

Brochure Ball Valves



- Chemical
- Petrochemical
- Food industry
- HVAC
- Steel industry
- Steam installations
- Pharmaceutical industry
- Power plants
- Pulp & Paper
- Oil & Gas
- OEM
- Water installations
- Tank storage





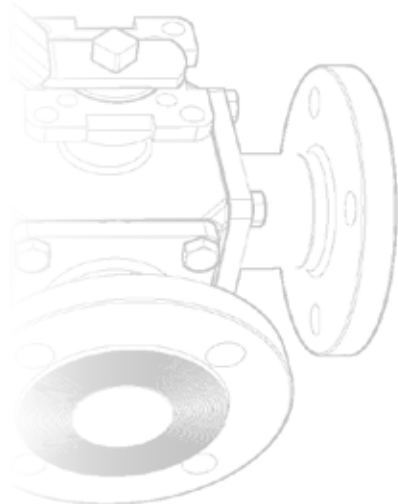
BALL VALVES



In our extensive stock of ball valves you will find a wide range of products. We keep a large stock of 1-, 2- and 3-piece ball valves with various connections.

From brass ball valves for simple applications to Trunnion ball valves in exotic materials, they have no secrets for us. If you're looking for a ball valve of excellent quality and with a short delivery time, then you came to the right place at Sodeco Valves.

You can also rely on Sodeco Valves for specials. We will search for the appropriate ball valve for you with the correct properties for your process, taking into account temperature, pressure and medium.



We offer customized solutions for high temperatures as well as cryogenic applications.

Furthermore, our ball valves have an extensive certification so various inspections such as fire-safe, TA-Luft or food inspections are possible.



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FLOATING BALL SOFT & METAL SEATED

DIN

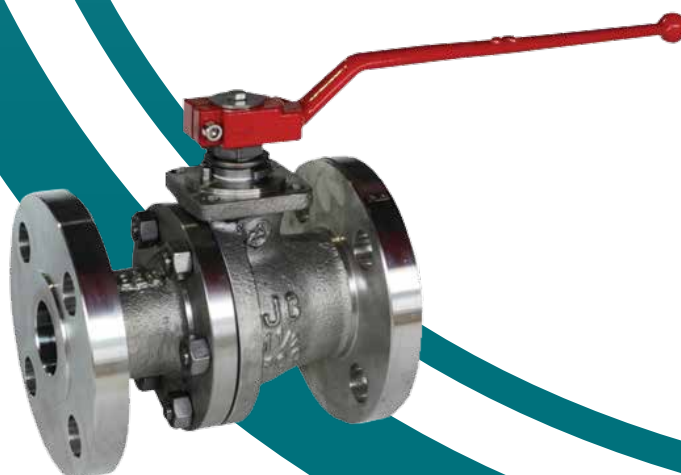
PN16 - PN40 FULL BORE
DN15 to DN200
PN63 – PN100 FULL BORE
DN15 to DN100
Short pattern or long pattern

ANSI

Class 150 – 300 FULL & REDUCED BORE
½" – 12"
Class 600 FULL & REDUCED BORE
½" – 4"
Class 900 – 1500 – 2500 FULL & REDUCED BORE
½" – 2"

