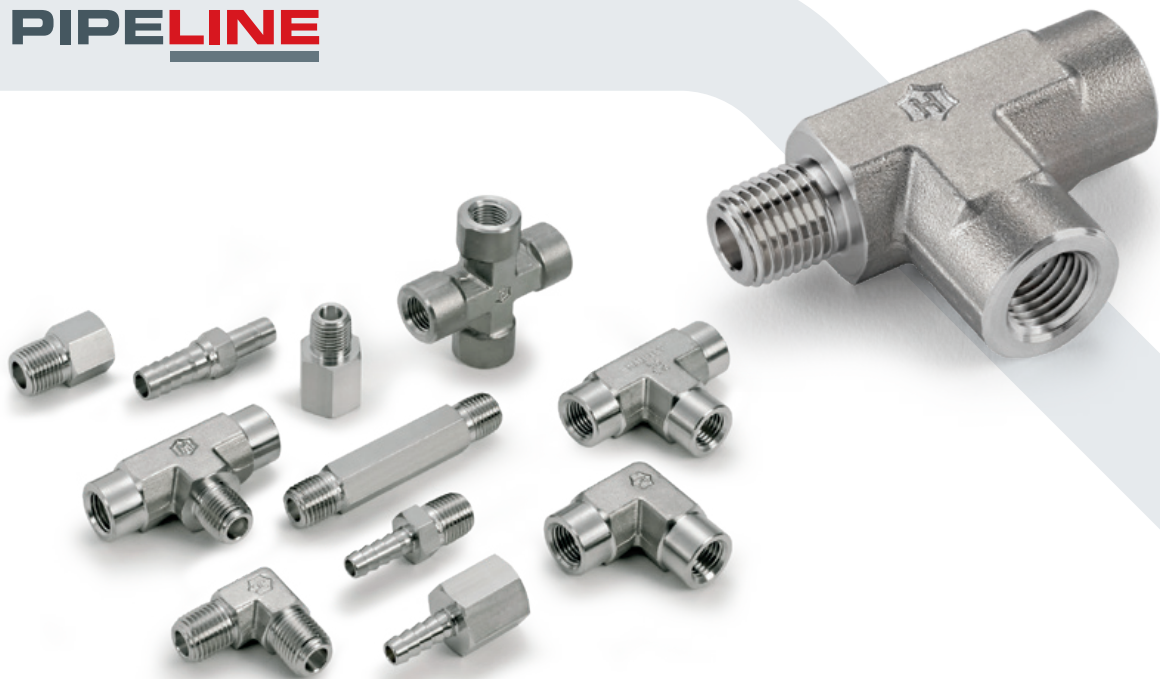


HAM-LET PRECISION INSTRUMENT PIPE FITTINGS



PIPELINE



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 PTFE 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 and 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.

PIPELINE INDEX

ELBOW 100 H



04

MALE ELBOW 100 HM



04

TEE 101 H



04

MALE TEE 101 HM



05

CROSS 102 H



05

HEX COUPLING 103 H



05

UNION RECORD 104 H



06

HOLLOW HEX PLUGS 107 H



06

HOLLOW HEX PLUGS SAE/MS STRAIGHT THREAD BOSS 107 HOB



06

PIPE CAP 108 H



07

REDUCING BUSHING 110 H



07

REDUCING BUSHING SAE/MS STRAIGHT THREAD BOSS 110 HOB



08

HEX LONG NIPPLE 113 H



08

STREET ELBOW 116 H



09

HEX REDUCING COUPLING 119 H



09

ADAPTER NPT 120 H



10

ADAPTER NPT FEMALE TO MALE BSPT 120 HNR



10

ADAPTER FEMALE NPT TO MALE BSPP 120 HNG



11

ADAPTER NPT TO SAE/MS STRAIGHT THREAD BOSS 120 HNOB



11

ADAPTER FEMALE BSPT TO MALE NPT 120 HNRN



11

GAUGE ADAPTER FEMALE BSPP TO MALE NPT 120 HGN



12

PIPE PLUG NPT 121 H



12

HEX HEAD PLUG SAE/MS STRAIGHT THREAD BOSS 121 HOB



12

HEX NIPPLE 122 H



13

HEX NIPPLE MALE NPT TO MALE BSPT 122 HNR



13

HEX NIPPLE MALE NPT TO MALE BSPP 122 HNG



14

HEX NIPPLE NPT TO SAE/MS STRAIGHT BOSS 122 HNOB



14

CLOSE NIPPLE 122 HCN



14

REDUCING NIPPLE 123 H



15

BRANCH TEE 3600 H



15

STREET TEE 3750 H



16

MALE HOSE CONNECTOR 130 HM



16

FEMALE HOSE CONNECTOR 130 HF



17

TUBE TO HOSE CONNECTOR 130 LT



17

ORDERING INFORMATION

EXAMPLE:

