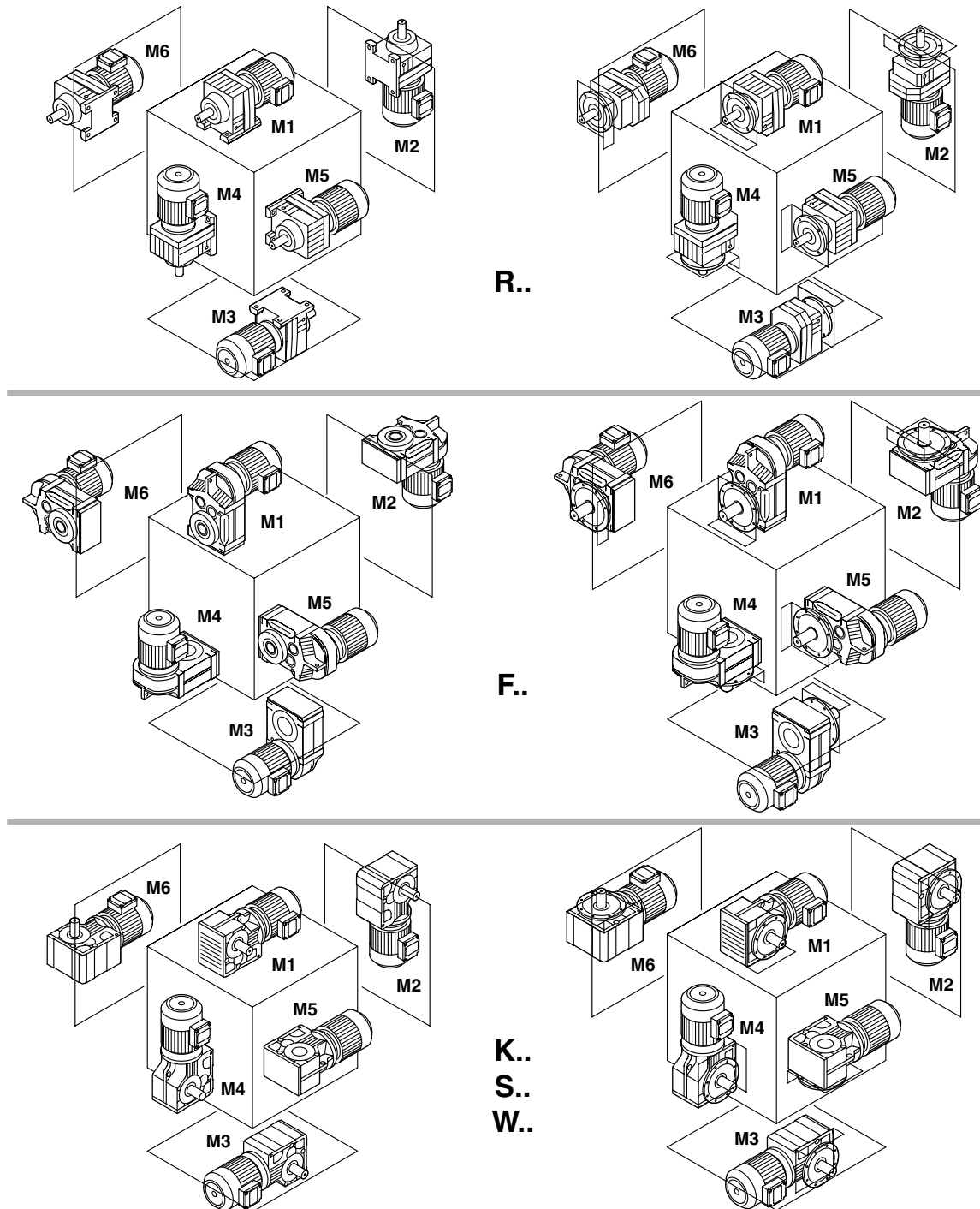


9 Mounting Positions and Important Order Information

9.1 General information on mounting positions

Mounting position designation

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.



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Figure 82: Depiction of mounting positions M1 ... M6

9.2 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.

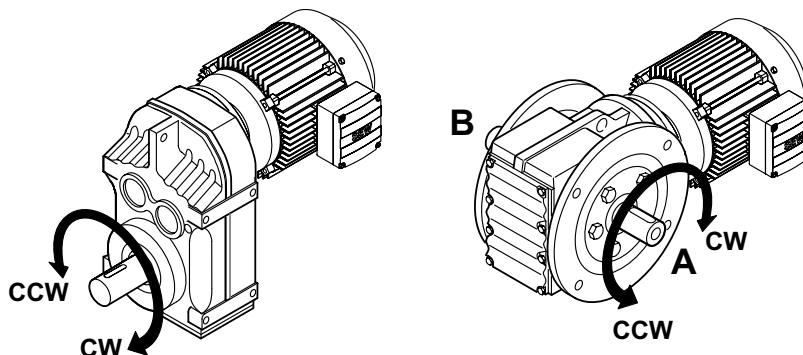
The following applies to all gear units and gearmotors

Direction of rotation of the output with a backstop

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

If the drive has a backstop RS, 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) = Rotating clockwise
Counterclockwise (CCW) = Rotating counterclockwise



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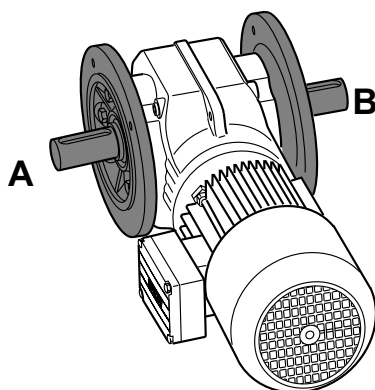
Figure 83: Direction of rotation of output

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 84)



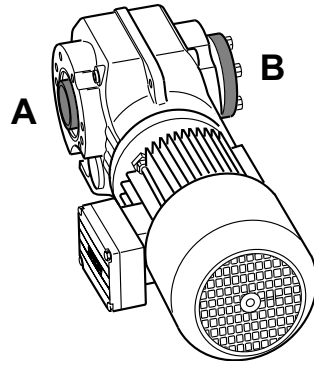
57505AXX

Figure 84: 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 disc, you also have to indicate whether the A or B end is the output end. In Figure 85, the A end is the output end. The shrink disc 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 85: Position of the output end



You will find the permitted mounting surfaces (= hatched area) in the mounting position sheets (page 156 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 and MOVIMOT® gearmotors from SEW-EURODRIVE.

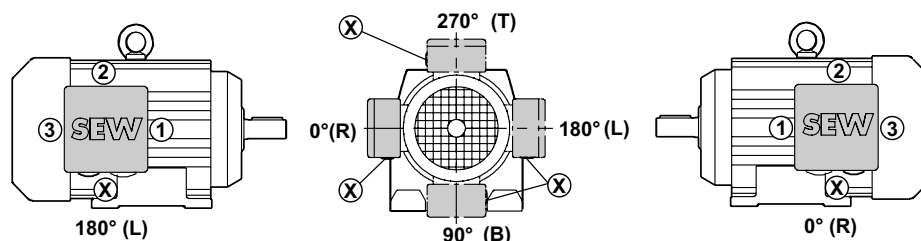
**Position terminal
box and cable
entry**

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 (→ Figure 86). 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 retained for gearmotors. Figure 86 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 86).



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Figure 86: Position of terminal box and cable entry

Unless indicated otherwise, you will receive the terminal box type 0° (R) with cable entry "X". 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.
- **Only** cable entries "X" and "2" are possible for **DT56 and DR63** motors. **Exception:** Cable entry "3" is also possible for DR63 with IS plug connector.
- The following cable entries are possible in the **DT71..BMG** motor with gear unit flange diameters 160 mm and 200 mm:

Terminal box position	0° (R)	90° (B)	180° (L)	270° (T)
Possible cable entries	"X", "3"	"X", "1", "3"	"1", "2"	"X", "1", "3"

Applies to all MOVIMOT® gearmotors

Position terminal box and cable entry

The following information applies to MOVIMOT® gearmotors in addition to the gearmotors.

Position of the terminal box (MOVIMOT® inverter):

Not all positions are possible with MOVIMOT® gearmotors. Note the information in section "Position of the terminal box (MOVIMOT® inverter)" on page 180.

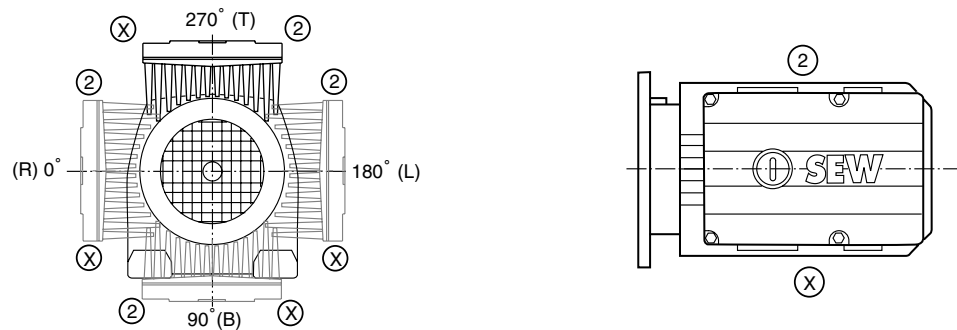
Position of the cable entry:

You do not have to select the position of the cable entry for MOVIMOT® gearmotors. Positions "X" (= standard position) and position "2" are always possible (see Figure 87).

Position of plug connectors options:

You will have to select the position for MOVIMOT® optional plug connectors (e.g. ASA3) (see Figure 87).

Not all position are possible. See the notes in the section "Mounting Positions, Technical Data and Dimension Sheets MOVIMOT®".



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Figure 87: Position terminal box and cable entry, plug connectors

Sample orders

Type (Examples)	Mounting position	Shaft position	Flange position	Terminal box position	Position of cable entry	Direction of rotation of output
K47../RS	M2	A	-	0°	"X"	CW
SF77DV100L4	M6	AB	AB	90°	"3"	-
KA97DV132M4	M4	B	-	270°	"2"	-
KH107DV160L4	M1	A	-	180°	"3"	-
WF20DT71D4	-	A	A	0°	"X"	-
KAF67A	M3	A	B	-	-	-

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.

9.3 Key to the mounting position sheets



Spiroplan® gearmotors do not depend on any particular mounting position. However, mounting positions M1 to M6 are also shown for SPIROPLAN® gearmotors to assist you in working with this documentation.

Important: Spiroplan® gearmotors cannot 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
	Oil drain plug

Churning losses

* → page 45

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:

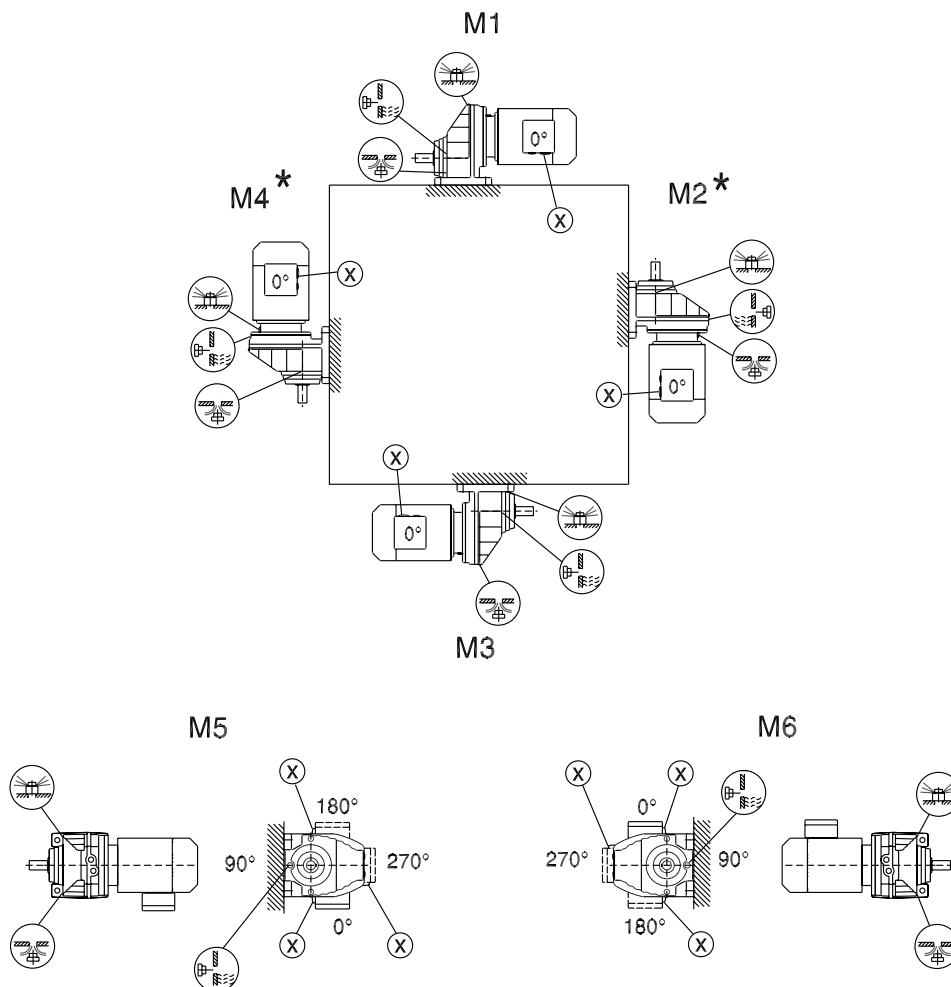
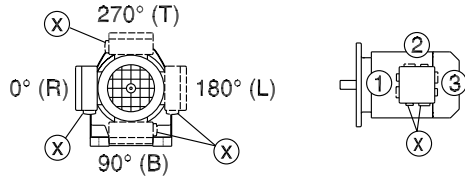


- **For gear units with solid shaft:** The displayed shaft is always on the A end.
- **For shaft mounted gear units:** The shaft with dashed lines represents the customer shaft. The output end ($\triangle$ shaft position) is always shown on the A end.

