



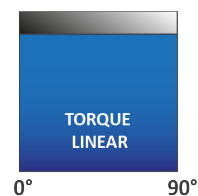
Design	Pneumatic double-piston rotary actuator in rack and pinion design	
Function	Double and single-acting	
Material	Body Caps Pistons Pinion shaft Bearings Sealings Screws	Aluminum, powder-coated Aluminum, powder-coated Aluminum Carbon steel, nickel plated POM Standard: NBR Optional: HNBR/FPM/Silicone Stainless steel
Temperature range	Standard	-20°C ... +80°C
	Low temperature	-40°C ... +80°C
	High temperature	-10°C ... +150°C
ATEX marking	 	Standard and low temperature II 2 G Ex h IIC T6/T5 Gb II 2 D Ex h IIIC 100°C Db High temperature II 2 G Ex h IIC T6...T3 Gb II 2 D Ex h IIIC 170°C Db
Control pressure	2 ... 8 bar	
Control media	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	
Mounting position	Any mounting position	
Nominal rotation angle	90° Adjustable in both end positions +/-5° (optional stroke adjustment up to 100%)	
Standards	Interface actuator/ feedback-unit	VDI/VDE 3845 resp. NAMUR
	Interface actuator/ control media	VDI/VDE 3845 resp. NAMUR
	Interface actuator/ valve	ISO 5211 and DIN 3337



Torque diagram

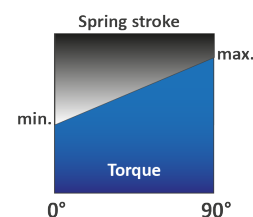
Double-acting

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

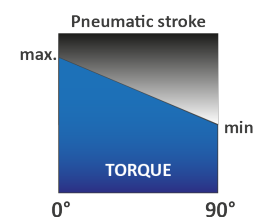


Single-acting

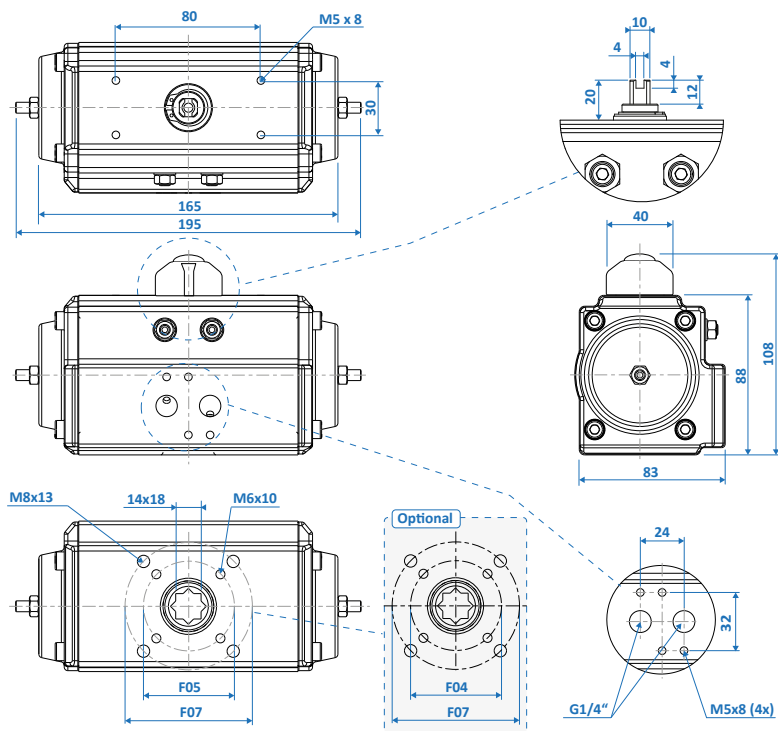
Provides a linearly reducing torque through the complete pivoting angle in both pivoting directions.



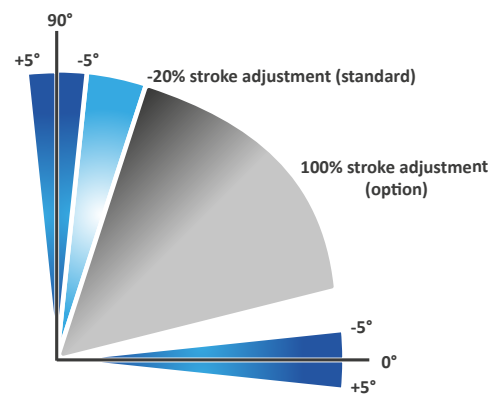
Offers the maximum torque at the beginning of each stroke to overcome the breakaway torque.



Dimensions



Angle adjustment



Both end positions can be adjusted by $\pm 5^\circ$ 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	7	8
Torque in Nm	14	18	21	25	28	32	35	39	42	49	56

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	10,5	7,2	13,9	10,6	17,4	14,2	20,9	17,7	24,4	21,2	28	24,7	31,5	28,2	35	31,7	42	38,8	49	45,8
	6	12,5	8,6	12,5	8,6	16	12,1	19,5	15,6	23	19,1	26,5	22,6	30	26,1	33,5	29,6	40,6	36,7	47,6	43,7
	7	14,6	10,1	11	6,5	14,5	10	18	13,5	21,6	17	25,1	20,5	28,6	24	32,1	27,6	39,1	34,6	46,2	41,6
	8	16,7	11,5	9,6	4,4	13,1	7,9	16,6	11,4	20,1	14,9	23,6	18,4	27,1	21,9	30,7	25,5	37,7	32,5	44,7	39,5
	9	18,8	13	8,1	2,3	11,6	5,8	15,2	9,3	18,7	12,8	22,2	16,3	25,7	19,9	29,2	23,4	36,3	30,4	43,3	37,4
	10	20,9	14,4			10,2	3,7	13,7	7,2	17,2	10,7	20,8	14,3	24,3	17,8	27,8	21,3	34,8	28,3	41,8	35,3
	11	23	15,8					12,3	5,1	15,8	8,6	19,3	12,2	22,8	15,7	26,3	19,2	33,4	26,2	40,4	33,3
	12	25,1	17,3					10,8	3	14,4	6,6	17,9	10,1	21,4	13,6	24,9	17,1	31,9	24,1	39	31,2

Weight, volume

Function	Weight (kg)	Volume (l)
double-acting	2,0	0,44
single-acting	2,1	0,21

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	1,32	1,54	1,76	1,98	2,20	2,42	2,64	3,08	3,52
single-acting	0,63	0,74	0,84	0,95	1,05	1,16	1,26	1,47	1,68