KLINGER Fluid Control

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KVN piston valve „Basic“

KVN BASIC

Agenda

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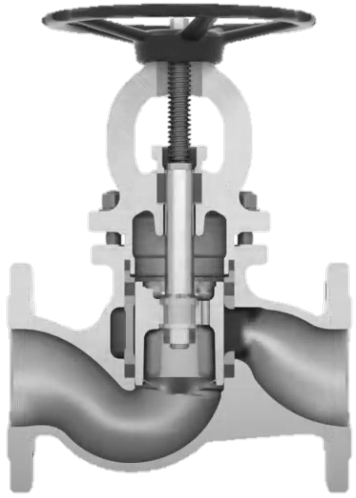
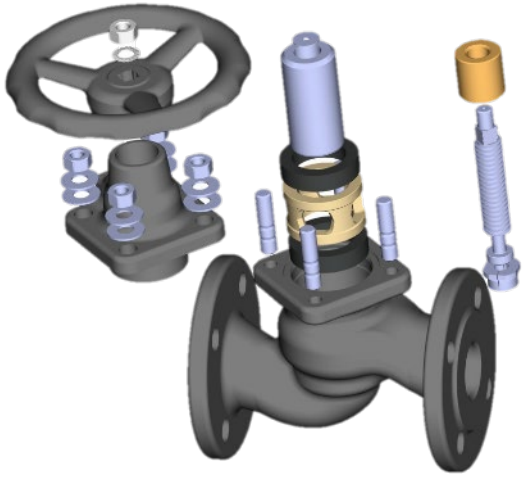
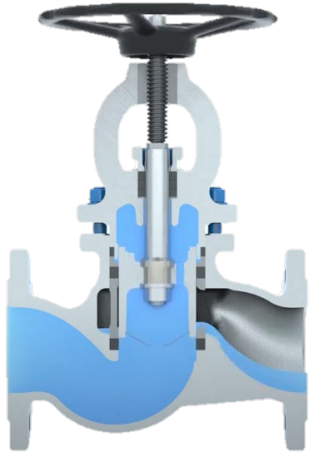
- KVN non pressure balanced
- KVN pressure balanced
- P/T diagrams
- Valve rings
- Regualtion version
- Maintenance and spare parts
- Marking
- EN12266-1
- Advantages







