

FELLBACH®

FELLBACH - 4th Generation pneumatic part turn actuators

Innovations for the future with new and intelligent highlights!



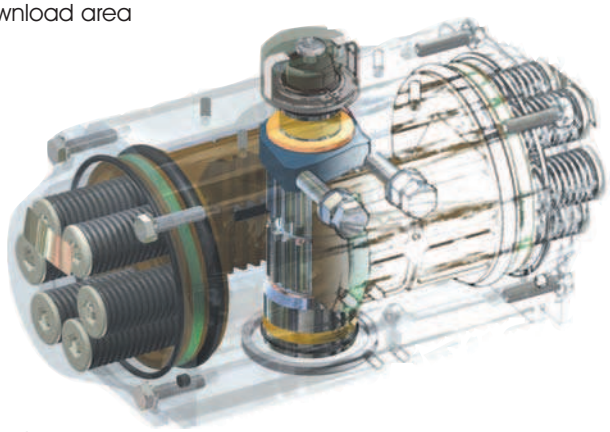
The development and production of the pneumatic actuators is done in accordance with the practicable standards, for example the ISO 5211, DIN 3337, VDI/VDE 3845 or the NF E29-409 under attention of the ISO 9001.



Our team in the sales department, the project planning and in the assemblage assures to you a perfect support and a high quality standard.
To garantee the daily deliveries we maintain the worldwide biggest stock with Air Torque part turn actuators.

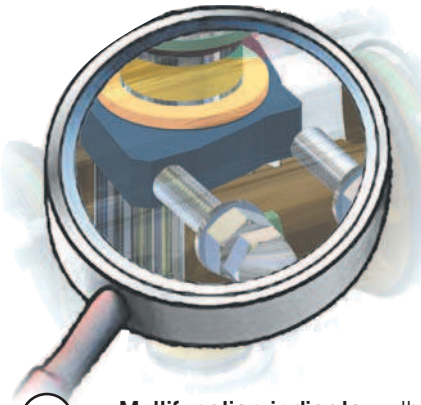


Here we provide beside the technical informations a large download area with documentation and drawings.



FELLBACH part turn actuators of the 4. Generation:
Interresting news and a lot of technical developments combine reliabled now with the requirements of the future and fulfil the newest completions of the ISO 5211 yet!

(1) **Body** - The Aluminium body with the appealing 'New Edge Design' is inside and outside complete coated with ALODUR.



Advantages
of the ALODUR coating:
extremely abrasion resistant,
low surface roughness, optimal resistance

(2) **External stroke adjustment** - a great saving of time is achieved, when mounting the actuator on the valve, through the service friendly adjustment of both end positions with the precise cam system. The rotation angle is easily changeable with a special cam, f.e. for 0°-15° and 75°-90°. Safety for emergency cases is possible through blocking of the actuator. This new feature can be used by simply changing the screw into a longer one.
All adjustments of the end positions are possible service friendly without disassembling.

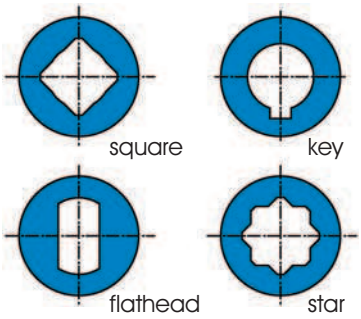


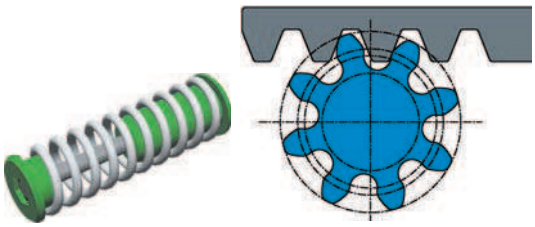
(3) **Multifunction indicator** - the position of the multifunction indicator is quick adapted for a parallel or 45° position of the square as well as for along or across to the pipe mounted actuator positions.
The direct mounting - through exchange of the yellow inserts the multifunction indicator is suitable as cam for the direct mounting (mechanic, inductive).

(4) **The connections** - ISO 5211, DIN 3337 (F03-F25), VDI/VDE 3845 (Size 0 to 4) ISO 1 (CNOMO) and NAMUR for flexible usability and exchangeability.

The driveshaft - square - flathead - key - star
A more flexible construction is obtained through the possibility of free adjustment of the driveshaft in 45°-steps (square on the bottom).
With a rotation of the drive shaft the requested position can be realized. For correct position indication the plug of the indicator (drive shaft top) is designed as an octagon, so the position indicator also can be mounted in 45°-steps.

Optional a flathead, key connection or a star is available (for the star the lower usable torque is to consider).



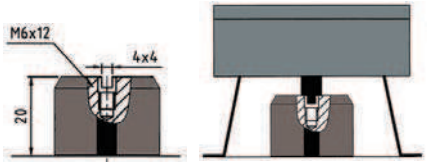


Technical details
The tooth profile, and so the way of force, for the used rack and pinion principle was optimized through the involute gearing.

