

ABO valve

Engineered for life

CONCENTRIC BUTTERFLY VALVES

Body design

Interflanged

Double flanged

WAFER type with through holes

LUG type with threaded holes

With through / threaded holes

Nominal size

Interflanged

Double flanged

DN32 - DN600

DN700 - DN1600 (Series 20)

DN50 - DN2200 (Series 13)

Working pressure

6 bar / 10 bar / 16 bar

Flange connection

PN6/PN10/PN16/Class 150

Working temperature

-40°C / +150°C

Working media

Potable water
Waste water
Hot industrial water
Heating water
Sea water
Chemicals
Gas / Oil and gas
Oil / Oil derivatives
Loose materials
Air
Beverages / Food
Malt
Sugar juice

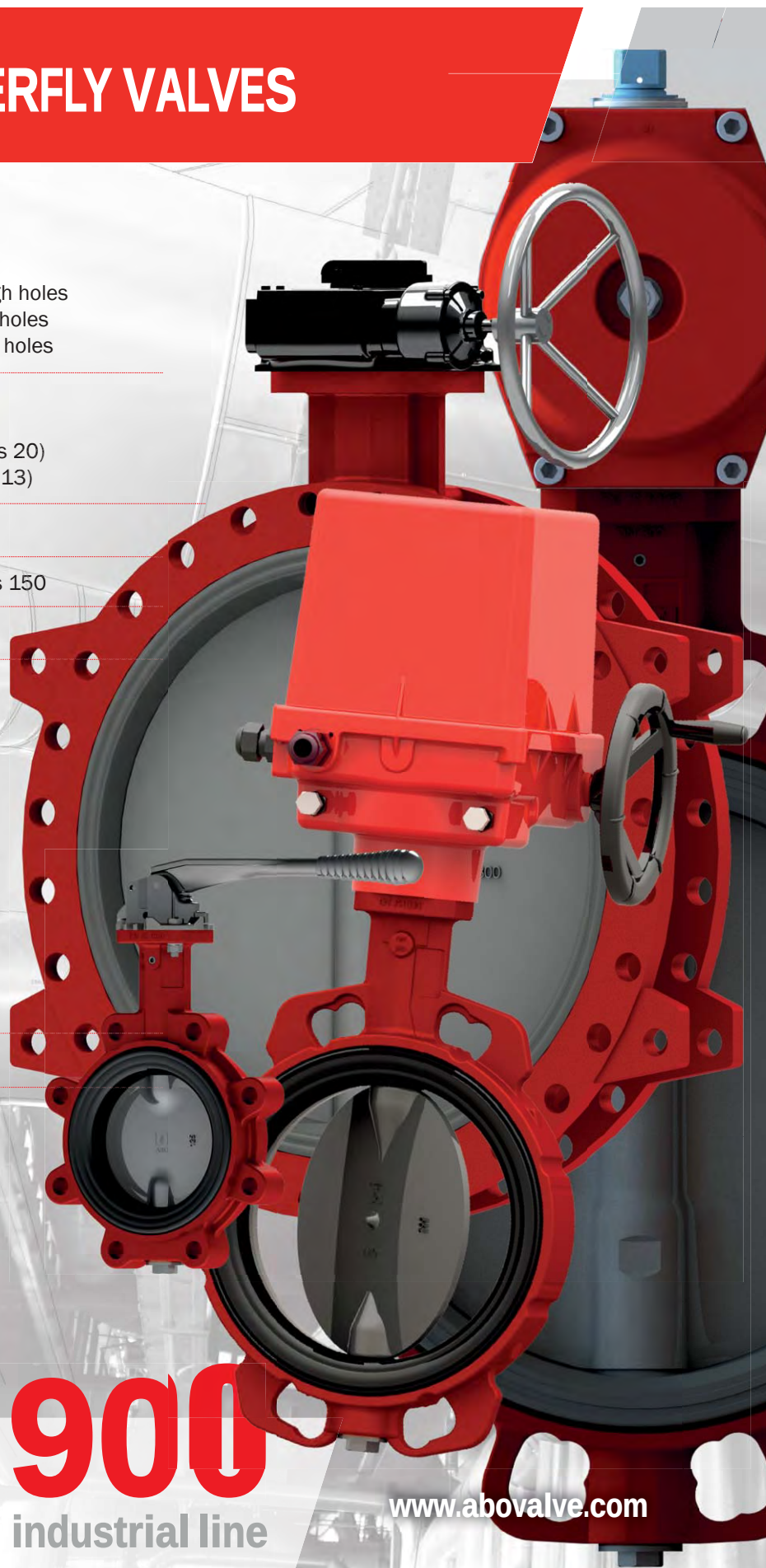
Tightness

Class A

Features

Concentric design **Bidirectional valve**

Body with safety
plug (up to DN400)
Body with pin cover
(DN450-DN600)
Demountable valve
Easy service



SERIES 900

industrial line

www.abovalve.com

GENERAL VALVE DESCRIPTION

Industrial Valve Manufacturer

Wafer/Lug/Double flanged concentric butterfly valves of Series 900 are resistant soft-sealing valves designed for industrial applications like:

- purification, treatment and distribution of potable or waste water, waste slurry treatment
- heating, heating water distribution
- ventilation, air conditioning
- conveying and distribution of sea and industrial water
- distribution of light chemicals, pharmaceuticals, oils and oil derivatives
- distribution of sugar juice, food industry applications
- conveying loose materials
- pulp and paper industry
- gas distribution
- dust or gas explosive environment (zones 0, 1; 20 and 21; except mining environment)

Basic properties

- concentric design, bidirectional
- wafer/lug type with split stem
- disc is moved by stem with diagonally fit square-end stem
- pivot plug enables to dismantle the valve (valid for wafer/lug valves up to DN 400), pin cover at DN 450-DN 600
- body long neck according to the regulations of thermoprocessing equipment
- red epoxy coating acc. RAL 2002-80 µm
- certified by DWGV for potable water and gas
- ABS certified - PED certificate
- ACS certification

Based on customers' special requests we offer:

- bonded seat - for vacuum systems with maximum absolute pressure of 200 mbar
- NBR conduct - ATEX design for group II, category 1 / 2 GD TX
- special seat types certified by FDA for food industry
- WRAS certification for potable water
- inspection certificates 3.1/3.2
- customer tailored valve design - special body or disc coatings, stem extensions for non-standard valve control etc.

Type designation

9 2 4 B

Body design

B - Wafer body with through holes
T - Lug body with tapped holes
U - Double flanged body with short face-to-face length (ISO 5752, Series 20)
F - Double flanged body with long face-to-face length (ISO 5752, Series 13)
** upon request the valve body can be coated with various types of special protecting coatings (Rilsan/Halar/A4 etc.)*

Disc material

0 - Brass 2.0402
1 - Aluminium bronze 2.0975 (C95800)
2 - Stainless steel 1.4308 (CF8)
3 - Ductile iron 0.7040 (GGG40)*
4 - Stainless steel 1.4408 (CF8M)*
5 - HASTELLOY
6 - Stainless steel 1.4539 (Uranus B6)
7 - Titanium
** upon request the disc can be coated with special coatings (Rilsan/Halar)*

Seat material

1 - NBR
2 - EPDM
3 - NBR Carboxyle (XNBR)
4 - VITON
5 - Steam silicone (VMQ)
6 - Silicone (VMQ)
7 - Epichlorhydrin (ECO)
8 - HYPALON® (CSM)
9 - NBR 70-AG
- NBR conduct
** other materials upon request*

Series designation

Series 900

Standards

Leak test

EN 12266-1, Class A
ISO 5208, Class A
API 598, Table 5
ANSI/FCI 70-2, Class VI

Face to face length

EN 558, Series 20/13
ISO 5752, Series 20/13
API 609, Table 2

Flange connection

EN 1092-1
ASME B16.5
ASME B16.47

Top flange

EN ISO 5211

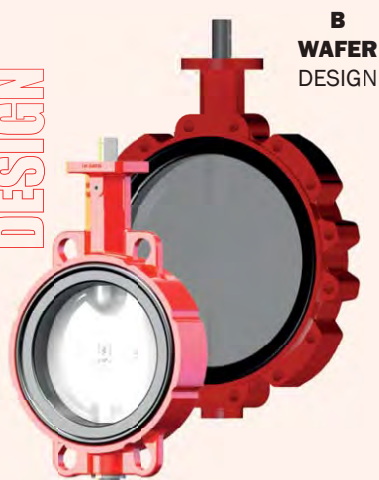
Working standard

EN 593
EN 1074-1, 2
DVGW W 363-(P)
EN 13774

DESIGN MODELS



INTERFLANGED
DESIGN



DN32-DN600

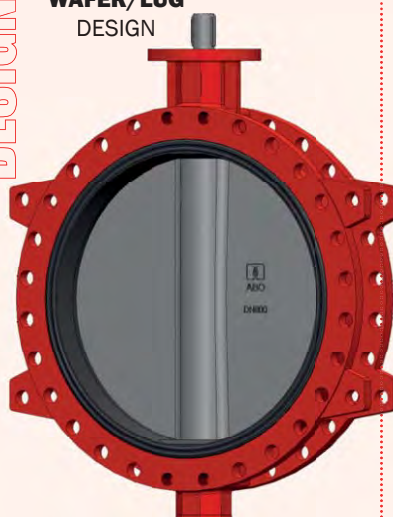
T
LUG
DESIGN



DN32-DN600

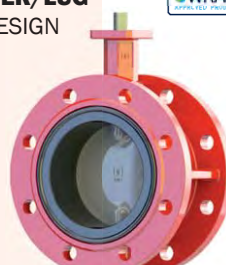
DOUBLEFLANGED
DESIGN

U
WAFFER/LUG
DESIGN



DN700-DN1600
Short face-to-face length
Series 20

F
WAFFER/LUG
DESIGN



DN50-DN2200
Long face-to-face length
Series 13

DVGW CERTIFICATION
GAS / POTABLE WATER



DN32-DN400

ALUMINIUM
BODY

B
WAFFER
DESIGN



DN32-DN300

Quality control

- ABO valve production facilities are certified in accordance with ISO 9001:2015 (ISO 14001, 45001)
- tightness test procedures according to standards EN 12266-1, ISO 5208, ANSI/FCI 70-2
- production in accordance with the Pressure Equipment Directive 2014/68/EU (Module H)
- 3.1, 3.2 inspection certificates
- all the actuators are adjusted and tested while assembled
- manual actuator, if delivered, is adjusted and tested while assembled
- all the certificates can be downloaded from www.abovalve.com

For natural gas interflanged distribution systems

are offered gas versions valves of the Series 99xx. The gas valves are fitted with a control lever with a yellow sleeve. The valves are designed for natural gas, are supplied with a special set of seat with **DVGW** certification, tightness class A, working pressure max. 10 bar.

For distribution of potable water

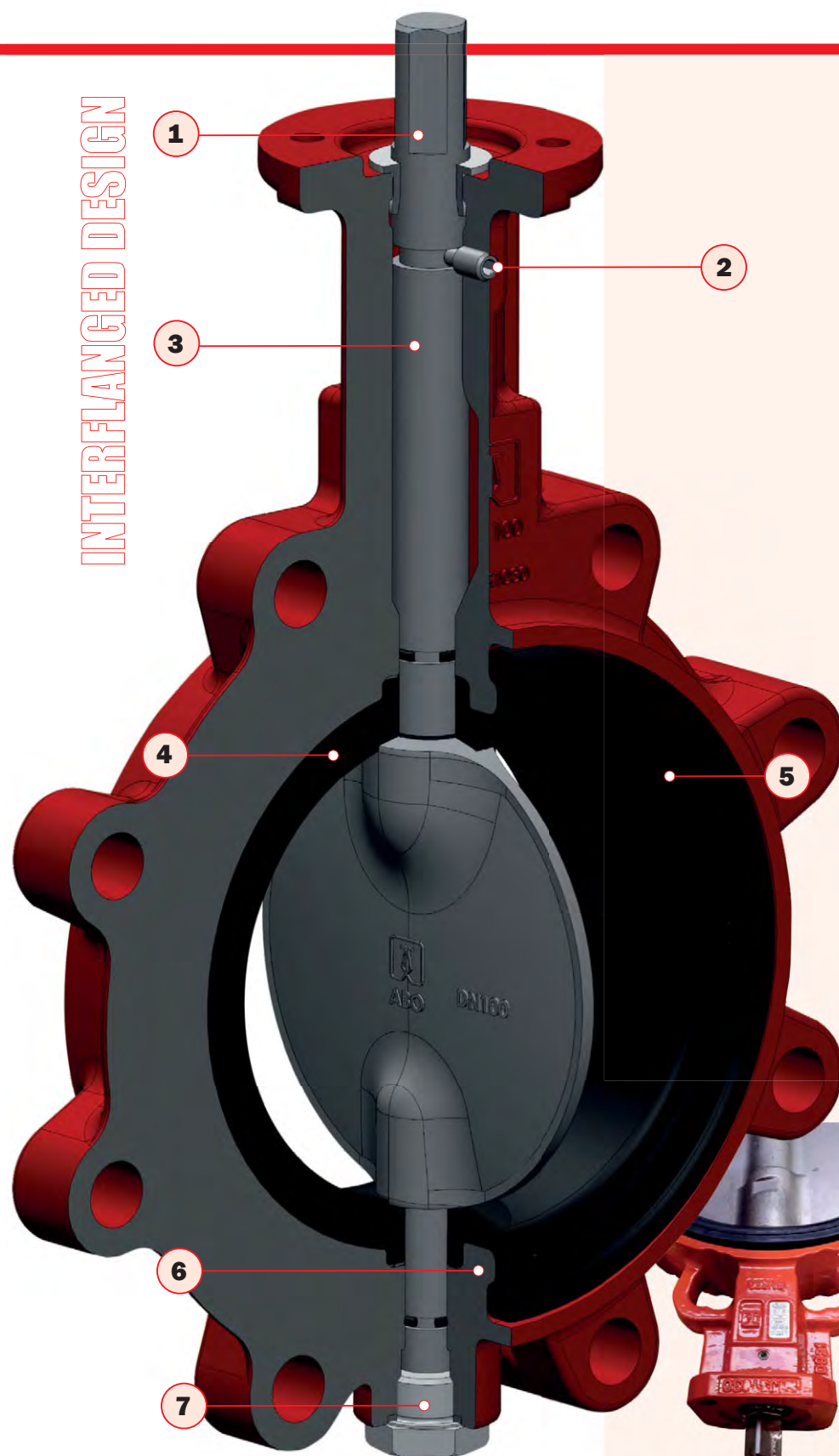
are offered valves of Series 900 with special set of seats with **DVGW/WRAS** certification. The valves are designed for cold water, inc. potable water, tightness class A, working pressure 10/16 bar. The valves are equipped with control lever with a grey sleeve.

As a lightweight variant (valves with lower weight) are offered valves of Series 900 with aluminium body, working pressure 10/16 bar, working temperature: -40 °C / +150 °C.

DESIGN ADVANTAGES

Industrial Valve Manufacturer

INTERFLANGED DESIGN



1. International standard compatibility

- according to the standard ISO 5211 top flange enables to directly mount any manual operators and actuators. Valve long neck enables to use insulation and protects control elements on the ISO flange. The design meets requirements on heating system control fittings.

2. Blow-out proof shaft system

- a retaining bolt disables a stem movement upwards

3. Splitted stem

- with the divided stem the valve reaches better Kv/Cv values and thus a low pressure loss.

4. Seat design

- seat profile in the body (groove and tongue system) prevents the seat to slip out from the body when the disc moves.

5. Dougle side profile

- enables to correctly fit the seat in the body

6. Groove shape

- the seat is inserted in the stem position inside the body profile to enable better support.

7. Demountable design

- enables to simply change the seal.



< DN 400
retaining washer
against stem
movement

> DN 400
retaining bolt
against stem
blow-out

4 / ABO Valve Czech

BODY SURFACE TREATMENT / SEAT ANCHORING

 **ABO** valve

Body surface treatment

Epoxy coating

Standard ABO high quality epoxy coating system, complying with the C2 corrosion aggressiveness degree according to the standard ČSN EN ISO 12944-1, minimum coating thickness 80 µm.

Marine environment coating

Resistant coating suitable for marine environment or high corrosion risk environment. Available are variants resistant to corrosion aggressiveness grades C3, C4 and C5.

Rilsan

Highly resistant coating for very demanding applications of high flexibility, elasticity and excellent corrosion resistance. This coating option is recommended for applications such as seawater, cement, process water, food or media contaminated with chemicals.

Halar

Thermoplastic Fluoroplast coating to be installed in pipelines with aggressive media. The coatings of high chemical resistance are suitable also for joining material, sealing washers and similar.

Inter Zone 954

Coating provides superior protection in sea water environment. The coating is designed for bodies exposed to high humidity or other very arduous climate conditions. It is highly resistant to acid and solvent vapours and sprinkles, common and salt water.

Seat anchoring options

Groove/tongue

STANDARD

- groove/tongue system prevents seat movement
- reliability
- simple replacing seat

Vulcanized(bonded) seat UPON REQUEST

- vulcanized seat is intended for use in vacuum and difficult operation conditions. For lower vacuum glued seat version can be used.

The seat is guiding and prevents anchored by **a groove/tongue system** enabling stable unwanted seat movement.

3-stage sealing system guarantees 100% tightness, long term product lifespan and safe operation in the most demanding applications.

1. Primary sealing

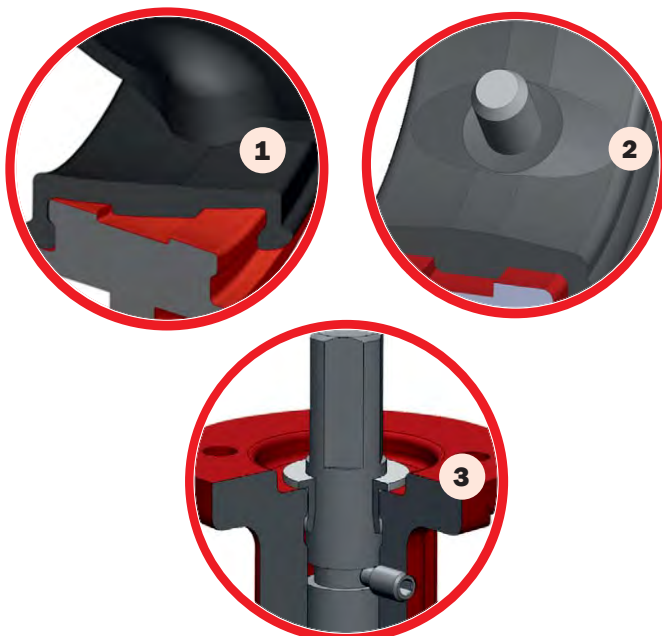
- sealing surface of the seat in the contact area with disc, stem and pivot has a precisely defined geometry

2. Secondary sealing

- secondary sealing is created by the stem and pivot disc overlap depending on the seat diameter

3. Tertiary sealing

- stems and pivots are equipped with safety O-rings that further enhance operational performance and reliability
- O-rings protect stem bearings against penetration of abrasive particles from environment



VALVES FOR SPECIAL PURPOSES

Industrial Valve Manufacturer



Valves with stem extension for special actuation requirements at inaccessible places

Stem extensions of various lengths are installed on valve stems according to particular projects. For inaccessible installations in vats, pits etc.

6 / ABO Valve Czech



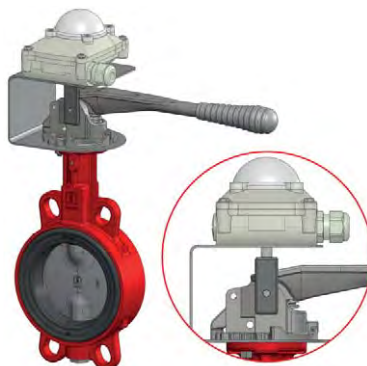
Valves with lightened aluminium body

Light weight valve. Suitable for installations in plastic pipes (pools)



Aluminium bronze valve disc for seawater treatment systems

Specially designed for maritime and marine environment where a maximum product reliability is required in highly saline environment.



Valve with special lever and limit switches

Can be equipped with non-standard lever type (up to 10 position degrees). The disc position is scanned by limit switches connected to the valve stem.



Valve discs with special coatings

Discs are coated with high resistant coatings for aggressive environment (Rilsan/Halar).



Polyurethane coated valve bodies

Specially designed for underground applications. Polyurethane coating protects the valve body against corrosion.



Valve actuator installation according to customers' requirements

Standard - actuator on the side. Possibility to place valve actuator according the specific disposition or specific requirements.

VALVES FOR SPECIAL PURPOSES



ATEX design

For valves intended for explosive atmospheres i.e where explosive mixtures of gases, vapours, fog or dust are created. DVGW certification.



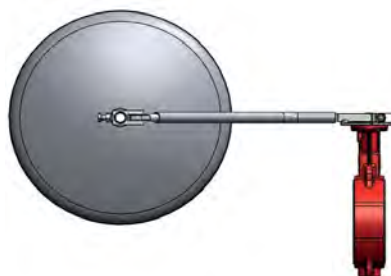
Valves with worm gear controlled by chain

Chain installed for worm gear control. The chain replaces handwheel. Suitable for inaccessible places.



Valve with stem extension

Stem extensions are used in hard-to-reach places where there is no direct access to the valve.



Float valve

For installations in tanks/reservoirs. The float controls valve opening by the level height.



Valves with FDA certified seats

For food industry. For potable water medium WRAS certification can be provided.



Additional equipment for pneumatic actuators

Pneumatic actuators can be equipped with positioners, solenoids, limit switch boxes, etc.



Valves with stainless flanges

Non-standard connection to pipelines. Connection flanges are screwed to the valve body.

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SEATS / POSSIBLE APPLICATIONS

Industrial Valve Manufacturer



Industry	Medium	Marking	Seat material	Applications	Working temperature range
Water management Potable water treatment	Potable water	EPDM	DRINKING WATER EPDM (EPDM-018)	WRAS, ACS. Certified by DVGW GmbH (DVGW W 363-P).	-20 °C .. + 90 °C
Water management Potable water distribution / Heating	Potable water Heating water		DRINKING WATER EPDM-HT (EPDM-019)	For potable water purification, treatment and distribution - higher temperature resistance	-20 °C .. + 130 °C
Water management Potable water distribution / Food indust	Beverages Juices / Malt Hot service water		EPDM-HT*) (EPDM-022)	FDA certified. For sugar mills, beverage factories, malt houses. Seat colour - black.	-20 °C .. + 130 °C
Food industry	Beverages Juices Malt		EPDM-014 (FDA)	FDA certified - for lower tempetaure ranges. Seat colour - white. Corresponds to standard 1935/2004.	-10 °C .. + 90 °C
Chemical industry Ventilation Air conditioning Water treatment	Air Non-aggressive acids and alkalines Non-aggressive minerals Water distribution		EPDM-008/1	For distribution of non-aggressive mild mineral acids, air distribution - ventilation and air conditioning. Suitable for water treatment installations..	-20 °C .. + 90 °C
Water managment	Potable water	EPDM	EPDM-024 NSF61	For potable water purification, treatnet and distribution - higher temperature	-20 °C .. + 130 °C
 Industrial production processes / Gas distribution Oil industry Petrochemi- stry Fuel processing Waste oils processing Fat sorting Loose materials conveying Cement and lime industry	Gas	NBR	DVGW-GAS NITRILE	Natural gas transport and distribution. Certificated by DVGW CERT GmbH	-10 °C .. + 90 °C
	Abrasive media	NBR-X	CARBOXYLIC NITRILE	For oily media applications with brasive particles in transported media. FDA.	0 °C .. + 90 °C
		FLUCAST	FLUCAST AB/N	For oily mediaaainstallations - crude oil distribution	-0 °C .. + 90 °C
		FLUCAST	FLUCAST AB/P	For abrasive resistant applications - for „dry“ media like loose materials, powder media (gypsum, carbon black, china clay, oxides), pneumatic conveying of cement and powder in mining industry.	-10 °C .. + 70 °C
		FLUCAST	FLUCAST AB/T	For abrasive media with high temperature resistance.	-5 °C .. + 130 °C

*) **EPDM Super HT seat:** -10 °C .. +150 °C. This new EPDM Super HT seat has much better mechanical properties if we compare it to other rubber compounds used at high temperatures like silicones of fluorelastomers. In addition to being used for hot water, EPDM Super HT is also suitable for steam. Here it can replace f.e. steam silicone seat

Industry	Medium	Marking	Seat material	Applications	Working temperature range
Sea water treatment Water softening for industry in general Petrochemistry Fuel processing Biogas distribution	Salt water Biogas Crude oil Fuel	ECO	EPICHLORHYDRIN	For seawater, saltwater, gas/biogas, crude oil and fuel distribution applications.	-40 °C .. +90 °C
Chemical industry Recovery / Stem heating / Biogas distribution / System for production and distribution of pure steam	Steam Biogas Agressive acids Oils	FPM	VITON BIO	High fluorine contents, suitable for distribution of acids and oils, chemically resistance.	-5 °C .. +150 °C
			STANDARD VITON (FPM-002)		
Chemical industry Petrochemistry	Industrial grease Oils Non-agressive acids	CSM	HYPALON	Suitable for applications with standard rubber mixtures lifespan limited by action of high temperatures - distribution of oils, diluted acids and alkalines.	-10 °C .. +100 °C
Chemical industry Recovery Steam heating Industrial pipelines for steam distribution	Steam	MVQ	HYPALON	For heat recovery, steam supply and distribution systems	-40 °C .. +150 °C
Food industry	Food steam	VMQ	FOOD SILICONE	Steam distribution systems with higher work temperatures, certified by FDA.	-40 °C .. +150 °C
Chemical industry Recovery Steam heating Industrial pipelines for steam distribution	Steam - high temperature ranges	VMQ	SILICONE	For media requiring higher temperature resistance at negative and positive work media temperatures (steam).	-40 °C .. +160 °C

*) possible alternatives of the seats with WRAS certification:

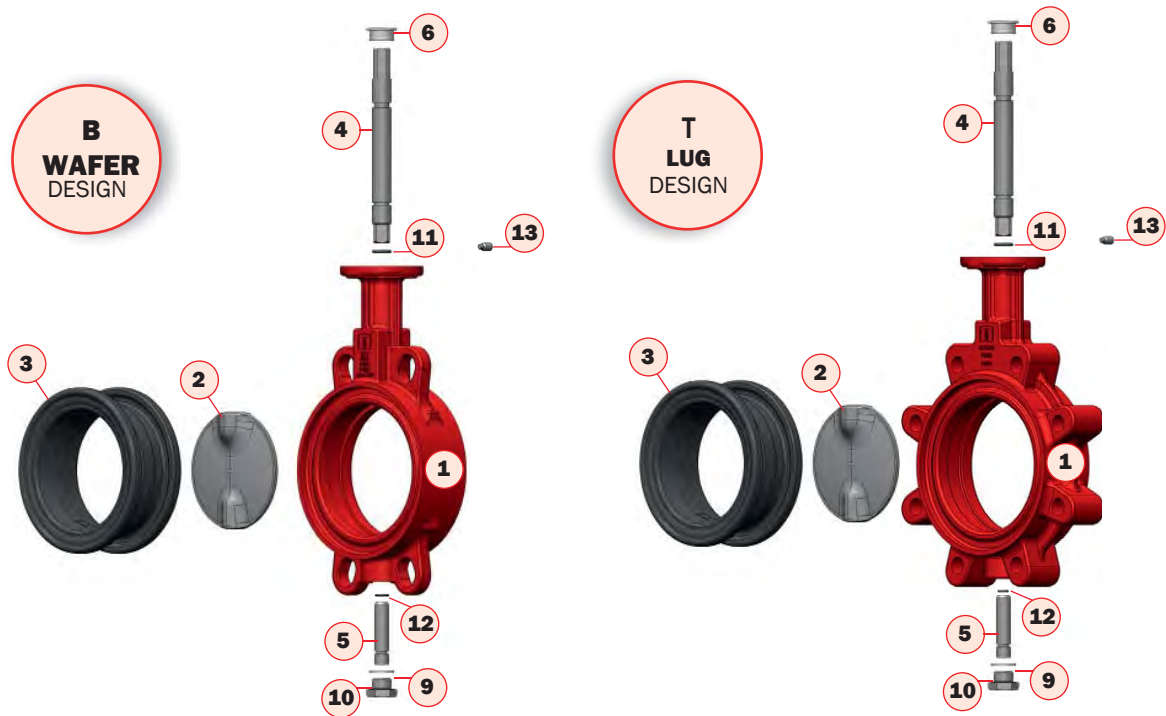
1. Material EPDM, type designation **YL-E-7010**, black color of the seat, for temperature ranges max. 60 °C.
2. Material EPDM, type designation **Sunaflex T 9635**, black color of the seat, for temperature ranges max. 85 °C.



MATERIAL PERFORMANCE

Industrial Valve Manufacturer

INTERFLANGED DESIGN



Pos.	Name	Material
1	Body	Ductile iron 0.7040 (GGG40) epoxy coated Carbon steel 1.0446 (A216 WCB) Stainless steel 1.4408 (CF8M) Low carbon steel 1.1156 (LCC) Aluminium EN AC 4300 (C95500) Aluminium bronze 2.0975 (C95800)
2	Disc	0 - Brass 2.0402 (UNS C38000) 1 - Aluminium bronze 2.0975 (C95800) 2 - Stainless steel 1.4308 (CF8) 3 - Ductile iron 0.7040 (GGG40) epoxy coated 4 - Stainless steel 1.4408 (CF8M) 5 - HASTELLOY 6 - Stainless steel 1.4539 (Uranus B6) 7 - Titaniu

Pos.	Name	Material
1	Seat	1 - NBR 2 - EPDM 3 - NBR Carboxyl 4 - Viton Bio 5 - Silicone steam (MVQ) 6 - Silicone (VMQ) 7 - Epichlorohydrin 8 - HYPALON® (CSM) 9 - NBR 70-AG - NBR conduct
4	Stem	Stainless steel 1.4021 (AISI 420)
5	Pivot	Stainless steel 1.4021 (AISI 420)
6	Bushing	Delrin (to DN 300) Brass (from DN 350) Klingsil C-4400)
9	seal	Stainless steel A2
10	plug	NBR, EPDM, optionally VITON
11	Stem O-ring	NBR, EPDM, optionally VITON
12	Pivot O-ring	Stainless steel A2
13	Retaining bolt	

Other materials upon request.
Seat and disc materials are
recommended based on particular inquiry.

INSTALLATION BETWEEN FLANGES



Installation between flanges DN32 to DN600 - Wafer/Lug design

	DN	32/40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
B	PN6											•	•	•	•	•
	PN10															
	PN16													•		
	Class150													•	•	•
T	PN6	•	•	•	•	•	•	•	•	•	•	•	•	X	X	X
	PN10													•	•	•
	PN16								•	•	•	•	•	•	•	•
	Class150	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Standard • Upon request X Impossible

Installation between flanges DN700 to DN1600 - Double flanged design - Series 20

	Dn	700	800	900	1000	1100	1200	1300	1400	1500	1600
U	PN6	•	•	•	•	•	•	•	•	•	•
	PN10										
	PN16	•	•	•	•	•	•	•	•	•	•
	Class 150	•	•	•	•	•	•	•	•	•	•

Standard • Upon request

Installation between flanges DN50 - DN2200 - Double flanged design - Series 13

	DN	50 - 2200
F	PN6	•
	PN10	
	PN16 *)	•
	Class 150	•

• Upon request
Standard

*) PN16 for nominal sizes DN50-300 is standard, for nominal sizes bigger than DN300 PN16 upon request



VALVE ACTUATION

Industrial Valve Manufacturer

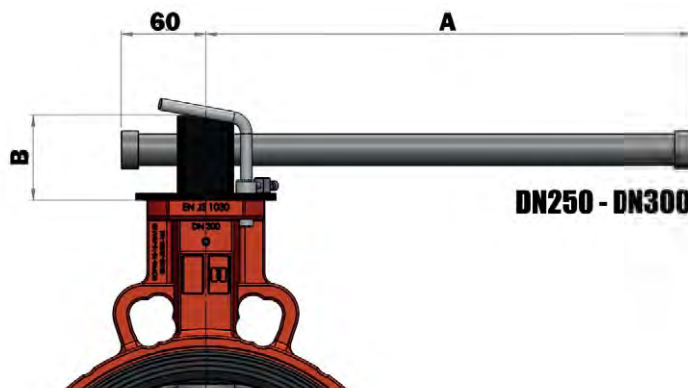
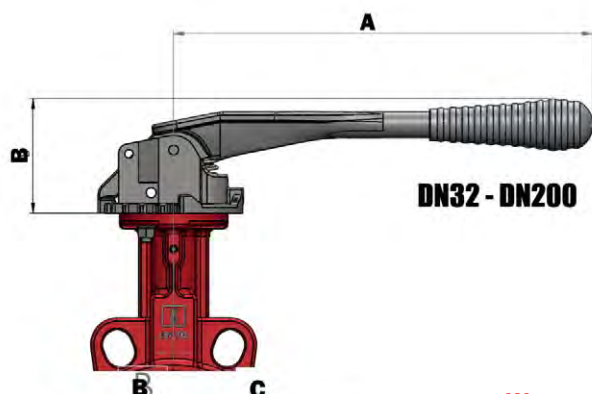
All the ABO valves can be equipped with hand levers, worm gears, pneumatic and electric actuators. The top flange design according to the standard ISO 5211 enables to directly assemble actuators on valves. Thus compatibility between valves and actuators is guaranteed.

Handlever

Dimensions are mentioned in mm, weight in kg.

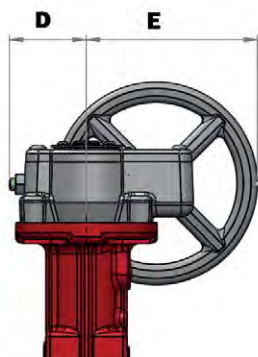
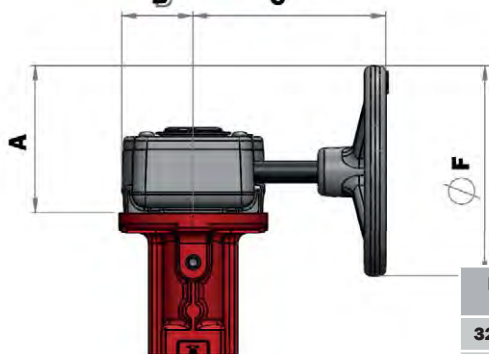
For manual actuation ABO offers carbon steel lever suitably painted to improve resistance to corrosion, abrasion and shock. Stainless lever on request. Top flange connection according to ISO standards F05 for DN50 to DN65 and F07 for DN80 to DN200. Controlled lever upon request. The levers can be equipped with a lock to ensure an optimized position. The levers can be supplemented with limit switches.

DN	32-100	125	150 - 200	250	300
A	270	270	362	450	750
B	75	75	75	135	135
Weight	1,24	1,26	1,40	2,20	3,10
Shaft	14x14	17x17	17x17	22x22	22x22



Worm gear with handwheel

Manual gearbox casing is made from cast iron with suitable surface treatment and protection degree class IP 67. Self-locking design of the worm gear enables both to set basic positions open/shut and to control (throttle) media flow. The worm gearbox is simply controlled hand-wheel of a suitable diameter. End positions of the worm gearbox are adjusted by screws. The gearbox can be equipped with a lockable system secured by a padlock. The worm gearbox as well as the hand lever can be completed with limit switch boxes.



DN	PN	ISO FLANGE	SHAFT	A	B	C	D	E	F	Kg
32/40	16	F05	14X14	70	35	91	38	84	100	1,2
50	16	F05	14X14	70	35	91	38	84	100	1,2
65	16	F05	14X14	70	35	91	38	84	100	1,2
80	16	F05	14X14	70	35	91	38	84	100	1,2
100	16	F05	14X14	70	35	91	38	84	100	1,2
125	16	F07	17X17	127,5	46	139	59	141	200	2,2
150	16	F07	17X17	127,5	46	139	59	141	200	2,2
200	16	F07	17X17	127,5	46	139	59	141	200	2,2
250	16	F10	22X22	134	57	156	60	155	200	4,2
300	16	F10	22X22	134	57	156	60	155	200	4,2
350	10	F12	27X27	183	57	210	95	205	300	4,5
350	16	F12	27X27	238	67	255	131	267	400	6,5
400	10	F14	27X27	292	78	350	169	331	500	11,0
400	16	F14	27X27	341	78	350	219	381	600	12,00
450	10	F14	Ø38	348	110	346	196	405	600	26,00
450	16	F14	Ø38	348	110	346	196	405	600	26,00
500	10	F14	Ø42	348	110	346	196	405	600	26,00
500	16	F14	Ø42	405	143	387	220	480	700	35,00
600	10	F16	Ø50	405	143	387	220	480	700	35,00
600	16	F16	Ø50	405	143	387	270	530	800	37,00

VALVE ACTUATION



Actuators

Pneumatic actuators

Pneumatic actuators ABO Series 95 can be assembled to valves in two options: single-acting or double-acting

Electric actuators

Electric drives ABO Series 97 are designed quarter-turn. Electric actuators can be installed on ABO valves for voltages of 24 V, 230 V or 400 V.

Special actuators types

Valves are equipped with special actuator types from major world suppliers (Auma, Regada, Valpes etc.).



electric actuator



pneumatic actuator



special actuators

Operating torques (Nm) vs working pressure (bar)

DN	32/40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
p_{max} 6bar	8	11	15	20	38	55	70	100	160	235	480	750	1180	1380	2050
p_{max} 10bar	9	12	17	25	46	70	80	125	200	290	530	1200	1550	2050	2700
p_{max} 16bar	10	12	20	30	55	85	100	150	290	380	580	1650	2100	2700	3700

Mentioned torques are valid only for valves with EPDM seats and stainless discs for liquid media. For valve actuation the declared values must be multiplied by 1,2. For NBR seats to be multiplied by 1,4. For gas media or media with abrasive particles use secondary coefficient 1,35. For NBR and VITON (FPM) seats multiply by 1,4. For specific work conditions contact manufacturer to get advised the actuation type choice.

MADE IN EUROPE 100% TESTED
CONCENTRIC BUTTERFLY VALVES
HIGH PERFORMANCE BUTTERFLY VALVES
KNIFE GATE VALVES • CHECK VALVES • BALL VALVES DN150
ATEX 94/9/EC OFFSET DESIGN R&D CENTER GLOBAL OPERATIONS **API 598** DOUBLE FLANGED EUROPEAN MANUFACTURER
DN600 • BALL CHECK VALVES • DIAPHRAGM VALVES • FILTERS
• ACTUATORS • POWER • OIL & GAS PN16 NUCLEAR POWER STATE-OF-THE-ART TECHNOLOGY

SERVED INDUSTRIES
WAFFER & LUG TYPE • WASTEWATER • PETROLEUM • OILFIELD
KV VALUES • HYDROCARBON PROCESSING • INDUSTRIAL PROCESSING EPOXY COATING

MADE IN EUROPE 100% TESTED
CONCENTRIC BUTTERFLY VALVES
HIGH PERFORMANCE BUTTERFLY VALVES
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DN600 • BALL CHECK VALVES • DIAPHRAGM VALVES • FILTERS
• ACTUATORS • POWER • OIL & GAS PN16 NUCLEAR POWER STATE-OF-THE-ART TECHNOLOGY

SERVED INDUSTRIES
WAFFER & LUG TYPE • WASTEWATER • PETROLEUM • OILFIELD
KV VALUES • HYDROCARBON PROCESSING • INDUSTRIAL PROCESSING EPOXY COATING

MADE IN EUROPE 100% TESTED
ECCENTRIC BUTTERFLY VALVES
KNIFE GATE VALVES • BALL VALVES • DIAPHRAGM VALVES
PTFE-LINED BUTTERFLY VALVES • CHECK VALVES
R&D CENTER GLOBAL OPERATIONS **U-SECTION RAL 2002 API 598** DOUBLE FLANGED EUROPEAN MANUFACTURER
DN600 • BALL CHECK VALVES • DIAPHRAGM VALVES • FILTERS
• ACTUATORS • POWER • OIL & GAS PN16 NUCLEAR POWER STATE-OF-THE-ART TECHNOLOGY
DURABILITY • STAINLESS STEEL ASME B16.5 • CARBON STEEL

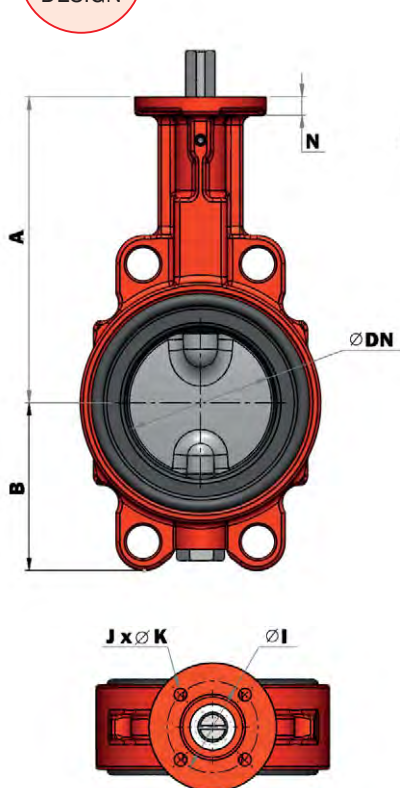
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VALVE BASIC DIMENSIONS

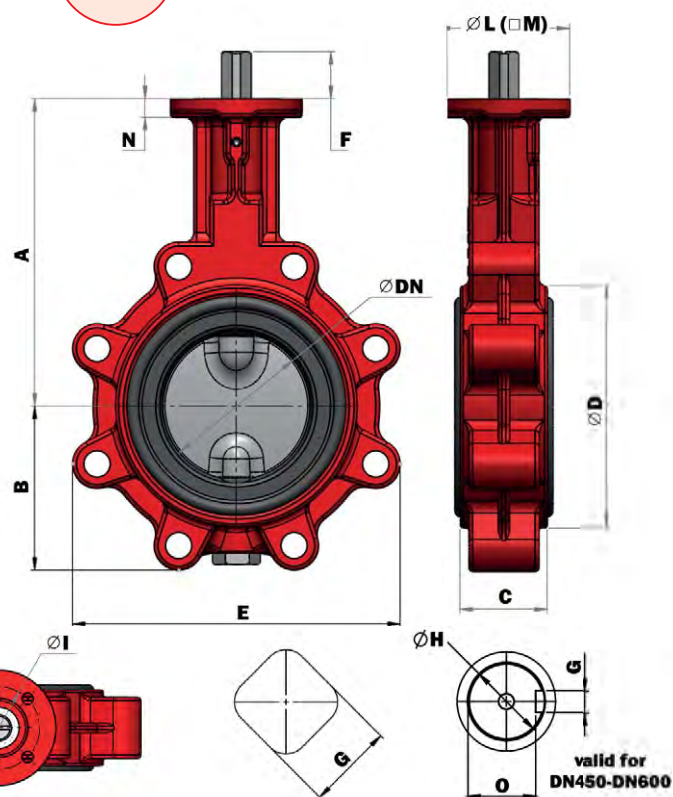
Industrial Valve Manufacturer

INTERFLANGED DESIGN

B
wafer
DESIGN



T
LUG
DESIGN



	DN	32/40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Valve dimensions	A	136	146	154	163	173	193	205	234	270	310	325	365	375	485	565
	B	54	64	72	89	105	119	130	166	202	237	271	314	330	368	464
	C	33	43	46	46	52	56	56	60	68	78	78	102	114	127	154
	D	78	96	113	128	150	184	212	268	320	378	435	488	544	590	695
	E	110	115	129	174	204	234	255	319	396	465	509	590	610	682	810
Endshaft dimensions	F	25	25	25	25	25	25	25	25	30	30	36	36	80	80	80
	G	14	14	14	14	14	17	17	17	22	22	27	27	12	12	14
	H	-	-	-	-	-	-	-	-	-	-	-	-	ø42	ø42	ø50
	O	-	-	-	-	-	-	-	-	-	-	-	-	37,1	37,1	44,5
	I	50/70	50	50	50	50	70	70	70	102	102	125	140	140	140	165
Flange dimensions	J	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	K	7	7	7	7	7	9	9	9	11	11	14	18	18	18	23
	L	-	70	70	70	70	-	-	-	-	-	-	-	175	175	210
	M	70	-	-	-	-	70	70	70	105	105	130	140	-	-	-
	N	8	8	8	8	8	12	12	14	17	17	17	21	22	27	27
Weight (kg)	ver. B	2,3	2,7	3,2	3,7	4,7	6,7	8,4	13,3	22,0	29,3	46,4	69,8	83,0	112,0	216,0
	Ver. T	2,3	3,0	3,7	4,8	6,1	9,2	10,2	15,3	28,4	41,2	62,0	96,3	130,0	149,0	288,0
ISO Flange		F05/07	F05	F05	F05	F05	F07	F07	F07	F10	F10	F12	F14	F14	F14	F16

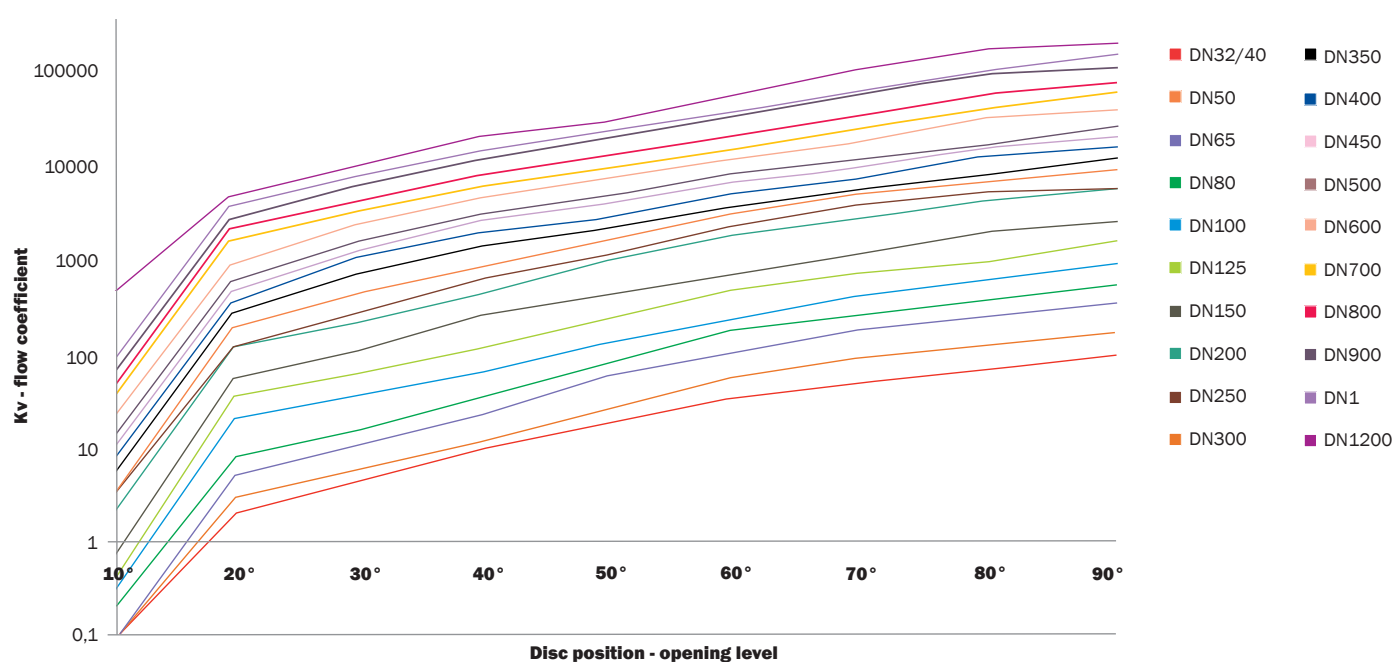
Dimensions are mentioned in mm.