9.4 Mounting positions of helical gearmotors

RX57-RX107

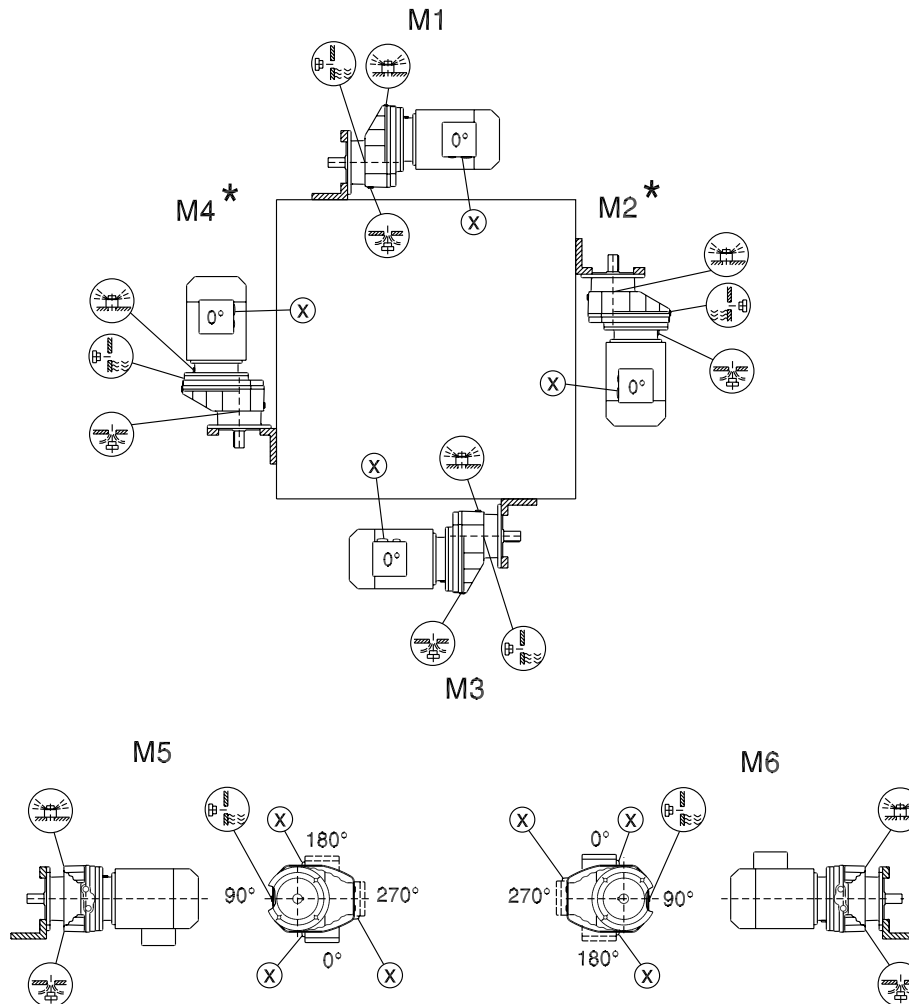
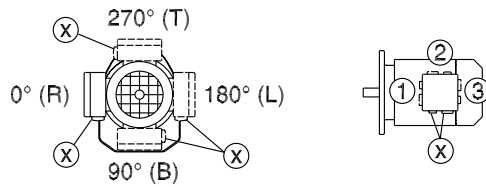
04 043 02 00



* → page 155

RXF57-RXF107

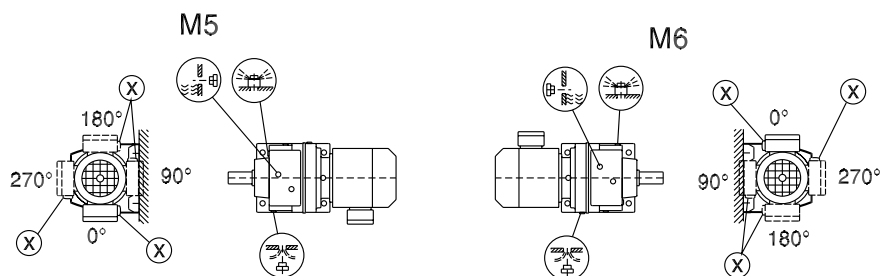
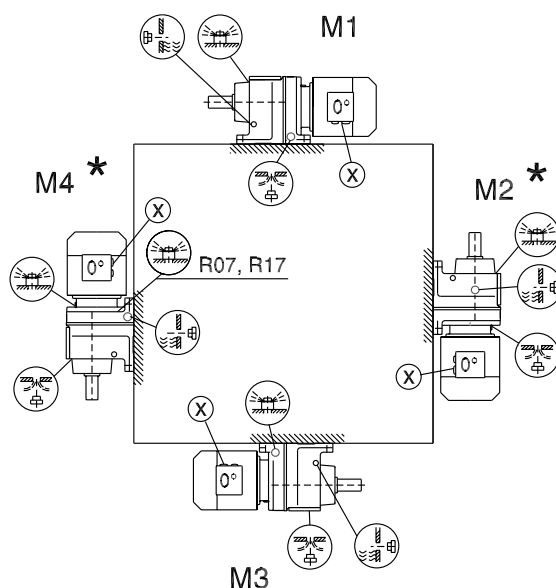
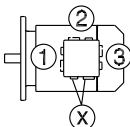
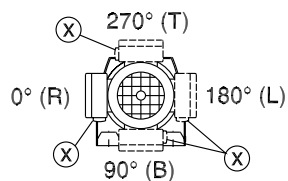
04 044 02 00



* → page 155

R07-R167

04 040 03 00

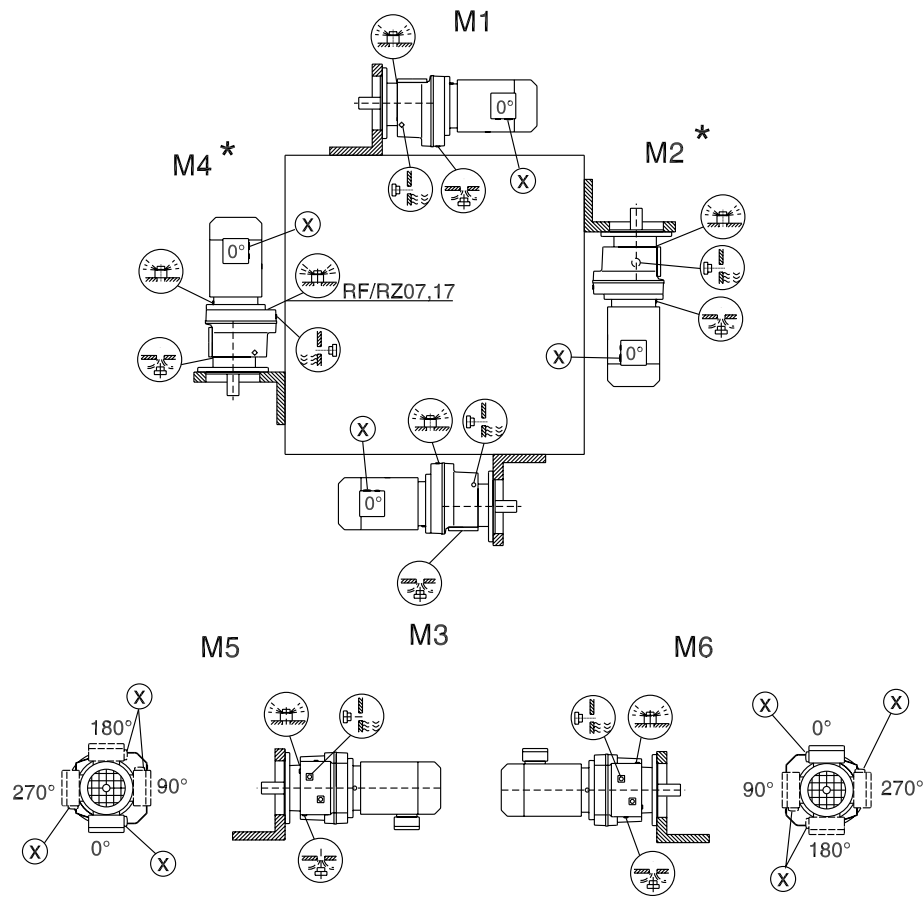
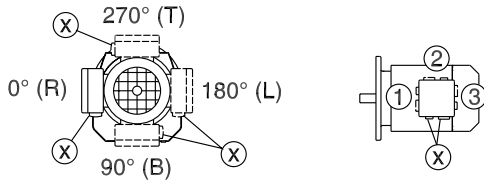


R07		M1, M2, M3, M5, M6
R17, R27		M1, M3, M5, M6
R07, R17, R27		
R47, R57		M5

* → page 155

RF07-RF167, RZ07-RZ87

04 041 03 00

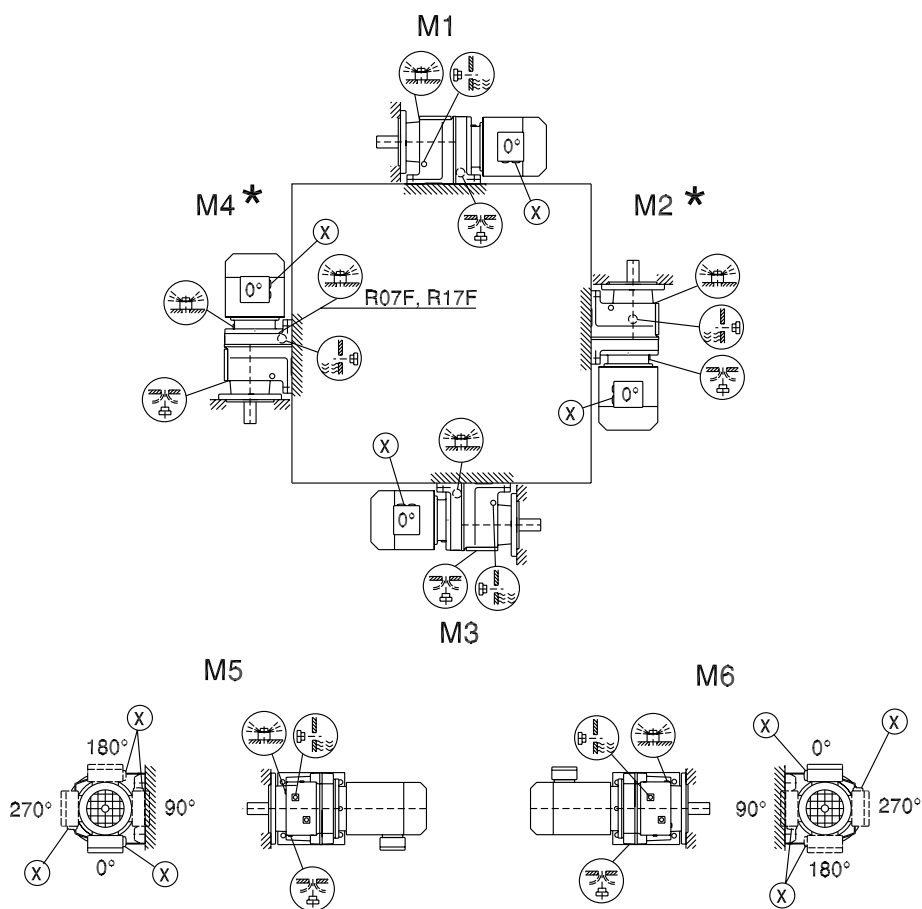
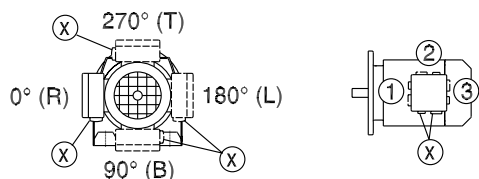


RF/RZ07		M1, M2, M3, M5, M6
RF/RZ17,27		M1, M3, M5, M6
RF/RZ07, 17, 27	 	
RF/RZ47, 57		M5

* → page 155

R07F-R87F

04 042 03 00



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

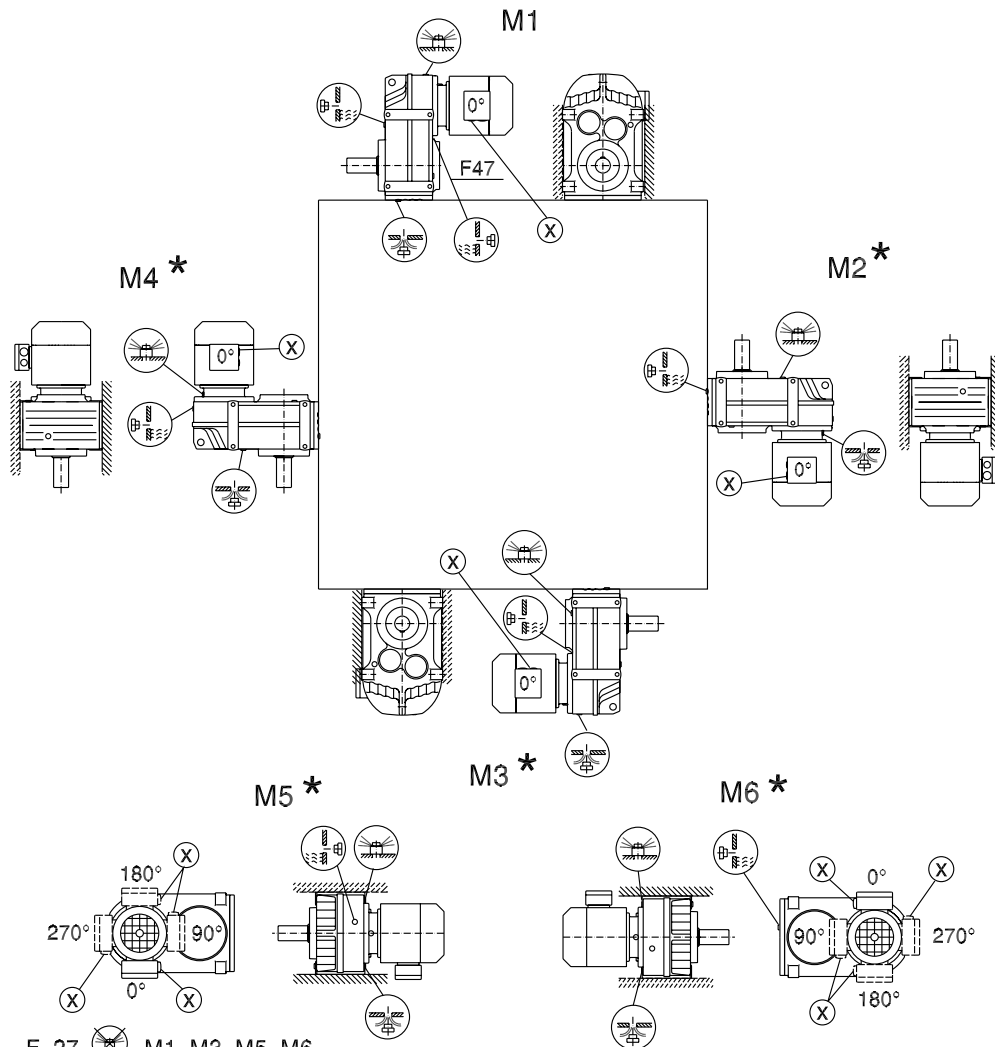
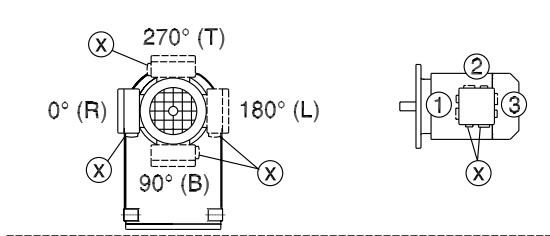
* → page 155

Important: See the information in the section "Project Planning for Gear Units/Overhung and axial loads" (page 51).

