



## DK and DK/CP DN 15÷65

New diaphragm valves with maximised flow rate available in manual or pneumatically actuated versions. Manual versions are equipped with the innovative DIALOCK® lockable handwheel. Pneumatic versions may have piston or diaphragm actuators.

# DK DIALOCK® DN 15-65

The new diaphragm valve with maximised flow rate and innovative handwheel



## High visibility graduated

**optical position indicator** protected by transparent cap with seal O-Ring.

## Customisation plate

The customisation lets you **identify the valve on the system** according to specific needs.



## Optimised fluid dynamic design

**Substantially increased flow coefficient and reduced pressure drop** thanks to the new internal geometry of the body.

**Sensitive and precise adjustment** along the entire stroke of the shutter thanks to the greatly improved characteristic curve of the valve.



## Floating pin connection

between the control screw and diaphragm to prevent concentrated loads, **improve the seal and extend its lifetime.**



**Valve body** set up for the installation of an **identification tag.**



## Valve anchoring bracket

integrated in the body with **threaded metal inserts.**



**DIALOCK® System: innovative** handwheel with an **immediate and ergonomic operating locking device**, that allows it to be adjusted and locked in over **300 positions**.

#### **Waterproof design**

The special design and components of the handwheel make the **operating mechanism totally waterproof**, isolating all the internal metal parts from contact with external agents.



#### **Corrosion resistant**

The operating mechanism entirely in fibreglass reinforced PP (PP-GR) and the **absence of metal parts exposed to the external environment** make the valve suitable for chemically aggressive applications.



#### **PMDK multifunction plate**

With the PMDK mounting plate, **alignment of the valve axis** with the rest of the system becomes even easier. The plate also allows simple and **rapid anchoring of the valve to a wall**.



# ADJUSTMENT LINEARITY AND EFFICIENCY



## New maximised flow rate valve bodies

### Valve body

The new DK series has a valve body with an optimised internal fluid dynamic design that increases performance by up to 90% with respect to previous models.

The new internal geometry of the valve has, in fact, allowed its efficiency to be greatly improved, obtaining substantial increases in the flow coefficient values (Kv100) and a resulting reduction in pressure loss.

The degree of efficiency reached has also enabled the size and weight of the valve to be reduced.

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



### New DN65 body

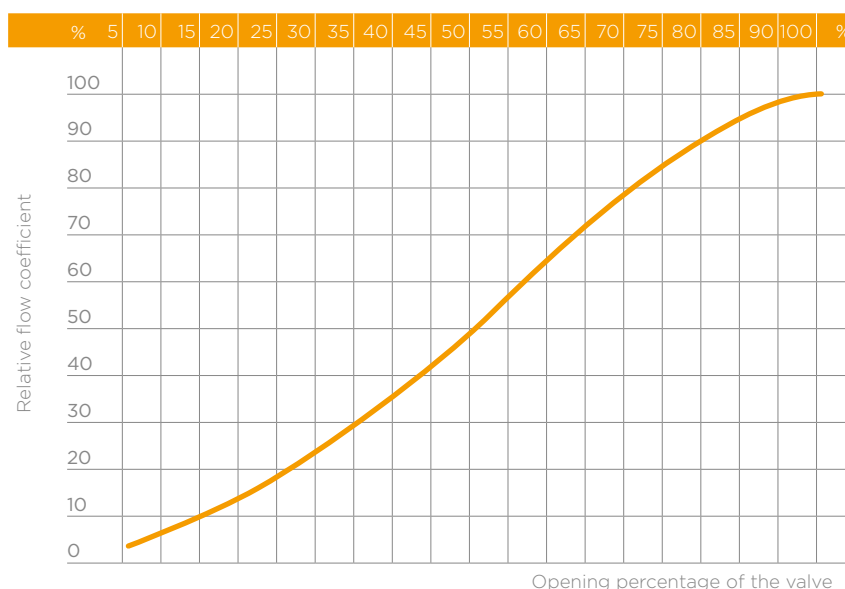
The performance increase deriving from the new fluid dynamic design has also allowed a new DN65 body to be realised identical to the DN50, improving the flow coefficient by over 20% while retaining the installation dimensions of the traditional DN65 but with a 60% plus reduction in weight.

