


PN 10/16/25/40 - DN 150...2000

KAT-A 2014-EA

Product characteristics and benefits

- Face-to-face length acc. to EN 558-1, basic series 15 - from DN 500 1.5 x DN
- With flange ends on both sides acc. to EN 1092-2
- Control valve in straightway type
- With customized control device depending on operating conditions
- Low actuating torque due to pressure balanced valve piston
- Rotationally symmetrical flow guidance
- Annular flow cross section in each position
- Axial movement of the plunger by means of crank gear mechanism
- With self-locking worm gear unit including position indicator
- With electric actuator
- Elastic profile sealing ring located in the no-flow zone for high durability
- Wear-resistant, corrosion-resistant and infiltration-proof piston guides in the body by micro-finished bronze weld overlay

Materials

- Body: Ductile iron EN-JS 1030 (GGG-40)
- Piston guide rails: Bronze overlay welded
- Piston: Stainless steel 1.4301
- Valve sealing: EPDM
- Inner parts: Stainless steel (exception: > DN 600 crank gear from EN-JS 1030 (GGG-40))
- Bolts: Stainless steel A4 (DIN EN ISO 3506)
- Bearing bush: Bronze
- Eye bolts for lifting: Galvanized steel 1.0401 (C15)

Corrosion protection

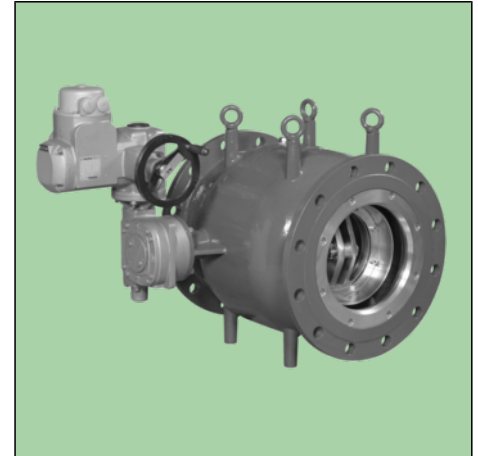
- Internally and externally epoxy coated

Versions

- Standard version as described
- Special designs available on request
- With slotted cylinder to control high differential pressure for water with suspended solids (Form "SZ")
- With orifice cylinder to control high differential pressure (Form "LH")
- With cut off edge and sudden enlargement of cross sectional area at the seat to control lower differential pressure (Form "E")
- With a short movable special cylinder (Form "SPZ")
- With a rigid double anti-cavitation cylinder (Form "LD") for regulating high pressure differences and optimum adjustment to the plant conditions
- With a movable double anti-cavitation cylinder (Form "LHD") for regulating high pressure differences
- With a rigid anti-cavitation cylinder (Form "L") for regulating high pressure differences and optimum adjustment to the plant conditions

Field of Application

- Chamber installation
- Installation in plants


Tests and approvals

- Final inspection test acc. to EN 12266 (DIN 3230 Part 4)

Operation data

- Specify operating pressure when inquiring/ordering.:
 - Maximum flow rate and minimum differential pressure
 - Minimum flow rate and maximum differential pressure
 - Static pressure upstream of valve
 - Static pressure downstream of valve
 - Dynamic pressure upstream of valve
 - Dynamic pressure downstream of valve

Note

For valve dimensioning the free VAG UseCAD® software is available on request.

For proper installation and safe operation please ensure that you read the installation and operation instructions: KAT-B 2014