9.5 Parallel shaft helical gearmotors

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

42 042 03 00



F..27 M1, M3, M5, M6

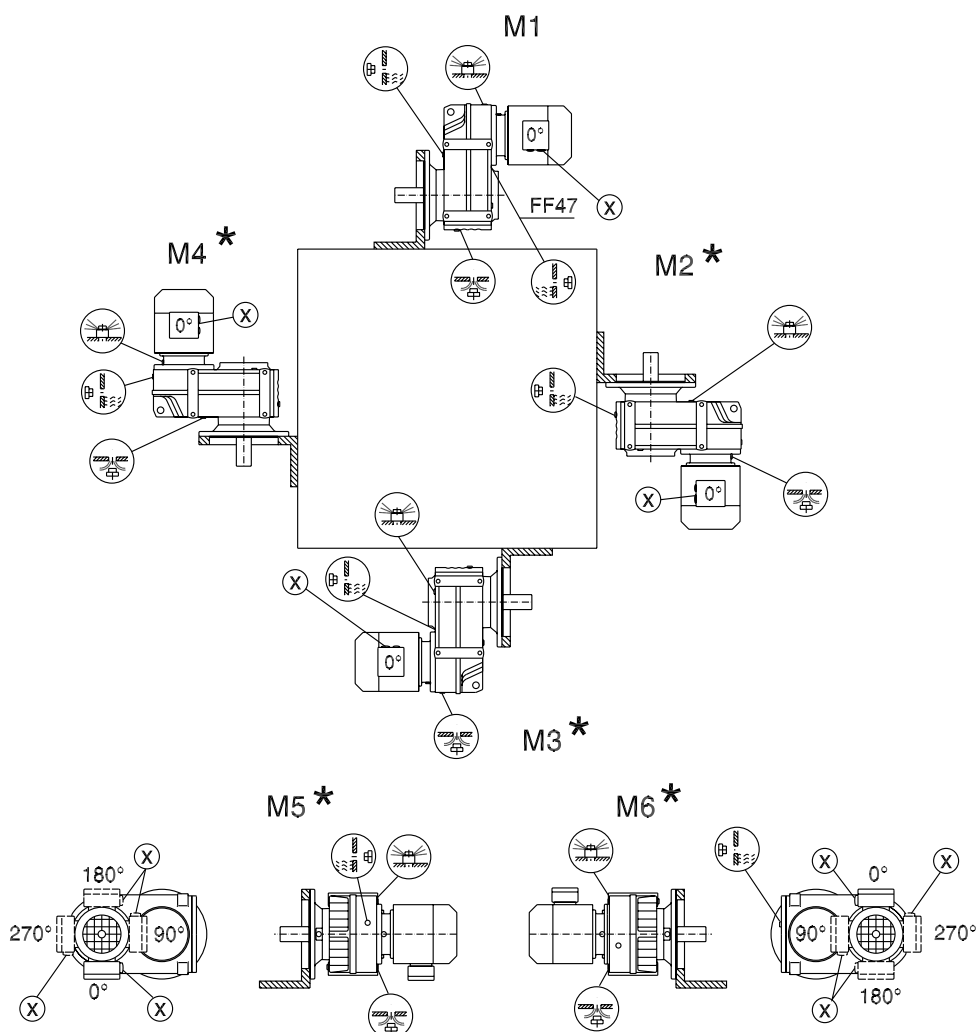
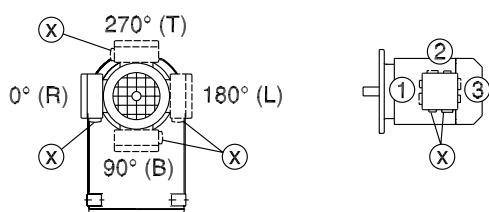
F..27 M1 - M6

F..27 M1, M3, M5, M6

* → page 155

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

42 043 03 00

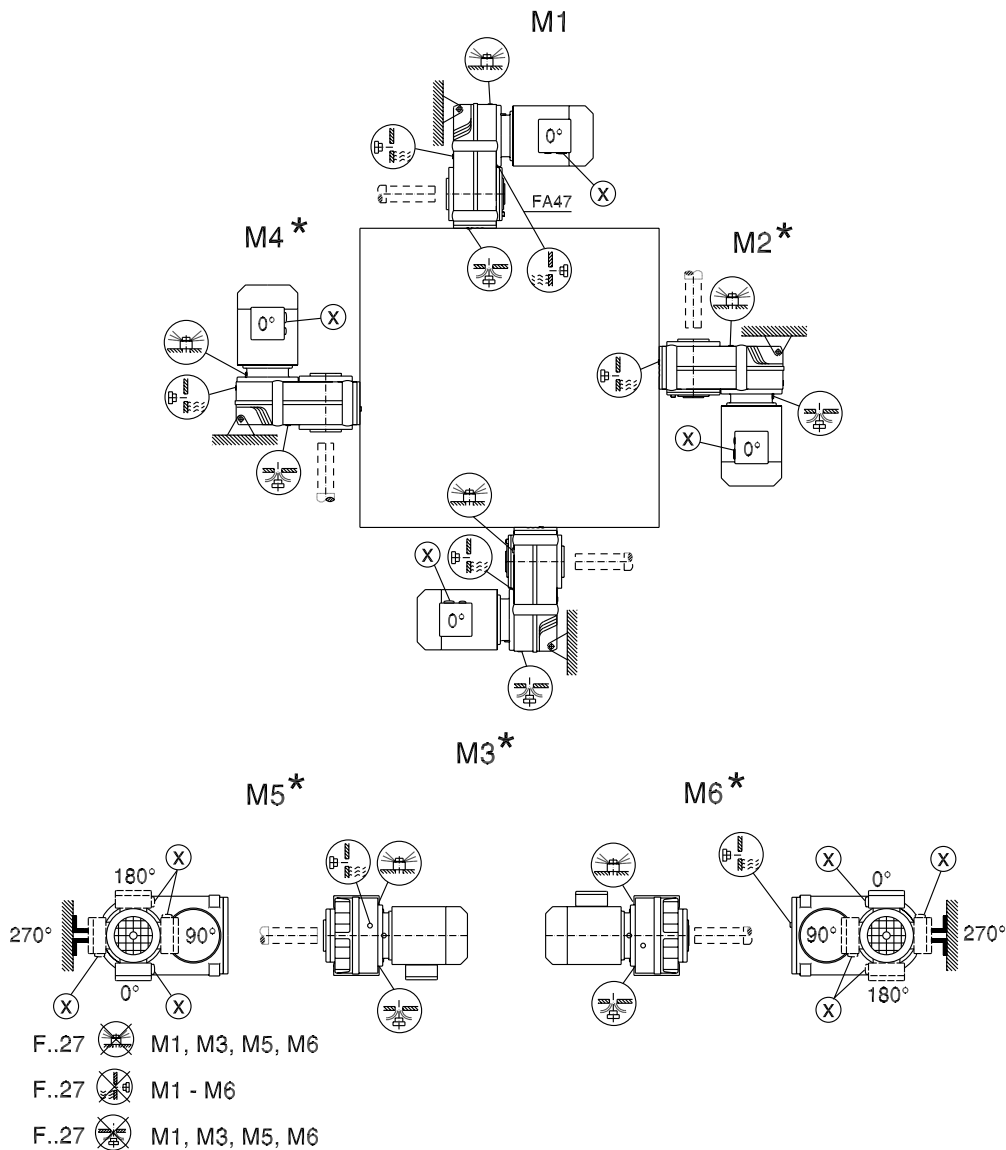
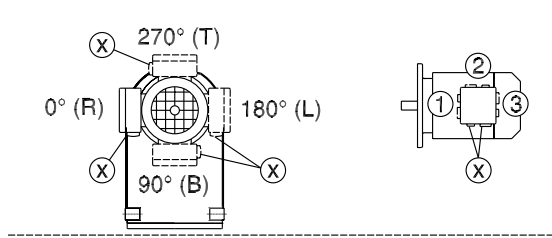


