

- Torque 0,15 ... 147 Nm
- Angle of rotation 90 ... 180°
- Rotary wing drive
- Cushioning: elastic
- Optionally with adjustable angle of rotation and hydraulic shock absorber

AVENTICS Series RAK Rotary wing drives

The AVENTICS Series RAK is an efficient and easy way to generate torque from compressed air, in a very compact size. They are ideal for the compact applications in a wide range of industries such as, packaging, process, electronics etc.



Technical data

| | |
|-------------------------------------|---|
| Industry | Industrial |
| Type | Archive product: Do not use in new constructions! |
| Compressed air connection | G 3/8 |
| Rotary compact module version | Rotary wing drive, double-acting |
| axis geometry | single |
| Frame size | RAK - 8S |
| Type | Single vane |
| Axis diameter | 25 mm 17 mm 25 mm |
| Theoretical torque at | 6 bar |
| Min. swivel times | 0.32 s |
| Maximum operating frequency | 60 |
| Interior volume | 283 cm ³ |
| Max. permissible axial bearing load | 147 N |
| Radial shaft load | 1960 N |
| Theoretical torque | 35 Nm |
| Permissible kinetic energy | 1.08 J |
| Repetitive precision | 3 ° |

| | |
|------------------------------------|---------------------|
| Max. angle of rotation | 180 ° |
| Min. working pressure | 2 bar |
| Max. working pressure | 10 bar |
| Min. ambient temperature | 5 °C |
| Max. ambient temperature | 60 °C |
| Min. medium temperature | 5 °C |
| Max. medium temperature | 60 °C |
| Medium | Compressed air |
| Min. oil content of compressed air | 0 mg/m ³ |
| Max. oil content of compressed air | 1 mg/m ³ |
| Max. particle size | 5 µm |
| Weight | 3.7 kg |

Material

| | |
|------------------|--------------------------------|
| Housing material | Aluminum |
| Surface housing | painted/powder-coated |
| Seal material | Acrylonitrile butadiene rubber |
| Material axis | Stainless Steel |
| Part No. | 2705080300 |

