POVRATNE KLAPNE - KOSE

11

OBLIQUE RETURN FLAPS

POVRATNI VENTILI

12

RETURN VALVES

PRIMENA

Povratni ventili su uređaji namenjeni za sprečavanje povratnog strujanja radnog fluida. Ugrađuju su cevne sisteme da spreče isticanje i gubitak radnog fluida i osiguraju uređaje od oštećenja koje bi proizvelo povratno strujanje fluida. To su samodejstvujući uređaji, koji automatski, bez pogonskog sistema obavljaju svoju funkciju. Oni propuštaju fluid u jednom smeru, a u suprotnom njihovo zaporno telo automatski zatvara svetli otvor cevi i time sprečava nepoželjno povratno strujanje fluida. Zatvaranje se vrši uz pomoć opruge i sile pritiska povratnog fluida.

Povratni ventili mogu da se montiraju u horizontalnom i vertikalnom položaju, a pošto dozvoljavaju strujanje radnog fluida samo u jednom smeru to je prilikom montaže potrebno obratiti pažnju da smer strelice na kućištu ventila odgovara smeru kretanja radnog fluida u datom cevovodu.

Primenjuju se u postrojenjima za dobijanje, pripremu i distribuciju vode, u komunalnim objektima, u sistemima za navodnjavanje, u raznim postrojenjima hemijske i petrohemijske industrije i energetskim postrojenjima.

IZVOĐENJE

Povratne ventile izrađujemo za nazivne prečnike DN 50 do DN 500 (mm), nazivnih pritisaka do NP 25 (bar), na zahtev i do 40 (bar) i temperature do 150 (°C).

APPLICATION

Return valves are the units intended for preventing the operating fluid backflow. They are fitted within piping systems to prevent operating fluid leaking and loss and to protect the units from damages that might be caused by the fluid backflow. They are self-activating units that perform their function automatically, without a drive system. They pass the fluid in one direction and their shutoff body automatically closes the pipe bright opening in the other direction, preventing in that way undesirable backflow of the fluid. Closing is effected by means of a spring and returning fluid pressure force.

Return valves may be fitted in horizontal and vertical positions and since they allow for fluid flow in one direction only, attention should be paid during the fitting, to the arrow direction, indicated on the valve housing, to match the operating fluid flow direction in the pipeline given.

They are most frequently used in water treatment, preparation and distribution plants, in communal facilities, irrigation systems, various chemical and petrochemical plants and power plants.

FABRICATION

Return valves are made for nominal diameters, ranging from DN 50 to DN 500 (mm) and pressures up to NP 25 (bar) and up to 40 (bar) if requested, and temperatures up to 150(°C).

Kućište ventila je u zavaranoj konstrukciji i bez prirubnica, a veza sa prirubnicama cevovoda ostvaruje se uvrtanjem zavrtnjeva u telo kućišta.

Povratni ventili svoju funkciju u cevovodu obavljaju kretanjem zapornog tela duž ose cevovoda. Zaporno telo je u obliku ploče sa osovinom u središnjem delu, a aksijalno kretanje uslovljeno je kretanjem osovine duž ose kliznih ležajeva.

Između zapornog tela i nosača zadnjeg kliznog ležaja nalazi se opruga koja ima ulogu da dovede zaporno telo u položaj zatvaranja u trenutku kada radni pritisak opadne ispod 0.2 (bar) i da donekle amortizuje udar zapornog tela pri otvaranju ventila.

Zaptivanje povratnih ventila ostvaruje se naleganjem zaptivne površine zapornog tela na zaptivni prsten smešten u kućištu ventila.

Povratne ventile izrađujemo sa ugradbenim dužinama koje odgovaraju standardima JUS M.C5.005 - F4, a priključne mere prirubnica su prema JUS M.B6.011 i DIN 2501.

MATERIJAL

Kućište i zaporno telo izrađujemo od konstrukcionih čelika zavarivanjem, s tim da je zaptivni deo zapornog tela od nerđajućeg čelika.

