


# PR023

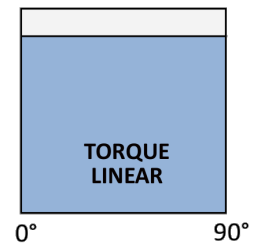
<b>Design</b>	Pneumatic double-piston rotary actuator in rack and pinion design
<b>Function</b>	Double- and single-acting execution
<b>Standards</b>	Interface actuator/feedback-unit - VDI/VDE 3845 (NAMUR)  Interface actuator/control media - VDI/VDE 3845 (NAMUR)  Interface actuator/valve - ISO5211 / DIN 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

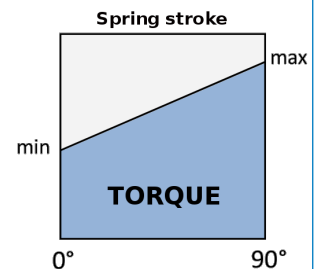
### Double-acting

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

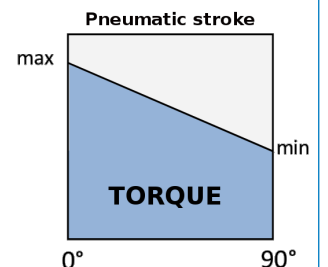


### Single-acting

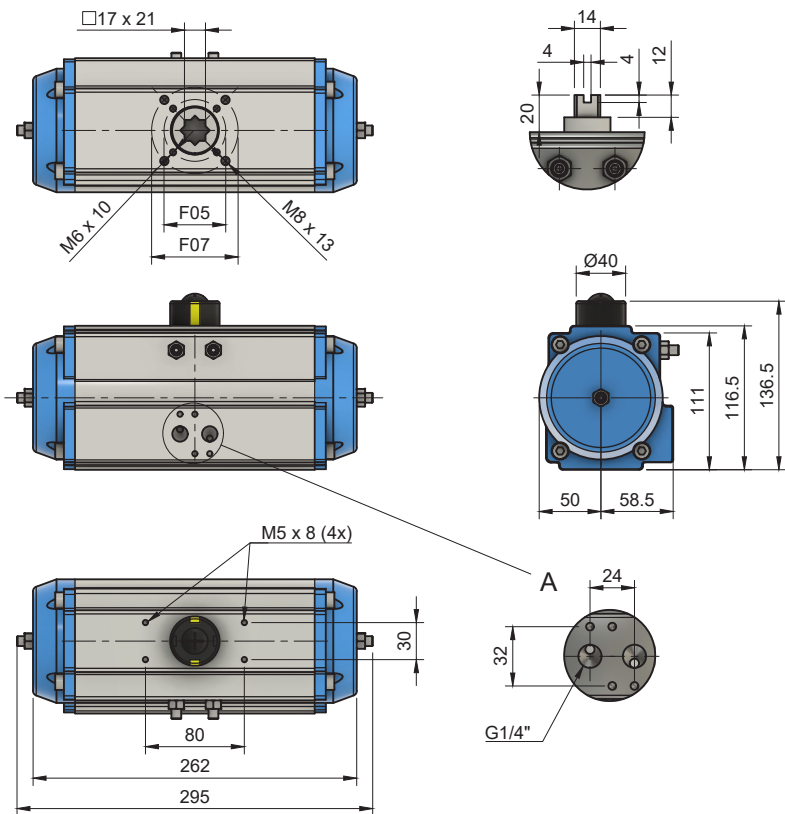
Provides a linearly reducing torque through the complete pivoting angle in both pivoting directions.



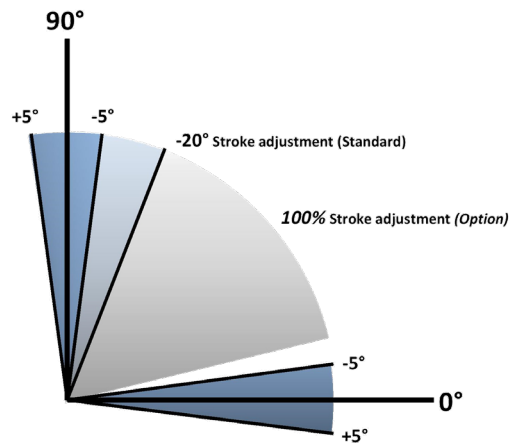
Offers the maximum torque at the beginning of each stroke to overcome the breakaway torque.



### 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	45,4	56,8	68,2	79,6	91,0	102,4	113,8	125,2	136,6	148,0	159,4	170,8	182,2

### 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	34	23	44	33	56	45	67	56												
	6	41	28	40	26	51	38	62	49	74	60	85	72								
	7	48	33	35	19	46	31	58	42	69	53	80	65								
	8	55	37	31	13	42	24	53	35	64	47	76	58	87	69	98	81	121	103		
	9	62	42			37	17	48	28	60	40	71	51	82	62	94	74	116	96		
	10	69	47					44	22	55	33	66	44	78	55	89	67	111	89	134	112
	11	76	51							50	26	62	37	73	49	84	60	107	82	129	105
	12	83	56									57	30	68	42	79	53	102	76	125	98

### Weight, volume

Function	Weight (kg)	Volume (l)
double-acting	4,6	1,37
single-acting	5,2	0,64

### 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	4,11	4,80	5,48	6,17	6,85	7,54	8,22	9,59	10,96
single-acting	1,92	2,24	2,56	2,88	3,20	3,52	3,84	4,48	5,12