5 Mounting Positions of Gear Units

5.1 General information on the mounting positions of R, F, K, S, W gear units

SEW-EURODRIVE distinguishes between the six gear unit mounting positions M1 to M6. The following figure shows the position of the gear unit in mounting positions M1 to M6:

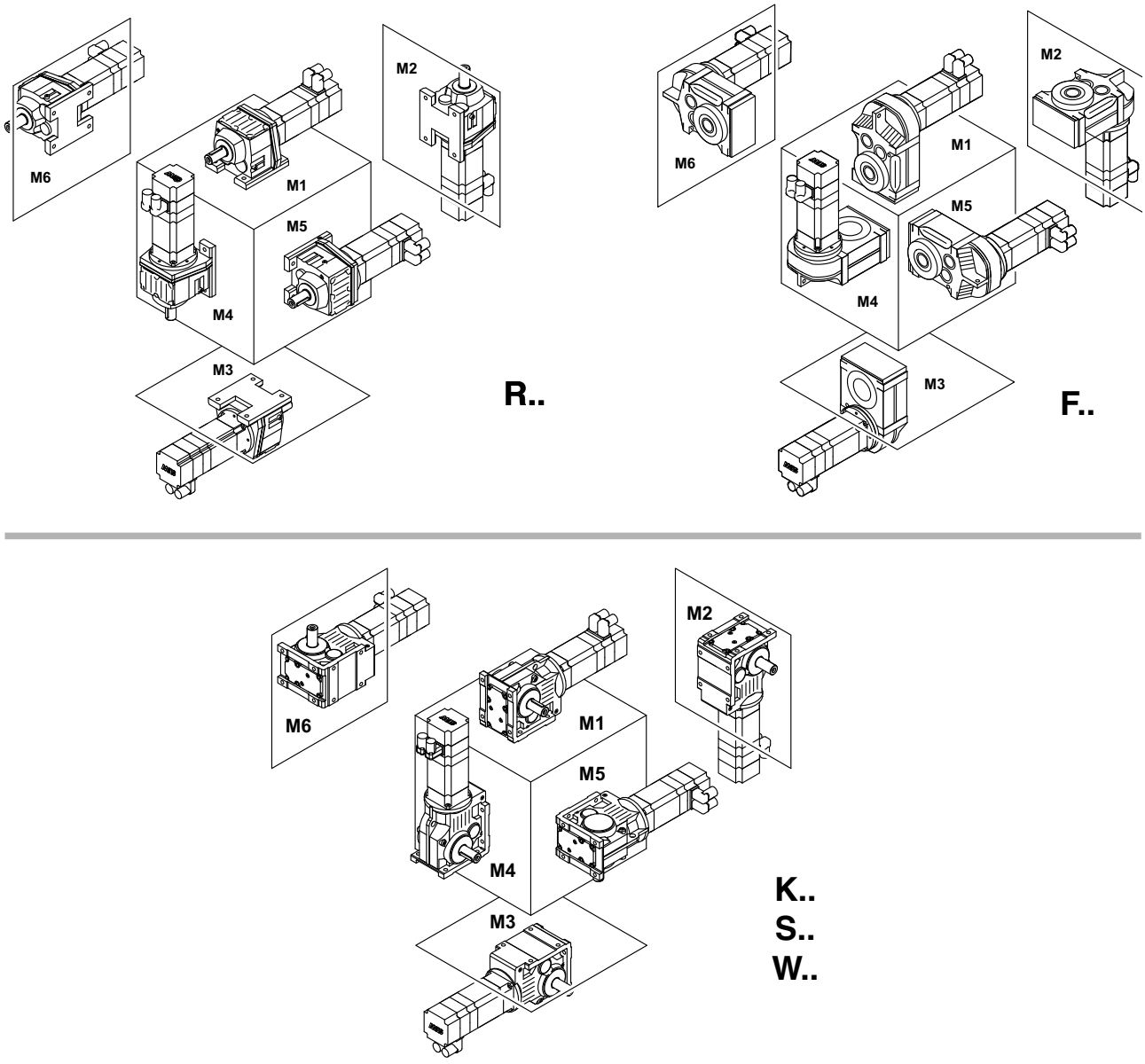
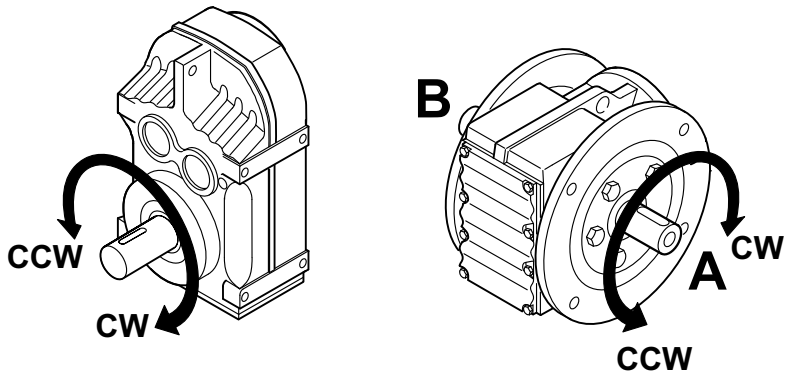


Figure 8: Depiction of mounting positions M1 - M6

5.2 Order information for R, F, K, S, W servo gear units

	INFORMATION
	The following order information is required in addition to the mounting position for R, F, K, S and W gear units to enable the configuration of the drive to be defined exactly.

Direction of rotation of the output shaft



63650AXX

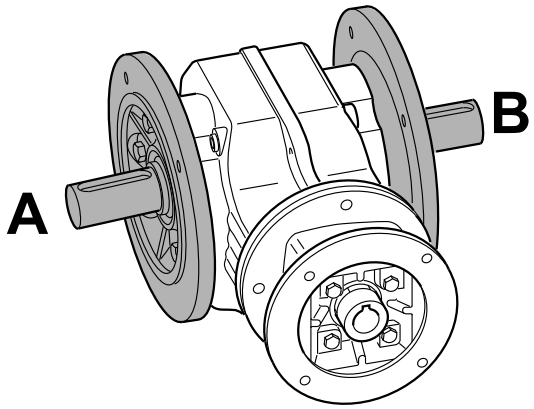
Figure 9: Output direction of rotation

As viewed at the output shaft: Clockwise (CW) = Rotating clockwise
Counterclockwise (CCW)= Rotating counterclockwise

Position of 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



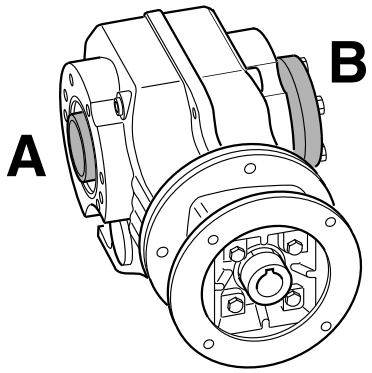
50296AXX

Figure 10: Position of the output shaft and output flange

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 Figure 11 , the A end is the output end. The shrink disk is located opposite the output end, here on the B side.

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



63855axx

Figure 11: Example: Position of the output end

	INFORMATION
	You will find the permitted mounting surfaces (= hatched area) in the mounting position sheets (page 70 and subsequent pages). **Example:** Only the mounting surface at the bottom is possible with helical-bevel gear units K167/K187 in mounting positions M5 and M6.

Changing the 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 gear units: Contact the SEW-EURODRIVE customer service when changing to mounting position M2 or M3.

5.3 General information on the mounting positions of BS.F, PS.F, PS.C gear units

Mounting position deisgnations of BS.F helical-bevel gear units

SEW-EURODRIVE distinguishes between the gear unit mounting positions M1 to M6. The following figure shows the spatial orientation of the gear unit in mounting positions M1 to M6 with the output end A.

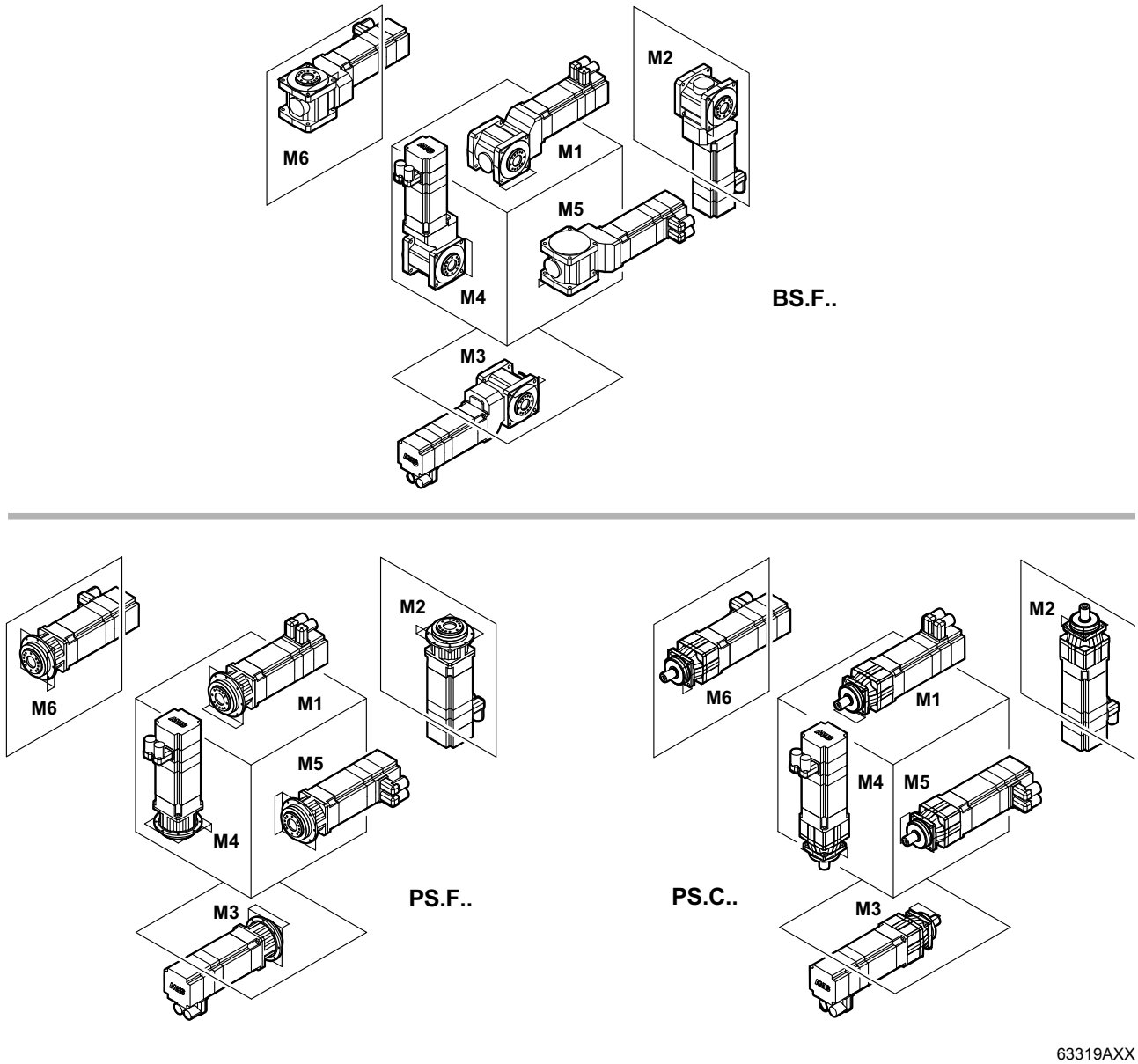


Figure 12: Description of mounting positions

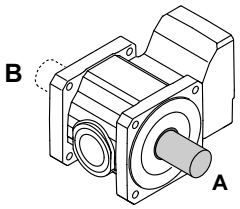
5.4 Order information for BS.F, PS.F, PS.C servo gear units

Definition of A and B ends of output shafts

When installing the gear unit via one of the output flanges, the gear unit must be attached to the shaft output side via the B5 output flange.

