ROTARY ACTUATOR SERIES R3K

A3

ROTARY ACTUATOR SERIES R3K

An actuator with a double rack and play take-up.

Angle of rotation adjustable from 0° to 180°. These rotary actuators can be supplied with a mechanical stop or, for

some sizes, a hydraulic decelerator. There is also a version with external hydraulic decelerators with more

kinetic energy. The typical V-Lock dovetail and grooves are present on the turntable and the lower part of the body.

There are two grooves on either side for inserting retracting magnetic sensors.

There is a hole in the flange for air pipes or power cables.

N.B.: We always suggest to use flow microregulators. During the setup of the actuator, start with CLOSE flow microregulators, and open gradually till the achievment of the required speed.



TECHNICAL DATA		R3K-16	R3K-20	R3K-25
Operating pressure	bar		3 to 7	
	MPa		0.3 to 0.7	
	psi		43 to 101	
Temperature range	°C		-10 to 80	
Fluid		Lubricated or unlubricated 20	µm filtered air. If lubricated air is used,	lubrication must be continuous
Bore	mm	2 x 16	2 x 20	2 x 25
Theoretical torque at 6 bar	Nm	0.9	1.8	4.6
Maximum axial load	N	74	135	300
Maximum radial load	N	78	137	450
Maximum overturning moment	Nm	2.4	4	9.7
Rotation time without load	s	0.2	0.2	0.2
Maximum kinetic energy:				
with mechanical stop	Joule	0.007	0.025	0.082
with inner decelerators	Joule	-	-	0.29
Weight	kg	0.66	1.13	2.17

COMPONENTS

- ① ROTARY FLANGE: anodised aluminium
- 2 PINION: hardened and tempered steel
- 3 BALL BEARING
- ④ PISTON / RACK: hardened and tempered steel
- (5) CUSHIONING GASKET: NBR
- 6 GUIDE PAD: PTFE
- ⑦ MAGNET: neodymium
- (8) HEAD: anodised aluminium
- BARREL: anodised aluminium
- 10 GASKET: NBR

VERSIONS:

- (1) Stroke adjustment
- Stroke adjustment with inside hydraulic shock absorbers (available from Ø 25)



ROTARY ACTUATOR SERIES R3K



KEY DIAGRAM

Due to the design of turntables for R3K actuators, and to allow precision assembly with the K fixing elements, it is necessary to add a second key code W0950005151K to the one already present on the standard element.



EXAMPLES OF APPLICATION



NOTES

ROTARY ACTUATOR SERIES R3K

ROTARY ACTUATOR R3K-16

NOTE: For standard dovetail dimensions see chapter V-Lock Adaptors.



CodeDescriptionW1630162180KRotary actuator R3K-16



ROTARY ACTUATOR R3K-20

NOTE: For standard dovetail dimensions see chapter V-Lock Adaptors.







CodeDescriptionW1630202180KRotary actuator R3K-20

ACTUATORS

ROTARY ACTUATOR SERIES R3K

ROTARY ACTUATOR R3K-25

NOTE: For standard dovetail dimensions see chapter V-Lock Adaptors.

5



 Code
 Description

 W1630252180K
 Rotary actuator R3K-25

 W1630253180K
 Rotary actuator + shock absorbers R3K-25

A3.128



ACCESSORIES

RETRACTABLE SENSOR

SENSOR, SQUARE TYPE Latest generation, secure fixing





SENSOR, OVAL TYPE

Traditional

For codes and technical data, see **chapter A6**.

LTS POSITION SENSORS



For technical data and usage strokes see **chapter A6**.

SPARE PARTS

SHOCK ABSORBERS



Code	Ø	Description
0950004015	Ø 25	Shock absorbers ECO S 25 MC2 short M14 x 1.5

NOTES

ROTARY ACTUATOR SERIES R3K WITH EXTERNAL SHOCK ABSORBERS

A3

An actuator with a double rack and play take-up. The hydraulic decelerators are mounted externally and act at a greater distance from the rotation axis compared to internal decelerators.

This means the amount of kinetic energy absorbed is 4-8 times greater than with internal decelerators.

Reduced longitudinal dimensions as there are no adjusting screws. Available in versions with 90° and 180° rotation.

The typical V-Lock dovetail and grooves are present on the turntable and the lower part of the body.

There are two grooves on either side for inserting retracting magnetic sensors.

There is a hole in the flange for air pipes or power cables.

N.B.: The use of flow microregulators is recommended. During setup, start with the microregulator CLOSED, then open it gradually until the desired speed is reached.



