High Pressure Equipment

Specialty Valves

High Pressure Equipment Company produces many valves engineered for specific requirements and operating conditions.

Ball Valves provide shut-off of liquid or gas flow through 20,000 psi. These valves are available in two way and three way configurations.

Hastelloy Valves are the most common special material valves we produce. We maintain an inventory of Hastelloy C-276 to assure prompt delivery.

High Temperature Valves feature an extension to remove the packing area (stuffing box) from the hot zone of a valve, making them suitable for use at 1,000°F (538°C).

Micro Control Metering Valves are designed to assure the fine and precise stem travel necessary for excellent control of flow. An integral vernier indicator provides exact measurement of stem revolution.

Relief Valves protect a system from over-pressure damage and failure. Relief Valves are offered in pressure ranges: 3,000 psi to 30,000 psi.



Pipe Connection Valves allow you to plumb a system through 15,000 psi using standard NPT pipe connections.

Male Bottom Connection Valves are designed for applications where extra rigidity or space restrictions are critical. These valves feature one-piece stem construction to increase durability and reduce overall height.

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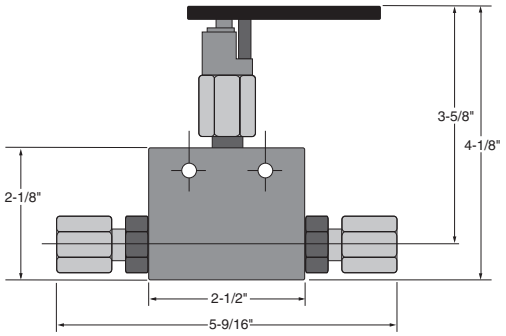
Ball Valves

10,000, 15,000 and 20,000 psi service

High Pressure Equipment offers two styles of ball valves (free floating and trunion) to provide effective shut-off of liquid or gas flow.

Two-way ball valves offer complete shut-off with a convenient 1/4 turn. Valve actuators are available for remote control of HiP ball valves.

Virtually all metal components are stainless steel to insure consistent operation under even the most severe applications. Teflon packing provides reliable leak-free service up to 400°F. Other packings, including Polypak and Grafoil are available upon request.



Two-Way Free Floating Ball Valves

Catalog No.	Tube Size	Conn*	Pressure Rating @RT	Minimum Orifice	C_V
15-16AF1	1/16"	AF1	15,000 psi	0.052	0.09
15-16AF2	1/8"	AF2	15,000 psi	0.094	0.20
10-16AF4	1/4"	AF4	10,000 psi	0.125	0.45
10-16AF6	3/8"	AF6	10,000 psi	0.250	2.70
20-16LF4	1/4"	LF4	20,000 psi	0.109	0.31
20-16LF6	3/8"	LF6	20,000 psi	0.203	1.70
20-16LF9	9/16"	LF9	20,000 psi	0.250	2.70
20-16HF2	1/8"	HF2	20,000 psi	0.062	0.12
20-16HF4	1/4"	HF4	20,000 psi	0.094	0.20
20-16HF6	3/8"	HF6	20,000 psi	0.125	0.45
20-16HF9	9/16"	HF9	20,000 psi	0.188	1.45
10-16NFA	1/8"	1/8" NPT	10,000 psi	0.250	2.70
10-16NFB	1/4"	1/4" NPT	10,000 psi	0.250	2.70
10-16NFC	3/8"	3/8" NPT	10,000 psi	0.250	2.70
10-16NFD	1/2"	1/2" NPT	10,000 psi	0.250	2.70

* Other connections available upon request. Consult factory.

Severe Duty Ball Valves (Trunion Style)

10,000, 15,000 and 20,000 psi service

High Pressure Equipment Company introduces its TRUNION STYLE ball valves for effective shut-off of liquid and gas flow through 20,000 psi @ 350°F maximum. Our offering features a trunion ball design, making this type of valve ideal for severe duty applications. This valve is available in two-way or three-way configurations with orifices of .187", .375" or .500".

The two-way ball valve offers complete shut-off with a convenient $^1/_4$ turn. The standard configuration of the three-way ball valve requires $^1/_2$ turn to change port outlets and provides for complete shut-off. An optional diverter style three-way ball valve requires only a $^1/_4$ turn to change the port outlets. Air operated actuators are available for remote control.

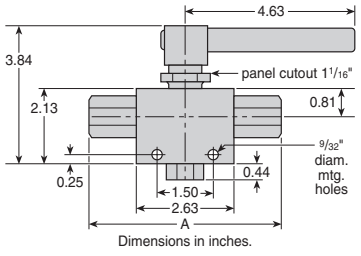
Material of construction is 316 stainless steel, O-rings are Viton, ball seat is PEEK. Alternate materials of construction are available upon request.



