

Product brochure  
INFINITY resilient seated gate valve



**BELGICAST** RANGE

# RESILIENT SEATED GATE VALVES

## INFINITY

The latest in TALIS's proven range of valves, the INFINITY represents a new generation of resilient seated gate valves [DN40-700]. As well as boasting of the latest technological advances and unique technical features, INFINITY has been 100% designed and manufactured in Europe using high quality materials and the latest manufacturing technologies, to guarantee, to our valuable customers, an extraordinary lifetime, outstanding operability and unique safety features.

### FUNCTIONS

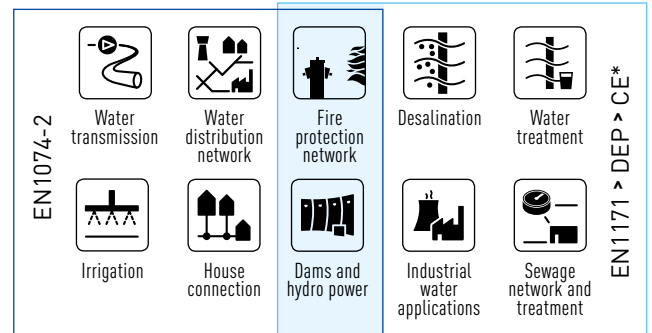
Isolation resilient seated gate valves, with wedge fully encapsulated in elastomer, for ON/OFF duty, and operation by means of handwheel or T-key.



### ADVANTAGES

- L **Low torque:** INFINITY and its new wedge and stem technology ensures smooth functionality with outstanding low torque values.
- L **Longer service life:** new guiding system for the wedge with male composite sliding skate in order to easily achieve the 2500 cycles endurance test required by European standards.
- L **Corrosion resistance:** high quality materials. Wide range of coatings available. Threadless bonnet up to DN300 that allows continuous coating.
- L **Low head loss:** clear way and straight bore design from DN40 up to DN600 in order to allow a free path without restriction of the fluid.
- L **Bubble tight shut off:** new wedge design with increased thickness of the elastomer at the sealing areas to improve tightness.

### APPLICATIONS



\* See page 22 for gate valves which are subjected to CE marking according to the European "Pressure Equipment Directive" 2014/68/EU (PED).

### USES

- L **On networks, gate valves can be:**
  - Used both as part of new works and renovations.
  - Installed outside, buried in the ground, in valves' room, or in buildings.
- L **The use of gate valves allows user:**
  - To balance the distribution of water at all points in the mesh network (in open or closed position).
  - To isolate control valves, fire hydrants, air valves, pumps, etc. for their maintenance.
  - To perform maintenance on the network (isolation of part of the network).
  - To stop the flow in the case of failure or pipe incident.
  - To drain water tanks or sections of the water network.

### F4/F5



PAGE: 10

#### TECHNICAL DATA

**DN range:** 40-300mm  
**PN/PFA:** 16bars

#### DESCRIPTION

Gate valves with flange connection. Available with Standard body length according to EN 558 Series 14 or Series 15. To be operated by means of Handwheel or T-Key.

### F4/F5



PAGE: 12

#### TECHNICAL DATA

**DN range:** 350-700mm  
**PN/PFA:** 16bars

#### DESCRIPTION

Gate valves with flange connection. Available with Standard body length according to EN 558 Series 14 or Series 15. To be operated by means of Handwheel or T-Key.

### BS



PAGE: 14

#### TECHNICAL DATA

**DN range:** 50-300mm  
**PN/PFA:** 16bars

#### DESCRIPTION

Gate valves with flange connection. Comply to BS5163 standard with length according to BS EN 558 Series 3. To be operated by means of Handwheel or T-Key.

### INFINI-3



PAGE: 16

#### TECHNICAL DATA

**DN range:** 50-300mm  
**PN/PFA:** 16bars

#### DESCRIPTION

Combination of 3 Gate valves with flange connection. Compact designs to use where space is at premium, for example in urban applications. Different combinations of diameters can be available. To be operated by means of Handwheel or T-Key.

### INFINI-4



PAGE: 16

#### TECHNICAL DATA

**DN range:** 50-300mm  
**PN/PFA:** 16bars

#### DESCRIPTION

Combination of 4 Gate valves with flange connection. Compact designs to use where space is at premium, for example in urban applications. Different combinations of diameters can be available. To be operated by means of Handwheel or T-Key.

### PE ENDS



PAGE: 18

#### TECHNICAL DATA

**DN range:** 40/50 - 300/315 mm  
**PN/PFA:** 10 or 16bars

#### DESCRIPTION

Gate valves with PE ends for assembly on PE pipes with electrofusion couplings or by butt fusion welding process. Gives continuity to the installation. To be operated by means of Handwheel or T-Key.

### PREPARED FOR ELECTRIC ACTUATOR



SEE OTHER DEDICATED BROCHURE

#### TECHNICAL DATA

**DN range:** 40-300mm  
**PN/PFA:** 16bars

#### DESCRIPTION

Gate valves with flange connection. Available with Standard body length according to EN 558 Series 14 or Series 15. To be operated by means of Electric Actuator.

### PREPARED FOR ELECTRIC ACTUATOR



SEE OTHER DEDICATED BROCHURE

#### TECHNICAL DATA

**DN range:** 350-700mm  
**PN/PFA:** 16bars

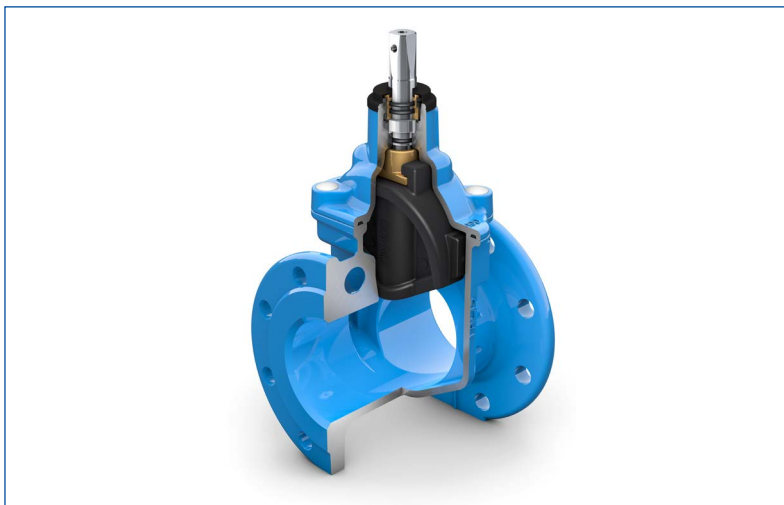
#### DESCRIPTION

Gate valves with flange connection. Available with Standard body length according to EN 558 Series 14 or Series 15. To be operated by means of Electric Actuator.

## CHARACTERISTICS

- └ Made of **high quality materials** according to the relevant standards.
- └ **Clear way and straight bore**, so the flow is optimum with minimum head losses.
- └ **Replaceable packing** under pressure.
- └ **Bayonet** stuffing nut with three O-rings to guarantee the tightness throughout the stem (up to DN300).
- └ **Patented\* three locking tab for bayonet system** up to DN300 to avoid self dismantling.
- └ **Innovative dust guard** made of three O-rings integrated into one single piece that protects the valve from floods, salt spray and dust, and ensures full isolation (up to DN300).
- └ Wedge **fully encapsulated** in EPDM for a better resistance to corrosion.
- └ Integral male composite sliding skate as guiding system for **easy operation** under maximum differential pressure.
- └ Body bonnet bolts are protected with hot melt glue.
- └ **Rounded surfaces** of the body ensure a uniform coating and protection of the highest quality.
- └ **Excellent corrosion resistance** thanks to the fully coated bonnet (not threads) and the epoxy powder coating.
- └ Stem in stainless steel.
- └ **Maintenance free.**
- └ Designed to be operated by handwheel or T-key.
- └ **Approved** by major organizations worldwide for drinking water.
- └ In conformity with **European standard** EN 1074-2 (annex A) and EN 1171 (category 3).
- └ **100% tested** acc. to EN 12166-1 standard.

(\*) List of the countries on request.



## APPROVALS

- └ DVGW, NF, ACS, KIWA, OVGW, WRAS, VdS, ...

## OPTIONS/VARIANTS

- └ GSK approved, epoxy 300 microns mini, others ...
- └ Full enamel coating.
- └ Electric actuator, Pneumatic/ Hydraulic cylinder, others ...
- └ Visual mechanical position indicator with optional electrical limit switch.
- └ Configuration for sea water, sewage water and hot water.
- └ Valve complying to BS5163 type B.
- └ Wedge fully encapsulated in NBR or hot potable water approved EPDM (up to 70°C).
- └ Bolts in stainless steel A4.
- └ Accessories (handwheel, captop, stem extension, others ...).

## TECHNICAL DATA

- └ **Nominal Diameter (DN):** DN40 to DN700.
- └ **Body length to EN558:** Series 14: short body (F4). Series 15: long body (F5). Series 3: BS.
- └ **Closing direction:** Clockwise closing (CC). Anticlockwise closing (ACC).
- └ **Nominal Pressure (PN):** PN16.
- └ **Flange Drilling:** PN10 or PN16 according to EN 1092-2.
- └ **Medium Temperature (EN1074-2):**
  - Epoxy coating: -10 to 50°C
  - Enamel coating: -10 to 50°C (up to 70°C under request, in the case of EN1171).
- └ **Water tightness:** Rate A according to EN 12266-1.
- └ **Maximum Velocity:**

