

HiFLUX

High Pressure Valves & Fittings



HIGH SERVICE
HIGH QUALITY
HIGH PERFORMANCE
High Pressure equipment

HiFLUX

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HiFLUX



Passion for a high-pressure future, constant challenge and innovation

HIFLUX Co., Ltd. has been recognized for its technological prowess by successfully producing various of high-pressure piping materials that are difficult to manufacture domestically through continuous R&D and facility investment to open up new markets in the ultra-high pressure piping materials sector.

Based on differentiated technological prowess and price competitiveness compared to overseas manufacturers in Europe and the United States, it is growing into a global brand by concluding OEM supply contracts with domestic OEM suppliers and overseas global waterjet manufacturers.

In addition, in order to open up new markets, we have developed air-operated valves, high-pressured pressure regulators, back pressure regulators, and other fittings for various purposes and pressure-specific accessories, and now our products are being applied to mass production facilities in various industries.

Expanding R&D investment to achieve carbon neutrality

In order to contribute to carbon neutrality, HIFLUX has researched and developed manual valves for hydrogen refueling stations with pure domestic capital and technology, obtained KS certification, and is currently being supplied to hydrogen refueling station plant sites. It is also developing check valves and pneumatic valves (AOV) KS propulsion and valves for liquefied hydrogen.

In addition, based on its technology related to high-pressure piping for hydrogen refueling stations, it was selected as a hydrogen specialized company by the Ministry of Trade, Industry and Energy in 2024. We will continue to do our best to contribute to the development of the hydrogen industry through steady investment and marketing.

We will always listen to our customers' voices and contribute to productivity and quality improvement through continuous product improvement and service provision, and strive to become HIFLUX that can grow and develop together with our customers.

Thank you.

HIFLUX Co., Ltd. | CEO *Kim Hyeon Hyo*

Overview

Company name	HIFLUX Co., Ltd.	CEO	Kim Hyeon Hyo
Date of Establishment	May 26, 2010	Business Area	Various valves, hydraulic equipment, pumps, etc
Address	(34037) Da Dong, 361-33, Gapcheon-ro, Yuseong-gu, Daejeon, Republic of Korea	Telephone	+82 042-933-5670 (Extension number 1.Technical Sales Department 2.Design Department 3.Public Relations Department 4.Purchasing Department 5.Production Department)
E-mail	Technical Sales Dept : sales@hiflux.com Promotion Dept : min@hiflux.com	Main Product	Needle Valve, Check Valve, Ball Valve, Relief Valve, Air Operated Valve, High-Temp Valve, Control Valve, Fitting, Fitting Accessory, Tube, Nipple, Regulator, Union, Adapter, Tube Support, Radiating Pipe, Pressure Gauge, Tooling Set, Lok Type Products

HIFLUX HISTORY

- 2024.05. Selected as a 'Hydrogen Specialist Company' by Government
- 2023.10. Acquired 'KS certification for manual valve for hydrogen refueling station' by KGS
- 2023.05. KS Q ISO 45001 certification
- 2023.05. Selected as a 2023 HIFLUX Small Giant Company
- 2021.08. Patent (Double-sealed check valve) acquired
- 2021.07. Received a commendation from KGS
- 2021.03. Patent (High-pressure valve) acquired
- 2020.07. 'Material/Component/Equipment Specialist Company Confirmation' acquired
- 2020.07. Patent (High-temperature/high-pressure valve) acquired
- 2020.06. R&D (Valve and fittings for H70 hydrogen refueling stations)
- 2020.04. Patent (Valves including stem carriers) acquired
- 2020.02. 2 types of valve patents acquired
- 2019.01. Joined the Korea Hydrogen Industry Association
- 2018.09. Moved to new headquarters and factory in Daedeok Techno Valley
- 2018.08. Acquired 'Venture Business Certification' from the Technology Guarantee Fund
- 2018.02. HIFLUX acquired European Standard Certification (CE)
- 2016.09. Self-developed 3 types of high-pressure valves
- 2016.04. Self-developed high-pressure Trunnion Ball Valve
- 2015.11. Self-developed high-pressure relief valve
- 2015.11. Factory expansion
- 2015.10. High pressure manifold block, high pressure ball valve self-development
- 2015.08. High pressure relief valve, high pressure needle valve self-development
- 2014.07. Corporate research institute certification
- 2013.10. KS Q ISO 9001 certification, KS I ISO 14001 certification
- 2010.05. Establishment of HIFLUX

Certification Patents



Certificate of Hydrogen Specialist Company



KS Certificate of Needle valve for Hydrogen Station



ISO 9001, 14001, 45001 (Quality, Environment, Health)



CE Certifications



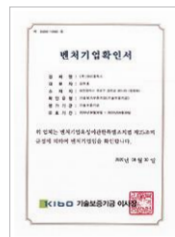
Certificate of Corporate Research Institute



