



HYDRAULIC HOSE AND FITTINGS

North American Catalog



Dunlop Hiflex and LGG Industrial Partnership

Dunlop Hiflex branded hydraulic hose and fittings are distributed exclusively in North America through LGG Industrial. Through our partnership with Dunlop Hiflex as a high-quality supplier, LGG Industrial customers have access to the widest range of hydraulic hose and fittings on the market.

Dunlop Hiflex is driven by a passion for excellence in the design, manufacture, and supply of hydraulic hoses and fittings. Since 1956, Dunlop Hiflex has been committed to providing its customers with products that meet the highest standards of quality, reliability, and performance.



// LGG INDUSTRIAL OEM SOLUTIONS



Recognized by Modern Distribution Magazine as one of North America's top hose and accessory distributors.

- Headquartered in Pittsburgh, PA - operating 70 branches across the USA and Canada
- Trusted supplier of hoses since 1935 with unparalleled depth of expertise in fluid handling, material conveyance and sealing solutions



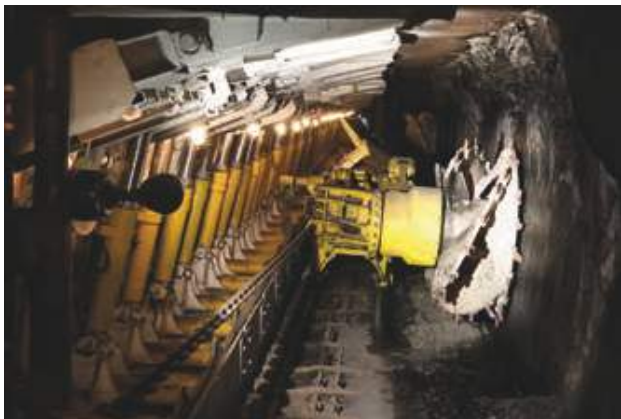
- A globally renowned brand in the fluid power industry
- Based in Italy and produced by one of the world's leading manufacturers of hydraulic hoses
- Manufactured in regions known for high-quality production standards
- Trusted and approved by top American mobile OEM companies
- Offering a comprehensive hose assembly manufacturer's warranty, ensuring perfect compatibility with Dunlop Hiflex hoses and fittings
- Extensive catalog of hydraulic hoses and fittings
- Specializing in metric hose ends



- LGG Industrial's Hose Fabrication Process
- Cutting-edge production control for unmatched consistency
- MES (Manufacturing Execution System)-powered, end-to-end production tracking
- Each hose is individually serialized for traceability
- Scanned fittings and hoses for 100% component accuracy
- Comprehensive batch traceability for all hose components



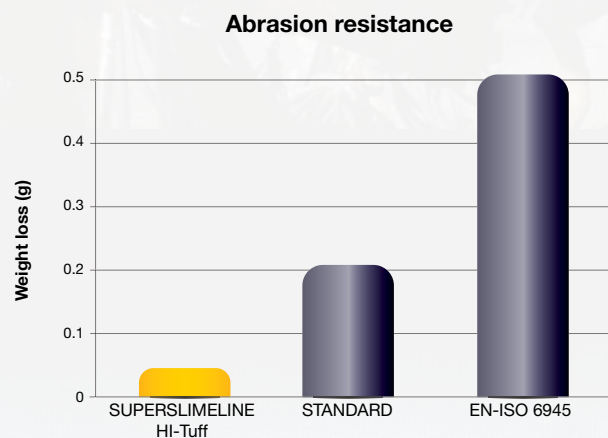
// MAIN HYDRAULIC APPLICATION



HI-TUFF HIGH ABRASION RESISTANCE

HI-TUFF

- **Excellent abrasion resistance**
(10 times higher than EN-ISO 6945 requirement)
- **High ozone resistance**
(10 times more than the standard)
- **MSHA approved cover**
- **Alternative to protective sleeve**
in applications requiring abrasion resistance



EXTRA FLEXIBLE BIO OIL RESISTANT HOSE RANGE

POWERFLEX^{Bio}

- Specially designed for bio oil full compatibility
- **Extreme flexibility:** up to 50% better bend radius compared to SAE 100R
- Minetuff cover for top abrasion & ozone resistance
- MSHA-approved fire resistant cover



BEND RADIUS: REDUCED UP TO 50%

// HOSE SERIES – PRESSURE BY SIZE

	Hose Family	Specification	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
TEXTILE BRAID	ARGUS 2TE	EN 854	1100	1000	920	840	730	650	600			
WIRE BRAID	122 HI-TUFF 1SN/R1AT	SAE 100 R1AT - ISO 1436-1 - UNI EN 853 1SN MSHA				2320		1530	1280			600
	117 SLIMLINE HI-TUFF	SAE 100 R17 1SC MSHA	3000		3000	3000						
	222 HI-TUFF 2SN/R2AT	SAE 100 R2AT - ISO 1436-1 - UNI EN 853 2SN MSHA	5850		4800	4000	3630	3120	2400	1820	1310	1200
	241T SUPERSLIMLINE - HI-TUFF	EN 857 2SC (up to 1") - ISO 11237 - SAE 100 R16	6000	5500	5000	4500	4000	3500	3000	2000	1820	
	241X SUPERSLIMLINE - TUFLEX	EN 857 2SC - ISO 11237 - SAE 100 R16	6000		5000	4500	4000	3500	3000			
	241R SUPERSLIMLINE - HI-TUFF HP	EN 857 2SC (up to 1") - ISO 11237 - SAE 100 R16				5000	5000	4000	3630			
	SP33G SUPERFOREST				7280	6800	6000	5500	4750	3500		
SPIRAL	POWERFLEXBIO EXTRA 3000 - HI	ISO 18752 - exceeds SAE 100 R12								3000	3000	3000
	POWERFLEXBIO EXTRA 4000 - HI	ISO 18752				4000		4000	4000	4000	4200	4000
	POWERFLEXBIO EXTRA 5000 - HI	exceeds ISO 18752					5000	5000	5000	5000	5000	5000
	POWERFLEXBIO EXTRA 5000 PLUS - HI-TUFF	ISO 18752						5500	5500			
	POWERFLEXBIO EXTRA 6000 - HI	ISO 18752 - exceeds SAE 100 R15	6550		6450	6000	6000	6000	6000	6000	6000	6000
	POWERFLEXBIO EXTRA 4000 - TUFLEX	ISO 18752						4000	4000	4000	4200	4000
	POWERFLEXBIO EXTRA 5000 - TUFLEX	ISO 18752					5000	5000	5000	5000	5000	5000
	POWERFLEXBIO EXTRA 6000 - TUFLEX	ISO 18752 - exceeds SAE 100 R15	6550		6450	6000	6000	6000	6000	6000	6000	6000
HIGH TEMP - BRAID	COMMANDER 150 1SN PLUS	SAE 100 R1AT - ISO 1436-1 - UNI EN 853 1SN	3250		2610	2320	1900	1530	1280	920	730	600
LOW TEMPERATURE BRAID	261E HYPERCOLD SUPERSLIMLINE		6000	5500	5000	4500	4500	4000	3500	3000	2000	1820
	SP33E HYPERCOLD SUPERFOREST					6800	6000	5500	4800			
LOW TEMPERATURE SPIRAL	HYPERCOLD EXTRA 4000	ISO 18752									4200	4000
	HYPERCOLD EXTRA 5000	exceeds ISO 18752					5000	5500	5500	5000	5000	5000
	HYPERCOLD EXTRA 6000	ISO 18752 - exceeds SAE 100 R15	6550		6450	6000	6000	6000	6000	6000	6000	6000
OIL RETURN LINES	FLEXOR R4 604	SAE 100 R4						300	250	200	150	100
	FLEXOR R4 634 EXTRA FLEXIBLE	SAE 100 R4						300	250	200	150	100
	FLEXOR R4 644 HIGH TEMPERATURE	SAE 100 R4						300	250	200	150	100
WATER BLAST	WATERBLAST - WB10L					10000		10000	10000			
	WATERBLAST - WB15L				18000	18000		14500				
	WATERBLAST - WB20L	ISO 18752 - exceeds SAE 100 R15	20000	20000	20000	20000		20000				



// HOSE

// TEXTILE BRAID	9	// HIGH TEMPERATURE	18
// WIRE BRAID	10	// LOW TEMPERATURE	19
// WIRE SPIRAL - POWERFLEXBIO	13	// OIL RETURN LINES	22
// TUFLEX	16	// PRESSURE WASH	23

// TEXTILE BRAID

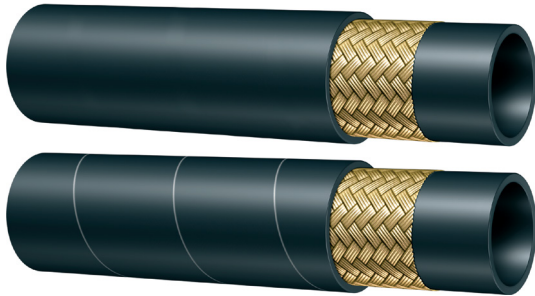
// ARGUS 2TE

**EN 854****Tube:** oil resistant synthetic rubber.**Reinforcement:** one high tensile textile braid.**Cover:** abrasion, ozone and hydrocarbon resistant synthetic rubber.**Application:** medium pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.**Temperature:** -40 °C +100 °C (-40 °F +212 °F)
air max T = +70 °C (+160 °F)**Length:** random**DH SCAN crimp short code:** 2TE

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1001398	4	6.0	1/4"	13.1	0.52	7.5	1100	30.0	4300	40	1.57	0.112	0.08
1001399	5	8.0	5/16"	14.9	0.59	7.0	1000	27.0	3945	50	1.97	0.160	0.11
1001400	6	10.0	3/8"	16.5	0.65	6.3	920	25.2	3680	60	2.36	0.163	0.11
1001401	8	13.0	1/2"	19.7	0.78	5.8	840	23.2	3360	70	2.76	0.240	0.17
1001402	10	16.0	5/8"	23.9	0.94	5.0	730	20.0	2900	90	3.54	0.281	0.19
1001761	12	19.0	3/4"	27.0	1.06	4.5	650	18.0	2610	110	4.33	0.350	0.24
1001404	16	25.0	1"	34.4	1.35	4.0	600	16.0	2320	150	5.91	0.497	0.34

// WIRE BRAID

// 122 HI-TUFF 1SN



MSHA

SAE 100 R1AT - ISO 1436-1 - UNI EN 853 1SN**Tube:** oil resistant synthetic rubber.**Reinforcement:** one high tensile steel braid.**Cover:** smooth up to 1", wrapped over 1". Abrasion, ozone and hydrocarbon resistant synthetic rubber.**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

air max T = +70 °C (+160 °F)

Length: random up to 1" - 61 m max over 1 1"/4**LGG Industrial Short Code:** (Dash Size)R1SN

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004594	8	13.0	1/2"	19.9	0.78	16.0	2320	64.0	9280	180	7.09	0.372	0.26
1004595	12	19.0	3/4"	27.0	1.06	10.5	1530	42.0	6000	240	9.45	0.543	0.37
1004608	16	25.0	1"	35.6	1.40	8.8	1280	35.2	5100	300	11.81	0.864	0.59
1003961	32	51.0	2"	62.4	2.46	4.0	600	16.0	2320	630	24.80	1.835	1.24
1004609	48	76.0	3"	92.0	3.62	2.6	375	10.3	1500	900	35.43	3.530	2.38

// SLIMLINE 117 HI-TUFF



MSHA

SAE 100 R17 - EN 857 1SC - ISO 11237**Tube:** oil resistant synthetic rubber.**Reinforcement:** one high tensile steel braid.**Cover:** abrasion, ozone and hydrocarbon resistant synthetic rubber.**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

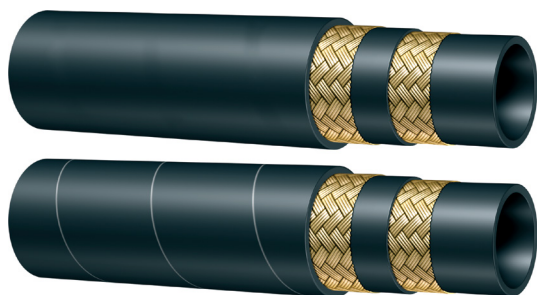
air max T = +70 °C (+160 °F)

Length: random

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1000167	4	6.0	1/4"	12.0	0.47	22.5	3250	90.0	13000	50	1.97	0.167	0.12
1000178	5	8.0	5/16"	13.3	0.52	21.5	3120	86.0	12500	55	2.17	0.190	0.13
1000106	6	10.0	3/8"	15.4	0.61	21.0	3000	84.0	12000	65	2.56	0.256	0.18
1000105	8	13.0	1/2"	19.2	0.76	21.0	3000	84.0	12000	90	3.54	0.360	0.25

Specification reference EN 857 1SC for 1/4", 5/16", 3/8" only

// 222 HI-TUFF 2SN



MSHA

SAE 100 R2AT - ISO 1436-1 - UNI EN 853 2SN

Tube: oil resistant synthetic rubber.**Reinforcement:** two high tensile steel braids.**Cover:** smooth up to 1", wrapped over 1". Abrasion, ozone and hydrocarbon resistant synthetic rubber.**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

air max T = +70 °C (+160 °F)

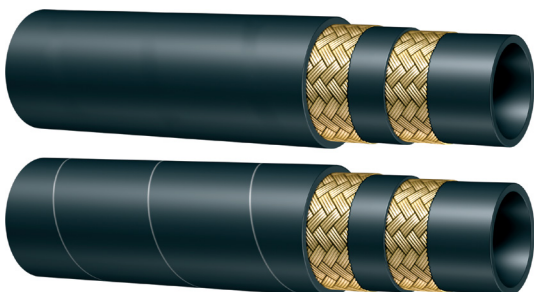
Length: random up to 1" - 61 m max over 1 1/4"**LGG Industrial Short Code:** (Dash Size)R2SN

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004766	4	6.0	1/4"	14.2	0.56	40.0	5850	160.0	23200	100	3.94	0.330	0.23
1005529	6	10.0	3/8"	18.2	0.72	33.0	4800	132.0	19200	125	4.92	0.463	0.32
1005530	8	13.0	1/2"	21.3	0.84	27.5	4000	110.0	16000	175	6.89	0.530	0.36
1004614	10	16.0	5/8"	24.5	0.96	25.0	3630	100.0	14500	200	7.87	0.663	0.45
1005557	12	19.0	3/4"	28.6	1.13	21.5	3120	86.0	12500	240	9.45	0.852	0.58
1005558	16	25.0	1"	36.6	1.44	16.5	2400	66.0	9600	300	11.81	1.224	0.83
1004615	20	32.0	1 1/4"	46.0	1.81	12.5	1820	50.0	7280	420	16.54	1.769	1.19
1004616	24	38.0	1 1/2"	52.8	2.08	9.0	1310	36.0	5240	500	19.69	2.030	1.37
1005535	32	51.0	2"	65.6	2.58	8.0	1200	32.0	4640	630	24.80	2.760	1.86

11

HOSE

// 241T SUPERSLIMLINE - HI-TUFF



MSHA

EN 857 2SC (up to 1") - ISO 11237 - SAE 100 R16

Tube: oil resistant synthetic rubber.**Reinforcement:** two high tensile steel braids.**Cover:** smooth up to 1", wrapped over 1". Abrasion, ozone and hydrocarbon resistant synthetic rubber.**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

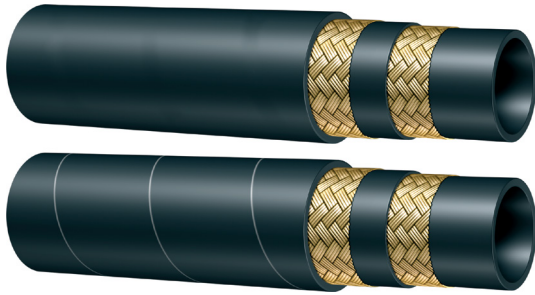
air max T = +70 °C (+160 °F)

Length: random up to 1" - 61 m max over 1 1/4"**DH SCAN crimp short code:** 241T**LGG Industrial Short Code:** (Dash Size)R16AR

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1001049	4	6.0	1/4"	13.2	0.52	42.0	6000	168.0	24000	50	1.97	0.259	0.18
1001053	5	8.0	5/16"	14.8	0.58	37.5	5500	150.0	22000	55	2.17	0.313	0.22
1001056	6	10.0	3/8"	17.4	0.69	35.0	5000	140.0	20000	65	2.56	0.382	0.26
1001060	8	13.0	1/2"	20.7	0.81	31.0	4500	124.0	18000	90	3.54	0.502	0.34
1001065	10	16.0	5/8"	23.7	0.93	28.0	4000	112.0	16000	100	3.94	0.598	0.41
1001068	12	19.0	3/4"	27.9	1.10	24.0	3500	96.0	14000	120	4.72	0.821	0.56
1001073	16	25.0	1"	35.6	1.40	21.0	3000	84.0	12000	150	5.91	1.266	0.86
1001791	20	32.0	1 1/4"	42.2	1.66	14.0	2000	58.0	8400	210	8.27	1.367	0.92
1002289	24	38.0	1 1/2"	49.9	1.96	12.5	1820	50.0	7280	430	16.93	1.864	1.26

// 241R SUPERSLIMLINE - HI-TUFF HP

MSHA

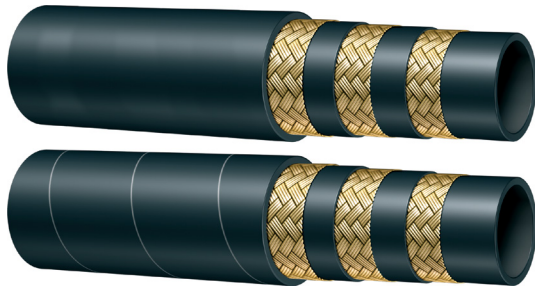
**EN 857 2SC (up to 1") - ISO 11237 - SAE 100 R16****Tube:** oil resistant synthetic rubber.**Reinforcement:** two high tensile steel braids.**Cover:** smooth up to 1", wrapped over 1". Abrasion, ozone and hydrocarbon resistant synthetic rubber.**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

air max T = +70 °C (+160 °F)

Length: random up to 1" - 61 m max over 1"1/4**DH SCAN crimp short code:** FXP2-R**LGG Industrial Short Code:** (Dash Size)R16ARHP

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1003111	8	13.0	1/2"	21.0	0.83	35.0	5000	140.0	20000	120	4.72	0.534	0.36
1004915	10	16.0	5/8"	24.0	0.94	35.0	5000	140.0	20000	135	5.31	0.686	0.47
1001721	12	19.0	3/4"	27.4	1.08	28.0	4000	112.0	16000	150	5.91	0.831	0.56
1004362	16	25.0	1"	35.6	1.40	25.0	3630	100.0	14500	152	5.98	1.359	0.92

// SP33G SUPERFOREST

**Tube:** oil resistant synthetic rubber.**Reinforcement:** three high tensile steel braids.**Cover:** smooth up to 1", wrapped over 1". Abrasion, ozone and hydrocarbon resistant synthetic rubber.**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

air max T = +70 °C (+160 °F)

Length: random**DH SCAN crimp short code:** 33G

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1001037	6	10.0	3/8"	21.1	0.83	50.0	7280	196.0	28000	120	4.72	0.730	0.50
1001038	8	13.0	1/2"	24.1	0.95	46.9	6800	188.0	27200	160	6.30	0.863	0.58
1001039	10	16.0	5/8"	27.8	1.09	41.0	6000	164.0	23500	210	8.27	1.084	0.73
1001040	12	19.0	3/4"	32.2	1.27	37.5	5500	150.0	22000	260	10.24	1.380	0.93
1001041	16	25.0	1"	39.2	1.54	32.7	4750	130.8	19000	310	12.20	1.882	1.27
1001042	20	32.0	1 1/4"	45.9	1.81	24.0	3500	96.0	14000	410	16.14	2.310	1.56

// WIRE SPIRAL - POWERFLEXBIO EXTRA

// POWERFLEXBIO EXTRA 3000 - HI-TUFF **NEW**

MSHA



ISO 18752 - exceeds SAE 100 R12

Tube: petroleum and biodegradable hydraulic fluid resistant synthetic rubber.

Reinforcement: four high tensile steel spirals.

Cover: abrasion, ozone and hydrocarbon resistant synthetic rubber.

Application: very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in very demanding applications where compact design, high pulsating pressure and tight bend radius are required.

Temperature: -40 °C +121 °C (-40 °F +250 °F)

Length: 61 m max

LGG Industrial Short Code: (Dash Size)CP4

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004861	20	32.0	1 1/4"	44.9	1.77	21.0	3000	84.0	12000	210	8.27	1.917	1.29
1004862	24	38.0	1 1/2"	50.6	1.99	21.0	3000	84.0	12000	250	9.84	2.445	1.65
1004863	32	51.0	2"	64.7	2.55	21.0	3000	84.0	12000	318	12.52	4.080	2.75

// POWERFLEXBIO EXTRA 4000 - HI-TUFF **NEW**

MSHA



ISO 18752

Tube: petroleum and biodegradable hydraulic fluid resistant synthetic rubber.

Reinforcement: four high tensile steel spirals.

Cover: smooth up to 1", wrapped over 1". Abrasion, ozone and hydrocarbon resistant synthetic rubber.

Application: very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in very demanding applications where compact design, high pulsating pressure and tight bend radius are required.

Temperature: -40 °C +121 °C (-40 °F +250 °F)

Length: random up to 1" - 61 m max over 1 1/4"

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004895	8	13.0	1/2"	22.6	0.89	28.0	4000	112.0	16000	90	3.54	0.624	0.42
1004864	12	19.0	3/4"	29.0	1.14	28.0	4000	112.0	16000	120	4.72	0.978	0.66
1004865	16	25.0	1"	37.2	1.46	28.0	4000	112.0	16000	150	5.91	1.479	1.00
1004866	20	32.0	1 1/4"	44.2	1.74	28.0	4000	112.0	16000	210	8.27	2.214	1.49
1004867	24	38.0	1 1/2"	50.6	1.99	29.0	4200	116.0	16800	250	9.84	2.802	1.89
1004868	32	51.0	2"	64.7	2.55	28.0	4000	112.0	16000	318	12.52	4.001	2.69

// POWERFLEXBIO EXTRA 5000 - HI-TUFF **NEW**

MSHA

exceeds ISO 18752

Tube: petroleum and biodegradable hydraulic fluid resistant synthetic rubber.

Reinforcement: four/six high tensile steel spirals.

Cover: smooth up to 1", wrapped over 1". Abrasion, ozone and hydrocarbon resistant synthetic rubber.

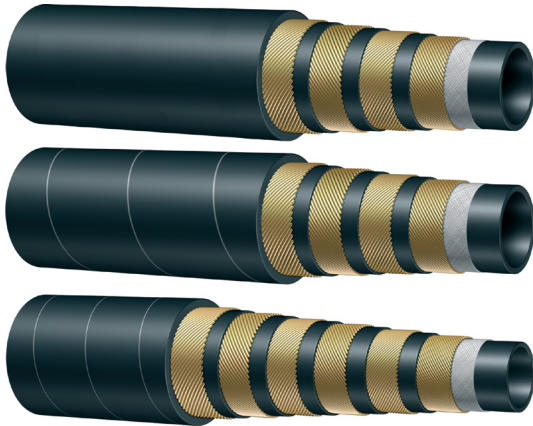
Application: very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in very demanding applications where compact design, high pulsating pressure and tight bend radius are required.

Temperature: -40 °C +121 °C (-40 °F +250 °F)

Length: random up to 1" - 61 m max over 1"1/4

LGG Industrial Short Code: (Dash Size)CP5



Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004869	4WS	10	16.0	5/8"	25.4	1.00	35.0	5000	140.0	20000	100	3.94	0.845	0.57
1004870	4WS	12	19.0	3/4"	29.4	1.16	35.0	5000	140.0	20000	120	4.72	1.166	0.79
1004871	4WS	16	25.0	1"	37.4	1.47	35.0	5000	140.0	20000	150	5.91	1.634	1.10
1004872	4WS	20	32.0	1 1/4"	44.0	1.73	35.0	5000	140.0	20000	210	8.27	2.214	1.49
1004873	6WS	24	38.0	1 1/2"	54.8	2.16	35.0	5000	140.0	20000	250	9.84	3.924	2.64
1004874	6WS	32	51.0	2"	68.7	2.70	35.0	5000	140.0	20000	318	12.52	5.787	3.89

// POWERFLEXBIO EXTRA 5000 PLUS - HI-TUFF **NEW**

MSHA

ISO 18752

Tube: petroleum and biodegradable hydraulic fluid resistant synthetic rubber.

Reinforcement: four high tensile steel spirals.

Cover: abrasion, ozone and hydrocarbon resistant synthetic rubber.

Application: very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in very demanding applications where compact design, high pulsating pressure and tight bend radius are required.

Temperature: -40 °C +121 °C (-40 °F +250 °F)

Length: random



Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004875	12	19.0	3/4"	30.2	1.19	38.0	5500	152.0	22040	120	4.72	1.276	0.86
1004876	16	25.0	1"	37.4	1.47	38.0	5500	152.0	22040	150	5.91	1.817	1.23

// POWERFLEXBIO EXTRA 6000 - HI-TUFF **NEW**

MSHA

**ISO 18752 - exceeds SAE 100 R15**

Tube: petroleum and biodegradable hydraulic fluid resistant synthetic rubber.

Reinforcement: four/six high tensile steel spirals.

Cover: smooth up to 1", wrapped over 1". Abrasion, ozone and hydrocarbon resistant synthetic rubber.

Application: very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in very demanding applications where compact design, high pulsating pressure and tight bend radius are required.

Temperature: -40 °C +121 °C (-40 °F +250 °F)

Length: random up to 1" - 61 m max over 1"1/4

LGG Industrial Short Code: (Dash Size)CP6

Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004877	4WS	4	6,0	1/4"	17,0	0,67	45,0	6550	180,0	26200	60	2,36	0,510	0,35
1004878	4WS	6	10,0	3/8"	19,8	0,78	44,5	6450	178,0	25800	75	2,95	0,645	0,44
1004879	4WS	8	13,0	1/2"	22,5	0,89	42,0	6000	168,0	24000	90	3,54	0,710	0,48
1004880	4WS	10	16,0	5/8"	27,8	1,09	42,0	6000	168,0	24000	100	3,94	1,190	0,80
1004881	4WS	12	19,0	3/4"	30,6	1,20	42,0	6000	168,0	24000	120	4,72	1,371	0,93
1004882	4WS	16	25,0	1"	38,0	1,50	42,0	6000	168,0	24000	150	5,91	1,926	1,30
1004883	6WS	20	32,0	1 1/4"	47,6	1,87	42,0	6000	168,0	24000	225	8,86	2,982	2,01
1004884	6WS	24	38,0	1 1/2"	54,4	2,14	42,0	6000	168,0	24000	305	12,01	4,144	2,79
1004885	6WS	32	51,0	2"	68,7	2,70	42,0	6000	168,0	24000	380	14,96	6,031	4,06

// TUFLEX

// 241X SUPERSLIMLINE - TUFLEX



MSHA

EN 857 2SC - ISO 11237 - SAE 100 R16

Tube: oil resistant synthetic rubber.**Reinforcement:** two high tensile steel braids.**Cover:** abrasion, ozone and hydrocarbon resistant synthetic rubber. Special "tuflex" cover for excellent abrasion resistance and long service life in heavy duty applications.**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.**Temperature:** -40 °C +100 °C (-40 °F +212 °F)

air max T = +70 °C (+160 °F)

Length: random**DH SCAN crimp short code:** 241X**LGG Industrial Short Code:** (Dash Size)R16SAR

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1001077	4	6.0	1/4"	13.2	0.52	42.0	6000	168.0	24000	50	1.97	0.275	0.19
1001079	6	10.0	3/8"	17.4	0.69	35.0	5000	140.0	20000	65	2.56	0.393	0.27
1001081	8	13.0	1/2"	20.6	0.81	31.0	4500	124.0	18000	90	3.54	0.528	0.36
1001082	10	16.0	5/8"	23.7	0.93	28.0	4000	112.0	16000	100	3.94	0.622	0.42
1001083	12	19.0	3/4"	27.7	1.09	24.0	3500	96.0	14000	120	4.72	0.830	0.56
1001084	16	25.0	1"	35.6	1.40	21.0	3000	84.0	12000	150	5.91	1.300	0.88

// POWERFLEXBIO EXTRA 4000 -
TUFLEX **NEW**

ISO 18752

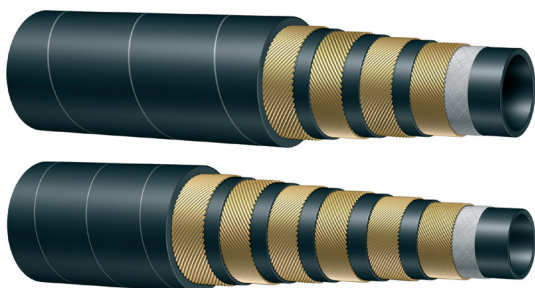
Tube: petroleum and biodegradable hydraulic fluid resistant synthetic rubber.**Reinforcement:** four high tensile steel spirals.**Cover:** abrasion, ozone and hydrocarbon resistant synthetic rubber. Special "tuflex" cover for long service life in extreme applications where low friction and very high abrasion or underwater resistance are required.**Application:** very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in very demanding applications where compact design, high pulsating pressure and tight bend radius are required.

Temperature: -40 °C +120 °C (-40 °F +250 °F)**Length:** random up to 1" - 61 m max over 1 1/4"

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1005257	12	19.0	3/4"	29.0	1.14	28.0	4000	112.0	16000	120	4.72	0.995	0.67
1005258	16	25.0	1"	37.4	1.47	28.0	4000	112.0	16000	150	5.91	1.495	1.01
1005259	20	32.0	1 1/4"	44.2	1.74	28.0	4000	112.0	16000	210	8.27	2.214	1.49
1005260	24	38.0	1 1/2"	50.6	1.99	29.0	4200	116.0	16800	250	9.84	2.610	1.76
1005261	32	51.0	2"	64.7	2.55	28.0	4000	112.0	16000	318	12.52	4.001	2.69

// POWERFLEXBIO EXTRA 5000 - TUFLEX **NEW**



ISO 18752

Tube: petroleum and biodegradable hydraulic fluid resistant synthetic rubber.

Reinforcement: four high tensile steel spirals.

Cover: abrasion, ozone and hydrocarbon resistant synthetic rubber. Special "tuflex" cover for long service life in extreme applications where low friction and very high abrasion or underwater resistance are required.

Application: very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in very demanding applications where compact design, high pulsating pressure and tight bend radius are required.

Temperature: -40 °C +120 °C (-40 °F +250 °F)

Length: random up to 1" - 61 m max over 1 1/4"

Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1005262	4WS	10	16.0	5/8"	25.4	1.00	35.0	5000	140.0	20000	100	3.94	0.878	0.60
1005263	4WS	12	19.0	3/4"	29.4	1.16	35.0	5000	140.0	20000	120	4.72	1.166	0.79
1005264	4WS	16	25.0	1"	37.4	1.47	35.0	5000	140.0	20000	150	5.91	1.702	1.15
1005265	4WS	20	32.0	1 1/4"	44.0	1.73	35.0	5000	140.0	20000	210	8.27	2.267	1.53
1005266	6WS	24	38.0	1 1/2"	54.8	2.16	35.0	5000	140.0	20000	250	9.84	3.924	2.64
1005267	6WS	32	51.0	2"	68.7	2.70	35.0	5000	140.0	20000	318	12.52	5.787	3.89

// POWERFLEXBIO EXTRA 6000 - TUFLEX **NEW**

MSHA

ISO 18752 - exceeds SAE 100 R15

Tube: petroleum and biodegradable hydraulic fluid resistant synthetic rubber.

Reinforcement: four/six high tensile steel spirals.

Cover: abrasion, ozone and hydrocarbon resistant synthetic rubber. Special "tuflex" cover for long service life in extreme applications where low friction and very high abrasion or underwater resistance are required.

Application: very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in very demanding applications where compact design, high pulsating pressure and tight bend radius are required.

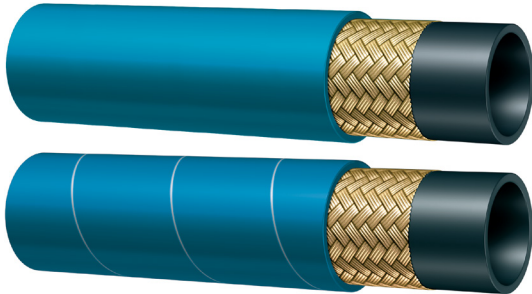
Temperature: -40 °C +120 °C (-40 °F +250 °F)

Length: random up to 1" - 61 m max over 1 1/4"

Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1005268	4WS	4	6.0	1/4"	17.0	0.67	45.0	6550	180.0	26200	60	2.36	0.510	0.35
1005269	4WS	6	10.0	3/8"	19.8	0.78	44.5	6450	178.0	25800	75	2.95	0.615	0.42
1005270	4WS	8	13.0	1/2"	22.5	0.89	42.0	6000	168.0	24000	90	3.54	0.710	0.48
1005271	4WS	10	16.0	5/8"	27.8	1.09	42.0	6000	168.0	24000	100	3.94	1.190	0.80
1005272	4WS	12	19.0	3/4"	30.6	1.20	42.0	6000	168.0	24000	120	4.72	1.371	0.93
1005274	4WS	16	25.0	1"	38.0	1.50	42.0	6000	168.0	24000	150	5.91	1.961	1.32
1005275	6WS	20	32.0	1 1/4"	47.6	1.87	42.0	6000	168.0	24000	225	8.86	3.140	2.12
1005276	6WS	24	38.0	1 1/2"	54.4	2.14	42.0	6000	168.0	24000	305	12.01	4.155	2.80
1005277	6WS	32	51.0	2"	68.7	2.70	42.0	6000	168.0	24000	380	14.96	6.098	4.10

// HIGH TEMPERATURE

// COMMANDER 150 1SN PLUS

**SAE 100 R1AT - ISO 1436-1 - UNI EN 853 1SN****Tube:** oil resistant synthetic rubber.**Reinforcement:** one high tensile steel braid.**Cover:** smooth up to 1", wrapped over 1". Blue abrasion, ozone and hydrocarbon resistant synthetic rubber.**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.

Specially designed for high temperature applications.

Not recommended for steam service.

Temperature: -40 °C +150 °C (-40 °F +300 °F)

air max T up to 5/8" = +85 °C (+185 °F)

air max T over 3/4" = +110 °C (+230 °F)

Length: random up to 5/8" - 61 m max over 3/4"**DH SCAN crimp short code:** 150PLUS-1SN

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004656	4	6.0	1/4"	12.7	0.50	22.5	3250	90.0	13000	100	3.94	0.206	0.14
1004657	6	10.0	3/8"	16.6	0.65	18.0	2610	72.0	10500	130	5.12	0.307	0.21
1004658	8	13.0	1/2"	19.7	0.78	16.0	2320	64.0	9280	180	7.09	0.379	0.26
1004659	10	16.0	5/8"	22.7	0.89	13.0	1900	52.0	7560	200	7.87	0.436	0.30
1004660	12	19.0	3/4"	26.9	1.06	10.5	1530	42.0	6000	240	9.45	0.581	0.40
1004661	16	25.0	1"	34.8	1.37	8.8	1280	35.2	5100	300	11.81	0.915	0.62
1004662	20	32.0	1 1/4"	42.1	1.66	6.3	920	25.2	3680	420	16.54	1.121	0.76
1004663	24	38.0	1 1/2"	49.2	1.94	5.0	730	20.0	2900	500	19.69	1.443	0.97
1004664	32	51.0	2"	62.4	2.46	4.0	600	16.0	2320	630	24.80	1.911	1.29

// 2SN EVOLUTION HT 150



MSHA

SAE 100 R2AT - ISO 1436-1 - UNI EN 853 2SN**Tube:** oil resistant synthetic rubber.**Reinforcement:** two high tensile steel braids.**Cover:** smooth up to 5/8", wrapped over 3/4". Abrasion, ozone and hydrocarbon resistant blue synthetic rubber..**Application:** high pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.

Specially designed for high temperature applications.

Not recommended for steam service.

Temperature: -40 °C +150 °C (-40 °F +300 °F)

air max T up to 5/8" = +85 °C (+185 °F),

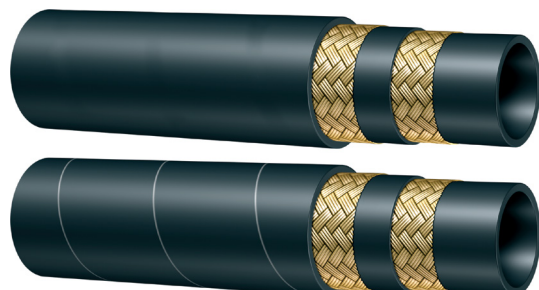
air max T over 3/4" = +110 °C (+230 °F)

Length: random up to 5/8" - 61 m max over 3/4"

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004524	4	6.0	1/4"	14.2	0.56	40.0	5850	160.0	23200	100	3.94	0.339	0.23
1004525	6	10.0	3/8"	18.4	0.72	33.0	4800	132.0	19200	125	4.92	0.480	0.33
1004526	8	13.0	1/2"	21.1	0.83	27.5	4000	110.0	16000	175	6.89	0.549	0.37
1004527	10	16.0	5/8"	24.5	0.96	25.0	3630	100.0	14500	200	7.87	0.689	0.47
1004528	12	19.0	3/4"	29.0	1.14	21.5	3120	86.0	12500	240	9.45	0.881	0.60
1004529	16	25.0	1"	37.4	1.47	16.5	2400	66.0	9600	300	11.81	1.364	0.92
1004533	20	32.0	1 1/4"	46.4	1.83	12.5	1820	50.0	7280	420	16.54	1.894	1.28
1004534	24	38.0	1 1/2"	52.8	2.08	9.0	1310	36.0	5240	500	19.69	2.129	1.44
1004535	32	51.0	2"	65.6	2.58	8.0	1200	32.0	4640	630	24.80	2.815	1.90

// LOW TEMPERATURE

// 261E HYPERCOLD SUPERSLIMLINE



Tube: oil resistant ultra low temperature synthetic rubber.

Reinforcement: two high tensile steel braids.

Cover: smooth up to 1", wrapped over 1". Oil, water, ozone and ultra low temperature resistant synthetic rubber.

Application: hydraulic system with petroleum or water/glycol based fluids, fuel, lubricating oils.

Specially designed for ultra low temperature applications.

Temperature: -55 °C +100 °C (-67 °F +212 °F)

air max T = +70 °C (+160 °F)

Length: random

DH SCAN crimp short code: 261E

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1001556	4	6.0	1/4"	13.2	0.52	42.0	6000	168.0	24000	50	1.97	0.280	0.19
1002432	5	8.0	5/16"	14.8	0.58	37.5	5500	150.0	22000	55	2.17	0.310	0.21
1001557	6	10.0	3/8"	17.4	0.69	35.0	5000	140.0	20000	65	2.56	0.390	0.27
1001491	8	13.0	1/2"	20.7	0.81	31.0	4500	124.0	18000	90	3.54	0.520	0.35
1001941	10	16.0	5/8"	23.7	0.93	28.0	4000	112.0	16000	100	3.94	0.600	0.41
1001559	12	19.0	3/4"	27.6	1.09	24.0	3500	96.0	14000	120	4.72	0.810	0.55
1001560	16	25.0	1"	35.6	1.40	21.0	3000	84.0	12000	150	5.91	1.220	0.82
1003108	20	32.0	1 1/4"	43.3	1.70	14.0	2000	58.0	8400	210	8.27	1.390	0.94
1002790	24	38.0	1 1/2"	49.9	1.96	12.5	1820	50.0	7280	430	16.93	1.863	1.26

// SP33E HYPERCOLD SUPERFOREST



Tube: oil resistant ultra low temperature synthetic rubber.

Reinforcement: three high tensile steel braids.

Cover: oil, water, ozone and ultra low temperature resistant synthetic rubber.

Application: hydraulic system with petroleum or water/glycol based fluids, fuel, lubricating oils.

Specially designed for ultra low temperature applications.

Temperature: -55 °C +100 °C (-67 °F +212 °F)

air max T = +70 °C (+160 °F)

Length: random

DH SCAN crimp short code: SP33E

Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1001093	8Q8AA01200FVB8	8	13.0	1/2"	24.1	0.95	46.9	6800	188.0	27200	160	6.30	0.892	0.60
1002293	8Q8AA01600FVB8	10	16.0	5/8"	27.8	1.09	41.4	6000	164.0	23500	210	8.27	1.121	0.76
1001094	8Q8AA02000FVB8	12	19.0	3/4"	32.2	1.27	37.5	5500	150.0	22000	260	10.24	1.430	0.97
1001095	8Q8AA02500FVB8	16	25.0	1"	39.2	1.54	33.0	4800	130.8	19000	310	12.20	1.940	1.31

// HYPERCOLD EXTRA 4000 **NEW****ISO 18752****Tube:** oil resistant ultra low temperature synthetic rubber.**Reinforcement:** four high tensile steel spirals.**Cover:** abrasion, ozone, hydrocarbon and ultra low temperature resistant synthetic rubber.**Application:** very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

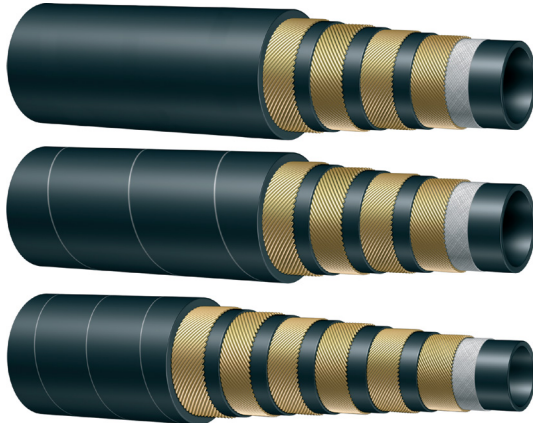
Specially designed for long service life in ultra low temperature applications.

Temperature: -55 °C +120 °C (-67 °F +250 °F)

air max T = +70 °C (+160 °F)

Length: 61 m

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004946	24	38.0	1 1/2"	50.6	1.99	29.0	4200	116.0	16800	250	9.84	2.659	1.79
1004947	32	51.0	2"	64.7	2.55	28.0	4000	112.0	16000	318	12.52	4.062	2.73

// HYPERCOLD EXTRA 5000 **NEW****exceeds ISO 18752****Tube:** oil resistant ultra low temperature synthetic rubber.**Reinforcement:** four/six high tensile steel spirals.**Cover:** smooth up to 1", wrapped over 1". Abrasion, ozone, hydrocarbon and ultra low temperature resistant synthetic rubber.**Application:** very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

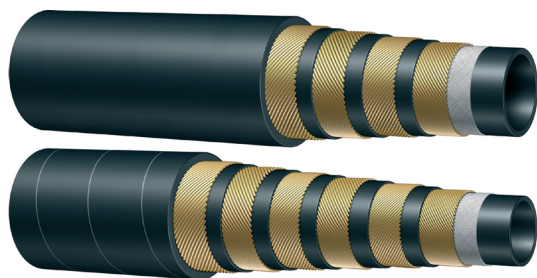
Specially designed for long service life in ultra low temperature applications

Temperature: -55 °C +120 °C (-67 °F +250 °F)

air max T = +70 °C (+160 °F)

Length: random up to 1" - 61 m max over 1 1/4"

Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004950	4WS	10	16.0	5/8"	25.4	1.00	35.0	5000	140.0	20000	100	3.94	0.898	0.61
1004951	4WS	12	19.0	3/4"	30.2	1.19	38.0	5500	152.0	22040	120	4.72	1.300	0.88
1004952	4WS	16	25.0	1"	37.4	1.47	38.0	5500	152.0	22040	150	5.91	1.874	1.26
1004953	4WS	20	32.0	1 1/4"	44.2	1.74	35.0	5000	140.0	20000	210	8.27	2.281	1.54
1004954	6WS	24	38.0	1 1/2"	54.8	2.16	35.0	5000	140.0	20000	250	9.84	4.051	2.73
1004955	6WS	32	51.0	2"	68.7	2.70	35.0	5000	140.0	20000	318	12.52	5.922	3.98

// HYPERCOLD EXTRA 6000 **NEW****ISO 18752 - exceeds SAE 100 R15****Tube:** oil resistant ultra low temperature synthetic rubber.**Reinforcement:** four/six high tensile steel spirals.**Cover:** smooth up to 1", wrapped over 1". Abrasion, ozone, hydrocarbon and ultra low temperature resistant synthetic rubber.**Application:** very high pressure hydraulic lines, fuel, oil, lubricants, antifreeze solution, air and water.

Specially designed for long service life in ultra low temperature applications.

Temperature: -55 °C +120 °C (-67 °F +250 °F)

air max T = +70 °C (+160 °F)

Length: random up to 1" - 61 m max over 1 1/4"

Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)
1004956	4WS	4	6.0	1/4"	17.2	0.68	45.0	6550	180.0	26200	60	2.36	0.552	0.38
1004957	4WS	6	10.0	3/8"	20.2	0.80	44.5	6450	178.0	25800	75	2.95	0.685	0.47
1004958	4WS	8	13.0	1/2"	22.6	0.89	42.0	6000	168.0	24000	90	3.54	0.756	0.51
1004959	4WS	10	16.0	5/8"	27.8	1.09	42.0	6000	168.0	24000	100	3.94	1.249	0.84
1004960	4WS	12	19.0	3/4"	30.6	1.20	42.0	6000	168.0	24000	120	4.72	1.418	0.96
1004961	4WS	16	25.0	1"	38.0	1.50	42.0	6000	168.0	24000	150	5.91	1.995	1.35
1004962	6WS	20	32.0	1 1/4"	47.6	1.87	42.0	6000	168.0	24000	225	8.86	3.135	2.11
1004963	6WS	24	38.0	1 1/2"	54.4	2.14	42.0	6000	168.0	24000	305	12.01	4.229	2.85
1004964	6WS	32	51.0	2"	68.9	2.71	42.0	6000	168.0	24000	380	14.96	6.148	4.14

// OIL RETURN LINES

// FLEXOR R4 634

**Extra flexible****SAE 100 R4**

Tube: oil resistant synthetic rubber.

Reinforcement: high tensile textile cords with embedded steel helix wire.

Cover: abrasion, ozone and hydrocarbon resistant synthetic rubber.

Application: fuel, oil and hydraulic fluids with 50% max aromatic content suction and delivery.

Specially designed for hydraulic oil return lines requiring tight bend radius.

Temperature: -40 °C +100 °C (-40 °F +212 °F)

LGG Industrial Short Code: (Dash Size)R4

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)	Length (m)
1005517	12	19.0	3/4"	30.0	1.18	2.1	300	8.4	1200	38	1.50	0.600	0.41	30.500
1005519	16	25.0	1"	36.0	1.42	1.7	250	6.8	986	50	1.97	0.740	0.50	30.500
1005521	20	32.0	1 1/4"	43.0	1.69	1.4	200	5.6	800	64	2.52	0.910	0.62	30.500
1005523	24	38.0	1 1/2"	49.0	1.93	1.0	150	4.0	600	76	2.99	1.050	0.71	30.500
1005525	32	51.0	2"	62.0	2.44	0.7	100	2.8	400	102	4.02	1.370	0.93	30.500

// FLEXOR R4 644 HT

**Extra flexible - High temperature****SAE 100 R4**

Tube: oil resistant synthetic rubber.

Reinforcement: high tensile textile cords with embedded steel helix wire.

Cover: abrasion, ozone and hydrocarbon resistant synthetic rubber.

Application: fuel, oil and hydraulic fluids with 50% max aromatic content suction and delivery.

Specially designed for high temperature applications and hydraulic oil return lines requiring tight bend radius.

Temperature: -40 °C +135 °C (-40 °F +275 °F)

Item Code	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)	Length (m)
1001277	12	19.0	3/4"	30.0	1.18	2.1	300	8.4	1200	38	1.50	0.620	0.42	30.500
1001274	16	25.0	1"	36.0	1.42	1.7	250	6.8	986	50	1.97	0.770	0.52	30.500
1001196	20	32.0	1 1/4"	43.0	1.69	1.4	200	5.6	800	64	2.52	0.950	0.64	30.500
1001279	24	38.0	1 1/2"	49.0	1.93	1.0	150	4.0	600	76	2.99	1.100	0.74	30.500
1001281	32	51.0	2"	62.0	2.44	0.7	100	2.8	400	102	4.02	1.430	0.97	30.500
1001283	40	63.0	2 1/2"	76.0	2.99	0.4	60	1.6	240	126	4.96	2.170	1.46	30.500
1001285	48	76.0	3"	89.0	3.50	0.4	60	1.6	240	152	5.98	2.690	1.81	30.500
1001290	64	102.0	4"	116.0	4.57	0.2	30	0.8	120	204	8.03	3.530	2.38	30.500

// PRESSURE WASH

// WATERBLAST - WB10L



Tube: oil and water resistant synthetic rubber.
Reinforcement: four high tensile steel spirals.
Cover: oil, water and ozone resistant synthetic rubber.
Application: very high pressure water jetting.
Temperature: -10 °C +70 °C (14 °F +158 °F)
Length: multiples of lengths shown in below grid.
DH SCAN crimp short code: WB10L

Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)	Length (m)
1003795	4WS	8	13.0	1/2"	23.5	0.93	70.0	10000	175.0	25000	200	7.87	0.805	0.55	15.250
1003796	4WS	8	13.0	1/2"	23.5	0.93	70.0	10000	175.0	25000	200	7.87	0.805	0.55	20.000
1004044	4WS	12	19.0	3/4"	32.2	1.27	70.0	10000	175.0	25000	210	8.27	1.450	0.98	15.250
1004212	4WS	12	19.0	3/4"	32.2	1.27	70.0	10000	175.0	25000	210	8.27	1.450	0.98	20.000
1004214	4WS	16	25.0	1"	38.7	1.52	70.0	10000	175.0	25000	320	12.60	1.987	1.34	20.000
1004213	4WS	16	25.0	1"	38.7	1.52	70.0	10000	175.0	25000	320	12.60	1.987	1.34	15.250

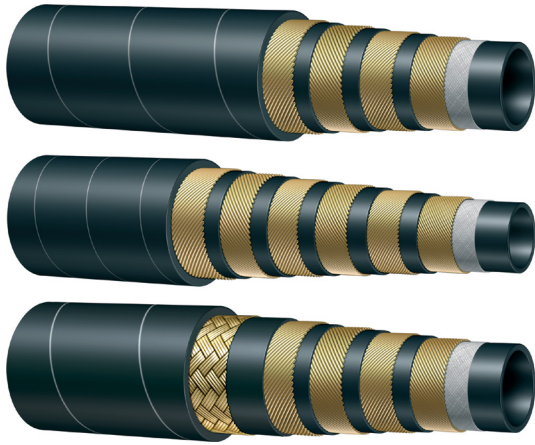
// WATERBLAST - WB15L



Tube: oil and water resistant synthetic rubber.
Reinforcement: four high tensile steel spirals.
Cover: oil, water and ozone resistant synthetic rubber.
Application: very high pressure water jetting.
Temperature: -10 °C +70 °C (14 °F +158 °F)
Length: multiples of lengths shown in below grid.
DH SCAN crimp short code: WB15L

Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)	Length (m)
1003470	4WS	6	10.0	3/8"	21.2	0.83	124.0	18000	310.0	45000	150	5.91	0.850	0.58	20.000
1003471	4WS	6	10.0	3/8"	21.2	0.83	124.0	18000	310.0	45000	150	5.91	0.850	0.58	15.250
1003473	4WS	8	13.0	1/2"	25.8	1.02	110.0	16000	275.0	40000	200	7.87	1.204	0.81	15.250
1003472	4WS	8	13.0	1/2"	25.8	1.02	110.0	16000	275.0	40000	200	7.87	1.204	0.81	20.000
1003474	4WS	12	19.0	3/4"	32.3	1.27	100.0	14500	250.0	36000	280	11.02	1.671	1.13	20.000
1003475	4WS	12	19.0	3/4"	32.3	1.27	100.0	14500	250.0	36000	280	11.02	1.690	1.14	15.250

// WATERBLAST - WB20L



Tube: oil and water resistant synthetic rubber.

Reinforcement: four or six high tensile steel spirals or four high tensile steel spiral and one steel braid.

Cover: oil, water and ozone resistant synthetic rubber.

Application: very high pressure water jetting.

Temperature: -10 °C +70 °C (14 °F +158 °F)

Length: multiples of lengths shown in below grid.

