



PUMP, VALVE AND DAM
EQUIPMENT

TURBINE BY-PASS VALVE



Since 1984, SEMSAN PUMP is main mechanical equipment and specific process pumps manufacturer for most important projects of Turkey. SEMSAN is most wanted company in Turkey market when SEMSAN PUMP established.

SEMSAN PUMP relocated in Samsun organized industrial zone at 2002 for growing marketing requests.

SEMSAN PUMP has 5000m2 work field in Samsun Industrial zone. Our company has 2x2000 kg. + 2x750 kg. Inducto therm brand twin induction furnaces. We can offer our brands manufacturing and high-tech forming and induction equipment's we can produce stainless steel and ductile products.

SEMSAN PUMP has TSE certificates on all products and all processes have to obey TSE ISO 9001:2008, TSE-EN-ISO 14001, İSG-OHSAS TS18001 quality management.

SEMSAN PUMP also has European CE Declaration of conformity for pumps and valves.

SEMSAN PUMP has innovative perspective, daily gaining new features on our company. Also SEMSAN PUMP check updates and newest products in the marketing world wide and keeps updating and upgrading self.

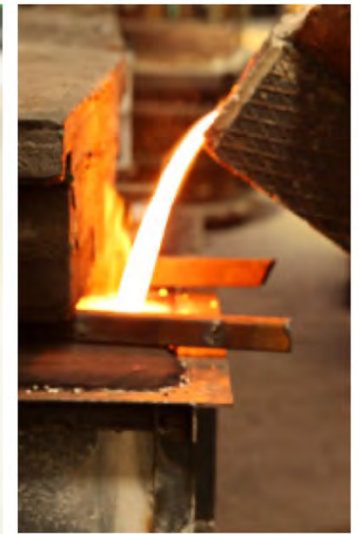
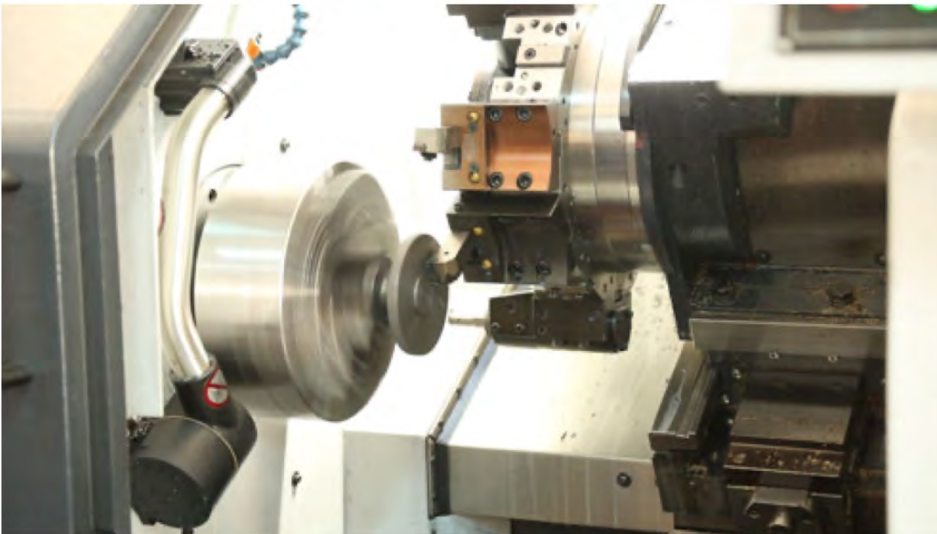
CERTIFICATION

- K-Q TSE ISO EN 9000 QUALITY MANAGEMENT SYSTEM
- TSE İSG-OHSAS TS 18001 HEALTH AND SAFETY MANAGEMENT SYSTEM
- Ç-E TSE-ISO-EN 14000 ENVIROMENTAL MANAGEMENT SYSTEM
- TS EN 593 BUTTERFLY VALVE
- TS EN 12334 CHECK VALVE
- TS 12599 SUBMERSIBLE SEWAGE PUMP
- TSE K 461 DISMANTLIG JOINT
- 97/23/EC PRESSURE EQUIPMENT CASTING CERTIFICATE
- CE DECLARATION OF CONFORMITY ABOUT PUMPS
- TS 12873 SERVICE QUALIFICATION CERTIFICATE - PUMPS
- TS 12844 SERVICE QUALIFICATION CERTIFICATE - VALVE
- WRAS - COATING AND EPDM SEALING SUITABLE FOR DRINKING WATER



MANUFACTURING

- FOUNDRY; 2x2000 kg + 2x750 kg Inductotherm Induction Furnace
- CNC Machining Department
- Electrostatic Epoxy Coating Line
- Double Compound Wet Epoxy Line
- Quality Control
- Material Laboratory: Spectrometer, Tensile Strength Test Machine, Microstructure Analysis Microscope, Hardness Tests
- Hydrostatic Pressure Tests for EN 12266 -1,2
- Pump Performance Tests for ISO 9906
- Material Certification for EN 10204 3.1
- Coating Thickness, Pull of and Spark Test
- Surface Roughness Tests





TURBINE BY-PASS VALVE PLUNGER VALVE WITH HYDRAULIC

DN 150/1400 | PN 10/ 16/ 25/ 40/ 64



DESIGN

- Flanges DIN EN 1092
- Open – close and control valve
- Circle section symmetrical flow
- Moving linear plunger
- Metal sealing, and EPDM sealing ring
- V-port for high pressure difference
- Maximum working temperature 50 °C