Certificate of Small and Medium Enterprise



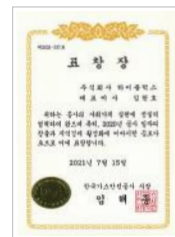
Certificate of Materials/Parts/Equipment Specialist Enterprise



Certificate of Venture Enterprise



Hydrogen Association Membership Card



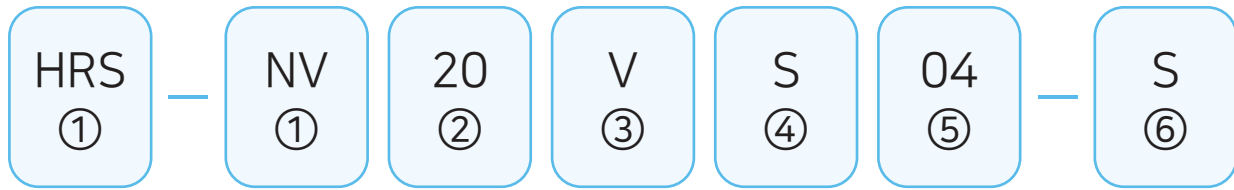
Gas Safety Corporation Award



Patent Certificate / Trademark Registration Certificate

Catalog Numbering System

simply indicate catalog number and specify option or special requirement



① Products	② Pressure	③ Type of Components	④ Material	⑤ Tube Size	⑥ Options
HRS-NV : Hydrogen Refueling System Needle Valve	03 : 3,000 psi	Needle Valve - V : Vee Stem - R : Regulating Stem	S : Stainless Steel 316	02 : 1/8 inch 04 : 1/4 inch	Needle Valve Control Valve Air Operated Valve High Temperature Valve
NV : Needle Valve	07 : 7,500 psi	Check Valve - O : O-Ring Type - B : Ball Type	H : Hastelloy	06 : 3/8 inch	- S : Straight Type - A : Angle Type
CV : Check Valve	15 : 15,000 psi	Ball Valve	HC : Hastelloy C276 Wetted Part	08 : 1/2 inch	- O : 3way/1on Type - T : 3way/2on Type - D : 3way 2stem Type
BV : Ball Valve	20 : 20,000 psi	- 03 : Orifice 4.8mm - 05 : Orifice 8mm	IN : Inconel 600	09 : 9/16 inch 12 : 3/4 inch	Ball Valve - 20-90 : 2way - 3-180 : 3way Switching - 3-90 : 3way Diverting
ABV : Actuator Ball Valve	30 : 30,000 psi	Control Valve Air Operated Valve - O : Normal-Open Type - C : Normal-Closed Type	IN625 : Inconel 625	16 : 1 inch	
AOV : Air Operated Valve	60 : 60,000 psi	Relief Valve - FS : Factory Set - FA : Field Adjustable - PP : Proportional Type	IN825 : Inconel 825	15 : 15A 25 : 25A	Relief Valve Field Adjustable - 1 : 1 Inlet - 2 : 2 Inlet
RV : Relief Valve	100 : 100,000 psi	Fitting - E : Elbow Type - T : Tee Type - C : Cross Type	NI : Nickel 200		Proportional Type - N : NPT Inlet port
SH : Safety Head	150 : 150,000 psi	Fitting Accessory - A : Adapter - S : Sleeve - G : Gland - R : Collar - T : Collet	TI : Titanium		Fitting Accessory - AV : Anti-Vibration Type
CON : Control Valve	N : NPT P : PT				GPR - N : Normal Type - P : Panel Type
HV : High Temperature Valve					
GV : Wellhead Gauge Valve					
BLV : Bleed Valve					
DBBV : Double Block and Bleed Valve					
FT : Fitting					
FA : Fitting Accessory					
MF : Manifold Block					
FATC : Tube Cap					
T : Tube					
N : Nipple					
A : Adapter					
BPR : Back Pressure Regulator					
HPR : High Pressure Regulator					
GPR : General Pressure Regulator					
ABPR : Air Operating Back Pressure Regulator					

Example

- NV60VS06-A : Needle Valve, 60,000 psi, Vee Stem, 3/8", Angle Type.
- NV15VS04-O : Needle Valve, 15,000 psi, Vee Stem, 1/4", 3Way/1on Pressure Type.
- AOV60CS04-A : Air Operated Valve, 60,000 psi, Normal-Closed, 1/4", Angle Type.
- FT60ES06 : Fitting, 60,000 psi, Elbow Type, 3/8".
- FA60GS04-AV : Fitting Accessory, 60,000 psi, Gland, 1/4", Anti-Vibration Type.

Wellhead Gauge Valve

Needle valve to enable removal of tools for sampling and calibration of measuring instruments

Wellhead Gauge Valve is a needle valve that is installed in places where sampling or calibration of measuring tools is required, and enables sampling when used with a Bleed Valve, and enables the removal of measuring tools for calibration. It can be used with a maximum pressure of 30,000 psi, and has one inlet port and three outlet ports, so it can be used by attaching a gauge or bleed valve, depending on the application.

