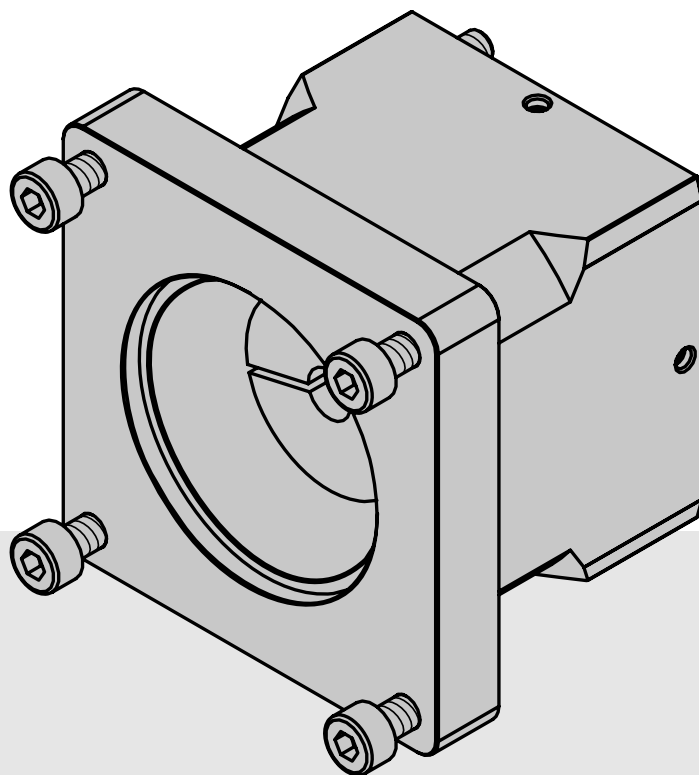


UNIMOTION

ASSEMBLY INSTRUCTIONS

VK MG






MOTOR ADAPTER
WITH A COUPLING



GENERAL INFORMATION

In this assembly instructions the linear unit and electric cylinder or slider, on which the motor adapter VK will be mounted, are designated as product. The motor or the gearbox are designated as motor.

USED SYMBOLS

	Remark, note
	Warning!
	Danger! Risk of coming into contact with power conducting parts! The power supply must be disconnected!
	For more information, please refer to the specified documentation
	Use different tightening torque as it is presented in the section "Recommended tightening torques"

RECOMMENDED TIGHTENING TORQUES

Recommended tightening torques of the screws

Tightening torque (8.8)	Thread size						
	M2	M2,5	M3	M4	M5	M6	M8
$M_{A, \max}$ [Nm]	0,4	0,7	1,3	2,8	5,6	9,6	23,0

Table 1: Recommended tightening torques of the screws of strength class 8.8.

Recommended tightening torques of the coupling screws


Tightening torque	Coupling type and size		
	EKL 2	EKL 5	EKL 10
$M_{A, \max}$ [Nm]	0,6	2,0	4,0

Table 2: Recommended tightening torques of the coupling screws.

PERMISSIBLE LOADS

Overloading

The maximum rotational speed and the maximum torque of the motor must not exceed the limits of the product or the coupling. Overloading the product can lead to the product being damaged.

 For the values of maximum rotational speed and maximum torque of the product or the coupling, please refer to the product or coupling catalogue.

PARTS LIST

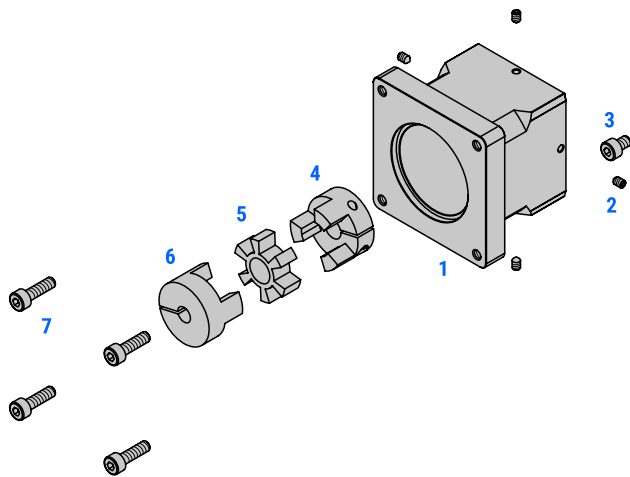


Figure 1: Parts of the standard motor adapter VK MG.

