



Triple Eccentric Metal Seated

Butterfly Valves



A-T ARMATUREN LTD.
新德特殊阀门厂有限公司



TUV

**ISO
9000**
EN 29001



SCHROEDAHL & ARAPP
Made in Germany

www.at-valve.com



A & T

A-T ARMATUREN LTD.

新德特殊阀门厂有限公司

总经理温健成与外商

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<http://www.a-tcontrols.com>

<http://www.schroedahl.com>

A-T ARMATUREN LTD. OEM manufacturing in Schroedahl & Arapp Spezial Armaturen Co KG, A&T has, over a period of years, established a reputation for manufacturing high technology valves. Their range of triple and double offset butterfly valves are manufactured in sizes from 80mm to 2500mm and pressures from 10 Bar (class 125) to 260 Bar (class 2500).

The A&T OEM range of valves are in use at many of the Water Boards, Water Authorities, Municipalities, Mines, Petrochem and Process plants, and Steel refineries in Germany, as well as U.S.A. and the Asia.

The valves are available in wafer, lugged and double flanged configurations. A wide variety of drillings can be accommodated as well as most European, American and Asian specifications.

Standard

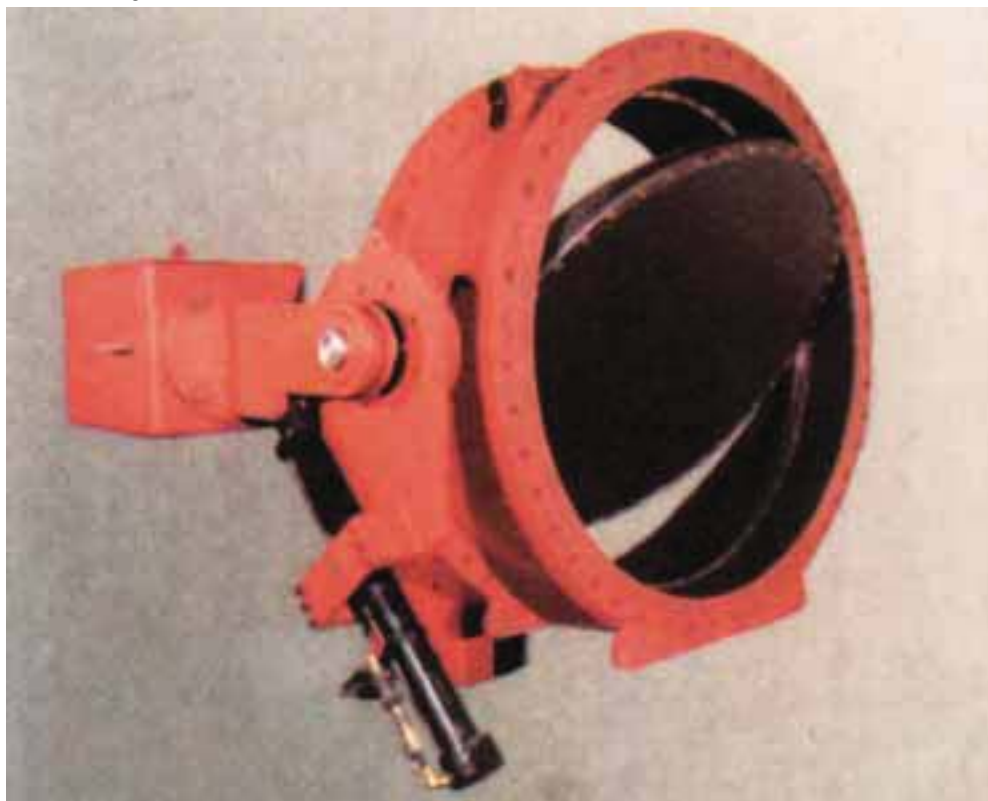
Valve Design:	API 6D, ASME B16.34, ASME B 31.3
Face to Face	ASME B16.10
Dimension:	
End Flange	ASME B16.5, ASME B16.47
Dimensions:	MSS SP 44
Butt Weld Ends:	ASME B 16.25
Test:	API 6D, API 598
Fire Test:	API 6FA, API 607

