









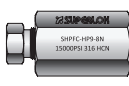

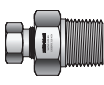






# High-pressure Fittings



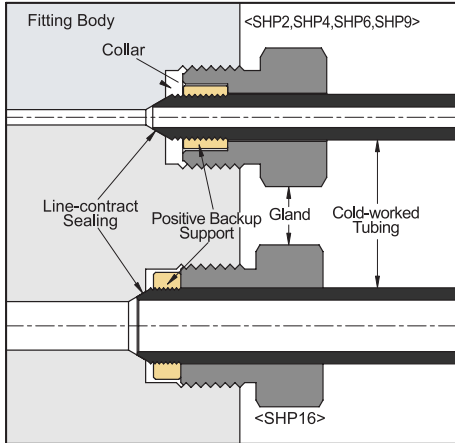
## Cone & Thread High Pressure Fitting Index

 <p><b>SHpsc</b> Straight Coupling</p> <p>5P</p>	 <p><b>SHpUA</b> Union Adapter</p> <p>7P</p>	 <p><b>SHpp</b> Plug</p> <p>9P</p>
 <p><b>SHpUC</b> Union Coupling (Slip Type)</p> <p>5P</p>	 <p><b>SHpFA</b> Female Adapter</p> <p>7P</p>	 <p><b>SHpCP</b> Cap</p> <p>9P</p>
 <p><b>SHpBC</b> Bulkhead Coupling</p> <p>5P</p>	 <p><b>SHpMA</b> Male Adapter</p> <p>7P</p>	 <p><b>SHpN</b> Nipple</p> <p>9P</p>
 <p><b>SHpE</b> Elbow</p> <p>6P</p>	 <p><b>SHpFC</b> Female Connector</p> <p>8P</p>	
 <p><b>SHpT</b> Tee</p> <p>6P</p>	 <p><b>SHpMC</b> Male Connector</p> <p>8P</p>	
 <p><b>SHpC</b> Cross</p> <p>6P</p>	 <p><b>SHpG</b> Gland</p> <p>8P</p>	
 <p><b>SHpA</b> Adapter</p> <p>7P</p>	 <p><b>SHpCR</b> Collar</p> <p>8P</p>	

# High-pressure Fittings

(Cone & Threaded Type)

## SHP Series

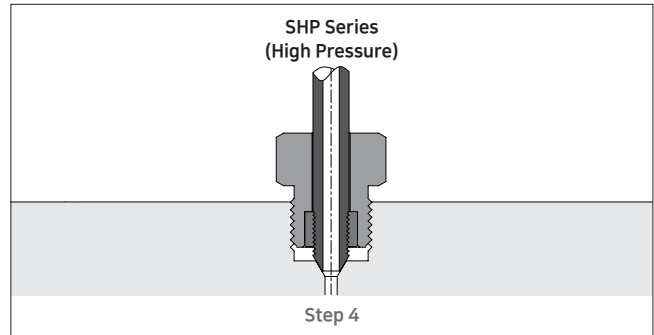
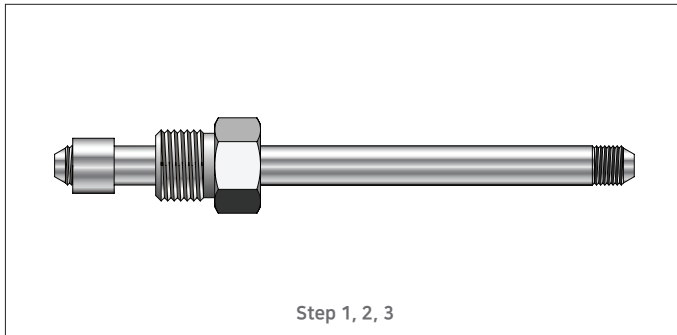


### Features

- Pressure: up to 60,000 psi (4137 bar)
- Increased pressure handling capabilities.
- Coned and Threaded connection.
- Available sizes: 1/8", 1/4", 3/8", 9/16", and 1" .
- Fittings manufactured from cold worked 316 stainless steel.
- Operating temperatures: -423°F (-252°C) to 1200°F (649°C)
- Anti-vibration connection components available.