- F..27  M1, M3, M5, M6
- F..27  M1 - M6
- F..27  M1, M3, M5, M6

* → page 155

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

42 044 03 00

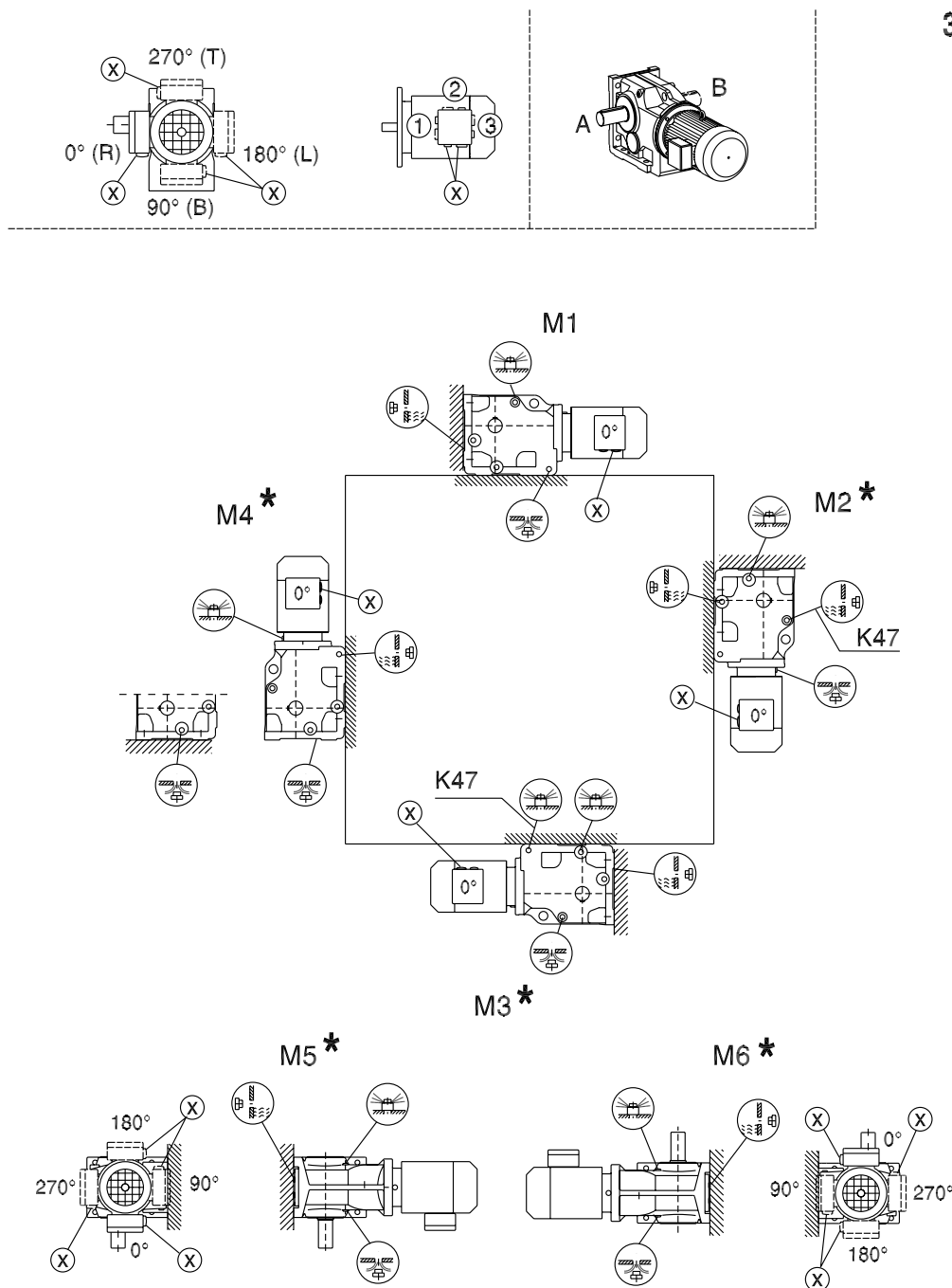


* → page 155

9.6 Mounting positions of helical-bevel gearmotors

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

34 025 03 00

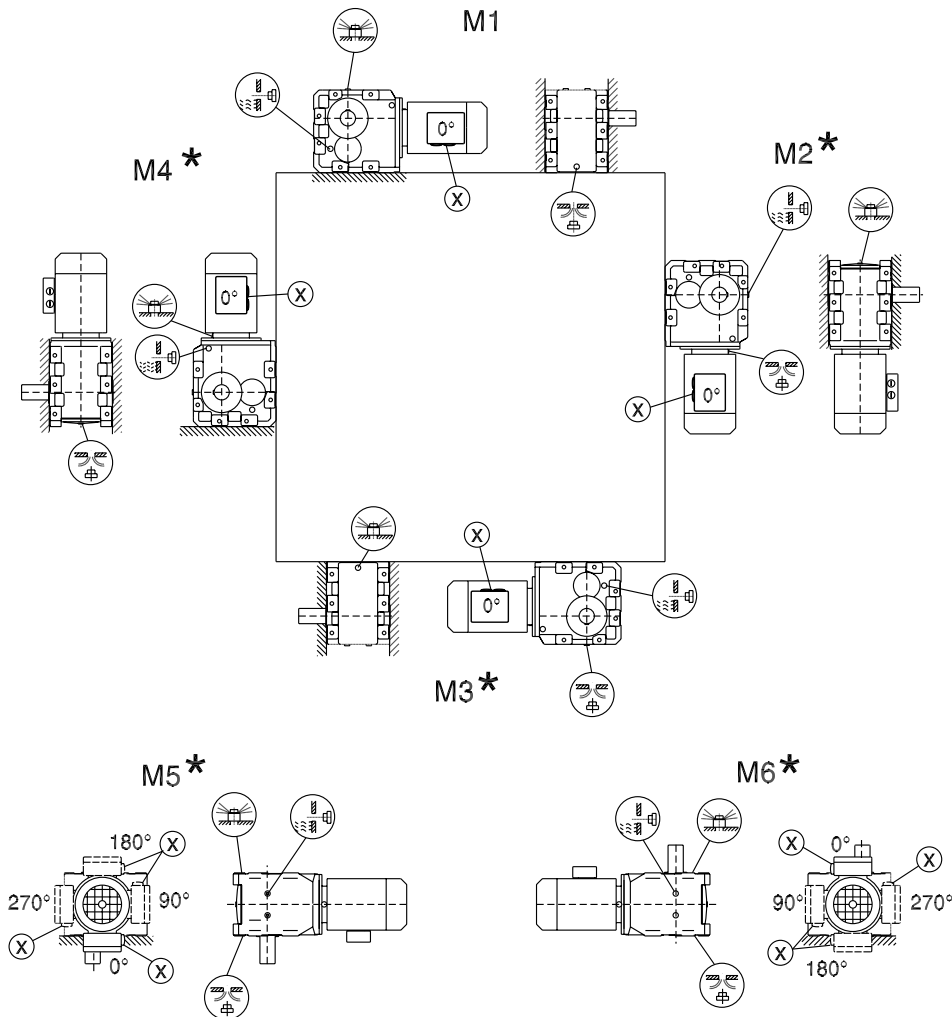
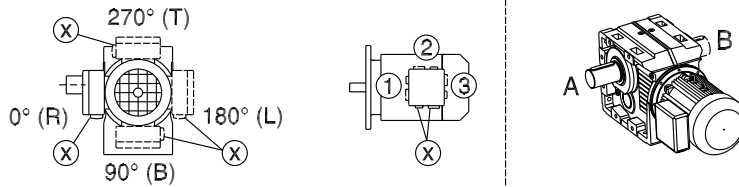


* → page 155

Important: See the  information in the section "Project Planning for Gear Units/Overhung and axial loads" (page 51).

K167-187, KH167B-187B

34 026 03 00

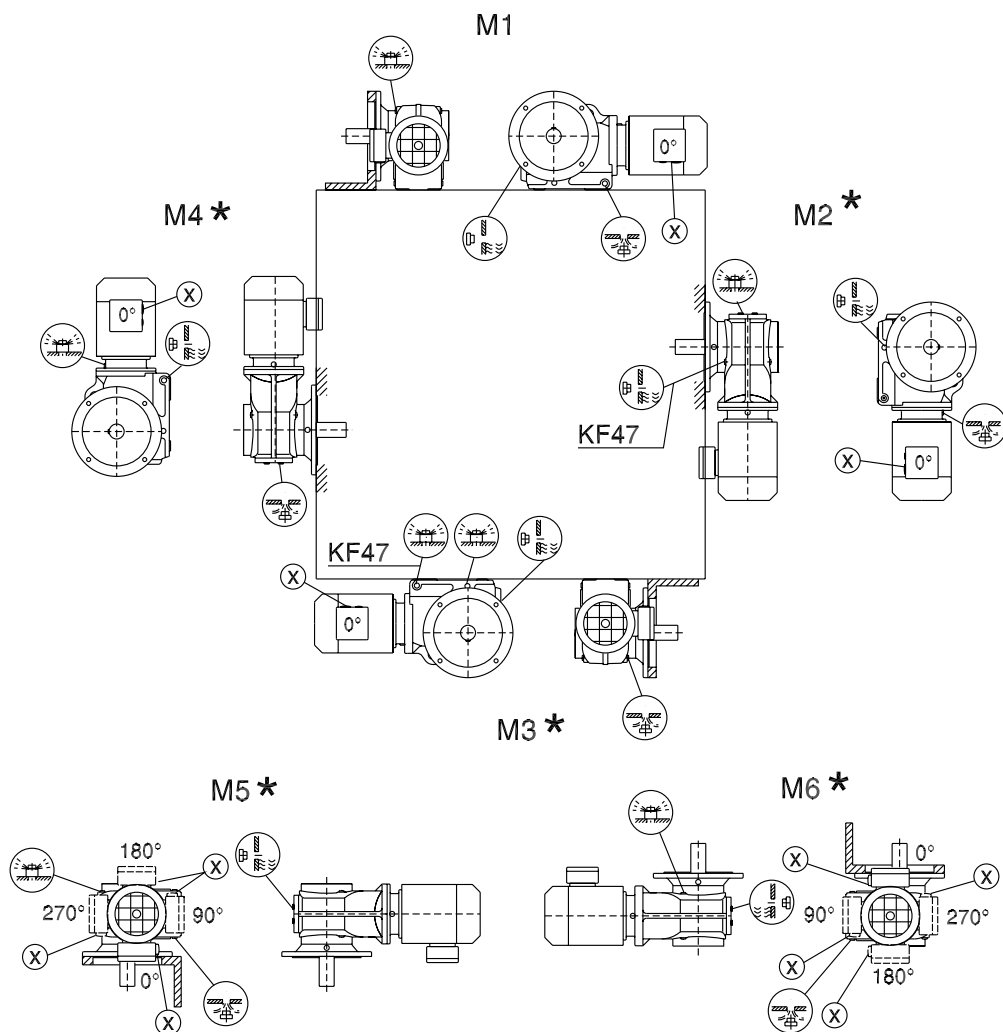
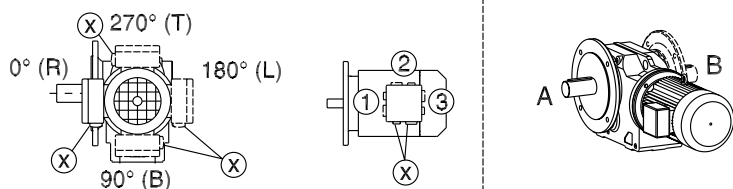


* → page 155

Important: See the  information in the section "Project Planning for Gear Units/Overhung and axial loads" (page 51).

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

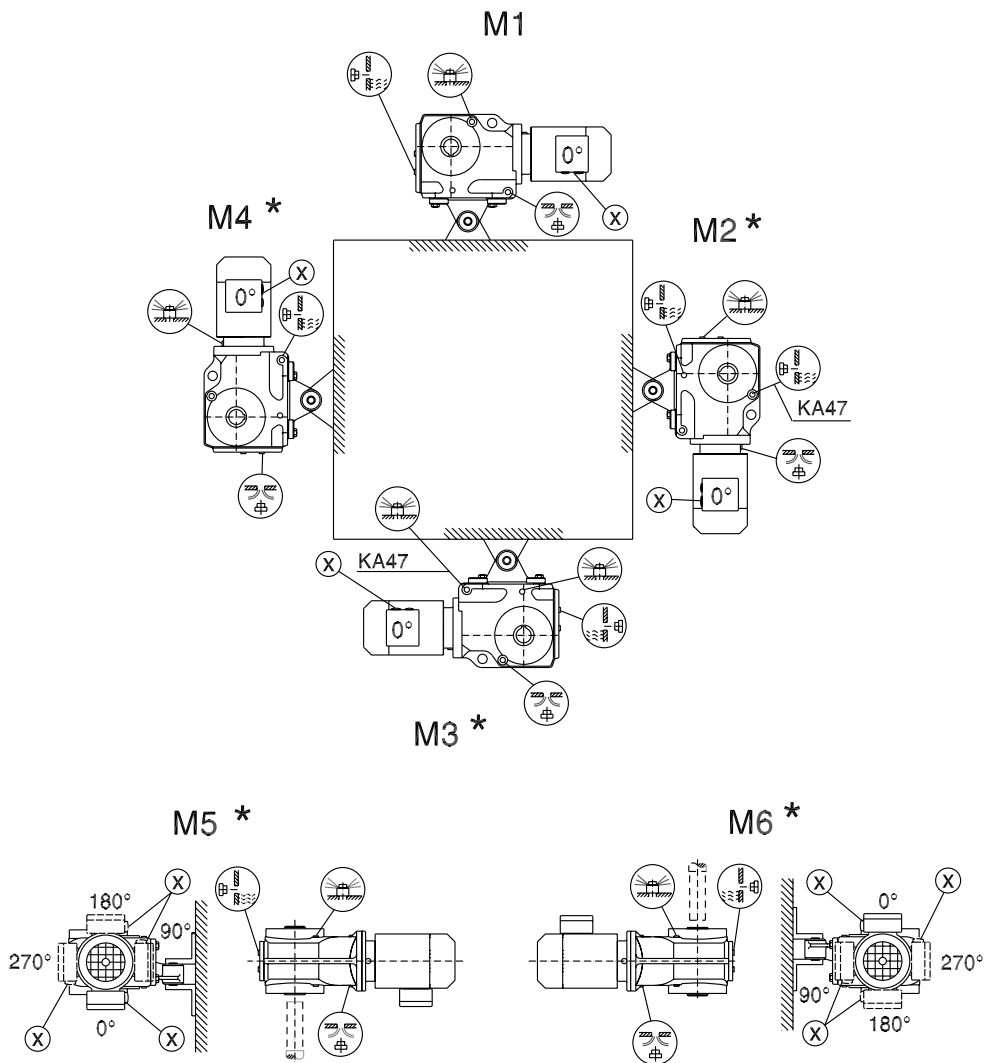
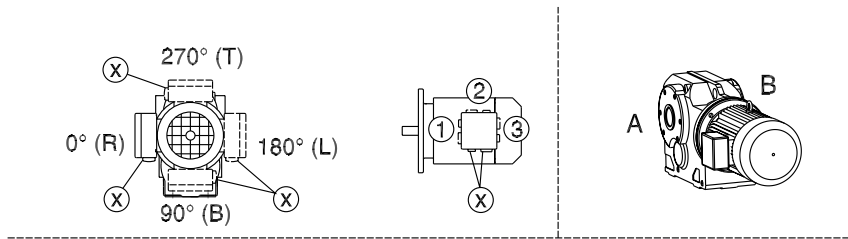
34 027 03 00



* → page 155

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

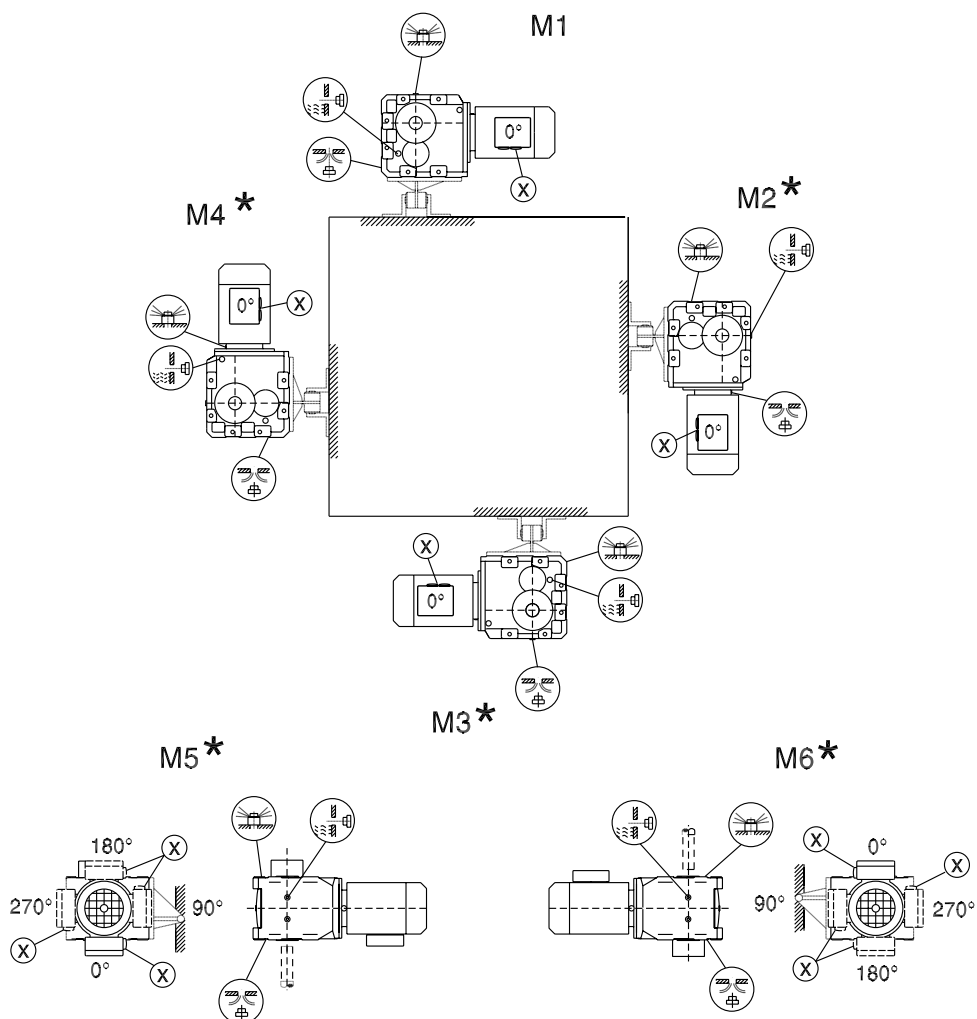
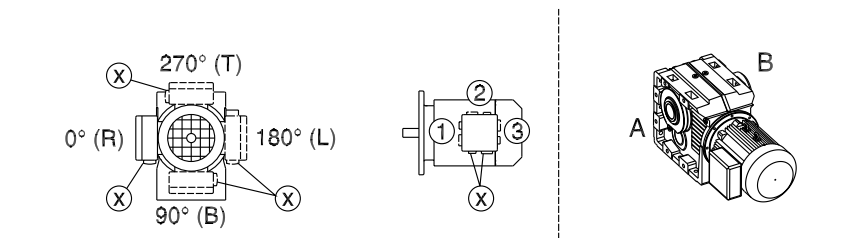
39 025 04 00



