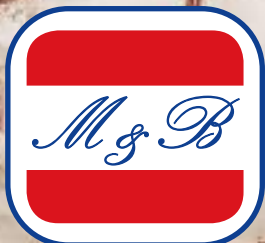


Monti & Barabino

**Technical Supplies
For Industrial and Naval field
Since 1880**



**HYDRAULIC
FITTINGS**





Monti & Barabino, established in 1880, is based in Genoa and operates in the field of Technical Items supplies for the Industrial and Maritime Sectors.

The extremely wide experience matured in more than 135 years of activity and its highly qualified personnel composed by technicians, marine engineers, naval architects etc., enables the Company to offer the most complete and efficient technical and commercial assistance.

Moreover, the products stocked in its large warehouse allows it to promptly satisfy any kind of enquiry, while its workshop is able to manufacture all types of packings and gaskets comprising the moulding of rubber and elastomer of various types, including silicon, Fluoropolymer, Polyurethane, etc.

Since February 2004, Monti & Barabino S.p.A. improved its Quality Management System in accordance with **UNI EN ISO 9001** regulations, obtaining the certification through **R.I.N.A.** This prestigious acknowledgement is a confirmation of our constant effort in offering excellent quality and service to all those Customers who have chosen and will choose our Company as their supplier.



Our workshop, acting as  **Parker** Official distributor, is able to offer:

- FLEXIBLE HOSES FOR LOW, MEDIUM AND VERY HIGH PRESSURE
- MED APPROVED FLEXIBLE HOSES
- TYPE APPROVED SHIP TO SHORE AND INDUSTRIAL COMPOSITE HOSES
- HIGH PRESSURE STEAM HOSES
- HIGH PRESSURE CLEANING HOSES
- RUBBER, STAINLESS STEEL AND TEXTILE EXPANSION JOINTS

Moreover:

- HYDRAULIC TEST FACILITIES
- MANAGEMENT OF TESTING PROCEDURES IN PRESENCE OF CLASSIFICATION BODIES
- PRESSED FITTINGS ON LARGE BORE RUBBER HOSES UP TO 10"



MECHANICAL WORKSHOP and **PIPE WORKSHOP** are available for the execution of customized processes on our semi-finished products. Thanks to the wide availability of **WAREHOUSE** we are able to satisfy your needs in a short time, organizing and managing your shipments in a very short time.

We perform CNC turning and cutting on rubber and metal semi-finished products; we mold details and rubber gaskets.



We produce gaskets in any material, even according to Customer's design, including padded copper and spiral wound gaskets.

We sew and assemble insulating mats and textile joints: wide choice of fabrics for high temperatures.



Laser marking of finished products and components

We are an authorized **Parker** assembling center, hydraulic hoses up to 3" and industrial hoses up to 10".

Ask for our **FLEXIBLE HOSES** and **ACCESSORIES CATALOG**



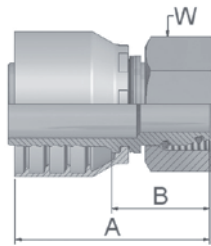
Approved welders able to manufacture special fittings according to Customer's specifications.

We perform internal hydrostatic tests, also in the presence of an external Certifying Body.



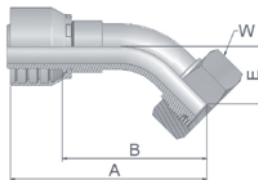
**Female Metric 24°
Light Series with O-Ring
Swivel – Straight**

ISO 12151-2-SWS-L – DKOL



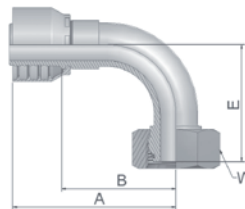
**Female Metric 24°
Light Series with O-Ring
Swivel – 45° Elbow**

ISO 12151-2-SWE 45°-L – DKOL 45°



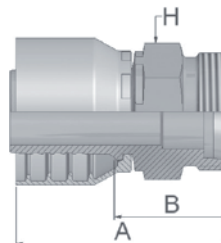
**Female Metric 24°
Light Series with O-Ring
Swivel – 90° Elbow**

ISO 12151-2-SWE-L – DKOL 90°



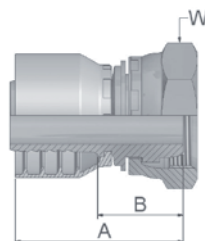
**Male Metric 24°
Light Series – Rigid
Straight**

ISO 12151-2-S-L – CEL



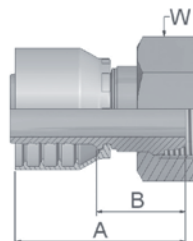
**Female Metric
Very Light Series LL
Swivel – Straight (Ball
Nose)**

DKM



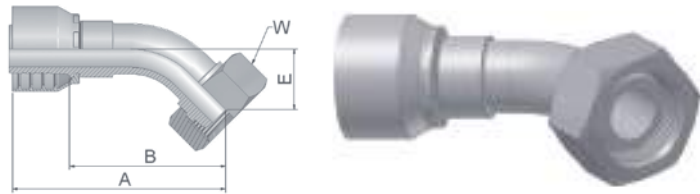
**Female Metric
Light Series – Swivel
Straight (Ball Nose)**

DKL



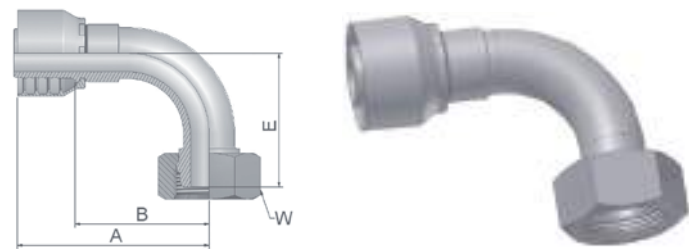
**Female Metric
Light Series – Swivel
45° Elbow (Ball Nose)**

DKL 45°



**Female Metric
Light Series – Swivel
90° Elbow (Ball Nose)**

DKL 90°



**Female Metric 24° – Swivel
Heavy Series with O-Ring
Straight**

ISO 12151-2-SWS-S – DKOS



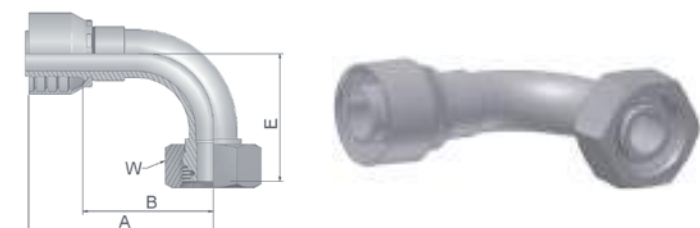
**Female Metric 24° – Swivel
Heavy Series with O-Ring
45° Elbow**

ISO 12151-2 – SWE 45°-S – DKOS 45°



**Female Metric 24° – Swivel
Heavy Series with O-Ring
90° Elbow**

ISO 12151-2-SWE-S – DKOS 90°



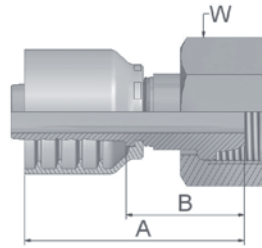
**Male Metric 24° – Rigid
Heavy Series – Straight**