120H

Material Description

SS - Stainless Steel 316

B - Brass

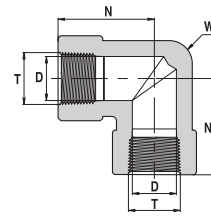
1/2

x

1/4

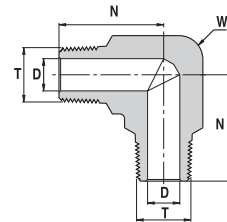
All orders should include ordering information and material description.

100 H ELBOW



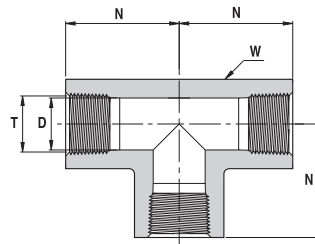
Ordering Information	T Female NPT size	N		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	
100H _ 1/8	1/8	1.04	26.4	0.31	7.8	5/8
100H _ 1/4	1/4	1.17	29.7	0.41	10.5	11/16
100H _ 3/8	3/8	1.42	36.1	0.56	14.2	15/16
100H _ 1/2	1/2	1.56	39.6	0.69	17.4	1 1/8
100H _ 3/4	3/4	1.92	48.8	0.90	22.9	1 3/8
100H _ 1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

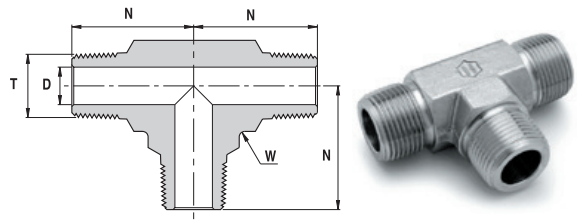
101 H TEE



Ordering Information	A Female NPT Size	N		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	
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

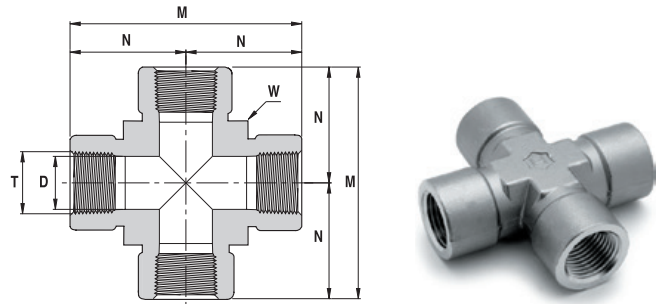
"D" Dimension is minimum opening. Dimensions are for reference only, and are subject to change without notice.

101 HM MALE TEE



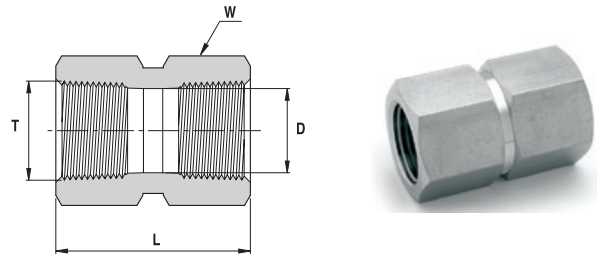
Ordering Information	T Male NPT Size	N		D Min. Opening		W Wrench Flat
		inch	mm	inch	mm	inch
101HM _ 1/8	1/8	0.88	22.4	0.19	4.8	1/2
101HM _ 1/4	1/4	1.05	26.7	0.28	7.1	5/8
101HM _ 3/8	3/8	1.17	29.7	0.38	9.6	13/16
101HM _ 1/2	1/2	1.45	36.8	0.47	11.9	15/16

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

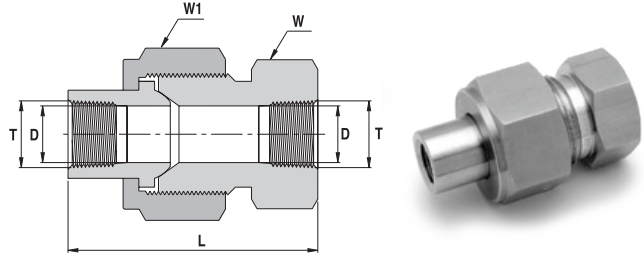
103 H HEX COUPLING



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

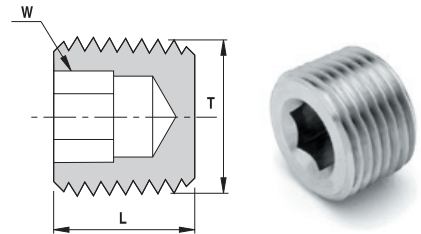
"D" Dimension is minimum opening. Dimensions are for reference only, and are subject to change without notice.