CONTROL

- Counterweight and hydraulic pistons help closing very fast with the provide of hydraulic piston will be closed

OPTIONAL

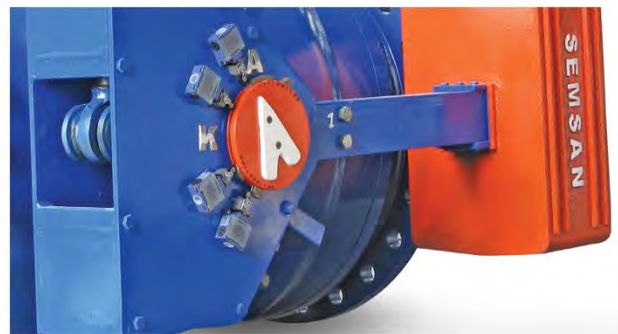
- Electrical actuator
- Handwheel
- DN > 1400

APPLICATION

When the turbine inlet valve closed it is using for bypass the water in penstock and save from hammer and high pressure

MATERIAL

- Body is ductile iron casting (GGG-40/50)
- Moving internal parts stainless steel AISI 304
- Valve shaft is stainless steel AISI 420
- Bearing is bronze
- Plunger seal ring EPDM



LAST QUALITY CONTROL EN 12266 – 1 CLASS A

Nominal Diameter (DN)	Nominal Pressure PN kg / cm2	Test Pressure		Max Pressure for Temperature 50 °C
		Body	Disk	
150.....1400	10	15	15	10
150.....1400	16	24	24	16
150.....1400	25	37,5	27,5	25
150.....1400	40	60	44	40
150.....1400	64	96	71	64

* All of dimensions and explanations has been given for information. SEMSAN reserve right to keep change all them off.

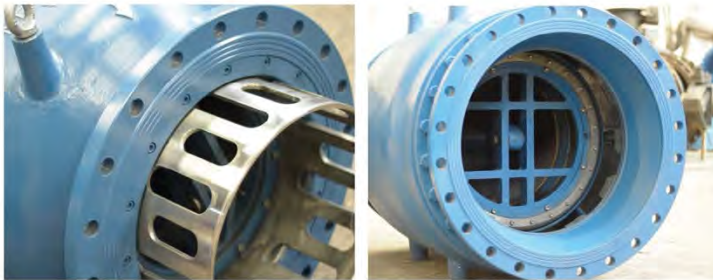


ADVANTAGES

- Pressure, flow rate and water level control valve
- Low operation torques on high pressure differences
- High safety coefficient design
- Linear regulation capability
- Suitable for modulating operation
- Low cavitation risk
- Metal seaing, additional EPDM seal ring
- Special outlet design for project.
- Operation types for application areas
- Low maintenance cost

APPLICATION AREAS

- Open – Close valve for high presure and flow velocity
- Pump Control Valve
- Water Level Control Valve
- Bottom Outlet Valve
- Turbine Inlet and Turbine By – Pass Valve
- Pressure Control Valve for Drinking Water
- Flow Rate Regulation Valve
- Pressure Control for Irrigation Projects



DESIGN

- TS EN 593 Certificated
- PN10 – PN64
- Double Flange
- Face to Face EN 558 – 1 Series 15 (up to DN500 1,5 x DN)
- Open Close and Control Valve
- Axial Movement for Plunger
- Rotationally Symetric Flow
- Metal seaing, additional EPDM seal ring
- Adjustable and Replaceable Sealing Ring
- Mechanical position indicator and limit stops on gear box
- Max Operation Temperature 50°C
- Movement Parts are Stainless Steel

