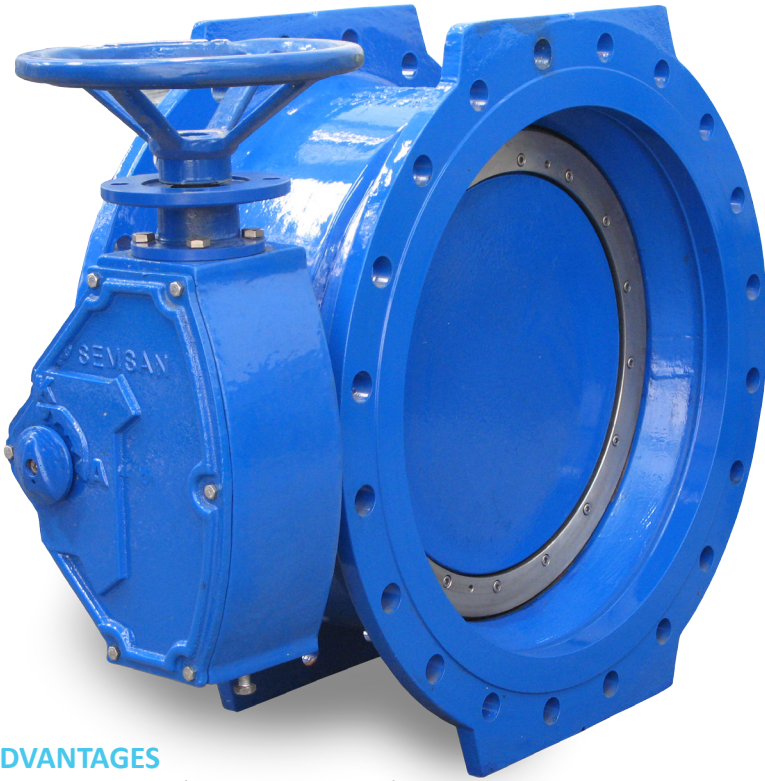


**PUMP, VALVE AND DAM
EQUIPMENT
BUTTERFLY VALVES**





ADVANTAGES

- Compact Design (EN 558-1 Series 14)
- Low Operation Torque for Bigger Diameters with Double Eccentric
- Low maintenance cost
- Leakage Tests, EN 12266 Class A (completely tightness)

DESIGN

- TS EN 593 Certificated
- Double Flange
- Double Eccentric
- Flanges DIN EN 1092 PN 10 – PN40
- Valve Shaft Double Offset
- Face to Face EN 558-1 Series 14 (DIN 3202, F4) (Short Pattern is Optional)
- Mechanical Position Indicator and Limit stops on Gear Box
- Body Sealing Surface;
- Corrosion - Resistant Stainless Welded AISI 316 and Microfinished.
- Adjustable and Replaceable Sealing Ring
- EN 12516 – 1 Steel Welded Design (Optional)
- Max Operation Temperature 50 °C (120 °C Optional)

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	
100.....2800	10	15	11	10
100.....2800	16	24	18	16
100.....2800	25	37,5	27,5	25
100.....2800	40	60	44	40

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

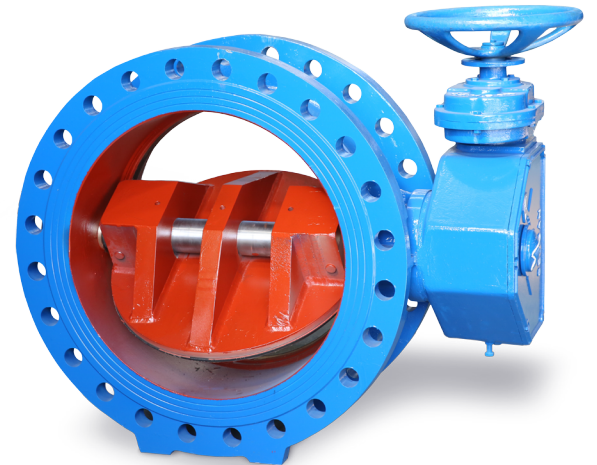


APPLICATION AREAS

- Drinking Water Lines
- Drinking Water Treatment Plants
- Waste Water Treatment Plants
- Pumping Stations
- Irrigation Projects
- Dams and Reservoirs
- Neutral Gas and Cool Power Plants
- Hydroelectric Power Plants
- Industrial Plants

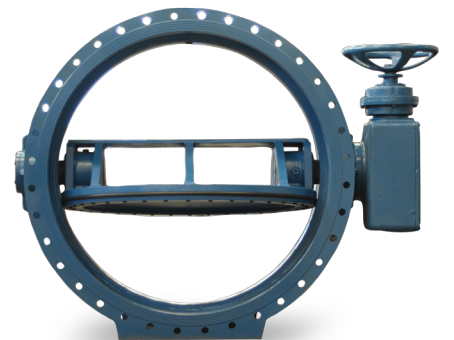
OPERATION

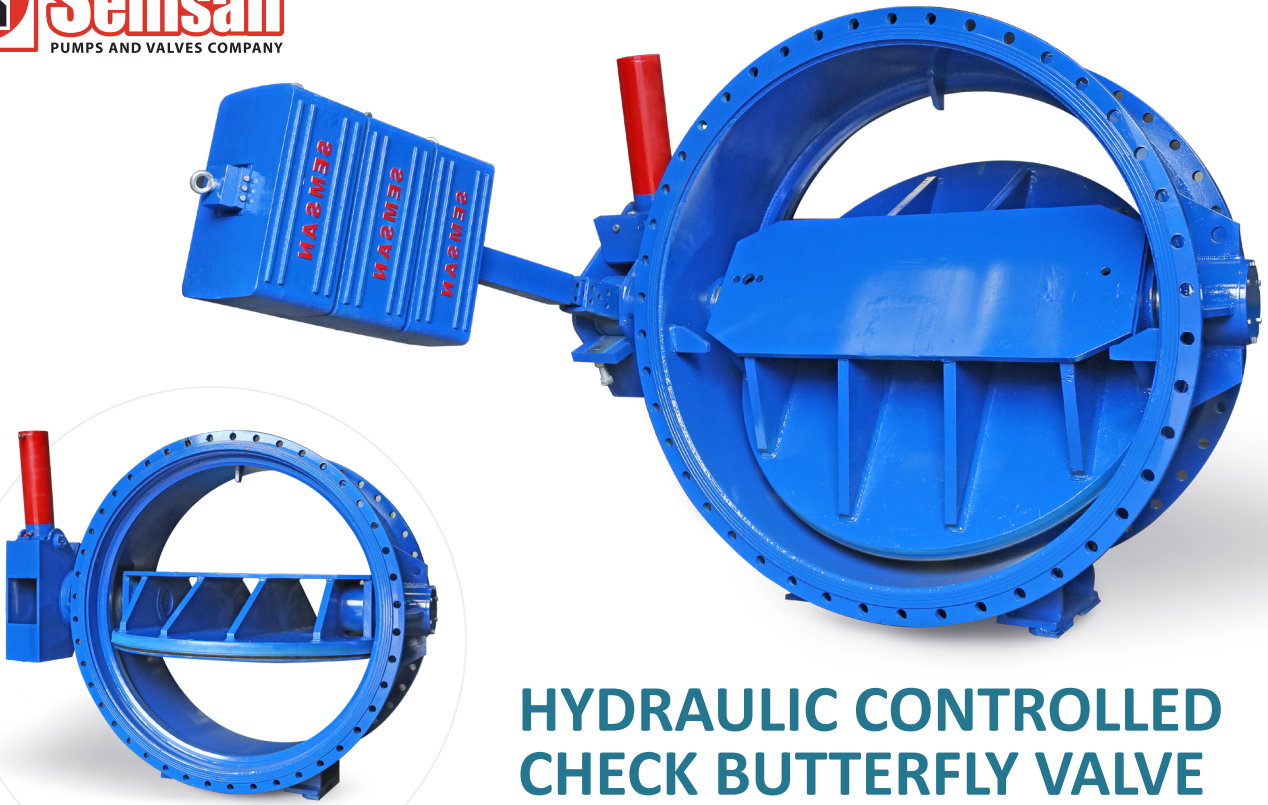
- Handwheel
- Electrical Actuator
- Pneumatic Actuator
- Hydraulic Actuator
- On – Off or Modulating Operation



