

 Aliaxis



DK DN 15÷65

PVC-C

DIALOCK® 2-way diaphragm valve

DK DN 15÷65

The DK DIALOCK® diaphragm valve is particularly suitable for shutting off and regulating abrasive or dirty fluids. The new internal geometry of the body increases flow coefficient, reduce pressure drop and allows a sensitive and precise adjustment along the entire stroke of the shutter. The DK is extremely compact and very light. The innovative handwheel is equipped with a patented immediate and ergonomic operating locking device that allows it to be adjusted and locked in any position.

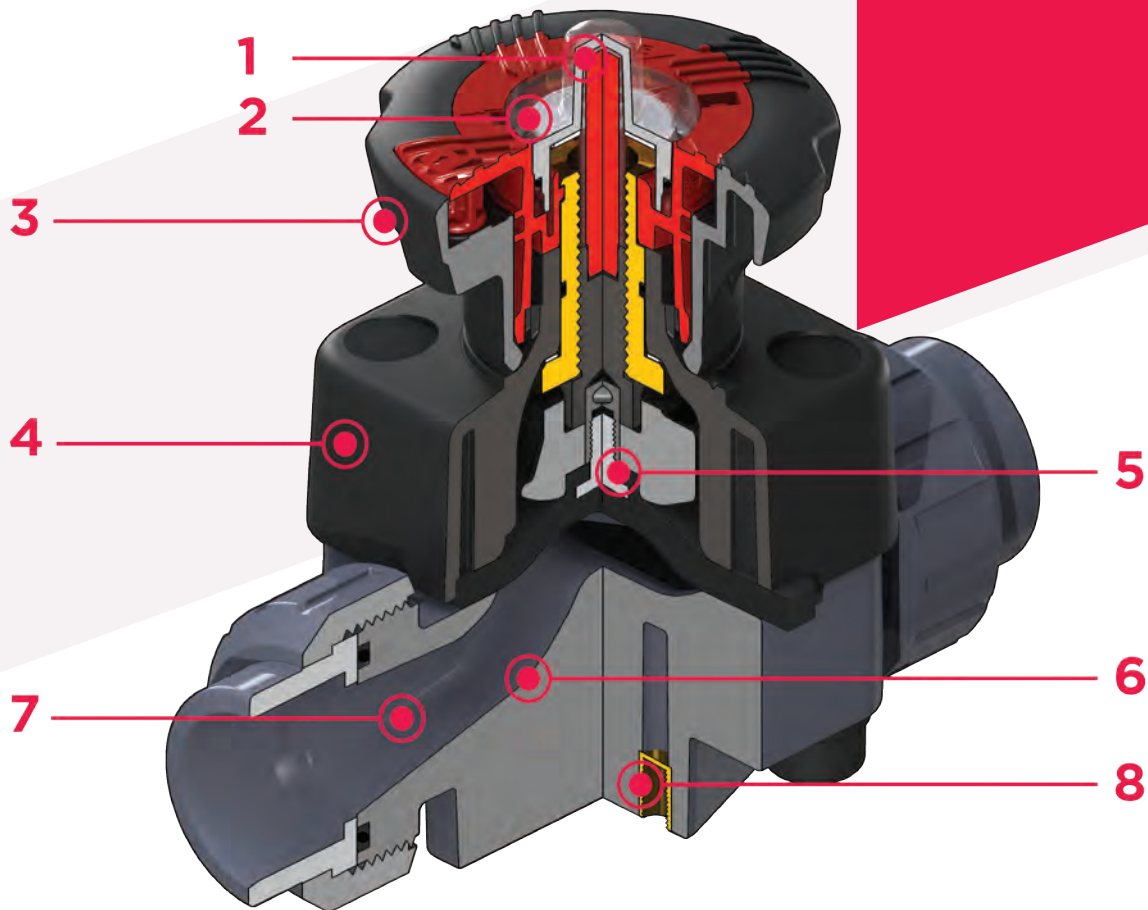


DIALOCK® 2-WAY DIAPHRAGM VALVE

- Connection system for solvent weld, threaded and flanged joints
- **Optimised fluid dynamic design:** maximum output flow rate thanks to the optimised efficiency of the fluid dynamics that characterise the new internal geometry of the body
- **Internal components in metal, totally isolated from the fluid** and external environment
- **Modularity of the range:** only 2 handwheel and 4 diaphragm and bonnet sizes for 7 different valve sizes
- Non-rising handwheel that stays at the same height during rotation, equipped with a graduated optical indicator protected by a transparent PVC cap with seal O-Ring
- Bonnet fastening screws in stainless steel protected against the external environment by PE plugs. Absence of metal parts exposed to the external environment to prevent any risk of corrosion
- **New flanged bodies:** the new bodies, characterised by a monolithic flanged structure, are available in PVC-U, PVC-C, PP-H and PVDF. This design, free from body and flange joints, greatly reduces mechanical stress and increases system performance.
- **CDSA** (Circular Diaphragm Sealing Angle) system that, thanks to the uniform distribution of shutter pressure on the diaphragm seal, offers the following advantages:
 - reduction in the tightening torque of the screws fixing the actuator to the valve body
 - reduced mechanical stress on all valve components (actuator, body and diaphragm)
 - easy to clean valve interior
 - low risk of the accumulation of deposits, contamination or damage to the diaphragm due to crystallisation