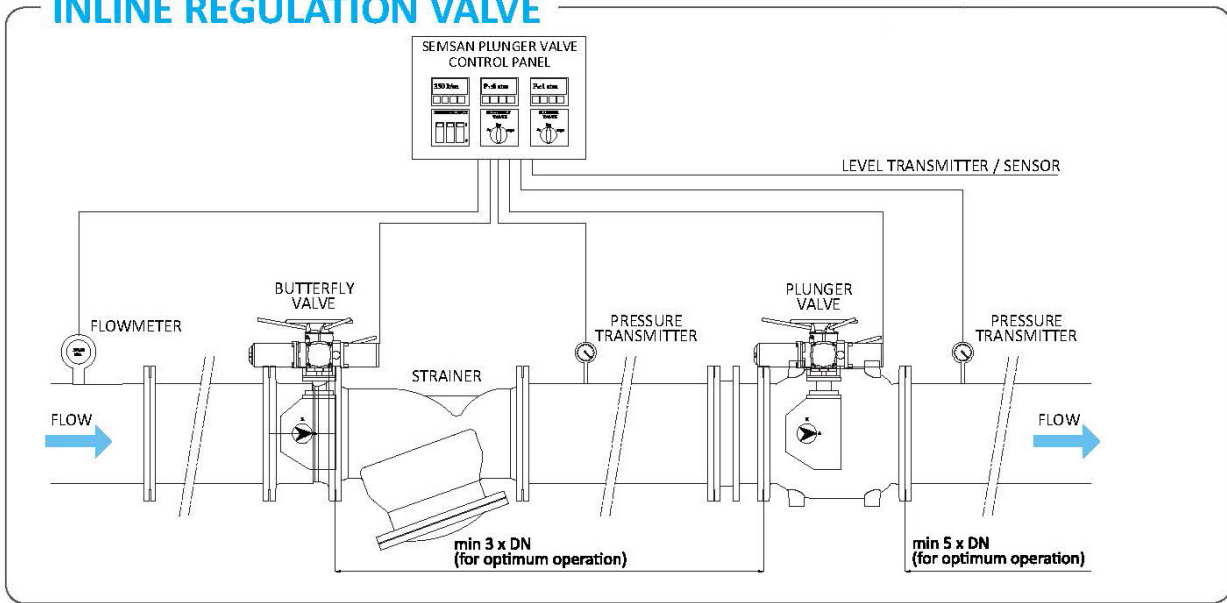
CORROSION PROTECTION

- Electrostatic Powder Coating for Drinking Water
- Zinch – Rich Epoxy Primer
- Coal – Tar Epoxy
- Glass Flake Epoxy
- Enamel Epoxy for Ultraviolet
- Completely Stainless Steel Design
- Ebonite Coating for Seawaater

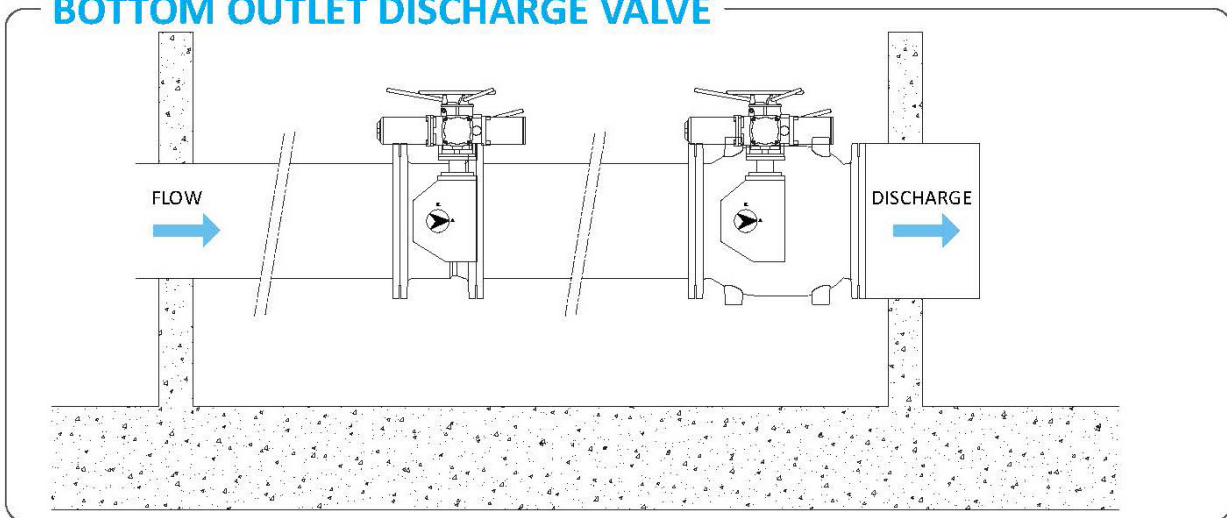
OPERATION

- Handwheel
- Electrical Actuator
- Pneumatic Actuator
- Hydraulic Actuator
- On-off or Modulating Operation

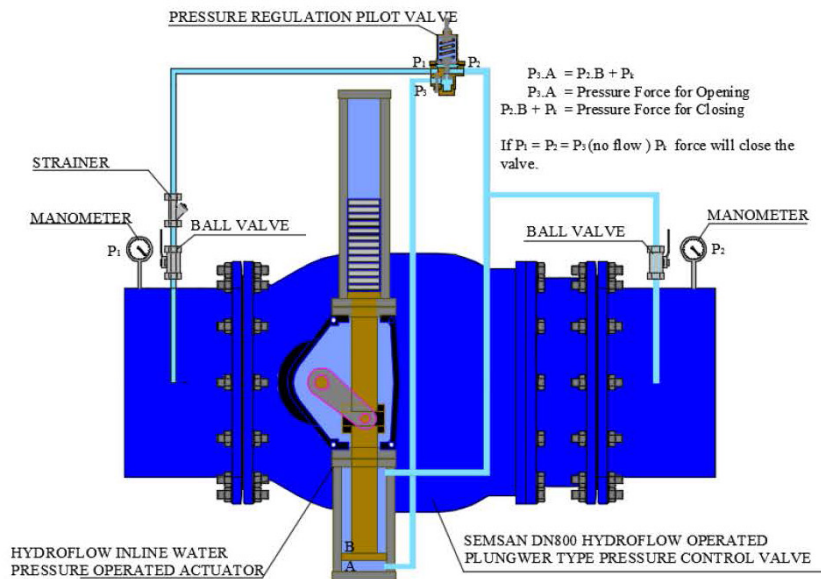
INLINE REGULATION VALVE



BOTTOM OUTLET DISCHARGE VALVE

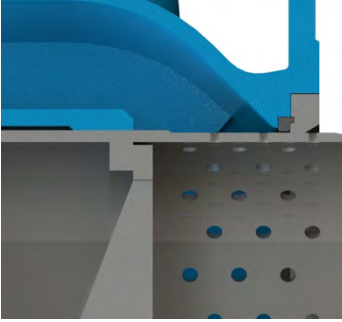


INLINE HYDROFLOW PLUNGER VALVE (WORKING WITH LINE PRESSURE)