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 Seawater





HYDRAULIC CONTROLLED CHECK BUTTERFLY VALVE (TURBINE INLET VALVE)

DN 250/2800 | PN 10 / 16 / 25 / 40

DESIGN

- TS EN 593 Certificated
- Double Flange
- Double Eccentric
- Flanges DIN EN 1092
- Valve Shaft Double Offset
- PN 10 – PN40
- Face to Face EN 558-1 Series 14 (DIN 3202, F4) (Short Pattern is Optional)
- Mechanical Position Indicator and Limit Stops on Gear Box
- Body Sealing Surface; Corrosion - Resistant Stainless Welded AISI 316 and Microfinished.
- Adjustable and Replaceable Sealing Ring
- EN 12516 – 1 Steel Welded Design (Optional)
- Max Operation Temperature 50 °C

APPLICATION AREAS

- Turbine Inlet Valves in Hydroelectric Power Plants
- Emergency Shut Off Valves in Dams and Reservoirs
- Check Butterfly Valves for Pumping Stations

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 Seawater

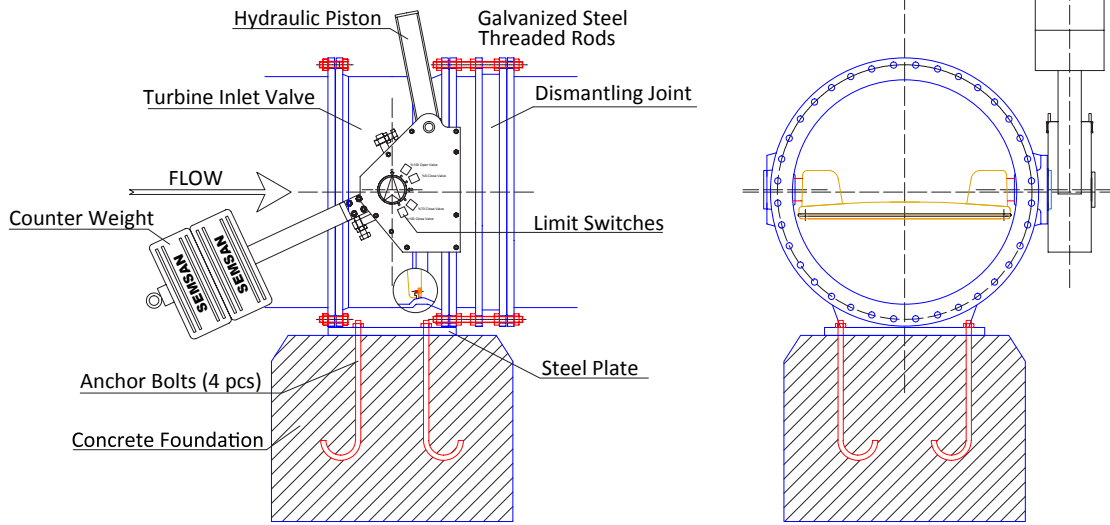
ADVANTAGES

- Opening and Closing With Hydraulic Piston
- Closing With Counter Weight
- High Security Coefficient
- Suddenly Shut-Off for Emergency
- Additional Limit Switch for Hydraulic Leakages
- Two Different Operation Adjust Valve

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	
250.....2800	10	15	11	10
250.....2800	16	24	18	16
250.....2800	25	37,5	27,5	25
250.....2800	40	60	44	40

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

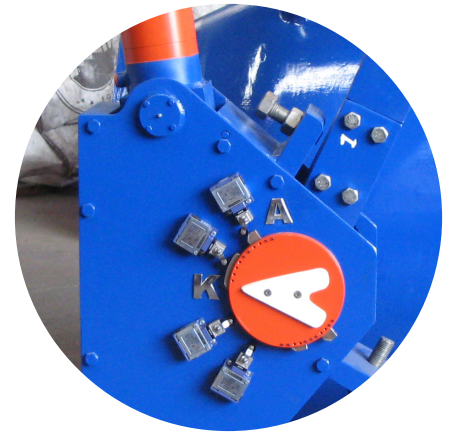


OPERATING PRINCIPLES

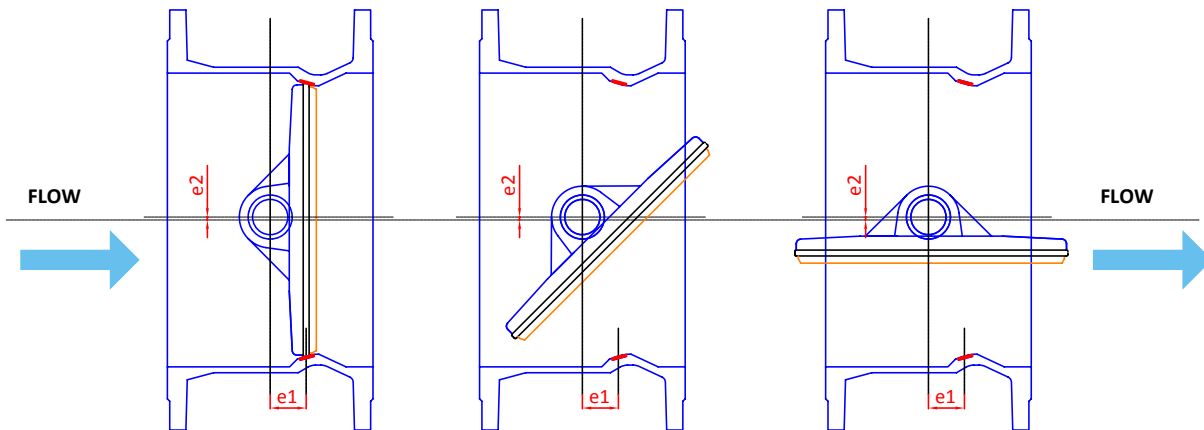
Check-Butterfly valve; It is the valve closed by weight fastened to valve shaft and opened by hydraulic pump. Oil pressure disappearing in hydraulic cylinder of the valve opened by hydraulic pump will be supported by accumulator having a diaphragm in the volume of 2,0 L, since S1 and S2 solenoid valves are closed. If cylinder pressure falls down from adjusted pressure, hydraulic pump will operate and increase system pressure. If adjustable pressure shifter doesn't operate, valve will start to close. When it is closed at the rate of 5 %, limit switch on the valve box cover will be closed, pump will operate, increase the system pressure and valve will come into the position of full open.

If close order comes to the valve because of extreme speed and low pressure, it sends 24 V current to the coil of S1 solenoid valve on hydraulic power unit. by opening of S1 solenoid valve, valve starts to close, it completes with high speed the closing ratio of 70 % and with low speed the remaining closing ratio of 30 %.

