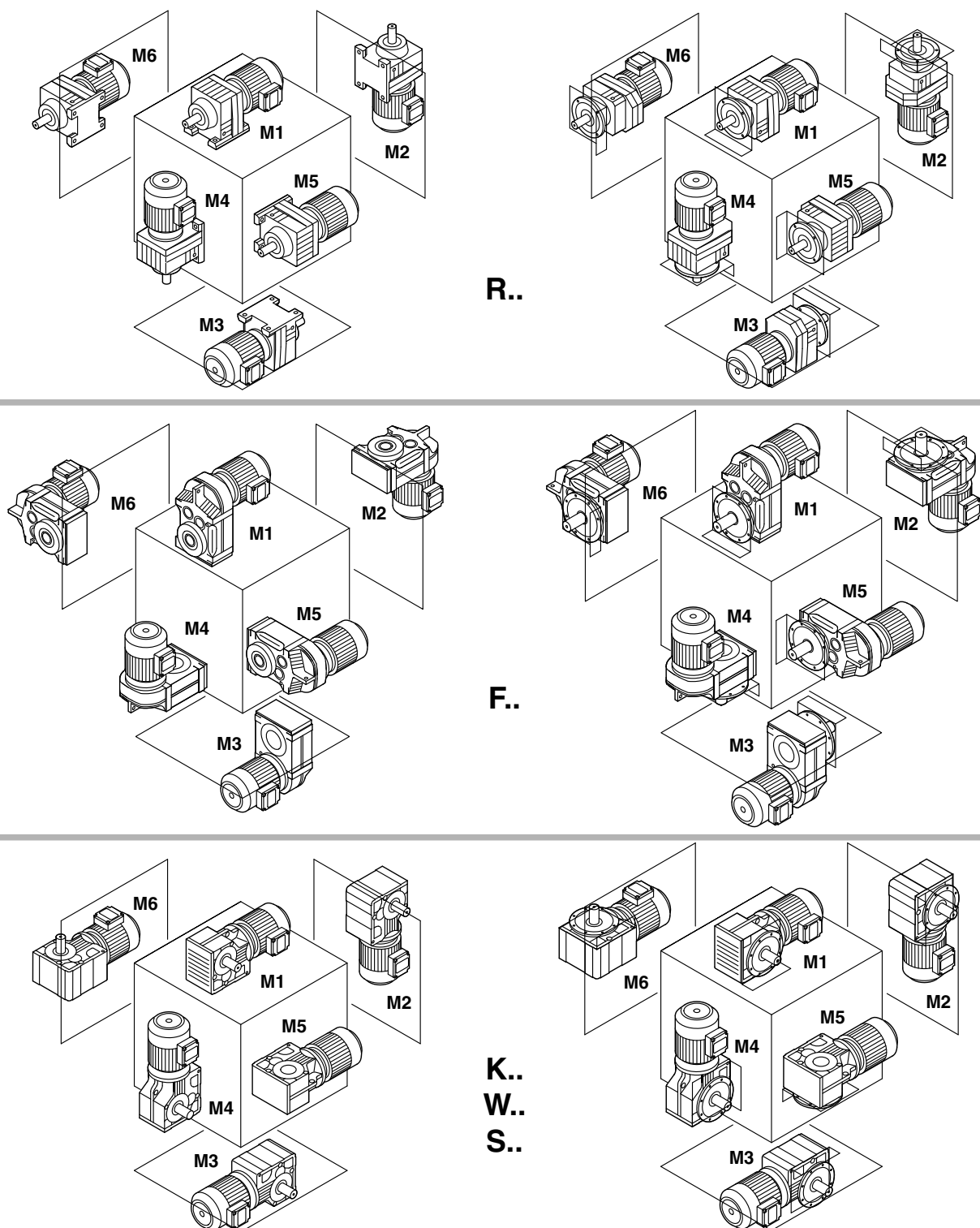


5 Gear Unit Mounting Positions

5.1 General information on mounting positions

SEW-EURODRIVE differentiates between six mounting positions M1 - M6 for gear units and gearmotors.


The following figure shows the position of the gear unit in mounting positions M1 - M6.



03203axx

The term MX for the mounting positions stands for a product design that the customer can adjust with a few adaptations to any mounting position.

5.2 Order information for servo gearmotors/gear units

	INFORMATION
	<p>The following order information is required for R, F, K and S gear units or gearmotors in addition to the mounting position to exactly determine the type of drive.</p> <p>This information is also required for SPIROPLAN® gearmotors (W gearmotors) that do not depend on a particular mounting position.</p>

The following applies to all gear units and gearmotors

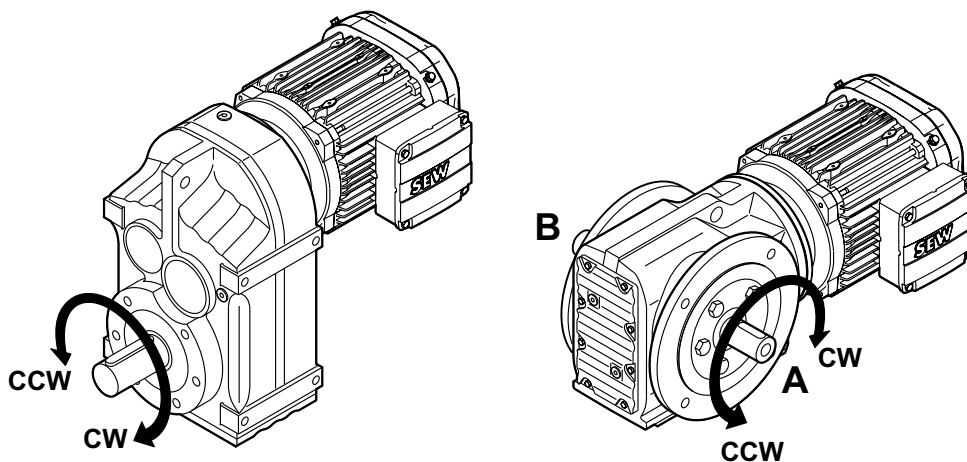
Observe the following notes for all gear units and gearmotors from SEW-EURODRIVE.

*Output direction of
rotation with
backstop*

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

As viewed at the output shaft:

Clockwise (CW)	= Rotating clockwise
Counterclockwise (CCW)	= Rotating counterclockwise



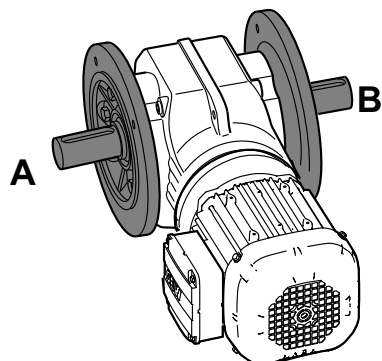
60511AXX

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

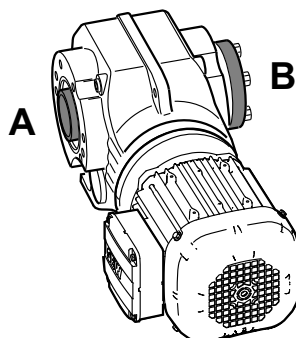


60513axx

Position of the output end in right-angle gear units

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 the following figure, the A end is the output end. The shrink disk is located opposite the output end, here on the B 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.



60510axx



INFORMATION

You find the permitted mounting surfaces (= hatched area) in the mounting position sheets (page 69 and subsequent pages).

Example: In mounting positions M5 and M6, only the mounting surface at the bottom is possible with helical-bevel gear units K167/K187.

Changing the mounting position

It is important that you read the following information when you operate the gearmotor in a mounting position other than indicated in the order:

- Adjust the lubricant fill quantity to match the new mounting position.
- Adjust the position of the 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.

5.3 Order information for servo gearmotors

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

Position of motor terminal box and cable entry

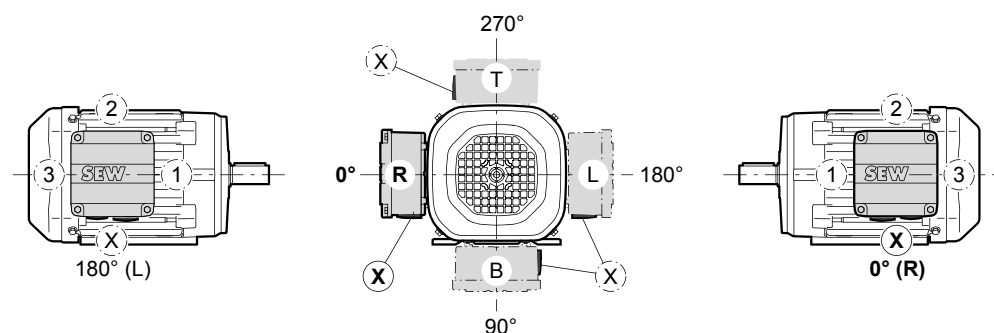
The position of the motor terminal box has so far been specified indicated with 0°, 90°, 180° or 270° as viewed onto the fan guard = B-end, see the following figure. A change in the product standard EN 60034 specifies that the following designations will have to be used for terminal box positions for 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. The following figure 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 possibilities are "X" (= normal position), "1", "2" or "3".

The following figure depicts the position of the terminal box and the cable entry.



60500AXX

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



INFORMATION

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.com → DriveGate® login

5.4 Key to the mounting position sheets

Symbols used

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

Symbol	Meaning
	Breather valve
	Oil level plug ¹⁾
	Oil drain plug
③	Cable entry position "3"

1) Does not apply to the first gear unit (larger gear unit) of multi-stage gear units



INFORMATION

Notes on the shafts illustrated on the mounting position sheets.

Observe the following information regarding the illustrations on 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.



INFORMATION

SPRIOPLAN® gearmotors do not depend on the mounting position, except for W..37/47 gearmotors in M4 mounting position. However, mounting positions M1 to M6 are also shown for SPIROPLAN® gear units to assist you in working with this documentation.

Important! Please note:

SPIROPLAN® gearmotors W..37 and W..47 can be equipped with breather valve, oil level plug or drain plug.



INFORMATION

Notes on the depicted motors.

Motors are only represented symbolically on the mounting position sheets.

Churning losses

* → page XX

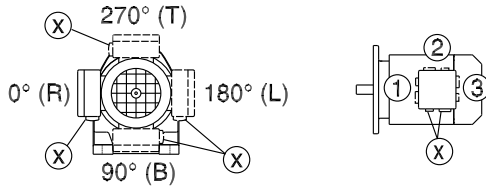
Churning losses may occur in some mounting positions. Contact SEW-EURODRIVE in case of the following combinations:

Mounting position	Gear unit type	Gear unit size	Input speed [rpm]
M2, M4	R	97 - 107	> 2500
		> 107	> 1500
M2, M3, M4, M5, M6	F	97 - 107	> 2500
		> 107	> 1500
	K	77 - 107	> 2500
		> 107	> 1500
	S	77 - 97	> 2500

