

ACTUATOR

AL 77

Description

AL 77 is a pneumatic actuator for 90° operation of valves. AL 77 is available as double acting (DA) or single acting (SR). AL 77 is designed with an internal lever (the Scotch Yoke principle) which gives a higher torque at the start and end of the operation.

Applications: Operation of ball valves and butterfly valves. For simple to highly demanding applications.

- Type:

AL 77 210-DA – AL 77 280-DA double acting

AL 77 210-SR – AL 77 280-SR single acting
- Marking:

The actuator is marked AL 77.
- Connection:

Valve: ISO 521 I/DIN 3337

Accessories: VDI/VDE 3845, NAMUR

Solenoid valve: NAMUR
- Operation:

0°-90° (±3° adjustment in closed position)
- Pressure:

Max 10 bar (size 265 max. 8 bar)
- Operating media:

Instrument air, inert gases.

Approvals

- ATEX
- SIL approved

Optional

AL 77 is offered with many accessories and is available in several alternative designs, contact us for more information.

- High/low temperature
- Hand operation
- Extra corrosion protection, Tufam-coating
- Lockable version
- Shorter operating times



Material specification

Part	Material
Cylinder	Extruded anodized aluminium
End plate	Aluminium
Pistons	Aluminium
Drive shaft	Stainless steel (210-260) Galvanized steel (270-280)
Piston sealing	Nitrile
Corrosion protection	Anodized

Ambient temperature

Standard version	-20°C - +80°C
Low temperature (optional)	-40°C - +60°C
High temperature (optional)	0°C - +150°C

Air consumption / Operating times

Values given at 6 bar air pressure

AL 77	Air consumption free air (NI)			Operating time seconds
	DA		SR	
	Anti-clockwise	Clockwise		
210	0,6	1,1	1,1	< 0,3
220	1,1	1,3	1,3	< 0,3
230	2,2	4,0	4,0	< 0,6
240	4,4	5,0	5,0	< 0,7
250	6,9	13,0	13,0	< 2,5
260	13,8	16,0	16,0	< 2,5
265	32,0	56,0	56,0	< 1,5
270	33,0	54,0	54,0	< 5
280	66,0	67,0	67,0	< 5

Torque - Nm

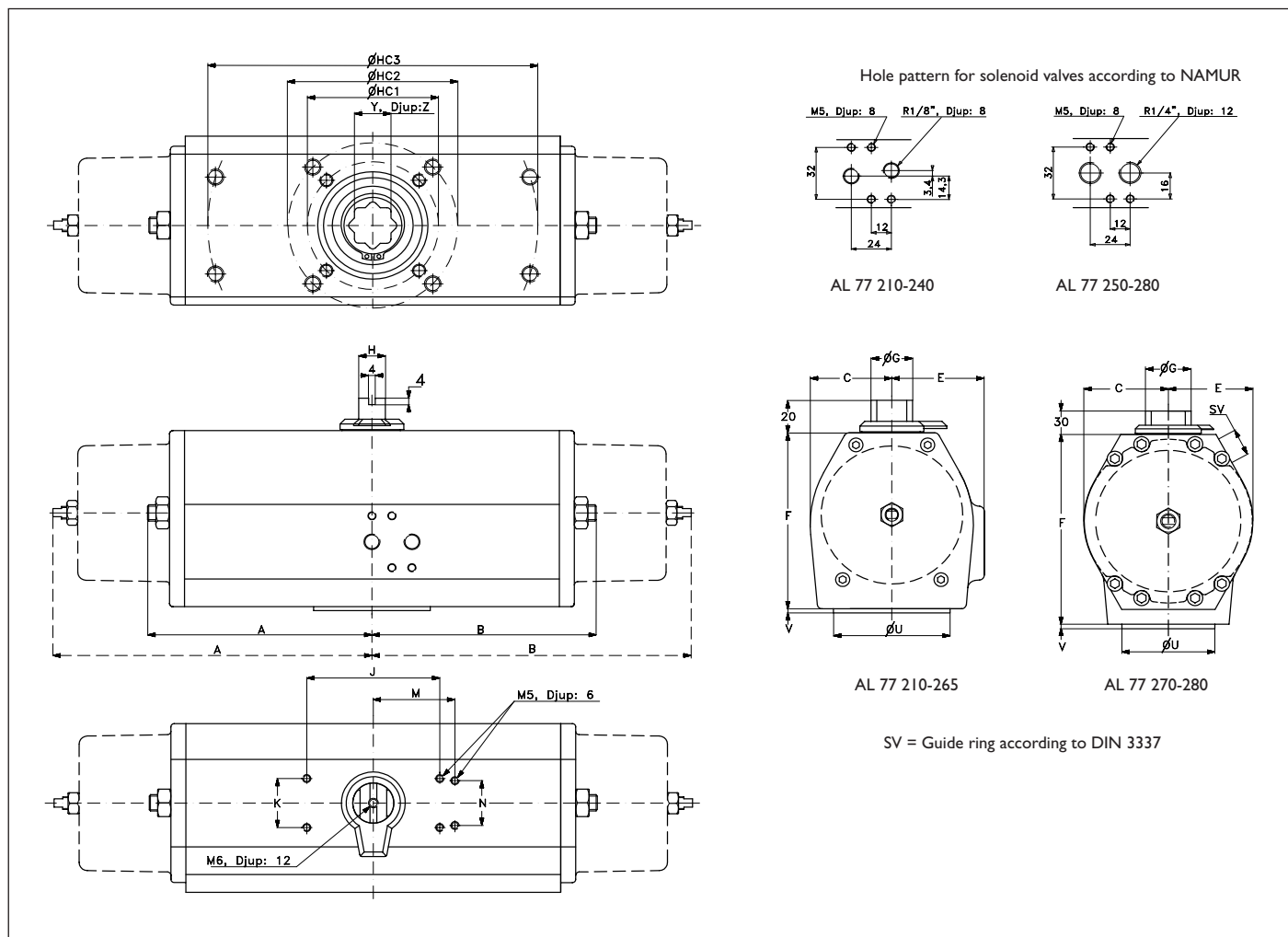
Values given at 6 bar air pressure 0° = Closed. 90° = Open.

