

DIASTAR Type 025



Product description

The DIASTAR 025 has the highest closing forces in the portfolio of pneumatically actuated diaphragm valves and is available with the functions FC (fail safe to close), FO (fail safe to open) and DA (double-acting).

The valve is thus used wherever high pipe pressures of up to 10 bar need to be controlled on on both sides.

Function

Pneumatic diaphragm valves from GF Piping Systems are used for regulating, as well as closing, controlling and monitoring volume flows. Especially when transporting contaminated, aggressive or abrasive media, this type of valve has decisive advantages thanks to its simple function and optimized construction. Only the valve body and diaphragm come into contact with the medium.

Applications

- Control applications
- Controlling pure and ultrapure media
- Water treatment
- Chemical dosing
- Applications with higher viscosity and solids content

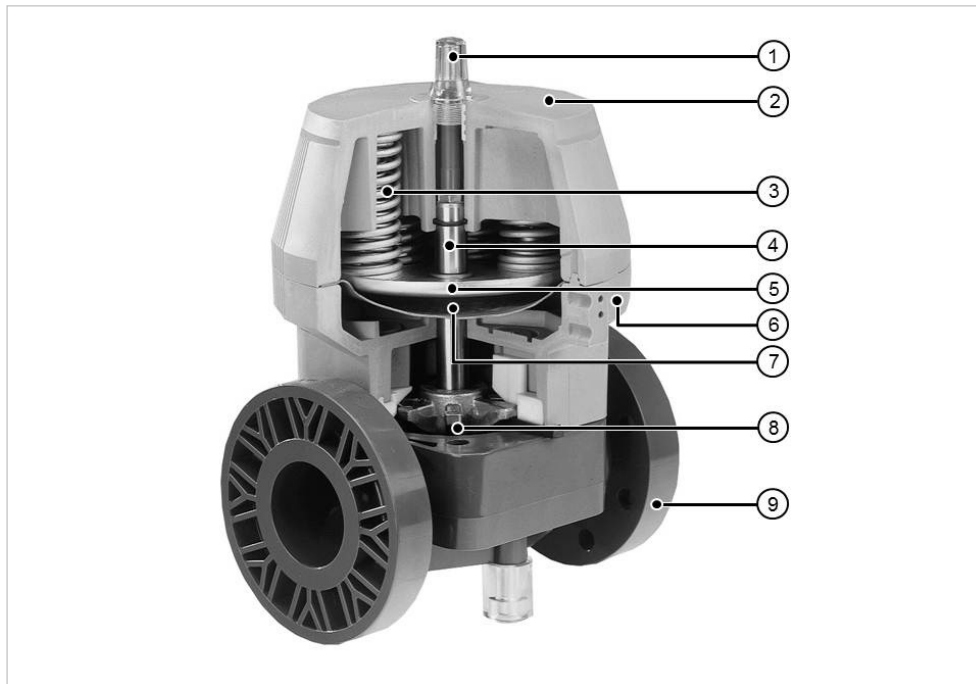
Benefits/features

- Safe transport of aggressive media
- Adapting closing forces to medium pressure through reduction of spring assemblies
- High corrosion resistance
- Maximum system safety
- Safe maintenance and minimal downtime
- Wide range of materials available
- Broad spectrum of applications
- Quick retrofitting through simple integration of accessories

Possible flow media

Contaminated, solid or ultrapure media.

Technical data



- ① Optical position indicator
- ② All-plastic housing, PP-GF
- ③ Pre-tensioned springs
- ④ Lifting spindle group, rust-free steel
- ⑤ Diaphragm plate
- ⑥ NAMUR interface for control air
- ⑦ Control diaphragms
- ⑧ Pressure piece
- ⑨ Valve body

