

Pneumatic actuator type PA11/ PA21



Product description

The pneumatic fully plastic actuators PA11 and PA21 from GF Piping Systems can be connected in various ways. They are available with or without stroke limiters in different designs. A position indicator is incorporated into the NAMUR interface, greatly simplifying the installation of accessories for the pneumatic actuators PA11 and PA21. Naturally, the flange interface also corresponds to the NAMUR standard. Third-party valves can be installed without problems.

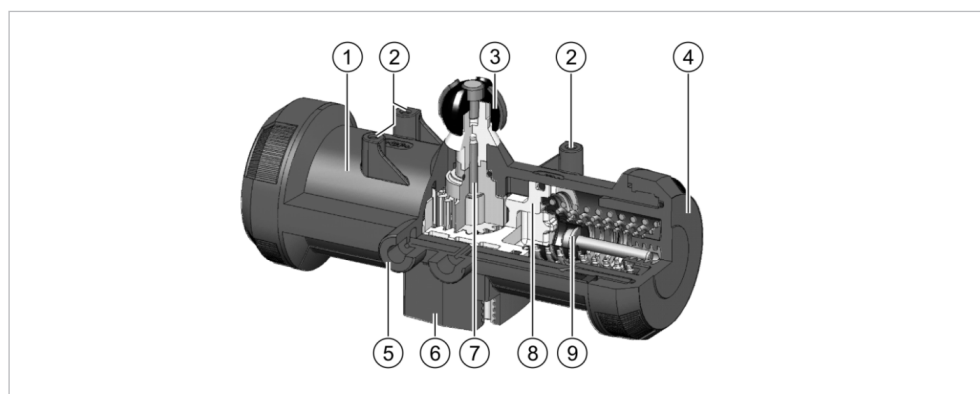
Applications

- Chemical process industry
- Water treatment
- Cooling

Benefits/features

- Robust PP-GF housing
- Full plastic actuator
- Position indicator with integrated NAMUR interface
- Multifunction module with different limit switch designs is available as an option

Technical data



- ① Housing of PP-GF
- ② NAMUR accessory interface
- ③ Position indicator
- ④ Spring cover
- ⑤ Control air connection Rp1/8"
- ⑥ Interface F04/05 according to ISO 5211
- ⑦ Pinion shaft
- ⑧ Piston with rack
- ⑨ Spring assembly, pre-tensioned, not available for function DA

Specification					
Combinations	PA11	2-way ball valve types 546 Pro, d16/DN10 – d32/DN25			
	PA21	2-way ball valve types 546 Pro, d40/DN32 – d63/DN50			
	PA11	3-way ball valve types 543, d16/DN10 – d32/DN25			
	PA21	3-way ball valve types 543, d40/DN32 – d63/DN50			
Nominal torque M _{dn}	PA11	5 Nm (3.7 lb. ft.)			
	PA21	10 Nm (7.4 lb. ft.)			
Peak torque	PA11	10 Nm (7.4 lb. ft.)			
	PA21	20 Nm (15 lb. ft.)			
Actuator connection	G1/8"				
Mode of operation	Fail-safe to close (FC)				
	Fail-safe to open (FO)				
	Double-acting (DA)				
Cycle time	1 – 2 s, with throttle valve up to 5 s				
Control medium	Neutral, non-aggressive gases (Control with fluids on request)				
Air pressure according to ISO 8573-1	2 or 3 for -10 °C				
	3 or 4 bar for T > 0 °C				
Actuating principle	Rack and pinion				
Temperature control medium	Max. 40 °C				
Ambient temperature	-10 – +50 °C				
Permissible humidity	0 – 100 %				
Max. allowable control pressure	7 bar				
Position indicator	Optically integrated				
Housing material	PP GF for very good chemical resistance				
Connections	PA11	F04			
	PA21	F05			
Weight	0.75 kg – 1.445 kg				
Control volume in dm ³	PA11	DN 10	0.15	0.18 (open)	
		15			
	PA21	20	0.28	0.15 (closed)	
		25			
		32			0.35 (open)
		40			

Options

Pneumatic ball valves

Ball valves of types 230 – 235 are based on ball valve type 546 Pro d16/DN10 – d63/DN50 and pneumatic actuators PA11 (DN10 – DN25) and PA21 (DN32 – DN50).

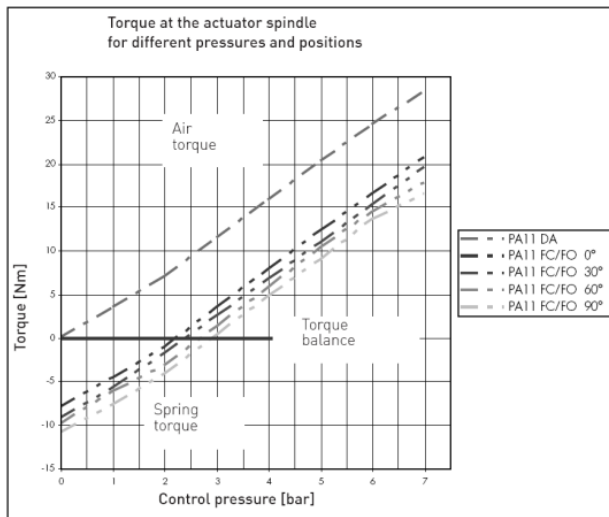
Ball valve, pneumatic	Actuator, pneumatic	Ball valve, hand-operated	Dimensions	Materials	Standards
Type 230	PA11/PA21	Type 546 Pro	DN10 – DN50	PVC-U, PVC-C, ABS	ISO/DIN
Type 231	PA11/PA21	Type 546 Pro	DN10 – DN50	PP-H	All standards
Type 232	PA11/PA21	Type 546 Pro	DN10 – DN50	PVDF	All standards
Type 233	PA11/PA21	Type 546 Pro	DN10 – DN50	PVC-U, PVC-C	ASTM/ANSI
Type 234	PA11/PA21	Type 546 Pro	DN10 – DN50	PVC-U, ABS	BS
Type 235	PA11/PA21	Type 546 Pro	DN10 – DN50	PVC-U, PVC-C, PP-H, PVDF	JIS

Ball valves of types 258 – 288 are based on ball valve type 543 d16/DN10 – d63/DN50 and pneumatic actuators PA11 and PA21. Type range 285 – 288 is designed as modular upgradeable 3-way ball valve for mixing and diverting applications which have special process requirements.