ISO 12151-2-S-S – CES



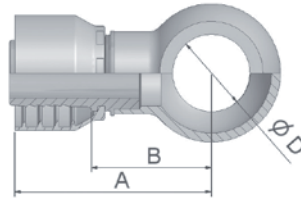
**Female Metric – Swivel
Heavy Series – Straight
(Ball Nose)**

DKS



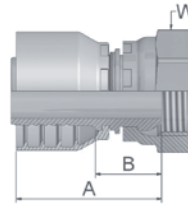
**Metric Banjo
Straight**

DIN 7642



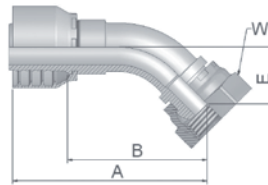
**Female BSP Parallel Pipe
Swivel – Straight (60° Cone)**

BS5200-A – DKR



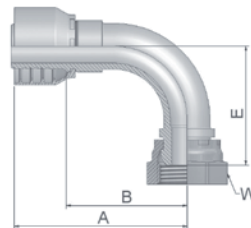
**Female BSP Parallel Pipe
Swivel
45° Elbow (60° Cone)**

BS 5200-D – DKR 45°



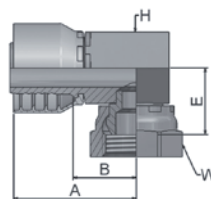
**Female BSP Parallel Pipe
Swivel
90° Elbow (60° Cone)**

BS 5200-B – DKR 90°



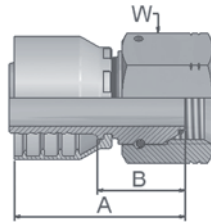
**Female BSP Parallel Pipe
Swivel – 90° Elbow
Block Type (60° Cone)**

BS 5200-E – DKR 90°



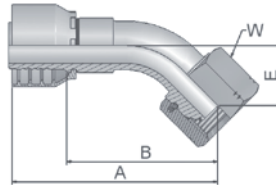
BSP Swivel Female with O-Ring (60° Cone)

BS 5200 – ISO 12151-6 – DKOR



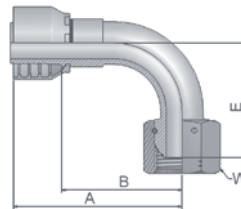
BSP Swivel Female with O-Ring 45° Elbow (60° Cone)

BS 5200 – ISO 12151-6 – DKOR 45°



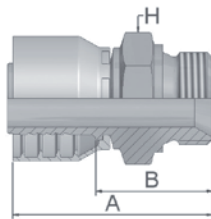
BSP Swivel Female with O-Ring 90° Elbow (60° Cone)

BS 5200 – ISO 12151-6 – DKOR 90°



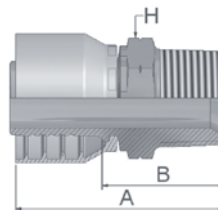
Male BSP Parallel Pipe Rigid – Straight (60° Cone)

BS5200 – AGR



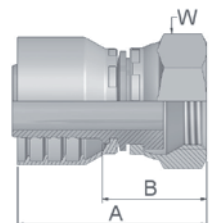
Male BSP Taper Pipe – Rigid Straight

BS5200 – AGR-K



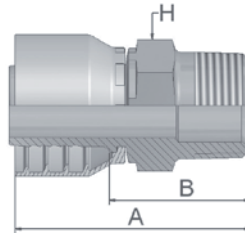
Female BSP Parallel Pipe Swivel

Straight (Flat Seat)



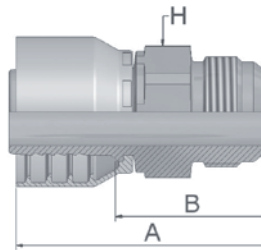
**Male NPTF Pipe
Rigid – Straight**

SAE J476A / J516 – AGN



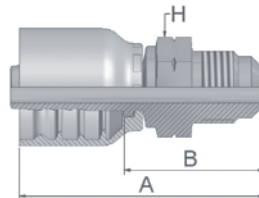
**Male JIC 37° – Rigid
Straight**

ISO12151-5-S – AGJ



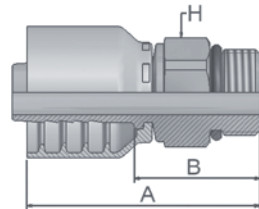
**Male SAE 45° – Rigid
Straight**

SAE J516



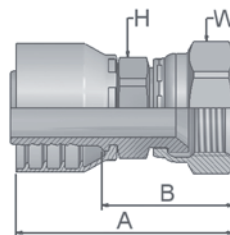
**Male SAE Straight Thread
with O-Ring – Rigid
Straight**

ISO 11926 – SAE J516



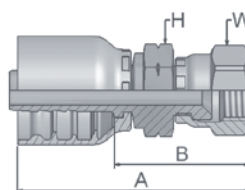
**Female – JIC 37°
SAE 45° Dual Flare
Swivel – Straight**

ISO12151-5-SWS – DKJ



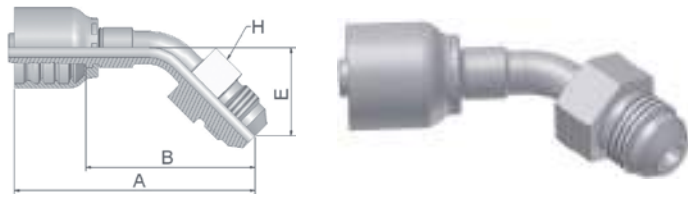
**Female SAE 45° – Swivel
Straight**

SAE J516



Male JIC 37° – Rigid 45° Elbow

ISO 12151-5 – AGJ 45°



Female JIC 37° SAE 45° – Dual Flare Swivel Female 45° Elbow

ISO 12151-5-SWE 45° – DKJ 45°



Female JIC 37° SAE 45° – Dual Flare Swivel Female 90° Elbow

ISO 12151-5-SWES – DKJ 90°



Female JIC 37° / 45° Swivel Female 90° Elbow (Long)

ISO 12151-5-SWEL – DKJ 90°L



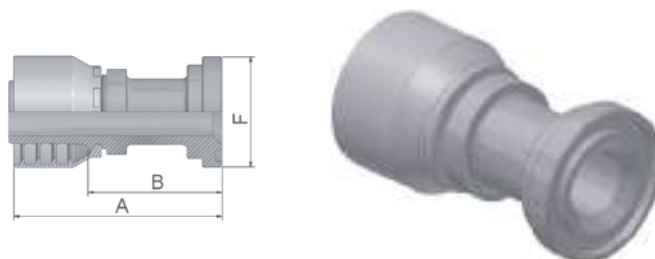
Female JIC 37° – Swivel 90° Elbow – Medium Drop