DH SCAN crimp short code: WB20L

Item Code	Constr.	ID (Dash)	ID (mm)	ID (in)	OD (mm)	OD (in)	WP (Mpa)	WP (psi)	BP (Mpa)	BP (psi)	BR (mm)	BR (in)	Weight (kg/m)	Weight (lb/ft)	Length (m)
1004172	4WS	4	6.0	1/4"	16.4	0.65	140.0	20000	350.0	50000	125	4.92	0.574	0.39	20.000
1004171	4WS	4	6.0	1/4"	16.4	0.65	140.0	20000	350.0	50000	125	4.92	0.574	0.39	15.250
1004175	4WS	5	8.0	5/16"	17.3	0.68	140.0	20000	350.0	50000	135	5.31	0.660	0.45	15.250
1004176	4WS	5	8.0	5/16"	17.3	0.68	140.0	20000	350.0	50000	135	5.31	0.660	0.45	20.000
1004178	4WS+1WB	6	10.0	3/8"	22.5	0.89	140.0	20000	350.0	50000	150	5.91	1.021	0.69	15.250
1004179	4WS+1WB	6	10.0	3/8"	22.5	0.89	140.0	20000	350.0	50000	150	5.91	1.021	0.69	20.000
1003798	4WS+1WB	8	13.0	1/2"	26.6	1.05	140.0	20000	350.0	50000	200	7.87	1.433	0.97	15.250
1003799	4WS+1WB	8	13.0	1/2"	26.6	1.05	140.0	20000	350.0	50000	200	7.87	1.433	0.97	20.000
1004182	6WS	12	19.0	3/4"	35.0	1.38	140.0	20000	350.0	50000	300	11.81	2.422	1.63	20.000
1004181	6WS	12	19.0	3/4"	35.0	1.38	140.0	20000	350.0	50000	300	11.81	2.422	1.63	15.250

// HOSE SERIES TO 1-PIECE

	Hose Family	Specification	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
TEXTILE BRAID	ARGUS 2TE	EN 854										
WIRE BRAID	122 HI-TUFF 1SN/R1AT	SAE 100 R1AT - ISO 1436-1 - UNI EN 853 1SN MSHA	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A
	117 SLIMLINE - HI-TUFF	SAE 100 R17 - EN 857 1SC MSHA	C12A		C12A	C12A						
	222 HI-TUFF 2SN/R2AT	SAE 100 R2AT - ISO 1436-1 - UNI EN 853 2SN MSHA	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A
	241T SUPERSLIMLINE - HI-TUFF	EN 857 2SC (up to 1") - ISO 11237 - SAE 100 R16	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A
	241X SUPERSLIMLINE - TUFLEX	EN 857 2SC - ISO 11237 - SAE 100 R16	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A
	241R SUPERSLIMLINE - HI-TUFF HP	EN 857 2SC (up to 1") - ISO 11237 - SAE 100 R16										
	SP33G SUPERFOREST											
SPIRAL	POWERFLEXBIO EXTRA 3000 - HI	ISO 18752 - Exceeds SAE 100 R12								C12A	C12A	C12A
	POWERFLEXBIO EXTRA 4000 - HI	ISO 18752				C18S		C18S	C18S	C18S	C18S	C18S
	POWERFLEXBIO EXTRA 5000 - HI	Exceeds ISO 18752					C18S	C18S	C18S	C18S	C18S	C18S
	POWERFLEXBIO EXTRA 5000 PLUS - HI-TUFF	ISO 18752						C18S	C18S			
	POWERFLEXBIO EXTRA 6000 - HI	ISO 18752 - Exceeds SAE 100 R15	C18S		C18S	C18S	C18S	C18S	C18S	C18S	C18S	
	POWERFLEXBIO EXTRA 4000 - TUFLEX	ISO 18752						C18S	C18S	C18S	C18S	C18S
	POWERFLEXBIO EXTRA 5000 - TUFLEX	ISO 18752					C18S	C18S	C18S	C18S	C18S	C18S
	POWERFLEXBIO EXTRA 6000 - TUFLEX	ISO 18752 - Exceeds SAE 100 R15	C18S		C18S	C18S	C18S	C18S	C18S	C18S	C18S	C18S
HIGH TEMP - BRAID	COMMANDER 150 1SN PLUS	SAE 100 R1AT - ISO 1436-1 - UNI EN 853 1SN										
LOW TEMPERATURE BRAID	261E HYPERCOLD SUPERSLIMLINE		C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A	C12A
	SP33E HYPERCOLD SUPERFOREST											
LOW TEMPERATURE SPIRAL	HYPERCOLD EXTRA 4000	ISO 18752										
	HYPERCOLD EXTRA 5000	Exceeds ISO 18752										
	HYPERCOLD EXTRA 6000	ISO 18752 - Exceeds SAE 100 R15										
OIL RETURN LINES	FLEXOR R4 604	SAE 100 R4										
	FLEXOR R4 634 EXTRA FLEXIBLE	SAE 100 R4										
	FLEXOR R4 644 HIGH TEMPERATURE	SAE 100 R4										
WATER BLAST	WATERBLAST - WB10L											
	WATERBLAST - WB15L											
	WATERBLAST - WB20L	ISO 18752 - Exceeds SAE 100 R15										

See 2-Piece Selection

// HOSE SERIES TO 2-PIECE

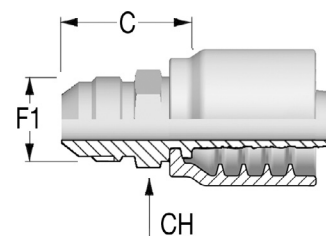
	Hose Family	Specification	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	1-1/2"	2"
TEXTILE BRAID	ARGUS 2TE	EN 854	H1100SK1	H1100SK1	H1100SK1	H1100SK1	H1100SK1	H1100SK1	H1100SK1	H1100SK1	H1100SK1	H1100SK1
WIRE BRAID	122 HI-TUFF 1SN/R1AT	SAE 100 R1AT - ISO 1436-1 - UNI EN 853 1SN MSHA	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1
	117 SLIMLINE - HI-TUFF	SAE 100 R17 - EN 857 1SC MSHA	H1200AD1		H1200AD1	H1200AD1						
	222 HI-TUFF 2SN/R2AT	SAE 100 R2AT - ISO 1436-1 - UNI EN 853 2SN MSHA	H1200AD2		H1200AD2	H1200AD2	H1200AD2	H1200AD2	H1200AD2	H1200AD2	H1200AD2	H1200AD2
	241T SUPERSLIMLINE - HI-TUFF	EN 857 2SC (up to 1") - ISO 11237 - SAE 100 R16	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	
	241X SUPERSLIMLINE - TUFLEX	EN 857 2SC - ISO 11237 - SAE 100 R16	H1200AD1		H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1			
	241R SUPERSLIMLINE - HI-TUFF HP	EN 857 2SC (up to 1") - ISO 11237 - SAE 100 R16										
	SP33G SUPERFOREST				H1100404	H1100404	H1100404	H1100404	H1100404	H1100404		
SPIRAL	POWERFLEXBIO EXTRA 3000 - HI	ISO 18752 - Exceeds SAE 100 R12										
	POWERFLEXBIO EXTRA 4000 - HI	ISO 18752				H1800NSS		H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS
	POWERFLEXBIO EXTRA 5000 - HI	exceeds ISO 18752					H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS
	POWERFLEXBIO EXTRA 5000 PLUS - HI-TUFF	ISO 18752						H1800NSS	H1800NSS			
	POWERFLEXBIO EXTRA 6000 - HI	ISO 18752 - Exceeds SAE 100 R15			H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS
	POWERFLEXBIO EXTRA 4000 - TUFLEX	ISO 18752						H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS
	POWERFLEXBIO EXTRA 5000 - TUFLEX	ISO 18752					H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS
	POWERFLEXBIO EXTRA 6000 - TUFLEX	ISO 18752 - Exceeds SAE 100 R15			H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS	H1800NSS
HIGH TEMP - BRAID	COMMANDER 150 1SN PLUS	SAE 100 R1AT - ISO 1436-1 - UNI EN 853 1SN										
LOW TEMPERATURE BRAID	261E HYPERCOLD SUPERSLIMLINE		H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	H1200AD1	
	SP33E HYPERCOLD SUPERFOREST					H1100404	H1100404	H1100404	H1100404			
LOW TEMPERATURE SPIRAL	HYPERCOLD EXTRA 4000	ISO 18752										
	HYPERCOLD EXTRA 5000	Exceeds ISO 18752										
	HYPERCOLD EXTRA 6000	ISO 18752 - Exceeds SAE 100 R15										
OIL RETURN LINES	FLEXOR R4 604	SAE 100 R4										
	FLEXOR R4 634 EXTRA FLEXIBLE	SAE 100 R4										
	FLEXOR R4 644 HIGH TEMPERATURE	SAE 100 R4										
WATER BLAST	WATERBLAST - WB10L											
	WATERBLAST - WB15L											
	WATERBLAST - WB20L											

// JIC 37° INSERTS

// C12A12510

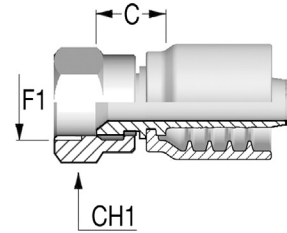
JIC Male 37° Cone

AGJ



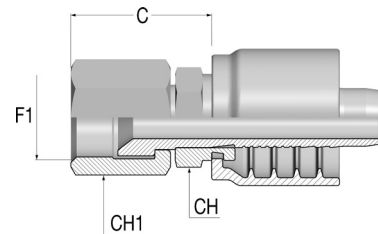
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1232606	C12A12510-04040	4	6.0	1/4"	4	7/16-20	25.3	12.0
1232607	C12A12510-04050	4	6.0	1/4"	5	1/2-20	25.3	14.0
1232608	C12A12510-04060	4	6.0	1/4"	6	9/16-18	26.3	17.0
1232609	C12A12510-05050	5	8.0	5/16"	5	1/2-20	25.3	14.0
1232610	C12A12510-05060	5	8.0	5/16"	6	9/16-18	26.3	17.0
1258023	C12A12510-06050	6	10.0	3/8"	5	1/2-20	26.3	17.0
1232611	C12A12510-06060	6	10.0	3/8"	6	9/16-18	26.3	17.0
1232612	C12A12510-06080	6	10.0	3/8"	8	3/4-16	29.8	19.0
1232613	C12A12510-06100	6	10.0	3/8"	10	7/8-14	33.8	24.0
1232614	C12A12510-08080	8	13.0	1/2"	8	3/4-16	30.6	19.0
1232615	C12A12510-08100	8	13.0	1/2"	10	7/8-14	34.6	24.0
1232616	C12A12510-08120	8	13.0	1/2"	12	1 1/16-12	37.1	27.0
1232617	C12A12510-10100	10	16.0	5/8"	10	7/8-14	34.6	24.0
1232618	C12A12510-10120	10	16.0	5/8"	12	1 1/16-12	37.1	27.0
1232619	C12A12510-12120	12	19.0	3/4"	12	1 1/16-12	37.6	27.0
1232620	C12A12510-12140	12	19.0	3/4"	14	1 3/16-12	40.1	32.0
1232621	C12A12510-12160	12	19.0	3/4"	16	1 5/16-12	42.6	36.0
1232622	C12A12510-16160	16	25.0	1"	16	1 5/16-12	43.4	36.0
1232623	C12A12510-16200	16	25.0	1"	20	1 5/8-12	46.9	46.0

// C12A22511

JIC Female 37° Seat
DKJ

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1232848	C12A22511-04040	Crimped	4	6.0	1/4"	4	7/16-20	14.6	16.0
1232849	C12A22511-04050	Crimped	4	6.0	1/4"	5	1/2-20	15.3	17.0
1232850	C12A22511-04060	Crimped	4	6.0	1/4"	6	9/16-18	15.3	19.0
1232851	C12A22511-05050	Crimped	5	8.0	5/16"	5	1/2-20	15.3	17.0
1232852	C12A22511-05060	Crimped	5	8.0	5/16"	6	9/16-18	15.3	19.0
1232853	C12A22511-06060	Crimped	6	10.0	3/8"	6	9/16-18	15.3	19.0
1232854	C12A22511-06080	Crimped	6	10.0	3/8"	8	3/4-16	17.8	25.0
1232855	C12A22511-08080	Crimped	8	13.0	1/2"	8	3/4-16	18.6	25.0
1232856	C12A22511-08100	Crimped	8	13.0	1/2"	10	7/8-14	19.6	27.0
1232857	C12A22511-08120	Crimped	8	13.0	1/2"	12	1 1/16-12	22.1	32.0
1232858	C12A22511-10100	Crimped	10	16.0	5/8"	10	7/8-14	19.6	27.0
1232859	C12A22511-10120	Crimped	10	16.0	5/8"	12	1 1/16-12	20.1	32.0
1232860	C12A22511-12100	Crimped	12	19.0	3/4"	10	7/8-14	20.1	27.0
1232861	C12A22511-12120	Crimped	12	19.0	3/4"	12	1 1/16-12	20.6	32.0
1232862	C12A22511-12140	Crimped	12	19.0	3/4"	14	1 3/16-12	19.9	36.0
1232863	C12A22511-12160	Crimped	12	19.0	3/4"	16	1 5/16-12	22.1	38.0
1232864	C12A22511-16160	Crimped	16	25.0	1"	16	1 5/16-12	23.9	38.0
1232865	C12A22512-16200	Thrust wire nut	16	25.0	1"	20	1 5/8-12	26.5	50.0

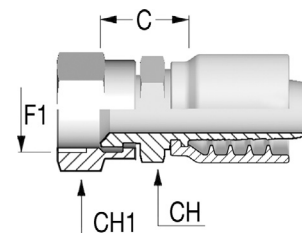
Image: insert with Crimped Nut.

// C12A26514 **NEW**JIC Female 37° Seat with double Hexagon
DKJ and solid nut

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1251034	C12A26514-04040	Slip on nut	4	6.0	1/4"	4	7/16-20	19.0	14.0	14.0
1251035	C12A26514-04050	Slip on nut	4	6.0	1/4"	5	1/2-20	19.0	14.0	17.0
1251036	C12A2651K-04060	Slip on nut	4	6.0	1/4"	6	9/16-18	22.0	14.0	19.0
1251037	C12A26514-05060	Slip on nut	5	8.0	5/16"	6	9/16-18	22.0	14.0	19.0
1251038	C12A26514-06060	Slip on nut	6	10.0	3/8"	6	9/16-18	22.0	17.0	19.0
1251583	C12A2651K-06080	Slip on nut	6	10.0	3/8"	8	3/4-16	28.3	17.0	22.0
1250047	C12A26514-08080	Slip on nut	8	13.0	1/2"	8	3/4-16	25.7	19.0	22.0
1249628	C12A2651K-08100	Slip on nut	8	13.0	1/2"	10	7/8-14	29.0	22.0	27.0
1251046	C12A2651K-08120	Slip on nut	8	13.0	1/2"	12	1 1/16-12	28.7	24.0	32.0
1251039	C12A26514-10100	Slip on nut	10	16.0	5/8"	10	7/8-14	29.2	24.0	27.0
1249959	C12A2651K-10120	Crimped	10	16.0	5/8"	12	1 1/16-12	28.6	24.0	32.0
1249637	C12A26514-12120	Slip on nut	12	19.0	3/4"	12	1 1/16-12	29.7	27.0	32.0
1249721	C12A2651K-12160	Slip on nut	12	19.0	3/4"	16	1 5/16-12	36.1	32.0	38.0
1249818	C12A26514-16160	Slip on nut	16	25.0	1"	16	1 5/16-12	32.9	32.0	41.0

Product Codes roots ending with K: insert with double hexagon knurled (ex. C12A2651K).

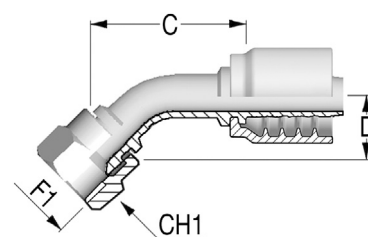
// C12A26511

JIC Female 37° Seat with Stem Hexagon
DKJ

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1232933	C12A26511-04040	Crimped	4	6.0	1/4"	4	7/16-20	19.6	14.0	16.0
1232936	C12A26511-05060	Crimped	5	8.0	5/16"	6	9/16-18	20.3	14.0	19.0
1232937	C12A26511-06040	Crimped	6	10.0	3/8"	4	7/16-20	20.6	17.0	16.0
1252192	C12A26511-06050	Crimped	6	10.0	3/8"	5	1/2-20	21.3	16.0	17.0
1232938	C12A26511-06060	Crimped	6	10.0	3/8"	6	9/16-18	21.3	17.0	19.0
1232940	C12A26511-06100	Crimped	6	10.0	3/8"	10	7/8-14	25.8	22.0	27.0
1232941	C12A26511-08060	Crimped	8	13.0	1/2"	6	9/16-18	23.1	19.0	19.0
1232942	C12A26511-08080	Crimped	8	13.0	1/2"	8	3/4-16	25.6	19.0	25.0
1232944	C12A26511-08120	Crimped	8	13.0	1/2"	12	1 1/16-12	28.1	25.0	32.0
1232945	C12A26511-10080	Crimped	10	16.0	5/8"	8	3/4-16	26.6	24.0	25.0
1232946	C12A26511-10100	Crimped	10	16.0	5/8"	10	7/8-14	27.6	24.0	27.0
1232948	C12A26511-12100	Crimped	12	19.0	3/4"	10	7/8-14	28.1	27.0	27.0
1232950	C12A26511-12140	Crimped	12	19.0	3/4"	14	1 3/16-12	29.9	32.0	36.0
1232952	C12A26511-16120	Crimped	16	25.0	1"	12	1 1/16-12	31.4	32.0	32.0
1232954	C12A26512-16200	Thrust wire nut	16	25.0	1"	20	1 5/8-12	37.5	41.0	50.0
1258018	C12A26512-20200	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	39.1	41.0	50.0
1258020	C12A26512-24240	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	43.4	50.0	55.0
1258021	C12A26512-32320	Thrust wire nut	32	51.0	2"	32	2 1/2-12	49.0	65.0	70

Image: insert with Crimped Nut.

// C12A22541-S

45° JIC Female 37° Seat
Short Drop
DKJ 45M
Solid one piece

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232866	C12A22541-0404S	Crimped	4	6.0	1/4"	4	7/16-20	36.6	10.0	16.0
1232867	C12A22541-0405S	Crimped	4	6.0	1/4"	5	1/2-20	37.2	12.0	17.0
1232868	C12A22541-0406S	Crimped	4	6.0	1/4"	6	9/16-18	39.4	11.0	19.0
1232869	C12A22541-0506S	Crimped	5	8.0	5/16"	6	9/16-18	42.8	12.0	19.0
1232870	C12A22541-0606S	Crimped	6	10.0	3/8"	6	9/16-18	46.3	11.0	19.0
1232871	C12A22541-0608S	Crimped	6	10.0	3/8"	8	3/4-16	47.2	15.0	25.0
1232872	C12A22541-0808S	Crimped	8	13.0	1/2"	8	3/4-16	51.6	15.0	25.0
1232873	C12A22541-0810S	Crimped	8	13.0	1/2"	10	7/8-14	50.7	16.0	27.0
1232874	C12A22541-0812S	Crimped	8	13.0	1/2"	12	1 1/16-12	57.0	21.0	32.0
1232875	C12A22541-1010S	Crimped	10	16.0	5/8"	10	7/8-14	62.2	19.0	27.0
1232877	C12A22541-1212S	Crimped	12	19.0	3/4"	12	1 1/16-12	67.5	21.0	32.0
1232878	C12A22541-1216S	Crimped	12	19.0	3/4"	16	1 5/16-12	71.4	26.0	38.0
1232879	C12A22541-1616S	Crimped	16	25.0	1"	16	1 5/16-12	79.4	24.0	38.0
1232880	C12A22542-1620S	Thrust wire nut	16	25.0	1"	20	1 5/8-12	83.8	37.0	50.0

Image: insert with Crimped Nut.

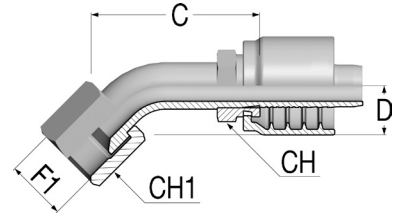
// C12A26544-S **NEW**

45° JIC Female 37° Seat

Short Drop

DKJ 45M

Solid nut and double Hexagon crimped



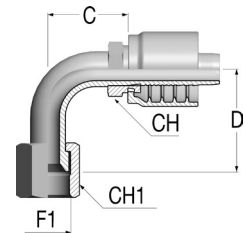
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1253028	C12A26544-0404S	Slip on nut	4	6.0	1/4"	4	7/16-20	37.0	10.0	14.0	14.0
1252508	C12A26544-0406S	Slip on nut	4	6.0	1/4"	6	9/16-18	39.0	11.0	14.0	19.0
1253029	C12A26544-0606S	Slip on nut	6	10.0	3/8"	6	9/16-18	46.0	11.0	17.0	19.0
1253030	C12A26544-0608S	Slip on nut	6	10.0	3/8"	8	3/4-16	47.0	15.0	17.0	22.0
1253031	C12A26544-0808S	Slip on nut	8	13.0	1/2"	8	3/4-16	52.0	15.0	19.0	22.0
1253032	C12A26544-0810S	Slip on nut	8	13.0	1/2"	10	7/8-14	51.0	16.0	19.0	27.0
1253033	C12A26544-1010S	Slip on nut	10	16.0	5/8"	10	7/8-14	65.0	16.0	24.0	27.0
1253034	C12A26544-1012S	Slip on nut	10	16.0	5/8"	12	1 1/16-12	69.0	21.0	24.0	32.0
1252209	C12A26544-1212S	Slip on nut	12	19.0	3/4"	12	1 1/16-12	67.0	21.0	27.0	32.0
1253035	C12A26544-1216S	Slip on nut	12	19.0	3/4"	16	1 5/16-12	71.0	24.0	27.0	41.0
1253036	C12A26544-1616S	Slip on nut	16	25.0	1"	16	1 5/16-12	80.0	24.0	32.0	41.0

// C12A26594-S **NEW**

90° JIC Female 37° Seat

Short Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1253039	C12A26594-0404S	Slip on nut	4	6.0	1/4"	4	7/16-20	27.0	21.0	14.0	14.0
1253042	C12A26594-0405S	Slip on nut	4	6.0	1/4"	5	1/2-20	26.5	21.0	14.0	17.0
1253044	C12A26594-0406S	Slip on nut	4	6.0	1/4"	6	9/16-18	31.0	23.0	14.0	19.0
1253052	C12A26594-0506S	Slip on nut	5	8.0	5/16"	6	9/16-18	41.0	23.0	14.0	19.0
1253055	C12A26594-0606S	Slip on nut	6	10.0	3/8"	6	9/16-18	40.0	24.5	17.0	19.0
1253057	C12A26594-0608S	Slip on nut	6	10.0	3/8"	8	3/4-16	49.0	29.0	17.0	22.0
1252206	C12A26594-0808S	Slip on nut	8	13.0	1/2"	8	3/4-16	48.0	29.0		22.0
1253061	C12A26594-0810S	Slip on nut	8	13.0	1/2"	10	7/8-14	46.0	32.0	19.0	27.0
1253064	C12A26594-1012S	Slip on nut	10	16.0	5/8"	12	1 1/16-12	42.5	37.0	24.0	32.0
1252213	C12A26594-1212S	Slip on nut	12	19.0	3/4"	12	1 1/16-12	58.2	46.0		32.0
1253068	C12A26594-1616S	Slip on nut	16	25.0	1"	16	1 5/16-12	74.0	56.0	32.0	41.0

Product Codes roots ending with 3: insert with turned ring (ex. C12A22593).

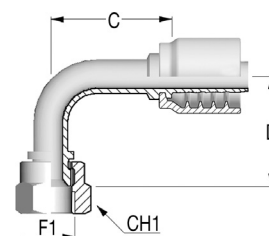
// C12A22591-S

90° JIC Female 37° Seat

Short Drop

DKJ 90S

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232883	C12A22591-0404S	Crimped	4	6.0	1/4"	4	7/16-20	27.0	21.0	16.0
1232885	C12A22591-0405S	Crimped	4	6.0	1/4"	5	1/2-20	26.5	23.5	17.0
1232887	C12A22591-0406S	Crimped	4	6.0	1/4"	6	9/16-18	31.0	23.0	19.0
1232895	C12A22591-0608S	Crimped	6	10.0	3/8"	8	3/4-16	48.8	29.0	25.0
1232898	C12A22591-0808S	Crimped	8	13.0	1/2"	8	3/4-16	46.4	29.0	25.0
1232901	C12A22591-0810S	Crimped	8	13.0	1/2"	10	7/8-14	45.8	32.0	27.0
1232903	C12A22591-0812S	Crimped	8	13.0	1/2"	12	1 1/16-12	37.3	46.0	32.0
1232907	C12A22591-1012S	Crimped	10	16.0	5/8"	12	1 1/16-12	47.9	48.0	32.0
1232910	C12A22591-1212S	Crimped	12	19.0	3/4"	12	1 1/16-12	58.2	46.0	32.0
1232912	C12A22591-1216S	Crimped	12	19.0	3/4"	16	1 5/16-12	53.6	53.0	38.0
1232915	C12A22591-1616S	Crimped	16	25.0	1"	16	1 5/16-12	74.0	56.0	38.0

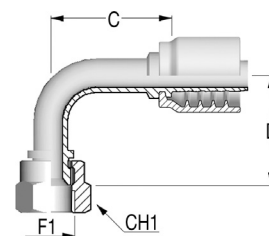
// C12A22591-M

90° JIC Female 37° Seat

Medium Drop

DKJ 90M

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232882	C12A22591-0404M	Crimped	4	6.0	1/4"	4	7/16-20	34.2	32.0	16.0
1232884	C12A22591-0405M	Crimped	4	6.0	1/4"	5	1/2-20	25.7	30.0	17.0
1232886	C12A22591-0406M	Crimped	4	6.0	1/4"	6	9/16-18	28.5	38.0	19.0
1232888	C12A22591-0505M	Crimped	5	8.0	5/16"	5	1/2-20	34.2	32.0	17.0
1232889	C12A22591-0506M	Crimped	5	8.0	5/16"	6	9/16-18	33.2	35.0	19.0
1232891	C12A22591-0606M	Crimped	6	10.0	3/8"	6	9/16-18	31.3	35.0	19.0
1232894	C12A22591-0608M	Crimped	6	10.0	3/8"	8	3/4-16	39.5	41.0	25.0
1232897	C12A22591-0808M	Crimped	8	13.0	1/2"	8	3/4-16	37.2	40.0	25.0
1232902	C12A22591-0812M	Crimped	8	13.0	1/2"	12	1 1/16-12	42.8	58.0	32.0
1232905	C12A22591-1010M	Crimped	10	16.0	5/8"	10	7/8-14	49.4	48.0	27.0
1232906	C12A22591-1012M	Crimped	10	16.0	5/8"	12	1 1/16-12	47.9	58.0	32.0
1232909	C12A22591-1212M	Crimped	12	19.0	3/4"	12	1 1/16-12	52.4	54.0	32.0
1232911	C12A22591-1216M	Crimped	12	19.0	3/4"	16	1 5/16-12	52.6	72.0	38.0
1232914	C12A22591-1616M	Crimped	16	25.0	1"	16	1 5/16-12	72.6	71.5	38.0
1232916	C12A22592-1620M	Thrust wire nut	16	25.0	1"	20	1 5/8-12	72.6	78.0	50.0

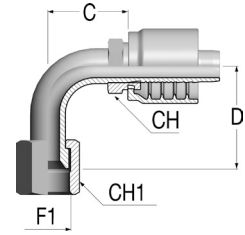
Image: insert with Crimped Nut.

// C12A26594-M **NEW**

90° JIC Female 37° Seat

Medium Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1253038	C12A26594-0404M	Slip on nut	4	6.0	1/4"	4	7/16-20	34.0	32.0	14.0	14.0
1253041	C12A26594-0405M	Slip on nut	4	6.0	1/4"	5	1/2-20	26.0	32.0	14.0	17.0
1253050	C12A26594-0505M	Slip on nut	5	8.0	5/16"	5	1/2-20	34.0	32.0	14.0	17.0
1253051	C12A26594-0506M	Slip on nut	5	8.0	5/16"	6	9/16-18	38.0	35.0	14.0	19.0
1253054	C12A26594-0606M	Slip on nut	6	10.0	3/8"	6	9/16-18	31.5	38.0	17.0	19.0
1252208	C12A26594-0808M	Slip on nut	8	13.0	1/2"	8	3/4-16	37.2	41.0		22.0
1253060	C12A26594-0810M	Slip on nut	8	13.0	1/2"	10	7/8-14	43.5	47.0	19.0	27.0
1253063	C12A26594-1010M	Slip on nut	10	16.0	5/8"	10	7/8-14	49.5	47.0	24.0	27.0
1253009	C12A26594-1012M	Slip on nut	10	16.0	5/8"	12	1 1/16-12	48.0	58.0	24.0	32.0
1252211	C12A26594-1212M	Slip on nut	12	19.0	3/4"	12	1 1/16-12	52.4	54.0		32.0
1253067	C12A26594-1616M	Slip on nut	16	25.0	1"	16	1 5/16-12	73.0	71.0	32.0	41.0

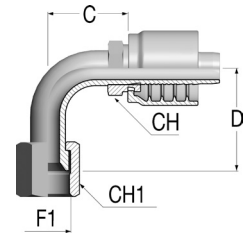
Product Codes roots ending with 3: insert with turned ring (ex. C12A22593).

// C12A26594-L **NEW**

90° JIC Female 37° Seat

Long Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1253037	C12A26594-0404L	Slip on nut	4	6.0	1/4"	4	7/16-20	31.0	46.0	14.0	14.0
1253040	C12A26594-0405L	Slip on nut	4	6.0	1/4"	5	1/2-20	31.0	46.0	14.0	17.0
1253053	C12A26594-0606L	Slip on nut	6	10.0	3/8"	6	9/16-18	43.5	54.0	17.0	19.0
1253058	C12A26594-0808L	Slip on nut	8	13.0	1/2"	8	3/4-16	50.0	64.0	19.0	22.0
1253059	C12A26594-0810L	Slip on nut	8	13.0	1/2"	10	7/8-14	37.0	65.0	19.0	27.0
1253062	C12A26594-1010L	Slip on nut	10	16.0	5/8"	10	7/8-14	50.0	70.0	24.0	27.0
1253065	C12A26594-1212L	Slip on nut	12	19.0	3/4"	12	1 1/16-12	54.0	96.0	27.0	32.0
1253066	C12A26594-1616L	Slip on nut	16	25.0	1"	16	1 5/16-12	79.0	114.0	32.0	41.0

Product Codes roots ending with 3: insert with turned ring (ex. C12A22593).

REV.2.2

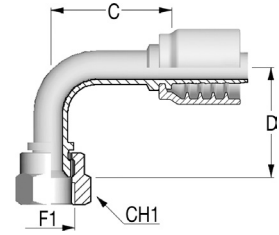
// C12A22591-L

90° JIC Female 37° Seat

Long Drop

DKJ 90L

Solid one piece

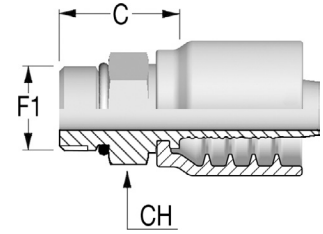


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232890	C12A22591-0606L	Crimped	6	10.0	3/8"	6	9/16-18	43.3	54.0	19.0
1232893	C12A22591-0608L	Crimped	6	10.0	3/8"	8	3/4-16	46.8	64.0	25.0
1232899	C12A22591-0810L	Crimped	8	13.0	1/2"	10	7/8-14	37.3	65.0	27.0
1232904	C12A22591-1010L	Crimped	10	16.0	5/8"	10	7/8-14	49.9	65.0	27.0
1232908	C12A22591-1212L	Crimped	12	19.0	3/4"	12	1 1/16-12	54.1	95.0	32.0

// SAE INSERTS

// C12A13010

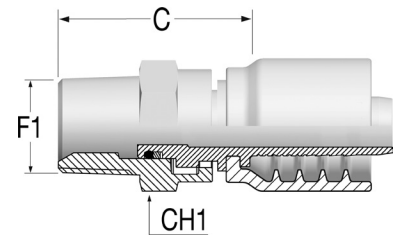
SAE Male Solid - O-Ring Boss



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1232654	C12A13010-04040	4	6.0	1/4"	4	7/16-20	20.3	14.0
1232655	C12A13010-04050	4	6.0	1/4"	5	1/2-20	21.3	16.0
1232656	C12A13010-04060	4	6.0	1/4"	6	9/16-18	22.3	17.0
1232657	C12A13010-06060	6	10.0	3/8"	6	9/16-18	23.3	19.0
1232658	C12A13010-06080	6	10.0	3/8"	8	3/4-16	24.3	22.0
1232659	C12A13010-06100	6	10.0	3/8"	10	7/8-14	26.8	27.0
1232660	C12A13010-08080	8	13.0	1/2"	8	3/4-16	25.1	22.0
1232661	C12A13010-08100	8	13.0	1/2"	10	7/8-14	27.6	27.0
1232662	C12A13010-08120	8	13.0	1/2"	12	1 1/16-12	32.1	32.0
1232663	C12A13010-10120	10	16.0	5/8"	12	1 1/16-12	32.1	32.0
1232664	C12A13010-12100	12	19.0	3/4"	10	7/8-14	28.1	27.0
1232665	C12A13010-12120	12	19.0	3/4"	12	1 1/16-12	32.6	32.0
1232666	C12A13010-12160	12	19.0	3/4"	16	1 5/16-12	34.6	38.0
1232667	C12A13010-16160	16	25.0	1"	16	1 5/16-12	35.4	38.0

// C12A13011

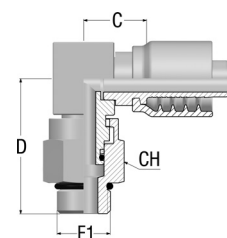
SAE Male Swivel O-Ring Boss



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1240619	C12A13011-04040	Crimped	4	6.0	1/4"	4	7/16-20	33.1	17.0
1240621	C12A13011-04060	Crimped	4	6.0	1/4"	4	7/16-20	42.5	22.0
1240622	C12A13011-06060	Crimped	6	10.0	3/8"	6	9/16-18	40.5	22.0
1240623	C12A13011-06080	Crimped	6	10.0	3/8"	8	3/4-16	43.5	25.0
1240624	C12A13011-08080	Crimped	8	13.0	1/2"	8	3/4-16	42.3	25.0
1240625	C12A13011-08100	Crimped	8	13.0	1/2"	8	3/4-16	43.8	25.0
1240626	C12A13011-12120	Crimped	12	19.0	3/4"	12	1 1/16-12	49.6	32.0
1240627	C12A13011-16160	Crimped	16	25.0	1"	16	1 5/16-12	53.9	41.0

// C12A13081

90° Compact SAE Male Swivel - O-Ring Boss

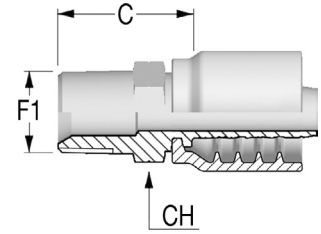


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)
1240611	C12A13081-04040	Crimped	4	6.0	1/4"	4	7/16-20	17.0	35.0	17.0
1240612	C12A13081-04050	Crimped	4	6.0	1/4"	5	1/2-20	17.0	35.0	17.0
1240613	C12A13081-04060	Crimped	4	6.0	1/4"	6	9/16-18	19.0	42.0	22.0
1240614	C12A13081-06060	Crimped	6	10.0	3/8"	6	9/16-18	20.0	44.0	22.0
1240615	C12A13081-06080	Crimped	6	10.0	3/8"	8	3/4-16	22.0	45.0	25.0
1240616	C12A13081-08080	Crimped	8	13.0	1/2"	8	3/4-16	23.0	48.0	25.0
1240001	C12A13081-08100	Crimped	8	13.0	1/2"	10	7/8-14	23.0	50.0	25.0
1240617	C12A13081-12120	Crimped	12	19.0	3/4"	12	1 1/16-12	27.0	60.0	32.0
1240618	C12A13081-16160	Crimped	16	25.0	1"	16	1 5/16-12	33.4	67.5	41.0

// NPTF INSERTS

// C12A12810

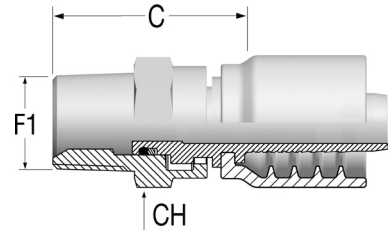
NPTF Male 60° Seat
AGN



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1232624	C12A12810-04020	4	6.0	1/4"	2	1/8-27	21.3	14.0
1232650	C12A1281P-04040	4	6.0	1/4"	4	1/4-18	26.8	14.3
1232625	C12A12810-04060	4	6.0	1/4"	6	3/8-18	27.8	17.0
1232626	C12A12810-04080	4	6.0	1/4"	8	1/2-14	31.3	22.0
1232627	C12A12810-05040	5	8.0	5/16"	4	1/4-18	26.8	19.0
1232628	C12A12810-05060	5	8.0	5/16"	6	3/8-18	27.8	22.0
1232629	C12A12810-06040	6	10.0	3/8"	4	1/4-18	26.8	17.0
1232630	C12A12810-06060	6	10.0	3/8"	6	3/8-18	27.8	19.0
1232631	C12A12810-06080	6	10.0	3/8"	8	1/2-14	31.3	22.0
1232632	C12A12810-08060	8	13.0	1/2"	6	3/8-18	28.6	17.0
1232633	C12A12810-08080	8	13.0	1/2"	8	1/2-14	32.1	19.0
1232634	C12A12810-08120	8	13.0	1/2"	12	3/4-14	34.1	22.0
1232635	C12A12810-10080	10	16.0	5/8"	8	1/2-14	33.1	22.0
1232636	C12A12810-10120	10	16.0	5/8"	12	3/4-14	34.1	25.0
1232637	C12A12810-12080	12	19.0	3/4"	8	1/2-14	33.6	19.0
1232638	C12A12810-12120	12	19.0	3/4"	12	3/4-14	34.6	22.0
1232639	C12A12810-12160	12	19.0	3/4"	16	1-11 1/2	43.6	22.0
1232640	C12A12810-16160	16	25.0	1"	16	1-11 1/2	44.4	25.0
1232641	C12A12810-16200	16	25.0	1"	20	1 1/4-11 1/2	47.4	27.0

// C12A12811

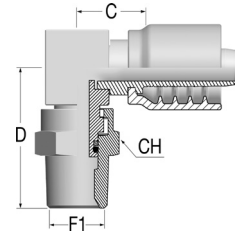
NPTF Male Swivel 60° Seat



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1232642	C12A12811-04040	Crimped	4	6.0	1/4"	4	1/4-18	37.6	24.0
1239964	C12A12811-04060	Crimped	4	6	1/4"	6	3/8-18	28	
1232643	C12A12811-06040	Crimped	6	10.0	3/8"	4	1/4-18	39.6	27.0
1232644	C12A12811-06060	Crimped	6	10.0	3/8"	6	3/8-18	37.5	27.0
1232645	C12A12811-06080	Crimped	6	10.0	3/8"	8	1/2-14	43.5	32.0
1232646	C12A12811-08060	Crimped	8	13.0	1/2"	6	3/8-18	38.3	36.0
1232647	C12A12811-08080	Crimped	8	13.0	1/2"	8	1/2-14	42.3	36.0
1232648	C12A12811-12120	Crimped	12	19.0	3/4"	12	3/4-14	50.1	41.0
1232649	C12A12811-16160	Crimped	16	25.0	1"	16	1-11 1/2	57.9	41.0

// C12A12881

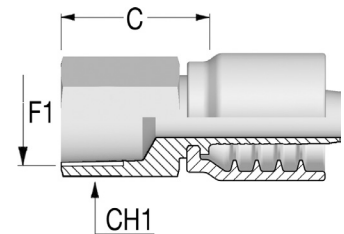
90° Compact NPTF Male Swivel 60° Seat



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)
1232651	C12A12881-04040	Crimped	4	6.0	1/4"	4	1/4-18	17.0	39.0	17.0
1232652	C12A12881-06060	Crimped	6	10.0	3/8"	6	3/8-18	20.0	41.0	22.0
1232653	C12A12881-08080	Crimped	8	13.0	1/2"	8	1/2-14	23.0	48.0	22.0

// C12A22810

NPTF Female Solid

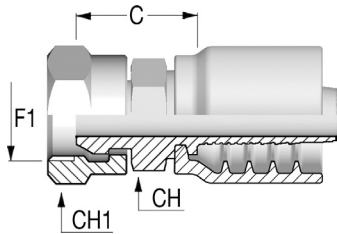


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1232917	C12A22810-04040	4	6.0	1/4"	4	1/4-18	27.8	19.0
1232918	C12A22810-06060	6	10.0	3/8"	6	3/8-18	28.8	22.0
1232919	C12A22810-08080	8	13.0	1/2"	8	1/2-14	35.6	25.0
1232920	C12A22810-12120	12	19.0	3/4"	12	3/4-14	38.1	32.0
1232921	C12A22810-16160	16	25.0	1"	16	1-11 1/2	44.9	38.0

// NPSM INSERTS

// C12A27311

NPSM Female

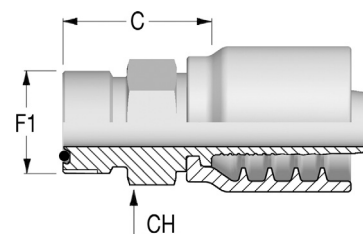


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1232957	C12A27311-04040	Crimped	4	6.0	1/4"	4	1/4-18	24.3	19.0	19.0
1232958	C12A27311-06060	Crimped	6	10.0	3/8"	6	3/8-18	24.8	22.0	22.0
1232959	C12A27311-08080	Crimped	8	13.0	1/2"	8	1/2-14	26.6	22.0	27.0
1232961	C12A27311-16160	Crimped	16	25.0	1"	16	1-11 1/2	35.4	36.0	38.0

// ORFS INSERTS

// C12A12410

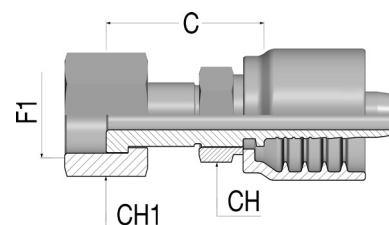
ORFS Male



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1232593	C12A12410-04040	4	6.0	1/4"	4	9/16-18	22.3	17.0
1232594	C12A12410-04060	4	6.0	1/4"	6	11/16-16	24.3	19.0
1232595	C12A12410-06060	6	10.0	3/8"	6	11/16-16	24.3	19.0
1232596	C12A12410-06080	6	10.0	3/8"	8	13/16-16	26.3	22.0
1232597	C12A12410-06100	6	10.0	3/8"	10	1-14	29.8	27.0
1232598	C12A12410-08080	8	13.0	1/2"	8	13/16-16	27.1	22.0
1232599	C12A12410-08100	8	13.0	1/2"	10	1-14	30.6	27.0
1232600	C12A12410-08120	8	13.0	1/2"	12	1 3/16-12	34.1	32.0
1232601	C12A12410-10100	10	16.0	5/8"	10	1-14	30.6	27.0
1232602	C12A12410-10120	10	16.0	5/8"	12	1 3/16-12	34.1	32.0
1232603	C12A12410-12120	12	19.0	3/4"	12	1 3/16-12	34.6	32.0
1232604	C12A12410-12160	12	19.0	3/4"	16	1 7/16-12	38.1	41.0
1232605	C12A12410-16160	16	25.0	1"	16	1 7/16-12	37.9	38.0

// C12A22414 **NEW**

ORFS Female with support Hexagon knurled



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1249411	C12A22414-04040	Slip on nut	4	6.0	1/4"	4	9/16-18	29.5	14.0	17.0
1249412	C12A22414-04060	Slip on nut	4	6.0	1/4"	6	11/16-16	31.8	17.0	22.0
1249413	C12A22414-04080	Slip on nut	4	6.0	1/4"	8	13/16-16	35.8	22.0	24.0
1249414	C12A22414-05060	Slip on nut	5	8.0	5/16"	6	11/16-16	30.8	17.0	22.0
1249415	C12A22414-06060	Slip on nut	6	10.0	3/8"	6	11/16-16	30.8	17.0	22.0
1249416	C12A22414-06080	Slip on nut	6	10.0	3/8"	8	13/16-16	39.3	22.0	24.0
1249418	C12A22414-08080	Slip on nut	8	13.0	1/2"	8	13/16-16	40.5	22.0	24.0
1249419	C12A22414-08100	Slip on nut	8	13.0	1/2"	10	1-14	43.0	24.0	30.0
1249420	C12A22414-08120	Slip on nut	8	13.0	1/2"	12	1 3/16-12	42.1	30.0	36.0
1249421	C12A22414-10100	Slip on nut	10	16.0	5/8"	10	1-14	45.0	24.0	30.0
1249422	C12A22414-10120	Slip on nut	10	16.0	5/8"	12	1 3/16-12	42.1	30.0	36.0
1249423	C12A22414-12120	Slip on nut	12	19.0	3/4"	12	1 3/16-12	42.6	30.0	36.0
1249424	C12A22414-12160	Slip on nut	12	19.0	3/4"	16	1 7/16-12	42.6	36.0	41.0
1249425	C12A22414-16160	Slip on nut	16	25.0	1"	16	1 7/16-12	51.4	36.0	41.0

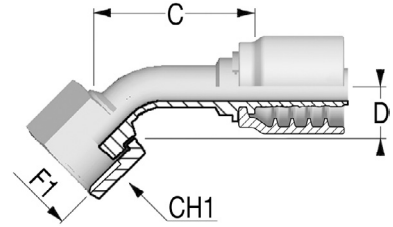
// C12A22443-S

45° ORFS Female

Short Drop

DK ORFS 45M

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232802	C12A22443-0404S	Slip on nut	4	6.0	1/4"	4	9/16-18	41.1	11.0	17.0
1232803	C12A22443-0406S	Slip on nut	4	6.0	1/4"	6	11/16-16	46.1	11.0	22.0
1232804	C12A22443-0506S	Slip on nut	5	8.0	5/16"	6	11/16-16	46.3	12.0	22.0
1232805	C12A22443-0606S	Slip on nut	6	10.0	3/8"	6	11/16-16	47.4	12.0	22.0
1232806	C12A22443-0608S	Slip on nut	6	10.0	3/8"	8	13/16-16	51.2	15.0	24.0
1232801	C12A22441-0808S	Crimped	8	13.0	1/2"	8	13/16-16	47.1	16.0	24.0
1232807	C12A22443-0810S	Slip on nut	8	13.0	1/2"	10	1-14	50.4	16.5	30.0
1232808	C12A22443-1010S	Slip on nut	10	16.0	5/8"	10	1-14	57.7	17.0	30.0
1232809	C12A22443-1012S	Slip on nut	10	16.0	5/8"	12	1 3/16-12	63.1	21.0	36.0
1232810	C12A22443-1212S	Slip on nut	12	19.0	3/4"	12	1 3/16-12	63.5	21.0	36.0
1232811	C12A22443-1216S	Slip on nut	12	19.0	3/4"	16	1 7/16-12	70.7	24.0	41.0
1232812	C12A22443-1616S	Slip on nut	16	25.0	1"	16	1 7/16-12	82.4	26.0	41.0
1232813	C12A22443-1620S	Slip on nut	16	25.0	1"	20	1 11/16-12	85.4	26.0	50.0

Image: insert with Slip on Nut.

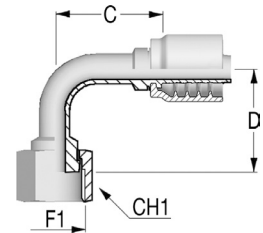
// C12A22493-S

90° ORFS Female

Short Drop

DK ORFS 90S

Solid one piece

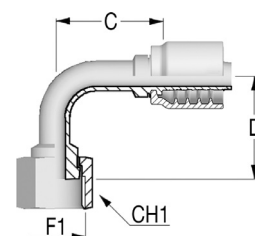


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232819	C12A22493-0404S	Slip on nut	4	6.0	1/4"	4	9/16-18	28.5	21.0	17.0
1232822	C12A22493-0406S	Slip on nut	4	6.0	1/4"	6	11/16-16	32.0	23.0	22.0
1232826	C12A22493-0606S	Slip on nut	6	10.0	3/8"	6	11/16-16	41.8	25.0	22.0
1232829	C12A22493-0608S	Slip on nut	6	10.0	3/8"	8	13/16-16	41.8	29.0	24.0
1232816	C12A22491-0808S	Crimped	8	13.0	1/2"	8	13/16-16	39.8	29.0	24.0
1232832	C12A22493-0810S	Slip on nut	8	13.0	1/2"	10	1-14	46.3	32.5	30.0
1232835	C12A22493-1010S	Slip on nut	10	16.0	5/8"	10	1-14	52.3	32.5	30.0
1232837	C12A22493-1012S	Slip on nut	10	16.0	5/8"	12	1 3/16-12	55.4	49.0	36.0
1232840	C12A22493-1212S	Slip on nut	12	19.0	3/4"	12	1 3/16-12	60.6	51.0	36.0
1232842	C12A22493-1216S	Slip on nut	12	19.0	3/4"	16	1 7/16-12	61.6	56.0	41.0
1232845	C12A22493-1616S	Slip on nut	16	25.0	1"	16	1 7/16-12	80.0	58.0	41.0
1232847	C12A22493-1620S	Slip on nut	16	25.0	1"	20	1 11/16-12	82.6	64.0	50.0

Image: insert with Slip on Nut.

// C12A22493-M

90° ORFS Female
Medium Drop
DK ORFS 90M
Solid one piece

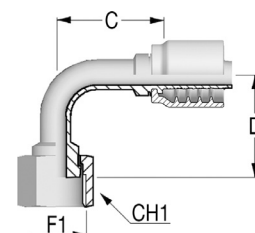


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232818	C12A22493-0404M	Slip on nut	4	6.0	1/4"	4	9/16-18	29.8	32.0	17.0
1232821	C12A22493-0406M	Slip on nut	4	6.0	1/4"	6	11/16-16	37.3	38.0	22.0
1232823	C12A22493-0506M	Slip on nut	5	8.0	5/16"	6	11/16-16	40.7	34.0	22.0
1232825	C12A22493-0606M	Slip on nut	6	10.0	3/8"	6	11/16-16	41.8	38.0	22.0
1232828	C12A22493-0608M	Slip on nut	6	10.0	3/8"	8	13/16-16	43.8	41.0	24.0
1232815	C12A22491-0808M	Crimped	8	13.0	1/2"	8	13/16-16	34.8	42.0	24.0
1232831	C12A22493-0810M	Slip on nut	8	13.0	1/2"	10	1-14	48.3	47.0	30.0
1232834	C12A22493-1010M	Slip on nut	10	16.0	5/8"	10	1-14	55.4	44.0	30.0
1232836	C12A22493-1012M	Slip on nut	10	16.0	5/8"	12	1 3/16-12	55.4	58.0	36.0
1232839	C12A22493-1212M	Slip on nut	12	19.0	3/4"	12	1 3/16-12	61.6	58.0	36.0
1232841	C12A22493-1216M	Slip on nut	12	19.0	3/4"	16	1 7/16-12	65.6	71.0	41.0
1232844	C12A22493-1616M	Slip on nut	16	25.0	1"	16	1 7/16-12	82.6	66.0	41.0
1232846	C12A22493-1620M	Slip on nut	16	25.0	1"	20	1 11/16-12	82.6	78.0	50.0

Image: insert with Slip on Nut.

// C12A22493-L

90° ORFS Female
Long Drop
DK ORFS 90L
Solid one piece



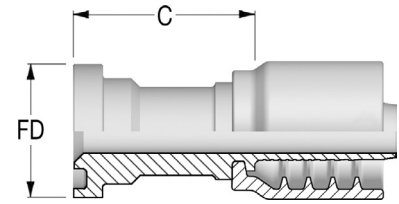
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232817	C12A22493-0404L	Crimped	4	6.0	1/4"	4	9/16-18	32.8	46.0	24.0
1232820	C12A22493-0406L	Slip on nut	4	6.0	1/4"	6	11/16-16	34.8	54.0	30.0
1232824	C12A22493-0606L	Slip on nut	6	10.0	3/8"	6	11/16-16	41.8	54.0	30.0
1232827	C12A22493-0608L	Slip on nut	6	10.0	3/8"	8	13/16-16	46.8	64.0	30.0
1232814	C12A22491-0808L	Crimped	8	13.0	1/2"	8	13/16-16	38.3	64.0	30.0
1232830	C12A22493-0810L	Slip on nut	8	13.0	1/2"	10	1-14	46.3	70.0	36.0
1232833	C12A22493-1010L	Slip on nut	10	16.0	5/8"	10	1-14	55.4	70.0	36.0
1232838	C12A22493-1212L	Slip on nut	12	19.0	3/4"	12	1 3/16-12	61.6	96.0	41.0
1232843	C12A22493-1616L	Slip on nut	16	25.0	1"	16	1 7/16-12	82.6	114.0	41.0

Image: insert with Slip on Nut.

// SAE FLANGES

// C12A43310

Flange SAE 3000 psi J518 Code 61
SFL

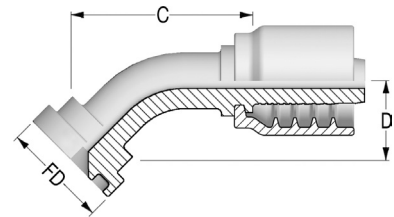


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	WP (psi)
1232962	C12A43310-08080	8	13.0	1/2"	8	1/2	30.2	41.0	5000
1232963	C12A43310-08120	8	13.0	1/2"	12	3/4	38.1	42.0	5000
1232964	C12A43310-12120	12	19.0	3/4"	12	3/4	38.1	42.5	5000
1232965	C12A43310-12160	12	19.0	3/4"	16	1	44.5	50.5	5000
1232966	C12A43310-16160	16	25.0	1"	16	1	44.5	51.4	5000
1232967	C12A43310-16200	16	25.0	1"	20	1 1/4	50.8	53.9	4000
1258017	C12A43310-32320	32	51.0	2"	32	2	71.4	70.0	3000

Diametres from 1/2" include Whip Check Retention Nut.

// C12A43340

45° Flange SAE 3000 psi J518 Code 61
SFL 45
Solid one piece



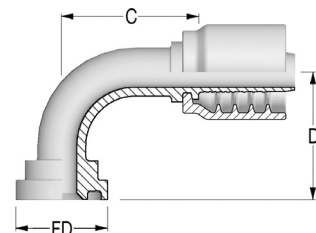
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1232968	C12A43340-08080	8	13.0	1/2"	8	1/2	30.2	52.9	22.0	5000
1232969	C12A43340-08120	8	13.0	1/2"	12	3/4	38.1	60.3	26.0	5000
1232970	C12A43340-10120	10	16.0	5/8"	12	3/4	38.1	65.0	26.0	5000
1232971	C12A43340-12120	12	19.0	3/4"	12	3/4	38.1	73.7	32.0	5000
1232972	C12A43340-12160	12	19.0	3/4"	16	1	44.5	77.9	29.0	5000
1232973	C12A43340-16160	16	25.0	1"	16	1	44.5	82.7	33.5	5000
1232974	C12A43340-16200	16	25.0	1"	20	1 1/4	50.8	82.2	36.0	4000

// C12A43390

90° Flange SAE 3000 psi J518 Code 61

SFL 90

Solid one piece

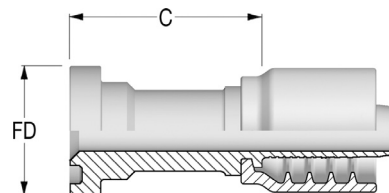


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1232975	C12A43390-08080	8	13.0	1/2"	8	1/2	30.2	45.8	42.0	5000
1232976	C12A43390-08120	8	13.0	1/2"	12	3/4	38.1	45.3	51.0	5000
1232977	C12A43390-12120	12	19.0	3/4"	12	3/4	38.1	59.7	58.0	5000
1232978	C12A43390-12160	12	19.0	3/4"	16	1	44.5	66.2	64.5	5000
1232979	C12A43390-16160	16	25.0	1"	16	1	44.5	70.6	67.0	5000
1232980	C12A43390-16200	16	25.0	1"	20	1 1/4	50.8	73.6	71.0	4000
1232981	C12A43390-16240	16	25.0	1"	24	1 1/2	60.3	93.1	75.0	3000

// C12A43610

Flange SAE 6000 psi J518 Code 62

SFS



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	WP (psi)
1232982	C12A43610-08080	8	13.0	1/2"	8	1/2	31.8	47.0	6000
1232983	C12A43610-08120	8	13.0	1/2"	12	3/4	41.3	52.0	6000
1232984	C12A43610-12120	12	19.0	3/4"	12	3/4	41.3	52.5	6000
1232985	C12A43610-12160	12	19.0	3/4"	16	1	47.6	55.5	6000
1232986	C12A43610-16120	16	25.0	1"	12	3/4	41.3	56.4	6000
1232987	C12A43610-16160	16	25.0	1"	16	1	47.6	56.4	6000
1232988	C12A43610-16200	16	25.0	1"	20	1 1/4	54.0	63.4	6000

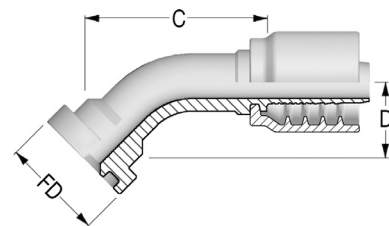
Diametres from 1/2" include Whip Check Retention Nut.

// C12A43640

45° Flange SAE 6000 psi J518 Code 62

SFS 45

Solid one piece



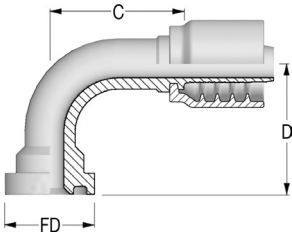
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1232989	C12A43640-08080	8	13.0	1/2"	8	1/2	31.8	56.5	23.0	6000
1232990	C12A43640-08120	8	13.0	1/2"	12	3/4	41.3	79.9	30.5	6000
1232991	C12A43640-12120	12	19.0	3/4"	12	3/4	41.3	84.1	31.0	6000
1232992	C12A43640-12160	12	19.0	3/4"	16	1	47.6	80.0	33.5	6000
1232993	C12A43640-16160	16	25.0	1"	16	1	47.6	96.7	36.0	6000
1232994	C12A43640-16200	16	25.0	1"	20	1 1/4	54.0	96.1	39.0	6000

// C12A43690

90° Flange SAE 6000 psi J518 Code 62

SFS 90

Solid one piece



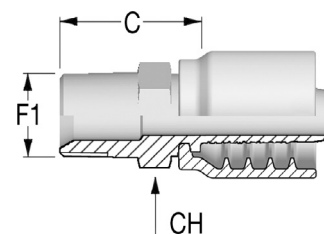
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1232995	C12A43690-08080	8	13.0	1/2"	8	1/2	31.8	47.8	46.0	6000
1232996	C12A43690-08120	8	13.0	1/2"	12	3/4	41.3	47.8	54.0	6000
1232997	C12A43690-10120	10	16.0	5/8"	12	3/4	41.3	49.9	55.0	6000
1232998	C12A43690-12120	12	19.0	3/4"	12	3/4	41.3	63.2	61.0	6000
1232999	C12A43690-12160	12	19.0	3/4"	16	1	47.6	63.2	66.0	6000
1233000	C12A43690-16160	16	25.0	1"	16	1	47.6	73.6	75.0	6000
1233001	C12A43690-16200	16	25.0	1"	20	1 1/4	54.0	77.6	78.0	6000

// BSP INSERTS

// C12A10710

BSPT Male

AGR K

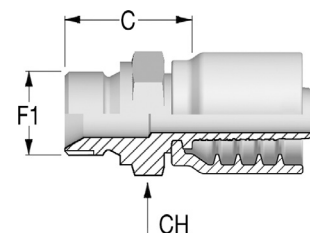


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1232560	C12A10710-04020	4	6.0	1/4"	2	1/8-28	21.3	12.0
1232561	C12A10710-04040	4	6.0	1/4"	4	1/4-19	26.8	17.0
1232562	C12A10710-04060	4	6.0	1/4"	6	3/8-19	27.8	19.0
1232563	C12A10710-05060	5	8.0	5/16"	6	3/8-19	27.8	19.0
1232564	C12A10710-06060	6	10.0	3/8"	6	3/8-19	27.8	19.0
1232565	C12A10710-06080	6	10.0	3/8"	8	1/2-14	32.3	22.0
1232566	C12A10710-08080	8	13.0	1/2"	8	1/2-14	33.1	22.0
1232567	C12A10710-10120	10	16.0	5/8"	12	3/4-14	34.1	27.0
1232568	C12A10710-12120	12	19.0	3/4"	12	3/4-14	34.6	27.0
1232569	C12A10710-12160	12	19.0	3/4"	16	1-11	43.6	36.0
1232570	C12A10710-16160	16	25.0	1"	16	1-11	44.4	36.0

// C12A10510

BSPP Male 60° Flare

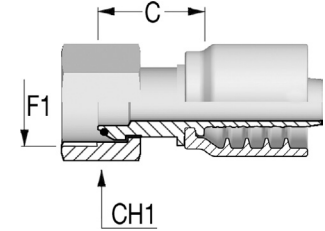
AGR



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1232544	C12A10510-04020	4	6.0	1/4"	2	1/8-28	20.8	14.0
1232545	C12A10510-04040	4	6.0	1/4"	4	1/4-19	26.3	19.0
1232546	C12A10510-04060	4	6.0	1/4"	6	3/8-19	27.8	22.0
1232547	C12A10510-05060	5	8.0	5/16"	6	3/8-19	27.8	22.0
1232548	C12A10510-06060	6	10.0	3/8"	6	3/8-19	27.8	22.0
1232549	C12A10510-06080	6	10.0	3/8"	8	1/2-14	31.3	27.0
1232550	C12A10510-08060	8	13.0	1/2"	6	3/8-19	28.6	22.0
1232551	C12A10510-08080	8	13.0	1/2"	8	1/2-14	32.1	27.0
1232552	C12A10510-08100	8	13.0	1/2"	10	5/8-14	34.1	30.0
1232553	C12A10510-08120	8	13.0	1/2"	12	3/4-14	36.1	32.0
1232554	C12A10510-10100	10	16.0	5/8"	10	5/8-14	34.1	30.0
1232555	C12A10510-10120	10	16.0	5/8"	12	3/4-14	36.1	32.0
1232556	C12A10510-12120	12	19.0	3/4"	12	3/4-14	36.6	32.0
1232557	C12A10510-12160	12	19.0	3/4"	16	1-11	41.6	41.0
1232558	C12A10510-16160	16	25.0	1"	16	1-11	42.4	41.0
1232559	C12A10510-16200	16	25.0	1"	20	1 1/4-11	46.4	50.0

// C12A20813

**BSPP Female 60° Cone with O-Ring
DKOR**

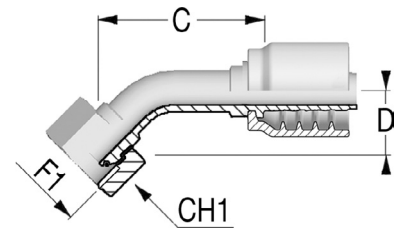


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1232679	C12A20813-04040	Slip on nut	4	6.0	1/4"	4	1/4-19	20.8	19.0
1232680	C12A20813-04060	Slip on nut	4	6.0	1/4"	6	3/8-19	23.3	22.0
1232681	C12A20813-05060	Slip on nut	5	8.0	5/16"	6	3/8-19	23.3	22.0
1232675	C12A20811-06040	Crimped	6	10.0	3/8"	4	1/4-19	17.3	19.0
1232682	C12A20813-06060	Slip on nut	6	10.0	3/8"	6	3/8-19	23.3	22.0
1232683	C12A20813-06080	Slip on nut	6	10.0	3/8"	8	1/2-14	24.3	27.0
1232684	C12A20813-08080	Slip on nut	8	13.0	1/2"	8	1/2-14	25.1	27.0
1232685	C12A20813-08100	Slip on nut	8	13.0	1/2"	10	5/8-14	28.4	27.0
1232686	C12A20813-08120	Slip on nut	8	13.0	1/2"	12	3/4-14	29.0	32.0
1232676	C12A20811-10100	Crimped	10	16.0	5/8"	10	5/8-14	17.1	27.0
1232687	C12A20813-10120	Slip on nut	10	16.0	5/8"	12	3/4-14	29.0	32.0
1232677	C12A20811-12120	Crimped	12	19.0	3/4"	12	3/4-14	20.6	32.0
1232688	C12A20813-12160	Slip on nut	12	19.0	3/4"	16	1-11	34.0	38.0
1232678	C12A20811-16160	Crimped	16	25.0	1"	16	1-11	23.9	38.0
1232689	C12A20813-16200	Slip on nut	16	25.0	1"	20	1 1/4-11	39.4	50.0

Image: insert with Slip on Nut.

