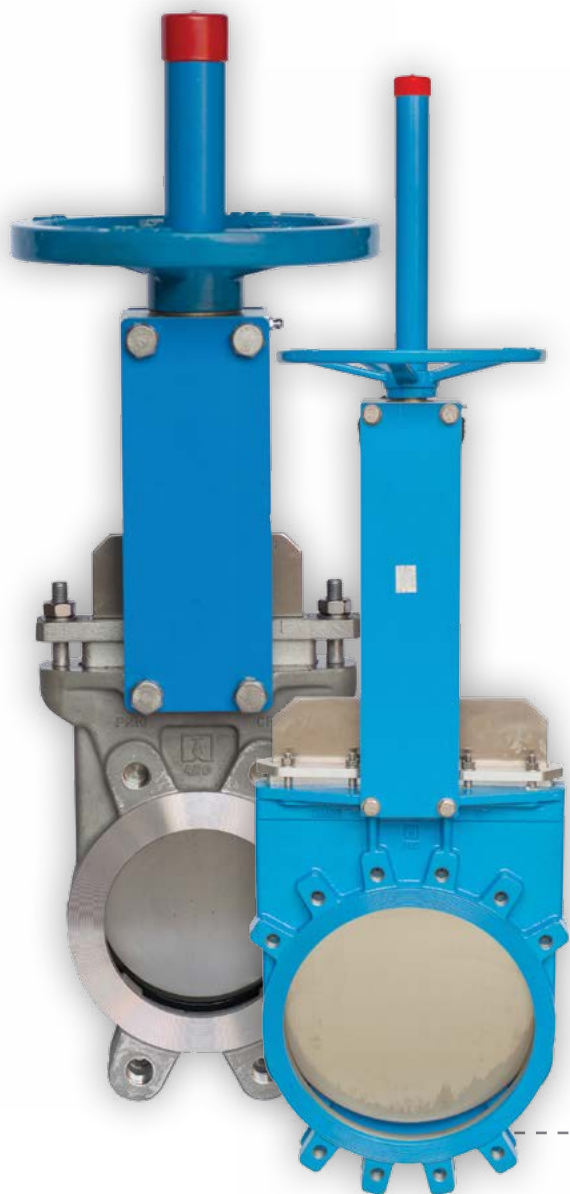
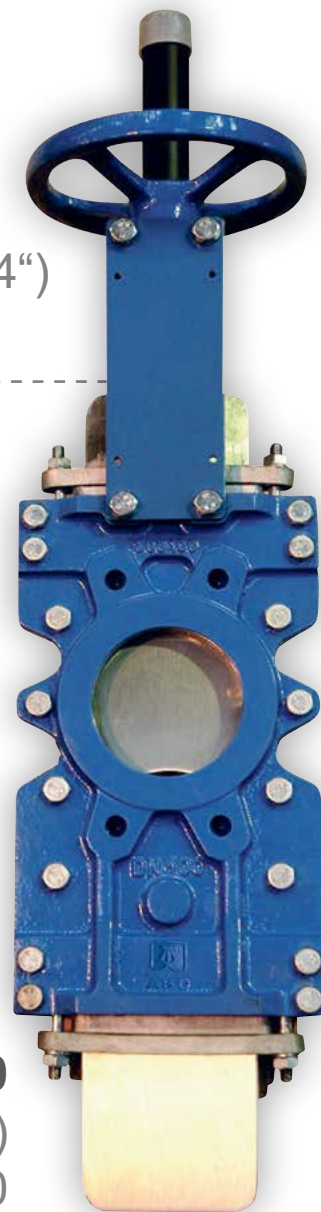


ABO valve



SERIES ABO 300
DN 50 - DN 600 (2" - 24")
PN 10



SERIES ABO 200
DN 50 - DN 1200 (2" - 48")
PN 10

CE

KNIFE GATE VALVES SERIES 200 AND 300

WWW.ABOVALVE.COM

GENERAL INFORMATION

INTRODUCTION TO SERIES 200

ABO Series 200 knife gate valves 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.). ABO knife gate valves, 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.

