

# Hy-Lok Instrument Thread Fittings

for Use with 1/8" thru 1" Piping Systems

Catalog No. H-300PF  
Feb. 2003

## Features

1. Precision pipe fittings for instrumentation and process control
2. Fine threads constructed to ensure leak-free & reliable systems
3. Male threads are protected with plastic cap
4. Various materials including SS316, Brass and Carbon steel
5. Many choice of connections and configurations are available

## Temperature Ratings

SS316	-325°F - 1200°F (-198°C - 648°C)
Brass	-325°F - 400°F (-198°C - 204°C)
Carbon Steel	- 20°F - 350°F (- 29°C - 176°C)

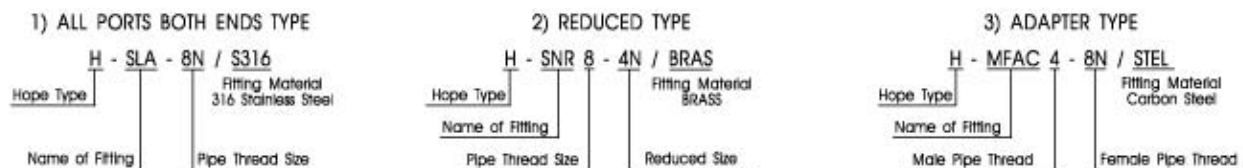
- ▶ PTFE tape applied to male threads limits the maximum temperature to + 450°F ( 232°C )

## Pressure Ratings

Size Designator	NPT Size	316 Stainless Steel				Brass				Carbon Steel			
		Male		Female		Male		Female		Male		Female	
		psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
1	1/16	11,000	757	6700	461	5500	378	3300	227	11,000	757	6700	461
2	1/8	10,000	689	6500	447	5000	344	3200	220	10,000	689	6500	447
4	1/4	8000	551	6600	454	4000	275	3300	227	8000	551	6600	454
6	3/8	7800	537	5300	365	3900	268	2600	179	7800	537	5300	365
8	1/2	7700	530	4900	337	3800	261	2400	165	7700	530	4900	337
12	3/4	7300	502	4600	316	3600	248	2300	158	7300	502	4600	316
16	1	5300	365	4400	303	2600	179	2200	151	5300	365	4400	303
20	1 1/4	6000	413	5000	344	3000	206	2500	172	6000	413	5000	344
24	1 1/2	5000	344	4600	316	2500	172	2300	158	5000	344	4600	316
32	2	3900	268	3900	268	1900	130	1900	130	3900	268	3900	268

- ▶ Working pressures calculated are reference only
- ▶ Working pressures calculated as per Process Piping Code ANSI B31.3 with allowable stress 20,000psi / SS316, 10,000psi / Brass, 20,000psi / Carbon steel and for working pressure in accordance with Power Piping Code ANSI B31.1 simply calculate applying a factor of .94 (94%) to above chart.
- ▶ Due to larger outer diameter of female threads pressure ratings of female are lower than male threads.
- ▶ To determine kPa, multiply psig by 6.89
- ▶ Pressure ratings of Hex Bushing (H-SHB) are not covered with this pressure rating table therefore indicated in its dimensional table.

## PART NUMBER EXAMPLE & HOW TO ORDER



## Name of Fittings

SLA=Elbow	SXA=Cross	SNA=Hex Nipple
SLC=Street Elbow	SSA=Hex Coupling	SNR=Hex Reducing Nipple
SML=Male Elbow	SSR=Red. Coupling	SNL=Hex Long Nipple
STA=Tee	SHB=Hex Bushing	MFAA=Adapter
SRT=Run Tee	SCA=Pipe Cap	MFAC=Ruducing Adapter
SBT=Branch Tee	SPB=Pipe Plug	SUR=Union Ball Joint
SMT=Male Tee	SBE=Close Nipple	KP-A=ISO Parallel Gasket