PFA/PS	EN1074-2	EN1171
10 bar	3 m/s	5 m/s
16 bar	4 m/s	5 m/s

## MATERIAL GUIDANCE

### STUFFING NUT IN ALUMINIUM- BRONZE CW307G

#### OTHERS VARIANTS\*:

- └ Brass CW617N

### BOLTS IN STEEL 12.9 + GEOMET 500B COATING

#### OTHERS VARIANTS\*:

- └ Stainless Steel A4

### STEM IN STAINLESS STEEL AISI 420/1.4021

#### OTHERS VARIANTS\*:

- └ AISI 316 L /1.4404
- └ AISI 431/1.4057

### BONNET IN DUCTILE IRON EN-GJS-500-7

### WEDGE NUT IN BRASS CW617N

#### OTHERS VARIANTS\*:

- └ Aluminium-bronze CW307G
- └ DZR Brass CW602N

### WEDGE IN DUCTILE IRON EN-GJS-500-7 + EPDM ELASTOMER

#### OTHERS VARIANTS\* FOR ELASTOMER:

- └ NBR
- └ EPDM High Temperature

### EPOXY COATING IN STANDARD

#### OTHERS VARIANTS\*:

- └ GSK epoxy
- └ Enamel
- └ Poliester
- └ Rilsan
- └ High Temperature coating

### BODY IN DUCTILE IRON EN-GJS-500-7

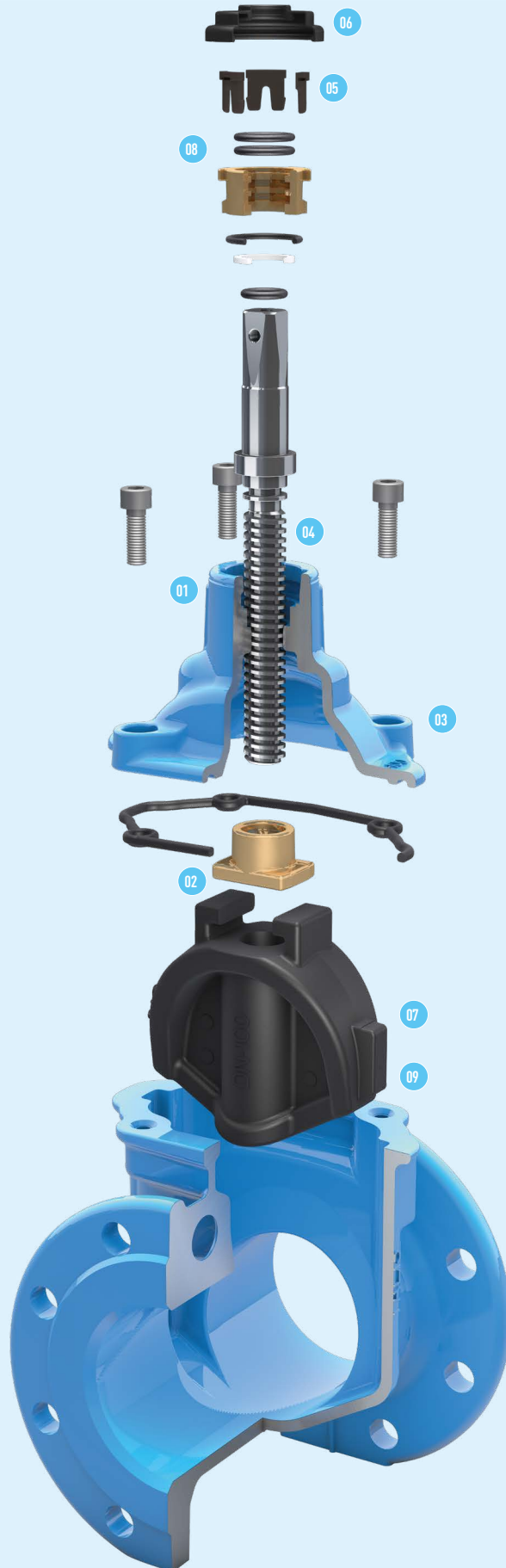


(\*) :These informations are only dedicated to show the different types of material for our Infinity gate valves. Variants solution can't be chosen individually, but are part of non dissociable offer on our products. For more details about our product offer, please contact us.

## TECHNICAL ADVANTAGES



FOR ENAMELED VERSION, THE VALVE INTEGRATES AN EDGE PROTECTION (1) PLACED ALL AROUND BETWEEN THE BODY AND THE BONNET.



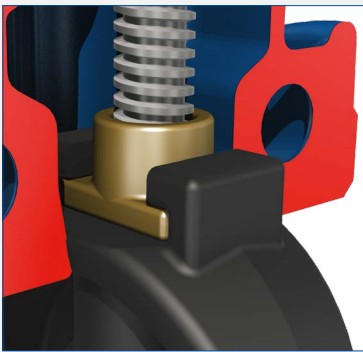
## TECHNICAL ADVANTAGES



**01:** Due to our PATENTED\* three locking tab bayonet system, The INFINITY gate valve has no threads, enabling a **continuous coating** and therefore avoiding corrosion problems.

Moreover, it is easy to remove the stuffing nut, with the valve under pressure and fully open, in order to change the O-ring.

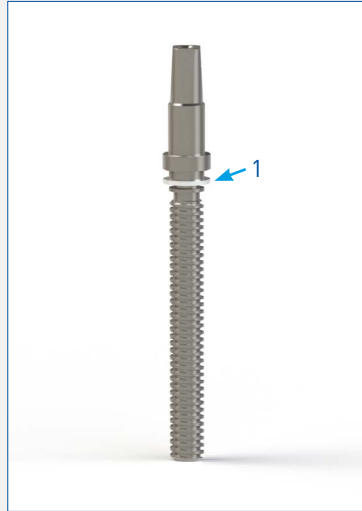
\* List of the countries on request.



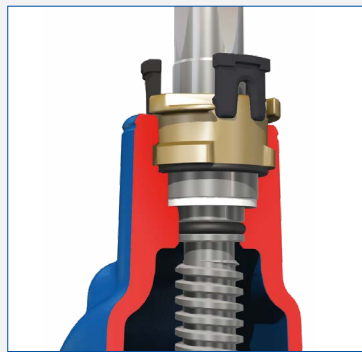
**02:** Free wedge nut, **reduces the stem bending forces** and at the same time enables it to be easily replaced.



**03:** The more compact new cap, reduces the water retention areas in order **to reduce the risk of bacterial growth**.



**04:** Stem and collar made in one piece in stainless steel for **better resistance to axial load and to withstand higher operating torques**. A polyamid washer (1) placed under the collar allows to reduce friction torque and protect coating inside the Bonnet.



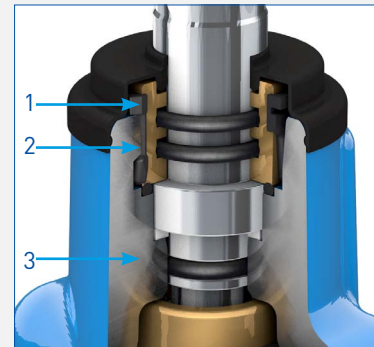
**05:** Our three locking tab for bayonet system prevents self-dismantling caused by vibrations.



**06:** Dust guard integrating three O-ring shape, **prohibiting the introduction of foreign bodies** at the stem.



**07: Male guiding system with composite sliding skate (1)** reduces the wear of the wedge against the body, allowing a smooth functionality and a longer life time of the valve. Furthermore, the increased thickness of the elastomer at the sealing areas improves product resilience to the usual small impurities encountered in networks.



**08: Triple seal at the operating stem** to ensure tightness with the test of time (2500 cycles).



**09:** Our **new male composite sliding skate technology** minimizes the wedge friction against the body ensuring a low operating torque even under high differential pressure and preventing damage or corrosion generated by the friction.

## COATING

### OPTIMUM PROTECTION

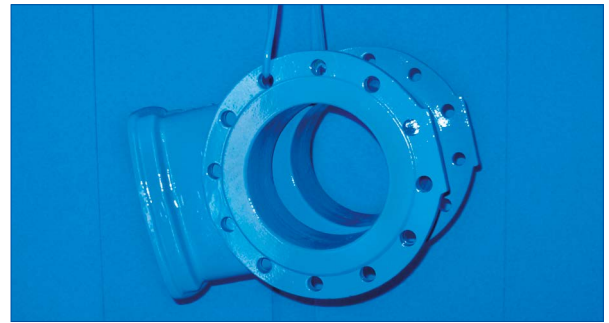
The INFINITY resilient seated gate valve has been designed with even more rounded surfaces and more ergonomic shapes that allow more uniform coating and ensure protection of the highest quality.

#### Corrosion protection with powder epoxy

BELGICAST valves are protected with epoxy powder both internally and externally, both the bonnet and the body in a continuous manner, as the model INFINITY with patented bayonet nut has no threads, thus ensuring complete corrosion protection.

The epoxy powder used by BELGICAST is approved for use with potable water by the most prestigious institutions worldwide. Moreover, BELGICAST painting facilities are approved according to GSK standard (RAL Quality Mark).

If you need your valves coated according to this process, please do not hesitate to enquire.



#### Permanent protection with enamel

Optionally, BELGICAST can manufacture gate valves completely enamelled. Vitreous enamel is highly resistant to corrosion, abrasion, sunlight and sedimentation due to its low porosity and smooth surface. The enamel is vitrified at 720° C and forms a perfect and permanent bond at the foundry.

BELGICAST's extensive experience in the manufacture of gate valves, together with modern enamel equipment, allows production of the highest quality.

### TEMPERATURES

Depending on the applied anticorrosive coating, the INFINITY gate valve is suitable for the following continuous operating temperatures:

- └ Epoxy powder protection: -10 °C to 50°C.
- └ Enamel protection: -10 °C to 50°C (70°C under request).







### VALVE TESTING ACCORDING TO EN 12266-1 - EN 1074

#### Testing pressures

- Shell tightness: 25 bar at room temperature.
- Seat tightness: 17.6 bar at room temperature.

#### Minimum test duration (in seconds)

Nominal diameter DN	Shell	Seat
Up to DN50 included	15	15
From DN65 up to DN150 included	60	60
From DN200 up to DN300 included	120	120
DN350 and above	300	120

#### Maximum allowable seat leakage

The criterion for seat leakage of BELGICAST resilient seated gate valves is Rate A: no visually detectable leakage for the duration of the test ("zero drops").

#### Quality control

- 100% of BELGICAST resilient seated gate valves are tested according to EN 12266-1, DIN 3230, or as per customer requirements.
- According to EN 1074 (2,500 cycles endurance resistance).

