

Uniwat®



Gate Valves
www.comeval.es

Codification

1	2	3	4	5	6	7	8	9	10	11	12	13	14
5	0	4	N	0	0	0	0	1	6	0	0	5	0

1-2-3	504	Gate valve inner screw / non-rising stem & handwheel
	507	Gate valve rising stem

4	N	Wedge coated in NBR
	E	Wedge coated in EPDM
	B	Metal seating in brass
	I	Metal seating in st. steel 304
	J	Metal seating in st. steel 316

5	0	Face to face EN 558 S14 (DIN 3202 F4)
	5	Face to face EN 558 S15 (DIN 3202 F5)
	3	Face to face BS5163 (EN558 S3)

6	0	Operated by handwheel
	W	Operated by wrench nut
	F	ISO top flange for actuator
	R	Operated by gear

7-8	00	Without top flange
	07	with ISO F07 top flange (digit 5=F)
	12	with ISO F12 top flange (digit 5=F)
	14	with ISO F14 top flange (digit 5=F)
	16	with ISO F16 top flange (digit 5=F)

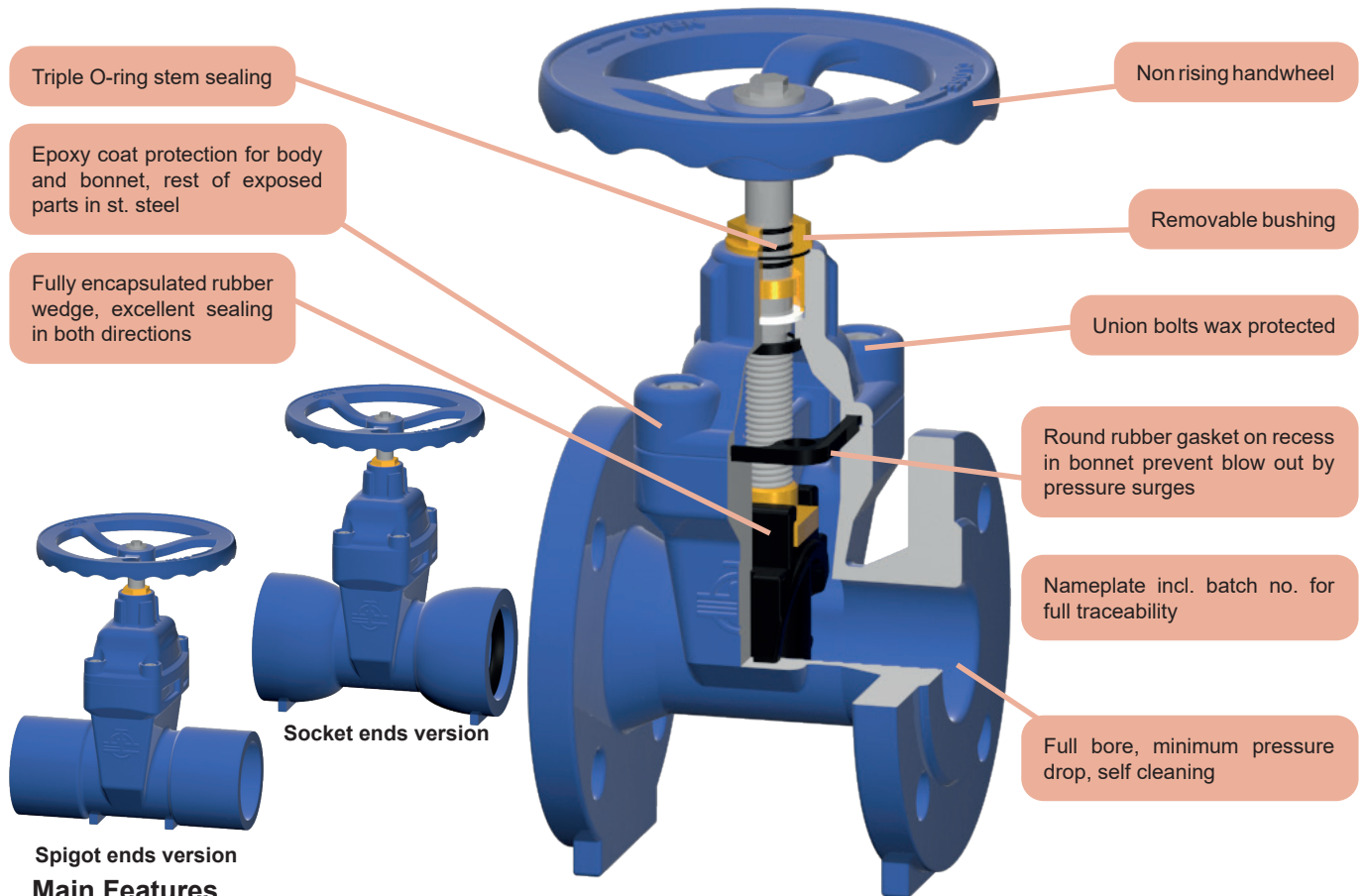
9-10	16	PN16
	06	PN6
	10	PN10
	25	PN25
	SP	SPIGOT ENDS

11	0	No special features
	C	Valve closes counterclockwise

12-13-14	040	DN40
	050	DN50
	065	DN65
	080	DN80
	100	DN100

SERIES 504 resilient seated version

Gate Valves are linear motion valves, bidirectional, with rubber vulcanised or metal wedge devised for stopping the flow of the service fluid when necessary, not being suitable for regulation purposes. Valves close by turning the handwheel clock wise. Valves are bolted bonnet, inner screw, non rising handwheel, non rising stem, and can be operated by handwheel, gear, etc. The valves are provided with epoxy protection against environmental or media aggression. Through their accurate design and production, they offer a reliable performance and full seat tightness, even with certain presence of sediments, being widely used mainly in water works service.



