

rotork® Fluid Systems



The RC-DOS actuator is built on the well-known and highly reliable scotch-yoke principle.

It is designed for 3-position control of dosing valves or emergency shut-down (ESD) valves where a partial stroke test (PST) is demanded.

The RC-DOS actuator is a basic Remote Control RC200-SR actuator equipped with an integrated linear cylinder with fully adjustable stroke length.

The actuator is operated by a 3/2-way solenoid valve similar to any other single acting pneumatic actuator in an isolating (on-off) application.

Additionally the user can stop actuator travel in any suitable intermediate position, by using a second 3/2-way solenoid valve connected to the integrated linear cylinder.

The dosing / PST function is designed only for travel from the fully compressed spring position to an intermediate position. Travel can then continue to either of the end positions.

The intermediate position can be used in dosing applications during a filling cycle or a partial stroke test position for ESD applications.

Features:

- Single-acting actuator with spring-return for guaranteed failsafe operation
- Fully adjustable mechanic travel stop for accurate partial stroke test angle
- Cost effective and simple control using only two 3/2-way solenoid valves
- Adjustable dosing position from 0 to 90°
- Exact filling of products over a given scale
- Mounting flange as per DIN 3337 / ISO 5211
- Up to 660 Nm closing torque at 6 bar
- Compatible with any VDI / VDE 3845 suitable limit switches

Method of operation

Control the actuator with two 3/2-way NC solenoid valves:

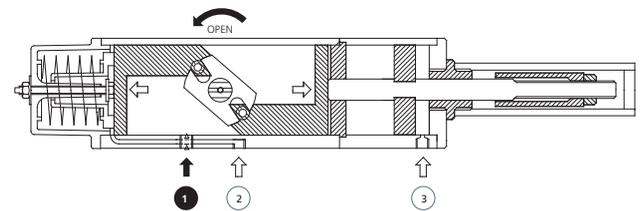
- Solenoid valve 1 connected to port 1
- Solenoid valve 2 connected to ports 2 & 3

RC200-DOS

3-position actuator with spring-return for dosing and partial stroke test operation

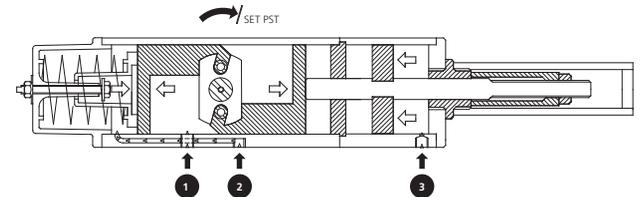
Normal on-off operation

Port 1 pressurised & ports 2 & 3 vented = actuator travels to active end position, open or closed.



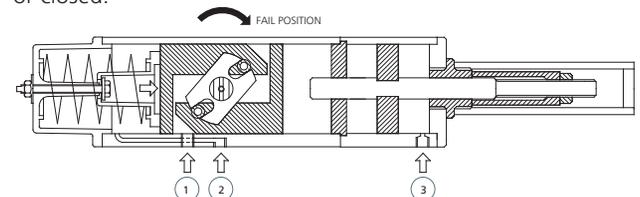
Dosing/PST operation

Ports 1, 2 & 3 pressurised = actuator travels to the set intermediate position.

