KLINGER India

INDUSTRIAL VALVES

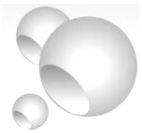




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KLINGER SCHÖNEBERG

KLINGER India

	KLINGER Schöneberg		1
	Overview about product lines	INTEC	2
	Flanged ball valves	INTEC	3
	Small ball valves Pressure gauge ball valves	INTEC	4
	Ball valve accessories	INTEC	5
	Ball valves	KLINGER	6
	Needle valves	KLINGER	7
	Special applications	INTEC	8
	Technical information	INTEC KLINGER	9

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KLINGER India

KLINGER SCHÖNEBERG GmbH

Connect with Quality!

KLINGER SCHÖNEBERG GmbH is a flexible medium-sized company focusing on research, development, production and sales of industrial valves, especially ball valves and pneumatic actuators.

KLINGER SCHÖNEBERG combines decades of experience with a high level of competence in the development of customised system and special solutions as well as providing technical application advice. Within the KLINGER Group, represented at 60 locations worldwide and comprising more than 40 companies, the highly specialised company focuses on critical applications in the chemical, petrochemical, plant and mechanical engineering industries. A wide range of technologies as well as customised solutions are used, including automated solutions for even the toughest conditions. The highest quality, innovative strength, the long lifetime of the products as well as extensive application knowledge and experience make KLINGER Schöneberg a leading company in the field of industrial valves.

The development, production and logistics headquarters is located in Graben-Neudorf, approx. 20 km from Karlsruhe. At the Graben-Neudorf site, the company is situated on an estate with a floor space of 5,200 m² and a building of approx. 4,200 m², comprising an office, warehouse and production hall. Sales, marketing and technical consulting are located in Waldems-Esch im Taunus.

More than two decades of experience and more than 12,000 different product designs are the basis for quick response and mutual success.

Quality is not just a piece of equipment, but a product feature we guarantee!

What customers can expect from us?

More safety, quality, reliability, lifecycle, availability and sustainability - with the innovative and proven products from the INTEC system technology, plant operators get more out of their process plant.

We combine engineering expertise with development experience, application knowledge and services to provide you with the optimum product solution using INTEC system technology for shutting off, controlling and influencing your fluid and gaseous mass flows in your process lines and plants.

Industrial valves are important components for maintaining transport and production processes in the process plants of all industries. Their scope of operation ranges from shutting off, throttling and controlling material flows in piping systems to opening and closing processes in piping systems. The sometimes-extreme operating conditions such as high pressures, extreme temperatures as well as aggressive, abrasive, corrosive and toxic media and the safety requirements in process and control engineering require individual and innovative products combined with detailed technical knowledge and application experience for the differentiated design, development and manufacture of industrial ball valves.

- Everything from one, single source
- Everything for an optimized CAPEX and OPEX
- Everything with the INTEC system technology

Certificates and Approvals

- Quality Management acc. to DIN EN ISO 9001:2015
- Certified acc. to API Q1 and 6D
- PED 2014/68/EU, Module H and H1
- WHG §19a approval (water-resources law)
- Allowance for the re-stamping of products by TÜV
- TR-CU 010/2011 and TR-CU 032/2013 - Russian Gost-R Certificate
- CRN certified for all regions of Canada
- TTC (TSG) - Chinese Type Test Certificate
- EcoVadis Sustainability Rating

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Services of KLINGER Schöneberg

RESEARCH AND DEVELOPMENT

Innovations and the development of innovative value-added products are a decisive success factor for our technology-driven company and create competitive advantages as well as a high level of employee identification. KLINGER Schöneberg maintains its own Research & Development (R&D) department, which is concerned with the evaluation of new technologies as well as with the in-house development of products and their implementation until they are market-ready.

The R&D department focuses on the development of innovations and new products for the application areas of process technology in chemistry, petrochemistry and plant and mechanical engineering. Over and above that, the R&D department cooperates with universities, research institutes and partner companies to swiftly transform new ideas into products. This results in powerful and efficient components and systems for shutting off, throttling and controlling material flows in piping systems.

Knowledge management is a further focal point.

ENGINEERING / DESIGN

Innovative, tested and proven products from the INTEC system technology.

We design your ideal product solution with INTEC system technology that is based on our extensive product designs combined with our development experience and application knowledge. To this end, all designs and calculations are carried out in-house, taking into account the applicable standards, guidelines, laws, regulations and customer requirements. To accomplish that, our engineering / design department prepares the necessary parts lists, production drawings and assembly drawings.

The heart of the technology / design department is a design office equipped with 7 CAD workstations. AutoCAD Mechanical (2D system, current version) and Autodesk Inventor (3D system, current version) are used here.

New products do not arrive at the customer for testing purposes without being subjected to trials, but are qualified in our company only under conditions that are as realistic as possible.

PRODUCTION / MANUFACTURING

As a traditional German company, we produce and manufacture our products in Graben-Neudorf near Karlsruhe. Our modern and networked machine park, consisting of CNC turning and milling machine centres, CNC 4- and 5-axis machining centres and modern CNC lathes are state of the art and are operated by highly trained employees.

This, in conjunction with a CAM system, strict quality control and strict adherence to the specified processes guarantee that we only produce parts of the highest quality.

The final products are subjected to 100% hydrostatic and functional testing. We have modern pressure and leak test benches for this purpose.

SALES AND TECHNICAL ADVICE

Whether you have questions about our products, need an offer, or are looking for a special and perfect solution for your application, our competent and reliable sales team is there for you in the office and in the field.

We provide you with detailed information about product innovations and support you in the selection, application, installation and operation of our products. For us as a supplier of high-quality products, competent and personal support before and after purchase is of great importance.

Not only do we offer you in-house application technology advice, but we would also be glad to visit you in person. Our well-trained employees in the office and in the field form permanent teams. This ensures that our customers have personal contacts.

That saves time and creates the good feeling of being understood.

QUALITY ASSURANCE

The goal of operational quality assurance is autonomous quality control through proactive error prevention, error detection and error correction, including documentation, throughout the entire value-added process.

Quality assurance includes quality controls at incoming and outgoing goods, visual inspection, functional tests, dimensional checks and material tests (such as PMI, VT, PT, etc.) as well as intermediate and final tests during production. We perform these jobs according to defined test plans and using the specified test equipment. We also use the latest CNC measuring technology.

All relevant test and measuring equipment is calibrated and monitored by an independent test laboratory. In addition, any necessary reclamation work and rework is also handled and the Quality Assurance department ensures that articles are correctly labelled and sorted.

Furthermore, Quality assurance supports the R&D department by providing development-related advice and the Procurement department in supplier management.

REPAIR AND OVERHAUL

The repair and overhaul of our ball valves is an essential service and performance offer of KLINGER SCHÖNEBERG GmbH.

Our ball valves are important components in process plants of all industries for the maintenance of transport and production processes. Their scope of application ranges from shutting off, throttling and controlling material flows in pipeline systems to opening and closing processes in pipeline systems. The sometimes extreme operating conditions (pressure, temperature, medium) and the safety requirements in process and control engineering require technical knowledge for a differentiated assessment of the damage or wear pattern for a proper and professional repair and maintenance by the manufacturer.

Ball valves are valuable resources, so in many cases it is worthwhile to have them checked by us first. A successful repair or overhaul contributes, depending on the product and value, to low operating costs for our customers and thus ensures optimised CAPEX and OPEX.

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ecovadis

KLINGER SCHOENEBERG GMBH

has been awarded a

Gold medal

as a recognition of their EcoVadis Rating

-JUNE 2022-





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Valid until: June 2023

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KLINGER GROUP

Visionary through tradition

KLINGER India

KLINGER is the world's leading manufacturer and supplier of industrial seals and valves. Founded in 1886 as a family business, the pioneer in the field of sealing technology today presents itself as a globally active group. In over 60 countries worldwide, 45 independent production, sales and service companies offer unique know-how and on-site consulting.

Our customers include leading companies in the manufacturing, infrastructure, automotive, marine, oil & gas, chemical, pulp & paper, energy, food and pharmaceutical industries. The KLINGER Group employs approximately 2,500 people worldwide (as of Dec. 31, 2020). It generates annual sales of 520 million euros (unconsolidated).

€ 520 Mio.* Annual Sales

are generated by the KLINGER group per year (*unkonsolidiert)

2,500 Employees

our global workforce amounts to 2,500 persons worldwide

80

countries of the world to which the Group has already exported

18

production sites worldwide

for seals, valves, instrumentation, expansion joints and hoses



60+

countries worldwide hosting subsidiaries or a representative of the KLINGER Group

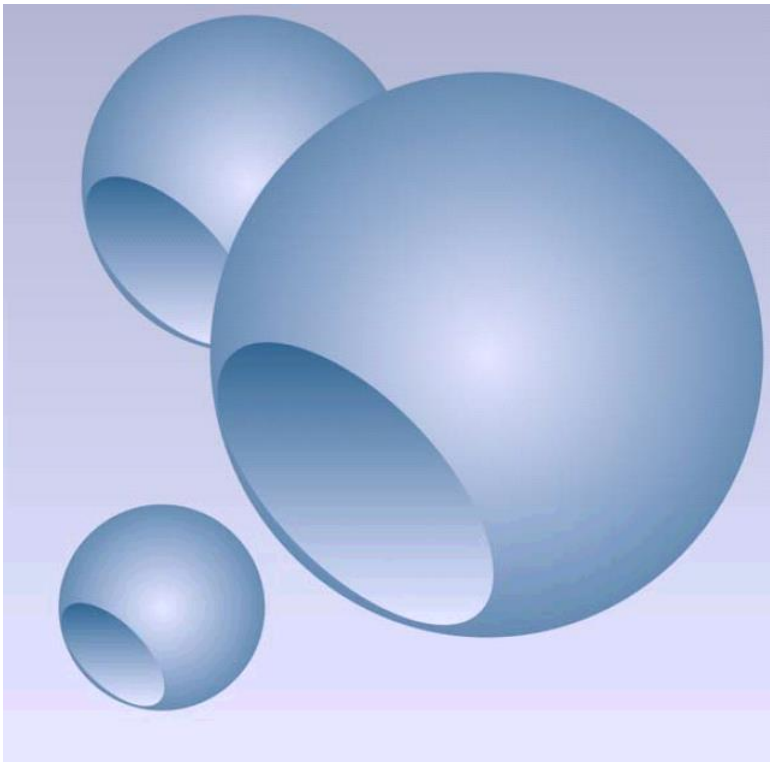
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OVERVIEW PRODUCT LINES

KLINGER India

INTEC



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KLINGER India

BALL VALVES INTEC

Overview about the several Product lines

INTEC K100	Mini plant ball valve	DN 8 – DN 20
INTEC K200	2-piece flanged ball valve	DN 15 – DN 500
INTEC K400	Multiple way ball valve	DN 15 – DN 150
INTEC K500	Tank bottom ball valve	DN 80/50 – DN 200/150
INTEC K600	Pressure gauge ball valve	DN 15 – DN 100
INTEC K700	Sampling device ball valve	DN 15 – DN 200
INTEC K800	3-piece high-pressure ball	DN 15 – DN 200

Accessories

INTEC 10	stem extension without top flange
INTEC 11	stem extension with top flange
INTEC 12	stem extension with top flange, double-sealed
INTEC 13	installation kit for actuator
INTEC 15	handle extension
INTEC 20	grid unit
INTEC 30	locking device
INTEC 40	spring closing unit
INTEC 50	thermo protection tube
INTEC 60	hand lever with bayonet locking
INTEC 60/ES	hand lever with bayonet locking and limit switch box

Product description code for INTEC K100

INTEC K1··	Mini plant ball valve
INTEC K· 10	with female threaded ends
INTEC K· 20	with male threaded ends
INTEC K· 30	one side with female threaded end and other side with male threaded end
INTEC K· 40	with pipe screwing light / heavy series acc. to DIN 2352
INTEC K· 50	with clamping ring connection
INTEC K··· -S	special alloy, special design, special face to face dimensions, higher pressure

Example:	INTEC K110	Mini plant ball valve with female threaded ends
	INTEC K120-S	Mini plant ball valve with male threaded ends, material 1.4462

Subject to modification. 01/2017

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KLINGER India

BALL VALVES INTEC

Product description code for INTEC K200, K400, K500 und K800

INTEC K2··	2-piece flanged ball valve
INTEC K4··	Multiple way ball valve
INTEC K5··	Tank bottom ball valve
INTEC K8··	3-piece flanged ball valve
INTEC K· 0·	floating ball
INTEC K· 1·	trunnion mounted ball, both sides spring loaded seatring
INTEC K· 2·	floating ball, single side spring loaded seatring
INTEC K· 3·	trunnion mounted ball, single side spring loaded seatring, free outlet
INTEC K·· 0	soft seated (KF/KFM, reinforced or virginal)
INTEC K·· 1	metal seated
INTEC K·· 2	carbon seated
INTEC K·· 3	ceramic seated
INTEC K·· 4	PEEK seated
INTEC K··· -S	special alloy, special design, special face to face dimensions, higher pressure
INTEC K··· -K	wafer type
INTEC K200-K-E	economic wafer type
INTEC K200-S-D	steam ball valve
INTEC K200-S-DB	double block and bleed ball valve

Example:		
	INTEC K220	2-piece flanged ball valve, floating ball, single side spring loaded seatring, soft seated
	INTEC K214-S	2-piece flanged b. v., trunnion mounted ball, both sides spring loaded seatring, PEEK seated, material 1.4462
	INTEC K410	Multiple way ball valve, trunnion mounted ball, both sides spring loaded seatring, soft seated
	INTEC K413-S	Multiple way b. v., trunnion mounted ball, both sides spring loaded seatring, ceramic seated, material 3.7035
	INTEC K524	Tank bottom ball valve, floating ball, single side spring loaded seatring, PEEK seated
	INTEC K531-S	Tank bottom ball valve, trunnion mounted ball, single side spring loaded seatring, free outlet, metal seated, material 1.4462
	INTEC K822	3-piece high-pressure ball valve, floating ball, single side spring loaded seatring, carbon seated
	INTEC K813-S	3-piece high-pressure b. v., trunnion mounted ball, both sides spring loaded seatring, ceramic seated, PN 160

Subject to modification. 01/2017

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KLINGER India

BALL VALVES INTEC

Product description code for INTEC K600

INTEC K6··/· - ·	Pressure gauge ball valve
INTEC K610/· - ·	connection acc. to DIN 16288, collar cap with cap nut
INTEC K620/· - ·	flange acc. to EN 1092 / collar cap with cap nut
INTEC K640/· - ·	connection acc. to EN 1092, pipe screwing light/heavy series acc. to DIN 2353
INTEC K6··/2-·	without vent bore
INTEC K6··/3-·	with vent bore
INTEC K6··/4-·	with vent bore and expansions tube
INTEC K6··/· -1	expansions tube M6
INTEC K6··/· -2	expansions tube G1/8“, handle be able to lock in opened and closed position, vent screw O-ring sealed
INTEC K6··/· -· -S	special alloy, special design, special face to face dimensions, higher pressure

Example:	**INTEC K610/2**	Pressure gauge ball valve, connection acc. to DIN 16288, collar cap with cap nut, without vent bore
	INTEC K640/4-2-S	Pressure gauge ball valve, connection acc. to EN 1092, expansions tube G1/8“, handle be able to lock in opened and closed position, plug screw o-ring sealed, material 1.4462

Product description code for INTEC K700

INTEC K7··	Sampling device ball valve
INTEC K· 3·	ball bore 30 mm, sample volume per switch cycle 10 / 15 / 25 ml
INTEC K· 4·	ball bore 40 mm, sample volume per switch cycle 40 / 50 / 70 ml
INTEC K·· 0	soft seated (KF/KFM, reinforced or virginal)
INTEC K·· 1	metal seated
INTEC K·· 2	carbon seated
INTEC K·· 3	ceramic seated
INTEC K·· 4	PEEK seated
INTEC K··· -S	special alloy, special design, special face to face dimensions, higher pressure
INTEC K··· -B	tank bottom connection

Example:	**INTEC K744**	Sampling device ball valve, ball bore 40 mm, sample volume per switch cycle 40 / 50 / 70 ml, PEEK seated

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FLANGED BALL VALVES

KLINGER India

	INTEC K200	2-piece flanged ball valves
	INTEC K230/K231	2-piece flanged ball valves, free outlet
	INTEC K200-K	Wafer type ball valves
	INTEC K204-S-D	Steam ball valves
	INTEC K400	Multiple way ball valves
	INTEC K500	Tank bottom ball valves
	INTEC K700	Sampling device ball valves
	INTEC K811	High-pressure ball valves

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INTEC BALL VALVES

System technology in one hand.

For your functionality and plant safety:

» Reinforced stem design for more safety in automation
» Dynamic primary sealing by floating ring principle
» German clean air act approval acc. to VDI 2440

For reduction of your variations:

» Fire-safe/Clean air act design - all in one - the best standard
» FDA conformity for pharmaceutical application
» System construction unit of all components for reduction of storage costs



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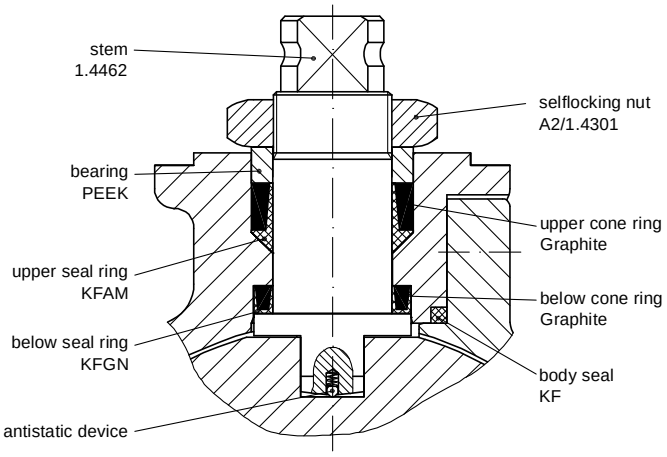
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trusted. worldwide.

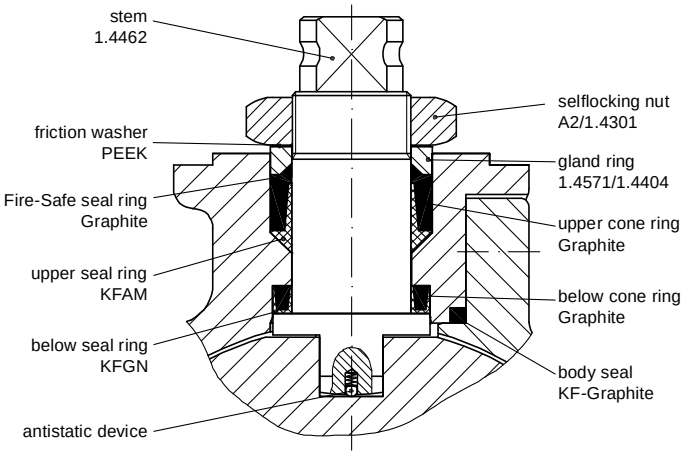
BALL VALVES INTEC

Stuffing box stem sealing systems
German clean air act certification acc. to VDI 2440

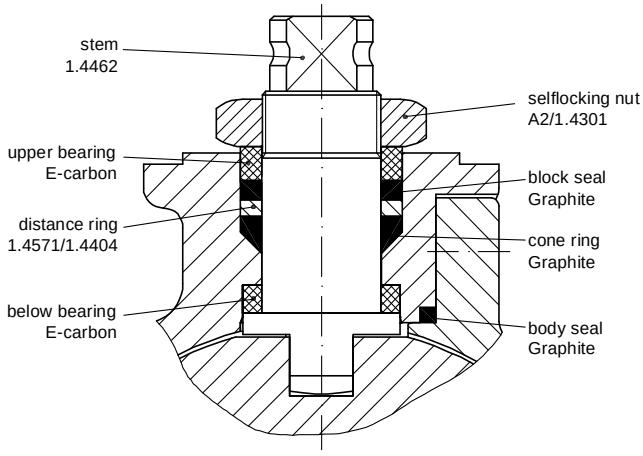
Standard



Fire-Safe



High Temperature



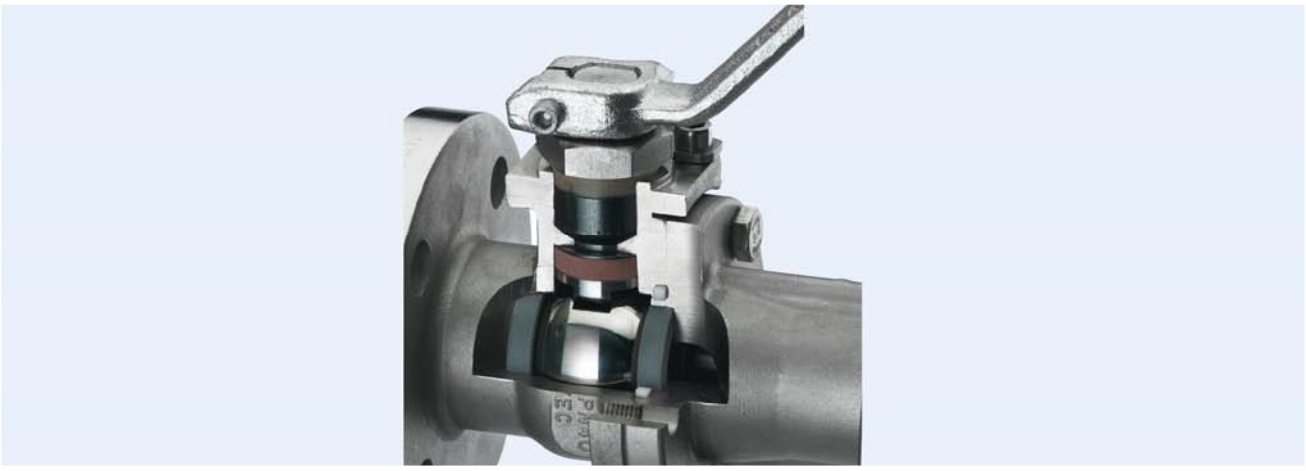
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KLINGER India

INTEC K200

High end ball valves for the chemical industry. One concept for all!



Proven design with perfect technical functionality. The ball valves are available in various material combinations and with different features.

Type:	2-piece flanged ball valve
Nominal sizes:	DN 15 - DN 500 NPS ½“ - NPS 20“
Pressure range:	PN 16 and PN 40 ANSI Class 150 and Class 300
Temperature:	up to +400°C
Material of body:	stainless steel, carbon steel
End connections:	flanges acc. to EN 1092 / flanges acc. to ANSI B 16.5
FTF:	acc. to EN 558, GR.1 and GR.27 / acc. to ANSI B 16.10
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, spring close unit - automatical return handle (“dead man handle”), gear (hand operated)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440, 100.000 cycles -40°C up to +220°C
- Fire-Safe acc. to API 607 and DIN EN ISO 10497
- classification acc. to SIL 2
- ATEX 2014/34/EU
- Type-test approval mark No. TÜV.A.318-15
- Type-test approval mark No. TÜ.AGG.431-09 for tanks for conveyance of dangerous goods (optional)
- Type Test Certificate TTC (optional)
- certified acc. to API 6D (optional)

Special designs:

- wide range of special materials

Product advantages:

- approvals acc. to virtually regulations
- system construction unit of all components for reduction of storage costs
- no o-rings - universal applicable
- stuffing box system absolutely ageing resistant
- system design in a Graphite/KF cone ring principle
- real primary sealing, no friction washer or bearing ring using of the floating ring seal principle (Graphite cone ring in KFGN-profile)
- stem material Duplex (1.4462), using of best knowledge of the pump technology
- reinforced stem design for more safety in automation
- FDA conformity for pharmaceutical application (optional)
- FDA conformity for oxygen (optional)

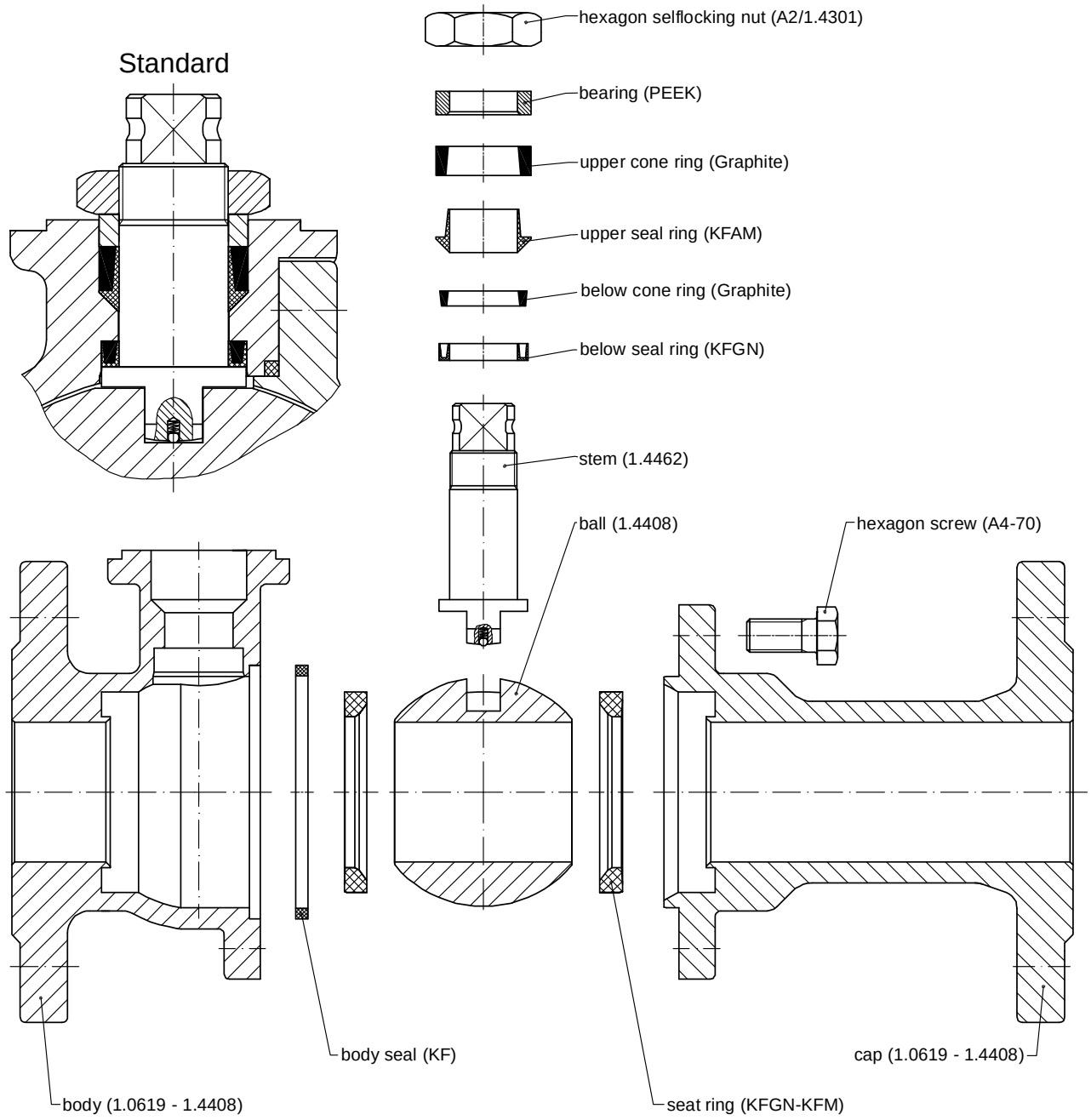
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KLINGER India

BALL VALVES INTEC K200

Detail arrangement
Standard
German clean air act certification acc. to VDI 2440



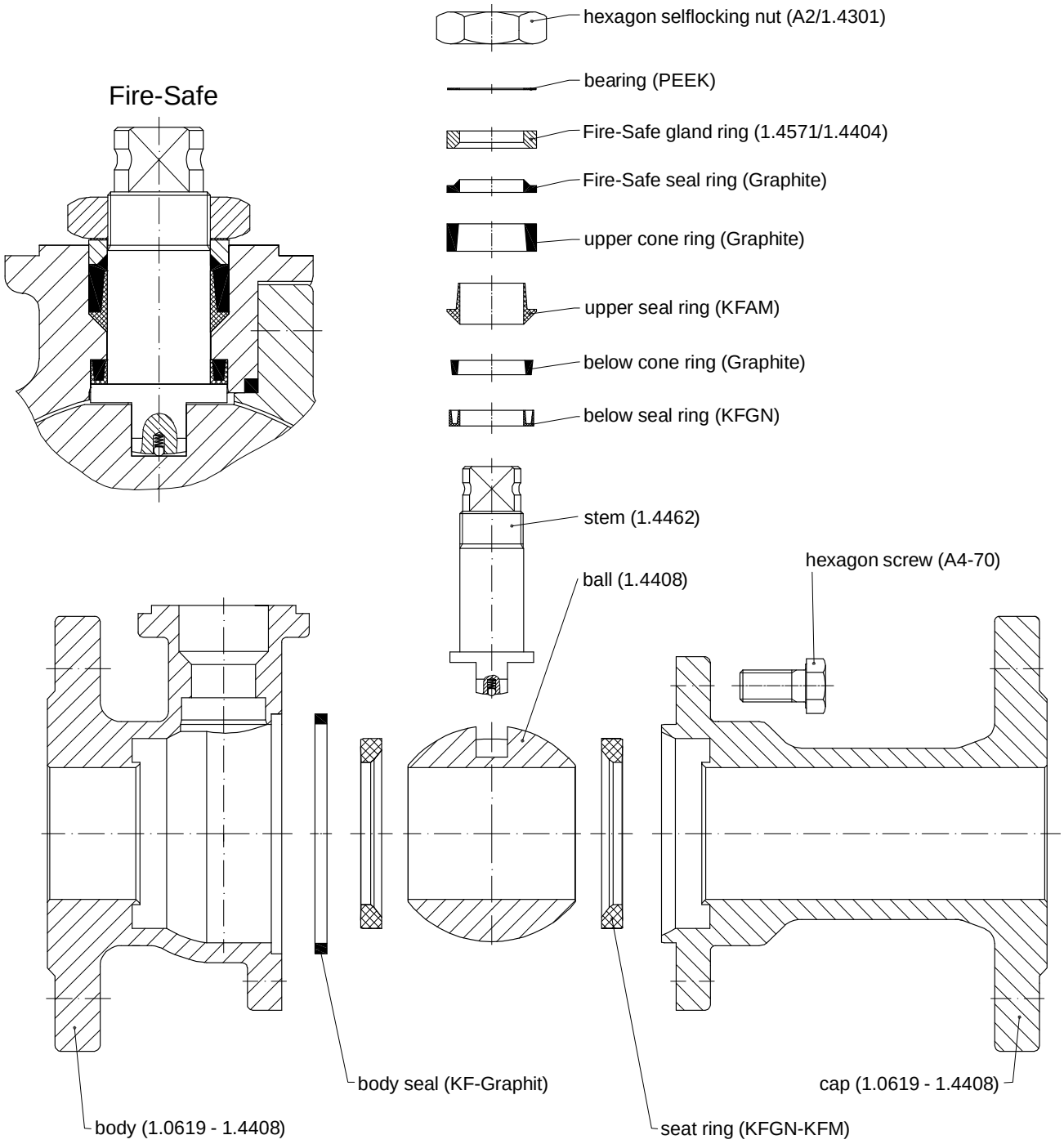
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KLINGER India

BALL VALVES INTEC K200

Detail arrangement
Fire-Safe
German clean air act certification acc. to VDI 2440



Subject to modification. 01/2017

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KLINGER India

INTEC K200, K220, K210, K224, K214

Seat ring system soft seated or PEEK seated.



Type:	2-piece flanged ball valve
Nominal sizes:	DN 15 - DN 500 NPS ½“ - NPS 20“
Pressure range:	PN 16 and PN 40 ANSI Class 150 and Class 300
Temperature:	up to +260°C
Material of body:	stainless steel, carbon steel
End connections:	flanges acc. to EN 1092 / flanges acc. to ANSI B 16.5
FTF:	acc. to EN 558, GR.1 and GR.27 / acc. to ANSI B 16.10
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, spring close unit - automatical return handle (“dead man handle”), gear (hand operated)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440, 100.000 cycles -40°C up to +220°C
- Fire-Safe acc. to API 607 and DIN EN ISO 10497
- classification acc. to SIL 2
- ATEX 2014/34/EU
- Type-test approval mark No. TÜV.A.318-15
- Type-test approval mark No. TÜ.AGG.431-09 for tanks for conveyance of dangerous goods (optional)
- Type Test Certificate TTC (optional)
- certified acc. to API 6D (optional)

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.

Special advantages:

- three side chambering of the seat ring
- reduction of abrasion, microdiffusion and operating torque
- best experiences in the chemical industry are made
- wide range of sealing materials:
  - KFM
  - KFGN (nitrogenium sintered)
  - KFCM (for steam application)
  - PEEK (continuous operation up to +260°C)

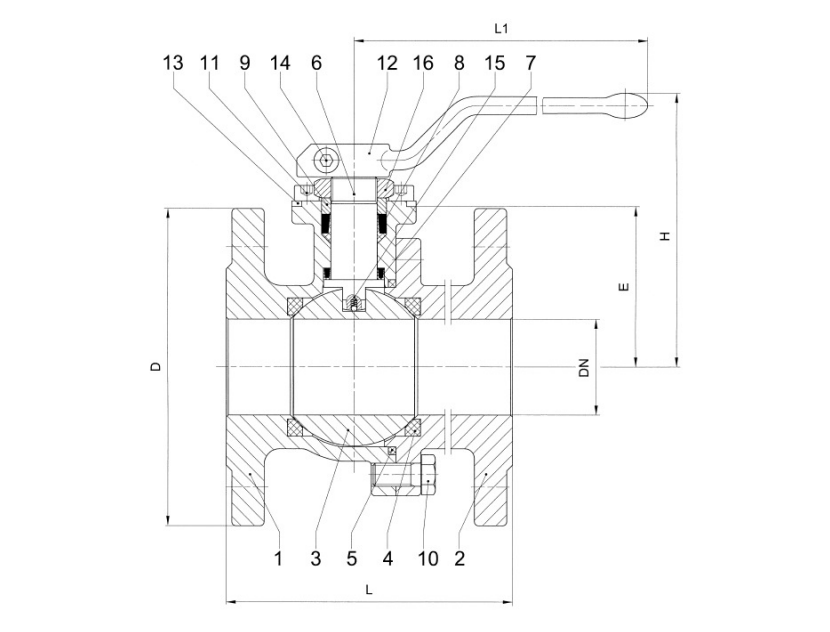
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BALL VALVES INTEC

K200, DN15 - DN100, PN16/40
floating ball, soft seated



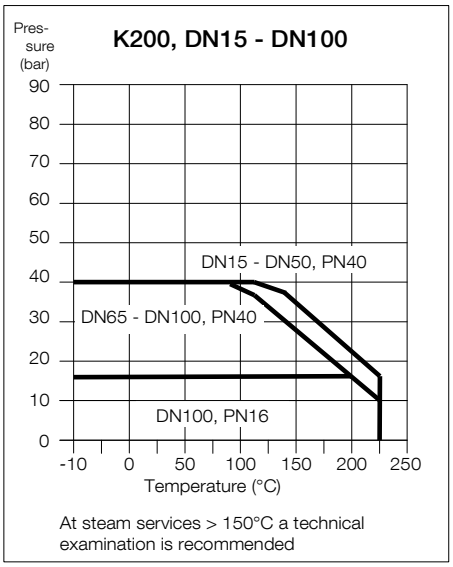
Flanged ball valve
full bore
face to face acc. to EN 558, GR. 1
face to face acc. to EN 558, GR. 27
flanges acc. to EN 1092

Specification:

Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, vacuum-tight, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, seat full chambered, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607 and DIN EN ISO 10497, with lever.

Marking: INTEC K200

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFGN/KFM	
5	body seal	KF	
6	stem	1.4462	
7	below seal	KFGN/Graphite	
8	upper seal	KFAM/Graphite	
9	bearing	PEEK	
10	hex. screw	A4-70	
11	allen screw	A2-70	
12	lever	1.4408/1.4308/steel zincplated	
13	stopper	1.4301	
14	allen screw	A2-70	
15	antistatic element	1.4401/1.4571/1.4404	
16	hex. nut self-locking	A2/1.4301	
Fire-Safe design			
5	combined body seal	KF-Graphite	
9	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	



At steam services > 150°C a technical examination is recommended

Dimensions

DN mm	PN	dimensions (mm) H	L1	L GR.1	L GR.27	D	E	top flange ISO	torque Nm**	weight kg GR.1	GR.27
15	40	95	160	130	115	95	39.5	F05	9	3.0	2.9
20	40	105	160	150	120	105	46.0	F05	10	4.0	3.7
25	40	114	180	160	125	115	49.5	F05	14	4.9	4.6
32	40	130	180	180	130	140	59.0	F05	17	6.7	6.4
40	40	135	300	200	140	150	76.0	F07	37	9.3	8.8
50	40	143	300	230	150	165	83.5	F07	45	13.0	12.1
65	40	155	300	290	170	185	94.0	F07	65	17.0	16.0
80	40	197	500	310	180	200	102.5	F10	109	26.0	23.0
100	16	215	500	350	190	220	120.5	F10	148	33.0	30.0
100	40	215	500	350	190	235	120.5	F10	148	34.0	32.0

** Necessary torque measured with treated water at Δ P = 16 bar and room temperature.

Ordering example:
INTEC K200, DN50, PN40, GR.27, 1.4408, Fire-Safe

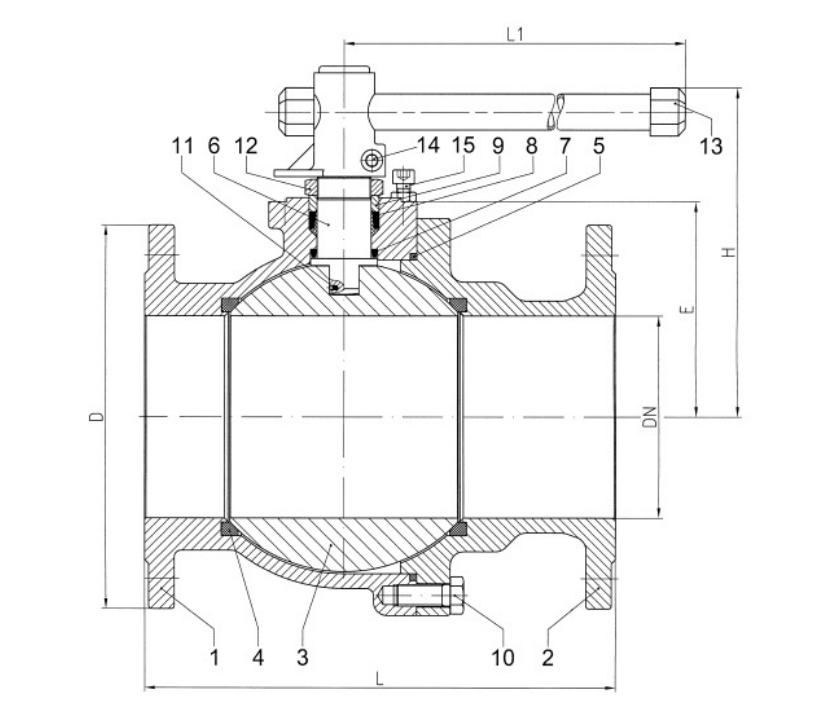
Subject to technical modification. 08/2018

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BALL VALVES INTEC

K200, DN125 - DN200, PN16/40
floating ball, soft seated



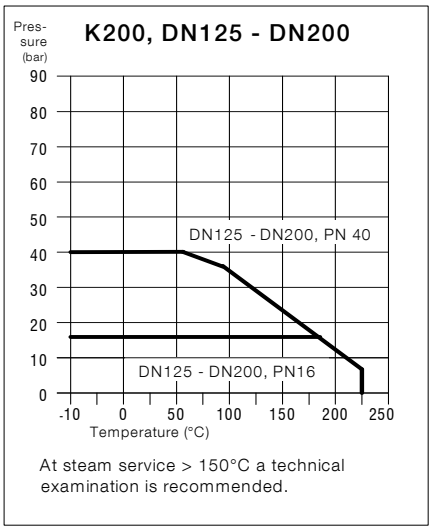
Flanged ball valve
full bore
face to face acc. to EN 558, GR. 27
flanges acc. to EN 1092

Specification:

Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.27, full bore, blow-out-proof stem, vacuum-tight, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, seat full chambered, stem packing Graphite/ KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K200

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFGN/KFM	
5	body seal	KF	
6	stem	1.4462	
7	below seal	KFGN/Graphite	
8	upper seal	KFAM/Graphite	
9	bearing	PEEK	
10	hex. screw	A4-70	
11	antistatic element	1.4401/1.4571/1.4404	
12	hex. screw self-locking	A2/1.4301	
13	lever	1.4408/1.4308/steel zincplated	
14	allen screw	A2-70	
15	stopper	A2	
Fire-Safe design			
5	combined body seal	KF-Graphite	
9	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K200, DN150, PN40, GR.27, 1.4408, Fire-Safe

Dimensions

DN mm	PN	dimensions (mm) H	L1	L	D	E	top flange ISO	torque Nm**	weight kg
125	16	263	700	325	250	164	F12	260	56
125	40	263	700	325	270	164	F12	260***	58
150	16	265	700	350	285	160	F12	286	80
150	40	265	700	350	300	181	F12	286***	85
200	16	340	1000	400	340	225	F14	442	152
200	40	340	1000	400	375	225	F14	442***	160

** Necessary torque measured with treated water at Δ P = 16 bar and room temperature.

*** PN 40 gearbox recommended.

Subject to technical modification. 08/2018

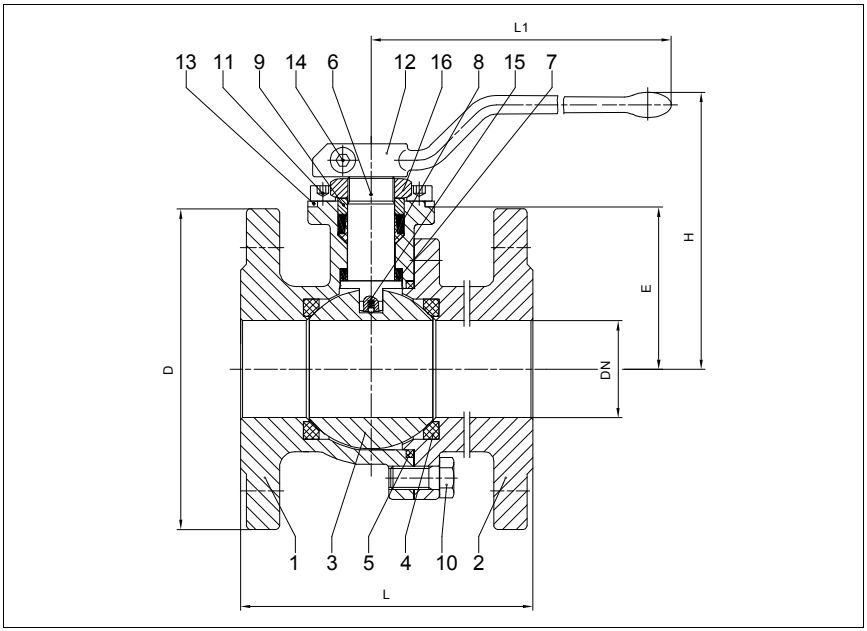
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BALL VALVES INTEC

K200, ½” - 4”, Class 150/300
with floating ball, soft seated

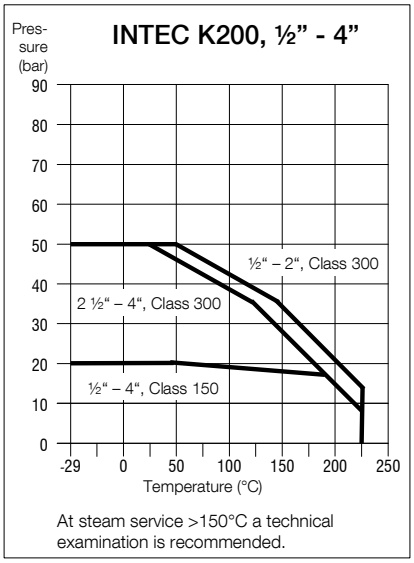


Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.5

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, seat full chambered, stem packing Graphite/ KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607 and DIN EN ISO 10497, with lever.

Marking: INTEC K200

No.	Part	Material	Material
Standard design			
1	body	A216-WCB	ASTM A351-CF8M
2	cap	A216-WCB	ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M)	
4	seat	KFGN/KFM	
5	body seal	KF	
6	stem	1.4462 (A479 UNS S31803)	
7	below seal	KFGN/Graphite	
8	upper seal	KFAM/Graphite	
9	bearing	PEEK	
10	hex. screw	A4-70 (A193-B8M)	
11	allen screw	A2-70 (A193-B8)	
12	lever	1.4408 (ASTM A351-CF8M)/1.4308 (ASTM A351-CF8)	
13	stopper	1.4301 (AISI 304)	
14	allen screw	A2-70 (A193-B8)	
15	antistatic element	1.4401 (AISI 316)/1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
16	hex. nut self-locking	A2/1.4301 (AISI 304)	
Fire-Safe design			
5	combined body seal	KF-Graphite	
9	Fire-Safe seal	Graphite	
	ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
	thrust washer	PEEK	



At steam service >150°C a technical examination is recommended.

Ordering example:
INTEC K200, 2”, Class 300, CF8M, Fire-Safe

Dimensions

NPS inch	dimensions H	L1	L 150 lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	top flange ISO	torque Nm** 150 lbs.	Nm** 300 lbs.	ca. weight kg 150 lbs.	kg 300 lbs.
½“	95	160	108	140	89	95	39.5	F05	9	10	2.1	2.9
¾“	105	160	117	152	98	117	46	F05	11	13	3.0	4.2
1“	114	180	127	165	108	124	49.5	F05	14	18	4.1	5.0
1 ¼“	130	180	140	178	117	133	59	F05	18	25	5.0	7.0
1 ½“	135	300	165	190	127	156	76	F07	39	52	8.0	10.5
2“	143	300	178	216	152	165	83.5	F07	48	70	11.8	13.0
2 ½“	155	300	190	241	178	190	94	F07	71	118	17.0	20.0
3“	197	500	203	283	190	210	102.5	F10	121	215	24.4	31.0
4“	215	500	229	305	229	254	120.5	F10	170	333	35.0	47.0

**Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

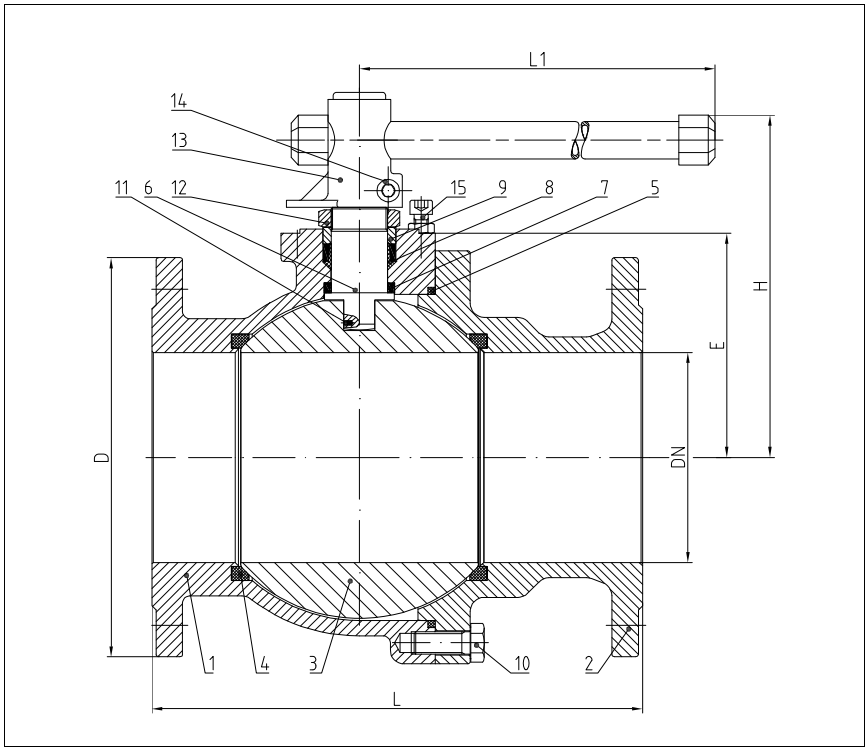
Subject to modification. 08/2019

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BALL VALVES INTEC

K200, 6” - 8”, Class 150/300
with floating ball, soft seated

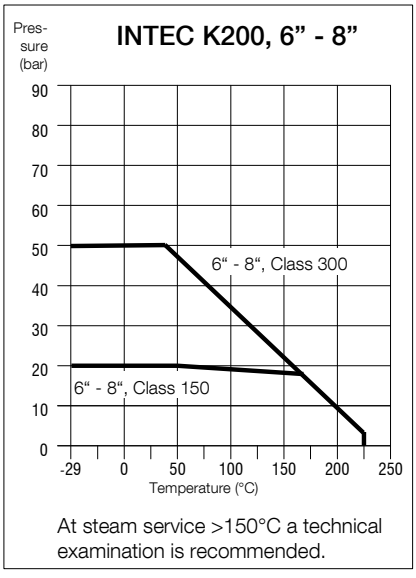


Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.5

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, seat full chambered, stem packing Graph-ite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K200

No.	Part	Material	Material
Standard design			
1	body	A216-WCB	ASTM A351-CF8M
2	cap	A216-WCB	ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M)	
4	seat	KFGN/KFM	
5	body seal	KF	
6	stem	1.4462 (A479 UNS S31803)	
7	below seal	KFGN/Graphite	
8	upper seal	KFAM/Graphite	
9	bearing	PEEK	
10	hex. screw	A4-70 (A193-B8M)	
11	antistatic element	1.4401 (AISI 316)/1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
12	hex. nut self-locking	A2/1.4301 (AISI 304)	
13	lever	1.4408 (ASTM A351-CF8M)/1.4308 (ASTM A351-CF8)	
14	allen screw	A2-70 (A193-B8)	
15	stopper	1.4301 (AISI 304)	
Fire-Safe design			
5	combined body seal	KF-Graphite	
9	Fire-Safe seal	Graphite	
	ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
	thrust washer	PEEK	



At steam service >150°C a technical examination is recommended.

Ordering example:
INTEC K200, 6”, Class 300, CF8M, Fire-Safe

Dimensions

NPS inch	dimensions (mm) H	L1	L 150 lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	top flange ISO	torque Nm* 150 lbs.	Nm* 300 lbs.	ca. weight kg 150 lbs.	kg 300 lbs.
6“	280	700	394	403	279	318	181	F12	380	847**	89.0	on request
8“	340	1000	457	502	343	381	225	F14	742	1731**	145.0	on request

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

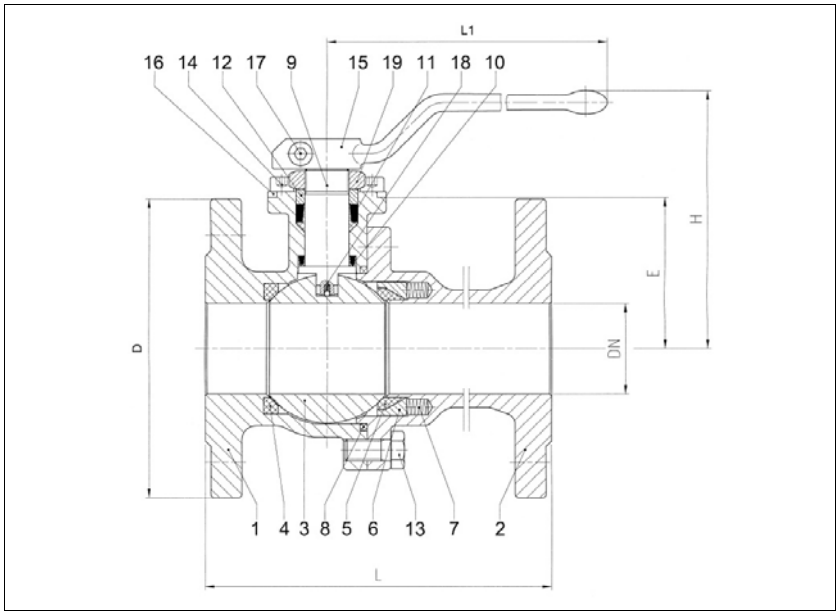
** Class 300 gearbox recommended.

Subject to modification. 08/2019

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BALL VALVES INTEC

K220, DN15 - DN100, PN16/40
floating ball, soft seated,
single side spring loaded seat ring

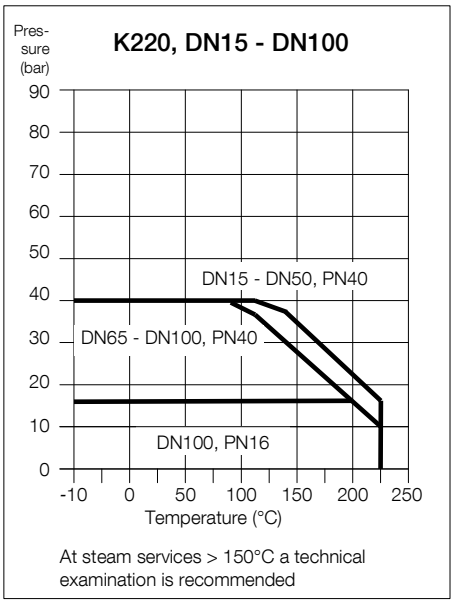


Flanged ball valve
full bore
face to face acc. to EN 558, GR. 1
face to face acc. to EN 558, GR. 27
flanges acc. to EN 1092

Specification:
Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, seat full chambered, single side spring loaded seat ring, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K220

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFGN/KFM	
5	spring loaded seat ring	KFGN/KFM	
6	seat bearing ring	1.4571/1.4404	
7	spiral spring	1.4401	
8	body seal	KF	
9	stem	1.4462	
10	below seal	KFGN/Graphite	
11	upper seal	KFAM/Graphite	
12	bearing	PEEK	
13	hex. screw	A4-70	
14	allen screw	A2-70	
15	lever	1.4408/1.4308/steel zincplated	
16	stopper	1.4301	
17	allen screw	A2-70	
18	antistatic element	1.4401/1.4571/1.4404	
19	hex. nut self-locking	A2/1.4301	
Fire-Safe design			
7	spiral spring	Inconel X750	
8	combined body seal	KF-Graphite	
9	Fire-Safe seal ring	Graphite	
	thrust washer	1.4571/1.4404	
		PEEK	



Dimensions

DN mm	PN	dimensions (mm) H	L1	L GR.1	L GR.27	D	E	top flange ISO	torque Nm**	weight kg GR.1	GR.27
15	40	95	160	130	115	95	39.5	F05	9	3.0	2.9
20	40	105	160	150	120	105	46.0	F05	10	4.0	3.7
25	40	114	180	160	125	115	49.5	F05	14	4.9	4.6
32	40	130	180	180	130	140	59.0	F05	17	6.7	6.4
40	40	135	300	200	140	150	76.0	F07	37	9.3	8.8
50	40	143	300	230	150	165	83.5	F07	45	13.0	12.1
65	40	155	300	290	170	185	94.0	F07	65	17.0	16.0
80	40	197	500	310	180	200	102.5	F10	109	26.0	23.0
100	16	215	500	350	190	220	120.5	F10	148	33.0	30.0
100	40	215	500	350	190	235	120.5	F10	148	34.0	32.0

** Necessary torque measured with treated water at Δ P = 16 bar and room temperature.

Ordering example:
INTEC K220, DN50, PN40, GR.27, 1.4408, Fire-Safe

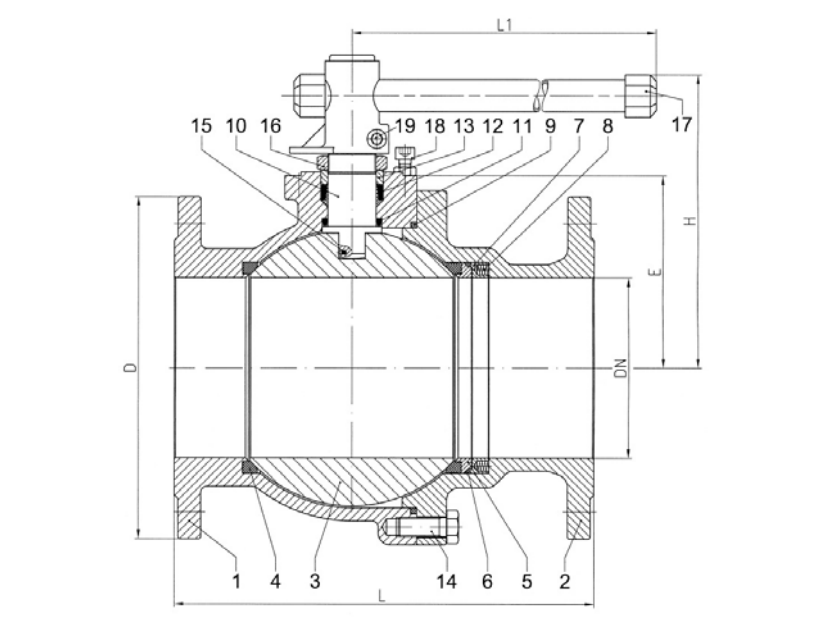
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BALL VALVES INTEC

K220, DN125 - DN200, PN16/40
with floating ball, soft seated, single side spring loaded seat ring



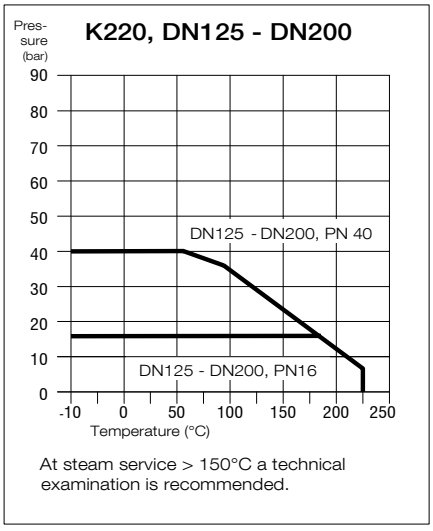
Flanged ball valve
full bore
face to face acc. to EN 558, GR. 27
flanges acc. to EN 1092

Specification:

Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, seat full chambered, single side spring loaded seat ring, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K220

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFGN/KFM	
5	seat bearing ring	1.4571/1.4404	
6	seat seal	KF	
7	follower ring	1.4571/1.4404	
8	spiral spring	1.4401	
9	body seal	KF	
10	stem	1.4462	
11	below seal	KFGN/Graphite	
12	upper seal	KFAM/Graphite	
13	bearing	PEEK	
14	hex. screw	A4-70	
15	antistatic element	1.4401/1.4571/1.4404	
16	hex. nut self-locking	A2/1.4301	
17	lever	1.4408/1.4308/steel zincplated	
18	stopper	A2	
19	allen screw	A2-70	
Fire-Safe design			
6	seat seal	Graphite	
8	spiral spring	Inconel X750	
9	combined body seal	KF-Graphite	
13	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	



At steam service > 150°C a technical examination is recommended.