## MATERIALS & DIMENSIONS

### F4/F5 - DN40/300 - PN10/16

(according to EN1074-2 (annex A) and EN1171 (category 3))



Item	Description	N°	Material	Standard
1	Body	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
2	Bonnet	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
3	Wedge	1	EN-GJS-500-7	EN 1563
4	Wedge coating	1	EPDM <sup>1)</sup>	EN 681-1
5	Stem	1	1.4021	EN 10088
6	Wedge lock nut	1	Copper alloy CW617N	EN 12165
7	Body-bonnet gasket	1	EPDM <sup>1)</sup>	EN 681-1
8	Stem washer	1	POM	-
9	O-ring (stem)	1	EPDM <sup>1)</sup>	EN 681-1
10	Stuffing nut (bayonet)	1	Al-br CW307G	EN 12165
11	O-ring (stuffing nut)	2	NBR	ASTM D2000
12	O-ring (stuffing nut/bonnet)	1	NBR	ASTM D2000
13	Body bonnet bolting	acc/DN	Steel 12.9 Geomet coated	EN ISO898-1
14	Dust guard	1	EPDM	EN 681-1
15	Handwheel	1	Stamped steel <sup>3)</sup>	-
16	Handwheel bolting	1	1.4301	EN 10088
17	Handwheel washer	1	1.4301	EN 10088
18	Square cap	1	EN-GJS-500-7 <sup>3)</sup>	EN 1563
19	Square cap bolting	1	Steel 8.8 Geomet coated	EN ISO898-1
20	Square cap plug	1	Lupolen	-
21	Wedge sliding skate <sup>4)</sup>	2	Composite	-
22	Locking tabs	3	Composite	-

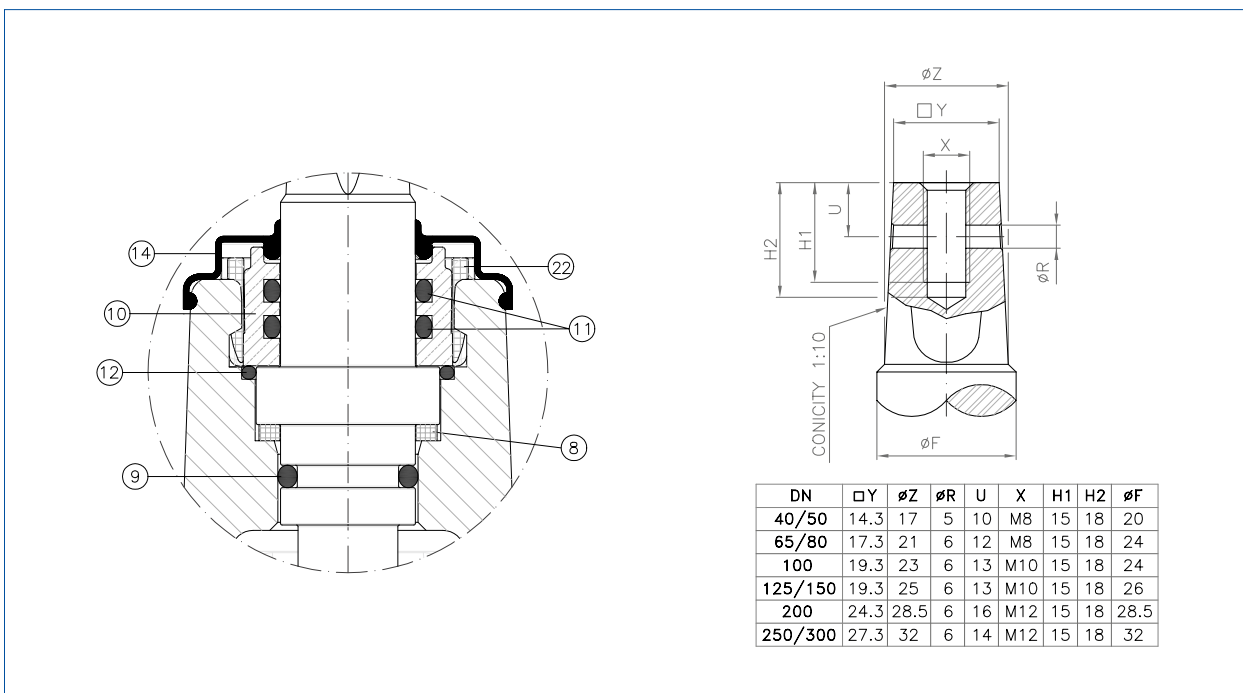
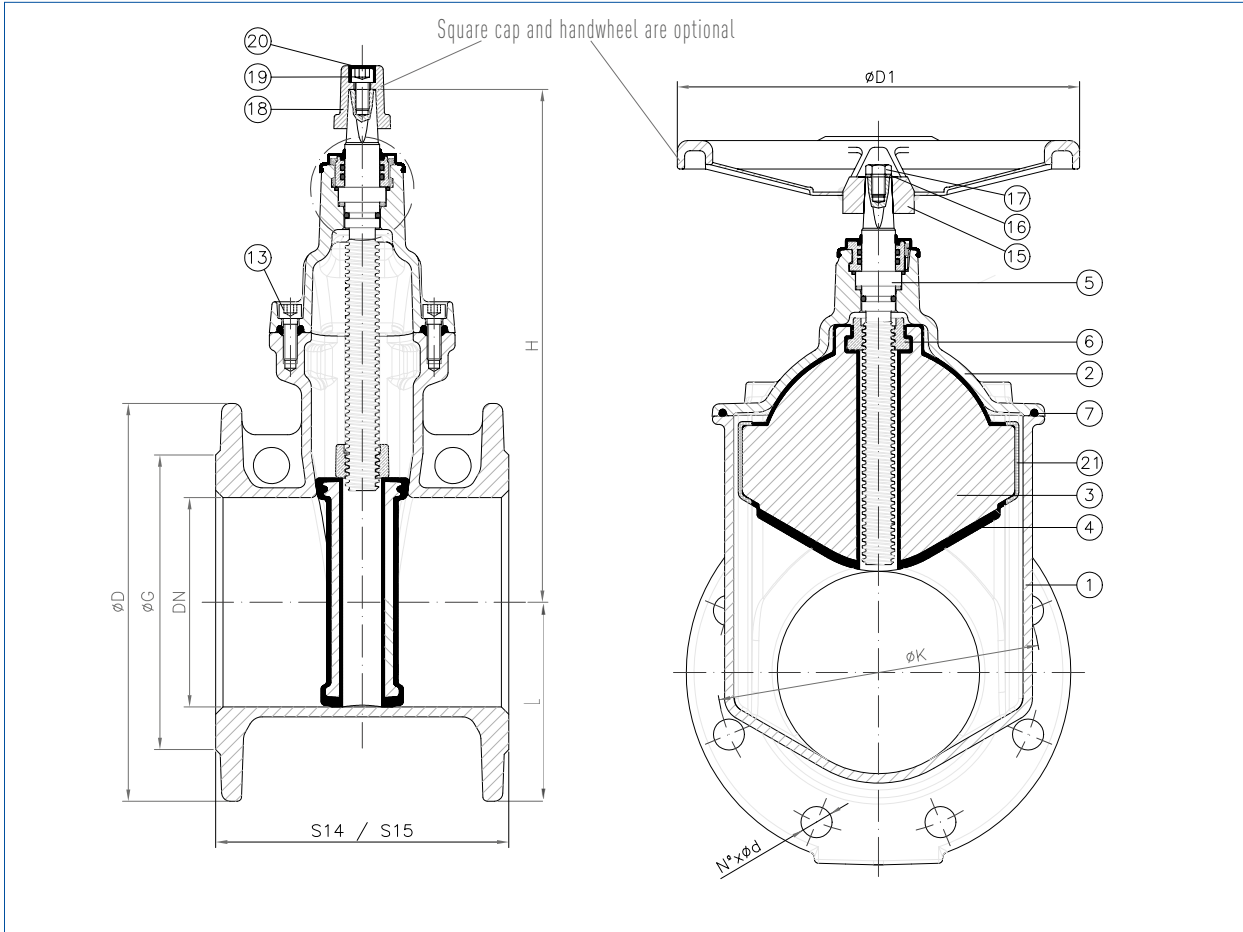
1) or NBR, depending on the approval and on the application. 2) blue coating (Rat 5015) with epoxy powder. 3) black epoxy coating. 4) DN40/50 without wedge sliding skates.

DN	EN 1092-2 PN10				EN 1092-2 PN16			EN 558 (DIN 3202)		H (mm)	L (mm)	øD1 (mm)	No. of turns for closing	Weight (kg)	
	øD (mm)	øK (mm)	øG (mm)	n°xd	øK (mm)	øG (mm)	n°xd	S14 (F4) (mm)	S15 (F5) (mm)					S14 (F4)	S15 (F5)
40	150	110	84	4x19	110	84	4x19	140	240	174	75	150	11,5	6,7	7,3
50	165	125	99	4x19	125	99	4x19	150	250	197	83	150	14	8,3	8,8
65*	185	145	118	4x19	145	118	4x19	170	270	237	93	150	15	12,3	13
80**	200	160	132	8x19	160	132	8x19	180	280	260	100	200	18	13,7	14,9
100	220	180	156	8x19	180	156	8x19	190	300	285	110	200	21,5	16,4	17,9
125	250	210	184	8x19	210	184	8x19	200	325	340	125	300	27	22,5	25,2
150	285	240	211	8x23	240	211	8x23	210	350	373	143	300	32	27,2	30,6
200	340	295	266	8x23	295	266	12x23	230	400	460	170	400	41,5	46,9	54,2
250	400	350	319	12x23	355	319	12x28	250	450	549	200	400	43	69,5	78,8
300	455	400	370	12x23	410	370	12x28	270	500	630	228	500	51	96,5	114,5

\* DN60 drilling on request. \*\* DN80 with 4 holes drilling on request.

The technical data and performance may be modified without prior notice depending on the technical advances.

F4/F5 - DN40/300 - PN10/16



## MATERIALS &amp; DIMENSIONS

## F4/F5 - DN350/700 - PN10/16

(according to EN1074-2 (annex A) and EN1171 (category 3))



Item	Description	N°	Material	Standard
1	Body	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
2	Bonnet	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
3	Wedge	1	EN-GJS-500-7	EN 1563
4	Wedge coating	1	EPDM <sup>1)</sup>	EN 681-1
5	Stem	1	1.4021	EN 10088
6	Wedge lock nut	1	Copper alloy CW617N	EN 12165
7	Body bonnet gasket	1	EPDM <sup>1)</sup>	EN 681-1
8	Lower packing bushing	1	PDM	-
9	O-ring (stem)	2	EPDM <sup>1)</sup>	EN 681-1
10	Upper packing bushing	1	PDM	-
11	O-ring int (upper packing bushing)	2	NBR	ASTM D2000
12	O-ring ext (upper packing bushing)	1	NBR	ASTM D2000
13	Body bonnet bolt	acc/DN	Steel 8.8 Geomet coated	EN ISO898-1
14	Dust guard	1	EPDM	EN 681-1
15	Handwheel	1	Stamped steel <sup>3)</sup>	-
16	Handwheel bolt	1	1.4301	EN 10088
17	Handwheel washer	1	1.4301	EN 10088
18	Square cap	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
19	Square cap bolt	1	Steel 8.8 Geomet coated	EN ISO898-1
20	Square cap plug	1	Lupolen	-
21	Wedge sliding skate	2	Composite	-
22	Upper bonnet	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
23	O-ring (lower packing bushing)	1	EPDM <sup>1)</sup>	EN 681-1
24	Axial ball bearing	2	Stainless steel	-
25	Bonnet-upper bonnet O-ring	1	NBR	ASTM D2000
26	Bonnet-upper bonnet bolt	4	Steel 8.8 Geomet coated	EN ISO898-1
27	Eyebolt	2	Steel 8.8 JS500 coated	EN ISO898-1
28	Cotter	1	Steel 8.8	EN ISO898-1
29	Packing washer	1	254 SMO	DIN 1.4547

1) or NBR, depending on the approval and on the application. 2) blue coating (Ral 5015) with epoxy powder. 3) black epoxy coating.

