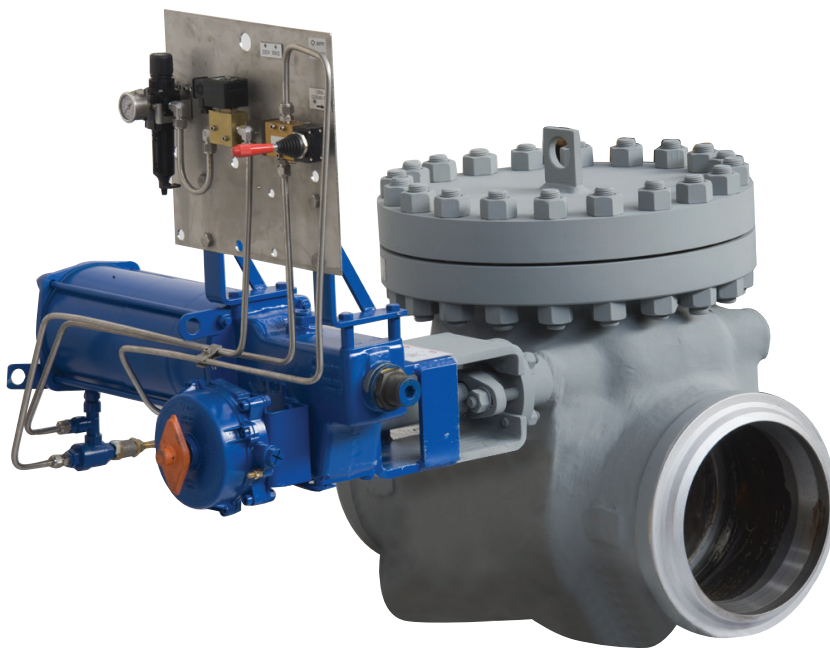


SEMPELL DEWRANCE CHECK VALVES
SIDE MOUNTED EXTRACTION CHECK VALVE

Fast closing check valves are installed in the turbine extraction pipe lines that supply steam to feed water heaters, auxiliary turbines and other equipment. Closing action in less than 1 second. The valves have side mounted actuators and are spring closing.



FEATURES

- The disc will freely close as a result of reversed flow.
- Complete disc closure at no flow conditions is assured by an off-set between the seating surface and the lever.
- The disc is provided with an anti-rotational device to avoid damage due to induced flow instability.
- Free swinging disc operation when the actuator is in open position (pressurized cylinder and compressed spring).
- A vertical seat design, a large opening angle of the disc (75°) and an accurate design of the internal geometry gives a very limited internal turbulence. This results in reduced pressure loss.
- During the fast air exhaust, the compressed spring allows a closure in less than 1 sec (the complete seat closure will be effective only when the steam flow becomes zero).
- The actuator action is limited to the first part of the stroke leaving a free swinging motion of the disc for few degrees when it is near the closed position. This avoids possible deformation by repeated internal shocks by forced closure.
- The standard actuator configuration includes: limit switches, pressure gauge and filter, quick exhaust valve and local closure test device.
- Quarter turn actuators assures the safety conditions for operators.

Options

- Counterweight
- Drain plug
- Spare body/bonnet gasket
- Anti blow-out kit

GENERAL APPLICATION

The valves prevent backflow of steam from feed water heaters, auxiliary turbines and other equipment to the main turbine after sudden load reductions or turbine trip.

Conventional power plants (coal and oil):

- Steam turbine extraction lines
- Water line, for the pump protection

Natural gas combined cycle:

- Cold reheat non return

Refineries and petrochemical plants, for compressor protection:

