

## Series RAK



AVENTICS™ Series RAK



# Rotary wing drives, Series RAK

- angle of rotation max. 90 180 270 °

- Rotary wing drive, double-acting

- axis geometry single



Working pressure min./max.

Ambient temperature min./max.

Medium temperature min./max.

Medium

Max. particle size

Oil content of compressed air

Theoretical torque at

Weight

See table below

See table below

-5 ... 60 °C

Compressed air

5 µm

0 ... 1 mg/m<sup>3</sup>

6 bar

See table below

## Technical data

| Part No.   | Frame size | Compressed air connection | angle of rotation | Min. swivel times |
|------------|------------|---------------------------|-------------------|-------------------|
|            |            | G                         |                   |                   |
| 2705010100 | RAK - 1S   | M5                        | 90 °              | 0.03 s            |
| 2705010300 | RAK - 1S   | M5                        | 180 °             | 0.06 s            |
| 2705120300 | RAK - 2S   | M5                        | 30-180 °          | 0.08 s            |
| 2705130300 | RAK - 3S   | M5                        | 30-180 °          | 0.08 s            |
| 2705140300 | RAK - 4S   | M5                        | 30-180 °          | 0.1 s             |
| 2705150400 | RAK - 5S   | G 1/8                     | 30-270 °          | 0.2 s             |
| 2705151400 | RAK - 5D   | G 1/8                     | 30-90 °           | 0.2 s             |

| Part No.   | Working pressure min./max. | Ambient temperature min./max. | Maximum operating frequency | Weight   |
|------------|----------------------------|-------------------------------|-----------------------------|----------|
| 2705010100 | 2 ... 7 bar                | -5 ... 80 °C                  | 300                         | 0.036 kg |
| 2705010300 | 2 ... 7 bar                | -5 ... 80 °C                  | 180                         | 0.036 kg |
| 2705120300 | 2 ... 7 bar                | -5 ... 80 °C                  | 150                         | 0.085 kg |
| 2705130300 | 2 ... 7 bar                | -5 ... 80 °C                  | 150                         | 0.17 kg  |
| 2705140300 | 2 ... 10 bar               | -5 ... 80 °C                  | 120                         | 0.28 kg  |
| 2705150400 | 2 ... 10 bar               | -5 ... 60 °C                  | 90                          | 0.51 kg  |
| 2705151400 | 2 ... 10 bar               | -5 ... 60 °C                  | 180                         | 0.53 kg  |

Swivel time: The values indicated are for the max. angle of rotation., Sliding block included in the scope of delivery

## Technical data

| Frame size                           | RAK - 1S            | RAK - 2S          | RAK - 3S           | RAK - 4S           |
|--------------------------------------|---------------------|-------------------|--------------------|--------------------|
| Axis diameter                        | 4 mm                | 5 mm              | 6 mm               | 8 mm               |
| Max. permissible axial bearing load  | 3 N                 | 4 N               | 4 N                | 25 N               |
| Max. permissible radial bearing load | 30 N                | 40 N              | 50 N               | 300 N              |
| Interior volume                      | 1.4 cm <sup>3</sup> | 4 cm <sup>3</sup> | 12 cm <sup>3</sup> | 21 cm <sup>3</sup> |
| Repetitive precision                 | 4 °                 | 4 °               | 4 °                | 4 °                |

| Frame size                 | RAK - 1S    | RAK - 2S    | RAK - 3S    | RAK - 4S    |
|----------------------------|-------------|-------------|-------------|-------------|
| Theoretical torque         | 0.15 Nm     | 0.38 Nm     | 1 Nm        | 2 Nm        |
| Permissible kinetic energy | 0.001 J     | 0.001 J     | 0.002 J     | 0.003 J     |
| Version                    | Single vane | Single vane | Single vane | Single vane |

| Frame size                           | RAK - 5D           | RAK - 5S           |
|--------------------------------------|--------------------|--------------------|
| Axis diameter                        | 10 mm              | 10 mm              |
| Max. permissible axial bearing load  | 30 N               | 30 N               |
| Max. permissible radial bearing load | 400 N              | 400 N              |
| Interior volume                      | 34 cm <sup>3</sup> | 43 cm <sup>3</sup> |
| Repetitive precision                 | 4 °                | 4 °                |
| Theoretical torque                   | 10 Nm              | 4 Nm               |
| Permissible kinetic energy           | 0.007 J            | 0.007 J            |
| Version                              | Double vane        | Single vane        |

## Technical information

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.

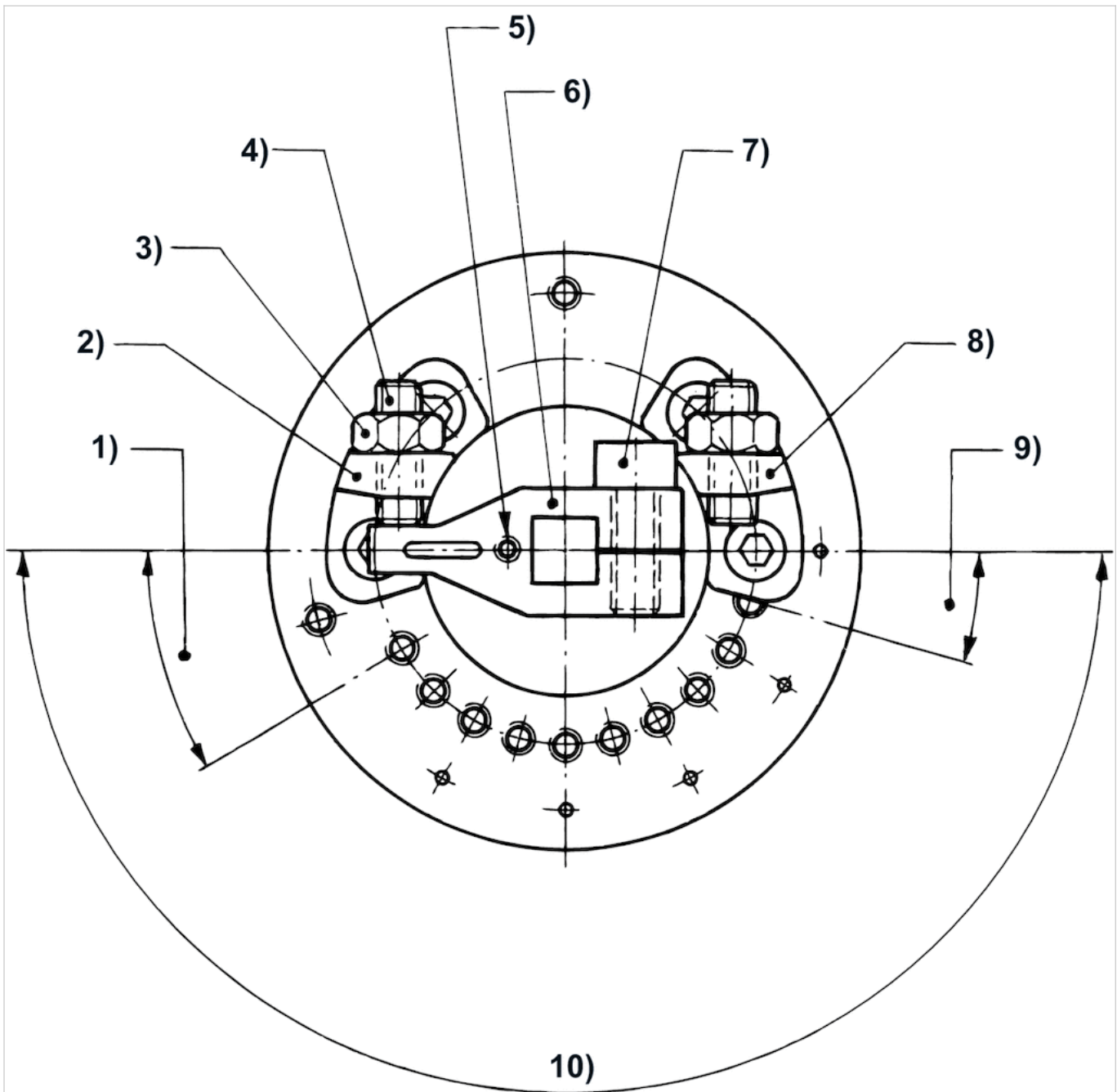
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

| Material |                                |
|----------|--------------------------------|
| Housing  | Aluminum, anodized             |
| Seal     | Acrylonitrile butadiene rubber |
| Axis     | Steel                          |

