

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.

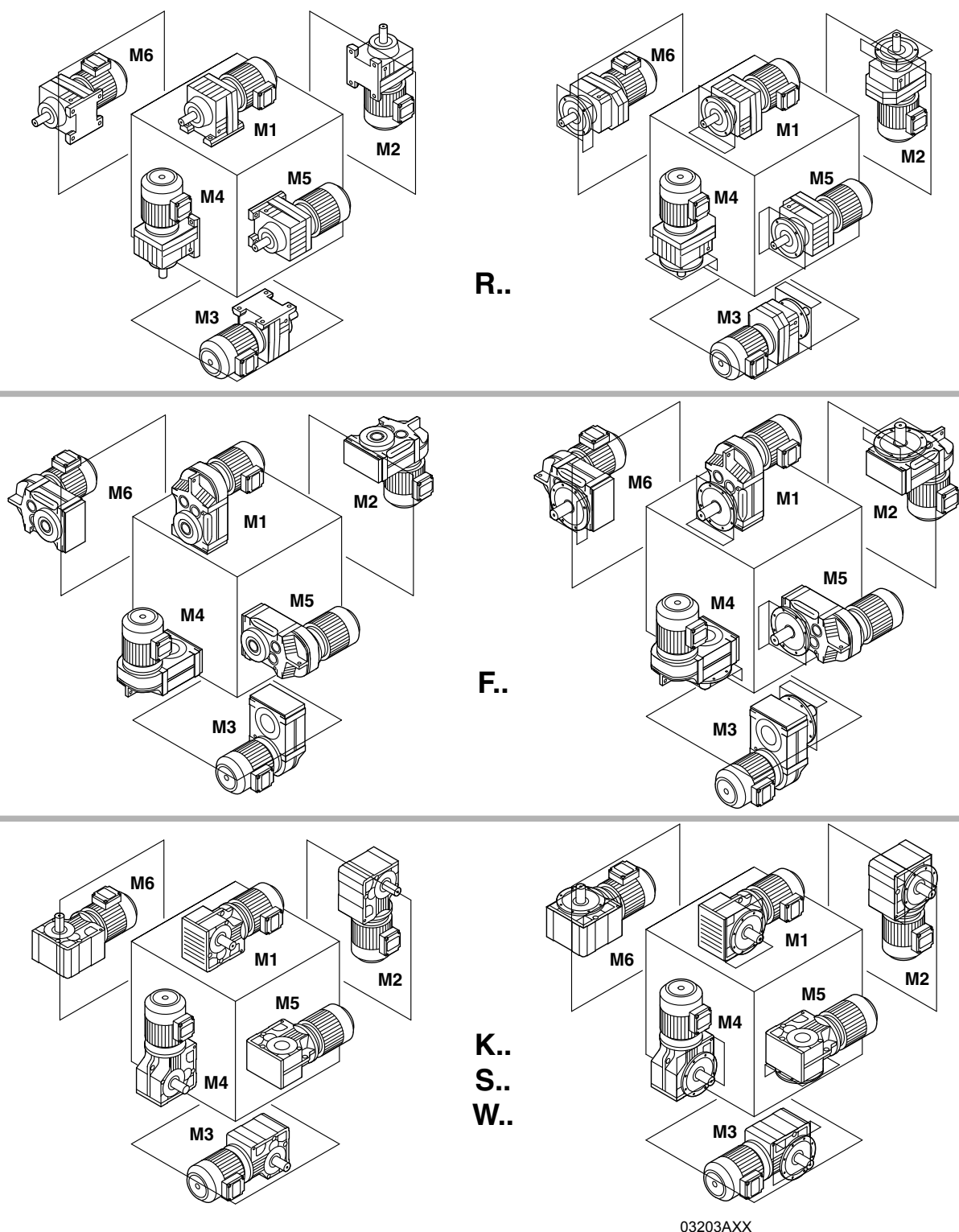


Figure 8: Depiction of mounting positions M1 ... M6

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.

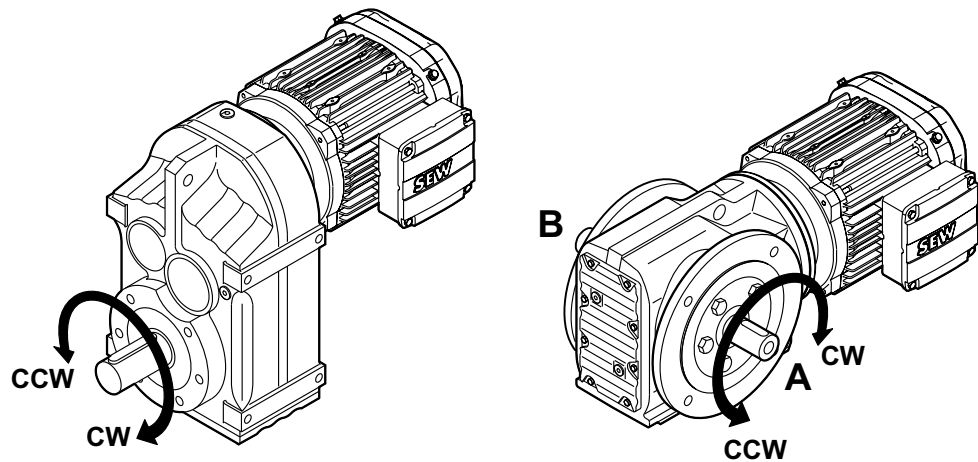
The following applies to all gear units and gearmotors

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 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)
Counterclockwise (CCW)



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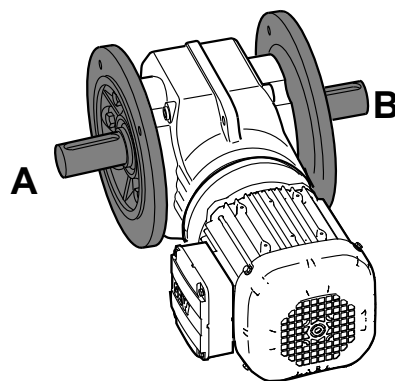
Figure 9: Output direction of rotation

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



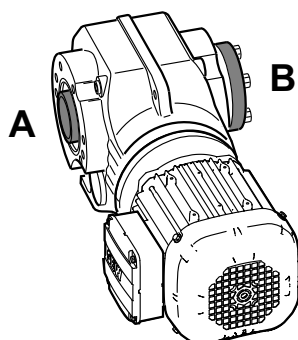
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Figure 10: Position of the output shaft and the output flange

*Position of 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 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.



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Figure 11: Position of the output end



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

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

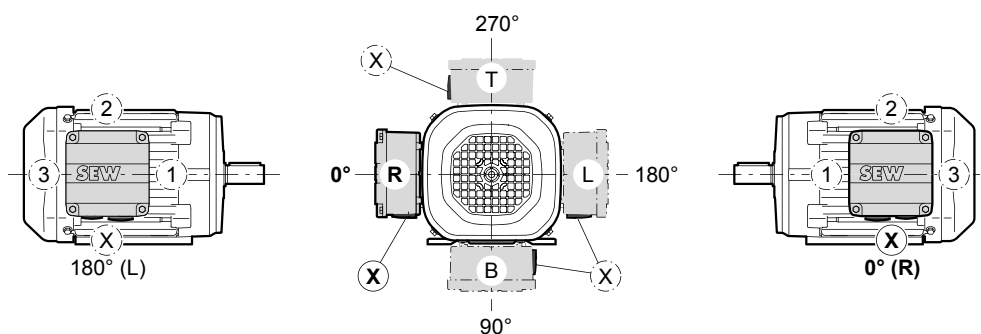
Position of the motor terminal box and the cable entry

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 (→ 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).



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Figure 12: Position of terminal box and cable entry

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

Sample orders

Type (Examples)	Mounting position	Shaft posi- tion	Flange position	Terminal box posi- tion	Cable entry position	Output direction of rotation
K47DRS71S4/RS	M2	A	-	0°	"X"	CW
SF77DRS100M4	M6	AB	AB	90°	"3"	-
KA97DRS132S4	M4	B	-	270°	"2"	-
KH107DRS132M4	M1	A	-	180°	"3"	-
WF20DRS71M4	-	A	A	0°	"X"	-
KAF67A	M3	A	B	-	-	-

**Changing the
mounting posi-
tion**

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:

Symbol	Meaning
	Breather valve
	Oil level plug ¹⁾
	Oil drain plug

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

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 [1/min]
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

Displayed shaft

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

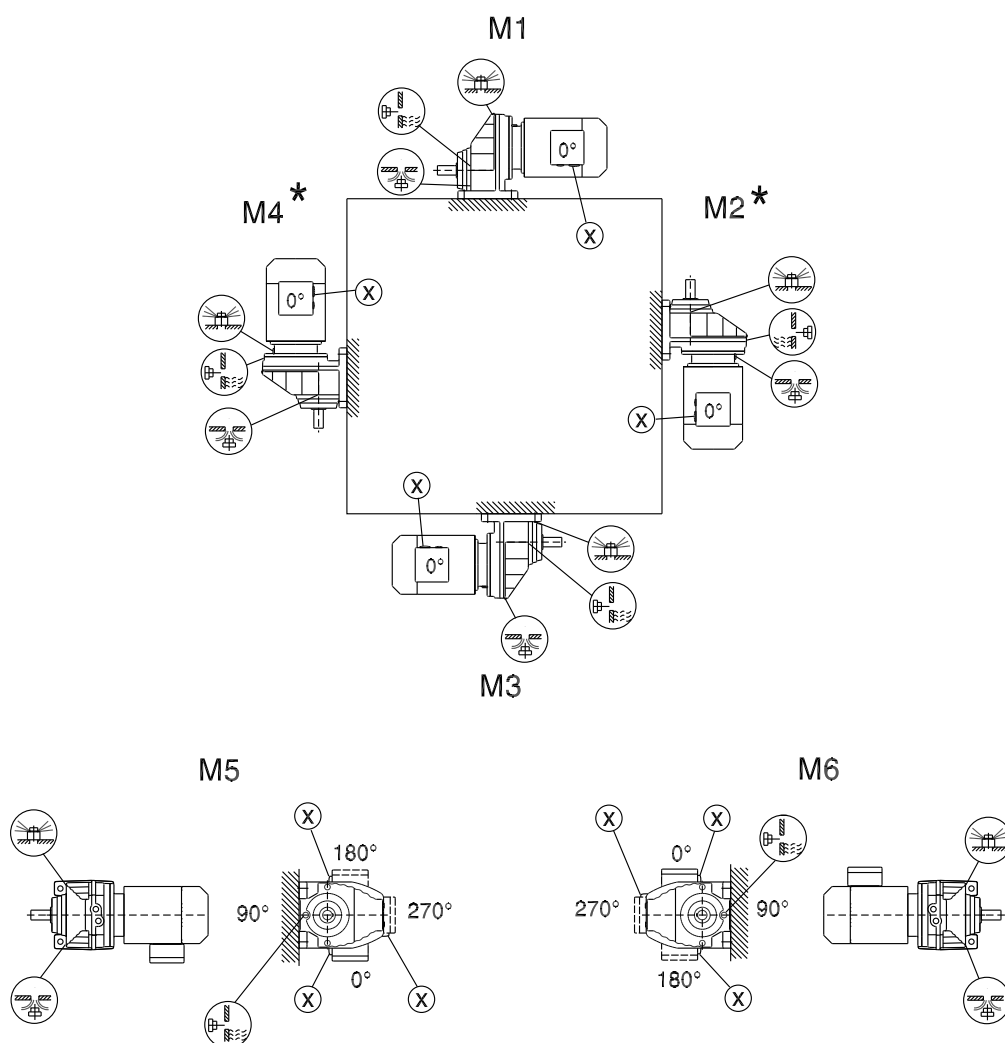
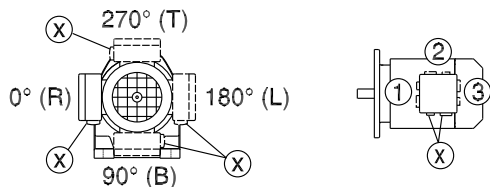


- **For gear units with solid shaft:** The displayed shaft is always on the A end.
- **For shaft mounted gear units:** The shaft with dashed lines represents the customer shaft. The output end (= shaft position) is always shown on the A end.