Valve closing at the ratio of 70 % closes limit switch on the valve box cover, sends 24 V DC current to the coil of S2 solenoid valve on the power unit. Solenoid valve operates and slowly closes 30 % of valve. There are 4 pieces limit switch on the valve box cover



DOUBLE ECCENTRIC DOUBLE FLANGED BUTTERFLY VALVE



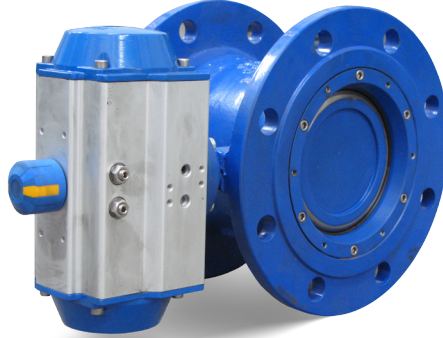
e1: Difference of Sealing Ring Seat Axis – Shaft Axis (For perfect contact of sealing ring to seat surface at flow direction)
 e2: Difference of Disc Axis – Valve Axis (For low operation torque at opening direction)

CONTROL TYPES - HYDRAULIC / PNEUMATIC / ELECTRICAL / HANDWHEEL

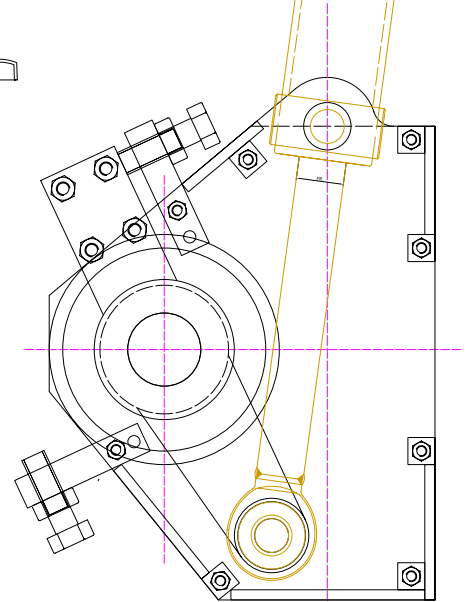
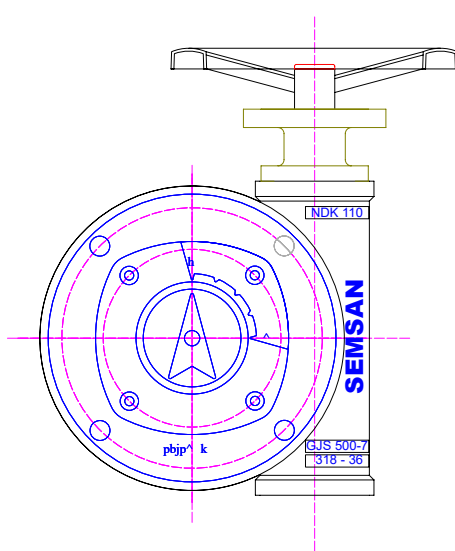
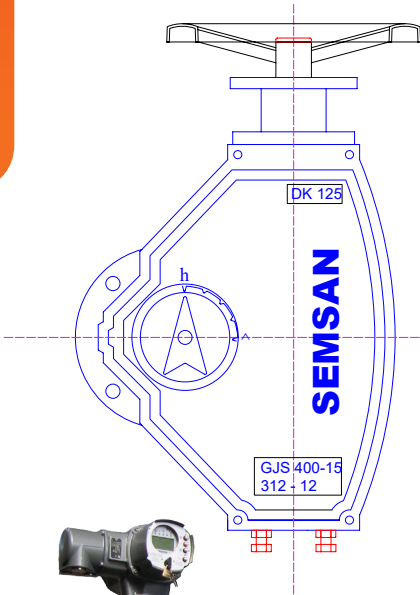
BUTTERFLY VALVE OPERATION TYPES



