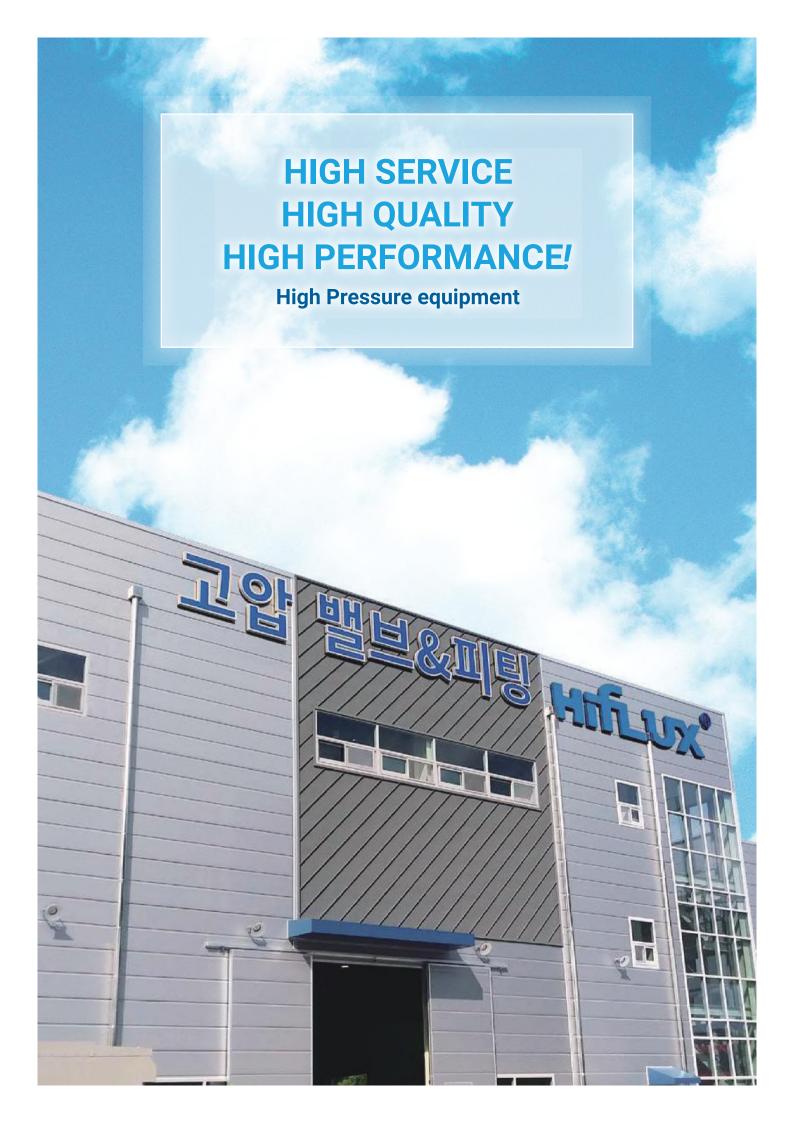


HIFLUX is based on the accumulated precision engineering & technological know-hows, high pressure equipment, required for plant valve, fitting, pressure regulator etc., manufacturing and sells.





### **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



ISO 9000



10-2103737



ISO 14001



Certificate of patent 10-2080599



Standard Certification(CE) (Needle Valve)



Certificate of patent 10-2080603



European Integrated Standard Certification(CE) (Relief Valve 3 Types)



Certificate of patent 10-2225407



Research Laboratory Certification



Certificate of patent 10-1151733



Venture Company Confirmation



Certificate of patent 10-2290368



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, wemakeprice, SSG.COM, 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 (Relief Valve 3 Types)
- Acquired European Integrated Standard Certification CE (Needle Valve).
- 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