Specification			
Dimensions	d75/DN65 – d160/DN150, 2 ½" – 6		
Pressure levels	PN10, from DN100: PN6		
Valve body materials	PVC-U, PVC-C, ABS, PP-H, PVDF, PVDF-HP		
Housing materials	PPGF-30 (polypropylene, 30 % fiberglass-reinforced)		
Piston	PPGF-30 white (polypropylene, 30 % fiberglass-reinforced)		
Pressure spindle	Stainless steel 1.4104		
Metal inserts	Stainless steel 1.4305		
Gaskets	NBR		
Springs	Galvanized steel		
Gasket/diaphragm materials	EPDM, PTFE/EPDM, FKM, FFKM, CSM, NBR		
Functions	FC, FO, DA		
Connecting thread control air	G ¼"		
Allowable control pressure	Max. 6 bar for FC mode Max. 5 bar for FO, DA mode		
Control volume for pneumatic actuator	FC	FO	DA
	d75/DN65	d110/DN100	d110/DN100, d75/DN65
	d90/DN80	d160/DN150	d160/DN 150 d90/DN80
	2.2 dm ³	3.8 dm ³	4.4 dm ³ 7.6 dm ³ 4.4dm ³ 2.2 dm ³ 7.6 dm ³ 3.8 dm ³
Ambient temperature	-10 °C to 50 °C		
Approvals	ACS, FDA, DIBt, TA Luft, NAMSA		

Pressure-temperature diagrams

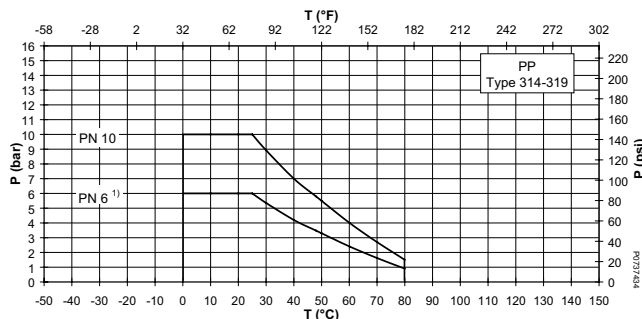
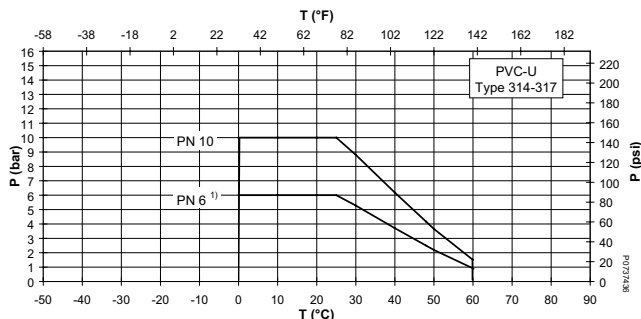
The following pressure-temperature diagrams are based on a lifetime of 25 years and water or similar media.

T Temperature (°C, °F)

P Permissible pressure (bar, psi)