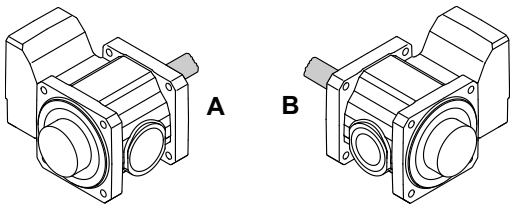
Gear unit type	Position		Mounting
	of the output shaft	of the shrink disk	
BSF.. / BSKF.. / BSBF	A end	-	Mounting via B5 flange on the A end
	B end	-	Mounting via B5 flange on the B end
BSHF..	-	B end	Mounting via B5 flange on the A end
	-	A end	Mounting via B5 flange on the B end
BSHF.. /I	-	A end	Mounting via B5 flange on the A end
	-	B end	Mounting via B5 flange on the B end
BSAF..	A end		Mounting via B5 flange on the A end
	B end		Mounting via B5 flange on the B end
BSF../BSKF..	AB	-	Mounting via B5 flange on the A end and/or B end

For BS.F. gear units, the position of the output shaft A, B or AB must be specified:



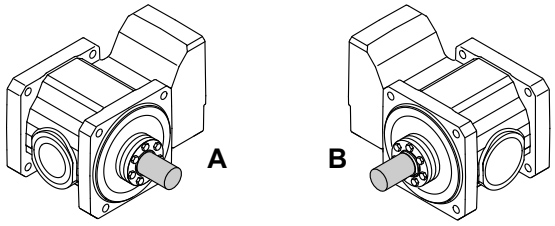
64345AXX

Figure 13: Position of the output shaft of BSF.., BSKF.., BSAF.., BSBF.. helical-bevel gear units



643461AXX

Figure 14: Position of the output shaft and output flange of BSHF.. helical-bevel gear units



64347AXX

Figure 15: Position of the output shaft and output flange of BSHF../I helical-bevel gear units

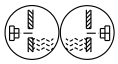
Direction of rotation of the output shaft

For a definition of the output shaft, see page 64.

5.5 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 displayed in the mounting position sheets Note the following information regarding the way in which shafts are depicted 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.

	INFORMATION
	SPRIOPLAN® gear units are not dependant on the mounting position, except for W..37 and W47 in mounting position M4. 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® gear units W..10 to W..30 cannot be equipped with breather valves, oil level plugs or drain plugs. SPIROPLAN® gear units W..37 and W..47 can be equipped with breather valves in mounting position M4 and with oil drain plugs in mounting position M2.

	INFORMATION
	Notes on the displayed motors. Motors are only represented symbolically in the mounting position sheets.

Churning losses

* → Page XX

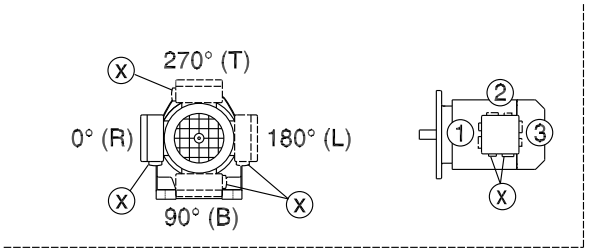
Churning losses may occur in some mounting positions. Contact SEW-EURODRIVE in case of the following combinations:

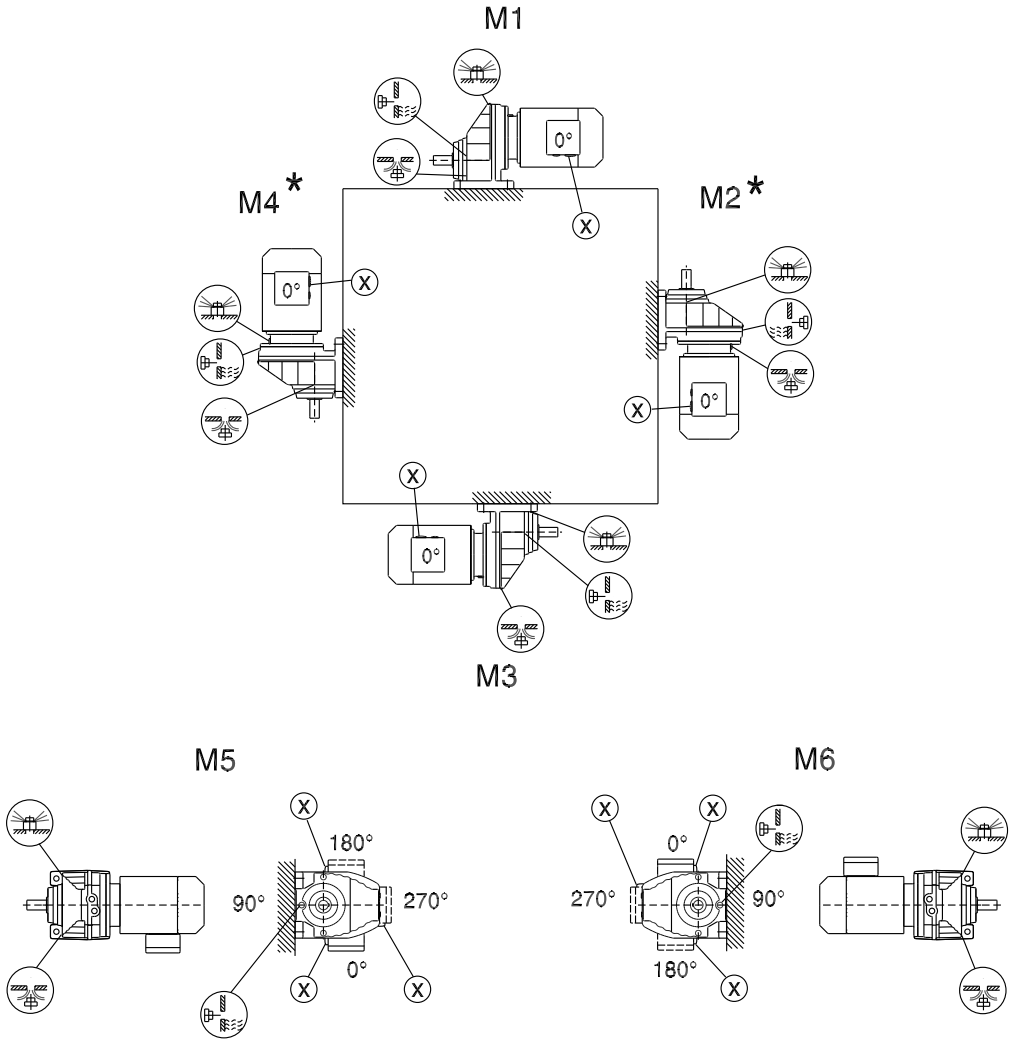
Mounting position	Gear unit type	Gear unit size	Input speed [rpm]
M2, M4	R	97 ... 107	> 2500
		> 107	>1500
M2, M3, M4, M5, M6	F	97 ... 107	> 2500
		> 107	> 1500
	K	77 ... 107	> 2500
		> 107	> 1500
	S	77 ... 97	> 2500