// C12A20843

**45° BSPP Female 60° Cone with O-Ring
DKOR 45
Solid one piece**



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232693	C12A20843-04040	Slip on nut	4	6.0	1/4"	4	1/4-19	45.5	15.0	19.0
1232694	C12A20843-04060	Slip on nut	4	6.0	1/4"	6	3/8-19	41.5	17.5	22.0
1232695	C12A20843-05060	Slip on nut	5	8.0	5/16"	6	3/8-19	45.1	18.5	22.0
1232696	C12A20843-06060	Slip on nut	6	10.0	3/8"	6	3/8-19	49.9	20.5	22.0
1232697	C12A20843-06080	Slip on nut	6	10.0	3/8"	8	1/2-14	45.7	21.0	27.0
1232698	C12A20843-08080	Slip on nut	8	13.0	1/2"	8	1/2-14	55.0	21.0	27.0
1232699	C12A20843-08100	Slip on nut	8	13.0	1/2"	10	5/8-14	57.2	23.0	27.0
1232700	C12A20843-08120	Slip on nut	8	13.0	1/2"	12	3/4-14	56.7	23.0	32.0
1232690	C12A20841-10100	Crimped	10	16.0	5/8"	10	5/8-14	64.0	21.5	27.0
1232701	C12A20843-10120	Slip on nut	10	16.0	5/8"	12	3/4-14	66.5	22.5	32.0
1232691	C12A20841-12120	Crimped	12	19.0	3/4"	12	3/4-14	70.0	28.0	32.0
1232702	C12A20843-12160	Slip on nut	12	19.0	3/4"	16	1-11	74.6	31.5	38.0
1232692	C12A20841-16160	Crimped	16	25.0	1"	16	1-11	84.0	34.0	38.0

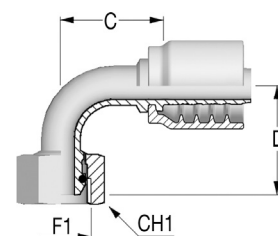
Image: insert with Slip on Nut.

// C12A20893

90° BSPP Female 60° Cone with O-Ring

DKOR 90

Solid one piece



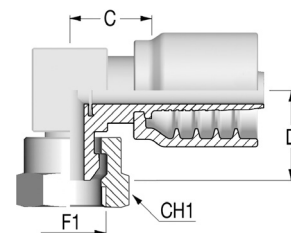
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232706	C12A20893-04040	Slip on nut	4	6.0	1/4"	4	1/4-19	29.3	29.0	19.0
1232707	C12A20893-04060	Slip on nut	4	6.0	1/4"	6	3/8-19	29.8	31.0	22.0
1232708	C12A20893-05060	Slip on nut	5	8.0	5/16"	6	3/8-19	33.2	36.0	22.0
1232709	C12A20893-06060	Slip on nut	6	10.0	3/8"	6	3/8-19	34.8	42.0	22.0
1232710	C12A20893-06080	Slip on nut	6	10.0	3/8"	8	1/2-14	34.3	35.5	27.0
1232711	C12A20893-08080	Slip on nut	8	13.0	1/2"	8	1/2-14	35.8	41.0	27.0
1232712	C12A20893-08100	Slip on nut	8	13.0	1/2"	10	5/8-14	41.6	43.5	27.0
1232713	C12A20893-08120	Slip on nut	8	13.0	1/2"	12	3/4-14	41.8	43.0	32.0
1232703	C12A20891-10100	Crimped	10	16.0	5/8"	10	5/8-14	47.9	47.0	27.0
1232714	C12A20893-10120	Slip on nut	10	16.0	5/8"	12	3/4-14	51.9	49.0	32.0
1232704	C12A20891-12120	Crimped	12	19.0	3/4"	12	3/4-14	49.1	53.0	32.0
1232715	C12A20893-12160	Slip on nut	12	19.0	3/4"	16	1-11	54.1	60.5	38.0
1232705	C12A20891-16160	Crimped	16	25.0	1"	16	1-11	75.1	69.0	38.0
1232716	C12A20893-16200	Slip on nut	16	25.0	1"	20	1 1/4-11	75.1	88.5	50.0

Image: insert with Slip on Nut.

// C12A20581

90° Compact BSPP Female 60° Cone

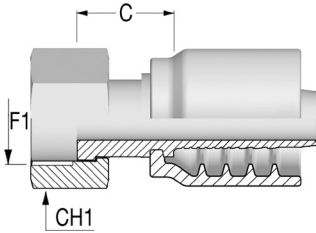
DKR 90



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1232668	C12A20581-06060	Crimped	6	10.0	3/8"	6	3/8-19	18.8	22.0	22.0
1232669	C12A20581-08080	Crimped	8	13.0	1/2"	8	1/2-14	22.6	24.5	27.0
1232670	C12A20581-12120	Crimped	12	19.0	3/4"	12	3/4-14	26.7	31.0	32.0

// C12A20613

BSPP Female Flat Seat
DKR FD



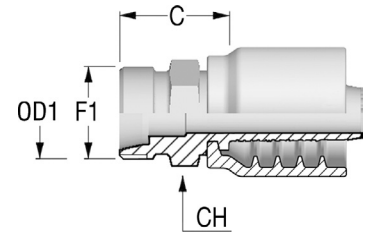
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1232672	C12A20613-06060	Slip on nut	6	10.0	3/8"	6	3/8-19	20.3	22.0
1232673	C12A20613-06080	Slip on nut	6	10.0	3/8"	8	1/2-14	20.8	27.0
1232674	C12A20613-08080	Slip on nut	8	13.0	1/2"	8	1/2-14	21.6	27.0
1232671	C12A20611-12120	Crimped	12	19.0	3/4"	12	3/4-14	18.1	32.0

Image: insert with Slip on Nut.

// DIN METRIC INSERTS

// C12A11110

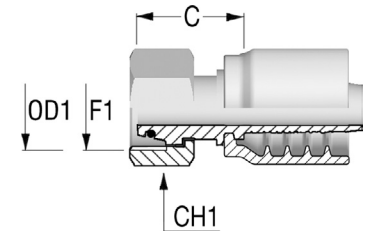
Metric Male 24° Seat
DIN 3853 - Light Series
CEL



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH (mm)
1232571	C12A11110-04120	4	6.0	1/4"	M12X1.5	6	21.3	14.0
1232572	C12A11110-04140	4	6.0	1/4"	M14X1.5	8	21.3	14.0
1232573	C12A11110-04160	4	6.0	1/4"	M16X1.5	10	23.3	17.0
1232574	C12A11110-05160	5	8.0	5/16"	M16X1.5	10	23.3	17.0
1232575	C12A11110-05180	5	8.0	5/16"	M18X1.5	12	24.3	19.0
1232576	C12A11110-06160	6	10.0	3/8"	M16X1.5	10	23.3	17.0
1232577	C12A11110-06180	6	10.0	3/8"	M18X1.5	12	24.3	19.0
1232578	C12A11110-06220	6	10.0	3/8"	M22X1.5	15	25.3	22.0
1232579	C12A11110-08220	8	13.0	1/2"	M22X1.5	15	26.1	22.0
1232580	C12A11110-08260	8	13.0	1/2"	M26X1.5	18	27.1	27.0
1232581	C12A11110-10260	10	16.0	5/8"	M26X1.5	18	27.1	27.0
1232582	C12A11110-12300	12	19.0	3/4"	M30X2	22	31.6	32.0
1232583	C12A11110-16360	16	25.0	1"	M36X2	28	34.4	36.0

// C12A21513

Metric Female 24° Cone with O-Ring
ISO 8434-1 - Light Series
DKOL



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH1 (mm)
1232717	C12A21511-04120	Crimped	4	6.0	1/4"	M12X1.5	6	24.8	14.0
1232718	C12A21513-04140	Slip on nut	4	6.0	1/4"	M14X1.5	8	24.4	17.0
1232719	C12A21513-04160	Slip on nut	4	6.0	1/4"	M16X1.5	10	25.4	19.0
1232720	C12A21513-05160	Slip on nut	5	8.0	5/16"	M16X1.5	10	25.4	19.0
1232722	C12A21513-06180	Slip on nut	6	10.0	3/8"	M18X1.5	12	25.4	22.0
1232723	C12A21513-06220	Slip on nut	6	10.0	3/8"	M22X1.5	15	27.4	27.0
1232724	C12A21513-08220	Slip on nut	8	13.0	1/2"	M22X1.5	15	28.2	27.0
1232725	C12A21513-08260	Slip on nut	8	13.0	1/2"	M26X1.5	18	29.2	32.0
1232726	C12A21513-10260	Slip on nut	10	16.0	5/8"	M26X1.5	18	29.2	32.0
1232727	C12A21513-12300	Slip on nut	12	19.0	3/4"	M30X2	22	31.7	36.0
1232728	C12A21513-16360	Slip on nut	16	25.0	1"	M36X2	28	33.6	41.0

Image: insert with Slip on Nut.

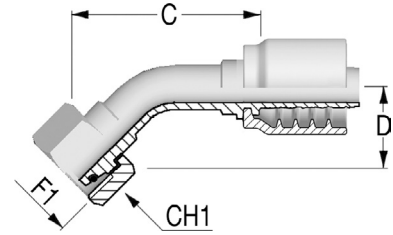
// C12A21543

45° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Light Series

DKOL 45

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1232729	C12A21543-04140	Slip on nut	4	6.0	1/4"	M14X1.5	8	43.0	17.5	17.0
1232730	C12A21543-04160	Slip on nut	4	6.0	1/4"	M16X1.5	10	42.0	20.0	19.0
1232731	C12A21543-05160	Slip on nut	5	8.0	5/16"	M16X1.5	10	47.5	20.0	19.0
1232733	C12A21543-06180	Slip on nut	6	10.0	3/8"	M18X1.5	12	46.8	19.5	22.0
1232734	C12A21543-08220	Slip on nut	8	13.0	1/2"	M22X1.5	15	55.0	21.0	22.0
1232735	C12A21543-10260	Slip on nut	10	16.0	5/8"	M26X1.5	18	65.3	24.0	32.0
1232736	C12A21543-12300	Slip on nut	12	19.0	3/4"	M30X2	22	69.4	32.0	36.0
1232737	C12A21543-16360	Slip on nut	16	25.0	1"	M36X2	28	91.4	32.0	41.0

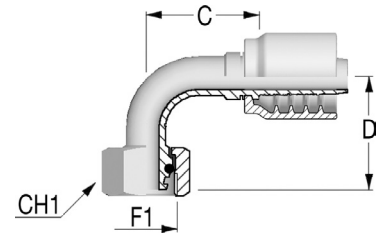
// C12A21593

90° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Light Series

DKOL 90

Solid one piece

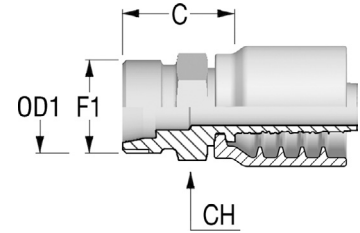


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1232738	C12A21591-04120	Crimped	4	6.0	1/4"	M12X1.5	6	29.5	26.0	14.0
1232739	C12A21593-04140	Slip on nut	4	6.0	1/4"	M14X1.5	8	28.3	32.5	17.0
1232740	C12A21593-04160	Slip on nut	4	6.0	1/4"	M16X1.5	10	28.3	32.5	19.0
1232741	C12A21593-04180	Slip on nut	4	6.0	1/4"	M18X1.5	12	28.8	35.0	22.0
1232742	C12A21593-05160	Slip on nut	5	8.0	5/16"	M16X1.5	10	33.7	38.0	19.0
1232744	C12A21593-06180	Slip on nut	6	10.0	3/8"	M18X1.5	12	32.8	39.0	22.0
1232745	C12A21593-08220	Slip on nut	8	13.0	1/2"	M22X1.5	15	39.8	40.5	27.0
1232746	C12A21593-10260	Slip on nut	10	16.0	5/8"	M26X1.5	18	51.4	48.0	32.0
1232747	C12A21593-10300	Slip on nut	10	16.0	5/8"	M30X2	22	52.4	49.0	36.0
1232748	C12A21593-12300	Slip on nut	12	19.0	3/4"	M30X2	22	52.1	59.0	36.0
1232749	C12A21593-16360	Slip on nut	16	25.0	1"	M36X2	28	77.6	68.0	41.0

Image: insert with Slip on Nut.

// C12A11210

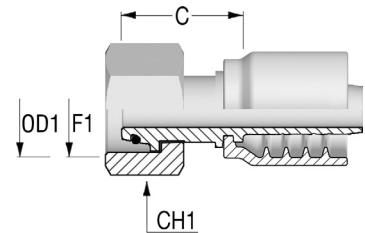
Metric Male 24° Seat
DIN 3853 - Heavy Series
CES



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH (mm)
1232584	C12A11210-04180	4	6.0	1/4"	M18X1.5	10	25.3	19.0
1232585	C12A11210-05200	5	8.0	5/16"	M20X1.5	12	25.3	22.0
1232586	C12A11210-06200	6	10.0	3/8"	M20X1.5	12	25.3	22.0
1232587	C12A11210-06220	6	10.0	3/8"	M22X1.5	14	27.3	22.0
1232588	C12A11210-08240	8	13.0	1/2"	M24X1.5	16	29.1	24.0
1232589	C12A11210-10300	10	16.0	5/8"	M30X2	20	33.1	32.0
1232590	C12A11210-12300	12	19.0	3/4"	M30X2	20	33.6	32.0
1232591	C12A11210-12360	12	19.0	3/4"	M36X2	25	37.6	36.0
1232592	C12A11210-16420	16	25.0	1"	M42X2	30	42.4	46.0

// C12A21613

Metric Female 24° Cone with O-Ring
ISO 8434-1 - Heavy Series
DKOS



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH1 (mm)
1232750	C12A21613-04160	Slip on nut	4	6.0	1/4"	M16X1.5	8	27.7	19.0
1232751	C12A21613-04180	Slip on nut	4	6.0	1/4"	M18X1.5	10	27.6	22.0
1232752	C12A21613-05200	Slip on nut	5	8.0	5/16"	M20X1.5	12	27.6	24.0
1232754	C12A21613-06200	Slip on nut	6	10.0	3/8"	M20X1.5	12	27.6	24.0
1232755	C12A21613-06220	Slip on nut	6	10.0	3/8"	M22X1.5	14	31.1	27.0
1232757	C12A21613-08240	Slip on nut	8	13.0	1/2"	M24X1.5	16	31.7	30.0
1232758	C12A21613-10300	Slip on nut	10	16.0	5/8"	M30X2	20	36.5	36.0
1232759	C12A21613-12300	Slip on nut	12	19.0	3/4"	M30X2	20	37.0	36.0
1232760	C12A21613-12360	Slip on nut	12	19.0	3/4"	M36X2	25	40.2	46.0
1232761	C12A21613-16360	Slip on nut	16	25.0	1"	M36X2	25	41.0	46.0
1232762	C12A21613-16420	Slip on nut	16	25.0	1"	M42X2	30	43.1	50.0

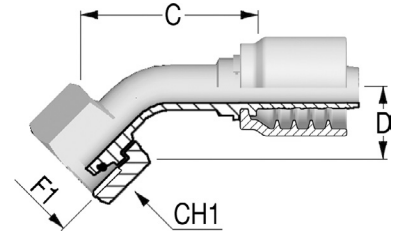
// C12A21643

45° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Heavy Series

DKOS 45

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1232763	C12A21643-04160	Slip on nut	4	6.0	1/4"	M16X1.5	8	48.6	16.0	19.0
1232764	C12A21643-04180	Slip on nut	4	6.0	1/4"	M18X1.5	10	43.5	19.0	22.0
1232765	C12A21643-05200	Slip on nut	5	8.0	5/16"	M20X1.5	12	48.1	21.0	24.0
1232766	C12A21643-06200	Slip on nut	6	10.0	3/8"	M20X1.5	12	50.6	20.0	24.0
1232767	C12A21643-06220	Slip on nut	6	10.0	3/8"	M22X1.5	14	52.9	21.0	27.0
1232768	C12A21643-08240	Slip on nut	8	13.0	1/2"	M24X1.5	16	55.8	21.5	30.0
1232769	C12A21643-10300	Slip on nut	10	16.0	5/8"	M30X2	20	66.3	30.0	36.0
1232770	C12A21643-12360	Slip on nut	12	19.0	3/4"	M36X2	25	69.5	33.0	46.0
1232771	C12A21643-16420	Slip on nut	16	25.0	1"	M42X2	30	110.3	40.5	50.0

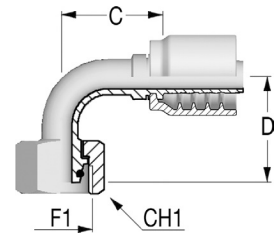
// C12A21693

90° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Heavy Series

DKOS 90

Solid one piece



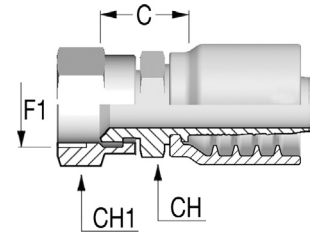
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1232772	C12A21693-04160	Slip on nut	4	6.0	1/4"	M16X1.5	8	27.3	33.0	19.0
1232773	C12A21693-04180	Slip on nut	4	6.0	1/4"	M18X1.5	10	26.8	34.0	22.0
1232774	C12A21693-05200	Slip on nut	5	8.0	5/16"	M20X1.5	12	33.2	39.0	24.0
1232775	C12A21692-06180	Thrust wire nut	6	10.0	3/8"	M18X1.5	10	35.0	38.0	22.0
1232776	C12A21693-06200	Slip on nut	6	10.0	3/8"	M20X1.5	12	34.3	38.5	24.0
1232777	C12A21693-06220	Slip on nut	6	10.0	3/8"	M22X1.5	14	34.3	40.5	27.0
1232778	C12A21693-08240	Slip on nut	8	13.0	1/2"	M24X1.5	16	39.8	41.5	30.0
1232779	C12A21693-10300	Slip on nut	10	16.0	5/8"	M30X2	20	47.9	55.0	36.0
1232780	C12A21693-12300	Slip on nut	12	19.0	3/4"	M30X2	20	50.6	58.0	36.0
1232781	C12A21693-12360	Slip on nut	12	19.0	3/4"	M36X2	25	50.6	59.5	46.0
1232782	C12A21693-16420	Slip on nut	16	25.0	1"	M42X2	30	75.6	79.0	50.0

Image: insert with Slip on Nut.

// SAE INSERTS

// C12A26611

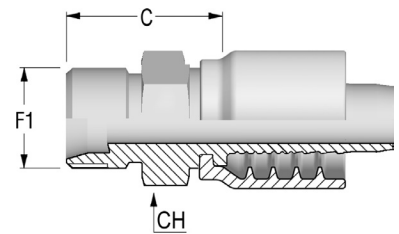
SAE Female Swivel 45° Seat



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1232955	C12A26611-06060	Crimped	6	10.0	3/8"	6	5/8-18	23.3	19.0	22.0
1232956	C12A26611-12120	Crimped	12	19.0	3/4"	12	1 1/16-14	28.6	27.0	32.0

// C12A13B10

SAE Male Flareless



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1240072	C12A13B10-04040	4	6.0	1/4"	4	7/16-20	21.8	12.0
1242131	C12A13B10-05060	5	8.0	5/16"	6	9/16-18	24.2	16.0
1239967	C12A13B10-06060	6	10.0	3/8"	6	9/16-18	24.2	16.0
1242132	C12A13B10-06080	6	10.0	3/8"	8	3/4-16	27.6	22.0
1237777	C12A13B10-08080	8	13.0	1/2"	8	3/4-16	28.4	22.0
1258022	C12A13B10-08100	8	13.0	1/2"	10	7/8-14	31.0	24.0
1242133	C12A13B10-12120	12	19.0	3/4"	12	1 1/16-12	33.1	30.0
1242135	C12A13B10-16160	16	25.0	1"	16	1 5/16-12	37.9	36.0

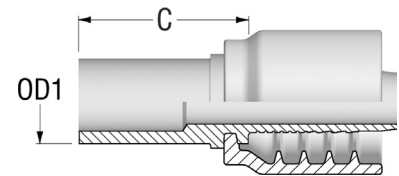
// DIN METRIC INSERTS

// C12A52010

Metric Straight Standpipe

DIN 2353

RSL/RSS

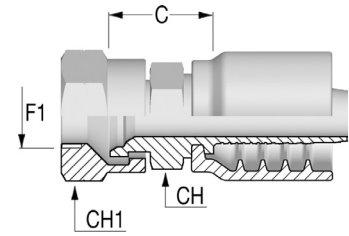


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	OD1	C (mm)
1233002	C12A52010-04080	4	6.0	1/4"	8	30.2
1233003	C12A52010-06100	6	10.0	3/8"	10	30.3
1233004	C12A52010-08150	8	13.0	1/2"	15	32.1
1233005	C12A52010-08160	8	13.0	1/2"	16	37.1

// JIS INSERTS

// C12A2381Z

JIS Female 60° Seat Flare - B 8363 (type F)

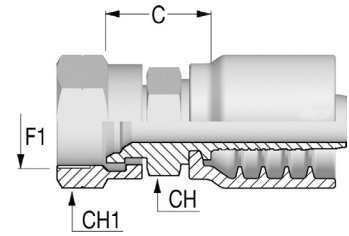


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1232922	C12A2381Z-04040	Crimped	4	6.0	1/4"	4	1/4-19	20.8	17.0	19.0
1232923	C12A2381Z-06060	Crimped	6	10.0	3/8"	6	3/8-19	21.8	19.0	22.0
1232924	C12A2381Z-08080	Crimped	8	13.0	1/2"	8	1/2-14	23.6	22.0	27.0
1232925	C12A2381Z-12120	Crimped	12	19.0	3/4"	12	3/4-14	27.1	30.0	36.0
1232926	C12A2381Z-16160	Crimped	16	25.0	1"	16	1-11	32.9	36.0	41.0

// KOMATSU INSERTS

// C12A24011

Komatsu Female

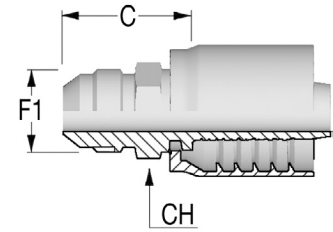


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1232927	C12A24011-04140	Crimped	4	6.0	1/4"	14	M14X1.5	20.8	17.0	19.0
1232928	C12A24011-06180	Crimped	6	10.0	3/8"	18	M18X1.5	21.8	19.0	22.0
1232929	C12A24011-08220	Crimped	8	13.0	1/2"	22	M22X1.5	23.6	22.0	27.0
1232930	C12A24011-10240	Crimped	10	16.0	5/8"	24	M24X1.5	27.1	32.0	32.0
1232931	C12A24011-12300	Crimped	12	19.0	3/4"	30	M30X1.5	27.6	30.0	36.0
1232932	C12A24011-16330	Crimped	16	25.0	1"	33	M33X1.5	35.7	41.0	41.0

// JIC 37°

// C18S12510 **NEW**

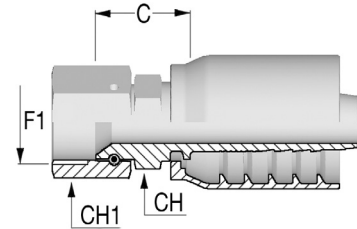
JIC Male 37° Cone
AGJ



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1255920	C18S12510-04040	4	6.0	1/4"	4	7/16-20	25.3	12.0
1255938	C18S12510-06060	6	10.0	3/8"	6	9/16-18	27.0	17.0
1255964	C18S12510-08080	8	13.0	1/2"	8	3/4-16	30.6	19.0
1255987	C18S12510-10100	10	16.0	5/8"	10	7/8-14	35.3	24.0
1256037	C18S12510-12120	12	19.0	3/4"	12	1 1/16-12	39.1	27.0
1255825	C18S12510-16160	16	25.0	1"	16	1 5/16-12	46.1	36.0
1257175	C18S12510-20200	20	32.0	1 1/4"	20	1 5/8-12	45.7	46.0

// C18S26514 **NEW**

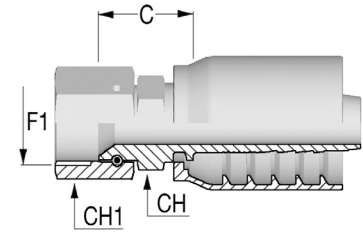
JIC Female 37° Seat with double Hexagon
DKJ and solid nut



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1255668	C18S26514-04040	Slip on nut	4	6.0	1/4"	4	7/16-20	19.0	14.0	14.0
1257599	C18S26514-06060	Slip on nut	6	10.0	3/8"	6	9/16-18	22.0	17.0	19.0
1257601	C18S26514-08080	Slip on nut	8	13.0	1/2"	8	3/4-16	25.6	19.0	25.0
1257602	C18S26514-10100	Slip on nut	10	16.0	5/8"	10	7/8-14	28.3	24.0	27.0
1257237	C18S26514-12120	Slip on nut	12	19.0	3/4"	12	1 1/16-12	30.9	27.0	32.0
1257049	C18S26514-16160	Slip on nut	16	25.0	1"	16	1 5/16-12	37.7	36.0	41.0

// C18S26511 **NEW**

JIC Female 37° Seat with Stem Hexagon
DKJ

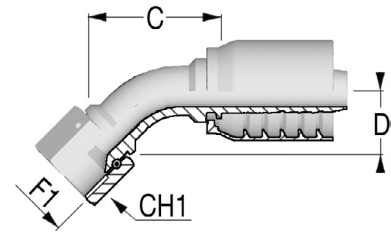


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1255922	C18S26511-04040	Crimped	4	6.0	1/4"	4	7/16-20	19.6	14.0	16.0
1255949	C18S26511-06060	Crimped	6	10.0	3/8"	6	9/16-18	22.0	17.0	19.0
1255966	C18S26511-08080	Crimped	8	13.0	1/2"	8	3/4-16	25.6	19.0	25.0
1255989	C18S26511-10100	Crimped	10	16.0	5/8"	10	7/8-14	28.3	24.0	27.0
1256040	C18S26511-12120	Crimped	12	19.0	3/4"	12	1 1/16-12	30.1	27.0	32.0
1255807	C18S26512-16160	Thrust wire nut	16	25.0	1"	16	1 5/16-12	38.6	36.0	38.0
1255809	C18S26512-16200	Thrust wire nut	16	25.0	1"	20	1 5/8-12	41.2	41.0	50.0
1255908	C18S26512-20200	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	43.0	46.0	50.0
1257203	C18S26512-24240	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	48.4	50.0	55.0
1257201	C18S26512-32320	Thrust wire nut	32	51.0	2"	32	2 1/2-12	59.2	65.0	70.0

Image: insert with Thrust Wire Nut.

// C18S22541 **NEW**

45° JIC Female 37° Seat
Medium Drop
DKJ 45M
Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1255927	C18S22541-04040	Crimped	4	6.0	1/4"	4	7/16-20	38.0	15.5	16.0
1255955	C18S22541-06060	Crimped	6	10.0	3/8"	6	9/16-18	50.0	17.5	19.0
1255968	C18S22541-08080	Crimped	8	13.0	1/2"	8	3/4-16	52.0	20.0	25.0
1256025	C18S22541-10100	Crimped	10	16.0	5/8"	10	7/8-14	57.0	29.0	27.0
1256046	C18S22541-12120	Crimped	12	19.0	3/4"	12	1 1/16-12	64.0	30.0	32.0
1255872	C18S22542-16160	Thrust wire nut	16	25.0	1"	16	1 5/16-12	85.0	31.0	38.0
1257076	C18S22542-20200	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	98.0	37.0	50.0
1258492	C18S22542-24240	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	118.0	43.5	55.0

Image: insert with Thrust Wire Nut.

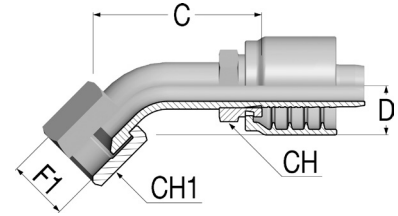
// C18S26544S **NEW**

45° JIC Female 37° Seat

Short Drop

DKJ 45M

Solid nut and double Hexagon crimped



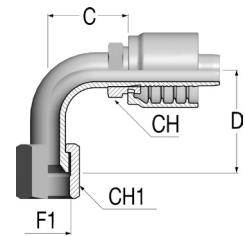
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1257603	C18S26544-0404S	Slip on nut	4	6.0	1/4"	4	7/16-20	40.0	10.0	14.0	16.0
1257604	C18S26544-0606S	Slip on nut	6	10.0	3/8"	6	9/16-18	43.0	11.0	17.0	19.0
1257605	C18S26544-0808S	Slip on nut	8	13.0	1/2"	8	3/4-16	65.0	15.0	19.0	25.0
1257606	C18S26544-1010S	Slip on nut	10	16.0	5/8"	10	7/8-14	66.0	16.0	24.0	27.0
1258442	C18S26544-1212S	Slip on nut	12	19.0	3/4"	12	1 1/16-12	67.0	21.0	27.0	32.0
1258450	C18S26544-1616S	Slip on nut	16	25.0	1"	16	1 5/16-12	80.0	24.0	36.0	41.0

// C18S26594S **NEW**

90° JIC Female 37° Seat

Short Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1258489	C18S26594-0404S	Slip on nut	4	6.0	1/4"	4	7/16-20	31.0	32.0	14.0	14.0
1258482	C18S26594-0606S	Slip on nut	6	10.0	3/8"	6	9/16-18	43.0	25.0	17.0	19.0
1258466	C18S26594-0808S	Slip on nut	8	13.0	1/2"	8	3/4-16	48.0	29.0	19.0	22.0
1258459	C18S26594-1010S	Slip on nut	10	16.0	5/8"	10	7/8-14	43.0	37.0	24.0	27.0
1257661	C18S26594-1212S	Slip on nut	12	19.0	3/4"	12	1 1/16-12	64.0	48.0	27.0	32.0
1258280	C18S26594-1616S	Slip on nut	16	25.0	1"	16	1 5/16-12	87.0	56.0	36.0	41.0

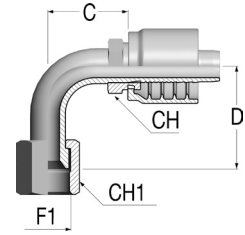
Material subjected to minimum order quantity.

// C18S26594M **NEW**

90° JIC Female 37° Seat

Medium Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1258487	C18S26594-0404M	Slip on nut	4	6.0	1/4"	4	7/16-20	31.0	32.0	14.0	14.0
1258479	C18S26594-0606M	Slip on nut	6	10.0	3/8"	6	9/16-18	43.0	38.0	17.0	19.0
1258464	C18S26594-0808M	Slip on nut	8	13.0	1/2"	8	3/4-16	50.0	41.0	19.0	22.0
1258457	C18S26594-1010M	Slip on nut	10	16.0	5/8"	10	7/8-14	50.0	47.0	24.0	27.0
1257660	C18S26594-1212M	Slip on nut	12	19.0	3/4"	12	1 1/16-12	54.0	58.0	27.0	32.0
1258444	C18S26594-1616M	Slip on nut	16	25.0	1"	16	1 5/16-12	72.0	71.0	36.0	41.0

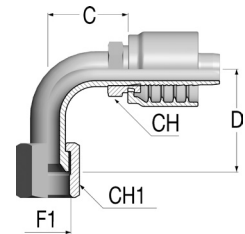
Material subjected to minimum order quantity.

// C18S26594L **NEW**

90° JIC Female 37° Seat

Long Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1258485	C18S26594-0404L	Slip on nut	4	6.0	1/4"	4	7/16-20	31.0	46.0	14.0	14.0
1258477	C18S26594-0606L	Slip on nut	6	10.0	3/8"	6	9/16-18	43.0	54.0	17.0	19.0
1258462	C18S26594-0808L	Slip on nut	8	13.0	1/2"	8	3/4-16	50.0	64.0	19.0	22.0
1258455	C18S26594-1010L	Slip on nut	10	16.0	5/8"	10	7/8-14	50.0	70.0	24.0	27.0
1258448	C18S26594-1212L	Slip on nut	12	19.0	3/4"	12	1 1/16-12	54.0	96.0	27.0	32.0
1258446	C18S26594-1616L	Slip on nut	16	25.0	1"	16	1 5/16-12	72.0	114.0	36.0	41.0

Material subjected to minimum order quantity.

REV.2.2

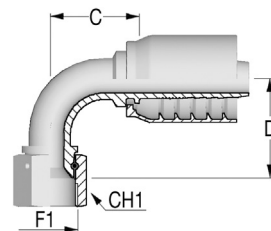
// C18S22591 **NEW**

90° JIC Female 37° Seat

Medium Drop

DKJ 90M

Solid one piece



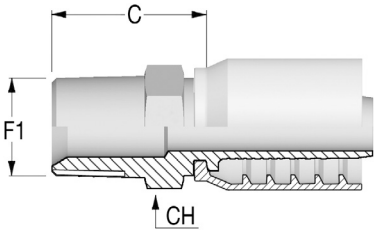
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1255924	C18S22591-04040	Crimped	4	6.0	1/4"	4	7/16-20	25.0	29.5	16.0
1255957	C18S22591-06060	Crimped	6	10.0	3/8"	6	9/16-18	32.0	35.0	19.0
1255970	C18S22591-08080	Crimped	8	13.0	1/2"	8	3/4-16	36.0	40.0	25.0
1256023	C18S22591-10100	Crimped	10	16.0	5/8"	10	7/8-14	46.0	52.0	27.0
1256044	C18S22591-12120	Crimped	12	19.0	3/4"	12	1 1/16-12	54.0	54.0	32.0
1255866	C18S22592-16160	Thrust wire nut	16	25.0	1"	16	1 5/16-12	76.0	67.0	38.0
1257205	C18S22592-20200	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	84.0	78.0	50.0
1257208	C18S22592-24240	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	104.0	92.0	55.0

Image: insert with Thrust Wire Nut.

// NPTF

// C18S12810 **NEW**

NPTF Male 60° Seat
AGN

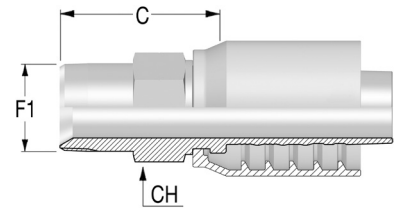


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1257176	C18S12810-12120	12	19.0	3/4"	12	3/4-14	35.5	27.0
1255827	C18S12810-16160	16	25.0	1"	16	1-11 1/2	44.4	36.0
1257177	C18S12810-20200	20	32.0	1 1/4"	20	1 1/4-11 1/2	50.9	46.0
1257184	C18S12810-24240	24	38.0	1 1/2"	24	1 1/2-11 1/2	54.5	50.0

// API

// C18S1281Z **NEW**

API Male - Extra Long Hexagon

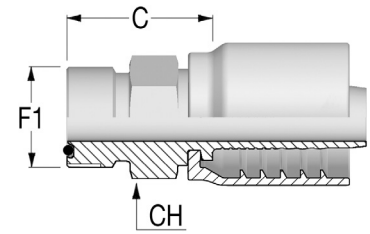


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1257199	C18S1281Z-32320	32	51.0	2"	32	2-11 1/2	105.7	65.0

// ORFS

// C18S12410 **NEW**

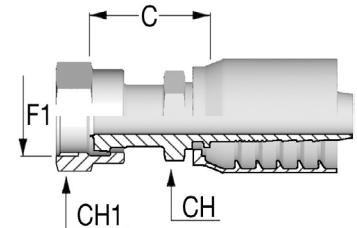
ORFS Male



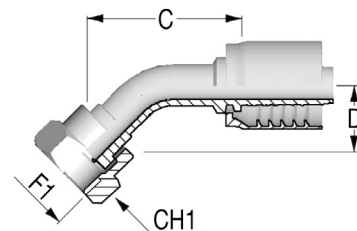
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1255931	C18S12410-04040	4	6.0	1/4"	4	9/16-18	22.3	17.0
1255953	C18S12410-06060	6	10.0	3/8"	6	11/16-16	25.0	19.0
1255974	C18S12410-08080	8	13.0	1/2"	8	13/16-16	27.1	22.0
1256028	C18S12410-10100	10	16.0	5/8"	10	1-14	31.3	27.0
1256048	C18S12410-12120	12	19.0	3/4"	12	1 3/16-12	36.1	32.0
1257073	C18S12410-16160	16	25.0	1"	16	1 7/16-12	40.6	38.0

// C18S22411 **NEW**

ORFS Female with Stem Hexagon

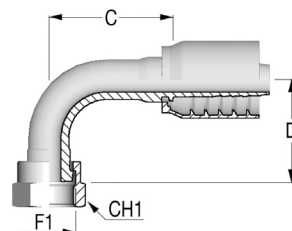


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1255929	C18S22411-04040	Crimped	4	6.0	1/4"	4	9/16-18	27.5	14.0	17.0
1255951	C18S22411-06060	Crimped	6	10.0	3/8"	6	11/16-16	31.0	17.0	22.0
1255981	C18S22411-08080	Crimped	8	13.0	1/2"	8	13/16-16	36.1	22.0	24.0
1256030	C18S22411-10100	Crimped	10	16.0	5/8"	10	1-14	40.3	24.0	30.0
1256052	C18S22411-12120	Crimped	12	19.0	3/4"	12	1 3/16-12	44.1	30.0	36.0
1257107	C18S22411-12160	Crimped	12	19.0	3/4"	16	1 7/16-12	50.1	36.0	41.0
1255811	C18S22411-16160	Crimped	16	25.0	1"	16	1 7/16-12	53.1	36.0	41.0
1255813	C18S22411-16200	Crimped	16	25.0	1"	20	1 11/16-12	54.1	41.0	50.0
1255910	C18S22411-20200	Crimped	20	32.0	1 1/4"	20	1 11/16-12	55.9	46.0	50.0
1257108	C18S22411-24240	Crimped	24	38.0	1 1/2"	24	2-12	61.5	50.0	60.0

// C18S22441 NEW**45° ORFS Female****DK ORFS 45****Solid one piece**

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1255936	C18S22443-04040	Slip on nut	4	6.0	1/4"	4	9/16-18	38.0	15.0	17.0
1255962	C18S22443-06060	Slip on nut	6	10.0	3/8"	6	11/16-16	48.0	17.0	22.0
1255985	C18S22441-08080	Crimped	8	13.0	1/2"	8	13/16-16	54.0	22.0	24.0
1256035	C18S22443-10100	Slip on nut	10	16.0	5/8"	10	1-14	58.0	17.0	30.0
1256058	C18S22443-12120	Slip on nut	12	19.0	3/4"	12	1 3/16-12	67.0	21.0	36.0
1257149	C18S22441-12120	Crimped	12	19.0	3/4"	12	1 3/16-12	82.0	26.0	36.0
1255836	C18S22441-16160	Crimped	16	25.0	1"	16	1 7/16-12	95.0	28.0	41.0
1255914	C18S22441-20200	Crimped	20	32.0	1 1/4"	20	1 11/16-12	108.0	36.5	50.0

Image: insert with Crimped Nut.

// C18S22491 NEW**90° ORFS Female****Medium Drop****DK ORFS 90M****Solid one piece**

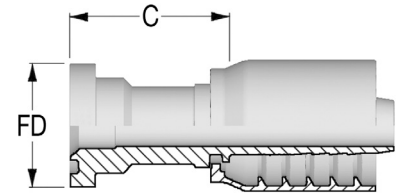
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1255934	C18S22493-04040	Slip on nut	4	6.0	1/4"	4	9/16-18	30.0	32.0	17.0
1255959	C18S22493-06060	Slip on nut	6	10.0	3/8"	6	11/16-16	43.0	38.0	22.0
1255983	C18S22491-08080	Crimped	8	13.0	1/2"	8	13/16-16	35.0	42.0	24.0
1256033	C18S22493-10100	Slip on nut	10	16.0	5/8"	10	1-14	56.0	44.0	30.0
1256054	C18S22493-12120	Slip on nut	12	19.0	3/4"	12	1 3/16-12	63.0	58.0	36.0
1257120	C18S22491-12120	Crimped	12	19.0	3/4"	12	1 3/16-12	68.0	58.0	36.0
1258676	C18S22493-12160	Slip on nut	12	19.0	3/4"	16	1 7/16-12	70.0	58.0	41.0
1255834	C18S22491-16160	Crimped	16	25.0	1"	16	1 7/16-12	80.0	66.0	41.0
1255912	C18S22491-20200	Crimped	20	32.0	1 1/4"	20	1 11/16-12	101.0	81.0	50.0

Image: insert with Crimped Nut.

// SAE FLANGES

// C18S43310 **NEW**

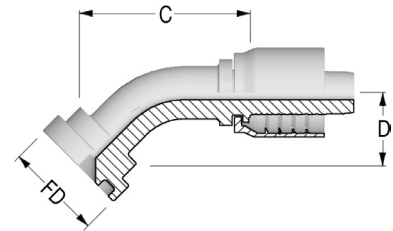
Flange SAE 3000 psi J518 Code 61
SFL



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	WP (psi)
1257121	C18S43310-12120	12	19.0	3/4"	12	3/4	38.1	39.5	5000
1257122	C18S43310-12160	12	19.0	3/4"	16	1	44.5	52.0	5000
1255816	C18S43310-16160	16	25.0	1"	16	1	44.5	54.1	5000
1255818	C18S43310-16200	16	25.0	1"	20	1 1/4	50.8	56.6	4000
1255885	C18S43310-20200	20	32.0	1 1/4"	20	1 1/4	50.8	57.5	3000
1257128	C18S43310-24240	24	38.0	1 1/2"	24	1 1/2	60.3	62.5	3000
1258677	C18S43310-32320	32	51.0	2"	32	2	71.4	79.2	3000

// C18S43340 **NEW**

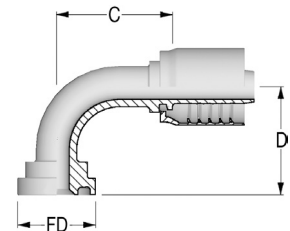
45° Flange SAE 3000 psi J518 Code 61
SFL 45
Solid one piece



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1257141	C18S43340-12120	12	19.0	3/4"	12	3/4	38.1	71.0	28.0	5000
1255850	C18S43340-16160	16	25.0	1"	16	1	44.5	88.0	35.0	5000
1255891	C18S43340-20200	20	32.0	1 1/4"	20	1 1/4	50.8	103.0	38.5	3000
1257140	C18S43340-20240	20	32.0	1 1/4"	24	1 1/2	60.3	99.0	40.0	3000
1257139	C18S43340-24240	24	38.0	1 1/2"	24	1 1/2	60.3	111.0	43.0	3000

// C18S43390 **NEW**

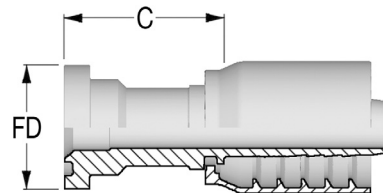
90° Flange SAE 3000 psi J518 Code 61
SFL 90
Solid one piece



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1257135	C18S43390-12120	12	19.0	3/4"	12	3/4	38.1	58.0	65.0	5000
1257138	C18S43390-12160	12	19.0	3/4"	16	1	44.5	68.0	59.0	5000
1255848	C18S43390-16160	16	25.0	1"	16	1	44.5	79.0	64.0	5000
1257136	C18S43390-16200	16	25.0	1"	20	1 1/4	50.8	75.0	69.0	4000
1255889	C18S43390-20200	20	32.0	1 1/4"	20	1 1/4	50.8	91.0	81.0	3000
1257137	C18S43390-24240	24	38.0	1 1/2"	24	1 1/2	60.3	103.0	93.0	3000

// C18S43610 **NEW**

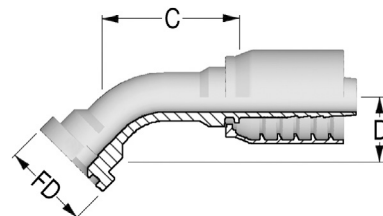
Flange SAE 6000 psi J518 Code 62
SFS



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	WP (psi)
1257144	C18S43610-12120	12	19.0	3/4"	12	3/4	41.3	53.1	6000
1257147	C18S43610-12160	12	19.0	3/4"	16	1	47.6	56.5	6000
1255823	C18S43610-16120	16	25.0	1"	12	3/4	41.3	59.1	6000
1255820	C18S43610-16160	16	25.0	1"	16	1	47.6	59.1	6000
1255822	C18S43610-16200	16	25.0	1"	20	1 1/4	54.0	66.1	6000
1257999	C18S43610-16240	16	25.0	1"	24	1 1/2	63.5	71.1	6000
1255882	C18S43610-20160	20	32.0	1 1/4"	16	1	47.6	60.0	6000
1254091	C18S43610-20200	20	32.0	1 1/4"	20	1 1/4	54.0	62.2	6000
1257148	C18S43610-20240	20	32.0	1 1/4"	24	1 1/2	63.5	74.0	6000
1257145	C18S43610-24200	24	38.0	1 1/2"	20	1 1/4	54.0	70.0	6000
1254092	C18S43610-24240	24	38.0	1 1/2"	24	1 1/2	63.5	68.5	6000
1257146	C18S43610-24320	24	38.0	1 1/2"	32	2	79.4	88.0	6000
1254093	C18S43610-32320	32	51.0	2"	32	2	79.4	103.0	6000

// C18S43640 **NEW**

45° Flange SAE 6000 psi J518 Code 62
SFS 45
Solid one piece



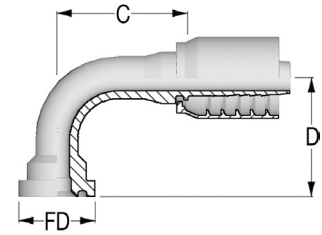
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1257131	C18S43640-12120	12	19.0	3/4"	12	3/4	41.3	75.0	30.0	6000
1257130	C18S43640-12160	12	19.0	3/4"	16	1	47.6	81.0	33.0	6000
1257132	C18S43640-16120	16	25.0	1"	12	3/4	41.3	77.0	29.5	6000
1255844	C18S43640-16160	16	25.0	1"	16	1	47.6	96.7	36.0	6000
1255846	C18S43640-16200	16	25.0	1"	20	1 1/4	54.0	96.0	44.0	6000
1257133	C18S43640-20160	20	32.0	1 1/4"	16	1	47.6	97.0	34.0	6000
1255895	C18S43640-20200	20	32.0	1 1/4"	20	1 1/4	54.0	102.0	41.0	6000
1257134	C18S43640-20240	20	32.0	1 1/4"	24	1 1/2	63.5	111.7	48.0	6000
1257129	C18S43640-24240	24	38.0	1 1/2"	24	1 1/2	63.5	143.0	48.0	6000

// C18S43690 **NEW**

90° Flange SAE 6000 psi J518 Code 62

SFS 90

Solid one piece

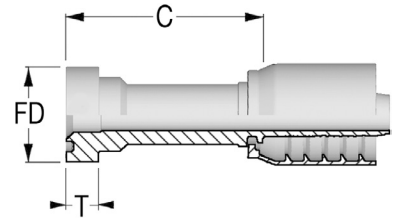


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1257109	C18S43690-12120	12	19.0	3/4"	12	3/4	41.3	65.0	64.0	6000
1257110	C18S43690-12160	12	19.0	3/4"	16	1	47.6	65.0	66.0	6000
1255842	C18S43690-1616N	16	25.0	1"	16	1	47.6	80.0	120.0	6000
1255840	C18S43690-16160	16	25.0	1"	16	1	47.6	75.0	74.0	6000
1257113	C18S43690-16200	16	25.0	1"	20	1 1/4	54.0	79.0	85.0	6000
1255906	C18S43690-20160	20	32.0	1 1/4"	16	1	47.6	86.0	72.0	6000
1257114	C18S43690-20200	20	32.0	1 1/4"	20	1 1/4	54.0	96.0	91.0	6000
1257115	C18S43690-20240	20	32.0	1 1/4"	24	1 1/2	63.5	99.0	103.5	6000
1257111	C18S43690-24240	24	38.0	1 1/2"	24	1 1/2	63.5	114.0	109.0	6000
1257112	C18S43690-32320	32	51.0	2"	32	2	79.4	168.0	134.0	6000

// SUPERCAT FLANGES

// C18S43910 **NEW**

Flange SUPERCAT

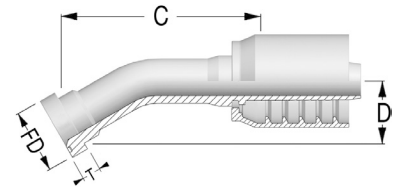


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)
1257116	C18S43910-12120	12	19.0	3/4"	12	3/4	41.3	14.3	85.5
1257118	C18S43910-12160	12	19.0	3/4"	16	1	47.6	14.3	87.0
1255829	C18S43910-16160	16	25.0	1"	16	1	47.6	14.3	95.1
1255831	C18S43910-16200	16	25.0	1"	20	1 1/4	54.0	14.3	95.1
1255887	C18S43910-20200	20	32.0	1 1/4"	20	1 1/4	54.0	14.3	91.0
1257119	C18S43910-20240	20	32.0	1 1/4"	24	1 1/2	63.5	14.3	87.0
1257117	C18S43910-24240	24	38.0	1 1/2"	24	1 1/2	63.5	14.3	88.0

// C18S43920 **NEW**

22° Flange SUPERCAT

Solid one piece

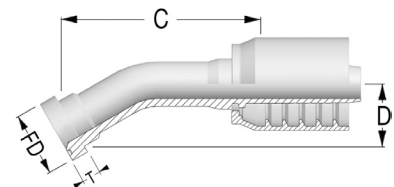


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)	D Drop (mm)
1257169	C18S43920-12120	12	19.0	3/4"	12	3/4	41.3	14.3	115.0	21.0
1257170	C18S43920-12160	12	19.0	3/4"	16	1	47.6	14.3	122.0	17.0
1255864	C18S43920-16160	16	25.0	1"	16	1	47.6	14.3	107.0	17.0
1255903	C18S43920-20200	20	32.0	1 1/4"	20	1 1/4	54.0	14.3	161.0	25.5
1257172	C18S43920-20240	20	32.0	1 1/4"	24	1 1/2	63.5	14.3	170.0	22.0

// C18S43930 **NEW**

30° Flange SUPERCAT

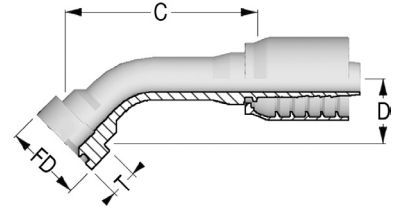
Solid one piece



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)	D Drop (mm)
1257181	C18S43930-12120	12	19.0	3/4"	12	3/4	41.3	14.3	113.0	24.0
1257546	C18S43930-12160	12	19.0	3/4"	16	1	47.6	14.3	118.0	26.5
1257180	C18S43930-16160	16	25.0	1"	16	1	47.6	14.3	138.0	27.0

// C18S43940 **NEW**

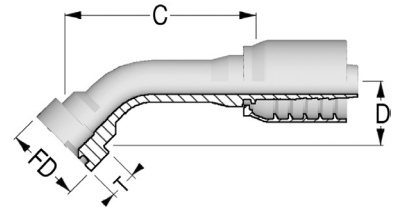
45° Flange SUPERCAT
Solid one piece



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)	D Drop (mm)
1257158	C18S43940-12120	12	19.0	3/4"	12	3/4	41.3	14.3	107.0	33.7
1258678	C18S43940-12160	12	19.0	3/4"	16	1	47.6	14.3	112.0	34.0
1255856	C18S43940-16160	16	25.0	1"	16	1	47.6	14.3	129.0	42.5
1255858	C18S43940-16200	16	25.0	1"	20	1 1/4	54.0	14.3	128.0	40.0
1257159	C18S43940-20200	20	32.0	1 1/4"	20	1 1/4	54.0	14.3	149.0	45.0

// C18S43960 **NEW**

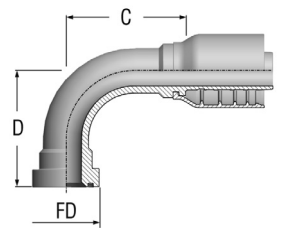
60° Flange SUPERCAT
Solid one piece



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)	D Drop (mm)
1258679	C18S43960-12120	12	19.0	3/4"	12	3/4	41.3	14.3	92.6	46.0
1258680	C18S43960-12160	12	19.0	3/4"	16	1	47.6	14.3	95.6	48.5
1255860	C18S43960-16160	16	25.0	1"	16	1	47.6	14.3	116.0	59.0
1255862	C18S43960-16200	16	25.0	1"	20	1 1/4	54.0	14.3	116.0	57.0

// C18S43990 **NEW**

90° Flange SUPERCAT
Solid one piece



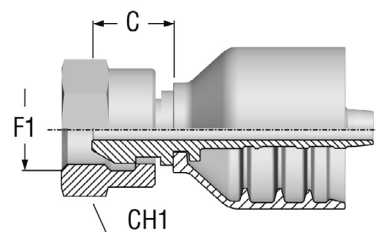
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)	D Drop (mm)
1257151	C18S43990-12120	12	19.0	3/4"	12	3/4	41.3	14.3	67.0	67.0
1257152	C18S43990-12160	12	19.0	3/4"	16	1	47.6	14.3	69.0	70.0
1255852	C18S43990-16160	16	25.0	1"	16	1	47.6	14.3	85.0	79.0
1255854	C18S43990-16200	16	25.0	1"	20	1 1/4	54.0	14.3	80.0	82.5
1255901	C18S43990-20200	20	32.0	1 1/4"	20	1 1/4	54.0	14.3	96.0	93.0
1257150	C18S43990-20240	20	32.0	1 1/4"	24	1 1/2	63.5	14.3	97.0	101.0
1257153	C18S43990-24240	24	38.0	1 1/2"	24	1 1/2	63.5	14.3	117.0	109.0

// BSP

// C18S20511 **NEW**

BSPP Female 60° Cone

DKR

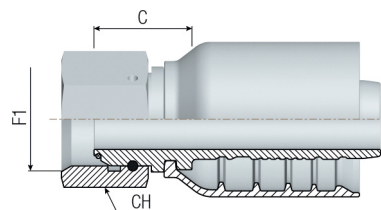


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1251418	C18S20511-04040	Crimped	4	6.0	1/4"	4	1/4-19	17.0	19.0
1251393	C18S20511-06060	Crimped	6	10.0	3/8"	6	3/8-19	18.5	22.0
1251340	C18S20511-08080	Crimped	8	13.0	1/2"	8	1/2-14	19.6	27.0
1251068	C18S20511-10100	Crimped	10	16.0	5/8"	10	5/8-14	18.9	27.0
1253824	C18S20511-12120	Crimped	12	19.0	3/4"	12	3/4-14	24.1	32.0
1253825	C18S20511-16160	Crimped	16	25.0	1"	16	1-11	28.1	38.0

// C18S20812 **NEW**

BSPP Female 60° Cone with O-Ring

DKOR

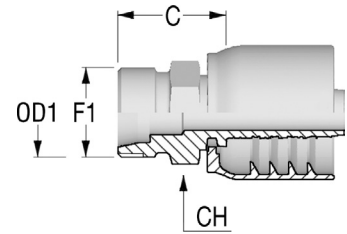


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1257173	C18S20812-12120	Thrust wire nut	12	19.0	3/4"	12	3/4-14	25.8	32.0
1257174	C18S20812-16160	Thrust wire nut	16	25.0	1"	16	1-11	31.6	38.0
1258452	C18S20812-24240	Thrust wire nut	24	38.0	1 1/2"	24	1 1/2-11	37.8	55.0

// DIN METRIC

// C18S11210 **NEW**

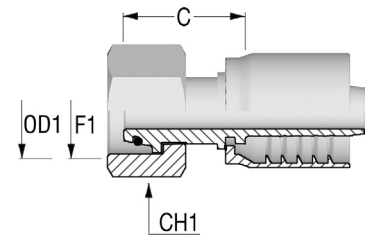
Metric Male 24° Seat
DIN 3853 - Heavy Series
CES



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH (mm)
1257161	C18S11210-12360	12	19.0	3/4"	M36X2	3/4"	30.0	36.0
1257162	C18S11210-16420	16	25.0	1"	M42X2		41.1	46.0
1257163	C18S11210-20520	20	32.0	1 1/4"	M52X2		45.2	55.0

// C18S21613 **NEW**

Metric Female 24° Cone with O-Ring
ISO 8434-1 - Heavy Series
DKOS

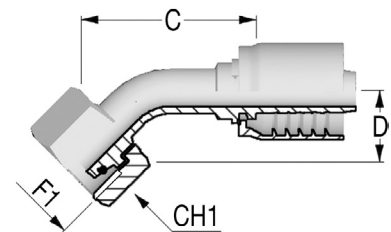


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH1 (mm)
1257156	C18S21612-12300	Thrust wire nut	12	19.0	3/4"	M30X2	20	37.4	36.0
1257154	C18S21613-12360	Slip on nut	12	19.0	3/4"	M36X2	25	41.7	46.0
1257155	C18S21613-16420	Slip on nut	16	25.0	1"	M42X2	30	45.8	50.0
1257157	C18S21612-16360	Thrust wire nut	16	25.0	1"	M36X2	1"	46.6	46.0
1255916	C18S21613-20520	Slip on nut	20	32.0	1 1/4"	M52X2	38	50.0	60.0

Image: insert with Slip on Nut.

// C18S21643 **NEW**

45° Metric Female 24° Cone with O-Ring
ISO 8434-1 - Heavy Series
DKOS 45
Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1257142	C18S21643-12360	Slip on nut	12	19.0	3/4"	M36X2	25	71.0	33.0	46.0
1257143	C18S21643-16420	Slip on nut	16	25.0	1"	M42X2	30	110.0	35.5	50.0
1255918	C18S21643-20520	Slip on nut	20	32.0	1 1/4"	M52X2	38	111.0	45.0	60.0

REV.2.2

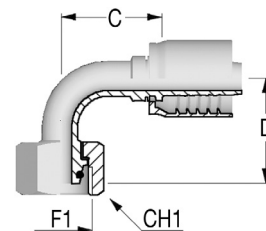
// C18S21693 **NEW**

90° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Heavy Series

DKOS 90

Solid one piece



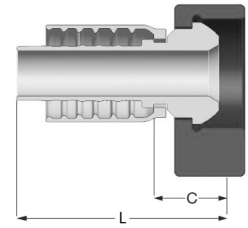
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1257164	C18S21693-12360	Slip on nut	12	19,0	3/4"	M36X2	25	51,0	59,5	46,0
1257165	C18S21693-16420	Slip on nut	16	25,0	1"	M42X2	30	85,0	70,0	50,0
1257168	C18S21692-16360	Thrust wire nut	16	25,0	1"	M36X2	1"	76,0	82,0	46,0

Image: insert with Slip on Nut.