Field of application

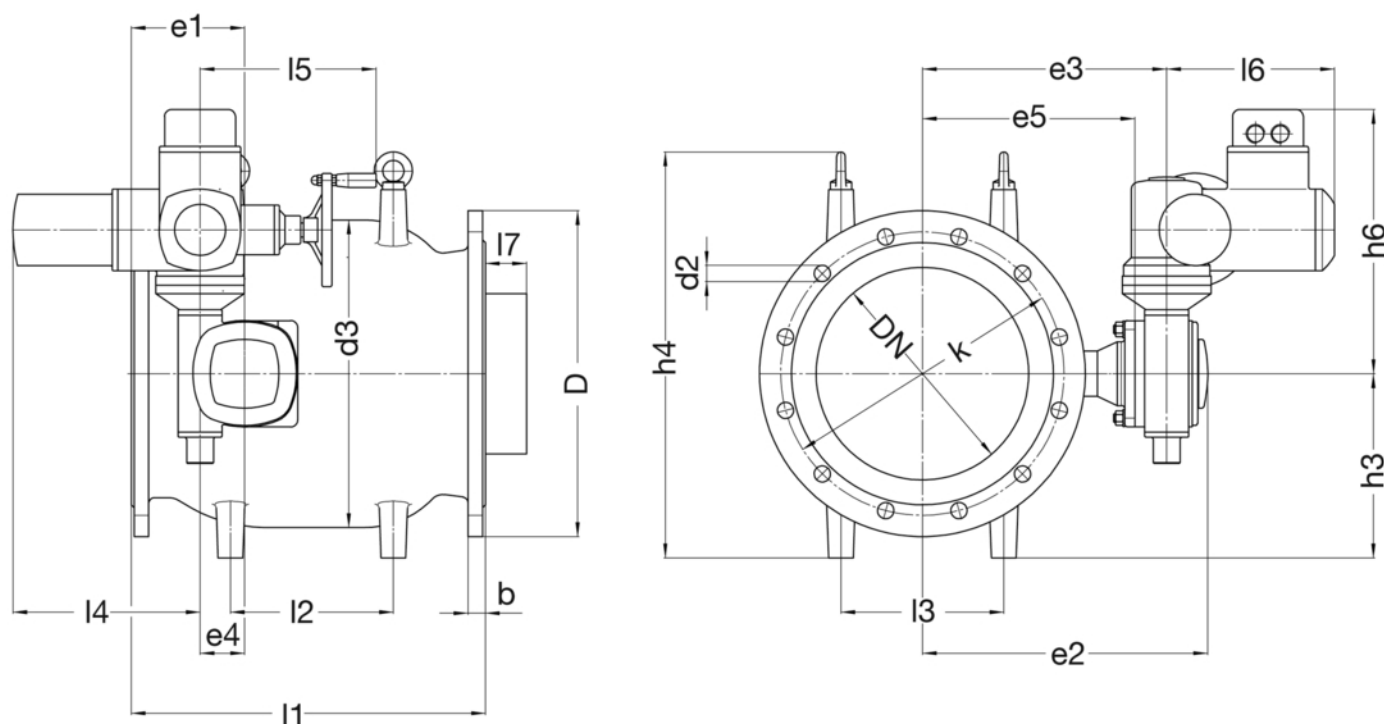
DN	PN	Maximum operating pressure [bar]	Maximum operating temperature for neutral liquids [°C]
150...1200	40	40	50
150...1600	25	25	50
150...2000	16	16	50
150...2000	10	10	50

Pressure test acc. to EN 12266

Test pressure body with water [bar]	Test pressure seat with water [bar]
60	44
37.5	28
24	18
15	11



Drawing



Technical data

PN 40

DN		150	200	250	300	400	450	500	600	700	800	900	1000
D	[mm]	300	375	450	515	660	685	755	890	995	1140	1250	1360
b	[mm]	26	30	34.5	39.5	48	49	52	58	64	65	76	80
d2	[mm]	28	31	34	34	41	41	44	50	48	56	56	56
d3	[mm]	236	302	371	434	575	632	711	840	998	1127	1258	1380
e1	[mm]	130	150	145	160	170	150	175	280	315	400	420	460
e2	[mm]	328	328	403	403	518	518	629	654	800	797	880	1016
e3	[mm]	270	270	345	345	467	467	550	575	725	725	800	898
e4	[mm]	63	63	63	63	80	80	100	100	125	125	160	160
e5	[mm]	225	225	300	300	410	410	475	500	650	650	725	800
h3	[mm]	155	190	230	260	335	345	385	460	520	600	650	720
h4	[mm]	355	425	513	573	741	761	841	1010	1150	1309	1428	1568
h6	[mm]	398	398	398	398	405	405	534	534	525	534	534	655
k	[mm]	250	320	385	450	585	610	670	795	900	1030	1140	1250
l1	[mm]	350	400	450	500	600	650	750	900	1050	1200	1350	1500
l2	[mm]	130	130	170	230	300	350	400	500	560	600	700	750
l3	[mm]	140	140	170	230	300	350	400	500	560	600	700	750
l4	[mm]	264	264	264	264	282	282	282	282	282	282	282	384
l5	[mm]	249	249	249	249	256	256	256	256	256	256	256	336
l6	[mm]	237	237	237	237	247	247	247	247	247	247	247	285
l7	[mm]	48	68	83	94	127	144	153	150	195	244	275	292
Actuator type		SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 10.2	SA 10.2	SA 10.2	SA 10.2
No. of holes		8	12	12	16	16	20	20	20	24	24	28	28
Weight without cylinder approx.	[kg]	95	140	205	235	420	490	695	1145	1725	2225	2825	4150
Volume with EA approx.	[m³]	0.190	0.230	0.310	0.360	0.590	0.660	0.900	1.300	1.500	2.600	3.500	4.600



