



Quarter-turn Actuator BR 31 for use in low-temperature applications

Application:

Single or double-acting piston actuator for butterfly valves, ball valves and other final control elements with rotating closure members, especially for high process demands in chemical plants. The BR 31a Quarter-Turn Actuator is also suitable for continuous duty in low-temperature applications.

- Opening angle 90°
- Air supply up to 10 bar
- Temperatures -55 °C to +80 °C
Down to -60 °C permissible with low switching frequency

The pneumatic quarter-turn actuators are designed for modulating or on/off service.

The actuators have the following special features:

- Silicone seals
- Externally adjustable end stops (+5°/-15°)
- Wide adjustment range of the end stops (20°)
- Parallel or diagonal square drive
- Freely adjustable position indicator (in 45° steps)
- Mounting and modification without special tools
- Encapsulated spring assembly
- Power transmission using involute gearing
- Direction of rotation reversible without additional components
- Corrosion-resistant ALODUR coating with excellent results in Kesternich and salt spray tests
- Standardized mounting of additional equipment according to VDI/VDE 3845
- Possible attachments according to DIN ISO 5211

Versions:

Type SRP and DAP in the sizes 15 to 10,000

- **Type SRP**
quarter-turn actuator, single-acting with spring-return mechanism
- **Type DAP**
quarter-turn actuator, double-acting without spring-return mechanism

Technical data:

Refer to the Pfeiffer Data Sheet <TB 31a> for further technical data.



Fig. 1 – BR 31a Quarter-turn Actuator (with view of the end stop screws)

Fig. 2 – BR 31a Quarter-turn Actuator (with view of the NAMUR interface)