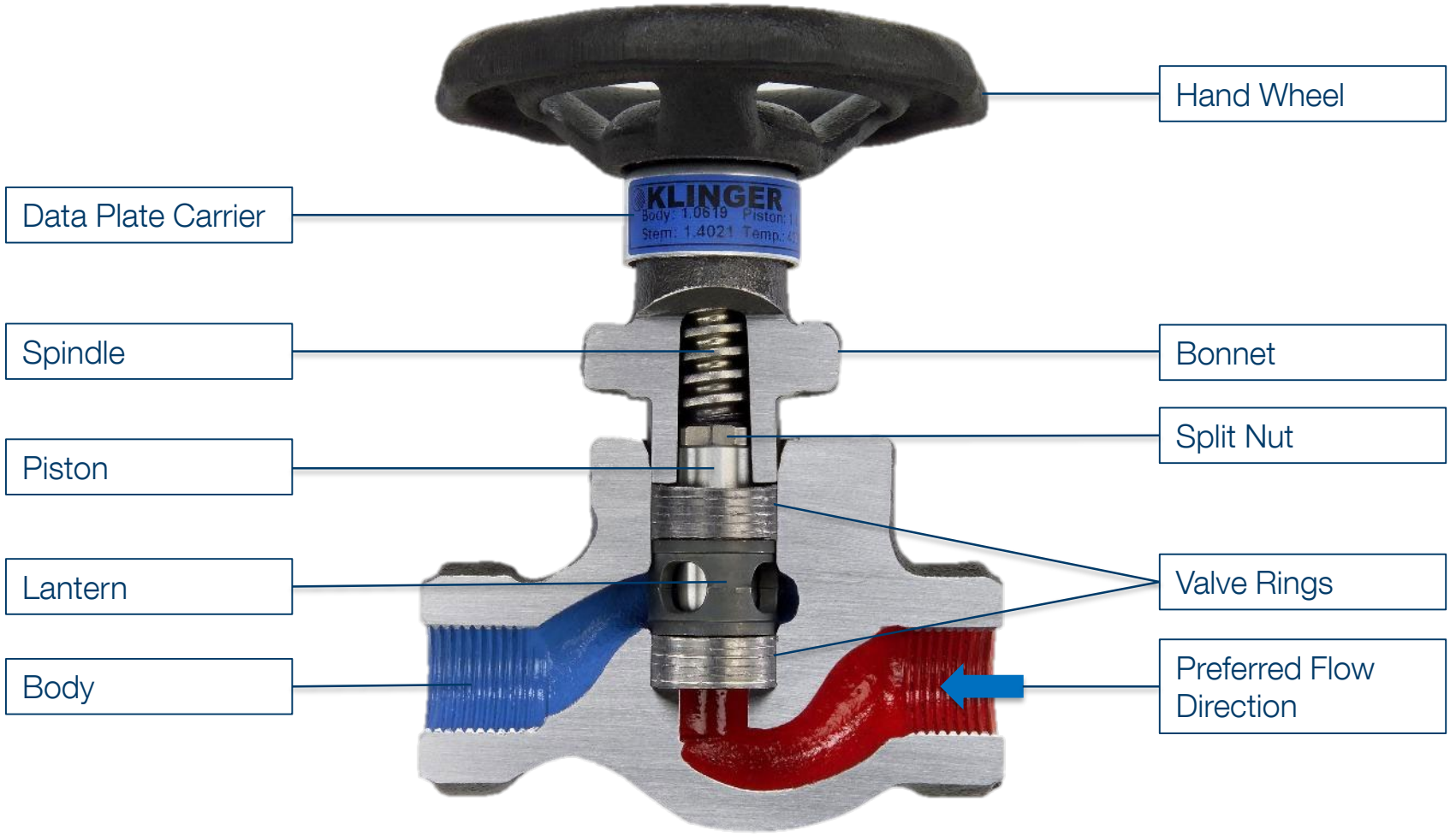
KLINGER PISTON VALVE KVN

Standard design overview

Model	DN	PN	Connection	Face to Face	Body Material	Pressure Balanced	Valve Rings	°C	General
KVN 	15-200	16,25,40	Flanged EN1092-1	EN558-1 GR1	EN-GJL 250 EN-JS1049 1.0619 1.4581 (until DN50)	DN15 – DN50: Non pressure balanced DN65 – DN200: Pressure balanced	KX-GT KX1	Acc. P/T diagram	**Certification Standard Version:** Fire Safe acc. API6F and EN10497 **Additional Certificates:** TA-Luft VDI2440 Oxygen SIL2
	½“ – 8“	CL150/ 300	Flanged ASME B16.5	ASME B16.10	A-216 WCB				
KVSN 	15-50	63	Butt Weld Ends acc. EN12627	KLINGER Standard	1.0619	Non pressure balanced			
	½“-2“	63	Socket Weld Ends acc. EN12760	DIN3202-M9	1.0619				
KVMN 	½“ – 2“	63	Threaded ends acc. ISO228-1	EN16722-114	1.0619 EN-GJL 250	Non pressure balanced			
	½“ – 2“	63	Threaded ends acc. NPT ANSI B2.1	ANSI B 1.20.1	1.0619 EN-GJL 250				