FOR VALVES WITH MAXIMUM WORKING PRESSURE OF 16 BAR:

DN	EN 1092-2 PN 10				EN 1092-2 PN 16				EN 558 (DIN 3202)		H (mm)	L (mm)	B (mm)	øD1 (mm)	No. of turns for closing	Weight kg			
	øD (mm)	øK (mm)	øG (mm)	no. x d	øD (mm)	øK (mm)	øG (mm)	no. x d	S14 (F4) (mm)	S15 (F5) (mm)						S14 (F4)		S15 (F5)	
																PN10	PN16	PN10	PN16
350	520	460	429	16x23	520	470	429	16x28	290	550	812	260	506	600	51	190	190	213	213
400	580	515	480	16x28	580	525	480	16x31	310	600	905	290	606	600	58	274	274	311	311
450	640	565	530	20x28	640	585	548	20x31	330	650	1002	320	672	600	65	310	309	363	362
500	715	620	582	20x28	715	650	609	20x34	350	700	1054	358	748	600	72	398	396	445	443
600	780	725	682	20x31	840	770	720	20x37	390	800	1285	420	955	800	87	670	668	776	774
700*	895	840	794	24x31	910	840	794	24x37	-	900	1285	455	955	800	87	-	-	970	975

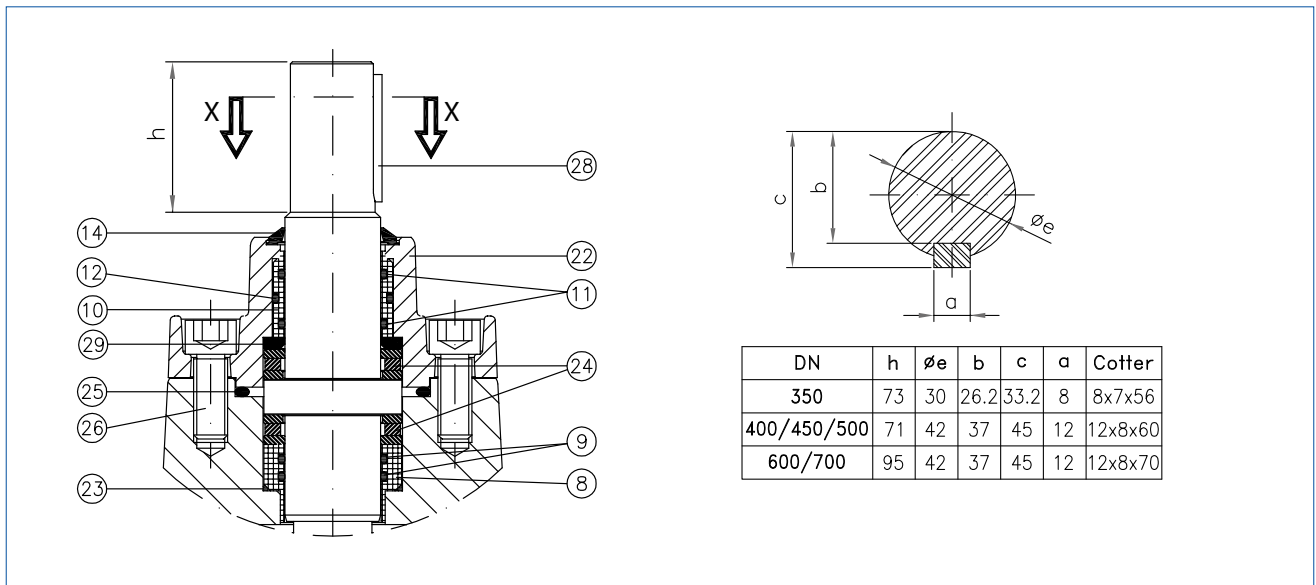
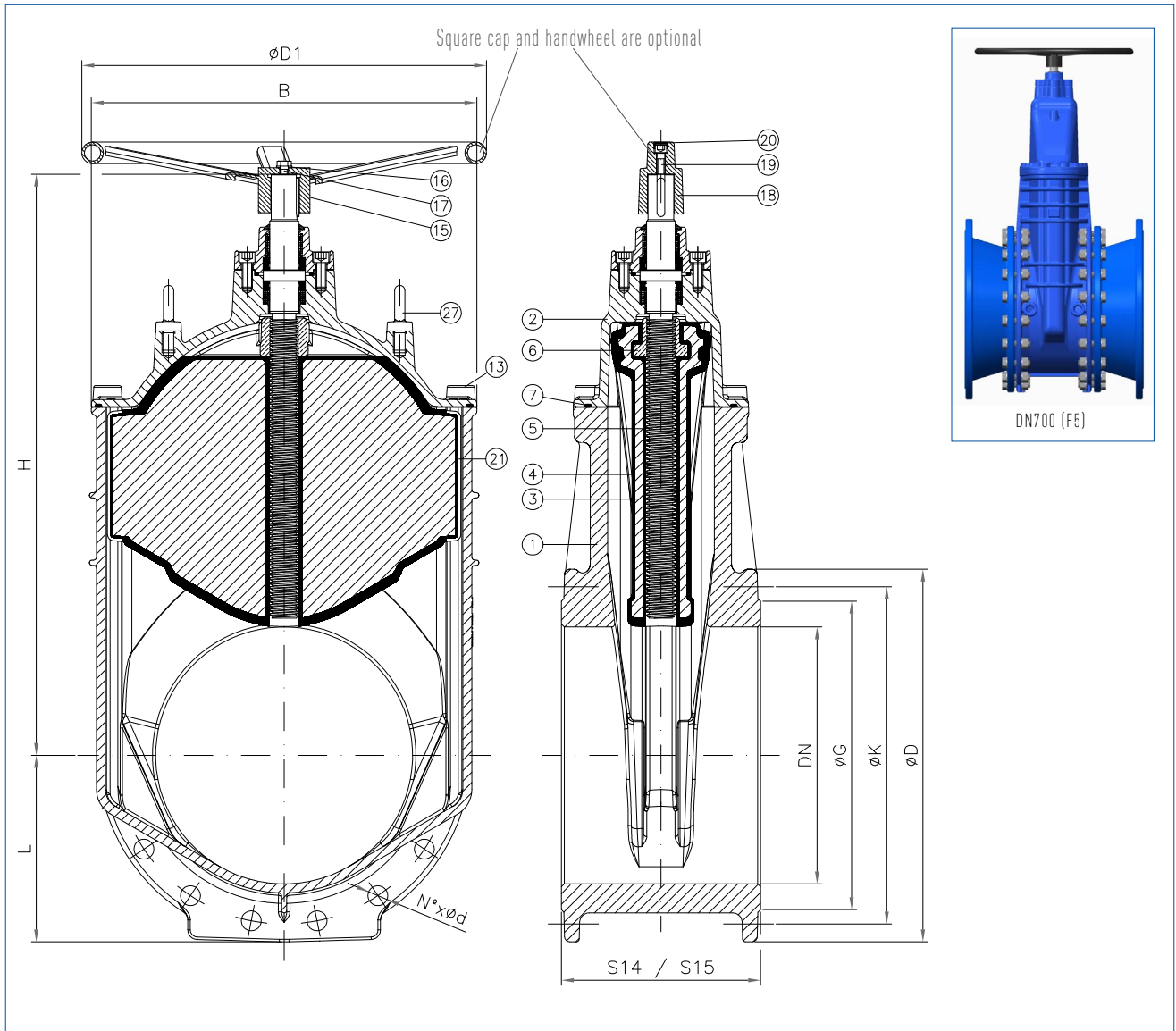
FOR VALVES WITH MAXIMUM WORKING PRESSURE OF 10 BAR:

DN	EN 1092-2 PN10				EN 558 (DIN 3202)		H (mm)	L (mm)	B (mm)	øD1 (mm)	No. of turns for closing	Weight (kg)	
	øD (mm)	øK (mm)	øG (mm)	n°xd	S14 (F4) (mm)	S15 (F5) (mm)						S14 (F4)	S15 (F5)
600	780	682	625	20x31	390	-	1285	390	955	800	87	553	-
700*	895	794	840	24x31	-	900	1285	447.5	955	800	87	-	815

\* Reduced bore of 600 mm. Valves produced from DN600/S14 with flanged conical adapters bolted on each side (see next page). For DN600 to 700, version with by-pass possible on request.

The technical data and performance may be modified without prior notice depending on the technical advances.

F4/F5 - DN350/600 - PN10/16



## MATERIALS & DIMENSIONS

### BS - DN50/300 - PN10/16

(ACCORDING TO EN1074-2 (ANNEX A), EN1171 (CATEGORY 3) AND BS5163\*)



Item	Description	N°	Material	Standard
1	Body	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
2	Bonnet	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
3	Wedge	1	EN-GJS-500-7	EN 1563
4	Wedge coating	1	EPDM <sup>1)</sup>	EN 681-1
5	Stem	1	1.4021	EN 10088
6	Wedge lock nut	1	Copper alloy CW617N	EN 12165
7	Body-bonnet gasket	1	EPDM <sup>1)</sup>	EN 681-1
8	Stem washer	1	POM	-
9	O-ring (stem)	1	EPDM <sup>1)</sup>	EN 681-1
10	Stuffing nut (bayonet)	1	Al-br CW307G	EN 12165
11	O-ring (stuffing nut)	2	NBR	ASTM D2000
12	O-ring (stuffing nut/bonnet)	1	NBR	ASTM D2000
13	Body bonnet bolting	acc/DN	Steel 12.9 Geomet coated	EN ISO898-1
14	Dust guard	1	EPDM	EN 681-1
15	Handwheel	1	Stamped steel <sup>3)</sup>	-
16	Handwheel washer	1	1.4301	EN 10088
17	Handwheel bolting	1	1.4301	EN 10088
18	Square cap bolting	1	Steel 8.8 Geomet coated	EN ISO898-1
19	Square cap	1	EN-GJS-500-7 <sup>3)</sup>	EN 1563
20	Wedge sliding skate <sup>4)</sup>	2	Composite	-
21	Locking tabs	3	Composite	-
22	Square cap plug	1	Lupolen	-
23	Grub screw	6 or 8	A4	DIN 913

