Advantages of the AT - Quarter turn actuators Series 31a

Fig.1 - The new design line of the AT-Quarter turn actuator series 31a

The Pfeiffer AT-Quarter turn actuator of series 31a has been improved through a range of technical advantages, as well as interessting new innovations, and developed with regards to the new amendments of ISO 5211

- **The adjustment for square-end diagonal or Parallel**

A flexible set-up can be achieved with the option of 45° settings to the square end of the drive shaft.

By rotating the shaft, the required adjustments can be achieved. For correct positioning, the adaptor for the position indicator (top end of shaft) is also designed with a square-end, in order for the positioning indicator to be fitted for 90° adjustments.

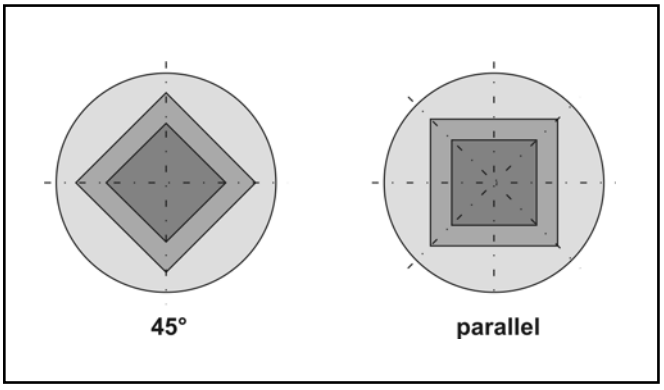

Fig. 2 - Adjustment of the square-end

- **The end stop position with a safe guard for incorrect handling**

The adjustment for both end positions can be set with external adjusting screws through a cam system.

The adjusting screws are mounted inside as blow out prood, to avoid injury when unscrewing the under pressure screws,

Before leaving our factory, the screws are marked with a sealing wax, in order to notice any visible displacement.

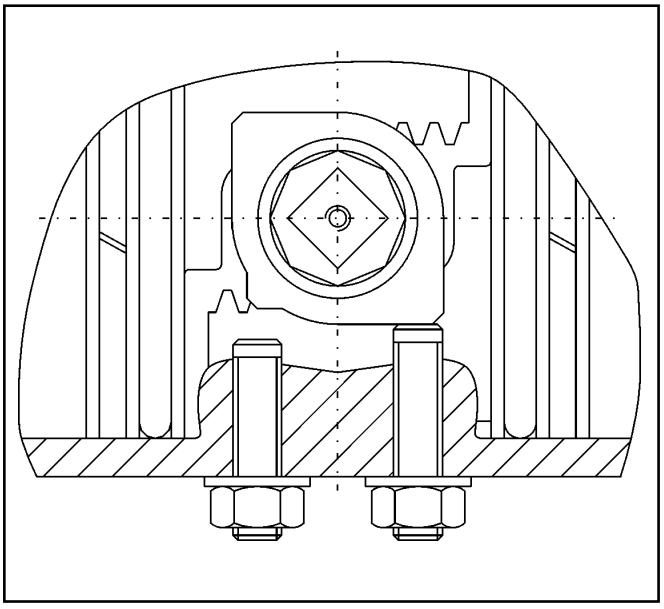

Fig. 3 - End stop position

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• The multi functional position indicator

The new position indicator is applicable for 45° 90° positions. The use of inserts in the position indicator are used for optical indication. These can be inserted variabley.

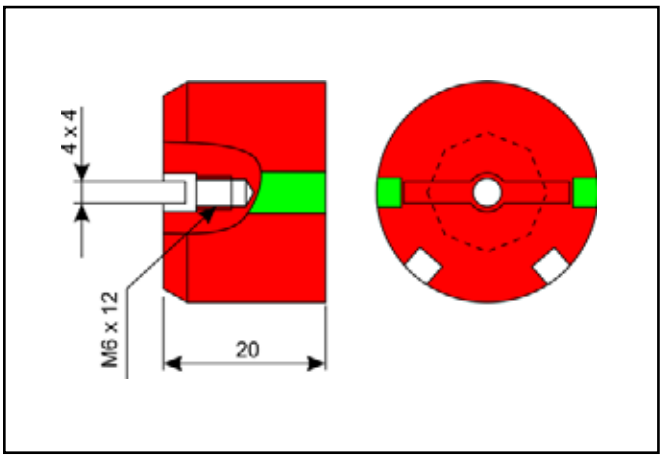

Fig. 4 - Position indicator

• Direct mounting

By exchanging the standard inserts with metal inserts, the multi functional position indicator is quick and easily prepared for open mounting.

