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ARI-ZETRIX® ANSI - Fig. 016 - Double flanged process valve with metallic sealing - Triple offset

ARI-ZETRIX® ANSI - Fig. 018 - Threaded flange process valve with metallic sealing - Triple offset

ARI-ZETRIX® ANSI

with worm gear

- Self-locking
- With variable adjustment

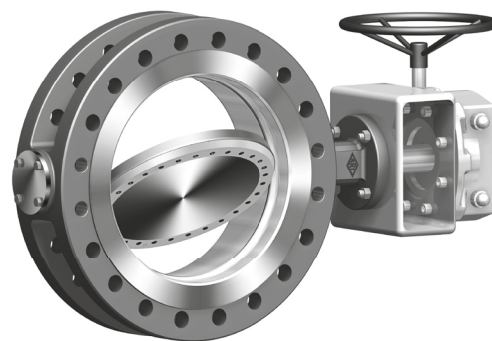
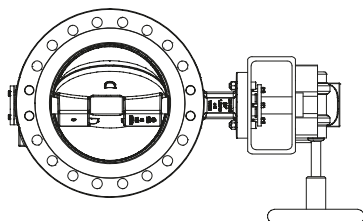


Fig. 016 -
ARI-ZETRIX® ANSI gear

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ARI-ZETRIX® ANSI

with electric rotary actuator Auma or Schiebel

- For temporary service S 2-15 min.
(or control: Auma S4 25%,
Schiebel S4 40%)
- 400V 50Hz (optional: 230V 50Hz)
- Enclosure IP 67

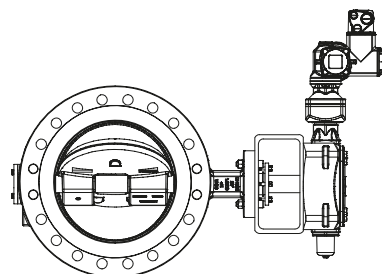
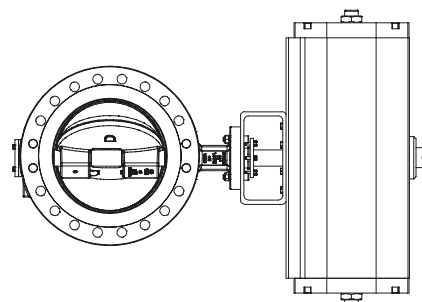


Fig. 016 -
ARI-ZETRIX® ANSI electric actuator

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ARI-ZETRIX® ANSI

with pneumatic actuator



on request

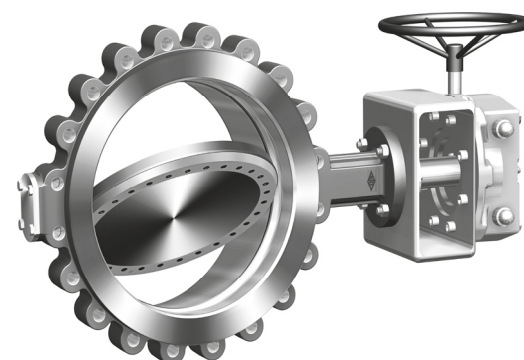
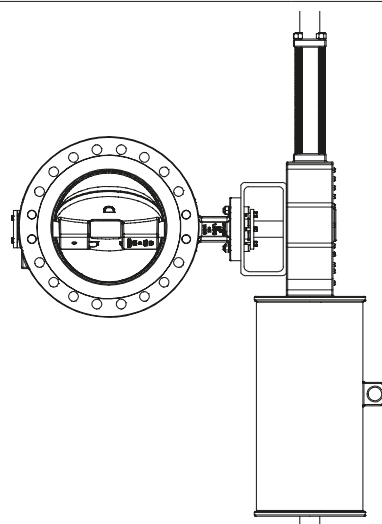


Fig. 018 -
ARI-ZETRIX® ANSI threaded flange

ARI-ZETRIX® ANSI

with hydraulic actuator



on request

Features:

- Double flange and threaded flange design
- Cast steel / stainless steel body, one-piece
- Triple offset construction:
Rotary movement (90°) without wear or friction
- Metallic sealing
- Stellite seat (Stellite® 21)
- Continuous stem, hardened bearings
with graphite protector ring
- Blow-out protected stem (optional: acc. to API 609)
- Firesafe acc. to ISO 10497 / API 607
- ATEX
- SIL
- Test EN ISO 15848-1/ TA-Luft (optional)