Spigot ends version
Main Features

Valve design: EN 12516
 Nominal pressure: PN25 / PN16 / PN10
 Face to face length: EN 558 S14 (DIN 3202 F4), EN 558 S15 (DIN 3202 F5), EN 558 S3 (BS5163)
 Flanged to EN 1092-2 type 21/B PN25 / PN16 / PN10 (valves DN65 with 4 holes as accepted variant in standard)
 Marking: EN 19
 Pressure Tests: EN 12266-1
 Seat leakage rate: Rate A (full seat tightness in both directions)
 Inside and outside epoxy coating protection blue color similar to RAL5005. Min. average thickness 250 microns
 Product compliant with Directive 2014/68/EU on Pressure Equipment (PED) and Machinery Directive 2006/42/EC
 WRAS Approval for DN50-DN500; ACS approval for DN40 to DN800

Main Duties / Limits of use

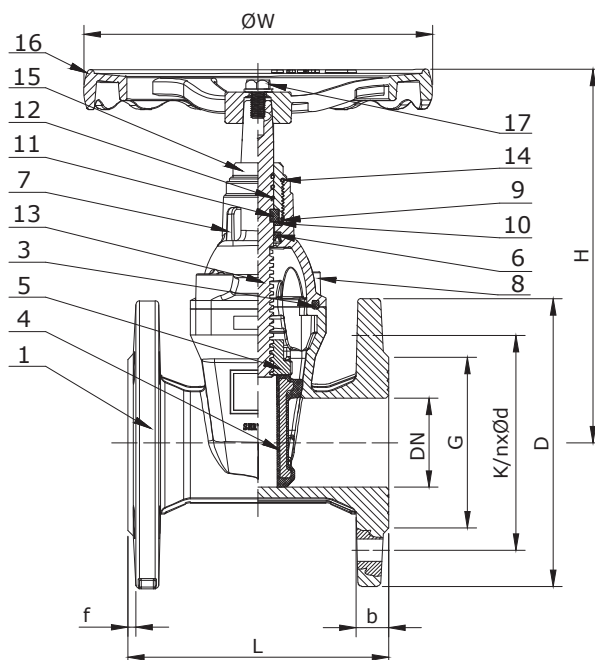
Fresh water and neutral liquids of group 2*, acc. to Directive 2014/68/EU Annex II table 9 up to category I
 PS: 25 bar (DN50-300 only for flanged version) / 16 / 10 bar ; TS: -10/80°C
 Table 9: PS 25 DN50-DN300 (Art.4-Parr.3 DN50-DN200)
 PS 16 DN40-DN1000 (Art.4-Parr.3 DN40-DN300)
 PS 10 DN40-DN1000 (Art.4-Parr.3)

Questions referring to chemical resistance, please consult us
 *Classification of fluids (group 2) acc. to Directive 2014/68/EU, Article 13

Options

Compliance with EN 1171, EN 1074-1/2, higher service temperatures, other designs and approvals, limit switches, different actuation. Please consult us

Main Parts and Materials



Nº	PART	MATERIAL
1	BODY	EN-JS1050 (GGG50)
3	GASKET	EPDM
4	WEDGE	EN-JS1050 (GGG50)-NBR (504N)* EN-JS1050 (GGG50)-EPDM (504E)
5	STEM NUT	Brass CuZn39Pb1
6	AUTO-SEALING RING	EPDM
7	BONNET	EN-JS1050 (GGG50)
8	SCREWS	Steel 8.8 galvanized wax covered
9	O-RINGS	EPDM

Nº	PART	MATERIAL
10	THRUST WASHER	POM
11	HOLDING RING	Stainless steel X20Cr13
12	O-RING	EPDM
13	STEM	Stainless steel X20Cr13
14	DUST RING	EPDM
15	PUSHER NUT	Brass CuZn39Pb1
16	HANDWHEEL	EN-JS1050 (GGG50)
17	SCREW-WASHER	Stainless steel A2

