

## Rotary actuators ▶ Rotary wing drives

### Rotary wing drives, Series RAK

▶ angle of rotation: 90 - 270 ° ▶ Rotary wing drive, double-acting ▶ axis geometry: single



00133616

Ambient temperature min./max.	+5 °C / +60 °C
Medium temperature min./max.	+5 °C / +60 °C
Medium	Compressed air
Max. particle size	5 μm
Oil content of compressed air	0 mg/m <sup>3</sup> - 1 mg/m <sup>3</sup>
Theoretical torque at	6 bar

Materials:	
Housing	Aluminum, painted/powder-coated
Seals	Acrylonitrile butadiene rubber
Axis	Stainless steel

#### Technical Remarks

- The pressure dew point must be at least 15 °C under ambient and medium temperature and may not exceed 3 °C.
- The oil content of compressed air must remain constant during the life cycle.
- Use only the approved oils from AVENTICS, see chapter „Technical information“.

Frame size		RAK - 6S	RAK - 6D	RAK - 7S	RAK - 7D	RAK - 8S
Axis diameter	[mm]	12	12	17	17	25
Max. permissible axial bearing load	[N]	44.1	44.1	88.2	88.2	147
Max. permissible radial bearing load	[N]	588	588	1176	1176	1960
Interior volume	[cm <sup>3</sup> ]	51	42	146	127	283
Repetitive precision	[°]	3	3	3	3	3
Theoretical torque	[Nm]	6	13	18	42	35
Permissible kinetic energy	[J]	0.049	0.049	0.225	0.225	1.078
Version		Single vane	Double vane	Single vane	Double vane	Single vane

Frame size		RAK - 8D			
Axis diameter	[mm]	25			
Max. permissible axial bearing load	[N]	147			
Max. permissible radial bearing load	[N]	1960			
Interior volume	[cm <sup>3</sup> ]	244			
Repetitive precision	[°]	3			
Theoretical torque	[Nm]	83			
Permissible kinetic energy	[J]	1.078			
Version		Double vane			

Frame size	Compressed air connection	angle of rotation	Swivel time	Working pressure	Maximum operating frequency	Weight	Part No.
		[°]	min./max. [s]	min./max. [bar]	[1/min]	[kg]	
RAK - 6S	G 1/8	180	0.16 / 1.6	2 / 10	90	0.79	<b>2705060300</b>
		270	0.25 / 2.5		60	0.73	<b>2705062800</b>
RAK - 6D	G 1/8	90	0.08 / 0.8	2 / 10	180	0.82	<b>2705061100</b>
RAK - 7S	G 1/4	180	0.24 / 2.4	2 / 10	80	1.9	<b>2705070300</b>
		270	0.36 / 3.6		50	1.7	<b>2705072700</b>
RAK - 7D	G 1/4	90	0.12 / 1.2	2 / 10	120	2	<b>2705071100</b>
RAK - 8S	G 3/8	180	0.32 / 3.2	2 / 10	60	3.7	<b>2705080300</b>

Swivel time: The values indicated are for the max. angle of rotation.  
Scope of delivery: incl. parallel key