104 H UNION RECORD



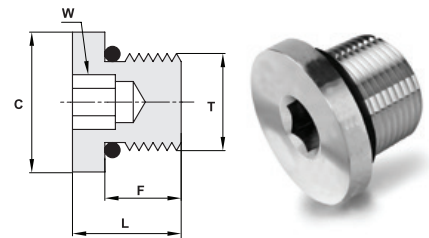
Ordering Information	T Female NPT Size	L		D Min. Opening		W Hex. Flat		W1 Hex. Flat
		inch	mm	inch	mm	inch	mm	
104H _ 1/8	1/8	1.81	46.0	0.27	6.9	15/16	23.81	1 1/8
104H _ 1/4	1/4	2.34	59.4	0.36	9.1	1 3/16	30.16	1 3/8
104H _ 3/8	3/8	2.50	63.5	0.52	13.2	1 5/16	33.34	1 1/2
104H _ 1/2	1/2	2.69	68.3	0.62	15.7	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 *

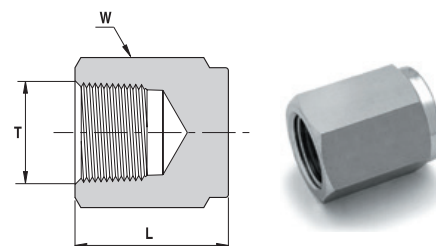


Ordering Information	T Straight Thread UN	L		F		C		W Hex. Flat	O-Ring**
		inch	mm	inch	mm	inch	mm	inch	
107HOB _ 7/16-20	7/16-20	0.45	11.4	0.36	9.1	0.56	14.2	3/16	-904
107HOB _ 1/2-20	1/2-20	0.45	11.4	0.36	9.1	0.63	15.9	3/16	-905
107HOB _ 9/16-18	9/16-18	0.48	12.2	0.39	9.9	0.69	17.5	1/4	-906
107HOB _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

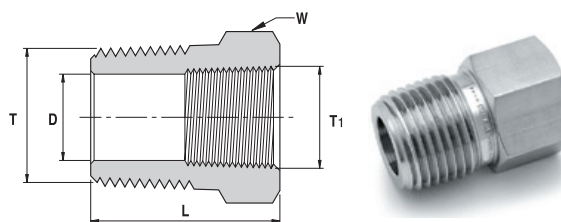
** O-rings used are Fluorocarbon FKM 90 Durometer. Other O-ring materials are available on request.

108 H PIPE CAP



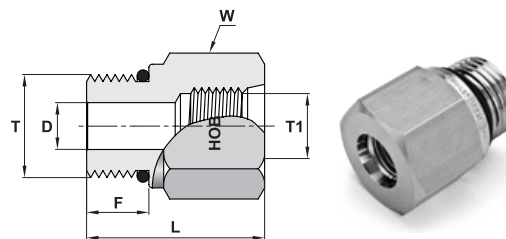
Ordering Information	T Female NPT Size	L		W Hex. Flat	
		inch	mm	inch	
108H _ 1/8	1/8	0.75	19.1	9/16	
108H _ 1/4	1/4	0.91	23.1	3/4	
108H _ 3/8	3/8	1.03	26.2	7/8	
108H _ 1/2	1/2	1.34	34.0	1 1/16	
108H _ 3/4	3/4	1.44	36.6	1 5/16	
108H _ 1	1	1.62	41.1	1 5/8	

