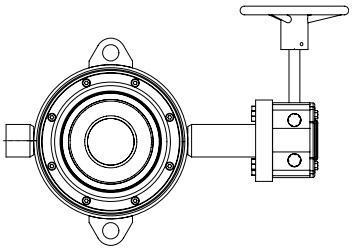
ARI-ZEDOX® - Fig. 121 - Butt weld ended high performance valve - Double offset

Fig. 121 -
ARI-ZEDOX® butt weld ended

ARI-ZEDOX®
with worm gear



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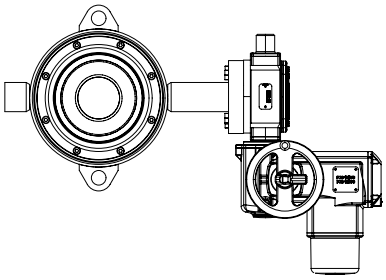
ARI-ZEDOX®
with electric rotary actuator
Auma



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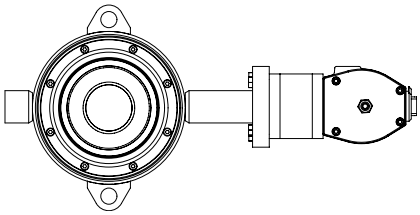
ARI-ZEDOX®
with pneumatic actuator



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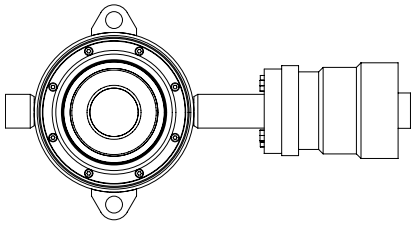
ARI-ZEDOX®
with hydraulic actuator



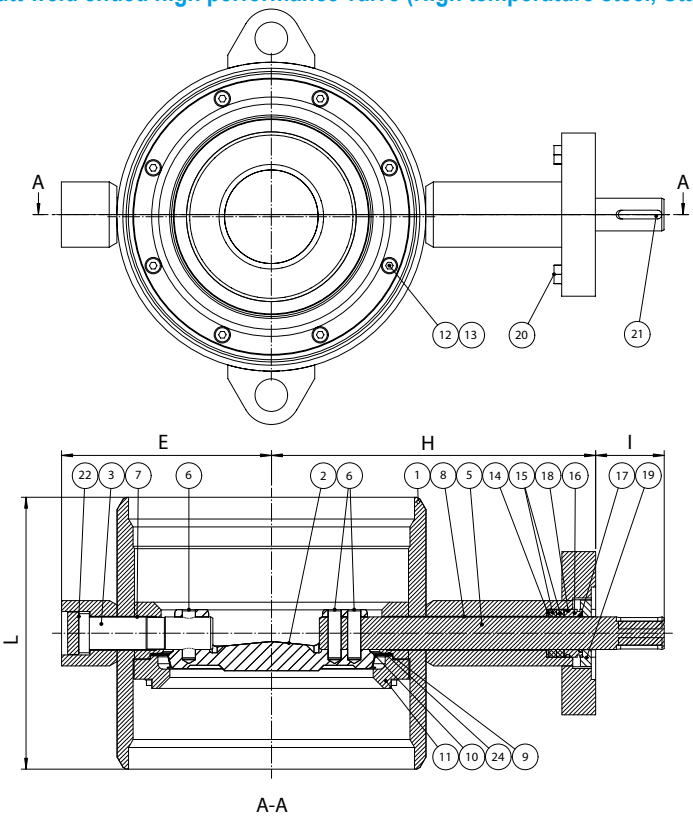
on request

Features:

- Carbon steel / stainless steel body
- Double offset construction:
  Rotary movement (90°) without wear or friction
- Metallic or PTFE sealing
- Bi-directional tightness
- Replaceable seat ring

A COMPANY OF THE ARI-GROUP
ARMATUREN

Butt weld ended high performance valve (High temperature steel, Stainless steel)



A-A

Figure	Nominal pressure	Material	Nominal diameter	Sealing element
84.121	PN6 - PN25	1.0425	DN 200-700	PTFE+C (TS)
			DN 200-1600	Stainless steel (CS)
54.121	PN6 - PN25	1.4307*	DN 200-700	PTFE+C (TS)
			DN 200-1600	Stainless steel (CS)

