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S15 111.181 PN10/16 DN40-500
Gate valve flanged



Certificate 3.1

Size : DN 40 to DN 1000
Ends : PN10/16 flanges
Min Temperature : - 10°C
Max Temperature : + 70°C with EPDM wedge
Max Pressure : 16 Bars up to DN400, 10 bars over
Specifications : Non rising stem
Clockwise to close
Full and total bore

Materials : Ductile iron body EN GJS 500-7

SPECIFICATIONS :

- Full and total bore
- Stainless steel non rising stem
- Clockwise to close
- Sliding pad (to facilitating the wedge movement) up to DN200
- Ductile iron wedge EPDM or NBR coated
- No retention area
- Heel positioning
- NBR bonnet gasket
- Screws bonnet protected
- 3 NBR O ring on stem
- Possibility to change stem gasket under pressure from DN80 to DN1000
- Epoxy painting RAL 5005 color 250 µm thickness
- Dust-coat on stem
- PN10/16 flanges R.F.

USE :

- For water distribution
- Min and max Temperature Ts : - 10°C to + 70°C
- Max pressure Ps : 16 bars for PN16 flanged valves up to DN400
- Max pressure Ps : 10 bars for PN10 flanged valves from DN200 to 1000

FLOW COEFFICIENT Kvs (M3 / h) :

DN	40	50	65	80	100	125	150	200
Kvs (m3/h)	118	229	360	537	933	1595	2685	5004

DN	250	300	350	400	450	500	600
Kvs (m3/h)	8393	12072	16348	21528	29372	37117	52626

HEAD LOSS CALCULATION FOR WATER :

$$\Delta p = (Q / Kvs)^2$$

Q : flow in m³/h

Δp : Head loss in bar

TORQUE VALUE (in Nm without safety coefficient) :

DN	40	50	65	80	100	125	150	200	250	300
Torque (Nm)	15	20	20	30	40	40	75	125	175	200

DN	350	400	450	500	600	700	800
Torque (Nm)	325	350	430	460	480	1100	1250

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NUMBER OF CYCLES TO CLOSE OR OPEN THE VALVE :

DN	40	50	65	80	100	125	150	200	250	300
Number of cycles	13	14.5	18.75	21.5	21.5	24.5	30	34	45.25	49.75

DN	350	400	450	500	600	700	800	1000
Number of cycles	55	61	52	57	66	72	82	102

GEARBOX SPECIFICATIONS :

DN	500	600	700	800	1000
Ref.	9801600	9801601	9801602	9801603	
Ratio factor	4.5 : 1	4.5 : 1	4.5 : 1	4.5 : 1	5.22 : 1
Number of cycles to close or to open the valve	256.5	297	324	369	532.4
Input torque (Nm)	107	167	245	277	380
Max Output torque (Nm)	900	1500	1500	1500	2800

RANGE :

- Ductile iron body with PN10/16 flanges R.F. and handwheel with EPDM wedge **Ref. 180** from DN 40 to DN 400
- Ductile iron body with PN10 flanges R.F. and handwheel with EPDM wedge **Ref. 180** DN 450 and 500
- Ductile iron body with PN10 flanges R.F. and gearbox with EPDM wedge **Ref. 180** from DN 600 to 1000
- Ductile iron body with PN10/16 flanges R.F. and handwheel with EPDM wedge and French water agreement ACS **Ref. 181** from DN 40 to DN 400
- Ductile iron body with PN10 flanges R.F. and handwheel with EPDM wedge and French water agreement ACS **Ref. 181** DN 450 and 500
- Ductile iron body with PN10 flanges R.F. and gearbox with EPDM wedge and French water agreement ACS **Ref. 181** from DN 600 to DN 1000
- Ductile iron body with PN10/16 flanges R.F. and handwheel with NBR wedge **Ref. 182** from DN 40 to DN 300

ACCESSORIES :



- Possible with square drive nut (option) **Ref. 9801831-9801838**



- Possible with gearbox (on request) from DN500 to DN800 **Ref. 9801600-9801603**
- Stem extension 1 meter long **Ref. 9802020** from DN50 to DN300 and **Ref. 9802029** from DN350 to DN400
- Stem extension 1,25 meter long **Ref. 9802031** from DN50 to DN300 and **Ref. 9802040** from DN350 to DN400

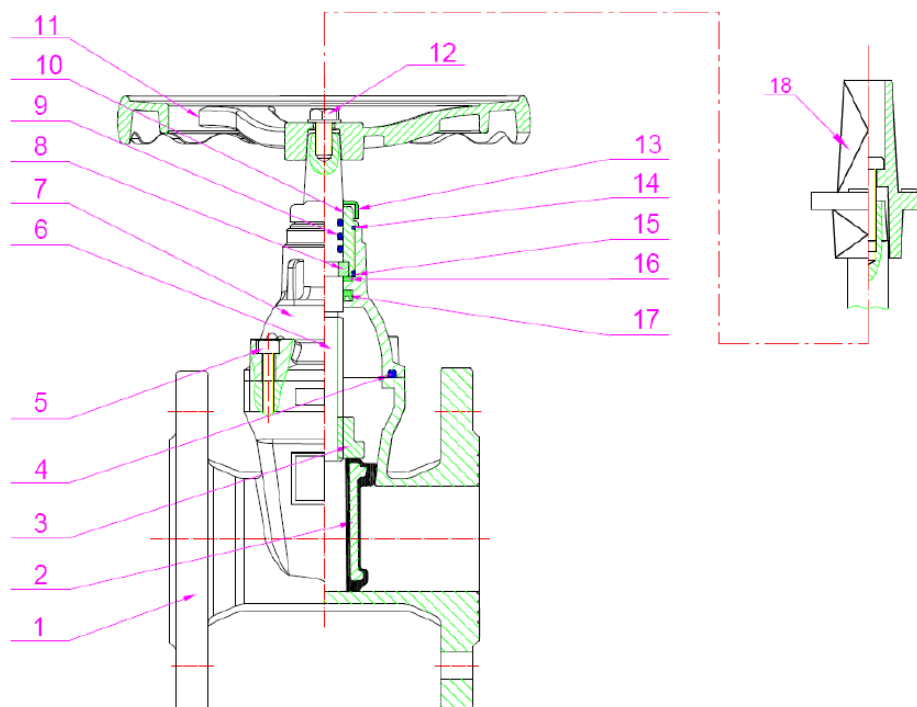


- Stem extension 1,5 meter long **Ref. 9802042** from DN50 to DN300 and **Ref. 9802051** from DN350 to DN400
- Stem extension 1,3 to 1,8 meter long **Ref. 9802060** from DN50 to DN200



