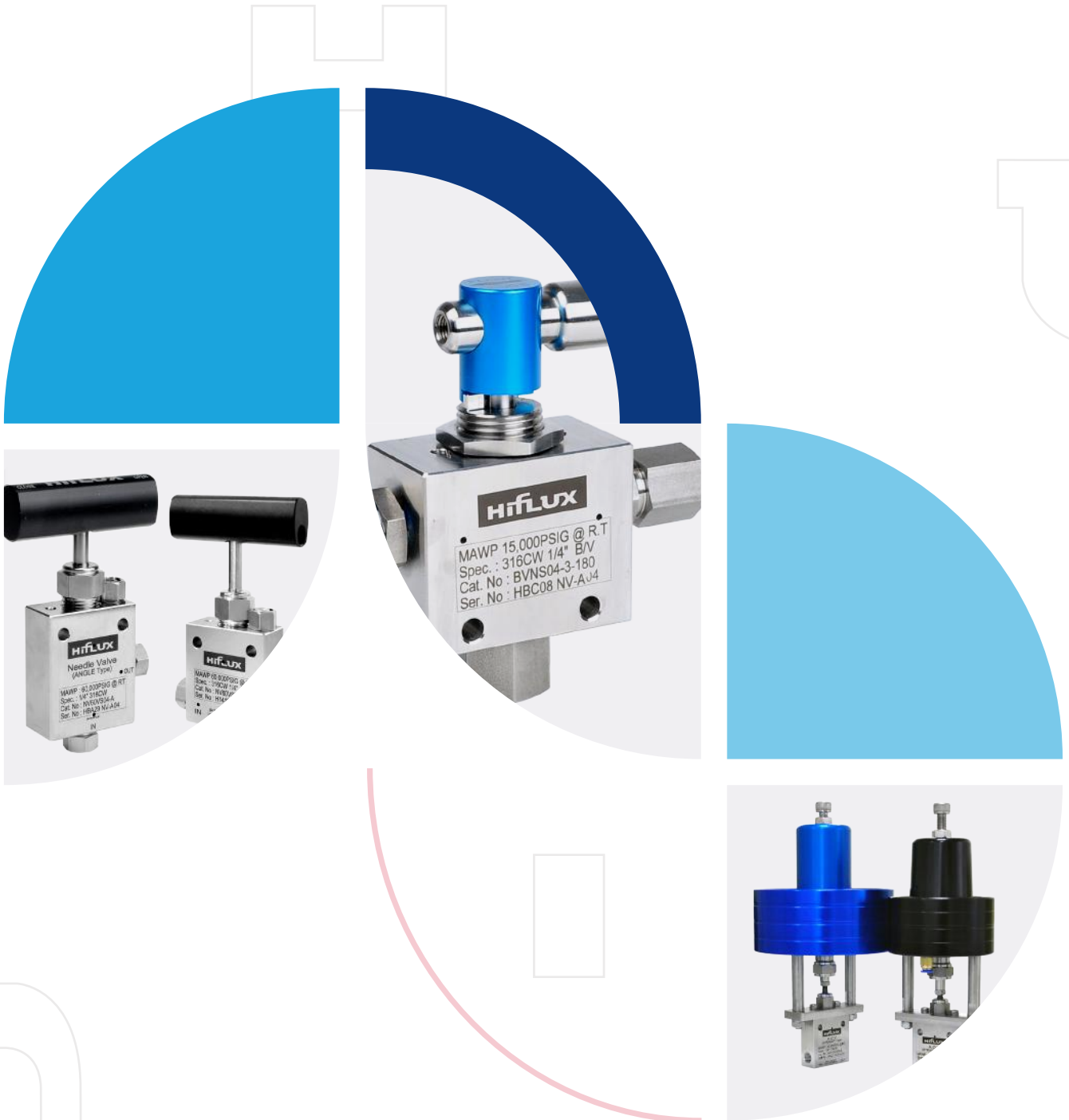


HIFLUX

High Pressure Valves & Fittings



HIFLUX is based on the accumulated precision engineering & technological know-hows, high pressure equipment, required for plant valve, fitting, pressure regulator etc., manufacturing and sells.

**HIGH SERVICE
HIGH QUALITY
HIGH PERFORMANCE!**

High Pressure equipment



CEO'S Message



Based on years of sophisticated engineering technology, Hiflux has been working hard to localize high-temperature, high-pressure industries and open new markets and developed a range of high-pressure products to meet the needs of our customers through constant research and facility investment.

Our products are applied to general pressure to special industry applications which require up to 150,000psig ultra high pressure.

In order to become a global leader in ultra-high pressure, We will do our best to become 'HIFLUX' a company that listens carefully to customers and consistently improves products and service and contributes to enhancing quality and productivity in order to develop and grow together with our customers. Thank you.