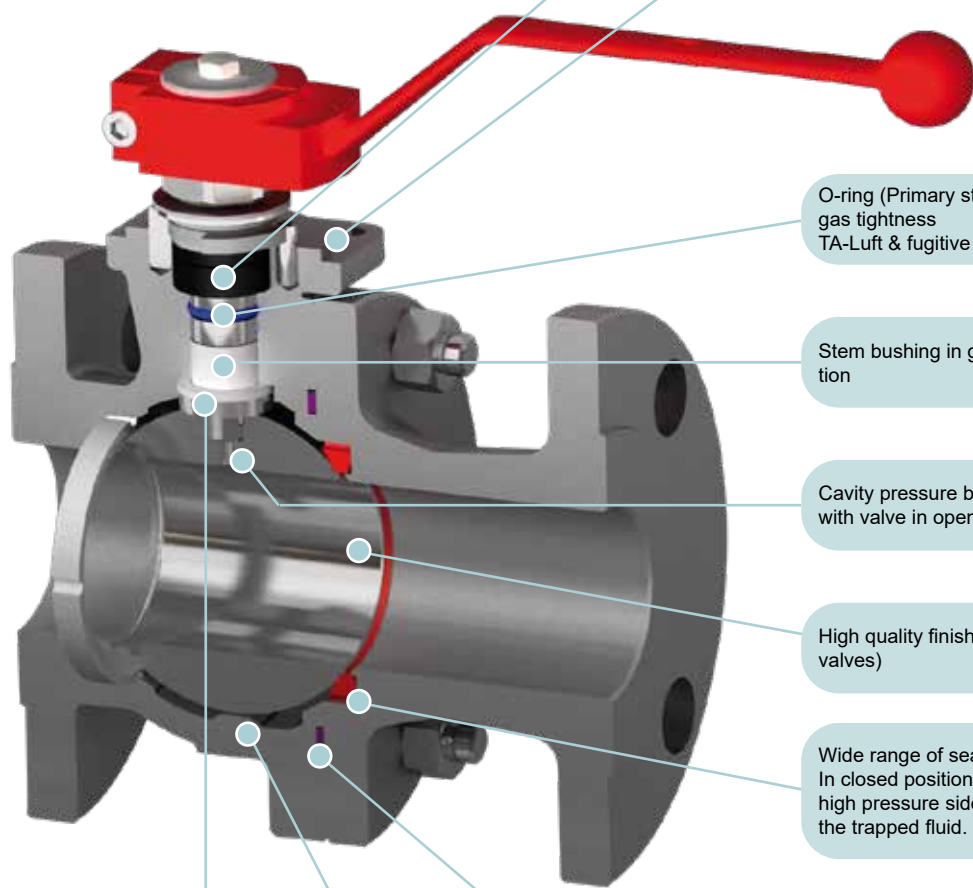
MATERIALS

Carbon Steel (A105N/WCC/LF2),
Stainless Steel (CF8M/F316/F51) & Alloys





FLOATING



Live loaded packing guarantees a perfect stem tightness, even under the harshest fluctuating conditions

ISO 5211 mounting flange for easy automation

O-ring (Primary stem seal) packing in FKM (*) for perfect gas tightness
TA-Luft & fugitive emissions certified to ISO 15848-1

Stem bushing in glass fibre filled PTFE for smooth operation

Cavity pressure balancing hole for pressure equalization with valve in open position

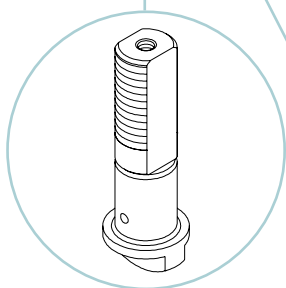
High quality finish with polished ball Ra1 (soft seated valves)

Wide range of seats materials from -196 °C up to 343 °C. In closed position, cavity overpressure is relieved to the high pressure side in the event of thermal expansion of the trapped fluid.

Spiral Wound body gasket (316L + PTFE + graphite)

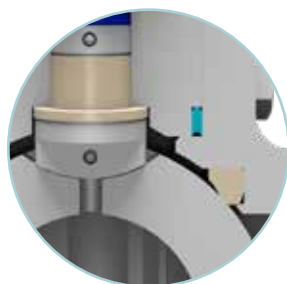
Internal body ribs prevent ball from dropping in the event that seats are destroyed by a fire (see Fire Safe)

Anti-blowout stem with double, non-removable anti-static device

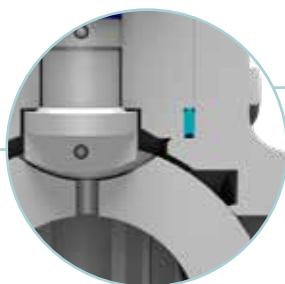


Fire-safe certified to API607 & ISO 10497

Full traceability with tagplate & serial number



BEFORE FIRE



AFTER FIRE

* Other options available



METAL SEATED



- For temperature > 260°C
- Abrasive media
- High velocity in opening/closing cycles

HARDENING TREATMENTS

HT-70

Max. Temperature: 550 °C
Corrosion Resistance: Medium
Abrasion Resistance: High

Is a Tungsten Carbide coating in a metallic matrix bonded mechanically to the base material by HVOF methods. This treatment gives a very good resistance to abrasion and impact and is suitable to work up to 550 °C.