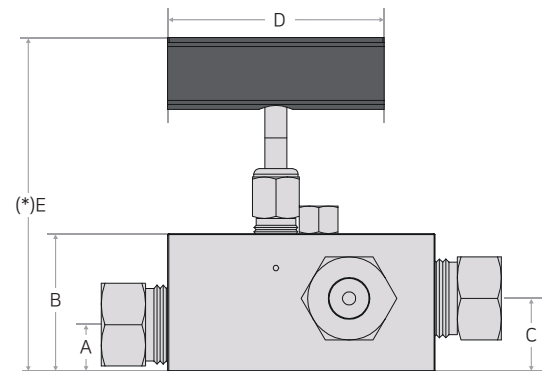
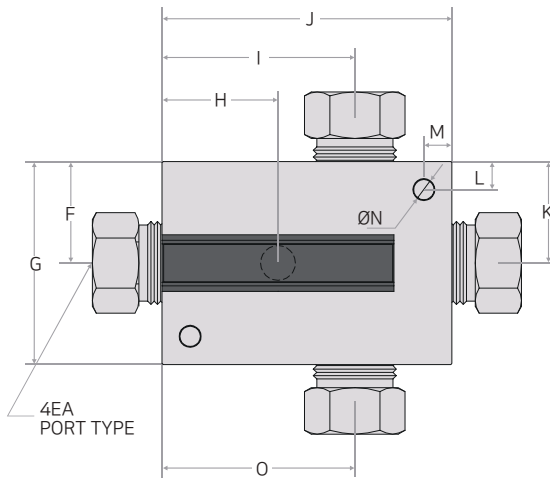
(Application - Line sampling, calibration of measuring tools)

Features

- Tube Size : 1/4", 3/8", 9/16"
- Usable up to 30,000 psi pressure
- Non-rotating stem prevents galling
- Packing designed for reliable sealing
- Metal to Metal Sealing Method
- One Inlet Port and 3 Outlet Ports
- Body made of STS316CW
- Packing located below stem threads



Exploded View & Dimensions



N: Punch Size, (*): Height at which the valve is completely closed

(Unit : mm)

Catalog No	Stem	Port Type	Pressure Rating	Tube Size	Orifice Size	Dimensions														
						A	B	C	D	(*E)	F	G	H	I	J	K	L	M	N	O
GV20VS04	Vee	H2004	20,000 psi	1/4"	3.2	10	50	22.5	80	118.6	25	50	30	51.5	80	25	6.4	6.4	7	51.5
GV20VS06		H2006		3/8"		17	50	26.5	80	121	35	70	40	66.5	100	35	9.7	9.7	7	66.5
GV30VS09		H6009	30,000 psi	9/16"		17	50	26.5	80	121	35	70	40	66.5	100	35	9.7	9.7	7	66.5

All dimensions are for reference only and may differ from actual size.

Bleed Valve

A valve used to vent pressure on a line and collect small samples

Bleed Valve is a valve used in instrumentation devices such as gauge valves to vent the pressure in the line to atmospheric pressure before removing the device, to assist in the calibration of the control device or to collect a small amount of sample.

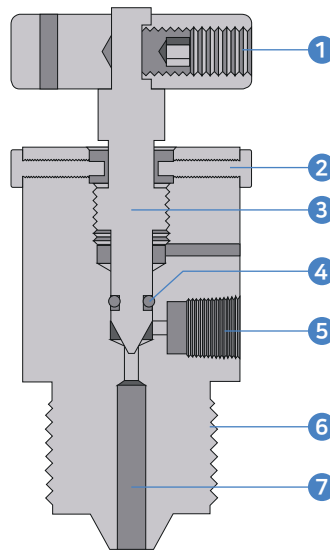
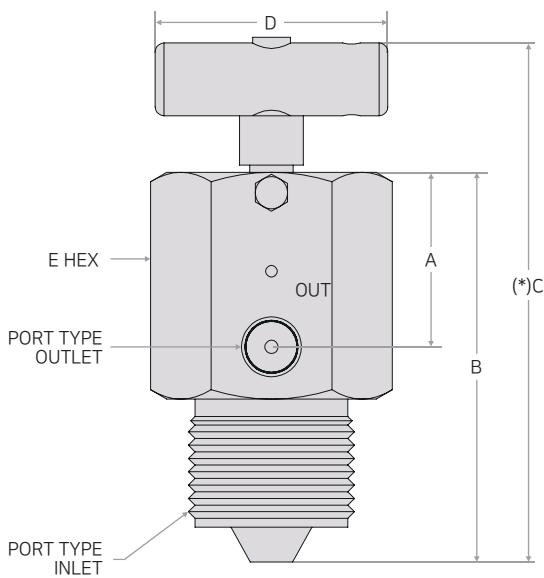
(Application - Pressure relief, small amount of sampling)

