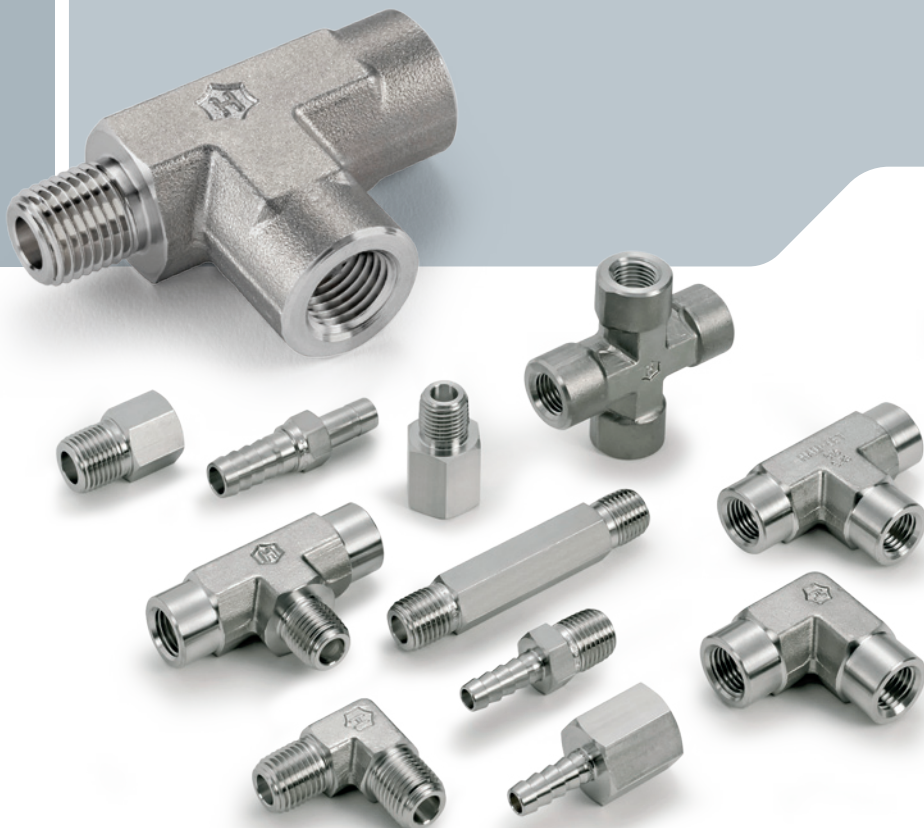


HAM-LET PRECISION INSTRUMENT PIPE FITTINGS **PIPE**LINE



GENERAL

The HAM-LET® Pipeline range of connectors is manufactured for typical applications in chemical and petrochemical processing plants, as well as oil, gas and power generation industries.

FEATURE

- Sizes range from 1/16" to 2".
- Fittings are properly packaged with the exposed threads protected to ensure they are not damaged during delivery.
- All pipe threads meet the requirements of **ASME/ANSI B1.20.1** (1983) for tapered pipe threads (NPT).
- Working pressures are calculated in accordance with Power Piping Code **ANSI B 31.1**, Refiner Piping Code **ASME/ANSI B 31.3** and section VIII of **ASME** Boiler & Pressure Vessel Code.

PRESSURE RATINGS (PSI)

NPT or BSPT/ISO size	STAINLESS STEEL 316		BRASS	
	male	female	male	female
1/16	11000	6700	5500	3300
1/8	10000	6500	5000	3200
1/4	8000	6600	4000	3300
3/8	7800	5300	3900	2600
1/2	7700	4900	3800	2400
3/4	7300	4600	3600	2300
1	5300	4400	2600	2200
1 1/4	6000	5000	3000	2500
1 1/2	5000	4600	2500	2300
2	3900	3900	1900	1900

MATERIALS

MATERIAL	Specifications	
	Barstock	Forgings
STAINLESS STEEL 316	ASTM A-276	ASTM A-182
	ASTM A-479	
BRASS	ASTM B-453	ASME B-283
	ASTM B-16	
	DIN 176.60	

INSTALLATION INSTRUCTIONS

To ensure a leak-tight seal, HAM-LET® recommends the use of a pipe thread sealant on all NPT threads. The most effective sealing method is teflon tape. Tape should be used only on male tapered pipe threads.

Do not use tape on flared, coned or tube fitting ends!

Clean both male and female tapered threads. Wrap tape in the direction of the male tapered thread spiral.

Note: Two wraps are suggested for stainless steel tapered pipe threads. Make sure tape does not overhang the first thread, as the tape might shred and enter the fluid system. Cut off excess tape. The connection is now ready for proper makeup.

ORDERING INFORMATION

EXAMPLE:

120H

Material Description

SS - Stainless Steel 316

B - Brass

1/2

x

1/4

All orders should include ordering information and material description.

PIPELINE INDEX

ELBOW _____ 100
100H



MALE ELBOW _____ 100
100HM



TEE _____ 100
101H



MALE TEE _____ 101
101HM



CROSS _____ 101
102H



HEX COUPLING _____ 101
103H



UNION RECORD _____ 102
104H



HOLLOW HEX PLUGS _____ 102
107H



HOLLOW HEX PLUGS _____ 102
SAE/MS STRAIGHT THREAD BOSS
107HOB



PIPE CAP _____ 103
108H



REDUCING BUSHING _____ 103
110H



REDUCING BUSHING _____ 104
SAE/MS STRAIGHT THREAD BOSS
110HOB



HEX LONG NIPPLE _____ 104
113H



STREET ELBOW _____ 105
116H



HEX REDUCING COUPLING _____ 105
119H



ADAPTER NPT _____ 106
120H



ADAPTER _____ 106
NPT FEMALE
TO MALE BSPT
120HNR



ADAPTER _____ 107
FEMALE NPT
TO MALE BSPP
120HNG



ADAPTER _____ 107
NPT TO SAE/MS STRAIGHT
THREAD BOSS
120HNOB



ADAPTER _____ 107
FEMALE BSPT
TO MALE NPT
120HRN



GAUGE ADAPTER _____ 108
FEMALE BSPP
TO MALE NPT
120HGN



PIPE PLUG NPT _____ 108
121H



HEX HEAD PLUG _____ 108
SAE/MS STRAIGHT
THREAD BOSS
121HOB



HEX NIPPLE _____ 109
122H



HEX NIPPLE _____ 109
MALE NPT
TO MALE BSPT
122HNR



HEX NIPPLE _____ 110
MALE NPT
TO MALE BSPP
122HNG



HEX NIPPLE _____ 110
NPT TO SAE/MS STRAIGHT BOSS
122HNOB



CLOSE NIPPLE _____ 110
122HCN



REDUCING NIPPLE _____ 111
123H



BRANCH TEE _____ 111
3600H



STREET TEE _____ 112
3750H



MALE HOSE CONNECTOR _____ 112
130HM



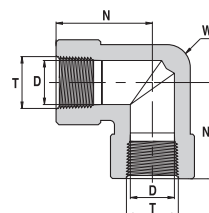
FEMALE HOSE CONNECTOR _____ 113
130HF



TUBE TO HOSE CONNECTOR _____ 113
130LT

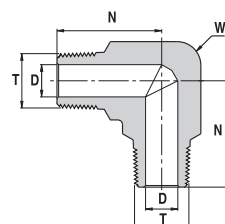


100 H ELBOW



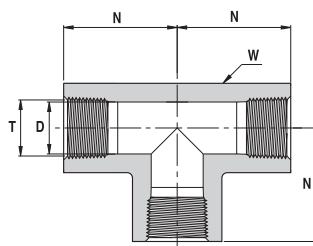
Ordering Information	T Female NPT size	N		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	inch
100H _ 1/8	1/8	1.04	26.4	0.31	7.8	5/8
100H _ 1/4	1/4	1.17	29.7	0.41	10.5	11/16
100H _ 3/8	3/8	1.42	36.1	0.56	14.2	15/16
100H _ 1/2	1/2	1.56	39.6	0.69	17.4	1 1/8
100H _ 3/4	3/4	1.92	48.8	0.90	22.9	1 3/8
100H _ 1	1	1.91	48.5	1.13	28.7	1 11/16

