

THE PISTON VALVE principle is a KLINGER idea. One of many ideas which has achieved world-wide recognition. Continuously modified and matched to modern requirement, the piston Valve has provided itself by the millions throughout the world. Today we can say with pride that our group is worlds largest manufacturer of valves, based on this design principle. KLINGER Piston valve performance is backed by central R & D of KLINGER at Switzerland.

The shut off assembly comprises of a stainless steel piston, two resilient valve rings and a ferrous metal lantern bush. The sealing consists of the cylindrical surface of the piston and the corresponding inner surface area of the sealing rings. This provides a very large sealing compared with globe valves with conventional design- one of the reasons for the Piston valve's excellent seal.

The valve Rings are the heart of the piston valve. They are made from KXGT, a material specially developed and exclusively used for the manufacture of valve ring. KXGT consists essentially of asbestos, a high quality elastomer and graphite. KLINGER valve rings are not merely surface graphited; the graphite content extends throughout the ring. For this reason its outstanding self lubricating properties are retained throughout the rings entire service life. KLINGER valve rings are resilient, accurately dimensioned and in consequence of their good recovery characteristics have excellent form retention and long service life. KLINGER valve rings are resistant to water, steam, oils, solvents and wide range of other media. KLINGER valve rings can be used for more than 230 listed fluid media.

**FEATURES:-**

- Seatless and Gland less valve.
- Economic, easy to service.
- No erosion of sealing surface.
- Maintenance free.
- Compensation for thermal expansion with use of Belleville washer.
- Leak-tight across ports and to atmosphere.

**END CONNECTIONS:-**

- Socket weld #800 Rating
- Screwed BSP/BSPT/NPT
- Flanged to ANSI #150/#300 (on Request)
- Flanged to DIN PN16 / PN40(on Request)

**MATERIAL OF CONSTRUCTION:-**

- ASTM A105
- ASTM A182 Gr.F316 (On Request)



**ON REQUEST:-**

- MOC : Cast Stainless / Alloy Steel
- Valve with extended spindle.
- Valve with Heating Jacket
- Pneumatic / Electrical Actuator