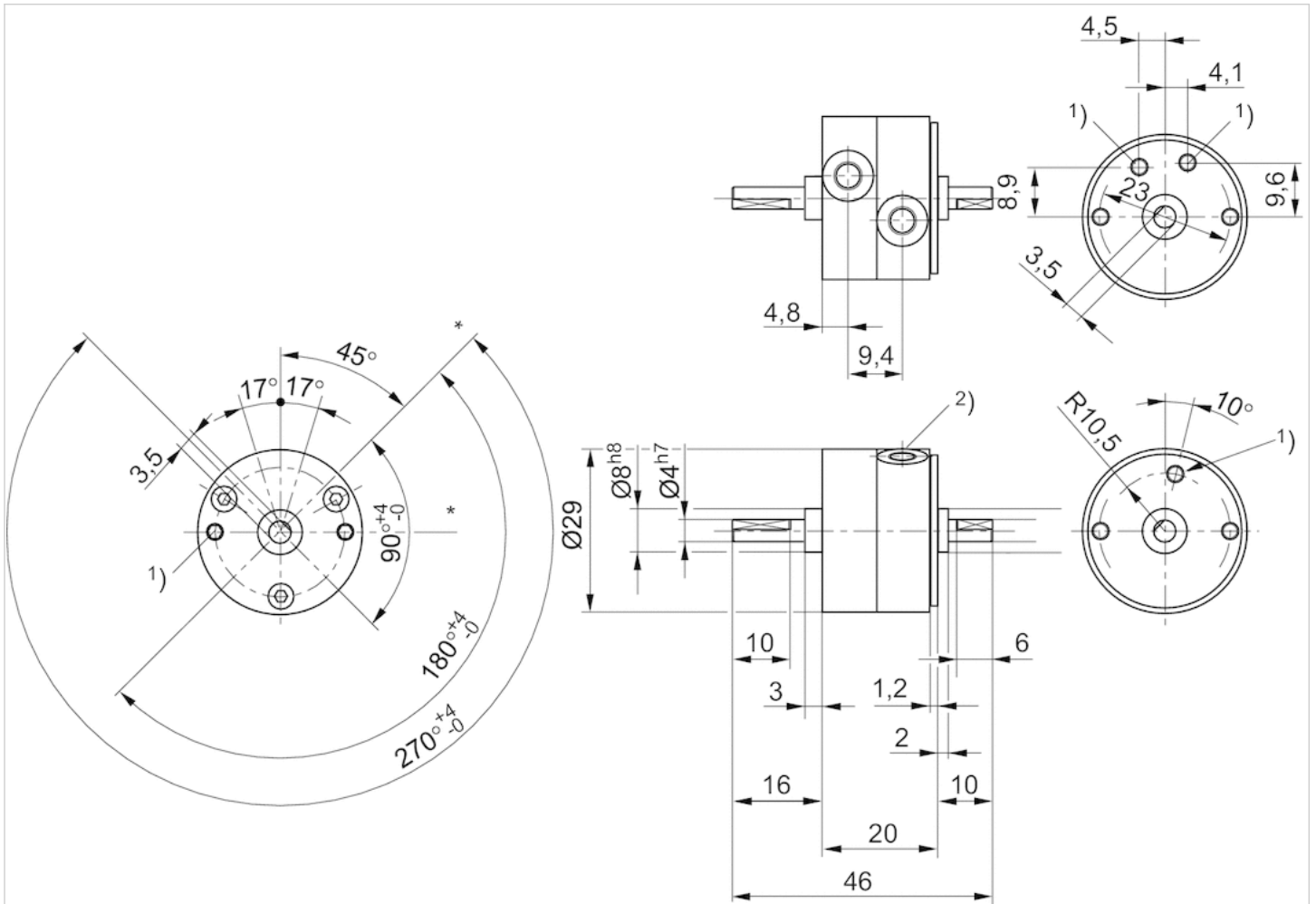
## Dimensions

Adjustable stop, Mounted on 2S, 3S, 4S, 5S and 5D at delivery



- 1) Minimum angle setting 30°. 2) Reference point stopper. 3) Locknut. 4) Fine adjust screw. 5) Mounting hole for magnet. 6) Swivel arm. 7) Swivel arm fixation screw. 8) Angle setting stopper. 9) Stopper mounting pitch 15°. 10) Oscillating angle.