INV	60	V	5	Ub	А
Product Value	Pressure	Type of Components	Material	Tube Size	Options
NV: Needle Valve  CV: Check Valve  BV: Ball Valve  AOV: Air Operated Valve  CON: Control Valve  GV: Wellhead Gauge Valve  BLV: Bleed Valve  DBBV: Double Block & Bleed Valve  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	03: 3,000psi 07: 7,500psi 15: Sleeve Type Refer to Valve Select 20: 20,000psi 30: 30,000psi 60: 60,000psi 100: 100,000psi	Needle Valve V: Vee Stem R: Regulating Stem  Check Valve O: O-Ring Type B: Ball Type  Ball Valve O3: Orifice 4.8mm O5: Orifice 8mm  Control Valve Air Operated Valve O: Normal-Open Type C: Normal-Closed Type  Relief Valve FS: Factory Set FA: Field Adjustable PP: Proportional Type  Fitting E: Elbow Type T: Tee Type C: Cross Type  Fitting Accessory A: Adapter (20,000psi용) S: Sleeve (저압용) G: Gland R: Collar T: Collet	S: Stainless steel 316 H: Hastelloy HC: Hastelloy C276 wetted part IN: Inconel 600 IN625: Inconel 625 IN825: Inconel 825 NI: Nickel 200 TI: Titanium	02: 1/8"  04: 1/4"  06: 3/8"  08: 1/2"  09: 9/16"  12: 3/4"  16: 1"  15: 15A  25: 25A	Needle Valve Control Valve Air Operated Valve S: Straight Type A: Angle Type O: 3way/1on pressure Type T: 3way/2on pressure Type  Ball Valve 2-90: 2WAY 3-180: 3WAY Switching Type 3-90: 3WAY Diverting Type Fitting Accessory AV: Anti-Vibration Type  GPR N: Normal Type P: Panel Type

### **Example**

- NV60VS06-A: Needle Valve, 60,000psi, Vee Stem, 3/8", Angle Type.
- NV15VS04-0 : 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.

## 11. Safety Head & Rupture Disc



Safety valve to protect and prevent overpressure of equipment and piping



Safety head is assembly housing for pressure burst disc. It is used to prevent damage and explosion and to protect the equipment with releasing the pressure quickly, in case of over pressure. It requires the burst disc which is called Rupture Disc that burst on overpressure condition.

#### **I** Features

- To protect the equipment damage.
- No leaking before the rupture disc burst case.
- Stainless steel 316 material. (Except 1,000psig: Nickel)
- 3/8" NPT Outlet design to connect vent lines.
- Include fitting accessories for suitable pressure and sizes for tubing.
- Manufactured with a tolerance of plus 6% and minus 3% of specified burst pressure.
- Rupture disc is not included in this item required to choose proper rupture disc separately. (Rupture Disc Spec.)

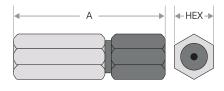
#### **Pressure Release Time**

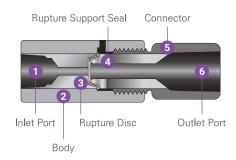
- 1. In case of pressure is increase rapidly.
- 2. Not allow for any leaking.
- 3. When system requires to release in short time.

#### **Consideration of selection**

- 1. Set pressure, Temp and medium.
- 2. Operation condition (Static/Back Pressure, pulsating, Etc,.).
- 3. Recommend regularly under the corrosion, metal fatigue, repeating environment.

Catalog	Pressure	Inlet	Outlet	Orifice	Dime	nsion	Rupture Disc Spec. Standard Burst Pressure (in psi at 72			
No.	Rating	Port Size	Port Size	Size	Α	HEX	Standard	Burst Pres	sure (in ps	i at 72°F)
SH15S02		1/8"		1.4	81.3	25.4	1,000	1,500	2,000	2,500
SH15S04	15,000 psi	1/4"		3.2	81.3	25.4	3,000	3,500	4,000	4,500
SH15S06		3/8"		5	81.3	25.4	5,000	5,500	6,000	6,500
SH10S08	10,000 psi	1/2"		5	81.3	25.4	7,000	7,500	8,000	8,500
SH20S04		1/4"		2.8	81.3	25.4	9,000	9,500	10,000	10,500
SH20S06		3/8"	3/8"	5	81.3	25.4	11,000	11,500		
SH20S09	20,000 psi	9/16"	NPT	5	81.3	25.4				
SH20S12		3/4"					12,500	15,000	17,500	18,000
SH20S16		1"					20,000			
SH60S04		1/4"		2.4	81.3	25.4	22,500	25,000	27,000	30,000
SH60S06	60,000 psi	3/8"		3.2	81.3	25.4	35,000	37,500	40,000	45,000
SH60S09		9/16"		4.8	84.5	36	50,000	55,000	60,000	65,000