## Pipe Thread Symbol

Nom. Pipe Size	Symbol	ANSI Pipe Thread (NPT)	BSP/ISO Thread	
			Tapered(7/1)	Parallel(228/1)
1/8	2	2N	2R	2G
1/4	4	4N	4R	4G
3/8	6	6N	6R	6G
1/2	8	8N	8R	8G
3/4	12	12N	12R	12G
1	16	16N	16R	16G



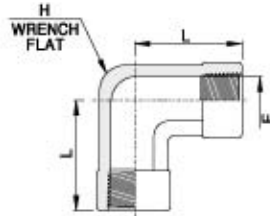
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# Hy-Lok Instrument Thread Fittings

## ELBOW (H-SLA)

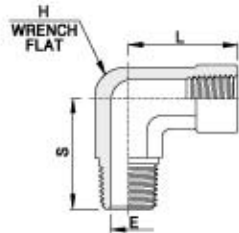
Female NPT both ends.



Part Number	Pipe Size	L	E	H Wrench Flat
H - SLA - 2N	1/8	24.0	8.9	12.7
H - SLA - 4N	1/4	29.0	11.7	17.5
H - SLA - 6N	3/8	34.5	15.0	20.6
H - SLA - 8N	1/2	37.0	18.7	25.4
H - SLA - 12N	3/4	46.5	23.5	31.8
H - SLA - 16N	1	48.8	29.7	42.9

## STREET ELBOW (H-SLC)

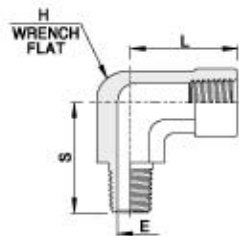
Female to male NPT.



Part Number	Pipe Size	L	S	E	H Wrench Flat
H - SLC - 2N	1/8	24.1	19.6	4.8	12.7
H - SLC - 4N	1/4	29.0	26.5	7.1	17.5
H - SLC - 6N	3/8	34.5	28.2	9.6	20.6
H - SLC - 8N	1/2	37.0	35.3	11.9	25.4
H - SLC - 12N	3/4	46.5	39.6	15.7	31.8
H - SLC - 16N	1	48.8	49.2	22.3	42.9

## REDUCING STREET ELBOW (H-SLCR)

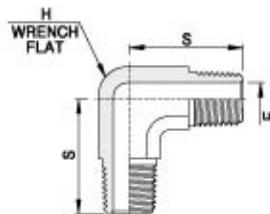
Female to male NPT.



Part Number	Pipe Size	Male Pipe Size	L	S	E	H Wrench Flat
H-SLCR 4 - 2N	1/4	1/8	29.0	22.4	4.8	17.5
H-SLCR 6 - 4N	3/8	1/4	34.5	28.2	7.1	20.6
H-SLCR 8 - 4N	1/2	1/4	37.0	30.5	7.1	25.4
H-SLCR 8 - 6N	1/2	3/8	37.0	30.5	9.6	25.4
H-SLCR12 - 8N	3/4	1/2	46.5	39.6	11.9	31.8
H-SLCR16 - 8N	1	1/2	48.8	44.5	11.9	42.9

## MALE ELBOW (H-SML)

Male NPT both ends.



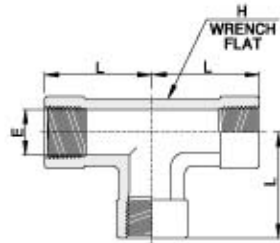
Part Number	Pipe Size	S	E	H Wrench Flat
H - SML - 2N	1/8	19.05	4.8	12.7
H - SML - 4N	1/4	24.5	7.1	12.7
H - SML - 6N	3/8	26.9	9.6	17.5
H - SML - 8N	1/2	33.2	11.9	20.6
H - SML - 12N	3/4	35.3	15.7	25.4
H - SML - 16N	1	44.5	22.3	31.8

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# Hy-Lok Instrument Thread Fittings

## TEE (H-STA)

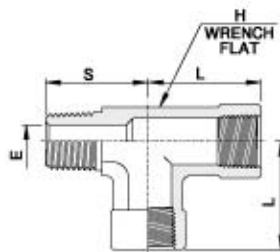
Female NPT all ports.



