


# PR004

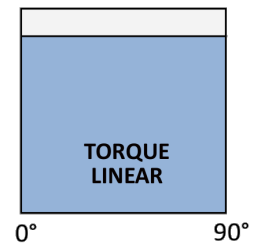
<b>Design</b>	Pneumatic double-piston rotary actuator in rack and pinion design
<b>Function</b>	Double- and single-acting execution
<b>Standards</b>	Interface actuator/feedback-unit - VDI/VDE 3845 (NAMUR)  Interface actuator/control media - VDI/VDE 3845 (NAMUR)  Interface actuator/valve - ISO5211 / DIN 3337
<b>Temperature range</b>	Standard: -20°C ... +80°C Low temperature version: -40°C ... +80°C High temperature version: -10°C ... +150°C
<b>Nominal angle</b>	90°
<b>Angle adjustment</b>	Adjustable in both end positions +/-5° Optional stroke adjustment up to 100%
<b>ATEX marking</b>	 II 2 G Ex h IIC T6...T3 Gb II 2 D Ex h IIIC 170°C Db
<b>Control Pressure</b>	2 up to 8 bar
<b>Control media</b>	dry, filtered air or inert gases in respect of remaining oil-, dust and water-content according to DIN ISO 8573-1 / class 4, maximum particle diameter 30µm, dew point minimum 10°C below ambient temperature
<b>Material</b>	Body: Aluminium, powder-coated Caps: Aluminium, powder-coated Pistons: Aluminium Pinion shaft: Carbon steel, nickel plated Bearings: POM Sealings: Standard: NBR Optional: HNBR/FPM/Silicone Screws: Stainless steel



## Torque diagram

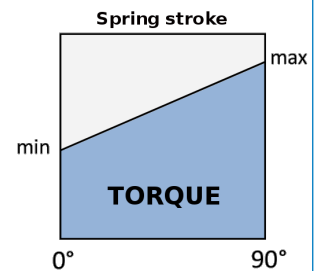
### Double-acting

Provides a linear and constant torque through the complete pivoting angle in both pivoting directions.

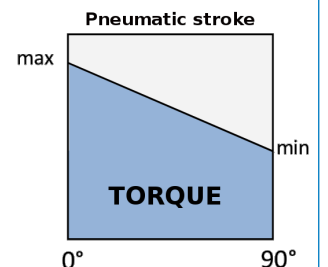


### Single-acting

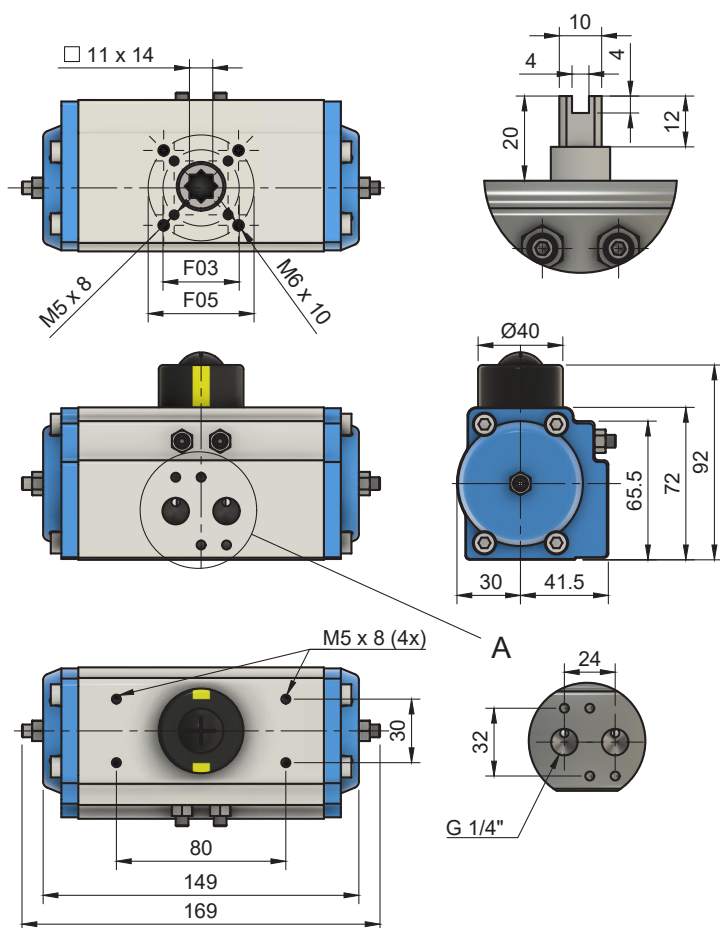
Provides a linearly reducing torque through the complete pivoting angle in both pivoting directions.



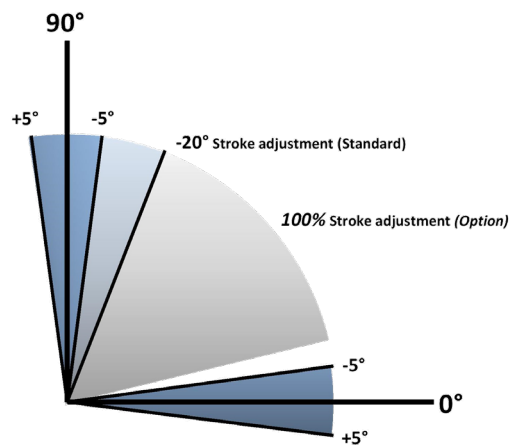
Offers the maximum torque at the beginning of each stroke to overcome the breakaway torque.



### Dimensions



### Angle adjustment



Both end positions can be adjusted by +/-5° for a precise setting of the final valve position.

The optional stroke adjustment offers a 100% setting of the switched end position.

### Torques double-acting

Control pressure in bar (g)	2	2,5	3	3,5	4	4,5	5	5,5	6	6,5	7	7,5	8
Torque in Nm	8,1	10,1	12,1	14,1	16,1	18,1	20,1	22,1	24,1	26,1	28,1	30,1	32,1

### Torques single-acting

Torque spring stroke in Nm			Control pressure in bar (g)																	
			3		3,5		4		4,5		5		5,5		6		7		8	
Spring set	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min	max	min
Torque in Nm	5	6	4	8	6															
	6	7	5	7	5	9	7	11	9											
	7	9	6	6	3	8	5	10	7	12	9	14	10							
	8	10	7	5	2	7	4	9	6	11	8	13	9	15	12	17	14			
	9	11	8	4	1	6	3	8	5	10	6	12	8	14	10	16	13	20	17	
	10	12	9			5	2	7	4	9	5	12	7	14	9	16	12	20	16	
	11	14	9					7	2	9	4	11	5	13	8	15	10	19	14	23
12	15	10									10	4	12	7	14	9	18	12	22	17

### Weight, volume

Function	Weight (kg)	Volume (l)
double-acting	1,4	0,28
single-acting	1,5	0,12

### Air consumption

Function	Air consumption for pivoting angle 90° at control pressure in bar (g) in litres/cycle								
	3	3,5	4	4,5	5	5,5	6	7	8
double-acting	0,84	0,98	1,12	1,26	1,40	1,54	1,68	1,96	2,24
single-acting	0,36	0,42	0,48	0,54	0,60	0,66	0,72	0,84	0,96