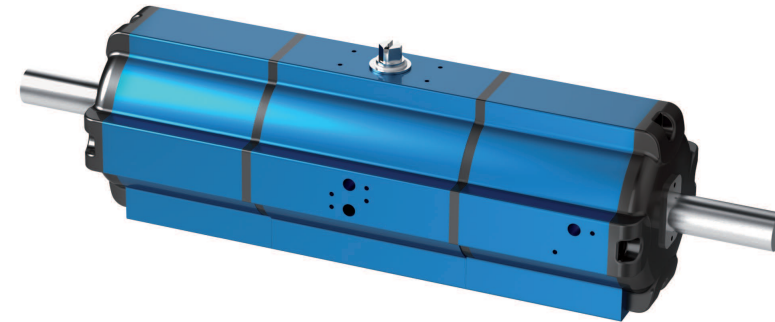


DOUBLE-PISTON QUARTER TURN ACTUATORS

TYPE DAD / DAF 90°

Technical Data

Design :	Pneumatic double-piston quarter turn actuator with dosing mode
Design features :	Rack-and-pinion system, piston guide via guide rods
Angle of rotation :	Fixed rotation angle 0° to 90° (normal operation) Adjustable at any position between 0° and 90° (dosing mode) Also suitable for Partial Stroke application
Air pressure supply :	mind. 2 bar, max. 8 bar
Operating medium :	Dry and filtered compressed air
Ambient temperature :	-25°C to +80°C
Mounting position :	any
Resistance to corrosion :	Industrial atmosphere
Lubrication :	Life time lubrication with grease ISO 51825-K2K-30
Seals :	NBR-O-Rings, 70 Shore
Coatings :	Housing anodized and colour sealed End caps - CED Cathodic electrodeposition
Maintenance and inspection :	AMG actuators are free of maintenance within the life time. Provided that: <ul style="list-style-type: none">• the actuator is properly mounted• the operating medium used is clean and non-aggressive• the actuator is operated under normal ambient conditions• the actuator is used in compliance with the intended use (see assembly and maintenance manual)
Applied standard :	DIN EN ISO 5211, DIN EN 15714-3, VDI / VDE 3845, DIN 79



DAD / DAF

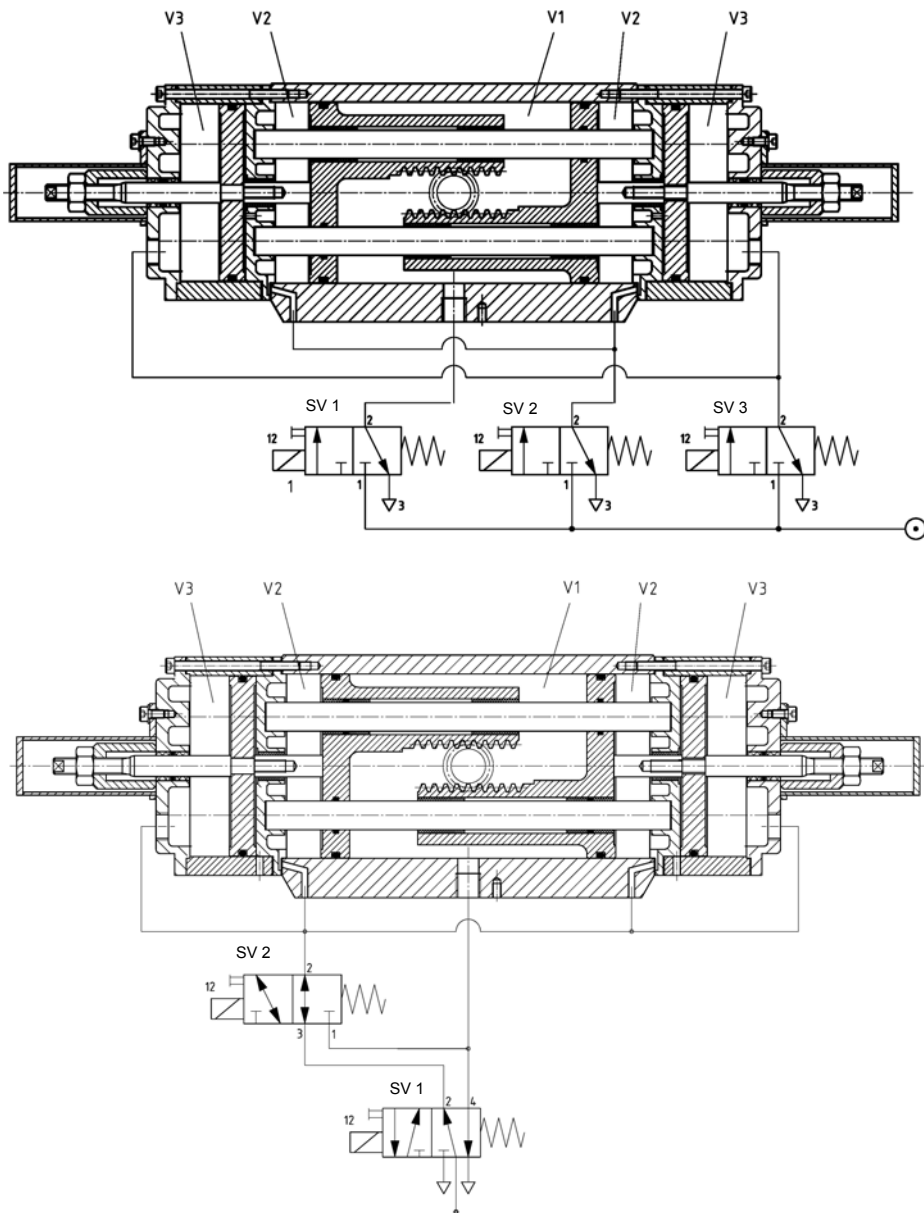
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DOUBLE-PISTON QUARTER TURN ACTUATORS
TYPE DAD / DAF 90°