Part Number	Pipe Size	L	E	H Wrench Flat
H - STA - 2N	1/8	24.0	8.9	12.7
H - STA - 4N	1/4	29.0	11.7	17.5
H - STA - 6N	3/8	34.5	15.0	20.6
H - STA - 8N	1/2	37.0	18.7	25.4
H - STA - 12N	3/4	46.5	23.5	31.8
H - STA - 16N	1	48.5	29.7	42.9

## RUN TEE (H-SRT)

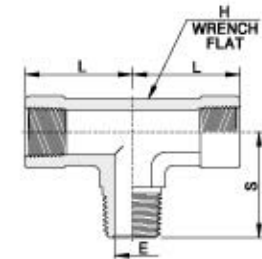
Female to male to female NPT.



Part Number	Pipe Size	L	S	E	H Wrench Flat
H - SRT - 2N	1/8	24.0	19.6	4.8	12.7
H - SRT - 4N	1/4	29.0	26.5	7.1	17.5
H - SRT - 6N	3/8	34.5	28.2	9.6	20.6
H - SRT - 8N	1/2	37.0	35.3	11.9	25.4
H - SRT - 12N	3/4	46.5	39.6	15.7	31.8
H - SRT - 16N	1	48.8	49.2	22.3	42.9

## BRANCH TEE (H-SBT)

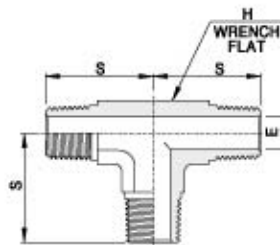
Female to female to male NPT.



Part Number	Pipe Size	L	S	E	H Wrench Flat
H - SBT - 2N	1/8	24.0	19.6	4.8	12.7
H - SBT - 4N	1/4	29.0	26.5	7.1	17.5
H - SBT - 6N	3/8	34.5	28.2	9.6	20.6
H - SBT - 8N	1/2	37.0	35.3	11.9	25.4
H - SBT - 12N	3/4	46.5	39.6	15.7	31.8
H - SBT - 16N	1	48.8	49.2	22.3	42.9

## MALE TEE (H-SMT)

Male NPT all ports.



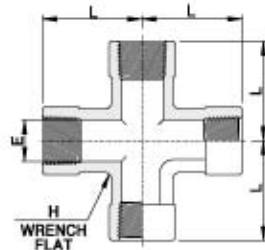
Part Number	Pipe Size	S	E	H Wrench Flat
H - SMT - 2N	1/8	19.05	4.8	12.7
H - SMT - 4N	1/4	24.5	7.1	12.7
H - SMT - 6N	3/8	26.9	9.6	17.5
H - SMT - 8N	1/2	33.2	11.9	20.6
H - SMT - 12N	3/4	35.3	15.7	25.4
H - SMT - 16N	1	44.5	22.3	31.8

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# Hy-Lok Instrument Thread Fittings

## CROSS (H-SXA)

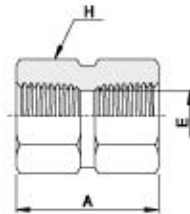
Female NPT all ports.



Part Number	Pipe Size	L	E	H Wrench Flat
H - SXA - 2N	1/8	24.0	8.9	12.7
H - SXA - 4N	1/4	29.0	11.7	17.5
H - SXA - 6N	3/8	34.5	15.0	20.6
H - SXA - 8N	1/2	37.0	18.7	25.4
H - SXA - 12N	3/4	46.5	23.5	31.8
H - SXA - 16N	1	48.8	29.7	42.9

## HEX COUPLING (H-SSA)

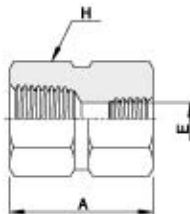
Female NPT both ends.