Zaptivni prsten je od tehničke plastike odgovarajuće tvrdoće ili od drugog odgovarajućeg materijala, a klizni ležajevi od bronze.

NARUČIVANJE

Naručivanje se vrši opisno kao što je naznačeno u opštim napomenama.

The valve housing is welded, without flanges and connection to the pipeline flanges is done by means of bolts, bolted in the housing body. Return valves perform their function in the pipeline by their shutoff body, moving along the pipeline axis. The shutoff body is in a form of a plate with an axle in the central part and the axial motion is conditioned by the axle moving along the slide bearing axis.

Between the shutoff body and the rear slide bearing support, there is a spring the function of which is to bring the shutoff body in the closing position in the moment when operating pressure drops below 0.2 (bar) and to absorb to the certain extent the shutoff body impact during the valve openning.

We fabricate return valves with in-built measures that comply to JUS M.C5.005-F4 and DIN 3202-F4 Standard and the flanges fitting dimensions are according to JUS M.B6.011 and DIN 2501.

MATERIAL

The housing and shutoff body are made of structural steels by welding; the sealing part of the shutoff body - of stainless steel.

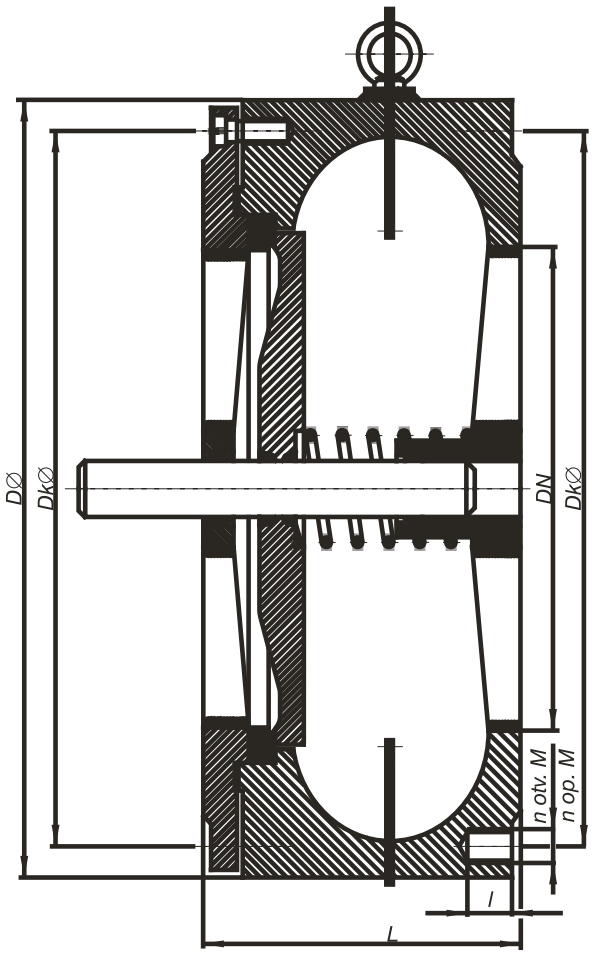
Sealing ring is made of corresponding hardness technical plastics or other corresponding material, and slide bearings are made of bronze.

HOW TO ORDER

You can order as described in general notes.