ISO 12151-5-SWEM – DKJ 90° M



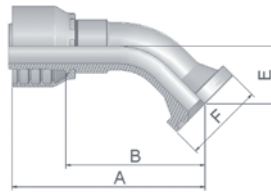
SAE Code 61 – Flange Head Straight

ISO 12151-3-S-L – SFL
3000 psi



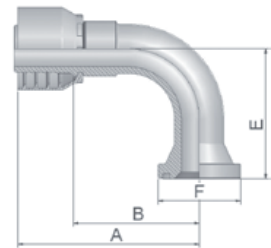
**SAE Code 61 – Flange Head
45° Elbow
ISO 12151-3 – E45-L – SFL 45°**

3000 psi



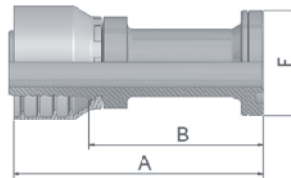
**SAE Code 61 – Flange Head
90° Elbow
ISO 12151-3 – E- L – SFL 90°**

3000 psi



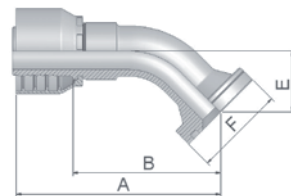
**SAE Code 62 Flange
Straight
ISO 12151-3-S-S – SFS**

6000 psi



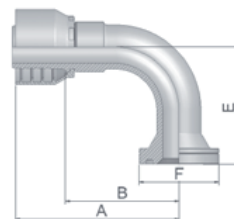
**SAE Code 62 Flange
45° Elbow – Heavy Series
ISO 12151-3 – E45-S – SFS 45°**

6000 psi



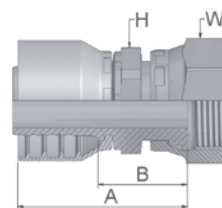
**SAE Code 62 Flange
90° Elbow
ISO 12151-3 – E-S – SFS 90°**

6000 psi



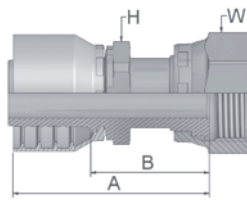
**Female ORFS
Swivel – Straight
Short**

ISO 12151-1 – SWSA
SAE J516 – ORFS



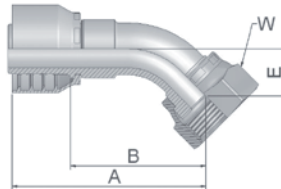
ORFS Swivel Female (Long)

ISO 12151-1-SWSB
SAE J516 – ORFS



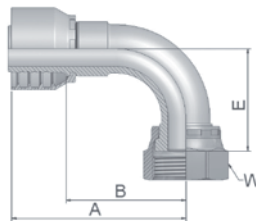
Female ORFS – Swivel 45° Elbow

ISO 12151-1 – SWE 45°
SAE J516 – ORFS 45°



Female ORFS – Swivel 90° Elbow – Short Drop

ISO 12151-1 – SWES
SAE J516 – ORFS 90°



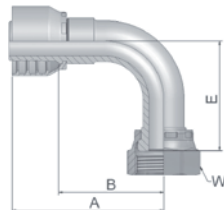
Female ORFS – Swivel 90° Elbow – Long Drop

ISO 12151-1 – SWEL
SAE J 516 – ORFS 90° L



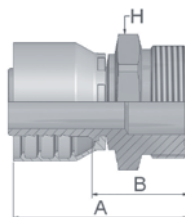
Female ORFS – Swivel 90° Elbow – Medium Drop

ISO 12151-1 – SWEM – ORFS 90° M



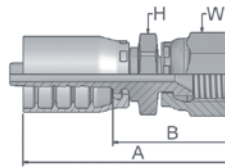
ORFS Male

ISO 12151-1-S – SAE J516



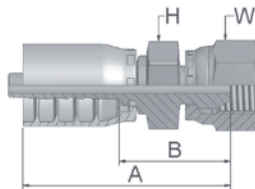
Female BSP Parallel Pipe Swivel – Straight (30° Flare)

ISO 228-1 – JIS B8363 – GUI



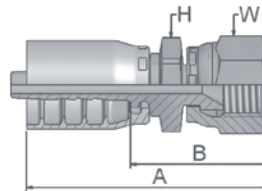
Female BSP Parallel Pipe Swivel – Straight (60° Cone)

ISO 228-1 – JIS B8363 – GUO



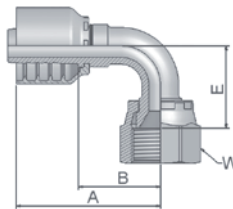
Female Metric – Swivel Straight (30° Flare)

JIS B8363 – MU



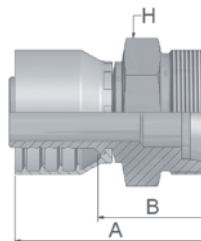
Female Metric – Swivel 90° Elbow (30° Flare)

JIS B8363



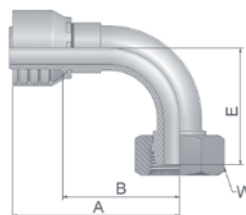
Male French Gas Series

Rigid – Straight (24° Cone)

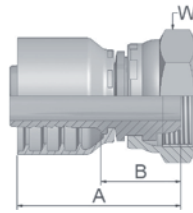


Female French Gas Series

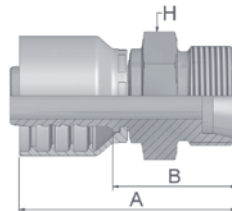
Swivel – 90° Elbow



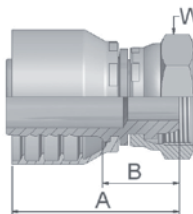
**Female French Gas Series
Swivel – Straight
(Ball Nose)**



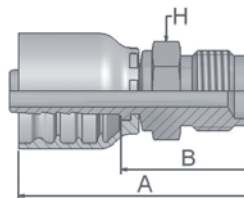
**French Male Metric Series
(24° Cone)**



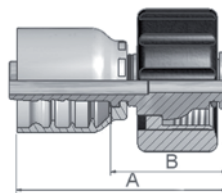
**French Female Metric Series
Swivel – (Ball Nose)**



**Metric Male for Agriculture
Valves**



Power Cleaner Connection



Special fittings can be machined upon request

FLAT FLANGE ASA 150					
DN	D	d	N° Holes	Ø	Pitch
1/2"	88,9	22,3	4	15,9	60,3
3/4"	98,4	27,4	4	15,9	69,8
1"	107,9	34,5	4	15,9	79,4
1" 1/4	117,5	43,2	4	15,9	88,9
1" 1/2	127,0	49,5	4	15,9	98,4
2"	152,4	62,0	4	19,0	120,6
2" 1/2	177,8	74,7	4	19,0	139,7
3"	190,5	90,7	4	19,0	152,4
3" 1/2	215,9	103,4	8	19,0	177,8
4"	228,6	116,1	8	19,0	190,5
5"	254,0	143,8	8	22,2	215,9
6"	279,4	170,7	8	22,2	241,3
8"	342,9	221,5	8	22,2	298,4
10"	406,4	276,3	12	25,4	361,9
12"	482,6	327,1	12	25,4	431,8
14"	533,4	359,1	12	28,6	476,2
16"	596,9	410,5	16	28,6	539,7
18"	635,0	461,8	16	31,7	577,8
20"	698,5	513,1	20	31,7	635,0
22"	749,3	564,4	20	34,9	692,1
24"	812,8	615,9	20	34,9	749,3
26"	869,9	666,7	24	34,9	806,4
30"	984,2	768,3	28	34,9	914,4
34"	1111,2	869,9	32	41,3	1028,7
36"	1168,4	920,7	32	41,3	1085,8
42"	1346,2	1073,1	36	41,3	1257,3