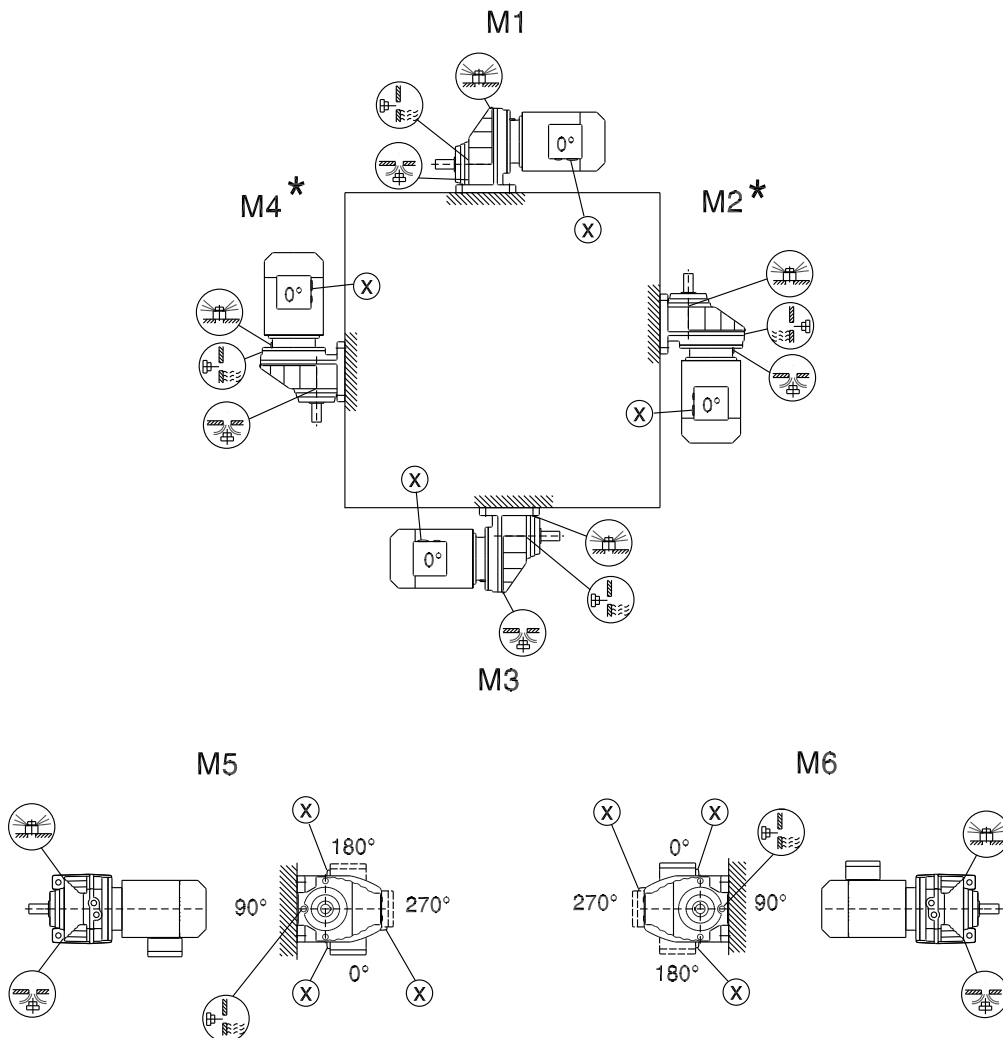
5.5 Mounting positions of helical gearmotors

RX57...RX107

04 043 02 00



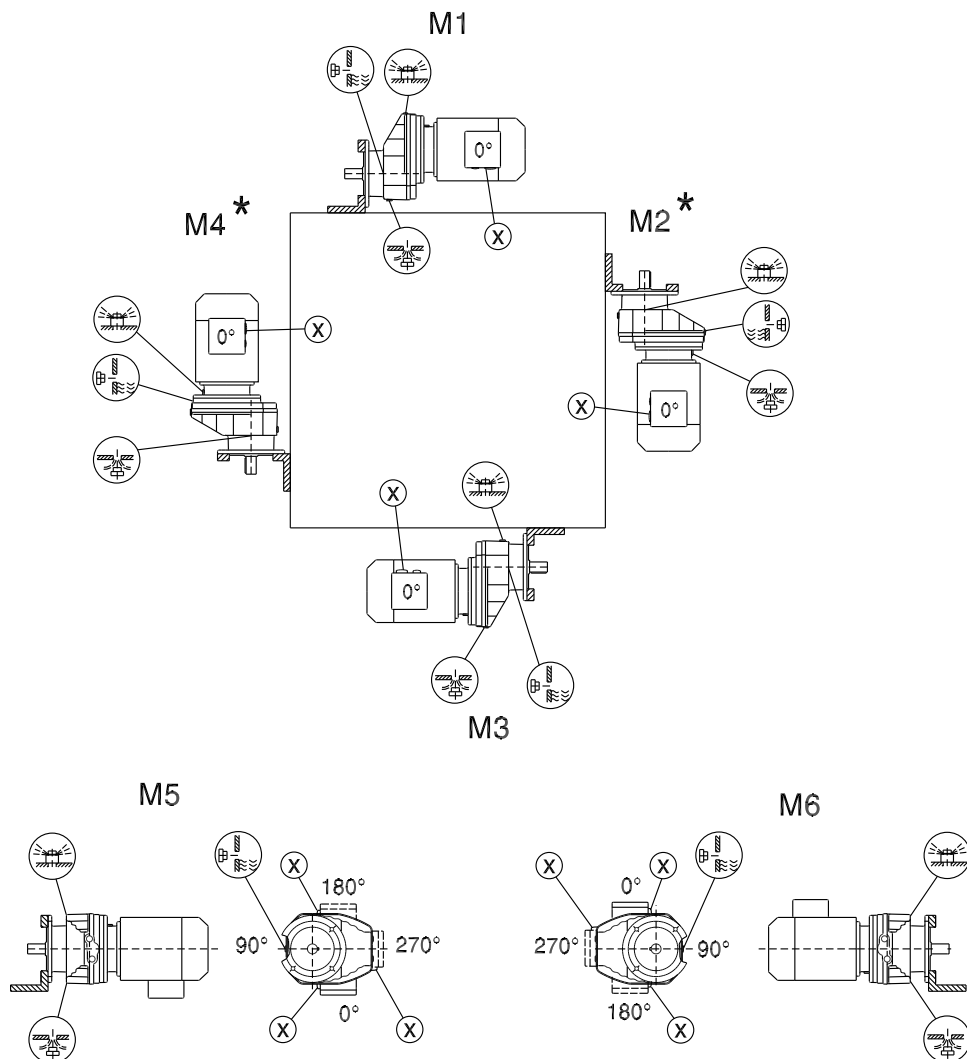
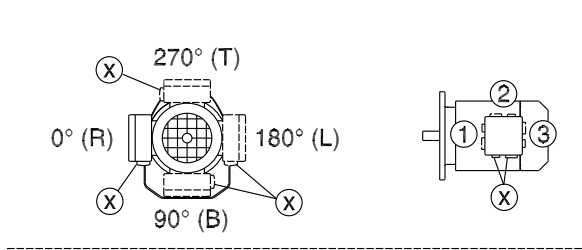
5



* → page 68

RXF57...RXF107

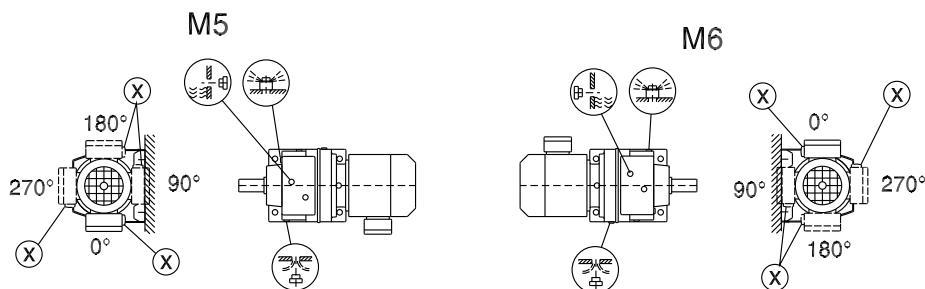
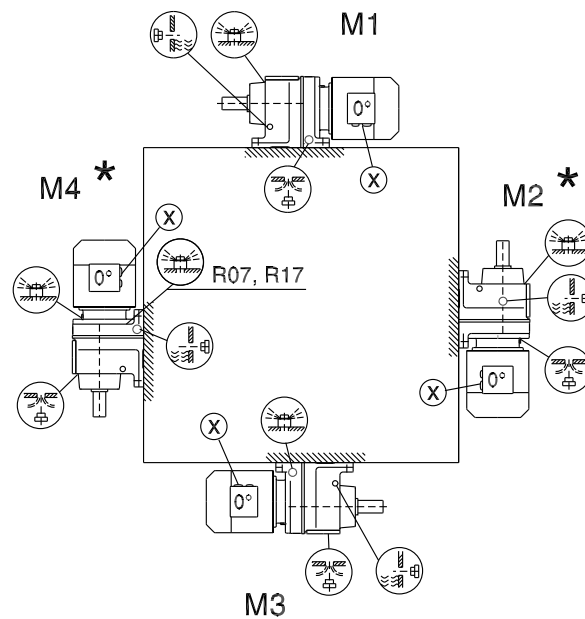
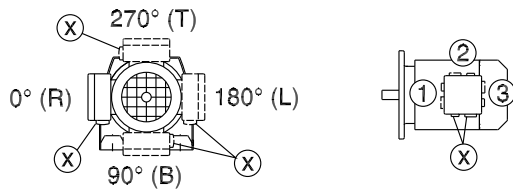
04 044 02 00



* → page 68

R07...R167

04 040 03 00



R07		M1, M2, M3, M5, M6
R17, R27		M1, M3, M5, M6
R07, R17, R27		
R47, R57		M5

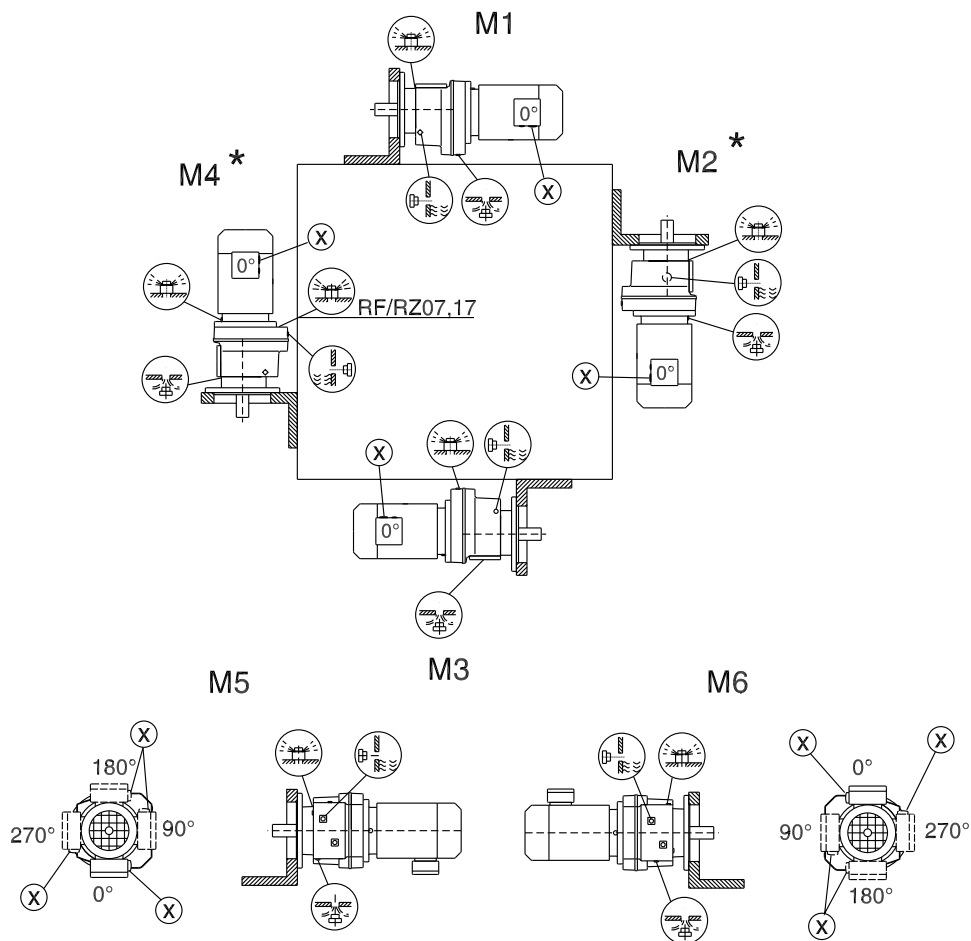
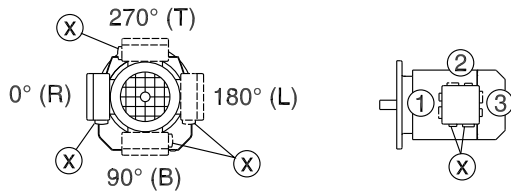
* → page 68