6.4 Helical gearmotors – mounting positions

RX57-RX107

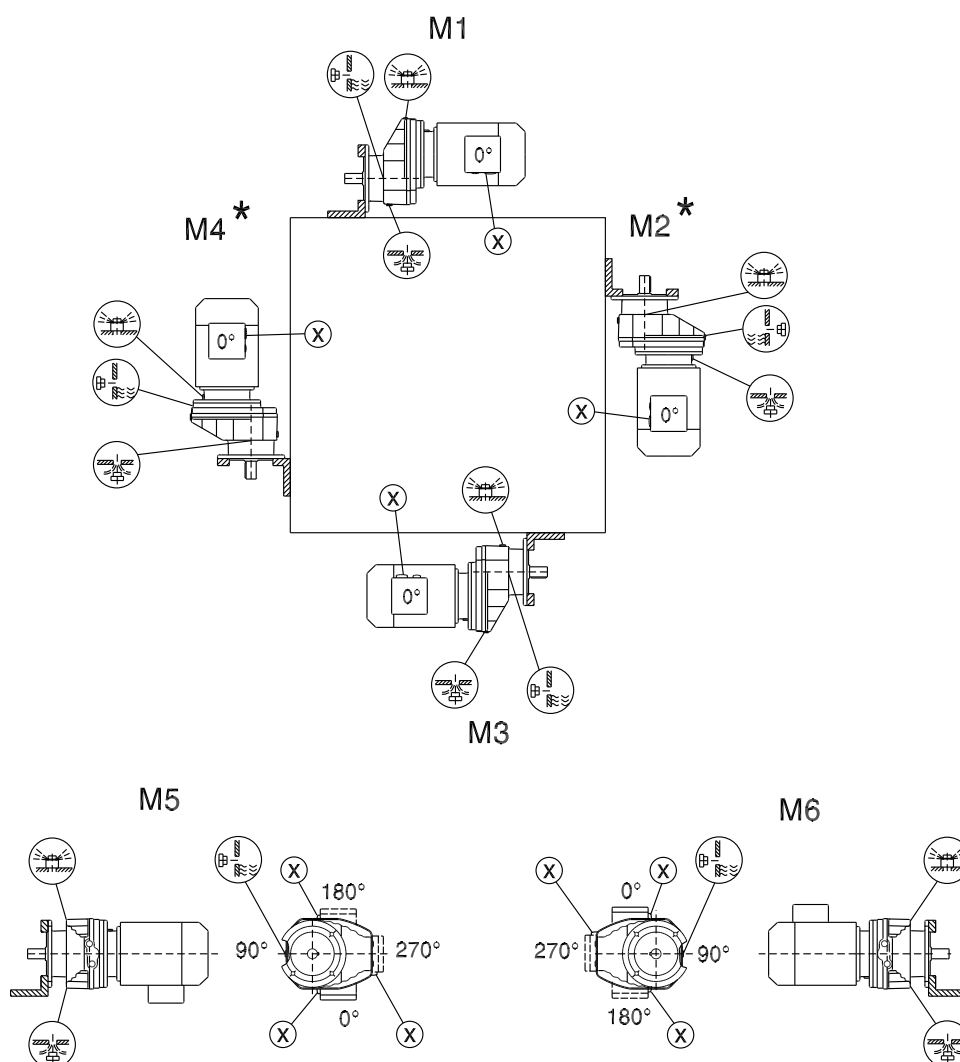
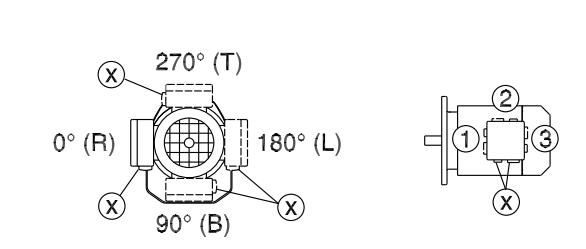
04 043 02 00



* → page 59

RXF57-RXF107

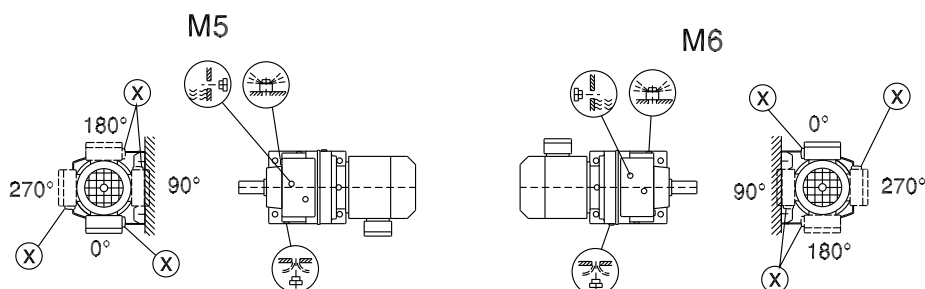
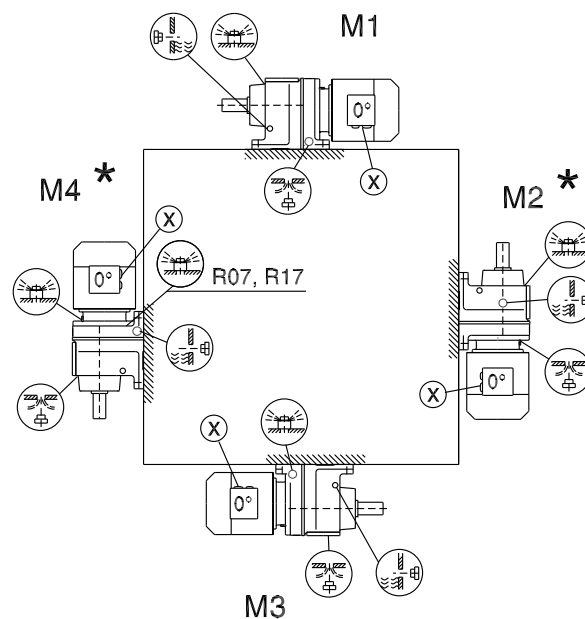
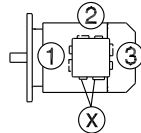
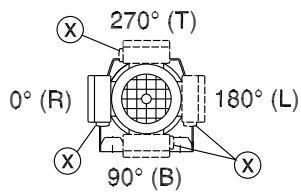
04 044 02 00



* → page 59

R07-R167

04 040 03 00

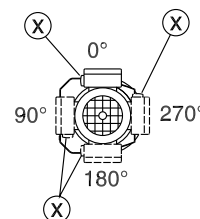
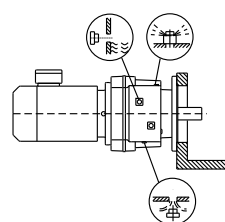
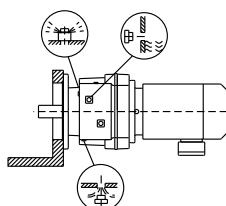
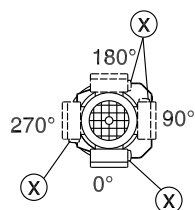
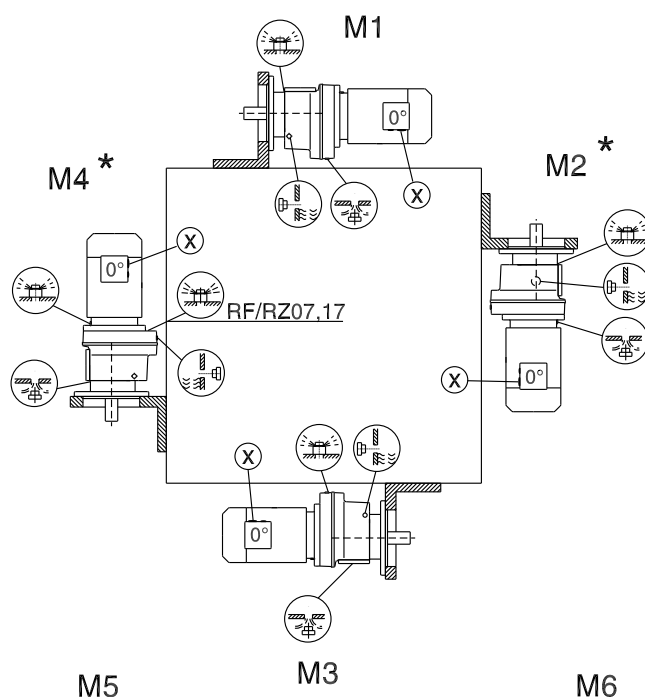
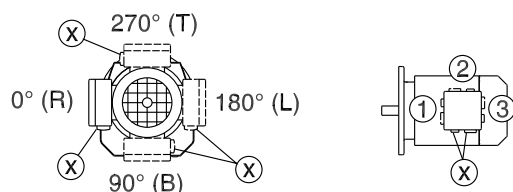


R07		M1, M2, M3, M5, M6
R17, R27		M1, M3, M5, M6
R07, R17, R27		
R47, R57		M5

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RF07-RF167, RZ07-RZ87

04 041 03 00

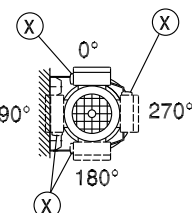
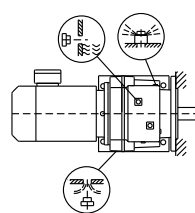
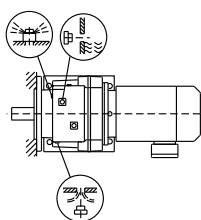
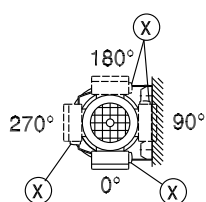
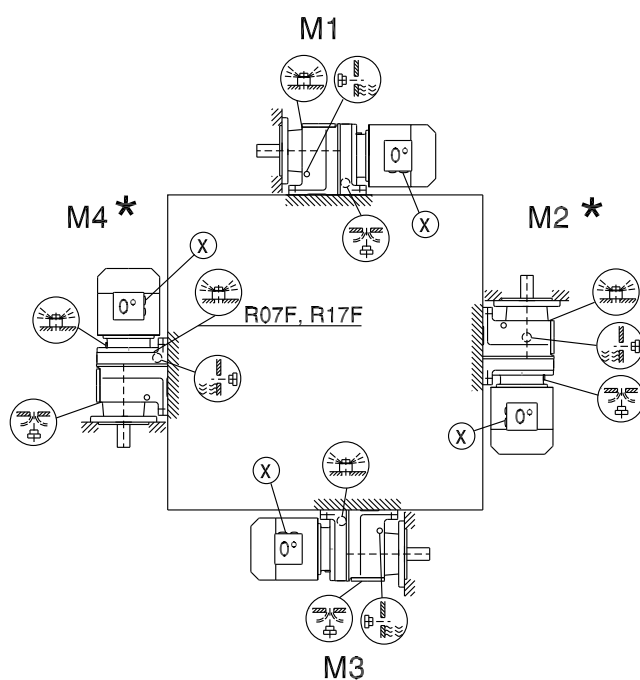
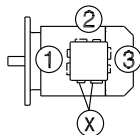
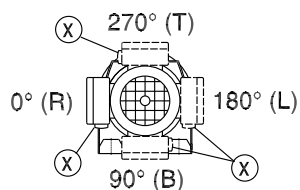


RF/RZ07		M1, M2, M3, M5, M6
RF/RZ17,27		M1, M3, M5, M6
RF/RZ07, 17, 27		
RF/RZ47, 57		M5

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R07F-R87F

04 042 03 00



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

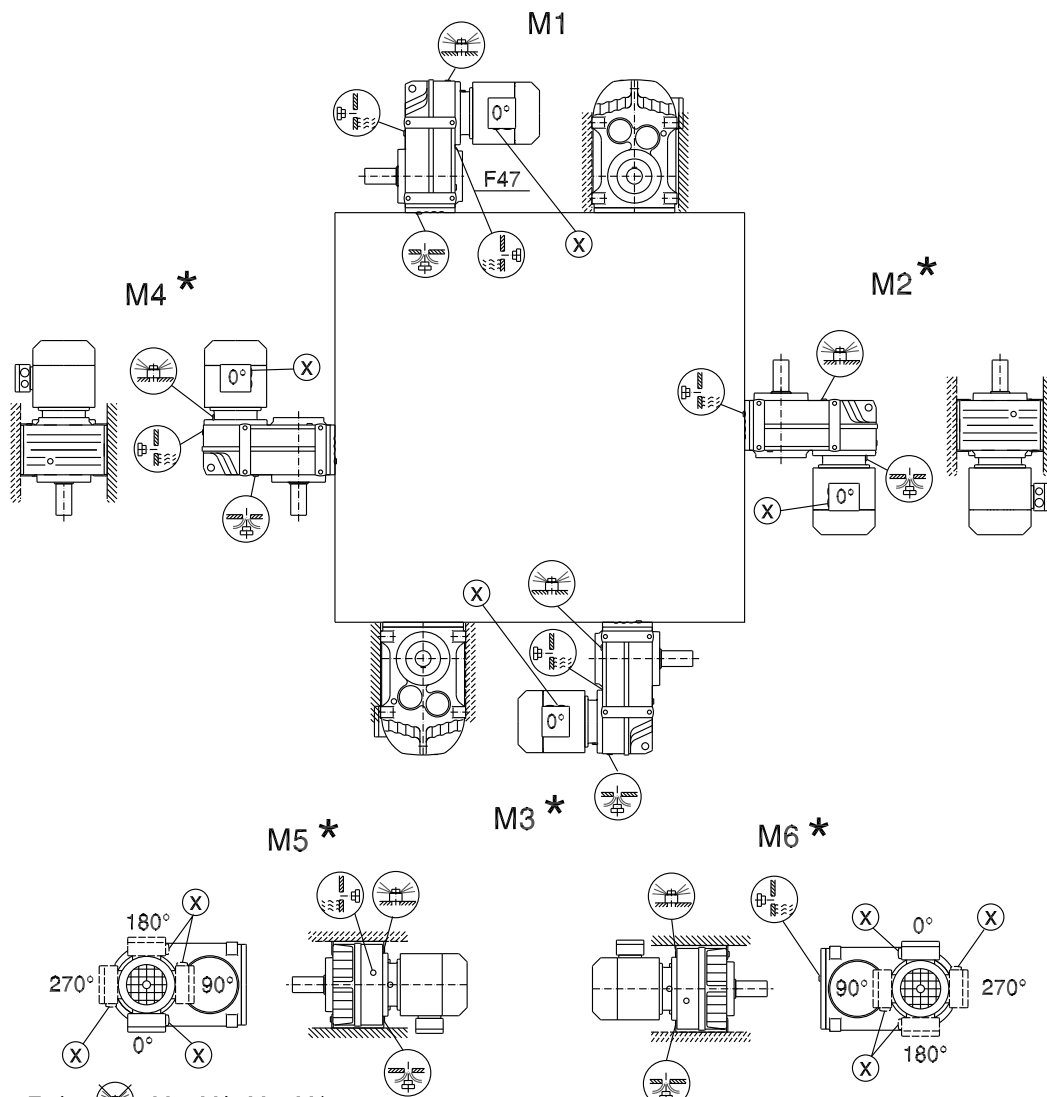
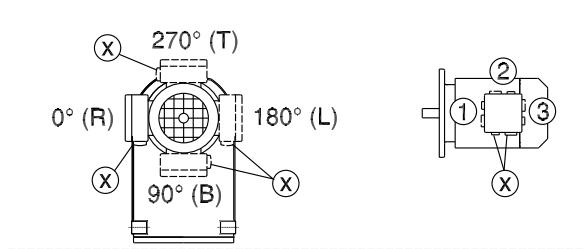
* → page 59