FLAT FLANGE ASA 300					
DN	D	d	N° Holes	Ø	Pitch
1/2"	95,2	22,3	4	15,9	66,7
3/4"	117,5	27,7	4	19,0	82,5
1"	123,8	34,5	4	19,0	88,9
1" 1/4	133,3	43,2	4	19,0	98,4
1" 1/2	155,6	49,5	4	22,2	114,3
2"	165,1	62,0	8	19,0	127,0
2" 1/2	190,5	74,7	8	22,2	149,2
3"	209,5	90,7	8	22,2	168,3
3" 1/2	228,6	103,4	8	22,2	184,1
4"	254,0	116,1	8	22,2	200,0
5"	279,4	143,8	8	22,2	234,9
6"	317,5	170,7	12	22,2	269,9
8"	381,0	221,5	12	25,4	330,2
10"	444,5	276,3	16	28,6	387,3
12"	520,7	327,1	16	31,7	450,8
14"	584,2	359,1	20	31,7	514,3
16"	647,7	410,5	20	34,9	571,5
18"	711,2	461,8	24	34,9	628,6
20"	774,7	513,1	24	34,9	685,8
22"	838,2	564,4	24	41,3	742,9
24"	914,4	615,9	24	41,3	812,8
26"	971,5	666,7	28	44,4	876,3
30"	1092,2	768,3	28	47,6	996,9
34"	1206,5	868,9	28	50,8	1104,9
36"	1270	920,7	32	54,0	1168,4
42"	1447,8	1073,1	36	54,0	1339,8

FLAT FLANGE PN 6					
DN	D	d	N° Holes	Ø	Pitch
15	80	22	4	12	55
20	90	28	4	12	65
25	100	34	4	12	75
32	120	43	4	14	90
40	130	49	4	14	100
50	140	62	4	14	110
65	160	77	4	14	130
80	190	90	4	18	150
100	210	116	4	18	170
125	240	141	8	18	200
150	265	170	8	18	225
175	295	196	8	18	255
200	320	221	8	18	280
250	375	275	12	18	335
300	440	326	12	22	395
350	490	358	12	22	445
400	540	409	16	22	495
450	595	460	16	22	550
500	645	510	20	22	600
600	755	612	20	25	705
700	860	716	24	25	810
800	975	818	24	29	920
900	1075	920	24	29	1020
1000	1175	1020	28	29	1120

FLAT FLANGE PN 10					
DN	D	d	N° Holes	Ø	Pitch
15	95	22	4	14	65
20	105	28	4	14	75
25	115	34	4	14	85
32	140	43	4	18	100
40	150	49	4	18	110
50	165	62	4	18	125
65	185	77	4	18	145
80	200	90	4	18	160
100	220	116	8	18	180
125	250	141	8	18	210
150	285	170	8	22	240
175	315	196	8	22	270
200	340	221	8	22	295
250	395	275	12	22	350
300	445	326	12	22	400
350	505	358	16	22	460
400	565	409	16	25	515
450	615	460	20	25	565
500	670	510	20	25	620
600	780	612	20	30	725
700	895	716	24	30	840
800	1015	818	24	33	950
900	1115	920	28	33	1050
1000	1230	1020	28	36	1160

FLAT FLANGE PN 16					
DN	D	d	N° Holes	Ø	Pitch
15	95	22	4	14	65
20	105	28	4	14	75
25	115	34	4	14	85
32	140	43	4	18	100
40	150	49	4	18	110
50	165	62	4	18	125
65	185	77	4	18	145
80	200	90	8	18	160
100	220	116	8	18	180
125	250	141	8	18	210
150	285	170	8	22	240
175	315	196	8	22	270
200	340	221	12	22	295
250	405	275	12	25	355
300	460	326	12	25	410
350	520	358	16	25	470
400	580	409	16	30	525
450	640	460	20	30	585
500	715	510	20	33	650
600	840	612	20	36	770
700	910	716	24	36	840
800	1025	818	24	39	950
900	1125	920	28	39	1050
1000	1255	1020	28	42	1170

Identifying Fitting Types

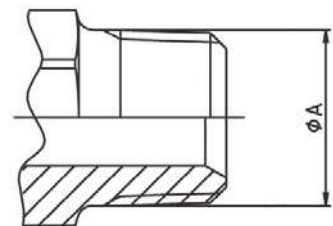
In general fittings can be identified by their visual appearance, their sealing surface/ sealing type or by their thread type/form. Viewing the following pages the visual identification will be self explanatory. The sealing mechanism and the method of thread identification however, needs further explanation.

Determining Sealing Mechanisms:

- Thread interface
- O-ring
- Matching angle or metal to metal joint
- Mated angle with O-ring

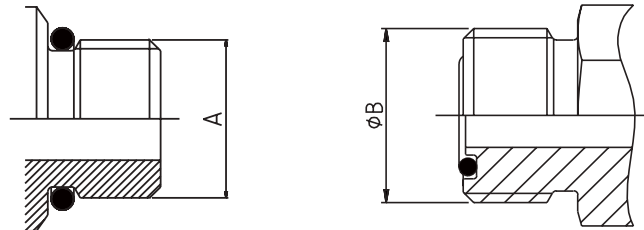
Thread Interface

The sealing is assured by the flattening of the edges of the threads when the male is screwed into the female fitting. Typically the front of the male fittings are narrower than the back of the fittings – often referred to as tapered threads.



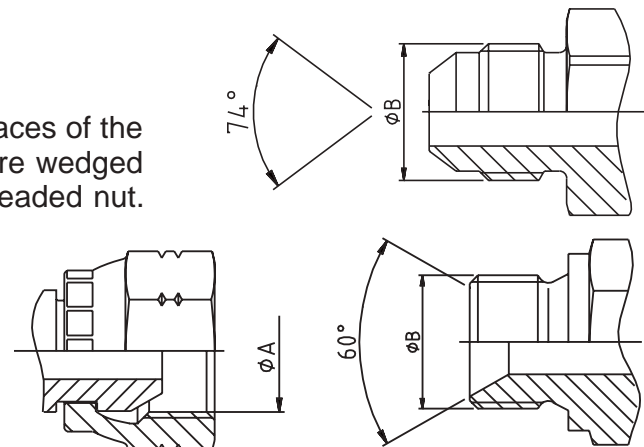
O-ring

The O-ring on the male is compressed against the corresponding female and assures the seal. This type of sealing mechanism should be the preferred choice for high-pressure applications.