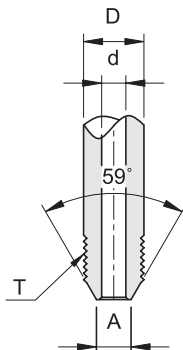
## Installation Instructions

### High Pressure Coned & Threaded Tube Connections



1. Apply a process-compatible lubricant to the gland threads.
2. Slip the gland onto the tube, then thread the collar onto the tube end.
3. A small amount of process-compatible lubricant applied to the tube cone will facilitate sealing. Insert the tubing into the connection and tighten finger tight.
4. Tighten gland slightly with the wrench.

## Tube Size & End Dimension



Tube Size. mm				Flow Area mm <sup>2</sup>	Working Pressure. psi				
O.D (D)	I.D (d)	A	Thread (T)		-325 to 100°F (-198 to 37.8°C)	200°F (93°C)	400°F (204°C)	600°F (316°C)	800°F (427°C)
1/8" (3.18)	0.51	1.59	1/8" - 40 LH.	0.203	60,000	60,000	57,750	54,250	50,700
1/4" (6.35)	2.77	3.18	1/4" - 28 LH.	3.23	60,000	60,000	57,750	54,250	50,700
3/8" (9.53)	5.16	5.56	3/8" - 24 LH.	7.74	60,000	60,000	57,750	54,250	50,700
9/16" (14.29)	4.78	7.14	9/16" - 18 LH.	18.06	60,000	60,000	57,750	54,250	50,700
	6.35			40,000	40,000	38,500	36,100	33,800	
1" (25.40)	11.13	14.29	1" - 14 LH.	97.42	43,000	43,000	43,000	41,380	36,330

## Ordering Information

Example 1:	$\frac{\text{SHPSC}}{1} - \frac{\text{HP4}}{2-1}$
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Example 2:	$\frac{\text{SHPA}}{1} - \frac{\text{HP4}}{2-1} - \frac{\text{MP6}}{2-2}$
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\*316 Stainless Steel is Standard Body Material

### 1. Type of Fitting

Please refer to Cone & Thread High Pressure Fitting Index on page 2.

- |                                                    |                                                   |
|----------------------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> SHPSC = Straight Coupling | <input type="checkbox"/> SHPMA = Male Adapter     |
| <input type="checkbox"/> SHPUC = Union Coupling    | <input type="checkbox"/> SHPFC = Female Connector |
| <input type="checkbox"/> SHPBC = Bulkhead Coupling | <input type="checkbox"/> SHPMC = Male Connector   |
| <input type="checkbox"/> SHPE = Elbow              | <input type="checkbox"/> SHPG = Gland             |
| <input type="checkbox"/> SHPT = Tee                | <input type="checkbox"/> SHPCR = Collar           |
| <input type="checkbox"/> SHPC = Cross              | <input type="checkbox"/> SHPP = Plug              |
| <input type="checkbox"/> SHPA = Adapter            | <input type="checkbox"/> SHPC = Cap               |
| <input type="checkbox"/> SHPUA = Union Adapter     | <input type="checkbox"/> SHPN = Nipple            |
| <input type="checkbox"/> SHPFA = Female Adapter    |                                                   |

### 2. Size

#### 2-1. Tube O.D

Size (inch)	1/8	1/4	3/8	9/16	3/4	1
High Pressure C&T	HP2	HP4	HP6	HP9	HP12	HP16

#### 2-2. Tube O.D or NPT

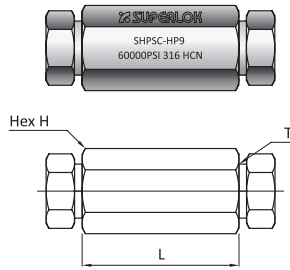
\* No designator is required for the fittings with identical tube ports. This designator is applicable for the second end connection or dropsize fittings.

Size (inch)	1/8	1/4	3/8	9/16	3/4	1
High Pressure C&T	HP2	HP4	HP6	HP9	HP12	HP16
Medium Pressure C&T	-	MP4	MP6	MP9	MP12	MP16
NPT Thread	-	4N	6N	8N	12N	16N

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.

