

Pipe Fittings



- 1/16 to 1 in. sizes
- NPT, ISO/BSP, and SAE threads
- Stainless steel, Carbon steel, Brass.

Pipe Fittings

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Pipe Fittings

Ordering Information

Add a material designator to the basic ordering number.

Example: SS-3-CN-N

Material	Designator
Stainless steel	SS
Carbon steel	S
Brass	B

- Heavy-wall fittings are available only in 316 stainless steel. The basic ordering numbers for these fittings include the material designator.
- Minimum order quantities may apply to certain materials and configurations.

Materials

Material Standards

Material	Bar Stock ^①	Forgings ^②
Stainless Steel	ASTM A276, ASME SA479, EN 1.4401	ASTM A182, ASME SA182, EN 1.4401
Carbon Steel	ASTM A108	—
Brass	ASME B16, ASTM B453	ASTM B283

① Straight fittings and tube adapters.

② Elbows, crosses, and tees.

Plating and Coating

To resist corrosion, all carbon steel fittings are treated with an electrodeposited zinc plating.

Dimensions

- Dimensions are for reference only and are subject to change.
- E dimensions refer to the minimum opening.

Cleaning

Components are cleaned to remove oil, grease, and loose particles.

Temperature Ratings

System temperatures may be limited by the thread sealant or, when applicable, the gasket or O-ring material.

Fitting Materials

Material	Maximum Temperature °F (°C)
316 stainless steel	1000 (537)
Carbon steel	375 (190)
Brass	400 (204)

Gasket, O-Ring Materials

Component	Material	Maximum Temperature °F (°C)	Minimum Temperature °F (°C)
Gaskets, O-rings	Buna N	230 (110)	-13 (-25)
	Fluorocarbon FKM	400 (204)	5 (-15)

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Pipe Fittings

Pressure Rating Basis and Thread Specifications

Thread Type (End Connection)	Pressure Rating Basis	Thread Type	Reference Specification
NPT	ASME B31.3, Process Piping or pressure testing with a 4:1 design factor based on hydraulic fluid leakage.	NPT	ASME B1.20.1, SAE AS71051
ISO/BSP (tapered)	ASME B31.3, Process Piping or pressure testing with a 4:1 design factor based on hydraulic fluid leakage.	ISO/BSP (tapered)	ISO 7, BS EN 10226-1, JIS B0203
ISO/BSP (parallel)	ISO 1179-3, ISO 228-1 Threads with Light-Duty Stud Ends with Sealing by O-ring with Retaining Ring (type G and H) or pressure testing with a 4:1 design factor based on hydraulic fluid leakage.	ISO/BSP (parallel)	ISO 228, JIS B0202
ISO/BSP (gauge)	ASME B31.3, Process Piping or pressure testing with a 4:1 design factor based on hydraulic fluid leakage.	ISO/BSP (parallel)	ISO 228, JIS B0202
SAE-Light Duty	SAE J1926/3, Connections for General Use and Fluid Power-Ports and Stud Ends with ASME B1.1 Threads and O-ring Sealing-Part 3: Light-Duty (L-Series) Stud Ends or pressure testing with a 4:1 design factor based on hydraulic fluid leakage.	Unified Inch Screw Threads	ASME B1.1
SAE-Heavy Duty	SAE J1926/2, Connections for General Use and Fluid Power-Ports and Stud Ends with ASME B1.1 Threads and O-ring Sealing-Part 2: Heavy-Duty (S-Series) or pressure testing with a 4:1 design factor based on hydraulic fluid leakage.	Unified Inch Screw Threads	ASME B1.1
XYZ AN fittings	SAE J514, Hydraulic Tube Fittings or pressure testing with a 4:1 design factor based on hydraulic fluid leakage.	Unified Inch Screw Threads	ASME B1.1 UNJ, SAE AS 8879

Ratings are based on ASME Code for Pressure Piping B31.3, Process Piping, at ambient temperature.

■ To determine pressure ratings in accordance with B31.1, Power Piping:

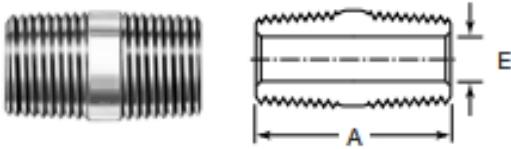
■ Carbon steel material—multiply by 0.85.

All other material ratings remain the same.

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Pipe Fittings

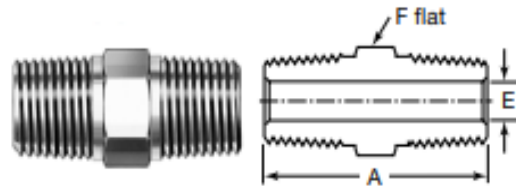
Close Nipples



Male NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)		Pressure Ratings, psig (bar)	
		A	E	SS S316, SS 304, Carbon Steel	Brass
1/8	-3-CN-N	0.75 (19.1)	0.19 (4.8)	10 000 (689)	5 000 (344)
1/4	-5-CN-N	1.12 (28.4)	0.28 (7.1)	8 000 (551)	4 000 (275)
3/8	-7-CN-N	1.12 (28.4)	0.38 (9.6)	7 800 (537)	3 900 (268)
1/2	-9-CN-N	1.50 (38.1)	0.47 (11.9)	7 700 (530)	3 800 (261)
3/4	-11-CN-N	1.50 (38.1)	0.62 (15.7)	7 300 (502)	3 600 (248)
1	-13-CN-N	1.88 (47.8)	0.88 (22.4)	5 300 (365)	2 600 (179)

Hex Nipples



Male NPT

NPT Size in.	Basic Ordering Number	Dimensions in. (mm),			Pressure Ratings, psig (bar)	
		A	E	F	SS 316, SS 304 Carbon Steel	Brass
1/16	-1-HN-N	1.01 (25.6)	0.12 (3.0)	5/16	11 000 (757)	5 500 (378)
1/8	-3-HN-N	1.01 (25.6)	0.19 (4.8)	7/16	10 000 (689)	5 000 (344)
1/4	-5-HN-N	1.40 (35.6)	0.28 (7.1)	9/16	8 000 (551)	4 000 (275)
3/8	-7-HN-N	1.43 (36.3)	0.38 (9.6)	11/16	7 800 (537)	3 900 (268)
1/2	-9-HN-N	1.84 (46.7)	0.47 (11.9)	7/8	7 700 (530)	3 800 (261)
3/4	-11-HN-N	1.84 (46.7)	0.62 (15.7)	1 1/16	7 300 (502)	3 600 (248)
1	-13-HN-N	2.32 (58.9)	0.88 (22.4)	1 3/8	5 300 (365)	2 600 (179)
Heavy-Wall Male NPT						
1/4	SS-5-HN-N-10K	1.40 (35.6)	0.23 (5.8)	9/16	10 000 (689)	—
1/2	SS-9-HN-N-10K	1.84 (46.7)	0.39 (9.9)	7/8	10 000 (689)	—

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Pipe Fittings

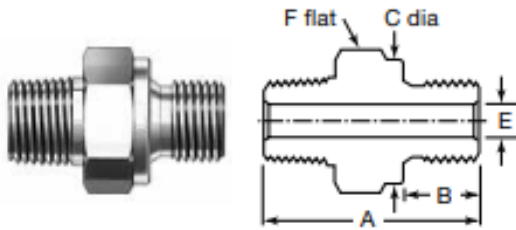
Hex Nipples

Male ISO Tapered Thread

ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig (bar)	
		A	E	F	SS 316, SS304 Carbon Steel	Brass
1/8	-3-HN-T	1.01 (25.6)	0.19 (4.8)	7/16	10000 (689)	5000 (344)
1/4	-5-HN-T	1.40 (35.6)	0.28 (7.1)	9/16	8000 (551)	4000 (275)
3/8	-7-HN-T	1.43 (36.3)	0.38 (9.6)	11/16	7800 (537)	3900 (268)
1/2	-9-HN-T	1.84 (46.7)	0.47 (11.9)	7/8	7700 (530)	3800 (265)