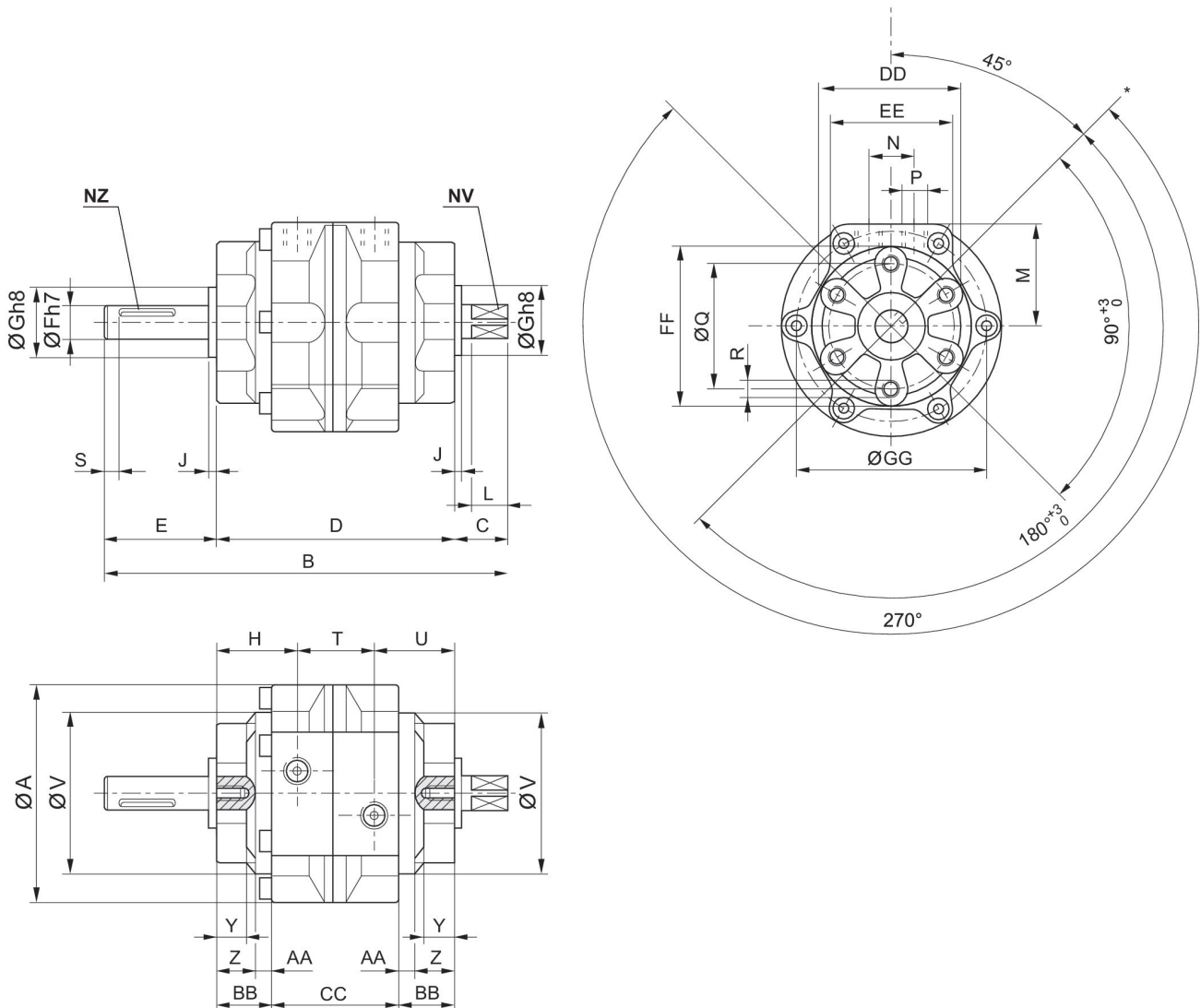
Technical information

The pressure dew point must be at least 15 °C less than 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. Further information can be found in the “Technical information” document (available in <https://www.emerson.com/en-us/support>).

Dimensions



* Oscillating reference point

| Frame size | Part No. | A | B | C | D | E | F | G | H |
|------------|------------|-------|-----|------|-----|------|----|----|------|
| RAK-6S | 2705060300 | 79 | 145 | 19.5 | 86 | 39.5 | 12 | 25 | 29 |
| RAK-6S | 2705062800 | 79 | 145 | 19.5 | 86 | 39.5 | 12 | 25 | 29 |
| RAK-6D | 2705061100 | 79 | 145 | 19.5 | 86 | 39.5 | 12 | 25 | 29 |
| RAK-7S | 2705070300 | 110 | 180 | 23.5 | 103 | 53.5 | 17 | 30 | 34.5 |
| RAK-7S | 2705072700 | 110 | 180 | 23.5 | 103 | 53.5 | 17 | 30 | 34.5 |
| RAK-7D | 2705071100 | 110 | 180 | 23.5 | 103 | 53.5 | 17 | 30 | 34.5 |
| RAK-8S | 2705080300 | 141.5 | 220 | 30 | 125 | 65 | 25 | 45 | 41.5 |
| RAK-8D | 2705081100 | 141.5 | 220 | 30 | 125 | 65 | 25 | 45 | 41.5 |

| Frame size | J | L | M | N | P | Q | R | S | T |
|------------|-----|----|----|----|-------|----|------|---|----|
| RAK-6S | 2.5 | 13 | 36 | 16 | G 1/8 | 45 | M6x1 | 5 | 28 |

Rotary wing drives, Series RAK

2705080300

Series RAK

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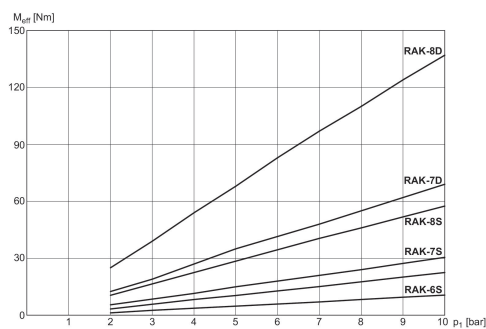
| Frame size | J | L | M | N | P | Q | R | S | T |
|------------|-----|----|----|----|-------|----|---------|---|----|
| RAK-6S | 2.5 | 13 | 36 | 16 | G 1/8 | 45 | M6x1 | 5 | 28 |
| RAK-6D | 2.5 | 13 | 36 | 16 | G 1/8 | 45 | M6x1 | 5 | 28 |
| RAK-7S | 3 | 16 | 51 | 24 | G 1/4 | 70 | M8x1,25 | 5 | 34 |
| RAK-7S | 3 | 16 | 51 | 24 | G 1/4 | 70 | M8x1,25 | 5 | 34 |
| RAK-7D | 3 | 16 | 51 | 24 | G 1/4 | 70 | M8x1,25 | 5 | 34 |
| RAK-8S | 3.5 | 22 | 66 | 32 | G 3/8 | 80 | M10x1,5 | 5 | - |
| RAK-8D | 3.5 | 22 | 66 | 32 | G 3/8 | 80 | M10x1,5 | 5 | - |

| Frame size | U | V | Y | Z | AA | BB | CC | DD | EE |
|------------|------|------|------|------|----|------|----|------|----|
| RAK-6S | 29 | 58 | 11 | 14 | 6 | 20 | 46 | 51 | 44 |
| RAK-6S | 29 | 58 | 11 | 14 | 6 | 20 | 46 | 51 | 44 |
| RAK-6D | 29 | 58 | 11 | 14 | 6 | 20 | 46 | 51 | 44 |
| RAK-7S | 34.5 | 85.2 | 10.5 | 15.5 | 8 | 23.5 | 56 | 75 | 61 |
| RAK-7S | 34.5 | 85.2 | 10.5 | 15.5 | 8 | 23.5 | 56 | 75 | 61 |
| RAK-7D | 34.5 | 85.2 | 10.5 | 15.5 | 8 | 23.5 | 56 | 75 | 61 |
| RAK-8S | 41.5 | 110 | 13 | 17.5 | 10 | 27.5 | 70 | 88.5 | 78 |
| RAK-8D | 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-6S | 57 | 68 | 10 | 4x2,5x20 |
| RAK-6D | 57 | 68 | 10 | 4x2,5x20 |
| RAK-7S | 85 | 97 | 13 | 5x3x36 |
| 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