HYDRAULIC



PNEUMATIC

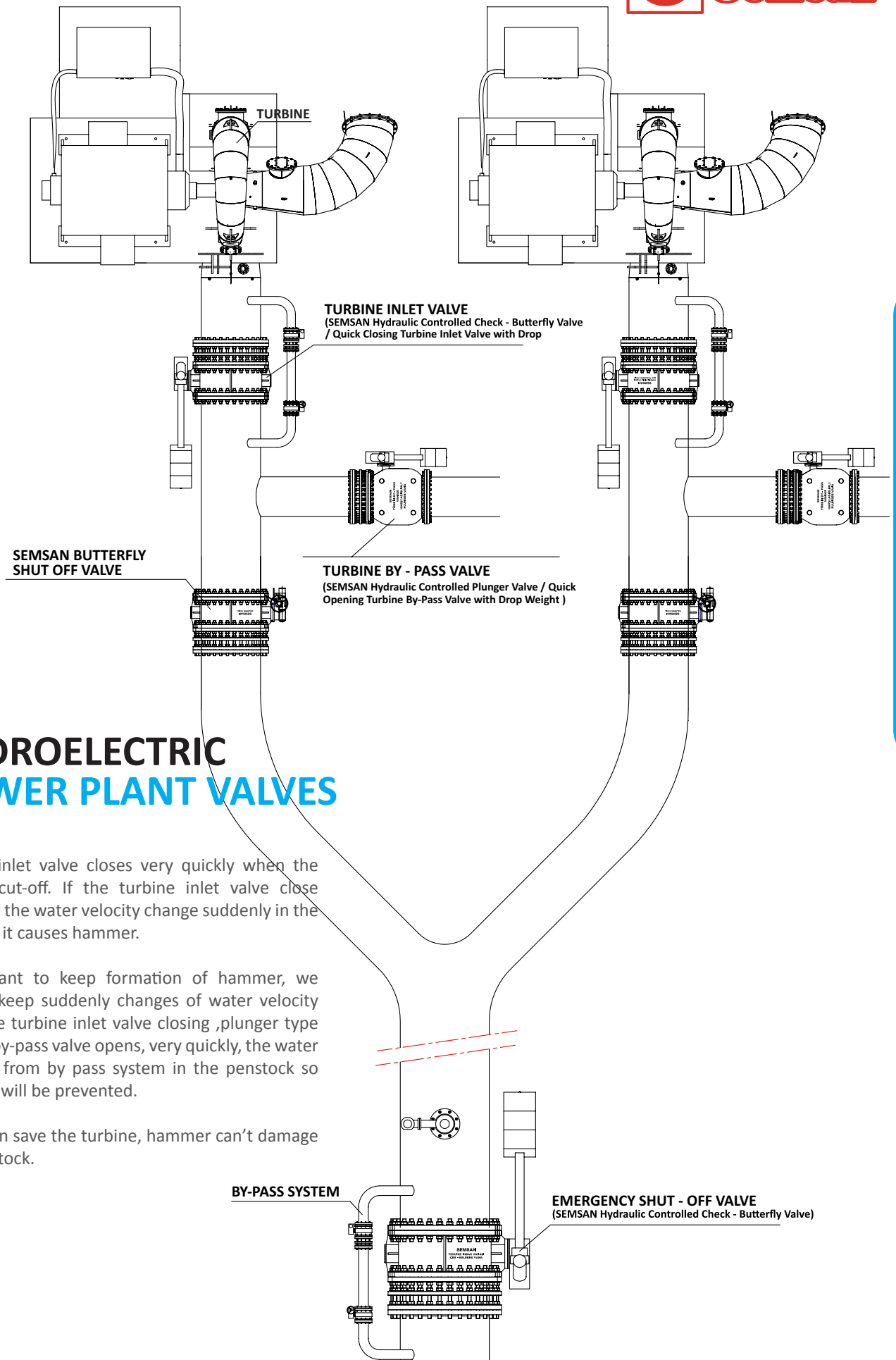


ELECTRICAL



HANDWHEEL





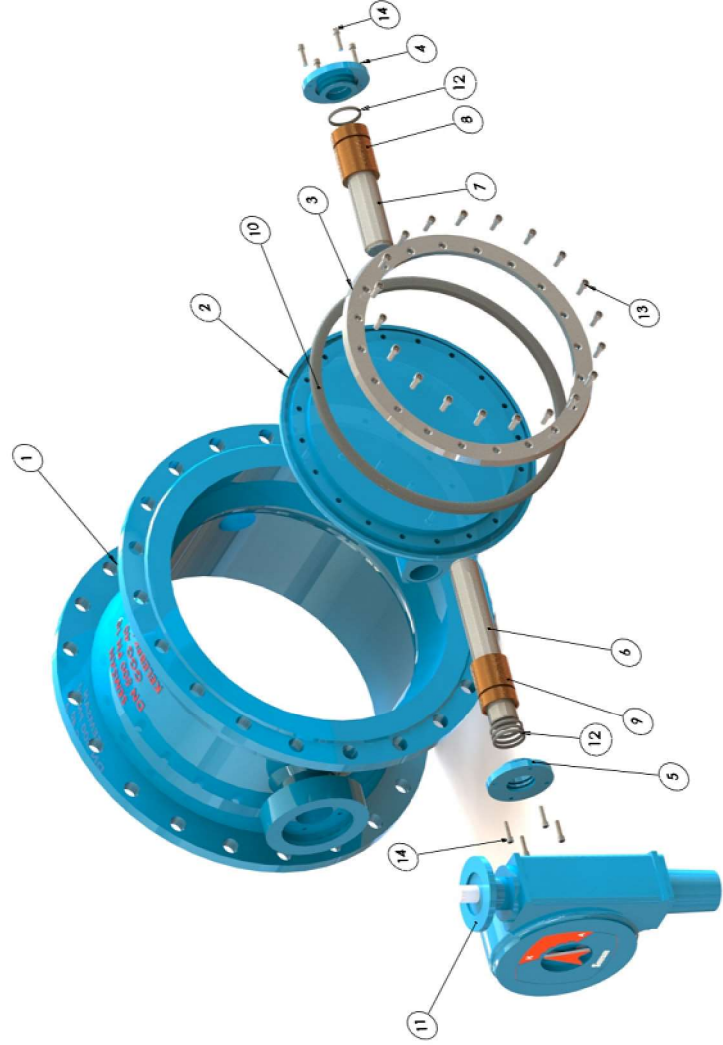
HYDROELECTRIC POWER PLANT VALVES

Turbine inlet valve closes very quickly when the turbine cut-off. If the turbine inlet valve close suddenly the water velocity change suddenly in the pipe and it causes hammer.

If we want to keep formation of hammer, we have to keep suddenly changes of water velocity when the turbine inlet valve closing ,plunger type turbine by-pass valve opens, very quickly, the water released from by pass system in the penstock so hammer will be prevented.

So we can save the turbine, hammer can't damage the penstock.

INTERNETIONAL STANDARDS FOR DESIGN		
MAIN TYPE	EN 593	Double Eccentric Double Offset
FACE TO FACE DIMENSIONS	EN 558 - 1	SERIES 14 and SERIES 13
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
LEAKAGE TEST		1.1 x PN
BODY TEST		1.5 X PN
COATING THICKNESS TEST		min 250 mikron
OPERATIONAL TORQUE TEST		Max determined opening torque in nominal pressure
OPEN - CLOSE TEST		Min 10 times per valve
MATERIAL TESTS		MECHANICAL , CHEMICAL , MICROSTRUCTURE



PART LIST			
1	VALVE BODY	DUCTILE IRON GJS400.15 / GJS400.18 / GJS500.7 / GJS500.14	STEEL S235JR / S355J / GS C25
2	VALVE DISC	DUCTILE IRON GJS400.15 / GJS400.18 / GJS500.7 / GJS500.14	STEEL S235JR / S355J / GS C25
3	SEALING RING FLANGE	STAINLESS STEEL AISI 304 / AISI 316	STEEL S235JR / S355J
4	BLIND LID	DUCTILE IRON GJS400.15 / GJS400.18 / GJS500.7 / GJS500.14	STEEL S235JR / S355J / GS C25
5	SHAFT LID	DUCTILE IRON GJS400.15 / GJS400.18 / GJS500.7 / GJS500.14	STEEL S235JR / S355J / GS C25
6	CONTROL SHAFT	1.4021 (AISI420)	1.4462 (Duplex SS)
7	SHORT SHAFT	1.4021 (AISI420)	1.4462 (Duplex SS)
8	SHORT BUSH	GCuSn10	PTFE
9	LONG BUSH	GCuSn10	PTFE
10	SEALING RING	EPDM	VITON
11	CONTROL BOX	SEMSAN NDK SERIES (IP68)	
12	O-RING	EPDM	VITON
13	INLET BOLTS AND OTHER BOLTS AND NUTS	A2	A4
14	BODY SEAT	8.8 GALVANISED	A4
15	COATING	AISI 316L, SI	EBONITE
		ELECTROPOWDER EPOXY	WET EPOXY, GLASS FLAKE

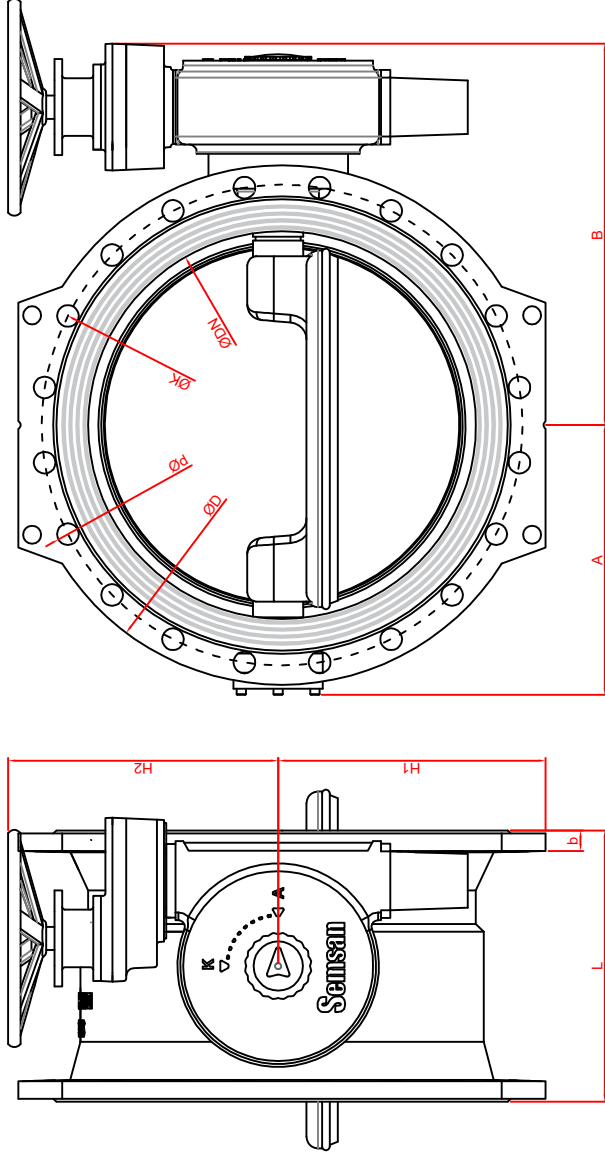


Semsan

POMPA MAKINA SANAYI VE TIC.LTD.ŞTİ.