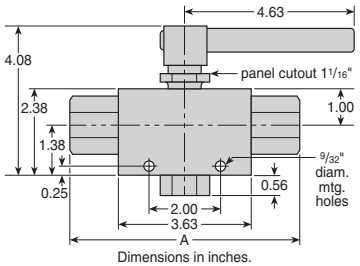
- Trunion style closure, ideal for severe duty applications
- Two-way and three-way valve configurations
- Three-way, $^1/_4$ turn diverter valve
- .187", .375" or .500" orifices
- Air actuators for remote operation
- Convenient panel mount design (cut $1^1/_{16}$" diameter hole) .187 and .375 only
- Large selection of tube and pipe fittings available
- Optional wetted parts available
- Optional O-rings available

Two-Way Trunion Ball Valves - 90°

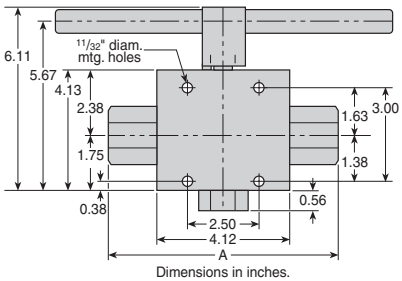
Orifice	Tube Size	Connection	Pressure Rating	Minimum Orifice	Cv	A	Catalog No.
.187	$^1/_{16}$"	AF1	15,000 psi	.052	0.09	4.19	15-71AF1
	$^1/_8$"	AF2	15,000 psi	.094	0.20	4.19	15-71AF2
	$^1/_4$"	AF4	10,000 psi	.125	0.45	4.69	10-71AF4
	$^3/_8$"	AF6	10,000 psi	.187	1.45	4.69	10-71AF6
	$^1/_4$"	LF4	20,000 psi	.109	0.31	4.63	20-71LF4
	$^3/_8$"	LF6	20,000 psi	.187	1.45	4.63	20-71LF6
	$^9/_{16}$"	LF9	20,000 psi	.187	1.45	5.13	20-71LF9
	$^1/_4$"	HF4	20,000 psi	.094	0.20	4.63	20-71HF4
	$^3/_8$"	HF6	20,000 psi	.125	0.45	4.63	20-71HF6
	$^9/_{16}$"	HF9	20,000 psi	.187	1.45	4.87	20-71HF9
	$^1/_8$"	$^1/_8$" NPT	15,000 psi	.187	1.45	4.63	15-71NFA
	$^1/_4$"	$^1/_4$" NPT	15,000 psi	.187	1.45	4.63	15-71NFB
	$^3/_8$"	$^3/_8$" NPT	15,000 psi	.187	1.45	4.65	15-71NFC
.375	$^3/_8$"	AF6	10,000 psi	.250	2.70	5.13	10-74AF6
	$^9/_{16}$"	LF9	15,000 psi	.312	4.22	6.25	15-74LF9
	$^3/_4$"	LF12	15,000 psi	.375	6.08	6.67	15-74LF12
	1"	LF16	15,000 psi	.375	6.08	7.45	15-74LF16
	$^1/_4$"	$^1/_4$" NPT	15,000 psi	.250	2.70	5.63	15-74NFB
	$^3/_8$"	$^3/_8$" NPT	15,000 psi	.375	6.08	5.63	15-74NFC
	$^1/_2$"	$^1/_2$" NPT	15,000 psi	.375	6.08	5.63	15-74NFD
.500	$^3/_4$"	LF12	10,000 psi	.500	19.3	6.56	10-80LF12
	1"	LF16	10,000 psi	.500	19.3	7.44	10-80LF16
	$^3/_4$"	$^3/_4$" NPT	10,000 psi	.500	19.3	6.44	10-80NFF
	1"	1" NPT	10,000 psi	.500	19.3	7.44	10-80NFH



.187 Orifice



.375 Orifice

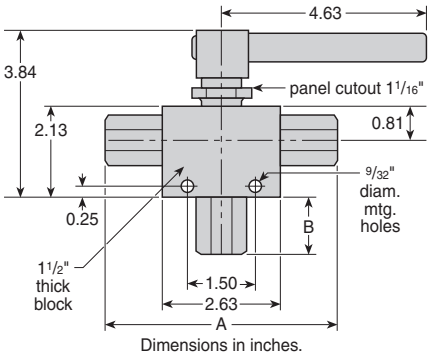


.500 Orifice

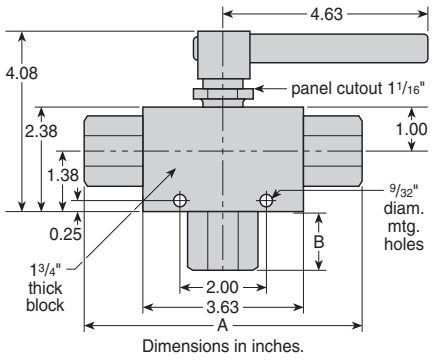
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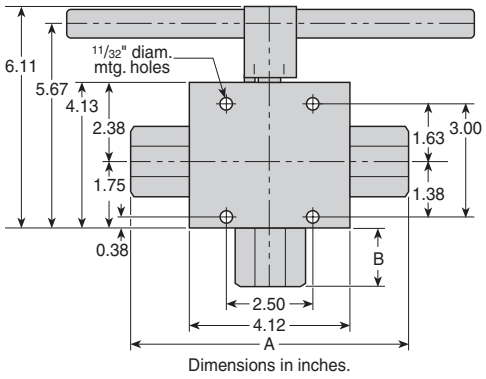
Three-Way Trunion Ball Valves