Features

- Compact product using one hexagonal material for easy installation
- Usable up to 30,000 psi pressure
- Can be used as a vent for safe plumbing work
- Easy operation with tee handle
- Metal to Metal Sealing Method



Exploded View & Dimensions



No	DESCRIPTION
1	Handle
2	Back Stop Screw
3	Stem
4	Viton O-ring
5	1/8" NPT OUT PORT
6	Screw
7	IN PORT

(*) : Height at which the valve is completely closed

(Unit : mm)

Catalog No	Port Type		Pressure Rating		Dimensions				
	INLET	OUTLET	INLET	OUTLET	A	B	(*)C	D	E(HEX)
BLV20VS04	H2004	1/8" NPT	20,000 psi	10,000 psi	33	59	78.24	40	36
BLV20VS06	H2006					63	82.24		
BLV20VS09	H2009					67	86.24		
BLV30VS04	H6004		30,000 psi	10,000 psi		57	76.24		
BLV30VS06	H6006					65.5	84.74		
BLV30VS09	H6009					70	89.24		

All dimensions are for reference only and may differ from actual size.

Double Block and Bleed Valve

A valve installed on a line using gas or oil to block only the side where a leak occurs for maintenance purposes

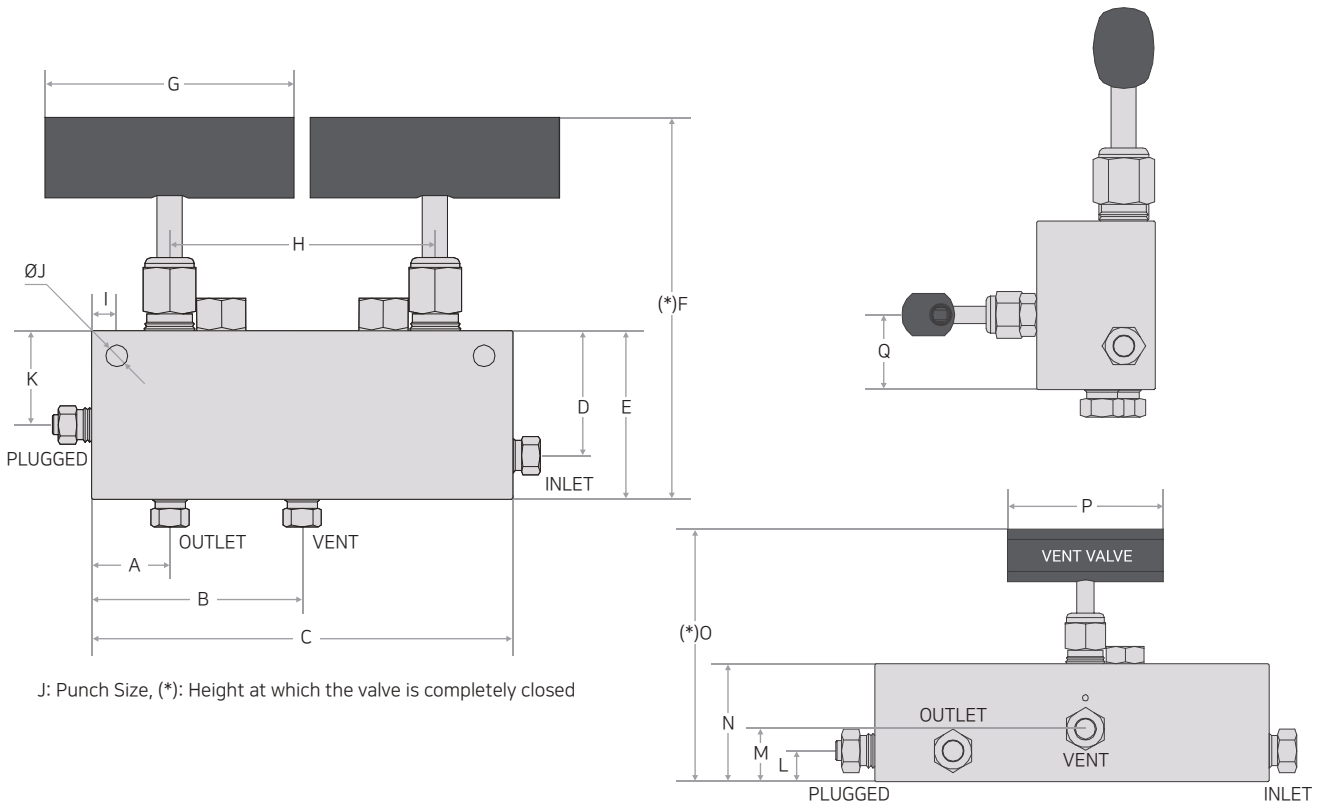
Double Block and Bleed Valve is a valve that is installed on a line using gas or oil to easily check the leaking area and, when a leak occurs, blocks only the leaking area to enable maintenance. It can also be used for chemical injection and sampling on the line. (Application - Pressure monitoring, pressure testing, chemical injection, sampling, drain pipe isolation)