KLINGER PISTON VALVE KVN

Non pressure balanced version DN15 - 50



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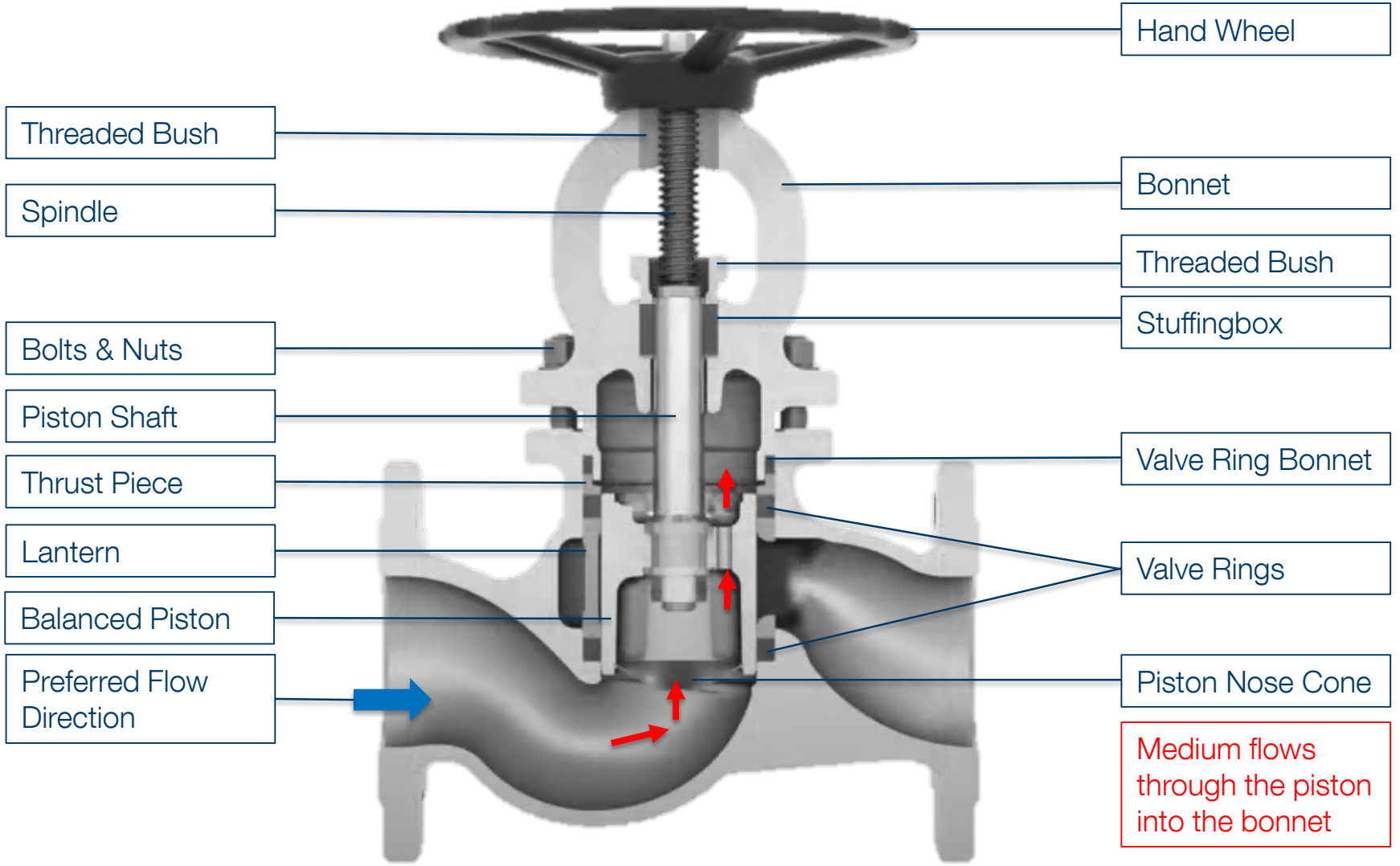
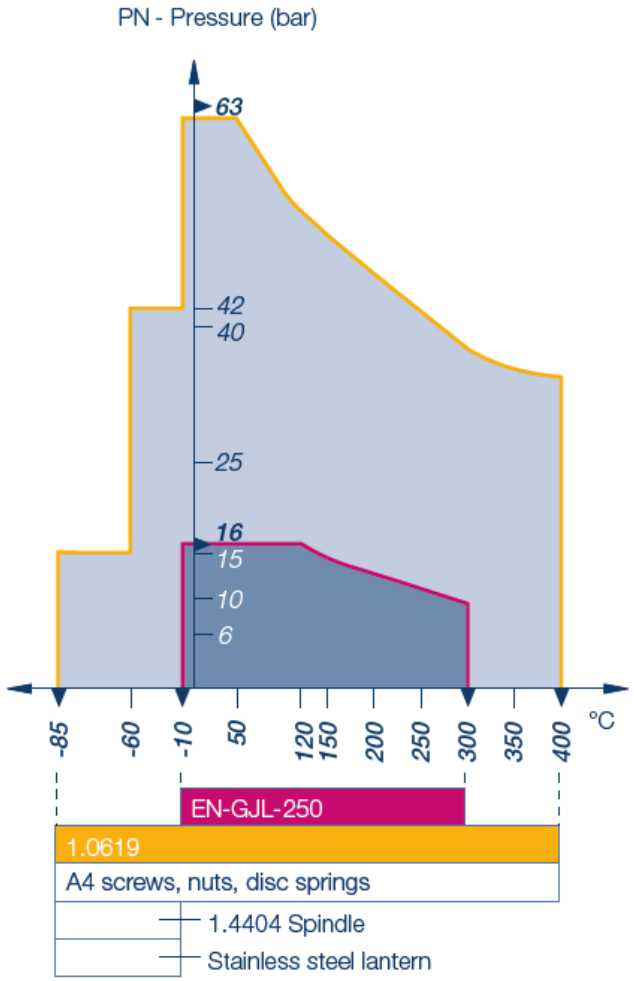
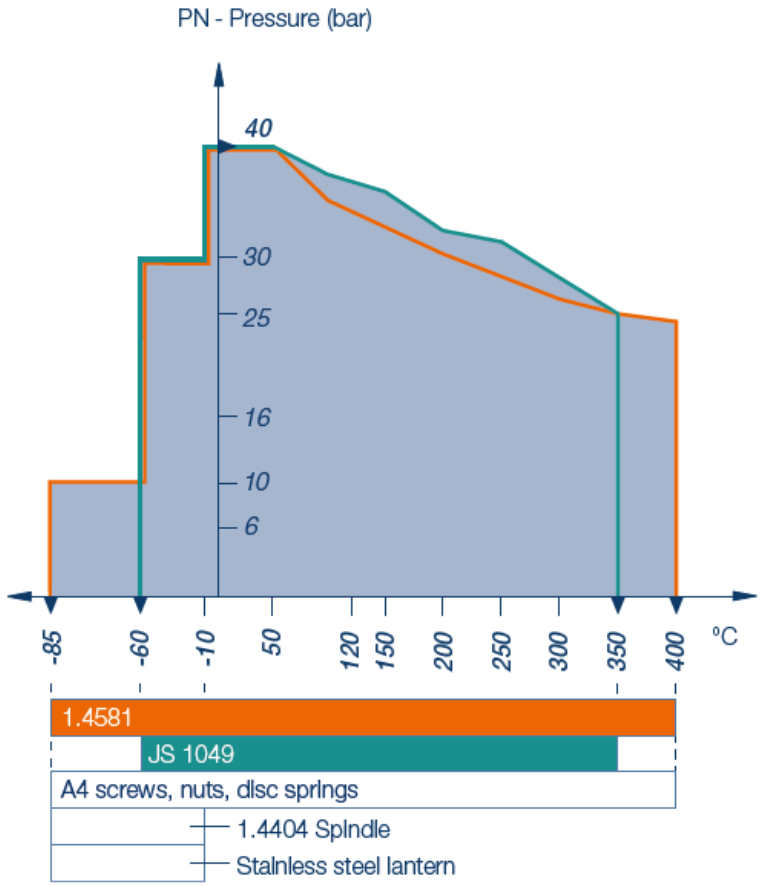
Pressure balanced version DN65 - 200