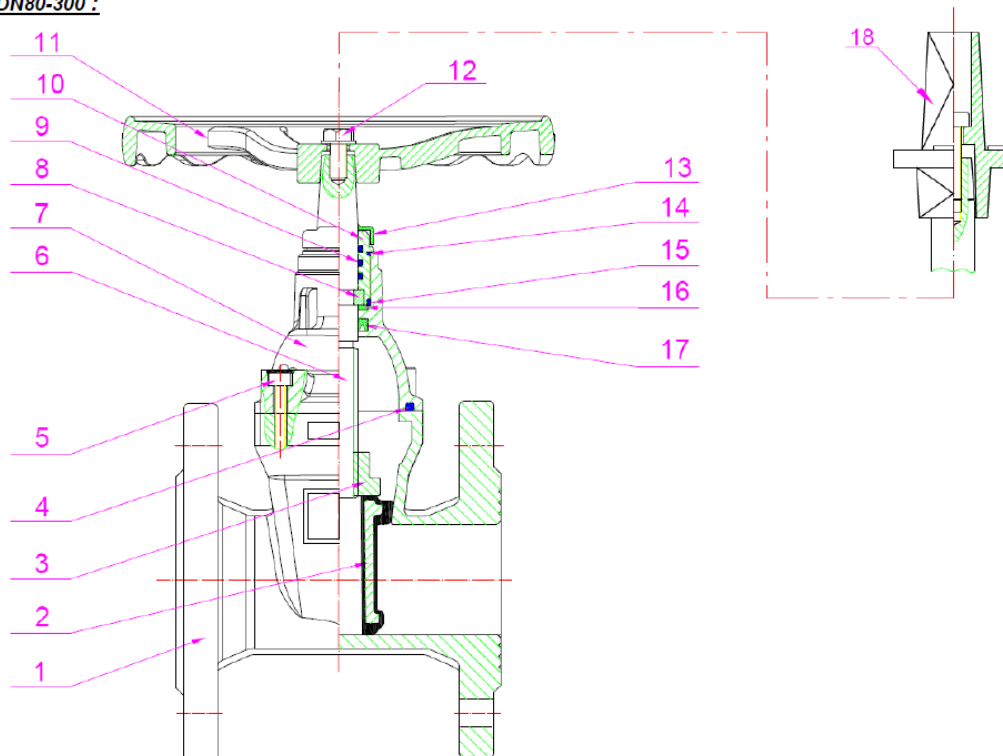
- Stem extension 2 to 2,5 meter long **Ref. 9802070** from DN50 to DN200
- Tee key 1 meter long **Ref.9802080** from DN50 to 200, **Ref.9802081** from DN250 to DN300 and **Ref. 9802082** from DN350 to DN400

MATERIALS DN40-65 :



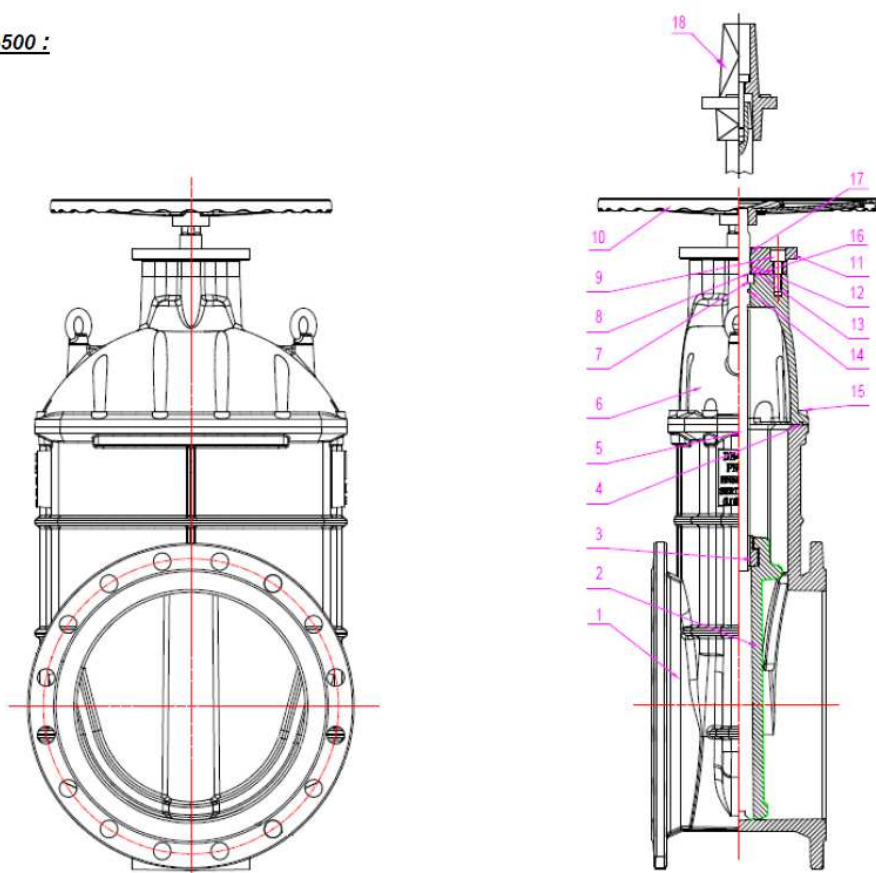
Item	Designation	Materials Ref.180	Materials Ref.181	Materials Ref.182
1	Body	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
2	Wedge	Ductile iron EN GJS-500-7 + EPDM	Ductile iron EN GJS-500-7 + EPDM	Ductile iron EN GJS-500-7 + NBR
3	Stem nut	Brass CuZn40Pb3	Brass CuZn40Pb3	Brass CuZn40Pb3
4	Gasket bonnet	NBR	NBR	NBR
5	Bonnet screw	Steel C35	SS 304	Steel C35
6	Stem	SS 420	SS 304	SS 420
7	Bonnet	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
8	Holding ring	Brass CuZn39Pb2	Brass CuZn39Pb2	Brass CuZn39Pb2
9	O ring	NBR	NBR	NBR
10	Pusher nut	Brass CuZn39Pb2	Brass CuZn39Pb2	Brass CuZn39Pb2
11	Handwheel	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
12	Handwheel screw	SS 304	SS 304	SS 304
13	Dust-coat	NBR	NBR	NBR
14	O ring	NBR	NBR	NBR
15	O ring	NBR	NBR	NBR
16	Ring	Nylon 66	Nylon 66	Nylon 66
17	Auto sealing ring	NBR	NBR	NBR
18	Square drive nut	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7