* → page 155

KH167-187

39 026 04 00

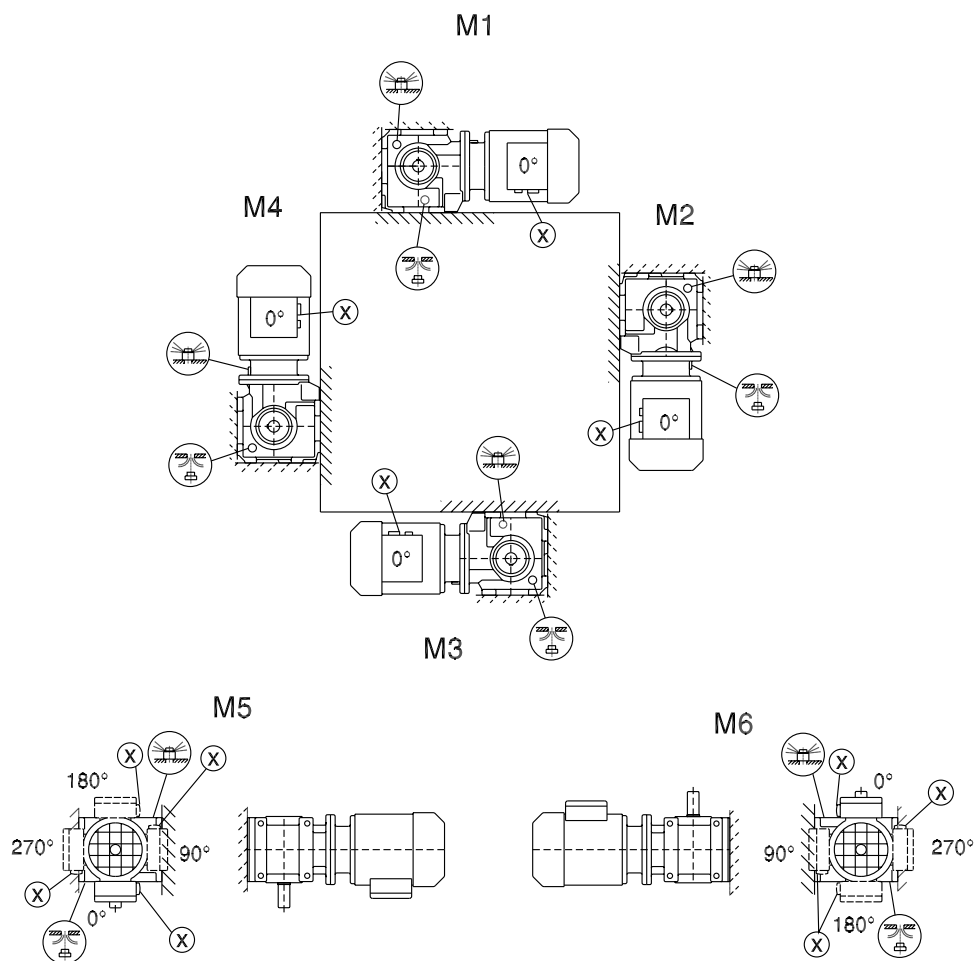
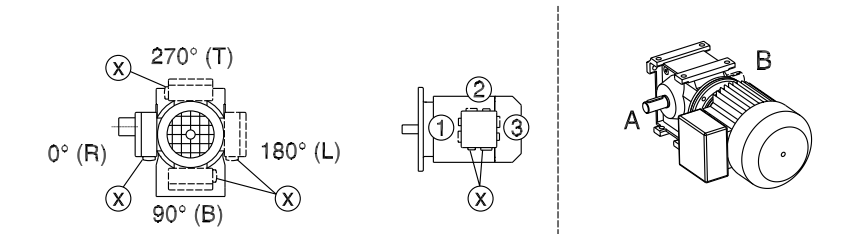


* → page 155

9.7 Mounting positions of helical-worm gearmotors

S37

05 025 03 00

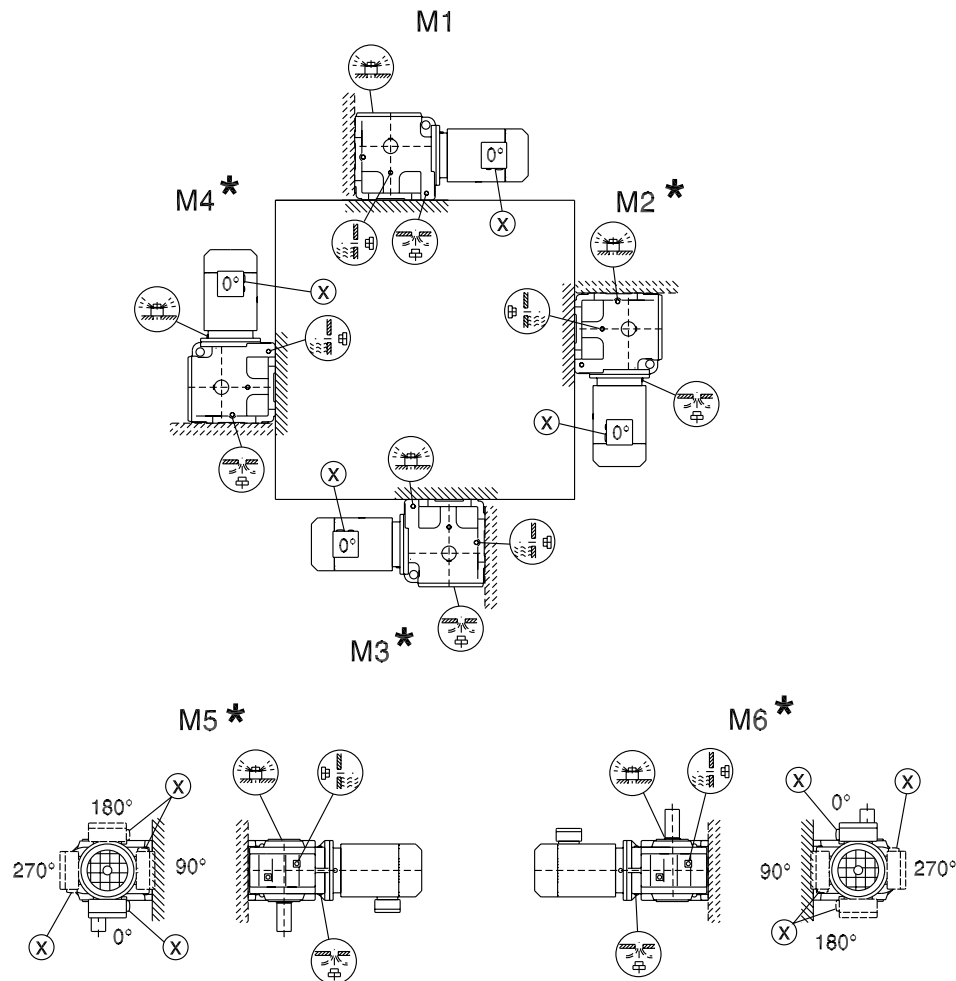
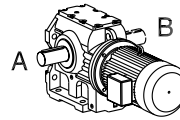
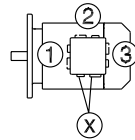
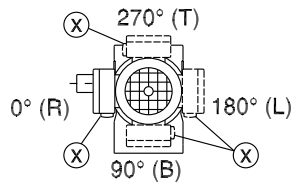


* → page 155

Important: See the  information in the section "Project Planning for Gear Units/Overhung and axial loads" (page 51).

S47 - S97

05 026 03 00

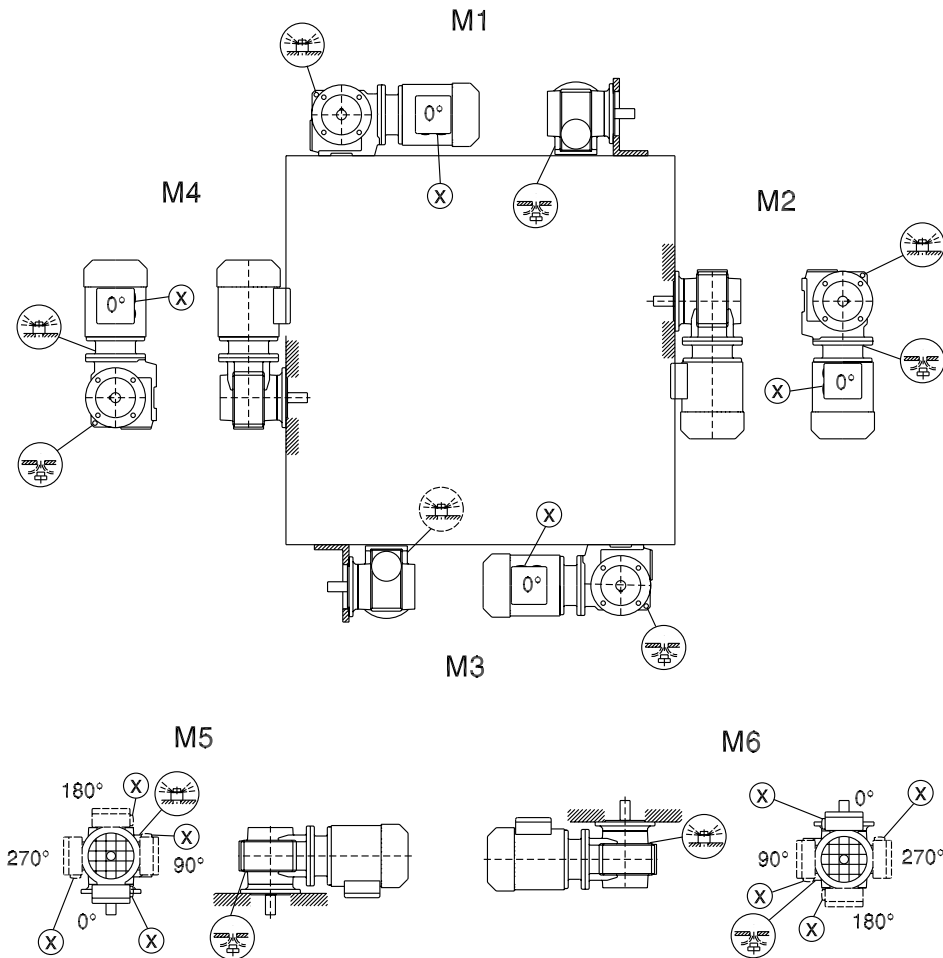
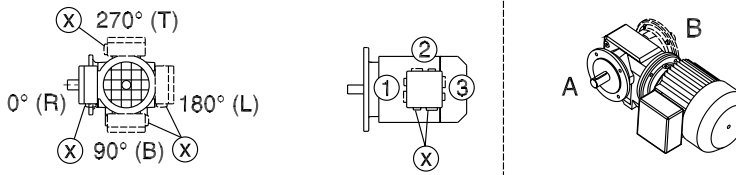


* → page 155

Important: See the  information in the section "Project Planning for Gear Units/Overhung and axial loads" (page 51).