### CDSA seal system

The new design of the internal profiles, free of dead areas, minimises the risk of a build-up of deposits and diaphragm contamination or damage through crystallisation, leaving the inside of the valve clean and hygienic.

## ADJUSTMENT LINEARITY

The work carried out on the internal profiles of the valve has also achieved the aim of greatly improving its characteristic curve, allowing extremely sensitive and precise adjustment along the entire length of the shutter stroke.



## SAFE AND PRACTICAL TO USE

### New Diallock® integrated handwheel locking system

#### Diallock® system

The innovative handwheel is equipped with a patented immediate and ergonomic locking device that allows it to be adjusted and locked in any position.

The valve can be locked by simply lifting the handwheel once the required position has been reached.

To release, simply push the handwheel downwards.



Handwheel and bonnet are in high mechanical strength and chemically resistant PP-GR, guaranteeing full protection by isolating all internal metal components from contact with external agents



To further safeguard the system against unwanted interference, it is also possible to fit a lock after having set the handwheel in the locked position.

# MAXIMUM AND MINIMUM FLOW RATE SETTINGS



## DKL series with travel stop and stroke limiter integrated in the handwheel

The DKL valve, a limited version of the DK diaphragm valve, is equipped with an innovative handwheel stroke control system which allows the maximum and minimum flow rates of the valve to be changed and prevent excessive pressure on the diaphragm during closing.

The system allows the valve stroke to be modified using the two independent adjusting screws, which determine the mechanical limits of the valve during opening and closing.



### Travel stop adjustment

To set the lock to the minimum flow rate or closed position, rotate the handwheel until the required position is reached and then lock the set position by tightening nut (A) and locknut (B).



### Stroke limiter adjustment

To set the lock to the maximum flow rate, rotate the handwheel until the required flow is reached and then lock the set position by rotating knob (C) anticlockwise until it reaches the stop.

## INSTANTANEOUS CHECK AND ADJUSTMENT

### Graduated optical position indicator

An immediate indication of the opening percentage of the valve is provided by the high visibility graduated optical position indicator, protected by a transparent cap with seal O-Ring.

The graduated scale of the indicator has 4 valve opening percentages: 25, 50, 75, 100%.

Thanks to the adjustment linearity of the valve, the flow rate can be regulated intuitively by simply glancing at the indicator.



## UNIQUE ID FOR EACH FUNCTION

### Integrated customisation plate

A white PVC customisation plate is housed in the transparent protection cap, which can be removed and, once overturned, used for indicating identification serial numbers or service indications on the valves such as, for example, the valve function in the system, the conveyed fluid and specific information for customer service, such as the customer name or installation date or location.

The waterproof transparent protection cap with seal O-Ring protect the customisation plate against deterioration.



## PRACTICAL INSTALLATION SOLUTIONS

### PMDK multifunction plate

DK valves are equipped with an integrated anchoring bracket with threaded metal inserts that allow direct fixing of the valve body without the need for additional components. This bracket allows the DK to be fitted with the multifunction PMDK plate required for simple and rapid valve mounting on a panel or wall. With the PMDK plate, it is also possible to align the axis of the valve with the FIP pipe clips.

The PMDK mounting plate is supplied as an accessory.



# ACTUATED DK DN 15-65

A full range of pneumatically actuated versions with piston and diaphragm actuators

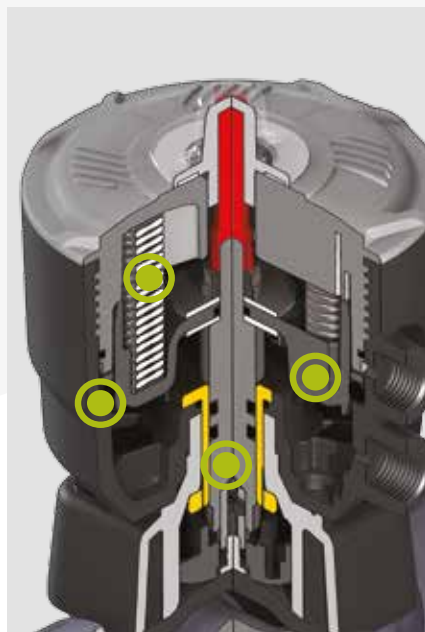
High visibility optical position indicator protected by a transparent cap with seal O-Ring.