NAME: DOUBLE ECCENTRIC DOUBLE OFFSET BUTTERFLY VALVE PART LIST AND DESIGN STANDARTS

NUMBER: 1002400KV_PARTLIST



INTERNETIONAL STANDARDS FOR DESIGN

MAIN TYPE	EN 593	Double Eccentric Double Offset
FACE TO FACE DIMENSIONS	EN 558 - 1	SERIES 14 and SERIES 13
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

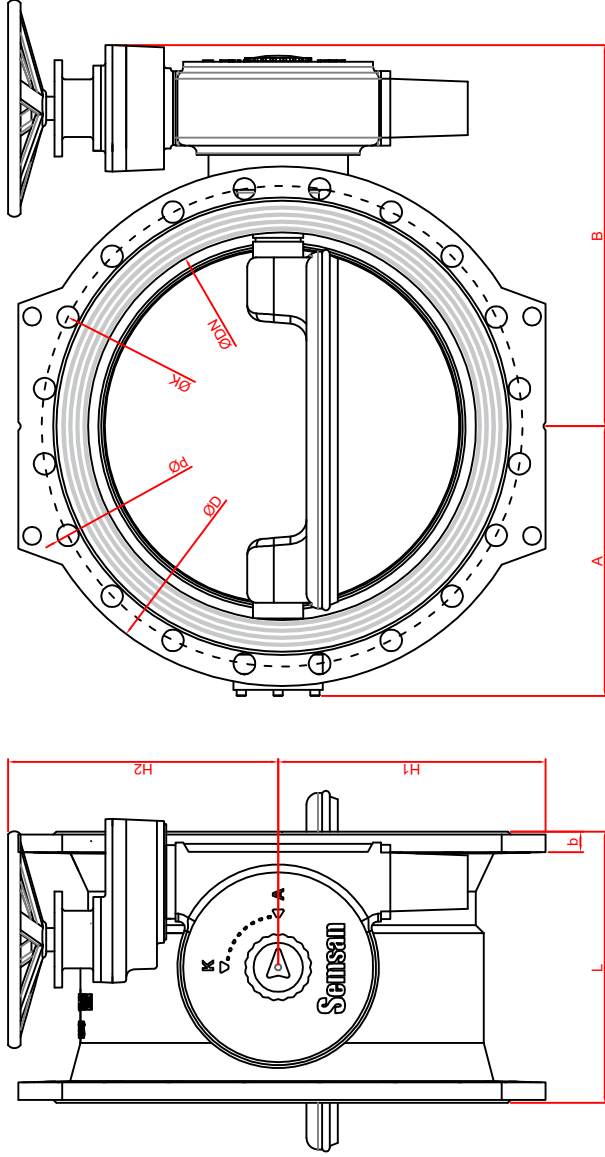
LEAKAGE TEST	1.1 x PN
BODY TEST	1.5 X PN
COATING THICKNESS TEST	min 250 mikron
OPERATIONAL TORQUE TEST	Max determined opening torque in nominal pressure
OPEN - CLOSE TEST	Min 10 times per valve
MATERIAL TESTS	MECHANICAL, CHEMICAL, MICROSTRUCTURE



Semsan
POMPA MAKINA SANAYI VE TIC.LTD.ŞTİ.

NAME: DN100 - DN2400 PN10 DOUBLE ECCENTRIC DOUBLE OFFSET BUTTERFLY VALVE DIMENSION TABLE
NUMBER: 1002400KV_PN10_DIMENSIONTABLE

DN	VALVE DIMENSIONS (in mm)				GEARBOX				FLANGE DIMENSIONS (in mm)							
	L	A	B	H1	Weight (kg)	Gearbox	Valve connection flange (ISO 5211)	Actuator connection flange (ISO 5210)	Turn / stroke	Operation Torque (Nm)	D	K	No of Holes	d		
100	190	110	230	110	176	20	NDK50	F07	F07/F10 - 20 / 30 mm	10	30	220	180	8	19	19
125	200	125	250	125	176	25	NDK50	F07	F07/F10 - 20 / 30 mm	10	30	250	210	8	19	19
150	210	143	255	143	176	30	NDK50	F07	F07/F10 - 20 / 30 mm	10	30	285	240	8	23	20
200	230	170	305	184	176	45	NDK50	F07	F07/F10 - 20 / 30 mm	10	60	340	295	8	23	20
250	250	200	360	214	230	60	NDK80	F12	F07/F10 - 20 / 30 mm	16.5	60	400	350	12	23	22
300	270	233	385	245	230	100	NDK80	F12	F07/F10 - 20 / 30 mm	16.5	60	455	400	12	23	24.5
350	290	275	410	260	230	116	NDK80	F14	F07/F10 - 20 / 30 mm	16.5	60	505	460	16	23	24.5
400	310	283	402	295	230	165	NDK80	F14	F07/F10 - 20 / 30 mm	16.5	60	565	515	16	28	24.5
450	330	330	466	320	270	190	NDK125	F16	F07/F10 - 20 / 30 mm	15	60	615	565	20	28	25.5
500	350	350	481	350	270	240	NDK125	F16	F10/F14 - 20 / 30 mm	15	120	670	620	20	28	26.5
600	390	398	547	400	299	320	NDK125+R3	F16	F10/F14 - 20 / 30 mm	45	120	780	725	20	31	30
700	430	490	672	474	417	470	NDK160+R3	F25	F10/F14 - 20 / 30 mm	45	120	895	840	24	31	32.5
800	470	545	770	525	417	620	NDK160+R3	F25	F10/F14 - 20 / 30 mm	45	120	1015	950	24	34	35
900	510	586	813	572	482	800	NDK200+R9	F30	F10/F14 - 30 mm	126	120	1115	1050	28	34	37.5
1000	550	650	882	635	482	1144	NDK200+R9	F30	F10/F14 - 30 mm	126	120	1230	1160	28	37	40
1100	590	690	917	690	482	1390	NDK200+R12	F30	F10/F14 - 30 mm	168	120	1340	1270	32	37	43
1200	630	750	1063	750	560	1740	NDK285+R16	F35	F10/F14 - 30 mm	216	120	1455	1380	32	41	45
1300	670	830	1113	830	560	2260	NDK285+R25	F35	F10/F14 - 30 mm	337.5	120	1570	1490	32	44	45
1400	710	890	1158	860	715	2545	NDK285+R36	F35	F10/F14 - 30 mm	486	120	1675	1590	36	44	46
1500	750	930	1215	920	642	3525	NDK370+R25	F40	F14 - 30 mm	356	250	1785	1700	36	44	47.5
1600	790	1000	1275	995	642	3985	NDK370+R25	F40	F14 - 30 mm	356	250	1915	1820	40	50	49
1800	870	1100	1375	1090	642	4850	NDK370+R25	F40	F14 - 30 mm	356	250	2115	2020	44	50	52
2000	950	1200	1525	1190	797	6680	NDK450+R25	F48	F14 - 30 mm	356	500	2325	2230	48	50	55
2200	1030	1315	1605	1225	797	9000	NDK450+R36	F48	F14 - 30 mm	486	500	2550	2440	52	56	59
2400	1110	1450	1760	1415	952	11200	NDK450+R36	F48	F14 - 30 mm	486	500	2760	2650	56	56	62



INTERNETIONAL STANDARDS FOR DESIGN

MAIN TYPE	EN 593	Double Eccentric Double Offset
FACE TO FACE DIMENSIONS	EN 558 - 1	SERIES 14 and SERIES 13
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 1287
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

LEAKAGE TEST	1.1 x PN
BODY TEST	1.5 X PN
COATING THICKNESS TEST	min 250 mikron
OPERATIONAL TORQUE TEST	Max determined opening torque in nominal pressure
OPEN - CLOSE TEST	Min 10 times per valve
MATERIAL TESTS	MECHANICAL, CHEMICAL, MICROSTRUCTURE