110 H REDUCING BUSHING

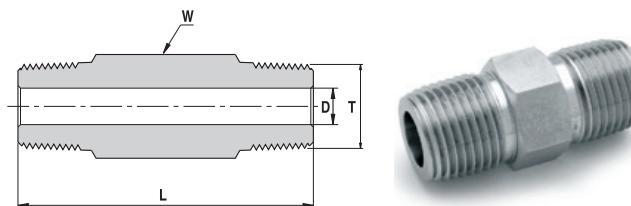


Ordering Information	T Male NPT Size	T1 Female NPT Size	L		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch
110H _ 1/8 X 1/16	1/8	1/16	1.03	26.2	0.19	4.8	7/16
110H _ 1/4 X 1/8	1/4	1/8	1.06	26.9	0.28	7.1	9/16
110H _ 3/8 X 1/8	3/8	1/8	0.86	21.8	0.34	8.6	11/16
110H _ 3/8 X 1/4	3/8	1/4	1.19	30.2	0.38	9.6	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	0.56	14.2	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	0.69	17.4	1 3/4
110H _ 1 1/4 X 3/4	1 1/4	3/4	1.47	37.3	0.90	22.9	1 3/4
110H _ 1 1/4 X 1	1 1/4	1	1.94	49.3	1.09	27.8	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

"D" Dimension is minimum opening. 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	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

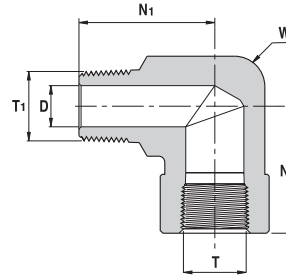
113 H**HEX LONG NIPPLE**

Ordering Information	T Male NPT Size	L Available Lengths (inch)						D Min. Opening		W Hex. Flat
		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

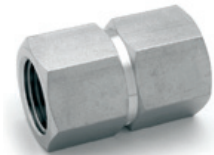
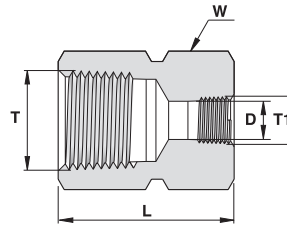
* Per SAE J1926 and MS 16142.

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

“D” Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

116 H**STREET ELBOW**

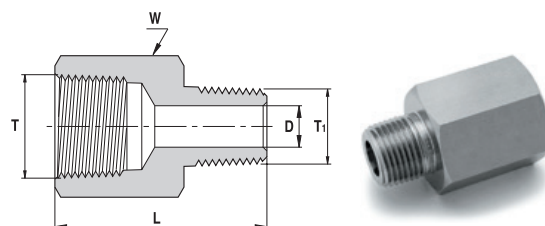
Ordering Information	T Female NPT Size	T1 Male NPT Size	N		N1		D Min. Opening		W Wrench Flat
			inch	mm	inch	mm	inch	mm	inch
116H _ 1/16 X 1/16	1/16	1/16	0.86	21.8	0.88	22.4	0.12	3.10	7/16
116H _ 1/8 X 1/16	1/8	1/16	1.04	26.4	0.87	22.1	0.12	3.10	5/8
116H _ 1/8 X 1/8	1/8	1/8	1.04	26.4	0.87	22.1	0.19	4.80	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

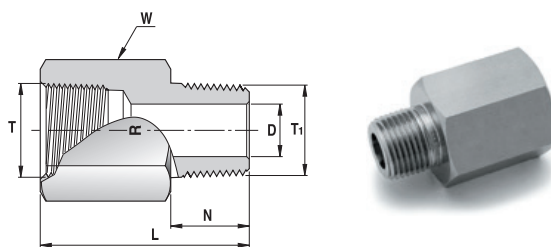
"D" Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

120 H ADAPTER NPT



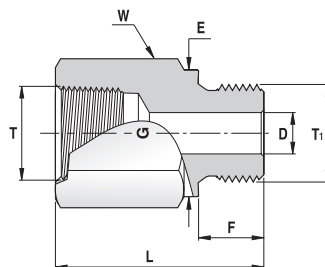
Ordering Information	T Female NPT Size	T1 Male NPT Size	L		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch
120H _ 1/8 X 1/16	1/8	1/16	1.09	27.7	0.12	3.0	9/16
120H _ 1/8 X 1/8	1/8	1/8	1.10	27.9	0.19	4.8	9/16
120H _ 1/4 X 1/8	1/4	1/8	1.26	32.0	0.19	4.8	3/4
120H _ 1/4 X 1/4	1/4	1/4	1.40	35.6	0.28	7.1	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