Caution: Observe 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

42 042 03 00



F..27 M1, M3, M5, M6

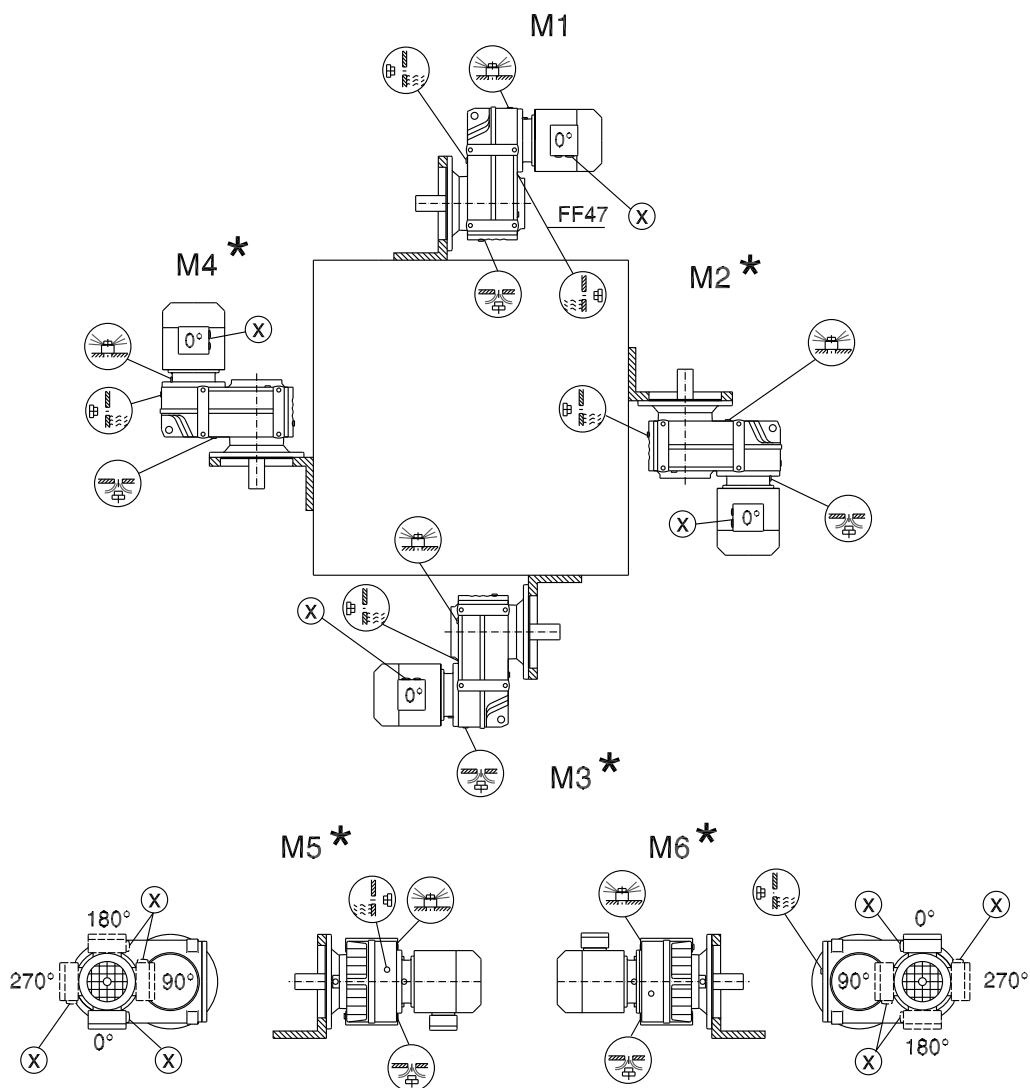
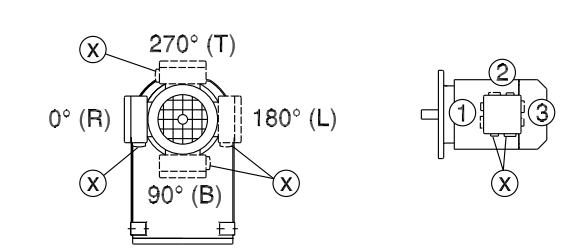
F..27 M1 - M6

F..27 M1, M3, M5, M6

* → page 59

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

42 043 03 00

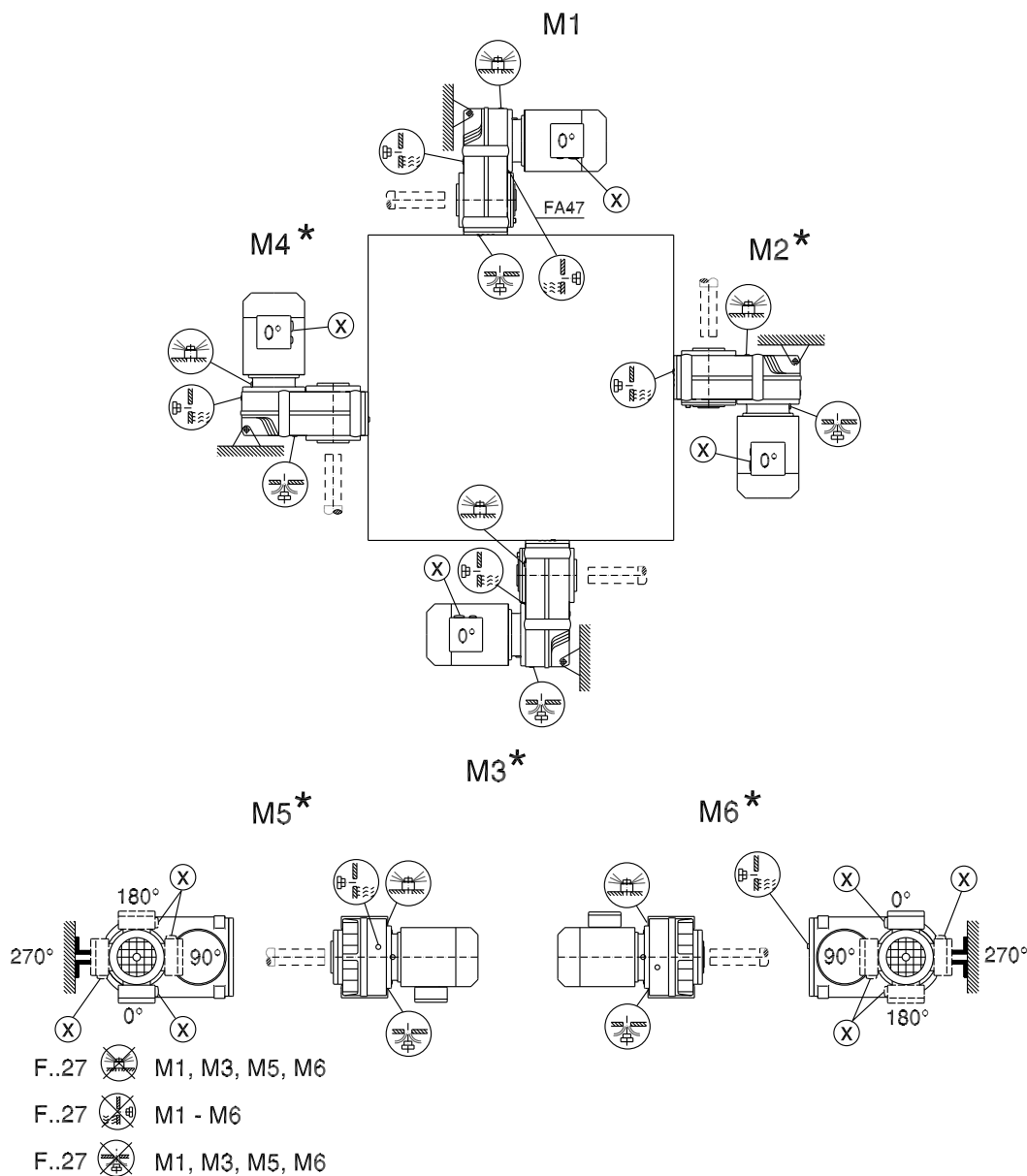
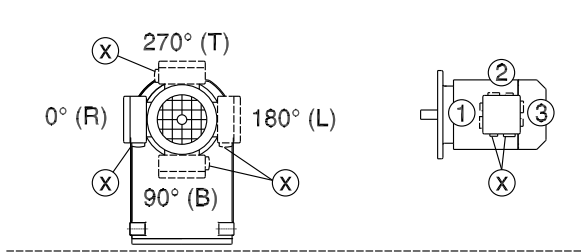


- F..27 M1, M3, M5, M6
- F..27 M1 - M6
- F..27 M1, M3, M5, M6

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

42 044 03 00

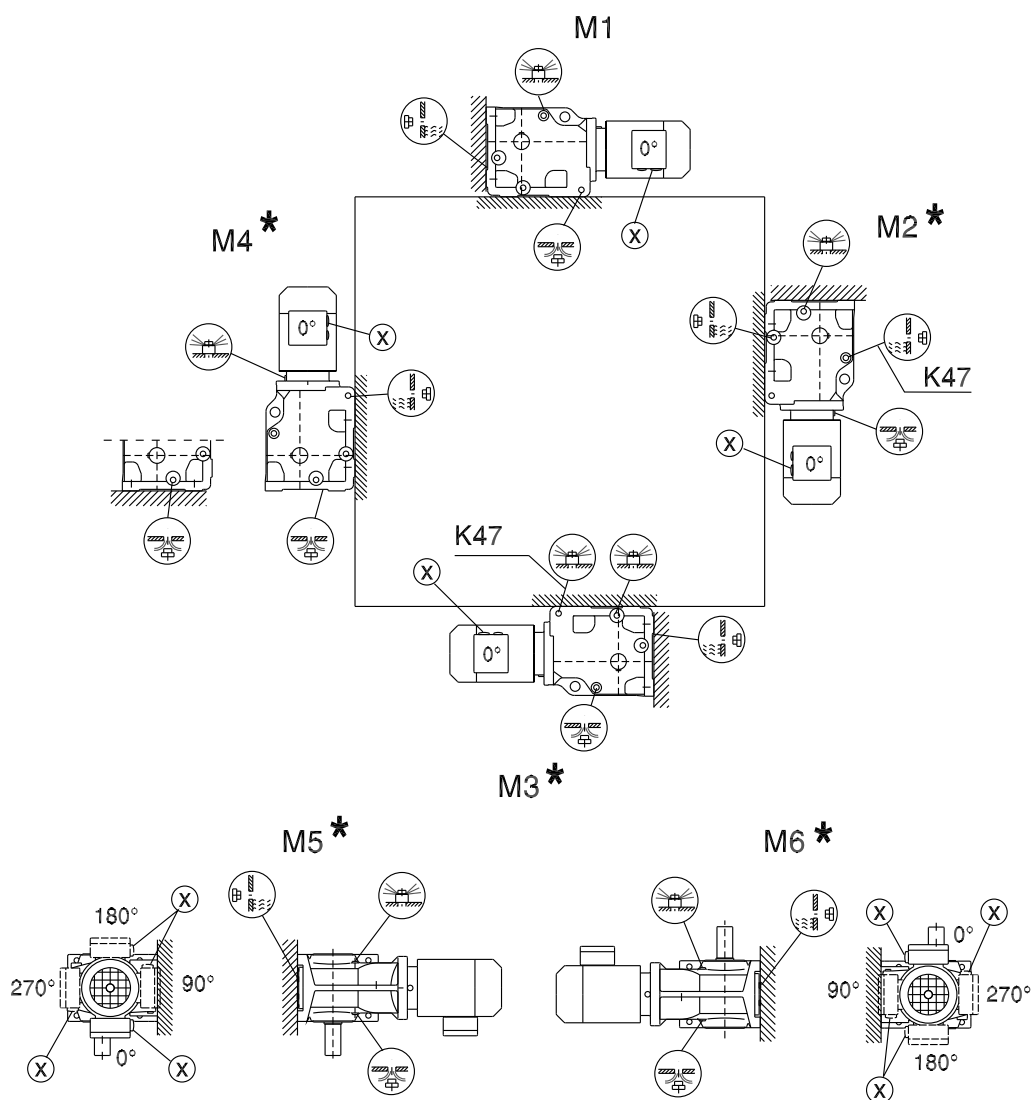
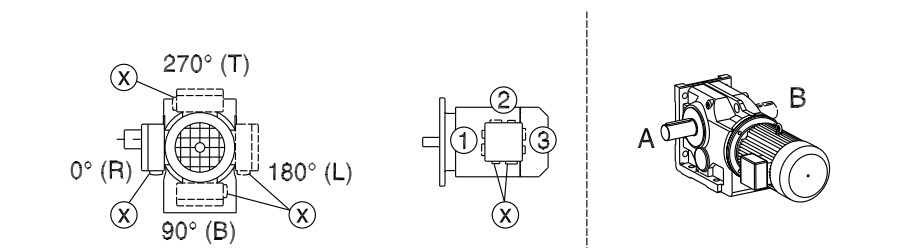