TECHNICAL DATA		R3K-16	R3K-20	R3K-25
Operating pressure	bar		3 to 7	
	MPa		0.3 to 0.7	
	psi		43 to 101	
Temperature range	°C		-10 to 80	
Fluid		Fluid Lubricated or unlubricated	20 µm filtered air. If lubricated air is use	d, lubrication must be continuous
Bore	mm	2 x 16	2 x 20	2 x 25
Theoretical torque at 6 bar	Nm	0.9	1.8	4.6
Maximum axial load	N	74	135	300
Maximal radial load	N	78	137	450
Maximum overturning moment	Nm	2.4	4	9.7
Rotation time without load	s	0.2	0.2	0.2
Maximum kinetic energy	Joule	0.16	0.55	1.40
Weight	kg	0.76	1.43	2.86

COMPONENTS

① ROTARY FLANGE: anodised aluminium

- $\bar{(2)}$ PINION: hardened and tempered steel
- ③ BALL BEARING
- ④ PISTON / RACK: hardened and tempered steel
- 5 CUSHIONING GASKET: NBR
- 6 GUIDE PAD: PTFE
- ⑦ MAGNET: neodymium
- (8) HEAD: anodised aluminium
- BARREL: anodised aluminium
- (1) STROKE REGULATOR WITH HYDRAULIC SHOCK ABSORBERS
- (1) Block for 90° version





ANGLES OF ROTATION







Hole position for bottom pins

MAXIMUM KINETIC ENERGY Joule [J]

Ø	With flange, 90° rotation: W1630_4090K With flange, 180°rotation: W1630_4180K
16	0.16
20	0.55
22	0.85
25	1.40
30	1.85
40	3.35

Hole position for bottom pins

DIMENSIONS - FORCES AND MOMENTS

Ø	T Theoretical torque	FA	FR	Μ
	at 6 bar [Nm]	Max axial load [N]	Max radial load [N]	Overturning moment [Nm]
16	0.9	74	78	2.4
20	1.8	135	137	4
22	2.7	195	360	5.3
25	4.6	300	450	9.7
30	9.3	340	490	12
40	22	360	560	18



KEY DIAGRAM

Due to the design of turntables for R3K actuators, and to allow precision assembly with the K fixing elements, it is necessary to add a second key code W0950005151K to the one already present on the standard element.



EXAMPLES OF APPLICATION





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ROTARY ACTUATOR WITH EXTERNAL SHOCK ABSORBERS R3K-16 90/180°

Code

W1630164090K W1630164180K

Description Rotary actuator with external shock absorbers R3K-16-90 Rotary actuator with external shock absorbers R3K-16-180



ROTARY ACTUATOR WITH EXTERNAL SHOCK ABSORBERS R3K-20 90/180°

NOTE: For standard dovetail dimensions see chapter V-Lock Adaptors.



Code

W1630204090K W1630204180K Description Rotary actuator with external shock absorbers R3K-20-90 Rotary actuator with external shock absorbers R3K-20-180 ACTUATORS

rotary actuator series r3k with external shock absorbers



Code

W1630254090K W1630254180K

Rotary actuator with external shock absorbers R3K-25-90 Rotary actuator with external shock absorbers R3K-25-180



ACCESSORIES

RETRACTABLE SENSOR

SENSOR, SQUARE TYPE Latest generation, secure fixing





SENSOR, OVAL TYPE

Traditional

°

For codes and technical data, see **chapter A6**.

For technical data and usage strokes see **chapter A6**.

LTS POSITION SENSORS

SPARE PARTS

SHOCK ABSORBERS



Code Ø 0950004009 Ø 16 0950004010 Ø 20 0950004015 Ø 25

Description Shock absorbers ECO 10 MF3 M10 x 1 Shock absorbers ECO 15 MF4 M12 x 1 Shock absorbers ECO S 25 MC2 short M14 x 1.5

NOTES

ROTARY ACTUATOR SERIES DAPK

ROTARY ACTUATOR SERIES DAPK

A3

The DAPK rotary actuator is characterised by an exceptionally high level of performance, great ease of use, positioning accuracy and long life. It features a patented rack and pinion slack adjustment mechanism. The angle of rotation can be adjusted between 0° and 180°. A 3° overrun beyond 180° is also provided at each side. The end position stops can be either elastic mechanical stop (for application with reduced mass and velocity) or hydraulic shock absorbers. The end position can be detected using either the magnetic version, which is suitable for magnetic sensors, or the version suitable for inductive sensors. Versions with two, three and four positions are also available. The third and fourth position can be added at a later stage by installing the accessory provided. The versions with a pneumatic rotary distributor can be used to supply compressed air to the rotating plate from the inside, thus avoiding using external rotating pipes. In this case the rotating plate can be chosen among the one mounted in-line and that tilted by 90°.



During the setup of the actuator, start with CLOSE flow microregulators, and open gradually till the achievment of the required speed.	