Gear Unit Mounting Positions

Mounting positions of helical gearmotors

RF07...RF167, RZ07...RZ87

04 041 03 00

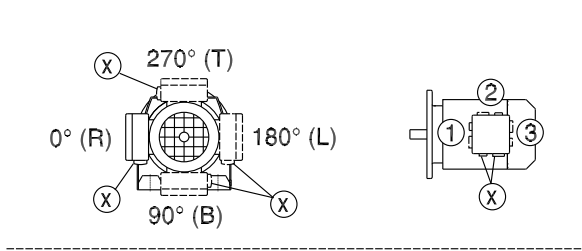


RF/RZ07		M1, M2, M3, M5, M6
RF/RZ17,27		M1, M3, M5, M6
RF/RZ07, 17, 27		
RF/RZ47, 57		M5

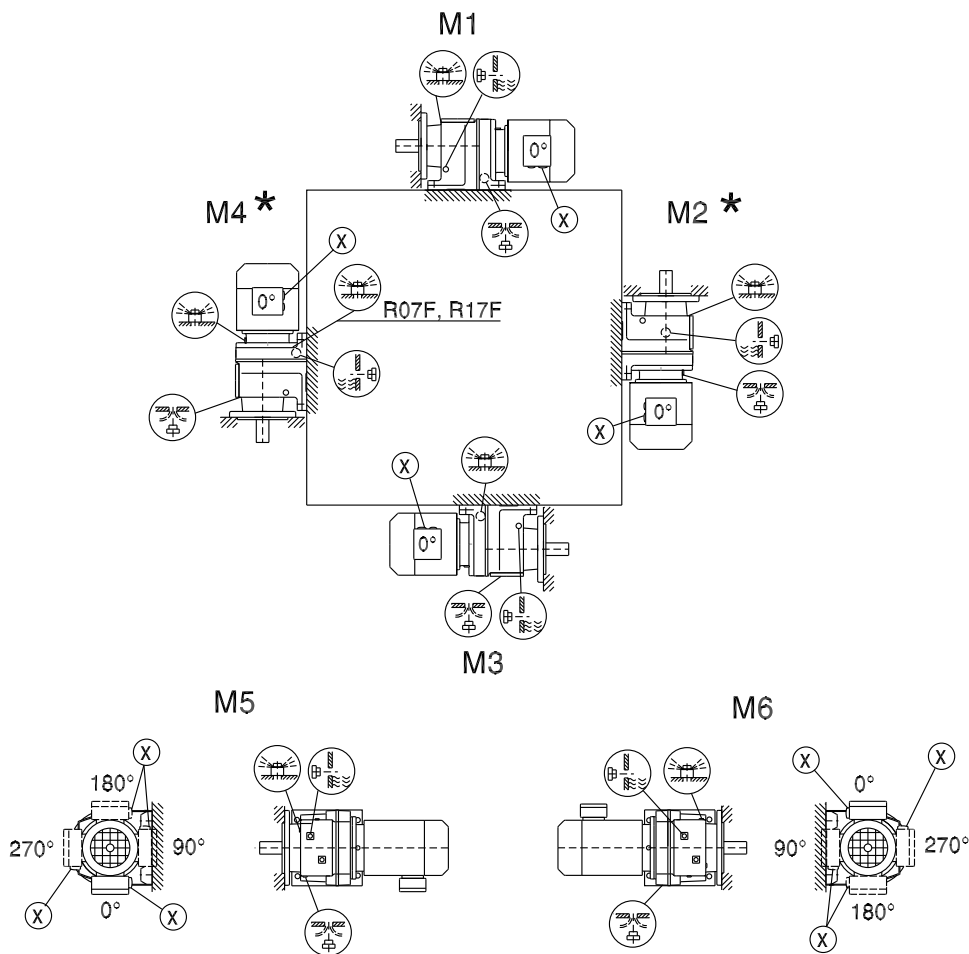
* → page 68

R07F...R87F

04 042 03 00



5



R07F		M1, M2, M3, M5, M6
R17F, R27F		M1, M3, M5, M6
R07F, R17F, R27F		
R47F, R57F		M5

* → page 68

Important: See the notes in section "Overhung and axial loads" on page 47.

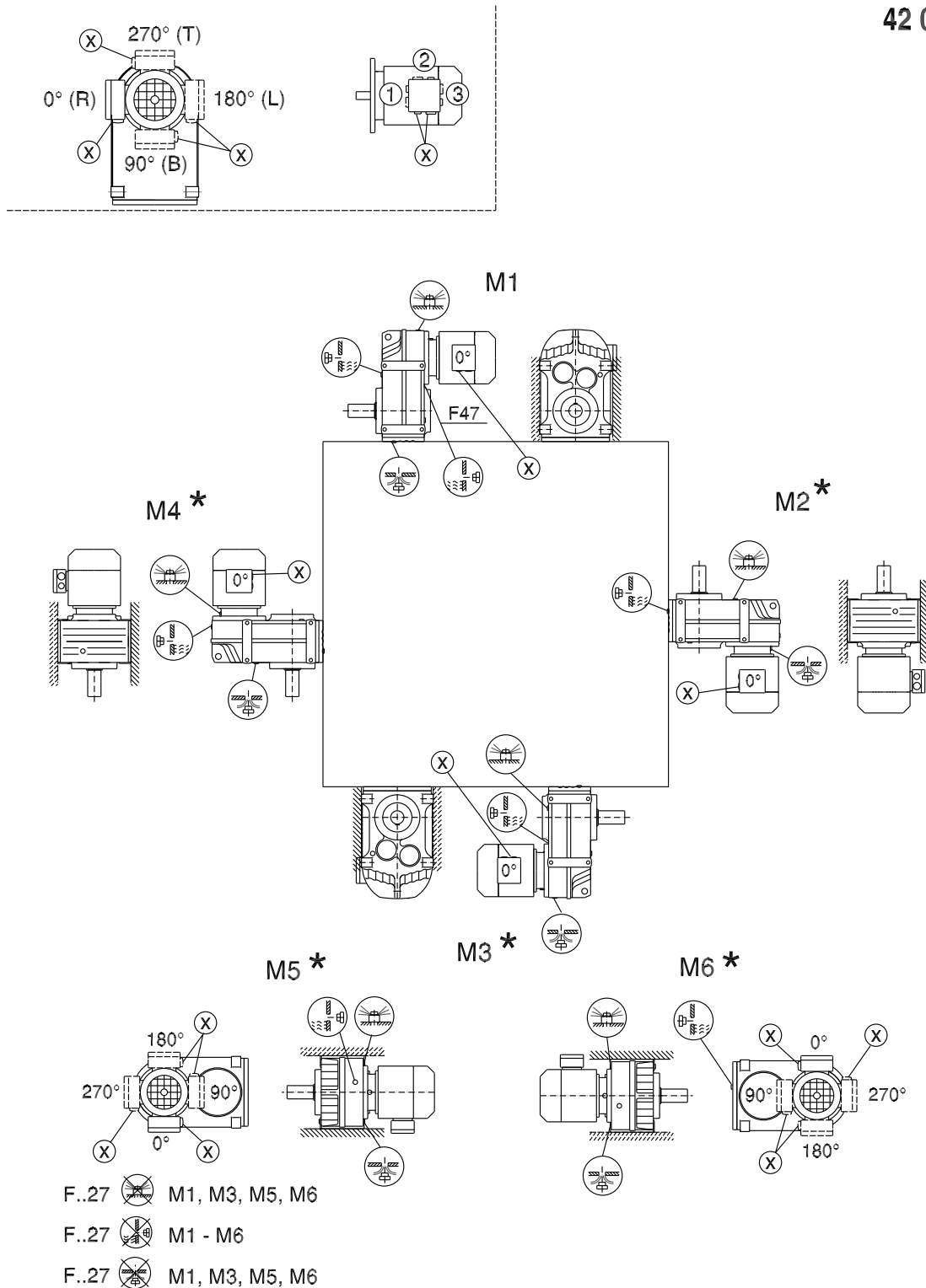
Gear Unit Mounting Positions

Mounting positions of parallel shaft helical gearmotors

5.6 Mounting positions of parallel shaft helical gearmotors

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

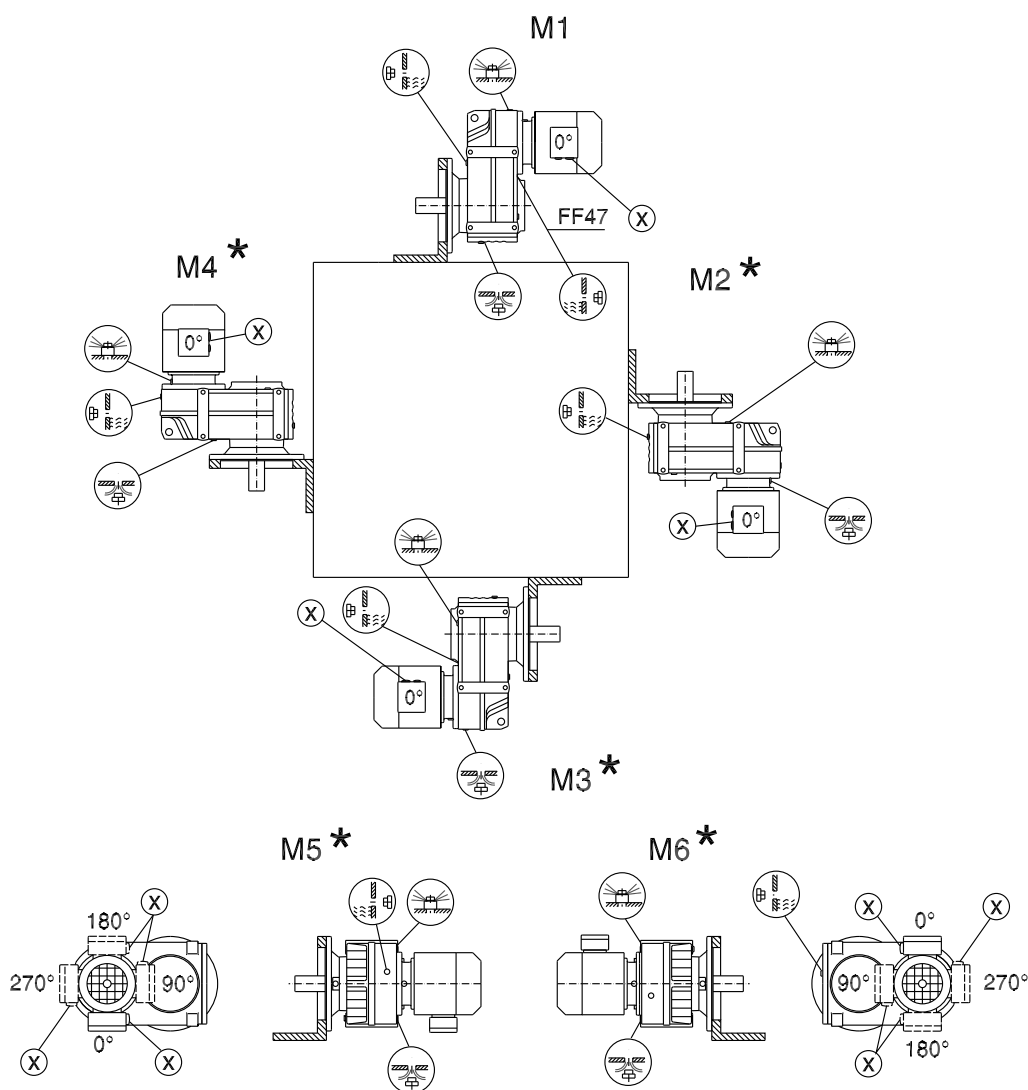
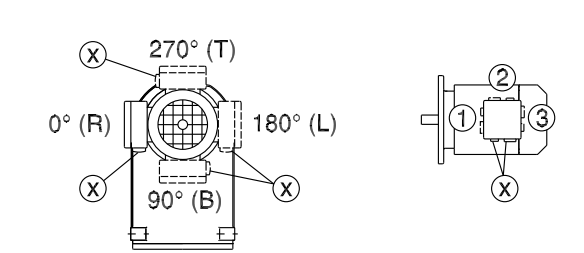
42 042 03 00