Certificates:

API 6D
 API 6A
 ISO 9001
 API 6FA, API 607



Manufacturing



三向偏心蝶阀 全金属密封
 液动0.1秒/ 气动0.5秒/ 电动/全自力式自动 DN80-DN3000 10Bar-260Bar -253℃ 至 815℃



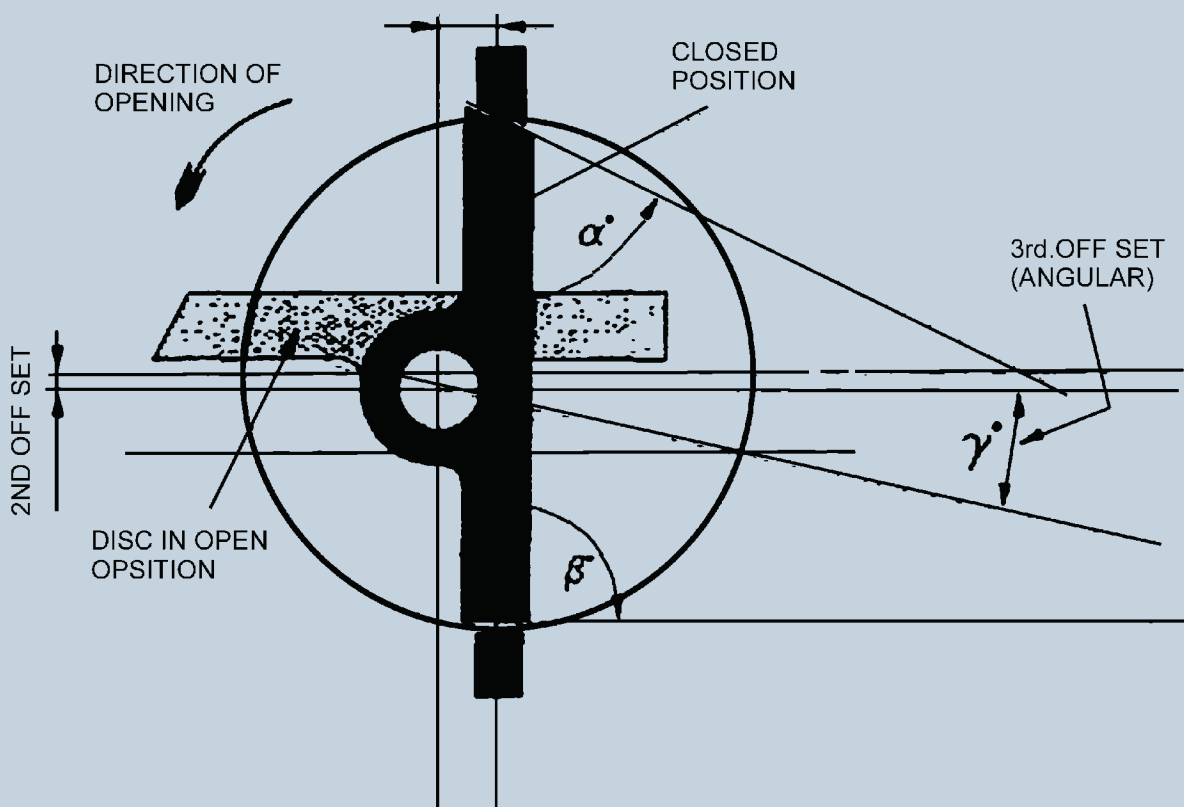


THE TRIPLE OFF-SET DESIGN PRINCIPLE

A&T OEM Metal Seating High Pressure butterfly valves provide a bi-directional bubble tight shut off. This is achieved by introducing state-of-the-art triple eccentric disc geometry.