Technical data

PN 40

DN		1200
D	[mm]	1575
b	[mm]	88
d2	[mm]	62
d3	[mm]	1645
e1	[mm]	560
e2	[mm]	1136
e3	[mm]	1040
e4	[mm]	200
e5	[mm]	950
h3	[mm]	850
h4	[mm]	1828
h6	[mm]	745
k	[mm]	1460
l1	[mm]	1800
l2	[mm]	800
l3	[mm]	800
l4	[mm]	282
l5	[mm]	256
l6	[mm]	247
l7	[mm]	363
Actuator type		SA 10.2
No. of holes		32
Weight without cylinder approx.	[kg]	5525
Volume with EA approx.	[m³]	7.000

PN 25

DN		150	200	250	300	400	450	500	600	700	800	900	1000
D	[mm]	300	360	425	485	620	670	730	845	960	1085	1185	1320
b	[mm]	26	22	24.5	24.5	32	34.5	41.5	42	46.5	51	55.5	60
d2	[mm]	28	28	31	31	37	37	37	41	44	50	50	57
d3	[mm]	236	302	371	434	575	632	711	840	998	1127	1258	1380
e1	[mm]	130	150	145	160	170	150	175	280	315	400	420	460
e2	[mm]	328	328	403	403	518	518	629	654	800	797	880	1016
e3	[mm]	270	270	345	345	467	467	550	575	725	725	800	898
e4	[mm]	63	63	63	63	80	80	100	100	125	125	160	160
e5	[mm]	225	225	300	300	410	410	475	500	650	650	725	800
h3	[mm]	155	190	230	260	335	345	385	460	520	600	650	720
h4	[mm]	355	425	513	573	741	761	841	1010	1150	1309	1428	1568
h6	[mm]	398	398	398	398	405	405	534	534	525	534	534	655
k	[mm]	250	310	370	430	550	600	660	770	875	990	1090	1210
l1	[mm]	350	400	450	500	600	650	750	900	1050	1200	1350	1500
l2	[mm]	130	130	170	230	300	350	400	500	560	600	700	750
l3	[mm]	140	140	170	230	300	350	400	500	560	600	700	750
l4	[mm]	264	264	264	264	282	282	282	282	282	282	282	384
l5	[mm]	249	249	249	249	256	256	256	256	256	256	256	336
l6	[mm]	237	237	237	237	247	247	247	247	247	247	247	285
l7	[mm]	48	68	83	94	127	144	153	150	195	244	275	292
Actuator type		SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 10.2	SA 10.2	SA 07.6	SA 10.2
No. of holes		8	12	12	16	16	20	20	20	24	24	28	28
Weight without cylinder approx.	[kg]	95	130	180	205	365	430	635	1045	1625	2055	2625	3825
Volume with EA approx.	[m³]	0.190	0.230	0.310	0.360	0.590	0.660	0.900	1.300	1.500	2.600	3.500	4.600