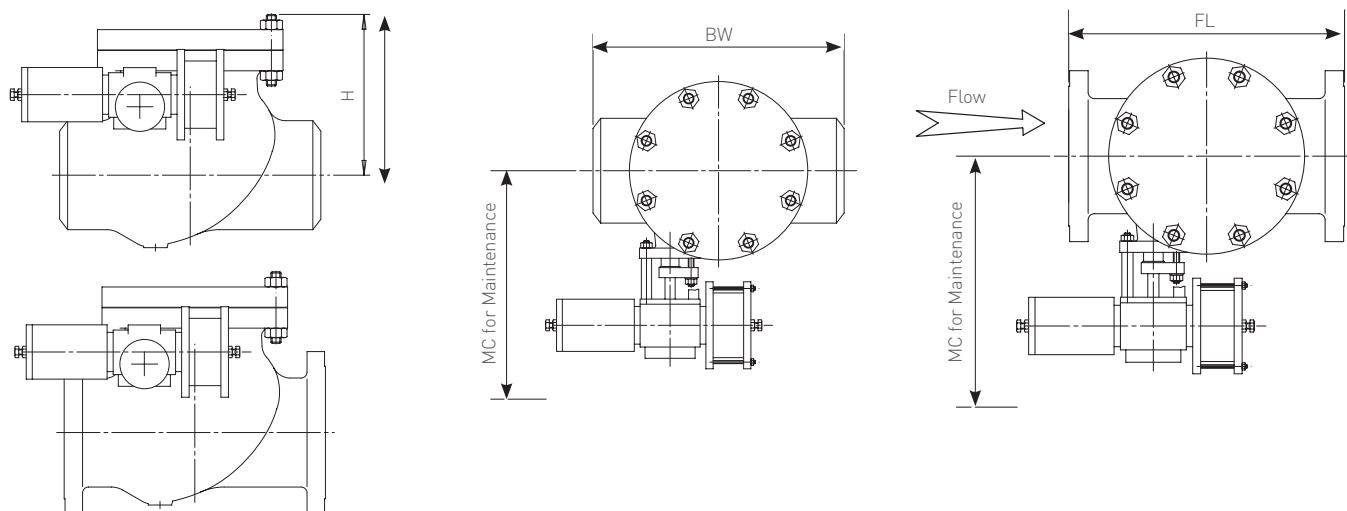
- Fluid catalytic cracking air blower discharge
- Compressor discharge lines and in process application

TECHNICAL DATA

Standard design: ASME B16.34
 Pressure ratings: ASME 150 to 1500
 Size: DN 150 to 1500 (NPS 6 to 60)
 Material: Carbon steel, Low alloy steel, Stainless steel
 Trim: Stainless steel 13 % Cr (trim 1 acc to API 600)
 End connection: Flanged or butt weld ends
 Installation: Horizontal
 Actuator: Pneumatic or hydraulic actuator