// HAMMER UNION

// C18S13F13 **NEW**

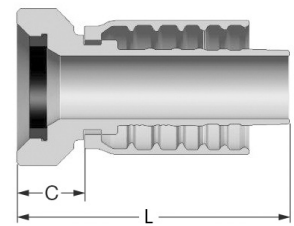
Male Hammer Union Fig. 1502 Integral Fitting with Lug Nut



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	C (mm)	L (mm)
1257190	C18S13F13-32320	32	51.0	2"	65.2	153.2

// C18S23F10 **NEW**

Female Hammer Union Fig. 1502 Integral Fitting with Rubber Ring



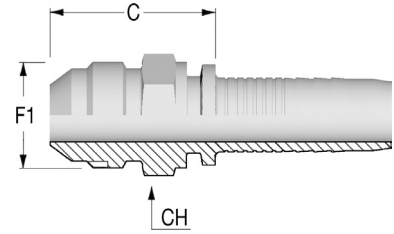
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	C (mm)	L (mm)
1257189	C18S23F10-32320	32	51.0	2"	61.7	149.7



// JIC 37° INSERTS

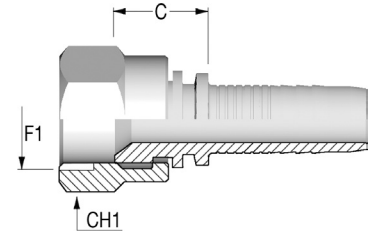
// H1212510

JIC Male 37° Cone
AGJ



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1200457	H1212510-030400	3	5.0	3/16"	4	7/16-20	23.8	12.0
1200500	H1212510-040400	4	6.0	1/4"	4	7/16-20	25.3	12.0
1200499	H1212510-040500	4	6.0	1/4"	5	1/2-20	25.3	14.0
1200501	H1212510-040600	4	6.0	1/4"	6	9/16-18	26.3	17.0
1200534	H1212510-050500	5	8.0	5/16"	5	1/2-20	25.3	14.0
1200535	H1212510-050600	5	8.0	5/16"	6	9/16-18	26.3	17.0
1201087	H1212510-050800	5	8.0	5/16"	8	3/4-16	29.8	19.0
1200332	H1212510-060600	6	10.0	3/8"	6	9/16-18	26.3	17.0
1200330	H1212510-060800	6	10.0	3/8"	8	3/4-16	29.8	19.0
1200331	H1212510-061000	6	10.0	3/8"	10	7/8-14	33.8	24.0
1200375	H1212510-080800	8	13.0	1/2"	8	3/4-16	30.6	19.0
1200376	H1212510-081000	8	13.0	1/2"	10	7/8-14	34.6	24.0
1200374	H1212510-081200	8	13.0	1/2"	12	1 1/16-12	37.1	27.0
1200413	H1212510-101000	10	16.0	5/8"	10	7/8-14	34.6	24.0
1200411	H1212510-101200	10	16.0	5/8"	12	1 1/16-12	37.1	27.0
1200441	H1212510-121200	12	19.0	3/4"	12	1 1/16-12	37.6	27.0
1200442	H1212510-121400	12	19.0	3/4"	14	1 3/16-12	40.1	32.0
1200443	H1212510-121600	12	19.0	3/4"	16	1 5/16-12	42.6	36.0
1222989	H1212510-161200	16	25.0	1"	12	1 1/16-12	40.4	32.0
1201379	H1212510-161600	16	25.0	1"	16	1 5/16-12	43.4	36.0
1201380	H1212510-162000	16	25.0	1"	20	1 5/8-12	46.9	46.0
1201381	H1212510-202000	20	32.0	1 1/4"	20	1 5/8-12	48.5	46.0
1201785	H1212510-202400	20	32.0	1 1/4"	24	1 7/8-12	52.5	50.0
1201382	H1212510-242400	24	38.0	1 1/2"	24	1 7/8-12	52.5	50.0
1201383	H1212510-323200	32	51.0	2"	32	2 1/2-12	62.0	65.0

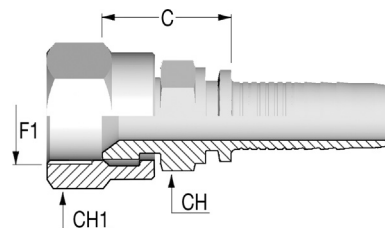
// H1222511

JIC Female 37° Seat
DKJ

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1200600	H1222511-030400	Crimped	3	5.0	3/16"	4	7/16-20	14.3	16.0
1200625	H1222511-040400	Crimped	4	6.0	1/4"	4	7/16-20	14.6	16.0
1200623	H1222511-040500	Crimped	4	6.0	1/4"	5	1/2-20	15.3	17.0
1200626	H1222511-040600	Crimped	4	6.0	1/4"	6	9/16-18	15.3	19.0
1200655	H1222511-050500	Crimped	5	8.0	5/16"	5	1/2-20	15.3	17.0
1200656	H1222511-050600	Crimped	5	8.0	5/16"	6	9/16-18	15.3	19.0
1200691	H1222511-060600	Crimped	6	10.0	3/8"	6	9/16-18	15.3	19.0
1200687	H1222511-060800	Crimped	6	10.0	3/8"	8	3/4-16	17.8	25.0
1200690	H1222511-061000	Crimped	6	10.0	3/8"	10	7/8-14	20.3	27.0
1200723	H1222511-080800	Crimped	8	13.0	1/2"	8	3/4-16	18.6	25.0
1200725	H1222511-081000	Crimped	8	13.0	1/2"	10	7/8-14	19.6	27.0
1200722	H1222511-081200	Crimped	8	13.0	1/2"	12	1 1/16-12	22.1	32.0
1200751	H1222511-101000	Crimped	10	16.0	5/8"	10	7/8-14	19.6	27.0
1200749	H1222511-101200	Crimped	10	16.0	5/8"	12	1 1/16-12	20.1	32.0
1201841	H1222511-121000	Crimped	12	19.0	3/4"	10	7/8-14	20.1	27.0
1200774	H1222511-121200	Crimped	12	19.0	3/4"	12	1 1/16-12	20.6	32.0
1200775	H1222511-121400	Crimped	12	19.0	3/4"	14	1 3/16-12	19.9	36.0
1200776	H1222511-121600	Crimped	12	19.0	3/4"	16	1 5/16-12	22.1	38.0
1201399	H1222511-161200	Crimped	16	25.0	1"	12	1 1/16-12	22.4	32.0
1201400	H1222511-161600	Crimped	16	25.0	1"	16	1 5/16-12	23.9	38.0
1201401	H1222512-162000	Thrust wire nut	16	25.0	1"	20	1 5/8-12	26.5	50.0
1202820	H1222511-201600	Crimped	20	32.0	1 1/4"	16	1 5/16-12	26.5	38.0
1201402	H1222512-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	28.1	50.0
1201403	H1222512-202400	Thrust wire nut	20	32.0	1 1/4"	24	1 7/8-12	30.4	55.0
1201097	H1222512-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	29.4	55.0

Image: insert with Crimped Nut.

// H1226511

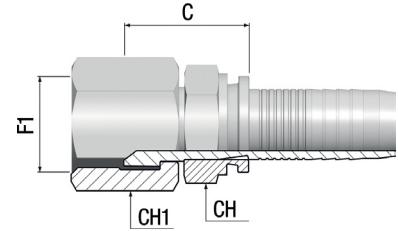
JIC Female 37° Seat with Stem Hexagon
DKJ

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1200599	H1226511-030400	Crimped	3	5.0	3/16"	4	7/16-20	18.1	12.0	16.0
1200621	H1226511-040400	Crimped	4	6.0	1/4"	4	7/16-20	18.3	14.0	16.0
1200622	H1226511-040600	Crimped	4	6.0	1/4"	6	9/16-18	20.3	14.0	19.0
1202406	H1226511-040500	Crimped	4	6.0	1/4"	5	1/2-20	20.3	14.0	17.0
1201264	H1226511-050600	Crimped	5	8.0	5/16"	6	9/16-18	20.3	14.0	19.0
1201497	H1226511-050500	Crimped	5	8.0	5/16"	5	1/2-20	20.3	14.0	17.0
1203246	H1226511-060400	Crimped	6	10.0	3/8"	4	7/16-20	20.6	17.0	16.0
1200686	H1226511-060600	Crimped	6	10.0	3/8"	6	9/16-18	21.3	17.0	19.0
1223146	H1226511-060500	Crimped	6	10.0	3/8"	5	1/2-20	21.3	16.0	17.0
1203090	H1226511-080600	Crimped	8	13.0	1/2"	6	9/16-18	23.1	19.0	19.0
1200685	H1226511-060800	Crimped	6	10.0	3/8"	8	3/4-16	24.8	19.0	25.0
1200720	H1226511-080800	Crimped	8	13.0	1/2"	8	3/4-16	25.6	19.0	25.0
1201340	H1226511-061000	Crimped	6	10.0	3/8"	10	7/8-14	25.8	22.0	27.0
1203329	H1226511-100800	Crimped	10	16.0	5/8"	8	3/4-16	26.6	24.0	25.0
1200721	H1226511-081000	Crimped	8	13.0	1/2"	10	7/8-14	26.6	22.0	27.0
1201728	H1226511-101000	Crimped	10	16.0	5/8"	10	7/8-14	27.6	24.0	27.0
1201464	H1226511-101200	Crimped	10	16.0	5/8"	12	1 1/16-12	28.1	25.0	32.0
1202895	H1226511-121000	Crimped	12	19.0	3/4"	10	7/8-14	28.1	27.0	27.0
1210833	H1226511-081200	Crimped	8	13.0	1/2"	12	1 1/16-12	28.1	25.0	32.0
1201333	H1226511-121200	Crimped	12	19.0	3/4"	12	1 1/16-12	28.6	27.0	32.0
1214219	H1226511-121400	Crimped	12	19.0	3/4"	14	1 3/16-12	29.9	32.0	36.0
1203088	H1226511-161200	Crimped	16	25.0	1"	12	1 1/16-12	31.4	32.0	32.0
1203089	H1226511-121600	Crimped	12	19.0	3/4"	16	1 5/16-12	32.1	32.0	38.0
1203243	H1226511-141600	Crimped	14	22.0	7/8"	16	1 5/16-12	32.1	32.0	38.0
1202408	H1226511-161600	Crimped	16	25.0	1"	16	1 5/16-12	32.9	32.0	38.0

Image: insert with Crimped Nut.

// H1226514 **NEW**

**JIC Female 37° Seat with double Hexagon
DKJ and solid nut**

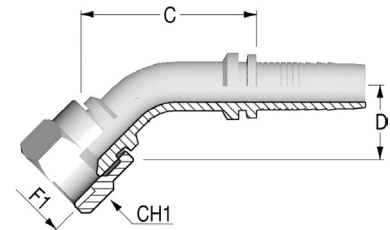


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1244537	H1226514-040400	Slip on nut	4	6.0	1/4"	4	7/16-20	19.0	14.0	14.0
1245538	H1226514-040500	Slip on nut	4	6.0	1/4"	5	1/2-20	18.9	14.0	17.0
1248014	H122651K-040600	Slip on nut	4	6.0	1/4"	6	9/16-18	22.0	14.0	19.0
1235613	H1226514-050500	Slip on nut	5	8.0	5/16"	5	1/2-20	20.6	14.0	17.0
1245542	H1226514-050600	Slip on nut	5	8.0	5/16"	6	9/16-18	22.1	14.0	19.0
1235614	H1226514-060600	Slip on nut	6	10.0	3/8"	6	9/16-18	22.1	17.0	19.0
1248122	H122651K-060800	Slip on nut	6	10.0	3/8"	8	3/4-16	24.0	17.0	22.0
1238237	H1226514-080800	Slip on nut	8	13.0	1/2"	8	3/4-16	25.7	19.0	22.0
1248016	H122651K-081000	Slip on nut	8	13.0	1/2"	10	7/8-14	29.0	22.0	27.0
1235615	H1226514-101000	Slip on nut	10	16.0	5/8"	10	7/8-14	29.2	24.0	27.0
1248017	H122651K-101200	Slip on nut	10	16.0	5/8"	12	1 1/16-12	28.6	24.0	32.0
1235616	H1226514-121200	Slip on nut	12	19.0	3/4"	12	1 1/16-12	29.7	27.0	32.0
1248018	H122651K-121600	Slip on nut	12	19.0	3/4"	16	1 5/16-12	36.1	32.0	41.0
1235617	H1226514-161600	Slip on nut	16	25.0	1"	16	1 5/16-12	33.9	32.0	41.0

Product Codes roots ending with K: insert with double hexagon knurled (ex. H122651K).

// H1222541-S

**45° JIC Female 37° Seat
Short Drop
DKJ 45M
Solid one piece**



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202821	H1222541-03040S	Crimped	3	5.0	3/16"	4	7/16-20	37.1	10.0	16.0
1202822	H1222541-04040S	Crimped	4	6.0	1/4"	4	7/16-20	36.6	10.0	16.0
1202823	H1222541-04050S	Crimped	4	6.0	1/4"	5	1/2-20	37.2	12.0	17.0
1202824	H1222541-04060S	Crimped	4	6.0	1/4"	6	9/16-18	39.4	11.0	19.0
1202825	H1222541-05050S	Crimped	5	8.0	5/16"	5	1/2-20	39.8	12.0	17.0
1202826	H1222541-05060S	Crimped	5	8.0	5/16"	6	9/16-18	42.8	12.0	19.0
1202827	H1222541-06060S	Crimped	6	10.0	3/8"	6	9/16-18	46.3	11.0	19.0
1202791	H1222541-06080S	Crimped	6	10.0	3/8"	8	3/4-16	47.2	15.0	25.0
1202828	H1222541-08080S	Crimped	8	13.0	1/2"	8	3/4-16	51.6	15.0	25.0
1202829	H1222541-08100S	Crimped	8	13.0	1/2"	10	7/8-14	50.7	16.0	27.0
1202830	H1222541-08120S	Crimped	8	13.0	1/2"	12	1 1/16-12	57.0	21.0	32.0
1202832	H1222541-10100S	Crimped	10	16.0	5/8"	10	7/8-14	62.2	19.0	27.0
1202831	H1222541-10120S	Crimped	10	16.0	5/8"	12	1 1/16-12	68.6	21.0	32.0
1202833	H1222541-12120S	Crimped	12	19.0	3/4"	12	1 1/16-12	67.5	21.0	32.0
1202834	H1222541-12160S	Crimped	12	19.0	3/4"	16	1 5/16-12	71.4	26.0	38.0
1202835	H1222541-16160S	Crimped	16	25.0	1"	16	1 5/16-12	79.4	24.0	38.0
1202836	H1222542-16200S	Thrust wire nut	16	25.0	1"	20	1 5/8-12	83.8	37.0	50.0
1202837	H1222542-20200M	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	97.1	37.0	50.0
1202839	H1222542-24240M	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	112.7	43.0	55.0
1202840	H1222542-32320M	Thrust wire nut	32	51.0	2"	32	2 1/2-12	159.9	67.0	70.0

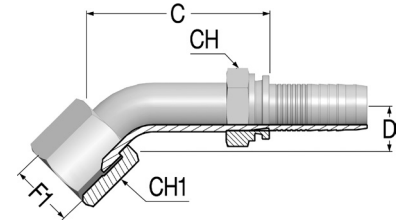
Image: insert with Crimped Nut.

// H1226544-S **NEW**

45° JIC Female 37° Seat

Short Drop

Solid Nut and double Hexagon crimped



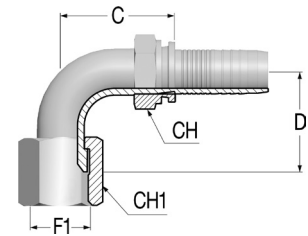
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1241580	H1226544-04040S	Slip on nut	4	6.0	1/4"	4	7/16-20	37.0	10.0	14.0	14.0
1255320	H1226544-04050S	Slip on nut	4	6.0	1/4"	5	1/2-20	37.0	10.0	14.0	17.0
1243629	H1226544-04060S	Slip on nut	4	6.0	1/4"	6	9/16-18	39.4	11.0	14.0	19.0
1241581	H1226544-05050S	Slip on nut	5	8.0	5/16"	5	1/2-20	40.0	11.0	14.0	17.0
1241582	H1226544-06060S	Slip on nut	6	10.0	3/8"	6	9/16-18	46.0	11.0	17.0	19.0
1244831	H1226544-06080S	Slip on nut	6	10.0	3/8"	8	3/4-16	47.0	22.0	17.0	22.0
1241583	H1226544-08080S	Slip on nut	8	13.0	1/2"	8	3/4-16	52.0	15.0	19.0	22.0
1245511	H1226544-08100S	Slip on nut	8	13.0	1/2"	10	7/8-14	51.0	16.0	19.0	27.0
1241585	H1226544-10100S	Slip on nut	10	16.0	5/8"	10	7/8-14	63.4	16.0	24.0	27.0
1244829	H1226544-10120S	Slip on nut	10	16.0	5/8"	12	1 1/16-12	69.0	21.0	24.0	32.0
1241586	H1226544-12120S	Slip on nut	12	19.0	3/4"	12	1 1/16-12	67.0	21.0	27.0	32.0
1246147	H1226544-12160S	Slip on nut	12	19.0	3/4"	16	1 5/16-12	71.0	24.0	27.0	41.0
1241587	H1226544-16160S	Slip on nut	16	25.0	1"	16	1 5/16-12	80.0	24.0	32.0	41.0

// H1226594-S **NEW**

90° JIC Female 37° Seat

Short Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1243637	H1226594-04040S	Slip on nut	4	6.0	1/4"	4	7/16-20	27.0	21.0	14.0	14.0
1245516	H1226594-04050S	Slip on nut	4	6.0	1/4"	5	1/2-20	26.5	21.0	14.0	17.0
1243632	H1226594-04060S	Slip on nut	4	6.0	1/4"	6	9/16-18	30.7	23.0	14.0	19.0
1245523	H1226594-05060S	Slip on nut	5	8.0	5/16"	6	9/16-18	41.0	23.0	14.0	19.0
1243634	H1226594-06060S	Slip on nut	6	10.0	3/8"	6	9/16-18	40.3	24.5	17.0	19.0
1243641	H1226594-06080S	Slip on nut	6	10.0	3/8"	8	3/4-16	48.8	29.0	17.0	22.0
1243644	H1226594-08080S	Slip on nut	8	13.0	1/2"	8	3/4-16	46.0	29.0	19.0	22.0
1245562	H1226594-08100S	Slip on nut	8	13.0	1/2"	10	7/8-14	46.0	32.0	19.0	27.0
1244848	H1226594-10100S	Slip on nut	10	16.0	5/8"	10	7/8-14	42.3	37.0	24.0	27.0
1244849	H1226594-10120S	Slip on nut	10	16.0	5/8"	12	1 1/16-12	48.0	48.0	24.0	32.0
1243635	H1226594-12120S	Slip on nut	12	19.0	3/4"	12	1 1/16-12	62.4	48.0	27.0	32.0
1246115	H1222593-12160S	Slip on nut	12	19.0	3/4"	16	1 5/16-12	53.6	53.0		41.0
1245568	H1226594-16160S	Slip on nut	16	25.0	1"	16	1 5/16-12	74.0	56.0	32.0	41.0

Product Codes roots ending with 3: insert with turned ring (ex. H1222593).

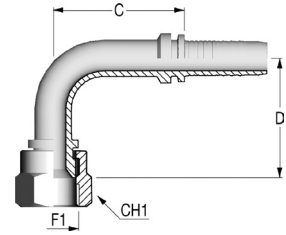
// H1222591-S

90° JIC Female 37° Seat

Short Drop

DKJ 90S

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202841	H1222591-03040S	Crimped	3	5.0	3/16"	4	7/16-20	26.7	21.0	16.0
1202772	H1222591-04040S	Crimped	4	6.0	1/4"	4	7/16-20	27.0	21.0	16.0
1203118	H1222591-04050S	Crimped	4	6.0	1/4"	5	1/2-20	26.5	23.5	17.0
1202788	H1222591-04060S	Crimped	4	6.0	1/4"	6	9/16-18	31.0	23.0	19.0
1203116	H1222591-05060S	Crimped	5	8.0	5/16"	6	9/16-18	42.7	23.0	19.0
1216771	H1222591-06050S	Crimped	6	10.0	3/8"	5	1/2-20	33.3	25.0	17.0
1203032	H1222591-06060S	Crimped	6	10.0	3/8"	6	9/16-18	42.3	25.0	19.0
1203033	H1222591-06080S	Crimped	6	10.0	3/8"	8	3/4-16	48.8	29.0	25.0
1203034	H1222591-08080S	Crimped	8	13.0	1/2"	8	3/4-16	46.4	29.0	25.0
1202815	H1222591-08100S	Crimped	8	13.0	1/2"	10	7/8-14	45.8	32.0	27.0
1202744	H1222591-08120S	Crimped	8	13.0	1/2"	12	1 1/16-12	37.3	46.0	32.0
1203035	H1222591-1010BS	Crimped	10	16.0	5/8"	10	7/8-14	36.5	32.0	27.0
1202745	H1222591-10120S	Crimped	10	16.0	5/8"	12	1 1/16-12	47.9	48.0	32.0
1202845	H1222591-12120S	Crimped	12	19.0	3/4"	12	1 1/16-12	58.2	46.0	32.0
1200780	H1222591-12140S	Crimped	12	19.0	3/4"	14	1 3/16-12	49.6	52.5	36.0
1202846	H1222591-12160S	Crimped	12	19.0	3/4"	16	1 5/16-12	53.6	53.0	38.0
1203036	H1222591-16160S	Crimped	16	25.0	1"	16	1 5/16-12	74.0	56.0	38.0

REV.2.2

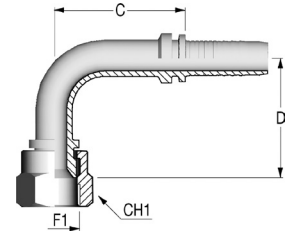
// H1222591-M

90° JIC Female 37° Seat

Medium Drop

DKJ 90M

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202792	H1222591-03040M	Crimped	3	5.0	3/16"	4	7/16-20	33.5	32.0	16.0
1202739	H1222591-04040M	Crimped	4	6.0	1/4"	4	7/16-20	34.2	32.0	16.0
1202740	H1222591-04050M	Crimped	4	6.0	1/4"	5	1/2-20	25.7	30.0	17.0
1202793	H1222591-04060M	Crimped	4	6.0	1/4"	6	9/16-18	28.5	38.0	19.0
1202794	H1222591-05050M	Crimped	5	8.0	5/16"	5	1/2-20	34.2	32.0	17.0
1202731	H1222591-05060M	Crimped	5	8.0	5/16"	6	9/16-18	33.2	35.0	19.0
1202742	H1222591-06060M	Crimped	6	10.0	3/8"	6	9/16-18	31.3	35.0	19.0
1202732	H1222591-06080M	Crimped	6	10.0	3/8"	8	3/4-16	39.5	41.0	25.0
1200693	H1222591-06100M	Crimped	6	10.0	3/8"	10	7/8-14	44.6	47.0	27.0
1202743	H1222591-08080M	Crimped	8	13.0	1/2"	8	3/4-16	37.2	40.0	25.0
1202741	H1222591-08100M	Crimped	8	13.0	1/2"	10	7/8-14	43.3	47.0	27.0
1252526	H1222593-08120M	Slip on nut	8	13.0	1/2"	12	1 1/16-12	42.8	58.0	32.0
1202844	H1222591-10100M	Crimped	10	16.0	5/8"	10	7/8-14	49.4	48.0	27.0
1216778	H1222591-10120M	Crimped	10	16.0	5/8"	12	1 1/16-12	47.9	58.0	32.0
1202746	H1222591-12120M	Crimped	12	19.0	3/4"	12	1 1/16-12	52.4	54.0	32.0
1216780	H1222591-12160M	Crimped	12	19.0	3/4"	16	1 5/16-12	52.6	72.0	38.0
1202847	H1222591-16160M	Crimped	16	25.0	1"	16	1 5/16-12	72.6	71.5	38.0
1202848	H1222592-16200M	Thrust wire nut	16	25.0	1"	20	1 5/8-12	72.6	78.0	50.0
1202849	H1222592-20200M	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	82.4	78.0	50.0
1202850	H1222592-20240M	Thrust wire nut	20	32.0	1 1/4"	24	1 7/8-12	87.3	82.0	55.0
1202851	H1222592-24240M	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	95.3	92.0	55.0
1202852	H1222592-32320M	Thrust wire nut	32	51.0	2"	32	2 1/2-12	129.5	140.0	70.0

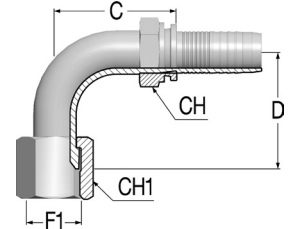
Image: insert with Crimped Nut.

// H1226594-M **NEW**

90° JIC Female 37° Seat

Medium Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1241588	H1226594-04040M	Slip on nut	4	6.0	1/4"	4	7/16-20	34.0	32.0	14.0	14.0
1245515	H1226594-04050M	Slip on nut	4	6.0	1/4"	5	1/2-20	26.0	32.0	14.0	17.0
1235584	H1222593-04060M	Slip on nut	4	6.0	1/4"	6	9/16-18	31.0	38.0		19.0
1241589	H1226594-05050M	Slip on nut	5	8.0	5/16"	5	1/2-20	34.0	32.0	14.0	17.0
1245522	H1226594-05060M	Slip on nut	5	8.0	5/16"	6	9/16-18	33.0	35.0	14.0	19.0
1241590	H1226594-06060M	Slip on nut	6	10.0	3/8"	6	9/16-18	31.3	38.0	17.0	19.0
1245576	H1222593-06080M	Slip on nut	6	10.0	3/8"	8	3/4-16	41.0	39.5		22.0
1241591	H1226594-08080M	Slip on nut	8	13.0	1/2"	8	3/4-16	37.2	41.0	19.0	22.0
1245560	H1226594-08100M	Slip on nut	8	13.0	1/2"	10	7/8-14	43.3	47.0	19.0	27.0
1241592	H1226594-10100M	Slip on nut	10	16.0	5/8"	10	7/8-14	49.4	47.0	24.0	27.0
1245565	H1226594-10120M	Slip on nut	10	16.0	5/8"	12	1 1/16-12	48.0	58.0	24.0	32.0
1241593	H1226594-12120M	Slip on nut	12	19.0	3/4"	12	1 1/16-12	52.0	58.0	27.0	32.0
1246116	H1222593-12160M	Slip on nut	12	19.0	3/4"	16	1 5/16-12	52.6	71.0		41.0
1241594	H1226594-16160M	Slip on nut	16	25.0	1"	16	1 5/16-12	73.0	71.0	32.0	41.0

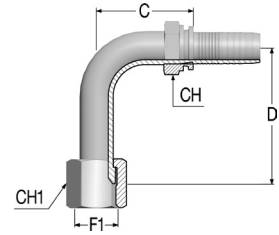
Product Codes roots ending with 3: insert with turned ring (ex. H1222593).

// H1226594-L **NEW**

90° JIC Female 37° Seat

Long Drop

Solid Nut and double Hexagon crimped



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)	CH1 (mm)
1244851	H1226594-04040L	Slip on nut	4	6.0	1/4"	4	7/16-20	31.0	46.0	14.0	14.0
1245514	H1226594-04050L	Slip on nut	4	6.0	1/4"	5	1/2-20	31.0	46.0	14.0	17.0
1244845	H1226594-06060L	Slip on nut	6	10.0	3/8"	6	9/16-18	43.3	54.0	17.0	17.0
1245766	H1222593-06080L	Slip on nut	6	10.0	3/8"	8	3/4-16	47.0	64.0		22.0
1245557	H1226594-08080L	Slip on nut	8	13.0	1/2"	8	3/4-16	49.9	64.0	19.0	22.0
1244846	H1226594-08100L	Slip on nut	8	13.0	1/2"	10	7/8-14	37.2	65.0	19.0	27.0
1244847	H1226594-10100L	Slip on nut	10	16.0	5/8"	10	7/8-14	50.0	70.0	24.0	27.0
1244850	H1226594-12120L	Slip on nut	12	19.0	3/4"	12	1 1/16-12	54.0	96.0	27.0	32.0
1245567	H1226594-16160L	Slip on nut	16	25.0	1"	16	1 5/16-12	79.0	114.0	32.0	41.0

Product Codes roots ending with 3: insert with turned ring (ex. H1222593).

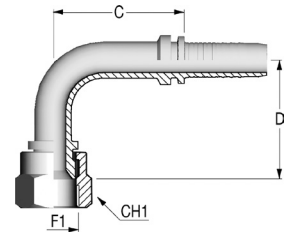
// H1222591-L

90° JIC Female 37° Seat

Long Drop

DKJ 90L

Solid one piece

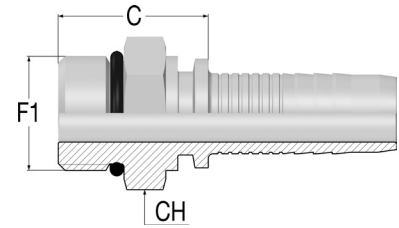


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1203131	H1222591-04040L	Crimped	4	6.0	1/4"	4	7/16-20	30.8	46.0	16.0
1214215	H1222591-04050L	Crimped	4	6.0	1/4"	5	1/2-20	31.3	45.0	17.0
1203115	H1222591-06060L	Crimped	6	10.0	3/8"	6	9/16-18	43.3	54.0	19.0
1202842	H1222591-06080L	Crimped	6	10.0	3/8"	8	3/4-16	47.0	64.0	25.0
1214216	H1222591-08080L	Crimped	8	13.0	1/2"	8	3/4-16	49.9	64.0	25.0
1202843	H1222591-08100L	Crimped	8	13.0	1/2"	10	7/8-14	37.3	65.0	27.0
1203114	H1222591-10100L	Crimped	10	16.0	5/8"	10	7/8-14	49.9	65.0	27.0
1203112	H1222591-12120L	Crimped	12	19.0	3/4"	12	1 1/16-12	54.1	95.0	32.0
1203111	H1222591-16160L	Crimped	16	25.0	1"	16	1 5/16-12	78.6	114.0	38.0

// SAE INSERTS

// H1213010

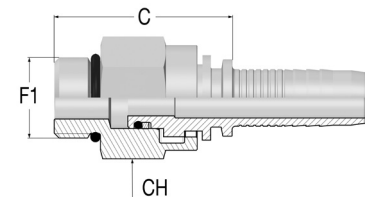
SAE Male Solid - O-Ring Boss



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1203147	H1213010-040400	4	6.0	1/4"	4	7/16-20	20.3	14.0
1201833	H1213010-040500	4	6.0	1/4"	5	1/2-20	21.3	16.0
1202519	H1213010-040600	4	6.0	1/4"	6	9/16-18	22.3	17.0
1201834	H1213010-060600	6	10.0	3/8"	6	9/16-18	23.3	19.0
1200337	H1213010-060800	6	10.0	3/8"	8	3/4-16	24.3	22.0
1200338	H1213010-061000	6	10.0	3/8"	10	7/8-14	26.8	27.0
1200382	H1213010-080800	8	13.0	1/2"	8	3/4-16	25.1	22.0
1200383	H1213010-081000	8	13.0	1/2"	10	7/8-14	27.6	27.0
1200381	H1213010-081200	8	13.0	1/2"	12	1 1/16-12	32.1	32.0
1221652	H1213010-101000	10	16.0	5/8"	10	7/8-14	27.6	24.0
1203146	H1213010-121000	12	19.0	3/4"	10	7/8-14	28.1	27.0
1200445	H1213010-121200	12	19.0	3/4"	12	1 1/16-12	32.6	32.0
1201836	H1213010-161600	16	25.0	1"	16	1 5/16-12	35.4	38.0
1225859	H1213010-202000	20	32.0	1 1/4"	20	1 5/8-12	39.0	46.0

// H1213011

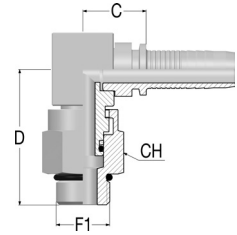
SAE Male Swivel - O-Ring Boss



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1225927	H1213011-060600	Crimped	6	10.0	3/8"	6	9/16-18	40.5	22.0
1225928	H1213011-060800	Crimped	6	10.0	3/8"	8	3/4-16	22.0	22.0
1225929	H1213011-080800	Crimped	8	13.0	1/2"	8	3/4-16	23.0	25.0
1225930	H1213011-081000	Crimped	8	13.0	1/2"	10	7/8-14	23.0	25.0
1230553	H1213011-121200	Crimped	12	19.0	3/4"	12	1 1/16-12	49.6	32.0

// H1213081

90° Compact SAE Male Swivel - O-Ring Boss

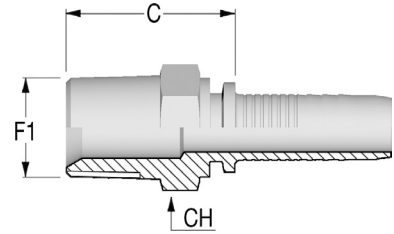


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)
1226490	H1213081-040500	Crimped	4	6.0	1/4"	5	1/2-20	17.0	34.0	17.0
1225933	H1213081-060800	Crimped	6	10.0	3/8"	8	3/4-16	22.0	44.0	25.0
1225934	H1213081-080800	Crimped	8	13.0	1/2"	8	3/4-16	21.6	49.7	25.0
1225935	H1213081-081000	Crimped	8	13.0	1/2"	10	7/8-14	23.0	49.0	25.0
1226492	H1213081-121200	Crimped	12	19.0	3/4"	12	1 1/16-12	27.0	60.0	27.0
1240593	H1213081-161600	Crimped	16	25.0	1"	16	1 5/16-12	34.4	67.5	41.0

// NPTF INSERTS

// H1212810

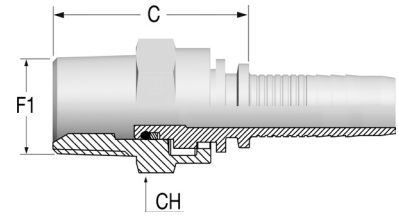
NPTF Male 60° Seat
AGN



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1200448	H1212810-030200	3	5.0	3/16"	2	1/8-27	20.8	12.0
1200466	H1212810-040200	4	6.0	1/4"	2	1/8-27	21.3	14.0
1228235	H121281P-040400	4	6.0	1/4"	4	1/4-18	26.8	14.3
1200511	H1212810-050400	5	8.0	5/16"	4	1/4-18	26.8	17.0
1200307	H1212810-060400	6	10.0	3/8"	4	1/4-18	26.8	17.0
1200308	H1212810-060600	6	10.0	3/8"	6	3/8-18	27.8	19.0
1200467	H1212810-040600	4	6.0	1/4"	6	3/8-18	27.8	19.0
1200512	H1212810-050600	5	8.0	5/16"	6	3/8-18	27.8	19.0
1200345	H1212810-080600	8	13.0	1/2"	6	3/8-18	28.6	19.0
1203150	H1212810-040800	4	6.0	1/4"	8	1/2-14	31.3	22.0
1200306	H1212810-060800	6	10.0	3/8"	8	1/2-14	31.3	22.0
1200343	H1212810-080800	8	13.0	1/2"	8	1/2-14	32.1	22.0
1200387	H1212810-100800	10	16.0	5/8"	8	1/2-14	33.1	24.0
1203149	H1212810-120800	12	19.0	3/4"	8	1/2-14	33.6	27.0
1200388	H1212810-101200	10	16.0	5/8"	12	3/4-14	34.1	27.0
1200344	H1212810-081200	8	13.0	1/2"	12	3/4-14	34.1	27.0
1200421	H1212810-121200	12	19.0	3/4"	12	3/4-14	34.6	27.0
1202282	H1212810-161200	16	25.0	1"	12	3/4-14	39.4	36.0
1200420	H1212810-121600	12	19.0	3/4"	16	1-11 1/2	43.6	36.0
1216610	H1212810-141600	14	22.0	7/8"	16	1-11 1/2	43.6	36.0
1201366	H1212810-161600	16	25.0	1"	16	1-11 1/2	44.4	36.0
1201367	H1212810-162000	16	25.0	1"	20	1 1/4-11 1/2	47.4	46.0
1201368	H1212810-202000	20	32.0	1 1/4"	20	1 1/4-11 1/2	49.0	46.0
1201369	H1212810-242400	24	38.0	1 1/2"	24	1 1/2-11 1/2	50.5	50.0
1201370	H1212810-323200	32	51.0	2"	32	2-11 1/2	54.2	65.0

// H1212811

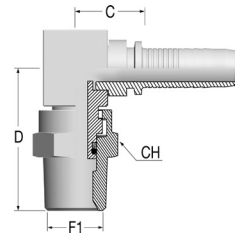
NPTF Male Swivel 60° Seat



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1216614	H1212811-040400	Crimped	4	6.0	1/4"	4	1/4-18	37.6	17.0
1216615	H1212811-040600	Crimped	4	6.0	1/4"	6	3/8-18	39.5	22.0
1216616	H1212811-060400	Crimped	6	10.0	3/8"	4	1/4-18	39.6	17.0
1214186	H1212811-060600	Crimped	6	10.0	3/8"	6	3/8-18	37.5	22.0
1216617	H1212811-060800	Crimped	6	10.0	3/8"	8	1/2-14	43.5	25.0
1216619	H1212811-080600	Crimped	8	13.0	1/2"	6	3/8-18	38.3	22.0
1214187	H1212811-080800	Crimped	8	13.0	1/2"	8	1/2-14	42.3	25.0
1216620	H1212811-121200	Crimped	12	19.0	3/4"	12	3/4-14	50.1	32.0
1216621	H1212811-161600	Crimped	16	25.0	1"	16	1-11 1/2	57.9	41.0

// H1212881

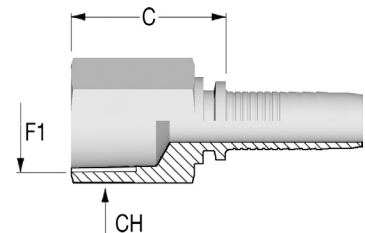
90° Compact NPTF Male Swivel 60° Seat



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH (mm)
1225918	H1212881-040400	Crimped	4	6.0	1/4"	4	1/4-18	17.0	39.0	17.0
1225920	H1212881-060600	Crimped	6	10.0	3/8"	6	3/8-18	20.8	45.7	19.0
1225921	H1212881-080800	Crimped	8	13.0	1/2"	8	1/2-14	21.6	49.7	19.0
1225922	H1212881-121200	Crimped	12	19.0	3/4"	12	3/4-14	27.0	60.5	27.0

// H1222810

NPTF Female Solid

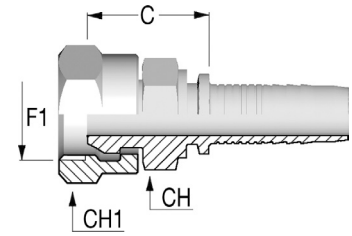


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1216794	H1222810-040200	4	6.0	1/4"	2	1/8-27	22.3	14.0
1200464	H1222810-040400	4	6.0	1/4"	4	1/4-18	27.8	19.0
1219145	H1222810-060600	6	10.0	3/8"	6	3/8-18	28.8	22.0
1216795	H1222810-080800	8	13.0	1/2"	8	1/2-14	35.6	25.0
1216796	H1222810-121200	12	19.0	3/4"	12	3/4-14	38.1	32.0
1216797	H1222810-161600	16	25.0	1"	16	1-11 1/2	44.9	38.0

// NPSM INSERTS

// H1227311

NPSM Female



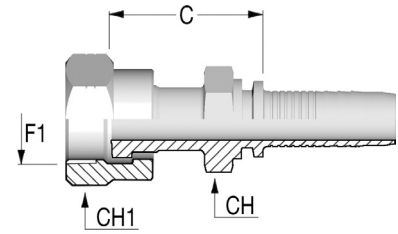
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1203280	H1227311-040400	Crimped	4	6.0	1/4"	4	1/4-18	24.3	17.0	19.0
1216834	H1227311-060600	Crimped	6	10.0	3/8"	6	3/8-18	24.8	19.0	22.0
1202084	H1227311-080800	Crimped	8	13.0	1/2"	8	1/2-14	26.6	22.0	27.0
1256083	H1227311-121200	Crimped	12	19.0	3/4"	12	3/4-14	20.6		32.0
1216836	H1227311-161600	Crimped	16	25.0	1"	16	1-11 1/2	35.4	36.0	38.0

1216835: without Stem Hexagon, with O-Ring

// ORFS INSERTS

// H1222411

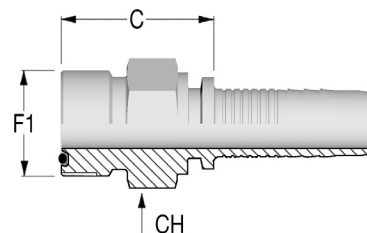
ORFS Female with Stem Hexagon



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1203220	H1222411-030400	Crimped	3	5.0	3/16"	4	9/16-18	26.8	14.0	17.0
1201586	H1222411-040400	Crimped	4	6.0	1/4"	4	9/16-18	27.3	14.0	17.0
1201855	H1222411-040600	Crimped	4	6.0	1/4"	6	11/16-16	30.3	17.0	22.0
1203143	H1222411-040800	Crimped	4	6.0	1/4"	8	13/16-16	35.3	22.0	24.0
1201741	H1222411-050600	Crimped	5	8.0	5/16"	6	11/16-16	30.3	17.0	22.0
1203237	H1222411-060400	Crimped	6	10.0	3/8"	4	9/16-18	28.3	17.0	17.0
1202369	H1222411-060600	Crimped	6	10.0	3/8"	6	11/16-16	30.3	17.0	22.0
1201339	H1222411-060800	Crimped	6	10.0	3/8"	8	13/16-16	35.3	22.0	24.0
1202563	H1222411-080600	Crimped	8	13.0	1/2"	6	11/16-16	32.1	19.0	22.0
1201338	H1222411-080800	Crimped	8	13.0	1/2"	8	13/16-16	36.1	22.0	24.0
1202052	H1222411-081000	Crimped	8	13.0	1/2"	10	1-14	39.6	24.0	30.0
1203053	H1222411-081200	Crimped	8	13.0	1/2"	12	1 3/16-12	42.1	30.0	36.0
1203061	H1222411-100800	Crimped	10	16.0	5/8"	8	13/16-16	37.1	24.0	24.0
1202612	H1222411-101000	Crimped	10	16.0	5/8"	10	1-14	39.6	24.0	30.0
1201815	H1222411-101200	Crimped	10	16.0	5/8"	12	1 3/16-12	42.1	30.0	36.0
1201782	H1222411-121000	Crimped	12	19.0	3/4"	10	1-14	40.1	27.0	30.0
1202560	H1222411-121200	Crimped	12	19.0	3/4"	12	1 3/16-12	42.6	30.0	36.0
1202053	H1222411-121600	Crimped	12	19.0	3/4"	16	1 7/16-12	48.6	36.0	41.0
1203142	H1222411-161200	Crimped	16	25.0	1"	12	1 3/16-12	45.4	32.0	36.0
1201446	H1222411-161600	Crimped	16	25.0	1"	16	1 7/16-12	49.4	36.0	41.0
1203056	H1222411-162000	Crimped	16	25.0	1"	20	1 11/16-12	50.4	41.0	50.0
1201447	H1222411-202000	Crimped	20	32.0	1 1/4"	20	1 11/16-12	52.0	41.0	50.0
1226017	H1222411-202400	Crimped	20	32.0	1 1/4"	24	2-12	56.5	50.0	60.0
1202046	H1222411-242400	Crimped	24	38.0	1 1/2"	24	2-12	56.5	50.0	60.0

// H1212410

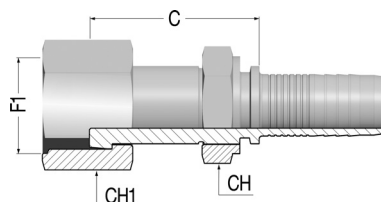
ORFS Male



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1202488	H1212410-040400	4	6.0	1/4"	4	9/16-18	22.3	17.0
1202489	H1212410-040600	4	6.0	1/4"	6	11/16-16	24.3	19.0
1214185	H1212410-050600	5	8.0	5/16"	6	11/16-16	24.3	19.0
1202490	H1212410-060600	6	10.0	3/8"	6	11/16-16	24.3	19.0
1202491	H1212410-060800	6	10.0	3/8"	8	13/16-16	26.3	22.0
1202055	H1212410-061000	6	10.0	3/8"	10	1-14	29.8	27.0
1202492	H1212410-080800	8	13.0	1/2"	8	13/16-16	27.1	22.0
1202054	H1212410-081000	8	13.0	1/2"	10	1-14	30.6	27.0
1202493	H1212410-081200	8	13.0	1/2"	12	1 3/16-12	34.1	32.0
1202892	H1212410-101000	10	16.0	5/8"	10	1-14	30.6	27.0
1202494	H1212410-101200	10	16.0	5/8"	12	1 3/16-12	34.1	32.0
1202495	H1212410-121000	12	19.0	3/4"	10	1-14	31.1	27.0
1202496	H1212410-121200	12	19.0	3/4"	12	1 3/16-12	34.6	32.0
1202497	H1212410-121600	12	19.0	3/4"	16	1 7/16-12	38.1	41.0
1202498	H1212410-161600	16	25.0	1"	16	1 7/16-12	37.9	38.0
1202499	H1212410-162000	16	25.0	1"	20	1 11/16-12	39.9	46.0
1202500	H1212410-202000	20	32.0	1 1/4"	20	1 11/16-12	41.5	46.0

// H1222414 **NEW**

ORFS Female with support Hexagon knurled



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1240013	H1222414-040400	Slip on nut	4	6.0	1/4"	4	9/16-18	29.5	14.0	17.0
1245728	H1222414-040600	Slip on nut	4	6.0	1/4"	6	11/16-16	31.8	17.0	22.0
1245899	H1222414-040800	Slip on nut	4	6.0	1/4"	8	13/16-16	35.8	22.0	24.0
1245428	H1222414-050600	Slip on nut	5	8.0	5/16"	6	11/16-16	30.8	17.0	22.0
1240034	H1222414-060600	Slip on nut	6	10.0	3/8"	6	11/16-16	32.3	17.0	22.0
1245892	H1222414-060800	Slip on nut	6	10.0	3/8"	8	13/16-16	39.3	22.0	24.0
1240035	H1222414-080800	Slip on nut	8	13.0	1/2"	8	13/16-16	40.5	22.0	24.0
1245429	H1222414-081000	Slip on nut	8	13.0	1/2"	10	1-14	43.0	24.0	30.0
1245904	H1222414-081200	Slip on nut	8	13.0	1/2"	12	1 3/16-12	42.1	30.0	36.0
1240036	H1222414-101000	Slip on nut	10	16.0	5/8"	10	1-14	39.6	27.0	30.0
1245905	H1222414-101200	Slip on nut	10	16.0	5/8"	12	1 3/16-12	42.1	30.0	36.0
1240038	H1222414-121200	Slip on nut	12	19.0	3/4"	12	1 3/16-12	42.6	30.0	36.0
1245906	H1222414-121600	Slip on nut	12	19.0	3/4"	16	1 7/16-12	50.6	36.0	41.0
1242623	H1222414-161600	Slip on nut	16	25.0	1"	16	1 7/16-12	51.4	36.0	41.0

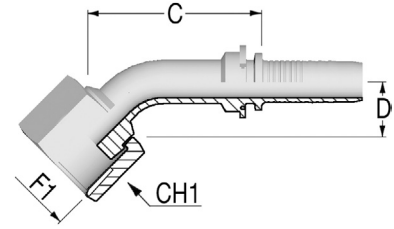
// H1222443-S

45° ORFS Female

Short Drop

DK ORFS 45M

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202774	H1222443-04040S	Slip on nut	4	6.0	1/4"	4	9/16-18	41.1	11.0	17.0
1202775	H1222443-04060S	Slip on nut	4	6.0	1/4"	6	11/16-16	46.1	11.0	22.0
1202871	H1222443-05060S	Slip on nut	5	8.0	5/16"	6	11/16-16	46.3	12.0	22.0
1202776	H1222443-06060S	Slip on nut	6	10.0	3/8"	6	11/16-16	47.4	12.0	22.0
1202777	H1222443-06080S	Slip on nut	6	10.0	3/8"	8	13/16-16	51.2	15.0	24.0
1202854	H1222441-08080S	Crimped	8	13.0	1/2"	8	13/16-16	47.1	16.0	24.0
1202771	H1222443-08100S	Slip on nut	8	13.0	1/2"	10	1-14	50.4	16.5	30.0
1202819	H1222443-10100S	Slip on nut	10	16.0	5/8"	10	1-14	57.7	17.0	30.0
1202853	H1222443-10120S	Slip on nut	10	16.0	5/8"	12	1 3/16-12	63.1	21.0	36.0
1202872	H1222443-12120S	Slip on nut	12	19.0	3/4"	12	1 3/16-12	63.5	21.0	36.0
1202915	H1222443-12160S	Slip on nut	12	19.0	3/4"	16	1 7/16-12	70.7	24.0	41.0
1202797	H1222443-16160S	Slip on nut	16	25.0	1"	16	1 7/16-12	82.4	26.0	41.0
1203141	H1222443-16200S	Slip on nut	16	25.0	1"	20	1 11/16-12	85.4	26.0	50.0
1203140	H1222443-20240S	Slip on nut	20	32.0	1 1/4"	24	2-12	101.1	28.0	60.0
1202874	H1222443-24240S	Slip on nut	24	38.0	1 1/2"	24	2-12	104.0	30.5	60.0

Image: insert with Slip on Nut.

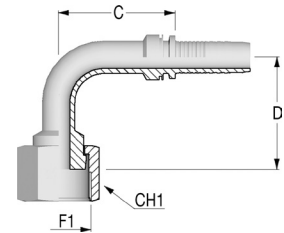
// H1222493-S

90° ORFS Female

Short Drop

DK ORFS 90S

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202778	H1222493-04040S	Slip on nut	4	6.0	1/4"	4	9/16-18	28.5	21.0	17.0
1202856	H1222493-04060S	Slip on nut	4	6.0	1/4"	6	11/16-16	32.0	23.0	22.0
1202857	H1222493-05060S	Slip on nut	5	8.0	5/16"	6	11/16-16	50.1	23.5	22.0
1202858	H1222493-06060S	Slip on nut	6	10.0	3/8"	6	11/16-16	40.0	27.0	22.0
1202859	H1222493-06080S	Slip on nut	6	10.0	3/8"	8	13/16-16	41.8	29.0	24.0
1203392	H1222491-08060S	Crimped	8	13.0	1/2"	6	11/16-16	44.1	25.0	22.0
1202855	H1222491-08080S	Crimped	8	13.0	1/2"	8	13/16-16	39.8	29.0	24.0
1203054	H1222493-08100S	Slip on nut	8	13.0	1/2"	10	1-14	46.3	32.5	30.0
1203334	H1222493-08120S	Slip on nut	8	13.0	1/2"	12	1 3/16-12	56.3	51.0	36.0
1202860	H1222493-10100S	Slip on nut	10	16.0	5/8"	10	1-14	52.3	32.5	30.0
1202861	H1222493-10120S	Slip on nut	10	16.0	5/8"	12	1 3/16-12	55.4	49.0	36.0
1202862	H1222493-12120S	Slip on nut	12	19.0	3/4"	12	1 3/16-12	60.6	51.0	36.0
1203055	H1222493-12160S	Slip on nut	12	19.0	3/4"	16	1 7/16-12	61.6	56.0	41.0
1203209	H1222491-16120S	Crimped	16	25.0	1"	12	1 3/16-12	54.6	51.0	36.0
1202863	H1222493-16160S	Slip on nut	16	25.0	1"	16	1 7/16-12	80.0	58.0	41.0
1203135	H1222493-16200S	Slip on nut	16	25.0	1"	20	1 11/16-12	82.6	64.0	50.0
1203133	H1222493-20200S	Slip on nut	20	32.0	1 1/4"	20	1 11/16-12	95.0	68.0	50.0
1214213	H1222493-24240S	Slip on nut	24	38.0	1 1/2"	24	2-12	103.7	78.0	60.0

Image: insert with Slip on Nut.

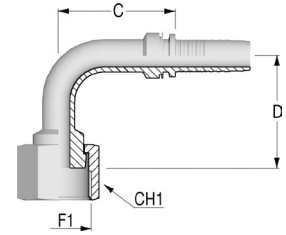
// H1222493-M

90° ORFS Female

Medium Drop

DK ORFS 90M

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202875	H1222493-04040M	Slip on nut	4	6.0	1/4"	4	9/16-18	29.8	32.0	17.0
1202715	H1222493-04060M	Slip on nut	4	6.0	1/4"	6	11/16-16	37.3	38.0	22.0
1202779	H1222493-05060M	Slip on nut	5	8.0	5/16"	6	11/16-16	40.7	34.0	22.0
1202780	H1222493-06060M	Slip on nut	6	10.0	3/8"	6	11/16-16	41.8	38.0	22.0
1202716	H1222493-06080M	Slip on nut	6	10.0	3/8"	8	13/16-16	43.8	41.0	24.0
1202781	H1222491-08080M	Crimped	8	13.0	1/2"	8	13/16-16	34.8	42.0	24.0
1202770	H1222493-08100M	Slip on nut	8	13.0	1/2"	10	1-14	48.3	47.0	30.0
1202782	H1222493-10100M	Slip on nut	10	16.0	5/8"	10	1-14	55.4	44.0	30.0
1203137	H1222493-10120M	Slip on nut	10	16.0	5/8"	12	1 3/16-12	55.4	58.0	36.0
1202783	H1222493-12120M	Slip on nut	12	19.0	3/4"	12	1 3/16-12	61.6	58.0	36.0
1202916	H1222493-12160M	Slip on nut	12	19.0	3/4"	16	1 7/16-12	65.6	71.0	41.0
1216748	H1222491-16120M	Crimped	16	25.0	1"	12	1 3/16-12	62.6	58.0	36.0
1202717	H1222493-16160M	Slip on nut	16	25.0	1"	16	1 7/16-12	82.6	66.0	41.0
1203069	H1222493-16200M	Slip on nut	16	25.0	1"	20	1 11/16-12	82.6	78.0	50.0
1202876	H1222493-20200M	Slip on nut	20	32.0	1 1/4"	20	1 11/16-12	97.0	78.0	50.0
1202877	H1222493-24240M	Slip on nut	24	38.0	1 1/2"	24	2-12	107.8	87.0	60.0

Image: insert with Slip on Nut.

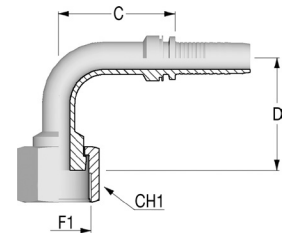
// H1222493-L

90° ORFS Female

Long Drop

DK ORFS 90L

Solid one piece



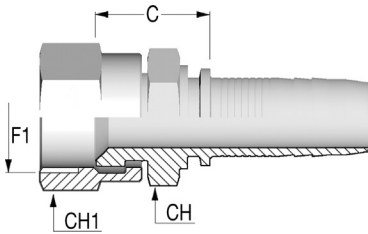
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1210841	H1222493-04040L	Slip on nut	4	6.0	1/4"	4	9/16-18	32.8	46.0	17.0
1203139	H1222493-04060L	Slip on nut	4	6.0	1/4"	6	11/16-16	34.8	54.0	22.0
1203138	H1222493-06060L	Slip on nut	6	10.0	3/8"	6	11/16-16	41.8	54.0	22.0
1203057	H1222493-06080L	Slip on nut	6	10.0	3/8"	8	13/16-16	46.8	64.0	24.0
1202922	H1222491-08080L	Crimped	8	13.0	1/2"	8	13/16-16	38.3	64.0	24.0
1214208	H1222493-08100L	Slip on nut	8	13.0	1/2"	10	1-14	46.3	70.0	30.0
1202918	H1222493-10100L	Slip on nut	10	16.0	5/8"	10	1-14	55.4	70.0	30.0
1202919	H1222493-10120L	Slip on nut	10	16.0	5/8"	12	1 3/16-12	55.4	96.0	36.0
1202920	H1222493-12120L	Slip on nut	12	19.0	3/4"	12	1 3/16-12	61.6	96.0	36.0
1202921	H1222493-12160L	Slip on nut	12	19.0	3/4"	16	1 7/16-12	61.6	118.0	41.0
1203136	H1222493-16160L	Slip on nut	16	25.0	1"	16	1 7/16-12	82.6	114.0	41.0
1203134	H1222493-20200L	Slip on nut	20	32.0	1 1/4"	20	1 11/16-12	97.0	129.0	50.0
1214212	H1222493-24240L	Slip on nut	24	38.0	1 1/2"	24	2-12	110.8	141.0	60.0

Image: insert with Slip on Nut.