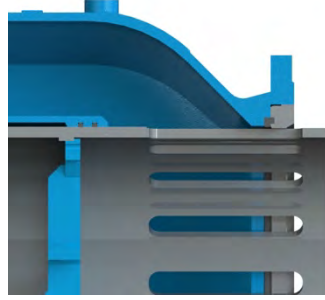


VERSIONS

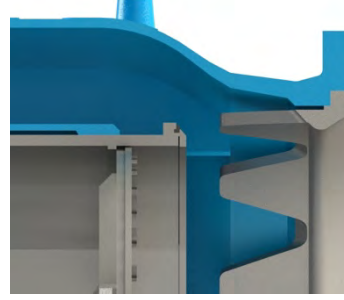
PERFORATED CYLINDER



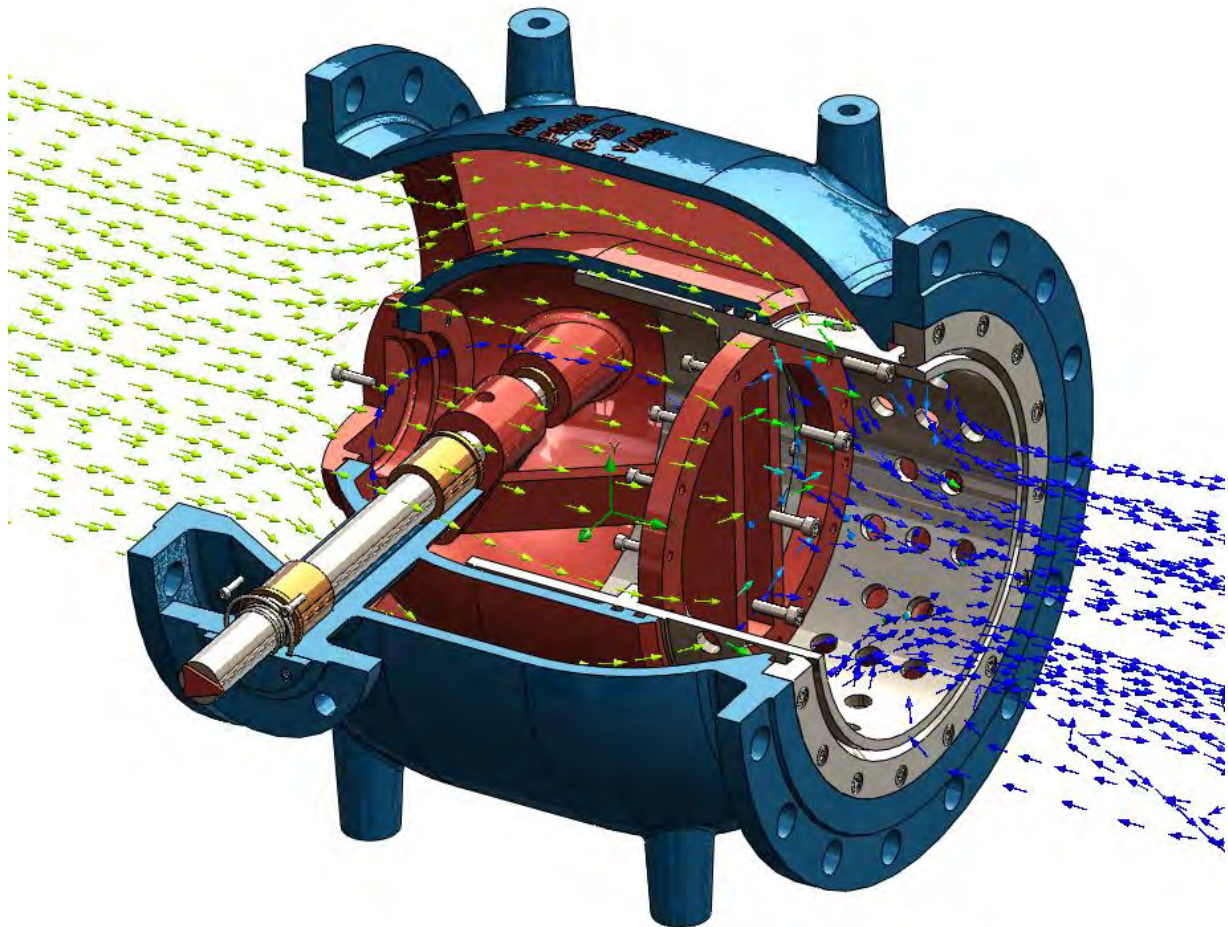
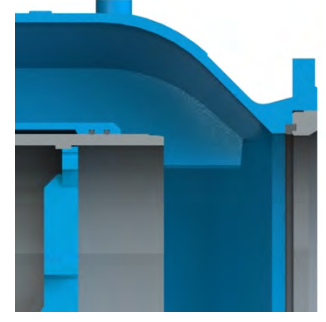
SLOTTED CYLINDER