HT-60

Max. Temperature: 800 °C
Corrosion Resistance: High
Abrasion Resistance: High

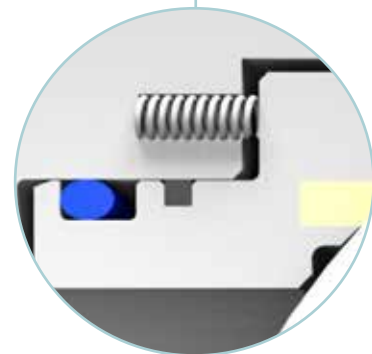
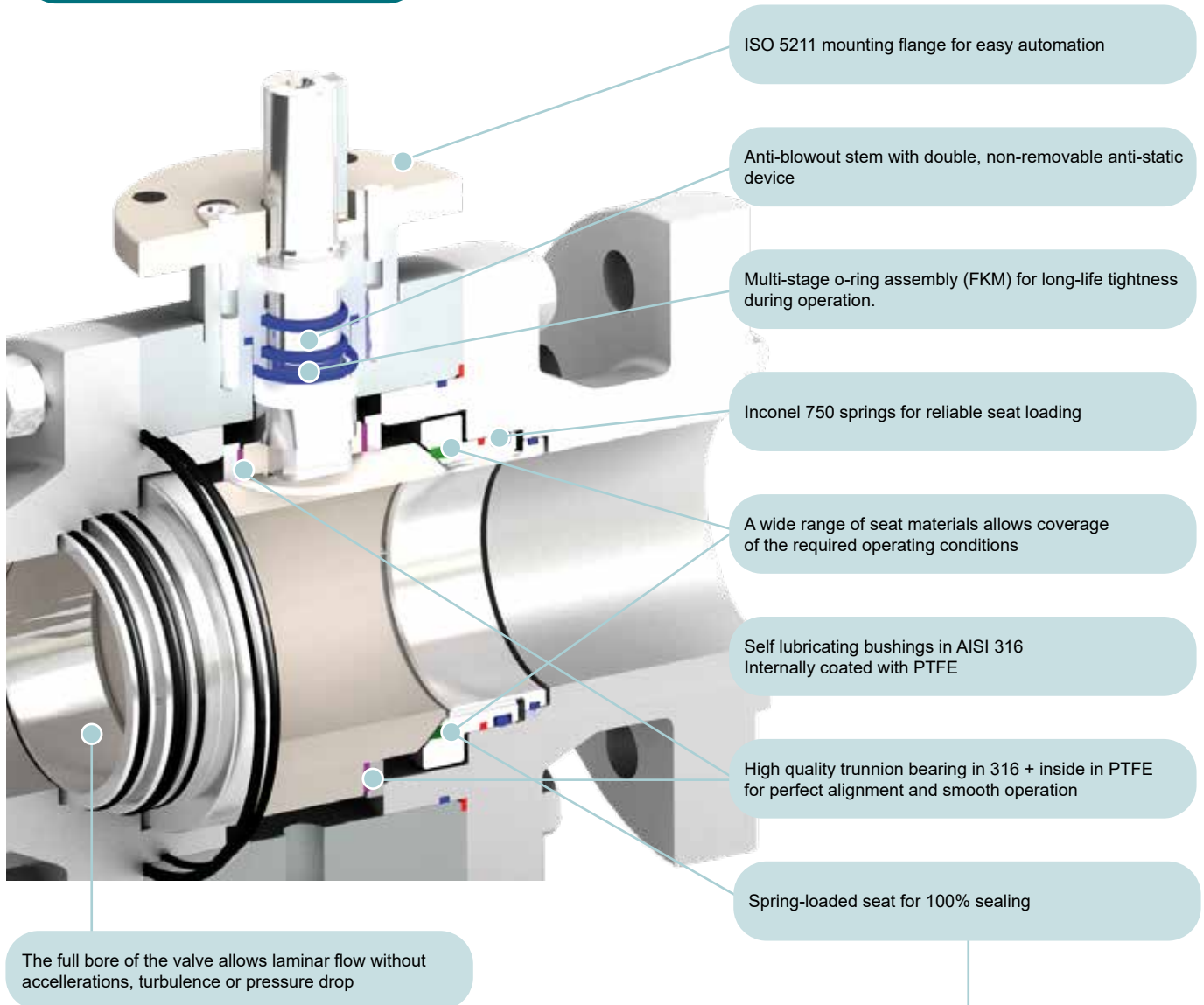
Is a Chromium Carbide coating in a nickel-chrome base in a metallic matrix bonded mechanically to the base material by HVOF methods. This treatment gives a very good resistance to abrasion and is the best choice for severe corrosion applications. It is suitable to work up to 800 °C.

HT-65

Max. Temperature: 500 °C
Corrosion Resistance: Medium
Abrasion Resistance: Medium

This is an exclusive treatment developed by JC with two main advantages: first all the ball and seat surface is hardened and second there is no additional overlay on the seat surface. This gives a very good tightness and a lower torque. The surface is hardened to 65 Rockwell C and it is valid to work up to 500 °C.

TRUNNION





BALL VALVES

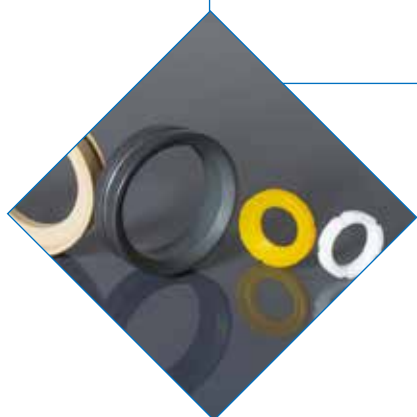
TYPE + BODY + BALL + SEATS



516 I I T

BODY	
H	Cast iron
A	Steel
I	Stainless steel

BALL	
I	Stainless steel

SEATS	
T	PTFE
S	Stansit
P	PEEK
VX1	VX-1
CF	PTFE (cavity filler)
CG	PTFE + 25% carbon graphite
GF	PTFE + 15% glassfiber
USP	Seats & packings certified FDA - USP - Class VI
H	Tru-Therm Th99
D	Devlon



TYPE												
		FULL BORE										
		FLOATING			SEMI-TRUNNION		TRUNNION					
		PN 16	PN 40		PN 16	PN 40						
DIN	SHORT FTF	516	540		1516	1540						
		3516	3540									
	LONG FTF	316	340									
		3316	3340									
		150#	300#	600#	150#	300#	150#	300#	600#			
ANSI		515	530	560	1515	1530	2515	2530	2560			
		3515	3530	3560			2515	2530	2560			
							6015 *	6030 *	6060 *			
							6015 *	6030 *	6060 *			
		REDUCED BORE										
		FLOATING			TRUNNION							
		150#	300#	600#	150#	300#	600#	900#	1500#			
ANSI		715	730	660	7015 *	7030 *	7060 *	7090 *	7050 *			
		3515	3530	3560	7015 *	7030 *	7060 *	7090 *	7050 *			