CHARACTERISTICS – SERIES 200

- Unidirectional wafer type valve with rising stem and monobloc 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
- Cast body of one integral piece with internal guides to support the knife
- Seating wedges help the knife to close against the body and seat
- Directional arrow in the body points the correct mounting position
- High flow rates with low pressure drop
- 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
- Interchangeable drives (hand wheel, electric actuator, pneumatic actuator)

APPLICATIONS

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
- Dry Bulk Conveying
- Mining
- Chemical Treatment
- Water Treatment
- Pulp & Paper

STANDARDS

Leak Test:

- EN 12266-1 leakage Class A for soft seated version
- ISO 5208 Class A for soft seated version
- API 598 table 5 for soft seated version

Connection between flanges:

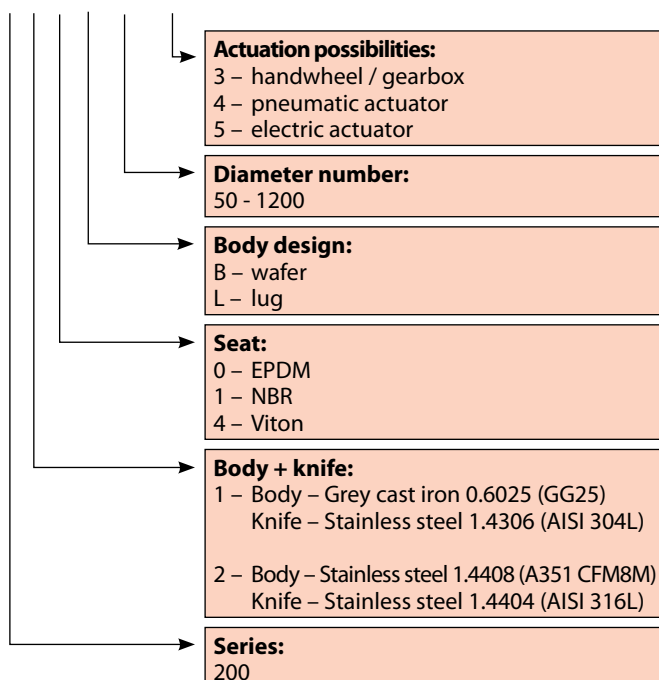
- EN 1092-1 PN10
- DIN 2632
- DIN 2566

Marking

- EN 19

MARKING OF VALVES

2 1 0 B 100 5



BODY DESIGN

Wafer (DN 50 – 1200)

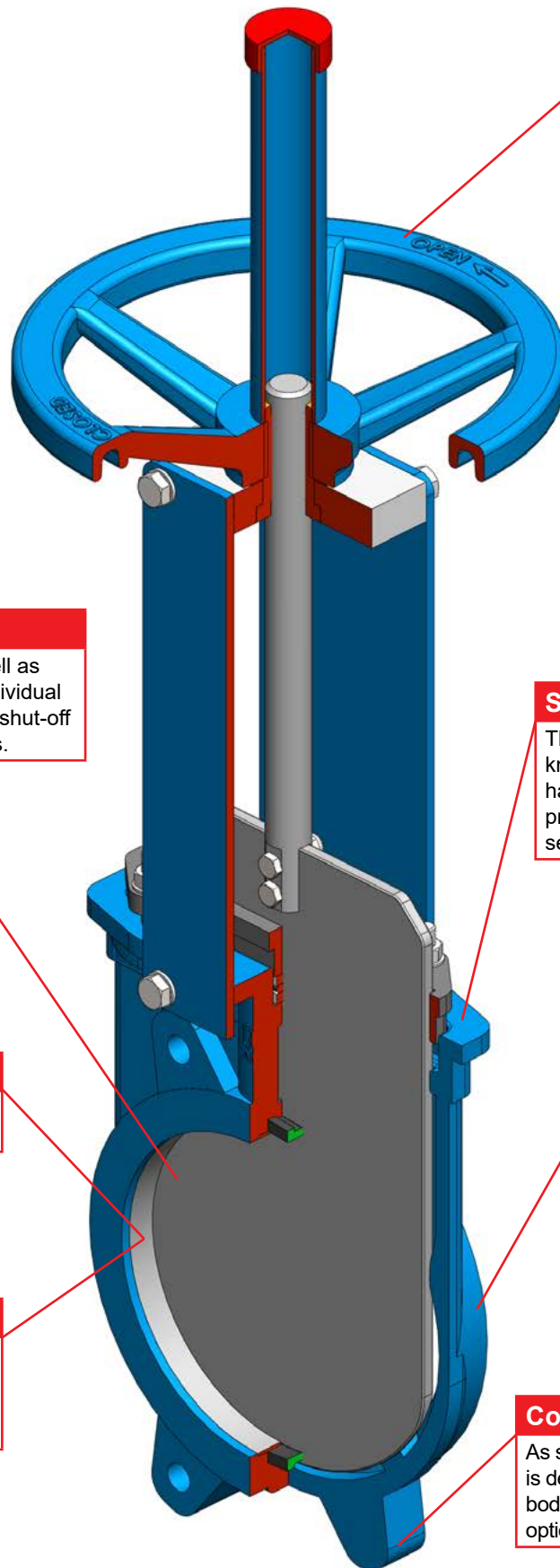
Lug (DN 50 – 1200)