MATERIALS DN80-300 :



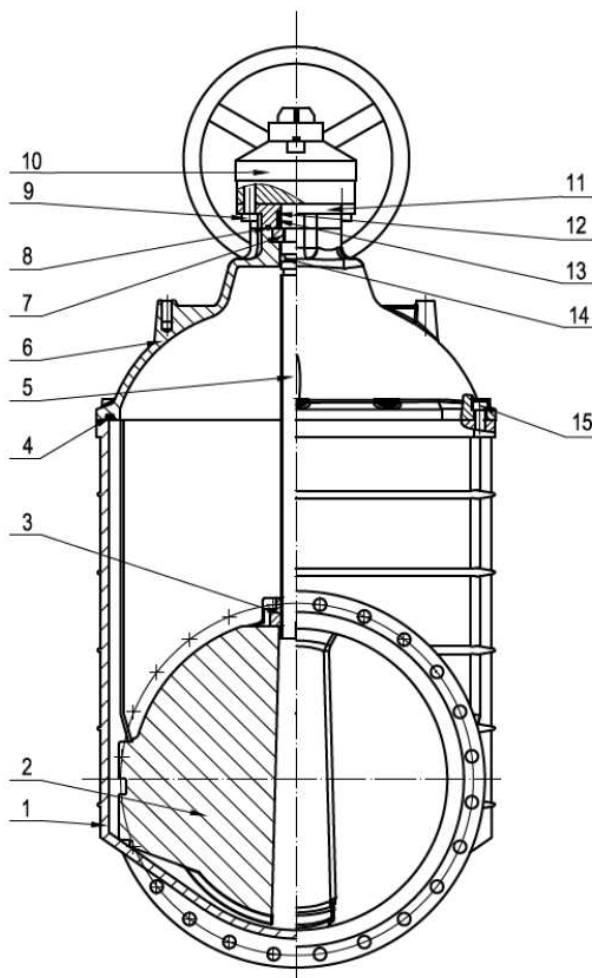
Item	Designation	Materials Ref.180	Materials Ref.181	Materials Ref.182
1	Body	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
2	Wedge	Ductile iron EN GJS-500-7 + EPDM	Ductile iron EN GJS-500-7 + EPDM	Ductile iron EN GJS-500-7 + NBR
3	Stem nut	Brass CuZn40Pb3	Brass CuZn40Pb3	Brass CuZn40Pb3
4	Gasket bonnet	NBR	NBR	NBR
5	Bonnet screw	Steel C35	SS 304	Steel C35
6	Stem	SS 420	SS 304	SS 420
7	Bonnet	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
8	Holding ring	Brass CuZn39Pb2	Brass CuZn39Pb2	Brass CuZn39Pb2
9	O ring	NBR	NBR	NBR
10	Pusher nut	Brass CuZn39Pb2	Brass CuZn39Pb2	Brass CuZn39Pb2
11	Handwheel	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
12	Handwheel screw	SS 304	SS 304	SS 304
13	Dust-coat	NBR	NBR	NBR
14	O ring	NBR	NBR	NBR
15	O ring	NBR	NBR	NBR
16	Ring	Nylon 66	Nylon 66	Nylon 66
17	Auto sealing ring	NBR	NBR	NBR
18	Square drive nut	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7

MATERIALS DN350-500 :



Item	Designation	Materials Ref.180 DN350-1000	Materials Ref.181 DN350-1000
1	Body	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
2	Wedge	Ductile iron EN GJS-500-7 + EPDM	Ductile iron EN GJS-500-7 + EPDM
3	Stem nut	Brass CuZn39Pb2	Brass CuZn39Pb2
4	Bonnet gasket	NBR	NBR
5	Stem	SS 420	SS 304
6	Bonnet	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
7	Holding ring	Brass CuZn39Pb2	Brass CuZn39Pb2
8	O ring	NBR	NBR
9	Screw	Steel Rst 37-2	SS 304
10	Handwheel	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
11	Gland	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
12	O ring	NBR	NBR
13	Ring	Nylon 66	Nylon 66
14	O ring	NBR	NBR
15	Bonnet bolt	Steel C35	SS 304
16	O ring	NBR	NBR
17	Dust-coat	NBR	NBR
18	Square drive nut	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7

MATERIALS DN600-1000 :