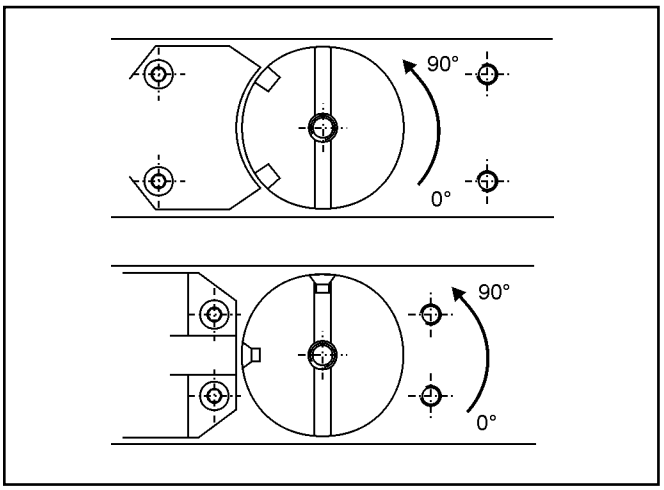

Fig. 5 - Multi functional position indicator

• Assembly of accessories

The position indicator has a VDI/VDE- interface. This means, that nearly every commercial available accessory can be fitted without problem.

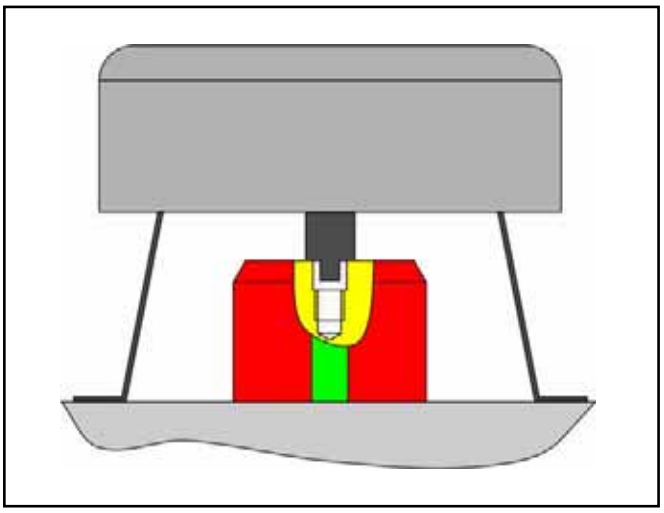

Fig. 6 - Mounting

• Alternative metal puck

In order for the use and application by high temperatures and special accessory parts easier to insert, a position indicator in stainless steel is available.
This is fixed on the axis with clamping screws.

• Technical details

The tooth profile, and therefore the direction for transmission of force through the use of the gear rod princible, has been consequently optimised with the use of an evolute gear.

A further technical implementation, is the reinforcement of the shaft diameter and the bearing seat. This enables a much higher force load for the new developed bodies.