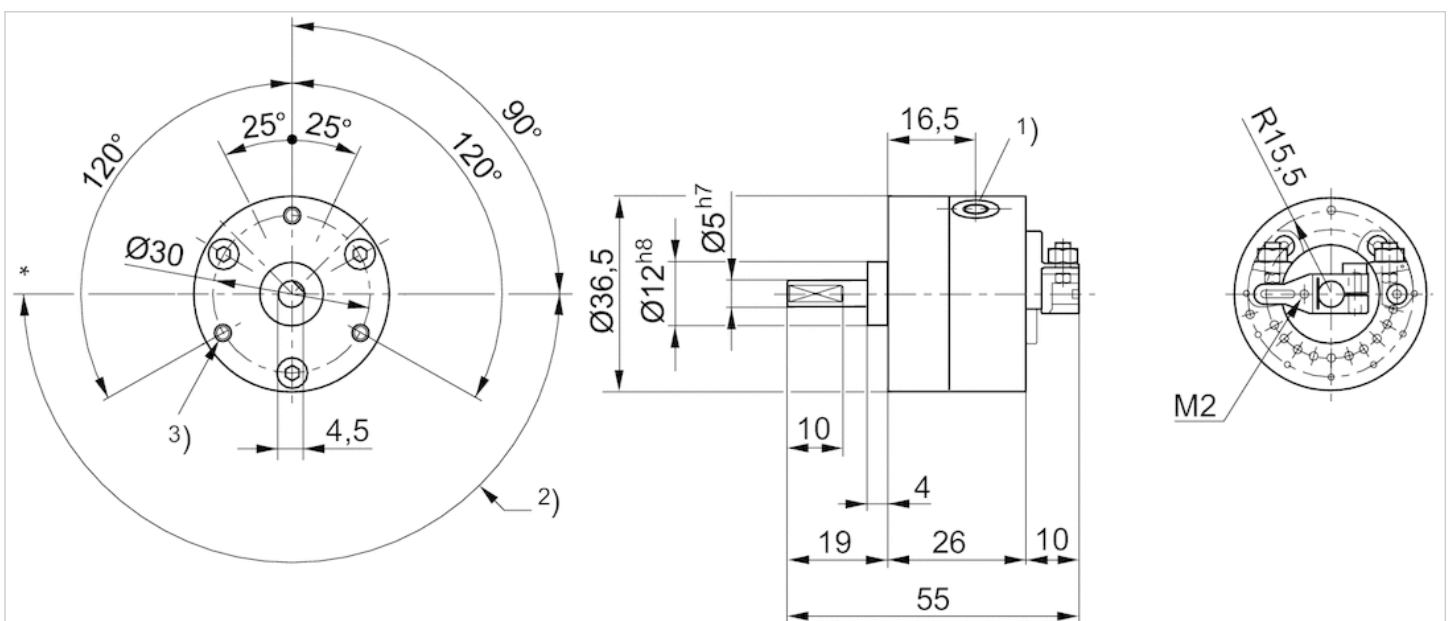
RAK - 1S, Fixed angle of rotation



\* Oscillating reference point

- 1) M3
- 2) 2 x M5

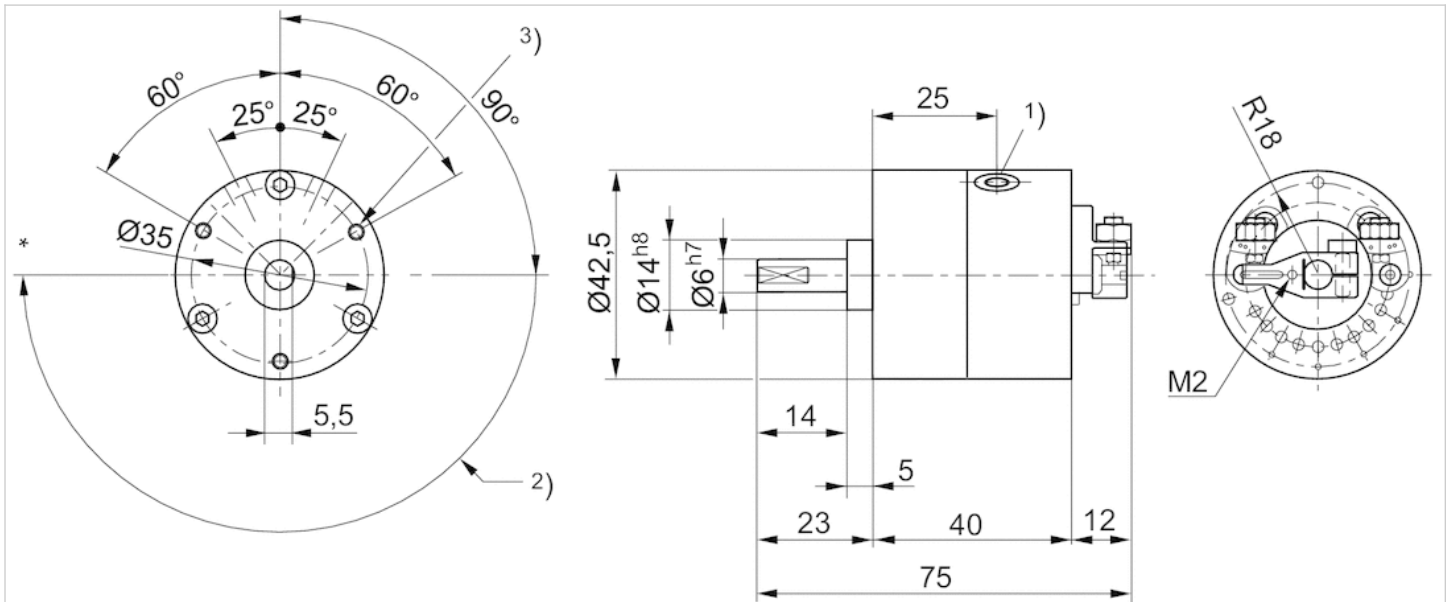
RAK - 2S, Adjustable angle of rotation



\* Oscillating reference point

- 1) 2 x M5
- 2) Angle of rotation 30° to 180°
- 3) 3x M3, depth 6

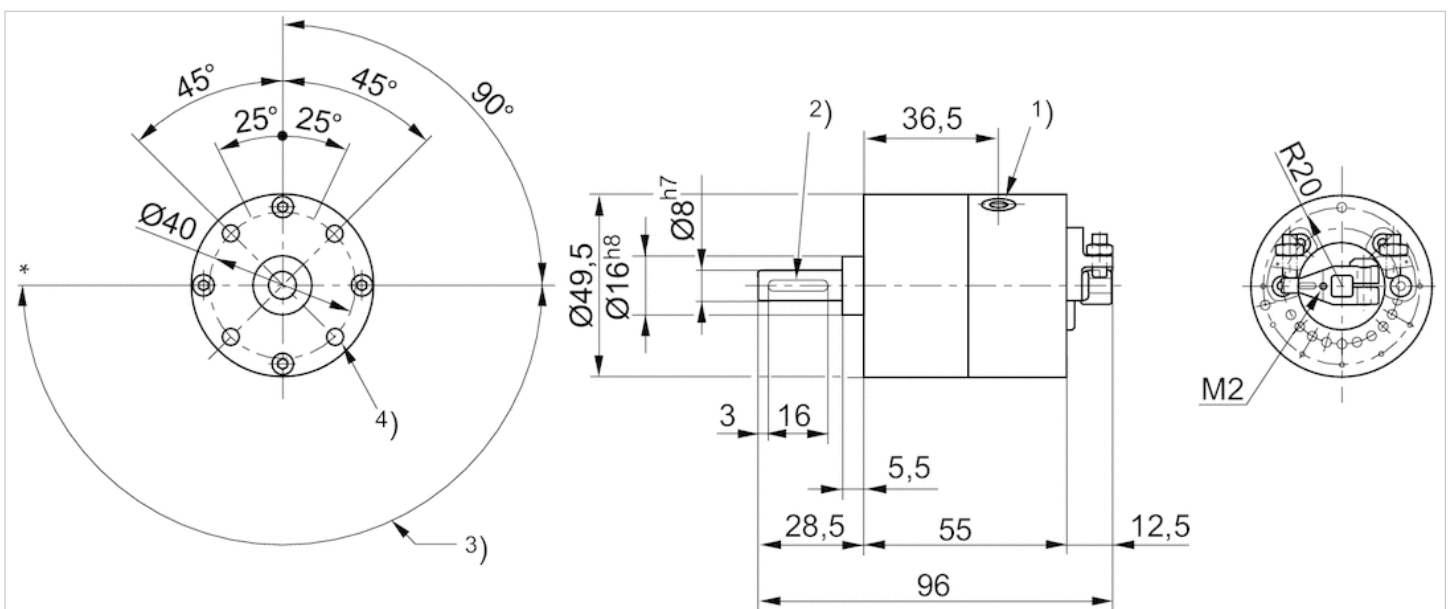
RAK - 3S, Adjustable angle of rotation



\* Oscillating reference point

- 1) 2 x M5
- 2) Angle of rotation 30° to 180°
- 3) 3x M3, depth 6

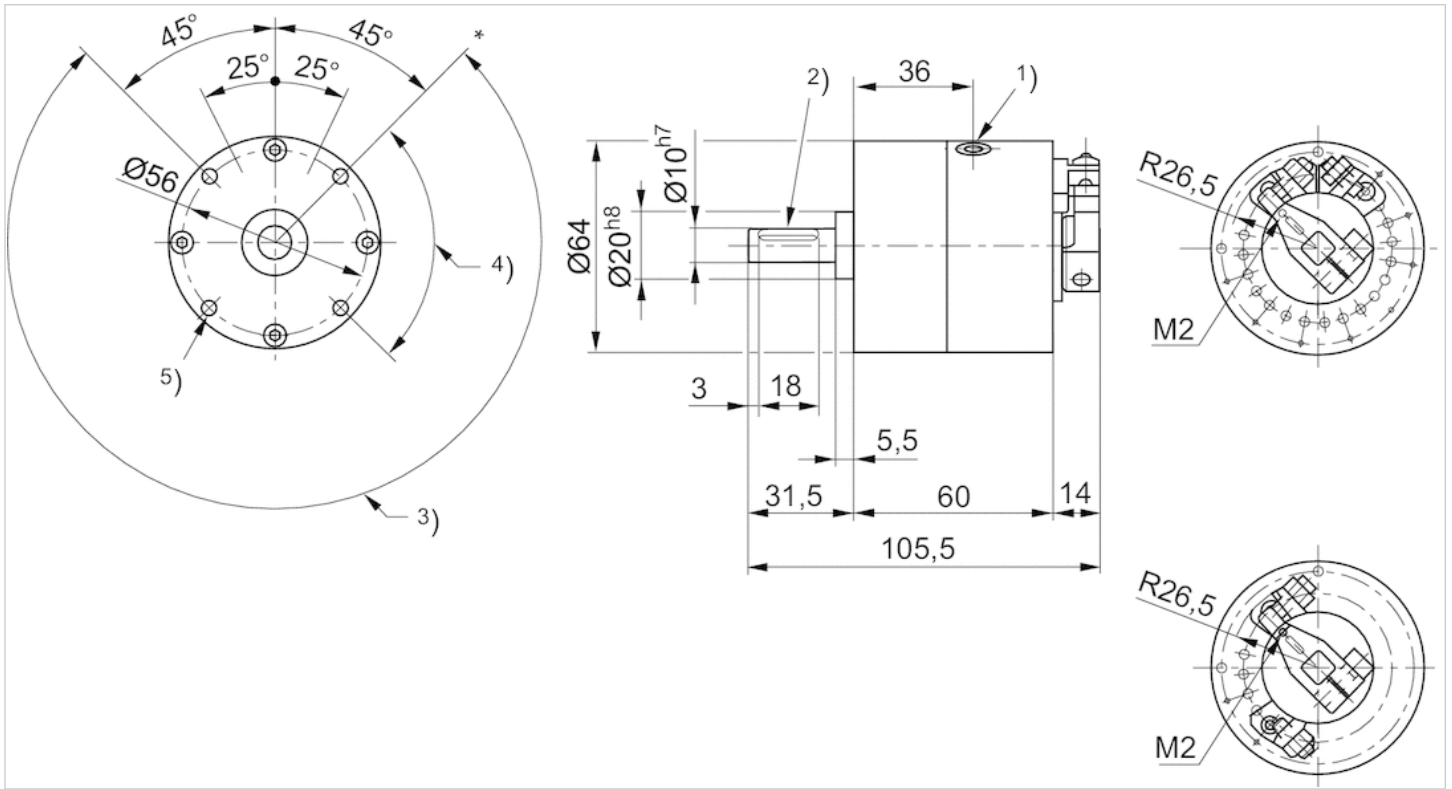
RAK - 4S, Adjustable angle of rotation



\* Oscillating reference point

- 1) 2 x M5
- 2) Groove: 3x1.8
- 3) Angle of rotation 30° to 180°
- 4) 4x M5, depth 8

RAK - 5S, RAK - 5D, Adjustable angle of rotation

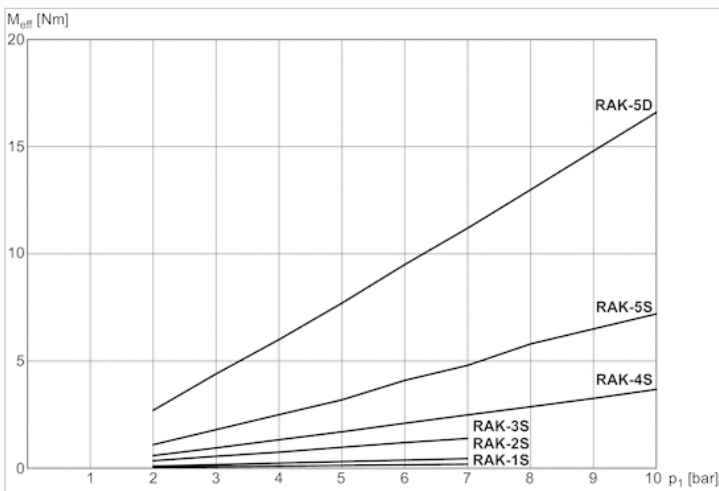


\* Oscillating reference point

- 1) 2x G1/8
- 2) Groove: 4x2.5
- 3) Angle of rotation 30° to 270°
- 4) Angle of rotation 90°
- 5) 4x M5, depth 8

Diagrams

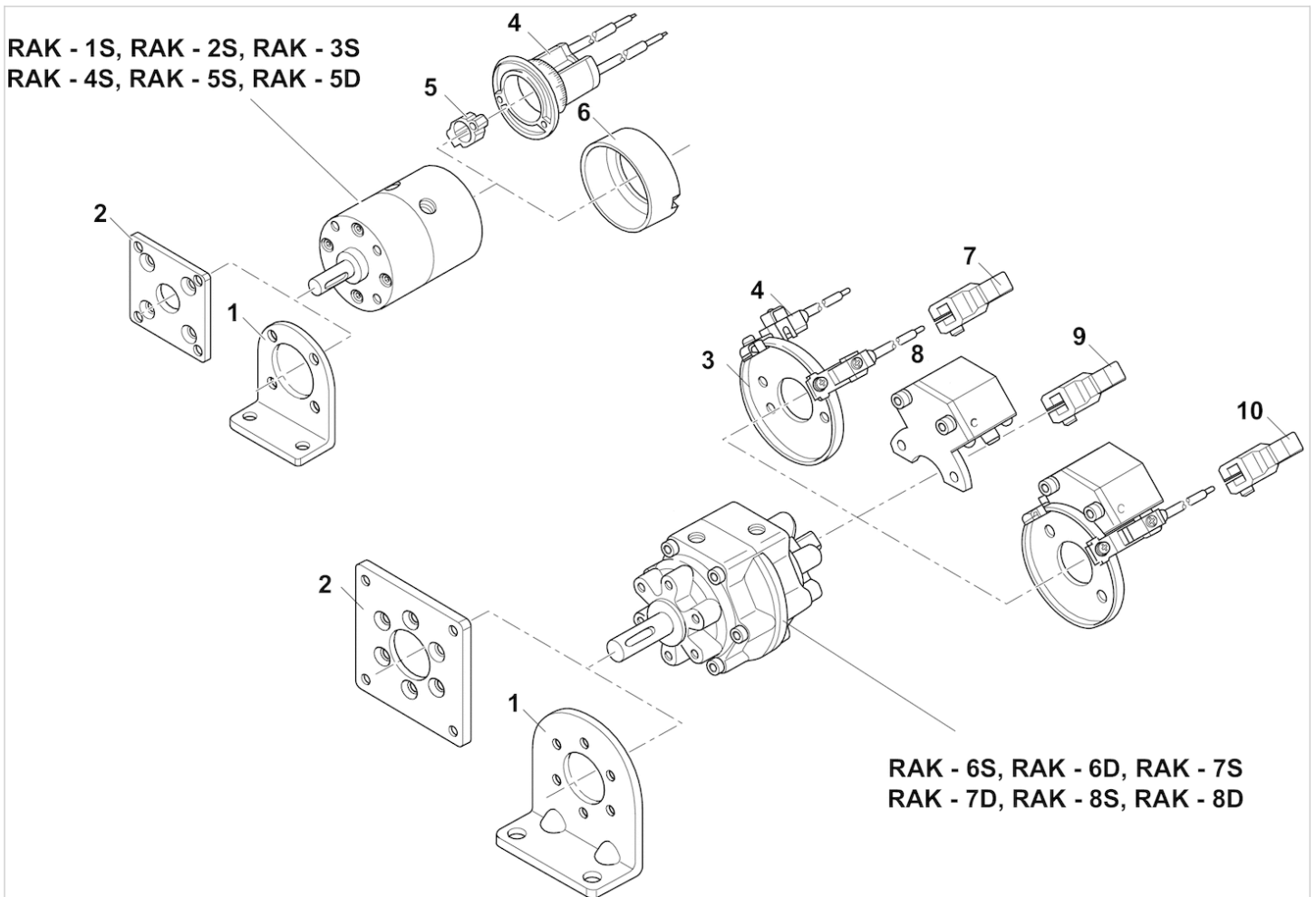
Effective torque



$M_{eff}$ : effective torque

## Accessories overview

### Overview drawing



- 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.



# Rotary wing drives, Series RAK

- angle of rotation max. 180 270 90 °
- Rotary wing drive, double-acting
- axis geometry single



|                               |                           |
|-------------------------------|---------------------------|
| Working pressure min./max.    | 2 ... 10 bar              |
| Ambient temperature min./max. | 5 ... 60 °C               |
| Medium temperature min./max.  | 5 ... 60 °C               |
| Medium                        | Compressed air            |
| Max. particle size            | 5 µm                      |
| Oil content of compressed air | 0 ... 1 mg/m <sup>3</sup> |
| Theoretical torque at         | 6 bar                     |
| Weight                        | See table below           |

## Technical data

| Part No.   | Frame size | Compressed air connection | angle of rotation | Min. swivel times |
|------------|------------|---------------------------|-------------------|-------------------|
|            |            | G                         |                   |                   |
| 2705060300 | RAK - 6S   | G 1/8                     | 180 °             | 0.16 s            |
| 2705062800 | RAK - 6S   | G 1/8                     | 270 °             | 0.25 s            |
| 2705061100 | RAK - 6D   | G 1/8                     | 90 °              | 0.08 s            |
| 2705070300 | RAK - 7S   | G 1/4                     | 180 °             | 0.24 s            |
| 2705072700 | RAK - 7S   | G 1/4                     | 270 °             | 0.36 s            |
| 2705071100 | RAK - 7D   | G 1/4                     | 90 °              | 0.12 s            |
| 2705080300 | RAK - 8S   | G 3/8                     | 180 °             | 0.32 s            |
| 2705081100 | RAK - 8D   | G 3/8                     | 90 °              | 0.16 s            |

| Part No.   | Maximum operating frequency | Weight  |
|------------|-----------------------------|---------|
| 2705060300 | 90                          | 0.79 kg |
| 2705062800 | 60                          | 0.73 kg |
| 2705061100 | 180                         | 0.82 kg |
| 2705070300 | 80                          | 1.9 kg  |
| 2705072700 | 50                          | 1.7 kg  |
| 2705071100 | 120                         | 2 kg    |
| 2705080300 | 60                          | 3.7 kg  |
| 2705081100 | 90                          | 4.3 kg  |

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

## Technical data

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

| Frame size                           | RAK - 8D            | RAK - 8S            |
|--------------------------------------|---------------------|---------------------|
| Axis diameter                        | 25 mm               | 25 mm               |
| Max. permissible axial bearing load  | 147 N               | 147 N               |
| Max. permissible radial bearing load | 1960 N              | 1960 N              |
| Interior volume                      | 244 cm <sup>3</sup> | 283 cm <sup>3</sup> |
| Repetitive precision                 | 3 °                 | 3 °                 |
| Theoretical torque                   | 83 Nm               | 35 Nm               |
| Permissible kinetic energy           | 1.08 J              | 1.08 J              |
| Version                              | Double vane         | Single vane         |

## Technical information

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.