5.6 Mounting positions of helical gear units

RX57...RX107

04 043 02 00

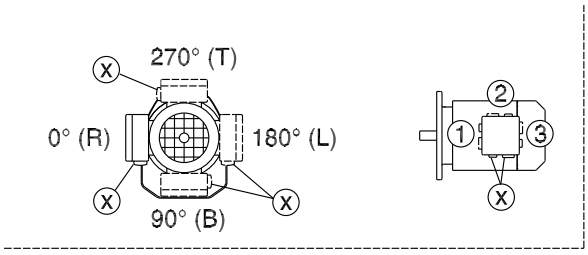


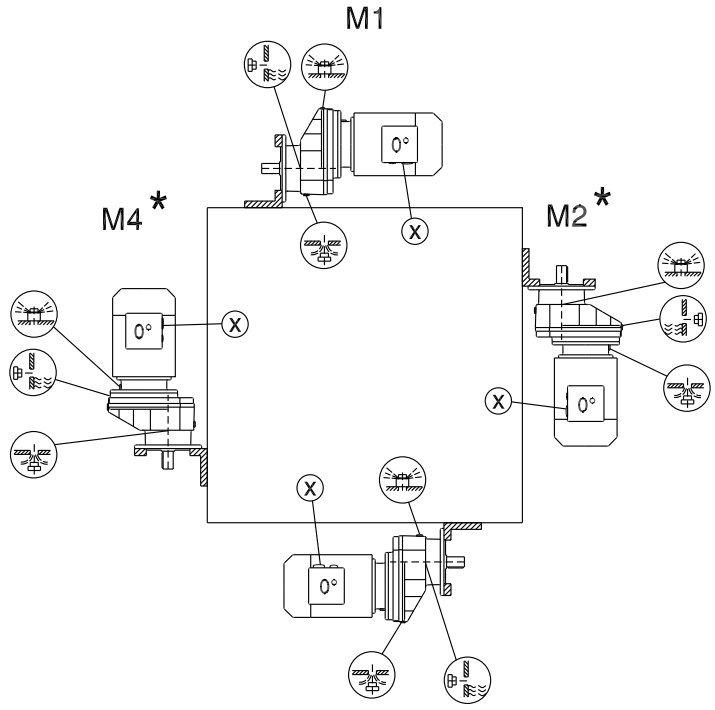


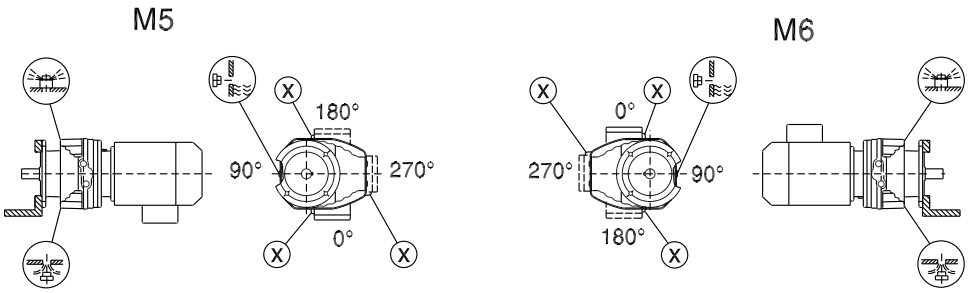
* → page 69

RXF57...RXF107

04 044 02 00



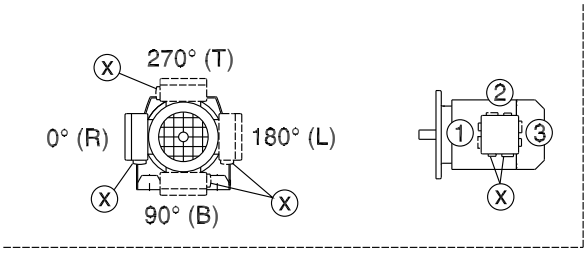


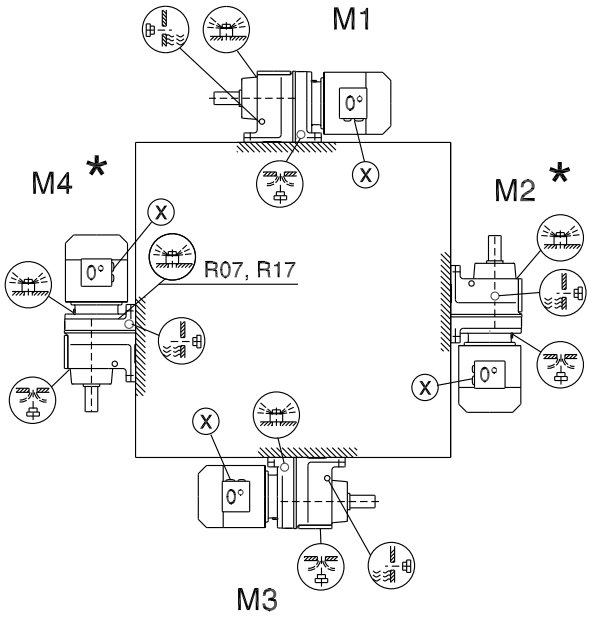


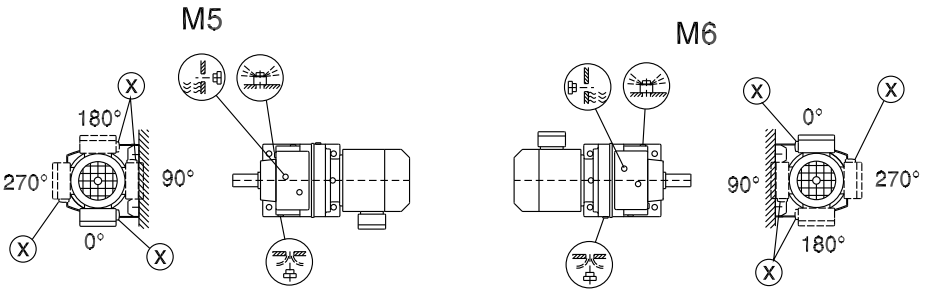
* → page 69

R07...R167

04 040 03 00





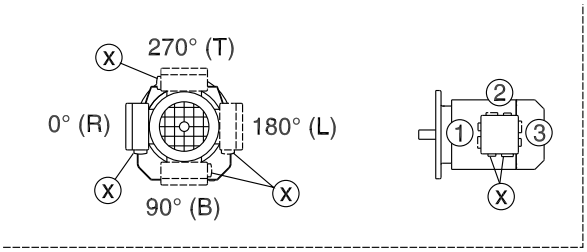


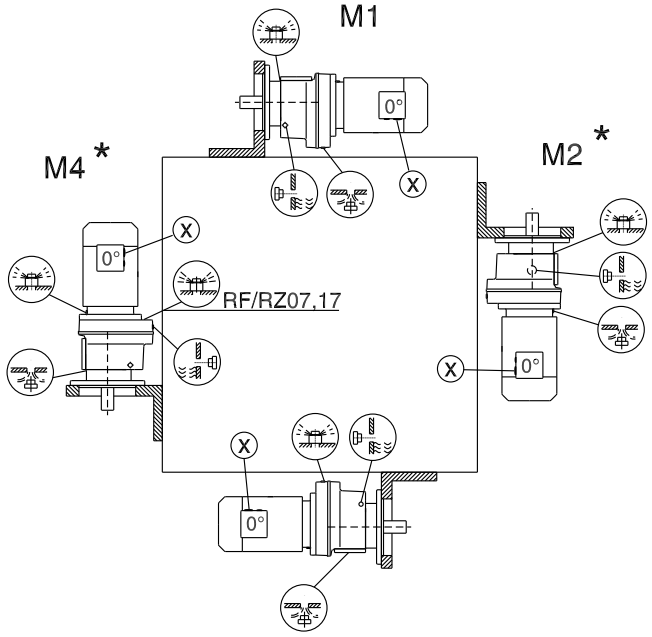
R07		M1, M2 , M3 , M5 , M6
R17, R27		M1, M3 , M5 , M6
R07, R17, R27		
R47, R57		M5

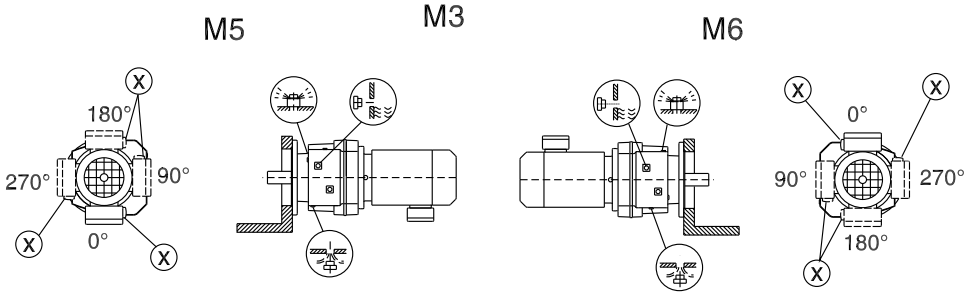
* → page 69

RF07...RF167, RZ07...RZ87

04 041 03 00





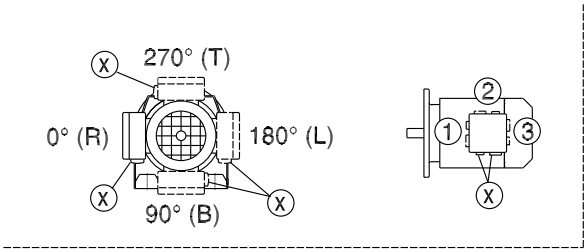


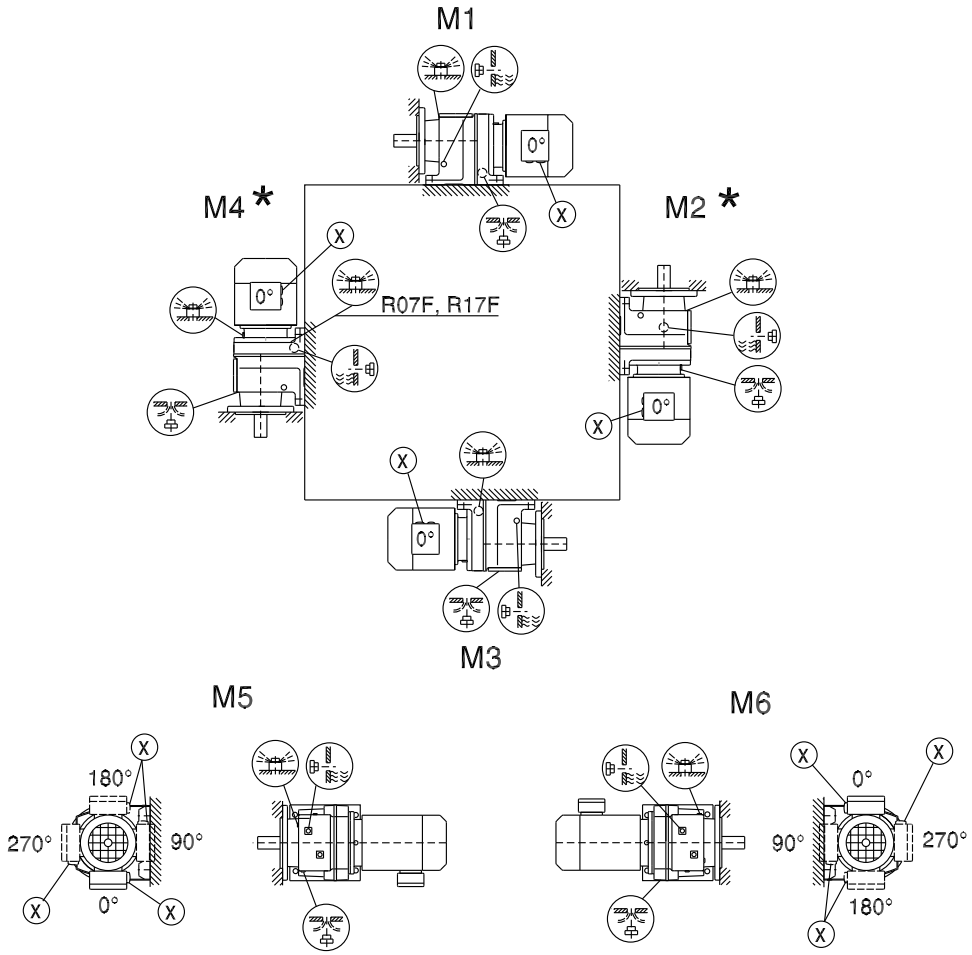
RF/RZ07		M1, M2 , M3 , M5 , M6
RF/RZ17,27		M1, M3 , M5 , M6
RF/RZ07, 17, 27		
RF/RZ47, 57		M5

* → page 69

R07F...R87F

04 042 03 00





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

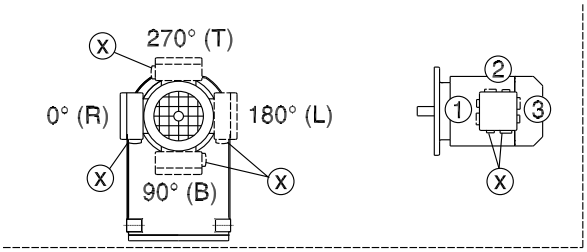
* → page 69

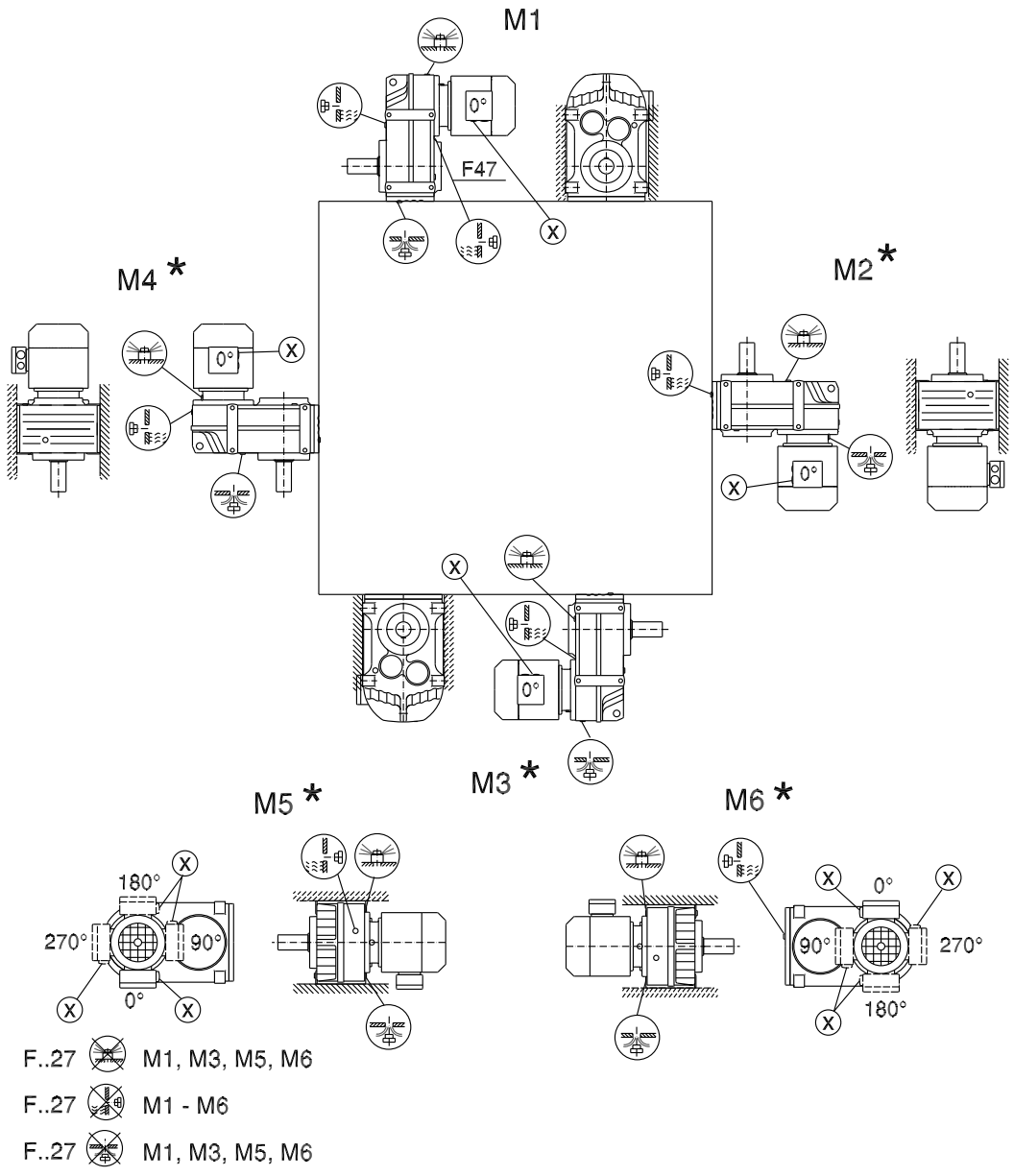
Important: See the (i) notes in the "Project planning / Overhung and axial loads" chapter (page 48).