// SAE INSERTS

// H1226611

SAE Female Swivel 45° Seat

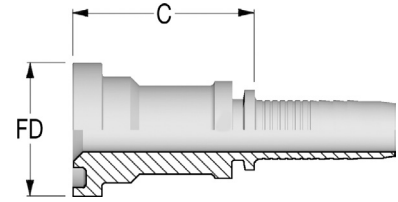


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1202661	H1226611-060600	Crimped	6	10.0	3/8"	6	5/8-18	23.3	19.0	22.0
1226098	H1226611-081000	Crimped	8	13.0	1/2"	10	7/8-14	26.6	22.0	27.0
1202371	H1226611-121200	Crimped	12	19.0	3/4"	12	1 1/16-14	28.6	27.0	32.0

// SAE FLANGES

// H1243310

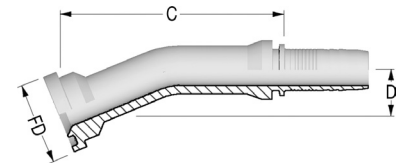
Flange SAE 3000 psi J518 Code 61
SFL



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	WP (psi)
1202747	H1243310-080800	8	13.0	1/2"	8	1/2	30.2	41.0	5000
1202763	H1243310-081200	8	13.0	1/2"	12	3/4	38.1	42.0	5000
1202801	H1243310-101200	10	16.0	5/8"	12	3/4	38.1	42.2	5000
1201734	H1243310-121200	12	19.0	3/4"	12	3/4	38.1	42.5	5000
1202750	H1243310-121600	12	19.0	3/4"	16	1	44.5	50.5	5000
1201408	H1243310-161600	16	25.0	1"	16	1	44.5	51.4	5000
1201409	H1243310-162000	16	25.0	1"	20	1 1/4	50.8	53.9	4000
1221654	H1243310-201600	20	32.0	1 1/4"	16	1	44.5	53.0	5000
1201410	H1243310-202000	20	32.0	1 1/4"	20	1 1/4	50.8	55.5	4000
1201411	H1243310-202400	20	32.0	1 1/4"	24	1 1/2	60.3	58.5	3000
1201412	H1243310-242400	24	38.0	1 1/2"	24	1 1/2	60.3	58.5	3000
1201413	H1243310-243200	24	38.0	1 1/2"	32	2	71.4	70.0	3000
1221662	H1243310-322400	32	51.0	2"	24	1 1/2	60.3	66.0	3000
1201414	H1243310-323200	32	51.0	2"	32	2	71.4	70.0	3000
1202074	H1243310-324000	32	51.0	2"	40	2 1/2	84.1	83.0	2500
1226113	H1243310-403200	40	63.0	2 1/2"	32	2	71.4	86.5	3000
1203063	H1243310-404000	40	63.0	2 1/2"	40	2 1/2	84.1	86.5	2500

// H1243320

22° Flange SAE 3000 psi J518 Code 61
SFL 22
Solid one piece



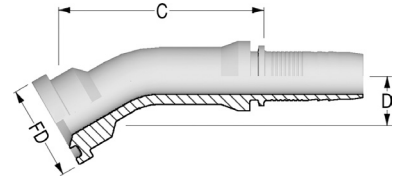
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1216854	H1243320-161600	16	25.0	1"	16	1	44.5	92.7	12.0	5000
1216856	H1243320-202000	20	32.0	1 1/4"	20	1 1/4	50.8	113.6	16.0	4000
1216857	H1243320-202400	20	32.0	1 1/4"	24	1 1/2	60.3	114.7	20.5	3000
1216858	H1243320-242400	24	38.0	1 1/2"	24	1 1/2	60.3	131.0	22.0	3000
1216859	H1243320-323200	32	51.0	2"	32	2	71.4	153.0	22.0	3000

// H1243330

30° Flange SAE 3000 psi J518 Code 61

SFL 30

Solid one piece



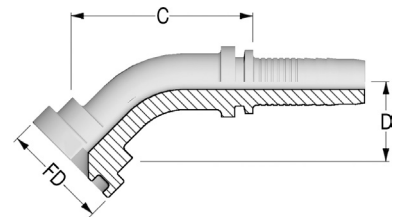
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1216861	H1243330-121200	12	19.0	3/4"	12	3/4	38.1	80.8	12.0	5000
1216862	H1243330-121600	12	19.0	3/4"	16	1	44.5	83.8	12.0	5000
1216863	H1243330-161600	16	25.0	1"	16	1	44.5	89.8	12.0	5000
1216864	H1243330-162000	16	25.0	1"	20	1 1/4	50.8	90.0	12.0	4000
1216866	H1243330-202000	20	32.0	1 1/4"	20	1 1/4	50.8	102.4	12.0	4000
1216867	H1243330-202400	20	32.0	1 1/4"	24	1 1/2	60.3	111.9	13.0	3000
1216868	H1243330-242400	24	38.0	1 1/2"	24	1 1/2	60.3	128.6	23.0	3000
1216869	H1243330-243200	24	38.0	1 1/2"	32	2	71.4	147.0	29.5	3000

// H1243340

45° Flange SAE 3000 psi J518 Code 61

SFL 45

Solid one piece



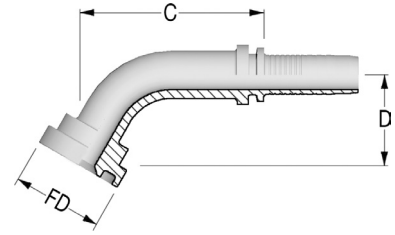
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1202748	H1243340-080800	8	13.0	1/2"	8	1/2	30.2	69.4	22.0	5000
1202751	H1243340-081200	8	13.0	1/2"	12	3/4	38.1	60.3	26.0	5000
1202678	H1243340-121200	12	19.0	3/4"	12	3/4	38.1	73.7	32.0	5000
1202752	H1243340-121600	12	19.0	3/4"	16	1	44.5	77.9	29.0	5000
1214223	H1243340-122000	12	19.0	3/4"	20	1 1/4	50.8	81.5	30.0	5000
1202681	H1243340-161600	16	25.0	1"	16	1	44.5	82.7	33.5	5000
1201845	H1243340-162000	16	25.0	1"	20	1 1/4	50.8	82.2	36.0	4000
1216872	H1243340-201600	20	32.0	1 1/4"	16	1	44.5	114.6	35.1	5000
1201848	H1243340-202000	20	32.0	1 1/4"	20	1 1/4	50.8	95.1	37.5	4000
1202677	H1243340-202400	20	32.0	1 1/4"	24	1 1/2	60.3	104.1	40.0	3000
1216873	H1243340-242000	24	38.0	1 1/2"	20	1 1/4	50.8	144.9	49.5	4000
1202753	H1243340-242400	24	38.0	1 1/2"	24	1 1/2	60.3	116.7	48.0	3000
1202754	H1243340-243200	24	38.0	1 1/2"	32	2	71.4	135.6	55.5	3000
1201982	H1243340-323200	32	51.0	2"	32	2	71.4	140.8	47.5	3000
1216874	H1243340-4040SL	40	63.0	2 1/2"	40	2 1/2	84.1	139.0	53.0	2500

// H1243360

60° Flange SAE 3000 psi J518 Code 61

SFL 60

Solid one piece



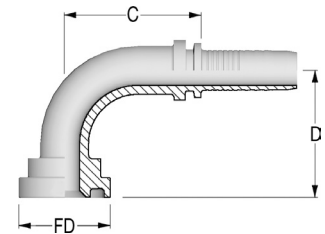
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1216878	H1243360-121200	12	19.0	3/4"	12	3/4	38.1	85.7	37.0	5000
1216880	H1243360-161600	16	25.0	1"	16	1	44.5	101.0	47.0	5000
1216881	H1243360-162000	16	25.0	1"	20	1 1/4	50.8	106.6	43.5	4000
1216882	H1243360-202000	20	32.0	1 1/4"	20	1 1/4	50.8	129.5	56.5	4000
1202882	H1243360-242400	24	38.0	1 1/2"	24	1 1/2	60.3	151.5	57.0	3000
1216884	H1243360-323200	32	51.0	2"	32	2	71.4	173.0	92.0	3000

// H1243390

90° Flange SAE 3000 psi J518 Code 61

SFL 90

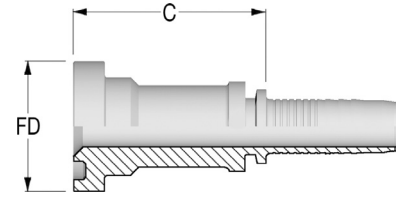
Solid one piece



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1202749	H1243390-080800	8	13.0	1/2"	8	1/2	30.2	45.8	42.0	5000
1202755	H1243390-081200	8	13.0	1/2"	12	3/4	38.1	45.3	51.0	5000
1202805	H1243390-101200	10	16.0	5/8"	12	3/4	38.1	49.4	51.0	5000
1202679	H1243390-121200	12	19.0	3/4"	12	3/4	38.1	59.7	58.0	5000
1202756	H1243390-121600	12	19.0	3/4"	16	1	44.5	66.2	64.5	5000
1202883	H1243390-122000	12	19.0	3/4"	20	1 1/4	50.8	69.7	60.0	4000
1202680	H1243390-161600	16	25.0	1"	16	1	44.5	70.6	67.0	5000
1201846	H1243390-162000	16	25.0	1"	20	1 1/4	50.8	73.6	71.0	4000
1216894	H1243390-162400	16	25.0	1"	24	1 1/2	60.3	93.1	75.0	3000
1202884	H1243390-201600	20	32.0	1 1/4"	16	1	44.5	94.4	65.0	5000
1201847	H1243390-202000	20	32.0	1 1/4"	20	1 1/4	50.8	88.0	84.0	4000
1202676	H1243390-202400	20	32.0	1 1/4"	24	1 1/2	60.3	91.5	87.5	3000
1202806	H1243390-242000	24	38.0	1 1/2"	20	1 1/4	50.8	93.6	93.0	4000
1202757	H1243390-242400	24	38.0	1 1/2"	24	1 1/2	60.3	104.8	91.0	3000
1202758	H1243390-243200	24	38.0	1 1/2"	32	2	71.4	104.8	115.0	3000
1216898	H1243390-322400	32	51.0	2"	24	1 1/2	60.3	132.8	133.0	3000
1201983	H1243390-323200	32	51.0	2"	32	2	71.4	129.3	130.0	3000
1203169	H1243390-3240B0	32	51.0	2"	40	2 1/2	84.1	103.0	100.0	2500
1203364	H1243390-4040SL	40	63.0	2 1/2"	40	2 1/2	84.1	137.2	125.0	2500

// H1243610

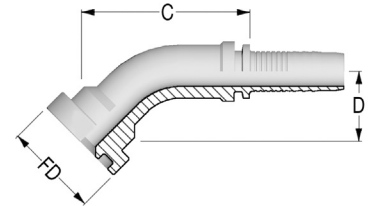
Flange SAE 6000 psi J518 Code 62
SFS



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	WP (psi)
1202511	H1243610-080800	8	13.0	1/2"	8	1/2	31.8	47.0	6000
1202759	H1243610-081200	8	13.0	1/2"	12	3/4	41.3	52.0	6000
1202807	H1243610-101200	10	16.0	5/8"	12	3/4	41.3	52.2	6000
1202733	H1243610-121200	12	19.0	3/4"	12	3/4	41.3	52.5	6000
1202760	H1243610-121600	12	19.0	3/4"	16	1	47.6	55.5	6000
1216908	H1243610-161200	16	25.0	1"	12	3/4	41.3	56.4	6000
1201415	H1243610-161600	16	25.0	1"	16	1	47.6	56.4	6000
1201416	H1243610-162000	16	25.0	1"	20	1 1/4	54.0	63.4	6000
1201417	H1243610-202000	20	32.0	1 1/4"	20	1 1/4	54.0	83.0	6000
1201418	H1243610-202400	20	32.0	1 1/4"	24	1 1/2	63.5	71.0	6000
1201419	H1243610-242400	24	38.0	1 1/2"	24	1 1/2	63.5	101.0	6000
1201420	H1243610-243200	24	38.0	1 1/2"	32	2	79.4	76.0	6000
1201421	H1243610-323200	32	51.0	2"	32	2	79.4	76.0	6000

// H1243640

45° Flange SAE 6000 psi J518 Code 62
SFS 45
Solid one piece



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1201729	H1243640-080800	8	13.0	1/2"	8	1/2	31.8	56.5	23.0	6000
1202764	H1243640-081200	8	13.0	1/2"	12	3/4	41.3	79.9	30.5	6000
1216910	H1243640-101200	10	16.0	5/8"	12	3/4	41.3	69.0	31.0	6000
1202082	H1243640-121200	12	19.0	3/4"	12	3/4	41.3	84.1	31.0	6000
1202083	H1243640-121600	12	19.0	3/4"	16	1	47.6	80.0	33.5	6000
1201794	H1243640-161600	16	25.0	1"	16	1	47.6	96.7	36.0	6000
1202091	H1243640-162000	16	25.0	1"	20	1 1/4	54.0	96.1	39.0	6000
1202761	H1243640-202000	20	32.0	1 1/4"	20	1 1/4	54.0	108.6	40.0	6000
1202452	H1243640-202400	20	32.0	1 1/4"	24	1 1/2	63.5	114.8	45.5	6000
1202453	H1243640-242400	24	38.0	1 1/2"	24	1 1/2	63.5	122.9	45.0	6000
1202734	H1243640-323200	32	51.0	2"	32	2	79.4	156.6	60.0	6000

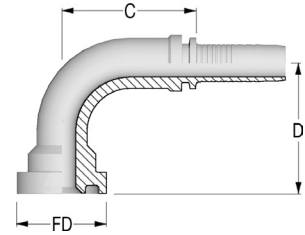
REV.2.2

// H1243690

90° Flange SAE 6000 psi J518 Code 62

SFS 90

Solid one piece

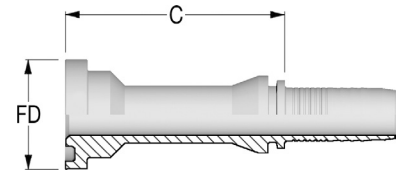


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1202257	H1243690-080800	8	13.0	1/2"	8	1/2	31.8	47.8	46.0	6000
1202766	H1243690-081200	8	13.0	1/2"	12	3/4	41.3	47.8	54.0	6000
1202808	H1243690-100800	10	16.0	5/8"	8	1/2	31.8	50.0	52.0	6000
1202814	H1243690-101200	10	16.0	5/8"	12	3/4	41.3	49.9	55.0	6000
1202075	H1243690-121200	12	19.0	3/4"	12	3/4	41.3	63.2	61.0	6000
1201795	H1243690-121600	12	19.0	3/4"	16	1	47.6	63.2	66.0	6000
1216913	H1243690-161200	16	25.0	1"	12	3/4	41.3	72.6	61.0	6000
1201739	H1243690-161600	16	25.0	1"	16	1	47.6	73.6	75.0	6000
1202767	H1243690-162000	16	25.0	1"	20	1 1/4	54.0	77.6	78.0	6000
1202735	H1243690-202000	20	32.0	1 1/4"	20	1 1/4	54.0	94.5	89.0	6000
1202768	H1243690-202400	20	32.0	1 1/4"	24	1 1/2	63.5	98.0	94.0	6000
1202736	H1243690-242400	24	38.0	1 1/2"	24	1 1/2	63.5	99.6	105.0	6000
1202769	H1243690-243200	24	38.0	1 1/2"	32	2	79.4	116.9	123.0	6000
1202762	H1243690-323200	32	51.0	2"	32	2	79.4	143.3	132.0	6000

// KOMATSU INSERTS

// H1244110

Komatsu Flange

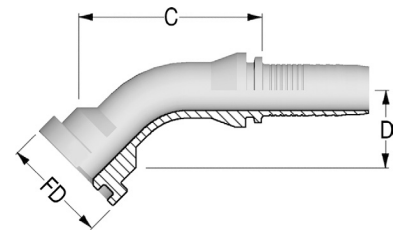


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)
1201625	H1244110-101000	10	16.0	5/8"	10	5/8	34.0	46.7

// H1244140

45° Komatsu Flange

Solid one piece

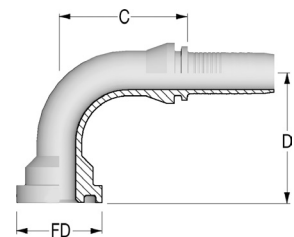


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)
1202066	H1244140-101000	10	16.0	5/8"	10	5/8	34.0	49.1	25.0

// H1244190

90° Komatsu Flange

Solid one piece



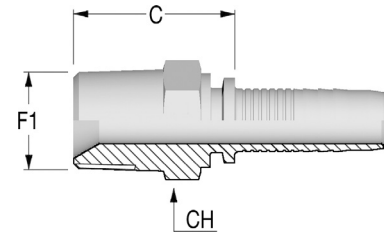
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)
1202067	H1244190-101000	10	16.0	5/8"	10	5/8	34.0	51.0	51.0

// BSP INSERTS

// H1210710

BSPT Male

AGR K

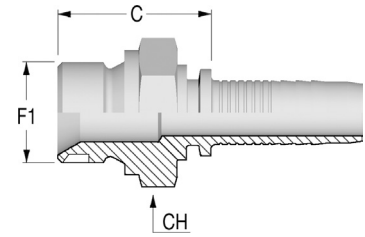


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1200456	H1210710-030200	3	5.0	3/16"	2	1/8-28	20.8	12.0
1200491	H1210710-040200	4	6.0	1/4"	2	1/8-28	21.3	12.0
1200490	H1210710-040400	4	6.0	1/4"	4	1/4-19	26.8	17.0
1200492	H1210710-040600	4	6.0	1/4"	6	3/8-19	27.8	19.0
1200532	H1210710-050400	5	8.0	5/16"	4	1/4-19	26.8	17.0
1200533	H1210710-050600	5	8.0	5/16"	6	3/8-19	27.8	19.0
1200328	H1210710-060400	6	10.0	3/8"	4	1/4-19	26.8	17.0
1200329	H1210710-060600	6	10.0	3/8"	6	3/8-19	27.8	19.0
1200327	H1210710-060800	6	10.0	3/8"	8	1/2-14	32.3	22.0
1200373	H1210710-080600	8	13.0	1/2"	6	3/8-19	28.6	19.0
1200371	H1210710-080800	8	13.0	1/2"	8	1/2-14	33.1	22.0
1200410	H1210710-101200	10	16.0	5/8"	12	3/4-14	34.1	27.0
1200440	H1210710-121200	12	19.0	3/4"	12	3/4-14	34.6	27.0
1200439	H1210710-121600	12	19.0	3/4"	16	1-11	43.6	36.0
1201365	H1210710-161200	16	25.0	1"	12	3/4-14	37.4	32.0
1201361	H1210710-161600	16	25.0	1"	16	1-11	44.4	36.0
1201363	H1210710-202000	20	32.0	1 1/4"	20	1 1/4-11	49.0	46.0
1201364	H1210710-242400	24	38.0	1 1/2"	24	1 1/2-11	50.5	50.0
1201360	H1210710-323200	32	51.0	2"	32	2-11	54.2	65.0

// H1210510

BSPP Male 60° Flare

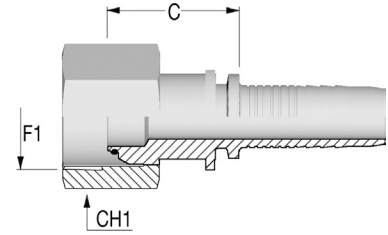
AGR



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1201291	H1210510-030200	3	5.0	3/16"	2	1/8-28	20.3	14.0
1201722	H1210510-040200	4	6.0	1/4"	2	1/8-28	20.8	14.0
1200507	H1210510-040400	4	6.0	1/4"	4	1/4-19	26.3	19.0
1200508	H1210510-040600	4	6.0	1/4"	6	3/8-19	27.8	22.0
1201098	H1210510-040800	4	6.0	1/4"	8	1/2-14	31.3	27.0
1200540	H1210510-050400	5	8.0	5/16"	4	1/4-19	26.3	19.0
1200541	H1210510-050600	5	8.0	5/16"	6	3/8-19	27.8	22.0
1201101	H1210510-050800	5	8.0	5/16"	8	1/2-14	31.3	27.0
1200340	H1210510-060400	6	10.0	3/8"	4	1/4-19	26.3	19.0
1200341	H1210510-060600	6	10.0	3/8"	6	3/8-19	27.8	22.0
1200339	H1210510-060800	6	10.0	3/8"	8	1/2-14	31.3	27.0
1200386	H1210510-080600	8	13.0	1/2"	6	3/8-19	28.6	22.0
1200384	H1210510-080800	8	13.0	1/2"	8	1/2-14	32.1	27.0
1201096	H1210510-081000	8	13.0	1/2"	10	5/8-14	34.1	30.0
1200385	H1210510-081200	8	13.0	1/2"	12	3/4-14	36.1	32.0
1201085	H1210510-100800	10	16.0	5/8"	8	1/2-14	32.1	27.0
1200419	H1210510-101000	10	16.0	5/8"	10	5/8-14	34.1	30.0
1200418	H1210510-101200	10	16.0	5/8"	12	3/4-14	36.1	32.0
1200446	H1210510-121200	12	19.0	3/4"	12	3/4-14	36.6	32.0
1201095	H1210510-121600	12	19.0	3/4"	16	1-11	41.6	41.0
1201355	H1210510-161600	16	25.0	1"	16	1-11	43.4	41.0
1201356	H1210510-162000	16	25.0	1"	20	1 1/4-11	46.4	50.0
1201357	H1210510-202000	20	32.0	1 1/4"	20	1 1/4-11	48.0	50.0
1201358	H1210510-242400	24	38.0	1 1/2"	24	1 1/2-11	51.0	55.0
1201359	H1210510-323200	32	51.0	2"	32	2-11	56.5	70.0

REV.2.2

// H1220813

**BSPP Female 60° Cone with O-Ring
DKOR**

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1200606	H1220511-030200	Crimped	3	5.0	3/16"	2	1/8-28	14.3	14.0
1202325	H1220813-030400	Slip on nut	3	5.0	3/16"	4	1/4-19	20.3	19.0
1201066	H1220511-040200	Crimped	4	6.0	1/4"	2	1/8-28	14.7	14.0
1202326	H1220813-040400	Slip on nut	4	6.0	1/4"	4	1/4-19	20.8	19.0
1202327	H1220813-040600	Slip on nut	4	6.0	1/4"	6	3/8-19	23.3	22.0
1202328	H1220811-050400	Crimped	5	8.0	5/16"	4	1/4-19	16.6	19.0
1202329	H1220813-050600	Slip on nut	5	8.0	5/16"	6	3/8-19	23.3	22.0
1202330	H1220811-060400	Crimped	6	10.0	3/8"	4	1/4-19	17.3	19.0
1202331	H1220813-060600	Slip on nut	6	10.0	3/8"	6	3/8-19	23.3	22.0
1202332	H1220813-060800	Slip on nut	6	10.0	3/8"	8	1/2-14	24.3	27.0
1202571	H1220811-080600	Crimped	8	13.0	1/2"	6	3/8-19	18.6	22.0
1202333	H1220813-080800	Slip on nut	8	13.0	1/2"	8	1/2-14	25.1	27.0
1202334	H1220813-081000	Slip on nut	8	13.0	1/2"	10	5/8-14	28.4	27.0
1202335	H1220813-081200	Slip on nut	8	13.0	1/2"	12	3/4-14	29.0	32.0
1203250	H1220811-100800	Crimped	10	16.0	5/8"	8	1/2-14	21.0	27.0
1202457	H1220811-101000	Crimped	10	16.0	5/8"	10	5/8-14	17.1	27.0
1202336	H1220813-101200	Slip on nut	10	16.0	5/8"	12	3/4-14	29.0	32.0
1202462	H1220811-121200	Crimped	12	19.0	3/4"	12	3/4-14	20.6	32.0
1202337	H1220813-121600	Slip on nut	12	19.0	3/4"	16	1-11	34.0	38.0
1202455	H1220811-161600	Crimped	16	25.0	1"	16	1-11	23.9	38.0
1202338	H1220813-162000	Slip on nut	16	25.0	1"	20	1 1/4-11	39.4	50.0
1202458	H1220812-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 1/4-11	32.0	50.0
1202339	H1220813-202400	Slip on nut	20	32.0	1 1/4"	24	1 1/2-11	41.9	55.0
1202463	H1220812-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 1/2-11	33.8	55.0
1202340	H1220813-243200	Slip on nut	24	38.0	1 1/2"	32	2-11	47.0	70.0
1202014	H1220812-323200	Thrust wire nut	32	51.0	2"	32	2-11	34.0	70.0

Image: insert with Slip on Nut.

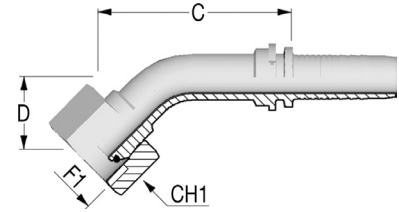
Codes with root "H1220511" are without O-ring

// H1220843

45° BSPP Female 60° Cone with O-Ring

DKOR 45

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202341	H1220843-040400	Slip on nut	4	6.0	1/4"	4	1/4-19	45.5	15.0	19.0
1202342	H1220843-040600	Slip on nut	4	6.0	1/4"	6	3/8-19	41.5	17.5	22.0
1214200	H1220841-050400	Crimped	5	8.0	5/16"	4	1/4-19	49.0	17.5	19.0
1202343	H1220843-050600	Slip on nut	5	8.0	5/16"	6	3/8-19	45.1	18.5	22.0
1202344	H1220843-060600	Slip on nut	6	10.0	3/8"	6	3/8-19	49.9	20.5	22.0
1202345	H1220843-060800	Slip on nut	6	10.0	3/8"	8	1/2-14	45.7	21.0	27.0
1202346	H1220843-080800	Slip on nut	8	13.0	1/2"	8	1/2-14	55.0	21.0	27.0
1202347	H1220843-081000	Slip on nut	8	13.0	1/2"	10	5/8-14	57.2	23.0	27.0
1202348	H1220843-081200	Slip on nut	8	13.0	1/2"	12	3/4-14	56.7	23.0	32.0
1202464	H1220841-101000	Crimped	10	16.0	5/8"	10	5/8-14	64.0	21.5	27.0
1202349	H1220843-101200	Slip on nut	10	16.0	5/8"	12	3/4-14	66.0	24.0	32.0
1202465	H1220841-121200	Crimped	12	19.0	3/4"	12	3/4-14	70.0	28.0	32.0
1202350	H1220843-121600	Slip on nut	12	19.0	3/4"	16	1-11	74.6	31.5	38.0
1202466	H1220841-161600	Crimped	16	25.0	1"	16	1-11	84.0	34.0	38.0
1216663	H1220843-162000	Slip on nut	16	25.0	1"	20	1 1/4-11	97.0	47.5	50.0
1202467	H1220842-202000	Slip on nut	20	32.0	1 1/4"	20	1 1/4-11	101.0	40.0	50.0
1202468	H1220842-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 1/2-11	116.0	46.0	55.0
1202469	H1220842-323200	Thrust wire nut	32	51.0	2"	32	2-11	152.0	60.0	70.0

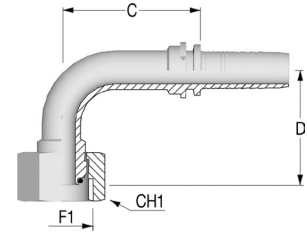
Image: insert with Slip on Nut.

// H1220893

90° BSPP Female 60° Cone with O-Ring

DKOR 90

Solid one piece



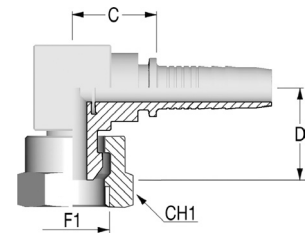
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1200607	H1220591-030200	Crimped	3	5.0	3/16"	2	1/8-28	33.0	30.0	14.0
1201707	H1220591-040200	Crimped	4	6.0	1/4"	2	1/8-28	30.5	32.0	14.0
1202367	H1220893-040400	Slip on nut	4	6.0	1/4"	4	1/4-19	29.3	29.0	19.0
1202353	H1220893-040600	Slip on nut	4	6.0	1/4"	6	3/8-19	29.8	31.0	22.0
1202354	H1220893-050600	Slip on nut	5	8.0	5/16"	6	3/8-19	33.2	36.0	22.0
1202355	H1220893-060600	Slip on nut	6	10.0	3/8"	6	3/8-19	34.8	42.0	22.0
1202356	H1220893-060800	Slip on nut	6	10.0	3/8"	8	1/2-14	34.3	35.5	27.0
1202881	H1220891-080600	Crimped	8	13.0	1/2"	6	3/8-19	35.3	43.0	22.0
1202357	H1220893-080800	Slip on nut	8	13.0	1/2"	8	1/2-14	35.8	41.0	27.0
1202358	H1220893-081000	Slip on nut	8	13.0	1/2"	10	5/8-14	41.6	43.5	27.0
1202359	H1220893-081200	Slip on nut	8	13.0	1/2"	12	3/4-14	41.8	43.0	32.0
1202470	H1220891-101000	Crimped	10	16.0	5/8"	10	5/8-14	47.9	47.0	27.0
1202360	H1220893-101200	Slip on nut	10	16.0	5/8"	12	3/4-14	51.9	49.0	32.0
1202471	H1220891-121200	Crimped	12	19.0	3/4"	12	3/4-14	49.1	53.0	32.0
1202361	H1220893-121600	Slip on nut	12	19.0	3/4"	16	1-11	54.1	60.5	38.0
1202475	H1220891-161600	Crimped	16	25.0	1"	16	1-11	75.1	69.0	38.0
1202362	H1220893-162000	Slip on nut	16	25.0	1"	20	1 1/4-11	75.1	88.5	50.0
1202472	H1220892-202000	Slip on nut	20	32.0	1 1/4"	20	1 1/4-11	76.0	89.0	50.0
1202363	H1220893-202400	Slip on nut	20	32.0	1 1/4"	24	1 1/2-11	101.0	83.0	55.0
1202456	H1220892-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 1/2-11	96.0	96.0	55.0
1202364	H1220893-243200	Slip on nut	24	38.0	1 1/2"	32	2-11	107.8	104.0	70.0
1202473	H1220892-323200	Thrust wire nut	32	51.0	2"	32	2-11	128.0	136.0	70.0

Image: insert with Slip on Nut.

// H1220581

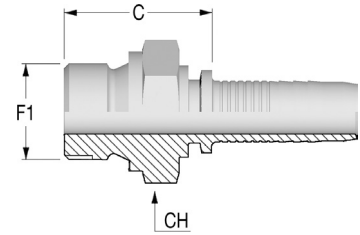
90° Compact BSPP Female 60° Cone

DKR 90



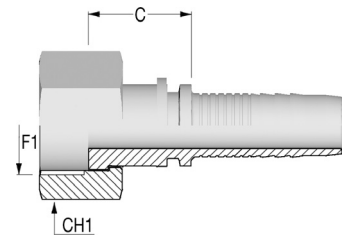
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202422	H1220581-040400	Crimped	4	6.0	1/4"	4	1/4-19	16.8	19.5	19.0
1202274	H1220581-050600	Crimped	5	8.0	5/16"	6	3/8-19	20.2	45.0	22.0
1202025	H1220581-060600	Crimped	6	10.0	3/8"	6	3/8-19	18.8	22.0	22.0
1202026	H1220581-060800	Crimped	6	10.0	3/8"	8	1/2-14	21.5	22.5	27.0
1202027	H1220581-080800	Crimped	8	13.0	1/2"	8	1/2-14	22.6	24.5	27.0
1203213	H1220581-121200	Crimped	12	19.0	3/4"	12	3/4-14	26.7	31.0	32.0
1203330	H1220581-1616B0	Crimped	16	25.0	1"	16	1-11	34.6	37.5	38.0

// H1210610

**BSPP Male Flat Seat
AGR FD**

Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1214181	H1210610-040400	4	6.0	1/4"	4	1/4-19	26.3	19.0
1223423	H1210610-060600	6	10.0	3/8"	6	3/8-19	27.8	22.0
1216596	H1210610-060800	6	10.0	3/8"	8	1/2-14	31.3	27.0
1225012	H1210610-080800	8	13.0	1/2"	8	1/2-14	32.1	27.0

// H1220613

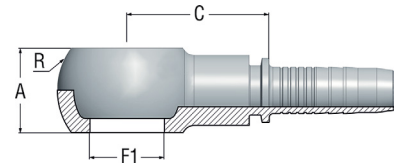
**BSPP Female Flat Seat
DKR FD**

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1202226	H1220613-040400	Slip on nut	4	6.0	1/4"	4	1/4-19	20.3	19.0
1202227	H1220613-060600	Slip on nut	6	10.0	3/8"	6	3/8-19	20.3	22.0
1202140	H1220613-060800	Slip on nut	6	10.0	3/8"	8	1/2-14	20.8	27.0
1202228	H1220613-080800	Slip on nut	8	13.0	1/2"	8	1/2-14	21.6	27.0
1202229	H1220613-081200	Slip on nut	8	13.0	1/2"	12	3/4-14	24.6	32.0
1201684	H1220611-101200	Crimped	10	16.0	5/8"	12	3/4-14	17.6	32.0
1201570	H1220611-121200	Crimped	12	19.0	3/4"	12	3/4-14	18.1	32.0
1216659	H1220611-121600	Crimped	12	19.0	3/4"	16	1-11	20.6	38.0
1201384	H1220611-161600	Crimped	16	25.0	1"	16	1-11	19.9	38.0

Image: insert with Slip on Nut.

// H1230310

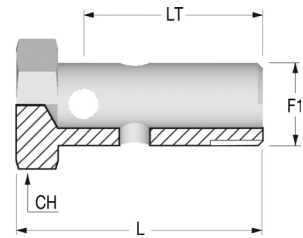
BSPP Banjo - RNR



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	C (mm)	R (mm)	A (mm)
1216840	H1230310-040600	4	6.0	1/4"	3/8-19	30.5	28	18.0
1203086	H1230310-040400	4	6.0	1/4"	1/4-19	26.5	22	14.0
1203087	H1230310-040200	4	6.0	1/4"	1/8-28	20.0	17	10.0
1201763	H1230310-050600	5	8.0	5/16"	3/8-19	30.5	28	18.0
1201754	H1230310-060800	6	10.0	3/8"	1/2-14	34.5	38	22.0
1201760	H1230310-060600	6	10.0	3/8"	3/8-19	24.3	28	18.0
1216843	H1230310-080600	8	13.0	1/2"	3/8-19	30.5	28	18.0
1203048	H1230310-080800	8	13.0	1/2"	1/2-14	35.0	38	22.0
1203085	H1230310-101000	10	16.0	5/8"	5/8-14	38.0	40	24.0
1200423	H1230310-121200	12	19.0	3/4"	3/4-14	41.5	46	29.0
1203084	H1230310-161600	16	25.0	1"	1-11	50.5	58	36.0

// H10V0210

BSPP Bolt

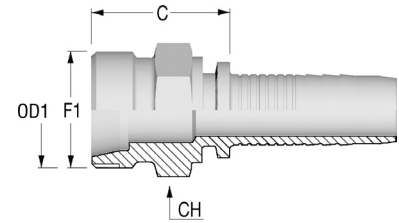


Item Code	Product Code	F1 Dash	F1	LT (mm)	L1 (mm)	CH (mm)
1210366	H10V0210-040000	4	1/4-19	25	30.0	19.0
1210367	H10V0210-060000	6	3/8-19	31	38.0	22.0
1210365	H10V0210-080000	8	1/2-14	38	46.0	27.0
1210404	H10V0210-100000	10	5/8-14	42	51.0	28.0
1210403	H10V0210-120000	12	3/4-14	47	56.0	32.0
1210402	H10V0210-160000	16	1-11	58	69.0	38.0

// DIN METRIC INSERTS

// H1211110

Metric Male 24° Seat
DIN 3853 - Light Series
CEL



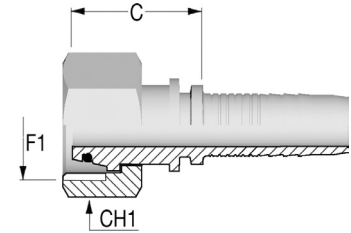
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH (mm)
1200451	H1211110-031200	3	5.0	3/16"	M12X1.5	6	20.8	14.0
1200481	H1211110-041200	4	6.0	1/4"	M12X1.5	6	21.3	14.0
1200482	H1211110-041400	4	6.0	1/4"	M14X1.5	8	21.3	14.0
1201558	H1211110-041600	4	6.0	1/4"	M16X1.5	10	23.3	17.0
1200478	H1211110-041800	4	6.0	1/4"	M18X1.5	12	24.3	19.0
1200518	H1211110-051600	5	8.0	5/16"	M16X1.5	10	23.3	17.0
1201086	H1211110-051800	5	8.0	5/16"	M18X1.5	12	24.3	19.0
1200314	H1211110-061600	6	10.0	3/8"	M16X1.5	10	23.3	17.0
1200315	H1211110-061800	6	10.0	3/8"	M18X1.5	12	24.3	19.0
1200320	H1211110-062200	6	10.0	3/8"	M22X1.5	15	25.3	22.0
1202565	H1211110-081800	8	13.0	1/2"	M18X1.5	12	25.1	19.0
1200358	H1211110-082200	8	13.0	1/2"	M22X1.5	15	26.1	22.0
1200362	H1211110-082600	8	13.0	1/2"	M26X1.5	18	27.1	27.0
1200401	H1211110-102600	10	16.0	5/8"	M26X1.5	18	27.1	27.0
1200432	H1211110-123000	12	19.0	3/4"	M30X2	22	31.6	32.0
1201372	H1211110-163600	16	25.0	1"	M36X2	28	34.4	36.0
1201373	H1211110-204500	20	32.0	1 1/4"	M45X2	35	40.0	46.0
1201374	H1211110-245200	24	38.0	1 1/2"	M52X2	42	42.0	55.0

// H1221513

Metric Female 24° Cone with O-Ring

ISO 8434-1 - Light Series

DKOL



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH1 (mm)
1200595	H1221513-031200	Slip on nut	3	5.0	3/16"	M12X1.5	6	23.9	14.0
1202944	H1221511-041200	Crimped	4	6.0	1/4"	M12X1.5	6	24.8	14.0
1200614	H1221513-041400	Slip on nut	4	6.0	1/4"	M14X1.5	8	24.4	17.0
1200609	H1221513-041600	Slip on nut	4	6.0	1/4"	M16X1.5	10	25.4	19.0
1201060	H1221513-041800	Slip on nut	4	6.0	1/4"	M18X1.5	12	25.4	22.0
1238160	H1221512-051400	Thrust wire nut	5	8.0	5/16"	M14X1.5	8	47.7	17.0
1200642	H1221513-051600	Slip on nut	5	8.0	5/16"	M16X1.5	10	25.4	19.0
1200643	H1221513-051800	Slip on nut	5	8.0	5/16"	M18X1.5	12	25.4	22.0
1200667	H1221513-061800	Slip on nut	6	10.0	3/8"	M18X1.5	12	25.4	22.0
1200670	H1221513-062200	Slip on nut	6	10.0	3/8"	M22X1.5	15	27.4	27.0
1246243	H1221511-061600	Crimped	6	10.0	3/8"	M16X1.5	3/8"	23.4	19.0
1238162	H1221512-081800	Thrust wire nut	8	13.0	1/2"	M18X1.5	12	24.0	22.0
1200707	H1221513-082200	Slip on nut	8	13.0	1/2"	M22X1.5	15	28.2	27.0
1201843	H1221513-082600	Slip on nut	8	13.0	1/2"	M26X1.5	18	29.2	32.0
1225977	H1221513-103000	Slip on nut	10	16.0	5/8"	M30X2		31.2	36.0
1238163	H1221512-102200	Thrust wire nut	10	16.0	5/8"	M22X1.5	15	25.3	27.0
1200736	H1221513-102600	Slip on nut	10	16.0	5/8"	M26X1.5	18	29.2	32.0
1239646	H1221512-122600	Thrust wire nut	12	19.0	3/4"	M26X1.5	18	25.5	32.0
1200762	H1221513-123000	Slip on nut	12	19.0	3/4"	M30X2	22	31.7	36.0
1220609	H1221513-123600	Slip on nut	12	19.0	3/4"	M36X2	28	32.8	41.0
1201593	H1221512-163000	Thrust wire nut	16	25.0	1"	M30X2	22	44.6	36.0
1201385	H1221513-163600	Slip on nut	16	25.0	1"	M36X2	28	33.6	41.0
1225980	H1221513-164500	Slip on nut	16	25.0	1"	M45X2	35	38.5	50.0
1201386	H1221513-204500	Slip on nut	20	32.0	1 1/4"	M45X2	35	40.1	50.0
1201387	H1221513-245200	Slip on nut	24	38.0	1 1/2"	M52X2	42	40.5	60.0

Image: insert with Slip on Nut.

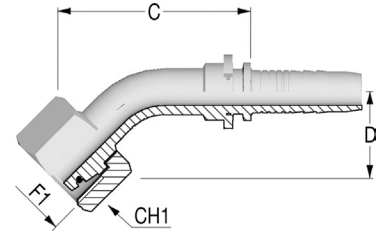
// H1221543

45° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Light Series

DKOL 45

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1200594	H1221543-031200	Slip on nut	3	5.0	3/16"	M12X1.5	6	44.9	19.0	14.0
1216676	H1221541-041200	Crimped	4	6.0	1/4"	M12X1.5	6	45.2	15.5	14.0
1200612	H1221543-041400	Slip on nut	4	6.0	1/4"	M14X1.5	8	43.0	17.5	17.0
1201576	H1221543-041600	Slip on nut	4	6.0	1/4"	M16X1.5	10	42.0	20.0	19.0
1200645	H1221543-051600	Slip on nut	5	8.0	5/16"	M16X1.5	10	47.5	20.0	19.0
1200646	H1221543-051800	Slip on nut	5	8.0	5/16"	M18X1.5	12	47.0	22.0	22.0
1246245	H1221541-061600	Crimped	6	10.0	3/8"	M16X1.5	10	43.0	19.0	19.0
1200671	H1221543-061800	Slip on nut	6	10.0	3/8"	M18X1.5	12	46.8	19.5	22.0
1239971	H1221542-081800	Thrust wire nut	8	13.0	1/2"	M18X1.5	12	52.0	23.0	22.0
1200711	H1221543-082200	Slip on nut	8	13.0	1/2"	M22X1.5	15	55.0	21.0	27.0
1200738	H1221543-102600	Slip on nut	10	16.0	5/8"	M26X1.5	18	65.3	24.0	32.0
1240723	H1221542-122600	Thrust wire nut	12	19.0	3/4"	M26X1.5	20	77.0	34.0	32.0
1200764	H1221543-123000	Slip on nut	12	19.0	3/4"	M30X2	22	69.4	32.0	36.0
1225983	H1221542-163000	Thrust wire nut	16	25.0	1"	M30X2	22	71.1	29.0	36.0
1201390	H1221543-163600	Slip on nut	16	25.0	1"	M36X2	28	91.4	32.0	41.0
1201392	H1221543-204500	Slip on nut	20	32.0	1 1/4"	M45X2	35	100.0	45.0	50.0
1202128	H1221543-245200	Slip on nut	24	38.0	1 1/2"	M52X2	42	114.1	47.0	60.0

Image: insert with Slip on Nut.

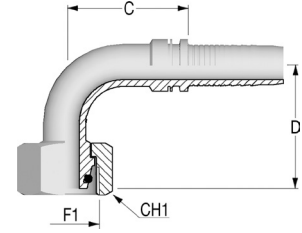
// H1221593

90° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Light Series

DKOL 90

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1200597	H1221593-031200	Slip on nut	3	5.0	3/16"	M12X1.5	6	23.6	33.0	14.0
1203240	H1221591-041200	Crimped	4	6.0	1/4"	M12X1.5	6	29.5	26.0	14.0
1239994	H1221592-041200	Thrust wire nut	4	6.0	1/4"	M12X1.5	6	29.0	34.0	14.0
1200618	H1221593-041400	Slip on nut	4	6.0	1/4"	M14X1.5	8	27.0	33.5	17.0
1200616	H1221593-041600	Slip on nut	4	6.0	1/4"	M16X1.5	10	27.0	34.0	19.0
1203218	H1221593-041800	Slip on nut	4	6.0	1/4"	M18X1.5	12	28.8	35.0	22.0
1200648	H1221593-051600	Slip on nut	5	8.0	5/16"	M16X1.5	10	33.7	38.0	19.0
1200649	H1221593-051800	Slip on nut	5	8.0	5/16"	M18X1.5	12	32.2	40.0	22.0
1246244	H1221591-061600	Crimped	6	10.0	3/8"	M16X1.5	10	36.0	36.0	19.0
1200676	H1221593-061800	Slip on nut	6	10.0	3/8"	M18X1.5	12	32.8	39.0	22.0
1200679	H1221593-062200	Slip on nut	6	10.0	3/8"	M22X1.5	15	35.8	38.5	27.0
1238173	H1221592-081800	Thrust wire nut	8	13.0	1/2"	M18X1.5	12	42.0	44.0	22.0
1200713	H1221593-082200	Slip on nut	8	13.0	1/2"	M22X1.5	15	39.8	40.5	27.0
1203154	H1221593-082600	Slip on nut	8	13.0	1/2"	M26X1.5	18	39.8	41.0	32.0
1201292	H1221593-1022B0	Slip on nut	10	16.0	5/8"	M22X1.5	15	51.4	47.0	27.0
1200740	H1221593-102600	Slip on nut	10	16.0	5/8"	M26X1.5	18	51.4	48.0	32.0
1200742	H1221593-103000	Slip on nut	10	16.0	5/8"	M30X2	22	52.4	49.0	36.0
1239736	H1221592-122600	Thrust wire nut	12	19.0	3/4"	M26X1.5	18	60.0	64.0	32.0
1200767	H1221593-123000	Slip on nut	12	19.0	3/4"	M30X2	22	52.1	59.0	36.0
1216685	H1221593-123600	Slip on nut	12	19.0	3/4"	M36X2	28	60.0	63.0	41.0
1225987	H1221592-163000	Thrust wire nut	16	25.0	1"	M30X2	22	66.0	64.0	36.0
1201391	H1221593-163600	Slip on nut	16	25.0	1"	M36X2	28	75.0	68.0	41.0
1216679	H1221592-203600	Thrust wire nut	20	32.0	1 1/4"	M36X2	28	92.2	86.0	41.0
1201393	H1221593-204500	Slip on nut	20	32.0	1 1/4"	M45X2	35	90.5	89.0	50.0
1201394	H1221593-245200	Slip on nut	24	38.0	1 1/2"	M52X2	42	106.5	97.5	60.0

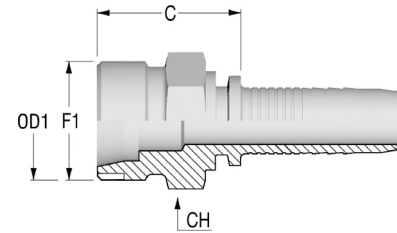
Image: insert with Slip on Nut.

// H1211210

Metric Male 24° Seat

DIN 3853 - Heavy Series

CES



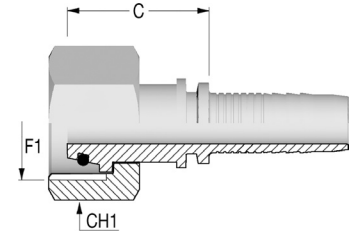
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH (mm)
1201828	H1211210-041400	4	6.0	1/4"	M14X1.5	6	24.3	17.0
1200485	H1211210-041600	4	6.0	1/4"	M16X1.5	8	24.3	17.0
1200477	H1211210-041800	4	6.0	1/4"	M18X1.5	10	25.3	19.0
1200521	H1211210-052000	5	8.0	5/16"	M20X1.5	12	25.3	22.0
1202267	H1211210-061800	6	10.0	3/8"	M18X1.5	10	25.3	19.0
1200316	H1211210-062000	6	10.0	3/8"	M20X1.5	12	25.3	22.0
1200319	H1211210-062200	6	10.0	3/8"	M22X1.5	14	27.3	22.0
1221728	H1211210-062400	6	10.0	3/8"	M24X1.5	16	28.1	24.0
1202564	H1211210-082200	8	13.0	1/2"	M22X1.5	14	28.1	22.0
1200360	H1211210-082400	8	13.0	1/2"	M24X1.5	16	29.1	24.0
1200364	H1211210-083000	8	13.0	1/2"	M30X2	20	33.1	32.0
1200403	H1211210-103000	10	16.0	5/8"	M30X2	20	33.1	32.0
1202526	H1211210-123000	12	19.0	3/4"	M30X2	20	33.6	32.0
1200434	H1211210-123600	12	19.0	3/4"	M36X2	25	37.6	36.0
1203151	H1211210-163600	16	25.0	1"	M36X2	25	38.4	36.0
1201375	H1211210-164200	16	25.0	1"	M42X2	30	42.4	46.0
1201376	H1211210-205200	20	32.0	1 1/4"	M52X2	38	48.0	55.0

// H1221613

Metric Female 24° Cone with O-Ring

ISO 8434-1 - Heavy Series

DKOS



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH1 (mm)
1200596	H1221613-031600	Slip on nut	3	5.0	3/16"	M16X1.5	8	27.2	19.0
1201827	H1221613-041400	Slip on nut	4	6.0	1/4"	M14X1.5	6	26.4	17.0
1200615	H1221613-041600	Slip on nut	4	6.0	1/4"	M16X1.5	8	27.7	19.0
1200610	H1221613-041800	Slip on nut	4	6.0	1/4"	M18X1.5	10	27.6	22.0
1201061	H1221613-042000	Slip on nut	4	6.0	1/4"	M20X1.5	12	27.6	24.0
1201832	H1221613-051800	Slip on nut	5	8.0	5/16"	M18X1.5	10	27.6	22.0
1200644	H1221613-052000	Slip on nut	5	8.0	5/16"	M20X1.5	12	27.6	24.0
1239671	H1221612-061600	Thrust wire nut	6	10.0	3/8"	M16X1.5	8	23.2	19.0
1238179	H1221612-061800	Thrust wire nut	6	10.0	3/8"	M18X1.5	10	22.3	22.0
1200668	H1221613-062000	Slip on nut	6	10.0	3/8"	M20X1.5	12	27.6	24.0
1200669	H1221613-062200	Slip on nut	6	10.0	3/8"	M22X1.5	14	31.1	27.0
1202570	H1221613-062400	Slip on nut	6	10.0	3/8"	M24X1.5	16	30.9	30.0
1239650	H1221612-082000	Thrust wire nut	8	13.0	1/2"	M20X1.5	12	23.2	24.0
1218557	H1221613-082200	Slip on nut	8	13.0	1/2"	M22X1.5	14	31.9	27.0
1200708	H1221613-082400	Slip on nut	8	13.0	1/2"	M24X1.5	16	31.7	30.0
1200710	H1221613-083000	Slip on nut	8	13.0	1/2"	M30X2	20	36.5	36.0
1239651	H1221612-10240Z	Thrust wire nut	10	16.0	5/8"	M24X1.5	16	25.3	30.0
1200737	H1221613-103000	Slip on nut	10	16.0	5/8"	M30X2	20	36.5	36.0
1201732	H1221613-123000	Slip on nut	12	19.0	3/4"	M30X2	20	37.0	36.0
1200763	H1221613-123600	Slip on nut	12	19.0	3/4"	M36X2	25	40.2	46.0
1239744	H1221612-163000	Thrust wire nut	16	25.0	1"	M30X2	20	29.8	36.0
1203099	H1221613-163600	Slip on nut	16	25.0	1"	M36X2	25	41.0	46.0
1201388	H1221613-164200	Slip on nut	16	25.0	1"	M42X2	30	43.1	50.0
1216693	H1221613-204200	Slip on nut	20	32.0	1 1/4"	M42X2	30	44.7	50.0
1201389	H1221613-205200	Slip on nut	20	32.0	1 1/4"	M52X2	38	48.1	60.0
1216695	H1221613-245200	Slip on nut	24	38.0	1 1/2"	M52X2	38	48.1	60.0

Image: insert with Slip on Nut.

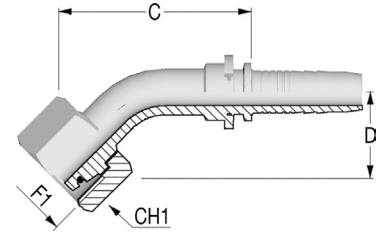
// H1221643

45° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Heavy Series

DKOS 45

Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1216697	H1221643-041400	Slip on nut	4	6.0	1/4"	M14X1.5	6	47.0	20.0	17.0
1200613	H1221643-041600	Slip on nut	4	6.0	1/4"	M16X1.5	8	48.6	16.0	19.0
1200611	H1221643-041800	Slip on nut	4	6.0	1/4"	M18X1.5	10	43.5	19.0	22.0
1240698	H1221643-051800	Slip on nut	5	8.0	5/16"	M18X1.5	10	46.0	18.0	22.0
1200647	H1221643-052000	Slip on nut	5	8.0	5/16"	M20X1.5	12	48.1	21.0	24.0
1239968	H1221642-061800	Thrust wire nut	6	10.0	3/8"	M18X1.5	10	47.0	21.0	22.0
1200672	H1221643-062000	Slip on nut	6	10.0	3/8"	M20X1.5	12	50.6	20.0	24.0
1200673	H1221643-062200	Slip on nut	6	10.0	3/8"	M22X1.5	14	52.9	21.0	27.0
1242602	H1221642-082000	Thrust wire nut	8	13.0	1/2"	M20X1.5	12	54.0	24.0	24.0
1200712	H1221643-082400	Slip on nut	8	13.0	1/2"	M24X1.5	16	55.8	21.5	30.0
1201300	H1221643-103000	Slip on nut	10	16.0	5/8"	M30X2	20	66.3	30.0	36.0
1202891	H1221643-123000	Slip on nut	12	19.0	3/4"	M30X2	20	66.1	29.0	36.0
1200765	H1221643-123600	Slip on nut	12	19.0	3/4"	M36X2	25	69.5	33.0	46.0
1203098	H1221643-163600	Slip on nut	16	25.0	1"	M36X2	25	89.7	36.0	46.0
1201395	H1221643-164200	Slip on nut	16	25.0	1"	M42X2	30	110.3	40.5	50.0
1201398	H1221643-205200	Slip on nut	20	32.0	1 1/4"	M52X2	38	109.0	45.0	60.0

Image: insert with Slip on Nut.

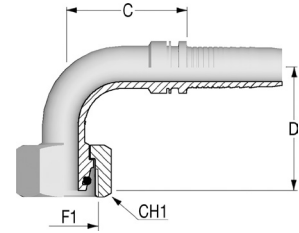
// H1221693

90° Metric Female 24° Cone with O-Ring

ISO 8434-1 - Heavy Series

DKOS 90

Solid one piece

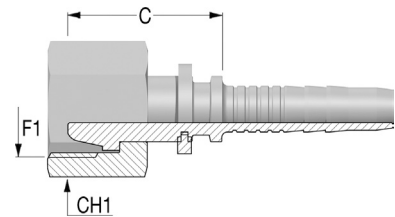


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1201065	H1221693-041400	Slip on nut	4	6.0	1/4"	M14X1.5	6	27.3	33.0	17.0
1200619	H1221693-041600	Slip on nut	4	6.0	1/4"	M16X1.5	8	27.3	33.0	19.0
1200617	H1221693-041800	Slip on nut	4	6.0	1/4"	M18X1.5	10	26.8	34.0	22.0
1216700	H1221693-051800	Slip on nut	5	8.0	5/16"	M18X1.5	10	33.2	39.0	22.0
1200650	H1221693-052000	Slip on nut	5	8.0	5/16"	M20X1.5	12	33.2	39.0	24.0
1239989	H1221692-061600	Thrust wire nut	6	10.0	3/8"	M16X1.5	8	33.0	38.0	19.0
1239926	H1221692-061800	Thrust wire nut	6	10.0	3/8"	M18X1.5	10	35.0	38.0	22.0
1200677	H1221693-062000	Slip on nut	6	10.0	3/8"	M20X1.5	12	34.3	38.5	24.0
1200678	H1221693-062200	Slip on nut	6	10.0	3/8"	M22X1.5	14	34.3	40.5	27.0
1240110	H1221692-082000	Thrust wire nut	8	13.0	1/2"	M20X1.5	12	40.0	45.0	24.0
1200714	H1221693-082400	Slip on nut	8	13.0	1/2"	M24X1.5	16	39.8	41.5	30.0
1201253	H1221693-083000	Slip on nut	8	13.0	1/2"	M30X2	20	45.8	50.0	36.0
1240088	H1221692-102400	Thrust wire nut	10	16.0	5/8"	M24X1.5	16	52.0	56.0	30.0
1200741	H1221693-103000	Slip on nut	10	16.0	5/8"	M30X2	20	47.9	55.0	36.0
1200766	H1221693-123000	Slip on nut	12	19.0	3/4"	M30X2	20	50.6	58.0	36.0
1200768	H1221693-123600	Slip on nut	12	19.0	3/4"	M36X2	25	50.6	59.5	46.0
1203097	H1221693-163600	Slip on nut	16	25.0	1"	M36X2	25	77.6	73.5	46.0
1201396	H1221693-164200	Slip on nut	16	25.0	1"	M42X2	30	75.6	79.0	50.0
1203096	H1221693-204200	Slip on nut	20	32.0	1 1/4"	M42X2	30	95.0	88.0	50.0
1201397	H1221693-205200	Slip on nut	20	32.0	1 1/4"	M52X2	38	94.0	92.0	60.0
1216710	H1221693-245200	Slip on nut	24	38.0	1 1/2"	M52X2	38	106.0	103.0	60.0

Image: insert with Slip on Nut.