KLINGER PISTON VALVE KVN

P/T diagrams KX-GT valve rings





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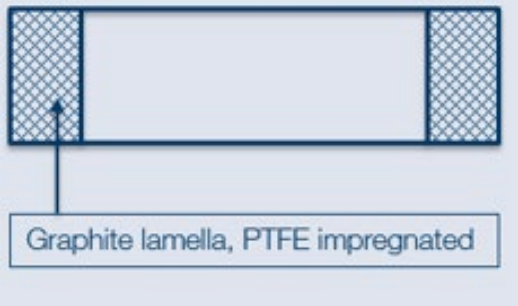
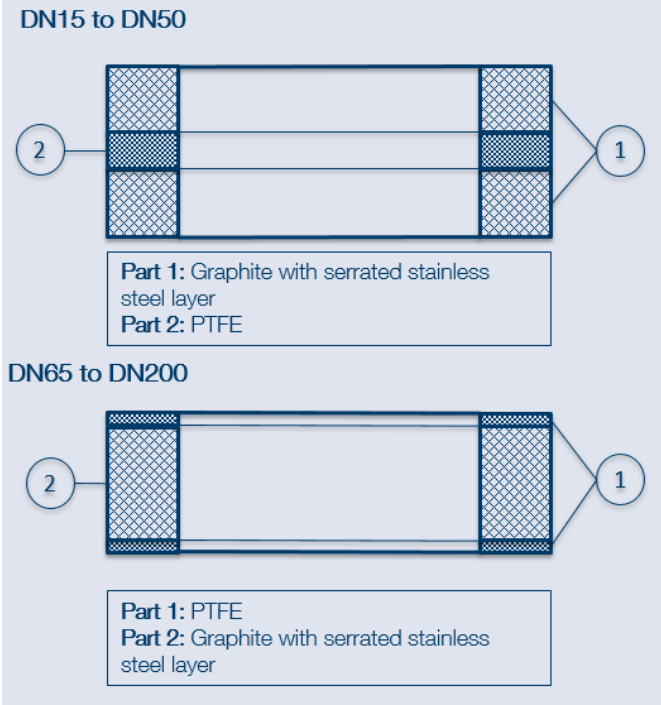
Valve ring type KX-GT and KX1