5.7 Mounting positions of parallel shaft helical gear units

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

42 042 03 00





F..27 M1, M3, M5, M6

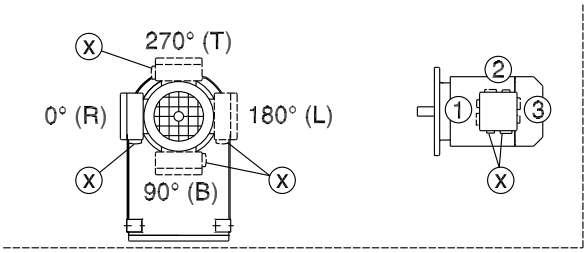
F..27 M1 - M6

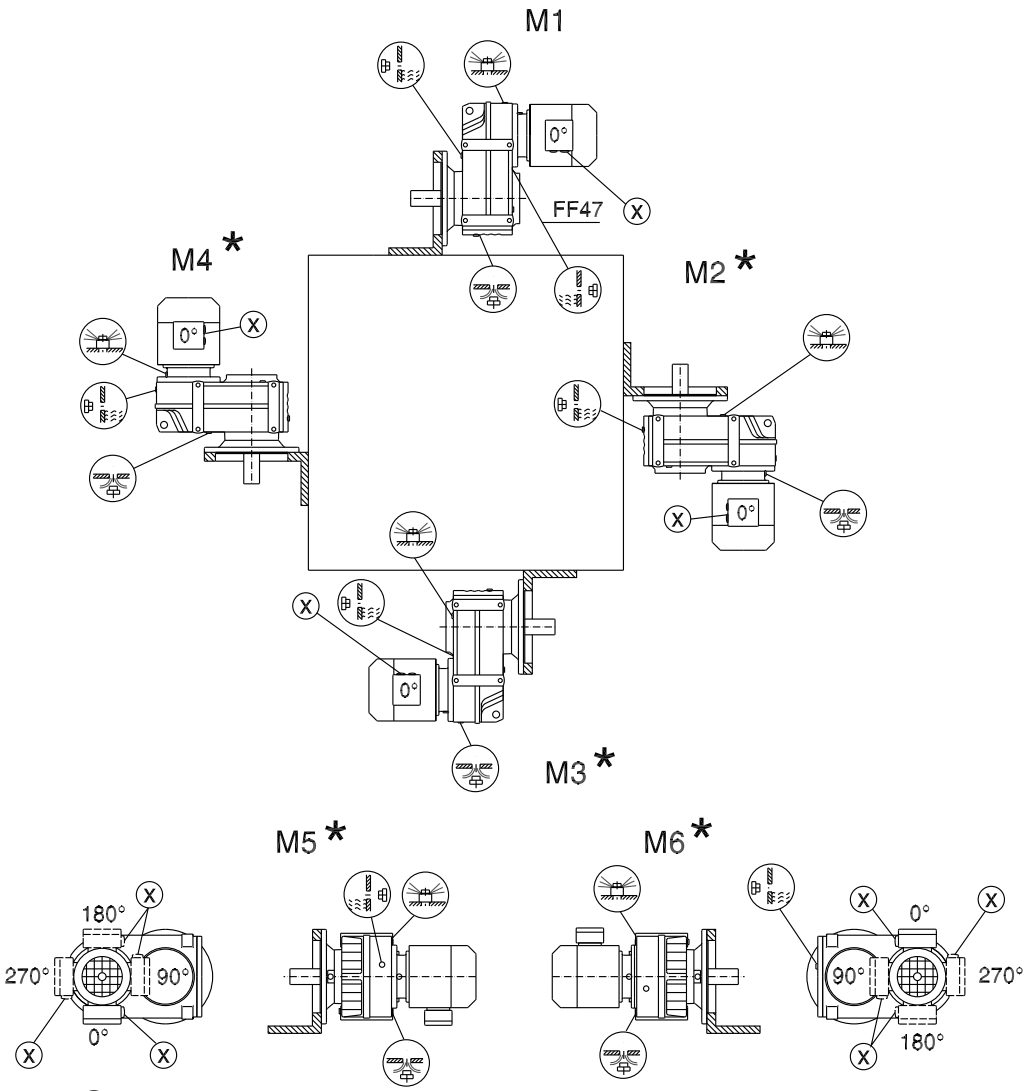
F..27 M1, M3, M5, M6

* → page 69

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

42 043 03 00





F..27 M1, M3, M5, M6

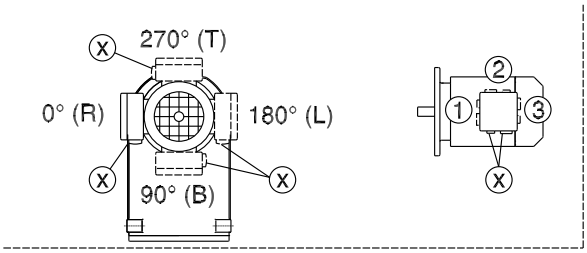
F..27 M1 - M6

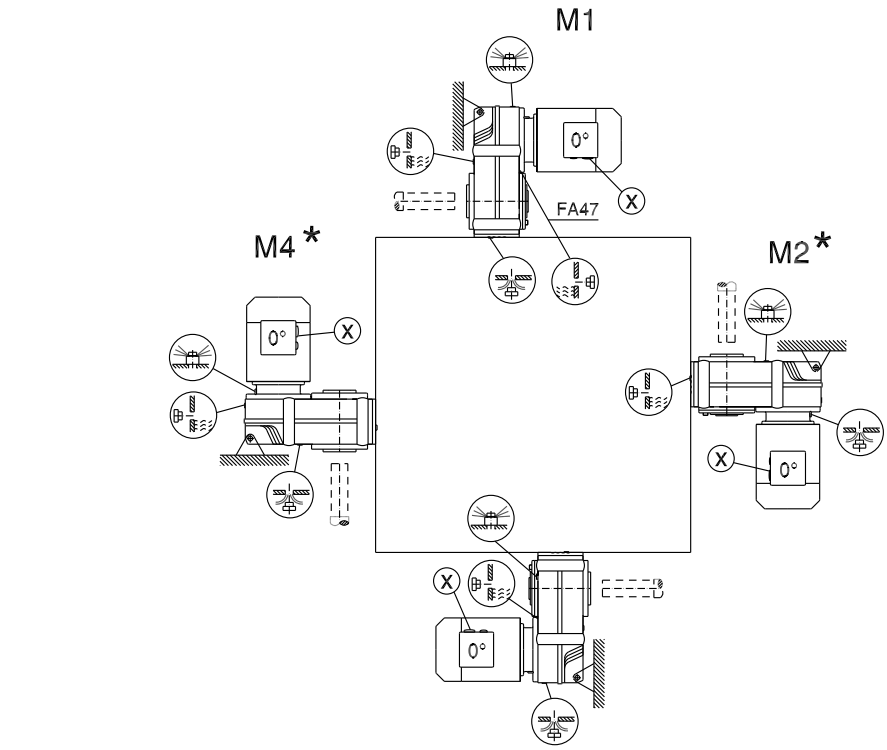
F..27 M1, M3, M5, M6

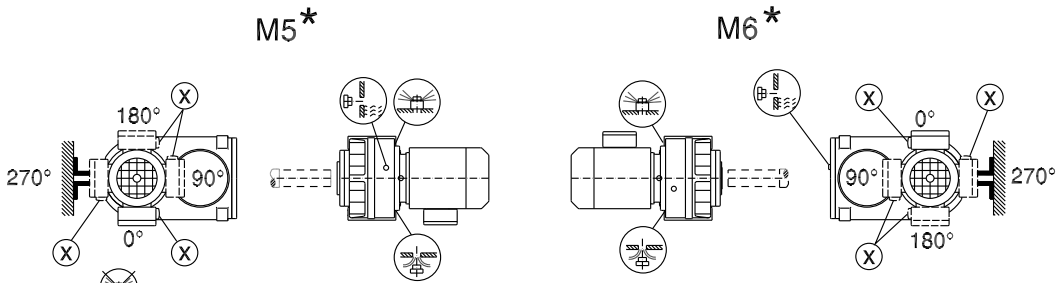
* → page 69

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

42 044 03 00







F..27 M1, M3, M5, M6

F..27 M1 - M6