// H1221313

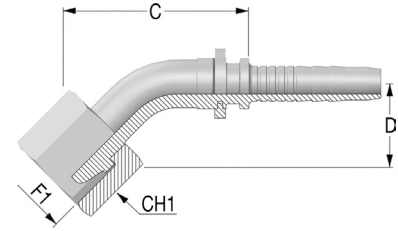
Universal Metric Female



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1200631	H1221313-041400	Slip on nut	4	6.0	1/4"	14	M14X1.5	22.3	17.0
1200632	H1221313-041600	Slip on nut	4	6.0	1/4"	16	M16X1.5	22.3	19.0
1200633	H1221313-041800	Slip on nut	4	6.0	1/4"	18	M18X1.5	22.3	22.0
1200658	H1221313-051600	Slip on nut	5	8.0	5/16"	16	M16X1.5	22.3	19.0
1200659	H1221313-051800	Slip on nut	5	8.0	5/16"	18	M18X1.5	22.3	22.0
1200698	H1221313-061800	Slip on nut	6	10.0	3/8"	18	M18X1.5	22.3	22.0
1200729	H1221313-082200	Slip on nut	8	13.0	1/2"	22	M22X1.5	24.7	27.0
1200753	H1221313-102600	Slip on nut	10	16.0	5/8"	26	M26X1.5	25.1	32.0

// H1221343

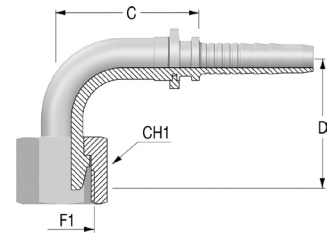
45° Universal Metric Female



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1216669	H1221343-041400	Slip on nut	4	6.0	1/4"	14	M14X1.5	36.5	16.0	17.0
1200660	H1221343-051600	Slip on nut	5	8.0	5/16"	16	M16X1.5	42.1	19.0	19.0
1201450	H1221343-061800	Slip on nut	6	10.0	3/8"	18	M18X1.5	42.8	20.0	22.0
1225972	H1221343-082200	Slip on nut	8	13.0	1/2"	22	M22X1.5	54.9	20.0	27.0
1225973	H1221343-102600DTZ	Slip on nut	10	16.0	5/8"	26	M26X1.5	54.0	22.0	32.0

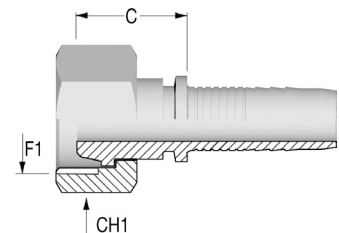
// H1221393

90° Universal Metric Female



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1225975	H1221393-041400	Slip on nut	4	6.0	1/4"	14	M14X1.5	28.4	30.0	17.0
1201452	H1221393-041600	Slip on nut	4	6.0	1/4"	16	M16X1.5	28.3	33.0	19.0
1200661	H1221393-051600	Slip on nut	5	8.0	5/16"	16	M16X1.5	34.2	36.0	19.0
1201323	H1221393-051800	Slip on nut	5	8.0	5/16"	18	M18X1.5	34.0	32.0	22.0
1200701	H1221393-061800	Slip on nut	6	10.0	3/8"	18	M18X1.5	32.8	37.0	22.0
1201580	H1221393-062200DTZ	Slip on nut	6	10.0	3/8"	22	M22X1.5	30.0	30.0	27.0
1200730	H1221393-082200	Slip on nut	8	13.0	1/2"	22	M22X1.5	39.8	40.0	27.0
1216672	H1221393-102600	Slip on nut	10	16.0	5/8"	26	M26X1.5	51.0	46.0	32.0

// H1221013

Metric Female 60° Cone
DIN 3863

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1200759	H1221013-123000	Slip on nut	12	19.0	3/4"	30	M30X1.5	21.6	36.0
1201572	H1221013-163800	Slip on nut	16	25.0	1"	38	M38X1.5	28.0	46.0

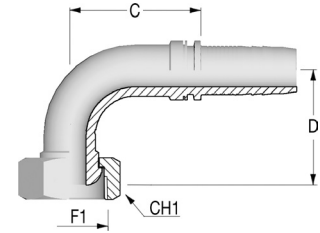
REV.2.2

// H1221093

90° Metric Female 60° Cone

DIN 3863

Solid one piece

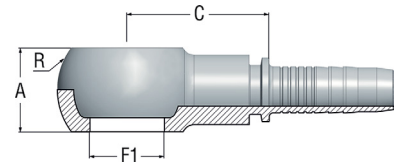


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1202056	H1221093-123000	Slip on nut	12	19.0	3/4"	30	M30X1.5	54.6	47.0	36.0
1201620	H1221093-163800	Slip on nut	16	25.0	1"	38	M38X1.5	72.6	60.0	46.0

// H1230910

Metric Banjo

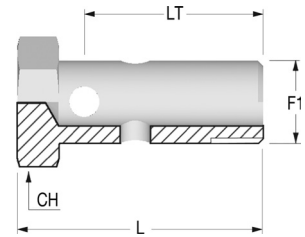
RNM



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	C (mm)	R (mm)	A (mm)
1202577	H1230910-031000	3	5.0	3/16"	M10X1.0	24.0	17	10.0
1200469	H1230910-041200	4	6.0	1/4"	M12X1.5	28.5	20	12.0
1200470	H1230910-041400	4	6.0	1/4"	M14X1.5	27.5	24	14.0
1200468	H1230910-041000	4	6.0	1/4"	M10X1.0	25.0	17	10.0
1200514	H1230910-051400	5	8.0	5/16"	M14X1.5	27.5	24	14.0
1200515	H1230910-051600	5	8.0	5/16"	M16X1.5	30.5	28	18.0
1200513	H1230910-051200	5	8.0	5/16"	M12X1.5	28.5	24	12.0
1200516	H1230910-051800	5	8.0	5/16"	M18X1.5	28.5	32	20.0
1200310	H1230910-061600	6	10.0	3/8"	M16X1.5	30.5	28	18.0
1200309	H1230910-061400	6	10.0	3/8"	M14X1.5	27.5	24	14.0
1200311	H1230910-061800	6	10.0	3/8"	M18X1.5	31.5	32	20.0
1200347	H1230910-082200	8	13.0	1/2"	M22X1.5	35.0	39	22.0
1200346	H1230910-081800	8	13.0	1/2"	M18X1.5	32.0	32	20.0
1200389	H1230910-102200	10	16.0	5/8"	M22X1.5	35.0	39	23.5
1200422	H1230910-122600	12	19.0	3/4"	M26X1.5	38.5	46	29.0
1203083	H1230910-163000	16	25.0	1"	M30X1.5	42.5	54	36.0

// H10V0810

Metric Bolt



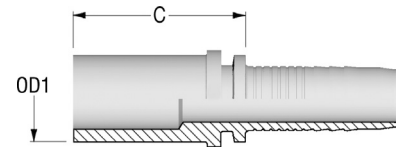
Item Code	Product Code	F1 Dash	F1	LT (mm)	L1 (mm)	CH (mm)
1210374	H10V0810-100000	10	M10X1.0	19	24.0	14.0
1210375	H10V0810-120000	12	M12X1.5	24	29.0	17.0
1210368	H10V0810-140000	14	M14X1.5	28	34.0	19.0
1210384	H10V0810-160000	16	M16X1.5	34	41.0	22.0
1210369	H10V0810-180000	18	M18X1.5	37	44.0	24.0
1210371	H10V0810-220000	22	M22X1.5	41	48.0	27.0
1210406	H10V0810-260000	26	M26X1.5	42	52.0	32.0
1210405	H10V0810-300000	30	M30X1.5	51	62.0	38.0

// H1252010

Metric Straight Standpipe

DIN 2353

RSL/RSS



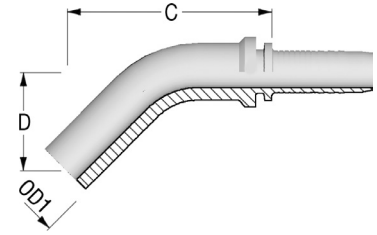
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	OD1	C (mm)
1200855	H1252010-030600	3	5.0	3/16"	6	27.8
1200856	H1252010-030800	3	5.0	3/16"	8	29.8
1200865	H1252010-040600	4	6.0	1/4"	6	28.3
1200867	H1252010-040800	4	6.0	1/4"	8	30.2
1200859	H1252010-041000	4	6.0	1/4"	10	32.2
1200860	H1252010-041200	4	6.0	1/4"	12	31.2
1200878	H1252010-050800	5	8.0	5/16"	8	30.3
1200871	H1252010-051000	5	8.0	5/16"	10	30.2
1200872	H1252010-051200	5	8.0	5/16"	12	32.7
1200793	H1252010-061000	6	10.0	3/8"	10	30.3
1200794	H1252010-061200	6	10.0	3/8"	12	29.3
1200796	H1252010-061400	6	10.0	3/8"	14	35.8
1200797	H1252010-061500	6	10.0	3/8"	15	34.8
1216922	H1252010-081000	8	13.0	1/2"	10	32.5
1200809	H1252010-081200	8	13.0	1/2"	12	32.1
1200811	H1252010-081400	8	13.0	1/2"	14	36.1
1200812	H1252010-081500	8	13.0	1/2"	15	32.1
1200813	H1252010-081600	8	13.0	1/2"	16	37.1
1200815	H1252010-081800	8	13.0	1/2"	18	36.0
1200828	H1252010-101800	10	16.0	5/8"	18	34.2
1200829	H1252010-102000	10	16.0	5/8"	20	44.2
1200832	H1252010-102200	10	16.0	5/8"	22	37.2
1200838	H1252010-122000	12	19.0	3/4"	20	45.5
1200840	H1252010-122200	12	19.0	3/4"	22	36.5
1200841	H1252010-122500	12	19.0	3/4"	25	48.5

// H1252040

45° Metric Standpipe

DIN 2353 - RSL45/RSS 45

Solid one piece



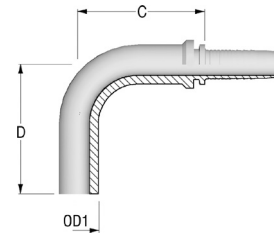
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	OD1	C (mm)	D Drop (mm)
1200863	H1252040-040600	4	6.0	1/4"	6	50.1	28.0
1200864	H1252040-040800	4	6.0	1/4"	8	43.2	23.0
1200862	H1252040-041000	4	6.0	1/4"	10	48.0	24.0
1200876	H1252040-051000	5	8.0	5/16"	10	48.4	24.0
1200877	H1252040-051200	5	8.0	5/16"	12	55.4	28.0
1200800	H1252040-061000	6	10.0	3/8"	10	48.5	24.0
1200801	H1252040-061200	6	10.0	3/8"	12	55.5	28.0
1200802	H1252040-061400	6	10.0	3/8"	14	53.1	28.0
1200817	H1252040-081500	8	13.0	1/2"	15	62.6	28.5
1200818	H1252040-081600	8	13.0	1/2"	16	63.3	32.0
1200843	H1252040-122200	12	19.0	3/4"	22	74.3	37.0
1200844	H1252040-122500	12	19.0	3/4"	25	83.0	44.0
1214232	H1252040-163000	16	25.0	1"	30	137.0	46.1

// H1252090

90° Metric Standpipe

DIN 2353 - RSL 90/RSS90

Solid one piece

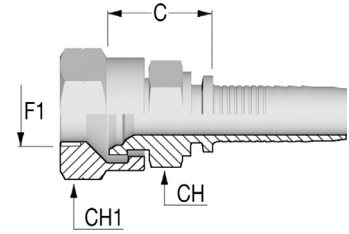


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	OD1	C (mm)	D Drop (mm)
1200857	H1252090-030600	3	5.0	3/16"	6	24.5	36.0
1200869	H1252090-040600	4	6.0	1/4"	6	25.4	36.0
1200870	H1252090-040800	4	6.0	1/4"	8	25.9	44.0
1200868	H1252090-041000	4	6.0	1/4"	10	37.0	42.0
1202296	H1252090-041200	4	6.0	1/4"	12	38.0	50.0
1200879	H1252090-051000	5	8.0	5/16"	10	28.6	48.5
1200880	H1252090-051200	5	8.0	5/16"	12	39.4	55.0
1200803	H1252090-061000	6	10.0	3/8"	10	30.7	42.0
1200804	H1252090-061200	6	10.0	3/8"	12	35.0	50.0
1200805	H1252090-061400	6	10.0	3/8"	14	37.0	50.0
1218454	H1252090-081200	8	13.0	1/2"	12	41.1	52.0
1200822	H1252090-081500	8	13.0	1/2"	15	44.7	57.0
1200823	H1252090-081600	8	13.0	1/2"	16	43.7	64.0
1203079	H1252090-081800	8	13.0	1/2"	18	58.1	59.0
1200835	H1252090-101800	10	16.0	5/8"	18	52.2	58.0
1200836	H1252090-102000	10	16.0	5/8"	20	62.6	70.0
1210832	H1252090-102200	10	16.0	5/8"	22	49.4	64.0
1203081	H1252090-122000	12	19.0	3/4"	20	63.4	70.0
1200846	H1252090-122200	12	19.0	3/4"	22	53.1	67.5
1200847	H1252090-122500	12	19.0	3/4"	25	63.2	85.0
1214233	H1252090-162500	16	25.0	1"	25	73.1	98.5
1202886	H1252090-162800	16	25.0	1"	28	73.1	89.5
1214234	H1252090-163000	16	25.0	1"	30	73.1	102.5
1214235	H1252090-203500	20	32.0	1 1/4"	35	89.0	106.5

// JIS INSERTS

// H122381Z

JIS Female 60° Seat Flare - B 8363 (Type F)

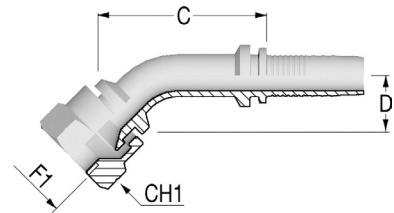


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1202947	H122381Z-040400	Crimped	4	6.0	1/4"	4	1/4-19	20.8	17.0	19.0
1202879	H122381Z-060600	Crimped	6	10.0	3/8"	6	3/8-19	21.8	19.0	22.0
1202878	H122381Z-080800	Crimped	8	13.0	1/2"	8	1/2-14	23.6	22.0	27.0
1203106	H122381Z-121200	Crimped	12	19.0	3/4"	12	3/4-14	27.1	30.0	36.0
1203105	H122381Z-161600	Crimped	16	25.0	1"	16	1-11	32.9	36.0	41.0
1201585	H122381Z-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 1/4-11	39.5	46.0	50.0
1201677	H122381Z-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 1/2-11	41.5	50.0	55.0

Image: insert with Crimped Nut.

// H122384Z

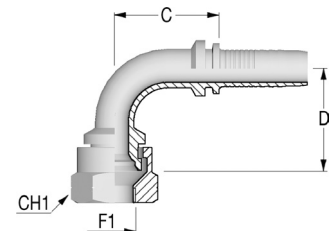
45° JIS Female 60° Seat Flare - B 8363 (Type F)



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1203104	H122384Z-040400	Crimped	4	6.0	1/4"	4	1/4-19	42.5	15.0	19.0

// H122389Z

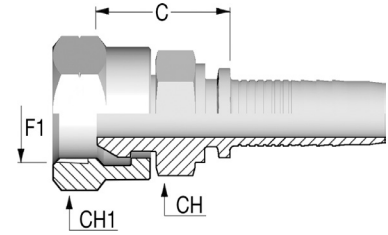
90° JIS Female 60° Seat Flare - B 8363 (Type F)



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1203095	H122389Z-040400	Crimped	4	6.0	1/4"	4	1/4-19	27.3	29.5	19.0
1203094	H122389Z-060600	Crimped	6	10.0	3/8"	6	3/8-19	31.3	33.0	22.0
1203093	H122389Z-080800	Crimped	8	13.0	1/2"	8	1/2-14	37.3	36.5	27.0
1203092	H122389Z-121200	Crimped	12	19.0	3/4"	12	3/4-14	46.1	52.0	36.0
1203091	H122389Z-161600	Crimped	16	25.0	1"	16	1-11	77.1	64.5	41.0

// H1223711

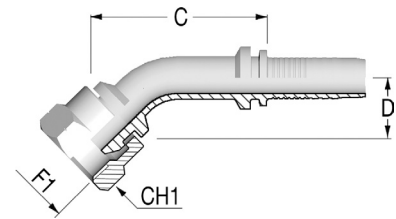
JIS Female 60° Cone - B 8363 (Type C)



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1203110	H1223711-040400	Crimped	4	6.0	1/4"	4	1/4-19	24.3	17.0	19.0
1203109	H1223711-060600	Crimped	6	10.0	3/8"	6	3/8-19	25.5	19.0	22.0
1203108	H1223711-080800	Crimped	8	13.0	1/2"	8	1/2-14	26.1	22.0	27.0
1226069	H1223711-100800	Crimped	10	16.0	5/8"	8	1/2-14	27.1	24.0	27.0
1226549	H1223711-101200	Crimped	10	16.0	5/8"	12	3/4-14	29.6	30.0	36.0
1203107	H1223711-121200	Crimped	12	19.0	3/4"	12	3/4-14	30.1	30.0	36.0
1214218	H1223711-161600	Crimped	16	25.0	1"	16	1-11	34.9	36.0	41.0

// H1223741

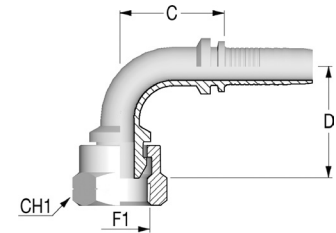
45° JIS Female 60° Cone - B 8363 (Type C)



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1216798	H1223741-040400	Crimped	4	6.0	1/4"	4	1/4-19	24.3	19.0	19.0
1216799	H1223741-060600	Crimped	6	10.0	3/8"	6	3/8-19	26.5	21.0	22.0
1216800	H1223741-080800	Crimped	8	13.0	1/2"	8	1/2-14	27.0	22.0	27.0
1216801	H1223741-121200	Crimped	12	19.0	3/4"	12	3/4-14	19.9	25.0	36.0

// H1223791

90° JIS Female 60° Cone - B 8363 (Type C)

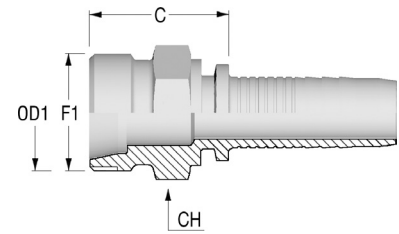


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1216803	H1223791-040400	Crimped	4	6.0	1/4"	4	1/4-19	25.3	33.0	19.0
1216805	H1223791-060600	Crimped	6	10.0	3/8"	6	3/8-19	32.3	36.5	22.0
1216806	H1223791-080800	Crimped	8	13.0	1/2"	8	1/2-14	37.3	38.5	27.0

// FRENCH INSERTS

// H1211810

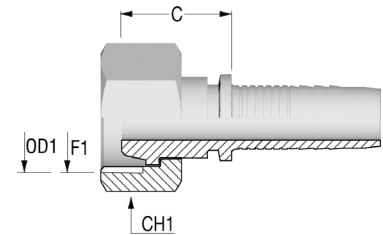
Metric Male - French Type



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH (mm)
1200317	H1211810-062000	6	10.0	3/8"	M20X1.5	13.25	25.3	22.0
1200361	H1211810-082400	8	13.0	1/2"	M24X1.5	16.75	27.1	24.0
1200404	H1211810-103000	10	16.0	5/8"	M30X1.5	21.25	31.1	30.0
1200435	H1211810-123600	12	19.0	3/4"	M36X1.5	26.75	33.6	36.0

// H1221813

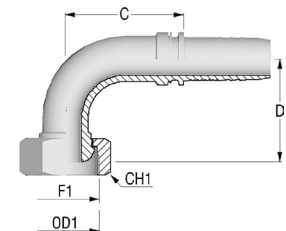
Metric Female - French Type



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH1 (mm)
1200651	H1221813-052000	Slip on nut	5	8.0	5/16"	M20X1.5		27.6	24.0
1200681	H1221813-062000	Slip on nut	6	10.0	3/8"	M20X1.5		27.6	24.0
1200717	H1221813-082400	Slip on nut	8	13.0	1/2"	M24X1.5		31.7	30.0
1200744	H1221813-103000	Slip on nut	10	16.0	5/8"	M30X1.5	22	26.6	36.0
1200770	H1221813-123600	Slip on nut	12	19.0	3/4"	M36X1.5	28	27.0	42.0

// H1221893

90° Metric Female - French Type

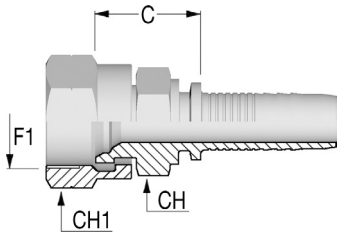


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1200654	H1221893-052000	Slip on nut	5	8.0	5/16"	M20X1.5	14	32.5	36.5	24.0
1200683	H1221893-062000	Slip on nut	6	10.0	3/8"	M20X1.5		37.0	44.0	24.0
1200719	H1221893-082400	Slip on nut	8	13.0	1/2"	M24X1.5	16	39.5	46.0	30.0
1203156	H1221893-103000	Slip on nut	10	16.0	5/8"	M30X1.5	22	43.0	49.0	36.0
1200773	H1221893-123600	Slip on nut	12	19.0	3/4"	M36X1.5	28	46.6	48.5	42.0

// KOMATSU INSERTS

// H1224011

Komatsu Female

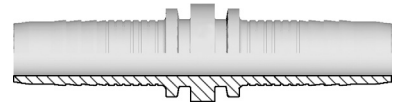


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1200502	H1224011-041400	Crimped	4	6.0	1/4"	14	M14X1.5	20.8	17.0	19.0
1216808	H1224011-061400	Crimped	6	10.0	3/8"	14	M14X1.5	20.8	17.0	19.0
1200334	H1224011-061800	Crimped	6	10.0	3/8"	18	M18X1.5	21.8	19.0	22.0
1202688	H1224011-082200	Crimped	8	13.0	1/2"	22	M22X1.5	23.6	22.0	27.0
1200414	H1224011-102400	Crimped	10	16.0	5/8"	24	M24X1.5	27.1	30.0	32.0
1200444	H1224011-123000	Crimped	12	19.0	3/4"	30	M30X1.5	27.6	30.0	36.0
1201720	H1224011-163300	Crimped	16	25.0	1"	33	M33X1.5	35.7	36.0	41.0

// HOSE MENDER

// H12C5610

Hose Mender

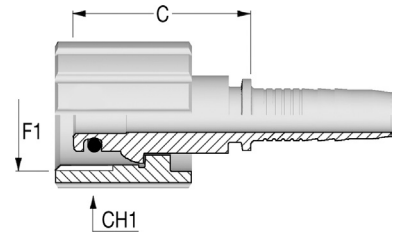


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)
1202949	H12C5610-040400	4	6.0	1/4"
1202870	H12C5610-050500	5	8.0	5/16"
1202868	H12C5610-060600	6	10.0	3/8"
1202867	H12C5610-080800	8	13.0	1/2"
1203160	H12C5610-101000	10	16.0	5/8"
1203161	H12C5610-121200	12	19.0	3/4"
1220608	H12C5610-161600	16	25.0	1"
1220607	H12C5610-202000	20	32.0	1 1/4"
1220605	H12C5610-242400	24	38.0	1 1/2"
1220606	H12C5610-323200	32	51.0	2"

// PRESSURE WASHER

// H1224914

Universal Female for Pressure Washer

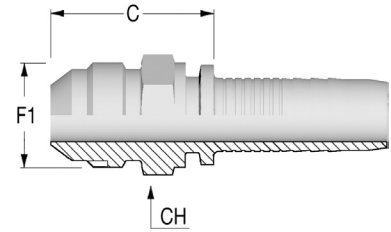


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1203350	H1224914-042200	Slip on nut	4	6.0	1/4"	22	M22X1.5	36.8	35.0
1203351	H1224914-052200	Slip on nut	5	8.0	5/16"	22	M22X1.5	36.8	35.0
1203352	H1224914-062200	Slip on nut	6	10.0	3/8"	22	M22X1.5	36.8	35.0

// JIC 37° INSERTS

// H1812510 **NEW**

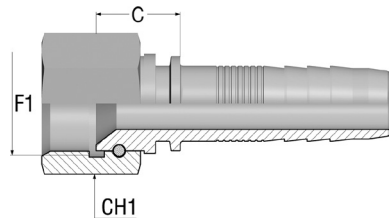
JIC Male 37° Cone
AGJ



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1255921	H1812510-040400	4	6.0	1/4"	4	7/16-20	25.3	12.0
1255939	H1812510-060600	6	10.0	3/8"	6	9/16-18	27.0	17.0
1255965	H1812510-080800	8	13.0	1/2"	8	3/4-16	30.6	19.0
1255988	H1812510-101000	10	16.0	5/8"	10	7/8-14	35.3	24.0
1256038	H1812510-121200	12	19.0	3/4"	12	1 1/16-12	39.1	27.0
1255826	H1812510-161600	16	25.0	1"	16	1 5/16-12	46.1	36.0
1257092	H1812510-202000	20	32.0	1 1/4"	20	1 5/8-12	50.4	46.0
1258599	H1812510-242400	24	38.0	1 1/2"	24	1 7/8-12	56.5	50.0

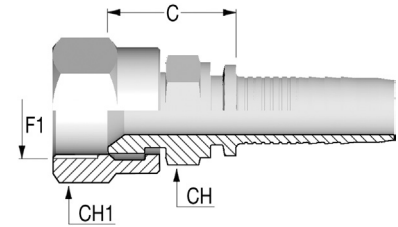
// H1822512 **NEW**

JIC Female 37° Seat
DKJ



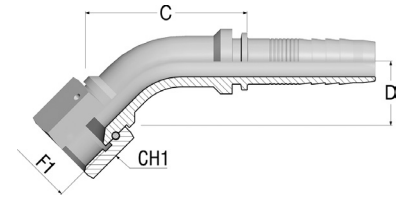
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1258631	H1822511-040400	Crimped	4	6.0	1/4"	4	7/16-20	14.6	16.0
1258632	H1822511-060600	Crimped	6	10.0	3/8"	6	9/16-18	16.0	19.0
1258633	H1822511-080800	Crimped	8	13.0	1/2"	8	3/4-16	18.6	25.0
1258634	H1822511-101000	Crimped	10	16.0	5/8"	10	7/8-14	20.3	27.0
1258252	H1822512-121200	Thrust wire nut	12	19.0	3/4"	12	1 1/16-12	22.8	32.0
1258307	H1822512-121600	Thrust wire nut	12	19.0	3/4"	16	1 5/16-12	24.6	38.0
1258265	H1822512-161600	Thrust wire nut	16	25.0	1"	16	1 5/16-12	18.5	38.0
1258328	H1822512-162000	Thrust wire nut	16	25.0	1"	20	1 5/8-12	29.2	50.0
1258498	H1822512-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	30.0	50.0
1258507	H1822512-202400	Thrust wire nut	20	32.0	1 1/4"	24	1 7/8-12	34.0	55.0
1258332	H1822512-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	23.5	55.0

Image: insert with Thrust Wire Nut.

// H1826511 **NEW****JIC Female 37° Seat with Stem Hexagon
DKJ**

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1255923	H1826511-040400	Crimped	4	6.0	1/4"	4	7/16-20	19.6	14.0	16.0
1255950	H1826511-060600	Crimped	6	10.0	3/8"	6	9/16-18	22.0	17.0	19.0
1255967	H1826511-080800	Crimped	8	13.0	1/2"	8	3/4-16	25.6	19.0	25.0
1255990	H1826511-101000	Crimped	10	16.0	5/8"	10	7/8-14	28.3	24.0	27.0
1256041	H1826511-121200	Crimped	12	19.0	3/4"	12	1 1/16-12	30.1	27.0	32.0
1255808	H1826512-161600	Thrust wire nut	16	25.0	1"	16	1 5/16-12	38.6	36.0	38.0
1255810	H1826512-162000	Thrust wire nut	16	25.0	1"	20	1 5/8-12	41.2	41.0	50.0
1255909	H1826512-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	43.0	46.0	50.0
1257202	H1826512-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	48.4	50.0	55.0
1257200	H1826512-323200	Thrust wire nut	32	51.0	2"	32	2 1/2-12	59.2	65.0	70.0

Image: insert with Crimped Nut.

// H1822541 **NEW****45° JIC Female 37° Seat
Medium Drop
DKJ 45M
Solid one piece**

Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1255928	H1822541-040400	Crimped	4	6.0	1/4"	4	7/16-20	38.0	15.5	16.0
1255956	H1822541-060600	Crimped	6	10.0	3/8"	6	9/16-18	50.0	17.5	19.0
1255969	H1822541-080800	Crimped	8	13.0	1/2"	8	3/4-16	52.0	20.0	25.0
1256026	H1822541-101000	Crimped	10	16.0	5/8"	10	7/8-14	57.0	29.0	27.0
1256047	H1822542-121200	Thrust wire nut	12	19.0	3/4"	12	1 1/16-12	70.0	27.5	32.0
1258345	H1822542-121600	Thrust wire nut	12	19.0	3/4"	16	1 5/16-12	69.0	33.5	38.0
1255873	H1822542-161600	Thrust wire nut	16	25.0	1"	16	1 5/16-12	85.0	31.0	38.0
1257075	H1822542-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	98.0	37.0	50.0
1258438	H1822542-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	118.0	43.5	55.0

Image: insert with Thrust Wire Nut.

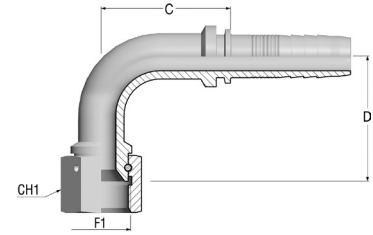
// H1822591 **NEW**

90° JIC Female 37° Seat

Medium Drop

DKJ 90M

Solid one piece



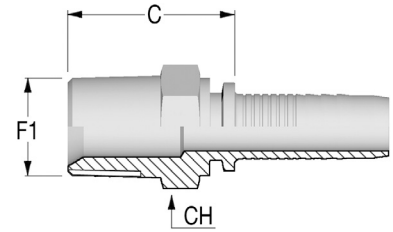
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1255925	H1822591-040400	Crimped	4	6.0	1/4"	4	7/16-20	25.0	29.5	16.0
1255958	H1822591-060600	Crimped	6	10.0	3/8"	6	9/16-18	32.0	35.0	19.0
1255971	H1822591-080800	Crimped	8	13.0	1/2"	8	3/4-16	36.0	40.0	25.0
1256024	H1822591-101000	Crimped	10	16.0	5/8"	10	7/8-14	46.0	52.0	27.0
1258264	H1822592-121200	Thrust wire nut	12	19.0	3/4"	12	1 1/16-12	60.0	57.0	32.0
1258342	H1822592-121600	Thrust wire nut	12	19.0	3/4"	16	1 5/16-12	58.0	63.5	38.0
1255867	H1822592-161600	Thrust wire nut	16	25.0	1"	16	1 5/16-12	76.0	67.0	38.0
1257204	H1822592-20200M	Thrust wire nut	20	32.0	1 1/4"	20	1 5/8-12	84.0	78.0	50.0
1257207	H1822592-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 7/8-12	104.0	92.0	55.0

Image: insert with Thrust Wire Nut.

// NPTF INSERTS

// H1812810 **NEW**

NPTF Male 60° Seat
AGN

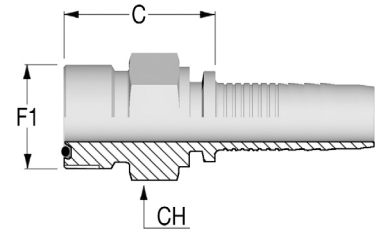


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1257080	H1812810-121200	12	19.0	3/4"	12	3/4-14	36.1	27.0
1255828	H1812810-161600	16	25.0	1"	16	1-11 1/2	47.1	36.0
1257086	H1812810-202000	20	32.0	1 1/4"	20	1 1/4-11 1/2	50.9	46.0
1257183	H1812810-242400	24	38.0	1 1/2"	24	1 1/2-11 1/2	54.5	50.0
1257185	H1812810-323200	32	51.0	2"	32	2-11 1/2	63.4	65.0

// ORFS INSERTS

// H1812410 **NEW**

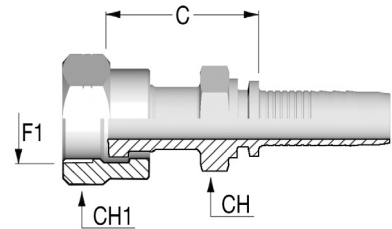
ORFS Male



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1255932	H1812410-040400	4	6.0	1/4"	4	9/16-18	22.3	17.0
1255954	H1812410-060600	6	10.0	3/8"	6	11/16-16	25.0	19.0
1255975	H1812410-080800	8	13.0	1/2"	8	13/16-16	27.1	22.0
1256029	H1812410-101000	10	16.0	5/8"	10	1-14	31.3	27.0
1256049	H1812410-121200	12	19.0	3/4"	12	1 3/16-12	36.1	32.0
1257070	H1812410-161600	16	25.0	1"	16	1 7/16-12	40.6	38.0
1257090	H1812410-202000	20	32.0	1 1/4"	20	1 11/16-12	43.4	46.0

// H1822411 **NEW**

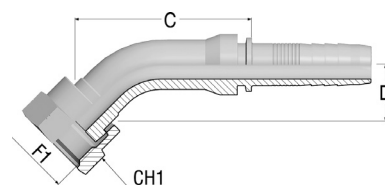
ORFS Female with Stem Hexagon



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)	CH1 (mm)
1255930	H1822411-040400	Crimped	4	6.0	1/4"	4	9/16-18	27.5	14.0	17.0
1255952	H1822411-060600	Crimped	6	10.0	3/8"	6	11/16-16	31.0	17.0	22.0
1255982	H1822411-080800	Crimped	8	13.0	1/2"	8	13/16-16	36.1	22.0	24.0
1256031	H1822411-101000	Crimped	10	16.0	5/8"	10	1-14	40.3	24.0	30.0
1256053	H1822411-121200	Crimped	12	19.0	3/4"	12	1 3/16-12	44.1	30.0	36.0
1256932	H1822411-121600	Crimped	12	19.0	3/4"	16	1 7/16-12	50.1	36.0	41.0
1255812	H1822411-161600	Crimped	16	25.0	1"	16	1 7/16-12	53.1	36.0	41.0
1255814	H1822411-162000	Crimped	16	25.0	1"	20	1 11/16-12	54.1	41.0	50.0
1255911	H1822411-202000	Crimped	20	32.0	1 1/4"	20	1 11/16-12	56.0	46.0	50.0
1256933	H1822411-242400	Crimped	24	38.0	1 1/2"	24	2-12	61.5	50.0	60.0

// H1822441 **NEW**

45° ORFS Female
Medium Drop
DK ORFS 45M
Solid one piece

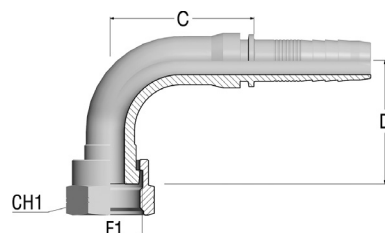


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1255937	H1822443-040400	Slip on nut	4	6.0	1/4"	4	9/16-18	38.0	15.0	17.0
1255963	H1822443-060600	Slip on nut	6	10.0	3/8"	6	11/16-16	48.0	17.0	22.0
1255986	H1822441-080800	Crimped	8	13.0	1/2"	8	13/16-16	54.0	22.0	24.0
1256036	H1822443-101000	Slip on nut	10	16.0	5/8"	10	1-14	58.0	17.0	30.0
1256059	H1822443-121200	Slip on nut	12	19.0	3/4"	12	1 3/16-12	67.0	21.0	36.0
1257078	H1822441-121200	Crimped	12	19.0	3/4"	12	1 3/16-12	82.0	26.0	36.0
1258416	H1822441-121600	Crimped	12	19.0	3/4"	16	1 7/16-12	81.0	28.0	41.0
1255837	H1822441-161600	Crimped	16	25.0	1"	16	1 7/16-12	95.0	28.0	41.0
1258440	H1822441-162000	Crimped	16	25.0	1"	20	1 11/16-12	88.0	28.0	50.0
1255915	H1822441-202000	Crimped	20	32.0	1 1/4"	20	1 11/16-12	108.0	36.5	50.0

Image: insert with Crimped Nut.

// H1822491 **NEW**

90° ORFS Female
Medium Drop
DK ORFS 90M
Solid one piece



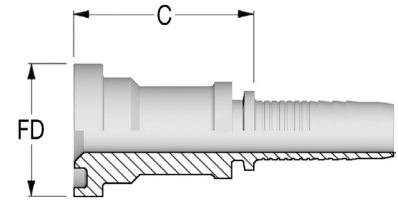
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1255935	H1822493-040400	Slip on nut	4	6.0	1/4"	4	9/16-18	30.0	32.0	17.0
1255960	H1822493-060600	Slip on nut	6	10.0	3/8"	6	11/16-16	43.0	38.0	22.0
1255984	H1822491-080800	Crimped	8	13.0	1/2"	8	13/16-16	35.0	42.0	24.0
1256034	H1822493-101000	Slip on nut	10	16.0	5/8"	10	1-14	56.0	44.0	30.0
1256055	H1822493-121200	Slip on nut	12	19.0	3/4"	12	1 3/16-12	63.0	58.0	36.0
1257077	H1822491-121200	Crimped	12	19.0	3/4"	12	1 3/16-12	68.0	58.0	36.0
1258325	H1822491-121600	Crimped	12	19.0	3/4"	16	1 7/16-12	70.0	58.0	36.0
1255835	H1822491-161600	Crimped	16	25.0	1"	16	1 7/16-12	80.0	66.0	41.0
1255913	H1822491-202000	Crimped	20	32.0	1 1/4"	20	1 11/16-12	101.0	81.0	50.0

Image: insert with Crimped Nut.

// SAE FLANGES

// H1843310 **NEW**

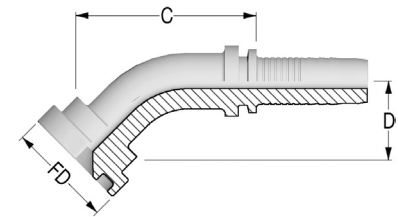
Flange SAE 3000 psi J518 Code 61
SFL



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	WP (psi)
1256975	H1843310-121200	12	19.0	3/4"	12	3/4	38.1	39.5	5000
1255817	H1843310-161600	16	25.0	1"	16	1	44.5	54.1	5000
1255819	H1843310-162000	16	25.0	1"	20	1 1/4	50.8	56.6	5000
1255886	H1843310-202000	20	32.0	1 1/4"	20	1 1/4	50.8	57.5	3000
1258560	H1843310-202400	20	32.0	1 1/4"	24	1 1/2	60.3	60.4	5000
1258432	H1843310-242000	24	38.0	1 1/2"	20	1 1/4	50.8	54.5	5000
1256999	H1843310-242400	24	38.0	1 1/2"	24	1 1/2	60.3	62.5	5000
1258422	H1843310-243200	24	38.0	1 1/2"	32	2	71.4	62.5	5000
1258299	H1843310-323200	32	50.0	2"	32	2	71.4	79.2	3000

// H1843340 **NEW**

45° Flange SAE 3000 psi J518 Code 61
SFL 45
Solid one piece



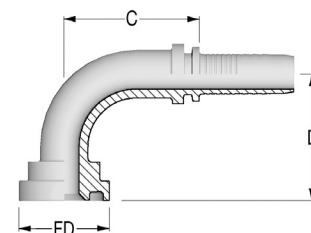
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1258340	H1843340-162000	16	25.0	1"	20	1 1/4	50.8	99.0	32.5	3000
1255892	H1843340-202000	20	32.0	1 1/4"	20	1 1/4	50.8	103.0	38.5	5000
1257023	H1843340-202400	20	32.0	1 1/4"	24	1 1/2	60.3	99.0	40.0	3000
1257002	H1843340-242400	24	38.0	1 1/2"	24	1 1/2	60.3	111.0	43.0	3000
1258414	H1843340-323200	32	50.0	2"	32	2	71.4	154.0	54.0	5000

// H1843390 **NEW**

90° Flange SAE 3000 psi J518 Code 61

SFL 90

Solid one piece

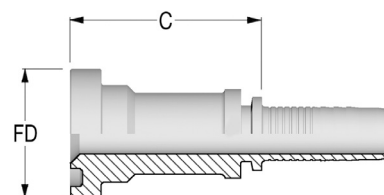


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1255849	H1843390-161600	16	25.0	1"	16	1	44.5	79.0	64.0	5000
1257007	H1843390-162000	16	25.0	1"	20	1 1/4	50.8	75.0	69.0	3000
1255890	H1843390-202000	20	32.0	1 1/4"	20	1 1/4	50.8	91.0	81.0	5000
1258622	H1843390-202400	20	32.0	1 1/4"	24	1 1/2	60.3	87.0	85.0	5000
1257000	H1843390-242400	24	38.0	1 1/2"	24	1 1/2	60.3	103.0	93.0	3000
1258385	H1843390-323200	32	50.0	2"	32	2	71.4	139.0	130.0	5000

// H1843610 **NEW**

Flange SAE 6000 psi J518 Code 62

SFS



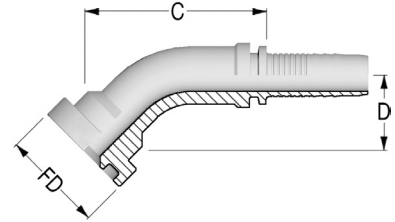
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	WP (psi)
1250893	H1843610-121200	12	19.0	3/4"	12	3/4	41.3	53.1	6000
1256988	H1843610-121600	12	19.0	3/4"	16	1	47.6	56.5	6000
1255824	H1843610-161200	16	25.0	1"	12	3/4	41.3	59.1	6000
1250885	H1843610-161600	16	25.0	1"	16	1	47.6	59.1	6000
1255821	H1843610-162000	16	25.0	1"	20	1 1/4	54.0	66.1	6000
1257998	H1843610-162400	16	25.0	1"	24	1 1/2	63.5	71.1	6000
1255884	H1843610-201600	20	32.0	1 1/4"	16	1	47.6	60.0	6000
1250350	H1843610-202000	20	32.0	1 1/4"	20	1 1/4	54.0	59.0	6000
1257017	H1843610-202400	20	32.0	1 1/4"	24	1 1/2	63.5	74.0	6000
1257009	H1843610-242000	24	38.0	1 1/2"	20	1 1/4	54.0	70.0	6000
1250857	H1843610-242400	24	38.0	1 1/2"	24	1 1/2	63.5	63.0	6000
1257028	H1843610-243200	24	38.0	1 1/2"	32	2	79.4	88.0	6000
1250340	H1843610-323200	32	50.0	2"	32	2	79.4	97.2	6000

// H1843640 **NEW**

45° Flange SAE 6000 psi J518 Code 62

SFS 45

Solid one piece



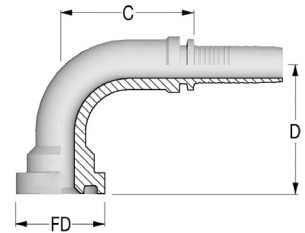
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1256966	H1843640-121200	12	19.0	3/4"	12	3/4	41.3	75.0	30.0	6000
1256964	H1843640-121600	12	19.0	3/4"	16	1	47.6	81.0	33.0	6000
1257026	H1843640-161200	16	25.0	1"	12	3/4	41.3	77.0	29.5	6000
1255845	H1843640-161600	16	25.0	1"	16	1	47.6	98.0	38.5	6000
1255847	H1843640-162000	16	25.0	1"	20	1 1/4	54.0	96.0	44.0	6000
1257027	H1843640-201600	20	32.0	1 1/4"	16	1	47.6	97.0	34.0	6000
1255896	H1843640-202000	20	32.0	1 1/4"	20	1 1/4	54.0	102.0	41.0	6000
1257021	H1843640-202400	20	32.0	1 1/4"	24	1 1/2	63.5	117.0	48.0	6000
1256962	H1843640-242400	24	38.0	1 1/2"	24	1 1/2	63.5	143.0	48.0	6000
1258583	H1843640-323200	32	50.0	2"	32	2	79.4	177.0	61.0	6000

// H1843690 **NEW**

90° Flange SAE 6000 psi J518 Code 62

SFS 90

Solid one piece

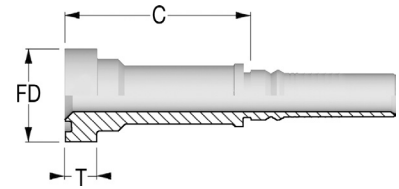


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	C (mm)	D Drop (mm)	WP (psi)
1256934	H1843690-121200	12	19.0	3/4"	12	3/4	41.3	65.0	64.0	6000
1256935	H1843690-121600	12	19.0	3/4"	16	1	47.6	65.0	66.0	6000
1258335	H1843690-161200	16	25.0	1"	12	3/4	41.3	75.0	61.0	6000
1255841	H1843690-161600	16	25.0	1"	16	1	47.6	75.0	74.0	6000
1256939	H1843690-162000	16	25.0	1"	20	1 1/4	54.0	79.0	85.0	6000
1255907	H1843690-201600	20	32.0	1 1/4"	16	1	47.6	86.0	72.0	6000
1257011	H1843690-202000	20	32.0	1 1/4"	20	1 1/4	54.0	96.0	91.0	6000
1257016	H1843690-202400	20	32.0	1 1/4"	24	1 1/2	63.5	99.0	103.5	6000
1256936	H1843690-242400	24	38.0	1 1/2"	24	1 1/2	63.5	114.0	109.0	6000
1257029	H1843690-323200	32	50.0	2"	32	2	79.4	168.0	134.0	6000

// SUPERCAT FLANGES

// H1843910 **NEW**

Flange SUPERCAT

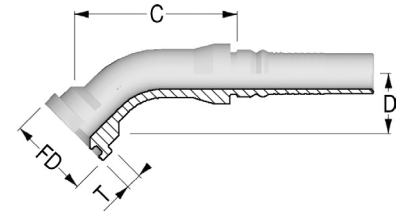


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)
1256983	H1843910-121200	12	19.0	3/4"	12	3/4	41.3	14.3	85.5
1256984	H1843910-121600	12	19.0	3/4"	16	1	47.6	14.3	87.0
1255830	H1843910-161600	16	25.0	1"	16	1	47.6	14.3	95.1
1255832	H1843910-162000	16	25.0	1"	20	1 1/4	54.0	14.3	95.1
1255888	H1843910-202000	20	32.0	1 1/4"	20	1 1/4	54.0	14.3	91.0
1257018	H1843910-202400	20	32.0	1 1/4"	24	1 1/2	63.5	14.3	87.0

// H1843940 **NEW**

45° Flange SUPERCAT

Solid one piece

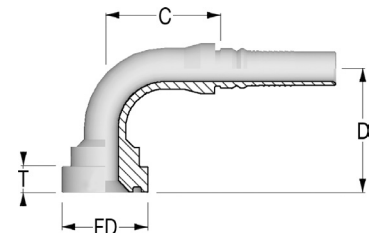


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)	D Drop (mm)
1256996	H1843940-121200	12	19.0	3/4"	12	3/4	41.3	14.3	107.0	33.7
1258113	H1843940-121600	12	19.0	3/4"	16	1	47.6	14.3	112.0	34.0
1255857	H1843940-161600	16	25.0	1"	16	1	47.6	14.3	129.0	42.5
1255859	H1843940-162000	16	25.0	1"	20	1 1/4	54.0	14.3	128.0	40.0
1257024	H1843940-202000	20	32.0	1 1/4"	20	1 1/4	54.0	14.3	149.0	45.0

// H1843990 **NEW**

90° Flange SUPERCAT

Solid one piece

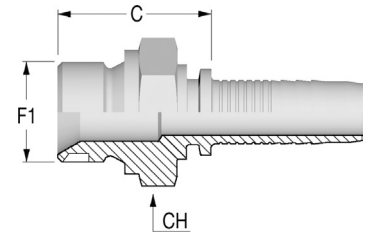


Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	FD (mm)	T (mm)	C (mm)	D Drop (mm)
1256994	H1843990-121200	12	19.0	3/4"	12	3/4	41.3	14.3	67.0	67.0
1256995	H1843990-121600	12	19.0	3/4"	16	1	47.6	14.3	69.0	70.0
1255853	H1843990-161600	16	25.0	1"	16	1	47.6	14.3	85.0	79.0
1255855	H1843990-162000	16	25.0	1"	20	1 1/4	54.0	14.3	80.0	82.5
1255902	H1843990-202000	20	32.0	1 1/4"	20	1 1/4	54.0	14.3	96.0	93.0
1257019	H1843990-202400	20	32.0	1 1/4"	24	1 1/2	63.5	14.3	97.0	101.0

// BSP INSERTS

// H1810510 **NEW**

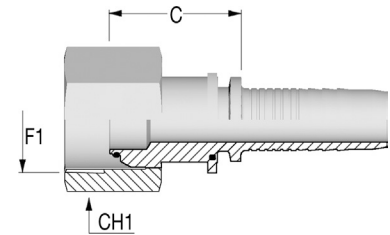
BSPP Male 60° Flare
AGR



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH (mm)
1258250	H1810510-121200	12	19.0	3/4"	12	3/4-14	38.1	32.0
1258251	H1810510-161600	16	25.0	1"	16	1-11	46.1	41.0
1258548	H1810510-202000	20	32.0	1 1/4"	20	1 1/4-11	50.0	50.0
1258336	H1810510-242400	24	38.0	1 1/2"	24	1 1/2-11	55.0	55.0
1258410	H1810510-323200	32	51.0	2"	32	2-11	66.7	70.0

// H1820812 **NEW**

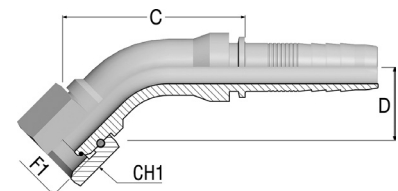
BSPP Female 60° Cone with O-Ring
DKOR



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	CH1 (mm)
1257104	H1820812-121200	Thrust wire nut	12	19.0	3/4"	12	3/4-14	25.8	32.0
1258306	H1820812-121600	Thrust wire nut	12	19.0	3/4"	16	1-11	28.3	38.0
1257054	H1820812-161600	Thrust wire nut	16	25.0	1"	16	1-11	31.6	38.0
1258338	H1820812-162000	Thrust wire nut	16	25.0	1"	20	1 1/4-11	34.1	50.0
1258497	H1820812-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 1/4-11	33.9	50.0
1258300	H1820812-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 1/2-11	37.8	55.0
1258287	H1820812-323200	Thrust wire nut	32	51.0	2"	32	2-11	43.2	70.0

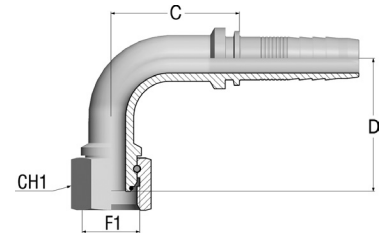
// H1820842 **NEW**

45° BSPP Female 60° Cone with O-Ring
DKOR 45
Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1258249	H1820842-121200	Thrust wire nut	12	19.0	3/4"	12	3/4-14	76.0	30.0	32.0
1258275	H1820842-161600	Thrust wire nut	16	25.0	1"	16	1-11	92.0	40.0	38.0
1258506	H1820842-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 1/4-11	90.0	40.0	50.0
1258407	H1820842-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 1/2-11	116.0	46.0	55.0
1258595	H1820842-323200	Thrust wire nut	32	51.0	2"	32	2-11	153.0	60.0	70.0

REV.2.2

// H1820892 **NEW****90° BSPP Female 60° Cone with O-Ring****DKOR 90****Solid one piece**

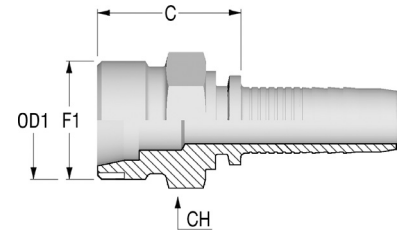
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1 Dash	F1	C (mm)	D Drop (mm)	CH1 (mm)
1258248	H1820892-121200	Thrust wire nut	12	19.0	3/4"	12	3/4-14	60.0	61.0	32.0
1258408	H1820892-121600	Thrust wire nut	12	19.0	3/4"	16	1-11	69.0	68.0	38.0
1258267	H1820892-161600	Thrust wire nut	16	25.0	1"	16	1-11	74.0	71.0	38.0
1258505	H1820892-202000	Thrust wire nut	20	32.0	1 1/4"	20	1 1/4-11	83.0	83.0	50.0
1258376	H1820892-242400	Thrust wire nut	24	38.0	1 1/2"	24	1 1/2-11	100.0	96.0	55.0
1258426	H1820892-323200	Thrust wire nut	32	51.0	2"	32	2-11	140.0	130.0	70.0

Image: insert with Slip on Nut.

// DIN METRIC INSERTS

// H1811210 **NEW**

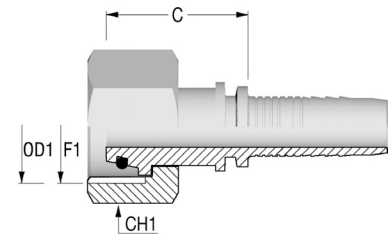
Metric Male 24° Seat
DIN 3853 - Heavy Series
CES



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH (mm)
1257032	H1811210-123600	12	19.0	3/4"	M36X2	25	30.0	36.0
1257041	H1811210-164200	16	25.0	1"	M42X2	30	41.1	46.0
1257093	H1811210-205200	20	32.0	1 1/4"	M52X2	38	49.9	55.0

// H1821613 **NEW**

Metric Female 24° Cone with O-Ring
ISO 8434-1 - Heavy Series
DKOS

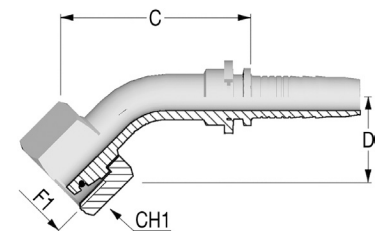


Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	CH1 (mm)
1257103	H1821612-123000	Thrust wire nut	12	19.0	3/4"	M30X2	20	37.4	36.0
1257094	H1821613-123600	Slip on nut	12	19.0	3/4"	M36X2	25	41.7	46.0
1257051	H1821612-163600	Thrust wire nut	16	25.0	1"	M36X2	25	46.6	46.0
1257055	H1821613-164200	Slip on nut	16	25.0	1"	M42X2	30	45.8	50.0
1258543	H1821612-204200	Thrust wire nut	20	32.0	1 1/4"	M42X2	30	50.0	50.0
1255917	H1821613-205200	Slip on nut	20	32.0	1 1/4"	M52X2	38	50.0	60.0
1258302	H1821612-245200	Thrust wire nut	24	38.0	1 1/2"	M52X2	38	57.0	60.0

Image: insert with Slip on Nut.

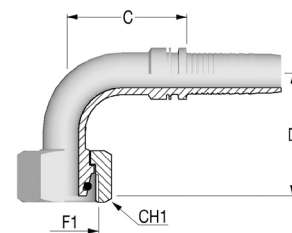
// H1821643 **NEW**

45° Metric Female 24° Cone with O-Ring
ISO 8434-1 - Heavy Series
DKOS 45
Solid one piece



Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1258305	H1821642-123000	Thrust wire nut	12	19.0	3/4"	M30X2	20	74.0	33.0	36.0
1257064	H1821643-123600	Slip on nut	12	19.0	3/4"	M36X2	25	71.0	33.0	46.0
1258315	H1821642-163600	Thrust wire nut	16	25.0	1"	M36X2	25	94.0	37.5	46.0
1257048	H1821643-164200	Slip on nut	16	25.0	1"	M42X2	30	110.0	35.5	50.0
1255919	H1821643-205200	Slip on nut	20	32.0	1 1/4"	M52X2	38	111.0	45.0	60.0

REV.2.2

// H1821693 **NEW****90° Metric Female 24° Cone with O-Ring****ISO 8434-1 - Heavy Series****DKOS 90****Solid one piece**

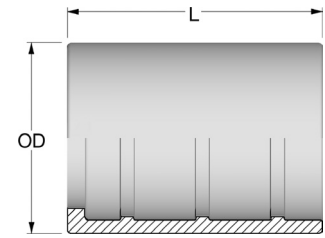
Item Code	Product Code	Nut Type	ID (Dash)	ID (mm)	ID (in)	F1	OD1	C (mm)	D Drop (mm)	CH1 (mm)
1258253	H1821692-123000	Thrust wire nut	12	19.0	3/4"	M30X2	20	66.1	67.5	36.0
1258331	H182169Z-123600	Slip on nut	12	19.0	3/4"	M36X2	25	51.0	59.5	41.0
1257067	H1821693-123600	Slip on nut	12	19.0	3/4"	M36X2	25	51.0	59.5	46.0
1257060	H1821692-163600	Thrust wire nut	16	25.0	1"	M36X2	25	76.0	82.0	46.0
1257045	H1821693-164200	Slip on nut	16	25.0	1"	M42X2	30	85.0	70.0	50.0
1258503	H1821693-205200	Slip on nut	20	32.0	1 1/4"	M52X2	38	95.0	92.0	60.0
1258334	H1821692-245200	Thrust wire nut	24	38.0	1 1/2"	M52X2	38	105.0	95.0	60.0

Image: insert with Slip on Nut.