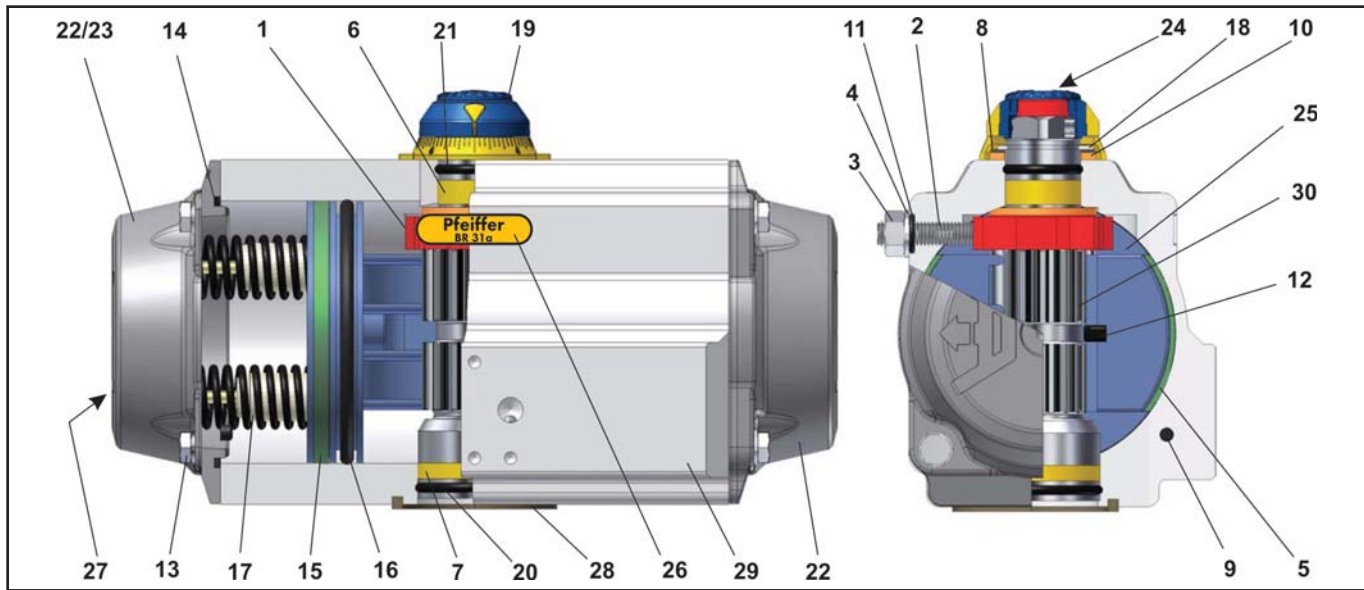


Fig. 3 – BR 31a Quarter-turn Actuator

Item	Qty.	Description	Material	Specification	Corrosion protection
1	1	Octi-cam (SRP/DAP 15 to SRP/DAP 150)	1.4301	UNI EN 10088-3	-
		Octi-cam (SRP/DAP 220 to SRP/DAP 10000)	Special alloy EN AW-6063	UNI EN 1563	NOC
2	2	End stop screw	A2-70	ISO 3506-1	-
3	2	Nut	A2-70	ISO 3506-2	-
4	2	Washer	1.4301	UNI EN 10088-2	-
5	2	Bearing (piston back)	PA46	Stanyl TW 300	-
6*	1	Bearing (pinion top) (SRP/DAP 15 to SRP/DAP 30)	PA46	Stanyl TW 300	-
		Bearing (pinion top) (SRP/DAP 60 to SRP/DAP 10000)	PPS+GF	-	-
7*	1	Bearing (pinion bottom) (SRP/DAP 15 to SRP/DAP 30)	PA46	Stanyl TW 300	-
		Bearing (pinion bottom) (SRP/DAP 60 to SRP/DAP 10000)	PPS + GF	-	-
8*	2	Thrust bearing (pinion)	PA46	Stanyl TW 300	-
9*	2	Plug	Silicone	NBR 70 SH.A	-
10	1	Thrust washer (pinion)	1.4301	UNI EN 10088-2	-
11*	2	O-ring (stop screw)	Special silicone	-	-
12	2	Piston guide	PA66 + GF	-	-
	8	Cap screw (SRP/DAP 15 to SRP/DAP 2000)	A2-70	ISO 3506-1	-
13	12	Cap screw (SRP/DAP 3000)	A2-70	ISO 3506-1	-
	16	Cap screw (SRP/DAP 5000 to SRP/DAP 10000)	A2-70	ISO 3506-1	-
14*	2	O-ring (end cap)	Special silicone	-	-
15*	2	Bearing (piston head)	POM	-	-
16*	2	O-ring (piston)	Special silicone	-	-
17	min. 5 max. 12	Spring (cartridge)	SiCr spring alloy steel	UNI EN 10270-2	Standard
18	1	Spring clip (pinion)	C75	UNI EN 10132-4	Standard
19	1	Position indicator	PA66 + GF	-	-
20*	1	O-ring (pinion bottom)	Special silicone	-	-
21*	1	O-ring (pinion top)	Special silicone	-	-
22	1	End cap left, right (SRP/DAP 15 to SRP/DAP 600)	EN AC-46000	UNI EN 1706	Standard
	2	End cap left, right (SRP/DAP 900 to SRP/DAP 10000)	EN AC-46000	UNI EN 1706	Standard
23	1	End cap left, right (SRP/DAP 15 to SRP/DAP 600)	EN AC-46000	UNI EN 1706	Standard
24	1	Cap screw (indicator)	A2-70	ISO 3506-1	-
25	2	Piston (SRP/DAP 15 to SRP/DAP 3000)	EN AC-46000	UNI EN 1706	Standard
		Piston (SRP/DAP 5000 to SRP/DAP 10000)	EN AC-46400	UNI EN 1706	Standard
26	1	Actuator label	Polyester/aluminum	RC 45	-
27	2	Label	Polyester/aluminum	RC 23	-
28	1	Spigot	Special alloy EN AW-6063	UNI EN 573/3	Standard
29	1	Body (SRP/DAP 15 to SRP/DAP 3000)	Special alloy EN AW-6063	UNI EN 573/3	Standard
		Body (SRP/DAP 5000 to SRP/DAP 10000)	Alloy EN AC-42100	UNI EN 1706	Standard
30	1	Drive shaft	1.4205 / 303	EN10088-3/STMA582	Standard

Table 1 – List of parts

* Recommended spare parts for maintenance