Face-to-face dimension series 14 acc. to DIN EN 12982

*1.4404 also possible

Sealing element:	
• PTFE+C (TS)	-40°C to 180°C
• Stainless steel (CS)	-40°C to 260°C
• higher temperatures up to 400°C on request	
Max. differential pressure:	
84.121	• 16 bar - standard
54.121	• 25 bar - option

Actuation arrangement:	
• Worm gear • Electric actuator	• Pneumatic actuator • Hydraulic actuator
Sealing leakage test:	
PTFE+C	• DIN EN 12266-1 Leakage rate A
Stainless steel	• DIN EN 12266-1 Leakage rate B - standard
	• DIN EN 12266-1 Leakage rate A - option

Options on request

Parts				
Pos.	**Sp.p.**	**Description**	**Fig. 84.121**	**Fig. 54.121**
1		Body	P265GH, 1.0425	X2CrNi18-9, 1.4307; special material by request
2		Disc	X4CrNiMoN27-5-2, 1.4460	
3		Subshaft	X4CrNiMo16–5-1, 1.4418	
5		Main shaft	X4CrNiMo16–5-1, 1.4418	
6		Pin	X2CrNiMoN22–5-3, 1.4462	
7		Subshaft bearing	PTFE on stainless steel net	
8		Stem bearing	PTFE on stainless steel net	
9 / 24	x	Shim	978-C / SIGRAFLEX HOCHDRUCK (SIGRAFLEX HOCHDRUCK for steam version)	
10	x	Seat ring	Stainless steel or PTFE+C; special material by request	
11		Retaining ring	P265GH, 1.0425	X2CrNi18-9, 1.4307; special material by request
12		Socket screw	A4-80	
13		Washer	ZN	
14		Back-up-ring	X2CrNiMo17-12-2, 1.4404	
15	x	Box packing	Graphite	
16		Shaft seal bushing	X2CrNiMo17-12-2, 1.4404	
17 / 18	x	O-ring	EPDM (not fitted in steam version)	
19		Gland	X2CrNiMo17-12-2, 1.4404	
20		Hexagonal screw	A4-70	
21		Key	C45, 1.0503	
22		Bearing plate	PTFE on stainless steel net	
	└ Spare parts			

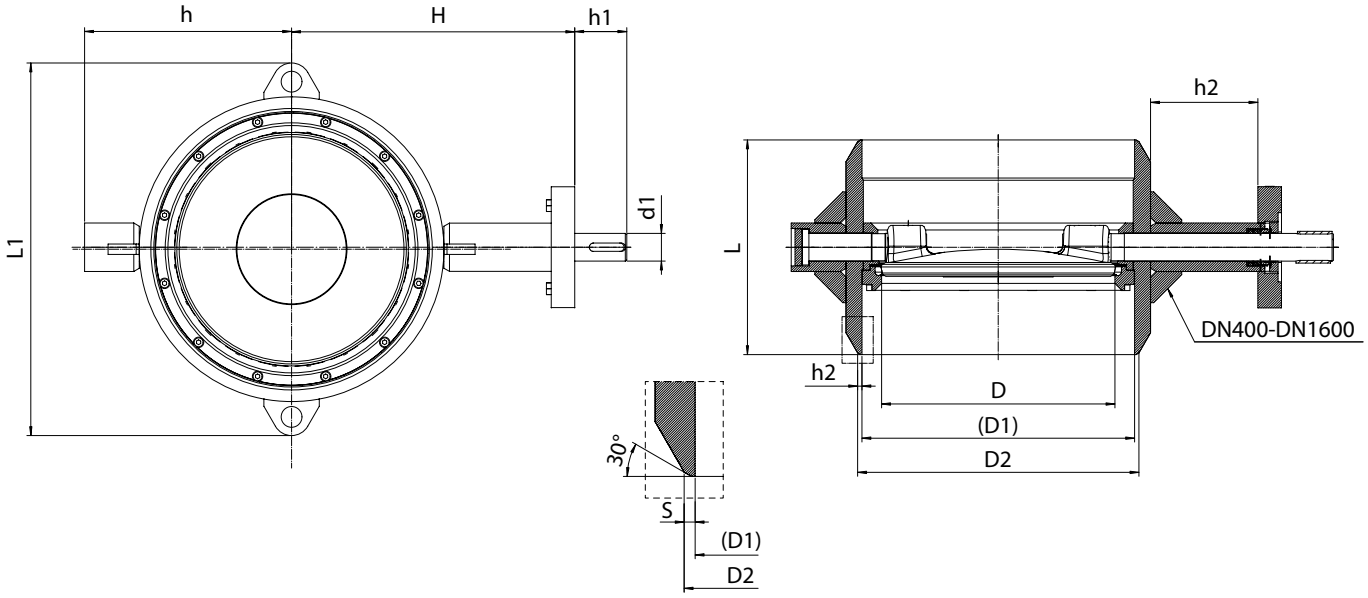
Information / restriction of technical rules need to be observed!