Articles in purple: metal seated

* : 3-piece body

1: trunnion version also available in Class 900, 1500 & 2500

2: trunnion version also available in Class 2500





Lever - oval handle - gearbox



Heavy duty locking device



V-port / regulating ball



- 30°
- 60°
- 90°

Cavity filler



Stem extension



Other

- Degreased (for oxygen)
- Decompression hole
- Chainwheel
- Heating jacket
- Coatings available





For manual valves

Beacon



BT

Limit or proximity switch

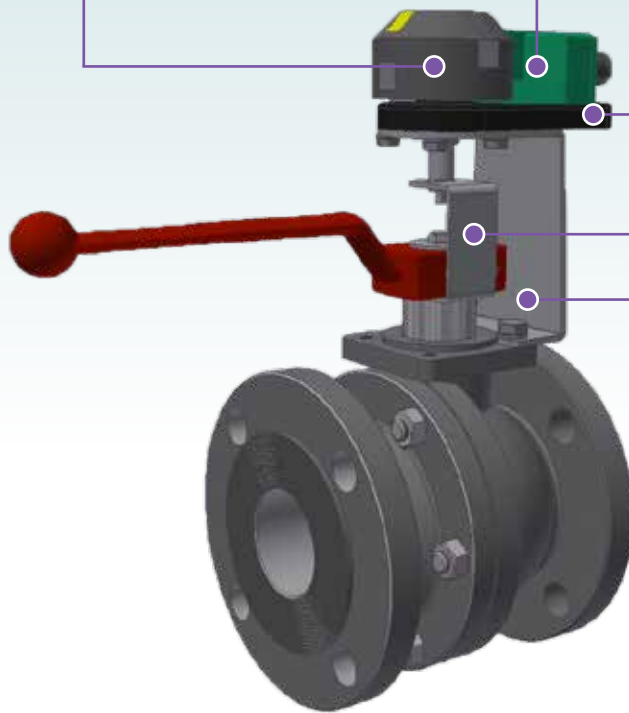


SD...

Limit switch box



SBM...



Only for SD...



EPV



CPLSJC



MBLS

For automated valves



Pneumatic actuators



Electric actuators



Pneumatic accessories





MATERIALS



Steel



Stainless steel

MOUNTING



Direct mounting



Indirect mounting

CONNECTION

BSP

acc. to DIN EN 10266



BW

acc. to ANSI B16.25 &
DIN 3239 part 1



SW

acc. to ANSI B16.11 &
DIN 3239 part 2



NPT

acc. to ASME B1.20.1





330A



350BA



DN	1/4 - 4"	1/4" - 4"
BODY	316	CF8M
BALL	316	316
STEM	316	316
SEATS	PTFE+15%GF	PTFE
PACKING	PTFE+15%GF	Chevron PTFE
PACKING GLAND	stem nut	stem nut
BODY SEAL	PTFE	PTFE
FIRE SAFE	no	no
TA-LUFT	no	no
PRESSURE CLASS	63 bar up to 2"	69 bar up to 2"
LOCKING DEVICE	yes	yes
ISO 5211 MOUNTING FLANGE	---	Coupler and mounting bracket
REPAIR KIT	no	yes
OTHER SEAT MATERIALS	no	no
STEM EXTENSION	no	yes
EXTENSION AND PROTECTION TUBE	no	yes
SPRING RETURN HANDLE	no	yes
REGULATING BALL	no	no
CONNECTION	BSP: 331A	BSP: 351BA
	BW: 332A	BW: 352BA
	SW: 333A	SW: 353BA
	NPT: 334A	NPT: 354BA



360BA



1/4" - 2" (2 1/2" RB)

A216 WCB CF8M

316 (FB) 316 (RB)

316

RPTFE

Chevron PTFE + graphite

spring washers

graphite

yes

yes

138 bar up to 1"

yes

Coupler and mounting bracket

yes

yes

yes

yes

yes

yes

BSP: 361BA / 361BAI

BW: 362BA / 362BAI

SW: 363BA / 363BAI

NPT: 364BA / 364BAI

370BA



1/4"-4"

CF8M

316 up to 1" - CF8M from 1 1/2"

316

RPTFE

Chevron PTFE
+ PTFE 25% G.F.

spring washers

PTFE

no

yes

69 bar up to 2"

yes

Direct mounting

yes

no

yes

yes

yes

no

BSP: 371BA

BW: 372BA

SW: 373BA

NPT: 374BA

390BA



1/4" - 4"

CF8M

316

316

RPTFE

Chevron PTFE + graphite,
Viton o-ring

spring washers

PTFE graphite

no (option)

yes

138 bar up to 1"

yes

Direct mounting

yes

yes

yes

yes

yes

yes (option)