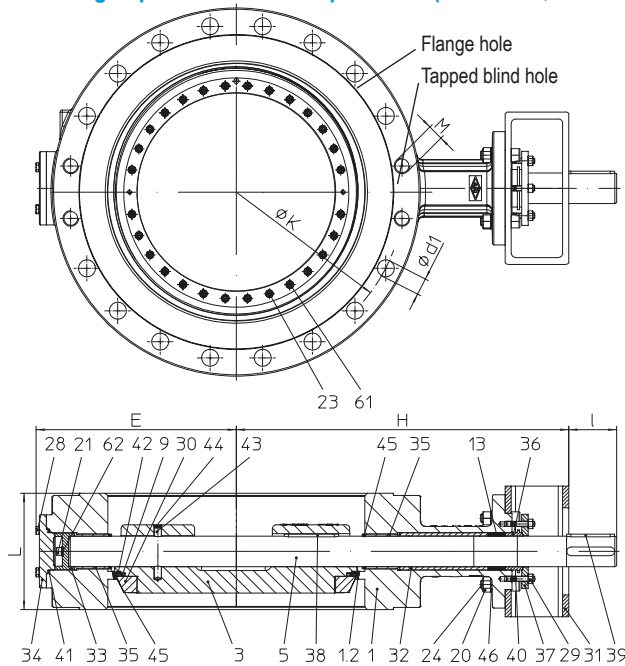
Double flanged process valve - Triple offset (Cast steel, Stainless steel)


Figure	Nominal pressure	Material	Nominal diameter	Disc	Stem
32.016	ANSI150	SA216WCB	DN 80-600 NPS 3-24	SA216WCB	SA276Gr.420
35.016	ANSI300				
52.016	ANSI150	SA351CF8M	DN 80-600 NPS 3-24	SA351CF8M	SA564Gr.630
55.016	ANSI300				

Face-to-face dimension series 13 acc. DIN EN 558 / ISO 5752 / API 609 Cat. B (short pattern)

Sealing element:

Graphite / SA182F51 -29°C up to 427°C

Max. differential pressure:

• = Nominal pressure

Actuation arrangement:

- Worm gear
- Electric actuator
- Pneumatic actuator
- Hydraulic actuator

Test:

Sealing leakage test: • DIN EN 12266-1 Leakage rate A

Options on request (refer to page 9)

Parts					
Pos.	Sp.p.	Description	ANSI150 / ANSI300		
			Fig. 32.016 / 35.016		Fig. 52.016 / 55.016
1		Body	SA216WCB		SA351CF8M
1.2		Seat	Stellit 21		
3		Disc	≤DN100 / NPS4: SA240Gr.304 ≥DN125 / NPS5: SA216WCB		≤DN100 / NPS4: SA240Gr.304 ≥DN125 / NPS5: SA351CF8M
5		Stem	SA276Gr.420		SA564Gr.630 - max. 300°C (SA453Gr.660 - max. 427°C on request)
9	x	Lamellar seal ring	Graphite / SA182F51		
13	x	Packing	Graphite		
20		Hexagon nut	8 - A2B		
21		Cheese head screw	A4-70		
23		Cheese head screw	A4-70		
24		Cheese head screw	8.8-A2B		
28		Hexagon screw	A2-70		
29		Hexagon nut	A2		
30		Retaining ring	SA516Gr.60 (nickel plated)		SA240Gr.304
31		Console	SA618Gr.I (galvanized)		
32		Distance bush	SA240Gr.304		
33		Axial bearing	SA276Gr.420 (hardened)		SA240Gr.304 (hardened)
34		Bottom flange	SA105		SA240Gr.304
35		Bushing	SA276Gr.420 (hardened)		SA240Gr.304 (hardened)
36		Bushing	SA240Gr.304		
37		Packing box flange	SA240Gr.304		
38 / 39		Parallel key	A4		
40		Stud	A4-70		
41	x	Spiral wound gasket	Graphite / SA182F321		
42	x	Spiral wound gasket	Graphite / Hastelloy C276, SB575		
43		Parallel pin	A4-70		
44		Retaining ring	SA276Gr.440B		
45		Bearing protector	Graphite webbing		
46		Spring ring	Spring steel - A2B		
61 / 62		Lock washer pair	A4		
	L Spare parts				

Information / restriction of technical rules need to be observed!

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview).