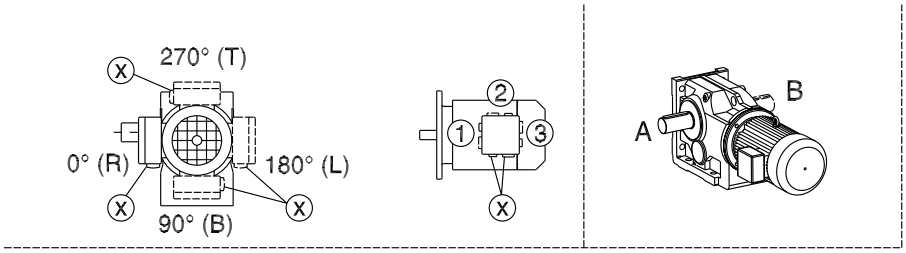
F..27 M1, M3, M5, M6

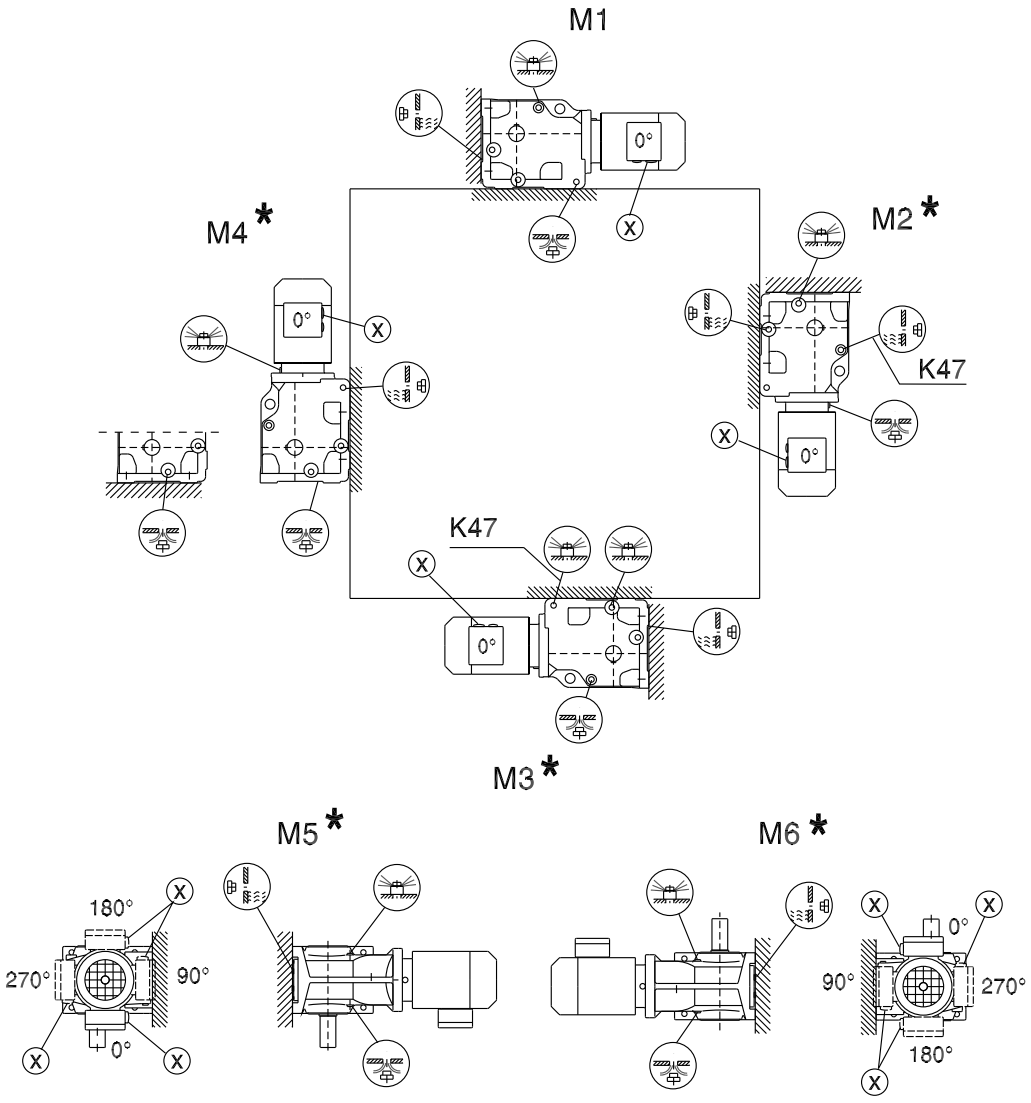
* → page 69

5.8 Mounting positions of helical-bevel gear units

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

34 025 03 00



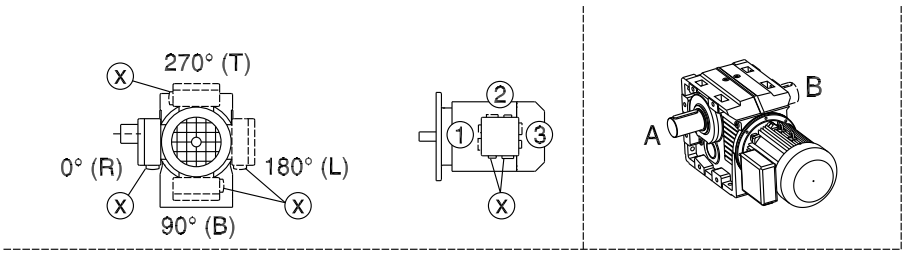


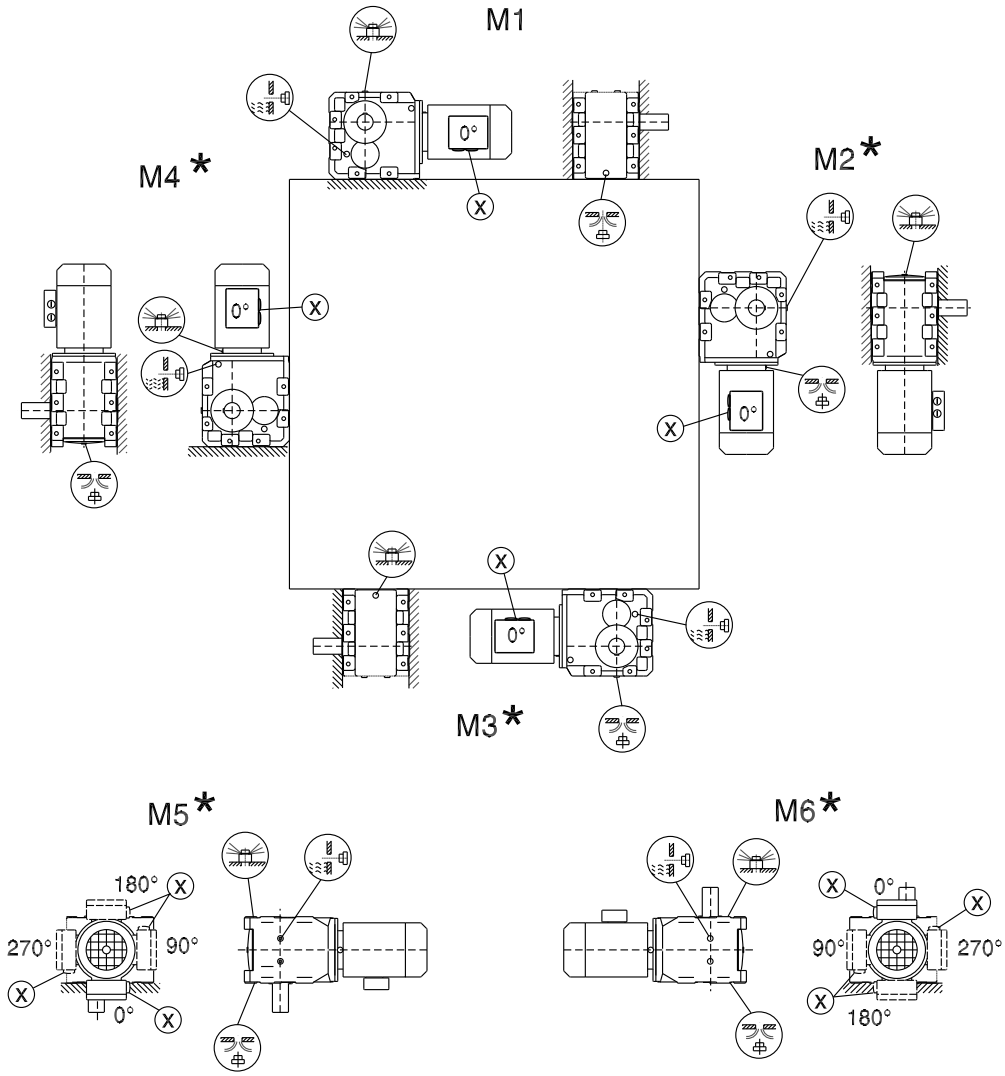
* → page 69

Important: See the (i) notes in the "Project planning / Overhung and axial loads" chapter (page 48).

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

34 026 03 00



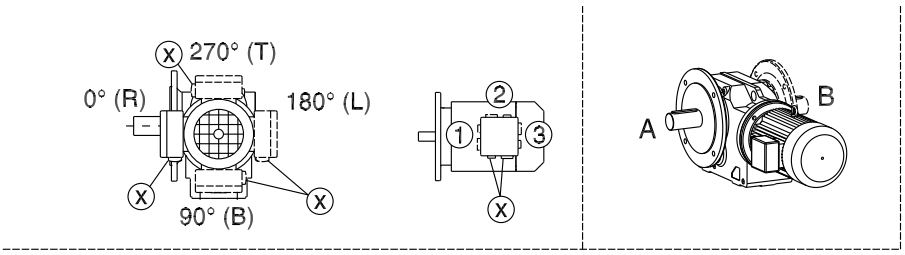


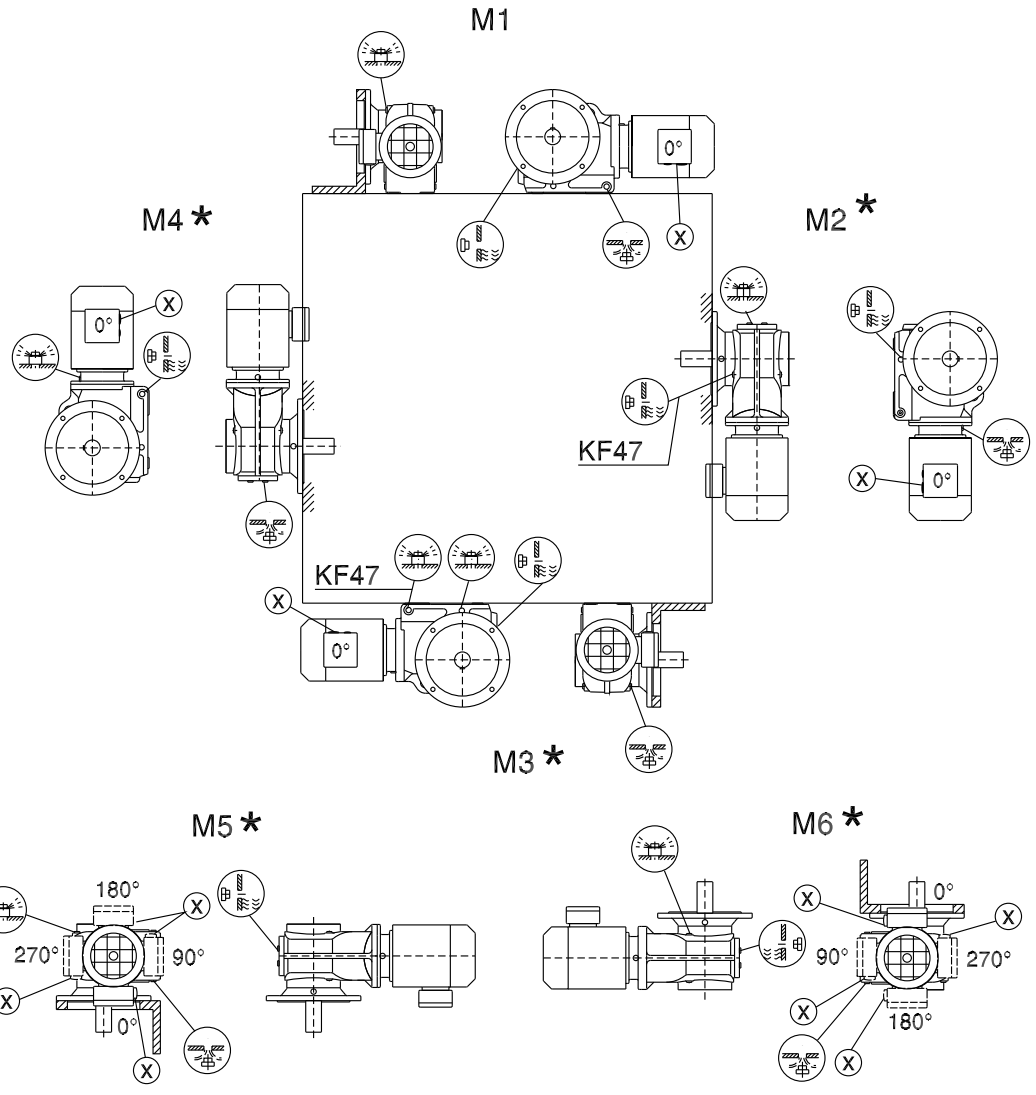
* → page 69

Important: See the (i) notes in the "Project planning / Overhung and axial loads" chapter (page 48).

