



HYDRAULIC FITTINGS

INTRODUCTION

Manuli Hydraulics is globally respected for the breadth and versatility of our hydraulic fittings range. Comprising over 6,000 references, we have fittings to suit most of the common international standards as well as the specific requirements of several of our important OEM customers.

The Manuli Hydraulics fittings range is made up of 3 families: MF2000, MF3000 and Smart Connectors.

The **MF2000** range comprises our core range of two-piece fitting solutions and has over 4,000 references:

Multifit (MF) - Simple and cost effective universal solution for wire spiral and wire braid hoses

Minifit (MN) - Extremely compact fittings for braided hose (DN6 to DN10)

Interlock Plus (IP) - Maximum reliability for very high pressure wire spiral hoses in heavy-duty applications

Interlock Super (IS) - High-tech swaged fittings for very large bore wire spiral hose

Spiralfit (SP) - No-skive insert for wire spiral hoses and large bore hose

Spiralfit GX (SPGX) - No-skive insert for wire spiral hoses and large bore hoses

Pushlock (PL) - Insert solution for low pressure applications without the need for a swaged ferrule

The **MF3000** range is made up of one-piece fittings for hoses at medium/high pressures:

One-Piece Flat (OPF) - No-skive, compact and flat-crimp fittings for wire braid hoses up to 1½"

One-Piece Kompact (OPK) - No-skive, compact and flat-crimp fittings for wire spiral and wire braid high pressure hoses up to 2½"

There are also several types of **Smart Connectors** available:

RotoFit - A well-known and patented Manuli Hydraulics solution designed to eliminate hose twist under external torques, which can be a major contributor to premature hose failure. The additional advantage of RotoFit is that it is a "Direct-to-Hose" and "Direct-to-Port" solution. By eliminating the need for adaptors, the number of possible leak points is reduced.

EasyFit - The Manuli "threadless" fittings solution for quick and easy installation of assemblies.

This innovative termination end is fitted with a simple axial push, allowing the hose to self-align and thus improve service life. Maintenance and repair time is also drastically reduced and installation / disconnection in restricted spaces is far easier. Moreover the "Direct-to-Port" concept eliminates the need for adaptors and the possibility of related leakages. All EasyFit fittings have an eco-friendly coating treatment for superior corrosion performance.

FastFit / FastFit Disconnectable - A "one plug" connection consisting of a male half integrated onto the hose and then inserted into the female cartridge. This easy and safe operation does not require any tools for assembly and allows easy installation in restricted areas or in complex configurations. FastFit comes in a wide range of cartridges with direct connection on most standard ports, including BSP, SAE METRIC and NPTF. In addition, the new FastFit Disconnectable range offers all the benefits of standard FastFit technology, but with the ability to disconnect the plug from the cartridge if required.

Adjustable Flange - A new and innovative product which allows the body of the flange fitting to rotate even after being installed and tightened, making installation simpler and also ensuring that the hose is oriented in its most natural way, reducing the likelihood of premature fatigue failures due to poor hose orientation.

E-Coat 1000 - Over 1,000 hours of corrosion protection

Corrosion of fittings can have severely damaging effects on the life and reliability of hose assemblies. In cases where fittings are becoming corroded at an unacceptable rate, ISO/TS 17165-2:2018 recommends upgrading the fittings to ones with an alternative plating material suitable for the environment in which they will be used.

Manuli’s standard **E-Coat 500** plating is a first-class, long lasting solution which offers up to 500 hours to red rust in standard salt-spray tests, versus the required minimum of 144 hours as per SAE J516 (ISO 9227 method).

But Manuli have upped their game even further and can now offer the new **E-Coat 1000** plating, which offers double the corrosion resistance of standard E-Coat 500 plating with minimal cost increase.

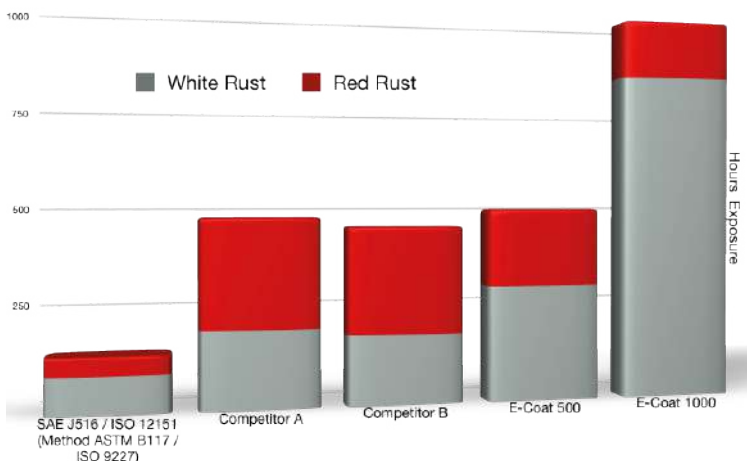
E-Coat 1000 offers:

- High resistance in crimped conditions eg: ferrules and crimped back nuts
- Enhanced performance of corrosion resistance compared to the standard E-Coat 500 plating (over 1,000 hours before red corrosion in standard salt spray test conditions ASTM B117 and ISO 9227*)
- Higher resistance to abrasion and handling than standard plating
- Full compliance with the European Directives REACH 1907/2006/EC, RoHS 2011/65/EC, ELV 2000/53/EC
- E-Coat 1000 is available as an option on all Manuli hydraulic fittings and flat-face quick couplings

E-Coat 1000 plating is the optimum solution for applications in severe environments and for demanding OEM specifications. It also offers even longer durability in standard hydraulic applications.

Best-In-Class Corrosion Resistance - Putting it to the test

Many other fitting manufacturers declare the superb corrosion resistance of their fittings, so we tested E-Coat 1000 against the best of the competition. The results speak for themselves. The best comparable competitor coatings both declare 1,000 hours to red rust, however, they both began to show red corrosion after less than 500 hours, and were seriously corroded by 750 hours. In contrast, the Manuli sample with E-Coat 1000 was barely showing signs of white corrosion after more than 1,000 hours in salt spray conditions. Even crimped fittings with E-Coat 1000 lasted over 750 hours before showing significant signs of corrosion, despite the damage to the plating integrity which occurs during the mechanical deformation process of crimping.


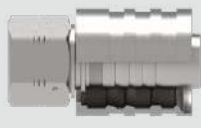







To order items with E-Coat 1000 plating, simply add the suffix “NK” to the part number when placing your orders.

Quantities and box sizes are as per standard fittings.



TWO PIECE TECHNOLOGY

OVERVIEW

<p>MINIFIT</p>  <p>p107 - p112</p>	<p>MULTIFIT</p>  <p>p113 - p175</p>	<p>INTERLOCK PLUS</p>  <p>p176 - p221</p>	<p>INTERLOCK SUPER</p>  <p>p222 - p225</p>
<p>SPIRALFIT</p>  <p>p226 - p247</p>	<p>SPIRALFIT GX</p>  <p>p248 - p249</p>	<p>PUSH-LOCK</p>  <p>p250 - p251</p>	<p>ACCESSORIES</p> <p>p252 - p255</p>






ONE PIECE TECHNOLOGY

OVERVIEW

<p>OPK</p>  <p>p256 - p280</p>	<p>OPF</p>  <p>p281 - p307</p>
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SMART FITTINGS

OVERVIEW

<p>EASYFIT</p>  <p>p308 - p311</p>	<p>FASTFIT</p>  <p>p312 - p318</p>	<p>FASTFIT DISCONNECTABLE</p>  <p>p319 - p321</p>
<p>ROTOFIT</p>  <p>p322 - p332</p>	<p>ADJUSTABLE FLANGE</p>  <p>p333 - p334</p>	

Fitting	Maximum Working Pressure (bar)														
	Hose Size / Dash														
	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"
	03	04	05	06	08	10	12	16	20	24	32	40	48	56	64
BSP 60° CONE BS5200 / ISO 8434-6	1/8"-28 350	1/4"-19 500		3/8"-19 460	1/2"-14 430	5/8"-14 350	3/4"-14 350	1"-11 350	1.1/4"-11 350	1.1/2"-11 300	2"-11 300	2.1/2"-11 140	3"-11 105		
BSP 60° CONE DOUBLE THRUST-WIRE NUT BS5200 / ISO 8434-6							3/4"-14 621	1"-11 621	1.1/4"-11 621	1.1/2"-11 560					
JIC 37° CONE ISO 8434-2 / SAE J514		7/16"-20 350	1/2"-20 350	9/16"-18 350	3/4"-16 350	7/8"-14 350	1.1/16"-12 350	1.5/16"-12 280	1.5/8"-12 210	1.7/8"-12 160	2.1/2"-12 125				
JIC 37° CONE DOUBLE THRUST-WIRE NUT ISO 8434-2 / SAE J514							1.1/16"-12 420	1.5/16"-12 420	1.5/8"-12 420	1.7/8"-12 420	2.1/2"-12 420				
ORFS ISO 8434-3 / SAE J1453		9/16"-18 460		11/16"-16 460	13/16"-16 420	1"-14 420	1.3/16"-12 420	1.7/16"-12 420	1.11/16"-12 420	2"-12 350					
NPTF MALE SAE J514 / ASME B1.20.3	1/8"-27 350	1/4"-18 350		3/8"-18 280	1/2"-14 245		3/4"-14 210	1"-11.5 175	1.1/4"-11.5 145	1.1/2"-11.5 145	2"-11.5 145				
NPSM FEMALE SAE J514	1/8"-27 350	1/4"-18 350		3/8"-18 280	1/2"-14 245		3/4"-14 210	1"-11.5 175	1.1/4"-11.5 145	1.1/2"-11.5 145	2"-11.5 145				
SAE 45° CONE SAE J512		7/16"-20 350	1/2"-20 350	5/8"-18 350	3/4"-16 310	7/8"-14 240	1.1/16"-14 240	1.3/8"-12 210							
ISO/SAE CODE 61 FLANGE ISO 6162-1 / SAE J518-1					1/2" 350		3/4" 350	1" 350	1-1/4" 280	1-1/2" 210	2" 210	2-1/2" 175	3" 160	3-1/2" 35	4" 35
ISO/SAE CODE 62 FLANGE ISO 6162-2 / SAE J518-2					1/2" 420		3/4" 420	1" 420	1-1/4" 420	1-1/2" 420	2" 420	2-1/2" 420	3" 420		
XTRAFANGE/61 ISO 6162-1 / SAE J518-1 PORT COMPATIBLE								1" 420	1-1/4" 420	1-1/2" 420	2" 420	2.1/2" 420			
XTRAFANGE/62 ISO 6162-2 / SAE J518-2 PORT COMPATIBLE							3/4" 560	1" 560	1-1/4" 560	1-1/2" 560	2" 450	2.1/2" 420	3" 420		
FLANGE/PLUS ISO 6162-2 / SAE J518-2 PORT COMPATIBLE							3/4" 420	1" 420	1-1/4" 420						
CAT FLANGE ISO 6162-2 / SAE J518-2 PORT COMPATIBLE							3/4" 420	1" 420	1-1/4" 420	1-1/2" 420	2" 420				
METRIC CONE 24° L SERIES ISO 8434-1 / DIN 3865	M12x1.5 415	M14x1.5 400	M16x1.5 350	M18x1.5 330	M22x1.5 275	M26x1.5 250	M30x2 245	M36x2 245	M45x2 220	M52x2 100					
METRIC CONE 24° S SERIES ISO 8434-1 / DIN 3865	M16x1.5 630	M18x1.5 630	M20x1.5 630	M20x1.5 630	M24x1.5 450	M30x2 420	M36x2 420	M42x2 420	M52x2 420						
METRIC CONE 60° LL SERIES DIN 20066							M30x2 63	M38x1.5 63	M45x1.5 63	M52x1.5 63	M65x2 40				
METRIC MULTISEAL DIN 20066	M12x1.5 250	M14x1.5 250	M16x1.5 250	M18x1.5 250	M22x1.5 250	M26x1.5 160									
FRENCH METRIC MILLIMETRIC NF E48-064						M27x1.5 420	M30x1.5 420	M33x1.5 420							
FRENCH GAZ MILLIMETRIC NF E48-064				M20x1.5 630	M24x1.5 630	M30x1.5 420	M36x1.5 420	M45x1.5 420							
JIS METRIC FEMALE 60° CONE (KOMATSU) JIS B8363		M14x1.5 350	M16x1.5 350	M18x1.5 350	M22x1.5 350	M24x1.5 280	M30x1.5 280	M33x1.5 280	M36x1.5 175	M42x2 105					
JIS GAS FEMALE 60° CONE (TOYOTA) JIS B8363		1/4"-19 350		3/8"-19 350	1/2"-14 350		3/4"-14 280	1"-11 280	1.1/4"-11 175	1.1/2"-11 105	2"-11 105				
SAE MALE O-RING BOSS TYPE SAE J516 / ISO 11926		7/16"-20 420		9/16"-18 420	3/4"-16 350	7/8"-14 280	1.1/6"-12 280	1.5/16"-12 210	1.5/8"-12 210						
METRIC STANDPIPE LIGHT DUTY DIN 2353 / ISO 8434-1	6 mm 250	8 mm 250	10 mm 250	12 mm 250	15 mm 250	18 mm 160	22 mm 160	28 mm 100	35 mm 100	42 mm 100					
METRIC STANDPIPE HEAVY DUTY DIN 2353 / ISO 8434-1	8 mm 630	10 mm 630	12 mm 630	14 mm 400	16 mm 400	20 mm 400	25 mm 400	30 mm 250	38 mm 250						
BSP BANJO		1/4"-19 210	3/8"-19 210	3/8"-19 210	1/2"-14 210	5/8"-14 210	3/4"-14 210	1"-11 210							
METRIC BANJO DIN 7642		M12x1.5 210	M14x1.5 210	M16x1.5 210	M22x1.5 210	M22x1.5 210	M26x1.5 210								
WASHCLEANER				M22x1.5 420											

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A523H95	318	M33H40	314	M21392/M21393	156	M30050	208
A52013H	315	M33H90	314	M21512/M21513	157	M30510	176
A52014H	321	M73H10	315	M21542/M21543	158	M30710	176
A52032H	310	M00110/M00120/M00130	112	M21592/M21593	159	M31110	196
A52053H	315	M00310/M00321	113	M21612/M21613	161	M31210	197
A52192H	311	M00820/M00830	113	M21642/M21643	162	M31240	197
A52193H	318	M00910/M00920/M00930	112	M21692/M21693	163	M31290	197
A52194H	320	M01500	175	M21713	164	M32410	182
A52283H	316	M01600	175	M21813	165	M32510	180
A52302H	310	M01800/M01810/M01850	175	M21893	165	M32810	187
A52323H	316	M01900	176	M22010	150	M33010	187
A52324H	320	M02400	106	M22040	151	M40512	177
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IM01600	210	M03400/M03450	114	M22441KR	135	M40892	179
IM01800/IM01810	210	M03500	115	M22441/M22443	134	M41243 LONG DROP	200
IM01900	211	M4364A	333	M22491KR	136	M41293 LONG DROP	200
IM30510	211	M4369A	333	M22491/M22493	135	M41612/M41613	198
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IM40842	212	M10510	116	M22591KR	130	M42412	183
IM40892	212	M10610	124	M22592/M22593	130	M42431	184
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IM42412	214	M11190	157	M22711/M22711KR	128	M42461	185
IM42442	214	M11210	160	M22712	127	M42491	185
IM42492	215	M11290	160	M22812	141	M42492	186
IM42512	213	M11710	163	M23301P	146	M42493	186
IM42542	213	M11810	164	M23301S	147	M42512	180
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IM43310	216	M12510	125	M23311	141	M42592	182
IM43310	219	M12810	140	M23321	142	M42714	181
IM43340	216	M13010	137	M23331	142	M43310	188
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IM43610	217	M14310	137	M23361	144	M43330	189
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L20543	251	M20812/M20813	121	M23991CT	171	M43740	201
L20593	251	M20841KR	122	M24011/M24012	166	M43790	201
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OPK11210	275
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OPK12510	259
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MINIFIT

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48

FERRULES														
M02400														
FITTINGS														
BSP														
DIN METRIC 24° CONE LIGHT TYPE														

MULTIFIT

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES																
M00110 / M00120 / M00130																
M00910 / M00920																
M03300																
M03400																
M03500																
M00310 / M00320																
M00820 / M00830																
FITTINGS																
BSP																
SAE (JIC)																
SAE (ORFS)																
SAE (O-RING BOSS)																
SAE (NPTF-NPSM)																
SAE FLANGE CODE 61																
SAE FLANGE CODE 62																
DIN STANDPIPE																
DIN METRIC 60° CONE																
DIN METRIC MULTISEAL																
DIN METRIC 24° CONE LIGHT TYPE																
DIN METRIC 24° CONE HEAVY TYPE																
NF (FRENCH MILLIMERIC TYPE)																
NF (FRENCH GAZ TYPE)																
JIS																
ORIGINAL EQUIPMENT CONNECTIONS																
BANJO CONNECTIONS																
SAE (45° CONE)																

INTERLOCK PLUS

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M01500																	
M01600																	
M01800 / M01810 / M01850																	
M01900																	

FITTINGS

BSP																	
SAE (JIC)																	
SAE (ORFS)																	
SAE (O-RING COSS)																	
SAE (NPTF-NPSM)																	
SAE FLANGE CODE 61																	
SAE FLANGE CODE 62																	
DIN METRIC 24° CONE HEAVY TYPE																	
ORIGINAL EQUIPMENT CONNECTIONS																	
XTRAFLLANGE/61																	
XTRAFLLANGE/62																	

INTERLOCK PLUS STAINLESS STEEL

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

IM01500																	
IM01600																	
IM01800 / IM01810																	
IM01900																	

FITTINGS

BSP																	
SAE (JIC)																	
SAE (ORFS)																	
SAE (NPTF)																	
SAE FLANGE CODE 61																	
SAE FLANGE CODE 62																	
DIN METRIC 24° CONE HEAVY TYPE																	
ORIGINAL EQUIPMENT CONNECTIONS																	

INTERLOCK SUPER

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M02700																	
M02800																	

FITTINGS

SAE FLANGE CODE 62																	
XTRAFLANGE/62																	
BSP																	
ORIGINAL EQUIPMENT CONNECTIONS																	

SPIRALFIT

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M05400																	
M05500																	

FITTINGS

BSP																	
SAE (JIC)																	
SAE (ORFS)																	
SAE (O-RING BOSS)																	
SAE (NPTF-NPSM)																	
SAE FLANGE CODE 61																	
SAE FLANGE CODE 62																	
DIN METRIC 24° CONE HEAVY TYPE																	
ORIGINAL EQUIPMENT CONNECTIONS																	
XTRAFLANGE/62																	

SPIRALFIT GX

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FERRULES

M05500-GX																	
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FITTINGS

SAE FLANGE CODE 62																	
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PUSHLOCK

DN	5	6	8	10	12	16	19	25	31	38	51	60	63	76	89	102
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"	2 3/8"	2 1/2"	3"	3 1/2"	4"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32	-38	-40	-48	-56	-64

FITTINGS																	
BSP																	

OPF

DN	5	6	8	10	12	16	19	25	31	38	51
Inch	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32

FITTINGS												
BSP												
SAE (JIC)												
SAE (ORFS)												
SAE (O-RING BOSS)												
SAE (NPTF-NPSM)												
SAE FLANGE CODE 61												
DIN STANDPIPE												
DIN METRIC MULTISEAL												
DIN METRIC 24° CONE LIGHT TYPE												
DIN METRIC 24° CONE HEAVY TYPE												
JIS												
ORIGINAL EQUIPMENT CONNECTIONS												

OPK

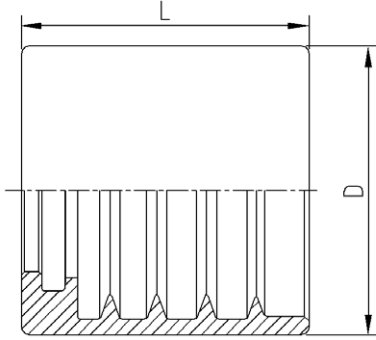
DN	5	6	8	10	12	16	19	25	31	38	51
Inch	$\frac{3}{16}$ "	$\frac{1}{4}$ "	$\frac{5}{16}$ "	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{5}{8}$ "	$\frac{3}{4}$ "	1"	$1\frac{1}{4}$ "	$1\frac{1}{2}$ "	2"
Size	-03	-04	-05	-06	-08	-10	-12	-16	-20	-24	-32

FITTINGS											
BSP											
SAE (JIC)											
SAE (ORFS)											
SAE (O-RING BOSS)											
SAE (NPTF-NPSM)											
SAE FLANGE CODE 61											
SAE FLANGE CODE 62											
DIN METRIC 24° CONE LIGHT TYPE											
DIN METRIC 24° CONE HEAVY TYPE											
NF (FRENCH MILLIMETRIC TYPE)											
NF (FRENCH GAZ TYPE)											
JIS											
ORIGINAL EQUIPMENT CONNECTIONS											

FERRULE

M02400

NO-SKIVE FERRULE FOR COMPACT HOSES



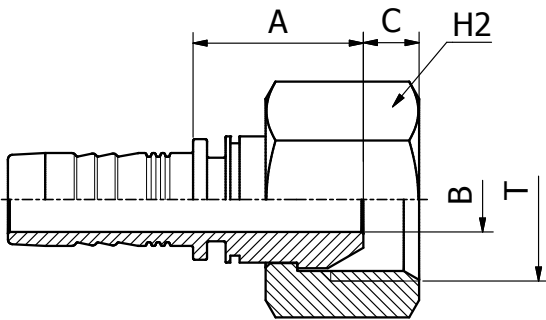
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M02400-03	5	- 3	3/16"			19.2	17.4				
M02400-04	6	- 4	1/4"			18.5	18.5				
M02400-05	8	- 5	5/16"			21.3	19.6				
M02400-06	10	- 6	3/8"			23.8	21.2				
M02400-08	12	- 8	1/2"			24.7	22.0				

FITTINGS
106

BS STANDARD CONNECTIONS

MS0513

BSP
FEMALE 60° CONE
BS5200 / ISO 8434-6

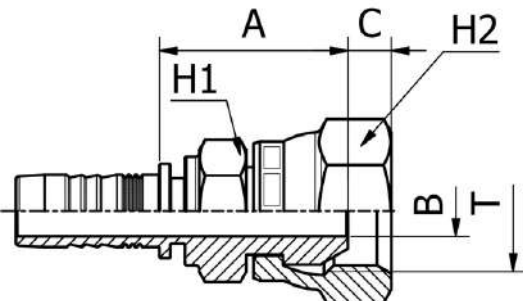


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	H2		
MS0513-04-04	6	- 4	1/4"	1/4" - 19	4.0	15.7	5.4	19.0		
MS0513-06-06	10	- 6	3/8"	3/8" - 19	7.0	18.3	6.0	22.0		

BS STANDARD CONNECTIONS

MS0511KR

BSP FEMALE 60° CONE
BS5200 / ISO 8434-6

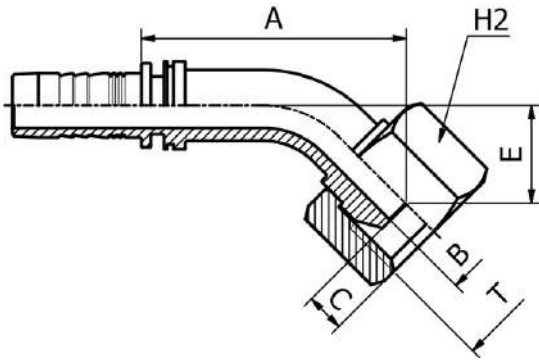


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	H1	H2	
MS0511-03-04H12KR	5	- 3	3/16"	1/4" - 19	4.0	23.5	5.2	12.0	19.0	
MS0511-04-04H12KR	6	- 4	1/4"	1/4" - 19	4.0	23.5	5.2	12.0	19.0	
MS0511-06-06H17KR	10	- 6	3/8"	3/8" - 19	7.0	26.0	6.0	17.0	22.0	
MS0511-08-08H19KR	12	- 8	1/2"	1/2" - 14	9.3	32.5	6.5	19.0	27.0	

BS STANDARD CONNECTIONS

MS0543

45° BSP
FEMALE 60° CONE
BS5200 / ISO 8434-6

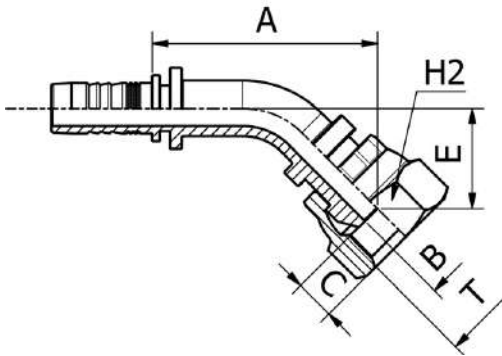


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS0543-04-04	6	- 4	1/4"	1/4" - 19	4.0	34.7	5.4	14.7	19.0		
MS0543-06-06	10	- 6	3/8"	3/8" - 19	7.0	41.0	6.0	15.3	22.0		

BS STANDARD CONNECTIONS

MS0541KR

BSP
FEMALE 60° CONE
BS5200 / ISO 8434-6

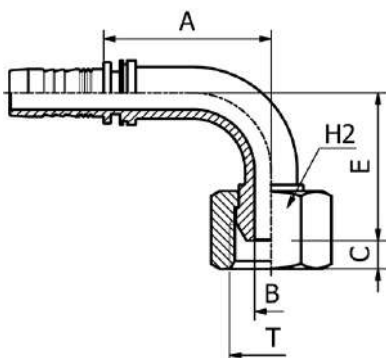


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS0541-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	36.5	5.2	16.6	19.0		
MS0541-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	44.5	6.0	20.0	22.0		

BS STANDARD CONNECTIONS

MS0593

90° BSP
FEMALE 60° CONE
BS5200 / ISO 8434-6

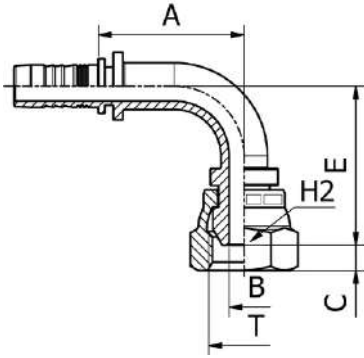


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS0593-04-04	6	- 4	1/4"	1/4" - 19	4.0	28.2	5.4	29.0	19.0		
MS0593-06-06	10	- 6	3/8"	3/8" - 19	7.0	35.3	6.0	31.5	22.0		

BS STANDARD CONNECTIONS

MS0591KR

90° BSP
FEMALE SWEEP ELBOW 60° CONE
BS5200 / ISO 8434-6



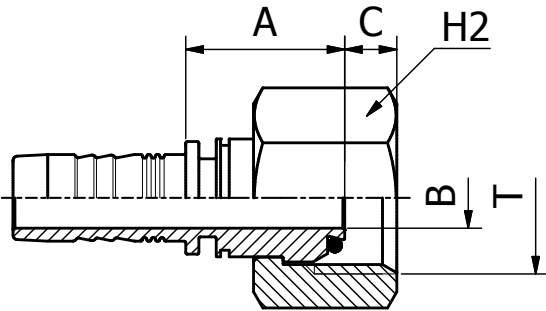
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
MS0591-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	27.0	5.2	30.5	19.0		
MS0591-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	34.5	6.0	37.5	22.0		

FITTINGS 108

BS STANDARD CONNECTIONS

MS0813

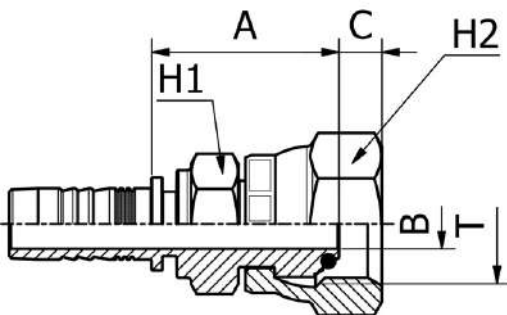
BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 8434-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H2	
MS0813-03-04	5	- 3	3/16"	1/4" - 19	4.0	15.5	5.4	19.0		
MS0813-04-04	6	- 4	1/4"	1/4" - 19	4.0	15.5	5.4	19.0		
MS0813-05-06	8	- 5	5/16"	3/8" - 19	7.0	18.0	6.0	22.0		
MS0813-06-06	10	- 6	3/8"	3/8" - 19	7.0	18.5	6.0	22.0		
MS0813-08-08	12	- 8	1/2"	1/2" - 14	9.3	20.5	6.3	27.0		

BS STANDARD CONNECTIONS

MS0811HKR

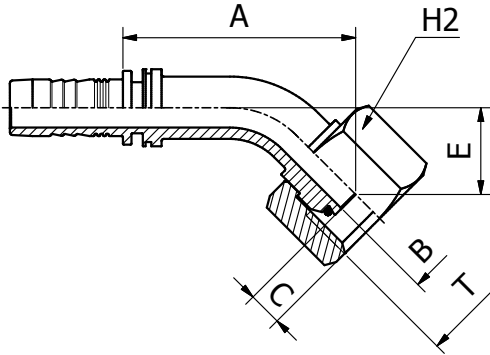


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	H2
MS0811-04-04H12KR	6	- 4	1/4"	1/4" - 19	4.0	23.5	5.2	12.0	19.0	
MS0811-06-06H17KR	10	- 6	3/8"	3/8" - 19	7.0	26.0	6.0	17.0	22.0	

BS STANDARD CONNECTIONS

MS0843

45° BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 8434-6

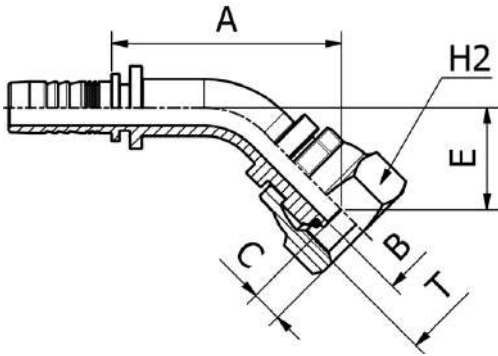


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS0843-04-04	6	- 4	1/4"	1/4" - 19	4.0	34.7	5.4	14.7	19.0		
MS0843-05-06	8	- 5	5/16"	3/8" - 19	7.0	40.5	6.0	17.0	22.0		
MS0843-06-06	10	- 6	3/8"	3/8" - 19	7.0	41.0	6.0	15.3	22.0		

BS STANDARD CONNECTIONS

MS0841KR

45° BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 8434-6

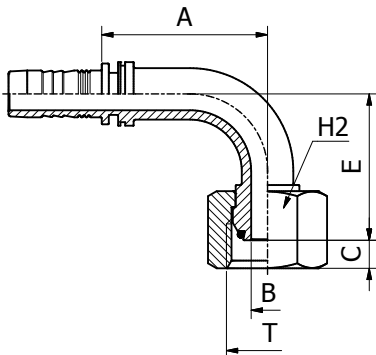


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS0841-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	36.5	5.2	16.5	19.0		
MS0841-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	44.5	6.0	20.0	22.0		

BS STANDARD CONNECTIONS

MS0893

90° BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 8434-6

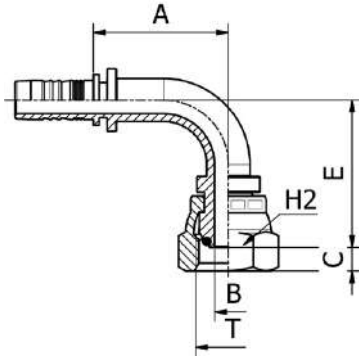


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS0893-03-04	5	- 3	3/16"	1/4" - 19	4.2	28.0	5.4	29.0	19.0		
MS0893-04-04	6	- 4	1/4"	1/4" - 19	4.0	28.0	5.4	29.0	19.0		
MS0893-05-06	8	- 5	5/16"	3/8" - 19	7.0	31.0	6.0	32.5	22.0		
MS0893-06-06	10	- 6	3/8"	3/8" - 19	7.0	35.5	6.0	31.5	22.0		
MS0893-08-08	12	- 8	1/2"	1/2" - 14	9.3	45.0	6.3	36.5	27.0		

BS STANDARD CONNECTIONS

MS0891KR

90° BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 8434-6

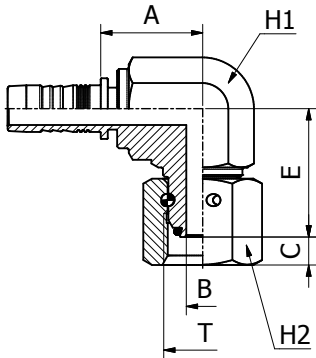


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
MS0891-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	27.0	5.2	30.5	19.0		
MS0891-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	34.5	6.0	37.5	22.0		

FITTINGS 110

BS STANDARD CONNECTIONS

MS0882F

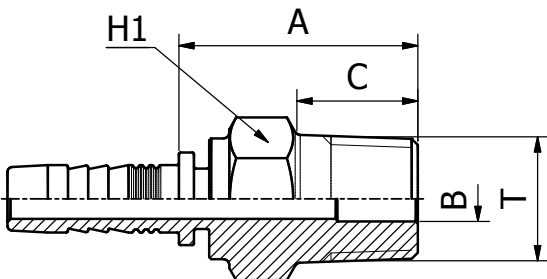


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H1
MS0882-04-04F	6	- 4	1/4"	1/4" - 19	4	18,7	4,1	22	14	19
MS0882-06-06F	10	- 6	3/8"	3/8" - 19	7	21,8	6	27,5	19	22

BS STANDARD CONNECTIONS

MT0710

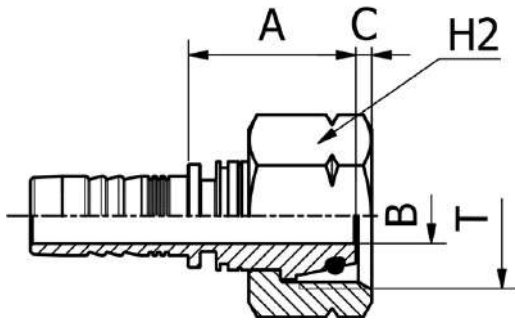
BSP MALE TAPERED



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm			
	DN	Dash	inch		T	B	A	C
MT0710-04-04	6	- 4	1/4"	1/4" - 19	4.5	23.5	12.0	14.0

DIN STANDARD CONNECTIONS

MS1513



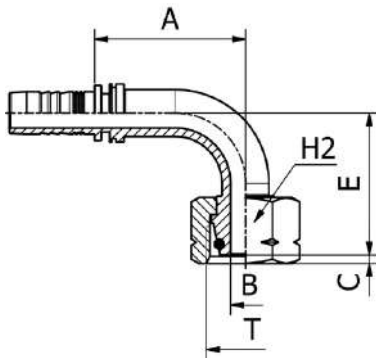
METRIC
O-RING FEMALE 24° CONE LIGHT DUTY
ISO 8434-1 / DIN 3865

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H2			
MS1513-04-14	6	- 4	1/4"	M14 X 1.5	4.0	21.0	1.3	17.0			
MS1513-05-16	8	- 5	5/16"	M16 X 1.5	6.0	21.5	1.8	19.0			
MS1513-05-18	8	- 5	5/16"	M18 X 1.5	7.0	20.9	2.0	22.0			
MS1513-06-18	10	- 6	3/8"	M18 X 1.5	7.0	21.1	2.0	22.0			

111 FITTINGS

DIN STANDARD CONNECTIONS

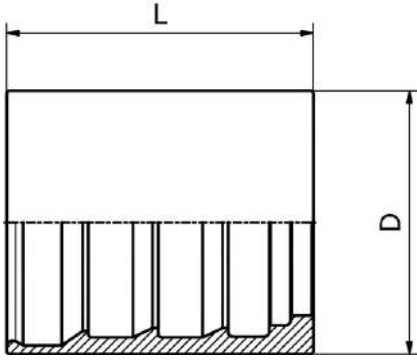
MS1593



90° METRIC
O-RING FEMALE 24° CONE LIGHT DUTY
ISO 8434-1 / DIN 3865

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
MS1593-04-14	6	- 4	1/4"	M14 X 1.5	4.0	28.0	1.3	31.5	17.0		
MS1593-05-16	8	- 5	5/16"	M16 X 1.5	6.0	31.0	1.8	32.5	19.0		
MS1593-06-18	10	- 6	3/8"	M18 X 1.5	7.0	35.5	2.5	33.5	22.0		

FERRULE



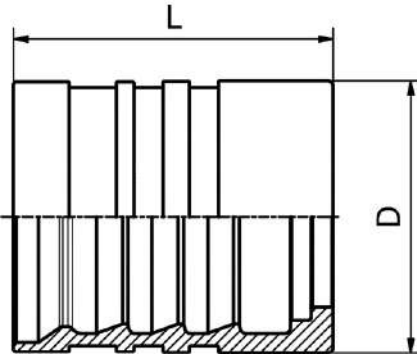
M00110/M00120/M00130

SKIVE FERRULE
FOR WIRE BRAID HOSES

FITTINGS
112

PART. REF.	HOSE BORE			PART. REF.	PART. REF.	DIMENSIONS mm					
	DN	Dash	inch			D	L				
M00120-03	5	- 3	3/16"			17.0	23.9				
M00120-04	6	- 4	1/4"			19.5	28.0				
M00120-05	8	- 5	5/16"			20.0	28.6				
M00120-06	10	- 6	3/8"			23.0	30.0				
M00120-08	12	- 8	1/2"			26.7	32.0				
M00120-10	16	- 10	5/8"			32.0	38.0				
M00120-12	19	- 12	3/4"			35.8	41.7				
M00130-16	25	- 16	1"			43.0	47.0				
M00110-20	31	- 20	1.1/4"			50.5	59.0				
M00110-24	38	- 24	1.1/2"			57.0	70.0				
M00110-32	51	- 32	2"			70.0	72.0				

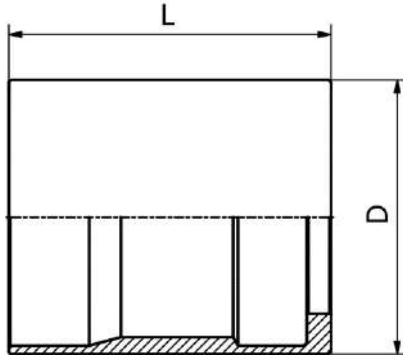
FERRULE



M00910/M00920/M00930

SKIVE FERRULE
FOR WIRE BRAID
AND SPIRAL HOSES

PART. REF.	HOSE BORE			PART. REF.	PART. REF.	DIMENSIONS mm					
	DN	Dash	inch			D	L				
M00910-03	5	- 3	3/16"			20.6	26.0				
M00910-04	6	- 4	1/4"			22.0	30.0				
M00910-05	8	- 5	5/16"			24.0	31.0				
M00910-06	10	- 6	3/8"			26.0	33.0				
M00920-06	10	- 6	3/8"			26.7	33.0				
M00910-08	12	- 8	1/2"			30.0	34.0				
M00910-10	16	- 10	5/8"			33.0	39.0				
M00920-12	19	- 12	3/4"			38.0	40.0				
M00930-16	25	- 16	1"			46.0	54.0				
M00920-20	31	- 20	1.1/4"			57.0	60.0				
M00910-24	38	- 24	1.1/2"			65.0	70.0				
M00910-32	51	- 32	2"			79.0	72.0				



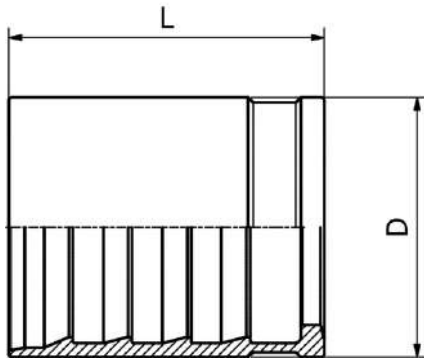
FERRULE

M00310/M00321

**NO-SKIVE FERRULE
FOR TEXTILE BRAID HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M00310-03	5	- 3	3/16"			17.5	27.0				
M00310-04	6	- 4	1/4"			19.3	30.0				
M00310-05	8	- 5	5/16"			21.0	32.0				
M00310-06	10	- 6	3/8"			24.0	32.0				
M00310-08	12	- 8	1/2"			28.4	34.0				
M00310-10	16	- 10	5/8"			33.0	37.0				
M00321-12	19	- 12	3/4"			37.0	43.0				
M00310-16	25	- 16	1"			43.5	51.0				
M00310-20	31	- 20	1.1/4"			50.0	59.0				

113 FITTINGS

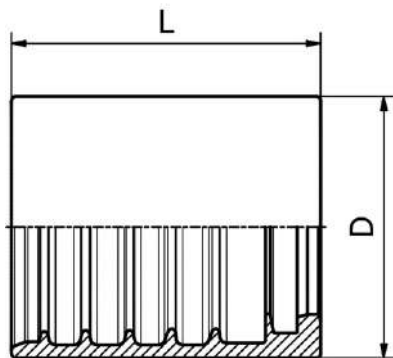


FERRULE

M00820/M00830

**NO-SKIVE FERRULE
FOR COMPACT HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M00820-03	5	- 3	3/16"			14.0	26.4				
M00830-04	6	- 4	1/4"			18.0	29.6				
M00830-05	8	- 5	5/16"			19.0	31.9				
M00820-06	10	- 6	3/8"			22.0	32.9				
M00820-08	12	- 8	1/2"			26.0	33.9				
M00820-10	16	- 10	5/8"			29.0	35.9				
M00820-12	19	- 12	3/4"			33.0	41.7				
M00820-16	25	- 16	1"			41.0	49.7				
M00820-20	31	- 20	1.1/4"			48.0	57.0				
M00820-24	38	- 24	1.1/2"			55.5	66.0				
M00820-32	51	- 32	2"			68.6	70.0				



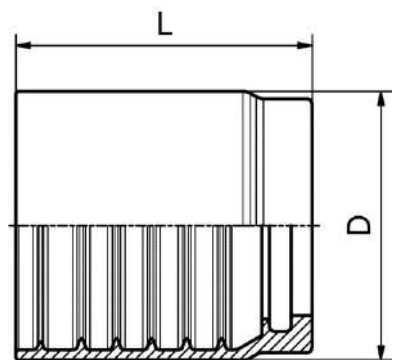
FERRULE

M03300

**NO-SKIVE FERRULE
FOR WIRE BRAID HOSES**

FITTINGS
114

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M03300-03	5	- 3	3/16"			19.2	22.0				
M03300-04	6	- 4	1/4"			20.5	27.5				
M03300-05	8	- 5	5/16"			22.8	28.5				
M03300-06	10	- 6	3/8"			25.0	30.0				
M03300-08	12	- 8	1/2"			28.0	33.0				

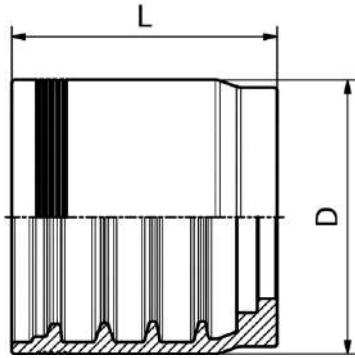


FERRULE

M03400/M03450

**NO-SKIVE FERRULE
FOR WIRE BRAID HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M03400-03	5	- 3	3/16"			21.0	23.0				
M03400-04	6	- 4	1/4"			23.0	30.1				
M03400-05	8	- 5	5/16"			24.0	30.0				
M03400-06	10	- 6	3/8"			26.0	31.1				
M03400-08	12	- 8	1/2"			29.0	34.0				
M03450-08	12	- 8	1/2"			30.3	31.0				
M03400-10	16	- 10	5/8"			33.0	37.0				
M03400-12	19	- 12	3/4"			37.0	42.0				
M03400-16	25	- 16	1"			46.0	50.7				
M03400-20	31	- 20	1.1/4"			59.0	57.2				
M03400-24	38	- 24	1.1/2"			67.0	64.8				
M03400-32	51	- 32	2"			80.0	68.3				
M03400-38	60	- 38	2.3/8"			82.5	69.0				
M03400-40	63	- 40	2.1/2"			88.2	68.8				
M03400-48	76	- 48	3"			103.0	75.0				
M03400-56	89	- 56	3.1/2"			123.4	91.0				
M03400-64	102	- 64	4"			131.0	93.0				



FERRULE

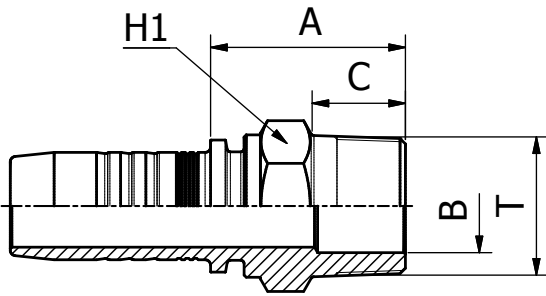
M03500

**NO SKIVE FERRULE
FOR WIRE SPIRAL HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	D	L						
M03500-06	10	- 6	3/8"	29.5	30.7						
M03500-08	12	- 8	1/2"	33.4	32.0						
M03500-10	16	- 10	5/8"	37.2	34.8						
M03500-12	19	- 12	3/4"	41.3	40.0						
M03500-16	25	- 16	1"	49.1	51.0						
M03500-20	31	- 20	1.1/4"	59.3	54.5						

115 FITTINGS

BS STANDARD CONNECTIONS



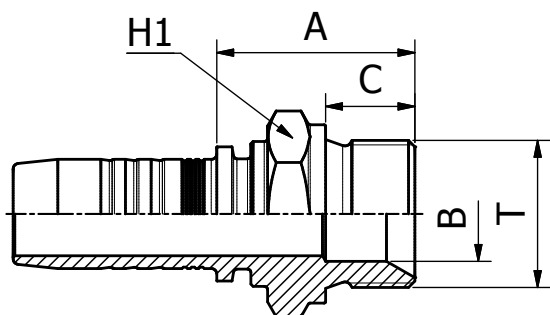
M10710

BSP MALE TAPERED - ISO 7

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	H1		
M10710-03-02	5	- 3	3/16"	1/8" - 28	4.5	20.5	8.0	12.0		
M10710-03-04	5	- 3	3/16"	1/4" - 19	4.5	24.5	12.0	14.0		
M10710-04-02	6	- 4	1/4"	1/8" - 28	4.5	21.0	8.0	12.0		
M10710-04-04	6	- 4	1/4"	1/4" - 19	4.5	25.0	12.0	14.0		
M10710-04-06	6	- 4	1/4"	3/8" - 19	7.0	26.0	12.0	19.0		
M10710-04-08	6	- 4	1/4"	1/2" - 14	10.0	29.5	15.0	22.0		
M10710-05-04	8	- 5	5/16"	1/4" - 19	5.5	25.0	12.0	14.0		
M10710-05-06	8	- 5	5/16"	3/8" - 19	7.0	26.5	12.0	19.0		
M10710-05-08	8	- 5	5/16"	1/2" - 14	10.0	30.0	15.0	22.0		
M10710-06-06	10	- 6	3/8"	3/8" - 19	7.0	27.0	12.0	19.0		
M10710-06-08	10	- 6	3/8"	1/2" - 14	10.0	30.5	15.0	22.0		
M10710-08-04	12	- 8	1/2"	1/4" - 19	4.5	26.0	12.0	19.0		
M10710-08-08	12	- 8	1/2"	1/2" - 14	10.0	31.0	15.0	22.0		
M10710-10-08	16	- 10	5/8"	1/2" - 14	10.0	31.0	15.0	22.0		
M10710-10-12	16	- 10	5/8"	3/4" - 14	17.0	34.0	17.0	27.0		
M10710-12-12	19	- 12	3/4"	3/4" - 14	17.0	35.5	17.0	27.0		
M10710-16-12	25	- 16	1"	3/4" - 14	17.0	38.0	17.0	32.0		
M10710-16-16	25	- 16	1"	1" - 11	22.5	42.0	21.0	36.0		
M10710-20-20	31	- 20	1.1/4"	1.1/4" - 11	28.5	47.5	23.0	46.0		
M10710-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	50.0	23.0	50.0		
M10710-32-32	51	- 32	2"	2" - 11	44.0	55.5	27.0	65.0		

BS STANDARD CONNECTIONS

M10510



**BSP MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6**

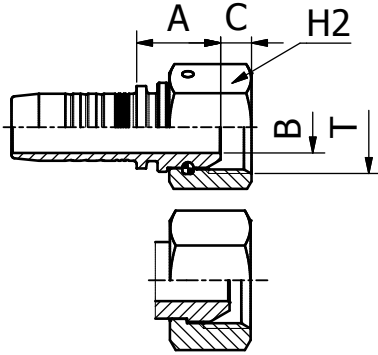
FITTINGS 116

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
M10510-03-02	5	- 3	3/16"	1/8" - 28		3.5	22.5	10.0	14.0		
M10510-03-04	5	- 3	3/16"	1/4" - 19		5.0	25.0	11.0	19.0		
M10510-04-02	6	- 4	1/4"	1/8" - 28		3.5	22.5	10.0	14.0		
M10510-04-04	6	- 4	1/4"	1/4" - 19		5.0	25.5	11.0	19.0		
M10510-04-06	6	- 4	1/4"	3/8" - 19		8.0	27.0	12.0	22.0		
M10510-04-08	6	- 4	1/4"	1/2" - 14		11.0	30.0	14.0	27.0		
M10510-05-04	8	- 5	5/16"	1/4" - 19		5.0	26.0	11.0	19.0		
M10510-05-06	8	- 5	5/16"	3/8" - 19		8.0	27.5	12.0	22.0		
M10510-06-04	10	- 6	3/8"	1/4" - 19		5.0	26.0	11.0	19.0		
M10510-06-06	10	- 6	3/8"	3/8" - 19		8.0	28.0	12.0	22.0		
M10510-06-08	10	- 6	3/8"	1/2" - 14		11.0	30.5	14.0	27.0		
M10510-08-06	12	- 8	1/2"	3/8" - 19		8.0	28.0	12.0	22.0		
M10510-08-08	12	- 8	1/2"	1/2" - 14		11.0	31.0	14.0	27.0		
M10510-08-10	12	- 8	1/2"	5/8" - 14		14.5	33.0	16.0	30.0		
M10510-08-12	12	- 8	1/2"	3/4" - 14		17.0	34.0	16.0	32.0		
M10510-10-10	16	- 10	5/8"	5/8" - 14		14.5	33.0	16.0	30.0		
M10510-10-12	16	- 10	5/8"	3/4" - 14		17.0	35.5	16.0	32.0		
M10510-12-08	19	- 12	3/4"	1/2" - 14		11.0	32.0	14.0	27.0		
M10510-12-12	19	- 12	3/4"	3/4" - 14		17.0	35.5	16.0	32.0		
M10510-12-16	19	- 12	3/4"	1" - 11		22.5	39.5	19.0	41.0		
M10510-16-12	25	- 16	1"	3/4" - 14		17.0	36.5	16.0	32.0		
M10510-16-16	25	- 16	1"	1" - 11		22.5	41.0	19.0	41.0		
M10510-16-20	25	- 16	1"	1.1/4" - 11		28.5	45.0	20.0	50.0		
M10510-20-20	31	- 20	1.1/4"	1.1/4" - 11		28.5	46.5	20.0	50.0		
M10510-20-24	31	- 20	1.1/4"	1.1/2" - 11		33.5	48.5	22.0	55.0		
M10510-24-24	38	- 24	1.1/2"	1.1/2" - 11		33.5	49.5	22.0	55.0		
M10510-32-32	51	- 32	2"	2" - 11		46.0	54.0	25.0	70.0		

BS STANDARD CONNECTIONS

M20512/M20513

**BSP FEMALE 60° CONE
BS5200 / ISO 12151-6**



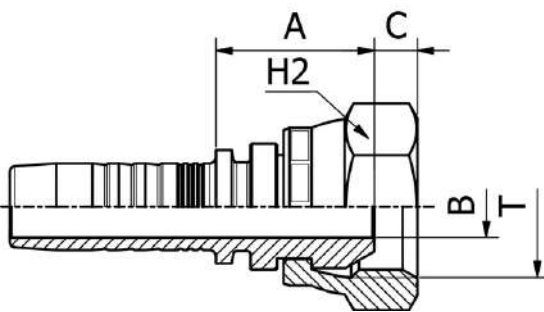
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M20512-03-02	5	- 3	3/16"	1/8" - 28	3.0	16.0	4.4	14.0			
M20512-04-02	6	- 4	1/4"	1/8" - 28	3.1	16.5	4.4	14.0			
M20512-05-04	8	- 5	5/16"	1/4" - 19	4.1	17.5	4.2	19.0			
M20512-06-04	10	- 6	3/8"	1/4" - 19	4.1	18.0	4.2	19.0			
M20512-08-06	12	- 8	1/2"	3/8" - 19	7.1	21.0	6.0	22.0			
M20512-08-10	12	- 8	1/2"	5/8" - 14	12.1	22.0	10.2	28.0			
M20512-08-12	12	- 8	1/2"	3/4" - 14	15.0	24.5	9.0	32.0			
M20512-10-08	16	- 10	5/8"	1/2" - 14	9.8	24.0	6.5	27.0			
M20512-10-10	16	- 10	5/8"	5/8" - 14	12.5	21.5	10.2	28.0			
M20512-10-12	16	- 10	5/8"	3/4" - 14	15.0	23.0	9.0	32.0			
M20512-12-08	19	- 12	3/4"	1/2" - 14	9.8	25.0	6.5	27.0			
M20512-12-12	19	- 12	3/4"	3/4" - 14	15.0	24.5	9.0	32.0			
M20512-12-16	19	- 12	3/4"	1" - 11	19.8	26.0	10.5	38.0			
M20512-16-12	25	- 16	1"	3/4" - 14	15.0	25.5	9.0	32.0			
M20512-16-16	25	- 16	1"	1" - 11	19.8	27.5	10.5	38.0			
M20513-03-04	5	- 3	3/16"	1/4" - 19	4.0	16.5	5.4	19.0			
M20513-04-04	6	- 4	1/4"	1/4" - 19	4.0	17.0	5.4	19.0			
M20513-04-06	6	- 4	1/4"	3/8" - 19	7.0	19.0	6.0	22.0			
M20513-04-08	6	- 4	1/4"	1/2" - 14	9.5	19.5	6.3	27.0			
M20513-05-06	8	- 5	5/16"	3/8" - 19	7.0	19.0	6.0	22.0			
M20513-05-08	8	- 5	5/16"	1/2" - 14	9.3	20.5	6.3	27.0			
M20513-06-06	10	- 6	3/8"	3/8" - 19	7.0	19.5	6.0	22.0			
M20513-06-08	10	- 6	3/8"	1/2" - 14	9.3	20.0	6.3	27.0			
M20513-08-08	12	- 8	1/2"	1/2" - 14	9.3	20.5	6.3	27.0			

117 FITTINGS

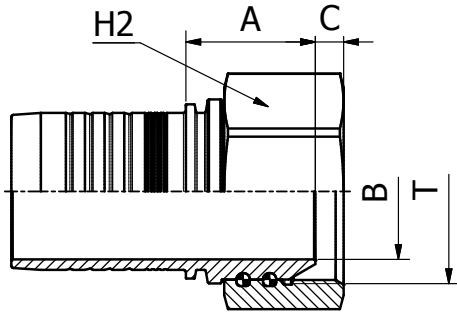
BS STANDARD CONNECTIONS

M20511KR

**BSP FEMALE 60° CONE
BS5200 / ISO 12151-6**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M20511-04-04KR	6	- 4	1/4"	1/4" - 19	4.0	20.0	5.2	19.0			
M20511-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	22.0	6.0	22.0			
M20511-08-08KR	12	- 8	1/2"	1/2" - 14	9.3	24.0	6.5	27.0			



BS STANDARD CONNECTIONS

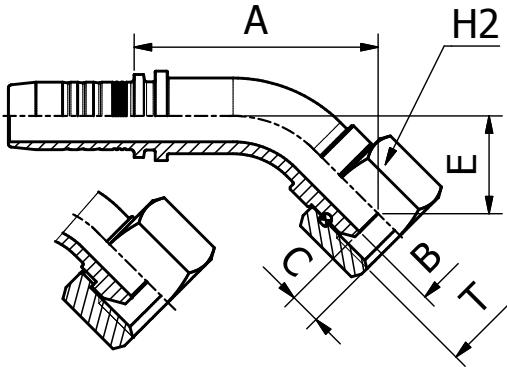
M20514

**BSP FEMALE 60° CONE
BS5200 / ISO 12151-6**

FITTINGS

118

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M20514-40-40	63	- 40	2.1/2"	2.1/2"	55.4	52.5	11.5	85.0			
M20514-48-48	76	- 48	3"	3"	65.0	57.0	10.9	100.0			



BS STANDARD CONNECTIONS

M20542/M20543

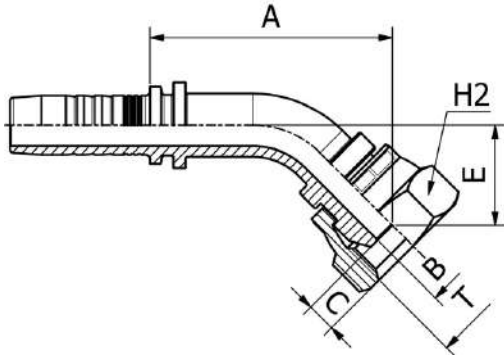
**45° BSP FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M20542-03-02	5	- 3	3/16"	1/8" - 28	3.0	31.0	4.4	15.0	14.0	
M20542-04-02	6	- 4	1/4"	1/8" - 28	3.1	35.5	4.4	14.5	14.0	
M20542-05-04	8	- 5	5/16"	1/4" - 19	4.0	35.5	4.1	16.0	19.0	
M20542-08-06	12	- 8	1/2"	3/8" - 19	7.1	52.0	6.0	20.0	22.0	
M20542-08-10	12	- 8	1/2"	5/8" - 14	12.1	54.5	10.2	22.5	28.0	
M20542-08-12	12	- 8	1/2"	3/4" - 14	15.0	57.0	9.0	25.0	32.0	
M20542-10-08	16	- 10	5/8"	1/2" - 14	9.3	63.5	6.5	26.5	27.0	
M20542-10-10	16	- 10	5/8"	5/8" - 14	12.5	63.0	10.2	26.0	28.0	
M20542-10-12	16	- 10	5/8"	3/4" - 14	15.0	64.0	9.0	27.0	32.0	
M20542-12-08	19	- 12	3/4"	1/2" - 14	9.3	55.5	6.5	22.5	27.0	
M20542-12-12	19	- 12	3/4"	3/4" - 14	15.0	70.5	9.0	28.5	32.0	
M20542-12-16	19	- 12	3/4"	1" - 11	19.8	72.5	10.5	30.0	38.0	
M20542-16-16	25	- 16	1"	1" - 11	19.8	91.0	10.5	36.5	38.0	
M20543-03-04	5	- 3	3/16"	1/4" - 19	4.0	35.5	5.4	14.5	19.0	
M20543-04-04	6	- 4	1/4"	1/4" - 19	4.0	36.0	5.4	15.0	19.0	
M20543-04-06	6	- 4	1/4"	3/8" - 19	7.0	37.5	6.0	16.0	22.0	
M20543-05-06	8	- 5	5/16"	3/8" - 19	7.0	38.0	6.0	13.5	22.0	
M20543-06-06	10	- 6	3/8"	3/8" - 19	7.0	42.0	6.0	15.5	22.0	
M20543-06-08	10	- 6	3/8"	1/2" - 14	9.3	42.5	6.3	16.0	27.0	
M20543-08-08	12	- 8	1/2"	1/2" - 14	9.3	49.5	6.3	17.0	27.0	

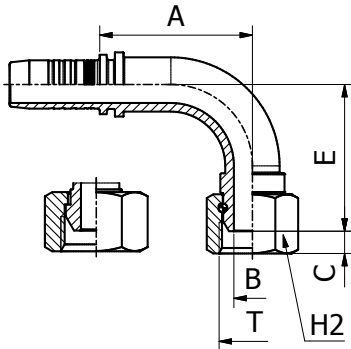
BS STANDARD CONNECTIONS

M20541KR

45° BSP FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	H2		
M20541-04-04KR	6	- 4	1/4"	1/4" - 19		4.2	38.0	5.2	16.6	19.0		
M20541-06-06KR	10	- 6	3/8"	3/8" - 19		7.0	45.5	6.0	20.0	22.0		
M20541-08-08KR	12	- 8	1/2"	1/2" - 14		9.3	54.0	6.5	22.0	27.0		



BS STANDARD CONNECTIONS

M20592/M20593

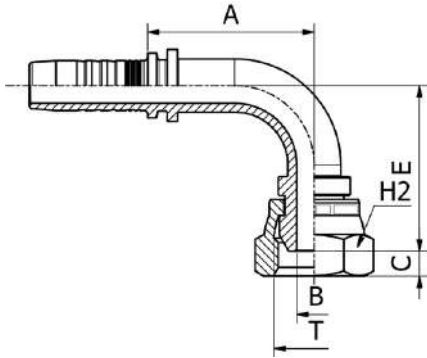
90° BSP FEMALE SWEPT ELBOW
60° CONE - BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	H2		
M20592-03-02	5	- 3	3/16"	1/8" - 28		3.0	21.5	4.4	26.0	14.0		
M20592-04-02	6	- 4	1/4"	1/8" - 28		3.1	28.5	4.4	27.0	14.0		
M20592-05-04	8	- 5	5/16"	1/4" - 19		4.0	26.5	4.1	29.5	19.0		
M20592-06-04	10	- 6	3/8"	1/4" - 19		4.0	27.0	4.1	29.5	19.0		
M20592-08-06	12	- 8	1/2"	3/8" - 19		7.1	45.0	6.0	41.0	22.0		
M20592-08-10	12	- 8	1/2"	5/8" - 14		12.1	44.0	10.2	44.0	28.0		
M20592-08-12	12	- 8	1/2"	3/4" - 14		15.0	44.0	9.0	45.5	32.0		
M20592-10-08	16	- 10	5/8"	1/2" - 14		9.3	53.5	6.5	54.5	27.0		
M20592-10-10	16	- 10	5/8"	5/8" - 14		12.5	53.5	10.2	53.5	28.0		
M20592-10-12	16	- 10	5/8"	3/4" - 14		15.0	53.5	9.0	55.0	32.0		
M20592-12-08	19	- 12	3/4"	1/2" - 14		9.3	45.5	6.5	44.0	27.0		
M20592-12-12	19	- 12	3/4"	3/4" - 14		15.0	61.5	9.0	59.5	32.0		
M20592-12-16	19	- 12	3/4"	1" - 11		19.8	61.5	10.5	62.0	38.0		
M20592-16-12	25	- 16	1"	3/4" - 14		15.0	64.5	9.0	59.5	32.0		
M20592-16-16	25	- 16	1"	1" - 11		19.8	79.5	10.5	76.0	38.0		
M20593-03-04	5	- 3	3/16"	1/4" - 19		4.0	29.0	5.4	29.0	19.0		
M20593-04-04	6	- 4	1/4"	1/4" - 19		4.0	29.5	5.4	29.0	19.0		
M20593-04-06	6	- 4	1/4"	3/8" - 19		7.0	29.5	6.0	31.0	22.0		
M20593-05-06	8	- 5	5/16"	3/8" - 19		7.0	32.0	6.0	27.5	22.0		
M20593-05-08	8	- 5	5/16"	1/2" - 14		9.3	36.5	6.3	32.0	27.0		
M20593-06-06	10	- 6	3/8"	3/8" - 19		7.0	36.5	6.0	31.5	22.0		
M20593-06-08	10	- 6	3/8"	1/2" - 14		9.3	36.5	6.3	32.0	27.0		
M20593-08-08	12	- 8	1/2"	1/2" - 14		9.3	45.0	6.3	36.5	27.0		

BS STANDARD CONNECTIONS

M20591KR

90° BSP FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6



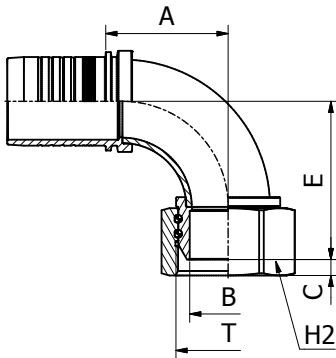
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M20591-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	28.5	5.2	30.5	19.0		
M20591-04-06KR	6	- 4	1/4"	3/8" - 19	7.0	28.5	6.0	32.0	22.0		
M20591-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	35.5	6.0	37.5	22.0		
M20591-06-08KR	10	- 6	3/8"	1/2" - 14	9.3	35.5	6.5	39.0	27.0		
M20591-08-06KR	12	- 8	1/2"	3/8" - 19	7.0	44.0	6.0	42.0	22.0		
M20591-08-08KR	12	- 8	1/2"	1/2" - 14	9.3	44.0	6.5	43.5	27.0		

FITTINGS 120

BS STANDARD CONNECTIONS

M20594

90° BSP FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6

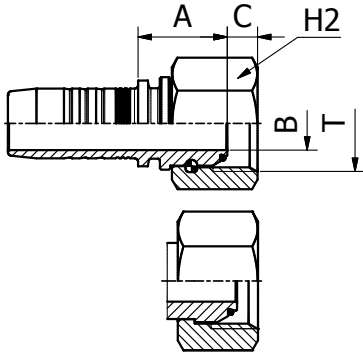


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M20594-40-40	63	- 40	2.1/2"	2.1/2"	55.4	88.0	11.5	114.0	85.0		
M20594-48-48	76	- 48	3"	3"	65.0	123.0	10.9	135.0	100.0		

BS STANDARD CONNECTIONS

M20812/M20813

**BSP O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6**



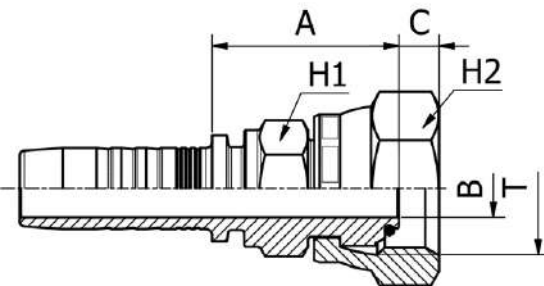
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	H2		
M20812-06-04	10	- 6	3/8"	1/4" - 19	4.1	18.0	4.1	19.0		
M20812-10-10	16	- 10	5/8"	5/8" - 14	12.5	22.0	9.7	28.0		
M20812-12-12	19	- 12	3/4"	3/4" - 14	15.0	25.0	8.5	32.0		
M20812-16-12	25	- 16	1"	3/4" - 14	15.0	26.0	8.5	32.0		
M20812-16-16	25	- 16	1"	1" - 11	19.8	27.5	10.6	38.0		
M20812-16-20	25	- 16	1"	1.1/4" - 11	26.1	31.0	10.5	50.0		
M20812-20-16	31	- 20	1.1/4"	1" - 11	19.8	29.0	10.5	38.0		
M20812-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	31.5	10.5	50.0		
M20812-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	29.5	12.5	60.0		
M20812-24-20	38	- 24	1.1/2"	1.1/4" - 11	26.0	31.5	10.5	50.0		
M20812-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	30.5	12.5	60.0		
M20812-24-32	38	- 24	1.1/2"	2" - 11	42.1	30.0	16.1	70.0		
M20812-32-32	51	- 32	2"	2" - 11	42.0	32.0	16.1	70.0		
M20813-03-04	5	- 3	3/16"	1/4" - 19	4.0	16.5	5.4	19.0		
M20813-04-04	6	- 4	1/4"	1/4" - 19	4.0	17.0	5.4	19.0		
M20813-04-06	6	- 4	1/4"	3/8" - 19	7.0	19.0	6.0	22.0		
M20813-06-06	10	- 6	3/8"	3/8" - 19	7.0	19.5	6.0	22.0		
M20813-06-08	10	- 6	3/8"	1/2" - 14	9.3	21.0	6.3	27.0		
M20813-08-08	12	- 8	1/2"	1/2" - 14	9.3	20.5	6.3	27.0		

121 FITTINGS

BS STANDARD CONNECTIONS

M20811HKR

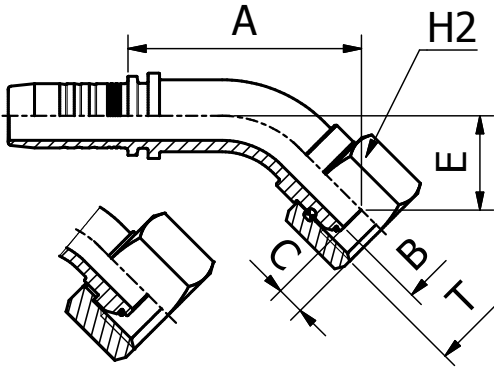
**BSP O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	H1	H2	
M20811-04-04H12KR	6	- 4	1/4"	1/4" - 19	4.0	25.0	5.2	12.0	19.0	
M20811-04-06H17KR	6	- 4	1/4"	3/8" - 19	7.0	27.0	6.0	17.0	22.0	
M20811-06-04H17KR	10	- 6	3/8"	1/4" - 19	4.0	26.0	5.2	17.0	19.0	
M20811-06-06H17KR	10	- 6	3/8"	3/8" - 19	7.0	27.5	6.0	17.0	22.0	
M20811-06-08H19KR	10	- 6	3/8"	1/2" - 14	9.3	29.5	6.5	19.0	27.0	
M20811-08-06H19KR	12	- 8	1/2"	3/8" - 19	7.0	29.5	6.0	19.0	22.0	
M20811-08-08H19KR	12	- 8	1/2"	1/2" - 14	9.3	30.0	5.5	19.0	27.0	

BS STANDARD CONNECTIONS

M20842/M20843

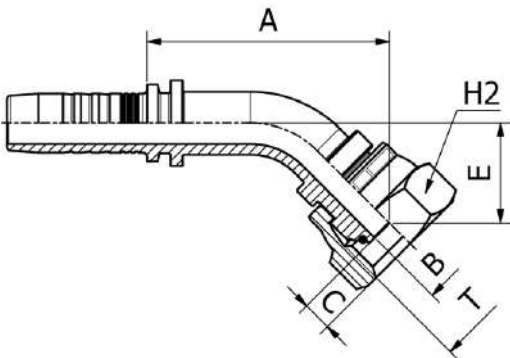


45° BSP O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M20842-10-10	16	- 10	5/8"	5/8" - 14	12.5	63.5	9.7	27.5	28.0	
M20842-12-12	19	- 12	3/4"	3/4" - 14	15.0	71.0	8.5	29.0	32.0	
M20842-16-12	25	- 16	1"	3/4" - 14	15.0	79.5	8.5	29.0	32.0	
M20842-16-16	25	- 16	1"	1" - 11	19.8	90.5	10.6	35.5	38.0	
M20842-16-20	25	- 16	1"	1.1/4" - 11	26.1	93.0	10.5	38.0	50.0	
M20842-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	101.5	10.5	39.0	50.0	
M20842-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	118.5	12.5	40.5	60.0	
M20842-24-20	38	- 24	1.1/2"	1.1/4" - 11	26.0	106.0	10.5	42.0	50.0	
M20842-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	118.0	12.5	45.0	60.0	
M20842-24-32	38	- 24	1.1/2"	2" - 11	42.1	117.5	16.1	44.5	70.0	
M20842-32-32	51	- 32	2"	2" - 11	42.0	134.0	16.1	47.0	70.0	
M20843-04-04	6	- 4	1/4"	1/4" - 19	4.0	36.0	5.4	14.5	19.0	
M20843-06-06	10	- 6	3/8"	3/8" - 19	7.0	42.0	6.0	15.5	22.0	
M20843-08-08	12	- 8	1/2"	1/2" - 14	9.3	49.5	6.3	17.0	27.0	

BS STANDARD CONNECTIONS

M20841KR



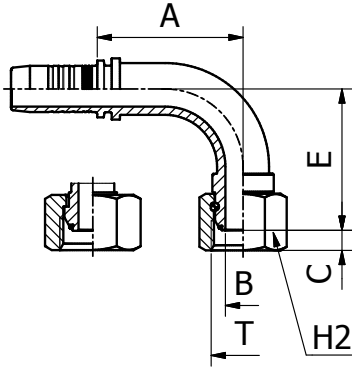
45° BSP O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M20841-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	38.0	5.2	16.6	19.0	
M20841-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	45.5	6.0	16.5	22.0	
M20841-08-08KR	12	- 8	1/2"	1/2" - 14	9.3	54.0	6.5	22.0	27.0	

BS STANDARD CONNECTIONS

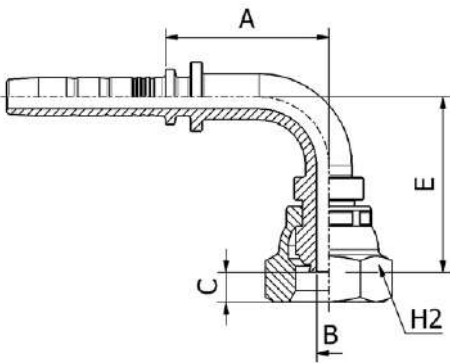
M20892/M20893

90° BSP O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M20892-06-04	10	- 6	3/8"	1/4" - 19	4.1	35.5	4.1	33.0	19.0		
M20892-10-10	16	- 10	5/8"	5/8" - 14	12.5	53.0	9.7	55.0	28.0		
M20892-12-12	19	- 12	3/4"	3/4" - 14	15.0	61.5	8.5	60.0	32.0		
M20892-12-16	19	- 12	3/4"	1" - 11	19.8	61.5	10.6	62.0	38.0		
M20892-16-12	25	- 16	1"	3/4" - 14	15.0	79.5	8.5	60.0	32.0		
M20892-16-16	25	- 16	1"	1" - 11	19.8	79.5	10.6	76.0	38.0		
M20892-16-20	25	- 16	1"	1.1/4" - 11	26.1	79.5	10.5	78.5	50.0		
M20892-20-16	31	- 20	1.1/4"	1" - 11	19.8	79.5	10.6	76.0	38.0		
M20892-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	90.5	10.5	83.5	50.0		
M20892-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	90.5	12.5	84.5	60.0		
M20892-24-20	38	- 24	1.1/2"	1.1/4" - 11	26.0	95.0	10.5	90.5	50.0		
M20892-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	108.0	12.5	98.5	60.0		
M20892-24-32	38	- 24	1.1/2"	2" - 11	42.1	108.0	16.1	98.0	70.0		
M20892-32-32	51	- 32	2"	2" - 11	42.0	131.0	16.1	110.5	70.0		
M20893-03-04	5	- 3	3/16"	1/4" - 19	4.0	29.0	5.4	29.0	19.0		
M20893-04-04	6	- 4	1/4"	1/4" - 19	4.0	29.5	5.4	29.0	19.0		
M20893-06-06	10	- 6	3/8"	3/8" - 19	7.0	36.5	6.0	31.5	22.0		
M20893-08-08	12	- 8	1/2"	1/2" - 14	9.3	45.0	6.3	36.5	27.0		

123 FITTINGS

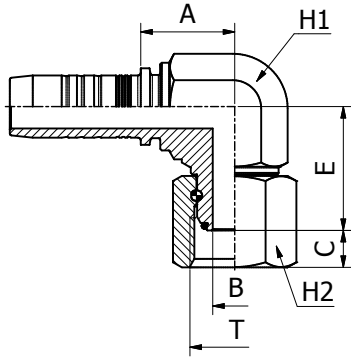


BS STANDARD CONNECTIONS

M20891KR

90° BSP O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M20891-04-04KR	6	- 4	1/4"	1/4" - 19	4.2	28.5	5.2	30.5	19.0		
M20891-04-06KR	6	- 4	1/4"	3/8" - 19	7.0	28.5	6.0	32.0	22.0		
M20891-06-04KR	10	- 6	3/8"	1/4" - 19	4.0	37.5	5.2	36.0	19.0		
M20891-06-06KR	10	- 6	3/8"	3/8" - 19	7.0	35.5	6.0	37.5	22.0		
M20891-06-08KR	10	- 6	3/8"	1/2" - 14	9.3	35.5	6.5	39.0	27.0		
M20891-08-06KR	12	- 8	1/2"	3/8" - 19	7.0	44.0	6.0	42.0	22.0		
M20891-08-08KR	12	- 8	1/2"	1/2" - 14	9.3	44.0	5.5	43.5	22.0		



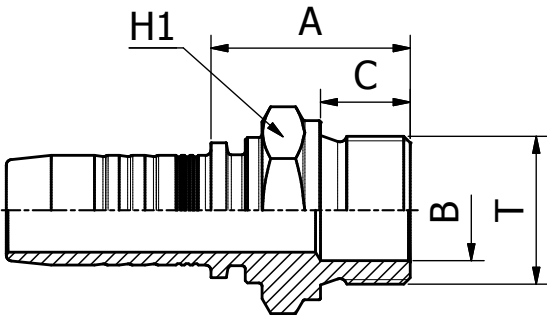
BS STANDARD CONNECTIONS

M20882F

**90° BSP O-RING FEMALE
COMPACT ELBOW 60° CONE
BS5200 / ISO 12151-6 (THRUST-WIRE NUT)**

FITTINGS 124

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H1	H2	
M20882-04-04F	6	- 4	1/4"	1/4" - 19	4.0	20.0	4.1	22.0	14.0	19.0	
M20882-06-06F	10	- 6	3/8"	3/8" - 19	7.0	23.0	6.0	27.5	19.0	22.0	
M20882-08-08F	12	- 8	1/2"	1/2" - 14	9.3	25.0	6.5	31.0	22.0	27.0	
M20882-10-10F	16	- 10	5/8"	5/8" - 14	12.5	24.5	9.7	32.5	24.0	28.0	
M20882-12-12F	19	- 12	3/4"	3/4" - 14	15.0	37.5	8.5	36.0	27.0	32.0	
M20882-16-16F	25	- 16	1"	1" - 11	20.0	52.0	10.6	44.0	36.0	38.0	

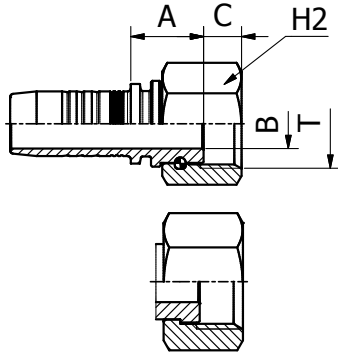


BS STANDARD CONNECTIONS

M10610

BSP MALE FLAT SEAT

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	H1		
M10610-04-04	6	- 4	1/4"	1/4" - 19	6.0	25.5	11.0	19.0		
M10610-06-06	10	- 6	3/8"	3/8" - 19	9.5	28.0	12.0	22.0		
M10610-06-08	10	- 6	3/8"	1/2" - 14	13.0	30.5	14.0	27.0		
M10610-08-08	12	- 8	1/2"	1/2" - 14	13.0	31.0	14.0	27.0		
M10610-10-08	16	- 10	5/8"	1/2" - 14	13.0	31.0	14.0	27.0		
M10610-12-12	19	- 12	3/4"	3/4" - 14	18.0	35.5	16.0	32.0		



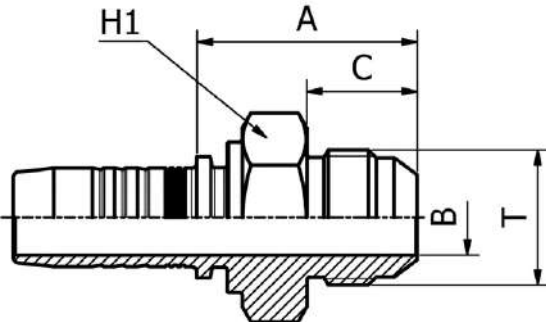
BS STANDARD CONNECTIONS

M20612/M20613

BSP FEMALE FLAT SEAT

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	H2				
M20612-08-12	12	- 8	1/2"	3/4" - 14	15.0	21.0	11.5	32.0				
M20612-10-12	16	- 10	5/8"	3/4" - 14	15.0	20.5	11.5	32.0				
M20612-12-12	19	- 12	3/4"	3/4" - 14	15.0	22.0	11.5	32.0				
M20612-12-16	19	- 12	3/4"	1" - 11	19.8	23.5	13.0	38.0				
M20612-16-16	25	- 16	1"	1" - 11	19.8	25.0	13.0	38.0				
M20612-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	26.0	15.0	50.0				
M20613-04-04	6	- 4	1/4"	1/4" - 19	4.0	14.5	7.9	19.0				
M20613-05-06	8	- 5	5/16"	3/8" - 19	7.0	16.0	9.0	22.0				
M20613-06-06	10	- 6	3/8"	3/8" - 19	7.0	16.5	9.0	22.0				
M20613-06-08	10	- 6	3/8"	1/2" - 14	9.3	17.5	9.8	27.0				
M20613-08-08	12	- 8	1/2"	1/2" - 14	9.3	18.0	9.8	27.0				

125 FITTINGS



SAE STANDARD CONNECTIONS

M12510

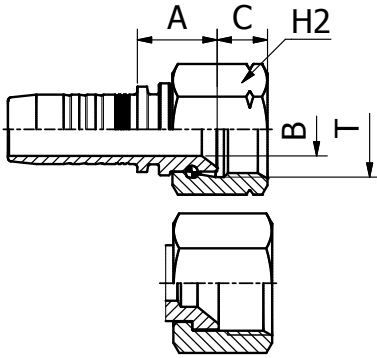
JIC MALE 37° CONE
SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	H1				
M12510-04-04	6	- 4	1/4"	7/16" - 20	4.0	28.0	14.0	12.0				
M12510-04-05	6	- 4	1/4"	1/2" - 20	5.5	29.0	14.0	14.0				
M12510-04-06	6	- 4	1/4"	9/16" - 18	7.0	29.0	14.0	17.0				
M12510-05-04	8	- 5	5/16"	7/16" - 20	4.0	29.0	14.0	14.0				
M12510-05-05	8	- 5	5/16"	1/2" - 20	5.5	29.0	14.0	14.0				
M12510-05-06	8	- 5	5/16"	9/16" - 18	7.0	29.0	14.0	17.0				
M12510-06-05	10	- 6	3/8"	1/2" - 20	5.5	29.5	14.0	17.0				
M12510-06-06	10	- 6	3/8"	9/16" - 18	7.0	29.5	14.0	17.0				
M12510-06-08	10	- 6	3/8"	3/4" - 16	9.3	34.0	16.5	19.0				
M12510-06-10	10	- 6	3/8"	7/8" - 14	12.5	38.5	19.5	24.0				
M12510-08-06	12	- 8	1/2"	9/16" - 18	7.0	32.0	14.0	19.0				
M12510-08-08	12	- 8	1/2"	3/4" - 16	9.3	34.5	16.5	19.0				
M12510-08-10	12	- 8	1/2"	7/8" - 14	12.5	39.0	19.5	24.0				
M12510-08-12	12	- 8	1/2"	1.1/16" - 12	15.0	43.0	22.0	27.0				
M12510-10-10	16	- 10	5/8"	7/8" - 14	12.5	39.0	19.5	24.0				
M12510-10-12	16	- 10	5/8"	1.1/16" - 12	15.0	42.5	22.0	27.0				
M12510-12-10	19	- 12	3/4"	7/8" - 14	12.5	41.5	19.5	27.0				
M12510-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	44.0	22.0	27.0				
M12510-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	44.5	22.5	32.0				
M12510-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	47.0	23.0	34.0				
M12510-16-12	25	- 16	1"	1.1/16" - 12	15.0	45.0	22.0	32.0				
M12510-16-16	25	- 16	1"	1.5/16" - 12	19.8	48.0	23.0	34.0				
M12510-16-20	25	- 16	1"	1.5/8" - 12	26.0	53.0	24.3	42.0				
M12510-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	53.5	24.3	42.0				
M12510-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	60.5	27.5	50.0				
M12510-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	60.5	27.5	50.0				
M12510-32-32	51	- 32	2"	2.1/2" - 12	42.0	72.0	34.0	65.0				

SAE STANDARD CONNECTIONS

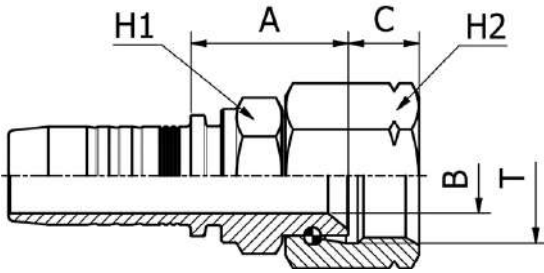
M22512/M22513

JIC FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H2			
M22512-03-05	5	- 3	3/16"	1/2" - 20	4.0	15.5	9.1	17.0			
M22512-04-04	6	- 4	1/4"	7/16" - 20	4.0	15.5	8.7	17.0			
M22512-04-05	6	- 4	1/4"	1/2" - 20	4.0	16.0	9.1	17.0			
M22512-05-04	8	- 5	5/16"	7/16" - 20	4.0	15.5	8.7	17.0			
M22512-05-05	8	- 5	5/16"	1/2" - 20	5.5	16.0	9.1	17.0			
M22512-05-06	8	- 5	5/16"	9/16" - 18	7.0	15.5	9.2	19.0			
M22512-06-05	10	- 6	3/8"	1/2" - 20	5.5	16.5	9.1	17.0			
M22512-06-06	10	- 6	3/8"	9/16" - 18	7.0	16.0	9.2	19.0			
M22512-08-08	12	- 8	1/2"	3/4" - 16	9.3	20.0	10.2	22.0			
M22512-10-10	16	- 10	5/8"	7/8" - 14	12.5	20.0	12.3	27.0			
M22512-12-08	19	- 12	3/4"	3/4" - 16	9.3	21.5	10.2	22.0			
M22512-12-10	19	- 12	3/4"	7/8" - 14	12.5	21.5	12.3	27.0			
M22512-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	22.5	14.2	32.0			
M22512-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	23.0	14.3	36.0			
M22512-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	23.0	15.0	38.0			
M22512-16-12	25	- 16	1"	1.1/16" - 12	15.0	23.5	14.2	32.0			
M22512-16-16	25	- 16	1"	1.5/16" - 12	19.8	24.0	15.0	38.0			
M22512-16-20	25	- 16	1"	1.5/8" - 12	26.0	30.0	16.2	50.0			
M22512-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	30.0	16.2	50.0			
M22512-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	35.0	18.8	60.0			
M22512-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	35.0	18.8	60.0			
M22512-32-24	51	- 32	2"	1.7/8" - 12	32.0	37.0	18.8	60.0			
M22512-32-32	51	- 32	2"	2.1/2" - 12	44.0	35.5	24.0	75.0			
M22513-03-04	5	- 3	3/16"	7/16" - 20	3.0	15.0	8.0	15.0			
M22513-04-06	6	- 4	1/4"	9/16" - 18	4.0	16.5	9.8	19.0			
M22513-05-08	8	- 5	5/16"	3/4" - 16	5.5	17.0	10.1	22.0			
M22513-06-08	10	- 6	3/8"	3/4" - 16	7.0	17.5	10.1	22.0			
M22513-06-10	10	- 6	3/8"	7/8" - 14	9.3	18.0	12.4	27.0			
M22513-08-10	12	- 8	1/2"	7/8" - 14	9.3	18.5	12.4	27.0			
M22513-08-12	12	- 8	1/2"	1.1/16" - 12	12.5	22.0	14.1	32.0			
M22513-10-12	16	- 10	5/8"	1.1/16" - 12	12.5	21.5	14.1	32.0			

M22712



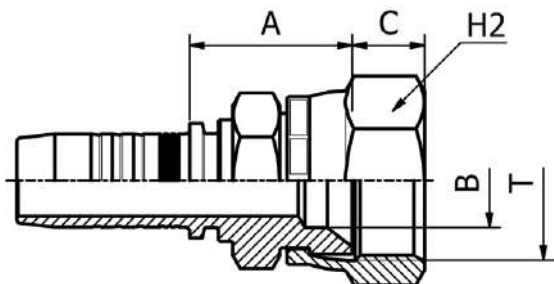
**JIC FEMALE 37° CONE SEAT DOUBLE HEXAGON
SAE J516 / ISO 12151-5 (THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm						
	DN	Dash	inch			B	A	C	H1	H2		
M22712-03-04	5	- 3	3/16"	7/16" - 20		4.0	20.5	8.7	12.0	17.0		
M22712-04-04	6	- 4	1/4"	7/16" - 20		4.0	21.0	8.7	12.0	17.0		
M22712-04-05	6	- 4	1/4"	1/2" - 20		4.0	21.5	9.1	12.0	17.0		
M22712-04-06	6	- 4	1/4"	9/16" - 18		7.0	24.0	9.2	14.0	19.0		
M22712-05-05	8	- 5	5/16"	1/2" - 20		5.5	21.5	9.1	14.0	17.0		
M22712-05-06	8	- 5	5/16"	9/16" - 18		7.0	24.0	9.2	14.0	19.0		
M22712-05-08	8	- 5	5/16"	3/4" - 16		9.3	26.0	10.2	19.0	22.0		
M22712-06-04	10	- 6	3/8"	7/16" - 20		4.0	24.5	8.7	17.0	17.0		
M22712-06-05	10	- 6	3/8"	1/2" - 20		5.5	25.0	9.1	17.0	17.0		
M22712-06-06	10	- 6	3/8"	9/16" - 18		7.0	24.5	9.2	17.0	19.0		
M22712-06-08	10	- 6	3/8"	3/4" - 16		9.3	27.0	10.2	19.0	22.0		
M22712-06-10	10	- 6	3/8"	7/8" - 14		12.5	28.0	12.3	22.0	27.0		
M22712-08-06	12	- 8	1/2"	9/16" - 18		7.0	24.5	9.2	19.0	19.0		
M22712-08-08	12	- 8	1/2"	3/4" - 16		9.3	27.5	10.2	19.0	22.0		
M22712-08-10	12	- 8	1/2"	7/8" - 14		12.5	28.5	12.3	22.0	27.0		
M22712-08-12	12	- 8	1/2"	1.1/16" - 12		14.0	30.0	14.2	27.0	32.0		
M22712-10-08	16	- 10	5/8"	3/4" - 16		9.3	28.5	10.2	22.0	22.0		
M22712-10-10	16	- 10	5/8"	7/8" - 14		12.5	28.5	12.3	22.0	27.0		
M22712-10-12	16	- 10	5/8"	1.1/16" - 12		15.0	30.0	14.2	27.0	32.0		
M22712-12-08	19	- 12	3/4"	3/4" - 16		9.3	30.0	10.2	27.0	22.0		
M22712-12-10	19	- 12	3/4"	7/8" - 14		12.5	30.0	12.3	27.0	27.0		
M22712-12-12	19	- 12	3/4"	1.1/16" - 12		15.0	31.5	14.2	27.0	32.0		
M22712-12-14	19	- 12	3/4"	1.3/16" - 12		15.0	33.0	14.3	30.0	36.0		
M22712-12-16	19	- 12	3/4"	1.5/16" - 12		19.8	32.5	15.0	32.0	38.0		
M22712-16-12	25	- 16	1"	1.1/16" - 12		12.5	34.0	14.2	32.0	32.0		
M22712-16-16	25	- 16	1"	1.5/16" - 12		19.8	34.5	15.0	32.0	38.0		
M22712-16-20	25	- 16	1"	1.5/8" - 12		26.0	43.0	16.2	41.0	50.0		
M22712-20-16	31	- 20	1.1/4"	1.5/16" - 12		19.8	36.0	15.0	38.0	38.0		
M22712-20-20	31	- 20	1.1/4"	1.5/8" - 12		26.0	43.5	16.2	41.0	50.0		
M22712-24-24	38	- 24	1.1/2"	1.7/8" - 12		32.0	51.0	18.8	50.0	60.0		
M22712-32-32	51	- 32	2"	2.1/2" - 12		44.0	51.5	24.0	65.0	75.0		