BSP: 391BA

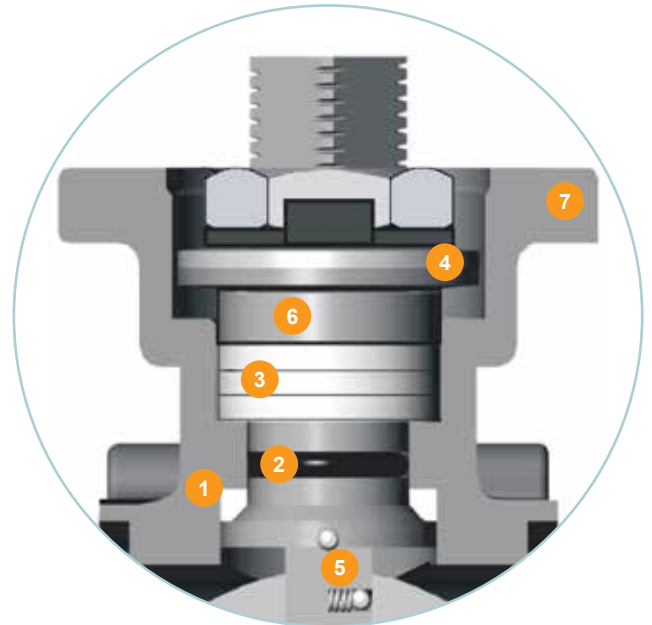
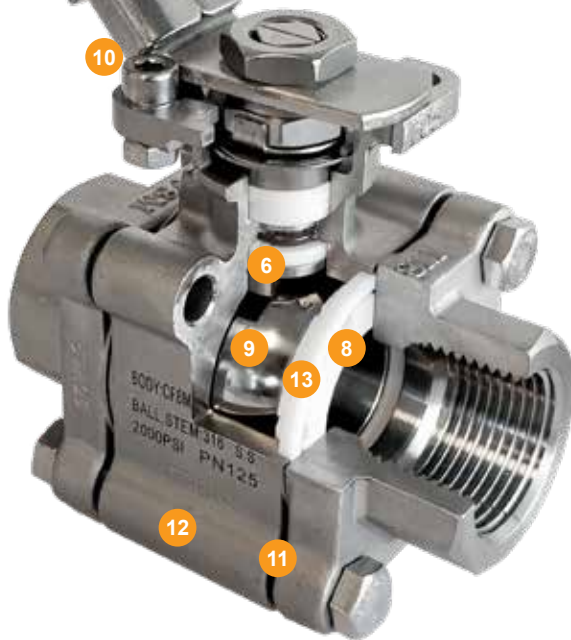
BW: 392BA

SW: 393BA

NPT: 394BA



390BA - DESIGN AND ADVANTAGES



1 **Pyramidal stem with stem seal.**
First stage of defense against leakage. The 45° slope of the stem with the stem seal effectively blocks all leak path during rotation

2 **O-ring stem packing.**
Second stage of defense against leakage. Enhances stem seal and maintains stem alignment, provides extra long service life

3 **V-ring stem packing.**
Third stage of defense against leakage. Multiple layers of V-ring Chevron packing expands sideways as it is being compressed, which guarantees perfect stem tightness.

4 **Belleville washers.**
Automatically compress the seals to adjust for wear, pressure and temperature fluctuations

5 **Double antistatic device.**
Stem-to-ball and stem-to-body as standard

6 **Super smooth stem finish.**
Reduces seal friction and operating torque, prolongs service life

6 **Optimized stem design.**
Provides perfect stem seal and extremely high cycle life

6 **Blow-out proof stem**

7 **Dual pattern ISO 5211 mounting pad with square shaft**
No bracket and adapter are required for actuator mounting, providing easy and low cost actuation with improved cycle life

8 **Seats**
Features with relief slots to relieve pressure in upstream, reducing seat wear and valve torque