* → page 59

6.6 Helical-bevel gearmotors – mounting positions

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

34 025 03 00

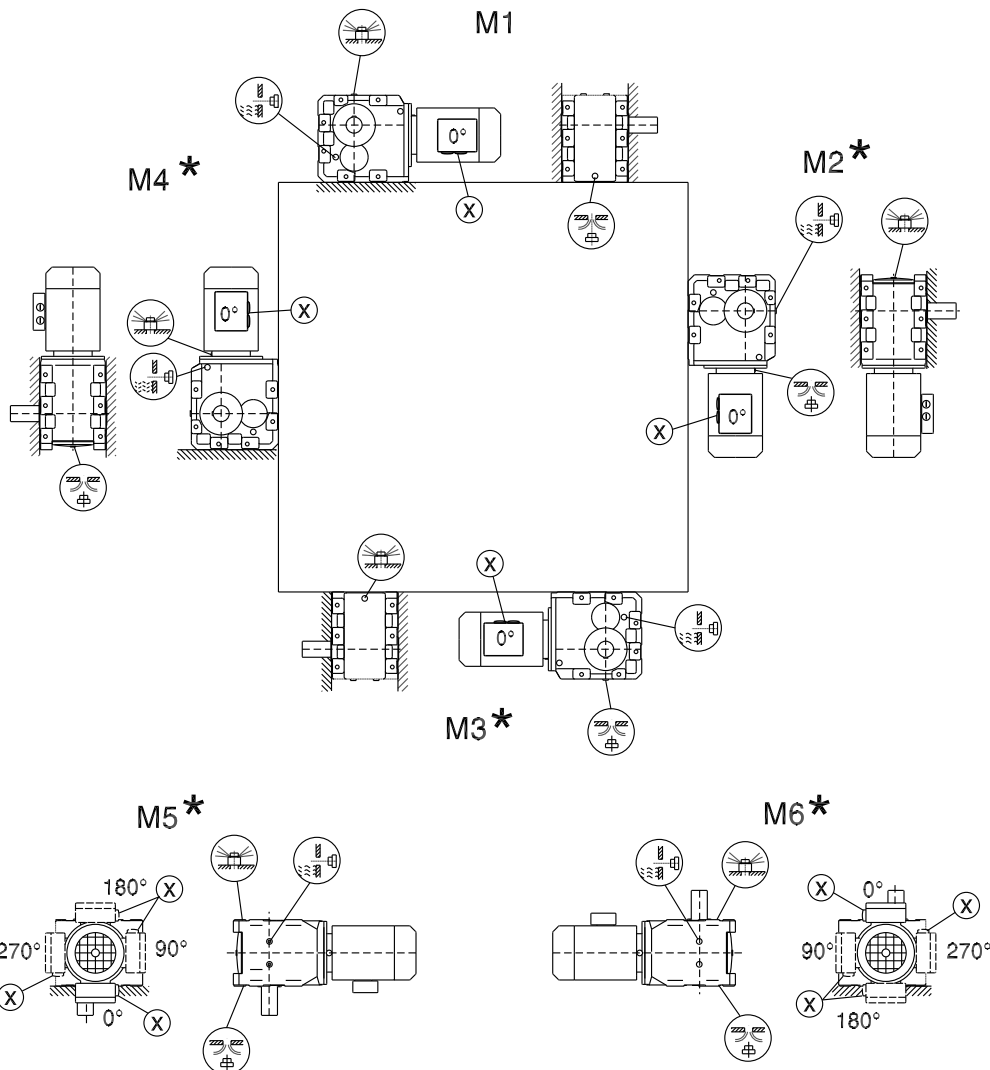
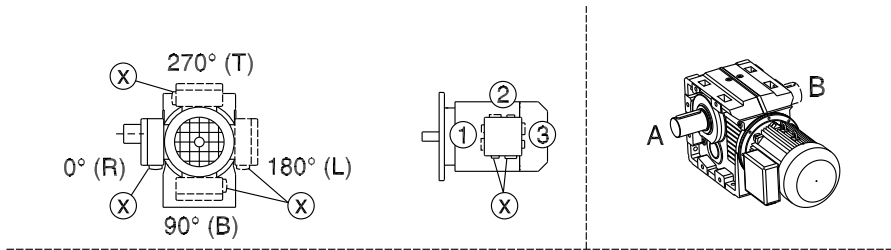


* → page 59

Caution: Observe the information marked with  in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).

K167-187, KH167B-187B

34 026 03 00

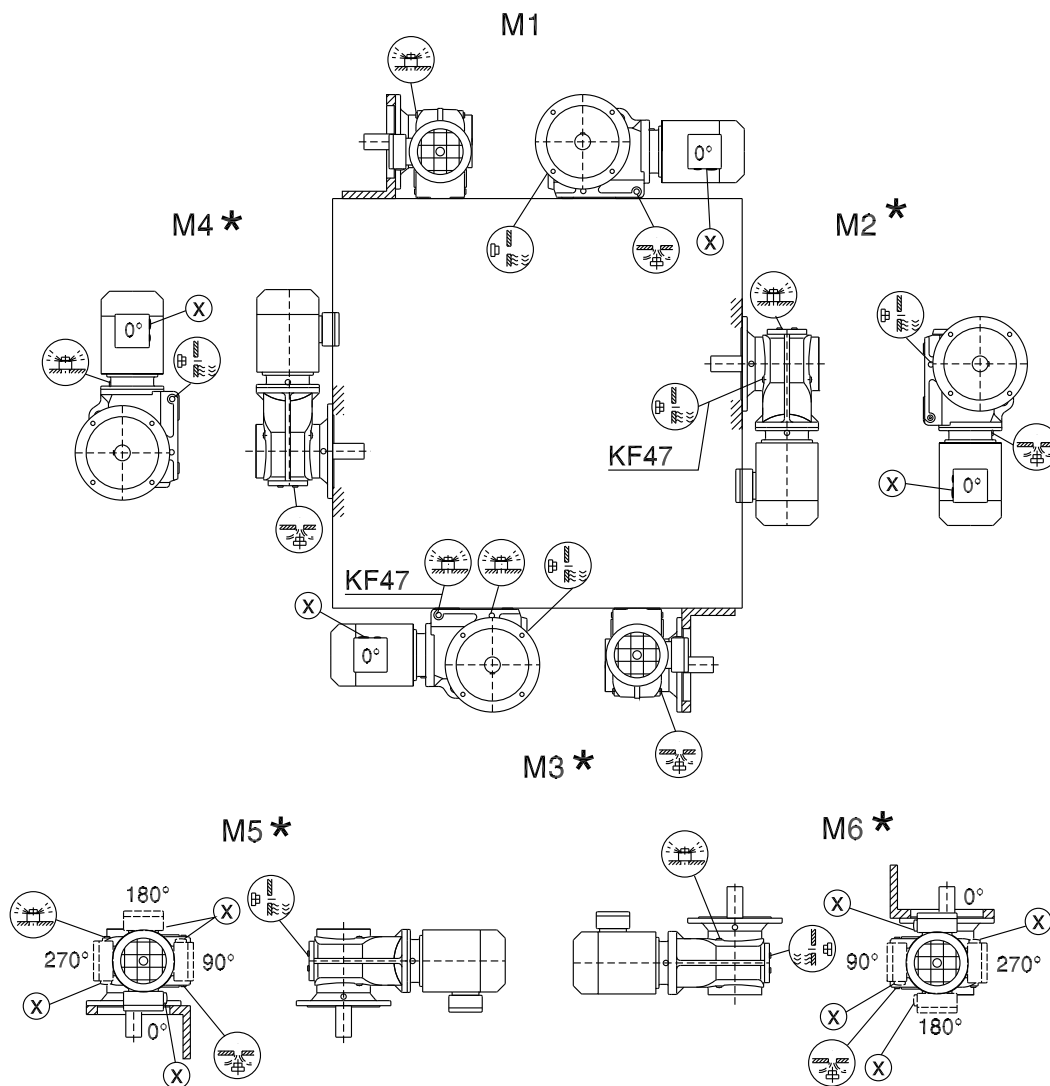
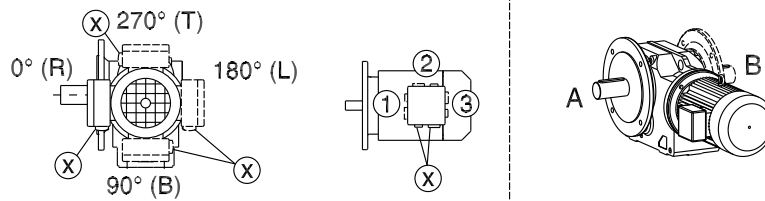


* → page 59

Caution: Observe the information marked with **i** in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).

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

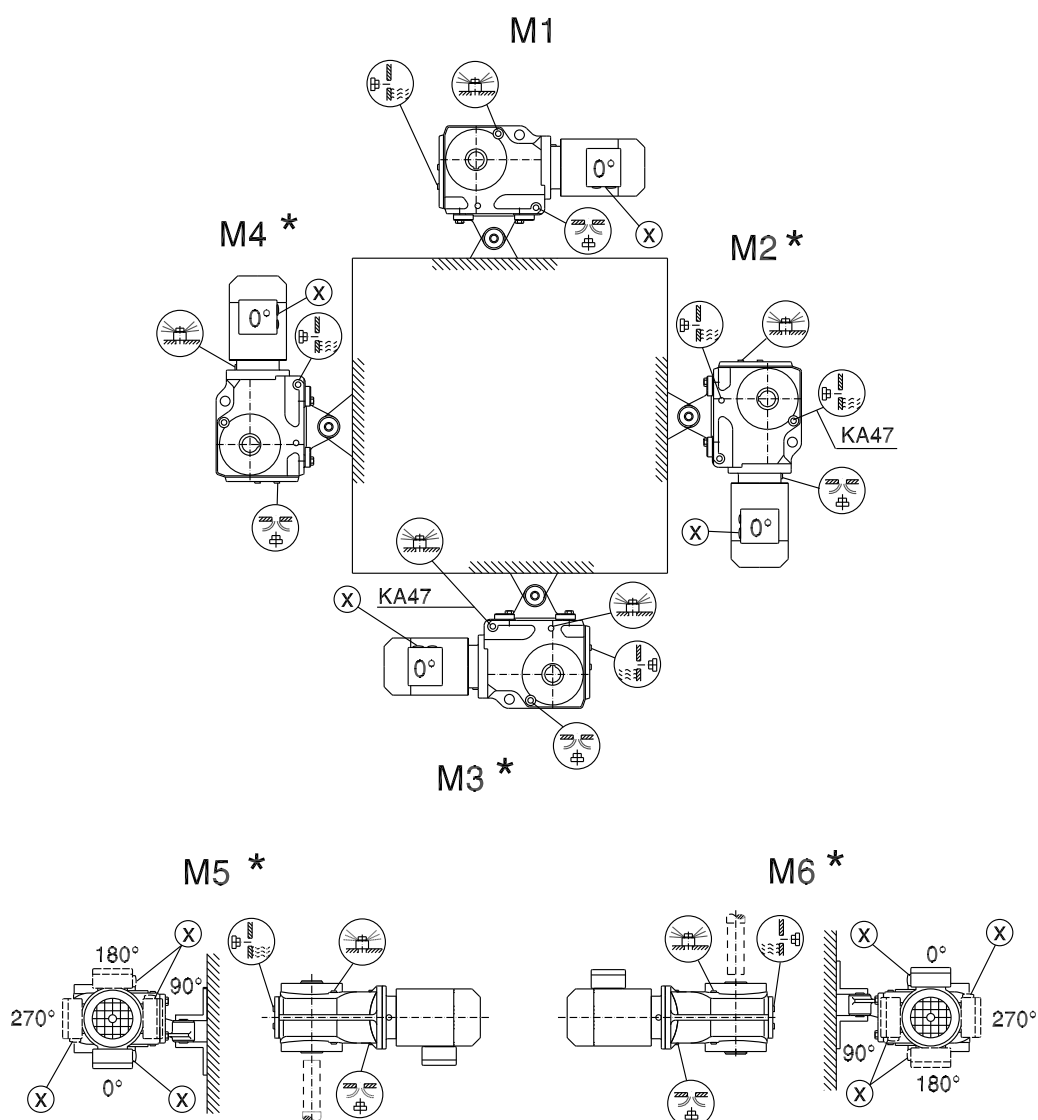
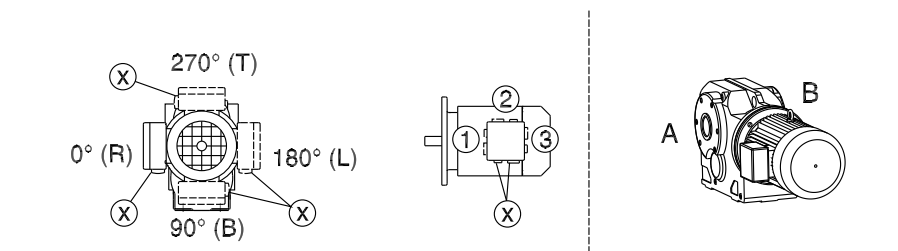
34 027 03 00