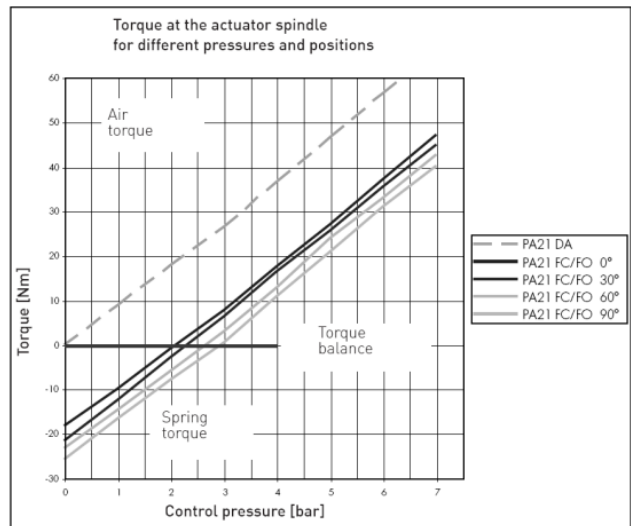
Ball valve, pneumatic	Actuator, pneumatic	Ball valve, hand-operated	Dimensions	Materials	Standards
Type 285	PA11/PA21	Type 543, horizontal	DN10 – DN50	PVC-U, PVC-C, ABS	All standards
Type 286	PA11/PA21	Type 543, horizontal	DN10 – DN50	PP-H	DIN/ISO, ASTM
Type 287	PA11/PA21	Type 543, horizontal	DN10 – DN50	PVDF	DIN/ISO, ASTM
Type 288	PA11/PA21	Type 543, vertical	DN10 – DN50	PVC-U, ABS	DIN/ISO, JIS

Torque characteristics

Type PA11

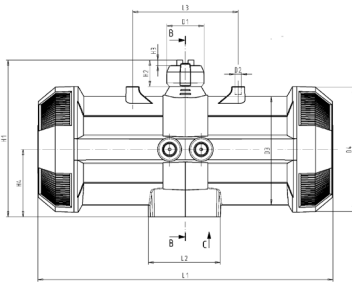


Type PA21

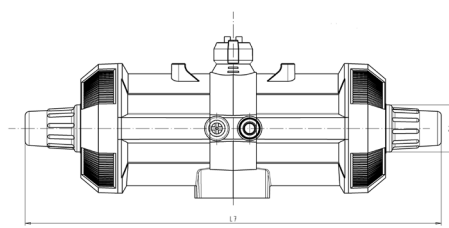


Dimensions

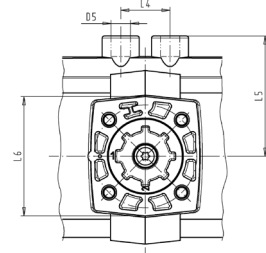
PA11 and PA21 without stroke limiter



PA11/21 with stroke limiter

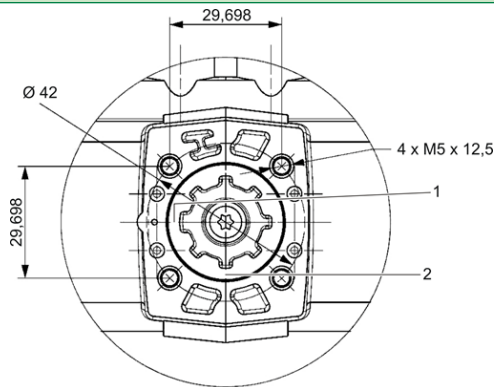


PA11 and PA21 – F image

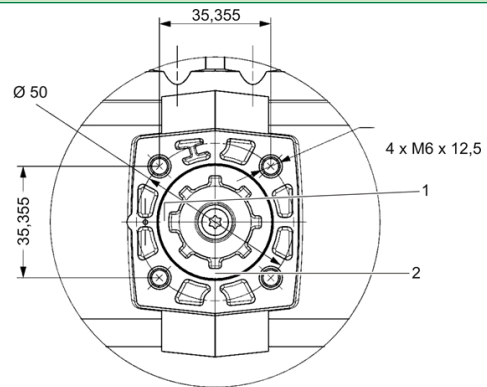


	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	D5 (mm)	D6 (mm)
PA11	194	44	80	24	48	54	275	97	20	4	40	29	M5	61	74	G $\frac{1}{8}$ "	35
PA21	224	55	80	24	58.5	58	305	119	20	4	51	29	M5	82	94	G $\frac{1}{8}$ "	35

Type PA11 – interface F04



Type PA21 – interface F05



Accessories

- 3/2-way solenoid valve PV94/95
- 3/2 – 5/2-way solenoid valve MNL532
- 4/2-way solenoid valve 5470
- NAMUR connection plate
- Pilot valve cluster PV2000
- Digital positioner DSR500-3
- Limit switch box for feedback
- AS interface ASVC 2300-11
- Emergency manual override

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

! Installation and maintenance must be performed according to the corresponding installation instructions. The installation manual is included with the product, see also the online product catalog at www.gfps.com.

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