Dimensions

DN mm	PN	dimensions (mm) H	L1	L	D	E	top flange ISO	torque Nm**	weight kg
125	16	263	700	325	250	164	F12	260	56
125	40	263	700	325	270	164	F12	260***	58
150	16	265	700	350	285	160	F12	286	80
150	40	265	700	350	300	181	F12	286***	85
200	16	340	1000	400	340	225	F14	442	152
200	40	340	1000	400	375	225	F14	442***	160

Ordering example:
INTEC K220, DN150, PN40, GR.27, 1.4408, Fire-Safe

** Necessary torque measured with treated water at Δ P = 16 bar and room temperature.

*** PN40 gearbox recommended.

Subject to technical modification. 08/2018

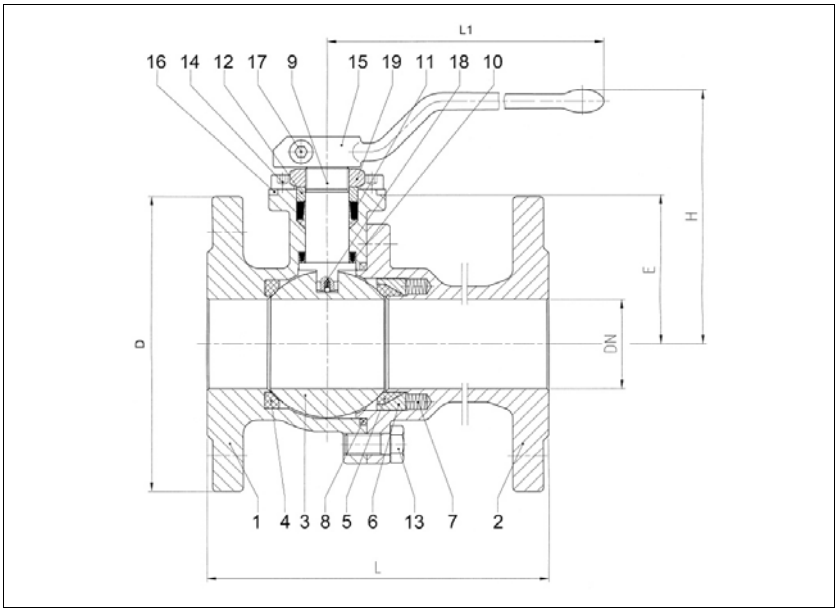
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BALL VALVES INTEC

K220, ½“ - 4“, Class 150/300
floating ball, soft seated,
single side spring loaded seat ring

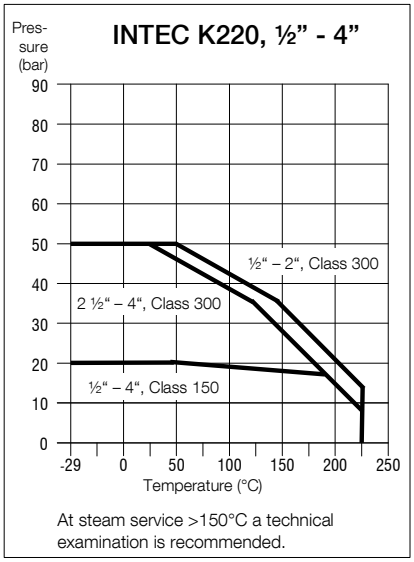


Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.15

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, seat full chambered, single side spring loaded seat ring, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, stuffing box acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607 and DIN EN ISO 10497, with lever.

Marking: INTEC K220

No.	Part	Material	Material
Standard design			
1	body	A216-WCB	ASTM A351-CF8M
2	cap	A216-WCB	ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M)	
4	seat	KFGN/KFM	
5	spring loaded seatring	KFGN/KFM	
6	seat bearing ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
7	spiral spring	1.4401 (AISI 316)	
8	body seal	KF	
9	stem	1.4462 (A479 UNS S31803)	
10	below seal	KFGN/Graphite	
11	upper seal	KFAM/Graphite	
12	bearing	PEEK	
13	hex. screw	A4-70 (A193-B8M)	
14	allen screw	A2-70 (A193-B8)	
15	lever	1.4408 (ASTM A351-CF8M)/1.4308 (ASTM A351-CF8)	
16	stopper	1.4301 (AISI 304)	
17	allen crew	A2-70 (A193-B8)	
18	antistatic element	1.4401 (AISI 316)/1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
19	hex. nut self-locking	A2/1.4301 (AISI 304)	
Fire-Safe design			
7	spiral spring	Inconel X750	
8	combined body seal	KF-Graphite	
12	Fire-Safe seal	Graphite	
	ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
	thrust washer	PEEK	



At steam service >150°C a technical examination is recommended.

Dimensions

NPS inch	dimensions (mm) H	L1	L 150 lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	top flange ISO	torque Nm** 150 lbs.	Nm** 300 lbs.
½“	95	160	108	140	89	95	39.5	F05	9	10
¾“	105	160	117	152	98	117	46	F05	11	13
1“	114	180	127	165	108	124	49.5	F05	14	18
1 ¼“	130	180	140	178	117	133	59	F05	18	25
1 ½“	135	300	165	190	127	156	76	F07	39	52
2“	143	300	178	216	152	165	83.5	F07	48	70
2 ½“	155	300	190	241	178	190	94	F07	71	118
3“	197	500	203	283	190	210	102.5	F10	121	215
4“	215	500	229	305	229	254	120.5	F10	170	333

** Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

Ordering example:
INTEC K220, 2”, Class 300, CF8M, Fire-Safe

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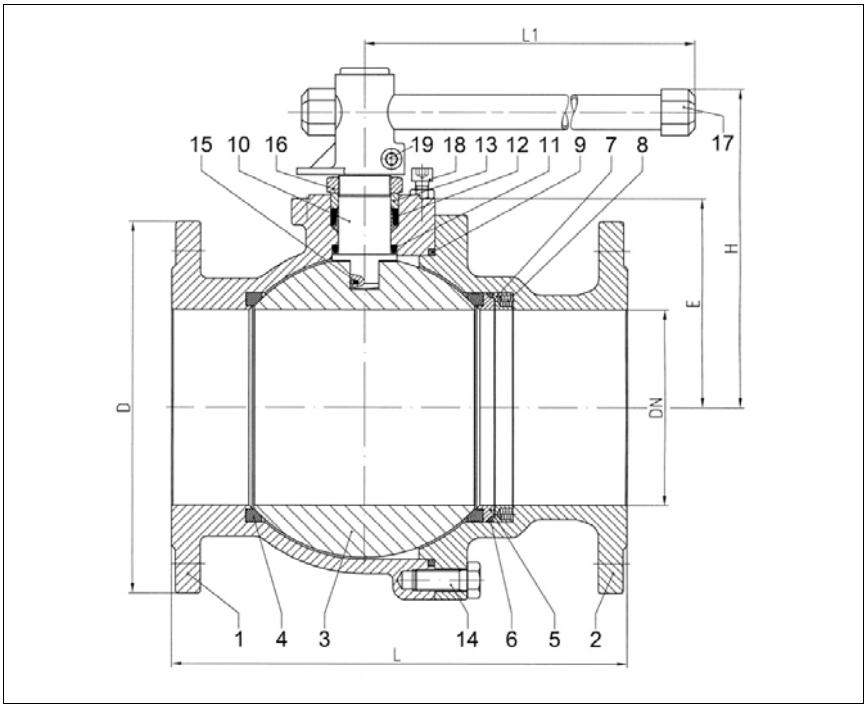
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BALL VALVES INTEC

K220, 6” - 8”, Class 150/300
floating ball, soft seated,
single side spring loaded seat ring

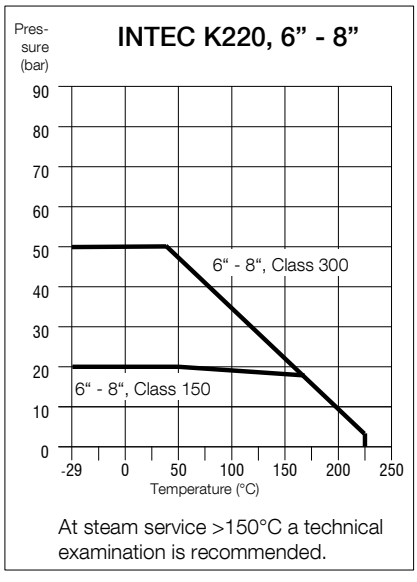


Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.5

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, seat full chambered, single side spring loaded seat ring, stem packing Graph-ite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, stuffing box acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K220

No.	Part	Material	Material
Standard design			
1	body	A216-WCB	ASTM A351-CF8M
2	cap	A216-WCB	ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M)	
4	seat	KFGN/KFM	
5	seat bearing ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
6	bearing ring seal	KF	
7	follower ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
8	spiral spring	1.4401 (AISI 316)	
9	body seal	KF	
10	stem	1.4462 (A479 UNS S31803)	
11	below seal	KFGN/Graphite	
12	upper seal	KFAM/Graphite	
13	bearing	PEEK	
14	hex. screw	A4-70 (A193-B8M)	
15	antistatic element	1.4401 (AISI 316)/1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
16	hex. nut self-locking	A2/1.4301 (AISI 304)	
17	lever	1.4408 (ASTM A351-CF8M)/1.4308 (ASTM A351-CF8)	
18	stopper	A2	
19	allen screw	A2-70 (A193-B8)	
Fire-Safe design			
6	bearing ring seal	Graphite	
8	spiral spring	Inconel X750	
9	combined body seal	KF-Graphite	
13	Fire-Safe seal	Graphite	
	ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
	thrust washer	PEEK	



At steam service >150°C a technical examination is recommended.

Ordering example:
INTEC K220, 6”, Class 300, CF8M, Fire-Safe

Dimensions

NPS inch	dimensions (mm) H	L1	L 150 lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	top flange ISO	torque Nm** 150 lbs.	Nm** 300 lbs.
6“	280	700	394	403	279	318	181	F12	380	847***
8“	340	1000	457	502	343	381	225	F14	742	1731***

** Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

*** Class 300 gearbox recommended.

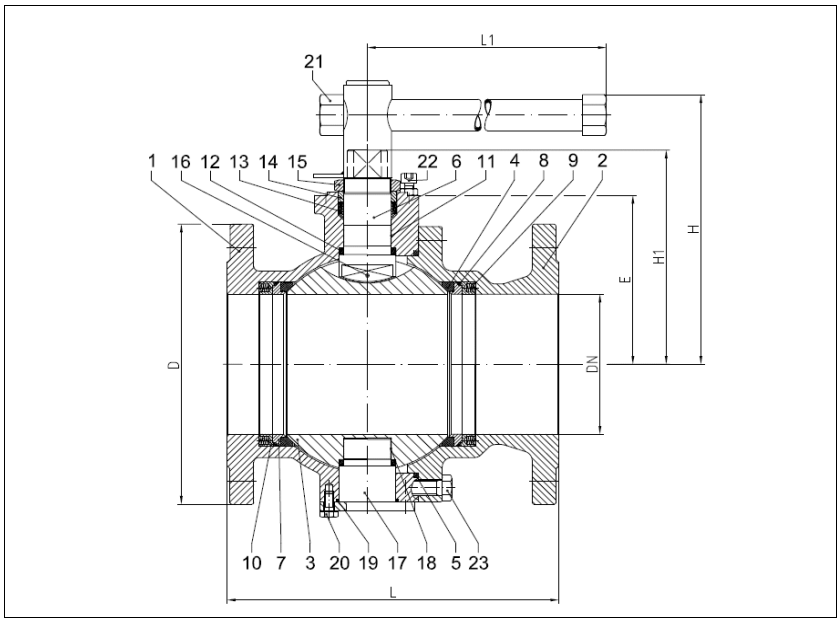
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BALL VALVES INTEC

K210, DN80 - DN250, PN16/40
trunnion mounted ball, soft seated, both sides spring loaded seat rings

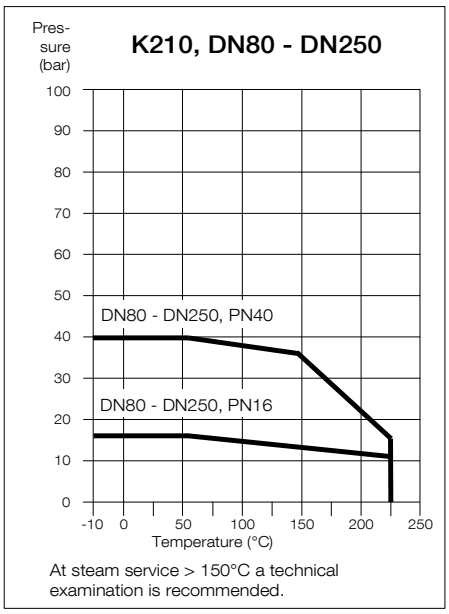


Flanged ball valve
full bore
face to face acc. to EN 558, GR.1
face to face acc. to EN 558, GR.27
flanges acc. to EN 1092

Specification:
Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, trunnion mounted ball, seats full chambered, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607 and DIN EN ISO 10497, with lever.

Marking: INTEC K210

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFGN/KFM	
5	body seal	KF	
6	stem	1.4462	
7	seat bearing ring	1.4571/1.4404	
8	seat seal	KF	
9	spiral spring	1.4401	
10	follower ring	1.4571/1.4404	
11	stem bearing	1.4401/KF	
12	below seal	KFGN/Graphite	
13	upper seal	KFAM/Graphite	
14	bearing	PEEK	
15	hex. nut self-locking	A2/1.4301	
16	antistatic element	1.4401/1.4571/1.4404	
17	trunnion (up to DN125 with screwed end))	1.4571/1.4404	
18	bearing	1.4401/KF	
19	trunnion seal	KF	
20	hex. screw (as from DN150)	A4-70	
21	lever	1.4408/1.4308/steel zincplated	
22	stopper	A2	
23	hex. screw	A4-70	
Fire-Safe design			
5	combined body seal	KF-Graphite	
8	seat seal	Graphite	
9	spiral spring	Inconel X750	
11	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	
19	trunnion seal	KF-Graphite	



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K210, DN100, PN40, GR. 27, 1.4408, Fire-Safe

Other flange connections and materials on request.

Dimensions

DN mm	PN	dimensions (mm) H	L1	L (GR. 1)	L (GR. 27)	D	E	H1	top flange ISO	torque Nm *	weight kg GR. 1	GR. 27
80	40	194	500	310	180	200	112.5	155	F10	170	24	23
100	16	221.5	500	350	190	220	137	179.5	F12	140	32.5	31.5
100	40	221.5	500	350	190	235	137	179.5	F12	255	33.5	33
125	16	246.5	700	-	325	250	164	206.5	F12	185	-	56.5
125	40	246.5	700	-	325	270	164	206.5	F12	370	-	58.5
150	16	263	700	-	350	285	181	229.5	F12	265	-	81
150	40	263	700	-	350	300	181	229.5	F12	565**	-	85
200	16	304	1000	-	400	340	225	284.5	F14	490	-	153
200	40	304	1000	-	400	375	225	284.5	F14	1110**	-	161
250	16	340.5	1200	-	450	405	261.5	321	F14/F16	760**	-	256
250	40	340.5	1200	-	450	450	261.5	321	F14/F16	1735**	-	274

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

** gearbox recommended

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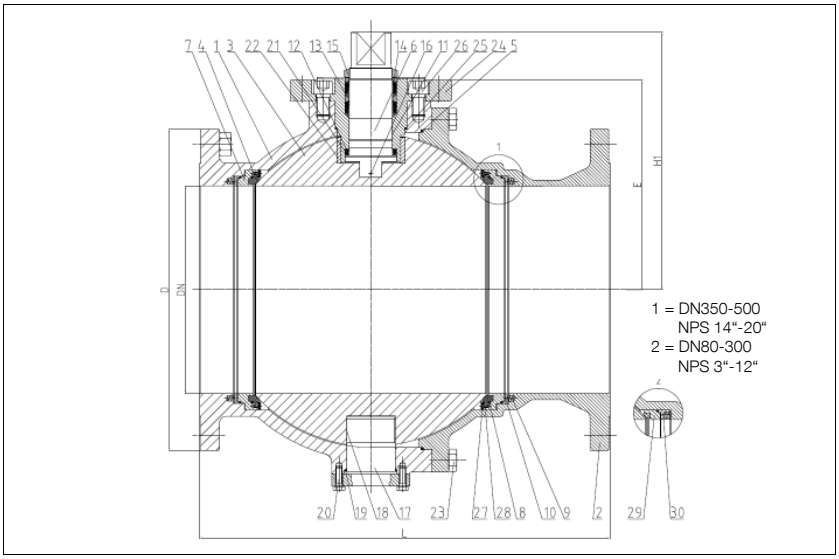
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BALL VALVES INTEC

K210, DN300 - DN500, PN16/40
trunnion mounted ball, soft seated, both sides spring loaded seat rings

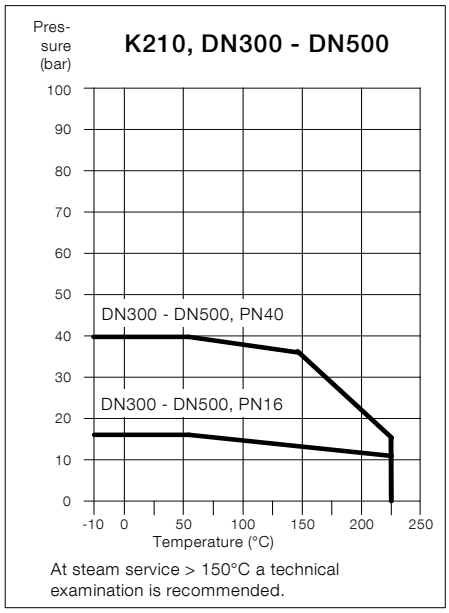


Flanged ball valve
full bore
face to face acc. to EN 558, GR.27
flanges acc. to EN 1092

Specification:
Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, trunnion mounted ball, seats full chambered, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607 and DIN EN ISO 10497.

Marking: INTEC K210

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFM	
5	body seal	KF	
6	stem	1.4462	
7	seat bearing ring	1.4571/1.4404	
8	seat seal	KF	
9	spiral spring	1.4401	
10	follower ring	1.4571/1.4404	
11	stem bearing	1.4401/KF	
12	below seal	KFGN/Graphite	
13	upper seal	KFAM/Graphite	
14	bearing	PEEK	
15	hex. nut self-locking	A2/1.4301	
16	antistatic element	1.4401/1.4571/1.4404	
17	trunnion	1.4571/1.4404	
18	bearing	1.4401/KF	
19	trunnion seal	KF	
20	hex. screw	A4-70	
21	friction washer	PEEK	
22	ball bearing	PEEK	
23	hex. screw	A4-70	
24	stuffing box	1.4571/1.4404	
25	stuffing box seal	KF	
26	allen screw	A4-70	
27	stop plate	1.4571/1.4404	
28	countersunk screw	A4-70	
29	seat bearing ring	1.4571/1.4404	
30	spring washer	1.4571/1.4404	
Fire-Safe design			
5	combined body seal	KF-Graphite	
8	seat seal	Graphite	
9	spiral spring	Inconel X750	
11	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	
19	trunnion seal	Graphite	
25	stuffing box seal	KF-Graphite	



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K210, DN400, PN40, GR. 27, 1.4408, Fire-Safe

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

** gearbox recommended

Other flange connections and materials on request.

Dimensions

DN mm	PN	dimensions (mm) L	D	E	H1	top flange ISO	torque Nm *	weight kg
300	16	500	460	311	400	F16	1364**	343
300	40	500	515	311	400	F16/F25	3239**	380
350	16	550	520	350	439	F25	1970**	505
350	40	550	580	350	439	F25	4613**	615
400	16	762	580	388.5	477.5	F25-F30	2540**	692
400	40	762	660	388.5	477.5	F25-F30	5950**	772
500	16	914	715	485	589	F25-F30	4890**	1363
500	40	914	755	485	589	F30/F35	11600**	1438

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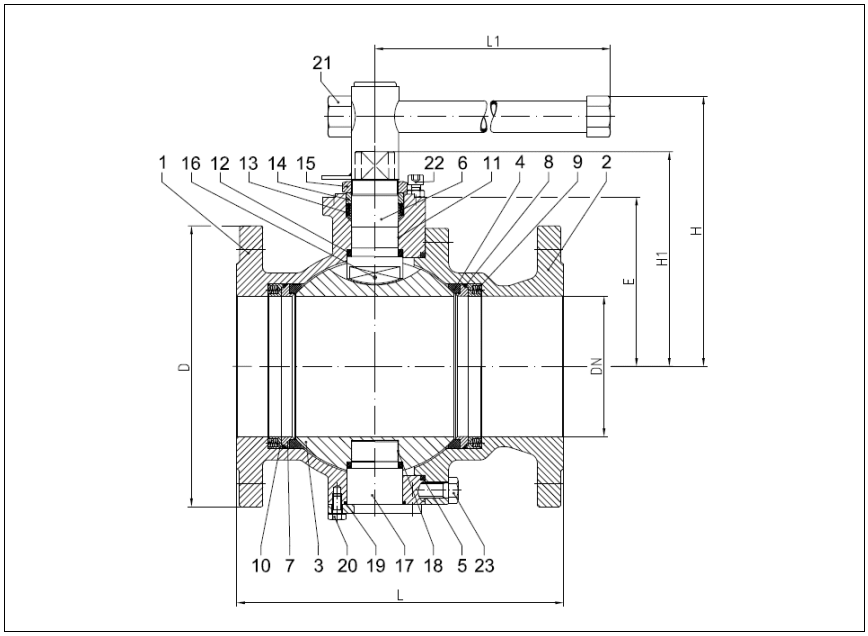
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BALL VALVES INTEC

K210, 3” - 10”, Class 150/300 trunnion mounted ball, soft seated, both sides spring loaded seat rings

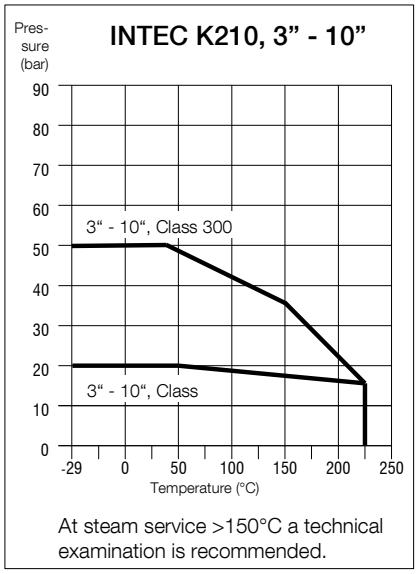


Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.5

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, trunnion mounted ball, seats full chambered, both sides spring loaded seat rings, stem packing graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607 and DIN EN ISO 10497, with lever.

Marking: INTEC K210

No.	Part	Material	Material
Standard design			
1	body	ASTM A216-WCB	ASTM A351-CF8M
2	cap	ASTM A216-WCB	ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M)	
4	seat	KFGN/KFM	
5	body seal	KF	
6	stem	1.4462 (A479 UNS S31803)	
7	seat bearing ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
8	bearing ring seal	KF	
9	spiral spring	1.4401 (AISI 316)	
10	follower ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
11	stem bearing	1.4401 (AISI 316)/KF	
12	below seal	KFGN/Graphite	
13	upper seal	KFAM/Graphite	
14	bearing	PEEK	
15	hex. nut self-locking	1.4301 (AISI 304)	
16	antistatic element	1.4401 (AISI 316)/1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
17	trunnion (up NPS 5” with screwed end)	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
18	bearing	1.4401 (AISI 316)/KF	
19	trunnion seal	KF	
20	hex. screw (as from NPS 6”)	A4-70 (A193-B8M)	
21	lever	1.4408 (ASTM A351-CF8M)/1.4308 (ASTM A351-CF8)	
22	stopper	A2	
23	hex. screw	A4-70 (A193-B8M)	
Fire-Safe design			
5	combined body seal	KF-Graphite	
8	bearing ring seal	Graphite	
9	spiral spring	Inconel X750	
14	Fire-Safe seal ring	Graphite	
		1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
	thrust washer	PEEK	
19	trunnion seal	KF-Graphite	



At steam service >150°C a technical examination is recommended.

Ordering example:
INTEC K210, 8“, Class 300, CF8M, Fire-Safe

Dimensions

NPS inch	dimensions (mm) H	L1	L 150 lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	H1	top flange ISO	torque Nm** 150 lbs.	torque Nm** 300 lbs.
3“	194	500	203	283	190	210	112.5	155	F10	121	214
4“	221.5	500	229	305	229	254	137	179.5	F12	168	324
6“	263	700	394	403	279	318	181	229.5	F12	333	733***
8“	304	1000	457	502	343	381	225	284.5	F14	634**	1462***
10“	340.5	1200	533	568	406	444	261.5	321	F14	993**	2309***

** Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.
*** Class 300 gearbox recommended.

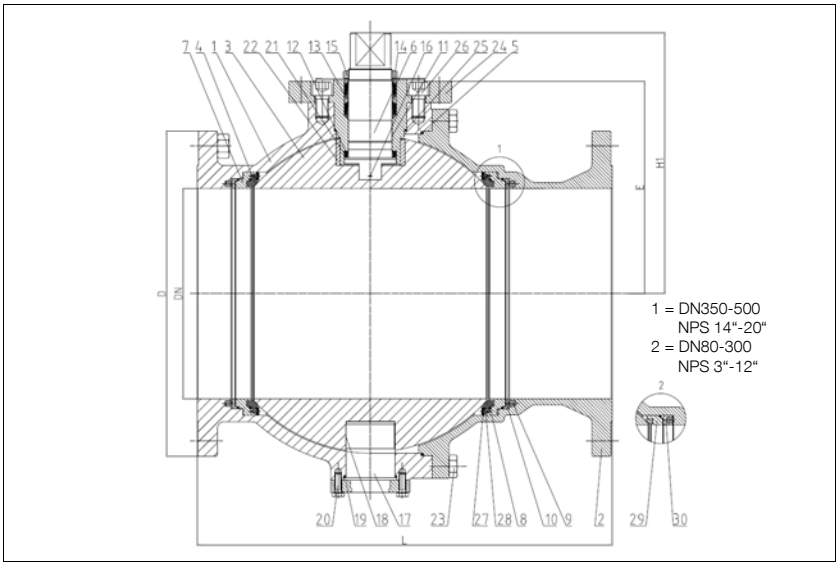
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BALL VALVES INTEC

K210, 12“ - 20“, Class 150/300
trunnion mounted ball, soft seated, both sides spring loaded seat rings

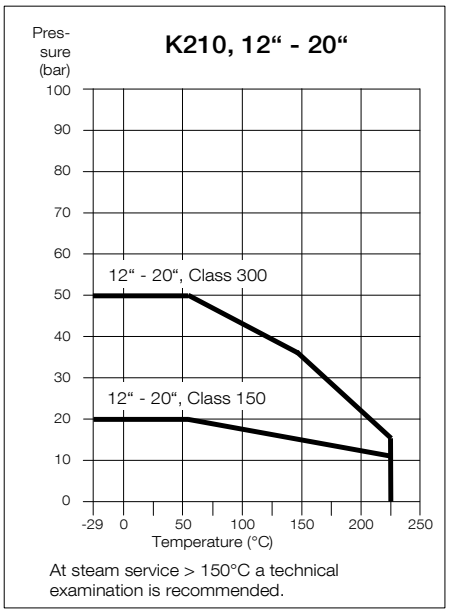


Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.5

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, trunnion mounted ball, seats full chambered, stem packing graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607 and DIN EN ISO 10497.

Marking: INTEC K210

No.	Part	Material	Material
Standard design			
1	body	ASTM A216-WCB	ASTM A351-CF8M
2	cap	ASTM A216-WCB	ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M)	
4	seat	KFM	
5	body seal	KF	
6	stem	1.4462 (A479 UNS S31803)	
7	seat bearing ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
8	bearing ring seal	KF	
9	spiral spring	1.4401 (AISI 316)	
10	follower ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
11	stem bearing	1.4401 (AISI 316)/KF	
12	below seal	KFGN/Graphite	
13	upper seal	KFAM/Graphite	
14	bearing	PEEK	
15	hex. nut self-locking	A2/1.4301 (AISI 304)	
16	antistatic element	1.4401 (AISI 316)/1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
17	trunnion	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
18	bearing	1.4401 (AISI 316)/KF	
19	trunnion seal	KF	
20	hex. screw	A4-70 (A193-B8M)	
21	friction washer	PEEK	
22	ball bearing	PEEK	
23	hex. screw	A4-70 (A193-B8M)	
24	stuffing box	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
25	stuffing box seal	KF	
26	allen screw	A4-70 (A193-B8M)	
27	stop plate	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
28	countersunk screw	A4-70 (A193-B8M)	
29	seat bearing ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
30	spring ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
Fire-Safe design			
5	combined body seal	KF-Graphite	
8	bearing ring seal	Graphite	
9	spiral spring	Inconel X750	
11	Fire-Safe seal	Graphite	
	ring	1.4571	
	thrust washer	PEEK	
19	trunnion seal	Graphite	
25	stuffing box seal	KF-Graphite	



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K210, 20”, Class 300, CF8M, Fire-Safe

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

** gearbox recommended

Dimensions

NPS inch	dimensions (mm) L 150lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	H1	top flange ISO	torque Nm * 150 lbs.	300 lbs.	ca. weight kg 150 lbs.	300 lbs.
12”	610	648	485	520	311	400	F16/F25	1642**	3921**	385	445
14”	686	762	535	585	350	439	F25	2420**	5820**	530	640
16”	762	838	595	650	389	477.5	F25-F35	3110**	7510**	715	870
20”	914	911	700	775	485	589	F25-F35	6020**	14770**	1365	1500

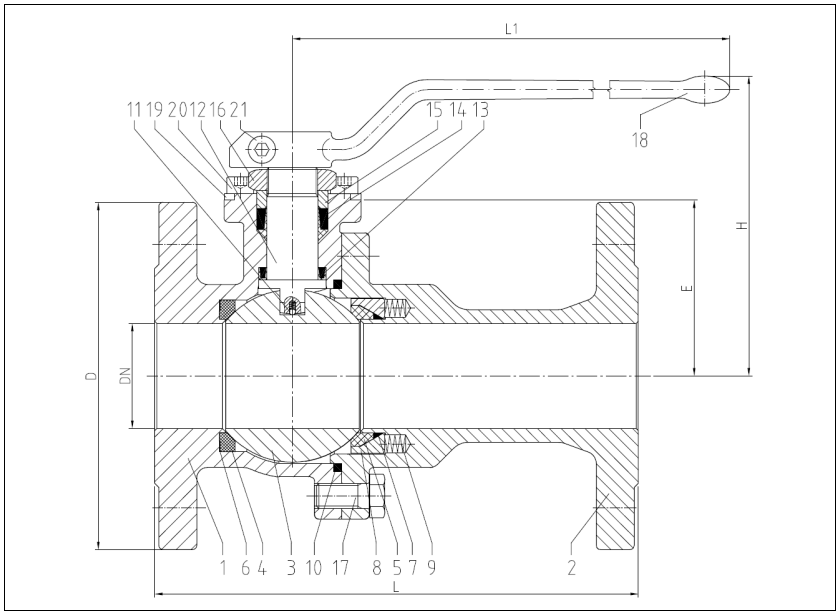
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BALL VALVES INTEC

K224, DN15 - DN100, PN16/40
floating ball, PEEK seated,
single side spring loaded seat ring



No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	PEEK / PEEK mod.	
5	spring loaded seat	PEEK / PEEK mod.	
6	seat back seal	Graphite	
7	seat seal	KF	
8	seat bearing ring	1.4571/1.4404	
9	spiral spring	1.4401	
10	body seal	KF	
11	antistatic element	1.4401/1.4571/1.4404	
12	stem	1.4462	
13	below seal	KFGN/Graphite	
14	upper seal	KFAM/Graphite	
15	upper stem bearing	PEEK	
16	hex. nut self-locking	A2/1.4301	
17	hex. screw	A4-70	
18	lever	1.4408/1.4308/steel zincplated	
19	stopper	1.4301	
20	allen screw	A2-70	
21	allen screw	A2-70	
Fire-Safe design			
7	seat seal	Graphite	
9	spiral spring	Inconel X750	
10	combined body seal	KF-Graphite	
12	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	

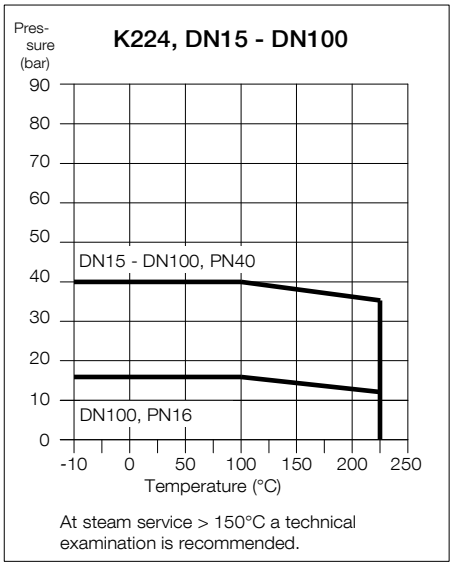
Flanged ball valve
full bore
face to face acc. to EN 558, GR. 1
face to face acc. to EN 558, GR. 27
flanges acc. to EN 1092

Specification:

Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, seat full chambered, single side spring loaded seat ring, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Also possible as high-temperature version up to +260°C.

Marking: INTEC K224



Dimensions

DN mm	PN	dimensions (mm) H	L1	L GR.1	L GR.27	D	E	top flange ISO	torque Nm**	ca. weight kg GR.1	GR.27
15	40	95	160	130	115	95	39.5	F05	12	3.0	2.9
20	40	105	160	150	120	105	46	F05	16	4.0	3.7
25	40	114	180	160	125	115	49.5	F05	23	4.9	4.6
32	40	130	180	180	130	140	59	F05	35	6.7	6.4
40	40	135	300	200	140	150	76	F07	70	9.3	8.8
50	40	143	300	230	150	165	83.5	F07	101	13.0	12.1
65	40	155	300	290	170	185	94	F07	180	17.0	16.0
80	40	197	500	310	180	200	102.5	F10	327	26.0	23.0
100	16	215	500	350	190	220	120.5	F10	257	33.0	30.0
100	40	215	500	350	190	235	120.5	F10	517	34.0	32.0

** Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

Ordering example:
INTEC K224, DN50, PN40, GR.27, 1.4408, Fire-Safe

Subject to technical modification. 10/2019

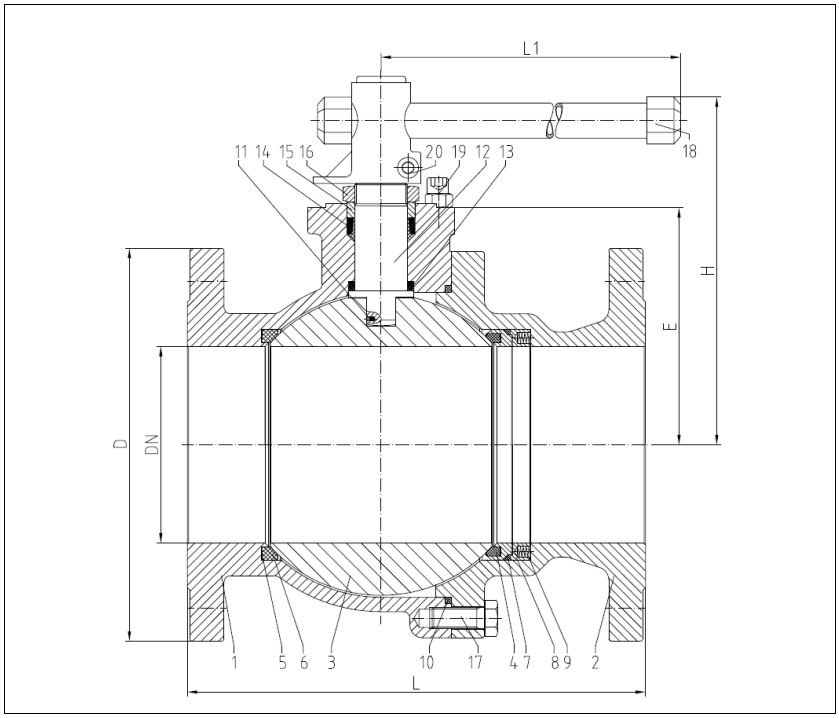
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BALL VALVES INTEC

K224, DN125 - DN200, PN10/16
floating ball, PEEK seated,
single side spring loaded seat ring



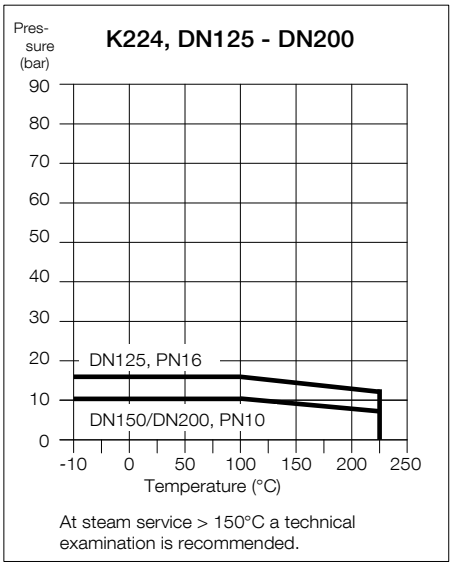
Flanged ball valve
full bore
face to face acc. to EN 558, GR. 27
flanges acc. to EN 1092

Specification:

Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.27, full bore, blow-out-proof sem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, seats full chambered, single side spring loaded seat ring, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC K224

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat (flanged)	PEEK/ Graphite/ 1.4571 - 1.4404 PEEK mod./ Graphite/ 1.4571 - 1.4404	
5	seat back seal	Graphite	
6	seat	PEEK / PEEK mod.	
7	seat seal	KF	
8	follower ring	1.4571/1.4404	
9	spiral spring	1.4401	
10	body seal	KF	
11	antistatic element	1.4401/1.4571/1.4404	
12	stem	1.4462	
13	below seal	KFGN/Graphite	
14	upper seal	KFAM/Graphite	
15	upper stem bearing	PEEK	
16	hex. nut self-locking	A2/1.4301	
17	hex. screw	A4-70	
18	lever	1.4408/1.4308/steel zincplated	
19	stopper	A2	
20	allen screw	A2-70	
Fire-Safe design			
7	seat seal	Graphite	
9	spiral spring	Inconel X750	
10	combined body seal	KF-Graphite	
12	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K224, DN150, PN10, GR.27, 1.4408, Fire-Safe

Dimensions

DN mm	PN	dimensions (mm) H	L1	L	D	E	top flange ISO	torque Nm*	ca. weight kg
125	16	263	700	325	250	164	F12	475**	56
150	10	265	700	350	285	160	F12	362**	80
200	10	340	1000	400	340	225	F14	558**	152

* Necessary torque measured with treated water at Δ P acc. pressure class and room temperature.

** gearbox recommended

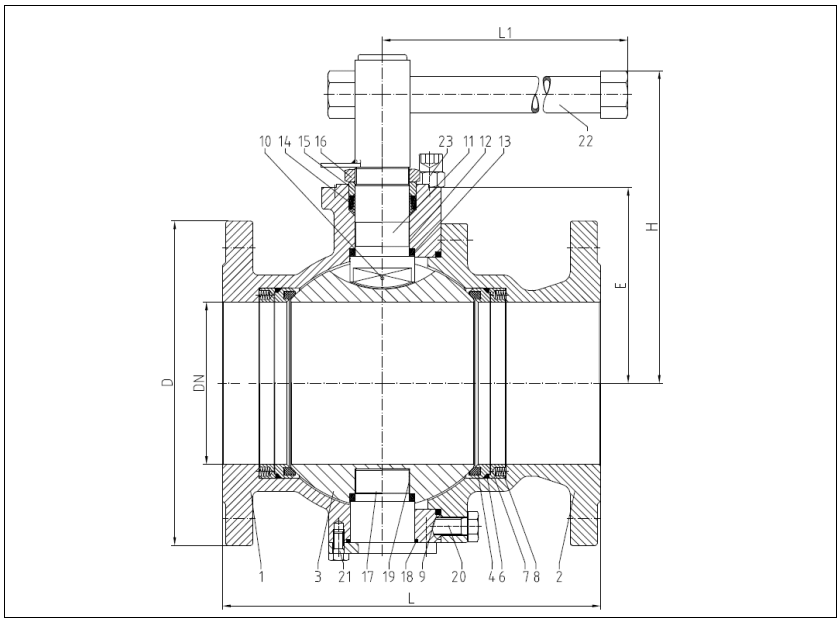
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BALL VALVES INTEC

K214, DN80 - DN250, PN16/40
trunnion mounted ball, PEEK seated, both sides spring loaded seat rings



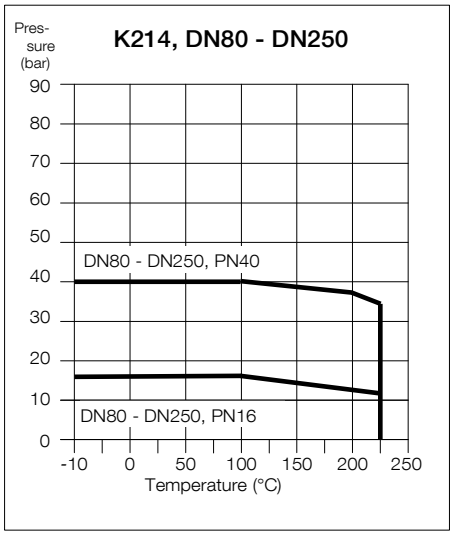
Flanged ball valve
full bore
face to face acc. to EN 558, GR.1
face to face acc. to EN 558, GR.27
flanges acc. to EN 1092

Specification:
Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, trunnion mounted ball, seats full chambered, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Also possible as high-temperature version up to +260°C.

Marking: INTEC K214

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat (flanged)	PEEK/Graphite/1.4571-1.4404 PEEK mod./Graphite/1.4571-1.4404	
6	seat seal	KF	
7	follower ring	1.4571/1.4404	
8	spiral spring	1.4401	
9	body seal	KF	
10	antistatic element	1.4401/1.4571/1.4404	
11	stem	1.4462	
12	below stem bearing	1.4401/KF	
13	below seal	KFGN/Graphite	
14	upper seal	KFAM/Graphite	
15	upper stem bearing	PEEK	
16	hex. nut self-locking	A2/1.4301	
17	trunnion	1.4571/1.4404	
18	trunnion seal	KF	
19	bearing	1.4401/KF	
20+21	hex. screw	A4-70	
22	lever	1.4408/1.4308/steel zincplated	
23	stopper	A2	
Fire-Safe design			
5	combined body seal	KF-Graphite	
6	seat seal	Graphite	
8	spiral spring	Inconel X750	
11	Fire-Safe seal ring	Graphite	
		1.4571/1.4404	
	thrust washer	PEEK	
18	trunnion seal	KF-Graphite	



Ordering example:
INTEC K214, DN100, PN40, GR.27, 1.4408, Fire-Safe

Other flange connections and materials on request.

Dimensions

DN mm	PN	dimensions (mm) H	L1	L GR. 1	L GR. 27	D	E	H1	top flange ISO	torque Nm *	ca. weight kg GR. 1	GR. 27
80	40	194	500	310	180	200	112.5	155	F10	294**	26	24
100	16	221.5	500	350	190	220	137	179.5	F12	238**	34	32
100	40	221.5	500	350	190	235	137	179.5	F12	456**	35	34
125	16	246.5	700	-	325	250	164	206.5	F12	255**	-	57
125	40	246.5	700	-	325	270	164	206.5	F12	521**	-	60
150	16	263	700	-	350	285	181	229.5	F12	359**	-	80
150	40	263	700	-	350	300	181	229.5	F12	780**	-	85
200	16	304	1000	-	400	340	225	284.5	F14	683**	-	140
200	40	304	1000	-	400	375	225	284.5	F14	1558**	-	150
250	16	340.5	1200	-	450	405	261.5	321	F14	1092**	-	245
250	40	340.5	1200	-	450	450	261.5	321	F14	2511**	-	250

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

** gearbox recommended

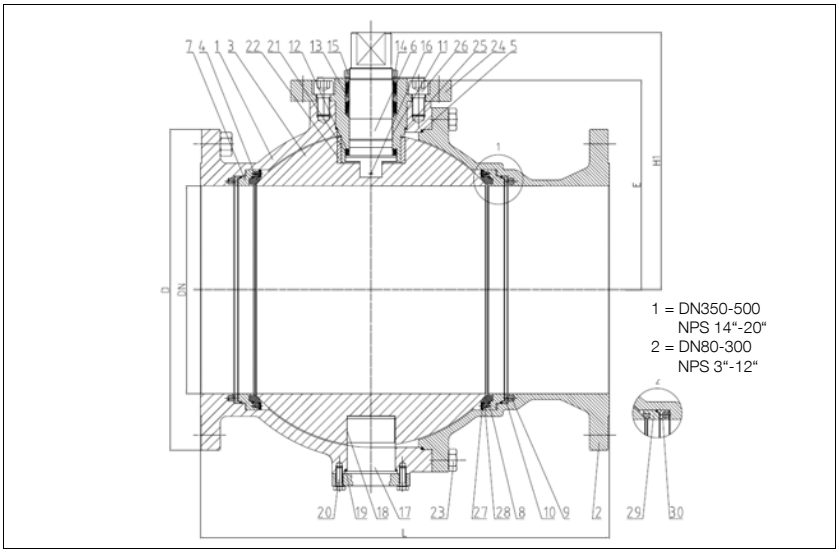
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BALL VALVES INTEC

K214, DN300 - DN500, PN16/40
trunnion mounted ball, PEEK seated, both sides spring loaded seat rings

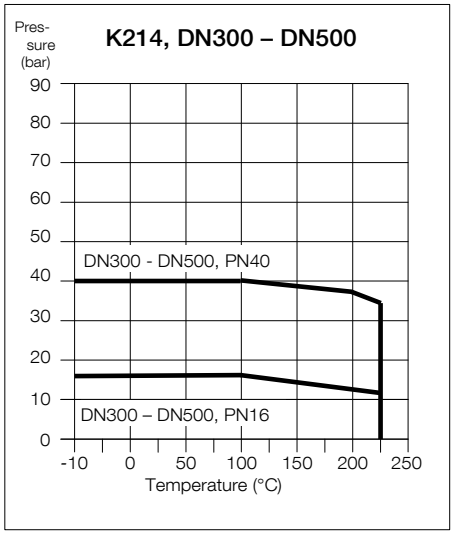


Flanged ball valve
full bore
face to face acc. to EN 558, GR.27
face to face acc. to EN 1092

Specification:
Two-piece ball valve acc. to EN 1092, face to face dimensions acc. to EN 558, GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, trunnion mounted ball, seats full chambered, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air acr VDI 2440.

Marking: INTEC K214

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	PEEK	
5	body seal	KF	
6	stem	1.4462	
7	seat bearing ring	1.4571/1.4404	
8	seat seal	KF	
9	spiral spring	1.4401	
10	follower ring	1.4571/1.4404	
11	stem bearing	1.4401/KF	
12	below seal	KFGN/Graphite	
13	upper seal	KFAM/Graphite	
14	bearing	PEEK	
15	hex. nut self-locking	A2/1.4301	
16	antistatic element	1.4401/1.4571/1.4404	
17	trunnion	1.4571/1.4404	
18	bearing	1.4401/KF	
19	trunnion seal	KF	
20	hex. screw	A4-70	
21	friction washer	PEEK	
22	ball bearing	PEEK	
23	hex. screw	A4-70	
24	stuffing box	1.4571/1.4404	
25	stuffing box seal	KF	
26	allen screw	A4-70	
27	stop plate	1.4571/1.4404	
28	countersunk screw	A4-70	
29	seat bearing ring	1.4571/1.4404	
30	spring washer	1.4571/1.4404	
Fire-Safe design			
5	combined body seal	KF-Graphite	
8	seat seal	Graphite	
9	spiral spring	Inconel X750	
11	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	
19	trunnion seal	Graphite	
25	stuffing box seal	KF-Graphite	



Ordering example:
INTEC K214, DN400, PN40, GR. 27, 1.4408, Fire-Safe

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

** gearbox recommended

Other flange connections and materials on request.

Dimensions

DN mm	PN	dimensions (mm) L	D	E	H1	top flange ISO	torque Nm *	ca. weight kg
300	16	500	460	311	400	F16	1789**	343
300	40	500	515	311	400	F16/F25	4226**	380
350	16	550	520	350	439	F25	2711**	505
350	40	550	580	350	439	F25	6270**	615
400	16	762	580	388.5	477.5	F25-F30	3496**	692
400	40	762	660	388.5	477.5	F25-F30	8106**	772
500	16	914	715	485	589	F25-F30	6394**	1363
500	40	914	755	485	589	F30/F35	15076**	1438

Subject to technical modification. 10/2019

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INTEC K221, K211

Seat ring system metal seated.



Type:	2-piece flanged ball valve
Nominal sizes:	DN 15 - DN 300 NPS ½“ - NPS 12“
Pressure range:	PN 16 and PN 40 ANSI Class 150 and Class 300
Temperature:	up to +400°C
Material of body:	stainless steel, carbon steel
End connections:	flanges acc. to EN 1092 / flanges acc. to ANSI B 16.5
FTF:	acc. to EN 558, GR.1 and GR.27 / acc. to ANSI B 16.10
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, spring close unit - automatical return handle (“dead man handle”), gear (hand operated)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440, 100.000 cycles -40°C up to +220°C
- Fire-Safe acc. to API 607 and DIN EN ISO 10497
- Type-test approval mark No. TÜV.A.318-15
- classification acc. to SIL 2
- ATEX 2014/34/EU
- Type Test Certificate TTC (optional)
- certified acc. to API 6D (optional)

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.

Product advantages:

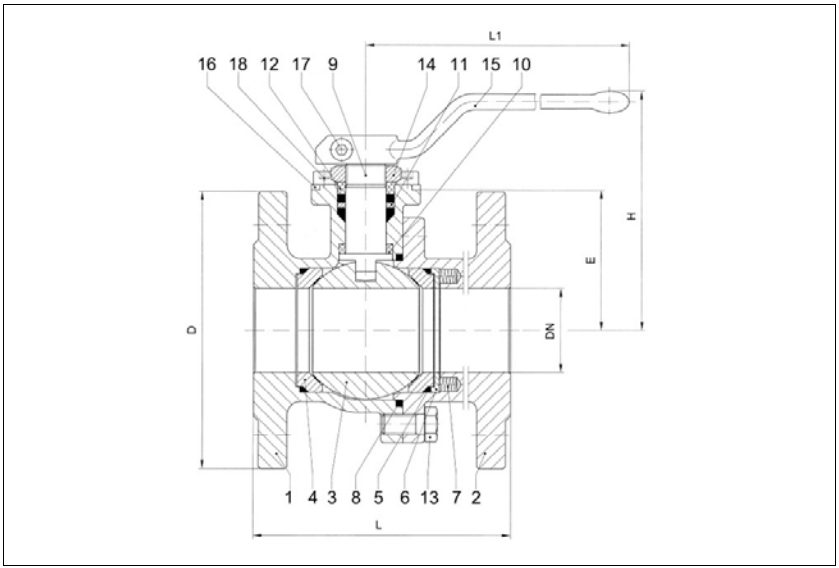
- seat ring and ball hard metal coated
- sleeken seat and ball polished
- high precision beared ball
- spring loaded, spiral springs chambered
- no use of disc springs to forcing the seat ring
- no dangerous because of crevice corrosion
- gas-tight
- high working life
- different coatings available

Subject to technical modification. 10/2018

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BALL VALVES INTEC

K221, DN15 - DN100, PN16/40
floating ball, metal seated,
single side spring loaded seat ring



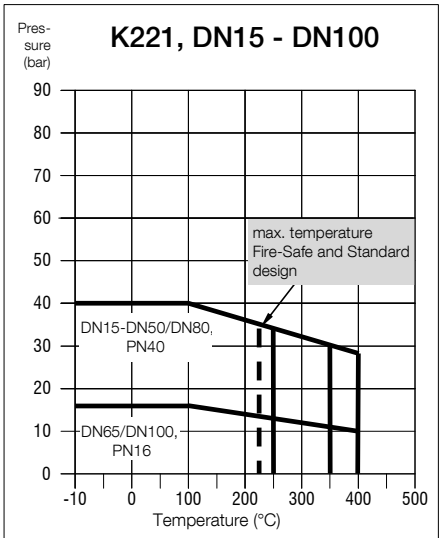
No.	Part	Material			Material		
High temperature design							
1	body	1.0619			1.4408		
2	cap	1.0619			1.4408		
3	ball	1.4408 hard facing metal coated					
4	seat	1.4571/1.4404 hard facing metal coated					
5	seat seal	Graphite					
6	follower ring	1.4571/1.4404					
7	spiral spring	Inconel X750					
8	body seal	Graphite					
9	stem	< 250°C	350°C	400°C	< 250°C	350°C	400°C
		1.4462	1.4313	1.4980	1.4462	1.4980	1.4980
10	below seal	E-carbon					
11	upper seal	1.4571/1.4404/Graphite					
12	bearing	E-carbon					
13	hex. screw	A4-70					
14	hex. nut self-locking	A2/1.4301					
15	lever	1.4408/1.4308/steel zincplated					
16	stopper	1.4301					
17	allen screw	A2-70					
18	allen screw	A2-70					
Fire-Safe design							
8	combined body seal	KF-Graphite					
10	below seal	KFGN/Graphite					
11	upper seal	KFAM/Graphite					
12	Fire-Safe seal	Graphite					
	ring	1.4571/1.4404					
	thrust washer	PEEK					
Standard design							
5	seat seal	KF					
8	body seal	KF					
10	below seal	KFGN/Graphite					
11	upper seal	KFAM/Graphite					
12	bearing	PEEK					

Flanged ball valve
full bore
face to face acc. to EN 558, GR. 1
face to face acc. to EN 558, GR. 27
flanges acc. to EN 1092

Specification:

Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), anti-static device, free of non ferrous metals, seat 1.4571/1.4404 hard facing metal coated, stem packing cone ring construction acc. to temperature use, dynamic loaded adjustable, single side spring loaded seat ring, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K221



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K221, DN50, PN40, GR.27, 1.4408, high temperature, 1.4980 (stem)

Dimensions

DN mm	PN	dimensions (mm) H	L1	L (GR. 1)	L (GR. 27)	D	E	top flange ISO	torque Nm *	weight kg (GR. 1)	(GR. 27)
15	40	95	160	130	115	95	39.5	F05	28	3.0	2.9
20	40	105	160	150	120	105	46.0	F05	36	4.0	3.7
25	40	114	180	160	125	115	49.5	F05	49	4.9	4.6
32	40	130	180	180	130	140	59.0	F05	71	6.7	6.4
40	40	135	300	200	140	150	76.0	F07	121	9.3	8.8
50	40	143	300	230	150	165	83.5	F07	180	13.0	12.1
65	16**	155	300	290	170	185	94.0	F07	179	16.0	15.0
80	40	197	500	310	180	200	102.5	F10	484	26.0	23.0
100	16**	215	500	350	190	220	120.5	F10	441	33.0	30,0

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

** PN 40 flanges on request.

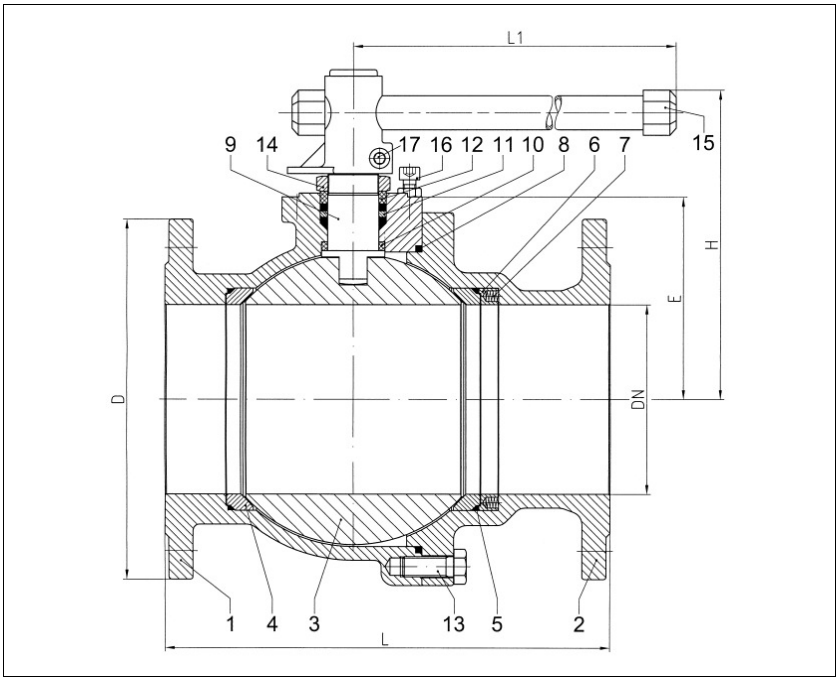
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Subject to technical modification. 08/2018

BALL VALVES INTEC

K221, DN125 - DN200, PN10/16
with floating ball, metal seated, single side spring loaded seat ring



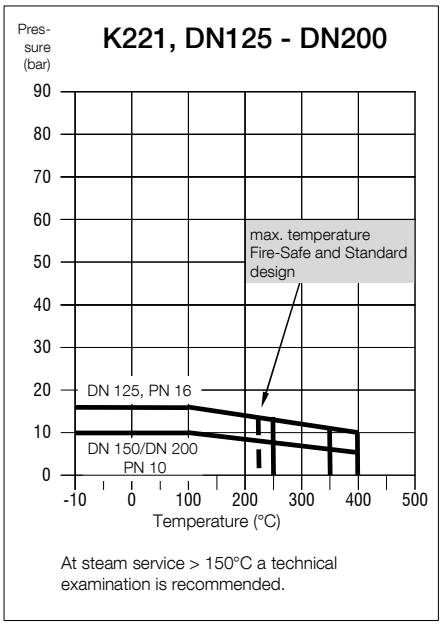
Flanged ball valve
full bore
face to face acc. to EN 558, GR. 27
flanges acc. to EN 1092

Specification:

Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), anti-static device, free of non ferrous metals, seat 1.4571/1.4404 hard facing metal coated, stem packing cone ring construction acc. to temperature use, dynamic loaded adjustable, single side spring loaded seat ring, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K221

No.	Part	Material			Material		
High temperature design							
1	body	1.0619			1.4408		
2	cap	1.0619			1.4408		
3	ball	1.4408 hard facing metal coated					
4	seat	1.4571/1.4404 hard facing metal coated					
5	seat seal	Graphite					
6	follower ring	1.4571/1.4404/1.4408					
7	spiral spring	Inconel X750					
8	body seal	Graphite					
9	stem	< 250°C	350°C	400°C	< 250°C	350°C	400°C
		1.4462	1.4313	1.4980	1.4462	1.4980	1.4980
10	below seal	E-carbon					
11	upper seal	1.4571/1.4404/Graphite					
12	bearing	E-carbon					
13	hex. screw	A4-70					
14	hex. nut self-locking	A2/1.4301					
15	lever	1.4408/1.4308/steel zincplated					
16	stopper	A2					
17	allen screw	A2-70					
Fire-Safe design							
8	combined body seal	KF-Graphite					
10	below seal	KFGN/Graphite					
11	upper seal	KFAM/Graphite					
12	Fire-Safe seal ring	Graphite					
		1.4571/1.4404					
	thrust washer	PEEK					
Standard design							
5	seat seal	KF					
8	body seal	KF					
10	below seal	KFGN/Graphite					
11	upper seal	KFAM/Graphite					
12	bearing	PEEK					



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K221, DN150, PN10, GR. 27, 1.4408, high temperature, 1.4980 (stem)

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

** gearbox recommended.

PN16/PN40 flange connection on request.