TECHNICAL DATA		DAPK-1	DAPIK-1	DAPK-2	DAPIK-2	
Internal air flows		NO	YES	NO	YES	
Operating pressure	bar		2 t	o 7		
	MPa		0.2 t	o 0.7		
	psi		29 to	5 101		
Temperature range	°C		-10	to 80		
	°F		14 to	176		
Fluid		Lubricated or unlub	ricated 20 µm filtered air. If luk	pricated air is used, lubrication	n must be continuous	
End position stop shock-absorption			Hydraulic shock-absorbers	or elastic mechanical stop		
End-position control			Inductive sensors,	magnetic sensors		
Rotation angle	otation angle ° Adjustable from 0 to 180					
Bore	mm	2	.0	3	2	
Moment of inertia around the central axis	kg.m²	0.004 0.030		030		
Theoretical torque at 6 bar	Nm	1.1 3.8		.8		
Maximum overturning moment	Nm	:	5	1	5	
Allowable axial tensile stress/compression	Ν	90 / 120 240 / 460		/ 460		
Allowable critical strain energy:						
with elastic mechanical stop Joule		0.	0.02		0.06	
with shock absorbers	Joule	e 0.20 0.60		60		
Repeatability (on 100 strokes at constant conditions)	0	≤ 0.01 ≤ 0.01 - 0.0		- 0.02		
Weight of the 2-position version	kg	g 0.56 0.71 1.50 1.1		1.73		
Weight of the 3-position version	kg	(g 0.66 0.80 1.67 1.9		1.90		
Weight of the 4-position version	kg	0.76	0.89	1.84	2.07	

COMPONENTS

- BODY: blank anodised aluminium
- 2 PLATE: blank anodised aluminium
- ③ PINION: steel
- (1) INTERFACE COVER: blank anodised aluminium
- (5) RACK: steel
- 6 SECONDARY RACK: steel
- ⑦ GUIDE RING: special technopolymer
- (8) GASKETS: NBR
- TUBE: hard-anodised aluminium
- END CAP: blank anodised aluminium
- COVER: blank anodised aluminium





CHOOSING THE SHOCK-ABSORBER

For the correct use of the DAPK-1/DAPIK-1 and DAPK-2/DAPIK-2, use the shock-absorber that best suits the application. For the DAPK-1/DAPIK-1, you can select only one shock-absorber.

For the DAPK-2/DAPIK-2, you can choose three types of shock-absorbers according to the following procedure:

EXAMPLE

DAPK-2 with:

• Moment of inertia applied to the rotary actuator: J = 0.0100 kg.m²

• Set angle of rotation: $\varphi = 150^{\circ}$

Requirement: Determine the shock-absorber that best suits the application:

- 1. Calculate the moment of inertia of the component applied to the DAPK-2/DAPIK-2 rotary actuator.
 - In our case the value is $J = 0.0100 \text{ kg}.\text{m}^2$
- 2. Determine the angle of rotation that the rotary actuator must perform. In our case the value is ϕ = 150 $^\circ$
- 3. Intersect the angle and moment of inertia in the diagrams "shock-absorber range of use" of the three types of shock-absorbers used. The shock-absorber whose point is inside the grey area shall be chosen.

In our case the shock-absorber obtained is the "Shock-absorber on request" MC150EUMH2 average hardness (see encryption key).

MC150EUMH STD shock-absorber range of use



A = MaxB = Min







MC150EUMH2 medium hardness shock-absorber range of use



B = Min

PERFORMANCE

ACTUATORS

ROTARY ACTUATOR SERIES DAPK

- The method used to determine the maximum theoretical number of cycles and theoretical time of a rotation is the same for both sizes of the DAPK/DAPIK, which involves the use of:
- "performance chart of DAPK-1/DAPIK-1 with hydraulic shock-absorbers and buffers";
- performance chart of DAPK-2/DAPIK-2 with hydraulic shock-absorbers and buffers".

EXAMPLE

- DAPK-2 with:
- Moment of inertia applied to the rotary actuator: $J = 0.0100 \text{ kg}.\text{m}^2$
- Set angle of rotation: $\varphi = 150^{\circ}$
- Supply pressure: p = 5 bar

Requirement: Determine the maximum theoretical number of cycles and theoretical time of a rotation:



Applicability:

- Centre of gravity of the rotating mass on the axis of rotation. Axis of rotation in any position.
- Centre of gravity of the rotating mass outside the axis of rotation. Axis of rotation in a vertical position.

Example of hydraulic with shock-absorbers:

- J = 0.010 kg·m²
- $\varphi = 150^{\circ}$
- p = 5 bar

Results

- $n_{max} = 50$ double strokes per minute t = 0.34 s standard shock absorber

- J = moment of inertia of mass
- n = max. number of double strokes per minute for the version with shock-absorbers
- p = pneumatic drive pressure
- = traverse time per stroke
- φ = angle of rotation

1. Starting from the moment of inertia applied to the rotary actuator, the maximum number of settable theoretical cycles is determined (line A). In our case the value is = 50 cycles/min

- 2. When the line of the desired angle of rotation is intercepted, move down to the supply pressure (line B) and, by crossing the indexed scale "t" (line C), you obtain the theoretical time of a rotation.
- 3. In our case the value is t ≈ 0.35 sec.