The valve shaft is off-set against the seal, (1st off-set), and against the centre line of the valve (2nd off-set). The seating edges are machined with a continuously changing slope from an angle α on top of the oval seat ring to an angle β at the opposite side (3rd off-set angular).

This geometry ensures that the seat ring stays clear of the seat except at the final shut-off position, resulting in long seat life and operating cycles in excess of 500 000.



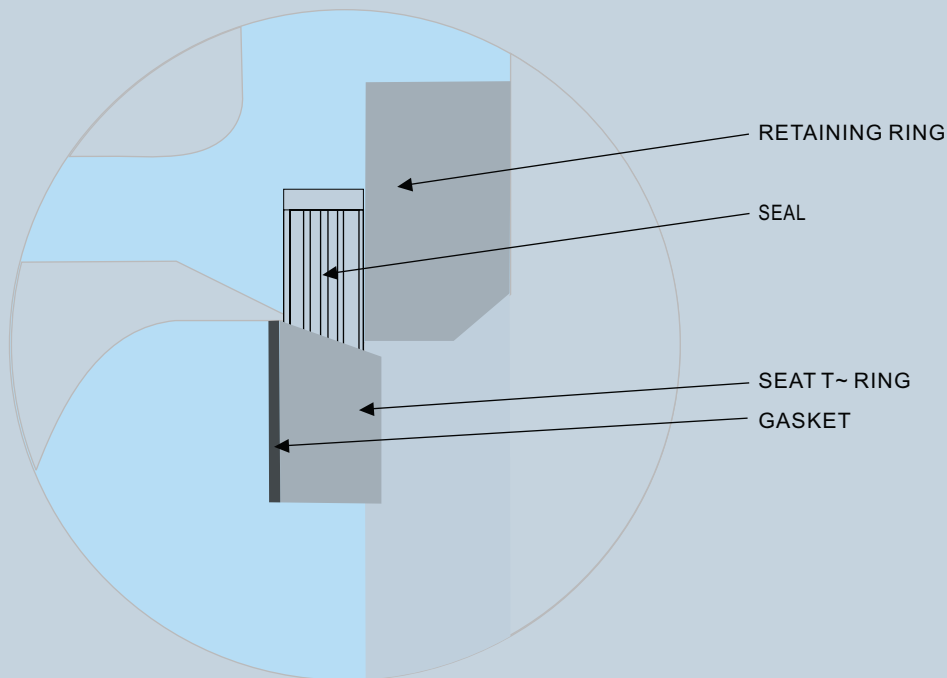
THE VALVE SEAL AND SEAT COMBINATION



The valve seal is manufactured from laminated stainless steel with PTFE or graphoil laminate depending on the applications. The seal is held in position by a bolt-on retaining ring and, together with the stainless seat ring, is easily replaceable.

A gasket prevents leakage around the seal ring. The metal seating valve can operate within a temperature of -249° to $+600^{\circ}$ C. Valve designs for cryogenic applications are available on request.

For low temperature applications, the metal seat can be substituted by a PTFE seat. A&T OEM High Pressure butterfly valves are manufactured in a wide range of materials to suit most applications.