Dimensions

DN mm	PN	dimensions (mm) H	L1	L	D	E	top flange ISO	torque Nm*	weight kg
125	16	263	700	325	250	164	F12	722**	56
150	10	265	700	350	285	160	F12	743**	80
200	10	340	1000	400	340	225	F14	1602**	152

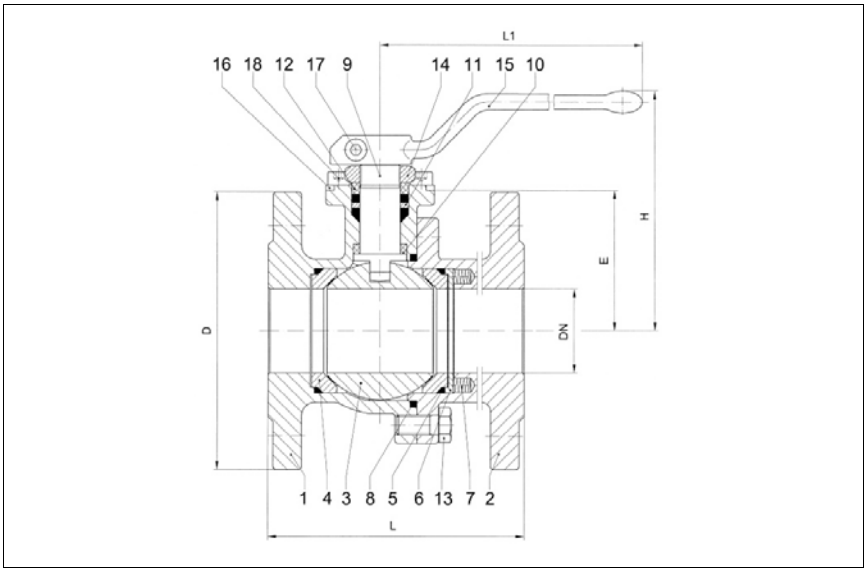
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BALL VALVES INTEC

K221, ½" - 4", Class 150/300
floating ball, metal seated,
single side spring loaded seat ring

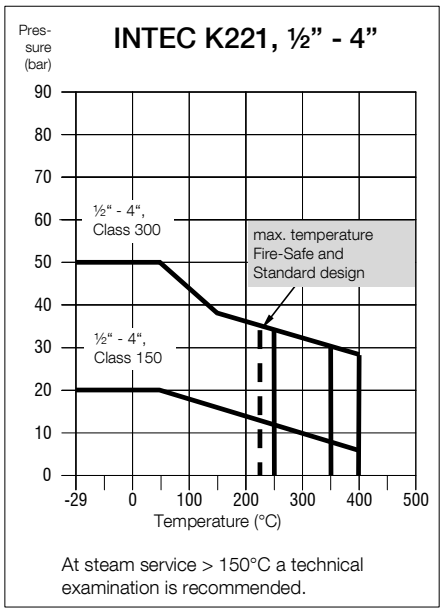


Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.5

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, seat 1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L) hard facing metal coated, single side spring loaded seat ring, stem packing cone ring construction acc. to temperature use, dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K221

No.	Part	Material		Material
High temperature design				
1	body	ASTM A216-WCB		ASTM A351-CF8M
2	cap	ASTM A216-WCB		ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M) hard facing metal coated		
4	seat	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L) hard facing metal coated		
5	bearing ring seal	Graphite		
6	follower ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)		
7	spiral spring	Inconel X750		
8	body seal	Graphite		
9	stem	< 250°C 1.4462 (A479 UNS S31803))	350°C 1.4313 (A479 UNS S41500)	400°C 1.4980 (A638-660)
10	below seal	E-carbon		
11	upper seal	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)/Graphite		
12	bearing	E-carbon		
13	hex. screw	A4-70 (A193-B8M)		
14	hex. nut self-locking	A2/1.4301 (AISI 304)		
15	lever	1.4408 (ASTM A351-CF8M)/1.4308 (ASTM A351-CF8)		
16	stopper	1.4301 (AISI 304)		
17+18	allen screw	A2-70 (A193-B8)		
Fire-Safe design				
8	combined body seal	KF-Graphite		
10	below seal	KFGN/Graphite		
11	upper seal	KFAM/Graphite		
12	Fire-Safe seal ring thrust washer	Graphite 1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L) PEEK		
Standard design				
5	bearing ring seal	KF		
8	body seal	KF		
10	below seal	KFGN/Graphite		
11	upper seal	KFAM/Graphite		
12	bearing	PEEK		



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K221, 2", Class 300, CF8M, high temperature

Dimensions

NPS inch	dimensions H	L1	L 150 lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	top flange ISO	torque Nm* 150 lbs.	torque Nm* 300 lbs.	ca. weight kg 150 lbs.	ca. weight kg 300 lbs.
½"	95	160	108	140	89	95	39.5	F05	30	37	2.1	2.9
¾"	105	160	117	152	98	117	46	F05	37	50	3.0	4.2
1"	114	180	127	165	108	124	49.5	F05	42	58	4.1	5.0
1 ¼"	130	180	140	178	117	133	59	F05	69	108	5.0	7.0
1 ½"	135	300	165	190	127	156	76	F07	107	177	8.0	10.5
2"	143	300	178	216	152	165	83.5	F07	162	**	11.8	13.0
2 ½"	155	300	190	241	178	190	94	F07	**	**	17.0	20.0
3"	197	500	203	283	190	210	102.5	F10	402	**	24.4	31.0
4"	215	500	229	305	229	254	120.5	F10	**	**	35.0	47.0

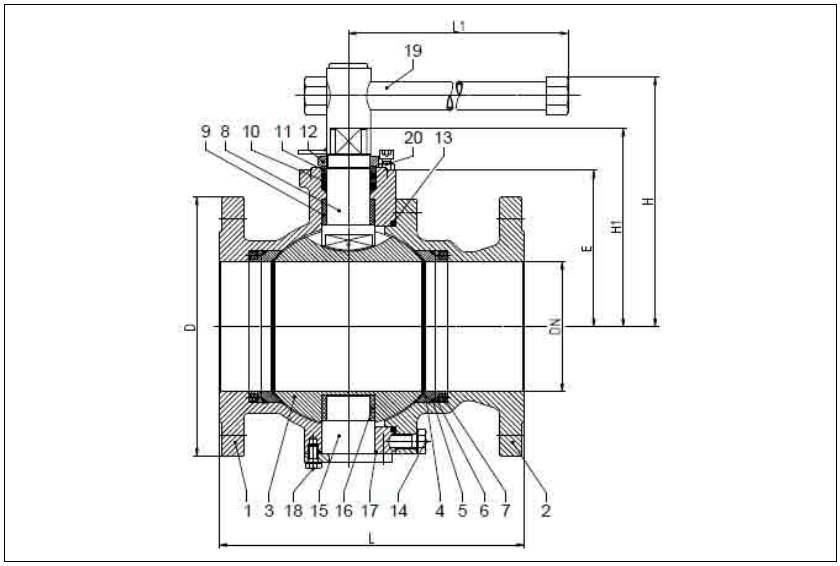
* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature. ** on request.

Subject to technical modification. 08/2019

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BALL VALVES INTEC

K211, DN80 - DN300, PN16/40
trunnion mounted ball, metal seated, both sides spring loaded seat rings

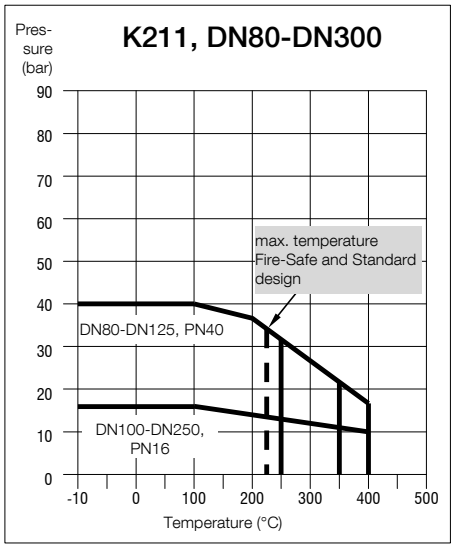


Flanged ball valve
full bore
face to face acc. to EN 558, GR.1
face to face acc. to EN 558, GR.27
flanges acc. to EN 1092

Specification:
Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, trunnion mounted ball, seat 1.4571/1.4404 hard facing metal coated, stem packing cone ring system acc. temperature use, dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K211

No.	Part	Material			Material		
High temperature design							
1	body	1.0619			1.4408		
2	cap	1.0619			1.4408		
3	ball	1.4408 hard facing metal coated					
4	seat	1.4571/1.4404 hard facing metal coated					
5	bearing ring seal	Graphite					
6	thrust collar	1.4571/1.4404					
7	spiral spring	Inconel X750					
8	stem	250°C	350°C	400°C	250°C	350°C	400°C
		1.4462	1.4313	1.4980	1.4462	1.4980	1.4980
9	stem bearing	E-carbon					
10	stem seal	1.4571/1.4404/Graphite					
11	bearing	E-carbon					
12	hex. nut self-locking	A2/1.4301					
13	body seal	Graphite					
14	hex. screw	A4-70					
15	bearing neck (< DN125 with screwed end)	1.4571/1.4404					
16	bearing	E-carbon					
17	trunnion seal	Graphite					
18	hex. screw (as from DN150)	A4-70					
19	lever	1.4408/1.4308/steel zincplated					
20	stopper	A2					
Fire-Safe design							
9	below stem seal	KFGN/Graphite					
	bearing	1.4401/KF					
10	upper stem seal	KFAM/Graphite					
11	Fire-Safe seal	Graphite					
	ring	1.4571/1.4404					
	thrust washer	PEEK					
13	combined body seal	KF-Graphite					
16	bearing	1.4401/KF					
Standard design							
5	bearing ring seal	KF					
7	spiral spring	1.4401					
9	below stem seal	KFGN/Graphite					
	bearing	1.4401/KF					
10	upper stem seal	KFAM/Graphite					
11	bearing	PEEK					
13	body seal	KF					
16	bearing	1.4401/KF					
17	trunnion seal	KF					



Ordering example:
INTEC K211, DN125, PN40, GR.27, 1.4404, Fire-Safe, 1.4980 (stem)

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.
** Gearbox recommended
*** free stem, gearbox/automation necessary

Dimensions

DN mm	PN	dimensions (mm) H	L1	L GR. 1	L GR. 27	D	E	H1	top flange ISO	torque Nm *	ca. weight kg GR. 1	GR. 27
80	40	194.0	500	310	180	200	112.5	155.0	F10	355**	26	24
100	16	221.5	500	350	190	220	137.0	179.5	F12	265	34	32
100	40	221.5	500	350	190	235	137.0	179.5	F12	510**	35	34
125	16	246.5	700	-	325	250	164.0	206.5	F12	350	-	57
125	40	246.5	700	-	325	270	164.0	206.5	F12	725**	-	60
150	16	263.0	700	-	350	285	181.0	229.5	F12	485**	-	80
200	16	304.0	1000	-	400	340	225.0	284.5	F14	935**	-	140
250	16	340.5	1200	-	450	405	261.5	321.0	F14	1525**	-	250
300	16	- ***	- ***	-	500	460	311.0	400.0	F16	o.R.**	-	320

Other flange connections and materials on request.

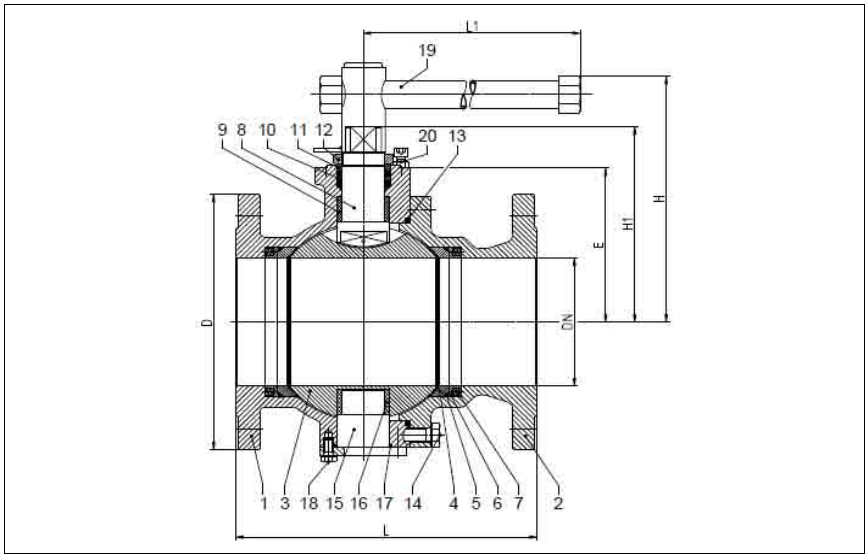
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Subject to technical modification. 08/2018

Ball Valves INTEC

K211, 3” - 12”, Class 150/300
trunnion mounted ball, metal seated, both sides spring loaded seat rings

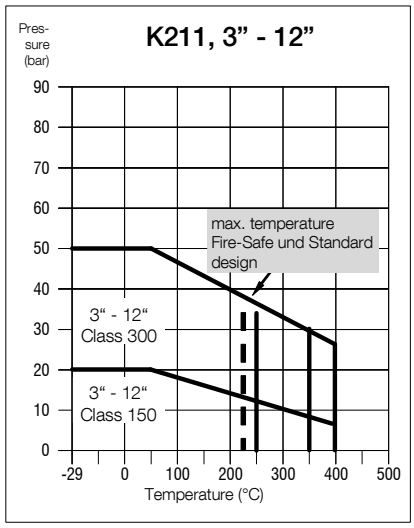


No.	Part	Material		Material
High temperature design				
1	body	A216-WCB		ASTM A351-CF8M
2	cap	A216-WCB		ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M) hard facing metal coated		
4	seat	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L) hard facing metal coated		
5	bearing ring seal	Graphite		
6	follower ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)		
7	spiral spring	Inconel X750		
8	stem	< 250°C	350°C	400°C
		1.4462 (A479 UNS S31803))	1.4313 (A479 UNS S41500)	1.4980 (A638-660)
9	stem bearing	E-carbon		
10	upper seal	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)/Graphite		
11	bearing	E-carbon		
12	hex. nut self-locking	A2/1.4301 (AISI 304)		
13	body seal	Graphite		
14	hex. screw	A4-70 (A193-B8M)		
15	trunnion (< NPS 5” with screwed end)	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)		
16	bearing	E-carbon		
17	trunnion seal	Graphite		
18	hex. screw (as from NPS 6”)	A4-70 (A193-B8M)		
19	lever	1.4408 (ASTM A351-CF8M)/1.4308 (ASTM A351-CF8)		
20	stopper	A2		
Fire-Safe design				
9	below seal	KFGN/Graphite		
	bearing	1.4401 (AISI 316)/KF		
10	upper seal	KFAM/Graphite		
11	Fire-Safe seal	Graphite		
	ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)		
	thrust washer	PEEK		
13	combined body seal	KF-Graphite		
16	bearing	1.4401 (AISI 316)/KF		
Standard design				
5	bearing ring seal	KF		
7	spiral spring	1.4401 (AISI 316)		
9	below seal	KFGN/Graphite		
	bearing	1.4401 (AISI 316)/KF		
10	upper seal	KFAM/Graphite		
11	bearing	PEEK		
13	body seal	KF		
16	bearing	1.4401 (AISI 316)/KF		
17	trunnion seal	KF		

Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.5

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, trunnion mounted ball, seats 1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L) hard facing metal coated, both sides spring loaded seat rings, stem packing cone ring system acc. to temperature use, dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K211



Ordering example:
INTEC K211, 4”, Class 300, CF8M, high temperature, 1.4980 (stem)

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

** Gearbox recommended

Dimensions

NPS inch	dimensions (mm) H	L1	L 150 lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	H1	top flange ISO	torque Nm* 150 lbs.	torque Nm* 300 lbs.	ca. weight kg 150 lbs.	ca. weight kg 300 lbs.
3”	194	500	203	283	190	210	112.5	155	F10	229**	437**	23	30
4”	221.5	500	229	305	229	254	137	179.5	F12	393**	790**	35	46
6”	263	700	394	403	279	318	181	229.5	F12/F14	686**	1500**	78	96
8”	304	1000	457	502	343	381	225	284.5	F14/F16	1310**	3100**	145	172
10”	340.5	1200	533	568	406	444	261.5	321	F14/F16	1856**	4349**	245	287
12”	--	--	610	648	483	521	311	400	F16	2983**	7367**	356	406

Subject to technical modification. 08/2019

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KLINGER India

INTEC K230, K231, K234

Free outlet, clearance volume free. Critical medias safe handling!



The ball valve revolution for all condition of aggregation. Fields of application: production of catalysers, transport of solids (bulk material transport systems), gaseous medias with contend of solid, solid/liquid applications, crystallising medias.

Type:	2-piece fanged ball valve
Nominal sizes:	DN 50 - DN 500 NPS 2“ - NPS 20“
Pressure range:	PN 16 and PN 40 ANSI Class 150 and Class 300
Temperature:	up to +400°C
Material of body:	stainless steel., carbon steel
End connections:	flanges acc. to EN 1092 / flanges acc. to ANSI B 16.5
FTF:	acc. to EN 558, GR.1 and GR.27 / acc. to ANSI B 16.10
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, spring close unit - automatical return handle (“dead man handle”), gear (hand operated)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440, 100.000 cycles -40°C up to +220°C
- Fire-Safe acc. to API 607 and DIN EN ISO 10497
- classification acc. to SIL 2
- ATEX 2014/34/EU
- Type-test approval mark No. TÜV.A.318-15
- Type Test Certificate TTC (optional)
- certified acc. to API 6D (optional)

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.

Product advantages:

- equipped with all advantages of series INTEC K200
- also metal to metal tight acc. to EN 12266-1, leak rate A
- free outlet for all kinds of solid
- clearance volume free
- wide range of special materials

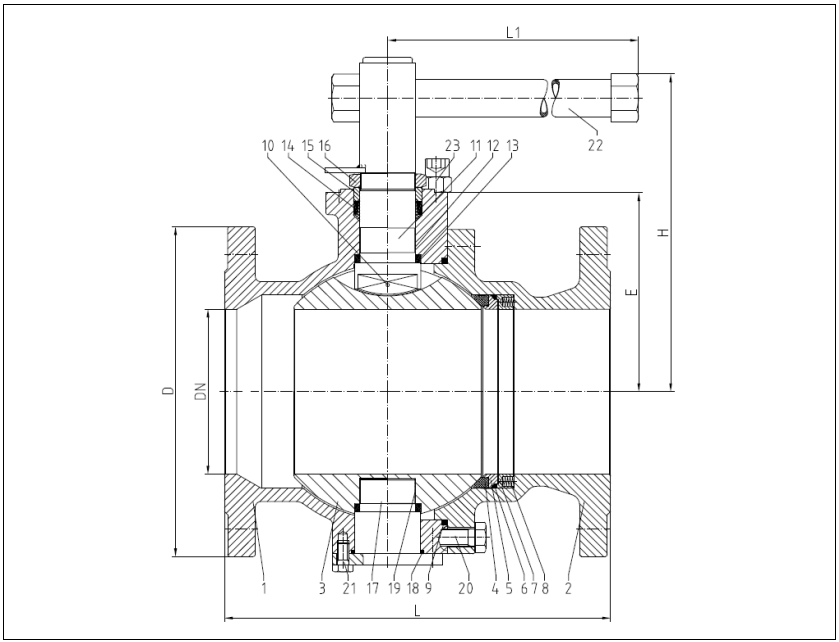
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BALL VALVES INTEC

K230, DN80 - DN250, PN16/40
trunnion mounted ball, soft seated
single side spring loaded seat ring, free outlet

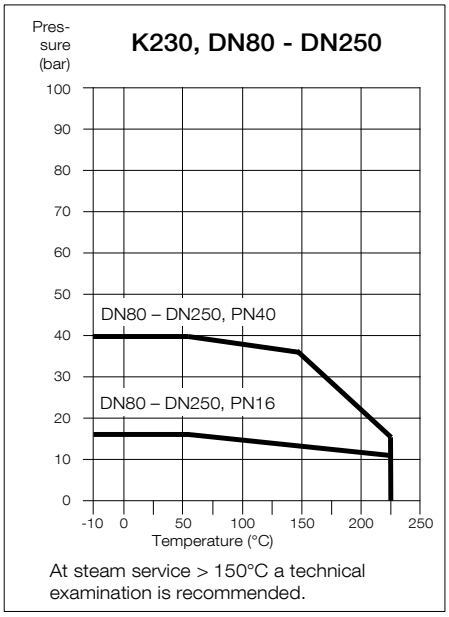


Flanged ball valve
full bore
face to face acc. to EN 558, GR.1
face to face acc. to EN 558, GR.27
flanges acc. to EN 1092

Specification:
Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, free outlet, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, trunnion mounted ball, seat full chambered, stem packing Graphite/ KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607 and DIN EN ISO 10497, with lever.

Marking: INTEC K230

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFGN/KFM	
5	seat bearing ring	1.4571/1.4404	
6	seat seal	KF	
7	follower ring	1.4571/1.4404	
8	spiral spring	1.4401	
9	body seal	KF	
10	antistatic element	1.4401/1.4571/1.4404	
11	stem	1.4462	
12	below stem bearing	1.4401/KF	
13	below seal	KFGN/Graphite	
14	upper seal	KFAM/Graphite	
15	upper stem bearing	1.4401/KF	
16	hex. nut self-locking	A2/1.4301	
17	bearing neck	1.4571/1.4404	
18	trunnion seal	KF	
19	bearing	1.4401/KF	
20+21	hex. screw	A4-70	
22	lever	1.4408/1.4308/steel zincplated	
23	stopper	A2	
Fire-Safe design			
6	seat seal	Graphite	
8	spiral spring	Inconel X750	
9	combined body seal	KF-Graphite	
11	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	
18	trunnion seal	KF-Graphite	



At steam service > 150°C a technical examination is recommended.

Ordering example:
INTEC K230, DN200, PN40,
GR. 27, 1.4408, Fire-Safe

Other flange connections and materials on request.

Dimensions

DN	PN	dimensions (mm)							top flange	torque	ca. weight kg	
mm		H	L1	L GR. 1	L GR. 27	D	E	H1	ISO	Nm *	GR. 1	GR. 27
80	40	194	500	310	180	200	112,5	155	F10	160	26	24
100	16	221.5	500	350	190	220	137	179.5	F12	130	33	32
100	40	221.5	500	350	190	235	137	179.5	F12	245	34	33
125	16	246.5	700	-	325	250	164	206.5	F12	175	-	57
125	40	246.5	700	-	325	270	164	206.5	F12	360	-	59
150	16	263	700	-	350	285	181	229.5	F12	255	-	81
150	40	263	700	-	350	300	181	229.5	F12	555**	-	85
200	16	304	1000	-	400	340	225	284.5	F14	480	-	153
200	40	304	1000	-	400	375	225	284.5	F14	1100**	-	161
250	16	340.5	1200	-	450	405	261.5	321	F14/F16	750**	-	258
250	40	340.5	1200	-	450	450	261.5	321	F14/F16	1725**	-	274

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

** gearbox recommended

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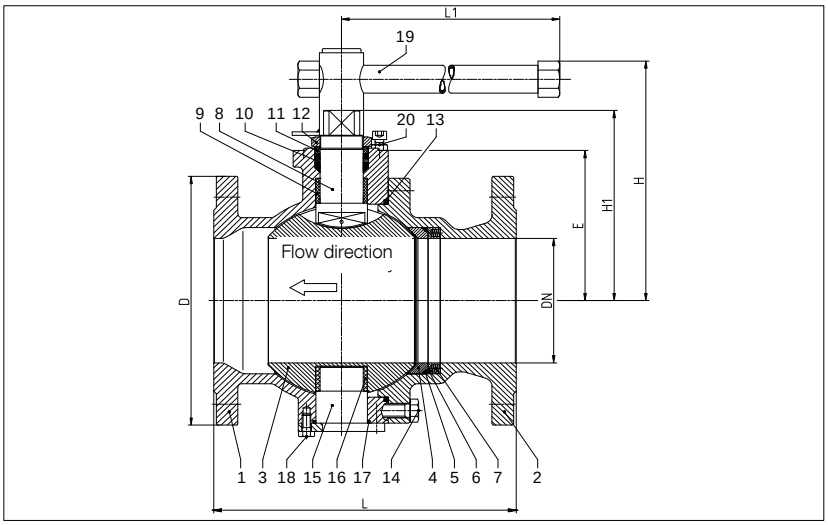
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BALL VALVES INTEC

K231, DN80 - DN300, PN16/40
trunnion mounted ball, metal seated, single side spring loaded seat ring, free outlet

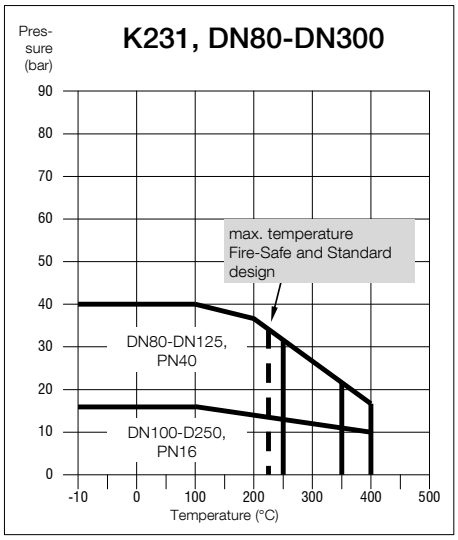


No.	Part	Material			Material		
High temperature design							
1	body	1.0619			1.4408		
2	cap	1.0619			1.4408		
3	ball	1.4408 hard facing metal coated					
4	seat	1.4571/1.4404 hard facing metal coated					
5	bearing ring seal	Graphite					
6	thrust collar	1.4571/1.4404					
7	spiral spring	Inconel X750					
8	stem	250°C	350°C	400°C	250°C	350°C	400°C
		1.4462	1.4313	1.4980	1.4462	1.4980	1.4980
9	stem bearing	E-carbon					
10	stem seal	1.4571/1.4404/Graphite					
11	bearing	E-carbon					
12	hex. nut self-locking	A2/1.4301					
13	body seal	Graphite					
14	hex. screw	A4-70					
15	bearing neck (< DN125 with screwed end)	1.4571/1.4404					
16	bearing	E-carbon					
17	trunnion seal	Graphite					
18	hex. screw (as from DN150)	A4-70					
19	lever	1.4408/1.4308/steel zincplated					
20	stopper	A2					
Fire-Safe design							
9	below stem seal	KFGN/Graphite					
	bearing	1.4401/KF					
10	upper stem seal	KFAM/Graphite					
11	Fire-Safe seal	Graphite					
	ring	1.4571/1.4404					
	thrust washer	PEEK					
13	combined body seal	KF-Graphite					
16	bearing	1.4401/KF					
Standard design							
5	bearing ring seal	KF					
7	spiral spring	1.4401					
9	below stem seal	KFGN/Graphite					
	bearing	1.4401/KF					
10	upper stem seal	KFAM/Graphite					
11	bearing	PEEK					
13	body seal	KF					
16	bearing	1.4401/KF					
17	trunnion seal	KF					

Flanged ball valve
full bore
face to face acc. to EN 558, GR.1
face to face acc. to EN 558, GR.27
flanges acc. to EN 1092

Specification:
Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, free outlet, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, trunnion mounted ball, seat 1.4571/1.4404 hard facing metal coated, stem packing cone ring construction acc. to temperature use, dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K231



Ordering example:
INTEC K231, DN125, PN40, GR.27, 1.4408, high temperature, 1.4980 (stem)

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.
** gearbox recommended
*** free stem, gearbox/automation necessary
Other flange connections and materials on request.

Dimensions

DN	PN	dimensions (mm)							top flange	torque	ca. weight kg	
mm		H	L1	L GR. 1	L GR. 27	D	E	H1	ISO	Nm *	GR. 1	GR. 27
80	40	194.0	500	310	180	200	112.5	155.0	F10	325**	26	25
100	16	221.5	500	350	190	220	137.0	179.5	F12	240	34	33
100	40	221.5	500	350	190	235	137.0	179.5	F12	490**	35	34
125	16	246.5	700	-	325	250	164.0	206.5	F12	330	-	58
125	40	246.5	700	-	325	270	164.0	206.5	F12	700**	-	60
150	16	263.0	700	-	350	285	181.0	229.5	F12	465**	-	84
200	16	304.0	1000	-	400	340	225.0	284.5	F14	910**	-	156
250	16	340.5	1200	-	450	405	261.5	321.0	F14	1470**	-	260
300	16	- ***	- ***	-	500	460	311.0	400.0	F16	o.r. ***	-	320

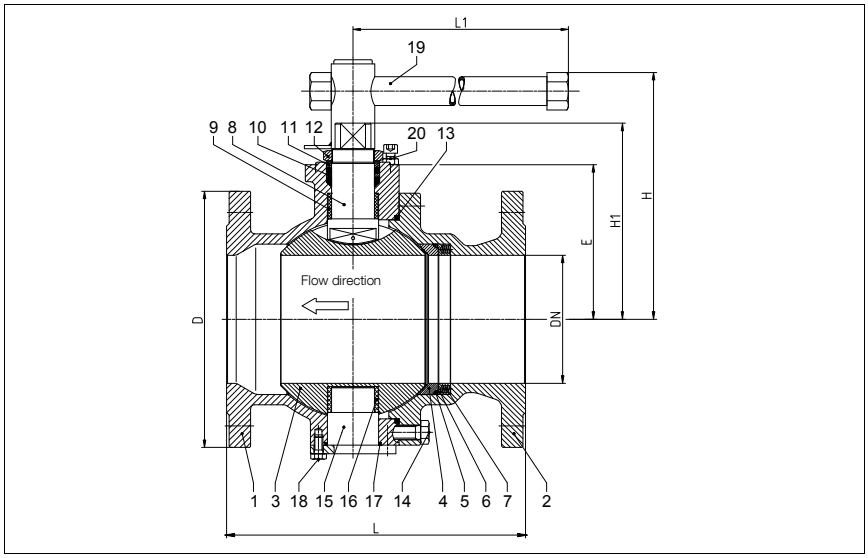
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Ball Valves INTEC

K231, 3” - 12”, Class 150/300
trunnion mounted ball, metal seated, single side spring loaded seat ring, free outlet

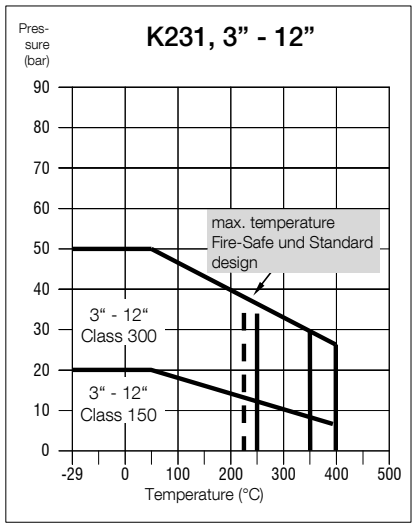


No.	Part	Material	Material
High temperature design			
1	body	A216-WCB	ASTM A351-CF8M
2	cap	A216-WCB	ASTM A351-CF8M
3	ball	1.4408 (ASTM A351-CF8M) hard facing metal coated	
4	seat	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L) hard facing metal coated	
5	bearing ring seal	Graphite	
6	follower ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
7	spiral spring	Inconel X750	
8	stem	< 250°C / 1.4462 (A479 UNS S31803))	350°C / 1.4313 (A479 UNS S41500) / 400°C / 1.4980 (A638-660)
9	stem bearing	E-carbon	
10	upper seal	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)/Graphite	
11	bearing	E-carbon	
12	hex. nut self-locking	A2/1.4301 (AISI 304)	
13	body seal	Graphite	
14	hex. screw	A4-70 (A193-B8M)	
15	trunnion (< NPS 5” with screwed end)	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
16	bearing	E-carbon	
17	trunnion seal	Graphite	
18	hex. screw (as from NPS 6”)	A4-70 (A193-B8M)	
19	lever	1.4408 (ASTM A351-CF8M)/1.4308 (ASTM A351-CF8)	
20	stopper	A2	
Fire-Safe design			
9	below seal	KFGN/Graphite	
	bearing	1.4401 (AISI 316)/KF	
10	upper seal	KFAM/Graphite	
11	Fire-Safe seal	Graphite	
	ring	1.4571 (AISI 316 Ti)/1.4404 (AISI 316 L)	
	thrust washer	PEEK	
13	combined body seal	KF-Graphite	
16	bearing	1.4401 (AISI 316)/KF	
Standard design			
5	bearing ring seal	KF	
7	spiral spring	1.4401 (AISI 316)	
9	below seal	KFGN/Graphite	
	bearing	1.4401 (AISI 316)/KF	
10	upper seal	KFAM/Graphite	
11	bearing	PEEK	
13	body seal	KF	
16	bearing	1.4401 (AISI 316)/KF	
17	trunnion seal	KF	

Flanged ball valve
full bore
face to face acc. to ANSI B 16.10
flanges acc. to ANSI B 16.5

Specification:
Two-piece ball valve, flanges acc. to ANSI B 16.5, face to face dimensions acc. to ANSI B 16.10, full bore, free outlet, blow-out-proof stem, body material stainless steel (ASTM A351-CF8M) or carbon steel (ASTM A216-WCB), antistatic device, free of non ferrous metals, trunnion mounted ball, seat 1.4571 (AISI 316 Ti)/ 1.4404 (AISI 316 L) hard facing metal coated, single side spring loaded seat ring, stem packing cone ring system acc. to temperature use, dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K231



Ordering example:
INTEC K231, 4”, Class 300, CF8M, high temperature, 1.4980 (stem)

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

** Gearbox recommended

Dimensions

NPS inch	dimensions (mm) H	L1	L 150 lbs.	L 300 lbs.	D 150 lbs.	D 300 lbs.	E	H1	top flange ISO	torque Nm* 150 lbs.	torque Nm* 300 lbs.	ca. weight kg 150 lbs.	ca. weight kg 300 lbs.
3”	194	500	203	283	190	210	112.5	155	F10	229**	437**	23	30
4”	221.5	500	229	305	229	254	137	179.5	F12	393**	790**	35	46
6”	263	700	394	403	279	318	181	229.5	F12/F14	686**	1500**	78	96
8”	304	1000	457	502	343	381	225	284.5	F14/F16	1310**	3100**	145	172
10”	340.5	1200	533	568	406	444	261.5	321	F14/F16	1856**	4349**	245	287
12”	--	--	610	648	483	521	311	400	F16	2983**	7367**	356	406

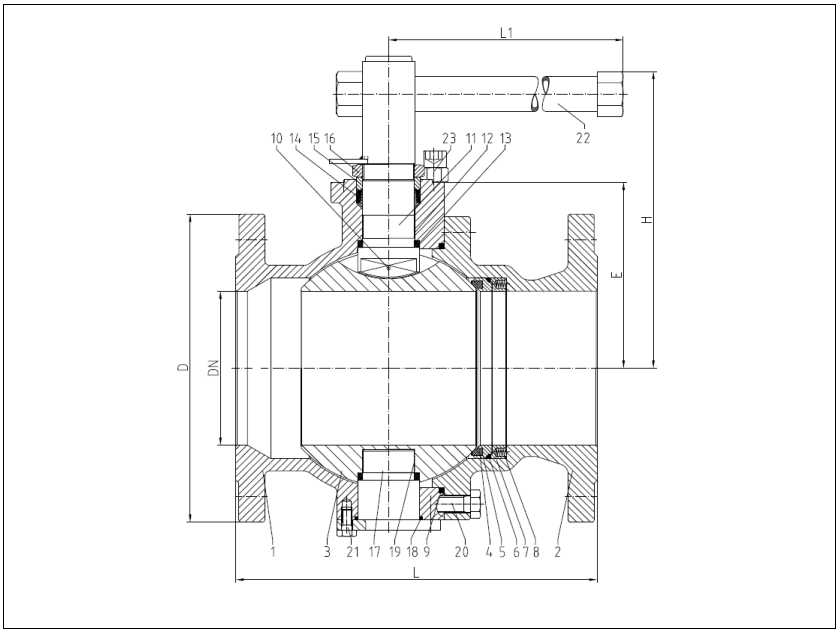
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BALL VALVES INTEC

K234, DN80 - DN250, PN16/40
trunnion mounted ball, PEEK seated, single side spring loaded seat ring, free outlet

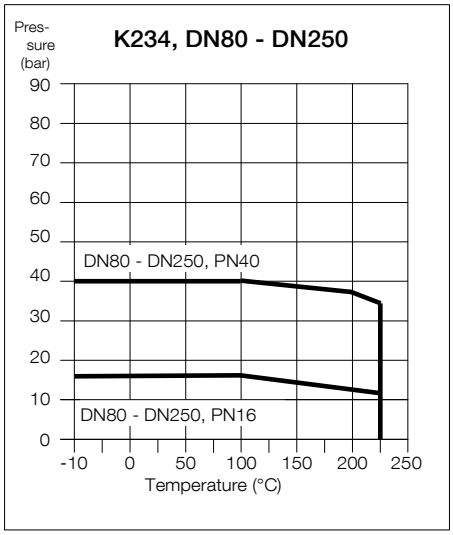


Flanged ball valve
Full bore
Face to face acc. to EN 558, GR.1
Face to face acc. to EN 558, GR.27
Flanges acc. to EN 1092

Specification:
Two-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, free outlet, blow-out-proof stem, body material stainless steel (1.4408) or carbon steel (1.0619), antistatic device, free of non ferrous metals, trunnion mounted ball, seat full chambered, stem packing Graphite/ KFGN/ KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC K234

No.	Part	Material	Material
Standard design			
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat (flanged)	PEEK/ Graphite/ 1.4571-1.4404 PEEK mod./ Graphite/ 1.4571-1.4404	
5	seat back seal	Graphite	
6	seat seal	KF	
7	follower ring	1.4571/1.4404	
8	spiral spring	1.4401	
9	body seal	KF	
10	antistatic element	1.4401/1.4571/1.4404	
11	stem	1.4462	
12	upper stem bearing	1.4401/KF	
13	below seal	KFGN/Graphite	
14	upper seal	KFAM/Graphite	
15	upper stem bearing	PEEK	
16	hex. nut self-locking	A2/1.4301	
17	bearing neck	1.4571/1.4404	
18	trunnion seal	KF	
19	bearing	1.4401/KF	
20+21	hex. screw	A4-70	
22	lever	1.4408/1.4308/steel zincplated	
23	stopper	A2	
Fire-Safe design			
6	seat seal	Graphite	
8	spiral spring	Inconel X750	
9	combined body seal	KF-Graphite	
11	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	
18	trunnion seal	KF-Graphite	



Ordering example:
INTEC K234, DN100, PN40, GR.27, 1.4408, Fire-Safe

Other flange connections and materials on request.

Dimensions

DN mm	PN	dimensions (mm) H	L1	L GR. 1	L GR. 27	D	E	H1	top flange ISO	torque Nm *	ca. weight kg GR. 1	GR. 27
80	40	194	500	310	180	200	112.5	155	F10	274**	26	24
100	16	221.5	500	350	190	220	137	179.5	F12	218**	33	32
100	40	221.5	500	350	190	235	137	179.5	F12	436**	34	33
125	16	246.5	700	-	325	250	164	206.5	F12	235**	-	57
125	40	246.5	700	-	325	270	164	206.5	F12	501**	-	59
150	16	263	700	-	350	285	181	229.5	F12	339**	-	81
150	40	263	700	-	350	300	181	229.5	F12	760**	-	85
200	16	304	1000	-	400	340	225	284.5	F14	663**	-	153
200	40	304	1000	-	400	375	225	284.5	F14	1538**	-	161
250	16	340.5	1200	-	450	405	261.5	321	F14	1072**	-	258
250	40	340.5	1200	-	450	450	261.5	321	F14	2491**	-	274

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

** gearbox recommended

Subject to technical modification. 10/2019

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KLINGER India

INTEC K200-K

Wafer type ball valve of the modular INTEC system technology!



Equipped with all advantages of the INTEC K200 as well as face to face dimensions acc. to EN 558, Gr.107, this wafer type ball valve is the favourite for special materials in all chemical plants.

Type:	Wafer type ball valve
Nominal size:	DN 15 - DN 80
Pressure range:	PN 16 and PN 40
Temperature:	up to +400°C
Material of body	stainless steel, carbon steel
End connections:	flanges acc. to EN 1092
Optional:	bearing version
FTF:	acc. to EN 558, GR.107
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, spring close unit - automatical return handle ("dead man handle"), gear (hand operated)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440, 100.000 cylces -40°C up to +220°C
- Fire-Safe acc. to DIN EN ISO 10497
- ATEX 2014/34/EU

Product advantages:

- equipped with all advantages of series INTEC K200
- face to face dimensions acc. to EN 558, GR.107
- wide range of special materials
- top flange DIN EN ISO 5211

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.

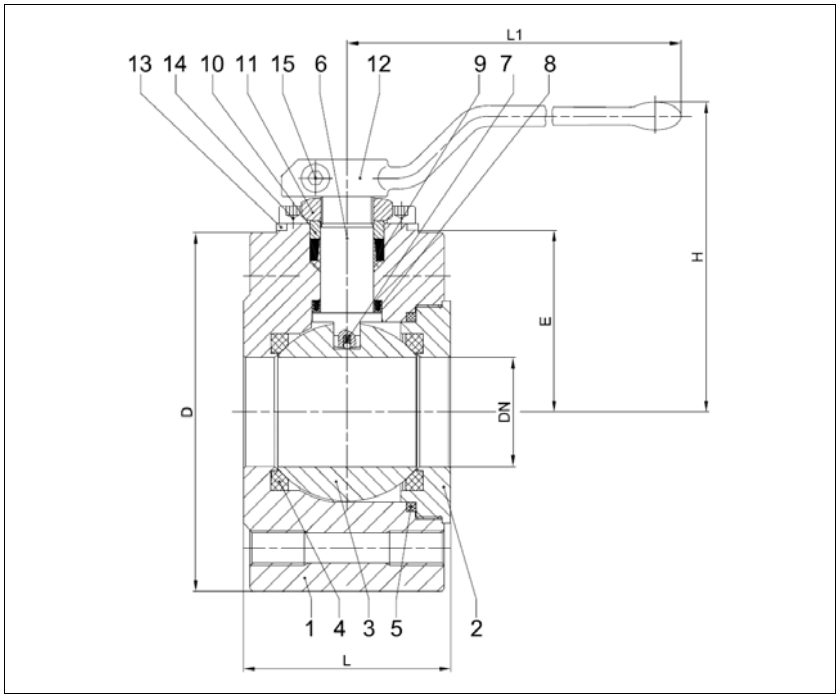
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BALL VALVES INTEC

K200-K, DN15 - DN80, PN40
floating ball, soft seated



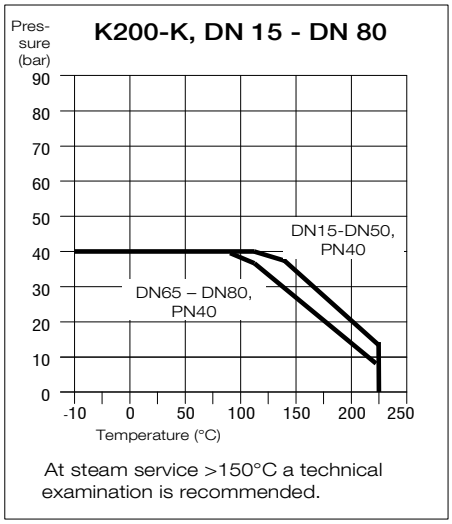
Wafer type ball valve
full bore
face to face acc. to EN 558, GR. 107
flanges acc. to EN 1092

Specification:

One-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.107, full bore, blow-out-proof stem, body material stainless steel (1.4571/1.4404) or carbon steel (1.0460), antistatic device, free on non ferrous metals, flange facing without interruption, cap mounted on block, body seal contact arrangement full chambered, seat full chambered, stem packing Graphite/KFGN/KFAM system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to DIN EN ISO 10497, with lever.

Marking: INTEC K200-K

No.	Part	Material code	Material code
Standard design			
1	body	1.0460	1.4571/1.4404
2	cap	1.0460	1.4571/1.4404
3	ball	1.4408	
4	seat	KFGN/KFM	
5	body seal	KF	
6	stem	1.4462	
7	antistatic element	1.4401/1.4571/1.4404	
8	below seal	KFGN/Graphite	
9	upper seal	KFAM/Graphite	
10	bearing	PEEK	
11	hex. nut self-locking	A2/1.4301	
12	lever	1.4408/1.4308/steel zincplated	
13	stopper	1.4301	
14	allen screw	A2-70	
15	allen screw	A2-70	
Fire-Safe design			
5	combined body seal	KF-Graphite	
9	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	



At steam service >150°C a technical examination is recommended.

Ordering example:
INTEC K200-K, DN50, PN40, 1.0460, Fire-Safe

Dimensions

DN mm	PN	dimensions (mm) H	L1	L	D	E	top flange ISO	torque Nm**	weight kg
15	40	95	160	50	95	39.5	F05	10	2.8
20	40	105	160	50	105	46.0	F05	16	3.3
25	40	114	180	60	115	49.5	F05	29	4.8
32	40	130	180	65	140	59.0	F05	46	7.6
40	40	135	300	80	150	76.0	F07	55	10.5
50	40	143	300	95	165	83.5	F07	88	14.8
65	40	155	300	110	185	94.0	F07	143	20.7
80	40	197	500	145	200	102.5	F10	208	30.6

** Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

Subject to technical modification. 08/2018

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KLINGER India

INTEC K204-S-D

Steam ball valve, which protects your resources!



The maintenance-free steam ball valve for the safe relaxation of steam-prominent elastomere hoses.

Type:	Steam ball valve
Nominal sizes:	DN 25/20
Pressure gauge:	PN 25
Temperature:	up to +210°C
Material of body:	stainless steel
End connections:	inlet with flange connection acc. to EN 1092, outlet with threaded end G ¾“ acc. to EN ISO 228-1, outlet pressure relief connection threaded end G ¼“ acc. to EN ISO 228-1
FTF:	acc. to producers standard
Accessories:	hand lever extension

Certificates and Approvals:

» qualified for steam application (internal tests)

Product advantages:

» safe pressure relief of steam hoses
» saving of time acc. to self pressure relief
» increase the service life of steam hoses

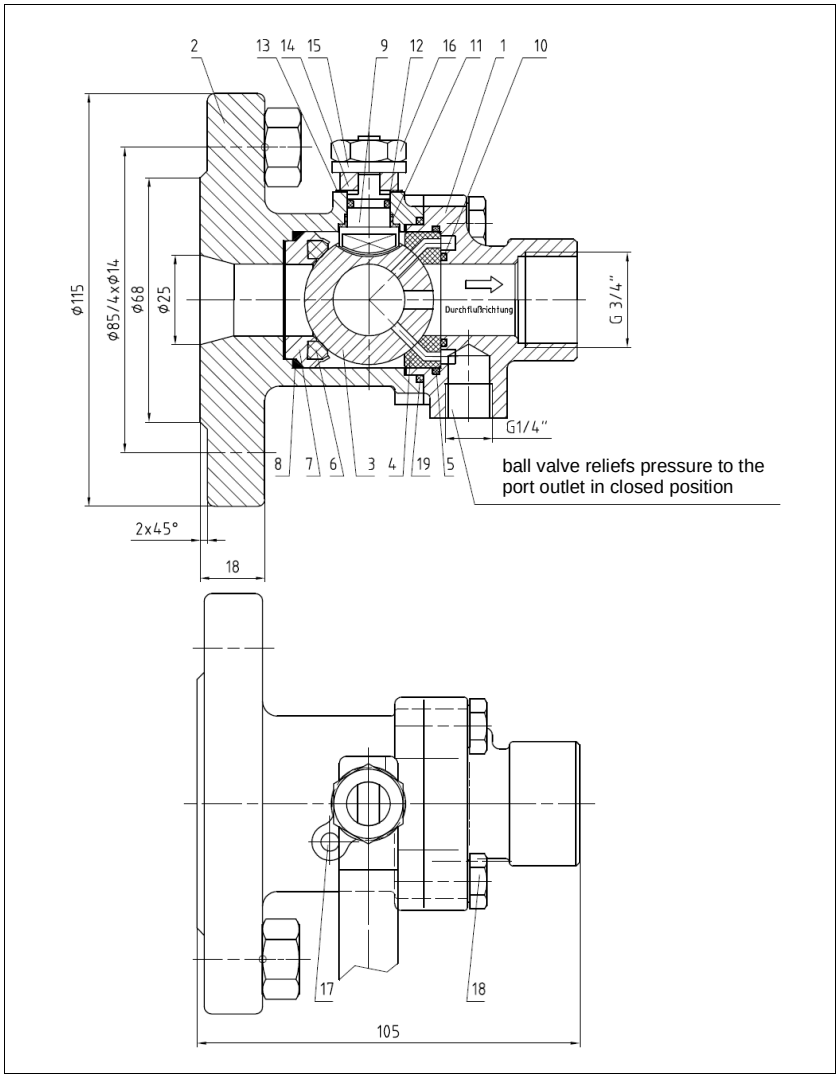
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BALL VALVES INTEC

K204-S-D, DN25/20, PN25
with outlet pressure relief connection

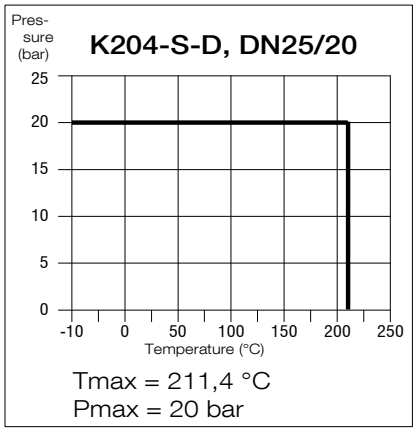


Steam ball valve
reduced bore
inlet with flange connection acc. to EN 1092
outlet with threaded end G ¾“
outlet pressure relief connection threaded end G ¼”
face to face dimensions acc. to producers standard

Specification:
Two-piece split body steam ball valve, inlet with flange connection acc. to EN 1092, outlet with threaded end G¾“ and outlet with automatic pressure relief in closed position, connection threaded end G ¼“, reduced bore, body material stainless steel (1.4408), free of non-ferrous metals, inlet seat ring KFCM, outlet seat ring made of modified PEEK, maintenance free shaft sealing with friction washer and o-ring, approved by PED, with lever.

Marking: INTEC
Type: K204-S-D

No.	Part	Material
1	body	1.4408
2	cap	1.4408
3	ball	1.4408
4	seat outlet	PEEK-mod.
5	o-ring	EPDM peroxyd. cross linked
6	seat inlet	KFC
7	seat bearing ring	1.4571/1.4404
8	seat	Graphite
9	stem	1.4462
10	o-ring	EPDM peroxyd. cross linked
11	friction washer	KFSM
12	o-ring	EPDM peroxyd. cross linked
13	thrust washer	PEEK
14	lever	1.4301/plasticised PVC
15	clamping washer	A2
16	hex. nut	A2
17	stopper	1.4571/1.4404
18	hex. screw	A4-70
19	body seal	KF



Ordering example:
INTEC K204-S-D, DN25/20, PN25, 1.4408

Subject to modification. 07/2017

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KLINGER India

INTEC K400

Multiple way ball valve of the modular INTEC system technology!



The universal multiple way ball valve in the unit construction system of the INTEC K200 series.
With 3-, 4- or 5-way applications, your medium is safety in flow!