Male NPT to Male ISO Tapered Thread

NPT Size in.	ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig (bar)	
			A	E	F	SS 316, SS 304 Carbon Steel	Brass
1/8	1/8	-3N-HN-3T	1.01 (25.6)	0.19 (4.8)	7/16	10 000 (689)	5 000 (344)
1/4	1/4	-5N-HN-5T	1.40 (35.6)	0.28 (7.1)	9/16	8 000 (551)	4 000 (275)
3/8	3/8	-7N-HN-7T	1.43 (36.3)	0.38 (9.6)	11/16	7 800 (537)	3 900 (268)
1/2	1/2	-9N-HN-9T	1.84 (46.7)	0.47 (11.9)	7/8	7 700 (530)	3 800 (261)
3/4	3/4	-11N-HN-11T	1.84 (46.7)	0.62 (15.7)	1 1/16	7 300 (502)	3 600 (248)
1	1	-13N-HN-13T	2.32 (58.9)	0.88 (22.4)	1 3/8	5 300 (365)	2 600 (179)



Male NPT to Male ISO Parallel Thread

NPT Size in.	ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)					Pressure Ratings, psig (bar)	
			A	B	C	E⊙	F	SS 316, SS 304 Carbon Steel	Brass
1/8	1/8	-3N-HN-3P	1.09 (27.7)	0.32 (8.1)	0.54 (13.7)	0.16 (4.1)	9/16	5800 (400)	2900 (200)
1/4	1/4	-5N-HN-5P	1.45 (36.8)	0.47 (11.9)	0.70 (17.8)	0.23 (5.8)	3/4	5800 (400)	2900 (200)
3/8	3/8	-7N-HN-7P	1.48 (37.6)	0.47 (11.9)	0.86 (21.8)	0.31 (7.9)	7/8	5800 (400)	2900 (200)
1/2	1/2	-9N-HN-9P	1.75 (44.4)	0.55 (14.0)	1.02 (25.9)	0.47 (11.9)	1 1/16	4700 (324)	2350 (162)
3/4	3/4	-11N-HN-11P	1.93 (49.0)	0.63 (16.0)	1.25 (31.8)	0.62 (15.7)	1 5/16	3620 (250)	1810 (125)
1	1	-13N-HN-13P	2.23 (56.6)	0.71 (18.0)	1.53 (38.9)	0.78 (19.8)	1 5/8	3620 (250)	1810 (125)

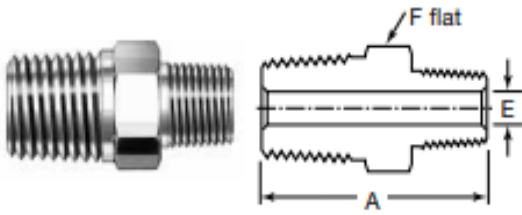
For gasket information, see page.

⊙ The E dimension is the minimum nominal opening. These fittings may have a larger opening at one end.

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Pipe Fittings

Hex Reducing Nipples



Male NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)			Pressure Ratings, psig(bar)	
		A	E ^①	F	SS 316, SS 304, Carbon Steel	Brass
1/8 to 1/16	-3N-HRN-1N	1.01 (25.6)	0.12 (3.0)	7/16	11 000 (757)	5 500 (378)
1/4 to 1/8	-5N-HRN-3N	1.22 (31.0)	0.19 (4.8)	9/16	10 000 (689)	5 000 (344)
3/8 to 1/8	-7N-HRN-3N	1.25 (31.8)	0.19 (4.8)	11/16	10 000 (689)	5 000 (344)
3/8 to 1/4	-7N-HRN-5N	1.43 (36.3)	0.28 (7.1)	11/16	8 000 (551)	4 000 (275)
1/2 to 1/8	-9N-HRN-3N	1.47 (37.3)	0.19 (4.8)	7/8	7 700 (530)	3 800 (261)
1/2 to 1/4	-9N-HRN-5N	1.65 (41.9)	0.28 (7.1)	7/8	8 000 (551)	4 000 (275)
1/2 to 3/8	-9N-HRN-7N	1.65 (41.9)	0.38 (9.6)	7/8	7 800 (537)	3 900 (268)
3/4 to 1/4	-11N-HRN-5N	1.65 (41.9)	0.28 (7.1)	1 1/16	8 000 (551)	4 000 (275)
3/4 to 1/2	-11N-HRN-9N	1.84 (46.7)	0.47 (11.9)	1 1/16	7 700 (530)	3 800 (261)
1 to 1/4	-13N-HRN-5N	1.94 (49.3)	0.28 (7.1)	1 3/8	5 300 (365)	2 600 (179)
1 to 1/2	-13N-HRN-9N	2.13 (54.1)	0.47 (11.9)	1 3/8	7 700 (530)	3 800 (261)
1 to 3/4	-13N-HRN-11N	2.13 (54.1)	0.62 (15.7)	1 3/8	7 300 (502)	3 600 (248)
Heavy-Wall Male NPT						
1/2 to 1/4	SS-9N-HRN-5N-10K	1.65 (41.9)	0.23 (5.8)	7/8	10 000 (689)	—

① The E dimension is the minimum nominal opening. These fittings may have a larger opening at the larger end.

Male NPT to Male ISO Tapered Thread

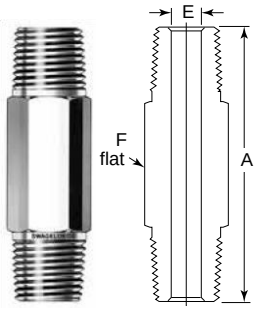
ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
		A	E ^①	F	SS 316, SS 304 Carbon Steel	Brass
3/8 to 1/4	-7N-HRN-5T	1.43 (36.3)	0.28 (7.1)	11/16	7 800 (537)	3 900 (268)
1/2 to 1/8	-9N-HRN-3T	1.47 (37.3)	0.19 (4.8)	7/8	7 700 (530)	3 800 (261)
1/2 to 3/8	-9N-HRN-7T	1.65 (41.9)	0.38 (9.6)	7/8	7 800 (537)	3 900 (268)

① The E dimension is the minimum nominal opening. These fittings may have a larger opening at the larger end.

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Pipe Fittings

Hex Long Nipples



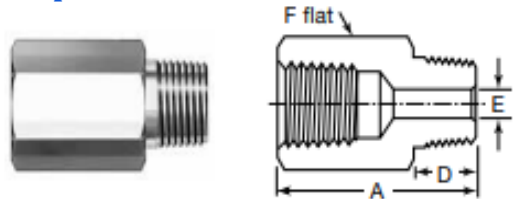
Male NPT

NPT Size in.	A (Available Lengths) in.						Basic Ordering Number	Dimensions in. (mm)		Pressure Ratings, psig(bar)	
	1.50	2.00	2.50	3.00	4.00	6.00		E	F	SS 316, SS 304 Carbon Steel	Brass
1/8	✓	✓	✓	✓	—	—	-3-HLN-N	0.19 (4.8)	7/16	10 000 (689)	5 000 (344)
1/4	✓	✓	✓	✓	✓	—	-5-HLN-N	0.28 (7.1)	9/16	8 000 (551)	4 000 (275)
3/8	✓	✓	✓	✓	✓	—	-7-HLN-N	0.38 (9.6)	11/16	7 800 (537)	3 900 (268)
1/2	—	✓	✓	✓	✓	✓	-9-HLN-N	0.47 (11.9)	7/8	7 700 (530)	3 800 (261)
3/4	—	✓	—	✓	✓	—	-11-HLN-N	0.62 (15.7)	1 1/16	7 300 (502)	3 600 (248)
1	—	—	—	✓	✓	—	-13-HLN-N	0.88 (22.4)	1 3/8	5 300 (365)	2 600 (179)

To order, insert the material designator as a prefix and the available length as a suffix to the basic ordering number