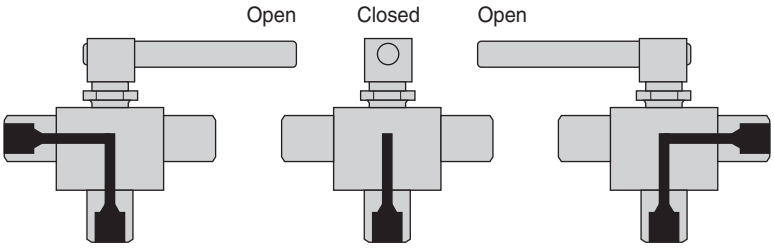
.187 Orifice



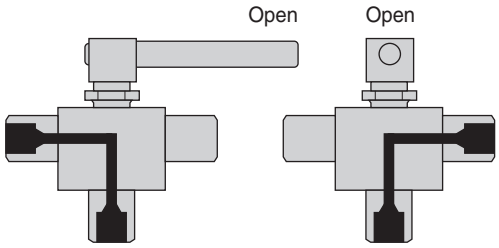
.375 Orifice



.500 Orifice



180° Three-Way Ball Valve



90° Three-Way Diverter Valve

Orifice	Tube Size	Connection	Pressure Rating	Minimum Orifice	C_V	A	B	3-Way 90° Catalog No.	3-Way 180° Catalog No.
.187	1/16"	AF1	15,000 psi	.052	0.04	4.19	0.55	15-73AF1	15-72AF1
	1/8"	AF2	15,000 psi	.094	0.10	4.19	0.55	15-73AF2	15-72AF2
	1/4"	AF4	10,000 psi	.125	0.22	4.69	0.83	10-73AF4	10-72AF4
	3/8"	AF6	10,000 psi	.187	0.71	4.69	1.01	10-73AF6	10-72AF6
	1/4"	LF4	20,000 psi	.109	0.15	4.63	1.00	20-73LF4	20-72LF4
	3/8"	LF6	20,000 psi	.187	0.71	4.63	1.00	20-73LF6	20-72LF6
	9/16"	LF9	20,000 psi	.187	0.71	5.13	1.25	20-73LF9	20-72LF9
	1/4"	HF4	20,000 psi	.094	0.10	4.63	0.81	20-73HF4	20-72HF4
	3/8"	HF6	20,000 psi	.125	0.22	4.63	0.94	20-73HF6	20-72HF6
	9/16"	HF9	20,000 psi	.187	0.71	4.87	1.19	20-73HF9	20-72HF9
	1/8"	1/8" NPT	15,000 psi	.187	0.71	4.63	0.50	15-73NFA	15-72NFA
	1/4"	1/4" NPT	15,000 psi	.187	0.71	4.63	1.06	15-73NFB	15-72NFB
	3/8"	3/8" NPT	15,000 psi	.187	0.71	4.65	1.06	15-73NFC	15-72NFC
.375	3/8"	AF6	10,000 psi	.250	1.07	5.13	0.75	10-76AF6	10-75AF6
	9/16"	LF9	15,000 psi	.312	1.67	6.25	1.06	15-76LF9	15-75LF9
	3/4"	LF12	15,000 psi	.375	2.40	6.67	1.18	15-76LF12	15-75LF12
	1"	LF16	15,000 psi	.375	2.40	7.45	1.99	15-76LF16	15-75LF16
	1/4"	1/4" NPT	15,000 psi	.250	1.07	5.63	1.06	15-76NFB	15-75NFB
	3/8"	3/8" NPT	15,000 psi	.375	2.40	5.63	1.06	15-76NFC	15-75NFC
	1/2"	1/2" NPT	15,000 psi	.375	2.40	5.63	1.06	15-76NFD	15-75NFD
.500	3/4"	LF12	10,000 psi	.500	7.43	6.56	1.30	10-82LF12	10-81LF12
	1"	LF16	10,000 psi	.500	7.43	7.44	1.74	10-82LF16	10-81LF16
	3/4"	3/4" NPT	10,000 psi	.500	7.43	6.44	1.30	10-82NFF	10-81NFF
	1"	1" NPT	10,000 psi	.500	7.43	7.44	1.74	10-82NFH	10-81NFH

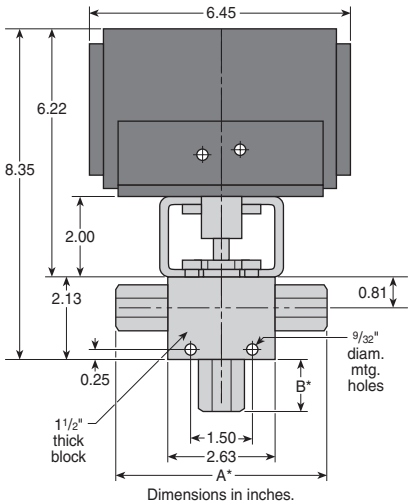
Ball Valve Actuators

High Pressure Equipment Company offers air operated actuators to accommodate remote operation. **NOTE: These air operators are only for use with two-way and three-way diverter style valves.**

To order: simply specify the appropriate ball valve catalog number and add the suffix “-TSR8” for air to open/spring to close, or “-TDA8” for air to open and close (double acting) or TSR20 for 0.500 orifice. For trunion only.

