

ADDITIONAL SHEET TY005.006 EN

Supplement to the data sheets of the manufacturer Air-Torque



Pneumatic Rotary Actuator Type AT (SC/SO/DL) from Air Torque for VETEC Rotary Plug Valves

Direction of rotation: Counterclockwise rotation for valve series 72, 73, 82 (counterclockwise closing)

Clockwise rotation for valve series 62 (clockwise closing)

Application

For automatic actuation of industrial valves with rotating throttle bodies (rotary plug valves, ball valves, butterfly valves, etc.).

Usage Throttling service and on/off service

Power supply Pneumatic

Design Type SC/SO- single-acting Double piston and internal springs
Type DL- double-acting Double piston, without spring return, without spring assemblies

Opening angle 0 to 75° for valve series 72, 73, 82

0 to 90° for valve series 62

Sizes 60 to 10000

Features

- Standard version at temperatures from: -40 to +80 °C
- Version for low temperature: -55 to + 80 °C
- Version for high temperature: - 15 to +150 °C
- Angle limitation (end stops): internal or external stroke limitation
- Power supply: 3 to 6 bar
- Interface to valve: According to DIN EN ISO 5211
- NAMUR interface for accessories: according to VDI/VDE 3845-1 (EN 15714-3) or VDI/VDE 3847-2 (IPM attachment kit)
- Operation: automatic and manual (for actuators with manual override)



Fig. 1: Type AT Actuator SC/SO/DL

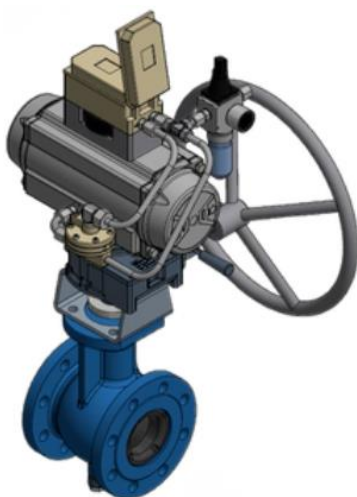


Fig. 2: Rotary plug valve type 82.7 with actuator type AT SC/SO and manual gearbox

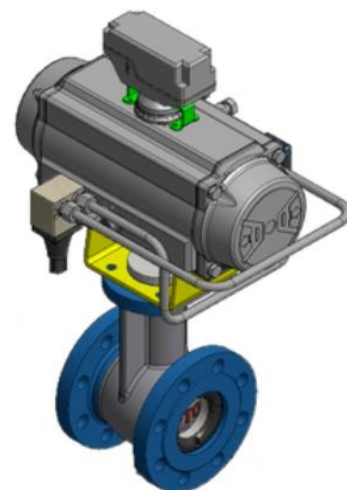


Fig. 3: Rotary plug valve type 82.7 with actuator type AT SC/SO

Principle of operation

When air pressure is applied, the two pistons move to the end positions, which compresses the spring assemblies and rotates the shaft.

Due to different spring packages, the required torques for special applications can be realised easily and uncomplicatedly.

Its special design allows the actuator to be used with different opening angles.

For detailed information, see the installation and operating instructions of the manufacturer Air Torque.

Fail-safe action

- Single-acting actuators type SC/SO
The fail-safe position in case of air supply failure is ensured by the spring return force:
 - Spring force closes (FC) - the valve is closed when the supply air fails.
 - Spring force opens (FO) - the valve opens when the supply air fails.
- Double-acting actuators type DL do not have a fail-safe function.

Mounting kits

A bracket connects actuator and valve (Fig. 5). The interface to the valve complies with DIN EN ISO 5211.

The actuator can be mounted with additional manual override (Fig. 6).

Actuator and valve are operated by turning the handwheel.