POVRATNI VENTILI
RETURN VALVES
NP 10 DN 50 - 500

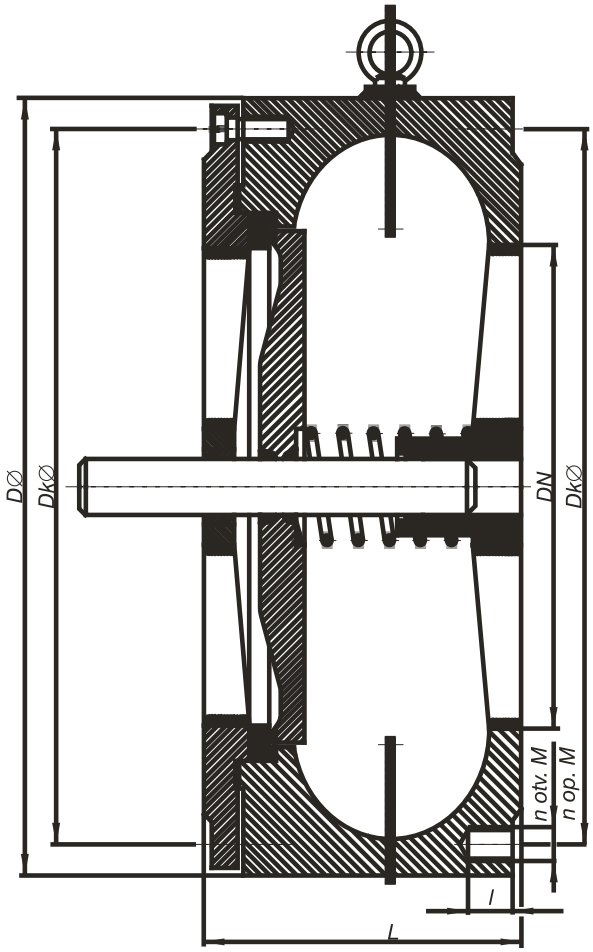
PV



DN	D∅	Dk∅	l	L	n	M	m(kg)
50	170	125	18	150	4	M16	15
65	190	145	18	170	4	M16	23,5
80	205	160	20	180	4	M16	30,2
100	225	180	20	190	4	M16	41
125	255	210	22	200	8	M16	54
150	290	240	22	210	8	M20	70,4
175	320	270	24	220	8	M20	85
200	345	295	24	230	8	M20	97
250	400	350	26	250	8	M20	120
300	450	400	26	270	12	M20	158
350	510	460	26	290	12	M20	206
400	575	515	26	310	16	M24	262
450	625	565	26	330	16	M24	311
500	680	620	28	350	20	M24	371

POVRATNI VENTILI
RETURN VALVES
NP 16 DN 50 - 500

PV



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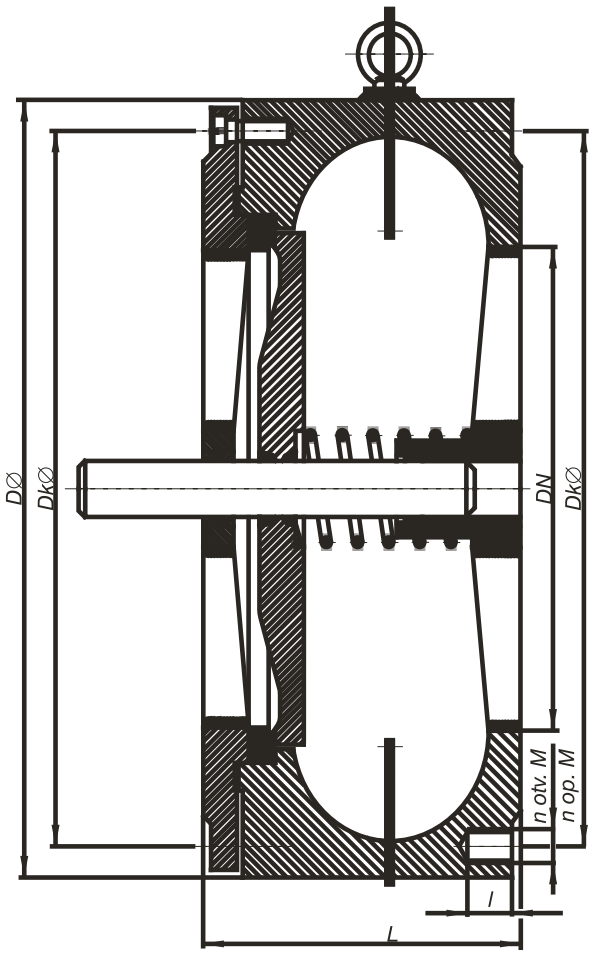
DN	D∅	Dk∅	l	L	n	M	m(kg)
50	170	125	18	150	4	M16	15
65	190	145	18	170	4	M16	23,5
80	205	160	20	180	8	M16	30,2
100	225	180	20	190	8	M16	41
125	255	210	22	200	8	M16	54
150	290	240	22	210	8	M20	70,4
175	320	270	24	220	8	M20	85
200	345	295	24	230	12	M20	97
250	410	355	26	250	12	M24	122
300	465	410	28	270	12	M24	161
350	525	470	30	290	16	M24	210
400	600	525	32	310	16	M27	267
450	650	585	34	330	20	M27	320
500	725	650	34	350	20	M30	382