Features

- Tube Size: 1/4", 3/8"
- Non-rotating stem prevents galling
- Packing designed for reliable sealing
- Metal to Metal Sealing method
- Excellent corrosion resistance based on 316 material
- Cone and Thread Connection for leak resistance when using gas and liquid



Exploded View & Dimensions



(Unit : mm)

Catalog No	Stem	Port Type	Pressure Rating	Tube Size	Orifice Size	Dimensions																
						A	B	C	D	E	(*)F	G	H	I	J	K	L	M	N	(*)O	P	Q
DBBV20VS04	Vee	H2004	20,000 psi	1/4"	2.8	25	67.5	135	40	54	120.07	80	85	8	7	30	10	17	38	81.3	50	24
DBBV20VS06		H2006		3/8"	3.2	28	70	140	40	60.5	126.57	80	84	8	7	30	10	17	38	81.3	50	30.5

All dimensions are for reference only and may differ from actual size.

High Temperature Valve

High temperature valve usable up to 500°C

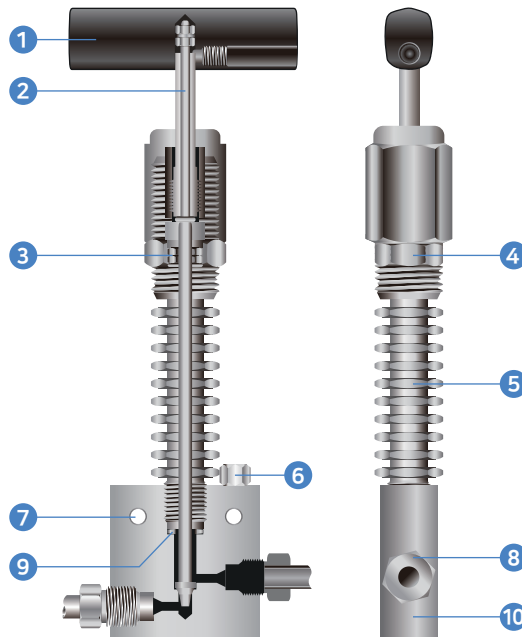
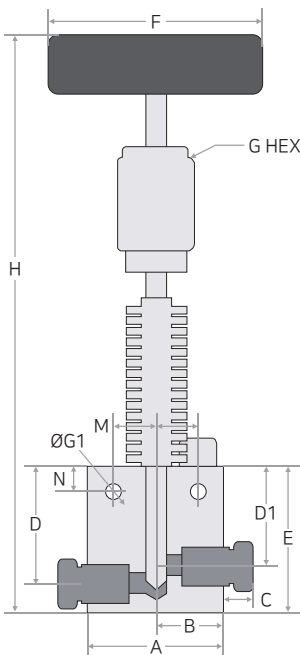
High-temperature valves are products that lower the temperature directly applied to the packing by isolating the packing from the high-temperature area where the fluid flows.

Features

- Up to 20,000 psi
- Non-rotating stem prevents galling
- Packing designed for reliable sealing
- Metal to Metal Sealing method
- Excellent corrosion resistance
- Valve usable up to 500°C
- Packing zone is located outside of hot zone
- Using a heat sink between the packing zone and hot zone increases the contact surface with air and reduces the heat effect on the packing zone



Exploded View & Dimensions



No	DESCRIPTION
1	Handle
2	Stem
3	Leak-proof packing
4	Fixing nut
5	Radiator tube
6	Anti-loosening device
7	Valve fixing hole
8	Connections (Fittings)
9	STS Seal
10	Valve body

(Unit : mm)

Catalog No	Pressure Rating	Port Type	Tube Size	Stem	Orifice Size	Dimensions											Block Thickness	
						A	B	C	D	D1	E	F	G	G1	H	M		N
HV20S04-S	20,000 psi	H2004	1/4"	Vee	2.8	50	25	11	40	30	50	80	28	6	211	16.7	9.7	20
HV20S06-S		H2006	3/8"		5.2	50	25	13	40	30	50	80	28	6	211	16.7	9.7	20
HV20S09-S		H2009	9/16"		9.1	63	31.5	16	60	44	73	80	32	8	235	17.6	12.7	25

G: Mounting hole size using the gland (body plane)
 G1: Mounting hole size using the body (body front)
 H: Height when the valve is completely closed

All dimensions are for reference only and may differ from the actual size.
 NPT, PT standard and specification production possible.
 (please contact customer service center)

Control Valve

A control valve that automatically adjusts the amount of fluid according to the signal from the positioner

The control valve is a valve that automatically controls the flow rate of the fluid according to the purpose by changing the position of the stem and changing the opening/closing rate of the orifice when an operation signal is transmitted to the positioner through an electric signal.