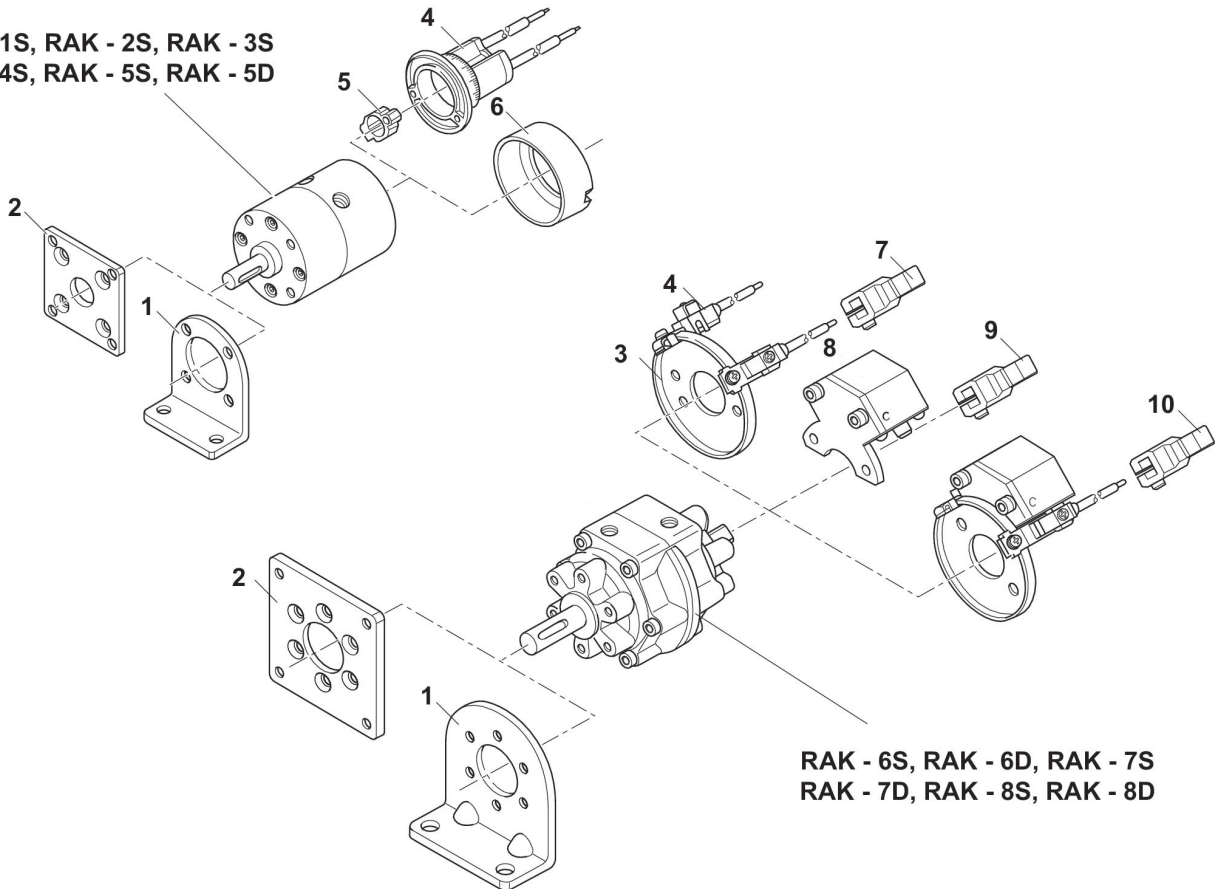
Effective torque



M_{eff}: effective torque

Overview drawing

RAK - 1S, RAK - 2S, RAK - 3S
RAK - 4S, RAK - 5S, RAK - 5D



RAK - 6S, RAK - 6D, RAK - 7S
RAK - 7D, RAK - 8S, RAK - 8D

1) foot mounting 2) flange mounting 3) mounting plate for sensor 4) sensor unit 5) Magnet 6) Protective cover 7) swivel arm with magnet 8) hydraulic shock absorber 9) swivel arm without magnet 10) swivel arm with magnet

NOTE: This overview drawing is only for orientation to indicate where the various accessory parts can be fastened to the cylinder. The illustration has been simplified for this purpose. It is thus not possible to derive the dimensions from this overview.