6 Mounting Positions and Important Order Information

6.1 General information regarding the mounting positions

Designation of the mounting positions

SEW-EURODRIVE differentiates between six mounting positions M1 ... M6 for gear units, gearmotors and MOVIMOT® gearmotors. The following figure shows the position of the gear unit in mounting positions M1...M6.
6.2 Important order information

The following order information is required for R, F, K and S gear units and gearmotors in addition to the mounting position to exactly determine the design of the drive.

This information is also required for Spiroplan® gearmotors (W gearmotors) that do not depend on a particular mounting position.

Observe the following notes for all gear units and gearmotors from SEW-EURODRIVE.

If the drive has an RS backstop, you have to indicate the direction of rotation of the output for the drive. The following definition applies:

As viewed at the output shaft:

- CW = Rotating clockwise
- CCW = Rotating counterclockwise

Figure 9: Output direction of rotation

In right-angle gear units, you also have to indicate whether the direction of rotation is given looking onto the A or B end.

Position of the output shaft and output flange

In right-angle gear units, you also have to indicate the position of the output shaft and the output flange:

- A or B or AB

Figure 10: Position of the output shaft and the output flange
In shaft mounted right-angle gear units with a shrink disk, you also have to indicate whether the A or B end is the output end. In Figure 11, the A end is the output end. The shrink disk is located opposite the output end.

In shaft mounted right-angle gear units, the "output end" is equivalent to the "shaft position" of right-angle gear units with solid shaft.

You will find the permitted mounting surfaces (= hatched area) in the mounting position sheets (page 60 and the following pages).

**Example:** Only the mounting surface at the bottom is possible with helical-bevel gear units K167/K187 in mounting positions M5 and M6.
For all gearmotors

Position of the motor terminal box and the cable entry

Observe the following notes for all gearmotors from SEW-EURODRIVE.

The position of the motor terminal box has so far been specified indicated with 0°, 90°, 180° or 270° as viewed onto the fan guard = B-end (→ Figure 12). A change in the product standard EN 60034 specifies that the following designations will have to be used for terminal box positions for foot-mounted motors in the future:

- As viewed onto the output shaft = A-end
- Designation as R (right), B (bottom), L (left) and T (top)

This new designation applies to foot-mounted motors without a gear unit in mounting position B3 (= M1). The previous designation is maintained for gearmotors. Figure 12 shows both designations. Where the mounting position of the motor changes, R, B, L and T are rotated accordingly. In motor mounting position B8 (= M3), T is at the bottom.

The position of the cable entry can be selected as well. The positions are "X" (= standard position), "1", "2" or "3" (→ Figure 12).

Unless indicated otherwise, you will receive the terminal box type 0° (R) with "X" cable entry. We recommend selecting cable entry "2" with mounting position M3.

- When the terminal box is in the 90° (B) position, check to see if the gearmotor has to be supported.

Software support

Not any cable entry position [X, 1, 2, 3] and terminal box position [0°(R), 90°(B), 180°(L), 270°(T)] can be chosen. Some additional features for the motor require a connection inside the terminal box, which means this terminal box is larger than the standard terminal box due to the normative air gaps and creepage distances. The dimension sheets only depict the standard terminal box.

For a thorough check of the possible positions of your drive, you can use the DRIVECAD software in DriveGate on the SEW-EURODRIVE website.

- If you are already a registered DriveGate user: https://portal.drivegate.biz/drivecad
- If you are not yet a registered DriveGate user: www.sew-eurodrive.de → DriveGate login.
**Mounting Positions and Important Order Information**

**Sample orders**

<table>
<thead>
<tr>
<th>Type (Examples)</th>
<th>Mounting position</th>
<th>Shaft position</th>
<th>Flange position</th>
<th>Terminal box position</th>
<th>Cable entry position</th>
<th>Output direction of rotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>K47DRS71S4/RS</td>
<td>M2</td>
<td>A</td>
<td>-</td>
<td>0°</td>
<td>&quot;X&quot;</td>
<td>CW</td>
</tr>
<tr>
<td>SF77DRE100M4</td>
<td>M6</td>
<td>AB</td>
<td>AB</td>
<td>90°</td>
<td>&quot;3&quot;</td>
<td>-</td>
</tr>
<tr>
<td>KA97DRE132S4</td>
<td>M4</td>
<td>B</td>
<td>-</td>
<td>270°</td>
<td>&quot;2&quot;</td>
<td>-</td>
</tr>
<tr>
<td>KH107DRE132M4</td>
<td>M1</td>
<td>A</td>
<td>-</td>
<td>180°</td>
<td>&quot;3&quot;</td>
<td>-</td>
</tr>
<tr>
<td>WF20DRS71M4</td>
<td>-</td>
<td>A</td>
<td>A</td>
<td>0°</td>
<td>&quot;X&quot;</td>
<td>-</td>
</tr>
<tr>
<td>KAF67A</td>
<td>M3</td>
<td>A</td>
<td>B</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Change in mounting position**

Make sure to read the following information when you operate the gearmotor in a mounting position other than the one indicated in the order:

- Adjust lubricant fill quantity to match the new mounting position
- Adjust position of breather valve
- For helical-bevel gearmotors: Contact the SEW-EURODRIVE customer service prior to changing to mounting position M5 or M6 and when changing from M5 to M6 or vice versa.
- For helical-worm gearmotors: Contact the SEW-EURODRIVE customer service when changing to mounting position M2 or M3.
6.3 Key to the mounting position sheets

The Spiroplan® gearmotors are not dependant on the mounting position, except for W..37 and W..47 in mounting position M4. However, mounting positions M1 to M6 are also shown for Spiroplan® gearmotors to assist you in working with this documentation.