PRODUCT QUALITY

- The ABO Series 200 knife gate valves meet the safety requirements of the pressure Equipments Directive 2014/68/EC (PED) appendix 1 for fluids of the groups 1 and 2
- ABO production facilities are certified in accordance to ISO 9001 (14001, 18001) quality system
- All ABO valves pass pressure tests to 110 % of rated pressure to ensure bubble tight shutoff

DESIGN BENEFITS



Interchangeable drives

Manual actuation is conducted through a handwheel. Standardized top flange enables mounting of a large selection of pneumatic and electric actuators.

Perfect shut-off

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.

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

Seat option

Multiple seat options available. Please refer to pages 4 and 5.

Low pressure drops

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

Simple seat replacement

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

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.

MATERIALS & COATING OPTIONS

ABO LINERS

EPDM

ABO EPDM liner 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 liner is suitable for applications with temperatures ranging from -10°C to 80°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 liner 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.

EXTERNAL COATING OPTIONS

HIGH QUALITY 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 11 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.

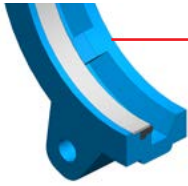


Series 200
clean water
treatment application



Series 200
sewage water
treatment application

SERIES 200 - SEAT OPTIONS

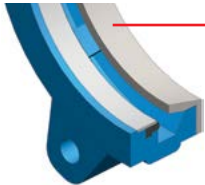


1. Soft seated

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

2. Metal seated

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 service.

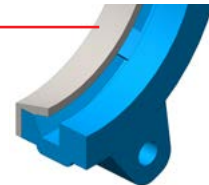


3. Soft seated with deflecting cone 15°

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 seated 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.

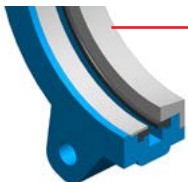
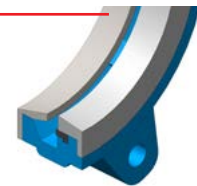


5. Soft seated with scraper 8°

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. Typical applications where this solution can be applied is pulp with solids and staples, or meat factories with bone particles.

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 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.

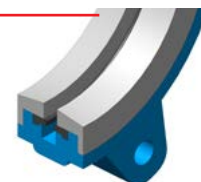


7. Bidirectional

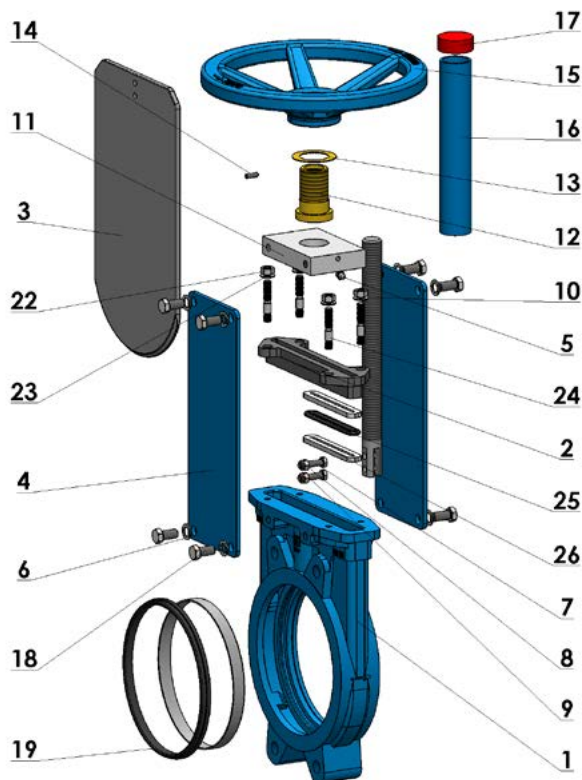
Standard soft seat bidirectional design with a flat fixing ring and a scraper. This solution is suitable for water and sewage service whereby a reversed flow of the media can occur.

8. Bidirectional reinforced

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.