SEPELL DEWRANCE CHECK VALVES

SIDE MOUNTED EXTRACTION CHECK VALVE



DIMENSIONS

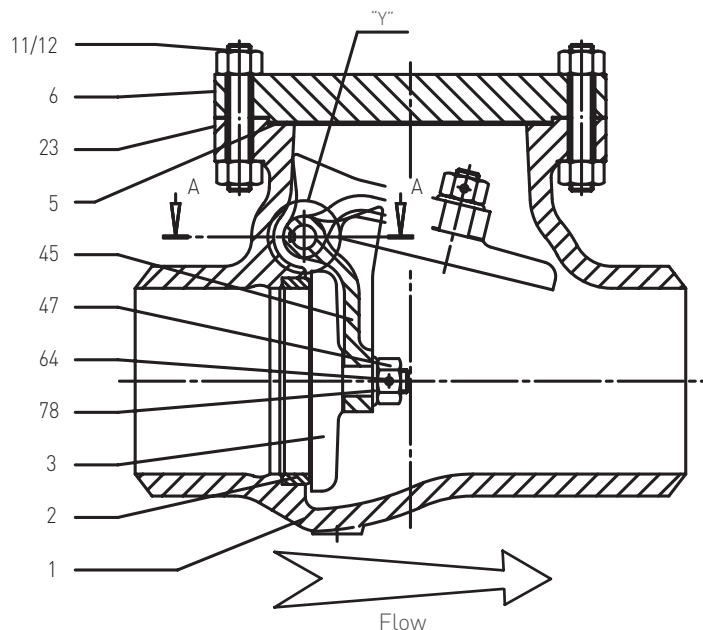
Size		ASME Class 150						ASME Class 300						ASME Class 600					
DN	NPS	FL	BW	H	MC	WFL	WBW	FL	BW	H	MC	WFL	WBW	FL	BW	H	MC	WFL	WBW
150	6"	356	356	240	1300	75	65	444	445	280	1300	115	85	562	559	325	1300	200	150
200	8"	495	495	290	1350	125	10	533	534	345	1350	210	165	663	660	425	1350	390	315
250	10"	622	622	360	1400	205	170	533	534	345	1350	210	165	790	787	475	1400	590	475
300	12"	698	698	425	1450	300	290	711	711	485	1500	470	375	841	838	505	1500	795	660
350	14"	787	787	490	1500	375	330	838	838	550	1500	655	535	892	889	605	1600	1005	845
400	16"	864	864	520	1600	535	485	864	864	560	1600	715	555	994	991	655	1700	1385	1165
450	18"	978	978	545	1650	625	550	978	978	590	1650	925	730	1095	1092	660	1800	1770	1520
500	20"	978	978	635	1900	825	755	1016	1016	680	1950	1125	895	1200	1194	840	2000	2385	2045
550	22"	1067	1067	680	2000	1130	980	1118	1118	710	2100	1580	1300	1407	1397	960	2400	3850	3330
600	24"	1295	1295	715	2100	1250	1150	1346	1346	760	2200	2110	1770	1461	1448	1000	2600	-	4070
650	26"	1295	1295	740	2200	1650	1545	1346	1346	800	2250	2430	1990	1461	1448	1000	2600	-	4070
700	28"	1448	1448	760	2200	1860	1790	-	1499	970	2300	-	2800	-	1600	1050	2650	-	4950
750	30"	1524	1524	840	2600	2610	2535	1594	1594	970	2800	4010	3410	1664	1651	1080	2700	5850	5150
800	32"	-	1676	880	2900	-	2860	-	-	-	-	-	-	-	1803	1230	2950	-	6800
850	34"	-	1829	910	3000	-	3230	-	-	-	-	-	-	-	1905	1280	2950	-	7400
900	36"	1956	1956	950	3200	3740	3650	2083	2083	1120	3000	6050	5250	2097	2083	1380	3100	10070	8500
950	38"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	40"	-	2006	1040	3200	-	4470	-	2134	1250	3050	-	7580	-	2318	1460	3150	-	11200
1050	42"	-	2038	1090	3200	-	4900	-	2159	1290	3050	-	8125	-	2438	1500	3200	-	12500
1100	44"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1150	46"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1200	48"	-	2134	1210	3300	-	6255	-	2235	1380	3300	-	9750	-	2540	1610	3200	-	16500
1250	50"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1300	52"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1350	54"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1400	56"	-	-	-	-	-	-	-	-	-	-	-	-	-	2794	1800	3300	-	22500

DIMENSIONS

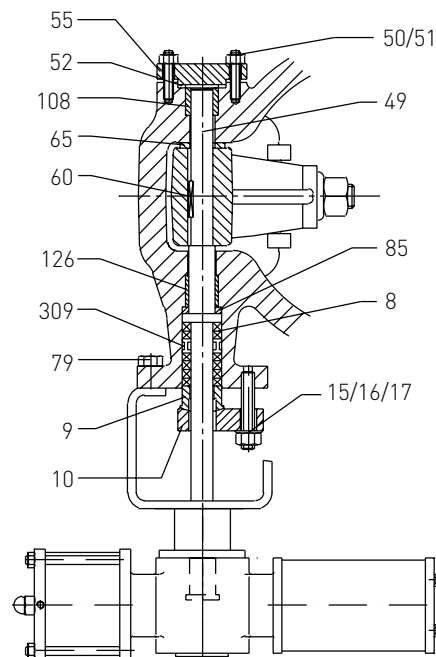
Size		ASME Class 900						ASME Class 1500					
DN	NPS	FL	BW	H	MC	WFL	WBW	FL	BW	H	MC	WFL	WBW
150	6"	613	610	400	1400	300	250	711	705	490	1550	545	430
200	8"	740	737	485	1500	570	430	842	832	565	1650	890	720
250	10"	841	838	540	1600	780	635	1001	991	660	1750	1510	1080
300	12"	968	965	610	1700	1150	950	1146	1130	675	1850	2230	1765
350	14"	1039	1029	690	1850	1560	1350	1276	1257	830	2000	3200	2500
400	16"	1140	1130	660	2050	1750	1500	1406	1384	880	2150	3700	3050
450	18"	1232	1219	670	2300	2300	2000	-	-	-	-	-	-
500	20"	1334	1321	700	2600	2540	2150	-	-	-	-	-	-
550	22"	-	-	-	-	-	-	-	-	-	-	-	-
600	24"	1568	1549	925	3200	5000	4500	-	-	-	-	-	-