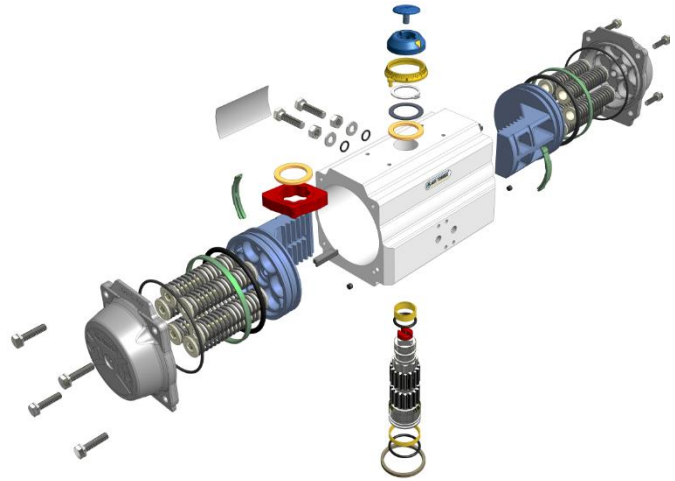


Fig. 4: Sectional drawing of Type AT Actuator

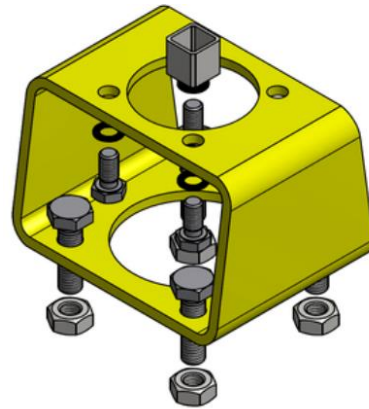


Fig. 5: Mounting kit for actuator with connections according to DIN EN ISO 5211

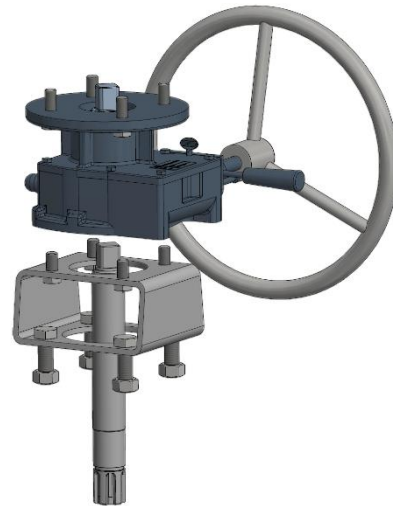


Fig. 6: Mounting kit for actuator with manual gearbox

Technical data

Table 1

Sizes (for VETEC valves)		60	100	150	20	300	450	600	900
Spring position (Type ATSC/SO)		Multi-spring, symmetric							
Opening angles		0 to 75° for valve series 72, 73, 82							
		0 to 90° for valve series 62							
Direction of rotation		Counterclockwise rotation for valve series 72, 73, 82 (counterclockwise closing)							
		Clockwise rotation for valve series 62 (clockwise closing)							
Spring range		13 - 26	22 - 44	30 - 60	49 - 98	63 - 126	99 - 198	135 - 269	100 - 379
Air torque		14 - 43	20 - 66	32 - 99	50 - 158	67 - 206	106 - 324	141 - 425	175 - 558
Supply air range		3 to 6							
Temperature range	O-Ring (NBR) Standard version	-40 to +80 °C							
	O-Ring (Viton®) High temperature version	-15 to +150 °C							
	O-Ring (Silikon) Low temperature version	-55 to +80 °C							
Weight (without bracket)		3,1	4,4	6,1	9,3	12	17	22	33