Part Number	Pipe Size	A	E	H Hex
H - SSA - 2N	1/8	20.3	8.9	14.2
H - SSA - 4N	1/4	30.0	11.7	19.05
H - SSA - 6N	3/8	33.0	15.0	22.2
H - SSA - 8N	1/2	39.4	18.7	26.9
H - SSA - 12N	3/4	41.0	23.5	31.8
H - SSA - 16N	1	50.5	29.7	41.2

## HEX REDUCING COUPLING (H-SSR)

Female NPT to reduced female NPT.



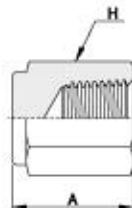
Part Number	Pipe Size	Reduced Pipe Size	A	E	H Hex
H-SSR 4- 2N	1/4	1/8	31.2	8.9	19.05
H-SSR 6- 4N	3/8	1/4	34.8	11.7	22.2
H-SSR 8- 2N	1/2	1/8	39.4	8.9	26.9
H-SSR 8- 4N	1/2	1/4	44.2	11.7	26.9
H-SSR 8- 6N	1/2	3/8	45.0	15.0	26.9
H-SSR12- 4N	3/4	1/4	45.7	11.7	31.8
H-SSR12- 8N	3/4	1/2	52.0	18.7	31.8
H-SSR16- 4N	1	1/4	50.8	11.7	41.2
H-SSR16- 8N	1	1/2	55.4	18.7	41.2
H-SSR16-12N	1	3/4	57.0	23.5	41.2

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# Hy-Lok Instrument Thread Fittings

## PIPE CAP (H-SCA)

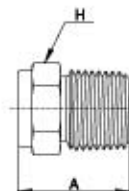
Female NPT.



Part Number	Pipe Size	A	H Hex
H - SCA - 2N	1/8	19.1	14.2
H - SCA - 4N	1/4	22.9	19.05
H - SCA - 6N	3/8	26.2	22.2
H - SCA - 8N	1/2	34.0	26.9
H - SCA - 12N	3/4	36.6	31.8
H - SCA - 16N	1	41.1	41.2

## PIPE PLUG (H-SPB)

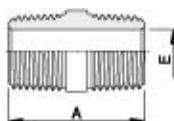
Male NPT.



Part Number	Pipe Size	A	H Hex
H - SPB - 2N	1/8	19.05	11.1
H - SPB - 4N	1/4	24.1	14.2
H - SPB - 6N	3/8	25.0	17.4
H - SPB - 8N	1/2	30.5	22.2
H - SPB - 12N	3/4	30.5	26.9
H - SPB - 16N	1	38.1	34.9

## CLOSE NIPPLE (H-SBE)

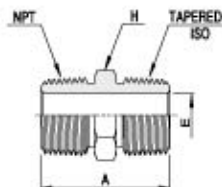
Male NPT both ends.



Part Number	Pipe Size	A	E
H - SBE - 2N	1/8	19.05	4.8
H - SBE - 4N	1/4	28.4	7.1
H - SBE - 6N	3/8	28.4	9.6
H - SBE - 8N	1/2	31.7	11.9
H - SBE - 12N	3/4	31.7	15.7
H - SBE - 16N	1	47.8	22.4

## HEX NIPPLE (H-SNA)

Male NPT both ends.



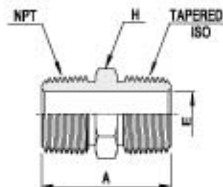
Part Number	Pipe Size	A	E	H Hex
H - SNA - 2N	1/8	25.4	4.8	11.1
H - SNA - 4N	1/4	35.3	7.1	14.2
H - SNA - 6N	3/8	36.1	9.6	17.4
H - SNA - 8N	1/2	46.7	11.9	22.2
H - SNA - 12N	3/4	46.7	15.7	26.9
H - SNA - 16N	1	58.7	22.3	34.9

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# Hy-Lok Instrument Thread Fittings