100 HM MALE ELBOW



Ordering Information	T Male NPT Size	N		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	inch
100HM _ 1/8	1/8	0.88	22.4	0.19	4.8	1/2
100HM _ 1/4	1/4	1.05	26.7	0.28	7.1	5/8
100HM _ 3/8	3/8	1.17	29.7	0.38	9.6	13/16
100HM _ 1/2	1/2	1.45	36.8	0.47	11.9	15/16

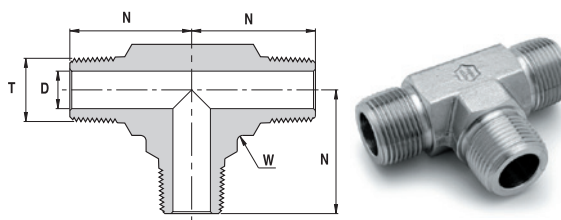
101 H TEE



Ordering Information	A Female NPT Size	N		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	inch
101H _ 1/8	1/8	1.04	26.4	0.31	7.8	5/8
101H _ 1/4	1/4	1.17	29.7	0.41	10.5	13/16
101H _ 3/8	3/8	1.42	36.1	0.56	14.2	15/16
101H _ 1/2	1/2	1.56	39.6	0.69	17.4	1 1/8
101H _ 3/4	3/4	1.92	48.8	0.90	22.9	1 3/8
101H _ 1	1	1.91	48.5	1.13	28.7	1 11/16

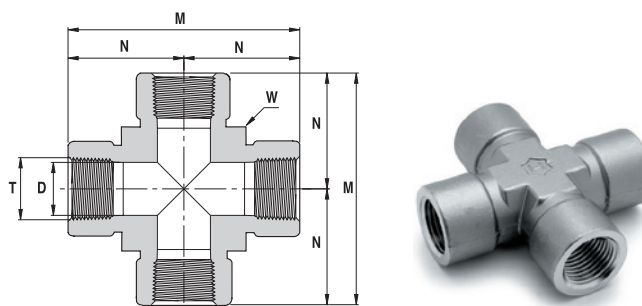
Dimensions are for reference only, and are subject to change without notice.

101 HM MALE TEE



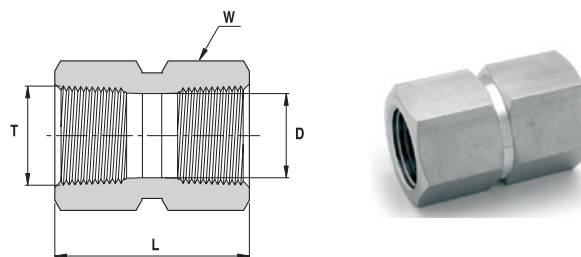
Ordering Information	T Male NPT Size	N		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	inch
101HM _ 1/8	1/8	0.88	22.4	0.19	4.8	1/2
101HM _ 1/4	1/4	1.05	26.7	0.28	7.1	5/8
101HM _ 3/8	3/8	1.17	29.7	0.38	9.6	13/16
101HM _ 1/2	1/2	1.45	36.8	0.47	11.9	15/16

102 H CROSS



Ordering Information	T Female NPT Size	N		M		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	inch	mm	inch
102H _ 1/8	1/8	1.04	26.4	2.08	52.8	0.31	7.8	5/8
102H _ 1/4	1/4	1.17	29.7	2.34	59.4	0.41	10.5	11/16
102H _ 3/8	3/8	1.42	36.1	2.84	72.2	0.56	14.2	13/16
102H _ 1/2	1/2	1.56	39.6	3.12	79.2	0.69	17.4	1
102H _ 3/4	3/4	1.92	48.8	3.84	97.6	0.90	22.9	1 1/4
102H _ 1	1	1.91	48.5	3.82	97.0	1.13	28.7	1 11/16

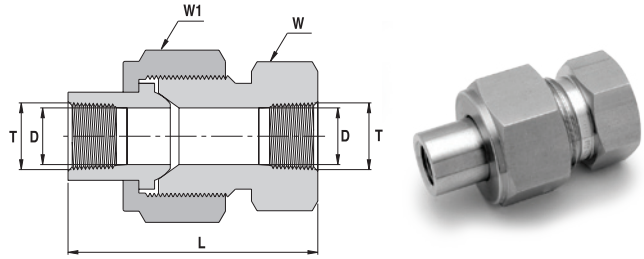
103 H HEX COUPLING



Ordering Information	T Female NPT size	L		D Min. Opening		W Hex. Flat
		inch	mm	inch	mm	inch
103H _ 1/8	1/8	0.81	20.6	0.31	7.8	9/16
103H _ 1/4	1/4	1.19	30.2	0.41	10.5	3/4
103H _ 3/8	3/8	1.31	33.3	0.56	14.2	7/8
103H _ 1/2	1/2	1.56	39.6	0.69	17.4	1 1/16
103H _ 3/4	3/4	1.62	41.1	0.90	22.9	1 5/16
103H _ 1	1	2.00	50.8	1.13	28.7	1 5/8

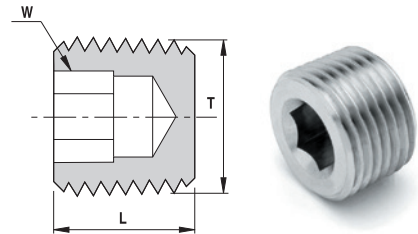
Dimensions are for reference only, and are subject to change without notice.

104 H UNION RECORD



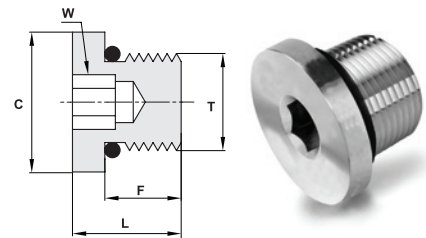
Ordering Information	T Female NPT Size	L		D Min. Opening		W Hex. Flat		W1 Hex. Flat
		inch	mm	inch	mm	inch	mm	inch
104H _ 1/8	1/8	1.81	46.0	0.27	6.9	15/16	23.81	1 1/8
104H _ 1/4	1/4	2.34	59.4	0.36	9.1	1 3/16	30.16	1 3/8
104H _ 3/8	3/8	2.50	63.5	0.52	13.2	1 5/16	33.34	1 1/2
104H _ 1/2	1/2	2.69	68.3	0.62	15.7	1 5/8	41.28	1 3/4
104H _ 3/4	3/4	3.12	79.2	0.87	22.1	1 7/8	47.63	2
104H _ 1	1	3.56	90.4	1.03	26.2	2 3/8	60.33	2 1/2

107 H HOLLOW HEX PLUGS



Ordering Information	T Male NPT Size	L		W Hex. Flat	
		inch	mm	inch	
107H _ 1/8	1/8	0.29	7.4	3/16	
107H _ 1/4	1/4	0.44	11.3	1/4	
107H _ 3/8	3/8	0.44	11.3	5/16	
107H _ 1/2	1/2	0.61	15.5	3/8	

107HOB HOLLOW HEX PLUG SAE/MS STRAIGHT THREAD BOSS *

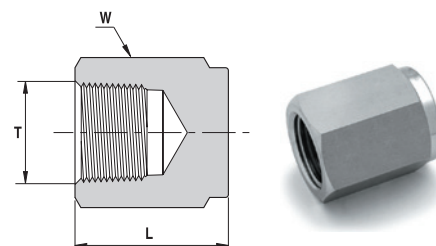


Ordering Information	T Straight Thread UN	L		F		C		W Hex. Flat	O-Ring**
		inch	mm	inch	mm	inch	mm	inch	
107HOB _ 7/16-20	7/16-20	0.45	11.4	0.36	9.1	0.56	14.2	3/16	-904
107HOB _ 1/2-20	1/2-20	0.45	11.4	0.36	9.1	0.63	15.9	3/16	-905
107HOB _ 9/16-18	9/16-18	0.48	12.2	0.39	9.9	0.69	17.5	1/4	-906
107HOB _ 3/4-16	3/4-16	0.56	14.2	0.44	11.2	0.88	22.4	5/16	-908

* Per SAE J1926 and MS 16142. See page 78 for mounting dimensions.