 - operating torque reduction

Technical specifications

Construction	Diaphragm valve with maximized flow rate and DIALOCK® lockable handwheel
Size range	DN 15 ÷ 65
Nominal pressure	PN 10 with water at 20° C
Temperature range	0 °C ÷ 100 °C
Coupling standards	<p>Solvent welding: EN ISO 15493, ASTM F 439. Can be coupled to pipes according to EN ISO 15493, ASTM F 441.</p> <p>Thread: ISO 228-1, DIN 2999.</p> <p>Flanging system: ISO 7005-1, EN ISO 15493, EN 558-1, DIN 2501, ANSI B.16.5 cl.</p>
Reference standards	<p>Construction criteria: EN ISO 16138, EN ISO 15493</p> <p>Test methods and requirements: ISO 9393</p> <p>Installation criteria: DVS 2204, DVS 2221, UNI 11242</p>
Valve material	<p>Body: PVC-C</p> <p>Bonnet and handwheel: PP-GR</p> <p>Position indicator cap: PVC</p>
Seal material	EPDM, FKM, PTFE
Control options	Manual control; pneumatic actuator



1 High visibility graduated optical position indicator protected by a transparent cap with seal O-Ring

2 Customisation plate: the customisation lets you identify the valve on the system according to specific needs

3 DIALOCK® SYSTEM: innovative handwheel with a patented **immediate and ergonomic operating locking device** that allows it **to be adjusted and locked in over 300 positions**

4 Handwheel and bonnet in high mechanical strength and chemically resistant **PP-GR**, providing full protection by isolating all internal metal parts from contact with external agents

5 Floating pin connection between the control screw and diaphragm to prevent concentrated loads, improve the seal and extend its lifetime

6 New design of valve body interior: substantially increased flow coefficient and reduced pressure drop. The degree of

efficiency reached has also enabled **the size and weight** of the valve to be **reduced**

7 Adjustment linearity: the internal profiles of the valve also greatly improve its characteristic curve, resulting in **extremely sensitive and precise adjustment** along the entire stroke of the shutter

8 Valve anchoring bracket integrated in the body, with threaded metal inserts allowing **simple panel or wall mounting** using the PMDK mounting plate (supplied as an accessory)