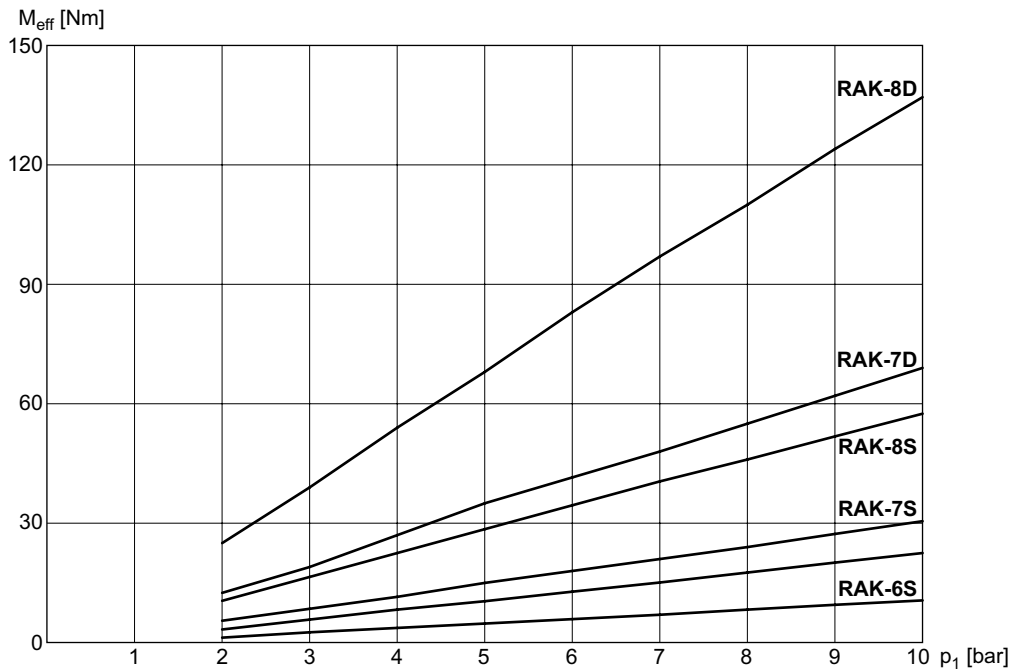
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Frame size	Compressed air connection	angle of rotation	Swivel time min./max.	Working pressure min./max.	Maximum operating frequency	Weight	Part No.
		[°]	[s]	[bar]	[1/min]	[kg]	
RAK - 8D	G 3/8	90	0.16 / 1.6	2 / 10	90	4.3	<b>2705081100</b>

Swivel time: The values indicated are for the max. angle of rotation.  
Scope of delivery: incl. parallel key

**Effective torque**



$M_{eff}$ : effective torque

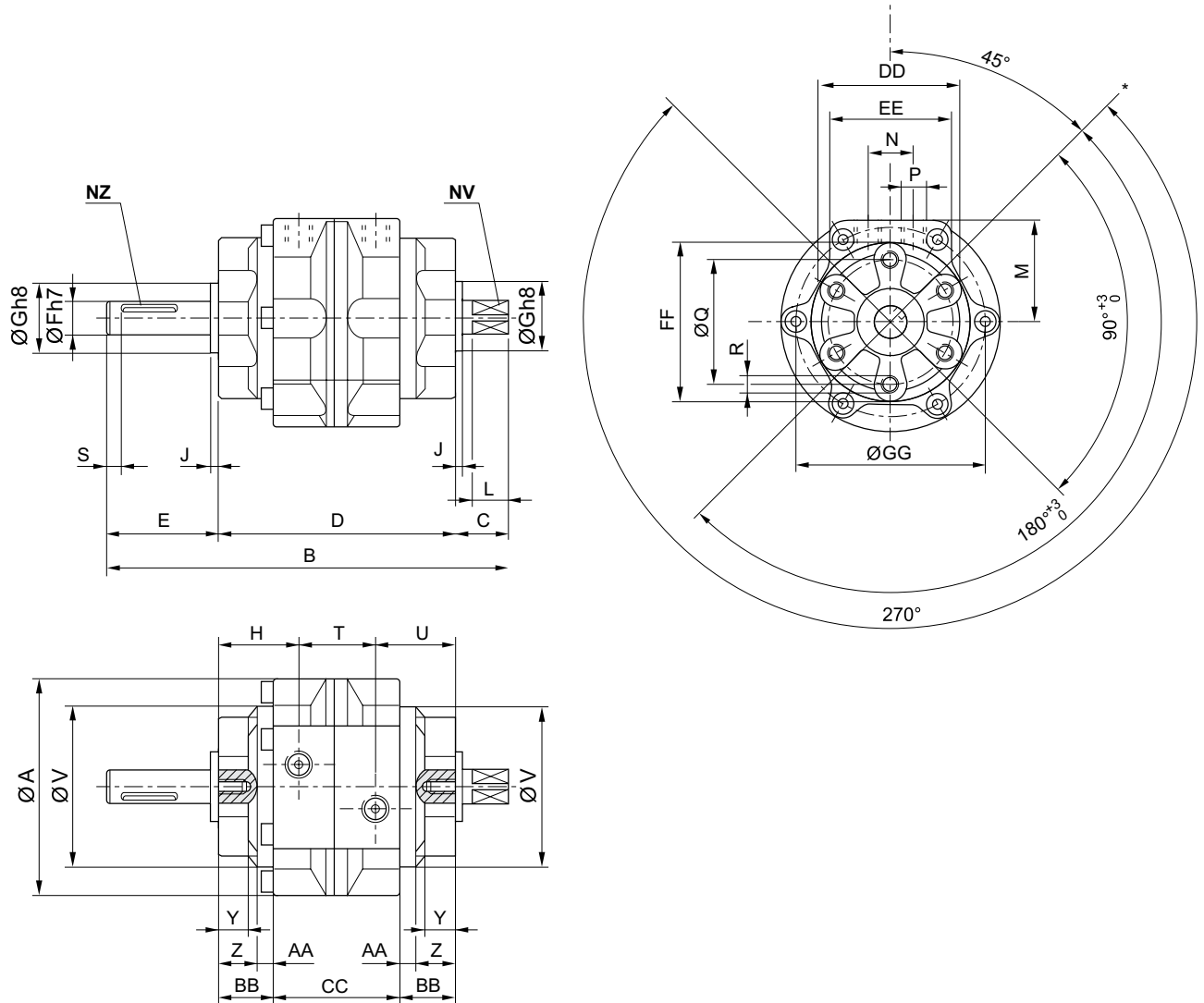
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### Dimensions