DN	D∅	Dk∅	l	L	n	M	m(kg)
50	170	125	20	150	4	M16	15
65	190	145	22	170	8	M16	23,5
80	205	160	24	180	8	M16	30,2
100	240	190	24	190	8	M20	44
125	275	220	26	200	8	M24	56,5
150	305	250	28	210	8	M24	70,4
175	335	280	28	220	12	M24	89
200	365	310	30	230	12	M24	102
250	425	370	32	250	12	M27	127
300	490	430	34	270	16	M27	168
350	560	490	38	290	16	M30	225
400	630	550	40	310	16	M33	275
450	680	600	42	330	20	M33	335
500	730	660	44	350	20	M33	395

POVRATNE KLAPNE

RETURN FLAPS

10

10

PRIMENA

Povratne klapne su zaštitni uređaji u cevovodima i cevnim sistemima za transport tečnih fluida. Primenjuju se za sprečavanje povratnog strujanja radnog fluida, a njihovo delovanje je automatsko.

Najširu primenu imaju u sistemima za distribuciju pitke vode i sistemima za navodnjavanje, prečišćavanje i transport otpadnih voda kao i u sistemima daljinskog grejanja.

Povratne klapne dozvoljavaju strujanje samo u jednom smeru, zbog čega prilikom montaže treba obratiti pažnju na to da smer strelice na kućištu povratne klapne odgovara smeru kretanja radnog fluida u datom cevovodu.

U praksi su se pokazale kao veliki potrošači energije jer imaju veliki koeficijent lokalnih gubitaka ζ.

IZVOĐENJE

Povratne klapne izrađujemo sa zapornim telom koje rotira oko osovine koja tangira zaporno telo. Na osovini je ugrađena torziona opruga odgovarajućeg momenta koja omogućava da povratna klapna dobro zaptiva i pri malim povratnim pritiscima.

Zaptivna površina na kućištu povratne klapne navaruje se elektrodom otpornom na koroziju, a zaptivanje se vrši preko gumenog prstena smeštenog u kanalu zapornog tela. Povratne klapne izrađujemo bez prirubnica, te se iste montiraju između cevnih prirubnica sa odgovarajućim prirubnicama. Nazivni prečnik se kreće od DN 50 do DN 500 (mm), a pritisci od NP 2,5 do NP 16 (bar).

MATERIJAL

Kućište i zaporno telo izrađujemo od konstrukcionih čelika zavarivanjem, a osovinu od čelika otpornog na koroziju.

Zaptivni elementi za temperaturu fluida do 80°C izrađuju se od EPDM-a, a za temperaturu do 150°C od specijalnog EPDM-a.

NARUČIVANJE

Naručivanje se vrši opisno kao što je naznačeno u opštim napomenama.

APPLICATION

Return flaps are protective units within pipelines ind piping systems for conveying of liquid fluids. They are applied to prevent the operating fluid backflow, and they act automatically.

They are most frequently used in drinking water distribution and irrigation systems, waste waters treatment and conveying as well as in district heating systems.

Return flaps permit fluids flow in one direction only, so that during the fitting, attention should be paid to the arrow direction, indicated on the butterfly return flaps housing, to match the operating fluid flow direction in the pipeline given.
In practice, they have shown to be great consumers of energy because they have a high coefficient of local losses ζ.

FABRICATION

Return flaps are made with a shutoff body rotating around the axle that touches the shutoff body. A torsion spring of corresponding torque is fitted onto the axle enabling good sealing of return flap, even in case of low back pressures.