## SHPSC

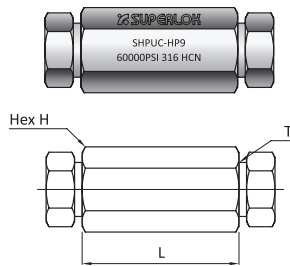
### Straight Coupling



Part No.	Tube Size (in)	Hex H (in)	Orifice	L	T	Pressure Rating (psi)
SHPSC-HP2	1/8"	3/4"	1.2	28.6	1/2" - 20 UNF	60,000
SHPSC-HP4	1/4"	1"	2.4	44.5	9/16" - 18 UNF	60,000
SHPSC-HP6	3/8"	1"	4.8	50.8	3/4" - 16 UNF	60,000
SHPSC-HP9	9/16"	1-3/8"	6.4	60.3	1-1/8" - 12 UNF	60,000
SHPSC40-HP9	9/16"	1-3/8"	6.4	60.3	1-1/8" - 12 UNF	40,000
SHPSC30-HP16	1"	1-3/4"	11.1	88.9	1-3/8" - 12 UNF	30,000

## SHPUC

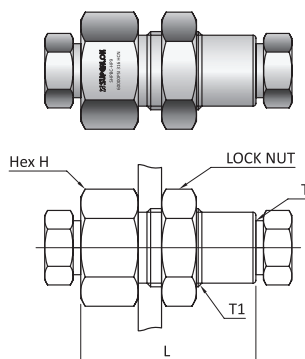
### Union Coupling (Slip Type)



Part No.	Tube Size (in)	Hex H (in)	Orifice	L	T	Pressure Rating (psi)
SHPUC-HP2	1/8"	3/4"	1.2	28.6	1/2" - 20 UNF	60,000
SHPUC-HP4	1/4"	1"	2.4	44.5	9/16" - 18 UNF	60,000
SHPUC-HP6	3/8"	1"	4.8	50.8	3/4" - 16 UNF	60,000
SHPUC-HP9	9/16"	1-3/8"	6.4	60.3	1-1/8" - 12 UNF	60,000
SHPUC40-HP9	9/16"	1-3/8"	6.4	60.3	1-1/8" - 12 UNF	40,000
SHPUC30-HP16	1"	1-3/4"	11.1	88.9	1-3/8" - 12 UNF	30,000

## SHPBC

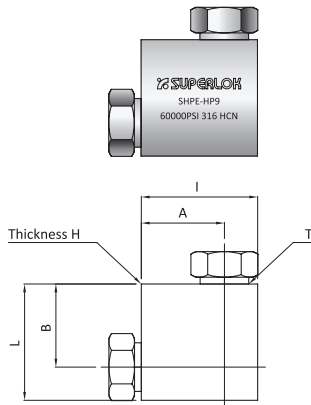
### Bulkhead Coupling



Part No.	Tube Size (in)	Hex H (in)	Orifice	L	T	T1	Pressure Rating (psi)
SHPBC-HP2	1/8"	1"	1.2	46.0	1/2" - 20 UNF	7/8" - 14 UNF	60,000
SHPBC-HP4	1/4"	1"	2.4	50.8	9/16" - 18 UNF	7/8" - 14 UNF	60,000
SHPBC-HP6	3/8"	1-3/8"	4.8	60.3	3/4" - 16 UNF	1-1/16" - 12 UNF	60,000
SHPBC-HP9	9/16"	1-7/8"	6.4	69.9	1-1/8" - 12 UNF	1-5/8" - 12 UNF	60,000
SHPBC40-HP9	9/16"	1-7/8"	6.4	69.9	1-1/8" - 12 UNF	1-5/8" - 12 UNF	40,000
SHPBC30-HP16	1"	1-7/8"	11.1	88.9	1-3/8" - 12 UNF	2-1/8" - 12 UNF	30,000

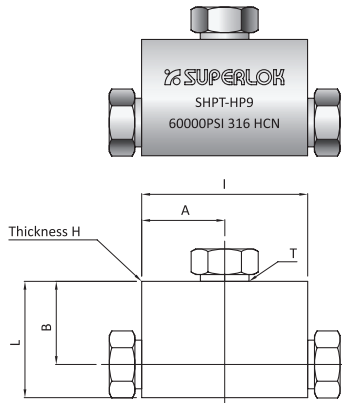
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## SHPE Elbow