Type:	Multiple way ball valve
Nominal sizes:	DN 15 - DN 150 NPS ½“ - NPS 6“
Pressure range:	PN 16 - PN160 ANSI Class 150, Class 300, Class 600 and Class 900
Temperature:	up to +400°C
Material of body:	stainless steel, carbon steel
End connections:	flanges acc. to EN 1092 / flanges acc. to ANSI B 16.5
FTF:	acc. to EN 558, GR.1 / acc. to ANSI B 16.10
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, spring close unit - automatical return handle (“dead man handle”), gear (hand operated)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440, 100.000 cycles -40°C up to +220°C
- ATEX 2014/34/EU

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.
- higher pressure ratings and temperatures on request
- other face to face dimensions on request

Product advantages:

- equipped with all advantages of series INTEC K200
- full bore
- T- or L-bore
- overlap free ports available
- top flange DIN EN ISO 5211

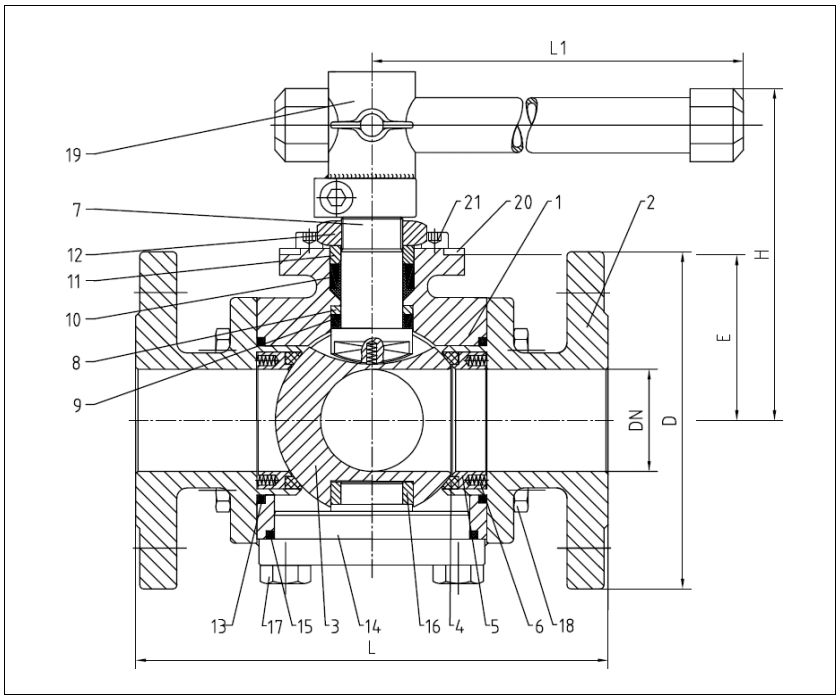
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BALL VALVES INTEC

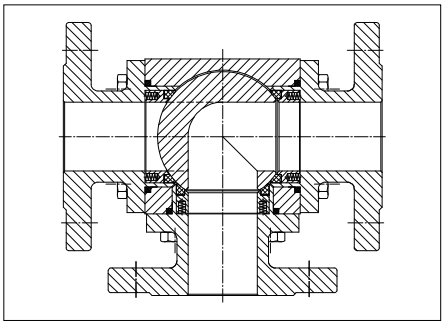
K410, DN15 - DN100, PN16/40
trunnion mounted, soft seated, spring loaded seat rings



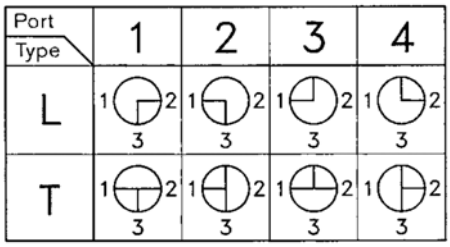
3-way ball valve with flanges
full bore
face to face acc. to EN 558, GR.1
flanges acc. to EN 1092

Specification:
3-way ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1, full bore, ball with L- or T-bore, blow-out-proof stem, body material stainless steel (1.4408/1.4571/1.4404) or carbon steel (1.0619/1.0460), antistatic device, free of non ferrous metals, seats full chambered, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Bezeichnung: INTEC K410



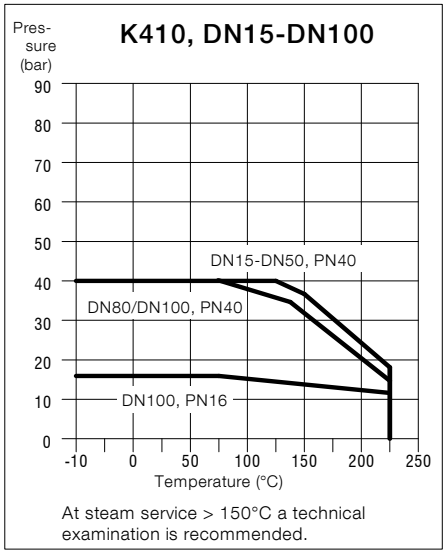
No.	Part	Material	Material
1	body	1.0619/1.0460	1.4408/1.4571/1.4404
2	cap	1.0619/1.0460	1.4408/1.4571/1.4404
3	ball	1.4408/1.4571/1.4404	
4	seat	KFGN/KFM	
5	seat bearing ring	1.4571/1.4404	
6	spiral spring	1.4401	
7	stem	1.4462	
8	below stem bearing	PEEK	
9	below seal	KFGN/Graphite	
10	upper seal	KFAM/Graphite	
11	upper stem bearing	PEEK	
12	hex. nut self-locking	A2/1.4301	
13	body seal	KF	
14	bearing neck	1.4408/1.4571/1.4404	
15	trunnion seal	KF	
16	bearing	PEEK	
17	hex. screw	A4-70	
18	hex. screw	A4-70	
19	lever	1.4408/1.4308/steel zincplated	
20	stopper	1.4301	
21	allen screw	A2-70	



Dimensions

DN	PN	dimensions (mm)					top flange	torque	weight
mm		H	L1	L	D	E	ISO	Nm*	kg
15	40	119.5	180	130**/210	95	55.0	F05	25	8.5
25	40	124.5	300	160	115	65.0	F07	46	10.0
40	40	171.0	500	200	150	76.5	F10	91	20.1
50	40	175.5	500	230	165	81.0	F10	95	24.4
80	40	204.0	700	310	200	120.0	F12	197	35.5
100	40	218.0	700	350	235	134.0	F12	243	48.2
100	16	218.0	700	350	220	134.0	F12	133	45.5

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature
** Compact type



Ordering example:
INTEC K410, DN50, PN40, Gr.1, 1.4408

Subject to technical modification. 08/2018

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KLINGER India

INTEC K410-S

Manifold ball valve. Precision of sampling, also applicable for online-Analysis.



- Overlap free multiple ports available with L-bore (e.g. DN 10, eightfold samplings)
- Absolutely clearance volume minimized
- Body, screwed insert and trunnion ball made of stainless steel (1.4571/1.4404)
- With double bearings of trunnion ball with PEEK
- Stem material Duplex (1.4462), using of best knowledge of the pump technology
- Optimized conception between preliminary tension and elastic force of the stuffing box without using of disc springs and elastomers
- Stuffing box system absolutely ageing resistant
- System design in a graphite/KF cone ring principle
- Real primary sealing, no friction washer or bearing ring using of the floating ring seal principle (graphite cone ring in KFG-profile)
- Three side chambering of the seat rings
- Using of nitrogenium sintered high quality KFGN
- Reduction of abrasion, microdiffusion and operating torque
- Certified acc. to German clean air act VDI 2440, 100.000 cycles, -40°C up to +220°C
- Hand lever with stop bolt of secure lock of the several indexing position
- Extreme low torque guarantee a high operating convenience
- Best experiences in the chemical industry are made
- Automation on request

Materials, nominal sizes and design on request.
Please talk to us, our experts will be pleased to advice you.

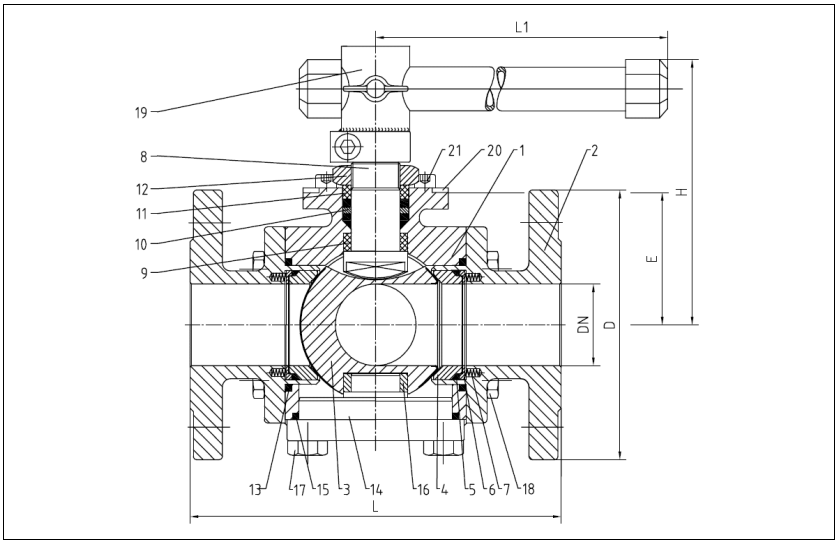
Subject to technical modification. 10/2018

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KLINGER India

BALL VALVES INTEC

K411, DN15 - DN100, PN16/40
trunnion mounted ball, metal seated, spring loaded seat rings

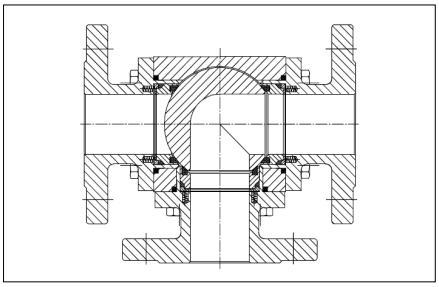


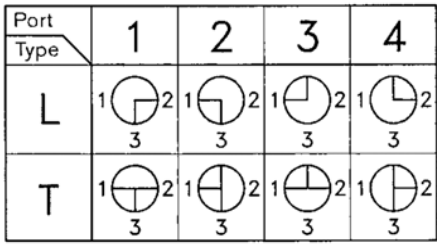
3-way ball valve with flanges
full bore
face to face acc. to EN 558, GR.1
flanges acc. to EN 1092

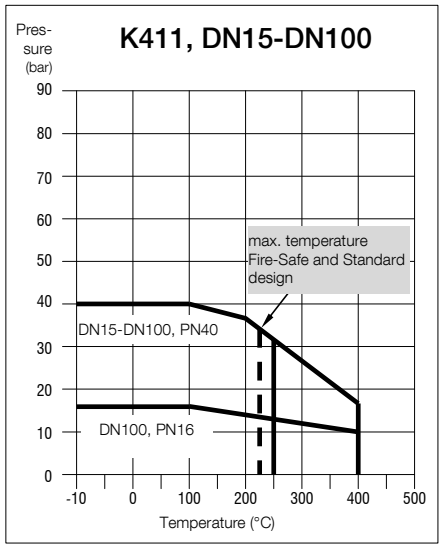
Specification:
3-way ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1, full bore, ball with L- or T-bore, blow-out-proof stem, body material stainless steel (1.4408/ 1.4571/1.4404) or carbon steel (1.0619/1.0460), antistatic device, free of non ferrous metals, trunnion mounted ball, seats 1.4571/1.4404 hard facing metal coated, stem packing cone ring system acc. to temperature use, dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC K411

No.	Part	Material		Material
High-temperature design				
1	body	1.0619/1.0460		1.4408/1.4571/1.4404
2	cap	1.0619/1.0460		1.4408/1.4571/1.4404
3	seal	1.4408/1.4571/1.4404 hard facing metal coated		
4	seat	1.4408/1.4571/1.4404 hard facing metal coated		
5	seat seal	Graphite		
6	follower ring	1.4571/1.4404		
7	spiral spring	Inconel X750		
8	stem	250°C	350°C	400°C
		1.4462	1.4980	1.4980
9	below stem bearing	E-carbon		
10	stem seal	1.4571/1.4404/Graphite		
11	upper stem bearing	E-carbon		
12	hex. nut self-locking	A2/1.4301		
13	body seal	Graphite		
14	bearing neck	1.4571/1.4404		
15	trunnion seal	Graphite		
16	bearing	E-carbon		
17+18	hex. screw	A4-70		
19	lever	1.4408/1.4308/steel zincplated		
20	stopper	1.4301		
21	allen screw	A2-70		
Fire-Safe design				
9	below stem seal	KFGN/Graphite		
	bearing	PEEK		
10	upper stem seal	KFAM/Graphite		
11	Fire-Safe seal	Graphite		
	ring	1.4571/1.4404		
	thrust washer	PEEK		
13	combined body seal	KF-Graphite		
16	bearing	PEEK		
Standard design				
5	seat seal	KF		
7	spiral spring	1.4401		
9	below stem seal	KFGN/Graphite		
	bearing	PEEK		
10	upper stem seal	KFAM/Graphite		
11	bearing	PEEK		
13	body seal	KF		
15	trunnion seal	KF		
16	bearing	PEEK		







Dimensions

DN mm	PN	dimensions (mm) H	L1	L	D	E	top flange ISO	weight kg
15	40	119.5	180	130**/210	95	55.0	F05	8.5
25	40	124.5	300	160	115	65.0	F07	10.0
40	40	171.0	500	200	150	76.5	F10	20.1
50	40	175.5	500	230	165	81.0	F10	24.4
80	40	204.0	700	310	200	120.0	F12	35.5
100	40	218.0	700	350	235	134.0	F12	48.2
100	16	218.0	700	350	220	134.0	F12	45.5

** wafer type

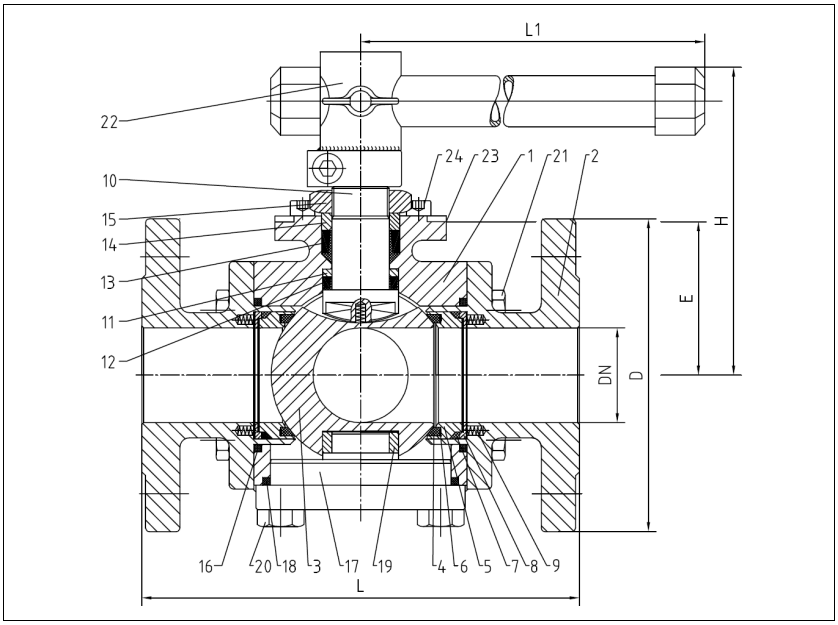
Ordering example:
INTEC K411, DN50, PN40, Gr.1, 1.4408

Subject to technical modification. 10/2019

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BALL VALVES INTEC

K414, DN15 - DN100, PN16/40
trunnion mounted, PEEK seated, spring loaded seat rings

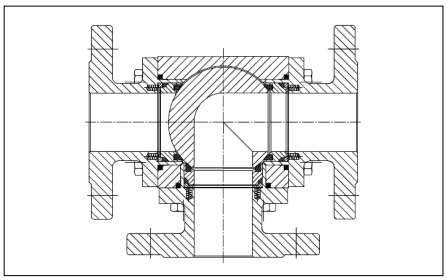


3-way ball valve with flanges
full bore
face to face acc. to EN 558, GR.1
flanges acc. to EN 1092

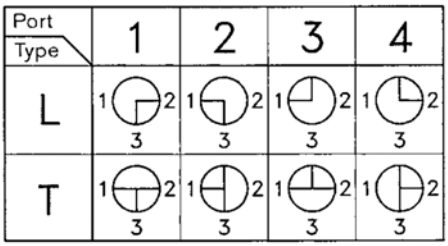
Specification:
3-way ball valve with flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1, full bore, ball with L- or T-bore, blow-out-proof stem, body material stainless steel (1.4408/1.4571/1.4404) or carbon steel (1.0619/1.0460), antistatic device, free of non ferrous metals, trunnion mounted ball, seats full chambered, stem packing Graphite/KFGN/KFAM cone ring system dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

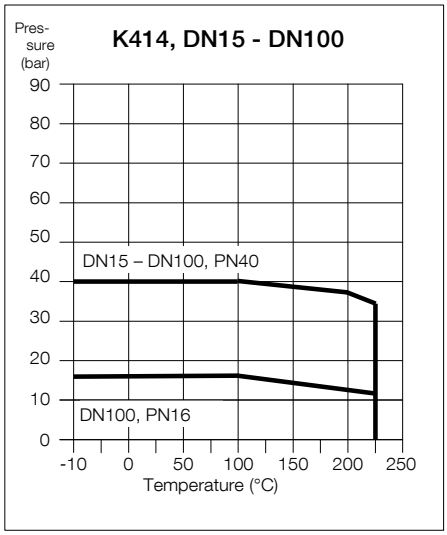
Also possible as high temperature version up to +260°C.

Marking: INTEC K414



No.	Part	Material	Material
Standard design			
1	body	1.0619/1.0460	1.4408/1.4571/1.4404
2	cap	1.0619/1.0460	1.4408/1.4571/1.4404
3	ball	1.4408/1.4571/1.4404	
4	seat	PEEK	
5	seat bearing ring	1.4571/1.4404	
6	seat back seal	Graphite	
7	seat seal	KF	
8	follower ring	1.4571/1.4404	
9	spiral spring	1.4401	
10	stem	1.4462	
11	below stem bearing	PEEK	
12	below seal	KFGN/Graphite	
13	upper seal	KFAM/Graphite	
14	upper stem bearing	PEEK	
15	hex. nut self-locking	A2/1.4301	
16	body seal	KF	
17	bearing neck	1.4571/1.4404	
18	trunnion seal	KF	
19	bearing	PEEK	
20+21	hex. screw	A4-70	
22	lever	1.4408/1.4308/steel zincplated	
23	stopper	1.4301	
24	allen screw	A2-70	
Fire-Safe design			
7	seat seal	Graphite	
9	spiral spring	Inconel X750	
16	combined body seal	KF-Graphite	
18	trunnion seal	KF-Graphite	
14	Fire-Safe seal	Graphite	
	ring	1.4571/1.4404	
	thrust washer	PEEK	





Dimensions

DN mm	PN	dimensions (mm) H	L1	L	D	E	top flange ISO	weight kg
15	40	119.5	180	130**/210	95	55.0	F05	8.5
25	40	124.5	300	160	115	65.0	F07	10.0
40	40	171.0	500	200	150	76.5	F10	20.1
50	40	175.5	500	230	165	81.0	F10	24.4
80	40	204.0	700	310	200	120.0	F12	35.5
100	40	218.0	700	350	235	134.0	F12	48.2
100	16	218.0	700	350	220	134.0	F12	45.5

** wafer type

Ordering example:
INTEC K414, DN50, PN40, GR.1, 1.4408

Subject to technical modification. 10/2019

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KLINGER India

INTEC K500

Tank bottom ball valve of the modular INTEC system technology!



The stem is angularly placed and thus a marsh free installation and trouble free automation is possible.

Type:	Tank bottom ball valve
Nominal sizes:	DN 80/50 - DN 200/150
Pressure range:	PN 10 and PN 16
Temperature:	up to +400°C
Material of body	stainless steel
End connections:	flanges acc. to EN 1092, tank connections: DIN 28140 (drain valve), DIN 28117 (loose flange)
FTF:	acc. to EN 558, GR.13
Accessories:	heating jacket, flushing connection

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440, 100.000 cycles -40°C up to +220°C
- ATEX 2014/34/EU

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.

Product advantages:

- equipped with all advantages of series INTEC K200
- individual connections on request
- clearance volume minimized
- marsh free installation
- trouble free automation
- metal seated up to +400°C

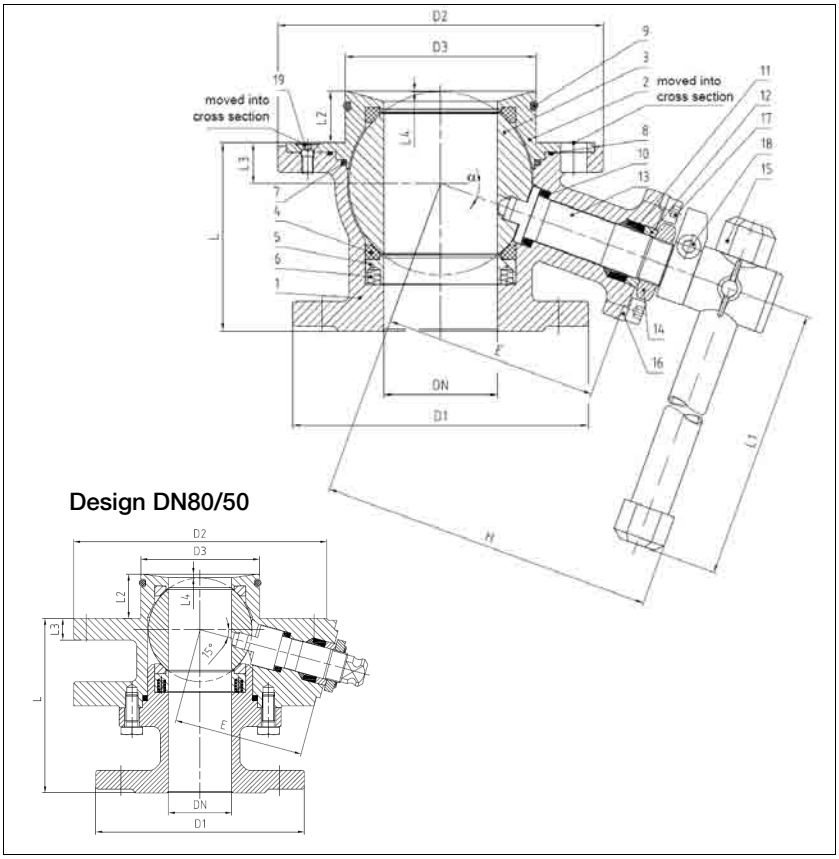
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BALL VALVES INTEC

K500, DN80/50 - DN200/150, PN10/16
floating ball, soft seated, single side spring loaded seat ring
Tank connection acc. to DIN 28140 part 1



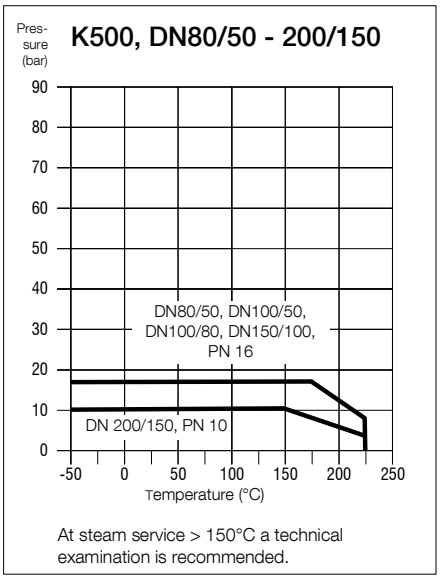
Design DN80/50

No.	Part	Material
1	body	1.4408/1.4571/1.4404
2	cap	1.4408/1.4571/1.4404
3	ball	1.4408
4	seat	KFM/KFGN
5	seat bearing ring	1.4571/1.4404
6	spiral spring	1.4401
7	body seal	KF
8	O-ring	Viton
9	O-ring	Viton
10	below seal	KFGN/Graphite
11	upper seal	KFAM/Graphite
12	bearing	PEEK
13	stem	1.4462
14	hex. nut self locking	A2/1.4301
15	lever	1.4408/1.4308
16	stopper	1.4301
17	allen screw	A2-70
18	allen screw	A2-70
19	countersunk screw	A4-70

Tank bottom ball valves with flanges
full bore
face to face acc. to EN 558, GR. 13
flanges acc. to EN 1092

Specification:
Tank bottom ball valve with two-piece body, outlet flange acc. to EN 1092, face to face dimension acc. to EN 558, GR.13, full bore, body material stainless steel (1.4408/1.4571/1.4404), antistatic device, free of non ferrous metals, tank connection acc. to DIN 28140 part 1, single spring loaded seat ring, stem sealing maintenance free, dynamic loaded adjustable, stem is angularly placed and thus a marsh free installation and trouble free automation is possible, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440,
Fire-Safe design, with lever.

Marking: INTEC K500



* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature

**Outlet flange Compact design with threaded holes. Also available in flange version, then with length = 138 mm

Ordering example:
INTEC K500, DN100/80, PN16, GR.13, 1.4408

Dimensions

DN	PN	dimensions (mm)											top flange	torque	weight
mm		H	L1	L2	L3	L4	L	E	D1	D2	D3	α	ISO	Nm*	kg
80/50	16	184.0	300	35	17	3.0	114**	102.5	165	200	94	15°	F07	45	11.8
100/50	16	178.0	300	35	27	29.8	127	118.5	165	220	129	15°	F07	45	16.0
100/80	16	339.0	500	35	27	0.3	127	144.5	200	220	129	20°	F10	90	17.5
150/100	16	368.5	500	40	41	0.5	140	174.0	220	285	179	20°	F10	130	43.0
200/150	10	405.0	700	40	76	1.0	200***	206.0	285	340	233	15°	F12	220	66.0

Subject to modification. 07/2018

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KLINGER India

INTEC K700

Sampling device ball valve of the modular INTEC system technology!



This assembling device ball valve owned an extremely big outlet with pressure relief of the sampling flask.
The sealing systems and also the body materials can be designed acc. to medium requirements.
This sampling device unit is available for plant lines from DN 15 up to DN 200. Cavity filler design is available.
Flask connection with thread acc. to DIN 168 or spring loaded disk is possible.

Type:	Sampling device ball valve
Nominal sizes:	DN 15 - DN 200
Pressure range:	PN 16 and PN 40
Temperature:	up to +400°C
Material of body:	stainless steel
End connections:	flanges acc. to EN 1092
FTF:	acc. to EN 558, GR.1 and GR.27
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, bottle support with spring loaded disc, metal bottle with bayonet locking, protection cover with bayonet locking, protection box made of stainless steel for vacuum or pressure relief, hollow needle system for septum-bottle

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440, 100.000 cycles -40°C up to +220°C
- ATEX 2014/34/EU

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.

Product advantages:

- equipped with all advantages of series INTEC K200
- extremely big outlet
- sealing systems and body materials can be designed acc. to medium requirements
- cavity filler design is available
- bottle connection with thread acc. to DIN 168 or with spring loaded disk
- various threaded connections on request

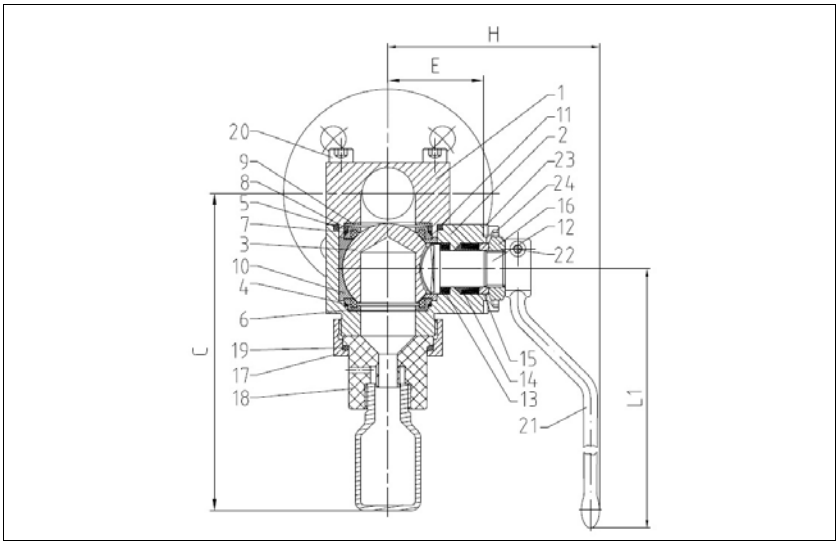
Subject to technical modification. 10/2018

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BALL VALVES INTEC

K730, DN15 - DN200, PN 16/40
Sample volume per switch cycle 10, 15 or 25 ml, soft seated



No.	Part	Material
design PN 16		
1	adapter	1.4571/1.4404/1.4408
2	body	1.4571/1.4404/1.4408
3	ball	1.4571/1.4404
4	seat exit port	KFM
5	seat entry port	KFM
6	seat bearing ring	1.4571/1.4404
7	bearing ring seal	KF
8	follower ring	1.4571/1.4404
9	plate spring	Inconel 718
10	spherical cap	1.4571/1.4404
11	body seal	KF
12	stem	1.4462
13	below seal	KFGN/Graphite
14	upper seal	KFAM/Graphite
15	bearing	PEEK
16	hex. nut self-locking	A2/1.4301
17	cap nut	1.4301
18	bottle adapter	KFGN
19	o-ring	Viton
20	allen screw	A4-70
21	lever	1.4408
22	allen screw	A2-70
23	stopper	1.4301
24	allen screw	A2-70
design PN 40		
4	seat exit port	PEEK

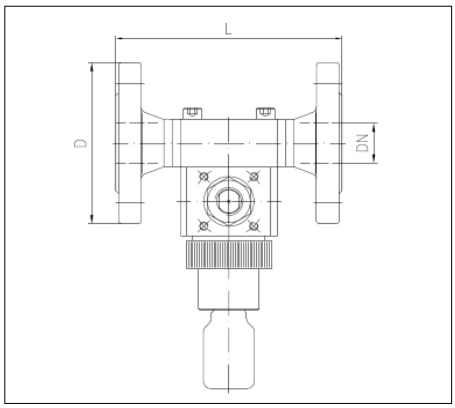
Dimensions

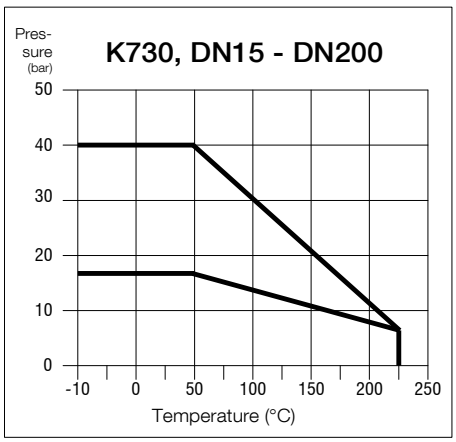
DN mm	PN	dimensions (mm) H	L1	L (GR.1)	L (GR.27)	D	E	C sample bottle 25 ml (GL25)	50 ml (GL32)	100 ml (GL45)
15	16/40	116.5	180	130	-	95	52.5	170.3	187.3	200.3
20	16/40	116.5	180	150	-	105	52.5	172.5	189.5	202.5
25	16/40	116.5	180	160	-	115	52.5	175.1	192.1	205.1
32	16/40	116.5	180	180	-	140	52.5	177.6	194.6	207.6
40	16/40	116.5	180	200	140	150	52.5	180.5	197.5	210.5
50	16/40	116.5	180	230	150	165	52.5	186.75	203.75	216.75
65	16/40	216.5*	180	290	170	185	52.5	198.1	215.1	228.1
80	16/40	216.5*	180	310	180	200	52.5	209.5	226.5	239.5
100	16/40	216.5*	180	350	190	200/235	52.5	223.4	240.4	253.4
125	16/40	216.5*	180	-	325	250/270	52.5	237.3	254.5	267.5
150	16/40	216.5*	180	-	350	285/300	52.5	252.0	269.0	282.0
200	16/40	216.5*	180	-	400	340/375	52.5	266.4	283.4	296.4

Sampling device ball valve with flanges acc. to EN 1092
connection thread for sample bottle acc. to DIN 168 GL 25, GL 32, GL 45
full bore
face to face acc. to EN 558, GR. 1
face to face acc. to EN 558, GR. 27

Specification:
Sampling device ball valve with flanges acc. to EN 1092, connection thread for sample bottle acc. to DIN 168 GL 25, GL 32, GL 45, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4571/ 1.4404/1.4408), antistatic device, free of non ferrous metals, ball with pocket hole for a defined sample volume of 10, 15, 25 ml, cavity reduced through spherical cap, seat fully chambered, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC 730





* incl. 100 mm stem extension.

Protection box, safety cover and/or heating jacket on request.

- special material on request.

Ordering example:
INTEC K730, DN50, PN16, GR.1, 25 ml, GL 25

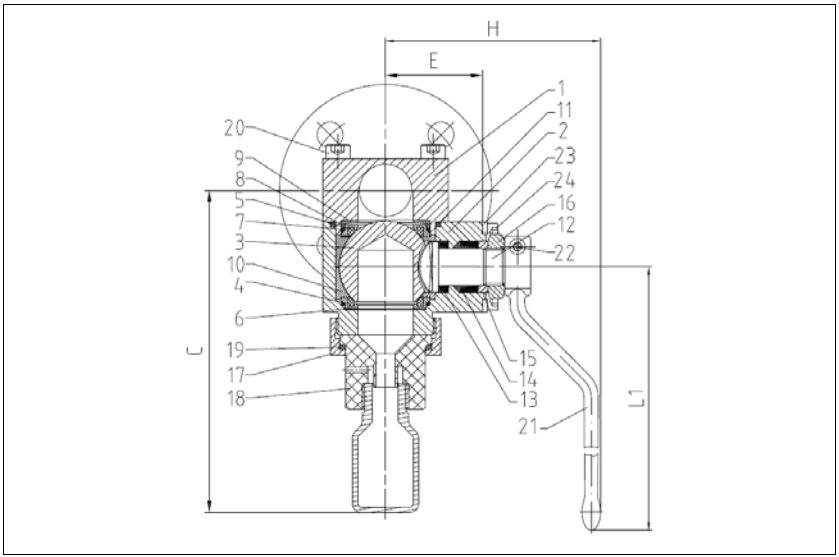
Subject to modification. 05/2017

KLINGER Industrial Products India Pvt. Ltd. #6 Tarana, 1st Floor, GoodEarth Malhar, Kambipura, Kengeri, Bengaluru 560074, Karnataka, India. Tel +91 8618523021 / +91 80 2990 9572 / e-mail: info@klinger.in

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BALL VALVES INTEC

K740, DN15 - DN200, PN 16/40
Sample volume per switch cycle 40, 50 or 70 ml, soft seated



No.	Part	Material
design PN 16		
1	adapter	1.4571/1.4404/1.4408
2	body	1.4571/1.4404/1.4408
3	ball	1.4571/1.4404
4	seat exit port	KFM
5	seat entry port	KFM
6	seat bearing ring	1.4571/1.4404
7	bearing ring seal	KF
8	follower ring	1.4571/1.4404
9	plate spring	Inconel 718
10	spherical cap	1.4571/1.4404
11	body seal	KF
12	stem	1.4462
13	below seal	KFGN/Graphite
14	upper seal	KFAM/Graphite
15	bearing	PEEK
16	hex. nut self-locking	A2/1.4301
17	cap nut	1.4301
18	bottle adapter	KFGN
19	o-ring	Viton
20	allen screw	A4-70
21	lever	1.4408
22	allen screw	A2-70
23	stopper	1.4301
24	allen screw	A2-70
design PN 40		
4	seat exit port	PEEK

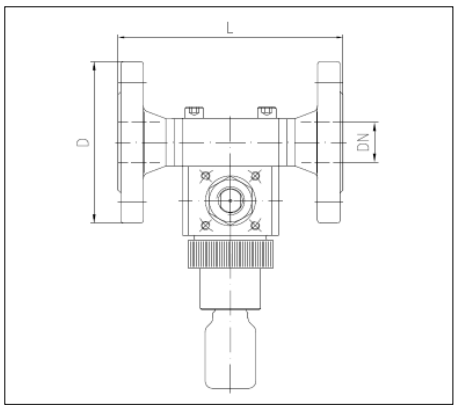
Dimensions

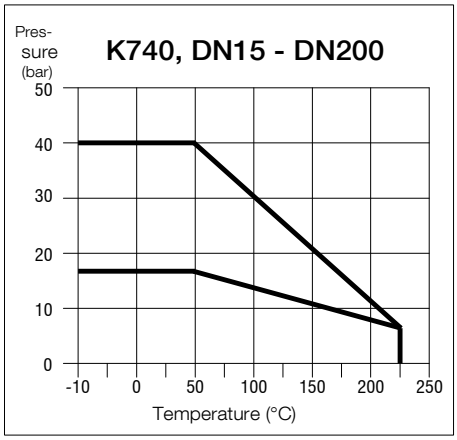
DN mm	PN	dimensions (mm) H	L1	L (GR.1)	L (GR.27)	D	E	C sample bottle 50 ml (GL32)	100 ml (GL45)	250 ml (GL45)
15	16/40	125.5	300	160**	-	95	66.5	227	238	275
20	16/40	125.5	300	160**	-	105	66.5	227	238	275
25	16/40	125.5	300	160	-	115	66.5	227	238	264
32	16/40	125.5	300	180	-	140	66.5	228	239	272
40	16/40	125.5	300	200	140	150	66.5	231	242	275
50	16/40	125.5	300	230	150	165	66.5	237	248	281
65	16/40	225.5*	300	290	170	185	66.5	244	255	288
80	16/40	225.5*	300	310	180	200	66.5	252	263	296
100	16/40	225.5*	300	350	190	200/235	66.5	269	280	313
125	16/40	225.5*	300	-	325	250/270	66.5	284	295	328
150	16/40	225.5*	300	-	350	285/300	66.5	299	310	343
200	16/40	225.5*	300	-	400	340/375	66.5	334	345	378

Sampling device ball valve with flanges acc. to EN 1092
connection thread for sample bottle acc. to DIN 168 GL 25, GL 32, GL 45
full bore
face to face acc. to EN 558, GR. 1
face to face acc. to EN 558, GR. 27

Specification:
Sampling device ball valve with flanges acc. to EN 1092, connection thread for sample bottle acc. to DIN 168 GL 25, GL 32, GL 45, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4571/1.4404/1.4408), antistatic device, free of non ferrous metals, ball with pocket hole for a defined sample volume of 40, 50, 70 ml, cavity reduced through spherical cap, seat fully chambered, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC K740





* incl. 100 mm stem extension.
Protection box, safety cover and/or heating jacket on request.
** special lengths
- special material on request.

Ordering example:
INTEC K740, DN50, PN16, GR.1, 50 ml, GL 32

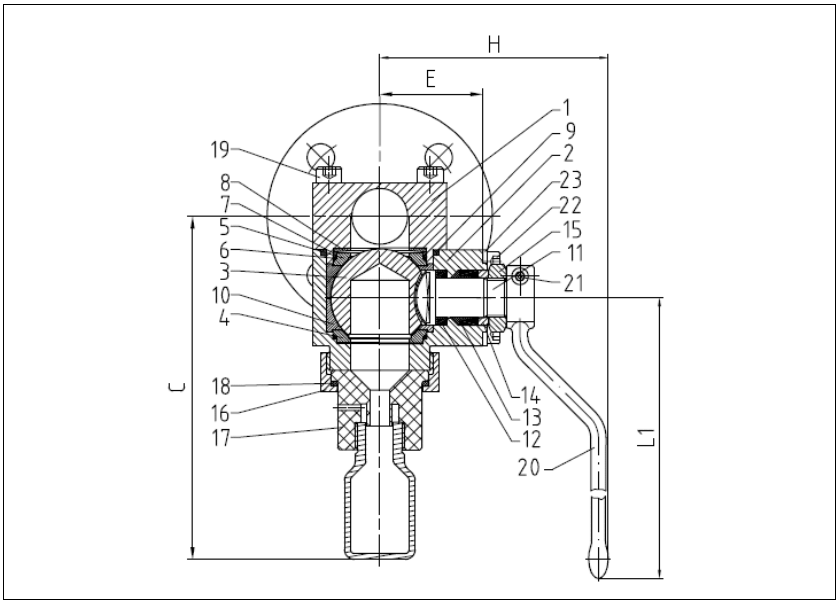
Subject to modification. 05/2017

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www.klinger.in

BALL VALVES INTEC

K731, DN15 - DN200, PN16/40
Sample volume per switch 10, 15 or 25 ml, metal seated



No.	Part	Material
1	adapter	1.4571/1.4404/1.4408
2	body	1.4571/1.4404/1.4408
3	ball	1.4571/1.4404 hard facing metal coated
4	seat exit port	1.4571/1.4404 hard facing metal coated
5	seat entry port	1.4571/1.4404 hard facing metal coated
6	bearing ring seal	KF
7	follower ring	1.4571/1.4404
8	plate spring	Inconel 718
9	body seal	KF
10	spherical cap	1.4571/1.4404
11	stem	1.4462
12	below seal	KFGN/Graphite
13	upper seal	KFAM/Graphite
14	upper stem bearing	PEEK
15	hex. nut self-locking	A2/1.4301
16	cap nut	1.4301
17	bottle adapter	KFGN
18	o-ring	Viton
19	allen screw	A4-70
20	lever	1.4408
21	allen screw	A2-70
22	allen screw	A2-70
23	stopper	1.4301

Dimensions

DN mm	PN	dimensions (mm) H	L1	L (GR.1)	L (GR.27)	D	E	C sample bottle 25 ml (GL25)	50 ml (GL32)	100 ml (GL45)
15	16/40	116.5	250	130	-	95	52.5	170.3	187.3	200.3
20	16/40	116.5	250	150	-	105	52.5	172.5	189.5	202.5
25	16/40	116.5	250	160	-	115	52.5	175.1	192.1	205.1
32	16/40	116.5	250	180	-	140	52.5	177.6	194.6	207.6
40	16/40	116.5	250	200	140	150	52.5	180.5	197.5	210.5
50	16/40	116.5	250	230	150	165	52.5	186.75	203.75	216.75
65	16/40	216.5*	250	290	170	185	52.5	198.1	215.1	228.1
80	16/40	216.5*	250	310	180	200	52.5	209.5	226.5	239.5
100	16/40	216.5*	250	350	190	200/235	52.5	223.4	240.4	253.4
125	16/40	216.5*	250	-	325	250/270	52.5	237.3	254.5	267.5
150	16/40	216.5*	250	-	350	285/300	52.5	252.0	269.0	282.0
200	16/40	216.5*	250	-	400	340/375	52.5	266.4	283.4	296.4

* incl. 100 mm stem extension.

Protection box, safety cover and/or heating jacket on request.

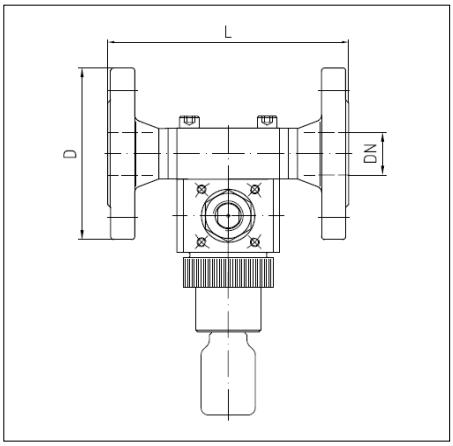
- special material on request.

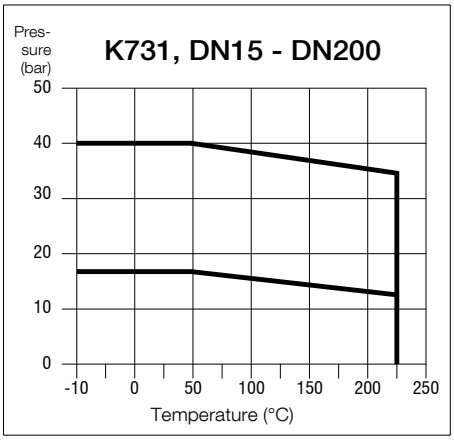
Sampling device ball valve
with flanges acc. to EN 1092
connection thread for sample bottle acc. to DIN 168 GL 25, GL 32, GL 45
full bore
face to face acc. to EN 558, GR. 1
face to face acc. to EN 558, GR. 27

Specification:
Sampling device ball valve with flanges acc. to EN 1092, connection thread for sample bottle acc. to DIN 168 GL 25, GL 32, GL 45, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4571/ 1.4404/1.4408), antistatic device, free of non ferrous metals, ball with pocket hole for a defined sample volume of 10, 15, 25 ml, cavity reduced through spherical cap, seats 1.4571/1.4404 hard facing metal coated, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

High-temperature design up to +400°C on request.

Marking: INTEC K731





Ordering example:
INTEC K731, DN50, PN16, GR.1, 25 ml, GL 25

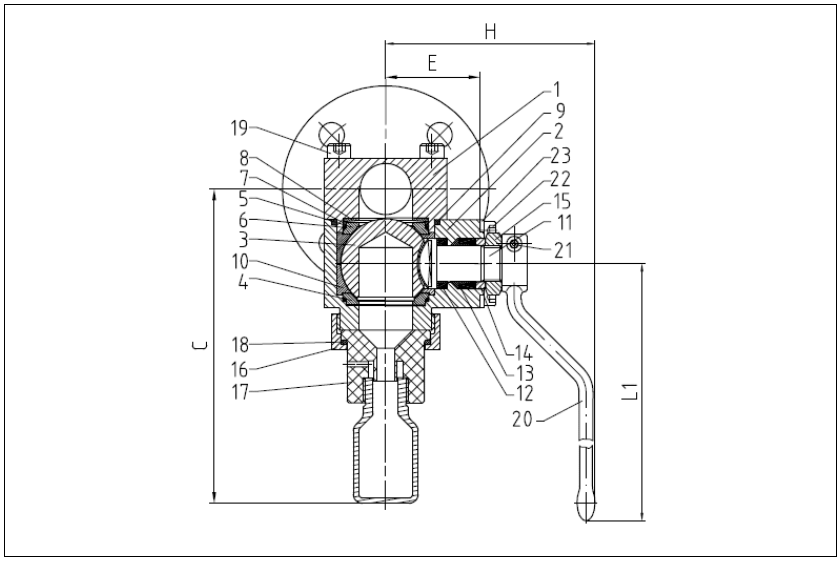
Subject to modification. 05/2017

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BALL VALVES INTEC

K741, DN15 - DN200, PN16/40
Sample volume per switch 40, 50 or 70 ml, metal seated



No.	Part	Material
1	adapter	1.4571/1.4404/1.4408
2	body	1.4571/1.4404/1.4408
3	ball	1.4571/1.4404 hard facing metal coated
4	seat exit port	1.4571/1.4404 hard facing metal coated
5	seat entry port	1.4571/1.4404 hard facing metal coated
6	bearing ring seal	KF
7	follower ring	1.4571/1.4404
8	plate spring	Inconel 718
9	body seal	KF
10	spherical cap	1.4571/1.4404
11	stem	1.4462
12	below seal	KFGN/Graphite
13	upper seal	KFAM/Graphite
14	upper stem bearing	PEEK
15	hex. screw self-locking	A2/1.4301
16	cap nut	1.4301
17	bottle adapter	KFGN
18	o-ring	Viton
19	allen screw	A4-70
20	lever	1.4408
21	allen screw	A2-70
22	allen screw	A2-70
23	stopper	1.4301

Dimensions

DN mm	PN	dimensions (mm) H	L1	L (GR.1)	L (GR.27)	D	E	C sample bottle 50 ml (GL32)	100 ml (GL45)	250 ml (GL45)
15	16/40	125.5	360	160**	-	95	66.5	227	238	275
20	16/40	125.5	360	160**	-	105	66.5	227	238	275
25	16/40	125.5	360	160	-	115	66.5	227	238	264
32	16/40	125.5	360	180	-	140	66.5	228	239	272
40	16/40	125.5	360	200	140	150	66.5	231	242	275
50	16/40	125.5	360	230	150	165	66.5	237	248	281
65	16/40	225.5*	360	290	170	185	66.5	244	255	288
80	16/40	225.5*	360	310	180	200	66.5	252	263	296
100	16/40	225.5*	360	350	190	200/235	66.5	269	280	313
125	16/40	225.5*	360	-	325	250/270	66.5	284	295	328
150	16/40	225.5*	360	-	350	285/300	66.5	299	310	343
200	16/40	225.5*	360	-	400	340/375	66.5	334	345	378

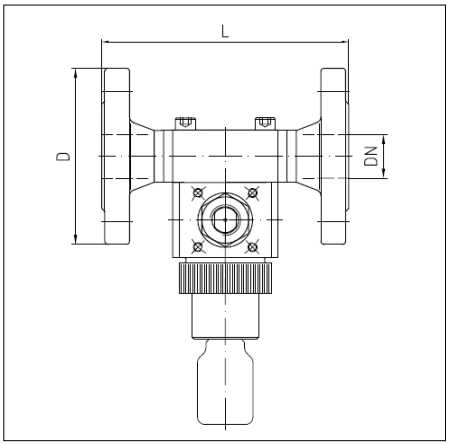
* incl. 100 mm stem extension.
Protection box, safety cover and/or heating jacket on request.
** special lengths.
- special material on request.

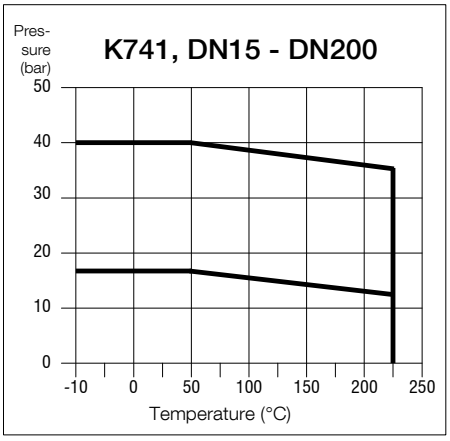
Sampling device ball valve
with flanges acc. to EN 1092
connection thread for sample bottle acc. to DIN 168 GL 25, GL 32, GL 45
full bore
face to face acc. to EN 558, GR. 1
face to face acc. to EN 558, GR. 27

Specification:
Sampling device ball valve with flanges acc. to EN 1092, connection thread for sample bottle acc. to DIN 168 GL 25, GL 32, GL 45, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4571/ 1.4404/1.4408), antistatic device, free of non ferrous metals, ball with pocket hole for a defined sample volume of 40, 50, 70 ml, cavity reduced through spherical cap, seats 1.4571/1.4404 hard facing metal coated, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

High-temperature design up to +400°C on request.

Marking: INTEC K741





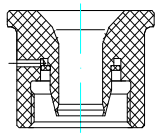
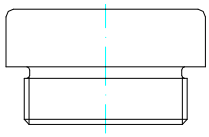
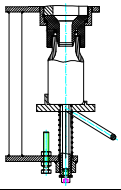
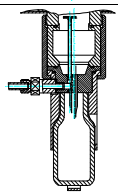
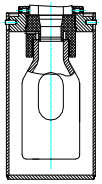
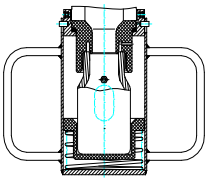
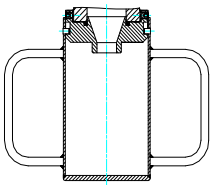
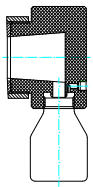
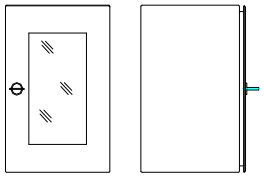
Ordering example:
INTEC K741, DN50, PN16, GR.1,
50 ml, GL 32

Subject to modification. 05/2017

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BALL VALVES INTEC

Adapter versions for
Sampling device ball valves Type INTEC K730ff / INTEC K740ff

Adapter version	Adapter material	Drawing
Bottle adapter GL25 (DIN 168) with vent bore	KFA / KFGN	
Bottle adapter GL32 (DIN 168) with vent bore	KFA / KFGN	
Bottle adapter GL45 (DIN 168) with vent bore	KFA / KFGN	
Plug screw for GL25, GL32, GL45 (DIN 168)	KF	
Bottle support, spring loaded for GL25, GL32, GL45 (DIN 168)	KFA / KFGN	
Hollow needle system for septum-bottle (1.4571 or special material)	1.4571 or special material	
Protection cover with bayonet locking (1.4301) for GL25, GL32, GL45 (DIN 168)	KFA / KFGN	
Protection cover, bottle support spring loaded with bayonet locking (1.4301) for GL25, GL32, GL45 (DIN 168)	KFA / KFGN	
Metal bottle with bayonet locking (1.4571 or special material)	1.4571 or special material	
Swing adapter for angular and vertical piping	KFA / KFGN	
Protection box (1.4301 or plastic)		

Subject to modification. 04/2017

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KLINGER India

INTEC K811

3-piece high-pressure ball valve of the modular INTEC system technology!



High precision bearings and both sides spring loaded seat ring elements are responsible for a safety handling in all applications of the high pressure ranges.

Type:	3-piece high-pressure ball valve
Nominal sizes:	DN 16, DN 24, DN 30, DN 45
Pressure range:	PN 325
Temperature:	up to +400°C
Material of body:	stainless steel, carbon steel
End connections:	flanges acc. to BASF-WN 18011
FTF:	acc. to EN 558, GR.2
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, gear (hand operated)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440,
- ATEX 2014/34/EU

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.

Product advantages:

- equipped with all advantages of series INTEC K200
- two-piece split body or three-piece split body design
- extreme long-life acc. high precision bearing of the stem
- optimized arrangement of the bearing forces
- leakage rate A

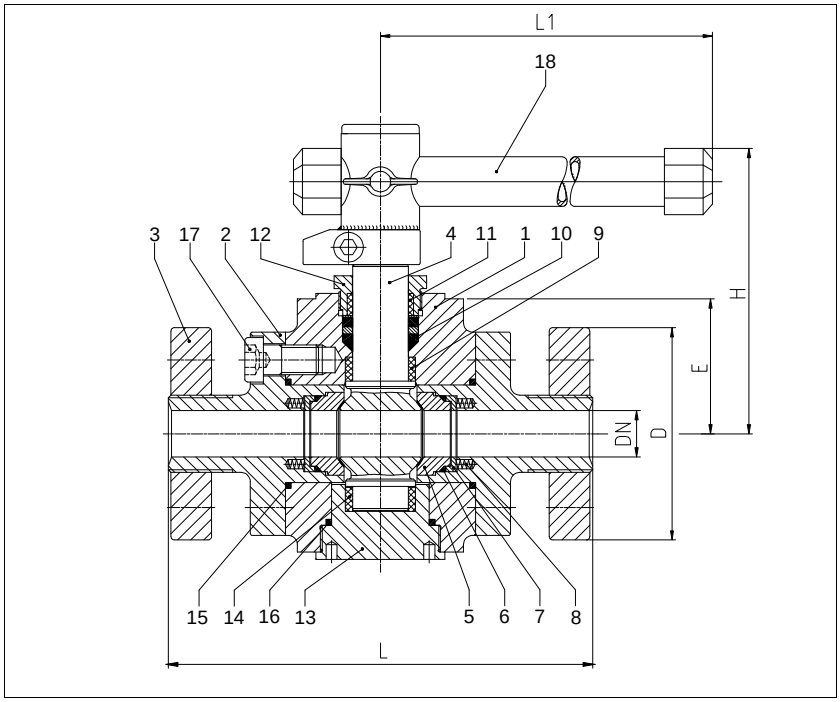
Subject to technical modification. 10/2018

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www.klinger.in

BALL VALVES INTEC

K811, DN16/DN24/DN30/DN45, PN325
trunnion mounted ball, metal seated, both sides spring loaded seat rings

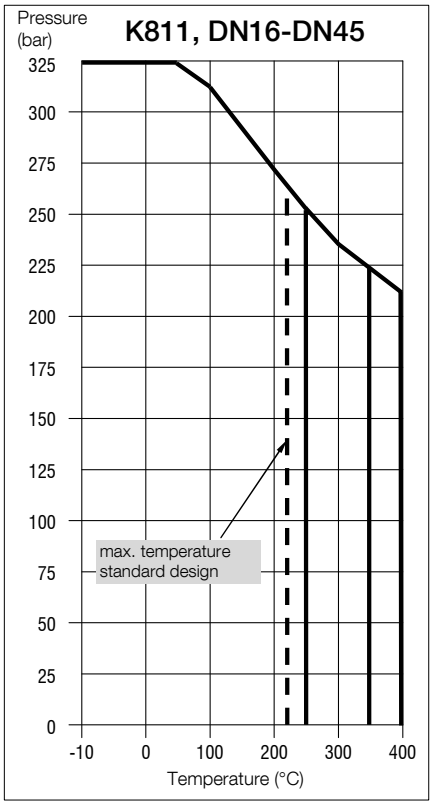


3-piece high-pressure ball valve
with flanges
full bore
face to face acc. to producers standard flanges acc. to BASF-WN 18 011

Specification:
3-piece high-pressure ball valve, flanges acc. to BASF-WN 18 011, face to face dimensions acc. to producers standard, full bore, ball and stem one unit, blow-out-proof stem, body material stainless steel (1.4571/1.4404) or carbon steel (1.0460), antistatic device, free of non ferrous metals, seat 1.4571/1.4404 hard facing metal coated, stem packing cone ring construction acc. to temperature use, dynamic loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC K811

No.	Part	Material			Material		
High temperature design							
1	body	1.0460			1.4571/1.4404		
2	cap	1.0460			1.4571/1.4404		
3	screwed flange	1.7258			1.7258		
4	ball-stem unit	250°C	350°C	400°C	250°C	350°C	400°C
	hard facing metal coated	1.4462	1.4313	1.4980	1.4462	1.4980	1.4980
5	seat	1.4571/1.4404 hard facing metal coated					
6	bearing ring seal	Graphite					
7	follower ring	1.4571/1.4404					
8	spiral spring	Inconel X750					
9	below stem bearing	E-carbon					
10	upper stem seal	1.4571/1.4404/Graphite					
11	upper stem bearing	E-carbon					
12	stuffing box screw	1.4571/1.4404					
13	bearing neck	1.4571/1.4404					
14	trunnion bearing	E-carbon					
15	body seal	Graphite					
16	trunnion seal	Graphite					
17	hex. nut	1.7258					
18	lever	1.4408/1.4308/steel zincplated					
Standard design							
8	spiral spring	1.4401					
9	below stem bearing	PEEK					
10	upper stem seal	KF/Graphite/PEEK					
11	upper stem bearing	PEEK					
15	body seal	KF					
16	trunnion seal	KF					



Dimensions

DN mm	PN	dimensions (mm) H	L1	L	D	E	top flange ISO	torque Nm*	weight kg
16	325	139.0	300	230	105	62.0	F07	186	13,6
24	325	185.5	500	260	115	73.0	F10	305	19.0
30	325	201.5	700	300	135	83.0	F12	442	30.5
45	325	216.0	700	350	165	97.5	F14	717**	49.3

* Necessary torque measured with treated water at Δ P acc. to pressure class and room temperature.

** Gearbox recommended.

Other flange connections on request.

Ordering example:
INTEC K811, DN24, PN325, 1.0460, high temperature, stem 1.4980

Subject to technical modification. 08/2018

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SMALL BALL VALVES / PRESSURE GAUGE BALL VALVES

KLINGER India

INTEC









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INTEC K100

Perfect solution for laboratory, chemical analysis, testing and mini plant!



The high pressure series for all laboratory and mini plant applications for process industries. The series is available from threaded end to clamping ring connection. All variations are used for laboratory and also in control applications. A benefit for this series is also the smart possibility for automation. Certified acc. to German clean air act VDI 2440!