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

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

TS = **T**eflon seal and **S**tainless steel disc

CS = **C**hromed seal and **S**tainless steel disc



DN		200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600
Face-to-face dimension series 14 acc. to DIN EN 12982																
L	(mm)	230	250	270	290	310	330	350	390	430	470	510	550	630	710	790
Dimensions																
D	(mm)	138	187	238	286	337	386	437	483	582	682	775	855	1054	1237	1468
D1 (DIN end)	(mm)	210.1	263.0	312.7	344.4	393.8	444.4	495.4	593.6	693.6	795.2	894.4	994.0	1195	1392	1592
D2 (DIN end)	(mm)	219.1	273.0	323.9	355.6	406.4	457.0	508.0	609.6	711.2	812.8	914.4	1016	1220	1420	1620
s (DIN end)	(mm)	4.5	5	5.6	5.6	6.3	6.3	6.3	8	8.8	8.8	10	11	12.5	14	14
D1 (GOST end)	(mm)	210.1	263.0	312.7	365.0	414.0	-	514.0	616.0	704.0	804.0	902.0	1000	1195	1392	1592
D2 (GOST end)	(mm)	219.1	273.0	323.9	377.0	426.0	-	530.0	630.0	720.0	820.0	920.0	1020	1220	1420	1620
s (GOST end)	(mm)	4.5	5	5.6	6	6	-	8	7	8	8	9	10	12.5	14	14
h	(mm)	154	193	229	255	300	326	351	376	440	490	575	636	755	912	1032
H	(mm)	259	298	323	352	409	445	470	548	601	651	718	764	873	1018	1138
h1	(mm)	58	63	69	75	75	86	86	103	119	119	125	130	160	180	165
d1	(mm)	25	30	35	40	40	50	50	60	70	70	90	100	140	170	170
h2	(mm)	115	125	125	125	155	149	149	178	181	183	194	183	182	206	206
L1	(mm)	233	385	435	465	540	590	660	760	860	955	1070	1200	1440	1770	1918
Flange ISO 5211		F10	F12	F12	F14	F14	F16	F16	F16	F25	F30	F30	F30	F35	F40	F40
Weights for butt weld ended high performance valve																
1.0425	Fig. 84.121	(kg)	27	41	56	82	111	148	196	315	403	483	694	854	2050	3210	4180
1.4307	Fig. 54.121	(kg)														

Pressure-temperature-ratings	**Intermediate values for max. permissible operational pressure can be determined by linear interpolation of the given temperature / pressure chart.**

acc. to Högfors standard	PN		-40 °C	0 °C	50 °C	100°C	150°C	200°C	250°C	260°C
1.0425	16	(bar)	16	16	16	15	14,2	13,4	12,3	12,06
1.0425	25	(bar)	25	25	25	23,4	22,2	21	19,2	18,84

acc. to Högfors standard	PN		-40 °C	0 °C	50 °C	100°C	150°C	200°C	250°C	260°C
1.4307	16	(bar)	16	16	16	14,8	13,2	11,7	10,8	10,62
1.4307	25	(bar)	25	25	25	23,1	20,7	18,2	16,8	16,52

acc. to Högfors standard	PN		-40 °C	0 °C	50 °C	100°C	150°C	200°C	250°C	260°C
1.4404	16	(bar)	16	16	16	15,7	14,3	13	11,7	11,4
1.4404	25	(bar)	25	25	25	24,5	22,4	20,3	18,2	17,8