* → page 68

FF/FAF/FHF/FAZ/FHZ27...157, FVF/FVZ27...107

42 043 03 00



- F..27 M1, M3, M5, M6
- F..27 M1 - M6
- F..27 M1, M3, M5, M6

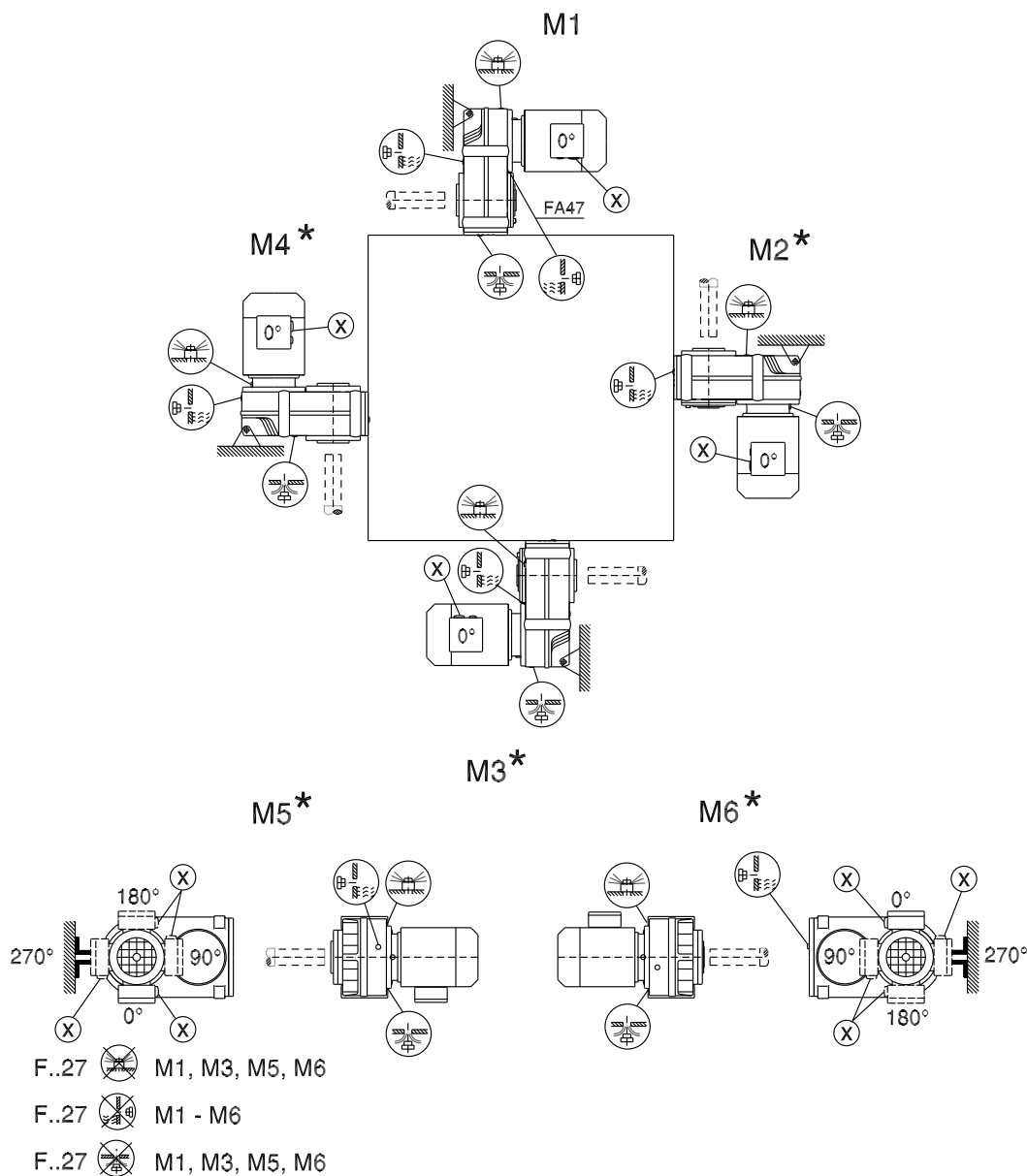
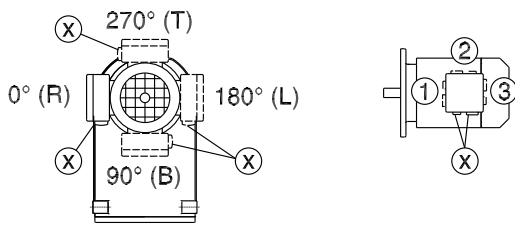
* → page 68

Gear Unit Mounting Positions

Mounting positions of parallel shaft helical gearmotors

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

42 044 03 00

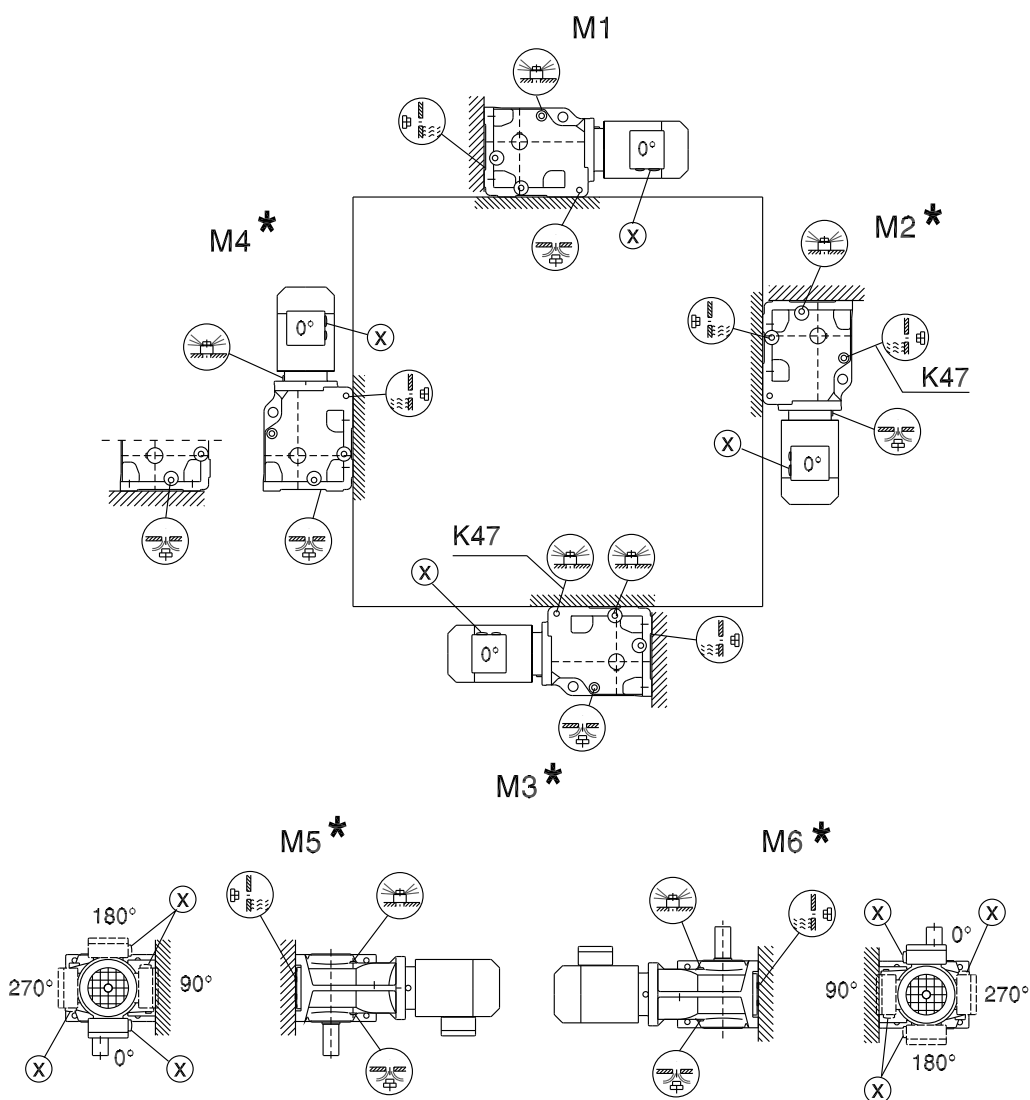
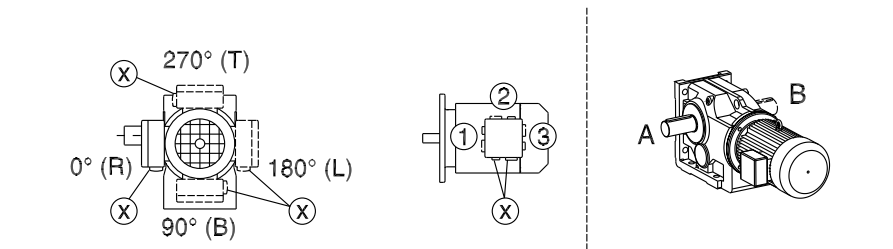


* → page 68


5.7 Mounting positions of helical-bevel gearmotors

K/KA..B/KH37B...157B, KV37B...107B

34 025 03 00



* → page 68

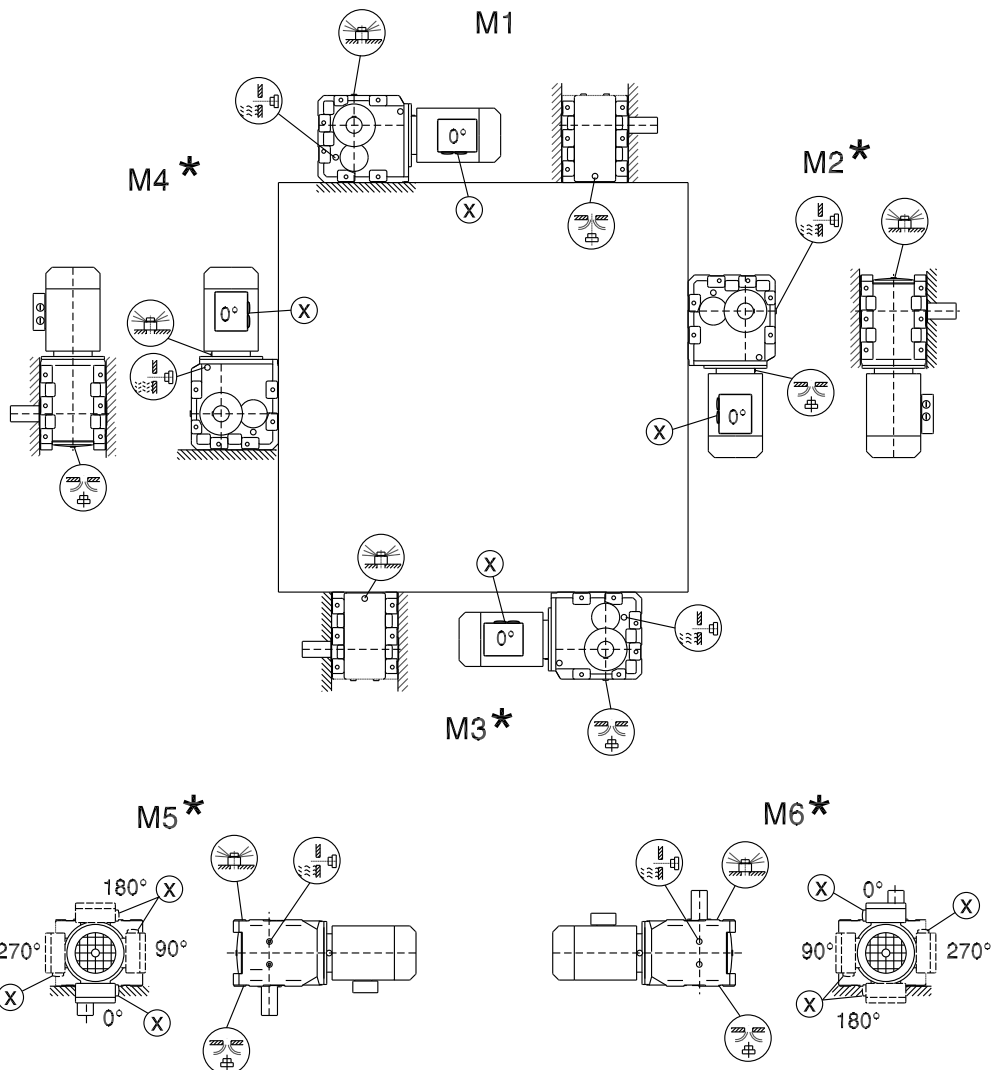
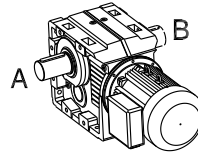
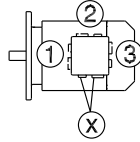
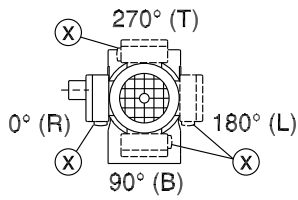
Important: See the  notes in section "Overhung and axial loads" on page 47.