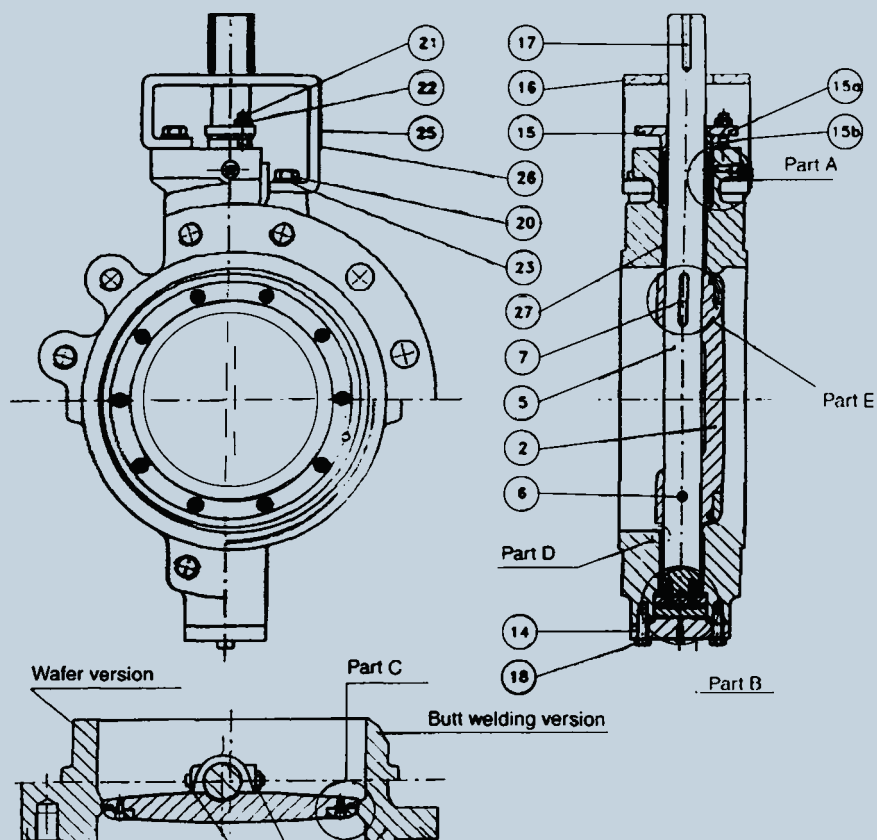


A&T OEM metal seating valves are certified fire safe in accordance with BS6755 : Part 2 : 1987, and API 607, AP16FA. The range has been tested and certified in accordance with API Standards 598.