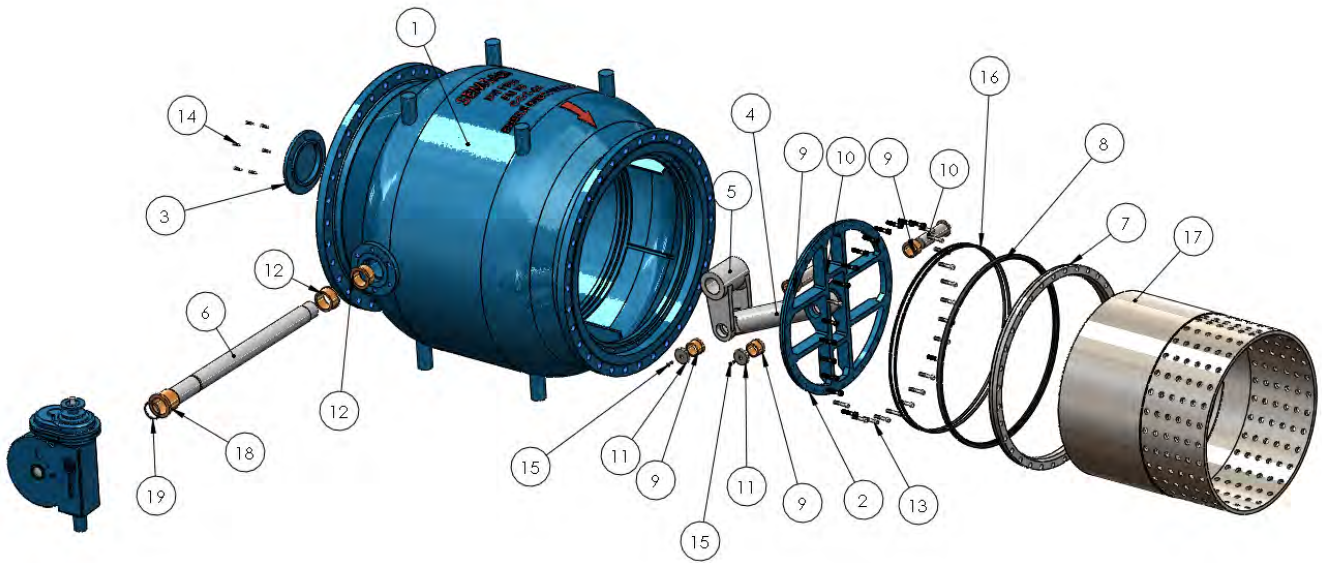


VPORT



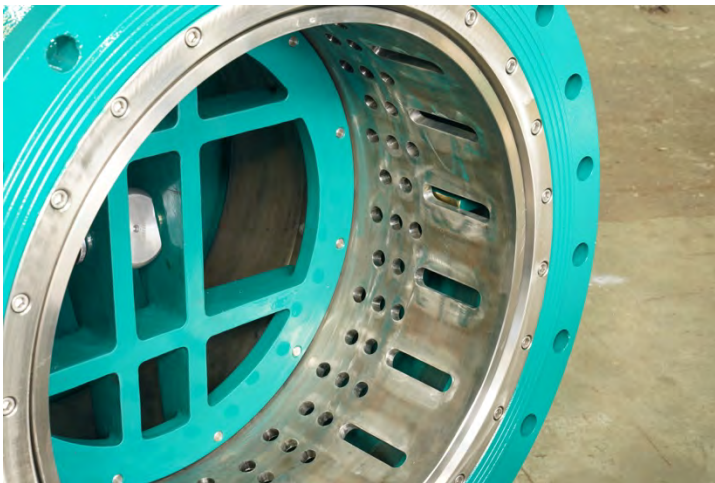
SEAT RING

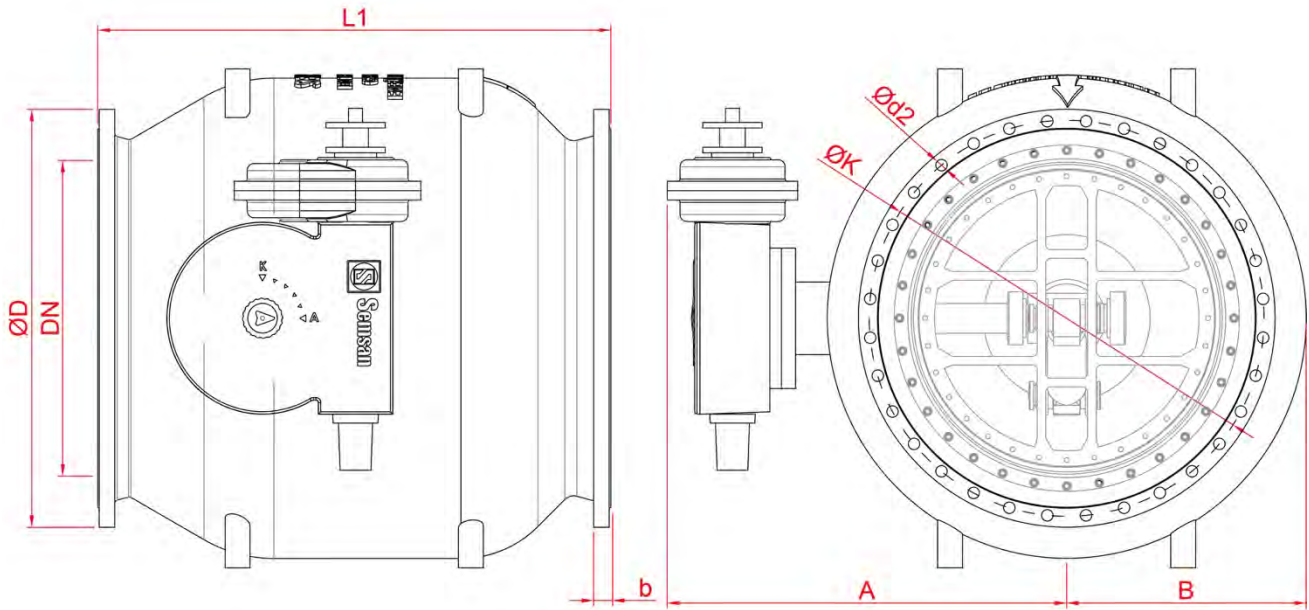




NO	PART	STANDART MATERIAL	OPTIONAL MATERIALS	
1	BODY	DUCTILE IRON		
2	PISTON CONNECTION PART	GJS400.15 / GJS400.18 /		
3	BACK LID	GJS500.7 / GJS500.14		
4	CRANK	1.4021 (AISI420)		
5	CONNECTING PART	DUCTILE IRON GJS400.15 / GJS400.18 / GJS500.7 / GJS500.14	STAINLESS STEEL AISI 304 / AISI 316 / AISI 329 Duplex (S32900)	
6	VALVE SHAFT	1.4021 (AISI420)	1.4057 (AISI431)	1.4462 (Duplex SS)
7	SEALING RING FLANGE	AISI 304	AISI 316	AISI 329 Duplex (S32900)
8	SEALING RING	EPDM	NBR	VITON
9	CRANK BEARINGS	GCuSn10	Derlin	PTFE
10	CONNECTION PINS	1.4021 (AISI420)	1.4057 (AISI431)	1.4462 (Duplex SS)
11	PINS BEARING CAP	1.4021 (AISI420)	1.4057 (AISI431)	1.4462 (Duplex SS)
12	SHAFT BEARINGS	GCuSn10	Derlin	PTFE
13	FLANGE BOLTS	A2	A4	
14	BACK LID BOLTS	A2	A4	
15	PIN BOLTS	A2	A4	
16	PISTON SEALING RINGS	EPDM	NBR	VITON
17	SHAFT BEARINGS	GCuSn10	Derlin	PTFE
18	SHAFT SEALING RINGS	EPDM	NBR	VITON
19	CONTROL BOX	SEMSAN NDK SERIES (IP68)		