SF/SAF/SHF37

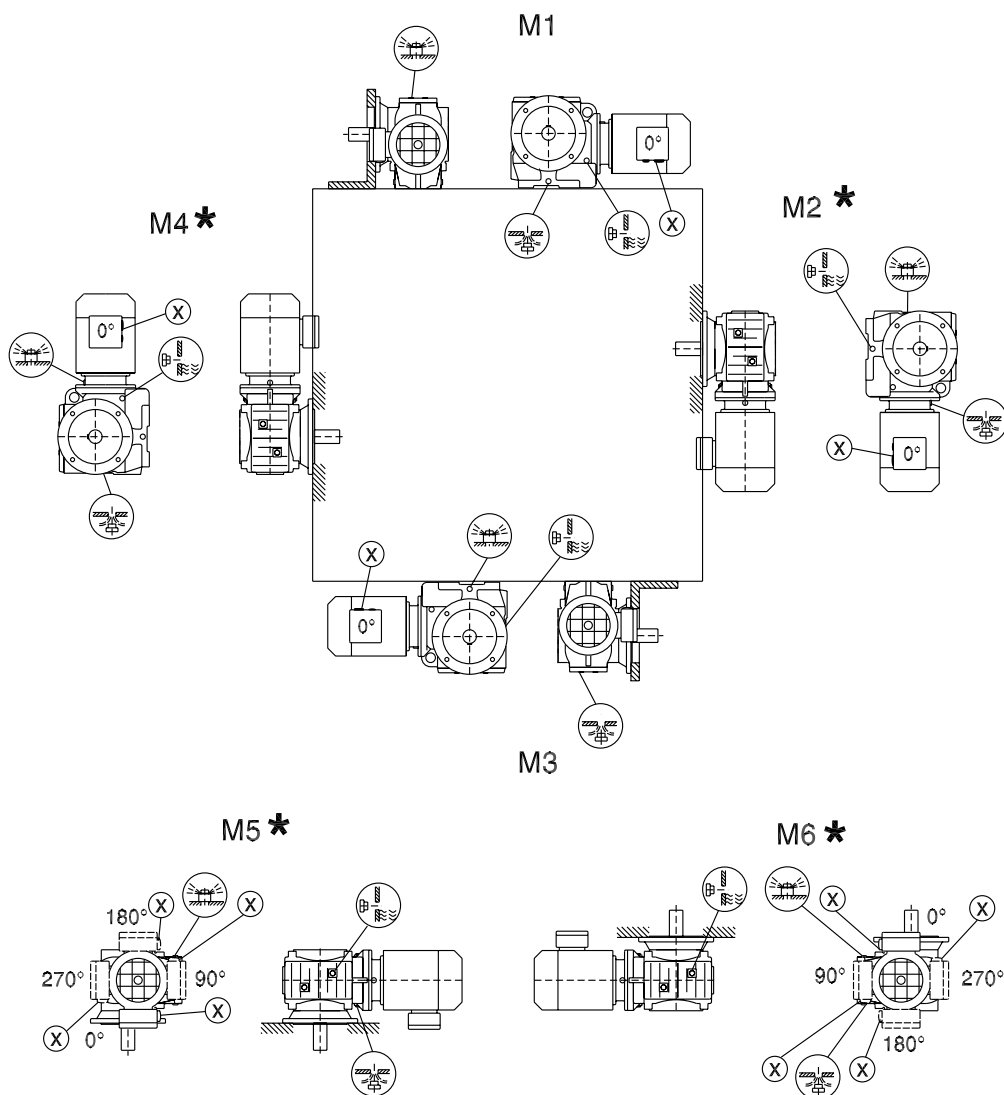
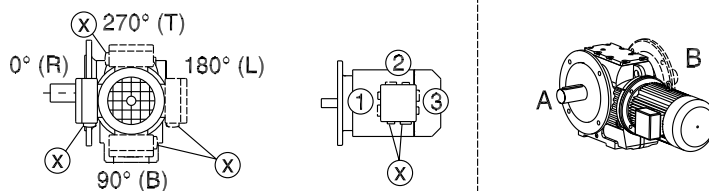
05 027 03 00



* → page 155

SF/SAF/SHF/SAZ/SHZ47-97

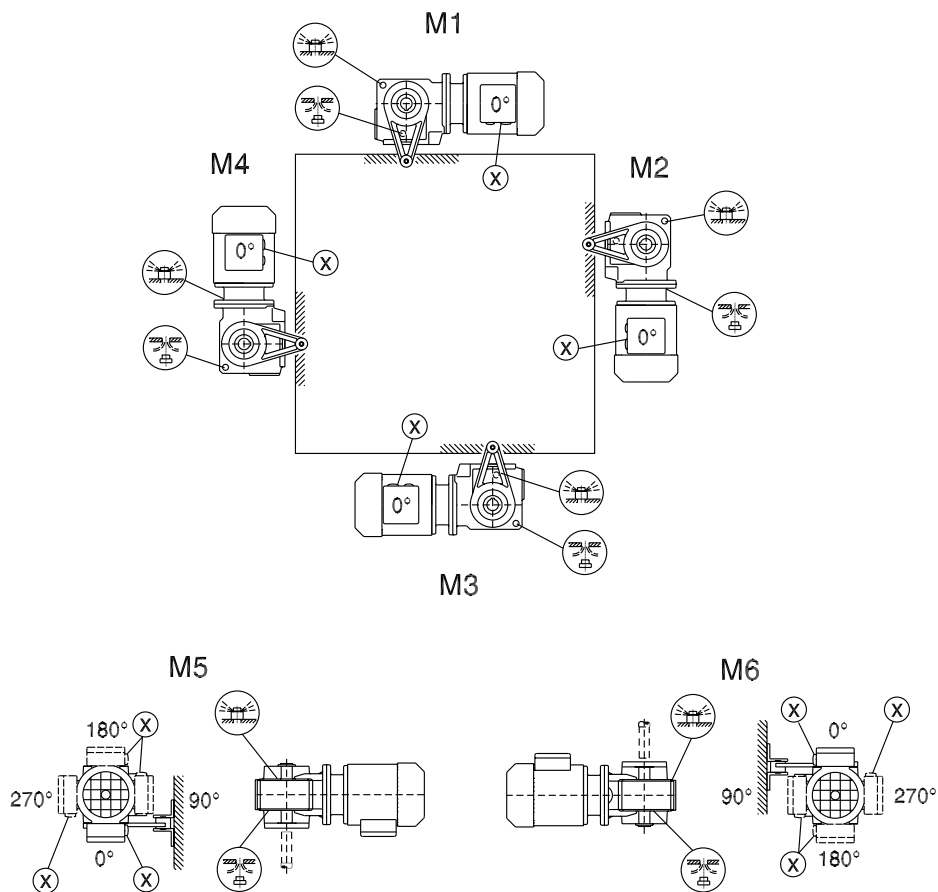
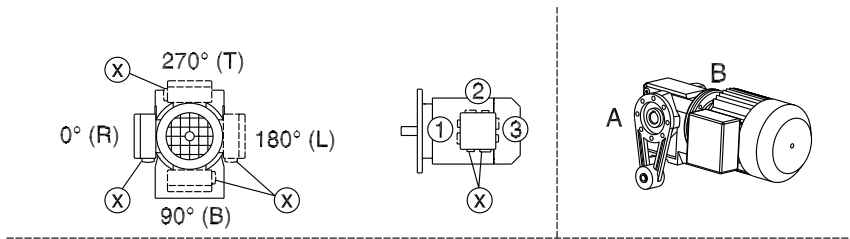
05 028 03 00



* → page 155

SA/SH/ST37

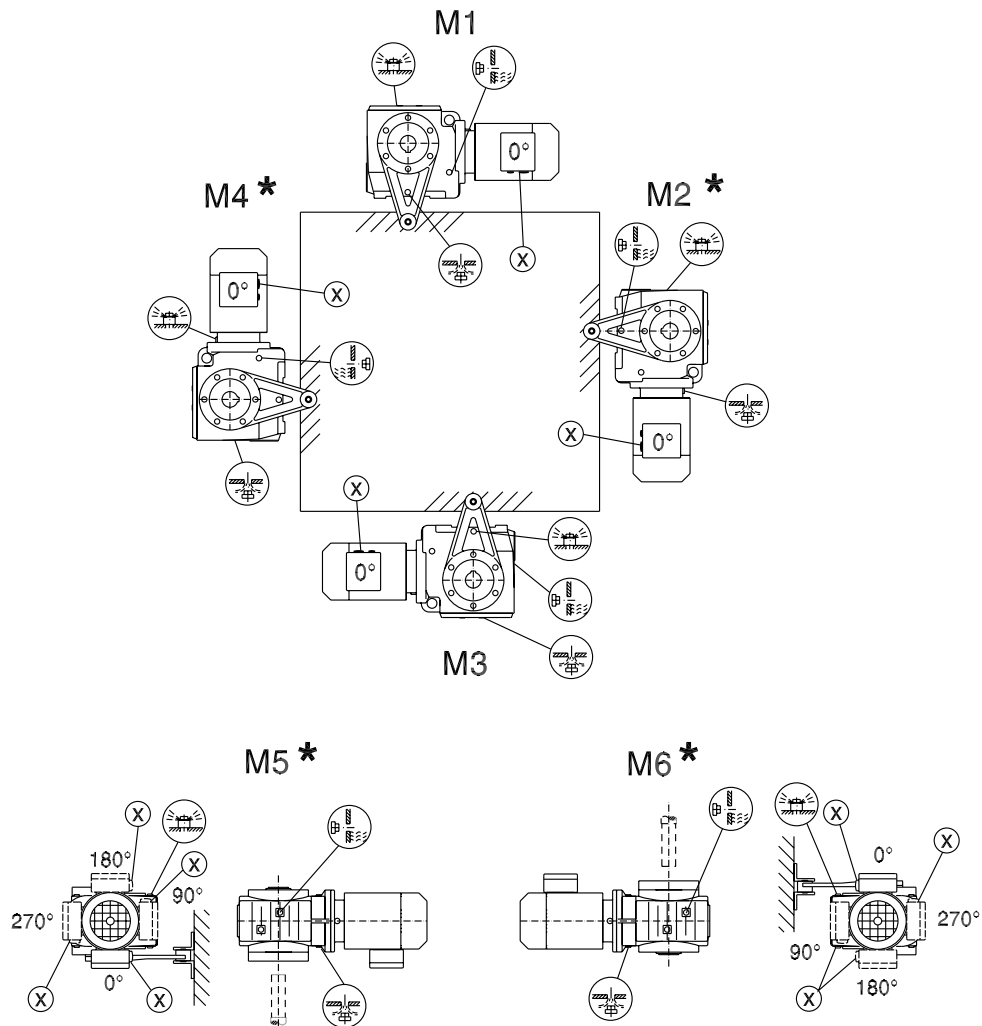
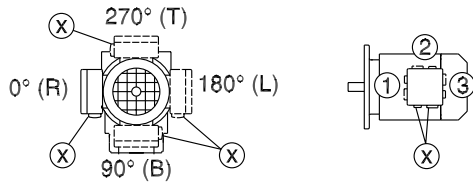
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* → page 155

SA/SH/ST47-97

28 021 03 00

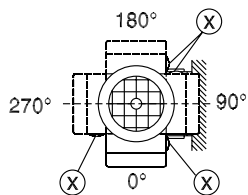
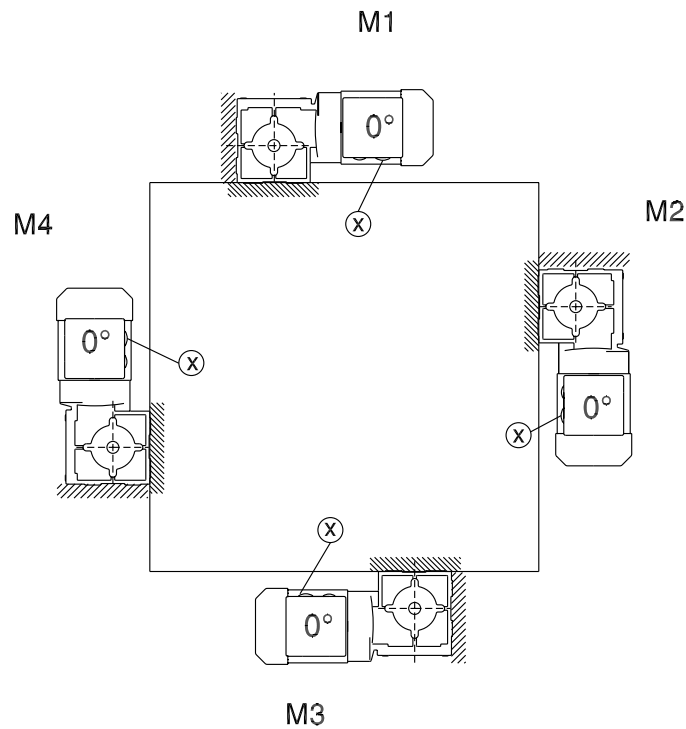
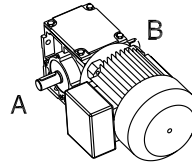
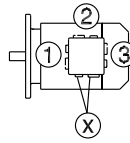
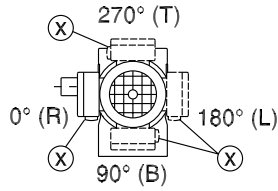


* → page 155

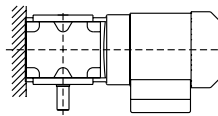
9.8 Mounting positions of Spiroplan® gearmotors

W10-30

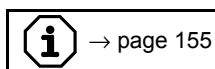
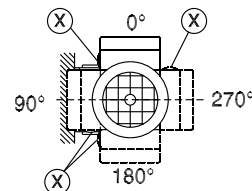
20 001 01 02