CEO ***Kim Hyeon-hyo***

HIGH PRESSURE HISTORY

PASSION FOR THE FUTURE, CONSTANT CHALLENGE AND INNOVATION

Our company has been recognized for its technology by succeeding in various localization of high-pressure instruments which are difficult to manufacture in Korea through continuous research and development and facility investment for new market exploration in ultra-high pressure instruments material field. Based on technology and price competitiveness differentiated from overseas manufacturers such as Europe and USA, we are growing into a global brand by supplying domestic OEM and supplying OEM with overseas Global Waterjet manufacturer.



DEVELOP VARIOUS HIGH PRESSURE VALVES EXPAND OVERSEAS MARKET

- Signed supply contract with Denmark and France.
- Development of High Pressure Bleed Valve, Wellhead Gauge Valve, Double Block & Bleed Valve.
- Development of high pressure ball valve 2Way / 3Way Trunnion Ball Valve.
- Development of high pressure relief valve (factory set, field adjustable, proportional type).
- Development of high pressure needle valve 3way 2stem valve.
- Signed OEM supply contract with Global Waterjet Pump manufacturer in China and Austria.
- Russia and Singapore signed contract for supply of goods.



Certificate of patent
10-2136732



Certificate of patent
10-2103737



Certificate of patent
10-2080599



Certificate of patent
10-2080603



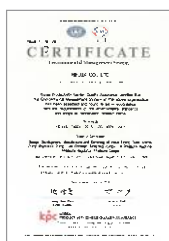
Certificate of patent
10-2225407



Certificate of patent
10-1151733



ISO 9000



ISO 14001



European Integrated
Standard Certification (CE)



Research laboratory
certification



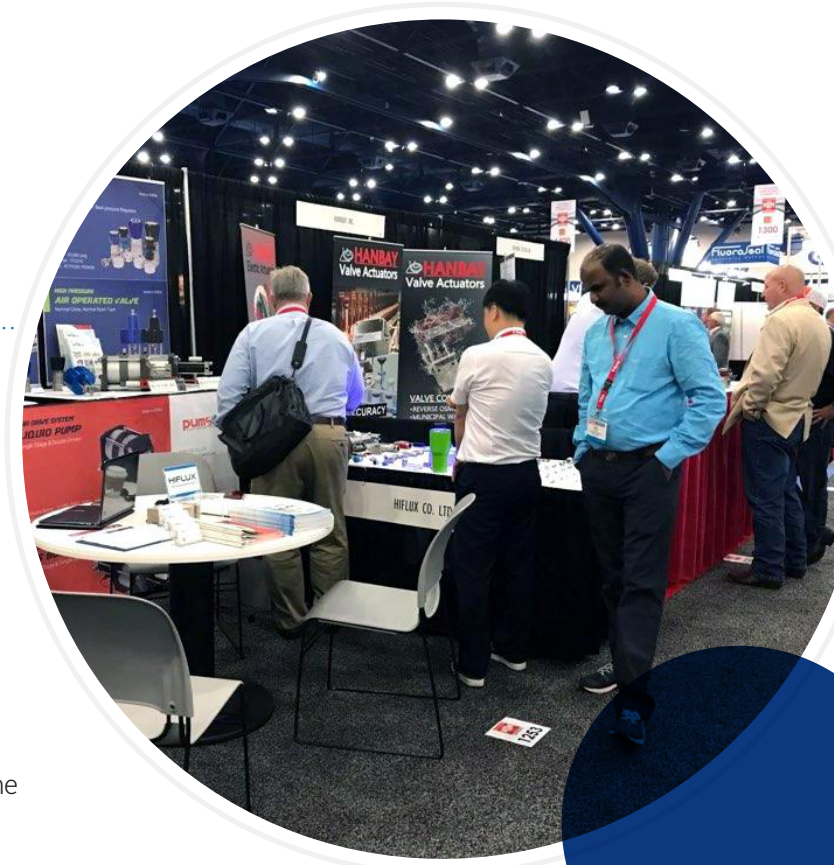
Venture company
confirmation



Trademark
(HIFLUX)

OPENING THE ONLINE MARKET PARTICIPATING IN THE DOMESTIC AND OVERSEAS FAIR

- Participated in Valve World EXPO & CONFERENCE exhibition in USA and China.
- Participated in China International Petrochemical Technology Exhibition (Cippe).
- Participated in international parts and materials industry exhibition / International nanotechnology exhibition / International marine plant exhibition every year.
- Join Open Market(Auction, Gmarket, 11st, Naver Shopping, ebay).
- Opened 'HIFLUX Shopping Mall' for the first time in the high pressure piping materials industry.



ESTABLISHED R & D CENTER HIGH PRESSURE TECHNOLOGY LOCALIZATION

- Transfer of head office and factory to Daedeok Techno Valley.
- Acquiring 'Venture Company Certification'.
- Acquired European Integrated Standard Certification (CE).
- Acquired ISO 9001, ISO 14001 certification.
- Trademark Registration 'HIFLUX, FLUXLOK'.
- Patent Registration (7 types of high pressure valves).
- Establishment and certification of affiliated research institute.