Standard Valve Ring KX-GT:

- Lamellar graphite, reinforced with serrated stainless steel
- Asbestos free
- High life cycle
- Temperature range -85°C to 400°C
- Temperature shock resistant
- Max. pressure PN63
- Resistant against corrosion
- Suitable for high and low PH values



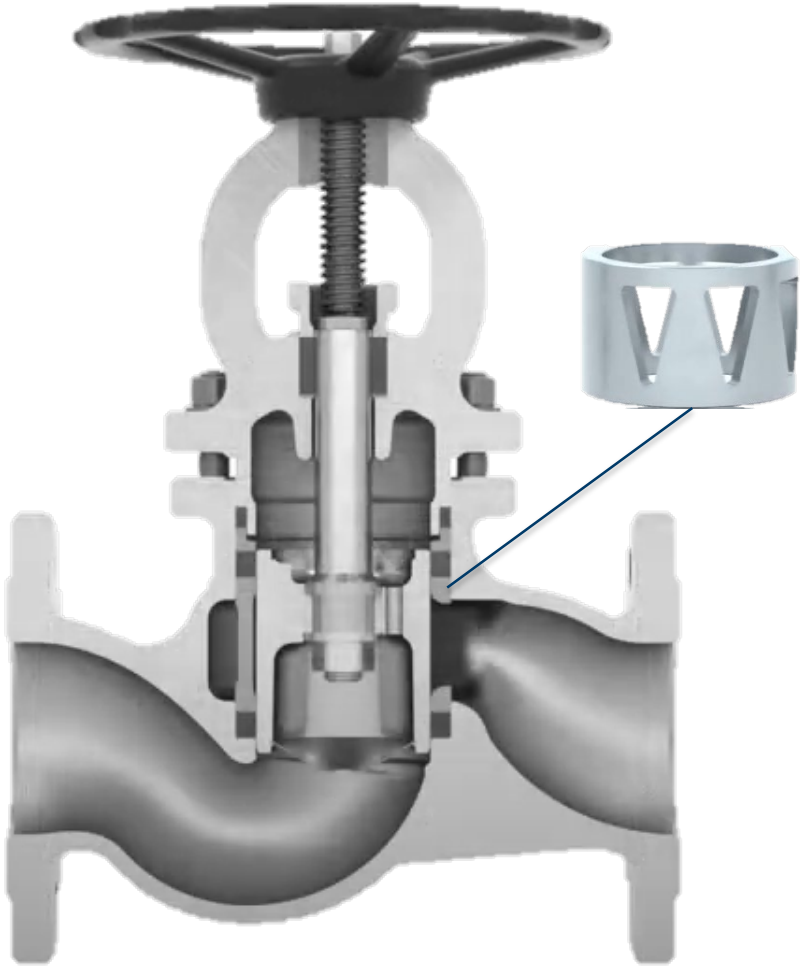
Standard Valve Ring KX1:

- Design standard KX-GT with additional PTFE disc
- Lowest leakage rate (2ppm) – best sealing performance
- TA Luft / VDI2440 approved
- Already installed KVN with standard valve rings could be easily upgraded with KX1 valve rings