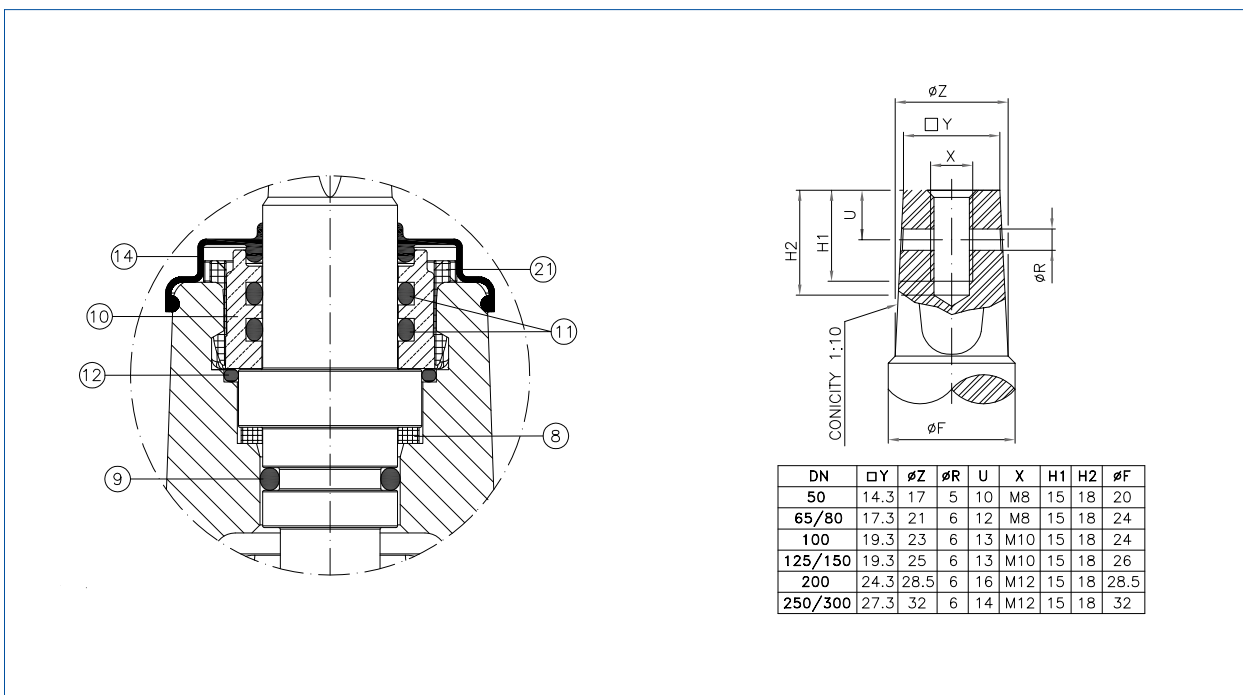
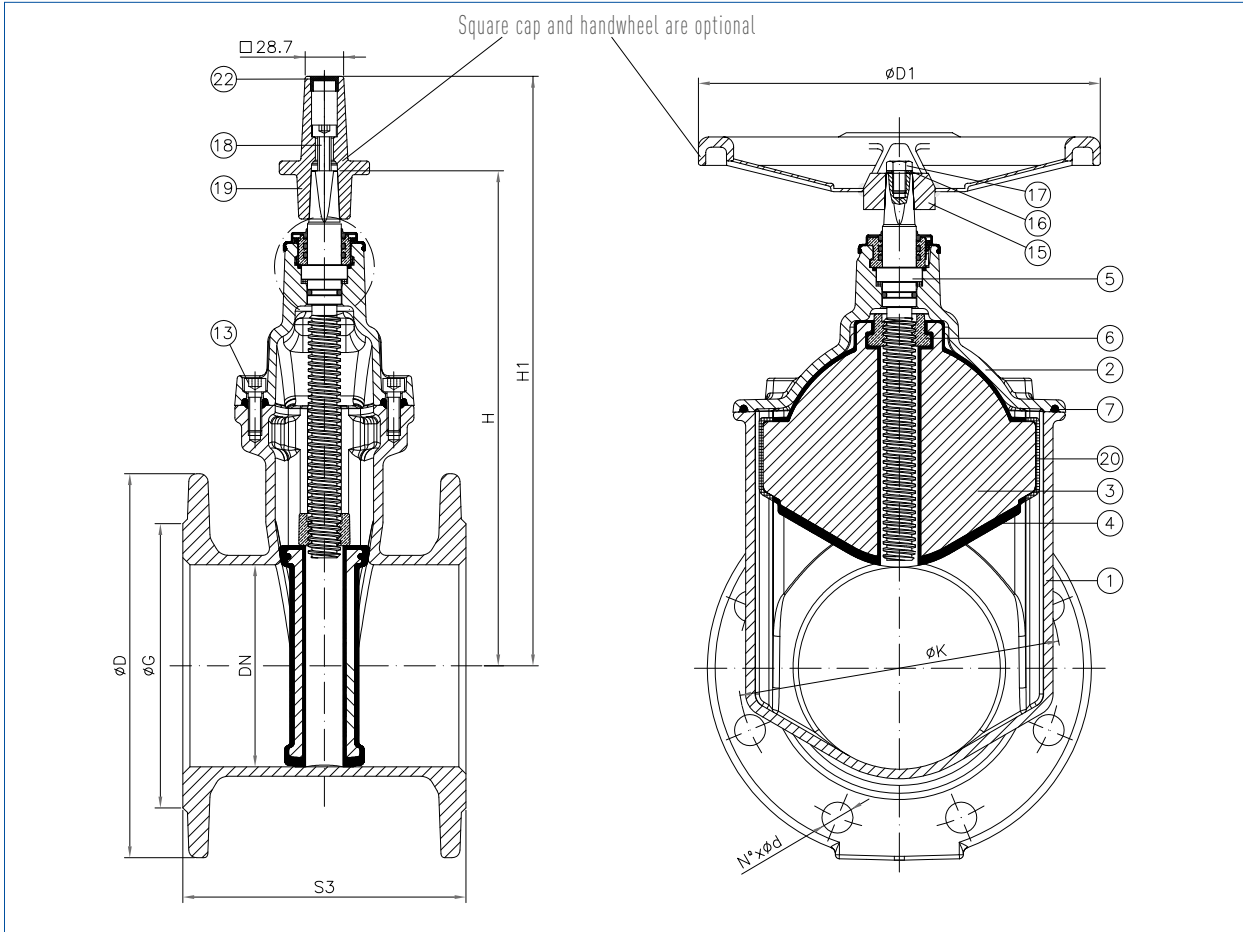
1) or NBR, depending on the approval and on the application. 2) blue coating (Ral 5015) with epoxy powder. 3) black epoxy coating. 4) DN50 without wedge sliding skates.

DN	øD (mm)	EN 1092-2 (BS-4504) PN10			EN 1092-2 (BS-4504) PN16			EN 558	H (mm)	H1 (mm)	øD1 (mm)	No. of turns for closing	Weight (kg)
		øK (mm)	øG (mm)	n°xd	øK (mm)	øG (mm)	n°xd	S3 (mm)					
50	165	125	99	4x19	125	99	4x19	178	197	269	150	14	8.3
65	185	145	118	4x19	145	118	4x19	190	237	301	150	15	12.6
80	200	160	132	8x19	160	132	8x19	203	260	324	200	18	14.1
100	220	180	156	8x19	180	156	8x19	229	285	348	200	21,5	16.8
125	250	210	184	8x19	210	184	8x19	254	340	403	300	27	23.6
150	285	240	211	8x23	240	211	8x23	267	373	436	300	32	28.5
200	340	295	266	8x23	295	266	12x23	292	460	528	400	41,5	50.1
250	400	350	319	12x23	355	319	12x28	330	549	618	400	43	72.7
300	455	400	370	12x23	410	370	12x28	356	630	699	500	51	99.0

\*Resilient seated gate valve according to EN1074-2 (annex B) and BS5163 for operation by «Ring key and bar» is also part of our manufacturing range, documentation upon request.documentation upon request.

The technical data and performance may be modified without prior notice depending on the technical advances.

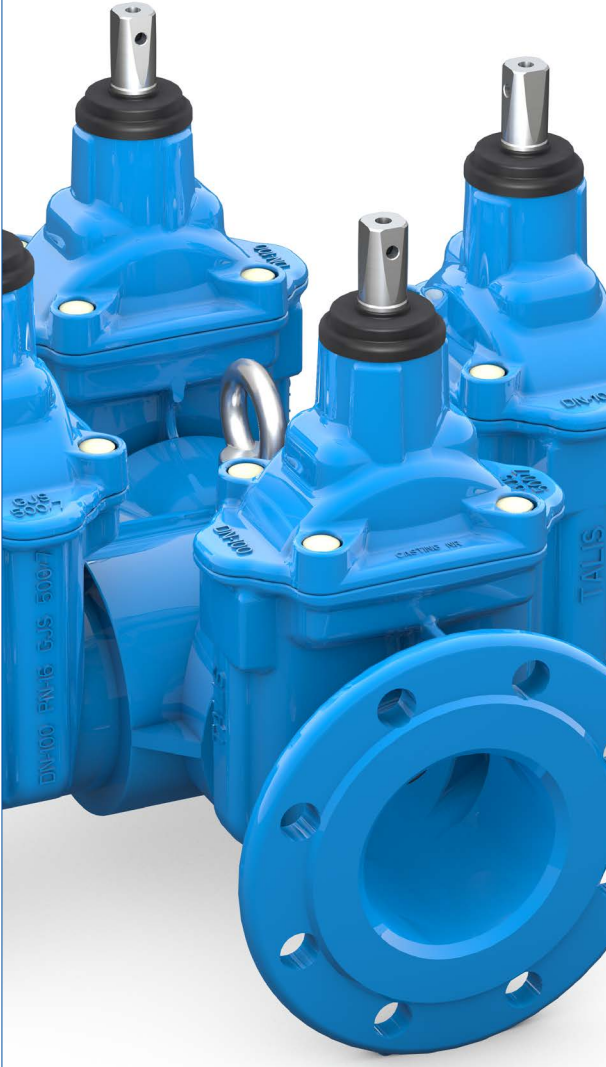
BS - DN50/300 - PN10/16



## MATERIALS & DIMENSIONS

### INFINI-3 / INFINI-4 - DN50/300 - PN10/16

(ACCORDING TO EN1074-2 (ANNEX A) and EN1171 (CATEGORY 3))



Item	Description	N°	Material	Standard
1	Body	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
2	Bonnet	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
3	Wedge	1	EN-GJS-500-7	EN 1563
4	Wedge coating	1	EPDM <sup>1)</sup>	EN 681-1
5	Stem	1	1.4021	EN 10088
6	Wedge lock nut	1	Copper alloy CW617N	EN 12165
7	Body-bonnet gasket	1	EPDM <sup>1)</sup>	EN 681-1
8	Stem washer	1	POM	-
9	O-ring (stem)	1	EPDM <sup>1)</sup>	EN 681-1
10	Stuffing nut (bayonet)	1	Al-br CW307G	EN 12165
11	O-ring (stuffing nut)	2	NBR	ASTM D2000
12	O-ring (stuffing nut/bonnet)	1	NBR	ASTM D2000
13	Body bonnet bolting	acc/DN	Steel 12.9 Geomet coated	EN ISO898-1
14	Dust guard	1	EPDM	EN 681-1
15	Cross	1	EN-GJS-500-7 <sup>2)</sup>	EN1563
16	O-ring (cross)	3 or 4	NBR	ASTM D2000
17	Lifting ring	1	Coated steel	-
18	Square cap	1	EN-GJS-500-7 <sup>3)</sup>	EN 1563
19	Square cap bolting	1	Steel 8.8 Geomet coated	EN ISO898-1
20	Square cap plug	1	Lupolen	-
21	Wedge sliding skate <sup>4)</sup>	2	Composite	-
22	Locking tabs	3	Composite	-
23	Grub screw	6 or 8	A4	DIN 913

1) or NBR, depending on the approval and on the application. 2) blue coating (Rat 5015) with epoxy powder. 3) black epoxy coating. 4) DN50 without wedge sliding skates.