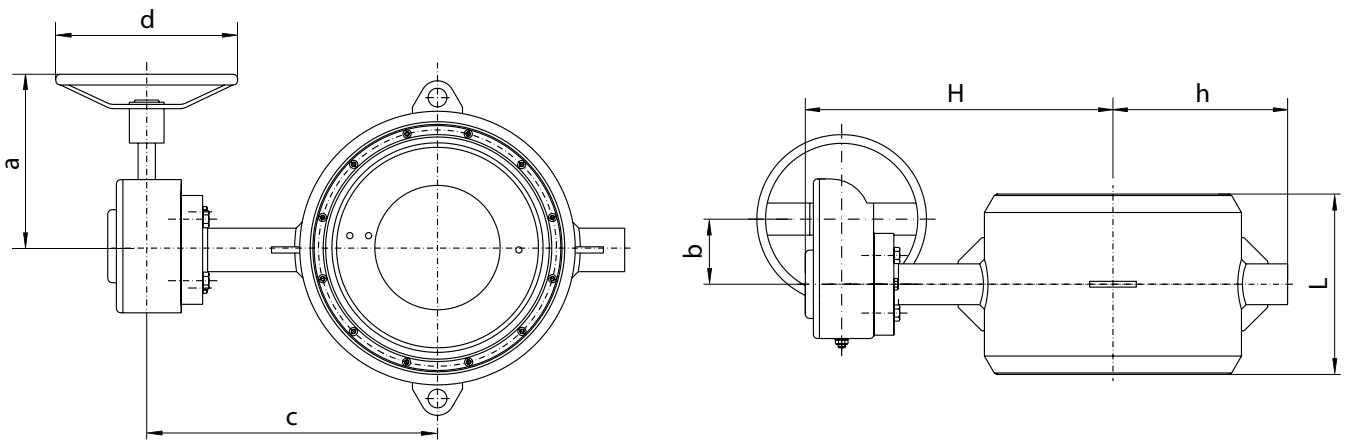
DN				200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400
Operation torque (bi-directional flow)																	
PN25	sealing PTFE+C	Torque*	(Nm)	190	320	550	850	1300	1800	2400	3400	5500	-	-	-	-	-
	sealing stainless steel		(Nm)	240	400	700	1100	1600	2200	3000	4200	6800	10000	13000	16000	24000	34000

* for steam duty use the next size up

ZEDOX® Butt weld ended high performance valve with worm gear

Opening and closing of the valves with the handwheel.

The position of the disc can be seen on a position indicator on top of the gear.



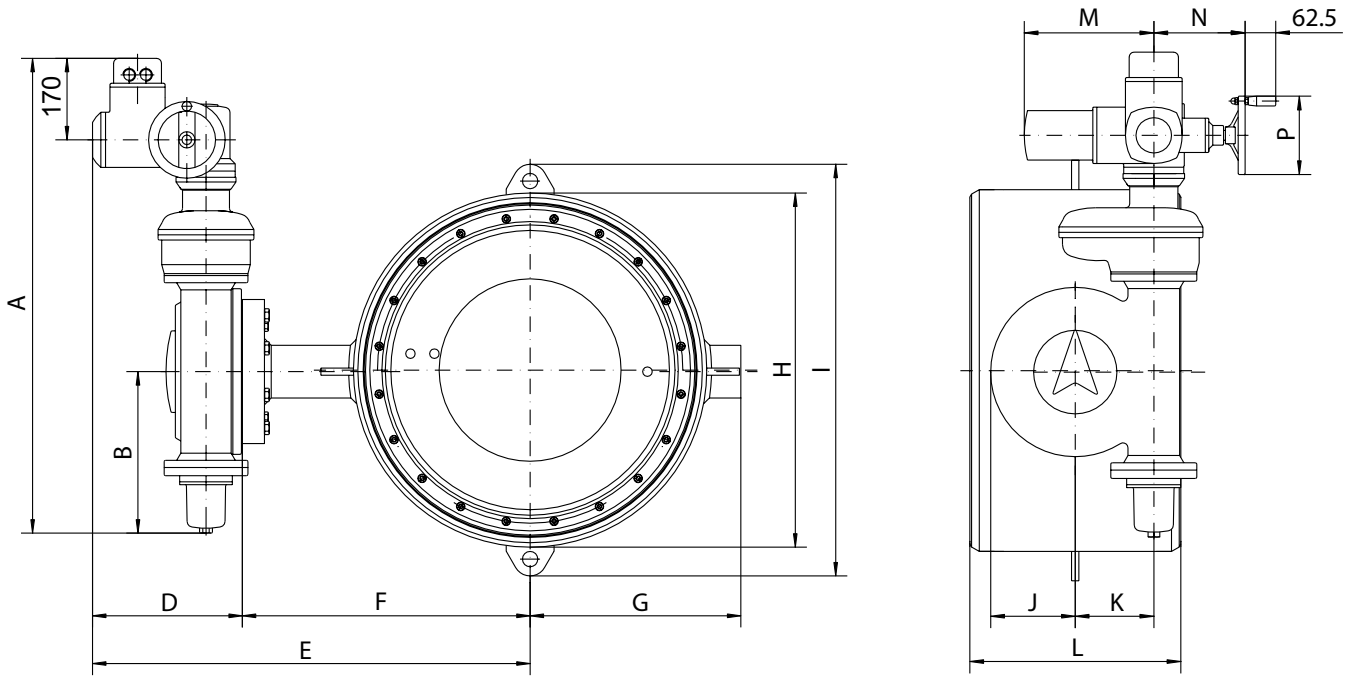
Parts			
Pos.	**Sp.**	**Description**	**Fig. 84./54.121**
500	x	Worm gear	
		└ Spare parts	