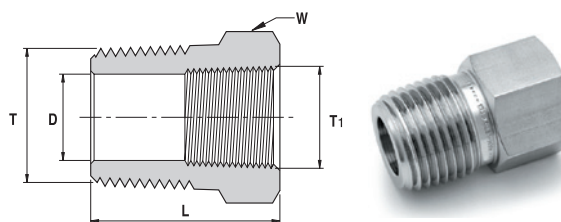
** O-rings used are Viton 90 Durometer. Other O-ring materials are available on request.
Dimensions are for reference only, and are subject to change without notice.

108 H PIPE CAP



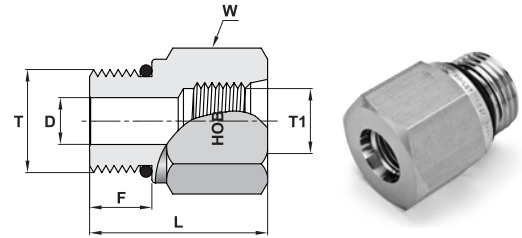
Ordering Information	T Female NPT Size	L		W Hex. Flat	
		inch	mm	inch	
108H _ 1/8	1/8	0.75	19.1	9/16	
108H _ 1/4	1/4	0.91	23.1	3/4	
108H _ 3/8	3/8	1.03	26.2	7/8	
108H _ 1/2	1/2	1.34	34.0	1 1/16	
108H _ 3/4	3/4	1.44	36.6	1 5/16	
108H _ 1	1	1.62	41.1	1 5/8	

110 H REDUCING BUSHING

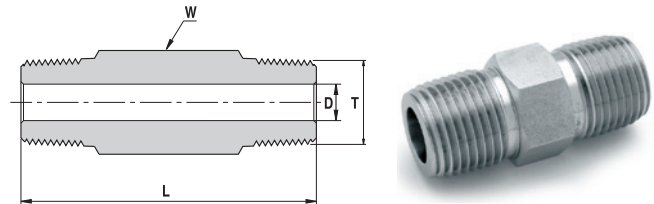


Ordering Information	T Male NPT Size	T1 Female NPT Size	L		D Min. Opening		W Hex. Flat inch
			inch	mm	inch	mm	
110H _ 1/8 X 1/16	1/8	1/16	1.03	26.2	0.19	4.8	7/16
110H _ 1/4 X 1/8	1/4	1/8	1.06	26.9	0.28	7.1	9/16
110H _ 3/8 X 1/8	3/8	1/8	0.86	21.8	0.34	8.6	11/16
110H _ 3/8 X 1/4	3/8	1/4	1.19	30.2	0.37	9.5	3/4
110H _ 1/2 X 1/8	1/2	1/8	1.08	27.4	0.34	8.6	7/8
110H _ 1/2 X 1/4	1/2	1/4	1.08	27.4	0.41	10.5	7/8
110H _ 1/2 X 3/8	1/2	3/8	1.41	35.8	0.47	11.9	7/8
110H _ 3/4 X 1/4	3/4	1/4	1.08	27.4	0.45	11.4	1 1/16
110H _ 3/4 X 3/8	3/4	3/8	1.08	27.4	0.56	14.2	1 1/16
110H _ 3/4 X 1/2	3/4	1/2	1.63	41.4	0.62	15.7	1 1/16
110H _ 1 X 1/4	1	1/4	1.37	34.8	0.41	10.5	1 3/8
110H _ 1 X 3/8	1	3/8	1.37	34.8	0.59	15.0	1 3/8
110H _ 1 X 1/2	1	1/2	1.37	34.8	0.69	17.4	1 3/8
110H _ 1 X 3/4	1	3/4	1.85	47.0	0.87	22.1	1 3/8
110H _ 1 1/4 X 1/2	1 1/4	1/2	1.46	37.1	0.73	18.5	1 3/4
110H _ 1 1/4 X 3/4	1 1/4	3/4	1.47	37.3	0.94	23.9	1 3/4
110H _ 1 1/4 X 1	1 1/4	1	1.94	49.3	1.17	29.7	1 3/4
110H _ 1 1/2 X 1/2	1 1/2	1/2	1.61	40.9	0.72	18.3	2 1/8
110H _ 1 1/2 X 3/4	1 1/2	3/4	1.61	40.9	0.90	22.9	2 1/8
110H _ 1 1/2 X 1	1 1/2	1	1.61	40.9	1.17	29.7	2 1/8
110H _ 1 1/2 X 1 1/4	1 1/2	1 1/4	2.31	58.7	1.50	38.1	2 1/8
110H _ 2 X 1/2	2	1/2	1.83	46.5	0.73	18.5	2 3/4
110H _ 2 X 3/4	2	3/4	1.83	46.5	0.94	23.9	2 3/4
110H _ 2 X 1	2	1	1.83	46.5	1.17	29.7	2 3/4
110H _ 2 X 1 1/4	2	1 1/4	1.83	46.5	1.50	38.1	2 3/4
110H _ 2 X 1 1/2	2	1 1/2	1.83	46.5	1.73	43.9	2 3/4

Dimensions are for reference only, and are subject to change without notice.

110HOB**REDUCING BUSHING SAE/MS
STRAIGHT THREAD BOSS ***

Ordering Information	T Straight Thread UN	T1 Straight Thread UN	D		L		F		W Hex. Flat inch	O-Ring**
			inch	mm	inch	mm	inch	mm		
110HOB _ 9/16-18 X 7/16-20	9/16-18	7/16-20	0.28	7.1	1.12	28.4	0.36	9.1	13/16	-906
110HOB _ 3/4-16 X 7/16-20	3/4-16	7/16-20	0.24	6.0	1.30	33.0	0.44	11.2	15/16	-908
110HOB _ 3/4-16 X 9/16-18	3/4-16	9/16-18	0.42	10.7	1.19	30.2	0.44	11.2	1	-908
110HOB _ 3/4-16 X 7/8-14	3/4-16	7/8-14	0.42	10.7	1.60	40.6	0.44	11.2	1 1/2	-908
110HOB _ 7/8-14 X 9/16-18	7/8-14	9/16-18	0.50	12.7	1.10	27.9	0.50	12.7	1	-910
110HOB _ 7/8-14 X 3/4-16	7/8-14	3/4-16	0.50	12.7	1.42	36.1	0.50	12.7	1 3/16	-910
110HOB _ 1 1/16-12 X 3/4-16	1 1/16-12	3/4-16	0.65	16.5	1.27	32.3	0.59	15.0	1 1/4	-912
110HOB _ 1 5/16-12 X 1 1/16-12	1 5/16-12	1 1/16-12	0.87	22.1	1.61	40.9	0.59	15.0	1 5/8	-916
110HOB _ 1 5/8-12 X 1 5/16-12	1 5/8-12	1 5/16-12	1.09	27.7	1.98	50.3	0.59	15.0	2 1/8	-920
110HOB _ 1 7/8-12 X 1 5/16-12	1 7/8-12	1 5/16-12	1.23	31.2	1.27	32.3	0.59	15.0	2 1/8	-924