DN	80	100	125	150	200	250	300	350	400	500	600
NPS	3	4	5	6	8	10	12	14	16	20	24

Face-to-face dimension series 13 acc. to DIN EN 558 / API 609 Cat. B (short pattern)												
L	(mm)	114	127	140	140	152	165	178	190	216	229	267

Dimensions													
ANSI 150	H	(mm)	292	288	344	344	371	498	552	588	662	712	763
	E	(mm)	127	150	184	185	204	239	267	305	337	392	460
	I	(mm)	45	45	55	55	55	55	65	65	80	110	110
ANSI 300	H	(mm)	292	288	344	344	400	575	601	636	661	762	819
	E	(mm)	127	150	184	185	215	251	285	317	356	416	496
	I	(mm)	45	45	55	55	65	80	80	110	110	130	130

Standard-flange dimensions / Hexagon screw (Quantity, Thread, Length) per side														
ANSI 150	Flange hole	ØK	(mm)	152,4	190,5	215,9	241,3	298,4	362	431,8	476,2	539,4	635	749,3
		n x Ød1	(mm)	--	4 x 19	4 x 22	4 x 22	4 x 22	8 x 26	8 x 26	8 x 29	12 x 29	16 x 32	16 x 35
		Number of threads	(n)	4	4	4	4	4	4	4	4	4	4	4
	Screw	Thread ^{1) 2)}	(in)	5/8 - 11UNC	5/8 - 11UNC	3/4 - 10UNC	3/4 - 10UNC	3/4 - 10UNC	7/8 - 9UNC	7/8 - 9UNC	1 - 8UNC	1 - 8UNC	1 1/8 - 8UN	1 1/4 - 8UN
		Number ¹⁾	(n)	--	4	4	4	4	8	8	8	12	16	16
		Length ¹⁾	(mm)	--	95	95	95	100	110	110	120	130	140	140
		Number ²⁾	(n)	4	4	4	4	4	4	4	4	4	4	4
		Length ²⁾	(mm)	50	50	60	60	60	60	60	70	70	80	90
ANSI 300	Flange hole	ØK	(mm)	168,3	200	235	269,7	330,2	387,4	450,9	514,4	571,5	685,8	812,8
		n x Ød1	(mm)	4 x 22	4 x 22	4 x 22	8 x 22	8 x 26	12 x 29	12 x 32	16 x 32	16 x 35	20 x 35	20 x 41
		Number of threads	(n)	4	4	4	4	4	4	4	4	4	4	4
	Screw	Thread ^{1) 2)}	(in)	3/4 - 10UNC	3/4 - 10UNC	3/4 - 10UNC	3/4 - 10UNC	7/8 - 9UNC	1 - 8UNC	1 1/8 - 8UN	1 1/8 - 8UN	1 1/4 - 8UN	1 1/4 - 8UN	1 1/2 - 8UN
		Number ¹⁾	(n)	4	4	4	8	8	12	12	16	16	20	20
		Length ¹⁾	(mm)	95	100	105	105	115	130	140	145	160	170	200
		Number ²⁾	(n)	4	4	4	4	4	4	4	4	4	4	4
		Length ²⁾	(mm)	50	55	60	60	70	80	90	90	100	100	120

¹⁾ Hexagon screws / studs for flange holes ²⁾ Hexagon screws for tapped blind hole

Weights for double flanged process valve														
SA216WCB	ANSI 150	Fig. 32.016	(kg)	33	44	65	65	80	98	131	175	236	454	530
	ANSI 300	Fig. 35.016	(kg)	33	44	65	65	90	105	182	260	345	523	832
SA351CF8M	ANSI 150	Fig. 52.016	(kg)	35	46	68	68	84	103	136	180	242	460	537
	ANSI 300	Fig. 55.016	(kg)	35	46	68	68	96	110	187	265	352	529	841

Pressure-temperature-ratings				Intermediate values for max. permissible operational pressures can be determined by linear interpolation of the given temperature / pressure chart.										
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acc. to ANSI	ANSI		-29°C to 38 °C	93°C	149°C	204°C	260°C	315°C	343°C	371°C	399°C	427°C
SA216WCB	150	(bar)	19,6	17,9	15,8	13,8	11,7	9,6	8,6	7,6	6,6	5,5
SA216WCB	300	(bar)	51,1	46,6	45,2	43,8	41,4	39,3	37,9	36,6	34,8	28,3

acc. to ANSI	ANSI		-29°C to 38 °C	93°C	149°C	204°C	260°C	315°C	343°C	371°C	399°C	427°C
SA351CF8M	150	(bar)	18,9	16,2	14,8	13,4	11,7	9,6	8,6	7,5	6,5	5,5
SA351CF8M	300	(bar)	49,6	42,7	38,6	35,5	33,1	31	30,3	30	29,3	28,9