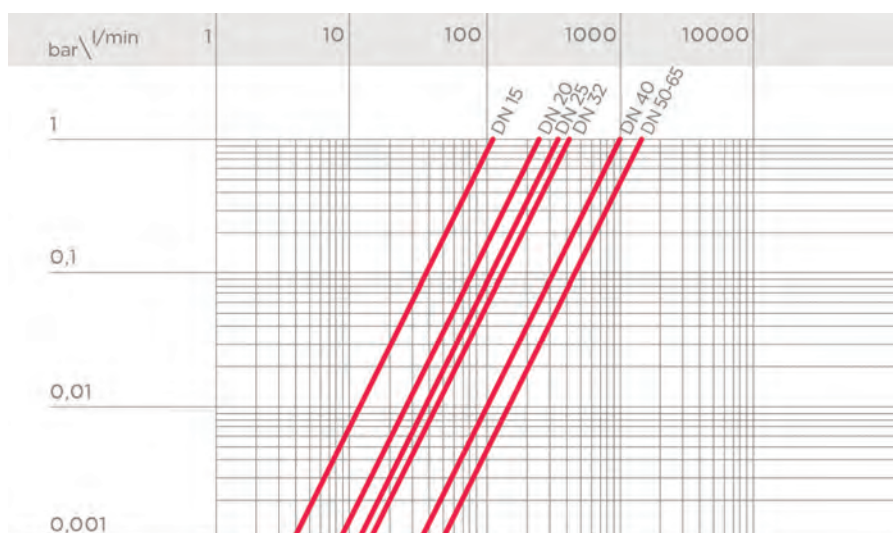
TECHNICAL DATA

PRESSURE VARIATION ACCORDING TO TEMPERATURE

For water and non-hazardous fluids with regard to which the material is classified as CHEMICALLY RESISTANT. In other cases, a reduction of the nominal pressure PN is required (25 years with safety factor).



PRESSURE DROP GRAPH



K_v100 FLOW COEFFICIENT

The K_v100 flow coefficient is the Q flow rate of litres per minute of water at a temperature of 20°C that will generate Δp= 1 bar pressure drop at a certain valve position. The Kv100 values shown in the table are calculated with the valve completely open.

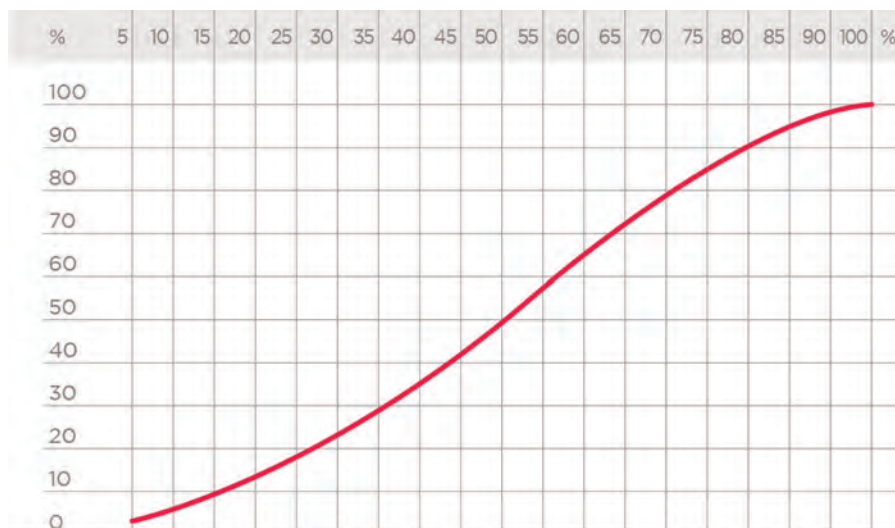
DN	15	20	25	32	40	50	65
Kv100 l/min	112	261	445	550	1087	1648	1600

RELATIVE FLOW COEFFICIENT GRAPH

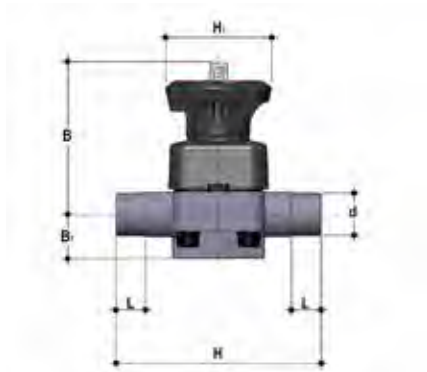
The relative flow coefficient is the flow rate through the valve as a function of the degree of valve opening.