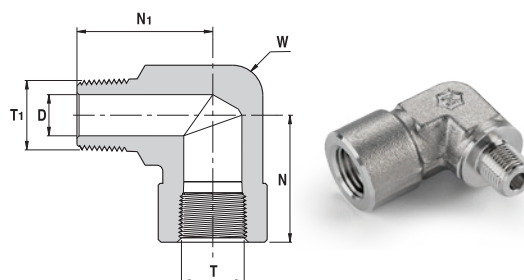
113 H**HEX LONG NIPPLE**

Ordering Information	T Male NPT Size	L Available Lengths (inch)						D Min. Opening		W Hex. Flat inch
		1.50	2.00	2.50	3.00	4.00	6.00	inch	mm	
113H _ 1/8 X 1.5 / 2 / 2.5 / 3	1/8	✓	✓	✓	✓	-	-	0.19	4.8	7/16
113H _ 1/4 X 1.5 / 2 / 2.5 / 3 / 4	1/4	✓	✓	✓	✓	✓	-	0.28	7.1	9/16
113H _ 3/8 X 1.5 / 2 / 2.5 / 3 / 4	3/8	✓	✓	✓	✓	✓	-	0.38	9.6	11/16
113H _ 1/2 X 2 / 3 / 4	1/2	-	✓	-	✓	✓	✓	0.47	11.9	7/8
113H _ 3/4 X 2 / 3 / 4	3/4	-	✓	-	✓	✓	-	0.62	15.8	1 1/16
113H _ 1 X 3 / 4	1	-	-	-	✓	✓	-	0.88	22.4	1 3/8

* Per SAE J1926 and MS 16142. See page 78 for mounting dimensions.

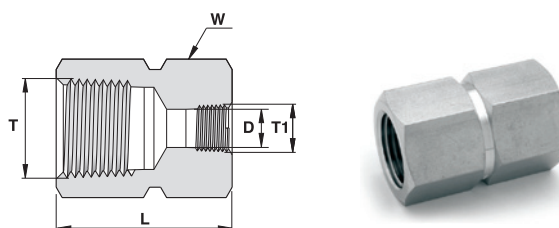
** O-rings used are Viton 90 Durometer. Other O-ring materials are available on request.
Dimensions are for reference only, and are subject to change without notice.

116 H STREET ELBOW



Ordering Information	T Female NPT Size	T1 Male NPT Size	N		N1		D Min. Opening		W Wrench Flat
			inch	mm	inch	mm	inch	mm	inch
116H _ 1/16 X 1/16	1/16	1/16	0.86	21.8	0.88	22.4	0.12	3.10	7/16
116H _ 1/8 X 1/16	1/8	1/16	1.04	26.4	0.87	22.1	0.12	3.10	5/8
116H _ 1/8 X 1/8	1/8	1/8	1.04	26.4	0.87	22.1	0.19	4.80	5/8
116H _ 1/4 X 1/8	1/4	1/8	1.17	29.7	1.00	25.4	0.19	4.80	11/16
116H _ 1/4 X 1/4	1/4	1/4	1.17	29.7	1.17	29.7	0.28	7.10	11/16
116H _ 3/8 X 1/4	3/8	1/4	1.42	36.1	1.26	32.0	0.28	7.10	15/16
116H _ 3/8 X 3/8	3/8	3/8	1.42	36.1	1.26	32.0	0.38	9.60	15/16
116H _ 1/2 X 1/4	1/2	1/4	1.56	39.6	1.38	35.1	0.28	7.10	1 1/8
116H _ 1/2 X 3/8	1/2	3/8	1.56	39.6	1.38	35.1	0.38	9.60	1 1/8
116H _ 1/2 X 1/2	1/2	1/2	1.56	39.6	1.56	39.6	0.47	11.9	1 1/8
116H _ 3/4 X 3/4	3/4	3/4	1.92	48.8	1.67	42.4	0.62	15.8	1 3/8
116H _ 1 X 1	1	1	1.83	46.5	1.94	49.3	0.86	21.8	1 11/16

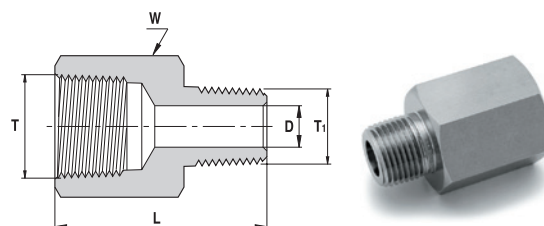
119 H HEX REDUCING COUPLING



Ordering Information	T Female NPT Size	T1 Female NPT Size	L		D Min. opening		W Hex. Flat
			inch	mm	inch	mm	inch
119H _ 1/4 X 1/8	1/4	1/8	1.22	31.0	0.31	7.8	3/4
119H _ 3/8 X 1/4	3/8	1/4	1.38	35.1	0.41	10.5	7/8
119H _ 1/2 X 1/8	1/2	1/8	1.56	39.6	0.31	7.8	1 1/16
119H _ 1/2 X 1/4	1/2	1/4	1.75	44.5	0.41	10.5	1 1/16
119H _ 1/2 X 3/8	1/2	3/8	1.78	45.2	0.56	14.2	1 1/16
119H _ 3/4 X 1/4	3/4	1/4	1.81	46.0	0.41	10.5	1 5/16
119H _ 3/4 X 1/2	3/4	1/2	2.06	52.3	0.69	17.4	1 5/16
119H _ 1 X 1/2	1	1/2	2.19	55.6	0.69	17.4	1 5/8
119H _ 1 X 3/4	1	3/4	2.25	57.2	0.90	22.9	1 5/8

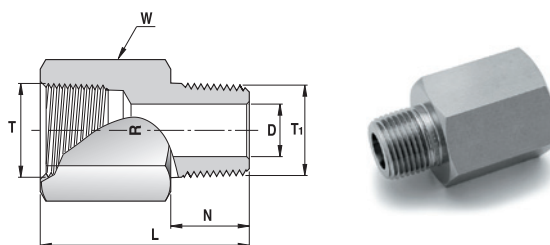
Dimensions are for reference only, and are subject to change without notice.

120 H ADAPTER NPT



Ordering Information	T Female NPT Size	T1 Male NPT Size	L		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	
120H _ 1/8 X 1/16	1/8	1/16	1.09	27.7	0.12	3.0	9/16
120H _ 1/8 X 1/8	1/8	1/8	1.10	27.9	0.19	4.8	9/16
120H _ 1/4 X 1/8	1/4	1/8	1.26	32.0	0.19	4.8	3/4
120H _ 1/4 X 1/4	1/4	1/4	1.40	35.6	0.28	7.1	3/4
120H _ 3/8 X 1/8	3/8	1/8	1.33	33.8	0.19	4.8	7/8
120H _ 3/8 X 1/4	3/8	1/4	1.50	38.1	0.28	7.1	7/8
120H _ 3/8 X 3/8	3/8	3/8	1.51	38.4	0.38	9.6	7/8
120H _ 1/2 X 1/8	1/2	1/8	1.58	40.1	0.19	4.8	1 1/16
120H _ 1/2 X 1/4	1/2	1/4	1.76	44.7	0.28	7.1	1 1/16
120H _ 1/2 X 3/8	1/2	3/8	1.75	44.5	0.37	9.5	1 1/16
120H _ 1/2 X 1/2	1/2	1/2	1.94	49.3	0.47	11.9	1 1/16
120H _ 3/4 X 1/4	3/4	1/4	1.85	47.0	0.28	7.1	1 5/16
120H _ 3/4 X 3/8	3/4	3/8	1.82	46.2	0.37	9.5	1 5/16
120H _ 3/4 X 1/2	3/4	1/2	2.02	51.3	0.47	11.9	1 5/16
120H _ 3/4 X 3/4	3/4	3/4	2.02	51.3	0.62	15.8	1 5/16
120H _ 1 X 1/4	1	1/4	1.96	49.8	0.28	7.1	1 5/8
120H _ 1 X 1/2	1	1/2	2.16	54.9	0.47	11.9	1 5/8
120H _ 1 X 3/4	1	3/4	2.17	55.1	0.62	15.7	1 5/8
120H _ 1 X 1	1	1	2.28	57.9	0.86	21.8	1 5/8