## HEX NIPPLE (H-SNA)

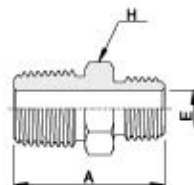
Male NPT to ISO tapered



Part Number	NPT Thread Size	BSP/ISO Thread Size	A	E	H Hex
H-SNA- 2NR	1/8	1/8-28 7/1	24.6	4.1	11.1
H-SNA- 4NR	1/4	1/4-19 7/1	35.6	6.4	14.2
H-SNA- 6NR	3/8	3/8-19 7/1	36.3	9.7	17.4
H-SNA- 8NR	1/2	1/2-14 7/1	46.0	11.9	22.2
H-SNA-12NR	3/4	3/4-14 7/1	46.7	15.7	26.9
H-SNA-16NR	1	1-11 7/1	58.9	22.4	34.9

## HEX REDUCING NIPPLE (H-SNR)

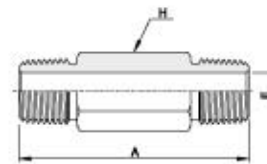
Male NPT to reduced male NPT.



Part Number	Pipe Size	Reduced Pipe Size	A	E	H Hex
H-SNR 4- 2N	1/4	1/8	30.7	4.8	14.2
H-SNR 6- 2N	3/8	1/8	32.0	4.8	17.4
H-SNR 6- 4N	3/8	1/4	36.1	7.1	17.4
H-SNR 8- 2N	1/2	1/8	37.2	4.8	22.2
H-SNR 8- 4N	1/2	1/4	41.7	7.1	22.2
H-SNR 8- 6N	1/2	3/8	41.7	9.6	22.2
H-SNR12- 4N	3/4	1/4	41.7	7.1	26.9
H-SNR12- 8N	3/4	1/2	46.7	11.9	26.9
H-SNR16- 4N	1	1/4	49.3	7.1	34.9
H-SNR16- 8N	1	1/2	54.1	11.9	34.9

## HEX LONG NIPPLE (H-SNL)

Male NPT both ends.

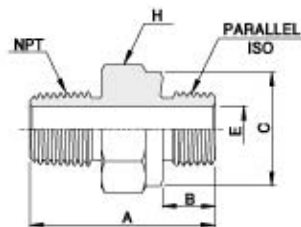


★ Specified length to be shown as last designator in part number.  
Example : H-SNL-4N L 51(51mm=2"length)

Part Number	Pipe Size	A	E	H Hex
H-SNL - 2N	1/8	★	4.8	11.1
H-SNL - 4N	1/4	★	7.1	14.2
H-SNL - 6N	3/8	★	9.7	17.4
H-SNL - 8N	1/2	★	11.9	22.2
H-SNL - 12N	3/4	★	15.7	26.9
H-SNL - 16N	1	★	22.4	34.9

## HEX NIPPLE (H-SNA)

Male NPT to male ISO parallel



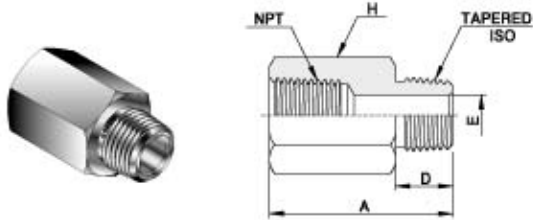
Part Number	NPT Thread Size	BSP/ISO Thread Size	A	B	C	E	H Hex
H-SNA- 2NG	1/8	1/8-28 228/1	27.4	7.1	13.7	4.1	14.2
H-SNA- 4NG	1/4	1/4-19 228/1	36.8	11.2	17.8	5.8	19.05
H-SNA- 6NG	3/8	3/8-19 228/1	37.6	11.2	21.8	7.9	22.2
H-SNA- 8NG	1/2	1/2-14 228/1	45.0	14.2	26.1	11.9	26.9
H-SNA-12NG	3/4	3/4-14 228/1	49.0	15.7	31.5	15.7	33.3
H-SNA-16NG	1	1-11 228/1	56.9	18.3	38.9	19.8	41.0

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# Hy-Lok Instrument Thread Fittings

## ADAPTER (H-MFAA)

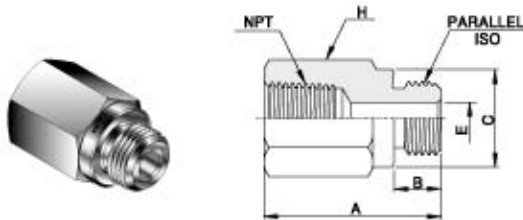
Female NPT to male ISO tapered.