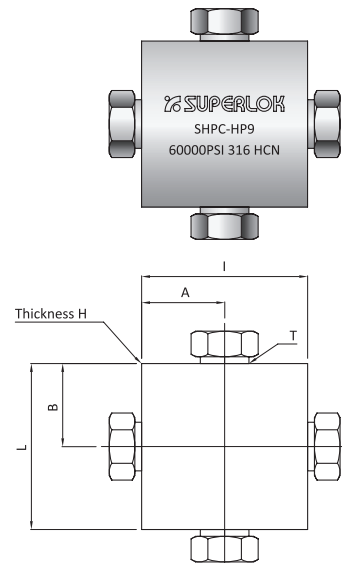
Part No.	Tube Size (in)	d	A	B	I	L	H	T	Pressure Rating (psi)
SHPE-HP2	1/8"	1.2	19.1	19.1	28.6	28.6	19.1	1/2" - 20 UNF	60,000
SHPE-HP4	1/4"	2.4	22.2	25.4	34.9	38.1	25.4	9/16" - 18 UNF	60,000
SHPE-HP6	3/8"	4.8	31.8	25.4	44.5	38.1	25.4	3/4" - 16 UNF	60,000
SHPE-HP9	9/16"	6.4	47.6	28.6	66.7	47.6	38.1	1-1/8" - 12 UNF	60,000
SHPE40-HP9	9/16"	6.4	47.6	28.6	66.7	47.6	38.1	1-1/8" - 12 UNF	40,000
SHPE30-HP16	1"	11.1	52.4	52.4	76.2	76.2	44.5	1-3/8" - 12 UNF	30,000

## SHPT Tee



Part No.	Tube Size (in)	d	A	B	I	L	H	T	Pressure Rating (psi)
SHPT-HP2	1/8"	1.2	19.1	17.5	38.1	28.6	19.1	1/2" - 20 UNF	60,000
SHPT-HP4	1/4"	2.4	25.4	25.4	50.8	34.9	25.4	9/16" - 18 UNF	60,000
SHPT-HP6	3/8"	4.8	25.4	31.8	50.8	39.7	25.4	3/4" - 16 UNF	60,000
SHPT-HP9	9/16"	6.4	33.3	34.9	66.7	54.0	38.1	1-1/8" - 12 UNF	60,000
SHPT40-HP9	9/16"	6.4	33.3	34.9	66.7	54.0	38.1	1-1/8" - 12 UNF	40,000
SHPT30-HP16	1"	11.1	52.4	52.4	104.8	76.2	44.5	1-3/8" - 12 UNF	30,000

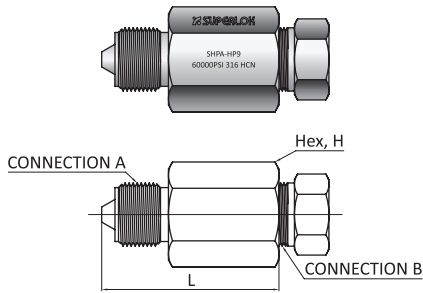
## SHPC Cross



Part No.	Tube Size (in)	d	A	B	I	L	H	T	Pressure Rating (psi)
SHPC-HP2	1/8"	1.2	19.1	19.1	38.1	38.1	19.1	1/2" - 20 UNF	60,000
SHPC-HP4	1/4"	2.4	25.4	19.1	50.8	38.1	25.4	9/16" - 18 UNF	60,000
SHPC-HP6	3/8"	4.8	27.0	25.4	54.0	50.8	25.4	3/4" - 16 UNF	60,000
SHPC-HP9	9/16"	6.4	34.9	33.3	69.9	66.7	38.1	1-1/8" - 12 UNF	60,000
SHPC40-HP9	9/16"	6.4	34.9	33.3	69.9	66.7	38.1	1-1/8" - 12 UNF	40,000
SHPC30-HP16	1"	11.1	52.4	52.4	104.8	104.8	44.5	1-3/8" - 12 UNF	30,000

