



General Information:

Air Torque 3 position pneumatic actuators 90° provide an operation of 0° - 45° - 90° or 0° - 90° - 180° for 180° actuator rotation. The intermediate position is achieved by an external mechanical stop with 2 auxiliary pistons (for spring return actuators it may be only one auxiliary piston). This intermediate stop position is adjustable, for example 5°, 20°, 30°, 50°, 75° etc. The intermediate position is easily achieved by adjusting the external nuts located outside the two end-caps. Both type, double acting and spring return, are available.

Field of application: For dosing, for exact filling and for any kind of services where on 90° rotation an intermediate stop position is desired.



To control and operate the 3-Position actuators a system of solenoid valves and a sequence of air supply is required:

Operation 3-Position Actuators ED 2010

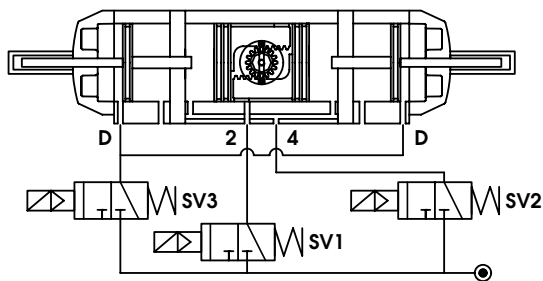
double acting

Rotation 90°

- Type: 3PD DR ... 90°

Rotation 180°

- Type: 3PD DR ...180°



Rotation 90°	Rotation 180°	Solenoid Valve energized	Pressurized Port
0° -> 90°	0° -> 180°	SV1	2
90° -> 0°	180° -> 0°	SV2	4
0° -> X°	0° -> Y°	first SV3 + after SV1	D + 2
X° -> 90°	Y° -> 180°	SV1	2
90° -> X°	180° -> Y°	SV3	D
X° -> 0°	Y° -> 0°	SV2	4

X: Intermediate position, 0° to 90°

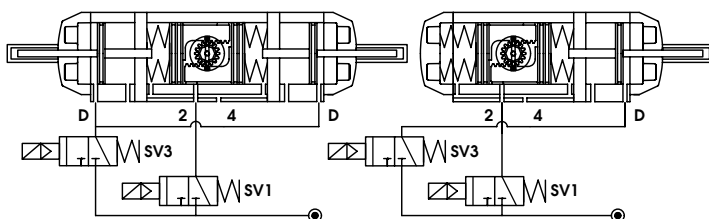
Y: Intermediate position, 90° to 180°

- Note:**
1. As an alternative, the solenoid valve SV3 can be replaced by 2 solenoid valves directly applied to NAMUR connections on the 2 auxiliary bodies.
 2. As an alternative, the solenoid valves SV1 and SV2 can be replaced by one 5/3 bistable solenoid valve with exhausted center position, directly applied to NAMUR connections on the central body.

3-Position Actuators ED 2010, Rotation 90°

Spring return - type: 3PD SC ...

Spring return - type: 3P SC ...



Rotation	Solenoid Valve energized	Pressurized Port
0° -> 90°	SV1	2
90° -> 0°	air failure at port 2 - apring action	
0° -> X°	first SV3 + after SV1	D + 2
X° -> 90°	SV1	2
*90° -> X°	first SV1 + after SV3	2 + D
X° -> 0°	Abluft an 2 - Federwirkend	

***Note:** This function is achievable **only** with 3-Position Spring Return actuators with 2 auxiliary pistons (external mechanical stop).

Note: As an alternative for **3PD**, the solenoid valve SV3 can be replaced by 2 solenoid valves directly applied to NAMUR connections on the 2 auxiliary bodies.



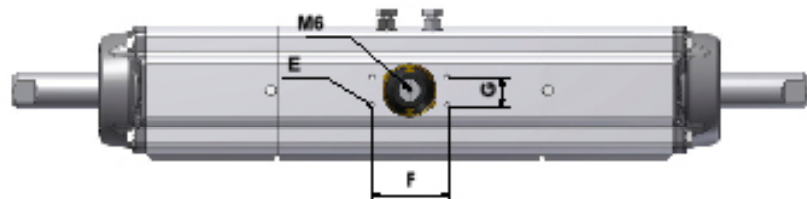
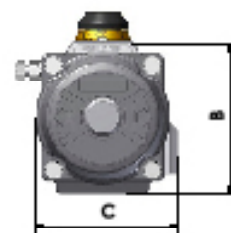
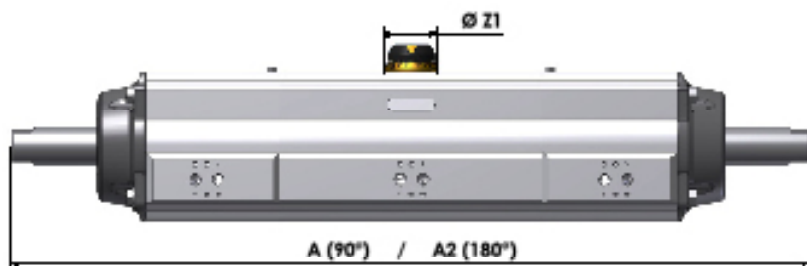
EDITION 2010
3-Position Actuators
Description