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

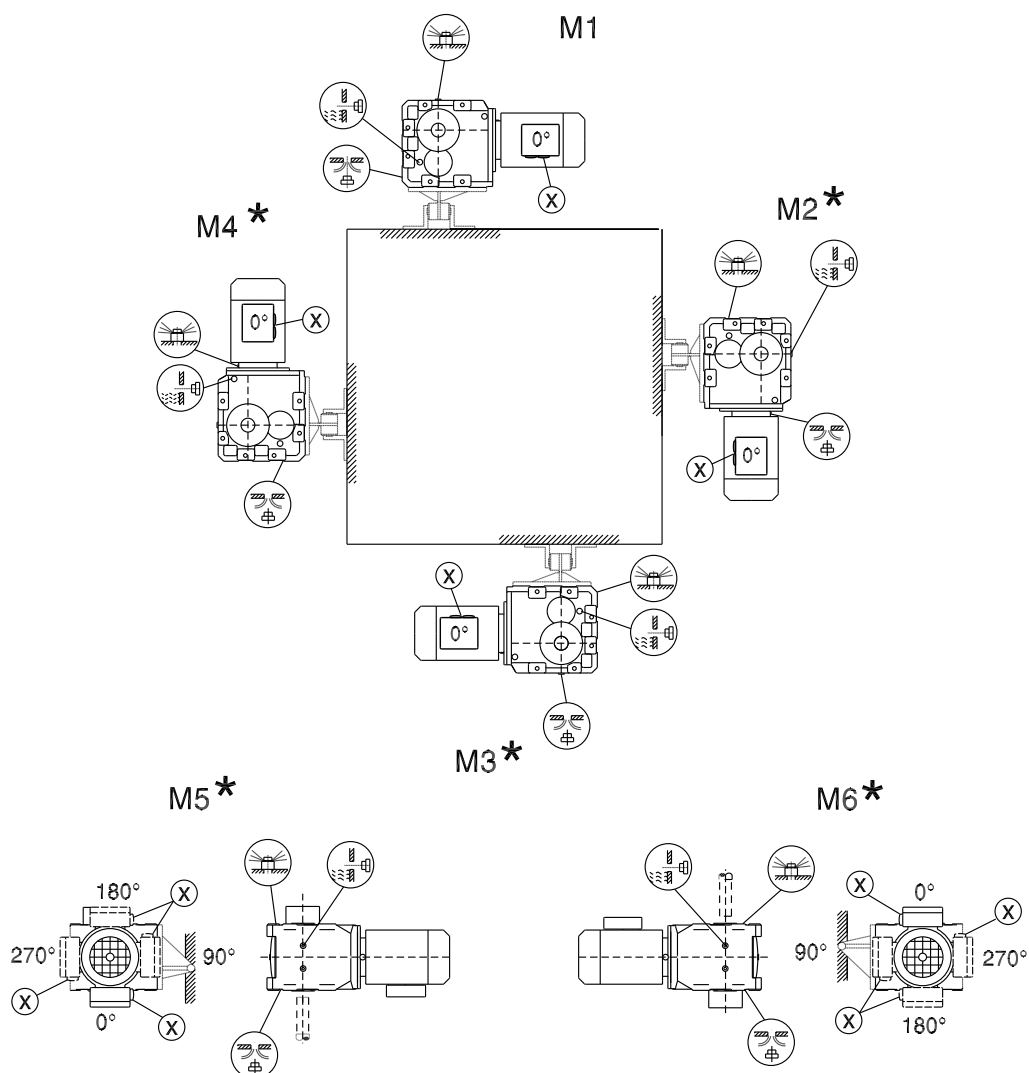
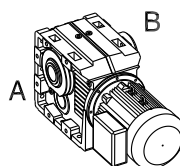
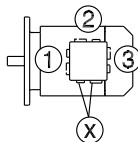
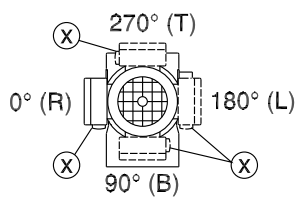
39 025 04 00



* → page 59

KH167-187

39 026 04 00

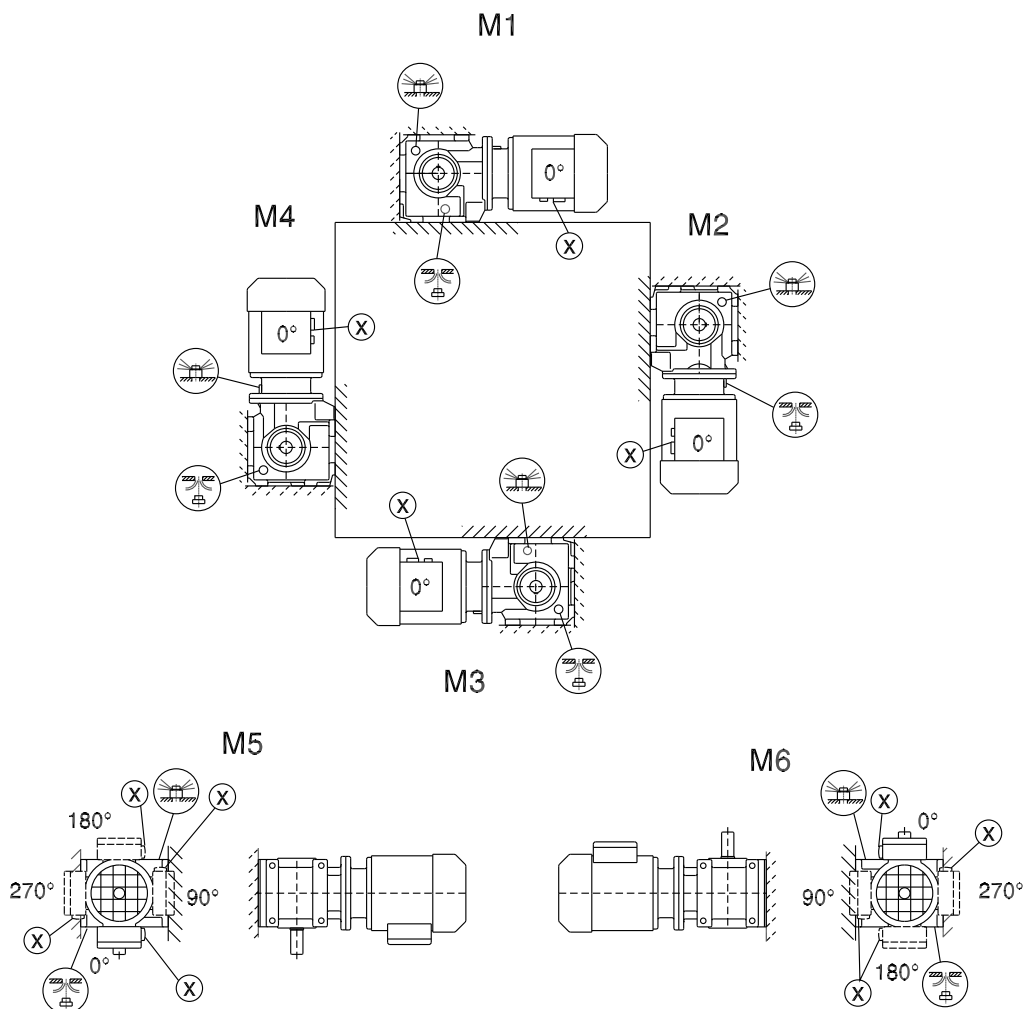
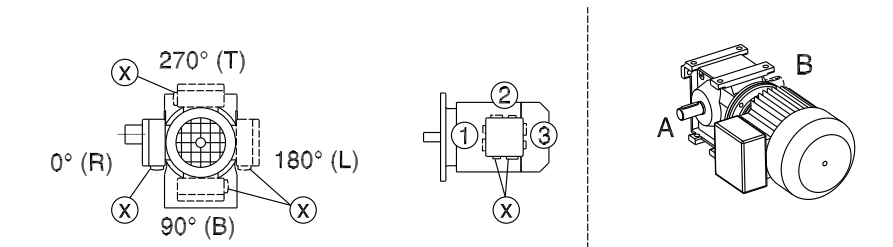


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6.7 Helical-worm gearmotors – mounting positions

S37

05 025 03 00

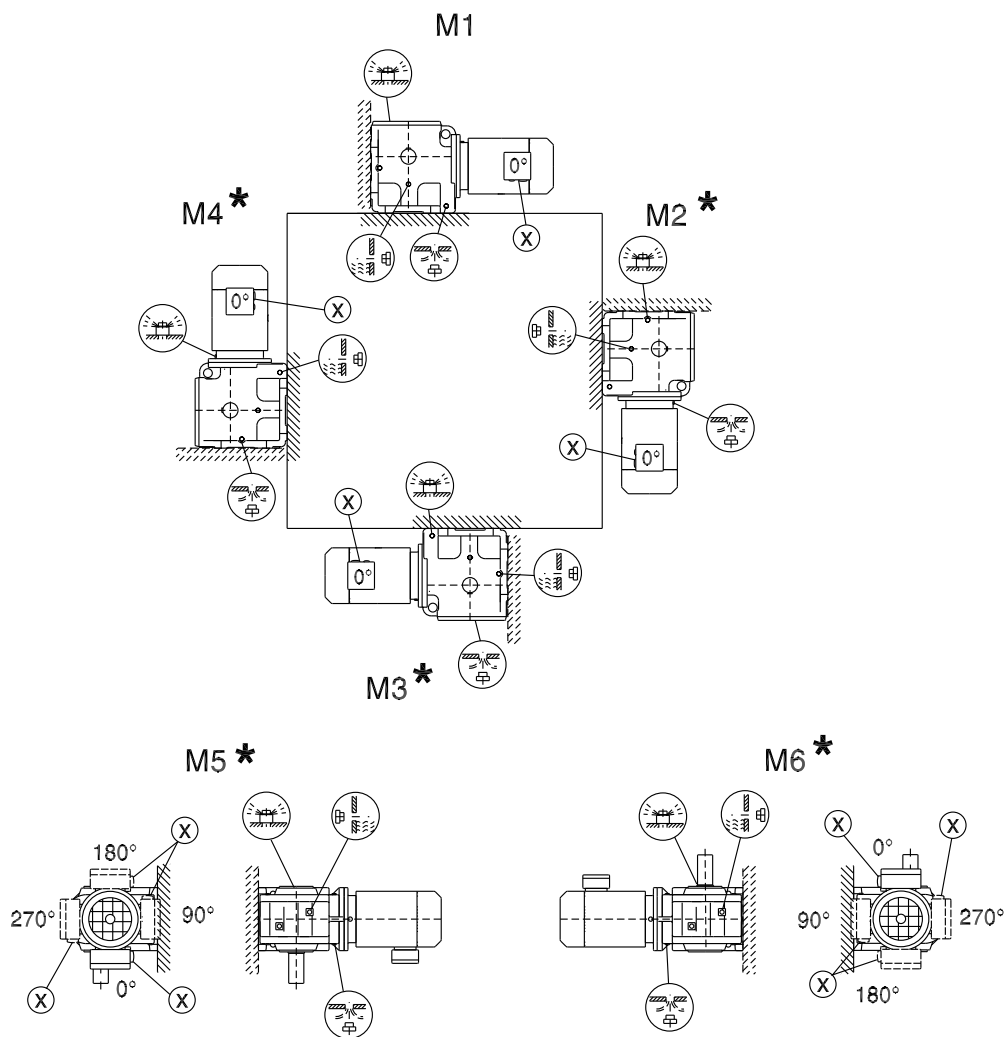
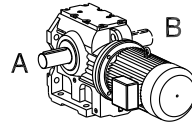
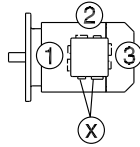
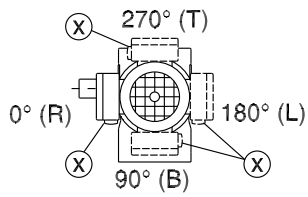


* → page 59

Caution: Observe the information marked with **i** in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).

