

Aliaxis



DK DN 15÷65

PP-H

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.

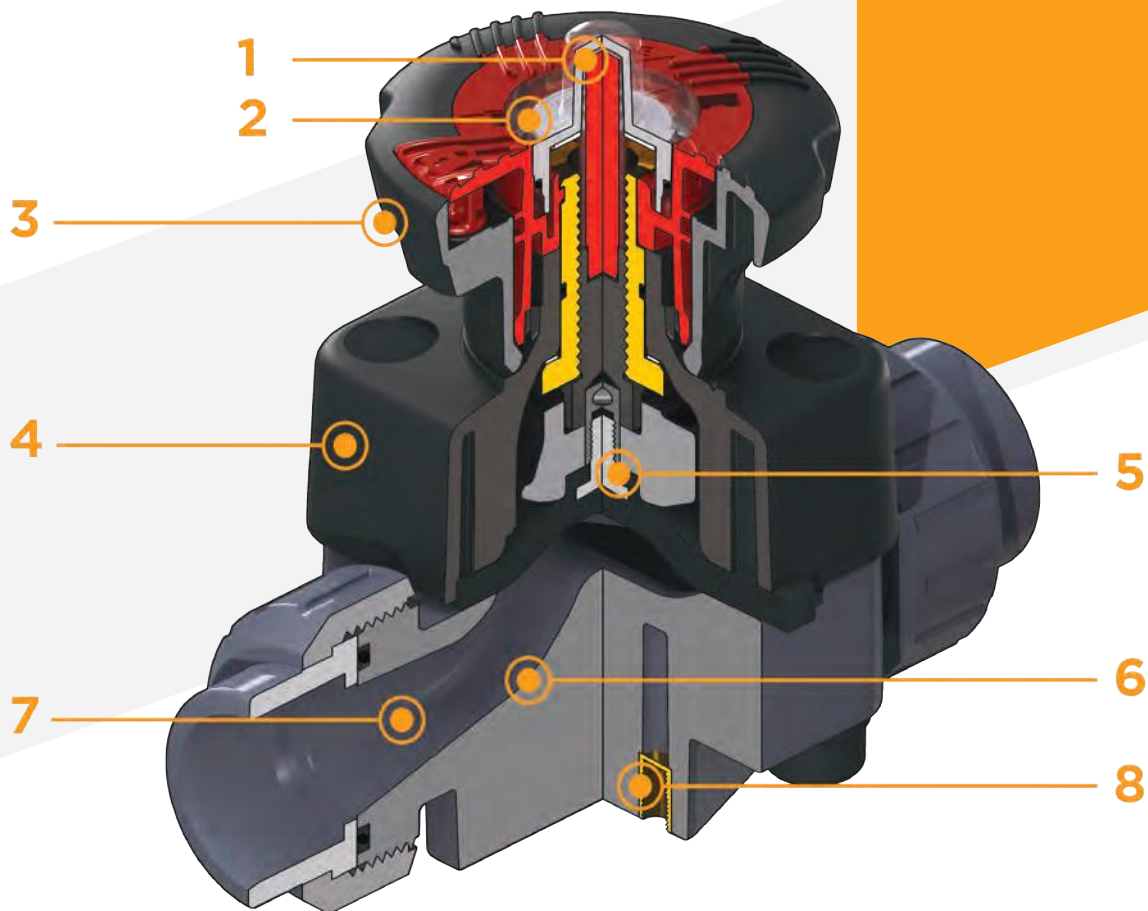


## DIALOCK® 2-WAY DIAPHRAGM VALVE

- 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

<b>Construction</b>	Diaphragm valve with maximized flow rate and DIALOCK® lockable handwheel
<b>Size range</b>	DN 15 ÷ 65
<b>Nominal pressure</b>	PN 10 with water at 20° C
<b>Temperature range</b>	0 °C ÷ 100 °C
<b>Coupling standards</b>	<b>Welding:</b> EN ISO 15494. Can be coupled to pipes according to EN ISO 15494. <b>Thread:</b> ISO 228-1, DIN 2999. <b>Flanging system:</b> ISO 7005-1, EN ISO 1092-1, EN 15494, EN 558-1, DIN 2501, ANSI B.16.5 cl.150
<b>Reference standards</b>	<b>Construction criteria:</b> EN ISO 16138, EN ISO 15494 <b>Test methods and requirements:</b> ISO 9393 <b>Installation criteria:</b> DVS 2202-1, DVS 2207-11, DVS 2208-1, UNI 11318
<b>Valve material</b>	<b>Body:</b> PP-H <b>Bonnet and handwheel:</b> PP-GR <b>Position indicator cap:</b> PVC
<b>Seal material</b>	EPDM, FKM, PTFE
<b>Control options</b>	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)