Type:	Small ball valve
Nominal sizes:	DN 8 - DN 20
Pressure range:	PN 100, PN 160 and PN 250
Temperature:	up to +260°C
Material of body:	stainless steel
End connections:	with female threaded ends, with male threaded ends, one side with female threaded end and other side with male threaded end, with pipe screwing light / heavy series with clamping ring connection
FTF:	see relevant ball valve types
Accessories:	heating jacket, hand lever with bayonet locking, hand lever extension, block unit - padlock unit, spring close unit - automatical return lever (“deadman handle”)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440
- ATEX 2014/34/EU

Special designs:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.
- PEEK seated
- special connections on request

Product advantages:

- compact design
- one piece body reduces fugitive emissions
- best suited for automation
- wide range of accessories

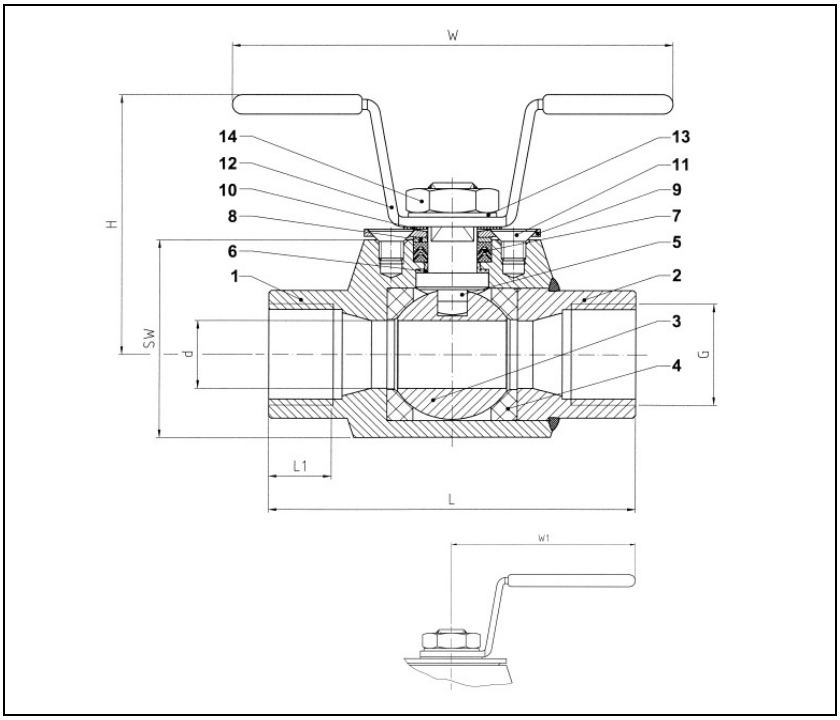
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KLINGER India

BALL VALVES INTEC

K110, DN8 - DN20, PN100/160

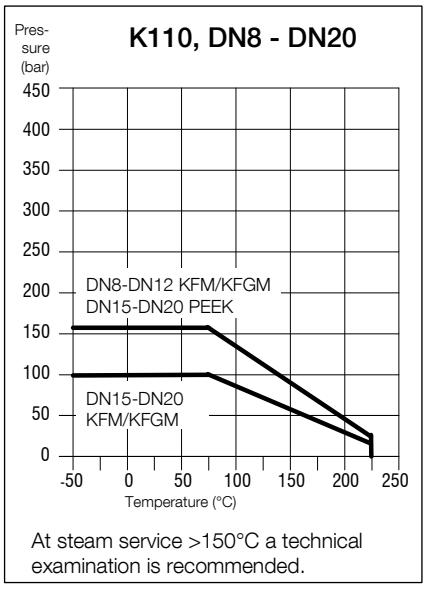


Mini plant ball valve
with female threaded ends
acc. to EN ISO 228-1
face to face dimensions acc. to
DIN 3202 part 4-M3

Specification:
One-piece ball valve, female threaded ends acc. to EN ISO 228-1, blow-out-proof-stem, body material stainless steel (1.4571/1.4404), free of non ferrous metals, seat KFM/KFGM or PEEK for higher pressures and temperatures, stem packing KF chevron ring, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC
Type: K110

No.	Part	Material code
1	body	1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFM/KFGM/PEEK-KFM
5	stem	1.4571/1.4404
6	fricion washer	KFSM/PEEK
7	chevron ring	KFM
8	washer	1.4301/1.4571/1.4404
9	gland	1.4310
10	thrust washer	PEEK
11	countersunk screw	A2
12	lever	1.4301/1.4571/plasticised PVC
13	serrated lock washer	A2
14	hex. nut	A2



At steam service >150°C a technical examination is recommended.

Dimensions

DN mm	connect. G in inch	PN	dimensions (mm) d	L	L1	H	W	W1	SW* mm
8	G 1/4	160	7.5	50	9.7	45	90		27
12	G 3/8	160	11	60	10.1	49	90		32
12	G 1/2	160	11	65	13.2	49	90		32
15	G 1/2	100	14	75	13.2	53		100	41
15	G 1/2	160	14	75	13.2	53		100	41
15	G 3/4	100	14	80	14.5	53		100	41
15	G 3/4	160	14	80	14.5	53		100	41
20	G 3/4	100	17	80	14.5	66		120	46
20	G 3/4	160	17	80	14.5	66		120	46
20	G 1	100	17	90	16.8	66		120	46
20	G 1	160	17	90	16.8	66		120	46

Gearbox with connection acc. to DIN EN ISO 5211 is possible.
* Width across in mm

Ordering example:
INTEC K110, DN 12, G ½", KFGM, PN160, 1.4571

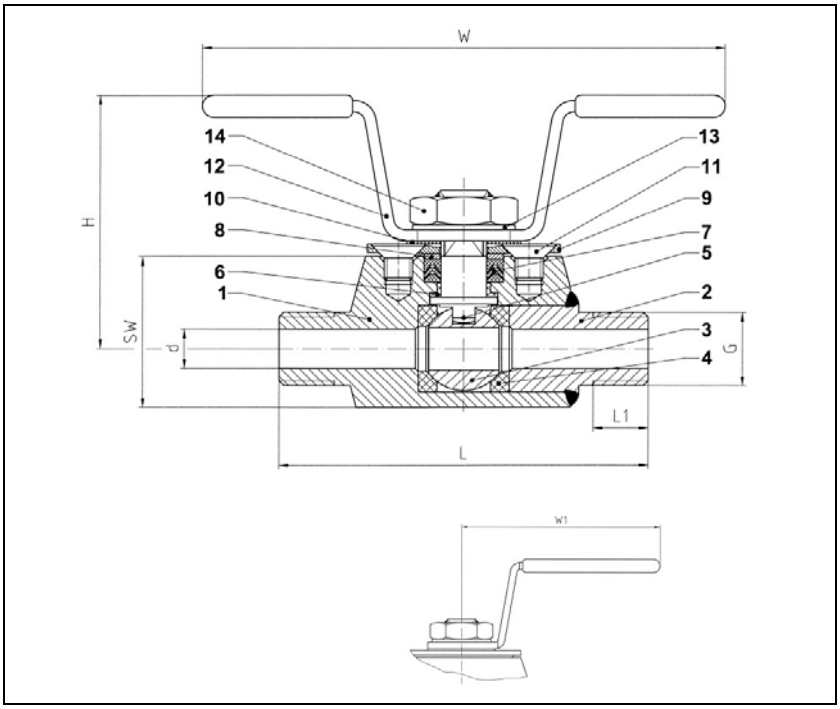
Subject to modification. 01/2017

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KLINGER India

BALL VALVES INTEC

K120, DN8 - DN20, PN100/160

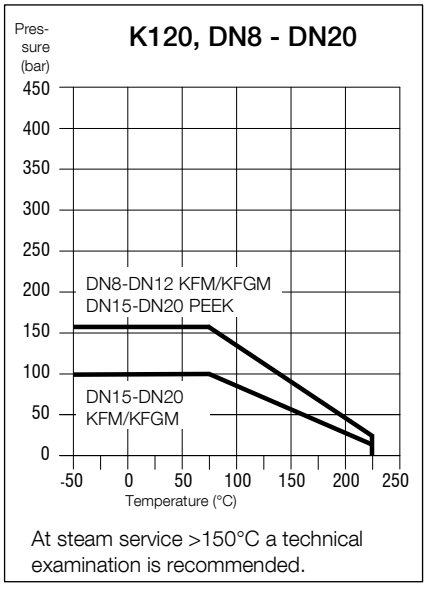


Mini plant ball valve with male threaded ends acc. to EN ISO 228-1 face to face dimensions acc. to producers standard

Specification:
One-piece ball valve, male threaded ends acc. to EN ISO 228-1, blow-out-proof-stem, body material stainless steel (1.4571/1.4404), free of non ferrous metals, seat KFM/KFGM or PEEK for higher pressures and temperatures, stem packing KF chevron ring, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC
Type: K120

No.	Part	Material code
1	body	1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFM/KFGM/PEEK-KFM
5	stem	1.4571/1.4404
6	friction washer	KFSM/PEEK
7	chevron ring	KFM
8	washer	1.4301/1.4571/1.4404
9	gland	1.4310
10	thrust washer	PEEK
11	countersunk screw	A2
12	lever	1.4301/1.4571/plasticised PVC
13	serrated lock washer	A2
14	hex. nut	A2



At steam service >150°C a technical examination is recommended.

Dimensions

DN mm	connect. G in inch	PN	dimensions (mm) d	L	L1	H	W	W1	SW* mm
8	G 1/4	160	7.5	65	9.7	45	90		27
12	G 3/8	160	11	70	10.1	49	90		32
12	G 1/2	160	11	80	13.2	49	90		32
15	G 1/2	100	14	85	13.2	53		100	41
15	G 1/2	160	14	85	13.2	53		100	41
15	G 3/4	100	14	90	14.5	53		100	41
15	G 3/4	160	14	90	14.5	53		100	41
20	G 3/4	100	17	90	14.5	66		120	46
20	G 3/4	160	17	90	14.5	66		120	46
20	G 1	100	17	95	16.8	66		120	46
20	G 1	160	17	95	16.8	66		120	46

Gearbox with connection acc. to DIN EN ISO 5211 is possible.
* Width across in mm

Ordering example:
INTEC K120, DN 15, G ¾", KFGM, PN100, 1.4571

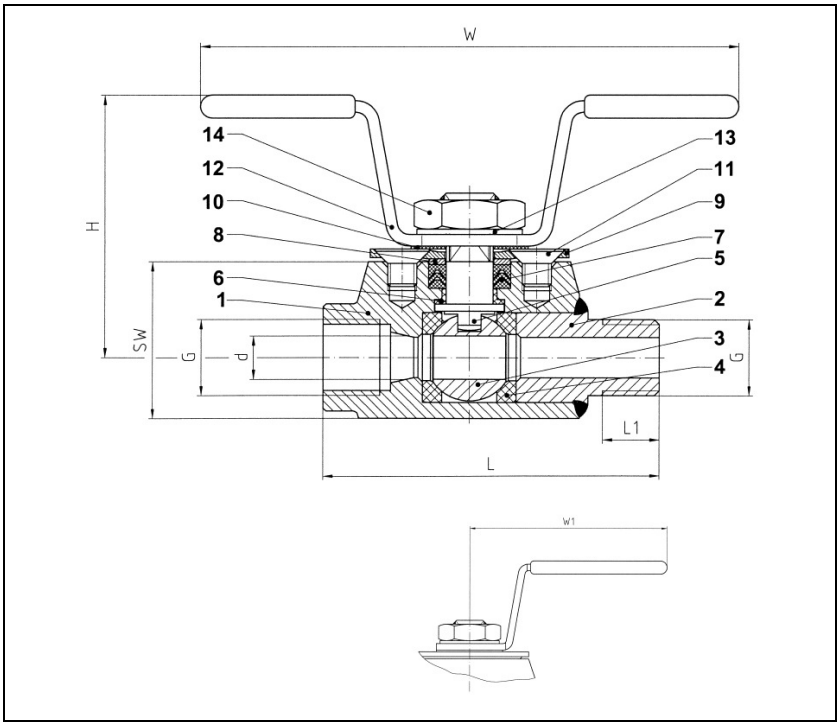
Subject to modification. 01/2017

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KLINGER India

BALL VALVES INTEC

K130, DN8 - DN20, PN100/160

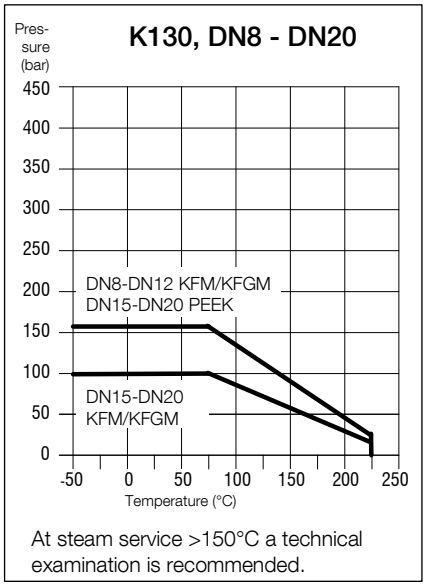


Mini plant ball valve with male and female threaded ends acc. to EN ISO 228-1 face to face dimensions acc. to producers standard

Specification:
One-piece ball valve, male and female threaded ends acc. to EN ISO 228-1, blow-out-proof-stem, body material stainless steel (1.4571/1.4404), free of non ferrous metals, seat KFM/KFGM or PEEK for higher pressures and temperatures, stem packing KF chevron ring, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC
Type: K130

No.	Part	Material code
1	body	1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFM/KFGM/PEEK-KFM
5	stem	1.4571/1.4404
6	friction washer	KFSM/PEEK
7	chevron ring	KFM
8	washer	1.4301/1.4571/1.4404
9	gland	1.4310
10	thrust washer	PEEK
11	countersunk screw	A2
12	lever	1.4301/1.4571/plasticised PVC
13	serrated lock washer	A2
14	hex. nut	A2



At steam service >150°C a technical examination is recommended.

Dimensions

DN mm	connect. G in inch	PN	dimensions (mm) d	L	L1	H	W	W1	SW* mm
8	G 1/4	160	7.5	57,5	9.7	45	90		27
12	G 3/8	160	11	65	10.1	49	90		32
12	G 1/2	160	11	80	13.2	49	90		32
15	G 1/2	100	14	80	13.2	53		100	41
15	G 1/2	160	14	80	13.2	53		100	41
15	G 3/4	100	14	85	14.5	53		100	41
15	G 3/4	160	14	85	14.5	53		100	41
20	G 3/4	100	17	85	14.5	66		120	46
20	G 3/4	160	17	85	14.5	66		120	46
20	G 1	100	17	92,5	16.8	66		120	46
20	G 1	160	17	92,5	16.8	66		120	46

Gearbox with connection acc. to DIN EN ISO 5211 is possible.
* Width across in mm

Ordering example:
INTEC K130, DN 12, G ½", KFGM, PN160, 1.4571

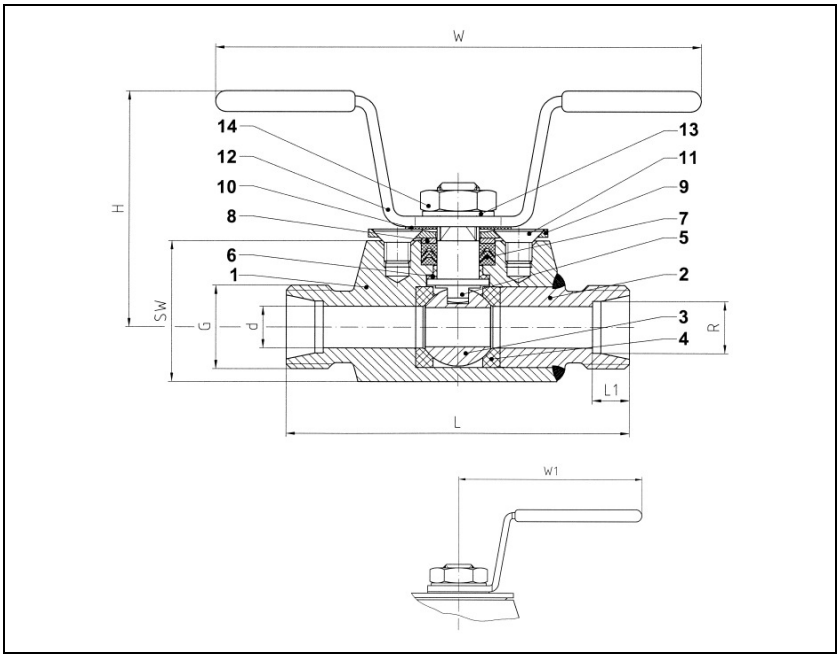
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KLINGER India

BALL VALVES INTEC

K140, DN8 – DN15, PN100/160/250

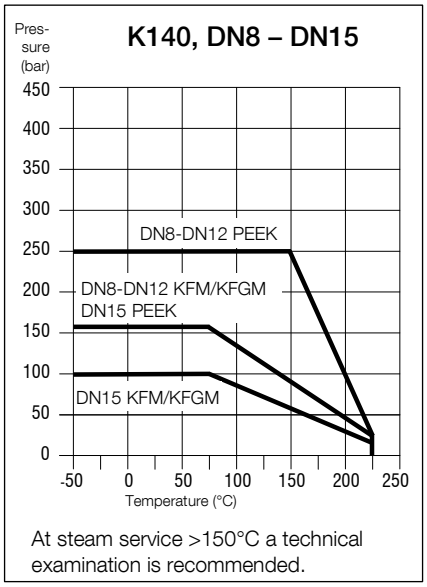


Mini plant ball valve with pipe screwing light/heavy series acc. to DIN 2353 face to face dimensions acc. to producers standard

Specification:
One-piece ball valve with pipe screwing light/heavy series acc. to DIN 2353, blow-out-proof-stem, body material stainless steel (1.4571/1.4404), free of non ferrous metals, seat KFM/KFGM or PEEK for higher pressures and temperatures, stem packing KF chevron ring, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC
Type: K140

No.	Part	Material code
1	body	1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFM/KFGM/PEEK-KFM
5	stem	1.4571/1.4404
6	friction washer	KFSM/PEEK
7	chevron ring	KFM
8	washer	1.4301/1.4571/1.4404
9	gland	1.4310
10	thrust washer	PEEK
11	countersunk screw	A2
12	lever	1.4301/1.4571/plasticised PVC
13	serrated lock washer	A2
14	hex. nut	A2



At steam service >150°C a technical examination is recommended.

Dimensions

DN mm	R	G	PN	dimensions (mm) d	L	L1	H	W	W1	SW* mm
8	6-L	M12 x 1.5	160	7.5	60	7	45	90		27
8	6-S	M14 x 1.5	160	7.5	60	7	45	90		27
8	6-S	M14 x 1.5	250	7.5	60	7	45	90		27
8	8-L	M14 x 1.5	160	7.5	60	7	45	90		27
8	8-S	M16 x 1.5	160	7.5	60	7	45	90		27
8	8-S	M16 x 1.5	250	7.5	60	7	45	90		27
8	10-L	M16 x 1.5	160	7.5	65	7	45	90		27
8	10-S	M18 x 1.5	160	7.5	65	7.5	45	90		27
8	10-S	M18 x 1.5	250	7.5	65	7.5	45	90		27
12	12-L	M18 x 1.5	160	11	65	7	49	90		32
12	12-S	M20 x 1.5	160	11	65	7.5	49	90		32
12	12-S	M20 x 1.5	250	11	65	7.5	49	90		32
12	15-L	M22 x 1.5	160	11	70	7	49	90		32
15	15-L	M22 x 1.5	100	14	75	7	53		100	41
15	15-L	M22 x 1.5	160	14	75	7	53		100	41
15	18-L	M26 x 1.5	100	14	75	7.5	53		100	41
15	18-L	M26 x 1.5	160	14	75	7.5	53		100	41

Gearbox with connection acc. to DIN EN ISO 5211 is possible. * Width across in mm

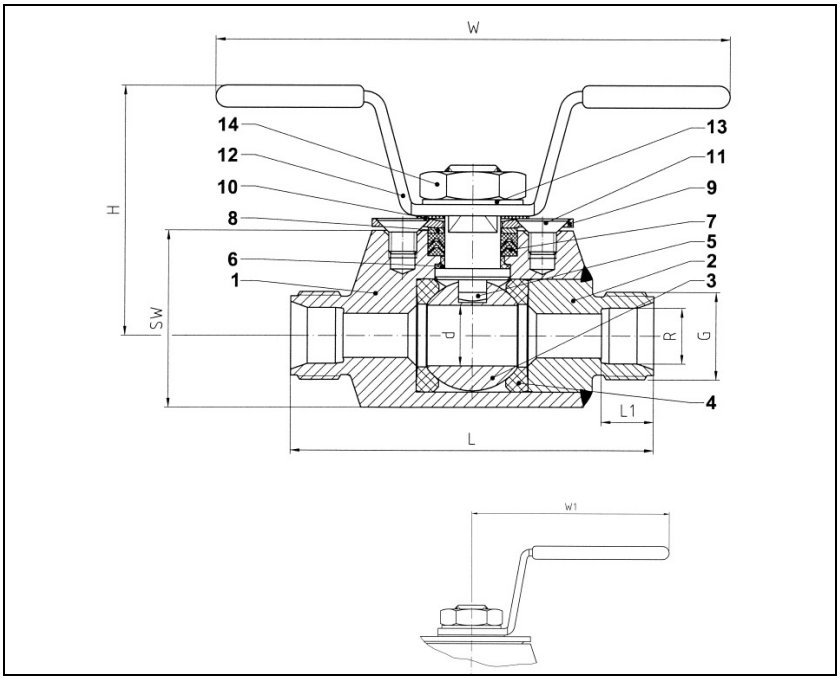
Ordering example:
INTEC K140, DN 12, 12-L, KFGM, PN160, 1.4571

Subject to modification. 01/2017

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BALL VALVES INTEC

K150, DN8 – DN15, PN100/160/250

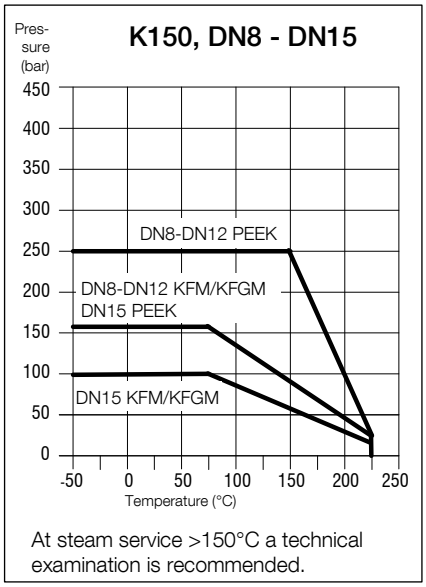


Mini plant ball valve for clamping ring connection face to face dimensions acc. to producers standard

Specification:
One-piece ball valve for clamping ring connection, blow-out-proof-stem, body material stainless steel (1.4571/1.4404), free of non ferrous metals, seat KFM/KFGM or PEEK for higher pressures and temperatures, stem packing KF chevron ring, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC
Type: K150

No.	Part	Material code
1	body	1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFM/KFGM/PEEK-KFM
5	stem	1.4571/1.4404
6	friction washer	KFSM/PEEK
7	chevron ring/packing	KFM/Graphite
8	washer	1.4301/1.4571/1.4404
9	gland	1.4310
10	thrust washer	PEEK
11	countersunk screw	A2
12	lever	1.4301/1.4571/plasticised PVC
13	serrated lock washer	A2
14	hex. nut	A2



At steam service >150°C a technical examination is recommended.

Dimensions

DN mm	R	G in inch	PN	dimensions (mm) d	L	L1	H	W	W1	SW* mm
8	6	7/16	160	7.5	60	7.9	45	90		27
8	6	7/16	250	7.5	60	7.9	45	90		27
8	8	1/2	160	7.5	60	8.6	45	90		27
8	8	1/2	250	7.5	60	8.6	45	90		27
8	10	5/8	160	7.5	65	9.5	45	90		27
8	10	5/8	250	7.5	65	9.5	45	90		27
12	12	3/4	160	11	65	12.5	49	90		32
12	12	3/4	250	11	65	12.5	49	90		32
15	16	7/8	100	14	80	14.5	53		100	41
15	16	7/8	160	14	80	14.5	53		100	41
15	18	1	100	14	80	14.5	53		100	41
15	18	1	160	14	80	14.5	53		100	41

Gearbox with connection acc. to DIN EN ISO 5211 is possible.
* Width across in mm

Ordering example:
INTEC K150, DN 12, R 12, KFGM, PN160, 1.4571

Subject to modification. 01/2017

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KLINGER India

INTEC K600

No compromise for your kettle pressure!



Stainless steel ball valves for pressure gauges and measurement lines. The different variations of your connection like flanges acc. to EN 1092, outside thread acc. to DIN 16288, pressure gauge connection acc. to DIN 16284 or female and male thread variations are available. The minimised dimensions and the safety regarding the pressure relief of the gauge are the absolutely advantages for this product. Available with vent bore, without vent bore, with test connection port or with expansion tube. Certified acc. to German clean air act VDI 2440!

Type:	Pressure gauge ball valve
Nominal sizes:	DN 4 - DN 100
Pressure range:	PN 16, PN 40 and PN 160
Temperature:	up to +225°C
Material of body:	stainless steel
End connections:	flanges acc. to EN 1092, outside thread acc. to DIN 16288, pressure gauge connection acc. to DIN 16284, female and male thread
FTF:	acc. to producers standard
Accessories:	heating jacket, hand lever extension, stem extension, block unit - padlock unit, grid unit, hand lever with bayonet locking, spring close unit - automatical return handle (“dead man handle”), gear (hand operated)

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440
- ATEX 2014/34/EU

Special design:

- special materials like Duplex, Super Duplex, Hastelloy B2/C4/C276, Titanium, Zirconium, Monell, Nickel etc.

Product advantages.

- different variations of connections
- minimized dimensions
- safety regarding the pressure relief of the gauge
- available with vent bore, without vent bore, with test connection port or with expansion tube

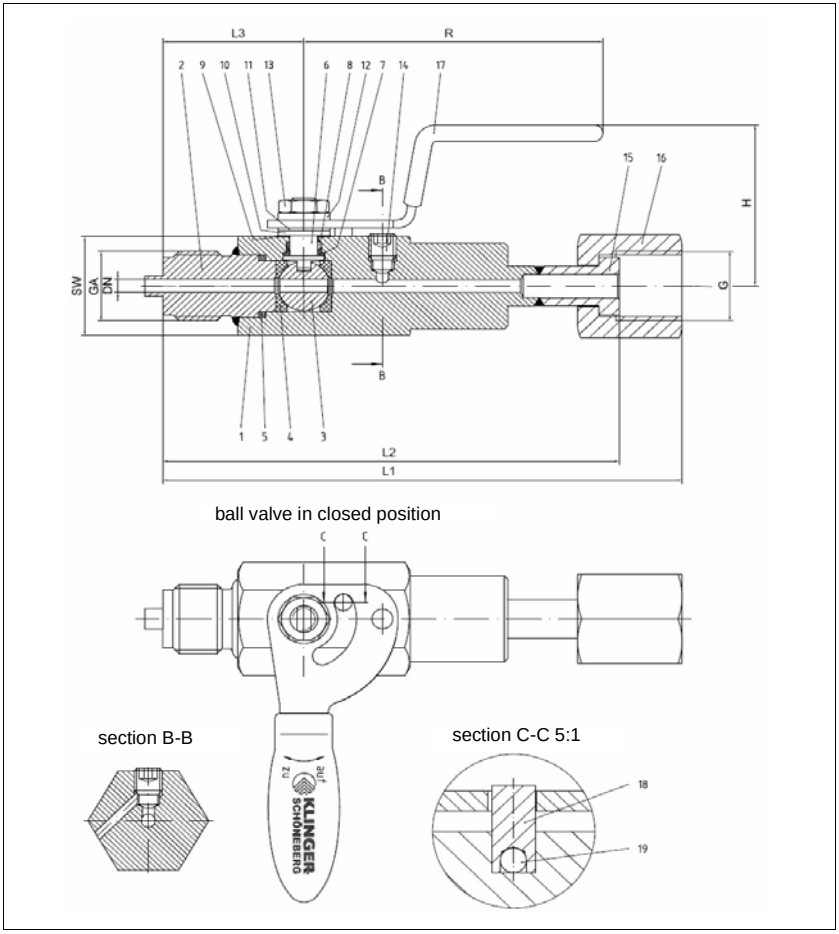
Subject to technical modification. 10/2018

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BALL VALVES INTEC

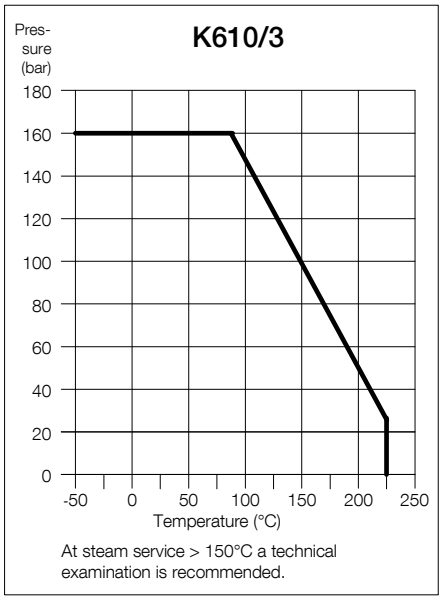
K610/3, DN4, PN160
with vent bore



Pressure gauge ball valve
connection G ½“ A acc. to DIN 16288
collar cap with cap nut G ½“ acc. to DIN 16284
face to face dimension acc. to producers standard

Specification:
Pressure gauge ball valve, connection G ½“ A acc. to DIN 16288, collar cap with cap nut G ½“ acc. to DIN 16284, blow-out-proof stem, body material stainless steel (1.4571/1.4404), body fully welded, acc. to the safety requirements of chemical industry, antistatic device, free of non ferrous metals, with vent bore, certified acc. to German clean air act VDI 2440, with lever.

Marking: INTEC
Type: K610/3



Ordering example:
K610/3, DN 4, PN 160, 1.4571

No.	Part	Material
1	body	1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFGN
5	sealing ring	KF
6	stem	1.4571/1.4404
7	friction washer	KFSM
8	cone ring	KF
9	sealing washer	KFA
10	washer	A2
11	plate spring	1.4310
12	serrated lock washer	A2
13	hex. nut	A2
14	vent screw	A4/1.4571/1.4404
15	collar cap	1.4571/1.4404
16	cap nut	1.4571/1.4404
17	safety lever	1.4301/plasticised PVC
18	stopper	1.4571/1.4404
19	ball	1.4571/1.4404

Dimensions

G	GA	DN	dimensions (mm)					SW	weight
			L1	L2	L3	H	R		kg
G ½“	G ½“	Ø 4	149	131	40.5	49	86	30	0.6

Subject to modification. 01/2017

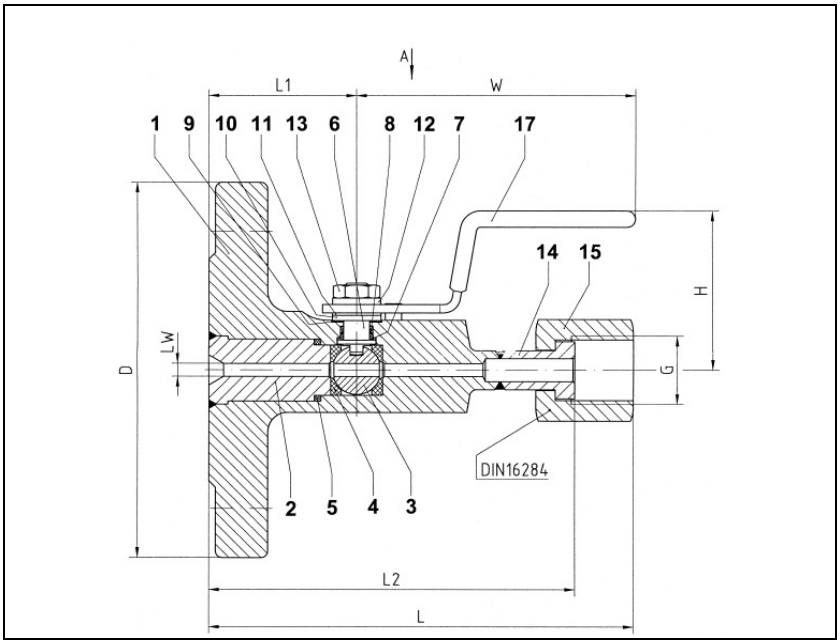
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BALL VALVES INTEC

K620/2, DN15 - DN100, PN16/40
without vent bore

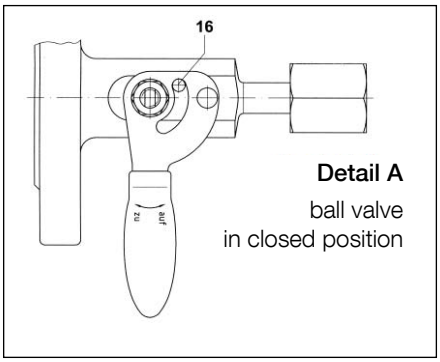


Pressure gauge ball valve with flange connection acc. to EN 1092 collar cap with cap nut G ½“ acc. to DIN 16284 face to face dimensions acc. to producers standard

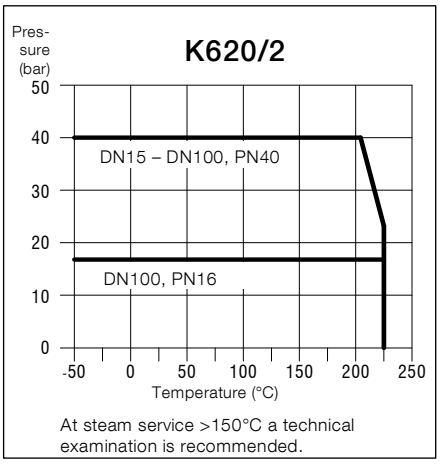
Specification:
Pressure gauge ball valve with flange connection acc. to EN 1092, collar cap with cap nut G ½“ acc. to DIN 16284, fully welded body material stainless steel (1.4571/1.4404), antistatic device, free of non ferrous metals, maintenance free shaft sealing with friction washer and cone ring, without vent bore, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC
Type: K620/2

No.	Part	Material code
1	body	1.4408/1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFGN
5	seal	KF
6	stem	1.4571/1.4404
7	friction washer	KFSM
8	cone ring	KF
9	antistatic element	KFA
10	washer	A2
11	plate spring	1.4310
12	serrated lock washer	A2
13	hex. nut	A2
14	collar cap	1.4571/1.4404
15	cap nut	1.4571/1.4404
16	stopper	1.4571/1.4404
17	lever	1.4301/plasticised PVC



Detail A
ball valve
in closed position



Dimensions

DN mm	LW	PN	G	dimensions (mm) L	L1	L2	H	W	D
15	4	40	½“	130	45	112	49	86	95
20	4	40	½“	130	45	112	49	86	105
25	4	40	½“	130	45	112	49	86	115
32	4	40	½“	130	45	112	49	86	140
40	4	40	½“	130	45	112	49	86	150
50	4	40	½“	130	45	112	49	86	165
65	4	40	½“	130	45	112	49	86	185
80	4	40	½“	130	45	112	49	86	200
100	4	16	½“	130	45	112	49	86	220
100	4	40	½“	130	45	112	49	86	235

Other pressure classes on request

Ordering example:
INTEC K620/2, DN25, PN40, 1.4571

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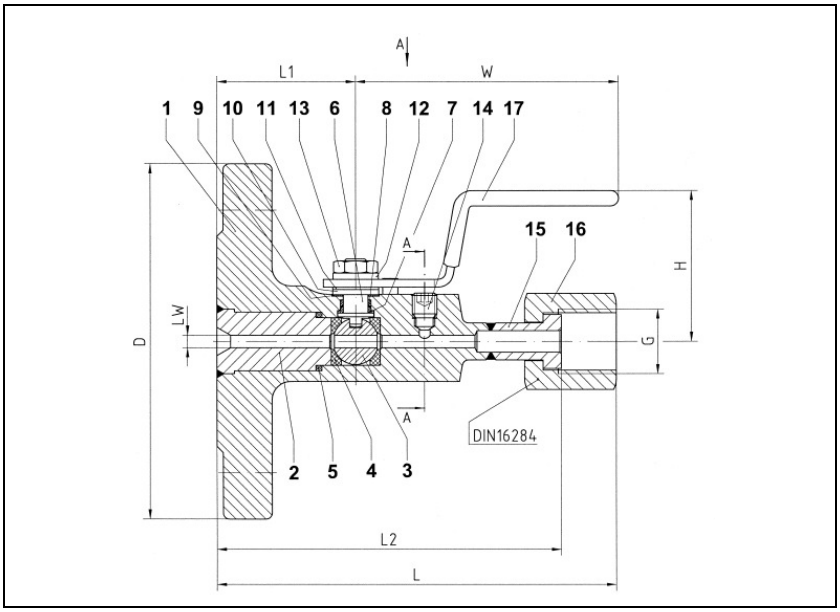
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BALL VALVES INTEC

K620/3, DN15 - DN100, PN16/40
with vent bore

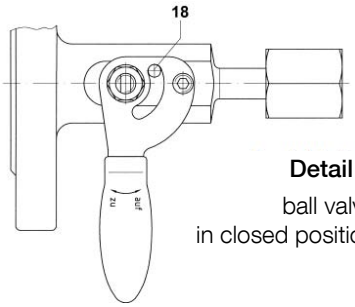


Pressure gauge ball valve with flange connection acc. to EN 1092 collar cap with cap nut G ½“ acc. to DIN 16284 face to face dimensions acc. to producers standard

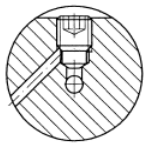
Specification:
Pressure gauge ball valve with flange connection acc. to EN 1092, collar cap with cap nut G ½“ acc. to DIN 16284, fully welded body material stainless steel (1.4571/1.4404), antistatic device, free of non ferrous metals, maintenance free shaft sealing with friction washer and cone ring, with vent bore, the design of the lever prevent aeration in opened position (patented!), certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC
Type: K620/3

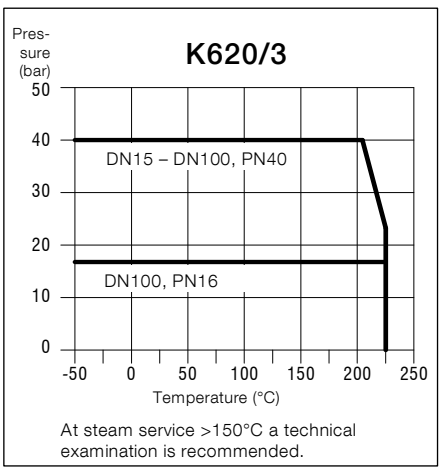
No.	Part	Material code
1	body	1.4408/1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFGN
5	seal	KF
6	stem	1.4571/1.4404
7	friction washer	KFSM
8	cone ring	KF
9	antistatic element	KFA
10	washer	A2
11	plate spring	1.4310
12	serrated lock washer	A2
13	hex. nut	A2
14	vent screw	A4/1.4571/1.4404
15	collar cap	1.4571/1.4404
16	cap nut	1.4571/1.4404
17	safety lever	1.4301/plasticised PVC
18	stopper	1.4571/1.4404



Detail A
ball valve
in closed position



Section A-A
with vent bore



Dimensions

DN mm	LW	PN	G	dimensions (mm) L	L1	L2	H	W	D
15	4	40	½“	130	45	112	49	86	95
20	4	40	½“	130	45	112	49	86	105
25	4	40	½“	130	45	112	49	86	115
32	4	40	½“	130	45	112	49	86	140
40	4	40	½“	130	45	112	49	86	150
50	4	40	½“	130	45	112	49	86	165
65	4	40	½“	130	45	112	49	86	185
80	4	40	½“	130	45	112	49	86	200
100	4	16	½“	130	45	112	49	86	220
100	4	40	½“	130	45	112	49	86	235

Other pressure classes on request

Ordering example:
INTEC K620/3, DN25, PN40, 1.4571

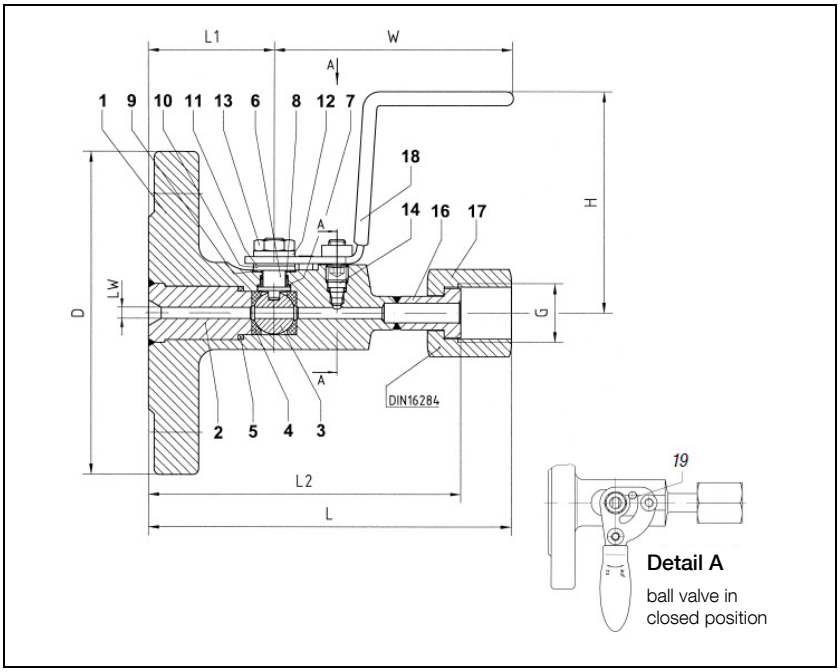
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BALL VALVES INTEC

K620/4-2, DN15 - DN100, PN16/40 with vent bore and expansion tube resp. test connection port G 1/8“



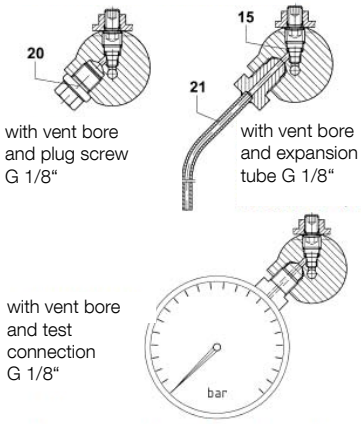
Pressure gauge ball valve with flange connection acc. to EN 1092
collar cap with cap nut G ½“
acc. to DIN 16284
expansion tube resp. test connection port G 1/8”
face to face dimensions acc. to producers standard

Specification:
Pressure gauge ball valve with flange connection acc. to EN 1092, collar cap with cap nut G ½“ acc. to DIN 16284, fully welded body material stainless steel (1.4571/1.4404), antistatic device, free of non ferrous metals, maintenance free shaft sealing with friction washer and cone ring, with vent bore, expansion tube resp. test connection port G 1/8”, the design of the lever prevent aeration in opened position (patented!), vent screw O-ring sealed, certified acc. to GERMAN clean air act VDI 2440, lever be able to lock in opened and closed position.

Marking: INTEC
Type: K620/4-2

No.	Part	Material code
1	body	1.4408/1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFGN
5	seal	KF
6	stem	1.4571/1.4404
7	friction washer	KFSM
8	cone ring	KF
9	antistatic element	KFA
10	washer	A2
11	plate spring	1.4310
12	serrated lock washer	A2
13	hex. nut	A2
14	vent screw	A4/1.4571/1.4404
15	o-ring	Viton
16	collar cap	1.4571/1.4404
17	cap nut	1.4571/1.4404
18	safety lever	1.4301/plasticised PVC
19	stopper	1.4571/1.4404
20	plug screw	1.4571/1.4404
21	expansion tube G 1/8“/tube ∅ 4x1x120	1.4571/1.4404

Section A-A - open position

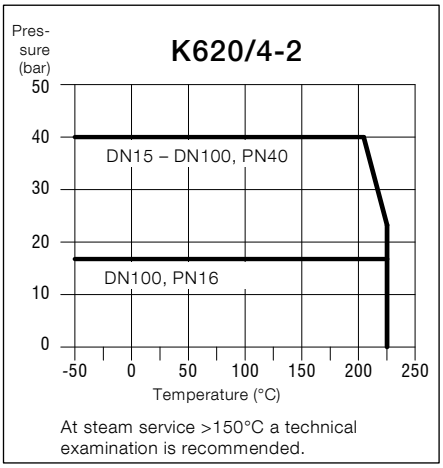


Pressure gauge not included

Dimensions

DN mm	LW	PN	G	dimensions (mm) L	L1	L2	H	W	D
15	4	40	½“	130	45	112	79	86	95
20	4	40	½“	130	45	112	79	86	105
25	4	40	½“	130	45	112	79	86	115
32	4	40	½“	130	45	112	79	86	140
40	4	40	½“	130	45	112	79	86	150
50	4	40	½“	130	45	112	79	86	165
65	4	40	½“	130	45	112	79	86	185
80	4	40	½“	130	45	112	79	86	200
100	4	16	½“	130	45	112	79	86	220
100	4	40	½“	130	45	112	79	86	235

Other pressure classes on request



At steam service >150°C a technical examination is recommended.

Ordering example: INTEC K620/4-2, DN25, PN40, 1.4571 with test connection G 1/8“

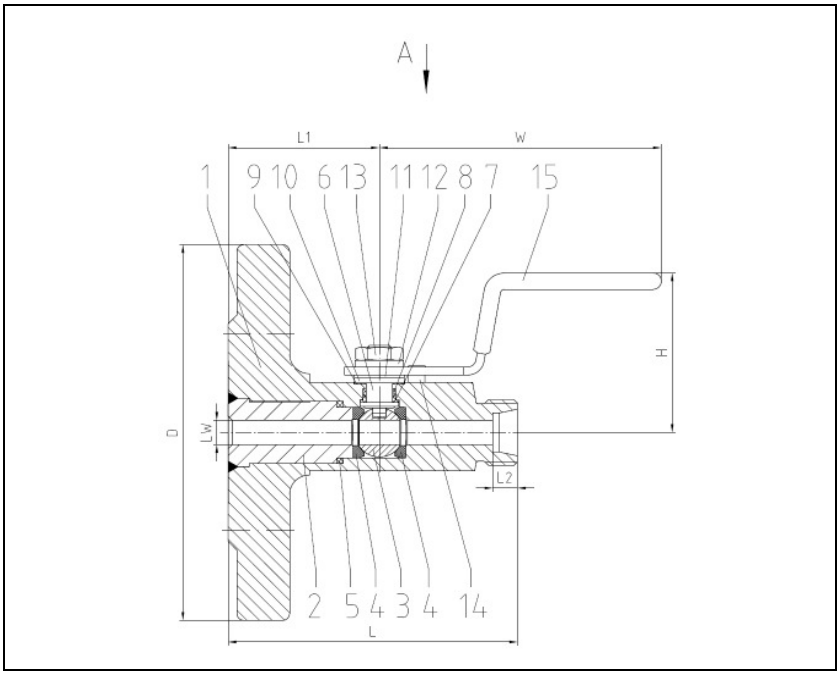
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BALL VALVES INTEC

K640/2, DN15 - DN100, PN16/40
without vent bore



No.	Part	Material
1	body	1.4408/1.4571/1.4404
2	cap	1.4571/1.4404
3	ball	1.4571/1.4404
4	seat	KFGN
5	seal	KF
6	stem	1.4571/1.4404
7	friction washer	KFSM
8	cone ring	KF
9	antistatic element	KFA
10	washer	A2
11	plate spring	1.4310
12	serrated lock washer	A2
13	hex. nut	A2
14	stopper	1.4571/1.4404
15	lever	1.4301/plasticised-PVC

Dimensions

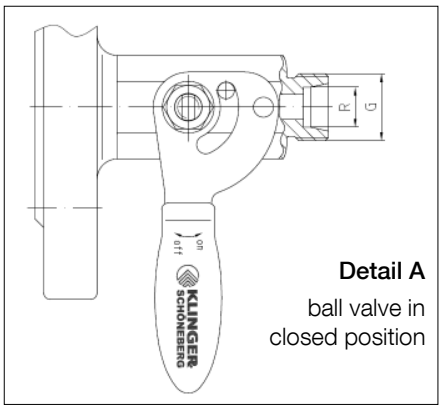
DN mm	LW	PN	dimensions (mm) L	L1	L2	H	W	D
15	7.5	40	85	45	7.5	49	86	95
20	7.5	40	85	45	7.5	49	86	105
25	7.5	40	85	45	7.5	49	86	115
32	7.5	40	85	45	7.5	49	86	140
40	7.5	40	85	45	7.5	49	86	150
50	7.5	40	85	45	7.5	49	86	165
65	7.5	40	85	45	7.5	49	86	185
80	7.5	40	85	45	7.5	49	86	200
100	7.5	16	85	45	7.5	49	86	220
100	7.5	40	85	45	7.5	49	86	235

Other pressure classes on request

Pressure gauge ball valve with flange connection acc. to EN 1092 pipe screwing light/heavy series acc. to DIN 2353 10-S and 12-S face to face dimensions acc. to producers standard

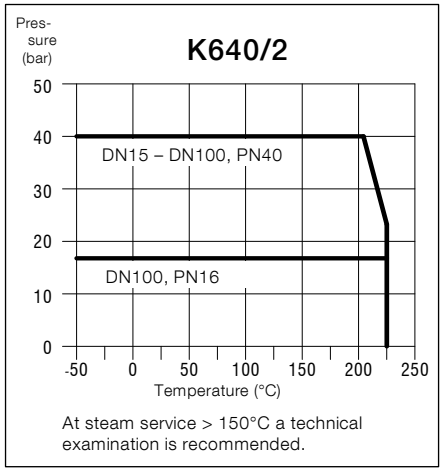
Specification:
Pressure gauge ball valve with flange connection acc. to EN 1092, pipe screwing light/heavy series acc. to DIN 2353 10-S and 12-S, fully welded body material stainless steel (1.4571/1.4404), antistatic device, free of non ferrous metals, maintenance free shaft sealing with friction washer and cone ring, without vent bore, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: INTEC
Type: K640/2



Detail A
ball valve in closed position

DN (mm)	R	G
any DN	10-S	M18x1.5
any DN	12-S	M20x1.5



Ordering example:
INTEC K640/2, DN25, PN40, 1.4404, 10-S, M18x1,5

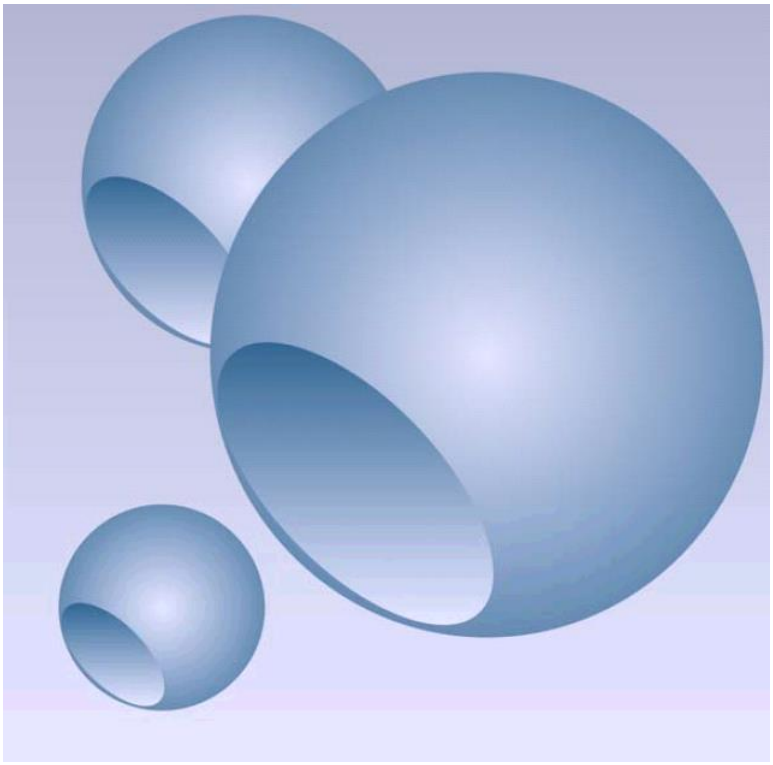
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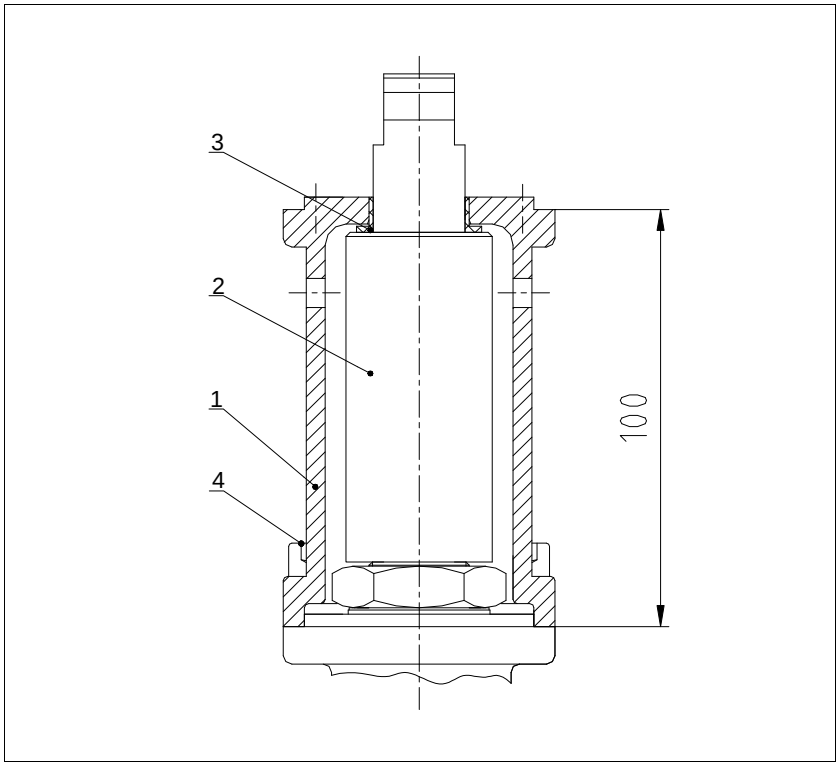
INTEC



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BALL VALVES INTEC

Stem extension
INTEC 11, F05/F05 - F14/F14



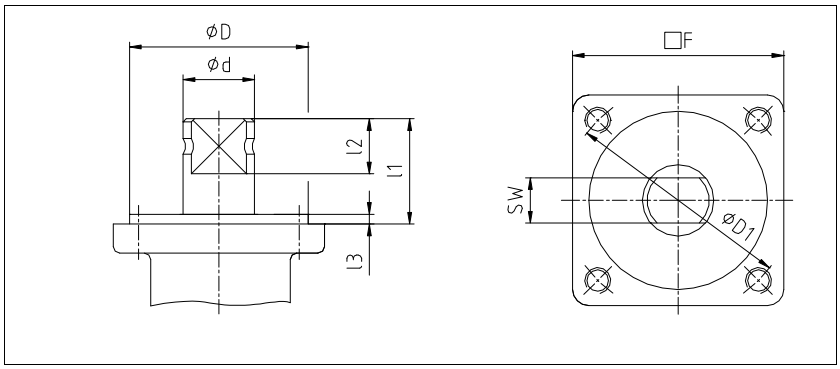
Stem extension with top flange acc. to DIN EN ISO 5211

Specification:
Stem extension with top flange acc. to DIN EN ISO 5211, stem extension length 100 mm (special length on request), double-d of coupling is equal to double-d of valve stem, coupling is precisely pivoted in the extension-body, body with leakage holes.