IMPORTANT: the maximum number of cycles and the time of a rotation are theoretical data and as such, for particular applications, these values are unlikely to be achieved.



ROTARY ACTUATOR SERIES DAPK



PERFORMANCE GRAPHS FOR DAPK-1, DAPIK-1 WITH HYDRALIC SHOCK-ABSORBERS AND ELASTIC MECHANICAL STOPS



Applicability:

- Centre of gravity of the rotating mass on the axis of rotation. Axis of rotation in any position.
- · Centre of gravity of the rotating mass outside the axis of rotation. Axis of rotation in a vertical position.

Example of hydraulic with shock-absorbers:

- $J = 0.0015 \text{ kg} \cdot \text{m}^2$
- $\varphi = 150^{\circ}$
- p = 5 bar

Results:

n_{max} = 80 double strokes per minute t = 0.22 s

J = moment of inertia of mass

- n = max. number of double strokes per minute for the version with shock-absorbers
- p = pneumatic drive pressure
- t = traverse time per stroke
- φ = angle of rotation

PERFORMANCE GRAPHS FOR DAPK-2, DAPIK-2 WITH HYDRALIC SHOCK-ABSORBERS AND ELASTIC MECHANICAL STOPS



Applicability:

- Centre of gravity of the rotating mass on the axis of rotation. Axis of rotation in any position.
- Centre of gravity of the rotating mass outside the axis of rotation. Axis of rotation in a vertical position.

Example of hydraulic with shock-absorbers:

- $J = 0.010 \text{ kg} \cdot \text{m}^2$
- $\varphi = 150^{\circ}$
- p = 5 bar

Results:

 $n_{max} = 50$ double strokes per minute t = 0.34 s standard shock absorber

- J = moment of inertia of mass
- n = max. number of double strokes per minute
- for the version with shock-absorbers
- p = pneumatic drive pressure
- t = traverse time per stroke
- $\varphi = angle of rotation$



2-POSITION VERSIONS DAPK left /right end position



3-POSITION VERSIONS (DZAK)

DAPK against DZAK on the outlet



DZAK outlet, DAPK without pressure



MB



 $M_{\rm p} = p \cdot 0.35 \longrightarrow 7$

 $\begin{array}{l} M_{H} = p \cdot 0.21 \longrightarrow 1 \\ M_{B} = p \cdot 0.18 \longrightarrow 2 \end{array}$

 $\begin{array}{l} M_{H} = p \cdot 0.25 \longrightarrow 3 \\ M_{B} = p \cdot 0.10 \longrightarrow 4 \end{array}$

- = drive pressure р
- $\rm M_{_{H}}$ = moment of holding, i.e. the moment applicable from the outside to the stationary pinion shaft, with no pinion movement.
- M = moment of movement, i.e. the moment available for the moving pinion shaft due to the effect of pneumatic drive.





2-POSITION VERSIONS

DAPK + DZAK

DAPK left /right end position





3-POSITION VERSIONS (DZAK)

DAPK against DZAK on the outlet



DZAK outlet, DAPK without pressure



DAPK + DZAK





 $\begin{array}{l} \mathsf{M}_{\mathsf{H}} = \mathsf{p} \cdot 1.12 \longrightarrow 3 \\ \mathsf{M}_{\mathsf{B}} = \mathsf{p} \cdot 0.35 \longrightarrow 4 \end{array}$

 $\begin{array}{l} M_{\rm H} = p \cdot 1.69 \longrightarrow 5) \\ M_{\rm B} = p \cdot 1.10 \longrightarrow 6) \end{array}$



- = drive pressure = moment of holding, i.e. the moment applicable from the outside to the stationary M pinion shaft, with no pinion movement.
- = moment of movement, i.e. the moment available for the moving pinion shaft due M_D to the effect of pneumatic drive.



EXAMPLES OF APPLICATION





A3

DIMENSIONS OF THE DAPK-1 ROTARY ACTUATOR











- Holes for centring pins
 Right-hand rotation supply
 Left-hand rotation supply
 Bushing for inductive sensors
 Magnetic sensor or position sensor fixing slots
 Dovetail for "V-Lock" fixing. For standard dimensions, see chapter V-Lock adaptors
 Slot for "V-Lock" precision key
 Threaded holes for fixing





DAPIK-1 ROTARY ACTUATOR DIMENSIONS WITH INTERNAL AIR FLOWS









- Holes for centring pins Right-hand rotation supply Left-hand rotation supply Bushing for inductive sensors 1 2 3 4 5 6

- Magnetic sensor or position sensor fixing slots Dovetail for "V-Lock" fixing.
- Dovetail for "V-Lock" fixing. For standard dimensions, see **chapter V-Lock adaptors** Slot for "V-Lock" precision key Threaded holes for fixing Air inlets on the right (M5 thread) Air outlets on the left (M5 thread) Air outlets on the left (M5 thread) Air outlets on the left (M5 thread) 1
- ® 9
- 10
- (1) (12)



IMPORTANT: 1° of rotation corresponds to a linear movement of Δ = 0.126 mm

A3

ROTARY ACTUATOR SERIES DAPK

DIMENSIONS OF THE DAPK-2 ROTARY ACTUATOR







Shock-absorbers	L
Standard (H)	192.7 mm
Medium hardness (H2)	192.7 mm
Hard (M7)	209.5 mm

VERSION WITH ELASTIC MECHANICAL STOP 115,5 max.