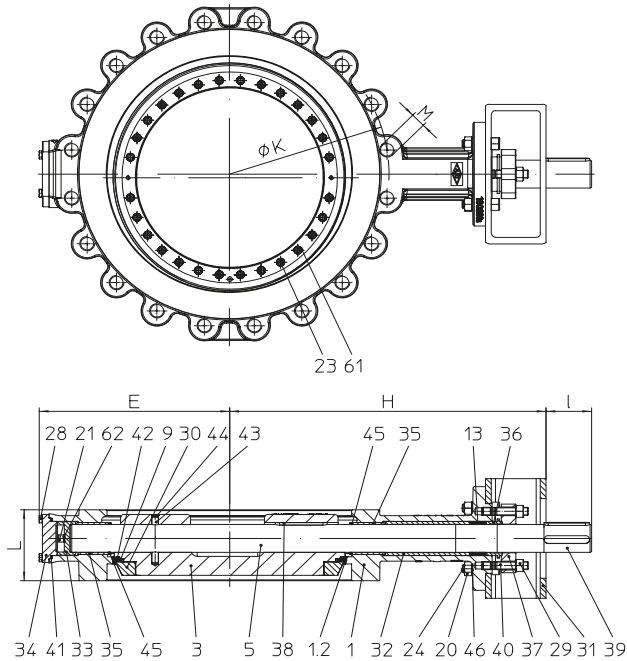
Threaded flange process valve - Triple offset (Cast steel, Stainless steel)


Figure	Nominal pressure	Material	Nominal diameter	Disc	Stem
32.018	ANSI150	SA216WCB	DN 80-600 NPS 3-24	SA216WCB	SA276Gr.420
35.018	ANSI300				

52.018	ANSI150	SA351CF8M	DN 80-600 NPS 3-24	SA351CF8M	SA564Gr.630
55.018	ANSI300				

Face-to-face dimension series 16 acc. to DIN EN 558 / ISO 5752

Sealing element:

• Graphite / SA182F51 -29°C up to 427°C

Max. differential pressure:

• = Nominal pressure

Actuation arrangement:

- Worm gear
- Electric actuator
- Pneumatic actuator
- Hydraulic actuator

Test:

Sealing leakage test: • DIN EN 12266-1 Leakage rate A

Options on request (refer to page 9)

Parts					
Pos.	Sp.p.	Description	ANSI150 / ANSI300		
			Fig. 32.018 / 35.018	Fig. 52.018 / 55.018	
1		Body	SA216WCB	SA351CF8M	
1.2		Seat	Stellit 21		
3		Disc	≤DN100 / NPS4: SA240Gr.304 ≥DN150 / NPS5: SA216WCB	≤DN100 / NPS4: SA240Gr.304 ≥DN150 / NPS5: SA351CF8M	
5		Stem	SA276Gr.420	SA564Gr.630 max. 300°C (SA453Gr.660 max. 427°C on request)	
9	x	Lamellar seal ring	Graphite / SA182F51		
13	x	Packing	Graphite		
20		Hexagon nut	8 - A2B		
21		Cheese head screw	A4-70		
23		Cheese head screw	A4-70		
24		Cheese head screw	8.8-A2B		
28		Hexagon screw	A2-70		
29		Hexagon nut	A2		
30		Retaining ring	SA516Gr.60 (nickel plated)	SA240Gr.304	
31		Console	SA618Gr.I (galvanized)		
32		Distance bush	SA240Gr.304		
33		Axial bearing	SA276Gr.420 (hardened)	SA240Gr.304 (hardened)	
34		Bottom flange	SA105	SA240Gr.304	
35		Bushing	SA276Gr.420 (hardened)	SA240Gr.304 (hardened)	
36		Bushing	SA240Gr.304		
37		Packing box flange	SA240Gr.304		
38 / 39		Parallel key	A4		
40		Stud	A4-70		
41	x	Spiral wounded gasket (≥ DN250)	Graphite / SA182F321		
42	x	Spiral wounded gasket	Graphite / Hastelloy C276, SB575		
43		Parallel pin	A4-70		
44		Retaining ring	SA276Gr.440B		
45		Bearing protector	Graphite webbing		
46		Spring ring	Spring steel - A2B		
61 / 62		Lock washer pair	A4		
	L Spare parts				

Information / restriction of technical rules need to be observed!

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview).