DN		**200**	**250**	**300**	**350**	**400**	**450**	**500**	**600**	**700**	**800**	**900**	**1000**	**1200**	**1400**	**1600**
Dimensions																
H	(mm)	346	385	410	442	499	566	591	678	760	810	877	942	1051	1219	1418
h	(mm)	154	193	229	255	300	326	351	376	440	490	575	636	755	912	1032
a	(mm)	220	255	255	291	291	387	387	382	500	500	546	571	571	621	683
b	(mm)	71	71	71	86	86	130	130	53	263	263	278	384	384	279	343
c	(mm)	300	339	363	394	451	500	525	608	660	710	777	864	973	1118	1312
d	(mm)	200	300	300	400	400	500	500	500	500	500	500	500	600	700	700
Type of gear		AB550N	AB550N	AB550N	AB880N	AB880N	AB2000N	AB2000N	AB2000N	AB6800N-PR4	AB6800N-PR4	AB6800N-PR6	AB6800N-PR6	A200N-PR10	IW9	IW10

Weights with manual gear Rotork*																
1.0425	Fig. 84.121	(kg)	36	50	65	96	125	172	220	339	466	546	758	918	2184	3610	4588
1.4307	Fig. 54.121	(kg)														

*weight of hand wheel is not included

ZEDOX® Butt weld ended high performance valve with electric rotary actuator Auma

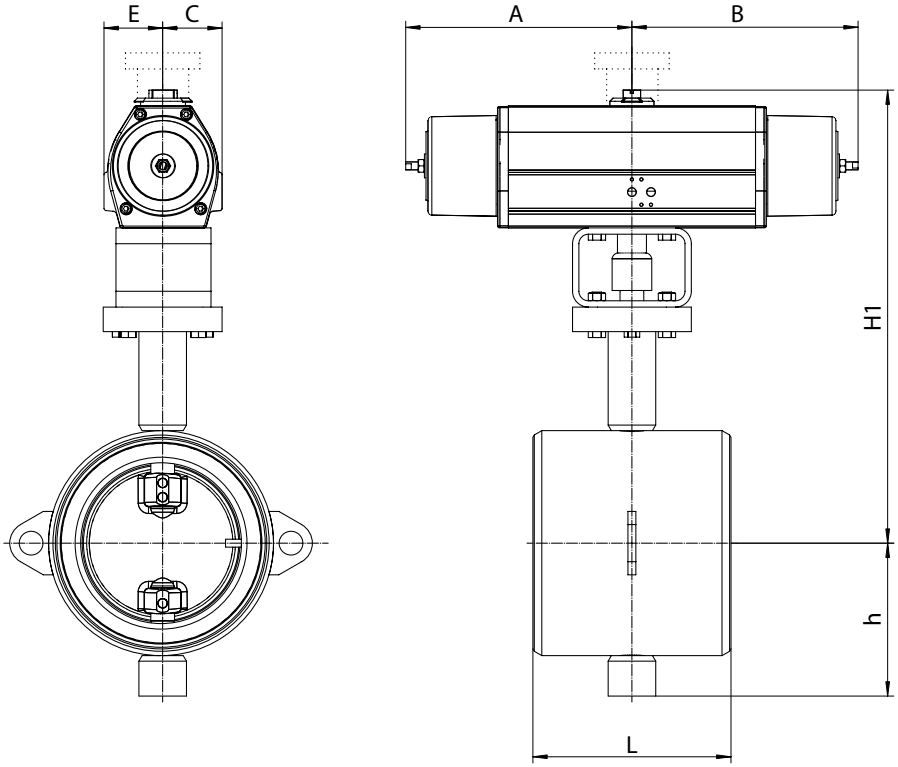


DN		200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600
Face-to-face dimension series 14 acc. to DIN EN 12982																
L	(mm)	230	250	270	290	310	330	350	390	430	470	510	550	630	710	790