Marking: INTEC 11

Ordering example:
INTEC 11, F05/F05, SW14

No.	Part	Material
1	body	1.4408
2	coupling	1.4462
3	bearing	PTFE
4	socket screw	A2-70



Dimensions

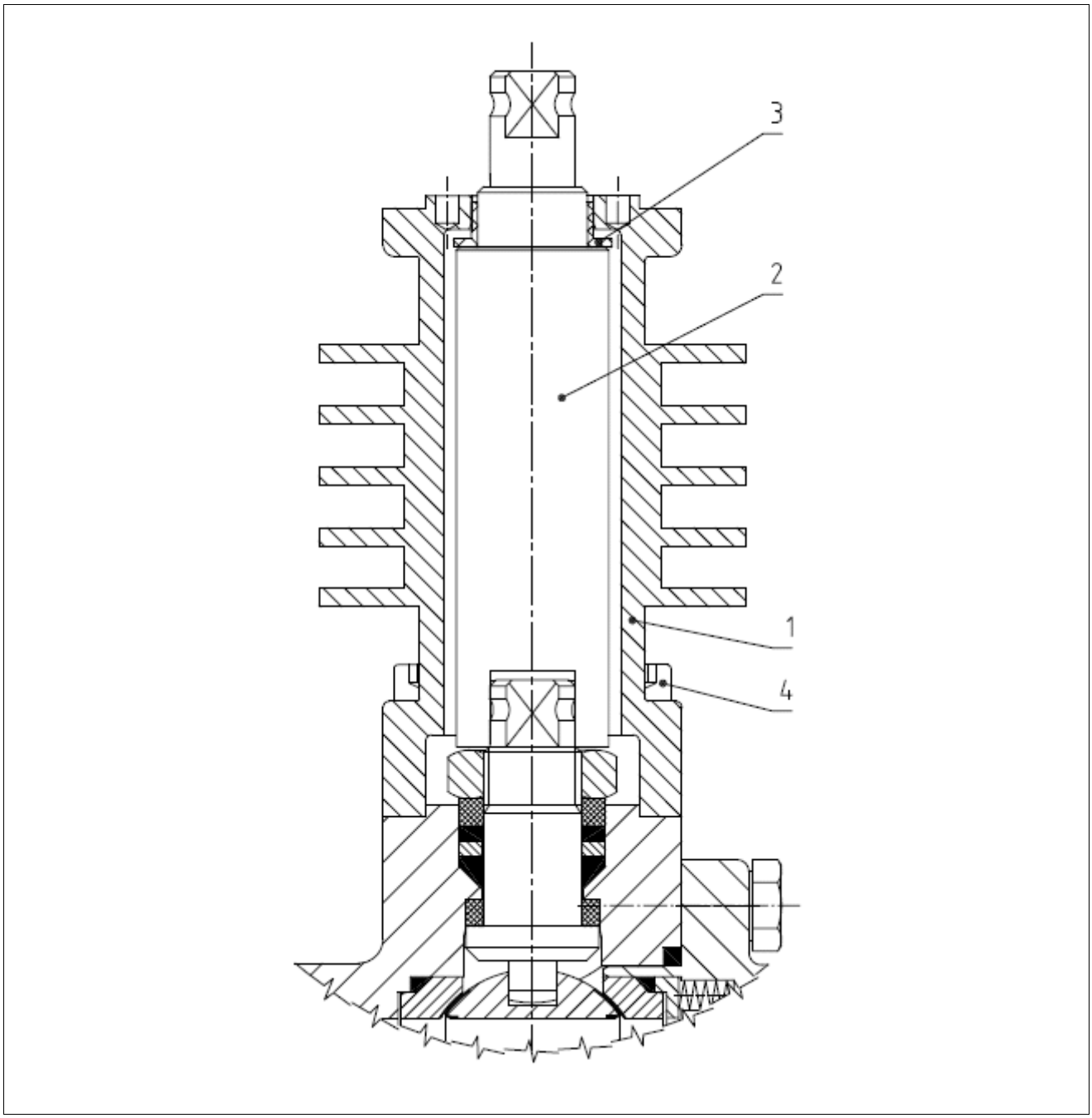
top flange ISO	dimensions (mm) F	D	D1	d	SW	l1	l2	l3	weight kg
F05/F05	49.0	35.0	50.0	14.0	11.0	22.5	11.0	2.0	0.9
F05/F05	49.0	35.0	50.0	18.0	14.0	26.0	14.0	2.0	1.0
F07/F07	65.0	55.0	70.0	22.0	17.0	32.5	17.0	3.0	1.5
F10/F10	90.0	70.0	102.0	26.0	19.0	37.5	19.0	3.0	1.8
F12/F12	110.0	85.0	125.0	33.0	24.0	42.5	24.0	3.0	3.8
F12/F12	110.0	85.0	125.0	42.0	30.0	48.5	30.0	3.0	4.5
F14/F14	130.0	100.0	140.0	42.0	30.0	48.5	30.0	3.0	7.0
F14/F14	130.0	100.0	140.0	55.0	41.0	59.5	41.0	3.0	7.9

Subject to modification. 09/2016

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BALL VALVES INTEC

Stem extension with cooling fin
INTEC 11-S



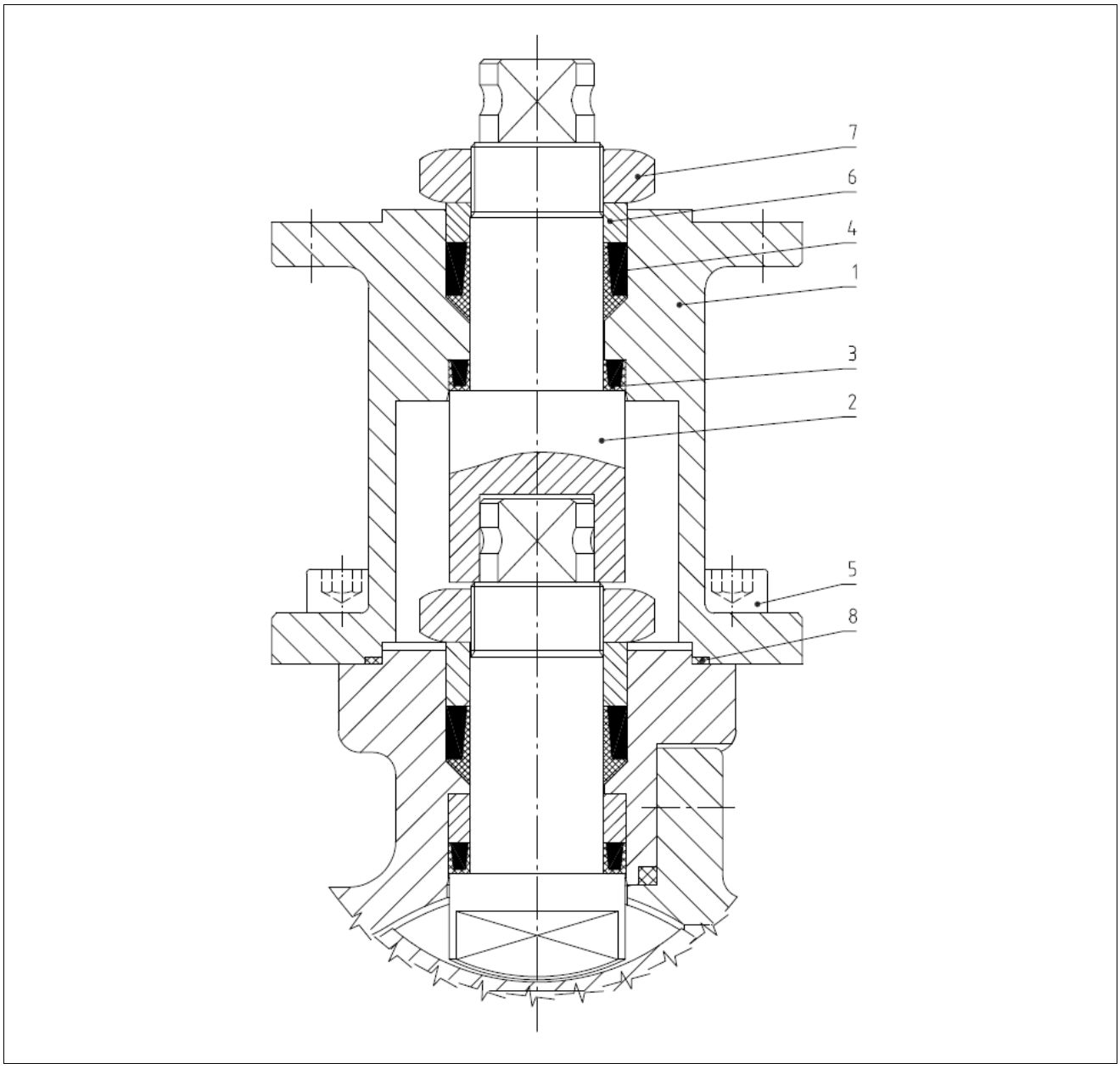
No.	Part	Material
1	body	1.4571/1.4404
2	coupling	1.4462/1.4980
3	bearing	KF
4	socket screw	A2-70/1.4980

Subject to modification. 02/2018

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BALL VALVES INTEC

Stem extension double-sealed
INTEC 12



No.	Part	Material
1	body	1.4571/1.4404
2	coupling	1.4462
3	below seal	KFGN/Graphite
4	upper seal	KFAM/Graphite
5	socket screw	A2-70
6	bearing	PEEK
7	hex. nut self-locking	A2/1.4301
8	body seal (stem extension)	KF

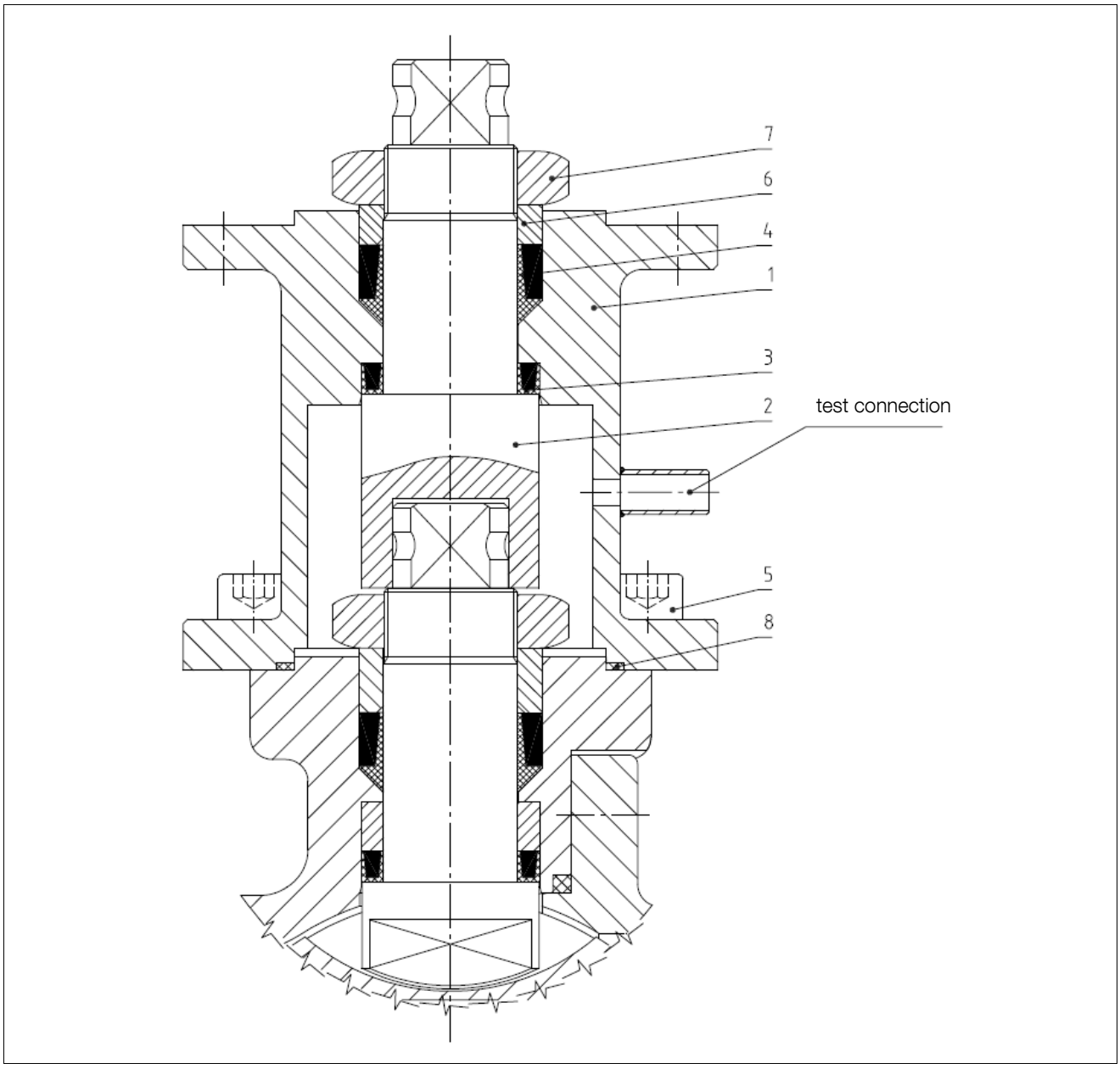
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BALL VALVES INTEC

Stem extension double-sealed with test connection
INTEC 12-S



No.	Part	Material
1	body	1.4571/1.4404
2	coupling	1.4462
3	below seal	KFGN/Graphite
4	upper seal	KFAM/Graphite
5	socket screw	A2-70
6	bearing	PEEK
7	hex. nut self-locking	A2/1.4301
8	body seal (stem extension)	KF

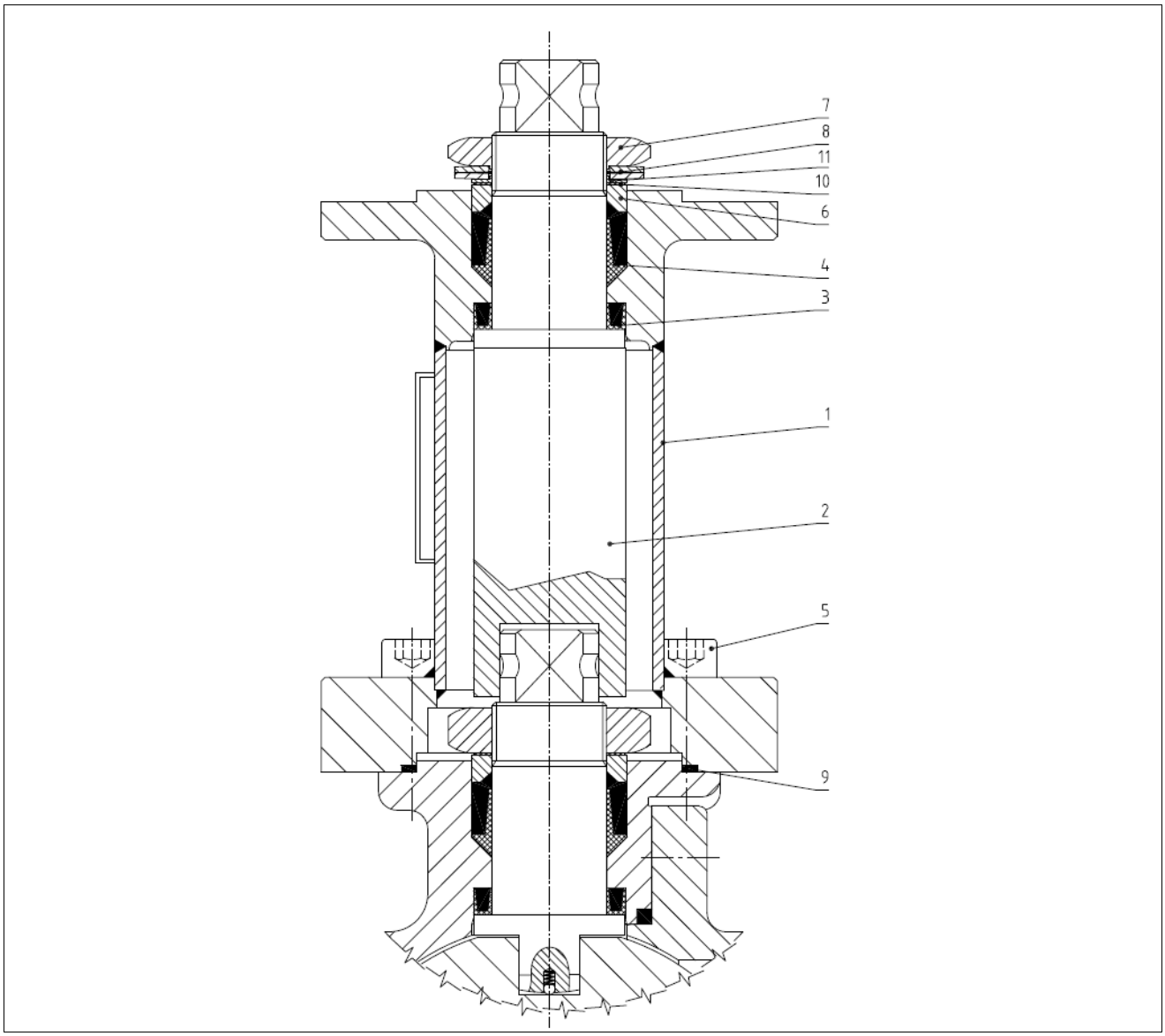
Subject to modification. 02/2018

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KLINGER India

BALL VALVES INTEC

Stem extension double-sealed cryogenic type
INTEC 12-S-TT



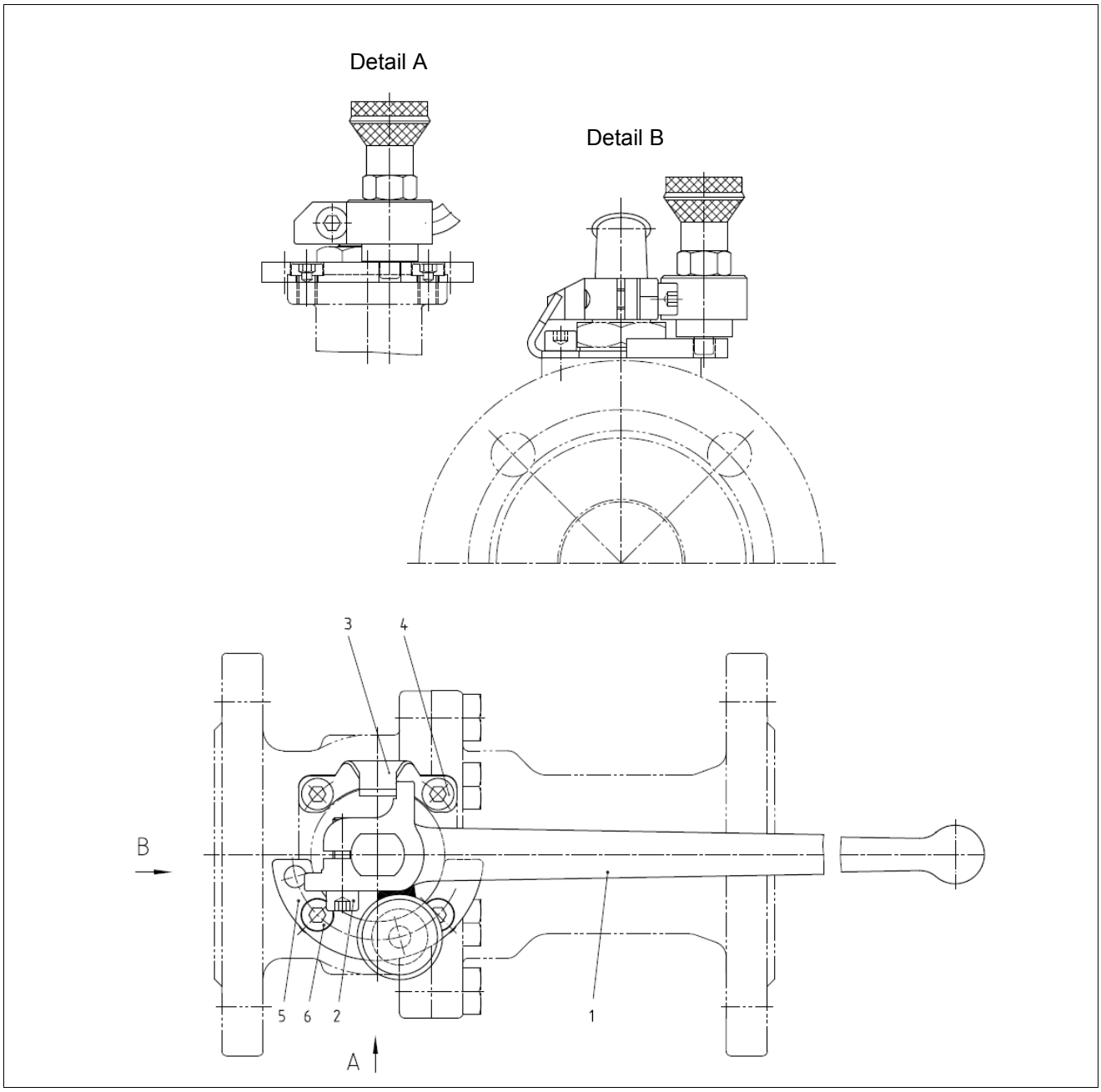
No.	Part	Material
1	body	1.4571/1.4404
2	coupling	1.4462/1.4980
3	below seal	KFGN/Graphite
4	upper seal	KFAM/Graphite
5	socket screw	A2-70/1.4980
6	thrust ring	1.4571/1.4404
7	hex. nut self-locking	A2/1.4301
8	disc spring	1.4568
9	body seal (stem extension)	Graphite
10	thrust washer	PEEK
11	thrust ring	1.4571/1.4404

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BALL VALVES INTEC

Grid unit
INTEC 20, DN15 - DN65

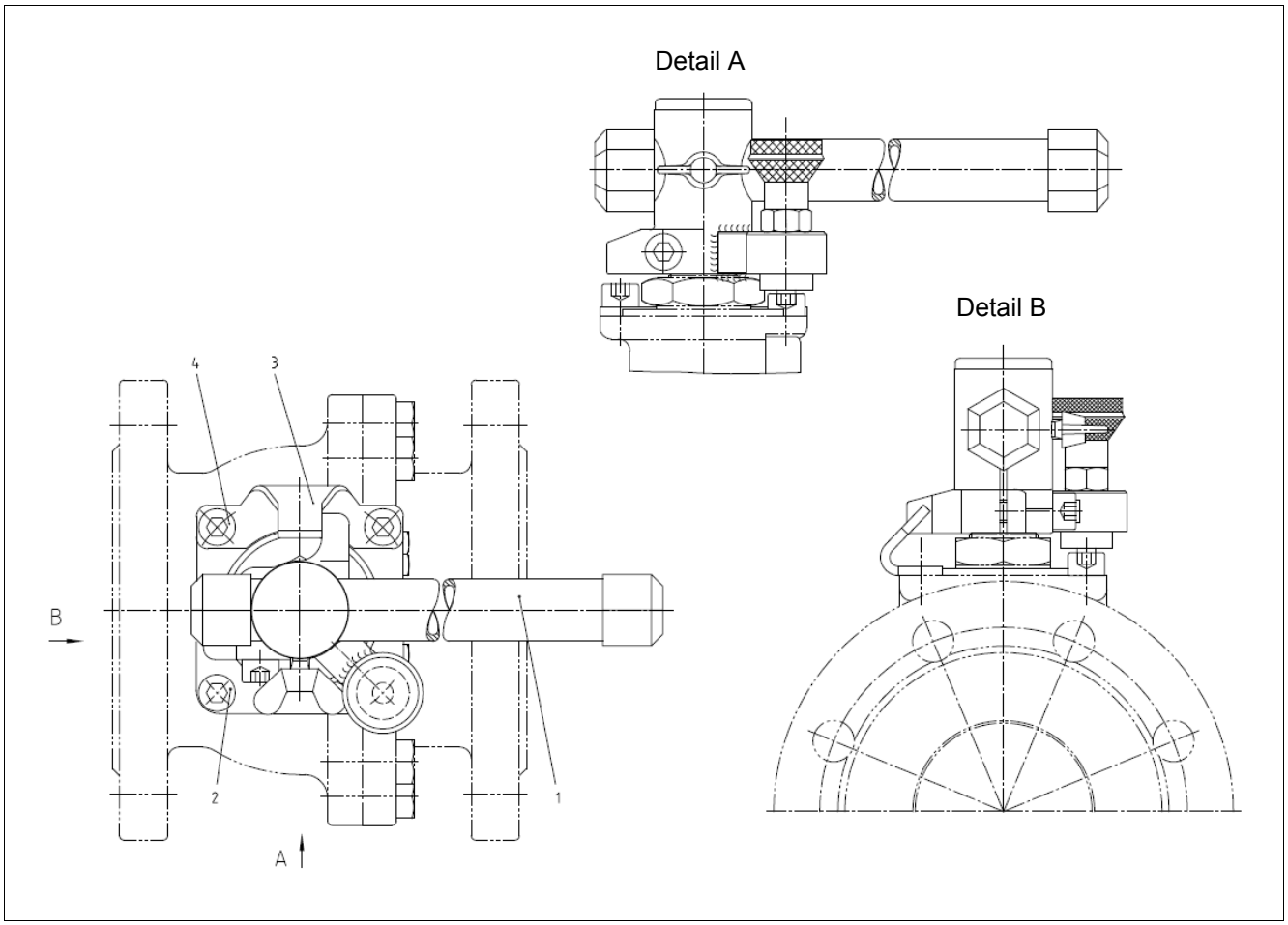


No.	Part	Material
1	lever with locking bolt	1.4408/A2-Nirosta
2	socket screw	A2-70
3	stopper	1.4301
4	socket screw	A2-70
5	base plate	1.4301
6	socket screw	A2-70

Subject to modification. 02/2018

BALL VALVES INTEC

Grid unit
INTEC 20, DN80 - DN100



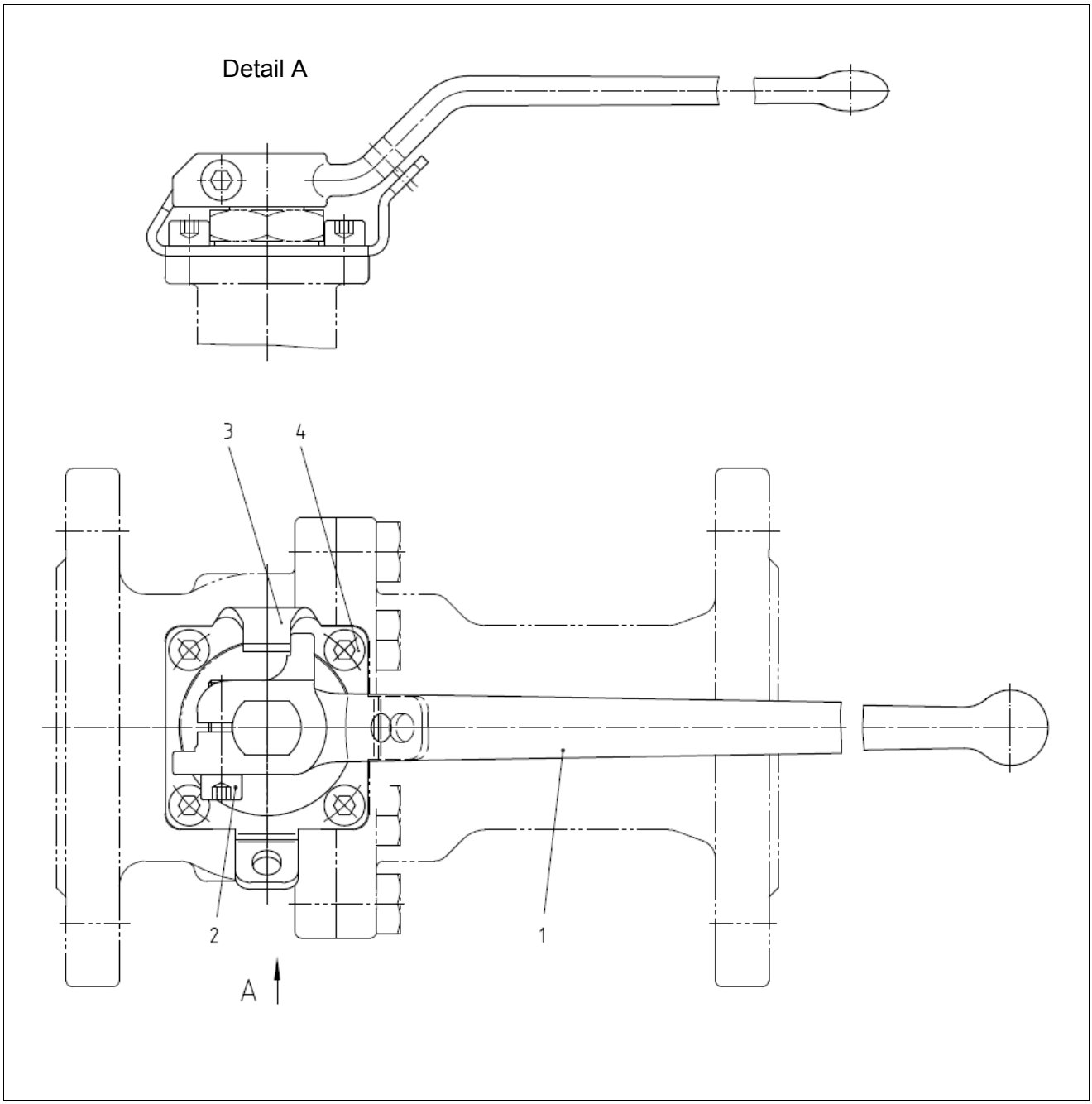
No.	Part	Material
1	lever with locking bolt	1.4408/A2-Nirosta
2	socket screw	A2-70
3	stopper	1.4301
4	socket screw	A2-70

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BALL VALVES INTEC

Locking device
INTEC 30, DN15 - DN65



No.	Part	Material
1	lever	1.4408
2	socket screw	A2-70
3	stopper	1.4301
4	socket screw	A2-70

Lock not included in the delivery

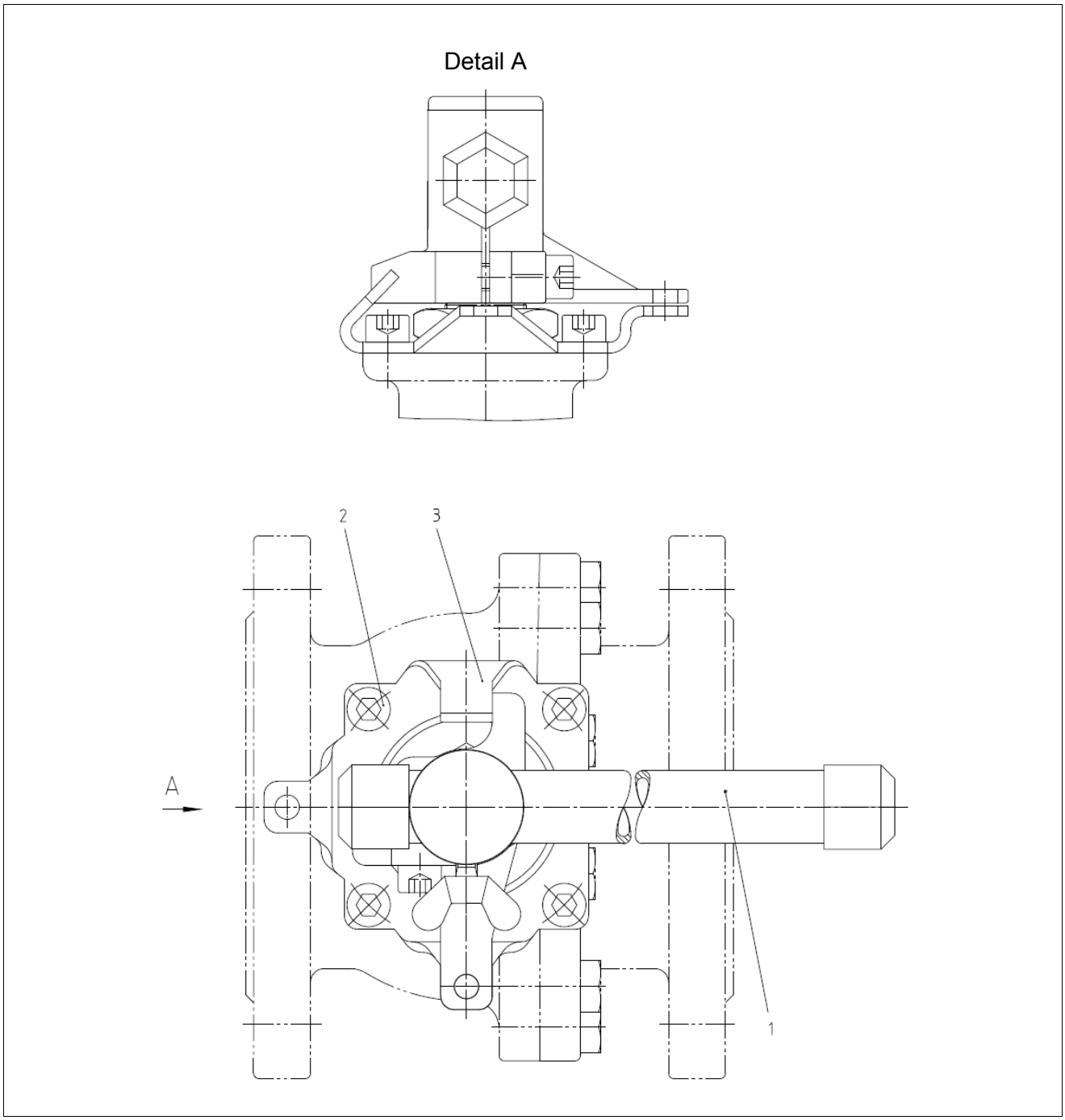
Subject to modification. 02/2018

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BALL VALVES INTEC

Locking device
INTEC 30, DN80 - DN150



No.	Part	Material
1	lever unit	1.4408/1.4301/1.4401
2	socket screw	A2-70
3	stopper	1.4301

Lock not included in the delivery

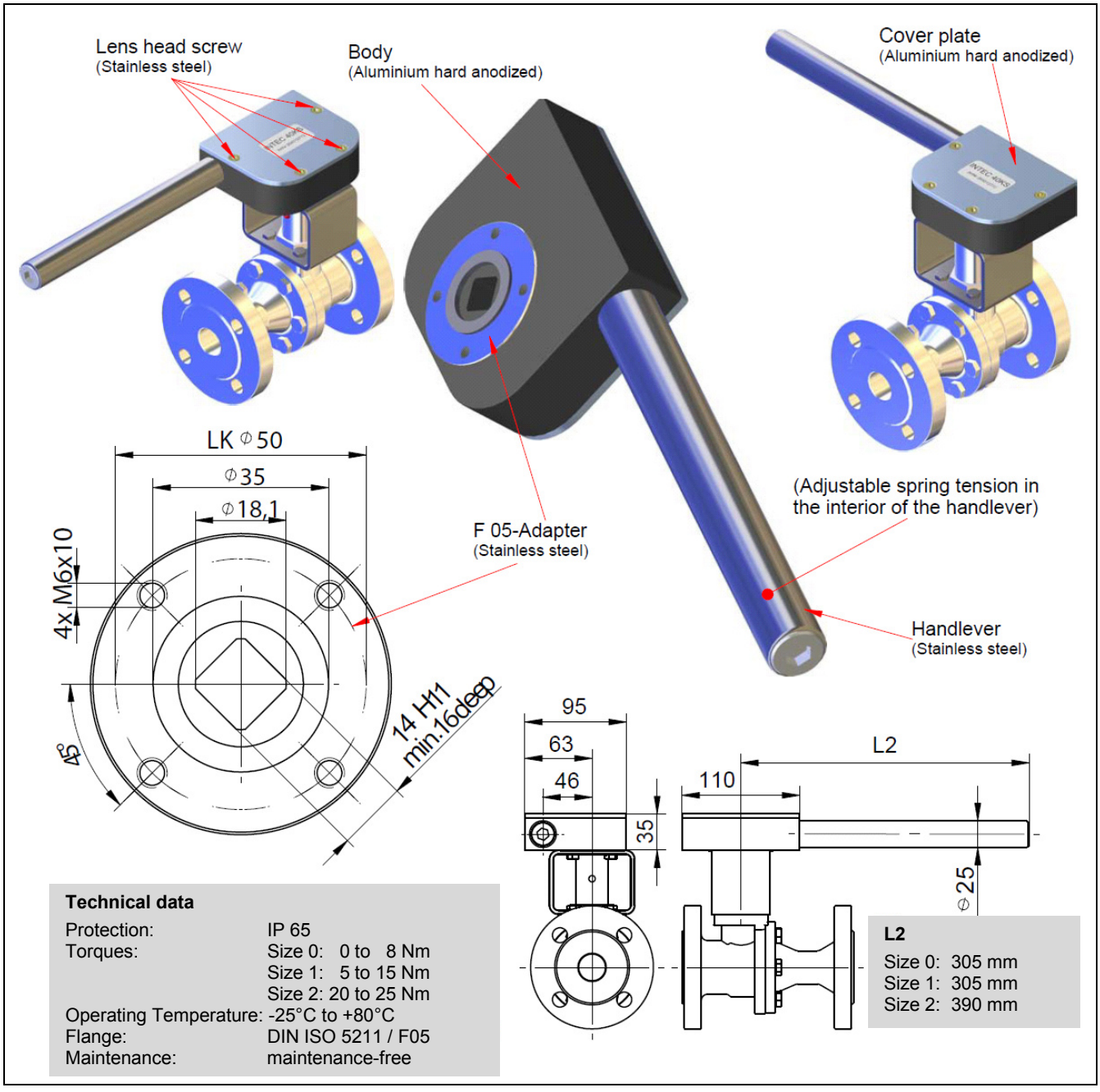
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INTEC 40KS

Spring closing unit for hand operated valves (Dead-man`s switching)



Technical data

Protection:	IP 65
Torques:	Size 0: 0 to 8 Nm
	Size 1: 5 to 15 Nm
	Size 2: 20 to 25 Nm
Operating Temperature:	-25°C to +80°C
Flange:	DIN ISO 5211 / F05
Maintenance:	maintenance-free

L2

Size 0: 305 mm
Size 1: 305 mm
Size 2: 390 mm

The spring closing unit INTEC 40KS is a user friendly, robust and easy to mounted safety device for all quarter turn valves.

The valve is actuated by the hand-lever. Upon release of the hand-lever the valve will be moved, by the spring force, back to the default safe position (as pre-set).

One of the characteristics of the spring closing unit INTEC 40KS is the possibility of continuous adjustment of the spring-force. This allows for the user, at any time incl. during operation, to make adjustment within a few simple steps to required torque setting.

The following additional options are available: adaption for limit-switches, grid-unit to avoid unintended actuation (Tamper Proof), special materials and customer specific executions.

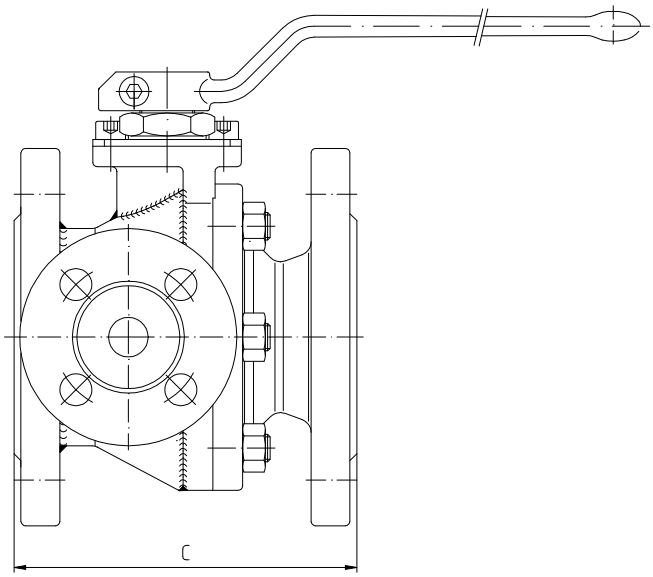
Subject to technical modification. 10/2019

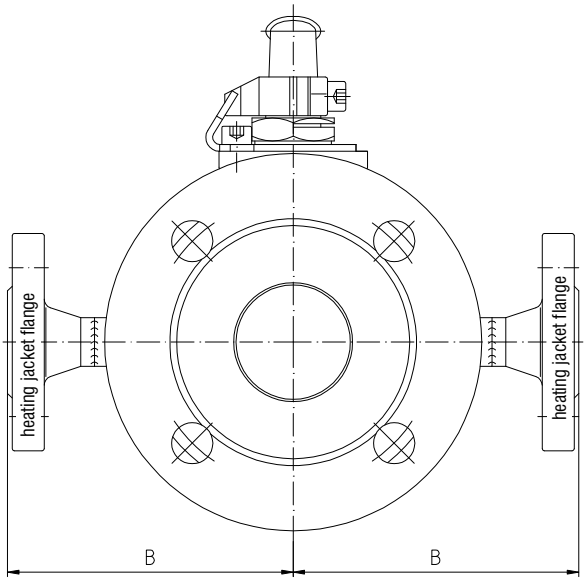
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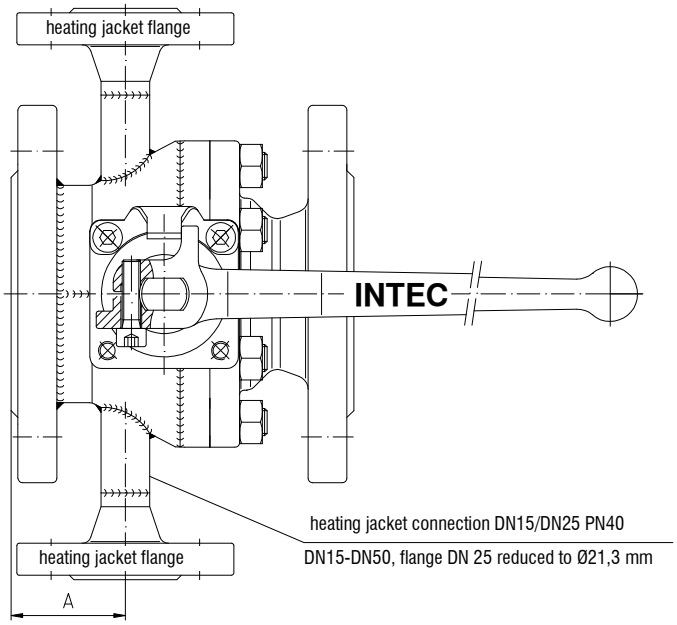
BALL VALVES INTEC

One-piece heating jacket PN25

Heating jacket with flanges acc. to EN 1092
Face to face acc. to EN 558, GR.1
Face to face acc. to EN 558, GR.27







Dimensions

DN	dimensions (mm)			
	A	B	GR.1 C	GR.27 C
15*	70	110	130	--
15	38	80	130	--
25 **	50	110	160	--
25 ***	70	110	160	--
40	60	115	200	140
50	60	125	230	150
65	55	150	290	170
80	80	150	310	180
100	70	160	350	190
150	90	195	480	350
200	90	350	600	400

* solid material construction
** body material 1.4408
*** body material 1.4571, 1.4462

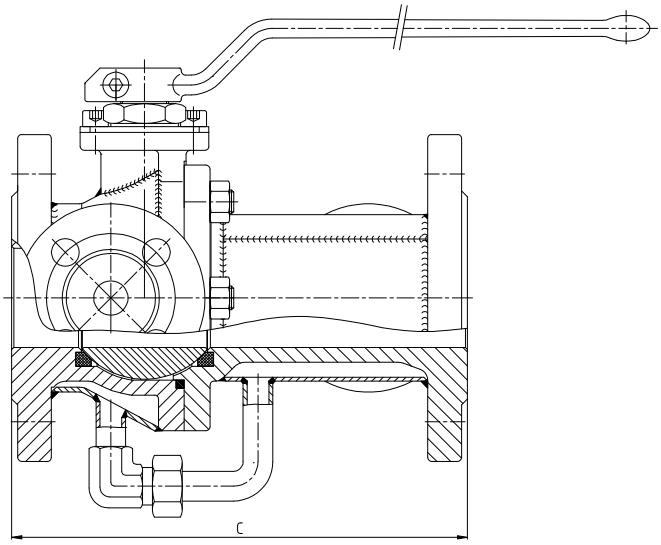
Subject to modification. 01/2017

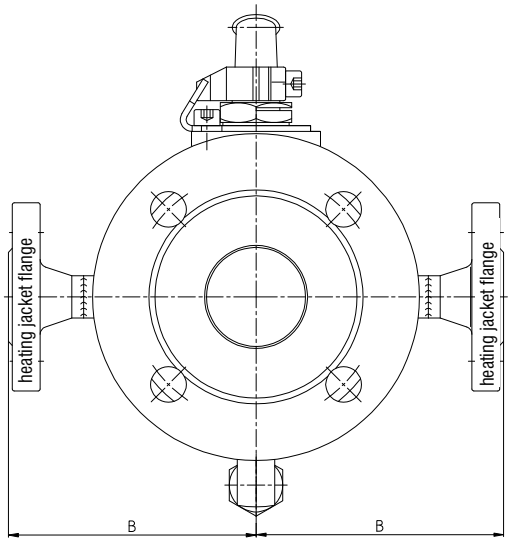
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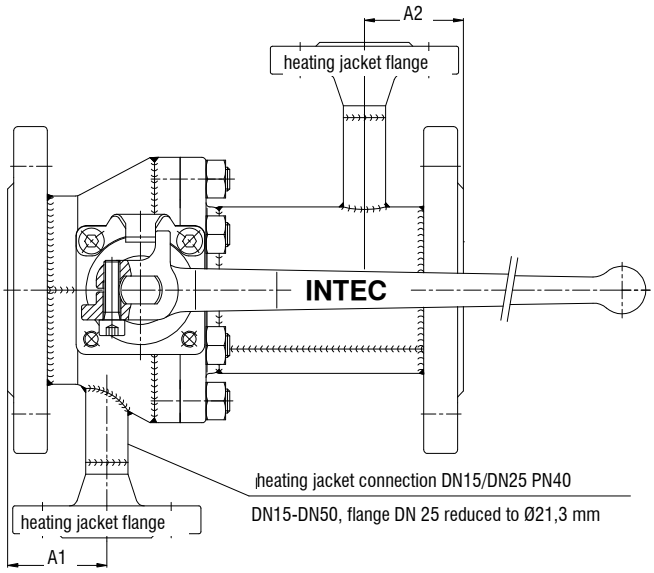
BALL VALVES INTEC

Two-piece heating jacket PN25

Heating jacket with flanges acc. to EN 1092
Face to face acc. to EN 558, GR.1
Face to face acc. to EN 558, GR.27







Dimensions

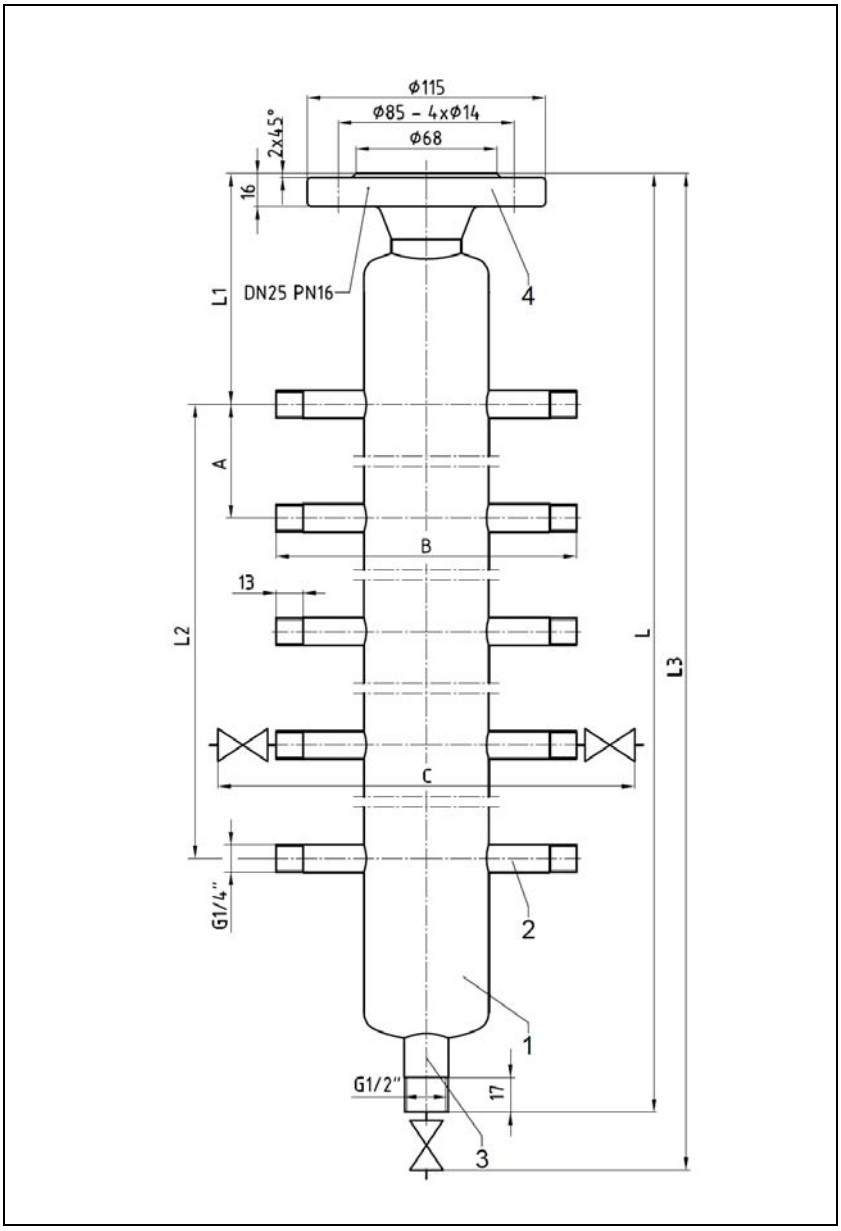
DN	dimensions (mm)			
	A1 / A2	B	GR.1 C	GR.27 C
15	45 / 33	80	130	--
25	50 / 45	110	160	--
40	60 / 50	115	200	--
50	60 / 50	125	230	--
80	80 / 70	150	310	--
100	70	160	350	--
150	110 / 90	210	--	350
200	140 / 140	265	--	400
300	110 / 70	350	--	500

Subject to modification. 01/2017

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AIR HEADER INTEC

with 10-, 20- or x-times outlet ports, DN25, PN16



Air header, stainless steel 1.4571/1.4404 with 10-, 20- or x-times outlet ports

Specification:
Air header, stainless steel 1.4571/1.4404 with 10-, 20- or x-times outlet ports, air header tube: size 2"

The outlet ports are equipped with following shut-off valves:

Outlet:
threaded connection with shut-off valve ball valve RK-Proball KH 1T M 1/4"

Draining:
threaded connection with shut-off valve ball valve RK-Proball KH 1T M 1/2"

Input flange:
DN25, PN16 Form B1

No.	Part	Material
1	air header tube	1.4571/1.4404
2	connection nipple 1/4“	1.4571/1.4404
3	connection nipple 1/2“	1.4571/1.4404
4	flange DN25, PN16	1.4571/1.4404

Ordering example:
Air header with 10 outlet ports

Dimensions

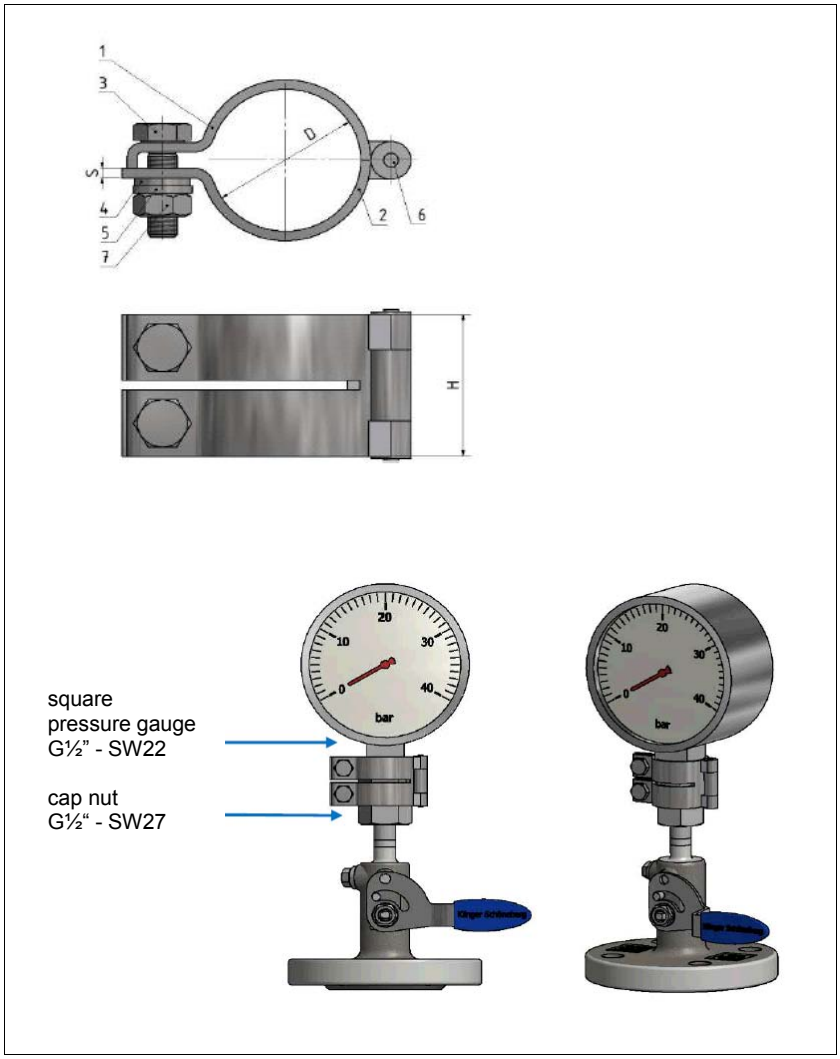
Number of connections	dimensions (mm) L	L1	L2	L3	A	B	C
10 piece	753	110	520 (4x130)	796	130	145	205
20 piece	1135	110	900 (9x100)	1188	100	145	205

Subject to modification. 04/2017

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BALL VALVES INTEC

Pressure gauge safety clamp TYPE 51



Protection against loosening of pressure gauge or pressure gauge tightening, e.g. by pipeline vibration

No.	Part	Material
1	upper safety clamp	1.4301
2	below safety clamp	1.4301
3	hex. bolt	A2
4	washer	A2
5	spring washer	A2
6	cylinder pin	A2
7	hex. nut	A2

Dimensions

dimensions in mm			
G	D	H	S
G ½"	31	30	2

Subject to modification. 02/2018

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BALL VALVES

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TYP 300P

One-piece sampling device ball valve.



The economical solution for open sampling in the field of laboratory- and process engineering. Optional variations of connections, e.g. female thread, clamping ring connection, cutting ring connection etc. are available.

Type:	One-piece ball valve
Nominal sizes:	DN ¼“ - DN 2“
Pressure range:	PN 63
Temperature:	up to +210°C
Material of body:	stainless steel
End connections:	female threaded ends acc. to EN 10226-1 with screwed butt weld end connection
FTF:	acc. to producers standard
Accessories:	stem extension, grid unit, spring close unit

Certificates and Approvals:

» ATEX 2014/34/EU

Product advantages:

» special designs for higher pressures and higher temperatures
» special material combinations
» available free of oil and grease
» available with spring close unit to avoid wrong operation (open/close) by user

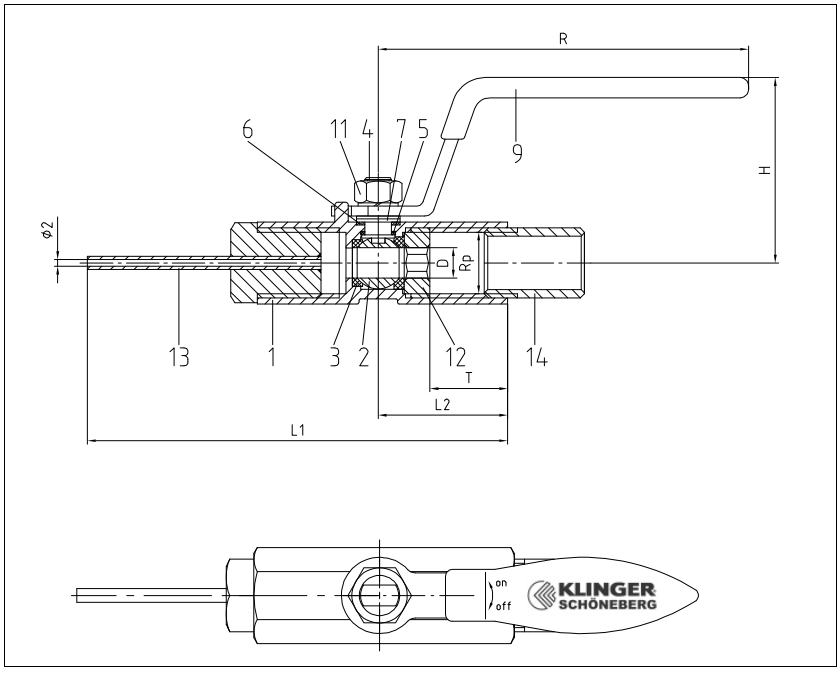
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MINI PLANT BALL VALVE

TYPE 300 P, ¼“ - 2“, PN 63
sampling tube with 2mm inside diameter

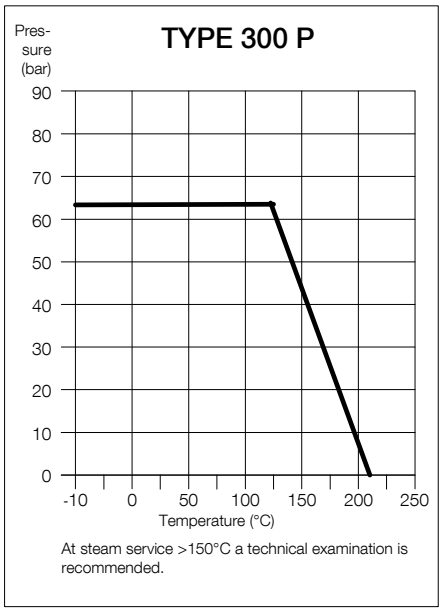


Mini plant ball valve
female threaded ends acc. to EN 10226-1 with
screwed butt weld end connection
sampling tube with 2mm inside diameter
face to face dimensions acc. to producers standard

Specification:
One-piece sampling device ball valve, female threaded ends acc. to EN 10226-1 with screwed butt weld end connection, sampling tube with 2mm inside diameter, blow-out-proof stem, body material stainless steel (1.4408), free of non ferrous metals, with lever.