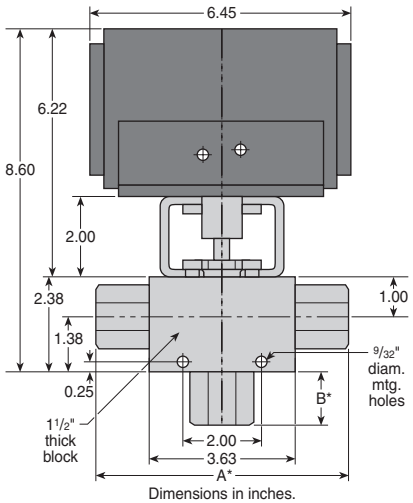
Use TDA4 and TSR4 for floating ball style valves.





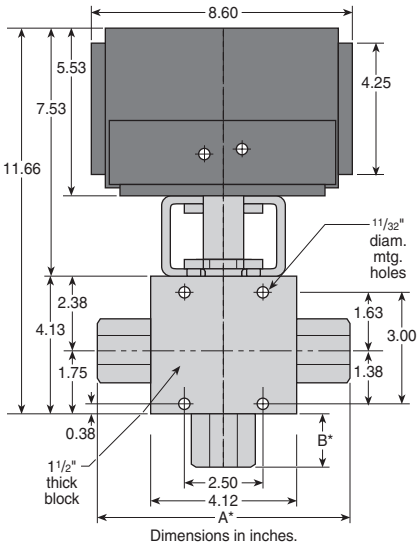
Dimensions in inches.
* Dimensions found within charts on pages 6.3-6.4

.187 Orifice



Dimensions in inches.
* Dimensions found within charts on pages 6.3-6.4

.375 Orifice



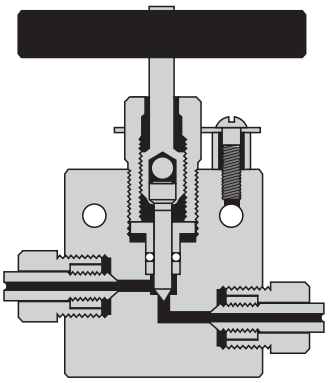
Dimensions in inches.
* Dimensions found within charts on pages 6.3-6.4

.500 Orifice

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Hastelloy Valves



A large number of the valves and fittings shown within this catalog are frequently furnished in special materials to meet the requirements of specific applications. One of the most commonly requested "special" materials is Hastelloy C-276. While very few components are maintained in stock in special materials, a supply of Hastelloy C-276 is normally available.

The following should be observed when requesting items in Hastelloy C-276 or other special materials:

Tubing collars and glands for High Pressure coned-and-threaded connections are "non-wetted" parts which do not normally come into contact with the fluid or gas. Thus these items are supplied in 316 stainless steel unless otherwise specified.

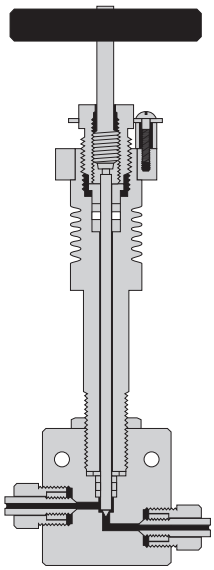
The inner sleeve connection of the Taper Seal is a "wetted" part and must be of the same material as the valve or fitting body. The Taper Seal gland is a "non-wetted" part and is supplied in 316 stainless steel unless otherwise requested.

Physical size of Hastelloy C-276 or other special material items may vary from the dimensions of standard items shown in this catalog, depending on availability of materials. (Parts normally supplied in hex shaped material are frequently supplied in round shaped material with wrench flats when manufacturing from special materials).

Packing material in all special material valves is Teflon unless otherwise specified.

Other materials. In addition to Hastelloy C-276, valves and fittings can be furnished in Monel, Inconel, titanium and various other special materials. Consult factory for price and delivery.

High Temperature Valves



The High Temperature Extension provides a means to move the packing area (stuffing box) away from the hot zone of a valve. Fins are provided around the packing area to dissipate heat and, with proper cooling of the extension, these valves can be used at 1,000°F (538°C).

Size range. High temperature extensions are available for $^{1}/_{4}$" O.D., $^{3}/_{8}$" O.D., and $^{9}/_{16}$" O.D. tubing size valves in the 30,000 psi series and for all Medium Pressure series valves.

Materials and features. Standard packing is Grafoil. Teflon packing is also available. Nonrotating tip stems prevent galling at the seats and minimize torque requirements for positive shut off.

When ordering, simply add the suffix "-HT" to the standard valve catalog number (example: 30-11HF4-HT).

Note: These valves may also be used in cryogenic applications. Teflon packing supplied.