Example: SS-3-HLN-N-1.50

Adapters



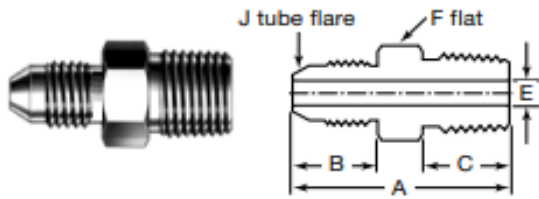
Female ISO Tapered Thread to Male NPT

ISO Thread Size in.	NPT Size in.	Basic Ordering Number	Dimensions in. (mm)				Pressure Ratings, psig(bar)	
			A	D	E	F	SS 316, SS 304 Carbon Steel	Brass
1/4	1/4	-5T-A2-5N	1.43 (36.3)	0.56 (14.2)	0.28 (7.1)	3/4	6 600 (454)	3 300 (227)
3/8	3/8	-7T-A2-7N	1.51 (38.4)	0.56 (14.2)	0.38 (9.6)	7/8	5 300 (365)	2 600 (179)
1/2	1/2	-9T-A2-9N	1.96 (49.8)	0.75 (19.1)	0.47 (11.9)	1 1/16	4 900 (337)	2 400 (165)

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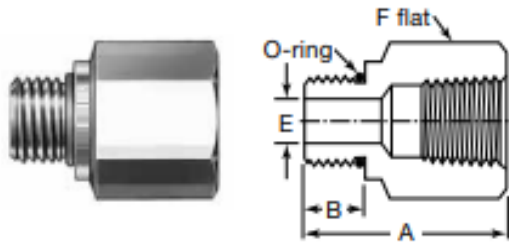
Pipe Fittings

Adapters



Male JIC (AN) to Male NPT

JIC Thread Size in.	NPT Size in.	Basic Ordering Number	Dimensions in. (mm)						Pressure Ratings, psig(bar)		
			A	B	C	E	F	J	SS316, SS 304	Carbon Steel	Brass
7/16-20	1/4	-5A-A4-5N	1.4 (35.6)	0.55 (13.0)	0.56 (14.2)	0.17 (4.3)	9/16	1/4	8000 (551)	5000 (344)	4000 (275)
9/16-18	1/4	-7A-A4-5N	1.43 (36.3)	0.56 (14.2)	0.56 (14.2)	0.28 (7.1)	5/8	3/8	8000 (551)	5000 (344)	4000 (275)
9/16-18	3/8	-7A-A4-7N	1.43 (36.3)	0.56 (14.2)	0.56 (14.2)	0.30 (7.6)	11/16	3/8	7800 (537)	5000 (344)	3900 (268)
3/4-16	1/2	-9A-A4-9N	1.75 (44.4)	0.66 (16.8)	0.75 (19.0)	0.39 (9.9)	7/8	1/2	7700 (530)	4500 (310)	3850 (265)
1 1/16-12	3	-11A-A4-11N	1.99 (50.5)	0.86 (21.8)	0.75 (19.0)	0.61 (15.5)	1 1/8	3/4	7000 (482)	3500 (240)	3500 (241)
1 5/16-12	1	-13A-A4-13N	2.3 (58.4)	0.91 (23.1)	0.94 (23.9)	0.84 (21.3)	1 3/8	1	5000 (344)	3000 (210)	2500 (172)



Male SAE/MS Straight Thread to Female NPT

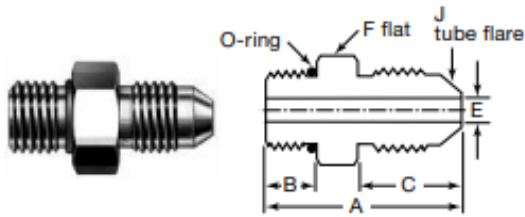
SAE/MS Thread Size in.	NPT Size in.	Basic Ordering Number	Dimensions in. (mm)				Uniform O-Ring [Ⓢ] Size	Pressure Ratings, psig(bar)	
			A	B	E	F		SS 316, SS304, Carbon Steel	Brass
7/16-20	1/4	-5S-A6-5N	1.32 (33.5)	0.36 (9.1)	0.2 (5.1)	3/4	-904	5076 (350)	2538 (175)
9/16-18	3/8	-7S-A6-7N	1.36 (34.5)	0.39 (9.9)	0.28 (7.1)	15/16	-906	5076 (350)	2538 (175)
3/4-16	1/2	-9S-A6-9N	1.62 (41.1)	0.44 (11.2)	0.42 (10.7)	1 1/16	-908	4568 (315)	2277 (157)
1 1/16-12	3/4	-11S-A6-11N	1.82 (46.2)	0.59 (15)	0.66 (16.7)	1 3/8	-912	3625 (250)	1812 (125)
1 5/16-12	1	-13S-A6-13N	2.12 (53.8)	0.59 (15)	0.88 (22.4)	1 5/8	-916	3045 (210)	1522 (105)

Ⓢ O-ring material is 90 durometer fluorocarbon FKM.

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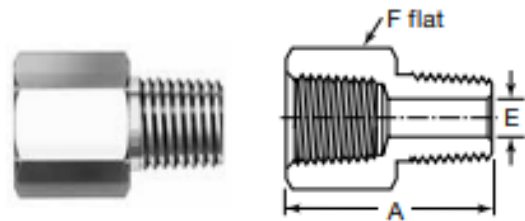
Adapters



Male SAE/MS Straight Thread to Male JIC

SAE/MS Thread Size in.	JIC Thread Size in.	Basic Ordering Number	Dimensions in. (mm)						Uniform O-Ring ^① Size	Pressure Ratings, psig(bar)	
			A	B	C	E	F	J		SS 316, SS304, Carbon Steel	Brass
7/16-20	7/16-20	-5S-A4-5A	1.19 (30.2)	0.36 (9.1)	0.55 (14.0)	0.17 (4.3)	9/16	1/4	-904	5076 (350)	2538 (175)
9/16-18	9/16-18	-7S-A4-7A	1.26 (32)	0.39 (9.9)	0.56 (14.2)	0.28 (7.1)	11/16	3/8	-906	5076 (350)	2538 (175)
3/4-16	3/4-16	-9S-A4-9A	1.44 (36.6)	0.44 (11.2)	0.66 (16.8)	0.39 (9.9)	7/8	1/2	-908	4568 (315)	2284 (150)
1 1/16-12	1 1/16-12	-11S-A4-11A	1.87 (47.5)	0.59 (15)	0.86 (21.8)	0.61 (15.5)	1 1/4	3/4	-912	3625 (250)	1812 (120)
1 5/16-12	1 5/16-12	-13S-A4-13A	1.98 (50.3)	0.59 (15)	0.91 (23.1)	0.84 (21.3)	1 1/2	1	-916	3045 (210)	1522 (105)

① O-ring material is 90 durometer fluorocarbon FKM.



Female to Male NPT

NPT Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
		A	E	F	SS 316, SS304, Carbon Steel	Brass
1/8	-3-A2-N	1.10 (27.9)	0.19 (4.8)	9/16	6 500 (447)	3 200 (220)
1/4	-5-A2-N	1.40 (35.6)	0.28 (7.1)	3/4	6 600 (454)	3 300 (227)
3/8	-7-A2-N	1.51 (38.4)	0.38 (9.6)	7/8	5 300 (365)	2 600 (179)
1/2	-9-A2-N	1.94 (49.3)	0.47 (11.9)	1 1/16	4 900 (337)	2 400 (165)
3/4	-11-A2-N	2.02 (51.3)	0.62 (15.7)	1 5/16	4 600 (316)	2 300 (158)
1	-13-A2-N	2.28 (57.9)	0.88 (22.4)	1 5/8	4 400 (303)	2 200 (151)
Heavy-Wall Female to Male NPT						
1/4	SS-4-A2-N-10K	1.43 (36.3)	0.23 (5.8)	1	10 000 (689)	—
1/2	SS-8-A2-N-10K	2.02 (51.3)	0.39 (9.9)	1 1/2	10 000 (689)	—

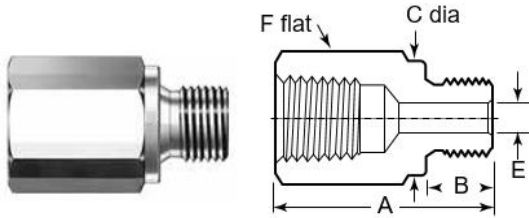
Female to Male ISO Tapered Thread

ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
		A	E	F	SS 316, SS304, Carbon Steel	Brass
1/8	-3-A2-T	1.09 (27.7)	0.19 (4.8)	9/16	6 500 (447)	3 200 (220)
1/4	-5-A2-T	1.42 (36.1)	0.28 (7.1)	3/4	6 600 (454)	3 300 (227)
3/8	-7-A2-T	1.50 (38.1)	0.38 (9.6)	7/8	5 300 (365)	2 600 (179)
1/2	-9-A2-T	1.95 (49.5)	0.47 (11.9)	1 1/16	4 900 (337)	2 400 (165)