Horizontal axis: Percentage opening of the valve

Vertical axis: Relative flow coefficient



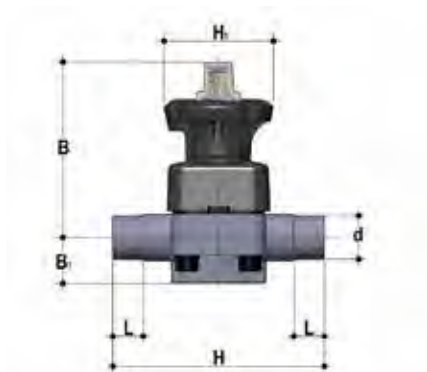
DIMENSIONS



DKDC

DIALOCK® diaphragm valve with male ends for solvent welding, metric series

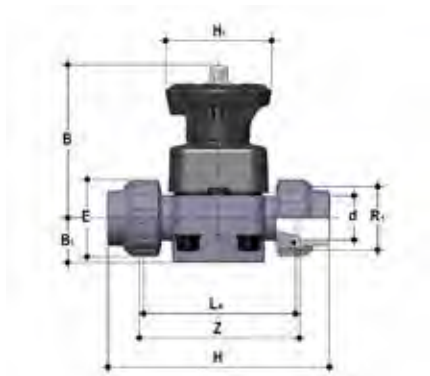
d	DN	PN	B	B ₁	H	H ₁	L	g	EPDM code	FKM code	PTFE code
20	15	10	102	25	124	80	16	466	DKDC020E	DKDC020F	DKDC020P
25	20	10	105	30	144	80	19	491	DKDC025E	DKDC025F	DKDC025P
32	25	10	114	33	154	80	22	696	DKDC032E	DKDC032F	DKDC032P
40	32	10	119	30	174	80	26	743	DKDC040E	DKDC040F	DKDC040P
50	40	10	149	35	194	120	31	1574	DKDC050E	DKDC050F	DKDC050P
63	50	10	172	46	224	120	38	2310	DKDC063E	DKDC063F	DKDC063P
75	65	10	172	46	284	120	44	2430	DKDC075E	DKDC075F	DKDC075P



DKLDC

DIALOCK® diaphragm valve with stroke limiter and male ends for solvent welding, metric series

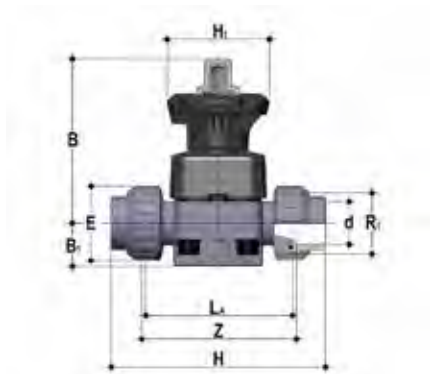
d	DN	PN	B	B ₁	H	H ₁	L	g	EPDM code	FKM code	PTFE code
20	15	10	115	25	124	80	16	496	DKLDC020E	DKLDC020F	DKLDC020P
25	20	10	118	30	144	80	19	521	DKLDC025E	DKLDC025F	DKLDC025P
32	25	10	127	33	154	80	22	726	DKLDC032E	DKLDC032F	DKLDC032P
40	32	10	132	30	174	80	26	773	DKLDC040E	DKLDC040F	DKLDC040P
50	40	10	175	35	194	120	31	1634	DKLDC050E	DKLDC050F	DKLDC050P
63	50	10	200	46	224	120	38	2370	DKLDC063E	DKLDC063F	DKLDC063P
75	65	10	200	46	284	120	44	2490	DKLDC075E	DKLDC075F	DKLDC075P



DKUIC

DIALOCK® diaphragm valve with female union ends for solvent welding, metric series