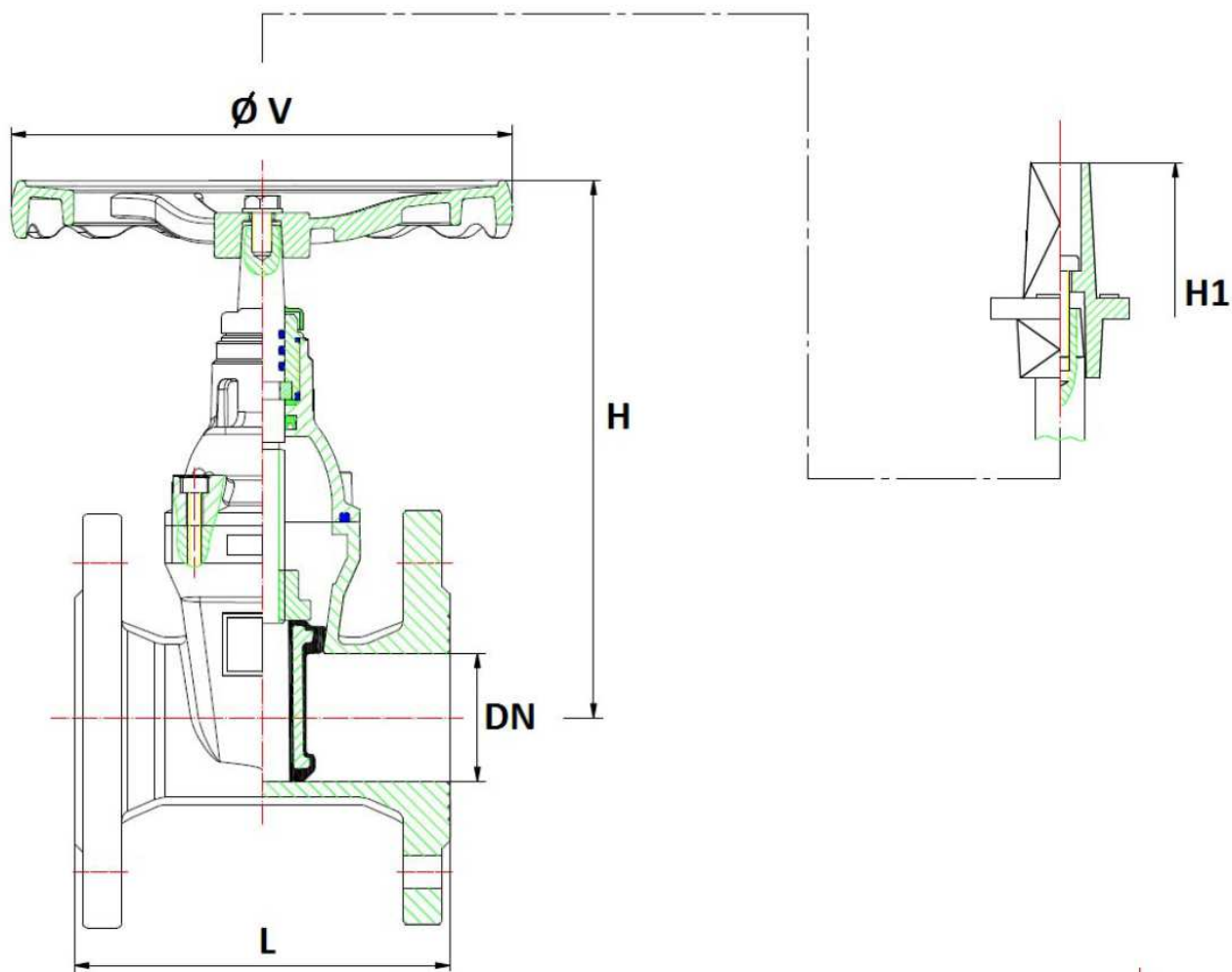


Item	Designation	Materials Ref.180 DN500-1000	Materials Ref.181 DN500-1000
1	Body	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
2	Wedge	Ductile iron EN GJS-500-7 + EPDM	Ductile iron EN GJS-500-7 + EPDM
3	Stem nut	Brass CuZn39Pb2	Brass CuZn39Pb2
4	Bonnet gasket	NBR	NBR
5	Stem	SS 420	SS 304
6	Bonnet	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
7	Holding ring	Brass CuZn39Pb2	Brass CuZn39Pb2
8	O ring	NBR	NBR
9	Screw	Steel Rst 37-2	SS 304
10	Wheel		
11	Gland	Ductile iron EN GJS-500-7	Ductile iron EN GJS-500-7
12	O ring	NBR	NBR
13	Ring	Nylon 66	Nylon 66
14	O ring	NBR	NBR
15	Bolt bonnet	Steel C35	SS 304

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HANDWHEEL VALVE SIZE DN 40 - 65 (in mm) :

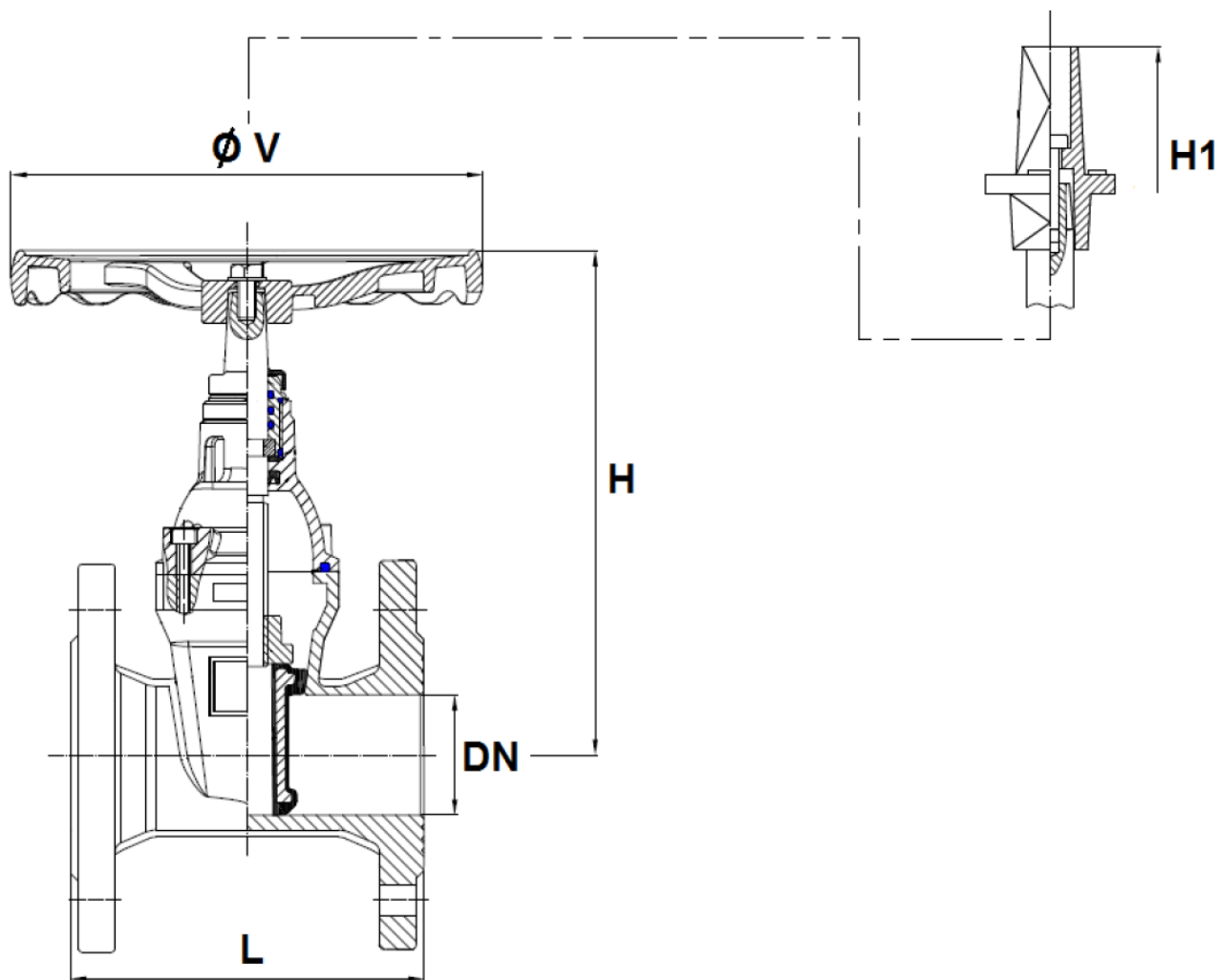


Ref.	DN	40	50	65
180/181/182	L	140	150	170
	H	190	215	235
	H1	260	285	300
	Ø V	200	200	200
	Weight (in Kg)	7.37	8.56	11.30