NOMINAL FLOW VALUES



DN	10°	20°	30°	40°	50°	60°	70°	80°	90°
32/40	0,1	2	4	9	17	30	45	61	84,4
50	0,1	3	6	11	23	50	81	110	147
65	0,1	5	10	21	53	90	160	210	290
80	0,2	8	15	33	76	160	238	340	450
100	0,3	20	35	60	122	220	362	520	730
125	0,4	24	60	110	223	430	626	797	1260
150	0,7	54	105	248	400	640	987	1630	1990
200	2	120	210	410	915	1630	2331	3446	4396
250	3	129	274	590	1037	2000	3210	4164	4500
300	3	188	424	820	1500	2710	4180	5433	6800
350	5	265	685	1327	1990	3214	4690	6292	8900
400	7	345	1000	1825	2550	4383	6090	9779	11500
450	9	449	1200	2518	3680	5929	7840	11925	15000
500	12	586	1511	2909	4340	7167	9508	12762	18800
600	19	847	2217	4203	6560	9863	14614	23621	27600
700	31	1554	3118	5686	8569	12810	19511	29904	42416
800	39	2045	4105	7486	11815	17633	29902	41231	52776
900	53	2614	5767	10917	17326	27849	44987	68209	74979
1000	72	3584	7194	13117	20702	30991	47201	72344	102614
1200	390	4597	10146	19195	26221	43873	79092	119966	131962

1KV = 0,854701 CV



DN>600 / DOUBLE FLANGED DESIGN - SERIES „U”

Industrial Valve Manufacturer

Body design

Double flanged Body with threaded / tapped holes

Design performance

Series „U” Short face-to-face length, Series 20
According to ISO 5752-20

Nominal size

Design „U” DN700 - DN1600

Working pressure

1,0 MPa - 1,6 MPa (PN10 / PN16)

Leak test

1,1 MPa - 1,76 MPa

Working temperature

NBR -10 °C / +90 °C
Seat EPDM -20 °C / +125 °C *)

Features

Concentric design

Top flange according to ISO 5211
Flange connection according to BS4504/DIN/ANSI
Design complies with API609

*) other alternatives upon request

1. International

Standard compatibility

- according to the standard ISO 5211 the top flange enables to directly assemble any manual operators and actuators. Valves are usually delivered with worm gear actuators. A wide scale of pneumatic or electric actuators can be assembled, too.

2. Blow-out proof system

- a retaining washer disables shaft movement upwards.

3. Lengthened neck

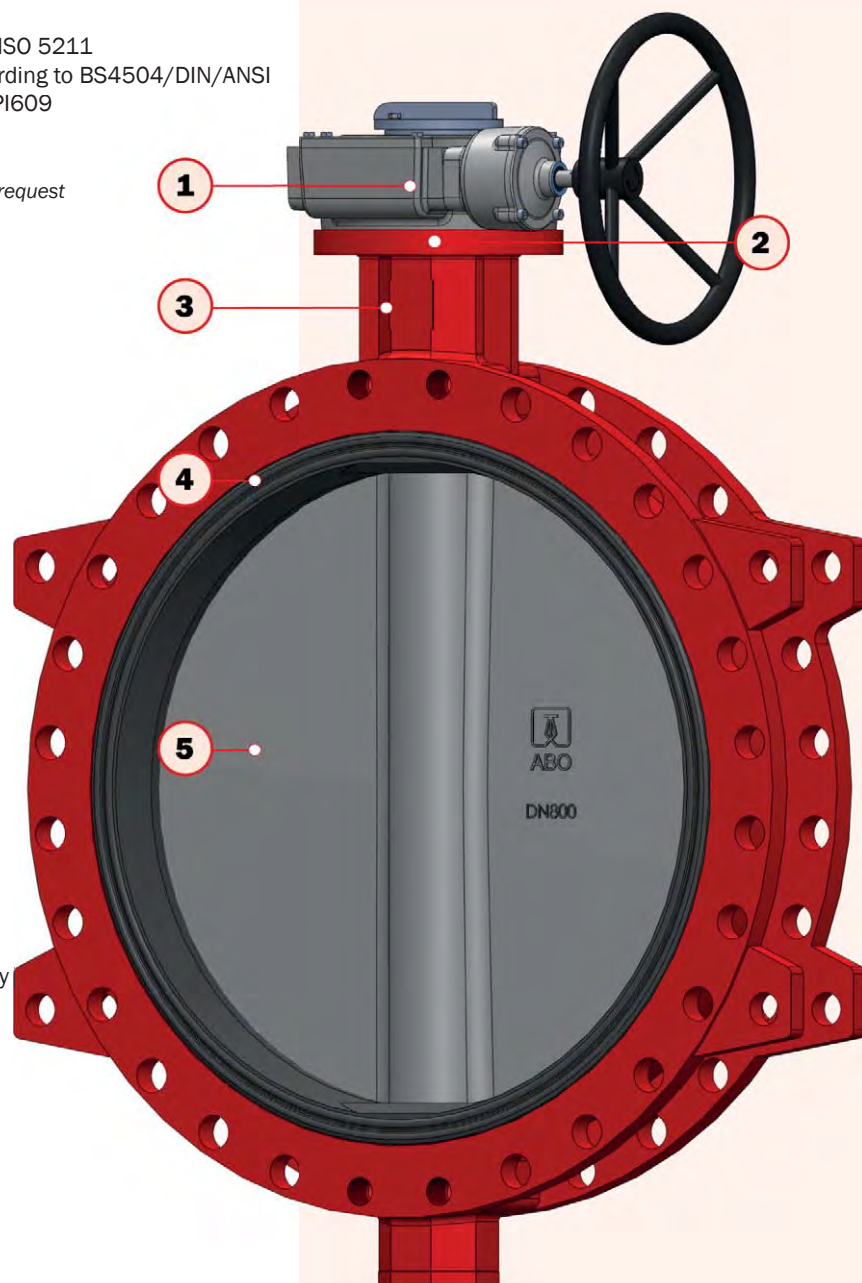
- enables to insulate the actuator from conveyed media warm effects and thus meets requirements on heating systems controls

4. Seat design

- seat movement or incorrect position is impossible - seat can be vulcanized. Vulcanization leads to decreasing torque values needed to handle the valve. Valve inner part is fully rubber lined and thus protected against corrosive effects.

5. Disc design

- disc with polished edges is protective to seat and provides a long lifespan. Symmetric disc profile improves valve performance by increasing Kv (Cv) values, decreases turbulence and minimizes pressure loss

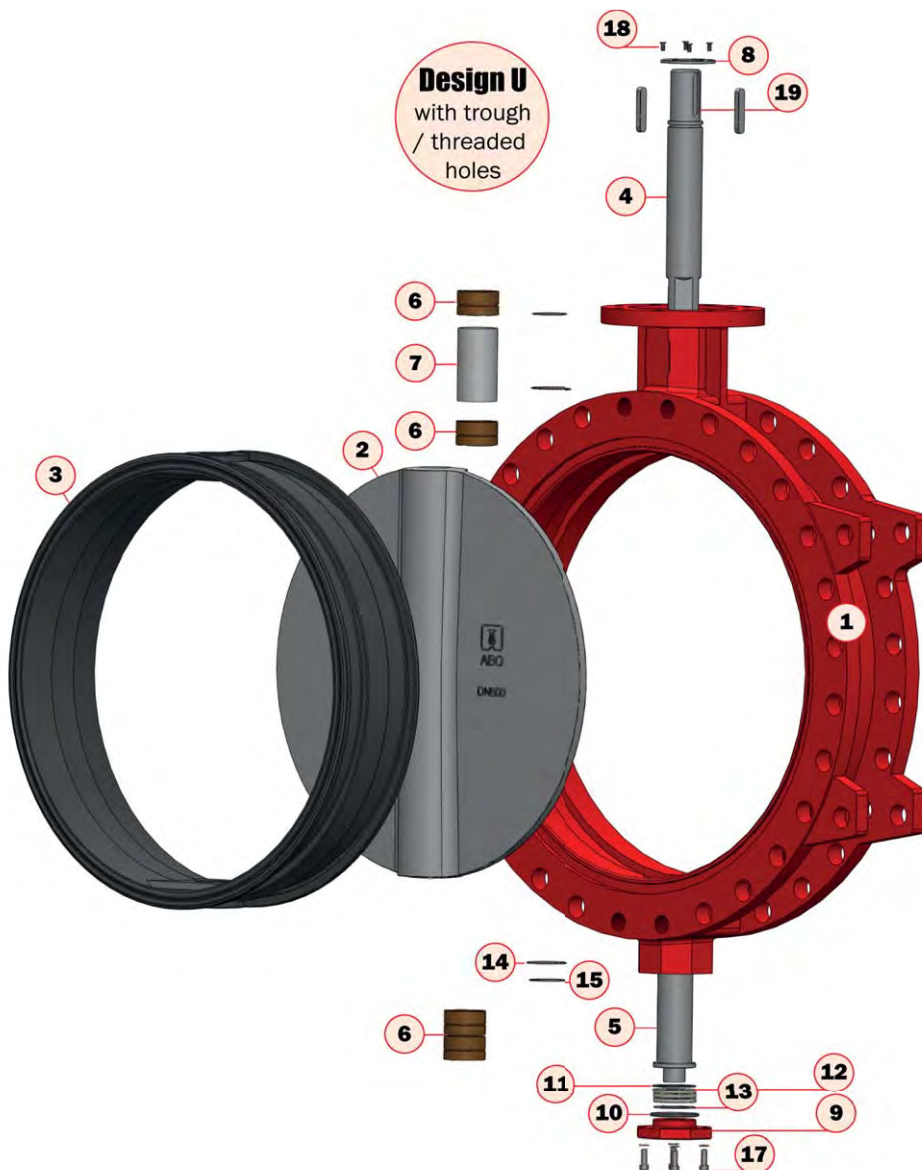


DN>600 / DOUBLE FLANGED DESIGN - SERIES „U“



DN700-DN1600 / PN10

Pos	Name	Material
1	Body	0.7040
2	Disc	upon request
3	Seat	upon request
4	Shaft	1.4021
5	Pivot	1.4021
6	Bushing	Bronze
7	Supporting liner	1.4301
8	Retaining ring	1.4401 (316)
9	Cover	0.7040
10	Washer	1.4301 (304)
11	Washer	1.4301 (304)
12	Bearing	upon standard
13	O-ring	upon request
14	O-ring	upon request
15	O-ring	upon request
16	Washer	A4
17	Bolt	A4
18	Bolt	A4
19	Spring	A4



Advantages of concentric shut-off valve double-flanged design

- 100 % tightness
- 0% leakiness
- vulcanized seat
- actuation by various actuator types - manual, electric, pneumatic or special types
- on/off and for regulation
- fully sealed stem, medium is not in contact with stem and body
- bi-directional tightness
- low body weight
- disc aerodynamic design minimising pressure loss
- disc with polished edges, high through put profile

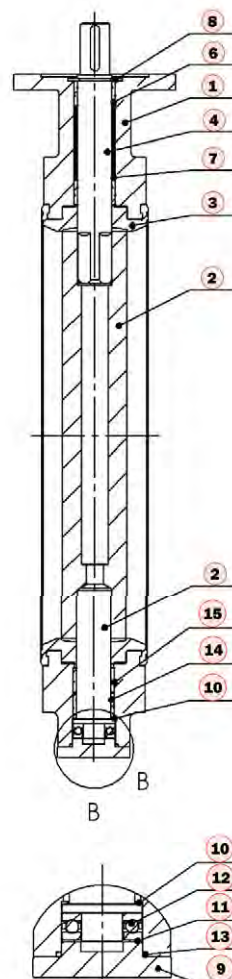
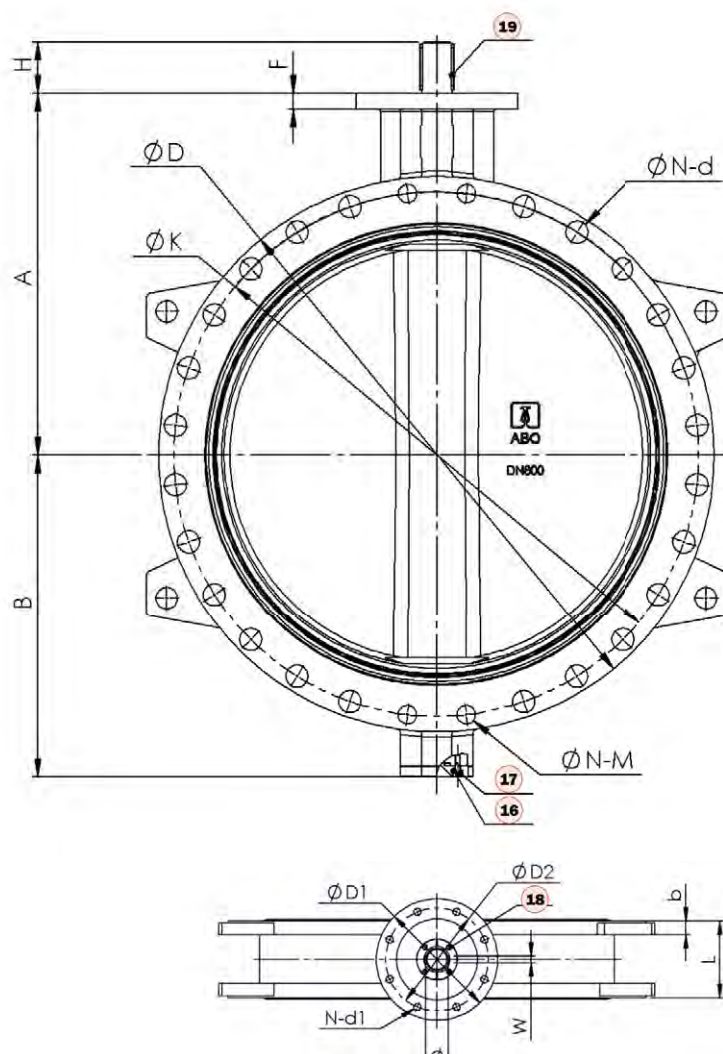
Material options Body / Disc / Seat/ Shaft

Body	Grey cast iron / Ductile iron / Carbon steel / Stainless steel / Epoxy coating / Coating C4, C5
Disc	Ductile iron / Stainless steel / Aluminium Bronze / Duplex / Super Duplex / HC276 / RILSAN, HALAR coating
Seat	NBR / EPDM / EPDM for potable water/FPM/Silicone
Shaft	AISI420 / AISI431 / F51/ F55 or

*) special materials upon request

DN>600 / DOUBLE FLANGED DESIGN - SERIES „U”

Industrial Valve Manufacturer



DN700 - DN1600 / PN10

	700	800	900	1000	1100	1200	1400	1600
A	624	672	720	800	900	941	1040	1150
B	535	606	670	735	830	978	1009	1138
H	95	95	130	130	135	150	150	180
D	910	1025	1125	1255	1355	1485	1685	1930
K	840	950	1050	1160	1270	1380	1590	1820
N-d	20-31	20-34	24-34	24-37	28-37	28-41	32-44	36-50
N-m	4-M27	4-M30	4-M30	4-M33	4-M33	4-M36	4-M39	4-M45
L	165	190	203	216	254	254	279	318
b	32,5	35	37,5	40	42,5	45	46	49
D1	300	300	300	300	350	350	415	415
D2	254	254	254	254	298	298	356	356
N-d1	8-18	8-18	8-18	8-18	8-22	8-22	8-33	8-33
F	30	30	34	34	34	34	40	40
Ø	55	55	75	85	105	105	120	160
W	16	16	20	22	28	28	32	40

DOUBLE FLANGED DESIGN - SERIES „U”



**Operating torques (Nm)
vs working pressure (bar)
SERIES 20**

DN	PN10	PN16
	Nm	Nm
700	3500	4200
750	3800	4800
800	4600	5600
900	5800	7800
1000	8800	10800
1100	11240	15600
1200	13800	19320
1300	16900	23660
1400	20000	28000
1500	25000	35000
1600	29000	40600
1800	39900	55860
2000	52250	73150

Mentioned torques are valid for valves of Series 20 with interchangeable seats. The data do not include values of the safety factor. Using seat EPDM multiply the values by 1,2. Using seats NBR/VITON/SILICONE multiply the values by 1,3.

**Operating torques (Nm)
vs working pressure (bar)
SERIES 13**

DN	PN10	PN16
	Nm	Nm
50	17	17
65	25	25
80	38	38
100	56	56
125	90	90
150	124	124
200	233	233
250	392	392
300	560	560
350	736	988
400	1011	1479
450	1355	1887
500	1807	2444
600	2825	4054
700	4410	6204
750	5080	-
800	5812	8782
900	7092	12142
1000	10584	16122
1050	12172	-
1200	16935	29684
1400	22000	345000

Mentioned torques does not include safety factor. Please use a factor of 1.3

VALVE ACTUATION

Worm gearbox with handwheel

Manual gearbox casing is made from cast iron with suitable surface treatment and protection degree class IP 67. Self-locking design of the worm gear enables both to set basic positions open/shut and to control (throttle) media flow. The worm gearbox is simply controlled hand-wheel of a suitable diameter. End positions of the worm gearbox are adjusted by screws. The gearbox can be equipped with a lockable system secured by a padlock. The worm gearbox as well as the hand lever can be completed with limit switch boxes.

Actuators

Pneumatic actuators

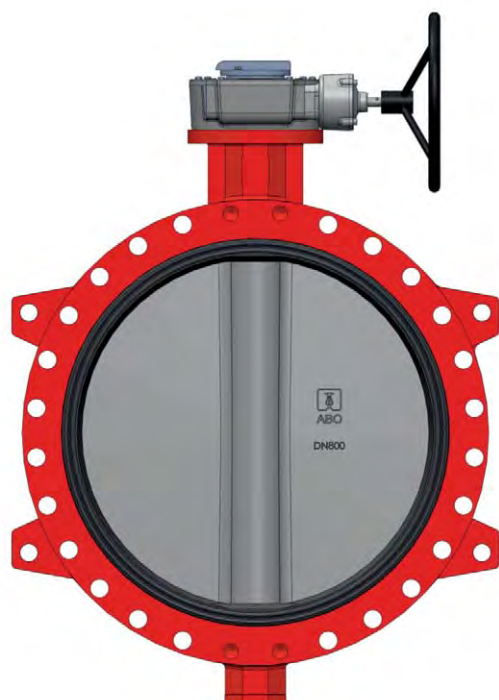
Two standard designs: single-action/double-action.

Electric actuators

Electric actuators can be installed for voltages of 24 V, 230 V or 400 V

Special actuators types

Made by suppliers Auma, Regada, Valpes, etc



DN>600 / DOUBLE FLANGED DESIGN - SERIES „F”

Industrial Valve Manufacturer

Body design

Double flanged

Body with through / threaded holes

Design performance

Series „F”

Increased face-to-face length, Series 13
According to ISO 5752-13

Nominal size

Design „F”

DN50 - DN2200

Working pressure

10 bar - 16 bar (PN10 / PN16)

Leak test

11 bar - 17,6 bar

Working temperature

Seat NBR -10 °C / +90 °C **vulcanized**
Seat EPDM -20 °C / +125 °C **vulcanized ***)

Features

Concentric design

Top flange according to ISO 5211
Flange connection according to S4504/DIN/ANSI
Design complies with API609

*) other alternatives upon request

1. International Standard compatibility

- according to the standard ISO 5211 the top flange enables to directly assemble any manual operators and actuators. Valves are usually delivered with worm gear actuators. A wide scale of pneumatic or electric actuators can be assembled, too.

2. Blow-out proof system

- a retaining washer disables shaft movement upwards.

3. Lengthened neck

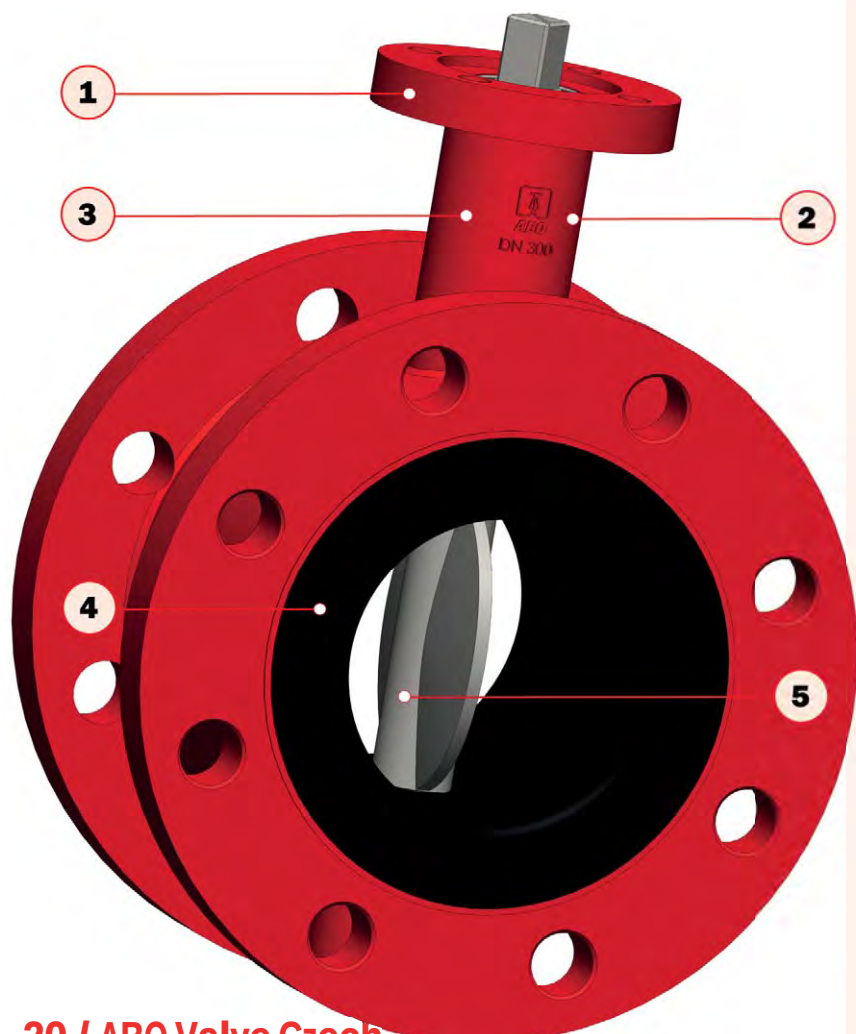
- enables to insulate the actuator from conveyed media warm effects and thus meets requirements on heating systems controls

4. Seat design

- seat movement or incorrect position is impossible - seat can be vulcanized. Vulcanization leads to decreasing torque values needed to handle the valve. Valve inner part is fully rubber lined and thus protected against corrosive effects.

5. Disc design

- disc with polished edges is protective to seat and provides a long lifespan. Symmetric disc profile improves valve performance by increasing Kv (Cv) values, decreases turbulence and minimizes pressure loss.



DOUBLE FLANGED DESIGN - SERIES „F”

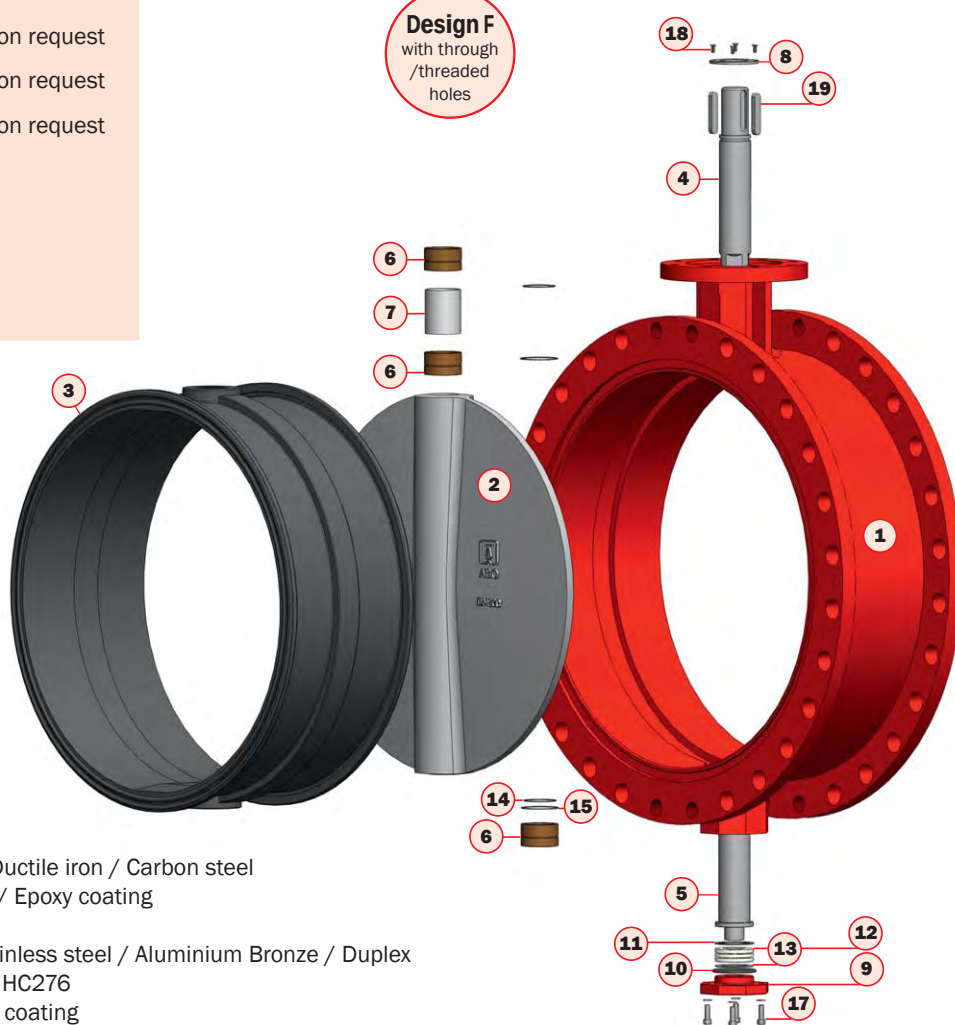


ABO valve

DN50-DN2200 / PN10

Pos	Name	Material
1	Body	0.7040
2	Disc	upon request
3	Seat	upon request
4	Shaft	1.4021
5	Pivot	1.4021
6	Bushing	Bronze
7	Supporting liner	1.4301
8	Retaining ring	1.4401 (316)
9	Cover	0.7040
10	Washer	1.4301 (304)
11	Washer	1.4301 (304)
12	Bearing	upon standard
13	O-ring	upon request
14	O-ring	upon request
15	O-ring	upon request
16	Washer	A4
17	Bolt	A4
18	Bolt	A4
19	Spring	A4

Design F
with through
/threaded
holes



Material options Body / Disc / Seat/ Shaft

Body	Grey cast iron / Ductile iron / Carbon steel / Stainless steel / Epoxy coating / Coating C4, C5
Disc	Ductile iron / Stainless steel / Aluminium Bronze / Duplex / Super Duplex / HC276 / RILSAN, HALAR coating
Seat	NBR / EPDM / EPDM for potable water/FPM/Silicone
Shaft	AISI420 / AISI431 / F51/ F55 or

*) special materials upon request

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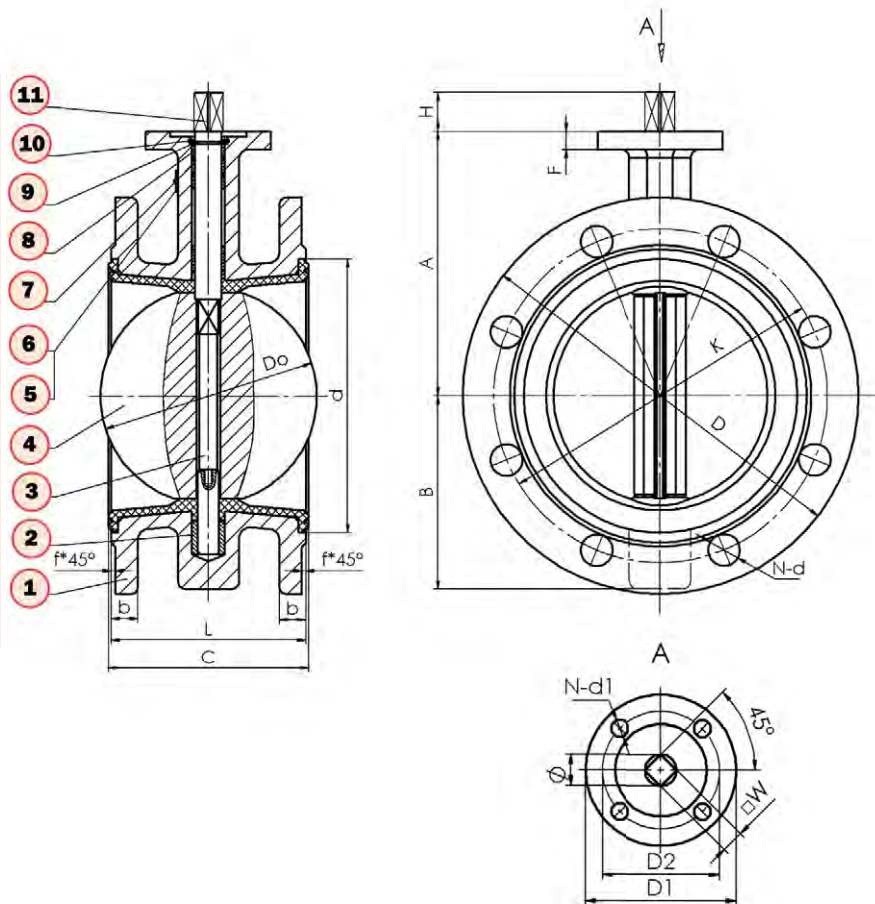
DESIGN PARAMETERS

/ SERIES - „F”

Industrial Valve Manufacturer

DN50 - DN350 / PN10

Pos	Name	Material
1	Body	0.7040 + EPDM
2	Bushing	Bronze
3	Pivot	SS 1.4021/420t
4	Disc	1.4408 (CF8M)
5	Rivet	SS A2
6	Label	1.4301/SS304
7	Bushing	Bronze
8	O-ring	EPDM/NBR
9	Washer	1.4301/SS304
10	Retaining ring	SS A2
11	Shaft	SS 1.4021/420



	50	65	80	100	125	150	200	250	300	350	400
A	120	130	145	155	170	190	205	235	280	310	340
B	80	89	95	114	125	139	170	198	223	254	306
H	25	25	25	25	25	25	25	30	30	30	36
D	165	135	200	220	250	285	340	395	445	505	580
K	125	145	160	180	210	240	295	350	400	460	525
N-d	4-19	4-19	8-19	8-19	8-19	8-23	8-23	12-23	12-23	16-23	16-31
Do	52,6	64,3	78,8	104	123,3	155,7	202,4	250,4	301,5	333,3	389,6
d	89	106	120	144	170	197	252	305	350	415	460
L	108	112	114	127	140	140	152	165	178	190	216
C	111	115	117	130	143	143	155	168	182	194	221
b	19	19	19	19	19	19	20	22	24,5	24,5	28
f	3	3	3	3	3	3	3	3	3	4	4
D1	65	65	65	90	90	90	125	125	125	150	175
D2	50	50	50	70	70	70	102	102	102	125	140
N-d1	4-7	4-7	4-7	4-10	4-10	4-10	4-12	4-12	4-12	4-14	4-18
F	13	13	13	13	13	13	15	15	20	20	22
Ø	12,6	12,6	12,6	15,77	18,92	18,92	22,1	28,45	31,6	31,6	37,95
W	14	14	14	14	17	17	17	22	22	27	27

*) PN16 upon request

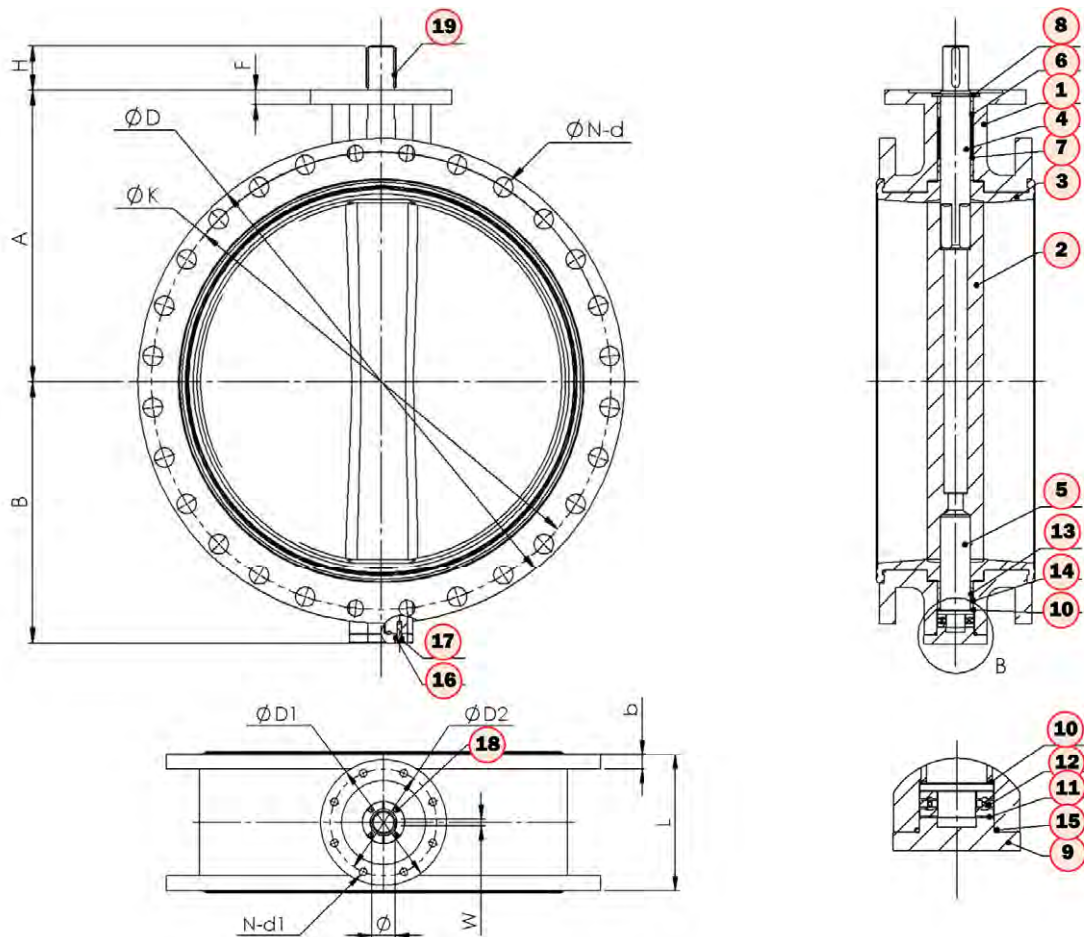
22 / ABO Valve Czech

DESIGN PARAMETERS

/ SERIES - „F”



DN450 - DN1200 / PN10



	450	500	600	700	800	900	1000	1200
A	375	430	500	560	620	685	735	917
B	345	378	440	510	560	638	705	815
H	80	80	80	95	95	130	130	150
D	615	670	780	895	1015	1115	1230	1455
K	565	620	725	840	950	1050	1160	1380
N-d	20-28	20-28	20-31	24-31	24-34	28-34	28-37	32-41
Do	440,5	491,6	592,5	695	794,7	864,7	965	1160,6
d	510	560	660	770	871	972	1080	1270
L	222	229	267	292	318	330	410	470
c	227	234	272	299	325	337	417	478
b	25,5	26,5	30	32,5	35	37,5	40	45
f	4	4	5	5	5	5	5	5
D1	175	175	210	300	300	300	300	350
D2	140	140	165	254	254	254	254	298
N-d1	4-18	4-18	4-22	8-18	8-18	8-18	8-18	8-22
F	22	22	22	30	30	34	34	34
Ø	38	42	50	55	55	75	85	105
W	10	12	14	16	16	20	22	28

*) sizes above DN1200 upon request.

*) PN16 on request

CONTACT US

Industrial Valve Manufacturer



Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 222 232
sales@abovalve.com

Slovak Republic

ABO Slovakia, s.r.o.
Nové Mesto nad Váhom
tel.: +421 947 902 862
sales.sk@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0)152 262 29501
sales.de@abovalve.com

Italy

ABO valve Italiana S.r.l.
Agrate Brianza
tel.: +39 334 9102143
sales.it@abovalve.com

USA

ABO Controls LLC
Houston
tel.: +(1) 832.291.4929
sales.us@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 216 527 36 34
sales.tr@abovalve.com

India

ABO Controls Pvt. Ltd.
Pune
tel.: +91 97691 31034
sales.in@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
tel.: +65 9169 4562
sales.sn@abovalve.com

China

ABO Flow Control
Shanghai
tel.: +86 136 01 522 831
sales.cn@abovalve.com

United Arab Emirates

Sales representation
Abu Dhabi
tel.: +971 56 9207964
bharti@abovalve.com

Bahrain

Sales representation
Manama
tel.: +973 3444 9065
jimmichen@abovalve.com



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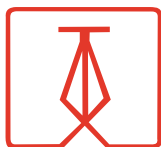


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Valid from: 8/2024



ABO *valve*
Industrial Valve Manufacturer

CONCENTRIC BUTTERFLY VALVES

Body design	WAFER type with through holes LUG with threaded holes
Nominal size	DN32 - DN150
Working pressure	6 bar / 10 bar / 16 bar
Flange connection	PN6 / PN10 / PN16 / Class 151
Working temperature	-10 °C / +125 °C
Working media	Potable water Hot water Air conditioning Air Natural gas
Gas version	PS6 / -10 °C / +90 °C
Tightness	Class A
Features	Concentric design Pin body version Gas version Possible control by float



SERIES 600

economy line

www.abovalve.com

GENERAL VALVE DESCRIPTION / DESIGN MODELS

Industrial Valve Manufacturer

Interflanged concentric butterfly valves Series 600 are used at various industries like:

- potable water treatment and production
- heating, distribution of hot water
- ventilation
- air conditioning
- natural gas
- propane and butane gas (bottle gas)
- coal gas

Basic properties

- concentric design
- split stem
- pressed connection (for brass disc)
- body long neck according to the regulations of thermoprocessing equipment
- red epoxy coating according to RAL 2002 - 80 µm

Quality control

- manufacturing at ABO valve is certified according to quality control standard ISO 9001:2015 (14001, 45001)
- leak tests according to standards: ČSN EN 12266-1, ISO 5208, ANSI/FCI 70-2
- production in accordance with the Pressure Equipment Directive 2014/68/EU (Module H)
- manual actuation, if delivered, is adjusted and tested during assembly
- all certificates are downloadable from www.abo valve.com

Type designation

6 1 0 B G 100

Nominal size

DN32 - DN150

Gas valve performance

G

Body design

B - Wafer body type with through holes
T - Lug body type with threaded holes

Disc material

0 - Brass 2.0402
2 - Stainless steel 1.4308 (CF8)
3 - Ductile iron 0.7040 (GGG40) with epoxy coating
4 - Stainless steel 1.4408 (CF8M)

Seat material

1 - NBR
2 - EPDM

Series name

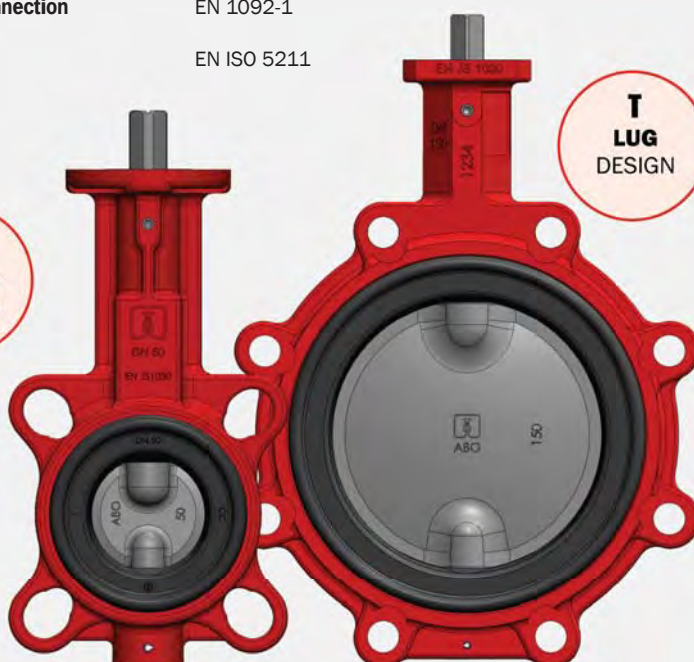
Series 600

Standards

Leak test	EN 12266-1, Class A ISO 5208, Class A
Face to face length	EN 558, Series 20 ISO 5752, Series 20
Flange connection	EN 1092-1
Top flange	EN ISO 5211

B
WAFER
DESIGN

T
LUG
DESIGN



DESIGN ADVANTAGES



ABO valve



1. Top flange

- according to the standard ISO 5211 enables to directly mount any manual actuator

2. Blow-out proof shaft system

- a retaining bolt disables a stem movement upwards

3. Valve long neck

- enables to use insulation and protects control elements on the ISO flange. The design meets requirements on heating system fittings.