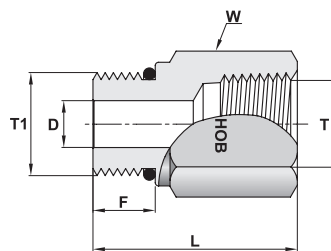


Ordering Information	T Female NPT Size	T1 Male BSPT ISO 7/1, BS21 Size	L		N		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch	mm	inch
120HNR _ 1/8	1/8	1/8-28	1.09	27.7	0.38	9.7	0.19	4.8	9/16
120HNR _ 1/4	1/4	1/4-19	1.42	36.1	0.56	14.2	0.28	7.1	3/4
120HNR _ 3/8	3/8	3/8-19	1.50	38.1	0.56	14.2	0.38	9.6	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

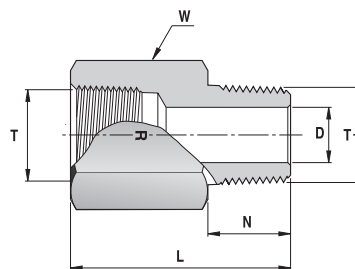
"D" Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

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

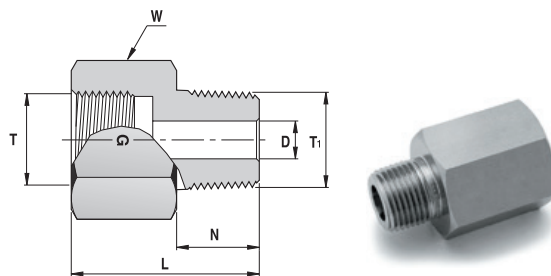
120 HRN**ADAPTER BSPT TO NPT**

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.

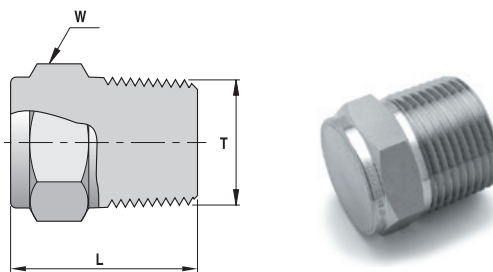
** O-rings used are Fluorocarbon FKM 90 Durometer. Other O-ring materials are available on request.

"D" Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

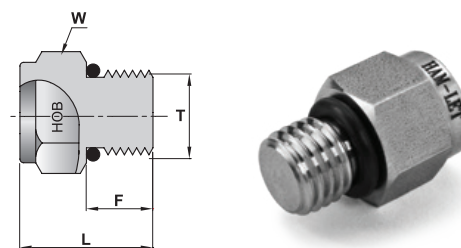
120 HGN**GAUGE ADAPTER
BSPP TO NPT**

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

For Parallel Threads Sealing, see page 76

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***

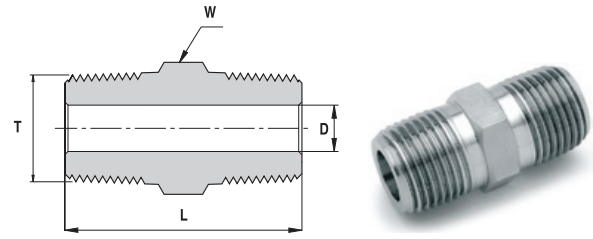
Ordering Information	T Straight Thread UN	L		F		W Hex. Flat inch	O-Ring**
		inch	mm	inch	mm		
121HOB _ 5/16-24	5/16-24	0.70	17.8	0.30	7.6	7/16	-902
121HOB _ 7/16-20	7/16-20	0.76	19.3	0.36	9.1	9/16	-904
121HOB _ 9/16-18	9/16-18	0.82	20.8	0.39	9.9	11/16	-906
121HOB _ 3/4-16	3/4-16	0.89	22.6	0.44	11.2	7/8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

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

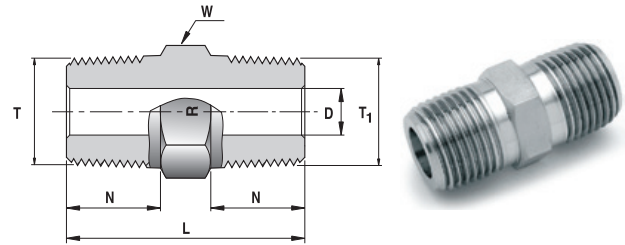
"D" Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