SAE STANDARD CONNECTIONS

M22711/M22711KR

**JIC FEMALE
37° CONE SEAT DOUBLE HEXAGON
SAE J516 / ISO 12151-5**

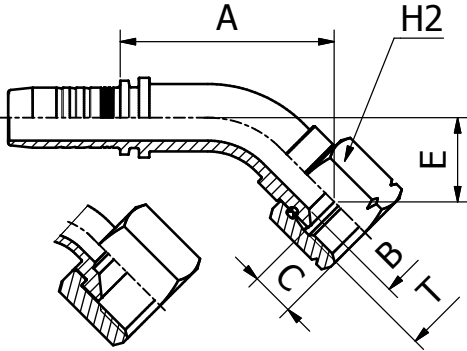


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	H1	H2		
M22711-12-16	19	- 12	3/4"	1.5/16" - 12		19.8	34.5	15.3	32.0	38.0		
M22711-16-16	25	- 16	1"	1.5/16" - 12		19.8	35.5	15.3	32.0	38.0		
M22711-20-20	31	- 20	1.1/4"	1.5/8" - 12		26.0	42.0	16.1	41.0	50.0		
M22711-24-24	38	- 24	1.1/2"	1.7/8" - 12		32.0	46.5	18.6	50.0	60.0		
M22711-32-32	51	- 32	2"	2.1/2" - 12		42.0	50.5	23.5	65.0	75.0		
M22711-04-04KR	6	- 4	1/4"	7/16" - 20		4.0	20.5	8.9	12.0	15.0		
M22711-04-05KR	6	- 4	1/4"	1/2" - 20		4.0	21.0	9.4	14.0	17.0		
M22711-04-06KR	6	- 4	1/4"	9/16" - 18		7.0	21.5	9.5	14.0	17.0		
M22711-06-04KR	10	- 6	3/8"	7/16" - 20		4.0	21.5	8.9	17.0	15.0		
M22711-06-05KR	10	- 6	3/8"	1/2" - 20		4.0	22.0	9.4	17.0	17.0		
M22711-06-06KR	10	- 6	3/8"	9/16" - 18		7.0	22.0	9.5	17.0	17.0		
M22711-06-08KR	10	- 6	3/8"	3/4" - 16		9.3	26.5	10.7	19.0	22.0		
M22711-08-08KR	12	- 8	1/2"	3/4" - 16		9.3	27.0	10.7	19.0	22.0		
M22711-08-10KR	12	- 8	1/2"	7/8" - 14		9.3	29.5	12.5	22.0	25.0		
M22711-08-12KR	12	- 8	1/2"	1.1/16" - 12		15.0	28.5	14.1	27.0	32.0		
M22711-10-08KR	16	- 10	5/8"	3/4" - 16		9.3	28.5	10.7	22.0	22.0		
M22711-10-10KR	16	- 10	5/8"	7/8" - 14		12.5	29.5	12.5	22.0	25.0		
M22711-10-12KR	16	- 10	5/8"	1.1/16" - 12		15.0	29.0	14.1	27.0	32.0		
M22711-12-08KR	19	- 12	3/4"	3/4" - 16		9.3	29.5	10.7	27.0	22.0		
M22711-12-10KR	19	- 12	3/4"	7/8" - 14		12.5	30.5	12.5	27.0	25.0		
M22711-12-12KR	19	- 12	3/4"	1.1/16" - 12		15.0	30.0	14.1	27.0	32.0		
M22711-16-12KR	25	- 16	1"	1.1/16" - 12		15.0	32.5	14.1	32.0	32.0		

SAE STANDARD CONNECTIONS

M22542/M22543

**45° JIC FEMALE SWEPT ELBOW
37° CONE SEAT
SAE J516 / ISO 12151-5**



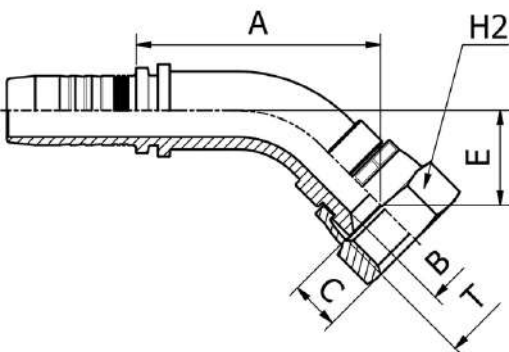
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22542-03-04	5	- 3	3/16"	7/16" - 20	4.0	35.0	8.7	14.5	17.0		
M22542-04-04	6	- 4	1/4"	7/16" - 20	4.0	35.5	8.7	14.5	17.0		
M22542-04-05	6	- 4	1/4"	1/2" - 20	4.0	35.5	9.1	14.5	17.0		
M22542-05-05	8	- 5	5/16"	1/2" - 20	5.5	37.5	9.1	14.0	17.0		
M22542-05-06	8	- 5	5/16"	9/16" - 18	7.0	38.0	9.2	14.5	19.0		
M22542-06-06	10	- 6	3/8"	9/16" - 18	7.0	42.0	9.2	16.5	19.0		
M22542-08-06	12	- 8	1/2"	9/16" - 18	7.0	43.0	9.2	16.5	19.0		
M22542-08-08	12	- 8	1/2"	3/4" - 16	9.3	52.0	10.2	20.0	22.0		
M22542-10-10	16	- 10	5/8"	7/8" - 14	12.5	62.0	12.3	25.5	27.0		
M22542-12-08	19	- 12	3/4"	3/4" - 16	9.3	53.5	10.2	20.0	22.0		
M22542-12-10	19	- 12	3/4"	7/8" - 14	12.5	63.5	12.3	25.0	27.0		
M22542-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	70.0	14.2	27.5	32.0		
M22542-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	69.5	14.3	27.5	36.0		
M22542-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	70.0	15.0	27.5	38.0		
M22542-16-12	25	- 16	1"	1.1/16" - 12	15.0	72.5	14.2	27.5	32.0		
M22542-16-16	25	- 16	1"	1.5/16" - 12	19.8	84.0	15.0	32.0	38.0		
M22542-16-20	25	- 16	1"	1.5/8" - 12	26.0	90.0	16.2	36.0	50.0		
M22542-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	103.5	16.2	41.5	50.0		
M22542-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	106.5	18.8	44.5	60.0		
M22542-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	119.0	18.8	46.5	60.0		
M22542-32-32	51	- 32	2"	2.1/2" - 12	44.0	163.0	24.0	68.0	75.0		
M22543-04-06	6	- 4	1/4"	9/16" - 18	4.0	35.5	9.8	14.0	19.0		
M22543-06-08	10	- 6	3/8"	3/4" - 16	7.0	41.0	10.1	14.0	22.0		
M22543-06-10	10	- 6	3/8"	7/8" - 14	9.3	42.5	12.4	15.5	27.0		
M22543-08-10	12	- 8	1/2"	7/8" - 14	9.3	49.5	12.4	17.0	27.0		
M22543-08-12	12	- 8	1/2"	1.1/16" - 12	12.5	49.5	14.1	17.0	32.0		
M22543-10-12	16	- 10	5/8"	1.1/16" - 12	12.5	60.0	14.1	24.0	32.0		

129 FITTINGS

SAE STANDARD CONNECTIONS

M22541KR

**45° JIC FEMALE SWEPT ELBOW
37° CONE SEAT
SAE J516 / ISO 12151-5**

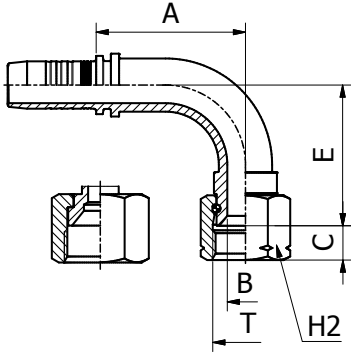


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22541-04-04KR	6	- 4	1/4"	7/16" - 20	4.2	34.5	8.9	13.5	15.0		
M22541-04-05KR	6	- 4	1/4"	1/2" - 20	4.0	35.0	9.4	14.0	17.0		
M22541-06-06KR	10	- 6	3/8"	9/16" - 18	7.0	42.0	9.5	16.0	17.0		
M22541-08-08KR	12	- 8	1/2"	3/4" - 16	9.3	52.0	10.7	20.0	22.0		
M22541-10-10KR	16	- 10	5/8"	7/8" - 14	12.5	61.0	12.5	22.5	25.0		
M22541-12-12KR	19	- 12	3/4"	1.1/16" - 12	15.0	69.0	14.1	26.5	32.0		

SAE STANDARD CONNECTIONS

M22592/M22593

90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5



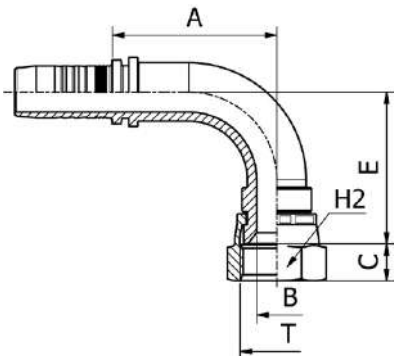
FITTINGS 130

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22592-04-04	6	- 4	1/4"	7/16" - 20	4.0	28.5	8.7	27.0	17.0		
M22592-04-05	6	- 4	1/4"	1/2" - 20	4.0	28.5	9.1	27.5	17.0		
M22592-05-05	8	- 5	5/16"	1/2" - 20	5.5	31.0	9.1	28.0	17.0		
M22592-05-06	8	- 5	5/16"	9/16" - 18	7.0	31.0	9.2	28.5	19.0		
M22592-06-05	10	- 6	3/8"	1/2" - 20	5.5	30.0	9.1	26.5	17.0		
M22592-06-06	10	- 6	3/8"	9/16" - 18	7.0	35.5	9.2	32.5	19.0		
M22592-08-06	12	- 8	1/2"	9/16" - 18	7.0	37.0	9.2	33.0	19.0		
M22592-08-08	12	- 8	1/2"	3/4" - 16	9.3	44.0	10.2	41.0	22.0		
M22592-10-10	16	- 10	5/8"	7/8" - 14	12.5	53.5	12.3	52.5	27.0		
M22592-12-10	19	- 12	3/4"	7/8" - 14	12.5	55.0	12.3	52.5	27.0		
M22592-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	62.0	14.2	58.0	32.0		
M22592-12-14	19	- 12	3/4"	1.3/16" - 12	15.0	63.0	14.3	58.0	36.0		
M22592-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	63.0	15.0	57.5	38.0		
M22592-16-16	25	- 16	1"	1.5/16" - 12	19.8	77.0	15.0	68.5	38.0		
M22592-16-20	25	- 16	1"	1.5/8" - 12	26.0	77.5	16.2	74.5	50.0		
M22592-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	90.5	16.2	86.5	50.0		
M22592-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	90.5	18.8	90.5	60.0		
M22592-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.0	108.0	18.8	100.5	60.0		
M22592-32-32	51	- 32	2"	2.1/2" - 12	44.0	142.0	24.0	137.0	75.0		
M22593-03-04	5	- 3	3/16"	7/16" - 20	3.0	26.0	8.5	23.5	15.0		
M22593-04-06	6	- 4	1/4"	9/16" - 18	4.0	29.5	9.8	28.0	19.0		
M22593-04-08	6	- 4	1/4"	3/4" - 16	7.0	29.5	10.0	30.5	22.0		
M22593-06-08	10	- 6	3/8"	3/4" - 16	7.0	36.5	10.1	29.5	22.0		
M22593-06-10	10	- 6	3/8"	7/8" - 14	9.3	36.5	12.4	31.5	27.0		
M22593-08-10	12	- 8	1/2"	7/8" - 14	9.3	45.0	12.4	36.0	27.0		
M22593-08-12	12	- 8	1/2"	1.1/16" - 12	12.5	45.0	14.1	36.0	32.0		
M22593-10-12	16	- 10	5/8"	1.1/16" - 12	12.5	51.5	14.1	50.0	32.0		

SAE STANDARD CONNECTIONS

M22591KR

90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5

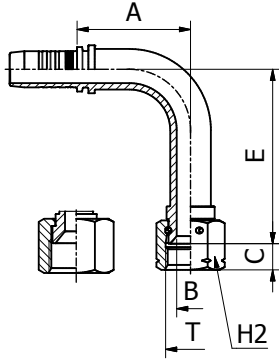


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22591-04-04KR	6	- 4	1/4"	7/16" - 20	4.2	28.5	8.9	26.0	15.0		
M22591-04-05KR	6	- 4	1/4"	1/2" - 20	4.0	28.5	9.4	26.5	17.0		
M22591-06-06KR	10	- 6	3/8"	9/16" - 18	7.0	35.5	9.5	32.0	17.0		
M22591-08-08KR	12	- 8	1/2"	3/4" - 16	9.3	44.0	10.7	40.5	22.0		
M22591-10-10KR	16	- 10	5/8"	7/8" - 14	12.5	53.5	12.5	47.0	25.0		
M22591-12-12KR	19	- 12	3/4"	1.1/16" - 12	15.0	62.0	14.1	57.0	32.0		
M22591-16-12KR	25	- 16	1"	1.1/16" - 12	15.0	62.0	14.1	57.0	32.0		

SAE STANDARD CONNECTIONS

M24792/M24793

90° JIC FEMALE LONG DROP ELBOW
37° CONE SEAT
SAE J516 / ISO 12151-5



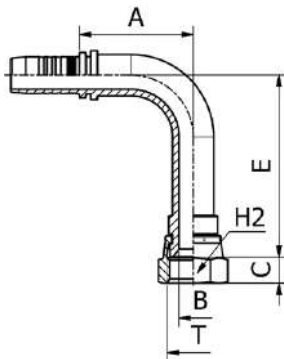
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M24792-04-04	6	- 4	1/4"	7/16" - 20	4.0	28.5	8.7	45.0	17.0		
M24792-04-05	6	- 4	1/4"	1/2" - 20	4.0	28.5	9.1	45.0	17.0		
M24792-06-06	10	- 6	3/8"	9/16" - 18	7.0	35.5	9.2	55.0	19.0		
M24792-08-08	12	- 8	1/2"	3/4" - 16	9.3	44.0	10.2	61.0	22.0		
M24792-10-10	16	- 10	5/8"	7/8" - 14	12.5	53.5	12.3	65.5	27.0		
M24792-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	62.0	14.2	94.5	32.0		
M24792-16-16	25	- 16	1"	1.5/16" - 12	19.8	77.5	15.0	110.0	38.0		
M24792-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	90.5	16.2	129.0	50.0		
M24793-04-06	6	- 4	1/4"	9/16" - 18	4.0	29.5	9.8	55.5	19.0		
M24793-06-08	10	- 6	3/8"	3/4" - 16	7.0	36.5	10.1	61.5	22.0		
M24793-08-10	12	- 8	1/2"	7/8" - 14	9.3	45.0	12.4	65.0	27.0		

131 FITTINGS

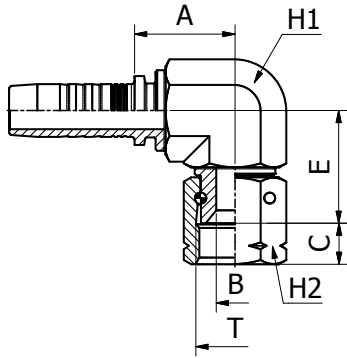
SAE STANDARD CONNECTIONS

M24791KR

90° JIC FEMALE LONG DROP ELBOW
37° CONE SEAT
SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M24791-04-04KR	6	- 4	1/4"	7/16" - 20	4.2	28.5	8.9	45.0	15.0		
M24791-06-06KR	10	- 6	3/8"	9/16" - 18	7.0	35.5	9.5	55.0	17.0		
M24791-08-08KR	12	- 8	1/2"	3/4" - 16	9.3	44.0	10.7	64.0	22.0		
M24791-10-10KR	16	- 10	5/8"	7/8" - 14	12.5	53.5	12.5	70.0	25.0		
M24791-12-12KR	19	- 12	3/4"	1.1/16" - 12	15.0	62.0	14.1	96.0	32.0		



SAE STANDARD CONNECTIONS

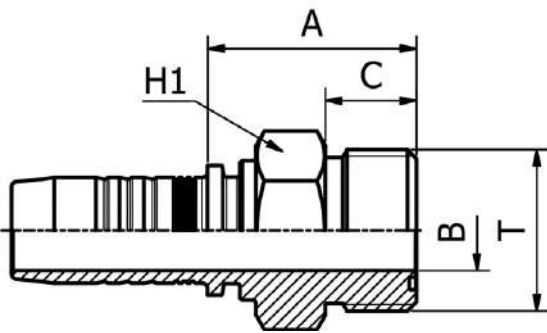
M22582F

**90° JIC FEMALE COMPACT ELBOW
37° CONE SEAT**

SAE J516 / ISO 12151-5 (THRUST-WIRE NUT)

FITTINGS 132

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H1	H2
M22582-04-04F	6	- 4	1/4"	7/16" - 20	4.0	20.0	8.7	20.5	14.0	17.0	
M22582-04-06F	6	- 4	1/4"	9/16" - 18	7.0	20.0	9.2	21.5	14.0	19.0	
M22582-06-06F	10	- 6	3/8"	9/16" - 18	7.0	23.0	9.2	24.0	19.0	19.0	
M22582-06-08F	10	- 6	3/8"	3/4" - 16	9.3	26.5	10.2	28.0	22.0	22.0	
M22582-08-08F	12	- 8	1/2"	3/4" - 16	9.3	25.0	10.2	28.0	22.0	22.0	
M22582-08-10F	12	- 8	1/2"	7/8" - 14	12.5	25.0	12.3	29.0	22.0	27.0	
M22582-12-12F	19	- 12	3/4"	1.1/16" - 12	15.0	37.5	14.2	33.0	27.0	32.0	
M22582-16-16F	25	- 16	1"	1.5/16" - 12	20.0	52.0	15.0	40.0	36.0	38.0	



SAE STANDARD CONNECTIONS

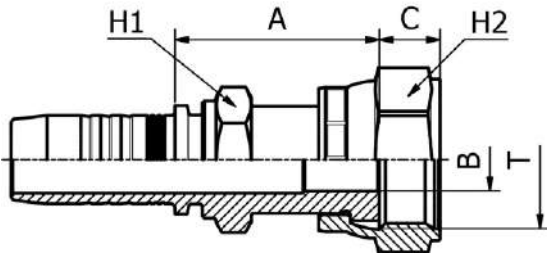
M12410

**ORFS MALE
SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
M12410-04-04	6	- 4	1/4"	9/16" - 18	4.0	24.0	9.8	16.0			
M12410-04-06	6	- 4	1/4"	11/16" - 16	6.7	26.5	11.2	19.0			
M12410-05-06	8	- 5	5/16"	11/16" - 16	6.7	27.0	11.2	19.0			
M12410-06-06	10	- 6	3/8"	11/16" - 16	6.7	27.5	11.2	19.0			
M12410-06-08	10	- 6	3/8"	13/16" - 16	9.3	30.0	12.8	22.0			
M12410-08-06	12	- 8	1/2"	11/16" - 16	6.7	29.0	11.2	22.0			
M12410-08-08	12	- 8	1/2"	13/16" - 16	9.3	30.5	12.8	22.0			
M12410-08-10	12	- 8	1/2"	1" - 14	12.5	35.0	15.5	27.0			
M12410-08-12	12	- 8	1/2"	1.3/16" - 12	15.0	37.5	17.0	32.0			
M12410-10-08	16	- 10	5/8"	13/16" - 16	9.3	30.5	12.8	22.0			
M12410-10-10	16	- 10	5/8"	1" - 14	12.5	34.5	15.5	27.0			
M12410-10-12	16	- 10	5/8"	1.3/16" - 12	15.0	37.5	17.0	32.0			
M12410-12-12	19	- 12	3/4"	1.3/16" - 12	15.0	39.0	17.0	32.0			
M12410-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	40.5	17.5	38.0			
M12410-16-16	25	- 16	1"	1.7/16" - 12	19.8	42.0	17.5	38.0			
M12410-16-20	25	- 16	1"	1.11/16" - 12	26.0	44.0	17.5	46.0			
M12410-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	46.5	17.5	46.0			
M12410-24-24	38	- 24	1.1/2"	2" - 12	32.0	48.5	17.5	55.0			

SAE STANDARD CONNECTIONS

M22411

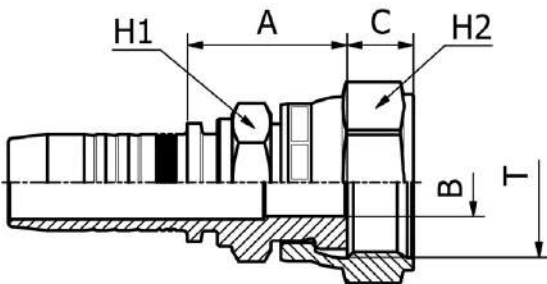


**ORFS FEMALE
SAE J516 / ISO 12151-1 PULLBACK TYPE
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M22411-04-04	6	- 4	1/4"	9/16" - 18	4.0	27.5	8.0	13.0	19.0		
M22411-04-06	6	- 4	1/4"	11/16" - 16	7.0	30.0	9.5	16.0	22.0		
M22411-04-08	6	- 4	1/4"	13/16" - 16	9.3	35.5	11.0	19.0	24.0		
M22411-05-04	8	- 5	5/16"	9/16" - 18	4.0	28.5	8.0	16.0	19.0		
M22411-05-06	8	- 5	5/16"	11/16" - 16	7.0	30.5	9.5	16.0	22.0		
M22411-06-04	10	- 6	3/8"	9/16" - 18	4.0	29.0	8.0	16.0	19.0		
M22411-06-06	10	- 6	3/8"	11/16" - 16	7.0	31.0	9.5	16.0	22.0		
M22411-06-08	10	- 6	3/8"	13/16" - 16	9.3	36.5	11.0	19.0	24.0		
M22411-08-06	12	- 8	1/2"	9/16" - 18	7.0	32.0	9.5	19.0	22.0		
M22411-08-08	12	- 8	1/2"	13/16" - 16	9.3	37.0	11.0	19.0	24.0		
M22411-08-10	12	- 8	1/2"	1" - 14	11.5	39.0	13.5	24.0	30.0		
M22411-08-12	12	- 8	1/2"	1.3/16" - 12	13.9	44.0	14.5	28.0	36.0		
M22411-10-08	16	- 10	5/8"	13/16" - 16	9.3	37.0	11.0	24.0	24.0		
M22411-10-10	16	- 10	5/8"	1" - 14	11.5	39.0	13.5	24.0	30.0		
M22411-10-12	16	- 10	5/8"	1.3/16" - 12	13.9	44.0	14.5	28.0	36.0		
M22411-12-10	19	- 12	3/4"	1" - 14	11.5	41.5	13.5	28.0	30.0		
M22411-12-12	19	- 12	3/4"	1.3/16" - 12	13.9	45.5	14.5	28.0	36.0		
M22411-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	48.5	15.0	36.0	41.0		
M22411-16-12	25	- 16	1"	1.3/16" - 12	13.9	48.0	13.5	36.0	36.0		
M22411-16-16	25	- 16	1"	1.7/16" - 12	19.8	49.5	15.0	36.0	41.0		
M22411-16-20	25	- 16	1"	1.11/16" - 12	26.0	52.0	13.6	41.0	50.0		
M22411-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	52.0	14.8	41.0	50.0		
M22411-20-24	31	- 20	1.1/4"	2" - 12	32.0	56.5	14.2	50.0	60.0		
M22411-24-24	38	- 24	1.1/2"	2" - 12	32.0	56.5	14.2	50.0	60.0		

SAE STANDARD CONNECTIONS

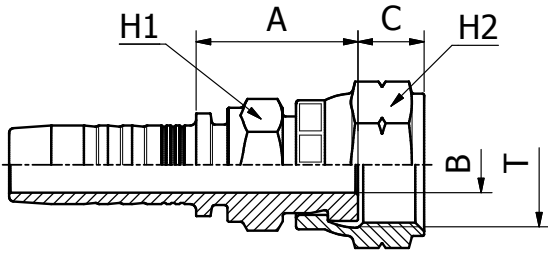
M27411



**ORFS FEMALE
SAE J516 / ISO 12151-1 SHORT TYPE
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M27411-04-04	6	- 4	1/4"	9/16" - 18	4.0	20.5	8.0	13.0	19.0		
M27411-04-06	6	- 4	1/4"	11/16" - 16	7.0	22.0	9.5	16.0	22.0		
M27411-05-06	8	- 5	5/16"	11/16" - 16	7.0	25.5	9.5	16.0	22.0		
M27411-06-06	10	- 6	3/8"	11/16" - 16	7.0	26.0	9.5	16.0	22.0		
M27411-06-08	10	- 6	3/8"	13/16" - 16	9.3	26.5	11.0	19.0	24.0		
M27411-08-08	12	- 8	1/2"	13/16" - 16	9.3	26.5	11.0	19.0	24.0		
M27411-08-10	12	- 8	1/2"	1" - 14	11.5	27.5	12.5	24.0	30.0		
M27411-08-12	12	- 8	1/2"	1.3/16" - 12	13.9	31.0	13.5	28.0	36.0		
M27411-10-10	16	- 10	5/8"	1" - 14	11.5	28.0	12.5	24.0	30.0		
M27411-10-12	16	- 10	5/8"	1.3/16" - 12	13.9	31.0	13.5	28.0	36.0		
M27411-12-12	19	- 12	3/4"	1.3/16" - 12	13.9	32.5	13.5	28.0	36.0		
M27411-16-16	25	- 16	1"	1.7/16" - 12	19.8	36.5	13.5	36.0	41.0		

SAE STANDARD CONNECTIONS

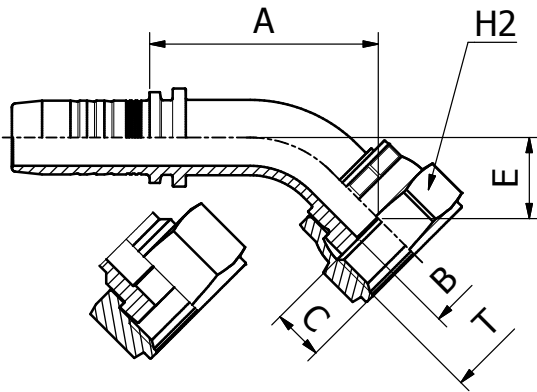


M27411KR

**ORFS FEMALE
SAE J516 / ISO 12151-1 SHORT TYPE
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
M27411-04-04KR	6	- 4	1/4"	9/16" - 18	4.0	20.5	8.0	14.0	17.0		
M27411-06-06KR	10	- 6	3/8"	11/16" - 16	7.0	23.0	9.5	17.0	22.0		
M27411-08-08KR	12	- 8	1/2"	13/16" - 16	9.3	27.0	11.0	19.0	24.0		

FITTINGS 134



SAE STANDARD CONNECTIONS

M22441/M22443

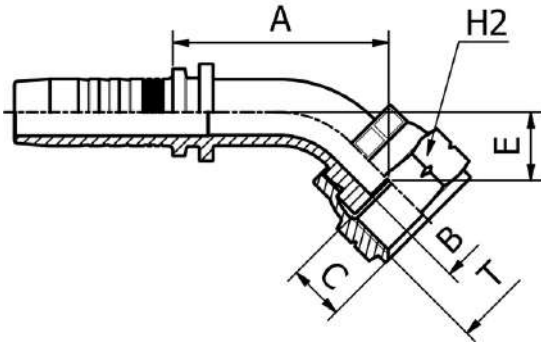
**45° ORFS FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M22441-08-06	12	- 8	1/2"	11/16" - 16	7.0	32.5	9.5	11.0	22.0	
M22441-12-10	19	- 12	3/4"	1" - 14	11.5	51.0	12.5	16.5	30.0	
M22441-16-12	25	- 16	1"	1.3/16" - 12	13.9	66.0	13.5	21.5	36.0	
M22443-04-04	6	- 4	1/4"	9/16" - 18	4.0	31.0	8.2	10.5	17.0	
M22443-04-06	6	- 4	1/4"	11/16" - 16	7.0	31.0	9.5	10.5	22.0	
M22443-05-06	8	- 5	5/16"	11/16" - 16	7.0	34.0	9.5	10.5	22.0	
M22443-06-06	10	- 6	3/8"	11/16" - 16	6.0	32.5	9.5	11.0	22.0	
M22443-06-08	10	- 6	3/8"	13/16" - 16	9.3	34.0	11.0	12.5	24.0	
M22443-08-08	12	- 8	1/2"	13/16" - 16	9.0	42.0	11.0	13.0	24.0	
M22443-08-10	12	- 8	1/2"	1" - 14	11.5	42.0	13.5	13.5	30.0	
M22443-08-12	12	- 8	1/2"	1.3/16" - 12	13.9	46.5	14.5	18.5	36.0	
M22443-10-10	16	- 10	5/8"	1" - 14	11.5	49.0	13.5	16.0	30.0	
M22443-10-12	16	- 10	5/8"	1.3/16" - 12	13.9	51.5	14.5	18.5	36.0	
M22443-12-12	19	- 12	3/4"	1.3/16" - 12	13.9	60.5	14.5	21.5	36.0	
M22443-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	60.0	14.8	21.0	41.0	
M22443-16-16	25	- 16	1"	1.7/16" - 12	19.8	72.0	14.8	23.5	41.0	
M22443-16-20	25	- 16	1"	1.11/16" - 12	26.0	74.0	14.8	25.0	50.0	
M22443-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	82.0	14.8	27.0	50.0	
M22443-24-24	38	- 24	1.1/2"	2" - 12	32.0	98.0	14.8	31.5	60.0	

SAE STANDARD CONNECTIONS

M22441KR

45° ORFS FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1

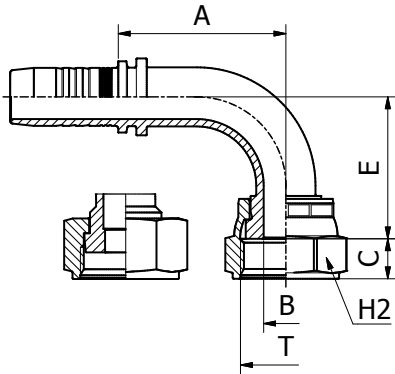


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22441-04-04KR	6	- 4	1/4"	9/16" - 18	4.2	30.0	8.0	10.5	17.0		
M22441-06-06KR	10	- 6	3/8"	11/16" - 16	6.0	31.5	9.5	11.0	22.0		
M22441-08-08KR	12	- 8	1/2"	13/16" - 16	9.0	42.5	11.0	13.5	24.0		

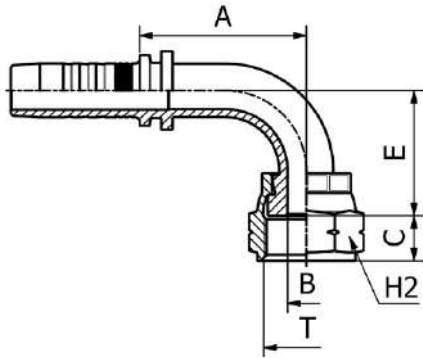
SAE STANDARD CONNECTIONS

M22491/M22493

90° ORFS FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22491-10-10032	16	- 10	5/8"	1" - 14	11.0	42.0	7.5	32.0	30.0		
M22491-06-04	10	- 6	3/8"	9/16" - 18	4.0	28.0	8.0	23.0	19.0		
M22491-08-06	12	- 8	1/2"	11/16" - 16	7.0	30.0	9.5	24.5	22.0		
M22491-10-08	16	- 10	5/8"	13/16" - 16	9.3	41.0	11.0	34.0	24.0		
M22491-12-10	19	- 12	3/4"	1" - 14	11.5	49.0	12.5	38.5	30.0		
M22491-16-12	25	- 16	1"	1.3/16" - 12	13.9	57.5	13.5	48.0	36.0		
M22493-04-04	6	- 4	1/4"	9/16" - 18	4.0	27.5	8.2	22.0	17.0		
M22493-04-06	6	- 4	1/4"	11/16" - 16	7.0	27.5	9.5	22.0	22.0		
M22493-05-06	8	- 5	5/16"	11/16" - 16	7.0	32.0	9.5	23.0	22.0		
M22493-06-06	10	- 6	3/8"	11/16" - 16	6.0	30.0	9.5	24.0	22.0		
M22493-06-08	10	- 6	3/8"	13/16" - 16	9.3	30.0	11.0	26.5	24.0		
M22493-08-08	12	- 8	1/2"	13/16" - 16	9.0	40.5	11.0	30.0	24.0		
M22493-08-10	12	- 8	1/2"	1" - 14	11.5	40.0	13.5	30.5	30.0		
M22493-08-12	12	- 8	1/2"	1.3/16" - 12	13.9	39.5	14.5	37.5	36.0		
M22493-10-10	16	- 10	5/8"	1" - 14	11.5	48.0	13.5	37.5	30.0		
M22493-10-12	16	- 10	5/8"	1.3/16" - 12	13.9	48.0	14.5	41.0	36.0		
M22493-12-12	19	- 12	3/4"	1.3/16" - 12	13.9	56.5	14.5	48.0	36.0		
M22493-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	56.5	14.8	47.5	41.0		
M22493-16-16	25	- 16	1"	1.7/16" - 12	19.8	71.5	14.8	56.0	41.0		
M22493-16-20	25	- 16	1"	1.11/16" - 12	26.0	71.5	14.8	58.5	50.0		
M22493-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	83.0	14.8	66.0	50.0		
M22493-24-24	38	- 24	1.1/2"	2" - 12	32.0	102.0	14.8	79.5	60.0		



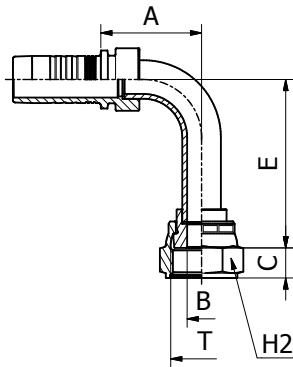
SAE STANDARD CONNECTIONS

M22491KR

90° ORFS FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1

FITTINGS 136

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M22491-04-04KR	6	- 4	1/4"	9/16" - 18	4.2	26.5	8.0	22.0	17.0		
M22491-04-06KR	6	- 4	1/4"	11/16" - 16	6.0	26.3	9.5	22.0	22.0		
M22491-06-06KR	10	- 6	3/8"	11/16" - 16	6.0	29.0	9.5	24.0	22.0		
M22491-06-08KR	10	- 6	3/8"	13/16" - 16	9.0	35.5	11.0	28.5	24.0		
M22491-08-08KR	12	- 8	1/2"	13/16" - 16	9.0	40.5	11.0	30.5	24.0		



SAE STANDARD CONNECTIONS

M24491 LONG DROP

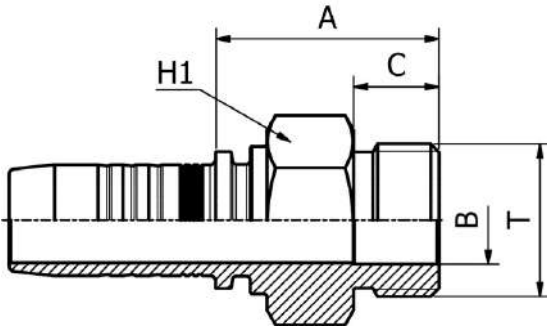
90° ORFS FEMALE LONG DROP ELBOW
SAE J516 / ISO 12151-1
(CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M24491-04-04	6	- 4	1/4"	9/16" - 18	4.4	25.0	8.0	46.0	17.0		
M24491-04-06	6	- 4	1/4"	11/16" - 16	7.0	26.5	9.5	53.5	22.0		
M24491-05-06	8	- 5	5/16"	11/16" - 16	6.7	31.5	9.5	54.0	22.0		
M24491-06-06	10	- 6	3/8"	11/16" - 16	6.7	32.0	9.5	54.0	22.0		
M24491-06-08	10	- 6	3/8"	13/16" - 16	6.7	32.0	11.0	54.0	24.0		
M24491-08-08	12	- 8	1/2"	13/16" - 16	9.6	37.0	11.0	64.0	24.0		
M24491-08-10	12	- 8	1/2"	1" - 14	9.6	37.0	12.5	64.5	30.0		
M24491-10-10	16	- 10	5/8"	1" - 14	12.0	41.0	13.0	70.0	30.0		
M24491-10-12	16	- 10	5/8"	1.3/16" - 12	12.7	41.0	13.5	73.0	36.0		
M24491-12-12	19	- 12	3/4"	1.3/16" - 12	15.0	58.5	13.5	96.0	36.0		
M24491-16-16	25	- 16	1"	1.7/16" - 12	19.8	71.5	13.5	114.0	41.0		
M24491-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	82.5	13.6	129.0	50.0		

SAE STANDARD CONNECTIONS

M13010

SAE MALE O-RING BOSS TYPE
SAE J516 / ISO 11926

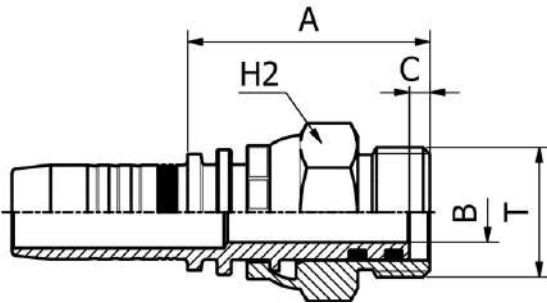


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M13010-04-04	6	- 4	1/4"	7/16" - 20	4.4	24.0	9.1	14.0			
M13010-04-06	6	- 4	1/4"	9/16" - 18	7.5	24.5	9.9	17.0			
M13010-06-06	10	- 6	3/8"	9/16" - 18	7.5	25.5	9.9	17.0			
M13010-06-08	10	- 6	3/8"	3/4" - 16	9.9	28.5	11.1	22.0			
M13010-06-10	10	- 6	3/8"	7/8" - 14	12.3	31.5	12.7	25.0			
M13010-08-08	12	- 8	1/2"	3/4" - 16	9.9	29.0	11.1	22.0			
M13010-08-10	12	- 8	1/2"	7/8" - 14	12.3	32.0	12.7	25.0			
M13010-08-12	12	- 8	1/2"	1.1/16" - 12	15.5	38.5	15.1	32.0			
M13010-10-10	16	- 10	5/8"	7/8" - 14	12.5	32.0	12.7	25.0			
M13010-10-12	16	- 10	5/8"	1.1/16" - 12	15.5	37.5	15.1	32.0			
M13010-12-12	19	- 12	3/4"	1.1/16" - 12	15.5	39.5	15.1	32.0			
M13010-12-16	19	- 12	3/4"	1.5/16" - 12	21.5	40.0	15.1	38.0			
M13010-16-16	25	- 16	1"	1.5/16" - 12	21.5	41.0	15.1	38.0			
M13010-20-20	31	- 20	1.1/4"	1.5/8" - 12	27.5	43.5	15.1	46.0			

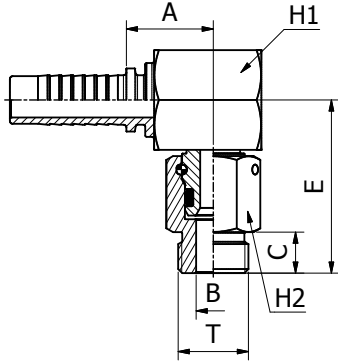
SAE STANDARD CONNECTIONS

M14310

SAE SWIVEL MALE O-RING BOSS TYPE
SAE J516 / ISO 11926



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H2			
M14310-04-04	6	- 4	1/4"	7/16" - 20	4.0	43.0	9.1	17.0			
M14310-04-06	6	- 4	1/4"	9/16" - 18	7.0	44.0	9.9	22.0			
M14310-06-06	10	- 6	3/8"	9/16" - 18	7.0	48.0	9.9	22.0			
M14310-06-08	10	- 6	3/8"	3/4" - 16	9.3	47.0	11.1	22.0			
M14310-08-08	12	- 8	1/2"	3/4" - 16	9.3	53.0	11.1	27.0			
M14310-08-10	12	- 8	1/2"	7/8" - 14	9.3	41.5	13.0	27.0			
M14310-08-12	12	- 8	1/2"	1.1/16" - 12	12.5	49.5	15.0	32.0			
M14310-10-10	16	- 10	5/8"	7/8" - 14	9.3	41.5	13.0	27.0			
M14310-12-12	19	- 12	3/4"	1.1/16" - 12	12.5	50.5	15.0	32.0			



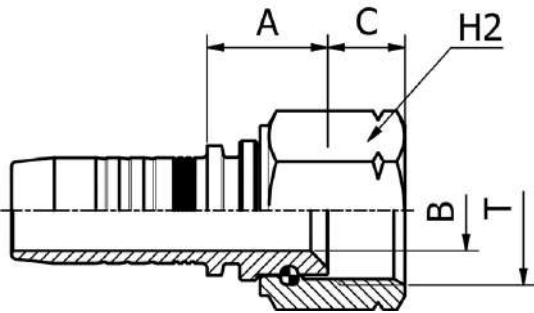
SAE STANDARD CONNECTIONS

M14390

90° SAE SWIVEL MALE O-RING BOSS TYPE
SAE J516 / ISO 11926

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H1	H2
M14390-06-06	10	- 6	3/8"	9/16" - 18	5.7	20.0	9.9	40.0	22.0	17.0	
M14390-06-08	10	- 6	3/8"	3/4" - 16	9.3	20.0	11.1	44.5	22.0	22.0	
M14390-08-08	12	- 8	1/2"	3/4" - 16	9.3	23.5	11.1	47.0	27.0	22.0	
M14390-08-10	12	- 8	1/2"	7/8" - 14	9.8	23.5	13.0	47.0	27.0	27.0	
M14390-10-10	16	- 10	5/8"	7/8" - 14	9.8	23.5	13.0	47.0	27.0	27.0	
M14390-12-12	19	- 12	3/4"	1.1/16" - 12	13.0	28.0	15.0	58.5	34.0	32.0	

FITTINGS 138



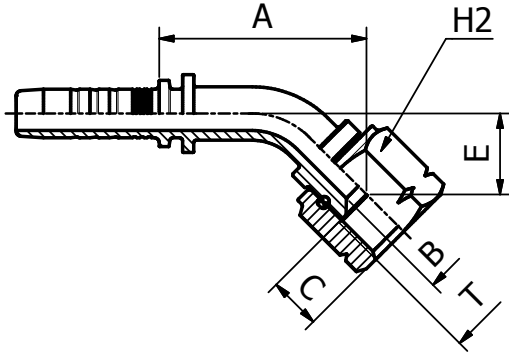
SAE STANDARD CONNECTIONS

M22612

SAE FEMALE 45° CONE SEAT
SAE J516/J512
(THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M22612-04-04	6	- 4	1/4"	7/16" - 20	4.0	15.5	8.7	17.0			
M22612-05-06	8	- 5	5/16"	5/8" - 18	7.0	16.0	10.8	22.0			
M22612-06-06	10	- 6	3/8"	5/8" - 18	7.0	16.5	10.8	22.0			
M22612-12-12	19	- 12	3/4"	1.1/16" - 14	15.0	22.5	14.4	32.0			

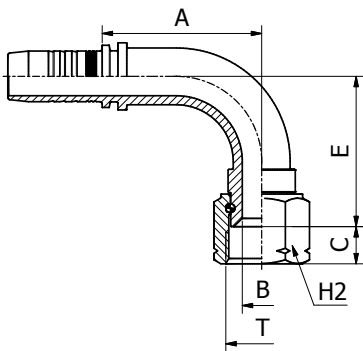
SAE STANDARD CONNECTIONS



M22642

**45° SAE FEMALE SWEPT ELBOW 45° CONE SEAT
SAE J516/J512
(THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M22642-06-06	10	- 6	3/8"	5/8" - 18	7.0	42.5	10.8	16.5	22.0		



SAE STANDARD CONNECTIONS

M22692

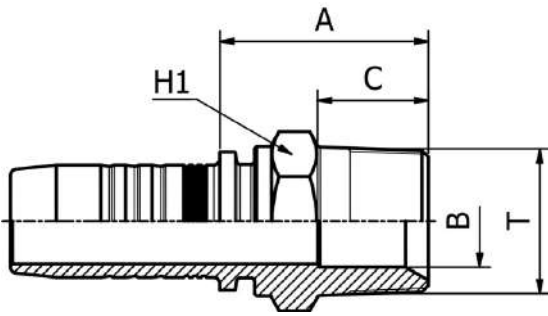
**90° SAE FEMALE SWEPT ELBOW 45° CONE SEAT
SAE J516/J512
(THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M22692-04-04	6	- 4	1/4"	7/16" - 20	4.0	28.5	8.7	27.0	17.0		
M22692-06-06	10	- 6	3/8"	5/8" - 18	7.0	35.5	10.8	33.0	22.0		
M22692-12-12	19	- 12	3/4"	1.1/16" - 14	15.0	62.0	14.4	58.0	32.0		

SAE STANDARD CONNECTIONS

M12810

NPTF MALE 60° CONE SEAT
SAE J516/J514

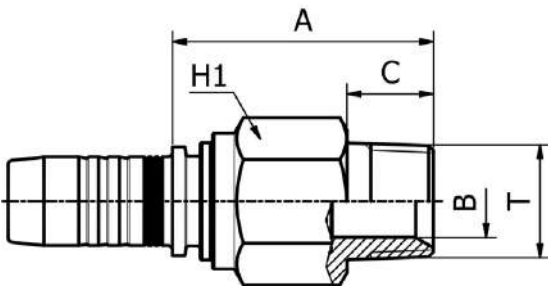


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M12810-03-02	5	- 3	3/16"	1/8" - 27	3.0	23.5	10.0	12.0			
M12810-03-04	5	- 3	3/16"	1/4" - 18	5.5	29.0	14.5	14.0			
M12810-04-02	6	- 4	1/4"	1/8" - 27	4.0	24.0	10.0	12.0			
M12810-04-04	6	- 4	1/4"	1/4" - 18	5.5	29.0	14.5	14.0			
M12810-04-06	6	- 4	1/4"	3/8" - 18	9.3	27.5	14.5	19.0			
M12810-04-08	6	- 4	1/4"	1/2" - 14	9.3	33.5	19.2	24.0			
M12810-05-04	8	- 5	5/16"	1/4" - 18	5.5	29.5	14.5	14.0			
M12810-05-06	8	- 5	5/16"	3/8" - 18	9.3	32.0	14.5	19.0			
M12810-06-04	10	- 6	3/8"	1/4" - 18	5.5	30.0	14.5	14.0			
M12810-06-06	10	- 6	3/8"	3/8" - 18	9.3	28.5	14.5	19.0			
M12810-06-08	10	- 6	3/8"	1/2" - 14	12.5	34.5	19.2	24.0			
M12810-08-06	12	- 8	1/2"	3/8" - 18	9.3	29.0	14.5	19.0			
M12810-08-08	12	- 8	1/2"	1/2" - 14	12.5	35.0	19.2	24.0			
M12810-08-12	12	- 8	1/2"	3/4" - 14	15.5	35.5	19.2	27.0			
M12810-10-08	16	- 10	5/8"	1/2" - 14	12.5	38.5	19.2	24.0			
M12810-10-12	16	- 10	5/8"	3/4" - 14	16.0	40.0	19.2	27.0			
M12810-12-08	19	- 12	3/4"	1/2" - 14	12.5	36.5	19.2	27.0			
M12810-12-12	19	- 12	3/4"	3/4" - 14	16.0	36.5	19.2	27.0			
M12810-12-16	19	- 12	3/4"	1" - 11.5	19.8	46.0	24.2	36.0			
M12810-16-12	25	- 16	1"	3/4" - 14	15.5	39.0	19.2	32.0			
M12810-16-16	25	- 16	1"	1" - 11.5	19.8	44.0	24.2	36.0			
M12810-16-20	25	- 16	1"	1.1/4" - 11.5	26.0	56.5	25.0	46.0			
M12810-20-20	31	- 20	1.1/4"	1.1/4" - 11.5	26.0	56.5	25.0	46.0			
M12810-24-24	38	- 24	1.1/2"	1.1/2" - 11.5	32.0	57.5	26.0	50.0			
M12810-32-32	51	- 32	2"	2" - 11.5	45.0	64.5	26.5	65.0			
M12810-40-40	63	- 40	2.1/2"	2.1/2" - 8	55.4	78.0	39.9	80.0			
M12810-48-48	76	- 48	3"	3" - 8	68.9	86.0	41.5	100.0			

SAE STANDARD CONNECTIONS

M14110R

NPTF SWIVEL MALE 60° CONE SEAT
SAE J516/J514

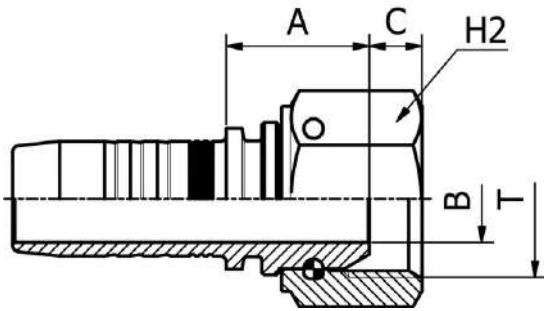


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M14110-04-02R	6	- 4	1/4"	1/8" - 27	3.0	42.0	10.0	17.0			
M14110-04-04R	6	- 4	1/4"	1/4" - 18	4.0	46.5	14.5	17.0			
M14110-04-06R	6	- 4	1/4"	3/8" - 18	7.0	46.5	14.5	19.0			
M14110-06-04R	10	- 6	3/8"	1/4" - 18	4.0	50.5	14.5	22.0			
M14110-06-06R	10	- 6	3/8"	3/8" - 18	7.0	50.5	14.5	22.0			
M14110-06-08R	10	- 6	3/8"	1/2" - 14	9.3	55.0	19.2	24.0			
M14110-08-06R	12	- 8	1/2"	3/8" - 18	7.0	54.5	14.5	27.0			
M14110-08-08R	12	- 8	1/2"	1/2" - 14	9.3	59.0	19.2	27.0			
M14110-12-12R	19	- 12	3/4"	3/4" - 14	16.0	58.0	19.2	32.0			
M14110-16-16R	25	- 16	1"	1" - 11.5	19.8	66.0	24.2	38.0			

SAE STANDARD CONNECTIONS

M22812

**NPSM FEMALE 60° CONE
SAE J516/J514
(THRUST-WIRE NUT)**

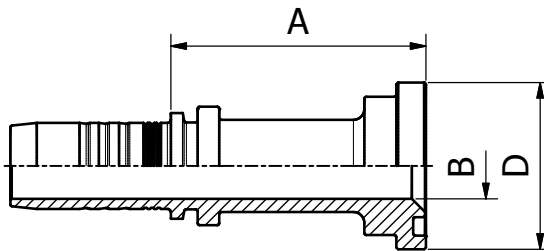


PART. REF.	HOSE BORE			Thread	T	DIMENSIONS mm					
	DN	Dash	inch			B	A	C	H2		
M22812-04-04	6	- 4	1/4"	1/4" - 18	4.0	17.5	4.2	19.0			
M22812-06-04	10	- 6	3/8"	1/4" - 18	4.1	18.0	4.2	19.0			
M22812-06-06	10	- 6	3/8"	3/8" - 18	7.0	21.0	6.0	22.0			
M22812-08-08	12	- 8	1/2"	1/2" - 14	9.3	23.0	6.5	27.0			
M22812-12-12	19	- 12	3/4"	3/4" - 14	15.0	24.5	9.0	32.0			
M22812-16-16	25	- 16	1"	1" - 11.5	19.8	27.5	10.5	38.0			

SAE STANDARD CONNECTIONS

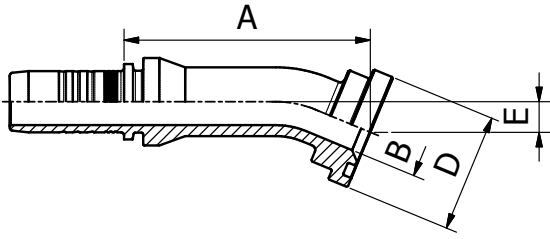
M23311

**ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3**



PART. REF.	HOSE BORE			FLANGE	inch	DIMENSIONS mm				
	DN	Dash	inch			B	A	D		
M23311-08-08	12	-8	1/2"	1/2"	9.3	51.0	30.3			
M23311-08-12	12	-8	1/2"	3/4"	15.1	58.0	38.0			
M23311-10-08	16	-10	5/8"	1/2"	9.3	51.0	30.3			
M23311-10-12	16	-10	5/8"	3/4"	15.0	65.5	38.0			
M23311-10-24	16	-10	5/8"	1.1/2"	32.0	69.5	60.5			
M23311-12-12	19	-12	3/4"	3/4"	15.0	58.0	38.0			
M23311-12-16	19	-12	3/4"	1"	20.0	58.0	44.6			
M23311-12-20	19	-12	3/4"	1.1/4"	26.0	69.5	51.0			
M23311-16-12	25	-16	1"	3/4"	15.0	60.5	38.0			
M23311-16-16	25	-16	1"	1"	19.8	64.5	44.6			
M23311-16-20	25	-16	1"	1.1/4"	26.0	70.5	51.0			
M23311-20-12	31	-20	1.1/4"	3/4"	15.0	61.0	38.0			
M23311-20-16	31	-20	1.1/4"	1"	19.8	64.5	44.6			
M23311-20-20	31	-20	1.1/4"	1.1/4"	26.0	70.5	51.0			
M23311-20-24	31	-20	1.1/4"	1.1/2"	32.0	72.5	60.5			
M23311-20-32	31	-20	1.1/4"	2"	42.0	75.5	71.6			
M23311-24-24	38	-24	1.1/2"	1.1/2"	32.0	75.5	60.5			
M23311-24-32	38	-24	1.1/2"	2"	42.0	75.5	71.6			
M23311-32-32	51	-32	2"	2"	42.0	79.0	71.6			
M23311-32-40	51	-32	2"	2.1/2"	56.0	81.0	84.3			
M23311-38-40	60	-38	2.3/8"	2.1/2"	50.5	84.0	84.3			
M23311-40-32	63	-40	2.1/2"	2"	42.0	78.5	71.6			
M23311-40-40	63	-40	2.1/2"	2.1/2"	55.4	84.0	84.3			
M23311-40-48	63	-40	2.1/2"	3"	68.9	79.0	101.6			
M23311-40-56	63	-40	2.1/2"	3.1/2"	79.0	90.5	114.3			
M23311-40-64	63	-40	2.1/2"	4"	90.0	96.5	127.0			
M23311-48-48	76	-48	3"	3"	68.9	85.5	101.6			
M23311-56-56	89	-56	3.1/2"	3.1/2"	79.0	94.5	114.3			
M23311-64-64	102	-64	4"	4"	90.0	100.5	127.0			

SAE STANDARD CONNECTIONS



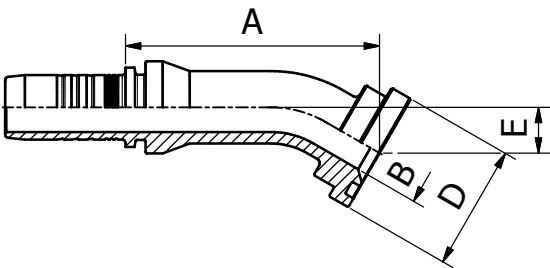
M23321

22.5° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23321-08-08	12	-8	1/2"	1/2"		9.3	64.0	30.3	8.0			
M23321-12-12	19	-12	3/4"	3/4"		15.0	74.5	38.0	10.0			
M23321-12-16	19	-12	3/4"	1"		20.0	74.5	44.6	10.0			
M23321-16-16	25	-16	1"	1"		19.8	89.0	44.6	11.5			
M23321-16-20	25	-16	1"	1.1/4"		26.0	88.5	51.0	11.5			
M23321-16-24	25	-16	1"	1.1/2"		32.0	88.5	60.5	12.0			
M23321-20-20	31	-20	1.1/4"	1.1/4"		26.0	100.0	51.0	12.0			
M23321-20-20018	31	-20	1.1/4"	1.1/4"		26.0	99.0	51.0	18.0			
M23321-20-24	31	-20	1.1/4"	1.1/2"		32.0	102.0	60.5	13.0			
M23321-24-24	38	-24	1.1/2"	1.1/2"		32.0	116.5	60.5	14.0			
M23321-24-24023	38	-24	1.1/2"	1.1/2"		32.0	115.0	60.5	23.0			
M23321-24-32	38	-24	1.1/2"	2"		42.0	116.5	71.6	14.0			
M23321-32-32	51	-32	2"	2"		42.0	134.5	71.6	15.0			
M23321-40-40	63	-40	2.1/2"	2.1/2"		52.0	80.0	84.3	16.5			
M23321-40-40A150	63	-40	2.1/2"	2.1/2"		52.0	151.0	84.3	17.5			
M23321-40-48	63	-40	2.1/2"	3"		61.0	107.5	101.6	20.5			
M23321-48-48	76	-48	3"	3"		61.0	111.0	101.6	20.5			

All items are made from solid with the exception of M23321-40-40, M23321-40-48, M23321-48-48

SAE STANDARD CONNECTIONS



M23331

30° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

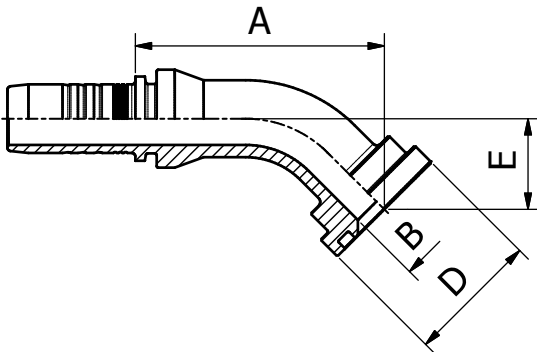
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23331-08-08	12	-8	1/2"	1/2"		9.3	62.5	30.3	11.0			
M23331-08-12	12	-8	1/2"	3/4"		15.0	63.5	38.0	11.5			
M23331-12-12	19	-12	3/4"	3/4"		15.0	73.0	38.0	14.0			
M23331-12-16	19	-12	3/4"	1"		20.0	73.0	44.6	14.0			
M23331-16-16	25	-16	1"	1"		19.8	87.0	44.6	16.5			
M23331-16-20	25	-16	1"	1.1/4"		26.0	87.0	51.0	16.5			
M23331-20-20	31	-20	1.1/4"	1.1/4"		26.0	98.0	51.0	17.5			
M23331-20-24	31	-20	1.1/4"	1.1/2"		32.0	100.0	60.5	18.5			
M23331-20-24044	31	-20	1.1/4"	1.1/2"		32.0	131.5	60.5	44.0			
M23331-24-24	38	-24	1.1/2"	1.1/2"		32.0	114.5	60.5	20.0			
M23331-24-32	38	-24	1.1/2"	2"		42.0	114.5	71.6	20.0			
M23331-32-32	51	-32	2"	2"		42.0	132.0	71.6	22.0			
M23331-40-40	63	-40	2.1/2"	2.1/2"		52.0	87.5	84.3	24.0			
M23331-40-40A150	63	-40	2.1/2"	2.1/2"		52.0	149.0	84.3	26.0			
M23331-40-48	63	-40	2.1/2"	3"		52.0	85.0	101.6	24.5			
M23331-48-48	76	-48	3"	3"		61.0	117.5	101.6	31.5			

All items are made from solid with the exception of M23331-40-40, M23331-40-48, M23331-48-48

SAE STANDARD CONNECTIONS

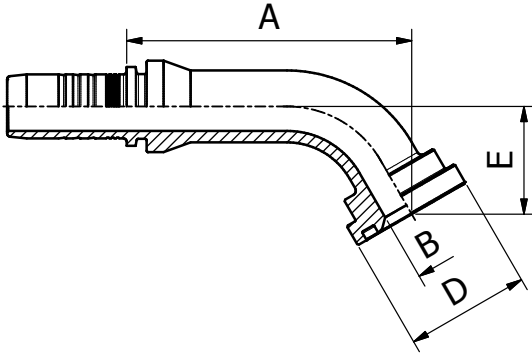
M23341

45° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23341-06-08	10	-6	3/8"	1/2"		9.3	52.5	30.0	17.5			
M23341-08-08	12	-8	1/2"	1/2"		9.3	58.5	30.3	18.5			
M23341-08-12	12	-8	1/2"	3/4"		15.0	59.5	38.0	19.0			
M23341-08-16	12	-8	1/2"	1"		19.8	59.5	44.6	19.0			
M23341-10-12	16	-10	5/8"	3/4"		15.0	61.0	38.0	22.0			
M23341-12-12	19	-12	3/4"	3/4"		15.0	71.0	38.0	26.0			
M23341-12-16	19	-12	3/4"	1"		20.0	68.5	44.6	23.0			
M23341-16-12	25	-16	1"	3/4"		15.0	74.5	38.0	23.0			
M23341-16-16	25	-16	1"	1"		19.8	81.5	44.6	27.5			
M23341-16-16032	25	-16	1"	1"		19.8	86.0	44.5	32.0			
M23341-16-20	25	-16	1"	1.1/4"		26.0	81.5	51.0	27.5			
M23341-20-16	31	-20	1.1/4"	1"		19.8	84.5	44.6	29.5			
M23341-20-20	31	-20	1.1/4"	1.1/4"		26.0	92.0	51.0	29.5			
M23341-20-20038	31	-20	1.1/4"	1.1/4"		26.0	100.5	50.9	38.0			
M23341-20-24	31	-20	1.1/4"	1.1/2"		32.0	93.5	60.5	31.0			
M23341-24-24	38	-24	1.1/2"	1.1/2"		32.0	107.5	60.5	34.5			
M23341-24-24044	38	-24	1.1/2"	1.1/2"		32.0	117.0	60.5	44.0			
M23341-24-32	38	-24	1.1/2"	2"		42.0	107.5	71.6	34.5			
M23341-32-20	51	-32	2"	1.1/4"		26.0	128.5	51.0	32.0			
M23341-32-32	51	-32	2"	2"		42.0	124.0	71.6	39.0			
M23341-32-32056	51	-32	2"	2"		42.0	141.0	71.5	56.0			
M23341-32-40	51	-32	2"	2.1/2"		56.0	136.5	84.3	49.5			
M23341-40-32	63	-40	2.1/2"	2"		42.0	152.0	71.6	48.5			
M23341-40-40	63	-40	2.1/2"	2.1/2"		52.0	95.0	84.3	48.5			
M23341-40-40A140	63	-40	2.1/2"	2.1/2"		52.0	141.0	84.3	46.0			
M23341-40-48	63	-40	2.1/2"	3"		61.0	117.5	101.6	53.5			
M23341-48-48	76	-48	3"	3"		58.0	125.5	101.6	53.5			
M23341-56-56	89	-56	3.1/2"	3.1/2"		79.0	139.0	114.3	68.0			
M23341-56-64	89	-56	3.1/2"	4"		79.0	124.5	127.0	53.5			
M23341-64-64	102	-64	4"	4"		90.0	132.0	127.0	56.5			

All items are made from solid with the exception of M23341-40-40, M23341-40-48, M23341-48-48, M23341-56-56, M23341-56-64, M23341-64-64.



SAE STANDARD CONNECTIONS

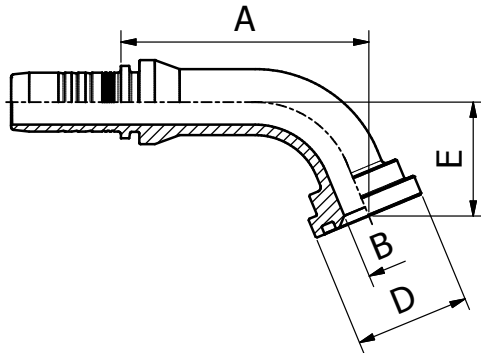
M23361

60° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

FITTINGS 144

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23361-08-08	12	-8	1/2"	1/2"		9.3	71.5	30.3	26.0			
M23361-08-12	12	-8	1/2"	3/4"		15.0	72.0	38.0	26.5			
M23361-12-12	19	-12	3/4"	3/4"		15.0	87.0	38.0	33.0			
M23361-12-16	19	-12	3/4"	1"		20.0	87.0	44.6	33.0			
M23361-16-16	25	-16	1"	1"		19.8	104.0	44.6	39.0			
M23361-16-20	25	-16	1"	1.1/4"		26.0	104.0	51.0	39.0			
M23361-20-20	31	-20	1.1/4"	1.1/4"		26.0	120.0	51.0	43.0			
M23361-20-20065	31	-20	1.1/4"	1.1/4"		26.0	107.5	51.0	65.0			
M23361-20-24	31	-20	1.1/4"	1.1/2"		32.0	121.0	60.5	44.5			
M23361-24-20	38	-24	1.1/2"	1.1/4"		26.0	136.5	51.0	46.5			
M23361-24-24	38	-24	1.1/2"	1.1/2"		32.0	143.5	60.5	50.5			
M23361-24-32	38	-24	1.1/2"	2"		42.0	143.5	71.6	51.0			
M23361-32-32	51	-32	2"	2"		42.0	129.0	71.6	58.0			
M23361-40-40	63	-40	2.1/2"	2.1/2"		52.0	94.5	84.3	67.0			
M23361-40-40A200	63	-40	2.1/2"	2.1/2"		52.0	196.6	84.3	68.5			
M23361-40-48	63	-40	2.1/2"	3"		52.0	87.5	101.6	54.5			
M23361-48-48	76	-48	3"	3"		61.0	128.5	101.6	79.0			

All items are made from solid with the exception of M23361-40-40, M23361-40-48, M23361-48-48.



SAE STANDARD CONNECTIONS

M23371

67.5° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

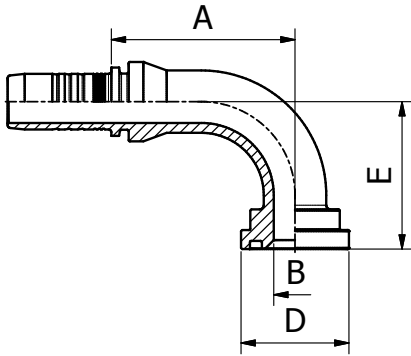
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23371-08-08	12	-8	1/2"	1/2"		9.3	68.0	30.3	29.5			
M23371-08-12	12	-8	1/2"	3/4"		15.0	68.5	38.0	30.5			
M23371-08-16	12	-8	1/2"	1"		19.8	68.5	44.6	30.5			
M23371-12-12	19	-12	3/4"	3/4"		15.0	82.0	38.0	38.0			
M23371-12-16	19	-12	3/4"	1"		20.0	82.0	44.6	38.0			
M23371-12-20	19	-12	3/4"	1.1/4"		26.0	82.0	51.0	38.0			
M23371-16-16	25	-16	1"	1"		19.8	98.5	44.6	45.0			
M23371-16-20	25	-16	1"	1.1/4"		26.0	98.5	51.0	45.0			
M23371-20-20	31	-20	1.1/4"	1.1/4"		26.0	114.0	51.0	50.0			
M23371-20-24	31	-20	1.1/4"	1.1/2"		32.0	115.0	60.5	52.0			
M23371-24-24	38	-24	1.1/2"	1.1/2"		32.0	136.5	60.5	59.0			
M23371-24-32	38	-24	1.1/2"	2"		42.0	136.5	71.6	59.0			
M23371-32-32	51	-32	2"	2"		42.0	162.0	71.6	68.5			
M23371-32-32085	51	-32	2"	2"		42.0	150.5	71.6	85.0			
M23371-32-40	51	-32	2"	2.1/2"		56.0	171.5	84.3	83.5			
M23371-40-40	63	-40	2.1/2"	2.1/2"		52.0	95.0	84.3	78.0			
M23371-40-40A190	63	-40	2.1/2"	2.1/2"		52.0	188.0	84.3	81.0			
M23371-40-48	63	-40	2.1/2"	3"		52.0	90.5	101.6	64.5			

All items are made from solid with the exception of M23371-40-40, M23371-40-48.

SAE STANDARD CONNECTIONS

M23391

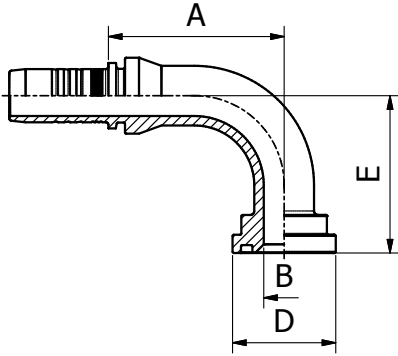
90° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm					
	DN	Dash	inch	inch		B	A	D	E		
M23391-06-08	10	-6	3/8"	1/2"		9.3	44.5	30.0	34.5		
M23391-08-08	12	-8	1/2"	1/2"		9.3	54.5	30.3	40.0		
M23391-08-12	12	-8	1/2"	3/4"		15.0	54.5	38.0	41.0		
M23391-08-16	12	-8	1/2"	1"		19.8	54.5	44.6	66.0		
M23391-10-08	16	-10	5/8"	1/2"		9.3	56.0	30.3	46.5		
M23391-10-12	16	-10	5/8"	3/4"		15.0	56.0	38.0	47.5		
M23391-12-12	19	-12	3/4"	3/4"		15.0	64.5	38.0	52.0		
M23391-12-16	19	-12	3/4"	1"		20.0	64.5	44.6	52.0		
M23391-12-20	19	-12	3/4"	1.1/4"		26.0	64.5	51.0	52.0		
M23391-16-12	25	-16	1"	3/4"		15.0	71.0	38.0	52.0		
M23391-16-16	25	-16	1"	1"		19.8	77.5	44.6	62.0		
M23391-16-20	25	-16	1"	1.1/4"		26.0	77.5	51.0	62.0		
M23391-16-24	25	-16	1"	1.1/2"		32.0	77.0	60.5	64.0		
M23391-20-16	31	-20	1.1/4"	1"		19.8	80.0	44.6	66.0		
M23391-20-20	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	70.0		
M23391-20-24	31	-20	1.1/4"	1.1/2"		32.0	90.5	60.5	72.0		
M23391-20-32	31	-20	1.1/4"	2"		42.0	93.5	71.6	76.0		
M23391-24-20	38	-24	1.1/2"	1.1/4"		26.0	104.5	51.0	75.0		
M23391-24-24	38	-24	1.1/2"	1.1/2"		32.0	108.0	60.5	84.0		
M23391-24-32	38	-24	1.1/2"	2"		42.0	108.0	71.6	84.0		
M23391-32-24	51	-32	2"	1.1/2"		32.0	136.0	60.5	89.0		
M23391-32-32	51	-32	2"	2"		42.0	129.0	71.6	99.0		
M23391-32-40	51	-32	2"	2.1/2"		56.0	132.5	84.3	116.0		
M23391-40-32	63	-40	2.1/2"	2"		42.0	149.5	71.6	114.0		
M23391-40-40	63	-40	2.1/2"	2.1/2"		52.0	88.0	84.3	119.0		
M23391-40-40A150	63	-40	2.1/2"	2.1/2"		52.0	150.5	84.3	117.0		
M23391-40-48	63	-40	2.1/2"	3"		61.0	120.0	101.6	140.0		
M23391-48-48	76	-48	3"	3"		58.0	123.0	101.6	140.0		
M23391-48-56	76	-48	3"	3.1/2"		61.0	123.0	114.3	115.0		
M23391-56-56	89	-56	3.1/2"	3.1/2"		79.0	134.5	114.3	160.0		
M23391-64-64	102	-64	4"	4"		90.0	153.5	127.0	158.5		

All items are made from solid with the exception of M23391-40-40, M23391-40-48, M23391-48-48, M23391-48-56, M23391-56-56, M23391-64-64.

SAE STANDARD CONNECTIONS

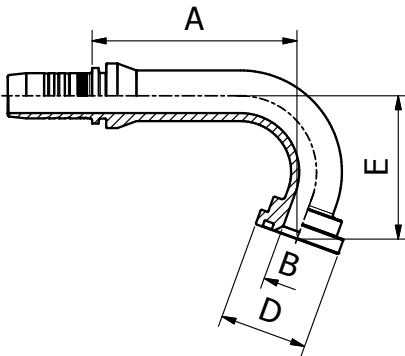


M23391 LONG DROP

90° LONG DROP ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23391-06-08041	10	-6	3/8"	1/2"		9.3	44.5	30.0	41.0			
M23391-12-12058	19	-12	3/4"	3/4"		15.0	64.5	38.0	58.0			
M23391-16-16070	25	-16	1"	1"		19.8	77.5	44.5	70.0			
M23391-16-20117	25	-16	1"	1.1/4"		26.0	77.5	51.0	117.0			
M23391-16-24107	25	-16	1"	1.1/2"		32.0	77.0	60.5	107.0			
M23391-20-20091	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	91.0			
M23391-20-20100	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	100.0			
M23391-20-20112	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	112.0			
M23391-20-20130	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	130.0			
M23391-20-20168	31	-20	1.1/4"	1.1/4"		26.0	90.5	51.0	168.0			
M23391-20-24118	31	-20	1.1/4"	1.1/2"		32.0	90.5	60.5	118.0			
M23391-20-24130	31	-20	1.1/4"	1.1/2"		32.0	90.5	60.5	130.0			
M23391-24-24104	38	-24	1.1/2"	1.1/2"		32.0	108.0	60.5	104.0			
M23391-24-24148	38	-24	1.1/2"	1.1/2"		32.0	108.0	60.5	148.0			
M23391-24-24172	38	-24	1.1/2"	1.1/2"		32.0	108.0	60.5	172.0			
M23391-24-32115	38	-24	1.1/2"	2"		42.0	108.0	71.6	115.0			
M23391-24-32172	38	-24	1.1/2"	2"		42.0	108.0	71.6	172.0			
M23391-32-32138	51	-32	2"	2"		42.0	129.0	71.5	138.0			
M23391-32-32203	51	-32	2"	2"		42.0	129.0	71.6	203.0			

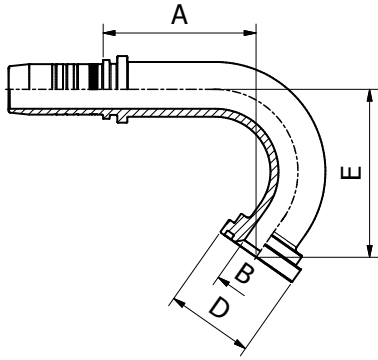
SAE STANDARD CONNECTIONS



M23301P

110° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23301-08-12P	12	-8	1/2"	3/4"		15.0	53.0	38.0	48.0			
M23301-12-12P	19	-12	3/4"	3/4"		15.0	89.0	38.0	62.0			
M23301-12-16P	19	-12	3/4"	1"		20.0	89.0	44.6	62.0			
M23301-16-16P	25	-16	1"	1"		19.8	88.5	44.6	79.0			
M23301-16-20133P	25	-16	1"	1.1/4"		26.0	69.0	51.0	133.0			
M23301-20-20P	31	-20	1.1/4"	1.1/4"		26.0	102.0	51.0	91.0			
M23301-20-24P	31	-20	1.1/4"	1.1/2"		32.0	96.5	60.5	93.0			
M23301-24-24119P	38	-24	1.1/2"	1.1/2"		32.0	105.5	60.5	119.0			
M23301-32-32P	51	-32	2"	2"		42.0	142.0	71.6	123.0			

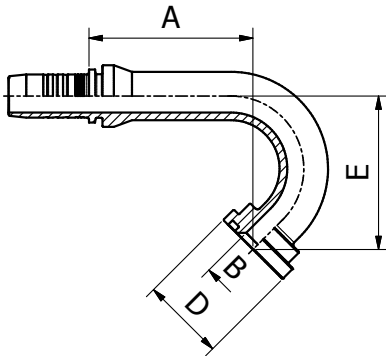


SAE STANDARD CONNECTIONS

M23301S

125° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23301-32-32151S	51	-32	2"	2"		42.0	118.5	71.6	151.0			



SAE STANDARD CONNECTIONS

M23301T

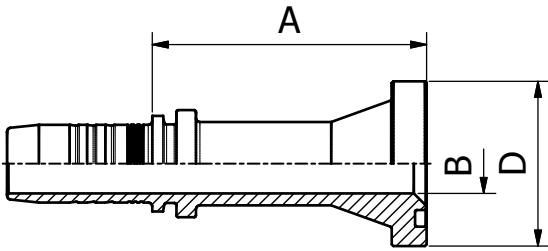
135° ISO/SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23301-12-12T	19	-12	3/4"	3/4"		15.0	74.5	38.0	70.0			
M23301-12-16T	19	-12	3/4"	1"		20.0	74.5	44.6	70.0			
M23301-16-16T	25	-16	1"	1"		19.8	70.0	44.6	88.5			

SAE STANDARD CONNECTIONS

M23611

ISO/SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3



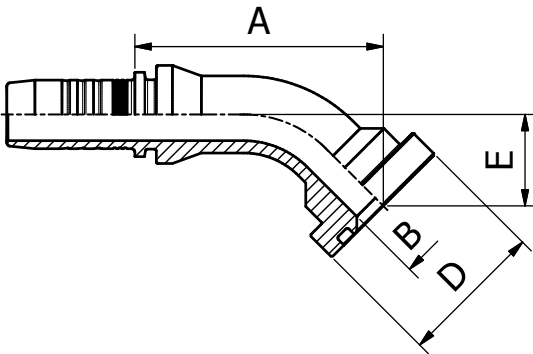
PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D				
M23611-08-08	12	-8	1/2"	1/2"		9.3	52.0	31.8				
M23611-08-12	12	-8	1/2"	3/4"		15.0	68.5	41.5				
M23611-10-08	16	-10	5/8"	1/2"		9.3	52.0	31.8				
M23611-10-12	16	-10	5/8"	3/4"		15.0	70.0	41.5				
M23611-10-16	16	-10	5/8"	1"		20.0	80.0	47.7				
M23611-12-12	19	-12	3/4"	3/4"		15.0	69.0	41.5				
M23611-12-16	19	-12	3/4"	1"		20.0	81.0	47.7				
M23611-16-16	25	-16	1"	1"		19.8	82.5	47.7				
M23611-16-20	25	-16	1"	1.1/4"		26.0	90.0	54.2				
M23611-20-16	31	-20	1.1/4"	1"		19.8	82.5	47.7				
M23611-20-20	31	-20	1.1/4"	1.1/4"		26.0	84.5	54.2				
M23611-20-24	31	-20	1.1/4"	1.1/2"		32.0	90.5	63.7				
M23611-24-24	38	-24	1.1/2"	1.1/2"		32.0	92.5	63.6				
M23611-32-32	51	-32	2"	2"		42.0	109.0	79.5				

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SAE STANDARD CONNECTIONS

M23641

45° ISO/SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

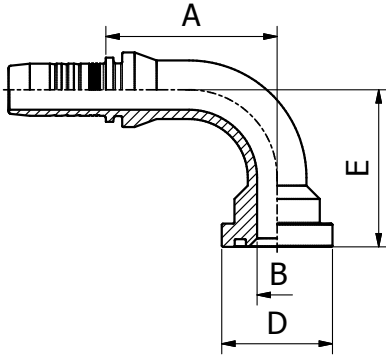


PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23641-08-08	12	-8	1/2"	1/2"		9.3	59.0	31.7	19.0			
M23641-08-12	12	-8	1/2"	3/4"		15.0	68.0	41.5	27.5			
M23641-10-08	16	-10	5/8"	1/2"		9.3	62.5	31.8	23.5			
M23641-10-12	16	-10	5/8"	3/4"		15.0	67.5	41.5	31.0			
M23641-12-12	19	-12	3/4"	3/4"		15.0	72.5	41.5	28.0			
M23641-12-16	19	-12	3/4"	1"		20.0	77.0	47.7	32.5			
M23641-16-12	25	-16	1"	3/4"		15.0	80.0	41.5	30.0			
M23641-16-16	25	-16	1"	1"		19.8	83.5	47.7	32.5			
M23641-16-20	25	-16	1"	1.1/4"		26.0	88.5	54.2	37.5			
M23641-20-20	31	-20	1.1/4"	1.1/4"		26.0	95.0	54.2	37.5			
M23641-20-24	31	-20	1.1/4"	1.1/2"		32.0	102.5	63.7	45.0			
M23641-24-24	38	-24	1.1/2"	1.1/2"		32.0	118.0	63.7	44.0			
M23641-24-32	38	-24	1.1/2"	2"		42.0	129.0	79.6	55.5			
M23641-32-32	51	-32	2"	2"		42.0	151.5	79.6	60.5			
M23641-32-32056	51	-32	2"	2"		42.0	147.5	79.6	56.5			

SAE STANDARD CONNECTIONS

M23691

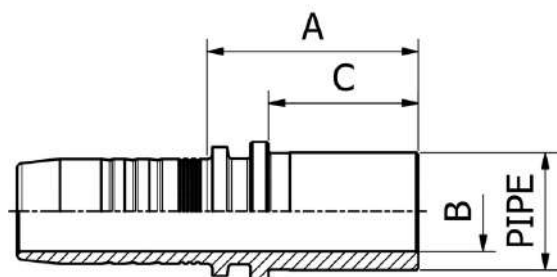
90° ISO/SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			FLANGE		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M23691-08-08	12	-8	1/2"	1/2"		9.3	54.5	31.8	45.0			
M23691-08-08040	12	-8	1/2"	1/2"		9.3	54.5	31.7	41.0			
M23691-08-12	12	-8	1/2"	3/4"		15.0	54.5	41.5	53.0			
M23691-10-08	16	-10	5/8"	1/2"		9.3	57.5	31.8	45.0			
M23691-10-12	16	-10	5/8"	3/4"		15.0	53.5	41.5	60.5			
M23691-10-16	16	-10	5/8"	1"		19.8	56.0	47.7	64.0			
M23691-12-08	19	-12	3/4"	1/2"		9.3	60.6	31.8	57.5			
M23691-12-12	19	-12	3/4"	3/4"		15.0	64.0	41.5	59.0			
M23691-12-16	19	-12	3/4"	1"		20.0	64.5	47.7	65.0			
M23691-16-12	25	-16	1"	3/4"		15.0	74.5	41.5	67.0			
M23691-16-16	25	-16	1"	1"		19.8	73.5	47.7	68.0			
M23691-16-20	25	-16	1"	1.1/4"		26.0	73.5	54.2	75.0			
M23691-20-16	31	-20	1.1/4"	1"		19.8	82.5	47.7	68.0			
M23691-20-20	31	-20	1.1/4"	1.1/4"		26.0	85.5	54.2	81.0			
M23691-20-20090	31	-20	1.1/4"	1.1/4"		26.0	85.5	54.1	90.0			
M23691-20-24	31	-20	1.1/4"	1.1/2"		32.0	85.5	63.7	91.5			
M23691-24-20	38	-24	1.1/2"	1.1/4"		26.0	105.0	54.2	91.0			
M23691-24-24	38	-24	1.1/2"	1.1/2"		32.0	106.0	63.7	94.5			
M23691-24-24104	38	-24	1.1/2"	1.1/2"		32.0	106.0	63.7	104.0			
M23691-24-32	38	-24	1.1/2"	2"		42.0	106.0	79.6	110.5			
M23691-32-32	51	-32	2"	2"		42.0	138.0	79.6	132.0			
M23691-32-32138	51	-32	2"	2"		42.0	138.0	79.6	138.0			

DIN STANDARD CONNECTIONS

M22010



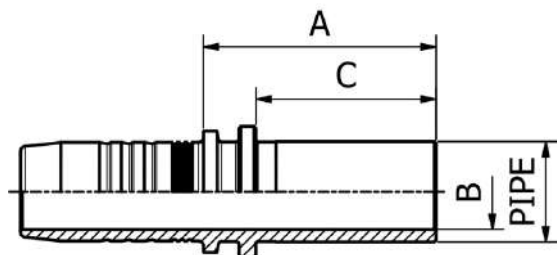
METRIC STANDPIPE LIGHT DUTY
DIN 2353 / ISO 8434-1

FITTINGS 150

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm						
	DN	Dash	inch		mm	B	A	C			
M22010-03-04	5	- 3	3/16"	4.0		2.0	29.5	22.0			
M22010-03-06	5	- 3	3/16"	6.0		3.0	29.5	22.0			
M22010-04-06	6	- 4	1/4"	6.0		3.0	30.0	22.0			
M22010-05-08	8	- 5	5/16"	8.0		5.5	30.0	22.0			
M22010-05-10	8	- 5	5/16"	10.0		7.0	31.0	23.0			
M22010-06-10	10	- 6	3/8"	10.0		7.0	31.5	23.0			
M22010-06-12	10	- 6	3/8"	12.0		8.0	31.5	23.0			
M22010-06-15	10	- 6	3/8"	15.0		10.5	33.5	25.0			
M22010-08-12	12	- 8	1/2"	12.0		8.0	32.0	23.0			
M22010-08-15	12	- 8	1/2"	15.0		10.5	34.0	25.0			
M22010-08-18	12	- 8	1/2"	18.0		12.5	35.0	26.0			
M22010-10-18	16	- 10	5/8"	18.0		12.5	35.0	26.0			
M22010-10-22	16	- 10	5/8"	22.0		15.0	37.0	28.0			
M22010-12-18	19	- 12	3/4"	18.0		12.5	36.5	26.0			
M22010-12-22	19	- 12	3/4"	22.0		15.0	38.5	28.0			
M22010-16-28	25	- 16	1"	28.0		19.8	41.5	30.0			
M22010-20-35	31	- 20	1.1/4"	35.0		26.0	48.5	36.0			
M22010-24-42	38	- 24	1.1/2"	42.0		32.0	52.5	40.0			

DIN STANDARD CONNECTIONS

M22110



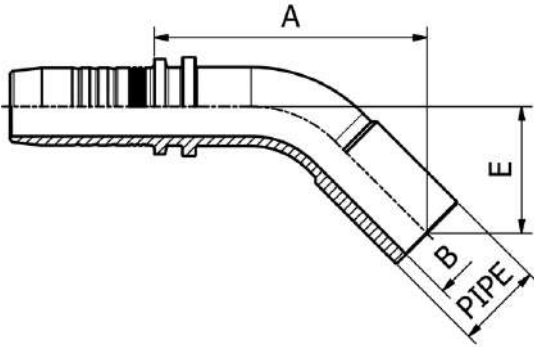
METRIC STANDPIPE HEAVY DUTY
DIN 2353 / ISO 8434-1

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm						
	DN	Dash	inch		mm	B	A	C			
M22110-03-08	5	- 3	3/16"	8.0		3.0	31.0	24.0			
M22110-03-10	5	- 3	3/16"	10.0		3.0	29.5	22.0			
M22110-04-08	6	- 4	1/4"	8.0		4.0	32.0	24.0			
M22110-04-10	6	- 4	1/4"	10.0		4.0	34.0	26.0			
M22110-04-12	6	- 4	1/4"	12.0		7.0	34.0	26.0			
M22110-05-12	8	- 5	5/16"	12.0		7.0	34.0	26.0			
M22110-06-14	10	- 6	3/8"	14.0		8.0	37.5	29.0			
M22110-08-14	12	- 8	1/2"	14.0		9.3	38.0	29.0			
M22110-08-16	12	- 8	1/2"	16.0		10.5	39.0	30.0			
M22110-10-20	16	- 10	5/8"	20.0		12.5	45.0	36.0			
M22110-12-20	19	- 12	3/4"	20.0		15.0	46.5	36.0			
M22110-12-25	19	- 12	3/4"	25.0		15.0	50.5	40.0			
M22110-16-25	25	- 16	1"	25.0		15.0	51.5	40.0			
M22110-16-30	25	- 16	1"	30.0		19.8	55.5	44.0			
M22110-16-38	25	- 16	1"	38.0		26.0	61.5	50.0			
M22110-20-30	31	- 20	1.1/4"	30.0		20.5	56.5	44.0			
M22110-20-38	31	- 20	1.1/4"	38.0		26.0	62.5	50.0			
M22110-24-38	38	- 24	1.1/2"	38.0		26.0	62.5	50.0			

DIN STANDARD CONNECTIONS

M22040

45° METRIC STANDPIPE LIGHT DUTY
DIN 2353 / ISO 8434-1

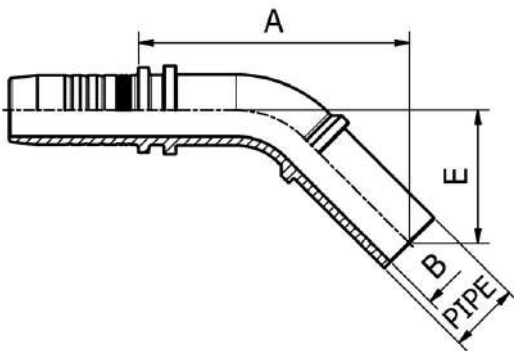


PART. REF.	HOSE BORE			Pipe	mm	DIMENSIONS mm						
	DN	Dash	inch			B	A	E				
M22040-03-06	5	- 3	3/16"	6.0	3.0	37.5	20.5					
M22040-04-06	6	- 4	1/4"	6.0	3.0	38.0	20.5					
M22040-05-10	8	- 5	5/16"	10.0	7.0	44.5	22.5					
M22040-06-10	10	- 6	3/8"	10.0	7.0	47.5	23.0					
M22040-06-12	10	- 6	3/8"	12.0	8.0	49.5	25.0					
M22040-08-15	12	- 8	1/2"	15.0	10.5	58.0	28.0					
M22040-10-18	16	- 10	5/8"	18.0	12.5	63.5	30.5					
M22040-12-22	19	- 12	3/4"	22.0	15.0	69.0	32.0					
M22040-16-28	25	- 16	1"	28.0	19.8	81.5	37.0					

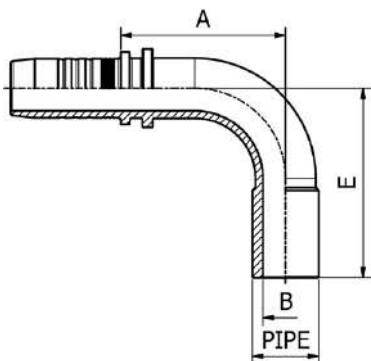
DIN STANDARD CONNECTIONS

M22140

45° METRIC STANDPIPE HEAVY DUTY
DIN 2353 / ISO 8434-1



PART. REF.	HOSE BORE			Pipe	mm	DIMENSIONS mm						
	DN	Dash	inch			B	A	E				
M22140-04-08	6	- 4	1/4"	8.0	4.0	42.0	22.0					
M22140-04-10	6	- 4	1/4"	10.0	6.0	44.0	24.0					
M22140-06-14	10	- 6	3/8"	14.0	9.3	54.5	29.0					
M22140-08-16	12	- 8	1/2"	16.0	10.5	61.0	30.0					
M22140-10-20	16	- 10	5/8"	20.0	12.5	69.0	36.0					
M22140-12-25	19	- 12	3/4"	25.0	15.0	80.5	40.5					
M22140-16-25	25	- 16	1"	25.0	15.0	82.0	41.0					



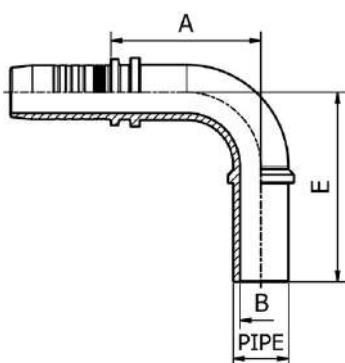
DIN STANDARD CONNECTIONS

M22090

90° METRIC STANDPIPE LIGHT DUTY
DIN 2353 / ISO 8434-1

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm					
	DN	Dash	inch		B	A	E			
M22090-03-06	5	- 3	3/16"	6.0	3.0	22.5	34.0			
M22090-04-06	6	- 4	1/4"	6.0	3.0	23.0	34.0			
M22090-05-10	8	- 5	5/16"	10.0	7.0	29.5	40.0			
M22090-06-10	10	- 6	3/8"	10.0	7.0	33.0	42.5			
M22090-06-12	10	- 6	3/8"	12.0	8.0	34.0	45.0			
M22090-08-12	12	- 8	1/2"	12.0	8.0	34.5	45.0			
M22090-08-15	12	- 8	1/2"	15.0	10.5	42.0	52.0			
M22090-08-18	12	- 8	1/2"	18.0	12.5	42.0	55.0			
M22090-10-18	16	- 10	5/8"	18.0	12.5	49.0	59.0			
M22090-10-22	16	- 10	5/8"	22.0	15.0	53.5	63.0			
M22090-12-22	19	- 12	3/4"	22.0	15.0	54.5	63.0			
M22090-16-28	25	- 16	1"	28.0	19.8	67.5	75.0			
M22090-20-35	31	- 20	1.1/4"	35.0	26.0	80.5	94.0			

FITTINGS 152



DIN STANDARD CONNECTIONS

M22190

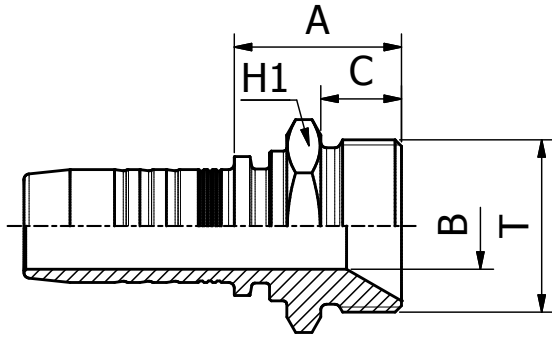
90° METRIC STANDPIPE HEAVY DUTY
DIN 2353 / ISO 8434-1

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm					
	DN	Dash	inch		B	A	E			
M22190-04-08	6	- 4	1/4"	8.0	4.0	27.0	38.0			
M22190-04-10	6	- 4	1/4"	10.0	6.0	27.0	41.0			
M22190-04-12	6	- 4	1/4"	12.0	7.0	27.0	44.0			
M22190-05-12	8	- 5	5/16"	12.0	7.0	30.5	44.0			
M22190-06-14	10	- 6	3/8"	14.0	9.3	35.0	51.0			
M22190-08-14	12	- 8	1/2"	14.0	9.3	42.0	53.5			
M22190-08-16	12	- 8	1/2"	16.0	10.5	43.0	55.0			
M22190-10-20	16	- 10	5/8"	20.0	12.5	49.0	66.5			
M22190-12-20	19	- 12	3/4"	20.0	15.0	54.5	69.0			
M22190-12-25	19	- 12	3/4"	25.0	15.0	57.5	75.0			
M22190-16-25	25	- 16	1"	25.0	15.0	61.5	76.5			
M22190-16-30	25	- 16	1"	30.0	19.8	69.5	87.0			