4. Stem support at two points

- makes easier valve operation

5. Double side profile

- eliminates a risk of immobilisation after a longer shut-down

6. Split stem

- with the split stem valves reach better Kv/Cv values and thus a low pressure loss

7. Special seat shape

- closely fits to the stem and the pivot

8. Seat and body alignment

- enables a correct seat position and fixes the seat in the body; thus prevents the seat to slip out from the body while opening or closing the valve

9. Surface treatment

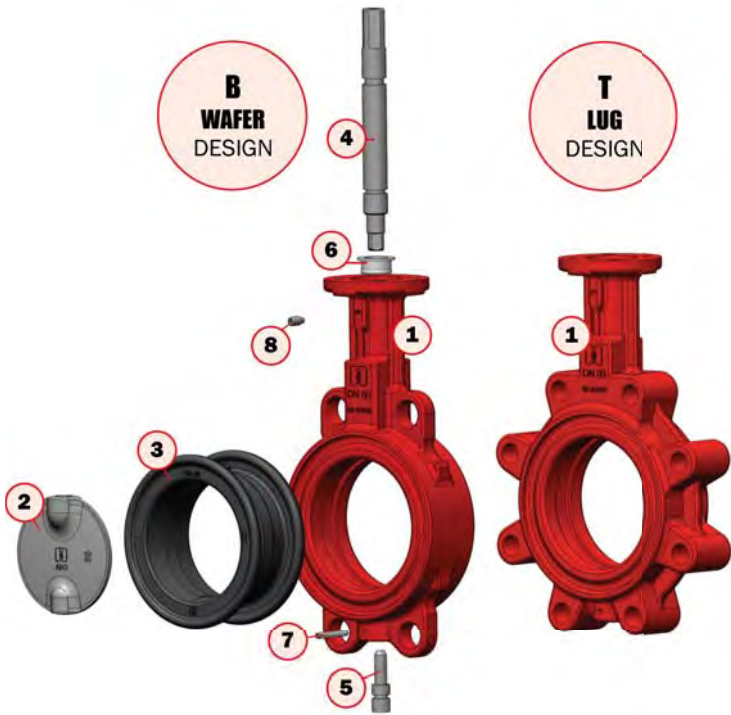
- epoxy coating 80 µm

10. Retaining pin

- prevents against stem blow-out

MATERIAL PERFORMANCE / FLANGE CONNECTION

Industrial Valve Manufacturer



Item	Name	Material
1	Body - „B” *) (WAFFER type)	DN32/40 Ductile iron 0.7040 (GGG40) epoxy coated
		DN50-DN150 Grey cast iron 0.6025 (GG25) epoxy coated
2	Disc	0 - Brass 2.0402
		2 - Stainless steel 1.4308 (CF8)
		3 - Ductile iron 0.7040 (GGG40) (epoxy coated)
		4 - Stainless steel 1.4408 (CF8M)
3	Seat	1 - NBR
		2 - EPDM
4	Stem	Stainless steel 1.4021 (AISI 420)
5	Pivot	Stainless steel 1.4021 (AISI 420)
6	Bushing	Delrin
7	Flexible pin	Stainless steel A2
8	Adjusting bolt	Stainless steel A2

*) Body „T” (LUG type): **DN32/40-DN150**
Ductile iron 0.7040 (GGG40) epoxy coated

Installation between flanges

		DN	32/40	50	65	80	100	125	150
		NPS	1 1/4" - 1 1/2"	2"	2 1/2"	3"	4"	5"	6"
B	PN6								
	PN10								
	PN16								
	Class 150								
T	PN6								
	PN10		•	•	•	•	•	•	•
	PN16								
	Class 150		•	•	•	•	•	•	•

For JIS 5K/10K, please consult with ABO.

		Standard	On request
			•
Working conditions			
working pressure	Seat temperature ratings		
16 bar (max.)	Seat EPDM : -10 °C up to +125 °C*)		
	Seat NBR : -10 °C up to +90 °C		

*) at medium temperature above 120 °C
is the max. allowed pressure reduced from
16 bar to 14,4 bar and from 10 bar to
9 barO.

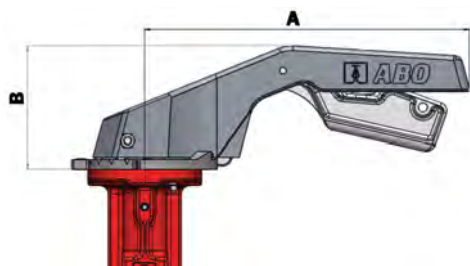
VALVE ACTUATION



ABO valve

Manual lever

For manual actuation ABO offers an aluminium lever suitably coated to improve abrasion and shock resistance.

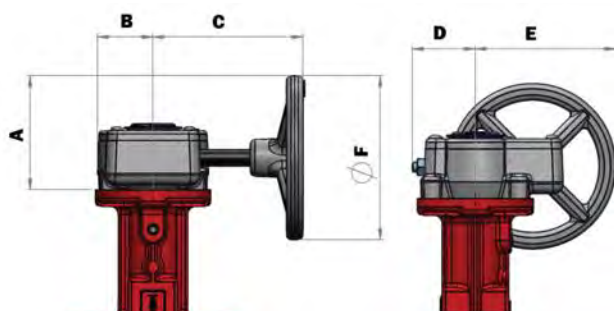


DN	32 - 80	100 - 150
NPS	1 1/4" - 3"	4" - 6"
A	200	275
B	76	76
Weight (kg)	0,35	0,4

Dimensions are declared in mm.

Worm gear with handwheel

Manual gearbox casing is made from cast iron with suitable surface treatment and protection degree class IP 67. Self-locking design of the worm gear enables both to set basic positions open/shut and to control (throttle) media flow. The worm gearbox is simply controlled handwheel of a suitable diameter. End positions of the worm gearbox are adjusted by screws. The gearbox can be equipped with a lockable system secured by a padlock. The worm gearbox as well as the hand lever can be completed with limit switch boxes



DN	32 - 150
NPS	1 1/4" - 6"
A	70
B	35
C	91
D	38
E	84
F	100
Weight (Kg)	1,2

Dimensions are declared in mm.

Operationg torques (Nm) vs. working pressure (bar)

DN	32/40	50	65	80	100	125	150
NPS	1 1/4"-1 1/2"	2"	2 1/2"	3"	4"	5"	6"
p _{MAX} 6 bar	6	7	11	17	28	38	85
p _{MAX} 10 bar	9	10	15	22	37	44	98
p _{MAX} 16 bar	12	14	24	27	44	58	130

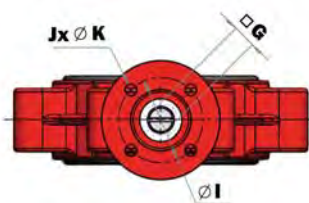
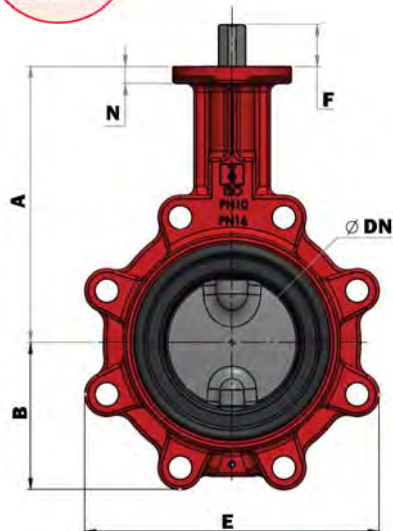
Mentioned torques are valid only for valves with EPDM seats and stainless discs for liquid media. For valve actuation the declared values must be multiplied by 1,2. For NBR seats to be multiplied by 1,4. For gas media or media with abrasive particles use secondary coefficient 1,35. For VITON (FPM) seats multiply by 1,4. For specific work conditions contact manufacturer to get advise for the actuation.



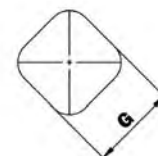
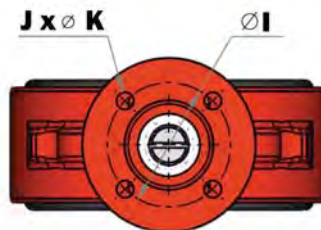
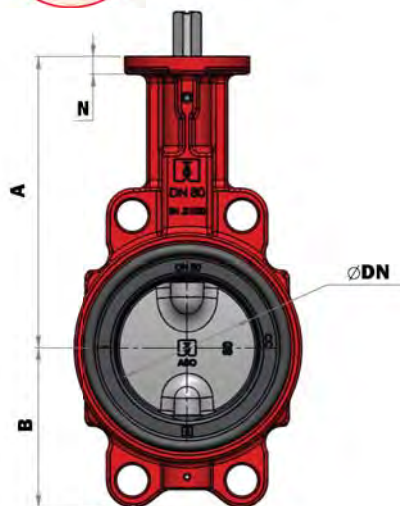
VALVE BASIC DIMENSIONS

Industrial Valve Manufacturer

T
LUG
DESIGN



B
WAFER
DESIGN



	DN	32/40	50	65	80	100	125	150
	NPS	1 ^{1/4} "-1 ^{1/2} "	2"	2 ^{1/2} "	3"	4"	5"	6"
	A	136	146	153,5	163	172,5	192,5	205
	B	54	64	72	89	100	112	128
	C	33	43	46		52	56	
	D	78	96	113	128	150	184	212
	E	110	116	131	173	192	235	258
Stem end	F	25						
	G	14						
ISO Top flange	I	50/70	50				70	
	J	4						
	K	7/9	7				9	
Flange dimensions	L	-	70				-	
	M	70	-				105	
	N	8					9,5	
Weight (Kg)	Ver. B	1,9	2,7	3,2	3,7	4,7	6,7	9,4
	Ver. T	2,3	3,0	3,7	4,8	6,1	9,2	10,2
ISO flange		F05/F07	F05				F07	

Dimensions are mentioned in mm.

VALVE GAS DESIGN



ABO valve

For natural gas, propane and butane
and coal gas



an economy ABO valve gas version is offered (is not designed for biogas). The valves of Series 600 designed for gas are suitable for pipelines and pump stations. The gas valves are simply recognizable: actuation lever is distinctly marked yellow and the valve body is marked with a series label with a „G“ letter. This valve is offered with special set of O-rings.

Installation between flanges

	PN6	PN10	PN16	Class 150
B				
T	•			•

Standard

On request

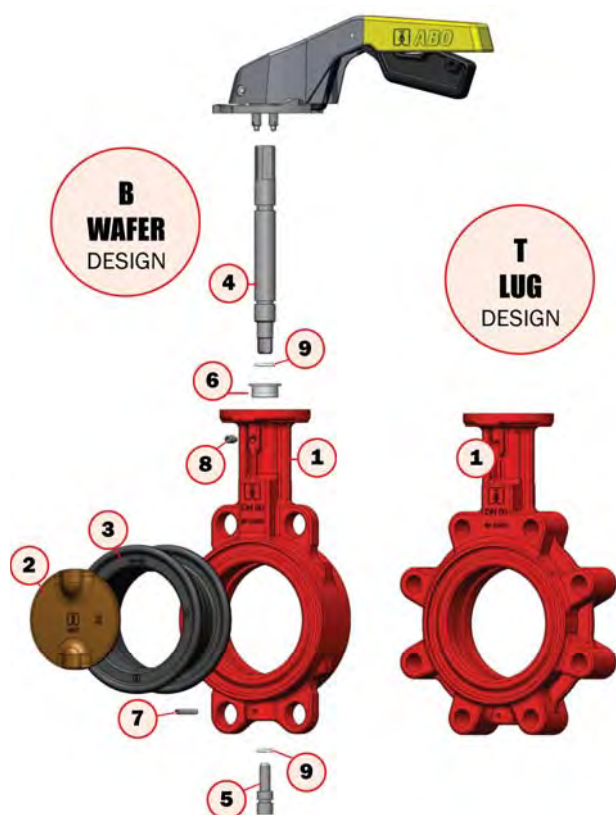
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Working conditions

Working pressure	Seat temperature rating
6 bar max.	Seat NBR: -10°C / +90°C

Material performance

Item	Name	Material
1	Body	DN32/40 Ductile iron 0.7040 (GGG40) epoxy coated DN50-DN150 Grey cast iron 0.6025 (GG25) epoxy coated
2	Disc	0 - Brass 2.0402 1 - Aluminium bronze 2.0975 2 - Stainless steel 1.4308 (CF8) 3 - Ductile iron 0.7040 (GGG40) (epoxy coated) 4 - Stainless steel 1.4408 (CF8M)
3	Seat	1 - NBR
4	Stem	Stainless steel 1.4021 (AISI 420)
5	Pivot	Stainless steel 1.4021 (AISI 420)
6	Bushing	Delrin
7	Flexible pin	Stainless steel A2
8	Adjusting bolt	Stainless steel A2
9	O-ring	NBR



Basic properties

- nominal diameter DN32- DN150
- concentric design
- suitable for shut-off and regulating
- split stem
- BG version with through holes
- TG version with threaded holes

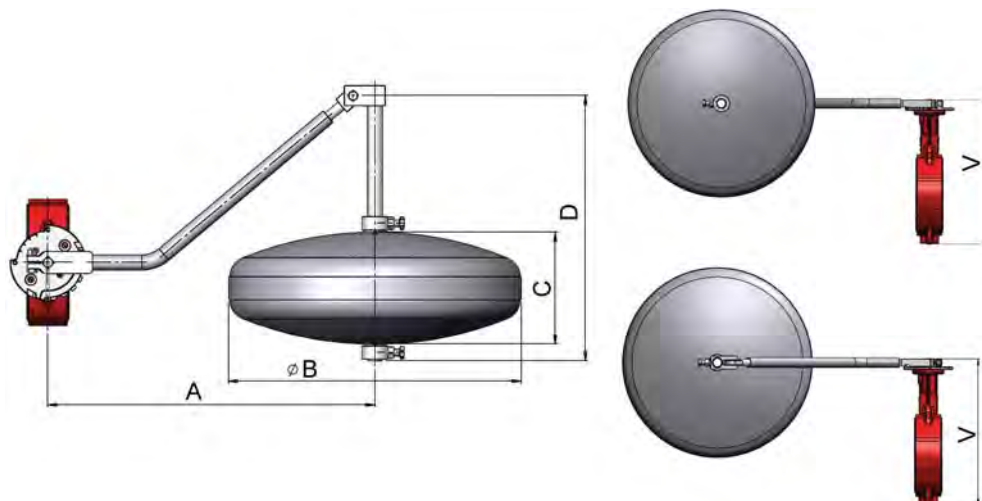
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FLOAT CONTROLLED VALVE

Industrial Valve Manufacturer

Manual lever

Valve disc is fit concentrically on a stem and a pivot. The stem is assembled in slide bearings, the lower pivot is fixed in the body. The float closes (opens) the valve when the level rises (sinks). Lift is limited by end bolts..



Assembly and maintenance

- valve can be mounted in horizontal and vertical pipes between flanges
- valve stem must always be in horizontal position
- float must always move in vertical direction

Use

- float valves are used as shut-off elements for automatic control of liquid inflow or outflow into/from reservoirs according to current level height. For water or other non-aggressive liquid media at temperatures of up to 100 °C.

DN	32/40	50	65	80	100	125	150
NPS	1 1/4"-1 1/2"	2"	2 1/2"	3"	4"	5"	6"
A	300			500		1000	
B	476						
C	240					310	
D	1035					1550	
V	215	235	250	273	303	333	356
Weight (kg)	10	11	12	12,5	13	18	19,5
Float volume (l)	25					35	

Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 224 087
sales@abovalve.com

Slovak Republic

ABO Slovakia, s.r.o.
Banská Bystrica
tel.: +421 947 902 862
sales.sk@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0)152 262 29501
sales.de@abovalve.com

USA

ABO Controls LLC
Houston
tel.: +(1) 832.291.4929
sales.us@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 216 527 36 34
sales.tr@abovalve.com

Russia

ABO Armatura LLC
Smolensk
tel.: +7 (4812) 240 020
sales.ru@abovalve.com

India

ABO Controls Pvt. Ltd.
Mumbai
tel.: +91 773 820 4779
sales.in@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
tel.: +65 9169 4562
sales.sg@abovalve.com

China

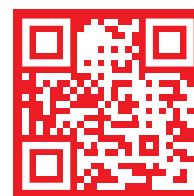
ABO Flow Control
Shanghai
tel.: +86 136 01 522 831
sales.cn@abovalve.com

United Arab Emirates

Sales representation
Abu Dhabi
tel.: +971 56 9207964
bharti@abovalve.com

Bahrain

Sales representation
Manama
tel.: +973 3444 9065
jimmichen@abovalve.com



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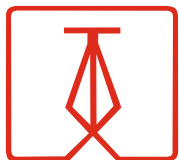


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Valid from 2/2023



ABO valve

we make processes work

PTFE LINED BUTTERFLY VALVES

Body type

Interflanged

WAFER type with through holes

LUG type with threaded holes

Nominal size

DN50 - DN400

Working pressure

6 bar / 10 bar

Flange connection

PN6 / PN10 / PN16 / Class 150

Working temperature

-40°C / +200°C

Working media

Purified industrial water
Potable water
Industrial cleaners
Chemicals
Beverages
Food
Aggressive liquids
Toxic media
Caustic media
Paper mill stock
Drugs and pharmaceuticals
Chlorine / Alkalines / Acids
Dyes

Tightness

Class A

Features

Concentric design

ATEX design

High-performance
valve for
high-demanding
industries

Bidirectional tightness

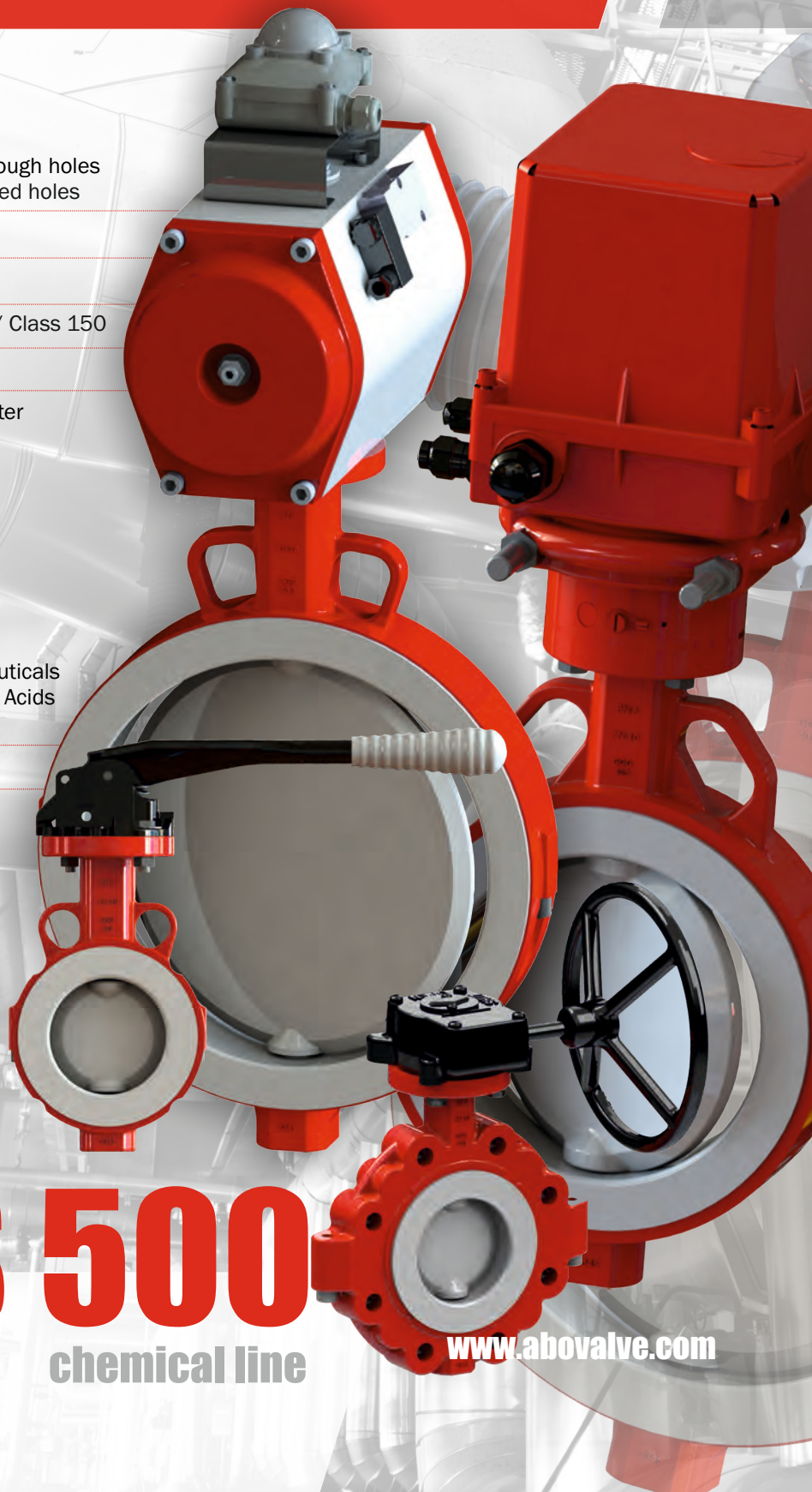
PTFE seat
for high-temperature
working settings

Split body

SERIES 500

chemical line

www.abovalve.com



GENERAL DESCRIPTION

SERIES 500
CHEMICAL LINE

Czech Industrial
Valve Manufacturer

Bidirectional bubble-tight concentric butterfly valves of Series 500 with PTFE sealing

are offered for very clean manufacturing environments and are used in various industries like:

- **pure industrial water treatment**
- **chemical industry** (acids, alkalines)
- pharmaceutical/sanitary industry
- food and beverage industry
- paper industry
- pulp processing
- corrosive, toxic and caustic media
- production of chlorine
- dyes manufacturing and processing

Basic properties

- **concentric design**
- **bi-directional valve**
- compact PTFE „TRIM” (stem, disc, pivot)
- 3 mm PTFE coated disc
- **ATEX design, version 588:** disc provided with 3mm layer of conductive PTFE (contains graphite to improve conductivity)
- possible both vertical and horizontal pipe mounting
- fully tight in shut position
- suitable as shut-off and control valve
- easy installation
- actuating stem sealing prevents media leaking to environs
- extended neck design allows for piping insulation and enables easy access for actuator mounting
- steel PTFE impregnated bearings provide exact support of stem and pivot
- top flange according to standard EN ISO 5211 enables variable control by means of various actuator types
- red epoxy coating acc. RAL 2002 - 80 µm (as a standard)

Based on customers' particular requirements we offer

- WRAS certification for potable water
- **ATEX design**
- inspection certificate 3.1, 3.2

Valve coating

- ABO offers epoxy coated valve bodies providing excellent abrasion and atmosphere corrosion resistance
- coating colour is red acc. RAL 2002, 80 µm thick
- upon request valve bodies can be provided with special coating f.e. C3, C4 etc.



Type designation

5 9 9 B 100

- **Nominal size**
DN50 - Dn400
- **Body design**
B - WAFER with through holes
T - LUG with threaded holes
- **Seat material**
8 - conductive PTFE
9 - PTFE
- **Disc material**
8 - duplex stainless steel 1.4469
conductive PTFE coated
9 - duplex stainless steel 1.4469
PTFE coated
7 - duplex stainless steel 1.4469
with polished edges
- **Series designation**
Series 500

Standards

Hydraulic test	EN 12266-1, Class A ISO 5208, Class A
Face-to-face length	EN 558, Series 20 ISO 5752, Series 20
Flange connection	EN 1092-1 ASME B16.5
Top flange	EN ISO 5211
Working standard	EN 593
Marking	EN 19
Atex design	EN ISO 80079-36 EN IEC 60079-0



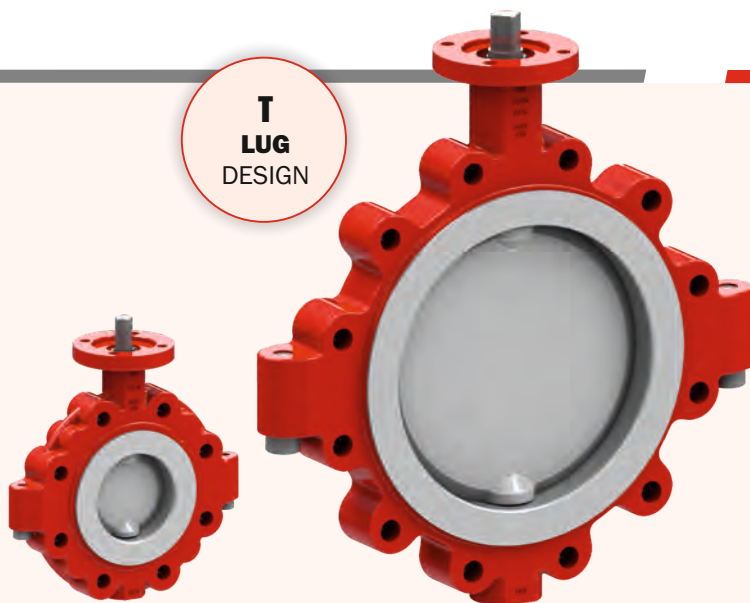
VALVE MODELS



B
WAFER
DESIGN



T
LUG
DESIGN



ATEX performance



578B

588B



578T

588T

Valve actuation

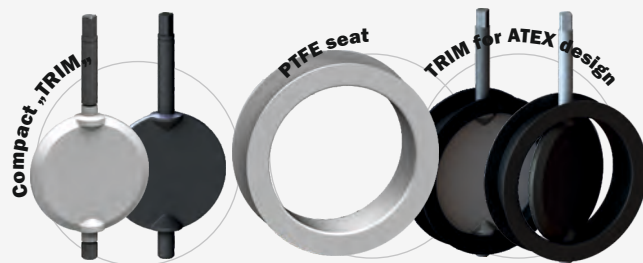


Handlever

Gearbox with handwheel

Actuator - pneumatic

Actuator - electric



Compact "TRIM"

PTFE seat

TRIM for ATEX design



DN80B/T
Handlever



DN150B/DN80T
Gearbox
with handwheel



DN150B/DN80T
Electric actuator

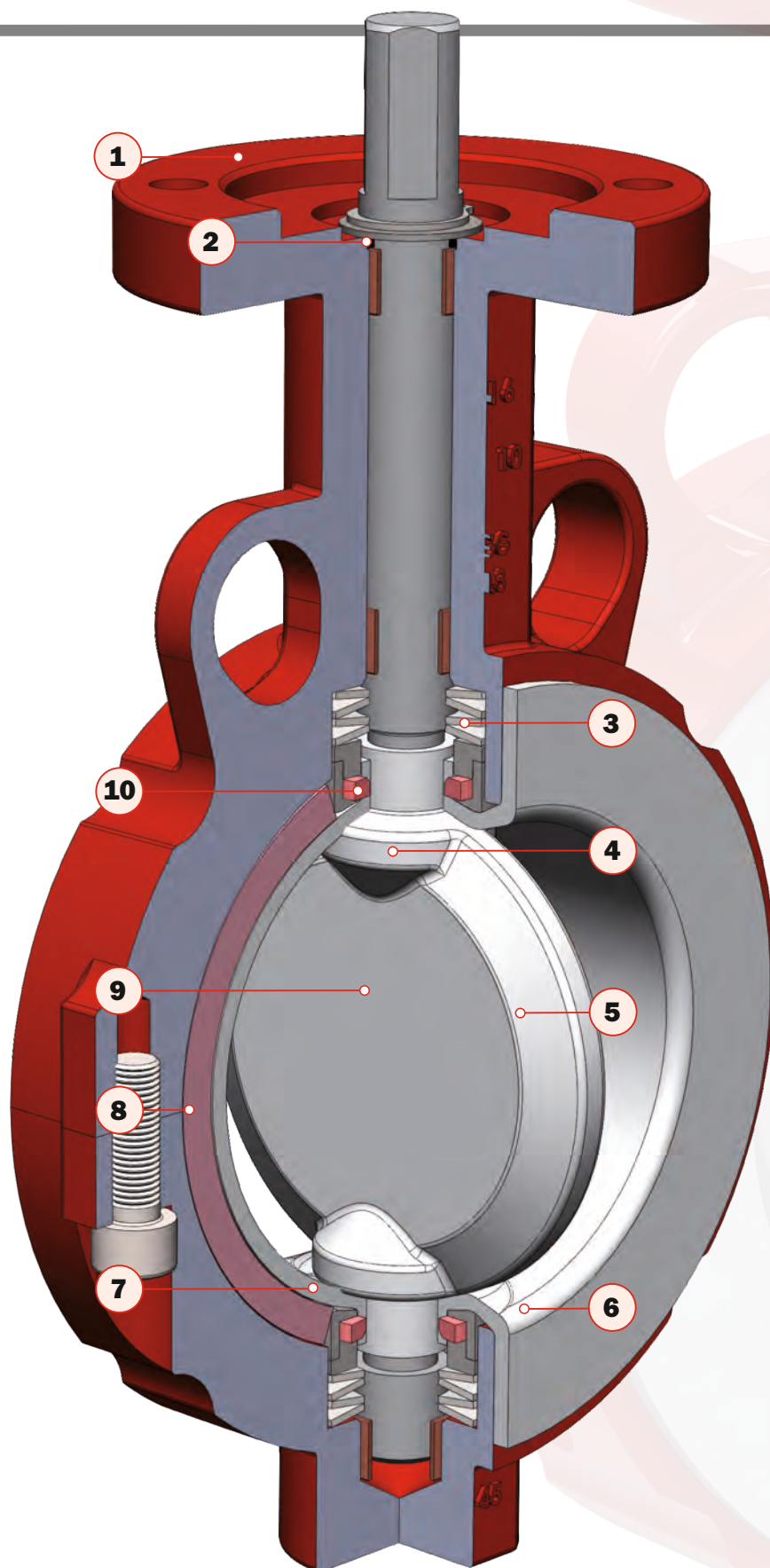


DN150B/DN80T
Pneumatic actuator

DESIGN ADVANTAGES



ABO valve



1. Top flange

- according to standard ISO 5211 enables to directly assemble any type of actuator. Flange high neck enables to insulate the actuator on the ISO flange.

2. Protection from penetrating abrasive articles

- dust protection O-ring protects stem and pivot bearings against entering abrasive articles.

3. Preloaded seal

- belleville washers in the valve neck ensure the seal pressure to disc. Double seals on both stem/pivot are standard equipment.

4. Ball sealing principle

- sealing surface of the teflon liner in the stem area has a defined ball geometry exactly reproducing the disc geometry. There are no critical transitions. Thus fluent and reliable operation is ensured.

5. Profiled disc

- lower pressure drops and higher Kv values.

6. Teflon seat

- with minimal thickness of 3 mm PTFE is manufactured by isostatic hot pressing.

7. Functional areas

- precise machining and exact alignment of the sealing components provides sealing around the stem in the functional areas.

8. Seat energizer

- silicone energizer extends completely around the seat, including the disc hub providing uniform force for bubble-tight shutoff.

9. Disc / stem / pivot

- single-piece TRIM lined with PTFE coating thick at least 3 mm. All the sealing surfaces are machined.

10. Safety elements

- bushings with the silicone rings are compressed by the belleville springs washers during assembly. The silicone ring presses the edge of the seat, against the edge of the disc and around the stem. This ensures tightness and protects the inner seal of the valve against the media.

MATERIAL PERFORMANCE



Standard desing

1 / 2 - Body (top / bottom part)

Ductile iron 0.7043 (GGG40.3)

3 - Disc & Stem & Pivot

Duplex stainless steel

1.4469 + PTFE

4 - Seat

PTFE

5 - Spring element

Silicone rubber / Viton

6 - Retaining ring

Stainless steel A2

7 - Washer

Stainless steel A2

8 - O-ring

Silicone rubber

9 - Sliding cover

Steel + CuSn10 + PTFE

10 - Disc spring

Stainless steel 1.4310

11 - Ring seat

Stainless steel 1.4021

12 - Ring

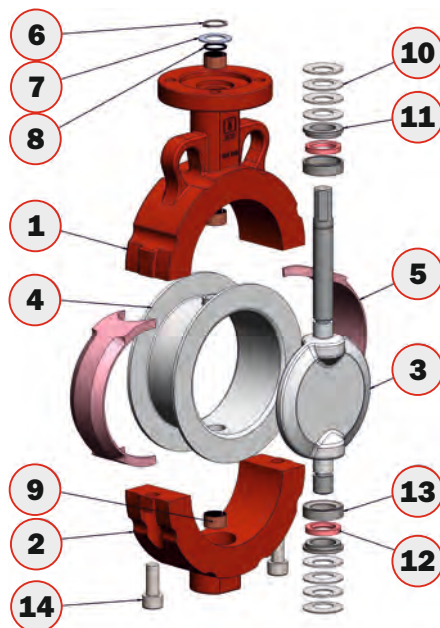
Silicone rubber

13 - Thrust washer

Stainless steel 1.4021

14 - Screw

Stainless steel A4



Disc from stainless steel
with polished edges
Disc with **PTFE coating**

ATEX design

1 - Seat

Conductive PTFE

2 - Disc & Shaft & Pivot

Stainless steel 1.4469 + conductive
PTFE coating / Stainless steel 1.4469
with polished edges

3/4 - Body (top and bottom part)

Ductile iron 0.7043 (GGG40.3)

5 - Ring seat

Stainless steel 1.4021

6 - Pressure washer

Stainless steel 1.4021

7 - Spring element

Silicone rubber

8 - Ring

Silicone rubber

9 - Sliding bush

Steel + CuSn10 + PTFE

10 - Disc spring

Stainless steel 1.4310

11 - Bolt

Stainless steel A4

12 - Retaining ring

Stainless steel A2

13 - O-Ring

Silicone rubber

14 - Washer

Stainless steel A2

15 - Fan washer

Steel - galvanized

16 - Nut

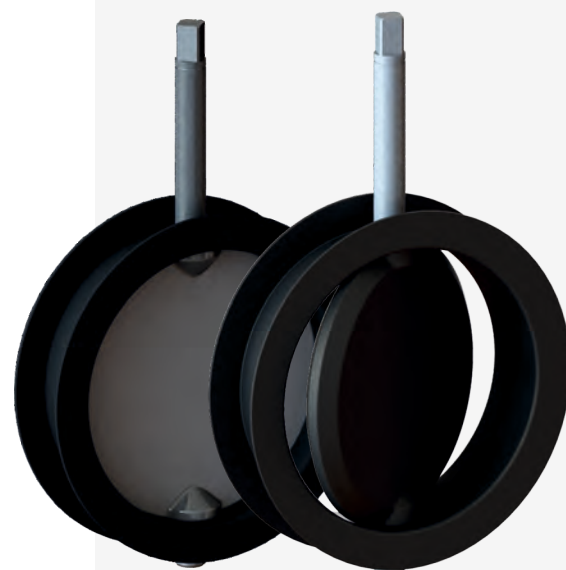
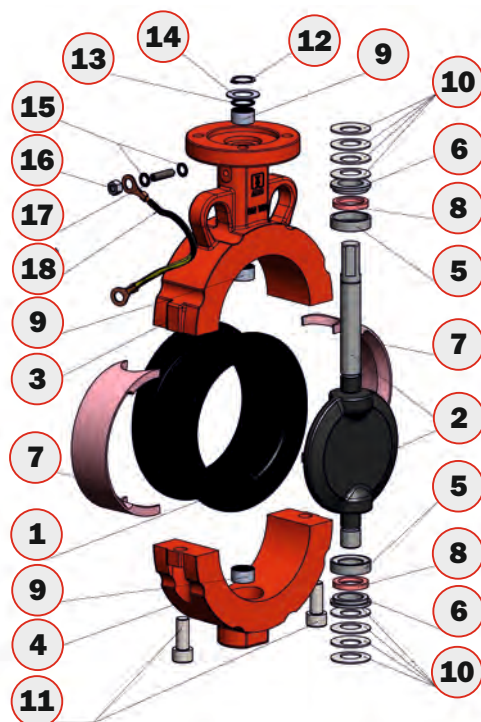
Stainless steel A4

17 - Screw for ATEX valves

Stainless steel 1.4021

18 - Wire clamp

Stainless steel A2 / Copper



Disc from stainless steel
with polished edges
Disc with **conductive
PTFE coating**

ATEX DESIGN

Czech Industrial Valve Manufacturer

PTFE properties

- the parts coming to contact with work media (seat, disc) are lined with PTFE. Thus their long lifespan and valve quality stability are provided. PTFE characteristics are high chemical resistance, toughness and flexibility, low friction coefficient, low water absorption and non-adhesiveness. All the mentioned properties provide increased protection against leakage of media. Low friction coefficient value reduces valve opening torque.
- excellent abrasion and corrosion resistance
- resistance to chemicals incl. strong acids and alkalines
- resistance to solvents, alcohols, greases and oils
- resistance to humidity and water

General features

- Concentric design**
- Compact **PTFE „TRIM”**
- 588:** disc provided with 3 mm layer of conductive PTFE (to improve conductivity contains graphite)
- WAFFER / LUG type (split body)
- Bi-directional valve**
- Possible both vertical and horizontal pipe mounting
- Suitable as a closure and control valve
- Top flange according to standard ISO 5211
- PTFE coated steel bearings ensure accurate guidance of the top and bottom shaft**
- Actuating stem sealing prevents media leaking to environs
- Easy assembly
- Working media**
- Purified industrial water
- Potable water
- Industrial cleaners / Dyes
- Chemicals / Chlorine / Alkalines / Acids
- Beverages / Food
- Caustic / Toxic media / Paper mill stock
- Drugs and pharmaceuticals

Basic information

Body design
WAFFER - with through holes
LUG - with threaded holes

Nominal size
578: DN50 - DN300
588: DN50 - DN400

Working pressure
6 bar / 10 bar

Flange connection
PN6/PN10/PN16/Class 150

Body material
Ductile iron 0.7043 (GGG40.3)

Disc
Duplex stainless steel
1.4469 conductive PTFE coated
Duplex stainless steel
1.4469 with polished edges

Seat type
Conductive PTFE

Temperature rating
- 40 °C / +200 °C

Hydraulic test
Class A

Standards

Leak test
EN 12266-1, Class A
ISO 5208, Class A

Face to face length
EN 558, Series 20
ISO 5752, Series 20
API 609 Tab. 1

Flange connection
EN 1092-1
ASME B16.5

TOP flange
EN ISO 5211

Working standard
EN 593

Marking
EN 19

ATEX desing
EN ISO 80079-36
EN IEC 60079-0

Type designation

- 5 8 8 B**
- Body design**
B - WAFFER body with through holes
T - LUG body with threaded holes
 - Seat material**
8 - Conductive PTFE
 - Disc material**
8 - Duplex stainless steel 1.4469 conductive PTFE coated
7 - Duplex stainless steel 1.4469 with polished edges
 - Series designation**
Series 500

Maximum medium flow rate

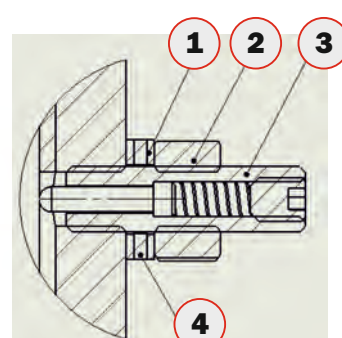
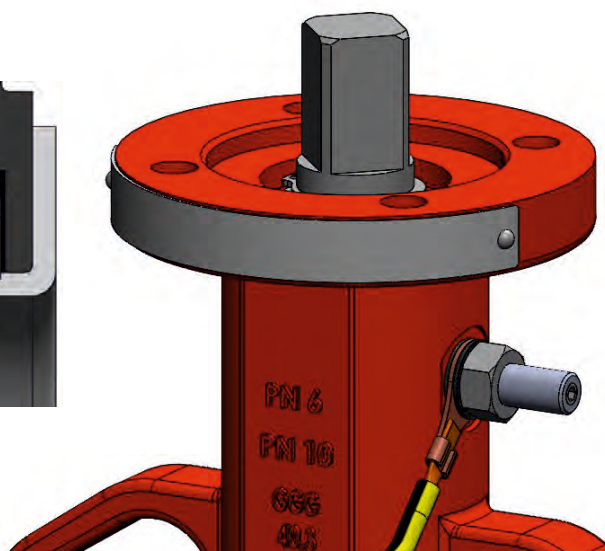
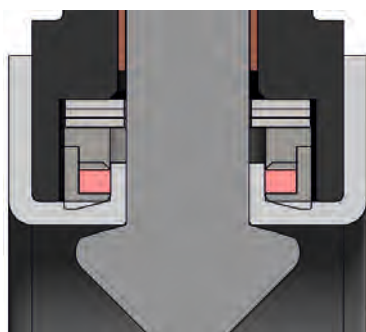
PS [bar]	Maximum medium flow rate [m/s]	
	Liquid	Gas
do 6	2,5	25
6 < PS ≤ 10	3	30

Seat

- The seat is made of **conductive Teflon (PTFE)** and is pressed by a set of prestressed disc springs
- Safety seals** on both shaft ends - ring made of silicone rubber which is pressed by set of springs

ATEX design

- ATEX clamp** - (pos. No. 4) to which it is connected the lead wire is connected to the ATEX screw (No. 3) using hexagon nuts (No. 2) and two washers (No. 1)
- The ATEX screw** is connected to the shut-off flap through the threaded hole into which it is screwed
- The tip of the ATEX screw** is pressed in by means of a spring to the steel shaft and thanks to this spring the contact is constant and does not break



6 / ABO valve Czech

VALVE ACTUATION



Operating torques (Nm) vs. working pressure (bar)

	DN	50	65	80	100	125	150	200	250	300	350	400
599	p _{max} 10bar	35	40	60	95	140	190	250	435	660	850	1050
579*	p _{max} 10bar	35	40	60	95	140	190	250	435	660	-	-

p_{max} - maximum working pressure. For pressure of 10 bar (water at 20 °C). Torques are declared without safety factor. Recommended safety coefficient for the actuator installation is 1,3.
 *) series 579B are available only up to DN300

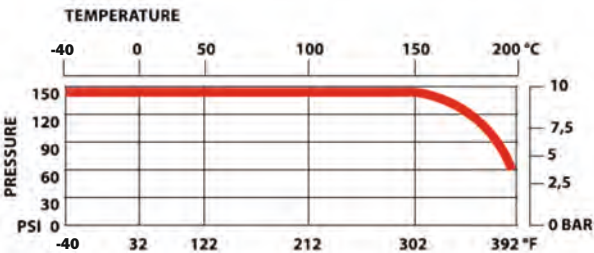
Installation between flanges DN50 - DN400

	DN	50	65	80	100	125	150	200	250	300	350	400
	PN6											
	PN10											
	PN16											
	Class 150											
	JIS 10 K											
	JIS 16 K											

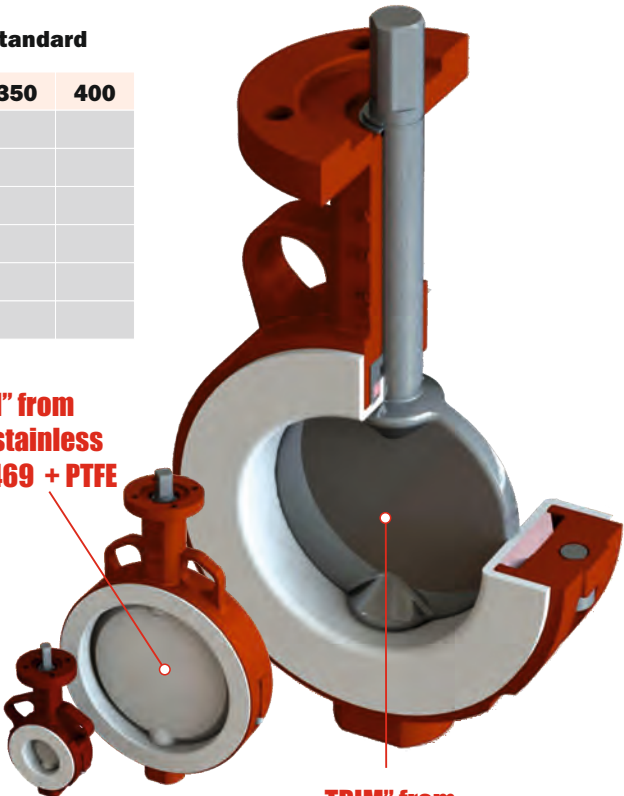
Working conditions

Max. working pressure	Temperature rating
DN50-DN400: 10 bar	- 40 °C do +200 °C *)

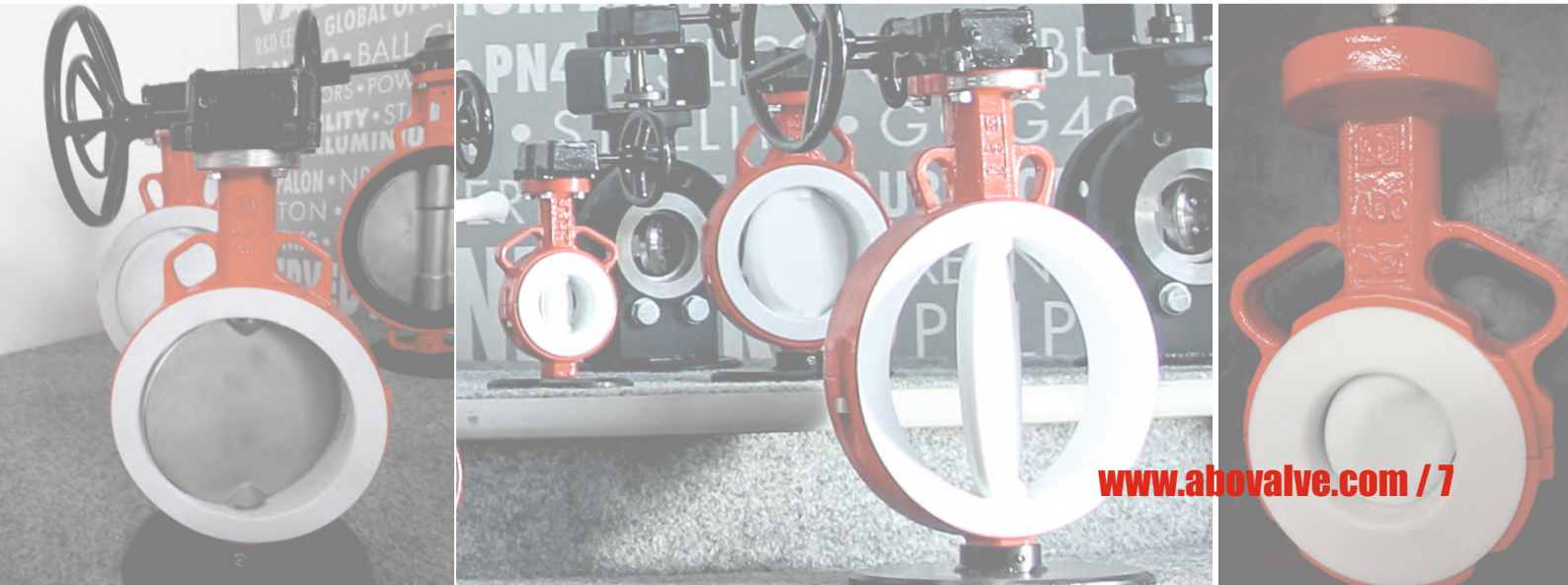
*) depending on medium



„TRIM” from duplex stainless steel 1.4469 + PTFE



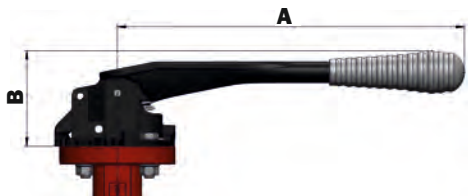
„TRIM” from one piece only (stem + disc + pivot)



All ABO handlevers, manual worm-gear units, pneumatic or electric actuators can be mounted directly to ABO butterfly valves, which ensures compatibility between the actuator and the valve.