Catalog Numbering System



Simply indicate catalog number and specify option or special requirement

NV	60	V	S	06	A
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Product Value	Pressure	Type of Components	Material	Tube Size	Options
NV : Needle Valve	03 : 3,000psi	Needle Valve V : Vee Stem R : Regulating Stem	S : Stainless steel 316	02 : 1/8"	Needle Valve Control Valve Air Operated Valve
CV : Check Valve	07 : 7,500psi	Check Valve O : O-Ring Type B : Ball Type	H : Hastelloy	04 : 1/4"	S : Straight Type A : Angle Type O : 3way/1on pressure Type T : 3way/2on pressure Type
BV : Ball Valve	15 : Sleeve Type Refer to Valve Select	Ball Valve 03 : Orifice 4.8mm 05 : Orifice 8mm	HC : Hastelloy C276 wetted part	06 : 3/8"	
AOV : Air Operated Valve	20 : 20,000psi	Control Valve Air Operated Valve O : Normal-Open Type C : Normal-Closed Type	IN : Inconel 600	08 : 1/2"	Ball Valve 2-90 : 2WAY 3-180 : 3WAY Switching Type 3-90 : 3WAY Diverting Type
CON : Control Valve	30 : 30,000psi	Relief Valve FS : Factory Set FA : Field Adjustable PP : Proportional Type	IN625 : Inconel 625	09 : 9/16"	Fitting Accessory AV : Anti-Vibration Type
GV : Wellhead Gauge Valve	60 : 60,000psi	Fitting E : Elbow Type T : Tee Type C : Cross Type	IN825 : Inconel 825	12 : 3/4"	
BLV : Bleed Valve	100 : 100,000psi		NI : Nickel 200	16 : 1"	GPR N : Normal Type P : Panel Type
DBBV : Double Block & Bleed Valve	150 : 150,000psi		TI : Titanium	15 : 15A 25 : 25A	
RV : Relief Valve					
FT : Fitting					
FA : Fitting Accessory					
MF : Manifold Block					
T : Tube					
N : Nipple					
GPR : General Pressure Regulator					
HPR : High Pressure Regulator					
BPR : Back Pressure Regulator					
AD : Adapter					
TS : Tube Support					

※ Catalog number can be changed without any notification

Example

- NV60VS06-A : Needle Valve, 60,000psi, Vee Stem, 3/8", Angle Type.
- NV15VS04-O : Needle Valve, 15,000psi, Vee Stem, 1/4", 3Way/1on Pressure Type.
- CON07CS15-S : Control Valve, 7,500psi, Normal-Closed, 15A, Straight Type.
- AOV60CS04-A : Air Operated Valve, 60,000psi, Normal-Closed, 1/4", Angle Type.
- FT60ES06 : Fitting, 60,000psi, Elbow Type, 3/8".
- FA60GS04-AV : Fitting Accessory, 60,000psi, Gland, 1/4", Anti-Vibration Type.

08. Relief Valve - Factory Set

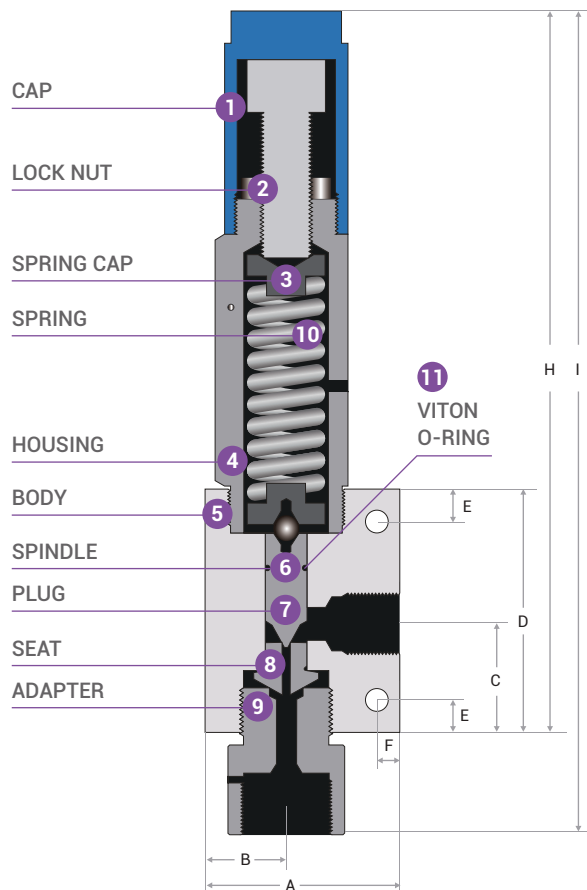


Safety valve that protects the system by venting the pressure when over pressure occurs

It vents the pressure when the pressure is over than setting pressure and protects the pressure the system and equipment with venting. it hold the lower pressure than setting pressure after venting. Supply with set pressure (Customer requirement) with sealing tag.