*Only available for PN10-16

Main Valve Parameters DN40-200

	DN	40	50	65	80	100	125	150
L	F4	140	150	170	180	190	200	210
	F5	240	250	270	280	300	325	350
	BS5163	165	178	190	203	229	254	267
H		191	230	270	290	315	348	385
ØW		200	200	200	254	254	315	315
D	PN10/16	150	165	185	200	220	250	285
	PN25	-	165	185	200	235	270	300
K	PN10/16	110	125	145	160	180	210	240
	PN25	-	125	145	160	190	220	250
n-Ød	PN10/16	4-19	4-19	4-19	8-19	8-19	8-19	8-23
	PN25	-	4-19	8-19	8-19	8-23	8-28	8-28
b	PN10/16	19	19	19	19	19	19	19
	PN25	-	19	19	19	19	19	20
G	PN10/16	84	99	118	132	156	184	211
	PN25	-	99	118	132	156	184	211
f		3	3	3	3	3	3	3
Kvs-value		140	220	370	560	880	1380	2300
Recomm. closing torque	PN10/16	20	25	30	35	50	60	70
	PN25	-	50	60	60	100	140	150
Max. closing torque (EN 1171)	PN10/16	80	90	100	150	190	190	190
	PN25	-	90	110	110	150	185	225
No. of turns	PN10/16	7	7	9	10,5	10,5	13	16
	PN25	-	13	17	17	21	26	26
Approx. Weight		9,5	10,5	13,5	15,5	22	26	37

Recomm. closing torques are shown without safety factor

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m³/h / Torques in Nm / Weights in kg

Information / restriction of technical rules need to be observed!

The engineer, designing a system or a plant, is responsible for the selection of the correct valve

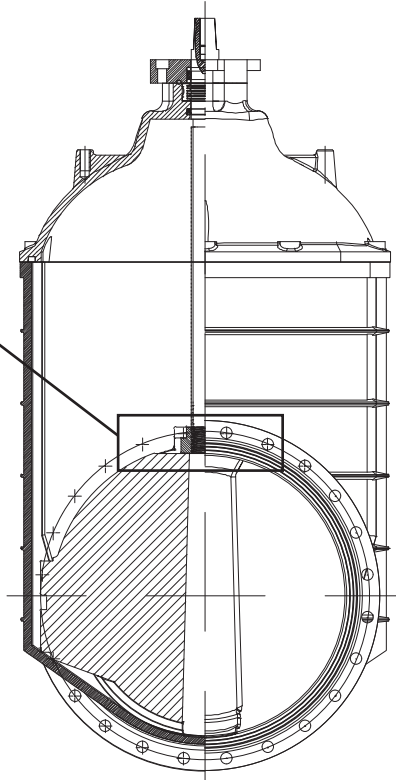
Installation, Operating and Maintenance Manual can be downloaded at www.comeval.es

Product suitability must be verified, contact manufacturer for information

DN250-1000

SERIES 504

PN25 DN250 & DN300 M27



Main Valve Parameters

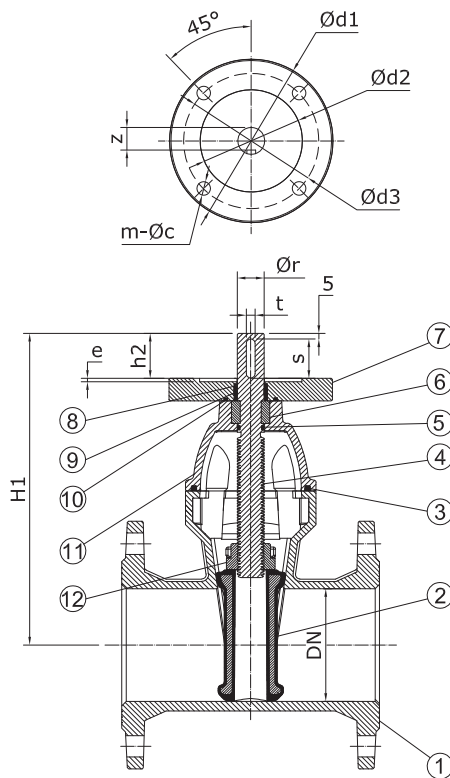
DN		200	250	300	350	400	450	500	600	700	800	900	1000
L	F4	230	250	270	290	310	330	350	390	430	470	510	550
	F5	400	450	500	550	600	650	700	800	900	1000	1100	1200
	BS5163	292	330	356	381	406	432	457	508	610	660	711	813
H		505	590	690	810	890	1010	1234	1260	2150	2150	2220	2250
ØW		315	406	406	500	500	630	630	630	-	-	-	-
D	PN10	340	395	445	505	565	615	670	780	895	1015	1115	1230
	PN16		405	460	520	580	640	715	840	910	1025	1125	1255
	PN25	360	425	485	-	-	-	-	-	-	-	-	-
K	PN10	295	350	400	460	515	565	620	725	840	950	1050	1160
	PN16		355	410	470	525	585	650	770	840	950	1050	1170
	PN25	310	370	430	-	-	-	-	-	-	-	-	-
n-Ød	PN10	8-23	12-23	12-23	16-23	16-28	20-28	20-28	20-31	24-31	24-34	28-34	28-37
	PN16	12-23	12-28	12-28	16-28	16-31	20-31	20-34	20-37	24-37	24-41	28-41	28-44
	PN25	12-28	12-31	16-31	-	-	-	-	-	-	-	-	-
b	PN10	20	22	24,5	24,5	24,5	25,5	26,5	30	32,5	35	37,5	40
	PN16		22	24,5	26,5	28	30	31,5	36	39,5	43	47	50
	PN25	22	24,5	27,5	-	-	-	-	-	-	-	-	-
G	PN10	266	319	370	429	480	548	609	720	794	901	1001	1112
	PN16		319	370	429	480	530	582	682	794	901	1001	1112
	PN25	274	330	389	-	-	-	-	-	-	-	-	-
f		3	3	4	4	4	4	4	5	5	5	5	5
Kvs-value		4090	6390	9200	11591	16350	20455	25560	37153	53190	73361	92236	125256
Recomm. closing torque	PN10/16	160	160	180	200	240	270	350	420	-	-	-	-
	PN25	280	300	350	-	400	-	-	-	-	-	-	-
Max. closing torque (EN 1171)	PN10/16	240	240	300	300	390	390	390	-	-	-	-	-
	PN25	300	375	400	-	600	-	-	-	-	-	-	-
No. of turns	PN10/16	17,5	21	26	30,5	34,5	26	32,5	34,5	41,5	41,5	-	-
	PN25	34	37	44	-	68	-	-	-	-	-	-	-
Approx. Weight		59	89,5	126	180	246	320	490	620	1048	1155	1330	1410