Micro Control Metering Valves

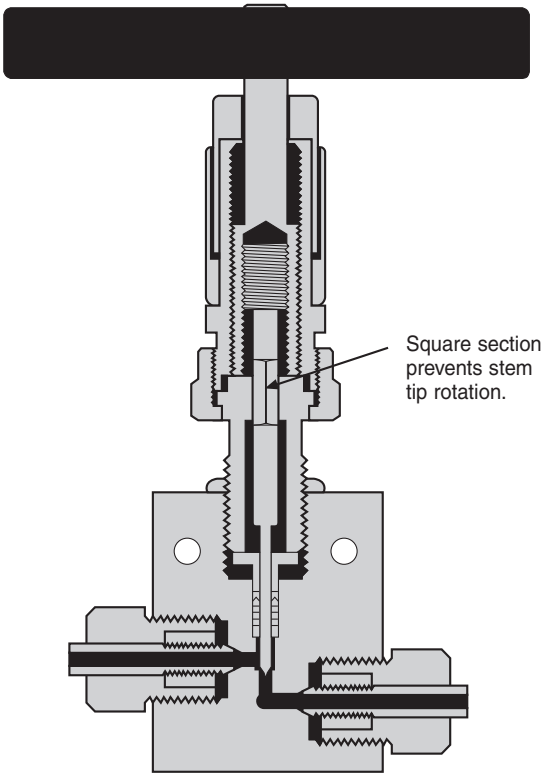
The Micro Control Metering Valve assembly is available for all of the valves in the 60,000 psi series. This unique stem design operates on the principle of a right-hand threaded component operating in an opposite direction of motion to a left-hand threaded component.

As the pitch sizes of these threads are different from each other, a very fine and precise stem travel is made possible. This provides exceptional control that is not possible with ordinary fine pitched stem designs.

Each complete revolution of the stem provides 0.005" stem travel. The vernier indicator allows readings in increments of one-tenth of a revolution (0.0005" stem travel).

The non-rotating lower section stem is ground to a 9 degree included angle to insure maximum control. **While this valve may be turned to the fully off (closed) position, it is always preferable to provide a separate on-off valve in the system to protect the precise control of the metering valve.**

When ordering, simply specify the valve catalog number from the 60,000 psi series and add the suffix "-V" (example: 60-11HF4-V.)



Metering Tip Valves

When the precision control offered by the above "Micro Control" metering valve is not required, a multi-piece, rolled fine pitched stem assembly can be provided. The non-rotating lower section stem is ground to a 9 degree included angle and provides a .050" stem travel per complete revolution of the handle. **While this valve may be turned to the fully off (closed) position, it is always preferable to provide a separate on-off valve in the system to protect the precise control of the metering valve.**

When ordering, simply specify valve catalog number from the 60,000 psi series and add the suffix "-MTS" (example: 60-11HF4-MTS).

For pricing consult factory.



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Relief Valves (Factory Set)

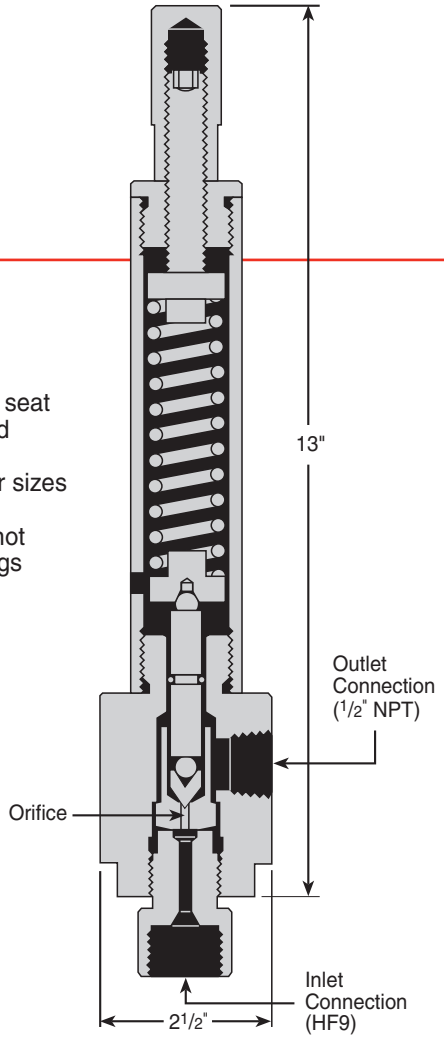
Relief valves are offered in pressure ranges: 1,500 through 60,000 psi.

Standard materials include 316 stainless steel bodies and removable seat glands with 17-4PH stainless steel removable seats and pistons. Standard O-ring material on the piston is Viton Valves may be used up to 350° F.

Inlet connections are for $^{9}/_{16}$" O.D. tubing (HF9) with adapters for other sizes available. Outlet connections are $^{1}/_{2}$" NPT.

These valves are not recommended for use below 1,500 psi, and are not readily adjustable in the field without proper test equipment. Pressure settings are made at the factory and valves are tagged accordingly.

To order, simply specify catalog number and set pressure. See table below.