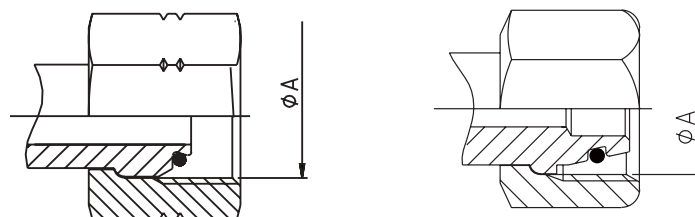
Matching Angle or Metal to Metal Joint

The seal takes place where the two angled faces of the male and corresponding female meet and are wedged into one another by the tightening of the threaded nut. The sealing surfaces can either be convex or concave (seat) on the male or in the head of the pipe of the female as shown.



Matching Angle with O-ring

These fittings combine the functionality of both the matching angle seal with the O-ring. The O-ring is in the angled sealing surface of the fitting so that when the threaded male and female are screwed together the sealing surfaces wedge together and at the same time deform the O-ring between them.



Determining Thread Type

In general the appearance of the threads of various fittings looks similar and hinders the easy identification of the thread. To assure the correct identification, the threads must be measured and compared to the tables listed in the following section.

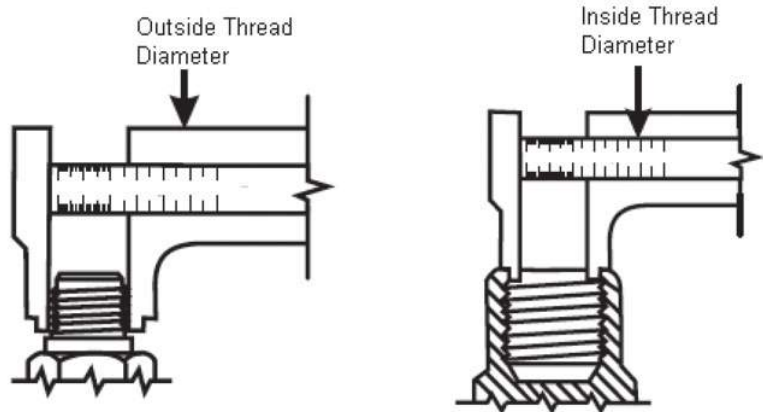
Thread Gauge

Using a thread gauge, the number of threads per inch can be determined. Holding the gauge and coupling threads in front of a lighted background helps to obtain an accurate measurement.



Caliper Measure

A vernier caliper should be used to measure the thread diameter of the largest point. (Outside diameter (O.D.) of male threads – Inside Diameter (I.D.) of female threads.)



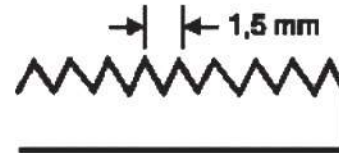
German DIN Hose Fittings (DIN – Deutsches Institut für Normung)

Often referred to as metric fittings these fittings seal using the angled sealing surfaces (metal to metal) or the combination of metal to metal with O-rings.

They are available in **very light (LL)**, **light series (L)** or **heavy series (S)**

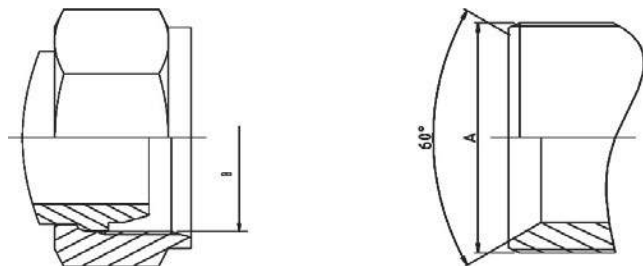
The sealing face angles are either 24° with or without O-rings, or 24°/60° universal cones. Identification is made by measuring the thread size and also the tube outside diameter.

Defined by the outside diameter and the pitch (distance between 2 crests of the thread)
example: M22x1.5 - pitch of 1,5mm



DIN Very Light Series (LL)

The male 60° cone will mate with the female 60° cone only. The male has a 60° sealing angle (seat) and straight metric thread. The female has a 60° seat and straight metric thread.



Standard

DIN 20078 Part 3¹⁾

Parker end configurations

C0

DN	Metric thread	ØA (mm)	ØB (mm)
20	M30x1.5	30,00	28,50
25	M38x1.5	38,00	36,50
32	M45x1.5	45,00	43,50
40	M52x1.5	52,00	50,50
50	M65x2	65,00	63,00

DIN Light (L) and Heavy Series (S) without O-ring

The male 60° cone will mate with the female universal 24° or 60° cone only.

The male has a 60° sealing angle (seat) and straight metric threads. The female has a 24° and 60° universal seat and straight metric threads.

Standard

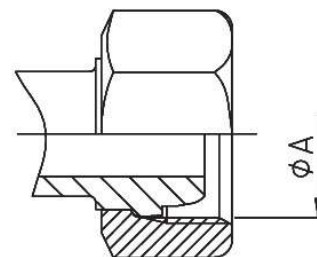
DIN 20078 Part 2¹⁾

(previously known as DIN 20078 A, D & E)

Parker end configurations light series:

C3, C4, C5, C6

(Often also referred to as “Ball nose cones”)



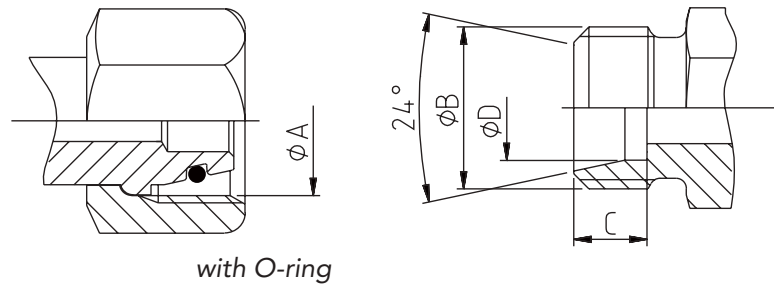
without O-ring

1) obsolete standard, no exact replacement

DIN 24° Light (L) and Heavy Series (S) with O-ring

The male has a 24° sealing angle cone seat with straight metric threads.

The female has a 24° convex cone with O-ring and a swivel straight metric threaded nut.



Standard

ISO 12151-2 / ISO 8434-1 & ISO 8434-4

(Previously DIN 20 078 Part 4, 5, 8, 9)

Parker end configurations light series

CA, CE, CF, D0

Parker end configurations heavy series

C9, 0C, 1C, D2

Tube OD	Specif.	Metric thread	ØA (mm)	ØB (mm)	C (mm)	ØD (mm)
6,00	6L	M12X1.5	10,50	12,00	7,00	6,20
6,00	6S	M14X1.5	12,50	14,00	7,00	6,20
8,00	8L	M14x1.5	12,50	14,00	7,00	8,20
8,00	8S	M16x1.5	14,50	16,00	7,00	8,20
10,00	10L	M16x1.5	14,50	16,00	7,00	10,20
10,00	10S	M18x1.5	16,50	18,00	7,50	10,20
12,00	12L	M18x1.5	16,50	18,00	7,00	12,20
12,00	12S	M20x1.5	18,50	20,00	7,50	12,20
14,00	14S	M22x1.5	20,50	22,00	8,00	14,20
15,00	15L	M22x1.5	20,50	22,00	7,00	15,20
16,00	16S	M24x1.5	22,50	24,00	8,50	16,20
18,00	18L	M26x1.5	24,50	26,00	7,50	18,20
20,00	20S	M30x2	27,90	30,00	10,50	20,20
22,00	22L	M30x2	27,90	30,00	7,50	22,20
25,00	25S	M36x2	33,90	36,00	12,00	25,20
28,00	28L	M36x2	33,90	36,00	7,50	28,20
30,00	30S	M42x2	39,90	42,00	13,50	30,20
35,00	35L	M45x2	42,90	45,00	10,50	35,30
38,00	38S	M52x2	49,90	52,00	16,00	38,30
42,00	42L	M52x2	49,90	52,00	11,00	42,30

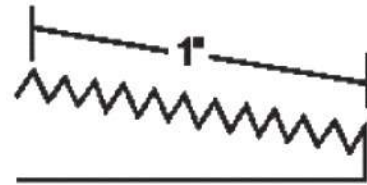
British Standard Pipe (BSP)

Also referred to as Whitworth threads, the BSP thread type fittings seal using metal to metal angled surfaces or a combination of metal to metal and an O-ring.