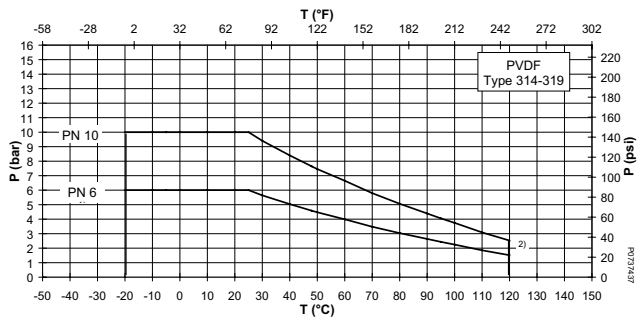
PVC-U

PP-H

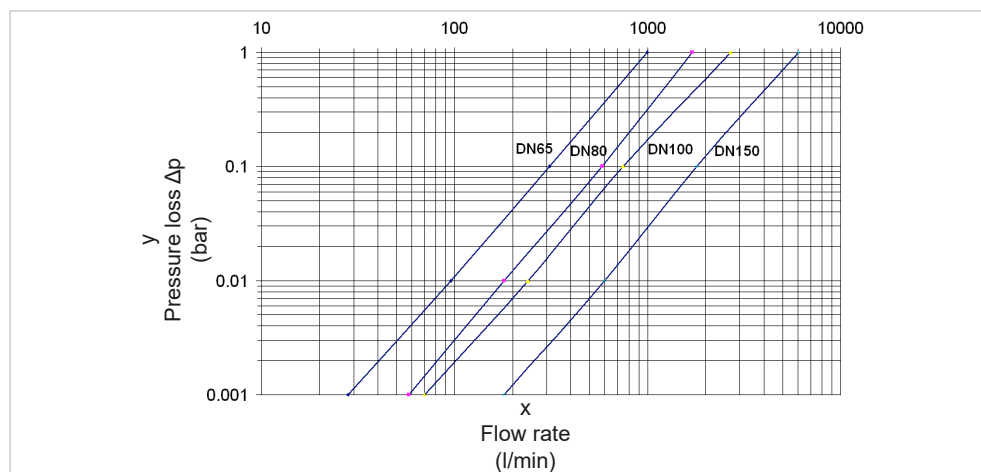


- 1) DIASTAR 025 DN100 and DN150
- 2) Depending on the connection type and actuator, the nominal pressure is reduced to PN10
- 3) Depending on the connection type and actuator, the nominal pressure is reduced to PN6

PVDF

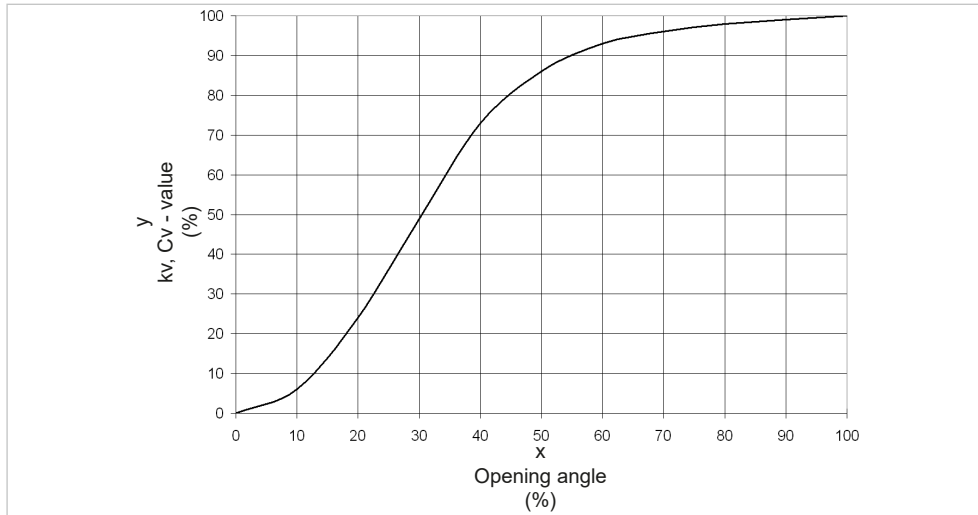


Pressure losses



- x Flow rate (l/min, US gal/min)
- y Pressure loss Δp (bar, psi)

Flow characteristics



x Open angle (%)
y Kv, Cv value (%)

Pressure ratings

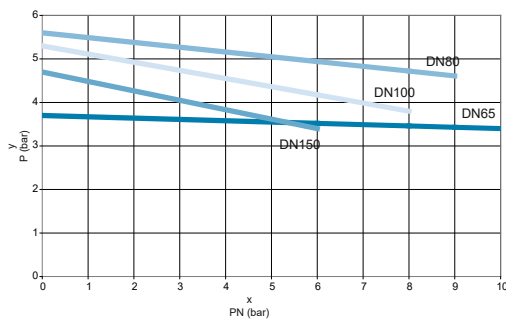
DN	Pressure rating [bar]	Max. control pressure [bar]		
		FC	FC	FO/DA
		EPDM ¹⁾	PTFE ¹⁾	EPDM
75DN65	10	3.8	5.8	3.0 ²⁾
90DN80	10	5.6	5.3	4.0 ²⁾
110DN100	6	5.3	5.3	4.0 ³⁾
160DN150	6	4.8	4.8	5.0 ³⁾