// FERRULES

// H1200TX2

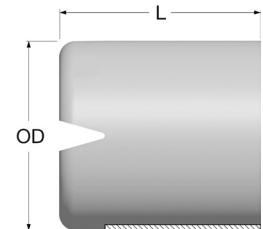
No-Skive Ferrule for 3TE, R5 and Flexopak 2 Minetuff 2 1/2" - 241T
Hi-tuff hoses



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1236581	H1200TX2-030000	3	5.0	3/16"	21.0	20.0
1236582	H1200TX2-040000	4	6.0	1/4"	23.0	24.7
1236583	H1200TX2-050000	5	8.0	5/16"	25.0	24.7
1236584	H1200TX2-060000	6	10.0	3/8"	27.0	29.7
1236585	H1200TX2-080000	8	13.0	1/2"	30.0	30.5
1236586	H1200TX2-100000	10	16.0	5/8"	34.0	35.5
1236587	H1200TX2-120000	12	19.0	3/4"	38.0	36.0
1236588	H1200TX2-160000	16	25.0	1"	48.0	42.5
1236589	H1200TX2-200000	20	31.0	1 1/4"	53.0	56.5
1236590	H1200TX2-240000	24	38.0	1 1/2"	60.0	61.5
1236591	H1200TX2-320000	32	51.0	2"	76.0	73.5
1236592	H1200TX2-400000	40	63.0	2 1/2"	89.0	85.0

// H1200TX4

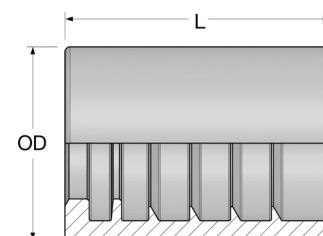
No-Skive Ferrule for R4 Hoses (604, 634, 644)



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1250572	H1200TX4-120000	12	19.0	3/4"	36.0	39.0
1250581	H1200TX4-160000	16	25.0	1"	42.4	44.3
1250582	H1200TX4-200000	20	31.0	1 1/4"	50.0	53.2
1250583	H1200TX4-240000	24	38.0	1 1/2"	55.0	60.2
1250584	H1200TX4-320000	32	51.0	2"	70.0	73.2
1250585	H1200TX4-400000	40	63.0	2 1/2"	83.0	86.0

// H1200103

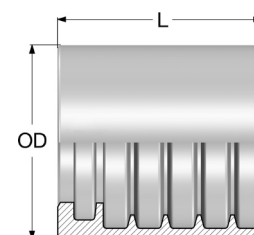
No-Skive Ferrule for PLT



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1202932	H1200103-030000	3	5.0	3/16"	17.0	23.0
1201351	H1200103-040000	4	6.0	1/4"	19.0	26.3

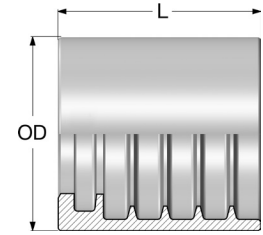
// H1200AD2

No-Skive Ferrule for 2SN



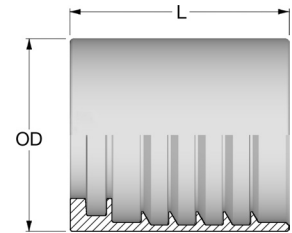
Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1227990	H1200AD2-030000	3	5.0	3/16"	21.0	20.0
1227991	H1200AD2-040000	4	6.0	1/4"	23.0	24.7
1227992	H1200AD2-050000	5	8.0	5/16"	25.0	24.7
1227993	H1200AD2-060000	6	10.0	3/8"	27.0	29.7
1227994	H1200AD2-080000	8	13.0	1/2"	30.0	30.5
1227995	H1200AD2-100000	10	16.0	5/8"	33.0	30.5
1227996	H1200AD2-120000	12	19.0	3/4"	37.0	36.0
1227997	H1200AD2-160000	16	25.0	1"	45.0	36.7
1227998	H1200AD2-200000	20	31.0	1 1/4"	56.0	48.6
1227999	H1200AD2-240000	24	38.0	1 1/2"	64.0	48.5
1228000	H1200AD2-320000	32	51.0	2"	78.0	48.6

// H1200AD1

No-Skive Ferrule for 1 Wire Braid and 2 Wire Braid Compact Hoses

Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1227977	H1200AD1-030000	3	5.0	3/16"	19.0	24.0
1227978	H1200AD1-040000	4	6.0	1/4"	22.0	24.7
1227979	H1200AD1-050000	5	8.0	5/16"	23.0	24.7
1227980	H1200AD1-060000	6	10.0	3/8"	26.0	29.7
1227981	H1200AD1-080000	8	13.0	1/2"	29.0	30.5
1227983	H1200AD1-100000	10	16.0	5/8"	32.0	30.5
1227985	H1200AD1-120000	12	19.0	3/4"	36.0	36.0
1227986	H1200AD1-160000	16	25.0	1"	44.0	36.7
1227987	H1200AD1-200000	20	31.0	1 1/4"	53.0	48.6
1227988	H1200AD1-240000	24	38.0	1 1/2"	61.0	48.6
1227989	H1200AD1-320000	32	51.0	2"	75.0	48.6

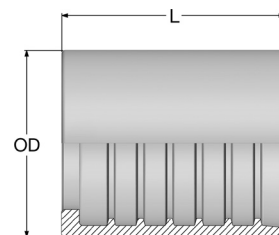
// H1200204

No-Skive Ferrule for/Powerflexbio Hoses

Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1216588	H1200204-060000	6	10.0	3/8"	30.0	28.0
1216589	H1200204-080000	8	13.0	1/2"	34.0	33.9
1216590	H1200204-100000	10	16.0	5/8"	38.0	36.6
1203322	H1200204-120000	12	19.0	3/4"	42.0	39.5
1203323	H1200204-160000	16	25.0	1"	50.0	47.5
1216591	H1200204-200000	20	31.0	1 1/4"	61.0	50.2

// H1200TP0

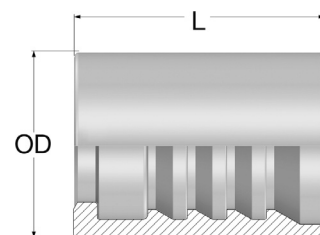
No-Skive Ferrule for Thermoplastic and 1 Wire Braid Compact Hoses



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1232354	H1200TP0-030000	3	5,0	3/16"	15,0	22,0
1232358	H1200TP0-040000	4	6,0	1/4"	17,0	26,5
1232359	H1200TP0-050000	5	8,0	5/16"	19,0	26,5
1232360	H1200TP0-060000	6	10,0	3/8"	22,0	26,5
1232361	H1200TP0-080000	8	13,0	1/2"	26,0	30,5

// H1100SK1

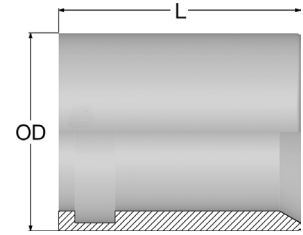
Skive Ferrule for 1 Wire Braid and 2 Wire Braid Compact Hoses
No-Skive for 1TE, 2TE and R6



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1233077	H1100SK1-040000	4	6,0	1/4"	19,0	25,5
1233078	H1100SK1-050000	5	8,0	5/16"	21,0	25,5
1233079	H1100SK1-060000	6	10,0	3/8"	23,0	27,5
1233080	H1100SK1-080000	8	13,0	1/2"	27,0	33,5
1233081	H1100SK1-100000	10	16,0	5/8"	30,0	36,5
1233082	H1100SK1-120000	12	19,0	3/4"	33,0	40,0
1233083	H1100SK1-160000	16	25,0	1"	41,0	46,5

// H2200TF0

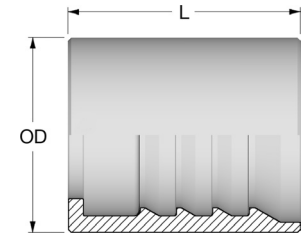
No-Skive Ferrule for PTFE Hoses



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1232132	H2200TF0-030000	3	5.0	3/16"	14.0	20.0
1232133	H2200TF0-040000	4	6.0	1/4"	15.0	25.0
1232134	H2200TF0-050000	5	8.0	5/16"	17.2	25.0
1232135	H2200TF0-060000	6	10.0	3/8"	22.0	25.0
1232136	H2200TF0-080000	8	13.0	1/2"	25.0	30.0
1232137	H2200TF0-100000	10	16.0	5/8"	30.0	33.0
1232138	H2200TF0-120000	12	19.0	3/4"	35.0	37.0
1232139	H2200TF0-160000	16	25.0	1"	42.0	45.0
1232140	H2200TF0-200000	20	31.0	1 1/4"	50.0	48.0
1232141	H2200TF0-240000	24	38.0	1 1/2"	57.0	58.0
1232142	H2200TF0-320000	32	51.0	2"	73.0	67.0

// H1100104

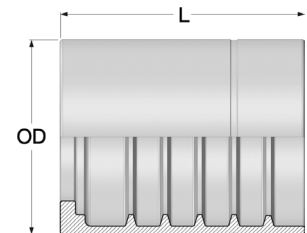
Skive Ferrule for 1SN



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1201545	H1100104-200000	20	31.0	1 1/4"	50.0	43.8
1201546	H1100104-240000	24	38.0	1 1/2"	57.0	49.2
1201547	H1100104-320000	32	51.0	2"	71.0	63.7

// H1800NSS **NEW**

Multispiral No-Skive Ferrule



Item Code	Product Code	ID (Dash)	ID (mm)	ID (in)	Ferrule OD (mm)	L (mm)
1255743	H1800NSS-060000	6	10.0	3/8"	29.0	37.0
1255796	H1800NSS-080000	8	13.0	1/2"	31.0	40.0
1255833	H1800NSS-100000	10	16.0	5/8"	38.0	44.3
1255868	H1800NSS-120000	12	19.0	3/4"	43.0	52.5
1253826	H1800NSS-160000	16	25.0	1"	50.0	63.0
1255880	H1800NSS-200000	20	31.0	1 1/4"	62.0	73.0
1258472	H1800NSS-240000	24	38.0	1 1/2"	70.0	78.5
1257089	H1800NSS-320000	32	51.0	2"	85.0	94.0

// HOSE GUIDELINE

SETTING NEW STANDARD

Dunlop Hiflex cares for the environment and for your equipment among Dunlop Hiflex's newest products are Powerflexbio 2000, 3000, 4000, 5000, 5000 PLUS, 6000 spiral hose, low temperature, Temp Tech, MineTuff, SuperTuff hose and a complete coupling line.

They join the extensive range of Dunlop Hiflex hose, the high pressure hydraulic components that have set the standard for reliability and durability.

DESIGN

Throughout the world, Dunlop Hiflex has built up a name synonymous with quality, a reputation based on first class product, a commitment to research and development and ongoing capital investment.

The development and product engineering staff in Dunlop Hiflex, continue to provide fluid conveying product innovations that assure better performance and cost saving to our customers. Dunlop Hiflex hose and couplings are designed to work together as a system for problem free performance, no matter what machine you operate.

The performance of all our products exceeds SAE, DIN, JIS requirements and some hoses meet the MSHA and LOBA flame resistance requirements, as well.

LEADERSHIP IN HYDRAULIC HOSE AND COUPLING COMPONENTS

Dunlop Hiflex has developed into a world leading manufacturer of fluid power and fluid system components. A positive attitude towards the demands of new equipment which is using the latest technology has seen Dunlop Hiflex introduce many outstanding new hydraulic hose types. These hoses have found acceptance in a wide range of industries, some examples are: Mining, Logging, Petroleum, Railroad, Construction, Earthmoving, Agriculture, Waste/Refuse, Manufacturing, Pulp and Plywood Mills, Molding, Drilling, Crane

GLOBAL COMPANY

Due to our world-wide organization of subsidiaries and distributors you will always be near a source for Dunlop Hiflex products. Your Dunlop Hiflex dealer has trained personnel to consult with you on your hose and coupling requirements guaranteeing consistent quality and performance.

OUR COMMITMENT

By remaining alert to customer's needs, Dunlop Hiflex is constantly engineering new products for tomorrow's markets as well as modifying them for even higher performances. Dunlop Hiflex commitment to innovation and service makes our products known throughout the world for quality, reliability and leadership, when you need quality hose and couplings, use the best available.

Now you can count on Dunlop Hiflex for all your needs.

TESTING

Dunlop Hiflex laboratories are fully equipped to carry out tests according to standards like SAE, ISO, DIN and JIS. New products are also subjected to laboratory simulation of actual service prior to being released on the market.

WORLD CLASS QUALITY

Dunlop Hiflex is working to adhere to internationally recognized quality programs requiring stringent standards. Many of our customers are demanding ISO qualification or equivalent as a prerequisite for purchasing. This standard is an assurance of consistent quality. For Dunlop Hiflex this is just the start "do it right from the beginning".

IMPORTANT NOTE FOR USERS

Hose assemblies require caution in use not only to provide long service life but also to guard against potentially dangerous failure.

Serious injury, death and destruction of property can result from the rupture or blowing-apart of a hydraulic hose assembly that is damaged, worn out, badly assembled or installed incorrectly.

Users should follow good maintenance practices. Avoid expensive downtime by establishing a program of inspection, testing and replacement of hose assemblies before failure occurs; taking into account factors including: severity of application, frequency of equipment use, past performance of hose assemblies. Document your maintenance, inspections and testing.

Only properly trained persons should inspect, test or service hose assemblies and this training should be updated regularly.

Users should carefully observe the precautions listed below under "be aware that" as well as follow closely our recommendations for the selection of hose and couplings. In addition, care should be taken not to exceed the minimum bend radius listed for each hose size and type.

Maximum operating pressure should not exceed the pressures listed. Instruction for assembling fittings to different hoses should be followed carefully to ensure the safe performance of the complete assembly.

By following the recommendations on hose assembly routing and installation, improved safety and longer service life of any hose installation will result.

Hydraulic fluid under pressure can be potentially dangerous!! An explosive burst or stream of escaping fluid can cause damage to equipment as well as serious injury to persons nearby.

BE AWARE THAT...

1. Highly pressurized fluid escaping from a small pinhole can be almost invisible and, yet, exert extreme force capable of penetrating the skin and other body tissues, causing possible severe injury.
2. Hot fluids or chemicals can cause severe burns.
3. Pressurized fluids, if released uncontrolled, can exert a tremendous explosive force.
4. All hydraulic hoses listed in this catalogue are electrically conductive.
5. Some hydraulic fluids are highly flammable.

AND...

6. Always position a shield between you and any pressurised hydraulic lines when working next to them... or shut the pressure off.
7. Wear safety glasses.
8. Do not use your hands to check for leaks. Do not touch a pressurised hydraulic hose assembly with any part of your body, if fluid punctures the skin, even if no pain is felt, a serious emergency exists. Obtain medical assistance immediately. Failure to do so can result in loss of the injured body part or death.
9. Stay out of hazardous areas while testing hose assemblies under pressure. Use proper safety protection.
10. If an injury or reaction occurs, get medical attention right away.
11. Use only non-conductive thermoplastic hoses where electrical conductivity is not desired: for instance, equipment working on electric power lines.

Dunlop Hiflex hose and fitting are designed, engineered and tested to be used together in an assembly.

The use of Dunlop Hiflex fittings on other manufactures hose or the use of Dunlop Hiflex hose with other manufactures fittings may result in the production of unreliable or unsafe assemblies. It is neither recommended nor authorized by Dunlop Hiflex.

Dunlop Hiflex recommends only those hose and coupling combinations specified in the Dunlop Hiflex Hydraulic Products Catalogues.

Dunlop Hiflex disclaims any liability for any hose assemblies which have not been produced in conformance with Dunlop Hiflex assembly recommendations and current crimp data charts.

Extensive impulse testing has been performed by Dunlop Hiflex to verify the recommendations contained in this catalogue. A simple burst or pressure test cannot determine a hose and coupling combination.

Any claim for defects must be made in writing on the appropriate ISO 9001 complaint form within 8 days from receipt of the product. Dunlop Hiflex will have a reasonable opportunity thereafter to examine and investigate the alleged defect.

The customer's exclusive remedy with respect to any claim of any kind whatsoever shall be refund of the purchase price or replacement of the product at the option of Dunlop Hiflex and in no event shall Dunlop Hiflex be liable for any incidental or consequential damages whatsoever.

REFERENCE SPECIFICATIONS

SAE	Society of Automotive Engineers
DNV-GL	Det Norske Veritas - Germanischer Lloyd
EN	European Norm
DIN	Deutsche Institute Normen
CERCHAR	Centre d'Etudes et Recherches des Charbonnages de France
MSHA	U.S. Mine Safety and Health Administration

LOBA	Landesoberbergamt Nordrhein - Westfalen
AS	Australian Standard
BV	Bureau Veritas
ISO	International organization for Standardization
KR	Korean Register
MA	Chinese Mining

The listings below are intended only as guides in identifying which Dunlop Hiflex hoses comply with requirements of various agencies.

Hose	SAE J517	EN	ISO	Dunlop Hiflex proprietary hose	DNV GL	ABS	BV	NKK	RINA	Lloyd's Register	MSHA ²	USDOT ³	KR	MA
Argus 1TE/R6 HF	100 R6	EX 854 1TE (up to 3/4")												
Argus 2TE HF		854 2TE												
Argus 3TE/R3 HF	100 R3	854 3TE												
Flexor 7	100 R7	855 R7	3949											
Flexor 8	100 R8	855 R8												
2TE Railway		854 2TE 45545-2												
2SC Railway		854 2SC 45545-2	11237											
122T HI-TUFF - 1SN/R1AT	100 R1AT	853 1SN	1436-1		●	●		●*		●	●		●	
222 HI-TUFF - 2SN/R2ST	100 R2AT	853 2SN	1436-1		●	●		●*	●	●	●		●	
221T Slimline Plus		857 2SC	11237		●	●	●	●*						
121T Slimline Plus -1SC		857 1SC	11237		●		●							
241T Superslimline	100 r16	857 2SC (uo to 1")	11237		●	●	●	●	●	●	●		●	
AT7K - 490 Powertrak				●							●			
AT8K - 560 Powertrak				●							●			
Powerflexbio 3000	EX SAE R12		18752	●	●	●	●	●*	●	●	●			
Powerflexbio 4000			18752	●	●	●	●	●*	●	●	●			
Powerflexbio 5000			18752 (up to 1")	●	●	●	●	●*	●	●	●			
Powerflexbio 5000P			18752	●	●	●	●	●*	●	●	●			
Powerflexbio 6000	EX SAE R15		18752	●	●	●	●	●*	●	●	●			
Firesafe 5000				●	●					●	●			
Commander 150 1SN Plus	100 R1AT	853 1SN	1436-1	●										
SP33G - Superforest				●	●	●	●	●		●			●	
261E - Hypercold Superslimline														
SP33E - Hypercold Superforest														
Flexor R4	100 R4						●							

* Running

1. DNV approvals are with permanent (crimp) type fittings only
 2. Hoses with MSHA approved cover are always branded "MSHA"
 3. DOT Type all TYPE All FMVSS 106 approval up to 3/4"
- Listing may vary by style and size, for current and complete information, contact Dunlop Hiflex for details.

SAFETY GUIDE BASIC FACTORS FOR THE SELECTION, INSTALLATION AND MAINTENANCE OF HOSE AND HOSE ASSEMBLIES

Hydraulic hose (and hose assemblies) has a limited life dependent on service conditions to which is applied.

Subjecting hose (and hose assemblies) to conditions more severe than the recommended limits significantly reduce service life. Exposure to combinations of recommended limits (i.e., continuous use at maximum rated working pressure, maximum recommended operating temperature and minimum bend radius) will also reduce service life.

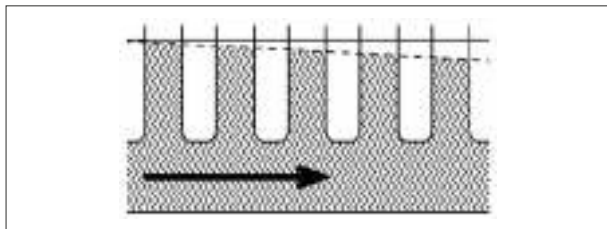
WARNING: FAILURE TO FOLLOW PROPER SELECTION, INSTALLATION AND MAINTENANCE PROCEDURES MIGHT RESULT IN BODILY INJURY, AND DAMAGE TO PROPERTY.

1. SELECTION

The following is a list of factors which must be considered before the selection of a hose can be made:

1.1 Line size

In order to achieve maximum efficiency in a hydraulic system, it is necessary to keep pressure losses (resistance to the volumetric flow) to a minimum when a fluid is conveyed by the different types of flow lines. When a fluid flows through a flow line, heat is generated by friction. Thus part of the energy is lost as heat energy, which results in a pressure loss.



These pressure losses depend upon:

- flow velocity (for a given volumetric flow, the fluid flow velocity increases with a decrease in the cross sectional area of a flow line and vice versa)
- length of the flow line
- the viscosity of the fluid flowing
- the density of the fluid flowing
- the type of flow (laminar or turbulent)

Types of flow - The type of flow changes from laminar to turbulent at a certain flow velocity. This velocity is given by the Reynold's Number Re.

For cylindrical flow lines the following formula applies:

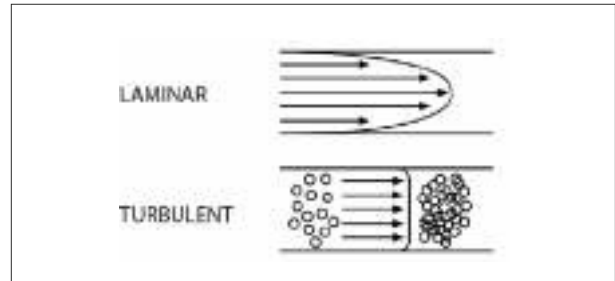
$$Re = \frac{v \times d}{\nu}$$

where: v = velocity (m/s)
 d = flow line internal dia (m)
 ν = kinematic viscosity (m²/s)

As soon as the value for Re exceeds 2300, the laminar flow changes to turbulent flow.

Laminar flow - In laminar flow, the individual fluid particles move up to certain speeds in uniform layers alongside each other. They scarcely disturb or influence each other.

Turbulent flow - If the value for Re exceeds 2300, flow becomes whirling and turbulent. The individual particles no longer move in one direction in an orderly fashion, but influence and hinder each other.



Certain fluid flow velocities have proved to be most suitable for hydraulic flow lines.

Recommended flow velocities:

Suction lines:	0.5 ... 1.2 m/s	1.6 ... 4 feet/s
Return lines:	2 ... 3 m/s	6.5 ... 10 feet/s
Pressure lines:	4 ... 7.5 m/s	13 ... 25 feet/s

FLOW CAPACITY NORMOGRAM

Flow Capacities of Hose at Recommended Flow Velocities
 The chart below is provided as an aid in the determination of the correct hose size.

Example at 45 l/min, what is the proper hose size within the recommended velocity range for pressure lines? Locate 45 l/min in the left-hand column and 7,5 m/s in the right-hand column (the maximum recommended velocity range for pressure lines).

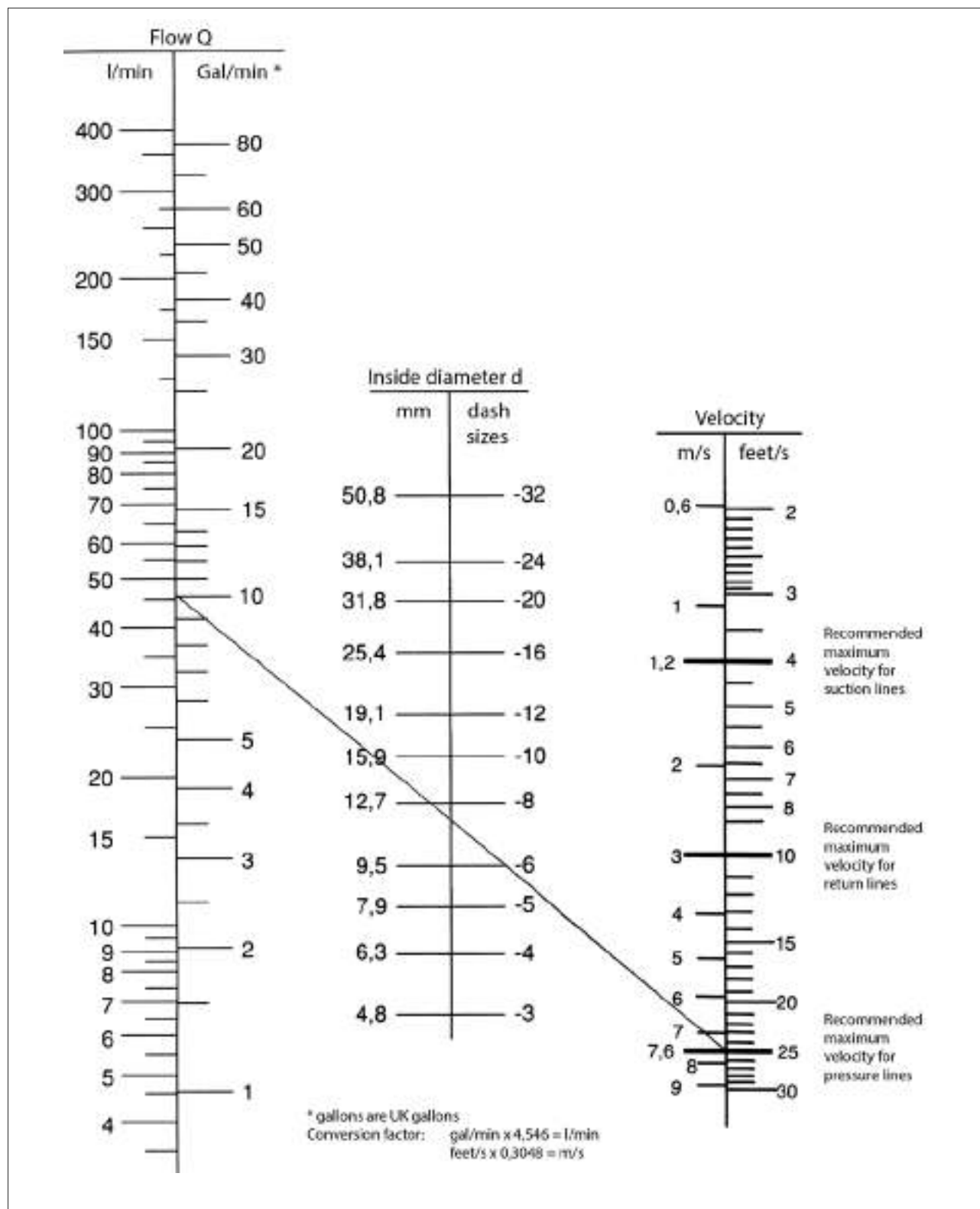
Lay a straight line across these two points. The inside diameters shown in the center column is above 9,5 mm so we have to use 12,7 mm (1/2"). For suction hose, follow the same procedure except use recommended velocity range for intake lines in the righthand column.

where: Q = flow in liters per seconds (l/sec)
 V = velocity in meters per seconds (m/s)
 d = hose inside diameter (mm & dash size)

TECHNICAL INFORMATION – NORMOGRAM OF THE FLOW

The normogram herewith is pivotal to help you find the hose diameter by knowing the liquid flow and speed.

In order to find the correct diameter you should trace a line between the flow value (l/min) and the suggested speed (m/sec) according to the kind of delivery (pressure or return). The value touched by the line in the central column will indicate the hose ID (mm/inches) that must be used.



It is therefore important to calculate correctly the required flow line sizes. Undersized pressure lines results in high fluid velocity causing an excessive pressure drop, and heat built up, which impair overall system performance.

Undersized suction lines can cause cavitation at the hydraulic pump inlet, affecting performance, shortening pump life, and creating excessive noise levels.

The flow capacity normogram is an aid to determine the correct hose internal diameter size, desired flow rate and recommended velocity. By the use of any two known factors, the third can be determined.

1.2 Pressure

After determining the system pressure for a hydraulic system, hose selection must be made so that the recommended maximum operating pressure specified by a given hose, is equal or greater than the system pressure. Dynamic pressure is common for all hydraulic systems. Pressure surges which exceed the maximum working pressure (pressure relief valve setting) affect the service life of system components, including a hose assembly and therefore need to be taken into consideration. Hoses used for suction lines must be selected to ensure the hose will withstand the negative pressure of the system.

1.3 Temperature

Care must be taken to ensure that the operating temperature of the fluid being conveyed and ambient temperatures, do not exceed the limitations of the hose. Special care must be taken when routing near hot manifolds or molten metal.

1.4 Fluid Compatibility

Hose selection must assure compatibility of the hose tube, cover, reinforcement, and fittings with the fluid used.

Additional caution must be observed in hose selection for gaseous applications. Some fire resistant fluids require the same hose as petroleum oil. Some use a special hose, while a few fluids will not work with any hose at all.

For gas application, where compatible with Dunlop Hiflex Hoses, and at pressure above 10 bar, the hose cover shall be pin-pricked.

1.5 Permeation

Permeation (that is, seepage through the hose) will occur from inside the hose to outside when hose is used with gases, liquid and gas fuels, and refrigerants (including but not limited to such materials such as helium, fuel oil, natural gas or freon). This permeation may result in high concentrations of vapors which are potentially flammable, explosive, or toxic and in loss of fluid. Even though the fluid compatibility is acceptable, you must take into account the fact that permeation will occur and could be hazardous. Permeation of moisture from outside the hose to inside the hose will also occur. If this moisture permeation would have detrimental effects (particularly but not limited to refrigeration and air conditioning systems), incorporation of sufficient drying capacity in the system or other appropriate system safeguards should be selected and used.

1.6 Routing

Attention must be given to optimum routing to minimize inherent problems. Restrain, protect or guide hose with the use of clamps if necessary to minimize risk or damage due to excessive flexing, whipping or contact with other moving parts or corrosives. Determine hose lengths and configurations that will result in proper routing and protection from abrasion, snagging or kinking and provide leak resistant connections.

1.7 Environment

Care must be taken to ensure that the hose and fittings are either compatible with or protected from the environment to which they are exposed. Environmental conditions including but not limited to ultraviolet light, heat, ozone, moisture, water, salt water, chemicals, and air pollutants can cause degradation and premature failure and, therefore, must be considered.

1.8 Mechanical Loads

External forces can significantly reduce hose life. Mechanical loads which must be considered include excessive flexing, twist, kinking, tensile or side loads, bend radius, and vibration. Use of swivel type fittings or adaptors may be required to ensure no twist is put into the hose. Unusual applications may require special testing prior to hose selection.

1.9 Abrasion

While a hose is designed with a reasonable level of abrasion resistance, care must be taken to protect the hose from excessive abrasion which can result in erosion, snagging, and cutting of the hose cover. Exposure of the reinforcement will significantly accelerate hose failure.

1.10 Proper End Fitting

Care must be taken to ensure proper compatibility exists between the hose and coupling selected based on the manufacturer's recommendations substantiated by testing to industry standards such as SAE J517, DIN 20024, JIS B 8360.

1.11 Length

When establishing proper hose length, motion absorption, hose length changes due to pressure, as well as hose and machine tolerances must be considered.

1.12 Specifications and Standards

When selecting hose and fittings, government, industry, and manufacturer's specifications and recommendations must be reviewed as applicable.

1.13 Hose Cleanliness

Hose components may vary in cleanliness levels. Care must be taken to ensure that the assemblies selected have an adequate level of cleanliness for the application.

1.14 Welding and Brazing

Heating of plated parts, including hose fittings and adaptors, above 232° C (450° F) such as during welding, brazing, or soldering may emit deadly gases.

1.15 Electrical Conductivity

Certain applications require that a hose be non-conductive to prevent electrical current flow. Other applications require the hose to be sufficiently conductive to drain off static electricity. Extreme care must be exercised when selecting hose and fittings for these or any other applications in which electrical conductivity or non-conductivity is a factor. For applications that require hose to be electrically non-conductive, including but not limited to applications near high voltage electric lines, only special non-conductive The manufacturer of the equipment in which the non-conductive hose is to be used must be consulted to be certain that the hose and fittings that are selected are proper for the application.

Do not use any Dunlop Hiflex hose or fitting for any application requiring non-conductive hose, including but not limited to applications near high voltage electric lines, unless the application is expressly approved in the Dunlop Hiflex technical publication for the product, the SAFETY GUIDE hose is both orange in colour and marked "non-conductive", and the manufacturer of the equipment on which the hose is to be used specifically approves the particular Dunlop Hiflex hose and fitting for such use. Dunlop Hiflex does not supply any hose or fittings for conveying paint in airless paint spraying or similar applications and therefore should not be used. A special hose and fitting assembly is required for this application, to avoid static electricity buildup which could cause a spark that may results in an explosion and/or fire. The electrical conductivity or non-conductivity of hose and fittings is dependent upon many factors and may be susceptible to change. These factors include but are not limited to the various materials used to make the hose and the fittings, manufacturing methods (including moisture control), how the fittings contact the hose, age and amount of deterioration or damage or other changes, moisture content of the hose at and particular time, and others factors.

2. INSTALLATION

After the selection of the correct hose, the following factors must be considered prior to hose and fitting assembly and installation.

2.1 Pre-Installation Inspection

Prior to installation, a careful examination of the hose must be performed. All components must be checked for correct style, size, and length. The hose must be examined for cleanliness, obstructions, blisters, cover looseness, or any other visible defects.

2.2 Hose and Fitting Assembly

Do not assemble an Dunlop Hiflex fitting on an Dunlop Hiflex hose that is not specified by Dunlop Hiflex for that hose. Do not assemble Dunlop Hiflex fittings on another manufacturer's hose or an Dunlop Hiflex hose on another manufacturer's fitting unless Dunlop Hiflex approves the assembly in writing, and the user verifies the assembly and the application through analysis and testing.

The Dunlop Hiflex published hose assembly instructions must be followed for assembling the fittings on the hose.

2.3 Related Accessories

Crimp or swage Dunlop Hiflex hose or fittings only with Dunlop Hiflex approved swage or crimp machines and in accordance with the Dunlop Hiflex published hose assembly instructions.

2.4 Parts

Do not use any Dunlop Hiflex hose fitting part (including but not limited to sockets, or inserts) except with the correct Dunlop Hiflex mating parts, in accordance with Dunlop Hiflex published hose assembly.

2.5 Reusable/Permanent

Do not reuse any reusable hose coupling that has blown or pulled off a hose. Do not reuse an Dunlop Hiflex permanent (that is, crimped or swaged) hose fitting or any part thereof.

2.6 Minimum Bend Radius

Installation of a hose at less than the minimum listed bend radius may significantly reduce the hose life. Particular attention must be given to avoid sharp bending at the hose/fitting juncture.

2.7 Twist Angle and Orientation

Hose installations must be such that relative motion of machine components does not produce twisting.

2.8 Securement

In many applications, it may be necessary to restrain, protect, or guide the hose to protect it from damage by unnecessary flexing, pressure surges, and contact with other mechanical components. Care must be taken to ensure such restraints do not introduce additional stress or wear points.

2.9 Proper Connection of Ports

Proper physical installation of the hose requires a correctly installed port connection while ensuring that no twist or torque is transferred to the hose.

2.10 External Damage

Proper installation is not complete without ensuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated.

2.11 System Checkout

After completing the installation all air entrapment must be eliminated and the system pressurized to the maximum system pressure and checked for proper function without any leaks. Personnel must stay out of potential hazardous areas while testing.

3. HOSE AND FITTING MAINTENANCE INSTRUCTIONS

Even with proper selection and installation, hose life may be significantly reduced without a continuing maintenance program. Frequency should be determined by the severity of the application and risk potential. A maintenance program must be established and followed to include the following as a minimum:

3.1 Visual Inspection Hose/Fitting

Any of the following conditions require immediate shut down and replacement of the hose assembly:

- Fitting slippage on hose.
- Damaged, cut or abraded cover (any reinforcement exposed).
- Hard, stiff, heat cracked, or charred hose.
- Cracked, damaged, or badly corroded fittings.
- Leaks at fitting or in hose.
- Kinked, crushed, flattened or twisted hose.
- Blistered, soft, degraded, or loose cover.

3.2 External Damage

Proper installation is not complete without ensuring that tensile loads, side loads, kinking, flattening, potential abrasion, thread damage, or damage to sealing surfaces are corrected or eliminated.

3.3 System Checkout

After completing the installation all air entrapment must be eliminated and the system pressurized to the maximum system pressure and checked for proper function without any leaks. Personnel must stay out of potential hazardous areas while testing.

3.4 Visual Inspection All Other

The following items must be tightened, repaired or replaced as required:

- Leaking port conditions
- Remove excess dirt build-up
- Clamp, guards, shields
- System fluid level, fluid type and any air entrapment

3.5 Functional Test

Operate the system at maximum operating pressure and check for possible malfunctions and freedom from leaks. Personnel must stay out of potential hazardous areas while testing.

3.6 Replacement Intervals

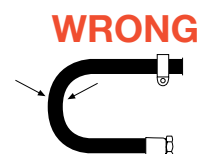
Specific replacement intervals must be considered based on previous service life, government or industry recommendations, or when failures could result in unacceptable downtime, damage, or injury risk.

CORRECT ASSEMBLY INSTALLATION

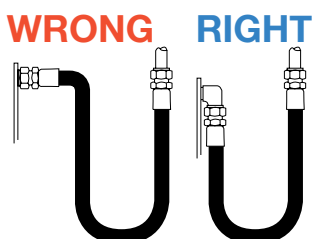
Satisfactory performance and appearance depend upon proper hose installation. Excessive length destroys the trim appearance of an installation, adds unnecessarily to the cost of the hose assembly, will cause poor power transmission, and will shorten the life of the hose assembly.



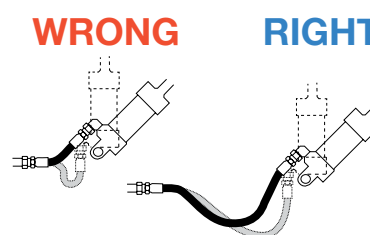
Since hose may change in length under the surge of high pressure, provide sufficient slack for expansion



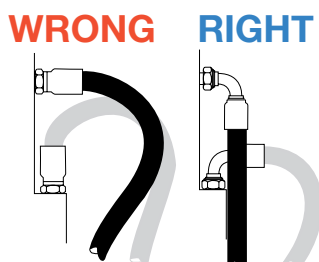
Due to changes in length when hose is pressurized, do not clamp at bends so curves absorb changes. Do not clamp high and low



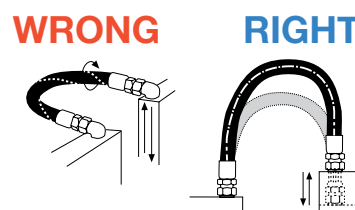
Avoid sharp twist or bend in hose by using proper angle adapters.



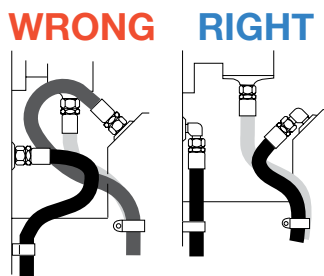
Adequate hose length is most important to distribute movement on flexing applications and to avoid abrasion



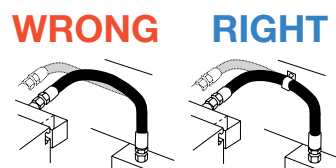
Where the radius falls below the required minimum, an angle adapter should be used as shown above to avoid sharp bends in hose.



To avoid twisting in hose lines bent in two planes, clamp hose at change of plane, as shown.



Obtain direct routing of hose through use of 45° and 90° adapters and fittings. Improve appearance by avoiding excessive hose length.

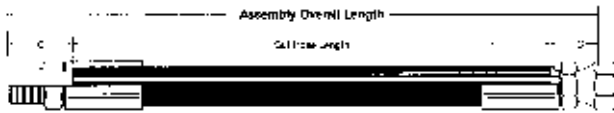


To prevent twisting and distortion, hose should be bent in the same plane as the motion of the port to which hose is connected.

HOW TO DETERMINE CORRECT ASSEMBLY LENGTH

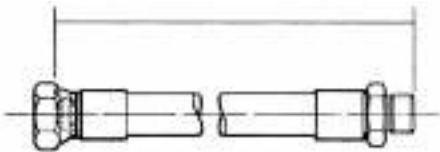
For most assemblies, the correct assembly length may be determined by direct measurement of the equipment or a drawing. Minimum bend radii as shown in the hose specification tables should be observed.

Assemblies are measured to the end of the seal. To determine the length of hose needed in making assemblies with permanent or reusable couplings, subtract Dimension "C" (Cut off factor) for each coupling from the required overall assembly length. Dimension "C" may be found in the coupling specification tables.



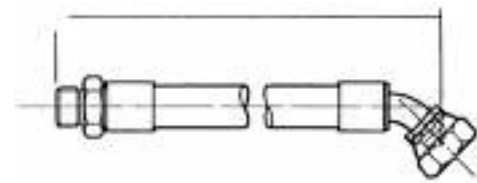
HOW TO MEASURE ASSEMBLIES

Length over nipples



Swivel female and male union

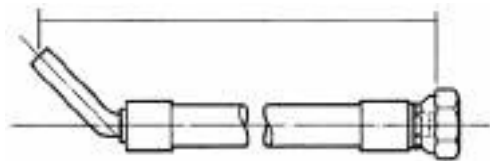
Length between male nipple and centre of female nipple



Male union

Swivel female 45° swept union

Length between centre lines of S.P. and end of nipple



45° standpipe

Swivel female union

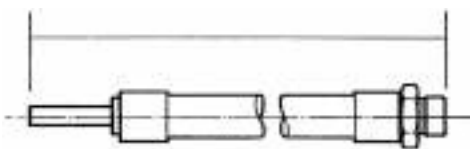
Length between centre of angle and nipple end



Male union

90° SAE flange

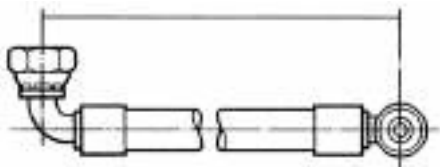
Length between S.P. and nipple ends



Straight standpipe

Male union

Length between centre lines of angle and banjo



Swivel female 90° swept union

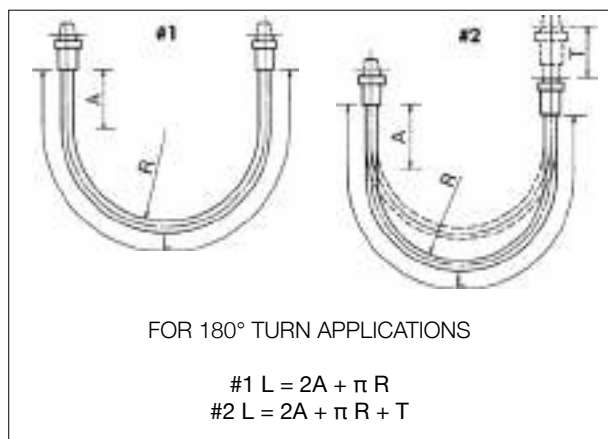
Banjo coupling



$$L \geq l(1 + 0,04)$$

Remember that hydraulic hose under pressure will elongate up to 2% of its length or contract up to 4% depending on pressure, type and size. Sufficient allowance should be made to permit such changes in length.

Occasionally an assembly will be required similar to the sketches to the right. The following equations are helpful in determining the correct length:



where:

L = overall length of the hydraulic hose assembly, in mm or inches.

A = allowance for a minimum straight section of hydraulic hose at each end of the assembly, measured from the outer end of each coupling, in mm or inches. These two straight sections are necessary to prevent excessive stress concentrations directly back of the couplings. See table below.

R = bending radius of the hose, in mm or inches. See hose specifications tables.

T = amount of travel, in mm or inches.

Often right angle adapters provide a convenient means of avoiding too small a bend radius.

Hose ID	in	1/4	5/16	3/8	1/2	5/8	3/4	1	1 1/4	1 1/2	2
	mm	6.4	7.9	9.5	12.7	15.9	19	25	31.8	38.1	50.8
Min	in	5	5	5	6	6	7	8	9	10	11
"A"	mm	127	127	127	152	152	178	203	229	254	279

Length Tolerance for Hydraulic Hose Assemblies and Specified Hose Lengths

For lengths from 0 up to and including 12" (305 mm)

Tolerance: $\pm 1/8" \pm 3 \text{ mm}$

For lengths $\geq 12" (305 \text{ mm}) < 18" (457 \text{ mm})$

Tolerance: $\pm 3/16" \pm 5 \text{ mm}$

For lengths $\geq 18" (457 \text{ mm}) < 36" (914 \text{ mm})$

Tolerance: $\pm 1/4" \pm 6 \text{ mm}$

For lengths $\geq 36" (914 \text{ mm}) < 48" (1219 \text{ mm})$

Tolerance: $\pm 3/8" \pm 10 \text{ mm}$

For lengths $\geq 48" (1219 \text{ mm}) < 72" (1830 \text{ mm})$

Tolerance: $\pm 1/2" \pm 13 \text{ mm}$

For lengths $\geq 72" (1830 \text{ mm})$

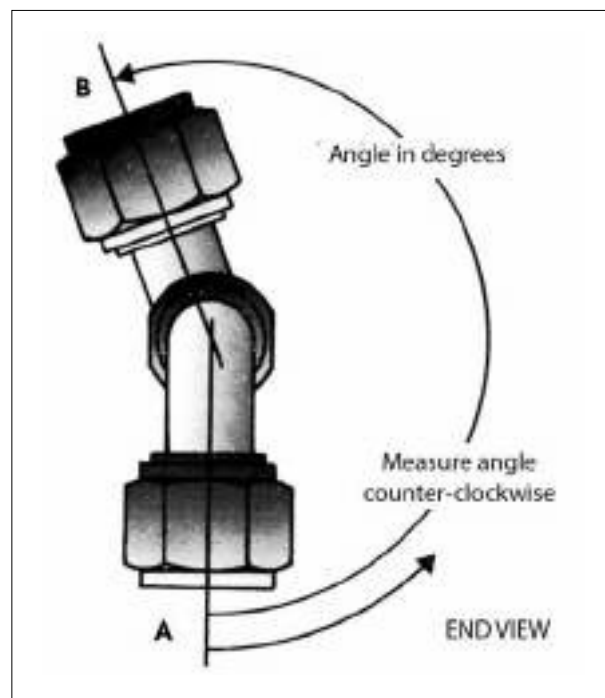
Tolerance: $\pm 1\%$

Elbow angle and angle of orientation

Tolerance: ± 3

Angle Couplings

A - To measure angle of offset of a hose assembly, point one end of coupling "A" (the nearest) to a vertical position downward. The angle can then be measured from the centreline of this vertical coupling in an anticlockwise direction to the centreline of coupling "B" (the far coupling) (see illustration). Relationships can then be expressed from 0° to 360°. If angle not given elbows are positioned at 0°.



// FITTINGS GUIDELINES

FITTING IDENTIFICATION

Dash numbers

Most fluid piping system sizes are measured by dash numbers. These are universally used abbreviations for the size of component expressed as the numerator of the fraction with the denominator always being 16. For example, a -04 port is 4/16 or 1/4 inch. Dash numbers are usually nominal (in name only) and are abbreviations that make ordering of components easier.

There are many coupling systems used for hydraulic connections. They are identified as: American, British, French, German, Japanese.

This section lists the origin and coupling style. Descriptions and dimensional data follows each coupling style.

AMERICAN THREAD TYPES

NPTF (National Pipe Tapered Fuel)

This is a dryseal thread, the National pipe tapered thread for fuels. This is used for both male and female ends. This connection is still widely used in fluid power systems, even through it is not recommended by the National Fluid Power Association (N.F.P.A.) for use in hydraulic applications.

The NPTF male will mate with the NPTF, NPSF or NPSM female. The NPTF male has tapered threads and a 30° inverted seat. The NPTF female has tapered threads and no seat.

The seal takes place by deformation of the threads. The NPSM female has straight threads and a 30° inverted seat. The seal takes place on the 30° seat.

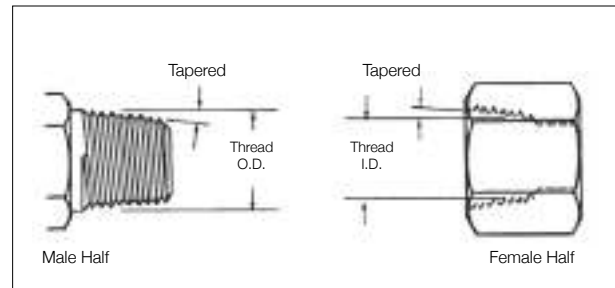
The NPTF connector is similar to, but not interchangeable with, the BSPT connector. The thread pitch is different in most sizes. Also, the thread angle is 60° instead of the 55° angle found on BSPT threads.

NPTF (National Pipe Tapered Fuel)

The National pipe straight thread for fuels. This is sometimes used for female ends and properly mates with the NPTF male end. However, the SAE recommends the NPTF thread in preference to the NPSF for female ends.

NPSF (National Pipe Straight Mechanical)

National pipe straight thread for mechanical joint. This is used on the female swivel nut of iron pipe swivel adapters. The leak-resistant joint is not made by the sealing fit of threads, but by a tapered seat in the coupling end. This connection is sometimes used in fluid power systems.



Thread Identification Table

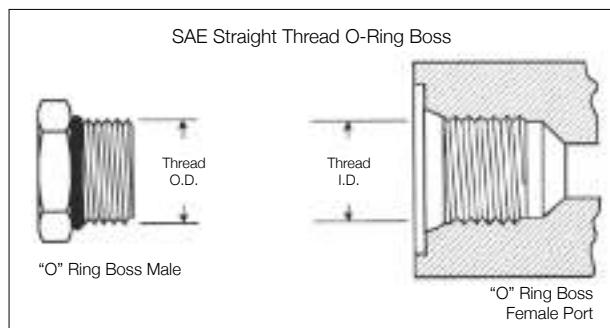
National Pipe Straight Mechanical (NPSM)

National Pipe Tapered for Fuels (NPTF)

Tube Size	Tube Size	Thread Size	Female Thread I.D.		Male Thread O.D.	
Dash	(in)	(in-TPI)	(mm)	(in)	(mm)	(in)
-2	1/8	1/8-27	8.7	0.34	10.3	0.41
-4	1/4	1/4-18	11.9	0.47	14.3	0.56
-6	3/8	3/8-18	15.1	0.59	17.5	0.69
-8	1/2	1/2-14	18.3	0.72	21.4	0.84
-12	3/4	3/4-14	23.8	0.94	27.0	1.06
-16	1	1-11 1/2	30.2	1.19	33.3	1.31
-20	1 1/4	1 1/4-11 1/2	38.9	1.53	42.9	1.69
-24	1 1/2	1 1/2-11 1/2	44.5	1.75	48.4	1.91
-32	2	2-11 1/2	57.2	2.25	60.3	2.38

SAE J514 Straight Thread O-Ring Boss (ORB)

This port connection is recommended by the N.F.P.A. for optional leakage control in medium and high pressure hydraulic systems. The O'ring boss male will mate with an O'ring boss female only.



Thread Identification Table
SAE J514 Straight Thread O-Ring Boss

Tube Size	Tube Size	Thread Size	Female Thread I.D.		Male Thread O.D.	
Dash	(in)	(in-TPI)	(mm)	(in)	(mm)	(in)
-2	1/8	5/16-24	6.9	0.27	7.8	0.31
-3	3/16	3/8-24	8.5	0.34	9.4	0.37
-4	1/4	7/16-20	9.9	0.39	11.2	0.44
-5	5/16	1/2-20	11.5	0.45	12.6	0.49
-6	3/8	9/16-18	12.9	0.51	14.1	0.56
-8	1/2	3/4-16	17.5	0.69	18.9	0.74
-10	5/8	7/8-14	20.5	0.81	22.1	0.87
-12	3/4	1 1/16-12	24.9	0.98	26.9	1.06
-14	7/8	1 3/16-12	28.1	1.11	30.3	1.18
-16	1	1 5/16-12	31.3	1.23	33.1	1.31
-20	1 1/4	1 5/8-12	39.2	1.54	41.1	1.62
-24	1 1/2	1 7/8-12	45.6	1.79	47.4	1.87
-32	2	2 1/2-12	61.4	2.42	63.3	2.49

The male has straight threads and an O'ring. The female has straight threads and a sealing face. The seal is made at the O'ring on the male and the sealing face on the female. The threads hold the connection mechanically.

SAE J514 37° (JIC)

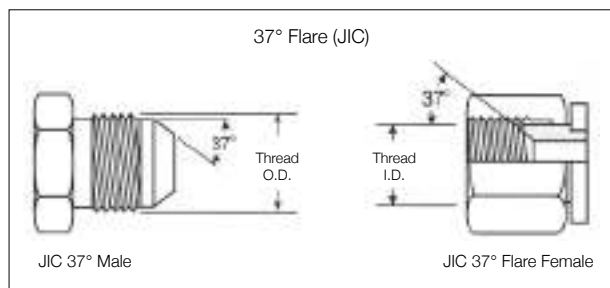
The Society of Automotive Engineers (SAE) specifies a 37° angle flare or seat be used with high pressure hydraulic tubing. These are commonly called JIC couplings.

The JIC 37° flare male will mate with a JIC female only.

The JIC male has straight threads and a 37° flare seat.

The JIC female has straight threads and a 37° flare seat.

The seal is made on the 37° flare seat by establishing a line contact between the male flare and the female cone seat. The threads hold the connection mechanically.



Thread Identification Table
SAE J514 37° Flare (JIC)

Tube Size	Tube Size	Thread Size	Female Thread I.D.		Male Thread O.D.	
Dash	(in)	(in-TPI)	(mm)	(in)	(mm)	(in)
-2	1/8	5/16-24	6.9	0.27	7.8	0.31
-3	3/16	3/8-24	8.5	0.34	9.4	0.37
-4	1/4	7/16-20	9.9	0.39	11.2	0.44
-5	5/16	1/2-20	11.5	0.45	12.6	0.49
-6	3/8	9/16-18	12.9	0.51	14.1	0.56
-8	1/2	3/4-16	17.5	0.69	18.9	0.74
-10	5/8	7/8-14	20.5	0.81	22.1	0.87
-12	3/4	1 1/16-12	24.9	0.98	26.9	1.06
-14	7/8	1 3/16-12	28.1	1.11	30.3	1.18
-16	1	1 5/16-12	31.3	1.23	33.1	1.31
-20	1 1/4	1 5/8-12	39.2	1.54	41.1	1.62
-24	1 1/2	1 7/8-12	45.6	1.79	47.4	1.87
-32	2	2 1/2-12	61.4	2.42	63.3	2.49

CAUTION: In the -02, -03, -04, -05, -08 and -10 sizes, the threads of the SAE 45° flare and the SAE 37° flare are the same. However, the sealing surface angles are not the same. Carefully measure the seat angle to differentiate.

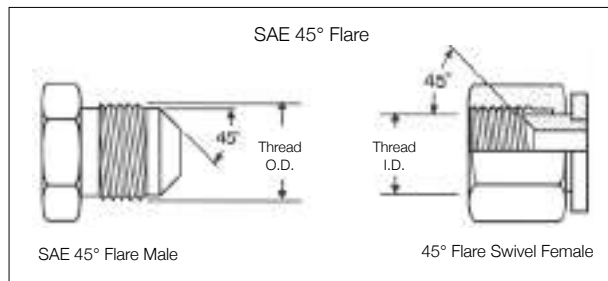
SAE J512 45°

A term usually applied to fittings having a 45° angle flare or seat. Soft copper tubing is generally used in such applications as it is easily flared to the 45° angle. These are for low pressure applications - commonly used in refrigeration, automotive and truck piping systems. The SAE 45° flare male will mate with an SAE 45° flare female only.

The SAE male has straight threads and a 45° flare seat.

The SAE female has straight threads and a 45° flare seat.

The seal is made on the 45° flare seat.



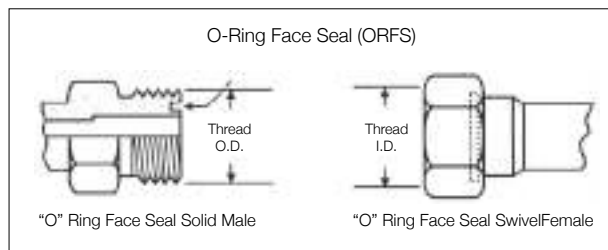
Thread Identification Table
SAE J512 45°

Tube Size	Tube Size	Thread Size	Female Thread I.D.		Male Thread O.D.	
Dash	(in)	(in-TPI)	(mm)	(in)	(mm)	(in)
-2	1/8	5/16-24	6.9	0.27	7.9	0.31
-3	3/16	3/8-24	8.5	0.34	9.6	0.38
-4	1/4	7/16-20	9.9	0.39	11.2	0.44
-5	5/16	1/2-20	11.4	0.45	12.7	0.50
-6	3/8	5/8-18	14.2	0.56	15.7	0.62
-7	7/16	1 1/16-16	15.7	0.62	17.3	0.68
-8	1/2	3/4-16	17.0	0.68	19.0	0.75
-10	5/8	7/8-14	20.3	0.80	22.3	0.88
-12	3/4	1 1/16-14	25.1	0.99	26.9	1.06
-14	7/8	1 1/4-12	29.5	1.16	31.7	1.25
-16	1	1 3/8-12	32.5	1.28	35.0	1.38

The threads hold the connection mechanically. CAUTION: In the -02, -03, -04, -05, -08 and -10 sizes, the threads of the SAE 45° flare and the SAE 37° flare are the same. However, the sealing surface angles are not the same. Carefully measure the seat angle to differentiate.

SAE J1453 O-Ring Face Seal (ORFS)

A seal is made when the O'ring in the male contacts the flat face on the female. Couplings are intended for hydraulic systems where elastomeric seals are acceptable to overcome leakage and leak resistance is crucial. This connection offers the very best leakage control available today.



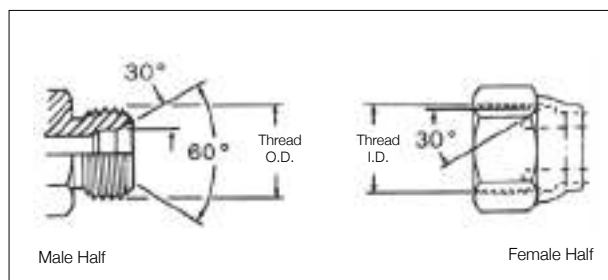
Thread Identification Table
SAE J1453 O-Ring Face Seal (ORFS)

Tube Size	Tube Size	Thread Size	Female Thread I.D.		Male Thread O.D.	
Dash	(in)	(in-TPI)	(mm)	(in)	(mm)	(in)
-4	1/4	9/16-18	12.9	0.51	14.1	0.56
-6	3/8	1 1/16-16	15.9	0.63	17.3	0.68
-8	1/2	1 3/16-16	19.1	0.75	20.5	0.81
-10	5/8	1-14	23.6	0.93	25.2	0.99
-12	3/4	1 3/16-12	28.1	1.11	30.0	1.18
-16	1	1 7/16-12	34.4	1.36	36.3	1.43
-20	1 1/4	1 1/16-12	40.8	1.61	42.7	1.68
-24	1 1/2	2-12	48.7	1.92	50.6	1.99

The male connector has a straight thread and a machined flat face. The female has a straight thread and a machined flat face. The seal takes place by compressing the O-Ring onto the flat face of the female, similar to the split flange type fitting. The threads hold the connection mechanically.

SAE J512 Inverted Flare

This connection is frequently used in automotive systems. The male connector can either be a 45° flare in the tube fitting form or a 42° seat in the machined adapter form. The female has a straight thread with a 42° inverted flare. The seal takes place on the flared surface. The threads hold the connection mechanically.

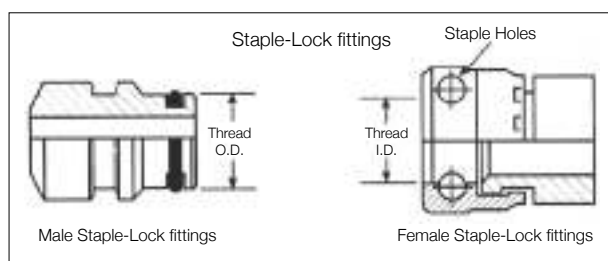


Thread Identification Table
SAE J512 Inverted Flare

Tube Size	Tube Size	Thread Size	Female Thread I.D.		Male Thread O.D.	
Dash	(in)	(in-TPI)	(mm)	(in)	(mm)	(in)
-2	1/8	5/16-28	6.9	0.27	7.9	0.31
-3	3/16	3/8-24	8.5	0.34	9.6	0.38
-4	1/4	7/16-24	9.9	0.39	11.2	0.44
-5	5/16	1/2-20	11.4	0.45	12.7	0.50
-6	3/8	5/8-18	14.2	0.56	15.7	0.62
-7	7/16	1 1/16-18	15.7	0.62	17.3	0.68
-8	1/2	3/4-18	17.0	0.68	19.0	0.75
-10	5/8	7/8-18	20.3	0.80	22.3	0.88
-12	3/4	1 1/16-16	25.1	0.99	26.9	1.06

SAE J1467 Clip Fastener

This is a radial O-Ring seal connection commonly used for hydraulic applications in underground mines. The male contains an exterior O-Ring and backup ring, plus a groove to accept the "staple". The female has a smooth bore with two holes for the staple.



Thread Identification Table
SAE J1467 Clip Fastener

Dash Size	Inch Size	Female Staple-Lock I.D.		Male Staple-Lock O.D.	
	(in)	(mm)	(in)	(mm)	(in)
-4	1/4	14.9	19/32	15.1	19/32
-6	3/8	19.9	51/64	20.1	51/64
-8	1/2	23.9	61/64	24.1	61/64
-12	3/4	28.9	1.9/64	29.1	1.9/64
-16	1	38.9	1.35/64	39.1	1.35/64
-20	1 1/4	45.9	1.13/16	46.1	1.13/16
-24	1 1/2	54.9	1.11/64	55.2	2.11/64
-32	2	63.9	1.17/32	64.2	2.17/32

A "U" shaped retaining clip or staple is inserted through the two holes, passing through the groove in the male to lock the connection together. The seal takes place by contact between the O-Ring in the male and the smooth bore of the female.

SAE J518/ISO - DIS 6162/JIS B8363 O-Ring Flange

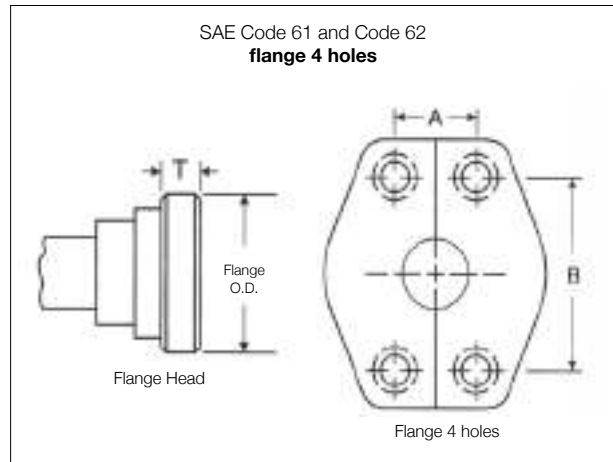
This connection is commonly used in fluid power system. There are two pressure ratings. Code 61 Form R, PN 35/350 bar, Type I, is referred to as the "standard" series and Code 62 Form S, PN 415 bar, Type II, is the "heavy duty" "6000 psi" series. The design concept for both series is the same, but the bolt hole spacing and flanged head diameters are larger for the higher pressure, Code 62 connection.