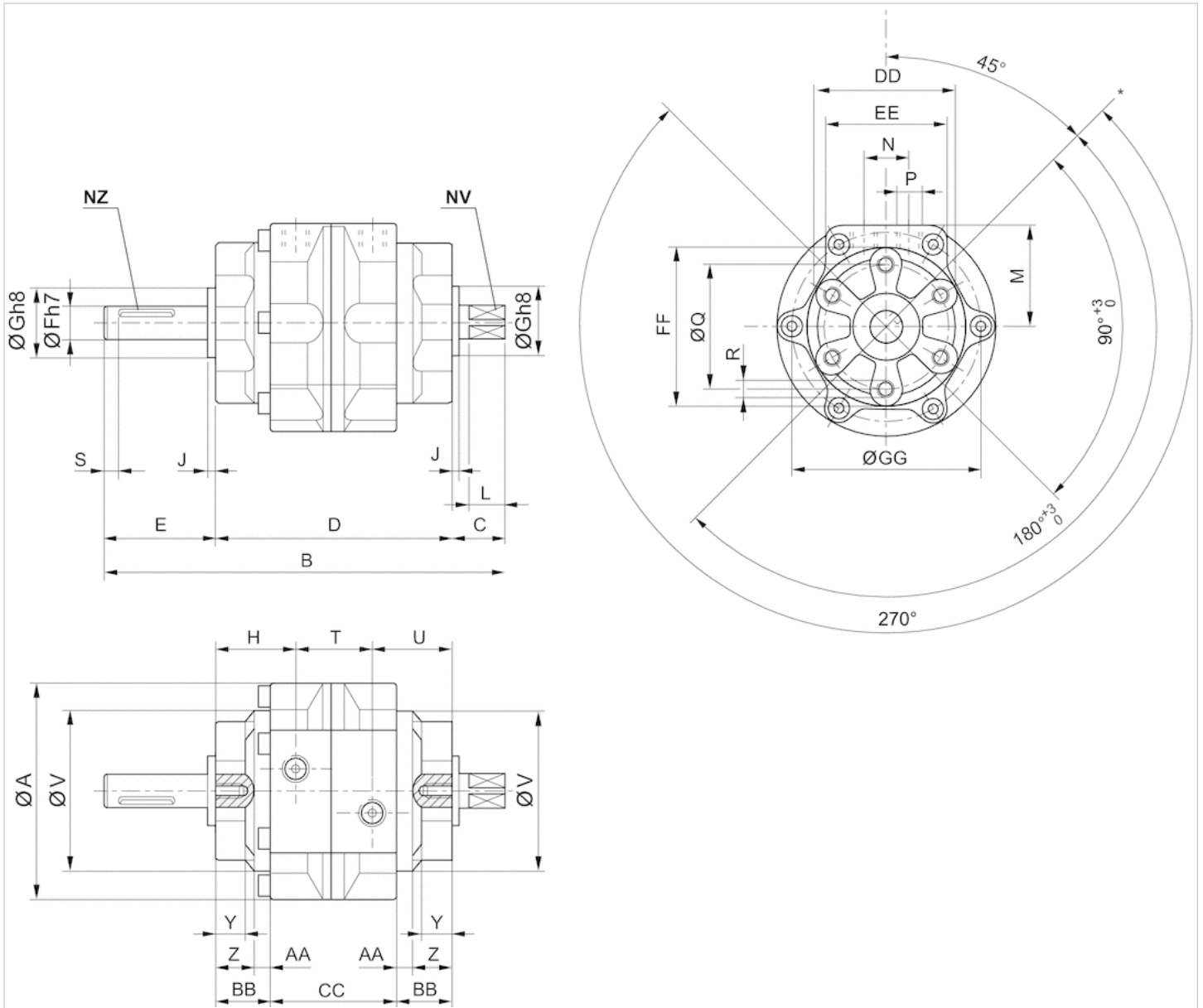
Use only the approved oils from AVENTICS. Further information can be found in the "Technical information" document (available in the MediaCentre).

## Technical information

| Material |                                 |
|----------|---------------------------------|
| Housing  | Aluminum, painted/powder-coated |
| Seal     | Acrylonitrile butadiene rubber  |
| Axis     | Stainless steel                 |

## Dimensions

### Dimensions



\* Oscillating reference point

## Dimensions

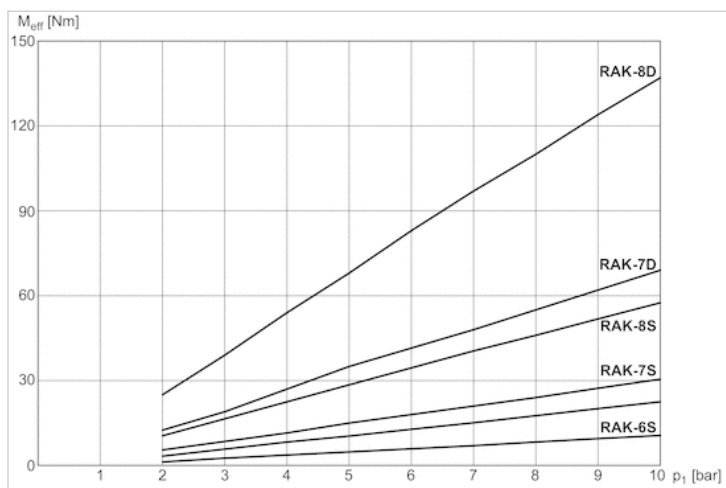
| Part No.   | Frame size | A     | B   | C    | D   | E    | F  | G  | H    | J   | L  | M  | N  | P     | Q  | R       | S | T  |
|------------|------------|-------|-----|------|-----|------|----|----|------|-----|----|----|----|-------|----|---------|---|----|
| 2705060300 | RAK - 6S   | 79    | 145 | 19.5 | 86  | 39.5 | 12 | 25 | 29   | 2.5 | 13 | 36 | 16 | G 1/8 | 45 | M6x1    | 5 | 28 |
| 2705062800 | RAK - 6S   | 79    | 145 | 19.5 | 86  | 39.5 | 12 | 25 | 29   | 2.5 | 13 | 36 | 16 | G 1/8 | 45 | M6x1    | 5 | 28 |
| 2705061100 | RAK - 6D   | 79    | 145 | 19.5 | 86  | 39.5 | 12 | 25 | 29   | 2.5 | 13 | 36 | 16 | G 1/8 | 45 | M6x1    | 5 | 28 |
| 2705070300 | RAK - 7S   | 110   | 180 | 23.5 | 103 | 53.5 | 17 | 30 | 34.5 | 3   | 16 | 51 | 24 | G 1/4 | 70 | M8x1,25 | 5 | 34 |
| 2705072700 | RAK - 7S   | 110   | 180 | 23.5 | 103 | 53.5 | 17 | 30 | 34.5 | 3   | 16 | 51 | 24 | G 1/4 | 70 | M8x1,25 | 5 | 34 |
| 2705071100 | RAK - 7D   | 110   | 180 | 23.5 | 103 | 53.5 | 17 | 30 | 34.5 | 3   | 16 | 51 | 24 | G 1/4 | 70 | M8x1,25 | 5 | 34 |
| 2705080300 | RAK - 8S   | 141.5 | 220 | 30   | 125 | 65   | 25 | 45 | 41.5 | 3.5 | 22 | 66 | 32 | G 3/8 | 80 | M10x1,5 | 5 | -  |
| 2705081100 | RAK - 8D   | 141.5 | 220 | 30   | 125 | 65   | 25 | 45 | 41.5 | 3.5 | 22 | 66 | 32 | G 3/8 | 80 | M10x1,5 | 5 | -  |

| U    | V    | Y    | Z    | AA | BB   | CC | DD   | EE | FF   | GG  | NV | NZ 1)    |
|------|------|------|------|----|------|----|------|----|------|-----|----|----------|
| 29   | 58   | 11   | 14   | 6  | 20   | 46 | 51   | 44 | 57   | 68  | 10 | 4x2,5x20 |
| 29   | 58   | 11   | 14   | 6  | 20   | 46 | 51   | 44 | 57   | 68  | 10 | 4x2,5x20 |
| 29   | 58   | 11   | 14   | 6  | 20   | 46 | 51   | 44 | 57   | 68  | 10 | 4x2,5x20 |
| 34.5 | 85.2 | 10.5 | 15.5 | 8  | 23.5 | 56 | 75   | 61 | 85   | 97  | 13 | 5x3x36   |
| 34.5 | 85.2 | 10.5 | 15.5 | 8  | 23.5 | 56 | 75   | 61 | 85   | 97  | 13 | 5x3x36   |
| 34.5 | 85.2 | 10.5 | 15.5 | 8  | 23.5 | 56 | 75   | 61 | 85   | 97  | 13 | 5x3x36   |
| 41.5 | 110  | 13   | 17.5 | 10 | 27.5 | 70 | 88.5 | 78 | 98.5 | 125 | 19 | 7x4x40   |
| 41.5 | 110  | 13   | 17.5 | 10 | 27.5 | 70 | 88.5 | 78 | 98.5 | 125 | 19 | 7x4x40   |