Handlever

For manual actuation, company ABO valve offers handlevers in carbon steel material with protective coating for excellent corrosion, abrasion and impact resistance. A lever in stainless steel material is an option.



DN	50-65	80-125	150
A	225	270	360
B	75	75	75
Kg	1,2	1,35	1,5

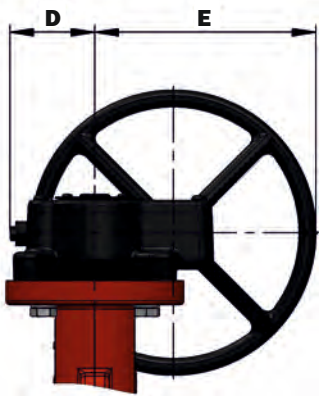
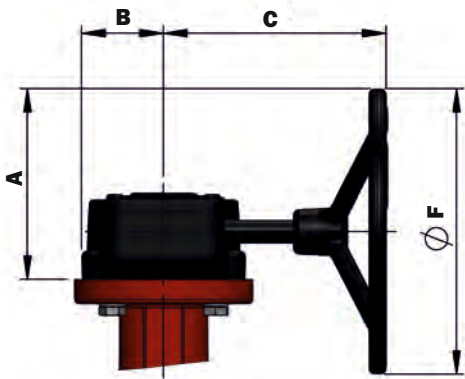
Dimensions are mentioned in mm.

Manual gearbox with handwheel

Manual gearbox casing is made from cast iron with suitable surface treatment and protection degree class IP 67. Self-locking design of the worm gear enables both to set basic positions open/shut and to control (throttle) media flow. The worm gearbox is simply controlled hand-wheel of a suitable diameter. End positions of the worm gearbox are adjusted by screws. The gearbox can be equipped with a lockable system secured by a padlock. The worm gearbox as well as the hand lever can be completed with limit switch boxes.

DN	50-65	80-150	200-300	350-400
A	69,5	127,5	133,5	287,5
B	35	46	57	67
C	91	139	156	275
D	38	59	59,5	181
E	84	141	155	319
F	100	200	200	500
Kg	1,24	2,85	4,56	10,2

Dimensions are mentioned in mm.



VALVE ACTUATION



Actuators

Pneumatic actuators

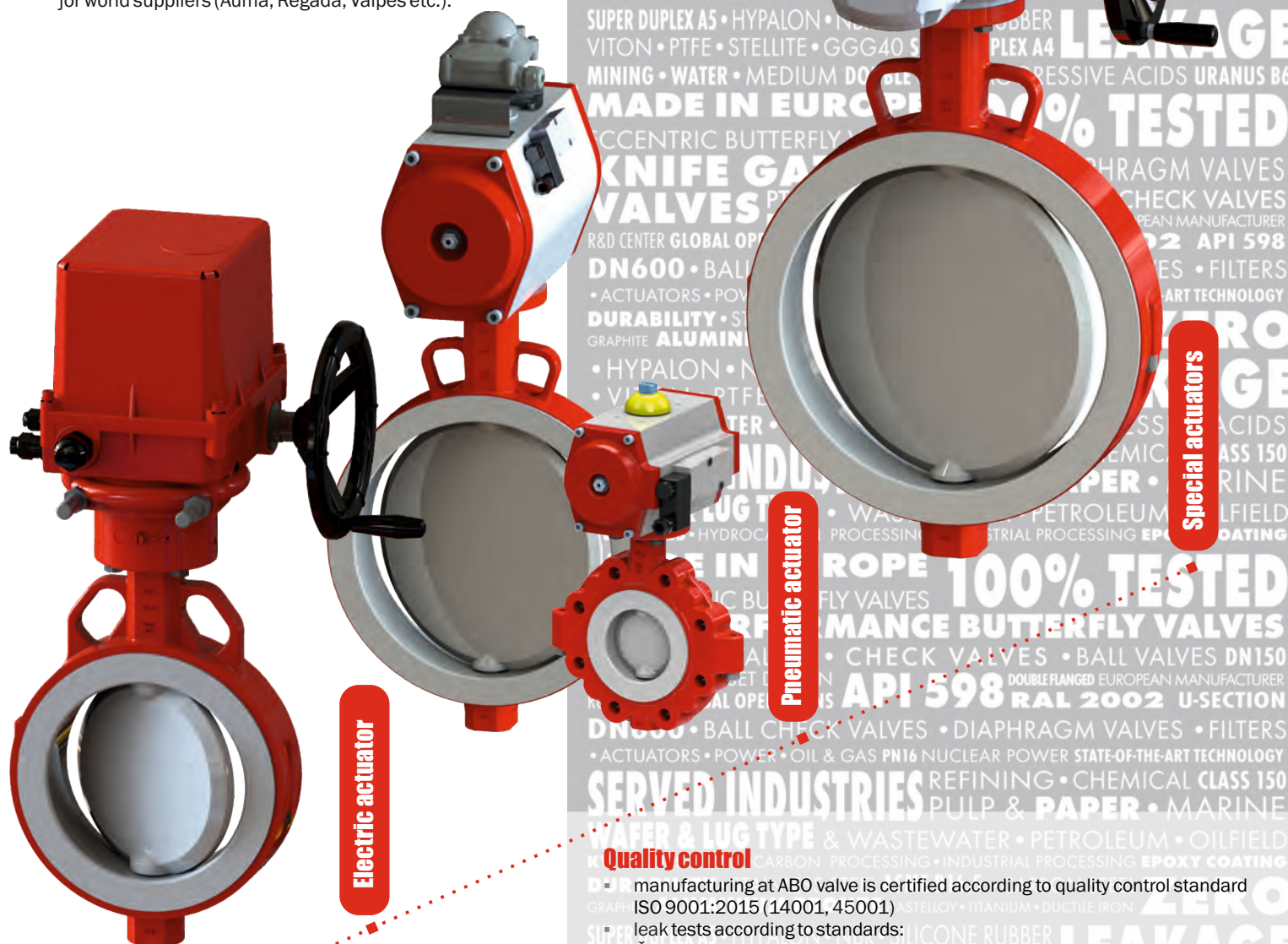
ABO valves can be equipped with pneumatic actuators of two optional designs: single-action or double-action.

Electric actuators

Electric actuators are designed quarter-turn. Electric actuators can be installed for voltages of 24 V, 230 V or 400 V.

Special actuator types

Valves are equipped with special actuator types from major world suppliers (Auma, Regada, Valpes etc.).



MADE IN EUROPE 100% TESTED

CONCENTRIC BUTTERFLY VALVES **HIGH PERFORMANCE BUTTERFLY VALVES**

KNIFE GATE VALVES • BALL VALVES DN150

ATEX 94/9/EC OFFSET DESIGN DOUBLE FLANGED EUROPEAN MANUFACTURER

R&D CENTER GLOBAL OPERATIONS **API 598 RAL 2002 U-SECTION**

DN600 • BALL CHECK VALVES • DIAPHRAGM VALVES • FILTERS

• ACTUATORS • POWER STATE-OF-THE-ART TECHNOLOGY

SEWERAGE • CHEMICAL CLASS 150

WATER • MARINE

KV 150 • OILFIELD

DURABILITY • STAINLESS STEEL • EPOXY COATING

GRAPHITE ALUMINIUM • ZERO LEAKAGE

• HYPALON • NBR • RUBBER

VITON • PTFE • STELLITE • GGG40 • PLEX A4

MINING • WATER • MEDIUM DUTY • PRESSURE ACIDS URANUS B6

MADE IN EUROPE 100% TESTED

CONCENTRIC BUTTERFLY VALVES

KNIFE GATE VALVES

PTFE-LINED BALL VALVES • CHECK VALVES

R&D CENTER GLOBAL OPERATIONS EUROPEAN MANUFACTURER

DN600 • BALL VALVES • DIAPHRAGM VALVES • FILTERS

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PTFE-LINED BALL VALVES • CHECK VALVES

R&D CENTER GLOBAL OPERATIONS EUROPEAN MANUFACTURER

DN600 • BALL VALVES • DIAPHRAGM VALVES • FILTERS

Quality control

manufacturing at ABO valve is certified according to quality control standard ISO 9001:2015 (14001, 45001)

leak tests according to standards:

ČSN EN 12266-1, ISO 5208, ANSI/FCI 70-2

production in accordance with the Pressure Equipment Directive 2014/68/EU - Equipment operating under pressure (Category III, module H)

3.1/3.2 inspection test certificates can be issued

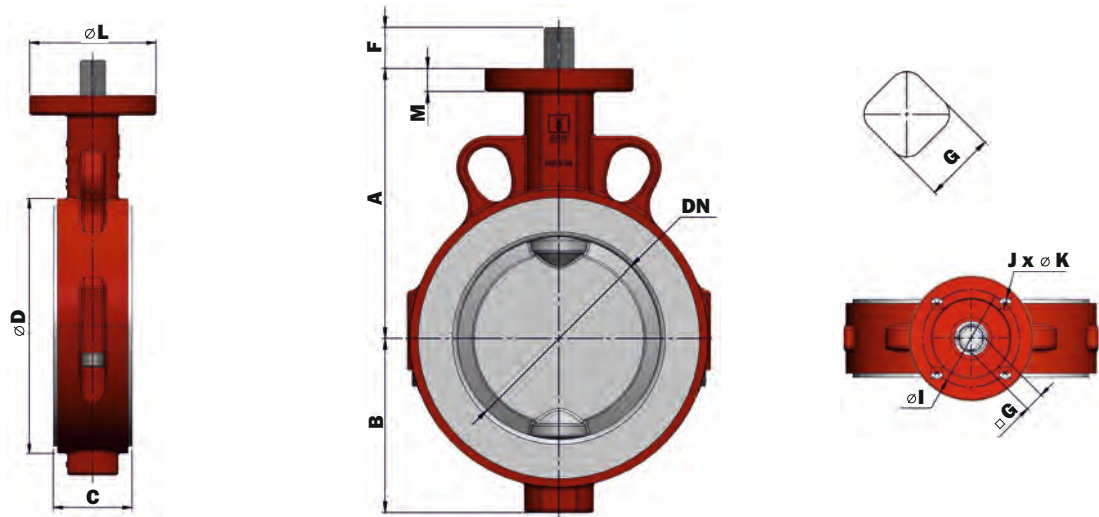
valve actuators, if delivered, are adjusted and tested while assembled all the certificates can be downloaded from www.abovalve.com

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BASIC DIMENSIONS

WAFLER (B) DESIGN

Czech Industrial Valve Manufacturer



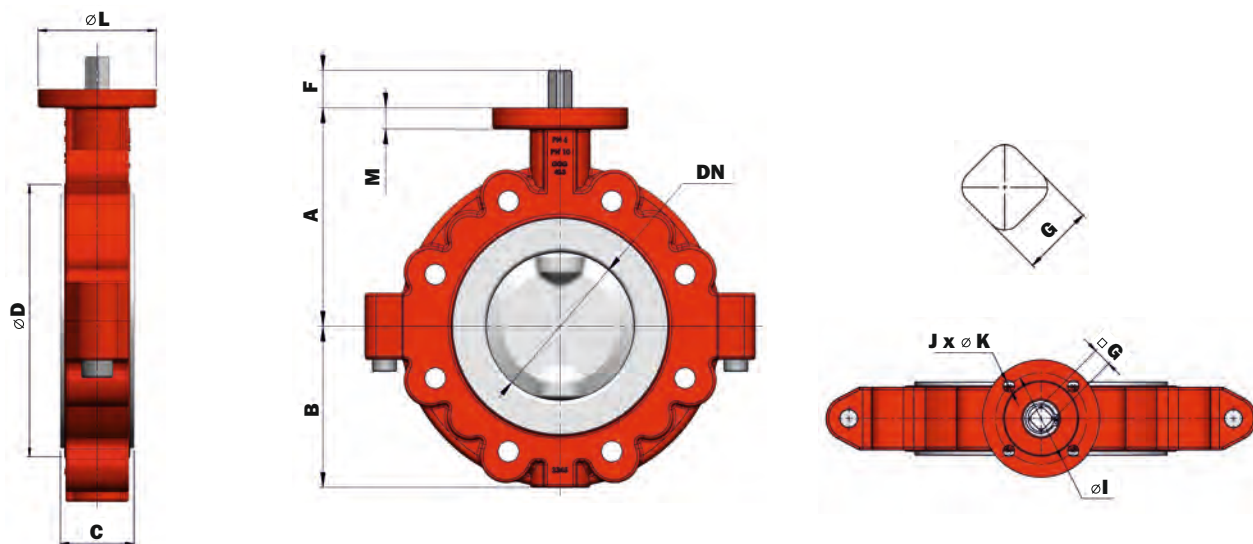
WAFLER (B)-DESIGN		DN	50	65	80	100	125	150	200	250	300	350	400
Valve dimension	A		120	128	135	145	164	176,5	234	274	299	331	361
	B		61	74	78	90	106	126	152	186	214	245	280
	C		43	46	46	52	56	56	60	70	76	78	102
	D		96	115	131	152	181	207	257	314	364	408	468
Endshaft dimensions	F		25	25	25	25	25	25	25	31	31	42	42
	G		11	11	14	14	14	14	17	22	22	27	27
Top flange dimensions	I		50	50	70	70	70	70	70	102	102	125	125
	J		4	4	4	4	4	4	4	4	4	4	4
	K		7	7	9	9	9	9	9	12	12	14	14
	L		70	70	90	90	90	90	90	125	125	155	155
	M		14	14	14	14	14	14	14	18	20	20	20
ISO Flange 5211			F05	F05	F07	F07	F07	F07	F07	F10	F10	F12	F12
Weight (kg)			2,3	3,0	3,5	5,0	6,5	7,8	13,2	23,6	30,9	40,1	59,7

Dimensions are mentioned in mm.



BASIC DIMENSIONS

LUG (T) DESIGN



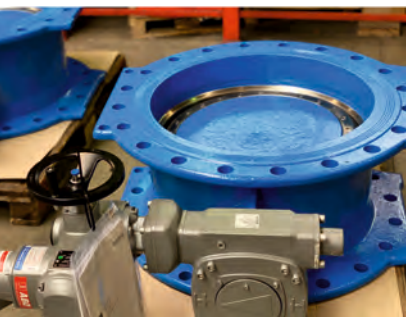
LUG (T)-DESIGN		DN	50	65	80	100	125	150	200	250	300
Valve dimension	A		120,5	128	135,5	145	164	176,5	234	274	299
	B		76	85	95	107	127	138	172	197	214
	C		43	46	46	52	56	56	60	70	76
	D		96	115	131	152	181	207	257	314	364
	F		25	25	25	25	25	25	25	31	31
Endshaft dimensions	G		11	11	14	14	14	14	17	22	22
	I		50	50	70	70	70	70	70	102	102
Top flange dimensions	J		4	4	4	4	4	4	4	4	4
	K		7	7	9	9	9	9	9	12	12
	L		70	70	90	90	90	90	90	125	125
	M		14	14	14	14	14	14	14	18	20
ISO Flange 5211			F05	F05	F07	F07	F07	F07	F07	F10	F10
Weight (kg)			3,65	5,8	7,1	9,4	12,4	14,7	26,7	35,9	46,6

Dimensions are mentioned in mm.



CONTACT US

Czech Industrial Valve Manufacturer



Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 224 087
sales@abovalve.com

Slovak Republic

ABO Slovakia, s.r.o.
Banská Bystrica
tel.: +421 484 145 633
sales.sk@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0)152 262 29501
sales.de@abovalve.com

Russia

ABO Armatura LLC
Smolensk
tel.: +7 (4812) 240 020
sales.ru@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 216 527 36 34
sales.tr@abovalve.com

China

ABO Flow Control
Shanghai
tel.: +86 136 01 522 831
sales.cn@abovalve.com

India

ABO Controls Pvt. Ltd.
Mumbai
tel.: +91 99 2002 9994
sales.in@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
tel.: +65 9169 4562
sales.sg@abovalve.com

United Arab Emirates

Sales representation
Abu Dhabi
tel.: +971 56 9207964
bharti@abovalve.com

Bahrain

Sales representation
Manama
tel.: +973 3444 9065
jimnichen@abovalve.com

Valid since: 08/2021



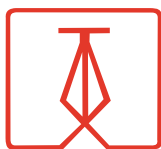
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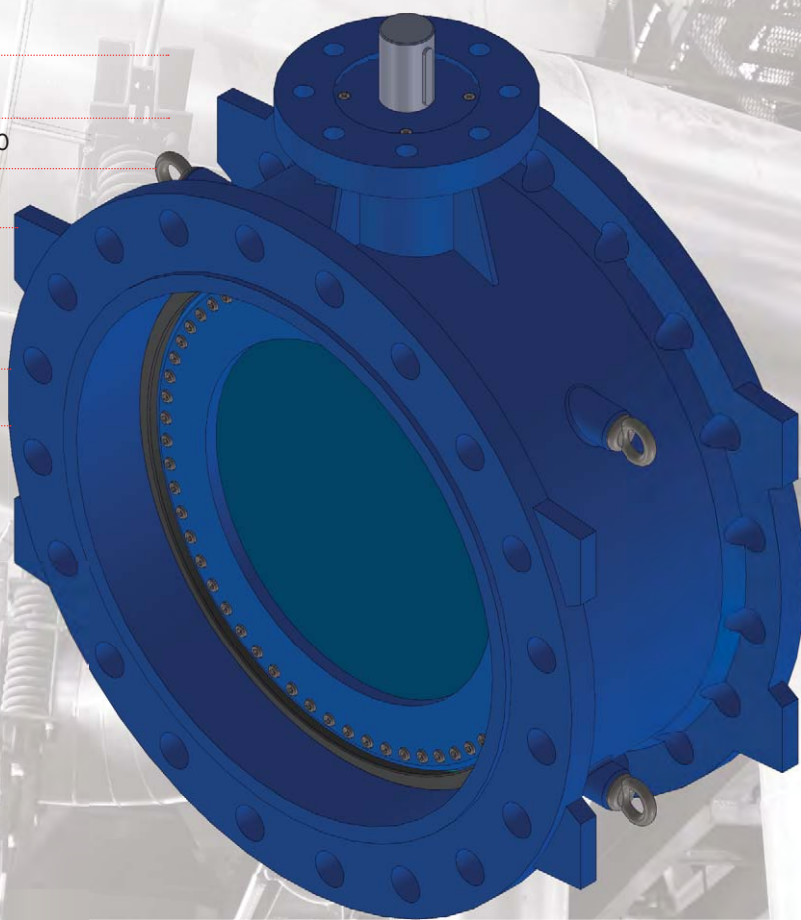


ABO valve

Industrial Valve Manufacturer

DOUBLE OFFSET DOUBLE FLANGED BUTTERFLY VALVES

Body design	Double flanged
Nominal size	DN150 - DN2000
Working pressure	16 bar / 25 bar / 40 bar / 50 bar
Flange connection	PN6 / PN10 / PN16 / PN25 / PN40
Working temperature	-10 °C / +80 °C
Working media	Industrial water Potable water Sewage Low corrosive liquids
Tightness	Class A
Features	Double offset design Splitted stem Bidirectional sealing WRAS certification



SERIES 2E3

power line

www.abovalve.com

GENERAL VALVE DESCRIPTION

Industrial Valve Manufacturer

Double offset double flanged butterfly valves Series 2E3 are suited for wide range of industrial applications including:

- sanitary installations
- industrial piping
- hydraulic equipment
- chilled water, potable water
- waste water
- irrigation & drainage systems
- sewage piping systems
- desalination

The butterfly valves Series 2E3 are not suitable for flow rate throttling. Disc's shafts should be always installed in horizontal positions.

General features

- double flanged valve design with double excentricity
- on/off regulating device
- bi-directional sealing
- stainless steel sealing
- easy repair and maintenance
- easy installation and assembly
- WRAS certification

Quality control

- manufacturing at ABO valve is certified according to quality control standard ISO 9001:2015 (14001, 18001)
- tightness tests according to standards: ČSN EN 12266-1, ISO 5208, ANSI/FCI 70-2
- production in accordance with the Pressure Equipment Directive 2014/68/EU - Equipment operating under pressure (Category III, module H)
- all the ABO valves are tested under the pressure of 110% work pressure to ensure leak tightness according to standards - the 2.2/3.1/3.2 pressure test certificates can be issued
- valve actuators, if delivered, are adjusted and tested while assembled
- all certificates are downloadable from www.abovalve.com



Type designation

2E3 3 4 3 F 150

Nominal size (DN)

Body design
F - Double flanged

Disc material
3 - Ductile iron 0.7040 (GGG40)
6 - Ductile iron 0.7050 (GGG50)

Seat material
4 - Stainless steel 1.4301

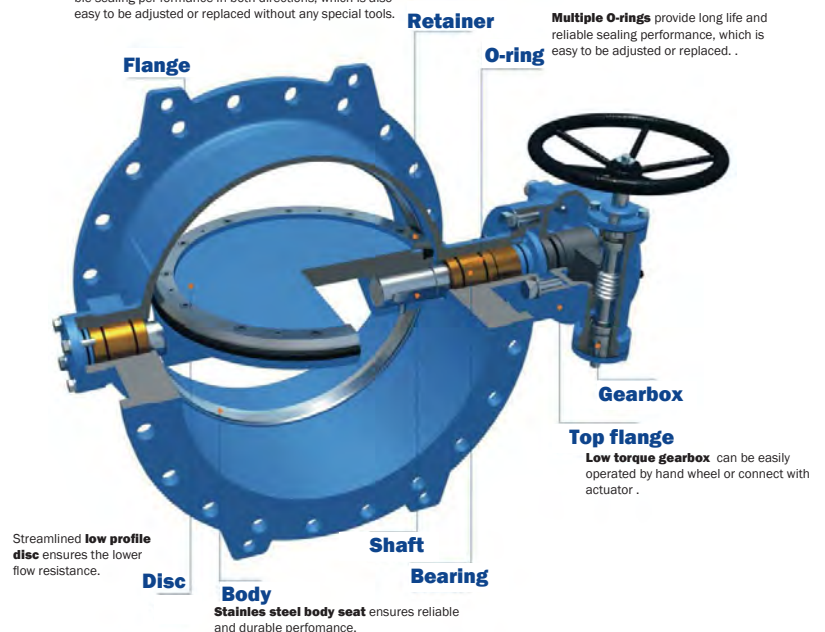
Body material
3 - Ductile iron 0.7040 (GGG40)
6 - Ductile iron 0.7050 (GGG50)

Series name
Series 2E3

Standards

Design	EN 593
Leak test	EN 12266-1, Class A ISO 5208, Class A API 598
Face to face length	EN 558-1, Series 14 ISO 5752, Series 14 ISO 5752, Series 13
Flange connection	EN1092/BS4504 (DIN2501) ASME B16.5 Class 150
Top flange	EN ISO 5211

T-profiled disc seal ring fixed by retainer ensures reliable sealing performance in both directions, which is also easy to be adjusted or replaced without any special tools.



DESIGN ADVANTAGES



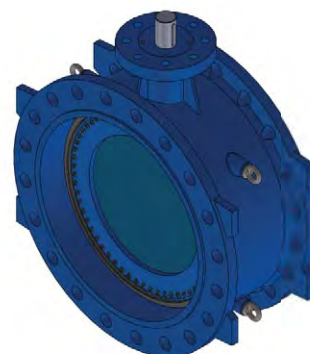
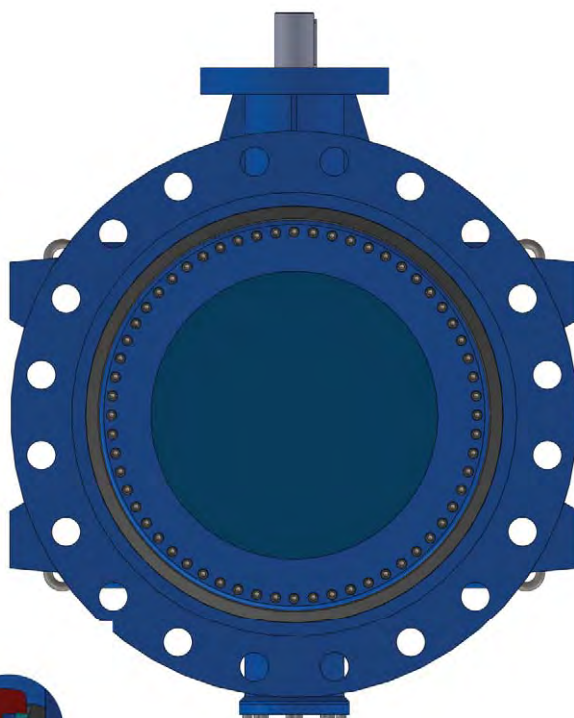
ABO valve

Design F
DOUBLE
FLANGED



Easy seat replacement

Possibility of replacement of the profile sealing ring without disassembling the disc.



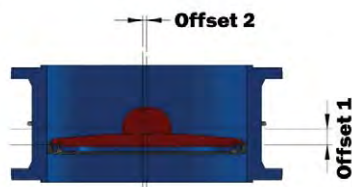
International standard compatibility

Top flange according ISO 521.1 allows direct installation of manual gearboxes or actuators



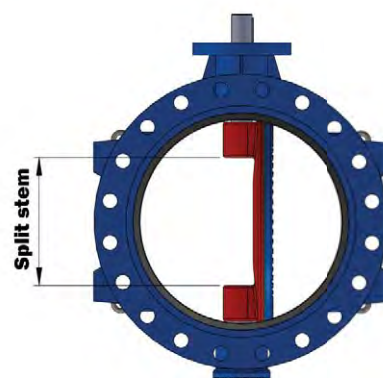
Improved sealing performance

Automatic sealing system with enclosed and pressure-supported profile sealing ring.



Double offset

Double offset design ensures perfect tightness and function of the valve, especially in case of water hammer. This offers results in factoring during the first 10 degrees of opening and final 10 degrees of closing.



Split stem

Split stem allows higher flow rate and Kv value and lower pressure drop.

Installation between flanges (DN150-DN3000)

DN	150	200	250	300	350	400	450	500	600	700	800	900	1000	1100	1200	1400	1500	1600	1800	2000	2200	2400	2500	2600	3000
PN10														X			X								
PN16																	X								
PN25														X									X	X	X
PN40														X							X	X	X	X	X

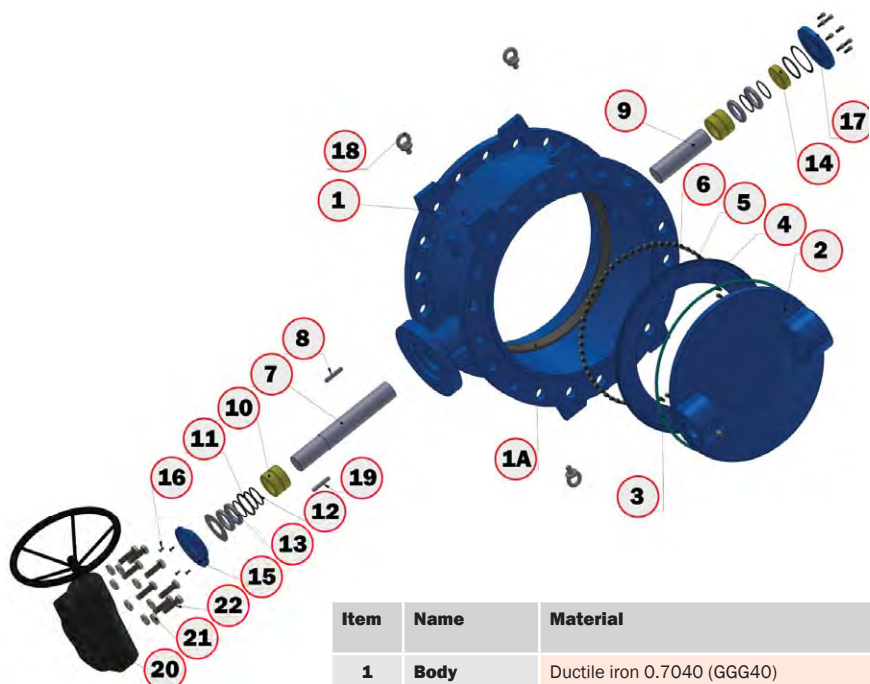
Standard

X Upon request

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MATERIAL PERFORMANCE / TECHNICAL INFORMATION

Industrial Valve Manufacturer



Coating

Epoxy coating is applied for excellent corrosion resistance. The coating is electrostatically applied (inside and outside), thickness 250 µm.

ABO valve coating is executed in blue finish RAL5005. Other color possibilities: RAL5015/RAL5017.

Item	Name	Material
1	Body	Ductile iron 0.7040 (GGG40) Ductile iron 0.7050 (GGG50) (GJS400-15 / GJS500-7)
1A	Body seat	Stainless steel 1.4301
2	Disc	Ductile iron 0.7040 (GGG40) Ductile iron 0.7050 (GGG50) (GJS400-15 / GJS500-7)
3	Disc sealing ring	Rubber (EPDM/NBR)
4	Retaining ring	Stainless steel 1.4301 (SS304) Stainless steel 1.4571
5	Bolt	Stainless steel A2
6	Screws	Stainless steel A4
7	Upper shaft	Stainless steel 1.4021 (SS420) Duplex stainless steel 1.4462 (S31803)
8	Key	Steel 1.4021 (SS420) Duplex stainless steel 1.4462 (S31803)
9	Lower shaft	Stainless steel 1.4021 Duplex stainless steel 1.4462 (S31803)

Item	Name	Material
10	Bushing	Bronze 2.0936
11,2	O-ring	Rubber (EPDM/NBR)
13,14	Adjustment ring	Delrin
15	End cover	Ductile iron GGG50 / GGG40
16	Bolt	Stainless steel A21
17	End cover	Ductile iron GGG50 / GGG40
18	Eye bolt	Steel A21CWCB
19	Key	Stainless steel 1.4021 (SS420) Duplex stainless steel 1.4462 (S31803)
20	Gearbox	Grey cast iron GG25 (0.6025)
21	Washer	Steel 1.0037
22	Bolt	Steel A2-70

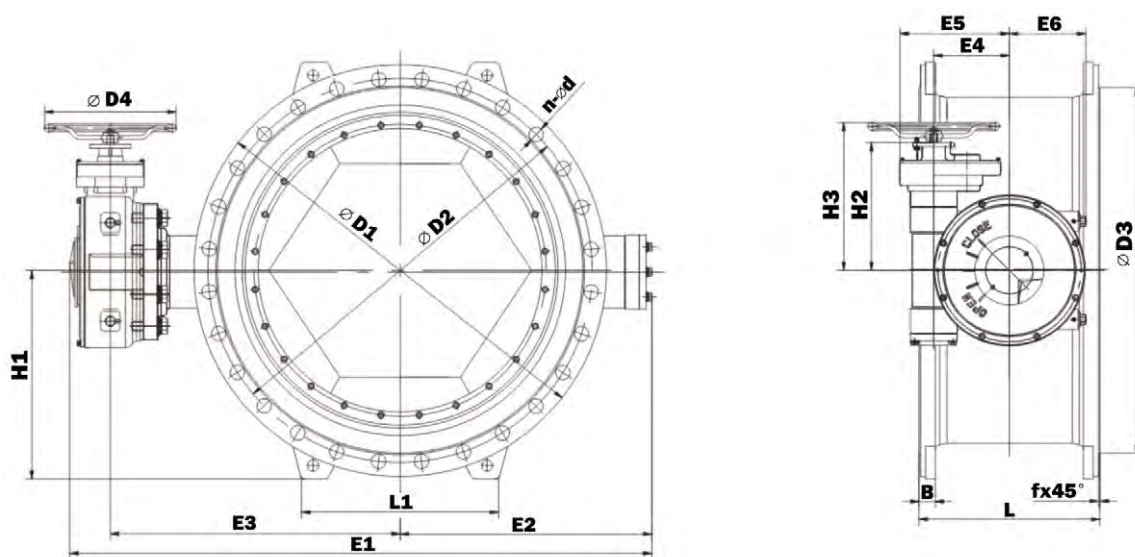
Execution in other material types can be provided upon request. Choice of the seat and disc materials for various media will be recommended upon specific inquiry

DN	150	200	250	300	350	400	450	500	600	700	800	900
P _{max} 10 bar		315	505	788	1098	1591	2015	2623	4029	5758	8376	11387
P _{max} 16 bar	222	466	827	1163	1754	2341	3074	4135	6328	9166	13446	17794
P _{max} 25 bar	396	800	1346	2018	2731	3869	5085	6789	9958	15815	22048	27462
P _{max} 40 bar	721	1206	2042	3230	4535	6049	9532	8567	13249	27154	27596	37516

DN	1000	1100	1200	1300	1400	1500	1600	1700	1800	2000	2200	2400
P _{max} 10 bar	15268	20252	23567		33714	40972	48968		67936	90666	115614	150482
P _{max} 16 bar	23843	30342	37685		53058	56484	81921		107690	139344		
P _{max} 25 bar	39462		49698		88368	92579	127759					
P _{max} 40 bar	47534	71004	108230		126595	153086						

Bare shaft torques.

MAIN DIMENSIONS / PN10



PN10

DN	D1	D2	D3	B	f	L		n-d	H1	H2	H3	E1	E2	E3	E4	E5	E6	L1	D4
						series 14	series 13												
200	Ø340	Ø295	Ø266	20	3	230	152	8-Ø23	175	137	193	526	198	272	64	99	86	196	240
250	Ø395	Ø350	Ø319	22	3	250	165	12-Ø23	202,5	137	193	568	219	293	64	99	86	240	240
300	Ø445	Ø400	Ø370	24,5	4	270	178	12-Ø23	227,5	178	233	670	254	351	93,4	135	115	260	320
350	Ø505	Ø460	Ø429	24,5	4	290	190	16-Ø23	257,5	178	233	720	279	376	93,4	135	115	280	320
400	Ø565	Ø515	Ø480	24,5	4	310	216	16-Ø28	287,5	192	283	834	320	432	120	169	138	310	400
450	Ø615	Ø565	Ø530	25,5	4	330	222	20-Ø28	312,5	192	283	903	359	462	120	169	138	340	400
500	Ø670	Ø620	Ø582	26,5	4	350	229	20-Ø28	340	317	378	988	393	513	120	186	138	370	400
600	Ø780	Ø725	Ø682	30	5	390	267	20-Ø31	395	315	376	1119	450	580	148	214	166	430	400
700	Ø895	Ø840	Ø794	32,5	5	430	292	24-Ø31	452,5	315	376	1217	530	598	148	214	166	480	400
800	Ø1015	Ø950	Ø901	35	5	470	318	24-Ø34	512,5	346	407	1410	614	691	185	265	196	560	400
900	Ø1115	Ø1050	Ø1001	37,5	5	510	330	28-Ø34	562,5	346	407	1530	675	750	185	265	196	615	400
1000	Ø1230	Ø1160	Ø1112	40	5	550	410	28-Ø37	620	390	451	1712	748	839	230	333	232	670	400
1200	Ø1455	Ø1380	Ø1328	45	5	630	470	32-Ø41	732,5	451	512	1971	865	981	230	368	232	800	400
1400	Ø1675	Ø1590	Ø1530	46	5	710	530	36-Ø44	842,5	507	568	2313	1011	1138	315	453	327	920	400
1500	Ø1785	Ø1700	Ø1640	48	5	750	565	36-Ø44	897,5	507	568	2489	1112	1213	315	453	327	980	400
1600	Ø1915	Ø1820	Ø1750	49	5	790	600	40-Ø50	962,5	507	568	2588	1161	1263	315	453	327	1050	400
1800	Ø2115	Ø2020	Ø1950	52	5	870	670	44-Ø50	1063	599	660	3038	1324	1501	412	613	408	1162	400
2000	Ø2325	Ø2230	Ø2150	55	5	950	760	48-Ø50	1168	599	660	3255	1436	1606	412	613	408	1270	400

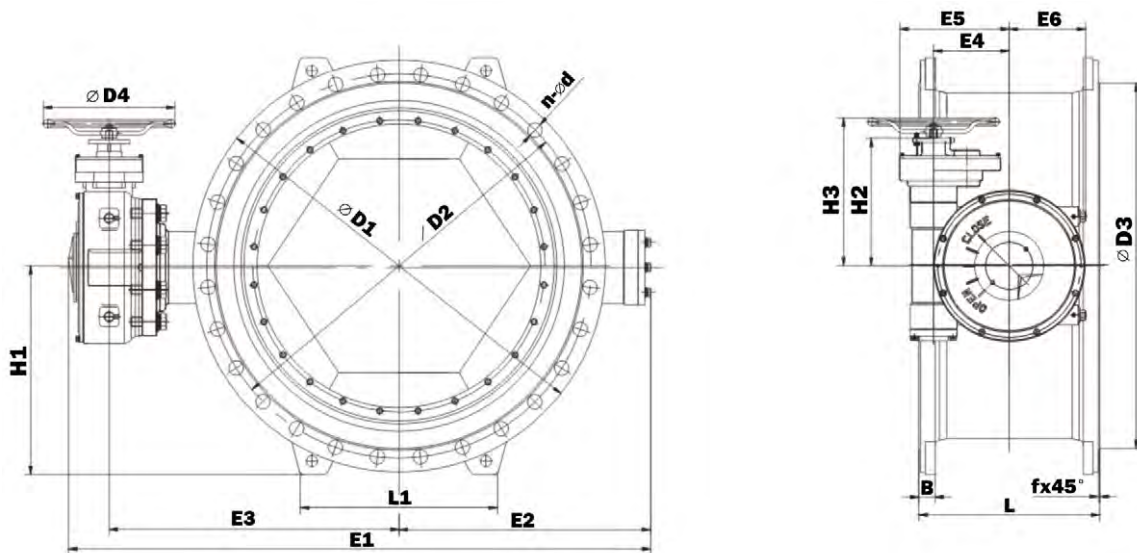
If there is any request for larger sizes, please consult with us

Face to face length acc. to EN588-1 Series 14/13 (ISO 5752 Series 14/13, DIN 3202 F4/F16).

Flange dimensions and drilling acc. to EN1092-2 (ISO 7005-2).