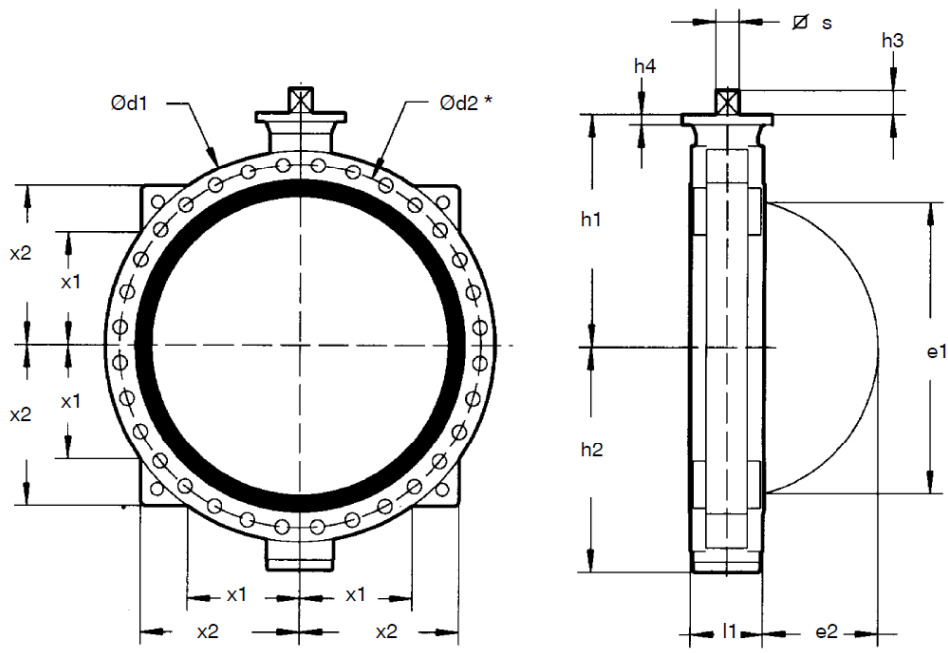
Model MS Standard Bill of Material

Flanged version



Parts Name	-29°C to 400°C	-29°C to 540°C
	A216-WCB	A216-WC6
1 Body / seat	ASTM A216 WCB / AISI 316	ASTM A216 WC6 / AISI 316
2 Disc	ASTM A216 WCB	ASTM A216 WC6
3. Seal Ring	AISI 430 Laminated	AISI 316LN Lamination
4. Seal ring retainer	ASTM A515 Gr.60	ASTM A240 type 316
5. Shaft	ASTM A182 Gr..F6a	ASTM A479 type XM 19
6. Taper pin	ASTMA182gr.F6a	ASTM A479 type XM
7. Disc key	ASTMA182gr.F6a	19 ASTM A479 type XM
8. Spiral wound gasket*	ASTM I316+Grafoil	19 AISI316+Grafoil ®
9. Retaining screws	ASTM A1 93 B8M	ASTM A1 93 B8M
10. Thrust bearing washer	400 Series Stainless Steel Hardened	ASTM A479 type XM19
11. Thrust bearing screws	ASTM A193 B8M	ASTM A1 93 B8M
12. Unloosening washer	ASTMA182gr.F6a Hardened	ASTM A479 type XM19
13. Spiral wound gasket*	AISI 316+Grafoil ®	AISI 316+Grafoil ®
14. Bottom flange	ASTMA515gr.60	ASTMA216 WC6
15. Gland	ASTM A105	ASTM A216 WC6
16. Bracket	Carbon Steel	Carbon Steel
17. Stem key	AISI 1040	AISI 1040
18. Bottom screws	ASTMA193gr.B7	ASTMA193gr.B8