**AVAILABLE SIZES:-**

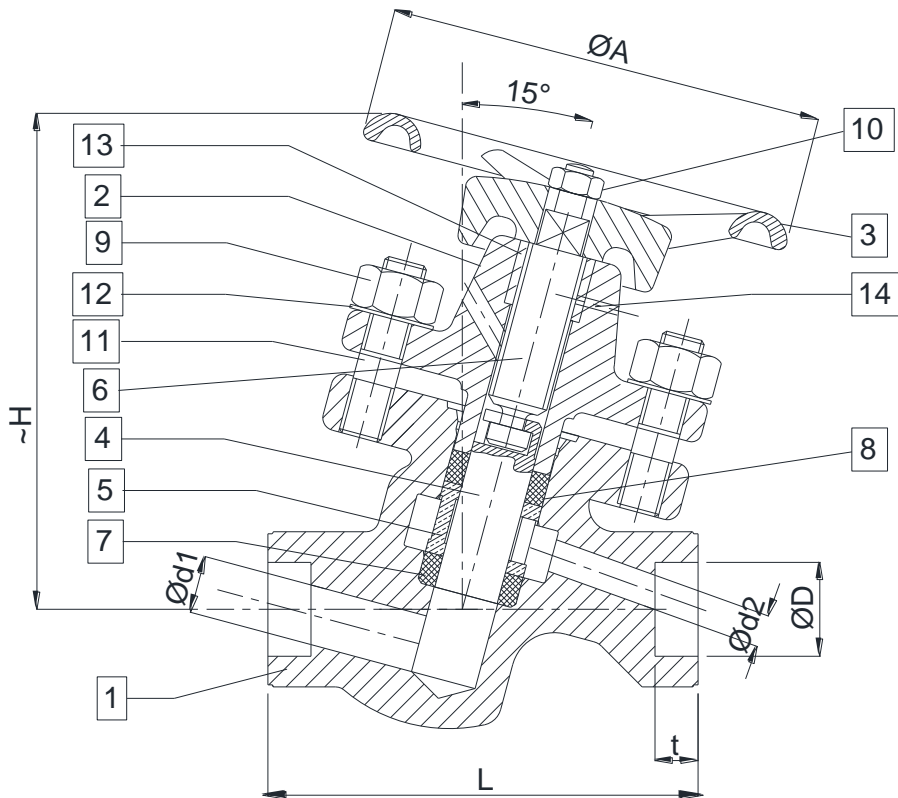
- USN15,20,25, and 40 NB

**INSTALLATION:-**

Preferred direction is as per arrow, however this valve is a Bi Directional Valve. This valve can be installed in any position without any adverse effect on performance, seal ability or flow.

Due to soft sealing principle it is advisable to install a strainer upstream of the valve to avoid damage to the rings caused by weld slag, metal and other solid impurities.

## BILL OF MATERIAL :-



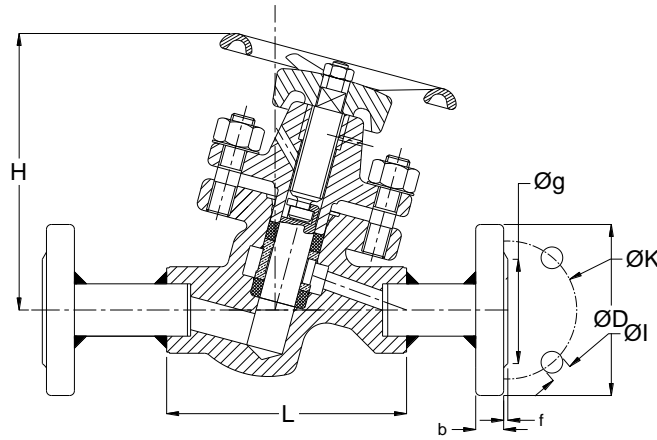
No.	PART NAME	MATERIAL	MATERIAL CODE
1	Body	Forged Steel	ASTM A105
2	Bonnet	Forged Steel	ASTM A105
3#	Hand Wheel	Fabricated / C.I.	M.S. / C.I.
4#	Piston	Stainless Steel	Cast Equivalent Of AISI 430
5#	Lantern Bush	Stainless Steel	ASTM A276 TP410
6#	Spindle	Stainless Steel	ASTM A276-TP410
7#	Lower Valve Ring	Klinger Std.	KXGT
8#	Upper Valve Ring	Klinger Std.	KXGT
9	Bonnet Nut	Carbon Steel	ASTM A 194 Gr.2H
10	Hand Wheel Nut	Carbon Steel	ASTM A 194 Gr.2H
11	Stud	Alloy Steel	ASTM B 193 Gr. B7
12	Bel. Washer	Spring Steel	50 Cr V4
13*	Threaded Bush	Cast Iron	GG20 / FG200
14*	Tension Pin	Spring Steel	50 Cr V4
# Available as Spares			

## DIMENSIONS(mm):-

Size	Class	L	H	ØA CI / MS	ØD	t	Ød1	Ød2
15	800	110.00	110.00	100 / 106	21.80	10.00	11.00	11.00
20	800	110.00	110.00	100 / 106	27.20	13.00	11.00	11.00
25	800	135.00	155.00	140 / 146	33.90	13.00	19.00	17.00
40	800	185.00	215.00	180 / 200	48.80	13.00	36.50	24.00



## DIMENSIONS(mm):-



Size	Overall Dimensions		Connection Dimensions (#150)						
	Length (L)	Height (H)	ØA	ØD	b	Øg	No of holes	ØI	ØK
15 NB	212	118	100	90	9.6	35	4	16	60.3
20 NB	232	134	120	100	11.2	42.9	4	16	69.9
25 NB	251	155	140	110	12.7	50.8	4	16	79.4
40 NB	311	215	180	125	15.9	73	4	16	98.4