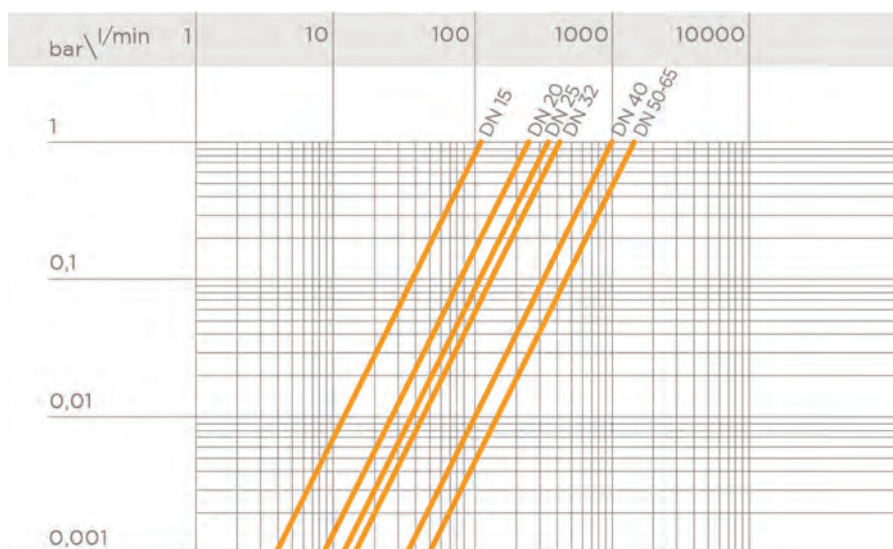
# TECHNICAL DATA

## 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<sub>v</sub>100 FLOW COEFFICIENT

The K<sub>v</sub>100 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 K<sub>v</sub>100 values shown in the table are calculated with the valve completely open.

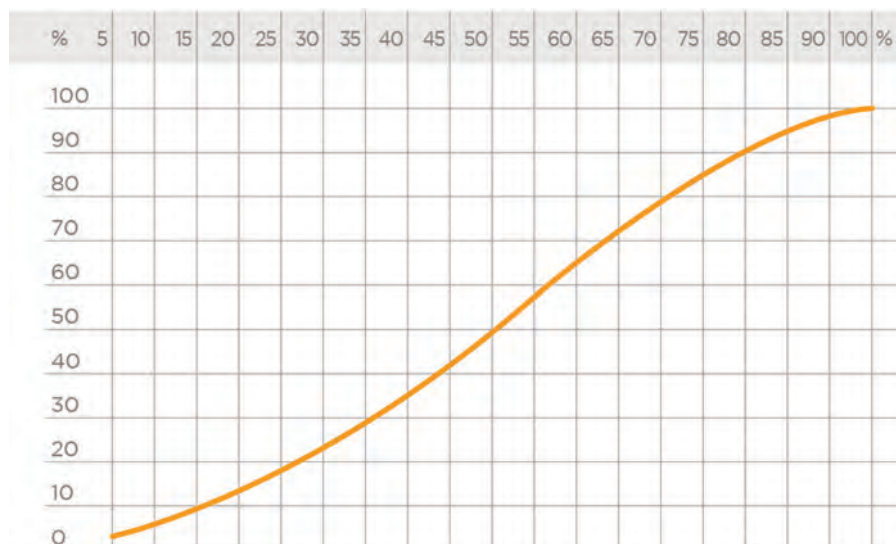
DN	15	20	25	32	40	50	65
K <sub>v</sub> 100 l/min	112	261	445	550	1087	1648	1600

## RELATIVE FLOW COEFFICIENT GRAPH

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

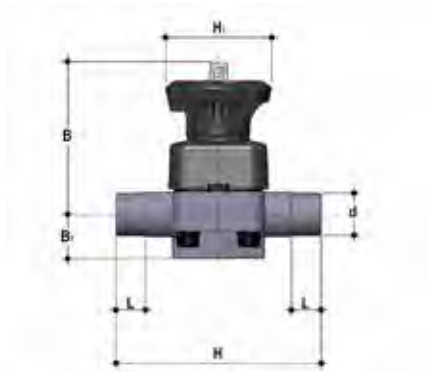
Horizontal axis: Opening percentage of the valve