SEMPELL DEWRANCE CHECK VALVES

SIDE MOUNTED EXTRACTION CHECK VALVE



SECTION A-A (not in scale)

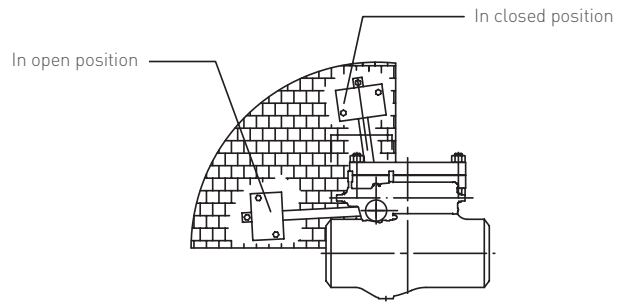
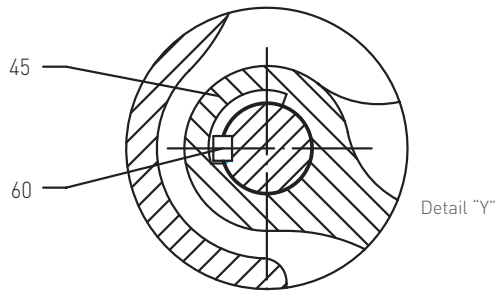
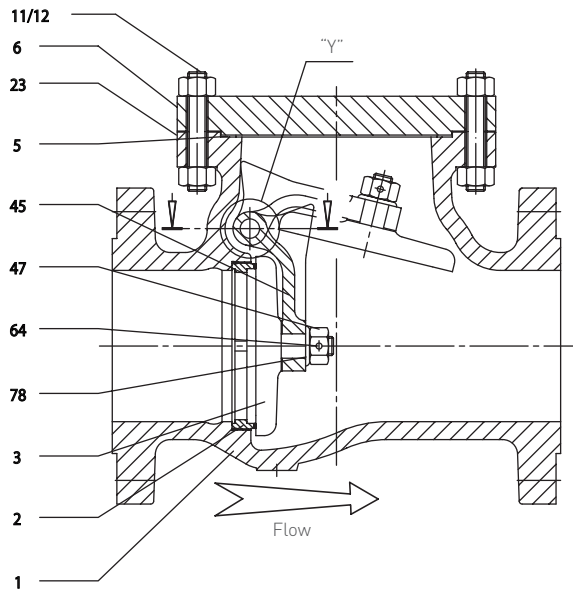