The female (port) is an unthreaded hole with four bolt holes in a rectangular pattern around the port.

The male consists of a flanged head, grooved for an O-Ring, and either a captive flange or split flange halves with bolt holes to match the port. The seal take place on the O-Ring, which is compressed between the flange head and the flat surface surrounding the port. The threaded bolts hold the connection together.

SAE J518, DIN 20066, ISO/DIS 6162 and JIS B 8363 are interchangeable, except for bolt sizes.

*All Code 61 flange head hose couplings meet or exceed SAE J518 Code 61 requirements for hydraulic split flange connections. The Code 61 flange head design can withstand a maximum operating pressure of 3000 to 5000 psi depending on size.



Flange Dash	SAE Cod 61 FORM R - PN 35/350 - TYPE I								SAE Cod 62 FORM S - PN 415 - TYPE II								CATERPILLAR							
	Flange Head Size		Flange Head T		A		B		Flange Head Size		Flange Head T		A		B		Flange Head Size		Flange Head T		A		B	
Size	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)
-8	1.19	30.2	.265	6.7	.69	17.5	1.50	38.1	.305		.71	18.2	1.59	40.5										
-10*	1.34	34.0	.265	6.7	.78	19.8	1.69	42.9																
-12	1.50	38.1	.265	6.7	.87	22.2	1.89	47.6	1.63	41.3	.345	8.7	.94	23.8	2.00	50.8	1.63	41.3	.56	14.2	.94	23.8	2.00	50.8
-16	1.75	44.5	.315	8.0	1.03	26.2	2.05	52.4	1.88	47.6	.375	9.5	1.10	27.8	2.25	57.2	1.88	47.6	.56	14.2	1.10	27.8	2.25	57.2
-20	2.00	50.8	.315	8.0	1.19	30.2	2.31	58.7	2.13	54.0	.405	10.3	1.26	31.8	2.63	66.7	2.13	54.0	.56	14.2	1.26	31.8	2.63	66.7
-24	2.38	60.3	.315	8.0	1.41	35.7	2.75	69.9	2.50	63.5	.495	12.6	1.44	36.6	3.13	79.4	2.50	63.5	.56	14.2	1.44	36.6	3.13	79.4
-32	2.81	71.4	.375	9.5	1.69	42.9	3.06	77.8	3.13	79.4	.495	12.6	1.73	44.4	3.81	96.8	3.13	79.4	.56	14.2	1.73	44.4	3.81	96.8
-40	3.31	84.1	.375	9.5	2.00	50.8	3.50	88.9																

T = Thickness

-10 is a non SAE size flange

How to measure

Four Bolt Flange - First measure the port hole diameter using the caliper.

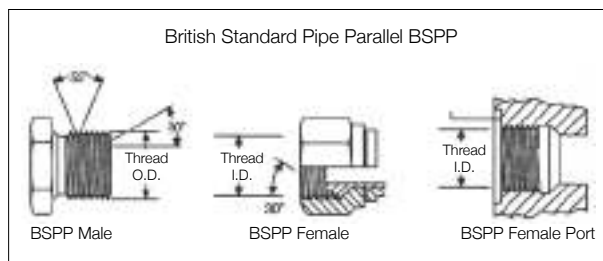
Next, measure the longest bolt hole spacing from centre-to-centre (Dimension "A") or measure the flanged head diameter. O.D.

1. The size -10, which is common outside of North America is not an SAE Standard size.
2. Caterpillar flanges, which are the same flange O.D. as SAE Code 62, have a thicker flange head.
3. Poclain flanges, which are completely different from SAE flanges.

BRITISH CONNECTIONS

British Standard Pipe Parallel (BSPP)

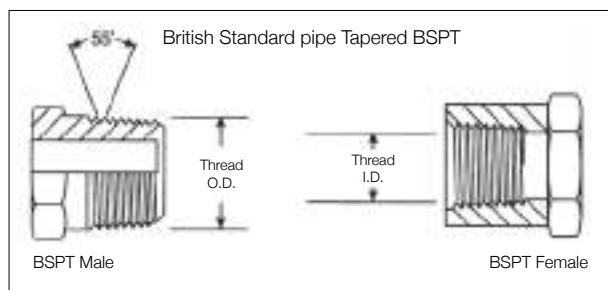
This connection is frequently used in automotive systems. The male connector can either be a 45° flare in the tube fitting form or a 42° seat in the machined adapter form. The female has a straight thread with a 42° inverted flare. The seal takes place on the flared surface. The threads hold the connection mechanically.



British Standard Pipe Tapered (BSPT)

The BSPT (tapered) male will mate with a BSPT (tapered) female, or a BSPP (parallel) female. The BSPT male has tapered threads. When mating with either the BSPT (tapered) female or the BSPP (parallel) female port, the seal is made on the threads accomplished by thread distortion. A thread sealant is recommended.

The BSPT connector is similar to, but not interchangeable with, the NPTF connector. The thread pitch is different in most cases, and the thread angle is 55° instead of the 60° angle found on NPTF threads.



Thread Identification Table

BSPP - (British Standard Pipe Parallel)

BSPT - (British Standard Pipe Tapered)

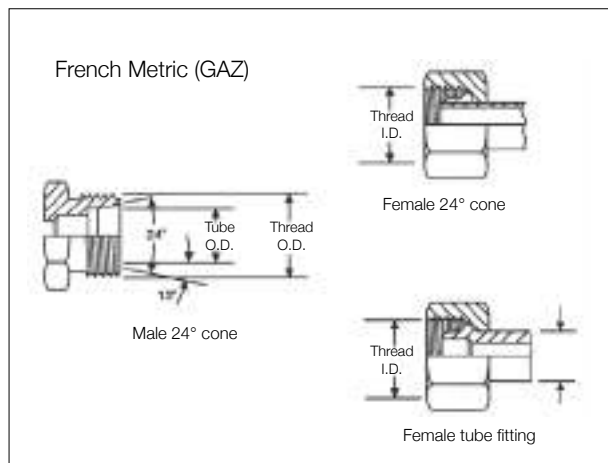
Dash Size	Inch Size	Thread Size	Female Thread I.D.		Male Thread O.D.	
			(mm)	(in)	(mm)	(in)
-2	1/8	1/8-28	8.7	0.34	9.5	0.38
-4	1/4	1/4-19	11.1	0.44	13.5	0.56
-6	3/8	3/8-19	15.1	0.59	16.7	0.66
-8	1/2	1/2-14	18.3	0.72	20.6	0.81
-10	5/8	5/8-14	20.6	0.81	23.0	0.91
-12	3/4	3/4-14	23.8	0.94	26.2	1.03
-16	1	1-11	30.2	1.19	33.3	1.31
-20	1 1/4	1 1/4-11	38.9	1.53	41.1	1.66
-24	1 1/2	1 1/2-11	45.2	1.78	47.6	1.88
-32	2	2-11	56.4	2.22	59.5	2.34

FRENCH CONNECTIONS

French GAZ have a 24° seat and metric threads. These are similar to German DIN couplings, but the threads are different in some sizes, the French use fine threads in all sizes. French flanges are different than SAE, they have a lip that protrudes from the flange face. These are Poclain style flanges.

Millimetrique and GAZ 24°

This connection consists of a common male and two different females. The French Metric (GAZ) male will mate with the female 24° cone or the female tube fitting. The male has a 24° seat and straight metric threads. The female has a 24° seat or a tubing sleeve and straight metric threads. The Millimetrique Series is used with whole number metric O.D. tubing and the GAZ Series is used with fractional number metric O.D. pipe size tubing.



**Thread Identification Table
French Metric Millimetrique**

Metric Thread (dia x pitch)	Female Thread I.D.		Male Thread O.D.		Tube O.D.	
	(mm)	(in)	(mm)	(in)	(mm)	(in)
M12 X 1.0	11.0	0.43	12.0	0.47	6	0.24
M14 X 1.5	12.5	0.49	14.0	0.55	8	0.31
M16 X 1.5	14.5	0.57	16.0	0.63	10	0.39
M18 X 1.5	16.5	0.65	18.0	0.71	12	0.47
M20 X 1.5	18.5	0.73	20.0	0.79	14	0.55
M22 X 1.5	20.5	0.81	22.0	0.87	15	0.59
M24 X 1.5	22.5	0.89	24.0	0.94	16	0.63
M27 X 1.5	25.5	1.00	27.0	1.06	18	0.71
M30 X 1.5	28.5	1.12	30.0	1.18	22	0.87
M33 X 1.5	31.5	1.24	33.0	1.30	25	0.98
M36 X 1.5	34.5	1.36	36.0	1.42	28	1.10
M39 X 1.5	37.5	1.48	39.0	1.54	30	1.18
M42 X 1.5	40.5	1.59	42.0	1.65	32	1.26
M45 X 1.5	43.5	1.71	45.0	1.77	35	1.38
M48 X 1.5	46.5	1.83	48.0	1.89	38	1.50
M52 X 1.5	50.5	1.99	52.0	2.05	40	1.57
M54 X 2.0	51.9	2.04	54.0	2.13	45	1.77

**Thread Identification Table
French Metric GAZ 24° Cone**

Dash Size (dash)	Metric Thread (dia x pitch)	Female Thread I.D.		Male Thread O.D.		Tube O.D.	
		(mm)	(in)	(mm)	(in)	(mm)	(in)
-6	M20 X 1.5	18.5	0.73	20.0	0.78	13.25	0.52
-8	M24 X 1.5	22.5	0.89	24.0	0.94	16.75	0.66
-10	M30 X 1.5	28.5	1.12	30.0	1.18	21.25	0.83
-12	M36 X 1.5	34.5	1.36	36.0	1.41	26.75	1.05
-16	M45 X 1.5	43.5	1.71	45.0	1.77	33.50	1.32
-20	M52 X 1.5	50.5	1.99	52.0	2.04	42.25	1.66

GAZ Poclain 24° Flange

The Poclain (French GAZ) 24° high pressure flange is usually found on Poclain equipment. The male flange will mate with a female flange or a port. The seal is made on the 24° seat.

Nominal	A		B		E	
Size (in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
1/2	39.9	1.57	18.3	.72	14	.55
5/8	39.9	1.57	18.3	.72	14	.55
3/4	50.8	2	23.9	.94	18	.71

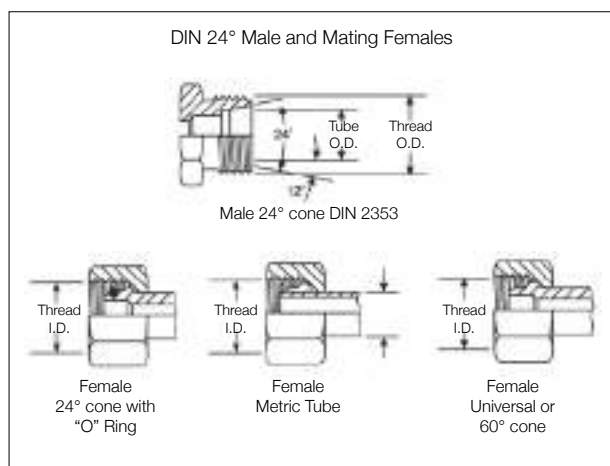
GERMAN DIN CONNECTIONS

A coupling referred to as metric, usually means a DIN coupling. Flanges are standard Code 61 or Code 62.

DIN 2353 24° Cone

The DIN 24° cone male will mate with any of the three females shown below.

The male has a 24° seat, straight metric threads, and a recessed counterbore which matches the tube O.D. used with it. The mating female may be a 24° cone with O'ring, (DKO type) a metric tube fitting or a universal 24° or 60° cone.



Thread Identification Table
DIN 24° Cone

Metric Thread (dia x pitch)	Female Thread I.D.		Male Thread O.D.		Tube O.D.			
	(mm)	(in)	(mm)	(in)	Light Series		Heavy Series	
	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
M12 X 1.5	10.5	0.41	12	0.47	6	0.24		
M14 X 1.5	12.5	0.49	14	0.55	8	0.31	6	0.24
M16 X 1.5	14.5	0.57	16	0.63	10	0.39	8	0.31
M18 X 1.5	16.5	0.65	18	0.71	12	0.47	10	0.39
M20 X 1.5	18.5	0.73	20	0.79			12	0.47
M22 X 1.5	20.5	0.81	22	0.87	15	0.59	14	0.55
M24 X 1.5	22.5	0.89	24	0.94			16	0.63
M26 X 1.5	24.5	0.96	26	1.02	18	0.71		
M30 X 2.0	27.9	1.10	30	1.18	22	0.87	20	0.79
M36 X 2.0	33.9	1.33	36	1.42	28	1.10	25	0.98
M42 X 2.0	39.9	1.57	42	1.65			30	1.18
M45 X 2.0	42.9	1.69	45	1.77	35	1.38		
M52 X 2.0	49.9	1.96	52	2.05	42	1.65	38	1.50

There is a light and heavy series DIN coupling.

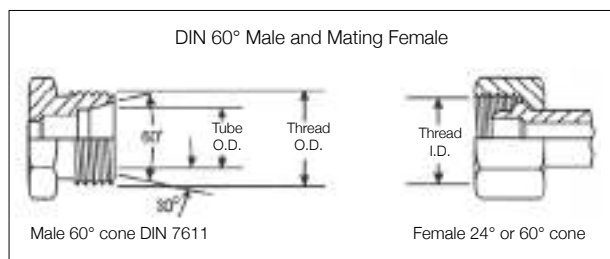
Proper identification is made by measuring both the thread size and the tube O.D. (The heavy series has a smaller tube O.D. than the light, but has a thicker wall section).

DIN 3863 60° Cone

This connection is frequently used in hydraulic systems. The DIN 60° cone male will mate with the female universal 24° or 60° cone only.

The male has a 60° seat and straight metric threads. The female has a 24° and 60° universal seat and straight metric threads. The seal takes place by contact between the cone of the male and the nose of the flareless swivel.

The threads hold the connection mechanically.

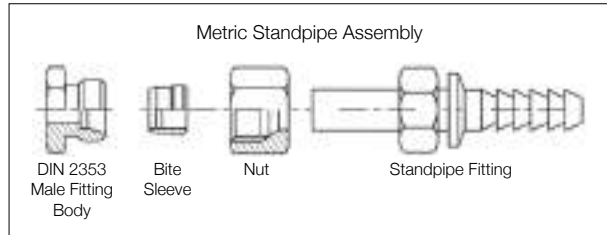


Thread Identification Table
DIN 60°

Metric Thread (dia x pitch)	Female Thread I.D.		Male Thread O.D.		Tube O.D.	
	(mm)	(in)	(mm)	(in)	(mm)	(in)
M12 X 1.5	10.5	0.41	12	0.47	6	0.24
M14 X 1.5	12.5	0.49	14	0.55	8	0.31
M16 X 1.5	14.5	0.57	16	0.63	10	0.39
M18 X 1.5	16.5	0.65	18	0.71	12	0.47
M22 X 1.5	20.5	0.81	22	0.87	15	0.59
M26 X 1.5	24.5	0.96	26	1.02	18	0.71
M30 X 1.5	28.5	1.12	30	1.18	22	0.87
M38 X 1.5	36.5	1.44	38	1.50	28	1.10
M45 X 1.5	43.5	1.71	45	1.77	35	1.38
M52 X 1.5	50.5	1.99	52	2.05	42	1.65

Metric Standpipe

A metric standpipe is comprised of three components attached to a male fitting. The components are a Standpipe, Bite Sleeve and Metric Nut. The nut is placed over the Standpipe, followed by the Bite Sleeve (see illustration below). For DIN light assemblies, a DIN light metric nut is used. For DIN heavy assemblies, a DIN heavy metric nut is used. Bite Sleeve and Standpipe are selected on the basis of tube O.D.



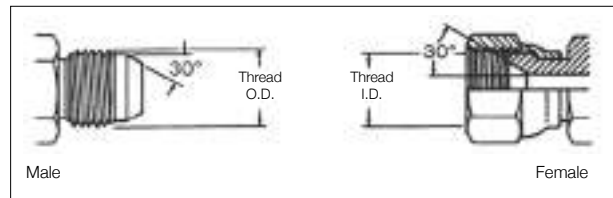
Tube O.D. (mm)	Metric Nut Thread	
	Light	Heavy
6	M12 x 1.5	
8	M14 x 1.5	M16 x 1.5
10	M16 x 1.5	M18 x 1.5
12	M18 x 1.5	M20 x 1.5
15	M22 x 1.5	
16		M24 x 1.5
18	M26 x 1.5	
20		M30 x 2.0
22	M30 x 1.5	
25		M36 x 2.0
28	M36 x 2.0	
30		M42 x 2.0
35	M45 x 2.0	
38		M52 x 2.0
42	M52 x 2.0	

JAPANESE CONNECTIONS

Japanese equipment uses JIS (Japanese Industrial Standard) couplings with a 30° seat and British Standard Pipe Parallel threads. All flanges are Code 61 or Code 62 (except -10).

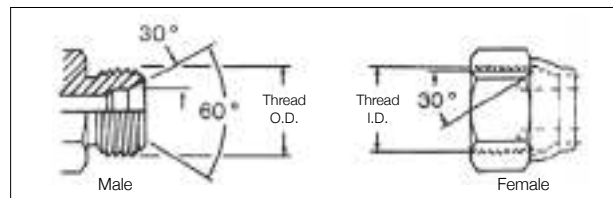
JIS 30° Flare Parallel Pipe Threads - JIS B 0202

These Japanese 30° flare male coupling will mate with a Japanese 30° flare female only. The male and female have straight threads and a 30° seat. The seal is made on the 30° seat. The threads on the Japanese 30° flare connector conform to JIS B 0202, the same as the BSPP threads. Both the British and Japanese connectors have a 30° seat, but they are not interchangeable, because the British seat is inverted.



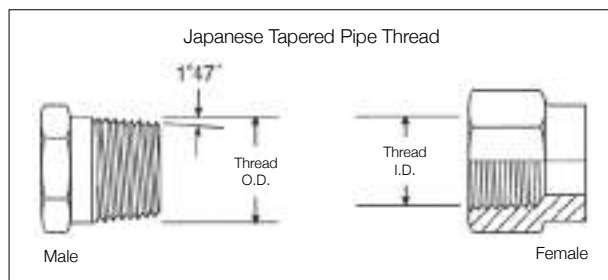
JIS 30° Inverted Seat, Parallel Pipe Threads - JIS B 0202

The JIS parallel is similar to the BSPP connection. The JIS parallel thread and the BSPP connection are interchangeable.



JIS Tapered Pipe Thread (PT) - JIS B 0203

The JIS tapered pipe thread connection is similar to the BSPT connection and fully interchangeable. The Japanese connection does not have a 30° Flare, and will not mate with the BSPP female. The thread conforms to JIS B 0203, same as BSPT threads. The seal on the JIS tapered pipe thread connection is made on the threads.

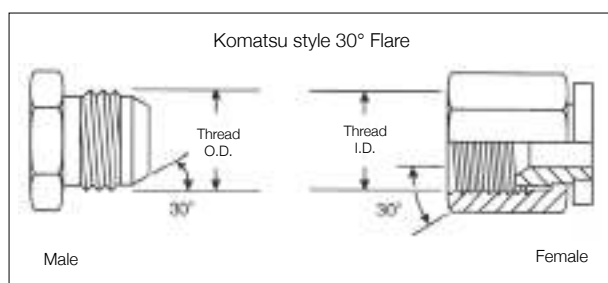


Thread Identification Table

Dash Size	Inch Size	Thread Size	Female Thread I.D.		Male Thread O.D.	
			(in-TPI)	(mm)	(mm)	(in)
-2	1/8	1/8-27		8.7	9.5	0.38
-4	1/4	1/4-18		11.1	13.5	0.56
-6	3/8	3/8-18		15.1	16.7	0.66
-8	1/2	1/2-14		18.3	20.6	0.81
-10	5/8	5/8-14		20.6	23.0	0.91
-12	3/4	3/4-14		23.8	26.2	1.03
-16	1	1 1/4-11		30.2	33.3	1.31
-20	1 1/4	1 1/4-11		38.9	41.1	1.66
-24	1 1/2	1 1/2-11		45.2	47.6	1.88
-32	2	2-11		56.4	59.5	2.34

Komatsu Style 30° Flare Parallel Threads

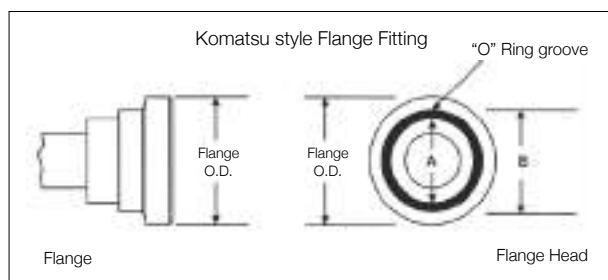
The Komatsu style 30° Flare Parallel thread coupling is identical to the Japanese 30° Flare parallel except for the threads. The Komatsu uses Metric fine threads which conform to JIS B 0207. The Komatsu connector seals on the 30° Flare.



Dash Size	Inch Size	Metric Thread	Male Thread O.D.	B Thread I.D.
			(mm)	(mm)
-6	3/8	M18x1.5	18	16.4
-8	1/2	M22x1.5	22	20.4
-10	5/8	M24x1.5	24	22.4
-12	3/4	M30x1.5	30	28.4
-16	1	M33x1.5	33	31.4
-20	1 1/4	M36x1.5	36	34.4
-24	1 1/2	M42x1.5	42	40.4

Komatsu Flange Fitting

The Komatsu Flange fitting is nearly identical to and fully interchangeable with the SAE Code 61 flange fitting. In all sizes the O-ring dimensions are different. When replacing a Komatsu flange with an SAE style flange, an SAE style O-ring must be used.



Flange Dash	Flange Size	A	B
Size	(in)		
-8	1.19	.73	.98
-10*	1.34	.73	1.10
-12	1.50	.85	1.22
-16	1.75	1.12	1.50
-20	2.00	1.36	1.73
-24	2.38	1.75	2.12
-32	2.81	2.22	2.56

*is a non SAE size flange

RECOMMENDED FITTING AND ADAPTER INSTALLATION TORQUE

SAE J514 37° CONE (JIC)

Dash	Thread	Lb.ft		N.m	
		Min	Max	Min	Max
-4	7/16-20	11	12	15	16
-5	1/2-20	14	15	19	21
-6	9/16-18	18	20	24	28
-8	3/4-16	36	39	49	53
-10	7/8-14	57	63	77	85
-12	1 1/16-12	79	88	107	119
-14	1 3/16-12	94	103	127	140
-16	1 5/16-12	108	113	147	154
-20	1 5/8-12	127	133	172	181
-24	1 7/8-12	158	167	215	226
-32	2 1/2-12	245	258	332	350

BSPP without O-Ring

Dash	Thread	Lb.ft	N.m
-2	1/8-28	7	10
-4	1/4-19	15	20
-6	3/8-19	26	35
-8	1/2-14	44	60
-10	5/8-14	52	70
-12	3/4-14	85	115
-16	1-11	103	140
-20	1 1/4-11	155	210
-24	1 1/2-11	214	290
-32	2-11	295	400

SAE J1453 O-Ring Face Seal (ORFS)

Dash	Thread	Lb.ft		N.m	
		Min	Max	Min	Max
-4	9/16-18	18	21	25	28
-6	1 1/16-18	30	32	40	44
-8	1 3/16-16	41	44	55	60
-10	1-14	46	50	60	68
-12	1 3/16-12	65	70	90	95
-16	1 7/16-12	92	100	125	135
-20	1 11/16-12	125	140	170	190
-32	2-12	150	165	200	225

BSPP without O-Ring

Dash	Thread	Lb.ft	N.m
-2	1/8-28	N/A	N/A
-4	1/4-19	15	20
-6	3/8-19	26	35
-8	1/2-14	37	50
-10	5/8-14	44	60
-12	3/4-14	63	85
-16	1-11	85	115
-20	1 1/4-11	140	190
-24	1 1/2-11	177	240
-32	2-11	221	300

SAE Flange J518 Code 61

Dash	Thread	Lb.ft		N.m	
		Min	Max	Min	Max
-8	1/2	15	19	20	25
-12	3/4	21	29	28	40
-16	1	27	35	37	48
-20	1 1/4	35	46	48	62
-24	1 1/2	46	58	62	79
-32	2	54	66	73	90
-40	2 1/2	79	91	107	124
-48	3	137	149	186	203

JIS (B8363)

Dash	Thread	Lb.ft	N.m
-4	1/4-19	19	25
-6	3/8-19	25	34
-8	1/2-14	49	64
-10	5/8-14	100	132
-12	3/4-14	100	132
-16	1-11	149	196
-20	1 1/4-11	171	225
-24	1 1/2-11	194	255
-32	2-11	240	316

SAE J518 Code 62

Dash	Thread	Lb.ft		N.m	
		Min	Max	Min	Max
-8	1/2	15	19	20	25
-12	3/4	25	33	34	45
-16	1	42	50	56	68
-20	1 1/4	63	75	85	102
-24	1 1/2	117	133	158	181
-32**	2	200	217	271	294

Metric

Thread	Lb.ft		N.m	
	Min	Max	Min	Max
M12x1.5	8	11	15	20
M14x1.5	13	18	25	30
M16x1.5	19	26	35	40
M18x1.5	22	30	40	45
M20x1.5	24	33	45	50
M22x1.5	32	44	60	70
M24x1.5	41	55	75	85
M26x1.5	46	63	85	95
M30x2	57	77	105	120
M36x2	74	100	135	150
M42x2	111	151	205	230
M45x2	136	184	250	280
M52x2	147	199	270	300

JIC FFFT TORQUE METHOD

The FFFT (Flats From Finger Tight) method allows to assemble fittings and adapters at the correct torque value without a dynamometric wrench. The rotation applied according the value shown in tab.1 ensures a good sealing, avoid unscrewing and over torque that can cause nut or cone crack.

Assembling instruction:

- hand tighten the joint
- make a longitudinal mark on one of the flats of hex and continue it on the body hex as shown in Fig.1
- tighten the joint further by the number of flat as shown in Tab.1/2 according to JIC version.

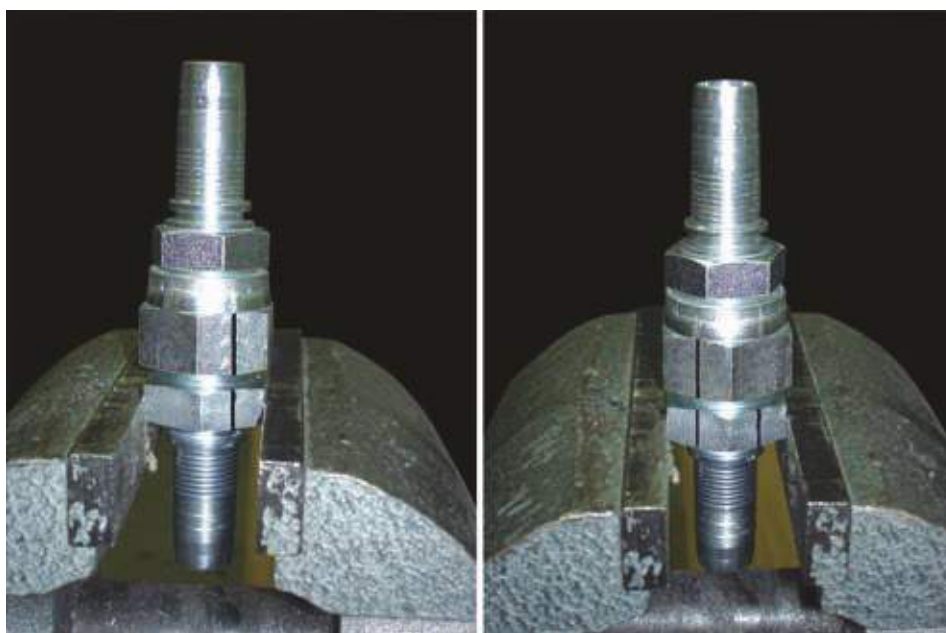


Fig. 1

CRIMPED NUT JIC VERSION						
Assembling value - carbon steel material - SAE J514 JIC 37° flare						
Dash size	Thread	Lb.*t		N*m		FFFT 0/+0.25
		Min	Max	Min	Max	
-4	7/16-20	11	12	15	16	2
-5	1/2-20	14	15	19	21	2
-6	9/16-18	18	20	24	28	2
-8	3/4-16	36	39	49	53	1.5
-10	7/8-14	57	63	77	85	1.5
-12	1 1/16-12	79	88	107	119	1
-14	1 3/16-12	94	103	127	140	1
-16	1 5/16-12	108	113	147	154	1
-20	1 5/8-12	127	133	172	181	1
-24	1 7/8-12	158	167	215	226	1
-32	2 1/2-12	245	258	332	350	1

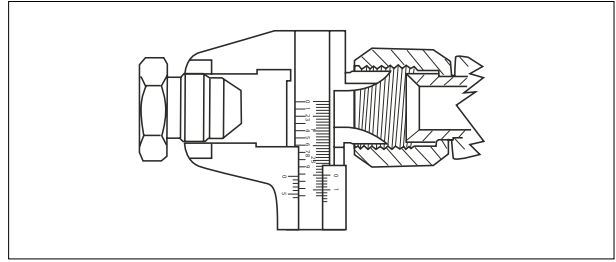
Tab. 1

SLIP-ON NUT JIC VERSION						
Assembling value - carbon steel material - SAE J514 JIC 37° flare						
Dash size	Thread	Lb.*t		N*m		FFFT 0/+0.25
		Min	Max	Min	Max	
-4	7/16-20	11	12	15	16	1
-5	1/2-20	14	15	19	21	1
-6	9/16-18	18	20	24	28	1
-8	3/4-16	36	39	49	53	1
-10	7/8-14	57	63	77	85	1
-12	1 1/16-12	79	88	107	119	0.75
-16	1 5/16-12	108	113	147	154	0.75

Tab. 2

HOW TO DETERMINE THE THREAD TYPE USING CALLIPERS

By measuring with a caliper the outside diameter of the thread of a male or the inside diameter of the thread of a female you will get a measure in mm. By finding this value in mm on the below table, you'll be able to find the relevant thread type.



Male OD	mm	Female ID
	8.7	G1/8" BSP
1/8" – 27 NPTF	9.5	
G1/8" BSP	9.6	
M 10 x 1	9.8	
	9.9	7/16" – 20 JIC
	10.5	M 12 x 1.5
7/16" – 20 JIC	11.0	
	11.4	1/2" – 20 SAE
	11.6	G1/4" BSP
M 12 x 1.5	11.9	
1/4" – 18 NPTF	12.5	
	12.5	M 14 x 1.5
1/2" – 20 SAE	12.6	
	12.9	9/16" – 18 JIC
G1/4" BSP	13.0	
M 14 x 1.5	13.9	
9/16" – 18 JIC	14.2	
	14.5	M16 x 1.5
	15.1	G3/8" BSP
M 16 x 1.5	15.8	
3/8" – 18 NPTF	15.9	
	16.5	M18 x 1.5
G3/8" BSP	16.6	
	17.5	3/4" – 16 JIC
M 18 x 1.5	17.9	
	18.4	20 x 1.5 DKF
3/4" – 16 JIC	18.8	
	18.8	G1/2" BSP
1/2" – 14 NPT	19.8	
20 x 1.5 CEF	19.9	
	20.4	7/8" – 14 SAE
	20.5	M 22 x 1.5
G1/2" BSP	20.8	
	20.9	G5/8" BSP
M 22 x 1.5	21.9	
7/8" – 14 SAE	22.1	
	22.5	24 x 1.5 DKF
G5/8" BSP	22.8	
24 x 1.5 CEF	23.9	
	24.5	G3/4" BSP
	24.8	1 1/16" – 12 JIC
3/4" – 14 NPTF	25.1	
	25.5	M26 x 1.5
M 26 x 1.5	25.9	
G3/4" BSP	26.3	
1 1/16" – 12 JIC	26.8	

Male OD	mm	Female ID
	27.9	1 3/16" – 12 JIC
	28.0	M 30 x 2
	28.5	30 x 1.5 DKF
M 30 x 2	29.8	
30 x 1.5 CEF	29.9	
1 3/16" – 12 JIC	30.1	
	30.7	G1" BSP
	31.2	1 5/16" – 12 JIC
1" – 11 1/2 NPTF	31.4	
	31.5	M 33 x 1.5
G1" BSP	33.1	
1 5/16" – 12 JIC	33.2	
	34.0	M 36 x 2
	34.5	36 x 1.5 DKF
M 36 x 2	35.8	
36 x 1.5 CEF	35.9	
	36.5	M 36 x 1.5
M 38 x 1.5	37.9	
	38.8	1 5/8" – 12 JIC
	39.4	G1 1/4" BSP
	39.8	M 42 x 1.5
1 1/4" – 11 1/2 NPTF	40.2	
	40.5	M 42 x 1.5
1 5/8" – 12 JIC	41.1	
1 1/4" – 11 BSP	41.7	
M 42 x 2	41.8	
	42.4	M 45 x 2
	43.3	45 x 1.5 DKF
M 45 x 2	44.8	
45 x 1.5 CEF	44.9	
	45.1	1 7/8" – 12 JIC
	45.2	G1 1/2" BSP
1 1/2" – 11 1/2 NPTF	46.3	
1 7/8" – 12 JIC	47.5	
G1 1/2" BSP	47.7	
	49.6	M 52 x 2
	50.3	52 x 1.5 DKF
M 52 x 2	51.8	
52 x 1.5 CEF	51.9	
	57.4	G2" BSP
2" – 11 1/2 NPTF	58.3	
G2" BSP	59.4	
	61.1	2 1/2" – 12 JIC
	62.5	M 65 x 2
2 1/2" – 12 JIC	63.3	

PRESSURE CONVERSION TABLES

Metric to psi (1 KPa = .145 psi)

Kilo Pascal (KPa)	Mega Pascal (KPa)	Bar (Bar)	Pounds per Square Inch (psi)
100	0.1	1	14.5
200	0.2	2	29.0
300	0.3	3	43.5
400	0.4	4	58.0
500	0.5	5	72.5
600	0.6	6	87.0
700	0.7	7	101.5
800	0.8	8	116.0
900	0.9	9	130.5
1000	1	10	145.0
2000	2	20	290.1
3000	3	30	435.1
4000	4	40	580.2
5000	5	50	725.5
6000	6	60	870.2
7000	7	70	1015
8000	8	80	1160
9000	9	90	1305
10000	10	100	1450
20000	20	200	2901
30000	30	300	4351
40000	40	400	5802
50000	50	500	7252
60000	60	600	8702
70000	70	700	10153
80000	80	800	11603
90000	90	900	13053
100000	100	1000	14504
200000	200	2000	29008
300000	300	3000	43511

psi to metric (1 psi = 6.89 KPa)

Pounds per Square Inch (psi)	Kilo Pascal (KPa)	Mega Pascal (MPa)	Bar (Bar)
10	68.9	0.07	0.7
20	137.9	0.14	1.4
30	206.8	0.21	2.1
40	275.8	0.28	2.8
50	344.7	0.34	3.4
60	413.7	0.41	4.1
70	482.6	0.48	4.8
80	551.6	0.55	5.5
90	620.5	0.62	6.2
100	689	0.70	6.9
200	1379	1.4	13.8
300	2068	2.1	20.7
400	2758	2.8	27.6
500	3447	3.4	34.5
600	4137	4.1	41.4
700	4826	4.8	48.3
800	5516	5.5	55.2
900	6205	6.2	62.1
1000	6895	6.9	68.9
2000	13790	13.8	147.9
3000	20684	20.7	206.8
4000	27579	27.6	275.8
5000	34474	34.5	344.7
6000	41389	41.4	413.7
7000	48263	48.3	482.6
8000	55158	55.2	551.6
9000	62053	62.1	620.5
10000	68948	68.9	689
20000	137896	137.9	1378
30000	206844	206.8	2068
40000	275792	275.8	2758

CONVERSION TABLES FROM IMPERIAL SYSTEM TO METRIC SYSTEM

Inches	mm
1/64	.0156 .397
1/32	.0312 .794
3/64	.0468 1.191
1/16	.0625 1.588
5/64	.0781 2.381
3/32	.0937 2.381
7/64	.1093 2.778
1/8	.1250 3.175
9/64	.1406 3.572
5/32	.1562 3.969
11/64	.1718 4.366
3/16	.1875 4.763
13/64	.2031 5.159
7/32	.2187 5.556
15/64	.2343 5.953
1/4	.2500 6.350

Inches	mm
17/64	.2656 6.747
9/32	.2812 7.144
19/64	.2968 7.541
15/16	.3125 7.938
21/64	.3281 8.334
11/32	.3437 8.731
23/64	.3593 9.128
3/8	.3750 9.525
25/64	.3906 9.922
13/32	.4062 10.319
27/64	.4218 10.716
7/16	.4375 11.113
29/64	.4531 11.509
15/32	.4687 11.906
31/64	.4843 12.303
1/2	.5000 12.700

Inches	mm
33/64	.5156 13.097
17/32	.5312 13.494
35/64	.5468 13.891
9/16	.5625 14.288
37/64	.5781 14.684
19/32	.5937 15.081
39/64	.6093 15.478
5/8	.6250 15.875
41/64	.6406 16.272
21/32	.6562 16.669
43/64	.6718 17.066
11/16	.6875 17.463
45/64	.7031 17.859
23/32	.7187 18.256
47/64	.7343 18.653
3/4	.7500 19.050

Inches	mm
49/64	.7656 19.447
25/32	.7812 19.844
51/64	.7968 20.241
13/16	.8125 20.638
53/64	.8281 21.034
27/32	.8437 21.431
55/64	.8593 21.828
7/8	.8750 22.225
57/64	.8906 22.622
29/32	.9062 23.019
59/64	.9218 23.416
15/16	.9375 23.813
61/64	.9531 24.209
31/32	.9687 24.606
63/64	.9843 25.003
1	1000 25.400

// ADAPTERS GUIDELINES

ADAPTER SELECTION

Selection of an appropriate adapter for a given application depends on the fluid system operating parameters listed below and the tube material and wall thickness they require:

1. Type of fluid
2. Operating temperature range
3. Type of line - pressure, return or suction
4. Maximum flow rate through the line
5. Maximum operating / service pressure
6. Severity of service
7. Environment

Then, based on the tube selected and appropriate fluid system operating parameters, determine adapter type(s) and material(s) using the features comparison table below.

FEATURES COMPARISON OF TUBE FITTINGS				
FEATURE		ORFS	JIC 37°	BSP
Performance	Pressure capability*	Very High	Medium to High	Medium to High
	Seal Reliability	Excellent	Good	Very Good
		Elastomeric Seal	Metal to Metal Seal	Elastomeric Seal
		High tolerance to minor surface imperfections and damage. High tolerance to assembly variations.	Low tolerance to minor surface imperfections and damage. Low tolerance to assembly variations.	Low tolerance to minor surface imperfections and damage. Low tolerance to assembly variations.
	Vibration Resistance in Rigid Systems	Excellent	Good	Very Good
Tube Compatibility	Wall Thickness	All	Medium	Medium
	Critical Features	OD tolerance and hardness for at tube, OD tolerance only for brazed tube	ID nish, wall thickness uniformity (concentricity) and hardness	OD tolerance and hardness
Assembly	Tube Preparation	Easy and quick (slower for sleeve brazing)	Easy and quick	Easy and quick (slower for welded nipple)
	Inspection	Easy and quick	Easy and quick	Critical, need experience
	Ease of Installation	Excellent, Minimum skill and training are necessary because of high tolerances to assembly variations	Good. Low tolerance to assembly variations. Requires skilled and trained personnel Tube Preparation	
	Ease of Maintenance	Excellent, no tube entry	Very Good, Small tube entry	Good, Large tube entry
Temperature Capability Adapters without O-Ring	Steel	To be used only with O-ring	-65° F to 500° F	-65° F to 500° F
	Stainless Steel		-425° F to 1200° F	==
	Brass		-40° F to 400° F	==
Temperature Capability Adapters with O-Ring**	All Style of Adapter	-30 F to 250° F	-30 F to 250° F	-30 F to 250° F

* For details see Working Pressure Charts in the individual adapters section

** For details concerning O-ring see section "O-ring selection" and "Fluid Resistance Table"

JIC 37° ADAPTER (ISO 8434-2, SAE J514)**Main Features**

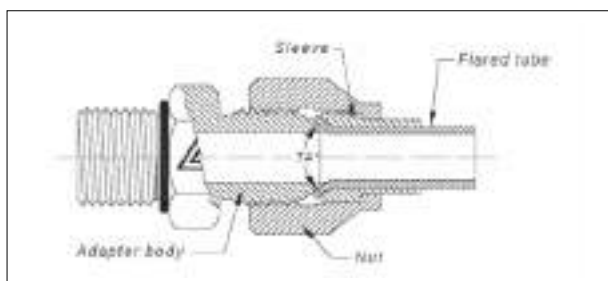
SAE J514 and ISO 8434-2, and commonly called 37° JIC adapters.

37° JIC adapter performs extremely well in all high pressure applications.

The seal is made by connecting a 37° flared tube surface to a 37° flare male and tightening by means of a nut and a sleeve. The flared tube avoids welded connection, so high performances are guaranteed even in case of severe vibrations, mechanic/hydraulic shocks and multiple assembly/disassembly operations.

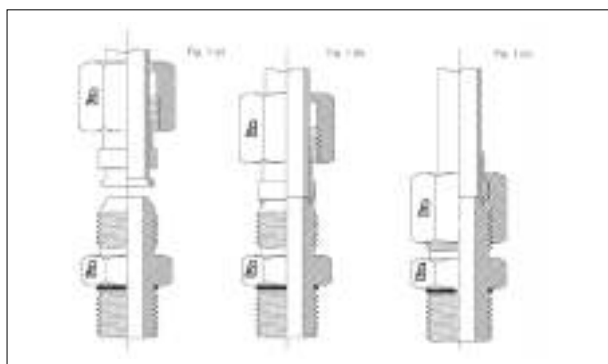
When tightened, sleeve provides tube and adapter self alignment and helps to reduce the vibrations on the tube during application.

An appropriate choice of sleeve gives the possibility of assembling adapters with both metric and inch-tubes.

**Flaring Operations**

Perfect sealing is guaranteed with tubes having physical and mechanical characteristics obtained by cold-drawing and a ductility expressed as 21% of minimum elongation.

- Cut end of tube must be perpendicular to its axis . Note: cutting operation reduces the whole length of tube (almost 0,5±1mm for each end).
- Dimensions of the end of the tube shall allow the correct placing on the flaring machine.
- Flared surface must be inspected to avoid excessive roughness and defects such as cracks or exfoliation.
- Length of flared zone shall be enough to allow a sufficient sealing surface and avoid the blowing off of the tube, but not excessive to prevent the contact with thread of the nut.
- A well followed flaring procedure assures no leakage even after frequent assembling and disassembling operations.

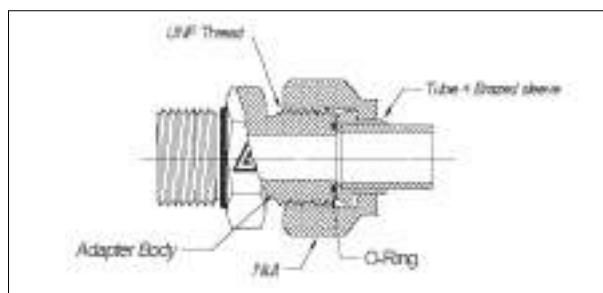
**ORFS ADAPTER (ISO 8434-3, SAE J1453)****Main Features**

Adapters are designed and manufactured according to standard SAE J1453 and commonly called ORFS adapters. O-Ring Face Seal adapters performs extremely well in all high pressure applications where elastomeric seals are needed to overcome leakage and leak resistance is crucial.

A seal is made when the O-Ring in the male contacts the 180° flat face of the tube. The male connector has a straight thread and a machined flat face. The seal takes place by compressing the O-Ring onto the flat face of the female.

ORFS system is composed by:

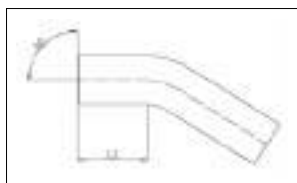
- Nut.
- Sleeve for flat tube and a shouldered sleeve for brazing. An appropriate choice of sleeve gives the possibility of assembling adapters with both metric and inch-tubes.
- Various kind and size of adapter body.
- O-Ring material is NBR, Shore "A": 90, suitable for a temperature range of: - 30°/+130° C (-22/+266° F).

**Flaring Tube Operations**

Perfect sealing is guaranteed with tubes having physical and mechanical characteristics obtained by cold-drawing and a ductility expressed as 21% of minimum elongation.

- Cut end of tube must be perpendicular to its axis.
- Cutting operation reduces the whole length of tube.
- Dimensions of the end of the tube shall allow the correct placing on the flaring machine.
- Flared surface must be inspected to avoid excessive roughness and defects such as cracks or exfoliation.
- Brazing sleeve guarantees the same performances as the flared tube, and shall be used in the following cases:
 - Tube is not in accordance with the above mechanical characteristics.
 - The straight part of the tube is not of a sufficient length (see quote L2 and values listed in table of figure O-3).
 - Tube thickness is lower than values listed in table (O-1).
 - For cutting length consider shoulder of the sleeve (quote L1 of table O-1).

A well followed flaring procedure assures no leakage even after frequent assembling and disassembling operations.



Hose mm	L2 Min mm
Ø 6 - Ø 12	73
Ø 14 - Ø 18	100
Ø 20 - Ø 22	120
Ø 25 - Ø 42	130

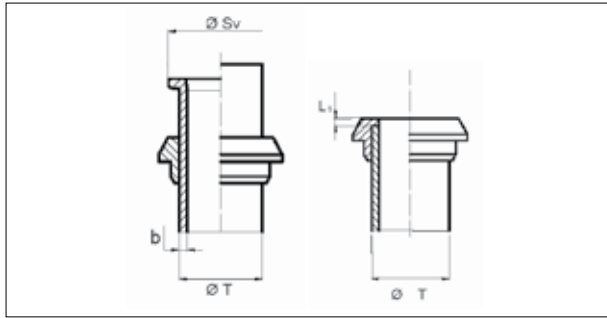
Only a few simple operations are required for assembling ORFS tube/adaptor.

Sleeve and Tube Flared:

- 1a) Place nut and sleeve on the tube with the appropriate orientation.
- 2a) Flare the tube (see procedure)
- 3a) Place the tube near seal surface of the adapter and screw by hand.
- 4a) Lock the adapter and tighten with a torque wrench

Brazed sleeve

- 1b) Cut the tube considering quote L1 of the sleeve (See Figure O-5);
- 2b) Clean and degrease accurately the end of the tube and the sleeve;
- 3b) Put the brazing ring into the sleeve
- 4b) Apply flux at the end of the tube and in the sleeve, then assemble the sleeve on the tube;
- 5b) Start brazing and be aware of not overheating flux material;
- 6b) Clean the connecting part and verify the good quality of weld around the external diameter of the hose;
- 7b) Complete the assembly procedure as described in points 3a) and 4a). See the correct installation torque in the attached table (O-2).



Hose		SV	
mm	In	mm	In
6	1/4	12.0	12.7
8	5/16	14.7	15.7
10	3/8	14.7	15.7
12	1/2	17.9	18.9
15		22.1	23.4
16	5/8	22.1	23.4
18		26.3	27.8
20	3/4	26.3	27.8
22		32.4	34.2
25	1	32.4	34.2
28		39.0	40.5
30		39.0	40.5
32	1 1/4	39.0	40.5
35		46.0	48.5
38	1 1/2	46.0	48.5

BSP ADAPTER (ISO 8434-6, BS 5200)

Main Features

Adapters are designed and manufactured according to standard BS 5200, ISO 8434-6 and ISO 228-1 and they are commonly called BSP adapters (British Standard Pipe). BSP adapter is widely employed, it performs extremely well in all high pressure applications with oil and gas.

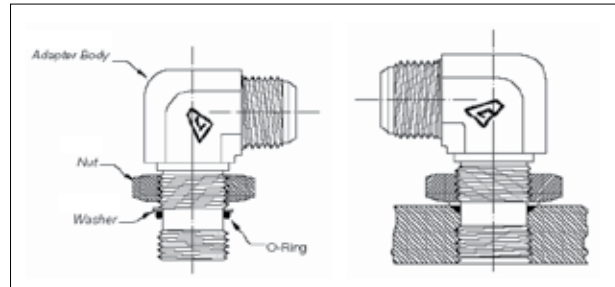
The seal is made by connecting a 60° coned seat to the 60° male surface and tightening the nut assembly. The O-Ring placed in the tube groove improves the sealing.

There are not welded part in the locking area and performances are good even after multiple assembly and disassembly operations, severe vibrations and mechanic/hydraulic shocks.

Assembling Procedure

Only a few simple operations are required for assembling BSP tube/adaptor:

1. Carefully align tube and adapter. Otherwise sealing is not guaranteed.
2. Lubricate accurately sealing surfaces with mineral oil or suitable lubricant.
3. Place the tube near seal surface of the adapter and tight by hand.
4. Lock the adapter and tighten with a torque wrench. See the correct installation torque in the attached table B-1.



Assembly Instruction For Adjustable Adapter Thread: SAE, UNF, BSPP, Metric

Lubricate the O-Ring with mineral oil. Back off locknut as for as possible.

Make sure that washer is pushed-up as much as possible. Screw by hand the adapter into the port until the ORing enter the port.

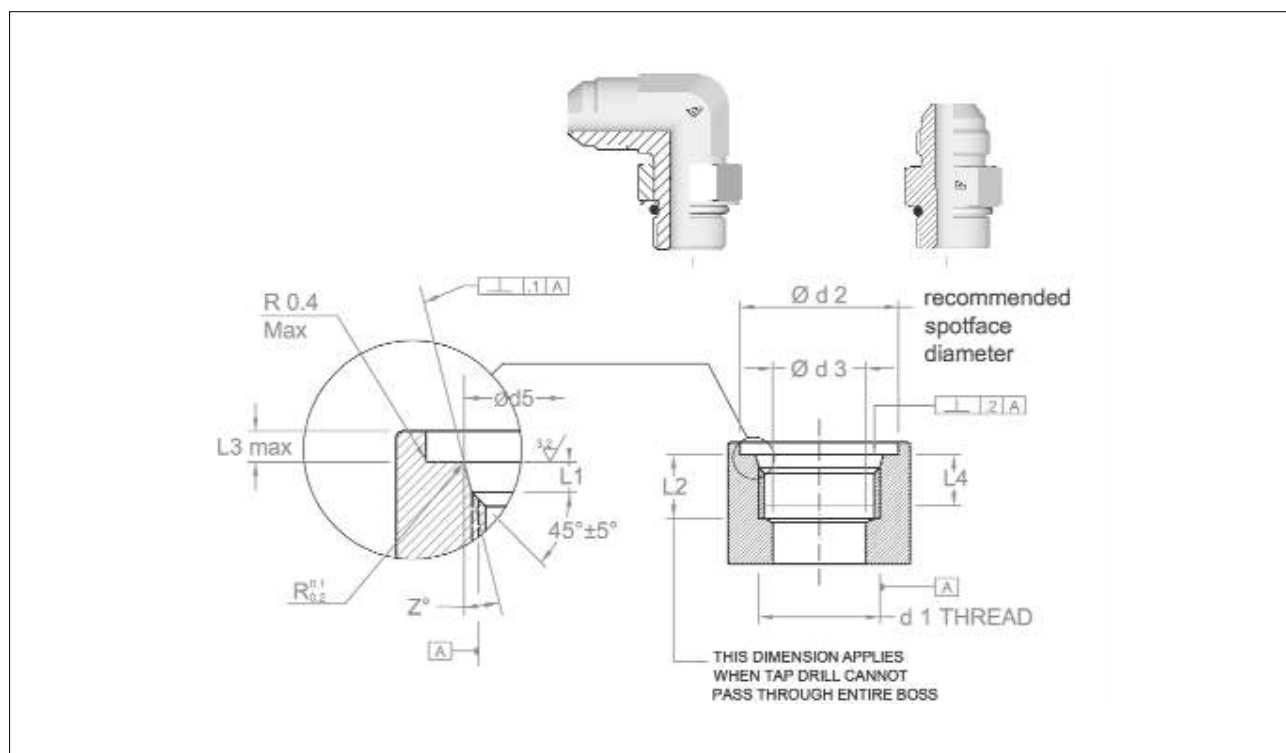
To align adaptor orientation to tube end or hose assembly, unscrew the adaptor by the required amount, but not more than one full turn.

Hold the adapter in desired position by mean of a wrench and tighten locknut to the suggested torque value by means of a dynamometric wrench.

METRIC PORT - ISO 6149 - SAE 2244-1

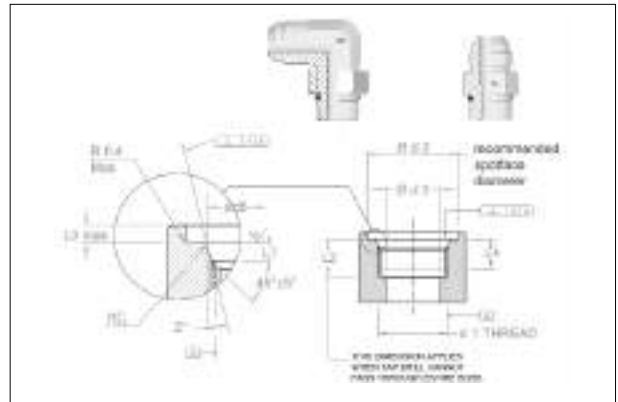
Metric Thread	D2 ²⁾ min	D3 ³⁾ min	D5 +0.10	D6 +0.50	L1 +0.40	L2 min	L3 max	L4	Z° ±1°	Assembly Torque +10%
D1	mm	mm	mm	mm	mm	mm	mm	mm		Nm
M8x1	17	14	9.1	14	1.6	11.5	1	10	12°	10
M10x1	20	16	11.1	16	1.6	11.5	1	10	12°	20
M12x1.5	23	19	13.8	19	2.4	14	1.5	11.5	15°	35
M14x1.51)	25	21	15.8	21	2.4	14	1.5	11.5	15°	45
M16x1.5	28	24	17.8	24	2.4	15.5	1.5	13	15°	55
M18x1.5	30	28	19.8	26	2.4	17	2	14.5	15°	70
M22x1.5	34	29	23.8	29	2.4	18	2	15.5	15°	100
M27x3	40	34	29.4	34	3.1	22	2	19	15°	170
M33x2	49	43	35.4	43	3.1	22	2.5	19	15°	310
M42x2	60	52	44.4	52	3.1	22.5	2.5	19.5	15°	330
M48x2	66	57	50.4	57	3.1	25	2.5	22	15°	420
M60x2	76	67	52.4	67	3.1	27.5	2.5	24.5	15°	500

- 1) Preferred for diagnostic port application
- 2) Spotface diameter with identification ridge
- 3) Spotface diameter without identification ridge



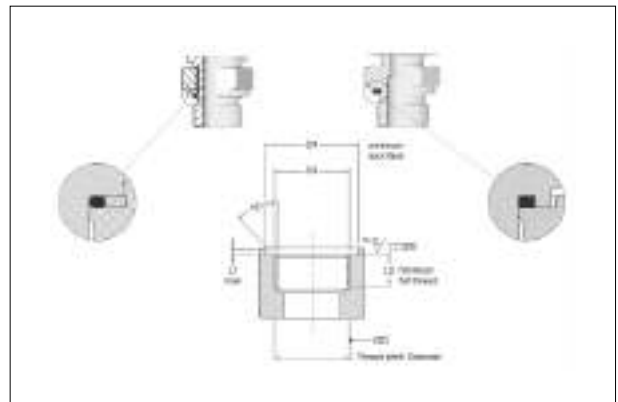
SAE UNF PORT - SAE J1926-1 - ISO 11926

ANSI B1.1	D2	D3 min	D3 +0.13	L1 +0.40	L2 min	L3 max	L4 min	Z° ±1°	Assembly Torque +10%
D1	mm	mm	mm	mm	mm	mm	mm		Nm
7/16"-20	21	4.4	12.4	2.4	14	1.6	11.5	12°	20
1/2"-20	23	6	14	2.4	14	1.6	11.5	12°	25
9/16"-18	25	7.5	15.6	2.5	15.5	1.6	12.7	12°	35
3/4"-16	30	10	20.6	2.5	17.5	2.4	14.3	15°	70
7/8"-14	34	12.5	23.9	3.3	20	2.4	16.7	15°	100
1" 1/16-12	41	16	29.2	3.3	23	2.4	19	15°	170



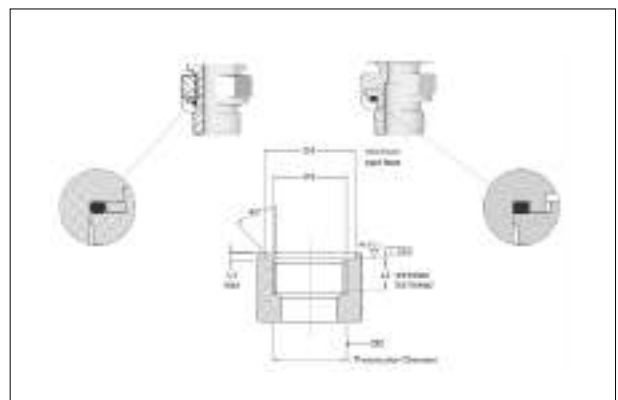
BSPP PORT - ISO 9974 - DIN 3852-1

ANSI B1.1 Thread	D3 +0.20	D4	L1 max	L2 min	Assembly Torque +10%
D1	mm	mm	mm	mm	Nm
1/8"-28	9.8	15	1	8	20
1/4"-19	13.2	20	1.5	12	50
3/8"-19	16.7	23	2	12	80
1/2"-14	21	28	2.5	14	100
3/4"-14	26.5	33	2.5	16	200
1"-11	33.3	41	2.5	18	380
1" 1/4-11	42	51	2.5	20	500
1" 1/2-11	47.9	56	2.5	22	600



METRIC PORT - ISO 9974 - DIN 3852-1

Metric Thread	D3 +0.20	D4 min	L1 max	L2 min	Assembly Torque +10%
D1	mm	mm	mm	mm	Nm
M12x1.5	12	18	1.5	12	35
M14x1.5	14	20	1.5	12	45
M16x1.5	16	23	1.5	12	55
M18x1.5	18	25	2	12	68
M20x1.5	20	27	2	14	80
M22x1.5	22	28	2.5	14	98
M27x2	27	33	2.5	16	180
M33x2	33	41	2.5	18	310
M42x2	42	51	2.5	20	330
M48x2	48	56	2.5	22	400



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