Dimensions



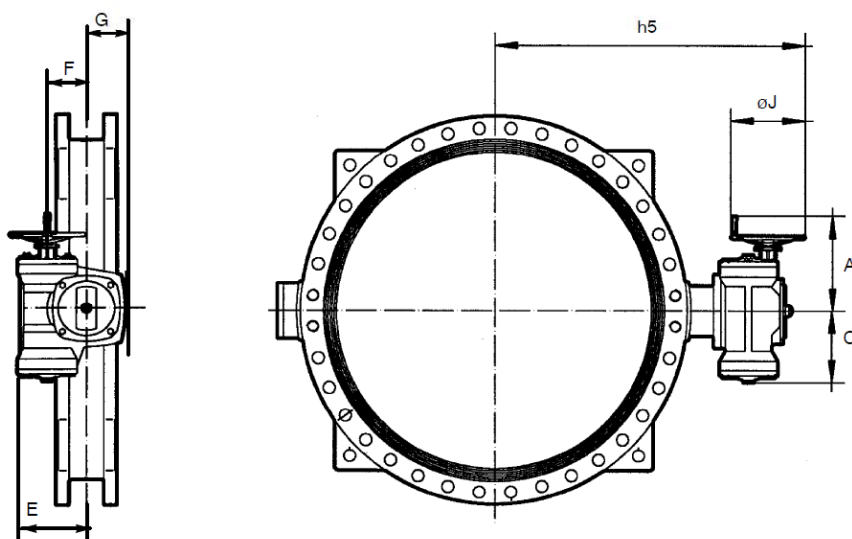
DN	NPS	Pressure	Connection	O _{d1}	Face to face	h ₁	h ₂	Mounting plate ISO 5211		Shaft output		Disc clearance		x ₁	x ₂	Weight daN
					l ₁			n	h ₄	s	h ₃	e ₁	e ₂			
1100	42"	10	AWWA cl. D	1 332	216	765	674	F25	30	60	80	1 006	405	383	545	850
		10	EN 1092 PN10	1 340	216	790	703	F25	30	60	80	1 057	430	386	548	900
1100	44"	10	AWWA cl. D	1 340	216	790	703	F25	30	60	80	1 057	430	403	566	960
		16	EN 1092 PN 16	1 355	280	867	843	F30	40	90	90	1 035	396	333	590	1 400
1100	44"	16	AWWA cl. E	1 405	280	867	843	F30	40	90	90	1 035	396	382	590	1 400
	44"	20	PN 20 / Cl. 150	1 405	280	867	843	F30	40	90	90	1 035	396	382	590	1 600
1100		25	EN 1092 PN 25	1 420	280	867	843	F30	40	90	90	1 035	396	395	590	1 878
	1200	10	EN 1092 PN10	1 455	254	840	756	F25	30	60	80	1 152	461	428	588	1 090
1200	48"	10	AWWA cl. D	1 497	254	840	756	F25	30	60	80	1 152	461	444	602	1 150
		16	EN 1092 PN 16	1 485	280	917	893	F30	40	90	90	1 137	447	450	625	1 538
1200	48"	16	AWWA cl. E	1 511	280	917	893	F30	40	90	90	1 137	447	450	625	1 538
	48"	20	PN 20 / Cl. 150	1 511	280	917	893	F30	40	90	90	1 137	447	450	625	1 761
1200		25	EN 1092 PN 25	1 530	280	917	893	F30	40	90	90	1 137	447	450	625	2 031
	1300	16	EN 1092 PN 16	1 585	280	967	943	F30	40	90	90	1 240	497	470	680	1 620
1300	52"	16	AWWA cl. E	1 626	280	967	943	F30	40	90	90	1 240	497	470	680	1 620
	52"	20	PN 20 / Cl. 150	1 626	280	967	943	F30	40	90	90	1 240	497	470	680	1 915
1300		25	EN 1092 PN 25	1 645	280	967	943	F35	40	90	90	1 240	497	470	680	2 185
		10	AWWA cl. D	1 683	280	992	968	F30	40	90	90	1 293	522	480	700	1 500
	16	AWWA cl. E	1 683	280	992	968	F30	40	90	90	1 293	522	480	700	1 680	
1350		20 - 25	Not standardized	Please consult us												
1400		10	EN 1092 PN10	1 675	280	1 017	993	F30	40	90	90	1 343	547	480	725	1 600
1400		16	EN 1092 PN 16	1 685	280	1 017	993	F30	40	90	90	1 343	547	480	725	1 744
1400	56"	20	PN 20 / Cl. 150	1 745	280	1 017	993	F35	40	90	90	1 343	547	480	725	2 068
1400		25	EN 1092 PN 25	1 755	400	1 055	1 018	F35	40	90	90	1 303	481	485	735	2 622
1500		10	EN 1092 PN10	1 785	280	1 067	1 043	F30	40	90	90	1 455	600	530	765	1 800
	60"	10	AWWA cl. D	1 854	280	1 067	1 043	F30	40	90	90	1 455	600	530	765	1 800
1500		16	EN 1092 PN 16	1 820	280	1 067	1 043	F30	40	90	90	1 455	600	530	765	1 950
	60"	16	AWWA cl. E	1 854	280	1 067	1 043	F30	40	90	90	1 455	600	530	765	1 950
1500	60"	20	PN 20 / Cl. 150	1 854	400	1 105	1 068	F35	40	90	90	1 407	531	520	775	3 085
1500		25	EN 1092 PN 25	1 865	400	1 105	1 068	F35	40	90	90	1 407	531	520	775	3 210

Motorization

For large sizes valves, the torque depends on hydraulic characteristics.

The table below shows recommended actuators on lubricated media with a maximum fluid velocity of 2m/s (6.5ft/s). According to the working conditions and the hydraulic characteristics, higher fluid velocities can be allowed, therefore other actuator recommendations can be proposed : please consult us.