- 1 – Motor adapter housing
- 2 – Motor adapter housing set screw¹
- 3 – Anti-rotation screw²
- 4 – Hub 1
- 5 – Elastomer insert
- 6 – Hub 2
- 7 – Motor screw
- 8 – Motor adapter flange⁴
- 9 – Motor adapter flange screw⁴

Elastomer coupling³

¹ For the VK MG 60, the screw is used.

² Only for the VK MG 25, 32 and 45. For the VK MG 25, the spring pin is used.

³ Only for the case of the standard motor adapter VK MG, the coupling is included.

⁴ Additionally in the case of non-standard motor adapter VK MG.

- i** The standard motor adapters VK MG are made out of one piece and are compatible with the standard motor. For the combination with an individual motor, the non-standard motor adapter is used.
- 📖** For the compatibility of the standard motor adapters VK MG with standard motors, please refer to the product catalogue.

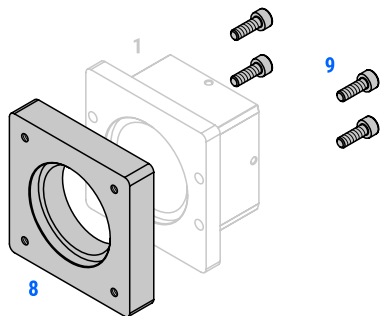


Figure 2: Additional parts of the non-standard motor adapter VK MG.

MOUNTING

⚠️ Requirements for personnel

The motor adapter may only be mounted by appropriately qualified personnel. All qualified personnel must have read and understood this assembly instructions.

⚠️ Avoid from collision of the moving components and the motor adapter (or the motor).

There must never be any collision of the mounted motor adapter (or the motor) and the moving components of the product or structure where the product is installed, otherwise the product may be damaged.

⚠️ Risk of coming into contact with power conducting parts!

During the mounting procedure, the power supply should be disconnected and secured against reconnection!

STEP 1 AND 2

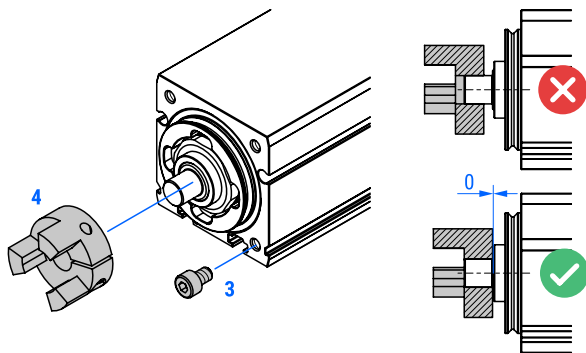


Figure 3: Step 1 and 2.

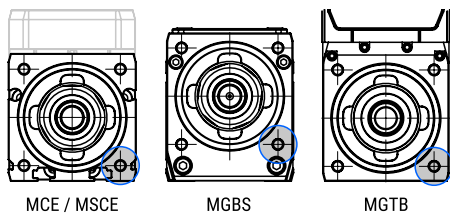


Figure 4: Mounting position of the anti-rotation screw 3.

STEP 3 AND 4

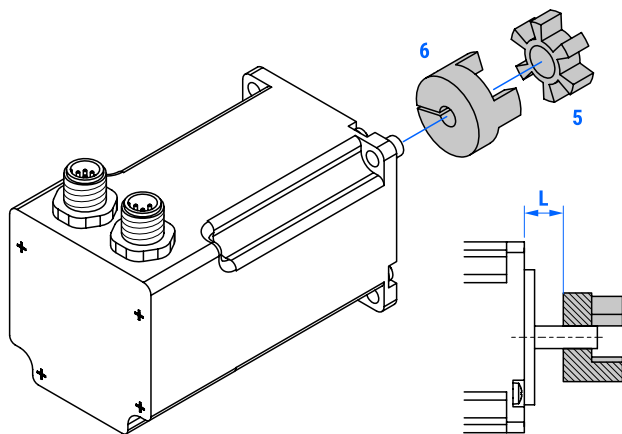


Figure 5: Step 3 and 4.