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

34 027 03 00

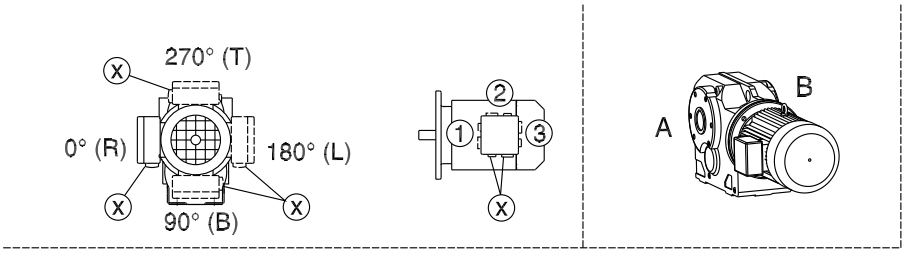


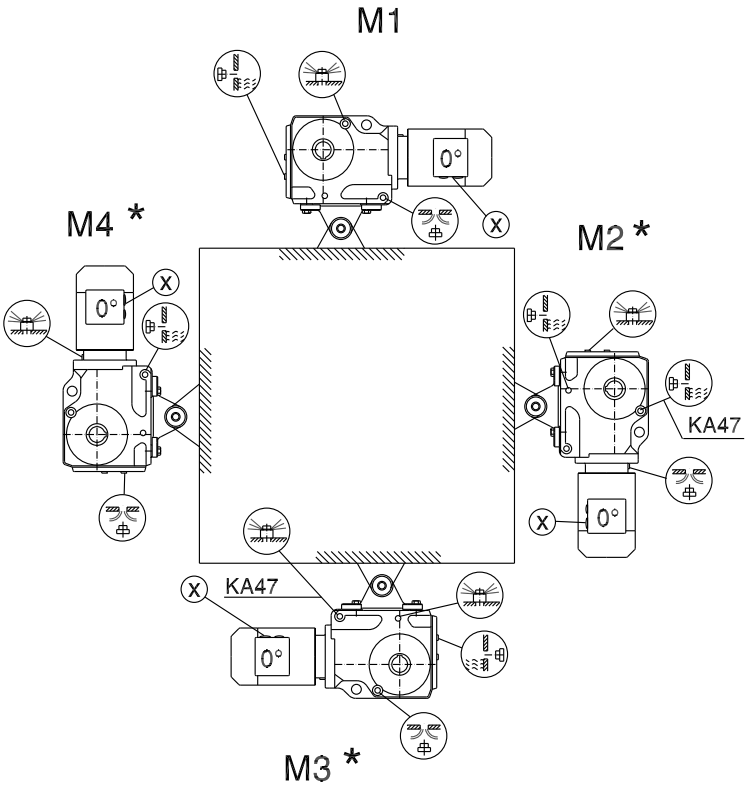


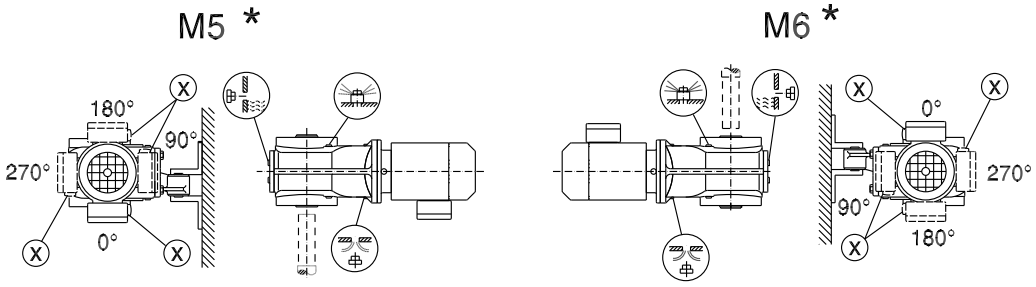
* → page 69

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

39 025 04 00

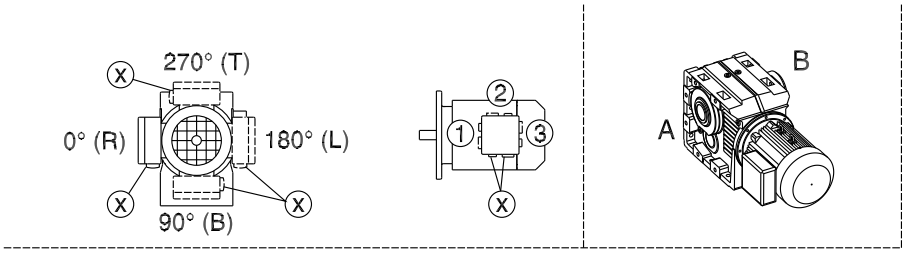


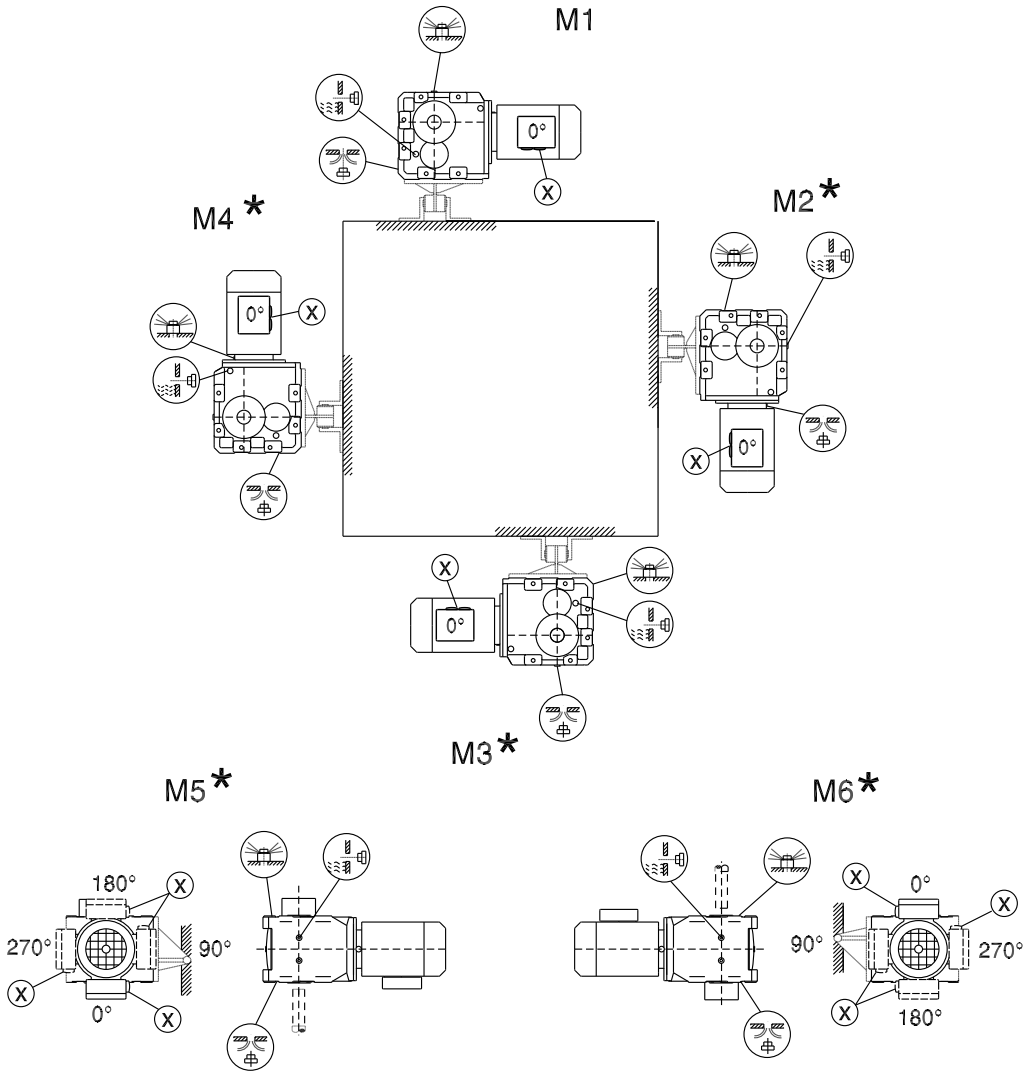




* → page 69

KH167...187

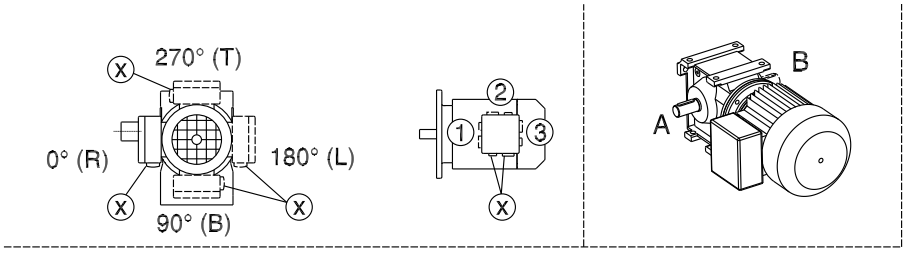




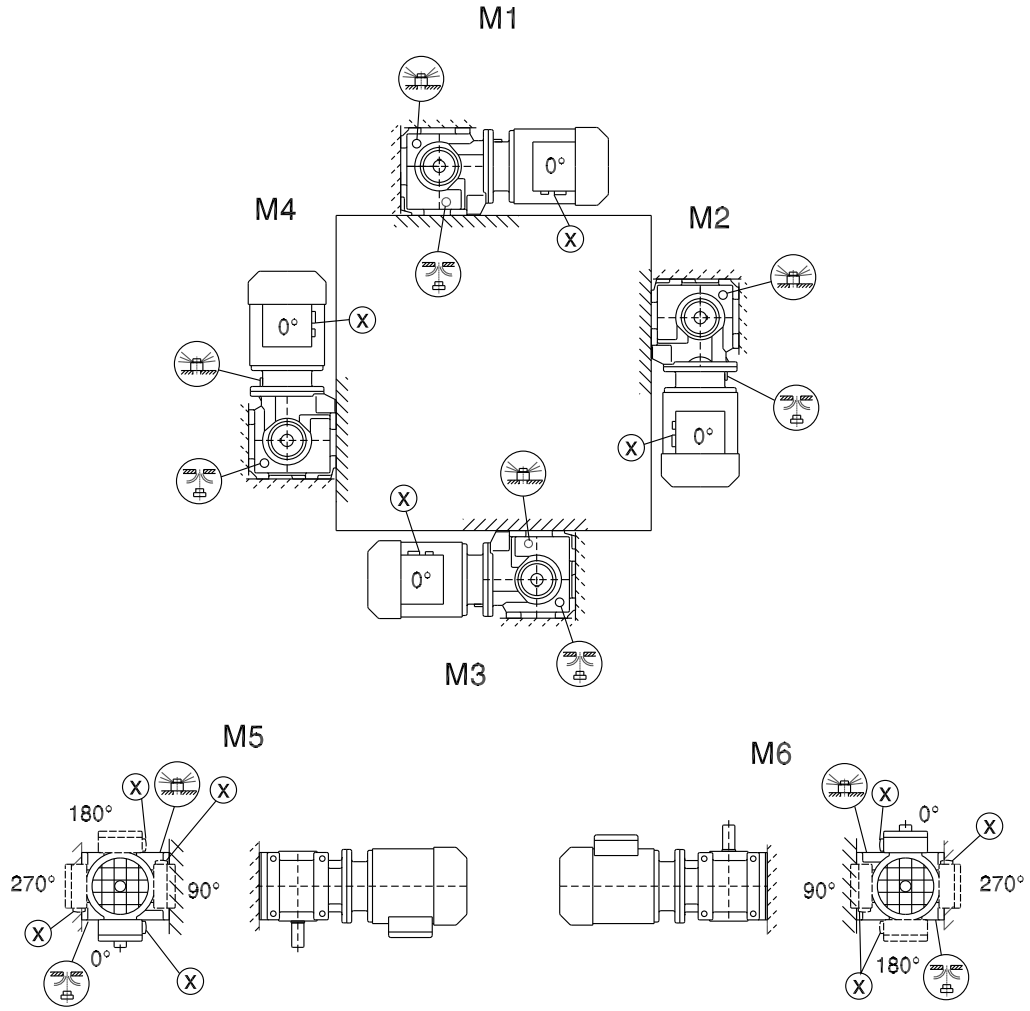
* → page 69

5.9 Mounting positions of helical-worm gear units

S37



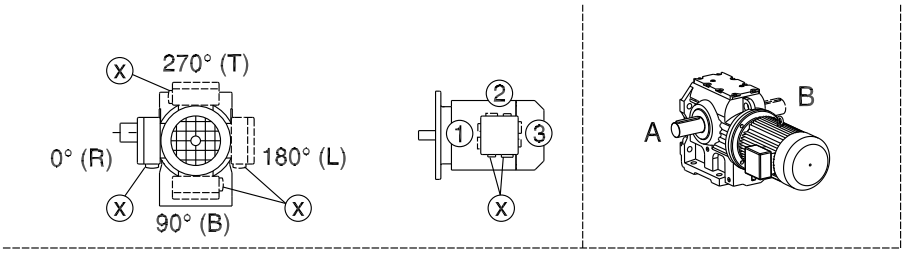
05 025 03 00

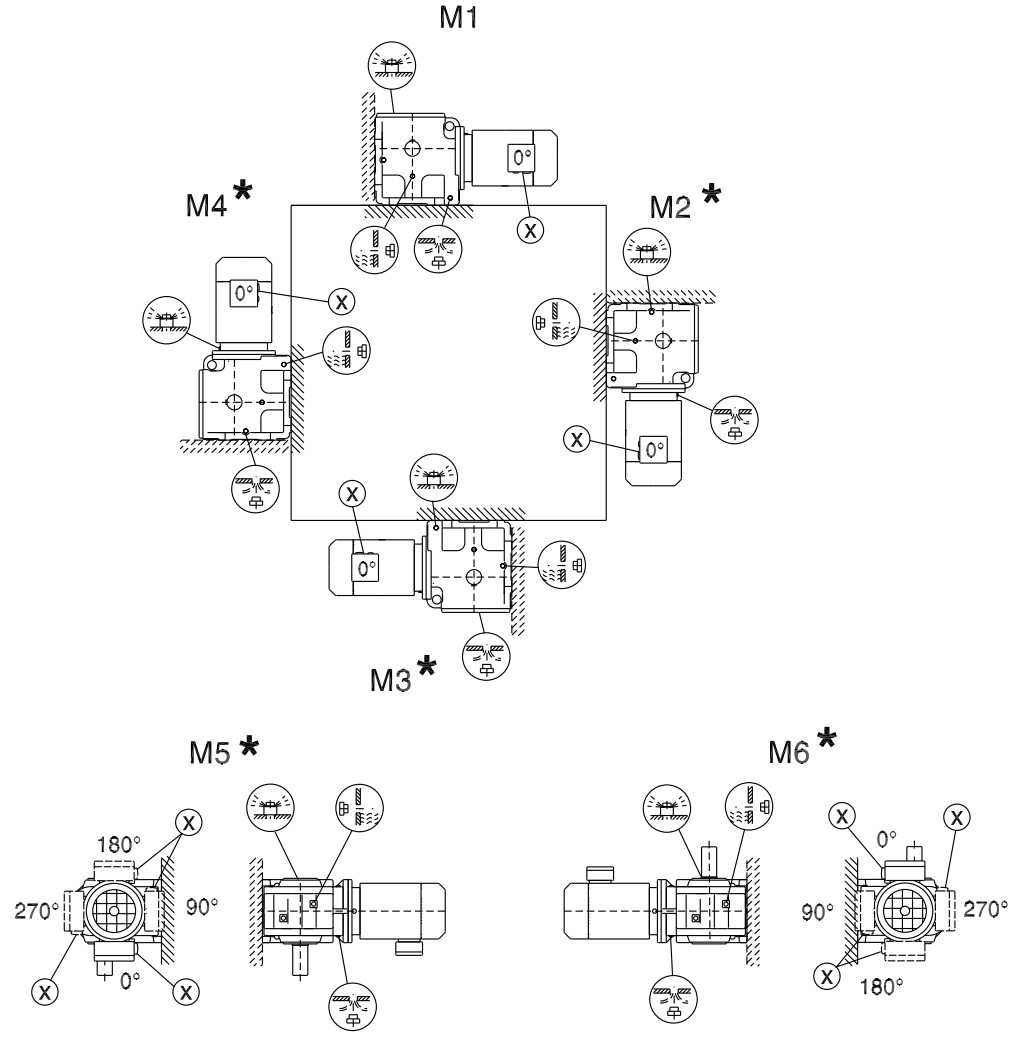


* → page 69

Important: See the (i) notes in the "Project planning / Overhung and axial loads" chapter (page 48).