DAD (3x 3/2 Way)	SV 1	SV 2	SV 3
	12	12	12
0° - Intremediate position	1	0	1
Intremediate position - 90°	1	0	0
90° - Intremediate position	0	0	1
Intremediate position - 0°	0	1	1
0° - 90°	1	0	0
90° - 0°	0	1	1

DAD (1x 3/2 & 1x 5/2 Way)	SV 1	SV 2
	12	12
0° - Intremediate position	1	0
Intremediate position - 90°	1	0
90° - Intremediate position	0	0
Intremediate position - 0°	0	1
0° - 90°	1	0
90° - 0°	0	1

(SV 2 switchen after SV 1)

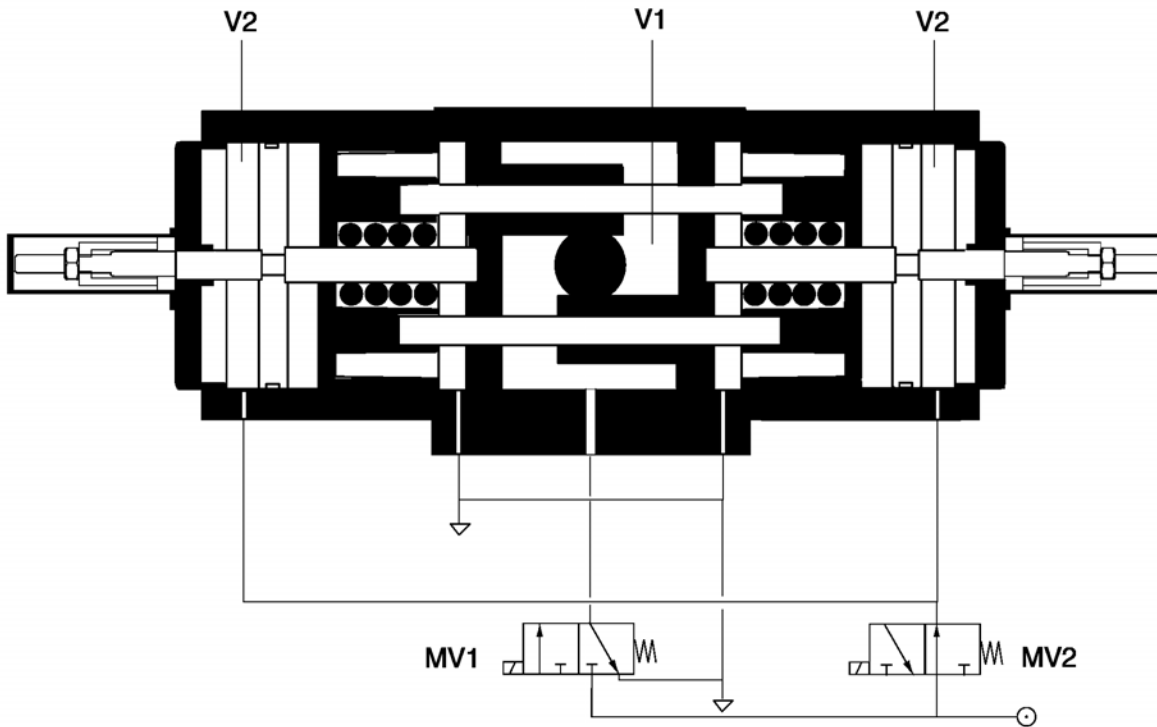
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DOUBLE-PISTON QUARTER TURN ACTUATORS
TYPE DAD / DAF 90°



DAF

The mechanism is actuated using two 3/2 directional valves.

Coarse pulse: MV I switches to Position 1 and aerates V₁. MV II remains in Position 1 and de-aerates V₂. The inner piston opens the fitting by 90° in a counter-clockwise direction.

Fine pulse: MV II switches to Position 1 and aerates V₂. V₁ remains aerated. With the support of spring forces, outer pistons move the inner pistons against the aerated V₁ chamber until the completely reproducible, fixed middle position, which is set using the outer adjusting nuts, has been reached. The fitting is closed in a clockwise direction until it reaches the middle position.