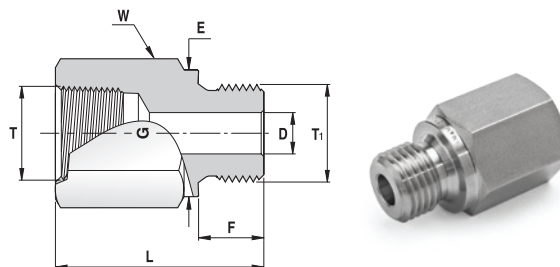
120 HNR ADAPTER NPT TO BSPT



Ordering Information	T Female NPT Size	T1 Male BSPT ISO 7/1, BS21 Size	L		N		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch	mm	
120HNR _ 1/8	1/8	1/8-28	1.09	27.7	0.38	9.7	0.19	4.8	9/16
120HNR _ 1/4	1/4	1/4-19	1.42	36.1	0.56	14.2	0.28	7.1	3/4
120HNR _ 3/8	3/8	3/8-19	1.50	38.1	0.56	14.2	0.38	9.6	7/8
120HNR _ 1/2	1/2	1/2-14	1.94	49.3	0.75	19.0	0.47	11.9	1 1/16
120HNR _ 3/4	3/4	3/4-14	2.02	51.3	0.75	19.0	0.62	15.8	1 5/16
120HNR _ 1	1	1-11	2.30	58.4	0.94	23.9	0.88	22.4	1 5/8

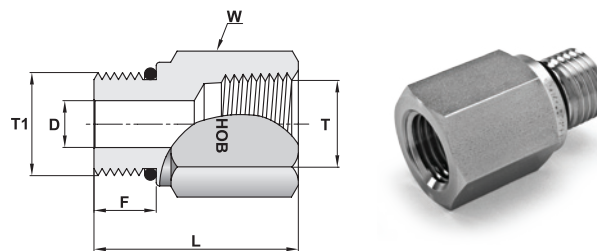
Dimensions are for reference only, and are subject to change without notice.

120 HNG ADAPTER NPT TO BSPP



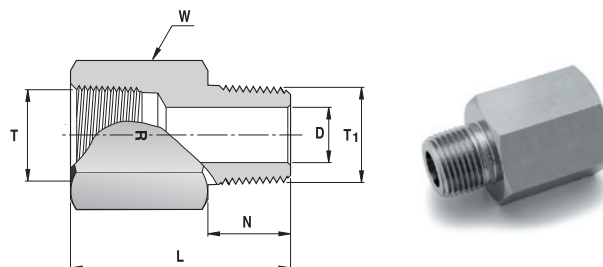
Ordering Information	T Female NPT Size	T1 Male BSPP ISO 228/1, BS 2779	L		F		E Dia.		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch	mm	inch	mm	
120HNG _ 1/8	1/8	1/8-28	0.99	25.1	0.28	7.1	0.54	13.8	0.16	4.1	9/16
120HNG _ 1/4	1/4	1/4-19	1.32	33.5	0.44	11.2	0.70	18.0	0.23	5.8	3/4
120HNG _ 3/8	3/8	3/8-19	1.41	35.8	0.44	11.2	0.85	21.8	0.31	7.9	7/8
120HNG _ 1/2	1/2	1/2-14	1.74	44.2	0.56	14.2	1.02	26.0	0.47	11.9	1 1/16
120HNG _ 3/4	3/4	3/4-14	1.89	48.0	0.62	15.7	1.26	32.0	0.62	15.7	1 5/16
120HNG _ 1	1	1-11	2.10	53.3	0.72	18.3	1.53	39.0	0.78	19.8	1 5/8

120HNOB ADAPTER NPT TO SAE/MS STRAIGHT THREAD BOSS *



Ordering Information	T Female NPT Size	T1 Straight Thread UN	D		L		F		W Hex. Flat	O-Ring**
			inch	mm	inch	mm	inch	mm		
120HNOB _ 1/4 X 7/16-20	1/4	7/16-20	0.20	5.1	1.32	33.5	0.36	9.1	3/4	-904
120HNOB _ 3/8 X 9/16-18	3/8	9/16-18	0.28	7.1	1.39	35.3	0.39	9.9	15/16	-906
120HNOB _ 1/2 X 3/4-16	1/2	3/4-16	0.42	10.7	1.76	44.7	0.44	11.2	1 1/16	-908
120HNOB _ 3/4 X 1 1/16-12	3/4	1 1/16-12	0.66	16.7	1.99	50.5	0.59	15.0	1 3/8	-912
120HNOB _ 1 X 1 5/16-12	1	1 5/16-12	0.88	22.3	2.12	53.8	0.59	15.0	1 5/8	-916

120 HRN ADAPTER BSPT TO NPT

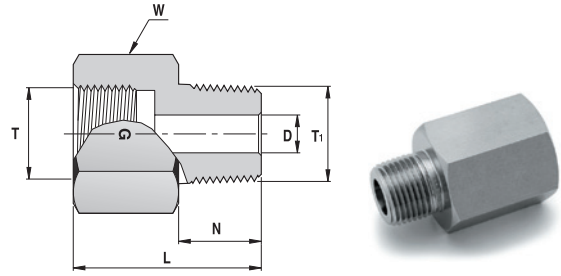


Ordering Information	T Female BSPT ISO 7/1, BS21	T1 Male NPT size	L		N		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch	mm	
120HRN _ 1/4	1/4-19	1/4	1.43	36.3	0.56	14.2	0.28	7.1	3/4
120HRN _ 3/8	3/8-19	3/8	1.51	38.4	0.56	14.2	0.38	9.6	7/8
120HRN _ 1/2	1/2-14	1/2	1.96	49.8	0.75	19.1	0.47	11.9	1 1/16

* Per SAE J1926 and MS 16142. See page 78 for mounting dimensions.

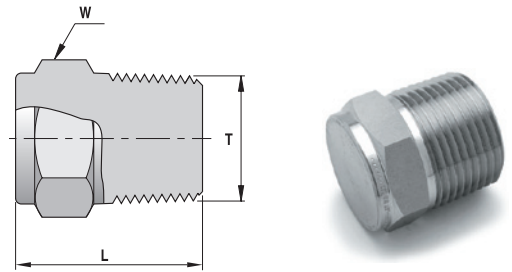
** O-rings used are Viton 90 Durometer. Other O-ring materials are available on request.
Dimensions are for reference only, and are subject to change without notice.