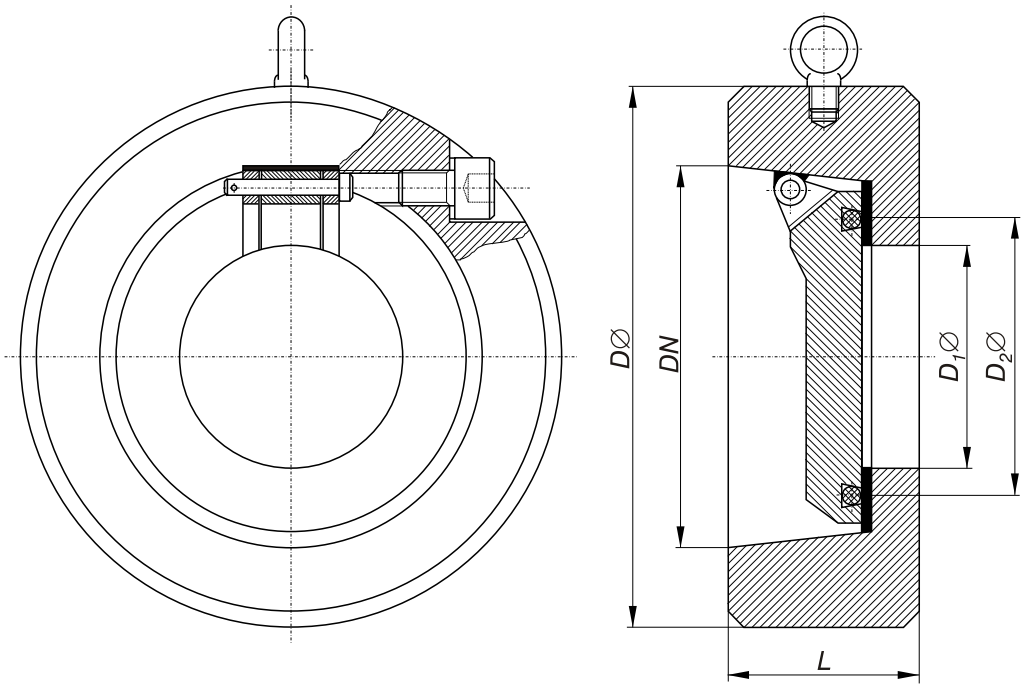
The sealing surface on the return flap housing is welded on (weaved) by a corresponding stainless electrode, the sealing being effected through a rubber ring, located across the shutoff body channel. The return flaps are made without flanges, and they are fitted between the flanged pipes having corresponding flanges. The nominal diameter ranges from DN 50 to DN 500 (mm) and pressures from NP 2.5 to NP 16 (bar).

MATERIAL

Return flaps housing and shutoff body, are made of structural steels by welding; the shaft (axle) - of stainless steel.
Sealing elements for fluid temperatures up to 80 (°C) are made of EPDM and special EPDM is used for the temperatures up to 150 (°C).

HOW TO ORDER

You can order as described in general notes.



DN	D_1∅	D∅	D_2∅	L	m (kg)
100	70	160	80	30	3
125	90	190	100	32	3,5
150	115	215	130	34	4,5
200	160	270	175	36	8
250	200	325	235	38	12,8
300	240	375	270	40	20
350	270	435	300	45	36
400	310	485	340	50	52
450	360	555	390	55	70
500	400	590	430	60	90

*) ostale veličine na zahtev

*) other values at requirement

POVRATNE KLAPNE - KOSE
OBLIQUE RETURN FLAPS

PKK

PRIMENA

Povratne klapne - kose su zaštitni uređaji u cevovodima i cevnim sistemima za transport fluida. Primenjuju se za sprečavanje povratnog strujanja radnog fluida, a delovanje povratnih klapni - kosih je automatsko.

Najširu primenu imaju u postrojenjima za transport otpadnih voda, kada je raspoloživi pritisak pumpe mali, a povratna voda može da bude pod atmosferskim pritiskom (bez natpritiska).

Povratne klapne - kose dozvoljavaju strujanje fluida samo u jednom smeru, tako da prilikom montaže treba obratiti pažnju na to da smer strelice na kućištu klapne odgovara smeru kretanja radnog fluida u datom cevovodu.