Gear Unit Mounting Positions


Mounting positions of helical-bevel gearmotors

K167...187, KH167B...187B

34 026 03 00

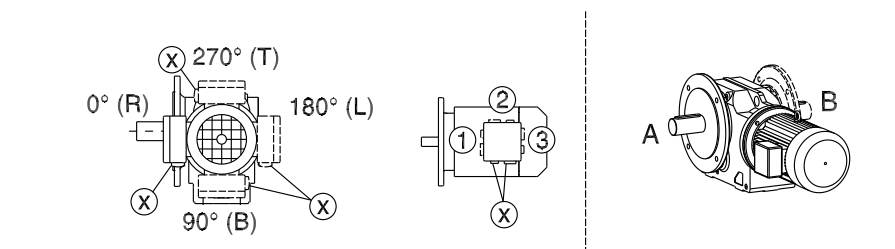


* → page 68

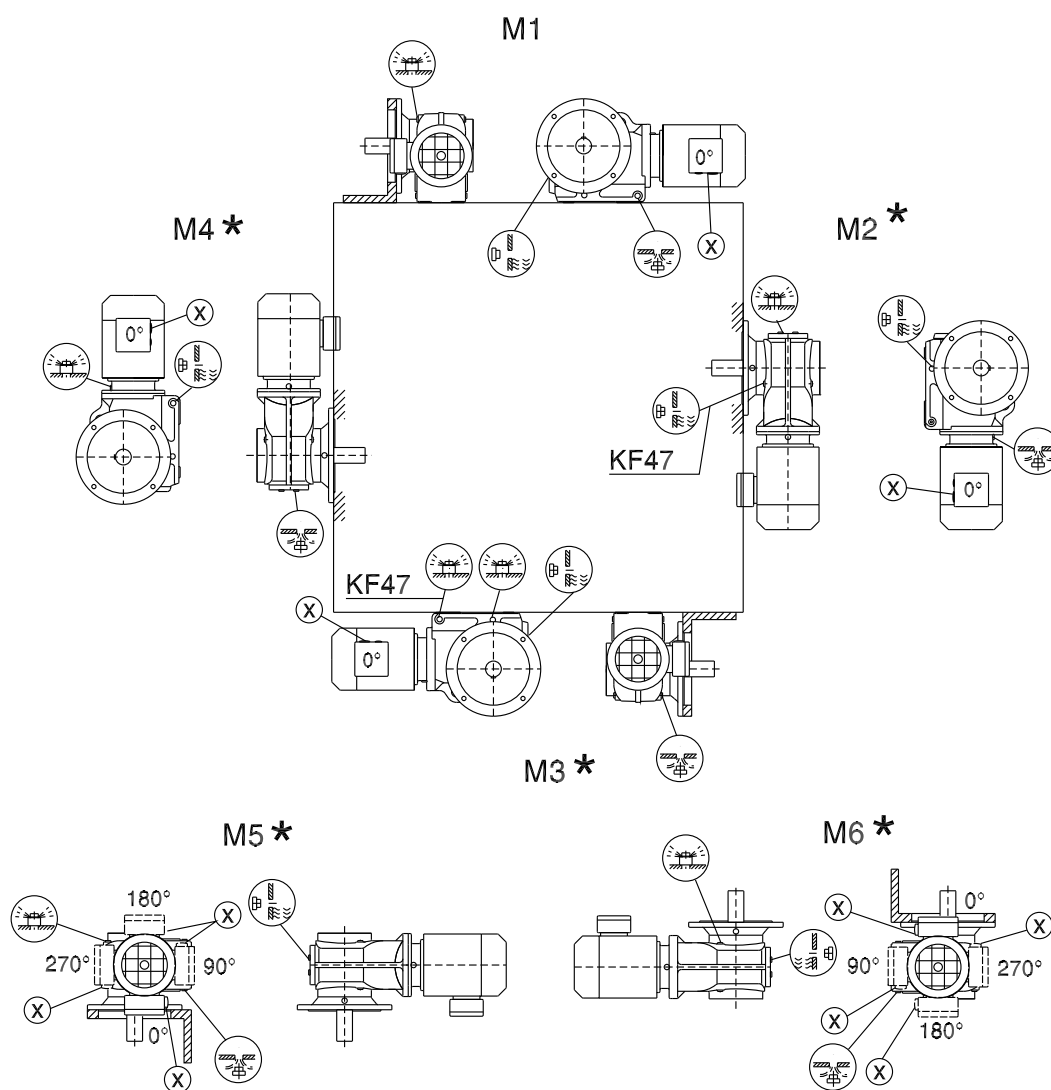
Important: See the  notes in section "Overhung and axial loads" on page 47.

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

34 027 03 00



5



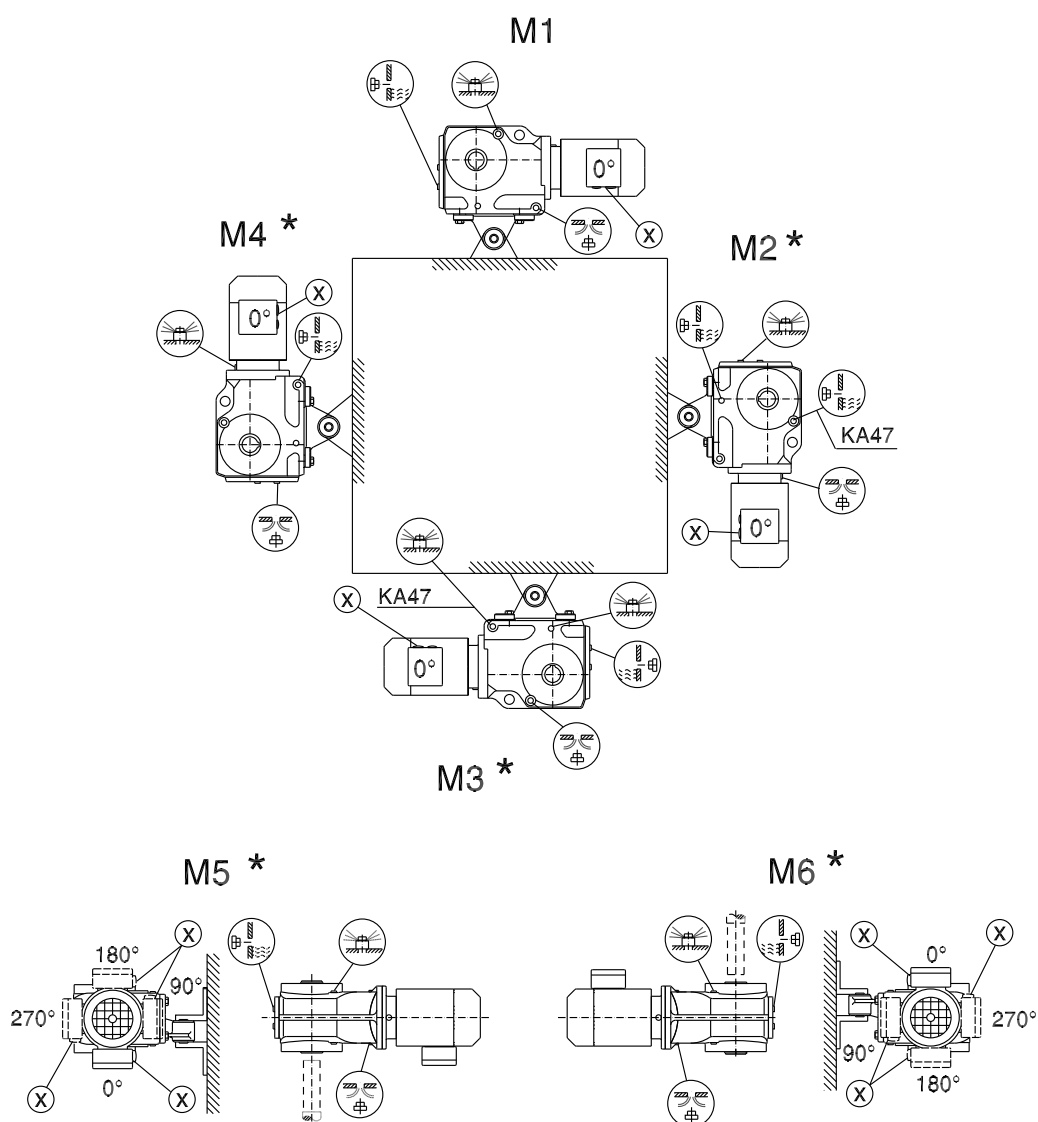
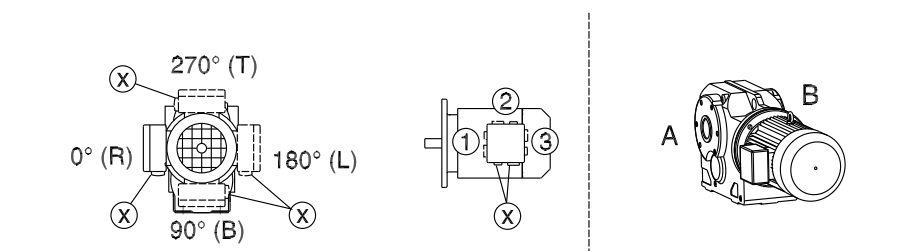
* → page 68