1) Groove: width x depth x length

## Diagrams

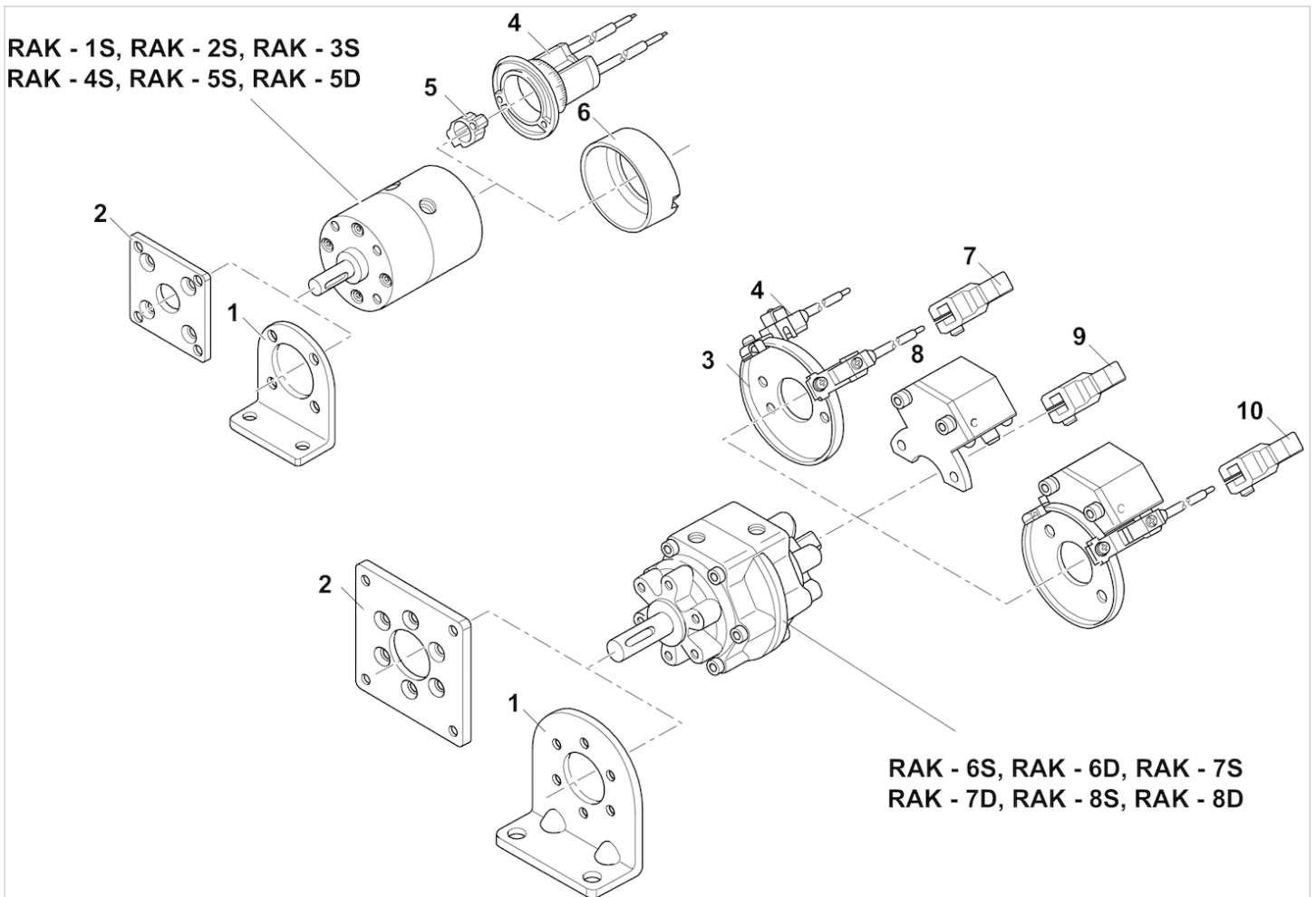
### Effective torque



M<sub>eff</sub>: effective torque

## Accessories overview

### Overview drawing



- 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.

# Foot mounting

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



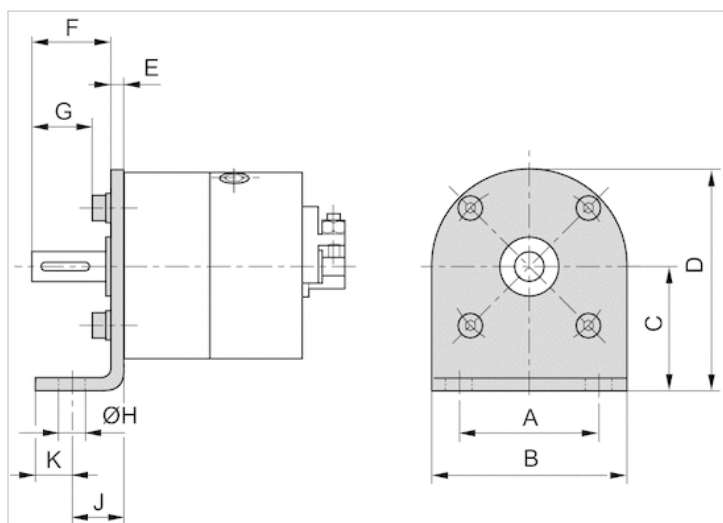
## Technical data

| Part No.   |
|------------|
| 2706112000 |
| 2706122000 |
| 2706132000 |
| 2706142000 |
| 2706152000 |

## Technical information

| Material |            |
|----------|------------|
| Material | Steel      |
|          | galvanized |

## Dimensions



## Dimensions

| Part No.   | For series         | A  | B  | C  | D  | E   | F    | G    | H   | J  | K  |
|------------|--------------------|----|----|----|----|-----|------|------|-----|----|----|
| 2706112000 | RAK - 1S           | 20 | 30 | 22 | 37 | 2   | 14   | 10.3 | 4.8 | 10 | 5  |
| 2706122000 | RAK - 2S           | 26 | 36 | 25 | 43 | 2.6 | 16.4 | 12.7 | 4.8 | 11 | 7  |
| 2706132000 | RAK - 3S           | 30 | 42 | 30 | 51 | 3.2 | 19.8 | 16.1 | 5.8 | 12 | 8  |
| 2706142000 | RAK - 4S           | 36 | 49 | 34 | 58 | 3.6 | 25   | 18.7 | 6.5 | 15 | 10 |
| 2706152000 | RAK - 5S, RAK - 5D | 48 | 66 | 42 | 75 | 4.5 | 27   | 20.7 | 6.5 | 18 | 12 |

# Flange mounting

- for series RAK - 3S RAK - 4S RAK - 5S, RAK - 5D



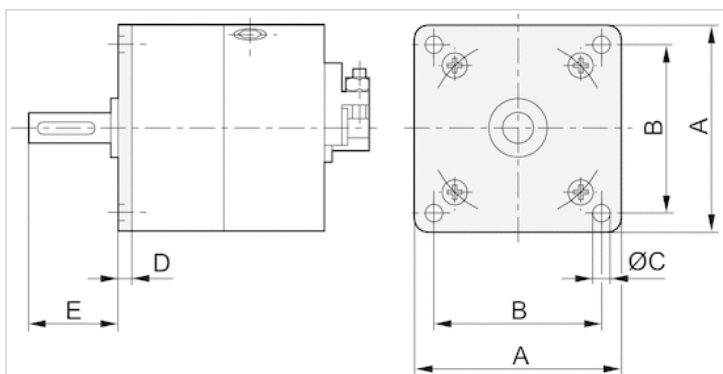
## Technical data

| Part No.   |
|------------|
| 2706131000 |
| 2706141000 |
| 2706151000 |

## Technical information

| Material |            |
|----------|------------|
| Material | Steel      |
|          | galvanized |

## Dimensions





## Dimensions

| Part No.   | For series         | A  | B  | C   | D   | E    |
|------------|--------------------|----|----|-----|-----|------|
| 2706131000 | RAK - 3S           | 42 | 34 | 3.5 | 3.2 | 19.8 |
| 2706141000 | RAK - 4S           | 50 | 41 | 5.5 | 3.6 | 24.9 |
| 2706151000 | RAK - 5S, RAK - 5D | 64 | 52 | 5.5 | 3.6 | 27.9 |

# Protective cover

- for series RAK - 2S RAK - 3S RAK - 4S RAK - 5S, RAK - 5D



Weight

See table below

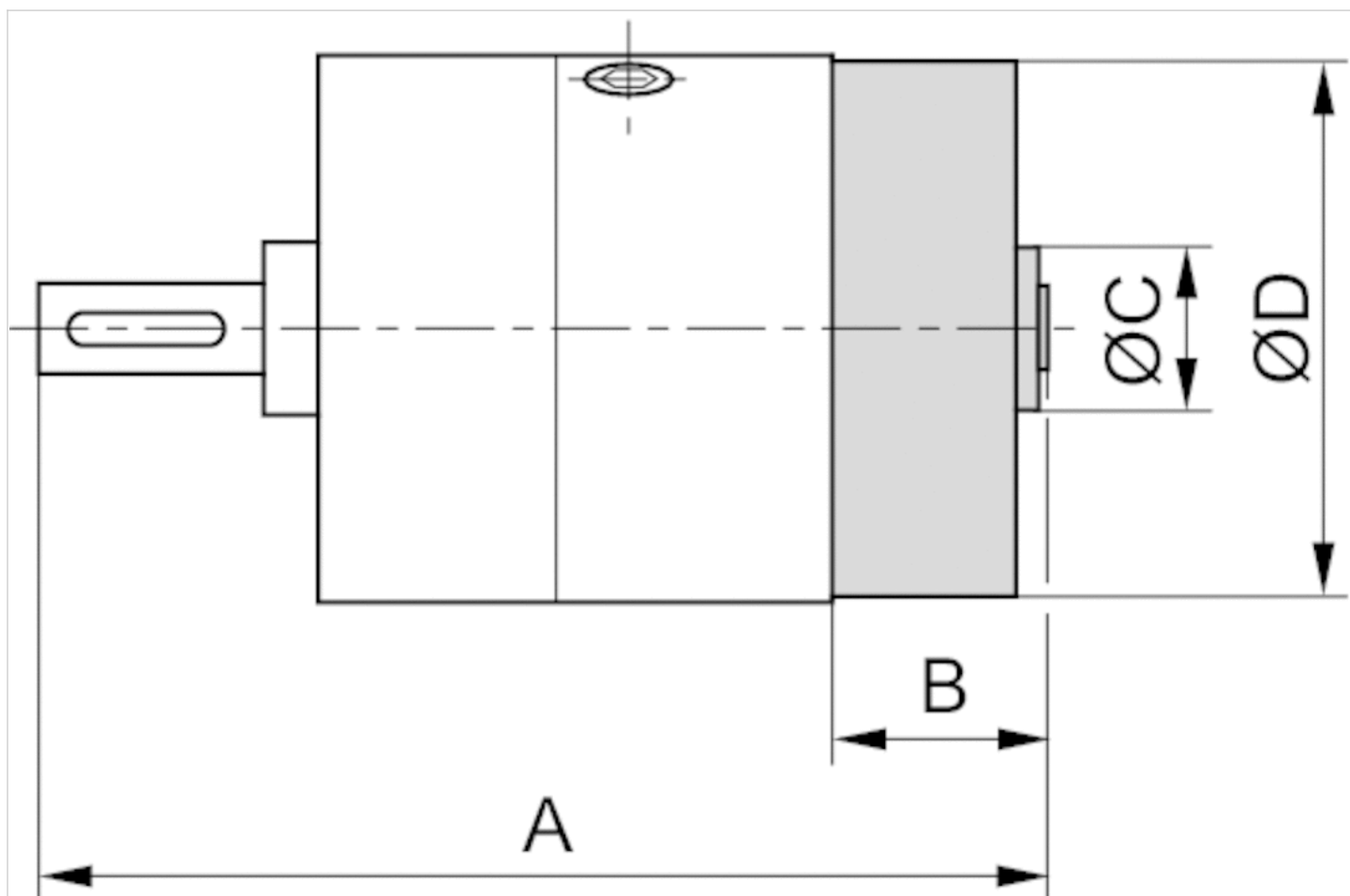
## Technical data

| Part No.   | for series         | Weight   |
|------------|--------------------|----------|
| 2706320000 | RAK - 2S           | 0.015 kg |
| 2706330000 | RAK - 3S           | 0.015 kg |
| 2706340000 | RAK - 4S           | 0.025 kg |
| 2706350000 | RAK - 5S, RAK - 5D | 0.025 kg |