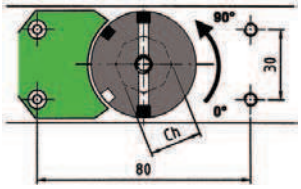
Additional it is possible to adjust the torque through the reliable spring cartridges, made with high quality spring steel, according to the requirements.

The new multifunction indicator for 4th Generation actuators (2. Line).

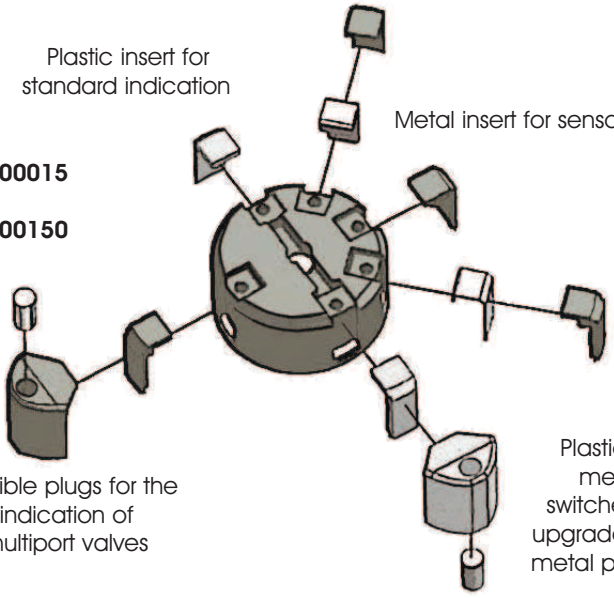
The multifunction indicator
The new indicator is suitable for 45° or 90° position (s. a.). A visual indication is realized through coloured inserts (white) in the (red) indicator. The inserts are variable to fit.
The indicator has a VDI/VDE-interface. So mostly every standard attachement can be mounted without problems.



The direct mounting
Through exchange of the standard inserts with metal inserts the multifunction indicator can be quick and easy changed for direct mounting.



With this new Multifunctionindicator nearly the most of the possibilities with common switches are easily and variable to mount. And all this with the standard cams !




Example for mechanical or IFM sensors


Example for proximity switches (P+F, TURCK etc...)


Example for multiport valve indication



Note: Indicators for the actuator sizes DR/SC00220 to DR/SC05000 Ø85 / Ø115

The Advantages of the 4th Generation

Multifunction-indicator
- adjustment in 45°-steps possible
- prepared for double proximity sensor
- variable plug system

Body
- anticorrosion coating A-B-C-D-E-P
- DIN/ISO 5211, VDI/VDE 3845, NAMUR
- New Edge design

Piston guiding
- 3-way guiding
- optimized bearing surface
- serial application up to 150 °C

Spring cartridge
- safe mounting
- spring force through variation adjustable

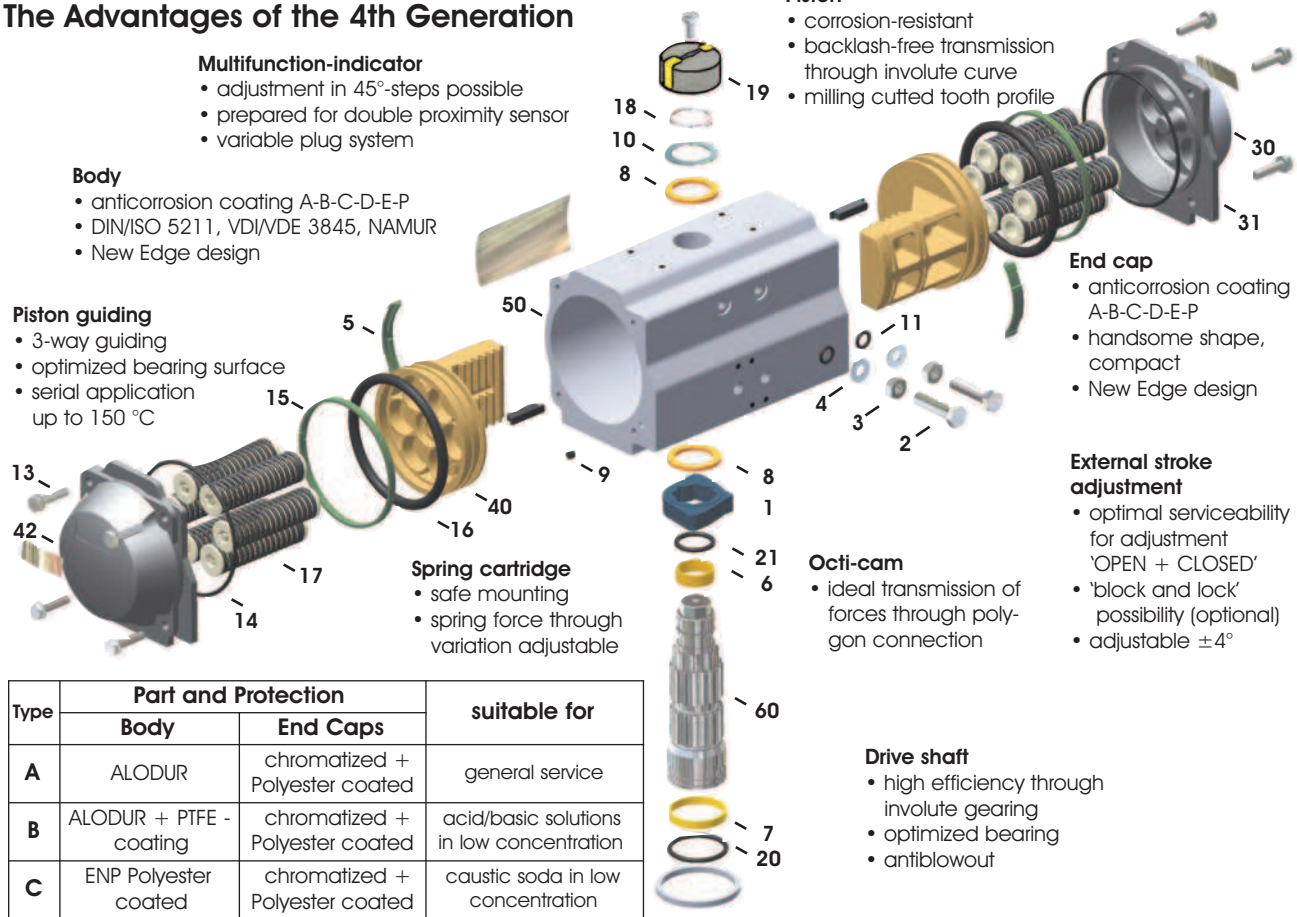
Piston
- corrosion-resistant
- backlash-free transmission through involute curve
- milling cutted tooth profile