VAG RIKO® Plunger Valve

one-piece body, with electric actuator



Water

Technical data

PN 25

DN		1200	1400	1600
D	[mm]	1530	1755	1975
b	[mm]	69	74	81
d2	[mm]	57	62	62
d3	[mm]	1645	1920	2244
e1	[mm]	560	650	725
e2	[mm]	1136	1359	1609
e3	[mm]	1040	1240	1490
e4	[mm]	200	250	250
e5	[mm]	950	1100	1350
h3	[mm]	850	1000	1200
h4	[mm]	1828	2187	2608
h6	[mm]	745	815	970
k	[mm]	1420	1640	1860
l1	[mm]	1800	2100	2500
l2	[mm]	800	1000	1200
l3	[mm]	800	1000	1200
l4	[mm]	282	283	384
l5	[mm]	256	254	336
l6	[mm]	247	248	384
l7	[mm]	363	430	480
Actuator type		SA 10.2	SA 10.2	SA 14.6
No. of holes		32	36	40
Weight without cylinder approx.	[kg]	5225	8625	17350
Volume with EA approx.	[m³]	7.000	11.243	19.000

PN 16

DN		150	200	250	300	400	450	500	600	700	800	900	1000
D	[mm]	285	340	405	460	580	640	715	840	970	1025	1125	1255
b	[mm]	26	22	24.5	24.5	28	30	31.5	36	39.5	43	46.5	50
d2	[mm]	22	23	28	28	31	31	34	37	37	40	41	44
d3	[mm]	236	302	371	434	575	632	711	840	998	1127	1258	1380
e1	[mm]	130	150	145	160	170	150	175	280	315	400	420	460
e2	[mm]	328	328	403	403	518	518	629	654	800	797	880	1016
e3	[mm]	270	270	345	345	467	467	550	575	725	725	800	898
e4	[mm]	63	63	63	63	80	80	100	100	125	125	160	160
e5	[mm]	225	225	300	300	410	410	475	500	650	650	725	800
h3	[mm]	155	190	230	260	335	345	385	460	520	600	650	720
h4	[mm]	355	425	513	573	741	761	841	1010	1150	1309	1428	1568
h6	[mm]	398	398	398	398	405	405	534	534	525	534	534	655
k	[mm]	240	295	355	410	525	585	650	770	840	950	1050	1170
l1	[mm]	350	400	450	500	600	650	750	900	1050	1200	1350	1500
l2	[mm]	130	130	170	230	300	350	400	500	560	600	700	750
l3	[mm]	140	140	170	230	300	350	400	500	560	600	700	750
l4	[mm]	264	264	264	264	282	282	282	282	282	282	282	384
l5	[mm]	249	249	249	249	256	256	256	256	256	256	256	336
l6	[mm]	237	237	237	237	247	247	247	247	247	247	247	285
l7	[mm]	48	68	83	94	127	144	153	150	195	244	275	292
Actuator type		SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 10.2	SA 10.2	SA 07.6	SA 10.2
No. of holes		8	12	12	12	16	20	20	20	24	24	28	28
Weight without cylinder approx.	[kg]	95	130	170	195	330	375	575	1015	1525	1975	2575	3665
Volume with EA approx.	[m³]	0.190	0.230	0.310	0.360	0.590	0.660	0.900	1.300	1.500	2.600	3.500	4.600


Technical data
PN 16

DN		1200	1400	1600	1800	2000
D	[mm]	1485	1685	1930	2130	2345
b	[mm]	57	60	65	70	75
d2	[mm]	50	50	57	57	62
d3	[mm]	1645	1920	2244	2520	2800
e1	[mm]	560	650	725	840	900
e2	[mm]	1136	1359	1609	1998	2210
e3	[mm]	1040	1240	1490	1713	1925
e4	[mm]	200	250	250	315	315
e5	[mm]	950	1100	1350	1500	1700
h3	[mm]	850	1000	1200	1380	1540
h4	[mm]	1828	2187	2608	3058	3410
h6	[mm]	745	815	970	1203	1203
k	[mm]	1390	1590	1820	2020	2230
l1	[mm]	1800	2100	2500	2700	3000
l2	[mm]	800	1000	1200	1500	1600
l3	[mm]	800	1000	1200	1500	1600
l4	[mm]	282	283	384	384	384
l5	[mm]	256	254	336	329	329
l6	[mm]	247	248	384	285	285
l7	[mm]	363	430	480	590	620
Actuator type		SA 07.6	SA 07.6	SA 14.2	SA 14.2	SA 14.2
No. of holes		32	36	40	44	48
Weight without cylinder approx.	[kg]	5025	8225	17050	18000	25000
Volume with EA approx.	[m³]	7.000	11.243	19.000	27.000	37.000