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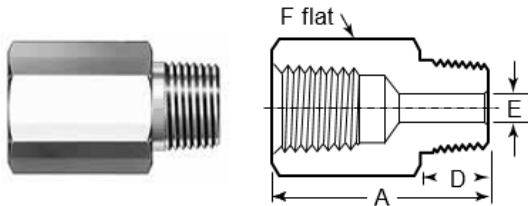
Pipe Fittings

Adapters



Female NPT to Male ISO Parallel Thread

NPT Size in.	ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)					Pressure Ratings, psig(bar)	
			A	B	C	E	F	SS 316, SS304, Carbon Steel	Brass
1/8	1/8	-3N-A2-3P	0.99 (25.1)	0.32 (8.1)	0.54 (13.7)	0.16 (4.1)	9/16	5800 (400)	2900 (200)
1/4	1/4	-5N-A2-5P	1.32 (33.5)	0.47 (11.9)	0.70 (17.8)	0.23 (5.8)	3/4	5800 (400)	2900 (200)
3/8	3/8	-7N-A2-7P	1.41 (35.8)	0.47 (11.9)	0.86 (21.8)	0.31 (7.9)	7/8	5800 (400)	2900 (200)
1/2	1/2	-9N-A2-9P	1.74 (44.2)	0.55 (14.0)	1.02 (25.9)	0.47 (11.9)	1 1/16	4700 (324)	2350 (162)
3/4	3/4	-11N-A2-11P	1.89 (48.0)	0.63 (16.0)	1.25 (31.8)	0.62 (15.7)	1 5/16	3620 (250)	1810 (125)
1	1	-13N-A2-13P	2.10 (53.3)	0.71 (18.0)	1.53 (38.9)	0.78 (19.8)	1 5/8	3620 (250)	1810 (125)



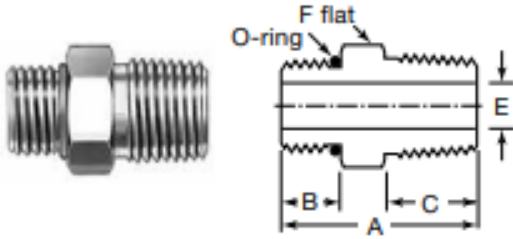
Female NPT to Male ISO Tapered Thread

NPT Size in.	ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)				Pressure Ratings, psig(bar)	
			A	D	E	F	SS 316, SS 304 Carbon Steel	Brass
1/8	1/8	-3N-A2-3T	1.09 (27.7)	0.38 (9.6)	0.19 (4.8)	9/16	6500 (447)	3200 (220)
1/4	1/4	-5N-A2-5T	1.42 (36.1)	0.56 (14.2)	0.28 (7.1)	3/4	6600 (454)	3300 (227)
3/8	3/8	-7N-A2-7T	1.50 (38.1)	0.56 (14.2)	0.38 (9.6)	7/8	5300 (365)	2600 (179)
1/2	1/2	-9N-A2-9T	1.94 (49.3)	0.75 (19.1)	0.47 (11.9)	1 1/16	4900 (337)	2400 (165)
3/4	3/4	-11N-A2-11T	2.02 (51.3)	0.75 (19.1)	0.62 (15.7)	1 5/16	4600 (316)	2300 (158)
1	1	-13N-A2-13T	2.30 (58.4)	0.94 (23.9)	0.88 (22.4)	1 5/8	4400 (303)	2200 (151)

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Pipe Fittings

Adapters

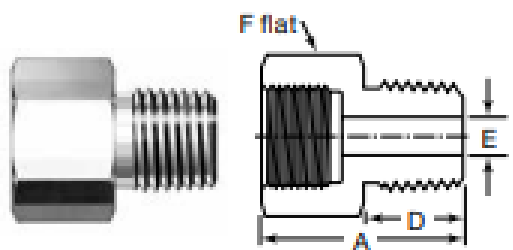


Male SAE/MS Straight Thread to Male NPT

SAE/MS Thread Size in.	NPT Size in.	Basic Ordering Number	Dimensions in. (mm)					Uniform O-Ring ^① Size	Pressure Ratings, psig(bar)	
			A	B	C	E	F		SS 316, SS 304 Carbon Steel	Brass
7/16-20	1/4	-5S-A4-5T	1.20 (30.5)	0.36 (9.1)	0.56 (14.2)	0.20 (5.1)	9/16	-904	5076 (350)	2538 (175)
9/16-18	3/8	-7S-A4-7T	1.26 (32.0)	0.36 (9.1)	0.56 (14.2)	0.28 (7.1)	11/16	-906	5076 (350)	2538 (175)
3/4-16	1/2	-9S-A4-9T	1.53 (38.9)	0.44 (11.2)	0.75 (19.1)	0.42 (10.7)	7/8	-908	4568 (315)	2277 (157)
1 1/16-12	3/4	-11S-A4-11T	1.75 (44.4)	0.59 (15.0)	0.75 (19.1)	0.62 (15.7)	1 1/4	-912	3625 (250)	1812 (125)
1 5/16-12	1	-13S-A4-13T	2.00 (50.8)	0.59 (15.0)	0.94 (23.9)	0.88 (22.4)	1 1/2	-916	3045 (210)	1522 (105)

① O-ring material is 90 durometer fluorocarbon FKM.

Gauge Adapters



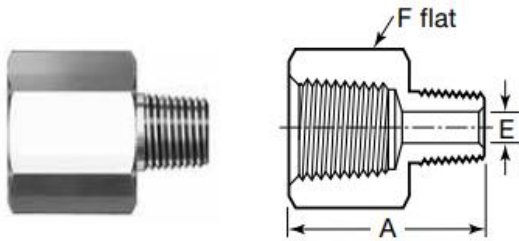
Female ISO Parallel (Gauge) Thread to Male NPT

ISO Thread Size in.	NPT Size in.	Ordering Number	Dimensions in. (mm)				Pressure Ratings, psig(bar)	
			A	D	E	F	SS 316, SS 304 Carbon Steel	Brass
1/4	1/4	-5P-GA-5N	1.19 (30.2)	0.56 (14.2)	0.22 (5.6)	3/4	5700 (392)	2850 (196)
3/8	3/8	-7P-GA-7N	1.27 (32.2)	0.56 (14.2)	0.26 (6.6)	15/16	5700 (392)	2850 (196)
1/2	1/2	-9P-GA-9N	1.68 (42.7)	0.75 (19.1)	0.28 (7.1)	1 1/16	3900 (268)	1950 (134)

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Pipe Fittings

Reducing Adapters



Female to Male NPT

Female NPT Size in.	Male NPT Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
			A	E	F	SS 316, SS 304 Carbon Steel	Brass
1/8	1/16	-3N-RA-1N	1.09 (27.7)	0.12 (3.0)	9/16	6 500 (447)	3200 (220)
1/4	1/8	-5N-RA-3N	1.26 (32.0)	0.19 (4.8)	3/4	6 600 (454)	3300 (227)
3/8	1/8	-7N-RA-3N	1.33 (33.8)	0.19 (4.8)	7/8	5 300 (365)	2600 (179)
	1/4	-7N-RA-5N	1.50 (38.1)	0.28 (7.1)		5 300 (365)	2600 (179)
1/2	1/8	-9N-RA-3N	1.58 (40.1)	0.19 (4.8)	1 1/16	4 900 (337)	2400 (165)
	1/4	-9N-RA-5N	1.76 (44.7)	0.28 (7.1)		4 900 (337)	2400 (165)
	3/8	-9N-RA4-7N	1.75 (44.4)	0.38 (9.6)		4 900 (337)	2400 (165)
3/4	1/4	-11N-RA-5N	1.85 (47.0)	0.28 (7.1)	1 5/16	4 600 (316)	2300 (158)
	3/8	-11N-RA-7N	1.82 (46.2)	0.38 (9.6)		4 600 (316)	2300 (158)
	1/2	-11N-RA-9N	2.02 (51.3)	0.47 (11.9)		4 600 (316)	2300 (158)
1	1/4	-13N-RA-5N	1.96 (49.8)	0.28 (7.1)	1 5/8	4 400 (303)	2200 (151)
	1/2	-13N-RA-9N	2.16 (54.9)	0.47 (11.9)		4 400 (303)	2200 (151)
	3/4	-13N-RA-11N	2.17 (55.1)	0.62 (15.7)		4 400 (303)	2200 (151)
Heavy-Wall Female to Male NPT							
1/2	1/4	SS-9N-RA-5N-10K	1.81 (46.0)	0.23 (5.8)	1 1/2	10 000 (689)	—