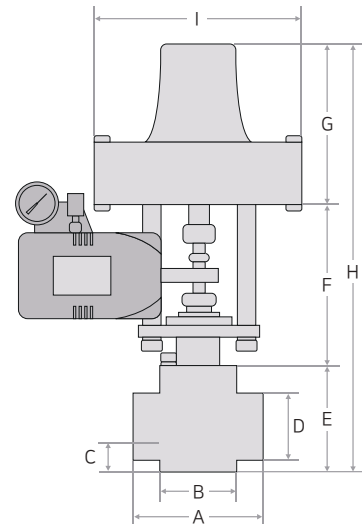
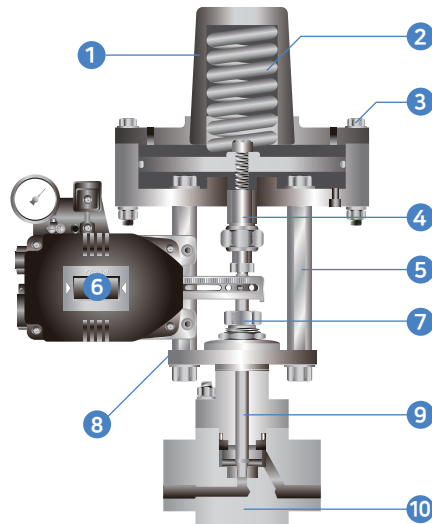
Features

- Minimum air pressure for operation: 5 kgf/cm²
- Non-rotating stem prevents galling
- Packing designed for reliable sealing
- Metal to Metal Seating extends seat life
- Regulating Stem with flow control
- Max Working Pressure: 3,000 psi, 7,500 psi
- Pipe Size: 15A, 25A
- Use of cold-working stainless steel materials



Exploded View & Dimensions

No	Description
1	Spring Housing
2	Spring
3	Nut
4	Connecting ROD
5	Support bar
6	Positioner
7	Stem Seal Gland
8	Bracket
9	Stem
10	Valve Body



(Unit : mm)

Catalog No	Pressure Rating	Pipe Size	Dimensions								
			A	B	C	D	E	F	G	H	I
CON03CS15-S	3,000 psi	15A	136	80	30	21.4	110	166.6	171	448	219
CON03CS25-S	3,000 psi	25A	136	80	30	33.4	110	166.6	171	448	219
CON07CS15-S	7,500 psi	15A	136	80	30	21.4	110	166.6	171	448	219

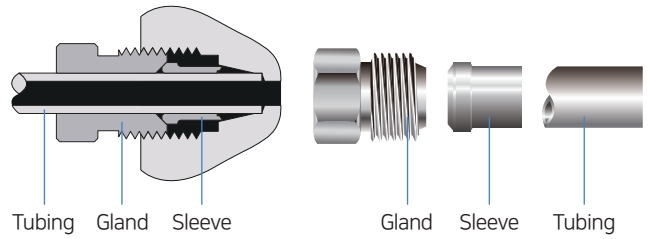
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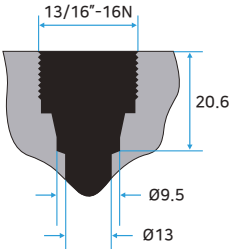
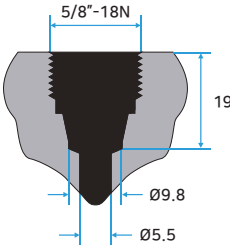
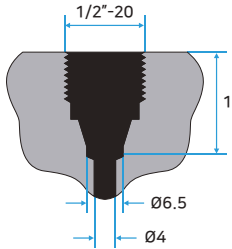
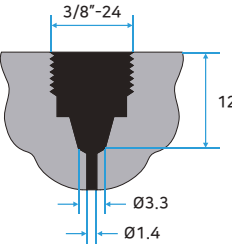
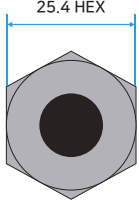
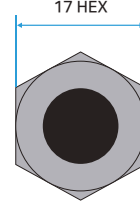
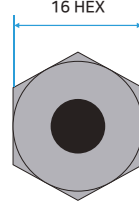
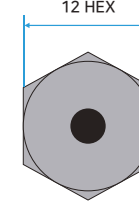
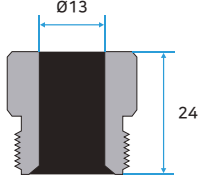
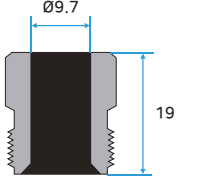
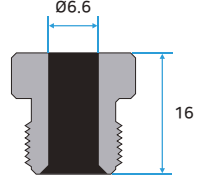
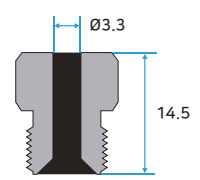
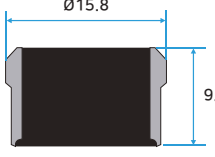
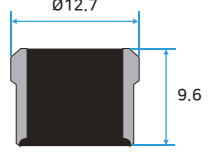
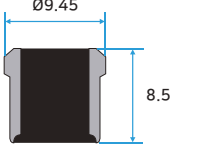
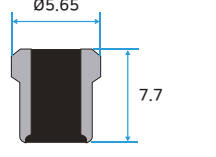
Port Type