I Features

- Pressure Range : 3,000psi ~ 60,000psi
- Setting Pressure Tolerance : $\pm 8\%$
- Inlet Port : H6009 (Orifice size : $\varnothing 6.4$)
- Outlet Port : 1/2" NPT
- Standard Material : Stainless Steel
- O-ring Material on Piston : Viton
- Max Operating Temperature : 160°C



(Unit : mm)

Catalog No.	Port Type		Orifice Size	Pressure Range(PSI)		Dimensions									Block Thickness
	Inlet	Outlet		Minimum	Maximum	A	B	C	D	E	F	G	H	I	
RV11FSS09	H6009	1/2" NPT	6.2	3,000	11,000	60	25	33.5	75	10	7	7	292.5	323.87	44
RV21FSS09			4.5	11,000	21,000										
RV30FSS09			3.9	21,000	30,000										
RV45FSS09			3.2	30,000	45,000										
RV60FSS09			2.6	45,000	60,000										

As all sizes are for reference, they can be changed without any notification.

09. Relief Valve - Field Adjustable



Protect the system from overpressure by venting when the pressure exceeds a set value

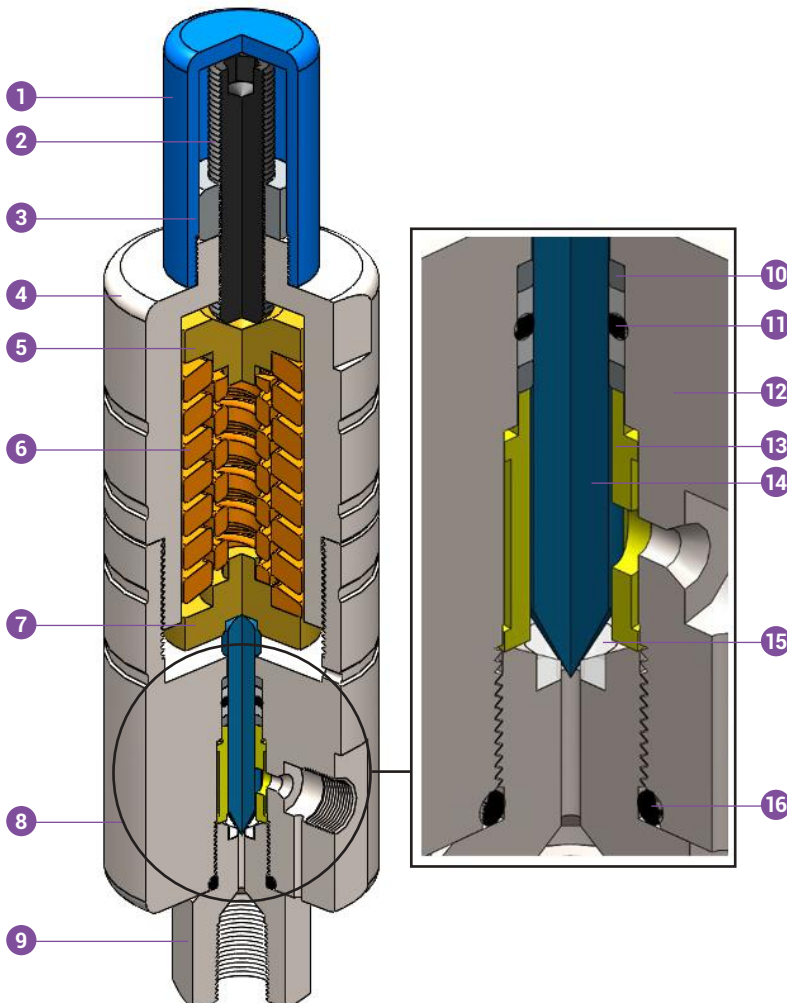
Relief valve Field Adjustable protect the system from overpressure by venting when the pressure exceeds a set value, Easy to set pressure with using bolt on the top.

I Features

- Pressure Range : 1,000psi ~ 10,000psi, 10,000psi ~ 20,000psi
- Setting Pressure Tolerance : $\pm 8\%$
- Max Working Temperature : $-20^{\circ}\text{C} \sim 65^{\circ}\text{C}$ (NYLON) / $-20^{\circ}\text{C} \sim 160^{\circ}\text{C}$
- Inlet Port : 1/4" NPT, H2004
- Outlet Port : 1/4" NPT
- Orifice Size : $\phi 1.8$
- Possible to connect many other types with Adapter.
- Provide long life cycle with using spring and soft seat.