MAIN DIMENSIONS / PN16

Industrial Valve Manufacturer



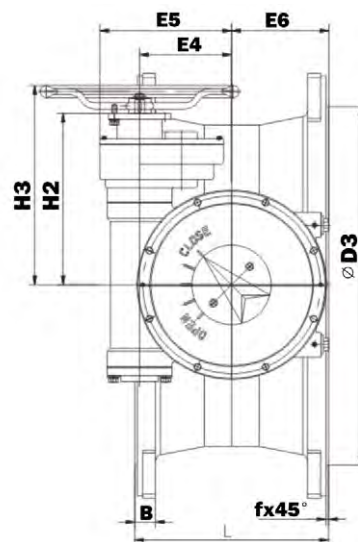
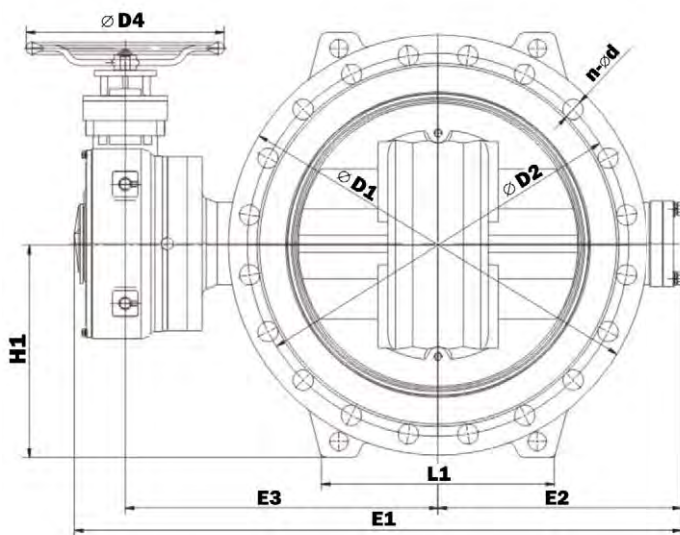
PN16

DN	D1	D2	D3	B	f	L		n-d	H1	H2	H3	E1	E2	E3	E4	E5	E6	L1	D4
						series 14	se-ries 13												
200	Ø340	Ø295	Ø266	20	3	230	152	12- Ø3	175	137	193	526	198	272	64	99	86	196	240
250	Ø405	Ø355	Ø319	22	3	250	165	12- Ø28	207,5	178	233	622	230	328	93,4	135	115	240	320
300	Ø460	Ø410	Ø370	24,5	4	270	178	12- Ø28	235	178	233	670	254	351	93,4	135	115	275	320
350	Ø520	Ø470	Ø429	26,5	4	290	190	16- Ø28	265	192	283	784	295	407	120	169	138	290	400
400	Ø580	Ø525	Ø480	28	4	310	216	16- Ø31	295	192	283	853	334	437	120	169	138	310	400
450	Ø640	Ø585	Ø548	30	4	330	222	20- Ø31	325	317	378	938	368	488	120	186	138	360	400
500	Ø715	Ø650	Ø609	31,5	4	350	229	20- Ø34	362,5	315	376	1019	400	530	148	214	166	470	400
600	Ø840	Ø770	Ø720	36	5	390	267	20- Ø31	425	315	376	1117	480	548	148	214	166	395	400
700	Ø910	Ø840	Ø794	39,5	5	430	292	20- Ø37	460	346	407	1308	563	640	185	265	196	480	400
800	Ø1025	Ø950	Ø901	43	5	470	318	24 Ø41	517,5	346	407	1426	623	698	185	265	196	560	400
900	Ø1125	Ø1050	Ø1001	46,5	5	510	330	28- Ø41	567,5	390	451	1612	698	789	230	265	232	618	400
1000	Ø1255	Ø1170	Ø1112	50	5	550	410	28- Ø44	635,5	451	512	1773	766	882	230	333	232	600	400
1200	Ø1485	Ø1390	Ø1328	57	5	630	470	32- Ø50	737,5	507	568	2112	910,5	1038	315	368	327	800	400
1400	Ø1685	Ø1590	Ø1530	60	5	710	530	36- Ø50	847,5	599	660	2529	1063	1253	412	453	408	920	400
1500	Ø1820	Ø1710	Ø1640	62,5	5	750	565	36- Ø57	915	599	660	2633	1120	1300	412	453	408	1000	400
1600	Ø1930	Ø1820	Ø1750	65	5	790	600	36- Ø57/4-M52	970	599	660	2754	1172	1369	412	453	408	1060	400
1800	Ø2130	Ø2020	Ø1950	70	5	870	670	36- Ø57/8-M52	1070	777	838	3257	1416	1602	495	613	485	1170	600
2000	Ø2345	Ø2230	Ø2150	75	5	950	760	48- Ø62	1178	777	838	3523	1583	1701	495	613	485	1290	600

If there is any request for larger sizes, please consult with us

Face to face lenght acc. to EN588-1 Series 14/13 (ISO 5752 Series 14/13, DIN 3202 F4/F16).
Flange dimensions and drilling acc. to EN1092-2 (ISO 7005-2).

MAIN DIMENSIONS / PN25



PN25

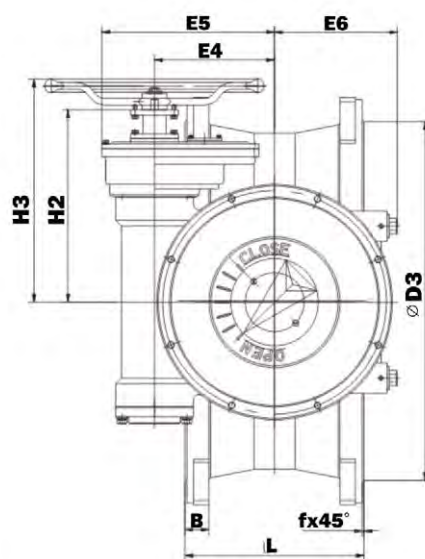
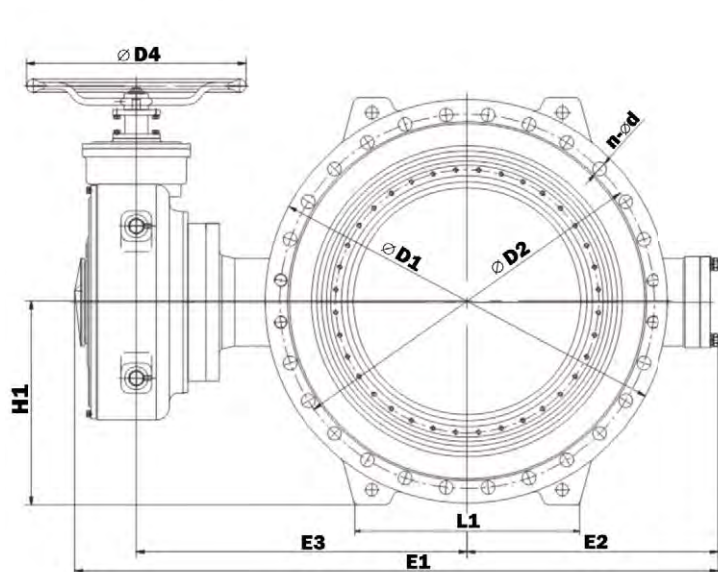
DN	D1	D2	D3	B	f	L	n-d	H1	H2	H3	E1	E2	E3	E4	E5	E6	L1	D4
						series 14												
200	Ø360	Ø310	Ø274	22	3	230	12- Ø28	190	178	233	586	221	300	93,4	135	115	220	320
250	Ø426	Ø370	Ø330	25	3	250	12- Ø31	220	178	233	656	254	337	93,4	135	115	260	320
300	Ø485	Ø430	Ø389	28	4	270	16- Ø31	250	192	283	757	298	377	120	169	138	300	400
350	Ø555	Ø490	Ø448	30	4	290	16- Ø34	285	317	378	830	318	430	120	186	138	320	400
400	Ø620	Ø530	Ø503	32	4	310	16- Ø37	315	315	376	945	370	486	148	214	166	350	400
450	Ø670	Ø600	Ø548	34,5	4	330	20- Ø37	340	315	376	991	406	496	148	214	166	371	400
500	Ø730	Ø660	Ø609	37	4	350	20- Ø37	370	346	407	1112	453	554	185	265	196	410	400
600	Ø845	Ø770	Ø720	42	5	390	20- Ø41	427,5	346	407	1235	495	631	185	265	196	470	400
700	Ø960	Ø875	Ø820	46,5	5	430	24- Ø44	485	390	451	1398	569	704	230	333	232	530	400
800	Ø1085	Ø990	Ø928	51	5	470	24- Ø50	547,5	390	451	1571	646	800	230	333	232	600	400
900	Ø1185	Ø1090	Ø1028	45,5	5	510	28- Ø50	597,5	451	512	1669	695	849	230	368	232	655	400
1000	Ø1320	Ø1210	Ø1140	60	5	550	24- Ø57/4 -M52	665	507	568	1923	779	980	315	353	327	730	400
1200	Ø1530	Ø1420	Ø1350	69	5	630	32- Ø57	770	599	660	2252	903	1136	412	613	408	840	400
1400	Ø1755	Ø1640	Ø1560	74	5	710	36- Ø62	882,5	599	660	2516	1041	1262	412	613	408	970	400
1500	Ø1865	Ø1750	Ø1678	77,5	5	750	36- Ø62	937,5	599	660	2651	1130	1308	412	613	408	1030	400
1600	Ø1975	Ø1860	Ø1780	81	5	790	36- Ø62/4 -M56	992,5	777	838	2852	1208	1405	495	725	485	1080	600

If there is any request for larger sizes, please consult with us

Face to face lenght acc. to EN588-1 Series 14/13 (ISO 5752 Series 14/13, DIN 3202 F4/F16).
Flange dimensions and drilling acc. to EN1092-2 (ISO 7005-2).

MAIN DIMENSIONS / PN40

Industrial Valve Manufacturer



PN40

DN	D1	D2	D3	B	f	L	n-d	H1	H2	H3	E1	E2	E3	E4	E5	E6	L1	D4
200	Ø375	Ø320	Ø284	30	3	230	12- Ø31	192,5	178	233	603	229	309	93,4	135	115	180	320
250	Ø450	Ø385	Ø345	35	3	250	8- Ø34/4 -M30	230	192	283	712	261	369	120	169	138	200	400
300	Ø515	Ø450	Ø409	40	4	270	12- Ø34/4 -M30	262,5	317	378	795	305	408	120	186	138	240	400
350	Ø580	Ø510	Ø465	44	4	290	12- Ø37/4 -M33	295	315	376	904	360	455	148	214	166	320	400
400	Ø660	Ø585	Ø535	48	4	310	12- Ø41/4 -M36	335	315	376	1001	407	505	148	214	166	320	400
450	Ø685	Ø610	Ø560	49	4	330	16- Ø41/4 -M36	347,5	346	407	1067	429	533	185	265	196	360	400
500	Ø755	Ø670	Ø615	52	4	350	16- Ø44/4 -M39	382,5	346	407	1180	477	598	185	265	196	450	400
600	Ø890	Ø795	Ø735	58	5	390	16- Ø50/4 -M45	450	390	451	1363	555	683	230	333	232	500	400
700	Ø995	Ø900	Ø840	64	5	430	20- Ø48/4 -M45	505	507	568	1625	666	795	315	453	327	560	400
800	Ø1140	Ø1030	Ø960	72	5	470	20- Ø56/4 -M52	575	507	568	1696	664	868	315	453	327	630	400
900	Ø1250	Ø1140	Ø1070	76	5	510	24- Ø56/4 -M52	635	507	568	1904	785	955	315	453	327	690	400
1000	Ø1360	Ø1250	Ø1180	80	5	550	24- Ø56/4 -M52	690	599	660	2039	837	989	412	613	408	740	400
1200	Ø1575	Ø1460	Ø1380	88	5	630	24- Ø62/8 -M56	792,5	777	838	2595	1077	1279	495	725	485	860	600
1400	Ø1795	Ø1680	Ø1600	98	5	710	28- Ø62/8 -M56	902,5	777	838	2839	1200	1400	495	725	485	1000	600
1500	Ø1925	Ø1800	Ø1715	105	5	750	28- Ø70/8 -M64	967,5	777	838	3041	1305	1497	495	725	485	1060	600
1600	Ø2025	Ø1900	Ø1815	108	5	790	32- Ø70/8 -M64	1018	958		3252	1410	1520	560	820	566	1100	

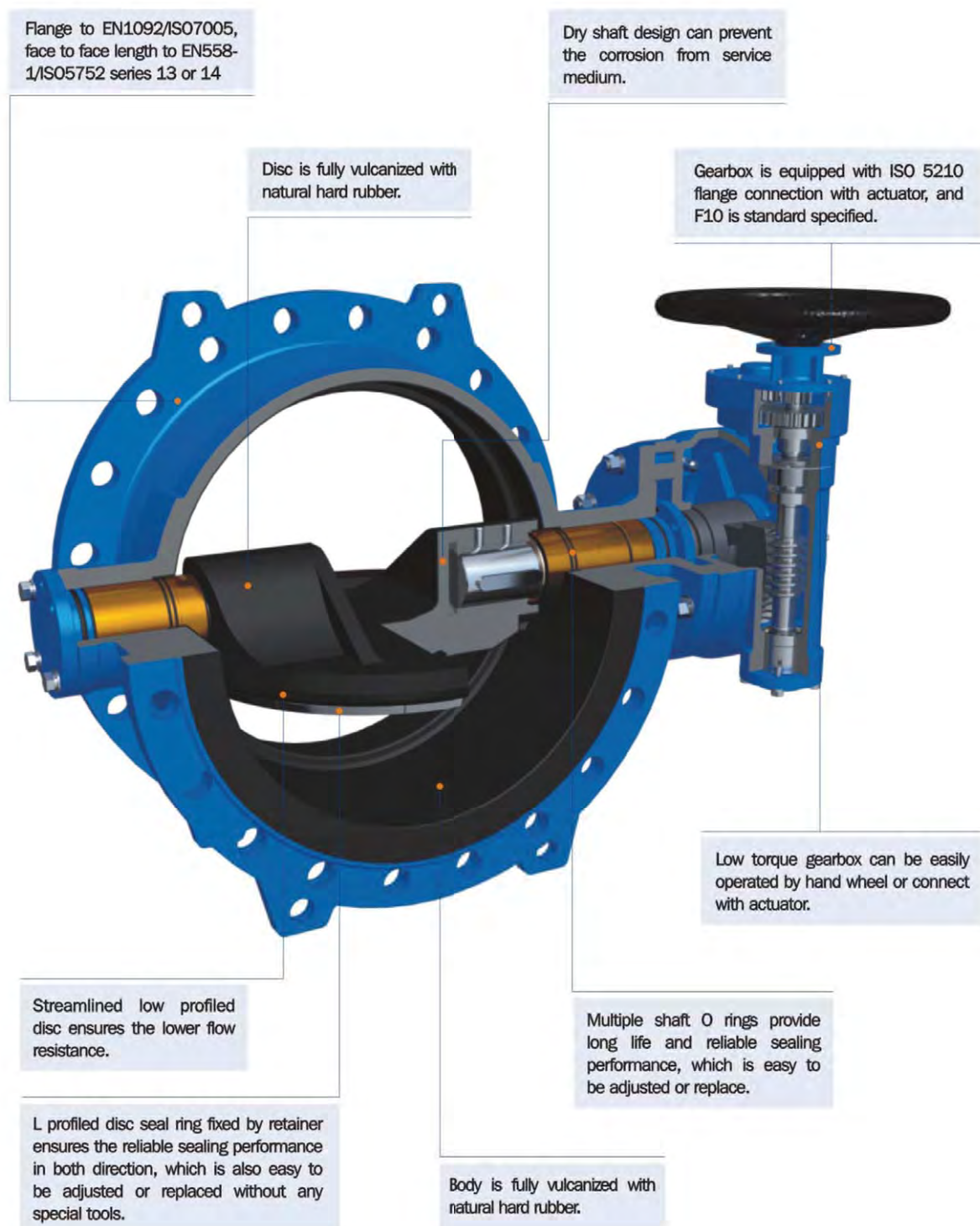
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Face to face lenght acc. to EN588-1 Series 14/13 (ISO 5752 Series 14/13, DIN 3202 F4/F16).
Flange dimensions and drilling acc. to EN1092-2 (ISO 7005-2).

RUBBER LINED OPTION / MAIN FEATURES



ABO valve



CONTACT US

Industrial Valve Manufacturer



Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 224 087
sales.sk@abovalve.com

Slovak Republic

ABO Slovakia, s.r.o.
Banská Bystrica
tel.: +421 947 902 862
sales.sk@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0)152 262 29501
sales.de@abovalve.com

USA

ABO Controls LLC
Houston
tel.: +(1) 832.291.4929
sales.us@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 216 527 36 34
sales.tr@abovalve.com

Russia

ABO Armatura LLC
Smolensk
tel.: +7 (4812) 240 020
sales.ru@abovalve.com

India

ABO Controls Pvt. Ltd.
Mumbai
tel.: +91 773 820 4779
sales.in@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
tel.: +65 9169 4562
sales.sg@abovalve.com

China

ABO Flow Control
Shanghai
tel.: +86 136 01 522 831
sales.cn@abovalve.com

United Arab Emirates

Sales representation
Abu Dhabi
tel.: +971 56 9207964
bharti@abovalve.com

Bahrain

Sales representation
Manama
tel.: +973 3444 9065
jimmichen@abovalve.com



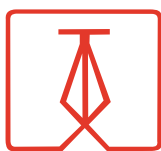
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ABO valve

Industrial Valve Manufacturer

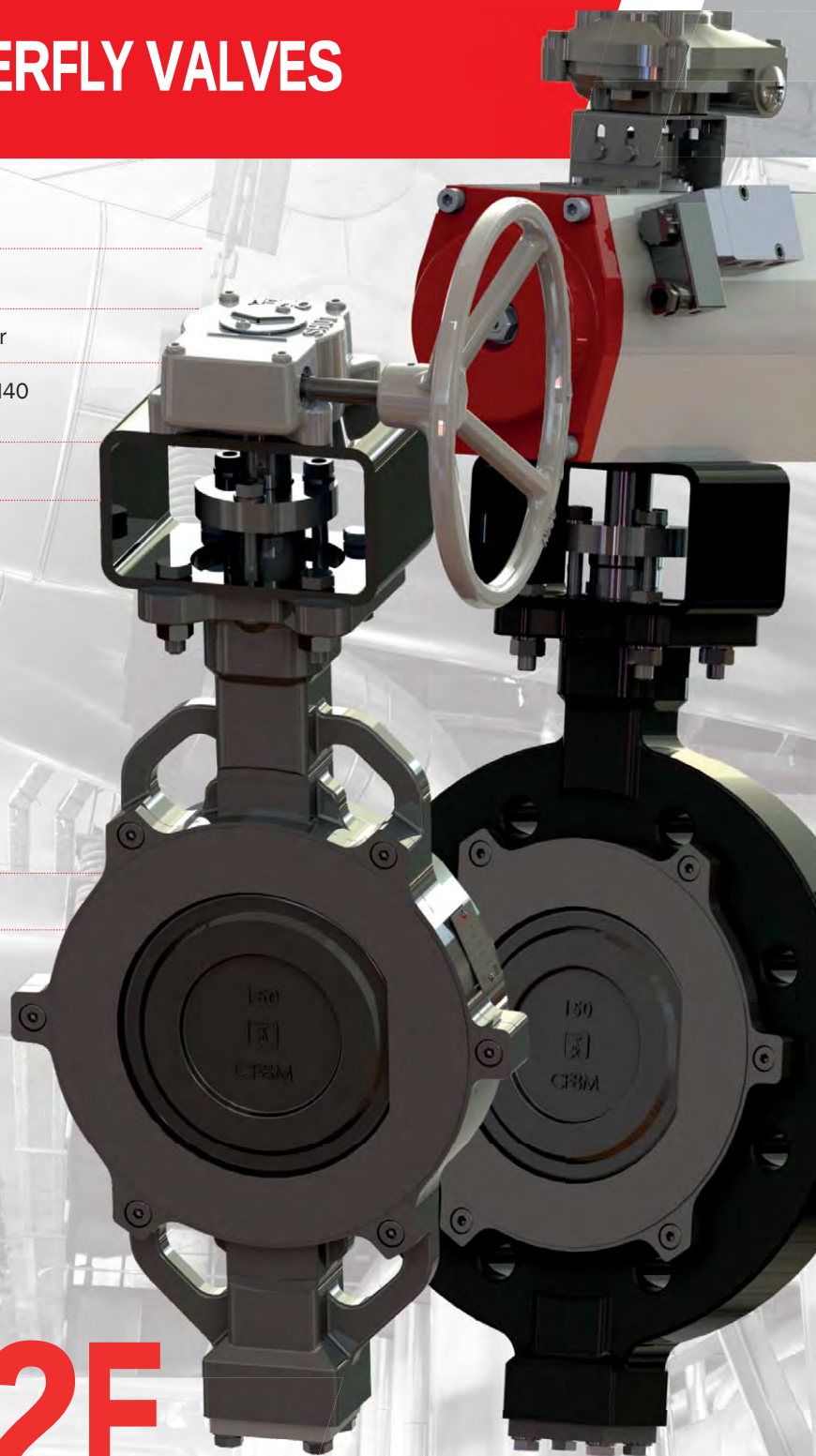
DOUBLE OFFSET BUTTERFLY VALVES

Body design	WAFER type with through holes LUG type with threaded holes
Nominal size	DN50 - DN600
Working pressure	16 bar / 25 bar / 40 bar / 50 bar
Flange connection	PN6 / PN10 / PN16 / PN25 / PN40 Class 150 / Class 300
Working temperature	-55 °C / +325 °C *)
Working media	Waste / Supply water Potable water Hot industrial water Crude oil Petroleum products Fuel / Oil / Oil derivatives Pulp / Paper stock Natural gas Coke oven gas Stack gas Steam / Condensate Air Bitumen (asphalt)
Tightness	Class A **)
Features	Excentric seat design Bi directional tightness (RS design) SIL2 / SIL3 ***) certification ATEX performance ***) TA-Luft stuffing box ***)

*) higher working temperatures
upon request according
to the material performance
of the valve body

**) Metal-Metal seat tightness
Class C

***) upon request



SERIES 2E

energy line

www.abovalve.com

GENERAL VALVE DESCRIPTION

Industrial Valve Manufacturer

The 2E-series double offset butterfly valves

are industrial fittings intended for full opening or closing flow. They may be also used for a rough flow control. The valves are designed for operation with very hard industrial conditions demanding safety, reliability and minimum maintenance like for example:

- nuclear energy industry
- water treatment
- gas pipe-works
- chemical industry
- metallurgy (and heavy industry in general)
- pulp and paper-making industry
- shipbuilding industry
- oil and petrochemical industry
- heat recovery, steam heating
- processing hydrocarbons
- fuel storage in aviation industry

Basic properties

- double offset design
- eccentric disc position in the body, precise connection of the disc with the stem and pivot, exact shaft and pivot bearing in the slide bushings
- split sealed stem - bigger Kv
- high efficiency of opening and closing valve
- easy operation
- easy assembly and installation
- vacuum max. 0,01 bar abs. (version R-PTFE)
- standardized top flange according to EN ISO 5211 enabling mount various types of actuator (electric, pneumatic, hydraulic)
- ATEX certified for explosive atmosphere
- option: TA-Luft sealed valve - stem is sealed with a special graphite gland



Type designation

5 5 9 0 B 100

Nominal size (DN)

Body design

B - AFER W body type with th holes reared
T - LUG body type with tapped holes

Disc material

0 - stainless steel 1.4408 (CF8M)
stainless steel 1.4409 (ASTM A351 CF3M)
stainless steel 1.4027 (ASTM CA-40)

Seat material

9 - R-PTFE (PTFE reinforced by 25% glass fibre)
8 - FIRE SAFE (R-PTFE + INCONEL)
7 - INCONEL 718 2.4668

Body material

6 - low carbon steel 1.1156 (A352 LCC)
5 - carbon steel 1.0625 (A216 WCB)
4 - stainless steel 1.4408 (A351 CF8M))

Series designation

Series 2E

Standards

Leak test

Design „R-PTFE“

Design „Fire Safe“

EN 12266-1, Class A
ISO 5208, Class A
API 598

Design „Metal-Metal“

DN 50-DN125
EN 12266-1, Class C
ISO 5208, Class C
API 598

Face to face length

EN 558, Series 20
ISO 5752, Series 20
API 609, Table 3

ATEX performance

according to 2014/34/EU

Flange connection

EN 1092-1, 2

Top flange

EN ISO 5211

Working standard

EN 593

Marking

EN19

VALVE MODELS



ABO valve

B
WAFER
DESIGN



T
LUG
DESIGN



Standard line
DN50-DN400
Bi-directional
line (RS design)
DN50-DN600

B
WAFER
DESIGN



T
LUG
DESIGN



DN50-DN125

DN150-DN600

Advantages of double offset valves

- split stem allows higher Kv/Cv values
- lower pressure loss
- gas pipe-works
- guaranteed tightness in both directions at nominal working pressure (RS version)
- sealing ring and seat come to contact only nearly after the valve is entirely shut
- low closing torque
- the seal guarantees perfect upper stem tightness
- water and air tightness
- actuator connection can be done by bracket or the stem can be extended if connected to special actuator types

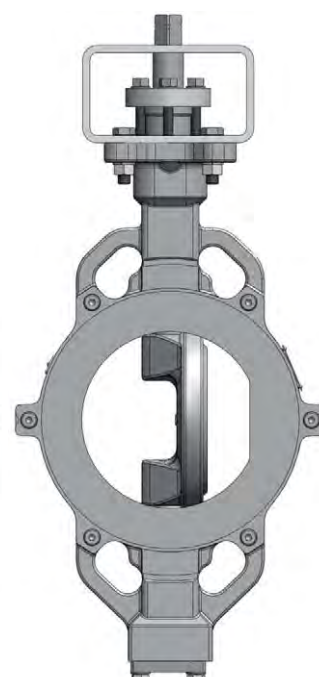
Quality control

- ABO valve production facilities are certified in accordance with ISO 9001:2015 (14001, 45001) quality control standards
- tightness test procedures according to standards EN 12266-1, ISO 5208, ANSI/FCI 70-2, API598
- production in accordance with the Pressure Equipment Directive 2014/68/EU (Module H)
- the possibility of issuing inspection certificate 3.1, 3.2
- all the actuators are adjusted and tested while assembled
- all the certificates can be downloaded at www.abovalve.com

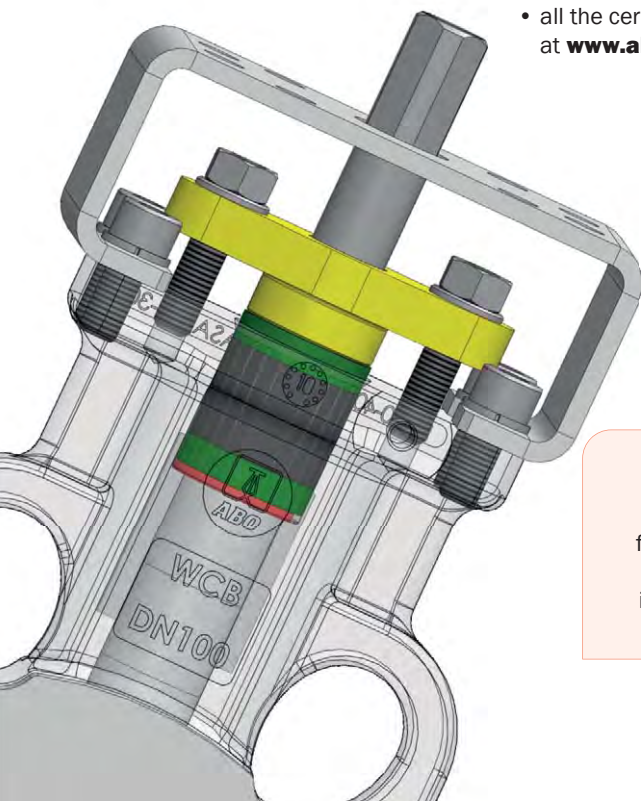
Split stem/
Better
flow rate



One piece design



ABO design



The stem seal
with TA-LUFT
certification

for perfect tightness
of pollutants
into the ambient air
(upon request)

www.abovalve.com /3

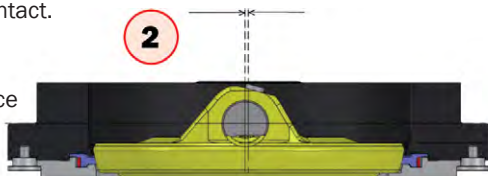
DESIGN ADVANTAGES

Industrial Valve Manufacturer

Double offset

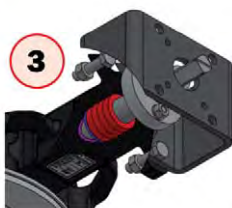
- the double offset design provides a safe function and tightness even after a sudden temperature or pressure change. It reduces seat wear and ensures perfect tightness. The first offset **(1)** shifts the axis of the rotation off the sealing surface and thus provides tightness between the seat and the sealing ring around the entire disc circumference. The second offset **(2)** moves the the axis of the disc rotation off the valve (pipeline) axis and thus releases the ring from the seat after a few degrees of opening movement. The reason of the second offset is to quickly relieve the seal from compression between the disc and the seat
- the design extends the seal lifetime and the torques are lower. When shutting valve, the rotating movement is changed to the linear one and the disc is effectively pressed into the seal. The design also prevents undesirable agglomerating e. g. undissolved substances in the area of disc and seal contact.

- (1)** - stem axis
is off the sealing surface
- (2)** - stem offset
off the pipeline axis



Stem and seal (3)

- two-piece stem** - thanks to the split stem the valve attains higher values of Kv/Cv and related low pressure loss
- adjusting seal according to the customers' requirements** - the seal can be tightened to the parameters prescribed by customers. Thus maximum tightness can be achieved around the stem and the actuation torque for low-pressure applications can be decreased.
- adjustable seal** - enables easy access to final adjustment of the seal without dismantling the actuator
- stem assembly** - upper and lower bushings made from TP Igus provides high abrasion resistance and prolongs valve lifespan



- extended neck** - enables to insulate piping incl. the valve
- easy service and seal replacement** - easy assembly and replacement
- top flange according to ISO 5211** - enables to directly install a manual handle or an actuator

Seal design

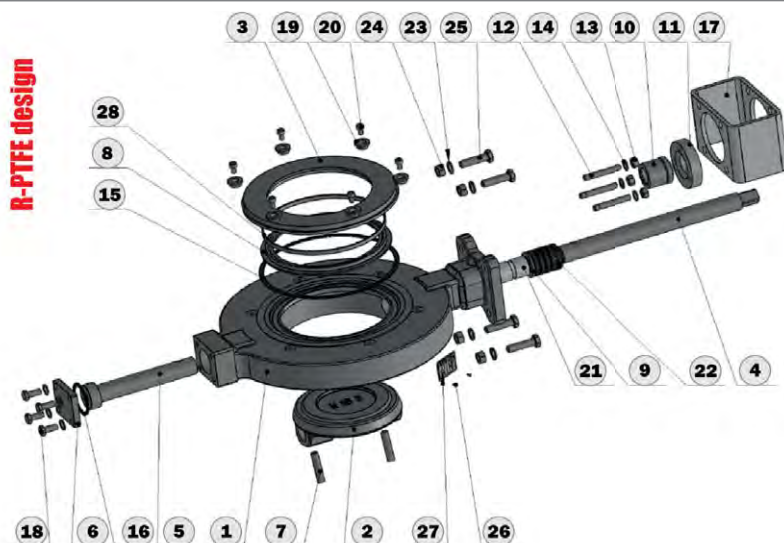
- R-PTFE** - suitable seal geometry ensures full tightness and a high number of cycles. The PTFE seal is reinforced with 25% glass fibres, reducing wear and increasing valve thermal stability. Longer lifespan of the valve and lower maintenance demand are guaranteed.
- end-stops** - are designed to avoid overrunning the maximum allowable position of the disc. Thus the seal is not damaged nor overloaded and the valve lifespan is extended **(4) (5)**.



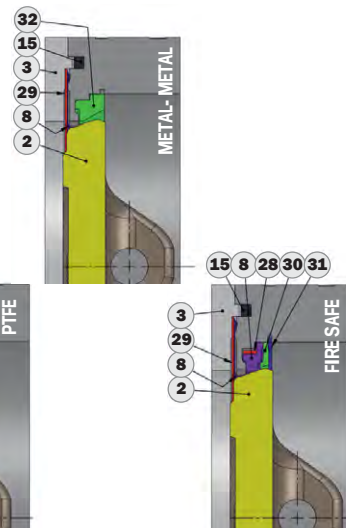
4 / ABO Valve Czech



MATERIAL PERFORMANCE



Seat details



Item	Name	Material
1	Body	6 - low carbon steel 1.1156 (A352 LCC)
		5 - carbon steel 1.0625 (A216 WCB)
		4 - stainless steel 1.4408 (A351 CF8M)
2	Disc	DN50-125: stainless steel 1.4409 (ASTM A351 CF3M / CF8M)
		DN150-600:
		55xx: stainless steel 1.4027 (ASTM CA-40)
		54xx, 56xx: stainless steel 1.4408 (ASTM A351 CF8M)
3	Pressure flange	Carbon steel 1.0425
		Stainless steel 1.4404 (AISI 316L)
4	Stem	54XX, 56XX: stainless steel 1.4462
		55XX: stainless steel 1.4021 (AISI 420)
5	Pivot	DN50-125: stainless steel 1.4404 (AISI 316L)
		DN150-600: stainless steel 1.4021 (AISI 420)/1.4462
6	Cover	DN50-125: -
		DN150-600: carbon steel 1.4025 / stainless steel 1.4401 (AISI 316)
7	Pin	DN50-125: -
		54XX, 56XX DN150-600: stainless steel 1.4462
8	Seat	XX70 DN50-125: INCONEL 718 2.4668
		XX80: FIRE SAFE (R-PTFE + INCONEL)
9	Washer	XX90: R-PTFE (PTFE reinforced by 25% glass fiber)
10	Stuffing box	Stainless steel 1.4404 (AISI 316L)
11	Sealing flange	DN50-125: -
		54XX, 55XX DN150-600: stainless steel 1.4401 (AISI 316)
		56XX DN150-300: stainless steel 1.4401 (AISI 316)
		56XX DN350-600: stainless steel 1.4404 (AISI 316L)
12	Bolt	54XX, 55XX, 56XX DN50-125: stainless steel 1.4308 (CF8)
		54XX, 55XX, 56XX DN150-600: stainless steel
		1.4301 (AISI 304)
13	Nut	Stainless steel A4
		Stainless steel A4

Item	Name	Material
14	Washer	Stainless steel A4
15	Flange sealing	Graphite min. 98%
16	Cover seal	Graphite
17	Bracket	DN50-125, 500, 600: carbon stell 1.0553 DN150-400: carbon stell 1.0576
18	Bolt	Stainless steel A4
19	Retaining sleeve	Stainless steel 1.4404 (AISI 316L)
20	Bolt	Stainless steel A4
21	Bushing	Xx70, Xx80: stainless steel 1.4404 (AISI 316L) + nickel plated XX90: TP IGUS
22	Sealing	Graphite min. 98%
23	Washer	Stainless steel A4
24	Nut	Stainless steel A4
25	Bolt	Stainless steel A4
26	Rivet	Stainless steel A4
27	Label	Stainless steel
28	Seat O-ring	Stainless steel 1.4404 (AISI 316L) - only for „R-PTFE“ and „FIRE SAFE“ version
29	Sealing	INCONEL - only for „METAL-METAL“ and „FIRE SAFE“ version
30	Support ring	Stainless steel 1.4404 (AISI 316L)
31	Retaining ring	Stainless steel 1.4401
32	Support ring	Stainless steel 1.4404 (AISI 316L)

Working pressure max. **Temperature rating *)**
R-PTFE seat - tightness A -29 °C do 200 °C (R-PTFE) - 5590

DN50-DN100: 50 bar 55 °C do 325 °C (Inconel) - 5470

DN125-DN200: 40 bar

DN250-DN450: 25 bar **Coating**

Metal-Metal seat - tightness C RAL 9005 - standard
Fire Safe seat - tightness A Coating resistant to high temperatures (up to +600 °C)

DN50-DN125: 25 bar upon request

*) depending on the material performance

of the valve body (will be specified - please consult with ABO)

Other material performance on request. To select a suitable material solution please contact ABO valve company. Maximum temperatures for each seats are only permitted for specific media and short-term use.

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OPERATING TORQUES / FLANGE CONNECTION

Industrial Valve Manufacturer

Operating torques (Nm) vs. working pressure (bar) R-PTFE seat (standard line DN50-DN400)

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
NPS	2"	2 1/2,"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
PS 16 bar	19	35	50	77	110	145	278	567	650	1378	2248	2569	3090	4300
PS 25 bar	22	45	58	79	120	185	366	732	900	1900	3483	3925	5340	6250
PS 40 bar	32	53	62	90	150	242	485	-						
PS 50 bar	25	60	65	105										

Operating torques are mentioned without safety reserve.

Metal-metal seat and Fire Safe seat

DN	50	65	80	100	125
NPS	2"	2 1/2"	3"	4"	5"
P _{MAX} 16 bar	50	70	100	150	220
P _{MAX} 16 bar	50	70	100	150	220

Operating torques are mentioned without safety reserve

Installation between flanges DN50 - DN600

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
NPS	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
PN6	•	•		•	•	•	•	•	•	•	•	X	X	X
PN10														
PN16														
PN25														
PN40													X	X
ANSI150														
ANSI300										X	X	X	X	X
JIS 10K			•		•		•		•	X	•	•		
JIS 16K		•	•			•				•				

For Lug type (T) installation, please specify in the inquiry

Standard

•

Upon request

X

Impossible

KV (CV) coefficient

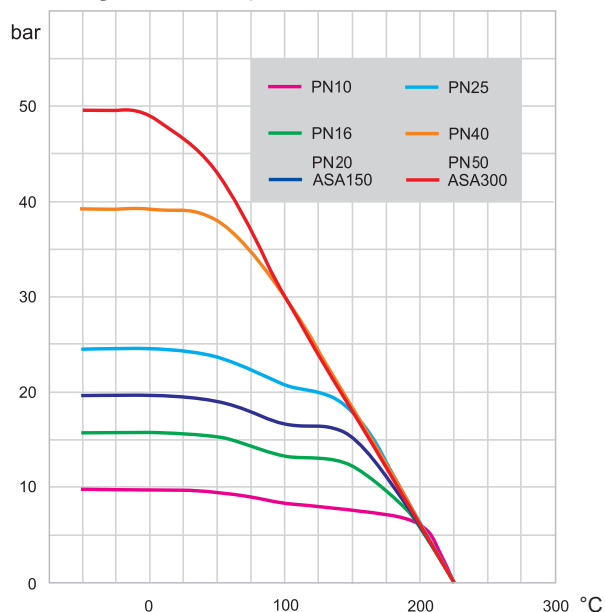
DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
NPS	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
KV	87	148	312	456	750	1125	1950	3100	4510	6120	8605	9419	11674	16914
CV	102	173	364	532	876	1313	2277	3619	5265	7145	10046	10926	13542	19620

PRESSURE AND TEMPERATURE CURVES

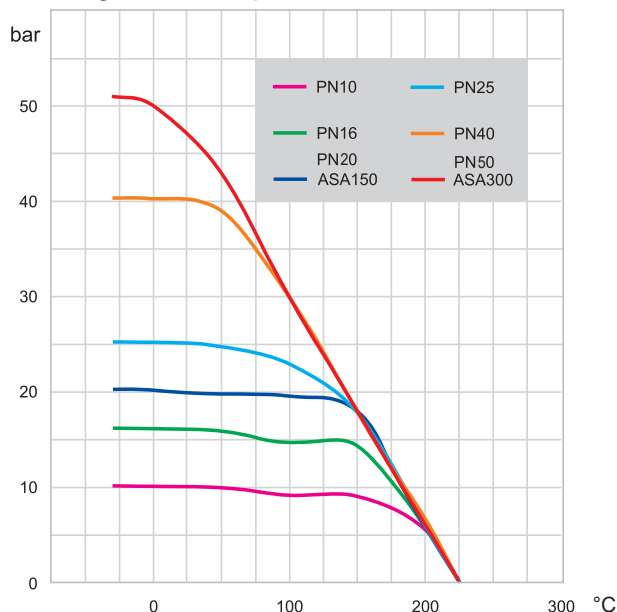


ABO valve

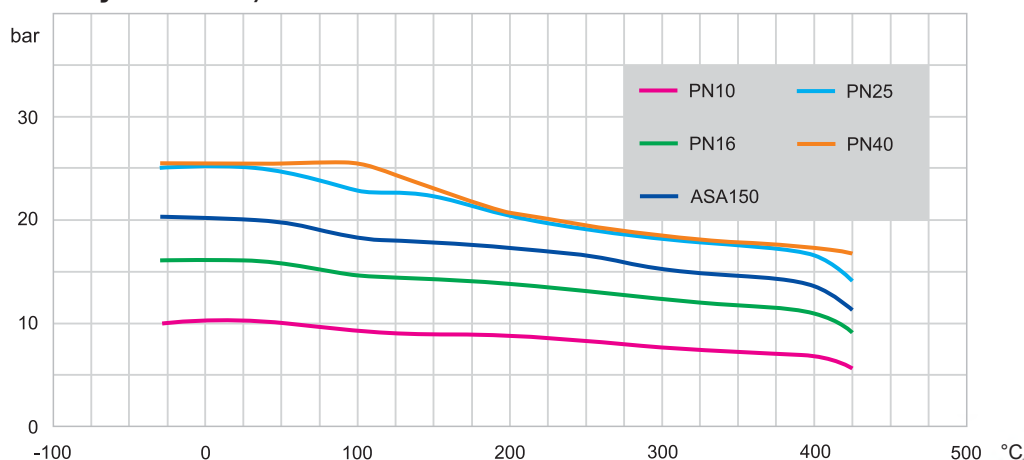
Body A351 CFM / PTFE seat



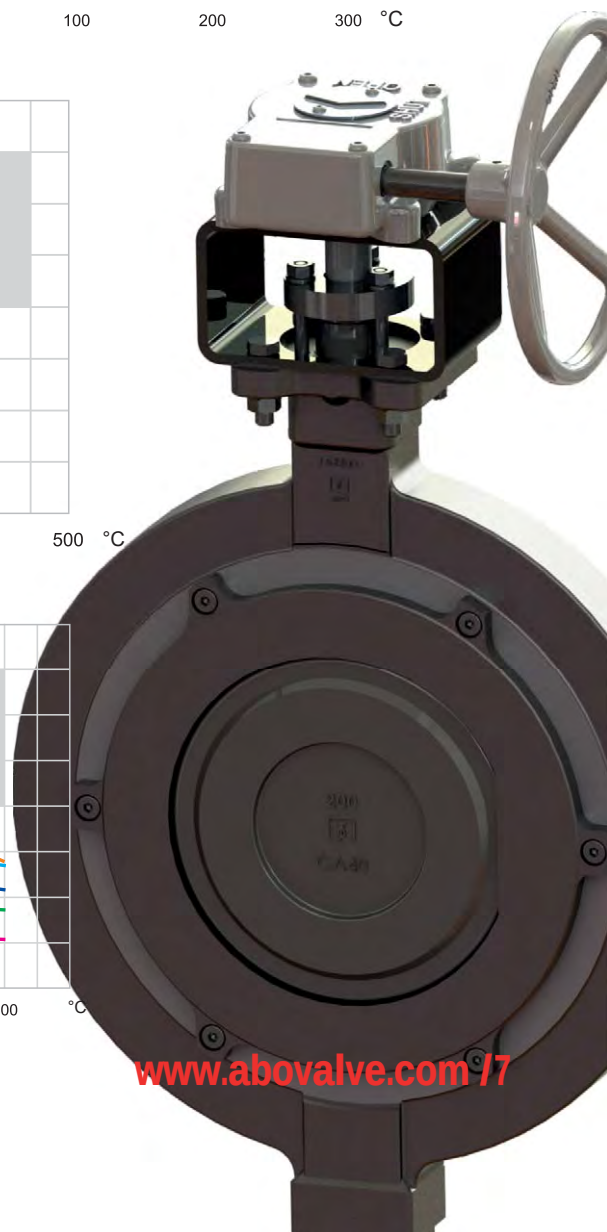
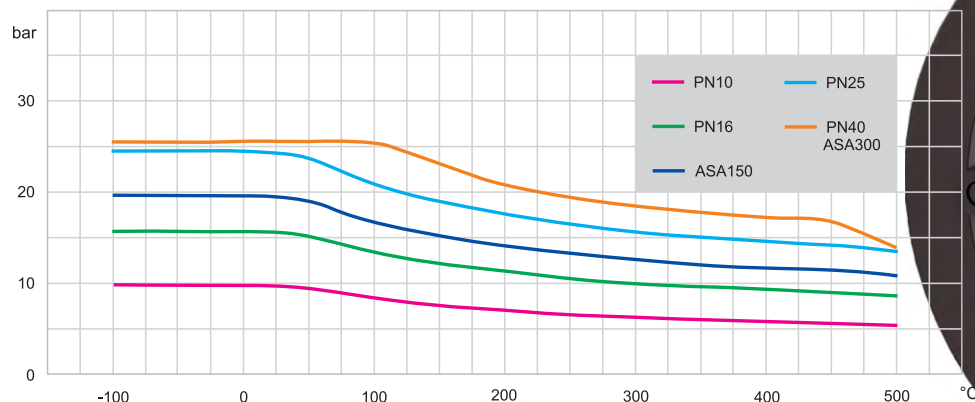
Body A216 WCB / PTFE seat



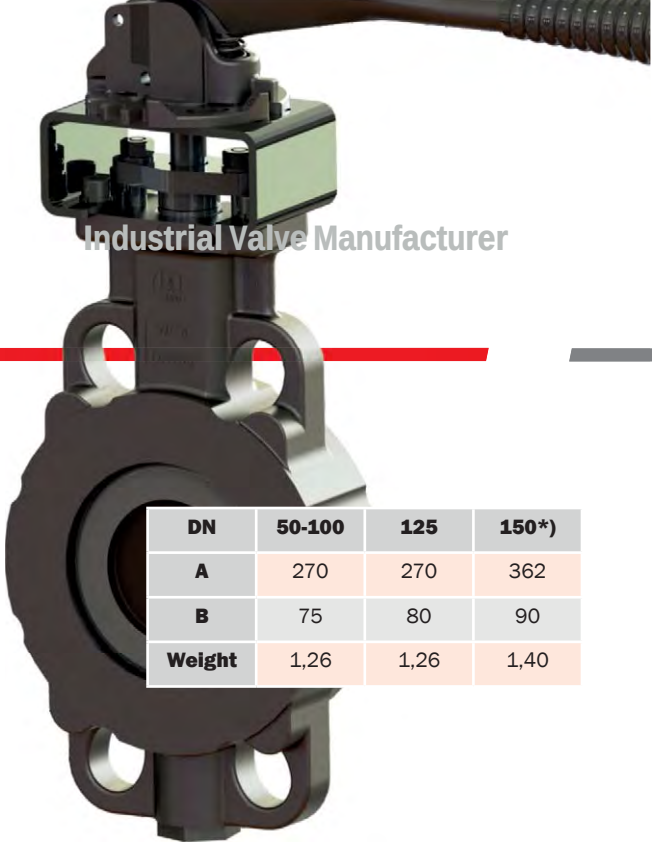
Body A216 WCB / Metal-Metal seat



Body A351 CFM / Metal-Metal seat



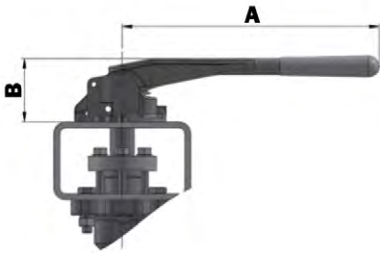
VALVE ACTUATION



All the ABO valves can be equipped with hand levers (up to DN150), worm gears, pneumatic and electric actuators. The upper flange design according to the standard ISO 5211 enables to directly assemble actuators on valves.