PARTS LIST

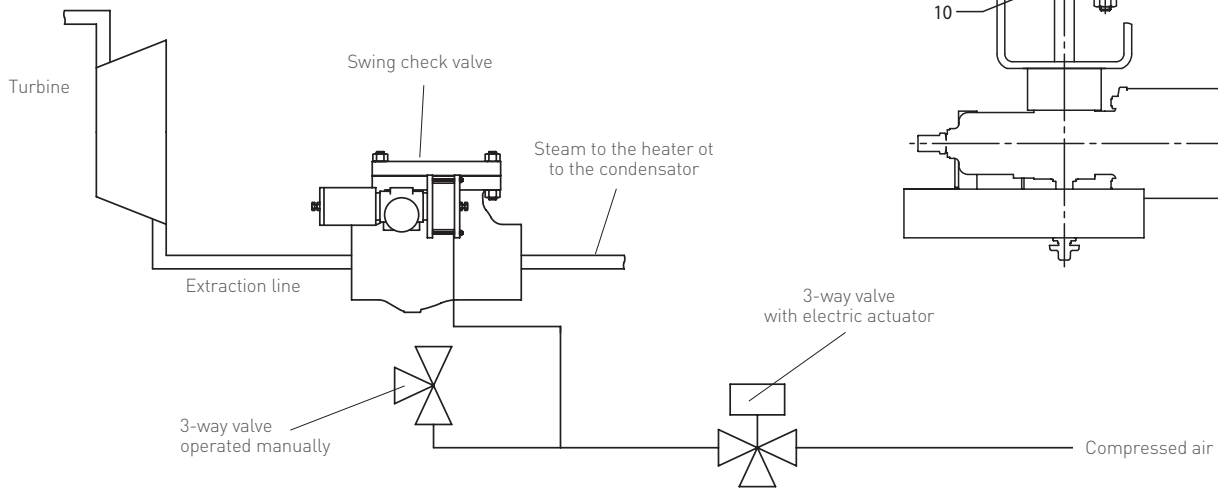
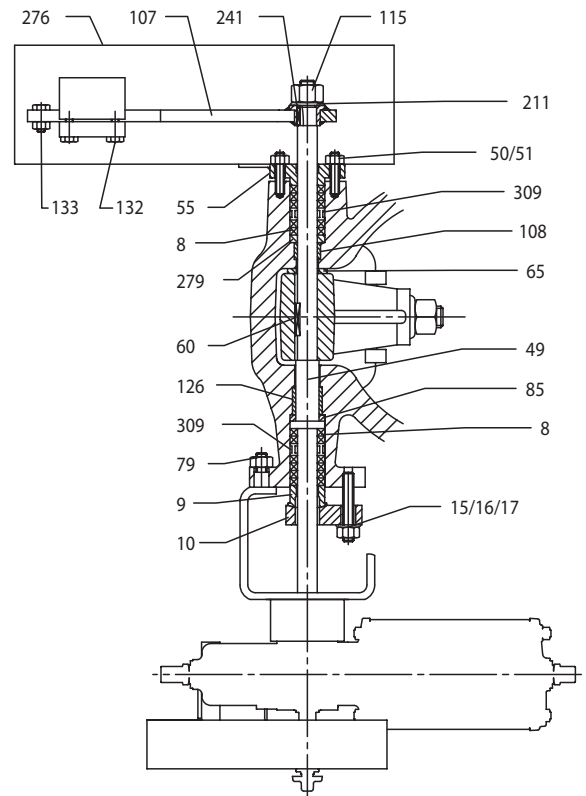
Item	Description	Material		
1	Body	A216 WCB	A217 WC6	A217 WC9
2	Seat	A105 +13% Cr	A182 F22 +13% Cr	A182 F22 +13% Cr
3	Disc	A216 WCB +13% Cr	A217 WC6 +13% Cr	A217 WC6 +13% Cr
5	Gasket	316/Graphite	316/Graphite	316/Graphite
6	Bonnet	A516 GR 70	A387 GR 11	A387 GR 22
8	Packing	Graphite	Graphite	Graphite
9	Gland	A182 F6	A182 F6	A182 F6
10	Gland flange	A516 GR 70	A516 GR 70	A516 GR 70
11	Body stud	A193 B7	A193 B16	A193 B16
12	Body nut	A194 2H	A194 GR7	A194 GR7
15	Gland stud	A193 B7	A193 B7	A193 B7
16	Gland nut	A194 2H	A194 2H	A194 2H
17	Washer	F316	F316	F316
23	Nameplate	Stainless steel	Stainless steel	Stainless steel
45	Hinge	A216 WCB	A217 WC6	A217 WC9
47	Disc nut	A194 2H	A194 GR7	A194 GR7
49	Pin	A565 GR630	A565 616 HT	A565 616 HT
50	Stud	A193 B7	A193 B16	A193 B16
51	Nut	A194 2H	A194 GR7	A194 GR7
52	Pin gasket	316/Graphite	316/Graphite	316/Graphite
55	Pin cover	A105	A182 F22	A182 F22
60	Key	A565 GR630	A565 GR630	A565 GR630
64	Split pin	F316	F316	F316
65	Spacer	F316	F316	F316
78	Disc washer	F316	F316	F316
85	Anti-clutch spacer	B150 C62300	B150 C62300	B150 C62300
108	Bush	Nitraloy 135	Nitraloy 135	Nitraloy 135
126	Bush	Nitraloy 135	Nitraloy 135	Nitraloy 135
309	Spacer	A182 F6	A182 F6	A182 F6

SEPELL DEWRANCE CHECK VALVES

SIDE MOUNTED EXTRACTION CHECK VALVE



SECTION A-A (not in SCALE)



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