Important! Please note:
Spiroplan® gearmotors W..10 to W..30 cannot be equipped with breather valves, oil level plugs or drain plugs.
Spiroplan® gearmotors W..37 and W..47 can be equipped with breather valves, oil level plugs or drain plugs.

Symbols used

The following table shows the symbols used in the mounting position sheets and their meaning:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image.png" alt="Breather Valve" /></td>
<td>Breather valve</td>
</tr>
</tbody>
</table>
| ![Oil Level Plug](image.png) | Oil level plug
1) Does not apply to the first gear unit (larger gear unit) of multi-stage gear units. |
| ![Oil Drain Plug](image.png) | Oil drain plug |

Churning losses

Churning losses may occur in some mounting positions. Contact SEW-EURODRIVE in case of the following combinations:

<table>
<thead>
<tr>
<th>Mounting position</th>
<th>Gear unit type</th>
<th>Gear unit size</th>
<th>Input speed [1/min]</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2, M4</td>
<td>R</td>
<td>97 ... 107</td>
<td>&gt; 2500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 107</td>
<td>&gt; 1500</td>
</tr>
<tr>
<td>M2, M3, M4, M5, M6</td>
<td>F</td>
<td>97 ... 107</td>
<td>&gt; 2500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 107</td>
<td>&gt; 1500</td>
</tr>
<tr>
<td></td>
<td>K</td>
<td>77 ... 107</td>
<td>&gt; 2500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 107</td>
<td>&gt; 1500</td>
</tr>
<tr>
<td></td>
<td>S</td>
<td>77 ... 97</td>
<td>&gt; 2500</td>
</tr>
</tbody>
</table>

Displayed shaft

Note the following information regarding display of shafts in the mounting position sheets:

- **For gear units with solid shaft**: The displayed shaft is always on the A end.
- **For shaft mounted gear units**: The shaft with dashed lines represents the customer shaft. The output end (= shaft position) is always shown on the A end.
6.4 Helical gearmotors – mounting positions

RX57-RX107

*→ page 59
Mounting Positions and Important Order Information

Helical gearmotors – mounting positions

RXF57-RXF107

0° (R)
270° (T)
90° (B)
180° (L)

M1

M2 *

M3

M4 *

M5

M6

* → page 59

04 044 02 00
Mounting Positions and Important Order Information
Helical gearmotors – mounting positions

RF07-RF167, RZ07-RZ87

* → page 59
Caution: See the information marked with * in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).
6.5 Parallel-shaft helical gearmotors – mounting positions

F/FA..B/FH27B-157B, FV27B-107B

* → page 59
M1...M6

Mounting Positions and Important Order Information
Parallel-shaft helical gearmotors – mounting positions

FF/FAF/FHF/FAZ/FHZ 27-157, FVF/FVZ 27-107

* → page 59
Parallel-shaft helical gearmotors – mounting positions

FA/FH27-157, FV27-107, FT37-97

42 044 03 00

* → page 59
6.6 Helical-bevel gearmotors – mounting positions

K/KA..B/KH47B-157B, KV37B-107B

Caution: See the information marked with ☑ in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).
**K167-187, KH167B-187B**

**Caution:** See the information marked with 🔴 in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).
Mounting Positions and Important Order Information

Helical-bevel gearmotors – mounting positions

KF/KAF/KHF/KAZ/KHZ37-157, KVF/KVZ37-107

*M → page 59
Mounting Positions and Important Order Information
Helical-bevel gearmotors – mounting positions

KA/KH37-157, KV37-107, KT37-97

M1...M6

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Mounting Positions and Important Order Information
Helical-bevel gearmotors – mounting positions

KH167-187

* → page 59

M1 ... M6

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6.7 Helical-worm gearmotors – mounting positions

Caution: See the information marked with 1 in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).
Caution: See the information marked with 1 in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).
Helical-worm gearmotors – mounting positions

Mounting Positions and Important Order Information

SF/SAF/SHF37

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Mounting Positions and Important Order Information
Helical-worm gearmotors – mounting positions

SA/SH/ST37

28 020 04 00

* → page 59
6.8 Spiroplan® gearmotors – mounting positions

W10-30
Spiroplan® gearmotors – mounting positions

Mounting Positions and Important Order Information

WF10-30

M1...M6

20 002 01 02

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Mounting Positions and Important Order Information
Spiroplan® gearmotors – mounting positions

WA10-30

20 003 02 02

→ page 59
Mounting Positions and Important Order Information
Spiroplan® gearmotors – mounting positions

W/WA37-47B

M1 ... M6
Mounting Positions and Important Order Information
Spiroplan® gearmotors – mounting positions

WF/WAF/WHF37-47

20 013 00 07

→ page 59
Mounting Positions and Important Order Information
Spiroplan® gearmotors – mounting positions

WA/WH/WT37-47

M1 ... M6

→ page 59
6.9 AC motor – mounting position designations

Position of motor terminal box and cable entry

Mounting positions

Figure 13: Position of terminal box and cable entry

Figure 14: AC motors mounting positions