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HANDWHEEL VALVE SIZE DN 80 - 300 (in mm) :

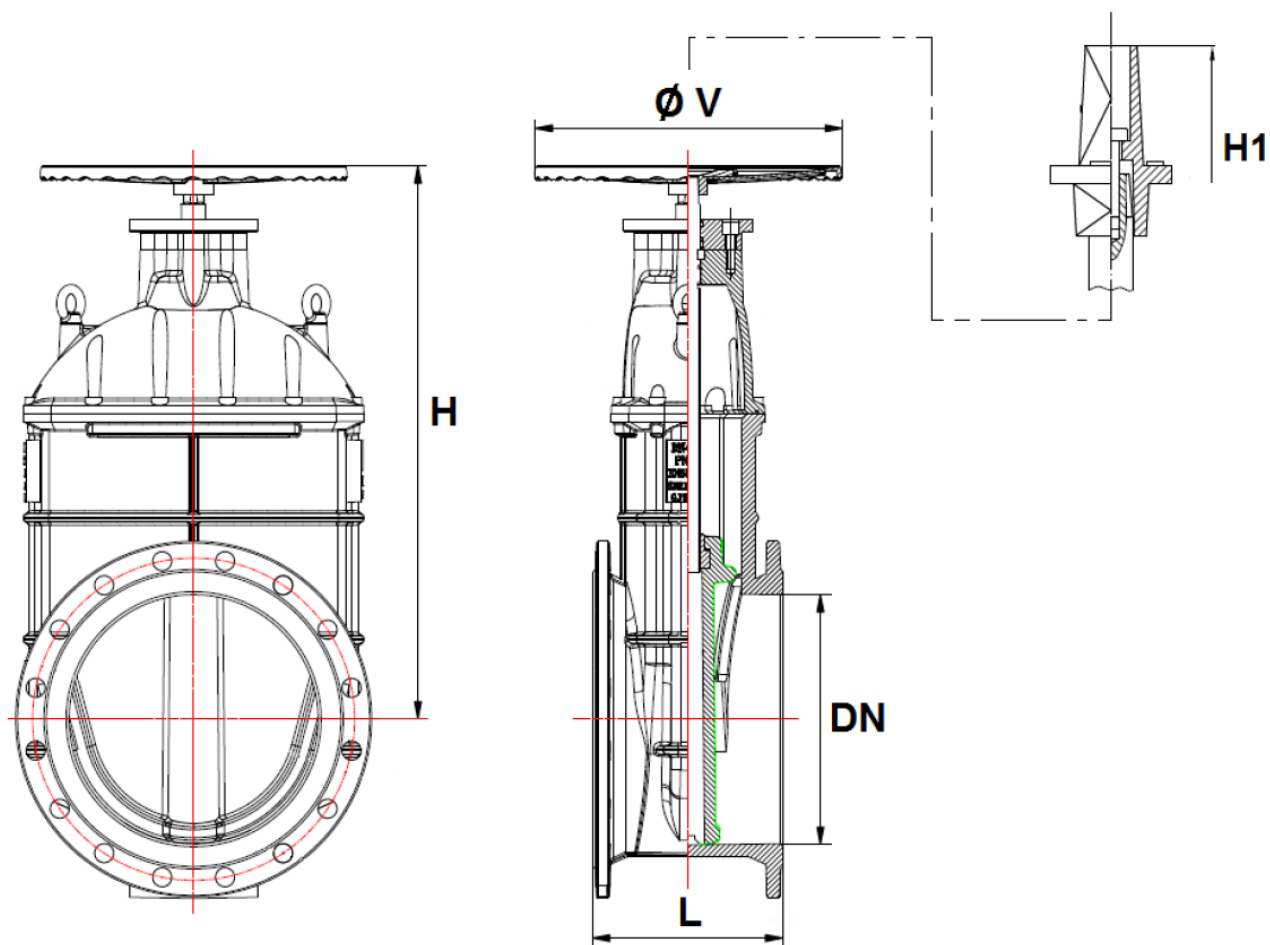


Ref.	DN	80	100	125	150	200	250	300
180/181/182	L	180	190	200	210	230	250	270
	H	265	315	350	385	485	600	680
	H1	320	390	430	470	560	680	770
	Ø V	254	254	315	315	315	406	406
	Weight (Kg)	14	19.90	24.20	31.80	49.40	84.70	106