Part Number	NPT Thread Size	BSP/ISO Thread Size	A	D	E	H Hex
H-MFAA- 2RN	1/8	1/8-28 7/1	27.4	9.7	4.8	14.2
H-MFAA- 4RN	1/4	1/4-19 7/1	35.8	14.2	7.1	19.05
H-MFAA- 6RN	3/8	3/8-19 7/1	37.6	14.2	9.7	22.2
H-MFAA- 8RN	1/2	1/2-14 7/1	49.0	19.1	11.9	26.9
H-MFAA-12RN	3/4	3/4-14 7/1	50.3	19.1	15.7	31.8
H-MFAA-16RN	1	1-11 7/1	58.0	23.9	22.3	41.2

## ADAPTER (H-MFAB)

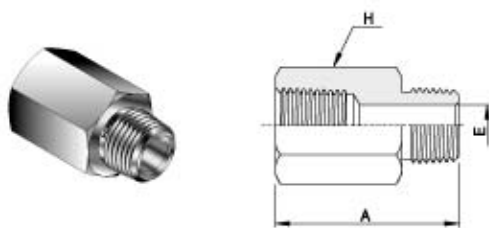
Female NPT male ISO parallel



Part Number	NPT Thread Size	BSP/ISO Thread Size	A	B	C	E	H Hex
H-MFAB- 2GN	1/8	1/8-28 228/1	24.9	7.1	13.7	4.1	14.2
H-MFAB- 4GN	1/4	1/4-19 228/1	33.3	11.2	17.8	5.8	19.05
H-MFAB- 6GN	3/8	3/8-19 228/1	37.8	11.2	21.8	7.9	22.2
H-MFAB- 8GN	1/2	1/2-14 228/1	43.9	14.2	26.1	11.9	26.9
H-MFAB-12GN	3/4	3/4-14 228/1	50.8	15.7	31.5	15.7	33.3
H-MFAB-16GN	1	1-11 228/1	53.1	18.3	38.9	19.8	41.2

## ADAPTER (H-MFAA)

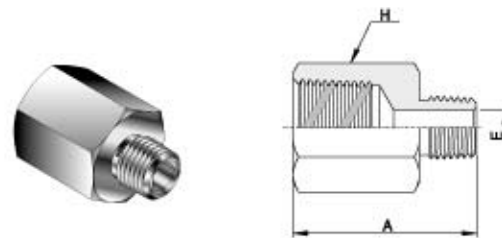
Female NPT to same size male NPT.



Part Number	Pipe Size	A	E	H Hex
H - MFAA - 2N	1/8	27.4	4.8	14.2
H - MFAA - 4N	1/4	35.6	7.1	19.05
H - MFAA - 6N	3/8	37.8	9.6	22.2
H - MFAA - 8N	1/2	49.0	11.9	26.9
H - MFAA - 12N	3/4	50.3	15.7	31.7
H - MFAA - 16N	1	58.0	22.3	41.2

## REDUCING ADAPTER (H-MFAC)

Female NPT to reduced male NPT.