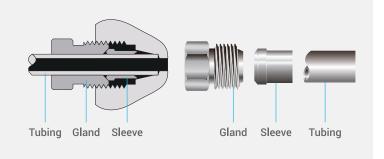




# Port Type Low Pressure Port Type

#### 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.

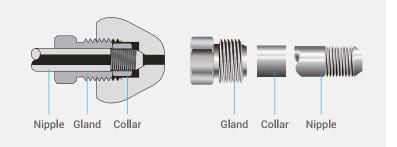


H1008 10,000psi - 1/2"	H1506 15,000psi - 3/8"	H1504 15,000psi - 1/4"	H1502 15,000psi - 1/8"
20.6 09.5 013	5/8"-18 Ø9.8 Ø5.5	1/2"-20 17.5 — Ø6.5 — Ø4	3/8"-24 →
25.4 HEX	17 HEX	16 HEX	12 HEX
Ø13 24	09.7	Ø6.6 16	03.3
Ø15.8 9.7	Ø12.7 9.6	Ø9.45 8.5	Ø5.65 7.7

# 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.

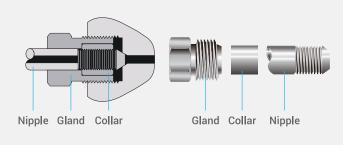


H2004	H2006	H2009	H2012	H2016
20,000psi - 1/4"	20,000psi - 3/8"	20,000psi - 9/16"	20,000psi - 3/4"	20,000psi - 1"
7/16°-20 12.7 60° 04.8 — Ø2.8	9/16"-18 15.8 07.9 05.2	13/16"-16 19 19 012.8 07.9	3/4"-14 23.9 — Ø15.8 — Ø11.1	1-3/8"-12 - Ø22.4 - Ø14.3
12 HEX	16 HEX 20	22 HEX 25	30 HEX 29	36 HEX 38
09.5 5.5 1/4"-28 LH	Ø11.9 6.4 3/8"-24 LH	Ø18.3 9/16"-18 LH	9.5 3/4"-16 LH	031 12.5
Ø6.35 26.5 — Ø9.3 — Ø3.57	Ø9.53 32 — Ø11.7 — Ø6.35	Ø14.29 ↓ Ø18.1 ↓ Ø10.32	Ø19.05 45.5 → Ø23.6 Ø14.29	Ø25.4 60 — Ø30.7 — Ø18.26
9 → 03.57 → 02.77	3/8"-24 LH  11  → Ø6.35  → Ø5.16	→ 9/16"-18 LH  13  → Ø10.32  → Ø7.92	→ 3/4"-16 LH  16  → Ø14.29  → Ø11.12	→ 1"-14 LH  20  → Ø18.26  → Ø14.27