Low Pressure Port Type

▶ Sleeve Type Connections - 10,000 psi / 15,000 psi

Sleeve Type is a method of attaching a sleeve inside a gland and can be used on 1/8", 1/4", 3/8", and 1/2" pipes. The tubes used for connecting products can be ordered from HIFLUX Mall and are made of stainless steel to ensure optimal performance in high-pressure environments.



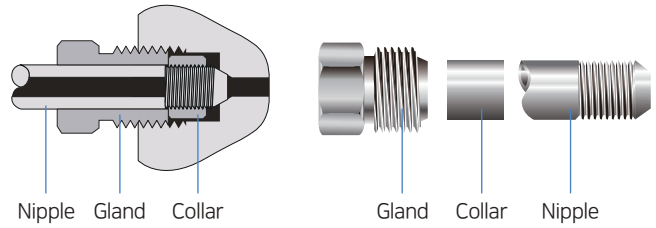
H1008 10,000psi - 1/2"	H1506 15,000psi - 3/8"	H1504 15,000psi - 1/4"	H1502 15,000psi - 1/8"
			
			
			
			

Port Type

Medium Pressure Port Type

Medium Pressure Connections - 20,000 psi

Products are connected using Collar and Nipple within the Gland, and the Nipple required for connecting products can be ordered in the desired length by the user, and can also be processed directly using our tooling set.



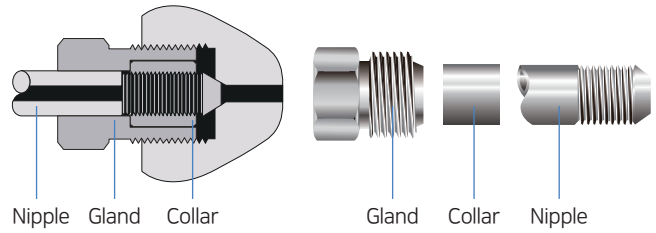
H2004 20,000psi - 1/4"	H2006 20,000psi - 3/8"	H2009 20,000psi - 9/16"	H2012 20,000psi - 3/4"	H2016 20,000psi - 1"
<p>7/16"-20 12.7 60° Ø4.8 Ø2.8</p>	<p>9/16"-18 15.8 Ø7.9 Ø5.2</p>	<p>13/16"-16 19 Ø12.8 Ø7.9</p>	<p>3/4"-14 23.9 Ø15.8 Ø11.1</p>	<p>1-3/8"-12 33.3 Ø22.4 Ø14.3</p>
<p>12 HEX 16</p>	<p>16 HEX 20</p>	<p>22 HEX 25</p>	<p>30 HEX 29</p>	<p>36 HEX 29</p>
<p>Ø9.5 5.5 1/4"-28 LH</p>	<p>Ø11.9 6.4 3/8"-24 LH</p>	<p>Ø18.3 8 9/16"-18 LH</p>	<p>Ø23.8 9.5 3/4"-16 LH</p>	<p>Ø31 12.5 1"-14 LH</p>
<p>Ø6.35 26.5 Ø9.3 Ø3.57</p>	<p>Ø9.53 32 Ø11.7 Ø6.35</p>	<p>Ø14.29 42 Ø18.1 Ø10.32</p>	<p>Ø19.05 45.5 Ø23.6 Ø14.29</p>	<p>Ø25.4 60 Ø30.7 Ø18.26</p>
<p>1/4"-28 LH 9 Ø3.57 Ø2.77</p>	<p>3/8"-24 LH 11 Ø6.35 Ø5.16</p>	<p>9/16"-18 LH 13 Ø10.32 Ø7.92</p>	<p>3/4"-16 LH 16 Ø14.29 Ø11.12</p>	<p>1"-14 LH 20 Ø18.26 Ø14.27</p>

Port Type

High Pressure Port Type

High Pressure Connections - 30,000 psi / 60,000 psi

The Nipple required for connection between the products by using collar and Nipple in the Gland can be ordered by user's desired length. you can also process directly using our Tooling Set tool. this cone and threaded connection is the standard for easy and fast high-pressure equipment configuration with optimum sealing and reliable performance for both liquid and gas at high pressure and temperature.