20	PLUNGER PISTON	AISI 304 / AISI 304L	AISI 316 / AISI316L	DUPLEX / SUPER DUPLEX STAINLESS STEEL
21	PLUNGER BEARING SURFACE	BRONZE WELDED		
22	COATING	ELECTROPOWDER EPOXY	WET EPOXY, GLASS FLAKE	EBONITE

INTERNETIONAL STANDARTS FOR DESIGN		
MAIN TYPE	AXIAL FLOW AND PRESSURE CONTROL VALVE	
FACE TO FACE DIMENSIONS	1,5x DN	EN 558 - 1 SERIES 15 up to DN500
FLANGE DIMENSIONS	EN 1092	Flange norm can be revise up to customer
VALVE CONNECTION FLANGES	ISO 5211	
FINAL ACCEPTANCE TEST	EN12266 1 - 2	Rate A (Zero Leakage)
DESIGN TEST	1074 / EN 1267	
BODY AND DISC MATERIALS	EN1563 / AISI / EN 10202 / EN 10213	
SHAFT MATERIAL	EN 10088 / AISI	
BEARING MATERIALS	EN 1982	
CONTROL BOX	EN 60529	IP68
NON METALLIC MATERIAL	EN 681 - 1	SHORE 70 +-5
COATING	EN ISO 12944 / EN ISO 2409 / EN ISO 4624 (min 250 mikron - electropowder epoxy up to DN1400; DN1500 and bigger wet epoxy)	
COATING FOR SEAWATER	min 3 mm ebonite coating / Glass Flake Epoxy Coating	
CERTIFICATION	10204 3.1 (non witnessed) 10204 3.2 (witnessed) Third Party Tests Raw Material Certificates	