Vertical axis: Relative flow coefficient





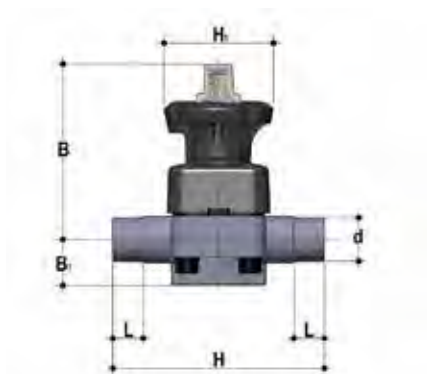
# DIMENSIONS



## DKDM

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

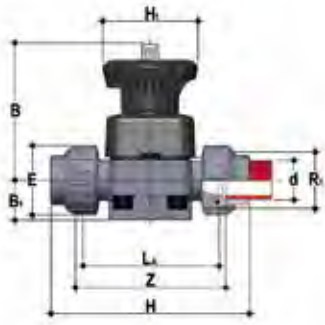
d	DN	PN	B	B <sub>1</sub>	H	H <sub>1</sub>	L	g	EPDM code	FKM code	PTFE code
20	15	10	102	25	124	80	16	430	DKDM020E	DKDM020F	DKDM020P
25	20	10	105	30	144	80	19	445	DKDM025E	DKDM025F	DKDM025P
32	25	10	114	33	154	80	22	620	DKDM032E	DKDM032F	DKDM032P
40	32	10	119	30	174	80	26	650	DKDM040E	DKDM040F	DKDM040P
50	40	10	149	35	194	120	31	1380	DKDM050E	DKDM050F	DKDM050P
63	50	10	172	46	224	120	38	2136	DKDM063E	DKDM063F	DKDM063P
75	65	10	172	46	284	120	44	2225	DKDM075E	DKDM075F	DKDM075P



## DKLDM

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

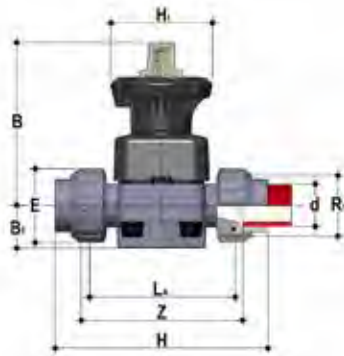
d	DN	PN	B	B <sub>1</sub>	H	H <sub>1</sub>	L	Lg	EPDM code	FKM code	PTFE code
20	15	10	115	25	124	80	16	460	DKLDM020E	DKLDM020F	DKLDM020P
25	20	10	118	30	144	80	19	475	DKLDM025E	DKLDM025F	DKLDM025P
32	25	10	127	33	154	80	22	650	DKLDM032E	DKLDM032F	DKLDM032P
40	32	10	132	30	174	80	26	680	DKLDM040E	DKLDM040F	DKLDM040P
50	40	10	175	35	194	120	31	1440	DKLDM050E	DKLDM050F	DKLDM050P
63	50	10	200	46	224	120	38	2196	DKLDM063E	DKLDM063F	DKLDM063P
75	65	10	200	46	284	120	44	2285	DKLDM075E	DKLDM075F	DKLDM075P



## DKUIM

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

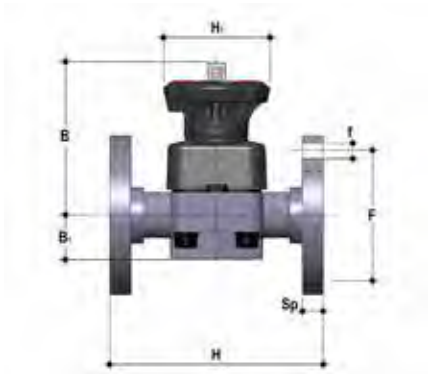
d	DN	PN	B	B <sub>1</sub>	E	H	H <sub>1</sub>	La	R <sub>1</sub>	Z	g	EPDM code	FKM code	PTFE code
20	15	10	102	25	41	129	80	90	1"	100	457	DKUIM020E	DKUIM020F	DKUIM020P
25	20	10	105	30	50	154	80	108	1 1/4"	116	500	DKUIM025E	DKUIM025F	DKUIM025P
32	25	10	114	33	58	168	80	116	1 1/2"	124	695	DKUIM032E	DKUIM032F	DKUIM032P
40	32	10	119	30	72	192	80	134	2"	140	781	DKUIM040E	DKUIM040F	DKUIM040P
50	40	10	149	35	79	222	120	154	2 1/4"	160	1557	DKUIM050E	DKUIM050F	DKUIM050P
63	50	10	172	46	98	266	120	184	2 3/4"	190	2293	DKUIM063E	DKUIM063F	DKUIM063P