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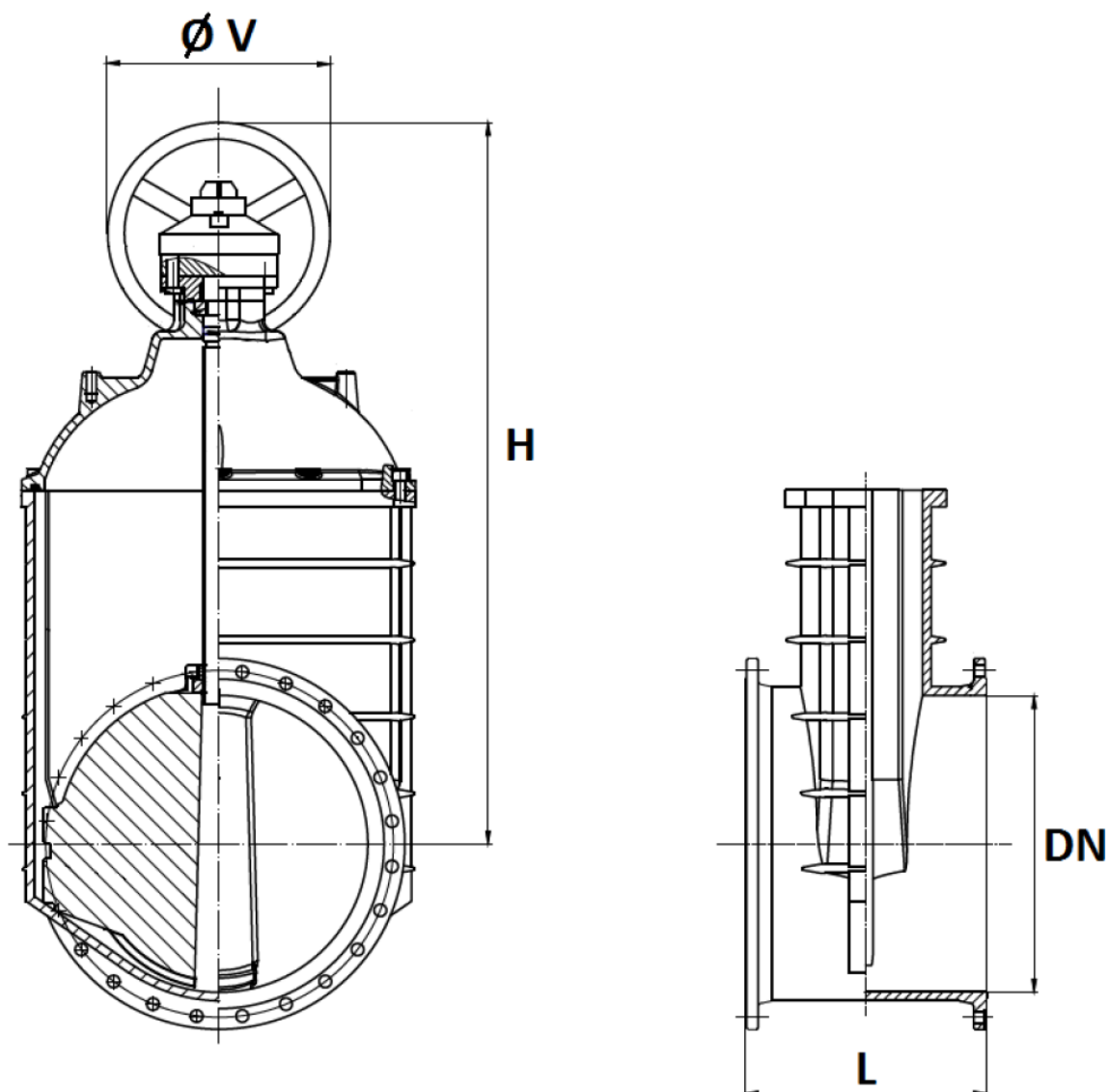
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HANDWHEEL VALVE SIZE DN 350 - 500 (in mm) :



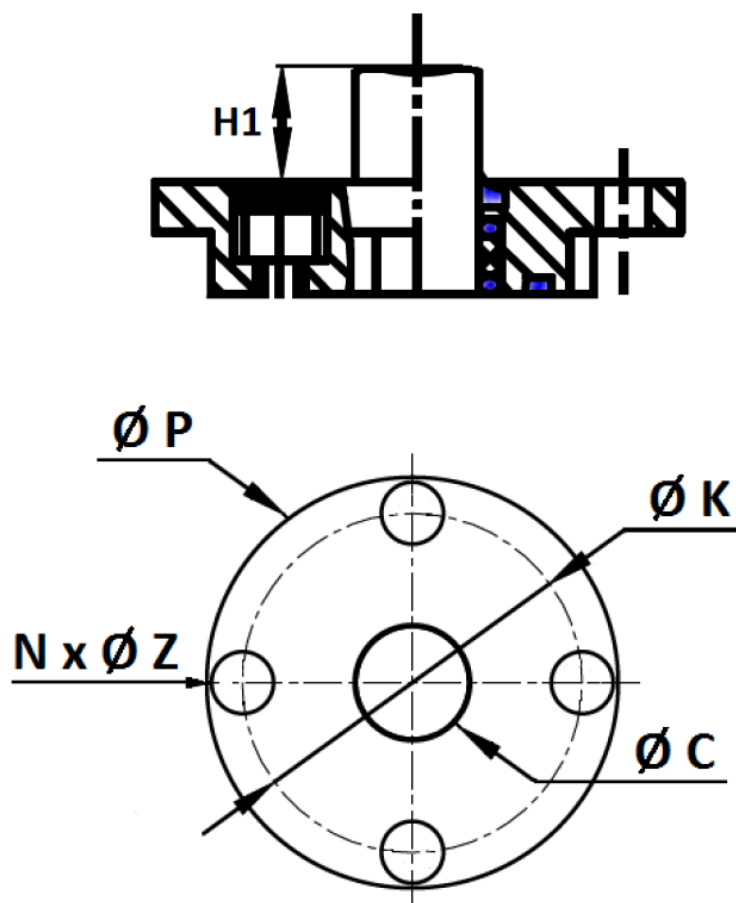
Ref.	DN	350	400	450	500
180/181	L	290	310	330	350
	H	810	890	1050	1230
	H1	900	1000	1150	1330
	Ø V	500	500	500	650
	Weight (in Kg)	185	246	360	419

GEARBOX VALVE SIZE DN 600 - 1000 (in mm) :



Ref.	DN	600	700	800	1000
180/181	L	390	430	470	550
	H	1470	1640	1780	2350
	Ø V	500	500	500	600
	Weight (in Kg)	655	1065	1270	2141

STEM AND ISO MOUNTING PAD SIZE DN350-1000 (in mm) :