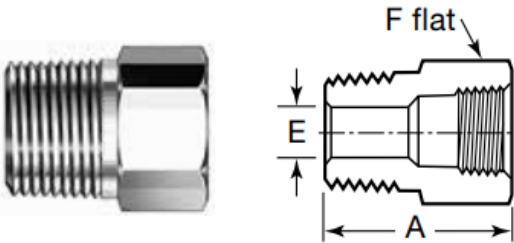
Female to Male ISO Tapered Thread

Female ISO Thread Size in.	Male ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
			A	E	F	SS 316, SS 304 Carbon Steel	Brass
1/4	1/8	-5T-RA-3T	1.26 (32.0)	0.19 (4.8)	3/4	6600 (454)	3300 (227)
3/8	1/4	-7T-RA-5T	1.50 (38.1)	0.28 (7.1)	7/8	5300 (365)	2600 (179)
1/2	1/4	-9T-RA-5T	1.76 (44.7)	0.28 (7.1)	1 1/16	4900 (337)	2400 (165)
	3/8	-9T-RA4-7T	1.75 (44.4)	0.38 (9.6)		4900 (337)	2400 (165)

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Pipe Fittings

Reducing Bushings



Male to Female NPT

Male NPT Size in.	Female NPT Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
			A	E	F	SS 316, SS 304 Carbon Steel	Brass
1/8	1/16	-3N-RB-1N	1.03 (26.2)	0.19 (4.8)	7/16	6700 (461)	3300 (227)
1/4	1/8	-5N-RB-3N	1.06 (26.9)	0.28 (7.1)	9/16	6500 (447)	3200 (220)
3/8	1/8	-7N-RB-3N	0.86 (21.8)	0.34 (8.6)	11/16	9200 (633)	4600 (316)
	1/4	-7N-RB-5N	1.19 (30.2)	0.38 (9.6)	3/4	6600 (454)	3300 (227)
1/2	1/8	-9N-RB-3N	1.08 (27.4)	0.34 (8.6)	7/8	12200 (840)	6100 (420)
	1/4	-9N-RB-5N		0.45 (11.4)		8300 (571)	4100 (282)
	3/8	-9N-RB-7N	1.41 (35.8)	0.47 (11.9)		5300 (365)	2600 (179)
3/4	1/4	-11N-RB-5N	1.08 (27.4)	0.45 (11.4)	1 1/16	10000 (689)	5000 (344)
	3/8	-11N-RB-7N		0.59 (15.0)		8200 (564)	4100 (282)
	1/2	-11N-RB-9N	1.63 (41.4)	0.62 (15.7)		4900 (337)	2400 (168)
1	1/4	-13N-RB-5N	1.37 (34.8)	0.45 (11.4)	1 3/8	10000 (689)	5000 (344)
	3/8	-13N-RB-7N		0.59 (15.0)		10000 (689)	5000 (344)
	1/2	-13N-RB-9N		0.73 (18.5)		8600 (592)	4300 (296)
	3/4	-13N-RB-11N	1.85 (47.0)	0.88 (22.4)		5300 (365)	2600 (179)

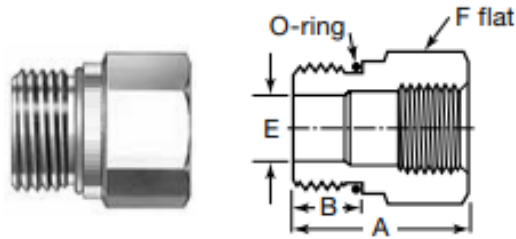
Male to Female ISO Tapered Thread

Male ISO Thread Size in.	Female ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
			A	E	F	SS 316, SS 304 Carbon Steel	Brass
1/4	1/8	-5T-RB-3T	1.06 (26.9)	0.28 (7.1)	9/16	6 500 (447)	3 200 (220)
3/8	1/4	-7T-RB-5T	1.19 (30.2)	0.38 (9.6)	3/4	6 600 (454)	3 300 (227)
1/2	1/4	-9T-RB-5T	1.08 (27.4)	0.44 (11.2)	7/8	8 300 (571)	4 100 (282)
	3/8	-9T-RB-7T	1.41 (35.8)	0.47 (11.9)		5 300 (365)	2 600 (179)

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Pipe Fittings

Reducers

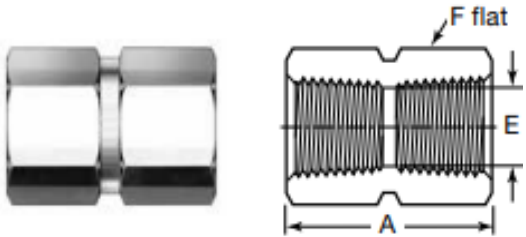


Male to Female SAE/MS Straight Thread

Male Thread Size in.	Female Thread Size in.	Basic Ordering Number	Dimensions in. (mm)				Uniform O-Ring ^① Size	Pressure Ratings, psig(bar)	
			A	B	E	F		SS 316, SS 304 Carbon Steel	Brass
9/16-18	7/16-20	-7S-R-5S	1.12 (28.4)	0.39 (9.9)	0.28 (7.1)	13/16	-906	5076 (350)	2538 (175)
3/4-16	7/16-20	-9S-R-5S	0.98 (24.9)	0.44 (11.2)	0.39 (9.9)	7/8	-908	4568 (315)	2277 (157)
	9/16-18	-9S-R-7S	1.19 (30.2)	0.44 (11.2)	0.42 (10.7)	1	-908	4568 (315)	2277 (157)
7/8-14	9/16-18	-15S-R-7S	1.10 (27.9)	0.50 (12.7)	0.50 (12.7)	1	-910	3625 (250)	1812 (125)
	3/4-16	-15S-R-9S	1.42 (36.1)	0.50 (12.7)	0.50 (12.7)	1 3/16	-910	3625 (250)	1812 (125)
1 1/16-12	3/4-16	-11S-R-9S	1.27 (32.3)	0.59 (15.0)	0.65 (16.5)	1 1/4	-912	3625 (250)	1812 (125)
1 5/16-12	1 1/16-12	-13S-R-11S	1.61 (40.9)	0.59 (15.0)	0.87 (22.1)	1 5/8	-916	3045 (210)	1522 (105)
1 5/8-12	1 5/16-12	-17S-R-13S	1.98 (50.3)	0.59 (15.0)	1.09 (27.7)	2 1/8	-920	2538 (175)	1261 (87)
1 7/8-12	1 5/16-12	-19S-R-13S	1.27 (32.3)	0.59 (15.0)	1.23 (31.2)	2 1/8	-924	2538 (175)	1261 (87)

① O-ring material is 90 durometer fluorocarbon FKM.