PN 10

DN		150	200	250	300	400	450	500	600	700	800	900	1000
D	[mm]	285	340	395	445	565	615	670	780	895	1015	1115	1230
b	[mm]	26	22	24.5	24.5	28	30	31.5	36	39.5	43	46.5	50
d2	[mm]	22	22	23	23	28	28	28	31	31	34	34	37
d3	[mm]	236	302	371	434	575	632	711	840	995	1127	1258	1380
e1	[mm]	130	150	145	160	170	150	175	280	315	400	420	460
e2	[mm]	328	328	403	403	518	518	629	654	800	797	880	1016
e3	[mm]	270	270	345	345	467	467	550	575	725	725	80	898
e4	[mm]	63	63	63	63	80	80	100	100	125	125	160	160
e5	[mm]	225	225	300	300	410	410	475	500	650	650	725	800
h3	[mm]	155	190	230	260	335	345	385	460	520	600	650	720
h4	[mm]	355	425	513	573	741	761	841	1010	1150	1309	1428	1568
h6	[mm]	398	398	398	398	405	405	534	534	525	534	534	655
k	[mm]	240	295	350	400	515	565	620	725	840	950	1050	1160
l1	[mm]	350	400	450	500	600	650	750	900	1050	1200	1350	1500
l2	[mm]	130	130	170	230	300	350	400	500	560	600	700	750
l3	[mm]	140	140	170	230	300	350	400	500	560	600	700	750
l4	[mm]	264	264	264	264	282	282	282	282	282	282	282	384
l5	[mm]	249	249	249	249	256	256	256	256	256	256	256	336
l6	[mm]	237	237	237	237	247	247	247	247	247	247	247	285
l7	[mm]	48	68	83	94	127	144	153	150	194	244	275	292
Actuator type		SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6	SA 07.6
No. of holes		8	8	12	12	16	20	20	20	24	24	28	28
Weight without cylinder approx.	[kg]	95	130	170	195	330	375	565	965	1525	1925	2525	3665
Volume with EA approx.	[m³]	0.190	0.230	0.310	0.360	0.590	0.660	0.900	1.300	1.500	2.600	3.500	4.600