120 HGN GAUGE ADAPTER BSPP TO NPT



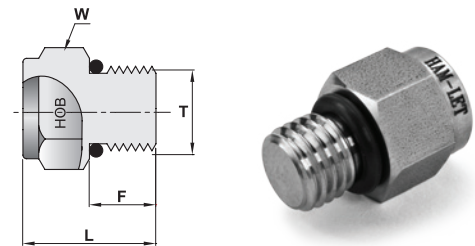
Ordering Information	T Female BSPP ISO 228/1, BS 2779 Size	T1 Male NPT Size	L		N		D Min. Opening		W Hex. Flat inch
			inch	mm	inch	mm	inch	mm	
120HGN _ 1/4	1/4-19	1/4	1.19	30.2	0.56	14.2	0.22	5.6	3/4
120HGN _ 3/8	3/8-19	3/8	1.27	32.3	0.56	14.2	0.26	6.6	15/16
120HGN _ 1/2	1/2-14	1/2	1.65	41.9	0.75	19.0	0.28	7.1	1 1/16

121 H PIPE PLUG NPT



Ordering Information	T Male NPT Size	L		W Hex. Flat inch
		inch	mm	
121H _ 1/16	1/16	0.75	19.0	5/16
121H _ 1/8	1/8	0.75	19.0	7/16
121H _ 1/4	1/4	0.96	24.4	9/16
121H _ 3/8	3/8	0.99	25.2	11/16
121H _ 1/2	1/2	1.21	30.7	7/8
121H _ 3/4	3/4	1.21	30.7	1 1/16
121H _ 1	1	1.50	38.1	1 3/8

121HOB HEX HEAD PLUG SAE/MS STRAIGHT THREAD BOSS*



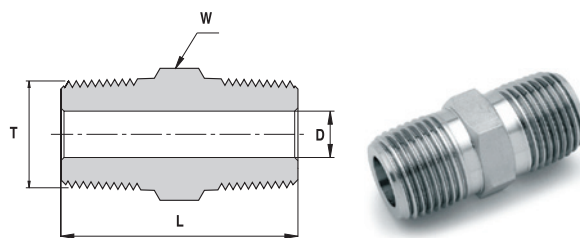
Ordering Information	T Straight Thread UN	L		F		W Hex. Flat inch	O-Ring**
		inch	mm	inch	mm		
121HOB _ 5/16-24	5/16-24	0.70	17.8	0.30	7.6	7/16	-902
121HOB _ 7/16-20	7/16-20	0.76	19.3	0.36	9.1	9/16	-904
121HOB _ 9/16-18	9/16-18	0.82	20.8	0.39	9.9	11/16	-906
121HOB _ 3/4-16	3/4-16	0.89	22.6	0.44	11.2	7/8	-908
121HOB _ 1 1/16-12	1 1/16-12	1.12	28.4	0.59	15.0	1 1/4	-912
121HOB _ 1 5/16-12	1 5/16-12	1.18	30.0	0.59	15.0	1 1/2	-916

* Per SAE J1926 and MS 16142. See page 78 for mounting dimensions.

** O-rings used are Viton 90 Durometer. Other O-ring materials are available on request.

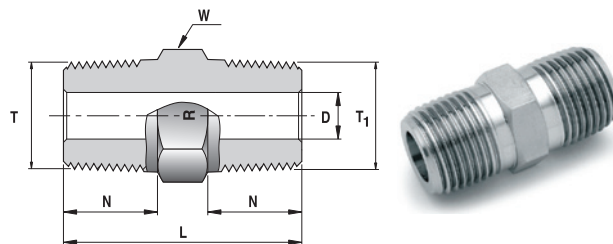
Dimensions are for reference only, and are subject to change without notice.

122 H HEX NIPPLE



Ordering Information	T Male NPT Size	L		D Min. Opening		W Hex. Flat
		inch	mm	inch	mm	inch
122H _ 1/16	1/16	1.01	25.7	0.12	3.0	5/16
122H _ 1/8	1/8	1.01	25.7	0.19	4.8	7/16
122H _ 1/4	1/4	1.40	35.6	0.28	7.1	9/16
122H _ 3/8	3/8	1.43	36.3	0.38	9.6	11/16
122H _ 1/2	1/2	1.84	46.7	0.47	11.9	7/8
122H _ 3/4	3/4	1.84	46.7	0.62	15.8	1 1/16
122H _ 1	1	2.32	58.9	0.87	22.1	1 3/8

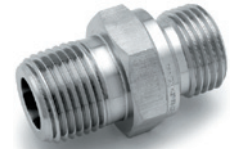
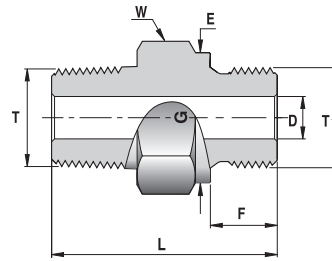
122 HNR HEX NIPPLE NPT TO BSPT



Ordering Information	T Male NPT Size	T1 Male BSPT ISO 7/1, BS21 Size	L		N		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch	mm	inch
122HNR _ 1/8	1/8	1/8-28	1.01	25.6	0.38	9.7	0.19	4.8	7/16
122HNR _ 1/4	1/4	1/4-19	1.40	35.6	0.56	14.2	0.28	7.1	9/16
122HNR _ 3/8	3/8	3/8-19	1.43	36.3	0.56	14.2	0.38	9.6	11/16
122HNR _ 1/2	1/2	1/2-14	1.84	46.7	0.75	19.0	0.47	11.9	7/8
122HNR _ 3/4	3/4	3/4-14	1.84	46.7	0.75	19.0	0.62	15.8	1 1/16
122HNR _ 1	1	1-11	2.32	58.9	0.94	23.9	0.87	22.1	1 3/8

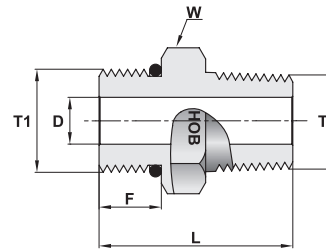
Dimensions are for reference only, and are subject to change without notice.

122 HNG HEX NIPPLE NPT TO BSPP



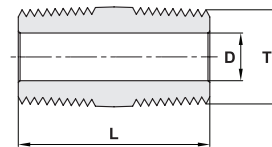
Ordering Information	T Male NPT Size	T1 Male BSPP ISO 228/1, BS 2779	L		F		E		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch	mm	inch	mm	
122HNG _ 1/8	1/8	1/8-28	1.07	27.2	0.28	7.1	0.54	13.8	0.16	4.1	9/16
122HNG _ 1/4	1/4	1/4-19	1.44	36.6	0.44	11.2	0.71	18.0	0.23	5.8	3/4
122HNG _ 3/8	3/8	3/8-19	1.47	37.3	0.44	11.2	0.85	21.8	0.31	7.9	7/8
122HNG _ 1/2	1/2	1/2-14	1.78	45.2	0.56	14.2	1.02	26.0	0.47	11.9	1 1/16
122HNG _ 3/4	3/4	3/4-14	1.95	49.5	0.62	15.7	1.26	32.0	0.62	15.8	1 5/16
122HNG _ 1	1	1-11	2.26	57.4	0.72	18.3	1.53	39.0	0.78	19.8	1 5/8

122HNOB HEX NIPPLE NPT TO SAE/MS STRAIGHT THREAD BOSS *



Ordering Information	T Male NPT Size	T1 Straight Thread UN	D		L		F		W Hex. Flat	O-Ring**
			inch	mm	inch	mm	inch	mm		
122HNOB _ 1/4 X 7/16-20	1/4	7/16-20	0.20	5.1	1.20	30.5	0.36	9.1	9/16	-904
122HNOB _ 3/8 X 9/16-18	3/8	9/16-18	0.28	7.1	1.26	32.0	0.39	9.9	11/16	-906
122HNOB _ 1/2 X 3/4-16	1/2	3/4-16	0.42	10.7	1.53	38.9	0.44	11.2	7/8	-908
122HNOB _ 3/4 X 1 1/16-12	3/4	1 1/16-12	0.62	15.7	1.75	44.4	0.59	15.0	1 1/4	-912
122HNOB _ 1 X 1 5/16-12	1	1 5/16-12	0.88	22.4	2.00	50.8	0.59	15.0	1 1/2	-916