End cap
- anticorrosion coating A-B-C-D-E-P
- handsome shape, compact
- New Edge design

External stroke adjustment
- optimal serviceability for adjustment 'OPEN + CLOSED'
- 'block and lock' possibility (optional)
- adjustable ±4°

Octi-cam
- ideal transmission of forces through polygon connection

Drive shaft
- high efficiency through involute gearing
- optimized bearing
- antiblowout



Type	Part and Protection		suitable for
	Body	End Caps	
A	ALODUR	chromatized + Polyester coated	general service
B	ALODUR + PTFE - coating	chromatized + Polyester coated	acid/basic solutions in low concentration
C	ENP Polyester coated	chromatized + Polyester coated	caustic soda in low concentration
D	ALODUR + PTFE - coating	chromatized + PTFE-coated	aggressive environ. acid/basic solutions
E	ALODUR + PTFE - coating	chromatized + PTFE-coated	acid/basic solutions, seawater
P	ALODUR	Resin impreg. + Hard anodized	Processindustry, solvent

All types: piston anodized, E-type -> drive shaft stainless steel
DR/SC5000 deliverable in typ A or P only.

(1) GS400-15 type DR/SC220-5000; (2) 8 pcs. type DR/SC15-2000; 12 pcs. type DR/SC3000; 16 pcs. DR/SC5000; (3) type DR/SC900-3000 end caps are symmetric.
❍ included in sparepart kit, ✶ included in high temperature kit, ✪ included in low temperature kit

Pos.	Pcs	Part Description	Material	Specification	Protection
01	1	Octi-Cam (Stop Arrangement)	1.4301	EN 10088-3 (1)	
02	2	Stop Cap Screw	A2-70	ISO 3506	
03	2	Nut (Stop Cap Screw)	A2-70	ISO 3506	
05 ❍	2	Bearing (Piston Back)	Nylon 46 (4)		
06,07 ❍	1	Bearing (Pinion Top/Bottom)	PA 46	Stanyl TW300	
08 ❍	2	Thrust Bearing (Pinion)	Nylon 46 (4)		
09 ❍✶✪	2	Plug (Transfer Port)	NBR	NBR 70 SH. A	
11 ❍✶✪	2	O' Ring (Stop Cap Screw Seal)	NBR	NBR 70 SH. A	
13	8/12/16 (2)	Cap Screw (End Cap)	A2-70	ISO 3506	
14 ❍✶✪	2	O' Ring (End Cap)	NBR	NBR 70 SH. A	
15 ❍✶	2	Bearing (Piston Head)	POM		
16 ❍✶✪	2	O' Ring (Piston)	NBR	NBR 70 SH. A	
17	min.5/max.12	Spring (Cartridge)	SiCr Spring Alloy Steel	DIN 17223 Part 2	Epoxid
19	1	Position Indicator	PP + 30% GF	Haiplen EP 30	
20,21 ❍✶✪	1	O' Ring (Pinion Bottom/Top)	NBR	NBR 70 SH. A	
30,31	1 (3)	Right/Left End Cap	GD-AlSi8.5Cu3.5Fe (4)	UNI 5075	A, B, D, E, P
40	2	Pistons	GD-AlSi8.5Cu3.5Fe (4)	UNI 5075	
43	1	Spigot	EN AW 6063 (4)	EN 573/3	Alodur
50	1	Body	EN AW 6063 (4)	EN 573/3	A, B, D, E, P
60	1	Drive Shaft	C22	DIN 17200	ENP