DN	80	100	125	150	200	250	300	350	400	500	600
NPS	3	4	5	6	8	10	12	14	16	20	24

Face-to-face dimension series 16 acc. to DIN EN 558 / ISO 5752												
L	(mm)	64	64	--	76	89	114	114	127	140	152	178

Dimensions													
ANSI 150	H	(mm)	292	288	--	344	371	498	552	588	662	712	763
	E	(mm)	131	154	--	184	212	238	267	304	336	391	453
	I	(mm)	45	45	--	55	55	55	65	65	80	110	110
ANSI 300	H	(mm)	292	288	--	344	400	575	601	636	661	762	819
	E	(mm)	131	154	--	184	223	250	285	317	351	411	488
	I	(mm)	45	45	--	55	65	80	80	110	110	130	130

Standard-flange dimensions / Threads (Dimensions, Number, Screw depth / length) per side														
ANSI 150	Flange hole	ØK	(mm)	152,4	190,5	--	241,3	298,4	362	431,8	476,2	539,4	635	749,3
		Number of threads	(n)	4	8	--	8	8	12	12	16	16	20	20
	Threads	Thread ^{1) 2)}	(in)	5/8 - 11UNC	5/8 - 11UNC	--	3/4 - 10UNC	3/4 - 10UNC	7/8 - 9UNC	7/8 - 9UNC	1 - 8UNC	1 - 8UNC	1 1/8 - 8UN	1 1/4 - 8UN
		Number ¹⁾	(n)	4	8	--	8	8	12	12	12	16	16	16
		Number ²⁾	(n)	--	--	--	--	--	--	--	4	--	4	4
		Screw depth ²⁾	(mm)	--	--	--	--	--	--	--	30	--	30	30
ANSI 300	Flange hole	ØK	(mm)	168,3	200	--	269,7	330,2	387,4	450,9	514,4	571,5	685,8	812,8
		Number of threads	(n)	8	8	--	12	12	16	16	20	20	24	24
	Threads	Thread ^{1) 2)}	(in)	3/4 - 10UNC	3/4 - 10UNC	--	3/4 - 10UNC	7/8 - 9UNC	1 - 8UNC	1 1/8 - 8UN	1 1/8 - 8UN	1 1/4 - 8UN	1 1/4 - 8UN	1 1/2 - 8UN
		Number ¹⁾	(n)	8	8	--	8	8	12	12	16	16	20	20
		Number ²⁾	(n)	--	--	--	4	4	4	4	4	4	4	4
		Screw depth ²⁾	(mm)	--	--	--	14	16	21	21	20	33	23	35

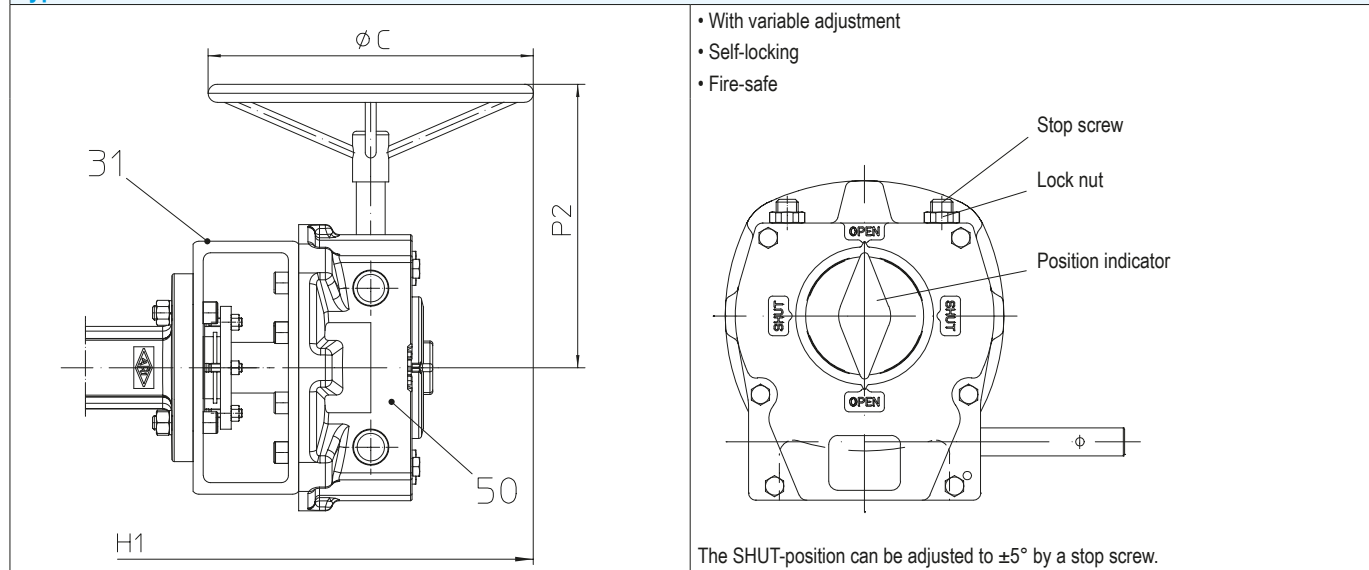
¹⁾ Continuous threaded hole ²⁾ Threaded blind hole