Marking: TYPE 300 P
Type: TYPE 300 P-1.4408

No.	Part	Material
1	body	1.4408
2	ball	1.4408
3	seat	KFG
4	stem	1.4401
5	friction washer	KF
6	packing ring	KF
7	thrust washer	1.4301
9	lever	1.4301
11	hex. nut	1.4401
12	inscrewed part	1.4401
13	sampling tube	1.4571
14	screwed butt weld end connection	1.4571



Dimensions

DN	D	dimensions (mm)				
		L1	L2	T	H	R
¼“	5.0	150	25	11	47	67
⅜“	7.0	170	30	13	49	67
½“	9.0	180	38	14	57	90
¾“	12.5	191	40	18	60	90
1“	16.0	202	45	22	68	112
1 ¼“	20.0	221	55	22	70	112
1 ½“	24.5	231	60	22	75	132
2“	32.0	252	70	23	80	132

Ordering example:
TYPE 300 P, 1”, PN 63, 1.4408

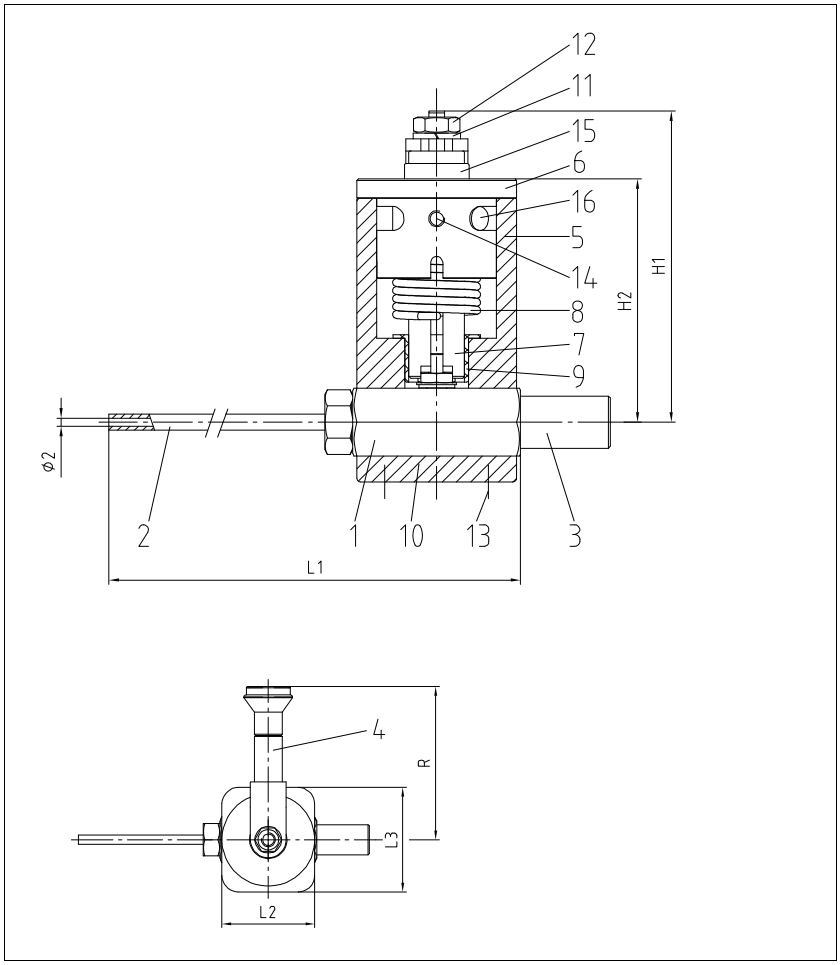
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MINI PLANT BALL VALVE

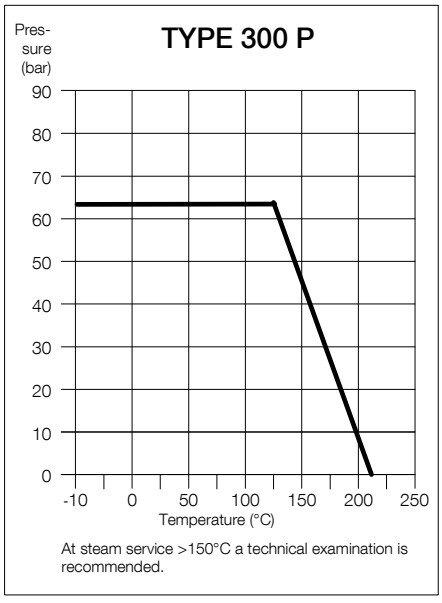
TYPE 300 P, ¼“, PN 63
with spring close unit TYPE 43



Mini plant ball valve
female threaded ends acc. to EN 10226-1 with
screwed butt weld end connection
sampling tube with 2mm inside diameter
face to face dimensions acc. to producers standard

Specification:
One-piece sampling device ball valve, female threaded ends acc. to EN 10226-1 with screwed butt weld end connection, sampling tube with 2mm inside diameter, blow-out-proof-stem, body material stainless steel (1.4408), free of non ferrous metals, with spring close unit to avoid wrong operation (open/close) by user.

Marking: TYP 300 P
Type: TYP 300 P-1.4408



No.	Part	Material
1	ball valve	1.4408
2	sampling tube	1.4571
3	screwed butt weld end connection	1.4571
4	lever with grid unit	1.4301
5	housing upper part	1.4408
6	cap	1.4408
7	spindle	1.4305
8	spring	1.4310
9	bearing sleeve	EP
10	housing lower part	1.4408
11	spring washer	1.4310
12	hex. nut	A2
13	socked screw	A2
14	rounded head screw	A2
15	bearing	EP
16	pin	1.4305

Ordering example:
TYPE 300 P, ¼”, PN 63, 1.4408
with spring close unit TYPE 43

Dimensions

DN	dimensions (mm)					
	L1	L2	L3	H1	H2	R
¼“	150	40	45	80	62	64

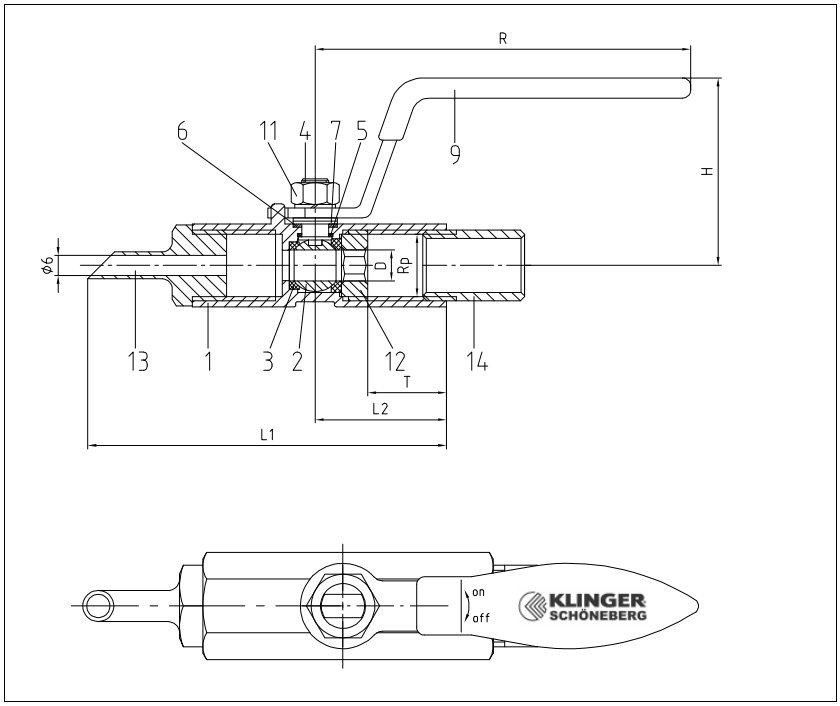
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MINI PLANT BALL VALVE

TYPE 300 PS, ¼“ - 2“, PN 63
sampling tube with inclined dripping edge

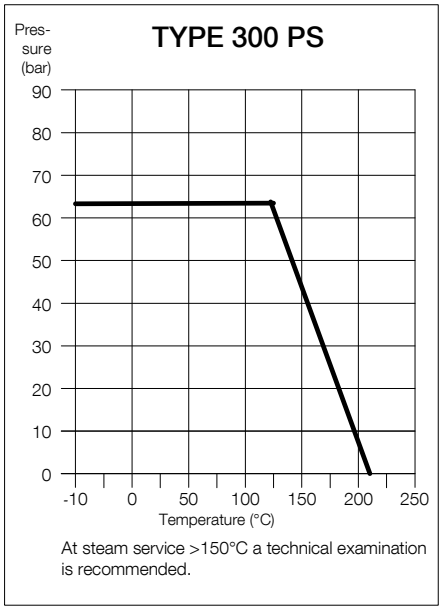


Mini plant ball valve
female threaded ends acc. to EN 10226-1 with
screwed butt weld end connection
sampling tube with inclined dripping edge
face to face dimensions acc. to producers standard

Specification:
One-piece sampling device ball valve, female threaded ends acc. to EN 10226-1 with screwed butt weld end connection, sampling tube with inclined dripping edge, blow-out-proof stem, body material stainless steel (1.4408), free of non ferrous metals, with lever.

Marking: TYPE 300 P
Type: TYPE 300 P-1.4408

No.	Part	Material
1	body	1.4408
2	ball	1.4408
3	seat	KFG
4	stem	1.4401
5	friction washer	KF
6	packing ring	KF
7	thrust washer	1.4301
9	lever	1.4301
11	hex. nut	1.4401
12	inscrewed part	1.4401
13	sampling tube	1.4571
14	screwed butt weld end connection	1.4571



Dimensions

DN	D	dimensions (mm)				
		L1	L2	T	H	R
¼“	5.0	83	25	14	47	67
⅜“	7.0	93	30	18	49	67
½“	9.0	108	38	23	57	90
¾“	12.5	114	40	23	60	90
1“	16.0	125	45	23	68	112
1 ¼“	20.0	159	55	35	70	112
1 ½“	24.5	169	60	37	75	132
2“	32.0	190	70	43	80	132

Ordering example:
TYPE 300 PS, 1”, PN 63, 1.4408

Technische Änderungen vorbehalten. 02/2017

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RK-PROBALL

An interesting alternative!



The RK-Proball series offers special interesting cost effectiveness. Depending on the design the ball valves are suitable in air pressure systems, light chemical industry, pulp and paper industry for alcalines, acids, solvents and other chemical agents. RK-Proball ball valve NC-Types are certified acc. to German clean air act VDI 2440! Flexible usability - a “Pro” for your plant.

Types:	1-, 2- or 3-piece ball valves
Nominal sizes:	DN 15 - DN 100 DN ¼“ - DN 4“
Pressure range:	PN 16, PN 40, PN 63 and PN 100 ANSI Class 150 and Class 300
Temperature:	up to +250°C
Body of material:	stainless steel, carbon steel
End connections:	threaded ends, flanges, with pipe screwing light series, with clamping ring connection, butt weld ends
FTF:	see relevant ball valve types
Accessories:	safety spring locking device, locking device for lever, stem extension

Certificates and Approvals:

- certified acc. to German clean air act VDI 2440
- ATEX 2014/34/EU
- Fire-Safe acc. to API 607 (optional)

Special designs:

- special materials on request

Product advantages:

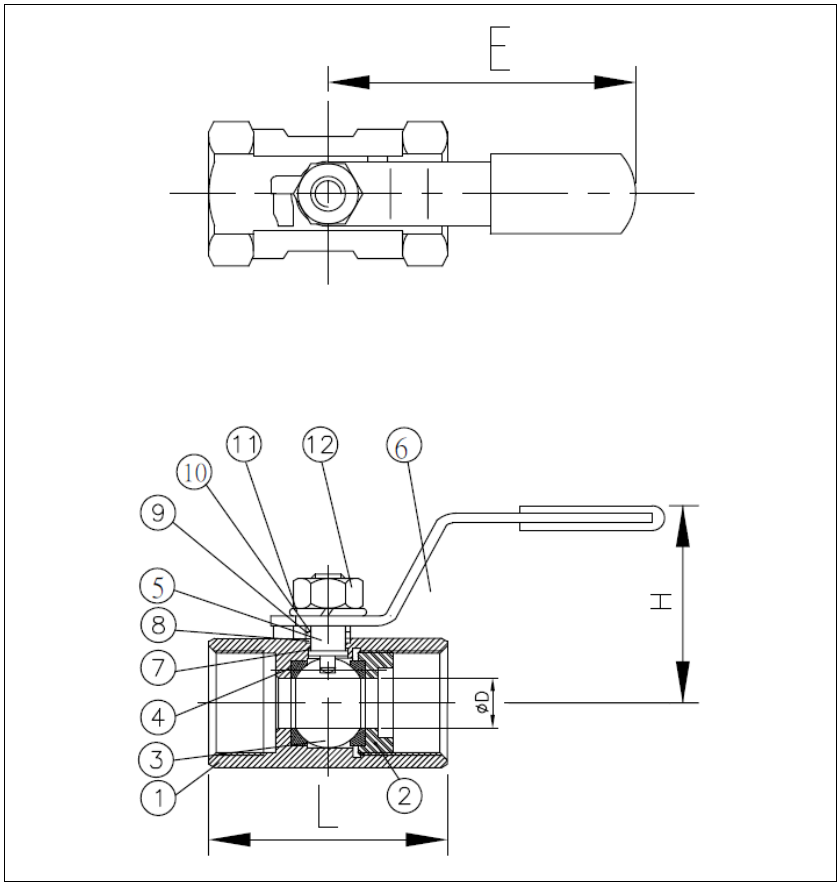
- special interesting cost effectiveness
- flexible usability
- certified acc. to German clean air act VDI 2440
- top flange DIN EN ISO 5211
- available with safety spring locking device
- best suited for automation

Subject to technical modification. 10/2018

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BALL VALVES
RK-PROBALL

KH 1T M, ¼" - 2", PN63

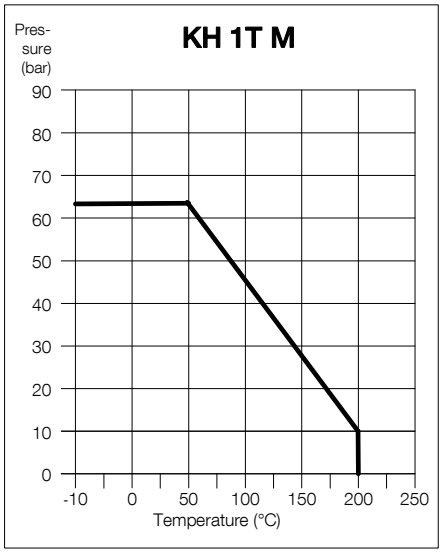


Ball valve with threaded ends
acc. to EN 10226-1 / EN ISO 228-1
reduced bore
face to face dimensions acc. to
DIN 3202-M3

Specification:
One-piece ball valve, threaded ends acc. to EN 10226-1/EN ISO 228-1, face to face dimensions acc. to DIN 3202-M3, reduced bore, bow-out-proof stem, body material stainless steel (1.4408), free of non ferrous metals, seat KFG, stem packing PTFE, approved by PED, inscrewed part marked with A4, nut marked with A4, high of the lever acc. to "UVV-Großchemie".

Marking: RK-Proball
Type: KH 1T M-1.4408

No.	Part	Material
1	body	1.4408
2	inscrewed part	1.4408
3	ball	1.4408
4	seat	KFG
5	stem	1.4401
6	lever	1.4301
7	stem packing	PTFE
8	thrust washer	PTFE
9	gland ring	1.4301
10	conical spring washer	1.4301
11	spring washer	1.4301
12	nut	1.4301



Dimensions

DN	DN	reduced bore	dimensions (mm)			weight
mm	inch	D	L	H	E	kg
8	¼	5.0	50	46.5	67	0.1
10	⅜	7.0	60	49.0	67	0.1
15	½	9.2	75	56.5	90	0.2
20	¾	12.5	80	60.0	90	0.3
25	1	15.0	90	67.8	112	0.4
32	1 ¼	20.0	110	69.8	112	0.7
40	1 ½	25.0	120	74.6	132	0.8
50	2	32.0	140	79.5	132	1.3

Ordering example:
KH 1T M, 2", PN 63, 1.4408

Subject to modification. 02/2019

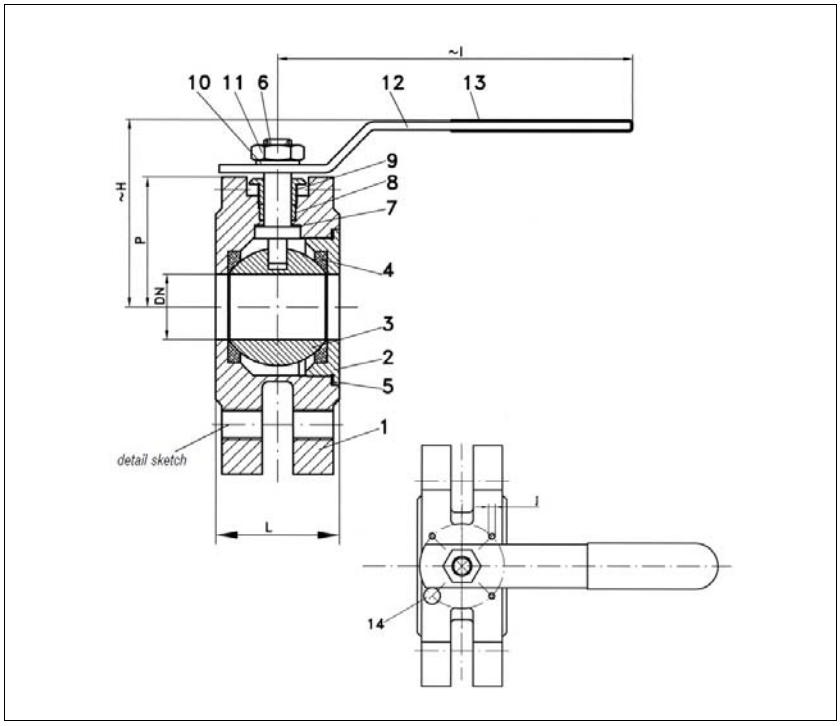
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BALL VALVES
RK-PROBALL

KH 1T W, ½“ - 4“, PN16



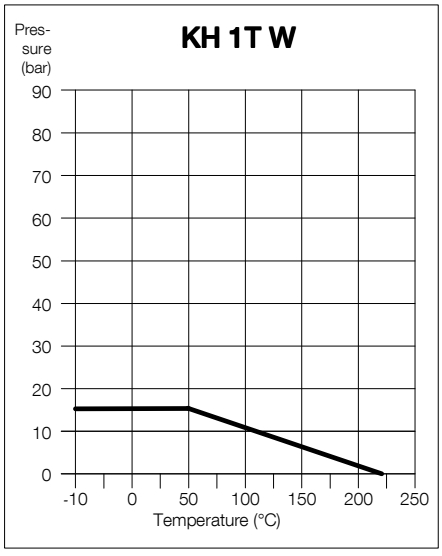
Kugelhähne RK-Proball KH 1T W of all sizes are also available with pneumatical, electrical or hydraulic actuators.

Wafer type ball valve
full bore
face to face acc. to producers standard
flanges acc. to EN 1092

Specification:
One-piece ball valve with flanges acc. to EN 1092, face to face dimensions acc. to producers standard, full bore, blow-out proof stem, body material stainless steel (1.4408), free of non ferrous metals, seat KFG/KFM, stem packing KF, design acc. to EN 19, design of the actuator connection refers to DIN/ISO 5211, approved by PED, with lever.

Marking: RK-Proball
Type: KH 1T W-1.4408

No.	Part	Material
1	body	1.4408
2	body screw	1.4408
3	ball	1.4408
4	seat	KFG/KFM
5	body seal	PTFE
6	stem	1.4401
7	seal	PTFE
8	stem packing	KF
9	gland nut	1.4301
10	thrust washer	1.4301
11	nut	1.4301
12	lever	1.4301
13	insulation cover	Vinyl
14	stopper	1.4301



Dimensions

DN mm	DN inch	dimensions (mm) H	l	j	L	P	top flange ISO	torque Nm	weight kg
15	½	70	145	M5	34.5	34.0	F3	10	1.25
20	¾	80	140	M5	38.5	37.8	F3	15	1.75
25	1	82	155	M5	44.5	45.5	F4	20	2.20
32	1 ¼	91	173	M6	54.0	51.5	F5	30	3.40
40	1 ½	110	187	M6	62.0	57.1	F5	35	4.10
50	2	118	187	M8	72.0	65.0	F5	45	5.30
65	2 ½	133	250	M8	104.0	84.5	F7	75	6.80
80	3	155	250	M8	118.0	90.6	F7	90	9.20
100	4	185	250	M8	150.0	108.0	F7	140	14.60

Ordering example:
KH 1T W, 2", PN 16, 1.4408

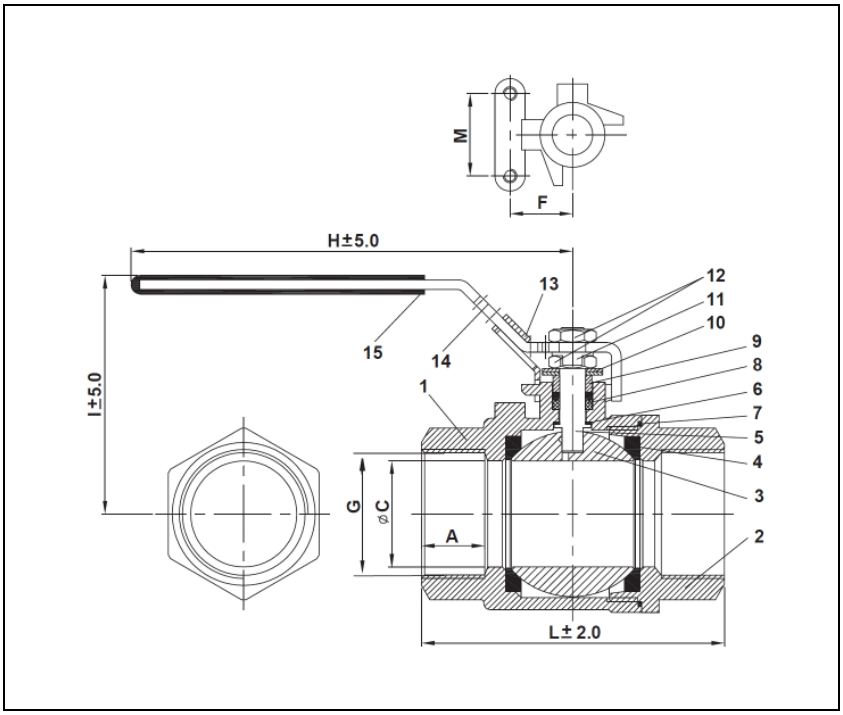
Subject to modification. 06/2016

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BALL VALVES
RK-PROBALL

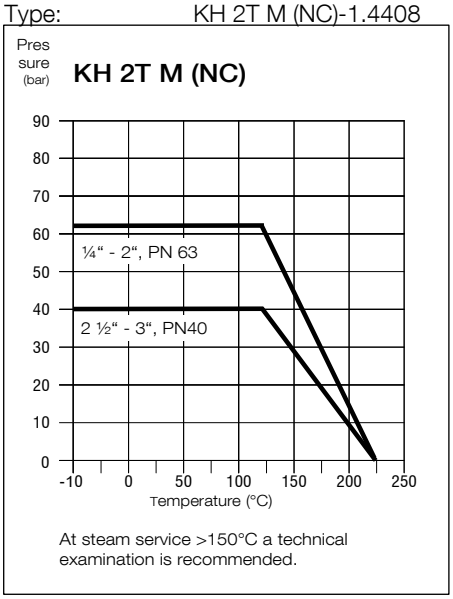
KH 2T M (NC), ¼“ - 2“, PN63, 2 ½“ - 3“, PN40



Ball valves with threaded ends acc. to EN 10226-1 / EN ISO 228-1 full bore face to face acc. to DIN 3202-M3

Specification:
Two-piece ball valve, threaded ends acc. to EN 10226-1 / EN ISO 228-1, face to face dimensions acc. to DIN 3202-M3, full bore, blow-out-proof stem, body material stainless steel (1.4408), free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, approved by PED, certified acc. to GERMAN clean air act VDI 2440, safety spring locking device is optional.

Marking: RK-Proball
Type: KH 2T M (NC)-1.4408



At steam service >150°C a technical examination is recommended.

No.	Part	Material
1	body	1.4408
2	cap	1.4408
3	ball	1.4408
4	seat	KFG
5	stem	1.4401
6	thrust washer	KF
7	body seal	KF
8	stem packing	KF
9	gland ring	1.4301
10	disc spring	1.4310
11	nut stopper	1.4301
12	stem nuts	1.4301
13	locking device*	1.4301
14	lever	1.4301
15	insulation cover	PVC

* special type

Ordering example:
KH 2T M (NC), 2“, PN 63, 1.4408, safety spring locking device

Dimensions

DN mm	connection G in inch	PN	dimensions (mm) A	C	F	M	H	I	L	torque Nm	weight kg
8	G 1/4“	63	12.5	11,5	12.7	28.5	115	66	50	4	0.3
10	G 3/8“	63	14	12,5	12.7	28.5	115	66	60	4	0.3
15	G 1/2“	63	17.8	15	12.7	28.5	115	68	75	6	0.4
20	G 3/4“	63	19.1	20	22.1	35	132	77	80	8	0.6
25	G 1”	63	22.6	25	22.1	35	162	82	90	11	1.0
32	G 1 1/4“	63	24.9	32	23.6	38	162	87	110	15	1.4
40	G 1 1/2“	63	24.9	38	23.6	38	205	103	120	25	2.3
50	G 2”	63	29.2	49	28.9	38.5	205	111	140	42	3.3
65	G 2 1/2“	40	33.7	65	35	55	260	152	185	60	7.4
80	G 3”	40	36.8	80	37.5	72	260	161	205	70	11.4

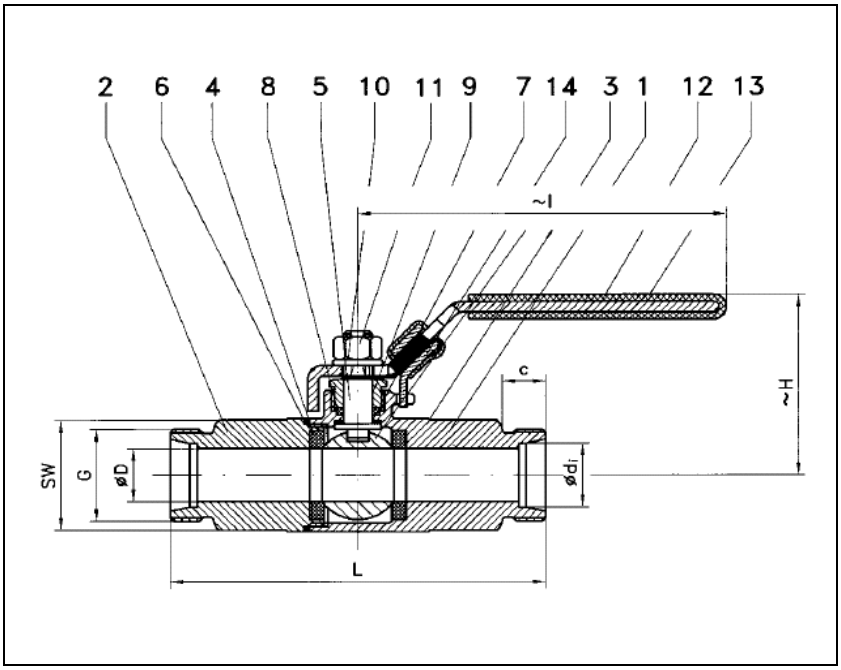
Subject to modification. 10/2021

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BALL VALVES
RK-PROBALL

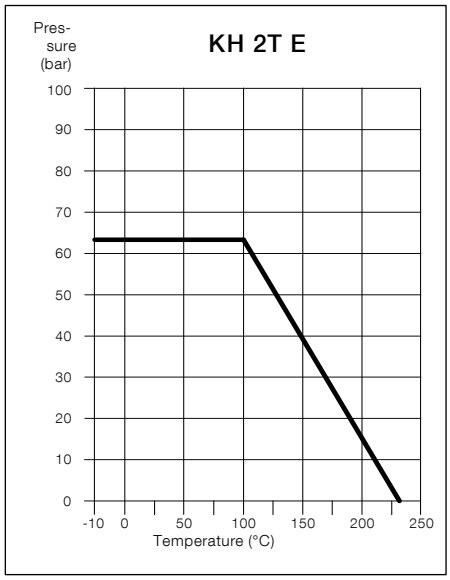
KH 2T E, DN6 - DN16, PN63



Ball valve with pipe screwing
light series acc. to DIN 3861
full bore
face to face acc. to DIN 3202 V1

Specification:
Two-piece ball valve with pipe screwing light series acc. to DIN 3861, full bore, blow-out-proof stem, body material stainless steel (1.4408), free of non-ferrous metals, seat KFG, stem KF, design acc. to EN 19, safety spring locking device is optional.

Marking: RK-Proball
Type: KH 2T E-1.4408



No.	Part	Material
1	body	1.4408
2	cap	1.4408
3	ball	1.4408
4	seat	KFG
5	stem	1.4401
6	seal	KFG
7	thrust washer	PTFE
8	stem packing	KF
9	gland nut	1.4301
10	washer	1.4301
11	nut	1.4301
12	lever	1.4301
13	insulation cover	Vinyl
14	spring locking device*	1.4301

* special type

Ordering example:
KH 2T E, DN6, PN 63, 1.4408,
safety spring locking device

Dimensions

DN mm	dimensions (mm) di	D	L	H	I	C	G	SW **	Kv-value m³/h	weight kg
6	8	6.0	76	50	102	10	M14x1.5	22	3	0.2
8	10	8.0	76	50	102	11	M16x1.5	22	5	0.2
10	12	10.0	80	50	102	11	M18x1.5	22	6	0.3
12	15	12.0	96	50	102	12	M22x1.5	24	7	0.3
16	18	15.0	105	52	102	12	M26x1.5	27	9	0.3

** width across in mm

Subject to modification. 02/2017

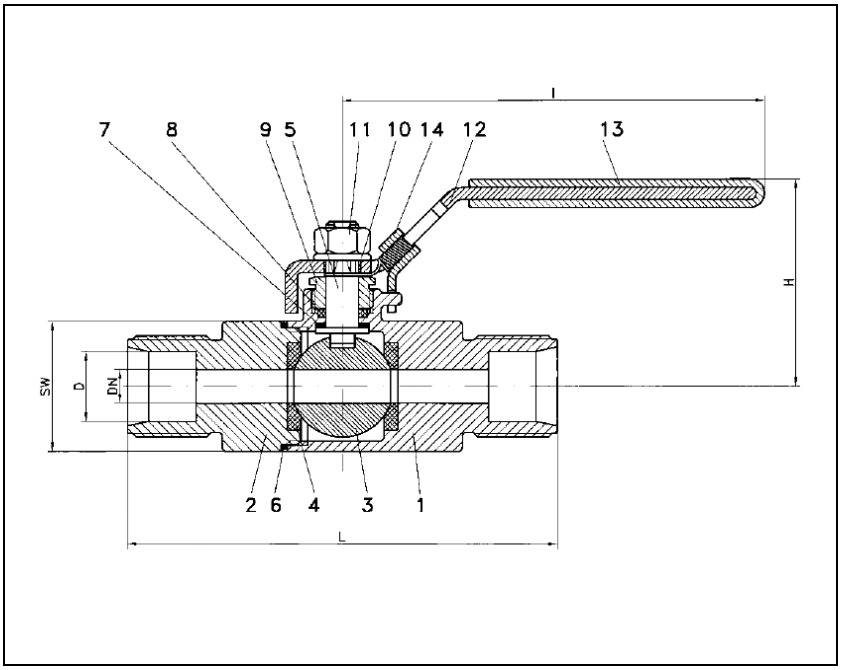
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BALL VALVES
RK-PROBALL

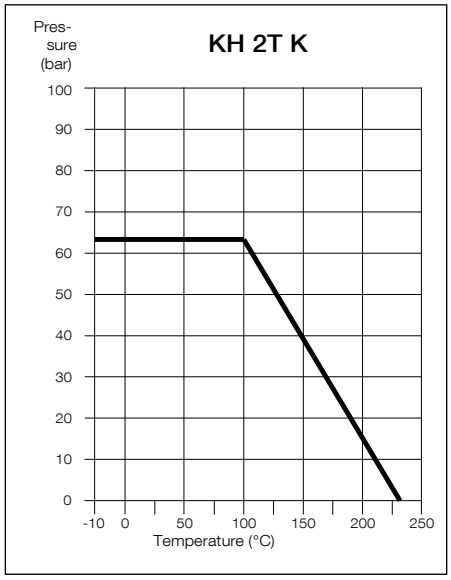
KH 2T K, DN4 - DN16, PN63



Ball valve with
clamping ring connection
full bore
face to face acc. to DIN 3202 V1

Specification:
Two-piece ball valve with clamping ring connection, full bore, blow-out-proof stem, body material lost wax cast stainless steel (1.4408), free of non-ferrous metals, seat KFG, stem packing KF, design acc. to EN 19, safety spring locking device is optional

Marking: RK-Proball
Type: KH 2T K-1.4408



No.	Part	Material
1	body	1.4408
2	cap	1.4408
3	ball	1.4408
4	seat	KFG
5	steam	1.4401
6	seal	KFG
7	thrust washer	PTFE
8	stem packing	KF
9	gland nut	1.4301
10	washer	1.4301
11	nut	1.4301
12	lever	1.4301
13	insulation cover	Vinyl
14	spring locking device*	1.4301

* special type

Ordering example:
KH 2T K, DN6, PN 63, 1.4408,
safety spring locking device

Dimensions

DN mm	PN	dimensions (mm) D	L	H	I	SW**	Kv-value m³/h	weight kg
4	63	6	76	50	102	22	2	0.2
6	63	8	76	50	102	22	3	0.2
8	63	10	76	50	102	22	5	0.2
10	63	12	80	50	102	22	6	0.3
12	63	15	96	50	102	24	7	0.3
16	63	18	105	52	102	34	9	0.6

** width across in mm

Subject to modification. 02/2017

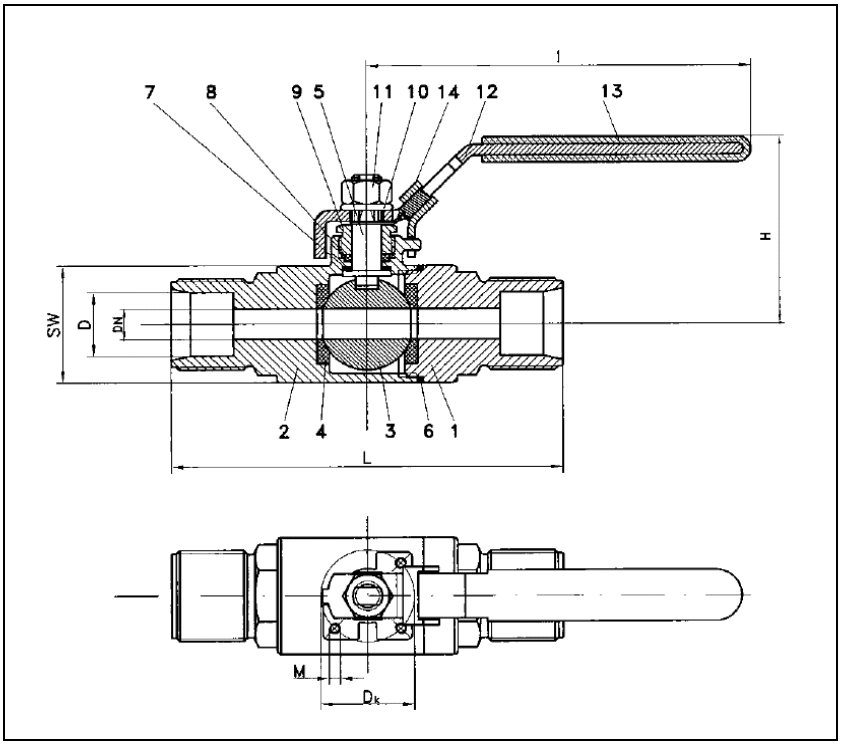
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BALL VALVES
RK-PROBALL

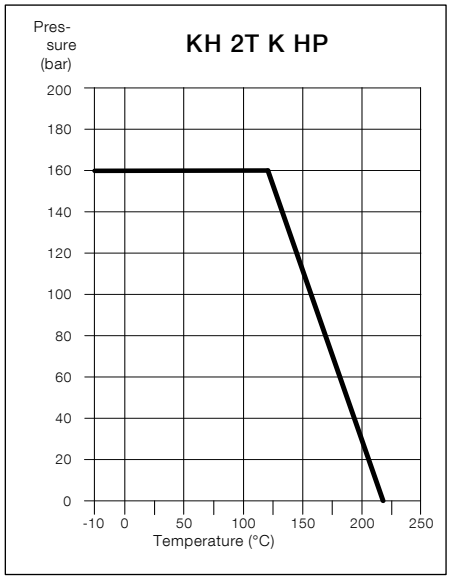
KH 2T K HP, DN4 - DN16, PN160



High-pressure ball valve
with clamping ring connection
full bore
face to face DIN 3202 V1

Specification:
Two-piece ball valve with clamping ring connection, high pressure PN 160, full bore, blow-out-proof stem, body material lost wax cast stainless steel (1.4408), free of non-ferrous metals, seat KFG/KFM, stem packing KF, top flange DIN EN ISO 5211, design acc. to EN 19, safety spring locking device is optional.

Marking: RK-Proball
Type: KH 2T K HP-1.4408



No.	Part	Material
1	body	1.4408
2	cap	1.4408
3	ball	1.4408
4	seat	KFG/KFM
5	stem	1.4401
6	seal	KFG
7	thrust washer	PTFE
8	stem packing	KF
9	gland nut	1.4301
10	washer	1.4301
11	nut	1.4301
12	lever	1.4301
13	insulation cover	Vinyl
14	spring locking device*	1.4301

* special type

Ordering example:
KH 2T K HP, DN6, PN 160, 1.4408, safety spring locking device

Dimensions

DN mm	PN	dimensions (mm) D	L	H	I	SW**	top flange ISO	D_k	M	Kv-value m³/h	weight kg
4	160	6	76	50	102	22	F04	42	M5	2	0.25
6	160	8	76	50	102	22	F04	42	M5	3	0.25
8	160	10	76	50	102	22	F04	42	M5	5	0.25
10	160	12	80	50	102	22	F04	42	M5	6	0.35
12	160	15	96	50	102	24	F04	42	M5	7	0.35
16	160	18	105	52	102	34	F04	42	M5	9	0.65

** width across in mm

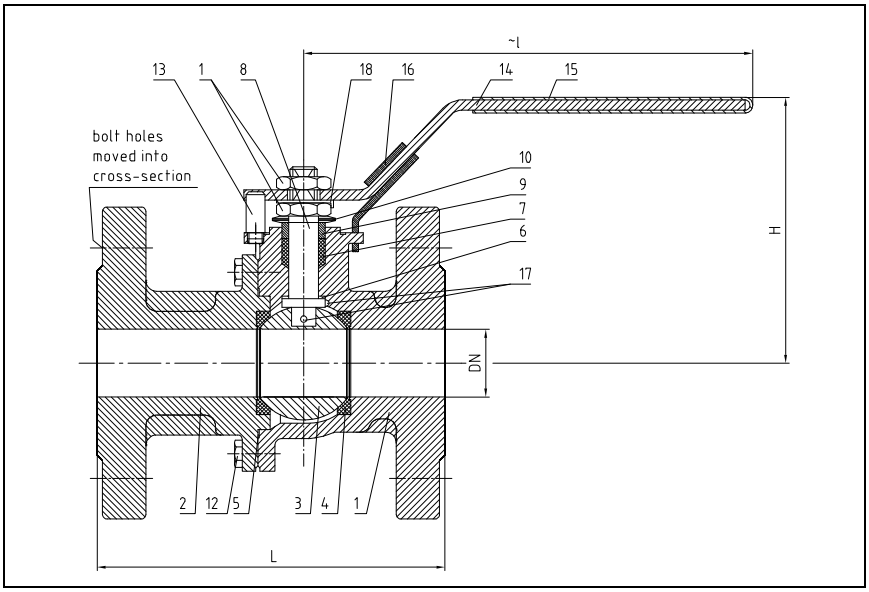
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BALL VALVES
RK-PROBALL

KH 2T F-FS, DN15 - DN100, PN16/40



Ball valves RK-Proball KH 2T F of all sizes are also available with pneumatical, electrical or hydraulic actuators.

Flanged ball valve
full bore
face to face acc. to 558, GR.1
face to face acc. to 558, GR.27
flanges acc. to EN 1092

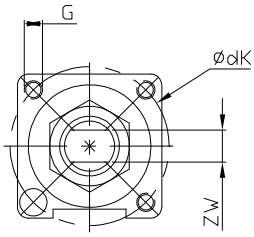
Specification:
Two-piece ball valve, flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR.1/GR.27, full bore, blow-out-proof stem, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFM, stem packing graphite, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, Fire-Safe acc. to API 607, safety spring locking device is optional.

Marking: RK-Proball
Types: KH 2T F-FS-1.0619
KH 2T F-FS-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFM	
5	seal	Graphite	
6	thrust washer	KFCM	
7	stem packing	Graphite	
8	stem	1.4401	
9	ring	1.4401	
10	belleville washer	1.4310	
11	nut	1.4301	
12	screw	A4-70	
12.1	stud bolt, GR.27	A4-70	
12.2	nut, GR.27	A4-70	
13	stop pin	1.4301	
14	lever	1.4301	
15	insulation cover	Vinyl	
16	spring locking device*	1.4301	
17	antistatic element	1.4401	
18	locking washer	1.4301	

* special type

Top flange

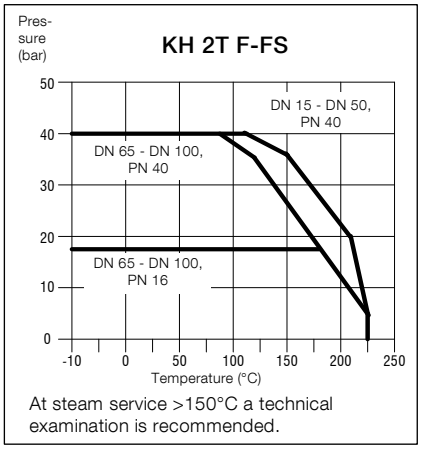


DN (mm)	Ø dk	G	ZW
15	42 x	M 5 x 0.8	8
20	42 x	M 5 x 0.8	8
25	50 x	M 6 x 1.0	10
32	50 x	M 6 x 1.0	10
40	50 x	M 6 x 1.0	10
50	70 x	M 8 x 1.25	14
65	70 x	M 8 x 1.25	14
80	102 x	M 10 x 1.5	19
100	102 x	M 10 x 1.5	19

Dimensions

DN mm	DN Zoll	PN	dimensions (mm) H	l	L GR.1	L GR.27	top flange ISO	torque Nm**	weight kg GR.1	kg GR.27
15	1/2“	40	86	165	130	115	F04	6	2.4	2.3
20	3/4“	40	92	165	150	120	F04	10	3.2	3.1
25	1“	40	106	176	160	125	F05	14	4.6	4.3
32	1 1/4“	40	114	215	180	130	F05	22	6.5	6.0
40	1 1/2“	40	116	215	200	140	F05	30	7.5	7.0
50	2“	40	136	278	230	150	F07	41	12.3	11.4
65	2 1/2“	40	150	278	290	170	F07	65	17.0	15.2
65	2 1/2“	16	150	278	290	170	F07	65	15.7	14.1
80	3“	40	185	375	310	180	F10	94	24.1	22.0
80	3“	16	185	375	310	180	F10	94	22.9	20.5
100	4“	40	200	375	350	190	F10	130	32.9	29.8
100	4“	16	200	375	350	190	F10	130	30.0	26.2

**Necessary torque measured with treated water at Δ P acc. to pressure 16 bar and room temperature



At steam service >150°C a technical examination is recommended.

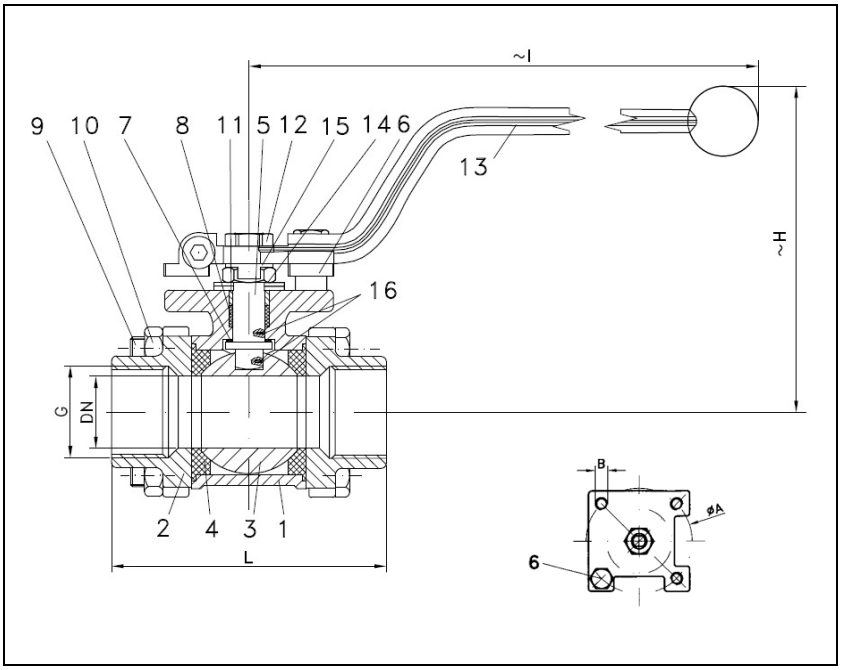
Ordering example:
KH 2T F-FS, DN 65, PN 16, GR.1, 1.4408, safety spring locking device

Subject to modification. 02/2017

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BALL VALVES
RK-PROBALL

KH 3T M (NC), ¼“ - 4“, PN63/100
casting lever



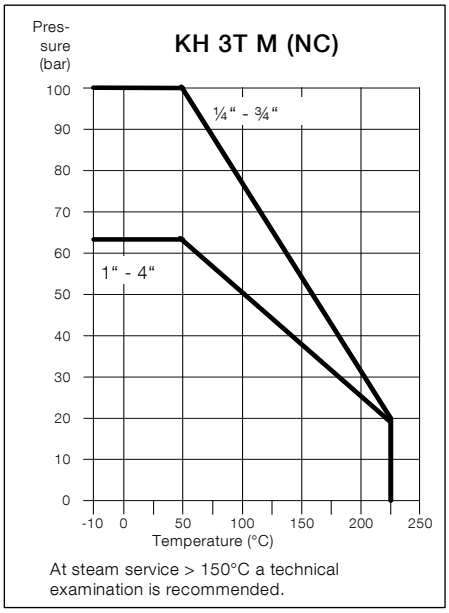
Ball valves RK-Proball KH 3T all sizes are also available with pneumatical, electrical or hydraulic actuators.

Ball valve with threated ends acc. to EN 10226-1 / EN ISO 228-1
full bore
face to face acc. to DIN 3202-M3

Specification:
Three-piece ball valve, threated ends acc. to EN 10226-1 / EN ISO 228-1, face to face dimensions acc. to DIN 3202-M3, full bore, blow-out-proof stem, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: RK-Proball
Types: KH 3T M (NC)-1.0619
KH 3T M (NC)-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFG	
5	stem	1.4401	
6	stop pin	1.4301	
7	washer	KFG	
8	stem packing	KF	
9	hex. screw	A2-70	
10	hex. nut	A2-70	
11	thrust washer	1.4301	
12	hex. nut	A2-70	
13	lever	1.4301	
14	plate spring	1.4310	
15	locking plate	1.4301	
16	antistatic element	1.4401	



At steam service > 150°C a technical examination is recommended.

Ordering example:
KH 3T M (NC), 2“, PN 63, 1.4408

Dimensions

DN mm	G inch	PN	dimensions (mm) H	I	L	top flange ISO 5211	Ø A	B	Kv-value m³/h	torque Nm	weight kg
10.6	¼	100	72	154	50	F03	36	M5	6	3	0.5
12.7	⅜	100	72	154	60	F03	36	M5	7	3	0.5
15	½	100	86	169	75	F04	42	M5	10	5	0.7
20	¾	100	93	169	80	F04	42	M5	25	10	0.9
25	1	63	105	222	90	F05	50	M6	35	11	1.3
32	1 ¼	63	110	222	110	F05	50	M6	46	20	2.2
38	1 ½	63	124	222	120	F05	50	M6	80	26	2.8
49	2	63	146	304	140	F07	70	M8	110	30	4.4
65	2 ½	63	170	304	185	F07	70	M8	310	70	9.8
80	3	63	176	354	205	F10	102	M10	360	90	14.8
100	4	63	207	354	240	F10	102	M10	820	120	25.4

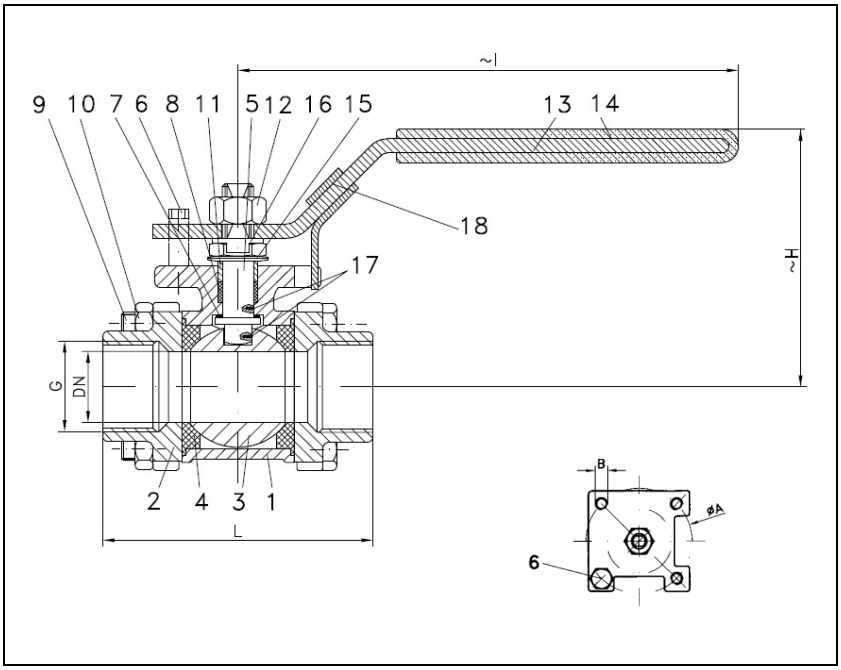
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BALL VALVES
RK-PROBALL

KH 3T M (NC), ¼“ - 4“, PN63/100
safety spring locking device



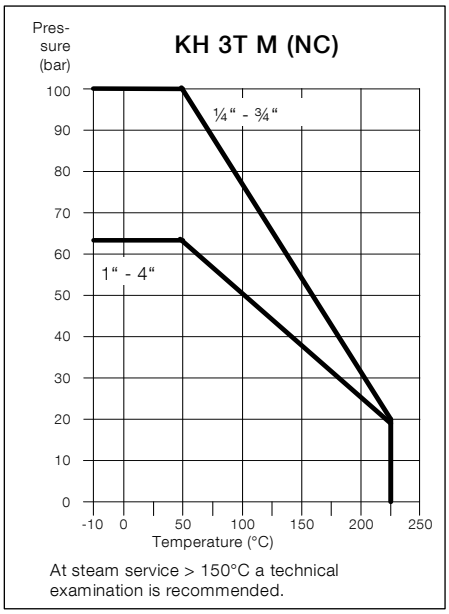
Ball valves RK-Proball KH 3T all sizes are also available with pneumatical, electrical or hydraulic actuators.

Ball valve with threated ends acc. to EN 10226-1 / EN ISO 228-1
full bore
face to face acc. to DIN 3202-M3

Specification:
Three-piece ball valve, threated ends acc. to EN 10226-1 / EN ISO 228-1, face to face dimensions acc. to DIN 3202-M3, full bore, blow-out-proof stem, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, lever with safety spring locking device.

Marking: RK-Proball
Types: KH 3T M (NC)-1.0619
KH 3T M (NC)-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFG	
5	stem	1.4401	
6	stop pin	1.4301	
7	washer	KFG	
8	stem packing	KF	
9	hex. nut	A2-70	
10	hex. screw	A2-70	
11	thrust washer	1.4301	
12	hex. nut	A2-70	
13	lever	1.4301	
14	insulation cover	Vinyl	
15	plate spring	1.4310	
16	locking plate	1.4301	
17	antistatic element	1.4401	
18	spring locking device	1.4301	



At steam service > 150°C a technical examination is recommended.

Ordering example:
KH 3T M (NC), 2“, PN 63, 1.4408, safety spring locking device

Dimensions

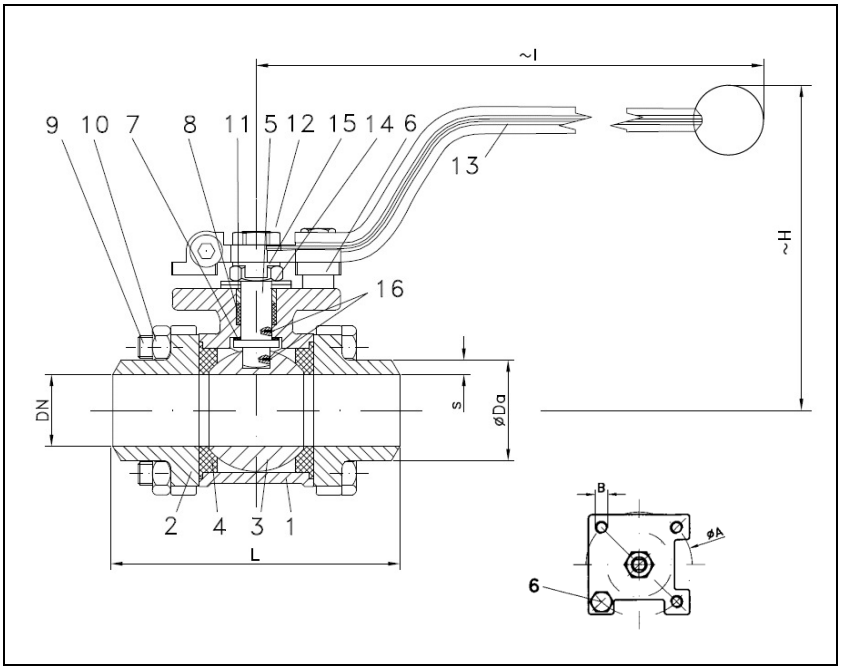
DN mm	G inch	PN	dimensions (mm) H	I	L	top flange ISO 5211	Ø A	B	Kv-value m³/h	torque Nm	weight kg
10.6	¼	100	63	118	50	F03	36	M5	6	3	0.5
12.7	⅜	100	63	118	60	F03	36	M5	7	3	0.5
15	½	100	67	135	75	F04	42	M5	10	5	0.7
20	¾	100	73	135	80	F04	42	M5	25	10	0.9
25	1	63	80	168	90	F05	50	M6	35	11	1.3
32	1 ¼	63	87	168	110	F05	50	M6	46	20	2.2
38	1 ½	63	103	205	120	F05	50	M6	80	26	2.8
49	2	63	112	218	140	F07	70	M8	110	30	4.4
65	2 ½	63	156	280	185	F07	70	M8	310	70	9.8
80	3	63	163	376	205	F10	102	M10	360	90	14.8
100	4	63	194	376	240	F10	102	M10	820	120	25.4

Subject to modification. 06/2016

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BALL VALVES
RK-PROBALL

KH 3T S (NC), ¼“ - 4“, PN63/100
casting lever



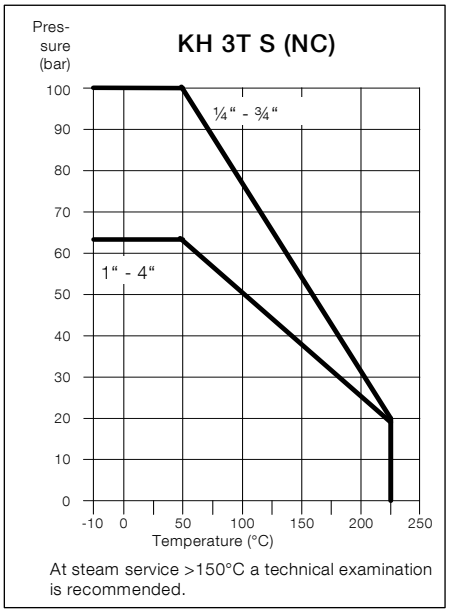
Ball valves RK-Proball KH 3T all sizes are also available with pneumatical, electrical or hydraulic actuators.

Ball valve with butt weld ends
full bore
face to face acc. to DIN 3202-S13
butt weld ends acc. to EN 12627

Specification:
Three-piece ball valve, butt weld ends acc. to EN 12627, face to face dimensions acc. to DIN 3202-S13, full bore, blow-out-proof stem, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: RK-Proball
Types: KH 3T S (NC)-1.0619
KH 3T S (NC)-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFG	
5	stem	1.4401	
6	stop pin	1.4301	
7	washer	KFG	
8	stem packing	KF	
9	hex. schrew	A2-70	
10	hex. nut	A2-70	
11	thrust washer	1.4301	
12	hex. nut	A2-70	
13	lever	1.4301	
14	plate spring	1.4310	
15	locking plate	1.4301	
16	antistatic element	1.4401	



At steam service >150°C a technical examination is recommended.