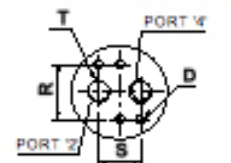
AIR TORQUE

PNEUMATISCHE STELLANTRIEBE

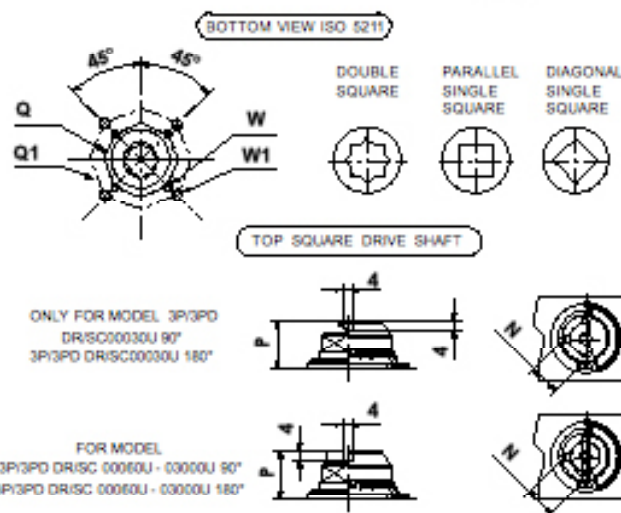
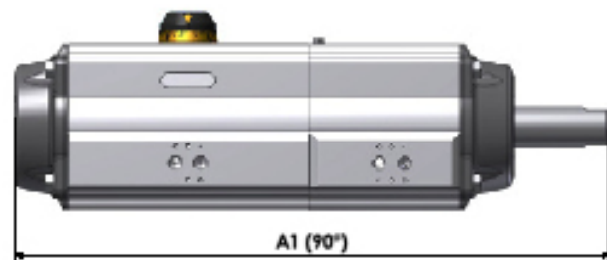
3PD for model: Spring return and double acting 90°, plus double acting 180°



AIR CONNECTION VDI/VDE 3845



3P only for model: Spring return 90°



Actuator** Type 3PD/3P	A 90°	A1 90°	A2 180°	B	C	D	E	F	G	N	P	R	S	Z1	T-ISO 228	ISO* Flange	Q	Q1	W	W1
DR/SC00030	392	273	454	85	84,5	M5x8	M5x8	80	30	11	20	32	24	42	1/8"	F05+F07	50	70	M6	M8
DR/SC00060	481	342	568	102	93	M5x8	M5x8	80	30	17	20	32	24	42	1/8"	F05+F07	50	70	M6	M8
DR/SC00100	578	409	672	115	106	M5x8	M5x8	80	30	17	20	32	24	42	1/4"	F05+F07	50	70	M6	M8
DR/SC00150	617	438	730	127	118,5	M5x8	M5x8	80	30	17	20	32	24	42	1/4"	F07+F10	70	102	M8	M10
DR/SC00300	798	565	948	157	146,5	M5x8	M5x8	80	30	27	30	32	24	58	1/4"	F07+F10	70	102	M8	M10
DR/SC00600	989	705	1177	196	181	M5x8	M5x8	80	30	27	30	32	24	67,5	1/4"	F10+F12	102	125	M10	M12
DR/SC01200	1290	909	1514	245	221,5	M5x8	M5x8	130	30	36	50	32	24	80	1/4"	F14	140	/	M16	/
DR/SC03000	1725	1218	2030	330	330	M6x10	M5x8	130	30	36	50	45	40	115	1/2"	F16	165	/	M20	/

*Note: Other connections available; ** Further models on request; Dimensions in mm

Specification:

Max. supply pressure: 8 bar
Operating pressure: 2,5 - 8 bar
Other dimensions: see data sheet
Material: see data sheet of 3P actuator

Output torque:

With the same operation pressure and/or the same number of springs, the torque is equivalent to the standard actuator.

Operating media: See data sheet of standard actuator.

Temperature: -20°C to +80°C

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Dosing
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