MATERIALS & TECHNICAL INFORMATION



ITEM	NAME	MATERIAL 1	MATERIAL 2
1	Body	Cast Iron EN 0.6025 (GG25)	Stainless steel 1.4408 (CF8M)
2	Packing Gland	Aluminium DIN 3.2581	Stainless steel 1.4408 (CF8M)
3	Gate	Steel EN 1.4306 (AISI 304L)	EN 1.4404 (AISI 316L)
4	Support Plate	Steel EN 1.0036	Steel EN 1.0036
5	Greaser	Steel EN Steel 1.0553 + Zn	Steel EN Steel 1.0553 + Zn
6	Grower Washer	Stainless steel A4	Stainless steel A4
7	Bolt	Stainless steel A4	Stainless steel A4
8	Bolt	Stainless steel A4	Stainless steel A4
9	Nut	Stainless steel A4	Stainless steel A4
10	Stem	Steel EN 1.4305 (AISI 303)	Steel EN 1.4305 (AISI 303)
11	Support Bridge	Steel EN 1.0036	Steel EN 1.0036
12	Stem drive nut	Brass EN 2.0402	Brass EN 2.0402
13	Washer	Brass EN 2.0402	Brass EN 2.0402
14	Stop screw	Stainless steel A4	Stainless steel A4
15	Handwheel	Cast Iron EN 0.6025 (GG25)	Cast Iron EN 0.6025 (GG25)
16	Tube	Steel EN 1.0036	Steel EN 1.0036
17	Cover	Plastic	Plastic
18	Sealing ring	EN 1.4404 (AISI 316L)	EN 1.4404 (AISI 316L)
19	Seat	EPDM	EPDM
20	Deflecting cone 15°	EN 1.4401 (AISI 316)	EN 1.4401 (AISI 316)
21	Reinforced ring 8°	EN 1.4401 (AISI 316)	EN 1.4401 (AISI 316)
22	Nut	Stainless steel A4	Stainless steel A4
23	Washer	Stainless steel A4	Stainless steel A4
24	Studs	Stainless steel A4	Stainless steel A4
25	Packing o-ring	EPDM	EPDM
26	Packing	SYNT + PTFE	SYNT + PTFE

Other materials upon request.

INSTALLATION BETWEEN FLANGES (DN 50-1200)

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600	700	800	900	1000	1200
ISO PN 6	*	*	*	*	*	*	*	X	X	X	X	X	X	X	X	X	X	X	X
ISO PN 10	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ISO PN 16	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CLASS 150	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

• standard * upon request x not suitable

TECHNICAL PERFORMANCE

Working Pressure

DN 50 – 250: 10 bar
 DN 300- 400: 6 bar
 DN 500 – 600: 4 bar
 DN 700 – 1200: 2 bar

Working temperature

EPDM temperature range: -25 +125°C
 NBR temperature range: -10 +80°C
 Viton temperature range: -25 +150°C

TORQUES (NM) – FOR ELECTRIC ACTUATOR

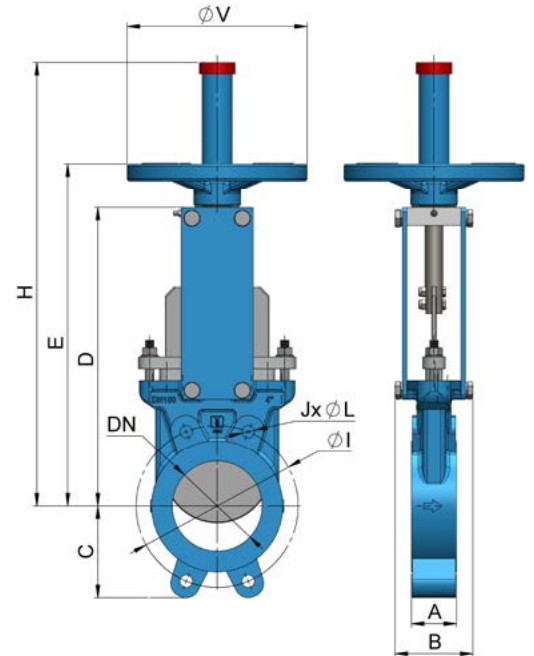
DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
10 bar	10	12	15	20	25	30	35	45	60	70	90	100	110	170

Note: Torque data does NOT include safety factors. Please consult with ABO engineers your concrete application for proper actuator selection.