S47 - S97

05 026 03 00

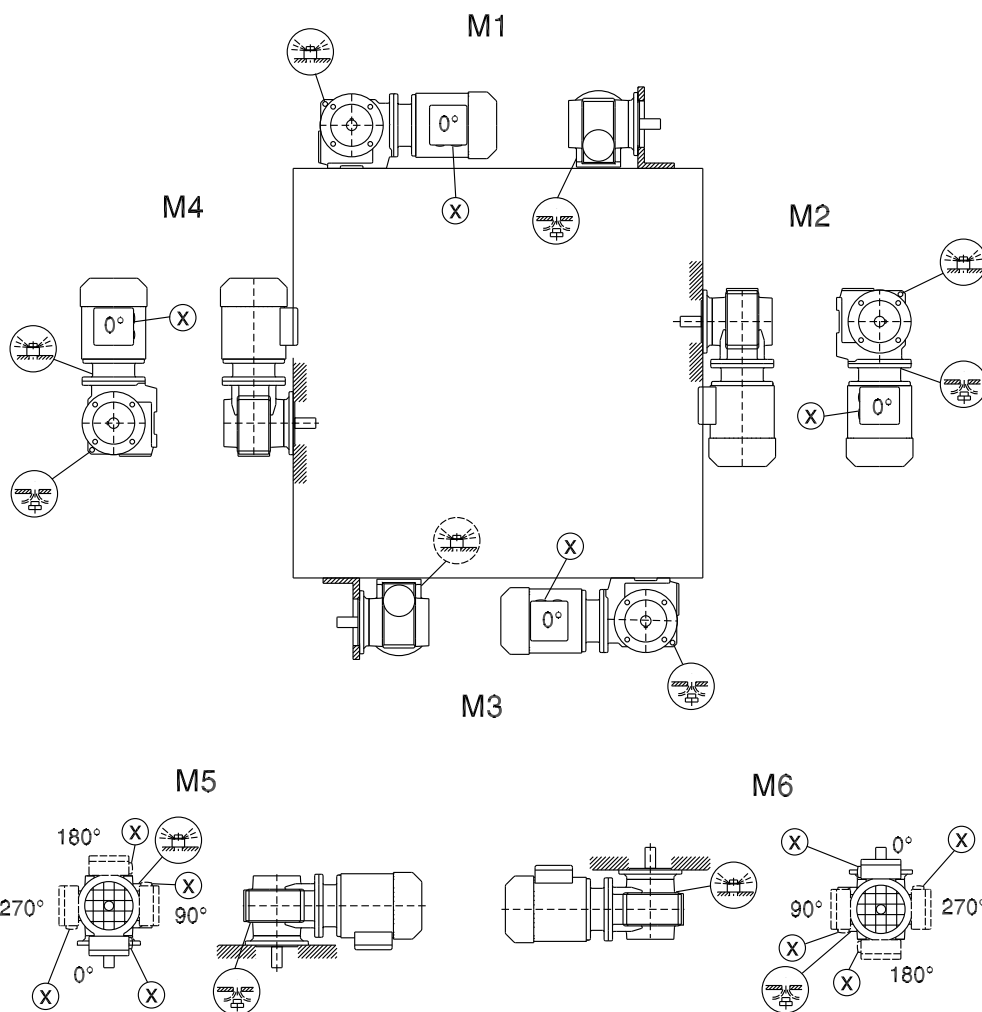
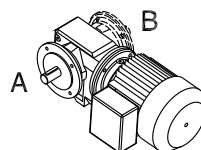
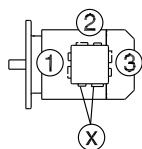
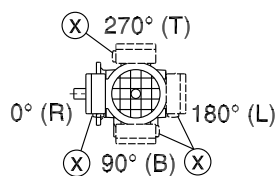


* → page 59

Caution: Observe the information marked with  in the "Gearmotors" catalog, section "Project Planning for Gear Units/Overhung and axial loads" (page 36).

SF/SAF/SHF37

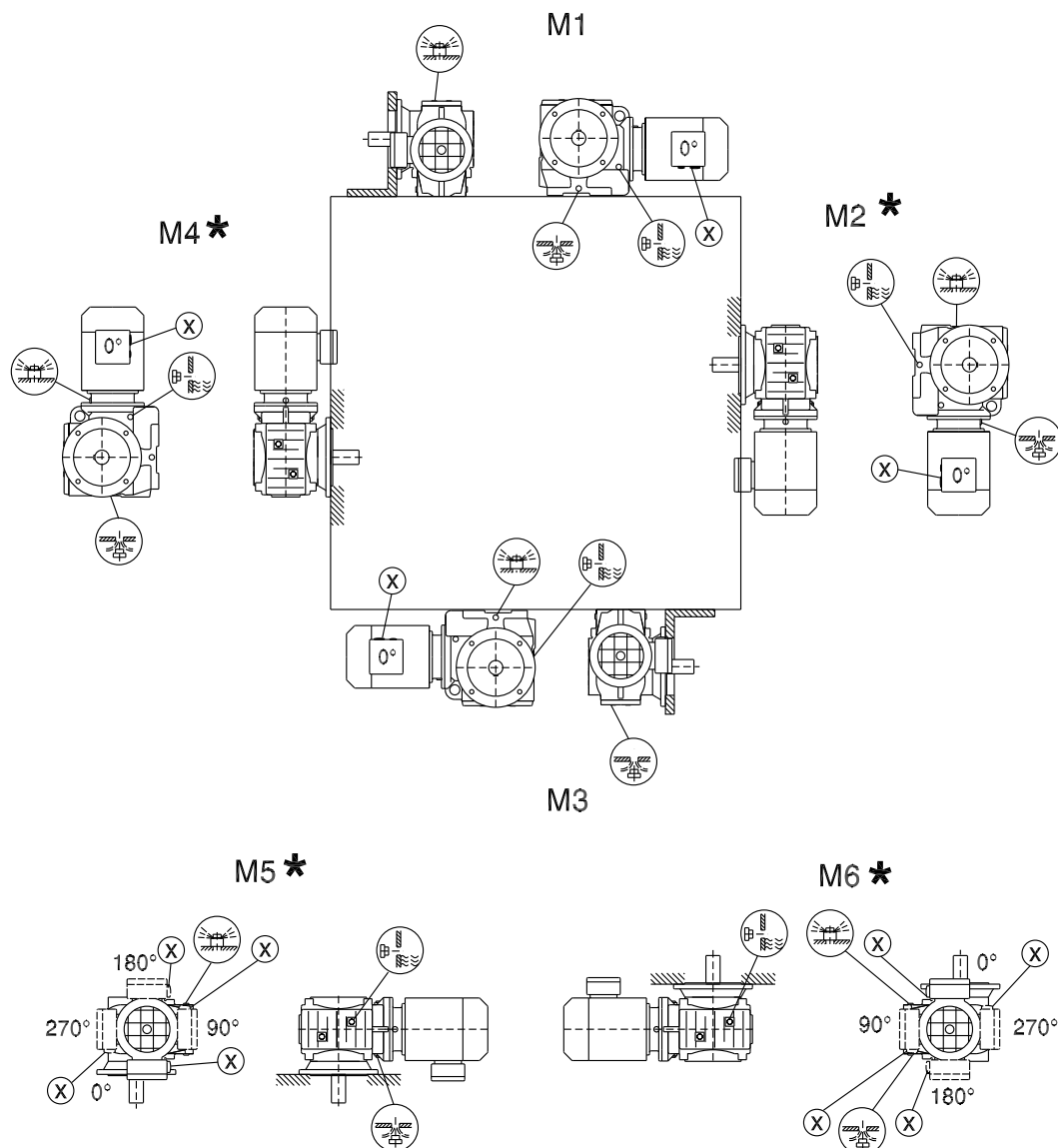
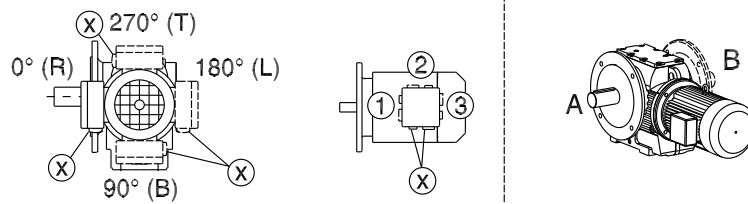
05 027 03 00



* → page 59

SF/SAF/SHF/SAZ/SHZ47-97

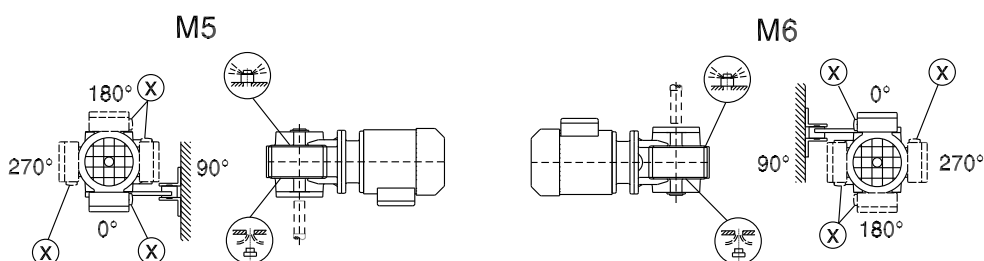
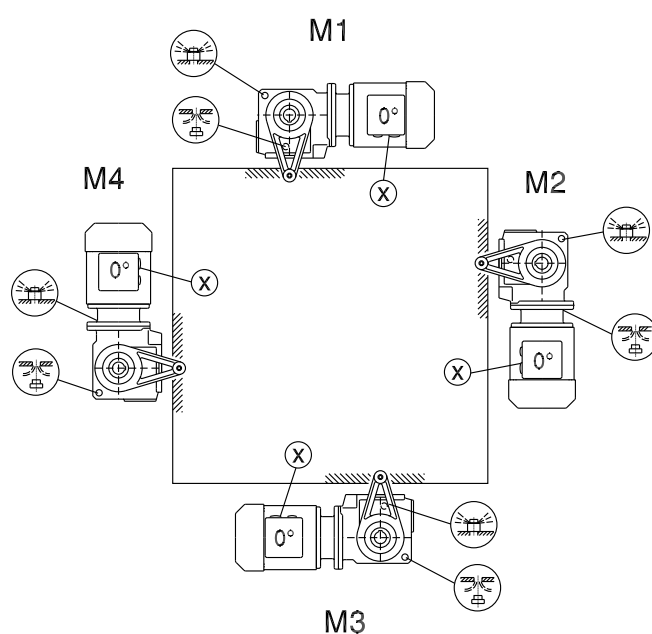
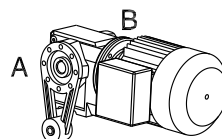
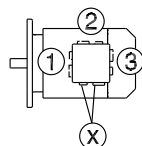
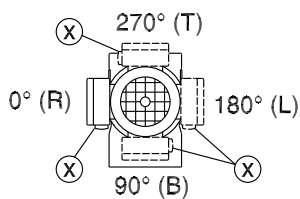
05 028 03 00



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SA/SH/ST37

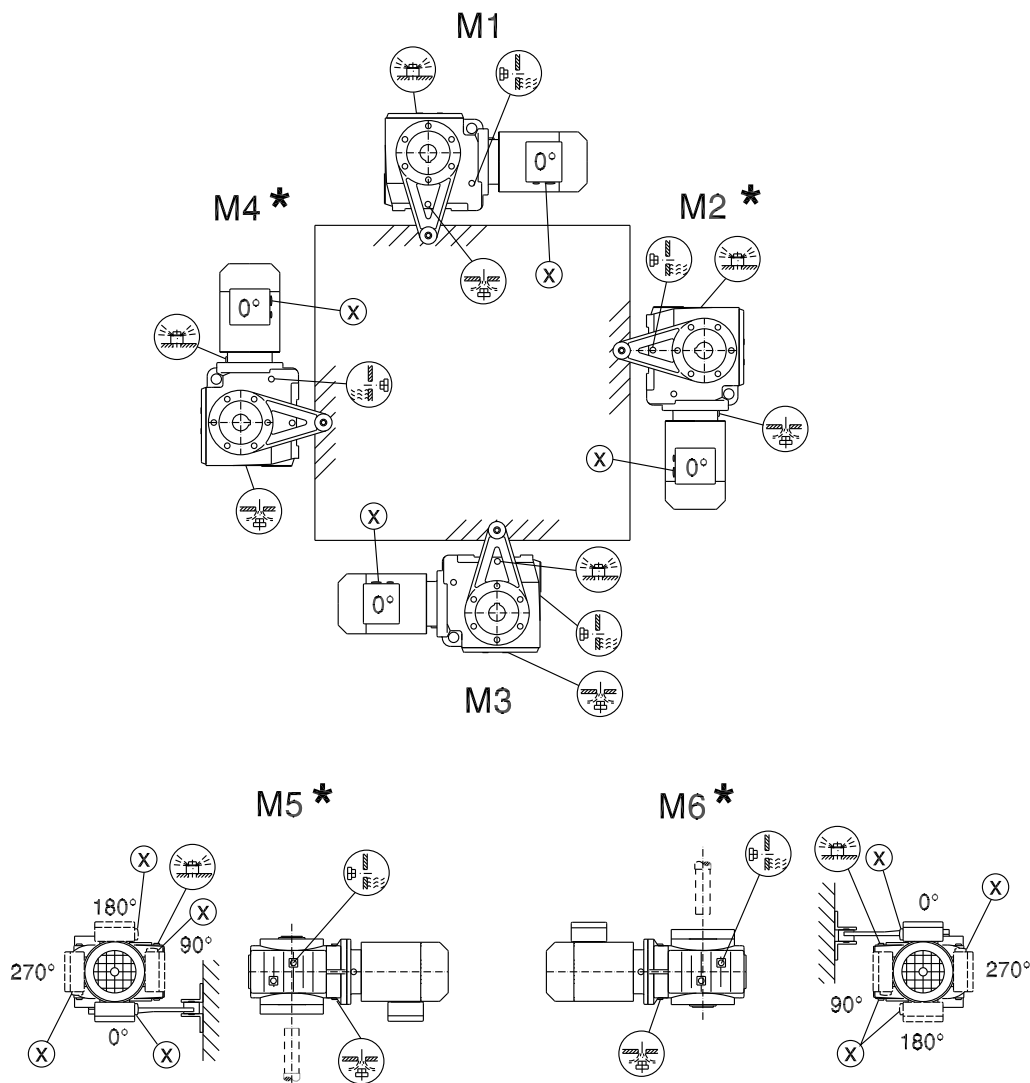
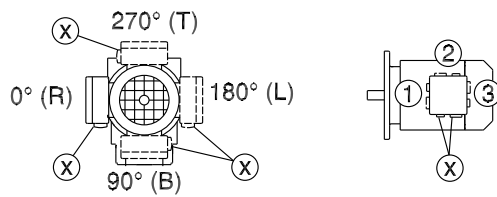
28 020 04 00