## Technical information

| Material |         |
|----------|---------|
| Housing  | Plastic |

## Dimensions



## Dimensions

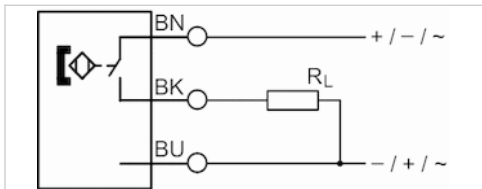
| Part No.   | For series         | A     | B    | C  | D  |
|------------|--------------------|-------|------|----|----|
| 2706320000 | RAK - 2S           | 65.7  | 20.7 | 19 | 35 |
| 2706330000 | RAK - 3S           | 84.7  | 21.7 | 19 | 41 |
| 2706340000 | RAK - 4S           | 106.2 | 22.7 | 19 | 49 |
| 2706350000 | RAK - 5S, RAK - 5D | 116.2 | 24.7 | 19 | 63 |

# Sensors

- with cable
- electronic PNP
- Direct mounting for series RAK - 1S RAK - 2S RAK - 3S RAK - 4S RAK - 5S, RAK - 5D



|                                |                |
|--------------------------------|----------------|
| Ambient temperature min./max.  | 5 ... 60 °C    |
| Protection class               | IP67           |
| Power consumption              | 15 mA          |
| Min./max. DC operating voltage | 10 ... 30 V DC |
| Switching time on              | 1 ms           |
| Switching time off             | 1 ms           |
| Display                        | LED            |
| Shock resistance               | 50 g / 11 ms   |
| Cable length L                 | 1 m            |
| Cable color                    | Black          |



## Technical data

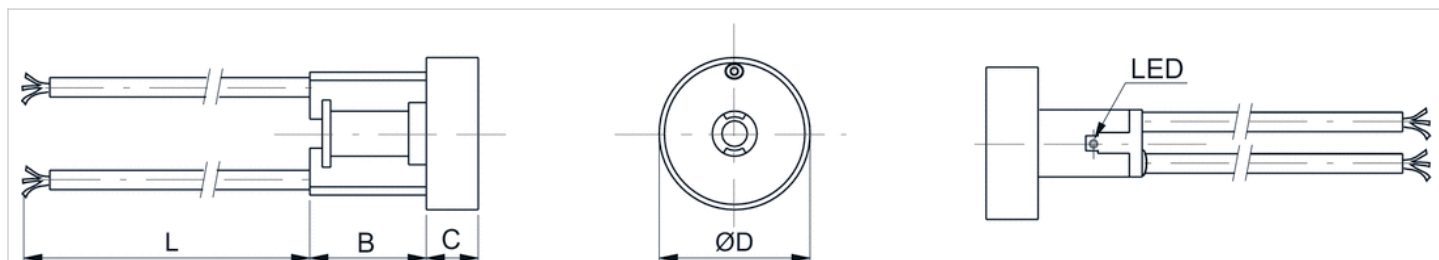
| Part No.   | for                | Type of contact | Cable length L |
|------------|--------------------|-----------------|----------------|
| 3224010000 | RAK - 1S           | electronic PNP  | 1 m            |
| 3224020000 | RAK - 2S           | electronic PNP  | 1 m            |
| 3224030000 | RAK - 3S           | electronic PNP  | 1 m            |
| 3224040000 | RAK - 4S           | electronic PNP  | 1 m            |
| 3224050000 | RAK - 5S, RAK - 5D | electronic PNP  | 1 m            |

## Technical information

| Material     |                    |
|--------------|--------------------|
| Housing      | Polyamide          |
| Cable sheath | Polyvinyl chloride |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | B  | C    | ØD | L [mm] |
|------------|----|------|----|--------|
| 3224010000 | 22 | 8.5  | 28 | 1000   |
| 3224020000 | 22 | 17.2 | 35 | 1000   |
| 3224030000 | 22 | 18.2 | 41 | 1000   |
| 3224040000 | 22 | 19.2 | 49 | 1000   |
| 3224050000 | 22 | 21.2 | 63 | 1000   |

# Flange mounting

- for series RAK - 6S, RAK - 6D RAK - 7S, RAK - 7D



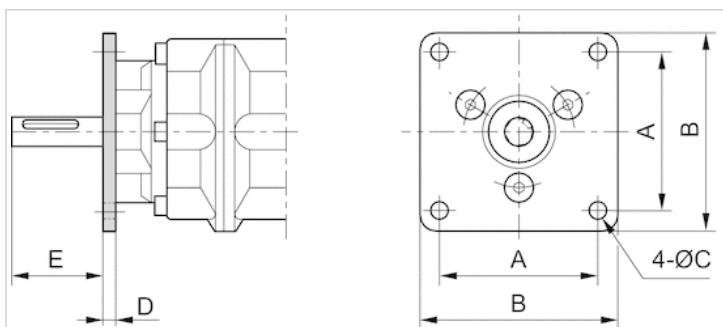
## Technical data

| Part No.   |
|------------|
| 2706161000 |
| 2706171000 |

## Technical information

| Material |                     |
|----------|---------------------|
| Material | Steel<br>galvanized |

## Dimensions



## Dimensions

| Part No.   | A  | B   | C | D   | E    |
|------------|----|-----|---|-----|------|
| 2706161000 | 64 | 80  | 7 | 4.5 | 35   |
| 2706171000 | 88 | 110 | 9 | 6   | 47.5 |



# Foot mounting

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



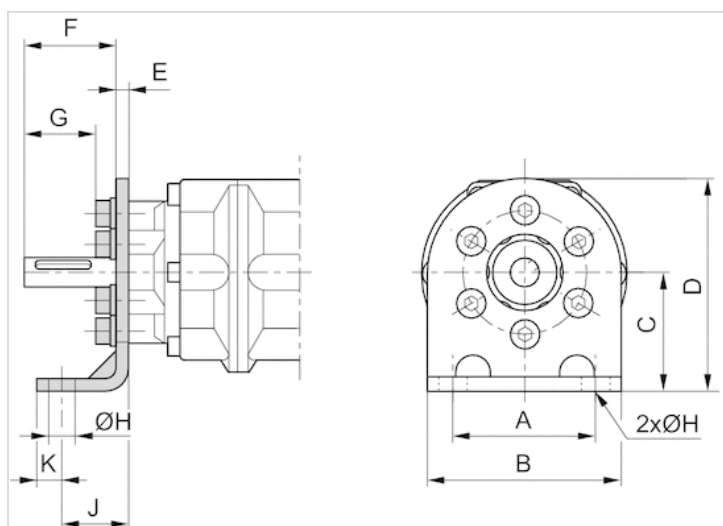
## Technical data

| Part No.   |
|------------|
| 2706162000 |
| 2706172000 |
| 2706182000 |

## Technical information

| Material |            |
|----------|------------|
| Material | Steel      |
|          | galvanized |

## Dimensions





## Dimensions

| Part No.   | A   | B   | C  | D    | E   | F    | G    | H  | J  | K  |
|------------|-----|-----|----|------|-----|------|------|----|----|----|
| 2706162000 | 55  | 75  | 45 | 82.5 | 4.5 | 35   | 27.5 | 11 | 25 | 10 |
| 2706172000 | 80  | 110 | 65 | 115  | 10  | 43.5 | 33.5 | 13 | 28 | 12 |
| 2706182000 | 100 | 140 | 80 | 135  | 12  | 53   | 40.5 | 15 | 32 | 13 |

# Hydraulic shock absorber

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



Ambient temperature min./max.

5 ... 50 °C

Medium

Oil

Weight

See table below

## Technical data

| Part No.   | for series         | Max. energy absorption/stroke | Max. energy absorption/hour |
|------------|--------------------|-------------------------------|-----------------------------|
| 2706660000 | RAK - 6S, RAK - 6D | 2.94 Nm                       | 1152 Nm                     |
| 2706670000 | RAK - 7S, RAK - 7D | 9.81 Nm                       | 4212 Nm                     |
| 2706680000 | RAK - 8S, RAK - 8D | 19.61 Nm                      | 8208 Nm                     |