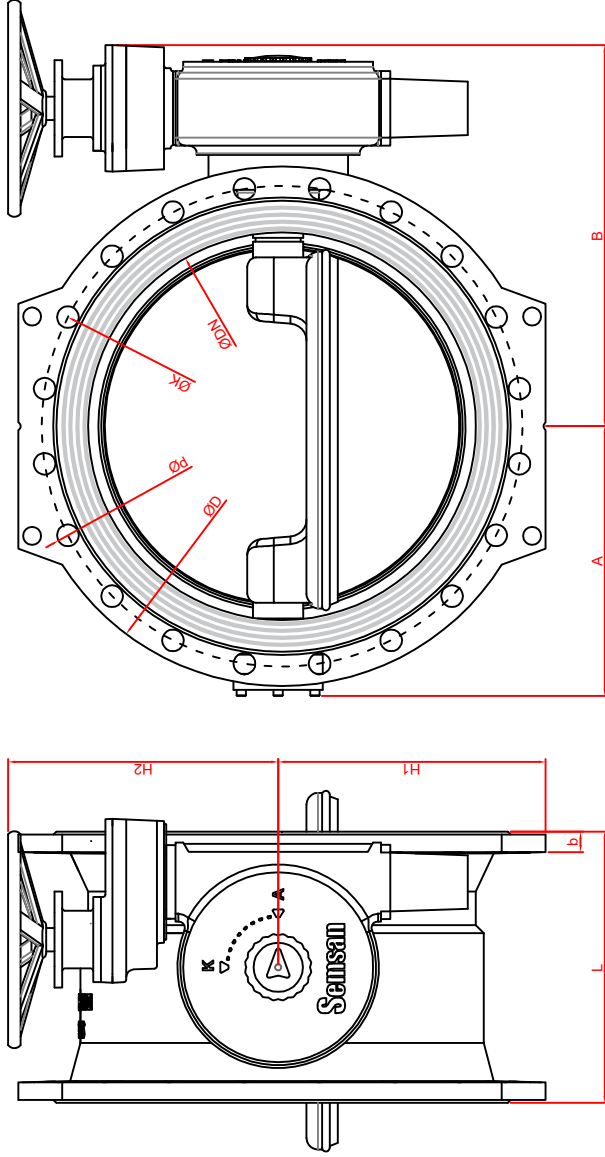
Semsan

POMPA MAKINA SANAYI VE TIC.LTD.ŞTİ.

NAME: DN100 - DN2000 PN16 DOUBLE ECCENTRIC DOUBLE OFFSET BUTTERFLY VALVE DIMENSION TABLE

NUMBER: 1002000KV_PN16_DIMENSIONTABLE

VALVE DIMENSIONS (in mm)				PN16												
				GEARBOX					FLANGE DIMENSIONS (in mm)							
DN	L	A	B	H1	H2	Weight t (kg)	Valve connection flange (ISO 5211)	Actuator connection flange (ISO 5210)	Turn / stroke	Operation Torque (Nm)	D	K	No of Holes	d	b	
100	190	110	230	110	176	20	NDK650	F07	F07/F10 - 20/30 mm	10	30	220	180	8	19	19
125	200	125	250	125	176	25	NDK50	F07	F07/F10 - 20/30 mm	10	30	250	210	8	19	19
150	210	143	255	143	176	30	NDK650	F07	F07/F10 - 20/30 mm	10	30	285	240	8	23	19
200	230	170	305	184	230	45	NDK80	F12	F07/F10 - 20/30 mm	16.5	60	340	295	12	23	20
250	250	200	360	214	230	60	NDK80	F12	F07/F10 - 20/30 mm	16.5	60	400	355	12	28	22
300	270	233	385	245	230	110	NDK80	F12	F07/F10 - 20/30 mm	16.5	60	455	410	12	28	24.5
350	290	275	410	270	230	125	NDK80	F14	F07/F10 - 20/30 mm	16.5	60	520	470	16	28	26.5
400	310	290	418	310	270	190	NDK125	F16	F10/F14 - 20/30 mm	15	120	580	525	16	31	28
450	330	330	466	330	270	240	NDK125	F16	F10/F14 - 20/30 mm	15	120	640	585	20	31	30
500	350	358	481	373	270	300	NDK125	F16	F10/F14 - 20/30 mm	15	120	715	650	20	34	31.5
600	390	420	547	430	299	511	NDK125+R3	F16	F10/F14 - 20/30 mm	45	120	840	770	20	37	36
700	430	430	697	480	434	670	NDK160+R8	F25	F10/F14 - 30 mm	135	120	910	840	24	37	39.5
800	470	545	802	530	482	775	NDK200+R8	F30	F10/F14 - 30 mm	126	120	1025	950	24	40	43
900	510	586	813	577	482	970	NDK200+R8	F30	F10/F14 - 30 mm	126	120	1125	1050	28	40	46.5
1000	550	650	882	648	482	1320	NDK200+R12	F30	F10/F14 - 30 mm	188	120	1255	1170	28	43	50
1100	590	690	917	700	482	1570	NDK200+R12	F30	F10/F14 - 30 mm	168	120	1355	1270	32	43	53.5
1200	630	750	1113	765	560	2090	NDK285+R25	F35	F10/F14 - 30 mm	337.5	120	1485	1390	32	49	57
1300	670	830	1158	845	560	2545	NDK285+R25	F35	F14 - 30 mm	337.5	250	1585	1490	32	49	58
1400	710	890	1148	870	642	2945	NDK370+R25	F40	F14 - 30 mm	356	250	1685	1590	36	49	60
1500	750	930	1215	940	642	3755	NDK370+R25	F40	F14 - 30 mm	356	250	1820	1710	36	57	62.5
1600	790	1000	1275	1000	797	4450	NDK370+R36	F40	F14 - 30 mm	486	250	1930	1820	40	57	65
1800	870	1100	1375	1100	797	5320	NDK450+R25	F48	F14 - 30 mm	356	250	2130	2020	44	57	70
2000	950	1250	1585	1280	952	7450	NDK450+R36	F48	F14 - 30 mm	486	500	2345	2230	48	62	75



INTERNETIONAL STANDARDS FOR DESIGN

MAIN TYPE	EN 593	Double Eccentric Double Offset
FACE TO FACE DIMENSIONS	EN 558 - 1	SERIES 14 and SERIES 13
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