- Holes for centring pins
 Right-hand rotation supply
 Left-hand rotation supply
 Bushing for inductive sensors
 Magnetic sensor or position sensor fixing slots
 Dovetail for "V-Lock" fixing. For standard dimensions, see chapter V-Lock adaptors
 Slot for "V-Lock" precision key
 Threaded holes for fixing





DAPIK-2 ROTARY ACTUATOR DIMENSIONS WITH INTERNAL AIR FLOWS







Shock-absorbers	L
Standard (H)	192.7 mm
Medium hardness (H2)	192.7 mm
Hard (M7)	209.5 mm





- Holes for centring pins
 Right-hand rotation supply
 Left-hand rotation supply
 Bushing for inductive sensors
 Magnetic sensor or position se
 Dovetail for "V-Lock" fixing.
- Bushing for inductive sensors Magnetic sensor or position sensor fixing slots Dovetail for "V-Lock" fixing. For standard dimensions, see **chapter V-Lock adaptors** Slot for "V-Lock" precision key Threaded holes for fixing Air inlets on the right (M5 thread) Air inlets on the left (M5 thread) Air outlets on the right (M5 thread) Air outlets on the left (M5 thread)
- (7) (8)
- 9 10 11

- (12)



IMPORTANT: 1° of rotation corresponds to a linear movement of Δ = 0.183 mm

A3

DIMENSIONS OF DAPIK-1 + WAK-1 ROTARY ACTUATOR WITH INTERNAL AIR FLOWS AND 90° RETURN



- ① Holes for centring pins
- 2 Right-hand rotation supply
- 3
- 6
- Right-hand rotation supply Left-hand rotation supply Dovetail for "V-Lock" fixing. For standard dimensions, see **chapter V-Lock adaptors** Slot for "V-Lock" precision key Threaded holes for fixing Air outlets on the right (M5 thread) Air outlets on the left (M5 thread)
- 0
- 8
- Ũ
- Ū
- IMPORTANT: for any missing dimensions, please refer to the DAPIK-1 rotary actuator on page A3.143





DIMENSIONS OF DAPIK-2 + WAK-2 ROTARY ACTUATOR WITH INTERNAL AIR FLOWS AND 90° RETURN





- Holes for centring pins
 Right-hand rotation supply
 Left-hand rotation supply
 Dovetail for "V-Lock" fixing. For standard dimensions, see chapter V-Lock adaptors
 Club for "V Lock" supply
- 7
- 8
- Slot for "V-Lock" precision key Threaded holes for fixing Air outlets on the right (M5 thread) Air outlets on the left (M5 thread) Ũ
- (12)
- IMPORTANT: for any missing dimensions, please refer to the DAPIK-2 rotary actuator on page **A3**.145



ACTUATORS



DIMENSIONS OF DAPK-1 + DZAK-1 THREE-POSITION ROTARY ACTUATOR (right or left)



(13) Air supply (M5 thread)

- Intermediate stop supply (M5 thread) (14)
- (15) Inductive sensor slot

IMPORTANT: for any missing dimensions, please refer to the DAPK-1 rotary actuator on page A3.142

DIMENSIONS OF DAPIK-1 + DZAK-1 THREE-POSITION ROTARY ACTUATOR WITH INTERNAL AIR FLOWS (right or left)



(13)

Air supply (M5 thread) Intermediate stop supply (M5 thread) (14)

Inductive sensor slot (15)

(13)

(14) (15)

IMPORTANT: for any missing dimensions, please refer to the DAPIK-1 rotary actuator on page A3.143

DIMENSIONS OF DAPIK-1 + WAK-1 + DZAK-1 THREE-POSITION ROTARY ACTUATOR WITH INTERNAL AIR FLOWS AND 90° RETURN (right or left)



A3

DIMENSIONS OF DAPK-2 + DZAK-2 THREE-POSITION ROTARY ACTUATOR (right or left)



Air supply (M5 thread) (13)

Intermediate stop supply (M5 thread) (14)

(15) Inductive sensor slot

IMPORTANT: for any missing dimensions, please refer to the DAPK-2 rotary actuator on page A3.144

DIMENSIONS OF DAPIK-2 + DZAK-2 THREE-POSITION ROTARY ACTUATOR WITH INTERNAL AIR FLOWS (right or left)



(13)

Air supply (M5 thread) Intermediate stop supply (M5 thread) (14)

(15) Inductive sensor slot

IMPORTANT: for any missing dimensions, please refer to the DAPIK-2 rotary actuator on page A3.145

