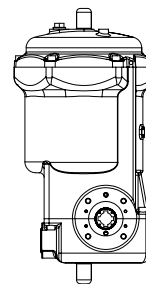


Technical Data Sheet

Rotary Actuator



TD_840

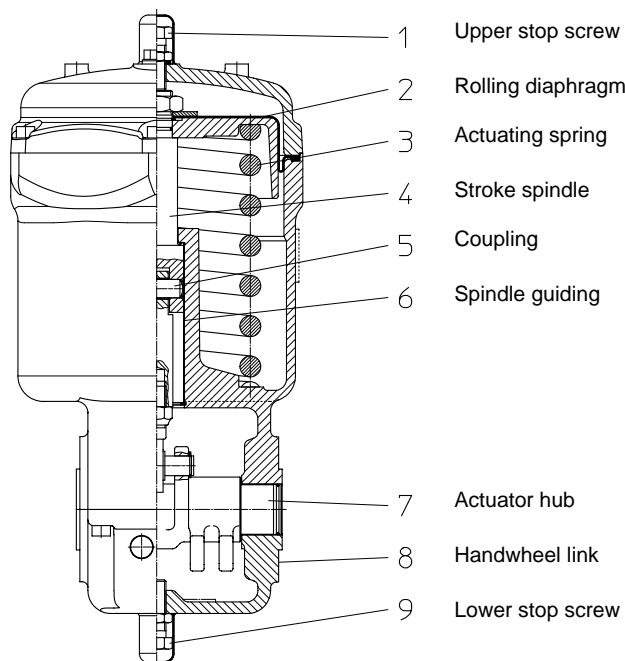
Technical data

Series	840
Diaphragm effective area	104 - 780 cm ²
Rotary angle	0-90° / 0-60° / 30-90°
Control signal	6 bar max.
Materials	Body: 3.2341/3.2371.61 Hub: 0.7040/0.7033 Rolling diaphragm: NBR, fabric-reinforced Bearing + guiding: PTFE/Graphite
Spring chamber	Optionally with air scavenging
Operating pressure	max. 7 bar ü
Operating temperature	-20 to +100°C (Option: -50 to +100°C)
Internal piping	-20 to +100°C (Option: -35 to +100°C)
No. of springs	1
Control force spring max.	46 - 1630 Nm
Control force air max.	87 - 2295 Nm

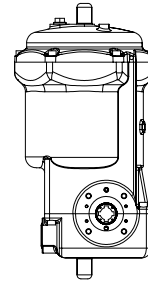
Functional description

The ARCATORQUE® is a pneumatic diaphragm actuator with spring return (fail safe) and is used to actuate rotary valves. The actuator positions the valve plug, which in turn is controlled by a pneumatic or electropneumatic positioner. These actuators can be operated in the "Air to open" function or with the reverse action "Air to close".

- A fabric-reinforced power diaphragm ensures smooth conversion of the pneumatic application of pressure into the linear motion of the actuator spindle. The power diaphragm (2), supported by the diaphragm disc, is connected to the linear spindle (4) and divides the actuator housing into pressure and spring chambers. If the force of the compressed air control signal exceeds the opposing spring force (3), the linear spindle (4) moves and actuates the rotary valve via a reversing lever.
- The spindle guide, and the pivot and hub bearings are made of maintenance-free PTFE composite materials and ensure a high level of adjusting accuracy when switching from a linear to a rotary motion.
- The control signal is carried to the diaphragm chamber via internal channels in the actuator housing. The air supply and venting (ventilation) of the spring chamber is carried out by means of the protective cap, which is impermeable to splash water, or the chamber is purged with the air from the positioner.
- The actuators are flange-mounted to the rotary valve directly or via an intermediate yoke. Force is transmitted to the shaft of the rotary valve via a positive-fit connection using a key or adjusting washer.