* → page 59

SA/SH/ST47-97

28 021 03 00

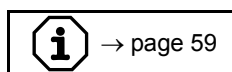
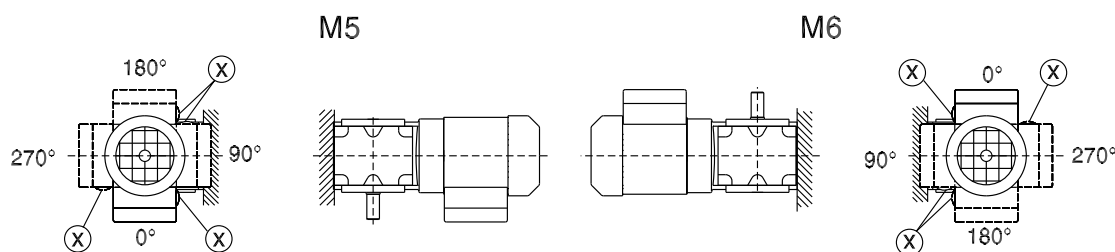
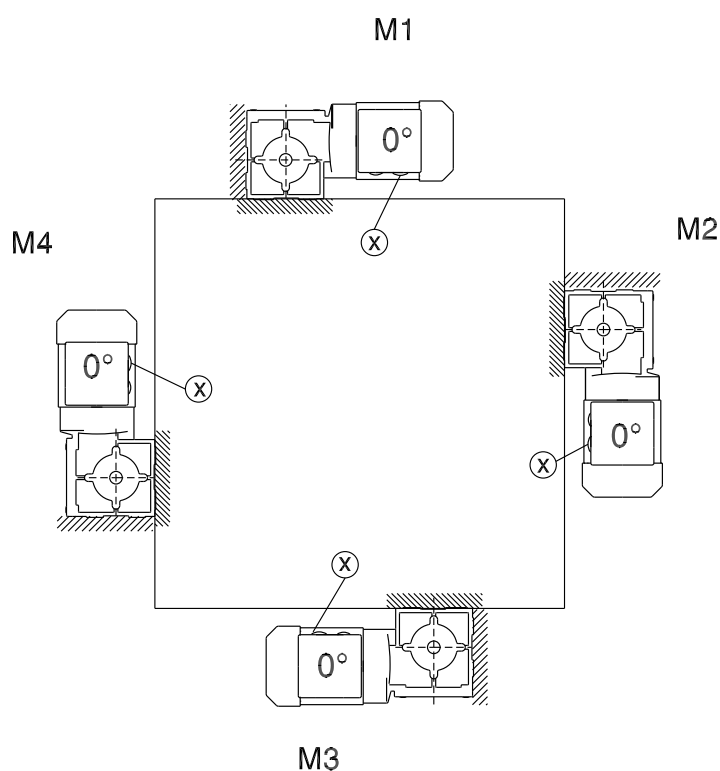
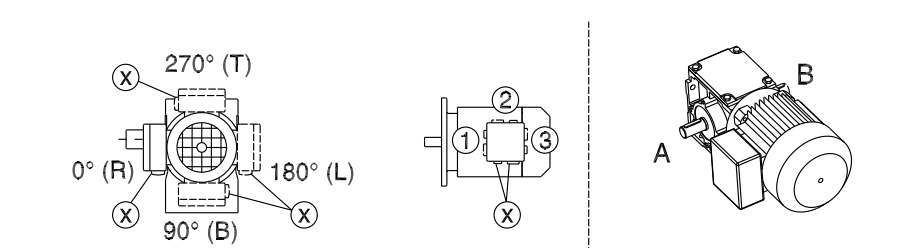


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6.8 Spiroplan® gearmotors – mounting positions

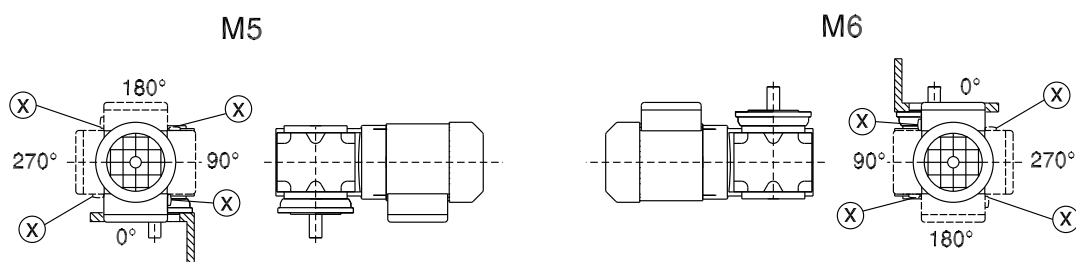
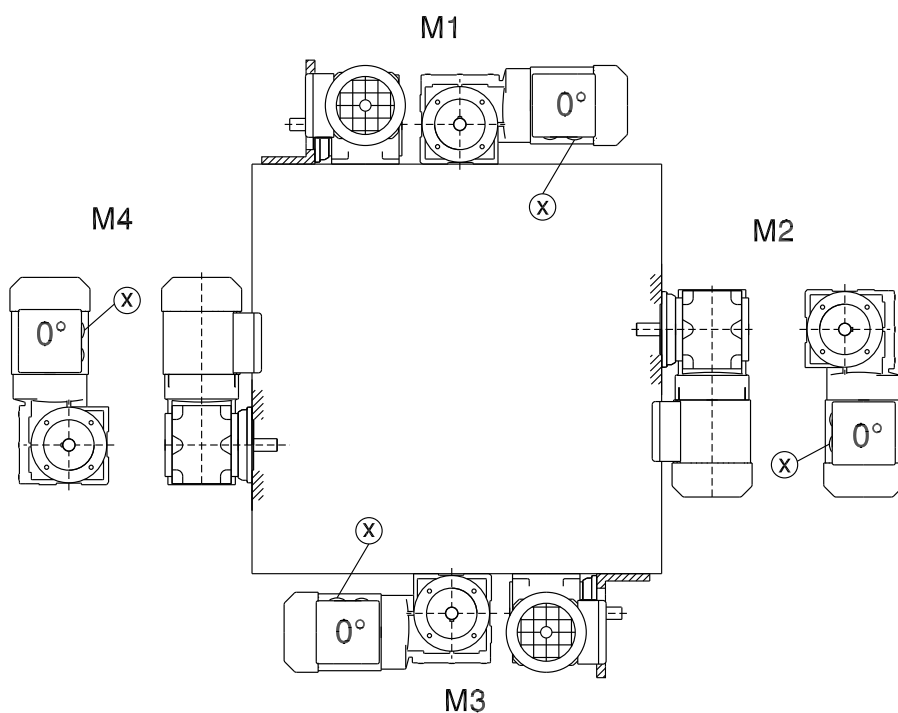
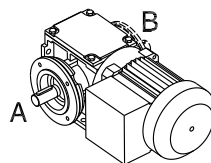
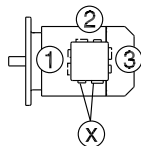
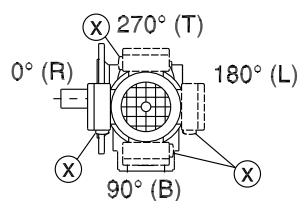
W10-30

20 001 01 02



WF10-30

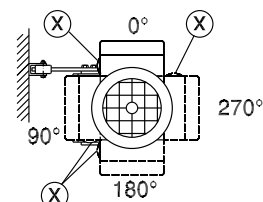
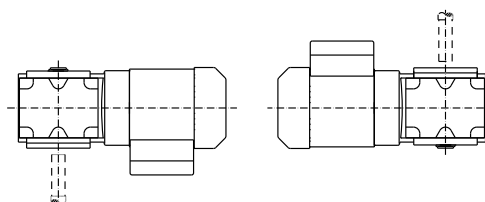
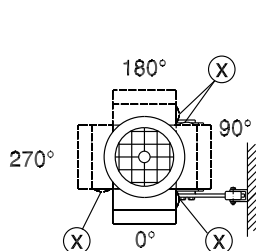
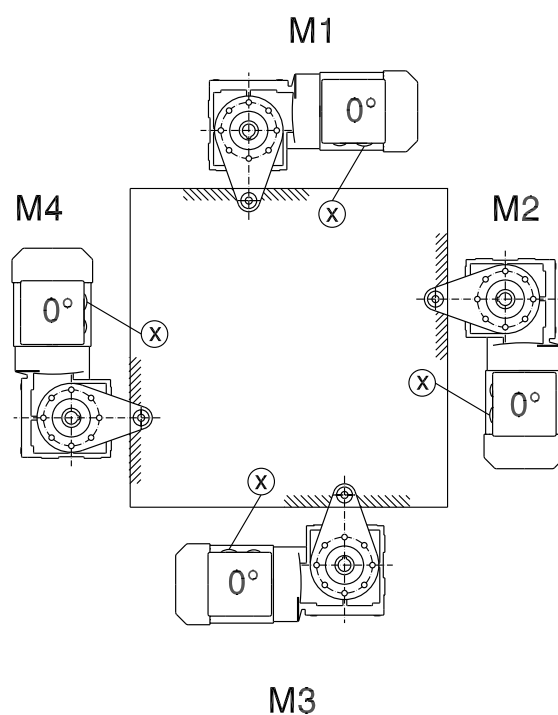
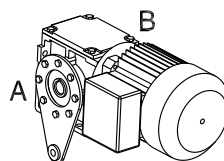
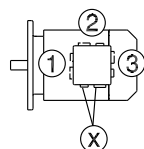
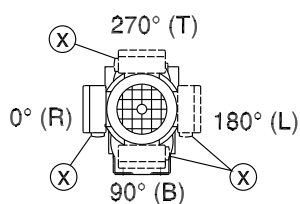
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WA10-30

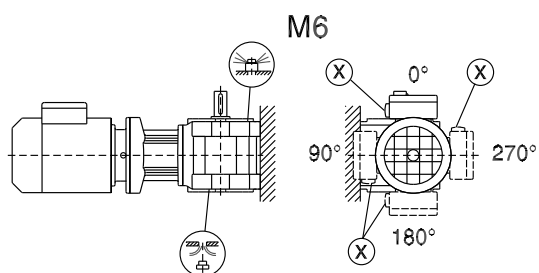
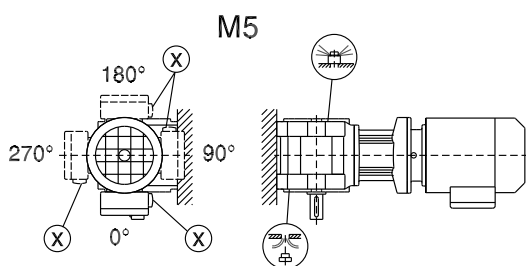
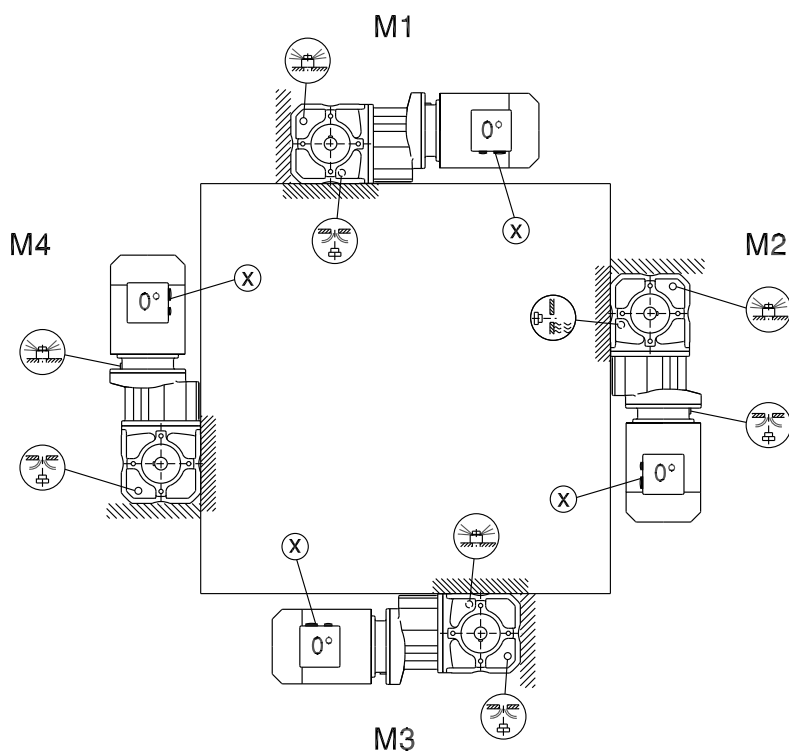
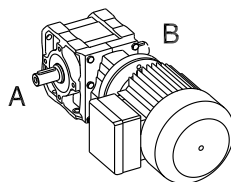
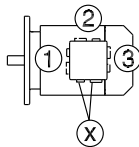
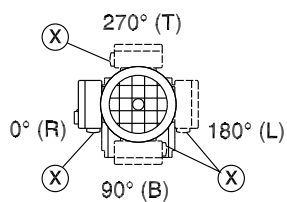
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W/WA37-47B