DIN STANDARD CONNECTIONS

M11010

METRIC MALE 60° CONE SEAT
SUPER LIGHT - DIN 3863

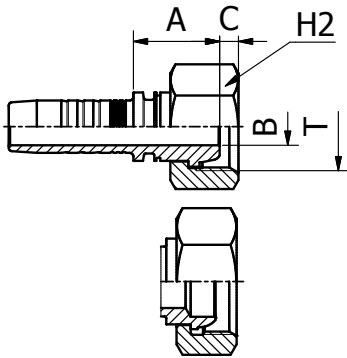


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
M11010-04-12	6	- 4	1/4"	M12 X 1.5	4.0	19.5	8.0	14.0			
M11010-04-16	6	- 4	1/4"	M16 X 1.5	4.0	23.5	11.0	19.0			
M11010-05-16	8	- 5	5/16"	M16 X 1.5	5.5	23.5	11.0	19.0			
M11010-10-26	16	- 10	5/8"	M26 X 1.5	12.5	25.5	12.0	27.0			

DIN STANDARD CONNECTIONS

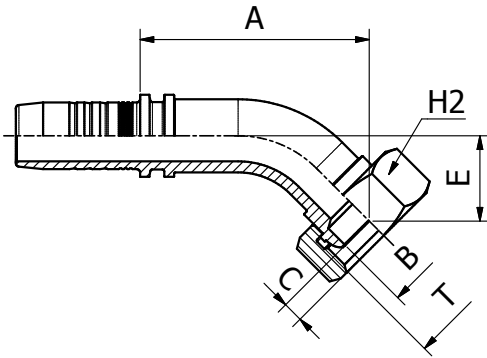
M21012/M21013

METRIC FEMALE 60° CONE
DIN 20078/3863



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H2		
M21012-03-10	5	-3	3/16"	M10 X1	3.0	18.5	1.8	14.0			
M21012-04-12	6	-4	1/4"	M12 X 1.5	4.0	19.5	3.9	17.0			
M21012-06-14	10	-6	3/8"	M14 X 1.5	6.0	19.5	3.9	17.0			
M21012-06-16	10	-6	3/8"	M16 X 1.5	8.0	21.5	3.8	19.0			
M21013-06-18	10	-6	3/8"	M18 X 1.5	10.0	19.5	4.5	22.0			
M21013-10-26	16	-10	5/8"	M26 X 1.5	12.5	22.0	2.0	32.0			
M21013-10-30	16	-10	5/8"	M30 X 1.5	20.0	20.0	6.0	36.0			
M21013-12-30	19	-12	3/4"	M30 X 1.5	20.0	21.0	6.0	36.0			
M21013-16-38	25	-16	1"	M38 X 1.5	26.0	23.0	7.5	46.0			
M21013-20-45	31	-20	1.1/4"	M45 X 1.5	33.0	23.5	8.0	50.0			
M21013-24-52	38	-24	1.1/2"	M52 X 1.5	40.0	25.0	8.0	60.0			
M21013-32-65	51	-32	2"	M65 X 2	42.0	35.0	5.2	75.0			

DIN STANDARD CONNECTIONS

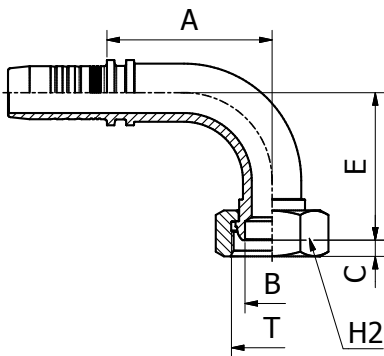


M21043

**45° METRIC FEMALE SWEPT ELBOW 60° CONE
DIN 20078/3863**

FITTINGS 154

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M21043-12-30	19	- 12	3/4"	M30 X 1.5	20.0	67.5	7.0	25.0	36.0		
M21043-16-38	25	- 16	1"	M38 X 1.5	26.0	81.0	7.5	28.0	46.0		



DIN STANDARD CONNECTIONS

M21093

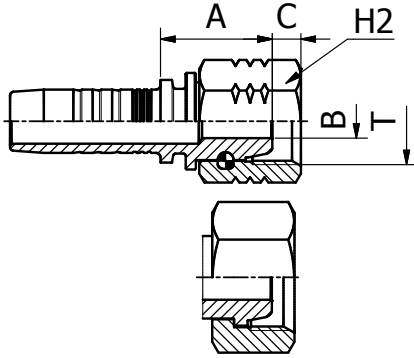
**90° METRIC FEMALE SWEPT ELBOW 60° CONE
DIN 20078/3863**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M21093-12-30	19	- 12	3/4"	M 30X1.5	20.0	61.0	6.0	54.5	36.0		
M21093-16-38	25	- 16	1"	M 38X1.5	26.0	76.5	7.5	63.0	46.0		
M21093-20-45	31	- 20	1.1/4"	M 45X1.5	33.0	92.0	8.0	81.0	50.0		

DIN STANDARD CONNECTIONS

M21312/M21313

METRIC FEMALE MULTISEAL
DIN 20078/3868



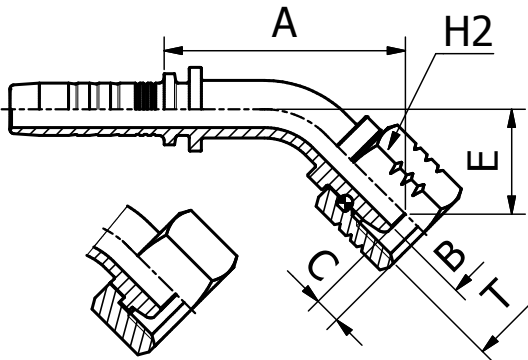
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	H2		
M21312-04-12	6	- 4	1/4"	M 12X1.5	6.0	4.0	19.5	4.0	17.0		
M21312-06-14	10	- 6	3/8"	M 14X1.5	8.0	4.0	19.5	3.9	17.0		
M21312-06-16	10	- 6	3/8"	M 16X1.5	10.0	7.0	21.5	5.0	19.0		
M21312-08-18	12	- 8	1/2"	M 18X1.5	12.0	7.0	23.0	5.9	22.0		
M21312-10-22	16	- 10	5/8"	M 22X1.5	15.0	9.3	23.5	5.5	27.0		
M21313-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	18.5	3.2	14.0		
M21313-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	19.5	3.0	17.0		
M21313-04-16	6	- 4	1/4"	M 16X1.5	10.0	4.0	19.5	4.0	19.0		
M21313-05-16	8	- 5	5/16"	M 16X1.5	10.0	5.5	19.5	4.0	19.0		
M21313-05-18	8	- 5	5/16"	M 18X1.5	12.0	5.5	19.5	4.0	22.0		
M21313-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	20.0	4.0	22.0		
M21313-06-22	10	- 6	3/8"	M 22X1.5	15.0	7.0	21.0	4.7	27.0		
M21313-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	21.5	4.7	27.0		
M21313-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	22.0	5.0	32.0		

155 FITTINGS

DIN STANDARD CONNECTIONS

M21342/M21343

45° METRIC FEMALE SWEPT ELBOW MULTISEAL
DIN 20078/3868

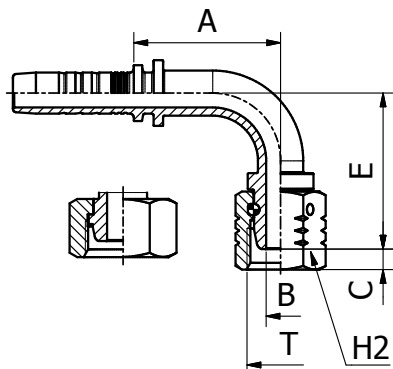


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M21342-05-14	8	- 5	5/16"	M 14X1.5	8.0	4.0	40.0	3.9	19.5	17.0		
M21342-06-16	10	- 6	3/8"	M 16X1.5	10.0	7.0	46.0	5.0	20.0	19.0		
M21343-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	36.5	3.0	15.0	17.0		
M21343-04-16	6	- 4	1/4"	M 16X1.5	10.0	4.0	36.5	4.0	15.0	19.0		
M21343-05-16	8	- 5	5/16"	M 16X1.5	10.0	5.5	39.0	4.0	15.0	19.0		
M21343-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	42.0	4.0	15.5	22.0		
M21343-06-22	10	- 6	3/8"	M 22X1.5	15.0	7.0	42.5	4.7	15.5	27.0		
M21343-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	49.5	4.7	17.0	27.0		
M21343-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	60.0	5.0	24.0	32.0		

DIN STANDARD CONNECTIONS

M21392/M21393

90° METRIC FEMALE SWEPT ELBOW MULTISEAL
DIN 20078/3868



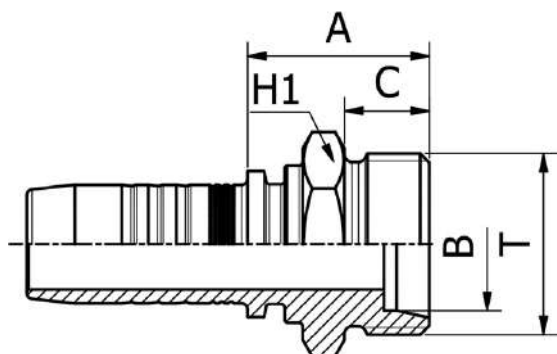
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	B	A	C	E	H2	
M21392-04-12	6	- 4	1/4"	M 12X1.5	6.0	4.0	28.0	4.0	30.5	17.0		
M21392-06-16	10	- 6	3/8"	M 16X1.5	10.0	7.0	35.5	5.0	38.0	19.0		
M21392-12-26	19	- 12	3/4"	M 26X1.5	18.0	15.0	61.5	2.3	63.0	32.0		
M21393-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	26.0	3.2	27.0	14.0		
M21393-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	29.5	3.0	29.5	17.0		
M21393-04-16	6	- 4	1/4"	M 16X1.5	10.0	4.0	29.5	4.0	29.5	19.0		
M21393-05-16	8	- 5	5/16"	M 16X1.5	10.0	5.5	32.0	4.0	29.0	19.0		
M21393-05-18	8	- 5	5/16"	M 18X1.5	12.0	7.0	32.0	4.0	30.5	22.0		
M21393-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	36.5	4.0	31.5	22.0		
M21393-06-22	10	- 6	3/8"	M 22X1.5	15.0	7.0	36.5	4.7	32.0	27.0		
M21393-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	45.0	4.7	36.5	27.0		
M21393-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	51.5	5.0	50.0	32.0		

FITTINGS 156

DIN STANDARD CONNECTIONS

M11110

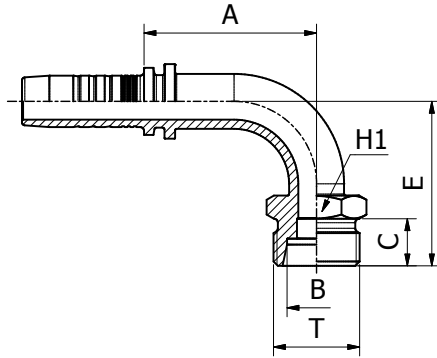
METRIC MALE 24° CONE SEAT LIGHT DUTY
DIN 20066 / ISO 12151-2



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	H1	
M11110-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	21.0	10.0	14.0		
M11110-04-12	6	- 4	1/4"	M 12X1.5	6.0	4.0	21.5	10.0	14.0		
M11110-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	21.5	10.0	14.0		
M11110-04-16	6	- 4	1/4"	M 16X1.5	10.0	7.0	23.5	11.0	17.0		
M11110-04-18	6	- 4	1/4"	M 18X1.5	12.0	9.0	23.5	11.0	19.0		
M11110-05-16	8	- 5	5/16"	M 16X1.5	10.0	7.0	24.0	11.0	17.0		
M11110-05-18	8	- 5	5/16"	M 18X1.5	12.0	9.0	24.0	11.0	19.0		
M11110-06-16	10	- 6	3/8"	M 16X1.5	10.0	7.0	24.0	11.0	17.0		
M11110-06-18	10	- 6	3/8"	M 18X1.5	12.0	9.0	24.5	11.0	19.0		
M11110-06-22	10	- 6	3/8"	M 22X1.5	15.0	10.0	25.5	12.0	22.0		
M11110-06-26	10	- 6	3/8"	M 26X1.5	18.0	12.5	26.5	12.0	27.0		
M11110-08-16	12	- 8	1/2"	M 16X1.5	10.0	7.0	24.5	11.0	22.0		
M11110-08-18	12	- 8	1/2"	M 18X1.5	12.0	9.3	24.5	11.0	22.0		
M11110-08-22	12	- 8	1/2"	M 22X1.5	15.0	10.0	25.5	12.0	22.0		
M11110-08-26	12	- 8	1/2"	M 26X1.5	18.0	12.5	26.5	12.0	27.0		
M11110-10-22	16	- 10	5/8"	M 22X1.5	15.0	10.0	25.5	12.0	22.0		
M11110-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	26.5	12.0	27.0		
M11110-10-30	16	- 10	5/8"	M 30X2	22.0	15.0	28.5	14.0	30.0		
M11110-12-26	19	- 12	3/4"	M 26X1.5	18.0	15.0	28.0	12.0	27.0		
M11110-12-30	19	- 12	3/4"	M 30X2	22.0	15.0	30.0	14.0	30.0		
M11110-12-36	19	- 12	3/4"	M 36X2	28.0	19.8	31.0	14.0	36.0		
M11110-16-36	25	- 16	1"	M 36X2	28.0	19.8	32.5	14.0	36.0		
M11110-20-45	31	- 20	1.1/4"	M 45X2	35.0	26.0	40.5	16.0	46.0		
M11110-24-52	38	- 24	1.1/2"	M 52X2	42.0	32.0	43.0	16.0	55.0		

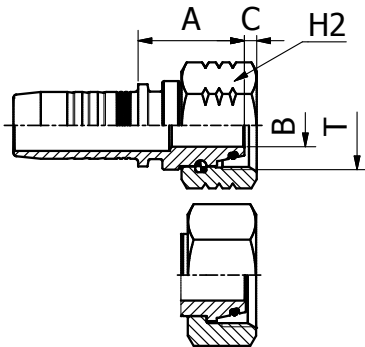
DIN STANDARD CONNECTIONS

M11190



**90° METRIC MALE 24° CONE SEAT LIGHT DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch	T	mm	B	A	C	E	H1
M11190-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	27.0	10.0	33.0	14.0
M11190-06-18	10	- 6	3/8"	M 18X1.5	12.0	9.0	32.0	11.0	35.5	19.0



DIN STANDARD CONNECTIONS

M21512/M21513

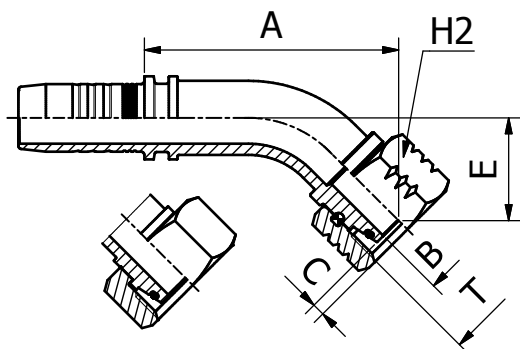
**METRIC O-RING FEMALE
24° CONE LIGHT DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch	T	mm	B	A	C	H2	
M21512-04-12	6	- 4	1/4"	M 12X1.5	6.0	3.0	21.0	2.2	17.0	
M21512-05-14	8	- 5	5/16"	M 14X1.5	8.0	4.0	20.0	2.9	17.0	
M21512-06-16	10	- 6	3/8"	M 16X1.5	10.0	6.0	23.0	3.0	19.0	
M21512-08-18	12	- 8	1/2"	M 18X1.5	12.0	7.0	29.0	2.9	22.0	
M21512-10-18	16	- 10	5/8"	M 18X1.5	12.0	7.0	29.0	2.9	22.0	
M21512-10-22	16	- 10	5/8"	M 22X1.5	15.0	9.5	26.5	2.4	27.0	
M21512-12-22	19	- 12	3/4"	M 22X1.5	15.0	9.5	31.0	2.4	27.0	
M21512-12-26	19	- 12	3/4"	M 26X1.5	18.0	12.5	31.0	2.3	32.0	
M21512-16-30	25	- 16	1"	M 30X2	22.0	15.0	34.0	4.2	36.0	
M21512-20-36	31	- 20	1.1/4"	M 36X2	28.0	19.8	35.5	5.0	41.0	
M21512-24-45	38	- 24	1.1/2"	M 45X2	35.0	26.0	42.5	5.8	50.0	
M21512-32-52	51	- 32	2"	M 52X2	42.0	32.0	50.5	5.6	60.0	
M21513-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	22.0	0.7	14.0	
M21513-03-14	5	- 3	3/16"	M 14X1.5	8.0	4.0	24.5	1.3	17.0	
M21513-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	22.0	1.3	17.0	
M21513-04-16	6	- 4	1/4"	M 16X1.5	10.0	6.0	22.5	1.8	19.0	
M21513-04-18	6	- 4	1/4"	M 18X1.5	12.0	7.0	22.0	2.0	22.0	
M21513-05-16	8	- 5	5/16"	M 16X1.5	10.0	6.0	22.5	1.8	19.0	
M21513-05-18	8	- 5	5/16"	M 18X1.5	12.0	7.0	22.0	2.0	22.0	
M21513-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	22.5	2.0	22.0	
M21513-06-22	10	- 6	3/8"	M 22X1.5	15.0	9.3	25.0	1.5	27.0	
M21513-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	25.5	1.5	27.0	
M21513-08-26	12	- 8	1/2"	M 26X1.5	18.0	12.5	26.0	2.0	32.0	
M21513-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	26.0	2.0	32.0	
M21513-10-30	16	- 10	5/8"	M 30X2	22.0	15.0	34.0	3.0	36.0	
M21513-10-36	16	- 10	5/8"	M 36X2	28.0	20.0	30.5	3.7	41.0	
M21513-12-30	19	- 12	3/4"	M 30X2	22.0	15.0	28.0	3.0	36.0	
M21513-12-36	19	- 12	3/4"	M 36X2	28.0	20.0	28.5	3.7	41.0	
M21513-16-36	25	- 16	1"	M 36X2	28.0	19.8	29.5	3.7	41.0	
M21513-16-45	25	- 16	1"	M 45X2	35.0	26.0	39.0	4.0	50.0	
M21513-20-45	31	- 20	1.1/4"	M 45X2	35.0	26.0	33.0	4.0	50.0	
M21513-20-52	31	- 20	1.1/4"	M 52X2	42.0	32.0	32.5	4.5	60.0	
M21513-24-52	38	- 24	1.1/2"	M 52X2	42.0	32.0	33.0	4.5	60.0	

DIN STANDARD CONNECTIONS

M21542/M21543

**45° METRIC O-RING FEMALE SWEPT ELBOW
24° CONE LIGHT DUTY
DIN 20066 / ISO 12151-2**

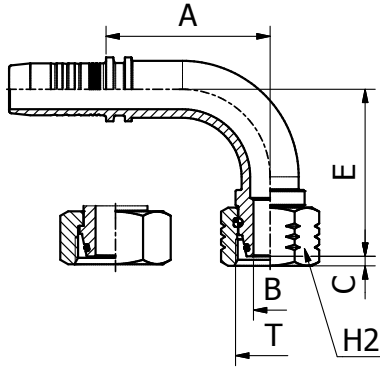


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M21542-04-12	6	- 4	1/4"	M 12X1.5	6.0	3.0	39.0	2.2	18.0	17.0		
M21542-06-16	10	- 6	3/8"	M 16X1.5	10.0	6.0	47.5	3.0	21.5	19.0		
M21542-08-18	12	- 8	1/2"	M 18X1.5	12.0	7.0	56.5	2.9	25.0	22.0		
M21542-10-22	16	- 10	5/8"	M 22X1.5	15.0	9.3	65.5	3.0	29.0	27.0		
M21542-12-26	19	- 12	3/4"	M 26X1.5	18.0	12.5	73.0	2.3	31.0	32.0		
M21542-20-36	31	- 20	1.1/4"	M 36X2	28.0	19.8	107.5	5.0	44.0	41.0		
M21542-24-36	38	- 24	1.1/2"	M 36X2	28.0	19.8	113.0	5.0	34.5	41.0		
M21543-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	35.0	0.7	16.0	14.0		
M21543-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	38.0	1.3	16.5	17.0		
M21543-04-16	6	- 4	1/4"	M 16X1.5	10.0	6.0	38.0	1.8	17.0	19.0		
M21543-04-18	6	- 4	1/4"	M 18X1.5	12.0	7.0	38.5	2.0	17.5	22.0		
M21543-05-16	8	- 5	5/16"	M 16X1.5	10.0	6.0	41.5	1.8	17.5	19.0		
M21543-05-18	8	- 5	5/16"	M 18X1.5	12.0	7.0	41.5	2.0	17.0	22.0		
M21543-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	43.5	2.0	16.5	22.0		
M21543-06-22	10	- 6	3/8"	M 22X1.5	15.0	9.3	45.0	1.5	18.0	27.0		
M21543-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	52.0	1.5	19.0	27.0		
M21543-08-26	12	- 8	1/2"	M 26X1.5	18.0	12.5	52.5	2.0	19.5	32.0		
M21543-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	62.0	2.0	26.5	32.0		
M21543-12-30	19	- 12	3/4"	M 30X2	22.0	15.0	71.0	3.0	28.5	36.0		
M21543-12-36	19	- 12	3/4"	M 36X2	28.0	19.8	72.0	3.7	30.0	41.0		
M21543-16-36	25	- 16	1"	M 36X2	28.0	19.8	85.0	3.7	32.0	41.0		
M21543-20-45	31	- 20	1.1/4"	M 45X2	35.0	26.0	100.0	4.0	36.0	50.0		
M21543-20-52	31	- 20	1.1/4"	M 52X2	42.0	32.0	100.0	4.5	42.0	60.0		
M21543-24-52	38	- 24	1.1/2"	M 52X2	42.0	32.0	117.0	4.5	44.5	60.0		

DIN STANDARD CONNECTIONS

M21592/M21593

90° METRIC O-RING FEMALE SWEPT ELBOW
 24° CONE LIGHT DUTY
 DIN 20066 / ISO 12151-2

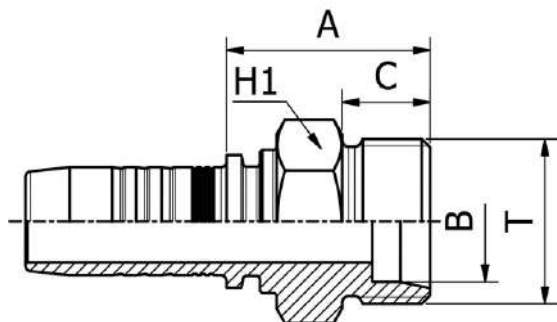


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M21592-04-12	6	- 4	1/4"	M 12X1.5	6.0	3.0	28.5	2.2	32.5	17.0		
M21592-05-14	8	- 5	5/16"	M 14X1.5	8.0	4.0	31.0	2.9	33.0	17.0		
M21592-06-16	10	- 6	3/8"	M 16X1.5	10.0	6.0	35.5	3.0	40.0	19.0		
M21592-08-18	12	- 8	1/2"	M 18X1.5	12.0	7.0	44.0	2.9	48.0	22.0		
M21592-10-22	16	- 10	5/8"	M 22X1.5	15.0	9.3	53.5	3.0	57.5	27.0		
M21592-12-26	19	- 12	3/4"	M 26X1.5	18.0	12.5	61.5	2.3	63.0	32.0		
M21592-16-30	25	- 16	1"	M 30X2	22.0	15.0	79.5	4.2	80.5	36.0		
M21592-20-36	31	- 20	1.1/4"	M 36X2	28.0	19.8	93.5	5.0	92.0	41.0		
M21592-24-36	38	- 24	1.1/2"	M 36X2	28.0	19.8	97.0	5.0	68.0	41.0		
M21592-32-52	51	- 32	2"	M 52X2	42.0	32.0	131.0	5.6	119.0	60.0		
M21593-03-12	5	- 3	3/16"	M 12X1.5	6.0	3.0	26.0	0.7	30.0	14.0		
M21593-03-14	5	- 3	3/16"	M 14X1.5	8.0	4.0	29.0	1.3	31.5	17.0		
M21593-04-14	6	- 4	1/4"	M 14X1.5	8.0	4.0	29.5	1.3	31.5	17.0		
M21593-04-16	6	- 4	1/4"	M 16X1.5	10.0	6.0	29.5	1.8	32.0	19.0		
M21593-04-18	6	- 4	1/4"	M 18X1.5	12.0	7.0	29.5	2.0	33.0	22.0		
M21593-05-16	8	- 5	5/16"	M 16X1.5	10.0	6.0	32.0	1.8	32.5	19.0		
M21593-05-18	8	- 5	5/16"	M 18X1.5	12.0	7.0	32.0	2.0	32.5	22.0		
M21593-05-22	8	- 5	5/16"	M 22X1.5	15.0	9.3	36.0	1.5	35.0	27.0		
M21593-06-18	10	- 6	3/8"	M 18X1.5	12.0	7.0	36.5	2.0	33.5	22.0		
M21593-06-22	10	- 6	3/8"	M 22X1.5	15.0	9.3	36.5	1.5	35.0	27.0		
M21593-08-22	12	- 8	1/2"	M 22X1.5	15.0	9.3	45.0	1.5	39.5	27.0		
M21593-08-26	12	- 8	1/2"	M 26X1.5	18.0	12.5	45.0	2.0	40.0	32.0		
M21593-10-26	16	- 10	5/8"	M 26X1.5	18.0	12.5	51.5	2.0	53.0	32.0		
M21593-10-30	16	- 10	5/8"	M 30X2	22.0	15.0	51.5	3.0	54.0	36.0		
M21593-12-30	19	- 12	3/4"	M 30X2	22.0	15.0	61.5	3.0	59.5	36.0		
M21593-12-36	19	- 12	3/4"	M 36X2	28.0	19.8	61.5	3.7	61.0	41.0		
M21593-16-36	25	- 16	1"	M 36X2	28.0	19.8	76.5	3.7	69.5	41.0		
M21593-16-45	25	- 16	1"	M 45X2	35.0	26.0	79.0	4.0	72.0	50.0		
M21593-20-45	31	- 20	1.1/4"	M 45X2	35.0	26.0	93.5	4.0	81.0	50.0		
M21593-24-52	38	- 24	1.1/2"	M 52X2	42.0	32.0	107.5	4.5	98.0	60.0		

DIN STANDARD CONNECTIONS

M11210

**METRIC MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**



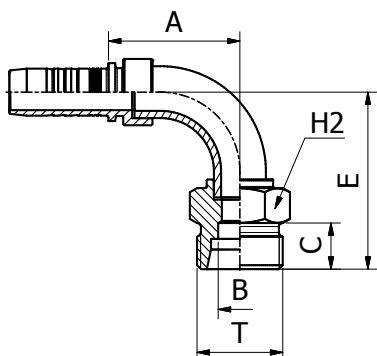
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	mm	B	A	C	H1
M11210-04-16	6	- 4	1/4"	M 16X1.5	8.0	5.5	25.5	12.0	17.0		
M11210-04-18	6	- 4	1/4"	M 18X1.5	10.0	6.0	26.5	12.0	19.0		
M11210-04-20	6	- 4	1/4"	M 20X1.5	12.0	7.0	29.0	12.0	22.0		
M11210-05-16	8	- 5	5/16"	M 16X1.5	8.0	5.5	26.0	12.0	17.0		
M11210-05-18	8	- 5	5/16"	M 18X1.5	10.0	7.0	26.5	12.0	19.0		
M11210-05-20	8	- 5	5/16"	M 20X1.5	12.0	7.0	29.0	12.0	22.0		
M11210-06-18	10	- 6	3/8"	M 18X1.5	10.0	7.0	27.0	12.0	19.0		
M11210-06-20	10	- 6	3/8"	M 20X1.5	12.0	7.0	29.0	12.0	22.0		
M11210-06-22	10	- 6	3/8"	M 22X1.5	14.0	8.0	31.0	14.0	22.0		
M11210-08-20	12	- 8	1/2"	M 20X1.5	12.0	9.3	29.5	12.0	22.0		
M11210-08-22	12	- 8	1/2"	M 22X1.5	14.0	9.3	31.5	14.0	22.0		
M11210-08-24	12	- 8	1/2"	M 24X1.5	16.0	9.3	31.5	14.0	24.0		
M11210-10-30	16	- 10	5/8"	M 30X2	20.0	15.0	35.5	16.0	30.0		
M11210-10-36	16	- 10	5/8"	M 36X2	25.0	19.8	40.0	18.0	36.0		
M11210-12-30	19	- 12	3/4"	M 30X2	20.0	15.0	37.0	16.0	30.0		
M11210-12-36	19	- 12	3/4"	M 36X2	25.0	19.8	41.0	18.0	36.0		
M11210-16-36	25	- 16	1"	M 36X2	25.0	19.8	42.5	18.0	36.0		
M11210-16-42	25	- 16	1"	M 42X2	30.0	25.0	44.5	20.0	46.0		
M11210-20-52	31	- 20	1.1/4"	M 52X2	38.0	30.0	51.0	22.0	55.0		

FITTINGS 160

DIN STANDARD CONNECTIONS

M11290

**90° METRIC MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**

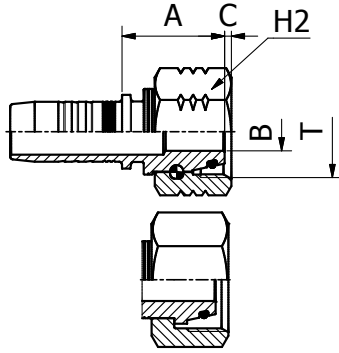


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	mm	B	A	C	E
M11290-05-20	8	- 5	5/16"	M 20X1.5	12.0	7.0	29.0	12.0	36.5	22.0	
M11290-10-30	16	- 10	5/8"	M 30X2	20.0	15.0	45.5	16.0	61.5	30.0	

DIN STANDARD CONNECTIONS

M21612/M21613

**METRIC O-RING FEMALE
24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2**

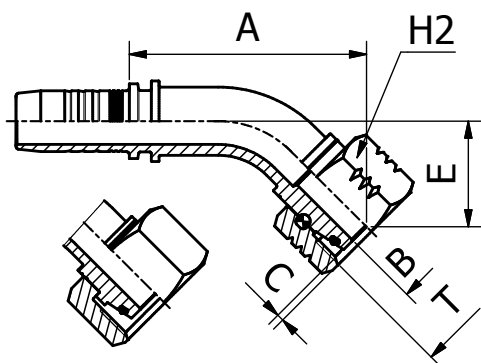


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	H2			
M21612-08-20	12	- 8	1/2"	M 20X1.5	12.0	7.0	29.0	2.5	24.0			
M21612-08-22	12	- 8	1/2"	M 22X1.5	14.0	7.0	27.0	2.5	27.0			
M21612-10-24	16	- 10	5/8"	M 24X1.5	16.0	9.3	29.5	4.0	30.0			
M21612-12-24	19	- 12	3/4"	M 24X1.5	16.0	9.3	30.5	4.0	30.0			
M21612-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	33.5	2.2	36.0			
M21612-16-30	25	- 16	1"	M 30X2	20.0	12.5	34.5	2.2	36.0			
M21612-16-36	25	- 16	1"	M 36X2	25.0	15.0	35.5	1.7	41.0			
M21613-03-14	5	- 3	3/16"	M 14X1.5	6.0	2.5	25.5	3.5	17.0			
M21613-03-16	5	- 3	3/16"	M 16X1.5	8.0	3.0	21.5	3.4	19.0			
M21613-04-14	6	- 4	1/4"	M 14X1.5	6.0	3.0	23.5	1.9	17.0			
M21613-04-16	6	- 4	1/4"	M 16X1.5	8.0	4.0	22.0	3.4	19.0			
M21613-04-18	6	- 4	1/4"	M 18X1.5	10.0	4.0	28.0	2.5	22.0			
M21613-04-20	6	- 4	1/4"	M 20X1.5	12.0	7.0	26.0	2.0	24.0			
M21613-05-18	8	- 5	5/16"	M 18X1.5	10.0	5.5	28.0	2.5	22.0			
M21613-05-20	8	- 5	5/16"	M 20X1.5	12.0	5.5	25.0	2.0	24.0			
M21613-06-18	10	- 6	3/8"	M 18X1.5	10.0	7.0	28.5	2.5	22.0			
M21613-06-20	10	- 6	3/8"	M 20X1.5	12.0	7.0	25.5	2.0	24.0			
M21613-06-22	10	- 6	3/8"	M 22X1.5	14.0	7.0	32.5	3.0	27.0			
M21613-06-24	10	- 6	3/8"	M 24X1.5	16.0	7.0	32.0	4.0	30.0			
M21613-08-24	12	- 8	1/2"	M 24X1.5	16.0	9.3	26.5	4.0	30.0			
M21613-08-30	12	- 8	1/2"	M 30X2	20.0	12.5	37.0	3.5	36.0			
M21613-10-30	16	- 10	5/8"	M 30X2	20.0	12.5	30.5	3.5	36.0			
M21613-10-36	16	- 10	5/8"	M 36X2	25.0	15.0	40.0	4.5	41.0			
M21613-12-36	19	- 12	3/4"	M 36X2	25.0	15.0	34.0	4.5	41.0			
M21613-16-42	25	- 16	1"	M 42X2	30.0	19.8	35.5	6.3	50.0			
M21613-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.0	37.5	8.0	60.0			
M21613-24-52	38	- 24	1.1/2"	M 52X2	38.0	26.0	49.5	8.0	60.0			

DIN STANDARD CONNECTIONS

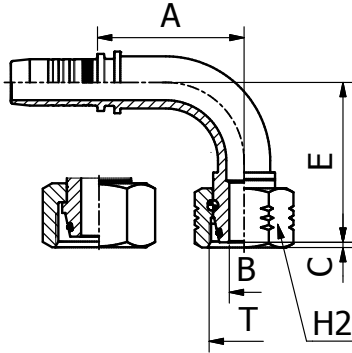
M21642/M21643

**45° METRIC O-RING FEMALE SWEPT ELBOW
24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2**



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	H2
M21642-06-18	10	- 6	3/8"	M 18X1.5	10.0	4.0	49.0	3.9	23.0	22.0		
M21642-08-22	12	- 8	1/2"	M 22X1.5	14.0	7.0	57.5	2.5	25.5	27.0		
M21642-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	76.5	2.2	34.0	36.0		
M21642-16-36	25	- 16	1"	M 36X2	25.0	15.0	98.0	1.7	43.5	41.0		
M21642-24-52	38	- 24	1.1/2"	M 52X2	38.0	24.7	111.0	8.8	48.0	60.0		
M21643-04-14	6	- 4	1/4"	M 14X1.5	6.0	3.0	38.5	1.9	17.5	17.0		
M21643-04-16	6	- 4	1/4"	M 16X1.5	8.0	4.0	36.5	3.4	15.0	19.0		
M21643-04-18	6	- 4	1/4"	M 18X1.5	10.0	4.0	37.5	2.5	16.5	22.0		
M21643-05-18	8	- 5	5/16"	M 18X1.5	10.0	4.0	42.5	2.5	18.0	22.0		
M21643-05-20	8	- 5	5/16"	M 20X1.5	12.0	5.5	42.0	2.0	18.5	24.0		
M21643-06-20	10	- 6	3/8"	M 20X1.5	12.0	7.0	45.0	2.5	18.0	24.0		
M21643-06-22	10	- 6	3/8"	M 22X1.5	14.0	7.0	45.5	3.0	18.5	27.0		
M21643-08-24	12	- 8	1/2"	M 24X1.5	16.0	9.3	52.5	4.0	20.0	30.0		
M21643-10-30	16	- 10	5/8"	M 30X2	20.0	12.5	65.5	3.5	29.5	36.0		
M21643-12-36	19	- 12	3/4"	M 36X2	25.0	15.0	75.0	4.5	32.5	41.0		
M21643-16-42	25	- 16	1"	M 42X2	30.0	19.8	90.0	6.3	35.5	50.0		
M21643-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.0	103.0	8.0	39.5	60.0		

DIN STANDARD CONNECTIONS

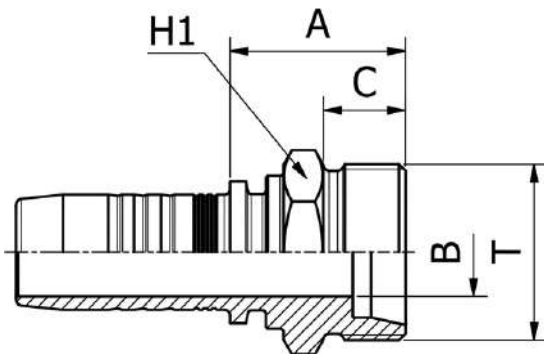


M21692/M21693

**90° METRIC O-RING FEMALE SWEPT ELBOW
24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M21692-06-18	10	- 6	3/8"	M 18X1.5	10.0	4.0	35.5	3.9	42.5	22.0		
M21692-08-22	12	- 8	1/2"	M 22X1.5	14.0	7.0	44.0	2.5	48.5	27.0		
M21692-10-24	16	- 10	5/8"	M 24X1.5	16.0	9.3	53.5	4.0	58.5	30.0		
M21692-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	61.5	2.2	67.5	36.0		
M21692-16-36	25	- 16	1"	M 36X2	25.0	15.0	79.5	1.7	86.0	41.0		
M21692-24-52	38	- 24	1.1/2"	M 52X2	38.0	24.7	91.5	8.8	95.5	60.0		
M21693-03-14	5	- 3	3/16"	M 14X1.5	6.0	3.0	26.0	3.5	30.0	17.0		
M21693-03-16	5	- 3	3/16"	M 16X1.5	8.0	3.0	26.0	3.4	29.5	19.0		
M21693-04-14	6	- 4	1/4"	M 14X1.5	6.0	3.0	29.5	1.9	32.5	17.0		
M21693-04-16	6	- 4	1/4"	M 16X1.5	8.0	4.0	29.5	3.4	29.5	19.0		
M21693-04-18	6	- 4	1/4"	M 18X1.5	10.0	4.0	29.5	2.5	31.0	22.0		
M21693-04-20	6	- 4	1/4"	M 20X1.5	12.0	5.5	29.5	2.0	34.5	24.0		
M21693-05-18	8	- 5	5/16"	M 18X1.5	10.0	4.0	32.0	2.5	33.5	22.0		
M21693-05-20	8	- 5	5/16"	M 20X1.5	12.0	5.5	32.0	2.0	34.0	24.0		
M21693-06-20	10	- 6	3/8"	M 20X1.5	12.0	7.0	36.5	2.0	35.0	24.0		
M21693-06-22	10	- 6	3/8"	M 22X1.5	14.0	7.0	36.5	3.0	37.0	27.0		
M21693-06-24	10	- 6	3/8"	M 24X1.5	16.0	9.3	36.5	4.0	36.0	30.0		
M21693-08-24	12	- 8	1/2"	M 24X1.5	16.0	9.3	45.0	4.0	40.5	30.0		
M21693-08-30	12	- 8	1/2"	M 30X2	20.0	12.5	45.0	3.5	44.5	36.0		
M21693-10-30	16	- 10	5/8"	M 30X2	20.0	12.5	51.5	3.5	57.5	36.0		
M21693-12-36	19	- 12	3/4"	M 36X2	25.0	15.0	61.5	4.5	64.5	41.0		
M21693-16-42	25	- 16	1"	M 42X2	30.0	19.8	79.0	6.3	74.5	50.0		
M21693-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.0	93.5	8.0	85.5	60.0		

163 FITTINGS



NF STANDARD CONNECTIONS

M11710

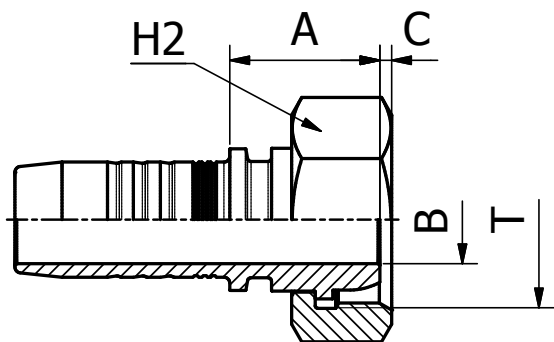
**FRENCH METRIC MALE
24° CONE SEAT MILLIMETRIC TYPE**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	H1		
M11710-10-2718	16	- 10	5/8"	M 27X1.5	18.0	12.5	28.5	14.0	28.0		
M11710-10-2720	16	- 10	5/8"	M 27X1.5	20.0	12.5	28.5	14.0	28.0		
M11710-12-30	19	- 12	3/4"	M 30X1.5	22.0	15.0	30.0	14.0	30.0		
M11710-12-33	19	- 12	3/4"	M 33X1.5	25.0	15.0	31.0	14.0	34.0		

NF STANDARD CONNECTIONS

M21713

**FRENCH METRIC FEMALE
MILLIMETRIC TYPE (SLIP-ON NUT)**



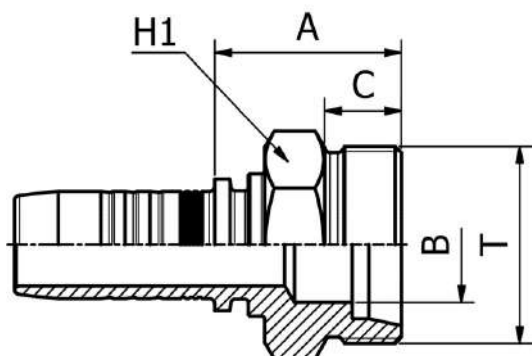
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	B	A	C	H2		
M21713-10-2718	16	-10	5/8"	M 27X1.5	18	12.5	21.5	5.0	32.0			
M21713-10-2720	16	-10	5/8"	M 27X1.5	20	12.5	21.5	5.0	32.0			
M21713-12-30	19	-12	3/4"	M 30X1.5	22	15.0	25.5	2.0	36.0			
M21713-12-33	19	-12	3/4"	M 33X1.5	25	15.0	25.5	2.0	38.0			
M21713-16-36	25	-16	1"	M 36X1.5	28	19.8	28.0	4.7	41.0			
M21713-16-39	25	-16	1"	M 39X1.5	30	19.8	28.5	4.2	46.0			

FITTINGS 164

NF STANDARD CONNECTIONS

M11810

**FRENCH METRIC MALE
24° CONE SEAT GAZ TYPE**

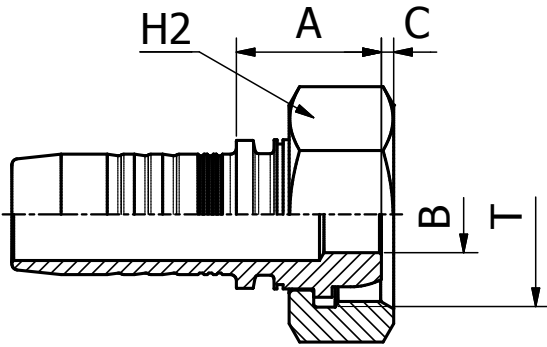


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	B	A	C	H1		
M11810-05-20	8	- 5	5/16"	M 20X1.5	13.25	8.0	27.0	12.0	22.0			
M11810-06-20	10	- 6	3/8"	M 20X1.5	13.25	8.0	27.5	12.0	22.0			
M11810-06-24	10	- 6	3/8"	M 24X1.5	16.75	12.0	28.0	12.0	24.0			
M11810-08-24	12	- 8	1/2"	M 24X1.5	16.75	12.0	28.5	12.0	24.0			
M11810-10-30	16	- 10	5/8"	M 30X1.5	21.25	15.0	31.5	14.0	30.0			
M11810-12-36	19	- 12	3/4"	M 36X1.5	26.75	21.0	34.0	14.0	36.0			
M11810-16-45	25	- 16	1"	M 45X1.5	33.5	26.0	39.5	16.0	46.0			

NF STANDARD CONNECTIONS

M21813

FRENCH METRIC FEMALE
GAZ TYPE (SLIP-ON NUT)



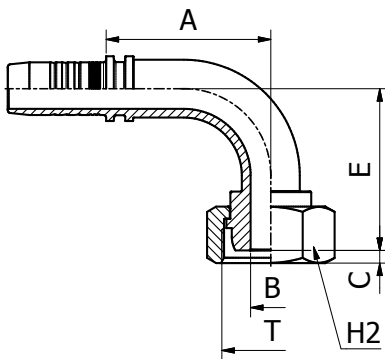
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	H2	
M21813-04-20	6	-4	1/4"	M 20X1.5	13.25	7.0	22.0	4.0	24.0			
M21813-05-20	8	-5	5/16"	M 20X1.5	13.25	7.0	22.0	4.0	24.0			
M21813-06-20	10	-6	3/8"	M 20X1.5	13.25	7.0	22.5	4.0	24.0			
M21813-06-24	10	-6	3/8"	M 24X1.5	16.75	9.3	25.5	3.5	30.0			
M21813-08-24	12	-8	1/2"	M 24X1.5	16.75	9.3	26.0	3.5	30.0			
M21813-08-30	12	-8	1/2"	M 30X1.5	21.25	12.5	23.5	2.0	36.0			
M21813-10-30	16	-10	5/8"	M 30X1.5	21.25	12.5	23.5	2.0	36.0			
M21813-12-36	19	-12	3/4"	M 36X1.5	26.75	15.0	27.0	4.7	41.0			
M21813-16-45	25	-16	1"	M 45X1.5	33.5	19.8	27.0	4.5	50.0			

165 FITTINGS

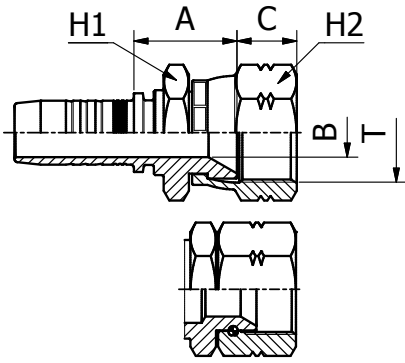
NF STANDARD CONNECTIONS

M21893

90° FRENCH METRIC FEMALE
GAZ TYPE (SLIP-ON NUT)



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	H2
M21893-05-20	8	-5	5/16"	M 20X1.5	13.25	7.0	32.0	4.0	29.5	24.0		
M21893-06-20	10	-6	3/8"	M 20X1.5	13.25	7.0	36.5	4.0	33.5	24.0		
M21893-08-24	12	-8	1/2"	M 24X1.5	16.75	12.0	45.0	3.5	41.0	30.0		
M21893-10-30	16	-10	5/8"	M 30X1.5	21.25	12.5	51.5	2.0	53.5	36.0		
M21893-12-36	19	-12	3/4"	M 36X1.5	26.75	15.0	61.5	4.7	60.0	41.0		



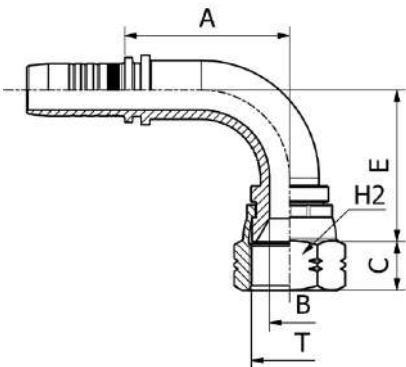
JIS STANDARD CONNECTIONS

M24011/M24012

JIS METRIC FEMALE 60° CONE SEAT
(KOMATSU) JIS B 8363

FITTINGS 166

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
M24011-04-14	6	- 4	1/4"	M 14X1.5	4.0	23.0	10.5	19.0	19.0		
M24011-04-18	6	- 4	1/4"	M 18X1.5	7.0	22.5	11.5	24.0	24.0		
M24011-05-16	8	- 5	5/16"	M 16X1.5	5.5	22.5	9.3	21.0	21.0		
M24011-06-14	10	- 6	3/8"	M 14X1.5	4.0	23.5	10.5	19.0	19.0		
M24011-06-18	10	- 6	3/8"	M 18X1.5	7.0	23.5	11.5	24.0	24.0		
M24011-08-22	12	- 8	1/2"	M 22X1.5	9.3	25.0	13.0	27.0	27.0		
M24011-10-24	16	- 10	5/8"	M 24X1.5	12.5	26.5	15.1	32.0	32.0		
M24011-12-30	19	- 12	3/4"	M 30X1.5	15.0	31.5	18.3	36.0	36.0		
M24011-16-33	25	- 16	1"	M 33X1.5	19.8	33.5	21.3	41.0	41.0		
M24011-20-36	31	- 20	1.1/4"	M 36X1.5	19.8	41.0	20.0	46.0	46.0		
M24012-24-42	38	- 24	1.1/2"	M 42X1.5	26.0	44.0	18.8	55.0	55.0		



JIS STANDARD CONNECTIONS

M24091

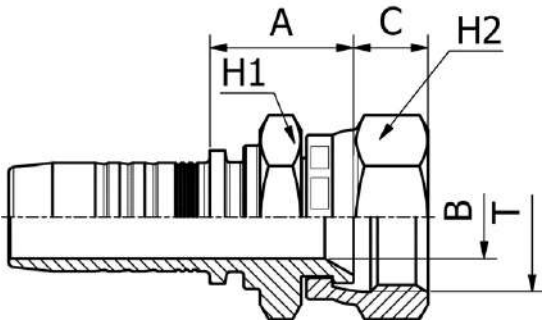
90° JIS METRIC FEMALE 60° CONE SEAT

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M24091-04-14	6	- 4	1/4"	M 14X1.5	4.0	29.0	10.5	28.5	19.0	
M24091-06-18	10	- 6	3/8"	M 18X1.5	7.0	35.5	11.5	34.0	24.0	
M24091-08-22	12	- 8	1/2"	M 22X1.5	9.3	44.0	13.0	40.0	27.0	
M24091-10-24	16	- 10	5/8"	M 24X1.5	12.5	53.5	15.2	47.0	32.0	
M24091-12-30	19	- 12	3/4"	M 30X1.5	15.0	61.5	18.3	56.5	36.0	

JIS STANDARD CONNECTIONS

M23811

JIS BSP FEMALE 60° CONE SEAT
(TOYOTA) - JIS B 8363
(CRIMPED-BACK NUT)

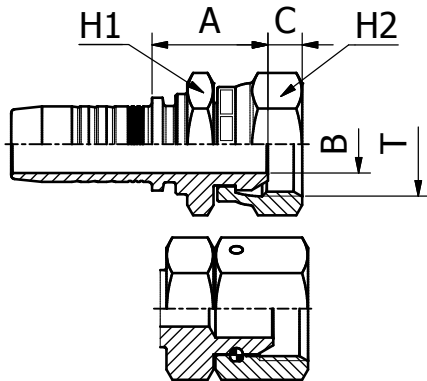


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	H1	H2		
M23811-04-04	6	- 4	1/4"	1/4" - 19		4.0	18.5	8.3	19.0	19.0		
M23811-06-06	10	- 6	3/8"	3/8" - 19		7.0	23.0	10.0	22.0	22.0		
M23811-08-08	12	- 8	1/2"	1/2" - 14		9.3	22.0	11.5	27.0	27.0		
M23811-12-12	19	- 12	3/4"	3/4" - 14		15.0	26.0	13.5	32.0	32.0		
M23811-16-16	25	- 16	1"	1" - 11		19.8	30.5	14.5	38.0	38.0		

JIS STANDARD CONNECTIONS

M20711/M20712

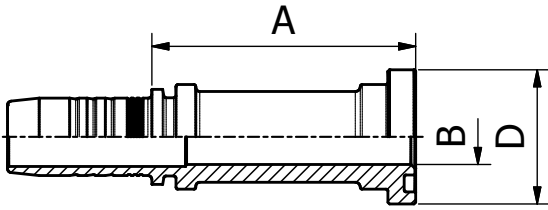
JIS BSP FEMALE 60° CONE
(NISSAN) - JIS B 8363



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	H1	H2		
M20711-04-04	6	- 4	1/4"	1/4" - 19		4.0	22.5	4.5	19.0	19.0		
M20711-06-06	10	- 6	3/8"	3/8" - 19		7.0	24.5	6.4	22.0	22.0		
M20711-08-08	12	- 8	1/2"	1/2" - 14		9.3	26.5	6.7	27.0	27.0		
M20711-12-12	19	- 12	3/4"	3/4" - 14		15.0	30.0	8.9	32.0	32.0		
M20712-10-08	16	- 10	5/8"	1/2" - 14		9.3	29.0	6.5	27.0	27.0		
M20712-10-12	16	- 10	5/8"	3/4" - 14		15.0	30.5	9.0	32.0	32.0		
M20712-16-16	25	- 16	1"	1" - 11		19.8	35.5	10.5	38.0	38.0		
M20712-20-20	31	- 20	1.1/4"	1.1/4" - 11		26.0	44.5	12.5	50.0	50.0		

ORIGINAL EQUIPMENT CONNECTIONS

M24111



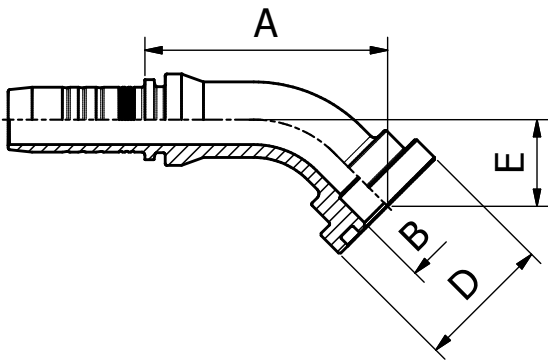
STRAIGHT KOMATSU FLANGE

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D			
M24111-08-10	12	-8	1/2"	5/8"	14.0	66.0	34.0				
M24111-10-10	16	-10	5/8"	5/8"	14.0	65.5	34.0				
M24111-12-10	19	-12	3/4"	5/8"	14.0	66.5	34.0				

FITTINGS 168

ORIGINAL EQUIPMENT CONNECTIONS

M24141

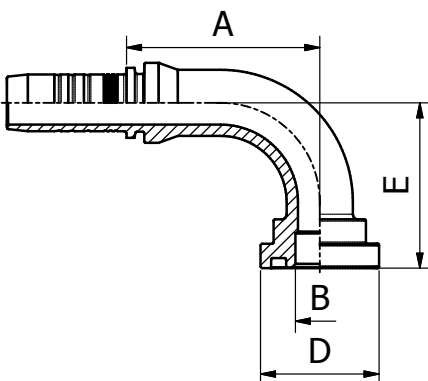


45° KOMATSU FLANGE

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	C	H1	H2
M24141-10-10	16	-10	5/8"	5/8"	14.0	61.0	34.0	22.0		

ORIGINAL EQUIPMENT CONNECTIONS

M24191



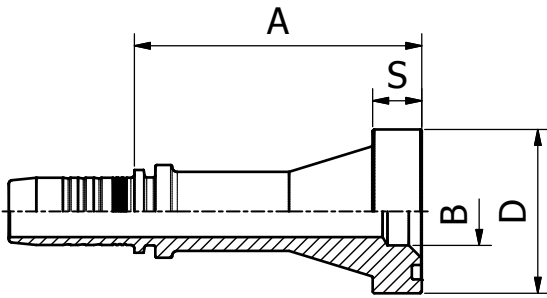
90° KOMATSU FLANGE

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	C	H1	H2
M24191-10-10	16	-10	5/8"	5/8"	14.0	56.0	34.0	47.5		
M24191-12-10	19	-12	3/4"	5/8"	14.0	56.0	34.0	47.5		

ORIGINAL EQUIPMENT CONNECTIONS

M23911

STRAIGHT SUPERCAT FLANGE

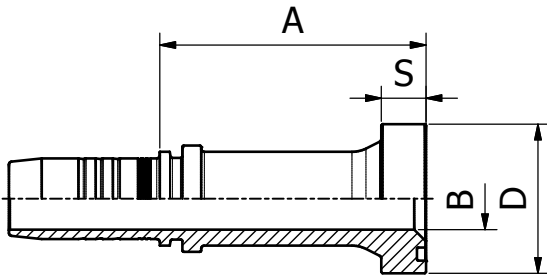


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm			
	DN	Dash	inch		B	A	D	S
M23911-12-12	19	-12	3/4"	3/4"	15.0	74.5	41.5	14.3
M23911-12-16	19	-12	3/4"	1"	19.8	83.5	47.7	14.3
M23911-16-16	25	-16	1"	1"	19.8	87.0	47.7	14.3
M23911-16-20	25	-16	1"	1.1/4"	26.0	92.5	54.0	14.3
M23911-20-20	31	-20	1.1/4"	1.1/4"	26.0	86.0	54.0	14.3
M23911-24-24	38	-24	1.1/2"	1.1/2"	32.0	94.0	63.6	14.3

ORIGINAL EQUIPMENT CONNECTIONS

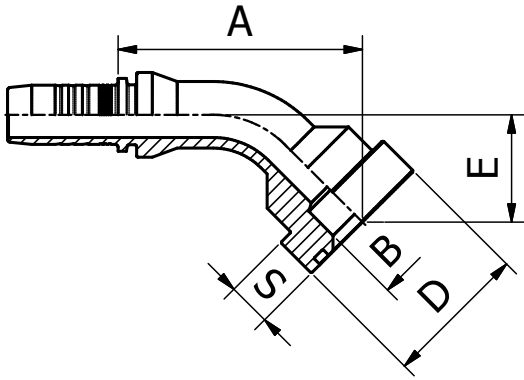
M23911CT

STRAIGHT REALCAT FLANGE



PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm			
	DN	Dash	inch		B	A	D	S
M23911-16-16CT	25	-16	1"	1"	19.8	85.0	47.7	14.3
M23911-20-20CT	31	-20	1.1/4"	1.1/4"	26.0	88.5	54.0	14.3
M23911-24-24CT	38	-24	1.1/2"	1.1/2"	32.0	93.0	63.6	14.3

ORIGINAL EQUIPMENT CONNECTIONS



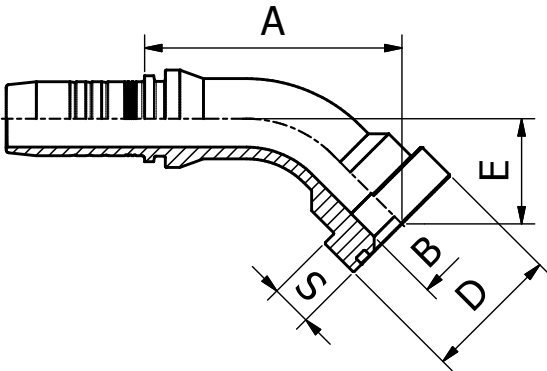
M23941

45° SUPERCAT FLANGE

FITTINGS 170

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M23941-12-12	19	-12	3/4"	3/4"	15.0	77.0	41.5	32.0	14.3		
M23941-16-16	25	-16	1"	1"	19.8	89.5	47.7	36.5	14.3		
M23941-16-20	25	-16	1"	1"	26.0	92.5	54.0	40.5	14.3		
M23941-20-20	31	-20	1.1/4"	1.1/4"	26.0	99.0	54.0	41.5	14.3		
M23941-24-24	38	-24	1.1/2"	1.1/2"	32.0	119.0	63.6	45.5	14.3		

ORIGINAL EQUIPMENT CONNECTIONS



M23941CT

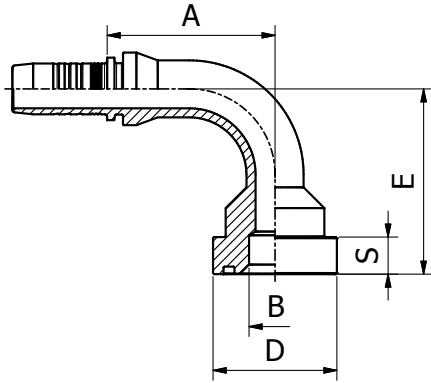
45° REALCAT FLANGE

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M23941-16-16CT	25	-16	1"	1"	19.8	89.5	47.7	36.5	14.3		
M23941-16-20CT	25	-16	1"	1.1/4"	26.0	93.0	54.0	40.5	14.3		
M23941-20-20CT	31	-20	1.1/4"	1.1/4"	26.0	99.0	54.0	41.5	14.3		
M23941-24-24CT	38	-24	1.1/2"	1.1/2"	32.0	119.0	63.7	45.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M23991

90° SUPERCAT FLANGE

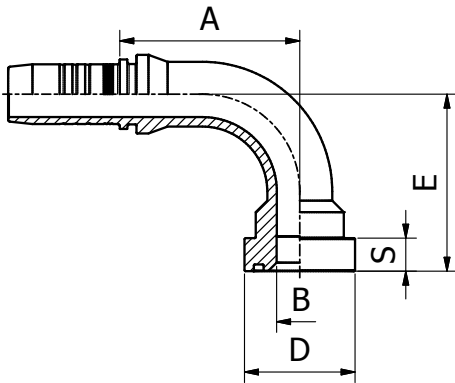


PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M23991-12-12	19	-12	3/4"	3/4"	15.0	64.5	41.5	64.5	14.3		
M23991-16-16	25	-16	1"	1"	19.8	77.5	47.7	76.5	14.3		
M23991-16-20	25	-16	1"	1.1/4"	26.0	75.5	54.0	80.5	14.3		
M23991-20-20	31	-20	1.1/4"	1.1/4"	26.0	85.5	54.0	87.0	14.3		
M23991-20-24	31	-20	1.1/4"	1.1/2"	32.0	85.5	63.7	93.0	14.3		

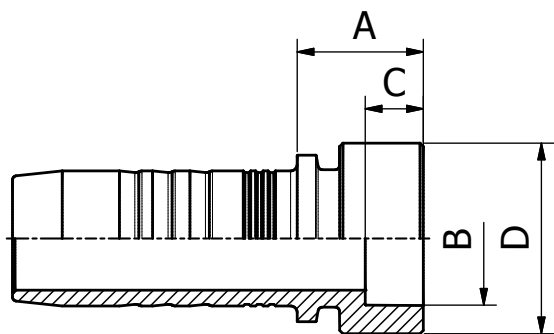
ORIGINAL EQUIPMENT CONNECTIONS

M23991CT

90° REALCAT FLANGE



PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M23991-16-16CT	25	-16	1"	1"	19.8	77.5	47.7	76.5	14.3		
M23991-16-20CT	25	-16	1"	1.1/4"	26.0	75.5	54.0	80.5	14.3		
M23991-20-20CT	31	-20	1.1/4"	1.1/4"	26.0	85.5	54.0	87.0	14.3		
M23991-24-24CT	38	-24	1.1/2"	1.1/2"	32.0	106.0	63.7	96.0	14.3		



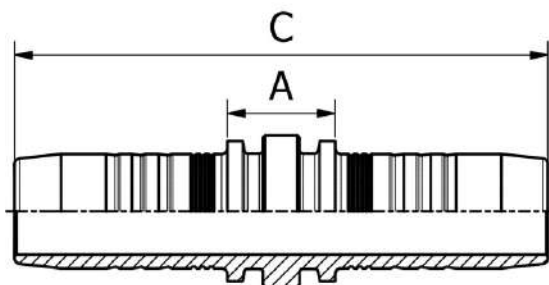
TAIL

M..IP..

WELDING TAIL

FITTINGS 172

PART. REF.	HOSE BORE					DIMENSIONS mm						
	DN	Dash	inch			B	A	C	D			
M03IP06	5	- 3	3/16"			6.0	11.5	5.0	10.0			
M04IP08	6	- 4	1/4"			8.0	13.0	5.0	12.0			
M05IP10	8	- 5	5/16"			10.0	13.5	6.0	14.0			
M06IP12	10	- 6	3/8"			12.0	13.5	6.0	16.0			
M06IP14	10	- 6	3/8"			14.0	13.5	6.0	18.0			
M08IP15	12	- 8	1/2"			15.0	14.0	6.0	20.0			
M08IP16	12	- 8	1/2"			16.0	14.0	6.0	20.0			
M10IP18	16	- 10	5/8"			18.0	15.0	7.0	23.0			
M12IP22	19	- 12	3/4"			22.0	16.0	7.0	26.0			
M16IP28	25	- 16	1"			28.0	18.5	8.0	34.0			
M20IP35	31	- 20	1.1/4"			35.0	20.5	9.0	40.0			
M24IP40	38	- 24	1.1/2"			40.0	21.5	9.0	50.0			
M32IP50	51	- 32	2"			50.0	23.0	10.0	60.0			
M40IP60	63	- 40	2.1/2"			61.0	19.0	7.0	73.0			
M48IP70	76	- 48	3"			70.0	38.0	10.0	89.0			



DOUBLE CONNECTOR

M10050

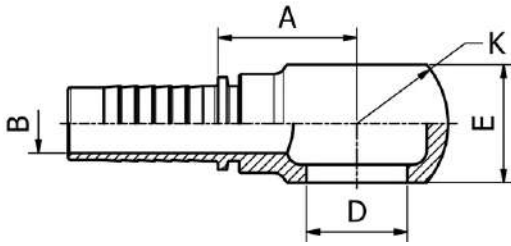
DOUBLE CONNECTOR

PART. REF.	HOSE BORE					DIMENSIONS mm					
	DN	Dash	inch			B	A	C			
M10050-03-03	5	- 3	3/16"			3.0	15.5	58.2			
M10050-04-04	6	- 4	1/4"			4.0	14.0	69.0			
M10050-05-05	8	- 5	5/16"			5.5	14.0	70.0			
M10050-06-06	10	- 6	3/8"			7.0	14.5	73.5			
M10050-08-08	12	- 8	1/2"			9.3	15.5	77.9			
M10050-10-10	16	- 10	5/8"			12.5	15.5	84.0			
M10050-12-12	19	- 12	3/4"			15.0	18.5	91.5			
M10050-16-16	25	- 16	1"			19.8	22.5	119.0			
M10050-20-20	31	- 20	1.1/4"			26.0	23.0	128.1			
M10050-24-24	38	- 24	1.1/2"			32.0	23.5	147.5			

BANJO CONNECTIONS

O20310

BSP BANJO



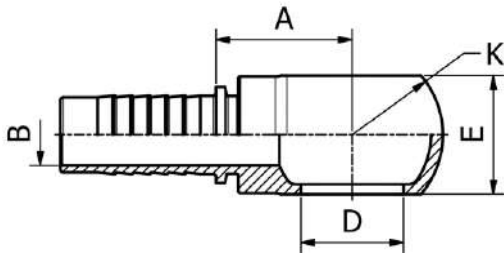
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	D	E	K	
O20310-04-04	6	- 4	1/4"	1/4" - 19	4.4	22.0	13.25	15.0	24.0		
O20310-04-06	6	- 4	1/4"	3/8" - 19	4.4	23.5	16.7	18.0	28.0		
O20310-05-04	8	- 5	5/16"	1/4" - 19	5.0	23.0	13.2	14.0	24.0		
O20310-05-06	8	- 5	5/16"	3/8" - 19	5.6	23.0	16.7	20.0	29.0		
O20310-06-06	10	- 6	3/8"	3/8" - 19	7.0	24.5	16.7	20.0	29.0		
O20310-06-08	10	- 6	3/8"	1/2" - 19	7.1	27.0	21.0	25.0	38.0		
O20310-08-08	12	- 8	1/2"	1/2" - 14	9.8	27.5	21.0	25.0	38.0		
O20310-10-10	16	- 10	5/8"	5/8" - 14	12.7	29.5	23.0	27.0	40.0		
O20310-12-12	19	- 12	3/4"	3/4" - 14	15.5	36.5	26.5	31.0	48.0		
O20310-16-16	25	- 16	1"	1" - 11	20.5	40.5	33.3	42.0	60.0		

173 FITTINGS

BANJO CONNECTIONS

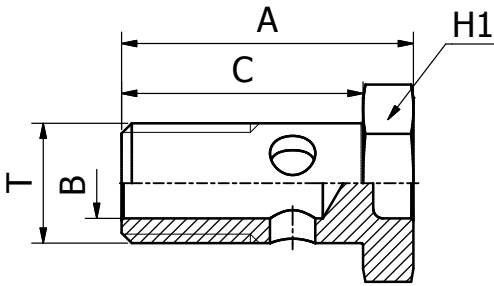
O20910

**METRIC BANJO
DIN 7642**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	D	E	K	
O20910-04-12	6	- 4	1/4"	M 12X1.5	4.4	22.5	12.0	12.0	20.0		
O20910-04-14	6	- 4	1/4"	M 14X1.5	4.4	23.5	14.0	14.0	24.0		
O20910-05-14	8	- 5	5/16"	M 14X1.5	5.6	23.5	14.0	14.0	24.0		
O20910-06-14	10	- 6	3/8"	M 14X1.5	7.1	25.0	14.0	14.0	24.0		
O20910-06-16	10	- 6	3/8"	M 16X1.5	7.1	25.0	16.0	16.0	28.0		
O20910-06-18	10	- 6	3/8"	M 18X1.5	7.1	27.0	18.0	20.0	32.0		
O20910-08-18	12	- 8	1/2"	M 18X1.5	9.8	28.0	18.0	20.0	32.0		
O20910-08-22	12	- 8	1/2"	M 22X1.5	9.8	31.0	22.0	25.0	39.0		
O20910-10-22	16	- 10	5/8"	M 22X1.5	12.7	31.0	22.0	25.0	39.0		
O20910-12-26	19	- 12	3/4"	M 26X1.5	15.5	34.5	26.0	30.0	46.0		

BOLT



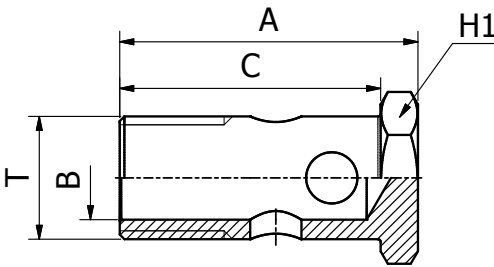
080810

METRIC BOLT - DIN 7643

FITTINGS
174

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
O80810-12				M 12X1.5	7.0	29.0	24.0	17.0			
O80810-14				M 14X1.5	9.0	31.0	26.0	19.0			
O80810-16				M 16X1.5	11.0	33.0	28.0	22.0			
O80810-18				M 18X1.5	13.0	37.0	32.0	24.0			
O80810-22				M 22X1.5	16.0	45.0	39.0	27.0			
O80810-26				M 26X1.5	20.0	51.0	45.0	32.0			

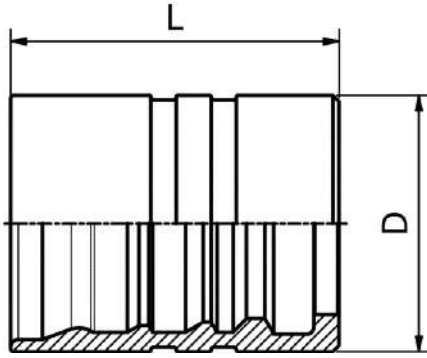
BOLT



080210

BSP BOLT

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1		
O80210-04				1/4" - 19	6.0	34.5	28.5	17.0			
O80210-06				3/8" - 19	9.0	45.5	38.5	22.0			
O80210-08				1/2" - 14	13.0	52.0	44.0	27.0			
O80210-10				5/8" - 14	15.0	56.5	48.5	30.0			
O80210-12				3/4" - 14	18.0	64.0	54.0	32.0			
O80210-16				1" - 11	24.0	77.5	68.5	41.0			



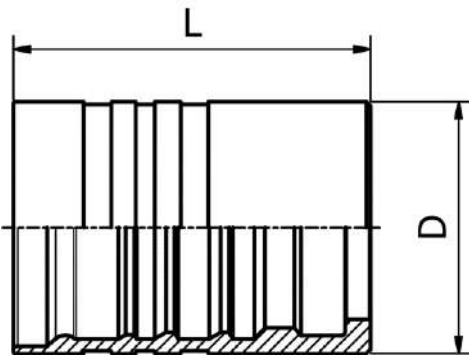
FERRULE

M01500

**DOUBLE SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES (4 PLY)**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M01500-10	16	- 10	5/8"			35.0	40.9				
M01500-12	19	- 12	3/4"			40.0	51.4				
M01500-16	25	- 16	1"			48.0	64.5				
M01500-20	31	- 20	1.1/4"			57.0	84.0				
M01500-24	38	- 24	1.1/2"			64.3	94.0				
M01500-32	51	- 32	2"			83.5	107.0				
M01500-40	63	- 40	2.1/2"			100.0	135.0				
M01500-48	76	- 48	3"			107.0	125.0				

175 FITTINGS

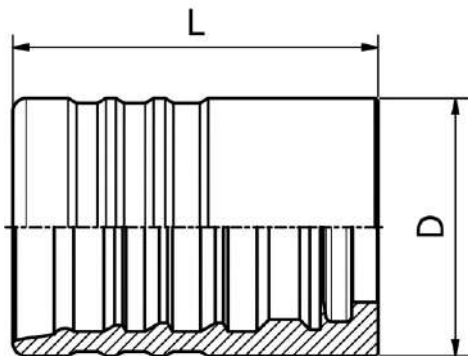


FERRULE

M01600

**DOUBLE SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES (6 PLY)**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M01600-20	31	- 20	1.1/4"			60.0	85.0				
M01600-24	38	- 24	1.1/2"			69.0	96.0				



FERRULE

M01800/M01810/M01850

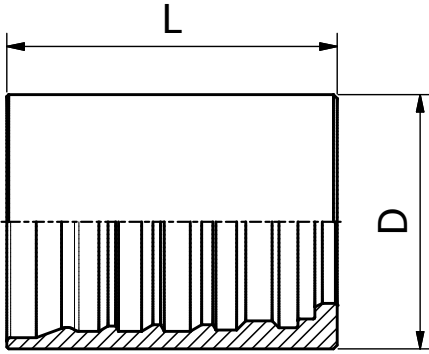
**DOUBLE SKIVE FERRULE FOR
EXTRA DUTY SPIRAL HOSES (6 PLY)**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M01850-12	19	-12	3/4"			45.1	51.4				
M01850-16	25	-16	1"			53.5	64.5				
M01850-20	31	- 20	1.1/4"			65.0	88.2				
M01800-32	51	- 32	2"			86.5	108.0				
M01810-40	63	- 40	2.1/2"			103.0	135.0				
M01810-48	76	- 48	3"			113.5	125.0				

FERRULE

M01900

DOUBLE SKIVE FERRULE



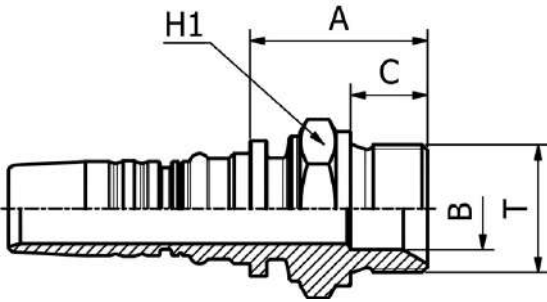
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M01900-20	31	-20	1.1/4"			68	88,2				
M01900-40	63	-40	2.1/2"			109	135				

FITTINGS 176

BS STANDARD CONNECTIONS

M30510

BSP MALE
PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6

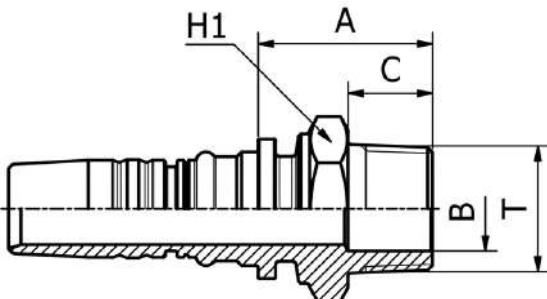


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M30510-12-12	19	- 12	3/4"	3/4" - 14	17.0	37.0	16.0	32.0			
M30510-12-16	19	- 12	3/4"	1" - 11	22.5	43.0	19.0	41.0			
M30510-16-16	25	- 16	1"	1" - 11	22.5	43.0	19.0	41.0			
M30510-16-20	25	- 16	1"	1.1/4" - 11	28.5	48.0	20.0	50.0			
M30510-20-20	31	- 20	1.1/4"	1.1/4" - 11	28.5	50.5	20.0	50.0			
M30510-24-24	38	- 24	1.1/2"	1.1/2" - 11	33.5	54.5	22.0	55.0			
M30510-32-32	51	- 32	2"	2" - 11	42.0	58.0	25.0	70.0			

BS STANDARD CONNECTIONS

M30710

BSP
MALE TAPERED)

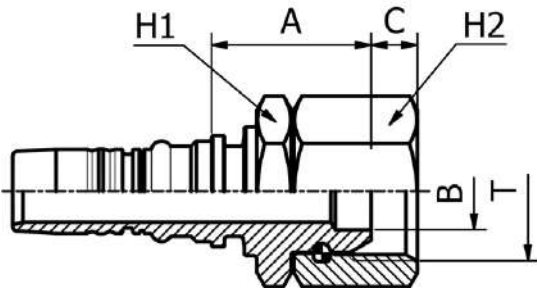


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M30710-12-12	19	- 12	3/4"	3/4" BSPT	17.0	35.0	17.0	32.0			
M30710-16-16	25	- 16	1"	1" BSPT	22.5	41.5	21.0	41.0			
M30710-20-20	31	- 20	1.1/4"	1.1/4" BSPT	28.5	82.0	23.0	46.0			
M30710-24-24	38	- 24	1.1/2"	1.1/2" - 11	33.5	52.0	23.0	55.0			
M30710-32-32	51	- 32	2"	2" - 11	42.0	56.1	27.0	70.0			

BS STANDARD CONNECTIONS

M40512

**BSP
FEMALE 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT)**

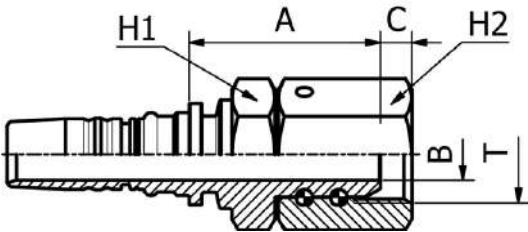


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
M40512-10-12H32	16	- 10	5/8"	3/4" - 14	15.0	31.0	9.0	32.0	32.0		

BS STANDARD CONNECTIONS

M40514

**BSP
FEMALE 60° CONE
BS5200 / ISO 12151-6
(DOUBLE THRUST-WIRE)**

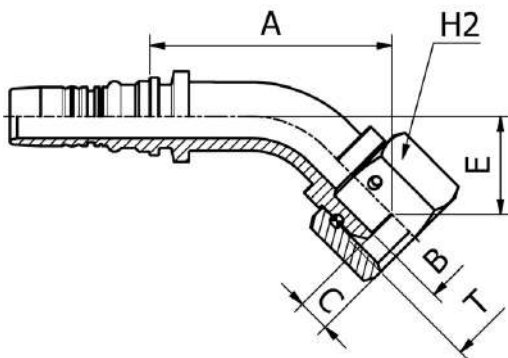


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
M40514-12-12	19	- 12	3/4"	3/4" - 14	14.5	53.0	8.7	36.0	36.0		
M40514-16-16	25	- 16	1"	1" - 11	18.0	58.0	11.1	41.0	41.0		
M40514-20-20	31	- 20	1.1/4"	1.1/4" - 11	23.0	75.0	10.1	50.0	55.0		
M40514-24-24	38	- 24	1.1/2"	1.1/2" - 11	27.0	76.0	12.5	55.0	60.0		

BS STANDARD CONNECTIONS

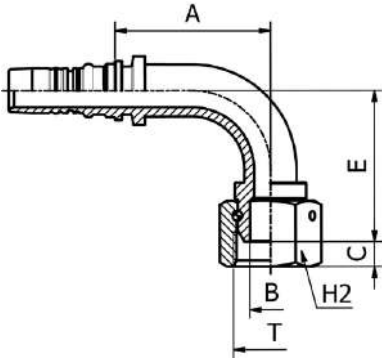
M40542

**45° BSP
FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT)**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	H2
M40542-10-12	16	- 10	5/8"	3/4" - 14	15.0	67.0	9.0	27.0	32.0	

BS STANDARD CONNECTIONS



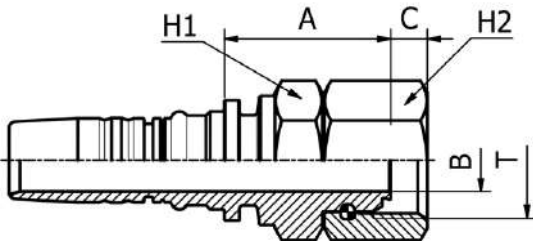
M40592

90° BSP
FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M40592-10-12	16	- 10	5/8"	3/4" - 14		15.0	56.5	9.0	55.0	32.0	

FITTINGS 178

BS STANDARD CONNECTIONS



M40812

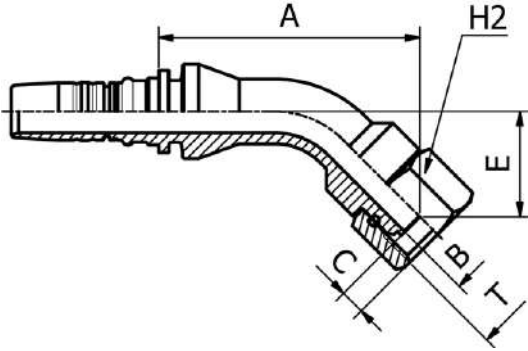
BSP O-RING
FEMALE 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	H1	H2	
M40812-12-12	19	- 12	3/4"	3/4" - 14		14.5	39.0	8.5	32.0	32.0	
M40812-12-16	19	- 12	3/4"	1" - 11		19.0	36.5	10.6	32.0	41.0	
M40812-16-12	25	- 16	1"	3/4" - 14		15.0	35.0	8.5	41.0	32.0	
M40812-16-16	25	- 16	1"	1" - 11		19.5	44.5	10.6	41.0	41.0	
M40812-16-20	25	- 16	1"	1.1/4" - 11		26.1	41.0	10.5	41.0	50.0	
M40812-20-16	31	- 20	1.1/4"	1" - 11		19.0	44.5	10.6	50.0	41.0	
M40812-20-20	31	- 20	1.1/4"	1.1/4" - 11		26.1	52.5	10.5	50.0	50.0	
M40812-20-24	31	- 20	1.1/4"	1.1/2" - 11		32.1	46.0	12.5	50.0	60.0	
M40812-24-20	38	- 24	1.1/2"	1.1/4" - 11		26.1	48.5	10.5	60.0	50.0	
M40812-24-24	38	- 24	1.1/2"	1.1/2" - 11		32.1	51.5	12.5	60.0	60.0	
M40812-32-32	51	- 32	2"	2" - 11		42.0	51.5	16.1	70.0	70.0	

BS STANDARD CONNECTIONS

M40842

**45° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT)**

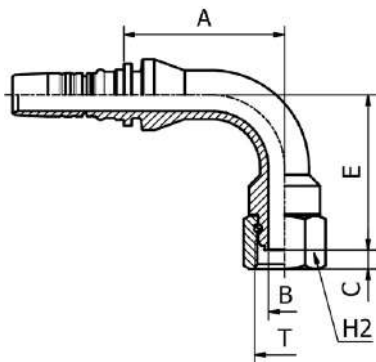


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M40842-12-12	19	- 12	3/4"	3/4" - 14	14.5	88.0	8.5	35.0	32.0		
M40842-12-16	19	- 12	3/4"	1" - 11	19.0	89.5	10.6	36.5	41.0		
M40842-16-12	25	- 16	1"	3/4" - 14	15.0	105.5	8.5	36.0	32.0		
M40842-16-16	25	- 16	1"	1" - 11	19.5	97.0	10.6	40.0	41.0		
M40842-16-20	25	- 16	1"	1.1/4" - 11	26.1	108.5	10.5	38.0	50.0		
M40842-20-16	31	- 20	1.1/4"	1" - 11	19.0	118.0	10.6	47.5	41.0		
M40842-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	120.0	10.5	49.5	50.0		
M40842-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	114.5	12.5	40.0	60.0		
M40842-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	126.5	12.5	50.0	60.0		
M40842-32-32	51	- 32	2"	2" - 11	42.0	162.5	16.1	66.5	70.0		

BS STANDARD CONNECTIONS

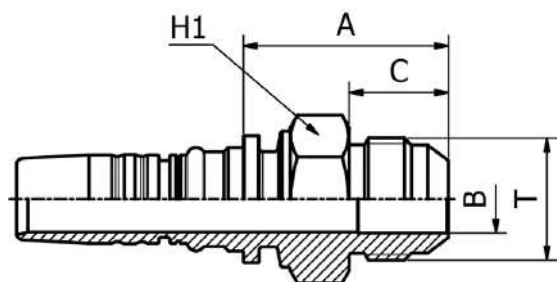
M40892

**90° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT)**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M40892-12-12	19	- 12	3/4"	3/4" - 14	14.5	72.5	8.5	70.0	32.0		
M40892-12-16	19	- 12	3/4"	1" - 11	19.0	72.5	10.6	71.0	41.0		
M40892-16-16	25	- 16	1"	1" - 11	19.5	82.0	10.6	80.5	41.0		
M40892-16-20	25	- 16	1"	1.1/4" - 11	26.1	95.0	10.5	78.5	50.0		
M40892-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	98.5	10.5	98.0	50.0		
M40892-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	98.5	12.5	84.5	60.0		
M40892-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	111.5	12.5	109.0	60.0		
M40892-32-32	51	- 32	2"	2" - 11	42.0	143.0	16.1	140.5	70.0		

SAE STANDARD CONNECTIONS



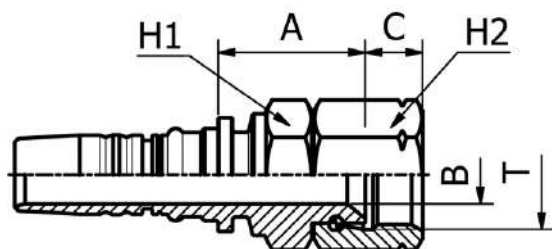
M32510

JIC
MALE 37° CONE
SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M32510-10-10	16	- 10	5/8"	7/8" - 14	12.0	41.0	19.5	27.0			
M32510-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	45.5	22.0	32.0			
M32510-16-16	25	- 16	1"	1.5/16" - 12	20.0	50.5	23.0	38.0			
M32510-16-20	25	- 16	1"	1.5/8" - 12	26.0	57.0	24.3	42.0			
M32510-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	66.0	24.3	46.0			
M32510-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	64.0	27.5	50.0			
M32510-32-32	51	- 32	2"	2.1/2" - 12	42.0	81.0	34.0	70.0			

FITTINGS 180

SAE STANDARD CONNECTIONS



M42512

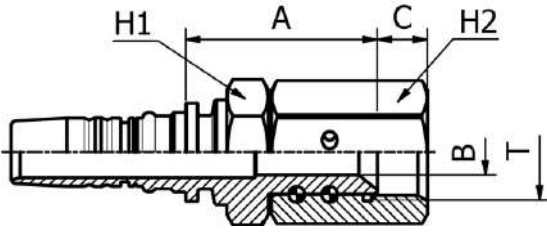
JIC
FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5
(THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M42512-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	36.0	14.2	32.0	32.0		
M42512-12-16	19	- 12	3/4"	1.5/16" - 12	21.7	32.5	15.2	41.0	41.0		
M42512-16-16	25	- 16	1"	1.5/16" - 12	21.7	40.5	15.2	41.0	41.0		
M42512-16-20	25	- 16	1"	1.5/8" - 12	26.1	44.0	16.2	50.0	50.0		
M42512-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	51.5	16.2	50.0	50.0		
M42512-20-24	31	- 20	1.1/4"	1.7/8" - 12	30.5	51.0	18.8	55.0	60.0		
M42512-24-24	38	- 24	1.1/2"	1.7/8" - 12	31.0	54.5	18.8	55.0	60.0		
M42512-32-32	51	- 32	2"	2.1/2" - 12	42.0	54.0	24.0	70.0	75.0		

SAE STANDARD CONNECTIONS

M42714

JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (DOUBLE THRUST-WIRE NUT)

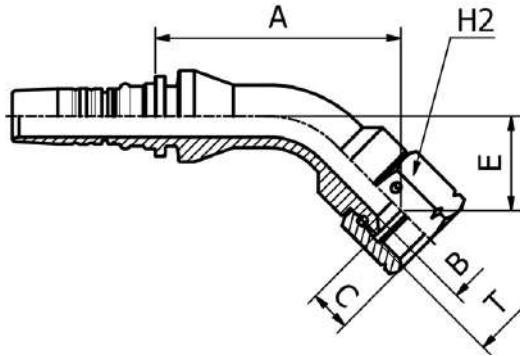


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M42714-12-12	19	- 12	3/4"	1.1/16" - 12	13.0	55.0	14.4	36.0	36.0		
M42714-16-16	25	- 16	1"	1.5/16" - 12	18.0	60.5	15.1	41.0	41.0		
M42714-20-20	31	- 20	1.1/4"	1.5/8" - 12	23.0	71.0	15.9	50.0	55.0		
M42714-24-24	38	- 24	1.1/2"	1.7/8" - 12	27.0	71.0	18.6	55.0	60.0		
M42714-32-32	51	- 32	2"	2.1/2" - 12	37.0	77.5	23.8	70.0	75.0		

SAE STANDARD CONNECTIONS

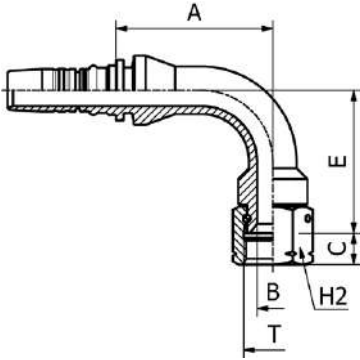
M42542

45° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42542-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	86.0	14.2	33.0	32.0		
M42542-16-16	25	- 16	1"	1.5/16" - 12	21.7	95.0	15.2	37.0	41.0		
M42542-16-20	25	- 16	1"	1.5/8" - 12	26.1	102.5	16.2	36.5	50.0		
M42542-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	115.5	16.2	45.0	50.0		
M42542-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	126.5	18.8	50.0	60.0		
M42542-32-32	51	- 32	2"	2.1/2" - 12	42.0	161.5	24.0	63.5	75.0		

SAE STANDARD CONNECTIONS



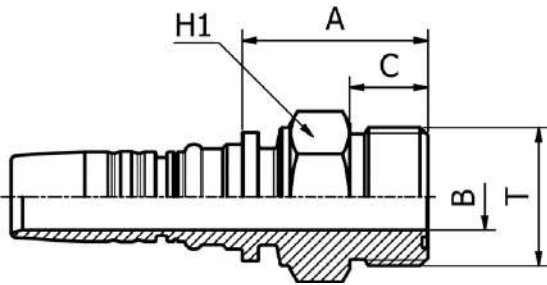
M42592

90° JIC
FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5
(THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42592-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	72.5	14.2	66.0	32.0		
M42592-12-16	19	- 12	3/4"	1.5/16" - 12	21.7	72.5	15.2	71.5	41.0		
M42592-16-16	25	- 16	1"	1.5/16" - 12	21.7	82.5	15.2	77.5	41.0		
M42592-16-20	25	- 16	1"	1.5/8" - 12	26.1	90.5	16.2	76.5	50.0		
M42592-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	98.5	16.2	92.0	50.0		
M42592-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.1	101.5	18.8	108.0	60.0		
M42592-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	111.5	18.8	106.0	60.0		
M42592-32-32	51	- 32	2"	2.1/2" - 12	42.0	144.5	24.0	137.0	75.0		

FITTINGS 182

SAE STANDARD CONNECTIONS



M32410

ORFS
MALE
SAE J516 / ISO 12151-1

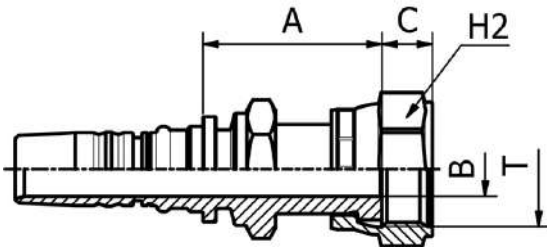
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M32410-10-08	16	- 10	5/8"	13/16" - 16	9.3	33.0	12.8	27.0			
M32410-10-10	16	- 10	5/8"	1" - 14	12.0	36.0	15.5	27.0			
M32410-10-12	16	- 10	5/8"	1.3/16" - 12	15.0	39.0	17.0	32.0			
M32410-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	40.5	17.0	32.0			
M32410-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	42.5	17.5	38.0			
M32410-16-16	25	- 16	1"	1.7/16" - 12	19.5	45.0	17.5	41.0			
M32410-16-20	25	- 16	1"	1.11/16" - 12	25.0	48.0	17.5	46.0			
M32410-20-16	31	- 20	1.1/4"	1.7/16" - 12	19.5	47.0	17.5	50.0			
M32410-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	50.5	17.5	46.0			
M32410-24-24	38	- 24	1.1/2"	2" - 12	31.0	53.0	17.5	55.0			
M32410-32-24	51	- 32	2"	2" - 12	31.0	53.0	17.5	70.0			