Handlever

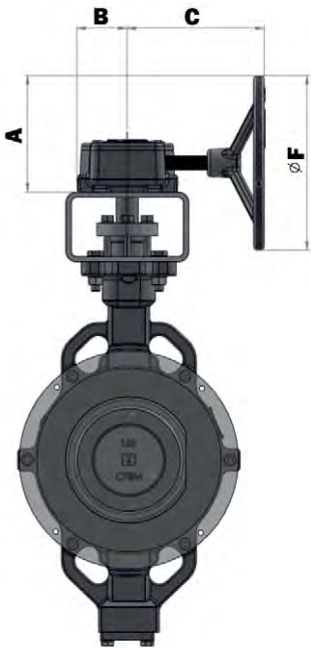
For manual actuation ABO valve offers carbon steel lever suitably painted to improve resistance to corrosion and abrasion. Stainless lever on request. Top flange connection according to ISO standards F07 for DN50 to DN125 and F10 for DN150. Controlled lever on request. The levers can be equipped with a padlock to ensure an optimized position, can be equipped with end position sensors.



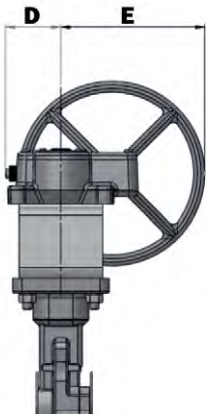
DN	50-100	125	150*)
A	270	270	362
B	75	80	90
Weight	1,26	1,26	1,40

Worm gear with handwheel

Manual gearbox housing is made from cast iron with suitable surface treatment and protection degree class IP 67. Self-locking design of the worm gear enables both to adjust basic positions open/shut and to control (throttle) media flow. The worm gearbox is simply actuated by means of a handwheel of a suitable diameter. End-limit positions of the worm gearbox are set by means of stop screws. The gearbox can be equipped with a lockable system secured by a padlock. Another way how to handle worm gearbox is using a chain. The worm gearbox as well as the hand lever can be completed with end-limit position sensors



DN	PS	ISO FLANGE	SHAFT	A	B	C	D	E	F	Kg
50	50	F07	14x14	127	46	139	59	141	200	2,9
65	50	F07	14x14	127	46	139	59	141	200	2,9
80	50	F07	14x14	127	46	139	59	141	200	2,9
100	50	F07	14x14	127	46	139	59	141	200	2,9
125	40	F07	14x14	127	46	139	59	141	200	2,9
150	40	F10	17x17	133	59	154	60	155	200	2,9
200	40	F10	17x17	133	59	154	62	155	200	2,9
250	25	F12	22x22	287	67	275	181	319	500	10
300	25	F14	27x27	287	67	275	181	319	500	10
350	25	F16	27x27	352	78	275	219	381	600	13
400	25	F16	36x36	398	110	346	245	454	700	24,6
450	25	F16	Ø55	408	142	400	120	480	700	50
500	25	F25	Ø64	255	142	378	142	330	400	40
600	25	F25	Ø75	363	175	429	175	440	500	50



Actuators

Pneumatic actuators

Pneumatic actuators ABO Series 95 can be assembled to valves in two options: single-acting or double-acting.

Pneumatic actuators

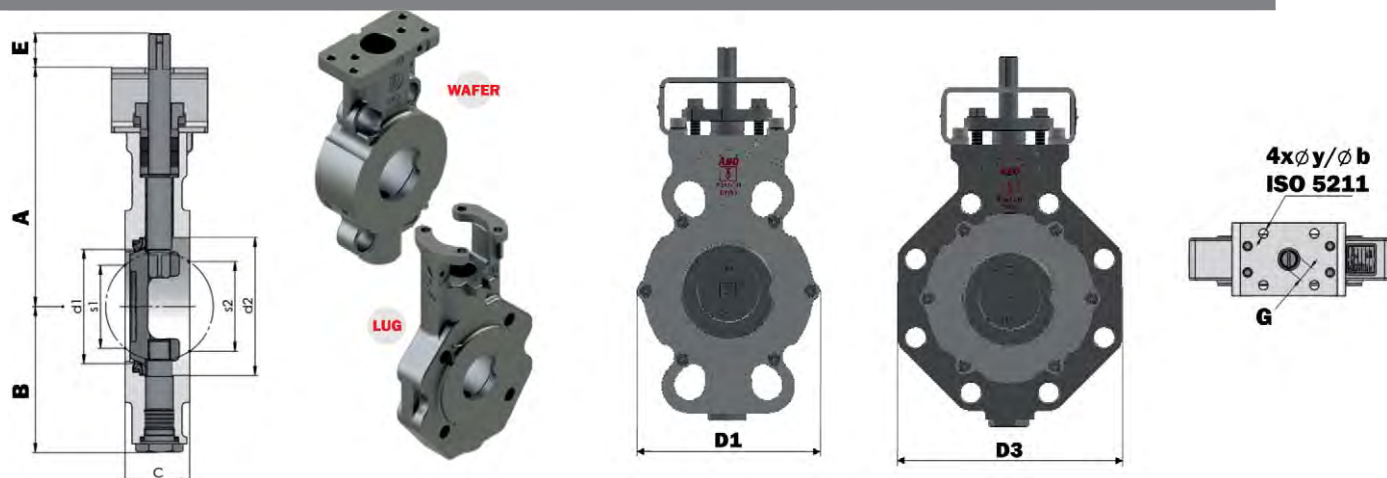
Electric actuators ABO Series 97 are designed quarter-turn. Electric actuators can be installed on ABO valves for voltages of 24 V, 230 V or 400 V.

Special actuators types

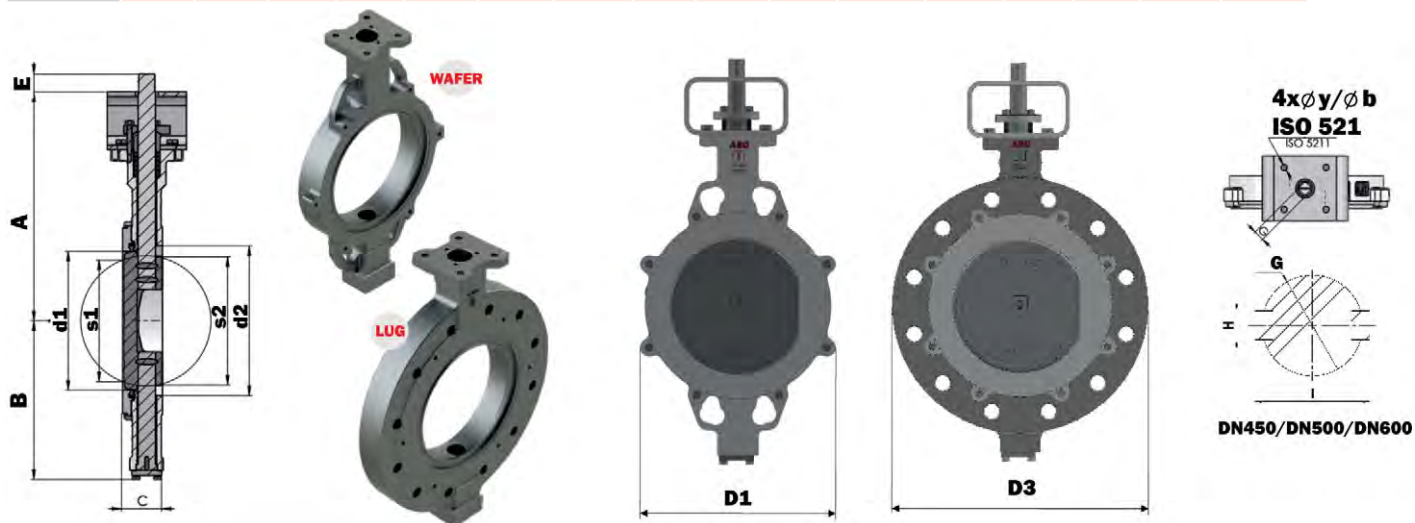
Valves are equipped with special actuator types from major world suppliers (Auma, Regada, Valpes, etc.).



BASIC DIMENSIONS



DN	d1	d2	A	B	C	D1	D2	s1	s2	E	G	ISO FLANGE	y	b	DESIGN B (kg)	DESIGN T (kg)
50	49	68	163	93	44	104	154	12	37	25	14	F07	9	70	5,1	7,3
65	65	82	170	100	47	123	178	39	55	25	14	F07	9	70	5,8	9,0
80	81	100	174	106	47	140	196	65	72	25	14	F07	9	70	6,8	10,1
100	100	123	206	123	53	163	225	85	91	25	14	F07	9	70	8,5	12,2
125	123	146	215	137	57	193	260	113	110	25	14	F07	9	70	11,8	16,5



DN	d1	d2	A	B	C	D1	D2	s1	s2	E	G	ISO FLANGE	y	b	DESIGN B (kg)	DESIGN T (kg)
150	146	155	307	214	57	252	318	136	143	25	17	F10	11	4	21	28
200	194	204	339	246	61	307	381	185	193	31	22	F10	11	4	29	41
250	240	259	395	275	69	349	450	224	236	31	22	F12	13	4	46	70
300	287	309	460	313	79	393	521	270	284	31	27	F14	17	4	67	105
350	313	342	508	355	92	448	577	300	308	45	27	F16	22	4	91	140
400	364	405	556	402	103	542	657	342	360	58	36	F16	22	4	132	211
450	420	450	567	395	114	565	-	400,2	419	80	ø55/16 /62,6	F16	22	4	165	-
500	452	500	625	431	127	593	707	434	454	100	ø64/18 /72,4	F25	17,5	8	241	282
600	547	600	698	491	154	695	830	524	546	110	ø75/20 /84,2	F25	17,5	8	367	

BIDIRECTIONAL TIGHTNESS / -RS- VERSION (DN50-DN600)

Industrial Valve Manufacturer

Butterfly valves of 2E series (RS version) are delivered in nominal sizes of DN50 to DN600. Their make provides bidirectional tightness of the valve. On the circumference the valve is sealed with a special RTFE seal filled with 25% glass fibres and silicone filling.

Body material

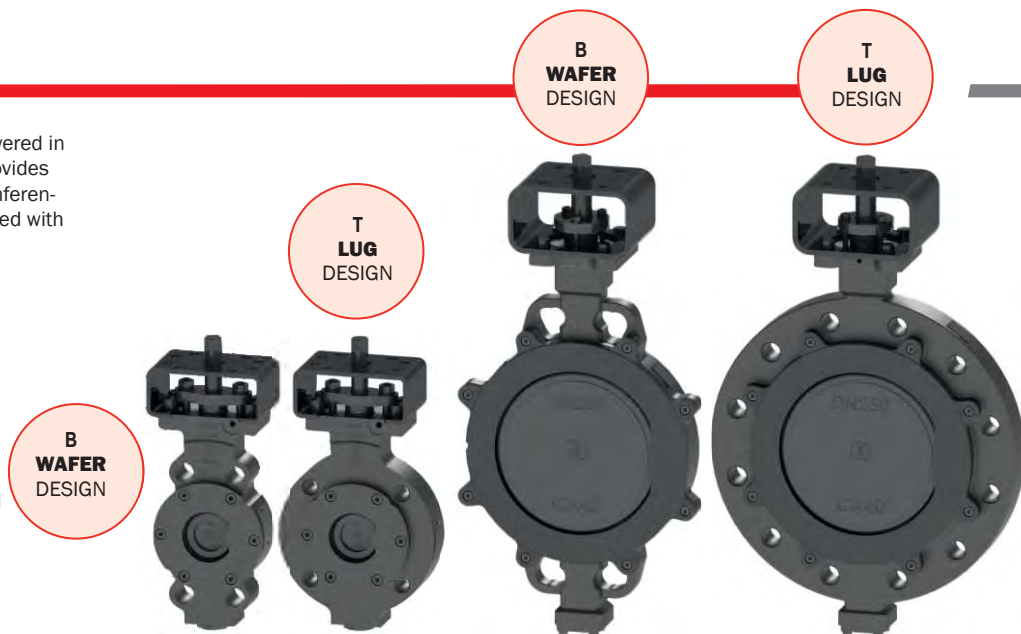
- carbon steel 1.0625 (A216 WCB)
/ 1.0425 (P265 GH)
- low carbon steel 1.1156 (A352 LCC)
/ 1.0566 (P355 NL1)
- stainless steel 1.4409 (CF3M)
/ 1.4401 (AISI 316)

Disc material:

- DN50-DN125
stainless steel 1.4409 (ASTM A351 CF3M / CF8M)
- DN150-600:
55xx: stainless steel 1.4027 (ASTM CA-40)
54xx, 56xx: stainless steel 1.4408
(ASTM A351 CF8M)

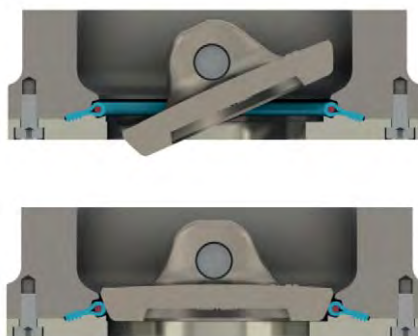
Valve features

- bidirectional tight and control butterfly valve with all-stainless disc
- double offset design
- sizes DN50 to DN600
- tightness class A (EN 12266-1)
- better flow rate due to split stem
- the seat is adapted to large temperature changes
- delivered for manual, electric or pneumatic control
- suitable for heat and power plants, steam and hot water pipework systems
- the valves may be delivered with a special surface protection



DN50-DN125

DN150-DN600



Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 224 087
sales@abovalve.com

Slovak Republic

ABO Slovakia, s.r.o.
Banská Bystrica
tel.: +421 484 145 633
sales.sk@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0)152 262 29501
sales.de@abovalve.com

USA

ABO Controls LLC
Houston
tel.: +(1) 832.291.4929
sales.us@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 216 527 36 34
sales.tr@abovalve.com

Russia

ABO Armatura LLC
Smolensk
tel.: +7 (4812) 240 020
sales.ru@abovalve.com

India

ABO Controls Pvt. Ltd.
Mumbai
tel.: +91 99 2002 9994
sales.in@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
tel.: +65 9169 4562
sales.sg@abovalve.com

China

ABO Flow Control
Shanghai
tel.: +86 136 01 522 831
sales.cn@abovalve.com

United Arab Emirates

Sales representation
Abu Dhabi
tel.: +971 56 9207964
bharti@abovalve.com

Bahrain

Sales representation
Manama
tel.: +973 3444 9065
jimmichen@abovalve.com



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Valid from: 2/2023



ABO valve

GET IN CONTROL
INTELLIGENT • INNOVATIVE • INTERNATIONAL
STAY IN CONTROL

TRIPLE OFFSET BUTTERFLY VALVES

Body design

WAFER type with through holes

LUG type with threaded holes

DOUBLE FLANGED type

Nominal size

DN50 - DN600

Working pressure

16/25/40/50 bar

Flange connection

PN6/PN10/PN16/PN25/

PN40/Class 150/

Class 300

Working temperature

-50°C/+325°C

Tightness

Class A/B



SERIES 3E

power line

www.abovalve.com



Desription

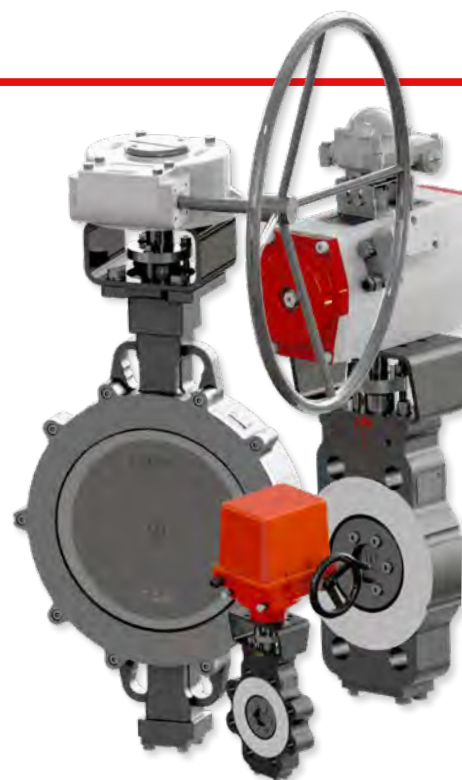
The 3E-series triple offset butterfly valves are industrial-grade shut-off and control units designed for high-demand process applications in sectors including power generation, oil & gas, petrochemical, and heavy industry. The triple eccentric geometry enables precise metal-to-metal sealing with negligible friction during operation, ensuring extended service life and consistent sealing integrity. Engineered from high-strength alloys with advanced surface treatments, these valves maintain performance across diverse media and process conditions. The design is compliant with international engineering standards and supports direct integration with a full range of manual, pneumatic, and electric actuation systems.

Working medium

Crude Oil	Paper stock
Petroleum products	Natural/Coke/Oven Stack Gas
Fuel	Steam
Oil&Oil derivates	Condensate
Pulp	Air
Potable/Waste/Hot/Industrial/Supply water	Bitumen

Standards

Design standard	EN 593 / ASME B16.34 API 609 - option
Leak test	Uni-directional tightness EN 12266-1, Class A/B (A: liquids, B: gas) ISO 5208, Class A/B (A: liquids, B: gas) API 598, (metal-seated valves) ANSI/FCI 70-2, Class VI
Face-to-face dimension	Wafer „B“ / Lug „T“ EN 558-2, seies 20 (series 25 - for DN350) ISO 5752, series 20 (series 25 - for DN350) API 609, category B, Class 150 Double flange „DF“ EN 558-2, seies 13 ISO 5752, seies 13 API 609, category B (short pattern), Class150
Fire safe design	EN ISO 10497 API 607
ATEX performance	As option
Anti blow-out design	As option
Top flange	EN ISO 5211
Flange conncection	Type B, EN 1092-1 (Type D, EN 1092-1 as option) Raised face, ASME B16.5 (Small groove face, ASME B16.5 as option)
Gasket options	EN 1514-1 / EN 1514-2 ASME B16.21 / ASME B16.20
Marking	EN 19 EN 593 PED 2014/68/EU API 609 ASME B16.34



Type designation

3 5 L 4 B 150 03

- **Control**
 - 0 - bare shaft
 - 3 - manual gearbox with handwheel
 - 4 - pneumatic actuator
 - 5 - electric actuator
- **Nominal size (DN)**
- **Design of the body**
 - B - Wafer
 - T - Lug
 - F - Double flanged
- **Disc material**
 - 4 - stainless steel nitridated
 - 4s - stainless steel + stellite
- **Seat material**
 - L - lamellar stainless steel + graphite
- **Body material**
 - 4 - stainless steel
 - 5 - carbon steel
 - 6 - low-temperature carbon steel
- **Series designation**
 - Series 3E

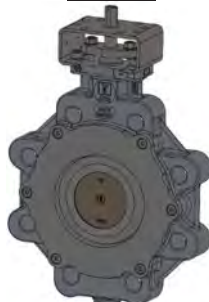
DESIGN MODELS B / T / DF DN50-125

Type B (Wafer)



DN50-125

Type T (Lug)



DN50-125

Type DF (Double flange)



DN50-125

Type B (Wafer)



DN150-400



DN450-600

Type T (Lug)



DN150-400



DN150-600

Type DF (Double flange)



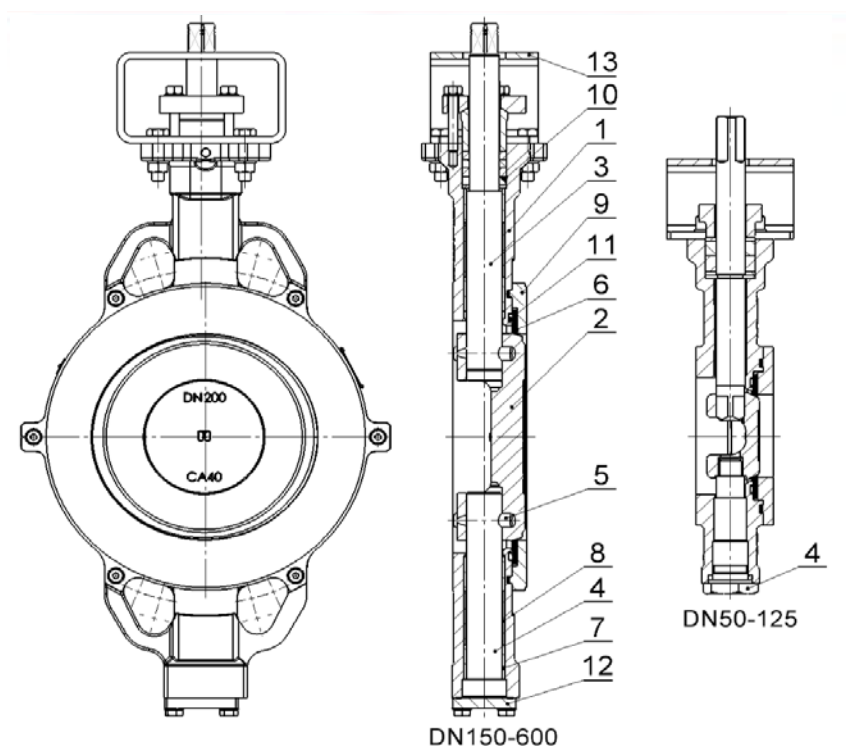
DN150-600

TORQUES

OPENING TORQUES [Nm] VS. WORKING PRESSURE [bar]													
DN	50	65	80	100	125	150	200	250	300	350	400	500	600
NPS	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	20"	24"
Pmax 10 bar	33	42	55	65	85	110	280	283	600	1100	1600	2490	3900
Pmax 16 bar	42	53	70	70	95	140	330	418	900	1500	2270	4100	5150
Pmax 20 bar	48	61	80	70	110	190	370	460	1030	1900	2430	5200	6100
Pmax 25 bar	54	68	90	85	130	210	490	656	1150	2500	3100	6500	8500
Pmax 30 bar	60	76	100	100	150	261	530						
Pmax 40 bar	66	84	110	125	170	350	630						
Pmax 50 bar	75	95	125	150	200								

CLOSING TORQUES [Nm]													
DN	50	65	80	100	125	150	200	250	300	350	400	500	600
NPS	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	20"	24"
Closing torque (water)	75	85	105	140	175	220	450	420	400	450	500	1750	2500
Closing torque (air)	75	85	105	140	175	220	450	565	550	1000	1300	3590	5050

MATERIAL CONFIGURATION



For standard option with cast body. Valid for B / T / DF types

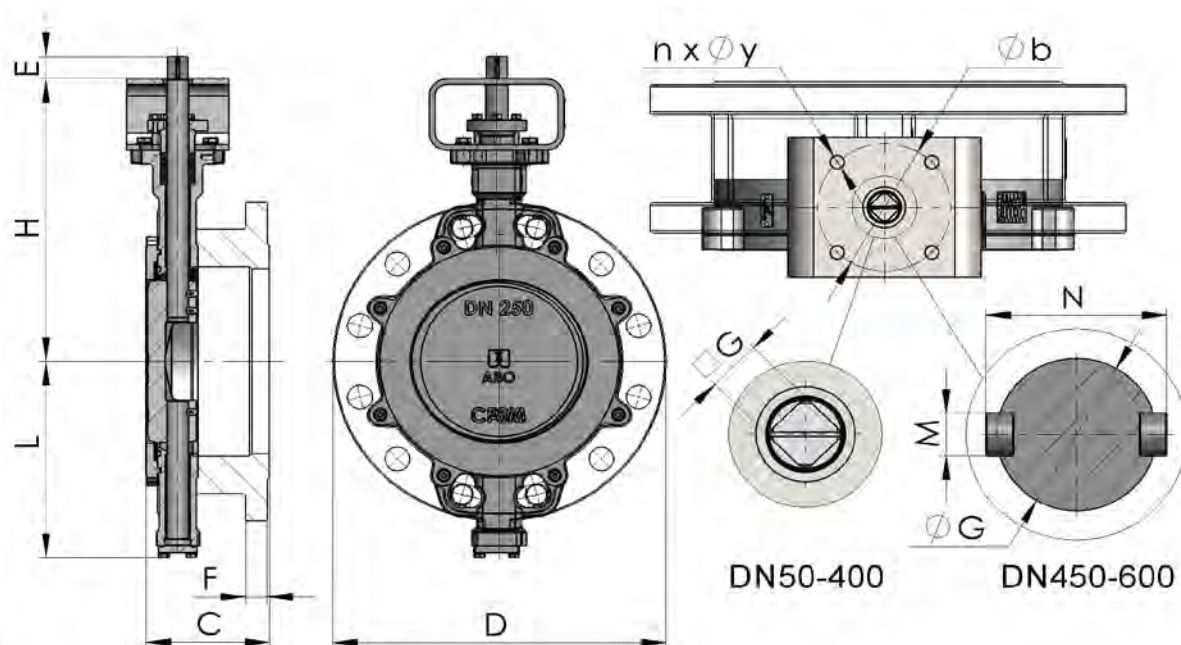
Part NO	Item	35L4	34L4	36L4
1	Body	WCB	CF8M	LCC
2	Disc (3xL4), (DN50-125)	CF8M + nitrided	CF8M + nitrided	CF8M + nitrided
	Disc (3xL4s), (DN150-600)	CA40 + nitrided	CF8M + nitrided	CF8M + nitrided
	Disc (3xL4s), (DN50-125)	CF8M + stellit	CF8M + stellit	CF8M + stellit
	Disc (3xL4s), (DN150-600)	CA40 + stellit	CF8M + stellit	CF8M + stellit
3	Shaft (DN50-125)	1.4542	1.4542	1.4542
	Shaft (DN150-600, 150-600)	1.4021	1.4462	1.4462
4	Pivot (DN50-125)	1.4404	1.4404	1.4404
	Pivot (DN150-600)	1.4021	1.4462	1.4462
5 *	Pin (DN150-600)	1.4021	1.4462	1.4462
6	Seat	1.4401 + graphite	1.4401 + graphite	1.4401 + graphite
7	Bearing	1.4404+Ni	1.4404+Ni	1.4404+Ni
8	Bushing	1.4404	1.4404	1.4404
9	Ring flange	1.0425 + Zn	1.4404	1.4404
10	Packing	Graphite	Graphite	Graphite
11	Spiral seal	1.4541 + graphite	1.4541 + graphite	1.4541 + graphite
12 *	Cover (DN150-600)	1.0425	1.4404	1.4404
13	Bracket	Carbon steel	Carbon steel	Carbon steel

Fastener material is A4 for all material configuration.

* Only DN150-600 valves have a cover (position 12) and pins (position 5);
 DN50-125 valves have a pivot with thread (position 4), picture DN50-125.

Other material performance upon request.

DIMENSIONS



For standard option with cast body:

DN	H	L	C			F	D			E	G/M/N	ISO 5211 FLANGE	n x øy	øb	DESIGN B [kg]	DESIGN T [kg]	DESIGN DF [kg]
			„B“	„T“	„DF“		„B“	„T“	„DF“								
50	162,5	92,5	43	-	-	114	151	-	25	□14	F07	4x9	70	4	5	-	
65	169,5	100	46	-	-	138	137	-	25	□14	F07	4x9	70	5	8	-	
80	173,5	106	48,5	114	21	150	195	210	25	□14	F07	4x9	70	6	10	14	
100	205,5	122,5	53	127	21	192	225	240	25	□14	F07	4x9	70	9	13	18	
125	215	137	56	140	23	217	259	280	25	□14	F07	4x9	70	12	16	27	
150	307	214	57	140	25	253	318	298	25	□17	F07/F10	4x9/4x11	70/102	21	32	37	
200	338,5	245,5	61	152	27	307	381	373	31	□22*	F10*	4x11	102	29	46	58	
250	395	274	69	165	29	352	450	445	31	□22	F12	4x13	125	46	70	88	
300	459,5	312	79	178	30	394	521	508	31	□27	F14	4x17	140	67	104	122	
350	508	354	92**	190	34	448	577	577	45	□27	F16	4x22	165	100	149	174	
400	556	401	103	216	36	542	657	657	58	□36	F16	4x22	165	130	206	230	
450	567	395	114	-	-	566	622	-	80	ø55/16/62,6	F16	4x22	165	160	174	-	
500	625	428	127,5	229	43	623	707	730	100	ø64/18/72,4	F25	8x18	254	240	280	342	
600	698	491,5	154	267	53	729	821	845	110	ø75/20/84,2	F25	8x18	254	365	407	535	

*New design since 01/06/2024. Old design was 17x17, F10

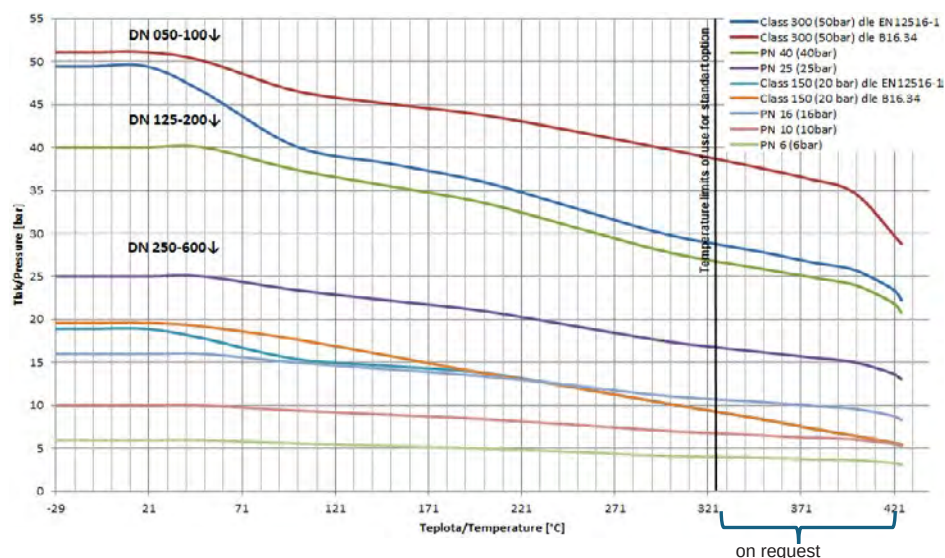
The weights are approximate, depending on material configuration and connection

**For standard option valve DN350 B and T type is FTF dimension (dimension C) according to series 25, others DN are according to series 20

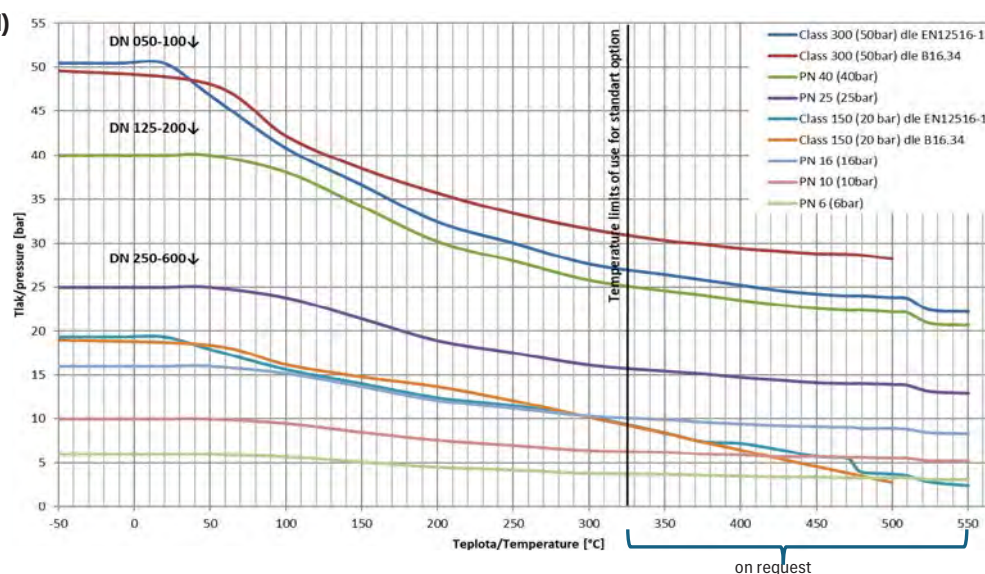
Others option FTF dimensions upon request

Pressure-temperature diagram

Body: carbon steel 1.0625 (WCB)



Body: stainless steel 1.4408 (CF8M)



KV Values

Size	Valve open angle with Kv								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
DN50	6	14	25	37	47	55	61	64	62
DN65	10	22	39	59	79	100	120	132	129
DN80	16	34	57	80	105	138	186	223	230
DN100	25	54	84	115	166	231	300	355	356
DN125	36	80	133	189	280	399	518	601	613
DN150	45	92	165	252	361	484	610	715	755
DN200	80	162	279	442	659	939	1 292	1 580	1 658
DN250	150	307	514	784	1 143	1 617	2 169	2 551	2 677
DN300	200	431	708	1 068	1 553	2 175	2 954	3 600	3 710
DN350	220	514	838	1 289	1 925	2 787	3 927	4 825	4 982
DN400	250	590	1 017	1 589	2 444	3 657	5 291	7 068	7 704
DN450	300	660	1 121	1 860	2 963	4 539	6 729	9 483	10 541
DN500	360	740	1 403	2 398	3 791	5 747	8 378	11 347	12 679
DN600	600	1 247	2 214	3 620	5 605	8 380	12 336	16 650	17 971

FLANGE CONNECTION

B type (Wafer)

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
NPS	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
PN6														
PN10														
PN16														
PN25														
PN40														
ANSI150														
ANSI300														
JIS 10K														
JIS 16K														

	for cast bodies, all connections are possible at the same time
	connections available, should be specified in an order
	additional machining required
	only in case of face-to-face in accordance with CLASS300 or Series 25
	not available

T type (Lug type)

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
NPS	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
PN6														
PN10														
PN16														
PN25														
PN40														
ANSI150														
ANSI300														
JIS 10K														
JIS 16K														

	connections available, should be specified in an order
	additional machining required
	only in case of face-to-face in accordance with CLASS300 or Series 25
	not available

DF type (Double flange)

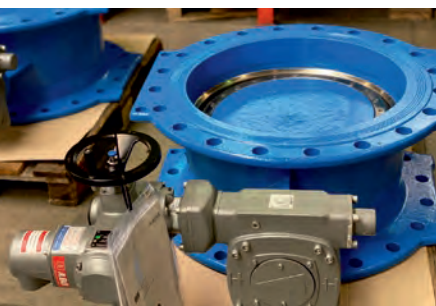
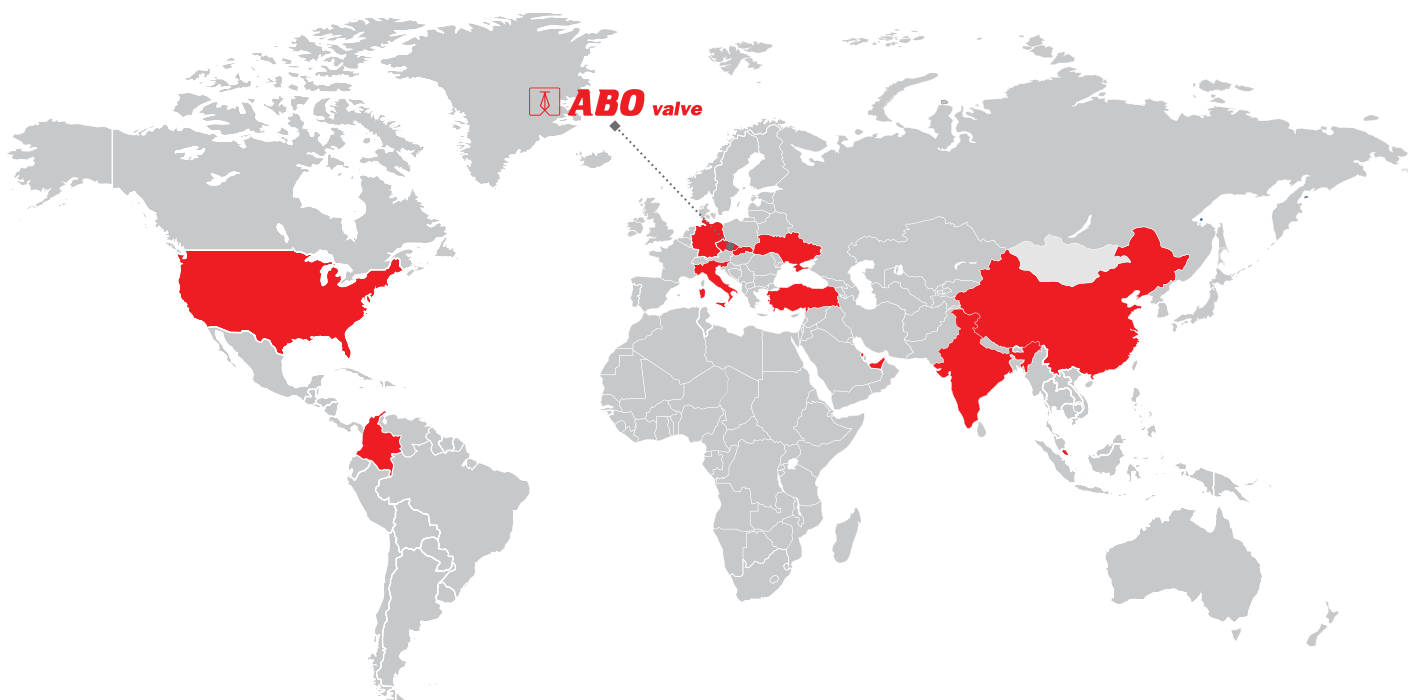
DN	80	100	125	150	200	250	300	350	400	450	500	600
NPS	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
PN6												
PN10												
PN16												
PN25												
PN40												
ANSI150												
ANSI300												
JIS 10K												
JIS 16K												

	connections available, should be specified in an order
	additional machining required
	not available



ABO valve

GET IN CONTROL
INTELLIGENT • INNOVATIVE • INTERNATIONAL
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Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 223 955
sales@abovalve.com

Italy

ABO valve Italiana S.r.l.
Agrate Brianza
tel.: +39 334 9102143
sales.it@abovalve.com

China

ABO Flow Control
Shanghai
tel.: +86 136 015 228 31
sales.cn@abovalve.com

USA

ABO Controls, LLC
Houston
tel.: +1 832 497 5303
sales.us@abovalve.com



Slovakia

ABO Slovakia, s.r.o.
Nové Mesto nad Váhom
tel.: +421 947 902 862
sales.sk@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

India

ABO Controls Pvt. Ltd.
Pune
tel.: +91 773 820 4779
sales.in@abovalve.com

Bahrain

Obchodní zastoupení
Manama
tel.: +973 - 3444 9065
jimmichen@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0) 152 / 26229501
sales.de@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 0543 321 54 09
sales.tr@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
+65 6254 0861
sales.sg@abovalve.com

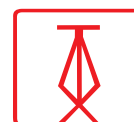
UAE

Obchodní zastoupení
Abu Dhabi
tel.: +971 56 920 7964
bharti@abovalve.com

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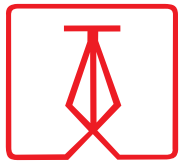


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Valid since: 09/2025



ABO valve

we make processes work

KNIFE GATE VALVES

Body design

Interflanged

WAFLER type with through holes

LUG with threaded holes

Nominal size

Series 200: DN50 - DN1200

Series 300: DN50 - DN600

Working pressure

2 bar / 4 bar / 6 bar / 10 bar

Flange connection

PN6 / PN10 / PN16 / Class 150

Working temperature

Series 200: -10 °C / +125 °C

Series 300: -10 °C / +200 °C

Working media

Waste water

Aqueous suspensions containing

solid particles

Slurry handling

Bulk materials

Sand

Dust media

Pulp

Paper stock

Mining suspensions

Abrasive media

Stock/Liquids in chemical industry

Features

Open design

Internal design of the seat

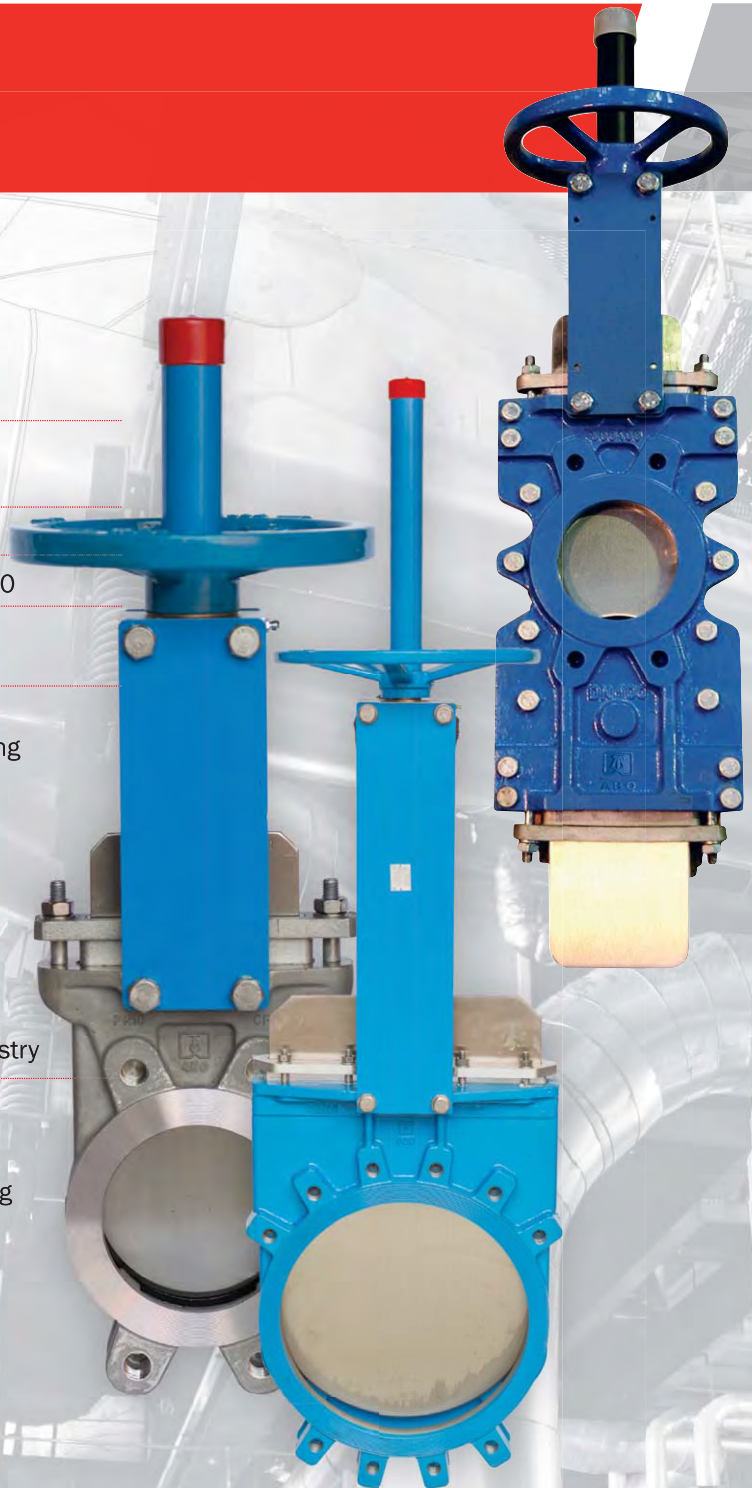
preventing sedimentation

blocking knife gate valve closing

Excellent flow-rate parameters

Minimal pressure drops

in piping system



SERIES 200/300

www.abovalve.com

KNIFE GATE VALVES SERIES 200

Czech Industrial Valve Manufacturer

Knife gate valves Series 200 are unidirectional wafer/lug type knife gate valves ideal for installations handling liquids containing suspended solids and waste water (mining, chemical treatment, water treatment, etc.).