## DKLUIM

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

d	DN	PN	B	B <sub>1</sub>	E	H	H <sub>1</sub>	La	R <sub>1</sub>	Z	g	EPDM code	FKM code	PTFE code
20	15	10	115	25	41	129	80	90	1"	100	487	DKLUIM020E	DKLUIM020F	DKLUIM020P
25	20	10	118	30	50	154	80	108	1 1/4"	116	530	DKLUIM025E	DKLUIM025F	DKLUIM025P
32	25	10	127	33	58	168	80	116	1 1/2"	124	725	DKLUIM032E	DKLUIM032F	DKLUIM032P
40	32	10	132	30	72	192	80	134	2"	140	811	DKLUIM040E	DKLUIM040F	DKLUIM040P
50	40	10	175	35	79	222	120	154	2 1/4"	160	1617	DKLUIM050E	DKLUIM050F	DKLUIM050P
63	50	10	200	46	98	266	120	184	2 3/4"	190	2353	DKLUIM063E	DKLUIM063F	DKLUIM063P

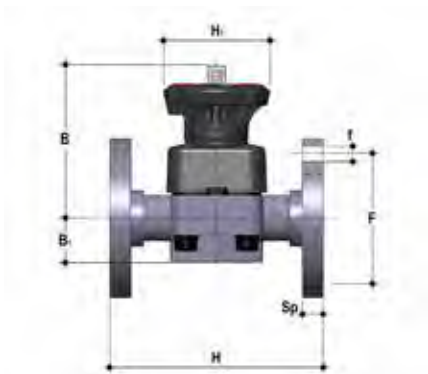


## DKOM

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

d	DN	PN	B	B <sub>1</sub>	F	f	H	H <sub>1</sub>	Sp	U	g	EPDM code	FKM code	PTFE code
20	15	10	102	25	65	14	130	80	13,5	4	817	DKOM020E	DKOM020F	DKOM020P
25	20	10	105	30	75	14	150	80	13,5	4	850	DKOM025E	DKOM025F	DKOM025P
32	25	10	114	33	85	14	160	80	13,5	4	892	DKOM032E	DKOM032F	DKOM032P
40	32	10	119	30	100	18	180	80	14	4	1005	DKOM040E	DKOM040F	DKOM040P
50	40	10	149	35	110	18	200	120	16	4	1771	DKOM050E	DKOM050F	DKOM050P
63	50	10	172	46	125	18	230	120	16	4	2453	DKOM063E	DKOM063F	DKOM063P
75	65	10	172	46	145	18	290	120	21	4	2997	DKOM075E	DKOM075F	DKOM075P

DKLOM version available on request



## DKOAM

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

d	DN	PN	B	B <sub>1</sub>	F	f	H	H <sub>1</sub>	Sp	U	g	EPDM code	FKM code	PTFE code
1/2"	15	10	102	25	60.3	14	108	80	13,5	4	817	DKOAM012E	DKOAM012F	DKOAM012P
3/4"	20	10	105	30	70	15.7	120	80	13,5	4	850	DKOAM034E	DKOAM034F	DKOAM034P
1"	25	10	114	33	80	15.7	131	80	13,5	4	892	DKOAM100E	DKOAM100F	DKOAM100P
1" 1/4	32	10	119	30	89	15.7	162	80	14	4	1005	DKOAM114E	DKOAM114F	DKOAM114P
1" 1/2	40	10	149	35	99	15.7	180	120	16	4	1771	DKOAM112E	DKOAM112F	DKOAM112P
2"	50	10	172	46	121	19	210	120	16	4	2453	DKOAM200E	DKOAM200F	DKOAM200P
2" 1/2	65	10	172	46	140	19	250	120	21	4	2997	DKOAM212E	DKOAM212F	DKOAM212P

DKLOAM version available on request

For installation prior to october 2017 please contact Fip Technical Support