SAE STANDARD CONNECTIONS

M42411

ORFS
FEMALE

SAE J516 / ISO 12151-1
PULLBACK TYPE (CRIMPED BACK-NUT)



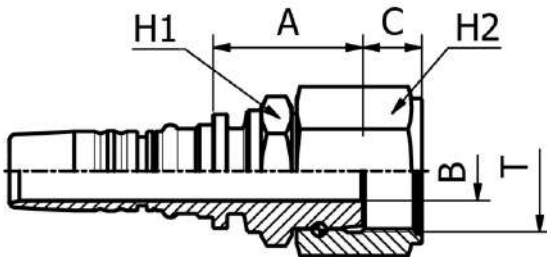
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M42411-10-10	16	- 10	5/8"	1" - 14	11.5	40.5	12.5	24.0	30.0		
M42411-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	48.0	13.5	32.0	36.0		
M42411-12-16	19	- 12	3/4"	1.7/16" - 12	19.0	50.0	13.5	36.0	41.0		
M42411-16-12	25	- 16	1"	1.3/16" - 12	14.3	50.0	13.5	41.0	36.0		
M42411-16-16	25	- 16	1"	1.7/16" - 12	19.5	51.5	13.5	41.0	41.0		
M42411-16-20	25	- 16	1"	1.11/16" - 12	26.0	51.5	13.6	41.0	50.0		
M42411-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	58.0	13.6	50.0	50.0		
M42411-24-24	38	- 24	1.1/2"	2" - 12	31.0	60.5	14.2	60.0	60.0		

SAE STANDARD CONNECTIONS

M42412

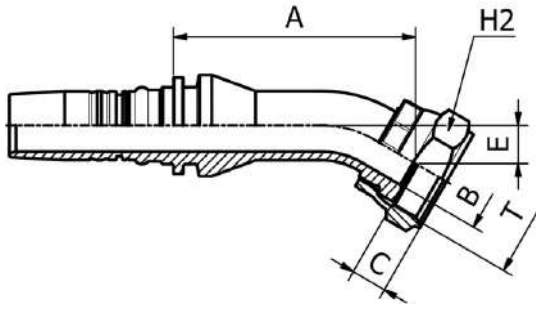
ORFS
FEMALE

SAE J516 / ISO 12151-1
HEAVY TYPE (THRUST-WIRE NUT)



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M42412-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	37.0	14.1	32.0	36.0		
M42412-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	41.0	15.0	41.0	46.0		
M42412-16-16	25	- 16	1"	1.7/16" - 12	19.5	42.0	15.0	41.0	46.0		
M42412-16-20	25	- 16	1"	1.11/16" - 12	26.0	50.0	15.1	46.0	55.0		
M42412-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	52.0	15.1	50.0	55.0		
M42412-20-24	31	- 20	1.1/4"	2" - 12	31.0	53.0	15.0	55.0	60.0		
M42412-24-24	38	- 24	1.1/2"	2" - 12	31.0	55.0	15.0	60.0	60.0		

SAE STANDARD CONNECTIONS



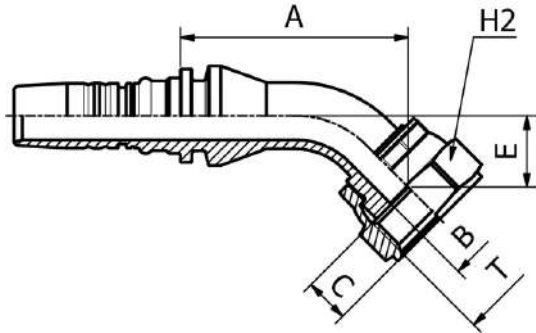
M42431

**30° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M42431-16-16	25	- 16	1"	1.7/16", 25.4 MM, 1"	19.5	91.0	10.3	14.0	41.0		

FITTINGS 184

SAE STANDARD CONNECTIONS

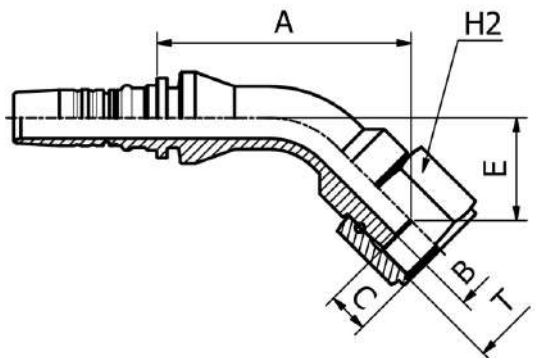


M42441

**45° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M42441-10-12	16	- 10	5/8"	1.3/16" - 12	14.3	56.0	13.5	21.5	36.0		
M42441-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	69.0	13.5	21.5	36.0		
M42441-12-16	19	- 12	3/4"	1.7/16" - 12	19.0	77.5	13.5	25.0	41.0		
M42441-16-16	25	- 16	1"	1.7/16" - 12	19.5	86.0	13.5	24.0	41.0		
M42441-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	97.0	13.6	27.0	50.0		
M42441-24-24	38	- 24	1.1/2"	2" - 12	31.0	112.0	14.2	31.5	60.0		

SAE STANDARD CONNECTIONS

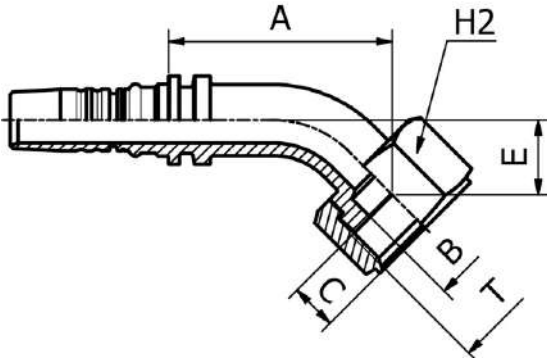


M42442

**45° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
HEAVY TYPE (THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M42442-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	89.0	14.0	36.0	36.0		
M42442-16-16	25	- 16	1"	1.7/16" - 12	19.5	100.0	15.0	42.5	46.0		
M42442-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	119.5	15.1	49.5	55.0		
M42442-24-24	38	- 24	1.1/2"	2" - 12	31.0	128.5	15.0	52.0	60.0		

SAE STANDARD CONNECTIONS

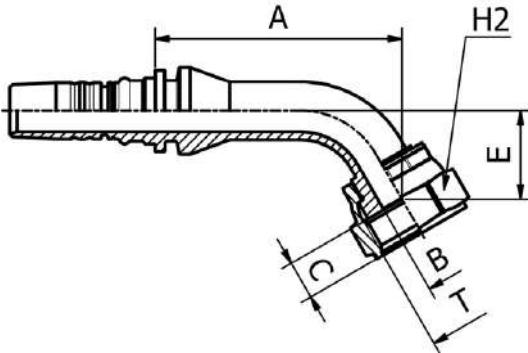


M42443

**45° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
(SLIP-ON NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42443-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	71.0	14.8	23.5	41.0		
M42443-16-20	25	- 16	1"	1.11/16" - 12	26.0	81.0	14.8	24.0	50.0		
M42443-20-24	31	- 20	1.1/4"	2" - 12	32.0	99.0	14.8	29.0	60.0		

SAE STANDARD CONNECTIONS

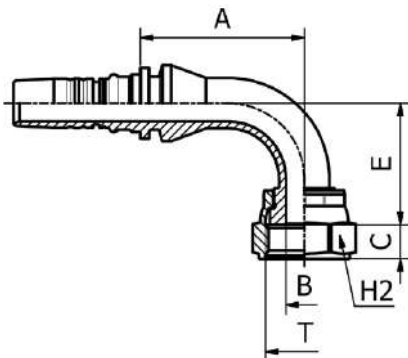


M42461

**60° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42461-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	85.5	13.5	30.5	36.0		

SAE STANDARD CONNECTIONS



M42491

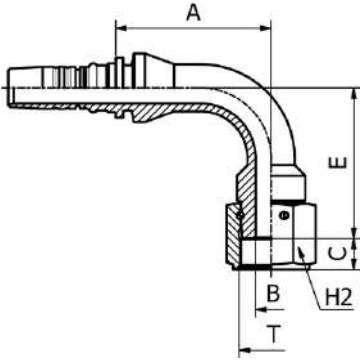
**90° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
(CRIMPED BACK-NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42491-10-12	16	- 10	5/8"	1.3/16" - 12	14.3	51.0	13.5	47.0	36.0		
M42491-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	65.0	13.5	48.0	36.0		
M42491-12-12109	19	- 12	3/4"	1.3/16" - 12	14.5	65.0	13.5	109.0	36.0		
M42491-12-16	19	- 12	3/4"	1.7/16" - 12	19.0	70.0	13.5	53.0	41.0		
M42491-16-16	25	- 16	1"	1.7/16" - 12	19.5	85.0	13.5	57.0	41.0		
M42491-16-16128	25	- 16	1"	1.7/16" - 12	19.5	85.0	13.5	128.0	41.0		
M42491-16-20	25	- 16	1"	1.11/16" - 12	24.0	84.5	13.6	61.0	50.0		
M42491-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	98.5	13.6	66.0	50.0		
M42491-24-24	38	- 24	1.1/2"	2" - 12	31.0	116.0	14.2	79.5	60.0		

SAE STANDARD CONNECTIONS

M42492

90° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
HEAVY TYPE (THRUST-WIRE-NUT)



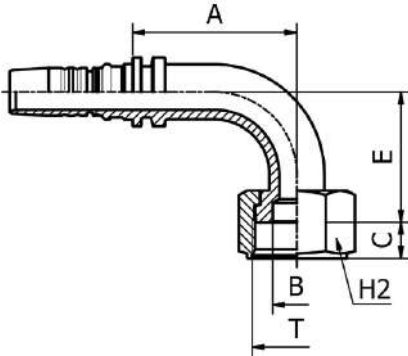
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	72.5	14.1	70.5	36.0		
M42492-16-16	25	- 16	1"	1.7/16" - 12	19.5	82.5	15.0	84.5	46.0		
M42492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	98.5	15.1	98.0	55.0		
M42492-24-24	38	- 24	1.1/2"	2" - 12	31.0	111.5	15.0	109.0	60.0		

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SAE STANDARD CONNECTIONS

M42493

90° ORFS FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1
(SLIP-ON NUT)

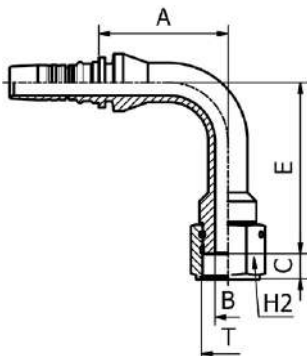


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M42493-12-16	19	- 12	3/4"	1.7/16" - 12	19.8	67.0	14.8	53.0	41.0		
M42493-16-20	25	- 16	1"	1.11/16" - 12	26.0	81.5	14.8	58.5	50.0		
M42493-20-24	31	- 20	1.1/4"	2" - 12	32.0	100.0	14.8	70.5	60.0		

SAE STANDARD CONNECTIONS

M44492 LONG DROP

90° ORFS
FEMALE LONG DROP ELBOW
SAE J516 / ISO 12151-1
(THRUST-WIRE NUT)

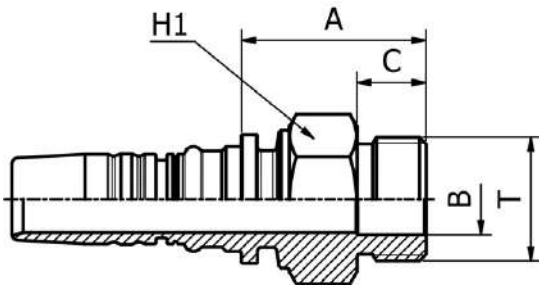


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M44492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	72.5	14.1	96.0	36.0		
M44492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	98.5	15.1	129.0	55.0		

SAE STANDARD CONNECTIONS

M33010

SAE
MALE O-RING BOSS TYPE
SAE J516 / ISO 11926

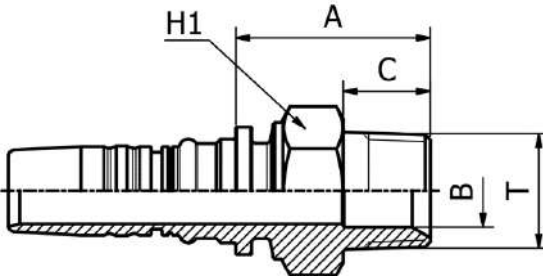


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M33010-12-12	19	- 12	3/4"	1.1/16" - 12	15.5	42.0	15.1	32.0			
M33010-16-16	25	- 16	1"	1.5/16" - 12	21.5	43.5	15.1	38.0			
M33010-20-20	31	- 20	1.1/4"	1.5/8" - 12	27.5	47.5	15.1	46.0			

SAE STANDARD CONNECTIONS

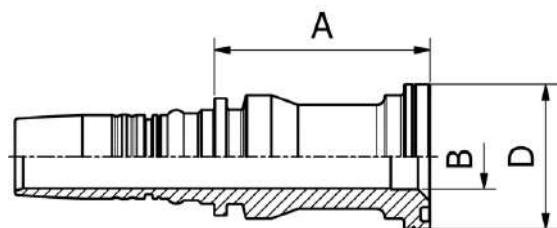
M32810

NPTF
MALE 60° CONE SEAT
SAE J516/J514



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M32810-10-12	16	- 10	5/8"	3/4" - 14	16.0	40.7	19.2	27.0			
M32810-12-12	19	- 12	3/4"	3/4" - 14	16.0	42.9	19.2	32.0			
M32810-16-16	25	- 16	1"	1" - 11,5	19.5	50.5	24.2	38.0			
M32810-20-20	31	- 20	1.1/4"	1.1/4" - 11,5	26.1	61.0	25.0	46.0			
M32810-24-24	38	- 24	1.1/2"	1.1/2" - 11,5	32.1	62.5	26.0	50.0			
M32810-24-32	38	- 24	1.1/2"	2" - 11,5	42.0	67.0	26.5	70.0			
M32810-32-32	51	- 32	2"	2" - 11,5	42.0	67.0	26.5	70.0			
M32810-40-40	63	- 40	2.1/2"	2.1/2" - 8	51.5	94.5	43.0	80.0			
M32810-48-48	76	- 48	3"	3" - 8	62.5	123.5	51.5	100.0			

SAE STANDARD CONNECTIONS



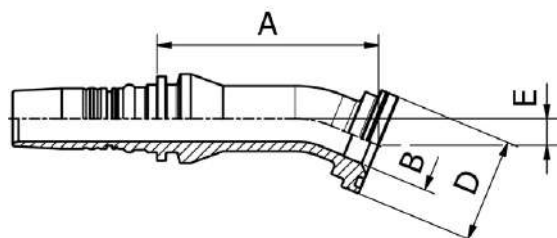
M43310

ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D				
M43310-10-16	16	- 10	5/8"	1"	20.0	64.0	44.6				
M43310-12-12	19	- 12	3/4"	3/4"	16.0	60.0	38.0				
M43310-12-16	19	- 12	3/4"	1"	20.0	65.5	44.6				
M43310-16-12	25	- 16	1"	3/4"	16.0	67.0	38.0				
M43310-16-16	25	- 16	1"	1"	20.0	66.5	44.6				
M43310-16-20	25	- 16	1"	1.1/4"	26.1	73.0	51.0				
M43310-20-20	31	- 20	1.1/4"	1.1/4"	26.1	75.0	51.0				
M43310-20-24	31	- 20	1.1/4"	1.1/2"	32.1	80.0	60.5				
M43310-24-24	38	- 24	1.1/2"	1.1/2"	32.1	80.5	60.5				
M43310-24-32	38	- 24	1.1/2"	2"	42.0	88.5	71.6				
M43310-32-24	38	- 24	1.1/2"	2"	32.1	104.0	60.5				
M43310-32-32	51	- 32	2"	2"	42.0	82.5	71.6				
M43310-40-40	63	- 40	2.1/2"	2.1/2"	51.5	92.5	84.3				
M43310-48-48	76	- 48	3"	3"	62.5	101.0	101.6				

FITTINGS 188

SAE STANDARD CONNECTIONS



M43320

22,5° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

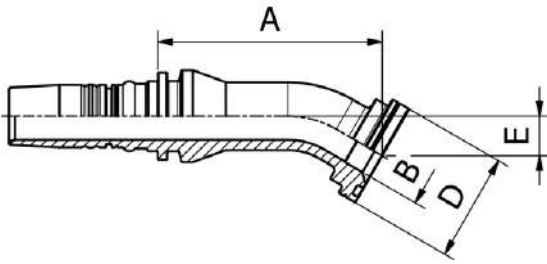
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E			
M43320-16-16	25	- 16	1"	1"	20.0	94.5	44.6	11.5			

SAE STANDARD CONNECTIONS

M43330

**30° ISO / SAE
CODE 61 FLANGE**

SAE J516 / ISO 12151-3



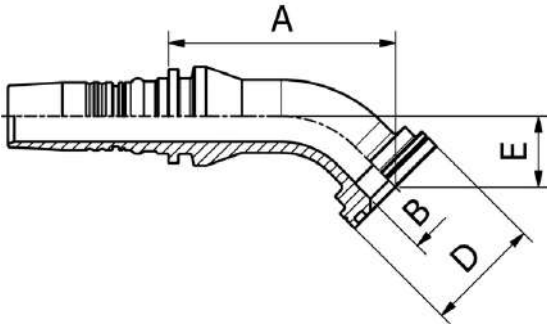
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
M43330-16-16	25	- 16	1"	1"	20.0	93.0	44.6	16.5				
M43330-20-20	31	- 20	1.1/4"	1.1/4"	26.1	106.5	51.0	17.5				
M43330-24-24	38	- 24	1.1/2"	1.1/2"	32.1	118.0	60.5	20.0				
M43330-32-32	51	- 32	2"	2"	42.0	137.0	71.6	22.0				

SAE STANDARD CONNECTIONS

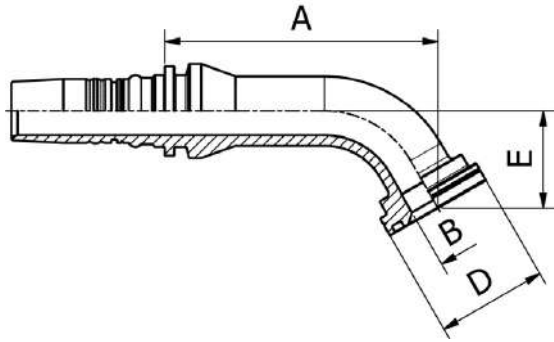
M43340

**45° ISO / SAE
CODE 61 FLANGE**

SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
M43340-12-12	19	- 12	3/4"	3/4"	16.0	75.5	38.0	26.0				
M43340-12-16	19	- 12	3/4"	1"	20.0	76.0	44.6	23.0				
M43340-16-16	25	- 16	1"	1"	20.0	87.0	44.6	27.5				
M43340-16-16032	25	- 16	1"	1"	20.0	92.0	44.5	32.0				
M43340-16-20	25	- 16	1"	1.1/4"	26.0	87.5	51.0	27.5				
M43340-20-20	31	- 20	1.1/4"	1.1/4"	26.1	100.5	51.0	29.5				
M43340-20-20038	31	- 20	1.1/4"	1.1/4"	26.1	109.0	50.9	38.0				
M43340-20-24	31	- 20	1.1/4"	1.1/2"	32.1	101.5	60.5	31.0				
M43340-24-24	38	- 24	1.1/2"	1.1/2"	32.1	111.0	60.5	34.5				
M43340-24-24044	38	- 24	1.1/2"	1.1/2"	32.1	120.0	60.5	44.0				
M43340-24-32	38	- 24	1.1/2"	2"	42.0	113.0	71.6	34.5				
M43340-32-32	51	- 32	2"	2"	42.0	128.5	71.6	39.0				
M43340-32-32056	51	- 32	2"	2"	42.0	146.0	71.6	56.0				
M43340-48-48	76	- 48	3"	3"	59.0	147.5	101.6	53.0				



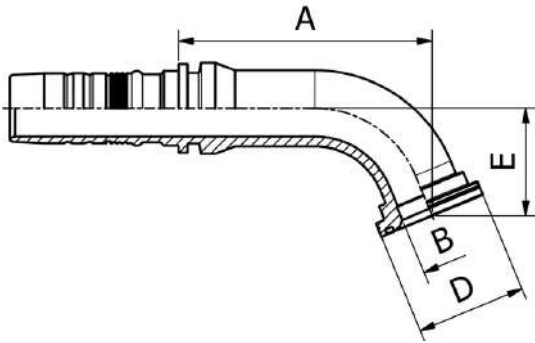
SAE STANDARD CONNECTIONS

M43360

60° ISO / SAE
 CODE 61 FLANGE
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M43360-16-16	25	- 16	1"	1"		20.0	110.0	44.6	39.0			
M43360-20-24	31	- 20	1.1/4"	1.1/2"		32.1	219.0	60.6	45.0			
M43360-24-24	38	- 24	1.1/2"	1.1/2"		32.1	147.0	60.5	51.0			
M43360-24-32	38	- 24	1.1/2"	2"		42.0	147.0	71.6	51.0			
M43360-32-32	51	- 32	2"	2"		42.0	175.0	71.6	58.5			

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SAE STANDARD CONNECTIONS

M43370

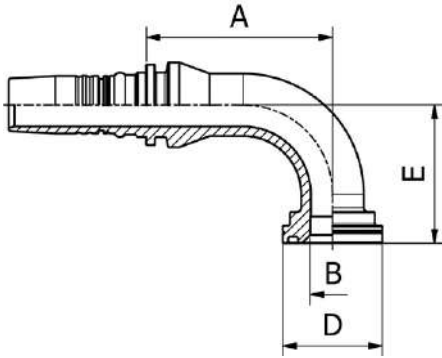
67.5° ISO / SAE
 FLANGE 3000 PSI
 SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M43370-24-24	38	- 24	1.1/2"	1.1/2"		32.1	139.5	60.5	59.0			
M43370-24-32	38	- 24	1.1/2"	2"		42.0	130.0	71.6	59.0			
M43370-32-32	51	- 32	2"	2"		42.0	167.0	71.5	68.5			

SAE STANDARD CONNECTIONS

M43390

90° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

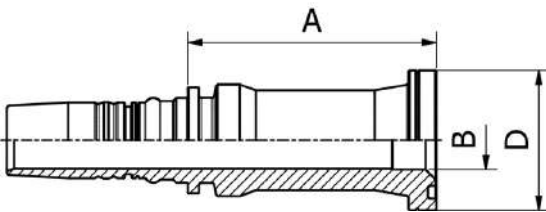


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M43390-10-16	16	- 10	5/8"	1"		20.0	71.0	44.6	52.0			
M43390-12-12	19	- 12	3/4"	3/4"		16.0	72.0	38.0	52.0			
M43390-12-12058	19	- 12	3/4"	3/4"		16.0	72.0	38.0	58.0			
M43390-12-16	19	- 12	3/4"	1"		20.0	72.5	44.6	52.0			
M43390-16-16	25	- 16	1"	1"		20.0	83.5	44.6	62.0			
M43390-16-16070	25	- 16	1"	1"		20.0	83.5	44.5	70.0			
M43390-16-20	25	- 16	1"	1.1/4"		26.0	83.5	51.0	62.0			
M43390-20-20	31	- 20	1.1/4"	1.1/4"		26.1	99.0	51.0	70.0			
M43390-20-20090	31	- 20	1.1/4"	1.1/4"		26.1	99.0	50.9	90.0			
M43390-20-16	31	- 20	1.1/4"	1"		19.8	96.5	44.6	66.0			
M43390-20-24	31	- 20	1.1/4"	1.1/2"		32.1	98.5	60.5	72.0			
M43390-24-24	38	- 24	1.1/2"	1.1/2"		32.1	111.5	60.5	84.0			
M43390-24-24104	38	- 24	1.1/2"	1.1/2"		32.1	111.5	60.5	104.0			
M43390-24-32	38	- 24	1.1/2"	2"		42.0	111.5	71.6	84.0			
M43390-32-32	51	- 32	2"	2"		42.0	133.5	71.6	99.0			
M43390-32-32138	51	- 32	2"	2"		42.0	133.5	71.5	138.0			
M43390-48-48	76	- 48	3"	3"		59.0	145.0	101.6	140.0			

SAE STANDARD CONNECTIONS

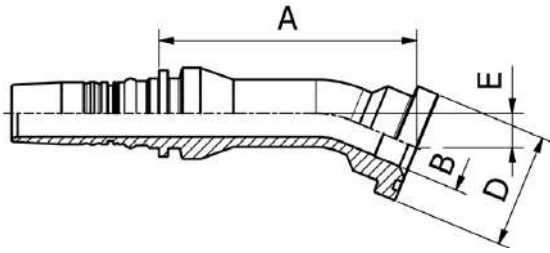
M43610

ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D				
M43610-10-12	16	- 10	5/8"	3/4"		16.0	65.0	41.5				
M43610-10-16	16	- 10	5/8"	1"		20.0	81.5	47.7				
M43610-12-12	19	- 12	3/4"	3/4"		16.0	71.5	41.4				
M43610-12-16	19	- 12	3/4"	1"		20.0	83.5	47.7				
M43610-16-12	25	- 16	1"	3/4"		16.0	80.5	41.4				
M43610-16-16	25	- 16	1"	1"		20.0	84.5	47.7				
M43610-16-20	25	- 16	1"	1.1/4"		26.0	89.0	54.2				
M43610-20-16	31	- 20	1.1/4"	1"		20.0	87.0	47.7				
M43610-20-20	31	- 20	1.1/4"	1.1/4"		26.1	91.0	54.2				
M43610-20-24	31	- 20	1.1/4"	1.1/2"		32.1	97.0	63.7				
M43610-24-20	38	- 24	1.1/2"	1.1/4"		26.0	101.0	54.2				
M43610-24-24	38	- 24	1.1/2"	1.1/2"		32.1	97.5	63.7				
M43610-24-32	38	- 24	1.1/2"	2"		42.0	113.0	79.6				
M43610-32-24	51	- 32	2"	1.1/2"		32.1	117.0	63.7				
M43610-32-32	51	- 32	2"	2"		42.0	112.5	79.6				
M43610-40-40	63	- 40	2.1/2"	2.1/2"		51.5	126.5	107.9				
M43610-48-48	76	- 48	3"	3"		62.5	167.0	131.9				

SAE STANDARD CONNECTIONS

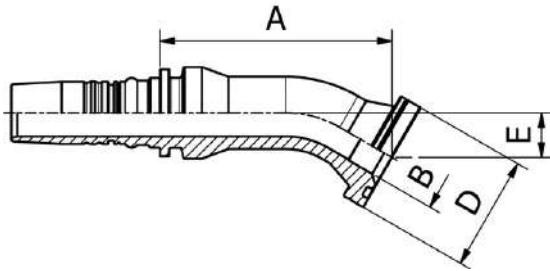


M43620

22.5° ISO / SAE
FLANGE 6000 PSI
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M43620-12-12	19	- 12	3/4"	3/4"		16.0	89.0	41.3	12.5			
M43620-16-16	25	- 16	1"	1"		20.0	100.5	47.7	14.5			
M43620-16-16023	25	- 16	1"	1"		20.0	106.5	47.7	23.0			
M43620-20-20	31	- 20	1.1/4"	1.1/4"		26.0	118.3	54.1	16.5			
M43620-20-20030	31	- 20	1.1/4"	1.1/4"		26.0	132.5	54.2	30.0			
M43620-24-24	38	- 24	1.1/2"	1.1/2"		32.0	136.5	63.7	19.0			
M43620-32-32	51	- 32	2"	2"		42.0	171.0	79.6	26.0			

SAE STANDARD CONNECTIONS

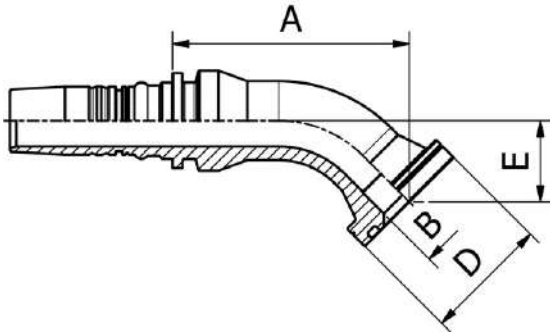


M43630

30° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D			
M43630-12-12	19	- 12	3/4"	3/4"		16.0	87.0	41.4	17.5			
M43630-16-12	25	- 16	1"	3/4"		16.0	93.0	41.4	17.0			
M43630-16-16	25	- 16	1"	1"		20.0	96.0	47.7	18.5			
M43630-20-20	31	- 20	1.1/4"	1.1/4"		26.0	116.0	54.2	22.5			
M43630-24-24	38	- 24	1.1/2"	1.1/2"		32.1	128.7	63.7	28.0			
M43630-32-32	51	- 32	2"	2"		42.0	164.0	79.6	35.5			

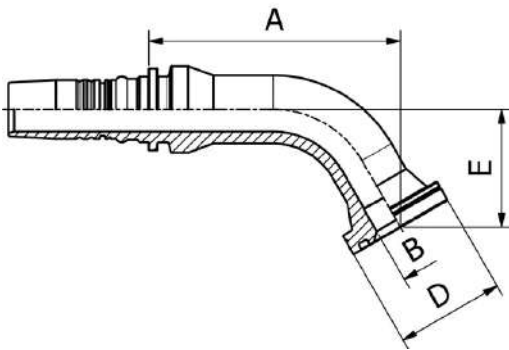
SAE STANDARD CONNECTIONS



M43640

45° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
M43640-10-12	16	- 10	5/8"	3/4"		16.0	71.0	41.4	31.0			
M43640-10-16	16	- 10	5/8"	1"		20.0	83.5	47.7	32.5			
M43640-12-12	19	- 12	3/4"	3/4"		16.0	79.0	41.4	26.0			
M43640-12-16	19	- 12	3/4"	1"		20.0	85.5	47.7	32.5			
M43640-16-12	25	- 16	1"	3/4"		16.0	87.0	41.4	28.0			
M43640-16-16	25	- 16	1"	1"		20.0	90.0	47.7	31.0			
M43640-16-20	25	- 16	1"	1.1/4"		26.0	93.0	54.2	34.5			
M43640-20-16	31	- 20	1.1/4"	1"		25.0	106.5	47.7	33.5			
M43640-20-20	31	- 20	1.1/4"	1.1/4"		26.0	108.0	54.2	37.5			
M43640-20-24	31	- 20	1.1/4"	1.1/2"		32.1	116.0	63.7	42.5			
M43640-24-20	38	- 24	1.1/2"	1.1/4"		26.0	115.0	54.2	41.5			
M43640-24-24	38	- 24	1.1/2"	1.1/2"		32.0	125.0	63.7	44.0			
M43640-24-32	38	- 24	1.1/2"	2"		42.0	134.0	79.6	55.5			
M43640-32-32	51	- 32	2"	2"		42.0	152.0	79.6	58.5			
M43640-32-32056	51	- 32	2"	2"		42.0	149.5	79.6	56.0			



SAE STANDARD CONNECTIONS

M43660

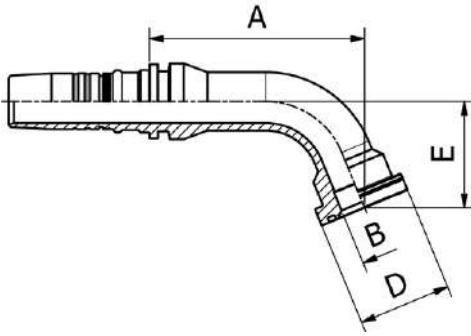
60° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	E			
M43660-12-12	19	- 12	3/4"	3/4"		16.0	98.5	41.4	39.0			
M43660-12-16	19	- 12	3/4"	1"		20.0	101.0	47.7	44.0			
M43660-16-16	25	- 16	1"	1"		20.0	111.0	47.7	52.0			
M43660-20-20	31	- 20	1.1/4"	1.1/4"		26.1	133.0	54.2	58.0			
M43660-20-24	31	- 20	1.1/4"	1.1/2"		32.1	137.0	63.7	65.0			
M43660-24-24	38	- 24	1.1/2"	1.1/2"		32.0	155.0	63.7	59.0			
M43660-32-32	51	- 32	2"	2"		42.0	199.5	79.6	83.5			

SAE STANDARD CONNECTIONS

M43670

67.5° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3



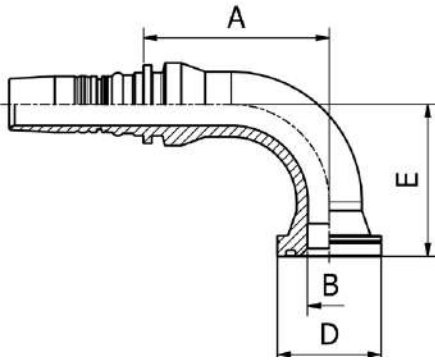
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M43670-16-20	25	- 16	1"	1.1/4"		26.0	105.0	54.1	58.5			
M43670-20-16T34	31	- 20	1.1/4"	1"		26.0	125.3	47.7	58.2			
M43670-20-20	31	- 20	1.1/4"	1.1/4"		26.1	125.5	54.2	62.0			
M43670-24-16	38	- 24	1.1/2"	1"		19.0	125.5	47.7	51.0			
M43670-24-20	38	- 24	1.1/2"	1.1/4"		26.0	142.5	54.1	54.1			
M43670-24-20T40	38	- 24	1.1/2"	1.1/4"		31.0	145.0	54.2	71.0			

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SAE STANDARD CONNECTIONS

M43690

90° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

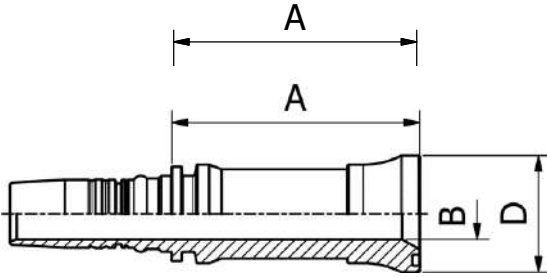


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M43690-10-12	16	- 10	5/8"	3/4"		16.0	56.5	41.4	60.5			
M43690-12-12	19	- 12	3/4"	3/4"		16.0	72.5	41.4	59.0			
M43690-12-16	19	- 12	3/4"	1"		20.0	72.5	47.7	65.0			
M43690-16-12	25	- 16	1"	3/4"		16.0	81.5	41.4	62.0			
M43690-16-16	25	- 16	1"	1"		20.0	85.5	47.7	70.0			
M43690-16-20	25	- 16	1"	1.1/4"		26.0	85.0	54.2	75.0			
M43690-20-16	31	- 20	1.1/4"	1"		25.0	105.0	47.7	79.0			
M43690-20-20	31	- 20	1.1/4"	1.1/4"		26.1	102.0	54.2	82.0			
M43690-20-20090	31	- 20	1.1/4"	1.1/4"		26.0	102.0	54.2	90.0			
M43690-20-24	31	- 20	1.1/4"	1.1/2"		32.1	105.0	63.7	92.0			
M43690-24-20	38	- 24	1.1/2"	1.1/4"		26.0	110.0	54.2	90.0			
M43690-24-24	38	- 24	1.1/2"	1.1/2"		32.1	114.5	63.7	96.0			
M43690-24-24104	38	- 24	1.1/2"	1.1/2"		32.1	114.5	63.7	104.0			
M43690-24-32	38	- 24	1.1/2"	2"		42.0	114.5	79.6	109.0			
M43690-32-32	51	- 32	2"	2"		42.0	142.5	79.6	132.0			
M43690-32-32138	51	- 32	2"	2"		42.0	140.5	79.6	142.5			

XTRAFRANGE

M48410

XTRAFRANGE/61
(ISO 6162-1/SAE J518 CODE 61
PORT COMPATIBLE)

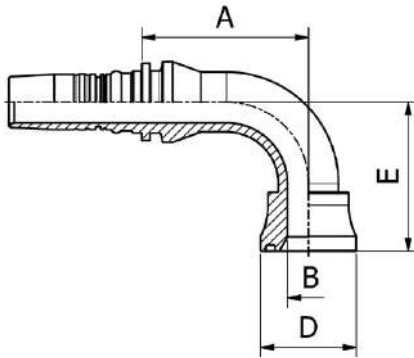


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D					
M48410-16-16	25	- 16	1"	1"	19.5	94.5	44.5						
M48410-20-20	31	- 20	1.1/4"	1.1/4"	25.0	103.5	50.5						
M48410-24-24	38	- 24	1.1/2"	1.1/2"	31.0	116.0	60.5						
M48410-32-32	51	- 32	2"	2"	41.0	101.0	71.6						
M48410-40-40	63	- 40	2.1/2"	2.1/2"	51.5	103.0	84.4						

XTRAFRANGE

M48490

90° XTRAFRANGE/61
(ISO 6162-1/SAE J518 CODE 61
PORT COMPATIBLE)

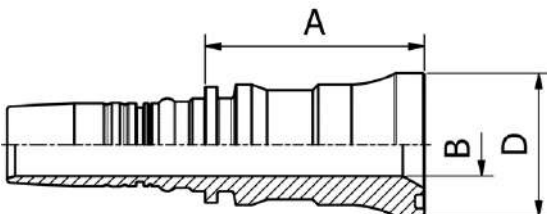


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D	E				
M48490-16-16	25	- 16	1"	1"	19.5	77.5	44.5	69.5					
M48490-20-20	31	- 20	1.1/4"	1.1/4"	25.0	107.0	50.5	90.0					
M48490-24-24	38	- 24	1.1/2"	1.1/2"	31.0	112.0	60.5	104.0					
M48490-32-32	51	- 32	2"	2"	41.0	145.0	71.6	138.0					

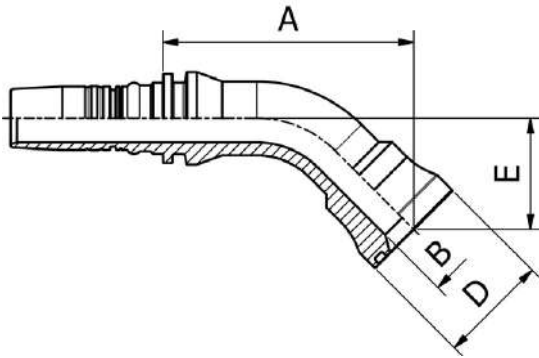
XTRAFRANGE

M48510

XTRAFRANGE/62
(SAE J518 CODE 62 - ISO 6162-2
PORT COMPATIBLE)



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D					
M48510-12-12	19	- 12	3/4"	3/4"	14.5	64.0	41.4						
M48510-16-16	25	- 16	1"	1"	19.5	68.5	47.7						
M48510-20-20	31	- 20	1.1/4"	1.1/4"	25.0	88.0	54.4						
M48510-24-24	38	- 24	1.1/2"	1.1/2"	31.0	102.0	63.7						
M48510-32-32	51	- 32	2"	2"	41.0	128.5	79.6						
M48510-40-40	63	- 40	2.1/2"	2.1/2"	51.5	148.5	99.2						

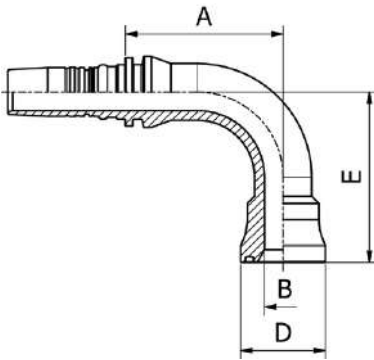


XTRAFRANGE

M48540

45° XTRAFRANGE/62
(SAE J518 CODE 62 - ISO 6162-2
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	E			
M48540-12-12	19	- 12	3/4"	3/4"		14.5	92.5	41.4	38.0			
M48540-16-16	25	- 16	1"	1"		19.5	101.5	47.7	45.0			
M48540-20-20	31	- 20	1.1/4"	1.1/4"		25.0	138.0	54.4	62.5			
M48540-24-24	38	- 24	1.1/2"	1.1/2"		31.0	155.0	63.7	71.5			
M48540-32-32	51	- 32	2"	2"		39.0	193.5	79.6	92.5			



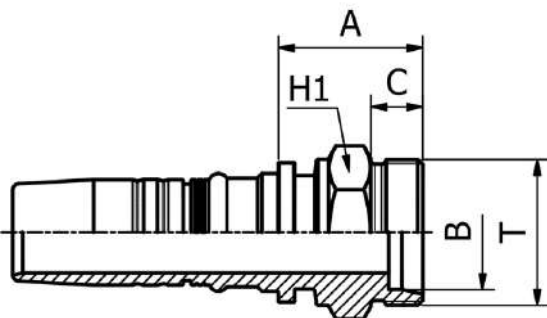
XTRAFRANGE

M48590

90° XTRAFRANGE/62
(SAE J518 CODE 62 - ISO 6162-2
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	E			
M48590-12-12	19	- 12	3/4"	3/4"		14.5	75.5	41.4	75.0			
M48590-16-16	25	- 16	1"	1"		19.5	83.5	47.7	90.0			
M48590-20-20	31	- 20	1.1/4"	1.1/4"		25.0	107.0	54.4	120.0			
M48590-24-24	38	- 24	1.1/2"	1.1/2"		31.0	122.0	63.7	140.0			
M48590-32-32	51	- 32	2"	2"		39.0	147.5	79.6	178.0			

DIN STANDARD CONNECTIONS



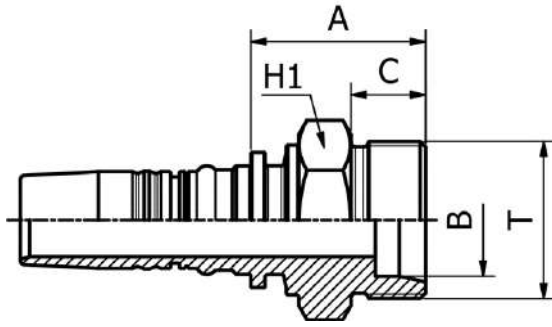
M31110

METRIC
MALE 24° CONE SEAT LIGHT DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	H1	
M31110-20-45	31	- 20	1.1/4"	M 45X2	35.0	35.3	44.5	16.0	46.0			

DIN STANDARD CONNECTIONS

M31210

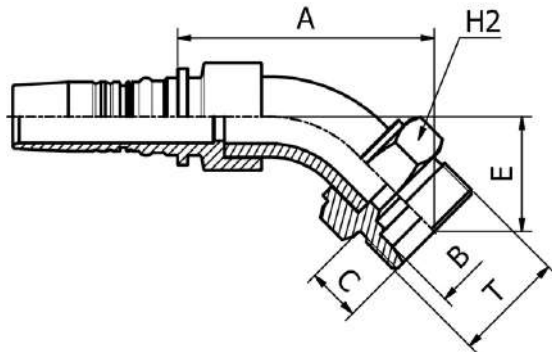


METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	H1	
M31210-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	37.0	16.0	30.0		
M31210-12-30	19	- 12	3/4"	M 30X2	20.0	14.5	38.5	16.0	32.0		
M31210-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	43.5	18.0	36.0		
M31210-16-36	25	- 16	1"	M 36X2	25.0	19.5	45.0	18.0	36.0		
M31210-16-42	25	- 16	1"	M 42X2	30.0	19.5	47.0	20.0	46.0		
M31210-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	55.0	22.0	55.0		
M31210-24-52	38	- 24	1.1/2"	M 52X2	38.0	31.0	55.5	22.0	55.0		

DIN STANDARD CONNECTIONS

M31240



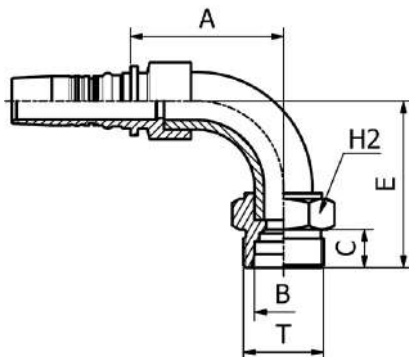
45° METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	E	H2
M31240-16-42	25	- 16	1"	M 42X2	30.0	25.0	96.0	20.0	43.0	46.0	
M31240-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	110.0	22.0	49.5	55.0	

*All items are made from brazing

DIN STANDARD CONNECTIONS

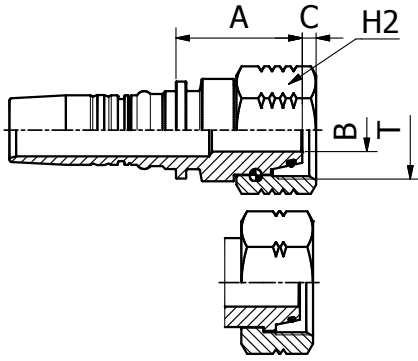
M31290



90° METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	E	H2
M31290-10-30	16	- 10	5/8"	M 30X2	20.0	15.0	64.5	29.0	64.0	32.0	
M31290-16-42	25	- 16	1"	M 42X2	30.0	20.0	79.5	20.0	87.0	46.0	
M31290-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	96.0	22.0	105.0	55.0	

*All items are made from brazing



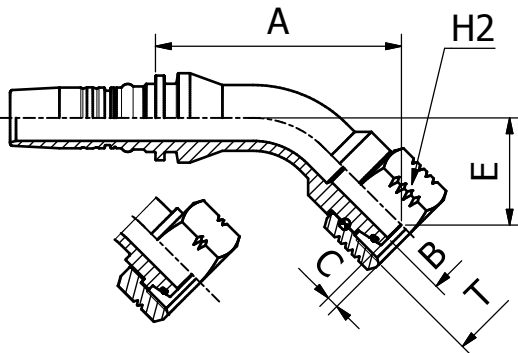
DIN STANDARD CONNECTIONS

M41612/M41613

**METRIC
O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	H2	
M41612-10-24	16	- 10	5/8"	M 24X1,5	16.0	9.3	31.0	4.0	30.0			
M41613-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	37.0	3.5	36.0			
M41612-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	44.0	3.2	36.0			
M41613-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	42.0	3.4	41.0			
M41613-12-42	19	- 12	3/4"	M 42X2	30.0	19.0	36.0	6.3	50.0			
M41612-16-36	25	- 16	1"	M 36X2	25.0	16.0	47.0	4.1	41.0			
M41613-16-42	25	- 16	1"	M 42X2	30.0	19.5	46.5	5.3	50.0			
M41613-16-52	25	- 16	1"	M 52X2	38.0	26.1	49.5	8.0	60.0			
M41612-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.0	47.5	6.0	50.0			
M41613-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	41.5	8.0	60.0			
M41612-24-52	38	- 24	1.1/2"	M 52X2	38.0	29.0	52.5	8.8	60.0			

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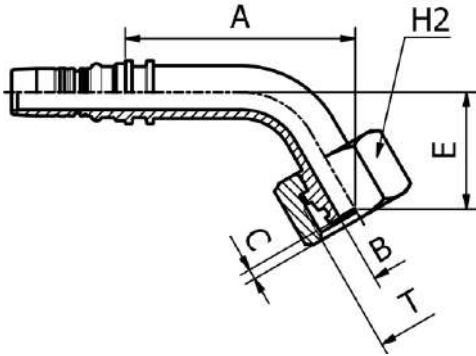
DIN STANDARD CONNECTIONS

M41642/M41643

**45° METRIC
O-RING FEMALE SWEEP ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	H2
M41643-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	66.5	3.5	29.5	36.0		
M41642-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	79.0	3.2	35.0	36.0		
M41643-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	81.0	3.4	33.5	41.0		
M41642-16-36	25	- 16	1"	M 36X2	25.0	16.0	103.0	4.1	45.5	41.0		
M41643-16-42	25	- 16	1"	M 42X2	30.0	19.5	93.0	5.3	36.0	50.0		
M41642-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	116.5	6.0	44.5	50.0		
M41643-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	110.0	8.0	40.0	60.0		
M41642-24-52	38	- 24	1.1/2"	M 52X2	38.0	29.0	128.0	8.8	51.5	60.0		

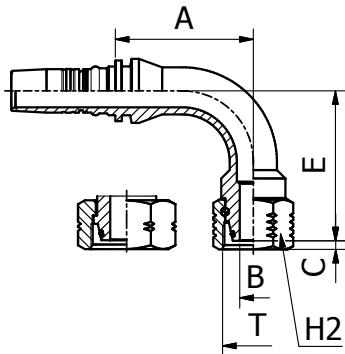
DIN STANDARD CONNECTIONS



M41663

**60° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M41663-10-30	16	- 10	5/8"	M30X2	20.0	12.0	78.4	3.5	40.0	36		



DIN STANDARD CONNECTIONS

M41692/M41693

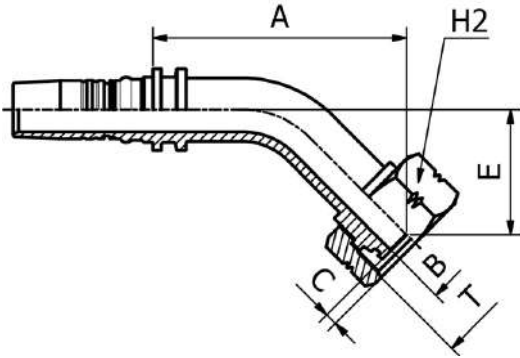
**90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M41693-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	52.5	3.5	57.5	36.0		
M41692-12-30	19	- 12	3/4"	M 30X2	25.0	12.5	64.0	3.2	68.5	36.0		
M41693-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	67.0	3.4	67.5	41.0		
M41692-16-36	25	- 16	1"	M 36X2	25.0	16.0	81.5	4.1	89.0	41.0		
M41693-16-42	25	- 16	1"	M 42X2	30.0	19.5	81.5	5.3	75.5	50.0		
M41692-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	103.5	6.0	90.0	50.0		
M41693-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	100.0	8.0	86.5	60.0		

DIN STANDARD CONNECTIONS

M41243 LONG DROP

45° METRIC
O-RING FEMALE
MEDIUM/LONG DROP ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2 (SLIP-ON NUT)



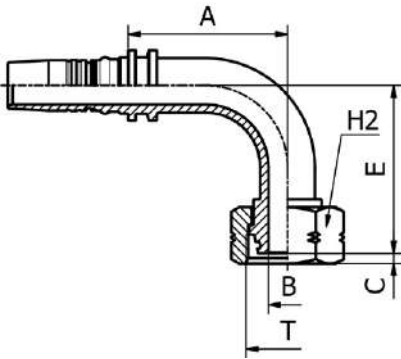
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	H2
M41243-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	77.5	3.5	35.0	36.0		
M41243-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	101.0	3.4	45.0	41.0		
M41243-16-42	25	- 16	1"	M 42X2	30.0	19.5	112.0	5.3	55.0	50.0		
M41243-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	133.0	8.0	63.0	60.0		

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DIN STANDARD CONNECTIONS

M41293 LONG DROP

90° METRIC
O-RING FEMALE
MEDIUM/LONG DROP ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2 (SLIP-ON NUT)

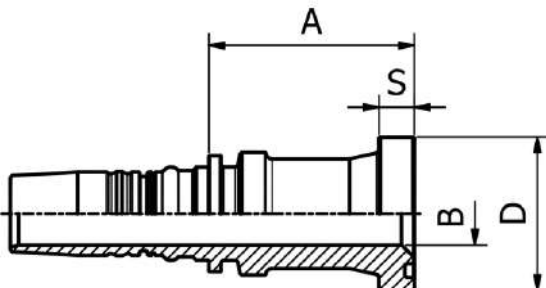


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	H2
M41293-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	53.0	3.5	60.0	36.0		
M41293-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	67.0	3.4	67.5	41.0		
M41293-16-42	25	- 16	1"	M 42X2	30.0	19.5	81.5	5.3	86.0	50.0		
M41293-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	100.0	8.0	92.0	60.0		

ORIGINAL EQUIPMENT CONNECTIONS

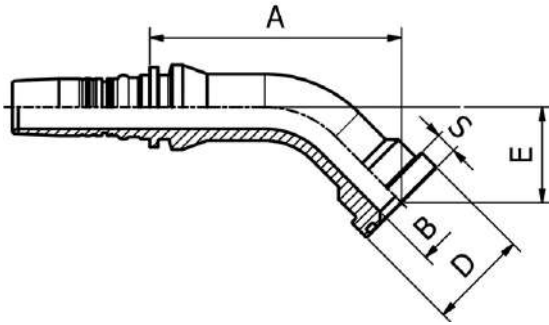
M43710

FLANGE PLUS
(SAE J518 CODE 62 - ISO 6162-2
PORT COMPATIBLE)



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	S	
M43710-10-12	16	- 10	5/8"	3/4"	16.0	51.5	41.5	9.0		
M43710-12-12	19	- 12	3/4"	3/4"	14.5	71.5	41.4	10.0		
M43710-16-16	25	- 16	1"	1"	19.5	64.0	47.7	11.0		
M43710-20-20	31	- 20	1.1/4"	1.1/4"	25.0	81.0	54.2	12.0		

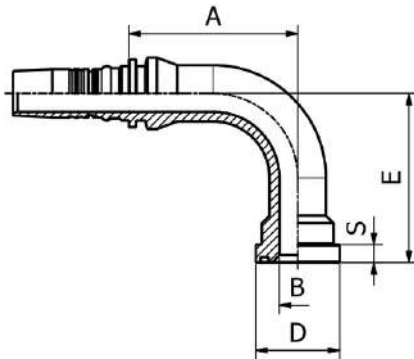
ORIGINAL EQUIPMENT CONNECTIONS



M43740

45° FLANGE PLUS
 (SAE J518 CODE 62 - ISO 6162-2
 PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43740-10-12	16	- 10	5/8"	3/4"	16.0	72.5	41.4	31.0	9.0		
M43740-12-12	19	- 12	3/4"	3/4"	14.5	113.0	41.4	40.0	10.0		
M43740-16-16	25	- 16	1"	1"	19.5	113.5	47.7	43.0	11.0		
M43740-20-20	31	- 20	1.1/4"	1.1/4"	25.0	133.5	54.2	50.0	12.0		



ORIGINAL EQUIPMENT CONNECTIONS

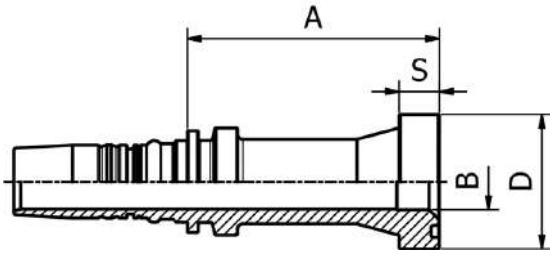
M43790

90° FLANGE PLUS
 (SAE J518 CODE 62 - ISO 6162-2
 PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43790-10-12	16	- 10	5/8"	3/4"	16.0	61.5	41.4	60.5	9.0		
M43790-12-12	19	- 12	3/4"	3/4"	14.5	93.0	41.4	75.0	10.0		
M43790-16-16	25	- 16	1"	1"	19.5	90.0	47.7	90.0	11.0		
M43790-20-20	31	- 20	1.1/4"	1.1/4"	25.0	115.0	54.2	110.0	12.0		

ORIGINAL EQUIPMENT CONNECTIONS

M43910



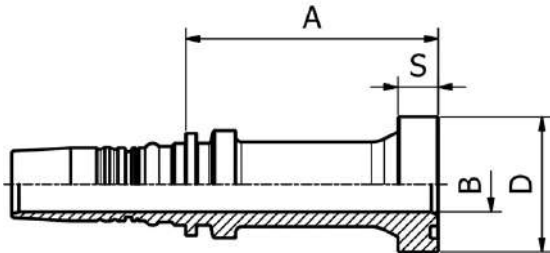
STRAIGHT SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm				
	DN	Dash	inch		B	A	D	S	
M43910-12-12	19	- 12	3/4"	3/4"	16.0	77.0	41.5	14.3	
M43910-12-16	19	- 12	3/4"	1"	20.0	88.5	47.7	14.3	
M43910-16-16	25	- 16	1"	1"	20.0	89.5	47.7	14.3	
M43910-16-20	25	- 16	1"	1.1/4"	26.0	93.5	54.0	14.3	
M43910-20-20	31	- 20	1.1/4"	1.1/4"	26.1	95.0	54.0	14.3	
M43910-20-24	31	- 20	1.1/4"	1.1/2"	32.1	98.5	63.6	14.3	
M43910-24-24	38	- 24	1.1/2"	1.1/2"	32.1	99.0	63.6	14.3	
M43910-24-32	38	- 24	1.1/2"	2"	42.0	115.0	79.3	14.3	
M43910-32-24	51	- 32	2"	1.1/2"	32.1	119.5	63.6	14.3	
M43910-32-32	51	- 32	2"	2"	42.0	114.5	79.3	14.3	

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ORIGINAL EQUIPMENT CONNECTIONS

M43910CT



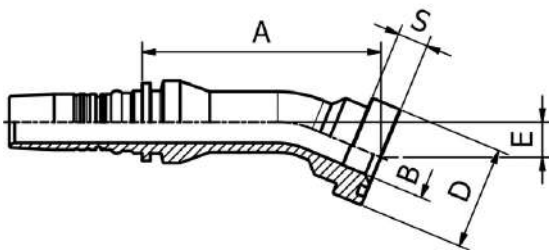
STRAIGHT REALCAT FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm				
	DN	Dash	inch		B	A	D	S	
M43910-16-16CT	25	- 16	1"	1"	19.5	89.5	47.7	14.3	
M43910-20-20CT	31	- 20	1.1/4"	1.1/4"	25.0	95.0	54.0	14.3	
M43910-20-24CT	31	- 20	1.1/4"	1.1/2"	31.0	98.0	63.6	14.3	
M43910-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	99.0	63.6	14.3	

ORIGINAL EQUIPMENT CONNECTIONS

M43920

22,5° SUPERCAT SERIES FLANGE

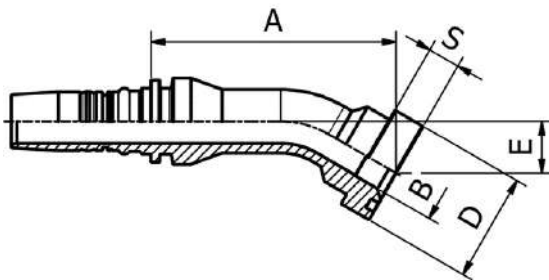


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	S		
M43920-12-12	19	- 12	3/4"	3/4"		16.0	94.0	41.5	14.5	14.3		
M43920-12-16	19	- 12	3/4"	1"		20.0	101.5	47.7	16.5	14.3		
M43920-16-16	25	- 16	1"	1"		20.0	110.5	47.7	16.5	14.3		
M43920-16-20	25	- 16	1"	1.1/4"		26.1	115.5	54.0	19.0	14.3		
M43920-20-20	31	- 20	1.1/4"	1.1/4"		26.1	122.0	54.0	18.0	14.3		
M43920-20-24	31	- 20	1.1/4"	1.1/2"		32.0	139.0	63.7	23.0	14.3		
M43920-24-24	38	- 24	1.1/2"	1.1/2"		32.0	138.0	63.7	20.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M43930

30° SUPERCAT SERIES FLANGE

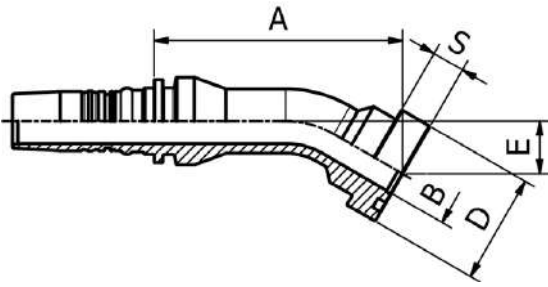


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	S		
M43930-12-12	19	- 12	3/4"	3/4"		16.0	92.0	41.5	20.0	14.3		
M43930-12-16	19	- 12	3/4"	1"		20.0	99.0	47.7	22.5	14.3		
M43930-16-16	25	- 16	1"	1"		20.0	108.0	47.7	23.0	14.3		
M43930-16-20	25	- 16	1"	1.1/4"		26.1	112.5	54.0	26.0	14.3		
M43930-20-20	31	- 20	1.1/4"	1.1/4"		26.1	119.5	54.0	25.0	14.3		
M43930-20-24	31	- 20	1.1/4"	1.1/2"		32.0	135.5	63.7	32.0	14.3		
M43930-24-24	38	- 24	1.1/2"	1.1/2"		32.0	135.0	63.7	28.0	14.3		
M43930-24-32	38	- 24	1.1/2"	2"		42.0	151.5	79.3	36.0	14.3		
M43930-32-32	51	- 32	2"	2"		42.0	171.5	79.3	37.5	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M43930CT

30° REALCAT SERIES FLANGE



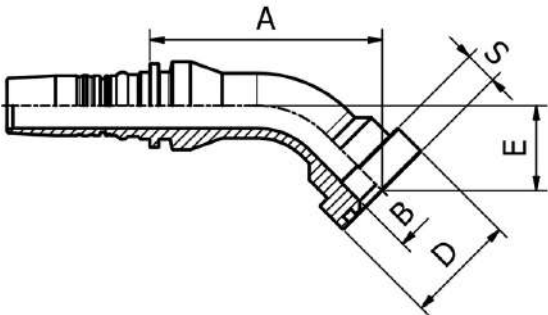
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43930-12-12CT	19	- 12	3/4"	3/4"	14.5	92.0	41.5	20.0	14.3		
M43930-16-16CT	25	- 16	1"	1"	19.5	108.0	47.7	23.0	14.3		
M43930-20-20CT	31	- 20	1.1/4"	1.1/4"	25.0	119.5	54.0	25.0	14.3		
M43930-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	135.0	63.7	28.0	14.3		

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ORIGINAL EQUIPMENT CONNECTIONS

M43940

45° SUPERCAT SERIES FLANGE

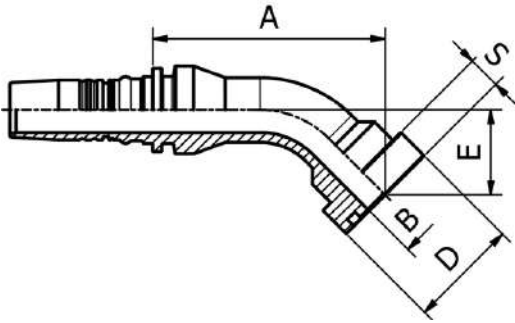


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43940-12-12	19	- 12	3/4"	3/4"	16.0	85.0	41.5	32.0	14.3		
M43940-12-16	19	- 12	3/4"	1"	20.0	91.5	47.7	35.5	14.3		
M43940-16-16	25	- 16	1"	1"	20.0	100.5	47.7	36.5	14.3		
M43940-16-20	25	- 16	1"	1.1/4"	26.1	103.5	54.0	40.5	14.3		
M43940-20-20	31	- 20	1.1/4"	1.1/4"	26.1	110.5	54.0	40.5	14.3		
M43940-20-24	31	- 20	1.1/4"	1.1/2"	32.0	124.5	63.7	50.5	14.3		
M43940-24-24	38	- 24	1.1/2"	1.1/2"	32.0	125.5	63.7	45.5	14.3		
M43940-24-32	38	- 24	1.1/2"	2"	42.0	139.5	79.3	56.5	14.3		
M43940-32-32	51	- 32	2"	2"	42.0	158.5	79.3	61.5	14.3		

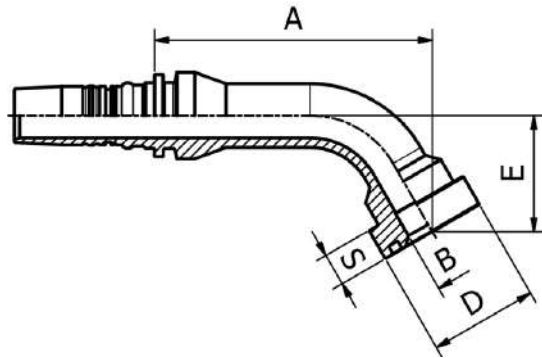
ORIGINAL EQUIPMENT CONNECTIONS

M43940CT

45° REALCAT FLANGE



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43940-16-16CT	25	- 16	1"	1"	19.5	100.5	47.7	36.5	14.3		
M43940-16-20CT	25	- 16	1"	1.1/4"	25.0	103.5	54.0	40.5	14.3		
M43940-20-24CT	31	- 20	1.1/4"	1.1/2"	31.0	124.5	63.7	50.5	14.3		
M43940-20-20CT	31	- 20	1.1/4"	1.1/4"	25.0	110.5	54.0	40.5	14.3		
M43940-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	125.5	63.7	45.0	14.3		



ORIGINAL EQUIPMENT CONNECTIONS

M43960

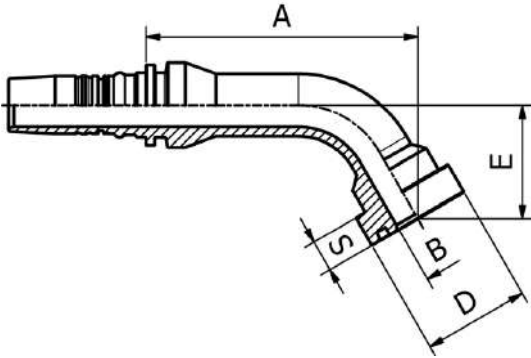
60° SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43960-12-16	19	- 12	3/4"	1"	20.0	106.0	47.7	48.0	14.3		
M43960-12-12	19	- 12	3/4"	3/4"	16.0	101.0	41.5	44.0	14.3		
M43960-16-16	25	- 16	1"	1"	20.0	122.0	47.7	51.0	14.3		
M43960-16-16055	25	- 16	1"	1"	20.0	102.5	47.7	55.0	14.3		
M43960-16-20	25	- 16	1"	1.1/4"	26.1	122.0	54.0	55.0	14.3		
M43960-20-20	31	- 20	1.1/4"	1.1/4"	26.1	136.0	54.0	56.0	14.3		
M43960-20-24	31	- 20	1.1/4"	1.1/2"	32.0	149.0	63.7	69.0	14.3		
M43960-24-24	38	- 24	1.1/2"	1.1/2"	32.0	154.5	63.7	63.0	14.3		
M43960-32-32	51	- 32	2"	2"	42.0	202.0	79.3	86.5	14.3		
M43960-32-32150	51	- 32	2"	2"	42.0	196.5	79.3	150.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M43960CT

60° REALCAT SERIES FLANGE



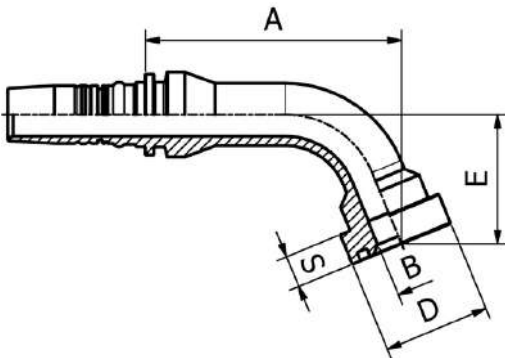
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M43960-16-16CT	25	- 16	1"	1"	19.5	122.0	47.7	51.0	14.3		
M43960-16-20CT	25	- 16	1"	1.1/4"	25.0	122.0	54.0	55.0	14.3		
M43960-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	154.5	63.7	63.5	14.3		

FITTINGS 206

ORIGINAL EQUIPMENT CONNECTIONS

M43970

67,5° SUPERCAT SERIES FLANGE

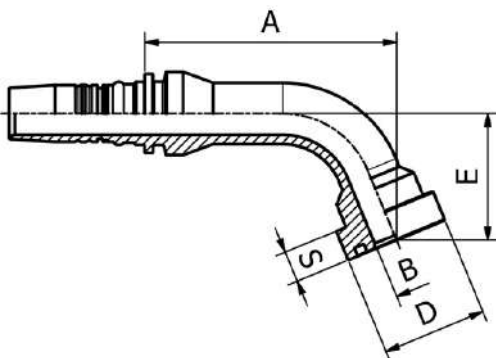


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M43970-12-12	19	- 12	3/4"	3/4"	16.0	95.0	41.5	49.5	14.3		
M43970-12-16	19	- 12	3/4"	1"	20.0	99.5	47.7	54.0	14.3		
M43970-16-16	25	- 16	1"	1"	20.0	115.0	47.7	58.0	14.3		
M43970-16-20	25	- 16	1"	1.1/4"	26.1	114.5	54.0	62.0	14.3		
M43970-20-20	31	- 20	1.1/4"	1.1/4"	26.1	128.0	54.0	64.0	14.3		
M43970-20-24	31	- 20	1.1/4"	1.1/2"	32.0	139.5	63.7	78.0	14.3		
M43970-24-24	38	- 24	1.1/2"	1.1/2"	32.0	146.0	63.7	72.0	14.3		
M43970-32-32	51	- 32	2"	2"	42.0	189.5	79.3	99.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M43970CT

67,5° REALCAT SERIES FLANGE

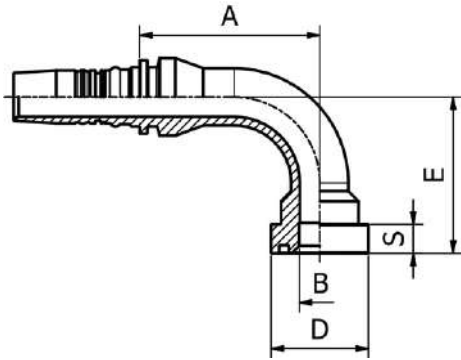


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	S		
M43970-16-16CT	25	- 16	1"	1"	19.5	115.0	47.7	58.0	14.3		
M43970-16-20CT	25	- 16	1"	1.1/4"	25.0	114.5	64.0	62.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M43990

90° SUPERCAT SERIES FLANGE



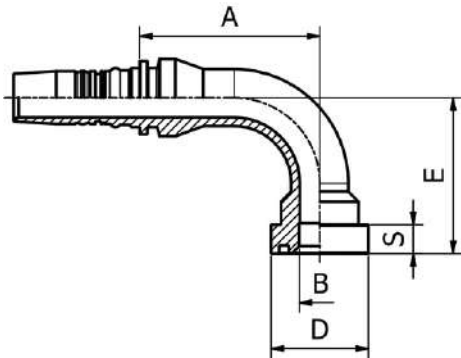
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E	S	
M43990-12-12	19	- 12	3/4"	3/4"		16.0	72.5	41.5	64.5	14.3		
M43990-12-16	19	- 12	3/4"	1"		20.0	75.0	47.7	69.5	14.3		
M43990-16-16	25	- 16	1"	1"		20.0	88.5	47.7	76.5	14.3		
M43990-16-20	25	- 16	1"	1.1/4"		26.1	86.5	54.0	80.5	14.3		
M43990-20-20	31	- 20	1.1/4"	1.1/4"		26.1	98.5	54.0	85.0	14.3		
M43990-20-24	31	- 20	1.1/4"	1.1/2"		32.0	104.0	63.7	101.0	14.3		
M43990-24-24	38	- 24	1.1/2"	1.1/2"		32.0	112.5	63.7	96.0	14.3		
M43990-24-32	38	- 24	1.1/2"	2"		42.0	115.0	79.3	112.0	14.3		
M43990-32-32	51	- 32	2"	2"		42.0	144.0	79.3	133.5	14.3		

207 FITTINGS

ORIGINAL EQUIPMENT CONNECTIONS

M43990 LONG DROP

90° LONG DROP SUPERCAT SERIES FLANGE

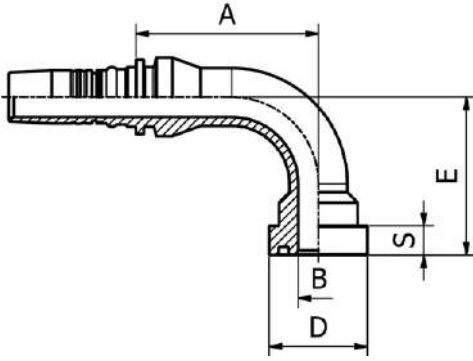


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E	S	
M43990-16-16150	25	- 16	1"	1"		20.0	88.5	47.7	150.0	14.3		
M43990-16-16132	25	- 16	1"	1"		20.0	88.5	47.7	132.0	14.3		
M43990-16-20150	25	- 16	1"	1.1/4"		26.1	88.5	54.0	150.0	14.3		
M43990-20-24135	31	- 20	1.1/4"	1.1/2"		32.0	98.5	63.7	135.0	14.3		
M43990-20-20150	31	- 20	1.1/4"	1.1/4"		26.1	98.5	54.0	150.0	14.3		
M43990-20-20092	31	- 20	1.1/4"	1.1/4"		26.1	98.5	54.0	92.0	14.3		
M43990-24-24106	38	- 24	1.1/2"	1.1/2"		32.0	112.5	63.7	106.0	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M43990CT

90° REALCAT FLANGE



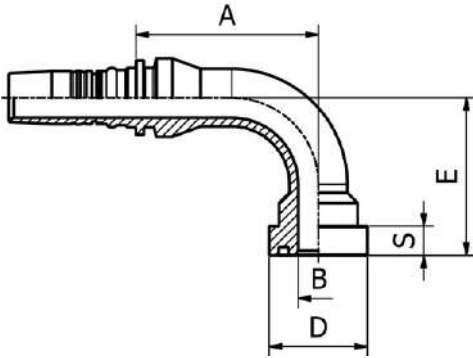
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43990-16-16CT	25	- 16	1"	1"	19.5	88.5	47.7	76.5	14.3		
M43990-16-20CT	25	- 16	1"	1.1/4"	25.0	86.5	54.0	80.5	14.3		
M43990-20-20CT	31	- 20	1.1/4"	1.1/4"	25.0	98.5	54.0	85.0	14.3		
M43990-24-24CT	38	- 24	1.1/2"	1.1/2"	31.0	112.5	63.7	96.0	14.3		

FITTINGS 208

ORIGINAL EQUIPMENT CONNECTIONS

M43990CT LONG DROP

90° LONG DROP REALCAT FLANGE

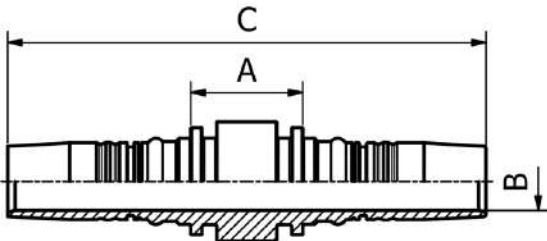


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M43990-16-16132CT	25	- 16	1"	1"	19.5	88.5	47.7	132.0	14.3		
M43990-20-20150CT	25	- 16	1"	1.1/4"	25.0	98.5	54.0	150.0	14.3		
M43990-24-24106CT	31	- 20	1.1/4"	1.1/2"	31.0	112.5	63.7	106.0	14.3		

DOUBLE CONNECTOR

M30050

DOUBLE CONNECTOR

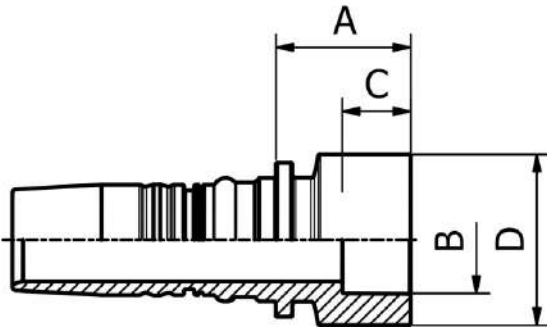


PART. REF.	HOSE BORE			DIMENSIONS mm					
	DN	Dash	inch	B	A	C			
M30050-20-20	31	- 20	1.1/4"	25.0	42.0	206.0			
M30050-24-24	38	- 24	1.1/2"	31.0	43.1	229.1			
M30050-32-32	51	- 32	2"	41.0	43.0	244.7			

TAIL

M49510WL

WELDING TAIL

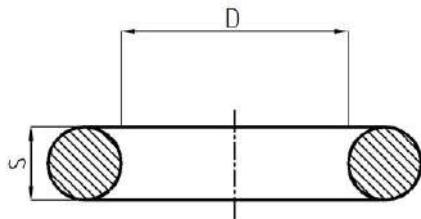


PART. REF.	HOSE BORE			DIMENSIONS mm								
	DN	Dash	inch			B	A	C	D			
M49510-10-18WL	16	- 10	5/8"			18.1	20.5	10.0	26.0			
M49510-12-22WL	19	- 12	3/4"			22.1	27.5	12.0	34.0			
M49510-16-28WL	25	- 16	1"			28.1	31.5	14.0	40.0			
M49510-20-35WL	31	- 20	1.1/4"			35.1	33.0	14.0	49.0			

209 FITTINGS

O-RING

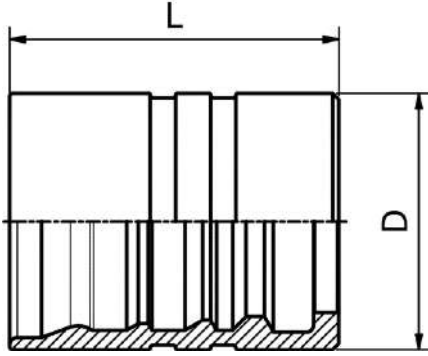
JO29



OPTIONAL INTERLOCK PLUS O-RING

PART. REF.	HOSE BORE			DIMENSIONS mm								
	DN	Dash	inch			D	S					
JO29161218	16	- 10	5/8"			12.42	1.78					
JO29191618	19	- 12	3/4"			15.6	1.78					
JO29262218	25	- 16	1"			21.95	1.78					
JO29322818	31	- 20	1.1/4"			28.3	1.78					
JO29383518	38	- 24	1.1/2"			34.65	1.78					
JO29514718	51	- 32	2"			47.35	1.78					
JO29605718	63	- 40	2.1/2"			56.87	1.78					
JO29737018	76	- 48	3"			69.57	1.78					

FERRULE



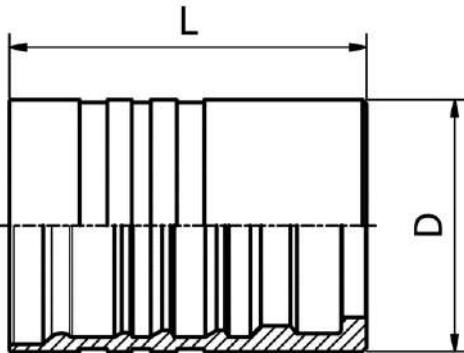
IM01500

**DOUBLE SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES (4 PLY)
STAINLESS STEEL**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IM01500-10	16	- 10	5/8"			35.0	40.9				
IM01500-12	19	- 12	3/4"			40.0	51.4				
IM01500-16	25	- 16	1"			48.0	64.5				
IM01500-20	31	- 20	1.1/4"			57.0	84.0				
IM01500-24	38	- 24	1.1/2"			64.3	94.0				
IM01500-32	51	- 32	2"			83.5	107.0				
IM01500-40	63	- 40	2.1/2"			100.0	135.0				
IM01500-48	76	- 48	3"			107.0	125.0				

FITTINGS 210

FERRULE

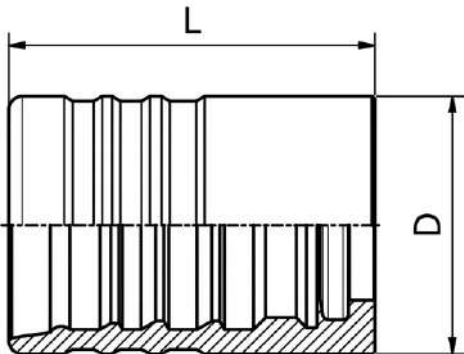


IM01600

**DOUBLE SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES (6 PLY)
STAINLESS STEEL**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IM01600-20	31	- 20	1.1/4"			60.0	85.0				
IM01600-24	38	- 24	1.1/2"			69.0	96.0				

FERRULE

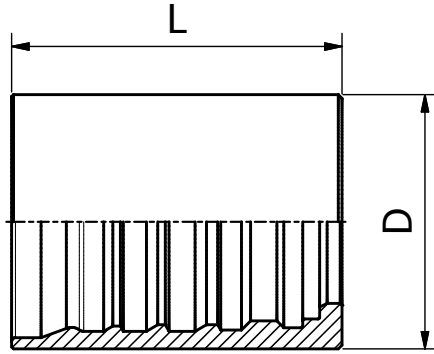


IM01800/IM01810

**DOUBLE SKIVE FERRULE
FOR EXTRA DUTY SPIRAL HOSES (6 PLY)
STAINLESS STEEL**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IM01800-32	51	- 32	2"			86.5	108.0				
IM01810-40	63	- 40	2.1/2"			103.0	135.0				
IM01810-48	76	- 48	3"			113.5	125.0				

FERRULE



IM01900

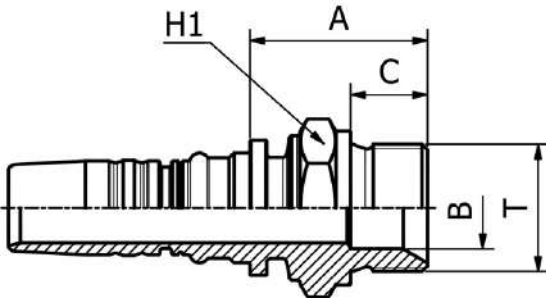
DOUBLE SKIVE FERRULE

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IM01900-20	31	-20	1.1/4"			68	88,2				

BS STANDARD CONNECTIONS

IM30510

BSP
MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6
(STAINLESS STEEL)

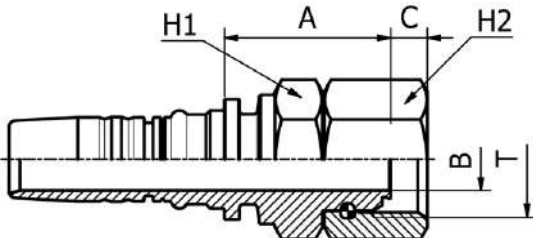


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T		B	A	C	H1			
IM30510-12-12	19	- 12	3/4"	3/4" - 14		17.0	37.0	16.0	32.0			
IM30510-16-16	25	- 16	1"	1" - 11		22.5	43.0	19.0	41.0			
IM30510-20-20	31	- 20	1.1/4"	1.1/4" - 11		28.5	50.5	20.0	50.0			
IM30510-24-24	38	- 24	1.1/2"	1.1/2" - 11		33.5	54.5	22.0	55.0			
IM30510-32-32	51	- 32	2"	2" - 11		42.0	58.0	25.0	70.0			

BS STANDARD CONNECTIONS

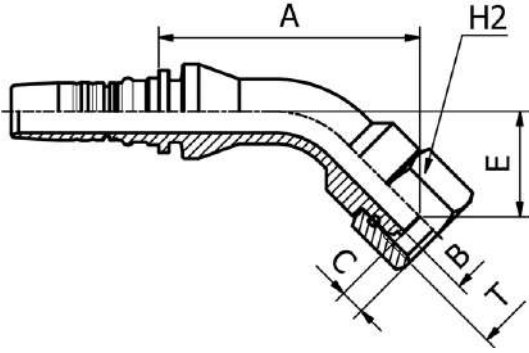
IM40812

BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT) STAINLESS STEEL



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T		B	A	C	H1	H2		
IM40812-12-12	19	- 12	3/4"	3/4" - 14		14.5	39.0	8.5	32.0	32.0		
IM40812-16-16	25	- 16	1"	1" - 11		19.5	44.5	10.6	41.0	41.0		
IM40812-20-20	31	- 20	1.1/4"	1.1/4" - 11		26.1	52.5	10.5	50.0	50.0		
IM40812-24-24	38	- 24	1.1/2"	1.1/2" - 11		32.1	51.5	12.5	60.0	60.0		
IM40812-32-32	51	- 32	2"	2" - 11		42.0	51.5	16.1	70.0	70.0		

BS STANDARD CONNECTIONS

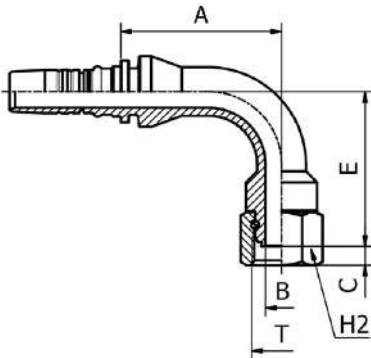


IM40842

45° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
IM40842-12-12	19	- 12	3/4"	3/4" - 14	14.5	88.0	8.5	35.0	32.0		
IM40842-16-16	25	- 16	1"	1" - 11	19.5	97.0	10.6	40.0	41.0		
IM40842-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	120.0	10.5	49.5	50.0		
IM40842-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	126.5	12.5	50.0	60.0		
IM40842-32-32	51	- 32	2"	2" - 11,5	42.0	162.5	16.1	66.5	70.0		

FITTINGS 212



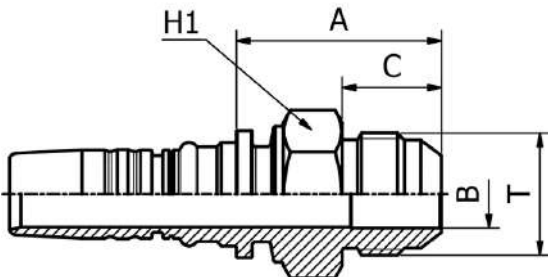
BS STANDARD CONNECTIONS

IM40892

90° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
IM40892-12-12	19	- 12	3/4"	3/4" - 14	14.5	72.5	8.5	70.0	32.0		
IM40892-16-16	25	- 16	1"	1" - 11	19.5	82.0	10.6	80.5	41.0		
IM40892-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	98.5	10.5	98.0	50.0		
IM40892-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	111.5	12.5	109.0	60.0		
IM40892-32-32	51	- 32	2"	2" - 11,5	42.0	143.0	16.1	140.5	70.0		

SAE STANDARD CONNECTIONS



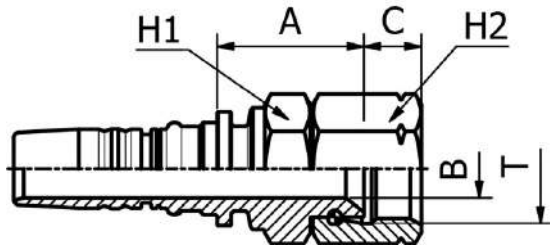
IM32510

JIC
MALE 37° CONE
SAE J516 / ISO 12151-5
STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	H1	
IM32510-10-10	16	- 10	5/8"	7/8" - 14	12.0	41.0	19.5	27.0		
IM32510-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	45.5	22.0	32.0		
IM32510-16-16	25	- 16	1"	1.5/16" - 12	20.0	50.5	23.0	38.0		
IM32510-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	66.0	24.3	46.0		
IM32510-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	64.0	27.5	50.0		
IM32510-32-32	51	- 32	2"	2.1/2" - 12	42.0	81.0	34.0	70.0		

SAE STANDARD CONNECTIONS

IM42512



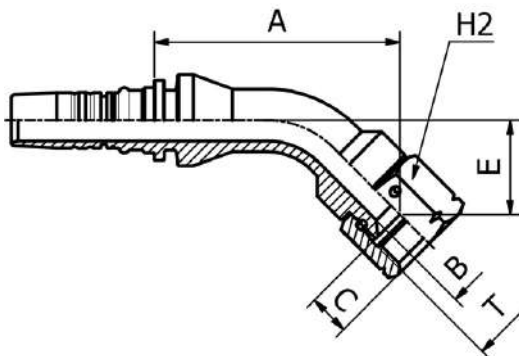
JIC
 FEMALE 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
IM42512-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	36.0	16.0	32.0	32.0		
IM42512-16-16	25	- 16	1"	1.5/16" - 12	21.7	40.5	15.2	41.0	41.0		
IM42512-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	51.5	16.2	50.0	50.0		
IM42512-24-24	38	- 24	1.1/2"	1.7/8" - 12	31.0	54.5	18.8	55.0	60.0		
IM42512-32-32	51	- 32	2"	2.1/2" - 8	42.0	54.0	24.0	70.0	75.0		

213 FITTINGS

SAE STANDARD CONNECTIONS

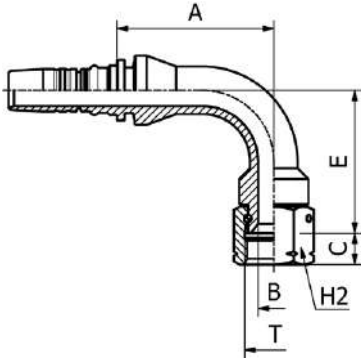
IM42542



45° JIC
 FEMALE SWEPT ELBOW 37° CONE SEAT
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM42542-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	86.0	16.0	33.0	32.0		
IM42542-16-16	25	- 16	1"	1.5/16" - 12	21.7	95.0	15.2	37.0	41.0		
IM42542-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	115.5	16.2	45.0	50.0		
IM42542-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	126.5	18.8	50.0	60.0		

SAE STANDARD CONNECTIONS



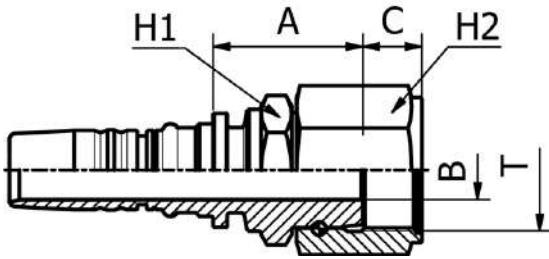
IM42592

90° JIC
FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5
(THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM42592-12-12	19	- 12	3/4"	1.1/16" - 12	15.0	72.5	16.0	66.0	32.0		
IM42592-12-16	19	- 12	3/4"	1.5/16" - 12	21.7	72.5	15.2	71.5	41.0		
IM42592-16-16	25	- 16	1"	1.5/16" - 12	21.7	82.5	15.2	77.5	41.0		
IM42592-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	98.5	16.2	92.0	50.0		
IM42592-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	111.5	18.8	106.0	60.0		
IM42592-32-32	51	- 32	2"	2.1/2" - 8	42.0	144.5	24.0	137.0	75.0		

FITTINGS 214

SAE STANDARD CONNECTIONS

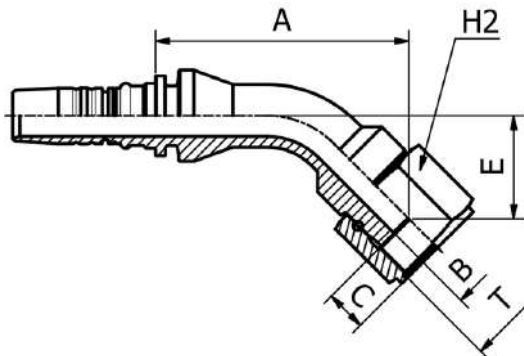


IM42412

ORFS
FEMALE
SAE J516 / ISO 12151-1 HEAVY TYPE
(THRUST-WIRE NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	H1	H2			
IM42412-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	37.0	32.0	36.0			
IM42412-16-16	25	- 16	1"	1.7/16" - 12	19.5	42.0	15.0	41.0	46.0		
IM42412-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	52.0	15.1	50.0	55.0		
IM42412-24-24	38	- 24	1.1/2"	2" - 12	31.0	55.0	15.0	60.0	60.0		

SAE STANDARD CONNECTIONS

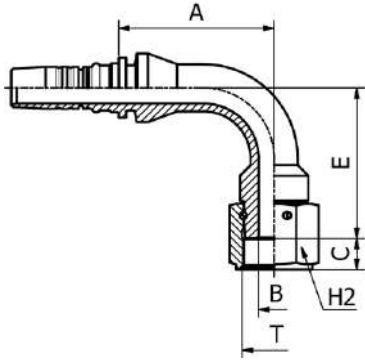


IM42442

45° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1 HEAVY TYPE
(THRUST-WIRE-NUT) STAINLESS STEEL

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM42442-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	89.0	13.9	36.0	36.0		
IM42442-16-16	25	- 16	1"	1.7/16" - 12	19.5	100.0	15.0	42.5	46.0		
IM42442-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	119.5	15.1	49.5	55.0		
IM42442-24-24	38	- 24	1.1/2"	2" - 12	31.0	128.5	15.0	52.0	60.0		