Thanks to their small size and light weight, are especially useful in facilities with limited space. Long-life service of the product is secured as a circular blade bevel prevents excessive wear and clogging (leakage). The valve is reinforced with oversize top and bottom ends to ensure proper sealing. Beveled knife hacks away fibrous particles, moving them towards a self-cleaning bottom area and rinsing them out of the saddle.

The valve can be manufactured with bonnets which provide for total water tightness towards the outside environment, thereby reducing the maintenance of the packing gland.

ABO knife gate valves series 200 are ideal for installations handling liquids which contain suspended solid and waste water. They are used in following applications:

- slurry handling
- bulk materials conveying
- mining industry
- chemical industry
- waste water treatment
- pulp and paper industry

Basic properties

- unidirectional knife gate valve with rising stem and one-piece body
- knife goes through the sealing area
- circular, total passage: enables a high flow capacity with low load loss
- gate with rounded edges: prolongs the working life of the rings and packing
- seating wedges help the knife to close against the body and seat
- directional arrow in the body points the correct mounting position
- high flow rate with low pressure drops
- internal design avoids any build up of solids that would prevent the valve from closing
- recommended for water with a maximum 5% concentration of solid particles
- can be combined with various kinds of drives and actuators (handwheel, electric, pneumatic actuator, etc)



Type designation

2 1 0 B 100 5

Actuation

- 1 - handlever
- 2 - handwheel
- 3 - gearbox
- 4 - pneumatic actuator
- 5 - electric actuator

Nominal size (DN)

Body type

- B - WAFLER
- T - LUG

Seat material

- 0 - EPDM
- 1 - NBR
- 4 - Viton

Body & knife material

- 1 - Body: grey cast iron 0.6025 (GG25)
Knife: stainless steel 1.4306 (AISI 304 L)
- 2 - Body: stainless steel 1.4408 (CF8M)
Knife: stainless steel 1.4404 (AISI 316 L)

Series name

Series 200

Standards

Leak test

EN 12266-1, Class A*)
ISO 5208, Class A*)
API 598, Tab. 5
*) for soft seated version

Connection between flanges

EN 1092-1
DIN 2632
DIN 2566

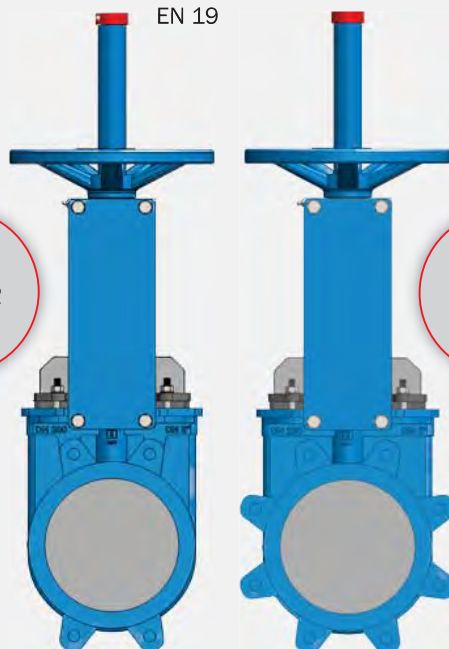
Marking

EN 19

Models

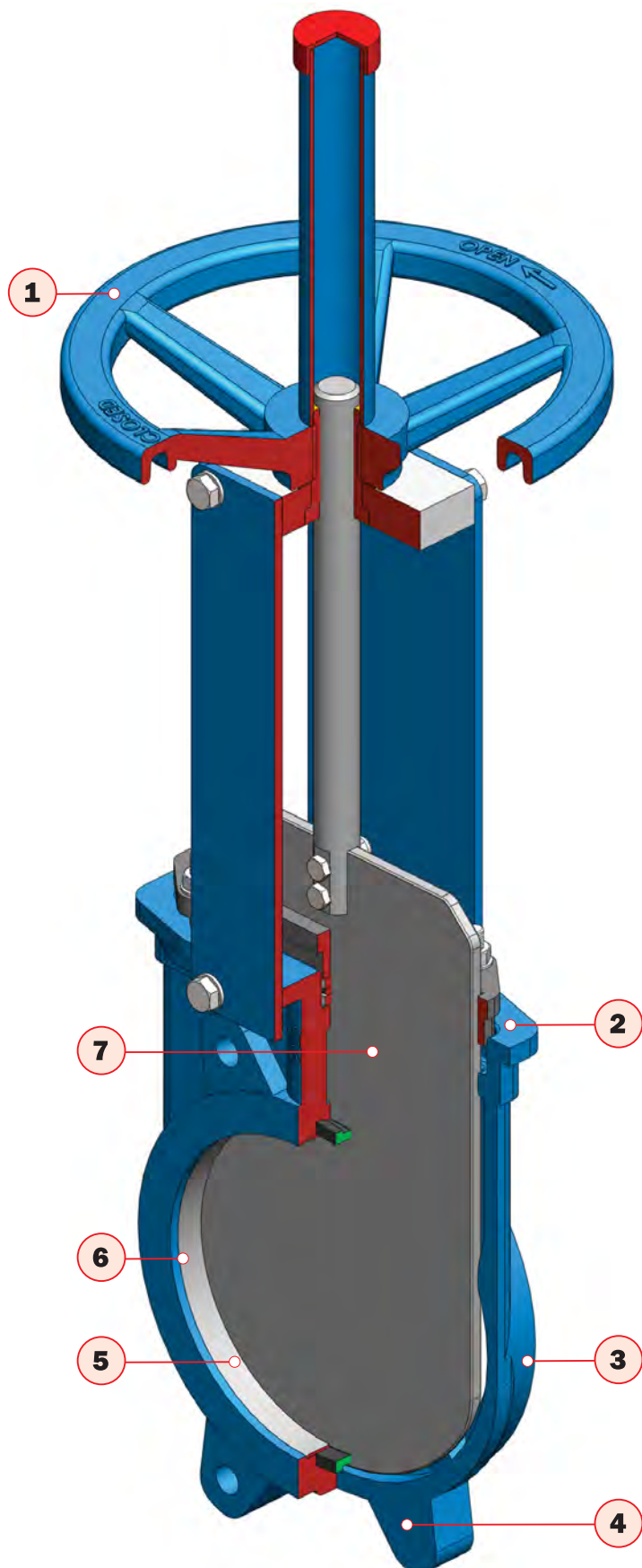
B
WAFLER
DESIGN

T
LUG
DESIGN



DESIGN ADVANTAGES

- SERIES 200



1. Interchangeable drives

- manual actuation is conducted through a handwheel. Also can be combined with a wide range of pneumatic and electric actuators.

2. Solid, durable body casting

- the solid iron body of ABO Series 200 knife gate valves has been designed to handle mechanical wear, and thus to provide for a durable solution in severe service conditions.

3. Minimal pressure drops

- a specially profiled body on the internal part prevents pressure drops with high media velocity.

4. Connection between flanges

- as standard, connection between flanges is designed as per EN 1092. However, the body design allows for variable connection options as per other norms.

5. Simple seat replacement

- the sealing design backed by the reinforcement ring allows for an easy and quick replacement of the sealing elements.

6. Seat option

- multiple seat options available. Please refer to pages 4 and 5.

7. Excellent tightness

- state of the art machining, as well as precise casting technology of individual components, results in a perfect shut-off and guarantees class A tightness
- Bi-directional seal available

SEATS / SURFACE TREATMENT

Czech Industrial Valve Manufacturer

Seats options

EPDM

▪ ABO EPDM seat is suitable for application with temperatures ranging from -25°C to +125°C. EPDM has excellent resistance to heat, ozone and sunlight, very good flexibility at low temperature, good resistance to alkalis, acids and oxygenated solvents. It has poor resistance to oil, gasoline and hydrocarbon based solvents. Typical applications for this material are clean water and waste water service, pulp and paper, or applications in the sugar refining industry.

NBR

▪ ABO NBR seat is suitable for applications with temperatures ranging from -10°C to +90°C. NBR has very good resistance to oil, gasoline, alkalis and acids, as well as to hydrocarbon based solvents. NBR has inferior resistance to ozone and oxygenated solvents, as well as to high polar solvents. Typical applications for this material is water contaminated with oils or grease.

VITON

▪ ABO VITON seat is suitable for applications with temperatures ranging from -25°C to +150°C. VITON has very good resistance to ozone and sunlight, is compatible with a broad spectrum of chemicals, salts solutions and may be used on bleached paper lines. ABO VITON has very good resistance to alkalis and acids. It is not suitable for steam or hot water service.

Body surface treatment

Epoxy coating

ABO standard coating option (RAL 5015) is premium quality epoxy grade C2 coating with minimal thickness of 80 microns (EN12904-1).

Marine coating

Marine coating for highly abrasive media, especially in marine environment, is an option. Grades C3, C4 and C5 are available.

Rilsan coating

Rilsan (Nylon 11) coating, providing superb corrosion resistance, is an option on selected valve components. This coating option is recommended for applications such as seawater, cement, food or water service contaminated with chemicals.

Halar coating

Halar coating provides for high impact strength, resistance to wide range of chemicals, acids and also severe corrosion and friction. Further, Halar coating is a suitable solution for cryogenic applications.

Inter Zone 954

Coating provides superior protection in sea water environment. The coating is designed for bodies exposed to high humidity or other very arduous climate conditions. It is highly resistant to acid and solvent vapours and sprinkles, common and salt water.



Clean water treatment application



Sewage water treatment application

SEAT OPTIONS



1. Soft seat

Standard soft seat design suitable for water service, and for liquids with a maximum solid concentration of 5 % (Class A tightness rate).

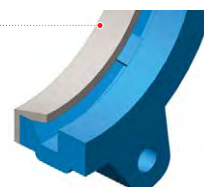
2. Metal seat

Metal seat design (knife closes against the body directly) with maintenance-free seat. This solution is suitable for usage in bulk handling applications, such as solids, powders and sands. Not suitable for water and liquids applications.



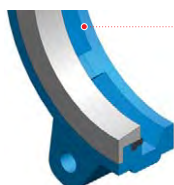
3. Soft seat with deflecting cone 15°

Soft seat design with a deflecting cone of 15° as accessory. This solution is particularly suitable for fluids with larger solid particles whereby damage of the body/internals can occur.



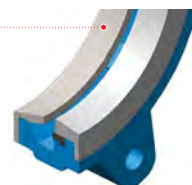
4. Metal seat with deflecting cone 15°

Metal seat design with a deflecting cone of 15° as accessory. This solution is particularly suitable for solid or powder media with larger solid particles whereby damage of the body/internals can occur.



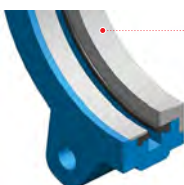
5. Soft seat with scraper 8°

Soft seat design with reinforced sealing ring of 8° in casted material securing a higher degree of protection for the seating element. This solution is used for medias with high velocity or higher pressure. This solution is used for pulp with solids or staples, or meat factories with bone particles.



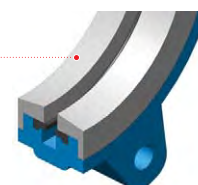
6. Soft seat with deflecting cone 15° and scraper 8°

Soft seat design with reinforced sealing ring of 8° and a deflecting cone of 15° as accessory. This solution gives more protection to the internals parts thanks to the cone (restriction of bore), and is suitable in severe abrasive service such as mining service, whereby water with slurries or sand is present.



7. Bidirectional seat

Standard soft seat bidirectional design with a flat fixing ring and a scraper. This solution is suitable for water and sewage service whereby a reversed flow of the media can occur.

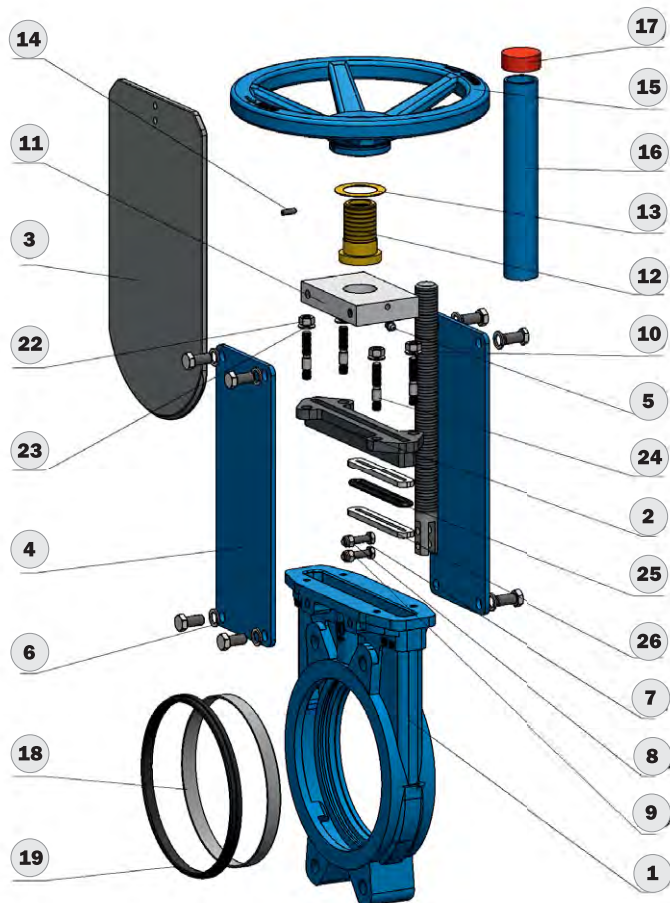


8. Bidirectional reinforced seat

Soft seat bidirectional design with reinforced sealing ring of 8° in casted material secures a higher degree of protection of the seating element. This solution is used for medias with high velocity or higher pressure, and in situations whereby a reversed flow of the media can occur.

MATERIAL PERFORMANCE / TECHNICAL INFORMATION

Czech Industrial Valve Manufacturer



Pos.	Name	Material 1	Material 2
1	Body	Cast iron 0.6025 (GG25)	Stainless steel 1.4408 (CF8M)
2	Packing gland	Aluminium 3.2581	Stainless steel 1.4408 (CF8M)
3	Knife	Stainless steel 1.4306 (AISI 304 L)	Stainless steel 1.4404 (AISI 316 L)
4	Support plate	Steel 1.0036	Steel 1.0036
5	Greaser	Steel 1.0553 + Zinc	Steel 1.0553 + Zinc
6,13 23	Washer	Stainless steel A4	Stainless steel A4
7,8	Bolt	Stainless steel A4	Stainless steel A4
9,22	Nut	Stainless steel A4	Stainless steel A4
10	Stem	Stainless steel EN 1.4305 (AISI 303)	Stainless steel EN 1.4305 (AISI 303)
11	Support plate	Brass 2.0402	Brass 2.0402
12	Stem nut	Brass 2.0402	Brass 2.0402
14	Lock washer	Stainless steel A4	Stainless steel A4
15	Hand-wheel	Cast iron 0.6025 (GG25)	Cast iron 0.6025 (GG25)
16	Tube	Steel 1.0036	Steel 1.0036
17	Cover	Plastic	Plastic
18	Sealing ring	Stainless steel 1.4404 (AISI 316 L)	Stainless steel 1.4404 (AISI 316 L)
19	Seat	EPDM	EPDM
20	Deflecting cone	Stainless steel 1.4401 (AISI 316)	Stainless steel 1.4401 (AISI 316)
21	Reinforced ring	Stainless steel 1.4401 (AISI 316)	Stainless steel 1.4401 (AISI 316)
21	Nut	Stainless steel A4	Stainless steel A4
24	Pivots	Stainless steel A4	Stainless steel A4
25	Stuffing O-ring	EPDM	EPDM
26	Stuffing box	Synthetic yarn + PTFE	Synthetic yarn + PTFE

Installation between flanges DN50 - DN1200, DESIGN „B”

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
NPS	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"	28"	32"	36"	40"	48"
PN6	•	•	•	•	•	•	•	×	×	×	×	×	×	×	×	×	×	×	×
PN10																			
PN16	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Class 150	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

standard

• on request

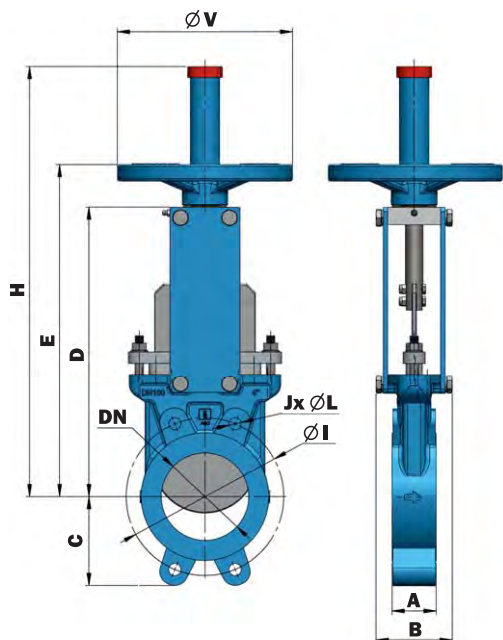
× impossible

Operating torques (Nm) vs. working pressure (bar)

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
NPS	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
p _{MAX} 10 bar	10	12	15	20	25	30	35	45	60	70	90	100	110	170

Operating torques above are valid for electric actuator. Operating torques are mentioned without safety reserve.

BASIC DIMENSIONS



DN	A	B	C	D	E	H	I	J	L	V	Kg (type B)
50	40	86	60	241	290	370	125	4	M16	200	8
65	40	86	68	267	316	400	145	4	M16	200	9
80	50	86	90	293	342	454	160	8	M16	200	10,5
100	50	86	102	332	381	494	180	8	M16	200	11,5
125	50	96	119	369	428	555	210	8	M16	250	15
150	60	96	130	419	478	626	240	8	M20	250	20
200	60	116	160	519	593	793	295	12	M20	305	32
250	70	116	202	636	710	937	350	12	M20	305	45
300	70	116	224	740	814	1 120	400	12	M20	305	58
350	96	193	261	912	987	1 136	460	16	M20	410	108
400	100	193	295	984	1 059	1 470	515	16	M24	410	130
450	106	193	318	1 055	1 130	1 640	565	20	M24	510	160
500	110	193	345	1 188	1 263	1 780	620	20	M24	510	193
600	110	290	400	1 378	1 453	2 070	725	20	M27	510	283

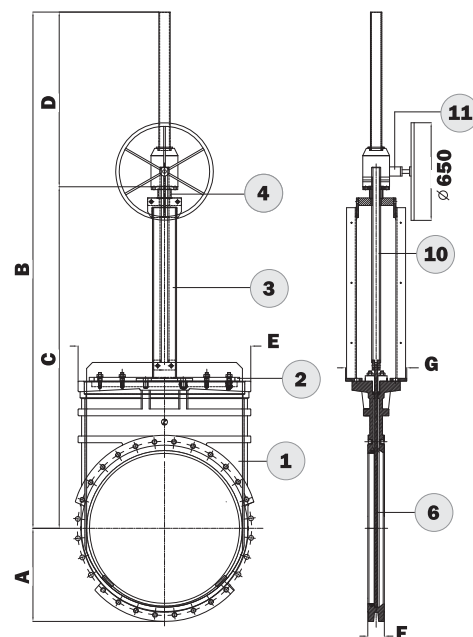
DN	A	B	C	D	E	F	G	ØK	P	
									Holes No.	PN10
700	460	2 501	1 646	855	838	110	408	840	24	M27
800	503	2 788	1 833	955	970	110	408	950	24	M30
900	586	3 149	2 094	1 055	1 040	110	408	1 050	28	M30
1000	620	3 439	2 284	1 155	1 150	110	408	1 160	28	M33
1200	755	4 159	2 804	1 355	1 450	150	460	1 380	32	M33



Transportation of bulk solids



Mixing chamber installation



Working conditions

Working pressure max.	Seats temperature rating
DN50-DN250: 10 bar	- 25 °C do +125 °C (EPDM)
DN300-DN400: 6 bar	- 10 °C do +90 °C (NBR)
DN500-DN600: 4 bar	- 25 °C do +150 °C (Viton)
DN700-DN1200: 2 bar	

KNIFE GATE VALVES SERIES 300

Czech Industrial Valve Manufacturer

Knife gate valves Series 300 are the most common of the so-called through conduit valves. Series ABO 300 is a wafer type bidirectional valve which is ideal for installations handling large solids, very viscous fluids, sludge and highly concentrated slurry (mining, paper industry, cement industry, etc.). The main characteristic of the blade is that it passes through the entire length of the body. A round outlet is machined in the middle of each blade. This outlet, while falling with identical outlet on the valve body, allows for maximum direct flow of the medium. Thus, while being in open position, the valve essentially becomes part of the piping (leading to dead zones elimination).

ABO knife gate valves series 300 are ideal for installations handling liquids which contain suspended solid and waste water. They are used in following applications:

- mining industry
- chemical industry
- slurry handling
- waste water treatment
- pulp and paper industry

Basic properties

- bidirectional design with two-piece body with rising stem
- knife goes through the sealing area
- circular, total passage: enables a high flow capacity with low load loss
- through the gate - in the open position there are not places that restrict the flow
- sided seal - seal and support ring on both sides
- can be combined with various kinds of actuators (handwheel, electric actuator, pneumatic actuator, etc)



Type designation

3 1 0 B 100 5

Actuation

- 1 - handlever
- 2 - handwheel
- 3 - gearbox
- 4 - pneumatic actuator
- 5 - electric actuator

Nominal size (DN)

Body type

B - WAFLER

Seat material

- 0 - EPDM
- 1 - NBR
- 4 - Viton

Body & knife material

- 1 - Body: grey cast iron 0.6025 (GG25)
Knife: stainless steel 1.4306 (AISI 304 L)
- 2 - Body: stainless steel 1.4408 (CF8M)
Knife: stainless steel 1.4404 (AISI 316 L)

Series name

Series 300

Standards

Leak test

EN 12266-1, Class A*)
ISO 5208, Class A*)
API 598, Tab. 5
*) for soft seated version

Connection between flanges

EN 1092-1

Marking

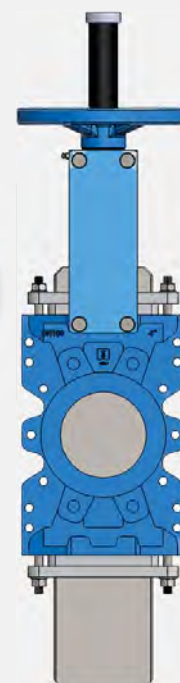
EN 19

Body type

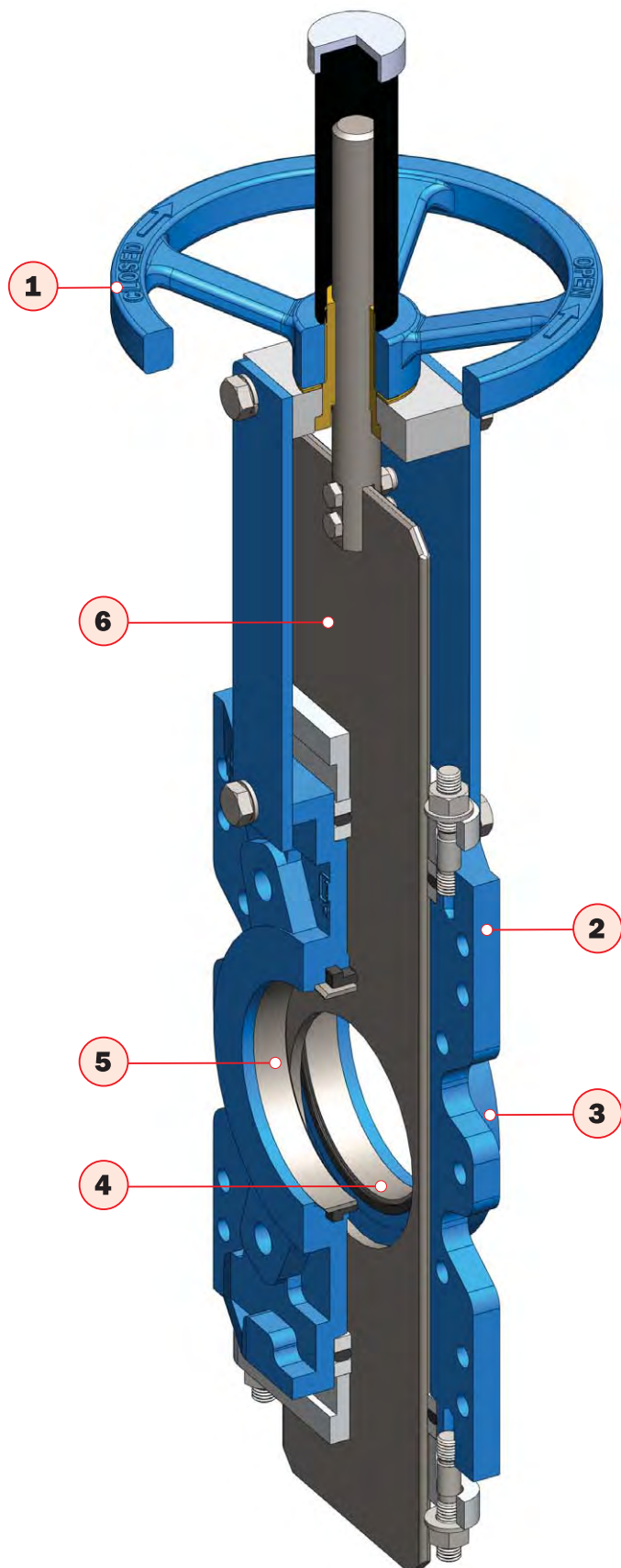
B
WAFLER
DESIGN

Working conditions

Working pressure max.	Temperature rating
DN50-DN250: 10 bar	- 25 °C do +125 °C (EPDM)
DN300-DN400: 6 bar	- 10 °C do +90 °C (NBR)
DN500-DN600: 4 bar	- 25 °C do +150 °C (Viton)



DESIGN ADVANTAGES - SERIES 300



1. Interchangeable drives

- manual actuation is conducted through a handwheel. Also can be combined with a wide range of pneumatic and electric actuators.

2. Robust body casting

- a two-piece body design allows for an easy replacement of internal components.

3. Connection between flanges

- as standard, connection between flanges is designed as per EN 1092. However, the body design allows for variable connection options as per other norms.

4. Profiled body shape

- a specially designed internal body shape prevents particles from entering into the sealing area and thus potentially decreasing the functionality of the valve.

5. Bidirectional sealing

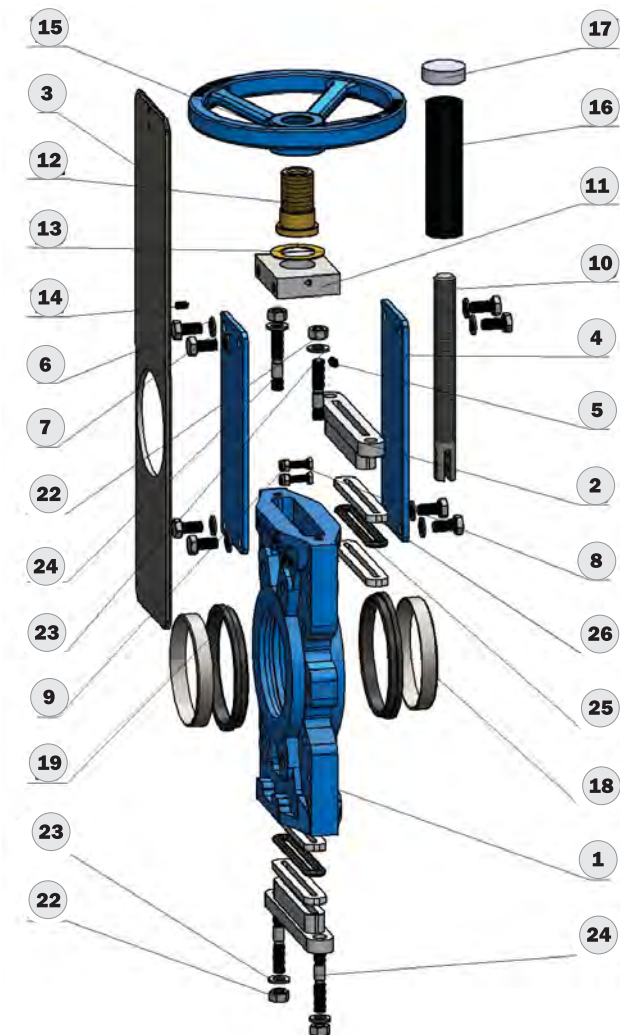
- state of the art machining, as well as precise casting technology of individual components, results in a perfect shut-off and guarantees class A tightness.

6. Excellent Bi-directional tightness

- in order to avoid leakage while moving the knife, packing has been installed in the upper as well as the lower part of the body. The packing system is further reinforced by metal rings and counter-flangers. "Metal-Metal" design is not bi-directionally tight, nor "A" class tightness.

MATERIAL PERFORMANCE / TECHNICAL INFORMATION

Czech Industrial Valve Manufacturer



Pos.	Name	Material 1	Material 2
1	Body	Cast iron 0.6025 (GG25)	Stainless steel 1.4408 (CF8M)
2	Packing gland	Aluminium 3.2581	Stainless steel 1.4408 (CF8M)
3	Knife	Stainless steel 1.4306 (AISI 304 L)	Stainless steel 1.4404 (AISI 316 L)
4	Support plate	Steel 1.0036	Steel 1.0036
5	Greaser	Steel 1.0553 + Zinc	Steel 1.0553 + Zinc
6,13 23	Washer	Stainless steel A2 (poz. 13 Mosaz 2.0402)	Stainless steel A2 (poz. 13 Mosaz 2.0402)
7,8	Bolt	Stainless steel A2	Stainless steel A2
9,22	Nut	Stainless steel A2	Stainless steel A2
10	Stem	Stainless steel EN 1.4305 (AISI 303)	Stainless steel EN 1.4305 (AISI 303)
11	Support bridge	Steel 1.0036	Steel 1.0036
12	Stem drive nut	Brass 2.0402	Brass 2.0402
14	Stop screw	Stainless steel 1.4301 (AISI 304)	Stainless steel 1.4301 (AISI 304)
15	Hand-wheel	Cast iron 0.6025 (GG25)	Cast iron 0.6025 (GG25)
16	Stem cover	Steel 1.0036	Steel 1.0036
17	Cover	Plastic	Plastic
18	Sealing ring	Stainless steel 1.4404 (AISI 316 L)	Stainless steel 1.4404 (AISI 316 L)
19	Seat	EPDM	EPDM
20	Deflecting cone	Stainless steel 1.4401 (AISI 316)	Stainless steel 1.4401 (AISI 316)
21	Reinforced ring	Stainless steel 1.4401 (AISI 316)	Stainless steel 1.4401 (AISI 316)
21	Nut	Stainless steel A2	Stainless steel A2
24	Pivots	Stainless steel A2	Stainless steel A2
25	Stuffing O-ring	EPDM	EPDM
26	Stuffing box	Synthetic yarn + PTFE	Synthetic yarn + PTFE

Installation between flanges DN50 - DN600, DESIGN B

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
NPS	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
PN6	•	•	•	•	•	•	•	x	x	x	x	x	x	x
PN10														
PN16	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Class 150	•	•	•	•	•	•	•	•	•	•	•	•	•	•

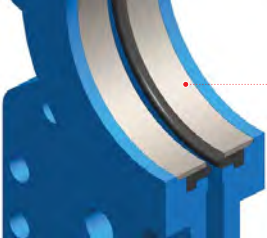
	standard
•	on request
x	impossible

Operating torques (Nm) vs. working pressure (bar)

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
NPS	2"	2 1/2"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	24"
p _{max} 10 bar	10	12	15	20	25	30	35	45	60	70	90	100	110	170

Operating torques above are valid for electric actuator. Operating torques are mentioned without safety reserve..

SEAT OPTIONS

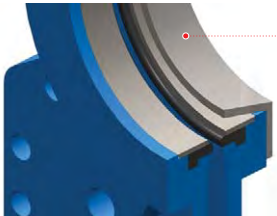


1. Soft seat

Standard soft seat design (EPDM, NBR, PTFE) cutting, suitable for water service, and for liquids with a maximum solid concentration of 5 % (Class A tightness rate).

2. Metal seat

Metal seat design (knife closes against the body directly) with maintenance-free seat is typically suitable for applications handling dense paper pulp. Not suitable for water and liquids applications. In fully open position, the valve is a perfect continuation of the pipe as it eliminates dead spaces. Bi-directional design is not possible in this variant.



3. Soft seat with deflecting cone 15°

Soft seat design with a deflecting cone of 15° as accessory is particularly suitable for solid or powder media with larger solid particles whereby damage of the body/interals can occur. This solution is frequently used in bulk industry for services with abrasive fluids.

4. Metal seat with deflecting cone 15°

Metal/metal seat design with a deflecting cone of 15° as accessory is particularly suitable for solid or powder media with larger solid particles whereby damage of the body/interals can occur.

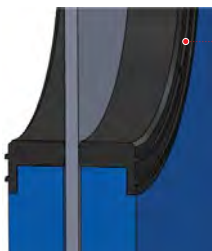
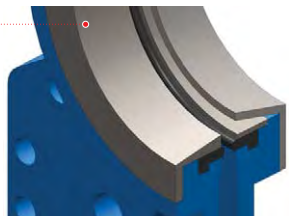


5. Soft seated with scraper 8°

Soft seat bidirectional design with reinforced sealing ring of 8° in casted material securing a higher degree of protection for the seating element. This solution is used for medias with high velocity or higher pressure, and in situations whereby a reversed flow of the media can occur. This solution is used for pulp with solids or staples in dumping outlet, dump chest drains and heavy rejects.

6. Soft seated with deflecting cone 15° and scraper 8°

Soft seat design with reinforced sealing ring of 8° and a deflecting cone of 15° as accessory. This solution gives more protection to the internal parts thanks to the cone (restriction of bore), and is suitable in severe abrasive service such as mining service, whereby water with slurries or sand is present.



7. Soft seated rubber sleeve

Special seat design with 2 rubber sleeves for abrasive service. This solution is particularly suitable for solid or powder media with larger solid particles whereby damage of the body/interals can occur. Frequently used in mining industry for medias with abrasive fluids.

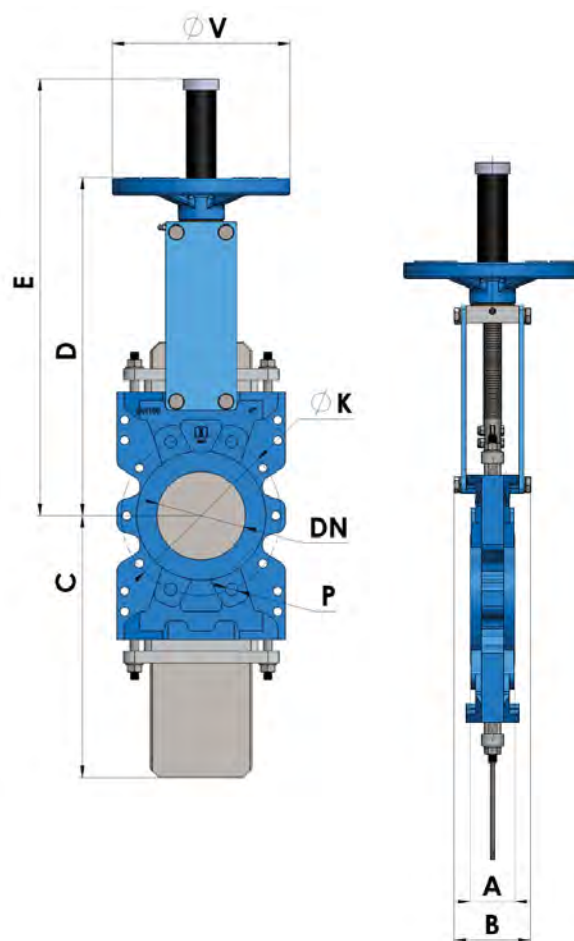
BASIC DIMENSIONS

- SERIES 300

Czech Industrial Valve Manufacturer

DN	A	B	C	D	E	øV
50	40	90	220	284	425	200
65	40	90	260	308	450	200
80	50	90	303	334	480	200
100	50	90	360	374	520	200
125	50	100	428	413	600	250
150	60	100	493	465	650	250
200	60	120	632	528	820	300
250	70	120	767	682	1 020	300
300	70	120	897	782	1 120	300
350	96	192	1 042	898	1 380	400
400	100	192	1 167	1 003	1 490	400
450	106	192	1 297	1 093	1 580	500
500	110	192	1 455	1 207	1 690	500
600	110	290	1 705	1 410	2 030	500

DN	øK		P		
DN	PN10	ANSI 150	Holes No.	PN10	ANSI 150
50	120	120,6	4	M16	W 5/8"
65	145	139,7	4	M16	W 5/8"
80	160	152,4	8	M16	W 5/8"
100	180	190,5	8	M16	W 5/8"
125	210	215,9	8	M16	W 3/4"
150	240	241,3	8	M20	W 3/4"
200	295	298,4	8	M20	W 3/4"
250	350	361,9	12	M20	W 7/8"
300	400	431,8	12	M20	W 7/8"
350	460	476,2	16	M20	W 1"
400	515	539,7	16	M24	W 1"
450	565	577,8	20	M24	W 1 1/8"
500	620	635,0	20	M24	W 1 1/8"
600	725	719,3	20	M27	W 1 1/8"



Czech Republic
ABO valve, s.r.o.
 Dalimilova 285/54
 783 35 Olomouc
 tel.: +420 585 224 087
 sales@abovalve.com

Slovak Republic
ABO Slovakia, s.r.o.
 Banská Bystrica
 tel.: +421 947 902 862
 sales.sk@abovalve.com

Germany
ABO Armaturen GmbH
 Essen
 tel.: +49 (0)152 262 29501
 sales.de@abovalve.com

USA
ABO Controls LLC
 Houston
 tel.: +1 (832) 291 4929
 sales.us@abovalve.com

Ukraine
ABO Ukraine LLC
 Dnipro
 tel.: +38 056 733 95 70
 sales.ua@abovalve.com

Turkey
ABO Armaturen LTD STI
 Istanbul
 tel.: +90 216 527 36 34
 sales.tr@abovalve.com

Russia
ABO Armatura LLC
 Smolensk
 tel.: +7 (4812) 240 020
 sales.ru@abovalve.com

India
ABO Controls Pvt. Ltd.
 Mumbai
 tel.: +91 773 820 4779
 sales.in@abovalve.com

Singapore
ABO Valve Pte. Ltd.
 Singapore
 tel.: +65 9169 4562
 sales.sg@abovalve.com

China
ABO Flow Control
 Shanghai
 tel.: +86 136 01 522 831
 sales.cn@abovalve.com

United Arab Emirates
Sales representation
 Abu Dhabi
 tel.: +971 56 9207964
 bharti@abovalve.com

Bahrain
Sales representation
 Manama
 tel.: +973 3444 9065
 jimmichen@abovalve.com



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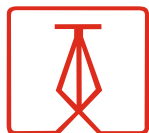


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Valid from: 2/2023



ABO *valve*

BALL VALVES

**DN8 - DN100
PN63/PN40**

Applications:

Chemical industry
Petrochemistry
Water treatment
Power plants
Pulp & Paper industry
Refineries
Oil & Gas
Shipbuilding
Pharmacy
Food & Beverages

SERIES ART.xxx

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ART. 940

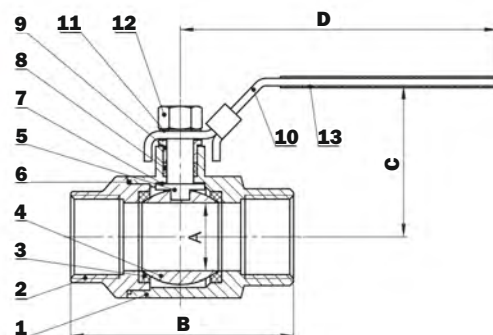
ART. 941

Czech Industrial Valve Manufacturer

ART. 940

Stainless steel ball valve

- 2-piece ball valve
- full bored body
- F.F. thread (BSPP / BSPT)
- DN 8-25: PN 63 / DN32-50: PN40
- thread end:
ANSI B 1.20.1 (NPT)
ISO 7/1 (Rc/Rp)
ISO 228/1 (G)



OPERATING TORQUES

DN	8	10	15	20	25	32	40	50
Nm	1,76	1,76	2,65	8,04	9,51	13,24	17,16	21,27

Note: The torque figures were measured under 0 pressure at room temperature (without safety factor).

DN	A	B±2	C	D
8	10	50	41,4	80
10	12,5	50	41,4	80
15	15	60	45	80
20	20	70	54,7	100
25	24,5	80	65,3	125
32	32	93	70,9	125
40	38	103	84	160
50	50	123	93,3	160

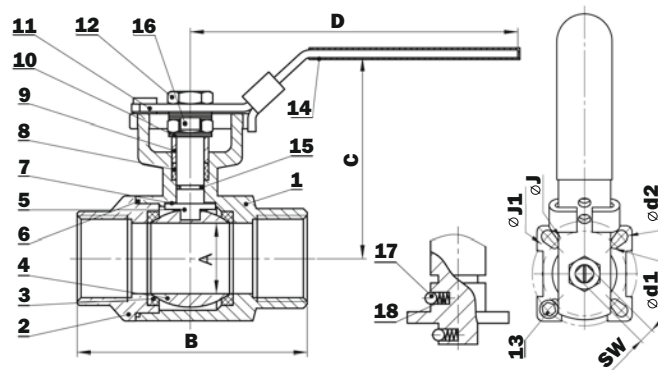
Note: Dimensions are mentioned in mm. Permissible deviations +/- 2 mm.