\* Oscillating reference point

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Frame size	A	B	C	D	E	F	G	H	J	L	M	N	P
RAK - 6S	79	145	19.5	86	39.5	12	25	29	2.5	13	36	16	G 1/8
RAK - 6D	79	145	19.5	86	39.5	12	25	29	2.5	13	36	16	G 1/8
RAK - 7S	110	180	23.5	103	53.5	17	30	34.5	3	16	51	24	G 1/4
RAK - 7D	110	180	23.5	103	53.5	17	30	34.5	3	16	51	24	G 1/4
RAK - 8S	141.5	220	30	125	65	25	45	41.5	3.5	22	66	32	G 3/8
RAK - 8D	141.5	220	30	125	65	25	45	41.5	3.5	22	66	32	G 3/8

Frame size	Q	R	S	T	U	V	Y	Z	AA	BB	CC	DD	EE
RAK - 6S	45	M6x1	5	28	29	58	11	14	6	20	46	51	44
RAK - 6D	45	M6x1	5	28	29	58	11	14	6	20	46	51	44
RAK - 7S	70	M8x1,25	5	34	34.5	85.2	10.5	15.5	8	23.5	56	75	61
RAK - 7D	70	M8x1,25	5	34	34.5	85.2	10.5	15.5	8	23.5	56	75	61
RAK - 8S	80	M10x1,5	5		41.5	110	13	17.5	10	27.5	70	88.5	78

Part numbers marked in bold are available from the central warehouse in Germany, see the shopping basket for more detailed information

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Frame size	Q	R	S	T	U	V	Y	Z	AA	BB	CC	DD	EE
RAK - 8D	80	M10x1,5	5		41.5	110	13	17.5	10	27.5	70	88.5	78

Frame size	FF	GG	NV	NZ 1)									
RAK - 6S	57	68	10	4x2,5x20									
RAK - 6D	57	68	10	4x2,5x20									
RAK - 7S	85	97	13	5x3x36									
RAK - 7D	85	97	13	5x3x36									
RAK - 8S	98.5	125	19	7x4x40									
RAK - 8D	98.5	125	19	7x4x40									

1) Groove: width x depth x length