SAE STANDARD CONNECTIONS

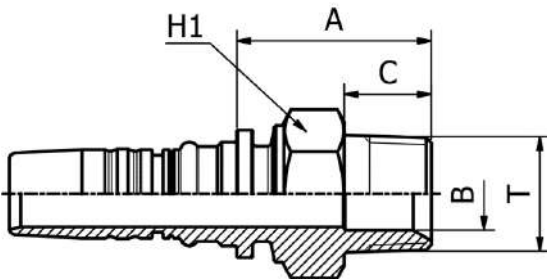


IM42492

**90° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1 HEAVY TYPE
(THRUST-WIRE-NUT) STAINLESS STEEL**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
IM42492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	72.5	13.9	70.5	36.0		
IM42492-16-16	25	- 16	1"	1.7/16" - 12	19.5	82.5	15.0	84.5	46.0		
IM42492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	98.5	15.1	98.0	55.0		
IM42492-24-24	38	- 24	1.1/2"	2" - 12	31.0	111.5	15.0	109.0	60.0		

SAE STANDARD CONNECTIONS

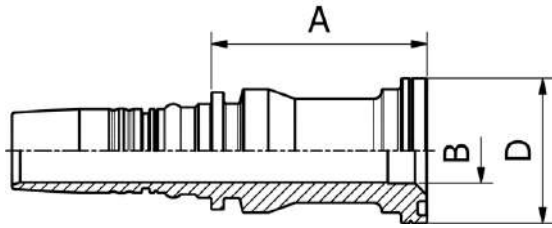


IM32810

**NPTF
MALE 60° CONE SEAT
SAE J516/J514
(STAINLESS STEEL)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
IM32810-10-08	16	- 10	5/8"	1/2" - 14	12.0	39.5	19.2	24.0			
IM32810-10-12	16	- 10	5/8"	3/4" - 14	16.0	40.5	19.2	27.0			
IM32810-12-12	19	- 12	3/4"	3/4" - 14	16.0	43.0	19.2	32.0			
IM32810-16-16	25	- 16	1"	1" - 11,5	19.5	50.5	24.2	38.0			
IM32810-20-20	31	- 20	1.1/4"	1.1/4" - 11,5	26.1	61.0	25.0	46.0			
IM32810-24-24	38	- 24	1.1/2"	1.1/2" - 11,5	32.1	62.5	26.0	50.0			
IM32810-32-32	51	- 32	2"	2" - 11	42.0	67.0	26.5	70.0			
IM32810-40-40	63	- 40	2.1/2"	2.1/2" - 8	51.5	94.5	43.0	80.0			
IM32810-48-48	76	- 48	3"	3" - 8	62.5	123.5	51.5	100.0			

SAE STANDARD CONNECTIONS

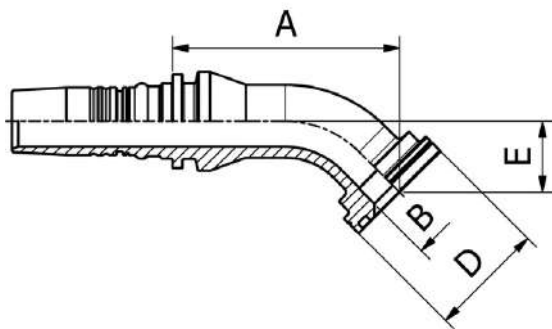


IM43310

ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D			
IM43310-12-12	19	- 12	3/4"	3/4"	16.0	60.0	38.0				
IM43310-16-16	25	- 16	1"	1"	20.0	66.5	44.6				
IM43310-20-20	31	- 20	1.1/4"	1.1/4"	26.1	75.0	51.0				
IM43310-24-24	38	- 24	1.1/2"	1.1/2"	32.1	80.5	60.5				
IM43310-32-32	51	- 32	2"	2"	42.0	83.0	71.6				

FITTINGS 216



SAE STANDARD CONNECTIONS

IM43340

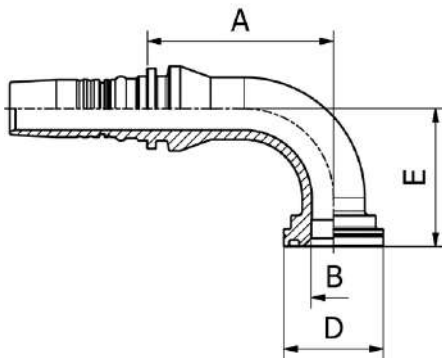
45° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E		
IM43340-12-12	19	- 12	3/4"	3/4"	16.0	75.5	38.0	23.0			
IM43340-16-16	25	- 16	1"	1"	20.0	87.0	44.6	27.3			
IM43340-20-20	31	- 20	1.1/4"	1.1/4"	26.1	100.5	51.0	29.5			
IM43340-24-24	38	- 24	1.1/2"	1.1/2"	32.1	111.0	60.5	34.5			
IM43340-32-32	51	- 32	2"	2"	42.0	128.5	71.6	39.0			

SAE STANDARD CONNECTIONS

IM43390

90° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)

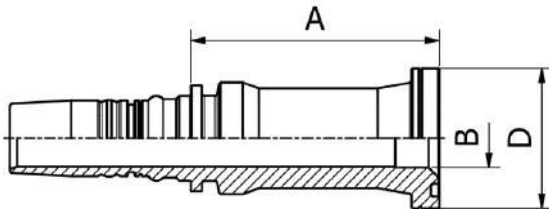


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E		
IM43390-12-12	19	- 12	3/4"	3/4"	16.0	72.0	38.0	52.0			
IM43390-16-16	25	- 16	1"	1"	20.0	83.5	44.6	62.0			
IM43390-20-20	31	- 20	1.1/4"	1.1/4"	26.1	99.0	51.0	70.0			
IM43390-24-24	38	- 24	1.1/2"	1.1/2"	32.1	111.5	60.5	84.0			
IM43390-32-32	51	- 32	2"	2"	42.0	133.5	71.6	99.0			

SAE STANDARD CONNECTIONS

IM43610

ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)



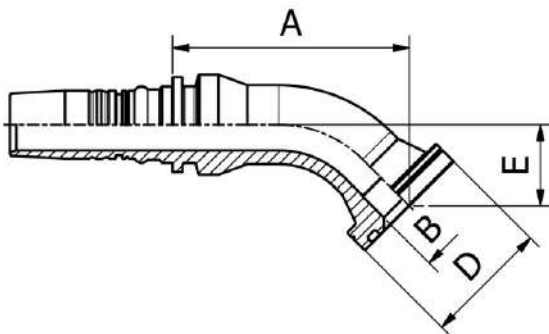
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm							
	DN	Dash	inch	inch		B	A	D					
IM43610-10-12	16	- 10	5/8"	3/4"		16.0	65.0	41.5					
IM43610-10-16	16	- 10	5/8"	1"		20.0	81.5	47.7					
IM43610-12-12	19	- 12	3/4"	3/4"		16.0	71.5	41.4					
IM43610-12-16	19	- 12	3/4"	1"		20.0	83.5	47.7					
IM43610-16-12	25	- 16	1"	3/4"		16.0	80.3	41.4					
IM43610-16-16	25	- 16	1"	1"		20.0	84.5	47.7					
IM43610-16-20	25	- 16	1"	1.1/4"		26.0	89.0	54.2					
IM43610-20-16	31	- 20	1.1/4"	1"		20.0	87.0	47.7					
IM43610-20-20	31	- 20	1.1/4"	1.1/4"		26.1	91.0	54.2					
IM43610-20-24	31	- 20	1.1/4"	1.1/2"		32.1	97.0	63.7					
IM43610-24-20	38	- 24	1.1/2"	1.1/4"		26.0	101.0	54.2					
IM43610-24-24	38	- 24	1.1/2"	1.1/2"		32.1	97.5	63.7					
IM43610-24-32	38	- 24	1.1/2"	2"		42.0	113.0	79.6					
IM43610-32-24	51	- 32	2"	1.1/2"		32.1	117.0	63.7					
IM43610-32-32	51	- 32	2"	2"		42.0	113.0	79.6					
IM43610-40-40	63	- 40	2.1/2"	2.1/2"		51.5	126.5	107.9					
IM43610-48-48	76	- 48	3"	3"		62.5	167.0	131.9					

217 FITTINGS

SAE STANDARD CONNECTIONS

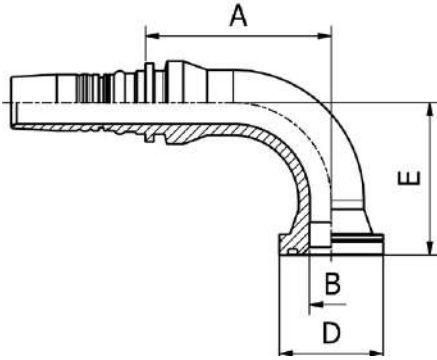
IM43640

45° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm							
	DN	Dash	inch	inch		B	A	D	E				
IM43640-12-12	19	- 12	3/4"	3/4"		16.0	81.0	41.4	28.0				
IM43640-16-16	25	- 16	1"	1"		20.0	91.5	47.7	32.5				
IM43640-20-20	31	- 20	1.1/4"	1.1/4"		26.0	108.0	54.2	37.5				
IM43640-24-24	38	- 24	1.1/2"	1.1/2"		32.0	124.5	63.7	44.0				
IM43640-32-32	51	- 32	2"	2"		42.0	154.0	79.6	60.5				

SAE STANDARD CONNECTIONS



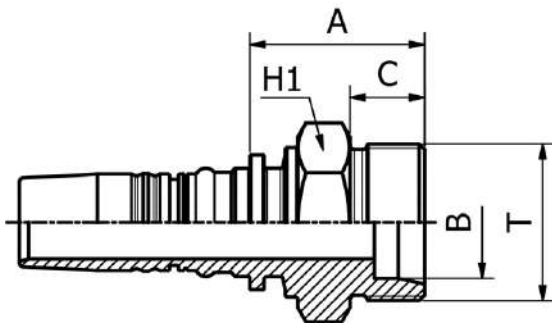
IM43690

90° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E			
IM43690-10-12	16	- 10	5/8"	3/4"	16.0	57.5	41.4	60.5			
IM43690-12-12	19	- 12	3/4"	3/4"	16.0	72.4	41.4	59.0			
IM43690-16-16	25	- 16	1"	1"	20.0	81.0	47.7	68.0			
IM43690-20-20	31	- 20	1.1/4"	1.1/4"	26.0	98.5	54.2	81.0			
IM43690-24-24	38	- 24	1.1/2"	1.1/2"	32.0	112.5	63.7	94.5			
IM43690-32-32	51	- 32	2"	2"	42.0	140.5	79.6	132.0			

FITTINGS 218

DIN STANDARD CONNECTIONS

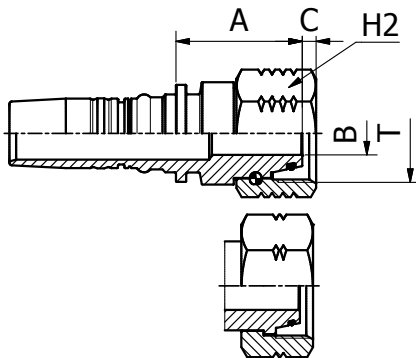


IM31210

METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	H1			
IM31210-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	37.0	16.0	30.0			
IM31210-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	43.5	18.0	36.0			
IM31210-16-42	25	- 16	1"	M 42X2	30.0	19.5	46.8	20.0	46.0			
IM31210-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	55.0	22.0	55.0			

DIN STANDARD CONNECTIONS

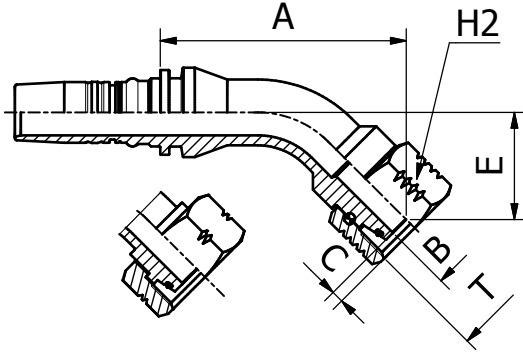


IM41612/IM41613

METRIC
O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	H2			
IM41613-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	37.0	3.5	36.0			
IM41613-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	42.0	3.4	41.0			
IM41613-16-42	25	- 16	1"	M 42X2	30.0	19.5	46.5	5.3	50.0			
IM41613-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	41.5	8.0	60.0			

DIN STANDARD CONNECTIONS

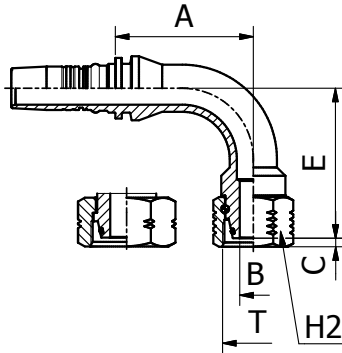


IM41642/IM41643

45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2 (STAINLESS STEEL)

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
IM41643-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	66.5	3.5	29.5	36.0		
IM41643-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	81.0	3.4	33.5	41.0		
IM41643-16-42	25	- 16	1"	M 42X2	30.0	19.5	93.0	5.3	36.0	50.0		
IM41643-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	110.0	8.0	40.0	60.0		

DIN STANDARD CONNECTIONS

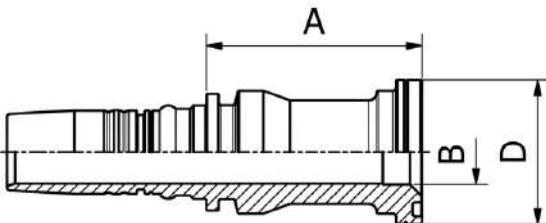


IM41692/IM41693

90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2 (STAINLESS STEEL)

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
IM41693-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	52.5	3.5	57.5	36.0		
IM41693-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	67.0	3.4	67.5	41.0		
IM41693-16-42	25	- 16	1"	M 42X2	30.0	19.5	81.5	5.3	75.5	50.0		
IM41692-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	103.5	6.1	90.0	50.0		
IM41693-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.0	100.0	8.0	86.5	60.0		

SAE STANDARD CONNECTIONS

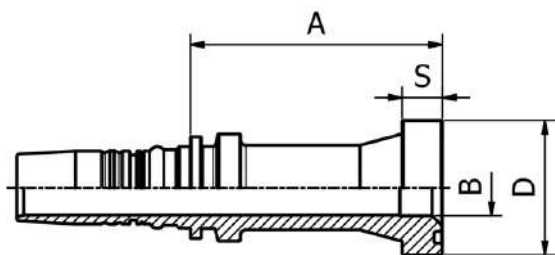


IM43310

ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3
(STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D				
IM43310-12-12	19	- 12	3/4"	3/4"	16.0	60.0	38.0				
IM43310-16-16	25	- 16	1"	1"	20.0	66.5	44.6				
IM43310-20-20	31	- 20	1.1/4"	1.1/4"	26.1	75.0	51.0				
IM43310-24-24	38	- 24	1.1/2"	1.1/2"	32.1	80.5	60.5				
IM43310-32-32	51	- 32	2"	2"	42.0	83.0	71.6				

ORIGINAL EQUIPMENT CONNECTIONS

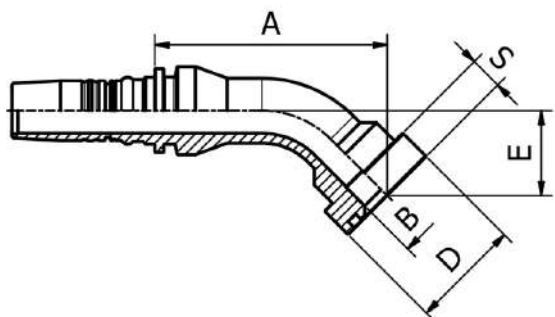


IM43910

STRAIGHT SUPERCAT SERIES FLANGE (STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D	S	
IM43910-12-12	19	- 12	3/4"	3/4"		16.0	77.0	41.5	14.3		
IM43910-16-16	25	- 16	1"	1"		20.0	89.5	47.7	14.3		
IM43910-20-20	31	- 20	1.1/4"	1.1/4"		26.0	95.0	54.0	14.3		
IM43910-24-24	38	- 24	1.1/2"	1.1/2"		32.1	99.0	63.6	14.3		
IM43910-32-32	51	- 32	2"	2"		42.0	114.0	79.3	14.3		

FITTINGS 220

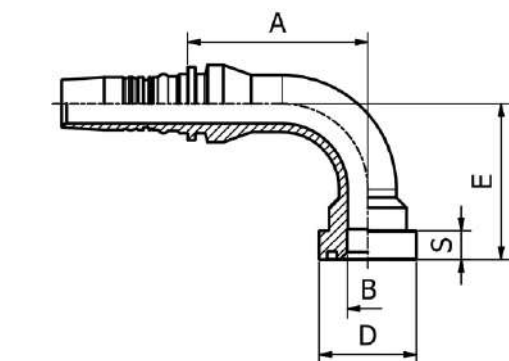


ORIGINAL EQUIPMENT CONNECTIONS

IM43940

45° SUPERCAT SERIES FLANGE (STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
IM43940-12-12	19	- 12	3/4"	3/4"		16.0	85.0	41.5	32.0	14.3
IM43940-16-16	25	- 16	1"	1"		20.0	100.5	47.7	36.5	14.3
IM43940-20-20	31	- 20	1.1/4"	1.1/4"		26.1	110.5	54.0	40.5	14.3
IM43940-24-24	38	- 24	1.1/2"	1.1/2"		32.0	125.5	63.7	45.5	14.3
IM43940-32-32	51	- 32	2"	2"		42.0	158.5	79.3	61.5	14.3

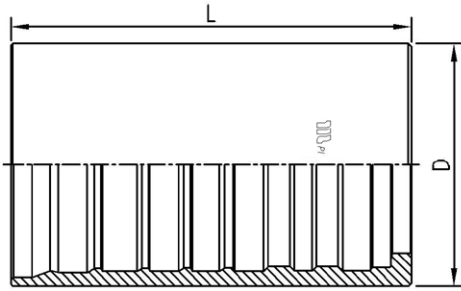


ORIGINAL EQUIPMENT CONNECTIONS

IM43990

90° SUPERCAT SERIES FLANGE (STAINLESS STEEL)

PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
IM43990-12-12	19	- 12	3/4"	3/4"		16.0	72.5	41.5	64.5	14.3
IM43990-16-16	25	- 16	1"	1"		20.0	88.5	47.7	76.5	14.3
IM43990-20-20	31	- 20	1.1/4"	1.1/4"		26.1	98.5	54.0	85.0	14.3
IM43990-24-24	38	- 24	1.1/2"	1.1/2"		32.0	112.5	63.7	96.0	14.3
IM43990-32-32	51	- 32	2"	2"		42.0	144.0	79.3	133.5	14.3

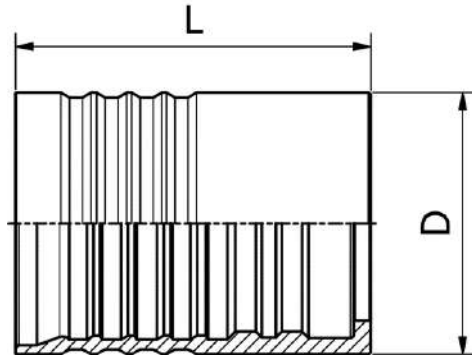


FERRULE

M02610

**DOUBLE SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES (8 PLY)**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M02610-56	89	-56	3.1/2"			143.2	236.7				

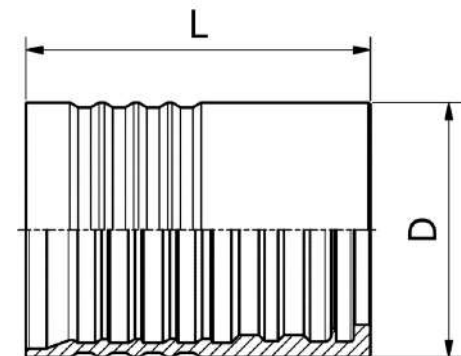


FERRULE

M02700

**DOUBLE SKIVE FERRULE
EXD.8WS**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M02700-24	38	- 24	1.1/2"			74.0	104.2				
M02700-32	51	- 32	2"			89.0	122.0				
M02700-48	76	- 48	3"			122.0	165.0				

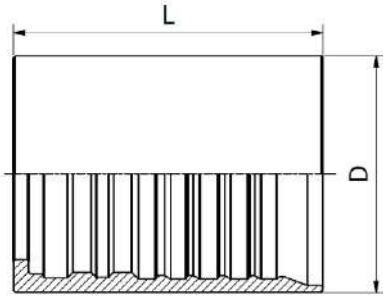


FERRULE

M02800

**DOUBLE SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES (8 PLY)**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M02800-48	76	- 48	3"			122.0	165.0				



FERRULE

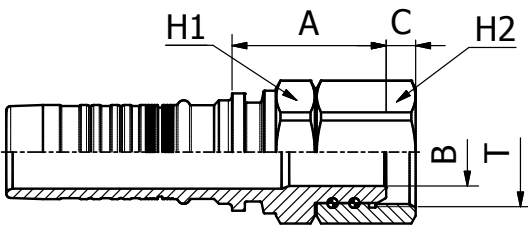
M02900

**DOUBLE SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M02900-24	38	- 24	1.1/2"			82.0	104.2				

FITTINGS
222

BS STANDARD CONNECTIONS

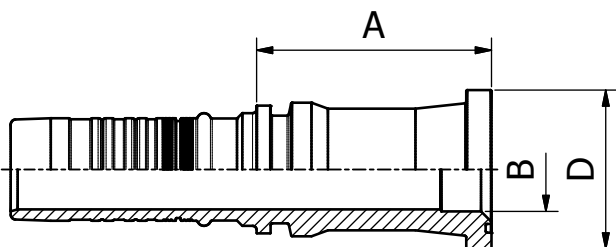


MB0514

**BSP FEMALE 60° CONE
BS5200 / ISO 12151-6**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
MB0514-24-24	38	-24	1.1/2"	1.1/2" - 11	27	86	12,5	55	60		
MB0514-32-32	51	-32	2"	2" - 11	37	84	16,1	70	70		

SAE STANDARD CONNECTIONS



MB3610

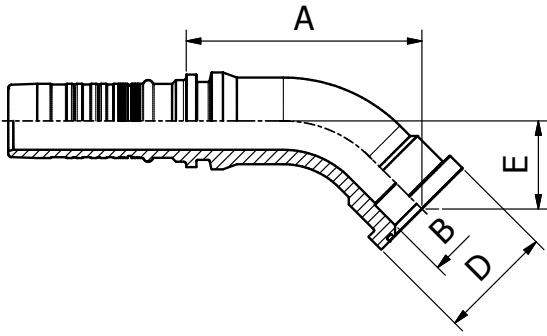
**ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3**

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D				
MB3610-24-24	38	-24	1.1/2"	1.1/2"	32,1	102,5	63,7				
MB3610-32-32	51	-32	2"	2"	42	117,5	79,6				
MB3610-48-48	76	-48	3"	3"	62,5	169	131,9				

SAE STANDARD CONNECTIONS

MB3640

ISO / SAE
45° CODE 62 FLANGE
SAE J516 / ISO 12151-3

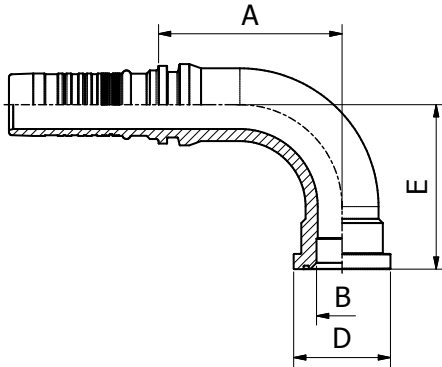


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E		
MB3640-24-24	38	-24	1.1/2"	1.1/2"	32,1	126,5	63,7	46			
MB3640-32-32	51	-32	2"	2"	42	163	79,6	61			

SAE STANDARD CONNECTIONS

MB3690

ISO / SAE
90° CODE 62 FLANGE
SAE J516 / ISO 12151-3

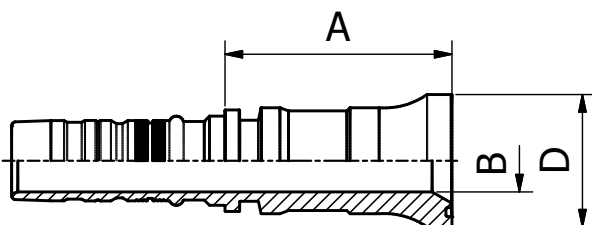


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E		
MB3690-24-24	38	-24	1.1/2"	1.1/2"	32,1	119	63,7	104			
MB3690-32-32	51	-32	2"	2"	42	151	79,6	135,5			

XTRAFRANGE

MB8510

XTRAFRANGE/62
(SAE J518 CODE 62 ISO 6162-2
PORT COMPATIBLE)

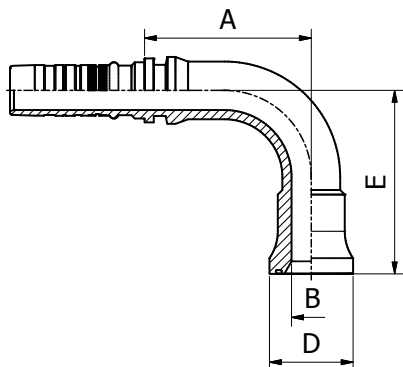


PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D		
MB8510-24-24	38	-24	1.1/2"	1.1/2"	30	109	63,7			
MB8510-32-32	51	-32	2"	2"	40	123	79,6			
MB8510-48-48	76	-48	3"	3"	62,5	152	128			

XTRAFRANGE

MB8590

90° XTRAFRANGE/62
(SAE J518 CODE 62 ISO 6162-2
PORT COMPATIBLE)



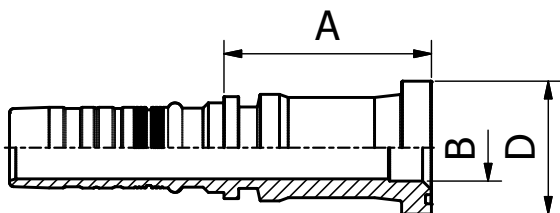
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D	E	
MB8590-24-24	38	-24	1.1/2"	1.1/2"		30	127	63,7	140		
MB8590-32-32	51	-32	2"	2"		39	152	79,6	178		

FITTINGS 224

ORIGINAL EQUIPMENT CONNECTIONS

MB3910

STRAIGHT SUPERCAT FLANGE

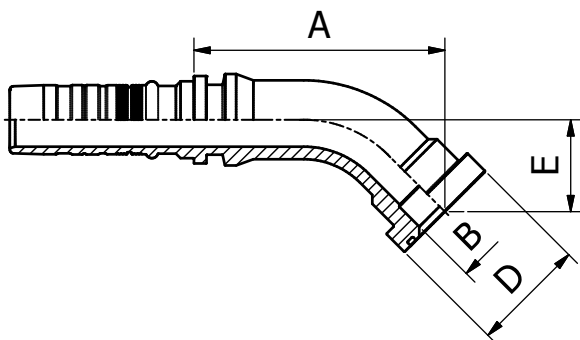


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D	S	
MB3910-24-24	38	-24	1.1/2"	1.1/2"		32.0	99.0	63.7	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

MB3940

45° SUPERCAT FLANGE

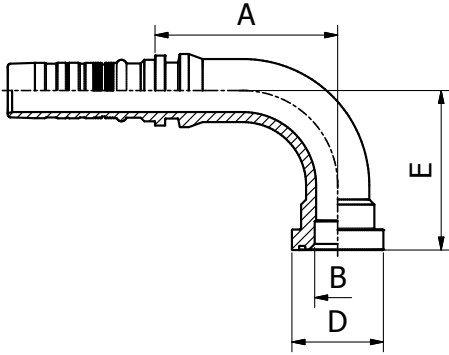


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D	E	S
MB3940-24-24	38	-24	1.1/2"	1.1/2"		32.0	140.0	63.7	51.5	14.3	

ORIGINAL EQUIPMENT CONNECTIONS

MB3990

90° SUPERCAT FLANGE



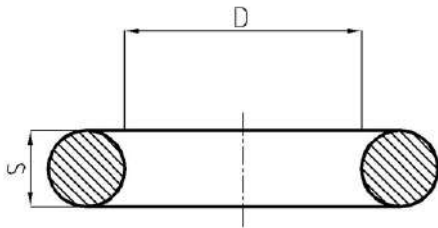
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
MB3990-24-24	38	-24	1.1/2"	1.1/2"	32.0	127.0	63.7	111.0	14.3		

FITTINGS
225

O-RING

JO29

INTERLOCK SUPER O-RING

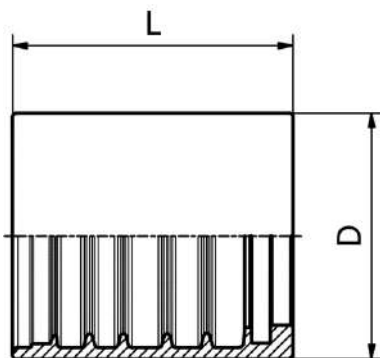


PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	D	S						
JO29757026	76	- 48	3"	69.5	2.6						
JO29878226	89	- 56	3.1/2"	82.2	2.6						
JO291029535	102	-64	4"	94.8	3.5						

FERRULE

M05400

**NO-SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES (4 PLY)**



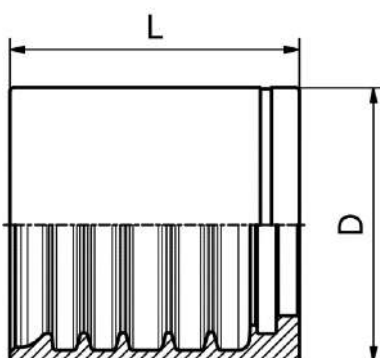
PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M05400-10	16	- 10	5/8"			40.0	44.3				
M05400-12	19	- 12	3/4"			43.8	53.3				
M05400-16	25	- 16	1"			52.0	64.3				
M05400-20	31	- 20	1.1/4"			59.3	72.0				
M05400-24	38	- 24	1.1/2"			68.5	78.0				
M05400-32	51	- 32	2"			84.6	97.1				
M05400-40	63	- 40	2.1/2"			97.0	116.0				
M05400-48	76	- 48	3"			109.8	124.0				
M05400-56	89	- 56	3.1/2"			127.7	123.5				
M05400-64	102	- 64	4"			145.0	126.5				

FITTINGS 226

FERRULE

M05500

**NO-SKIVE FERRULE
FOR HEAVY DUTY SPIRAL HOSES (4-6 PLY)**

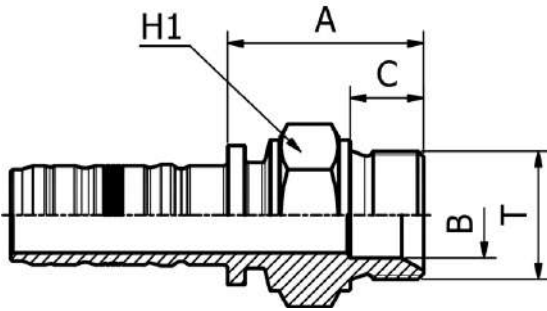


PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
M05500-24	38	- 24	1.1/2"			75.0	79.0				
M05500-20	31	- 20	1.1/4"			66.0	70.0				
M05500-32	51	- 32	2"			90.0	98.1				

BS STANDARD CONNECTIONS

M70510

**BSP
MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 12151-6**

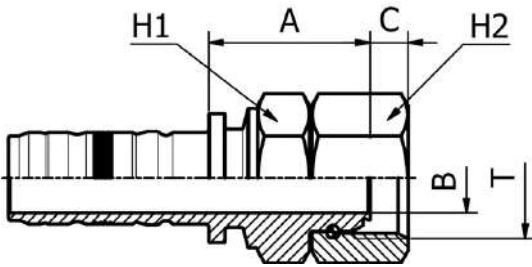


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M70510-12-12	19	- 12	3/4"	3/4" - 14	16.8	43.5	16.0	32.0			
M70510-12-16	19	- 12	3/4"	1" - 11	22.2	49.5	19.0	41.0			
M70510-16-16	25	- 16	1"	1" - 11	22.2	51.0	19.0	41.0			
M70510-16-20	25	- 16	1"	1.1/4" - 11	28.5	56.0	20.0	50.0			
M70510-20-20	31	- 20	1.1/4"	1.1/4" - 11	28.5	56.5	20.0	50.0			
M70510-24-24	38	- 24	1.1/2"	1.1/2" - 11	33.5	60.5	22.0	55.0			
M70510-32-32	51	- 32	2"	2" - 11	42.0	64.0	25.0	70.0			

BS STANDARD CONNECTIONS

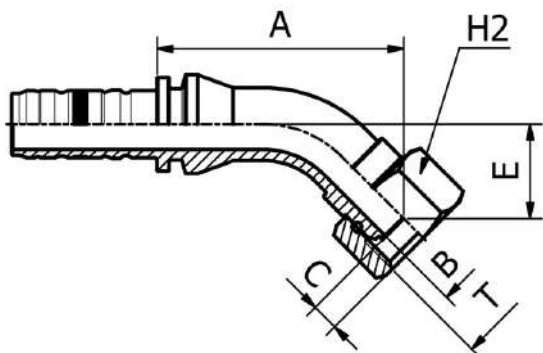
M80812

**BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M80812-12-12	19	- 12	3/4"	3/4" - 14	14.5	39.5	8.5	32.0	32.0		
M80812-12-16	19	- 12	3/4"	1" - 11	19.5	44.0	10.6	41.0	41.0		
M80812-16-12	25	- 16	1"	3/4" - 14	15.0	44.5	8.5	41.0	32.0		
M80812-16-16	25	- 16	1"	1" - 11	19.5	45.5	10.6	41.0	41.0		
M80812-16-20	25	- 16	1"	1.1/4" - 11	26.1	50.5	10.5	50.0	50.0		
M80812-20-16	31	- 20	1.1/4"	1" - 11	19.0	48.0	10.6	50.0	41.0		
M80812-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.1	50.5	10.5	50.0	50.0		
M80812-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.1	50.0	12.5	50.0	60.0		
M80812-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.1	52.0	12.5	60.0	60.0		
M80812-24-20	38	- 24	1.1/2"	1.1/4" - 11	26.1	52.0	10.5	55.0	50.0		
M80812-32-32	51	- 32	2"	2" - 11	42.0	53.5	16.1	70.0	70.0		

BS STANDARD CONNECTIONS



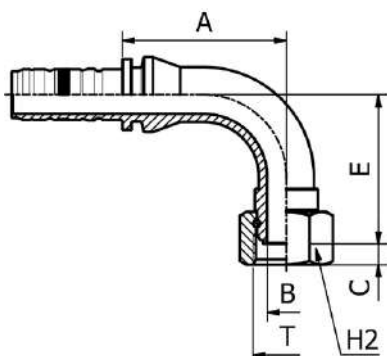
M80842

45° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M80842-12-12	19	- 12	3/4"	3/4" - 14	14.5	82.5	8.5	29.0	32.0		
M80842-12-16	19	- 12	3/4"	1" - 11	19.5	84.0	10.6	30.0	41.0		
M80842-16-12	25	- 16	1"	3/4" - 14	15.0	106.5	8.5	36.0	32.0		
M80842-16-16	25	- 16	1"	1" - 11	19.5	95.0	10.6	36.5	41.0		
M80842-16-16028	25	- 16	1"	1" - 11	19.5	84.0	10.6	28.0	41.0		
M80842-16-20	25	- 16	1"	1.1/4" - 11	26.1	109.5	10.5	38.0	50.0		
M80842-20-16	31	- 20	1.1/4"	1" - 11	19.5	102.0	10.6	36.5	41.0		
M80842-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	99.0	10.5	39.0	50.0		
M80842-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.0	114.0	12.5	54.0	60.0		
M80842-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	122.5	12.5	45.0	60.0		
M80842-32-32	51	- 32	2"	2" - 11	42.0	155.0	16.1	66.0	70.0		

FITTINGS 228

BS STANDARD CONNECTIONS



M80892

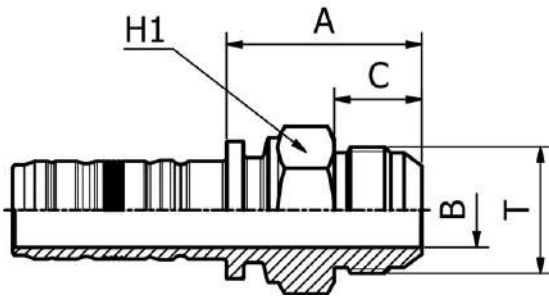
90° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M80892-12-12	19	- 12	3/4"	3/4" - 14	14.5	73.5	8.5	60.0	32.0		
M80892-12-12050	19	- 12	3/4"	3/4" - 14	14.5	67.5	8.5	50.0	32.0		
M80892-12-16	19	- 12	3/4"	1" - 11	19.5	73.5	10.6	62.0	41.0		
M80892-16-12	25	- 16	1"	3/4" - 14	15.0	90.0	8.5	70.0	32.0		
M80892-16-16	25	- 16	1"	1" - 11	19.5	83.0	10.6	76.0	41.0		
M80892-16-16058	25	- 16	1"	1" - 11	19.5	74.5	10.6	58.5	41.0		
M80892-16-20	25	- 16	1"	1.1/4" - 11	26.1	96.0	10.5	78.5	50.0		
M80892-20-16	31	- 20	1.1/4"	1" - 11	19.5	90.0	10.6	76.0	41.0		
M80892-20-20	31	- 20	1.1/4"	1.1/4" - 11	26.0	88.0	10.5	83.5	50.0		
M80892-20-24	31	- 20	1.1/4"	1.1/2" - 11	32.0	88.0	12.5	92.0	60.0		
M80892-24-24	38	- 24	1.1/2"	1.1/2" - 11	32.0	103.0	12.5	98.5	60.0		
M80892-32-32	51	- 32	2"	2" - 11	42.0	135.9	16.1	140.5	70.0		

SAE STANDARD CONNECTIONS

M72510

JIC
MALE 37° CONE
 SAE J516 / ISO 12151-5

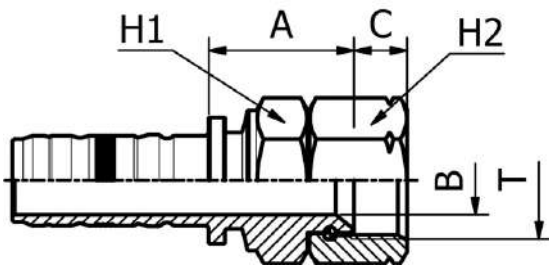


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M72510-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	44.5	22.0	30.0			
M72510-16-16	25	- 16	1"	1.5/16" - 12	19.5	51.5	23.0	38.0			
M72510-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	56.0	24.3	46.0			
M72510-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	60.0	27.5	50.0			
M72510-32-32	51	- 32	2"	2.1/2" - 12	42.0	75.5	34.0	65.0			

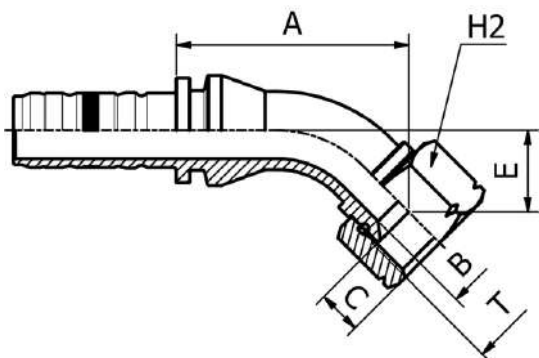
SAE STANDARD CONNECTIONS

M82712

JIC
FEMALE 37° CONE SEAT DOUBLE HEXAGON
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M82712-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	36.5	14.2	32.0	32.0		
M82712-12-16	19	- 12	3/4"	1.5/16" - 12	19.5	36.5	15.2	32.0	41.0		
M82712-16-16	25	- 16	1"	1.5/16" - 12	19.5	41.5	15.2	41.0	41.0		
M82712-16-20	25	- 16	1"	1.5/8" - 12	26.1	46.5	16.2	41.0	50.0		
M82712-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.1	51.5	16.2	50.0	50.0		
M82712-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	54.5	18.8	55.0	60.0		
M82712-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	54.5	18.8	55.0	60.0		
M82712-32-32	51	- 32	2"	2.1/2" - 12	42.0	56.0	24.0	65.0	75.0		



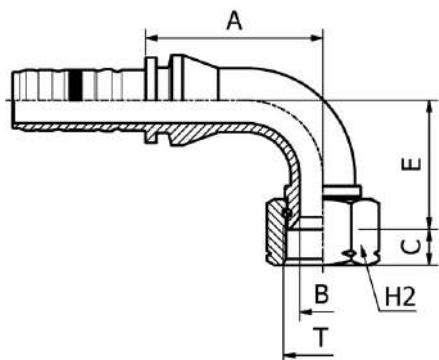
SAE STANDARD CONNECTIONS

M82542

**45° JIC
FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M82542-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	75.0	14.2	22.5	32.0		
M82542-16-16	25	- 16	1"	1.5/16" - 12	19.5	81.5	15.2	26.0	41.0		
M82542-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	101.0	16.2	41.5	50.0		
M82542-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	121.5	18.8	48.5	60.0		
M82542-32-32	51	- 32	2"	2.1/2" - 12	42.0	162.0	24.0	63.5	75.0		

FITTINGS 230



SAE STANDARD CONNECTIONS

M82592

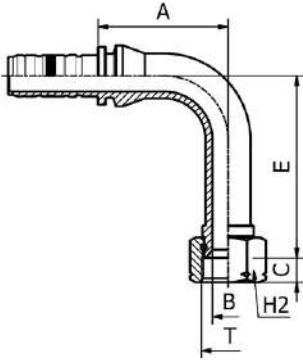
**90° JIC
FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M82592-12-16	19	- 12	3/4"	1.5/16" - 12	19.8	73.5	15.2	57.5	41.0		
M82592-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	67.5	14.2	47.5	32.0		
M82592-16-12	25	- 16	1"	1.1/16" - 12	14.5	76.5	14.2	47.5	32.0		
M82592-16-16	25	- 16	1"	1.5/16" - 12	19.5	74.5	15.2	55.5	41.0		
M82592-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	88.0	16.2	86.5	50.0		
M82592-20-24	31	- 20	1.1/4"	1.7/8" - 12	32.0	88.0	18.8	90.5	60.0		
M82592-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	105.0	18.8	101.0	60.0		
M82592-32-32	51	- 32	2"	2.1/2" - 12	42.0	145.0	24.0	139.0	75.0		

SAE STANDARD CONNECTIONS

M84792

90° JIC
FEMALE LONG DROP ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5

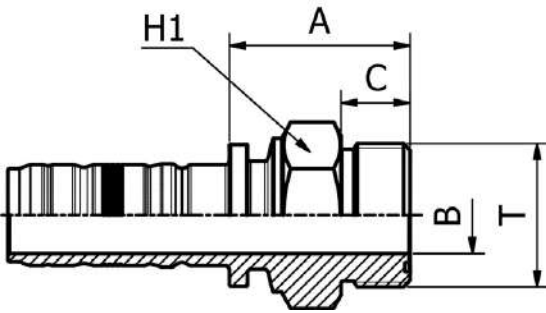


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
M84792-12-12	19	- 12	3/4"	1.1/16" - 12	14.5	73.5	14.2	94.5	32.0		
M84792-16-16	25	- 16	1"	1.5/16" - 12	19.5	81.0	15.2	114.0	41.0		
M84792-20-20	31	- 20	1.1/4"	1.5/8" - 12	26.0	88.0	16.2	129.0	50.0		
M84792-24-24	38	- 24	1.1/2"	1.7/8" - 12	32.1	105.0	18.8	141.0	60.0		
M84792-32-32	38	- 24	1.1/2"	2.1/2" - 12	42.0	145.0	24.0	222.0	75.0		

SAE STANDARD CONNECTIONS

M72410

ORFS
MALE
SAE J516 / ISO 12151-1

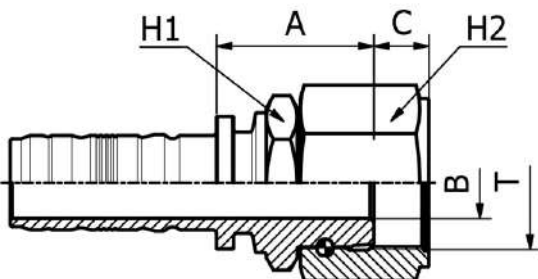


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	H1		
M72410-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	41.0	17.0	32.0		
M72410-16-16	25	- 16	1"	1.7/16" - 12	19.5	46.0	17.5	41.0		
M72410-20-20	31	- 20	1.1/4"	1.11/16" - 12	26.0	50.5	17.5	46.0		
M72410-24-24	38	- 24	1.1/2"	2" - 12	32.0	53.0	17.5	55.0		

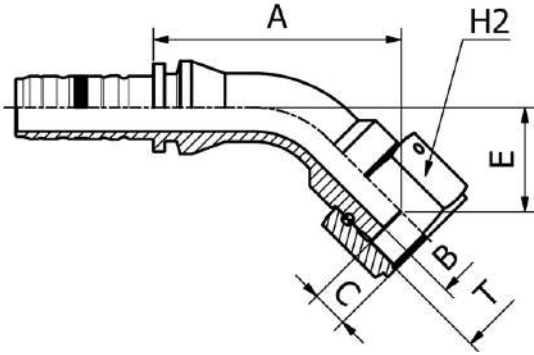
SAE STANDARD CONNECTIONS

M82412

ORFS
FEMALE
SAE J516/ISO 12151.1



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1	H2		
M82412-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	38.0	14.1	32.0	36.0		
M82412-12-16	19	- 12	3/4"	1.7/16" - 12	19.5	42.0	15.0	41.0	46.0		
M82412-16-16	25	- 16	1"	1.7/16" - 12	19.5	43.0	15.0	41.0	46.0		
M82412-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	52.5	15.1	50.0	55.0		
M82412-24-24	38	- 24	1.1/2"	2" - 12	30.5	55.0	15.0	60.0	60.0		



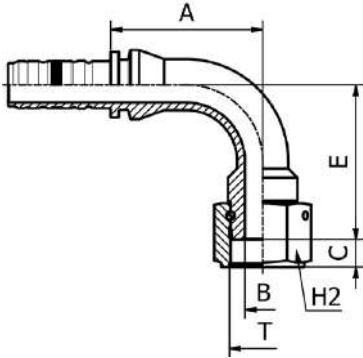
SAE STANDARD CONNECTIONS

M82442

45° ORFS
FEMALE SWEPT ELBOW SAE
J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M82442-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	90.0	14.1	36.0	36.0		
M82442-12-16	19	- 12	3/4"	1.7/16" - 12	19.5	90.5	15.0	36.5	46.0		
M82442-16-16	25	- 16	1"	1.7/16" - 12	19.5	101.0	15.0	42.5	46.0		
M82442-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	120.0	15.1	49.5	55.0		
M82442-24-24	38	- 24	1.1/2"	2" - 12	32.0	123.5	15.0	50.5	60.0		

FITTINGS 232

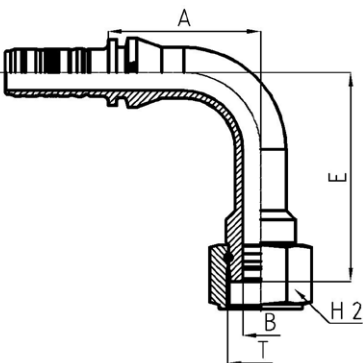


SAE STANDARD CONNECTIONS

M82492

90° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M82492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	73.5	14.1	70.5	36.0		
M82492-12-16	19	- 12	3/4"	1.7/16" - 12	19.5	86.0	15.0	71.0	46.0		
M82492-16-12	25	- 16	1"	1.3/16" - 12	14.5	89.5	14.1	70.5	36.0		
M82492-16-16	25	- 16	1"	1.7/16" - 12	19.5	83.0	15.0	84.5	46.0		
M82492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	99.0	15.1	98.0	55.0		
M82492-24-24	38	- 24	1.1/2"	2" - 12	32.0	105.0	15.0	104.0	60.0		



SAE STANDARD CONNECTIONS

M84492

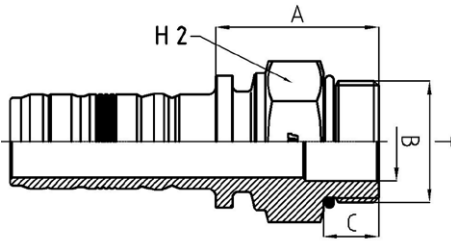
90° ORFS
FEMALE LONG DROP ELBOW
SAE J516 / ISO 12151-1
(THURST- WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	H2	
M84492-12-12	19	- 12	3/4"	1.3/16" - 12	14.5	73.5	14.1	96.0	36.0		
M84492-16-16	25	- 16	1"	1.7/16" - 12	19.5	83.0	15.0	114.0	46.0		
M84492-20-20	31	- 20	1.1/4"	1.11/16" - 12	25.0	99.0	15.1	129.0	55.0		

SAE STANDARD CONNECTIONS

M73010

SAE
MALE O-RING BOSS TYPE
SAE J516 / ISO 11926

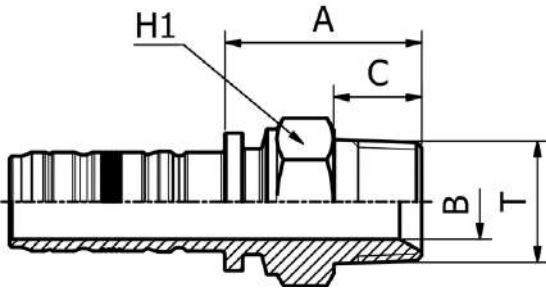


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M73010-12-12	19	- 12	3/4"	1.1/16" - 12	15.5	42.5	15.1	32.0			
M73010-16-16	25	- 16	1"	1.5/16" - 12	21.5	44.5	15.1	38.0			
M73010-20-20	31	- 20	1.1/4"	1.5/8" - 12	27.5	47.5	15.1	46.0			

SAE STANDARD CONNECTIONS

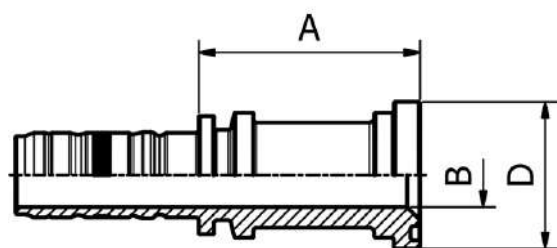
M72810

NPTF
MALE 60° CONE SEAT
SAE J516/J514



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
M72810-12-12	19	- 12	3/4"	3/4" - 14	16.0	41.5	19.2	30.0			
M72810-16-16	25	- 16	1"	1" - 11,5	19.5	52.0	24.2	38.0			
M72810-20-20	31	- 20	1.1/4"	1.1/4" - 11,5	25.0	61.5	25.0	46.0			
M72810-24-24	38	- 24	1.1/2"	1.1/2" - 11,5	30.5	60.5	26.0	50.0			
M72810-32-32	51	- 32	2"	2" - 11,5	41.0	67.5	26.5	65.0			
M72810-48-48	76	- 48	3"	3" - 8	62.5	121.5	51.5	100.0			

SAE STANDARD CONNECTIONS

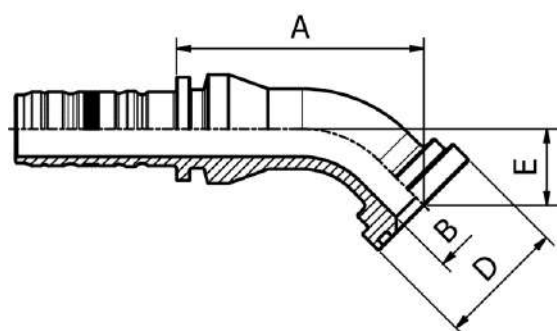


M83311

ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D				
M83311-12-12	19	- 12	3/4"	3/4"		14.5	66.5	38.0				
M83311-12-16	19	- 12	3/4"	1"		19.5	52.5	44.6				
M83311-16-12	25	- 16	1"	3/4"		14.5	67.5	38.0				
M83311-16-16	25	- 16	1"	1"		19.5	67.5	44.6				
M83311-16-20	25	- 16	1"	1.1/4"		26.0	53.5	51.0				
M83311-20-16	31	- 20	1.1/4"	1"		19.5	69.0	44.6				
M83311-20-20	31	- 20	1.1/4"	1.1/4"		26.0	75.0	51.0				
M83311-20-24	31	- 20	1.1/4"	1.1/2"		32.0	60.0	60.5				
M83311-24-24	38	- 24	1.1/2"	1.1/2"		32.0	78.5	60.5				
M83311-24-32	38	- 24	1.1/2"	2"		42.0	60.5	71.6				
M83311-32-32	51	- 32	2"	2"		42.0	82.5	71.6				
M83311-40-40	63	- 40	2.1/2"	2.1/2"		51.5	93.0	84.3				
M83311-48-48	76	- 48	3"	3"		62.5	88.5	101.6				
M83311-56-56	89	- 56	3.1/2"	3.1/2"		76.0	98.5	114.3				
M83311-64-64	102	- 64	4"	4"		89.0	105.0	127.0				

FITTINGS 234



SAE STANDARD CONNECTIONS

M83341

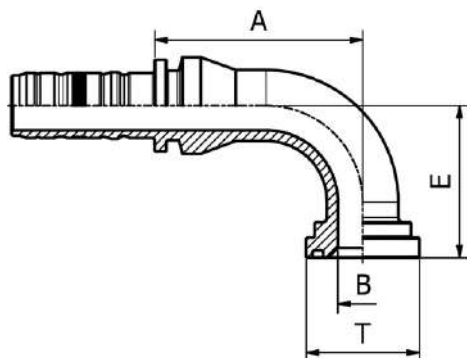
45° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D	E				
M83341-12-12	19	- 12	3/4"	3/4"		16.0	78.0	38.0	24.5				
M83341-12-16	19	- 12	3/4"	1"		19.5	78.0	44.6	24.5				
M83341-16-12	25	- 16	1"	3/4"		16.0	90.5	38.0	24.5				
M83341-16-16	25	- 16	1"	1"		19.5	86.5	44.6	26.5				
M83341-16-20	25	- 16	1"	1.1/4"		26.0	92.0	51.0	32.0				
M83341-20-16	31	- 20	1.1/4"	1"		19.5	90.5	44.6	26.5				
M83341-20-20	31	- 20	1.1/4"	1.1/4"		26.0	87.5	51.0	29.0				
M83341-20-24	31	- 20	1.1/4"	1.1/2"		32.0	88.5	60.5	30.0				
M83341-24-24	38	- 24	1.1/2"	1.1/2"		32.0	102.5	60.5	38.0				
M83341-24-32	38	- 24	1.1/2"	2"		42.0	102.5	71.6	38.0				
M83341-32-32	51	- 32	2"	2"		42.0	143.5	71.6	52.0				
M83341-40-40	63	- 40	2.1/2"	2.1/2"		49.2	131.0	84.3	44.5				
M83341-48-48	76	- 48	3"	3"		59.0	147.0	101.6	53.0				

SAE STANDARD CONNECTIONS

M83391

90° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3



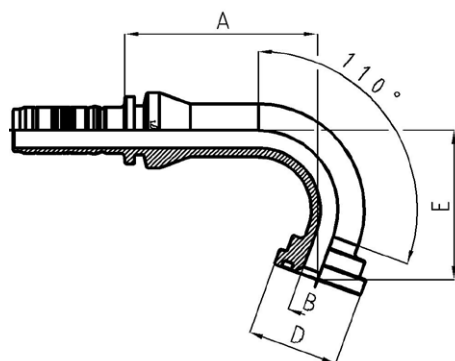
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M83391-12-12	19	- 12	3/4"	3/4"		16.0	72.5	38.0	58.0			
M83391-12-16	19	- 12	3/4"	1"		19.5	72.5	44.6	70.0			
M83391-12-16054	19	- 12	3/4"	1"		19.5	72.5	44.6	54.0			
M83391-16-12	25	- 16	1"	3/4"		16.0	85.0	38.0	58.0			
M83391-16-16	25	- 16	1"	1"		19.5	82.0	44.6	60.0			
M83391-16-20	25	- 16	1"	1.1/4"		26.0	82.0	51.0	68.0			
M83391-20-24	31	- 20	1.1/4"	1.1/2"		32.0	85.0	60.5	69.0			
M83391-20-16	31	- 20	1.1/4"	1"		19.5	86.0	44.6	60.0			
M83391-20-20	31	- 20	1.1/4"	1.1/4"		26.0	85.0	51.0	67.0			
M83391-24-24	38	- 24	1.1/2"	1.1/2"		32.0	96.5	60.5	81.0			
M83391-24-32	38	- 24	1.1/2"	2"		42.0	101.5	71.6	84.0			
M83391-32-32	51	- 32	2"	2"		42.0	135.5	71.6	120.0			
M83391-40-40	63	- 40	2.1/2"	2.1/2"		49.2	128.0	84.3	118.0			
M83391-48-48	76	- 48	3"	3"		59.0	144.5	101.6	140.0			
M83391-56-56	89	- 56	3.1/2"	3.1/2"		73.7	164.0	114.3	160.0			

235 FITTINGS

SAE STANDARD CONNECTIONS

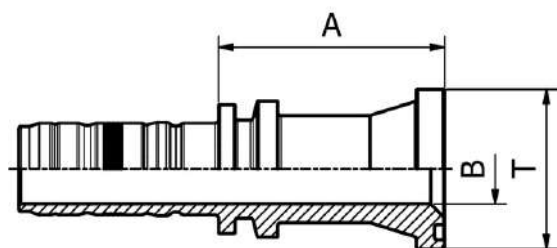
M83301...P

110° ISO / SAE
CODE 61 FLANGE



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M83301-12-12P	19	- 12	3/4"	3/4"		16.0	80.0	38.0	62.0			
M83301-16-16P	25	- 16	1"	1"		19.5	91.5	44.6	79.0			
M83301-20-20P	31	- 20	1.1/4"	1.1/4"		26.0	121.5	51.0	91.0			
M83301-24-24P	38	- 24	1.1/2"	1.1/2"		32.0	124.8	60.5	109.0			
M83301-32-32P	51	- 32	2"	2"		42.0	146.5	71.6	140.0			

SAE STANDARD CONNECTIONS



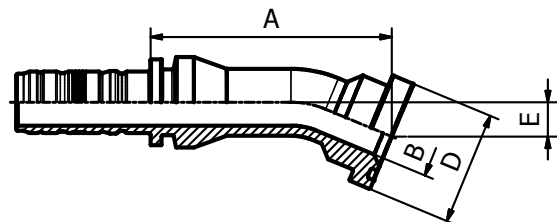
M83611

ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D					
M83611-10-12	16	- 10	5/8"	3/4"	16.0	52.5	41.1					
M83611-12-12	19	- 12	3/4"	3/4"	14.5	53.5	41.4					
M83611-12-16	19	- 12	3/4"	1"	19.5	59.5	47.7					
M83611-16-12	25	- 16	1"	3/4"	16.0	62.5	41.4					
M83611-16-16	25	- 16	1"	1"	19.5	63.5	47.7					
M83611-16-20	25	- 16	1"	1.1/4"	26.0	70.0	54.2					
M83611-20-16	31	- 20	1.1/4"	1"	19.5	62.0	47.7					
M83611-20-20	31	- 20	1.1/4"	1.1/4"	26.0	66.0	54.2					
M83611-20-24	31	- 20	1.1/4"	1.1/2"	32.0	74.5	63.7					
M83611-24-24	38	- 24	1.1/2"	1.1/2"	32.0	74.5	63.7					
M83611-24-32	38	- 24	1.1/2"	2"	42.0	88.5	79.6					
M83611-24-20	38	- 24	1.1/2"	1.1/4"	26.0	66.5	54.2					
M83611-32-24	51	- 32	2"	1.1/2"	32.0	91.5	63.7					

FITTINGS 236

SAE STANDARD CONNECTIONS



M83621

22.5° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

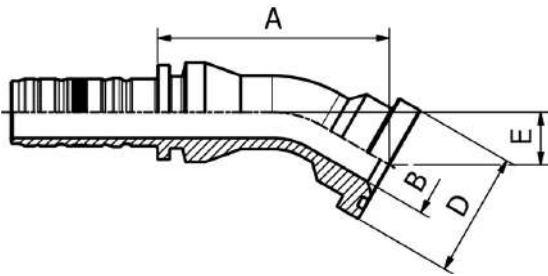
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch	inch	B	A	D	E				
M83621-12-12	19	-12	3/4"	3/4"	16.0	89.5	41.4	12.0				
M83621-16-16	25	-16	1"	1"	19.5	101.0	47.7	14.5				
M83621-20-20	31	-20	1.1/4"	1.1/4"	26.0	107.0	54.2	17.0				
M83621-24-24	38	-24	1.1/2"	1.1/2"	32.0	122.0	63.7	19.5				
M83621-32-32	51	-32	2"	2"	42.0	164.0	79.5	25.0				

SAE STANDARD CONNECTIONS

M83631

30° ISO / SAE
CODE 62 FLANGE

SAE J516 / ISO 12151-3



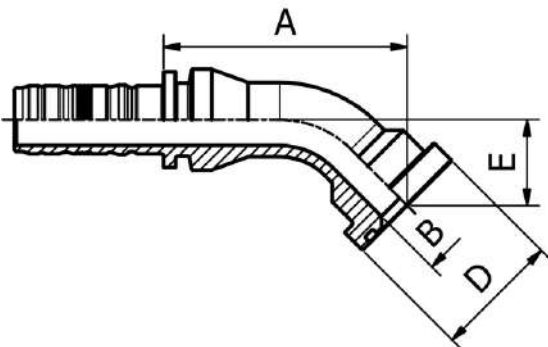
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D	E				
M83631-12-12	19	- 12	3/4"	3/4"	16.0	78.5	41.4	17.5					
M83631-16-16	25	- 16	1"	1"	19.5	89.0	47.7	20.0					
M83631-20-20	31	- 20	1.1/4"	1.1/4"	26.0	90.5	54.2	22.5					
M83631-24-24	38	- 24	1.1/2"	1.1/2"	32.0	104.5	63.7	27.0					

SAE STANDARD CONNECTIONS

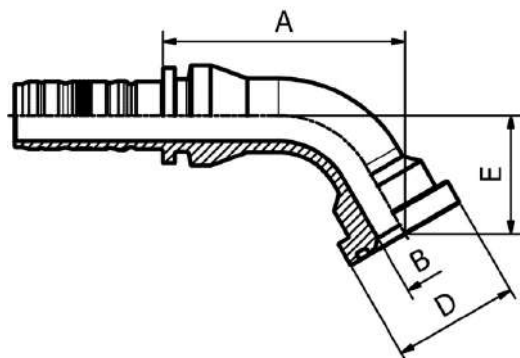
M83641

45° ISO / SAE
CODE 62 FLANGE

SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D	E				
M83641-12-12	19	- 12	3/4"	3/4"	16.0	81.5	41.4	28.0					
M83641-12-16	19	- 12	3/4"	1"	19.5	85.5	47.7	32.5					
M83641-16-12	25	- 16	1"	3/4"	16.0	87.5	41.4	28.0					
M83641-16-16	25	- 16	1"	1"	19.5	92.0	47.7	32.5					
M83641-16-20	25	- 16	1"	1.1/4"	26.0	97.0	54.2	37.0					
M83641-20-16	31	- 20	1.1/4"	1"	19.5	95.5	47.7	31.5					
M83641-20-20	31	- 20	1.1/4"	1.1/4"	26.0	96.5	54.2	38.0					
M83641-20-24	31	- 20	1.1/4"	1.1/2"	32.0	104.5	63.7	44.5					
M83641-24-20	38	- 24	1.1/2"	1.1/4"	26.0	110.5	54.2	38.0					
M83641-24-24	38	- 24	1.1/2"	1.1/2"	32.0	109.5	63.7	44.0					
M83641-24-32	38	- 24	1.1/2"	2"	42.0	121.5	79.6	56.0					
M83641-32-32	51	- 32	2"	2"	42.0	148.0	79.6	59.0					



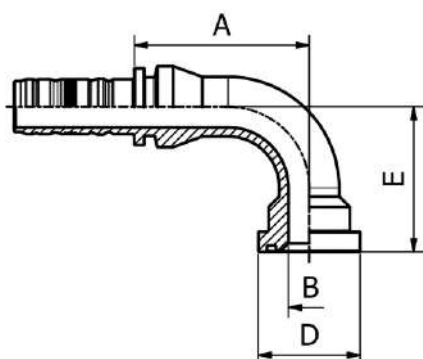
SAE STANDARD CONNECTIONS

M83661

60° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M83661-12-12	19	- 12	3/4"	3/4"		16.0	81.0	41.4	39.0			
M83661-12-16	19	- 12	3/4"	1"		19.5	84.0	47.7	44.0			
M83661-16-16	25	- 16	1"	1"		19.5	92.0	47.7	45.0			
M83661-20-20	31	- 20	1.1/4"	1.1/4"		26.0	97.5	54.2	55.0			
M83661-20-24	31	- 20	1.1/4"	1.1/2"		32.0	101.5	63.7	62.0			
M83661-24-24	38	- 24	1.1/2"	1.1/2"		32.0	110.5	63.7	61.5			
M83661-32-32	51	- 32	2"	2"		42.0	151.0	79.6	85.0			

FITTINGS 238



SAE STANDARD CONNECTIONS

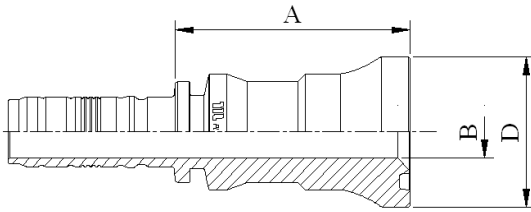
M83691

90° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E			
M83691-12-12	19	- 12	3/4"	3/4"		16.0	72.5	41.4	59.0			
M83691-12-16	19	- 12	3/4"	1"		19.5	72.6	47.7	65.0			
M83691-16-12	25	- 16	1"	3/4"		16.0	82.0	41.4	62.0			
M83691-16-16	25	- 16	1"	1"		19.5	82.0	47.7	68.0			
M83691-16-20	25	- 16	1"	1.1/4"		26.0	82.0	54.2	90.0			
M83691-16-20075	25	- 16	1"	1.1/4"		26.0	82.0	54.2	75.0			
M83691-20-16	31	- 20	1.1/4"	1"		19.5	86.0	47.7	68.0			
M83691-20-20	31	- 20	1.1/4"	1.1/4"		26.0	85.0	54.2	90.0			
M83691-20-24	31	- 20	1.1/4"	1.1/2"		32.0	85.0	63.7	104.0			
M83691-24-20	38	- 24	1.1/2"	1.1/4"		26.0	99.0	54.2	90.0			
M83691-24-24	38	- 24	1.1/2"	1.1/2"		32.0	98.0	63.7	104.0			
M83691-24-32	38	- 24	1.1/2"	2"		42.0	98.0	79.6	138.0			
M83691-32-32	51	- 32	2"	2"		42.0	136.0	79.6	138.0			

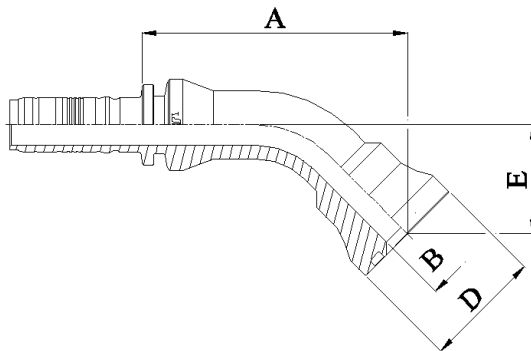
XTRAFRANGE

M88511



XTRAFRANGE/62
(SAE J518 -2/ ISO 6162-2
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D					
M88511-12-12	19	- 12	3/4"	3/4"	14.5	65.5	41.4						
M88511-16-16	25	- 16	1"	1"	19.5	69.0	47.7						
M88511-20-20	31	- 20	1.1/4"	1.1/4"	25.0	88.0	54.4						
M88511-24-24	38	- 24	1.1/2"	1.1/2"	30.5	102.0	63.7						
M88511-32-32	51	- 32	2"	2"	41.0	129.5	79.6						

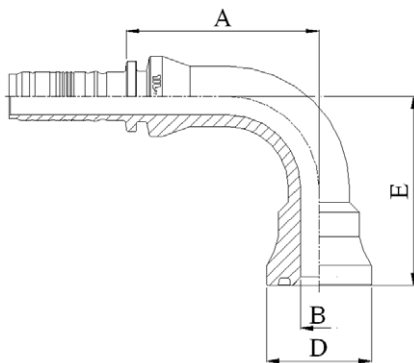


XTRAFRANGE

M88541

45° XTRAFRANGE/62
(SAE J518 -2/ ISO 6162-2
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D	E				
M88541-12-12	19	- 12	3/4"	3/4"	14.5	93.5	41.4	38.0					
M88541-16-16	25	- 16	1"	1"	19.5	103.5	47.7	45.0					
M88541-20-20	31	- 20	1.1/4"	1.1/4"	25.0	138.0	54.4	62.5					
M88541-24-24	38	- 24	1.1/2"	1.1/2"	30.5	155.0	63.7	71.5					
M88541-32-32	51	- 32	2"	2"	39.0	194.5	79.6	92.5					



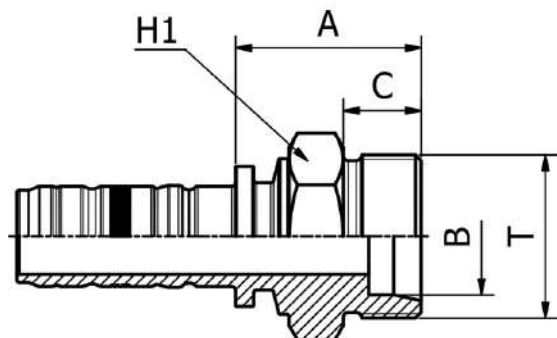
XTRAFRANGE

M88591

90° XTRAFRANGE/62
(SAE J518 -2/ ISO 6162-2
PORT COMPATIBLE)

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm								
	DN	Dash	inch		inch	B	A	D	E				
M88591-12-12	19	- 12	3/4"	3/4"	14.5	76.5	41.4	75.0					
M88591-16-16	25	- 16	1"	1"	19.5	84.5	47.7	90.0					
M88591-20-20	31	- 20	1.1/4"	1.1/4"	25.0	107.0	54.4	120.0					
M88591-24-24	38	- 24	1.1/2"	1.1/2"	30.5	122.0	63.7	140.0					
M88591-32-32	51	- 32	2"	2"	39.0	148.5	79.6	178.0					

DIN STANDARD CONNECTIONS



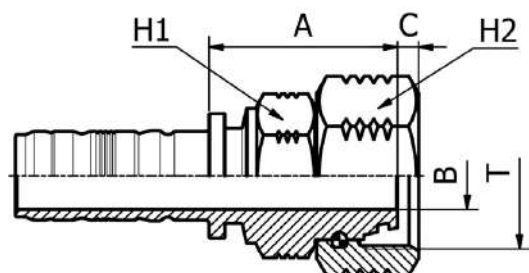
M71210

**METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	B	A	C	H1	
M71210-12-30	19	- 12	3/4"	M 30X2	20.0	14.5	39.5	16.0	32.0		
M71210-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	44.5	18.0	36.0		
M71210-16-36	25	- 16	1"	M 36X2	25.0	19.5	46.0	18.0	36.0		
M71210-16-42	25	- 16	1"	M 42X2	30.0	19.5	47.5	20.0	46.0		
M71210-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	55.0	22.0	55.0		
M71210-24-52	38	- 24	1.1/2"	M 52X2	38.0	30.5	55.5	22.0	55.0		

FITTINGS 240

DIN STANDARD CONNECTIONS



M81612

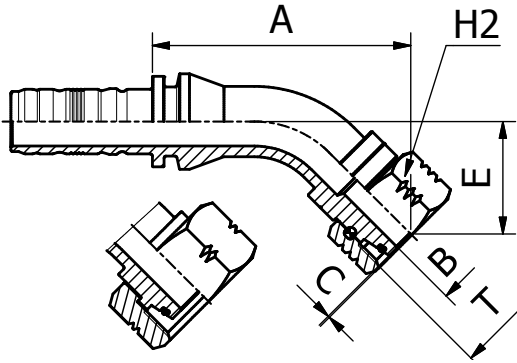
**METRIC
O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch			T	B	A	C	H1
M81612-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	49.5	3.2	32.0	36.0
M81612-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	52.0	4.1	36.0	41.0
M81612-12-42	19	- 12	3/4"	M 42X2	30.0	19.5	52.5	6.0	41.0	50.0
M81612-16-36	25	- 16	1"	M 36X2	25.0	16.0	56.0	4.1	41.0	41.0
M81612-16-42	25	- 16	1"	M 42X2	30.0	19.5	54.5	6.0	41.0	50.0
M81612-16-52	25	- 16	1"	M 52X2	38.0	25.0	56.0	8.8	50.0	60.0
M81612-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.5	56.0	6.1	46.0	50.0
M81612-20-52	31	- 20	1.1/4"	M 52X2	38.0	25.0	57.0	8.8	50.0	60.0
M81612-24-52	38	- 24	1.1/2"	M 52X2	38.0	26.1	58.0	8.8	55.0	60.0

DIN STANDARD CONNECTIONS

M81642/M81643

45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2



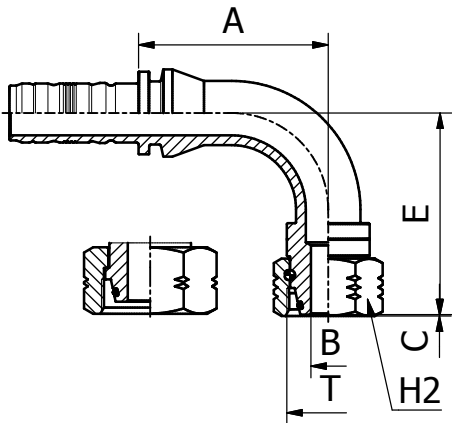
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M81642-10-24	16	- 10	5/8"	M24X1.5	16.0	9.3	70.0	4.0	29.5	30.0		
M81642-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	74.0	3.2	33.5	36.0		
M81643-10-36	16	- 10	5/8"	M 36X2	25.0	16.0	74.5	3.4	30.5	41.0		
M81642-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	80.0	3.2	35.0	36.0		
M81643-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	82.0	3.4	33.5	41.0		
M81642-16-36	25	- 16	1"	M 36X2	25.0	15.0	103.0	4.1	44.5	41.0		
M81643-16-42	25	- 16	1"	M 42X2	30.0	19.5	94.0	5.3	36.0	50.0		
M81642-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	117.5	6.0	44.0	50.0		
M81643-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	111.0	8.0	40.0	60.0		

241 FITTINGS

DIN STANDARD CONNECTIONS

M81692/M81693

90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2

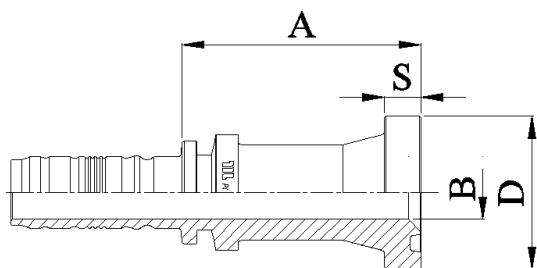


PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	H2		
M81692-10-24	16	- 10	5/8"	M24X1.5	16.0	9.3	57.0	4.0	58.5	30.0		
M81692-10-30	16	- 10	5/8"	M 30X2	20.0	12.0	57.0	3.2	64.0	36.0		
M81693-10-36	16	- 10	5/8"	M 36X2	25.0	16.0	60.5	3.4	60.0	41.0		
M81692-12-30	19	- 12	3/4"	M 30X2	20.0	12.5	64.5	3.2	68.5	36.0		
M81693-12-36	19	- 12	3/4"	M 36X2	25.0	14.5	68.0	3.4	67.5	41.0		
M81692-16-36	25	- 16	1"	M 36X2	25.0	15.0	83.0	4.1	87.5	41.0		
M81693-16-42	25	- 16	1"	M 42X2	30.0	19.5	82.5	5.3	75.5	50.0		
M81692-20-42	31	- 20	1.1/4"	M 42X2	30.0	19.1	102.0	6.0	90.0	50.0		
M81693-20-52	31	- 20	1.1/4"	M 52X2	38.0	26.1	101.0	8.0	86.5	60.0		

ORIGINAL EQUIPMENT CONNECTIONS

M83711

FLANGE PLUS
(SAE J518 -2 /ISO 6162-2 P
ORT COMPATIBLE)



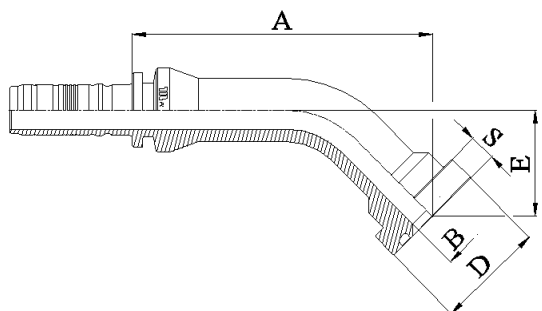
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	S	
M83711-12-12	19	- 12	3/4"	3/4"	14.5	65.0	41.4	10.0		
M83711-16-16	25	- 16	1"	1"	19.5	65.0	47.7	11.0		
M83711-20-20	31	- 20	1.1/4"	1.1/4"	25.0	81.0	54.2	12.0		

FITTINGS 242

ORIGINAL EQUIPMENT CONNECTIONS

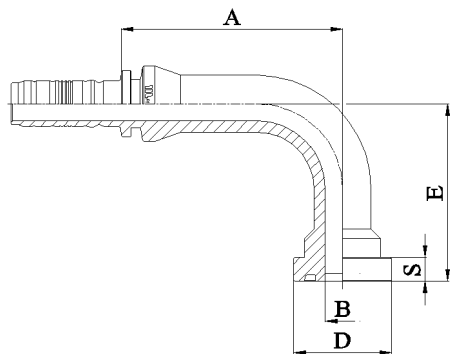
M83741

45° FLANGE PLUS
(SAE J518-2/ISO 6162-2
PORT COMPATIBLE)



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	S
M83741-12-12	19	- 12	3/4"	3/4"	14.5	114.0	41.4	40.0	10.0	
M83741-16-16	25	- 16	1"	1"	19.5	107.5	47.7	43.0	11.0	
M83741-20-20	31	- 20	1.1/4"	1.1/4"	25.0	133.5	54.2	50.0	12.0	

ORIGINAL EQUIPMENT CONNECTIONS

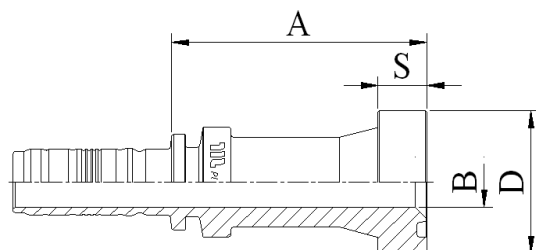


M83791

**90° FLANGE PLUS
(SAE J518 -2/ ISO 6162-2
PORT COMPATIBLE)**

PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E	S	
M83791-12-12	19	- 12	3/4"	3/4"		14.5	93.5	41.4	75.0	10.0		
M83791-16-16	25	- 16	1"	1"		19.5	91.0	47.7	90.0	11.0		
M83791-20-20	31	- 20	1.1/4"	1.1/4"		25.0	115.0	54.2	110.0	12.0		

ORIGINAL EQUIPMENT CONNECTIONS



M83911

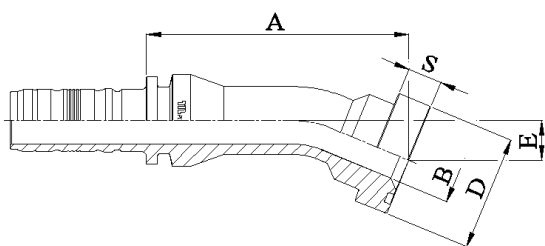
STRAIGHT SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D	S	
M83911-12-12	19	- 12	3/4"	3/4"		14.5	75.0	41.5	14.3		
M83911-12-16	19	- 12	3/4"	1"		19.5	80.5	47.7	14.3		
M83911-16-16	25	- 16	1"	1"		19.5	80.0	47.7	14.3		
M83911-16-20	25	- 16	1"	1.1/4"		26.0	84.0	54.0	14.3		
M83911-20-20	31	- 20	1.1/4"	1.1/4"		26.0	80.5	54.0	14.3		
M83911-20-24	31	- 20	1.1/4"	1.1/2"		32.0	84.0	63.6	14.3		
M83911-24-24	38	- 24	1.1/2"	1.1/2"		32.0	84.5	63.6	14.3		
M83911-24-32	38	- 24	1.1/2"	2"		42.0	107.5	79.3	14.3		
M83911-32-24	51	- 32	2"	1.1/2"		32.0	95.5	63.6	14.3		
M83911-32-32	51	- 32	2"	2"		42.0	110.5	79.3	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M83921

22,5° SUPERCAT SERIES FLANGE



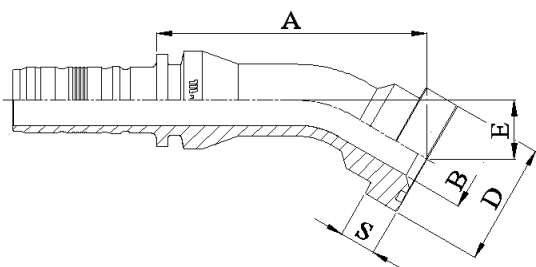
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E	S	
M83921-12-12	19	- 12	3/4"	3/4"		16.0	101.5	41.5	16.0	14.3		
M83921-12-16	19	- 12	3/4"	1"		19.5	98.0	47.7	16.5	14.3		
M83921-16-16	25	- 16	1"	1"		19.5	108.5	47.7	16.5	14.3		
M83921-16-20	25	- 16	1"	1.1/4"		26.0	113.0	54.0	18.5	14.3		
M83921-20-20	31	- 20	1.1/4"	1.1/4"		26.0	120.5	54.0	18.0	14.3		
M83921-20-24	31	- 20	1.1/4"	1.1/2"		32.0	119.0	63.7	21.0	14.3		
M83921-24-24	38	- 24	1.1/2"	1.1/2"		32.0	123.5	63.7	20.0	14.3		

FITTINGS 244

ORIGINAL EQUIPMENT CONNECTIONS

M83931

30° SUPERCAT SERIES FLANGE

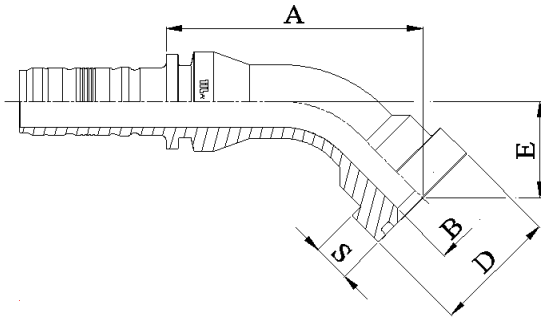


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch			inch	B	A	D	E	S	
M83931-12-12	19	- 12	3/4"	3/4"		16.0	99.0	41.5	22.0	14.3		
M83931-12-16	19	- 12	3/4"	1"		19.5	99.5	47.7	22.5	14.3		
M83931-16-16	25	- 16	1"	1"		19.5	106.0	47.7	23.0	14.3		
M83931-16-20	25	- 16	1"	1.1/4"		26.0	110.0	54.0	26.0	14.3		
M83931-20-20	31	- 20	1.1/4"	1.1/4"		26.0	117.5	54.0	25.0	14.3		
M83931-20-24	31	- 20	1.1/4"	1.1/2"		32.0	115.5	63.7	29.0	14.3		
M83931-24-24	38	- 24	1.1/2"	1.1/2"		32.0	120.5	63.7	28.0	14.3		
M83931-24-32	38	- 24	1.1/2"	2"		42.0	134.5	79.3	36.0	14.3		
M83931-32-32	51	- 32	2"	2"		42.0	163.5	79.3	37.5	14.3		

ORIGINAL EQUIPMENT CONNECTIONS

M83941

45° SUPERCAT SERIES FLANGE



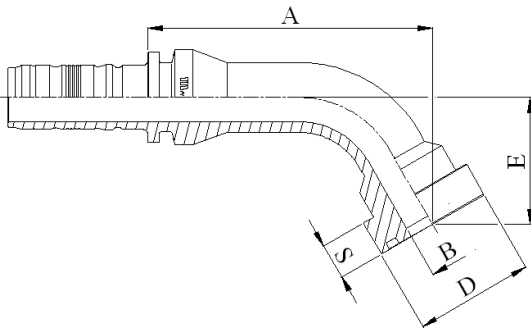
PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
M83941-12-12	19	- 12	3/4"	3/4"		16.0	91.5	41.5	34.5	14.3
M83941-12-16	19	- 12	3/4"	1"		19.5	92.0	47.7	35.5	14.3
M83941-16-16	25	- 16	1"	1"		19.5	98.0	47.7	36.5	14.3
M83941-16-20	25	- 16	1"	1.1/4"		26.0	101.0	54.0	40.5	14.3
M83941-20-20	31	- 20	1.1/4"	1.1/4"		26.0	109.0	54.0	40.0	14.3
M83941-20-24	31	- 20	1.1/4"	1.1/2"		32.0	106.0	63.7	46.0	14.3
M83941-24-24	38	- 24	1.1/2"	1.1/2"		32.0	111.0	63.7	45.5	14.3
M83941-24-32	38	- 24	1.1/2"	2"		42.0	122.0	79.3	56.5	14.3
M83941-32-32	51	- 32	2"	2"		42.0	150.5	79.3	61.5	14.3

245 FITTINGS

ORIGINAL EQUIPMENT CONNECTIONS

M83961

60° SUPERCAT SERIES FLANGE

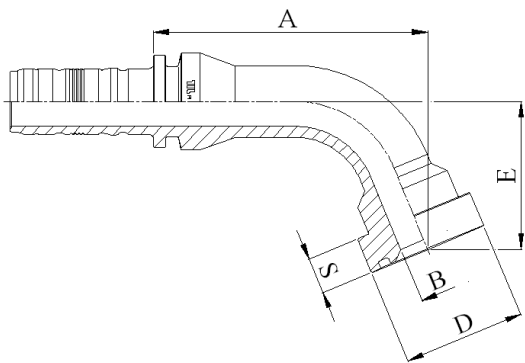


PART. REF.	HOSE BORE			Flange	Flange	DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
M83961-12-12	19	- 12	3/4"	3/4"		16.0	106.5	41.5	47.0	14.3
M83961-12-16	19	- 12	3/4"	1"		19.5	107.0	47.7	48.0	14.3
M83961-16-16	25	- 16	1"	1"		19.5	114.0	47.7	51.0	14.3
M83961-16-16055	25	- 16	1"	1"		19.5	100.0	47.7	55.0	14.3
M83961-16-20	25	- 16	1"	1.1/4"		26.0	116.5	54.0	54.0	14.3
M83961-20-20	31	- 20	1.1/4"	1.1/4"		26.0	130.0	54.0	54.5	14.3
M83961-20-24	31	- 20	1.1/4"	1.1/2"		32.0	126.0	63.7	63.5	14.3
M83961-24-24	38	- 24	1.1/2"	1.1/2"		32.0	140.0	63.7	63.0	14.3
M83961-32-32	51	- 32	2"	2"		42.0	194.0	79.3	86.5	14.3
M83961-32-32150	51	- 32	2"	2"		42.0	198.0	79.3	150.0	14.3

ORIGINAL EQUIPMENT CONNECTIONS

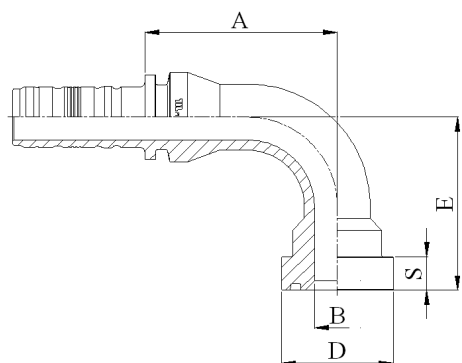
M83971

67,5° SUPERCAT SERIES FLANGE



PART. REF.	HOSE BORE			Flange		DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
M83971-12-12	19	- 12	3/4"	3/4"		16.0	100.0	41.5	53.0	14.3
M83971-12-16	19	- 12	3/4"	1"		19.5	100.5	47.7	54.0	14.3
M83971-16-16	25	- 16	1"	1"		19.5	107.0	47.7	58.0	14.3
M83971-16-20	25	- 16	1"	1.1/4"		26.0	109.0	54.0	62.0	14.3
M83971-20-20	31	- 20	1.1/4"	1.1/4"		26.0	123.0	54.0	62.0	14.3
M83971-20-24	31	- 20	1.1/4"	1.1/2"		32.0	117.5	63.7	71.5	14.3
M83971-24-24	38	- 24	1.1/2"	1.1/2"		32.0	131.0	63.7	72.0	14.3
M83971-32-32	51	- 32	2"	2"		42.0	181.5	79.3	99.0	14.3

FITTINGS 246



ORIGINAL EQUIPMENT CONNECTIONS

M83991

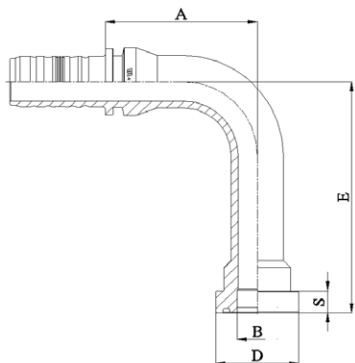
90° SUPERCAT SERIES FLANGE

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm				
	DN	Dash	inch			inch	B	A	D	E
M83991-12-12	19	- 12	3/4"	3/4"		16.0	76.0	41.5	68.5	14.3
M83991-12-16	19	- 12	3/4"	1"		19.5	76.0	47.7	69.5	14.3
M83991-16-16	25	- 16	1"	1"		19.5	82.0	47.7	73.5	14.3
M83991-16-20	25	- 16	1"	1.1/4"		26.0	82.0	54.0	78.5	14.3
M83991-20-20	31	- 20	1.1/4"	1.1/4"		26.0	94.0	54.0	82.0	14.3
M83991-20-24	31	- 20	1.1/4"	1.1/2"		32.0	85.0	63.7	92.0	14.3
M83991-24-24	38	- 24	1.1/2"	1.1/2"		32.0	98.0	63.7	96.0	14.3
M83991-24-32	38	- 24	1.1/2"	2"		42.0	98.0	79.3	112.0	14.3
M83991-32-32	51	- 32	2"	2"		42.0	136.0	79.3	133.5	14.3

ORIGINAL EQUIPMENT CONNECTIONS

M83991 LONG DROP

90° LONG DROP SUPERCAT SERIES FLANGE



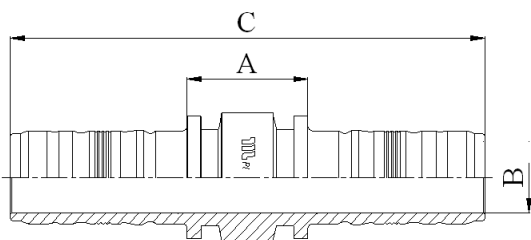
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	S	
M83991-16-16132	25	- 16	1"	1"	19.5	86.0	47.7	132.0	14.3		
M83991-16-16150	25	- 16	1"	1"	19.5	86.0	47.7	150.0	14.3		
M83991-16-20150	25	- 16	1"	1.1/4"	26.0	82.0	54.0	150.0	14.3		
M83991-20-20092	31	- 20	1.1/4"	1.1/4"	26.1	99.0	54.0	92.0	14.3		
M83991-20-20150	31	- 20	1.1/4"	1.1/4"	26.1	99.0	54.0	150.0	14.3		
M83991-20-24135	31	- 20	1.1/4"	1.1/2"	32.0	98.5	63.7	135.0	14.3		
M83991-24-24106	38	- 24	1.1/2"	1.1/2"	32.0	112.5	63.7	106.0	14.3		

247 FITTINGS

DOUBLE CONNECTOR

M70050

DOUBLE CONNECTOR

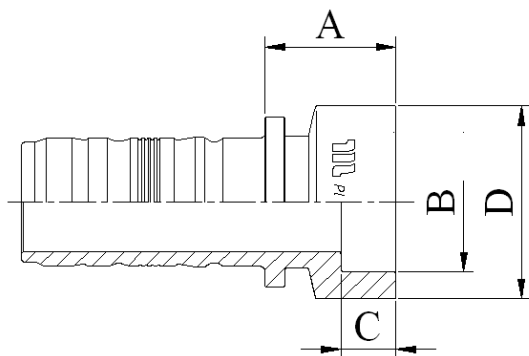


PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	B	A	C					
M70050-20-20	31	- 20	1.1/4"	25.0	42.5	166.2					
M70050-24-24	38	- 24	1.1/2"	30.5	43.0	178.9					
M70050-32-32	51	- 32	2"	41.0	45.5	220.8					