PN25

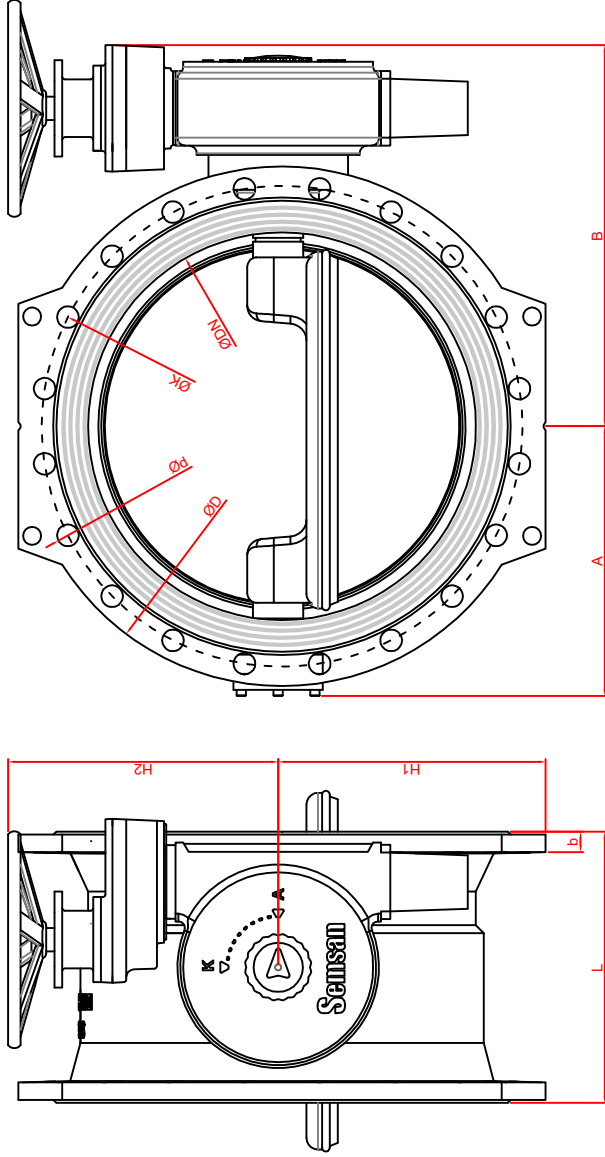
DN	VALVE DIMENSIONS (in mm)				GEARBOX				FLANGE DIMENSIONS (in mm)							
	L	A	B	H1	Weight (kg)	H2	Actuator connection (ISO 5210)	Turn / stroke	Operation Torque (Nm)	D	K	No of Holes	d			
100	190	110	230	110	176	28	NDK50	F07	F07/F10 - 20 / 30 mm	10	30	220	180	8	19	19
125	200	135	250	135	176	32	NDK50	F07	F07/F10 - 20 / 30 mm	10	30	270	220	8	28	19
150	210	150	290	150	230	50	NDK80	F12	F07/F10 - 20 / 30 mm	16,5	60	300	250	8	28	20
200	230	180	340	194	230	85	NDK80	F12	F07/F10 - 20 / 30 mm	16,5	60	360	310	12	28	22
250	250	213	380	225	264	90	NDK110	F16	F07/F10 - 20 / 30 mm	13	60	425	370	12	31	24,5
300	270	243	395	255	264	140	NDK110	F16	F10/F14 - 20 / 30 mm	13	120	485	430	16	31	27,5
350	290	278	440	285	264	185	NDK110	F16	F10/F14 - 20 / 30 mm	13	120	555	490	16	34	30
400	310	310	429	325	299	275	NDK125+R3	F16	F10/F14 - 20 / 30 mm	4,5	120	620	550	16	37	32
450	330	335	477	350	299	395	NDK125+R3	F16	F10/F14 - 20 / 30 mm	4,5	120	670	600	20	37	34,5
500	350	365	575	380	434	450	NDK160+R9	F25	F10/F14 - 30 mm	13,5	120	730	660	20	37	36,5
600	390	423	630	438	434	595	NDK160+R9	F25	F10/F14 - 30 mm	13,5	120	845	770	20	40	42
700	430	490	704	500	482	920	NDK200+R12	F30	F10/F14 - 30 mm	16,8	120	960	875	24	43	46,5
800	470	545	802	560	482	1150	NDK200+R12	F30	F10/F14 - 30 mm	16,8	120	1085	990	24	49	51
900	510	593	813	612	482	1830	NDK200+R16	F30	F14 - 30 mm	224	250	1185	1090	28	49	55,5
1000	550	660	882	680	482	2100	NDK200+R16	F30	F14 - 30 mm	224	250	1320	1210	28	56	60
1100	580	710	917	730	482	2300	NDK200+R16	F30	F14 - 30 mm	224	250	1420	1310	32	56	64
1200	630	765	1113	785	560	2600	NDK285+R25	F35	F14 - 30 mm	337,5	250	1530	1420	32	56	69
1300	670	830	1130	845	642	3550	NDK370+R25	F40	F14 - 30 mm	356	250	1640	1530	32	62	72
1400	710	890	1165	900	642	4000	NDK370+R25	F40	F14 - 30 mm	356	500	1755	1640	36	62	76
1500	750	933	1215	960	797	4400	NDK370+R36	F40	F14 - 30 mm	486	500	1865	1750	36	62	77,5
1600	790	1000	1275	1015	797	5500	NDK450+R25	F48	F14 - 30 mm	356	500	1975	1880	40	62	81
1800	870	1100	1375	1125	797	9000	NDK450+R36	F48	F14 - 30 mm	486	500	2195	2070	44	70	88
2000	950	1250	1585	1280	952	11500	NDK450+R36	F48	F14 - 30 mm	486	500	2425	2300	48	70	95

LEAKAGE TEST	1.1 x PN
BODY TEST	1.5 X PN
COATING THICKNESS TEST	min 250 mikron
OPERATIONAL TORQUE TEST	Max determined opening torque in nominal pressure
OPEN - CLOSE TEST	Min 10 times per valve
MATERIAL TESTS	MECHANICAL, CHEMICAL, MICROSTRUCTURE



NAME: DN100 - DN2000 PN25 DOUBLE ECCENTRIC DOUBLE OFFSET BUTTERFLY VALVE DIMENSION TABLE

NUMBER: 1002000KV_PN25_DIMENSIONTABLE



INTERNETIONAL STANDARDS FOR DESIGN		
MAIN TYPE	EN 593	Double Eccentric Double Offset
FACE TO FACE DIMENSIONS	EN 558 - 1	SERIES 14 and SERIES 13
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 1287
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

LEAKAGE TEST	1.1 x PN
BODY TEST	1.5 X PN
COATING THICKNESS TEST	min 250 mikron
OPERATIONAL TORQUE TEST	Max determined opening torque in nominal pressure
OPEN - CLOSE TEST	Min 10 times per valve
MATERIAL TESTS	MECHANICAL, CHEMICAL, MICROSTRUCTURE

DN	VALVE DIMENSIONS (in mm)				GEARBOX				FLANGE DIMENSIONS (in mm)							
	L	A	B	H1	Weight (kg)	Gearbox	Valve connection flange (ISO 5211)	Actuator connection flange (ISO 5210)	Turn / stroke	Operation Torque (Nm)	D	K	No of Holes	d	b	
100	190	120	275	120	230	35	NDK680	F12	F07/F10 - 20 / 30 mm	16,5	60	235	190	8	22	24
125	200	135	285	135	230	40	NDK80	F12	F07/F10 - 20 / 30 mm	16,5	60	270	220	8	26	26
150	210	150	320	150	264	55	NDK110	F16	F10/F14 - 20 / 30 mm	13	120	300	250	8	26	28
200	230	190	380	204	264	120	NDK110	F16	F10/F14 - 20 / 30 mm	13	120	375	320	12	30	34
250	250	225	405	237	264	195	NDK110	F16	F10/F14 - 20 / 30 mm	13	120	450	385	12	33	38
300	270	258	407	270	299	218	NDK125+R3	F16	F10/F14 - 20 / 30 mm	45	120	515	450	16	33	42
350	290	290	449	297	299	315	NDK125+R3	F16	F10/F14 - 20 / 30 mm	45	120	580	510	16	36	46
400	310	330	542	345	434	400	NDK160+R9	F25	F10/F14 - 30 mm	135	120	660	585	16	39	50
450	330	345	570	360	434	465	NDK160+R9	F25	F10/F14 - 30 mm	135	120	685	610	20	39	50
500	350	378	597	393	482	555	NDK200+R12	F30	F10/F14 - 30 mm	168	120	755	670	20	42	52
600	390	445	659	460	482	725	NDK200+R12	F30	F10/F14 - 30 mm	168	120	890	795	20	48	60
700	430	498	712	508	482	1100	NDK200+R16	F30	F14 - 30 mm	224	250	995	900	20	48	64
800	470	570	827	585	482	1850	NDK200+R16	F30	F14 - 30 mm	224	250	1140	1030	24	56	72
900	510	625	843	644	482	2200	NDK200+R16	F30	F14 - 30 mm	224	250	1250	1140	28	56	76
1000	550	680	928	700	560	2495	NDK285+R25	F35	F14 - 30 mm	337,5	250	1360	1250	28	56	80
1100	590	750	1045	770	642	3380	NDK370+R25	F40	F14 - 30 mm	356	250	1470	1380	28	56	84
1200	630	825	1175	845	642	4750	NDK370+R25	F40	F14 - 30 mm	356	250	1575	1460	32	62	88