122 H HEX NIPPLE



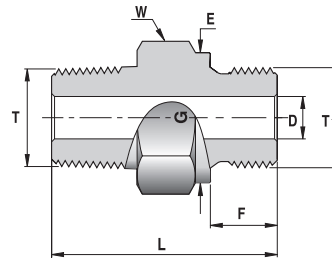
Ordering Information	T Male NPT Size	L		D Min. Opening		W Hex. Flat
		inch	mm	inch	mm	inch
122H _ 1/16	1/16	1.01	25.7	0.12	3.0	5/16
122H _ 1/8	1/8	1.01	25.7	0.19	4.8	7/16
122H _ 1/4	1/4	1.40	35.6	0.28	7.1	9/16
122H _ 3/8	3/8	1.43	36.3	0.38	9.6	11/16
122H _ 1/2	1/2	1.84	46.7	0.47	11.9	7/8
122H _ 3/4	3/4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

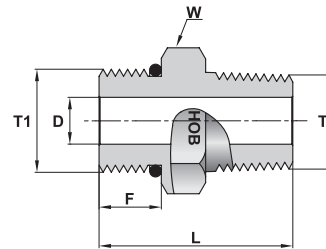


Ordering Information	T Male NPT Size	T1 Male BSPT ISO 7/1, BS21 Size	L		N		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch	mm	inch
122HNR _ 1/8	1/8	1/8-28	1.01	25.6	0.38	9.7	0.19	4.8	7/16
122HNR _ 1/4	1/4	1/4-19	1.40	35.6	0.56	14.2	0.28	7.1	9/16
122HNR _ 3/8	3/8	3/8-19	1.43	36.3	0.56	14.2	0.38	9.6	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

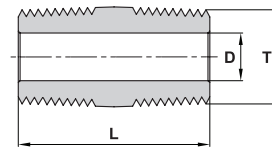
“D” Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

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

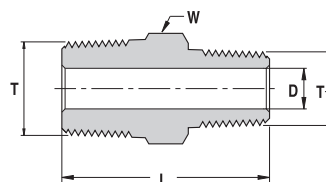
* Per SAE J1926 and MS 16142.

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

"D" Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

123 H

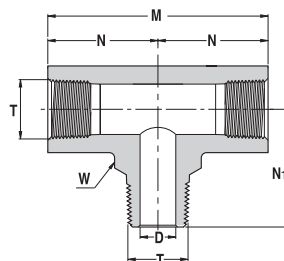
REDUCING NIPPLE



Ordering Information	T Male NPT Size	T1 Male NPT Size	L		D Min. Opening		W Hex. Flat
			inch	mm	inch	mm	inch
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

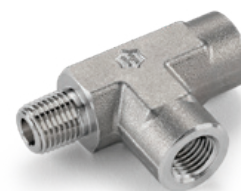
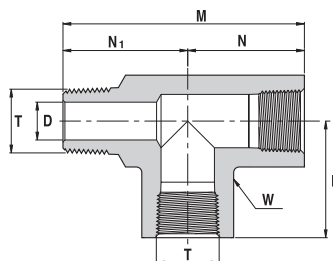
BRANCH TEE



Ordering Information	T Male & Female NPT	M		N		N1		D		W Wrench Flat
		inch	mm	inch	mm	inch	mm	inch	mm	inch
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

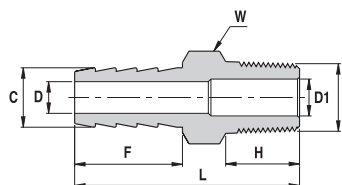
“D” Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

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

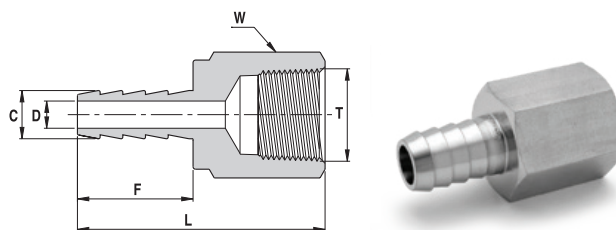
130 HM MALE TO HOSE CONNECTOR



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

"D" Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

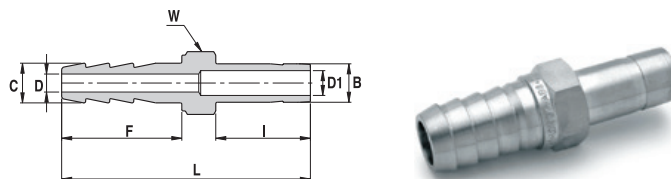
130 HF FEMALE HOSE CONNECTOR



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

"D" Dimension is minimum opening.

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

"D" Dimension is minimum opening. Dimensions are for reference only and are subject to change without notice.