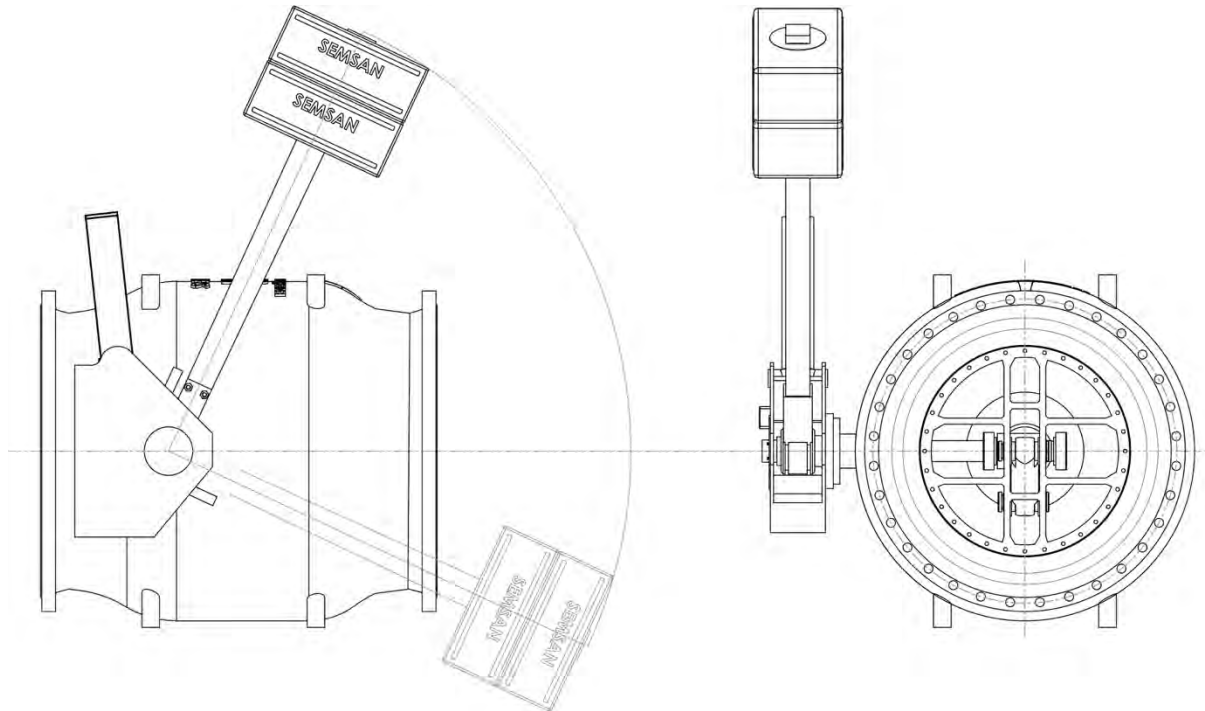




PN10										
DN	SERIES 15 (L1)	VALVE DIMENTIONS				FLANGE DIMENSIONS (in mm)				
		A	B	D	Volume	D	K	No of Holes	d2	b
100	300	225	110	220	0,02	220	180	8	19	19
125	325	240	125	250	0,03	250	210	8	19	19
150	350	305	143	285	0,04	285	240	8	23	19
200	400	335	170	340	0,06	340	295	8	23	20
250	450	350	200	400	0,07	400	350	12	23	22
300	500	365	228	455	0,09	455	400	12	23	24,5
350	550	390	255	505	0,11	505	460	16	23	24,5
400	600	515	290	565	0,15	565	515	16	28	24,5
450	600	515	310	615	0,17	615	565	20	28	25,5
500	750	550	360	670	0,2	670	620	20	28	26,5
600	900	630	435	780	0,27	780	725	20	31	30
700	1050	780	515	895	0,38	895	840	24	31	32,5
800	1200	840	565	1015	0,47	1015	950	24	34	35
900	1350	870	560	1115	0,53	1115	1050	28	34	37,5
1000	1500	1080	695	1230	0,72	1230	1160	28	37	40
1100	1500	1080	695	1340	0,78	1340	1270	32	37	43
1200	1800	1120	825	1455	0,93	1455	1380	32	41	45

PN 16										
DN	SERIES 15 (L1)	VALVE DIMENTIONS				FLANGE DIMENSIONS (in mm)				
		A	B	D	Volume	D	K	No of Holes	d	b
100	300	225	110	220	0,02	220	180	8	19	19
125	325	240	125	250	0,03	250	210	8	19	19
150	350	305	143	285	0,04	285	240	8	23	19
200	400	335	170	340	0,06	340	295	12	23	20
250	450	350	200	400	0,07	400	355	12	28	22
300	500	365	228	455	0,09	455	410	12	28	24,5
350	550	390	260	520	0,11	520	470	16	28	26,5
400	600	515	290	580	0,15	580	525	16	31	28
450	600	515	320	640	0,18	640	585	20	31	30
500	750	550	360	715	0,21	715	650	20	34	31,5
600	900	630	435	840	0,3	840	770	20	37	36
700	1050	780	515	910	0,39	910	840	24	37	39,5
800	1200	840	565	1025	0,48	1025	950	24	40	43
900	1350	870	565	1125	0,53	1125	1050	28	40	46,5
1000	1500	1080	695	1255	0,74	1255	1170	28	43	50
1100	1500	1080	680	1355	0,79	1355	1270	32	43	53,5
1200	1800	1120	825	1485	0,95	1485	1390	32	49	57
PN 25										
100	300	225	120	235	0,03	220	180	8	19	19
125	325	240	135	270	0,03	270	220	8	28	19
150	350	305	150	300	0,05	300	250	8	28	20
200	400	335	180	360	0,06	360	310	12	28	22
250	450	350	115	425	0,07	425	370	12	31	24,5
300	500	365	245	485	0,1	485	430	16	31	27,5
350	550	390	280	555	0,12	555	490	16	34	30
400	600	575	310	620	0,18	620	550	16	37	32
450	600	575	335	670	0,2	670	600	20	37	34,5
500	750	610	365	730	0,23	730	660	20	37	36,5
600	900	740	435	845	0,33	845	770	20	40	42
700	1050	840	515	960	0,43	960	875	24	43	46,5
800	1200	840	565	1085	0,5	1085	990	24	49	51
900	1350	870	595	1185	0,57	1185	1090	28	49	55,5
1000	1500	1090	695	1320	0,78	1320	1210	28	56	60
1100	1500	1090	710	1420	0,84	1420	1310	32	56	64
1200	1800	1130	825	1530	0,99	1530	1420	32	56	69