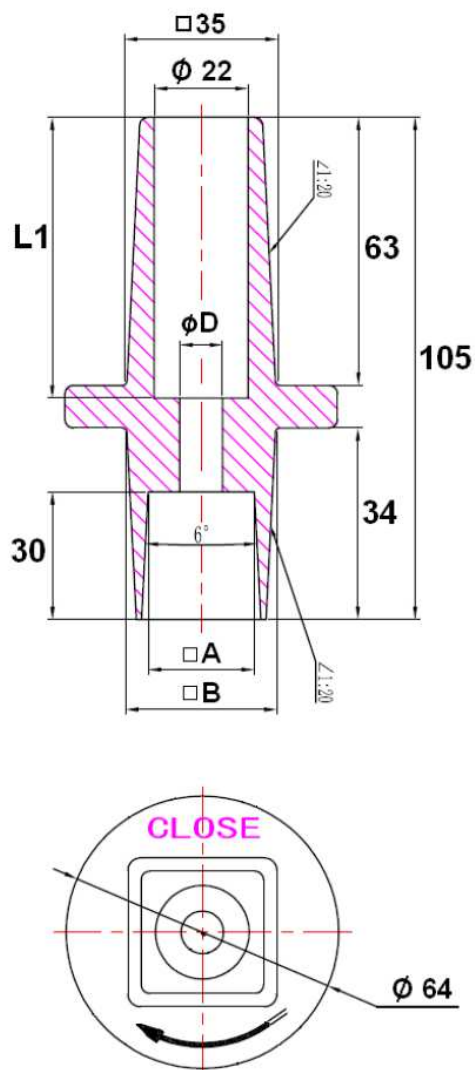
DN	350	400	450	500	600	700	800	1000
H1	58	58	58	75	75	75	75	122
Ø C	40	40	55	55	55	65	65	75
Ø P	210	210	210	300	300	300	300	350
Ø K	165	165	165	254	254	254	254	298
ISO	F16	F16	F16	F25	F25	F25	F25	F30
N x Ø Z	4 x 23	4 x 23	4 x 23	8 x 18	8 x 18	8 x 18	8 x 18	8 x 23

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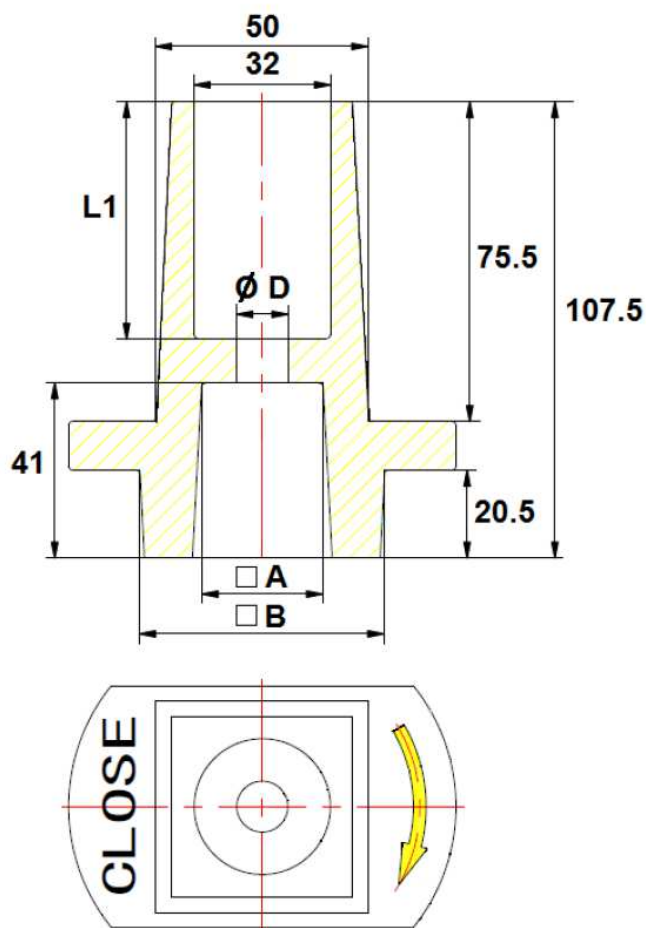
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SQUARE DRIVE NUT SIZE (in mm) :

DN 40 – 300



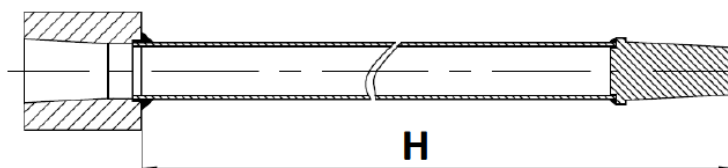
DN 350 - 400



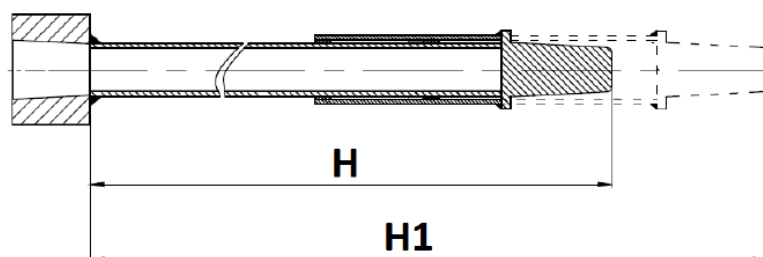
DN	40	50	65	80	100	125	150	200	250	300	350	400
A	14	14	14	17	17	19	19	19	24	24	28.5	28.5
B	34	34	34	34	34	36	36	36	42.5	42.5	57.5	57.5
L1	66	66	66	63	63	63	63	63	63	63	56	56
Ø D	10	10	10	10	10	10	10	10	12	12	12	12
Weight (Kg)	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.96	0.96
Ref.	9801831	9801831	9801831	9801832	9801832	9801833	9801833	9801833	9801834	9801834	9801838	9801838

STEM EXTENSION SIZE DN50-400 (in mm) :

FIXED TYPE

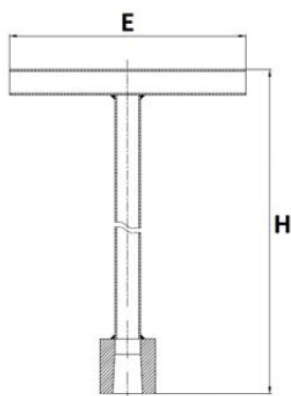


TELESCOPIC TYPE



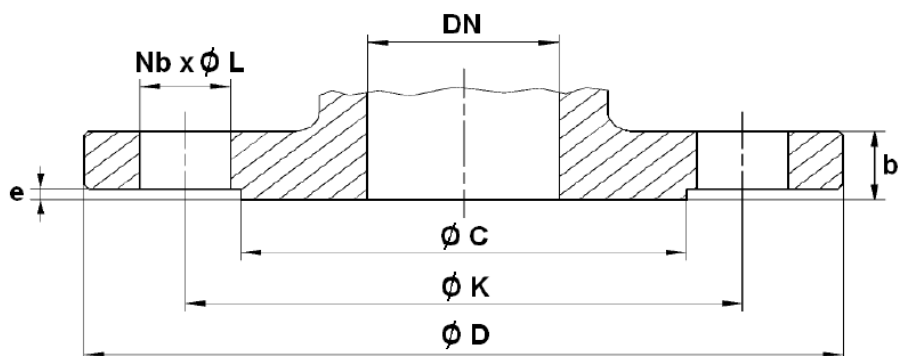
Ref.	DN	H	H1	Weight (Kg)
9802020	50-300	1000	-	3.7
9802031	50-300	1250	-	4.2
9802042	50-300	1500	-	4.5
9802060	50-200	1300	1800	9.6
9802070	50-200	2000	2500	11.8
9802029	350-400	1000	-	5.7
9802040	350-400	1250	-	6.5
9802051	350-400	1500	-	7.4