S47...S97



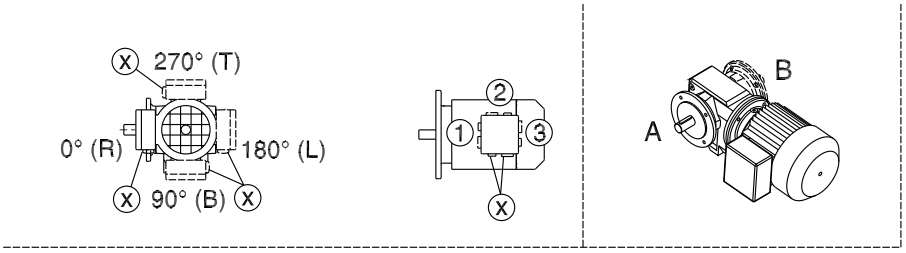


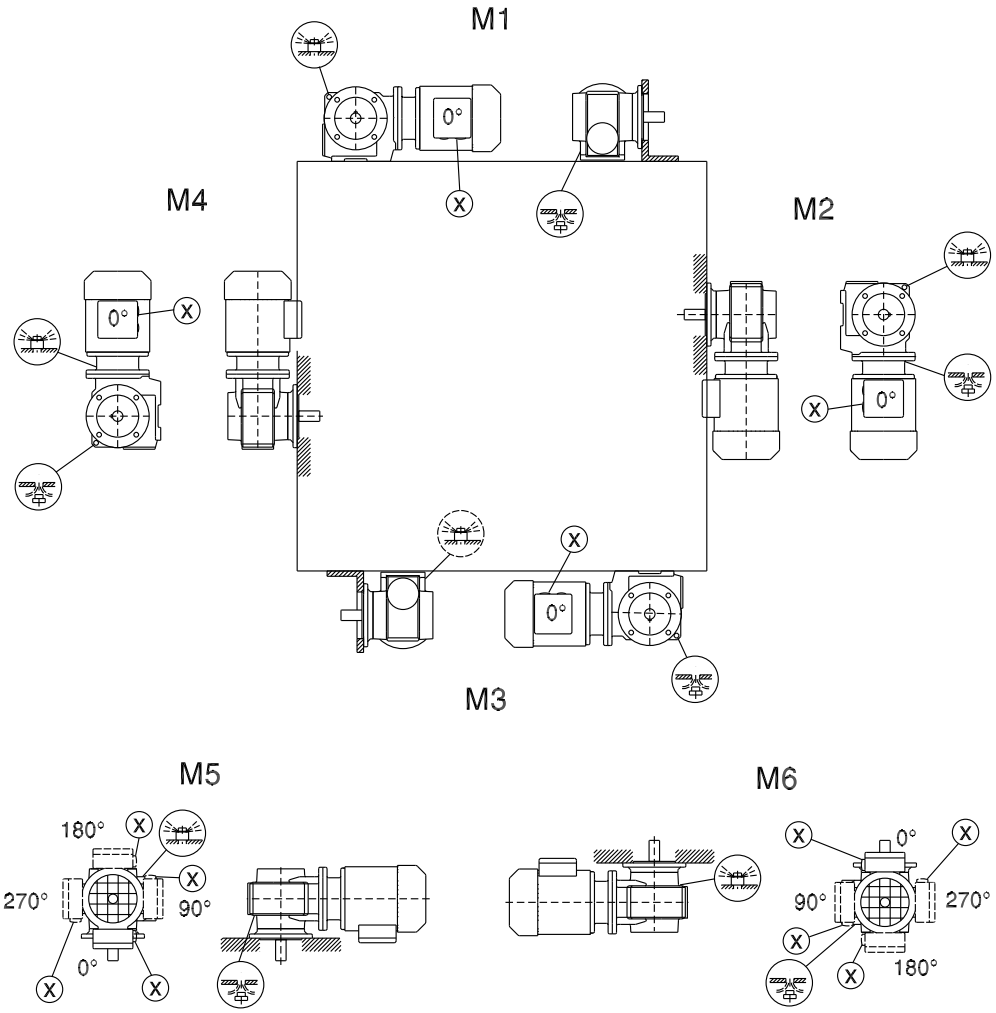
* → page 69

Important: See the (i) notes in the "Project planning / Overhung and axial loads" chapter (page 48).