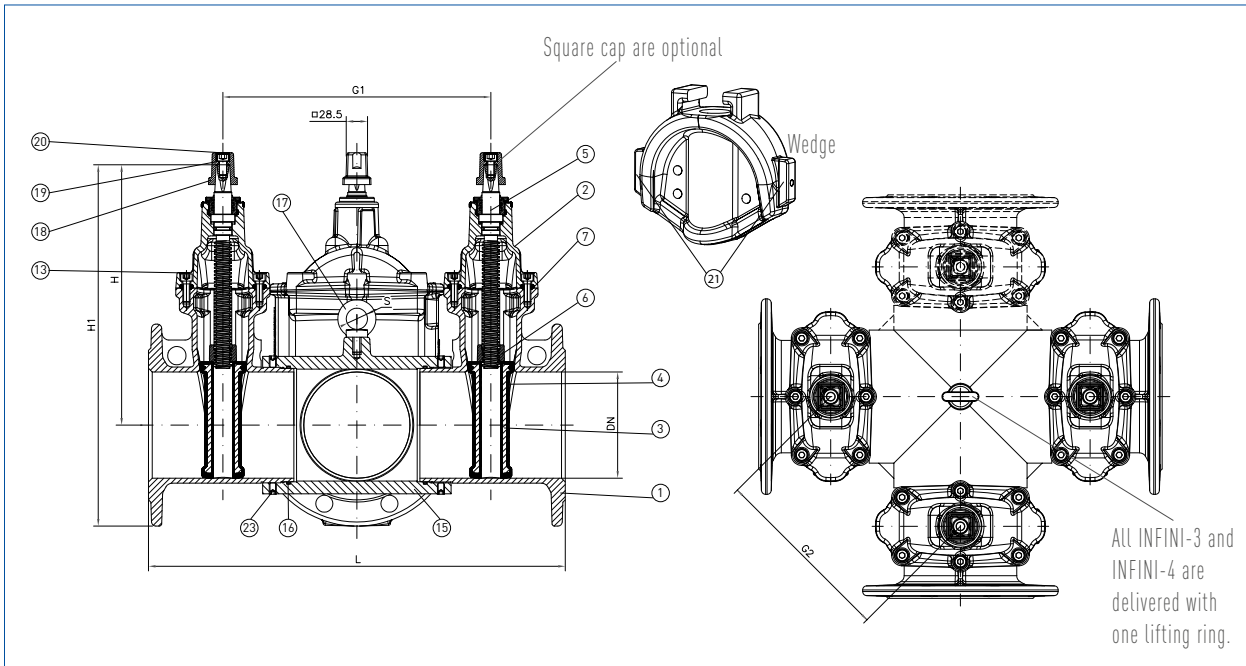
DN	øD (mm)	EN 1092-2 PN10			EN 1092-2 PN16			L (mm)	H1 (mm)	H (mm)	G1 (mm)	G2 (mm)	S (mm)	No. of turns for closing	Weight (kg) INFINI-3	Weight (kg) INFINI-4
		øK (mm)	øG (mm)	n°xd	øK (mm)	øG (mm)	n°xd									
50	165	125	99	4x19	125	99	4x19	357	280	197	207	146	20	14	17	20
65	185	145	118	4x19	145	118	4x19	412	330	237	242	171	20	15	27	34
80	200	160	132	8x19	160	132	8x19	446	360	260	266	188	25	18	34	43
100	220	180	156	8x19	180	156	8x19	487	395	285	297	210	25	21,5	51	63
125	250	210	184	8x19	210	184	8x19	528	465	340	328	232	30	27	67	83
150	285	240	211	8x23	240	211	8x23	588	516	373	378	267	30	32	93	111
200	340	295	266	8x23	295	266	12x23	710	630	460	480	339	35	41,5	165	198
250	400	350	319	12x23	355	319	12x28	838	749	549	588	415	40	43	247	299
300	455	400	370	12x23	410	370	12x28	970	858	630	700	495	50	51	346	417

For version with handwheel, please consult us.

The technical data and performance may be modified without prior notice depending on the technical advances.



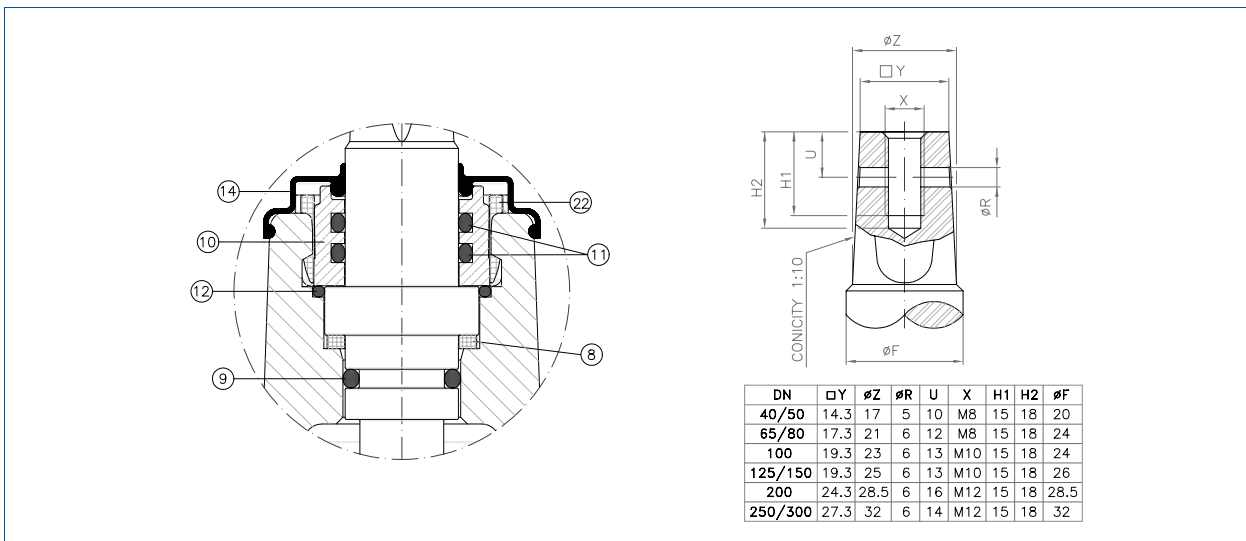
INFINI-3 / INFINI-4 - DN50/300 - PN10/16



INFINI-3



INFINI-4



## MATERIALS & DIMENSIONS

### PE ENDS - DN50/300 - PN10/16

(ACCORDING TO EN1074-2 (ANNEX A) AND EN1171 (CATEGORY 3))