Ordering example:
KH 3T S (NC), 2“, PN 63, 1.4408,

Dimensions

DN mm	DN inch	PN	dimensions (mm) Ø Da	S	H	l	L	top flange ISO 5211	Ø A	B	Kv-value m³/h	torque Nm	weight kg
8	¼	100	13.7	2.60	72	154	70	F03	36	M5	6	3	0.5
10	⅜	100	17.2	3.35	72	154	70	F03	36	M5	7	3	0.5
15	½	100	21.3	2.80	86	169	75	F04	42	M5	10	5	0.7
20	¾	100	26.9	2.95	93	169	90	F04	42	M5	25	10	0.9
25	1	63	33.7	3.45	105	222	100	F05	50	M6	35	11	1.3
32	1 ¼	63	42.4	5.20	110	222	110	F05	50	M6	46	20	1.9
38	1 ½	63	48.3	5.15	124	222	125	F05	50	M6	80	26	2.9
49	2	63	60.3	5.65	146	304	150	F07	70	M8	110	30	4.7
65	2 ½	63	76.1	5.55	170	304	190	F07	70	M8	310	70	9.7
80	3	63	88.9	4.45	176	354	220	F10	102	M10	360	90	14.6
100	4	63	114.3	7.15	207	354	270	F10	102	M10	820	120	25.8

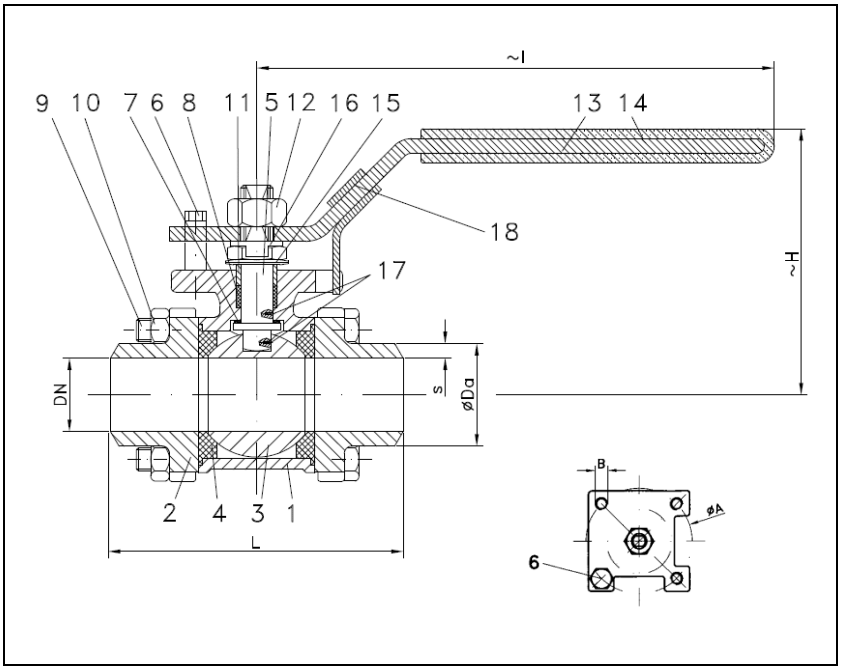
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BALL VALVES
RK-PROBALL

KH 3T S (NC), ¼“ - 4“, PN63/100
safety spring locking device



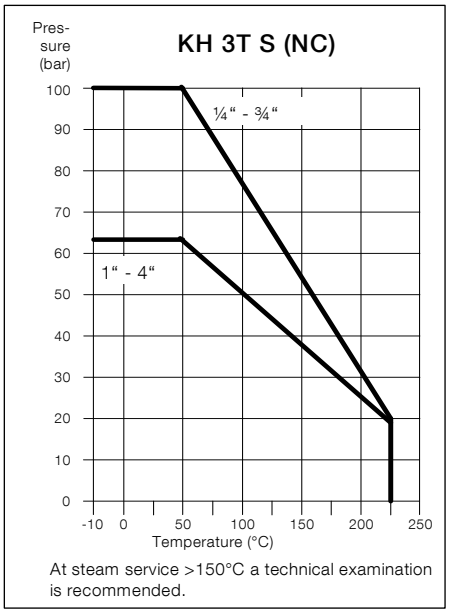
Ball valves RK-Proball KH 3T all sizes are also available with pneumatical, electrical or hydraulic actuators.

Ball valve with butt weld ends
full bore
face to face acc. to DIN 3202-S13
butt weld ends acc. to EN 12627

Specification:
Three-piece ball valve, butt weld ends acc. to EN 12627, face to face dimensions acc. to DIN 3202-S13, full bore, blow-out-proof stem, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, lever with safety spring locking device.

Marking: RK-Proball
Types: KH 3T S (NC)-1.0619
KH 3T S (NC)-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFG	
5	stem	1.4401	
6	stop pin	1.4301	
7	washer	KFG	
8	stem packing	KF	
9	hex. screw	A2-70	
10	hex. nut	A2-70	
11	thrust washer	1.4301	
12	hex. nut	A2-70	
13	lever	1.4301	
14	insulation cover	Vinyl	
15	plate spring	1.4310	
16	locking plate	1.4301	
17	antistatic element	1.4401	
18	spring locking device	1.4301	



At steam service >150°C a technical examination is recommended.

Ordering example:
KH 3T S (NC), 2“, PN 63, 1.4408, safety spring locking device

Dimensions

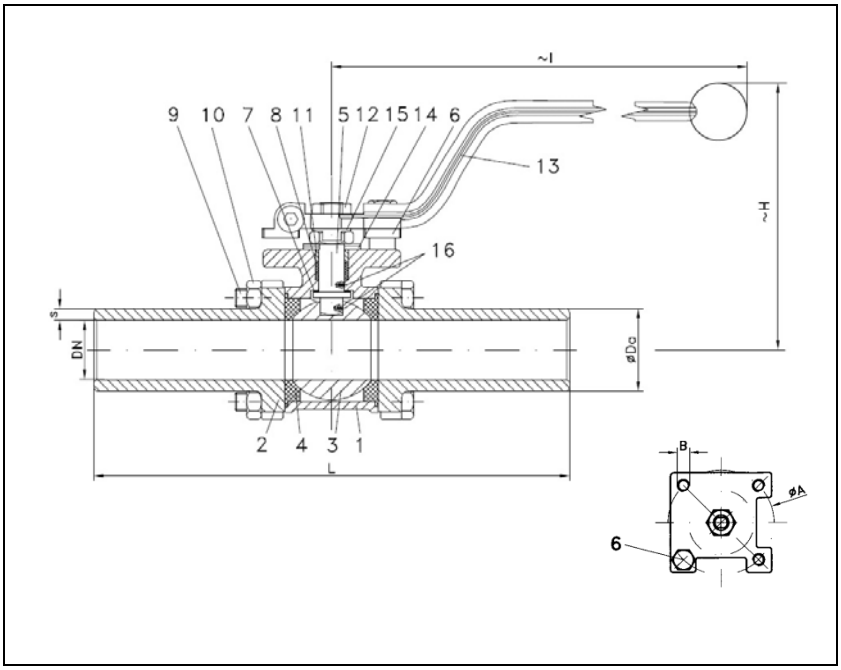
DN mm	DN inch	PN	dimensions (mm) Ø Da	S	H	l	L	top flange ISO 5211	Ø A	B	Kv-value m³/h	torque Nm	weight kg
8	¼	100	13.7	2,60	63	118	70	F03	36	M5	6	3	0.5
10	⅜	100	17.2	3,35	63	118	70	F03	36	M5	7	3	0.5
15	½	100	21.3	2,80	67	135	75	F04	42	M5	10	5	0.7
20	¾	100	26.9	2,95	73	135	90	F04	42	M5	25	10	0.9
25	1	63	33.7	3,45	80	168	100	F05	50	M6	35	11	1.3
32	1 ¼	63	42.4	5,20	87	168	110	F05	50	M6	46	20	1.9
38	1 ½	63	48.3	5,15	103	205	125	F05	50	M6	80	26	2.9
49	2	63	60.3	5,65	112	218	150	F07	70	M8	110	30	4.7
65	2 ½	63	76.1	5,55	156	280	190	F07	70	M8	310	70	9.7
80	3	63	88.9	4,45	163	376	220	F10	102	M10	360	90	14.6
100	4	63	114.3	7,15	194	376	270	F10	102	M10	820	120	25.8

Subject to modification. 06/2016

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BALL VALVES
RK-PROBALL

KH 3T SV (NC), ½“ - 4“, PN63/100
casting lever



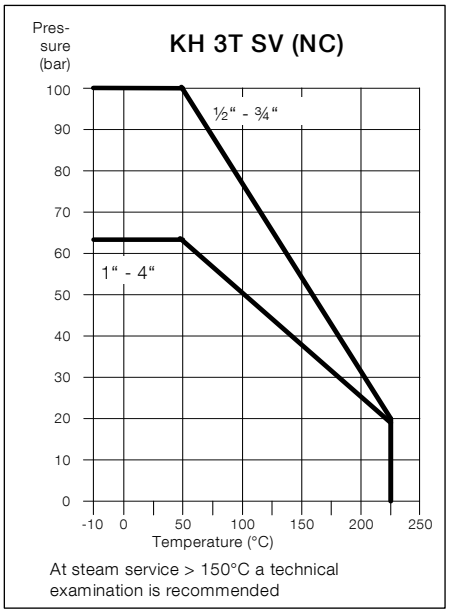
Ball valves RK-Proball KH 3T all sizes are also available with pneumatical, electrical or hydraulic actuators.

Ball valve with extended butt weld ends full bore
face to face dimensions acc. to producers standard
butt weld ends acc. to EN 12627

Specification:
Three-piece ball valve, extended butt weld ends acc. to EN 12627, face to face dimensions acc. to producers standard, full bore, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: RK-Proball
Types: KH 3T SV (NC)-1.0619
KH 3T SV (NC)-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFG	
5	stem	1.4401	
6	stop pin	1.4301	
7	washer	KFG	
8	stem packing	KF	
9	hex. screw	A2-70	
10	hex. nut	A2-70	
11	thrust washer	1.4301	
12	hex. nut	A2-70	
13	lever	1.4301	
14	plate spring	1.4310	
15	locking plate	1.4301	
16	antistatic element	1.4401	



At steam service > 150°C a technical examination is recommended

Ordering example:
KH 3T SV (NC), 2“, PN 63, 1.4408,

Dimensions

DN mm	DN inch	PN	dimensions (mm) Ø Da	S	H	l	L	top flange ISO 5211	Ø A	B	Kv-value m³/h	torque Nm	weight kg
15	½	100	23.5	4.25	86	169	180	F04	42	M5	10	5	1.0
20	¾	100	29.0	4.50	93	169	180	F04	42	M5	25	10	1.2
25	1	63	35.7	5.35	105	222	180	F05	50	M6	35	11	1.8
32	1 ¼	63	45.0	6.50	110	222	200	F05	50	M6	46	20	2.8
38	1 ½	63	51.0	6.50	124	222	200	F05	50	M6	80	26	3.5
49	2	63	62.0	6.50	146	304	210	F07	70	M8	110	30	5.5
65	2 ½	63	78.0	6.50	170	304	240	F07	70	M8	310	70	10.2
80	3	63	91.0	5.50	176	354	280	F10	102	M10	360	90	14.6
100	4	63	116.3	8.15	207	354	280	F10	102	M10	820	120	27.5

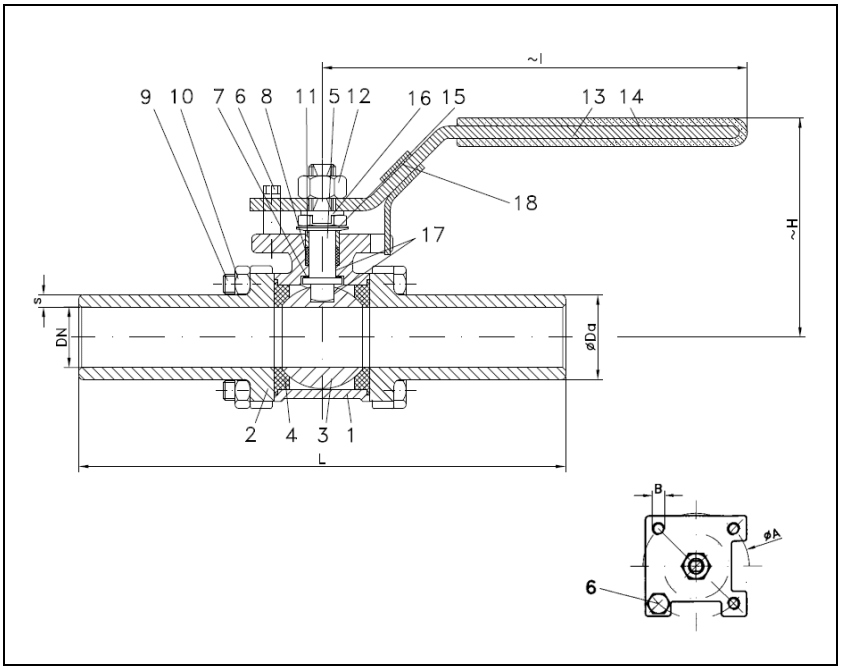
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BALL VALVES
RK-PROBALL

KH 3T SV (NC), ½“ - 4“, PN63/100
safety spring locking device



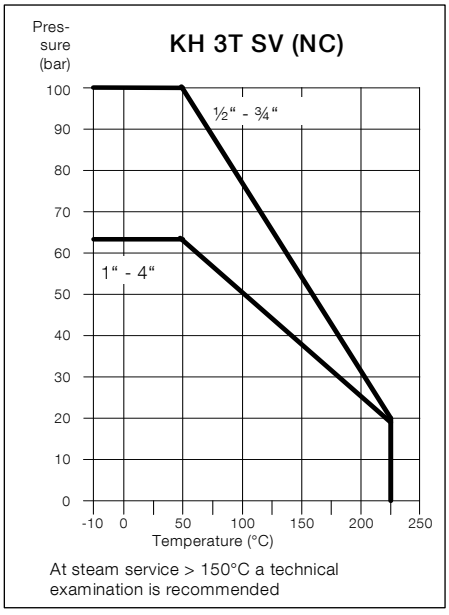
Ball valves RK-Proball KH 3T all sizes are also available with pneumatical, electrical or hydraulic actuators.

Ball valve with extended butt weld ends full bore
face to face dimensions acc. to producers standard
butt weld ends acc. to EN 12627

Specification:
Three-piece ball valve, extended butt weld ends acc. to EN 12627, face to face dimensions acc. to producers standard, full bore, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, lever with safety spring locking device.

Marking: RK-Proball
Types: KH 3T SV (NC)-1.0619
KH 3T SV (NC)-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFG	
5	stem	1.4401	
6	stop pin	1.4301	
7	washer	KFG	
8	stem packing	KF	
9	hex. screw	A2-70	
10	hex. nut	A2-70	
11	thrust washer	1.4301	
12	hex. nut	A2-70	
13	lever	1.4301	
14	insulation cover	Vinyl	
15	plate spring	1.4310	
16	locking plate	1.4301	
17	antistatic element	1.4401	
18	spring locking device	1.4301	



At steam service > 150°C a technical examination is recommended

Ordering example:
KH 3T SV (NC), 2“, PN 63, 1.4408, safety spring locking device

Dimensions

DN mm	DN inch	PN	dimensions (mm) Ø Da	S	H	l	L	top flange ISO 5211	Ø A	B	Kv-value m³/h	torque Nm	weight kg
15	½	100	23.5	4.25	67	135	180	F04	42	M5	10	5	0.7
20	¾	100	29.0	4.50	73	135	180	F04	42	M5	25	10	1.1
25	1	63	35.7	5.35	80	168	180	F05	50	M6	35	11	1.7
32	1 ¼	63	45.0	6.50	87	168	200	F05	50	M6	46	20	2.7
38	1 ½	63	51.0	6.50	103	205	200	F05	50	M6	80	26	3.5
49	2	63	62.0	6.50	112	218	210	F07	70	M8	110	30	5.4
65	2 ½	63	78.0	6.50	156	280	240	F07	70	M8	310	70	10.7
80	3	63	91.0	5.50	163	376	280	F10	102	M10	360	90	15.9
100	4	63	116.3	8.15	194	376	280	F10	102	M10	820	120	27.5

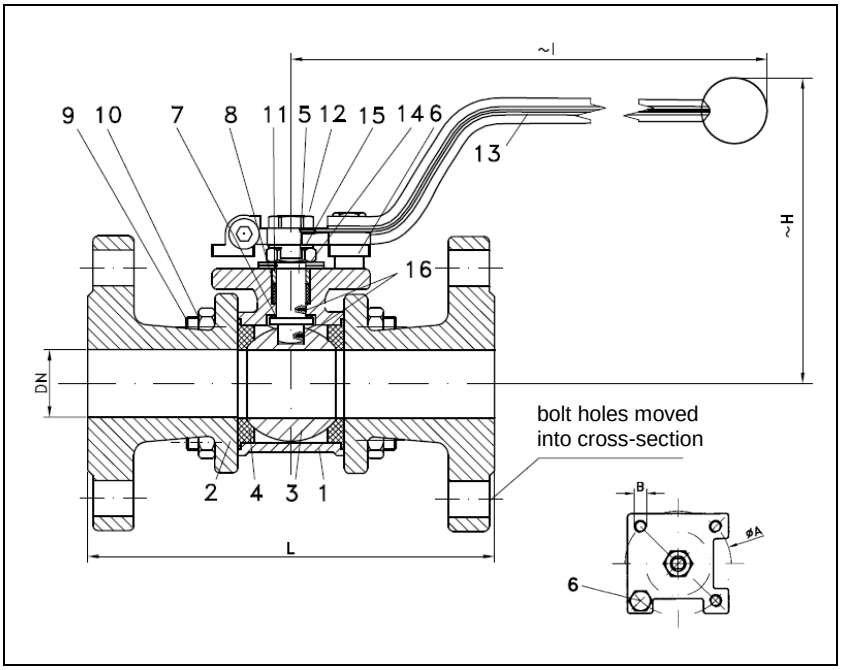
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BALL VALVES
RK-PROBALL

KH 3T F (NC), DN15 - DN100, PN16/40
casting lever



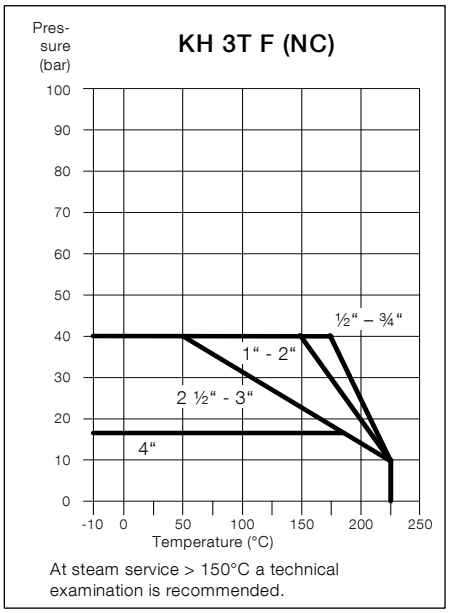
Ball valves RK-Proball KH 3T all sizes are also available with pneumatical, electrical or hydraulic actuators.

Flanged ball valves
full bore
face to face acc. to EN 558, GR. 1
flanges acc. to EN 1092

Specification:
Three-piece ball valve, flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR. 1, full bore, blow-out-proof stem, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, with lever.

Marking: RK-Proball
Types: KH 3T F (NC)-1.0619
KH 3T F (NC)-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFG	
5	stem	1.4401	
6	stop pin	1.4301	
7	washer	KFG	
8	stem packing	KF	
9	hex. screw	A2-70	
10	hex. nut	A2-70	
11	thrust washer	1.4301	
12	hex. nut	A2-70	
13	lever	1.4301	
14	plate spring	1.4310	
15	locking plate	1.4301	
16	antistatic element	1.4401	



At steam service > 150°C a technical examination is recommended.

Ordering example:
KH 3T F (NC), DN50, PN 40, 1.4408

Dimensions

DN mm	PN	dimensions (mm) H	I	L	top flange ISO 5211	Ø A	B	Kv-value m³/h	torque Nm	weight kg
15	40	86	169	130	F04	42	M5	10	5	2.1
20	40	93	169	150	F04	42	M5	25	10	2.9
25	40	105	222	160	F05	50	M6	35	11	3.9
32	40	110	222	180	F05	50	M6	46	20	5.6
40	40	124	222	200	F05	50	M6	80	26	7.4
50	40	146	304	230	F07	70	M8	110	30	10.3
65	40	170	304	290	F07	70	M8	310	70	14.4
80	40	176	354	310	F10	102	M10	360	90	23.8
100	40	207	354	350	F10	102	M10	820	120	37.2
100	16	207	354	350	F10	102	M10	820	120	34.3

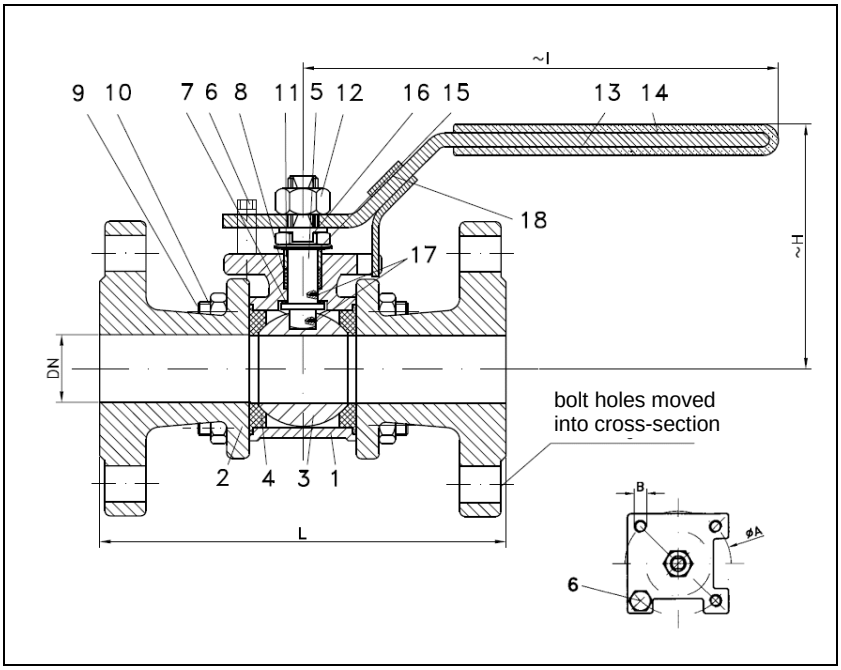
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BALL VALVES
RK-PROBALL

KH 3T F (NC), DN15 - DN100, PN16/40
safety spring locking device



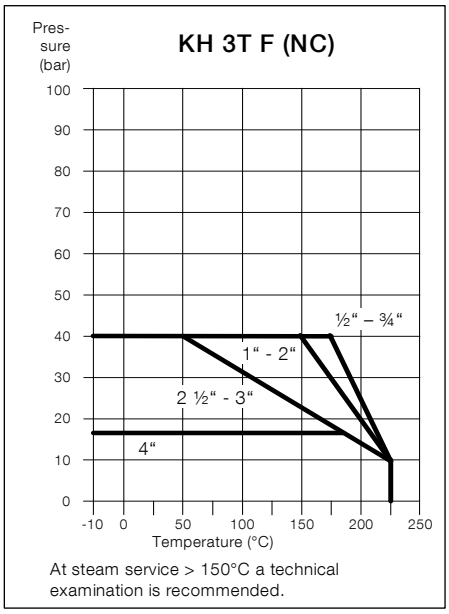
Ball valves RK-Proball KH 3T all sizes are also available with pneumatical, electrical or hydraulic actuators.

Flanged ball valves
full bore
face to face acc. to EN 558, GR. 1
flanges acc. to EN 1092

Specification:
Three-piece ball valve, flanges acc. to EN 1092, face to face dimensions acc. to EN 558, GR. 1, full bore, blow-out-proof stem, body material stainless steel (1.4408) or steel (1.0619), antistatic device, free of non ferrous metals, seat KFG, stem packing KF, disc spring loaded adjustable, top flange DIN EN ISO 5211, approved by PED, certified acc. to GERMAN clean air act VDI 2440, lever with safety spring locking device.

Marking: RK-Proball
Types: KH 3T F (NC)-1.0619
KH 3T F (NC)-1.4408

No.	Part	Material	Material
1	body	1.0619	1.4408
2	cap	1.0619	1.4408
3	ball	1.4408	
4	seat	KFG	
5	stem	1.4401	
6	stop pin	1.4301	
7	washer	KFG	
8	stem packing	KF	
9	hex. screw	A2-70	
10	hex. nut	A2-70	
11	thrust washer	1.4301	
12	hex. nut	A2-70	
13	lever	1.4301	
14	insulation cover	Vinyl	
15	plate spring	1.4310	
16	locking plate	1.4301	
17	antistatic element	1.4401	
18	spring locking device	1.4301	



At steam service > 150°C a technical examination is recommended.

Ordering example:
KH 3T F (NC), DN50, PN 40, 1.4408, safety spring locking device

Dimensions

DN mm	PN	dimensions (mm) H	l	L	top flange ISO 5211	Ø A	B	Kv-value m³/h	torque Nm	weight kg
15	40	67	135	130	F04	42	M5	10	5	2.1
20	40	73	135	150	F04	42	M5	25	10	2.9
25	40	80	168	160	F05	50	M6	35	11	3.9
32	40	87	168	180	F05	50	M6	46	20	5.6
40	40	103	205	200	F05	50	M6	80	26	7.4
50	40	112	218	230	F07	70	M8	110	30	10.3
65	40	156	280	290	F07	70	M8	310	70	14.4
80	40	163	376	310	F10	102	M10	360	90	23.8
100	40	194	376	350	F10	102	M10	820	120	37.2
100	16	194	376	350	F10	102	M10	820	120	34.3

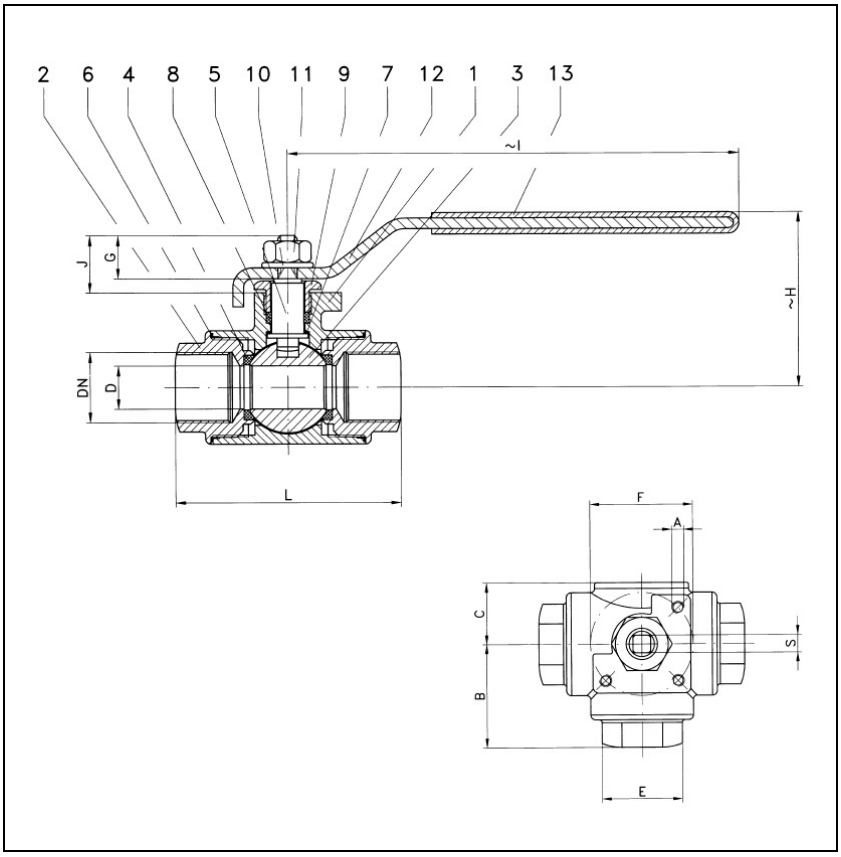
Subject to modification. 06/2016

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BALL VALVES
RK-PROBALL

KH 3W M, ¼“ - 2“, PN40/63

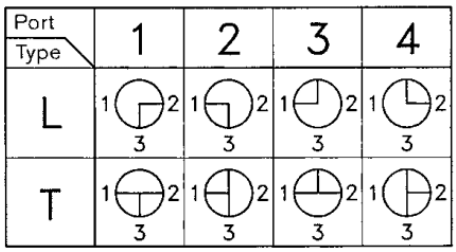


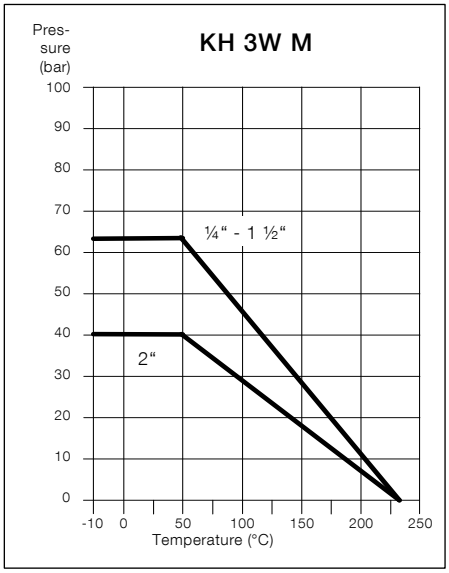
Ball valves RK-Proball KH 3W all sizes are also available with pneumatical, electrical or hydraulic actuators.

3-way ball valve with threated ends acc. to EN 10226-1 / EN ISO 228-1 reduced bore
face to face acc. to producers standard

Specification:
3-way ball valve with threated ends acc. to EN 10226-1 / EN ISO 228-1, face to face dimensions acc. to producers standard, reduced bore, ball with L- or T-bore, blow-out-proof stem, body material stainless steel (1.4408), free of non ferrous metals, seat KF, stem packing KF, DIN/ISO top flange design, approved by PED, with lever.

Marking: RK-Proball
Type: KH 3W M-1.4408





No.	Part	Material
1	body	1.4408
2	cap	1.4408
3	ball	1.4408
4	seat	KF
5	stem	1.4408
6	seal	KF
7	washer	PTFE
8	stem packing	KF
9	gland nut	1.4301
10	spring washer	1.4301
11	nut	1.4301
12	lever	1.4301
13	insulation cover	Vinyl

Dimensions

DN inch	PN	dimensions (mm) D	L	B	C	H	I	E	F	A	S	G	J	torque Nm	weight kg
¼“	63	9.5	78	39.5	22	54	157	29	42	M5 x 0,8	9	5.2	10	5	0.8
⅜“	63	9.5	78	39.5	22	54	157	29	42	M5 x 0,8	9	5.2	10	5	0.8
½“	63	12.0	78	39.5	22	54	157	29	42	M5 x 0,8	9	5.2	10	5	0.8
¾“	63	15.0	87	44.0	28	63	180	35	50	M6 x 1,0	9	7.1	13	8	1.2
1“	63	20.0	107	54.0	31	77	210	41	50	M6 x 1,0	9	12.0	22	14	1.7
1 ¼“	63	25.0	122	62.0	34	78	234	53	50	M6 x 1,0	11	17.9	27	17	2.8
1 ½“	63	32.0	132	67.5	40	82	234	58	70	M8 x 1,25	11	17.9	27	37	4.0
2“	40	40.0	160	82.0	48	88	234	73	70	M8 x 1,25	14	24.0	27	48	6.8

Ordering example: KH 3W M, 2“, PN40, 1.4408

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06/2016

Subject to modification.

NEEDLE VALVE

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RK-NEEDLE VALVES

Mini plant valve for generally application.



With conventional stuffing box or bellow sealed and safety stuffing box good solutions with clamping ring connection for your mini plant or measurement application.

Type:	High-pressure needle valve
Nominal sizes:	DN 4 - DN 10
Pressure range:	PN 250 and PN 315
Temperature:	up to +500°C
Material of body	stainless steel
End connections:	with clamping ring connection
FTF:	acc. to producers standard
Accessories:	stem extension

Special designs:

- special materials like Titanium, Hastelloy etc.
- soft seated or metal seated
- stuffing box made of Graphite or PTFE
- with female threaded ends
- with male threaded ends

- male/female variation
- light series acc. to DIN 3861
- NPT-thread

Product advantages:

- compact design
- compatible with current clamping ring connection manufacturers
- one-piece solid body
- German clean air act design design with bellow and safety stuffing box

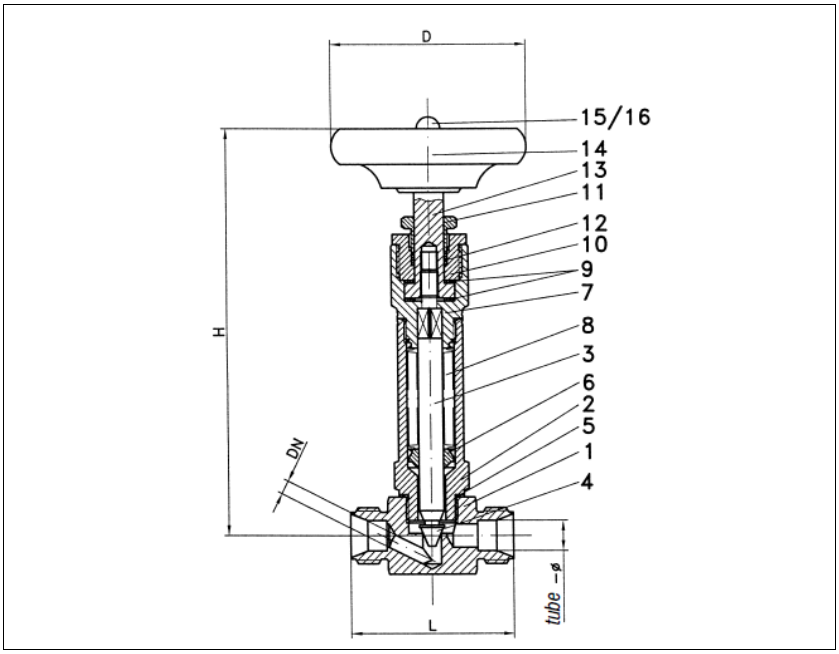
Subject to technical modification. 10/2018

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RK-NEEDLE VALVE

NVFK-HP, DN4 - DN10, PN250



High pressure needle valve with clamping ring connection and bellow face to face acc. to producers standard

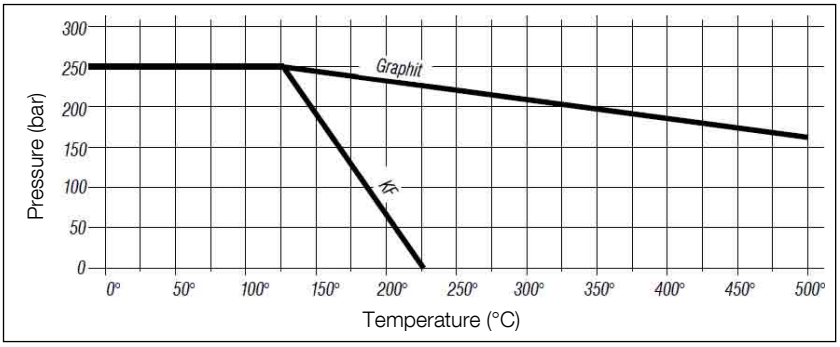
Specification:
High pressure needle valve with clamping ring connection PN 250, fully welded bellow and safety stuffing box above, body made of acid resistance forged steel (1.4571), metal tight conical globe, metal resealing, anti blow out spindle, bellow made of 3 layers fully welded, hardened shaft beared with PTFE coated friction discs, gland nut metal tight on block, stuffing box material KF or graphite, design free of non ferrous metals, clean air act confirmation, 10.000 cycles warranty.

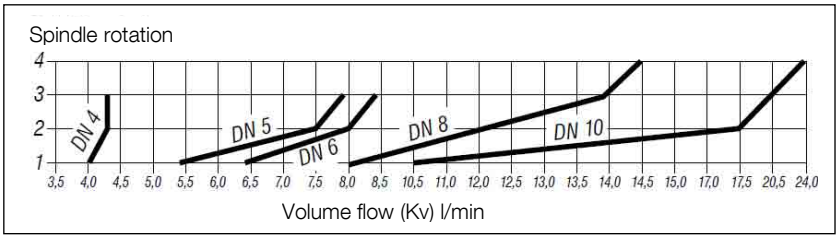
Marking: RK-Needle valve
Type: NVFK-HP-1.4571

No.	Part	Material 1.4571-KF	Material 1.4571-Graphite
1	body	1.4571	1.4571
2	bonnet	1.4571	1.4571
3	spindle	1.4571	1.4571
4	globe	1.4571	1.4571
5	body seal	1.4571	1.4571
6	below connector	1.4571	1.4571
7	upper connector	1.4571	1.4571
8	bellow	1.4571	1.4571
9	friction disc	1.4571/PTFE	1.4571/PTFE
10	gland nut	1.4571	1.4571
11	stuffing box	1.4571	1.4571
12	packing	KF	Graphite
13	shaft	1.4571	1.4571
14	hand wheel	synthetic FS31	synthetic FS31
15	washer	1.4571	1.4571
16	nut	1.4571	1.4571

Dimensions

DN	PN	tube-Ø	dimensions in mm L	H	D
4	250	6	60	151	80
5	250	8			
5	250	10	65		
6	250	12			
8	250	15	80	154	
10	250	18			





Ordering example:
NVFK-HP-1.4571-Graphite, DN8, PN250

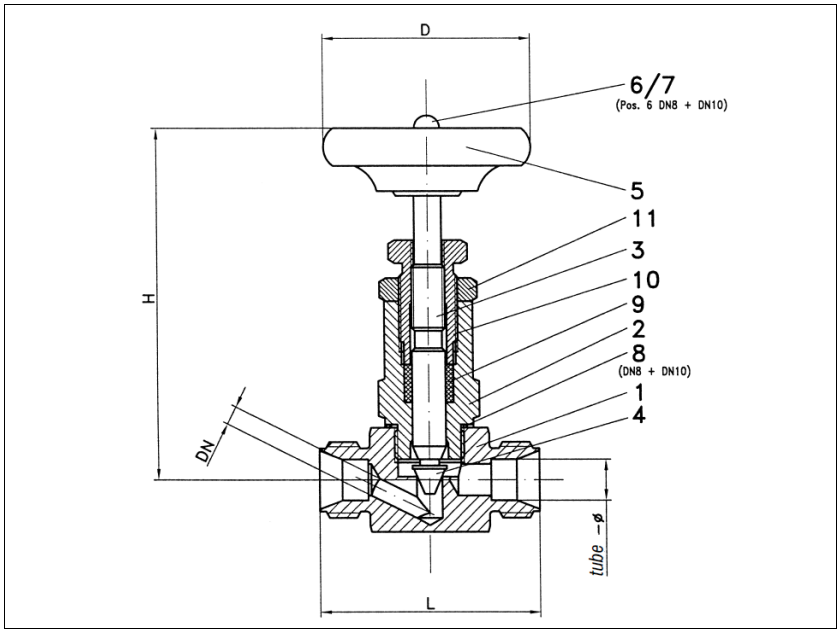
Subject to modification. 03/2017

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RK-NEEDLE VALVE

NVK-HP, DN4 - DN10, PN315



High pressure needle valve with clamping ring connection face to face acc. to producers standard

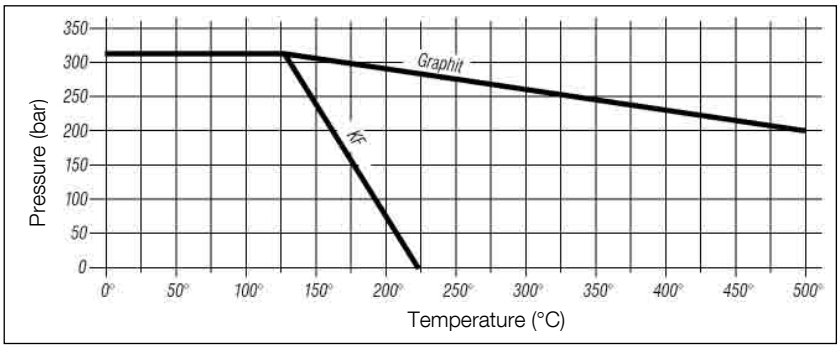
Specification:
High pressure needle valve with clamping ring connection PN 315, body made of acid resistance forged steel (1.4571), metal tight conical globe, metal resealing, anti blow out spindle, spindle thread outside located, re-tightened stuffing box, stuffing box material KF or graphite, design free of non ferrous metals.

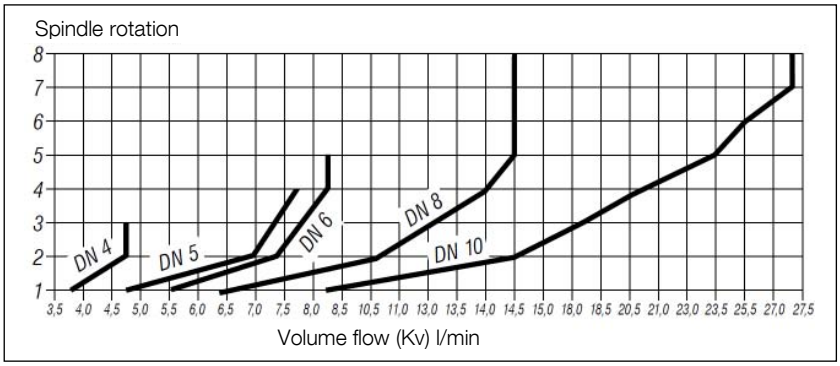
Marking: RK-Needle valve
Type: NVK-HP-1.4571

No.	Part	Material 1.4571-KF	Material 1.4571-Graphite
1	body	1.4571	1.4571
2	bonnet	1.4571	1.4571
3	spindle	1.4571	1.4571
4	globe	1.4571	1.4571
5	hand wheel	synthetic FS31	synthetic FS31
6	washer	1.4571	1.4571
7	nut	1.4571	1.4571
8	body seal	1.4571	1.4571
9	packing	KF	Graphite
10	tightening nut	1.4571	1.4571
11	nut	1.4571	1.4571

Dimensions

DN	PN	tube-Ø	dimensions in mm		
			L	H	D
4	315	6	55	84	50
5	315	8			
6	315	10			
6	315	12			
8	315	15	80	87	63
10	315	18			





Ordering example:
NVK-HP-1.4571-Graphite, DN8, PN315

Subject to modification. 03/2017

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SPECIAL APPLICATIONS

INTEC



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Duoball Valve
INTEC K200-S-FS

Ball valve with double shut-off for increased operational safety.

The Duoball ball valve developed by KLINGER Schöneberg has a double and independent shut-off, which significantly increases operational safety and reliability.

- Double closure
- Double Block & Bleed
- Increased closure safety
- Proven ball valve technology
- Leakage monitoring
- Pressure monitoring
- Flushing connection
- Defined cavity room
- Smallest possible cavity room
- Nitrogen pressure overlay
- With entrance and outlet connection to flush the cavity room
- Floating ball or trunnion mounted ball
- Soft seated or metal seated execution
- Leakage rate A, completely gas-tight
- Face to face dimensions acc. to EN 558 R1



Nominal size:	DN15 up to DN200	NPS ½“ up to NPS 8“
Design pressure:	PN16 up to PN40	Class150 up to Class300
Temperature range:	-10°C up to +400°C	-10°C up to +400°C

Subject to technical modification.

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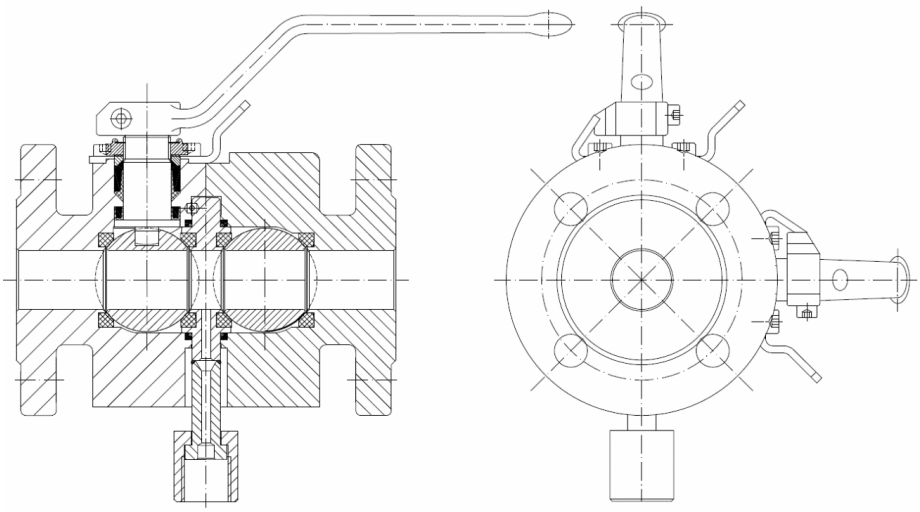
Duoball Valve INTEC K200-S-FS

Ball valve in standardized face-to-face length for higher operational reliability.

In the chemical, petrochemical and pharmaceutical industries, valves are an essential part of process plants.

Apart from influencing the fluid or gaseous mass flows, valves are required for the safe shut-off of pipelines and thus fulfil an essential safety function. For this reason, safety requirements are quite rightly high and are always an integral part of plant safety.

Especially in increasingly safety-critical applications, valves with a "double block and bleed" function are in demand. This requirement can be met by ball valves with a ball bearing and spring loaded ball seats on both sides (Double Block) and a venting or draining connection (Bleed) in the so-called dead space.



- Compared to standard ball valves, safety is significantly increased.
- The design is based on the integration of two ball valves in one body.
- Like all ball valves of the INTEC series, the Duoball valve is available with floating ball or trunnion mounted ball as well as soft or metal seated execution.
- All ball seat systems naturally fulfil the leakage rate A according to EN 12266 and are absolutely gas tight.
- Due to the double insulation and venting function, every Duoball valve is bi-directionally tight.
- In addition, the Duoball valve is also available in the standardised overall length according to EN 588 R1 and, in addition to increasing safety, offers a compact and cost-effective alternative to using several standard fittings.

Subject to technical modification.

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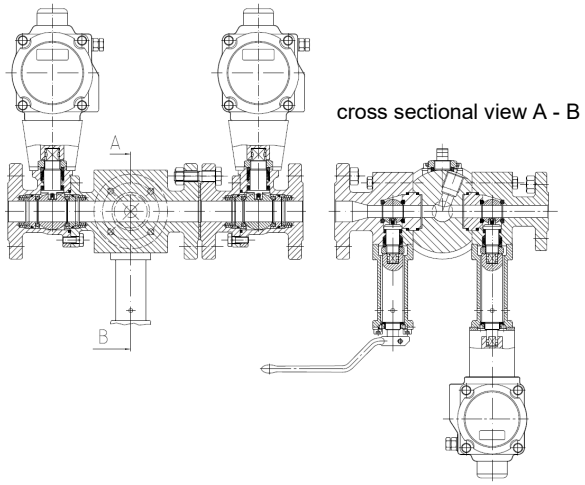
KLINGER India

Double Block & Bleed Ball Valve INTEC K220-S-DE-DB-FS

Safety device especially for Ethylene Oxide service.

- » Double closure
- » Double Block & Bleed
- » Increased closure safety
- » Proven ball valve technology
- » Leakage monitoring
- » Pressure monitoring
- » Defined cavity room
- » Flushing connection
- » Nitrogen pressure overlay
- » With entrance and outlet connection to flush the cavity room
- » Floating ball or trunnion mounted ball
- » Soft seated or metal seated execution
- » Leakage rate A, completely gas-tight
- » With two additional ball valves to seal the gap
- » Automatic pressure relief
- » Temperature monitoring of the intermediate space
- » Suitable for use in the EO field





cross sectional view A - B

Nominal size:	DN15 up to DN200	NPS ½“ up to NPS 8“
Design pressure:	PN16 up to PN40	Class150 up to Class300
Temperature range:	-196°C up to +220°C	-196°C up to +220°C

Subject to technical modification.

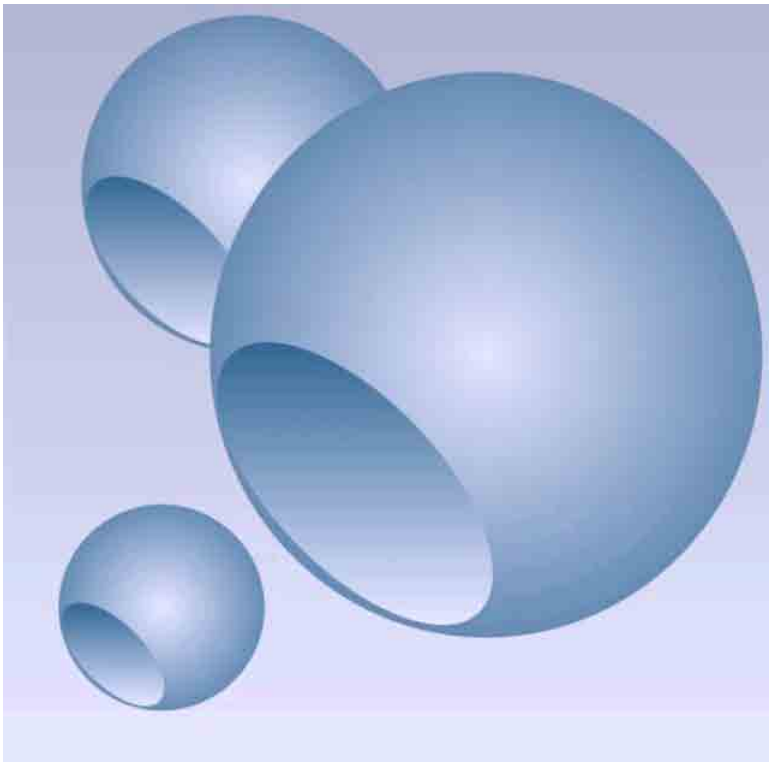
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TECHNICAL INFORMATION

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INTEC



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FLOW RATE

for Ball Valves INTEC
face to face dimensions acc. to EN 558, GR.1/GR.27/GR.107

DN	Through port [mm]	FTF length [mm]	Zeta	K_{VS} [m³/h]	cv [gal/min]
Ball Valves INTEC DN15-DN100, EN 558, GR.1					
15	15	130	0.125	25	29
20	20	150	0.102	49	57
25	25	160	0.084	85	99
32	31	180	0.070	140	164
40	40	200	0.060	258	302
50	50	230	0.053	430	503
65	65	290	0.049	755	883
80	77	310	0.043	1,135	1,328
100	100	350	0.036	2,105	2,463
Ball Valves INTEC DN15-DN500, EN 558, GR.27					
15	15	115	0.111	27	32
20	20	120	0.082	56	66
25	25	125	0.065	97	113
32	31	130	0.053	167	195
40	40	140	0.042	312	365
50	50	150	0.035	538	629
65	65	170	0.029	995	1,164
80	77	180	0.025	1,500	1,755
100	100	190	0.019	2,866	3,353
125	125	325	0.026	3,885	4,545
150	150	350	0.023	5,990	7,008
200	200	400	0.019	11,740	13,736
250	250	450	0.016	19,600	22,932
300	300	500	0.015	29,600	34,632
350	335	550	0.014	37,600	43,992
400	385	762	0.017	45,600	53,352
500	487	914	0.016	76,000	88,920
Ball Valves INTEC DN15-DN80, EN 558, GR.107					
15	15	50	0.048	41	48
20	20	50	0.034	86	101
25	25	60	0.031	141	165
32	31	65	0.026	237	277
40	40	80	0.024	413	483
50	50	95	0.022	677	792
65	65	110	0.019	1,240	1,451
80	77	145	0.020	1,672	1,956

Zeta = The pressure loss coefficient Zeta-Value is a dimensionless measure of the pressure loss in a flow-through component, such as a ball valve.

K_{VS} = The pressure loss Kvs-value corresponds to the water flow through a fully open valve, with a pressure loss of 1 bar and a water temperature of 5 - 30°C.

cv = The pressure loss cv-value corresponds to the water flow through a fully open valve, with a pressure loss of 1 PSI and a water temperature of 5 - 30°C.

Subject to modification. 02/2019

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FLOW RATE

for Ball Valves INTEC
face to face dimensions acc. to ANSI B 16.10, Class 150/Class 300

NPS	Through port [mm]	FTF length [mm]	Zeta	K_{VS} [m³/h]	cv [gal/min]
Ball Valves INTEC NPS ½“ - NPS 20“, ANSI B 16.10, Class 150					
½“	15	108	0.104	27	32
¾“	20	117	0.080	56	66
1“	25	127	0.066	96	112
1 ¼“	31	140	0.057	159	186
1 ½“	40	165	0.049	285	333
2“	50	178	0.041	489	572
2 ½“	65	190	0.032	940	1,100
3“	77	203	0.028	1,410	1,650
4“	100	229	0.024	2,610	3,054
6“	150	394	0.025	5,650	6,611
8“	200	457	0.021	10,960	12,823
10“	250	533	0.019	18,000	21,060
12“	300	610	0.018	26,900	31,473
14“	335	686	0.018	33,680	39,406
16“	385	762	0.017	45,600	53,352
20“	487	914	0.016	76,000	88,920
Ball Valves INTEC NPS ½“ - NPS 20“, ANSI B 16.10, Class 300					
½“	15	140	0.135	24	28
¾“	20	152	0.104	49	57
1“	25	165	0.086	84	98
1 ¼“	31	178	0.072	141	165
1 ½“	40	190	0.057	265	310
2“	50	216	0.050	444	519
2 ½“	65	241	0.041	830	971
3“	77	282	0.039	1,190	1,392
4“	100	305	0.031	2,262	2,647
6“	150	403	0.026	5,580	6,529
8“	200	502	0.023	10,480	12,262
10“	250	568	0.020	17,480	20,452
12“	300	648	0.019	26,100	30,537
14“	335	762	0.020	31,950	37,382
16“	385	838	0.019	43,500	50,895
20“	487	991	0.017	72,950	85,352

Zeta = The pressure loss coefficient Zeta-Value is a dimensionless measure of the pressure loss in a flow-through component, such as a ball valve.

K_{VS} = The pressure loss Kvs-value corresponds to the water flow through a fully open valve, with a pressure loss of 1 bar and a water temperature of 5 - 30°C.

cv = The pressure loss cv-value corresponds to the water flow through a fully open valve, with a pressure loss of 1 PSI and a water temperature of 5 - 30°C.

Subject to modification. 12/2018

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KLINGER India

INFORMATION

Technical Data

Conversion table for lbs./sq. inch in bar

lbs./sq. inch	bar	lbs./sq. inch	bar
1	0.0703	350	24.605
2	0.1406	400	28.120
3	0.2109	450	31.635
4	0.2812	500	35.150
5	0.3515	550	38.665
6	0.4218	600	42.180
7	0.4921	650	45.695
8	0.5624	700	49.210
9	0.6327	750	52.752
10	0.7030	800	56.240
15	1.054	850	59.755
20	1.406	900	63.270
25	1.757	950	66.785
30	2.109	1000	70.300
35	2.460	1100	77.330
40	2.812	1200	84.360
45	3.163	1300	91.390
50	3.515	1400	98.420
55	3.866	1500	105.450
60	4.218	1600	112.480
65	4.569	1700	119.510
70	4.921	1800	126.540
75	5.272	1900	133.570
80	5.624	2000	140.600
85	5.975	2100	147.630
90	6.327	2200	154.660
95	6.678	2300	161.690
100	7.030	2400	168.720
110	7.733	2500	175.750
120	8.436	2600	182.780
130	9.139	2700	189.810
140	9.842	2800	196.840
150	10.545	2900	203.870
160	11.248	3000	210.900
170	11.951		
180	12.654		
190	13.357		
200	14.060		
250	17.575		
300	21.090		

bar	lbs./sq. inch	bar	lbs./sq. inch
1	14.223	41	588.143
2	28.445	42	597.366
3	42.668	43	611.589
4	56.891	44	625.812
5	71.114	45	640.035
6	85.336	46	654.258
7	99.559	47	668.481
8	113.782	48	682.704
9	128.004	49	696.927
10	142.233	50	711.150
11	156.456	51	725.373
12	170.679	52	739.596
13	184.902	53	753.819
14	199.125	54	768.042
15	213.348	55	782.265
16	227.571	56	769.488
17	241.794	57	810.711
18	256.017	58	824.934
19	270.240	59	839.157
20	284.465	60	853.380
21	298.688	65	924.495
22	312.911	70	995.610
23	327.134	75	1066.725
24	341.357	80	1137.840
25	355.580	85	1208.955
26	369.805	90	1280.070
27	384.028	95	1351.185
28	398.251	100	1422.300
29	412.474	110	1564.530
30	426.698	120	1706.760
31	440.913	130	1848.990
32	445.136	140	1991.220
33	469.359	150	2133.450
34	483.582	160	2275.680
35	497.805	170	2417.920
36	512.028	180	2560.140
37	526.251	190	2702.370
38	540.474	200	2844.600
39	554.697		
40	568.920		

Subject to modification. 12/2016

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INFORMATION

Technical Data
Pressure-Temperature for Saturated Steam

Pressure bar	Saturation Temperature °C
0.01	6.6
0.015	12.7
0.02	17.1
0.025	20.7
0.03	23.7
0.04	28.6
0.05	32.5
0.06	35.8
0.08	41.1
0.10	45.4
0.12	49.0
0.15	53.6
0.20	59.7
0.25	64.6
0.30	68.7
0.35	72.3
0.40	75.4
0.50	80.9
0.60	85.5
0.70	89.5
0.80	93.0
0.90	96.2
1.0	99.1
1.1	101.8
1.2	104.2
1.3	106.6
1.4	108.7
1.5	110.8
1.6	112.7
1.8	116.3
2.0	119.6
2.2	122.6
2.4	125.5
2.6	128.1
2.8	130.5
3.0	132.9
3.2	135.1
3.4	137.2
3.6	139.2
3.8	141.1
4.0	142.9
4.5	147.2
5.0	151.1
5.5	154.7
6.0	158.1
6.5	161.2
7.0	164.2
7.5	167.0
8.0	169.6

Pressure bar	Saturation Temperature °C
8.5	172.1
9.0	174.5
9.5	176.8
10	179.0
11	183.2
12	187.1
13	190.7
14	194.1
15	197.4
16	200.4
17	203.4
18	206.2
19	208.8
20	211.4
22	216.2
24	220.8
26	225.0
28	229.0
30	232.8
32	236.4
34	239.8
36	243.1
38	246.2
40	249.2
42	252.1
44	254.9
46	257.6
48	260.2
50	262.7
55	268.7
60	274.3
65	279.6
70	284.5
75	289.2
80	293.6
85	297.9
90	301.9
95	305.8
100	309.5
110	316.5
120	323.1
130	329.3
140	335.0
150	340.5
160	345.7
180	355.4
200	364.2
225	374.0

Subject to modification. 12/2016

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