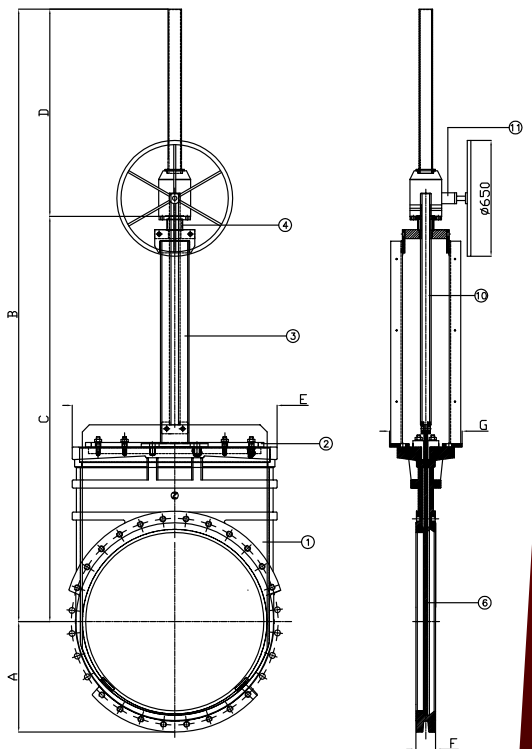
TECHNICAL CHARACTERISTICS

DIMENSIONS (mm)

DN	NPS	A	B	C	D	E	H	I	J	L	V	WEIGHT (kg)
												VERSION B
50	2"	40	86	60	241	290	370	125	4	M16	200	8
65	2 1/2"	40	86	68	267	316	400	145	4	M16	200	9
80	3"	50	86	90	293	342	454	160	8	M16	200	10,5
100	4"	50	86	102	332	381	494	180	8	M16	200	11,5
125	5"	50	96	119	369	428	555	210	8	M16	250	15
150	6"	60	96	130	419	478	626	240	8	M20	250	20
200	8"	60	116	160	519	593	793	295	8	M20	305	32
250	10"	70	116	202	636	710	937	350	12	M20	305	45
300	12"	70	116	224	740	814	1120	400	12	M20	305	58
350	14"	96	193	261	912	987	1336	460	16	M20	410	108
400	16"	100	193	295	984	1059	1470	515	16	M24	410	130
450	18"	106	193	318	1055	1130	1640	565	20	M24	510	160
500	20"	110	193	345	1188	1263	1780	620	20	M24	510	193
600	24"	110	290	400	1378	1453	2070	725	20	M27	510	283



DN	INCHES	A	B	C	D	E	F	G	ØK	P	
										PN 10	No. HOLES
700	28"	460	2501	1646	855	838	110	408	840	24	M27
800	32"	503	2788	1833	955	970	110	408	950	24	M30
900	36"	586	3149	2094	1055	1040	110	408	1050	28	M30
1000	40"	620	3439	2284	1155	1150	110	408	1160	28	M33
1200	48"	755	4159	2804	1355	1450	150	460	1380	32	M33



Series 200
Transportation of bulk solids



Series 200
Mixing chamber installation

GENERAL INFORMATION - SERIES 300

INTRODUCTION TO SERIES 300

ABO Series 300 knife gate valves 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).

CHARACTERISTICS – SERIES 300

- Bidirectional wafer type valve
- Knife goes through the seal area
- Rising stem
- Two-piece body
- 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
- Interchangeable drives (hand wheel, electric actuator, pneumatic actuator)

APPLICATIONS

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

- Mining
- Chemical treatment
- Slurry handling
- Water treatment
- Pulp & Paper
- Solids handling

STANDARDS

Leak Test:

- EN 12266-1 leakage Class A
- ISO 5208 Class A for soft seated version
- API 598 table 5

Connection Between Flanges:

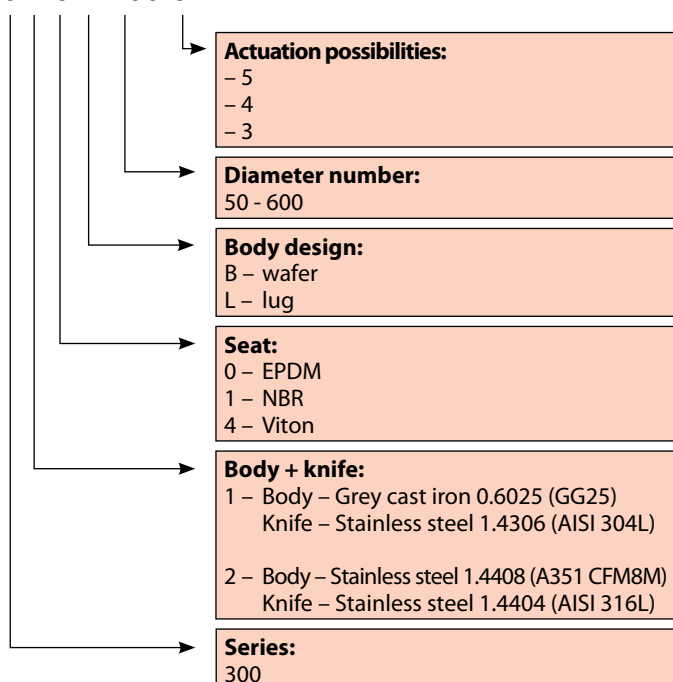
- EN 1092

Marking

- EN 19

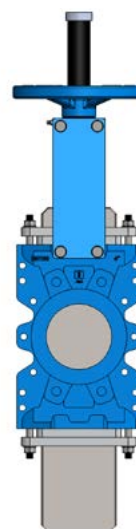
MARKING OF VALVES

3 1 0 B 100 5



BODY DESIGN

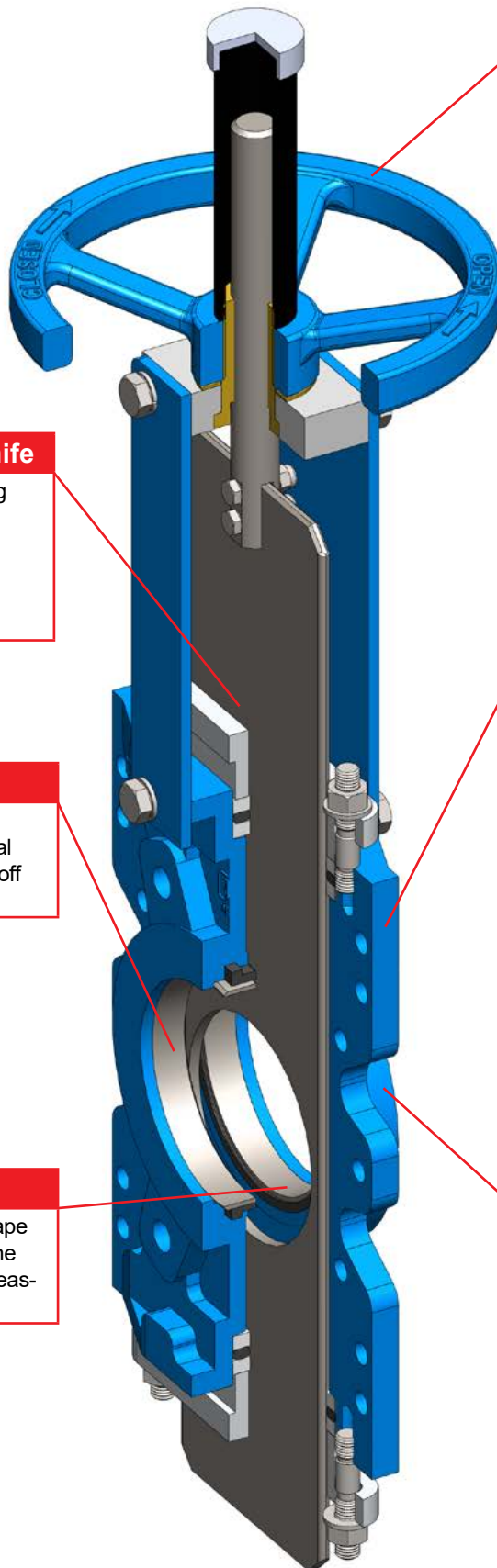
Wafer (DN 50 – 600)



PRODUCT QUALITY

- The ABO Series 300 knife gate valves meet the safety requirements of the pressure Equipments Directive 2014/68/EC (PED) appendix 1 for fluids of the groups 1 and 2

DESIGN BENEFITS



Interchangeable drives

Manual actuation is conducted through a handwheel. Standardized top flange enables mounting of a large selection of pneumatic and electric actuators.

Dual sealing around the knife

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 counterflangers.

Two-piece body

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

Bi-directional 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.

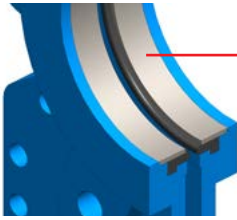
Connection between flanges

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

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.

MODELS - SEAT OPTIONS

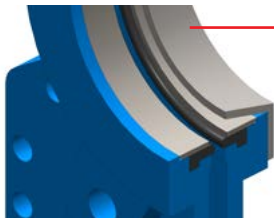


1. Soft seated

Standard soft seat design (EPDM, NBR, PTFE) cutting, through going suitable for water service, and for liquids with maximum pulp concentration of 5%.

2. Metal seated

Metal/Metal seated cutting, through going design of knife gate valve, is typically suitable for applications handling dense paper pulp. Metal/Metal seated knife gate valves are not suitable for water or liquids applications. In fully open position, the valve is a perfect continuation of the pipe as it eliminates dead spaces.