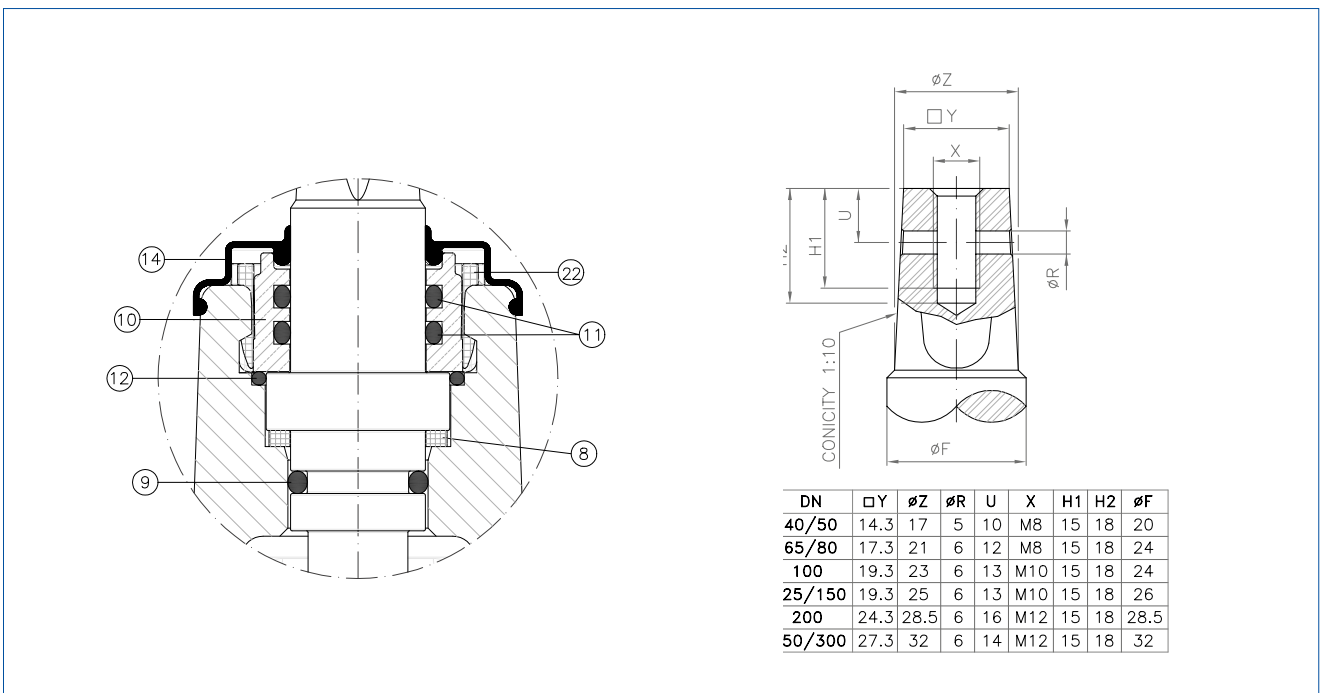
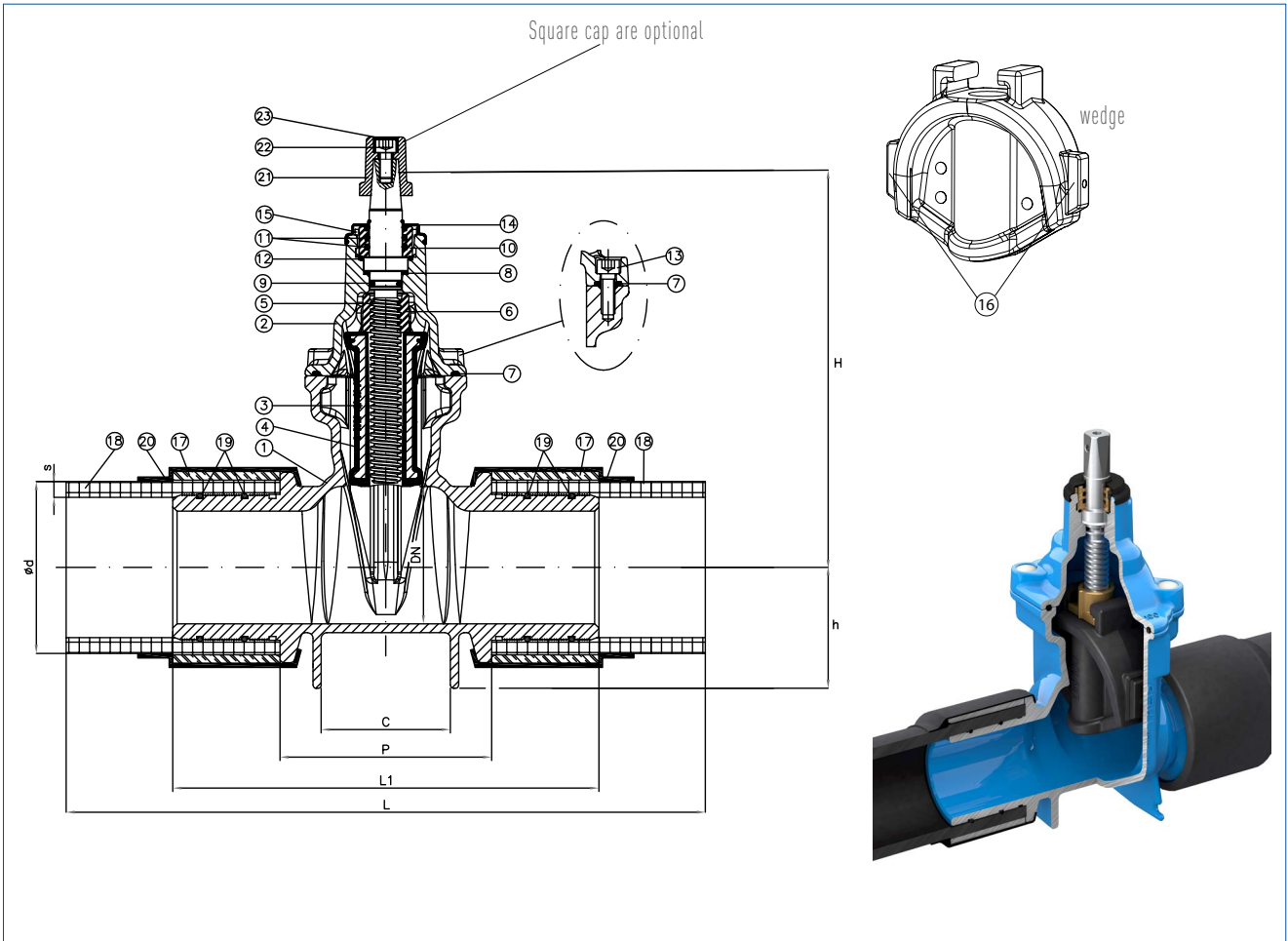
Item	Description	N°	Material	Standard
1	Body	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
2	Bonnet	1	EN-GJS-500-7 <sup>2)</sup>	EN 1563
3	Wedge	1	EN-GJS-500-7	EN 1563
4	Wedge coating	1	EPDM <sup>1)</sup>	EN 681-1
5	Stem	1	1.4021	EN 10088
6	Wedge lock nut	1	Copper alloy CW617N	EN 12165
7	Body-bonnet gasket	1	EPDM <sup>1)</sup>	EN 681-1
8	Stem washer	1	POM	-
9	O-ring (stem)	1	EPDM <sup>1)</sup>	EN 681-1
10	Stuffing nut (bayonet)	1	Al-br CW307G	EN 12165
11	O-ring (stuffing nut)	2	NBR	ASTM D2000
12	O-ring (stuffing nut/bonnet)	1	NBR	ASTM D2000
13	Body bonnet bolting	acc/DN	Steel 12.9 Geomet coated	EN ISO898-1
14	Dust guard	1	EPDM	EN 681-1
15	Locking tabs	3	Composite	-
16	Wedge sliding skate <sup>4)</sup>	2	Composite	-
17	Pressure bush	2	S355J2H	-
18	PE pipe <sup>5)</sup>	2	Polyethylene	EN 12201-1 & 2
19	O-ring (PE pipe)	4	NBR	ASTM D2000
20	Heat-shrinkable sleeve	2	Polymer	-
21	Square cap	1	EN-GJS-500-7 <sup>3)</sup>	EN 1563
22	Square cap bolting	1	Steel 8.8 Geomet coated	EN ISO898-1
23	Square cap plug	1	Lupolen	-

1) or NBR, depending on the approval and on the application. 2) blue coating (Ral 5015) with epoxy powder. 3) black epoxy coating. 4) DN 40/50 without wedge sliding skates. 5) PE pipe according to EN 12201-1 & 2.

DN*	PE PIPE ød / SDR	MAXIMUM WORKING PRESSURE OF 16 BAR (PFA16)							No. of turns for closing	Weight (kg)	PE PIPE ød / SDR	MAXIMUM WORKING PRESSURE OF 10 BAR (PFA10)							No. of turns for closing	Weight (kg)	
		s (mm)	L (mm)	L1 (mm)	P (mm)	C (mm)	H (mm)	h (mm)				s (mm)	L (mm)	L1 (mm)	P (mm)	C (mm)	H (mm)	h (mm)			
40	ø50 / SDR11	4.6	880	215	105	64	180	40	11.5	4.5	-	-	-	-	-	-	-	-	-	-	-
50	ø63 / SDR11	5.8	880	220	110	64	203	50	14	5.4	ø63 / SDR17	3.7	880	220	110	64	203	50	14	5.2	
65	ø75 / SDR11	6.8	900	230	120	74	246	59	15	10	ø75 / SDR17	4.5	900	230	120	74	246	59	15	9.8	
80	ø90 / SDR11	8.2	900	237	127	79	270	65	18	11.5	ø90 / SDR17	5.3	900	237	127	79	270	65	18	11	
100	ø110 / SDR11	10	900	310	154	82	298	78	21.5	18.2	ø110 / SDR17	6.5	900	310	154	94	298	78	21.5	17.7	
100	ø125 / SDR11	11.4	975	310	154	94	294	88	21.5	18.7	ø125 / SDR17	7.4	975	310	154	94	294	88	21.5	18	
125	ø140 / SDR11	12.8	1000	350	170	97	353	92	27	27.2	ø140 / SDR17	8.3	1000	350	170	97	353	92	27	26	
150	ø160 / SDR11	14.6	1100	381	171	102	390	110	32	34.5	ø160 / SDR17	9.5	1100	381	171	102	383	120	32	32.5	
150	ø180 / SDR11	16.4	1100	381	171	102	383	120	32	41.6	ø180 / SDR17	10.6	1100	381	171	102	383	120	32	39	
200	ø200 / SDR11	18.2	1100	464	244	160	487	135	41.5	68.5	ø200 / SDR17	11.8	1100	464	244	160	487	135	41.5	66	
200	ø225 / SDR11	20.5	1100	464	244	160	477	150	41.5	71	ø225 / SDR17	13.3	1100	464	244	160	477	150	41.5	68	
250	ø250 / SDR11	22.8	1350	500	280	160	581	160	43	105	ø250 / SDR17	14.8	1350	500	280	160	581	160	43	100	
300	ø315 / SDR11	28.7	1350	500	280	160	660	210	51	182.5	ø315 / SDR17	18.6	1350	500	280	160	660	210	51	173.5	

\*All gate valves with PE ends are reduced bore. PE pipe according to EN 12201-1 & 2.

PE ENDS - DN50/300 - PN10/16



## ACTUATION METHODS

TALIS offers a wide variety of actuation methods that will allow to choose the best option for each installation. The actuation can be made manually or by means of an electrical actuator with or without a gearbox. Also, we offer solutions for buried installations. Pneumatically actuated gate valves with a special design are also available for those installations where speed of actuation is a priority.



### MANUAL ACTUATION

Our resilient seated gate valves are designed to be operated with handwheel or T-key. In that later case, they need to be fitted with square cap. TALIS offers handwheels with the right dimensions, according to the DN and operating torque. Our standard handwheels are made of pressed steel and we also offer ductile iron as an option. Regarding square cap tops, our products comply with the different national practices and standards.

A cap plug (1), inserted inside, indicates the closing direction. Blue color for clockwise closing direction, red color for anti-clockwise closing direction.



### BURIED INSTALLATIONS

One special case of manual actuation occurs when the valve is buried and the actuation has to be done from the surface. For those cases special stem extensions, fixed or telescopic, are offered to fit with different national practices and standards. We can offer customised solutions for each country when requested. For example, TALIS offers adapters to fit plastic or casting pipes for the French market and stem extensions according to GW 336 for the German market.



### ELECTRICAL ACTUATION

Another option is to operate the gate valve by means of an electric actuator. This solution also offers the possibility of installing a remote control, that allows the final user to monitor the operations of the valves. Special versions of the gate valves prepared for the actuator are equipped with top flanges according to ISO 5210. Actuators from different suppliers can be installed on this standard flange, which gives the customer the freedom to choose their actuator. TALIS can provide the operating torques of the gate valves as well as guidance in choosing the right actuator for each DN.

DN	From DN40 to DN200* included	From DN250 to DN700 included
Connecting flange ISO 5210	F10	F14

\*DN200 fitted with F10 as per standard, F14 under request.



## GOOD TO KNOW BEFORE INSTALLATION

Before installation, in addition to the few informations given below, it is important to read the IOM manual.

### Storage

- Leave the rubber wedge slightly open: if it is closed completely, the rubber suffers unnecessary compression. Remove the flange cover just before the installation.
- The gate valves should preferably be stored under cover. A long storage under extreme weather conditions can cause alterations of the coating and seals.