Dimensions																
A	(mm)	444	500	510	689	689	689	700	700	990	1131	1131	1131	1131	1303	on request
B	(mm)	96	127	132	182	182	182	187	187	337	398	398	398	486	550	
D	(mm)	277	282	284	312	312	312	322	322	313	338	338	338	381	399	
E	(mm)	536	580	607	665	721	757	792	870	914	989	1056	1145	1254	1417	
F	(mm)	259	298	323	353	409	445	470	548	601	651	718	764	873	1018	
G	(mm)	154	193	229	255	299	326	351	376	440	490	575	636	755	912	
H	(mm)	233	284	334	389	440	490	540	638	738	835	946	1060	1279	1492	
J	(mm)	63	75	88	105	105	105	125	125	173	215	215	268	268	340	
K	(mm)	50	63	80	100	100	100	125	125	160	200	200	250	250	315	
M	(mm)	265	265	265	265	265	265	282	282	265	265	265	265	282	282	
N	(mm)	186	186	186	186	186	186	193	193	186	186	186	186	193	193	
P	(mm)	140	160	160	160	160	160	200	200	160	160	160	160	200	200	
Type of actuator	(mm)	SA07.2-GS50.3 - F10	SA07.6-GS63.3 - F12	SA07.6-GS80.3 - F12	SA07.6-GS100.3/ VZ4.3 -F14	SA07.6-GS100.3/ VZ4.3 -F14	SA07.6-GS100.3/ VZ4.3 -F16	SA10.2-GS125.3/ VZ4.3 -F16	SA10.2-GS125.3/ VZ4.3 -F16	SA07.6-GS160.3 GZ160.3 -F25	SA07.6-GS200.3/ GZ200.3 -F30	SA07.6-GS200.3/ GZ200.3 -F30	SA07.6-GS200.3/ GZ200.3 -F30	SA10.2-GS250.3/ GZ250.3 -F35	SA10.2-GS315/ GZ30.1 -F40	

Weights for with electric actuator																	
1.0425	Fig. 84.121	(kg)	53	72	91	136	165	202	264	383	515	674	885	1045	2383	3865	on request
1.4307	Fig. 54.121	(kg)															

ZEDOX® Butt weld ended high performance valve with pneumatic actuator



DN		200	250	300	350	400**	450**	500**
Face-to-face dimension series 14 acc. to DIN EN 12982								
L	(mm)	230	250	270	290	310	330	350
Dimensions								
E	(mm)	75	110	110	110	110	110	190
C	(mm)	69	110	110	110	110	110	190
h	(mm)	154	193	229	255	300	326	351
H1	(mm)	504	686	701	730	1002	1038	1100
A	(mm)	285	145	510	510	510	510	850
B	(mm)	285	510	510	510	510	510	850
Type of actuator*		RC260-SR	RC270-SR	RC280-SR	RC280-SR	RC-88-SR	RC-88-SR	RCG100-SR

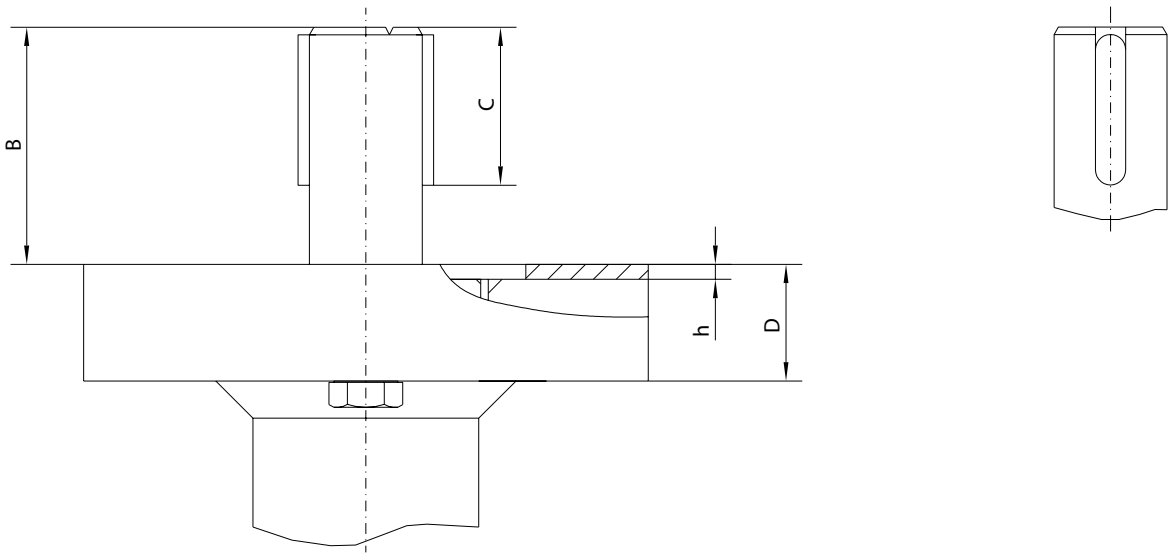
Weights with pneumatic actuator								
1.0425	Fig. 84.121	(kg)	48	94	132	158	255	292	711
1.4307	Fig. 54.121	(kg)						