DIMENSIONS OF DAPIK-2 + WAK-2 + DZAK-2 THREE-POSITION ROTARY ACTUATOR WITH INTERNAL AIR FLOWS AND 90° RETURN (right or left)



ACTUATORS

(13) (14)

(15)



DIMENSIONS OF DAPK-1 + 2 DZAK-1 FOUR-POSITION ROTARY ACTUATOR



(13) Air supply (M5 thread)

- Intermediate stop supply (M5 thread) (14)
- (15) Inductive sensor slot

IMPORTANT: for any missing dimensions, please refer to the DAPK-1 rotary actuator on page A3.142

DIMENSIONS OF DAPIK-1 + 2 DZAK-1 FOUR-POSITION ROTARY ACTUATOR WITH INTERNAL AIR FLOWS



(13)

Air supply (M5 thread) Intermediate stop supply (M5 thread) (14)

(15) Inductive sensor slot

(13)

(14)

(15)

IMPORTANT: for any missing dimensions, please refer to the DAPIK-1 rotary actuator on page A3.143

DIMENSIONS OF DAPIK-1 + WAK-1 + 2 DZAK-1 FOUR-POSITION ROTARY ACTUATOR WITH INTERNAL AIR FLOWS AND 90° RETURN



IMPORTANT: for any missing dimensions, please refer to the DAPIK-1 + WAK-1 rotary actuator on page A3.142

A3

DIMENSIONS OF DAPK-2 + 2 DZAK-2 FOUR-POSITION ROTARY ACTUATOR



(13) Air supply (M5 thread)

- Intermediate stop supply (M5 thread) (14)
- (15) Inductive sensor slot

IMPORTANT: for any missing dimensions, please refer to the DAPK-2 rotary actuator on page A3.144

DIMENSIONS OF DAPK-2 + 2 DZAK-2 FOUR-POSITION ROTARY ACTUATOR WITH INTERNAL AIR FLOWS



(13)

Air supply (M5 thread) Intermediate stop supply (M5 thread) Inductive sensor slot (14)

(15)

IMPORTANT: for any missing dimensions, please refer to the DAPIK-2 rotary actuator on page A3.145

DIMENSIONS OF DAPIK-2 + WAK-2 + 2 DZAK-2 FOUR-POSITION ROTARY ACTUATOR WITH INTERNAL AIR FLOWS AND 90° RETURN



ACTUATORS

(13)

(14) (15)



KEY TO CODES

K20	1	02	0	3	0	00	К
	SIZE	POSITION		END POSITION			FAMILY
Rotary actuator series DAPK / DAPIK	1 Size 1 2 Size 2	 02 2 position (DAPK) S3 3 position (DAPK + DZAK) D3 3 position (DAPK + DZAK) 04 4 position (DAPK + n.2 DZAK) 	 0 Without internal air flow 1 With internal in-line air flow (DAPIK) 2 With 90° in-line air flow (DAPIK + WAK) 	 With elastic mechanical stop With standard shock absorbers (STD) On request 6 With medium hardness shock-absorbers (H2) 7 With hard shock-absorbers (M7) 	0 Magnetic S Non-magnetic		K V-Lock
 On the left viewed from 	m the rotating plo	ote. ■ On	the right viewed from the rotati	ng plate. • O	nly for size 2.		