M5

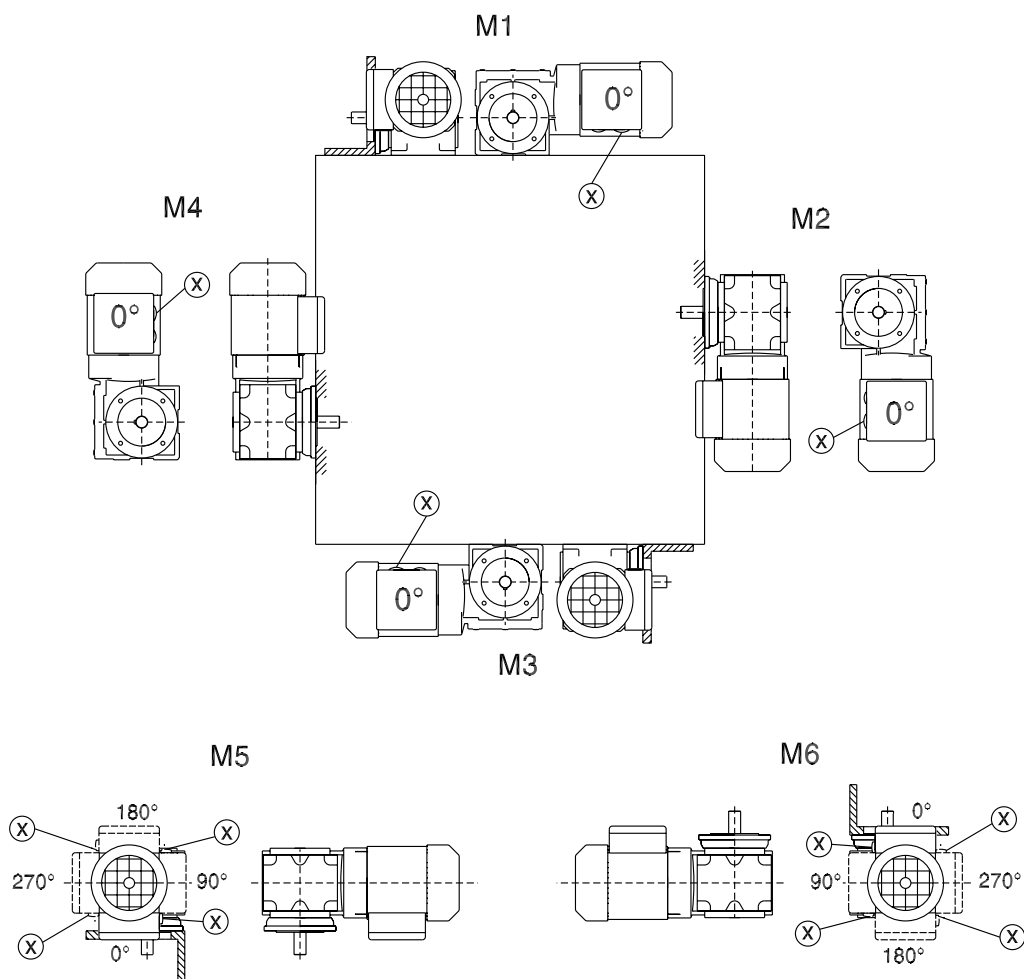
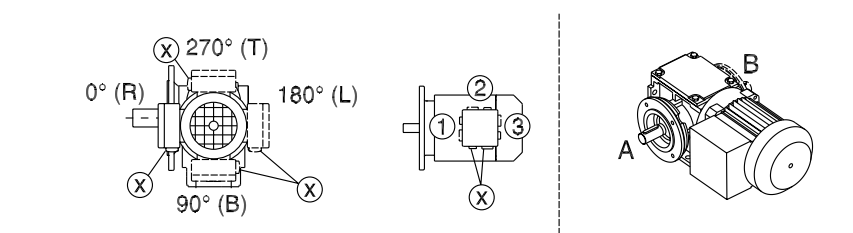


M6



WF10-30

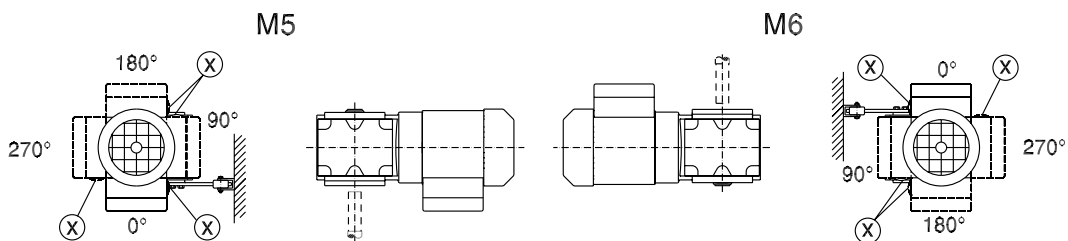
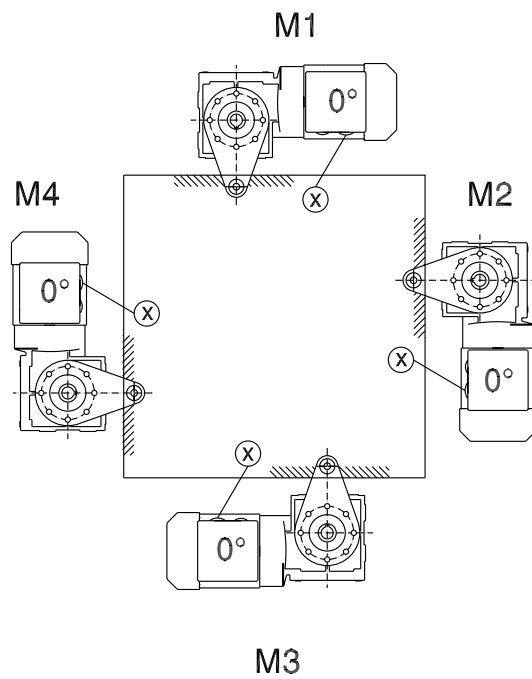
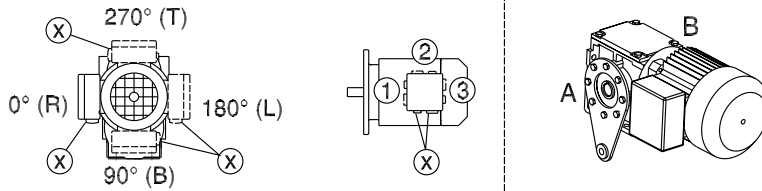
20 002 01 02



i → page 155

WA10-30

20 003 02 02



i → page 155

9.9 Mounting position designations AC motor

**Position of motor
terminal box and
cable entry**

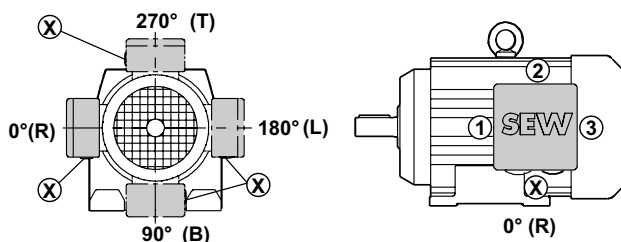


Figure 88: Position of terminal box and cable entry

51302AUS

**Mounting
positions**

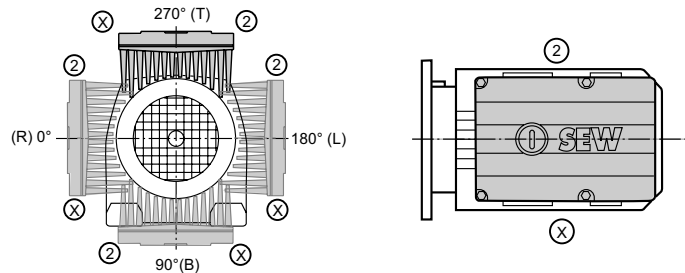
B3 	B6 	B7
B8 	V5 	V6
B5 B35 	V1 V15 	V3 V36
B65 	B75 	B85

Figure 89: Mounting positions of AC motors

04375AXX

9.10 Mounting position designation MOVIMOT® drives

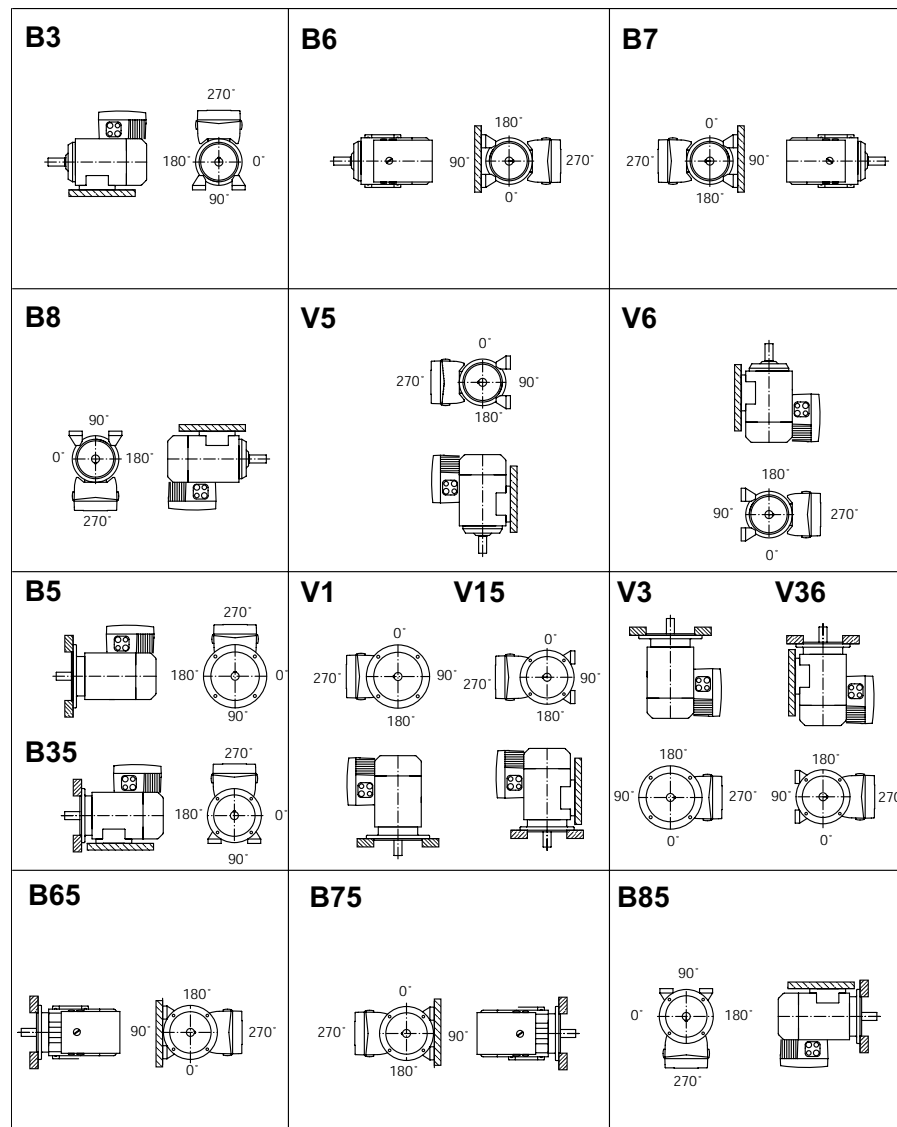
Position of
terminal box and
cable entry



59151AXX

Figure 90: Position of terminal box and cable entry

Mounting
positions



04375AXX

Figure 91: Mounting positions of MOVIMOT® drives

9.11 Position terminal box and cable entry (MOVIMOT® drives)

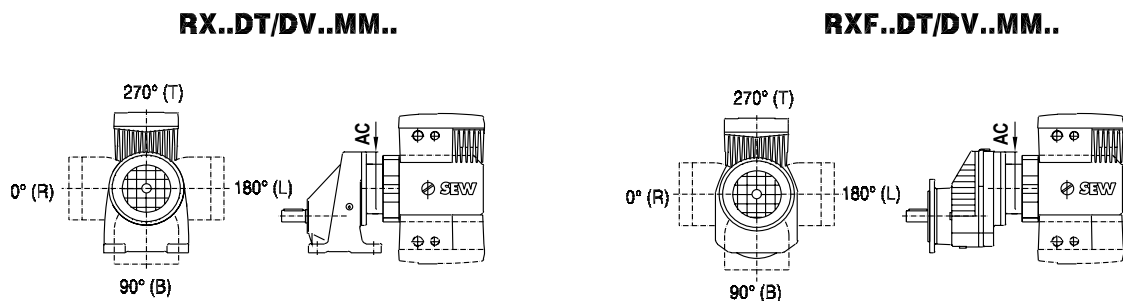


Figure 92: Possible terminal box positions RX..D..MM..

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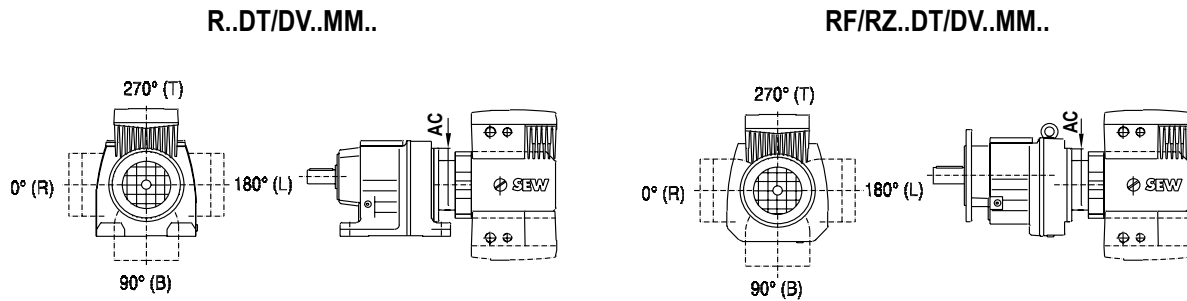
Gear unit	Motor	AC	0°	90°	180°	270° ¹⁾	Gear unit	Motor	AC	0°	90°	180°	270° ¹⁾
RX57	DT71D MM..	Ø 6.30in		2)			RXF57	DT71D MM..	Ø 6.30in				
	DT80..MM..			2)				DT80..MM..					
	DT90..MM..			2)				DT90..MM..					
	DV100..MM..			2)				DV100..MM..					
RX67	DT71D MM..	Ø 6.30in		2)			RXF67	DT71D MM..	Ø 6.30in				
	DT80..MM..			2)				DT80..MM..					
	DT90..MM..			2)				DT90..MM..					
	DV100..MM..			2)				DV100..MM..					
RX77	DT80..MM..	Ø 7.87in		2)			RXF77	DT80..MM..	Ø 7.87in				
	DT90..MM..			2)				DT90..MM..					
	DV100..MM..			2)				DV100..MM..					
RX87	DT80..MM..	Ø 9.84in		2)			RXF87	DT80..MM..	Ø 9.84in				
	DT90..MM1..			2)				DT90..MM1..					
	DV100..MM..			2)				DV100..MM..					
RX97	DT80..MM..	Ø 11.81in					RXF97	DT80..MM..	Ø 11.81in				
	DT90..MM1..							DT90..MM1..					
	DV100..MM..							DV100..MM..					
RX107	DV100..MM..	Ø 13.78in					RXF107	DV100..MM..	Ø 13.78in				

1) Standard position

2) Gear unit must be mounted on a base

Possible terminal box position

When using plug connectors/MOVIMOT® options, the number of possible positions can be even more limited. Please contact SEW-EURODRIVE.