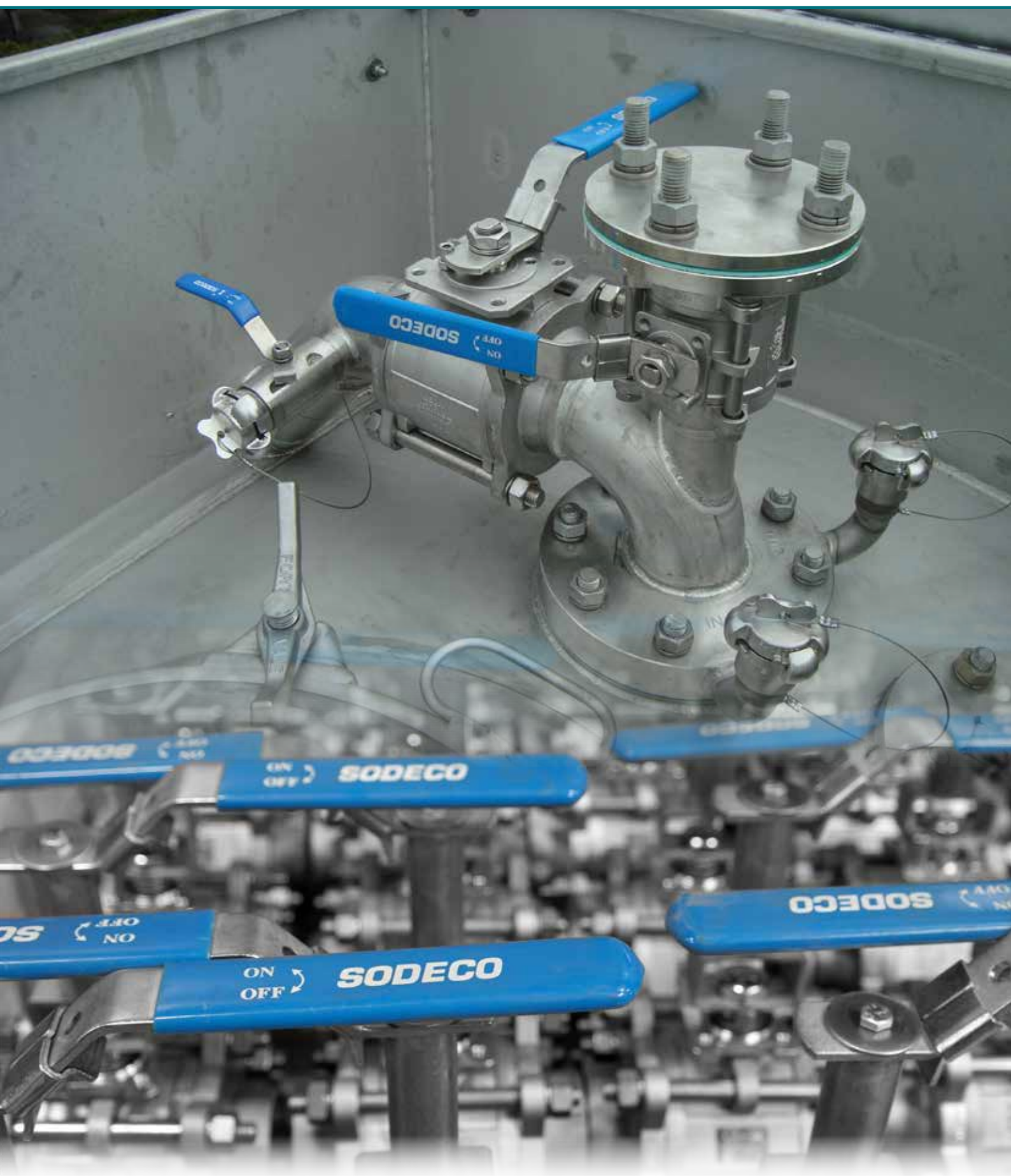
9 **Floating ball.**
Precisely machined, mirror polished solid ball for bubbletight shut-off with less operation torque. A relief hole in stem slot to balance the pressure in the body cavity ensures tight shut-off and reliable operation

10 **Locking device (standard)**
to prevent unauthorized operation

11 **3-piece body with swing-out design**
Fast and simple inline maintenance

12 **Encapsulated body bolts (up to 2")**
Enhance environment protection essential for API 607 Fire-Safe qualification

13 **Fully contained body seals**
Allows in line welding without disassembly, maintains sealing integrity from high vacuum to high pressure and temperature application



**10AIT / 10IITB / 10NFAIT / 10NFIITB****WAFER**

- Bar stock (10...) body or cast body (10NF) in steel (AIT) or stainless steel (IITB)
- Full body (10AIT/10IITB) or reduced body (10NFAIT/10NFIITB)
- With floating ball
- PTFE seats
- Anti blow-out stem
- Antistatic construction
- Fire Safe: standard for execution in steel, on request for execution in stainless steel
- Additional stem seal o-ring
- Mounting flange acc. to ISO5211
- PN 16, PN 40, ANSI 150, ANSI 300, PN 64, PN 100, ANSI 600

**11IITB / 11CAIT****HEATING JACKET**

- Steam jacket with threaded or flanged ends
- Body without cavities (11CAIT only)
- PN 16, PN 40, ANSI 150, ANSI 300 , PN 64, PN 100, ANSI 600



20R/T - 21R/T - 22R/T

BAR STOCK



- Reduced (R) or full body (T) from bar stock in steel (AIT) or stainless steel (IIT)
- 20R/T class 800# (PN130) - 1000 psi
- 21R/T class 1500# (PN210) - 3000 psi
- 22R/T class 2500# (PN420) - 6000 psi
- Connection: BSP, BW, SW or NPT

A241 / A242 / A243 / A244

3-PIECE BODY



- 3-piece ball valve, full bore
- Anti blow-out stem
- Anti static device
- Fire Safe: standard for execution in steel, on request for execution in stainless steel
- Additional stem seal with O-ring
- Mounting flange in accordance with ISO 5211
- Connection: BSP, BW, SW or NPT
- 800 psi / PN 64

A606 / A615

FLANGED



- Body in steel or stainless steel
- ANSI 150 # - ANSI 2500 #
- Reduced or full bore





256AITFM - 256IITFM



- Body in steel (AITFM) or stainless steel (IITFM)
- Ball in stainless steel A 351 Gr. CF8M
- Seats in PTFE
- Max. working pressure: 40 bar (DN 15 to DN 50),
16 bar (DN 65 to DN 200)



- Face to face: DIN 3202 F18
- Connection: flanged PN 16/40 (DN 15 to DN 50),
PN 16 (DN 65 to DN 200)
- ISO mounting flange
- Fire safe according to ISO 10497
- With lever in steel
- Also available: PN 40, ANSI 150, ANSI 300, long pattern