AL 77	DA			SR					
	Air opens			Air opens			Spring closes		
	Air closes								
	0°	60°	90°	0°	60°	90°	90°	30°	0°
210	38	19	27	20	9	11	18	9	12
220	76	38	54	41	18	22	37	18	25
230	145	72	105	78	33	41	69	33	47
240	290	145	210	158	68	84	140	68	96
250	450	225	320	245	105	130	215	105	150
260	910	460	650	500	215	265	440	215	305
265	1296	606	921	730	305	330	610	330	440
270	1890	940	1360	1030	440	550	910	440	620
280	3800	1900	2740	2080	900	1110	1840	900	1260

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Dimensions



AL 77	Fig 1					Fig 2					Fig 3				Fig 4 / 4a								Weight kg	
	HC1	HC2	HC3	Y**	Z	A	B	AI	BI	H	J	K	M	N	C	E	F	G	U*	V	DA	SR		
210	F07	F07	-	14	19	45	98	45	150	10	35,4	35,4	40	30	32	41	75	16	35	2	1,2	1,5		
220	F05	F07	-	14	19	98	98	150	150	10	80	30	-	-	32	41	75	16	35	2	1,6	2,2		
230	F07	F10	-	17	30	65	135	65	200	16	80	30	-	-	49	55	110	25	55	3	3,5	4,2		
240	F07	F10	-	22	30	135	135	200	200	16	80	30	-	-	49	55	110	25	70	3	4,9	7,0		
250	F10	F12	-	22	37	90	190	90	285	22	80	30	-	-	69	75	155	35	70	3	9,4	12,4		
260	F10	F12	-	27	37	190	190	285	285	22	80	30	-	-	69	75	155	35	85	3	12,5	18,5		
265	F12	-	-	27	37	195	195	317	317	22	80	30	-	-	76	76	202	35	85	3	18,8	26,6		
270	F14	-	170x110	36	64	145	300	145	510	40	130	30	-	-	110	110	248	60	100	4	32,0	45,0		
280	F12	F16	234,7x97,2	46	64	300	300	510	510	40	130	30	-	-	110	110	248	60	130	5	42,0	68,0		

U* = Guide ring for other hole circle on request for. Y** = Tolerance H9. The hole is octagonal and adapts to valve stems with squares both in 90° (ISO 5711) och 45° (DIN 3337) direction.

Installation

Actuator to be installed on valves with 90° operation, either for direct mounting on the valve or with bracket and adaptor.