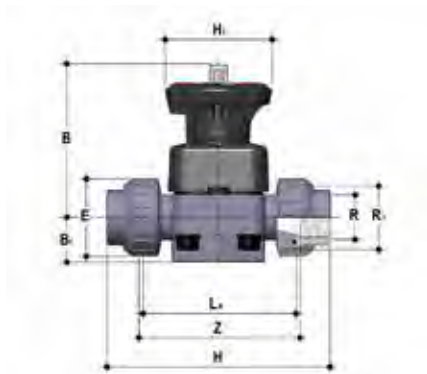
d	DN	PN	B	B ₁	E	H	H ₁	La	R ₁	Z	g	EPDM code	FKM code	PTFE code
20	15	10	102	25	41	129	80	90	1"	100	509	DKUIC020E	DKUIC020F	DKUIC020P
25	20	10	105	30	50	154	80	108	1 1/4"	116	576	DKUIC025E	DKUIC025F	DKUIC025P
32	25	10	114	33	58	168	80	116	1 1/2"	124	812	DKUIC032E	DKUIC032F	DKUIC032P
40	32	10	119	30	72	192	80	134	2"	140	945	DKUIC040E	DKUIC040F	DKUIC040P
50	40	10	149	35	79	222	120	154	2 1/4"	160	1814	DKUIC050E	DKUIC050F	DKUIC050P
63	50	10	172	46	98	266	120	184	2 3/4"	190	2752	DKUIC063E	DKUIC063F	DKUIC063P



DKLUIIC

DIALOCK® diaphragm valve with stroke limiter and female union ends for solvent welding, metric series

d	DN	PN	B	B ₁	E	H	H ₁	La	R ₁	Z	g	EPDM code	FKM code	PTFE code
20	15	10	115	25	41	129	80	90	1"	100	539	DKLUIIC020E	DKLUIIC020F	DKLUIIC020P
25	20	10	118	30	50	154	80	108	1 1/4"	116	606	DKLUIIC025E	DKLUIIC025F	DKLUIIC025P
32	25	10	127	33	58	168	80	116	1 1/2"	124	842	DKLUIIC032E	DKLUIIC032F	DKLUIIC032P
40	32	10	132	30	72	192	80	134	2"	140	975	DKLUIIC040E	DKLUIIC040F	DKLUIIC040P
50	40	10	175	35	79	222	120	154	2 1/4"	160	1874	DKLUIIC050E	DKLUIIC050F	DKLUIIC050P
63	50	10	200	46	98	266	120	184	2 3/4"	190	2812	DKLUIIC063E	DKLUIIC063F	DKLUIIC063P

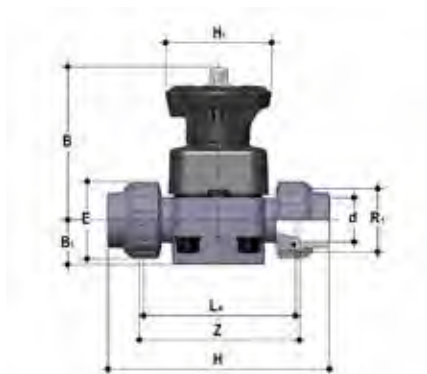


DKUFC

DIALOCK® diaphragm valve with BSP threaded female union ends

R	DN	PN	B	B ₁	E	H	H ₁	La	R ₁	Z	g	EPDM code	FKM code	PTFE code
1/2"	15	10	102	25	41	131	80	90	1"	97	509	DKUFC012E	DKUFC012F	DKUFC012P
3/4"	20	10	105	30	50	151	80	108	1 1/4"	118	576	DKUFC034E	DKUFC034F	DKUFC034P
1"	25	10	114	33	58	165	80	116	1 1/2"	127	812	DKUFC100E	DKUFC100F	DKUFC100P
1 1/4"	32	10	119	30	72	188	80	134	2"	145	945	DKUFC114E	DKUFC114F	DKUFC114P
1 1/2"	40	10	149	35	79	208	120	154	2 1/2"	165	1814	DKUFC112E	DKUFC112F	DKUFC112P
2"	50	10	172	46	98	246	120	184	2 3/4"	195	2752	DKUFC200E	DKUFC200F	DKUFC200P