456AIGF - 456IIGF



- 2-piece body in steel (AIGF) or stainless steel (IIGF)
- Seats in PTFE+ glass fibre
- Short pattern
- Mounting flange according to ISO 5211
- PN 16

615AIGF - 615IIGF



- 2-piece body in steel (AIGF) or stainless steel (IIGF)
- Seats in PTFE+ glass fibre
- Short pattern
- Mounting flange according to ISO 5211
- ANSI 150



150HIT



- Body in cast iron GG-20
- Ball in stainless steel
- PTFE seats
- Face-to-face dimensions according to DIN 3202 F18 (short)
- Mounting flange according to ISO 5211
- PN16

156IIT-0303



- Ball valve in stainless steel
- Short pattern (face-to-face)
- Seats: PTFE+ fibreglass
- Mounting flange according to ISO 5211
- PN16



BRASS



04900L / 04900T

- Floating ball
- Full bore
- L- or T-port
- Seats in PTFE
- BSP threaded
- With lever in aluminium



STAINLESS STEEL

1370L / 1370T

- floating ball
- reduced bore
- L- or T-port
- Seats in PTFE + 15% glass fiber
- BSP threaded
- With lever in stainless steel



1372L / 1372T

- floating ball
- reduced bore
- L- or T-port
- Seats in PTFE + 15% glass fiber
- NPT threaded
- With lever in stainless steel

OTHER 3-WAY VALVES

915 - 916

- Body in steel (AIT) or stainless steel (IIT)
- L- or T-port



103AIT(L/T) - 103IITB(L/T)

- Body in steel (AIT) or stainless steel (IITB)
- L- or T-port





3-WAY / 4-WAY / 5-WAY

V33H - V36H

- Body in steel (AIT) or stainless steel (IIT)
- L, T, X or I-port



FLOW PATTERNS

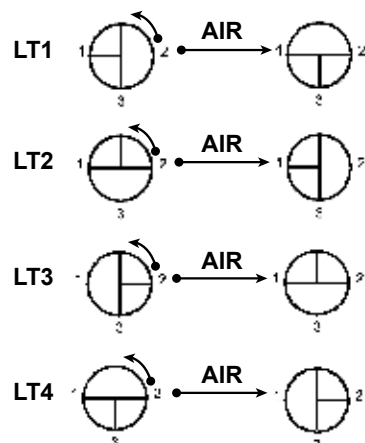
CONFIGURATION AND ROTATION OF THE BALL

Single acting actuator, normally closed (PE, ASR, ...)
Air operates the valve in anti-clockwise direction
Springs operate the valve in clockwise direction
Standard configuration

L - PORT

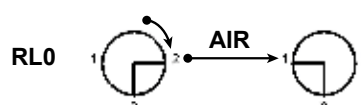


T - PORT

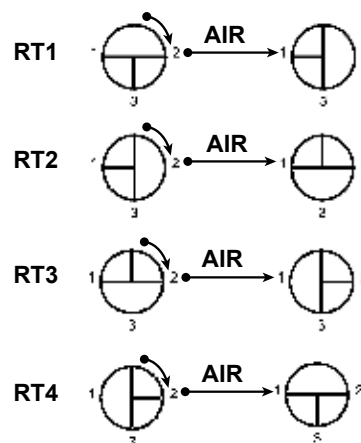


Single acting actuator, normally open (PE, ASR, ...)
Air operates the valve in clockwise direction
Springs operate the valve in anti-clockwise direction
Conversion necessary

L - PORT



T - PORT



EXAMPLES:

RL0: Ball (L - port) is turning clockwise from position 0° to position 90°

LT1: Ball (T - port) is turning counter-clockwise from position 0° to position 90°

NOTE: For single acting actuators, the first position is the 'fail safe' position in case of air failure