The angle of the sealing surfaces is 60° for both forms.

There are two popular thread forms, British Standard Pipe Parallel (BSPP) and British Standard Pipe Tapered (BSPT).

Identification is made by measuring the outside diameter of the thread and the number of threads per inch (25.4 mm)

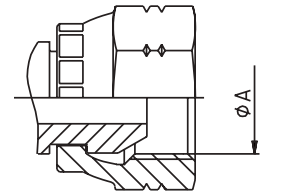


BSPP

metal to metal without O-ring
Standard

BS5200

Parker end configurations
92, B1, B2, B4, D9



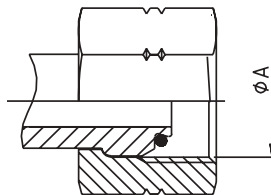
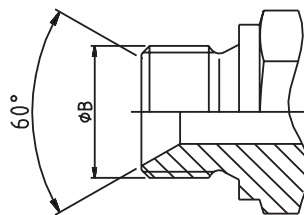
Tube OD	Size	BSP thread	ØA (mm)	ØB (mm)
6/10	-2	1/8-28	8,60	9,70
8/13	-4	1/4-19	11,50	13,20
12/17	-6	3/8-19	14,90	16,70
15/21	-8	1/2-14	18,60	20,90
18/23	-10	5/8-14	20,60	22,90
20/27	-12	3/4-14	24,10	26,40
26/34	-16	1"-11	30,30	33,20
33/42	-20	1.1/4-11	38,90	41,90
40/49	-24	1.1/2-11	44,90	47,80
50/60	-32	2-11	56,70	59,60

BSPP

metal to metal with O-ring
Standard

ISO 12151-6 ²⁾

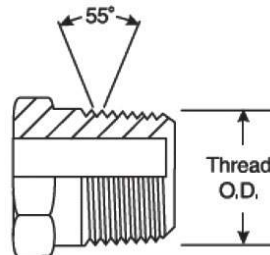
Parker end configurations
EA, EB, EC, EE, D9



BSPT

fittings seal through the thread interface mechanism. Care should be taken not to confuse the BSPT fitting with the NPTF male fitting. BSPT has a 55° thread angle. NPTF has 60° thread angle.

Parker end configuration
91

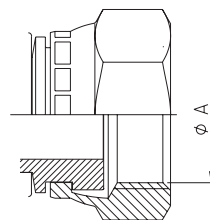


Tube OD	Size	BSP thread	ØA (mm)
5/10	-2	1/8-28	9,73
8/13	-4	1/4-19	13,16
12/17	-6	3/8-19	16,66
15/21	-8	1/2-14	20,96
20/27	-12	3/4-14	26,44
26/34	-16	1"-11	33,25
33/42	-20	1.1/4-11	41,91
40/49	-24	1.1/2-11	47,80
50/60	-32	2-11	59,61

BSP Flat Seal

These fittings have BSP parallel threads but the sealing surface is flat. The seal is made when the composite seal is compressed against the female flat face.

Parker end configurations
B5, B6, B7



Tube OD	Size	BSP thread	ØA (mm)
6/10	-2	1/8-28	8,6
8/13	-4	1/4-19	11,5
12/17	-6	3/8-19	14,9
15/21	-8	1/2-14	18,6
18/23	-10	5/8-14	20,6
20/27	-12	3/4-14	24,1
26/34	-16	1"-11	30,3

French Metric 24° Cone Gas Fittings

Typical to the French market the French Gas fittings have a 24° sealing surfaces seat with metric straight threads. Although similar to German DIN fittings the threads differ in some sizes as the French Gas fittings have fine threads in all sizes whereas the German DIN fittings use standard threads in the larger sizes.

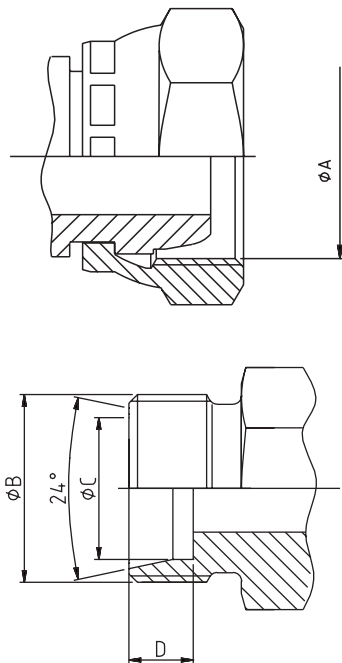
The sealing mechanism is metal to metal.

The fittings are not specified in any international standard.

Parker end configurations

F6, F9 (metric tube)

FG, F2, F4 (gas tube)



Tube OD	Size	BSP thread	ØA (mm)	ØB (mm)	ØC (mm)	D (mm)
6,00	6N	M12x1	11,00	12,00	6,20	9,00
8,00	8N	M14x1.5	12,50	14,00	8,15	9,00
10,00	10N	M16x1.5	14,50	16,00	10,20	9,00
12,00	12N	M18x1.5	16,50	18,00	12,15	9,00
13,25	13G	M20x1.5	18,50	20,00	13,50	9,00
14,00	14N	M20x1.5	18,50	20,00	14,15	9,00
15,00	15N	M22x1.5	20,50	22,00	15,15	9,00
16,00	16N	M24x1.5	22,50	24,00	16,15	9,00
16,75	17G	M24x1.5	22,50	24,00	17,00	9,00
18,00	18N	M27x1.5	25,50	27,00	18,15	9,00
20,00	20N	M27x1.5	25,50	27,00	20,15	9,00
21,25	21G	M30x1.5	28,50	30,00	21,50	9,00
22,00	22N	M30x1.5	28,50	30,00	22,15	9,00
25,00	25N	M33x1.5	31,50	33,00	25,15	9,00
26,75	27G	M36x1.5	34,50	36,00	27,00	9,00
28,00	28N	M36x1.5	34,50	36,00	28,25	9,00
30,00	30N	M39x1.5	37,50	39,00	30,25	9,00
32,00	32N	M42x1.5	40,50	42,00	32,25	9,00
33,25	34G	M45x1.5	43,50	45,00	33,80	9,00
35,00	35N	M45x1.5	43,50	45,00	35,25	9,00
38,00	38N	M48x1.5	46,50	48,00	38,25	9,00
40,00	40N	M52x1.5	50,50	52,00	40,35	9,00
42,25	42G	M52x1.5	50,50	52,00	42,55	9,00
48,25	49G	M58x2	55,90	58,00	49,00	11,00

Dryseal American Standard Taper Pipe Thread (NPTF)

This type of fitting uses the thread interface to seal and as such has a tapered thread that deforms and forms the seal.