Recomm. closing torques are shown without safety factor

Dimensions in mm subject to manufacturing tolerance / Kvs-values in m³/h / Torques in Nm / Weights in kg

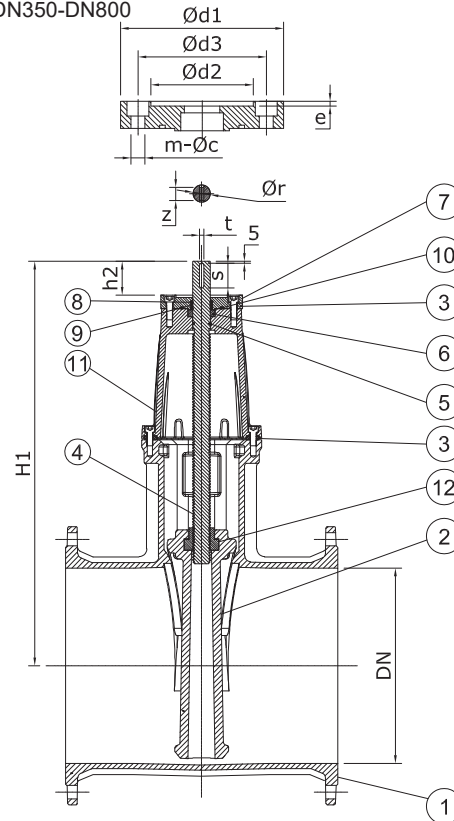
SERIES 504 PN10-16 ISO TOP FLANGE SIZES

DN50-DN300



NO.	PART/PARTE	MATERIAL
1	O-ring	NBR
2	Holding ring	CuZn39Pb1
3	Gland	GGG50
4	O-ring	EPDM
5	Sealing spacer sleeve	Nylon 66
6	O-ring	NBR

DN350-DN800



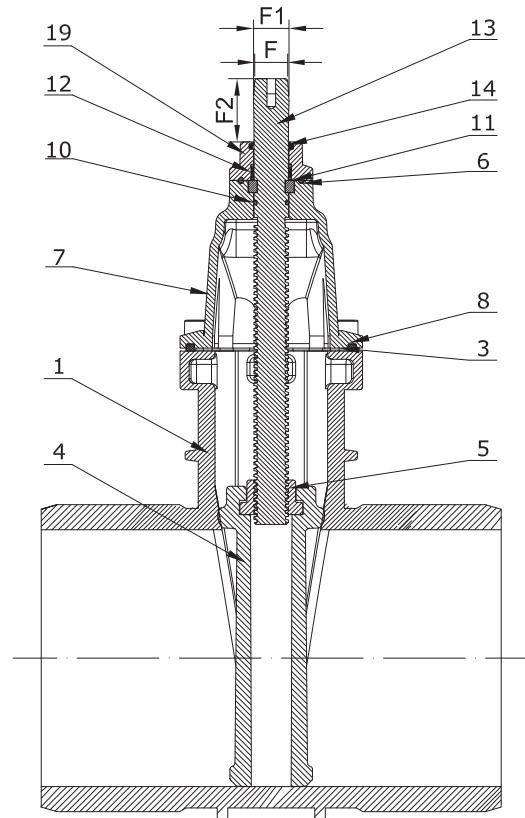
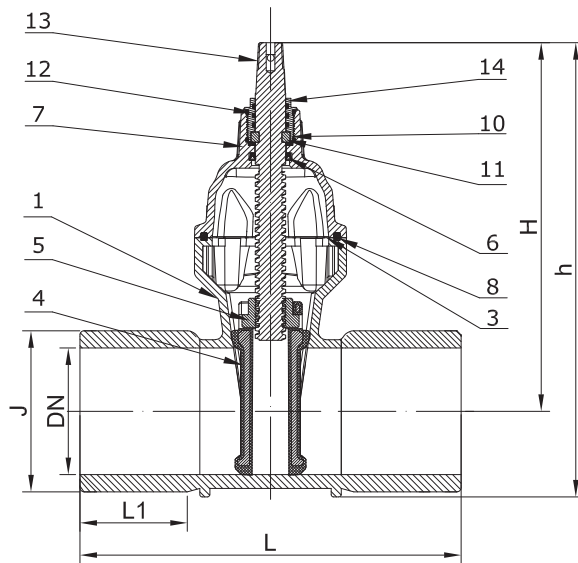
NO.	PART/PARTE	MATERIAL
7	Upper flange	GGG50
8	O-ring	EPDM
9	Sealing spacer sleeve	Nylon 66
10	O-ring	EPDM
11	Bonnet	GGG50
12	Stem nut	CuZn39Pb1