KLINGER PISTON VALVE KVN

Regulation version

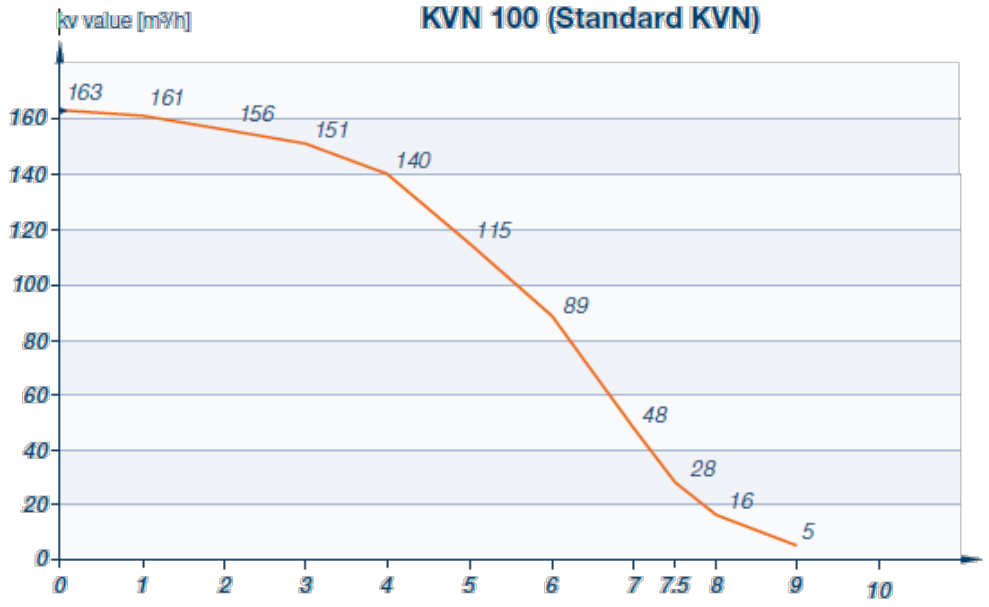
Regulation piston line size 15 to 50

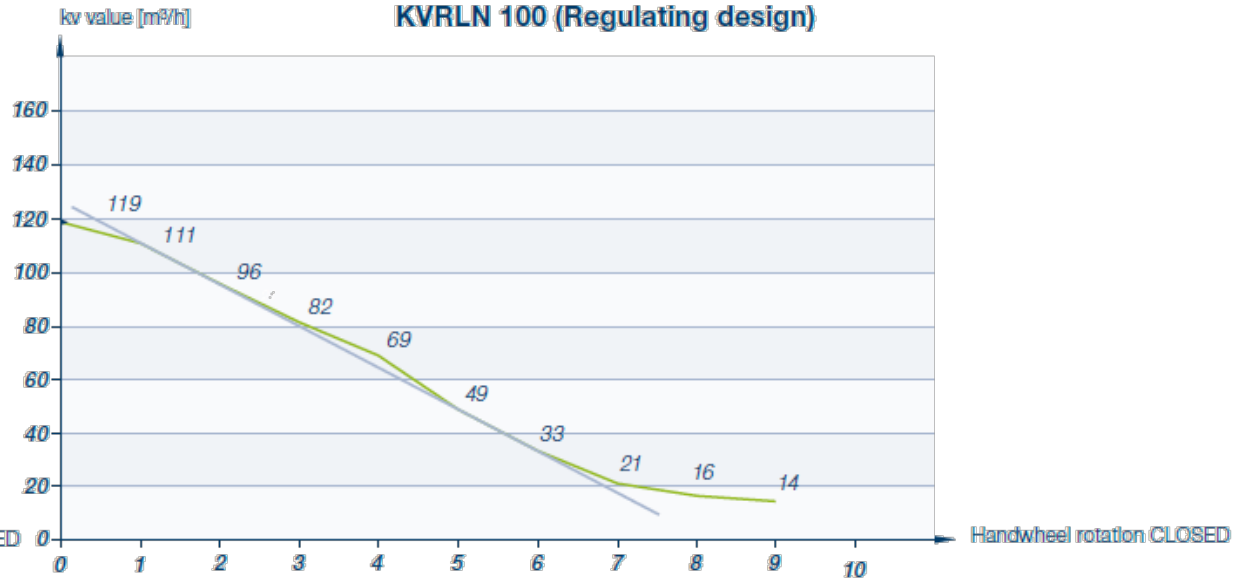


Regulation lantern line size 65 to 200

KLINGER PISTON VALVE KVN

Closing curve standard vs regulation





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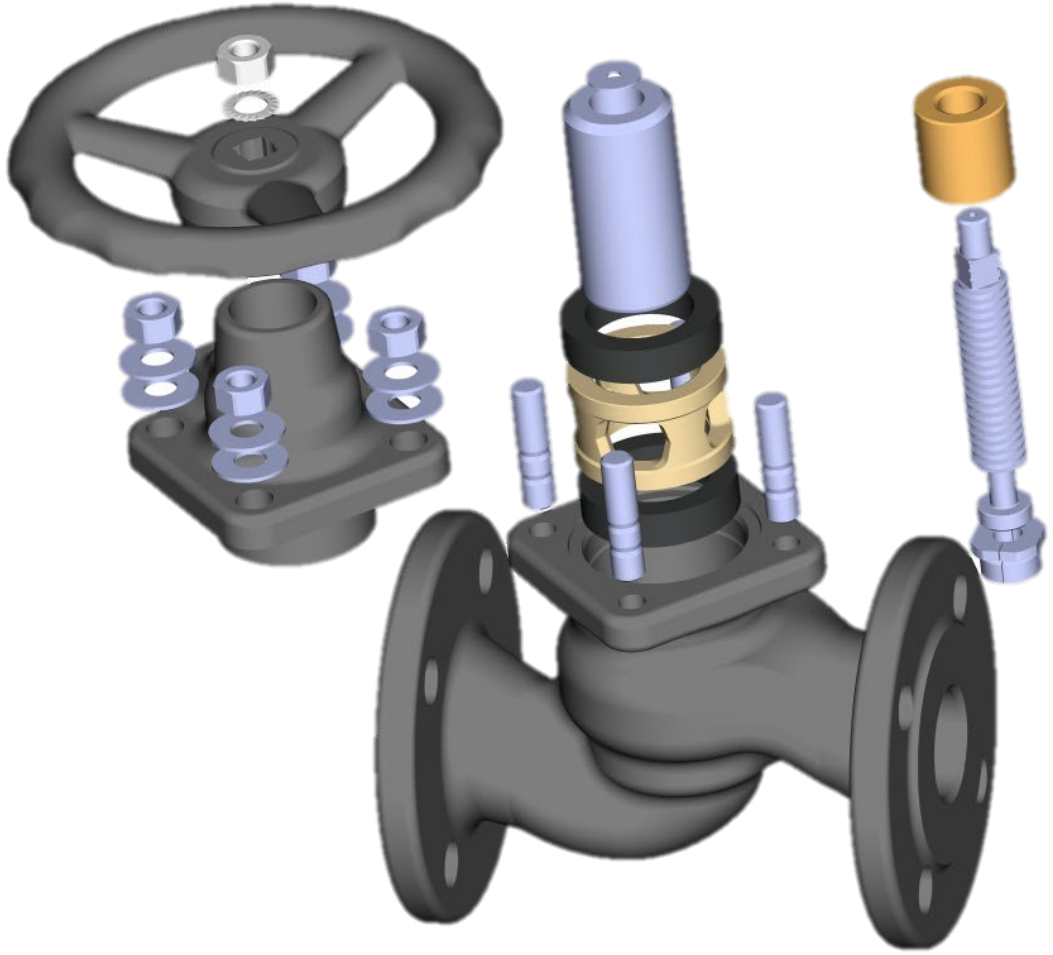