TAIL

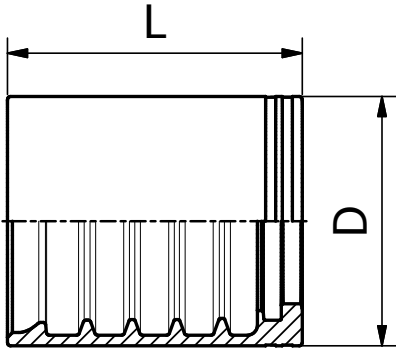
M89510WL

WELDING TAIL



PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	B	A	C	D				
M89510-12-22WL	19	- 12	3/4"	22.1	28.5	12.0	34.0				
M89510-16-28WL	25	- 16	1"	28.1	32.5	14.0	40.0				
M89510-20-35WL	31	- 20	1.1/4"	35.1	33.0	14.0	49.0				

FERRULE



M05500-GX

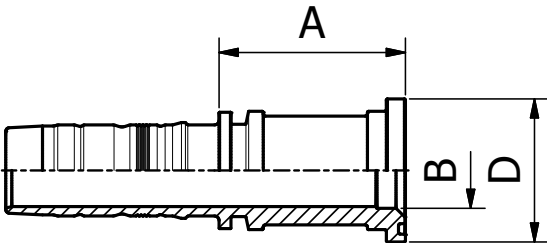
**NO-SKIVE FERRULE FOR
HEAVY DUTY SPIRAL HOSES
(4-6 PLY)**

PART. REF.	HOSE BORE					DIMENSIONS mm					
	DN	Dash	inch			D	L				
M05500-24GX	38	- 24	1.1/2"			75.0	88.5				
M05500-32GX	51	- 32	2"			98.0	120.3				

FITTINGS 248

SAE STANDARD CONNECTIONS

M83611-GX

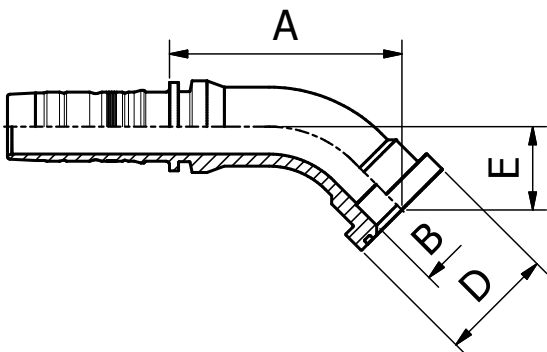


**ISO/SAE CODE 62 FLANGE
(ISO 6162-2 / SAE J518 CODE 62)**

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D		
M83611-24-24GX	38	- 24	1.1/2"	1.1/2"		32.0	79.0	63.7			
M83611-24-32GX	38	- 24	1.1/2"	2"		42.0	95.0	79.6			
M83611-32-32GX	51	- 32	2"	2"		42.0	98.5	79.6			

SAE STANDARD CONNECTIONS

M83641-GX



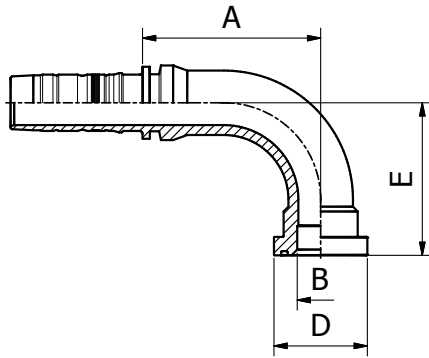
**45° ISO/SAE CODE 62 FLANGE
(ISO 6162-2 / SAE J518 CODE 62)**

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm					
	DN	Dash	inch			inch	B	A	D	E	
M83641-24-24GX	38	- 24	1.1/2"	1.1/2"		32.0	129.0	63.7	46.5		
M83641-24-32GX	38	- 24	1.1/2"	2"		32.0	138.0	79.6	57.5		
M83641-32-32GX	51	- 32	2"	2"		42.0	149.0	79.6	59.0		

SAE STANDARD CONNECTIONS

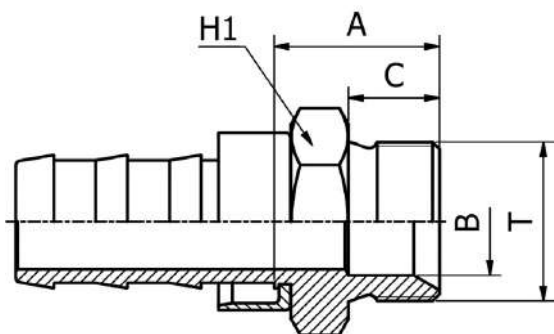
M83691-GX

**90° ISO/SAE CODE 62 FLANGE
(ISO 6162-2 / SAE J518 CODE 62)**



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E			
M83691-24-24GX	38	- 24	1.1/2"	1.1/2"	32.0	121.5	63.7	104.5			
M83691-32-32GX	51	- 32	2"	2"	42.0	136.5	79.6	138.0			

BS STANDARD CONNECTIONS



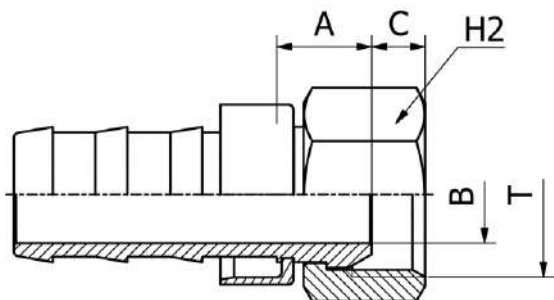
L10510

**BSP
MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H1			
L10510-04-04	6	- 4	1/4"	1/4" - 19	5.0	20.5	11.0	19.0			
L10510-04-06	6	- 4	1/4"	3/8" - 19	8.0	22.5	12.0	22.0			
L10510-06-06	10	- 6	3/8"	3/8" - 19	8.0	23.0	12.0	22.0			
L10510-08-08	12	- 8	1/2"	1/2" - 14	11.0	27.0	14.0	27.0			
L10510-10-10	16	- 10	5/8"	5/8" - 14	14.5	28.5	16.0	30.0			
L10510-12-12	19	- 12	3/4"	3/4" - 14	17.0	30.5	16.0	32.0			
L10510-16-16	25	- 16	1"	1" - 11	22.5	34.5	19.0	41.0			

FITTINGS 250

BS STANDARD CONNECTIONS

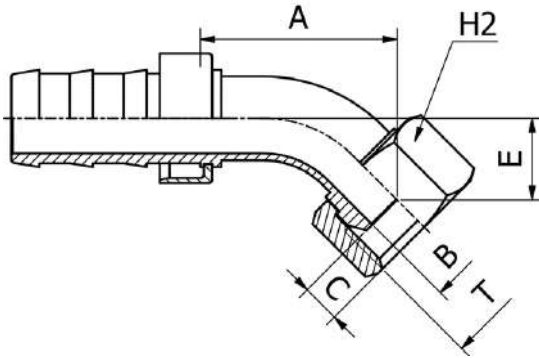


L20513

**BSP
FEMALE 60° CONE
BS5200 / ISO 12151-6
(SLIP-ON NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	H2			
L20513-04-04	6	- 4	1/4"	1/4" - 19	4.0	12.5	5.8	19.0			
L20513-04-06	6	- 4	1/4"	3/8" - 19	7.0	14.6	6.2	22.0			
L20513-06-06	10	- 6	3/8"	3/8" - 19	7.0	15.0	6.2	22.0			
L20513-08-08	12	- 8	1/2"	1/2" - 14	9.5	16.5	6.5	27.0			
L20513-10-10	16	- 10	5/8"	5/8" - 14	12.0	16.0	9.0	28.0			
L20513-12-12	19	- 12	3/4"	3/4" - 14	16.0	18.0	9.0	32.0			
L20513-12-16	19	- 12	3/4"	1" - 11	19.0	19.5	11.0	38.0			
L20513-16-16	25	- 16	1"	1" - 11	19.0	19.5	11.0	38.0			

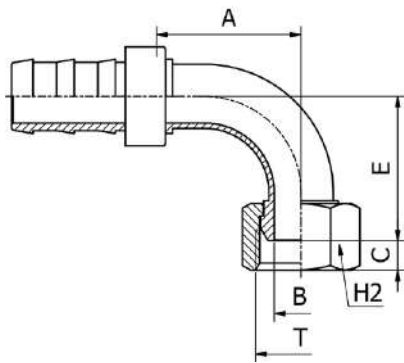
BS STANDARD CONNECTIONS



L20543

**45° BSP
FEMALE SWEPT ELBOW 60° CONE
BS5200/ISO 12151-6
(SLIP-ON NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
L20543-04-04	6	- 4	1/4"	1/4" - 19	4.0	31.0	5.8	12.0	19.0		
L20543-06-06	10	- 6	3/8"	3/8" - 19	7.0	38.5	6.2	14.5	22.0		
L20543-08-08	12	- 8	1/2"	1/2" - 14	9.5	44.0	6.5	18.5	27.0		
L20543-10-10	16	- 10	5/8"	5/8" - 14	12.0	50.5	9.0	19.0	28.0		
L20543-12-12	19	- 12	3/4"	3/4" - 14	16.0	53.0	9.0	21.0	32.0		
L20543-16-16	25	- 16	1"	1" - 11	19.0	56.0	11.0	23.5	38.0		

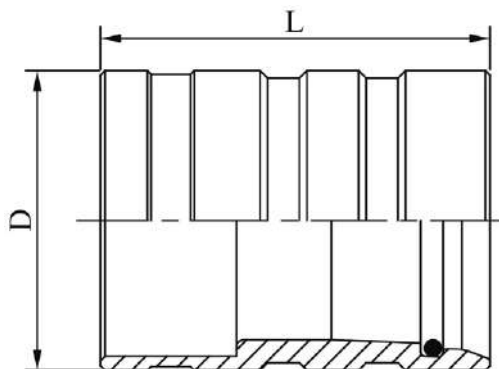


BS STANDARD CONNECTIONS

L20593

**90° BSP
FEMALE SWEPT ELBOW 60° CONE
BS5200/ISO 12151-6
(SLIP-ON NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	H2		
L20593-04-04	6	- 4	1/4"	1/4" - 19	4.0	26.0	5.8	24.0	19.0		
L20593-06-06	10	- 6	3/8"	3/8" - 19	7.0	35.0	6.2	30.5	22.0		
L20593-08-08	12	- 8	1/2"	1/2" - 14	9.5	38.0	6.5	38.5	27.0		
L20593-10-10	16	- 10	5/8"	5/8" - 14	12.0	45.5	9.0	41.0	28.0		
L20593-12-16	19	- 12	3/4"	1" - 11	19.0	48.5	11.0	48.5	38.0		
L20593-12-12	19	- 12	3/4"	3/4" - 14	16.0	48.5	9.0	46.5	32.0		
L20593-16-16	25	- 16	1"	1" - 11	19.0	54.0	11.0	54.0	38.0		



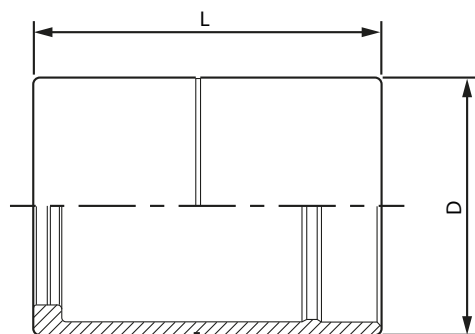
ACCESSORIES

0820

ANTI-KINK SLEEVE

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
O82040-12	19	- 12	3/4"			45.0	67.0				
O82040-16	25	- 16	1"			52.0	81.0				
O82068-16	25	- 16	1"			55.0	75.0				
O82062-20	31	- 20	1.1/4"			64.0	83.0				
O82060-20	31	- 20	1.1/4"			64.0	84.0				
O82068-20	31	- 20	1.1/4"			65.5	83.0				
O82060-24	38	- 24	1.1/2"			72.0	102.0				
O82068-24	38	- 24	1.1/2"			73.0	99.0				
O82068-32	51	- 32	2"			86.5	116.0				
O82068-40	63	- 40	2.1/2"			100.5	148.5				
O82068-48	76	- 48	3"			112.0	158.0				

FITTINGS 252



ACCESSORIES

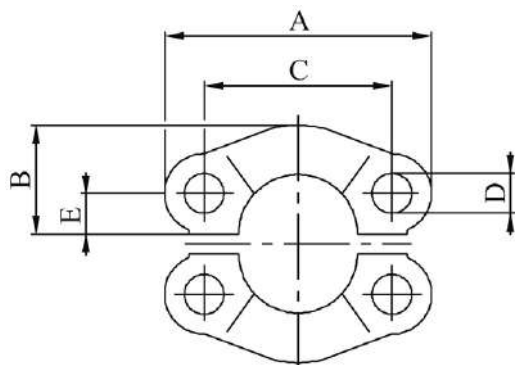
0821 / IO821

METAL SLEEVE / STAINLESS STEEL SLEEVE

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
O82110-06	10	- 6	3/8"			36.1	51.0				
O82110-08	12	- 8	1/2"			44.5	59.0				
O82110-10	16	- 10	5/8"			48.0	65.0				
O82110-12	19	- 12	3/4"			55.5	75.0				
O82110-16	25	- 16	1"			64.5	90.0				
O82110-20	31	- 20	1.1/4"			75.0	112.0				
O82110-24	38	- 24	1.1/2"			83.3	117.0				
O82110-32	51	- 32	2"			95.4	128.0				
IO82110-06	10	- 6	3/8"			36.1	51.0				
IO82110-08	12	- 8	1/2"			44.5	59.0				
IO82110-10	16	- 10	5/8"			48.0	65.0				
IO82110-12	19	- 12	3/4"			55.5	75.0				
IO82110-16	25	- 16	1"			64.5	90.0				
IO82110-20	31	- 20	1.1/4"			75.0	112.0				
IO82110-24	38	- 24	1.1/2"			83.3	117.0				
IO82110-32	51	- 32	2"			95.4	128.0				

ACCESSORIES

O83308

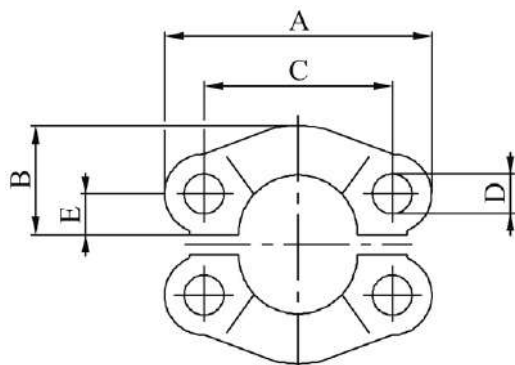


ISO/SAE
CODE 61 SPLIT FLANGE CLAMPS
SAE J518 / ISO 6162-1

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	B	A	C	D	E			
O83308-08				22.8	54.0	38.1	8.75	8.7			
O83308-12				25.9	65.0	47.6	10.75	11.1			
O83308-16				29.2	70.0	52.4	10.75	13.1			
O83308-20				36.3	79.0	58.7	12.0	15.1			
O83308-24				41.1	94.0	69.8	13.5	17.9			
O83308-32				48.2	102.0	77.8	13.5	21.4			
O83308-40				54.1	114.0	88.9	13.5	25.4			
O83308-48				65.3	135.0	106.4	16.75	31.0			
O83308-56				70.0	152.0	120.65	17.0	34.85			
O83308-64				75.0	160.0	130.18	17.0	38.9			

ACCESSORIES

O83609



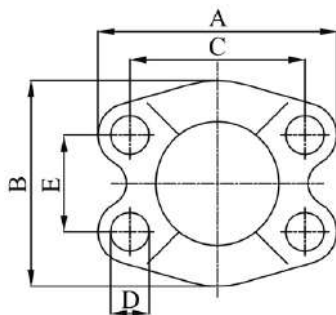
ISO/SAE
CODE 62 SPLIT FLANGE CLAMPS
SAE J518 / ISO 6162-2

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch	B	A	C	D	E			
O83609-08				23.6	56.0	40.5	8.75	9.1			
O83609-12				30.0	71.0	50.8	11.0	11.9			
O83609-16				34.8	81.0	57.1	13.0	13.9			
O83609-20				38.6	95.0	66.7	15.0	15.9			
O83609-24				47.5	113.0	79.4	17.0	18.3			
O83609-32				56.9	133.0	96.8	21.0	22.2			

ACCESSORIES

083607

**CODE 62 ONE-PIECE FLANGE CLAMP
ISO 6162-2 / SAE J518**



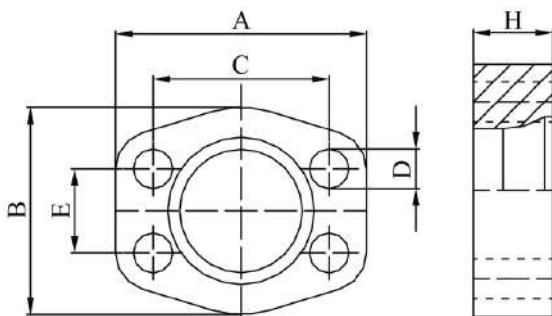
PART. REF.	HOSE BORE			DIMENSIONS mm						
	DN	Dash	inch	B	A	C	D	E		
O83607-12	19	- 12	3/4"	60.0	72.0	50.8	10.5	23.8		
O83607-16	25	- 16	1"	70.0	81.0	57.2	13.0	27.8		
O83607-20	31	- 20	1.1/4"	78.0	96.0	66.7	15.0	31.8		
O83607-24	38	- 24	1.1/2"	96.0	113.0	79.4	17.0	36.5		
O83607-32	51	- 32	2"	114.0	134.0	96.8	21.0	44.4		
O83607-40	63	- 40	2.1/2"	150.0	175.0	123.8	25.0	58.7		
O83607-48	76	- 48	3"	178.0	210.0	152.4	32.0	71.4		

FITTINGS 254

ACCESSORIES

088507

**ONE-PIECE CODE 62 XTRAFRANGE CLAMP
ISO 6162-2 / SAE J518
PORT COMPATIBLE**

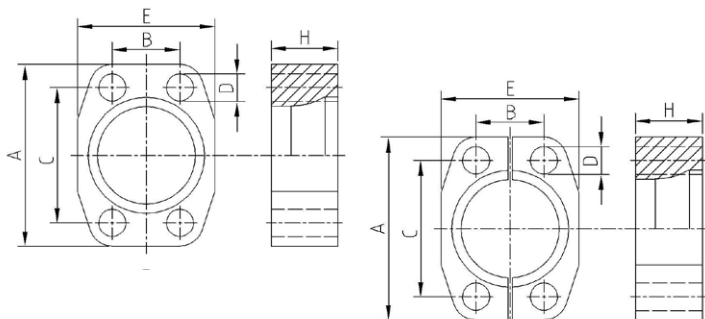


PART. REF.	HOSE BORE			DIMENSIONS mm						
	DN	Dash	inch	B	A	C	D	E	H	
O88507-12				60.0	71.5	50.8	11.0	23.8	21.5	
O88507-16				66.7	80.0	57.2	13.0	27.8	24.0	
O88507-20				78.0	95.0	66.7	15.0	31.7	30.0	
O88507-24				94.0	112.0	79.4	17.0	36.5	36.0	
O88507-32				114.0	133.0	96.8	21.0	44.5	47.0	
O88507-40				150.0	180.0	123.8	26.0	58.8	55.0	
O88507-48				176.0	210.3	152.4	31.0	71.4	60.0	

ACCESSORIES

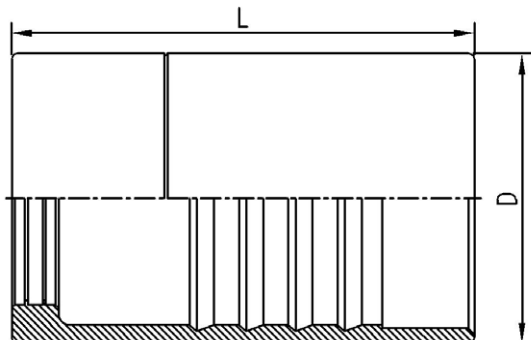
088407

**ONE-PIECE XTRAFRANGE 61 CLAMP /
SPLIT XTRAFRANGE/61 CLAMP**



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	C	D	E	H	
O88407-16				1"	26.2	70.5	52.4	10.6	53.0	25.7	
O88407-20				1.1/4"	30.2	80.0	58.7	12.0	64.0	26.8	
O88407-24				1.1/2"	35.7	94.0	69.9	13.3	77.0	33.6	
O88407-32				2"	42.9	102.0	77.8	13.3	88.0	35.0	
O88407-40				2.1/2"	50.8	114.0	88.9	13.3	102.0	44.3	

O88407-32 and O88407-40: Split XtraFlange/61 Clamp



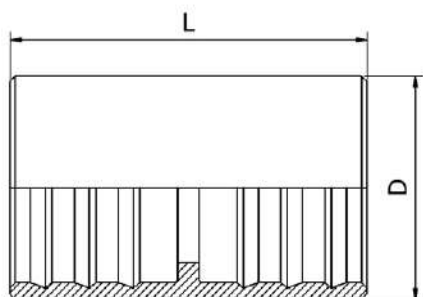
ACCESSORIES

IO821GA

**METAL SLEEVE FOR ARMOUR
(STAINLESS STEEL)**

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IO82110-06GA	10	- 6	3/8"			40.5	60.0				
IO82110-08GA	12	- 8	1/2"			46.8	75.0				
IO82110-10GA	16	- 10	5/8"			53.2	90.0				
IO82110-12GA	19	- 12	3/4"			59.5	105.0				
IO82110-16GA	25	- 16	1"			66.0	120.0				
IO82110-20GA	31	- 20	1.1/4"			78.6	135.0				
IO82110-24GA	38	- 24	1.1/2"			91.5	150.0				
IO82110-32GA	51	- 32	2"			106.5	165.0				

255 FITTINGS



ACCESSORIES

IO84210

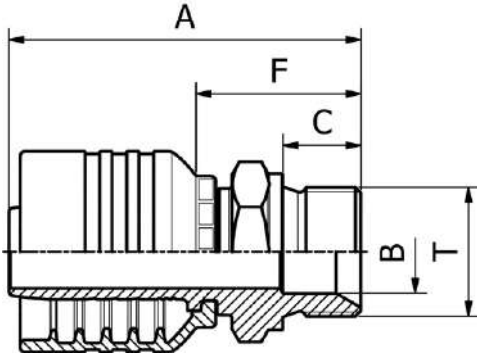
ARMOUR-JOINT

PART. REF.	HOSE BORE			DIMENSIONS mm							
	DN	Dash	inch			D	L				
IO84210-06	10	- 6	3/8"			40.5	65.0				
IO84210-08	12	- 8	1/2"			46.8	65.0				
IO84210-10	16	- 10	5/8"			53.2	65.0				
IO84210-12	19	- 12	3/4"			59.5	70.0				
IO84210-16	25	- 16	1"			66.0	75.0				
IO84210-20	31	- 20	1.1/4"			78.6	95.0				
IO84210-24	38	- 24	1.1/2"			91.5	105.0				
IO84210-32	51	- 32	2"			106.5	115.0				

BS STANDARD CONNECTIONS

OPK10510

**BSP
MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6**



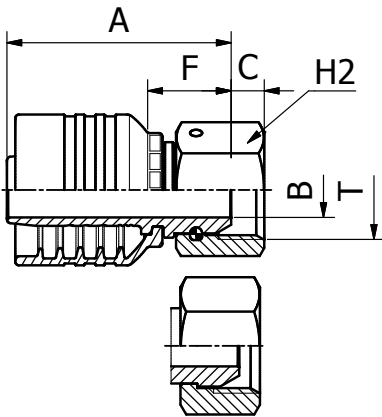
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPK10510-06A04	10	- 6	3/8"	1/4" - 19	5.0	55.5	11.0	26.0	19.0		
OPK10510-06A06	10	- 6	3/8"	3/8" - 19	8.0	57.5	12.0	28.0	22.0		
OPK10510-06A08	10	- 6	3/8"	1/2" - 14	11.0	60.0	14.0	30.5	27.0		
OPK10510-08A06	12	- 8	1/2"	3/8" - 19	8.0	59.0	12.0	28.0	22.0		
OPK10510-08A08	12	- 8	1/2"	1/2" - 14	11.0	62.0	14.0	31.0	27.0		
OPK10510-08A10	12	- 8	1/2"	5/8" - 14	14.5	64.0	16.0	33.0	30.0		
OPK10510-08A12	12	- 8	1/2"	3/4" - 14	17.0	65.0	16.0	34.0	32.0		
OPK10510-10A10	16	- 10	5/8"	5/8" - 14	14.5	67.5	16.0	33.0	30.0		
OPK10510-10A12	16	- 10	5/8"	3/4" - 14	17.0	68.5	16.0	35.5	32.0		
OPK10510-12A12	19	- 12	3/4"	3/4" - 14	17.0	72.0	16.0	35.5	32.0		
OPK10510-12A16	19	- 12	3/4"	1" - 11	22.5	76.0	19.0	39.5	41.0		
OPK10510-16A16	25	- 16	1"	1" - 11	22.5	89.0	19.0	41.0	41.0		
OPK10510-16A20	25	- 16	1"	1.1/4" - 11	28.5	93.0	20.0	45.0	50.0		
OPK10510-20A20	31	- 20	1.1/4"	1.1/4" - 11	28.5	99.0	20.0	46.5	50.0		
OPK10510-24A24	38	- 24	1.1/2"	1.1/2" - 11	33.5	111.5	22.0	49.5	55.0		
OPK10510-32A32	51	- 32	2"	2" - 11	46.0	120.0	25.0	54.0	70.0		

FITTINGS 256

BS STANDARD CONNECTIONS

OPK20512/OPK20513

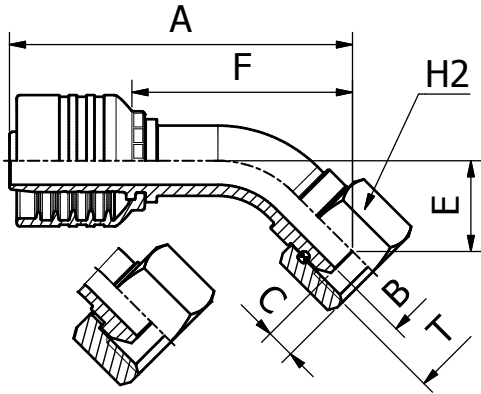
**BSP
FEMALE 60° CONE
BS5200 / ISO 12151-6**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPK20512-06A04	10	- 6	3/8"	1/4" - 19	4.1	47.5	4.2	18.0	19.0		
OPK20513-06A06	10	- 6	3/8"	3/8" - 19	7.0	49.0	6.0	19.5	22.0		
OPK20513-06A08	10	- 6	3/8"	1/2" - 14	9.3	49.5	6.3	20.0	27.0		
OPK20512-08A06	12	- 8	1/2"	3/8" - 19	7.1	52.0	6.0	21.0	22.0		
OPK20513-08A08	12	- 8	1/2"	1/2" - 14	9.3	51.5	6.3	20.5	27.0		
OPK20512-08A10	12	- 8	1/2"	5/8" - 14	12.1	53.0	10.2	22.0	28.0		
OPK20512-08A12	12	- 8	1/2"	3/4" - 14	15.0	56.0	9.0	24.5	32.0		
OPK20512-10A10	16	- 10	5/8"	5/8" - 14	12.5	56.0	10.2	21.5	28.0		
OPK20512-10A12	16	- 10	5/8"	3/4" - 14	15.0	57.5	9.0	23.0	32.0		
OPK20512-12A16	19	- 12	3/4"	1" - 11	19.8	62.5	10.5	26.0	38.0		
OPK20512-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.0	9.0	24.5	32.0		
OPK20512-16A16	25	- 16	1"	1" - 11	19.8	75.5	10.5	27.5	38.0		

OPK20512: THRUST WIRE NUT / OPK20513: SLIP-ON NUT

BS STANDARD CONNECTIONS

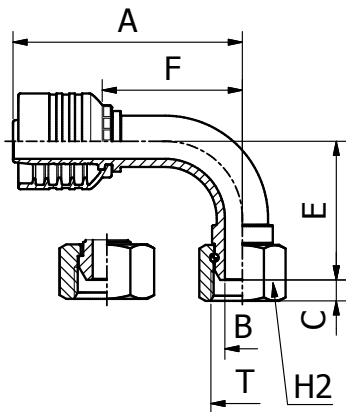


OPK20542/OPK20543

**45° BSP
FEMALE ELBOW 60° CONE
BS5200 / ISO 12151-6**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK20543-06A06	10	- 6	3/8"	3/8" - 19	7.0	71.5	6.0	15.5	42.0	22.0	
OPK20543-06A08	10	- 6	3/8"	1/2" - 14	9.3	72.0	6.3	16.0	42.5	27.0	
OPK20543-08A08	12	- 8	1/2"	1/2" - 14	9.3	81.0	6.3	17.0	49.5	27.0	
OPK20542-08A10	12	- 8	1/2"	5/8" - 14	12.1	85.5	10.2	22.5	54.5	28.0	
OPK20542-10A10	16	- 10	5/8"	5/8" - 14	12.5	97.5	10.2	26.0	63.0	28.0	
OPK20542-10A12	16	- 10	5/8"	3/4" - 14	15.0	98.0	9.0	27.0	64.0	32.0	
OPK20542-12A12	19	- 12	3/4"	3/4" - 14	15.0	107.0	9.0	28.5	70.5	32.0	
OPK20542-12A16	19	- 12	3/4"	1" - 11	19.8	109.0	10.5	30.0	72.5	38.0	
OPK20542-16A16	25	- 16	1"	1" - 11	19.8	139.5	10.5	36.5	91.0	38.0	

OPK20542: THRUST WIRE NUT / OPK20543: SLIP-ON NUT



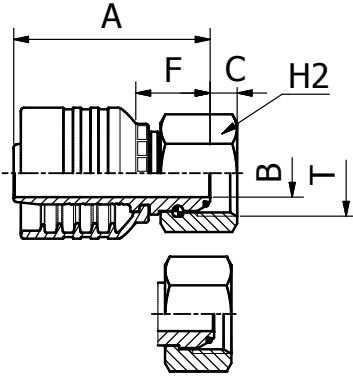
BS STANDARD CONNECTIONS

OPK20592/OPK20593

**90° BSP
FEMALE ELBOW 60° CONE
BS5200**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK20593-06A06	10	- 6	3/8"	3/8" - 19	7.0	66.0	6.0	31.5	36.5	22.0	
OPK20593-06A08	10	- 6	3/8"	1/2" - 14	9.3	66.0	6.3	32.0	36.5	27.0	
OPK20592-08A06	12	- 8	1/2"	3/8" - 19	7.1	76.0	6.0	41.0	45.0	22.0	
OPK20593-08A08	12	- 8	1/2"	1/2" - 14	9.3	76.0	6.3	36.5	45.0	27.0	
OPK20592-08A10	12	- 8	1/2"	5/8" - 14	12.1	75.5	10.2	44.0	44.0	28.0	
OPK20592-08A12	12	- 8	1/2"	3/4" - 14	15.0	75.5	9.0	45.5	44.0	32.0	
OPK20592-10A10	16	- 10	5/8"	5/8" - 14	12.5	88.0	10.2	53.5	53.5	28.0	
OPK20592-10A12	16	- 10	5/8"	3/4" - 14	15.0	88.0	9.0	55.0	53.5	32.0	
OPK20592-12A12	19	- 12	3/4"	3/4" - 14	15.0	98.0	9.0	59.5	61.5	32.0	
OPK20592-12A16	19	- 12	3/4"	1" - 11	19.8	98.0	10.5	62.0	61.5	38.0	
OPK20592-16A16	25	- 16	1"	1" - 11	19.8	127.5	10.5	76.0	79.5	38.0	

OPK20592: THRUST WIRE NUT / OPK20593: SLIP-ON NUT



BS STANDARD CONNECTIONS

OPK20812/OPK20813

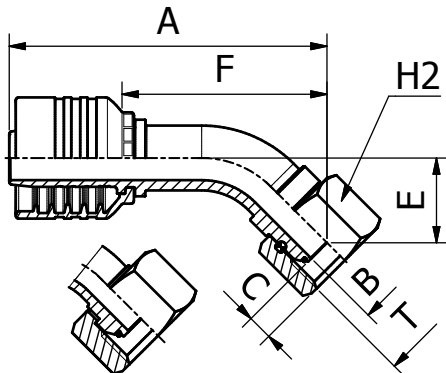
**BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6**

FITTINGS 258

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	F	H2
OPK20812-06A04	10	- 6	3/8"	1/4" - 19	4.1	47.5	4.1	18.0	19.0	
OPK20813-06A06	10	- 6	3/8"	3/8" - 19	7.0	49.0	6.0	19.5	22.0	
OPK20813-08A08	12	- 8	1/2"	1/2" - 14	9.3	51.5	6.3	20.5	27.0	
OPK20812-10A10	16	- 10	5/8"	5/8" - 14	12.5	56.5	9.7	22.0	28.0	
OPK20812-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.5	8.5	25.0	32.0	
OPK20812-16A16	25	- 16	1"	1" - 11	19.8	75.5	10.6	27.5	38.0	
OPK20812-16A20	25	- 16	1"	1.1/4" - 11	26.1	79.0	10.5	31.0	50.0	
OPK20812-20A20	31	- 20	1.1/4"	1.1/4" - 11	26.0	84.0	10.5	31.5	50.0	
OPK20812-20A24	31	- 20	1.1/4"	1.1/2" - 11	32.1	82.0	12.5	29.5	60.0	
OPK20812-24A24	38	- 24	1.1/2"	1.1/2" - 11	32.0	92.5	12.5	30.5	60.0	
OPK20812-24A32	38	- 24	1.1/2"	2"	42.1	92.0	16.1	30.0	70.0	
OPK20812-32A32	51	- 32	2"	2"	42.0	98.0	16.1	32.0	70.0	

OPK20812: THRUST WIRE NUT / OPK20813: SLIP-ON NUT

BS STANDARD CONNECTIONS



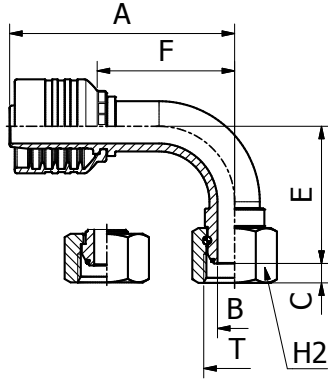
OPK20842/OPK20843

**45° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	F
OPK20843-06A06	10	- 6	3/8"	3/8" - 19	7.0	71.5	6.0	15.5	42.0	22.0
OPK20843-08A08	12	- 8	1/2"	1/2" - 14	9.3	81.0	6.3	17.0	49.5	27.0
OPK20842-10A10	16	- 10	5/8"	5/8" - 14	12.5	98.0	9.7	27.5	63.5	28.0
OPK20842-12A12	19	- 12	3/4"	3/4" - 14	15.0	107.5	8.5	29.0	71.0	32.0
OPK20842-20A20	31	- 20	1.1/4"	1.1/4" - 11	26.0	154.0	10.5	39.0	101.5	50.0
OPK20842-24A24	38	- 24	1.1/2"	1.1/2" - 11	32.0	180.0	12.5	45.0	118.0	60.0
OPK20842-16A16	25	- 16	1"	1" - 11	19.8	138.5	10.6	35.5	90.5	38.0
OPK20842-32A32	51	- 32	2"	2" - 11	42.0	200.0	16.1	47.0	134.0	70.0

OPK20842: THRUST WIRE NUT / OPK20843: SLIP-ON NUT

BS STANDARD CONNECTIONS

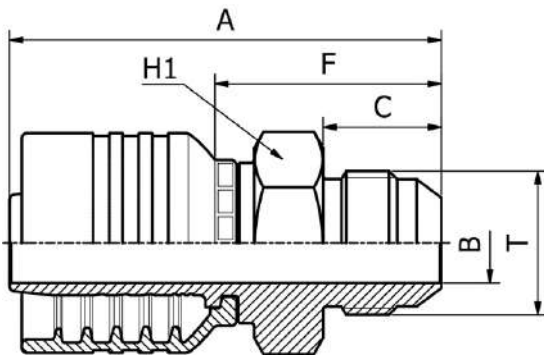


OPK20892/OPK20893

90° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK20892-06A04	10	- 6	3/8"	1/4" - 19	4.1	65.0	4.1	33.0	35.5	19.0	
OPK20893-06A06	10	- 6	3/8"	3/8" - 19	7.0	66.0	6.0	31.5	36.5	22.0	
OPK20893-08A08	12	- 8	1/2"	1/2" - 14	9.3	76.0	6.3	36.5	45.0	27.0	
OPK20892-10A10	16	- 10	5/8"	5/8" - 14	12.5	87.5	9.7	55.0	53.0	28.0	
OPK20892-12A12	19	- 12	3/4"	3/4" - 14	15.0	98.0	8.5	60.0	61.5	32.0	
OPK20892-16A20	25	- 16	1"	1.1/4" - 11	26.1	127.5	10.5	78.5	79.5	50.0	
OPK20892-16A16	25	- 16	1"	1" - 11	19.8	127.5	10.6	76.0	79.5	38.0	
OPK20892-20A20	31	- 20	1.1/4"	1.1/4" - 11	26.0	143.0	10.5	83.5	90.5	50.0	
OPK20892-20A24	31	- 20	1.1/4"	1.1/2" - 11	32.1	143.0	12.5	84.5	90.5	60.0	
OPK20892-24A24	38	- 24	1.1/2"	1.1/2" - 11	32.0	170.0	12.5	98.5	108.0	60.0	
OPK20892-32A32	51	- 32	2"	2" - 11	42.0	197.0	16.1	110.5	131.0	70.0	

OPK20892: THRUST WIRE NUT / OPK20893: SLIP-ON NUT



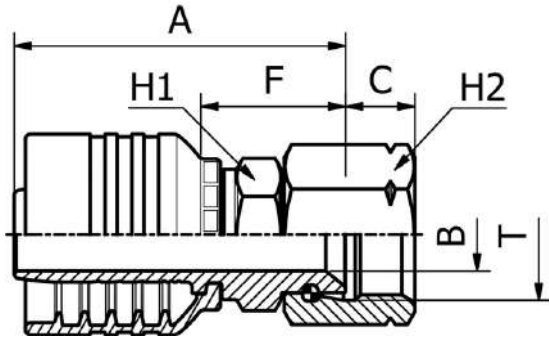
SAE STANDARD CONNECTIONS

OPK12510

JIC
MALE 37° CONE
SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H1	
OPK12510-06A06	10	- 6	3/8"	9/16" - 18	7.0	59.0	14.0	29.5	17.0	
OPK12510-06A08	10	- 6	3/8"	3/4" - 16	9.3	63.5	16.5	34.0	19.0	
OPK12510-06A10	10	- 6	3/8"	7/8" - 14	12.5	68.0	19.5	38.5	24.0	
OPK12510-08A06	12	- 8	1/2"	9/16" - 18	7.0	63.0	14.0	32.0	19.0	
OPK12510-08A08	12	- 8	1/2"	3/4" - 16	9.3	65.5	16.5	34.5	19.0	
OPK12510-08A10	12	- 8	1/2"	7/8" - 14	12.5	70.0	19.5	39.0	24.0	
OPK12510-08A12	12	- 8	1/2"	1.1/16" - 12	15.0	74.0	22.0	43.0	27.0	
OPK12510-10A10	16	- 10	5/8"	7/8" - 14	12.5	73.5	19.5	39.0	24.0	
OPK12510-10A12	16	- 10	5/8"	1.1/16" - 12	15.0	77.0	22.0	42.5	27.0	
OPK12510-12A10	19	- 12	3/4"	7/8" - 14	12.5	78.0	19.5	41.5	27.0	
OPK12510-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	80.5	22.0	44.0	27.0	
OPK12510-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	81.0	22.5	44.5	32.0	
OPK12510-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	83.5	23.0	47.0	34.0	
OPK12510-16A12	25	- 16	1"	1.1/16" - 12	15.0	93.0	22.0	45.0	32.0	
OPK12510-16A16	25	- 16	1"	1.5/16" - 12	19.8	96.0	23.0	48.0	34.0	
OPK12510-16A20	25	- 16	1"	1.5/8" - 12	26.0	101.0	24.3	53.0	42.0	
OPK12510-20A20	31	- 20	1.1/4"	1.5/8" - 12	26.0	106.0	24.3	53.5	42.0	
OPK12510-20A24	31	- 20	1.1/4"	1.7/8" - 12	32.0	113.0	27.5	60.5	50.0	
OPK12510-24A24	38	- 24	1.1/2"	1.7/8" - 12	32.0	122.5	27.5	60.5	50.0	
OPK12510-32A32	51	- 32	2"	2.1/2" - 12	42.0	138.0	34.0	72.0	65.0	

SAE STANDARD CONNECTIONS

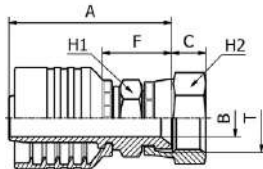


OPK22712

JIC
FEMALE 37° CONE SEAT DOUBLE HEXAGON
 SAE J516 / ISO 12151-5
 (THRUST-WIRE NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	H2
OPK22712-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	69.0	15.0	32.5	32.0	38.0	
OPK22712-16A20	25	- 16	1"	1.5/8" - 12	26.0	91.0	16.2	43.0	41.0	50.0	
OPK22712-20A20	31	- 20	1.1/4"	1.5/8" - 12	26.0	96.0	16.2	43.5	41.0	50.0	

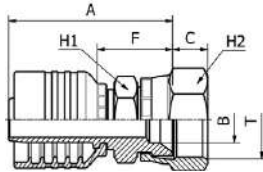
FITTINGS 260



SAE STANDARD CONNECTIONS

OPK22711/OPK22711KR

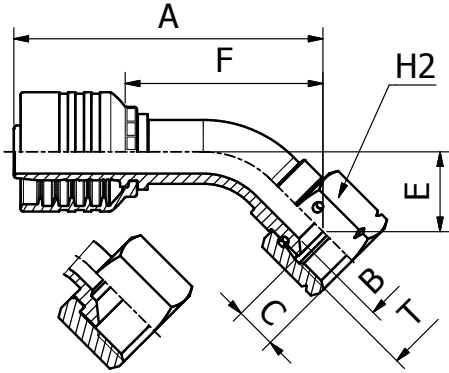
JIC
FEMALE 37° CONE SEAT DOUBLE HEXAGON
 SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	H2
OPK22711-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	51.5	9.5	22.0	17.0	17.0	
OPK22711-06A08KR	10	- 6	3/8"	3/4" - 16	9.3	56.0	10.7	26.5	19.0	22.0	
OPK22711-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	58.0	10.7	27.0	19.0	22.0	
OPK22711-08A10KR	12	- 8	1/2"	7/8" - 14	9.3	60.5	12.5	29.5	22.0	25.0	
OPK22711-08A12KR	12	- 8	1/2"	1.1/16" - 12	15.0	60.0	14.1	28.5	27.0	32.0	
OPK22711-10A08KR	16	- 10	5/8"	3/4" - 16	9.3	62.5	10.7	28.5	22.0	22.0	
OPK22711-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	64.0	12.5	29.5	22.0	25.0	
OPK22711-16A12KR	25	- 16	1"	1.1/16" - 12	15.0	80.5	14.1	32.5	32.0	32.0	
OPK22711-12A08KR	19	- 12	3/4"	3/4" - 16	9.3	66.0	10.7	29.5	27.0	22.0	
OPK22711-12A10KR	19	- 12	3/4"	7/8" - 14	12.5	67.0	12.5	30.5	27.0	25.0	
OPK22711-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	66.5	14.1	30.0	27.0	32.0	
OPK22711-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	71.0	15.3	34.5	32.0	38.0	
OPK22711-16A16	25	- 16	1"	1.5/16" - 12	19.8	83.5	15.3	35.5	32.0	38.0	

KR: CRIMPED BACK COMPACT ROBUST NUT

SAE STANDARD CONNECTIONS

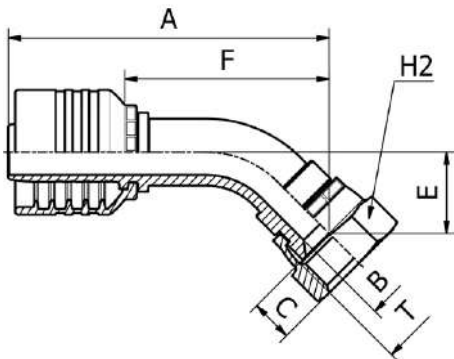


OPK22542/OPK22543

45° JIC
FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPK22542-06A06	10	- 6	3/8"	9/16" - 18	7.0	71.5	9.2	16.5	42.0	19.0	
OPK22543-06A08	10	- 6	3/8"	3/4" - 16	7.0	70.5	10.1	14.0	41.0	22.0	
OPK22543-06A10	10	- 6	3/8"	7/8" - 14	9.3	72.0	12.4	15.5	42.5	27.0	
OPK22542-08A08	12	- 8	1/2"	3/4" - 16	9.3	83.0	10.2	20.0	52.0	22.0	
OPK22543-08A10	12	- 8	1/2"	7/8" - 14	9.3	80.5	12.4	17.0	49.5	27.0	
OPK22543-08A12	12	- 8	1/2"	1.1/16" - 12	12.5	80.5	14.1	17.0	49.5	32.0	
OPK22542-10A10	16	- 10	5/8"	7/8" - 14	12.5	96.5	12.3	25.5	62.0	27.0	
OPK22543-10A12	16	- 10	5/8"	1.1/16" - 12	12.5	94.5	14.1	24.0	60.0	32.0	
OPK22542-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	106.0	14.2	27.5	70.0	32.0	
OPK22542-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	106.0	14.3	27.5	69.5	36.0	
OPK22542-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	106.5	15.0	27.5	70.0	38.0	
OPK22542-16A16	25	- 16	1"	1.5/16" - 12	19.8	132.5	15.0	32.0	84.0	38.0	
OPK22542-16A20	25	- 16	1"	1.5/8" - 12	26.0	138.0	16.2	36.0	90.0	50.0	
OPK22542-20A20	31	- 20	1.1/4"	1.5/8" - 12	26.0	156.0	16.2	41.5	103.5	50.0	
OPK22542-20A24	31	- 20	1.1/4"	1.7/8" - 12	32.0	159.0	18.8	44.5	106.5	60.0	
OPK22542-24A24	38	- 24	1.1/2"	1.7/8" - 12	32.0	181.0	18.8	46.5	119.0	60.0	
OPK22542-32A32	51	- 32	2"	2.1/2" - 12	44.0	229.0	24.0	68.0	163.0	75.0	

OPK22542: THRUST WIRE NUT / OPK22543: SLIP-ON NUT



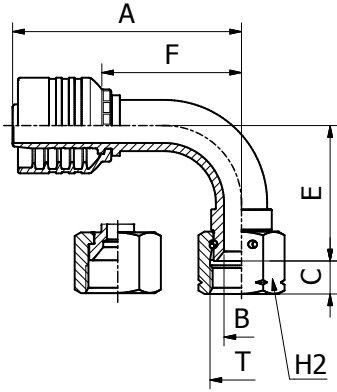
SAE STANDARD CONNECTIONS

OPK22541KR

45° ELBOW JIC
FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5
(CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPK22541-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	71.5	9.5	16.0	42.0	17.0	
OPK22541-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	83.0	10.7	20.0	52.0	22.0	
OPK22541-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	95.5	12.5	22.5	61.0	25.0	
OPK22541-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	105.5	14.1	26.5	69.0	32.0	

SAE STANDARD CONNECTIONS



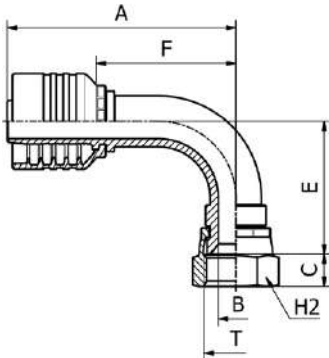
OPK22592/OPK22593

**90° JIC
FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5**

FITTINGS 262

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	F	H2	
OPK22592-06A05	10	- 6	3/8"	1/2" - 20		5.5	59.5	9.1	26.5	30.0	17.0	
OPK22592-06A06	10	- 6	3/8"	9/16" - 18		7.0	65.0	9.2	32.5	35.5	19.0	
OPK22593-06A08	10	- 6	3/8"	3/4" - 16		7.0	66.0	10.1	29.5	36.5	22.0	
OPK22593-06A10	10	- 6	3/8"	7/8" - 14		9.3	66.0	12.4	31.5	36.5	27.0	
OPK22592-08A06	12	- 8	1/2"	9/16" - 18		7.0	68.0	9.2	33.0	37.0	19.0	
OPK22592-08A08	12	- 8	1/2"	3/4" - 16		9.3	75.5	10.2	41.0	44.0	22.0	
OPK22593-08A10	12	- 8	1/2"	7/8" - 14		9.3	76.0	12.4	36.0	45.0	27.0	
OPK22593-08A12	12	- 8	1/2"	1.1/16" - 12		12.5	76.0	14.1	36.0	45.0	32.0	
OPK22592-10A10	16	- 10	5/8"	7/8" - 14		12.5	88.0	12.3	52.5	53.5	27.0	
OPK22593-10A12	16	- 10	5/8"	1.1/16" - 12		12.5	86.0	14.1	50.0	51.5	32.0	
OPK22592-12A10	19	- 12	3/4"	7/8" - 14		12.5	91.5	12.3	52.5	55.0	27.0	
OPK22592-12A12	19	- 12	3/4"	1.1/16" - 12		15.0	98.0	14.2	58.0	62.0	32.0	
OPK22592-12A14	19	- 12	3/4"	1.3/16" - 12		15.0	99.0	14.3	58.0	63.0	36.0	
OPK22592-12A16	19	- 12	3/4"	1.5/16" - 12		19.8	99.0	15.0	57.5	63.0	38.0	
OPK22592-16A16	25	- 16	1"	1.5/16" - 12		19.8	124.0	15.0	68.5	76.0	38.0	
OPK22592-16A20	25	- 16	1"	1.5/8" - 12		26.0	125.5	16.2	74.5	77.5	50.0	
OPK22592-20A20	31	- 20	1.1/4"	1.5/8" - 12		26.0	143.0	16.2	86.5	90.5	50.0	
OPK22592-20A24	31	- 20	1.1/4"	1.7/8" - 12		32.0	143.0	18.8	90.5	90.5	60.0	
OPK22592-24A24	38	- 24	1.1/2"	1.7/8" - 12		32.0	170.0	18.8	100.5	108.0	60.0	
OPK22592-32A32	51	- 32	2"	2.1/2" - 12		44.0	208.0	24.0	137.0	142.0	75.0	

OPK22592: THRUST WIRE NUT / OPK22593: SLIP-ON NUT

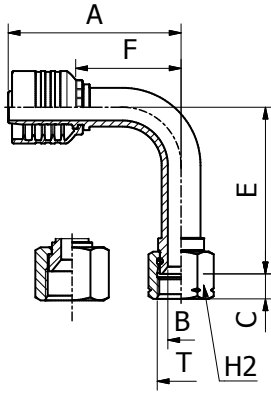


SAE STANDARD CONNECTIONS

OPK22591KR

**90° ELBOW JIC
FEMALE 37° CONE SEAT SAE
J516 / ISO 12151-5
(CRIMPED-BACK NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	E	F	H2	
OPK22591-06A06KR	10	- 6	3/8"	9/16" - 18		7.0	65.0	9.5	32.0	35.5	17.0	
OPK22591-08A08KR	12	- 8	1/2"	3/4" - 16		9.3	75.5	10.7	40.5	44.0	22.0	
OPK22591-10A10KR	16	- 10	5/8"	7/8" - 14		12.5	88.0	12.5	47.0	53.5	25.0	
OPK22591-12A12KR	19	- 12	3/4"	1.1/16" - 12		15.0	98.0	14.1	57.0	62.0	32.0	



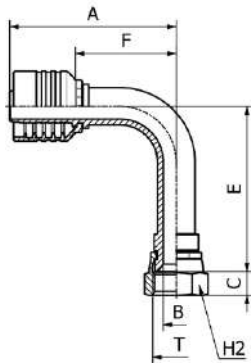
SAE STANDARD CONNECTIONS

OPK24792/OPK24793

90° JIC
FEMALE LONG DROP ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK24792-06A06	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.2	55.0	35.5	19.0	
OPK24793-06A08	10	- 6	3/8"	3/4" - 16	7.0	66.0	10.1	61.5	36.5	22.0	
OPK24793-08A10	12	- 8	1/2"	7/8" - 14	9.3	76.0	12.4	65.0	45.0	27.0	
OPK24792-08A08	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.2	61.0	44.0	22.0	
OPK24792-10A10	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.3	65.5	53.5	27.0	
OPK24792-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.2	94.5	62.0	32.0	
OPK24792-16A16	25	- 16	1"	1.5/16" - 12	19.8	125.5	15.0	110.0	77.5	38.0	

OPK24792: THRUST WIRE NUT / OPK24793: SLIP-ON NUT



SAE STANDARD CONNECTIONS

OPK24791KR

90° LONG DROP ELBOW JIC
FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5
(CRIMPED-BACK NUT)

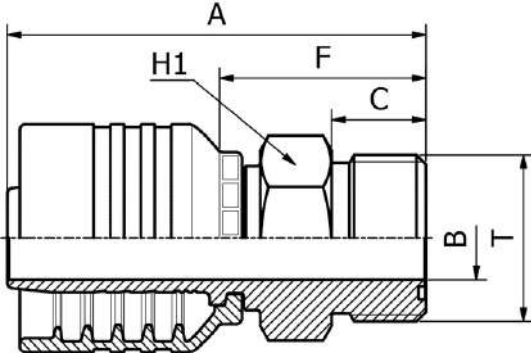
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK24791-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.5	55.0	35.5	17.0	
OPK24791-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.7	64.0	44.0	22.0	
OPK24791-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.5	70.0	53.5	25.0	
OPK24791-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.1	96.0	62.0	32.0	

SAE STANDARD CONNECTIONS

OPK12410

ORFS
MALE

SAE J516 / ISO 12151-1



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPK12410-06A06	10	- 6	3/8"	11/16" - 16	6.7	57.0	11.2	27.5	19.0		
OPK12410-06A08	10	- 6	3/8"	13/16" - 16	9.3	59.5	12.8	30.0	22.0		
OPK12410-08A08	12	- 8	1/2"	13/16" - 16	9.3	61.5	12.8	30.5	22.0		
OPK12410-08A10	12	- 8	1/2"	1" - 14	12.5	66.0	15.5	35.0	27.0		
OPK12410-10A10	16	- 10	5/8"	1" - 14	12.5	69.0	15.5	34.5	27.0		
OPK12410-10A12	16	- 10	5/8"	1.3/16" - 12	15.0	72.0	17.0	37.5	32.0		
OPK12410-12A12	19	- 12	3/4"	1.3/16" - 12	15.0	75.5	17.0	39.0	32.0		
OPK12410-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	77.0	17.5	40.5	38.0		
OPK12410-16A16	25	- 16	1"	1.7/16" - 12	19.8	90.0	17.5	42.0	38.0		
OPK12410-20A20	31	- 20	1.1/4"	1.11/16" - 12	26.0	99.0	17.5	46.5	46.0		
OPK12410-24A24	38	- 24	1.1/2"	2" - 12	32.0	110.5	17.5	48.5	55.0		

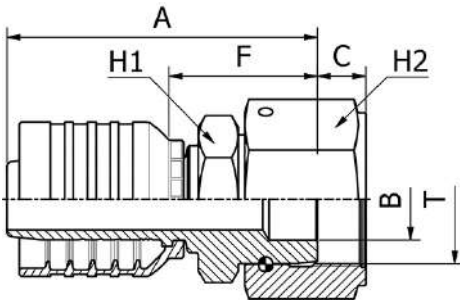
FITTINGS 264

SAE STANDARD CONNECTIONS

OPK22411

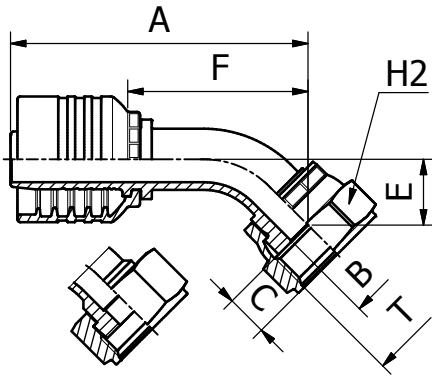
ORFS
FEMALE

SAE J516 / ISO 12151-1
PULLBACK TYPE



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1	H2	
OPK22411-06A06	10	- 6	3/8"	11/16" - 16	7.0	60.5	9.5	31.0	16.0	22.0	
OPK22411-06A08	10	- 6	3/8"	13/16" - 16	9.3	65.0	11.0	35.5	19.0	24.0	
OPK22411-08A06	12	- 8	1/2"	11/16" - 16	7.0	63.0	9.5	32.0	19.0	22.0	
OPK22411-08A08	12	- 8	1/2"	13/16" - 16	9.3	67.0	11.0	36.0	19.0	24.0	
OPK22411-08A10	12	- 8	1/2"	1" - 14	11.5	69.5	13.5	38.5	24.0	30.0	
OPK22411-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	73.0	14.5	42.0	28.0	36.0	
OPK22411-10A10	16	- 10	5/8"	1" - 14	11.5	73.0	13.5	38.5	24.0	30.0	
OPK22411-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	76.5	14.5	42.0	28.0	36.0	
OPK22411-12A10	19	- 12	3/4"	1" - 14	11.5	77.5	13.5	41.0	28.0	30.0	
OPK22411-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	80.0	14.5	43.5	28.0	36.0	
OPK22411-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	82.0	15.0	45.5	36.0	41.0	
OPK22411-16A12	25	- 16	1"	1.3/16" - 12	13.9	94.0	13.5	48.0	36.0	36.0	
OPK22411-16A16	25	- 16	1"	1.7/16" - 12	19.8	94.5	15.0	46.5	36.0	41.0	
OPK22411-16A20	25	- 16	1"	1.11/16" - 12	26.0	97.5	14.8	49.5	41.0	50.0	
OPK22411-20A20	31	- 20	1.1/4"	1.11/16" - 12	26.0	101.5	14.8	49.0	41.0	50.0	
OPK22411-24A24	38	- 24	1.1/2"	2" - 12	32.0	116.0	15.8	54.0	50.0	60.0	

SAE STANDARD CONNECTIONS

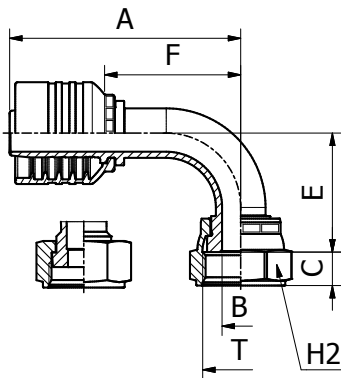


OPK22441/OPK22443

**45° ORFS
FEMALE ELBOW
SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK22443-06A06	10	- 6	3/8"	11/16" - 16	6.0	61.5	9.5	11.0	32.5	22.0	
OPK22443-06A08	10	- 6	3/8"	13/16" - 16	9.3	63.0	11.0	12.5	34.0	24.0	
OPK22441-08A06	12	- 8	1/2"	11/16" - 16	7.0	63.5	9.5	11.0	32.5	22.0	
OPK22443-08A08	12	- 8	1/2"	13/16" - 16	9.0	73.0	11.0	13.0	42.0	24.0	
OPK22443-08A10	12	- 8	1/2"	1" - 14	11.5	73.0	13.5	13.5	42.0	30.0	
OPK22443-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	78.0	14.5	18.5	46.5	36.0	
OPK22443-10A10	16	- 10	5/8"	1" - 14	11.5	83.5	13.5	16.0	49.0	30.0	
OPK22443-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	86.0	14.5	18.5	51.5	36.0	
OPK22441-12A10	19	- 12	3/4"	1" - 14	11.5	87.0	13.5	16.5	50.5	30.0	
OPK22443-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	97.0	14.5	21.5	60.5	36.0	
OPK22443-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	96.5	14.8	21.0	60.0	41.0	
OPK22443-16A16	25	- 16	1"	1.7/16" - 12	19.8	120.0	14.8	23.5	72.0	41.0	
OPK22443-16A20	25	- 16	1"	1.11/16" - 12	26.0	122.0	14.8	25.0	74.0	50.0	
OPK22443-20A20	31	- 20	1.1/4"	1.11/16" - 12	26.0	134.5	14.8	27.0	82.0	50.0	

OPK22442: THRUST WIRE NUT / OPK22443: SLIP-ON NUT



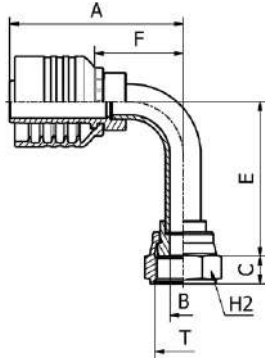
SAE STANDARD CONNECTIONS

OPK22491/OPK22493

**90° ORFS
FEMALE ELBOW
SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK22493-06A06	10	- 6	3/8"	11/16" - 16	6.0	59.5	9.5	24.0	30.0	22.0	
OPK22493-06A08	10	- 6	3/8"	13/16" - 16	9.3	59.5	11.0	26.5	30.0	24.0	
OPK22491-08A06	12	- 8	1/2"	11/16" - 16	7.0	61.5	9.5	24.5	30.0	22.0	
OPK22493-08A08	12	- 8	1/2"	13/16" - 16	9.0	71.5	11.0	30.0	40.5	24.0	
OPK22493-08A10	12	- 8	1/2"	1" - 14	11.5	71.0	13.5	30.5	40.0	30.0	
OPK22493-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	71.0	14.5	37.5	39.5	36.0	
OPK22493-10A10	16	- 10	5/8"	1" - 14	11.5	82.5	13.5	37.5	48.0	30.0	
OPK22493-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	82.5	14.5	41.0	48.0	36.0	
OPK22491-12A10	19	- 12	3/4"	1" - 14	11.5	85.5	13.5	38.0	49.0	30.0	
OPK22493-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	93.0	14.5	48.0	56.5	36.0	
OPK22493-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	93.0	14.8	47.5	56.5	41.0	
OPK22491-16A12	25	- 16	1"	1.3/16" - 12	13.9	106.0	13.5	48.0	57.5	36.0	
OPK22493-16A16	25	- 16	1"	1.7/16" - 12	19.8	119.5	14.8	56.0	71.5	41.0	
OPK22493-16A20	25	- 16	1"	1.11/16" - 12	26.0	119.5	14.8	58.5	71.5	50.0	
OPK22493-20A20	31	- 20	1.1/4"	1.11/16" - 12	26.0	135.5	14.8	66.0	83.0	50.0	
OPK22493-24A24	38	- 24	1.1/2"	2" - 12	32.0	164.0	14.8	79.5	102.0	60.0	

OPK22492: THRUST WIRE NUT / OPK22493: SLIP-ON NUT



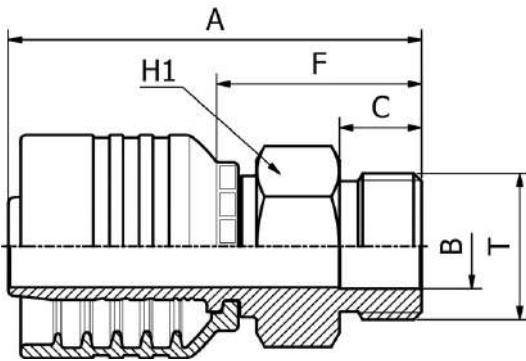
SAE STANDARD CONNECTIONS

OPK24491

90° ORFS
FEMALE LONG DROP ELBOW
SAE J516 / ISO 12151-1
(CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPK24491-06A06	10	- 6	3/8"	11/16" - 16	6.7	61.5	9.5	54.0	32.0	22.0	
OPK24491-06A08	10	- 6	3/8"	13/16" - 16	6.7	61.5	11.0	54.0	32.0	24.0	
OPK24491-08A08	12	- 8	1/2"	13/16" - 16	9.6	68.0	11.0	64.0	37.0	24.0	
OPK24491-08A10	12	- 8	1/2"	1" - 14	9.6	68.0	12.5	64.5	37.0	30.0	
OPK24491-10A10	16	- 10	5/8"	1" - 14	12.0	75.5	13.0	70.0	41.0	30.0	
OPK24491-10A12	16	- 10	5/8"	1.3/16" - 12	12.7	75.5	13.5	73.0	41.0	36.0	
OPK24491-12A12	19	- 12	3/4"	1.3/16" - 12	15.0	95.0	13.5	96.0	58.5	36.0	
OPK24491-16A16	25	- 16	1"	1.7/16" - 12	19.8	119.5	13.5	114.0	71.5	41.0	

All items made by brazing with the exception of OPK24491-12-12 and OPK24491-16-16

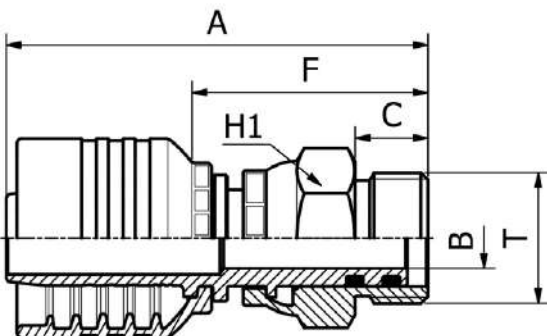


SAE STANDARD CONNECTIONS

OPK13010

SAE
MALE O'RING BOSS TYPE

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H1	
OPK13010-08A08	12	- 8	1/2"	3/4" - 16	9.9	60.0	11.1	29.0	22.0	
OPK13010-12A12	19	- 12	3/4"	1.1/16" - 12	15.5	76.0	15.1	39.5	32.0	
OPK13010-16A16	25	- 16	1"	1.5/16" - 12	21.5	89.5	15.1	41.0	38.0	



SAE STANDARD CONNECTIONS

OPK14310

SAE
SWIVEL MALE O'RING BOSS TYPE

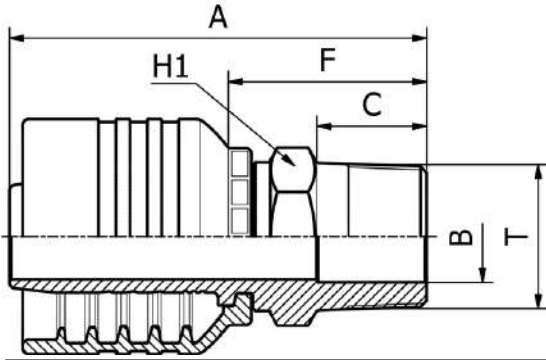
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H2	
OPK14310-08A08	12	- 8	1/2"	3/4" - 16	9.3	84.0	11.1	53.0	27.0	

Not to be used as a live swivel

SAE STANDARD CONNECTIONS

OPK12810

NPTF
MALE 60° CONE SEAT
SAE J516/J514



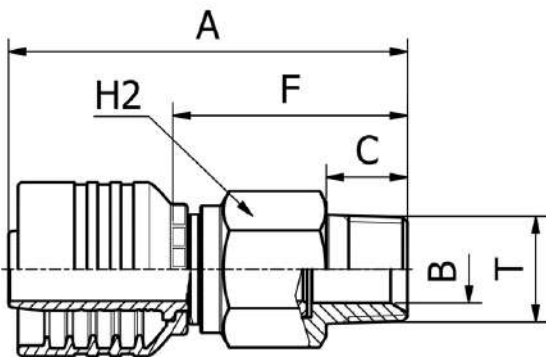
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H1	
OPK12810-06A04	10	- 6	3/8"	1/4" - 18	5.5	59.5	14.5	30.0	14.0	
OPK12810-06A06	10	- 6	3/8"	3/8" - 18	9.3	58.0	14.5	28.5	19.0	
OPK12810-06A08	10	- 6	3/8"	1/2" - 14	12.5	64.0	19.2	34.5	24.0	
OPK12810-08A06	12	- 8	1/2"	3/8" - 18	9.3	60.0	14.5	29.0	19.0	
OPK12810-08A08	12	- 8	1/2"	1/2" - 14	12.5	66.0	19.2	35.0	24.0	
OPK12810-08A12	12	- 8	1/2"	3/4" - 14	15.5	66.5	19.2	35.5	27.0	
OPK12810-10A08	16	- 10	5/8"	1/2" - 14	12.5	73.0	19.2	38.5	24.0	
OPK12810-10A12	16	- 10	5/8"	3/4" - 14	16.0	74.5	19.2	40.0	27.0	
OPK12810-12A08	19	- 12	3/4"	1/2" - 14	12.5	73.0	19.2	36.5	27.0	
OPK12810-12A12	19	- 12	3/4"	3/4" - 14	16.0	73.0	19.2	36.5	27.0	
OPK12810-12A16	19	- 12	3/4"	1" - 11,5	19.8	82.5	24.2	46.0	36.0	
OPK12810-16A20	25	- 16	1"	1.1/4" - 11,5	26.0	104.5	25.0	56.5	46.0	
OPK12810-16A12	25	- 16	1"	3/4" - 14	15.5	87.0	19.2	39.0	32.0	
OPK12810-16A16	25	- 16	1"	1" - 11,5	19.8	92.0	24.2	44.0	36.0	
OPK12810-20A20	31	- 20	1.1/4"	1.1/4" - 11,5	26.0	109.0	25.0	56.5	46.0	
OPK12810-24A24	38	- 24	1.1/2"	1.1/2" - 11,5	32.0	119.5	26.0	57.5	50.0	
OPK12810-32A32	51	- 32	2"	2" - 11,5	45.0	130.5	26.5	64.5	65.0	

267 FITTINGS

SAE STANDARD CONNECTIONS

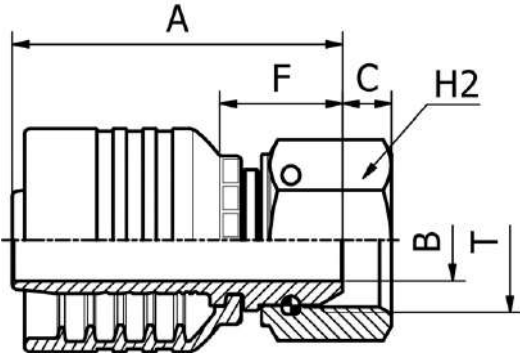
OPK14110R

NPTF
SWIVEL MALE 60° CONE SEAT
SAE J516/J514



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H2	
OPK14110-06A04R	10	- 6	3/8"	1/4" - 18	4.0	80.0	14.5	50.5	22.0	
OPK14110-06A06R	10	- 6	3/8"	3/8" - 18	7.0	80.0	14.5	50.5	22.0	
OPK14110-08A08R	12	- 8	1/2"	1/2" - 14	9.3	90.0	19.2	59.0	27.0	
OPK14110-12A12R	19	- 12	3/4"	3/4" - 14	16.0	94.5	19.2	58.0	32.0	
OPK14110-16A16R	25	- 16	1"	1" - 11,5	19.8	114	24.2	66.0	38.0	

Not to be used as a live swivel

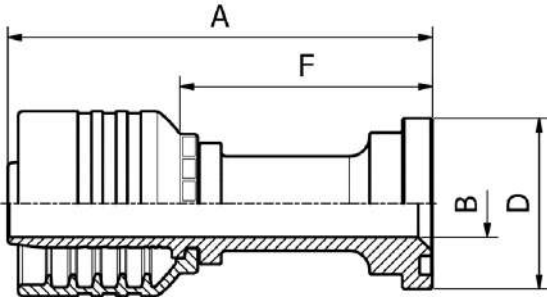


SAE STANDARD CONNECTIONS

OPK22812

**NPSM
FEMALE 60° CONE
SAE J516/J514
(THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPK22812-06A06	10	- 6	3/8"	3/8" - 18	7.0	50.5	6.0	21.0	22.0		
OPK22812-08A08	12	- 8	1/2"	1/2" - 14	9.3	54.0	6.5	23.0	27.0		
OPK22812-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.0	9.0	24.5	32.0		
OPK22812-16A16	25	- 16	1"	1" - 11,5	19.8	75.5	10.5	27.5	38.0		



SAE STANDARD CONNECTIONS

OPK23311

**ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3**

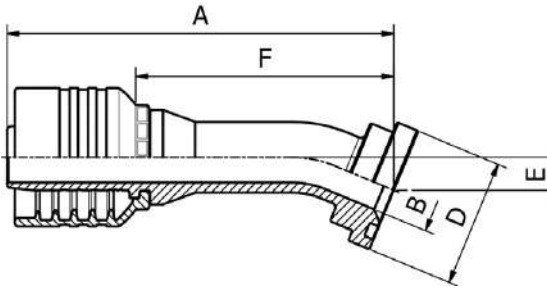
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	F			
OPK23311-08A08	12	- 8	1/2"	1/2"	9.3	82.0	30.3	51.0			
OPK23311-08A12	12	- 8	1/2"	3/4"	15.1	89.0	38.0	58.0			
OPK23311-10A12	16	- 10	5/8"	3/4"	15.0	100.0	38.0	65.5			
OPK23311-12A12	19	- 12	3/4"	3/4"	15.0	94.5	38.0	58.0			
OPK23311-12A16	19	- 12	3/4"	1"	20.0	94.5	44.6	58.0			
OPK23311-16A16	25	- 16	1"	1"	19.8	112.5	44.6	64.5			
OPK23311-16A20	25	- 16	1"	1.1/4"	26.0	118.5	51.0	70.5			
OPK23311-20A20	31	- 20	1.1/4"	1.1/4"	26.0	123.0	51.0	70.5			
OPK23311-20A24	31	- 20	1.1/4"	1.1/2"	32.0	125.0	60.5	72.5			
OPK23311-24A24	38	- 24	1.1/2"	1.1/2"	32.0	137.5	60.5	75.5			
OPK23311-24A32	38	- 24	1.1/2"	2"	42.0	137.5	71.6	75.5			
OPK23311-32A32	51	- 32	2"	2"	42.0	145.0	71.6	79.0			
OPK23311-32A40	51	- 32	2"	2.1/2"	56.0	147.0	84.3	81.0			

SAE STANDARD CONNECTIONS

OPK23321

22,5° ISO / SAE
CODE 61 FLANGE

SAE J516 / ISO 12151-3



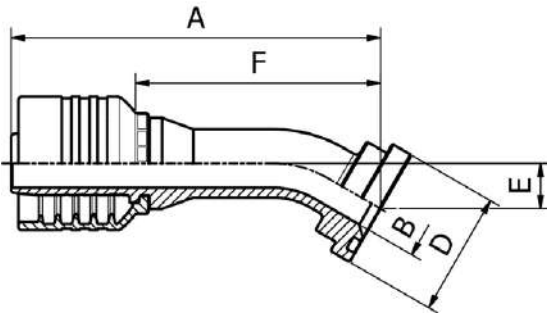
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23321-08A08	12	- 8	1/2"	1/2"		9.3	95.0	30.3	8.0	64.0		
OPK23321-12A12	19	- 12	3/4"	3/4"		15.0	111.0	38.0	10.0	74.5		
OPK23321-12A16	19	- 12	3/4"	1"		20.0	111.0	44.6	10.0	74.5		
OPK23321-16A16	25	- 16	1"	1"		19.8	137.0	44.6	11.5	89.0		
OPK23321-20A20	31	- 20	1.1/4"	1.1/4"		26.0	152.5	51.0	12.0	100.0		
OPK23321-20A24	31	- 20	1.1/4"	1.1/2"		32.0	154.5	60.5	13.0	102.0		

SAE STANDARD CONNECTIONS

OPK23331

30° ISO / SAE
CODE 61 FLANGE

SAE J516 / ISO 12151-3

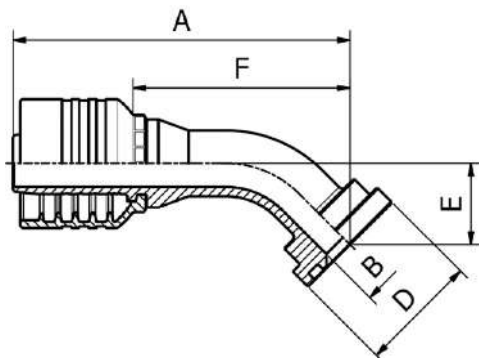


PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23331-08A08	12	- 8	1/2"	1/2"		9.3	93.5	30.3	11.0	62.5		
OPK23331-12A12	19	- 12	3/4"	3/4"		15.0	109.5	38.0	14.0	73.0		
OPK23331-12A16	19	- 12	3/4"	1"		20.0	109.5	44.6	14.0	73.0		
OPK23331-16A16	25	- 16	1"	1"		19.8	135.0	44.6	16.5	87.0		
OPK23331-20A20	31	- 20	1.1/4"	1.1/4"		26.0	150.5	51.0	17.5	98.0		
OPK23331-24A24	38	- 24	1.1/2"	1.1/2"		32.0	176.5	60.5	20.0	114.5		

SAE STANDARD CONNECTIONS

OPK23341

45° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3



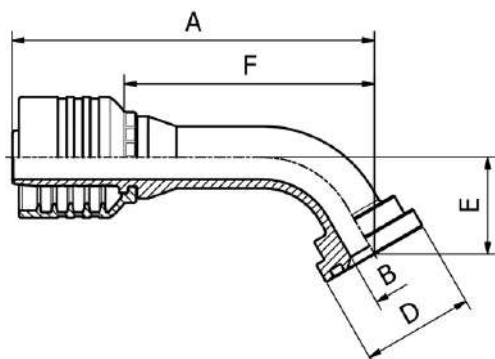
PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	F		
OPK23341-08A08	12	- 8	1/2"	1/2"	9.3	90.0	30.3	18.5	58.5		
OPK23341-08A12	12	- 8	1/2"	3/4"	15.0	90.5	38.0	19.0	59.5		
OPK23341-10A12	16	- 10	5/8"	3/4"	15.0	95.0	38.0	22.0	61.0		
OPK23341-12A12	19	- 12	3/4"	3/4"	15.0	104.5	38.0	23.0	68.5		
OPK23341-12A16	19	- 12	3/4"	1"	20.0	104.5	44.6	23.0	68.5		
OPK23341-16A16	25	- 16	1"	1"	19.8	129.5	44.6	27.5	81.5		
OPK23341-16A20	25	- 16	1"	1.1/4"	26.0	129.5	51.0	27.5	81.5		
OPK23341-20A20	31	- 20	1.1/4"	1.1/4"	26.0	144.5	51.0	29.5	92.0		
OPK23341-20A24	31	- 20	1.1/4"	1.1/2"	32.0	146.0	60.5	31.0	93.5		
OPK23341-24A24	38	- 24	1.1/2"	1.1/2"	32.0	169.5	60.5	34.5	107.5		
OPK23341-24A32	38	- 24	1.1/2"	2"	42.0	169.5	71.6	34.5	107.5		
OPK23341-32A32	51	- 32	2"	2"	42.0	190.0	71.6	39.0	124.0		

FITTINGS 270

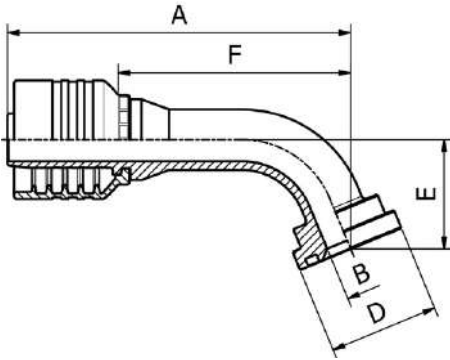
SAE STANDARD CONNECTIONS

OPK23361

60° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3



PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	F		
OPK23361-08A08	12	- 8	1/2"	1/2"	9.3	102.5	30.3	26.0	71.5		
OPK23361-12A12	19	- 12	3/4"	3/4"	15.0	123.5	38.0	33.0	87.0		
OPK23361-16A16	25	- 16	1"	1"	19.8	152.0	44.6	39.0	104.0		
OPK23361-16A20	25	- 16	1"	1.1/4"	26.0	152.0	51.0	39.0	104.0		
OPK23361-20A24	31	- 20	1.1/4"	1.1/2"	32.0	173.5	60.5	44.5	121.0		
OPK23361-20A20	31	- 20	1.1/4"	1.1/4"	26.0	172.5	51.0	43.0	120.0		
OPK23361-24A24	38	- 24	1.1/2"	1.1/2"	32.0	205.5	60.5	50.5	143.5		

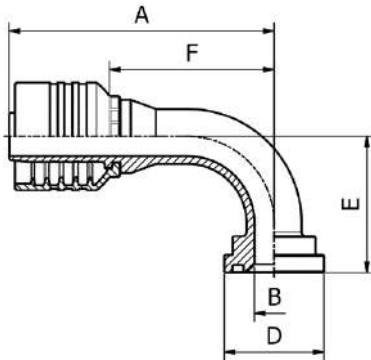


SAE STANDARD CONNECTIONS

OPK23371

67,5° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23371-08A08	12	- 8	1/2"	1/2"		9.3	99.0	30.3	29.5	68.0		
OPK23371-12A12	19	- 12	3/4"	3/4"		15.0	118.5	38.0	38.0	82.0		
OPK23371-12A16	19	- 12	3/4"	1"		20.0	118.5	44.6	38.0	82.0		
OPK23371-16A16	25	- 16	1"	1"		19.8	147.0	44.6	45.0	98.5		
OPK23371-20A20	31	- 20	1.1/4"	1.1/4"		26.0	166.5	51.0	50.0	114.0		
OPK23371-24A24	38	- 24	1.1/2"	1.1/2"		32.0	198.5	60.5	59.0	136.5		



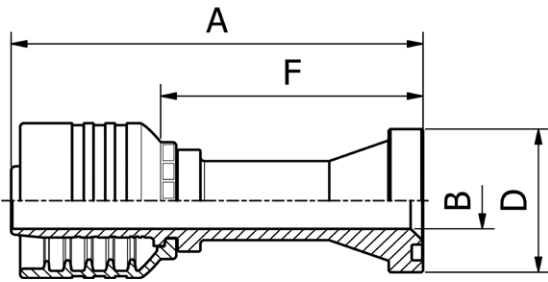
SAE STANDARD CONNECTIONS

OPK23391

90° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23391-08A08	12	- 8	1/2"	1/2"		9.3	85.5	30.3	40.0	54.5		
OPK23391-08A12	12	- 8	1/2"	3/4"		15.0	85.5	38.0	41.0	54.5		
OPK23391-10A12	16	- 10	5/8"	3/4"		15.0	90.0	38.0	47.5	56.0		
OPK23391-12A12	19	- 12	3/4"	3/4"		15.0	101.0	38.0	52.0	64.5		
OPK23391-12A16	19	- 12	3/4"	1"		20.0	101.0	44.6	52.0	64.5		
OPK23391-16A16	25	- 16	1"	1"		19.8	125.5	44.6	62.0	77.5		
OPK23391-16A20	25	- 16	1"	1.1/4"		26.0	125.5	51.0	62.0	77.5		
OPK23391-20A20	31	- 20	1.1/4"	1.1/4"		26.0	143.0	51.0	70.0	90.5		
OPK23391-20A24	31	- 20	1.1/4"	1.1/2"		32.0	143.0	60.5	72.0	90.5		
OPK23391-24A24	38	- 24	1.1/2"	1.1/2"		32.0	170.0	60.5	84.0	108.0		
OPK23391-24A32	38	- 24	1.1/2"	2"		42.0	170.0	71.6	84.0	108.0		
OPK23391-32A32	51	- 32	2"	2"		42.0	195.0	71.6	99.0	129.0		

SAE STANDARD CONNECTIONS

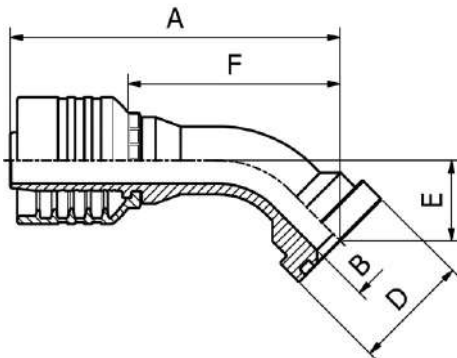


OPK23611

ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	F			
OPK23611-08A08	12	- 8	1/2"	1/2"	9.3	83.0	31.8	52.0			
OPK23611-08A12	12	- 8	1/2"	3/4"	15.0	99.5	41.5	68.5			
OPK23611-10A08	16	- 10	5/8"	1/2"	9.3	86.5	31.8	52.0			
OPK23611-10A12	16	- 10	5/8"	3/4"	15.0	104.5	41.5	70.0			
OPK23611-12A12	19	- 12	3/4"	3/4"	15.0	105.5	41.5	69.0			
OPK23611-12A16	19	- 12	3/4"	1"	20.0	117.5	47.7	81.0			
OPK23611-16A16	25	- 16	1"	1"	19.8	130.5	47.7	82.5			
OPK23611-16A20	25	- 16	1"	1.1/4"	26.0	138.0	54.2	90.0			
OPK23611-20A20	31	- 20	1.1/4"	1.1/4"	26.0	137.0	54.2	84.5			
OPK23611-20A24	31	- 20	1.1/4"	1.1/2"	32.0	143.0	63.7	90.5			
OPK23611-24A24	38	- 24	1.1/2"	1.1/2"	32.0	154.5	63.6	92.5			
OPK23611-32A32	51	- 32	2"	2"	42.0	175.0	79.5	109.0			

FITTINGS 272



SAE STANDARD CONNECTIONS

OPK23641

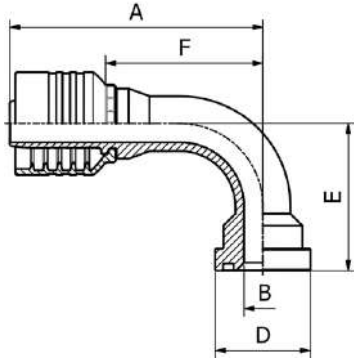
45° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	E	F		
OPK23641-08A08	12	- 8	1/2"	1/2"	9.3	93.5	31.8	22.0	62.0		
OPK23641-08A12	12	- 8	1/2"	3/4"	15.0	99.0	41.5	27.5	68.0		
OPK23641-10A12	16	- 10	5/8"	3/4"	15.0	102.0	41.5	31.0	67.5		
OPK23641-12A12	19	- 12	3/4"	3/4"	15.0	109.0	41.5	28.0	72.5		
OPK23641-12A16	19	- 12	3/4"	1"	20.0	114.0	47.7	32.5	77.0		
OPK23641-16A12	25	- 16	1"	3/4"	15.0	128.0	41.5	30.0	80.0		
OPK23641-16A16	25	- 16	1"	1"	19.8	132.0	47.7	32.5	83.5		
OPK23641-16A20	25	- 16	1"	1.1/4"	26.0	136.5	54.2	37.5	88.5		
OPK23641-20A20	31	- 20	1.1/4"	1.1/4"	26.0	147.5	54.2	37.5	95.0		
OPK23641-20A24	31	- 20	1.1/4"	1.1/2"	32.0	155.0	63.7	45.0	102.5		
OPK23641-24A24	38	- 24	1.1/2"	1.1/2"	32.0	180.0	63.7	44.0	118.0		
OPK23641-32A32	51	- 32	2"	2"	42.0	217.5	79.6	60.5	151.5		

SAE STANDARD CONNECTIONS

OPK23691

90° ISO / SAE
CODE 62 FLANGE
SAE J516 / ISO 12151-3



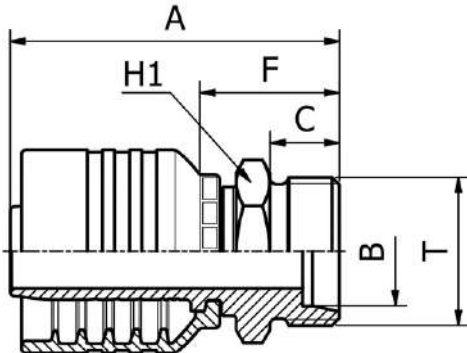
PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPK23691-08A08	12	- 8	1/2"	1/2"		9.3	85.5	31.8	45.0	54.5		
OPK23691-08A12	12	- 8	1/2"	3/4"		15.0	85.5	41.5	53.0	54.5		
OPK23691-10A12	16	- 10	5/8"	3/4"		15.0	87.5	41.5	60.5	53.5		
OPK23691-10A16	16	- 10	5/8"	1"		19.8	90.0	47.7	64.0	56.0		
OPK23691-12A12	19	- 12	3/4"	3/4"		15.0	100.5	41.5	59.0	64.0		
OPK23691-12A16	19	- 12	3/4"	1"		20.0	101.0	47.7	65.0	64.5		
OPK23691-16A16	25	- 16	1"	1"		19.8	121.5	47.7	68.0	73.5		
OPK23691-16A20	25	- 16	1"	1.1/4"		26.0	121.5	54.2	75.0	73.5		
OPK23691-20A20	31	- 20	1.1/4"	1.1/4"		26.0	138.0	54.2	81.0	85.5		
OPK23691-20A24	31	- 20	1.1/4"	1.1/2"		32.0	138.0	63.7	91.5	85.5		
OPK23691-24A24	38	- 24	1.1/2"	1.1/2"		32.0	168.0	63.7	94.5	106.0		
OPK23691-32A32	51	- 32	2"	2"		42.0	204.0	79.6	132.0	138.0		

273 FITTINGS

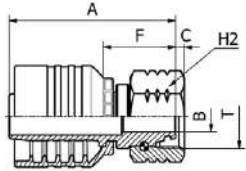
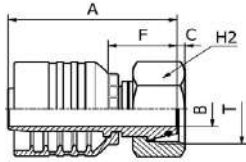
DIN STANDARD CONNECTIONS

OPK11110

METRIC
MALE 24° CONE SEAT LIGHT DUTY
DIN 20066 / ISO 12151-2



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	F	H1		
OPK11110-06A16	10	- 6	3/8"	M 16X1,5	10.0	7.0	53.5	11.0	24.0	17.0		
OPK11110-06A18	10	- 6	3/8"	M 18X1,5	12.0	9.0	54.0	11.0	24.5	19.0		
OPK11110-06A22	10	- 6	3/8"	M 22X1,5	15.0	10.0	55.0	12.0	25.5	22.0		
OPK11110-08A22	12	- 8	1/2"	M 22X1,5	15.0	10.0	56.5	12.0	25.5	22.0		
OPK11110-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	57.5	12.0	26.5	27.0		
OPK11110-10A22	16	- 10	5/8"	M 22X1,5	15.0	10.0	60.0	12.0	25.5	22.0		
OPK11110-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	61.0	12.0	26.5	27.0		
OPK11110-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	66.5	14.0	30.0	30.0		
OPK11110-16A36	25	- 16	1"	M 36X2	28.0	19.8	80.5	14.0	32.5	36.0		
OPK11110-20A45	31	- 20	1.1/4"	M 45X2	35.0	26.0	93.0	16.0	40.5	46.0		
OPK11110-24A52	38	- 24	1.1/2"	M 52X2	42.0	32.0	105.0	16.0	43.0	55.0		



DIN STANDARD CONNECTIONS

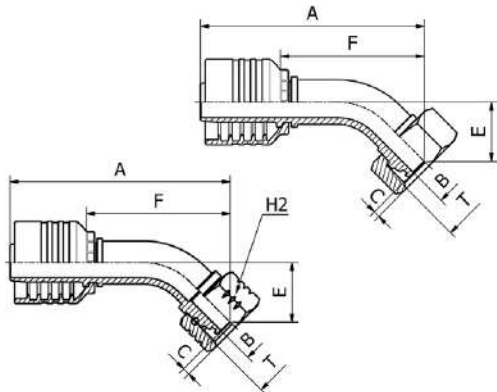
OPK21512/OPK21513

METRIC
O-RING FEMALE 24° CONE LIGHT DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	mm	B	A	C	F
OPK21512-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	52.5	3.0	23.0	19.0	
OPK21513-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	52.0	2.0	22.5	22.0	
OPK21513-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	54.5	1.5	25.0	27.0	
OPK21512-08A18	12	- 8	1/2"	M 18X1,5	12.0	7.0	60.0	2.9	29.0	22.0	
OPK21513-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	56.5	1.5	25.5	27.0	
OPK21513-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	57.0	2.0	26.0	32.0	
OPK21513-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	60.5	2.0	26.0	32.0	
OPK21513-10A30	16	- 10	5/8"	M 30X2	22.0	15.0	68.5	3.0	34.0	36.0	
OPK21512-12A26	19	- 12	3/4"	M 26X1,5	18.0	12.5	67.5	2.3	31.0	32.0	
OPK21513-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	64.5	3.0	28.0	36.0	
OPK21513-12A36	19	- 12	3/4"	M 36X2	28.0	20.0	65.0	3.7	28.5	41.0	
OPK21513-16A36	25	- 16	1"	M 36X2	28.0	19.8	77.5	3.7	29.5	41.0	
OPK21513-20A45	31	- 20	1.1/4"	M 45X2	35.0	26.0	85.5	4.0	33.0	50.0	
OPK21513-24A52	38	- 24	1.1/2"	M 52X2	42.0	32.0	95.0	4.5	33.0	60.0	