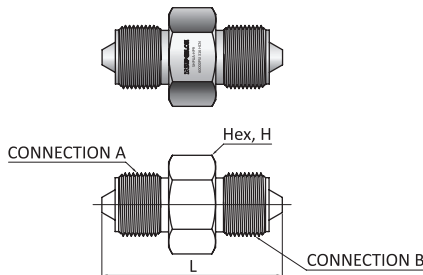
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## SHPA Adapter



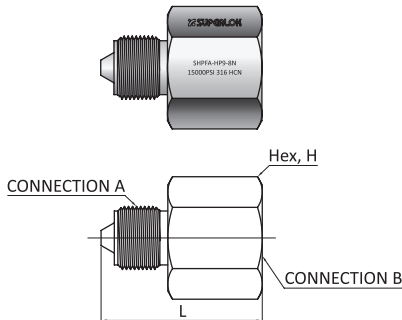
Part No.	Connection A	Connection B	Hex H (in)	L	Pressure Rating (psi)
SHPA-HP4	HP4	HP4	13/16"	35.1	60,000
SHPA-HP6	HP6	HP6	1"	47.6	60,000
SHPA-HP9	HP9	HP9	1-3/8"	58.7	60,000

## SHPUA Union Adapter



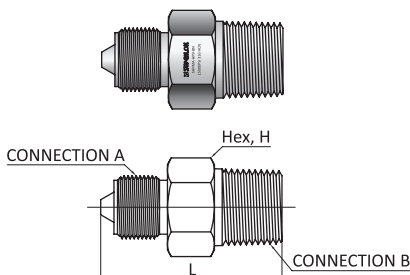
Part No.	Connection A	Connection B	Hex H	L	Pressure Rating (psi)
SHPUA-HP4	HP4	HP4	5/8"	42.8	60,000
SHPUA-HP6	HP6	HP6	13/16"	57.1	60,000
SHPUA-HP9	HP9	HP9	1-3/16"	76.2	60,000

## SHPFA Female Adapter



Part No.	Connection A	Connection B	Hex H	L	Pressure Rating (psi)
SHPFA-HP4-4N	HP4	1/4" NPT	3/4"	42.8	15,000
SHPFA-HP6-6N	HP6	3/8" NPT	1"	50.8	15,000
SHPFA-HP9-8N	HP9	1/2" NPT	1-3/16"	54.0	15,000

## SHPMA Male Adapter

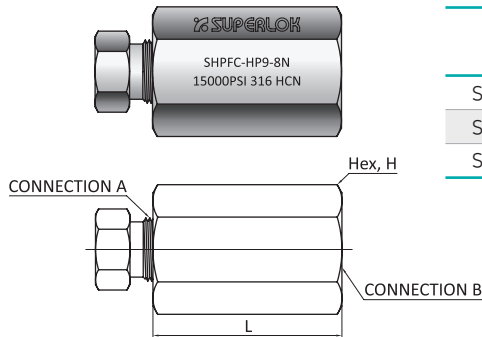


Part No.	Connection A	Connection B	Hex H	L	Pressure Rating (psi)
SHPMA-HP4-4N	HP4	1/4" NPT	3/4"	35.1	15,000
SHPMA-HP6-6N	HP6	3/8" NPT	1"	41.3	15,000
SHPMA-HP9-8N	HP9	1/2" NPT	1-3/8"	47.6	15,000

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## SHPFC

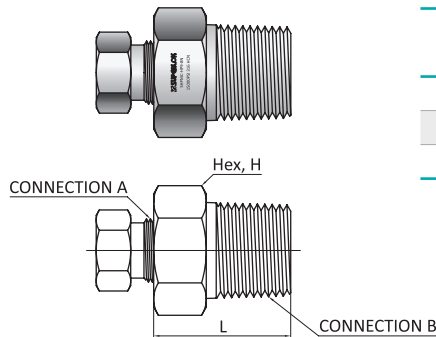
### Female Connector



Part No.	Connection A	Connection B	Hex H	L	Pressure Rating (psi)
SHPFC-HP4-4N	HP4	1/4" NPT	3/4"	41.4	15,000
SHPFC-HP6-6N	HP6	3/8" NPT	1"	47.8	15,000
SHPFC-HP9-8N	HP9	1/2" NPT	1-3/8"	63.5	15,000