## 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.

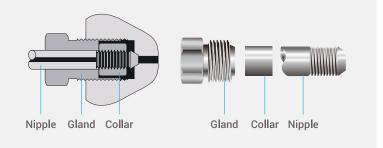


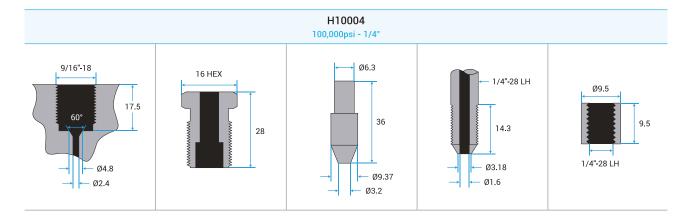
H3002 30,000psi - 1/8"	H3016 30,000psi - 1"	H6004 60,000psi - 1/4" (M : Metric)	H6006 60,000psi - 3/8" (M : Metric)	<b>H6009</b> 60,000psi - 9/16" (M : Metric)
1/2"-20 60° 111.37 01.16 02.4	1-3/8"-12 33.3 022.4 011.1	9/16"-18 (M16x1.5P)  11(11.5)  04.3(Ø5)  02.4(Ø2.4)	3/4"-16 (M20x1.5P) 16(15) 06.6 03.2(Ø3.2)	1-1/8"-12 (M26x1.5P) 19(15) 19(15) 09.7 04.8
13 HEX 18	36 HEX 38	16 HEX(17HEX) 20(22)	20 HEX(22HEX) 30(30)	30 HEX(27HEX) 38(38) Ø14.4
Ø3.18 24 → Ø6.35 → Ø1.78	Ø25.4 62 ← Ø31.45 ← Ø15.4	27.5 → Ø9.37 → Ø3.18	37 → Ø12.56 → Ø5.56	47 → Ø20.7 → Ø7.14
11.12 - Ø1.59	23  — Ø14.3	14.3 14.3 09.5	3/8"-24 LH  18.5  → Ø5.56  → Ø3.18	9/16"-18 LH  24  — Ø7.14  — Ø4.76
Ø6.3 Ø6.3 8 1/8"-40 LH	Ø31  12.5  11-14 LH	9.5 1/4"-28 LH 8 — Ø9.6 — Ø6.49	13.5 3/8"-24 LH 11.5 012.9 09.65	9/16"-18 LH  14.5

### 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.

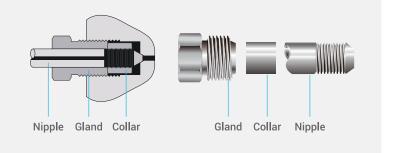


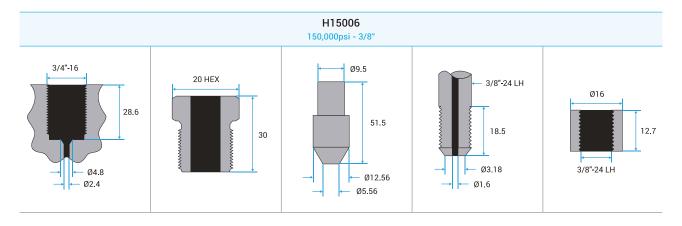


### Port Type Ultra High Pressure Port Type

#### 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.

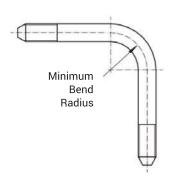




## Technical Information Recommended Torque

### [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)
	H1502	1/8 Inch (15,000)	13	170
10,000 PSI	H1504	1/4 Inch (15,000)	17	550
15,000 PSI	H1506	3/8 Inch (15,000)	17	550
	H1008	1/2 Inch (10,000)	24	800
	H2004	1/4 Inch (20,000)	17	550
	H2006	3/8 Inch (20,000)	17	550
20,000 PSI	H2009	9/16 Inch (20,000)	22	1100
	H2010	3/4 Inch (20,000)	30	3,500
	H2012	1 Inch (20,000)	HEX (mm)  13  17  17  24  17  17  22	5,000
	H3002	1/8 Inch (30,000)	13	500
	H6004	1/4 Inch (30,000)	20	550
30,000 PSI	H6006	3/8 Inch (30,000)	20	550
	H6009	9/16 Inch (30,000)	HEX (mm)  13  17  17  24  17  17  22  30  41  13  20  20  20  20  20  20  20  21  20  20	550
	H6004	1/4 Inch (60,000)	20	670
60,000 PSI	H6006	3/8 Inch (60,000)	20	670
	H6009	9/16 Inch (60,000)	20	670
100,000 PSI	H10004	1/4 <b>I</b> nch (100,000)	24	1250
150,000 PSI	H15006	3/8 Inch (150,000)	24	1870
	HFN02	1/8 Inch (15,000)	13	500
	HFN04	1/4 Inch (15,000)	17	550
10,000 & 15,000 PSI	HFN06	3/8 Inch (15,000)	17	550
NPT TYPE	HFN08	1/2 Inch (15,000)	22	1100
	HFN10	3/4 Inch (10,000)	41	-
	HFN12	1 Inch (10,000)	41	_