OPK21512: THRUST WIRE NUT / OPK21513: SLIP-ON NUT

DIN STANDARD CONNECTIONS



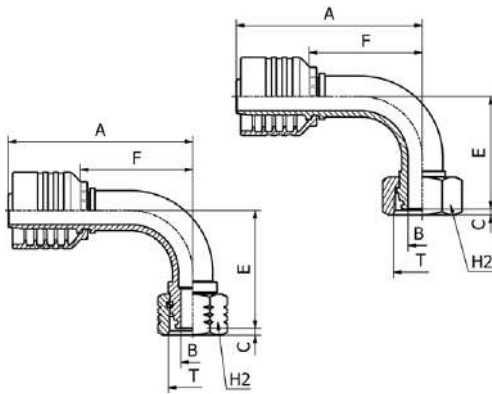
OPK21542/OPK21543

45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
LIGHT DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	mm	B	A	C	E
OPK21542-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	77.0	3.0	21.5	47.5	19.0
OPK21543-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	73.0	2.0	16.5	43.5	22.0
OPK21543-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	74.0	1.5	18.0	45.0	27.0
OPK21543-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	83.0	1.5	19.0	52.0	27.0
OPK21543-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	96.5	2.0	26.5	62.0	32.0
OPK21543-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	107.5	3.0	28.5	71.0	36.0
OPK21543-16A36	25	- 16	1"	M 36X2	28.0	19.8	133.0	3.7	32.0	85.0	41.0
OPK21543-20A45	31	- 20	1.1/4"	M 45X2	35.0	26.0	152.5	4.0	36.0	100.0	50.0
OPK21543-24A52	38	- 24	1.1/2"	M 52X2	42.0	32.0	179.0	4.5	44.5	117.0	60.0

OPK21542: THRUST WIRE NUT / OPK21543: SLIP-ON NUT

DIN STANDARD CONNECTIONS

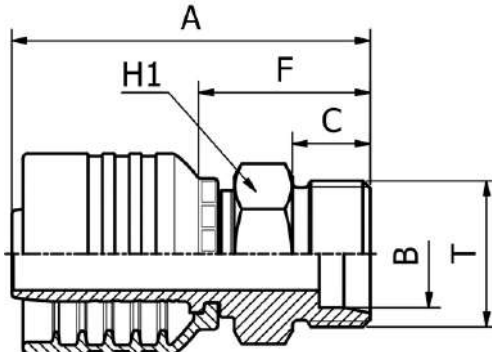


OPK21592/OPK21593

**90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
LIGHT DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	E	F	H2
OPK21592-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	65.0	3.0	40.0	35.5	19.0
OPK21593-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	66.0	2.0	33.5	36.5	22.0
OPK21593-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	66.0	1.5	35.0	36.5	27.0
OPK21592-08A18	12	- 8	1/2"	M 18X1,5	12.0	7.0	75.0	2.9	48.0	44.0	22.0
OPK21593-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	76.0	1.5	39.5	45.0	27.0
OPK21593-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	76.0	2.0	40.0	45.0	32.0
OPK21593-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	86.0	2.0	53.0	51.5	32.0
OPK21593-10A30	16	- 10	5/8"	M 30X2	22.0	15.0	86.0	3.0	54.0	51.5	36.0
OPK21593-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	97.5	3.0	59.5	61.5	36.0
OPK21593-16A36	25	- 16	1"	M 36X2	28.0	19.8	125.0	3.7	69.5	76.5	41.0
OPK21593-20A45	31	- 20	1.1/4"	M 45X2	35.0	26.0	146.0	4.0	81.0	93.5	50.0
OPK21593-24A52	38	- 24	1.1/2"	M 52X2	42.0	32.0	169.5	4.5	98.0	107.5	60.0

OPK21592: THRUST WIRE NUT / OPK21593: SLIP-ON NUT



DIN STANDARD CONNECTIONS

OPK11210

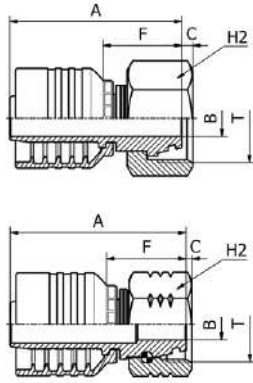
**METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	F	H1	
OPK11210-06A18	10	- 6	3/8"	M 18X1,5	10.0	7.0	56.5	12.0	27.0	19.0	
OPK11210-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	58.5	12.0	29.0	22.0	
OPK11210-06A22	10	- 6	3/8"	M 22X1,5	14.0	8.0	60.5	14.0	31.0	22.0	
OPK11210-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	62.5	14.0	31.5	24.0	
OPK11210-10A30	16	- 10	5/8"	M 30X2	20.0	15.0	70.0	16.0	35.5	30.0	
OPK11210-12A30	19	- 12	3/4"	M 30X2	20.0	15.0	73.5	16.0	37.0	30.0	
OPK11210-12A36	19	- 12	3/4"	M 36X2	25.0	19.8	77.5	18.0	41.0	36.0	
OPK11210-16A36	25	- 16	1"	M 36X2	25.0	19.8	90.5	18.0	42.5	36.0	
OPK11210-16A42	25	- 16	1"	M 42X2	30.0	25.0	92.5	20.0	44.5	46.0	
OPK11210-20A52	31	- 20	1.1/4"	M 52X2	38.0	30.0	103.5	22.0	51.0	55.0	

DIN STANDARD CONNECTIONS

OPK21612/OPK21613

**METRIC
O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2**



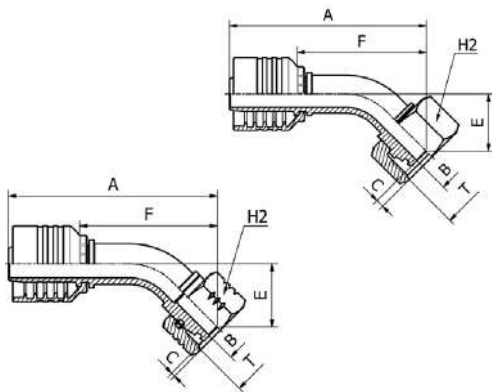
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	mm	B	A	C	F
OPK21613-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	54.5	2.0	25.5	24.0	
OPK21613-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	62.0	3.0	32.5	27.0	
OPK21613-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	58.0	4.0	26.5	30.0	
OPK21613-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	65.0	3.5	30.5	36.0	
OPK21612-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	70.0	2.2	33.5	36.0	
OPK21613-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	70.5	4.5	34.0	41.0	
OPK21612-16A36	25	- 16	1"	M 36X2	25.0	15.0	83.5	1.7	35.5	41.0	
OPK21613-16A42	25	- 16	1"	M 42X2	30.0	19.8	83.5	6.3	35.5	50.0	
OPK21613-20A52	31	- 20	1.1/4"	M 52X2	38.0	26.0	90.0	8.0	37.5	60.0	
OPK21613-24A52	38	- 24	1.1/2"	M 52X2	38.0	26.0	111.5	8.0	49.5	60.0	

OPK21612: THRUST WIRE NUT / OPK21613: SLIP-ON NUT

DIN STANDARD CONNECTIONS

OPK21642/OPK21643

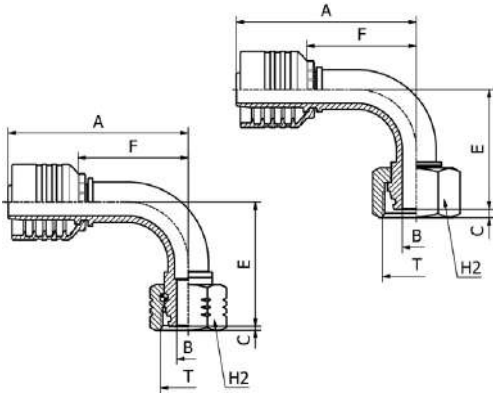
**45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2**



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	mm	B	A	C	E
OPK21643-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	73.5	2.0	17.0	44.0	24.0
OPK21643-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	75.0	3.0	18.5	45.5	27.0
OPK21643-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	83.5	4.0	20.0	52.5	30.0
OPK21643-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	99.5	3.5	29.5	65.5	36.0
OPK21642-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	113.0	2.2	34.0	76.5	36.0
OPK21643-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	111.5	4.5	32.5	75.0	41.0
OPK21643-16A42	25	- 16	1"	M 42X2	30.0	19.8	138.0	6.3	35.5	90.0	50.0
OPK21643-20A52	31	- 20	1.1/4"	M 52X2	38.0	26.0	155.5	8.0	39.5	103.0	60.0

OPK21642: THRUST WIRE NUT / OPK21643: SLIP-ON NUT

DIN STANDARD CONNECTIONS

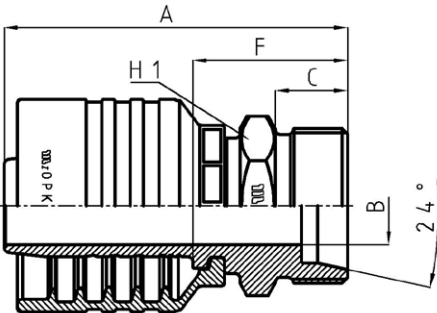


OPK21692/OPK21693

**90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	F
OPK21693-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	66.0	2.0	35.0	36.5	24.0	
OPK21693-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	66.0	3.0	37.0	36.5	27.0	
OPK21693-06A24	10	- 6	3/8"	M 24X1,5	16.0	9.3	66.0	4.0	36.0	36.5	30.0	
OPK21693-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	76.0	4.0	40.5	45.0	30.0	
OPK21693-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	86.0	3.5	57.5	51.5	36.0	
OPK21692-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	98.0	2.2	67.5	61.5	36.0	
OPK21693-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	97.5	4.5	64.5	61.5	41.0	
OPK21692-16A36	25	- 16	1"	M 36X2	25.0	15.0	127.5	1.7	86.0	79.5	41.0	
OPK21693-16A42	25	- 16	1"	M 42X2	30.0	19.8	127.5	6.3	74.5	79.0	50.0	
OPK21693-20A52	31	- 20	1.1/4"	M 52X2	38.0	26.0	146.0	8.0	85.5	93.5	60.0	

OPK21692: THRUST WIRE NUT / OPK21693: SLIP-ON NUT

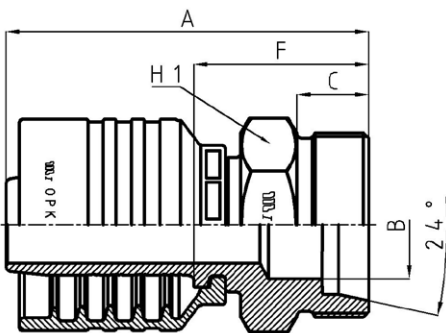


NF STANDARD CONNECTIONS

OPK11710

**FRENCH METRIC
MALE 24° CONE SEAT
MILLIMETRIC TYPE**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H1
OPK11710-12A30	19	- 12	3/4"	M 30X1,5	22.0	15.0	66.5	14.0	30.0	30.0		



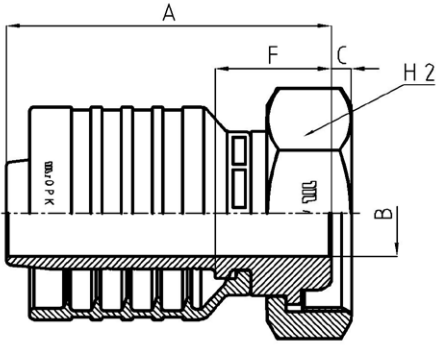
NF STANDARD CONNECTIONS

OPK11810

**FRENCH METRIC
MALE 24° CONE SEAT
GAZ TYPE**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H1
OPK11810-12A36	19	- 12	3/4"	M 36X1,5	26.8	21.0	70.5	14.0	34.0	36.0		

NF STANDARD CONNECTIONS



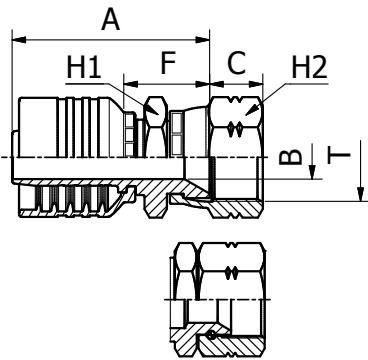
OPK21813

**FRENCH METRIC
FEMALE
GAZ TYPE**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	F	H2		
OPK21813-16A45	25	- 16	1"	M 45X1,5	33.5	19.8	75.0	4.5	27.0	50.0		

FITTINGS 278

JIS STANDARD CONNECTIONS



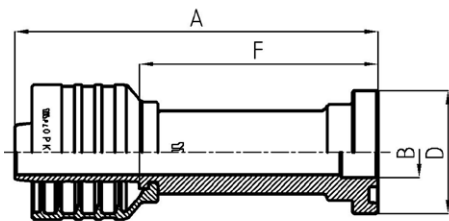
OPK24011/OPK24012

**JIS METRIC
FEMALE (KOMATSU)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1	H2	
OPK24011-06A18	10	- 6	3/8"	M 18X1,5	7.0	53.0	11.5	23.5	24.0	24.0	
OPK24011-08A22	12	- 8	1/2"	M 22X1,5	9.3	56.0	13.0	25.0	27.0	27.0	
OPK24011-10A24	16	- 10	5/8"	M 24X1,5	12.5	61.0	15.1	26.5	32.0	32.0	
OPK24011-12A30	19	- 12	3/4"	M 30X1,5	15.0	68.0	18.3	31.5	36.0	36.0	
OPK24011-16A33	25	- 16	1"	M 33X1,5	19.8	81.5	21.3	33.5	41.0	41.0	
OPK24012-24A42	38	- 24	1.1/2"	M 42X1,5	26.0	106.0	18.8	44.0	55.0	55.0	

OPK24011: CRIMPED BACK-NUT / OPK24012: THRUST WIRE NUT

ORIGINAL EQUIPMENT CONNECTIONS

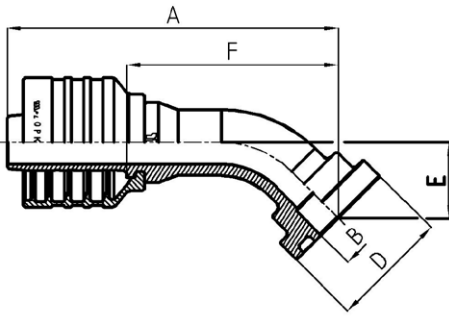


OPK24111

STRAIGHT KOMATSU FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch	inch	B	A	D	F			
OPK24111-10A10	16	- 10	5/8"	5/8"	14.0	100.0	34.0	65.5			

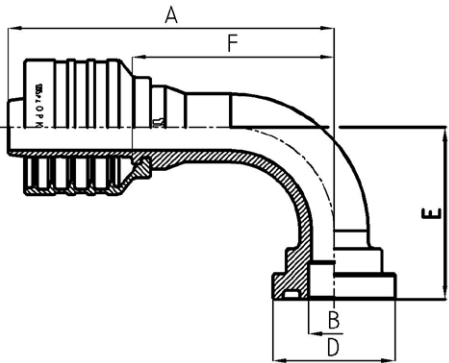
ORIGINAL EQUIPMENT CONNECTIONS



OPK24141

45° KOMATSU FLANGE

PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	E	F		
OPK24141-10A10	16	- 10	5/8"	5/8"		14.0	95.0	34.0	22.0	61.0		

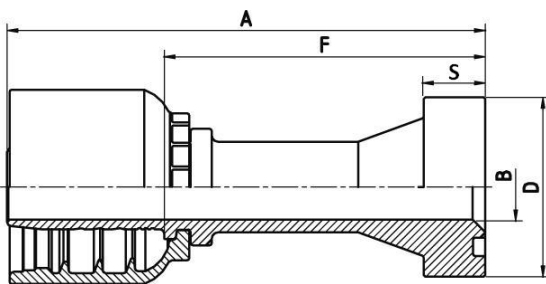


ORIGINAL EQUIPMENT CONNECTIONS

OPK24191

90° KOMATSU FLANGE

PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm						
	DN	Dash	inch			B	A	D	E	F		
OPK24191-10A10	16	- 10	5/8"	5/8"		14.0	90.0	34.0	47.5	56.0		

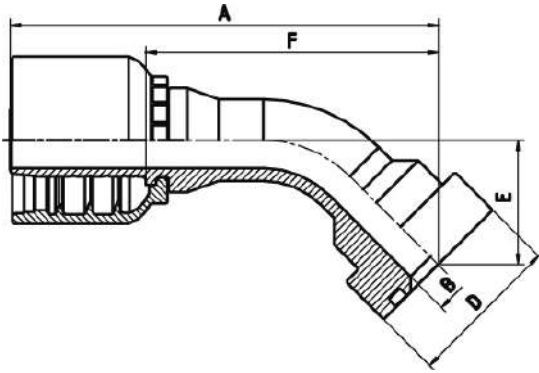


ORIGINAL EQUIPMENT CONNECTIONS

OPK23911

STRAIGHT SUPERCAT FLANGE

PART. REF.	HOSE BORE			Flange	inch	DIMENSIONS mm				
	DN	Dash	inch			B	A	D	F	S
OPK23911-12A12	19	- 12	3/4"	3/4"		15.0	111.0	41.5	74.5	14.3
OPK23911-16A16	25	- 16	1"	1"		19.8	135.0	47.7	87.0	14.3
OPK23911-16A20	25	- 16	1"	1.1/4"		26.0	140.5	54.0	92.5	14.3
OPK23911-20A20	31	- 20	1.1/4"	1.1/4"		26.0	138.5	54.0	86.0	14.3
OPK23911-24A24	38	- 24	1.1/2"	1.1/2"		32.0	156.0	63.6	94.0	14.3



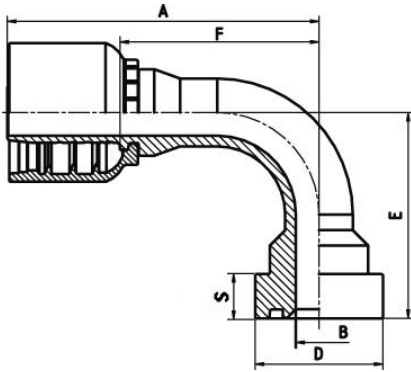
ORIGINAL EQUIPMENT CONNECTIONS

OPK23941

45° SUPERCAT FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	F	S
OPK23941-12A12	19	- 12	3/4"	3/4"	15.0	114.0	41.5	32.0	77.0	14.3	
OPK23941-16A16	25	- 16	1"	1"	19.8	138.0	47.7	36.5	89.5	14.3	
OPK23941-16A20	25	- 16	1"	1.1/4"	26.0	140.5	54.0	40.5	92.5	14.3	
OPK23941-20A20	31	- 20	1.1/4"	1.1/4"	26.0	151.5	54.0	41.5	99.0	14.3	

FITTINGS 280



ORIGINAL EQUIPMENT CONNECTIONS

OPK23991

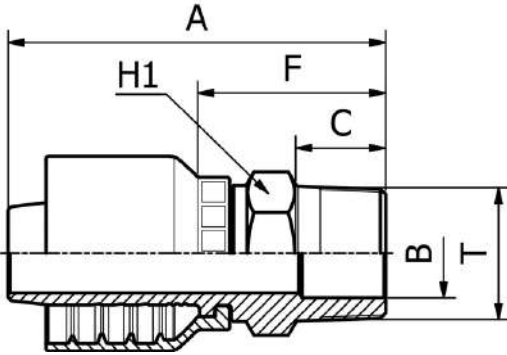
90° SUPERCAT FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	E	F	S
OPK23991-12A12	19	- 12	3/4"	3/4"	15.0	101.0	41.5	64.5	64.5	14.3	
OPK23991-16A16	25	- 16	1"	1"	19.8	125.5	47.7	76.5	77.5	14.3	
OPK23991-16A20	25	- 16	1"	1.1/4"	26.0	123.5	54.0	80.5	75.5	14.3	
OPK23991-20A20	31	- 20	1.1/4"	1.1/4"	26.0	138.0	54.0	87.0	85.5	14.3	

BS STANDARD CONNECTIONS

OPF10710

**BSP
MALE TAPERED**

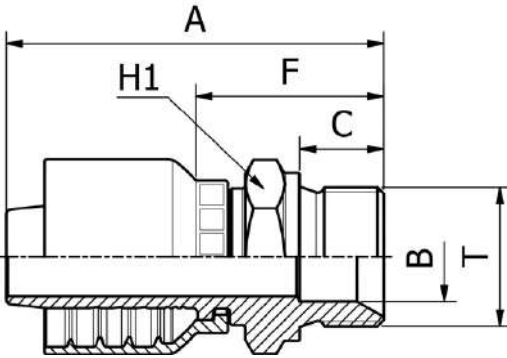


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF10710-08A08	12	- 8	1/2"	1/2" - 14	10.0	62.0	15.0	31.0	22.0		
OPF10710-10A12	16	- 10	5/8"	3/4" - 14	17.0	68.5	17.0	34.0	27.0		

BS STANDARD CONNECTIONS

OPF10510

**BSP
MALE PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6**

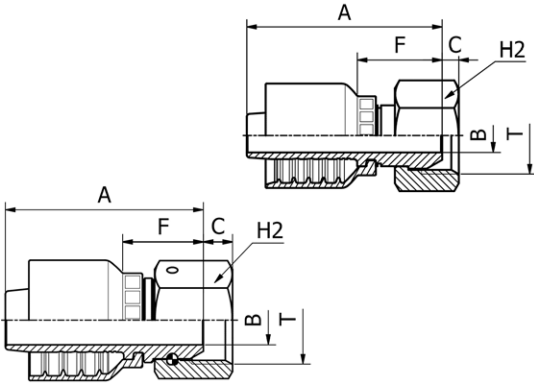


PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF10510-03A02	5	- 3	3/16"	1/8" - 28	3.5	44.0	10.0	22.5	14.0		
OPF10510-04A02	6	- 4	1/4"	1/8" - 28	3.5	50.0	10.0	22.5	14.0		
OPF10510-04A04	6	- 4	1/4"	1/4" - 19	5.0	53.0	11.0	25.5	19.0		
OPF10510-04A06	6	- 4	1/4"	3/8" - 19	8.0	54.5	12.0	27.0	22.0		
OPF10510-05A04	8	- 5	5/16"	1/4" - 19	5.0	54.0	11.0	26.0	19.0		
OPF10510-05A06	8	- 5	5/16"	3/8" - 19	8.0	55.5	12.0	27.5	22.0		
OPF10510-06A04	10	- 6	3/8"	1/4" - 19	5.0	55.5	11.0	26.0	19.0		
OPF10510-06A06	10	- 6	3/8"	3/8" - 19	8.0	57.5	12.0	28.0	22.0		
OPF10510-06A08	10	- 6	3/8"	1/2" - 14	11.0	60.0	14.0	30.5	27.0		
OPF10510-08A06	12	- 8	1/2"	3/8" - 19	8.0	59.0	12.0	28.0	22.0		
OPF10510-08A08	12	- 8	1/2"	1/2" - 14	11.0	62.0	14.0	31.0	27.0		
OPF10510-08A10	12	- 8	1/2"	5/8" - 14	14.5	64.0	16.0	33.0	30.0		
OPF10510-08A12	12	- 8	1/2"	3/4" - 14	17.0	65.0	16.0	34.0	32.0		
OPF10510-10A10	16	- 10	5/8"	5/8" - 14	14.5	67.5	16.0	33.0	30.0		
OPF10510-10A12	16	- 10	5/8"	3/4" - 14	17.0	68.5	16.0	34.0	32.0		
OPF10510-12A12	19	- 12	3/4"	3/4" - 14	17.0	72.0	16.0	35.5	32.0		
OPF10510-12A16	19	- 12	3/4"	1" - 11	22.5	76.0	19.0	39.5	41.0		
OPF10510-16A16	25	- 16	1"	1" - 11	22.5	89.0	19.0	41.0	41.0		
OPF10510-16A20	25	- 16	1"	1.1/4" - 11	28.5	93.0	20.0	45.0	50.0		

BS STANDARD CONNECTIONS

OPF20512/OPF20513

**BSP
FEMALE 60° CONE
BS5200 / ISO 12151-6**



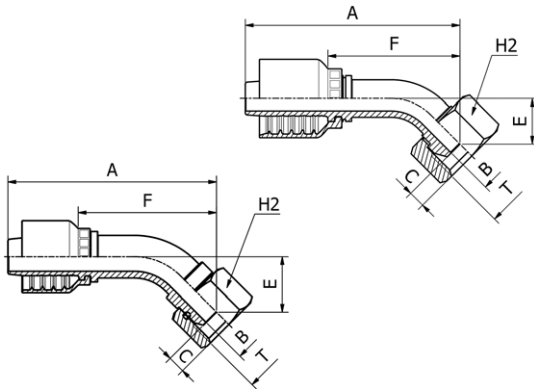
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	F	H2
OPF20512-03A02	5	- 3	3/16"	1/8" - 28	3.0	37.0	4.4	16.0	14.0	
OPF20513-03A04	5	- 3	3/16"	1/4" - 19	4.0	38.0	5.4	16.5	19.0	
OPF20512-04A02	6	- 4	1/4"	1/8" - 28	3.1	44.0	4.4	16.5	14.0	
OPF20513-04A04	6	- 4	1/4"	1/4" - 19	4.0	44.5	5.4	17.0	19.0	
OPF20513-04A06	6	- 4	1/4"	3/8" - 19	7.0	45.5	6.0	19.0	22.0	
OPF20512-05A04	8	- 5	5/16"	1/4" - 19	4.1	45.5	4.2	17.5	19.0	
OPF20513-05A06	8	- 5	5/16"	3/8" - 19	7.0	47.0	6.0	19.0	22.0	
OPF20512-06A04	10	- 6	3/8"	1/4" - 19	4.1	47.5	4.2	18.0	19.0	
OPF20513-06A06	10	- 6	3/8"	3/8" - 19	7.0	49.0	6.0	19.5	22.0	
OPF20513-06A08	10	- 6	3/8"	1/2" - 14	9.3	49.5	6.3	20.0	27.0	
OPF20512-08A06	12	- 8	1/2"	3/8" - 19	7.1	52.0	6.0	21.0	22.0	
OPF20513-08A08	12	- 8	1/2"	1/2" - 14	9.3	51.5	6.3	20.5	27.0	
OPF20512-08A10	12	- 8	1/2"	5/8" - 14	12.1	53.0	10.2	22.0	28.0	
OPF20512-08A12	12	- 8	1/2"	3/4" - 14	15.0	56.0	9.0	24.5	32.0	
OPF20512-10A10	16	- 10	5/8"	5/8" - 14	12.5	56.0	10.2	21.5	28.0	
OPF20512-10A12	16	- 10	5/8"	3/4" - 14	15.0	57.5	9.0	23.0	32.0	
OPF20512-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.0	9.0	24.5	32.0	
OPF20512-12A16	19	- 12	3/4"	1" - 11	19.8	62.5	10.5	26.0	38.0	
OPF20512-16A16	25	- 16	1"	1" - 11	19.8	75.5	10.5	27.5	38.0	

OPF20512: THRUST WIRE NUT / OPF20513: SLIP-ON NUT

BS STANDARD CONNECTIONS

OPF20542/OPF20543

**45° BSP
FEMALE ELBOW 60° CONE
BS5200 / ISO 12151-6**



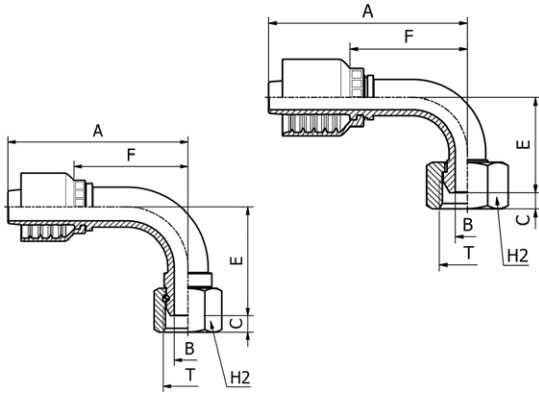
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch		T	B	A	C	E	F
OPF20543-04A04	6	- 4	1/4"	1/4" - 19	4.0	63.5	5.4	15.0	36.0	19.0
OPF20543-04A06	6	- 4	1/4"	3/8" - 19	7.0	65.0	6.0	16.0	37.5	22.0
OPF20543-05A06	8	- 5	5/16"	3/8" - 19	7.0	66.0	6.0	13.5	38.0	22.0
OPF20543-06A06	10	- 6	3/8"	3/8" - 19	7.0	71.5	6.0	15.5	42.0	22.0
OPF20543-06A08	10	- 6	3/8"	1/2" - 14	9.3	72.0	6.3	16.0	42.5	27.0
OPF20543-08A08	12	- 8	1/2"	1/2" - 14	9.3	81.0	6.3	17.0	49.5	27.0
OPF20542-08A10	12	- 8	1/2"	5/8" - 14	12.1	85.5	10.2	22.5	54.5	28.0
OPF20542-10A10	16	- 10	5/8"	5/8" - 14	12.5	97.5	10.2	26.0	63.0	28.0
OPF20542-10A12	16	- 10	5/8"	3/4" - 14	15.0	98.0	9.0	27.0	64.0	32.0
OPF20542-12A12	19	- 12	3/4"	3/4" - 14	15.0	107.0	9.0	28.5	70.5	32.0
OPF20542-12A16	19	- 12	3/4"	1" - 11	19.8	109.0	10.5	30.0	72.5	38.0
OPF20542-16A16	25	- 16	1"	1" - 11	19.8	139.5	10.5	36.5	91.0	38.0

OPF20542: THRUST WIRE NUT / OPF20543: SLIP-ON NUT

BS STANDARD CONNECTIONS

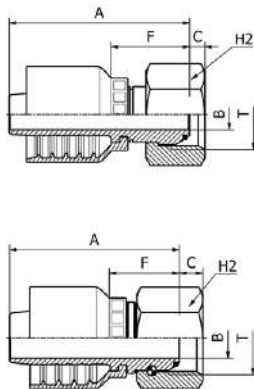
OPF20592/OPF20593

90° BSP
FEMALE ELBOW 60° CONE
BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPF20592-03A02	5	- 3	3/16"	1/8" - 28	3.0	43.0	4.4	26.0	21.5	14.0	
OPF20592-04A02	6	- 4	1/4"	1/8" - 28	3.1	56.0	4.4	27.0	28.5	14.0	
OPF20593-04A04	6	- 4	1/4"	1/4" - 19	4.0	57.0	5.4	29.0	29.5	19.0	
OPF20593-04A06	6	- 4	1/4"	3/8" - 19	7.0	57.0	6.0	31.0	29.5	22.0	
OPF20593-05A06	8	- 5	5/16"	3/8" - 19	7.0	60.0	6.0	27.5	32.0	22.0	
OPF20592-05A04	8	- 5	5/16"	1/4" - 19	4.0	54.5	4.1	29.5	26.5	19.0	
OPF20593-06A08	10	- 6	3/8"	1/2" - 14	9.3	66.0	6.3	32.0	36.5	27.0	
OPF20593-06A06	10	- 6	3/8"	3/8" - 19	7.0	66.0	6.0	31.5	36.5	22.0	
OPF20592-08A06	12	- 8	1/2"	3/8" - 19	7.1	76.0	6.0	41.0	45.0	22.0	
OPF20593-08A08	12	- 8	1/2"	1/2" - 14	9.3	76.0	6.3	36.5	45.0	27.0	
OPF20592-08A10	12	- 8	1/2"	5/8" - 14	12.1	75.5	10.2	44.0	44.0	28.0	
OPF20592-08A12	12	- 8	1/2"	3/4" - 14	15.0	75.5	9.0	45.5	44.0	32.0	
OPF20592-10A10	16	- 10	5/8"	5/8" - 14	12.5	88.0	10.2	53.5	53.5	28.0	
OPF20592-10A12	16	- 10	5/8"	3/4" - 14	15.0	88.0	9.0	55.0	53.5	32.0	
OPF20592-12A12	19	- 12	3/4"	3/4" - 14	15.0	98.0	9.0	59.5	61.5	32.0	
OPF20592-12A16	19	- 12	3/4"	1" - 11	19.8	98.0	10.5	62.0	61.5	38.0	
OPF20592-16A16	25	- 16	1"	1" - 11	19.8	127.5	10.5	76.0	79.5	38.0	

OPF20592: THRUST WIRE NUT / OPF20593: SLIP-ON NUT



BS STANDARD CONNECTIONS

OPF20812/OPF20813

BSP
O-RING FEMALE 60° CONE
BS5200 / ISO 12151-6

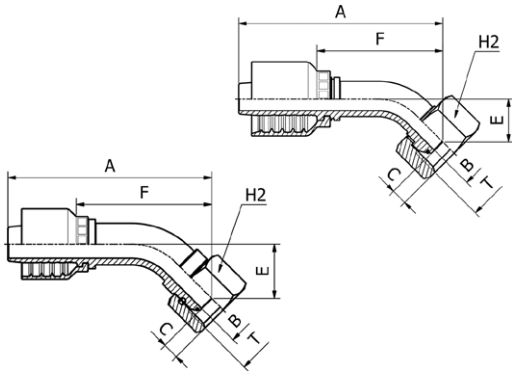
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H2	
OPF20813-04A04	6	- 4	1/4"	1/4" - 19	4.0	44.5	5.4	17.0	19.0		
OPF20812-06A04	10	- 6	3/8"	1/4" - 19	4.1	47.5	4.1	18.0	19.0		
OPF20813-06A06	10	- 6	3/8"	3/8" - 19	7.0	49.0	6.0	19.5	22.0		
OPF20813-08A08	12	- 8	1/2"	1/2" - 14	9.3	51.5	6.3	20.5	27.0		
OPF20812-10A10	16	- 10	5/8"	5/8" - 14	12.5	56.5	9.7	22.0	28.0		
OPF20812-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.5	8.5	25.0	32.0		
OPF20812-16A16	25	- 16	1"	1" - 11	19.8	75.5	10.6	27.5	38.0		
OPF20812-16A20	25	- 16	1"	1.1/4" - 11	26.1	79.0	10.5	31.0	50.0		

OPF20812: THRUST WIRE NUT / OPF20813: SLIP-ON NUT

BS STANDARD CONNECTIONS

OPF20842/OPF20843

45° BSP
O-RING FEMALE ELBOW 60° CONE
BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF20843-04A04	6	- 4	1/4"	1/4" - 19	4.0	63.5	5.4	14.5	36.0	19.0	
OPF20843-06A06	10	- 6	3/8"	3/8" - 19	7.0	71.5	6.0	15.5	42.0	22.0	
OPF20843-08A08	12	- 8	1/2"	1/2" - 14	9.3	81.0	6.3	17.0	49.5	27.0	
OPF20842-10A10	16	- 10	5/8"	5/8" - 14	12.5	98.0	9.7	27.5	63.5	28.0	
OPF20842-12A12	19	- 12	3/4"	3/4" - 14	15.0	107.5	8.5	29.0	71.0	32.0	
OPF20842-16A16	25	- 16	1"	1" - 11	19.8	138.5	10.6	35.5	90.5	38.0	

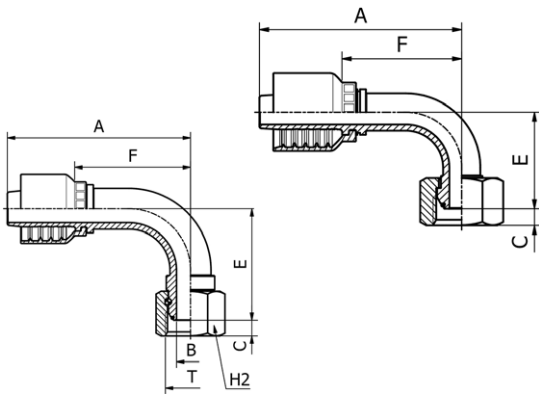
OPF20842: THRUST WIRE NUT / OPF20843: SLIP-ON NUT

FITTINGS 284

BS STANDARD CONNECTIONS

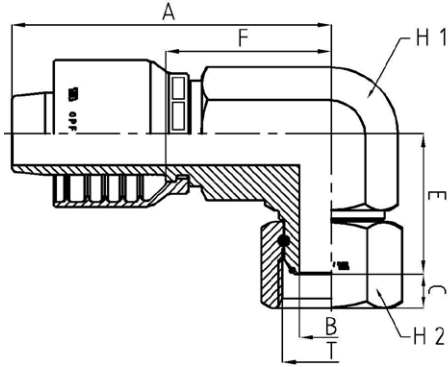
OPF20892/OPF20893

90° BSP
O-RING FEMALE SWEPT ELBOW 60° CONE
BS5200 / ISO 12151-6



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF20893-04A04	6	- 4	1/4"	1/4" - 19	4.0	57.0	5.4	29.0	29.5	19.0	
OPF20892-06A04	10	- 6	3/8"	1/4" - 19	4.1	65.0	4.1	33.0	35.5	19.0	
OPF20893-06A06	10	- 6	3/8"	3/8" - 19	7.0	66.0	6.0	31.5	36.5	22.0	
OPF20893-08A08	12	- 8	1/2"	1/2" - 14	9.3	76.0	6.3	36.5	45.0	27.0	
OPF20892-10A10	16	- 10	5/8"	5/8" - 14	12.5	87.5	9.7	55.0	53.0	28.0	
OPF20892-12A12	19	- 12	3/4"	3/4" - 14	15.0	98.0	8.5	60.0	61.5	32.0	
OPF20892-16A16	25	- 16	1"	1" - 11	19.8	127.5	10.6	76.0	79.5	38.0	
OPF20892-16A20	25	- 16	1"	1.1/4" - 11	26.1	127.5	10.5	78.5	79.5	50.0	

OPF20892: THRUST WIRE NUT / OPF20893: SLIP-ON NUT

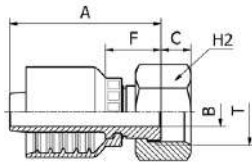


BS STANDARD CONNECTIONS

OPF20882F

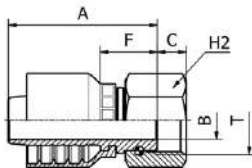
**90° BSP
O-RING FEMALE COMPACT ELBOW 60° CONE
BS5200 / ISO 12151-6
(THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	E	F	H1	H2	
OPF20882-04A04F	6	- 4	1/4"	1/4" - 19	4.0	47.5	4.1	22.0	20.0	14.0	19.0	
OPF20882-06A06F	10	- 6	3/8"	3/8" - 19	7.0	52.5	6.0	27.5	23.0	19.0	22.0	
OPF20882-08A08F	12	- 8	1/2"	1/2" - 14	9.3	56.0	6.5	31.0	25.0	22.0	27.0	
OPF20882-10A10F	16	- 10	5/8"	5/8" - 14	12.5	59.0	9.7	32.5	24.5	24.0	28.0	
OPF20882-12A12F	19	- 12	3/4"	3/4" - 14	15.0	74.0	8.5	36.0	37.5	27.0	32.0	
OPF20882-16A16F	25	- 16	1"	1" - 11	20.0	100.0	10.6	44.0	52.0	36.0	38.0	



BS STANDARD CONNECTIONS

OPF20612/OPF20613



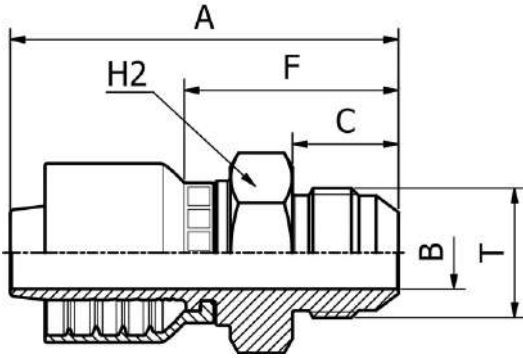
**BSP
FEMALE FLAT SEAT
(SLIP-ON NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	F	H2			
OPF20613-06A06	10	- 6	3/8"	3/8" - 19	7.0	46.0	9.0	16.5	22.0			
OPF20613-06A08	10	- 6	3/8"	1/2" - 14	9.3	47.0	9.8	17.5	27.0			
OPF20613-08A08	12	- 8	1/2"	1/2" - 14	9.3	49.0	9.8	18.0	27.0			
OPF20612-08A12	12	- 8	1/2"	3/4" - 14	15.0	52.0	11.5	21.0	32.0			

SAE STANDARD CONNECTIONS

OPF12510

JIC
MALE 37° CONE
SAE J516 / ISO 12151-5



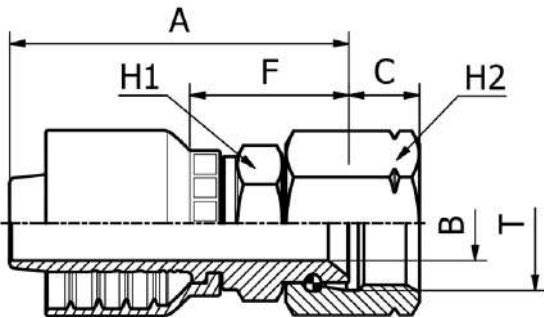
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF12510-04A04	6	- 4	1/4"	7/16" - 20	4.0	55.5	14.0	28.0	12.0		
OPF12510-04A05	6	- 4	1/4"	1/2" - 20	5.5	56.5	14.0	29.0	14.0		
OPF12510-04A06	6	- 4	1/4"	9/16" - 18	7.0	56.5	14.0	29.0	17.0		
OPF12510-05A05	8	- 5	5/16"	1/2" - 20	5.5	57.0	14.0	29.0	14.0		
OPF12510-05A06	8	- 5	5/16"	9/16" - 18	7.0	57.0	14.0	29.0	17.0		
OPF12510-06A06	10	- 6	3/8"	9/16" - 18	7.0	59.0	14.0	29.5	17.0		
OPF12510-06A08	10	- 6	3/8"	3/4" - 16	9.3	63.5	16.5	34.0	19.0		
OPF12510-06A10	10	- 6	3/8"	7/8" - 14	12.5	68.0	19.5	38.5	24.0		
OPF12510-08A06	12	- 8	1/2"	9/16" - 18	7.0	63.0	14.0	32.0	19.0		
OPF12510-08A08	12	- 8	1/2"	3/4" - 16	9.3	65.5	16.5	34.5	19.0		
OPF12510-08A10	12	- 8	1/2"	7/8" - 14	12.5	70.0	19.5	39.0	24.0		
OPF12510-08A12	12	- 8	1/2"	1.1/16" - 12	15.0	74.0	22.0	43.0	27.0		
OPF12510-10A10	16	- 10	5/8"	7/8" - 14	12.5	73.5	19.5	39.0	24.0		
OPF12510-10A12	16	- 10	5/8"	1.1/16" - 12	15.0	77.0	22.0	42.5	27.0		
OPF12510-12A10	19	- 12	3/4"	7/8" - 14	12.5	78.0	19.5	41.5	27.0		
OPF12510-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	80.5	22.0	44.0	27.0		
OPF12510-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	81.0	22.5	44.5	32.0		
OPF12510-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	83.5	23.0	47.0	34.0		
OPF12510-16A12	25	- 16	1"	1.1/16" - 12	15.0	93.0	22.0	45.0	32.0		
OPF12510-16A16	25	- 16	1"	1.5/16" - 12	19.8	96.0	23.0	48.0	34.0		
OPF12510-16A20	25	- 16	1"	1.5/8" - 12	26.0	101.0	24.3	53.0	42.0		

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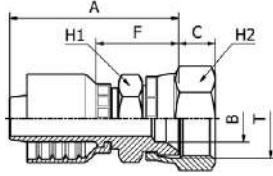
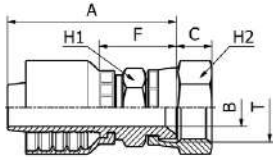
SAE STANDARD CONNECTIONS

OPF22712

JIC
FEMALE 37° CONE SEAT DOUBLE HEXAGON
SAE J516 / ISO 12151-5
(THRUST-WIRE NUT)



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1	H2	
OPF22712-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	69.5	14.3	33.0	30.0	36.0	
OPF22712-16A20	25	- 16	1"	1.5/8" - 12	26.0	91.0	16.2	43.0	41.0	50.0	



SAE STANDARD CONNECTIONS

OPF22711/OPF22711KR/ OPF22711K

JIC
FEMALE 37° CONE SEAT DOUBLE HEXAGON
SAE J516 / ISO 12151-5
(CRIMPED-BACK NUT)

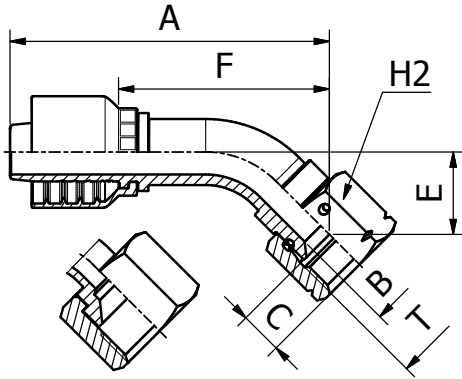
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	H2
OPF22711-03A04K	5	- 3	3/16"	7/16" - 20	4.0	41.5	8.9	20.0	12.0	15.0	
OPF22711-04A04KR	6	- 4	1/4"	7/16" - 20	4.0	48.0	8.9	20.5	12.0	15.0	
OPF22711-04A05KR	6	- 4	1/4"	1/2" - 20	4.0	48.5	9.4	21.0	14.0	17.0	
OPF22711-04A06KR	6	- 4	1/4"	9/16" - 18	7.0	49.0	9.5	21.5	14.0	17.0	
OPF22711-05A05KR	8	- 5	5/16"	1/2" - 20	4.0	49.5	9.4	21.5	17.0	17.0	
OPF22711-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	51.5	9.5	22.0	17.0	17.0	
OPF22711-06A08KR	10	- 6	3/8"	3/4" - 16	9.3	56.0	10.7	26.5	19.0	22.0	
OPF22711-08A12KR	12	- 8	1/2"	1.1/16" - 12	15.0	60.0	14.1	28.5	27.0	32.0	
OPF22711-08A06KR	12	- 8	1/2"	9/16" - 18	7.0	55.5	9.5	24.0	19.0	17.0	
OPF22711-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	58.0	10.7	27.0	19.0	22.0	
OPF22711-08A10KR	12	- 8	1/2"	7/8" - 14	9.3	60.5	12.5	29.5	22.0	25.0	
OPF22711-10A08KR	16	- 10	5/8"	3/4" - 16	9.3	62.5	10.7	28.5	22.0	22.0	
OPF22711-10A10KR	16	- 10	5/8"	7/8" - 14	9.3	64.0	12.5	29.5	22.0	25.0	
OPF22711-10A12KR	16	- 10	5/8"	1.1/16" - 12	15.0	63.5	14.1	29.0	27.0	32.0	
OPF22711-12A08KR	19	- 12	3/4"	3/4" - 16	9.3	66.0	10.7	29.5	27.0	22.0	
OPF22711-12A10KR	19	- 12	3/4"	7/8" - 14	12.5	67.0	12.5	30.5	27.0	25.0	
OPF22711-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	66.5	14.1	30.0	27.0	32.0	
OPF22711-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	71.0	15.3	34.5	32.0	38.0	
OPF22711-16A12KR	25	- 16	1"	1.1/16" - 12	15.0	80.5	14.1	32.5	32.0	32.0	
OPF22711-16A16	25	- 16	1"	1.5/16" - 12	19.8	83.5	15.3	35.5	32.0	38.0	

KR: CRIMPED KOMPACT ROBUST BACK-NUT

SAE STANDARD CONNECTIONS

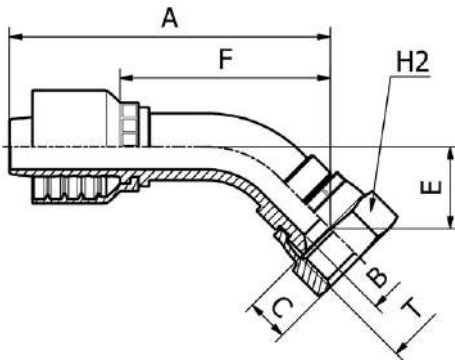
OPF22542/OPF22543

45° JIC
FEMALE SWEPT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPF22542-04A04	6	- 4	1/4"	7/16" - 20	4.0	63.0	8.7	14.5	35.5	17.0	
OPF22542-04A05	6	- 4	1/4"	1/2" - 20	4.0	63.0	9.1	14.5	35.5	17.0	
OPF22543-04A06	6	- 4	1/4"	9/16" - 18	4.0	63.0	9.8	14.0	35.5	19.0	
OPF22542-05A05	8	- 5	5/16"	1/2" - 20	5.5	65.5	9.1	14.0	37.5	17.0	
OPF22542-05A06	8	- 5	5/16"	9/16" - 18	7.0	66.0	9.2	14.5	38.0	19.0	
OPF22542-06A06	10	- 6	3/8"	9/16" - 18	7.0	71.5	9.2	16.5	42.0	19.0	
OPF22543-06A08	10	- 6	3/8"	3/4" - 16	7.0	70.5	10.1	14.0	41.0	22.0	
OPF22543-06A10	10	- 6	3/8"	7/8" - 14	9.3	72.0	12.4	15.5	42.5	27.0	
OPF22542-08A08	12	- 8	1/2"	3/4" - 16	9.3	83.0	10.2	20.0	52.0	22.0	
OPF22543-08A10	12	- 8	1/2"	7/8" - 14	9.3	80.5	12.4	17.0	49.5	27.0	
OPF22543-08A12	12	- 8	1/2"	1.1/16" - 12	12.5	80.5	14.1	17.0	49.5	32.0	
OPF22542-10A10	16	- 10	5/8"	7/8" - 14	12.5	96.5	12.3	25.5	62.0	27.0	
OPF22543-10A12	16	- 10	5/8"	1.1/16" - 12	12.5	94.5	14.1	24.0	60.0	32.0	
OPF22542-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	106.0	14.2	27.5	70.0	32.0	
OPF22542-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	106.0	14.3	27.5	69.5	36.0	
OPF22542-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	106.5	15.0	27.5	70.0	38.0	
OPF22542-16A12	25	- 16	1"	1.1/16" - 12	15.0	120.5	14.2	27.5	72.5	32.0	
OPF22542-16A16	25	- 16	1"	1.5/16" - 12	19.8	132.5	15.0	32.0	84.0	38.0	
OPF22542-16A20	25	- 16	1"	1.5/8" - 12	26.0	138.0	16.2	36.0	90.0	50.0	

OPF22542: THRUST WIRE NUT / OPF22543: SLIP-ON NUT



SAE STANDARD CONNECTIONS

OPF22541KR

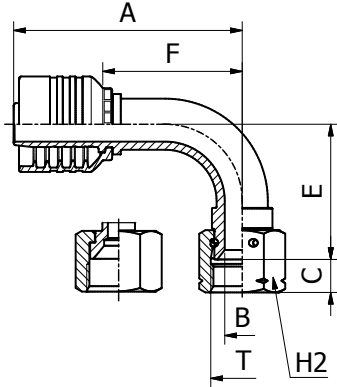
45° ELBOW JIC
FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5
(CRIMPED-BACK NUT)

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	E	F	H2
OPF22541-04A04KR	6	- 4	1/4"	7/16" - 20	4.2	62.0	8.9	13.5	34.5	15.0	
OPF22541-04A05KR	6	- 4	1/4"	1/2" - 20	4.0	62.5	9.4	14.0	35.0	17.0	
OPF22541-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	71.5	9.5	16.0	42.0	17.0	
OPF22541-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	83.0	10.7	20.0	52.0	22.0	
OPF22541-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	95.5	12.5	22.5	61.0	25.0	
OPF22541-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	105.5	14.1	26.5	69.0	32.0	

SAE STANDARD CONNECTIONS

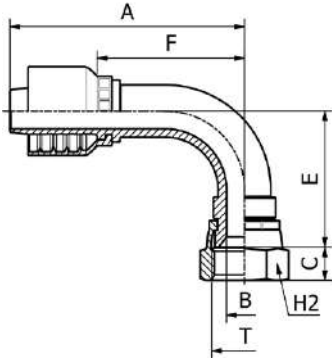
OPF22592/OPF22593

90° JIC
FEMALE ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF22593-03A04	5	- 3	3/16"	7/16" - 20	3.0	47.5	8.5	23.5	26.0	15.0	
OPF22592-04A04	6	- 4	1/4"	7/16" - 20	4.0	56.0	8.7	27.0	28.5	17.0	
OPF22592-04A05	6	- 4	1/4"	1/2" - 20	4.0	56.0	9.1	27.5	28.5	17.0	
OPF22593-04A06	6	- 4	1/4"	9/16" - 18	4.0	57.0	9.8	28.0	29.5	19.0	
OPF22593-04A08	6	- 4	1/4"	3/4" - 16	7.0	57.0	10.0	30.5	29.5	22.0	
OPF22592-05A05	8	- 5	5/16"	1/2" - 20	5.5	59.0	9.1	28.0	31.0	17.0	
OPF22592-05A06	8	- 5	5/16"	9/16" - 18	7.0	59.0	9.2	28.5	31.0	19.0	
OPF22592-06A05	10	- 6	3/8"	1/2" - 20	5.5	59.5	9.1	26.5	30.0	17.0	
OPF22592-06A06	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.2	32.5	35.5	19.0	
OPF22593-06A08	10	- 6	3/8"	3/4" - 16	7.0	66.0	10.1	29.5	36.5	22.0	
OPF22593-06A10	10	- 6	3/8"	7/8" - 14	9.3	66.0	12.4	31.5	36.5	27.0	
OPF22592-08A06	12	- 8	1/2"	9/16" - 18	7.0	68.0	9.2	33.0	37.0	19.0	
OPF22592-08A08	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.2	41.0	44.0	22.0	
OPF22593-08A10	12	- 8	1/2"	7/8" - 14	9.3	76.0	12.4	36.0	45.0	27.0	
OPF22593-08A12	12	- 8	1/2"	1.1/16" - 12	12.5	76.0	14.1	36.0	45.0	32.0	
OPF22592-10A10	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.3	52.5	53.5	27.0	
OPF22593-10A12	16	- 10	5/8"	1.1/16" - 12	12.5	86.0	14.1	50.0	51.5	32.0	
OPF22592-12A10	19	- 12	3/4"	7/8" - 14	12.5	91.5	12.3	52.5	55.0	27.0	
OPF22592-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.2	58.0	62.0	32.0	
OPF22592-12A14	19	- 12	3/4"	1.3/16" - 12	15.0	99.0	14.3	58.0	63.0	36.0	
OPF22592-12A16	19	- 12	3/4"	1.5/16" - 12	19.8	99.0	15.0	57.5	63.0	38.0	
OPF22592-16A16	25	- 16	1"	1.5/16" - 12	19.8	124.0	15.0	68.5	76.0	38.0	
OPF22592-16A20	25	- 16	1"	1.5/8" - 12	26.0	125.5	16.2	74.5	77.5	50.0	

OPF22592: THRUST WIRE NUT / OPF22593: SLIP-ON NUT



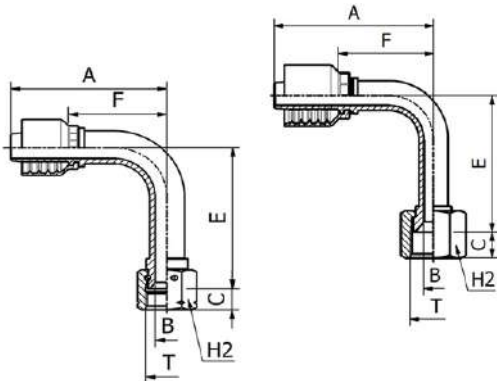
SAE STANDARD CONNECTIONS

OPF22591KR

**90° ELBOW JIC
FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5
(CRIMPED-BACK NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF22591-04A04KR	6	- 4	1/4"	7/16" - 20	4.2	56.0	8.9	26.0	28.5	15.0	
OPF22591-04A05KR	6	- 4	1/4"	1/2" - 20	4.0	56.0	9.4	26.5	28.5	17.0	
OPF22591-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.5	32.0	35.5	17.0	
OPF22591-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.7	40.5	44.0	22.0	
OPF22591-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.5	47.0	53.5	25.0	
OPF22591-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.1	57.0	62.0	32.0	

FITTINGS 290



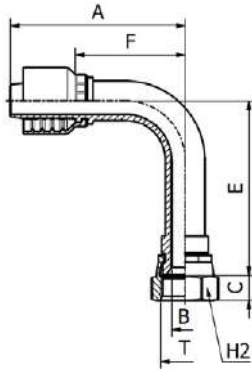
SAE STANDARD CONNECTIONS

OPF24792/OPF24793

**90° JIC
FEMALE LONG DROP ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF24792-04A04	6	- 4	1/4"	7/16" - 20	4.0	56.0	8.7	45.0	28.5	17.0	
OPF24792-04A05	6	- 4	1/4"	1/2" - 20	4.0	56.0	9.1	45.0	28.5	17.0	
OPF24793-04A06	6	- 4	1/4"	9/16" - 18	4.0	57.0	9.8	55.5	29.5	19.0	
OPF24792-08A08	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.2	61.0	44.0	22.0	
OPF24792-06A06	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.2	55.0	35.5	19.0	
OPF24793-06A08	10	- 6	3/8"	3/4" - 16	7.0	66.0	10.1	61.5	36.5	22.0	
OPF24793-08A10	12	- 8	1/2"	7/8" - 14	9.3	76.0	12.4	65.0	45.0	27.0	
OPF24792-10A10	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.3	65.5	53.5	27.0	
OPF24792-12A12	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.2	94.5	62.0	32.0	
OPF24792-16A16	25	- 16	1"	1.5/16" - 12	19.8	125.5	15.0	110.0	77.5	38.0	

OPF24792: THRUST WIRE NUT / OPF24793: SLIP-ON NUT

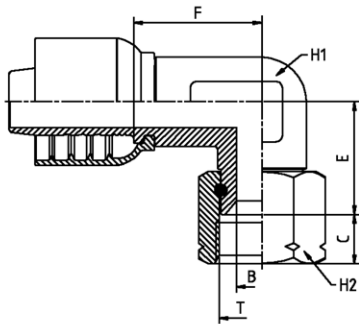


SAE STANDARD CONNECTIONS

OPF24791KR

**90° LONG DROP ELBOW JIC
FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5
(CRIMPED-BACK NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	E	F	H2		
OPF24791-04A04KR	6	- 4	1/4"	7/16" - 20	4.2	56.0	8.9	45.0	28.5	15.0		
OPF24791-06A06KR	10	- 6	3/8"	9/16" - 18	7.0	65.0	9.5	55.0	35.5	17.0		
OPF24791-08A08KR	12	- 8	1/2"	3/4" - 16	9.3	75.5	10.7	64.0	44.0	22.0		
OPF24791-10A10KR	16	- 10	5/8"	7/8" - 14	12.5	88.0	12.5	70.0	53.5	25.0		
OPF24791-12A12KR	19	- 12	3/4"	1.1/16" - 12	15.0	98.0	14.1	96.0	62.0	32.0		



SAE STANDARD CONNECTIONS

OPF22582F

**90° JIC
FEMALE COMPACT ELBOW 37° CONE SEAT
SAE J516 / ISO 12151-5
(THRUST-WIRE NUT)**

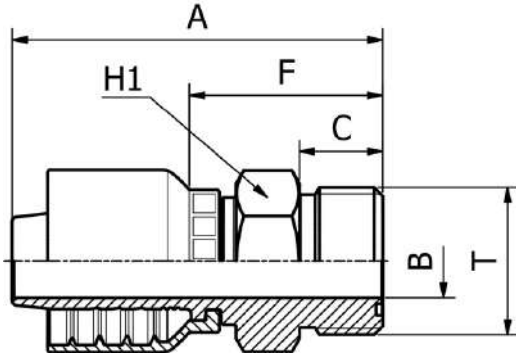
PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	E	F	H1	H2	
OPF22582-04A04F	6	- 4	1/4"	7/16" - 20	4.0	47.5	8.7	20.5	20.0	14.0	17.0	
OPF22582-04A06F	6	- 4	1/4"	9/16" - 18	7.0	47.5	9.2	21.5	20.0	14.0	19.0	
OPF22582-06A06F	10	- 6	3/8"	9/16" - 18	7.0	52.5	9.2	24.0	23.0	19.0	19.0	
OPF22582-06A08F	10	- 6	3/8"	3/4" - 16	9.3	56.0	10.2	28.0	26.5	22.0	22.0	
OPF22582-08A08F	12	- 8	1/2"	3/4" - 16	9.3	56.0	10.2	28.0	25.0	22.0	22.0	
OPF22582-08A10F	12	- 8	1/2"	7/8" - 14	12.5	56.0	12.3	29.0	25.0	22.0	27.0	
OPF22582-12A12F	19	- 12	3/4"	1.1/16" - 12	15.0	74.0	14.2	33.0	37.5	27.0	32.0	
OPF22582-16A16F	25	- 16	1"	1.5/16" - 12	20.0	100.0	15.0	40.0	52.0	36.0	38.0	

SAE STANDARD CONNECTIONS

OPF12410

ORFS
MALE

SAE J516 / ISO 12151-1



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF12410-04A04	6	- 4	1/4"	9/16" - 18	4.0	51.5	9.8	24.0	16.0		
OPF12410-04A06	6	- 4	1/4"	11/16" - 16	6.7	54.0	11.2	26.5	19.0		
OPF12410-05A06	8	- 5	5/16"	11/16" - 16	6.7	55.0	11.2	27.0	19.0		
OPF12410-06A06	10	- 6	3/8"	11/16" - 16	6.7	57.0	11.2	27.5	19.0		
OPF12410-06A08	10	- 6	3/8"	13/16" - 16	9.3	59.5	12.8	30.0	22.0		
OPF12410-08A08	12	- 8	1/2"	13/16" - 16	9.3	61.5	12.8	30.5	22.0		
OPF12410-08A10	12	- 8	1/2"	1" - 14	12.5	66.0	15.5	35.0	27.0		
OPF12410-10A10	16	- 10	5/8"	1" - 14	12.5	69.0	15.5	34.5	27.0		
OPF12410-10A12	16	- 10	5/8"	1.3/16" - 12	15.0	72.0	17.0	37.5	32.0		
OPF12410-12A12	19	- 12	3/4"	1.3/16" - 12	15.0	75.5	17.0	39.0	32.0		
OPF12410-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	77.0	17.5	40.5	38.0		
OPF12410-16A16	25	- 16	1"	1.7/16" - 12	19.8	90.0	17.5	42.0	38.0		

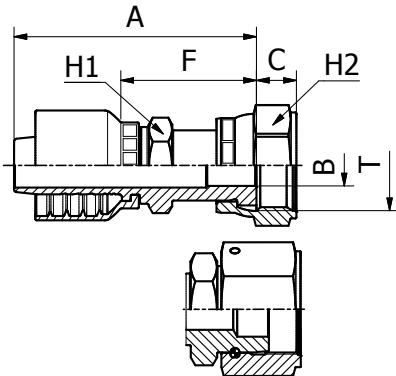
FITTINGS 292

SAE STANDARD CONNECTIONS

OPF22411 / OPF22412

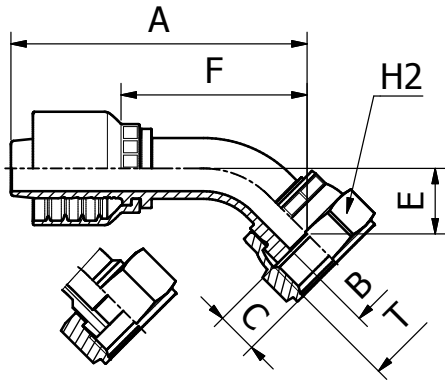
ORFS
FEMALE

SAE J516 / ISO 12151-1
PULL-BACK TYPE



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H1	H2
OPF22411-04A04	6	- 4	1/4"	9/16" - 18	4.0	55.0	8.0	27.5	13.0	19.0
OPF22411-04A06	6	- 4	1/4"	11/16" - 16	7.0	57.5	9.5	30.0	16.0	22.0
OPF22411-05A06	8	- 5	5/16"	11/16" - 16	7.0	58.5	9.5	30.5	16.0	22.0
OPF22411-06A06	10	- 6	3/8"	11/16" - 16	7.0	60.5	9.5	31.0	16.0	22.0
OPF22411-06A08	10	- 6	3/8"	13/16" - 16	9.3	65.0	11.0	35.5	19.0	24.0
OPF22411-08A06	12	- 8	1/2"	11/16" - 16	7.0	63.0	9.5	32.0	19.0	22.0
OPF22411-08A08	12	- 8	1/2"	13/16" - 16	9.3	67.0	11.0	36.0	19.0	24.0
OPF22411-08A10	12	- 8	1/2"	1" - 14	11.5	69.5	13.5	38.5	24.0	30.0
OPF22411-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	73.0	14.5	42.0	28.0	36.0
OPF22411-10A10	16	- 10	5/8"	1" - 14	11.5	73.0	13.5	38.5	24.0	30.0
OPF22411-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	76.5	14.5	42.0	28.0	36.0
OPF22411-12A10	19	- 12	3/4"	1" - 14	11.5	77.5	13.5	41.0	28.0	30.0
OPF22411-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	80.0	14.5	43.5	28.0	36.0
OPF22411-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	82.0	15.0	45.5	36.0	41.0
OPF22411-16A12	25	- 16	1"	1.3/16" - 12	13.9	94.0	13.5	48.0	36.0	36.0
OPF22411-16A16	25	- 16	1"	1.7/16" - 12	19.8	94.5	15.0	46.5	36.0	41.0

SAE STANDARD CONNECTIONS

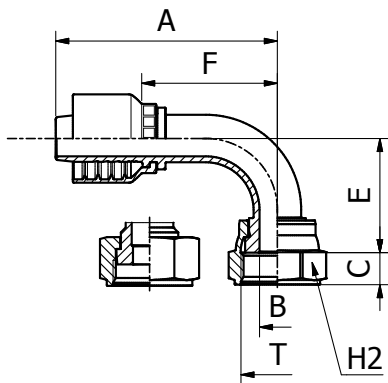


OPF22441 / OPF22443

**45° ORFS
FEMALE ELBOW
SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF22443-04A04	6	- 4	1/4"	9/16" - 18	4.0	58.5	8.2	10.5	31.0	17.0	
OPF22443-04A06	6	- 4	1/4"	11/16" - 16	7.0	58.5	9.5	10.5	31.0	22.0	
OPF22443-05A06	8	- 5	5/16"	11/16" - 16	7.0	62.0	9.5	10.5	34.0	22.0	
OPF22443-06A06	10	- 6	3/8"	11/16" - 16	6.0	61.5	9.5	11.0	32.5	22.0	
OPF22443-06A08	10	- 6	3/8"	13/16" - 16	9.3	63.0	11.0	12.5	34.0	24.0	
OPF22441-08A06	12	- 8	1/2"	11/16" - 16	7.0	63.5	9.5	11.0	32.5	22.0	
OPF22443-08A08	12	- 8	1/2"	13/16" - 16	9.0	73.0	11.0	13.0	42.0	24.0	
OPF22443-08A10	12	- 8	1/2"	1" - 14	11.5	73.0	13.5	13.5	42.0	30.0	
OPF22443-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	78.0	14.5	18.5	46.5	36.0	
OPF22443-10A10	16	- 10	5/8"	1" - 14	11.5	83.5	13.5	16.0	49.0	30.0	
OPF22443-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	86.0	14.5	18.5	51.5	36.0	
OPF22441-12A10	19	- 12	3/4"	1" - 14	11.5	87.0	13.5	16.5	50.5	30.0	
OPF22443-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	97.0	14.5	21.5	60.5	36.0	
OPF22443-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	96.5	14.8	21.0	60.0	41.0	
OPF22443-16A16	25	- 16	1"	1.7/16" - 12	19.8	120.0	14.8	23.5	72.0	41.0	
OPF22443-16A20	25	- 16	1"	1.11/16" - 12	26.0	122.0	14.8	25.0	74.0	50.0	

OPF22441: CRIMPED BACK-NUT / OPF22443: SLIP-ON NUT



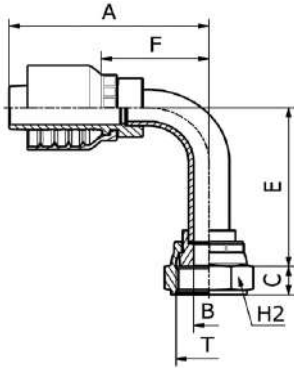
SAE STANDARD CONNECTIONS

OPF22491 / OPF22493

**90° ORFS
FEMALE SWEPT ELBOW
SAE J516 / ISO 12151-1**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF22493-04A04	6	- 4	1/4"	9/16" - 18	4.0	55.0	8.2	22.0	27.5	17.0	
OPF22493-04A06	6	- 4	1/4"	11/16" - 16	7.0	55.0	9.5	22.0	27.5	22.0	
OPF22493-05A06	8	- 5	5/16"	11/16" - 16	7.0	60.0	9.5	23.0	32.0	22.0	
OPF22493-06A06	10	- 6	3/8"	11/16" - 16	6.0	59.5	9.5	24.0	30.0	22.0	
OPF22493-06A08	10	- 6	3/8"	13/16" - 16	9.3	59.5	11.0	26.5	30.0	24.0	
OPF22491-08A06	12	- 8	1/2"	11/16" - 16	7.0	61.5	9.5	24.5	30.0	22.0	
OPF22493-08A08	12	- 8	1/2"	13/16" - 16	9.0	71.5	11.0	30.0	40.5	24.0	
OPF22493-08A10	12	- 8	1/2"	1" - 14	11.5	71.0	13.5	30.5	40.0	30.0	
OPF22493-08A12	12	- 8	1/2"	1.3/16" - 12	13.9	71.0	14.5	37.5	39.5	36.0	
OPF22493-10A10	16	- 10	5/8"	1" - 14	11.5	82.5	13.5	37.5	48.0	30.0	
OPF22493-10A12	16	- 10	5/8"	1.3/16" - 12	13.9	82.5	14.5	41.0	48.0	36.0	
OPF22491-12A10	19	- 12	3/4"	1" - 14	11.5	85.5	13.5	38.0	49.0	30.0	
OPF22493-12A12	19	- 12	3/4"	1.3/16" - 12	13.9	93.0	14.5	48.0	56.5	36.0	
OPF22493-12A16	19	- 12	3/4"	1.7/16" - 12	19.8	93.0	14.8	47.5	56.5	41.0	
OPF22491-16A12	25	- 16	1"	1.3/16" - 12	13.9	106.0	13.5	48.0	57.5	36.0	
OPF22493-16A16	25	- 16	1"	1.7/16" - 12	19.8	119.5	14.8	56.0	71.5	41.0	
OPF22493-16A20	25	- 16	1"	1.11/16" - 12	26.0	119.5	14.8	58.5	71.5	50.0	

OPF22491: CRIMPED BACK-NUT / OPF22493: SLIP-ON NUT



SAE STANDARD CONNECTIONS

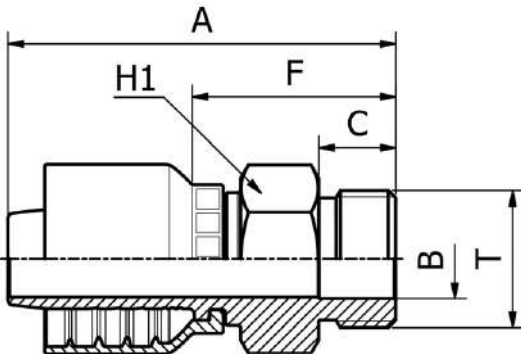
OPF24491

**90° ORFS
FEMALE LONG DROP ELBOW
SAE J516 / ISO 12151-1
(CRIMPED-BACK NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	E	F	H2	
OPF24491-04A04	6	- 4	1/4"	9/16" - 18	4.4	52.5	8.0	46.0	25.0	17.0	
OPF24491-06A06	10	- 6	3/8"	11/16" - 16	6.7	61.5	9.5	54.0	32.0	22.0	
OPF24491-06A08	10	- 6	3/8"	13/16" - 16	6.7	61.5	11.0	54.0	32.0	24.0	
OPF24491-08A08	12	- 8	1/2"	13/16" - 16	9.6	68.0	11.0	64.0	37.0	24.0	
OPF24491-08A10	12	- 8	1/2"	1" - 14	9.6	68.0	12.5	64.5	37.0	30.0	
OPF24491-10A10	16	- 10	5/8"	1" - 14	12.0	75.5	13.0	70.0	41.0	30.0	
OPF24491-10A12	16	- 10	5/8"	1.3/16" - 12	12.7	75.5	13.5	73.0	41.0	36.0	
OPF24491-12A12	19	- 12	3/4"	1.3/16" - 12	15.0	95.0	13.5	96.0	58.5	36.0	
OPF24491-16A16	25	- 16	1"	1.7/16" - 12	19.8	119.5	13.5	114.0	71.5	41.0	

All items made by brazing with the exception of OPF24491-12A12 and OPF24491-16A16

FITTINGS 294



SAE STANDARD CONNECTIONS

OPF13010

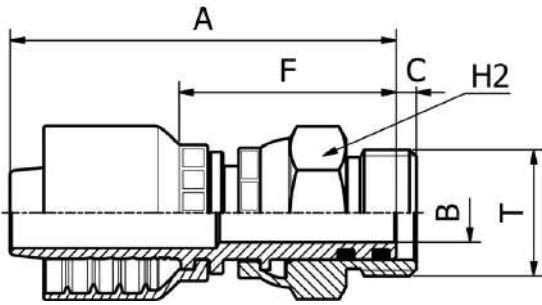
**SAE MALE
O-RING BOSS TYPE
SAE J516 / ISO 11926**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm					
	DN	Dash	inch	T	B	A	C	F	H1	
OPF13010-04A04	6	- 4	1/4"	7/16" - 20	4.4	51.5	9.1	24.0	14.0	
OPF13010-04A06	6	- 4	1/4"	9/16" - 18	7.5	52.0	9.9	24.5	17.0	
OPF13010-06A06	10	- 6	3/8"	9/16" - 18	7.5	55.0	9.9	25.5	17.0	
OPF13010-06A08	10	- 6	3/8"	3/4" - 16	9.9	58.0	11.1	28.5	22.0	
OPF13010-08A08	12	- 8	1/2"	3/4" - 16	9.9	60.0	11.1	29.0	22.0	
OPF13010-08A10	12	- 8	1/2"	7/8" - 14	12.3	63.0	12.7	32.0	25.0	
OPF13010-10A10	16	- 10	5/8"	7/8" - 14	12.5	63.0	12.7	32.0	25.0	
OPF13010-10A12	16	- 10	5/8"	1.1/16" - 12	15.5	72.0	15.1	37.5	32.0	
OPF13010-12A12	19	- 12	3/4"	1.1/16" - 12	15.5	76.0	15.1	39.5	32.0	
OPF13010-12A16	19	- 12	3/4"	1.5/16" - 12	21.5	76.5	15.1	40.0	38.0	
OPF13010-16A16	25	- 16	1"	1.5/16" - 12	21.5	89.5	15.1	41.0	38.0	

SAE STANDARD CONNECTIONS

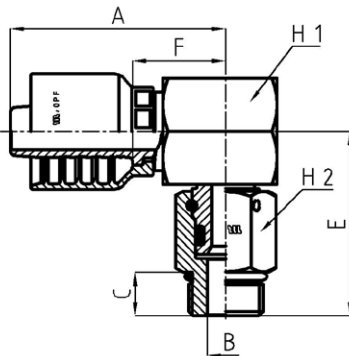
OPF14310

SAE
SWIVEL MALE OR. BOSS TYPE



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPF14310-04A04	6	- 4	1/4"	7/16" - 20	4.0	70.5	9.1	43.0	17.0		
OPF14310-04A06	6	- 4	1/4"	9/16" - 18	7.0	71.5	9.9	44.0	22.0		
OPF14310-06A06	10	- 6	3/8"	9/16" - 18	7.0	77.5	9.9	48.0	22.0		
OPF14310-06A08	10	- 6	3/8"	3/4" - 16	9.3	76.5	11.1	47.0	22.0		
OPF14310-08A08	12	- 8	1/2"	3/4" - 16	9.3	84.0	11.1	53.0	27.0		
OPF14310-08A10	12	- 8	1/2"	7/8" - 14	9.3	72.4	13.0	41.5	27.0		
OPF14310-12A12	19	- 12	3/4"	1.1/16" - 12	12.5	87.0	15.0	50.5	32.0		

Not to be used as a live swivel



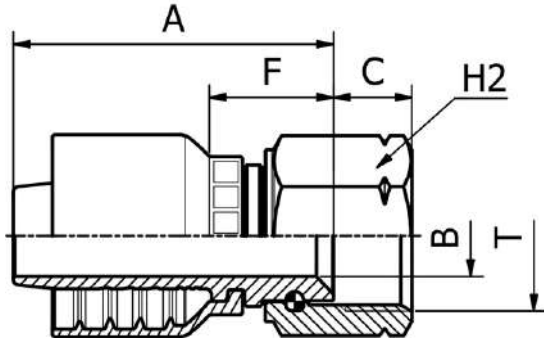
SAE STANDARD CONNECTIONS

OPF14390

90° SAE
SWIVEL MALE OR. BOSS

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch	T	B	A	C	E	F	H1	H2	
OPF14390-06A06	10	- 6	3/8"	9/16" - 18	5.7	49.5	9.9	40.0	20.0	22.0	17.0	
OPF14390-06A08	10	- 6	3/8"	3/4" - 16	9.3	49.5	11.1	44.5	20.0	22.0	22.0	
OPF14390-08A08	12	- 8	1/2"	3/4" - 16	9.3	54.5	11.1	47.0	23.5	27.0	22.0	
OPF14390-08A10	12	- 8	1/2"	7/8" - 14	9.8	54.5	13.0	47.0	23.5	27.0	27.0	
OPF14390-10A10	16	- 10	5/8"	7/8" - 14	9.8	58.0	13.0	47.0	23.5	27.0	27.0	
OPF14390-12A12	19	- 12	3/4"	1.1/16" - 12	13.0	64.5	15.0	58.5	28.0	34.0	32.0	

SAE STANDARD CONNECTIONS



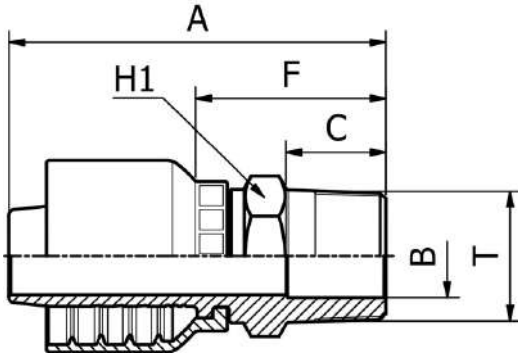
OPF22612

**SAE FEMALE
45° CONE SEAT
SAE J516 / J512
(THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H2	
OPF22612-06A06	10	- 6	3/8"	9/16" - 18	7.0	46.0	10.8	16.5	22.0		

FITTINGS 296

SAE STANDARD CONNECTIONS



OPF12810

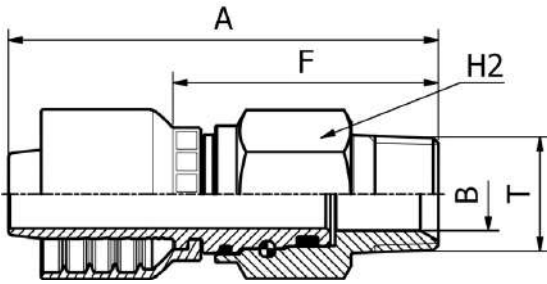
**NPTF
MALE 60° CONE SEAT
SAE J516 / J514**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch		T	B	A	C	F	H1	
OPF12810-03A02	5	- 3	3/16"	1/8" - 27	3.0	45.0	10.0	23.5	12.0		
OPF12810-03A04	5	- 3	3/16"	1/4" - 18	5.5	50.5	14.5	29.0	14.0		
OPF12810-04A02	6	- 4	1/4"	1/8" - 27	4.0	51.5	10.0	24.0	12.0		
OPF12810-04A04	6	- 4	1/4"	1/4" - 18	5.5	56.5	14.5	29.0	14.0		
OPF12810-04A06	6	- 4	1/4"	3/8" - 18	9.3	55.0	14.5	27.5	19.0		
OPF12810-04A08	6	- 4	1/4"	1/2" - 14	9.3	61.0	19.2	33.5	24.0		
OPF12810-05A04	8	- 5	5/16"	1/4" - 18	5.5	57.5	14.5	29.5	14.0		
OPF12810-05A06	8	- 5	5/16"	3/8" - 18	9.3	60.0	14.5	32.0	19.0		
OPF12810-06A04	10	- 6	3/8"	1/4" - 18	5.5	59.5	14.5	30.0	14.0		
OPF12810-06A06	10	- 6	3/8"	3/8" - 18	9.3	58.0	14.5	28.5	19.0		
OPF12810-06A08	10	- 6	3/8"	1/2" - 14	12.5	64.0	19.2	34.5	24.0		
OPF12810-08A06	12	- 8	1/2"	3/8" - 18	9.3	60.0	14.5	29.0	19.0		
OPF12810-08A08	12	- 8	1/2"	1/2" - 14	12.5	66.0	19.2	35.0	24.0		
OPF12810-08A12	12	- 8	1/2"	3/4" - 14	15.5	66.5	19.2	35.5	27.0		
OPF12810-10A08	16	- 10	5/8"	1/2" - 14	12.5	73.0	19.2	38.5	24.0		
OPF12810-10A12	16	- 10	5/8"	3/4" - 14	16.0	74.5	19.2	40.0	27.0		
OPF12810-12A08	19	- 12	3/4"	1/2" - 14	12.5	73.0	19.2	36.5	27.0		
OPF12810-12A12	19	- 12	3/4"	3/4" - 14	16.0	73.0	19.2	36.5	27.0		
OPF12810-12A16	19	- 12	3/4"	1" - 11,5	19.8	82.5	24.2	46.0	36.0		
OPF12810-16A12	25	- 16	1"	3/4" - 14	15.5	87.0	19.2	39.0	32.0		
OPF12810-16A16	25	- 16	1"	1" - 11,5	19.8	92.0	24.2	44.0	36.0		
OPF12810-16A20	25	- 16	1"	1.1/4" - 11,5	26.0	104.5	25.0	56.5	46.0		

SAE STANDARD CONNECTIONS

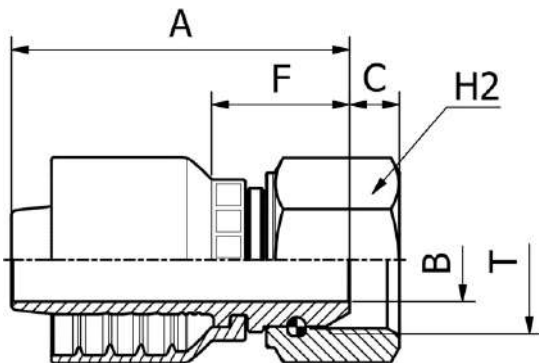
OPF14110R

**NPTF
SWIVEL MALE**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H1		
OPF14110-04A02R	6	- 4	1/4"	1/8" - 28	3.0	69.5	10.0	42.0	17.0		
OPF14110-04A04R	6	- 4	1/4"	1/4" - 18	4.0	74.0	14.5	46.5	17.0		
OPF14110-04A06R	6	- 4	1/4"	3/8" - 18	7.0	74.0	14.5	46.5	19.0		
OPF14110-06A04R	10	- 6	3/8"	1/4" - 18	4.0	80.0	14.5	50.5	22.0		
OPF14110-06A06R	10	- 6	3/8"	3/8" - 18	7.0	80.0	14.5	50.5	22.0		
OPF14110-06A08R	10	- 6	3/8"	1/2" - 14	9.3	84.5	19.2	55.0	24.0		
OPF14110-08A08R	12	- 8	1/2"	1/2" - 14	9.3	90.0	19.2	59.0	27.0		
OPF14110-12A12R	19	- 12	3/4"	3/4" - 14	16.0	94.5	19.2	58.0	32.0		
OPF14110-16A16R	25	- 16	1"	1" - 11	19.8	114.0	24.2	66.0	38.0		

Not to be used as a live swivel



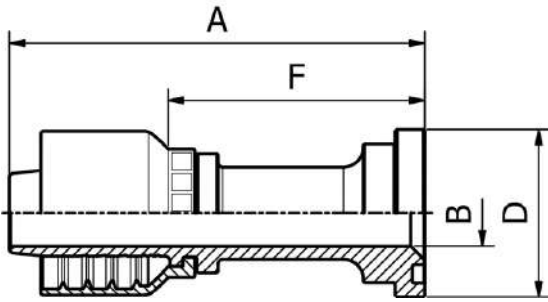
SAE STANDARD CONNECTIONS

OPF22812

**NPSM
FEMALE 60° CONE
SAE J516 / J514
(THRUST-WIRE NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm						
	DN	Dash	inch	T	B	A	C	F	H2		
OPF22812-04A04	6	- 4	1/4"	1/4" - 18	4.0	45.0	4.2	17.5	19.0		
OPF22812-06A06	10	- 6	3/8"	3/8" - 18	7.0	50.5	6.0	21.0	22.0		
OPF22812-08A08	12	- 8	1/2"	1/2" - 14	9.3	54.0	6.5	23.0	27.0		
OPF22812-12A12	19	- 12	3/4"	3/4" - 14	15.0	61.0	9.0	24.5	32.0		
OPF22812-16A16	25	- 16	1"	1" - 11,5	19.8	75.5	10.5	27.5	38.0		

SAE STANDARD CONNECTIONS

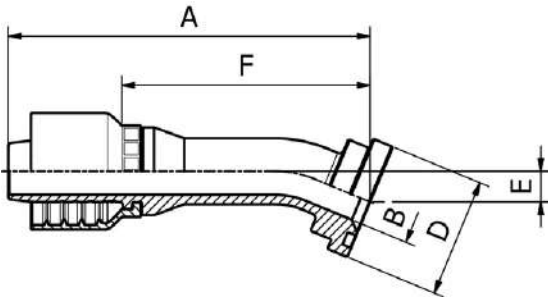


OPF23311

ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		inch	B	A	D	F		
OPF23311-08A08	12	- 8	1/2"	1/2"	9.3	82.0	30.3	51.0			
OPF23311-08A12	12	- 8	1/2"	3/4"	15.1	89.0	38.0	58.0			
OPF23311-10A12	16	- 10	5/8"	3/4"	15.0	100.0	38.0	65.5			
OPF23311-12A12	19	- 12	3/4"	3/4"	15.0	94.5	38.0	58.0			
OPF23311-12A16	19	- 12	3/4"	1"	20.0	94.5	44.6	58.0			
OPF23311-16A16	25	- 16	1"	1"	19.8	112.5	44.6	64.5			
OPF23311-16A20	25	- 16	1"	1.1/4"	26.0	118.5	51.0	70.5			

SAE STANDARD CONNECTIONS

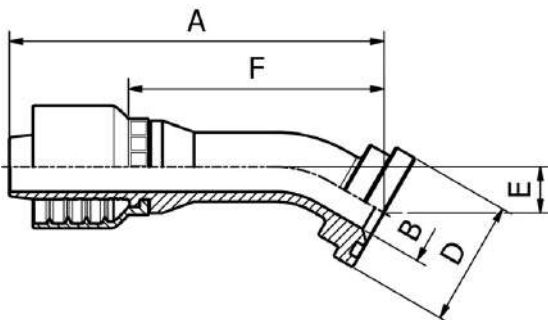


OPF23321

22,5° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	F
OPF23321-08A08	12	- 8	1/2"	1/2"	9.3	95.0	30.3	8.0	64.0	
OPF23321-12A12	19	- 12	3/4"	3/4"	15.0	111.0	38.0	10.0	74.5	
OPF23321-12A16	19	- 12	3/4"	1"	20.0	111.0	44.6	10.0	74.5	
OPF23321-16A16	25	- 16	1"	1"	19.8	137.0	44.6	11.5	89.0	

SAE STANDARD CONNECTIONS

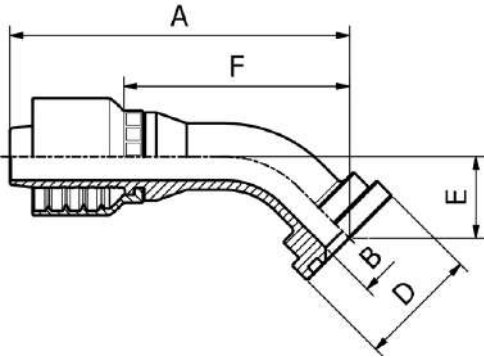


OPF23331

30° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm					
	DN	Dash	inch		inch	B	A	D	E	F
OPF23331-08A08	12	- 8	1/2"	1/2"	9.3	93.5	30.3	11.0	62.5	
OPF23331-12A12	19	- 12	3/4"	3/4"	15.0	109.5	38.0	14.0	73.0	
OPF23331-12A16	19	- 12	3/4"	1"	20.0	109.5	44.6	14.0	73.0	
OPF23331-16A16	25	- 16	1"	1"	19.8	135.0	44.6	16.5	87.0	

SAE STANDARD CONNECTIONS



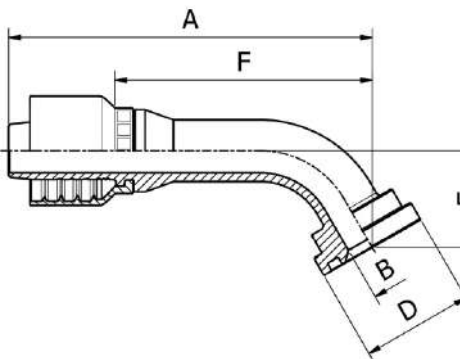
OPF23341

45° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF23341-08A08	12	- 8	1/2"	1/2"		9.3	90.0	30.3	18.5	58.5		
OPF23341-08A12	12	- 8	1/2"	3/4"		15.0	90.5	38.0	19.0	59.5		
OPF23341-10A12	16	- 10	5/8"	3/4"		15.0	95.0	38.0	22.0	61.0		
OPF23341-12A12	19	- 12	3/4"	3/4"		15.0	104.5	38.0	23.0	68.5		
OPF23341-12A16	19	- 12	3/4"	1"		20.0	104.5	44.6	23.0	68.5		
OPF23341-16A16	25	- 16	1"	1"		19.8	129.5	44.6	27.5	81.5		
OPF23341-16A20	25	- 16	1"	1.1/4"		26.0	129.5	51.0	27.5	81.5		

299 FITTINGS

SAE STANDARD CONNECTIONS

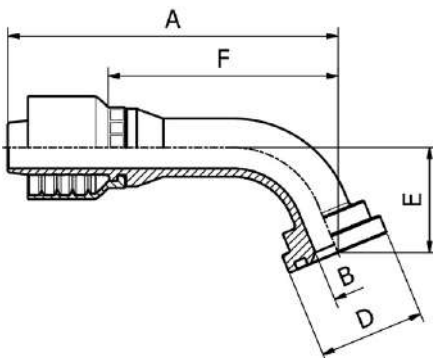


OPF23361

60° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF23361-08A08	12	- 8	1/2"	1/2"		9.3	102.5	30.3	26.0	71.5		
OPF23361-12A12	19	- 12	3/4"	3/4"		15.0	123.5	38.0	33.0	87.0		
OPF23361-16A16	25	- 16	1"	1"		19.8	152.0	44.6	39.0	104.0		
OPF23361-16A20	25	- 16	1"	1.1/4"		26.0	152.0	51.0	39.0	104.0		

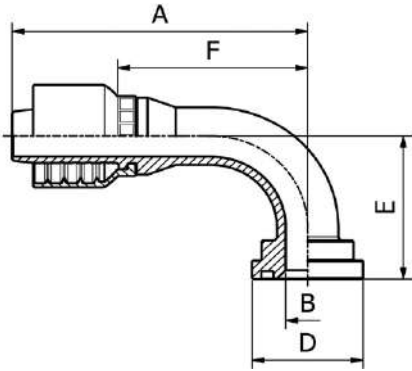
SAE STANDARD CONNECTIONS



OPF23371

67,5° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF23371-08A08	12	- 8	1/2"	1/2"		9.3	99.0	30.3	29.5	68.0		
OPF23371-12A12	19	- 12	3/4"	3/4"		15.0	118.5	38.0	38.0	82.0		
OPF23371-12A16	19	- 12	3/4"	1"		20.0	118.5	44.6	38.0	82.0		
OPF23371-16A16	25	- 16	1"	1"		19.8	147.0	44.6	45.0	98.5		



SAE STANDARD CONNECTIONS

OPF23391

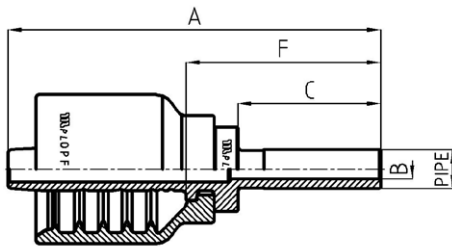
90° ISO / SAE
CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm						
	DN	Dash	inch		B	A	D	E	F		
OPF23391-08A08	12	- 8	1/2"	1/2"	9.3	85.5	30.3	40.0	54.5		
OPF23391-08A12	12	- 8	1/2"	3/4"	15.0	85.5	38.0	41.0	54.5		
OPF23391-10A12	16	- 10	5/8"	3/4"	15.0	90.0	38.0	47.5	56.0		
OPF23391-12A12	19	- 12	3/4"	3/4"	15.0	101.0	38.0	52.0	64.5		
OPF23391-12A16	19	- 12	3/4"	1"	20.0	101.0	44.6	52.0	64.5		
OPF23391-16A16	25	- 16	1"	1"	19.8	125.5	44.6	62.0	77.5		
OPF23391-16A20	25	- 16	1"	1.1/4"	26.0	125.5	51.0	62.0	77.5		

FITTINGS 300

DIN STANDARD CONNECTIONS

OPF22010

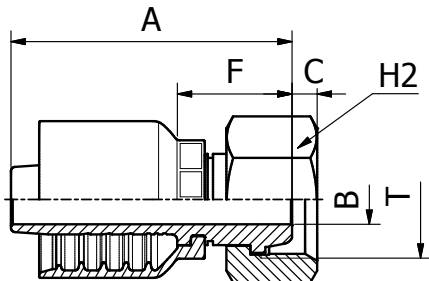


METRIC
STANDPIPE STRAIGHT L.T.