122HCN CLOSE NIPPLE



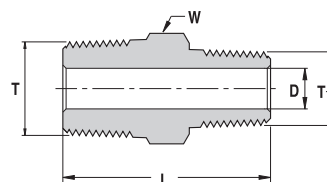
Ordering Information	T Male NPT Size	D		L	
		inch	mm	inch	mm
122HCN _ 1/8	1/8	0.19	4.8	0.75	19.1
122HCN _ 1/4	1/4	0.28	7.1	1.12	28.4
122HCN _ 3/8	3/8	0.38	9.6	1.12	28.4
122HCN _ 1/2	1/2	0.47	11.9	1.50	38.1
122HCN _ 3/4	3/4	0.62	15.7	1.50	38.1
122HCN _ 1	1	0.88	22.4	1.88	47.8

* Per SAE J1926 and MS 16142. See page 78 for mounting dimensions.

** O-rings used are Viton 90 Durometer. Other O-ring materials are available on request.

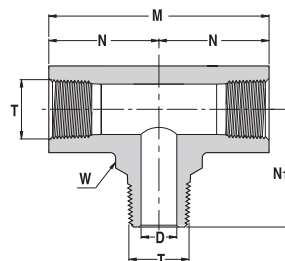
Dimensions are for reference only, and are subject to change without notice.

123 H REDUCING NIPPLE



Ordering Information	T Male NPT Size	T1 Male NPT Size	L		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	
123H _ 1/8 X 1/16	1/8	1/16	1.01	25.7	0.12	3.0	7/16
123H _ 1/4 X 1/8	1/4	1/8	1.22	31.0	0.19	4.8	9/16
123H _ 3/8 X 1/8	3/8	1/8	1.25	31.8	0.19	4.8	11/16
123H _ 3/8 X 1/4	3/8	1/4	1.43	36.3	0.28	7.1	11/16
123H _ 1/2 X 1/8	1/2	1/8	1.47	37.3	0.19	4.8	7/8
123H _ 1/2 X 1/4	1/2	1/4	1.65	41.9	0.28	7.1	7/8
123H _ 1/2 X 3/8	1/2	3/8	1.65	41.9	0.38	9.6	7/8
123H _ 3/4 X 1/4	3/4	1/4	1.65	41.9	0.28	7.1	1 1/16
123H _ 3/4 X 1/2	3/4	1/2	1.84	46.7	0.47	11.9	1 1/16
123H _ 1 X 1/2	1	1/2	2.13	54.1	0.47	11.9	1 3/8
123H _ 1 X 3/4	1	3/4	2.13	54.1	0.62	15.8	1 3/8

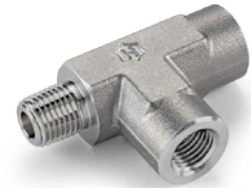
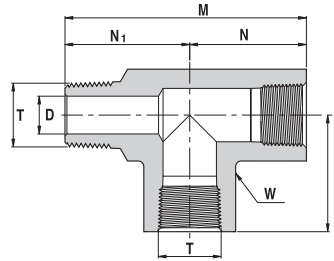
3600 H BRANCH TEE



Ordering Information	T Male & Female NPT	M		N		N1		D		W Wrench Flat
		inch	mm	inch	mm	inch	mm	inch	mm	
3600H _ 1/8	1/8	2.08	52.8	1.04	26.4	0.87	22.1	0.19	4.8	5/8
3600H _ 1/4	1/4	2.34	59.4	1.17	29.7	1.17	29.7	0.28	7.1	13/16
3600H _ 3/8	3/8	2.84	72.1	1.42	36.1	1.26	32.0	0.38	9.6	15/16
3600H _ 1/2	1/2	3.12	79.2	1.56	39.6	1.56	39.6	0.47	11.9	1 1/8

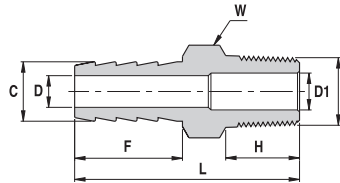
Dimensions are for reference only, and are subject to change without notice.

3750 H STREET TEE



Ordering Information	T Male & Female NPT	M		N		N1		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	inch	mm	inch	mm	inch
3750H _ 1/8	1/8	1.91	48.5	1.04	26.4	0.87	22.1	0.19	4.8	5/8
3750H _ 1/4	1/4	2.34	59.4	1.17	29.7	1.17	29.7	0.28	7.1	13/16
3750H _ 3/8	3/8	2.68	68.1	1.42	36.1	1.26	32.0	0.38	9.6	15/16
3750H _ 1/2	1/2	3.12	79.2	1.56	39.6	1.56	39.6	0.47	11.9	1 1/8