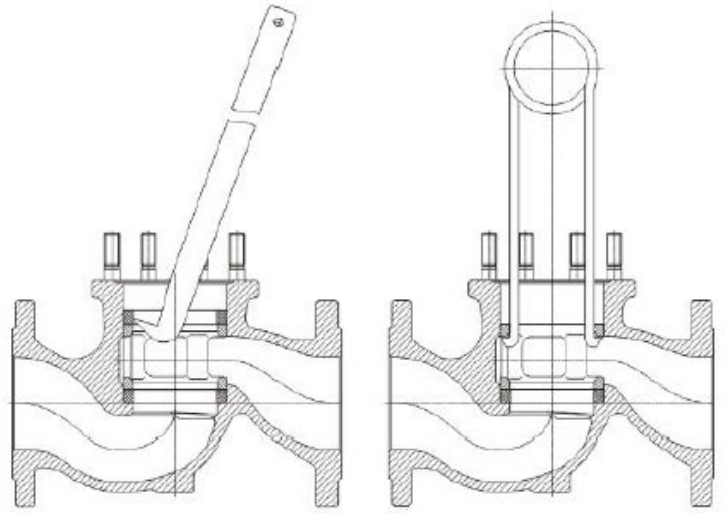
Maintenance and spare parts



In-line maintenance without dismantling of the valve possible.

Lantern drawer and Ring extractor hook for replacing lantern and valve rings are available. Valve ring change can also performed with a simple screw driver.