IZVOĐENJE

Povratne klapne - kose izrađujemo sa zapornim telom koje rotira oko osovine koja je paralelna horizontalnoj gornjoj tangenti.

Zaptivna površina je pod uglom, eliptičnog oblika i navarena elektrodom otpornom na koroziju, a zaptivanje se vrši preko gumenog prstena smeštenog na zapornom telu. Na zahtev kupca radimo i u drugim dimenzijama i za druge nazivne pritiske.

MATERIJAL

Kućište i zaporno telo izrađujemo od konstrukcionih čelika zavarivanjem, a vratilo od čelika otpornih na koroziju.

Zaptivni elementi izrađuju se od EPDM-a.

NARUČIVANJE

Naručivanje se vrši opisno kao što je naznačeno u opštim napomenama ili popunjavanjem upitnog lista.

APPLICATION

Oblique return flaps are protective units in pipelines and piping systems for fluids conveying . They are applied to prevent the operating fluids return flow, in that the oblique return flaps acting automatically.

They are most widely applied in the plants for wastewater conveying, when the available pump pressure is low and the return water may be under atmospheric pressure (without superpressure).

Oblique return flaps allow for liquid flowing in one direction only, so that in the course of fitting, care should be taken that the arrows direction, indicated on the flap casing, matches the operating fluid flow direction in the given pipeline.

FABRICATION

Oblique return flaps are fabricated with shutoff body rotating around its axis, parallel with the horizontal upper tangent.

The sealing surface is at the angle, of elliptical shape and it is bead welded by a corrosion resistant electrode. Sealing is effected through a rubber ring, situated on a shutoff body. Upon the request of the customer we can fabricate oblique return flaps of other sizes and nominal pressures, as well.

MATERIAL

The housing and shutoff body is made of structural steels by welding, and the shaft is of stainless steels.

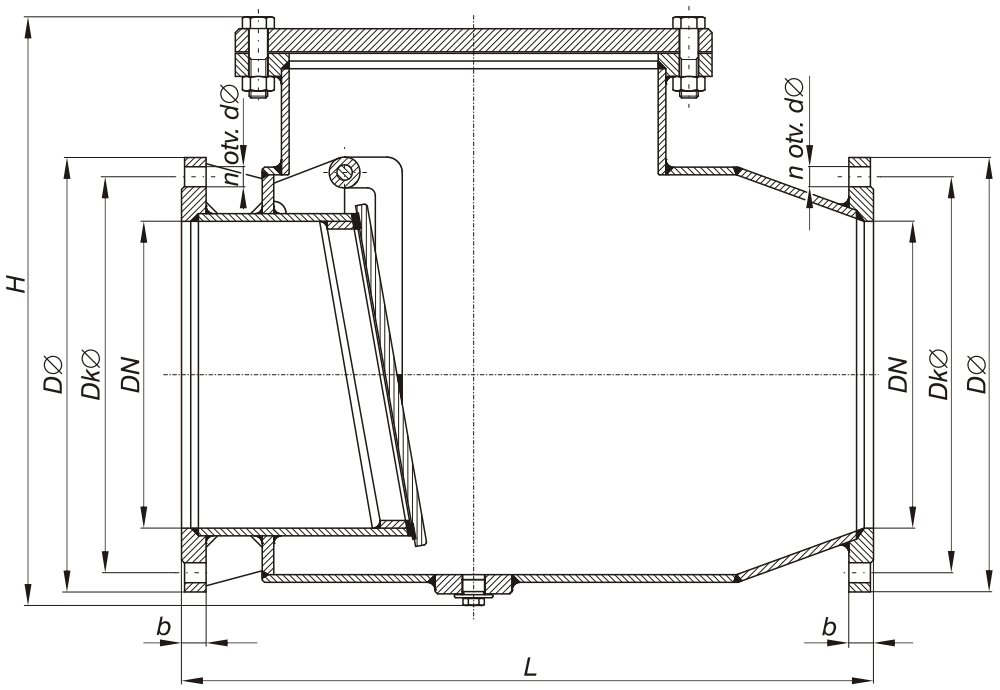
The sealing elements are made of EPDM.