## SHPMC

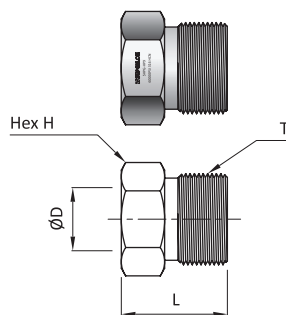
### Male Connector



Part No.	Connection A	Connection B	Hex H	L	Pressure Rating (psi)
SHPMC-HP4-4N	HP4	1/4" NPT	3/4"	35.1	15,000
SHPMC-HP6-6N	HP6	3/8" NPT	1"	41.3	15,000
SHPMC-HP9-8N	HP9	1/2" NPT	1-3/8"	47.6	15,000

## SHPG

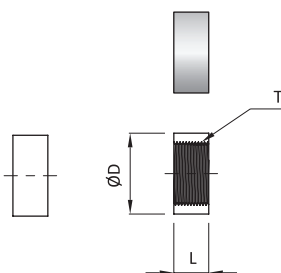
### Gland



Part No.	Tube Size (in)	Hex H (in)	D	L	T	Pressure Rating (psi)
SHPG-HP2	1/8"	1/2"	3.2	19.1	1/2" - 20 UNF	60,000
SHPG-HP4	1/4"	5/8"	6.4	20.6	9/16" - 18 UNF	60,000
SHPG-HP6	3/8"	13/16"	9.5	23.8	3/4" - 16 UNF	60,000
SHPG-HP9	9/16"	1-3/16"	14.3	34.9	1-1/8" - 12 UNF	60,000
SHPG40-HP9	9/16"	1-3/16"	14.3	34.9	1-1/8" - 12 UNF	40,000
SHPG30-HP16	1"	1-3/8"	25.4	38.1	1-3/8" - 12 UNF	30,000

## SHPCR

### Collar

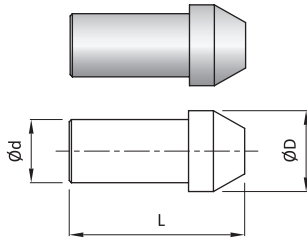


Part No.	Tube Size (in)	D	L	Thread T	Pressure Rating (psi)
SHPCR-HP2	1/8"	6.4	7.9	1/8" - 40 L.H.	60,000
SHPCR-HP4	1/4"	9.5	9.5	1/4" - 28 L.H.	60,000
SHPCR-HP6	3/8"	12.7	13.5	3/8" - 24 L.H.	60,000
SHPCR-HP9	9/16"	20.6	15.9	9/16" - 18 L.H.	60,000
SHPCR40-HP9	9/16"	20.6	15.9	3/4" - 16 L.H.	40,000
SHPCR30-HP16	1"	31.8	12.7	1" - 14 L.H.	30,000

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## SHPP

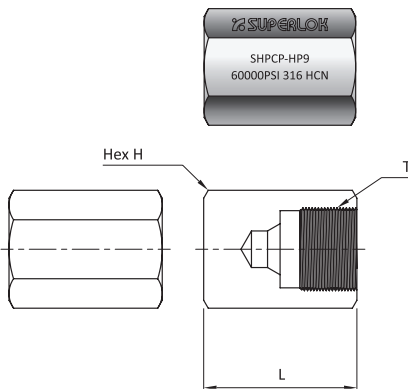
### Plug



Part No.	Tube Size (in)	d	D	L	Pressure Rating (psi)
SHPP-HP2	1/8"	3.2	6.4	22.2	60,000
SHPP-HP4	1/4"	6.4	9.5	28.6	60,000
SHPP-HP6	3/8"	9.5	12.7	33.3	60,000
SHPP-HP9	9/16"	14.3	20.6	44.5	60,000