LINED BALL VALVES



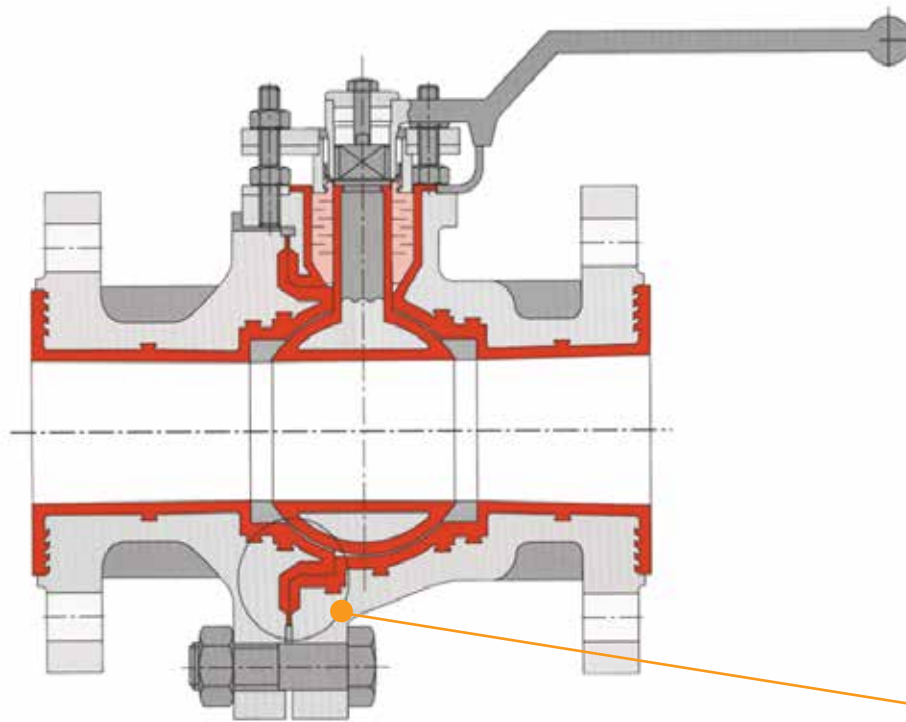
KN/KNA

Design - ISO/DIN (KN) or ANSI 150 (KNA)
 Nominal Pressure - 16 bar
 Lining - PFA
 Housing Material - EN-JS 1049 with epoxy coating
 Face-to-Face - DIN EN 558-1 and ISO 5752 series 1 or ANSI B16.10
 Flanges drilled to EN 1092 or ASME B16.5 class 150, raised face
 Temperature Range -60 °C to +200 °C (-75 °F to +400 °F)
 Certifications - EU Pressure Equipment Directive 2014/68/EU, German Clean Air Act (TA-Luft), SIL

KK

Design - DIN/ISO ANSI/ISA-75.08.01
 Nominal Pressure - 16 bar
 Lining - PFA
 Housing Material - EN-JS 1049 / ASTM A395 with epoxy coating
 Face-to-Face - DN + 50 mm
 Flangeless
 Temperature Range - -60 °C to +200 °C (-75 °F to +400 °F)
 Certifications - EU Pressure Equipment Directive 2014/68/EU, German Clean Air Act (TA-Luft)





Pure PFA lining
Min. 3,5 mm thickness (5 mm option)

Labyrinth body seal

Dove tail
Vacuum-proof anchoring of the lining



- *Bellow-type stem-packing*
- *TA-Luft*
- *Other materials available on request*

BALL VERSIONS



1-piece PFA ball/stem
(standard)



Al₂O₃ ceramic ball
with separate stem
(optional)



Cavity-free TF ball
for optimum draining and
flushing (optional)



V-control ball
high-quality flow control,
play-free (optional)





33



PN 40

- Body in brass, nickel plated
- Ball in Brass CW617N
- Seats in PTFE
- Connection: BSP threaded
Available on request:
 - NPT threaded
 - Male/female threaded

90



PN 25

60/84



Gas

93



With bleed nipple (vent)

89



PN 25

S2000



- Body in brass CW617N
- Ball in Brass CW617N
- Seats in PTFE + 15% carbon
- Connection: BSP threaded
- ISO flange for direct mount

S2000AD
S2000AS



AD: with double acting pneumatic actuator

AS: with pneumatic actuator spring return, spring to close, air to open

S2000PD
S2000PE



PD: with double acting pneumatic actuator

PE: with pneumatic actuator spring return, spring to close, air to open



STANDARD EXECUTION

101IIT - 102IIT



- Body in stainless steel - PN 64
- Locking device
- Reduced bore
- Temperature: -50°C up to +230°C
- Connection: BSP threaded (101IIT) or NPT threaded (102IIT)

HIGH PRESSURE

BKH/BKHI/BKHP/BKHPI



- Body in steel (BKH & BKHP) or stainless steel (BKHI & BKHPI)
- With ISO mounting (BKHP & BKHPI)
- Temperature: steel -20°C ~ +100°C
stainless steel -30°C ~ +100°C
- Suitable for gas (BKHI & BKHPI only)
- Connection: BSP threaded
- For working pressure up to 500 bar (depending on DN)



221AIIT - 222AIIT



- Body in stainless steel
- Max. working pressure: 63 bar
- Full bore
- Connection: BSP threaded (221AIIT) or NPT threaded (222AIIT)

212AIIT



- Body in stainless steel
- Working pressure: 138 bar (1/4" ~ 1"), 103 bar (1 1/4" ~ 2")
- Full bore
- Connection: NPT threaded

231AIIT



- Body in stainless steel
- Max. working pressure: 69 bar
- Full bore
- Connection: BSP threaded

231BAIT



- Body in stainless steel
- Max. working pressure: 69 bar
- Full bore
- Connection: BSP threaded
- Optional: with spring return lever

231AAIT



- Body in carbon steel A216 WCB - PN 64
- Locking device
- Full bore
- Seats: PTFE
- Connection: BSP threaded

231AIIRMF



- Body in stainless steel - PN 64
- Locking device
- Full bore
- Seats: PTFE+ glass fiber
- Connection: BSP threaded male/female

ALSO AVAILABLE

Sodeco Valves sizes, builds and performs a functional test on all automated valves. Thanks to our experienced people and our own assembly workshop with test bench we can offer flexible solutions to our customers and we aim for 100% customer satisfaction. Ask us about our possibilities!