HOW TO ORDER

You can order according to instructions given in general notes or by filling a Questionare.

POVRATNE KLAPNE - KOSE
OBLIQUE RETURN FLAPS
DN 50 - 400; NP 10

PKK



DN	L	H	DØ	DkØ	n	dØ	b	m(kg)
50	200	190	165	125	4	18	18	18
65	240	220	185	145	4	18	18	30
80	260	245	200	160	4	18	20	33
100	300	295	220	180	8	18	20	42
125	350	335	250	210	8	18	22	60
150	400	360	280	240	8	22	22	75
175	450	395	315	270	8	22	24	105
200	500	435	340	295	8	22	24	140
250	600	510	395	350	12	22	26	175
300	700	560	445	400	12	22	26	230
350	800	670	505	460	16	22	26	390
400	900	740	565	515	16	26	26	520

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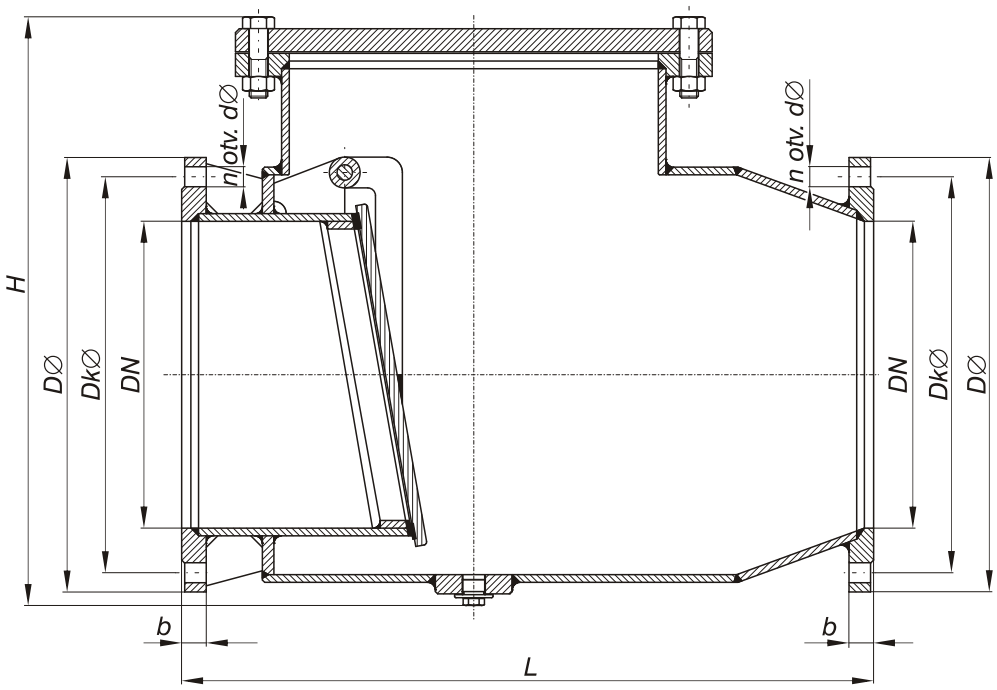
POVRATNE KLAPNE - KOSE
OBLIQUE RETURN FLAPS
DN 50 - 400; NP 16

PKK



DN	L	H	DØ	DkØ	n	dØ	b	m(kg)
50	200	190	165	125	4	18	18	20
65	240	220	185	145	4	18	18	32
80	260	245	200	160	4	18	20	35
100	300	295	220	180	8	18	20	44
125	350	335	250	210	8	18	22	62
150	400	360	285	240	8	22	22	82
175	450	395	315	270	8	22	24	110
200	500	435	340	295	12	22	24	145
250	600	510	405	355	12	26	26	185
300	700	560	460	410	12	26	28	245
350	800	670	520	470	16	26	30	410
400	900	740	580	525	16	30	32	540