DKLUFC version available on request

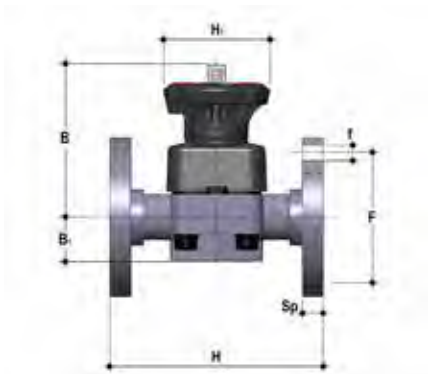


DKUAC

DIALOCK® diaphragm valve with female union ends for solvent welding, ASTM series

d	DN	PN	B	B ₁	E	H	H ₁	La	R ₁	Z	g	EPDM code	FKM code	PTFE code
1/2"	15	10	102	25	41	143	80	90	1"	98	509	DKUAC012E	DKUAC012F	DKUAC012P
3/4"	20	10	105	30	50	167	80	108	1 1/4"	115	576	DKUAC034E	DKUAC034F	DKUAC034P
1"	25	10	114	33	58	180	80	116	1 1/2"	122	812	DKUAC100E	DKUAC100F	DKUAC100P
1 1/4"	32	10	119	30	72	208	80	134	2"	144	945	DKUAC114E	DKUAC114F	DKUAC114P
1 1/2"	40	10	149	35	79	234	120	154	2 1/2"	164	1814	DKUAC112E	DKUAC112F	DKUAC112P
2"	50	10	172	46	98	272	120	184	2 3/4"	195	2752	DKUAC200E	DKUAC200F	DKUAC200P

DKLUAC version available on request

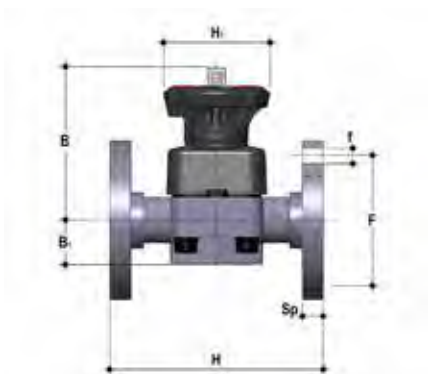


DKOC

DIALOCK® diaphragm valve with flanged monolithic body, drilled PN10/16. Face to face according to EN 558-1

d	DN	PN	B	B ₁	f	F	H	H ₁	Sp	U	g	EPDM code	FKM code	PTFE code
20	15	10	102	25	65	14	130	80	13,5	4	962	DKOC020E	DKOC020F	DKOC020P
25	20	10	105	30	75	14	150	80	13,5	4	1038	DKOC025E	DKOC025F	DKOC025P
32	25	10	114	33	85	14	160	80	13,5	4	1122	DKOC032E	DKOC032F	DKOC032P
40	32	10	119	30	100	18	180	80	14	4	1364	DKOC040E	DKOC040F	DKOC040P
50	40	10	149	35	110	18	200	120	16	4	2299	DKOC050E	DKOC050F	DKOC050P
63	50	10	172	46	125	18	230	120	16	4	3200	DKOC063E	DKOC063F	DKOC063P
75	65	10	172	46	145	18	290	120	21	4	3873	DKOC075E	DKOC075F	DKOC075P

DKLOC version available on request



DKOAC

DIALOCK® diaphragm valve with flanged monolithic body, drilled ANSI B16.5 cl. 150 #FF

d	DN	PN	B	B ₁	f	F	H	H ₁	Sp	U	g	EPDM code	FKM code	PTFE code
1/2"	15	10	102	25	60.3	14	108	80	13,5	4	962	DKOAC012E	DKOAC012F	DKOAC012P
3/4"	20	10	105	30	70	15.7	120	80	13,5	4	1038	DKOAC034E	DKOAC034F	DKOAC034P
1"	25	10	114	33	80	15.7	131	80	13,5	4	1122	DKOAC100E	DKOAC100F	DKOAC100P
1" 1/4	32	10	119	30	89	15.7	162	80	14	4	1364	DKOAC114E	DKOAC114F	DKOAC114P
1" 1/2	40	10	149	35	99	15.7	180	120	16	4	2299	DKOAC112E	DKOAC112F	DKOAC112P
2"	50	10	172	46	121	19	210	120	16	4	3200	DKOAC200E	DKOAC200F	DKOAC200P
2" 1/2	65	10	172	46	140	19	250	120	21	4	3873	DKOAC212E	DKOAC212F	DKOAC212P

DKLOAC version available on request

For installation prior to october 2017 please contact Fip Technical Support