They have 30° sealing angle surfaces, forming a 60° inverted (concave) seat.

The fittings are most frequently seen on machines of US origin.

The NPTF male will mate with the NPTF, NPSF, or NPSM females.

Care should be taken not to confuse the NPTF fitting with the BSPT male fitting. NPTF fittings have a 60° thread angle.

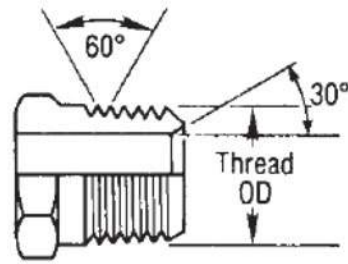
BSPT has a 55° thread angle.

Standard

SAE J516

Parker end configuration

01



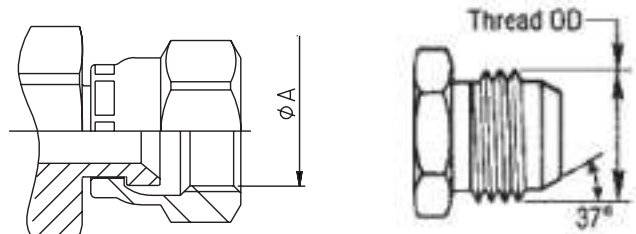
ØA dimension is measured on the 4th pitch of the thread

Size	NPTF thread	ØA (mm)	ØB (mm)
-2	1/8-27	10,24	8,73
-4	1/4-18	13,61	11,90
-6	3/8-18	17,05	15,90
-8	1/2-14	21,22	19,05
-12	3/4-14	26,56	24,60
-16	1-11,5	33,22	30,95
-20	1.1/4-11,5	41,98	39,69
-24	1.1/2-11,5	48,05	45,24
-32	2-11,5	60,09	57,15

SAE JIC 37°

Commonly referred to as just JIC fittings these metal to metal sealing type fittings have a 37° flare (sealing surface angle) and straight United National Fine straight Threads (UNF).

The original design specification for the fittings comes from the Society of Automotive Engineers (SAE) and these fittings are the most common American fitting type in Europe.



Standard

ISO 12151-5²⁾, ISO8434-2 and SAE J516

Parker JIC hose fittings are fully compatible with Parker Triple-lock Tube Fittings and adapters.

Parker end configurations

03, 06/68, 37/3V, 39/3W, 41/3Y, L9

2) standard in preparation

Tube OD	Tube D (mm)	UNF thread	Size	ØA (mm)	ØB (mm)
3/16"		3/8-24	-3	8,60	9,50
1/4"	6	7/16-20	-4	10,00	11,10
5/16"	8	1/2-20	-5	11,60	12,70
3/8"	10	9/16-18	-6	13,00	14,30
1/2"	12	3/4-16	-8	17,60	19,10
5/8"	14-15-16	7/8-14	-10	20,50	22,20
3/4"	18-20	1.1/16-12	-12	24,60	27,00
7/8"	22	1.3/16-12	-14	28,30	30,10
1"	25	1.5/16-12	-16	31,30	33,30
1.1/4"	30-32	1.5/8-12	-20	39,20	41,30
1.1/2"	38	1.7/8-12	-24	45,60	47,60
2"		2.1/2-12	-32	61,50	63,50

SAE 45° Flare

The angle of the flare is commonly used as a name when referring to these metal to metal sealing fittings.

The female fittings have a 90° concave inverted seat, created by the 45° angle sealing surfaces.

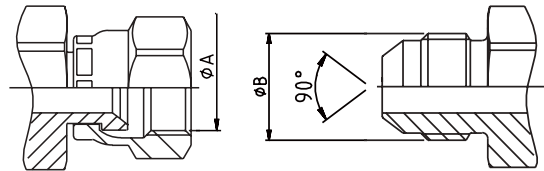
The SAE 45° flare male will mate with an SAE 45° flare female only or a dual seat JIC 37°/SAE45°.

Standard

SAE J516

Parker end configurations

04, 08/68, 77/3V, 79/3W, 81/3Y



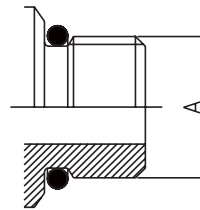
Tube OD	Size	UNF thread	ØA (mm)	ØB (mm)
1/4"	-4	7/16-20	9,90	11,10
5/16"	-5	1/2-20	11,50	12,70
3/8"	-6	5/8-18	14,30	15,90
1/2"	-8	3/4-16	17,50	19,10
5/8"	-10	7/8-14	20,60	22,20
3/4"	-12	1.1/16-14	25,00	27,00

SAE O-ring (Boss Type)

This male fitting has straight threads, a sealing face and an O-ring. It is compatible only with female boss type fittings generally found in the ports of the machines. Sealing is achieved through the O-ring of the male and through the sealing face of the female.

Parker end configuration

05



UNF thread	Size	ØA (mm)
5/16-24	-2	7,93
3/8-24	-3	9,52
7/16-20	-4	11,11
1/2-20	-5	12,70
9/16-18	-6	14,28
3/4-16	-8	19,10
7/8-14	-10	22,22
11/16-12	-12	27,00
13/16-12	-14	30,10
15/16-12	-16	33,30
15/8-12	-20	41,30
17/8-12	-24	47,60
21/2-12	-32	63,50

O-ring Face Seal (ORFS)

ORFS fittings are becoming the most popular international fitting type used on global OEM machines due to their high level of sealing and their good vibration resistance. The fittings use the O-ring compression mechanism to seal.

The female fittings have flat faces and straight threaded UNF swivel nuts. The male fittings have the O-ring in a groove in the flat face.

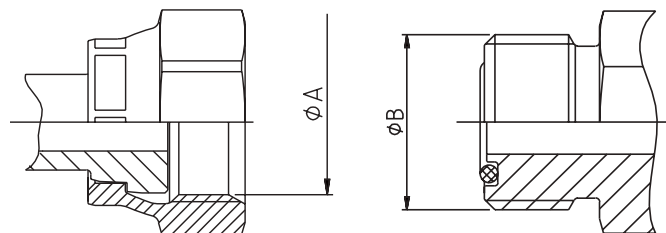
Seen as a major advantage, these fittings offer the possibility to build the hose assemblies into fixed distances/spaces, without having to move back other system components due the flat faces of the male and female fittings – the hose assembly can be slotted in.