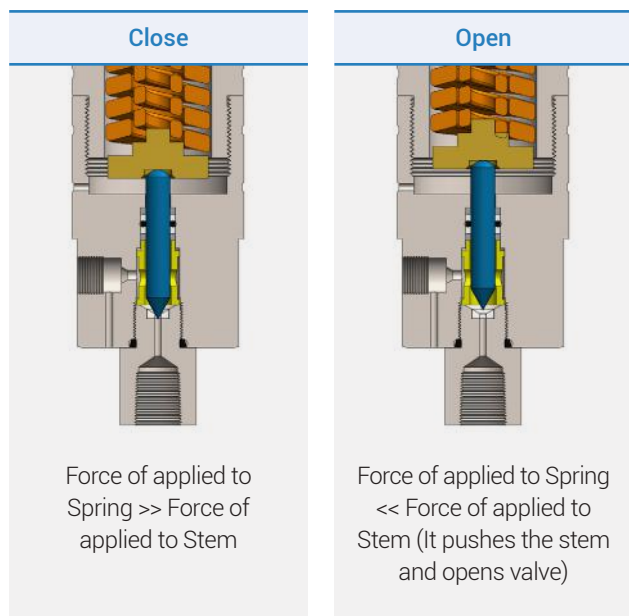


I Table Of Material



No.	DESCRIPTION	MATERIAL
1	CAP	AL6061
2	Socket Set Screw	SCM435
3	NUT	STS304
4	HOUSING 1	STS304
5	SPRING GUIDE 1	STS304
6	SPRING	Carbon Steel
7	SPRING GUIDE 2	STS304
8	HOUSING 2	STS316CW
9	SEAT GLAND	STS316CW
10	SUS SEAL	STS316CW
11	O-RING	Viton
12	GLASS SEAL	GLASS TEFLON
13	STEM GUIDE	STS316CW
14	STEM	STS630
15	SEAT	PEEK
16	O-RING	Viton

I HOW & WHERE



HOW

Relief valve opens stem when the pressure exceeds a set pressure and closes when the pressure falls below.

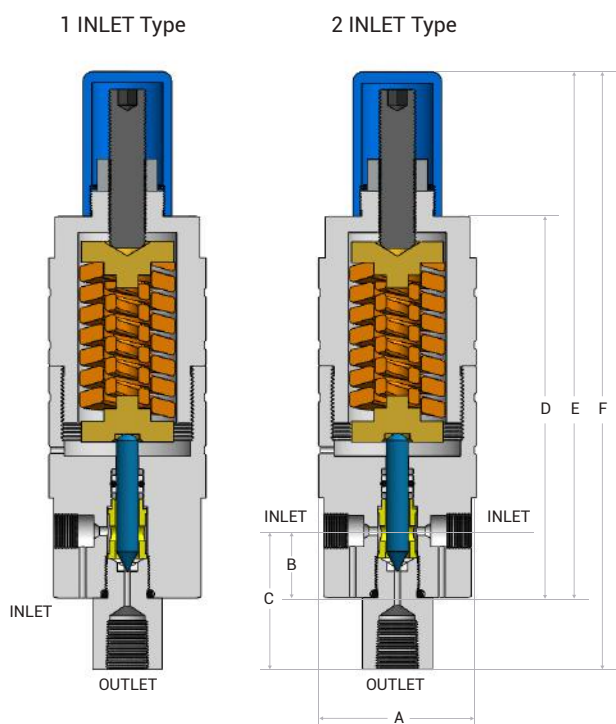
WHERE

- To protect the equipment form the over pressure.
- In the system which control the overpressure by heat expansion.
- When the low drain rates is not the problem point in high pressure.
- When the system requires "bubble tight" sealing.

WHERE NOT

- Pressure ~ below 1000 psig.
- If the system requires to increase venting or drain rates when the pressure rises.
- If the back pressure occurs at the drain port.
- High corrosive fluids, liquid N2 or any other fluids that defect the valves.

I Dimension Table



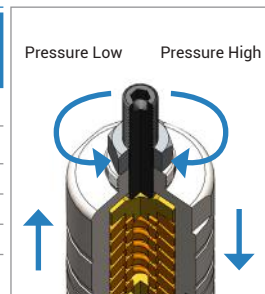
I Technical Features

Feature	RV10FAS	RV20FAS
Pressure Range (PSIG)	1,000 ~ 10,000	10,000 ~ 20,000
Inlet Port	1/4" NPT	H2004
Outlet Port	1/4" NPT	
Orifice Size	1.8mm	
CV	0.12	
Packing Material	PEEK	
O-ring Material	Viton	
Max Working Temperature	-20°C~65°C (NYLON) / -20°C~160°C	
Hexagon Wrench Tool Size	5mm Use a ranch with six angles	6mm Use a ranch with six angles
Adjust Dimension Tolerance ±%	±8%	

I Set Pressure

Catalog No.	SET PRESSURE (psi)	Spring Compression Length(mm)
1,000~10,000psi RV10FAS04	4000	1.92
	8000	3.84
10,000 ~ 20,000psi RV20FAS04	12000	5.76
	16000	7.68
	20000	9.06

As all values are for reference only, they can be changed without any notification.