Size	Overall Dimensions		Connection Dimensions (#300)						
	Length (L)	Height (H)	ØA	ØD	b	Øg	No of holes	ØI	ØK
15 NB	226	118	100	95	16	45	4	14	65
20 NB	252	134	120	105	18	58	4	14	75
25 NB	269	155	140	115	18	68	4	14	85
40 NB	327	215	180	150	18	88	4	14	110

## LIMITING CONDITIONS:

PMA Max allowable pressure 798 psig 850 °F 55 barg 454 °C  
 TMA Max allowable temperature 800 °F/0-798psig 454 °C/0-55 barg

PMO Max operating pressure 798 psig 50 barg  
 TMO Max operating temperature 850 °F 427 °C at operating pressures

Cold hydraulic test pressure will be max. 1190 psig

**Special Instructions:-** 1) Flush pipelines, 2) Open/Close the valve using hand wheel only, 3) Hot Tighten, 4) Lubricate spindle, 5) Use original Klinger rings only.

## HOW TO ORDER

KLINGER PISTON VALVE USN 25, Steam, FLANGED TO #150

Please mention the media, its design and working pressure/Temperature



Cast / Forged Steel Piston Valves, Bellow Seal Valves, High Pressure valves (Gate/Globe), Strainers – "Y" Type, Flash Vessel, Steam Traps (Thermodynamic, Thermostatic, Ball Float Traps, Inverted Bucket), Pressure Reducing Station, Condensate Recovery Products, Level Gauges (Reflex, Transparent, Bicolor), Sight Glass, Hot Water Generation System, Safety and Relief Valves.  
**FSD Products** : Compressed Asbestos / Non Asbestos Fiber Sheeting / Cut Gaskets, Spiral Wound Gaskets.

In view of technical progress design and dimensions are subjected to change without notice.



**UNI KLINGER LIMITED**

A joint venture of the Neterwala group of companies and KLINGER AG, Switzerland.

Central Sales Office & Pune Branch : SC1, 5<sup>th</sup> Fl., Kohinoor Est. Mumbai-Pune Highway, Khadki, Pune-411 003. Tel.: +91-20-4102 3000 Fax.: (020) 4102 3001  
 e-mail : [salesco@uniklinger.com](mailto:salesco@uniklinger.com), [salespune@uniklinger.com](mailto:salespune@uniklinger.com), Website : [www.uniklinger.com](http://www.uniklinger.com)

Factory : C-37, M.I.D.C., Ahmednagar – 414 111, Maharashtra, Tel. : 0241 – 2777223 / 2777512 Fax : 0241 – 2777294, E-mail : [fdworks@uniklinger.com](mailto:fdworks@uniklinger.com)

### Branch Offices :

**Baroda** : 102, 1st Floor, Otel Towers-II R.C. Dutt Road, Baroda-390 005, Tel.: 91-0265-2312343 / 2340660, Fax.: 91-265-2341419. E-mail : [salesbar@uniklinger.com](mailto:salesbar@uniklinger.com)  
**Chennai** : East Coast Centre, 5<sup>th</sup> Floor, 553, Mount road, Teyanampet, Chennai - 600 018, Tel.: 91 - 44 - 24345707. Fax.: 91 - 44 - 24343960. E-mail : [saleschen@uniklinger.com](mailto:saleschen@uniklinger.com)  
**Kolkata** : 9, Chitrakoot, 8th Floor, 230 A, AJC Bose road, Kolkatta-700 020, Tel.: 91-33-22872510, Fax.: 91-33-22876494. E-mail : [salescal@uniklinger.com](mailto:salescal@uniklinger.com)  
**Mumbai** : 22, 2nd Flr, Shreeji Arcade CHS, Almeda road, Thane-400 602, Tel.: 91-22-25421140 / 91-22-25440461, Fax.: 91-22-25440463. E-mail : [salesmum@uniklinger.com](mailto:salesmum@uniklinger.com)  
**Delhi** : 321, Ansal Chamber-II, 6, Bhikaji Cama Place, New Delhi-110 066, Tel.: 91-11-41658767 / 91-11-26193847, Fax.: 91-11-41658768. E-mail : [salesdel@uniklinger.com](mailto:salesdel@uniklinger.com)