DN		50	65	80	100	125	150	200
STEM MAIN DIMENSIONS	H1	200	240	250	290	328	370	475
	Ør	18	20	20	20	20	20	30
	z	14.5	16.5	16.5	16.5	16.5	16.5	26
	t	6	6	6	6	6	6	8
	s	35	35	35	35	35	35	40
TOP FLANGE ISO 5210	h2	40	40	40	40	40	40	45
	e	3	3	3	3	3	3	4
	Ød1	125	125	125	125	125	125	175
	Ød2	71	71	71	71	71	71	101
	Ød3	102	102	102	102	102	102	140
	m-Øc	4-Ø12	4-Ø12	4-Ø12	4-Ø12	4-Ø12	4-Ø12	4-Ø18
	Type	F10	F10	F10	F10	F10	F10	F14
DN		250	300	350	400	450	500	600
STEM MAIN DIMENSIONS	H1	565	660	750	830	990	930	1220
	Ør	30	30	30	30	30	30	40
	z	26	26	26	26	26	26	35.5
	t	8	8	8	8	8	8	12
	s	40	40	60	60	60	60	70
TOP FLANGE ISO 5210	h2	45	45	65	65	65	65	75
	e	4	4	4	4	4	4	5
	Ød1	175	175	175	175	175	175	210
	Ød2	101	101	101	101	101	101	130
	Ød3	140	140	140	140	140	140	165
	m-Øc	4-Ø18	4-Ø18	4-Ø18	4-Ø18	4-Ø18	4-Ø18	4-Ø20
	Type	F14	F14	F14	F14	F14	F14	F16

Dimensions in mm subject to manufacturing tolerance

SERIES 504 SPIGOT ENDS

Main Parts and Materials



N°	PART	MATERIAL
1	BODY	Ductile Iron
3	GASKET	NBR
4	WEDGE	Ductile Iron-EPDM (504E)
5	STEM NUT	Brass CuZn39P1
6	AUTO-SEALING RING	EPDM
7	BONNET	Ductile Iron
8	SCREWS	304

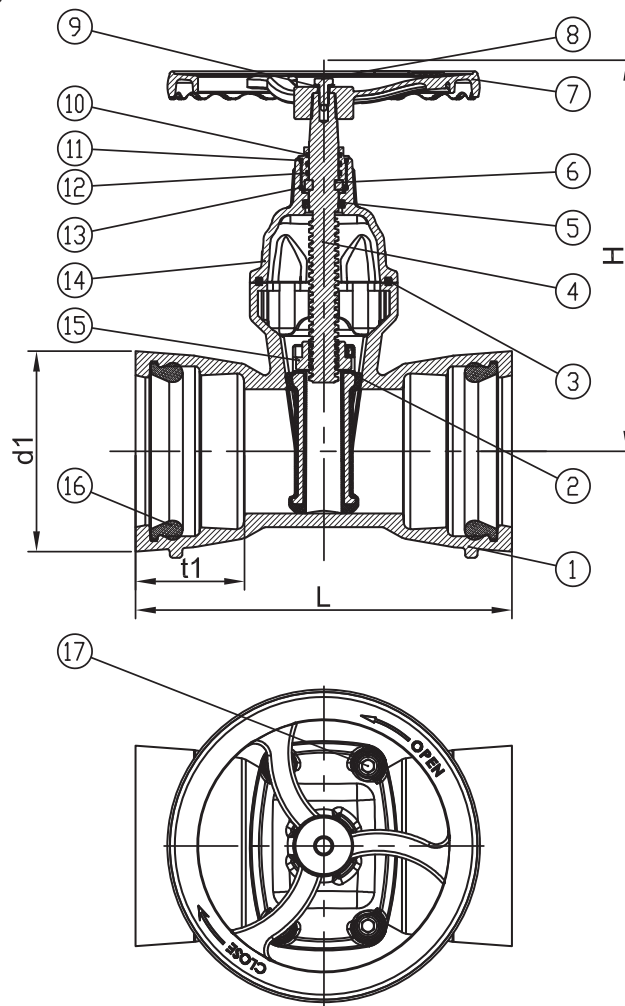
N°	PART	MATERIAL
10	THRUST WASHER	POM
11	HOLDING RING	Brass
12	O-RING	NBR
13	STEM	St. steel
14	DUST RING	NBR
19	GLAND	Ductile Iron