(Unit : mm)

Catalog No.	Port Type			Orifice Size	Pressure Range(PSI)		Dimensions						
	1 Inlet	2 Inlet	Outlet		Minimum	Maximum	A	B	C	D	E	F	G
RV10FAS04-1	1/4" NPT		1/4" NPT	1.8	1,000	10,000	38	21	43.1	112.5	158	180.1	28
RV10FAS04-2		1/4" NPT											
RV20FAS04-1	H2004		1/4" NPT										
RV20FAS04-2		H2004											

As all sizes are for reference, they can be changed without any notification.

10. Relief Valve - Proportional Type



A valve that gradually opens as the system's internal pressure increases

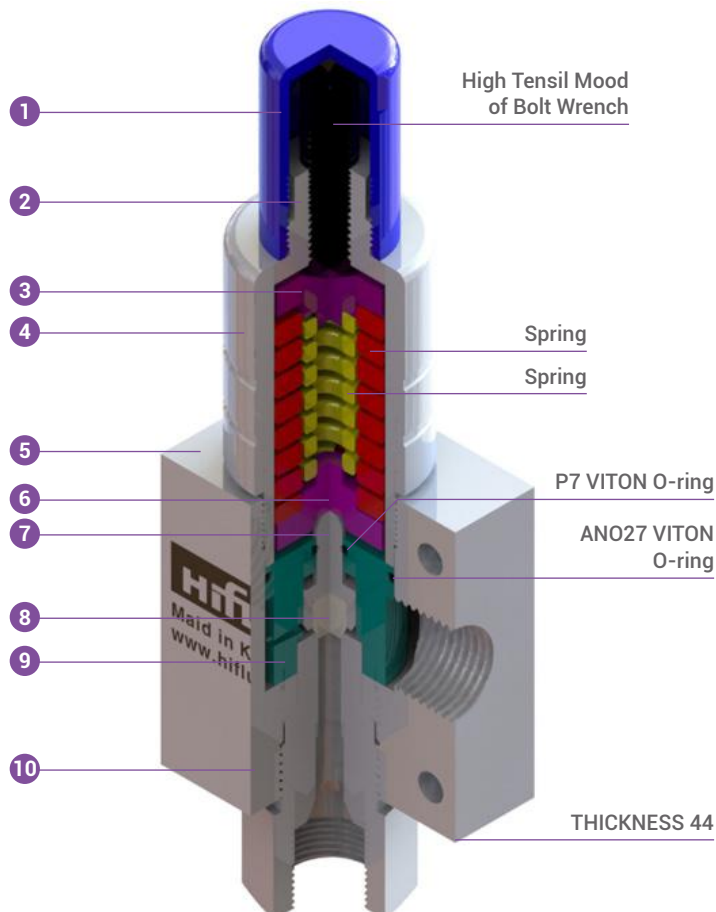
Proportional type is a progressively opened as the system pressure increase. It is useful in the system which the pressure increase rapidly or in the high flow system due to vent flow is increased as much as system pressure is increased.

I Features

- Pressure Range : 1,000psi ~ 15,000psi, 1,000psi ~ 20,000psi
- Setting Pressure Tolerance : $\pm 8\%$
- Inlet Port : 1/2" NPT, H2009 (9/16")
- Outlet Port : 1/2" NPT
- Orifice Size : $\phi 6.3$
- Standard Material : SUS
- O-ring Material on Piston : Viton
- Max Operating Temperature : 160°C
- Possible to connect many other types with Adapter.
- Provide long life cycle with using spring and soft seat.
- Supply with set pressure (Customer requirement) with sealing tag.



I Table of Material

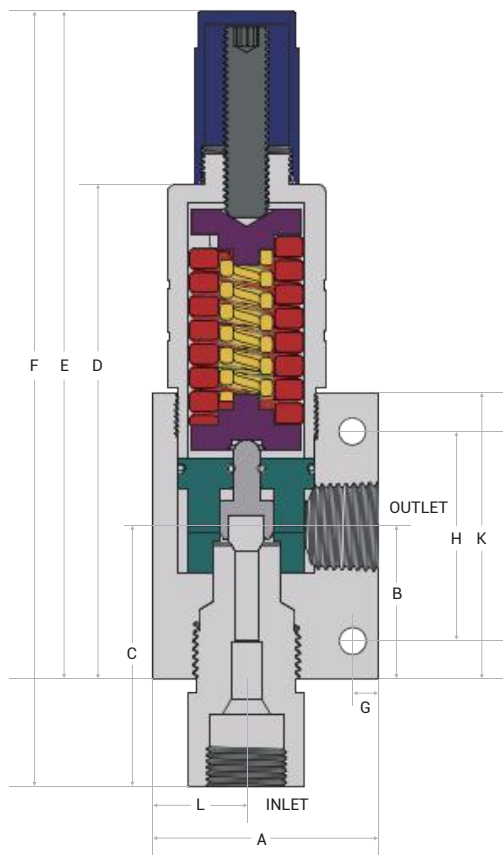


No.	DESCRIPTION	MATERIAL
1	CAP	AL6061
2	SUS NUT	STS304
3	SPRING GUIDE 1	STS304
4	HOUSING	STS304
5	BODY	STS316CW
6	SPRING GUIDE 2	STS304
7	STEM	STS630
8	SEAT	PEEK
9	STEM GUIDE	STS316CW
10	BOTTOM CONNECTOR	STS316CW