## DKP/CP DN 25-65

Pneumatically actuated diaphragm valve, single-acting (**NC-NO**) or double-acting (**DA**) with **optimized flow rate body and piston actuator in IXEF**, compact, ideal for applications requiring a high operating frequency and a long valve lifetime.

The DKP/CP is available in PVC-U and PP-H versions.



## Key features of the new actuator

6 independent cartridge springs arranged radially to uniformly distribute the load on the piston.

### Dual function main gasket.

**Piston seal:** the gasket does not move but sits securely on the actuator cylinder instead of the piston.

**External seal:** The gasket positioned above the threaded joint between the bonnet and cylinder ensures that the coupling is not stressed by the pressure inside the actuator.

## Piston in high strength IXEF

The high quality finish of the external surface guarantees perfect slidability over the seal and ensures a long working life without any actuator maintenance.

**High strength stainless steel stem** with double seal O-Ring.

### Floating pin connection

between the actuator stem and diaphragm to prevent concentrated loads, improve the seal and extend its lifetime.



## DK/CP DN 15-20

The new DK/CP is a pneumatically actuated diaphragm valve **with maximised flow rate body** and a robust and compact **piston actuator** in fibreglass reinforced PP (**PP-GR**), available in either a single-acting (**NC-NO**) or double-acting (**DA**) version. The construction characteristics of the DK/CP make it the **ideal solution** for applications requiring a **high operating frequency** and a **long lifetime** under **aggressive service conditions** and in **chemically aggressive environments**. The DK/CP is available in PVC-U, PP-H, PVC-C, PVDF versions.

## DKM/CP DN 25-65

Pneumatically actuated diaphragm valve, single-acting (**NC-NO**) or double-acting (**DA**) with **maximised flow rate body and diaphragm actuator in high strength PP-GR**, suitable for heavy duty applications and chemically aggressive environments. The DKM/CP is available in PVC-U, PP-H, PVC-C, PVDF versions.



When installing in confined spaces, the connections can be oriented in line with the piping.



## Accessories

The DK actuated valve range can be equipped with various accessories, such as: pilot solenoid valve, positioners and different position detection sensors.



# THE NEW DK SERIES

## TECHNICAL DATA AND RANGE

Series		DK				DKL			
General Information	Control options	Dialock® handwheel				Dialock® handwheel with stroke limiter			
	Range *with unions up to DN50	DN 15-65*				DN 15-65*			
	Nominal pressure	PN10				PN10			
	Actuator functions	-				-			
Body Material		PVC-U	PVC-C	PP-H	PVDF	PVC-U	PVC-C	PP-H	PVDF
Coupling standards	Male ISO	■	■	■	■	■	■	■	■
	Female ISO union	■	■	■	■	■	■	■	■
	BSP threaded union	■	■	-	-	■	■	-	-
	NPT threaded union	■	■	-	-	■	■	-	-
	ASTM union	■	■	-	-	■	■	-	-
	BS union	■	-	-	-	■	-	-	-
	JIS union	■	-	-	-	■	-	-	-
	BW long union	-	-	■	■	-	-	■	■
	BW short union	-	-	■	-	-	-	■	-
	BW PE long union	■	■	■	-	■	■	■	-
	Flanged ISO/DIN	■	■	■	■	■	■	■	■
	Flanged ANSI	■	■	■	■	■	■	■	■
Diaphragm material	EPDM	■	■	■	■	■	■	■	■
	PTFE	■	■	■	■	■	■	■	■
	FPM	■	■	■	■	■	■	■	■
	NBR	■	■	■	■	■	■	■	■
Reference standards	Construction criteria:	EN ISO 16138, EN ISO 1452, EN ISO 15493, EN ISO 15494, EN ISO 10931							
	Test methods and requirements:	ISO 9393							
	Installation criteria:	DVS 2204, DVS 2221, DVS 2202-1, DVS 2201-1, DVS 2207-11, DVS 2207-15, DVS 2208-1, UNI 11242, UNI 11318							

■ Versions available from catalogue

■ Versions available on request



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