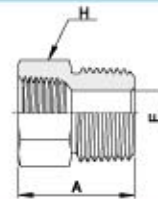
Part Number	Female Pipe Size	Male Pipe Size	A	E	H Hex
H-MFAC 2- 4N	1/4	1/8	31.5	4.8	19.05
H-MFAC 2- 6N	3/8	1/8	33.5	4.8	22.2
H-MFAC 4- 6N	3/8	1/4	37.8	7.1	22.2
H-MFAC 2- 8N	1/2	1/8	40.0	4.8	26.9
H-MFAC 4- 8N	1/2	1/4	44.5	7.1	26.9
H-MFAC 6- 8N	1/2	3/8	44.5	9.6	26.9
H-MFAC 4-12N	3/4	1/4	45.7	7.1	31.8
H-MFAC 6-12N	3/4	3/8	45.7	9.6	31.8
H-MFAC 8-12N	3/4	1/2	51.1	11.9	31.8
H-MFAC 4-16N	1	1/4	50.8	7.1	41.2
H-MFAC 8-16N	1	1/2	55.3	11.9	41.2
H-MFAC 16-16N	1	1	54.9	15.7	41.2

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

# Hy-Lok Instrument Thread Fittings

## HEX BUSHING (H-SHB)

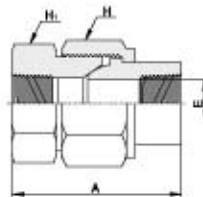
Male NPT to reduced female NPT.



Part Number	Female Pipe Size	A	E	H Hex	Working Pressure (PSIG)			
					316SS	Brass	Carbon Steel	
H-SHB 4-2N	1/4	1/8	26.7	7.1	14.2	5600	3100	6200
H-SHB 6-2N	3/8	1/8	21.8	8.5	17.4			
H-SHB 6-4N	3/8	1/4	30.0	9.6	19.05	5200	3100	6200
H-SHB 8-2N	1/2	1/8	27.4	8.5	22.2	-	-	-
H-SHB 8-4N	1/2	1/4	27.4	11.7	22.2	5800	3100	6200
H-SHB 8-6N	1/2	3/8	35.6	11.9	22.2	4400	2500	5100
H-SHB12-4N	3/4	1/4	27.4	11.4	26.9	-	-	-
H-SHB12-6N	3/4	3/8	27.4	15.0	26.9	-	-	-
H-SHB12-8N	3/4	1/2	41.4	15.7	26.9	-	-	-
H-SHB16-4N	1	1/4	34.8	11.4	34.9	-	-	-
H-SHB16-8N	1	1/2	34.8	18.5	34.9	-	-	-
H-SHB16-12N	1	3/4	47.0	22.4	34.9	-	-	-

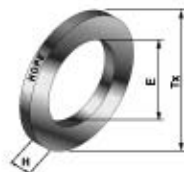
## UNION BALL JOINT (H-SUR)

Female NPT both ends.



Part Number	Pipe Size	A	E	H Hex	H <sub>1</sub> Hex
H-SUR-2N	1/8	45.7	6.9	28.6	23.8
H-SUR-4N	1/4	59.4	9.1	34.9	30.2
H-SUR-6N	3/8	63.5	13.2	38.1	33.3
H-SUR-8N	1/2	68.6	15.7	44.5	41.3
H-SUR-12N	3/4	79.2	22.4	50.8	47.6
H-SUR-16N	1	90.4	26.2	63.5	60.3

## ISO PARALLEL GASKET (KP-A)



Used to provide a seal with ISO parallel thread.  
(Material is Copper only)

Part Number	Pipe Size	E	H	Tx
KP-A-01	1/8	10.0	2.0	16.0
KP-A-03	1/4	14.0	2.0	19.5
KP-A-05	3/8	17.0	2.0	24.0
KP-A-07	1/2	22.0	2.0	29.0
KP-A-11	3/4	27.0	2.0	34.5
KP-A-16	1	34.0	2.0	42.0

All dimensions are in millimeters unless otherwise specified. Dimensions are for reference only, subject to change.

### ■ QUALITY SYSTEM CERTIFICATES



ISO 9001  
CERTIFICATE NO. QSC 212

ASME SECT. III (MO)  
CERTIFICATE NO. QSC 564

### ■ TYPE APPROVALS



American Bureau Shipping  
CERTIFICATE NO. DC-BK50288-X



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