## SHPCP

### Cap



Part No.	Tube Size (in)	Hex H (in)	L	T	Pressure Rating (psi)
SHPCP-HP2	1/8"	3/4"	22.2	1/2" - 20 UNF	60,000
SHPCP-HP4	1/4"	3/4"	22.2	9/16" - 18 UNF	60,000
SHPCP-HP6	3/8"	1"	31.8	3/4" - 16 UNF	60,000
SHPCP-HP9	9/16"	1-3/8"	38.1	1-1/8" - 12 UNF	60,000
SHPCP40-HP9	9/16"	1-3/8"	38.1	1-1/8" - 12 UNF	40,000
SHPCP30-HP16	1"	1-3/4"	76.2	1-3/8" - 12 UNF	30,000

## SHPN

### Nipple

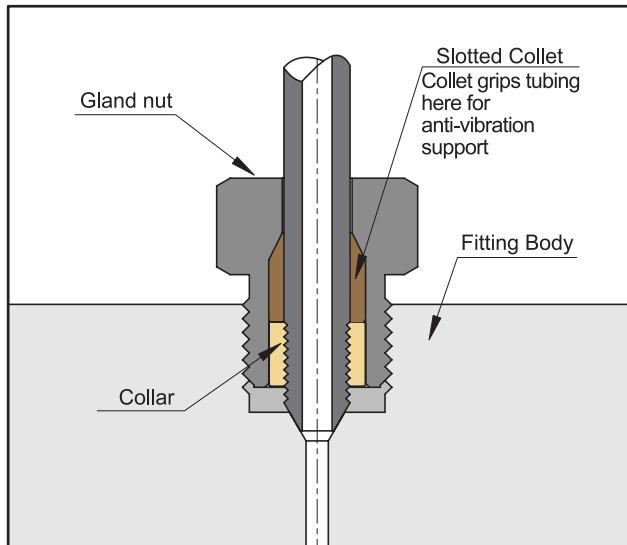
For rapid system make-up, BMT (SUPERLOK) supplies precut, coned-and-threaded nipples in various sizes and lengths for SUPERLOK high pressure fittings



Part No.							Tube Size in (mm)		Working Pressure at 100°F (psi)
Nipple Length in (mm)							O.D.	I.D.	
2.75" (69.9)	3" (76.2)	4" (101.6)	6" (152.4)	8" (203.2)	10" (254)	12" (304.8)	1/8" (3.18)	0.020" (0.51)	60,000
SHPN-4-2.75L	SHPN-2-3L	SHPN-2-4L	SHPN-2-6L	SHPN-2-8L	SHPN-2-10L	SHPN-2-12L	1/4" (6.35)	0.083" (2.11)	60,000
SHPN-4-2.75L	SHPN-4-3L	SHPN-4-4L	SHPN-4-6L	SHPN-4-8L	SHPN-4-10L	SHPN-4-12L	3/8" (9.53)	0.125" (3.18)	60,000
	SHPN-6-3L	SHPN-6-4L	SHPN-6-6L	SHPN-6-8L	SHPN-6-10L	SHPN-6-12L	9/16" (14.29)	0.188" (4.78)	60,000
		SHPN-9-4L	SHPN-9-6L	SHPN-9-8L	SHPN-9-10L	SHPN-9-12L		0.250" (6.35)	40,000
		SHPN40-9-4L	SHPN40-9-6L	SHPN40-9-8L	SHPN40-9-10L	SHPN40-9-12L			
			SHPN30-16-6L	SHPN30-16-8L	SHPN30-16-10L	SHPN30-16-12L	1" (25.4)	0.437" (11.09)	30,000

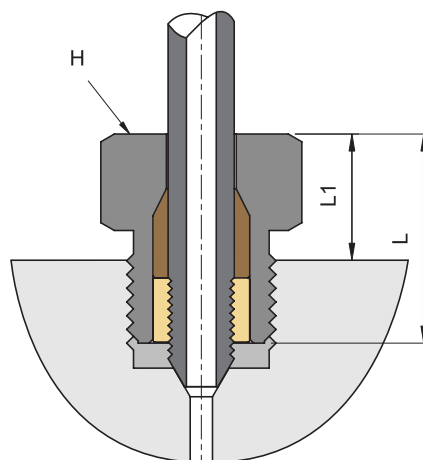
- Dimensions and Drawings are for reference only and are subject to change without prior notice.  
 - Unless otherwise specified, all dimensions are in millimeters.  
 - Sizes, pressure classes, and end connections not listed are available upon request.