### Assembly in pipe

- The assembly of the valve in the pipe is independent of the flow direction.
- When connecting the valve to the pipe, avoid the transmission of stress from the pipe to the valve body. For that, any pipe or pipe sections or valve not yet finally clamped in place must be provisionally supported to prevent abnormal stress on one or both sides of the valve.
- Tighten screws gradually in a star-shaped pattern, respecting the tightening torques.
- Once the valve is assembled, the threads of the bolts/rods should be greased with a graphite based waterproof grease (MOLYCOTE or similar) to prevent corrosion and facilitate subsequent dismantling operations.

### Operation

- Each valve must be operated in respect of the operating torques given in our IOM manual, by means of a handwheel or a T-key ("Ring key and bar" is strictly prohibited). Do not use the valves for regulating mode.
- Do not use the valves with EPDM rubber with gaseous fluids such as propane, butane, natural gas and also with hydrocarbons fluids like petrol, diesel, ...

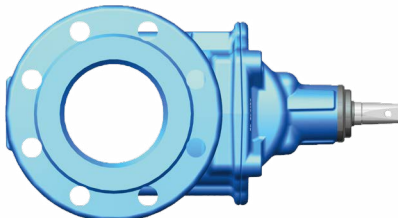
## RECOMMENDED POSITIONS FOR GATE VALVES WITH FLANGES

### From DN40 up to DN300:

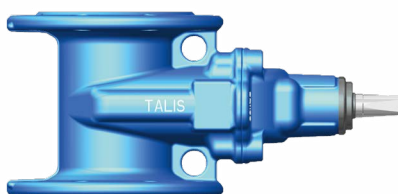
- 1) Ideal position:  
vertical stem,  
horizontal flow



- 2) Horizontal stem,  
horizontal flow



- 3) Horizontal stem,  
vertical flow

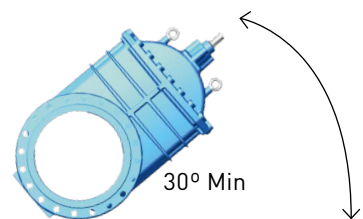


### From DN350 up to DN700:

- 1) Ideal position:  
vertical stem,  
horizontal flow



- 2) Oblique stem,  
horizontal flow



## EUROPEAN DIRECTIVE

**European directive 2014/68/EU (PED)** must be respected in all the countries of the European Union for all equipment under pressure. Valves which are subjected to this European directive are the object of a «CE» marking and also a CE declaration of conformity.

Are excluded from the scope of this directive the networks for the supply, distribution and discharge of water and associated equipment and heat exchangers such as penstocks, pressure tunnels, pressure shafts for hydroelectric installations and their related specific accessories. In this context:

- └ “water” means: potable water, waste water and effluent, and sewage,
- └ “Networks and associated equipment” means: complete systems for the supply distribution and discharge of water. They extend up to the point of use in buildings, industrial sites and plants, and include equipment closely related to these networks such as water meter and line valves. Pressure vessels, such as expansion vessels, however are not considered to be part of such ‘networks and associated equipment’ and are therefore not excluded.

Within the scope of the directive, the requirements on resilient seated gate valves are given in the table beside in the case of liquid from group 2. For the gate valves which are subjected to “CE” marking (see table beside), the document of “CE” declaration of conformity is available on request.

DN	PS MAX (bar)	Fluid group	Fluid Type	CATEGORY	CE MARKING
40	16	2	Liquid having vapor pressure max at 1513 mbar, at 70°C max.	Art 4, Par 3	n.a.*
50	16	2		Art 4, Par 3	n.a.*
60	16	2		Art 4, Par 3	n.a.*
65	16	2		Art 4, Par 3	n.a.*
80	16	2		Art 4, Par 3	n.a.*
100	16	2		Art 4, Par 3	n.a.*
125	16	2		Art 4, Par 3	n.a.*
150	16	2		Art 4, Par 3	n.a.*
200	16	2		Art 4, Par 3	n.a.*
250	16	2		Art 4, Par 3	n.a.*
300	16	2		Art 4, Par 3	n.a.*
350	16	2		Cat 1	Yes
400	16	2		Cat 1	Yes
450	16	2		Cat 1	Yes
500	16	2		Cat 1	Yes
600	16	2		Cat 1	Yes
700	16	2		Cat 1	Yes

(\*): according to the max working pressure defined, max temperature defined, and fluid group defined, the “CE marking” is not necessary for DN40 to 300 in the present case.

## REFERENCIALIST



### SEWAGE & TREATMENT

Project	Country	Year
EDAR Ondarroa	Spain	2018
ETAP Oum Azza (Rabat)	Morocco	2017
EDAR Tenerife	Spain	2017
Colector general de la margen izq.de la ría de Mundaka (Sukarrieta – EDAR Lamiaran)	Spain	2017
ETAP Fez Marruecos	Morocco	2016
2nd Changi NEWater (WRP)	Singapore	2016
EDAR Peñíscola	Spain	2015
EDAR Moraira	Spain	2015
Ampliación EDAR de Burgos	Spain	2015
EDAR de Chichaoua	Morocco	2015
EDAR Malpica	Spain	2015
EDAR Ribeira	Spain	2015
EDAR Ourense	Spain	2015
PTAR El Bello / Wastewater Treatment Plant	Colombia	2014
Makkah Project	KSA	2013
Darsait Waste Water Treatment Plant	Oman	2013
Atotonilco Planta Tratamiento / Water Treatment Plant	Mexico	2012
6th October WTP	Egypt	2012
Arroyo Valenoso Waste Water Treatment Plant	Spain	2012
Najmat Abu Dhabi Sewage Lifting Station	UAE	2012
Sanitary Waste Water Pumping Station	Saudi Arabia	2012
Sewage pumping station Lubertsy-2 – Moscow -	Russia	2012
Vodokanal (Astana SU Arnasy)- Main sewage pumping st-	Kazakhstan	2011-2012
Arroyo Culebro Waste Water treatment Plant	Spain	2011
Ciudad Real Waste Water Treatment Plant	Spain	2011
Madrid-Valmayor Planta Tratamiento	Spain	2010

Project	Country	Year
Arroyo Quiñones Waste Water treatment Plant	Spain	2010
Tomelloso Waste Water Treatment Plant	Spain	2010
Gava Waste Water Treatment Plant	Spain	2010
Nopwasd II Waste Water Treatment Plant (CAPW)	Egypt	2010
Cairo Airport New Terminal 3	Egypt	2009
Rejas- Madrid Waste Water Treatment Plant	Spain	2009
Alejandro East Waste Water Treatment Plant (CAPW)	Egypt	2009
Ibiza Waste Water treatment Plant	Spain	2009
Madrid-Almoguera Planta de Tratamiento	Spain	2008
Benquerencia Water treatment Plant	Spain	2008
Paterna Water treatment Plant	Spain	2008
La Gavia-Madrid Waste Water Treatment Plant	Spain	2008
Epele Water treatment Plant	Spain	2007
MGUP “Mosvodokanal” Cherkizovskaya sewage pumping st	Russia	2007
Gabal El Asfar Waste Water Treatment Plant (CAPW)	Egypt	2006
La Ranilla- Waste Water Treatment Plant	Spain	2006
Saint Petersburg South-west sewage treatment plant	Russia	2005



## WATER SUPPLY DISTRIBUTION



Project	Country	Year
Sifón en Ría de Oreeiros (Aguas de Galicia)	Spain	2018
Abastecimiento al T.M. de Urdax	Spain	2018
Rep. de las conduc. del Consorcio de Aguas de Asturias: Arteria Norte	Spain	2017
Túnel de Monrepós-Huesca	Spain	2017
Network reconditioning water supply for Soekarno Hatta airport Indonesia	Indonesia	2016
Conduccion para el abastecimiento del embalse "El Retortillo"	Spain	2016
Arterias Generales de la Desalinizadora a las Redes de Distribución	Spain	2016
Mejora abastecimiento Plan Écija ( Montepalcios-Moron)	Spain	2015
Mejora abastecimiento Plan Écija (Luisiana-Fuentes Andalucia)	Spain	2015
Abastecimiento Al Aljarafe	Spain	2015
Mejora abastecimiento Plan Écija (Arahal)	Spain	2015
The reconstruction of Entuziastov highway – Moscow	Russia	2012-2013
Ruwais Housing Complex (Abu Dhabi)	UAE	2012
Khalifa port	UAE	2012
Pal Tree at Jebel Ali	UAE	2012
New Sanitary Waste Lift Station	Saudi Arabia	2012
Peravia Acueducto / aqueduct	Dominic Rep	2012
Dynamo Stadium – Moscow	Russia	2012
Olympic objects in Imerety lowland - Sochi	Russia	2011-2012
Abu Dhabi International airport	UAE	2011
Vodokanal – Taraza	Kazakhstan	2011
Mokry Dwor proejct	Poland	2011
Main water pipelines . Irkutsk	Russia	2010-2012
Sochi, main pipeline Dn500 near Mzyta river	Russia	2010
Tifert (Tunisian Indian fertiliser)	Tunisia	2010
Pushkin deposit – Vkadivostok (i.Russkiy)	Russia	2010
National Water Annual Contract	Saudi Arabia	2010
Kamala-1 pumping station and distr. Network – Krasnoyarsk	Russia	2010
Jebel Ali Airport	UAE	2009
Dubai Crescent	UAE	2009
The Palm Deira (Dubai)	UAE	2009



## IRRIGATION



Project	Country	Year
Tr.de genie civil des sous sect.D1/D2 du per. Loukkos	Morocco	2018
Riego de Sucs	Spain	2016
Ampliación de la 1ª fase del Canal de Navarra	Spain	2016
Al Ain Irrigation Project	UAE	2011
Upgrading of Salam Street – Irrigation works	UAE	2010
Lleida-Segarra Garrigues Regadío / Irrigation	Spain	2008
Canal de Navarra / Navarra Channel	Spain	2008
Castejón Regadío / Irrigation project	Spain	2005
La Rioja-Najerilla Regadío / Irrigation Project	Spain	2005
Bozova (45,000 ha) Regadío / Irrigation	Turkey	2002





[www.talis-group.com](http://www.talis-group.com)

TALIS is the undisputed Number One for water transport and water flow control. TALIS has the best solutions available in the fields of water and energy management as well as for industrial and communal applications. We have numerous products for comprehensive solutions for the whole water cycle – from hydrants, butterfly valves and knife gate valves through to needle valves. Our experience, innovative technology, global expertise and individual consultation processes form the basis for developing long-term solutions for the efficient treatment of the vitally important resource “water”.



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