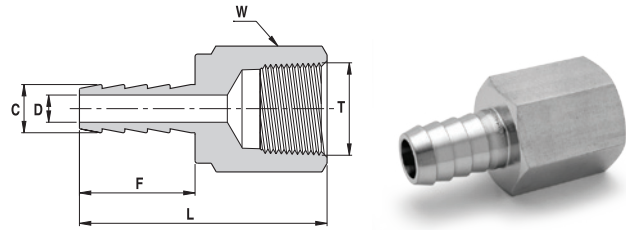
130 HM MALE TO HOSE CONNECTOR



Ordering Information	Hose I.D.	T Male NPT Size	C		D		D1		F		H		L		W Hex. Flat
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
130HM _ 1/8 X 1/8	1/8	1/8	0.15	3.80	0.08	2.0	0.19	4.80	0.40	10.2	0.38	9.70	1.08	27.4	7/16
130HM _ 1/8 X 1/4	1/8	1/4	0.15	3.80	0.08	2.0	0.28	7.10	0.40	10.2	0.56	14.2	1.26	32.0	9/16
130HM _ 3/16 X 1/8	3/16	1/8	0.23	5.84	0.12	3.0	0.12	3.00	0.59	15.0	0.38	9.70	1.27	32.3	7/16
130HM _ 3/16 X 1/4	3/16	1/4	0.23	5.84	0.12	3.0	0.28	7.10	0.59	15.0	0.56	14.2	1.45	36.8	9/16
130HM _ 1/4 X 1/8	1/4	1/8	0.30	7.62	0.19	4.8	0.19	4.80	0.79	20.1	0.38	9.70	1.47	37.3	7/16
130HM _ 1/4 X 1/4	1/4	1/4	0.30	7.62	0.19	4.8	0.19	4.80	0.79	20.1	0.56	14.2	1.65	41.9	9/16
130HM _ 1/4 X 3/8	1/4	3/8	0.30	7.62	0.19	4.8	0.19	4.80	0.79	20.1	0.56	14.2	1.66	42.2	11/16
130HM _ 1/4 X 1/2	1/4	1/2	0.30	7.62	0.19	4.8	0.47	11.9	0.79	20.1	0.75	19.0	1.85	47.0	7/8
130HM _ 5/16 X 1/8	5/16	1/8	0.38	9.65	0.19	4.8	0.19	4.80	0.87	22.1	0.38	9.70	1.55	39.4	7/16
130HM _ 5/16 X 1/4	5/16	1/4	0.38	9.65	0.19	4.8	0.19	4.80	0.87	22.1	0.56	14.2	1.73	43.9	9/16
130HM _ 5/16 X 3/8	5/16	3/8	0.38	9.65	0.19	4.8	0.37	9.50	0.87	22.1	0.56	14.2	1.74	44.2	11/16
130HM _ 5/16 X 1/2	5/16	1/2	0.38	9.65	0.19	4.8	0.47	11.9	0.87	22.1	0.75	19.0	1.96	49.8	7/8
130HM _ 3/8 X 1/4	3/8	1/4	0.45	11.43	0.30	7.6	0.30	7.60	0.87	22.1	0.56	14.2	1.73	43.9	9/16
130HM _ 3/8 X 3/8	3/8	3/8	0.45	11.43	0.30	7.6	0.30	7.60	0.87	22.1	0.56	14.2	1.74	44.2	11/16
130HM _ 3/8 X 1/2	3/8	1/2	0.45	11.43	0.30	7.6	0.30	7.60	0.87	22.1	0.75	19.0	1.96	49.8	7/8
130HM _ 1/2 X 1/4	1/2	1/4	0.60	15.24	0.37	9.5	0.28	7.10	0.94	23.8	0.56	14.2	1.80	45.7	11/16
130HM _ 1/2 X 3/8	1/2	3/8	0.60	15.24	0.37	9.5	0.37	9.50	0.94	23.8	0.56	14.2	1.81	46.0	11/16
130HM _ 1/2 X 1/2	1/2	1/2	0.60	15.24	0.37	9.5	0.37	9.50	0.94	23.8	0.75	19.0	2.03	51.6	7/8
130HM _ 5/8 X 1/2	5/8	1/2	0.75	19.10	0.47	11.9	0.47	11.9	0.98	24.9	0.75	19.0	2.07	52.6	1 1/16
130HM _ 5/8 X 3/4	5/8	3/4	0.75	19.10	0.50	12.7	0.63	16.0	0.98	24.9	0.75	19.0	2.07	52.6	1 1/16
130HM _ 3/4 X 1/2	3/4	1/2	0.90	22.86	0.63	16.0	0.47	11.9	1.05	26.7	0.75	19.0	2.14	54.4	1 1/16
130HM _ 3/4 X 3/4	3/4	3/4	0.90	22.86	0.63	16.0	0.63	16.0	1.05	26.7	0.75	19.0	2.14	54.4	1 1/16
130HM _ 3/4 X 1	3/4	1	0.90	22.86	0.63	16.0	0.88	22.4	1.05	26.7	0.94	23.9	2.43	61.7	1 3/8
130HM _ 1 X 3/4	1	3/4	1.2	30.48	0.88	22.4	0.63	16.0	1.19	30.2	0.75	19.0	2.38	60.5	1 3/8
130HM _ 1 X 1	1	1	1.2	30.48	0.88	22.4	0.88	22.4	1.19	30.2	0.94	23.9	2.57	65.3	1 3/8

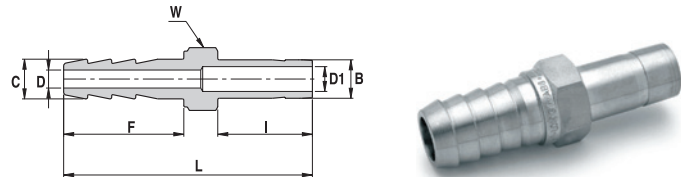
Dimensions are for reference only, and are subject to change without notice.

130 HF FEMALE HOSE CONNECTOR



Ordering Information	Hose I.D.	T NPT Size	C		D		F		L		W Hex. Flat
			inch	mm	inch	mm	inch	mm	inch	mm	
130HF _ 1/8 X 1/8	1/8	1/8	0.15	3.80	0.08	2.00	0.40	10.2	1.11	28.2	9/16
130HF _ 1/8 X 1/4	1/8	1/4	0.15	3.80	0.08	2.00	0.40	10.2	1.26	32.0	3/4
130HF _ 3/16 X 1/8	3/16	1/8	0.23	5.84	0.12	3.00	0.59	15.0	1.29	32.8	9/16
130HF _ 3/16 X 1/4	3/16	1/4	0.23	5.84	0.12	3.00	0.59	15.0	1.44	36.6	3/4
130HF _ 1/4 X 1/8	1/4	1/8	0.30	7.62	0.19	4.80	0.79	20.1	1.47	37.3	9/16
130HF _ 1/4 X 1/4	1/4	1/4	0.30	7.62	0.19	4.80	0.79	20.1	1.64	41.7	3/4
130HF _ 1/4 X 3/8	1/4	3/8	0.30	7.62	0.19	4.80	0.79	20.1	1.71	43.4	7/8
130HF _ 5/16 X 1/4	5/16	1/4	0.38	9.65	0.19	4.80	0.87	22.1	1.73	43.9	3/4
130HF _ 5/16 X 3/8	5/16	3/8	0.38	9.65	0.19	4.80	0.87	22.1	1.82	46.2	7/8
130HF _ 3/8 X 1/4	3/8	1/4	0.45	11.43	0.30	7.60	0.87	22.1	1.69	42.9	3/4
130HF _ 3/8 X 3/8	3/8	3/8	0.45	11.43	0.30	7.60	0.87	22.1	1.78	45.2	7/8
130HF _ 3/8 X 1/2	3/8	1/2	0.45	11.43	0.30	7.60	0.87	22.1	2.03	51.6	1 1/16
130HF _ 1/2 X 1/2	1/2	1/2	0.60	15.24	0.38	9.70	0.94	23.9	2.13	54.1	1 1/16

130 LT TUBE TO HOSE CONNECTOR



Ordering Information	Hose I.D.	B Tube Size	C		D		D1		F		I		L		W Hex. Flat
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
130LT _ 1/8 X 1/8	1/8	1/8	0.15	3.80	0.08	2.00	0.08	2.00	0.40	10.2	0.53	13.5	1.35	34.3	5/16
130LT _ 1/8 X 1/4	1/8	1/4	0.15	3.80	0.08	2.00	0.17	4.20	0.40	10.2	0.62	15.7	1.44	36.6	3/8
130LT _ 1/4 X 1/4	1/4	1/4	0.30	7.62	0.19	4.80	0.17	4.20	0.79	20.1	0.62	15.7	1.83	46.5	7/16
130LT _ 1/4 X 3/8	1/4	3/8	0.30	7.62	0.19	4.80	0.27	6.85	0.79	20.1	0.69	17.5	1.90	48.3	7/16
130LT _ 1/4 X 6 MM	1/4	6mm	0.30	7.62	0.19	4.80	0.16	4.00	0.79	20.1	0.62	15.7	1.86	47.2	7/16
130LT _ 5/16 X 1/4	5/16	1/4	0.37	9.40	0.19	4.80	0.17	4.20	0.87	22.1	0.62	15.7	1.91	48.5	7/16
130LT _ 3/8 X 3/8	3/8	3/8	0.45	11.43	0.30	7.60	0.27	6.85	0.87	22.1	0.69	17.5	1.98	50.3	9/16
130LT _ 3/8 X 1/2	3/8	1/2	0.45	11.43	0.30	7.60	0.37	9.40	0.87	22.1	0.91	23.1	2.20	55.9	5/8
130LT _ 1/2 X 3/8	1/2	3/8	0.60	15.24	0.38	9.70	0.27	6.85	0.94	23.9	0.69	17.5	2.05	52.1	11/16
130LT _ 1/2 X 1/2	1/2	1/2	0.60	15.24	0.38	9.70	0.37	9.40	0.94	23.9	0.91	23.1	2.27	57.7	11/16
130LT _ 3/4 X 3/4	3/4	3/4	0.90	22.86	0.63	16.0	0.59	15.0	1.05	26.7	0.97	24.6	2.44	62.0	1 1/16

Dimensions are for reference only, and are subject to change without notice.



A

B

C

D

E

F

G

H