ORDERING CODES

Description

Code	Description Co	de
DAPK-1	DA	N PK
K2010203000K	DAPK-1 magnetic with elastic mechanical stop K2	202
K2010203500K	DAPK-1 NON-magnetic with elastic mechanical stop K2	02
K2010205000K	DAPK-1 magnetic with shock absorbers K2	202
K2010205S00K	DAPK-1 NON-magnetic with shock absorbers K2	202
K2010213000K	DAPIK-1 magnetic with elastic mechanical stop K2	202
K2010213S00K	DAPIK-1 NON-magnetic with elastic mechanical stop K2	202
K2010215000K	DAPIK-1 magnetic with shock absorbers K2	202
K2010215S00K	DAPIK-1 NON-magnetic with shock absorbers K2	202
K201S303000K	DAPK-1 + DZAK-1 (SX) magnetic with elastic mechanical stop K2	202
K201S303S00K	DAPK-1 + DZAK-1 (SX) NON-magnetic with elastic mechanical stop K2	202
K201S305000K	DAPK-1 + DZAK-1 (SX) magnetic with shock absorbers K2	202
K201S305S00K	DAPK-1 + DZAK-1 (SX) NON-magnetic with shock absorbers K2	02
K201D303000K	DAPK-1 + DZAK-1 (DX) magnetic with elastic mechanical stop K2	202
K201D303S00K	DAPK-1 + DZAK-1 (DX) NON-magnetic with elastic mechanical stop K2	02
K201D305000K	DAPK-1 + DZAK-1 (DX) magnetic with shock absorbers K2	202
K201D305S00K	DAPK-1 + DZAK-1 (DX) NON-magnetic with shock absorbers K2	02
K2010403000K	DAPK-1 + n°2 DZAK-1 magnetic with elastic mechanical stop K2	202
K2010403S00K	DAPK-1 + n°2 DZAK-1 NON-magnetic with elastic mechanical stop K2	202
K2010405000K	DAPK-1 + n°2 DZAK-1 magnetic with shock absorbers K2	202
K2010405S00K	DAPK-1 + n°2 DZAK-1 NON-magnetic with shock absorbers K2	02
K201S313000K	DAPIK-1 + DZAK-1 (SX) magnetic with elastic mechanical stop K2	202
K201S313S00K	DAPIK-1 + DZAK-1 (SX) NON-magnetic with elastic mechanical stop K2	02
K201\$315000K	DAPIK-1 + DZAK-1 (SX) magnetic with shock absorbers K2	202
K201S315S00K	DAPIK-1 + DZAK-1 (SX) NON-magnetic with shock absorbers K2	202
K201D313000K	DAPIK-1 + DZAK-1 (DX) magnetic with elastic mechanical stop K2	202
K201D313S00K	DAPIK-1 + DZAK-1 (DX) NON-magnetic with elastic mechanical stop K2	:02
K201D315000K	DAPIK-1 + DZAK-1 (DX) magnetic with shock absorbers K2	:02
K201D315S00K	DAPIK-1 + DZAK-1 (DX) NON-magnetic with shock absorbers K2	:02
K2010413000K	DAPIK-1 + n°2 DZAK-1 magnetic with elastic mechanical stop K2	:02
K2010413S00K	DAPIK-1 + n°2 DZAK-1 NON-magnetic with elastic mechanical stop K2	:02
K2010415000K	DAPIK-1 + n°2 DZAK-1 magnetic with shock absorbers K2	:02
K2010415S00K	DAPIK-1 + n°2 DZAK-1 NON-magnetic with shock absorbers K2	:02
K2010223000K	DAPIK-1 + WAK-1 magnetic with elastic mechanical stop K2	:02
K2010223S00K	DAPIK-1 + WAK-1 NON-magnetic with elastic mechanical stop K2	:02
K2010225000K	DAPIK-1 + WAK-1 magnetic with shock absorbers K2	:02
K2010225S00K	DAPIK-1 + WAK-1 NON-magnetic with shock absorbers K2	:02
K201S323000K	DAPIK-1 + WAK-1 + DZAK-1 (SX) magnetic with elastic mechanical stop K2	:02
K2015323500K	DAPIK-1 + WAK-1 + DZAK-1 (SX) NON-magnetic with elastic mechanical stop K2	:02
K201S325000K	DAPIK-1 + WAK-1 + DZAK-1 (SX) magnetic with shock absorbers K2	:02
K201S325S00K	DAPIK-1 + WAK-1 + DZAK-1 (SX) NON-magnetic with shock absorbers K2	:02
K201D323000K	DAPIK-I + WAK-I + DZAK-I (DX) magnetic with elastic mechanical stop K2	.02
K201D323500K	DAPIK-1 + WAK-1 + DZAK-1 (DX) NON-magnetic with elastic mechanical stop K2	:02
K201D325000K	DAPIK-I + WAK-I + DZAK-I (DX) magnetic with shock absorbers K2	.02
K201D325500K	DAPIK-I + WAK-I + DZAK-I (DX) NON-magnetic with shock absorbers K2	.02
K2010423000K	DAPIK-1 + WAK-1 + n ⁻² DZAK-1 magnetic with elastic mechanical stop K2	.02
K2010423500K	DAPIK 1 + WAK-1 + n ⁻ Z DZAK-1 NON-magnetic with elastic mechanical stop	.02
K2010425000K	DAPIK-1 + WAK-1 + n Z DZAK-1 magnetic with shock absorbers	.02
K/UTU4/05UUK	DAPIN-1 + WAN-1 + n / D/AK-1 NUN-magnetic with shock absorbers K7	417