Main Valve Parameters DN100-450

DN	100	125	150	200	225	250	300	350	400	450
J	126	-	178	-	255	-	344	-	-	508
L	300	-	350	-	425	-	500	-	-	650
L1	80	-	80	-	95	-	95	-	-	120
H	294	-	371	-	565	-	649	-	-	951
h	372	-	477	-	738	-	851	-	-	1371
F	-	-	-	-	-	-	-	-	-	32
F1	-	-	-	-	-	-	-	-	-	40
F2	-	-	-	-	-	-	-	-	-	45

Dimensions in mm subject to manufacturing tolerance

Main Parts and Materials



N°	PART	MATERIAL
1	Body	Ductile iron
2	Wedge	Ductile iron + EPDM
3	Bonnet gasket	NBR
4	Stem	420
5	U ring	EPDM
6	Holding ring	CuZn39Pb1
7	Handwheel	Ductile iron
8	Bolt	304
9	Washer	304

N°	PART	MATERIAL
10	O-ring	NBR
11	O-ring	NBR
12	Thrust nut	CuZn39Pb1
13	Thrust washer	POM
14	Bonnet gasket	Ductile iron
15	Stem nut	CuZn39Pb1
16	Rubber ring	EPDM
17	Bolts	C45E/1045

Main Valve Parameters DN40-300

	40	50	65	80	100	125	150	200	250	300
L	-	-	-	284	306	-	337	355	390	440
H	220	215	250	290	310	350	400	505	615	705
d1	103	113	128	140	163	190	217	278	336	393
d2	83	93	108	-	143	169	195	250	301,5	356,5
d3	60,5	70,5	85,5	100,5	120,5	146,5	172,5	224,5	276,5	328,5
d4	77	87	103	-	138,9	164,8	190,6	245,2	296,9	351,7
d5	63,5	73,5	88,5	-	123,4	150	175,3	227,8	279,7	332,1
t1	78	78	80	86,1	88	91	94	100	105	110
t2	38	38	40	-	40	40	40	45	47	50

Dimensions in mm subject to manufacturing tolerance

Sizing Gate Valves



A valve flow coefficient represents the standard flow rate which flows through the valve at a given opening, referred to pre-established conditions:

* Kv value is the volume of water at 20°C, in cubic meters per hour (m³/h), that will flow through the valve at a static pressure drop of 1 bar across the valve.

* Cv value is the volume of water at 60°F, in gallons per minute (gpm), that will flow through the valve at a static pressure drop of 1 psi across the valve.

Conversion from Kv to Cv can be roughly calculated by means of the following expression:

$$Cv = Kv \times 1,17$$

Flow rate through the valve with other liquids can be calculated with the following expressions (*for gases please consult us*):

$$Kv = q (SG / dp)^{1/2}$$

where

q = water flow (m³/h)

SG = specific gravity (1 for water)

dp = pressure drop (bar)

$$Cv = q (SG / dp)^{1/2}$$

where

q = water flow (US gallons per minute)

SG = specific gravity (1 for water)

dp = pressure drop (psi)

It is common practice to size the Gate Valves on the basis of pipe DN for on off application.

COMEVAL Technical Department is at your disposal to help you sizing your system.

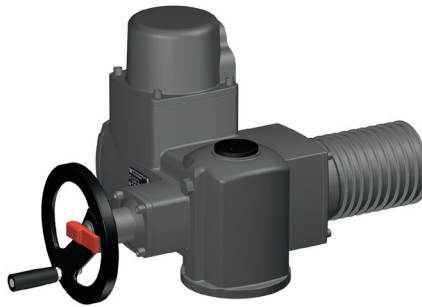
Actuation Solutions - Control Accesories

COMEVAL Gate Valves can be provided with a wide range of solutions on actuation and control accessories which is all packaged at our works according to customer specifications. The modular system permits to distributors and plant users to assemble or replace the diverse options in site. Virtually most applications that may be encountered on the industry today are covered with the standard range of actuation and accessories, nevertheless, other customer tailored solutions can be provided by our R&D Section.