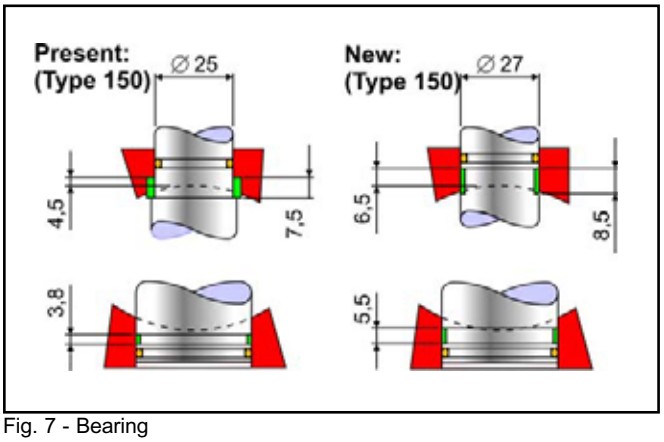

Fig. 7 - Bearing

- **The advantages of the new series 31a**

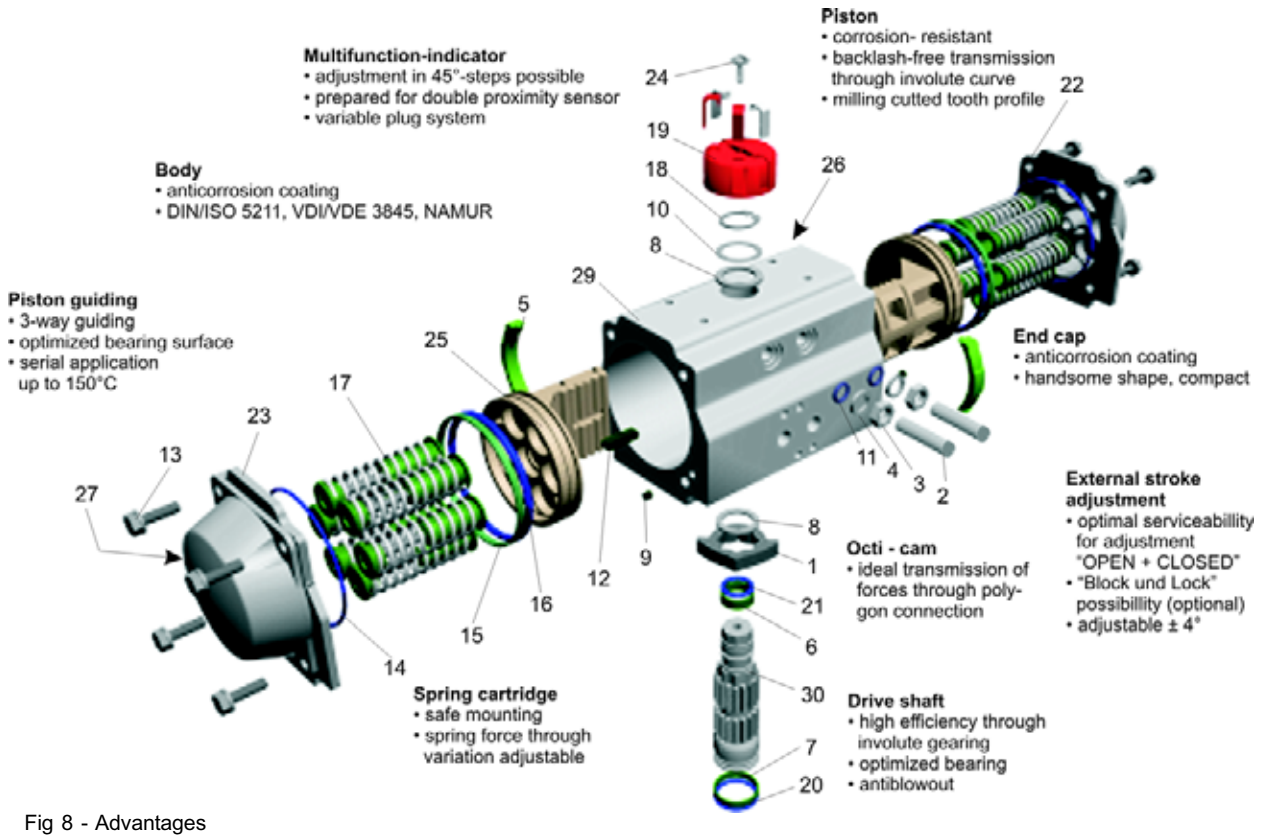

Fig 8 - Advantages

Pos.	Quantity	Description
1	1	Cam (Stop arrangement)
2	2	Stop cap screw
3	2	Nut
4	2	Washer
5	2	Piston guide jaws
6	1	Shaft bearing (top)
7	1	Shaft bearing (bottom)
8	2	Thrust bearing
9	2	Air connection
10	1	Support disk
11	2	Sealing ring (Adjusting screw)
12	2	Support washer
13	8 / 12 / 16	Cap screws
14	2	Cap sealing
15	2	Piston guide band

Pos.	Quantity	Description
16	2	Piston sealing
17	min. 4 / max. 12	Spring cartridge
18	1	Safety ring
19	1	Position indicator
20	1	Shaft sealing (bottom)
21	1	Shaft sealing (top)
22	1	Cap (right)
23	1	Cap (left)
24	1	Screw (Position indicator)
25	2	Piston
26	1	Type plate
27	2	Type plate (Cap)
28	1	Centring
29	1	Body
30	1	Drive shaft