Blocking pulse: MV I and MV II switch to Position 0. V₁ and V₂ are de-aerated. The released spring forces close the fitting.

Note: If V₂ is not de-aerated, it can be moved between the "CLOSED" and "Dosing" positions.

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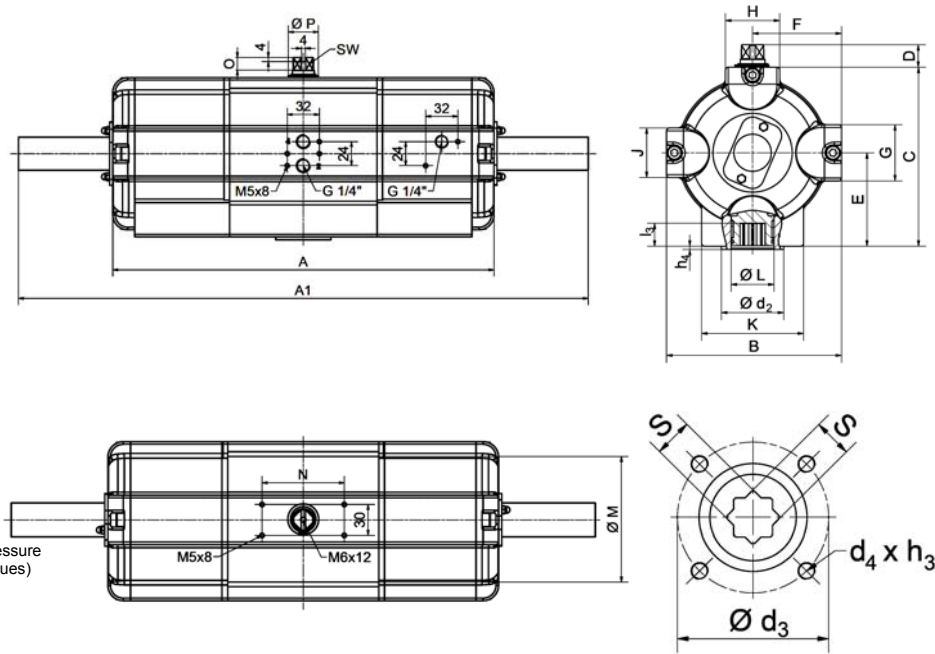
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DOUBLE-PISTON QUARTER TURN ACTUATORS
TYPE DAD / DAF 90°

Size	35	
Weight [kg]		
Type DAD	34,3	
Type DAF	40,2	
Stroke volume [dm³]		
Type DAD	6,8	
Type DAF	3,9	
Operating times [sec.] ¹⁾		
Type DAD OPEN	1,0	
Type DAD CLOSE	1,0	
Type DAF ²⁾ OPEN	2,0	
Type DAF ²⁾ CLOSE	1,0	

1) operating times at 4,5 bar air pressure supply without load (standard values)

2) Type DAF with 9 springs



Type	number of springs n	spring-torque		air torque Ma [Nm] at operating pressure pe [bar]																									
		Ms [Nm]		2 bar		2,5 bar		3 bar		3,5 bar		4 bar		4,5 bar		5 bar		5,5 bar		6 bar		6,5 bar		7 bar		7,5 bar		8 bar	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
DAD 35	-	-	-	221		286		350		413		478		543		607		671		736		801		863		925		986	
DAF 35	4	87	144	77	134	142	199	206	263	269	326	334	391	399	456	463	520	527	584	592	649	657	714	719	776	781	838	842	899
	5	109	180	41	112	106	177	170	241	233	304	298	369	363	434	427	498	491	562	556	627	621	692	683	754	745	816	806	877
	6	131	216	5	90	70	155	134	219	197	282	262	347	327	412	391	476	455	540	520	605	585	670	647	732	709	794	770	855
	7	152	252			34	134	98	198	161	261	226	326	291	391	355	455	419	519	484	584	549	649	611	711	673	773	734	834
	8	174	288					62	176	125	239	190	304	255	369	319	433	383	497	448	562	513	627	575	689	637	751	698	812
	9	196	324					26	154	89	217	154	282	219	347	283	411	347	475	412	540	477	605	539	667	601	729	662	790
	10	218	360							53	195	118	260	183	325	247	389	311	453	376	518	441	583	503	645	565	707	626	768
	11	239	396							17	174	82	239	147	304	211	368	275	432	340	497	405	562	467	624	529	686	590	747
12	261	432									46	217	111	282	175	346	239	410	304	475	369	540	431	602	493	664	554	725	

Design	DAD / DAF
Size	35
A	591
A1	869
B	218
C	217
D	20
E	112
F	109
G	50
H	90
K	108
Ø L	62
J	50
Ø M	192
N	80
O	12
Ø P	50
SW	30
Connection ISO 5211	F12
Ø d ₂	85
Ø d ₃	125
d ₄ x h ₃	M12x20
Number of screws	4
h ₄	3
l ₃	30
s	27

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