Weights for threaded flange process valve														
SA216WCB	ANSI 150	Fig. 32.018	(kg)	24	29	--	45	64	74	121	152	192	416	446
		Fig. 35.018	(kg)	24	29	--	45	64	82	148	246	317	494	778
SA351CF8M	ANSI 300	Fig. 52.018	(kg)	26	31	--	47	68	78	128	158	198	422	458
		Fig. 55.018	(kg)	26	31	--	47	69	86	152	250	324	450	787

Pressure-temperature-ratings				Intermediate values for max. permissible operational pressures can be determined by linear interpolation of the given temperature / pressure chart.									
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acc. to ANSI	ANSI		-29°C to 38 °C	93°C	149°C	204°C	260°C	315°C	343°C	371°C	399°C	427°C
SA216WCB	150	(bar)	19,6	17,9	15,8	13,8	11,7	9,6	8,6	7,6	6,6	5,5
SA216WCB	300	(bar)	51,1	46,6	45,2	43,8	41,4	39,3	37,9	36,6	34,8	28,3

acc. to ANSI	ANSI		-29°C to 38 °C	93°C	149°C	204°C	260°C	315°C	343°C	371°C	399°C	427°C
SA351CF8M	150	(bar)	18,9	16,2	14,8	13,4	11,7	9,6	8,6	7,5	6,5	5,5
SA351CF8M	300	(bar)	49,6	42,7	38,6	35,5	33,1	31	30,3	30	29,3	28,9

ZETRIX® process valve with worm gear
Type: AB


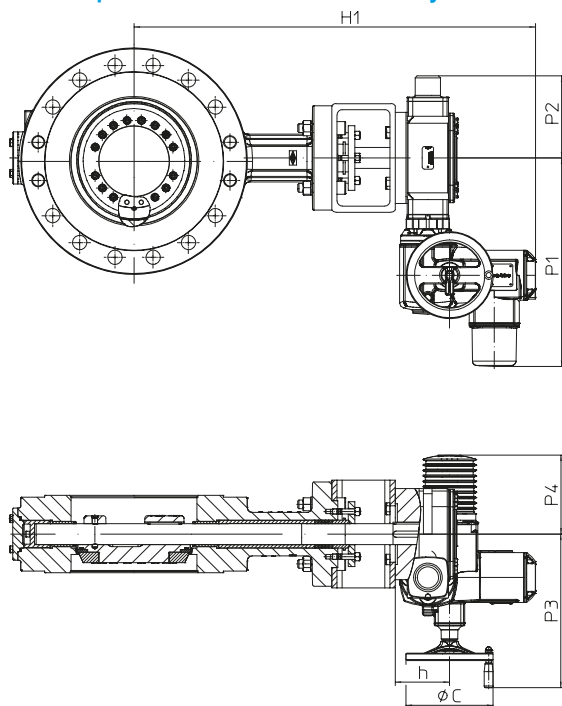
Parts			
Pos.	Ers.	Description	Fig. 32./35.016; 52./55.016 ; 32./35.018; 52./55.018
31		Console	SA618Gr.I (zinc coated)
50		Worm gear	
L Spare parts			

DN	80	100	125	150	200	250	300	350	400	500	600
NPS	3	4	5	6	8	10	12	14	16	20	24

Dimensions													
ANSI 150	H1 (to middle of valve)	(mm)	395	395	585	585	612	739	844	980	1110	1017	1068
	P2	(mm)	217	217	297	297	297	297	305	305	346	417	417
	ØC	(mm)	150	150	400	400	400	400	500	500	500	500	500
	Type of gear		AB210 FS	AB215 FS	AB550 FS	AB550 FS	AB550 FS	AB550 FS	AB880 FS	AB880 FS	AB1250 FS	AB1950 PR4 FS	AB1950 PR4 FS
ANSI 300	H1 (to middle of valve)	(mm)	395	395	585	585	692	973	1049	941	966	1121	1128
	P2	(mm)	217	217	297	297	305	346	346	417	417	470	470
	ØC	(mm)	150	150	400	400	500	500	500	500	500	500	500
	Type of gear		AB210 FS	AB215 FS	AB550 FS	AB550 FS	AB880 FS	AB1250 FS	AB1250 FS	AB1950 PR4 FS	AB1950 PR4 FS	AB6800 PR4 FS	AB6800 PR6 FS