Pressure Range	Orifice Size	Type of Service*	Assembly Part No.	Max Flow Capacity H_2O (GPM)
1,500 to 2,999 psi	1/4	GAS OR LIQUID	402633-03	13
3,000 to 10,999 psi	1/4	GAS OR LIQUID	402633-10	25
11,000 to 20,999 psi	3/16	GAS OR LIQUID	402633-20	20
21,000 to 30,000 psi	1/8	GAS OR LIQUID	402633-30	10
30,001 to 45,000 psi	7/64	GAS OR LIQUID	402633-45	10
45,001 to 60,000 psi	3/32	GAS OR LIQUID	402633-60	8

*Valves not bubble tight on gas service.

Relief Valves (Field Adjustable)

Relief valves are offered in pressure ranges: 1,000 through 20,000 psi.

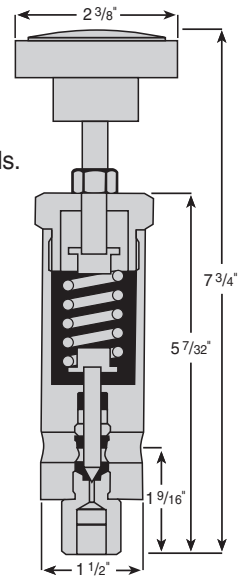
Standard materials include 316 stainless steel bodies and seat glands. Standard O-ring material is EPDM, with teflon packing and nylon seats.

Inlet connections $^{1}/_{4}$" NPT-HIP-10RV; HF4-HIP-20RV. Outlet connections are $^{1}/_{4}$" NPT.

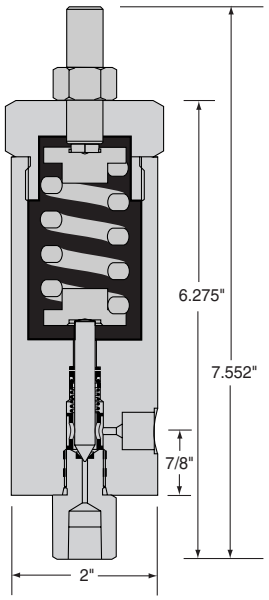
These valves are not recommended for use below 1,000 psi, and are **readily** adjustable in the field.

To order, simply specify catalog number. Example: HIP-10RV

Pressure Range	Orifice Size	Type of Service	Part number	Cv
1,000 to 10,000 psi	0.070	GAS OR LIQUID	HIP-10RV	.12
10,001 - 20,000 psi	0.070	GAS OR LIQUID	HIP-20RV	.12



HIP-10-RV



HIP-20-RV

***Please note HIP-20RV does not have handle, the valve is shipped with $^{1}/_{2}$-13" set screw.**

Male Bottom Connection Valves

Connections. This series of valves is offered in a few select variations which are most frequently required. They have been developed for applications where rigidity is a major concern (such as gas bottles) and where space is restricted.

Pipe connections as well as High Pressure (coned and threaded) connections are available as listed in tables below. Additionally, these valves can be supplied with rupture disc assemblies (safety heads) installed directly into the valve body as shown (see page 3.7 for listing of rupture discs).

Stems. The Male Bottom Connection Valves are supplied with a one-piece (solid construction) stem to maximize sensitivity of "feel" and to reduce overall height. The non-rotating tip stem design as featured on other valves may be supplied as an option at no additional charge.

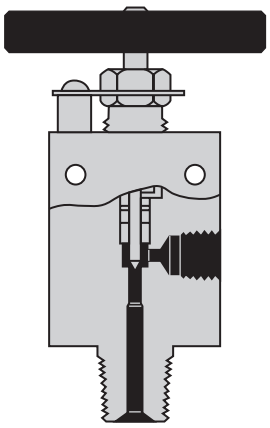
Materials include high tensile Type 316 stainless steel valve bodies and hardened 17-4PH stainless steel stems.

Packing is Teflon (450°F) standard with optional Viton (350°F), BUNA-N (200°F) and Grafoil (650°F) available at no additional cost.

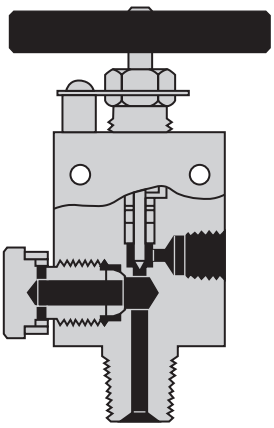
Air operators for remote control operation are available for all valves. (Select required valve and add "HIPCO").

Rupture discs must be ordered separately (see section 3.7).

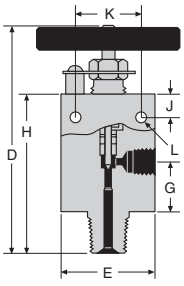
Special valves with connections other than those listed can be manufactured on special order when quantity permits. Consult factory with specifications.