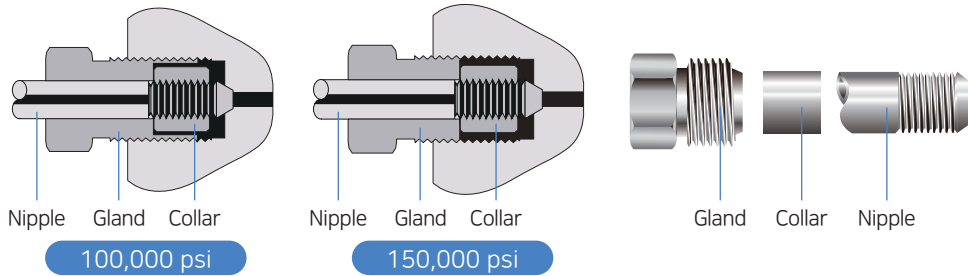
H3002 30,000psi - 1/8"	H3016 30,000psi - 1"	H6004 60,000psi - 1/4" (M : Metric)	H6006 60,000psi - 3/8" (M : Metric)	H6009 60,000psi - 9/16" (M : Metric)

Port Type

Ultra High Pressure Port Type

Ultra High Pressure Connections - 100,000 psi / 150,000 psi

The product is connected using a collar and nipple within the gland, and the corresponding pipe sizes are as follows. This Cone and Thread method connection is the optimal sealing method, and it provides reliable performance for both liquids and gases at high pressures and temperatures, and is the standard for easy and quick high-pressure equipment configuration.



H10004 100,000psi - 1/4"	H10006 100,000psi - 3/8"	H10009 100,000psi - 9/16"	H15006 150,000psi - 3/8"

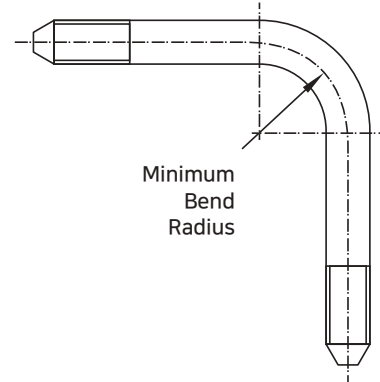
Technical Information

Recommended Torque

Recommended Minimum Bend Radius

Tubing Size O.D. x I.D. in. (mm)	Tubing Pressure psi (bar) @ R.T.	Recommended Minimum Bend Radius in. (mm)
1/4 inch (6.35 x 2.77)	20,000 (1,370)	1.25 (31.8)
3/8 inch (9.53 x 5.16)	20,000 (1,370)	1.75 (44.5)
9/16 inch (14.29 x 7.92)	20,000 (1,370)	2.63 (66.8)
3/4 inch (19.05 x 11.13)	20,000 (1,370)	3.50 (88.9)
1 inch (25.4 x 14.27)	20,000 (1,370)	4.63 (117.6)
1 inch (25.4 x 11.13)	30,000 (2,060)	4.63 (117.6)
1/4 inch (6.35 x 2.11)	60,000 (4,130)	1.25 (31.8)
3/8 inch (9.53 x 3.18)	60,000 (4,130)	1.75 (44.5)
9/16 inch (14.29 x 4.78)	60,000 (4,130)	2.63 (66.8)

All dimensions are for reference only and may differ from actual size.



HIFLUX Needle Valve Assembly Torque Chart

Valve Pressure Series	Port Type	Tube Size (PSI)	Stem Gland HEX (mm)	Minimum Torque (kg.f-cm)
10,000 PSI 15,000 PSI	H1502	1/8 Inch (15,000)	13	170
	H1504	1/4 Inch (15,000)	17	550
	H1506	3/8 Inch (15,000)	17	550
	H1008	1/2 Inch (15,000)	24	800
20,000 PSI	H2004	1/4 Inch (20,000)	17	550
	H2006	3/8 Inch (20,000)	17	550
	H2009	9/16 Inch (20,000)	22	1100
	H2010	3/4 Inch (20,000)	30	3,500
	H2012	1 Inch (20,000)	41	5,000
30,000 PSI	H3002	1/8 Inch (30,000)	13	500
	H6004	1/4 Inch (30,000)	20	550
	H6006	3/8 Inch (30,000)	20	550
	H6009	9/16 Inch (30,000)	20	550
60,000 PSI	H6004	1/4 Inch (60,000)	20	670
	H6006	3/8 Inch (60,000)	20	670
	H6009	9/16 Inch (60,000)	20	670
100,000 PSI	H10004	1/4 Inch (100,000)	24	1250
	H10006	3/8 Inch (100,000)	24	1250
	H10009	9/16 Inch (100,000)	24	1250
150,000 PSI	H15006	3/8 Inch (150,000)	24	1870
10,000 & 15,000 PSI NPT TYPE	HFN02	1/8 Inch (15,000)	13	500
	HFN04	1/4 Inch (15,000)	17	550
	HFN06	3/8 Inch (15,000)	17	550
	HFN08	1/2 Inch (15,000)	22	1100
	HFN10	3/4 Inch (10,000)	41	-
	HFN12	1 Inch (10,000)	41	-

Torque values apply to glass-impregnated Teflon packaging and may vary by ±10%



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