Table 1 - Parts list

- **The design range of the new series 31a**

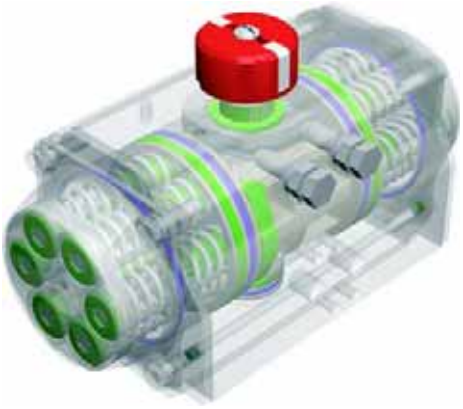

Fig 9 - AT-Quarter turn actuator series 31a, type SRP

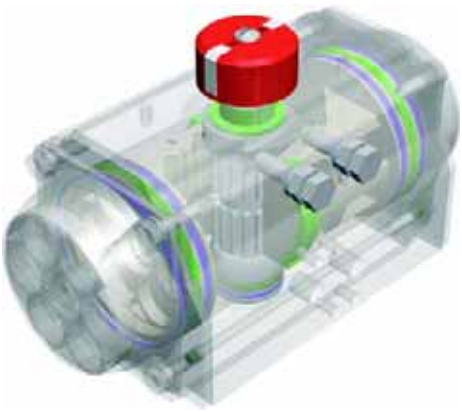

Fig. 11 - AT-Quarter turn actuator series 31a, type DAP

The single acting actuator

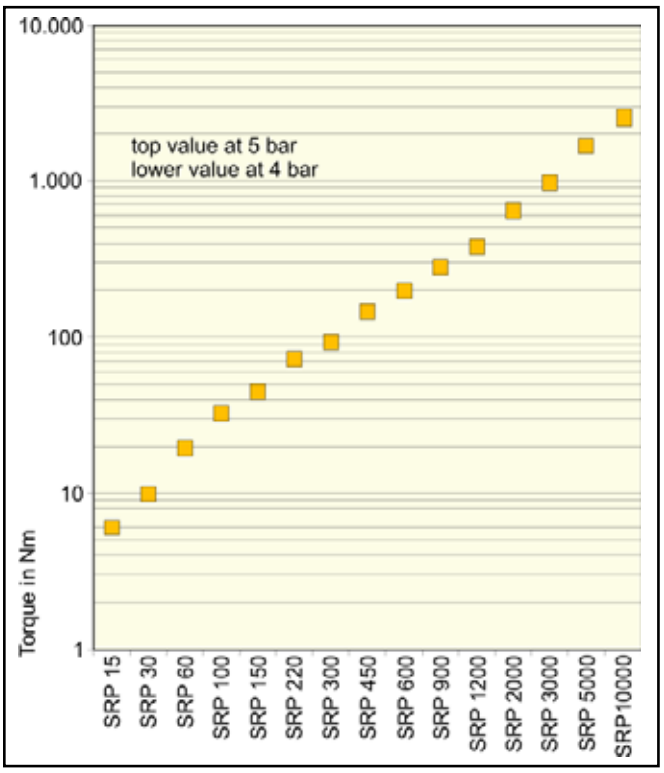

Fig. 10 - Conception range SRP 15 to SRP 10000

In addition to the simple adaptability of the single acting actuator to the required torque specifications in 0,5 bar - stages (air pressure),the range extension has enabled the smallest possible overlap to be achieved.
One of the biggest advantages is therefore the cost efficiency for the automation of a valve.

The double acting actuator

Because of the range conception, the smallest possible overlap for operational torques, for each actuator has been achieved.
In order to achieve this, the product range has been extended to 15 actuators. The double acting actuators cover a torque range from 7 to 10000 Nm (with 5,5 bar air pressure).
Therefore, for every application the optimal actuator can be recommended.

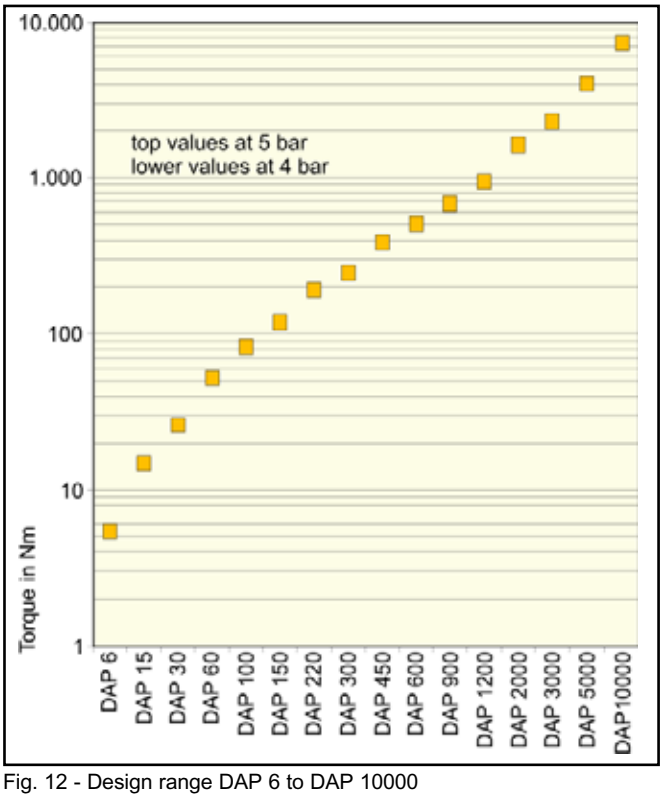

Fig. 12 - Design range DAP 6 to DAP 10000

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