Wide range of spare parts are available.



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Marking and painting

Up to DN50 marking with a sticker on a data plate carrier.

Information about DN, PN and body material.

From DN65 to DN200 marking with a disc beneath the hand wheel nut.

Information about DN, PN and body material.

Painting Until DN50:
Zinc phosphating ZnFe/ph, concentration 5,5 – 12%, coating thickness approx. 4 – 8 µm
Used oil: Castrol RUSTOL DWX 30 (DWX 32)

Painting from DN65 to 200:
Water soluble top coat lacquer system REM AQUA ESL, fast drying electrostatic sprayable lacquer,
Coating thickness approx. 30 – 80µm, colour azure RAL5015

KLINGER PISTON VALVE KVN

Testing acc. EN12266-1, P10, P11, P12

Test	Test Duration		Test pressure and media
	DN 15 – 150	DN 200 – 300	
P10 (Strength)	1 Minute	2 Minutes	1,5x PN Water
P11 (Tightness)	1 Minute	2 Minutes	1,5x PN Water
P12 (Seat Tightness)	1 Minute	2 Minutes	6 bar ± 1bar Air or 1,1x PN Water

KLINGER PISTON VALVE KVN

Advantages

Seal system

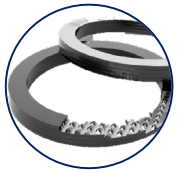
Reliable valve ring - piston design → Constant low torque, „self cleaning function“ for milky or cloudy liquids

High temperature → Valid up to 400°C media temperature

Valve ring

Standard valve ring KX-GT (graphite with serrated stainless steel) → Valid up to 400°C, mechanical loadable – insensitive for pressure hammers

Valve ring type KX1 (graphite with serrated stainless steel + PTFE disc) → Valid up to 350°C, mechanical loadable – insensitive for pressure hammers, TA-Luft compliant



Body

Compact casted body → Insensitive to pipeline forces, pressure balanced version available

Valve bonnet acc. ISO5211 → Easy installation for actuators

Easy handling → Installation in every position possible, flow direction marked with an arrow on body

Body construction → Valve rings are not located directly in the flow

Quality

Long service life → Reduction of maintenance cycles

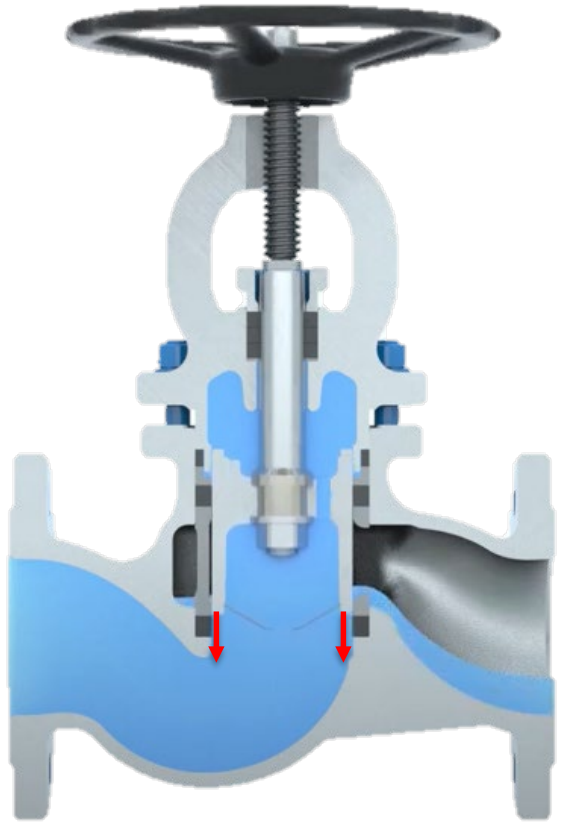
Service friendly → Inline service possible

Test acc. EN12266-1,P10,P11,P12 → Leakage rate A

Availability → All valve parts available as a spare part

Options

Regulation version, Oxygen version



Due to the piston – lantern – sealing ring design, the valve rings are not totally exposed to the media.

Media particles only can stick on the inner ring surfaces of the valve rings. By closing the KVN, the piston is moving through the valve ring and lantern areas. Adherent particles will be pushed back in the pipe line. There is no possibility that particles can penetrate into the sealing surfaces (self cleaning effect).The lifetime will be increased based on the self cleaning effect.

THANKS FOR YOUR ATTENTION!

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