Technical Data Sheet Rotary Actuator



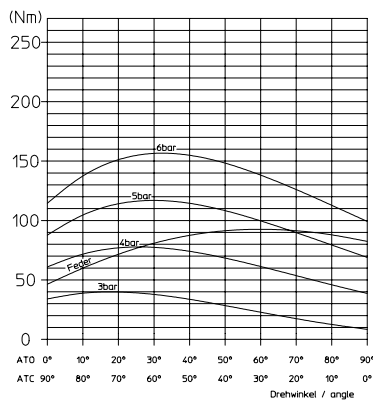
TD_840

Control force and control ranges

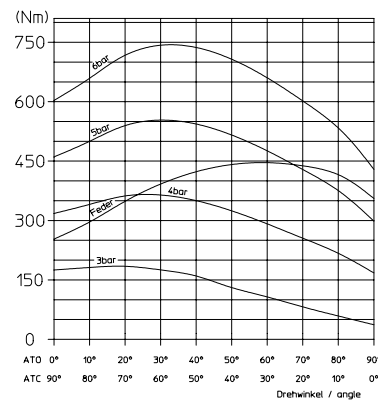
Actuator size		841	842	843	844
Spring 0% stroke	(Nm)	46	253	714.2	1629
	(bar)	1.75	1.75	1.75	2.0
Spring 100% stroke	(Nm)	82	355	1183	2612
	(bar)	2.75	2.75	2.75	3.8
Air 0% Stroke	(Nm)	87	460	1345	2295
	(bar)	5.0	5.0	5.0	5.0
Air 100% Stroke	(Nm)	68	298	855	872
	(bar)	5.0	5.0	5.0	5.0
Rolling diaphragm	(mm ²)	10387	36217	47120	77892
Cylinder Ø	(mm)	120	220	250	320
Stroke volume	(dm ³)	0.6	2.9	8.6	15.6
Max. coupling-Ø	(mm)	22	25	40	50
Mounting standard DIN/ISO5211		F07	F10	F12	F14
Air connection		G1/4	G1/2	G1/2	G1/2
Weight	(kg)	8	30	52	140
Handwheel	(kg)	1.5	2.5	3.5	15