I Technical Features

Feature	RV15PPS08N	RV20PPS09
Pressure Range (PSIG)	1,000~15,000	10,000~20,000
Inlet Port	1/2" NPT	H2009 (9/16")
Outlet Port	1/2" NPT	
Orifice Size	ø 6.3	
Packing Material	PEEK	
O-ring Material	Viton	
Max Working Temperature	-20°C~160°C	
Hexagon Wrench Tool Size	6mm Use a ranch with six angles	
Adjust Dimension Tolerance ±%	±8%	

I Specification



(Unit : mm)

Catalog No.	Port Type		Orifice Size	Pressure Range(PSI)		Dimensions											
	Inlet	Outlet		Minimum	Maximum	A	B	C	D	E	F	G	H	I	J	K	I
RV15PPS08N	1/2" NPT	1/2" NPT	6.3	1,000	15,000	60	40	68.2	130	175.5	203.7	7	55	28	7	75	25
RV20PPS09	H2009 (9/16")	1/2" NPT	6.3	1,000	20,000	60	40	68.2	130	175.5	203.7	7	55	28	7	75	25

As all sizes are for reference, they can be changed without any notification.

I HOW & WHERE

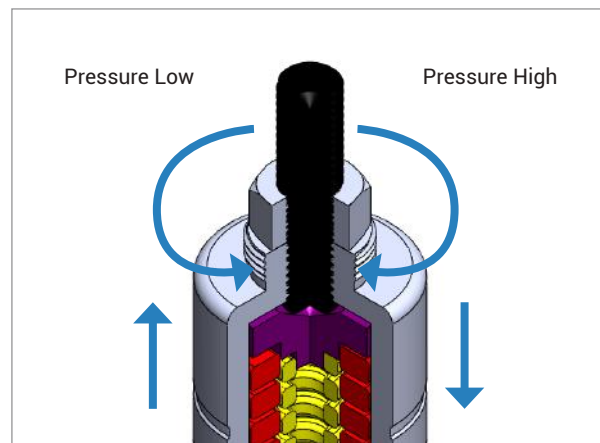
WHERE

- To protect the equipment form the over pressure.
- In the system which control the overpressure by heat expansion.
- When the low drain rates is not the problem point in high pressure.
- When the system requires "bubble tight" sealing.

WHERE NOT

- Pressure ~ below 1,000psi.
- If the system requires to increase venting or drain rates when the pressure rises.
- If the back pressure occurs at the drain port.
- High corrosive fluids, liquid N2 or any other fluids that defect the valves.

I Set Pressure

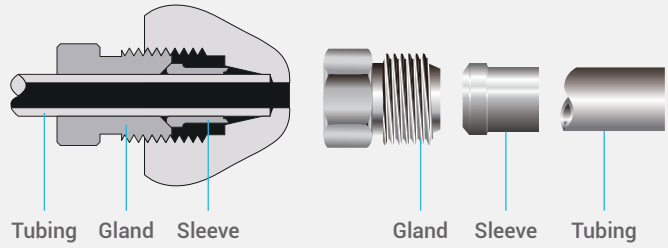


- The pressure of inlet port effects set pressure.
- Turn right to increase set pressure.
- Turn left to decrease set pressure.
- A tolerance value : ± 8%.

Port Type Low Pressure Port Type

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

Sleeve Type can be used in 1/8", 1/4", 3/8", 1/2" piping by fastening sleeve in gland. Tube required for connection between products can be ordered from Hiflux. Stainless steel material ensures optimum performance in high pressure environment.

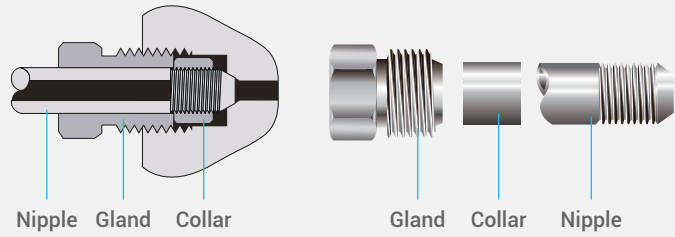


H1008 10,000psi - 1/2"	H1506 15,000psi - 3/8"	H1504 15,000psi - 1/4"	H1502 15,000psi - 1/8"

Port Type Medium Pressure Port Type

Medium Pressure Connections - 20,000 psi

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.