Weights														
SA216WCB	ANSI 150	Fig. 32.016 with gear	(kg)	37	48	73	73	88	106	146	190	263	495	575
	ANSI 300	Fig. 35.016 with gear	(kg)	37	48	73	73	105	120	209	301	390	607	916
	ANSI 150	Fig. 32.018 with gear	(kg)	28	33	--	53	72	74	136	167	219	457	491
	ANSI 300	Fig. 35.018 with gear	(kg)	28	33	--	53	79	82	175	287	362	578	862
SA351CF8M	ANSI 150	Fig. 52.016 with gear	(kg)	39	50	76	76	92	111	151	195	269	501	582
	ANSI 300	Fig. 55.016 with gear	(kg)	39	50	76	76	111	125	214	306	397	613	925
	ANSI 150	Fig. 52.018 with gear	(kg)	30	35	--	55	76	78	166	173	225	463	503
	ANSI 300	Fig. 55.018 with gear	(kg)	30	35	--	55	84	86	179	291	369	534	871



ZETRIX® process valve with electric rotary actuator


Actuator allocation on request

Type: Auma or Schiebel

- for temporary service S 2-15 min.
(or control: Auma S4 25%,
Schiebel S4 40%)
- Enclosure IP 67
- Temperature guard in the motor
- Heating

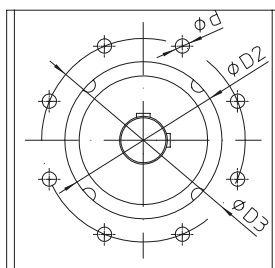
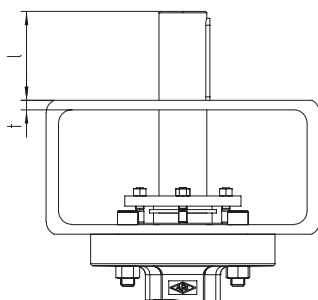
Voltages:

- 400V 50Hz (230V 50Hz)
- other voltages on request

Accessories:

- Travel switch
- Potentiometer
- Auma Matic
- Valve positioner 0-10V / 4-20mA
- Position-transmitter

For connection refer to terminal connection in the operating instructions of the actuator!

Actuator flange connection EN ISO 5211

ANSI150

DN		80	100	125	150	200	250	300	350	400	500	600
NPS		3	4	5	6	8	10	12	14	16	20	24
Connection EN ISO 5211		F10		F12				F14		F16	F25	
Stem with 2 parallel keys 90°	(mm)	22 h9	28 h9	36 h9	36 h9	36 h9	36 h9	42 h9	42 h9	48 h9	60 h9	70 h9
Ø d (Hole-Ø)	(mm)	11	11	13	13	13	13	17	17	21	17	17
Ø D2 (Inside-Ø)	(mm)	70	70	85	85	85	85	100	100	130	200	200
Ø D3 (Screw-hole circle)	(mm)	102	102	125	125	125	125	140	140	165	254	254
l	(mm)	45	45	55	55	55	55	65	65	80	110	110
t	(mm)	8	8	8	8	8	8	8	8	12	14	14

ANSI300

DN		80	100	125	150	200	250	300	350	400	500	600
NPS		3	4	5	6	8	10	12	14	16	20	24
Connection EN ISO 5211		F10		F12		F14	F16		F25		F30	
Stem with 2 parallel keys 90°	(mm)	22 h9	28 h9	36 h9	36 h9	42 h9	42 h9	48 h9	60 h9	60 h9	70 h9	80 h9
Ø d (Hole-Ø)	(mm)	11	11	13	13	17	21	21	17	17	21	21
Ø D2 (Inside-Ø)	(mm)	70	70	85	85	100	130	130	200	200	230	230
Ø D3 (Screw-hole circle)	(mm)	102	102	125	125	140	165	165	254	254	298	298
l	(mm)	45	45	55	55	65	80	80	110	110	130	130
t	(mm)	8	8	8	8	8	12	12	14	14	14	14

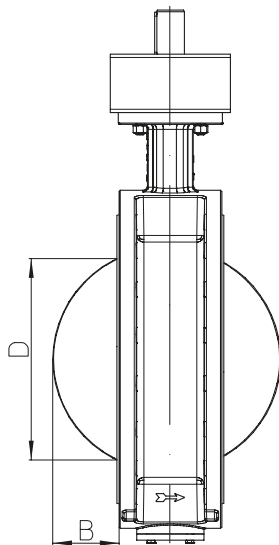
4-square connection on request.