Gear Unit Mounting Positions

Mounting positions of helical-bevel gearmotors

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

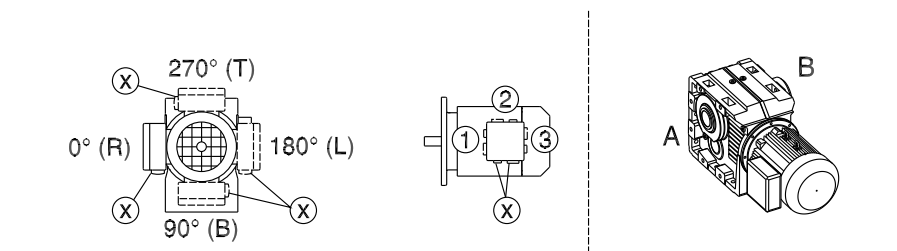
39 025 04 00



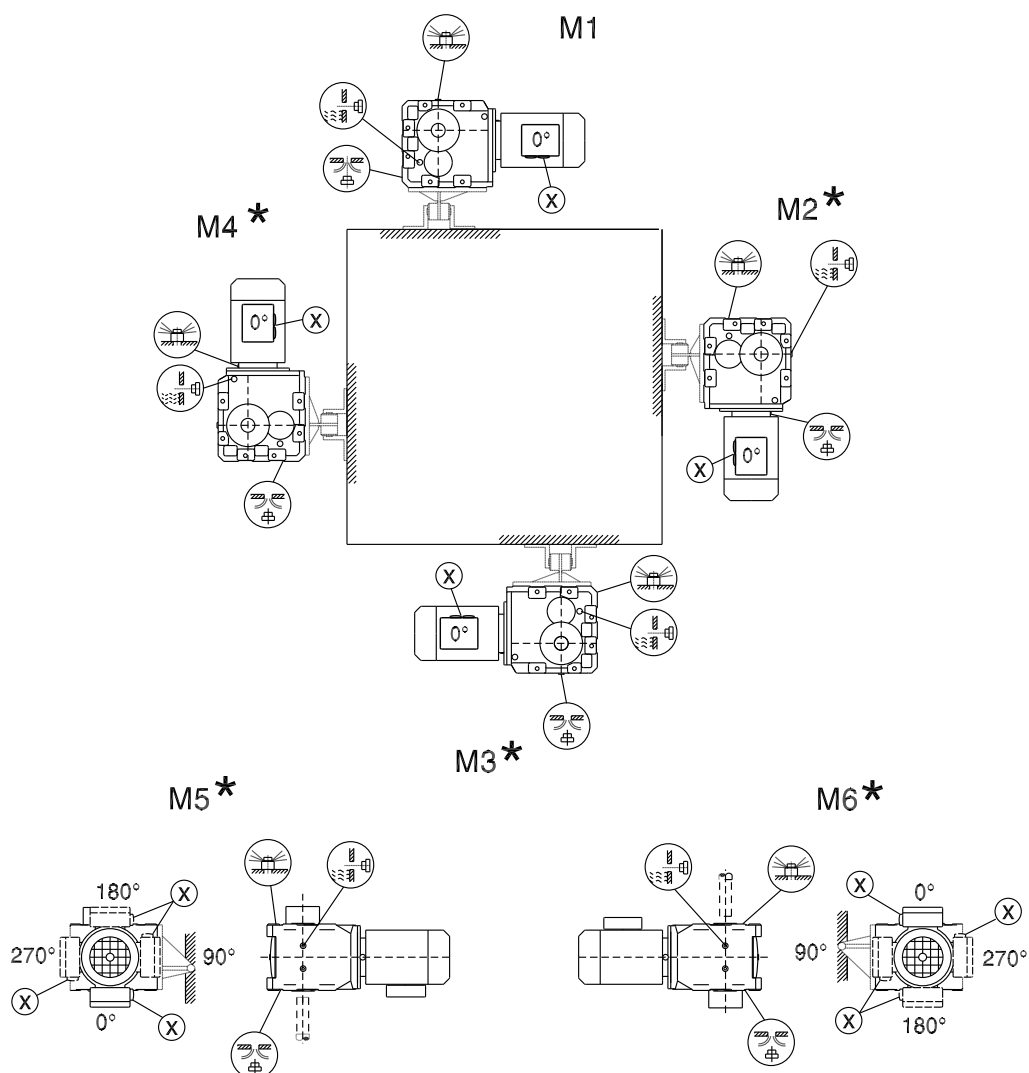
* → page 68

KH167...187

39 026 04 00



5

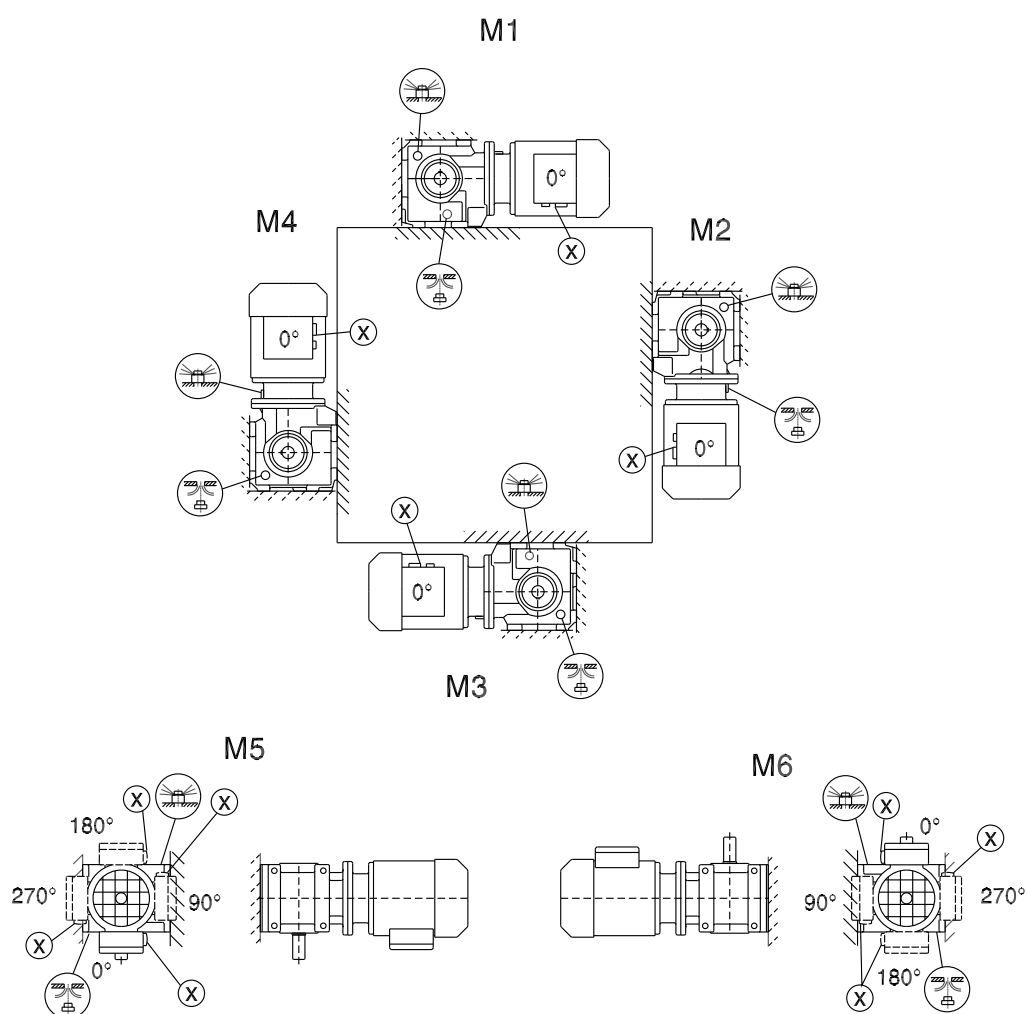
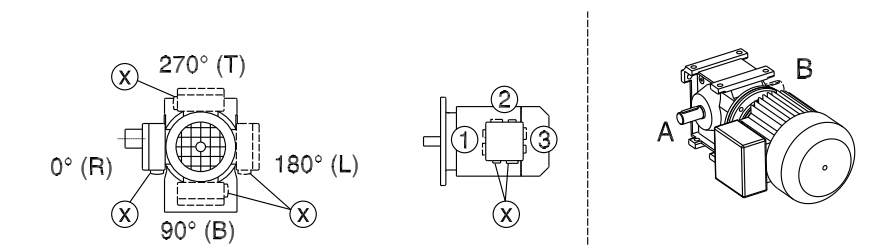


* → page 68


5.8 Mounting positions of helical-worm gearmotors

S37

05 025 03 00

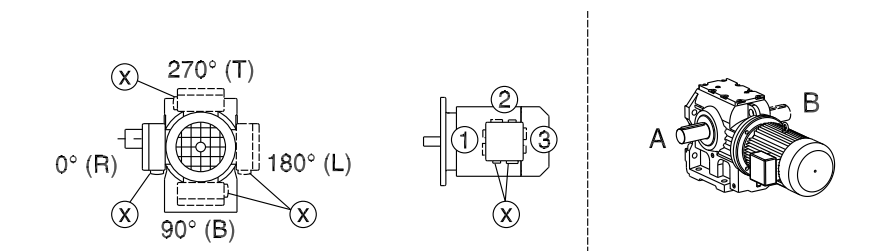


* → page 68

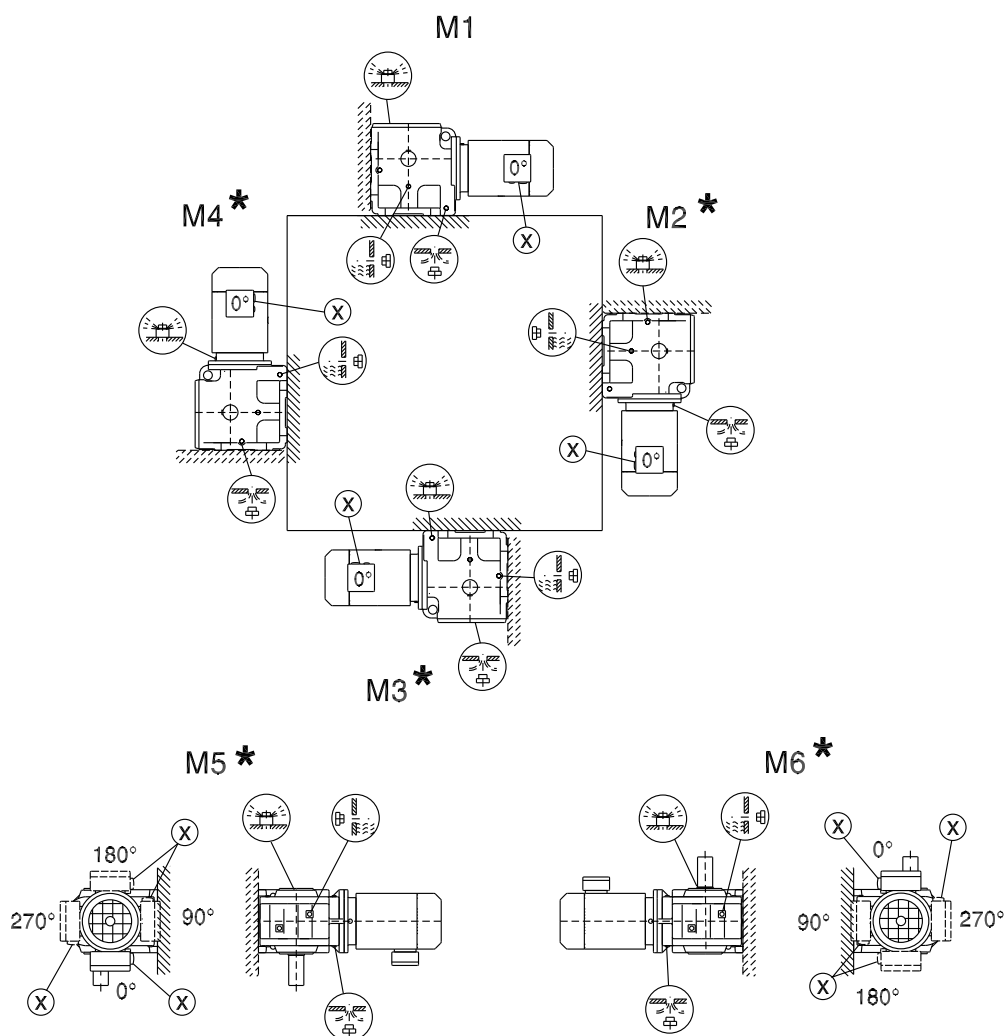
Important: See the  notes in section "Overhung and axial loads" on page 47.

S47...S97


05 026 03 00

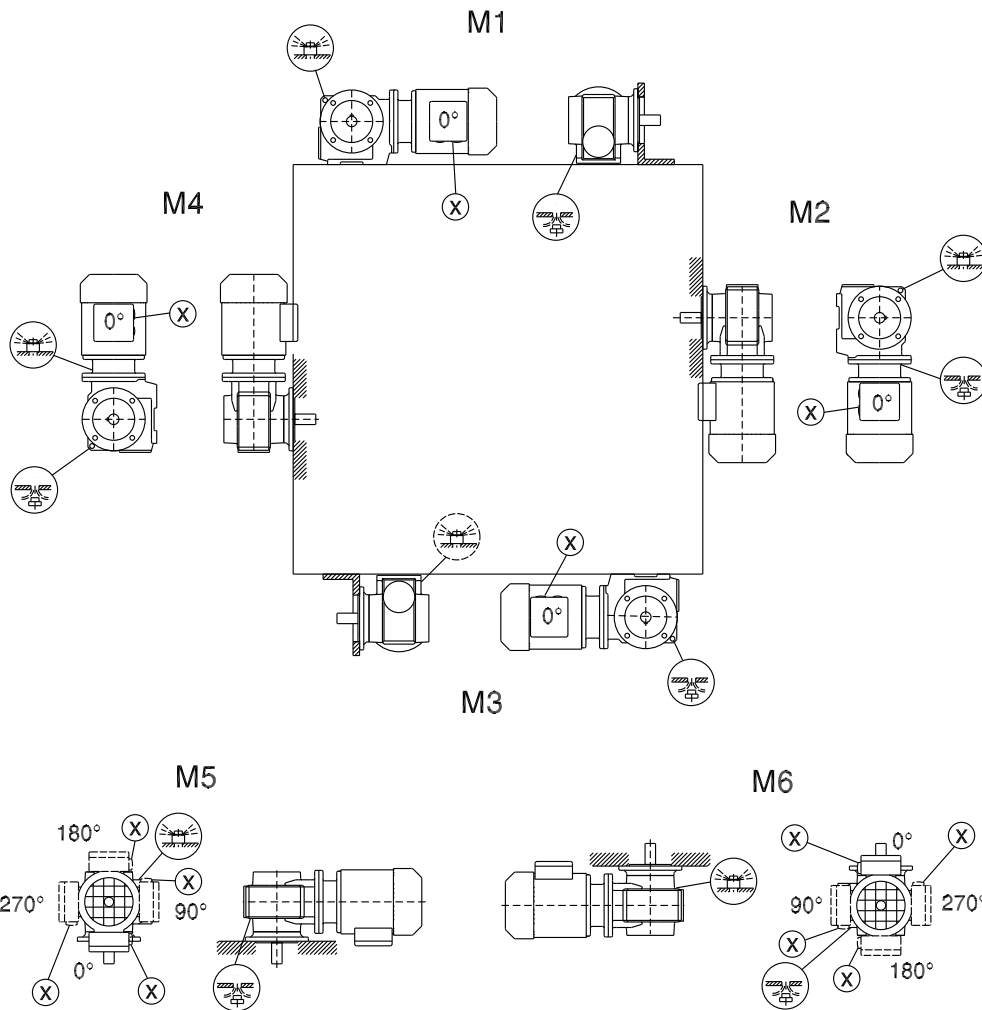
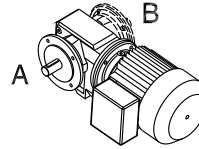
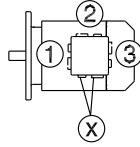
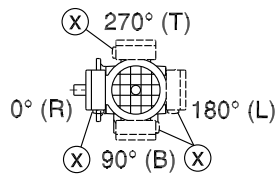