ITEM	PART NAME	MATERIAL Art.940	QUANTITY
1	Body	EN10213 1,4408	1
2	End caps	EN10213 1,4408	1
3	Seat	PTFE + 15% G.F.	2
4	Ball	CF8M/316	1
5	Steam	SUS 316	1
6	Gasket	PTFE	1
7	Gasket	PTFE	1
8	Seal	PTFE	1
9	Packing gland	SUS 304	1
10	Handle	SUS 304	1
11	Lever spring washer	SUS 304	1
12	Lever nut	SUS 304	1
13	Plastic coating	PVC	1

ART. 941

Stainless steel ball valve

- 2-pieces with ISO flanged connections
- full bored body
- F.F. thread (BSPP / BSPT)
- PN 63
- thread end:
ANSI B 1.20.1 (NPT)
ISO 7/1 (Rc/Rp)
ISO 228/1 (G)



OPERATING TORQUES

DN	15	20	25	32	40	50
Nm	4,12	4,61	9,02	9,61	12,55	21,27

Note: The torque figures were measured under 0 pressure at room temperature (without safety factor).

DN	A	B	C	D	H	L	J	J1	d1	d2	SW
8	11,1	57	72,7	110	42,3	8	42	50	6	7	9
10	11,1	57	72,7	110	42,3	8	42	50	6	7	9
15	15	57	70,7	110	42,3	8	42	50	6	7	9
20	20	71	72,7	110	44,8	8	42	50	6	7	9
25	24,5	83	83,5	135	54	10	42	50	6	7	11
32	32	91	100	165	59,2	10	50	70	7	9	11
40	38	104	100,8	165	71,3	10	50	70	7	9	11
50	50	123	118	165	82,9	14,8	50	70	7	9	14

Note: Dimensions are mentioned in mm. Permissible deviations +/- 2 mm.

ITEM	PART NAME	MATERIAL Art.941	QUANTITY
1	Body	EN10213 1,4408	1
2	End caps	EN10213 1,4408	1
3	Seats	PTFE + 15% G.F.	2
4	Ball	CF8M/316	1
5	Steam	SUS 316	1
6	Gasket	PTFE	1
7	Gasket	PTFE + 15% G.F.	1
8	Seal	PTFE	1
9	Gland ring	SUS 304	2
10	Belleville spring washer	SUS 301	2
11	Handle	SUS 304	1
12	Lever nut	SUS 304	2
13	Stop screw	SUS 304	1
14	Plastic coating	PVC	1
15	O-ring	VITON	1-2
16	Locking tab	SUS 304	1
17	Static device	SUS 316	2
18	Spring	SUS 316	2

2 / ABO valve Czech

ART. 942

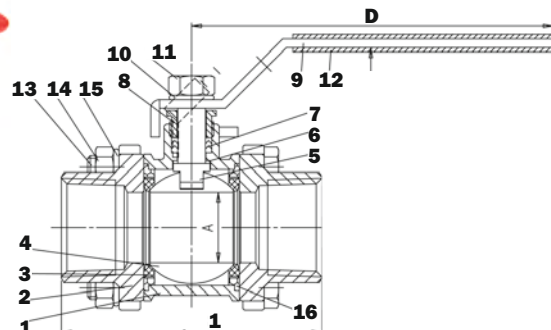
ART. 943



ART. 942

Stainless steel ball valve

- 3-piece ball valve
- full bored body
- F.F. thread (**BSPP** / BSPT)
- DN 8-25: PN 63 / DN32-50: PN40
- thread end:
ANSI B 1.20.1 (NPT)
ISO 7/1 (Rc/Rp)
ISO 228/1 (G)



OPERATING TORQUES

DN	8	10	15	20	25	32	40	50
Nm	1,76	1,76	3,92	5,39	7,65	14,22	19,14	22,06

Note: The torque figures were measured under 0 pressure at room temperature (without safety factor).

DN	A	B±2	C	D	E	F	G	B1±2
8	10	50	41,4	80	10	13	14	70
10	12,5	60	41,4	80	12,5	13	18	70
15	15	75	45	80	16	17	22	75
20	20	80	54,7	100	20	22	27,5	90
25	24,5	90	65,3	125	24,5	28	34,5	100
32	32	110	70,9	125	32	37	43	110
40	38	120	84	160	38	43	49	125
50	50	140	93,3	160	50	54	61,5	150

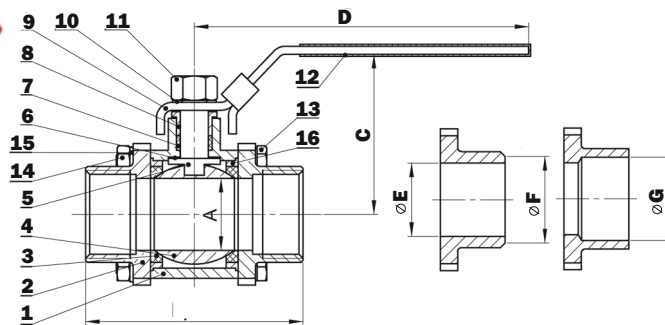
Note: Dimensions are mentioned in mm. Permissible deviations +/- 2 mm.

ITEM	PART NAME	MATERIAL	QUANTITY
1	Body	EN10213 1,4408	1
2	End caps	EN10213 1,4408	2
3	Seat	PTFE + 15% G.F.	2
4	Ball	CF8M/316	1
5	Steam	SUS 316	1
6	Gasket	PTFE	1
7	Seal	PTFE	1
8	Packing gland	SUS 304	1
9	Handle	SUS 304	1
10	Lever spring washer	SUS 304	1
11	Lever nut	SUS 304	1
12	Plastic coating	VINYL	1
13	Bolts	SUS 304	4
14	Bolts nuts	SUS 304	4
15	Spring washer	SUS 304	4
16	Body seal	PTFE + 15% G.F.	2

ART. 943

Stainless steel ball valve

- 2-pieces type
- full bored body
- welded pipe connection
- DN 8-25: PN 63
- DN32-50: PN40
- welded end:
EN 12627



OPERATING TORQUES

DN	8	10	15	20	25	32	40	50
Nm	1,76	1,76	3,92	5,39	7,65	14,22	19,14	22,06

Note: The torque figures were measured under 0 pressure at room temperature (without safety factor).

DN	A	B±2	C	D	E	F	G	B1±2
8	10	50	41,4	80	10	13	14	70
10	12,5	70	41,4	80	12,5	13	18	70
15	15	75	45	80	16	17	22	75
20	20	90	54,7	100	20	22	27,5	90
25	24,5	100	65,3	125	24,5	28	34,5	100
32	32	110	70,9	125	32	37	43	110
40	38	125	84	160	38	43	49	125
50	50	150	93,3	160	50	54	61,5	150

Note: Dimensions are mentioned in mm. Permissible deviations +/- 2 mm.

ITEM	PART NAME	MATERIAL	QUANTITY
1	Body	EN10213 1,4408	1
2	End caps	EN10213 1,4408	2
3	Seat	PTFE + 15% G.F.	2
4	Ball	CF8M/316	1
5	Steam	SUS 316	1
6	Gasket	PTFE	1
7	Seal	PTFE	1
8	Packing gland	SUS 304	1
9	Handle	SUS 304	1
10	Lever spring washer	SUS 304	1
11	Lever nut	SUS 304	1
12	Plastic coating	VINYL	1
13	Bolts	SUS 304	4
14	Bolts nuts	SUS 304	4
15	Spring washer	SUS 304	4
16	Body seal	PTFE + 15% G.F.	2

ART. 944

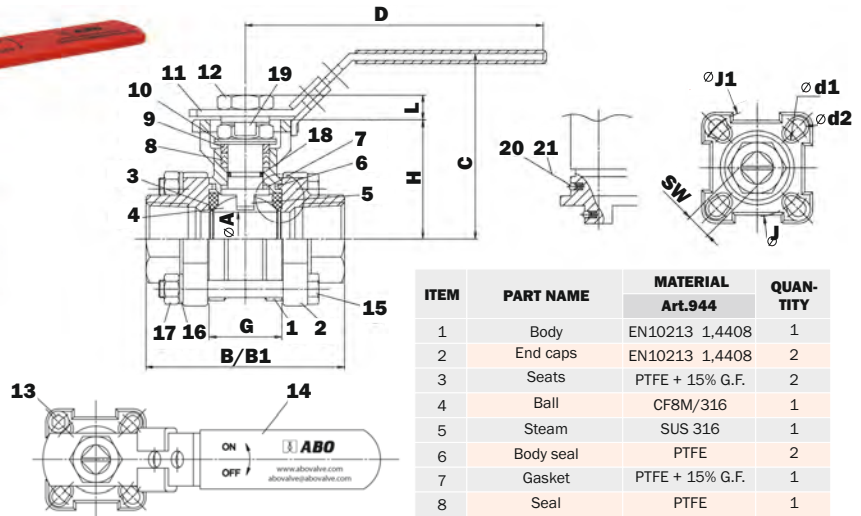
ART. 945

Czech Industrial Valve Manufacturer

ART. 944

Stainless steel ball valve

- 2-pieces with ISO flanged connection
- full bored body
- F.F. thread (**BSPP** / BSPT)
- PN63
- thread end:
ANSI B 1.20.1 (NPT)
ISO 7/1 (Rc/Rp)
ISO 228/1 (G)



OPERATING TORQUES

DN	15	20	25	32	40	50
Nm	3,73	5,10	6,57	9,61	16,47	32,16

Note: The torque figures were measured under 0 pressure at room temperature (without safety factor).

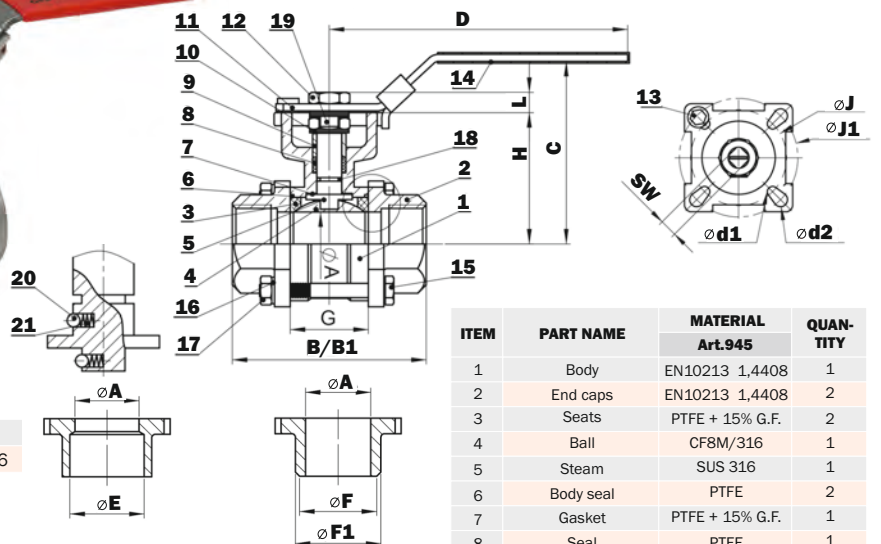
DN	A	B	B1	C	D	E	F	F1	G	J	J1	SW	d1	d2	H	L
8	11,1	75	75	70,9	110	14,2	13	17,2	25,2	36	42	9	6	6	42,3	8
10	11,1	75	75	70,9	110	17,7	13	17,2	25,2	36	42	9	6	6	42,3	8
15	16	75	75	70,9	110	21,9	17	22,4	25,2	36	42	9	6	6	42,3	8
20	20	90	90	73,4	110	27,2	22	28,2	27,7	36	42	9	6	6	44,8	8
25	24,5	100	100	84,1	135	34	28	33,7	33	42	50	11	6	7	54	10
32	32	110	110	89,3	135	42,7	37	44	41,2	42	50	11	6	7	59,2	10
40	38	120	125	109,5	165	48,8	43	50,8	49,3	50	70	14	7	9	73,5	14,8
50	50	140	150	118,9	165	61,3	54	62,6	63,6	50	70	14	7	9	82,9	14,8

Note: Dimensions are mentioned in mm. Permissible deviations +/- 2 mm.

ART. 945

Stainless steel ball valve

- 3-pieces type with ISO flanged connections
- full bored body
- welded pipe connection
- PN 63
- welded end:
EN 12627



OPERATING TORQUES

DN	15	20	25	32	40	50
Nm	3,73	5,10	6,57	9,61	16,47	32,16

Note: The torque figures were measured under 0 pressure at room temperature (without safety factor).

DN	A	B	B1	C	D	E	F	F1	G	J	J1	SW	d1	d2	H	L
8	11,1	75	75	70,9	110	14,2	13	17,2	25,2	36	42	9	6	6	42	8
10	11,1	75	75	70,9	110	17,7	13	17,2	25,2	36	42	9	6	6	42	8
15	16	75	75	70,9	110	21,9	17	22,4	25,2	36	42	9	6	6	42	8
20	20	80	90	73,4	110	27,2	22	28,2	27,7	36	42	9	6	6	45	8
25	24,5	90	100	84,1	135	34	28	33,7	33	42	50	11	6	7	54	10
32	32	110	110	89,3	135	42,7	37	44	41,2	42	50	11	6	7	59	10
40	38	120	125	110	165	48,8	43	50,8	49,3	50	70	14	7	9	74	15
50	50	140	150	119	165	61,3	54	62,6	63,6	50	70	14	7	9	83	15

Note: Dimensions are mentioned in mm. Permissible deviations +/- 2 mm.

ITEM	PART NAME	MATERIAL	QUANTITY
1	Body	EN10213 1,4408	1
2	End caps	EN10213 1,4408	2
3	Seats	PTFE + 15% G.F.	2
4	Ball	CF8M/316	1
5	Steam	SUS 316	1
6	Body seal	PTFE	2
7	Gasket	PTFE + 15% G.F.	1
8	Seal	PTFE	1
9	Gland ring	SUS 304	2
10	Belleville spring washer	SUS 301	2
11	Handle	SUS 304	1
12	Lever nut	SUS 304	1
13	Stop screw	SUS 304	1
14	Plastic coating	PVC	1
15	Bolts	SUS 304	4
16	Spring washer	SUS 304	4
17	O-ring	SUS 304	4
18	Locking tab	VITON	1-2
19	Static device	SUS 304	1
20	Static device	SUS 316	2
21	Spring	SUS 316	2

ITEM	PART NAME	MATERIAL	QUANTITY
1	Body	EN10213 1,4408	1
2	End caps	EN10213 1,4408	2
3	Seats	PTFE + 15% G.F.	2
4	Ball	CF8M/316	1
5	Steam	SUS 316	1
6	Body seal	PTFE	2
7	Gasket	PTFE + 15% G.F.	1
8	Seal	PTFE	1
9	Gland ring	SUS 304	2
10	Belleville spring washer	SUS 301	2
11	Handle	SUS 304	1
12	Lever nut	SUS 304	1
13	Stop screw	SUS 304	1
14	Plastic coating	PVC	1
15	Bolts	SUS 304	4
16	Spring washer	SUS 304	4
17	Bolts nuts	SUS 304	4
18	O-ring	VITON	1-2
19	Locking tab	SUS 304	1
20	Static device	SUS 316	2
21	Spring	SUS 316	2

ART. 946

ART. 947

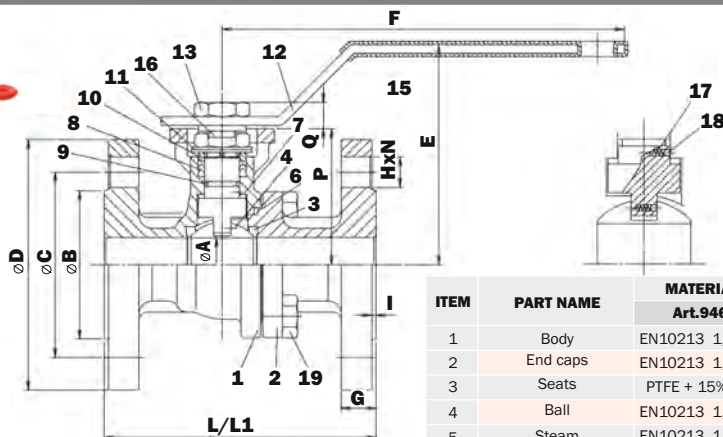


ART. 946

Stainless steel ball valve

- 2-pieces type with ISO flanged connection
- PN40
- flange connection: EN 1092*

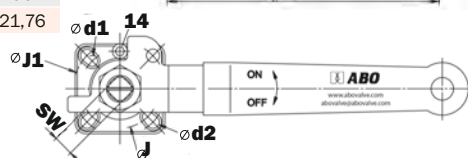
*(ANSI / ASME B16.5 upon request)



OPERATING TORQUES

DN	15	20	25	32	40	50
Nm	4,12	4,22	6,37	12,55	16,37	21,76

Note: The torque figures were measured under 0 pressure at room temperature (without safety factor).



DN	A	B	C	D	E	F	G	HxN	L	L1	I	P	Q	J	J1	d1	d2	SW
15	16	45	65	95	89	114	16	14x4	115	130	2	54	8	36	42	6	6	9
20	20	58	75	105	89	114	18	14x4	120	150	2	56	8	36	42	6	6	9
25	25	68	85	115	101	187	18	14x4	125	160	2	62,5	12	42	50	6	7	11
32	32	78	100	140	112	187	18	18x4	130	180	2	72	12	42	50	6	7	11
40	40	88	110	150	116	222	18	18x4	140	200	3	78	14,8	50	70	7	9	14
50	50	102	125	165	125	222	20	18x4	150	230	3	87,2	14,8	50	70	7	9	14

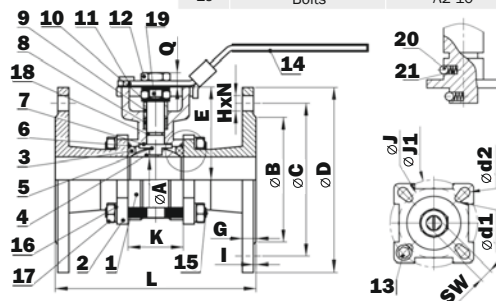
Note: Dimensions are mentioned in mm. Permissible deviations +/- 2 mm.

ART. 947

Stainless steel ball valve

- 3-pieces type with ISO flanged connections
- PN40
- flange connection: EN 1092*

*(ANSI / ASME B16.5 upon request)



OPERATING TORQUES

DN	15	20	25	32	40	50	65	80	100
Nm	3,73	5,10	6,57	9,61	16,47	32,16	61,76	78,43	132,35

Note: The torque figures were measured under 0 pressure at room temperature (without safety factor).

DN	A	B			C			D			SW	d1	d2	Q
		ANSI	PN16	PN40	ANSI	PN16	PN40	ANSI	PN16	PN40				
15	16	35	45	45	66,5	65	65	95	95	95	9	6	6	8
20	20	43	58	58	82,5	75	75	117	105	105	9	6	6	8
25	24,5	51	68	68	89	85	85	124	115	115	11	6	7	12
32	32	64	78	78	98,5	100	100	133	140	140	11	6	7	12
40	38	73	88	88	114,3	110	110	155	150	150	14	7	9	14,3
50	50	92	102	102	127	125	125	165	165	165	14	7	9	14,3
65	65	105	122	122	149,3	145	145	190	185	185	17	9	11	17,1
80	80	127	138	138	168	160	160	209	200	200	17	9	11	17,1
100	100	157	158	160	200	180	190	254	220	235	17	9	11	17,1

DN	E	G			I			H x N			K	L		J	J1
		ANSI	PN16	PN40	ANSI	DIN		ANSI	PN16	PN40		ANSI	DIN		
15	42,3	14,2	14	16	1,6	2	16x4	14x4	14x4	25,2	139,7	130	36	42	
20	44,8	15,7	16	18	1,6	2	19x4	14x4	14x4	27,2	152,4	150	36	42	
25	54	17,5	16	18	1,6	2	19x4	14x4	14x4	33	165,1	160	42	50	
32	59,2	19	16	18	1,6	2	19x4	18x4	18x4	41,2	177,8	180	42	50	
40	73,5	20,5	16	18	1,6	3	22x4	18x4	18x4	49,3	190,5	200	50	70	
50	82,9	22,5	18	20	1,6	3	19x8	18x4	18x4	63,6	215,9	230	50	70	
65	107	25,4	18	22	1,6	3	22x8	18x4	18x8	82,1	241,3	290	70	102	
80	117	28,4	20	24	1,6	3	22x8	18x8	18x8	95,8	282,4	310	70	102	
100	132	31,8	20	24	1,6	3	22x8	18x8	18x8	117,8	304,8	350	70	102	

Note: Dimensions are mentioned in mm. Permissible deviations +/- 2 mm.

ITEM	PART NAME	MATERIAL	QUANTITY
1	Body	EN10213 1,4408	1
2	End caps	EN10213 1,4408	1
3	Seats	PTFE + 15% G.F.	2
4	Ball	EN10213 1,4408	1
5	Steam	EN10213 1,4408	1
6	Body seal	PTFE / GRAPHITE	1
7	Gasket	PTFE + 15% G.F.	1
8	Seal	PTFE / GRAPHITE	1
9	O-ring	VITON	1-2
10	Gland ring	SUS 304	2
11	Belleville spring washer	SUS 301	2
12	Handle	SUS 304	1
13	Lever nut	SUS 304	2
14	Stop screw	SUS 304	1
15	Plastic coating	VINYL	1
16	Looking tab	SUS 304	1
17	Spring	SUS 316	1
18	Static device	SUS 316	1
19	Bolts	A2-10	4-6

ITEM	PART NAME	MATERIAL	QUANTITY
1	Body	EN10213 1,4408	1
2	End caps	EN10213 1,4408	2
3	Seats	PTFE + 15% G.F.	2
4	Ball	CF8M/316	1
5	Steam	SUS 316	1
6	Body seal	PTFE	2
7	Gasket	PTFE + 15% G.F.	1
8	Seal	PTFE	1
9	Gland ring	SUS 304	2
10	Belleville spring washer	SUS 301	2
11	Handle	SUS 304	1
12	Lever nut	SUS 304	1
13	Stop screw	SUS 304	1
14	Plastic coating	PVC	1
15	Bolts	SUS 304	4/6
16	Spring washer	SUS 304	8/12
17	Bolts nuts	SUS 304	8/12
18	O-ring	VITON	1/2
19	Locking tab	SUS 304	1
20	Static device	SUS 316	2
21	Spring	SUS 316	2

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CONTACT US

Czech Industrial Valve Manufacturer



Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 224 087
sales@abovalve.com

Slovak Republic

ABO Slovakia, s.r.o.
Banská Bystrica
tel.: +421 947 902 862
sales.sk@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0)152 262 29501
sales.de@abovalve.com

Russia

ABO Armatura LLC
Smolensk
tel.: +7 (4812) 240 020
sales.ru@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 216 527 36 34
sales.tr@abovalve.com

China

ABO Flow Control
Shanghai
tel.: +86 136 01 522 831
sales.cn@abovalve.com

India

ABO Controls Pvt. Ltd.
Mumbai
tel.: +91 773 820 4779
sales.in@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
tel.: +65 9169 4562
sales.sg@abovalve.com

USA

ABO Controls LLC
Houston
tel.: +(1) 832.291.4929
sales.us@abovalve.com

United Arab Emirates

Sales representation
Abu Dhabi
tel.: +971 56 9207964
bharti@abovalve.com

Bahrain

Sales representation
Manama
tel.: +973 3444 9065
jimmmichen@abovalve.com

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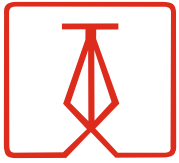
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ABO valve

we make processes work

CHECK VALVES

DUAL PLATE CHECK VALVES SERIES 700

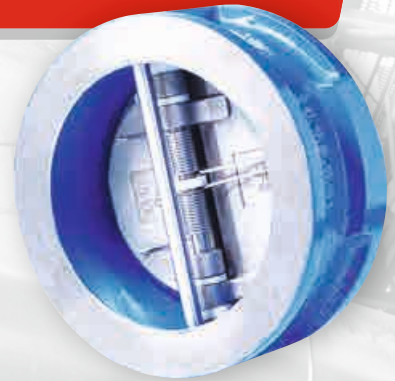
Nominal size	DN50 - DN1200
Working pressure	10 bar / 16 bar
Flange connection	PN10 / PN16
Working temperature	-25 °C / +125 °C
Working media	Pure water / Sewage / Soil water / Thick and viscous liquids

DUAL PLATE CHECK VALVES SERIES 700 HP

Nominal size	DN50 - DN600
Working pressure	10 bar / 16 bar
Flange connection	PN10 / PN16 / PN25
Working temperature	-25 °C / +125 °C
Working media	Pure water / Waste water / Oil & gas

SWING CHECK VALVES SERIES 800

Nominal size	DN50 - DN300
Working pressure	10 bar / 16 bar
Flange connection	PN10 / PN16
Working temperature	-25 °C / +125 °C
Working media	Waste water / Pure water / Heating systems / Soil water / Oils / Thick and viscous liquids



SERIES 700 / 800

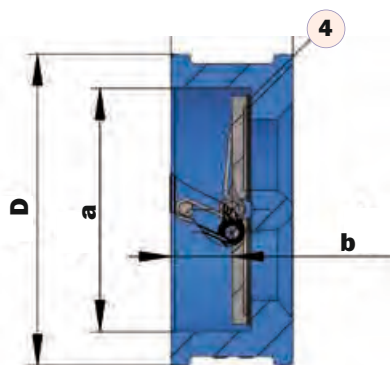
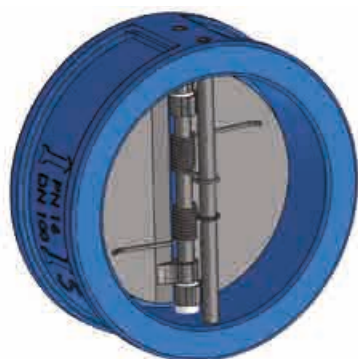
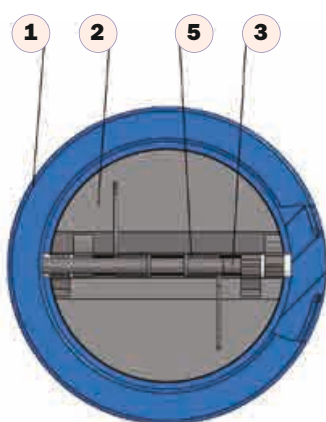
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DUAL PLATE CHECK VALVES SERIES 700

Czech Industrial Valve Manufacturer

Basic properties

- compact valve
- preferred vertical installation in the pipeline
- short face to face connection with good hydraulic performance
- mounting between flanges
- low pressure drops during medium flow rate



2 / ABO valve Czech

Standards

Leak test	ČSN EN 12266-1, Class A ISO 5208, Class A
Face to face length	ČSN EN 558
Flange connection	ČSN EN 6708 EN 1092-1,2
Working standard	EN 12334
Marking	EN19

Material performance

1	Body	Ductile iron 0.7040 (GGG40)
2	Disc	Stainless steel 1.4308 (CF8)
3	Stem	Stainless steel 1.4301 (AISI 304)
4	Seat	NBR (-10 °C / +100 °C) EPDM (-25 °C / 125 °C)
5	Spring	Stainless steel 1.4301 (AISI 304)

Basic dimensions

DN		L	PN10	PN16	a	b	r	kg
mm	inch		D	D				
50	2"	43	107		46	7,6	28,8	1,5
65	2"1/2	46	127		58	12,9	33	2,4
80	3"	64	142		66	14	40	3,8
100	4"	64	162		94	23	53,1	4,7
125	5"	70	192		120	32,8	65,7	6,3
150	6"	76	218		144,6	42,6	78,6	9,3
200	8"	89	273		198	67,4	104,4	15,2
250	10"	114	328		244	72	127	26
300	12"	114	378	388	283,9	100	148,3	40,7
350	14"	127	438	444	333	121	172,5	55
400	16"	140	489	495	381	136,8	197,5	75
450	18"	152	539	555	420	147,7	217,8	118
500	20"	152	594	617	475,3	179,5	244,6	173
600	24"	178	695	734	585	220	301,5	200
700	28"	229	810	804	690	250	352	260
800	32"	241	917	911	780	290	395	340
900	36"	241	1017	1011	850	332	445	520
1000	40"	300	1124	1128	940	332	483	760
1200	48"	350	1341	1342	1150	442	601	1200

Dimensions are mentioned in mm.

DUAL PLATE CHECK VALVES SERIES 700 HP



Basic properties

- max. operating pressure up to 24 bar
- high-performance dual plate check valve
- long-life and trouble-free maintenance
- compact design
- light weight thus easier handling and self supporting
- no external devices requirement
- same valve can be installed vertically or horizontally



Standards

Leak test

ČSN EN 12266-1, Class A *)
ISO 5208, Class A
API 598, Table 5

Face to face length

API 594

Flange connection

ASME B16.5

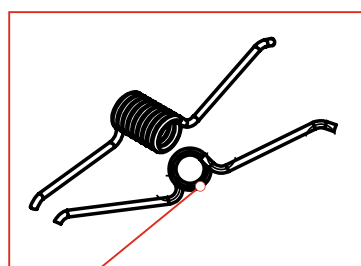
Working standard

ASME B16.34

Marking

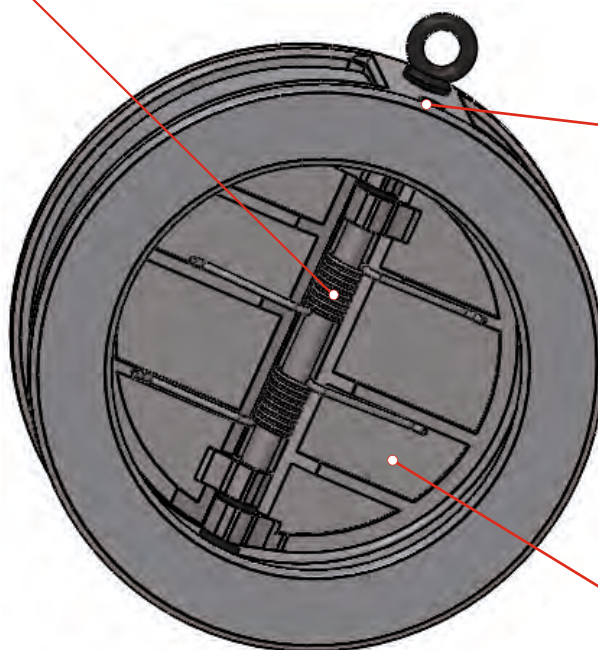
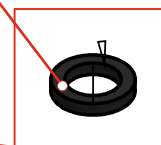
EN19

*) for tightness rate A, please consult with manufacturer

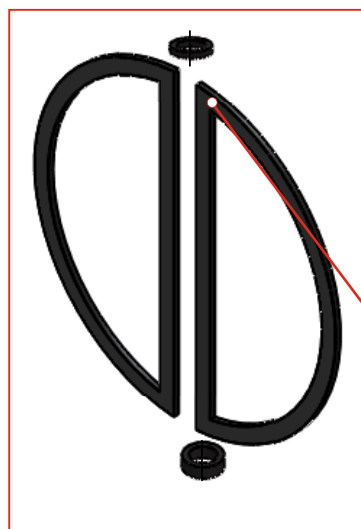


Spring loading on the plate assists valve closing ensure tight seal and minimize slamming.

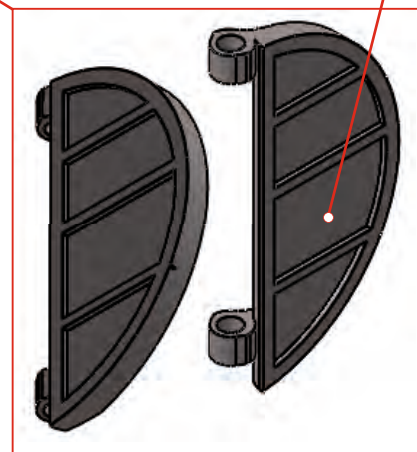
Pin retaining plugs fitted with graphite gasket for firesafe and leak free seal.



Dual plate design minimized valve cracking pressure and reduced valve pressure drops.



Dual plate design minimized valve cracking pressure and reduced valve pressure drops.

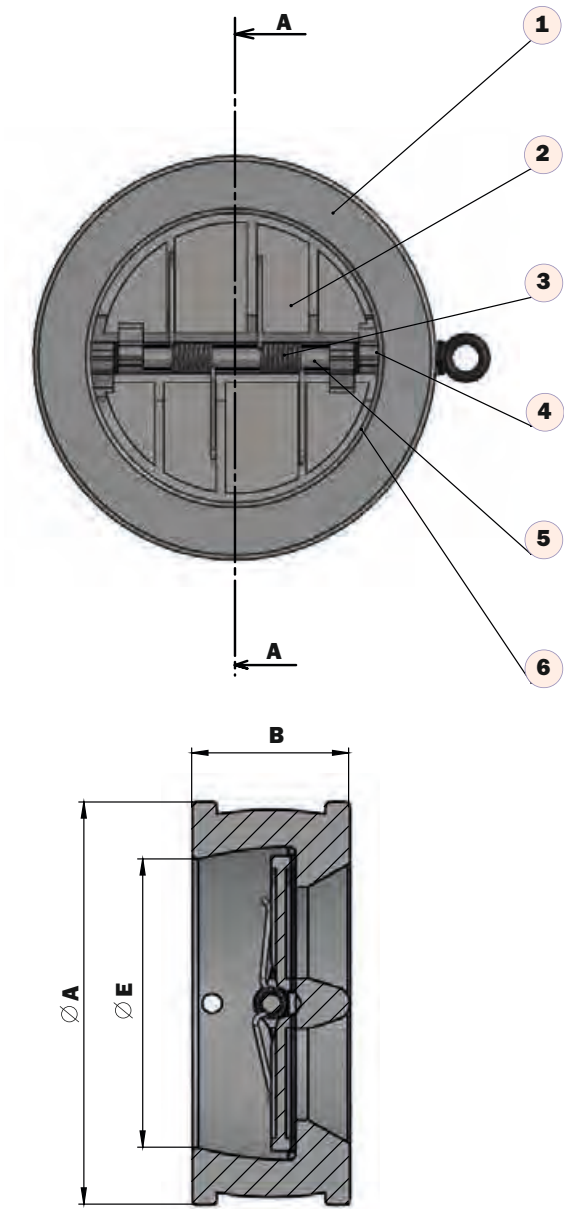


DUAL PLATE CHECK VALVES SERIES 700 HP

Czech Industrial Valve Manufacturer

Material performance

1	Body	ASTM B148 C95800
2	Disc	ASTM B148 C95800
3	Spring	Inconel X750
4	Bearing	ASTM B148 C95800
5	Stem	Monel 400
6	Seat	Lintegral



Basic dimensions

DN		A	B	E	Kg
mm	inch				
50	2"	104	60	40	2,5
65	2"1/2	123	66	60	3
80	3"	136	73	75	4
100	4"	174	73	90	6,5
125	5"	197	85	120	10
150	6"	222	98	145	12
200	8"	279	127	175	25
250	10"	339	146	240	32
300	12"	409	181	295	57
350	14"	450	184	350	85
400	16"	514	191	380	128
450	18"	549	203	425	131
500	20"	606	219	495	198
600	24"	717	222	590	260

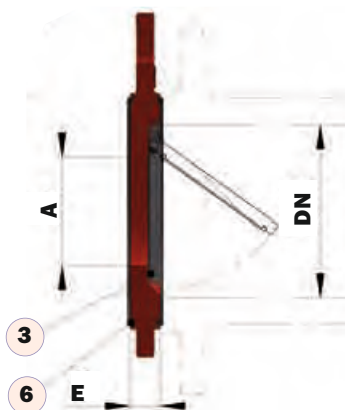
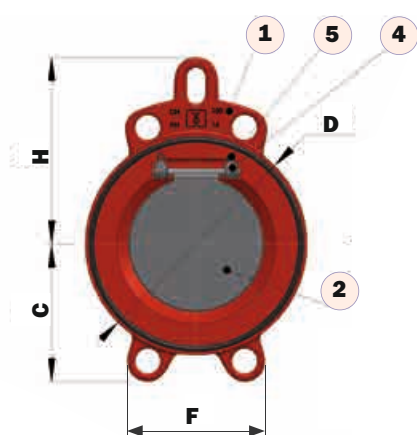
Dimensions are mentioned in mm.

SWING CHECK VALVES SERIES 800



Basic properties

- simple design and easy assembly
- direct installation between DIN flanges
- short construction length
- low weight, easy manipulation



Standards

Leak test	ČSN EN 12266-1, Class A ISO 5208, Class A
Flange connection	EN ISO 6708 EN 1092-1,2
Working standard	EN 12334
Marking	EN19

Material performance

1	Body	Ductile iron 0.7040 (GGG40)
2	Disc	Stainless steel 1.4308 (CF8)
3	Seat	NBR (-10°C / +100°C) - marking 814 EPDM (-25°C / 125°C) - marking 824
4	Holder	Stainless steel 1.4308 (CF8)
5	Bolt	Stainless steel 1.4301 (AISI 304)
6	Flange sealing	Elastomer

Special seats - Viton / Silicon - upon request.

Basic dimensions

DN		A	C	D	E	F	H	Kg
mm	inch							
50	2"	22	64	99	18	130	125	1,3
65	2 1/2"	38	72	118	20	142	135	1,8
80	3"	44	93	132	20	150	142	2,3
100	4"	70	107	158	20	112	157	2,6
125	5"	95	119	184	22	120	169	3,5
150	6"	114	133	212	22	137	185	4,5
200	8"	140	166	268	22	159	214	7
250	10"	185	198	319	29	141	246	12
300	12"	216	234	370	38	162	284	21,5

Dimensions are mentioned in mm.

CONTACT US

Czech Industrial Valve Manufacturer



Valid since: 08/2021

Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 224 087
sales@abovalve.com

Slovak Republic

ABO Slovakia, s.r.o.
Banská Bystrica
tel.: +421 947 902 862
sales.sk@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0)152 262 29501
sales.de@abovalve.com

Russia

ABO Armatura LLC
Smolensk
tel.: +7 (4812) 240 020
sales.ru@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 216 527 36 34
sales.tr@abovalve.com

China

ABO Flow Control
Shanghai
tel.: +86 136 01 522 831
sales.cn@abovalve.com

India

ABO Controls Pvt. Ltd.
Mumbai
tel.: +91 773 820 4779
sales.in@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
tel.: +65 9169 4562
sales.sg@abovalve.com

USA

ABO Controls LLC
Houston
tel.: +(1) 832.291.4929
sales.us@abovalve.com

United Arab Emirates

Sales representation
Abu Dhabi
tel.: +971 56 9207964
bharti@abovalve.com

Bahrain

Sales representation
Manama
tel.: +973 3444 9065
jimmichen@abovalve.com



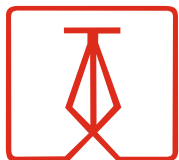
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ABO valve

we make processes work

Y-STRAINERS

Nominal diameter	DN15 - DN300
Working pressure	10 bar / 16 bar
Flange connection	PN10 / PN16
Working temperature	-10°C / +180°C
Working medium	Non-aggressive liquids
Main features	Trapping of mechanical impurities contained in transported medium The filter has a drain plug



SERIES FRI-16

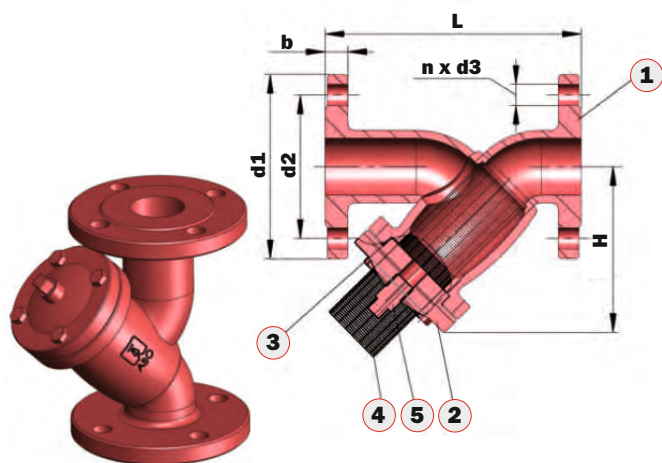
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Y-STRAINERS

Czech Industrial Valve Manufacturer

Basic properties

- Y-Strainer is used for filtration of mechanical impurities contained in transported media. Y-Strainer ensure proper functioning of valves or other devices. Working media can be non-aggressive liquids, vapours and gases.
- face to face acc. to DIN 3202-F1
- flange drilling acc. to EN1092:1997-PN10/16
- working pressure PN10, PN16
- coating color: RAL 5005



Basic dimensions

DN		L	H	d1	PN10		PN16		b	kg
mm	inch				d2	n * d3	d2	d3		
15	1/2"	130	42,5	95	65	4*14	65	4*14	14	3
20	3/4"	150	47,5	105	75	4*14	75	4*14	16	4
25	1"	160	52,5	115	85	4*14	85	4*14	16	5
32	1" 1/4	180	55	140	100	4*19	100	4*19	18	7
40	1" 1/2	200	115	150	110	4*19	110	4*19	19	8
50	2"	230	128,5	165	125	4*19	125	4*19	19	10
65	2" 1/2	290	155	185	145	4*19	145	4*19	19	14
80	3"	310	181	200	160	8*19	160	8*19	19	17
100	4"	350	205	220	180	8*19	180	8*19	19	23
125	5"	400	241	250	210	8*19	210	8*19	19	34
150	6"	480	284,5	285	240	8*23	240	8*23	19	45
200	8"	600	356	340	295	8*23	295	12*23	20	68
250	10"	730	416,5	405	350	12*23	355	12*28	22	112
300	12"	850	519	460	400	12*23	410	12*28	24,5	170

Dimensions are mentioned in mm.

Material performance

1	Body	Ductile iron 0.7040 (GGG40)
2	Bonnet	Ductile iron 0.7040 (GGG40)
3	Gasket	Stainless steel 1.4301 (AISI 304) + graphite
4	Drain plug	Stainless steel
5	Bolt	Carbon steel

Strainer

Strainer	Stainless steel 1.4301 (AISI 304)
Perforation diam.	DN50-DN100: 0,5-0,7 / DN200-DN300: 1,6
Sheet thickness	DN50-DN100: 0,5 / DN200-DN300: 0,8

Dimensions are mentioned in mm.

Mounting

Y-Strainer can be mounted in any position under the condition that the media flows in the same direction as it is indicated by the arrow placed on the filter body and the cover faces the bottom direction.

CONTACT US

Industrial Valve Manufacturer



Czech Republic

ABO valve, s.r.o.
Dalimilova 285/54
783 35 Olomouc
tel.: +420 585 224 087
sales.sk@abovalve.com

Slovak Republic

ABO Slovakia, s.r.o.
Banská Bystrica
tel.: +421 947 902 862
sales.sk@abovalve.com

Germany

ABO Armaturen GmbH
Essen
tel.: +49 (0)152 262 29501
sales.de@abovalve.com

USA

ABO Controls LLC
Houston
tel.: +(1) 832.291.4929
sales.us@abovalve.com

Ukraine

ABO Ukraine LLC
Dnipro
tel.: +38 056 733 95 70
sales.ua@abovalve.com

Turkey

ABO Armaturen LTD STI
Istanbul
tel.: +90 216 527 36 34
sales.tr@abovalve.com

Russia

ABO Armatura LLC
Smolensk
tel.: +7 (4812) 240 020
sales.ru@abovalve.com

India

ABO Controls Pvt. Ltd.
Mumbai
tel.: +91 99 2002 9994
sales.in@abovalve.com

Singapore

ABO Valve Pte. Ltd.
Singapore
tel.: +65 9169 4562
sales.sg@abovalve.com

China

ABO Flow Control
Shanghai
tel.: +86 136 01 522 831
sales.cn@abovalve.com

United Arab Emirates

Sales representation
Abu Dhabi
tel.: +971 56 9207964
bharti@abovalve.com

Bahrain

Sales representation
Manama
tel.: +973 3444 9065
jimmichen@abovalve.com



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