## Anti-vibration Collet Gland - Pressure up to 60,000psi



For extreme conditions of vibration and/or shock in tubing system such as locating fitting on an unsupported line near a compressor, SUPERLOK coned and threaded connections are offered with the anti-vibration collet gland assemblies. Completely interchangeable with standard SUPERLOK high pressure connections, the collet gland assemblies provide equally effective pressure handling capability.

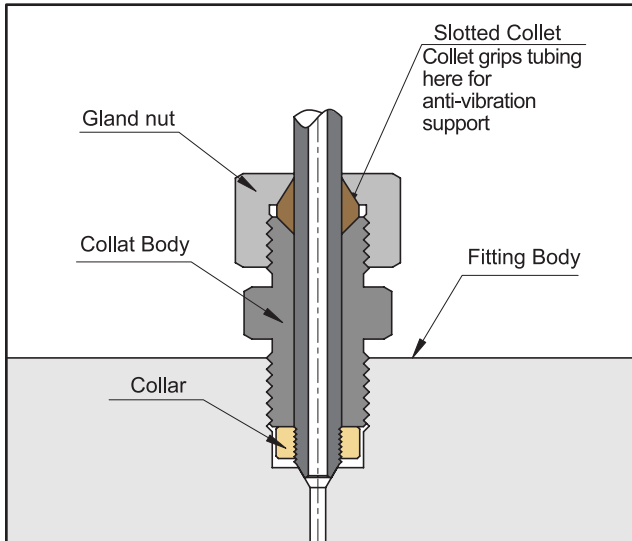
In standard connection systems, the bending stresses on the threaded area of the tubing imposed by excessive vibration or movement may cause premature fatigue failure of the tubing at the back of the thread. By moving the stress concentration back to the unthreaded part of the tubing and providing a wedge-type gripping action, the SUPERLOK anti-vibration collet gland assembly strengthens the entire structure. With stress concentration reduced and overall stress level maintained well below the endurance limit of the material, virtually unlimited vibrational fatigue life can be attained.



Part No.	Tube Size (in)	Hex H (in)	L1	L
SHP- AVCG- 4H	1/4"	5/8"	12.7	20.6
SHP- AVCG- 6H	3/8"	7/8"	15.8	28.5
SHP- AVCG- 9H	9/16"	1-3/16"	25.4	30.2

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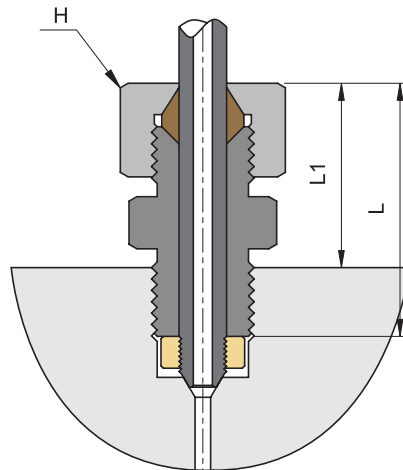
## Anti-vibration Collet Gland - Pressure up to 43,000psi



For extreme conditions of vibration and/or shock in tubing system, such as locating fitting on an unsupported line near a compressor, SUPERLOK coned and threaded connections are offered with the anti-vibration collet gland assemblies.

A less complex and more economical design than other vibration-resistant connections, the collet gland assembly utilizes the same coned and threaded features of SUPERLOK high pressure connections.

SHP-AVCG-16H extends gland nut to provide room for the tapered, slotted collet and collet nut. The design provides a slight difference in angles between the collet and the corresponding taper of the gland nut. As the nut is tightened, it acts to wedge the tapered end of the collet into a gripping engagement with the tubing.



Part No.	Tube Size (in)	Hex H (in)	L1	L
SHP- AVCG- 16H	1"	1-1/2"	42.9	60.5

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# BMT Co., Ltd.

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HGS® : Trademark registered in Republic of Korea (as of April 2024)

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Smart Distribution Board

Energy Management System (EMS)