5



* → page 68

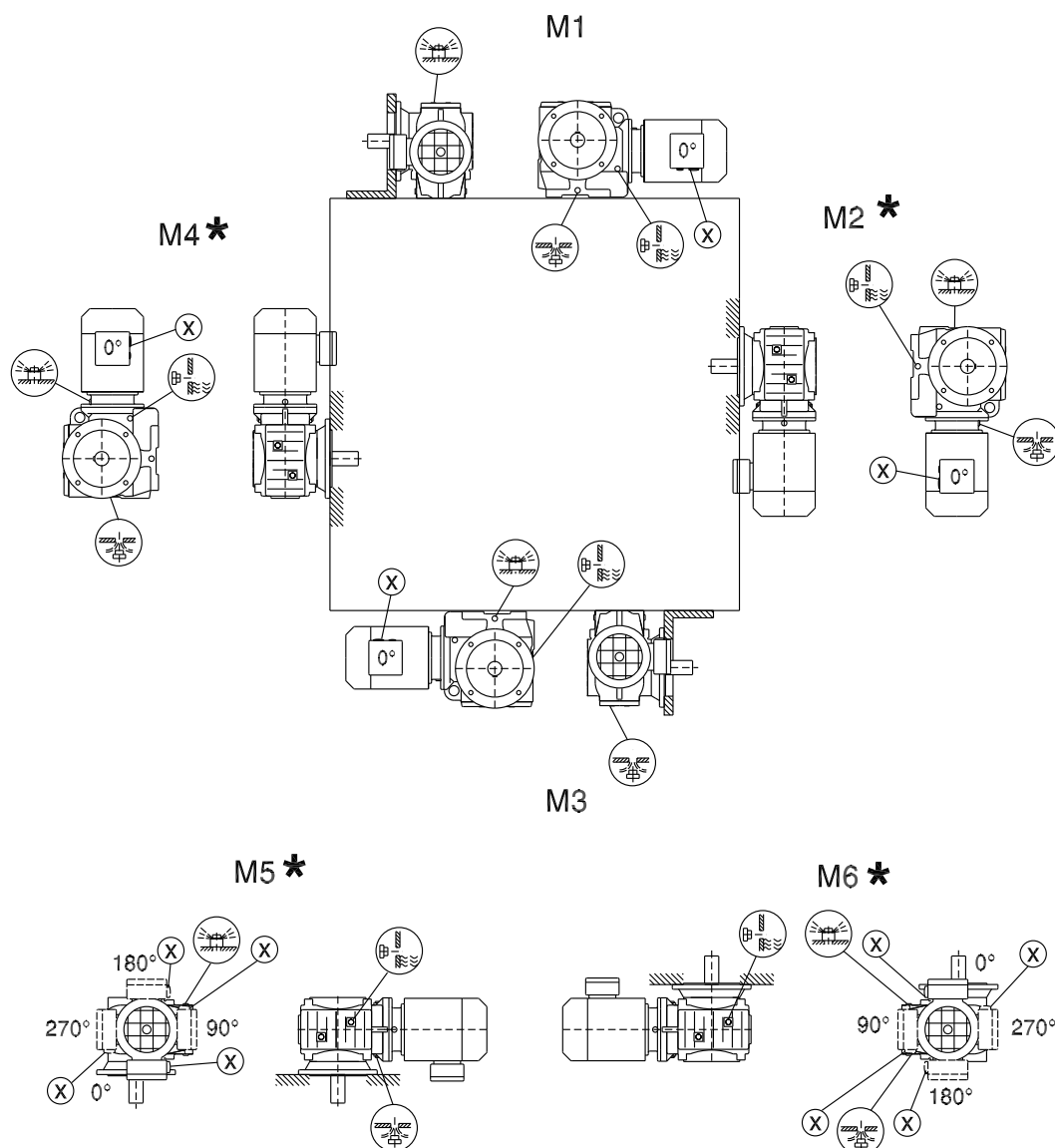
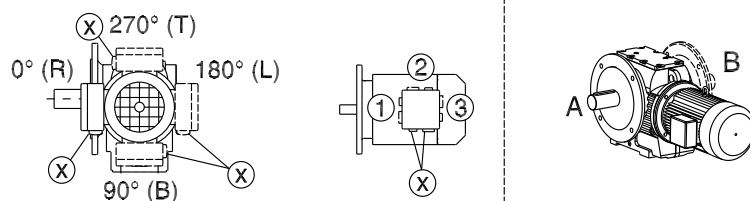
Important: See the  notes in section "Overhung and axial loads" on page 47.

SF/SAF/SHF37**05 027 03 00**

* → page 68

SF/SAF/SHF/SAZ/SHZ47...97

05 028 03 00



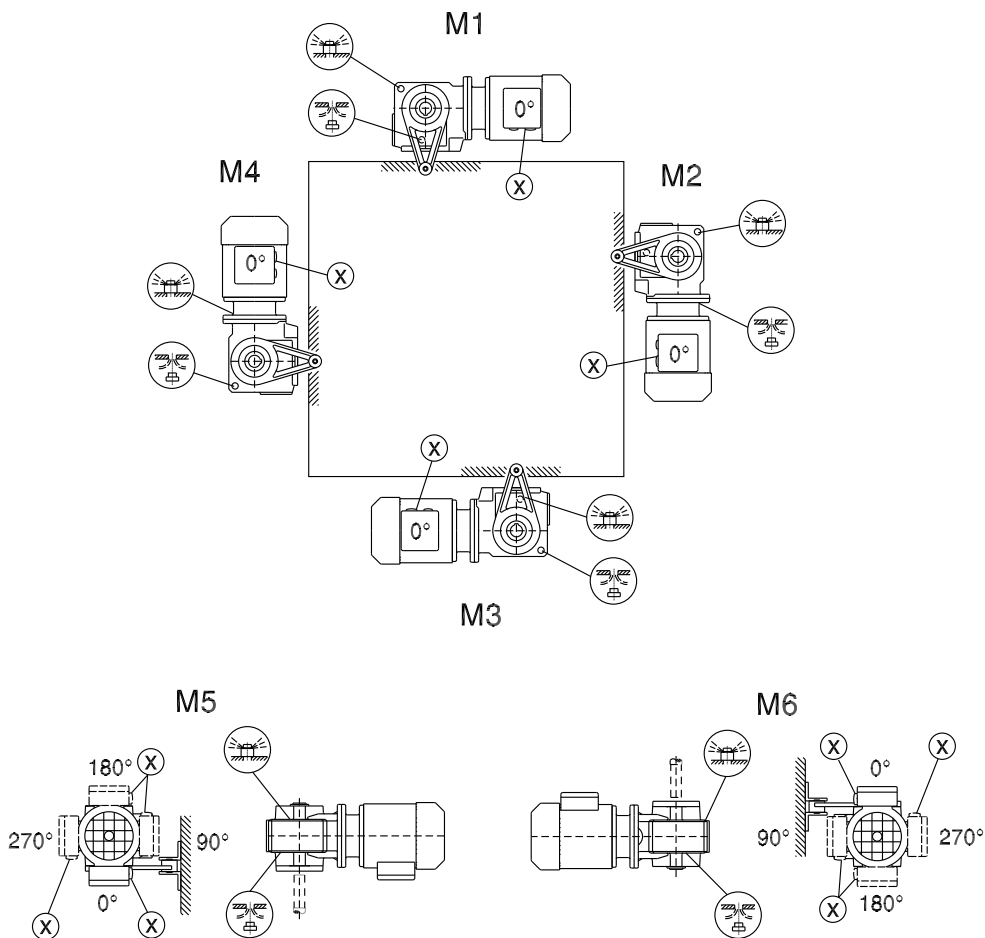
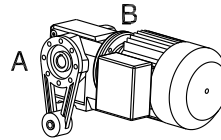
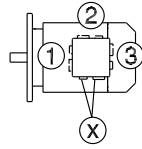
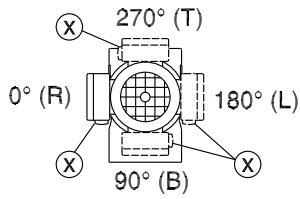
* → page 68