VAG RIKO® Plunger Valve

one-piece body, with electric actuator



Water

Technical data

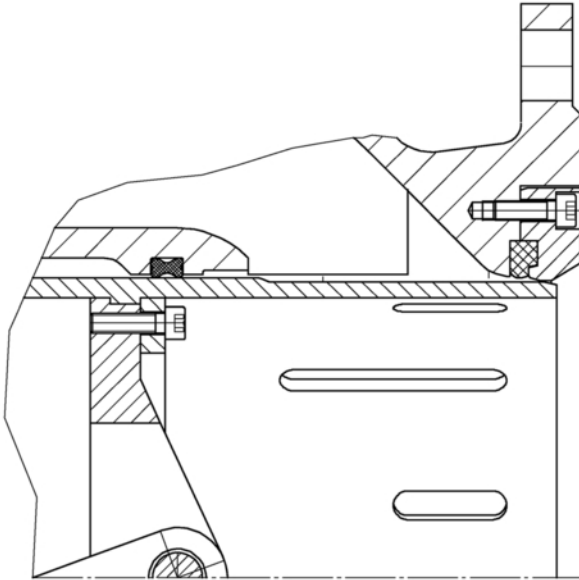
PN 10

DN		1200	1400	1600	1800	2000
D	[mm]	1455	1675	1915	2115	2325
b	[mm]	57	46	50	52	55
d2	[mm]	41	44	50	50	50
d3	[mm]	1645	1920	2244	2520	2800
e1	[mm]	560	650	725	840	900
e2	[mm]	1136	1359	1609	1998	2210
e3	[mm]	1040	1240	1490	1713	1925
e4	[mm]	200	250	250	315	315
e5	[mm]	950	1100	1350	1500	1700
h3	[mm]	850	1000	1200	1380	1540
h4	[mm]	1828	2187	2608	3058	3410
h6	[mm]	745	815	970	1203	1203
k	[mm]	1380	1590	1820	2020	2230
l1	[mm]	1800	2100	2500	2700	3000
l2	[mm]	800	1000	1200	1500	1600
l3	[mm]	800	1000	1200	1500	1600
l4	[mm]	282	283	384	384	384
l5	[mm]	256	254	336	329	329
l6	[mm]	247	248	384	285	285
l7	[mm]	363	430	480	590	620
Actuator type		SA 07.6	SA 07.6	SA 14.2	SA 14.2	SA 14.2
No. of holes		32	36	40	44	48
Weight without cylinder approx.	[kg]	4925	8225	17050	18000	25000
Volume with EA approx.	[m ³]	7.000	11.243	19.000	27.000	37.000



Further information

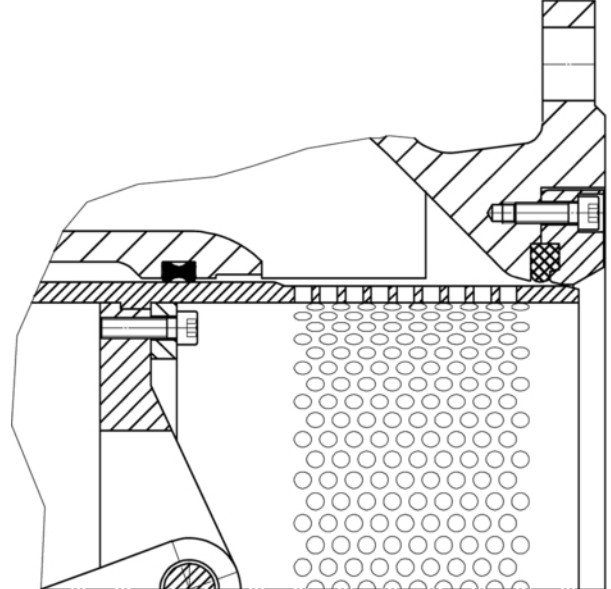
Type "SZ" with a movable slotted cylinder



Application:

- Preferably as control valve
- In case of considerable pressure differences
- Optimum adjustment to the plant conditions
- To prevent cavitation
- For water containing suspended matter

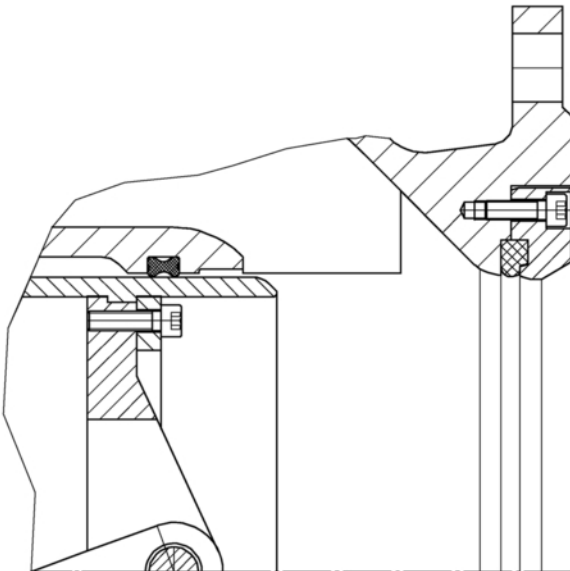
Type "LH" with a movable multiple orifice cylinder



Application:

- Preferably as control valve
- In case of considerable pressure differences
- Optimum adjustment to the plant conditions
- Optimum prevention of cavitation

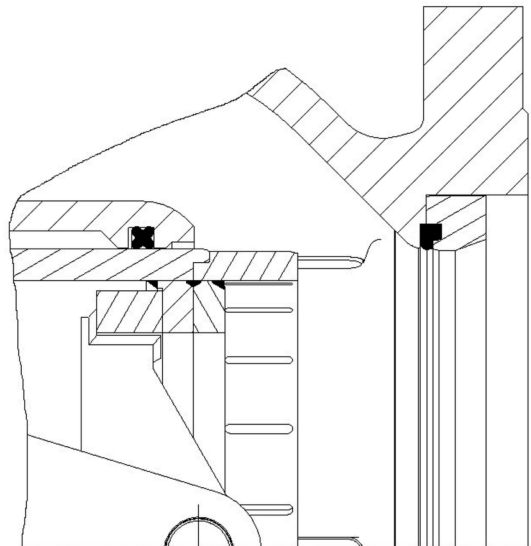
Type "E" with cut-off edge



Application:

- Preferably as control valve with sufficient back pressure
- As pump start-up valve

Type "SPZ" with a movable special cylinder



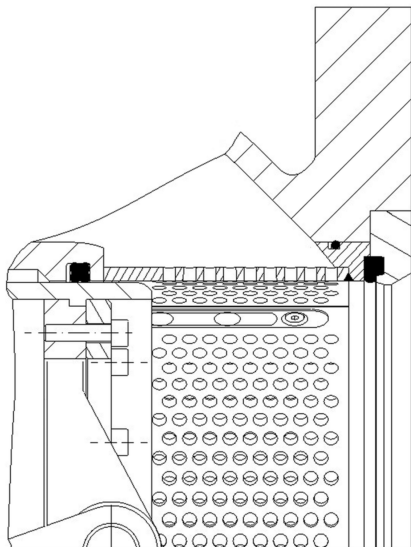
Application:

- Preferably as control valve
- Optimum adjustment to the plant conditions
- Optimum prevention of cavitation



Further information

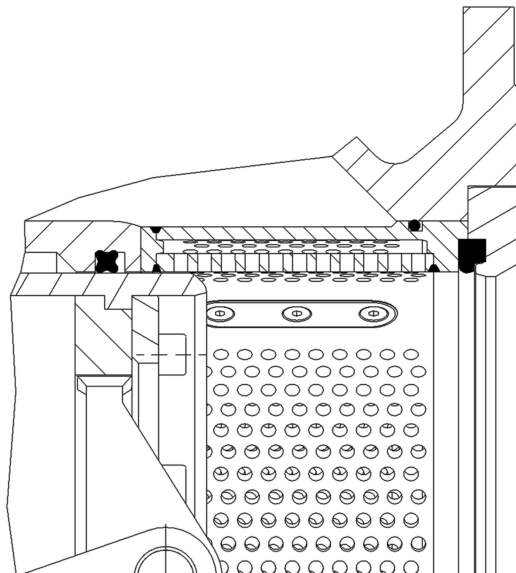
Type "L" with a rigid anti-cavitation cylinder



Application:

- Preferably as control valve
- In case of considerable pressure differences
- Optimum adjustment to the plant conditions
- Optimum prevention of cavitation
- Insensitive to suspended matter in water

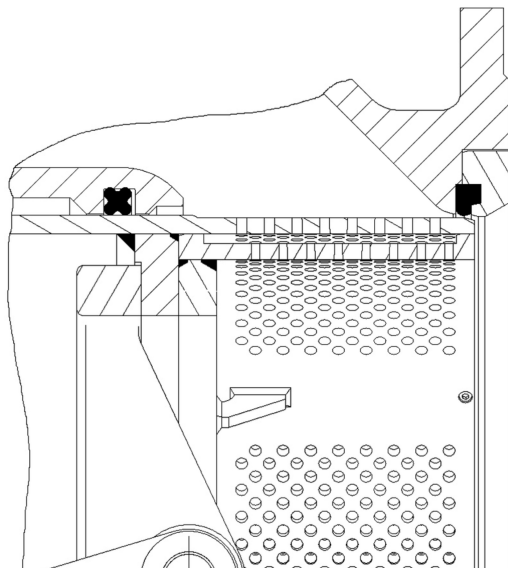
Type "LD" with a rigid double anti-cavitation cylinder



Application:

- Preferably as control valve
- In case of considerable pressure differences
- Optimum adjustment to the plant conditions
- Optimum prevention of cavitation
- Insensitive to suspended matter in water

Type "LHD" with a movable double anti-cavitation cylinder



Application:

- Preferably as control valve
- In case of considerable pressure differences
- Optimum adjustment to the plant conditions
- Optimum prevention of cavitation