T HANDLE SIZE (in mm) :



Ref.	DN	E	H	Weight (Kg)
9802080	50-200	300	1316	3.5
9802081	250-300	450	1316	3.8
9802082	350-400	300	1316	7.92

FLANGES PN10 SIZE (in mm) :



* DN60/65 double holes

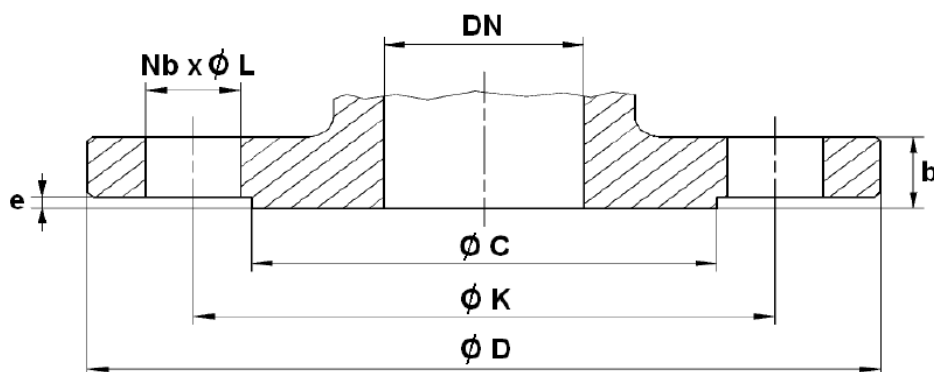
DN	40	50	60/65*	65	80	100	125	150	200	250	300
Ø C	84	99	118	118	132	156	184	211	266	319	370
Ø D	150	165	185	185	200	220	250	285	340	405	460
Ø K	110	125	135/145	145	160	180	210	240	295	350	400
Nb x Ø L	4 x 19	4 x 19	4 x 19	4 x 19	8 x 19	8 x 19	8 x 19	8 x 23	8 x 23	12 x 23	12 x 23
b	19	19	19	19	19	19	19	19	20	22	24.5
e	3	3	3	3	3	3	3	3	3	3	4
Ref. 180	180040	180050	-	180065	180080	180100	180125	180150	180200	180250	180300
Ref. 181	181040	181050	181066	181065	181080	181100	181125	181150	181200	181250	181300
Ref. 182	182040	182050	-	182065	182080	182100	182125	182150	182200	182250	182300

DN	350	400	450	500	600	700	800	1000
Ø C	429	480	530	582	682	794	901	1112
Ø D	520	580	640	715	840	910	1025	1255
Ø K	460	515	565	620	725	840	950	1160
Nb x Ø L	16 x 23	16 x 28	20 x 28	20 x 28	20 x 31	24 x 31	24 x 33	28 x 37
b	26.5	28	30	31.5	36	39.5	43	50
e	4	4	4	4	5	5	5	5
Ref. 180	180350	180400	180450	180500	180600	180700	180800	1801000
Ref. 181	181350	181400	181450	181500	181600	181700	181800	1811000

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FLANGES PN16 SIZE (in mm) :



DN	200	250	300	350	400
Ø C	266	319	370	429	480
Ø D	340	405	460	520	580
Ø K	295	355	410	470	525
Nb x Ø L	12 x 23	12 x 28	12 x 28	16 x 28	16 x 31
b	20	22	24,5	26,5	28
e	3	3	4	4	4
Ref. 180	180201	180251	180301	180351	180401
Ref. 181	181201	181251	181301	181351	181401
Ref. 182	182201	182251	182301	-	-

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STANDARDS :

- Fabrication according to ISO 9001 :2008 and ISO 14001 : 2004
- Designing according to DIN EN 1171
- Pressure tests according to EN 12266-1, Rate A
- DIRECTIVE 2014/68/EU : Products excluded, article 1, § 2b up to DN300
Risk category I Module A from DN350 to 600
- Certificate 3.1 on request
- Length according to EN 558 series 14 (DIN 3202 F4)
- Flanges according to EN 1092-2 PN10/16
- English water agreement WRAS for the wedge EPDM coated from DN50 to 500
- French water agreement **A.C.S. N° 14 ACC LY 028** for Ref.181 with wedge EPDM coated

INSTALLATION INSTRUCTIONS

GENERAL GUIDELINES :

- Ensure that the valves to be used are appropriate for the conditions of the installation (type of fluid, pressure and temperature).
- Be sure to have enough valves to be able to isolate the sections of piping as well as the appropriate equipment for maintenance and repair.
- Ensure that the valves to be installed are of correct strength to be able to support the capacity of their usage.
- **Installation of all circuits should ensure that their function can be automatically tested on a regular basis (at least two times a year).**

INSTALLATION INSTRUCTIONS :

- **Before installing the valves, clean and remove any objects from the pipes** (in particular bits of sealing and metal) which could obstruct and block the valves.
- **Ensure that both connecting pipes either side of the valve (upstream and downstream) are aligned** (if they're not, the valves may not work correctly).
- **Make sure that the two sections of the pipe (upstream and downstream) match, the valve unit will not absorb any gaps. Any distortions in the pipes may affect the tightness of the connection, the working of the valve and can even cause a rupture.** To be sure, place the kit in position to ensure the assembling will work.
- **If sections of piping do not have their final support in place, they should be temporarily fixed. This is to avoid unnecessary strain on the valve.**
- Tighten the bolts in cross.
- It's recommended to operate the valve (open and close) 1 to 2 times per year