Gear Unit Mounting Positions

Mounting positions of helical-worm gearmotors

SA/SH/ST37

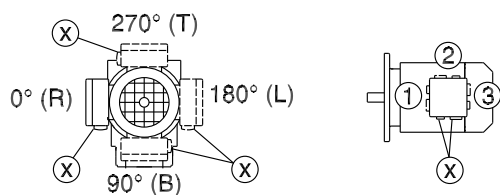
28 020 04 00



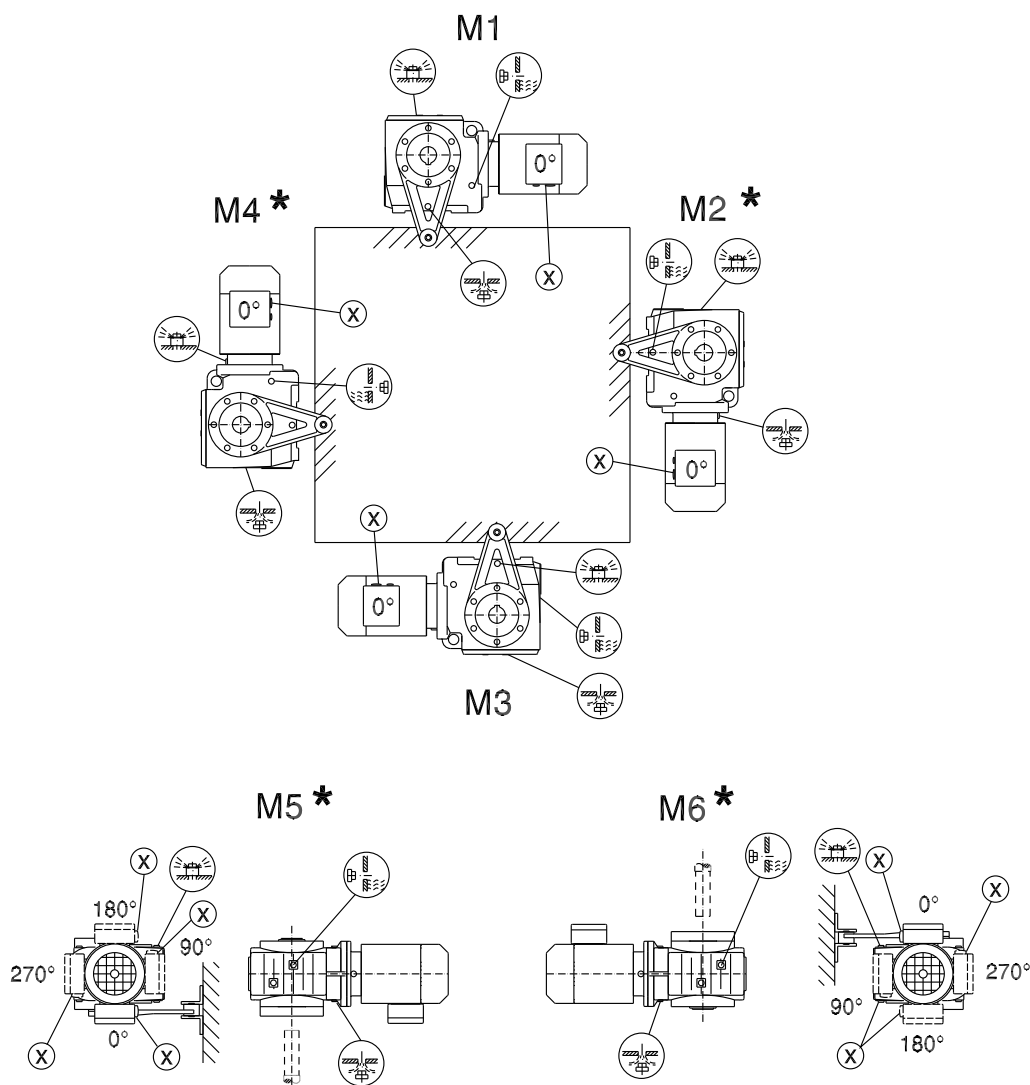
* → page 68

SA/SH/ST47...97

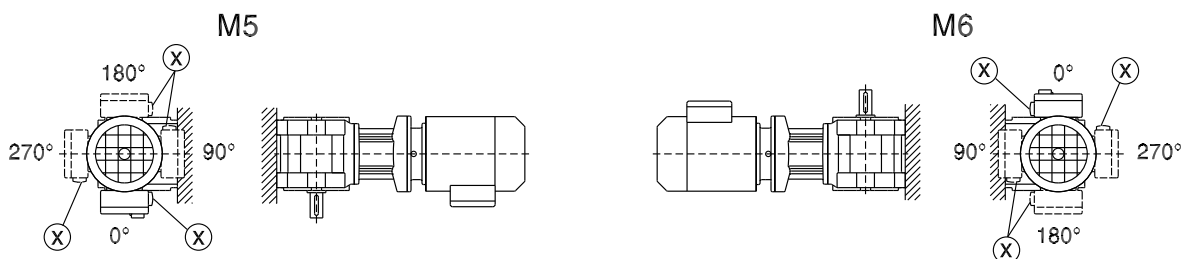
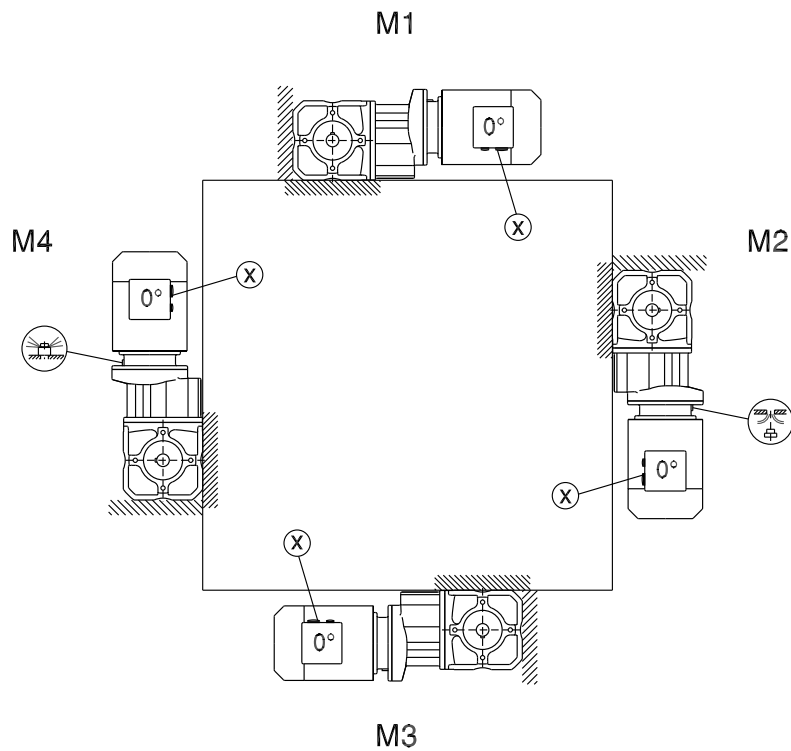
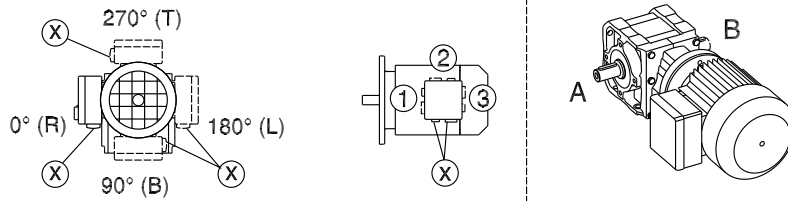

28 021 03 00



5

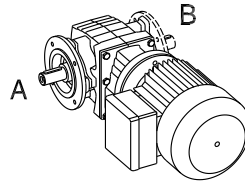
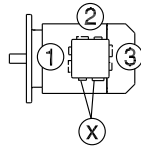
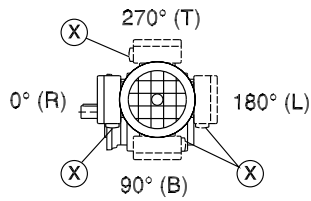


* → page 68

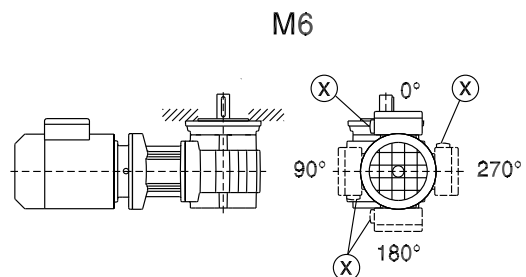
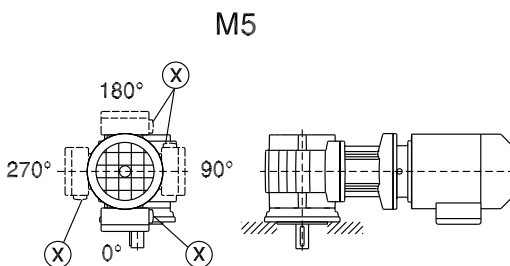
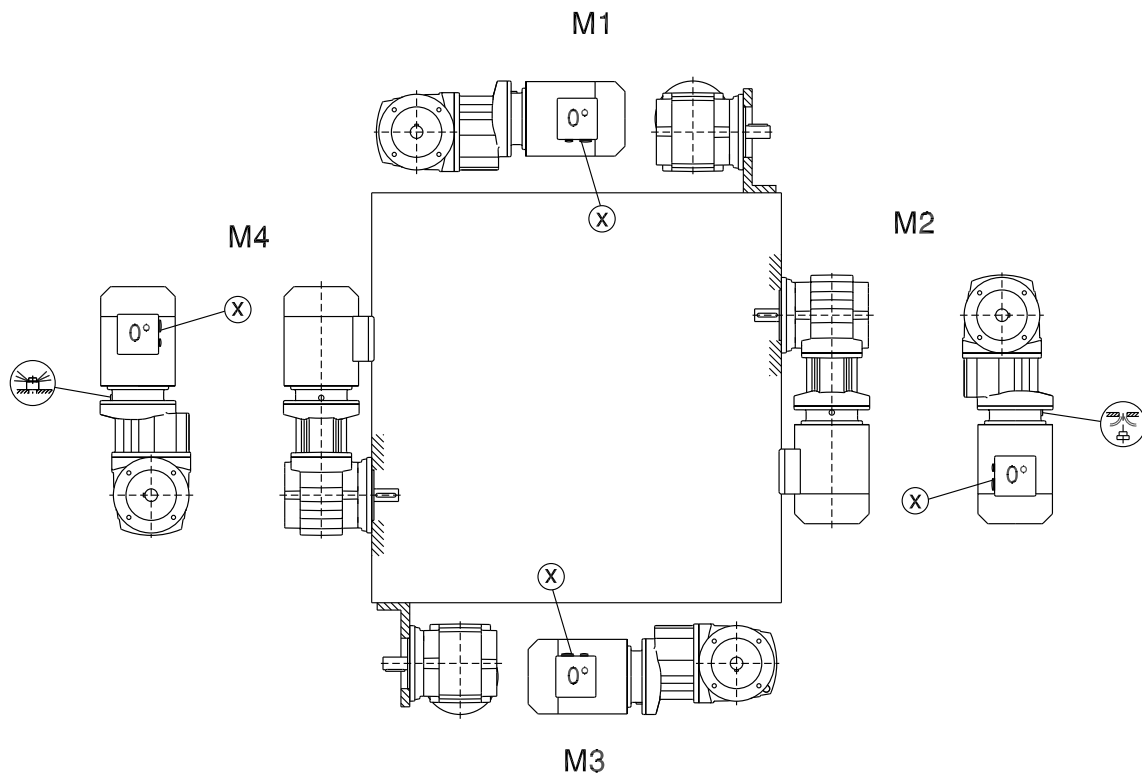
5.9 Mounting positions of SPIROPLAN® gearmotors**W/WA37-47B/WH37-47B****20 012 01 07**
 → page 68

WF/WAF/WHF37-47

20 013 01 07



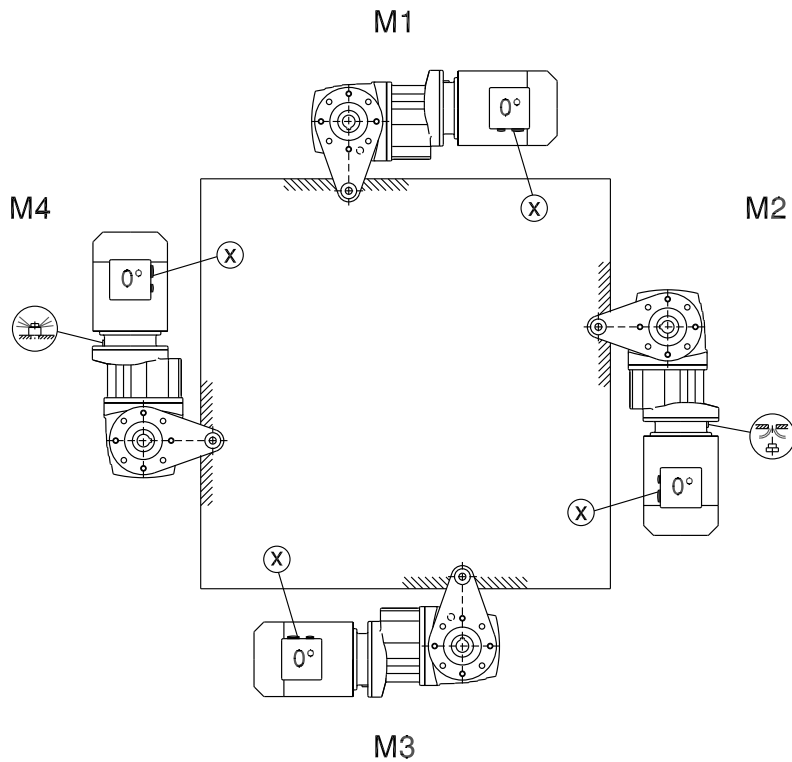
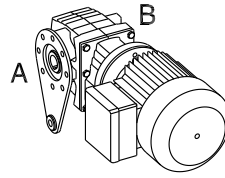
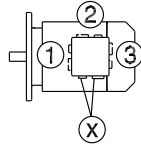
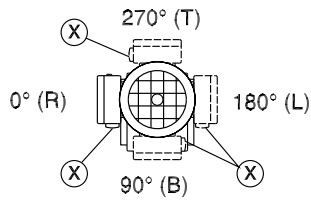
5



i → page 68

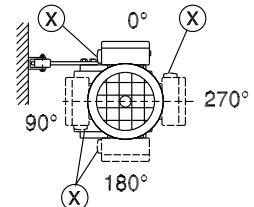
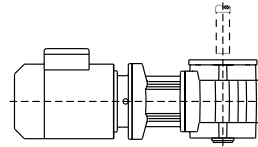
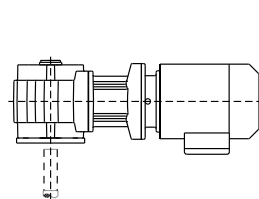
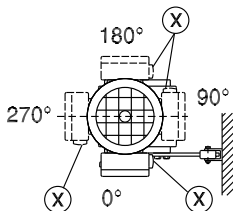
WA/WH/WT37-47

20 014 01 07



M5

M6



→ page 68