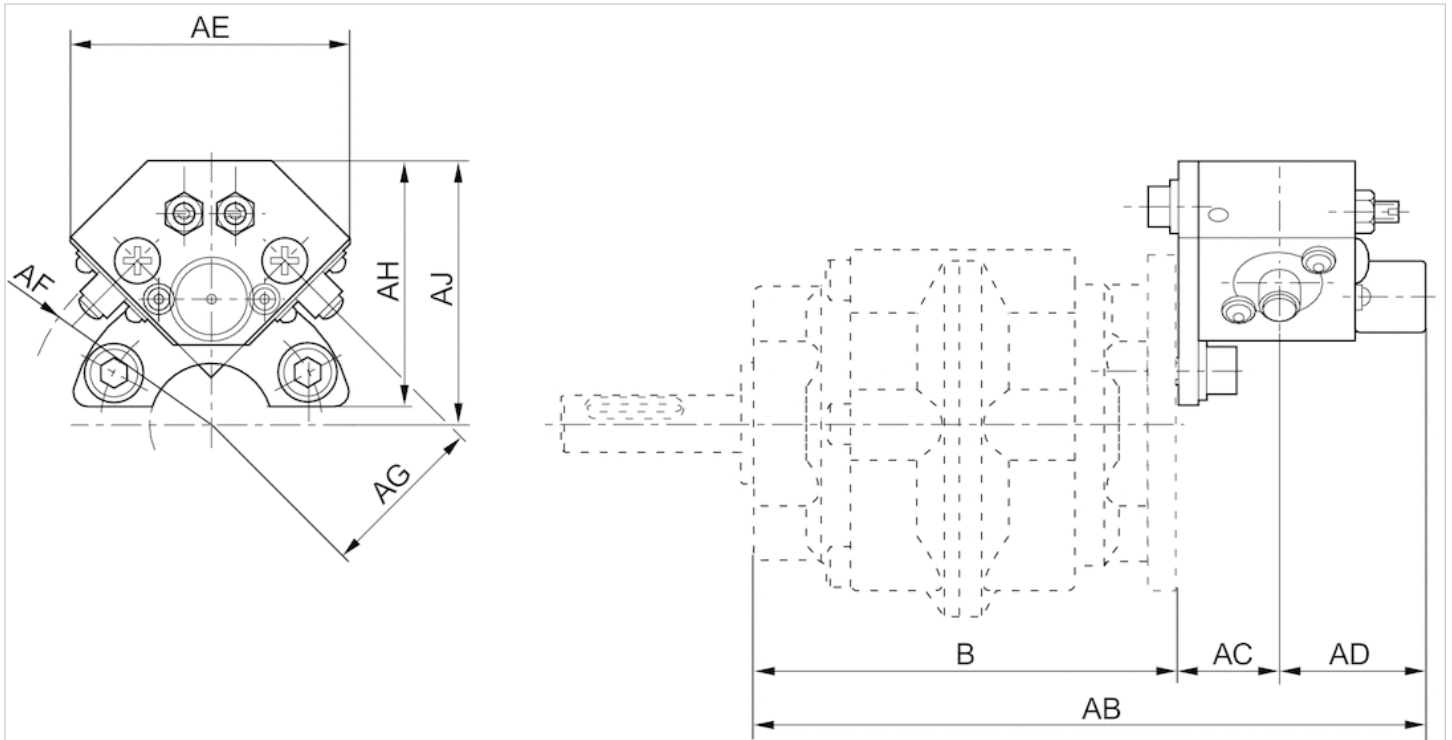
| Part No.   | Max. permissible mass moment of inertia | Max. angular velocity | Cushioning angle per piston | Weight  |
|------------|---|-----------------------|-----------------------------|---------|
| 2706660000 | 0.098 kg cm <sup>2</sup>                | 850 °/s               | 11 °                        | 0.24 kg |
| 2706670000 | 0.294 kg cm <sup>2</sup>                | 750 °/s               | 12 °                        | 0.42 kg |
| 2706680000 | 0.588 kg cm <sup>2</sup>                | 650 °/s               | 14 °                        | 0.78 kg |

## Technical information

| Material      |                    |
|---------------|--------------------|
| Cylinder tube | Aluminum, anodized |

## Dimensions

### Dimensions



## Dimensions

| Part No.   | AB    | AC   | AD | AE   | AF | AG | AH | AJ   | B   |
|------------|-------|------|----|------|----|----|----|------|-----|
| 2706660000 | 136.5 | 20.5 | 30 | 56.6 | 38 | 34 | 50 | 54   | 86  |
| 2706670000 | 159.5 | 22.5 | 34 | 70.7 | 51 | 46 | 62 | 71.5 | 103 |
| 2706680000 | 187.5 | 25.5 | 37 | 91.9 | 68 | 62 | 87 | 96   | 125 |

# Swivel arms without magnet, for 6S, 6D, 7S, 7D, 8S, and 8D

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



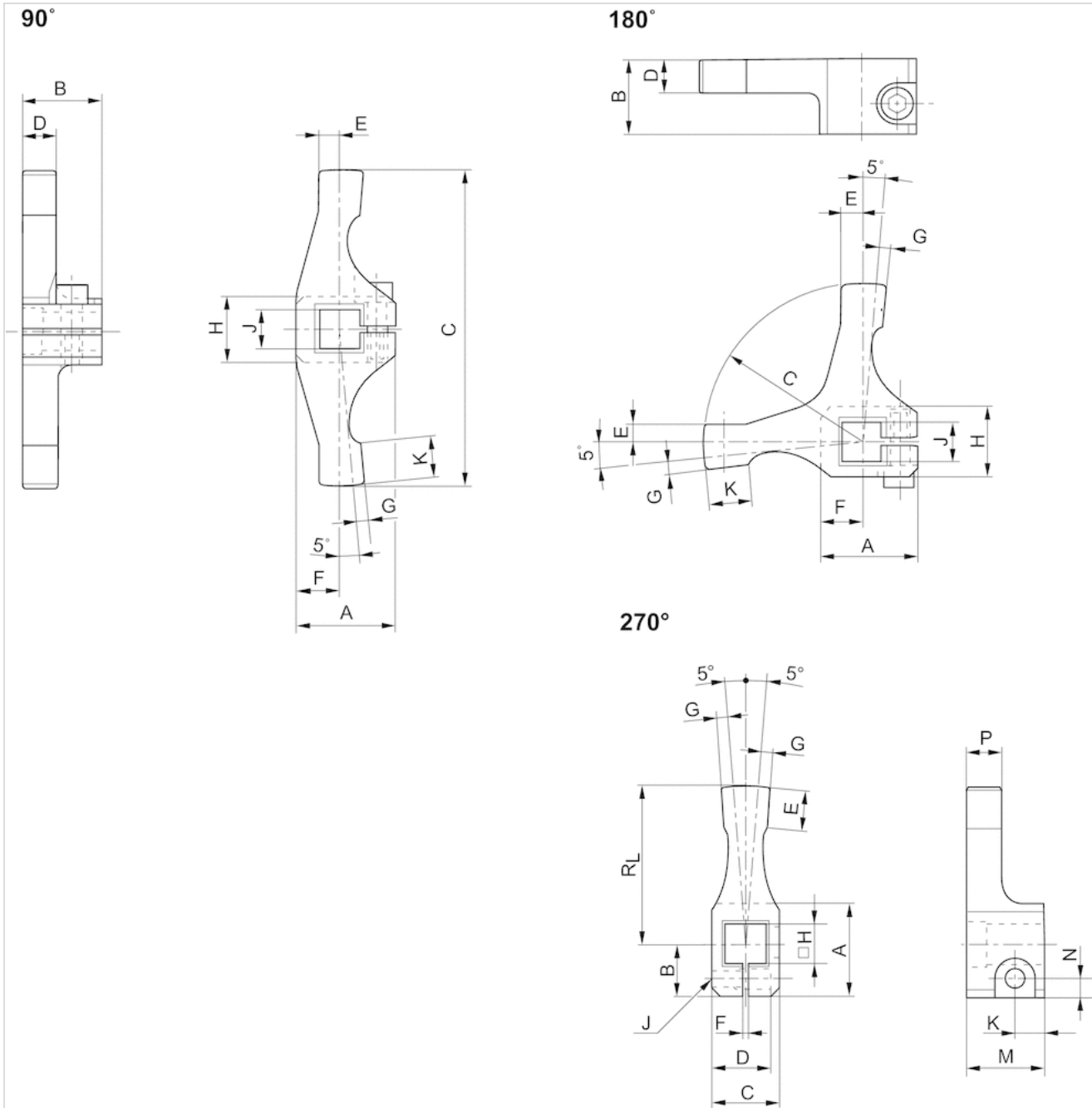
## Technical data

| Part No.   | for series         |
|------------|--------------------|
| 2706260100 | RAK - 6S, RAK - 6D |
| 2706260300 | RAK - 6S, RAK - 6D |
| 2706270100 | RAK - 7S, RAK - 7D |
| 2706270300 | RAK - 7S, RAK - 7D |
| 2706280100 | RAK - 8S, RAK - 8D |
| 2706280300 | RAK - 8S, RAK - 8D |
| R402004083 | RAK - 7S, RAK - 7D |

## Technical information

| Material |                    |
|----------|--------------------|
| Housing  | Aluminum, anodized |

## Dimensions



## Dimensions

| Part No.   | [°] 1) | A  | B    | C   | D    | E  | F   | G   | H  | J  | K  | L  | M  | N | P  |
|------------|--------|----|------|-----|------|----|-----|-----|----|----|----|----|----|---|----|
| 2706260100 | 90     | 23 | 18   | 76  | 8    | 5  | 10  | 2.5 | 16 | 10 | 10 | -  | -  | - | -  |
| 2706260300 | 180    | 23 | 18   | 38  | 8    | 5  | 10  | 2.5 | 16 | 10 | 10 | -  | -  | - | -  |
| 2706270100 | 90     | 28 | 20   | 102 | 10   | 5  | 12  | 4   | 24 | 13 | 12 | -  | -  | - | -  |
| 2706270300 | 180    | 28 | 20   | 51  | 10   | 5  | 12  | 4   | 24 | 13 | 12 | -  | -  | - | -  |
| 2706280100 | 90     | 40 | 23.5 | 136 | 12   | 9  | 18  | 5.4 | 35 | 19 | 14 | -  | -  | - | -  |
| 2706280300 | 180    | 28 | 20   | 51  | 10   | 5  | 12  | 4   | 24 | 13 | 12 | -  | -  | - | -  |
| R402004083 | 270    | 28 | 16   | 24  | 19.5 | 12 | 1.2 | 4.1 | 13 | M6 | 9  | 51 | 20 | 5 | 10 |