Description

DAPK-2 K2020203000K DAPK-2 magnetic with elastic mechanical stop DAPK-2 NON-magnetic with elastic mechanical stop K2020203S00K DAPK-2 magnetic with STD shock absorbers K2020205000K K2020205S00K DAPK-2 NON-magnetic with STD shock absorbers K2020213000K DAPIK-2 magnetic with elastic mechanical stop K2020213S00K DAPIK-2 NON-magnetic with elastic mechanical stop K2020215000K DAPIK-2 magnetic with STD shock absorbers K2020215S00K DAPIK-2 NON-magnetic with STD shock absorbers K202S303000K DAPK-2 + DZAK-2 (SX) magnetic with elastic mechanical stop DAPK-2 + DZAK-2 (SX) NON-magnetic with elastic mechanical stop K202S303S00K K202S305000K DAPK-2 + DZAK-2 (SX) magnetic with STD shock absorbers K202S305S00K DAPK-2 + DZAK-2 (SX) NON-magnetic with STD shock absorbers K202D303000K DAPK-2 + DZAK-2 (DX) magnetic with elastic mechanical stop K202D303S00K DAPK-2 + DZAK-2 (DX) NON-magnetic with elastic mechanical stop DAPK-2 + DZAK-2 (DX) magnetic with STD shock absorbers K202D305000K DAPK-2 + DZAK-2 (DX) NON-magnetic with STD shock absorbers K202D305S00K K2020403000K DAPK-2 + n°2 DZAK-2 magnetic with elastic mechanical stop K2020403S00K DAPK-2 + n°2 DZAK-2 NON-magnetic with elastic mechanical stop K2020405000K DAPK-2 + n°2 DZAK-2 magnetic with STD shock absorbers K2020405S00K DAPK-2 + n°2 DZAK-2 NON-magnetic with STD shock absorbers K202S313000K DAPIK-2 + DZAK-2 (SX) magnetic with elastic mechanical stop K202S313S00K DAPIK-2 + DZAK-2 (SX) NON-magnetic with elastic mechanical stop DAPIK-2 + DZAK-2 (SX) magnetic with STD shock absorbers K202S315000K K202S315S00K DAPIK-2 + DZAK-2 (SX) NON-magnetic with STD shock absorbers K202D313000K DAPIK-2 + DZAK-2 (DX) magnetic with elastic mechanical stop K202D313S00K DAPIK-2 + DZAK-2 (DX) NON-magnetic with elastic mechanical stop K202D315000K DAPIK-2 + DZAK-2 (DX) magnetic with STD shock absorbers K202D315S00K DAPIK-2 + DZAK-2 (DX) NON-magnetic with STD shock absorbers K2020413000K DAPIK-2 + n°2 DZAK-2 magnetic with elastic mechanical stop K2020413500K DAPIK-2 + n°2 DZAK-2 NON-magnetic with elastic mechanical stop K2020415000K DAPIK-2 + n°2 DZAK-2 magnetic with STD shock absorbers K2020415S00K DAPIK-2 + n°2 DZAK-2 NON-magnetic with STD shock absorbers K2020223000K DAPIK-2 + WAK-2 magnetic with elastic mechanical stop K2020223S00K DAPIK-2 + WAK-2 NON-magnetic with elastic mechanical stop K2020225000K DAPIK-2 + WAK-2 magnetic with STD shock absorbers K2020225S00K DAPIK-2 + WAK-2 NON-magnetic with STD shock absorbers K202S323000K DAPIK-2 + WAK-2 + DZAK-2 (SX) magnetic with elastic mechanical stop K202S323S00K DAPIK-2 + WAK-2 + DZAK-2 (SX) NON-magnetic with elastic mechanical stop K202S325000K DAPIK-2 + WAK-2 + DZAK-2 (SX) magnetic with STD shock absorbers K202S325S00K DAPIK-2 + WAK-2 + DZAK-2 (SX) NON-magnetic with STD shock absorbers K202D323000K DAPIK-2 + WAK-2 + DZAK-2 (DX) magnetic with elastic mechanical stop K202D323S00K DAPIK-2 + WAK-2 + DZAK-2 (DX) NON-magnetic with elastic mechanical stop K202D325000K DAPIK-2 + WAK-2 + DZAK-2 (DX) magnetic with STD shock absorbers K202D325S00K DAPIK-2 + WAK-2 + DZAK-2 (DX) NON-magnetic with STD shock absorbers K2020423000K DAPIK-2 + WAK-2 + n°2 DZAK-2 magnetic with elastic mechanical stop K2020423S00K DAPIK-2 + WAK-2 + n°2 DZAK-2 NON-magnetic with elastic mechanical stop K2020425000K DAPIK-2 + WAK-2 + n°2 DZAK-2 magnetic with STD shock absorbers K2020425S00K DAPIK-2 + WAK-2 + n°2 DZAK-2 NON-magnetic with STD shock absorbers

ACCESSORIES

V-Lock ACCESSORIES

See page A3.36

DZAK-1 INTERMEDIATE STOP

DZAK-2 INTERMEDIATE STOP



DZAK-1 ADJUSTING WRENCH



DZAK-2 ADJUSTING WRENCH



Code	Description
095K2000260K	DZAK-2 adjusting wrench

Code

Code

Description 095K2000100K DZAK-1 intermediate stop

Description 095K2000110K DZAK-2 intermediate stop

CodeDescription095K2000250KDZAK-1 adjusting wrench

CodeDescription095K2000150KWAK-1 angle adaptor

Weight [g] 190

Weight [g] 105

Weight [g] 214

Weight [g] 25

Weight [g] 30

Note: Individually packed with 4 screws, 4 washers

ROTARY ACTUATOR SERIES DAPK



A3.152

WAK-1





ROTARY ACTUATOR SERIES DAPK

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