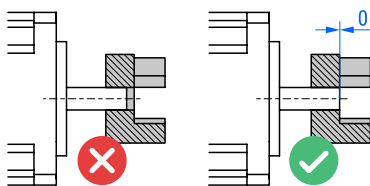


Figure 6: Coupling hub and motor shaft alignment for the non-standard motor adapter.

STEP 1: Place the coupling hub 1 4 on the drive shaft of the product. Ensure that the coupling hub 1 4 is completely pushed on the drive shaft of the product.

Tighten the coupling hub 1 screw 4 with the coupling tightening torque.

STEP 2: Mount the anti-rotation screw 3 into the bottom right mounting hole on the product, where the motor adapter housing 1 will be installed (please see Figure 4, where the mounting positions for screw 3 for different products are presented).

i For the case of VK MG 25 the anti-rotation pin is used, which needs to be inserted into the motor adapter housing 1.

i For the case of VK MG 60, there is no anti-rotation screw or pin 3.

STEP 3: Place the coupling hub 2 6 on the motor shaft. Ensure that the coupling hub 2 6 and the motor shaft are correctly aligned (mounting distance L must be ensured), see Figure 5 and Table 3.

Tighten the coupling hub 2 screw 6 with the coupling tightening torque.

i For the case of the non-standard motor adapter, the coupling hub must be aligned as it is presented in the Figure 6.

STEP 4: Insert the elastomer insert 5 into the coupling hub 2 6.

VK MG	Type	L [mm]
		(±0,2 mm)
25	T1	9,8
32	T1	9,8
	T2	13,8
45	T1	15,0
	T2	12,0
60	T1	10,5
	T2	27,0

Table 3: Mounting distance L (valid for the standard motor adapter).

STEP 5

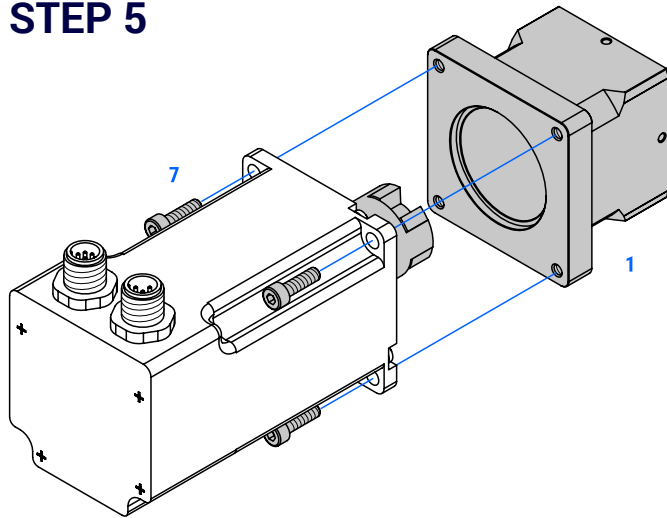


Figure 7: Step 5.

STEP 5: Mount the motor on the motor adapter housing **1** (in desired motor orientation) with the motor screws **7** (through the prepared holes on the motor flange). Tighten the motor screws **7**.

i For the case of the non-standard motor adapter, the motor adapter flange **8** must be mounted on the motor first using the motor screws **7**. After tightening the motor screw **7** mount the motor adapter housing **1** onto the motor adapter flange **8** with the motor adapter flange screws **9**, see Figure 8.