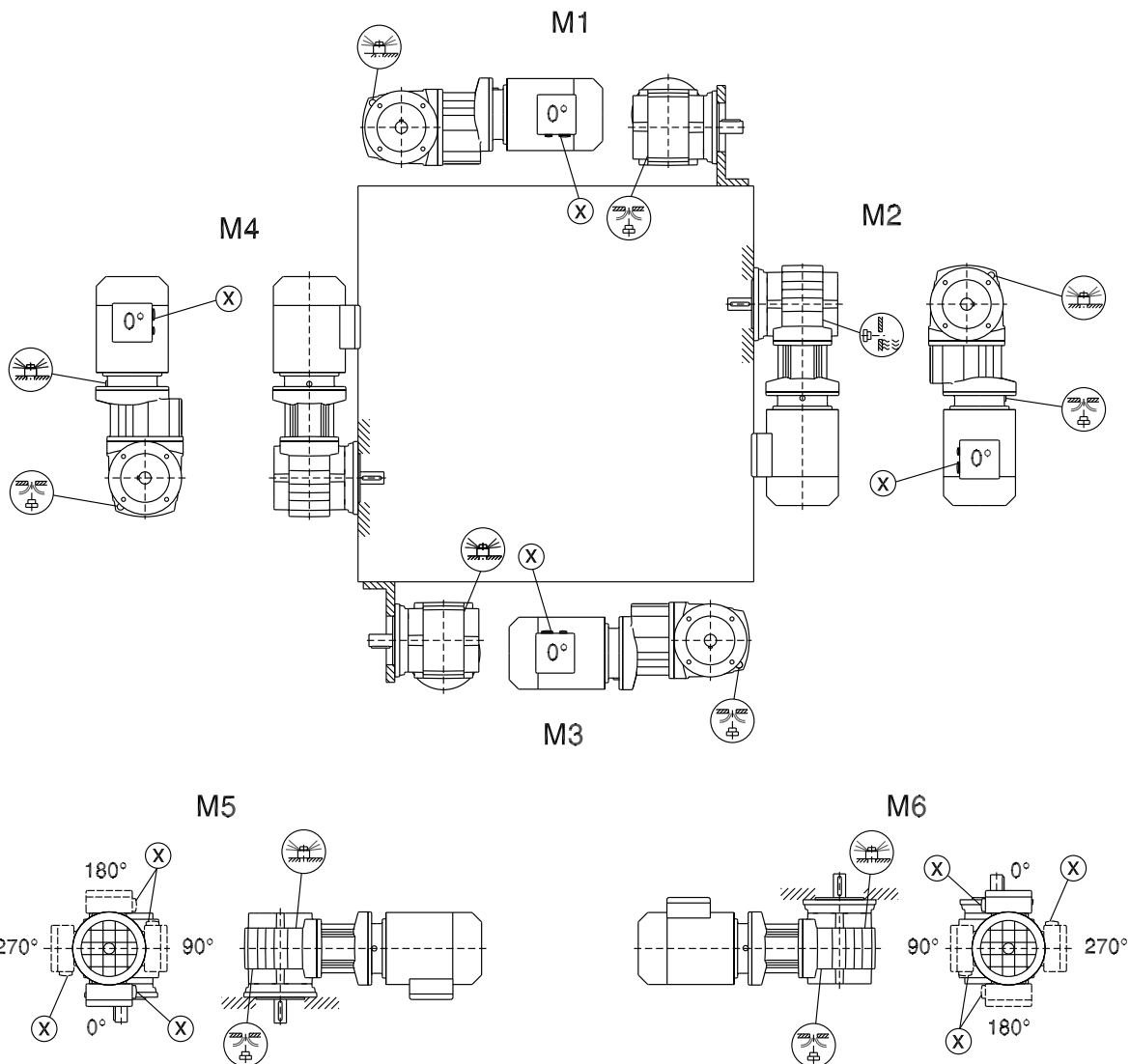
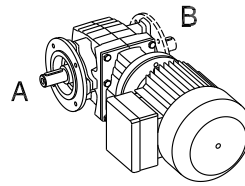
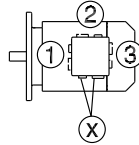
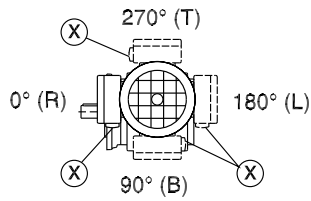
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WF/WAF/WHF37-47

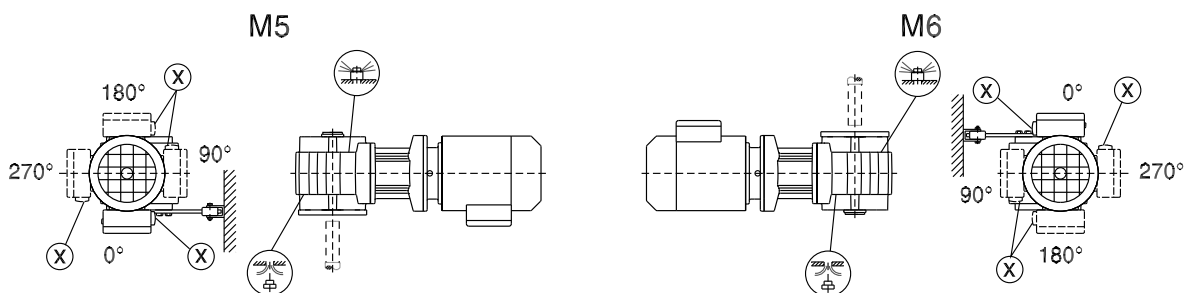
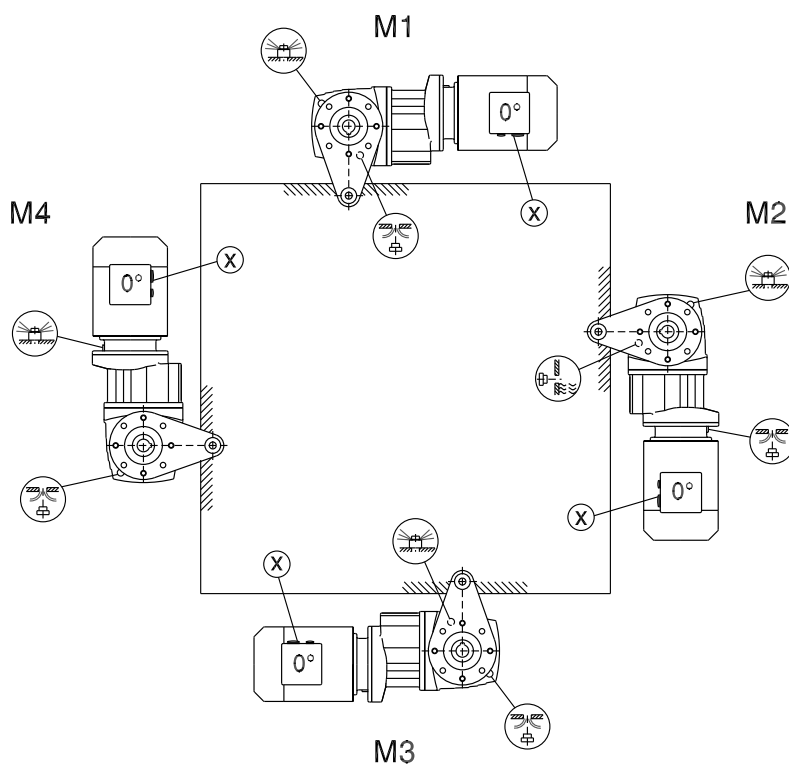
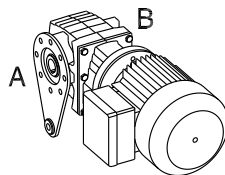
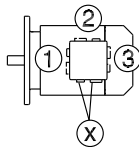
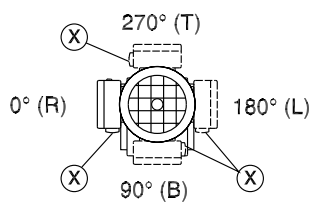
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WA/WH/WT37-47

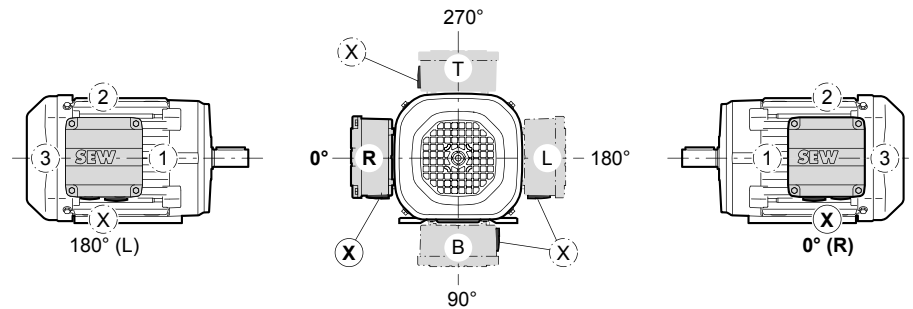
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6.9 AC motor – mounting position designations

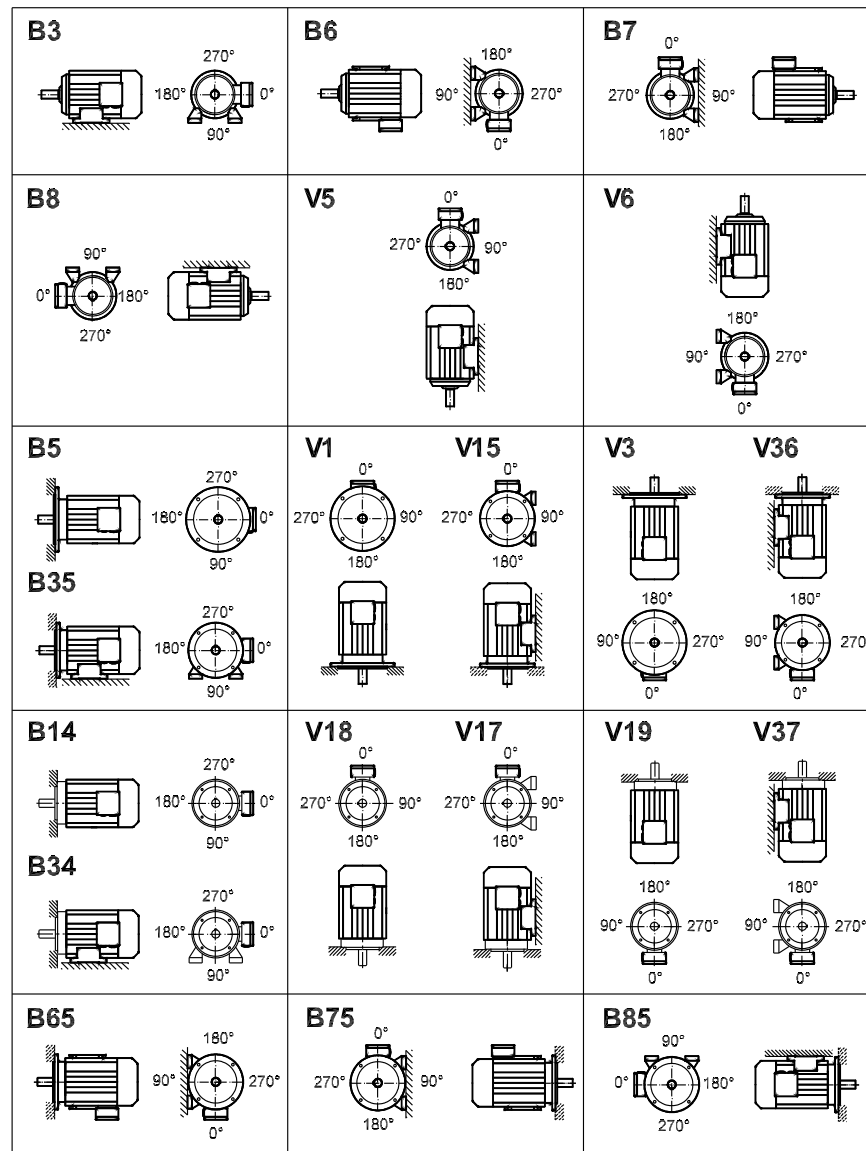
Position of motor
terminal box and
cable entry



60500AXX

Figure 13: Position of terminal box and cable entry

Mounting posi-
tions



62592AXX

Figure 14: AC motors mounting positions