Kvs-value / Zeta-value													
DN			80	100	125	150	200	250	300	350	400	500	600
NPS			3	4	5	6	8	10	12	14	16	20	24
ANSI150	Kvs-value	(m³/h)	100	190	345	515	1245	2110	3195	4230	5650	9260	13520
	Zeta-value	--	6,54	4,42	3,28	3,05	1,65	1,40	1,27	1,34	1,28	1,16	1,13
ANSI300	Kvs-value	(m³/h)	100	190	345	515	1020	1940	2915	3765	5090	8235	12445
	Zeta-value	--	6,54	4,42	3,28	3,05	2,46	1,66	1,52	1,69	1,58	1,47	1,34

Difference between disc outside-diameter and face-to-face for double flange design												
DN		80	100	125	150	200	250	300	350	400	500	600
NPS		3	4	5	6	8	10	12	14	16	20	24
B	(mm)	--	--	--	--	28,5	43,5	57,5	77	87,4	132,5	165,5
D	(mm)	--	--	--	--	123,3	169,3	209,6	261,3	301,6	411	503

Difference between disc outside-diameter and face-to-face for threaded flange design												
DN		80	100	125	150	200	250	300	350	400	500	600
NPS		3	4	5	6	8	10	12	14	16	20	24
B	(mm)	9	21	--	38	60	69	89	105	127	171	213
D	(mm)	43	73,5	--	118	168,5	204	247,5	292,5	342,5	444	542

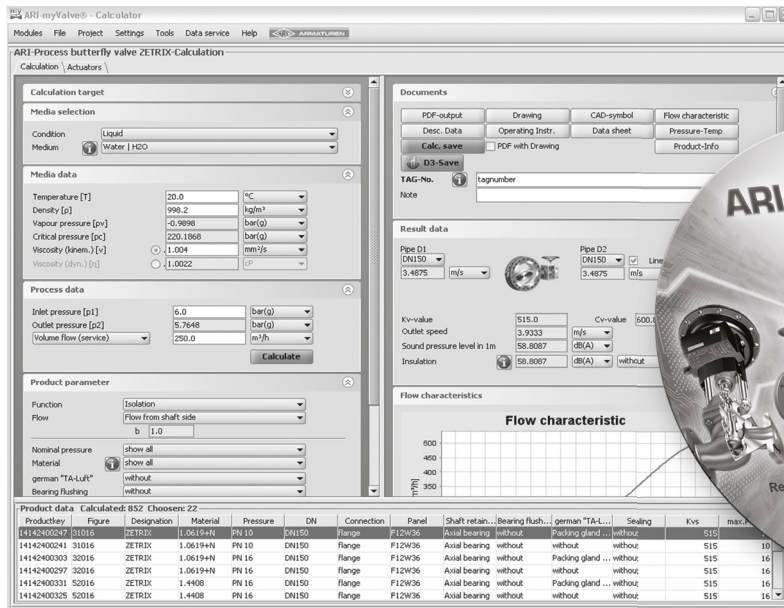


Options

- Flushing port for the shaft bearings and/or buffer port for protecting the stuffing box
- Flushing port for the bottom flange
- Welded bottom flange
- Double packing with drainage line (e.g. for thermal oil services)
- Test port
- Test EN ISO 15848-1/ TA-Luft
- Secondary sealing with O-rings
- Solid sealing ring for special applications
- Heating jacket
- Blow-out protected stem acc. to API 609

myValve® - Your Valve Sizing-Program.

myValve® is a powerful software tool that not only helps you size your system components; it also gives you instant access to all other data about the selected product, such as order information, spare parts drawings, operating instructions, data sheets, etc., whenever you need it.



Contents:

Module ARI-process valve ZETRIX-calculation

- Sizing of flow quantity Kv, volume flow Q, pressure drop p, sound level; Selecting the valve size with given capacity; Selection of the actuator.
- Calculation of torque for actuators in flow from shaft side and flow from disc side, as well as dynamic torque curves to show the maximum value and the opening angle at which it is reached.

Media:

Integrated media-data bank (more than 160 media) with conditions:

- Vapours / gases
- Steam (saturated and superheated)
- Liquids

Special features:

- Project administration of the calculation and product data incl. spare part drawings concerning to project and tag number.
- Direct output of calculation and product data in PDF format.
- Product data could be taken for a direct order.
- SI- and ANSI-units with direct conversion to another data bank.
- Settings with over pressure or absolute pressure.
- All ARI valves are integrated in a data bank.
- Direct access concerning to the product on data sheets, operating instructions, pressure-temperature-diagram and spare part drawings
- Operation in company networks possible (no complex installations on individually PC's necessary).
- Extensive catalogue extending over several product groups.

System Requirements:

Windows operating systems, Linux, etc.