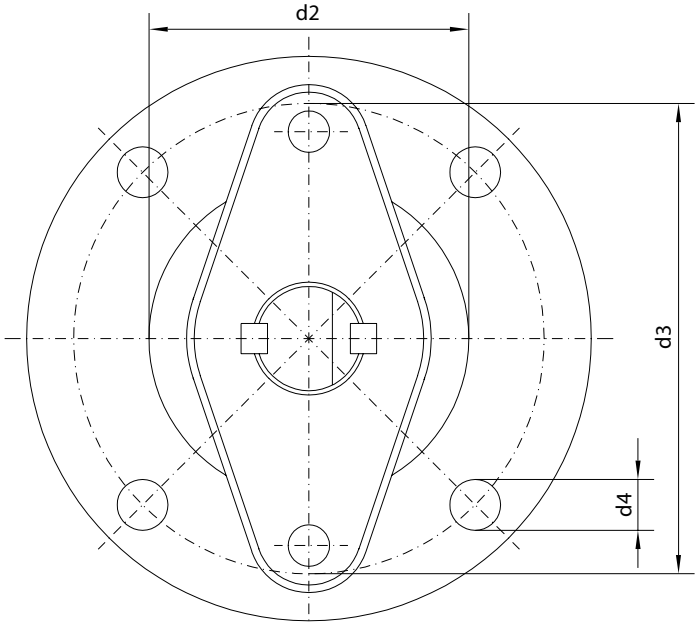
* at air pressure 6 bar

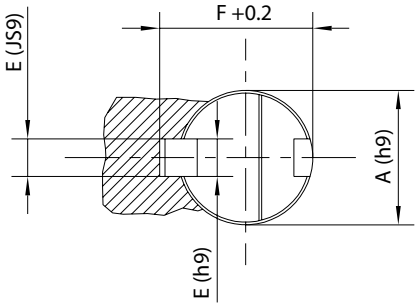
** Δ P max = 16 bar

actuator bigger than DN500 on request

Actuator flange connection

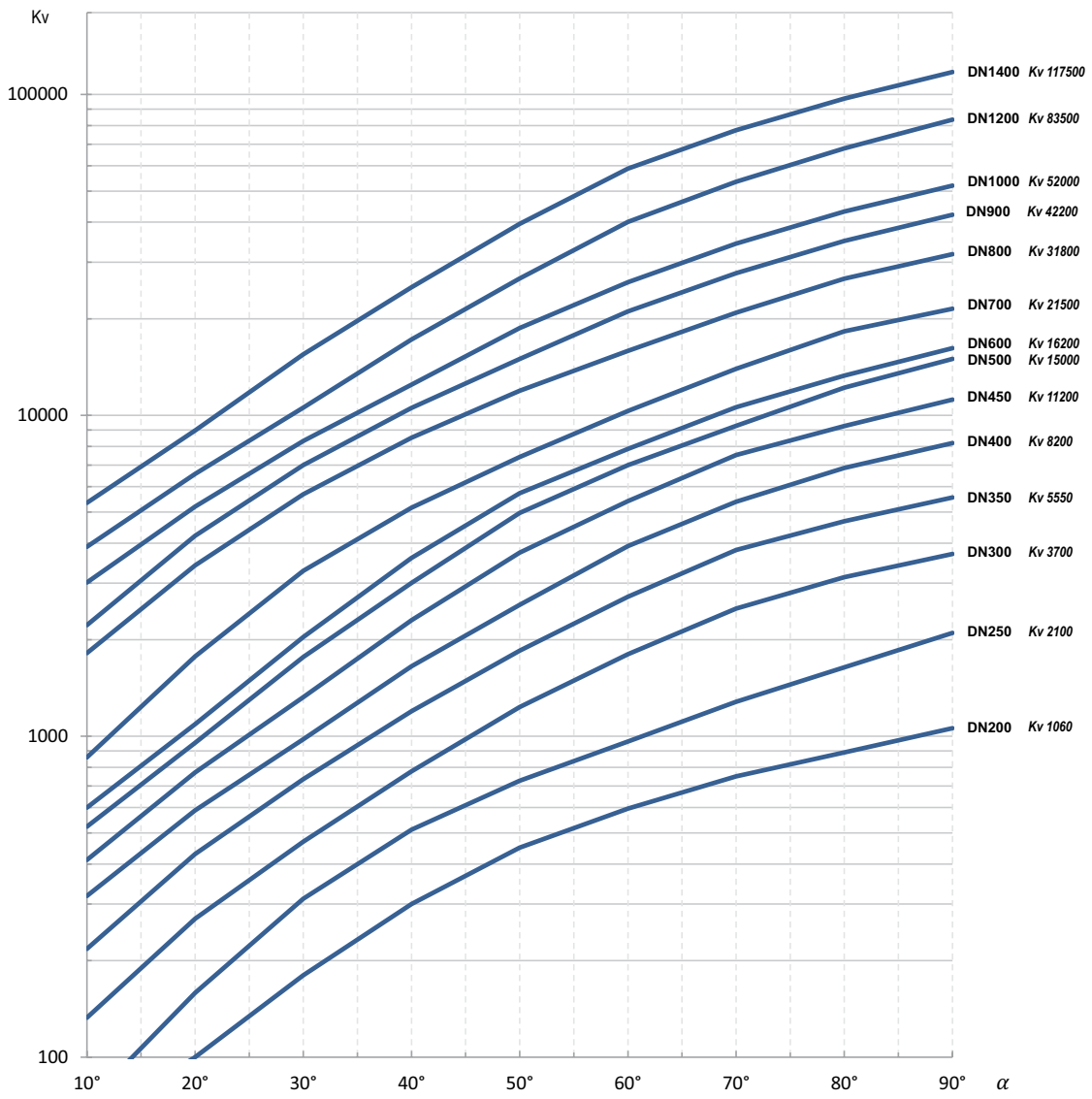






DN		200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600
Connection EN ISO 5211		F10	F12		F14		F16			F25	F30			F35	F40	
d2	(mm)	70	85		100		130			200	230			260	300	
d3	(mm)	102	125		140		165			254	298			356	406	
h	(mm)	4			5		6									
n x d4	(mm)	4x11	4x14	4x14	4x18	4x18	4x22	4x22	4x22	8x18	8x22	8x22	8x22	8x32	8x38	8x38
A	(mm)	25	30	35	40	40	50	50	60	70	70	90	100	140	170	170
B	(mm)	58	63	69	75	75	86	86	103	119	119	125	130	160	165	165
C	(mm)	38	42	47	52	52	65	65	82	92	92	113	125	102	112	112
D	(mm)	27	31	31	34	34	37	37	43	46	46	46	41	41	66	66
E	(mm)	8	8	10	12	12	14	14	18	20	20	25	28	36	40	40