Handwheel



Electric Actuator



Squares



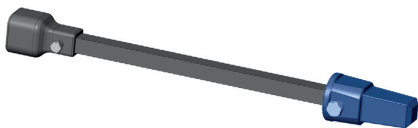
Gear box



Level wrench



Simple extension



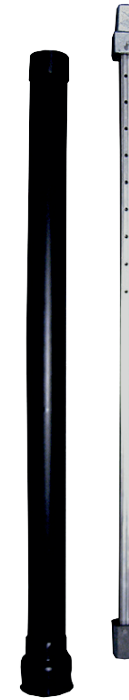
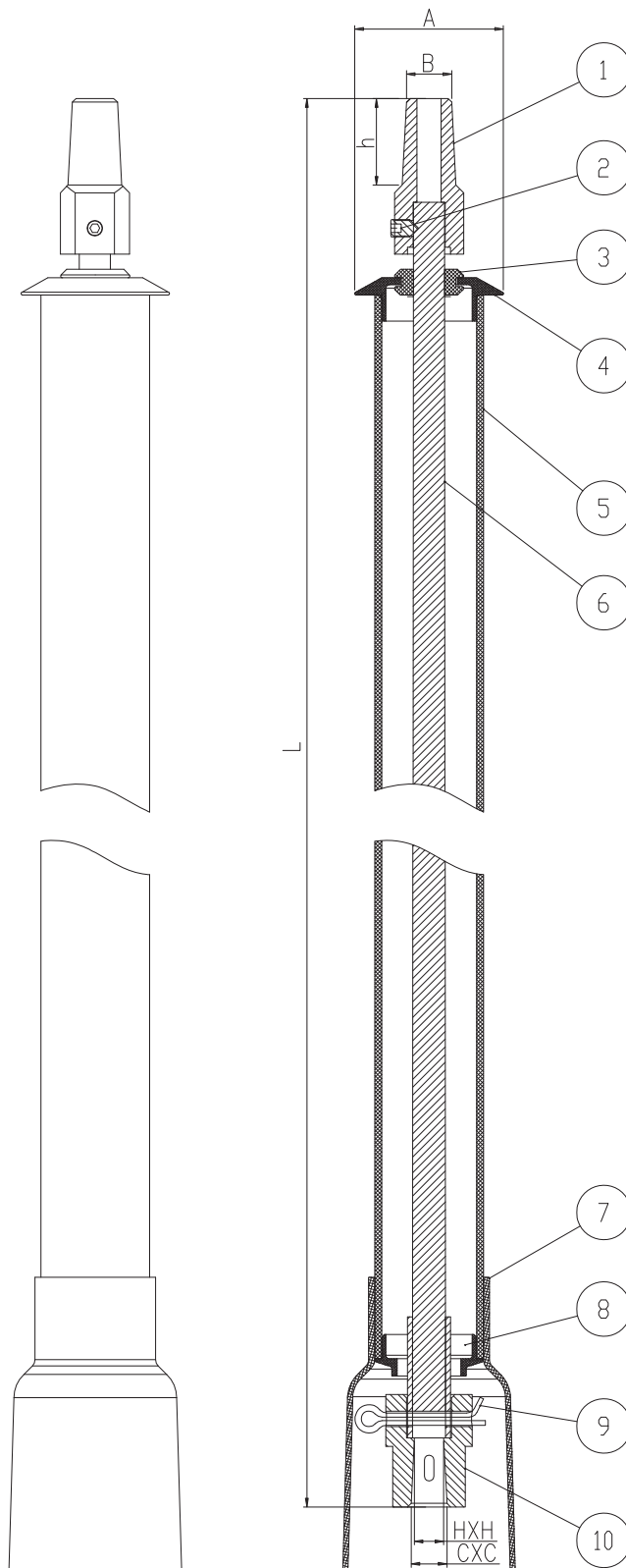
Telescopic extension



Limit switches



STEM EXTENSION



NO.	PART	MATERIAL
1	Square cap	GGG
2	Screw	SS201
3	Anti-dust ring	NBR
4	Top cover	PVC
5	Pipe	PVC
6	Spindle	Carbon steel
7	Bottom cover	PVC
8	End plate	PVC
9	Pin	Carbon steel
10	Coupling	GGG

DN	40	50	65	80	100	150	200	250	300
A	86								
B	27								
CXC	31X31			32X32	38X38		46X46	50X50	
HXH	14X14			17X17	19X19		24X24	27X27	
h	50								

Valves Assembling Sets

DN	Bolts with nuts		Flanges PN10	Gaskets
	Quantity	Size	Quantity	Quantity
15	8	M12x45	2	2
20	8	M12x50	2	2
25	8	M12x50	2	2
32	8	M16x55	2	2
40	8	M16x55	2	2
50	8	M16x60	2	2
65	8	M16x60	2	2
80	16	M16x65	2	2
100	16	M16x65	2	2
125	16	M16x70	2	2
150	16	M20x75	2	2
200	16	M20x80	2	2
250	24	M20x80	2	2
300	24	M20x80	2	2
350	32	M20x90	2	2
400	32	M24x90	2	2
450	40	M24x100	2	2
500	40	M24x100	2	2



DN	Bolts with nuts		Flanges PN16	Gaskets
	Quantity	Size	Quantity	Quantity
15	8	M12x45	2	2
20	8	M12x50	2	2
25	8	M12x50	2	2
32	8	M16x55	2	2
40	8	M16x55	2	2
50	8	M16x60	2	2
65	8	M16x60	2	2
80	16	M16x65	2	2
100	16	M16x65	2	2
125	16	M16x70	2	2
150	16	M20x80	2	2
200	24	M20x80	2	2
250	24	M24x90	2	2
300	24	M24x90	2	2
350	32	M24x100	2	2
400	32	M27x100	2	2
450	40	M27x100	2	2
500	40	M30x110	2	2
600	40	M33x140	2	2