Hex Couplings



Female NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)			Pressure Ratings, psig(bar)	
		A	E	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-HC-N	0.81 (20.6)	0.34 (8.6)	9/16	6 500 (447)	3200 (220)
1/4	-5-HC-N	1.19 (30.2)	0.45 (11.4)	3/4	6 600 (454)	3300 (227)
3/8	-7-HC-N	1.31 (33.3)	0.59 (15.0)	7/8	5 300 (365)	2600 (179)
1/2	-9-HC-N	1.56 (39.6)	0.73 (18.5)	1 1/16	4 900 (337)	2400 (165)
3/4	-11-HC-N	1.62 (41.1)	0.94 (23.9)	1 5/16	4 600 (316)	2300 (158)
1	-13-HC-N	2.00 (50.8)	1.17 (29.7)	1 5/8	4 400 (303)	2200 (151)
Heavy-Wall Female NPT						
1/4	SS-5-HC-N-10K	1.19 (30.2)	0.45 (11.4)	1	10 000 (689)	—
1/2	SS-9-HC-N-10K	1.56 (39.6)	0.73 (18.5)	1 1/2	10 000 (689)	—

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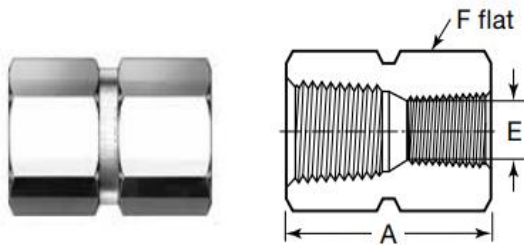
Pipe Fittings

Hex Couplings

Female ISO Tapered Thread

Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
		A	E	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-HC-T	0.81 (20.6)	0.33 (8.4)	9/16	6500 (447)	3200 (220)
1/4	-5-HC-T	1.19 (30.2)	0.44 (11.2)	3/4	6600 (454)	3300 (227)
3/8	-7-HC-T	1.31 (33.3)	0.58 (14.7)	7/8	5300 (365)	2600 (179)
1/2	-9-HC-T	1.56 (39.6)	0.72 (18.3)	1/16	4900 (337)	2400 (165)

Hex Reducing Couplings



Female NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)			Pressure Ratings, psig(bar)	
		A	E	F	SS 316, SS 304, Carbon Steel	Brass
1/4 to 1/8	-5N-HRC-3N	1.22 (31.0)	0.34 (8.6)	3/4	6600 (454)	3300 (227)
3/8 to 1/4	-7N-HRC-5N	1.38 (35.1)	0.45 (11.4)	7/8	5300 (365)	2600 (179)
1/2 to 1/8	-9N-HRC-3N	1.56 (39.6)	0.34 (8.6)	1/16	4900 (337)	2400 (165)
1/2 to 1/4	-9N-HRC-5N	1.75 (44.4)	0.45 (11.4)	1/16	4900 (337)	2400 (165)
1/2 to 3/8	-9N-HRC-7N	1.78 (45.2)	0.59 (15.0)	1/16	4900 (337)	2400 (165)
3/4 to 1/4	-11N-HRC-5N	1.81 (46.0)	0.45 (11.4)	5/16	4600 (316)	2300 (158)
3/4 to 1/2	-11N-HRC-9N	2.06 (52.3)	0.73 (18.5)	5/16	4600 (316)	2300 (158)
1 to 1/2	-13N-HRC-9N	2.19 (55.6)	0.73 (18.5)	5/8	4400 (303)	2200 (151)
1 to 3/4	-13N-HRC-11N	2.25 (57.2)	0.94 (23.9)	5/8	4400 (303)	2200 (151)
Heavy-Wall Female NPT						
1/2 to 1/4	SS-9N-HRC-5N-10K	1.75 (44.4)	0.45 (11.4)	1/2	10000 (689)	—

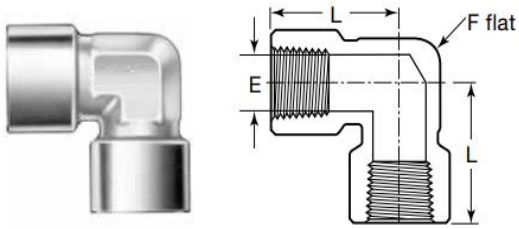
Female ISO Tapered Thread

ISO Thread Size in.	Basic Ordering Number	Dimensions, in. (mm)			Pressure Ratings, psig(bar)	
		A	E	F	SS 316, SS 304, Carbon Steel	Brass
3/8 to 1/4	-7T-HRC-5T	1.38 (35.1)	0.44 (11.2)	7/8	5300 (365)	2600 (179)
1/2 to 1/4	-9T-HRC-5T	1.75 (44.4)	0.44 (11.2)	1/16	4900 (337)	2400 (165)
1/2 to 3/8	-9T-HRC-7T	1.78 (45.2)	0.58 (14.7)	1/16	4900 (337)	2400 (165)

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Pipe Fittings

Elbows

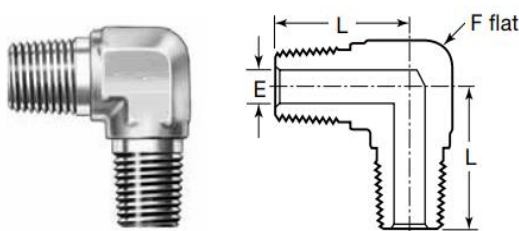


Female NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)			Pressure Ratings, psig(bar)	
		E	L	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-E-N	0.34 (8.6)	1.04 (26.4)	1/2	6 500 (447)	3 200 (220)
1/4	-5-E-N	0.45 (11.4)	1.17 (29.7)	11/16	7 200 (496)	3 600 (248)
3/8	-7-E-N	0.59 (15.0)	1.42 (36.1)	13/16	5 600 (385)	2 800 (192)
1/2	-9-E-N	0.73 (18.5)	1.56 (39.6)	1	5 600 (385)	2 800 (192)
3/4	-11-E-N	0.94 (23.9)	1.92 (48.8)	1 1/4	5 100 (351)	2 500 (172)
1	-13-E-N	1.17 (29.7)	1.91 (48.5)	1 11/16	6 400 (440)	3 200 (220)
Heavy-Wall Female NPT						
1/4	SS-5-E-N-10K	0.45 (11.4)	1.56 (39.6)	1	10 000 (689)	—
1/2	SS-9-E-N-10K	0.73 (18.5)	1.97 (50.0)	1 11/16	10 000 (689)	—

Female ISO Tapered Thread

ISO Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Pressure Ratings, psig(bar)	
		E	L	F	SS 316, SS 304, Carbon Steel	Brass
1/4	-5-E-T	0.44 (11.2)	1.17 (29.7)	11/16	7 200 (496)	3 600 (248)
3/8	-7-E-T	0.58 (14.7)	1.42 (36.1)	13/16	5 600 (385)	2 800 (192)
1/2	-9-E-T	0.72 (18.3)	1.56 (39.6)	1	5 600 (385)	2 800 (192)



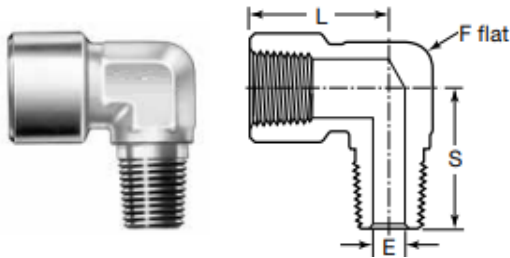
Male NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)			Pressure Ratings, psig(bar)	
		E	L	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-ME-N	0.19 (4.8)	0.88 (22.4)	7/16	10 000 (689)	5 000 (344)
1/4	-5-ME-N	0.28 (7.1)	1.05 (26.7)	1/2	8 000 (551)	4 000 (275)
3/8	-7-ME-N	0.38 (9.6)	1.17 (29.7)	11/16	7 800 (537)	3 900 (268)
1/2	-9-ME-N	0.47 (11.9)	1.45 (36.8)	13/16	7 700 (530)	3 800 (261)

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Pipe Fittings

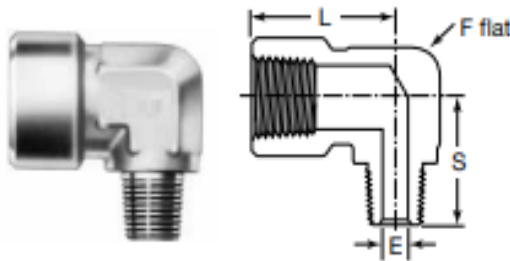
Street Elbows



Female to Male NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)				Pressure Ratings, psig(bar)	
		E	L	S	F	SS 316, SS 304, Carbon Steel	Brass
1/16	-1-SE-N	0.12 (3.0)	0.86 (21.8)	0.88 (22.4)	7/16	9 200 (633)	4 600 (316)
1/8	-3-SE-N	0.19 (4.8)	1.04 (26.4)	0.87 (22.1)	1/2	6 500 (447)	3 200 (220)
1/4	-5-SE-N	0.28 (7.1)	1.17 (29.7)	1.17 (29.7)	11/16	7 200 (496)	3 600 (248)
3/8	-7-SE-N	0.38 (9.6)	1.42 (36.1)	1.26 (32.0)	13/16	5 600 (385)	2 800 (192)
1/2	-9-SE-N	0.47 (11.9)	1.56 (39.6)	1.56 (39.6)	1	5 600 (385)	2 800 (192)
3/4	-11-SE-N	0.62 (15.7)	1.92 (48.8)	1.67 (42.4)	1 1/4	5 100 (351)	2 500 (172)
1	-13-SE-N	0.88 (22.4)	1.91 (48.5)	1.94 (49.3)	1 11/16	5 300 (365)	2 600 (179)