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Figure 93: Possible terminal box positions R..D..MM..

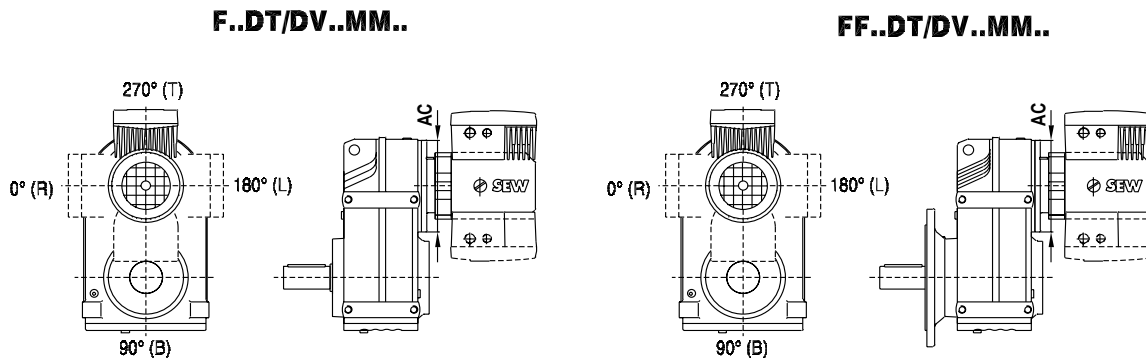
Gear unit	Motor	AC	0°	90°	180°	270° ¹⁾	Gear unit	Motor	AC	0°	90°	180°	270° ¹⁾
R07	DT71D MM..	Ø 9.31in	2)	2)	2)	2)	RF/RZ07	DT71D MM..	Ø 9.31in				
R17	DT71D MM..	Ø 9.31in		2)			RF/RZ17	DT71D MM..	Ø 9.31in				
	DT80..MM..			2)				DT80..MM..					
R27	DT71D MM..	Ø 4.72in		2)			RF/RZ27	DT71D MM..	Ø 4.72in				
	DT80..MM..			2)				DT80..MM..					
	DT90..MM..		2)	2)	2)	2)		DT90..MM..					
	DV100..MM..		2)	2)	2)	2)		DV100..MM..					
R37	DT71D MM..	Ø 4.72in		2)			RF/RZ37	DT71D MM..	Ø 4.72in				
	DT80..MM..			2)				DT80..MM..					
	DT90..MM..		2)	2)	2)	2)		DT90..MM..					
	DV100..MM..		2)	2)	2)	2)		DV100..MM..					
R47	DT71D MM..	Ø 6.30in		2)			RF/RZ47	DT71D MM..	Ø 6.30in				
	DT80..MM..			2)				DT80..MM..					
	DT90..MM..			2)				DT90..MM..					
	DV100..MM..			2)				DV100..MM..					
R57	DT71D MM..	Ø 6.30in		2)			RF/RZ57	DT71D MM..	Ø 6.30in				
	DT80..MM..			2)				DT80..MM..					
	DT90..MM..			2)				DT90..MM..					
	DV100..MM..			2)				DV100..MM..					
R67	DT71D MM..	Ø 6.30in		2)			RF/RZ67	DT71D MM..	Ø 6.30in				
	DT80..MM..			2)				DT80..MM..					
	DT90..MM..			2)				DT90..MM..					
	DV100..MM..			2)				DV100..MM..					
R77	DT80..MM..	Ø 7.87in		2)			RF/RZ77	DT80..MM..	Ø 7.87in				
	DT90..MM1..			2)				DT90..MM1..					
	DT90L MM22							DT90L MM22					
	DV100..MM..			2)				DV100..MM..					
R87	DT80..MM..	Ø 9.84in		2)			RF/RZ87	DT80..MM..	Ø 9.84in				
	DT90..MM1..			2)				DT90..MM1..					
	DV100..MM..							DV100..MM..					
R97	DT80..MM..	Ø 11.81in					RF97	DT80..MM..	Ø 11.81in				
	DT90..MM1..							DT90..MM1..					
	DV100..MM..							DV100..MM..					
R107	DV100..MM..	Ø 13.78in					RF107	DV100..MM..	Ø 13.78in				

1) Standard position

2) Gear unit must be mounted on a base

Possible terminal box position

When using plug connectors/MOVIMOT® options, the number of possible positions can be even more limited. Please contact SEW-EURODRIVE.



00007102

Figure 94: Possible terminal box positions F..D..MM..

Gear unit	Motor	AC	0°	90°	180°	270° ¹⁾	Gear unit	Motor	AC	0°	90°	180°	270° ¹⁾
F27	DT71D MM..	Ø 4.72in	2)		2)		FF27	DT71D MM..	Ø 4.72in				
	DT80..MM..		2)		2)			DT80..MM..					
	DT90..MM..		2)	2)	2)	2)		DT90..MM..					
F37	DT71D MM..	Ø 4.72in	2)		2)		FF37	DT71D MM..	Ø 4.72in				
	DT80..MM..		2)		2)			DT80..MM..					
	DT90..MM..		2)		2)			DT90..MM..					
	DV100..MM..		2)		2)			DV100..MM..					
F47	DT71D MM..	Ø 4.72in	2)		2)		FF47	DT71D MM..	Ø 4.72in				
	DT80..MM..		2)		2)			DT80..MM..					
	DT90..MM..		2)		2)			DT90..MM..					
	DV100..MM..		2)		2)			DV100..MM..					
F57	DT71D MM..	Ø 6.30in	2)		2)		FF57	DT71D MM..	Ø 6.30in				
	DT80..MM..		2)		2)			DT80..MM..					
	DT90..MM..		2)		2)			DT90..MM..					
	DV100..MM..		2)		2)			DV100..MM..					
F67	DT71D MM..	Ø 6.30in	2)		2)		FF67	DT71D MM..	Ø 6.30in				
	DT80..MM..		2)		2)			DT80..MM..					
	DT90..MM..		2)		2)			DT90..MM..					
	DV100..MM..		2)		2)			DV100..MM..					
F77	DT80..MM..	Ø 7.87in	2)		2)		FF77	DT80..MM..	Ø 7.87in				
	DT90..MM..		2)		2)			DT90..MM..					
	DV100..MM..		2)		2)			DV100..MM..					
F87	DT80..MM..	Ø 9.84in					FF87	DT80..MM..	Ø 9.84in				
	DT90..MM1..		2)		2)			DT90..MM1..					
	DV100..MM..		2)		2)			DV100..MM..					
F97	DT90..MM1..	Ø 11.81in					FF97	DT90..MM1..	Ø 11.81in				
	DV100..MM..							DV100..MM..					
F107	DV100..MM..	Ø 13.78in					FF107	DV100..MM..	Ø 13.78in				

1) Standard position

2) The gear unit must be mounted on a base if the inverter is on the foot-mounting end

Possible terminal box position

When using plug connectors/MOVIMOT® options, the number of possible positions can be even more limited. Please contact SEW-EURODRIVE.

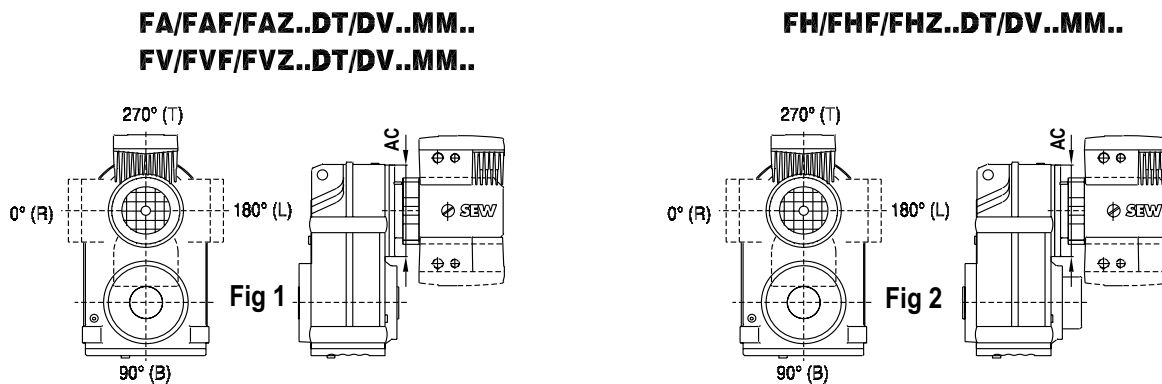


Figure 95: Possible terminal box positions F..D..MM..

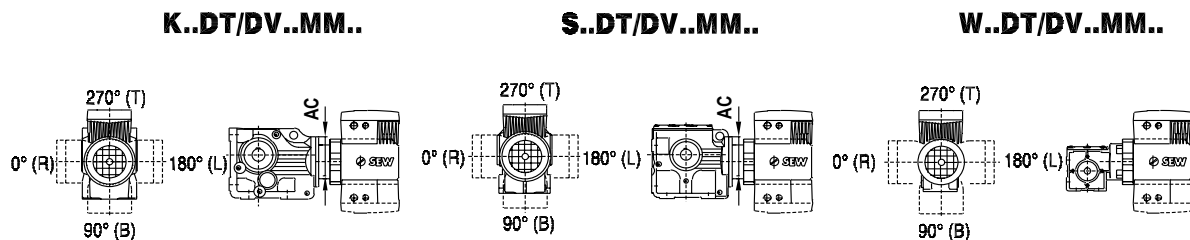
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Gear unit	Motor	Fig	AC	0°	90°	180°	270° ¹⁾	Gear unit	Motor	Fig	AC	0°	90°	180°	270° ¹⁾
F..27	DT71D MM.. DT80..MM.. DT90..MM..	1	Ø 4.72in					F..27	DT71D MM.. DT80..MM..	2	Ø 4.72in				
F..37	DT71D MM.. DT80..MM.. DT90..MM.. DV100..MM..		Ø 4.72in					F..37	DT71D MM.. DT80..MM.. DT90..MM.. DV100..MM..		Ø 4.72in				
F..47	DT71D MM.. DT80..MM.. DT90..MM.. DV100..MM..		Ø 4.72in					F..47	DT71D MM.. DT80..MM.. DT90..MM.. DV100..MM..		Ø 4.72in				
F..57	DT71D MM.. DT80..MM.. DT90..MM.. DV100..MM..		Ø 6.30in					F..57	DT71D MM.. DT80..MM.. DT90..MM.. DV100..MM..		Ø 6.30in				
F..67	DT71D MM.. DT80..MM.. DT90..MM.. DV100..MM..		Ø 6.30in					F..67	DT71D MM.. DT80..MM.. DT90..MM.. DV100..MM..		Ø 6.30in				
F..77	DT80..MM.. DT90..MM.. DV100..MM..		Ø 7.87in					F..77	DT80..MM.. DT90..MM.. DV100..MM..		Ø 7.87in				
F..87	DT80..MM.. DT90..MM1.. DV100..MM..		Ø 9.84in					F..87	DT80..MM.. DT90..MM1.. DV100..MM..		Ø 9.84in				
F..97	DT90..MM1.. DV100..MM..		Ø 11.81in					F..97	DT90..MM1.. DV100..MM..		Ø 11.81in				
F..107	DV100..MM..		Ø 13.78in					F..107	DV100..MM..		Ø 13.78in				

1) Standard position

Possible terminal box position

When using plug connectors/MOVIMOT® options, the number of possible positions can be even more limited. Please contact SEW-EURODRIVE.



00009102

Figure 96: Possible terminal box positions K..D..MM.., S..D..MM.., W..D..MM..

Gear unit	Motor	AC	0°	90°	180°	270° ¹⁾	Gear unit	Motor	AC	0°	90°	180°	270° ¹⁾
K37	DT71D MM..	Ø 4.72in		2)			S37	DT71D MM..	Ø 4.72in		2)		
	DT80..MM..			2)				DT80..MM..			2)		
	DT90..MM..			2)				DT90..MM1..			2)		
	DV100..MM..			2)				DV100..MM..			2)		
K47	DT71D MM..	Ø 6.30in		2)			S47	DT71D MM..	Ø 4.72in		2)		
	DT80..MM..			2)				DT80..MM..			2)		
	DT90..MM..			2)				DT90..MM..			2)		
	DV100..MM..			2)				DV100..MM..			2)		
K57	DT71D MM..	Ø 6.30in		2)			S57	DT71D MM..	Ø 4.72in		2)		
	DT80..MM..			2)				DT80..MM..			2)		
	DT90..MM..			2)				DT90..MM..			2)		
	DV100..MM..			2)				DV100..MM..			2)		
K67	DT71D MM..	Ø 6.30in		2)			S67	DT71D MM..	Ø 6.30in		2)		
	DT80..MM..			2)				DT80..MM..			2)		
	DT90..MM..			2)				DT90..MM..			2)		
	DV100..MM..			2)				DV100..MM..			2)		
K77	DT80..MM..	Ø 7.87in		2)			S77	DT80..MM..	Ø 7.87in		2)		
	DT90..MM..			2)				DT90..MM..			2)		
	DV100..MM..			2)				DV100..MM..			2)		
K87	DT80..MM..	Ø 9.84in		2)			S87	DT80..MM..	Ø 9.84in		2)		
	DT90..MM1..			2)				DT90..MM1..			2)		
	DV100..MM..			2)				DV100..MM..			2)		
K97	DT90..MM1..	Ø 11.81in					S97	DT90..MM1..	Ø 11.81in				
	DV100..MM..							DV100..MM..					
K107	DV100..MM..	Ø 13.78in											

Gear unit	Motor	0°	90°	180°	270° ¹⁾
W20	DT71D MM..		2)		
W30	DT71D MM..		2)		
	DT80..MM..		2)		

1) Standard position

2) Gear unit must be mounted on a base

Possible terminal box position

When using plug connectors/MOVIMOT® options, the number of possible positions can be even more limited. Please contact SEW-EURODRIVE.