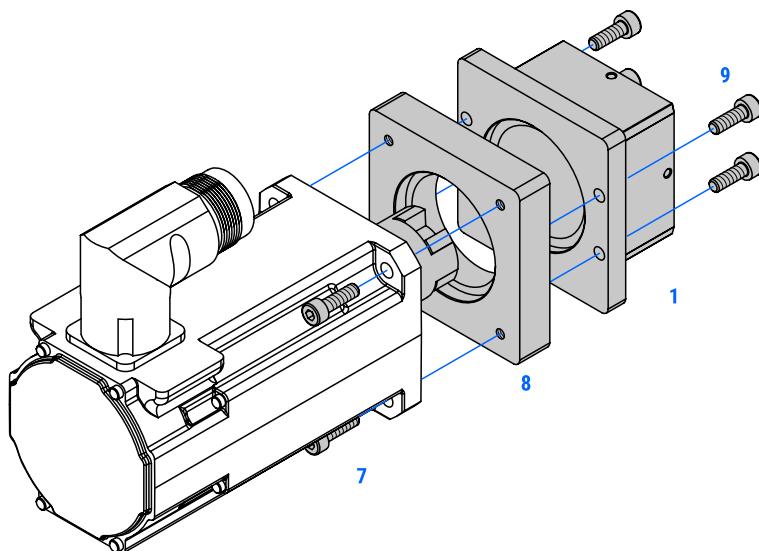


Figure 8: Step 5 for the case of the non-standard motor adapter.

i If the motor has tapped mounting holes, then the motor screws **7** are inserted through the motor adapter housing or motor adapter flange prepared holes for the case of standard or non-standard motor adapter, respectively.

STEP 6

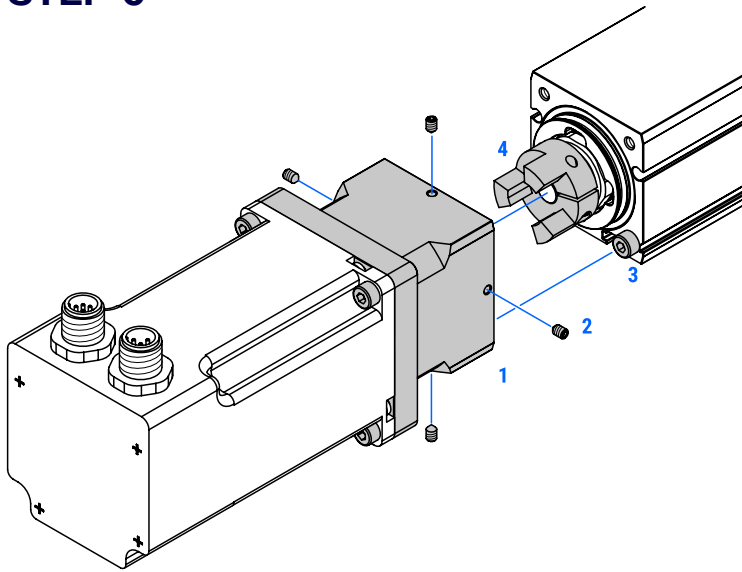


Figure 9: Step 6.

STEP 6: Mount the motor adapter housing 1 together with the motor on the product using the motor adapter housing set screws 2 and join the coupling hubs 4, 6 (and elastomer insert 5) at the same time. Ensure that the anti-rotation screw 3 is fitted into the prepared hole in the motor adapter housing 1.

- ⚠️ Tighten the set screw 2 with the tightening torque as follows:
 - set screw of size M3: 0,8 Nm.
- ℹ️ For the VK MG 60, the motor adapter housing screws 2 are used instead of set screws 2. For the tightening torque of the screws 2, please refer to the Table 1.
- ℹ️ For the VK MG 60 T2 and non-standard version of VK MG 60, the motor adapter housing 1 is mounted on the product first using the motor adapter housing screw 3, then the motor or the motor adapter flange 8 (together with a motor) is mounted on the motor adapter housing 1 (using the motor screws 7 or the motor adapter flange screws 9) for the case of standard or non-standard motor adapter, respectively.

INITIAL START-UP

Before the initial start-up, check if everything is OK:

- electrical wiring,
- mounted elements,
- tightened screws,
- there is no collision of the moving components and the motor adapter (or the motor),
- the motor needs to be supported for the case the product is subjected to the shock loads and vibrations or a massive motor is used.

DISMOUNTING

To dismantle the motor adapter VK MG properly, look at the mounting procedure.

⚠️ Dismounting the motor adapter

To dismantle the motor adapter VK MG, take precautions, such as turning off the power supply and prevent the moving components of the product from dropping, if it is in a vertical or inclined position. It should be also noted, that during the operating process hot surfaces of the motor, motor adapter VK and product may occur.