Reducing Street Elbows



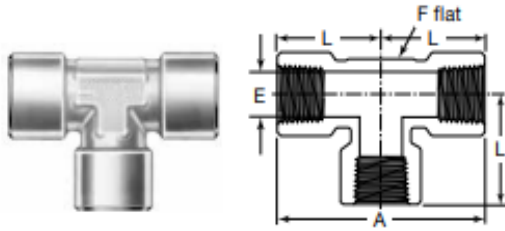
Female to Male NPT

Female NPT Size in.	Male NPT Size in.	Basic Ordering Number	Dimensions in. (mm)				Pressure Ratings, psig(bar)	
			E	L	S	F	SS 316, SS 304, Carbon Steel	Brass
1/8	1/16	-3N-RSE-1N	0.12 (3.0)	1.04 (26.4)	0.87 (22.1)	1/2	6 500 (447)	3 200 (220)
1/4	1/8	-5N-RSE-3N	0.19 (4.8)	1.17 (29.7)	1.00 (25.4)	11/16	7 200 (496)	3 600 (248)
3/8	1/4	-7N-RSE-5N	0.28 (7.1)	1.42 (36.1)	1.26 (32.0)	13/16	5 600 (385)	2 800 (192)
1/2	1/4	-9N-RSE-5N	0.28 (7.1)	1.56 (39.6)	1.38 (35.1)	1	5 600 (385)	2 800 (192)
	3/8	-9N-RSE-7N	0.38 (9.6)	1.56 (39.6)	1.38 (35.1)	1	5 600 (385)	2 800 (192)

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Pipe Fittings

Tees

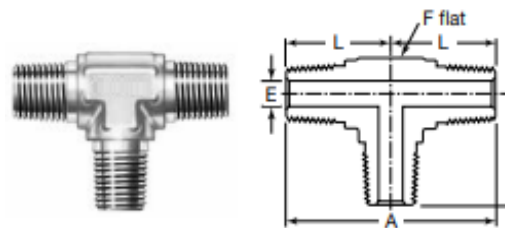


Female NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)				Pressure Ratings, psig(bar)	
		A	E	L	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-T-N	2.08 (52.8)	0.34 (8.6)	1.04 (26.4)	1/2	6 500 (447)	3 200 (220)
1/4	-5-T-N	2.34 (59.4)	0.45 (11.4)	1.17 (29.7)	11/16	7 200 (496)	3 600 (248)
3/8	-7-T-N	2.84 (72.1)	0.59 (15.0)	1.42 (36.1)	13/16	5 600 (385)	2 800 (192)
1/2	-9-T-N	3.12 (79.2)	0.73 (18.5)	1.56 (39.6)	1	5 600 (385)	2 800 (192)
3/4	-11-T-N	3.84 (97.5)	0.94 (23.9)	1.92 (48.8)	1 1/4	5 100 (351)	2 500 (172)
1	-13-T-N	3.82 (97.0)	1.17 (29.7)	1.91 (48.5)	1 11/16	6 400 (440)	3 200 (220)
Heavy-Wall Female NPT							
1/4	SS-5-T-N-10K	3.12 (79.2)	0.45 (11.4)	1.56 (39.6)	1	10 000 (689)	—
1/2	SS-9-T-N-10K	3.94 (100)	0.73 (18.5)	1.97 (50.0)	1 11/16	10 000 (689)	—

Female ISO Tapered Thread

ISO Thread Size in.	Basic Ordering Number	Dimensions, in. (mm)				Pressure Ratings, psig(bar)	
		A	E	L	F	SS 316, SS 304, Carbon Steel	Brass
1/4	-5-T-T	2.34 (59.4)	0.44 (11.2)	1.17 (29.7)	11/16	7 200 (496)	3 600 (248)
3/8	-7-T-T	2.84 (72.1)	0.58 (14.7)	1.42 (36.1)	13/16	5 600 (385)	2 800 (192)
1/2	-9-T-T	3.12 (79.2)	0.72 (18.3)	1.56 (39.6)	1	5 600 (385)	2 800 (192)



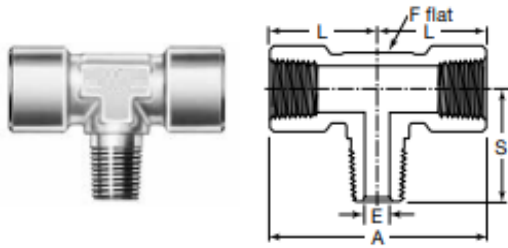
Male NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)				Pressure Ratings, psig(bar)	
		A	E	L	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-MT-T	1.76 (44.7)	0.19 (4.8)	0.88 (22.4)	7/16	10 000 (689)	5 000 (344)
1/4	-5-MT-T	2.10 (53.3)	0.28 (7.1)	1.05 (26.7)	1/2	8 000 (551)	4 000 (275)
3/8	-7-MT-T	2.34 (59.4)	0.38 (9.6)	1.17 (29.7)	11/16	7 800 (537)	3 900 (268)
1/2	-9-MT-T	2.90 (73.7)	0.47 (11.9)	1.45 (36.8)	13/16	7 700 (530)	3 800 (261)

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Pipe Fittings

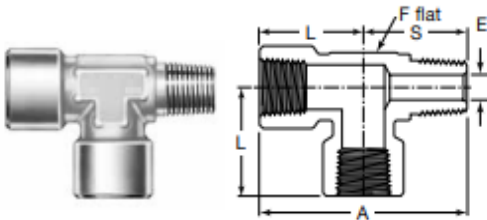
Branch Tee



Male and Female NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)					Pressure Ratings, psig(bar)	
		A	E	L	S	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-BT-N	2.08 (52.8)	0.19 (4.8)	1.04 (26.4)	0.87 (22.1)	1/2	6 500 (447)	3 200 (220)
1/4	-5-BT-N	2.34 (59.4)	0.28 (7.1)	1.17 (29.7)	1.17 (29.7)	11/16	7 200 (496)	3 600 (248)
3/8	-7-BT-N	2.84 (72.1)	0.38 (9.6)	1.42 (36.1)	1.26 (32.0)	13/16	5 600 (385)	2 800 (192)
1/2	-9-BT-N	3.12 (79.2)	0.47 (11.9)	1.56 (39.6)	1.56 (39.6)	1	5 600 (385)	2 800 (192)

Street Tee



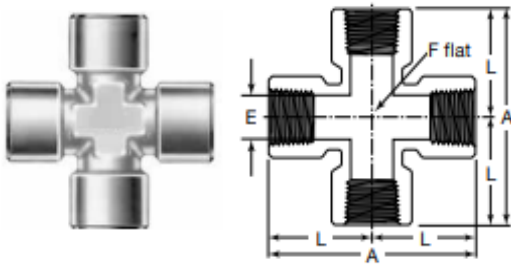
Male and Female NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)					Pressure Ratings, psig(bar)	
		A	E	L	S	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-ST-N	1.91 (48.5)	0.19 (4.8)	1.04 (26.4)	0.87 (22.1)	1/2	6 500 (447)	3 200 (220)
1/4	-5-ST-N	2.34 (59.4)	0.28 (7.1)	1.17 (29.7)	1.17 (29.7)	11/16	7 200 (496)	3 600 (248)
3/8	-7-ST-N	2.68 (68.1)	0.38 (9.6)	1.42 (36.1)	1.26 (32.0)	13/16	5 600 (385)	2 800 (192)
1/2	-9-ST-N	3.12 (79.2)	0.47 (11.9)	1.56 (39.6)	1.56 (39.6)	1	5 600 (385)	2 800 (192)
3/4	-11-ST-N	3.59 (91.2)	0.62 (15.7)	1.92 (48.8)	1.67 (42.4)	1 1/4	5 100 (351)	2 500 (172)