Maximum permissible differential pressures (Δp) → see Data sheet ► TY005.069

Table 2

Sizes (for VETEC valves)		1200	2000	3000	4000	5000	10000
Spring position (Type ATSC/SO)		Mehrfeder symmetrisch angeordnet					
Opening angles		0 to 75° for valve series 72, 73, 82					
		0 to 90° for valve series 62					
Direction of rotation		Counterclockwise rotation for valve series 72, 73, 82 (counterclockwise closing)					
		Clockwise rotation for valve series 62 (clockwise closing)					
Spring range		255 - 510	433 - 865	655 - 1309	877 - 1754	1104 - 2207	2034 - 4068
Air torque		260 - 792	447 - 1340	595 - 1892	844 - 2639	1217 - 3469	2034 - 6203
Supply air range		3 to 6					
Temperature range	O-Ring (NBR) Standard version	-40 to +80 °C					
	O-Ring (Viton®) High temperature version	-15 to +150 °C					
	O-Ring (Silikon) Low temperature version	-55 to +80 °C					
Weight (without bracket)		42	67	93	155	169	328

Maximum permissible differential pressures (Δp) → see Data sheet ► TY005.069

For further technical information see data sheets of the manufacturer Air-Torque, published on: www.airtorque.com

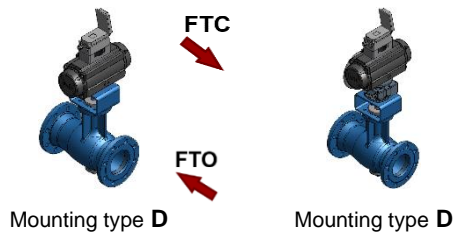
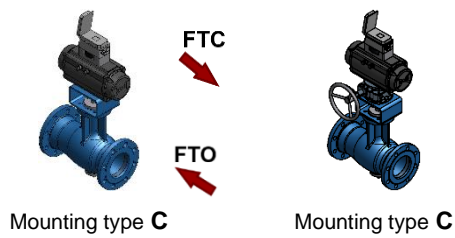
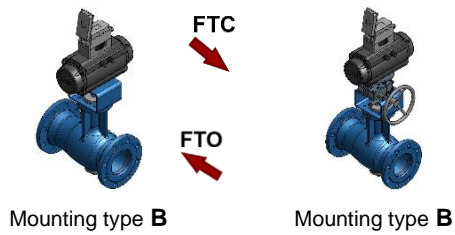
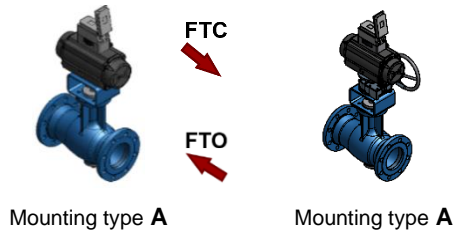
Attachment types

Mounting types A, B*, C, D* are possible for mounting the actuators.

Mounting type A is selected as the standard mounting position if no other information is available.

Actuator

Actuator with gearbox



(*)

➔ For control valves with manual gearboxes, mounting type B must be checked due to the risk of collision with the pipeline.

(*)

➔ For control valves with manual gearboxes, mounting type D must be checked due to the risk of collision with the pipeline.

Fig 7: Mounting types control valve with type AT actuator

Table 3

Size	See table 1 and 2
Attachment types	According to Fig. 7
Fail-safe action	Spring to close (FC)/spring to open (FO)
Maximum permissible differential pressures (Δp)	... bar (according to data sheet TY005.069)
Supply air	... bar
Stroke time	... s
Others	Special design, coating, technical documentation, etc.

Certificates (published on: www.airtorque.com)

- EU-Declaration of Conformity (see MOI)
- Certificate acc. to ATEX Directive 2014/34/EU
- SIL Certificate
- Declaration of Conformity acc. to Machinery Directive 2006/ 42/EC
- Protection class IP67 and IP68
- EAC Certificate acc. to TR CU 010/2011
- EAC Certificate acc. to TR CU 012/2011

VETEC Ventiltechnik GmbH

Siemensstrasse 12 · 67346 Speyer

Phone: +49 6232 6412-0 · Fax: +49 6232 42479

E-mail: sales-vetec-de@samsongroup.com · Internet: vetec.samsongroup.com