F	(mm)	28.3	33.3	38.3	43.3	43.3	53.3	53.3	64.4	74.9	74.9	95.4	105.4	148.4	179.4	179.5

Kv-value



WATER:

Volume flow: $Q = K_v \sqrt{\frac{\Delta p}{\rho}}$

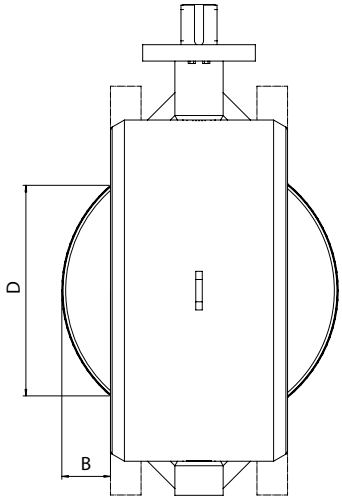
Flow velocity: $V = 354 \frac{Q}{DN^2}$

Kv = KV valvue - Capacity factor
DN = nominal valve size, mm
α = disc opening angle
Δp = pressure difference, bar

ρ = density of liquid, kg/dm³
V = flow velocity, m/s
Q = volume flow, m³/h

Difference between disc outside-diameter and face-to-face

DN		200	250	300	350	400	450	500	600	700	800	900	1000	1200	1400	1600
B	(mm)	-	-	-	2	21	32	48	52	81	111	138	152	217	267	327
D	(mm)	-	-	-	38	161	213	273	299	404	504	595	655	854	1018	1204



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-high performance valve ZEDOX-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.

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 or 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.