DN	PN10			
	GEARBOX	PNEUMATIC	Operation Torque (Nm)	HYDRAULIC
100	NDK50	RA80DA	30	
125	NDK50	RA80DA	30	
150	NDK50	RA80DA	30	
200	NDK80	RA120DA	30	HK50 + 80
250	NDK80	RA120DA	60	HK50 + 80
300	NDK80	PN1	60	HK50 + 160
350	NDK110	PN1	60	HK50 + 160
400	NDK125	PN1	60	HK50 + 280
450	NDK125	PN2	60	HK63 + 280
500	NDK125+MR3	PN2	60	HK63 + 280
600	NDK125+MR3	PN2	60	HK63 + 550
700	NDK160+R9		120	HK63 + 550
800	NDK160+R9		120	HK100 + 550
900	NDK200+R9		120	HK100 + 550
1000	NDK200+R9		120	HK125 + 550
1100	NDK200+R9		120	HK125 + 1100
1200	NDK200+R9		120	HK125 + 1100
1300	NDK285+R16		120	HK125 + 1650
1400	NDK285+R16		120	HK125 + 1650
1500	NDK370+R25		250	HK160 + 1650
1600	NDK370+R25		250	HK160 + 1650



DN	PN16			
	GEARBOX	PNEUMATIC	Operation Torque (Nm)	HYDRAULIC
100	NDK50	RA80DA	30	
125	NDK50	RA80DA	30	
150	NDK50	RA80DA	30	
200	NDK80	RA120DA	30	HK50 + 80
250	NDK80	RA120DA	60	HK50 + 80
300	NDK80	PN1	60	HK50 + 160
350	NDK110	PN1	60	HK50 + 160
400	NDK125	PN1	60	HK50 + 280
450	NDK125	PN2	60	HK63 + 280
500	NDK125	PN2	60	HK63 + 280
600	NDK125	PN2	60	HK63 + 550
700	NDK160+R9		120	HK63 + 550
800	NDK160+R9		120	HK100 + 550
900	NDK200+R9		120	HK100 + 550
1000	NDK200+R9		120	HK125 + 550
1100	NDK200+R9		120	HK125 + 1100
1200	NDK200+R9		120	HK125 + 1100
1300	NDK285+R16		120	HK125 + 1650
1400	NDK285+R16		120	HK125 + 1650
1500	NDK370+R25		250	HK160 + 1650
1600	NDK370+R25		250	HK160 + 1650
PN25				
100	NDK50	RA80DA	30	
125	NDK50	RA80DA	30	
150	NDK80	RA80DA	30	
200	NDK80	RA120DA	60	HK50 + 80
250	NDK110	RA120DA	60	HK50 + 80
300	NDK125	PN1	60	HK50 + 160
350	NDK125	PN1	60	HK63 + 160
400	NDK125	PN1	60	HK63 + 280
450	NDK125	PN2	60	HK63 + 280
500	NDK125+MR3	PN2	60	HK63 + 280
600	NDK125+R9	PN2	60	HK100 + 550
700	NDK160+R9		120	HK100 + 550
800	NDK160+R9		120	HK125 + 550
900	NDK200+R9		120	HK125 + 550
1000	NDK200+R9		120	HK125 + 550
1100	NDK285+R16		120	HK125 + 1100
1200	NDK285+R16		120	HK125 + 1100
1300	NDK370+R25		120	HK160 + 1650
1400	NDK370+R25		250	HK160 + 1650

Our Products



Butterfly Valve



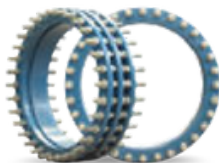
Plunger Valve



Tilting Check Valve



Nozzle Check Valve



Dismantling Joint



Submersible Mixed Flow Column Type Pump



Hydraulic Controlled Check Butterfly Valve



Strainer - Y - Type / Inline - Basket Type



Swing Check Valve



Knife Gate Valve



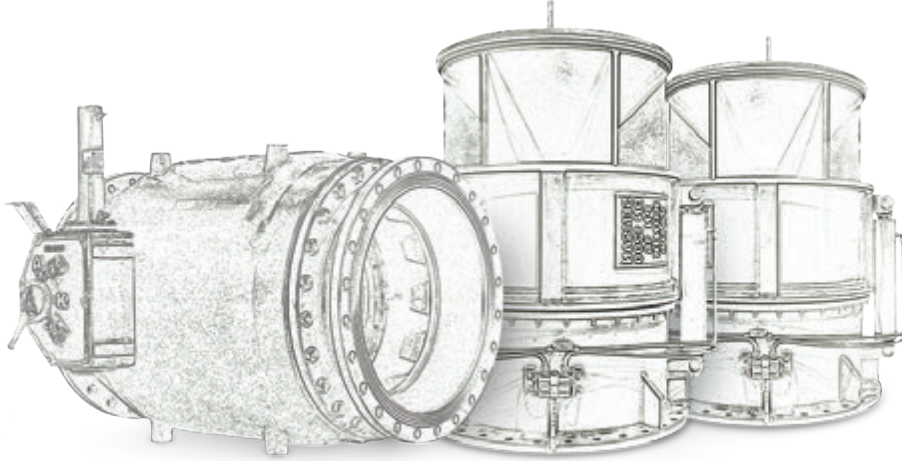
Hollow Jet Valve / Gate Valve



Submersible Sewage Pump



PUMP, VALVE & DAM
EQUIPMENTS
PRODUCT CATALOGUE



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