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Pipe Fittings

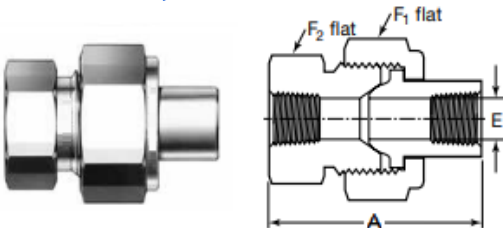
Cross



Female NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)				Pressure Ratings, psig(bar)	
		A	E	L	F	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-CS-N	2.08 (52.8)	0.34 (8.6)	1.04 (26.4)	1/2	6 500 (447)	3 200 (220)
1/4	-5-CS-N	2.34 (59.4)	0.45 (11.4)	1.17 (29.7)	11/16	7 200 (496)	3 600 (248)
3/8	-7-CS-N	2.84 (72.1)	0.59 (15.0)	1.42 (36.1)	13/16	5 600 (385)	2 800 (192)
1/2	-9-CS-N	3.12 (79.2)	0.73 (18.5)	1.56 (39.6)	1	5 600 (385)	2 800 (192)
3/4	-11-CS-N	3.84 (97.5)	0.94 (23.9)	1.92 (48.8)	1 1/4	5 100 (351)	2 500 (172)
1	-13-CS-N	3.82 (97.0)	1.17 (29.7)	1.91 (48.5)	1 11/16	6 400 (440)	3 200 (220)

Union Ball Joints



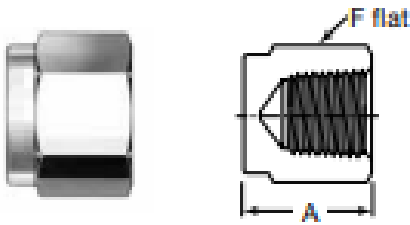
Female NPT

NPT Size in.	Basic Ordering Number	Dimensions in. (mm)				Pressure Ratings, psig(bar)	
		A	E	F ₁	F ₂	SS 316, SS 304, Carbon Steel	Brass
1/8	-3-UBJ-N	1.81 (46.0)	0.27 (6.8)	1 1/8	15/16	8 400 (578)	4 200 (289)
1/4	-5-UBJ-N	2.34 (59.4)	0.36 (9.1)	1 3/8	1 3/16	6 600 (454)	3 300 (227)
3/8	-7-UBJ-N	2.50 (63.5)	0.52 (13.2)	1 1/2	1 5/16	5 300 (365)	2 600 (179)
1/2	-9-UBJ-N	2.69 (68.3)	0.62 (15.7)	1 3/4	1 5/8	6 000 (413)	3 000 (206)
3/4	-11-UBJ-N	3.12 (79.2)	0.88 (22.4)	2 1/8	1 7/8	4 600 (316)	2 300 (158)
1	-13-UBJ-N	3.56 (90.4)	1.03 (26.2)	2 1/2	2 3/8	6 800 (468)	3 400 (234)

Union ball joint nuts are silver plated. A lubricant is utilized for assembly.

Pipe Fittings

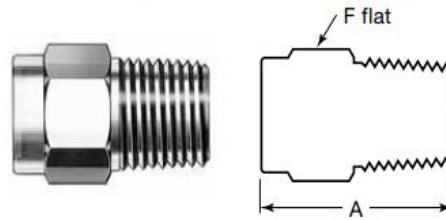
Pipe Caps



Female NPT

NPT Size in.	Basic Ordering Number	Dimensions in. (mm)	
		A	F
1/8	-3-PC-N	0.75 (19.1)	9/16
1/4	-5-PC-N	0.91 (23.1)	3/4
3/8	-7-PC-N	1.03 (26.2)	7/8
1/2	-9-PC-N	1.34 (34.0)	1 1/16
3/4	-11-PC-N	1.44 (36.6)	1 5/16
1	-13-PC-N	1.62 (41.1)	1 5/8
Heavy-Wall Female NPT			
1/4	SS-5-PC-N-10K	1.11 (28.2)	1
1/2	SS-9-PC-N-10K	1.58 (40.1)	1 1/2

Pipe Plugs

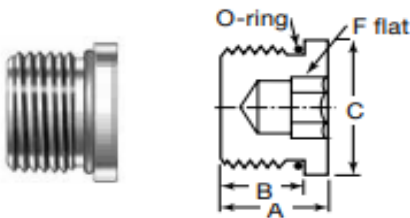


Male NPT

NPT Size in.	Basic Ordering Number	Dimensions in. (mm)	
		A	F
1/16	-1-PP-N	0.75 (19.1)	5/16
1/8	-3-PP-N	0.75 (19.1)	7/16
1/4	-5-PP-N	0.96 (24.4)	9/16
3/8	-7-PP-N	0.99 (25.1)	11/16
1/2	-9-PP-N	1.21 (30.7)	7/8
3/4	-11-PP-N	1.21 (30.7)	1 1/16
1	-13-PP-N	1.50 (38.1)	1 3/8

For pipe plugs with male ISO/BSP parallel threads (RS), contact representative.

Hollow Hex Plugs



Male SAE/MS Straight Thread

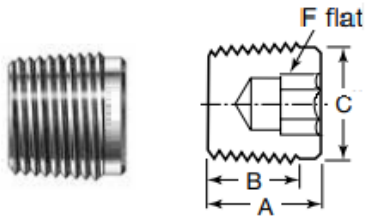
SAE/MS Thread Size in.	Basic Ordering Number	Dimensions in. (mm)				Uniform O-Ring ^① Size
		A	B	C	F	
7/16-20	-5-HOP-S	0.45 (11.4)	0.36 (9.1)	0.56 (14.2)	3/16	-904
9/16-18	-7-HOP-S	0.48 (12.2)	0.39 (9.9)	0.69 (17.5)	1/4	-906
3/4-16	-9-HOP-S	0.56 (14.2)	0.44 (11.2)	0.88 (22.4)	5/16	-908
1 1/16-12	-11-HOP-S	0.75 (19.1)	0.59 (15.0)	1.25 (31.8)	9/16	-912
1 5/16-12	-13-HOP-S	0.75 (19.1)	0.59 (15.0)	1.50 (38.1)	5/8	-916

① O-ring material is 90 durometer fluorocarbon FKM.

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Pipe Fittings

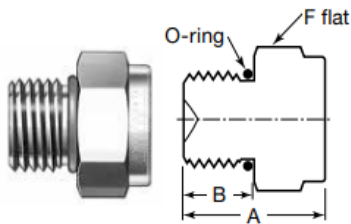
Hollow Hex Plugs



Male NPT

NPT Size in.	Basic Ordering Number	Dimensions, in. (mm)			
		A	B	C	F
1/8	-3-HOP-N	0.41 (10.4)	0.30 (7.6)	0.37 (9.4)	3/16
1/4	-5-HOP-N	0.61 (15.5)	0.49 (12.4)	0.48 (12.1)	1/4
3/8	-7-HOP-N	0.59 (15.0)	0.47 (11.9)	0.62 (15.7)	5/16
1/2	-9-HOP-N	0.76 (19.3)	0.64 (16.2)	0.76 (19.3)	3/8

Hex Head Plugs



Male SAE/MS Straight Thread

SAE/MS Thread Size in.	Basic Ordering Number	Dimensions in. (mm)			Uniform O-Ring ^① Size
		A	B	F	
7/16-20	-5-HHP-S	0.76 (19.3)	0.36 (9.1)	9/16	-904
9/16-18	-7-HHP-S	0.82 (20.8)	0.39 (9.9)	11/16	-906
3/4-16	-9-HHP-S	0.89 (22.6)	0.44 (11.2)	7/8	-908
1 1/16-12	-11-HHP-S	1.12 (28.4)	0.59 (15.0)	1 1/4	-912
1 5/16-12	-13-HHP-S	1.18 (30.0)	0.59 (15.0)	1 1/2	-916

① O-ring material is 90 durometer fluorocarbon FKM.