Torque moment

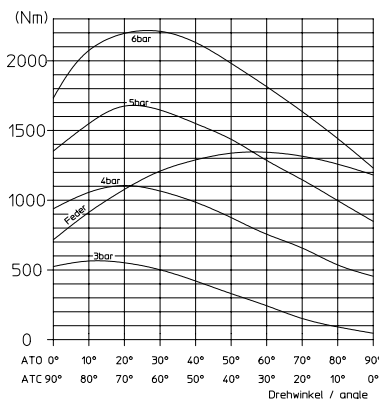
Torque moment (Nm) 841



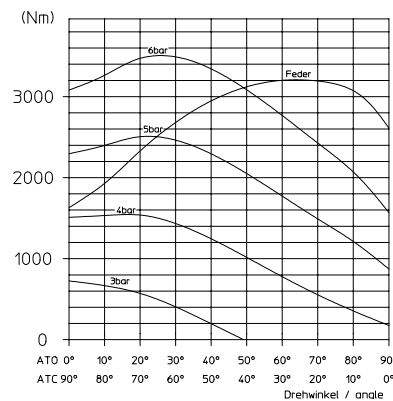
Torque moment (Nm) 842



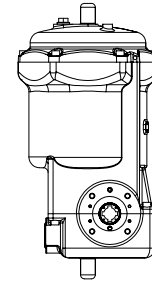
Torque moment (Nm) 843



Torque moment (Nm) 844

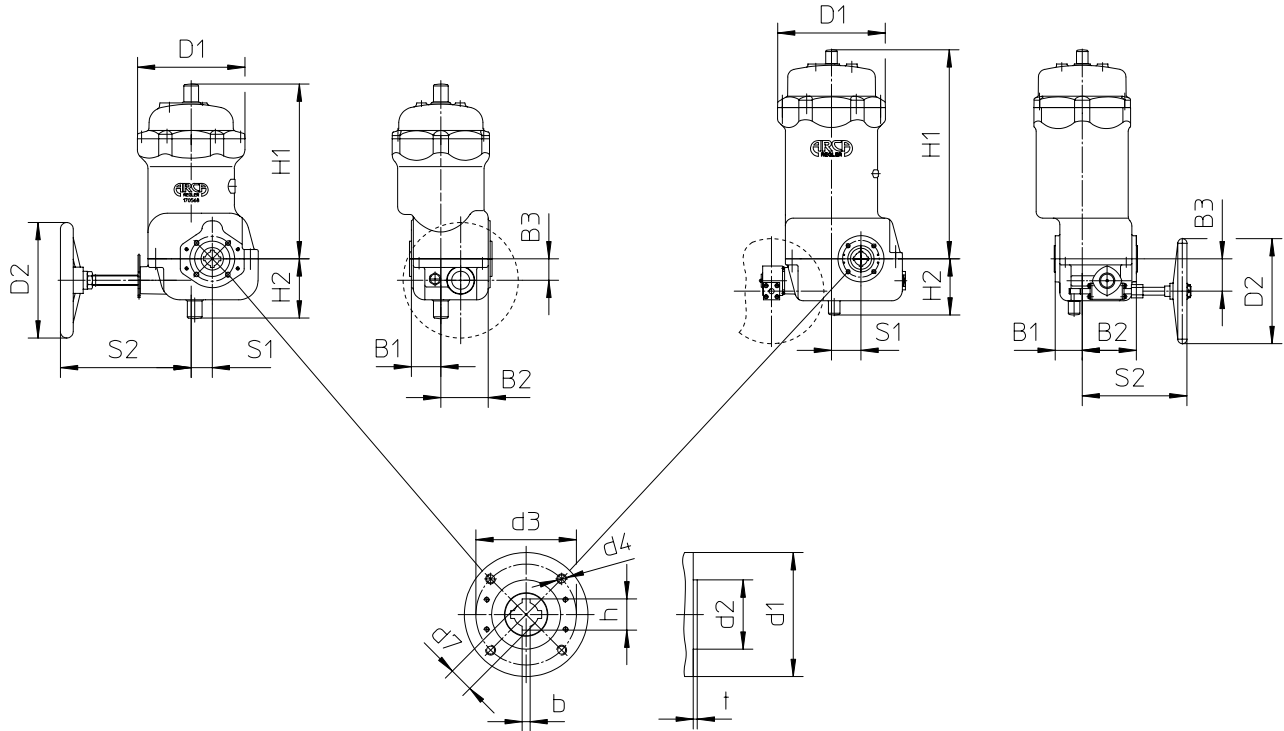


Technical Data Sheet Rotary Actuator



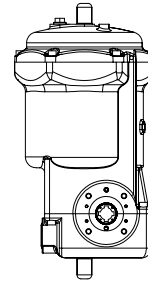
TD_840

Dimensions and weights



Type	Actuator									Mounting group	DIN/ISO 5211 DIN 3337-F__S							
	D1	D2	H1	H2	B1	B2	B3	S1	S2		d1	d2 _{f8}	d3	d4	t	d7	h	b ^{JS9}
841	168	180	273	93	46	77	33.5	33	125.5	F07	90	55	70	4xM8	3	15	19.4	5
															20	25.6	6	
															22	27.6	6	
842	284	225	429	132.5	66.5	105.5	44.5	44.5	177	F10	125	70	102	4xM10	3	15	19.4	5
															20	25.6	6	
															22	27.6	6	
															25	31.6	8	
843	320	320	609	192	79	142	86	88	245	F12	150	85	125	4xM12	3	22	27.6	6
															25	31.6	8	
															30	36.6	10	
															35	41.6	10	
															40	46.6	12	
844	412	400	796	214	103	207	135.5	112.5	305	F14	175	100	140	4xM16	3	35	41.6	10
															40	46.6	12	
															50	57.6	14	

Technical Data Sheet Rotary Actuator



TD_840

Type code

	841	-22	-09	-0	-1	-1	-0	-0	-0	-0
Series	841	diaphragm surface		103,87 cm ²						
Size of actuator	842	diaphragm surface		362,17 cm ²						
	843	diaphragm surface		471,20 cm ²						
	844	diaphragm surface		778,92 cm ²						
*Hub diameter (mm)	841	15/20/22								
	842	15/20/22/25								
	843	22/25/30/35/40								
	844	35/40/50								
Rotary angle	09	06	39							
	0-90°	0-60°	30-90°							
Standard spring	0	1								
	yes	no								
Internal piping	0	1	2							
	no	yes	only aeration							
Handwheel	0	1								
	no	yes								
Position indication	0	1								
	no	yES								
Special options	0	1								
	w/o	big screwing								
Painting	0	1	2							
	standard	special	hard-coated							
Execution	0	E	T							
	standard	hub diameter in inch	low temperature design							