PART. REF.	HOSE BORE			Pipe	DIMENSIONS mm						
	DN	Dash	inch		B	A	C	F			
OPF22010-04A06	6	- 4	1/4"	6.0	3.0	57.5	22.0	30.0			
OPF22010-06A10	10	- 6	3/8"	10.0	7.0	61.0	23.0	31.5			

DIN STANDARD CONNECTIONS

OPF21312/OPF21313



METRIC
FEMALE
MULTISEAL

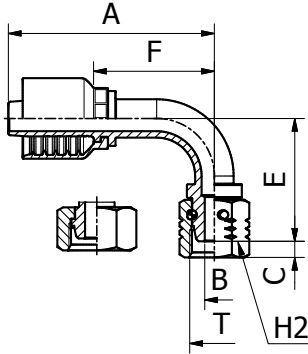
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch			T	B	A	C	F
OPF21312-06A16	10	- 6	3/8"	M 16X1,5	10.0	7.0	51.0	5.0	21.5	19.0
OPF21313-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	49.5	4.0	20.0	22.0
OPF21313-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	52.5	4.7	21.5	27.0

OPF21312: THRUST WIRE NUT / OPF21313: SLIP-ON NUT

DIN STANDARD CONNECTIONS

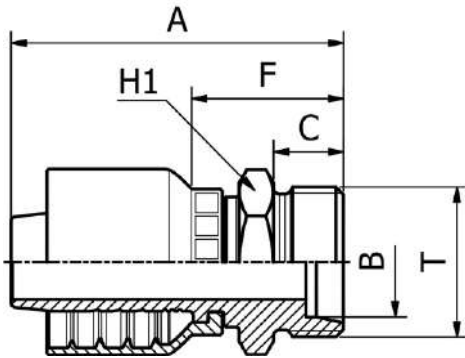
OPF21392/OPF21393

90° METRIC
FEMALE
MULTISEAL



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	E	F	H2	
OPF21392-06A16	10	- 6	3/8"	M 16X1,5	10.0	7.0	65.0	5.0	38.0	35.5	19.0	
OPF21393-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	66.0	4.0	31.5	36.5	22.0	

OPF21392: THRUST WIRE NUT / OPF21393: SLIP-ON NUT

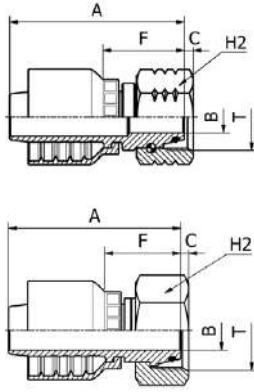


DIN STANDARD CONNECTIONS

OPF11110

METRIC
MALE 24° CONE SEAT LIGHT DUTY
DIN 20066 / ISO 12151-2

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch	T	mm	B	A	C	F	H1		
OPF11110-04A12	6	- 4	1/4"	M 12X1,5	6.0	4.0	49.0	10.0	21.5	14.0		
OPF11110-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	49.0	10.0	21.5	14.0		
OPF11110-04A16	6	- 4	1/4"	M 16X1,5	10.0	7.0	51.0	11.0	23.5	17.0		
OPF11110-04A18	6	- 4	1/4"	M 18X1,5	12.0	9.0	51.0	11.0	23.5	19.0		
OPF11110-05A16	8	- 5	5/16"	M 16X1,5	10.0	7.0	52.0	11.0	24.0	17.0		
OPF11110-05A18	8	- 5	5/16"	M 18X1,5	12.0	9.0	52.0	11.0	24.0	19.0		
OPF11110-06A16	10	- 6	3/8"	M 16X1,5	10.0	7.0	53.5	11.0	24.0	17.0		
OPF11110-06A18	10	- 6	3/8"	M 18X1,5	12.0	9.0	54.0	11.0	24.5	19.0		
OPF11110-06A22	10	- 6	3/8"	M 22X1,5	15.0	10.0	55.0	12.0	25.5	22.0		
OPF11110-08A22	12	- 8	1/2"	M 22X1,5	15.0	10.0	56.5	12.0	25.5	22.0		
OPF11110-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	57.5	12.0	26.5	27.0		
OPF11110-10A22	16	- 10	5/8"	M 22X1,5	15.0	10.0	60.0	12.0	25.5	22.0		
OPF11110-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	61.0	12.0	26.5	27.0		
OPF11110-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	66.5	14.0	30.0	30.0		



DIN STANDARD CONNECTIONS

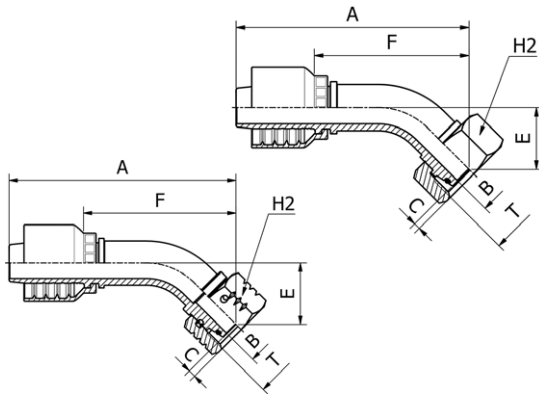
OPF21512/OPF21513

METRIC
O-RING FEMALE 24° CONE LIGHT DUTY
DIN 20066 / ISO 12151-2

FITTINGS 302

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	F	H2
OPF21512-04A12	6	- 4	1/4"	M 12X1,5	6.0	3.0	48.5	2.2	21.0	17.0		
OPF21513-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	49.5	1.3	22.0	17.0		
OPF21513-04A16	6	- 4	1/4"	M 16X1,5	10.0	6.0	50.0	1.8	22.5	19.0		
OPF21513-04A18	6	- 4	1/4"	M 18X1,5	12.0	7.0	49.5	2.0	22.0	22.0		
OPF21512-05A14	8	- 5	5/16"	M 14X1,5	8.0	4.0	48.0	2.9	20.0	17.0		
OPF21513-05A16	8	- 5	5/16"	M 16X1,5	10.0	6.0	50.5	1.8	22.5	19.0		
OPF21513-05A18	8	- 5	5/16"	M 18X1,5	12.0	7.0	50.0	2.0	22.0	22.0		
OPF21512-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	52.5	3.0	23.0	19.0		
OPF21513-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	52.0	2.0	22.5	22.0		
OPF21513-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	54.5	1.5	25.0	27.0		
OPF21512-08A18	12	- 8	1/2"	M 18X1,5	12.0	7.0	60.0	2.9	29.0	22.0		
OPF21513-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	56.5	1.5	25.5	27.0		
OPF21513-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	57.0	2.0	26.0	32.0		
OPF21513-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	60.5	2.0	26.0	32.0		
OPF21513-10A30	16	- 10	5/8"	M 30X2	22.0	15.0	68.5	3.0	34.0	36.0		
OPF21512-12A26	19	- 12	3/4"	M 26X1,5	18.0	12.5	67.5	2.3	31.0	32.0		
OPF21513-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	64.5	3.0	28.0	36.0		
OPF21513-12A36	19	- 12	3/4"	M 36X2	28.0	20.0	65.0	3.7	28.5	41.0		
OPF21513-16A36	25	- 16	1"	M 36X2	28.0	19.8	77.5	3.7	29.5	41.0		

OPF21512: THRUST WIRE NUT / OPF21513: SLIP-ON NUT



DIN STANDARD CONNECTIONS

OPF21542/OPF21543

45° METRIC
O-RING FEMALE SWEEP ELBOW 24° CONE
LIGHT DUTY
DIN 20066 / ISO 12151-2

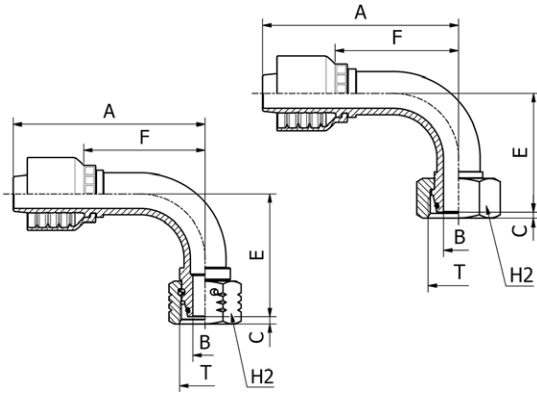
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	F
OPF21543-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	65.5	1.3	16.5	38.0	17.0	
OPF21543-04A16	6	- 4	1/4"	M 16X1,5	10.0	6.0	65.5	1.8	17.0	38.0	19.0	
OPF21543-05A16	8	- 5	5/16"	M 16X1,5	10.0	6.0	69.5	1.8	17.5	41.5	19.0	
OPF21543-05A18	8	- 5	5/16"	M 18X1,5	12.0	7.0	69.5	2.0	17.0	41.5	22.0	
OPF21542-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	77.0	3.0	21.5	47.5	19.0	
OPF21543-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	73.0	2.0	16.5	43.5	22.0	
OPF21543-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	74.0	1.5	18.0	45.0	27.0	
OPF21543-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	83.0	1.5	19.0	52.0	27.0	
OPF21543-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	96.5	2.0	26.5	62.0	32.0	
OPF21543-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	107.5	3.0	28.5	71.0	36.0	
OPF21543-16A36	25	- 16	1"	M 36X2	28.0	19.8	133.0	3.7	32.0	85.0	41.0	

OPF21542: THRUST WIRE NUT / OPF21543: SLIP-ON NUT

DIN STANDARD CONNECTIONS

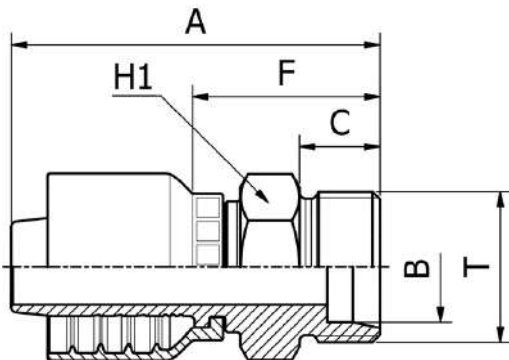
OPF21592/OPF21593

**90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
LIGHT DUTY
DIN 20066 / ISO 12151-2**



PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch	T	mm	B	A	C	E	F	H2
OPF21593-03A12	5	- 3	3/16"	M 12X1,5	6.0	3.0	47.5	0.7	30.0	26.0	14.0
OPF21592-04A12	6	- 4	1/4"	M 12X1,5	6.0	3.0	56.0	2.2	32.5	28.5	17.0
OPF21593-04A14	6	- 4	1/4"	M 14X1,5	8.0	4.0	57.0	1.3	31.5	29.5	17.0
OPF21593-04A16	6	- 4	1/4"	M 16X1,5	10.0	6.0	57.0	1.8	32.0	29.5	19.0
OPF21593-04A18	6	- 4	1/4"	M 18X1,5	12.0	7.0	57.0	2.0	33.0	29.5	22.0
OPF21593-05A16	8	- 5	5/16"	M 16X1,5	10.0	6.0	60.0	1.8	32.5	32.0	19.0
OPF21593-05A18	8	- 5	5/16"	M 18X1,5	12.0	7.0	60.0	2.0	32.5	32.0	22.0
OPF21592-06A16	10	- 6	3/8"	M 16X1,5	10.0	6.0	65.0	3.0	40.0	35.5	19.0
OPF21593-06A18	10	- 6	3/8"	M 18X1,5	12.0	7.0	66.0	2.0	33.5	36.5	22.0
OPF21593-06A22	10	- 6	3/8"	M 22X1,5	15.0	9.3	66.0	1.5	35.0	36.5	27.0
OPF21592-08A18	12	- 8	1/2"	M 18X1,5	12.0	7.0	75.0	2.9	48.0	44.0	22.0
OPF21593-08A26	12	- 8	1/2"	M 26X1,5	18.0	12.5	76.0	2.0	40.0	45.0	32.0
OPF21593-08A22	12	- 8	1/2"	M 22X1,5	15.0	9.3	76.0	1.5	39.5	45.0	27.0
OPF21593-10A26	16	- 10	5/8"	M 26X1,5	18.0	12.5	86.0	2.0	53.0	51.5	32.0
OPF21593-10A30	16	- 10	5/8"	M 30X2	22.0	15.0	86.0	3.0	54.0	51.5	36.0
OPF21593-12A30	19	- 12	3/4"	M 30X2	22.0	15.0	97.5	3.0	59.5	61.5	36.0
OPF21593-16A36	25	- 16	1"	M 36X2	28.0	19.8	125.0	3.7	69.5	76.5	41.0

OPF21592: THRUST WIRE NUT / OPF21593: SLIP-ON NUT

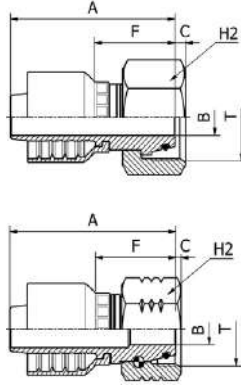


DIN STANDARD CONNECTIONS

OPF11210

**METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm				
	DN	Dash	inch	T	mm	B	A	C	F	H1
OPF11210-04A16	6	- 4	1/4"	M 16X1,5	8.0	5.5	53.0	12.0	25.5	17.0
OPF11210-04A18	6	- 4	1/4"	M 18X1,5	10.0	6.0	54.0	12.0	26.5	19.0
OPF11210-04A20	6	- 4	1/4"	M 20X1,5	12.0	7.0	56.5	12.0	29.0	22.0
OPF11210-05A20	8	- 5	5/16"	M 20X1,5	12.0	7.0	57.0	12.0	29.0	22.0
OPF11210-06A18	10	- 6	3/8"	M 18X1,5	10.0	7.0	56.5	12.0	27.0	19.0
OPF11210-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	58.5	12.0	29.0	22.0
OPF11210-06A22	10	- 6	3/8"	M 22X1,5	14.0	8.0	60.5	14.0	31.0	22.0
OPF11210-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	62.5	14.0	31.5	24.0
OPF11210-10A30	16	- 10	5/8"	M 30X2	20.0	15.0	70.0	16.0	35.5	30.0
OPF11210-12A30	19	- 12	3/4"	M 30X2	20.0	15.0	73.5	16.0	37.0	30.0
OPF11210-12A36	19	- 12	3/4"	M 36X2	25.0	19.8	77.5	18.0	41.0	36.0
OPF11210-16A36	25	- 16	1"	M 36X2	25.0	19.8	90.5	18.0	42.5	36.0
OPF11210-16A42	25	- 16	1"	M 42X2	30.0	25.0	92.5	20.0	44.5	46.0



DIN STANDARD CONNECTIONS

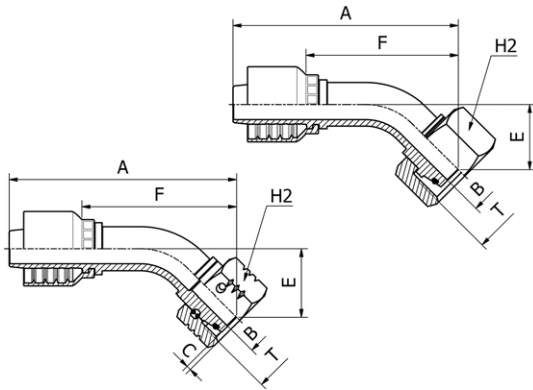
OPF21612/OPF21613

METRIC
O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2

FITTINGS 304

PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	mm	B	A	C	F
OPF21613-03A16	5	- 3	3/16"	M 16X1,5	8.0	3.0	43.0	3.4	21.5	19.0	
OPF21613-04A14	6	- 4	1/4"	M 14X1,5	6.0	3.0	51.0	1.9	23.5	17.0	
OPF21613-04A16	6	- 4	1/4"	M 16X1,5	8.0	4.0	49.5	3.4	22.0	19.0	
OPF21613-04A18	6	- 4	1/4"	M 18X1,5	10.0	4.0	55.5	2.5	28.0	22.0	
OPF21613-04A20	6	- 4	1/4"	M 20X1,5	12.0	7.0	53.5	2.0	26.0	24.0	
OPF21613-05A18	8	- 5	5/16"	M 18X1,5	10.0	5.5	56.0	2.5	28.0	22.0	
OPF21613-05A20	8	- 5	5/16"	M 20X1,5	12.0	5.5	53.0	2.0	25.0	24.0	
OPF21613-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	54.5	2.0	25.5	24.0	
OPF21613-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	62.0	3.0	32.5	27.0	
OPF21613-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	58.0	4.0	26.5	30.0	
OPF21613-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	65.0	3.5	30.5	36.0	
OPF21612-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	70.0	2.2	33.5	36.0	
OPF21613-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	70.5	4.5	34.0	41.0	
OPF21612-16A36	25	- 16	1"	M 36X2	25.0	15.0	83.5	1.7	35.5	41.0	
OPF21613-16A42	25	- 16	1"	M 42X2	30.0	19.8	83.5	6.3	35.5	50.0	

OPF21612: THRUST WIRE NUT / OPF21613: SLIP-ON NUT



DIN STANDARD CONNECTIONS

OPF21642/OPF21643

45° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2

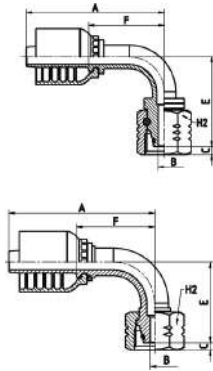
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm					
	DN	Dash	inch			T	mm	B	A	C	E
OPF21643-04A16	6	- 4	1/4"	M 16X1,5	8.0	4.0	64.0	3.4	15.0	36.5	19.0
OPF21643-04A18	6	- 4	1/4"	M 18X1,5	10.0	4.0	65.0	2.5	16.5	37.5	22.0
OPF21643-05A20	8	- 5	5/16"	M 20X1,5	12.0	5.5	70.0	2.0	18.5	42.0	24.0
OPF21643-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	73.5	2.0	17.0	44.0	24.0
OPF21643-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	75.0	3.0	18.5	45.5	27.0
OPF21643-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	83.5	4.0	20.0	52.5	30.0
OPF21643-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	99.5	3.5	29.5	65.5	36.0
OPF21642-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	113.0	2.2	34.0	76.5	36.0
OPF21643-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	111.5	4.5	32.5	75.0	41.0
OPF21643-16A42	25	- 16	1"	M 42X2	30.0	19.8	138.0	6.3	35.5	90.0	50.0

OPF21642: THRUST WIRE NUT / OPF21643: SLIP-ON NUT

DIN STANDARD CONNECTIONS

OPF21692/OPF21693

**90° METRIC
O-RING FEMALE SWEPT ELBOW 24° CONE
HEAVY DUTY
DIN 20066 / ISO 12151-2**



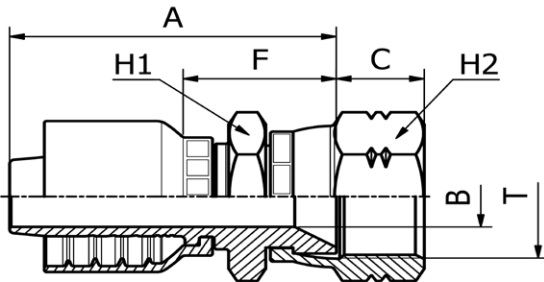
PART. REF.	HOSE BORE			Thread	Pipe	DIMENSIONS mm						
	DN	Dash	inch			T	mm	B	A	C	E	F
OPF21693-04A16	6	- 4	1/4"	M 16X1,5	8.0	4.0	57.0	3.4	29.5	29.5	19.0	
OPF21693-04A18	6	- 4	1/4"	M 18X1,5	10.0	4.0	57.0	2.5	31.0	29.5	22.0	
OPF21693-04A20	6	- 4	1/4"	M 20X1,5	12.0	5.5	57.0	2.0	34.5	29.5	24.0	
OPF21693-05A20	8	- 5	5/16"	M 20X1,5	12.0	5.5	60.0	2.0	34.0	32.0	24.0	
OPF21693-06A20	10	- 6	3/8"	M 20X1,5	12.0	7.0	66.0	2.0	35.0	36.5	24.0	
OPF21693-06A22	10	- 6	3/8"	M 22X1,5	14.0	7.0	66.0	3.0	37.0	36.5	27.0	
OPF21693-06A24	10	- 6	3/8"	M 24X1,5	16.0	9.3	66.0	4.0	36.0	36.5	30.0	
OPF21693-08A24	12	- 8	1/2"	M 24X1,5	16.0	9.3	76.0	4.0	40.5	45.0	30.0	
OPF21693-10A30	16	- 10	5/8"	M 30X2	20.0	12.5	86.0	3.5	57.5	51.5	36.0	
OPF21692-12A30	19	- 12	3/4"	M 30X2	20.0	12.5	98.0	2.2	67.5	61.5	36.0	
OPF21693-12A36	19	- 12	3/4"	M 36X2	25.0	15.0	97.5	4.5	64.5	61.5	41.0	
OPF21692-16A36	25	- 16	1"	M 36X2	25.0	15.0	127.5	1.7	86.0	79.5	41.0	
OPF21693-16A42	25	- 16	1"	M 42X2	30.0	19.8	127.5	6.3	74.5	79.0	50.0	

OPF21692: THRUST WIRE NUT / OPF21693: SLIP-ON NUT

JIS STANDARD CONNECTIONS

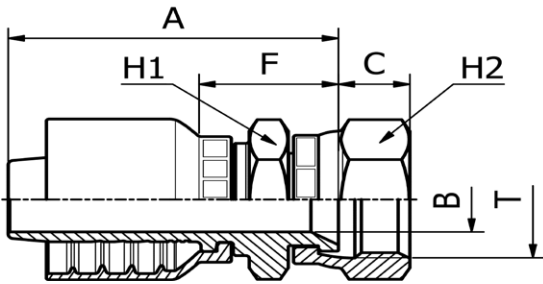
OPF24011

**JIS METRIC
FEMALE (KOMATSU)**



PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	mm	B	A	C	F	H1	H2
OPF24011-04A14	6	- 4	1/4"	M 14X1,5		4.0	50.5	10.5	23.0	19.0	19.0	
OPF24011-06A14	10	- 6	3/8"	M 14X1,5		4.0	53.0	10.5	23.5	19.0	19.0	
OPF24011-06A18	10	- 6	3/8"	M 18X1,5		7.0	53.0	11.5	23.5	24.0	24.0	
OPF24011-08A22	12	- 8	1/2"	M 22X1,5		9.3	56.0	13.0	25.0	27.0	27.0	
OPF24011-10A24	16	- 10	5/8"	M 24X1,5		12.5	61.0	15.1	26.5	32.0	32.0	
OPF24011-12A30	19	- 12	3/4"	M 30X1,5		15.0	68.0	18.3	31.5	36.0	36.0	
OPF24011-16A33	25	- 16	1"	M 33X1,5		19.8	81.5	21.3	33.5	41.0	41.0	

JIS STANDARD CONNECTIONS



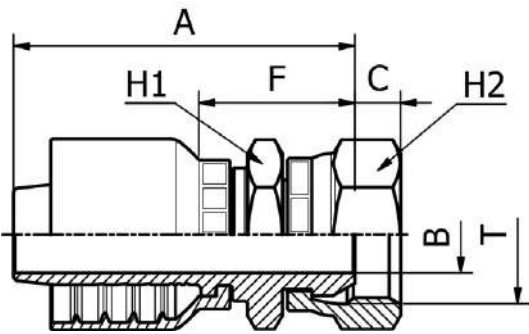
OPF23811

**JIS BSP
FEMALE 60° CONE SEAT (TOYOTA)
JIS B 8363
(CRIMPED-BACK NUT)**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	F	H1	H2	
OPF23811-04A04	6	- 4	1/4"	1/4" - 19		4.0	46.0	8.3	18.5	19.0	19.0	
OPF23811-06A06	10	- 6	3/8"	3/8" - 19		7.0	52.5	10.0	23.0	22.0	22.0	
OPF23811-08A08	12	- 8	1/2"	1/2" - 14		9.3	53.0	11.5	22.0	27.0	27.0	
OPF23811-12A12	19	- 12	3/4"	3/4" - 14		15.0	62.5	13.5	26.0	32.0	32.0	
OPF23811-16A16	25	- 16	1"	1" - 11		19.8	78.5	14.5	30.5	38.0	38.0	

FITTINGS 306

JIS STANDARD CONNECTIONS

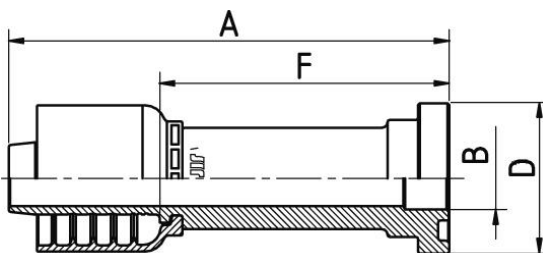


OPF20711

**JIS BSP
FEMALE 60° CONE (NISSAN)
JIS B 8363**

PART. REF.	HOSE BORE			Thread	DIMENSIONS mm							
	DN	Dash	inch		T	B	A	C	F	H1	H2	
OPF20711-12A12	19	- 12	3/4"	3/4" - 14		15.0	66.5	8.9	30.0	32.0	32.0	

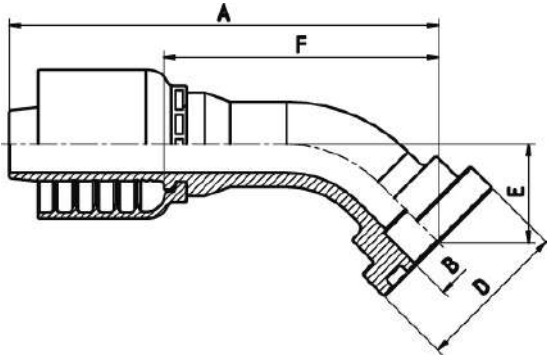
ORIGINAL EQUIPMENT CONNECTIONS



OPF24111

STRAIGHT KOMATSU FLANGE

PART. REF.	HOSE BORE			Flange	DIMENSIONS mm							
	DN	Dash	inch		inch	B	A	D	F			
OPF24111-10A10	16	- 10	5/8"	5/8"		14.0	100.0	34.0	65.5			

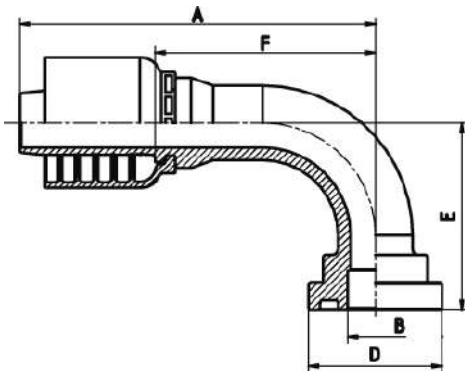


ORIGINAL EQUIPMENT CONNECTIONS

OPF24141

45° KOMATSU FLANGE

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF24141-10A10	16	- 10	5/8"	5/8"		14.0	95.0	34.0	22.0	61.0		



ORIGINAL EQUIPMENT CONNECTIONS

OPF24191

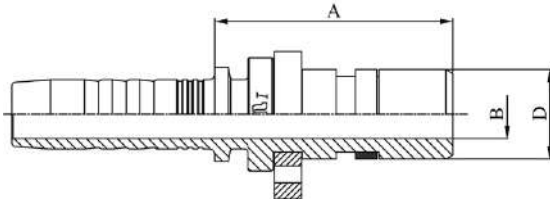
90° KOMATSU FLANGE

PART. REF.	HOSE BORE			Flange		DIMENSIONS mm						
	DN	Dash	inch	inch		B	A	D	E	F		
OPF24191-10A10	16	- 10	5/8"	5/8"		14.0	90.0	34.0	47.5	56.0		

MULTIFIT INSERT

M12H10

EF STRAIGHT
MALE INSERT



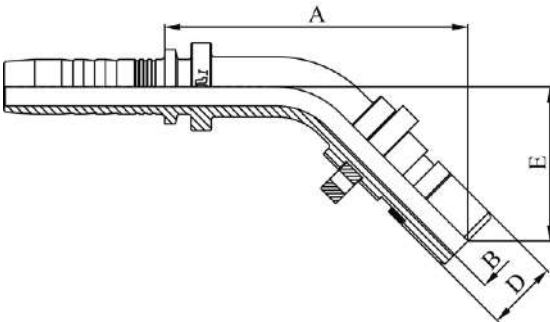
PART. REF.	HOSE BORE			Bar	DIMENSIONS mm					
	DN	Dash	inch		B	A	D			
M12H10-04-04	6	- 4	1/4"	350.0	4.0	30.0	10.0			
M12H10-04-06	6	- 4	1/4"	350.0	7.0	34.0	13.0			
M12H10-05-06	8	- 5	5/16"	350.0	7.0	34.0	13.0			
M12H10-06-04	10	- 6	3/8"	350.0	4.0	30.5	10.0			
M12H10-06-06	10	- 6	3/8"	350.0	7.0	34.5	13.0			
M12H10-06-08	10	- 6	3/8"	350.0	9.3	34.5	16.0			
M12H10-08-06	12	- 8	1/2"	350.0	7.0	35.0	13.0			
M12H10-08-08	12	- 8	1/2"	350.0	9.3	35.0	16.0			
M12H10-10-08	16	- 10	5/8"	350.0	9.3	35.0	16.0			
M12H10-10-12	16	- 10	5/8"	280.0	15.0	44.5	23.0			
M12H10-12-12	19	- 12	3/4"	280.0	15.0	44.5	23.0			

FITTINGS 308

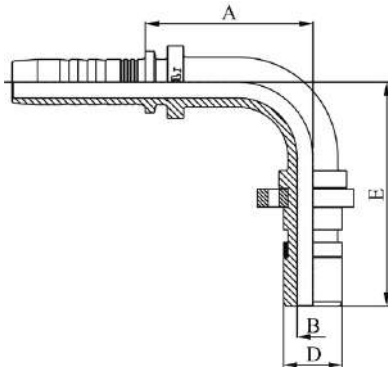
MULTIFIT INSERT

M12H40

EF 45° ELBOW
MALE INSERT



PART. REF.	HOSE BORE			Bar	DIMENSIONS mm					
	DN	Dash	inch		B	A	D	E		
M12H40-04-04	6	- 4	1/4"	350.0	4.0	46.0	10.0	23.5		
M12H40-04-06	6	- 4	1/4"	350.0	7.0	52.0	13.0	27.0		
M12H40-05-06	8	- 5	5/16"	350.0	7.0	53.0	13.0	27.5		
M12H40-06-04	10	- 6	3/8"	350.0	4.0	47.0	10.0	23.5		
M12H40-06-06	10	- 6	3/8"	350.0	7.0	55.5	13.0	28.0		
M12H40-08-08	12	- 8	1/2"	350.0	9.3	61.5	16.0	30.0		
M12H40-10-12	16	- 10	5/8"	280.0	15.0	79.0	23.0	41.0		
M12H40-10-08	16	- 10	5/8"	350.0	9.3	65.0	16.0	30.0		
M12H40-12-12	19	- 12	3/4"	280.0	15.0	85.5	23.0	42.5		



MULTIFIT INSERT

M12H90

EF 90° ELBOW
MALE INSERT

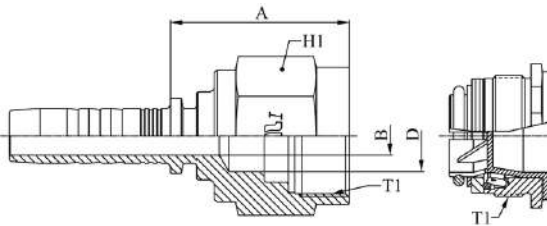
PART. REF.	HOSE BORE			Bar	DIMENSIONS mm						
	DN	Dash	inch		B	A	D	E			
M12H90-04-04	6	- 4	1/4"	350.0	4.0	30.0	10.0	40.0			
M12H90-04-06	6	- 4	1/4"	350.0	7.0	32.0	13.0	45.0			
M12H90-05-06	8	- 5	5/16"	350.0	7.0	33.5	13.0	46.5			
M12H90-06-04	10	- 6	3/8"	350.0	4.0	30.5	10.0	40.0			
M12H90-06-06	10	- 6	3/8"	350.0	7.0	37.0	13.0	49.5			
M12H90-08-06	12	- 8	1/2"	350.0	7.0	37.5	13.0	49.5			
M12H90-08-08	12	- 8	1/2"	350.0	9.3	44.0	16.0	55.0			
M12H90-10-08	16	- 10	5/8"	350.0	9.3	47.0	16.0	55.0			
M12H90-10-12	16	- 10	5/8"	280.0	15.0	55.0	23.0	74.5			
M12H90-12-12	19	- 12	3/4"	280.0	15.0	62.5	23.0	79.0			

309 FITTINGS

MULTIFIT INSERT

M22H10

EF STRAIGHT
FEMALE INSERT

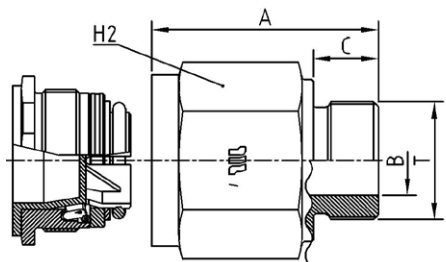


PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch	T		B	A	D	H1			
M22H10-04-04	6	- 4	1/4"	M 18X1	350.0	4.0	30.0	10.0	22.0			
M22H10-06-06	10	- 6	3/8"	M 22X1	350.0	7.0	33.5	13.0	25.0			
M22H10-08-08	12	- 8	1/2"	M 25X1	350.0	9.3	34.0	16.0	28.0			
M22H10-10-08	16	- 10	5/8"	M 25X1	350.0	12.5	34.0	23.0	28.0			
M22H10-10-12	16	- 10	5/8"	M 33X1,5	280.0	12.5	45.5	23.0	38.0			
M22H10-12-12	19	- 12	3/4"	M 33X1,5	280.0	15.0	46.5	23.0	38.0			

ADAPTORS

A52032H

**ADAPTOR BSP
MALE O-RING BOSS TYPE
ISO 1179
EF FEMALE**



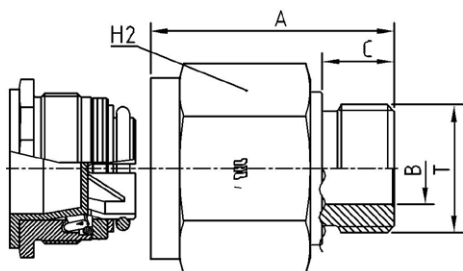
PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	Bar	B	A	C	D	H2
A52032H-04-04	6	- 4	1/4"	1/4" - 19	350.0	7.5	34.0	11.2	10.0	22.0		
A52032H-06-04	6	- 4	1/4"	3/8" - 19	350.0	9.0	34.0	11.2	10.0	22.0		
A52032H-06-06	10	- 6	3/8"	3/8" - 19	350.0	9.9	36.5	11.2	13.0	25.0		
A52032H-08-06	10	- 6	3/8"	1/2" - 14	350.0	12.3	39.5	14.5	13.0	27.0		
A52032H-08-08	12	- 8	1/2"	1/2" - 14	350.0	12.3	40.0	14.5	16.0	28.0		
A52032H-12-12	19	- 12	3/4"	3/4" - 14	280.0	15.5	50.5	14.5	23.0	38.0		
A52032H-16-12	19	- 12	3/4"	1" - 11	280.0	20.0	53.5	18.6	23.0	46.0		

FITTINGS 310

ADAPTORS

A52302H

**ADAPTOR SAE
O-RING BOSS MALE
ISO 11926
EF FEMALE**

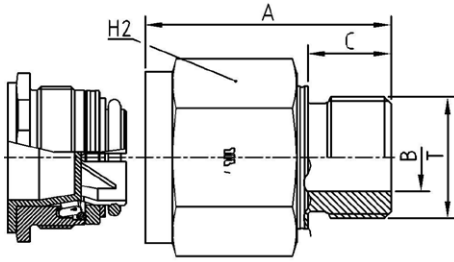


PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	Bar	B	A	C	D	H2
A52302H-06-04	6	- 4	1/4"	9/16" - 18	350.0	7.0	32.5	9.9	10.0	22.0		
A52302H-06-06	10	- 6	3/8"	9/16" - 18	350.0	7.0	36.0	9.9	13.0	25.0		
A52302H-08-06	10	- 6	3/8"	3/4" - 16	350.0	9.3	37.0	11.1	13.0	25.0		
A52302H-08-08	12	- 8	1/2"	3/4" - 16	350.0	9.3	37.0	11.1	16.0	28.0		
A52302H-10-08	12	- 8	1/2"	7/8" - 14	350.0	12.5	38.5	12.7	16.0	28.0		
A52302H-10-12	19	- 12	3/4"	7/8" - 14	280.0	12.5	49.5	12.7	23.0	38.0		
A52302H-12-12	19	- 12	3/4"	1.1/16" - 12	280.0	15.0	51.0	15.1	23.0	38.0		

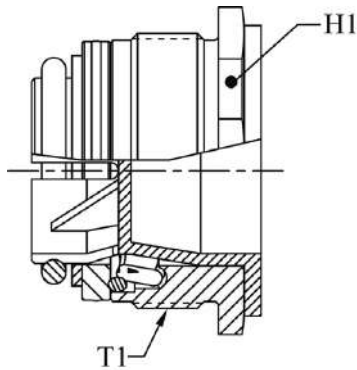
ADAPTORS

A52192H

**ADAPTOR METRIC
MALE
ISO 6149
EF FEMALE**



PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	Bar	B	A	C	D	H2
A52192H-14-04	6	- 4	1/4"	M 14X1,5	350.0	6.0	34.0	11.0	10.0	22.0		
A52192H-16-04	6	- 4	1/4"	M 16X1,5	350.0	7.0	35.0	12.5	10.0	22.0		
A52192H-18-06	10	- 6	3/8"	M 18X1,5	350.0	9.0	40.0	14.0	13.0	25.0		
A52192H-22-06	10	- 6	3/8"	M 22X1,5	350.0	12.0	40.0	15.0	13.0	27.0		
A52192H-22-08	12	- 8	1/2"	M 22X1,5	350.0	12.0	40.0	15.0	16.0	28.0		
A52192H-27-08	12	- 8	1/2"	M 27X2	350.0	15.0	43.0	18.5	16.0	32.0		
A52192H-27-12	19	- 12	3/4"	M 27X2	280.0	15.0	55.0	18.5	23.0	38.0		
A52192H-33-12	19	- 12	3/4"	M 33X2	280.0	20.0	54.0	18.5	23.0	41.0		



ADAPTORS

O82H10

**CARTRIDGE
EF**



PART. REF.	HOSE BORE			Thread	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	Bar	D	H1			
O82H10-04	6	- 4	1/4"	M 18X1	350.0	10.0	19.0					
O82H10-06	10	- 6	3/8"	M 22X1	350.0	13.0	23.0					
O82H10-08	12	- 8	1/2"	M 25X1	350.0	16.0	26.0					
O82H10-12	19	- 12	3/4"	M 33X1,5	280.0	23.0	34.0					

311 FITTINGS



FASTFIT TYPE PUSH-TO-CONNECT

FITTINGS 312

TECHNICAL DATA				
				
SIZE			WORKING PRESSURE [Dynamic]	
DN	Dash	inch	MPa	PSI
10	-06	3/8"	42	6,090
12	-08	1/2"	42	6,090
16	-10	5/8"	42	6,090
19	-12	3/4"	42	6,090
25	-16	1"	42	6,090
31	-20	1.1/4"	42	6,090

PRODUCT DESCRIPTION

- Push-to-connect design
- No assembly tools required
- Low connection effort
- Reduced assembly time even in hard-to-reach areas
- Disconnection by unscrewing adaptor

MATERIAL

Adaptor and Insert in steel, with some hardened areas in correspondence to the most stressed points. Seals in NBR. Other materials (VITON, EPDM or any others) on request

WORKING TEMPERATURE

-22°F up to +230°F (-30°C up to +110°C)
For different temperature range, the coupling can be assembled with specific seals

SAFETY FACTOR

4:1 for dynamic pressures

IMPULSE PRESSURES

500,000 cycles at 120% of the rated one (freq. 1Hz)

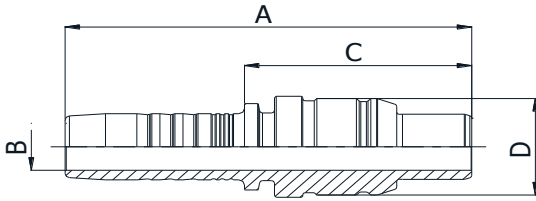
TEST SPECIFICATIONS

ISO 18879

MULTIFIT INSERT

M13H10

FAST-FIT STRAIGHT MALE INSERT

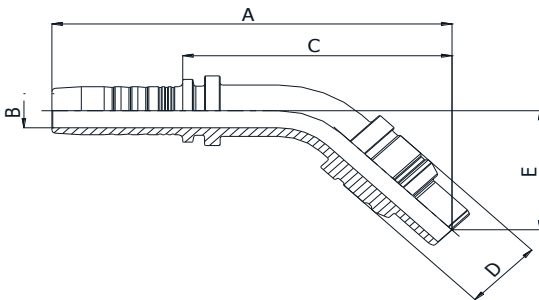


SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D		
10	-06	3/8"	M13H10-04-06	6	-04	1/4"	42	63.0	4.0	35.5	14.8		
10	-06	3/8"	M13H10-06-06	10	-06	3/8"	42	66.5	7.0	37.1	14.8		
12	-08	1/2"	M13H10-08-08	12	-08	1/2"	42	70.5	9.3	39.4	19.1		
16	-10	5/8"	M13H10-10-10	16	-10	5/8"	38	74.8	12.5	40.5	21.5		
19	-12	3/4"	M13H10-12-12	19	-12	3/4"	38	80.5	15.0	44.0	26.1		
25	-16	1"	M13H10-16-16	25	-16	1"	32	96.0	19.8	47.8	31.3		

MULTIFIT INSERT

M13H40

FAST-FIT 45° ELBOW MALE INSERT

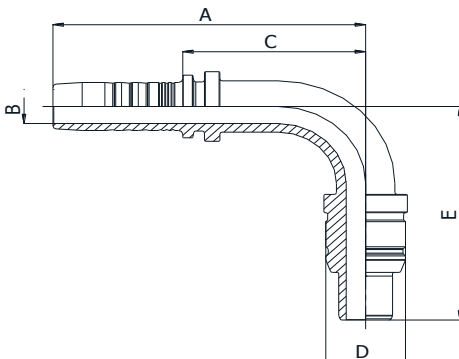


SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D	E	
10	-06	3/8"	M13H40-04-06	6	-04	1/4"	42	77.6	4.0	50.1	14.8	27.0	
10	-06	3/8"	M13H40-06-06	10	-06	3/8"	42	86.1	7.0	56.7	14.8	29.4	
12	-08	1/2"	M13H40-08-08	12	-08	1/2"	42	95.1	9.3	64.0	19.1	32.5	
19	-12	3/4"	M13H40-12-12	19	-12	3/4"	38	120.4	15.0	83.9	26.1	40.7	
25	-16	1"	M13H40-16-16	25	-16	1"	32	152.3	19.8	104.1	31.3	50.2	

MULTIFIT INSERT

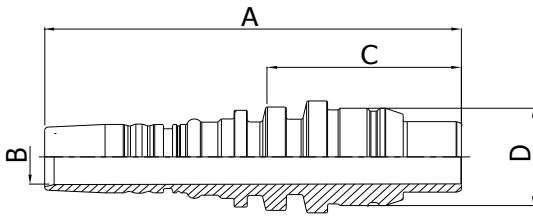
M13H90

FAST-FIT 90° ELBOW MALE INSERT



SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D	E	
10	-06	3/8"	M13H90-04-06	6	-04	1/4"	42	57.6	4.0	30.1	14.8	45.2	
10	-06	3/8"	M13H90-06-06	10	-06	3/8"	42	66.4	7.0	37.0	14.8	51.2	
12	-08	1/2"	M13H90-08-08	12	-08	1/2"	42	74.9	9.3	43.8	19.1	58.3	
19	-12	3/4"	M13H90-12-12	19	-12	3/4"	38	99.0	15.0	62.5	26.1	76.9	
25	-16	1"	M13H90-16-16	25	-16	1"	32	125.5	19.8	77.3	31.3	94.4	

INTERLOCK PLUS INSERT

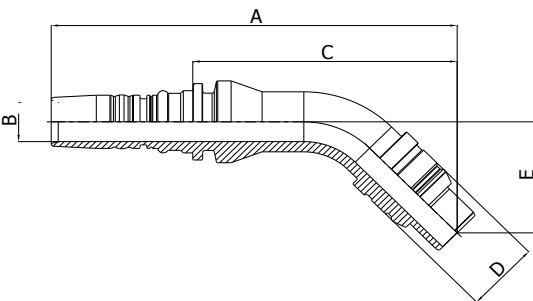


M33H10

**FAST-FIT STRAIGHT
MALE INSERT**

SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D		
19	-12	3/4"	M33H10-12-12	19	-12	3/4"	42	96.6	14.5	46.4	26.1		
25	-16	1"	M33H10-16-16	25	-16	1"	42	112.0	19.5	50.3	31.3		

FITTINGS 314



INTERLOCK PLUS INSERT

M33H40

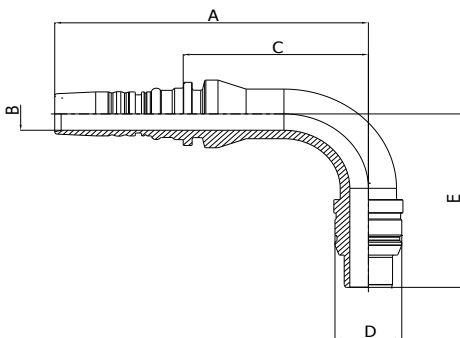
**FAST-FIT 45° ELBOW
MALE INSERT**

SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D	E	
19	-12	3/4"	M33H40-12-12	19	-12	3/4"	42	143.9	14.5	93.8	26.1	40.7	
25	-16	1"	M33H40-16-16	25	-16	1"	42	174.8	19.5	113.1	31.3	50.2	

INTERLOCK PLUS INSERT

M33H90

**FAST-FIT 90° ELBOW
MALE INSERT**

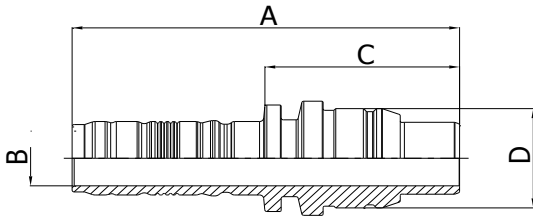


SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D	E	
19	-12	3/4"	M33H90-12-12	19	-12	3/4"	42	122.6	14.5	72.4	26.1	76.9	
25	-16	1"	M33H90-16-16	25	-16	1"	42	148.0	19.5	86.3	31.3	94.4	

SPIRALFIT INSERT

M73H10

FAST-FIT STRAIGHT MALE INSERT

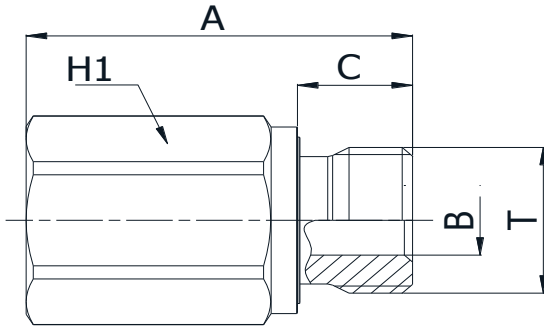


SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D		
19	-12	3/4"	M73H10-12-12	19	-12	3/4"	42	93.4	14.5	46.9	26.1		
25	-16	1"	M73H10-16-16	25	-16	1"	42	107.5	19.5	51.3	31.3		

ADAPTORS

A52013H

BSP MALE OR BOSS TYPE TO ISO 1179- 2

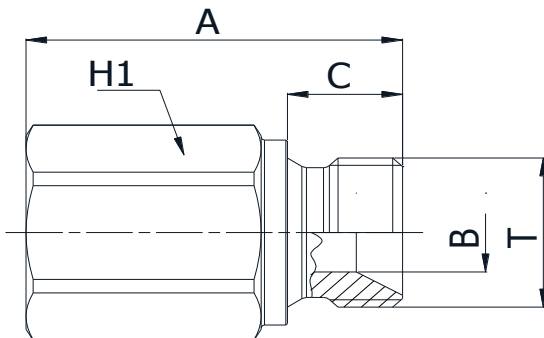


SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm					
DN	Dash	inch		T	MPa	A	B	C	H1		
10	-06	3/8"	A52013H-04-06	1/4"-19	42	45.0	5.0	12.0	19		
10	-06	3/8"	A52013H-06-06	3/8"-19	42	44.5	8.0	12.0	22		
12	-08	1/2"	A52013H-08-08	1/2"-14	42	47.0	10.0	14.0	27		
19	-12	3/4"	A52013H-12-12	3/4"-14	42	53.0	16.0	16.0	32		
25	-16	1"	A52013H-16-16	1"-11	42	60.0	20.0	18.0	41		

ADAPTORS

A52053H

BSP MALE 60° CONE (ISO 8434-6 / BS5200)



SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm					
DN	Dash	inch		T	MPa	A	B	C	H1		
12	-08	1/2"	A52053H-08-08	1/2"-14	42	45.8	11.0	14.0	27		

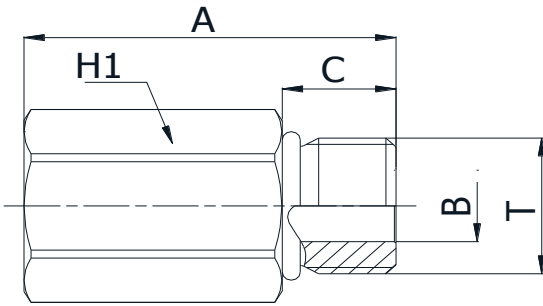
FITTINGS

315

ADAPTORS

A52323H

**SAE MALE
OR BOSS TYPE
TO SAE J1926-2**

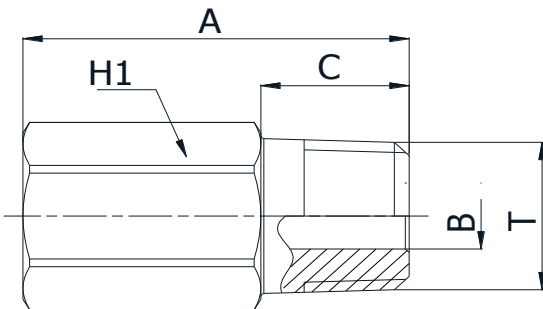


SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	H1			
10	-06	3/8"	A52323H-04-06	7/16"-20	42	42.2	4.5	11.0	19			
10	-06	3/8"	A52323H-06-06	9/16"-18	42	42.4	7.5	12.0	19			
12	-08	1/2"	A52323H-08-08	3/4"-16	42	45.8	10.0	14.0	24			
16	-10	5/8"	A52323H-10-10	7/8"-14	42	49.2	12.5	16.0	27			
19	-12	3/4"	A52323H-12-12	1.1/16"-12	42	53.5	15.5	18.5	32			
25	-16	1"	A52323H-16-16	1.5/16"-12	42	56.0	20.5	18.5	38			

ADAPTORS

A52283H

**STRAIGHT ADAPTOR
NPTF MALE
TO ASME B1.20.3**

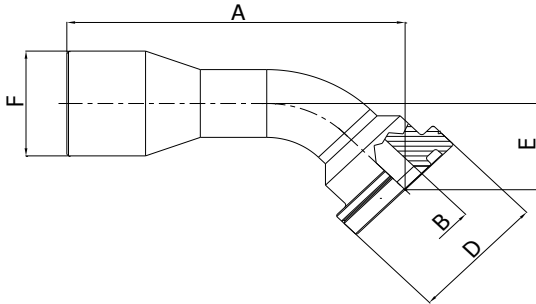


SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	H1			
10	-06	3/8"	A52283H-04-06	1/4"-18	42	44.7	6.0	14.5	19			
10	-06	3/8"	A52283H-06-06	3/8"-18	42	43.7	8.0	14.5	19			
12	-08	1/2"	A52283H-08-08	1/2"-14	42	50.0	9.5	19.2	24			
19	-12	3/4"	A52283H-12-12	3/4"-14	42	54.5	15.0	19.2	32			
25	-16	1"	A52283H-16-16	1"-11.5	42	62.0	19.5	24.2	38			

ADAPTORS

A54363H

45° ISO / SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

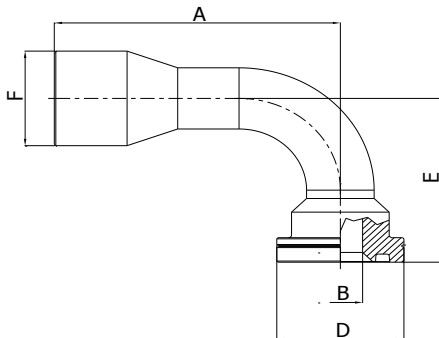


SIZE			PART. REF.	FLANGE	W.P	DIMENSIONS mm						
DN	Dash	inch		inch	MPa	A	B	D	E	F		
12	-08	1/2"	A54363H-08-08	1/2"	42	82.0	9.3	31.8	21.9	25.0		
19	-12	3/4"	A54363H-12-12	3/4"	42	101.8	14.5	41.4	28.0	34.0		
25	-16	1"	A54363H-16-16	1"	42	125.2	19.5	47.7	37.9	41.0		
31	-20	1-1/4"	A54363H-20-20	1-1/4"	42	136.1	25.0	54.2	35.6	55.0		

ADAPTORS

A57363H

90° ISO / SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3



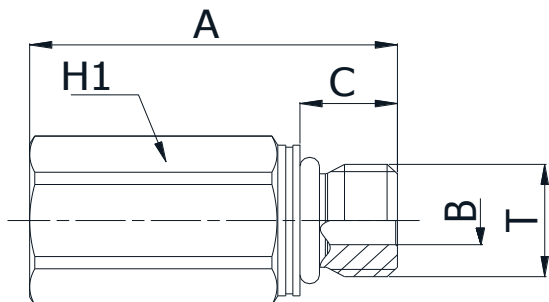
SIZE			PART. REF.	FLANGE	W.P	DIMENSIONS mm						
DN	Dash	inch		inch	MPa	A	B	D	E	F		
12	-08	1/2"	A57363H-08-08	1/2"	42	74.2	9.3	31.8	45.0	25.0		
19	-12	3/4"	A57363H-12-12	3/4"	42	93.2	14.5	41.4	58.9	34.0		
25	-16	1"	A57363H-16-16	1"	42	113.6	19.5	47.7	80.0	41.0		
31	-20	1-1/4"	A57363H-20-20	1-1/4"	42	132.1	25.0	54.2	82.0	55.0		

FITTINGS
317

ADAPTORS

A52193H

**STRAIGHT ADAPTOR
METRIC MALE
ISO 6149-2**



SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm					
DN	Dash	inch		T	MPa	A	B	C	H1		
10	-06	3/8"	A52193H-14-06	M14X1.5	42	41.5	6.0	11.0	19		
10	-06	3/8"	A52193H-18-06	M18X1.5	42	43.5	8.0	14.0	24		
12	-08	1/2"	A52193H-22-08	M22X1.5	42	45.0	10.0	15.0	27		
19	-12	3/4"	A52193H-27-12	M27X2	42	53.5	15.0	18.5	32		
25	-16	1"	A52193H-33-16	M33X2	42	57.0	20.0	18.5	41		

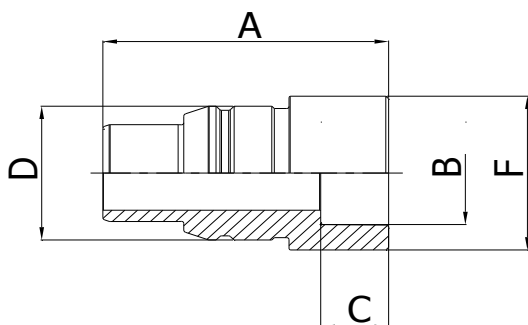
FITTINGS

318

ADAPTORS

A523H95

BRAZING SOCKET



SIZE			PART. REF.		W.P	DIMENSIONS mm					
DN	Dash	inch			MPa	A	B	C	D	F	
19	- 12	3/4"	A523H95-12-20		42	50.5	20.1	12.0	26.1	30.0	
25	- 16	1"	A523H95-16-26		42	58.0	26.1	16.0	31.3	38.0	



DISCONNECTABLE FASTFIT TYPE PUSH-TO-CONNECT

TECHNICAL DATA				
SIZE			WORKING PRESSURE (Dynamic)	
DN	Dash	inch	MPa	PSI
12	-08	1/2"	42	6,090

PRODUCT DESCRIPTION

- Push-to-connect design
- No assembly tools required
- Low connection effort
- Reduced assembly time even in hard-to-reach areas
- Disconnection by unlocking male insert by means of a standard tool

MATERIAL

Adaptor and Insert in steel, with some hardened areas in correspondence to the most stressed points. Seals in NBR. Other materials (VITON, EPDM or any others) on request

WORKING TEMPERATURE

-22°F up to +230°F (-30°C up to +110°C)
For different temperature range, the coupling can be assembled with specific seals

SAFETY FACTOR

4:1 for dynamic pressures

IMPULSE PRESSURES

500,000 cycles at 120% of the rated one (freq. 1Hz)

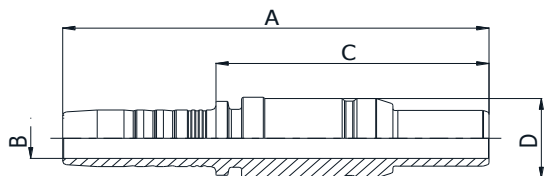
TEST SPECIFICATIONS

ISO 18879

MULTIFIT INSERT

M14H10

**DISCONNECTABLE FAST-FIT
STRAIGHT MALE INSERT**

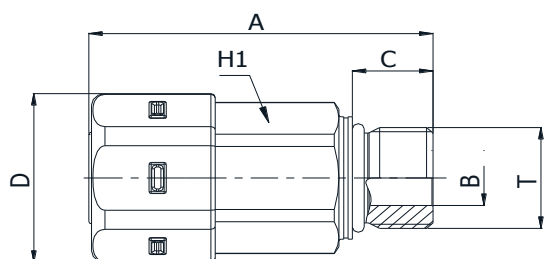


SIZE			PART REF.	SIZE			W.P	DIMENSIONS mm					
DN	Dash	inch		DN	Dash	inch	MPa	A	B	C	D		
12	-08	1/2"	M14H10-08-08	12	-08	1/2"	42	86.5	9.3	55.4	18.4		

ADAPTORS

A52194H

**STRAIGHT ADAPTOR
METRIC MALE ISO 6149-2**

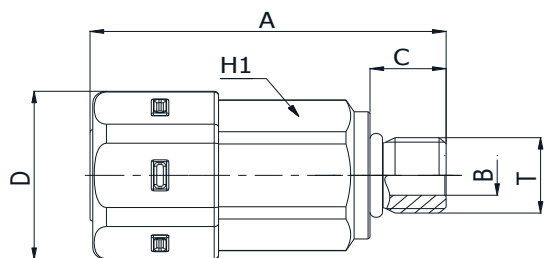


SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	D	H1		
12	-08	1/2"	A52194H-22-08	M22X1.5	42	64.0	12.0	15.0	37.0	30.0		

ADAPTORS

A52324H

**SAE MALE
OR BOSS TYPE
TO SAE J1926-2**

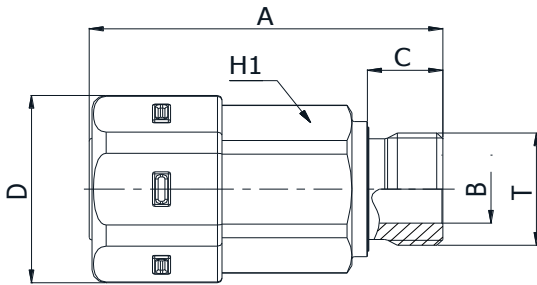


SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	D	H1		
12	-08	1/2"	A52324H-08-08	3/4"-16	42	64.8	10.0	14.0	37.0	30.0		

ADAPTORS

A52014H

**BSP MALE
OR BOSS TYPE
TO ISO 1179-2**



SIZE			PART. REF.	Thread	W.P	DIMENSIONS mm						
DN	Dash	inch		T	MPa	A	B	C	D	H1		
12	-08	1/2"	A52014H-08-08	1/2"-14	42	66.0	12.0	14.0	37.0	30.0		



ROTOFIT TYPE SWIVEL JOINT

FITTINGS 322

TECHNICAL DATA										
 SIZE			 WORKING PRESSURE (Dynamic)							
			MULTIFIT		INTERLOCK PLUS		SPIRALFIT		ADAPTOR	
DN	Dash	inch	MPa	PSI	MPa	PSI	MPa	PSI	MPa	PSI
6	-04	1/4"	42	6,090	-	-	-	-	-	-
10	-06	3/8"	42	6,090	-	-	-	-	42	6,090
12	-08	1/2"	42	6,090	-	-	-	-	-	-
16	-10	5/8"	42	6,090	-	-	-	-	35	5,075
19	-12	3/4"	35	5,075	42	6,090	42	6,090	35	5,075
25	-16	1"	35	5,075	42	6,090	42	6,090	35	5,075
31	-20	1.1/4"	35	5,075	42	6,090	42	6,090	35	5,075
38	-24	1.1/2"	28	4,060	42	6,090	42	6,090	35	5,075
51	-32	2"	21	3,045	-	-	-	-	-	-
63	-40	2.1/2"	14	2,030	-	-	-	-	-	-

PRODUCT DESCRIPTION

- Swivel joint purposely designed to eliminate torsional stresses due to hose twist under external torque
- Prevents connection unscrewing
- Full flow design to minimize pressure drops
- High number of balls to minimize friction

ROTATION ANGLE

Up to 40°

ROTATION FREQUENCY

Up to 15 alternative RPM

MATERIAL

Body in steel, with some hardened areas in correspondence to the most stressed points. Balls in 100Cr6 quenched and seals in NBR or Polyurethane. Other materials (VITON, EPDM or any others) on request

WORKING TEMPERATURE

-22°F up to +230°F (-30°C up to +110°C)

For different temperature range, the coupling can be assembled with specific seals

SAFETY FACTOR

4:1 for dynamic pressures

IMPULSE PRESSURES

500,000 cycles at 120% of the rated one (freq. 1Hz)

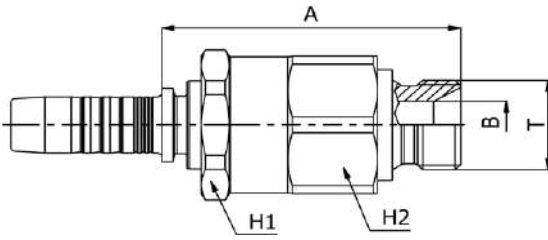
TEST SPECIFICATIONS

ISO 18879

BS STANDARD CONNECTIONS

MR10510

**BSP MALE
PARALLEL 60° CONE SEAT
BS5200 / ISO 8434-6**



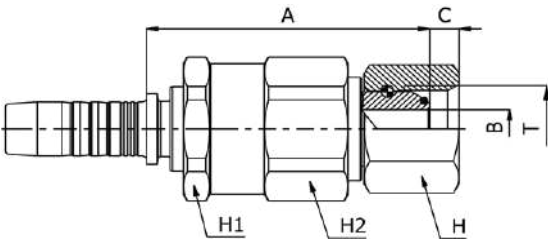
PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	H1	H2	
MR10510-04-04	6	-04	1/4"	1/4"-19	42	57.7	4.7	24	24			
MR10510-06-06	10	-06	3/8"	3/8"-19	42	58.2	8.0	27	27			
MR10510-08-08	12	-08	1/2"	1/2"-14	42	61.6	11.0	32	32			
MR10510-10-10	16	-10	5/8"	5/8"-14	35	69.3	14.3	36	36			
MR10510-12-12	19	-12	3/4"	3/4"-14	35	71.0	16.7	41	41			
MR10510-16-16	25	-16	1"	1"-11	35	83.0	22.2	50	50			
MR10510-20-20	31	-20	1.1/4"	1.1/4"-11	35	91.9	28.6	60	60			
MR10510-24-24	38	-24	1.1/2"	1.1/2"-11	28	105.1	33.3	70	70			

323 FITTINGS

BS STANDARD CONNECTIONS

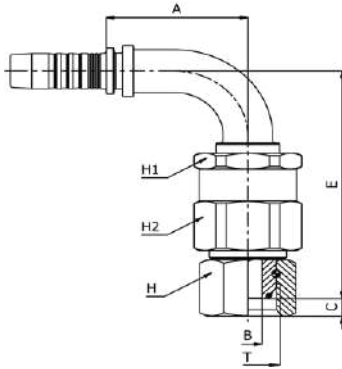
MR20812

**BSP O-RING
FEMALE 60° CONE
BS5200 / ISO 12151-6**



PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H	H1
MR20812-04-04	6	-04	1/4"	1/4"-19	42	58.0	4.3	4.1	19	24	24	
MR20812-06-06	10	-06	3/8"	3/8"-19	42	59.4	7.0	5.9	22	27	27	
MR20812-08-08	12	-08	1/2"	1/2"-14	42	62.4	9.3	6.5	27	32	32	
MR20812-10-10	16	-10	5/8"	5/8"-14	35	68.0	12.5	9.7	28	36	36	
MR20812-12-12	19	-12	3/4"	3/4"-14	35	70.8	15.0	8.5	32	41	41	
MR20812-16-16	25	-16	1"	1"-11	35	81.0	19.8	10.6	38	50	50	

BS STANDARD CONNECTIONS



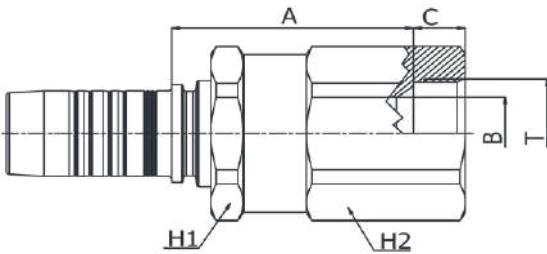
MR20892RT

90° BSP O-RING FEMALE SWEEP ELBOW
60° CONE BS5200 / ISO 12151-6

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	C	E	H	H1
MR20892-08-08RT	12	-08	1/2"	1/2"-14	42	45.9	9.3	6.5	85.3	27	32	32

FITTINGS 324

SAE STANDARD CONNECTIONS

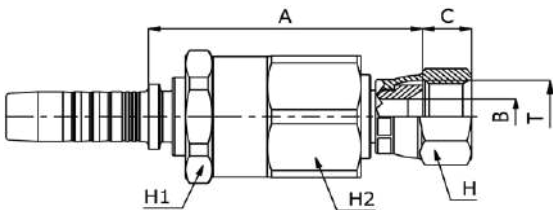


MR22510

SWIVEL JOINT JIC
FEMALE 37° CONE SEAT
SAE J516 / ISO 12151-5

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	C	H1	H2	
MR22510-20-20	31	-20	1.1/4"	1.5/8"-12	21	76.7	27.5	16.5	60	60		
MR22510-24-24	38	-24	1.1/2"	1.7/8"-12	16	87.5	33.5	19.5	70	70		

SAE STANDARD CONNECTIONS



MR22711

JIC
FEMALE DOUBLE HEXAGON 37° CONE SEAT

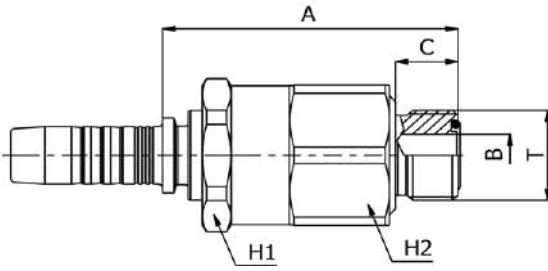
PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	C	H	H1	H2
MR22711-06-06	10	-06	3/8"	9/16"-18	35	56.0	7.0	9.5	17	27	27	
MR22711-08-08	12	-08	1/2"	3/4"-16	35	59.9	9.3	10.7	22	32	32	
MR22711-08-10	12	-08	1/2"	7/8"-14	35	61.9	11.3	12.5	25	32	32	
MR22711-10-10	16	-10	5/8"	7/8"-14	35	66.8	11.3	12.5	25	36	36	
MR22711-12-12	19	-12	3/4"	1.1/16"-12	35	68.3	15.0	14.1	32	41	41	
MR22711-16-16	25	-16	1"	1.5/16"-12	28	79.8	19.8	15.3	38	50	50	

SAE STANDARD CONNECTIONS

MR12410

ORFS
MALE

SAE J516 / ISO 12151-1



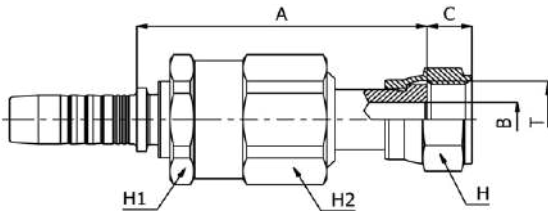
PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	C	H1	H2	
MR12410-08-08	12	-08	1/2"	13/16"-16	42	60.4	9.5	12.8	32	32		
MR12410-10-10	16	-10	5/8"	1"-14	42	68.8	12.5	15.5	36	36		

SAE STANDARD CONNECTIONS

MR22411

ORFS
FEMALE

SAE J516 / ISO 12151-1
PULL BACK TYPE (CRIMPED BACK-NUT)

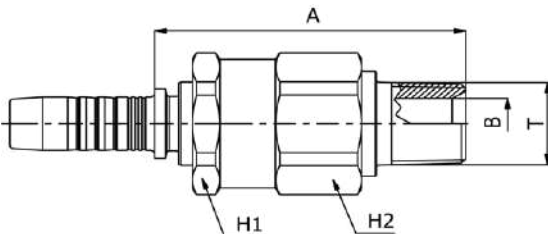


PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	C	H	H1	H2
MR22411-06-06	10	-06	3/8"	11/16"-16	42	64.5	7.0	9.5	22	27	27	
MR22411-08-08	12	-08	1/2"	13/16"-16	42	70.9	9.3	11.0	24	32	32	
MR22411-10-10	16	-10	5/8"	1"-14	42	77.8	11.5	13.5	30	36	36	
MR22411-12-12	19	-12	3/4"	1.3/16"-12	35	83.8	14.0	14.5	36	41	41	
MR22411-16-16	25	-16	1"	1.7/16"-12	35	93.4	19.8	15.0	41	50	50	

SAE STANDARD CONNECTIONS

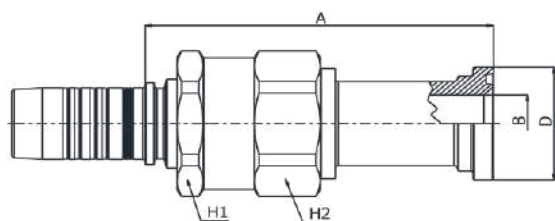
MR12810

NPTF MALE 60° CONE SEAT - SAE J516/J514



PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	H1	H2		
MR12810-04-04	6	-04	1/4"	1/4"-18	35	61.2	5.5	24	24			
MR12810-06-06	10	-06	3/8"	3/8"-18	28	60.7	9.3	27	27			
MR12810-08-08	12	-08	1/2"	1/2"-14	24.5	66.8	12.5	32	32			
MR12810-12-12	19	-12	3/4"	3/4"-14	21	74.2	16.0	41	41			
MR12810-16-16	25	-16	1"	1"-11.5	17.5	88.2	19.5	50	50			

SAE STANDARD CONNECTIONS



MR23311FK

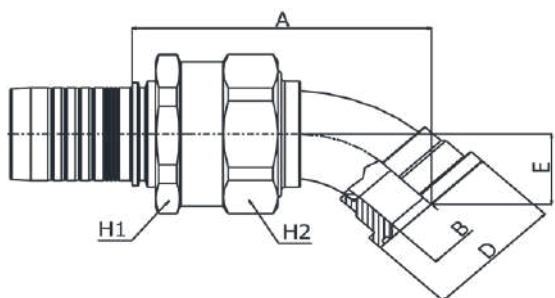
ISO / SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3
(VITON)

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	H1	H2
MR23311-20-20FK	31	-20	1.1/4"	1.1/4"	28	136.7	26.0	51.0	60	60		
MR23311-20-24FK	31	-20	1.1/4"	1.1/2"	21	134.7	32.0	60.5	60	60		
MR23311-24-24FK	38	-24	1.1/2"	1.1/2"	21	147.9	32.0	60.5	70	70		
MR23311-32-32FK	51	-32	2"	2"	21	154.4	42.0	71.6	90	90		

FITTINGS

326

SAE STANDARD CONNECTIONS

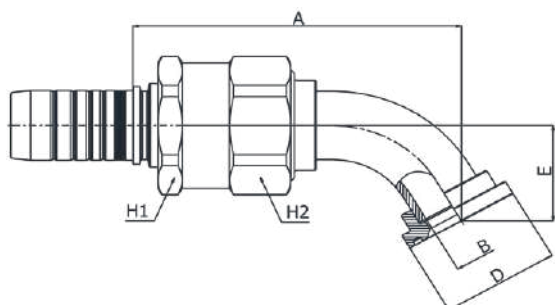


MR23341FK

45° ISO / SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3
(VITON)

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	E	H1
MR23341-40-40FK	63	-40	2.1/2"	2.1/2"	14	174.5	52.0	84.3	48.5	100	100	

SAE STANDARD CONNECTIONS



MR23361FK

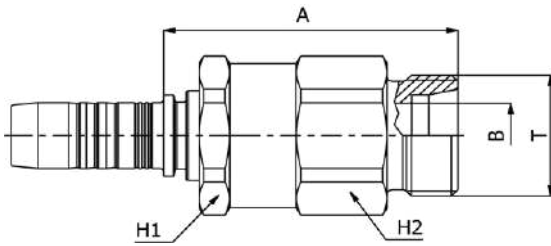
60° ISO / SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3
(VITON)

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	E	H1
MR23361-24-24FK	38	-24	1.1/2"	1.1/2"	21	166.6	32.0	60.5	52.9	70	70	
MR23361-24-32FK	38	-24	1.1/2"	2"	21	170.1	42.0	71.6	59.0	70	70	

DIN STANDARD CONNECTIONS

MR11210

**METRIC
MALE 24° CONE SEAT HEAVY DUTY
DIN 20066 / ISO 12151-2**

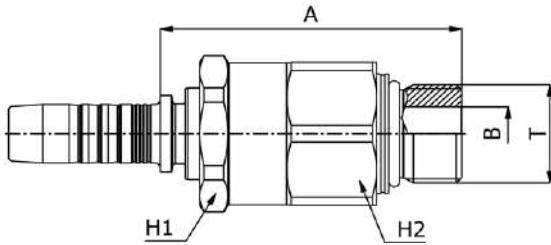


PART. REF.	SIZE			THREAD	PIPE	W.P.	DIMENSIONS mm					
	DN	Dash	inch				T	mm	MPa	A	B	H1
MR11210-10-30	16	-10	5/8"	M30X2	20	42	66.3	16.0	36	36		

DIN STANDARD CONNECTIONS

MR11910

**METRIC
MALE HEAVY DUTY SERIES
ISO 6149-2**

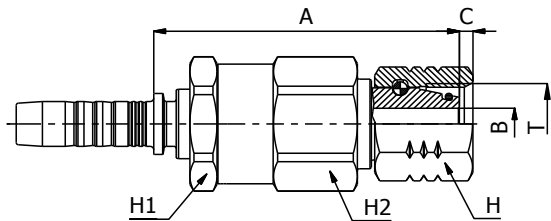


PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm					
	DN	Dash	inch			T	MPa	A	B	H1	H2
MR11910-06-18	10	-06	3/8"	M18X1.5	42	60.5	9.0	27	27		
MR11910-08-22	12	-8	1/2"	M22X1.5	42	61.9	12.0	32	32		

DIN STANDARD CONNECTIONS

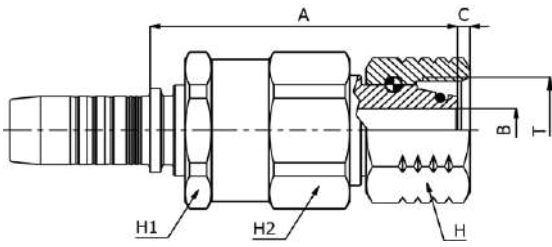
MR21512

**METRIC
O-RING FEMALE 24° CONE LIGHT DUTY
DIN 20066 / ISO 12151-2
(THRUST-WIRE NUT)**



PART. REF.	SIZE			THREAD	PIPE	W.P.	DIMENSIONS mm					
	DN	Dash	inch				T	mm	MPa	A	B	C
MR21512-04-16	6	-04	1/4"	M16X1.5	10	35	63.2	6.0	3.0	19	24	24
MR21512-06-18	10	-06	3/8"	M18X1.5	12	33	65.3	7.0	2.9	22	27	27
MR21512-10-26	16	-10	5/8"	M26X1.5	18	25	72.3	12.5	2.3	32	36	36

DIN STANDARD CONNECTIONS



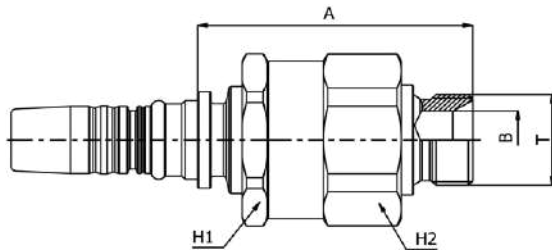
MR21612

**METRIC O-RING FEMALE 24° CONE HEAVY DUTY
DIN 20066 / ISO 12151-2 (THRUST-WIRE NUT)**

PART. REF.	SIZE			THREAD	PIPE	W.P.	DIMENSIONS mm						
	DN	Dash	inch				T	mm	MPa	A	B	C	H
MR21612-12-30	19	-12	3/4"	M30X2	20	35	79.8	12.5	3.2	36	41	41	

FITTINGS 328

BS STANDARD CONNECTIONS

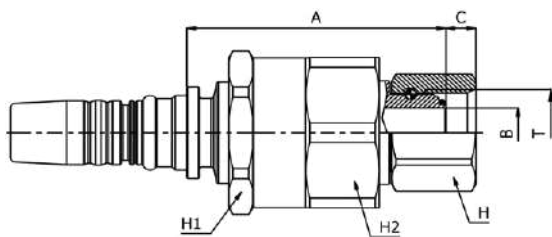


MR30510

**BSP
MALE 60° CONE SEAT
BS5200**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	H1	H2	
MR30510-12-12	19	-12	3/4"	3/4"-14	35	73.9	16.7	46	46			
MR30510-16-16	25	-16	1"	1"-11	35	85.7	22.2	55	55			
MR30510-20-20	31	-20	1.1/4"	1.1/4"-11	35	95.8	28.6	65	65			
MR30510-24-24	38	-24	1.1/2"	1.1/2"-11	30	109.6	33.3	75	75			

BS STANDARD CONNECTIONS



MR40812

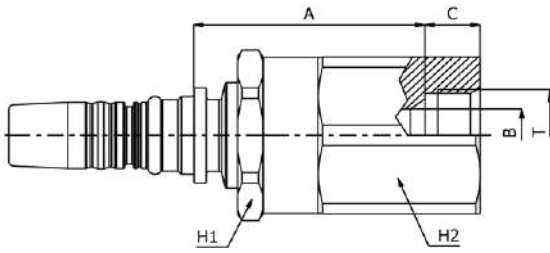
**BSP
O-RING FEMALE 60° CONE
BS5200/ ISO 8434-6**

PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	MPa	A	B	C	H	H1
MR40812-12-12	19	-12	3/4"	3/4"-14	35	73.7	15.0	8.5	32	46	46	
MR40812-16-16	25	-16	1"	1"-11	35	83.7	19.8	10.6	41	55	55	

SAE STANDARD CONNECTIONS

MR42510

JIC
FEMALE 37 °CONE SEAT
SAE J514

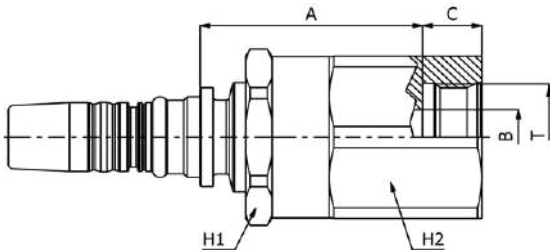


PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	C	H1	H2	
MR42510-12-12	19	-12	3/4"	1.1/16"-12	35	62.7	15.5	15.0	46	46		
MR42510-16-16	25	-16	1"	1.5/16"-12	28	70.0	21.5	16.5	55	55		

SAE STANDARD CONNECTIONS

MR42410

ORFS
FEMALE
ISO 8434-3 / SAE J1453

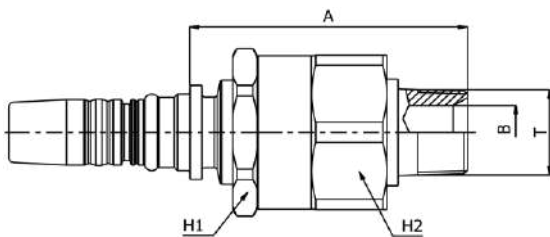


PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	C	H1	H2	
MR42410-12-12	19	-12	3/4"	1.3/16"-12	42	58.2	15.5	15.5	46	46		
MR42410-16-16	25	-16	1"	1.7/16"-12	42	66.0	20.5	16.0	55	55		

SAE STANDARD CONNECTIONS

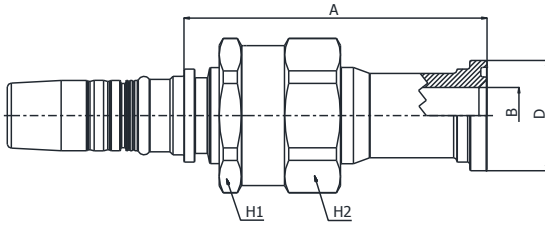
MR32810

NPTF
MALE 60° CONE SEAT
SAE J476A



PART. REF.	SIZE			THREAD	W.P.	DIMENSIONS mm						
	DN	Dash	inch			T	A	B	H1	H2		
MR32810-12-12	19	-12	3/4"	3/4"-14	21	77.1	16.0	46	46			
MR32810-16-16	25	-16	1"	1"-11.5	17.5	90.9	19.5	55	55			

SAE STANDARD CONNECTIONS

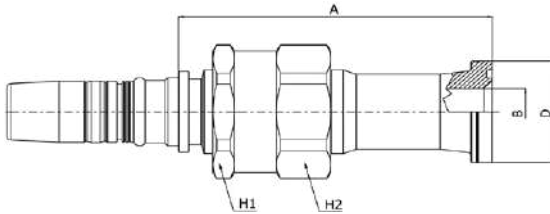


MR43310

ISO / SAE CODE 61 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	H1	H2
MR43310-20-20	31	-20	1.1/4"	1.1/4"	28	140.6	26.0	51.0	65	65		

SAE STANDARD CONNECTIONS

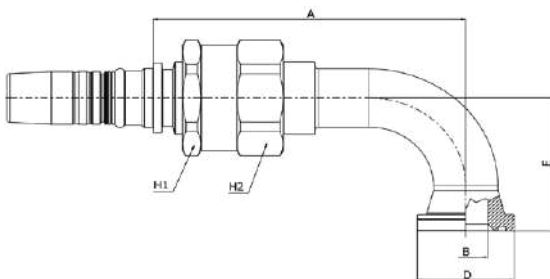


MR43610

ISO / SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	H1	H2
MR43610-20-20	31	-20	1.1/4"	1.1/4"	42	149.8	25.0	54.2	65	65		

SAE STANDARD CONNECTIONS



MR43690

90° ISO / SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

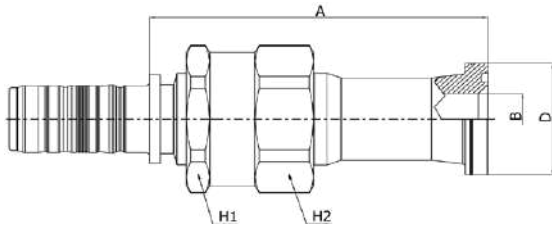
PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	E	H1
MR43690-20-20	31	-20	1.1/4"	1.1/4"	42	174.6	25.0	54.2	82.0	65	65	

FITTINGS 330

SAE STANDARD CONNECTIONS

MR83611

ISO / SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

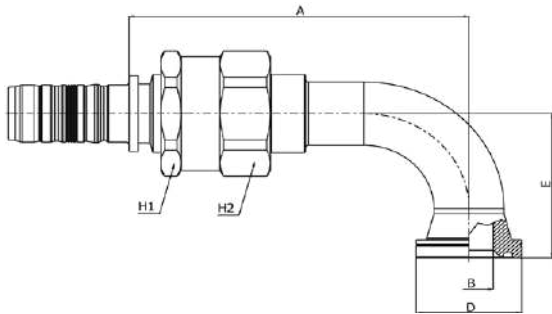


PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	H1	H2
MR83611-20-20	31	-20	1.1/4"	1.1/4"	42	149.9	25.0	54.2	65	65		

SAE STANDARD CONNECTIONS

MR83691

90° ISO / SAE CODE 62 FLANGE
SAE J516 / ISO 12151-3

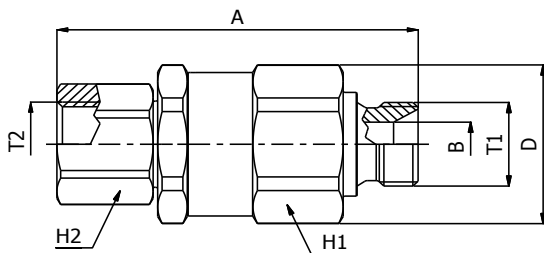


PART. REF.	SIZE			FLANGE	W.P.	DIMENSIONS mm						
	DN	Dash	inch			inch	MPa	A	B	D	E	H1
MR83691-20-20	31	-20	1.1/4"	1.1/4"	42	174.6	25.0	54.2	82.0	65	65	

BS STANDARD CONNECTIONS

AR520504

SWIVEL JOINT STRAIGHT
MALE BSP - FEMALE BSP

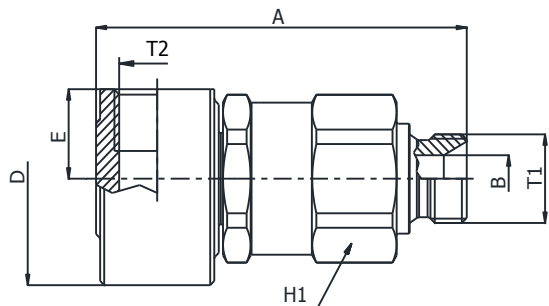


PART. REF.	SIZE			THREAD		W.P.	DIMENSIONS mm					
	DN	Dash	inch	T1	T2		MPa	A	B	D	H1	H2
AR520504-04-04	10	-06	3/8"	1/4"-19	1/4"-19	42	69.9	4.7	30.0	27.0	19.0	
AR520504-06-06	10	-06	3/8"	3/8"-19	3/8"-19	42	69.9	8.0	30.0	27.0	22.0	
AR520504-08-08	16	-10	5/8"	1/2"-14	1/2"-14	35	82.9	11.0	39.5	36.0	27.0	
AR520504-12-12	19	-12	3/4"	3/4"-14	3/4"-14	35	87.6	16.7	45.0	41.0	34.0	
AR520504-16-16	25	-16	1"	1"-11	1"-11	35	101.8	22.2	55.0	50.0	41.0	
AR520504-20-20	31	-20	1.1/4"	1.1/4"-11	1.1/4"-11	35	112.1	28.6	66.0	60.0	55.0	
AR520504-24-24	38	-24	1.1/2"	1.1/2"-11	1.1/2"-11	30	128.3	33.3	77.0	70.0	65.0	

BS STANDARD CONNECTIONS

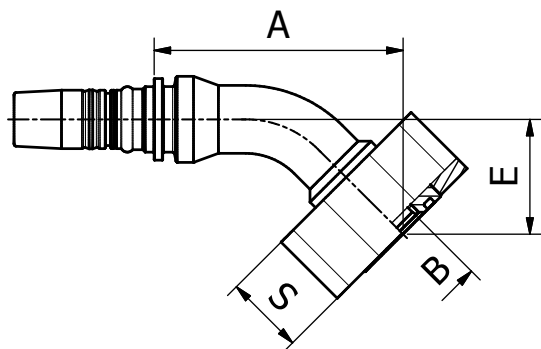
AR580504

SWIVEL JOINT 90°
MALE BSP - FEMALE BSP



PART. REF.	SIZE			THREAD		W.P.	DIMENSIONS mm						
	DN	Dash	inch	T1	T2		A	B	D	E	H1		
AR580504-04-04	10	-06	3/8"	1/4"-19	1/4"-19	42	70.4	4.7	36.0	16.0	27.0		
AR580504-06-06	10	-06	3/8"	3/8"-19	3/8"-19	42	75.4	8.0	39.0	16.0	27.0		
AR580504-08-08	16	-10	5/8"	1/2"-14	1/2"-14	35	90.9	11.0	50.0	21.0	36.0		
AR580504-12-12	19	-12	3/4"	3/4"-14	3/4"-14	35	100.1	16.7	60.0	24.0	41.0		
AR580504-16-16	25	-16	1"	1"-11	1"-11	35	117.3	22.2	70.0	28.0	50.0		

FITTINGS 332

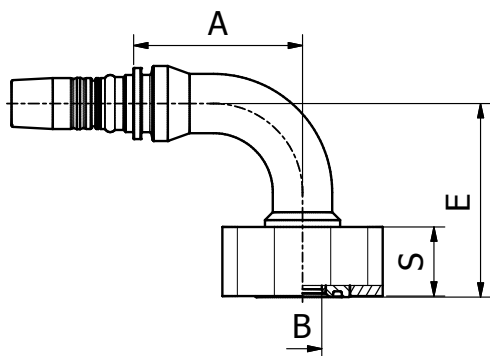


SAE STANDARD CONNECTIONS

M4364A

45° ADJUSTABLE FLANGE

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	A	B	E	S			
M4364A-12-12	19	- 12	3/4"	3/4"	90.5	14.5	37.5	27.4			
M4364A-16-16	25	- 16	1"	1"	109.5	19.5	50.5	35			
M4364A-20-20	31	- 20	1.1/4"	1.1/4"	136.5	25	56.5	35			



SAE STANDARD CONNECTIONS

M4369A

90° ADJUSTABLE FLANGE

PART. REF.	HOSE BORE			FLANGE	DIMENSIONS mm						
	DN	Dash	inch	inch	A	B	E	S			
M4369A-12-12	19	- 12	3/4"	3/4"	72.5	14.5	73	27.4			
M4369A-16-16	25	- 16	1"	1"	85.5	19.5	98	35			
M4369A-20-20	31	- 20	1.1/4"	1.1/4"	112	25	111.5	35			