Standard

ISO 12151-1, ISO8434-3 and SAE J516

Parker end configurations

JC, JM/J0, JS, JU, J1, J3, J5, J7, J9



Tube OD	Tube D (mm)	UNF thread	Size	ØA (mm)	ØB (mm)
1/4"	6	9/16-18	-4	13,00	14,20
3/8"	10	11/16-16	-6	15,90	17,50
1/2"	12	13/16-16	-8	19,10	20,60
5/8"	16	1-14	-10	23,80	25,40
3/4"	20	1.3/16-12	-12	28,20	30,10
1"	25	1.7/16-12	-16	34,15	36,50
1.1/4"	32	1.11/16-12	-20	40,50	42,90
1.1/2"	38	2-12	-24	48,80	50,80

Flange Fittings

Code 61 and Code 62

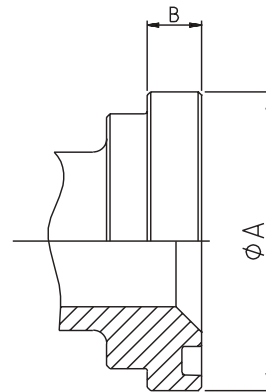
The 4-bolt split flange (or full flange) fitting is used worldwide for connecting high pressure hoses typically to pumps, motors and cylinders, where the hose assemblies are subjected to large pressure loadings.

The sealing mechanism is through compression of the O-ring in the face of the flange head against the surface of the port/ connection.

The flange fittings are generally separated into two pressure classes referred to as 3000 psi (SFL) or 6000 psi (SFS).

ISO 12151-3 refers to the flange fittings as code 61 for the 3000 psi and code 62 for the 6000 psi. In addition to these flanges, customer specific Komatsu® and CATERPILLAR® flanges can also be found in the market.

- Standard Code 61
for 3000 to 5000 psi max., depending on size
- High Pressure Code 62
for 6000 psi max. regardless of size



Parker end configurations

Code 61 (3000 psi)
15, 16, 17, 19, P5, P7, P9

5000 psi (Code 61 dimensions)
4A, 4F, 4N

Code 62 (6000 psi)
6A, 6F, 6N, PA, PF, PN, 89

Caterpillar flange
XA, XF, XG, XN

Flange (inch)	Size	code 61	code 61
1/2	-8	34,5/5000	41,3/6000
3/4	-12	34,5/5000	41,3/6000
1	-16	34,5/5000	41,3/6000
1.1/4	-20	27,5/4000	41,3/6000
1.1/2	-24	20,7/3000	41,3/6000
2	-32	20,7/3000	41,3/6000

Code 61 - SAE 3000 PSI

Flange (inch)	Size	ØA (mm)	B (mm)	O-Ring
1/2"	-8	30,18	6,73	18,64X3,53
3/4"	-12	38,10	6,73	24,99X3,53
1"	-16	44,45	8,00	32,92X3,53
1.1/4"	-20	50,80	8,00	37,69X3,53
1.1/2"	-24	60,33	8,00	47,22X3,53
2"	-32	71,42	9,53	56,74X3,53
2.1/2"	-40	84,12	9,53	69,44X3,53
3"	-48	101,60	9,53	85,32X3,53

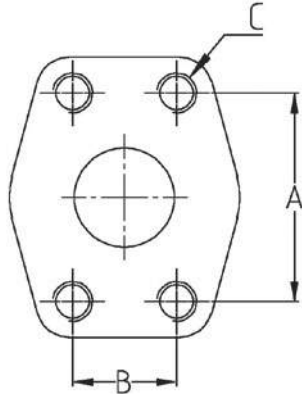
Code 62 - SAE 6000 PSI

Flange (inch)	Size	ØA (mm)	B (mm)	O-Ring
1/2"	-8	31,75	7,75	18,64X3,53
3/4"	-12	41,28	8,76	24,99X3,53
1"	-16	47,63	9,53	32,92X3,53
1.1/4"	-20	53,98	10,29	37,69X3,53
1.1/2"	-24	63,50	12,57	47,22X3,53
2"	-32	79,38	12,57	56,74X3,53

4-Bolt Split Flange

A 4-bolt split flange is used to attach the flange fittings to their ports.

- Standard Code 61 for 3000 to 5000 psi max., depending on size
- High Pressure Code 62 for 6000 psi max. regardless of size



port dimensions

Code 61 - SAE 3000 PSI

Flange	Size	A (mm)	B (mm)	(INCH)	C (METR.)
1/2"	-8	38.1	17.5	5/16-18	M8x1,25
3/4"	-12	47.6	22.3	3/8-16	M10x1,5
1"	-16	52.4	26.2	3/8-16	M10x1,5
1-1/4"	-20	58.7	30.2	7/16-14	M10x1,5
1-1/2"	-24	69.9	35.7	1/2-13	M12x1,75
2"	-32	77.8	42.8	1/2-13	M12x1,75*

Code 62 - SAE 6000 PSI

Flange	Size	A (mm)	B (mm)	(INCH)	C (METR.)
1/2"	-8	40.5	18.2	5/16-18	M8x1,25
3/4"	-12	50.8	23.8	3/8-16	M10x1,5
1"	-16	57.2	27.8	7/16-14	M12x1,75
1-1/4"	-20	66.7	31.8	1/2-13	M12x1,75*
1-1/2"	-24	79.4	36.5	5/8-11	M16x2
2"	-32	96.8	44.4	3/4-10	M20x2,5

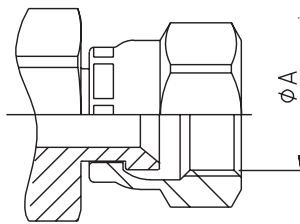
*M14x2 still used in the market but no longer in accordance with ISO 6162

Japanese fittings - JIS

Japanese Industrial Standard (JIS) are seen on most Japanese equipment and use a 30° sealing angle seat and either British Standard Pipe Parallel or metric threads.

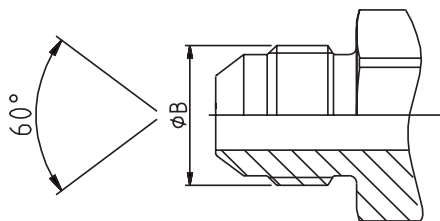
Care must be taken not to confuse the JIS fittings with BSP or JIC fittings.

The sealing mechanism of the fittings is the 30° metal to metal angled surfaces.



Parker end configurations

MU, XU (Metric)
FU (BSP)



JIS 30° metric

Symbol	Metric thread	ØA (mm)	ØB (mm)
MU-6	M14x1.5	12,50	14,00
MU-9	M18x1.5	16,50	18,00
MU-12	M22x1.5	20,50	22,00
MU-15	M27x2	25,00	27,00
MU-19	M27x2	25,00	27,00
MU-25	M33x2	31,00	33,00
MU-32	M42x2	40,00	42,00
MU-38	M50x2	48,00	50,00
MU-50	M60x2	58,00	60,00

JIS 30° BSP

Symbol	BSP thread	ØA (mm)	ØB (mm)
GUI-3	1/8-28	8,60	9,70
GUI-5/-6	1/4-19	11,50	13,20
GUI-8/-9	3/8-19	14,90	16,70
GUI-12	1/2-14	18,60	20,90
GUI-15/-19	3/4-14	24,10	26,40
GUI-25	1"-11	30,30	33,20
GUI-32	1.1/4-11	38,90	41,90
GUI-38	1.1/2-11	44,90	47,80
GUI-50	2-11	56,70	59,60



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