1) angle of rotation

# Swivel arms with magnet, for 6S, 6D, 7S, 7D, 8S, and 8D

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



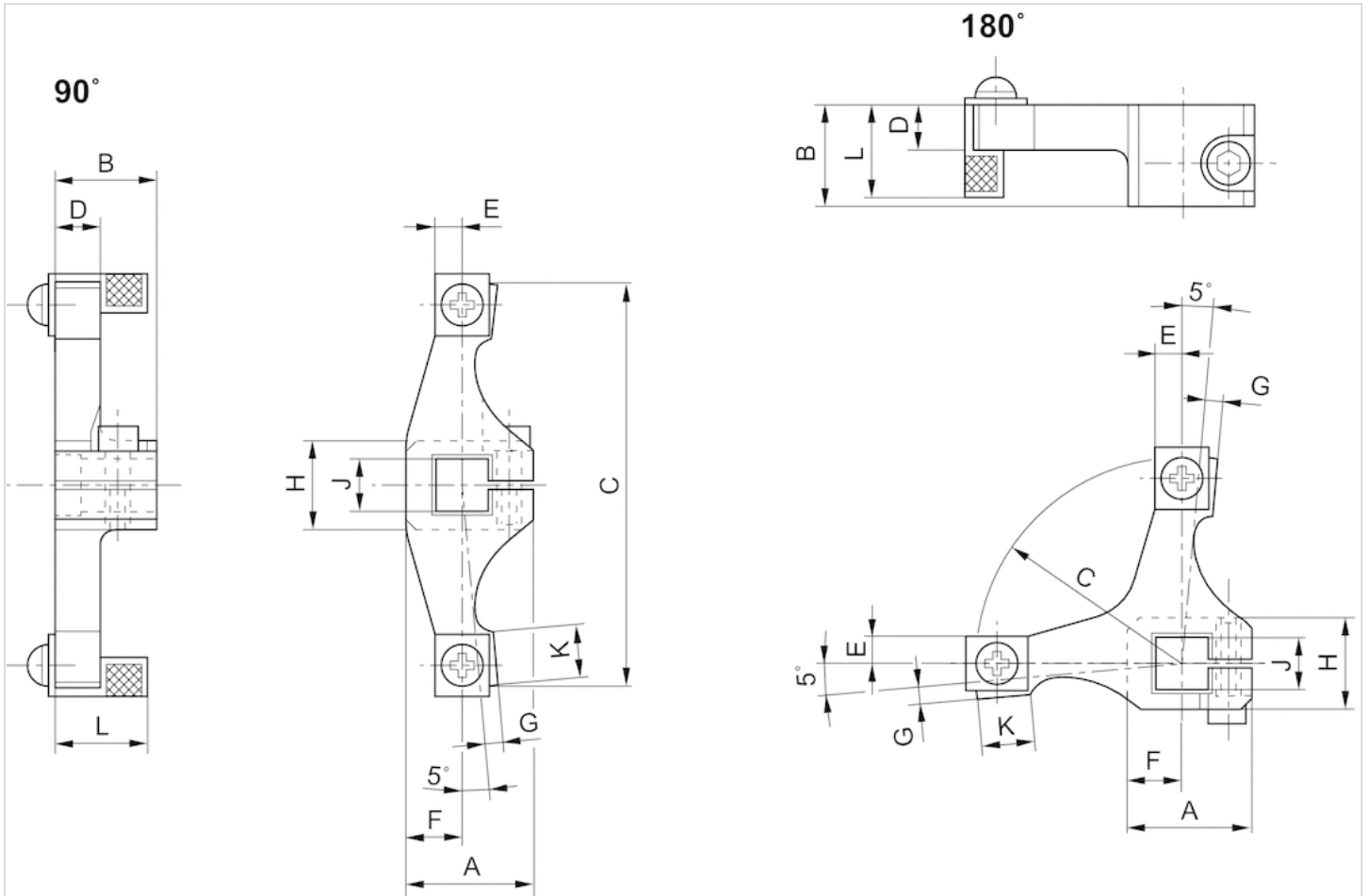
## Technical data

| Part No.   | for series         |
|------------|--------------------|
| 3224165100 | RAK - 6S, RAK - 6D |
| 3224165300 | RAK - 6S, RAK - 6D |
| 3224175100 | RAK - 7S, RAK - 7D |
| 3224175300 | RAK - 7S, RAK - 7D |
| 3224185100 | RAK - 8S, RAK - 8D |
| 3224185300 | RAK - 8S, RAK - 8D |

## Technical information

| Material |                    |
|----------|--------------------|
| Housing  | Aluminum, anodized |

## Dimensions



## Dimensions

| Part No.   | [°] 1) | A  | B    | C   | D  | E | F  | G   | H  | J  | K  | L    |
|------------|--------|----|------|-----|----|---|----|-----|----|----|----|------|
| 3224165100 | 90     | 23 | 18   | 76  | 8  | 5 | 10 | 2.5 | 16 | 10 | 10 | 17,2 |
| 3224165300 | 180    | 23 | 18   | 38  | 8  | 5 | 10 | 2.5 | 16 | 10 | 10 | 17,2 |
| 3224175100 | 90     | 28 | 20   | 102 | 10 | 5 | 12 | 4   | 24 | 13 | 12 | 19,2 |
| 3224175300 | 180    | 28 | 20   | 51  | 10 | 5 | 12 | 4   | 24 | 13 | 12 | 19,2 |
| 3224185100 | 90     | 40 | 23.5 | 136 | 12 | 9 | 18 | 5.4 | 35 | 19 | 14 | 21,2 |
| 3224185300 | 180    | 40 | 23.5 | 68  | 12 | 9 | 18 | 5.4 | 35 | 19 | 14 | 21,2 |

1) angle of rotation

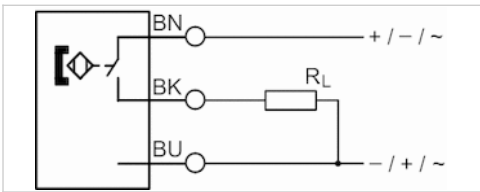


# Sensor

- with cable
- electronic PNP
- electronic PNP
- Direct mounting for series RAK - 6S, RAK - 6D, RAK - 7S, RAK - 7D, RAK - 8S, RAK - 8D



|                                |                |
|--------------------------------|----------------|
| Ambient temperature min./max.  | 5 ... 60 °C    |
| Protection class               | IP67           |
| Power consumption              | 20 mA          |
| Min./max. DC operating voltage | 10 ... 30 V DC |
| Switching time on              | 1 ms           |
| Switching time off             | 1 ms           |
| Display                        | LED            |
| Shock resistance               | 50 g / 11 ms   |
| Cable length L                 | 1 m            |
| Cable color                    | Black          |



## Technical data

| Part No.   | for  | Type of contact |
|------------|--|-----------------|
| 3224103100 | RAK - 6S, RAK - 6D, RAK - 7S, RAK - 7D, RAK - 8S, RAK - 8D | electronic PNP  |

| Part No.   | Cable length L | Function       |
|------------|----------------|----------------|
| 3224103100 | 1 m            | electronic PNP |

BN = brown ↔ BK = black ↔ BU = blue

# Sensor mounting

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



Ambient temperature min./max. 5 ... 60 °C  
 Weight 0.01 kg

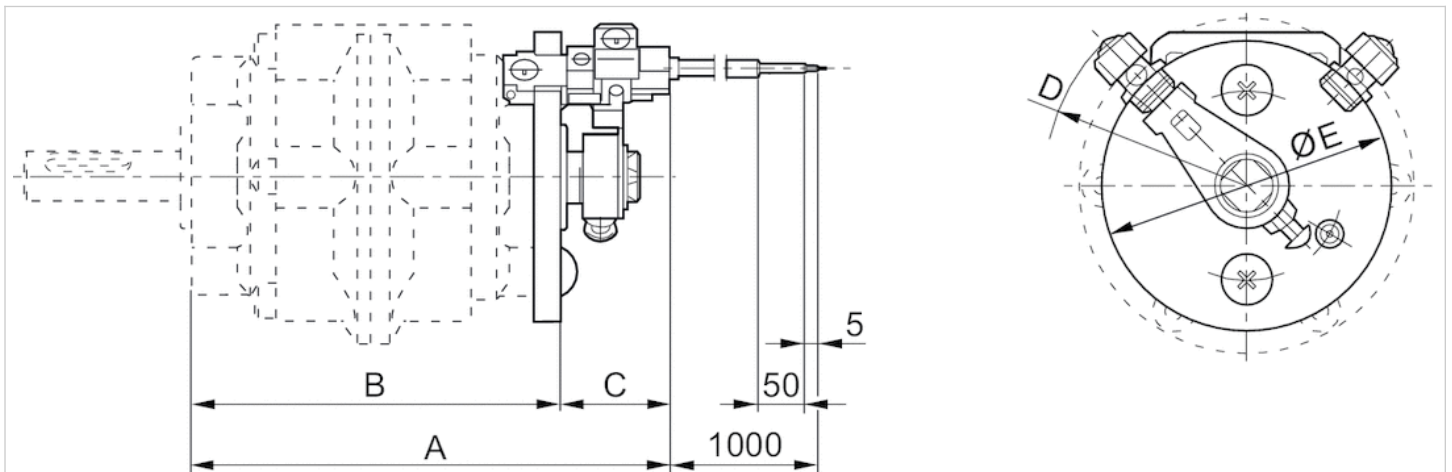
## Technical data

| Part No.   | Cylinders Ø |       | for series         | Scope of delivery |
|------------|-------------|-------|--------------------|-------------------|
|            | min.        | max.  |                    |                   |
| 3224160000 | 2.5 mm      | 10 mm | RAK - 6S, RAK - 6D | 1 piece           |
| 3224170000 | 2.5 mm      | 10 mm | RAK - 7S, RAK - 7D | 1 piece           |
| 3224180000 | 2.5 mm      | 10 mm | RAK - 8S, RAK - 8D | 1 piece           |

## Technical information

| Material |                    |
|----------|--------------------|
|          | Aluminum, anodized |

## Dimensions



## Dimensions

| Part No.   | Cylinders Ø | For series         | A     | B     | C    | D   | E   |
|------------|-------------|--------------------|-------|-------|------|-----|-----|
| 3224160000 | 2.5 mm      | RAK - 6S, RAK - 6D | 115   | 87.2  | 25.5 | R47 | 69  |
| 3224170000 | 2.5 mm      | RAK - 7S, RAK - 7D | 131.7 | 104.2 | 27.5 | R61 | 97  |
| 3224180000 | 2.5 mm      | RAK - 8S, RAK - 8D | 161.2 | 126.2 | 35   | R69 | 113 |

# Mounting plate

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



Weight

See table below

## Technical data

| Part No.   | for series         | Scope of delivery | Weight  |
|------------|--------------------|-------------------|---------|
| 3224161000 | RAK - 6S, RAK - 6D | 1 piece           | 0.05 kg |
| 3224171000 | RAK - 7S, RAK - 7D | 1 piece           | 0.1 kg  |
| 3224181000 | RAK - 8S, RAK - 8D | 1 piece           | 0.15 kg |

## Technical information

| Material           |
|--------------------|
| Aluminum, anodized |

# Efficient pneumatic solutions, our program: cylinders and drives, valves and valve systems, air supply management



Visit us: [Emerson.com/Aventics](https://www.emerson.com/Aventics)

Your local contact: [Emerson.com/contactus](https://www.emerson.com/contactus)



Emerson.com



[Facebook.com/EmersonAutomationSolutions](https://www.facebook.com/EmersonAutomationSolutions)



[LinkedIn.com/company/Emerson-Automation-Solutions](https://www.linkedin.com/company/Emerson-Automation-Solutions)



[Twitter.com/EMR\\_Automation](https://twitter.com/EMR_Automation)

An example configuration is depicted on the title page. The delivered product may thus vary from that in the illustration. Subject to change. This Document, as well as the data, specifications and other information set forth in it, are the exclusive property of AVENTICS GmbH. It may not be reproduced or given to third parties without its consent. Only use the AVENTICS products shown in industrial applications. Read the product documentation completely and carefully before using the product. Observe the applicable regulations and laws of the respective country. When integrating the product into applications, note the system manufacturer's specifications for safe use of the product. The data specified only serve to describe the product. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. It must be remembered that the products are subject to a natural process of wear and aging.

The Emerson logo is a trademark and service mark of Emerson Electric Co. Brand logotype are registered trademarks of one of the Emerson family of companies. All other marks are the property of their respective owners. © 2017 Emerson Electric Co. All rights reserved.  
2019-03



## CONSIDER IT SOLVED™