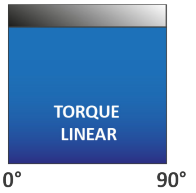
Pneumatic actuator 90°

PR763

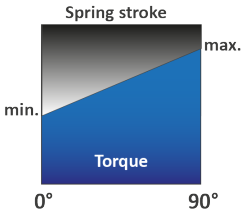
Design	Pneumatic double-piston rotary actuator in rack and pinion design	
Function	Double- and single-acting	
Material	Body	Aluminum, powder-coated
	Caps	Aluminum, powder-coated
	Pistons	Aluminum
	Pinion shaft	Carbon steel, nickel plated
	Bearings	POM
	Sealings	Standard: NBR Optional: HNBR/FPM/Silicone
	Screws	Stainless steel
Temperature range	Standard	-20°C...+80°C
	Low temperature version	-40°C...+80°C
	High temperature version	-10°C...+150°C
ATEX marking	CE Ex	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

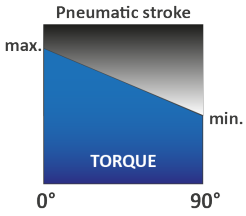
Torque diagram

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



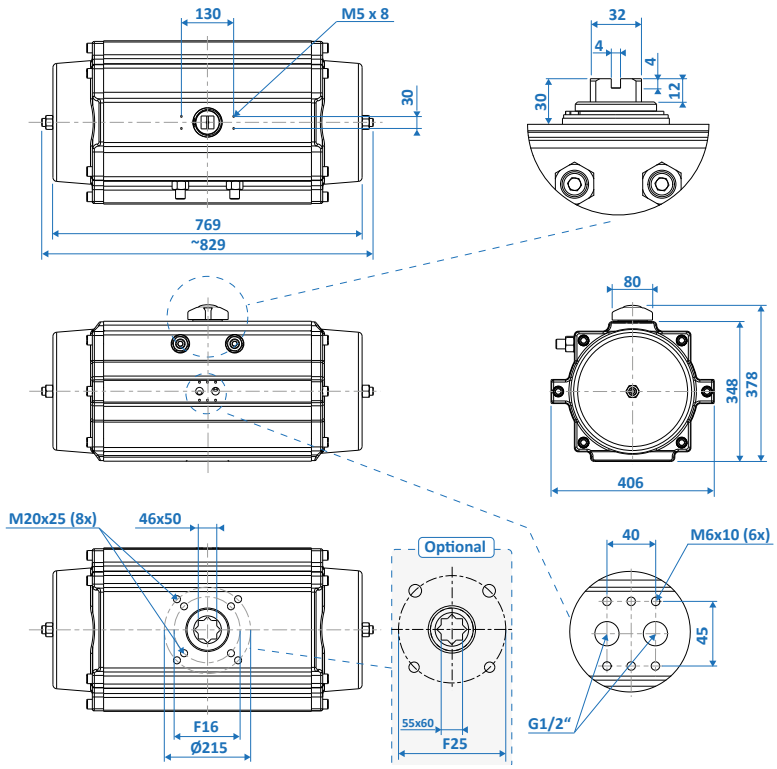
Single-acting
Provides a linearly reducing torque through the complete pivoting angle in both pivoting directions.
Offers the maximum torque at the beginning of each stroke to overcome the breakaway torque.



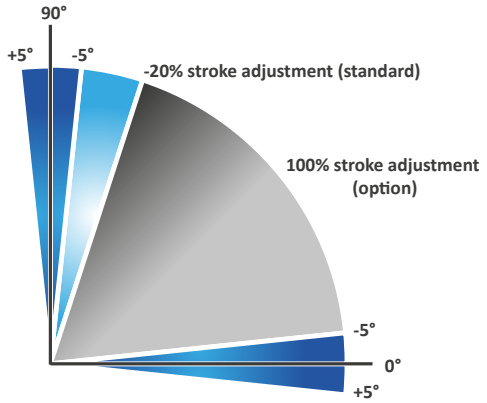


ProtACT GmbH | Märkerstraße 18 | 56307 Dernbach | Tel: +49 (0) 2605 96 25 19-0
Email: protact@protact-gmbh.de | Website: www.protact-gmbh.de

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	1526	1908	2289	2671	3052	3434	3815	4197	4578	4960	5341	5723	6104

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	1185	817	1574	1205	1972	1604	2371	2002	2769	2401	3168	2799	3566	3198	3965	3596	4762	4393	5559	5190
	6	1423	980	1411	968	1809	1367	2208	1765	2606	2164	3005	2562	3403	2961	3801	3359	4598	4156	5395	4953
	7	1660	1144	1247	731	1646	1130	2044	1528	2443	1927	2841	2325	3240	2724	3638	3122	4435	3919	5232	4716
	8	1897	1307	1084	494	1482	893	1881	1291	2279	1690	2678	2088	3076	2487	3475	2885	4272	3682	5069	4479
	9	2134	1470			1319	656	1717	1054	2116	1452	2514	1851	2913	2249	3311	2648	4108	3445	4905	4242
	10	2371	1634			1156	418	1554	817	1953	1215	2351	1614	2750	2012	3148	2411	3945	3208	4742	4005
	11	2608	1797					1391	580	1789	978	2188	1377	2586	1775	2985	2174	3782	2971	4579	3768
	12	2845	1960					1227	343	1626	741	2024	1140	2423	1538	2821	1937	3618	2734	4415	3531

Weight, volume

Function	Weight (kg)	Volume (l)
double-acting	110,0	53,5
single-acting	130,0	23,8

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	160,5	187,3	214,0	240,8	267,5	294,3	321,0	374,5	428,0
single-acting	71,4	83,3	95,2	107,1	119,0	130,9	142,8	166,6	190,4