Medium pressure → One sided applied

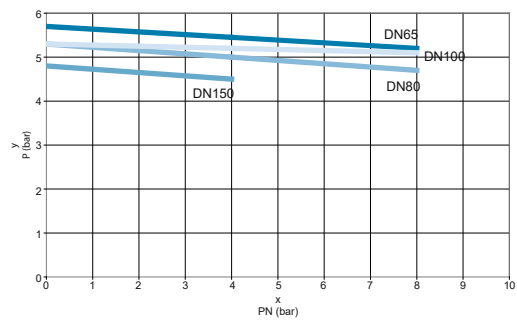
- ¹⁾ At 0 bar medium pressure
- ²⁾ At 10 bar medium pressure
- ³⁾ At 6 bar medium pressure

Control pressure diagrams for actuator

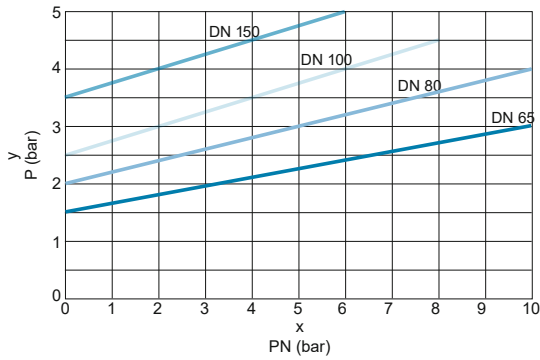
Fail safe to close (FC) with EPDM diaphragm



Fail safe to close (FC) with PTFE diaphragm

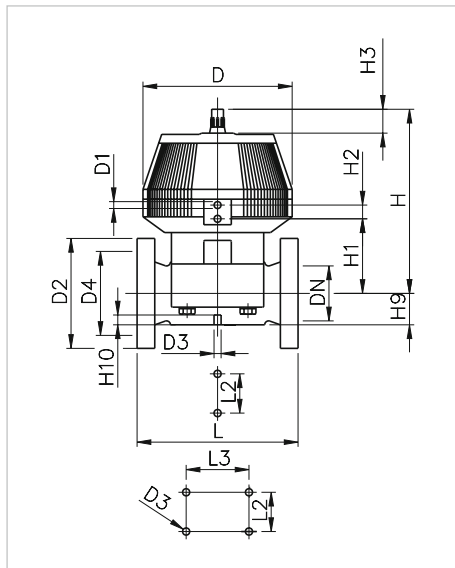


Fall safe to open (FO/DA)



Dimensions

DIASTAR 025 DN65 - DN150



Dim. (mm)	DN (mm)	Inch (inch)	D (mm)	D1 (G) (mm)	D2 (mm)	D3 (mm)	D4 (mm)	L (mm)	L2 (mm)	L3 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H9 (mm)	H10 (inch)	Stroke
75	65	2 1/2	280	1/4	185	M8	145	290	70		298	148	24	46	46	15	30
90	80	3	280	1/4	200	M12	160	310	120		302	150	24	46	57	15	35
110	100	4	335	1/4"	225	M12	180	350	120		409	176	24	46	69	20	40
160	150	6	335	1/4	285	M12	240	480	100	200	201	237	24	46	108	20	40

Weight

DN (mm)	PVC-U (kg)	PP-H (kg)	PVDF (kg)
65	13.6	13.7	14.2
80	17.4	16.0	18.7
100	24.7	22.8	26.5
150	35.0	33.4	38.2

Accessories

- Stroke limiter / emergency manual override
- Solenoid pilot Valve Type PV94, PV95, MNL532, PV2000
- Feedback – ER55 ER52 and ER53
- Positioner – Type SPC
- Bus communication – AS interface



For further information on accessories, refer to the online product catalog at www.gfps.com

- Mobile apps and online tools to support configuration and calculation at www.gfps.com/tools



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01/2022-A

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