Without Safety Head

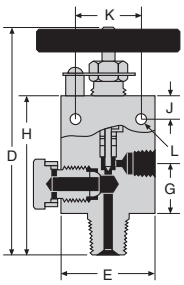


With Safety Head



Male Bottom Connection Valves (without Safety Head)

Assembly Number	Male Bottom	Female Side	psi	Orifice	D	E	G	H	J	K	L	Thickness
2-7928A	1/4" NPT	1/4" NPT	10,000	3/32"	5 1/16"	2"	1 15/16"	3 3/8"	1/2"	1 3/8"	7/32"	1"
2-8144A	1/4" NPT	HF4	10,000	3/32"	5 1/16"	2"	1 15/16"	3 3/8"	1/2"	1 3/8"	7/32"	1"
2-7602A	1/2" NPT	1/4" NPT	10,000	3/32"	5 1/16"	2"	1 15/16"	3 3/8"	1/2"	1 3/8"	7/32"	1"
2-7569-A	1/2" NPT	HF4	10,000	3/32"	5 1/16"	2"	1 15/16"	3 3/8"	1/2"	1 3/8"	7/32"	1"



Male Bottom Connection Valves (with Safety Head)

Assembly Number	Male Bottom	Female Side	psi	Orifice	D	E	G	H	J	K	L	Thickness
2-7927A	1/4" NPT	1/4" NPT	10,000	3/32"	5 1/16"	2"	1 15/16"	3 3/8"	1/2"	1 3/8"	7/32"	1"
2-8039A	1/4" NPT	HF4	10,000	3/32"	5 1/16"	2"	1 15/16"	3 3/8"	1/2"	1 3/8"	7/32"	1"
2-7604A	1/2" NPT	1/4" NPT	10,000	3/32"	5 1/4"	2"	2 1/8"	3 9/16"	1/2"	1 3/8"	7/32"	1"
2-7603A	1/2" NPT	HF4	10,000	3/32"	5 1/4"	2"	2 1/8"	3 9/16"	1/2"	1 3/8"	7/32"	1"

* **Rupture discs** must be ordered separately (see section 3.7).

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Female NPT/10,000 psi

Pipe Connection Valves

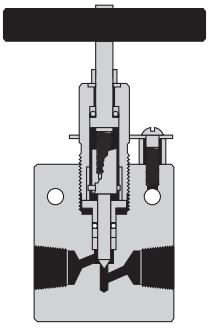
• 1/8" • 1/4" • 3/8" • 1/2" NPT

Non-rotating tip stems are standard for on-off service and insure long life on valve seats. Regulating tip stems are available for all valves at no additional cost.

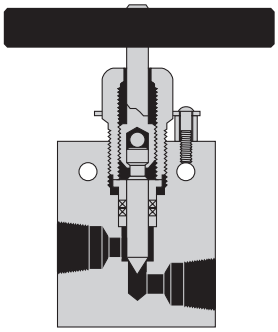
Materials include high tensile Type 316 stainless steel for valve bodies, and hardened 17-4PH stainless steel for lower section stems.

Packing is Teflon (450°F) standard with optional Viton (350°F), BUNA-N (200°F) and Grafoil (650°F) available at no additional cost.

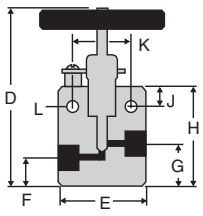
Air operators for remote control operation are available for all valves. (Select required valve and add "HIPCO" Air Operator).



NFA (1/8"), NFB (1/4") and NFC (3/8")

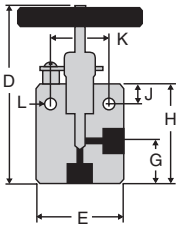


NFD (1/2")



Two Way Straight Valves

Pipe Size	Catalog No.*	psi	Connection	Orifice	D	E	F	G	H	J	K	L	Thickness
1/8" NPT	**10-11NFA**	10,000	NFA	1/8"	4 3/4"	2"	7/8"	7/8"	2 7/16"	1/2"	1 3/8"	7/32"	1"
1/4" NPT	**10-11NFB**	10,000	NFB	1/8"	4 3/4"	2"	7/8"	7/8"	2 7/16"	1/2"	1 3/8"	7/32"	1"
3/8" NPT	**10-11NFC**	10,000	NFC	1/8"	4 3/4"	2"	7/8"	7/8"	2 7/16"	1/2"	1 3/8"	7/32"	1"
1/2" NPT	**10-11NFD**	10,000	NFD	5/16"	5 5/8"	2 5/8"	3/4"	1 3/8"	3 1/8"	1/2"	1 5/8"	5/16"	1 1/2"



Two Way Angle Valves

Pipe Size	Catalog No.*	psi	Connection	Orifice	D	E	F	G	H	J	K	L	Thickness
1/8" NPT	**10-12NFA**	10,000	NFA	1/8"	4 3/4"	2"	–	1"	2 7/16"	1/2"	1 3/8"	7/32"	1"
1/4" NPT	**10-12NFB**	10,000	NFB	1/8"	4 3/4"	2"	–	1"	2 7/16"	1/2"	1 3/8"	7/32"	1"
3/8" NPT	**10-12NFC**	10,000	NFC	1/8"	4 3/4"	2"	–	1"	2 7/16"	1/2"	1 3/8"	7/32"	1"
1/2" NPT	**10-12NFD**	10,000	NFD	5/16"	5 3/4"	2 5/8"	–	1 1/2"	3 1/4"	1/2"	1 5/8"	5/16"	1 1/2"

* For valves requiring high temperature Grafoil packing in the 1/8" NPT, or 1/4" NPT or 3/8" NPT sizes, add suffix "-W" to catalog number. (Example 10-11NFB-W.)