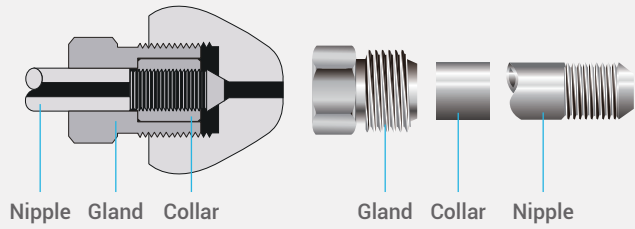


H2004 20,000psi - 1/4"	H2006 20,000psi - 3/8"	H2009 20,000psi - 9/16"	H2012 20,000psi - 3/4"	H2016 20,000psi - 1"

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.

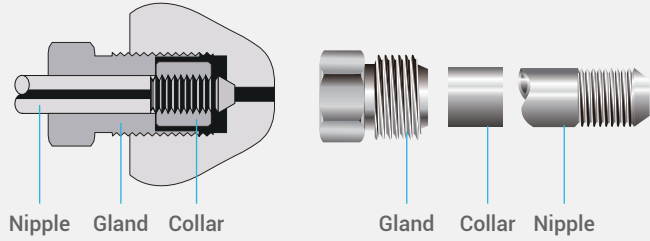


H3002 30,000psi - 1/8"	H3016 30,000psi - 1"	H6004 60,000psi - 1/4" (M : Metric)	H6006 60,000psi - 3/8" (M : Metric)	H6009 60,000psi - 9/16" (M : Metric)

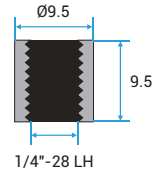
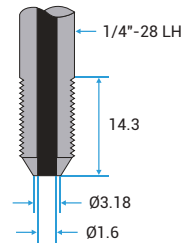
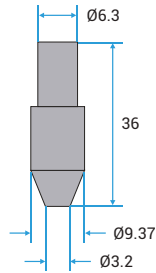
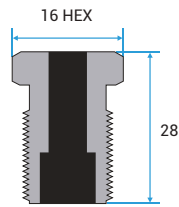
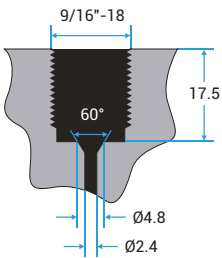
Port Type Ultra High Pressure Port Type

Ultra High Pressure Connections - 100,000 psi

The product is tightened with collar and nipple in Gland. The applicable pipe size is as follows. 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.



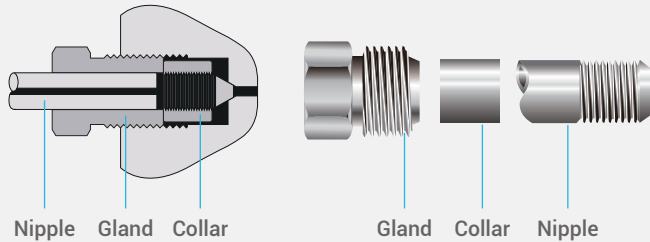
H10004 100,000psi - 1/4"



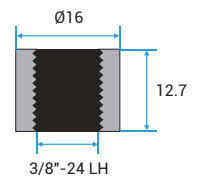
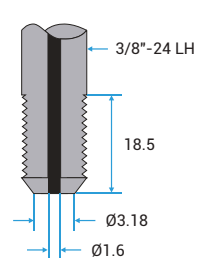
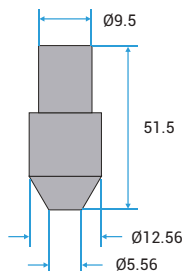
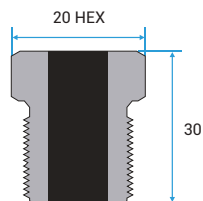
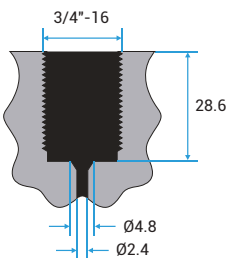
Port Type Ultra High Pressure Port Type

Ultra High Pressure Connections - 150,000 psi

The product is tightened with collar and nipple in Gland. The applicable pipe size is as follows. 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.



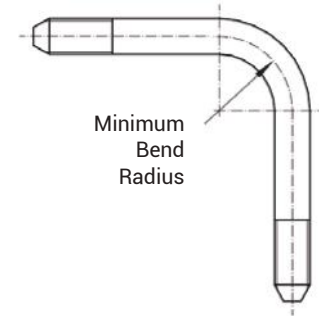
H15006 150,000psi - 3/8"



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)



As all sizes are for reference, they can be changed without any notification.

HIFLUX - Recommended Torque (Valves Minimum Packing Stem Gland Torque)

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 (10,000)	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
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	-

All dimensions and values are for reference only and subject to change.

HiFLUX[®]

HIFLUX Co., LTD

Address. 361-23, Gapcheon-ro, Yuseong-gu, Daejeon, 34037, Republic of Korea
Tel. +82-42-933-5670 Fax. +82-0303-0799-1241 E-mail. sales@hiflux.com
Web Site. www.hiflux.com Shopping Mall. www.hifluxshop.com