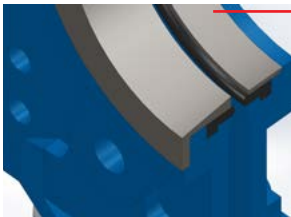


3. Soft seated with deflecting cone 15°

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

4. Metal seated with deflecting cone 15°

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

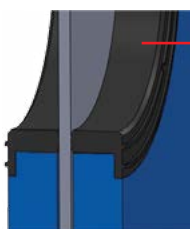
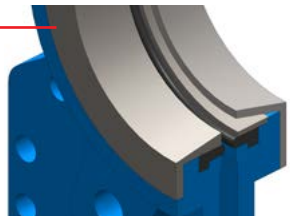


5. Soft seated with scraper 8°

Soft seat bidirectional design with reinforced sealing ring 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. Typically, this solution is used for pulp with solids/staples in dumping outlet, dump chest drains, and heavy rejects.

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

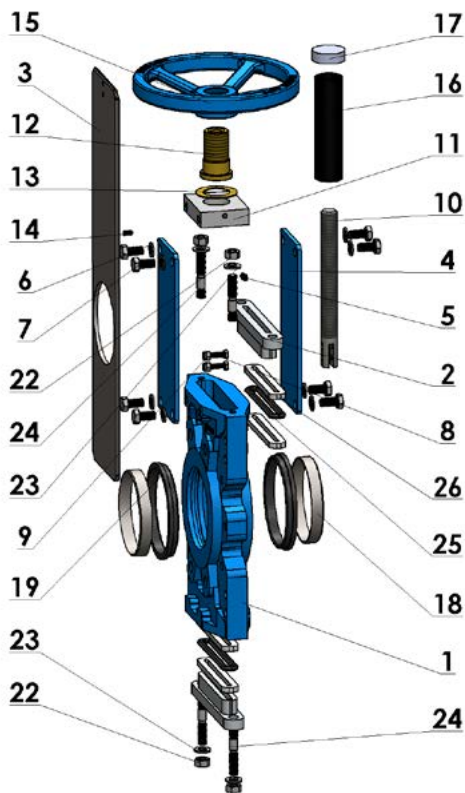
Soft seat design encompasses both, a reinforced sealing ring of 8° and a deflecting cone of 15° as accessory. This solution gives more protection to internals parts thanks to the cone (restriction of bore), and is suitable in severe abrasive service such as mining service whereby water with slurries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



7. 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/internals can occur. Frequently used in mining industry for medias with abrasive fluids.

MATERIAL & TECHNICAL INFORMATION



ITEM	NAME	Material 1	Material 2
1	Body	Cast Iron 0.6025 (GG25)	Stainless steel 1.4408 (CF8M)
2	Packing Gland	Aluminium DIN 3.2581	Stainless steel 1.4408 (CF8M)
3	Gate	Stainless steel 1.4306 (AISI 304L)	Stainless steel 1.4404 (AISI 316L)
4	Support Plate	Steel 1.0036	Steel 1.0036
5	Greaser	Steel 1.0553 + Zn	Steel 1.0553 + Zn
6	Grower Washer	Stainless steel A2	Stainless steel A2
7	Bolt	Stainless steel A2	Stainless steel A2
8	Bolt	Stainless steel A2	Stainless steel A2
9	Nut	Stainless steel A2	Stainless steel A2
10	Stem	Steel 1.4305 (AISI 303)	Steel 1.4305 (AISI 303)
11	Support Bridge	Steel 1.0036	Steel 1.0036
12	Stem drive nut	Brass 2.0402	Brass 2.0402
13	Washer	Brass 2.0402	Brass 2.0402
14	Stop screw	Steel EN 1.4301 (AISI 304)	Steel EN 1.4301 (AISI 304)
15	Handwheel	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 316L)	Stainless steel 1.4404 (AISI 316L)
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)
22	Nut	Stainless steel A2	Stainless steel A2
23	Washer	Stainless steel A2	Stainless steel A2
24	Studs	Stainless steel A2	Stainless steel A2
25	Packing o-ring	EPDM	EPDM
26	Packing gland	SYNT + PTFE	SYNT + PTFE

Other materials on request.