Valves Assembling Sets

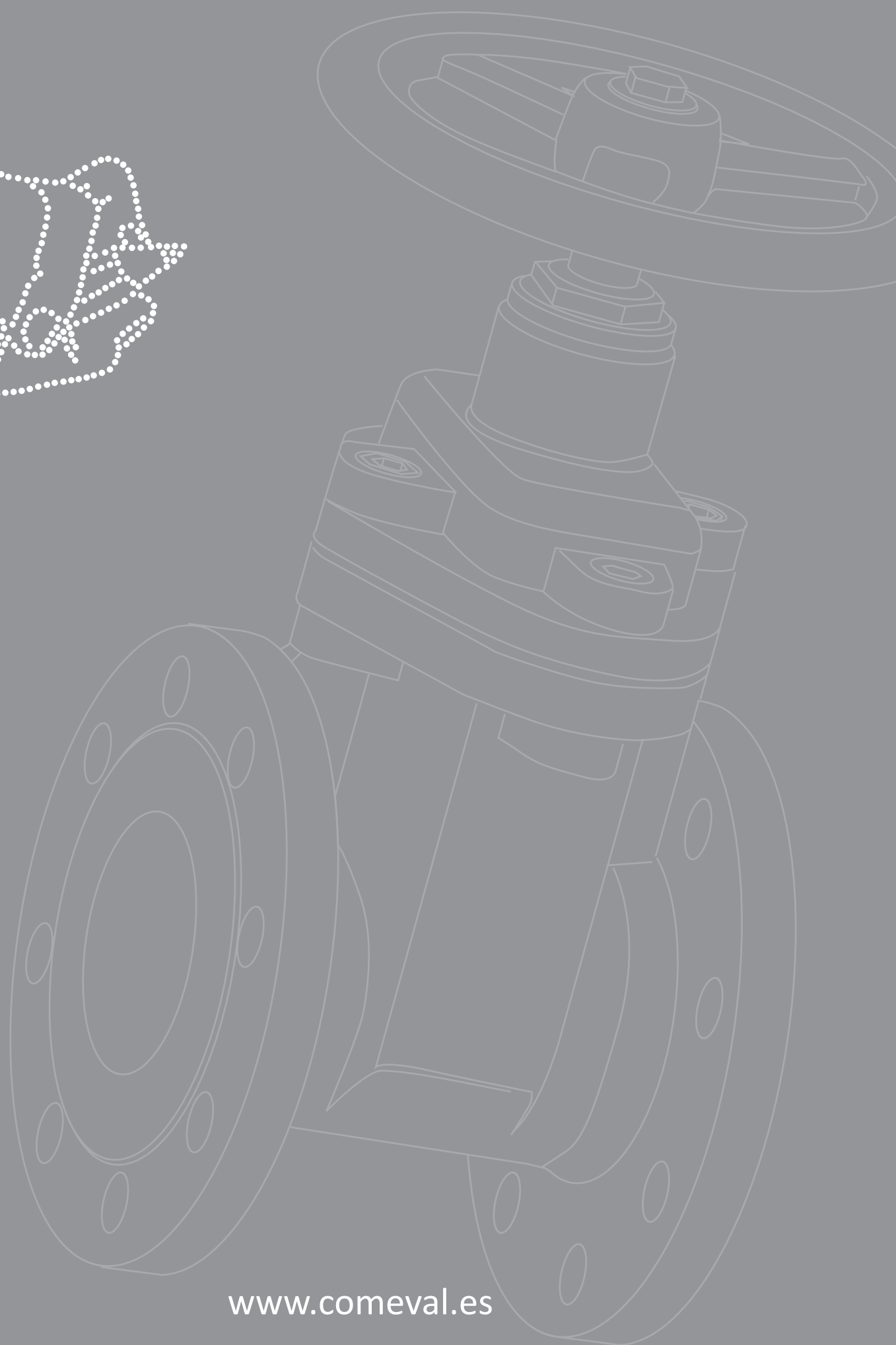
DN	Bolts with nuts		Flanges PN25	Gaskets
	Quantity	Size	Quantity	Quantity
15	8	M12x50	2	2
20	8	M12x55	2	2
25	8	M12x55	2	2
32	8	M16x55	2	2
40	8	M16x55	2	2
50	8	M16x60	2	2
65	16	M16x65	2	2
80	16	M16x70	2	2
100	16	M20x70	2	2
125	16	M24x80	2	2
150	16	M24x90	2	2
200	24	M24x90	2	2
250	24	M27x100	2	2
300	32	M27x100	2	2
350	32	M30x110	2	2
400	32	M33x120	2	2
450	40	M33x130	2	2
500	40	M33x130	2	2
600	40	M36x150	2	2



DN	Bolts with nuts		Flanges PN40	Gaskets
	Quantity	Size	Quantity	Quantity
15	8	M12x50	2	2
20	8	M12x55	2	2
25	8	M12x55	2	2
32	8	M16x55	2	2
40	8	M16x55	2	2
50	8	M16x60	2	2
65	16	M16x65	2	2
80	16	M16x70	2	2
100	16	M20x70	2	2
125	16	M24x80	2	2
150	16	M24x90	2	2
200	24	M27x100	2	2
250	24	M30x110	2	2
300	32	M30x120	2	2
350	32	M33x130	2	2
400	32	M36x140	2	2
450	40	M36x150	2	2
500	40	M39x150	2	2
600	40	M45x190	2	2

Excelling the best

Comeval®



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