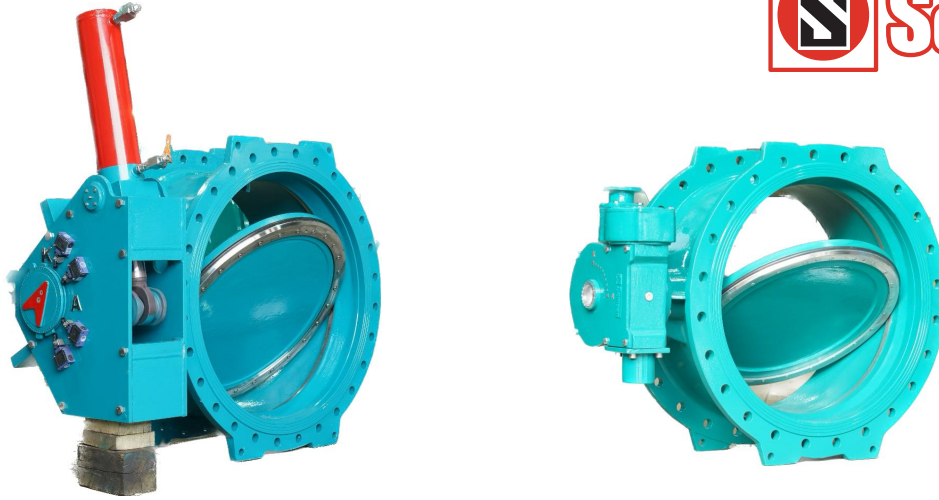


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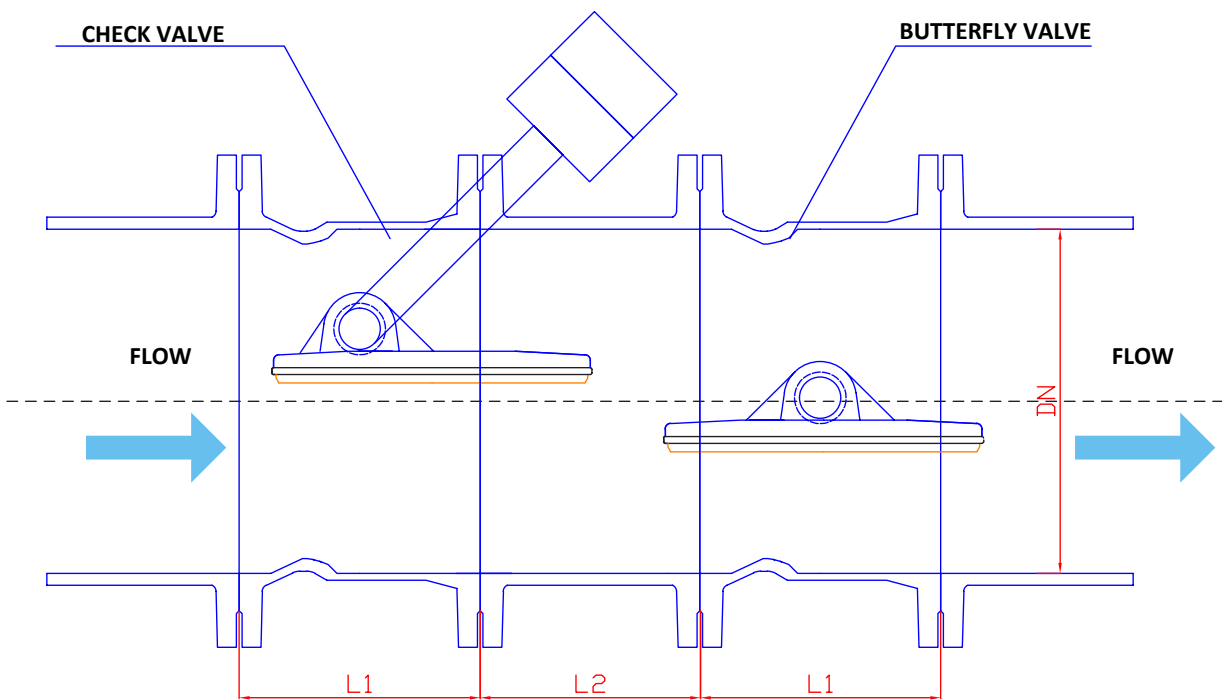
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NAME: DN100 - DN1200 PN40 DOUBLE ECCENTRIC DOUBLE OFFSET BUTTERFLY VALVE DIMENSION TABLE

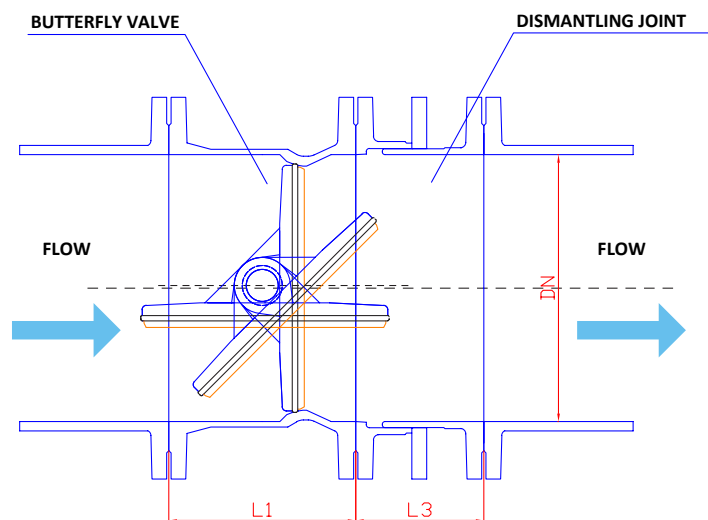
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BUTTERFLY VALVE ASSEMBLY DRAWING

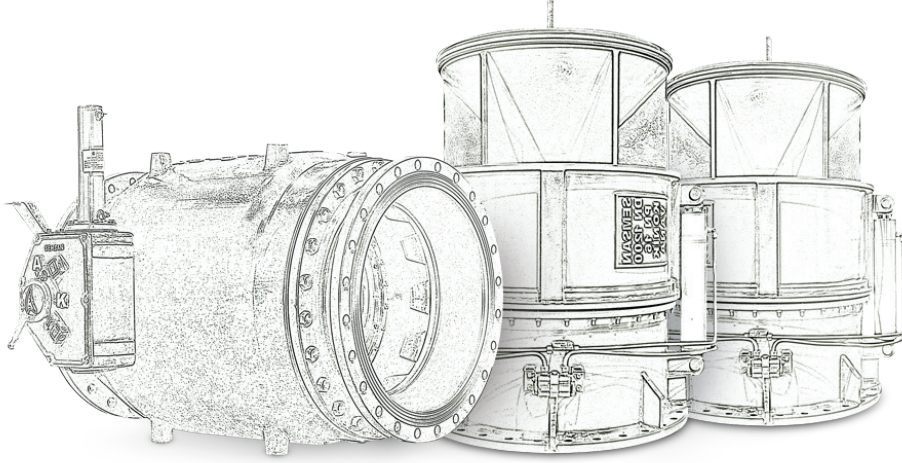


DN	L1 (mm)	L2 (mm)	L3 (mm)
150	210	150	200
200	230	150	220
250	250	150	220
300	270	150	220
350	290	225	230
400	310	225	230
450	330	300	250
500	350	300	260
600	390	400	260
700	430	500	260
800	470	600	290
900	510	650	290
1000	550	750	290
1100	590	800	300
1200	630	900	320
1300	670	1000	340
1400	710	1100	360





PUMP, VALVE & DAM
EQUIPMENTS
PRODUCT CATALOGUE



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