

bar-agturn[®]

Extended end position adjustment on both sides

Enhancement to technical datasheet



Objective

With 40 years of experience in automation, we have taken up the current requirements of the valve market and developed a new pneumatic quarter-turn actuator for our various customer groups.

With its special design, robust construction and great versatility in technical features, we meet the requirements of the demands of the plant planner the plant constructor to the user.

A very wide range of torques and rotating angles is covered.

In addition to the standard version, in which the end positions can be set from $+5^\circ$ to -5° in the 0° and 90° positions, other rotating angles can be set. This is made possible by a special and patented stop cam, which allows the fitting to be optimally adjusted.

This means a very precise adjustment to the production process, which avoids downtimes. A considerable time saving results from the fact that there is no need for constant readjustment and checking during adjustment. The valves are protected, as there is no need for the medium to clog or to open against the process flow is not necessary. Another positive aspect is the reduced loss in the batches due to continuous processes.

The main applications here are in general industry, in bulk goods handling and in the water treatment of

- System manufacturers
- Valve manufacturers
- Pump and blower manufacturers
- Plant manufacturers

With the bar-acturn, the end position is set with the aid of a setting cam and a setting screw for each end position. In the standard version, the adjustment range is $\pm 5^\circ$ around the end position.

With a newly developed and patented special cam, the adjustment range has been considerably extended. The setting angle of the actuator can now be limited up to 20° before the respective nominal end position (i.e. „open“ and „closed“).

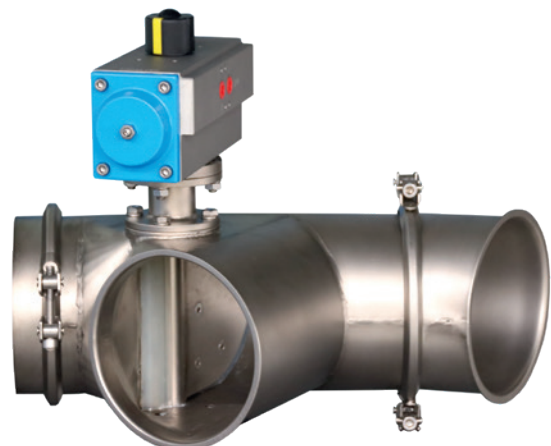
Product versions

bar-acturn with 90° rotating angle of sizes 040 to 160. The design can be combined with the high temperature and low temperature options. A combination with the stroke limitation via the cover screw is also possible.

Application

In industries with

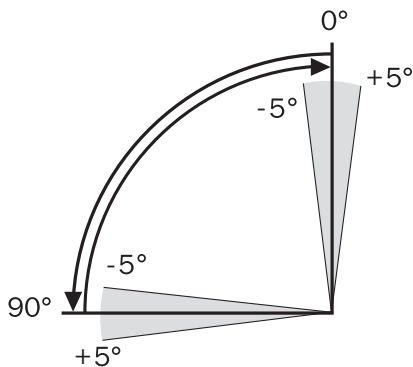
1. Butterfly valves: If the damper is used for throttling and is never to close completely (especially with single-acting actuators, as here the „inner“ end position must be set). These are shut-off dampers, which must remain open at least $10-15^\circ$ to maintain the open/close mechanism of the pumps.
2. Distribution diverters: 3-way valves of the Y-type. The same actuator can be set up identically with different turnout shapes for the outlet angles of the pipe connections.



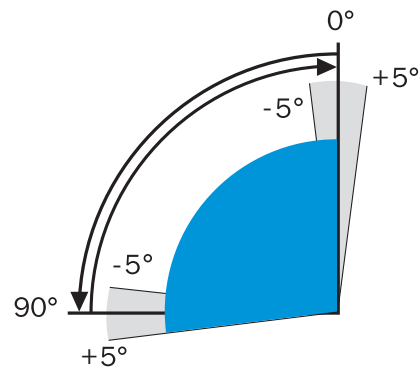
These rotating angle limitations can be achieved:

Actuator size	Extended rotating angle due to stop cam	
	Inner end position adjustment	Outer end position adjustment
GD/GS 40	-5° to 20°	70° to 95°
GD/GS 52	-5° to 20°	70° to 95°
GD/GS 63	-5° to 20°	70° to 95°
GD/GS 75	-5° to 20°	70° to 95°
GD/GS 92	-5° to 20°	70° to 95°
GD/GS 105	-5° to 20°	70° to 95°
GD/GS 125	-5° to 20°	70° to 95°
GD/GS 140	-5° to 20°	70° to 95°
GD/GS 160	-5° to 20°	70° to 95°

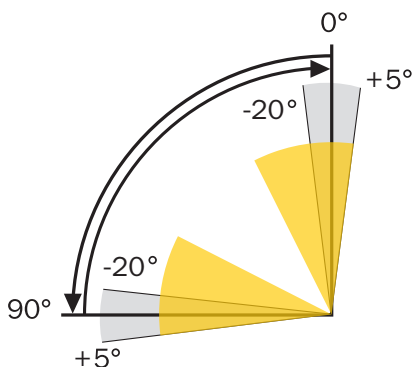
Operating principle



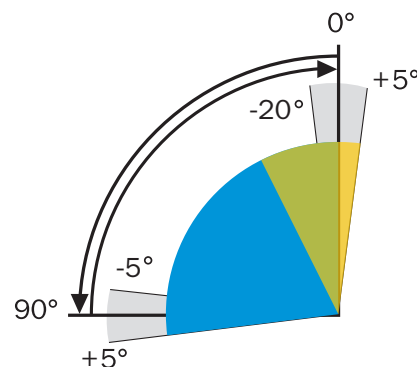
Standard version from GD-040 to GS-400
 Inner end position -5° to +5°
 Outer end position +85° to +95°
 Type code example: GD-092/090-F03/F05-V11-F



Version with cover screw from GD-052 to GS-210
 Inner end position -5° to +5°
 Outer end position 0° to +95° for 90° actuators
 Type code example: GD-092/090-F03/F05-V11-F-**OA**
Designation -OA = Outer Adjustment



Version with extended angle of rotation adjustment (new version) from GD-040 to GS-160
 Inner end position +5° to -20°
 Outer end position +70° to +95° for 90° actuators
 Type code example: GD-092/090-F03/F05-V11-F-**XA**
Designation -XA = eXtended Adjustment



Version as combination cover screw with extended angle of rotation adjustment from GD-052 to GS-160
 Inner end position -5° to +20°
 Outer end position 0° to +95° for 90° actuators
 Type code example: GD-092/090-F03/F05-V11-F-**CA**
Designation -CA = Combined Adjustment

If the two outer chambers of the actuator are pressurised, the pistons move towards each other to the home position (0°). With the help of the new and patented cam, this can be adjusted continuously and freely in the range between -5° and +20°.

When the inner chamber is pressurised, the pistons move apart to the 90° position. This end position can be freely adjusted between 70° and 95° due to the specially shaped stop surface of the cam.

Order code (example)

G	S	-	0	7	5	/	0	9	0	-	0	7	-	F05/07	-	V14	F	XA				
G	D	-	0	7	5	/	0	9	0	-			-	F05/07	-	V14	F	XA				
Operating way			Type				Pivoting angle 90°				Amount of springs			ISO flange pattern			Pinion design*		Installation variant		Special version	
GS = single-acting GD = double-acting																	* v = octagon with size		z = Double-D with size			

Standard version: GD-092/090-F03/F05-V11-F

Version with cover screw: GD-092/090-F03/F05-V11-F-OA

Version with extended angle of rotation adjustment: GD-092/090-F03/F05-V11-F-XA

Version as combination of cover screw with extended angle of rotation adjustment: GD-092/090-F03/F05-V11-F-CA

The descriptions and photographs contained in this product specification sheet are supplied by way of information only and are not binding.

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bar GmbH hereby objects to any term, different from or additional to bar GmbH terms, contained in any buyer communication in any form, unless agreed to in a writing signed by an officer of bar GmbH.

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