Manual control: Reducer

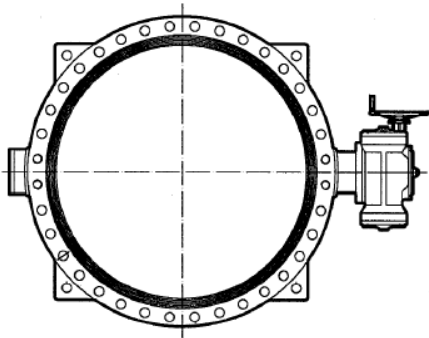


DN	NPS	Pressure	Reducer	A	C	E	F	G	øJ	h5	Weight kg*
1050	42"	10	MR 600	511	405	245	140	155	600	1174	105
1100	44"	10	MR 600	511	405	245	140	155	600	1199	105
1100	44"	16 and 20	MR 1200	661	555	318	180	180	800	1397	175
1100	44"	25	MR 1600	447	348	318	180	180	800	1264	183
1200	48"	10	MR 600	397	298	245	140	155	350	1174	105
1200	48"	16	MR 1200	661	555	318	180	180	800	1447	175
1200	48"	20 and 25	MR 1600	447	348	318	180	180	350	1314	183
1300	52"	16 and 20	MR 1600	447	348	318	180	180	350	1314	183
1300		25	GS250.3+GZ250.3	585	402	365	250	268	800 max.	1483	308
1350	54"	10	MR 1200	661	555	318	250	268	800	1522	175
1350	54"	16	MR 1600	447	348	318	180	180	350	1389	183
1350		20	MR 1600	447	348	318	180	180	350	**	183
1350		25	GS250.3+GZ250.3	585	402	365	250	268	800 max.	**	308
1400	56"	10	MR 1200	661	555	318	180	180	800	1547	175
1400	56"	16	MR 1600	447	348	318	180	180	350	1414	183
1400		20 and 25	GS250.3+GZ250.3	585	402	365	250	268	800 max.	1595	308
1500	60"	10	MR 1600	447	348	318	180	180	350	1464	183
1500	60"	16	GS250.3+GZ250.3	585	402	365	250	268	800 max.	1607	308
1500	60"	20 and 25	GS250.3+GZ250.3	585	402	365	250	268	800 max.	1645	

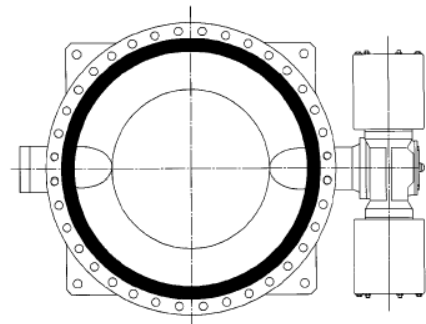


A-T ARMATUREN GMBH
Maschinen - und Gerätebau

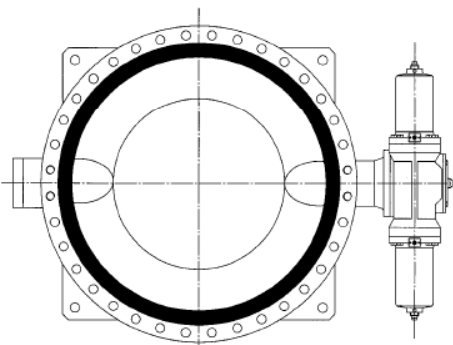
Electric actuator ACTELEC



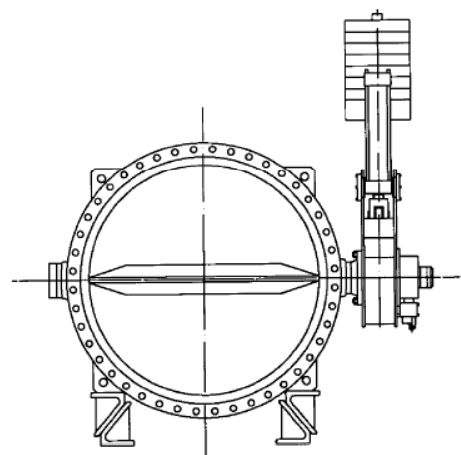
Pneumatic actuator ACTAIR



Hydraulic actuator ACTO



Counterweight





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