COATING OPTIONS

- Blue epoxy painting RAL 5015 – 80 µm
- Based on customers' request, higher degree of coating can be provided (refer to page 4)

INSTALLATION BETWEEN FLANGES (DN 50-600)

DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
ISO PN 6	*	*	*	*	*	*	*	X	X	X	X	X	X	X
ISO PN 10	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ISO PN 16	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CLASS 150	*	*	*	*	*	*	*	*	*	*	*	*	*	*

• standard * upon request x not suitable

TECHNICAL PERFORMANCES

Working Pressure

DN 50 – 250: 10 bar

DN 300- 400: 6 bar

DN 500 – 600: 4 bar

Working temperature

EPDM temperature range: -25 +125°C

NBR temperature range: -10 +80°C

Viton temperature range: -25 +150°C

TORQUES (NM) – FOR ELECTRIC ACTUATOR

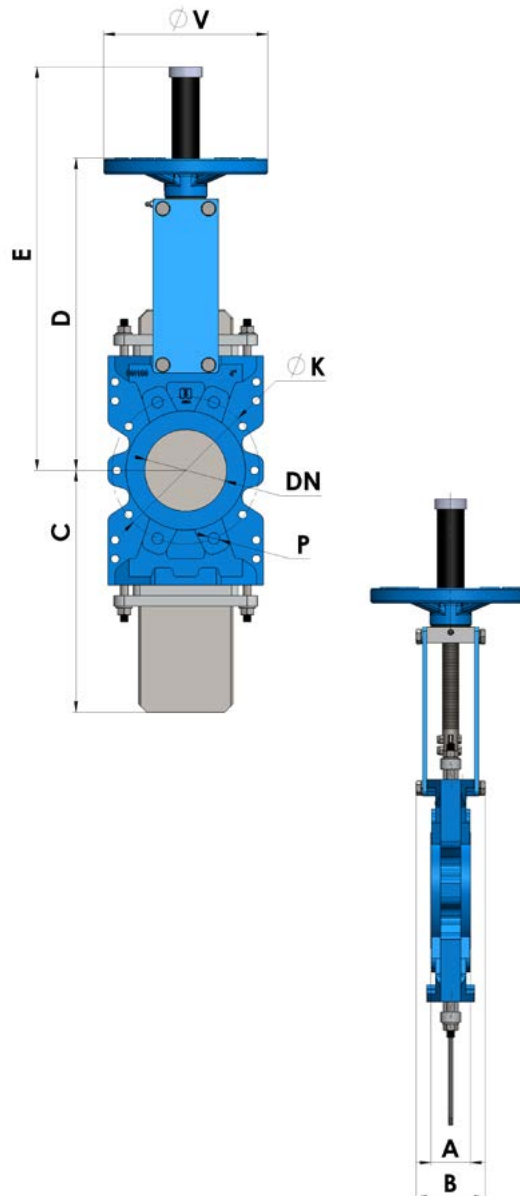
DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
10 bar	10	12	15	20	25	30	35	45	60	70	90	100	110	170

TECHNICAL CHARACTERISTICS

DN	INCH	A	B	C	D	E	Ø V
50	2"	40	90	220	284	425	200
65	2" 1/2	40	90	260	308	450	200
80	3"	50	90	303	334	480	200
100	4"	50	90	360	374	520	200
125	5"	50	100	428	413	600	250
150	6"	60	100	493	465	650	250
200	8"	60	120	632	582	820	300
250	10"	70	120	767	682	1020	300
300	12"	70	120	897	782	1120	300
350	14"	96	192	1042	898	1380	400
400	16"	100	192	1167	1003	1490	400
450	18"	106	192	1297	1093	1580	500
500	20"	110	192	1455	1207	1690	500
600	24"	110	290	1705	1410	2030	500

DN	INCHES	Ø K		P		
		PN 10	ANSI 150	No.Holes	PN 10	ANSI 150
50	2"	125	120,6	4	M16	W 5/8"
65	2" 1/2	145	139,7	4	M16	W 5/8"
80	3"	160	152,4	8	M16	W 5/8"
100	4"	180	190,5	8	M16	W 5/8"
125	5"	210	215,9	8	M16	W 3/4"
150	6"	240	241,3	8	M20	W 3/4"
200	8"	295	298,4	8	M20	W 3/4"
250	10"	350	361,9	12	M20	W 7/8"
300	12"	400	431,8	12	M20	W 7/8"
350	14"	460	476,2	16	M20	W 1"
400	16"	515	539,7	16	M24	W 1"
450	18"	565	577,8	20	M24	W 1 1/8"
500	20"	620	635	20	M24	W 1 1/8"
600	24"	725	719,3	20	M27	W 1 1/4"

DIMENSIONS (mm)



EUROPEAN UNION
European Regional Development Fund
Operational Programme Enterprise
and Innovations for Competitiveness

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Data subject to change.

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