Female NPT/10,000 and 15,000 psi

Pipe Connection Valves

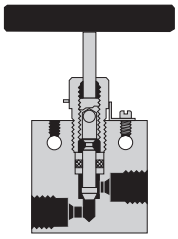
• 1/8" • 1/4" • 3/8" • 1/2" NPT • 3/4" NPT • 1" NPT

Non-rotating tip stems are standard for on-off service and insure long life on valve seats. Regulating tip stems are available for all valves at no additional cost.

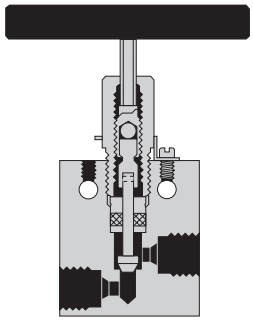
Materials include high tensile Type 316 stainless steel for valve bodies, and hardened 17-4PH stainless steel for lower section stems.

Packing is Teflon (450°F) standard with optional Viton (350°F), BUNA-N (200°F) and Grafoil (650°F) available at no additional cost.

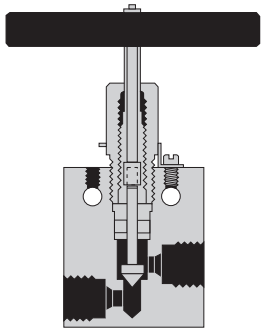
Air operators for remote control operation are available for all valves. (Select required valve and add "HIPCO" Air Operator).



NFA (1/8") and NFB (1/4")

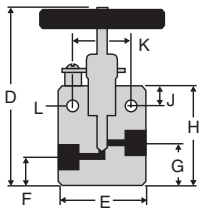


NFC (3/8") and NFD (1/2")



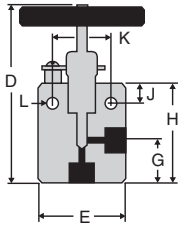
NFF (3/4") and NFH (1")

Two Way Straight Valves



Pipe Size	Catalog No.*	psi	Connection	Orifice	D	E	F	G	H	J	K	L	Thickness
1/8" NPT	15F-11NFA	15,000	NFA	.203	4 3/8"	2"	3/8"	13/16"	2"	3/8"	1 1/4"	7/32"	3/4"
1/4" NPT	15F-11NFB	15,000	NFB	.203	4 3/8"	2"	3/8"	13/16"	2"	3/8"	1 1/4"	7/32"	3/4"
3/8" NPT	15F-11NFC	15,000	NFC	.312	6 1/8"	2 1/2"	1/2"	1 1/8"	2 7/8"	1/2"	1 3/8"	11/32"	1"
1/2" NPT	15F-11NFD	15,000	NFD	.312	6 3/8"	2 5/8"	3/4"	1 3/8"	3 1/8"	1/2"	1 3/8"	11/32"	1 1/2"
3/4" NPT	10F-11NFF	10,000	NFF	.687	8 1/2"	4 1/8"	7/8"	1 13/16"	4 5/8"	1 1/8"	2 1/2"	9/16"	1 3/4"
1" NPT	10F-11NFH	10,000	NFH	.687	8 1/2"	4 1/8"	7/8"	1 13/16"	4 5/8"	1 1/8"	2 1/2"	9/16"	1 3/4"

Two Way Angle Valves



Pipe Size	Catalog No.*	psi	Connection	Orifice	D	E	F	G	H	J	K	L	Thickness
1/8" NPT	15F-12NFA	15,000	NFA	.203	4 13/16"	2"	—	1 1/4"	2 7/16"	3/8"	1 1/4"	7/32"	3/4"
1/4" NPT	15F-12NFB	15,000	NFB	.203	4 13/16"	2"	—	1 1/4"	2 7/16"	3/8"	1 1/4"	7/32"	3/4"
3/8" NPT	15F-12NFC	15,000	NFC	.312	6 1/2"	2 1/2"	—	1 1/2"	3 1/4"	1/2"	1 3/8"	11/32"	1"
1/2" NPT	15F-12NFD	15,000	NFD	.312	6 1/2"	2 5/8"	—	1 1/2"	3 1/4"	1/2"	1 3/8"	11/32"	1 1/2"
3/4" NPT	10F-12NFF	10,000	NFF	.687	9"	4 1/8"	—	2 5/16"	5 1/8"	1 1/8"	2 1/2"	9/16"	1 3/4"
1" NPT	10F-12NFH	10,000	NFH	.687	9"	4 1/8"	—	2 5/16"	5 1/8"	1 1/8"	2 1/2"	9/16"	1 3/4"

* For valves requiring high temperature Grafoil packing in the 1/8" NPT, or 1/4" NPT or 3/8" NPT sizes, add suffix "-W" to catalog number. (Example 10-11NFB-W.)

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