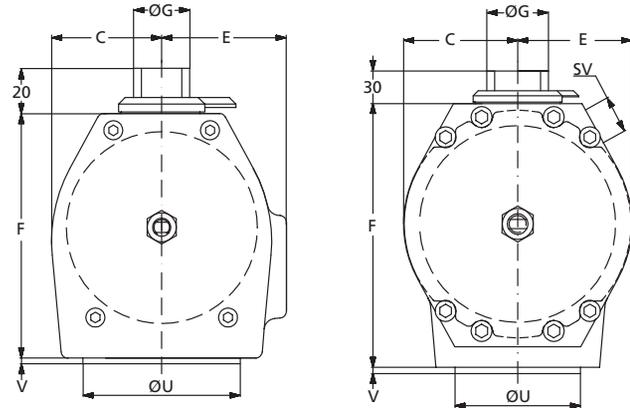
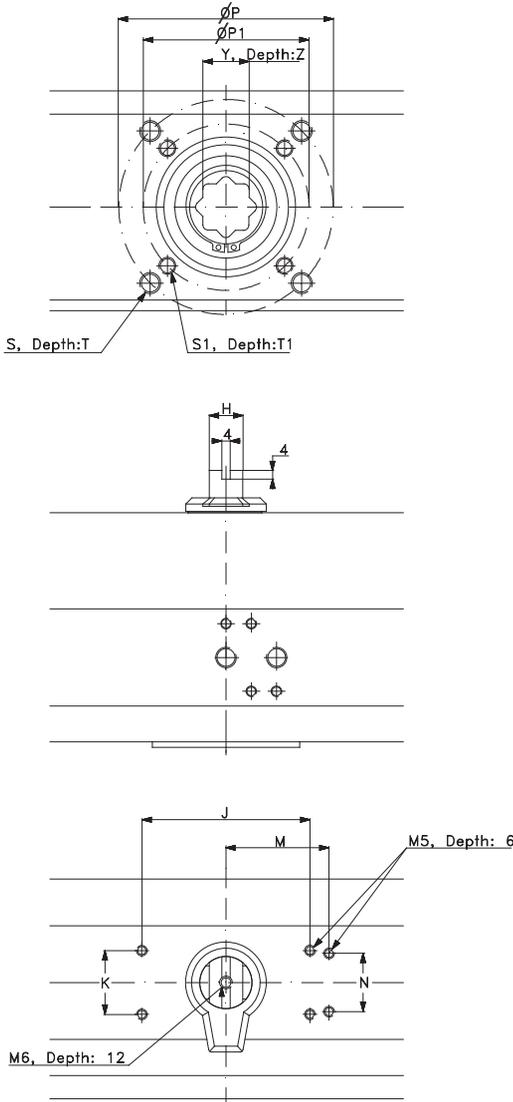


Fail position

All ports vented = spring-return travels to fail position, open or closed.



3-position actuator with spring-return for dosing and partial stroke test operation



RC270

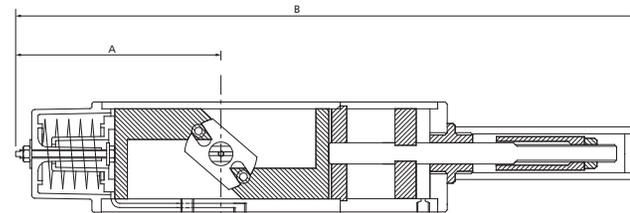
RC210-250

Air connections

RC210-230 3 x R¹/₈" , Depth 8
 RC250-270 3 x R¹/₄" , Depth 12

Type	ISO5211 DIN3337	Air Opens	Spring closes and closing		
			90°	30°	0°
			→		
RC210-DOS	F05	58	17.5	4.5	11.5
RC230-DOS	F10	220	75	24	42
RC250-DOS	F12	710	240	90	150
RC270-DOS	F16	2900	910	390	660

Note: 90° = Open, 0° = Closed



RC200-DOS Dimensions (mm)																				Std		Option		Weight (kg)		
Type	A	B	C	E	F	G	H	J	K	M	N	FI	P	S	T	FI	P1	S1	T1	U	V	Y	Z		Y	Z
RC210	150	432	32	41	75	16	10	-	-	40	30	F05	50	M6	11	-	-	-	-	35	2	14	19	-	-	3.2
RC230	200	592	49	55	110	25	16	80	30	-	-	F10	102	M10	17	F07	70	M8	14	70	3	22	30	17	30	9
RC250	285	813	69	75	155	35	22	80	30	-	-	F12	125	M12	21	F10	102	M10	17	85	3	27	37	22	37	20
RC270	510	1380	110	110	248	60	40	130	30	-	-	F16	165	M20	32	F12	125	M12	25	130	5	46	64	36	64	85

Note: RC270-DOS also has the following hole pattern on the bottom side: 4 off M16 x 25 mm deep, 234.7 x 97.2 mm hole pattern which corresponds to F25 PCD

A full listing of the Rotork sales and service network is available on our website.

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