SF/SAF/SHF37

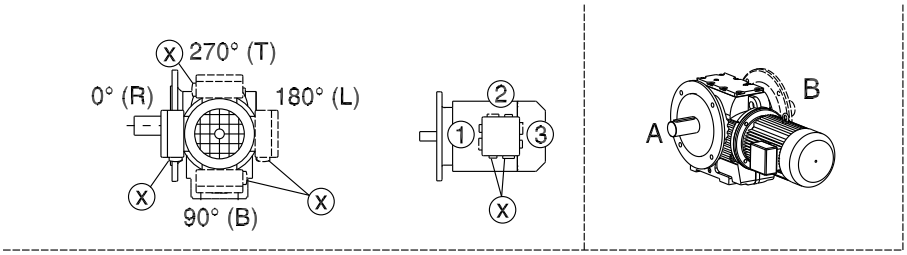
05 027 03 00

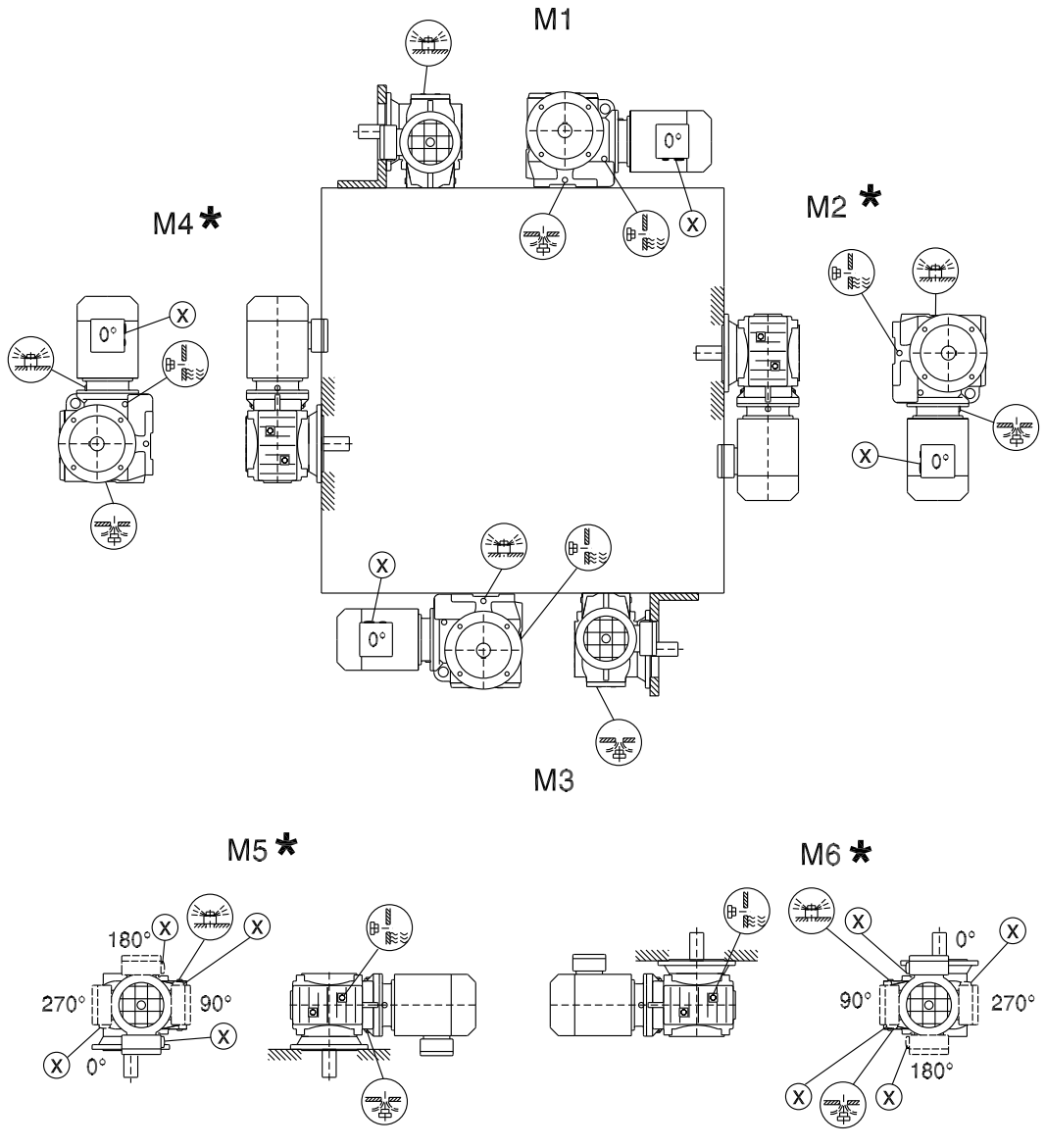




* → page 69

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

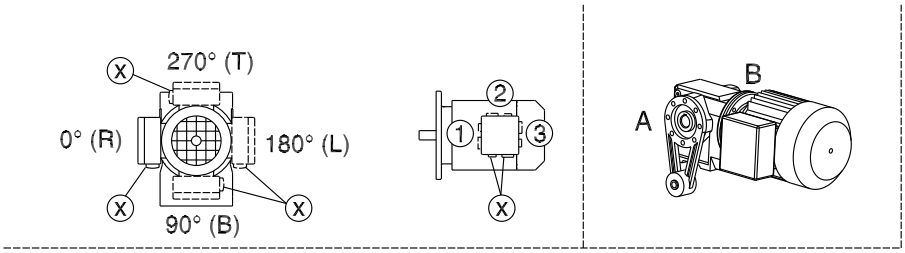


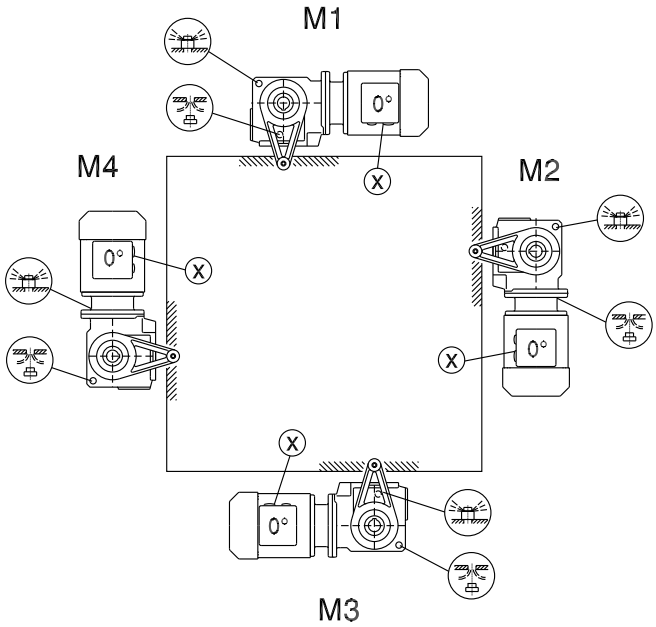


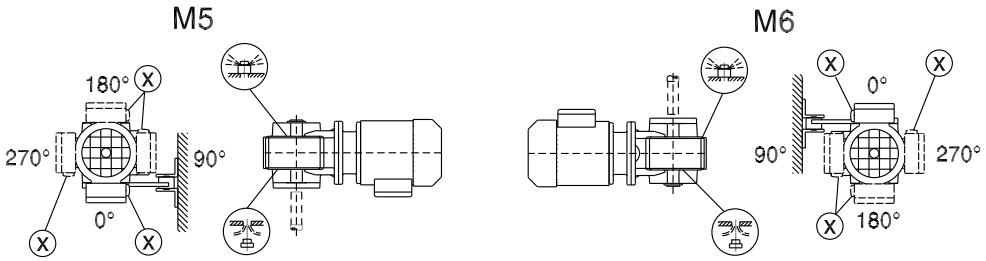
* → page 69

SA/SH/ST37

28 020 04 00



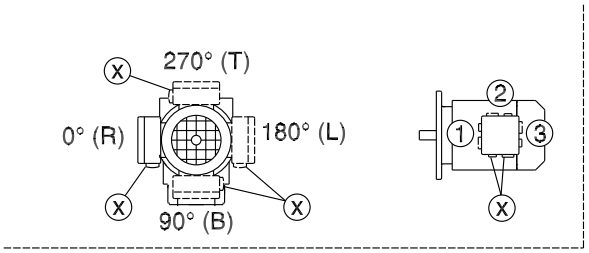


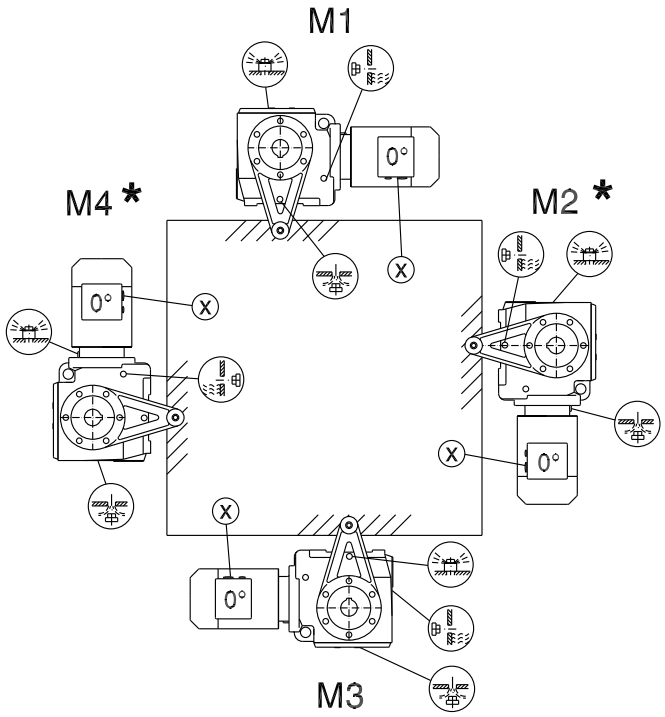


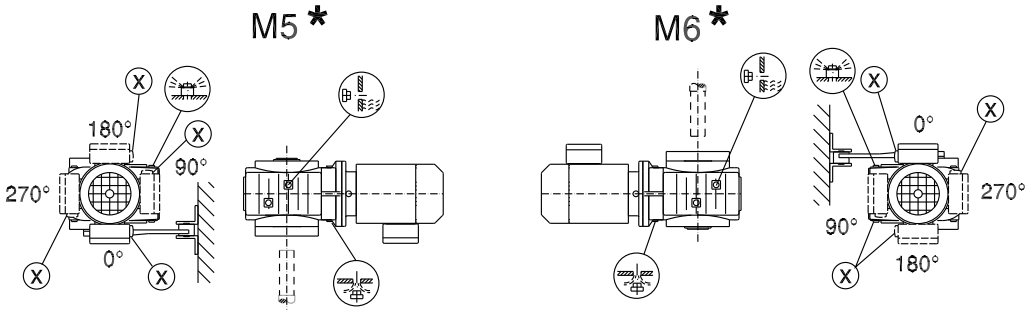
* → page 69

SA/SH/ST47...97

28 021 03 00



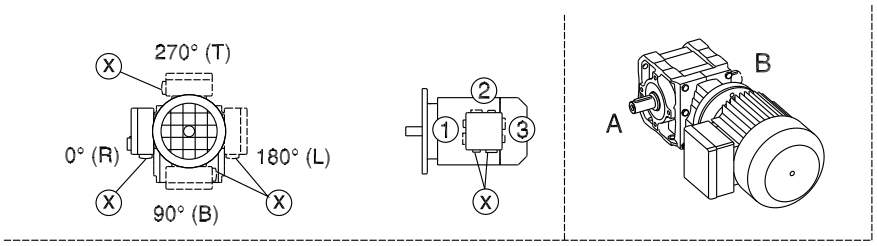


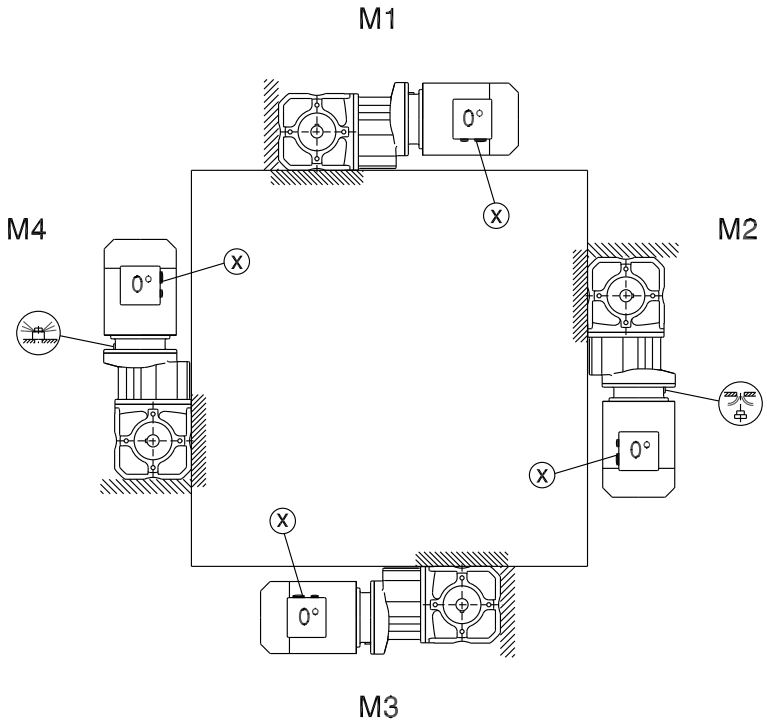


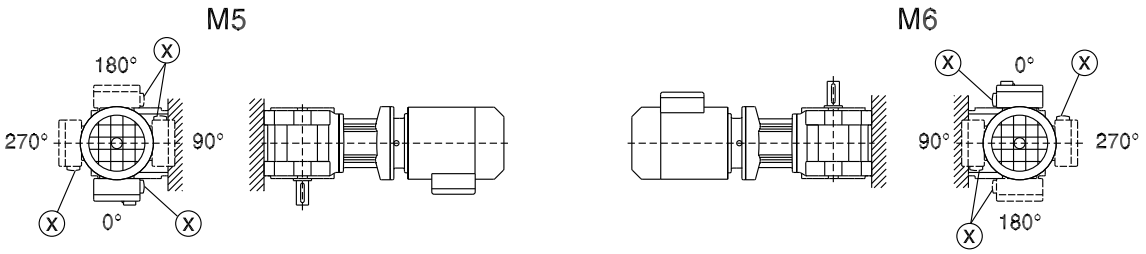
* → page 69

5.10 Mounting positions of SPIROPLAN® gear units

W/WA.7B/WH.7B

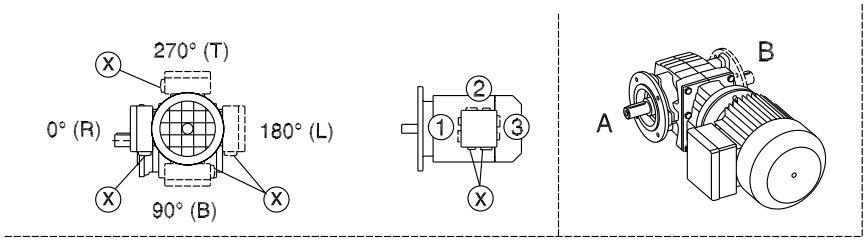


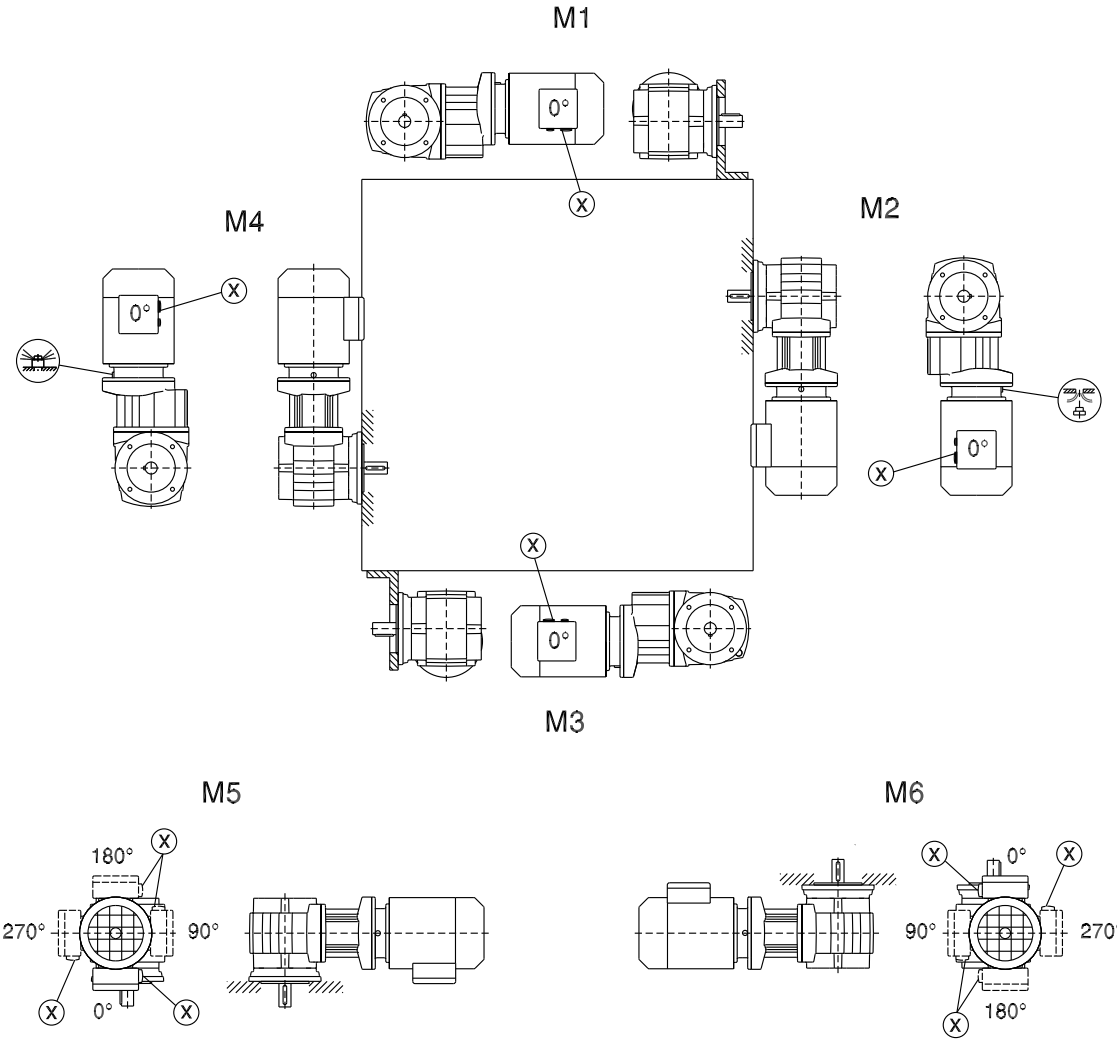




→ page 69

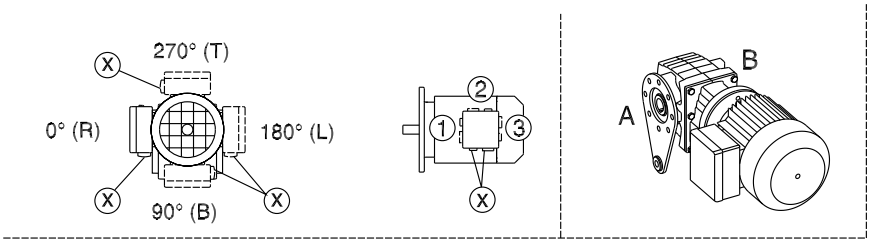
WF/WAF/WHF.7

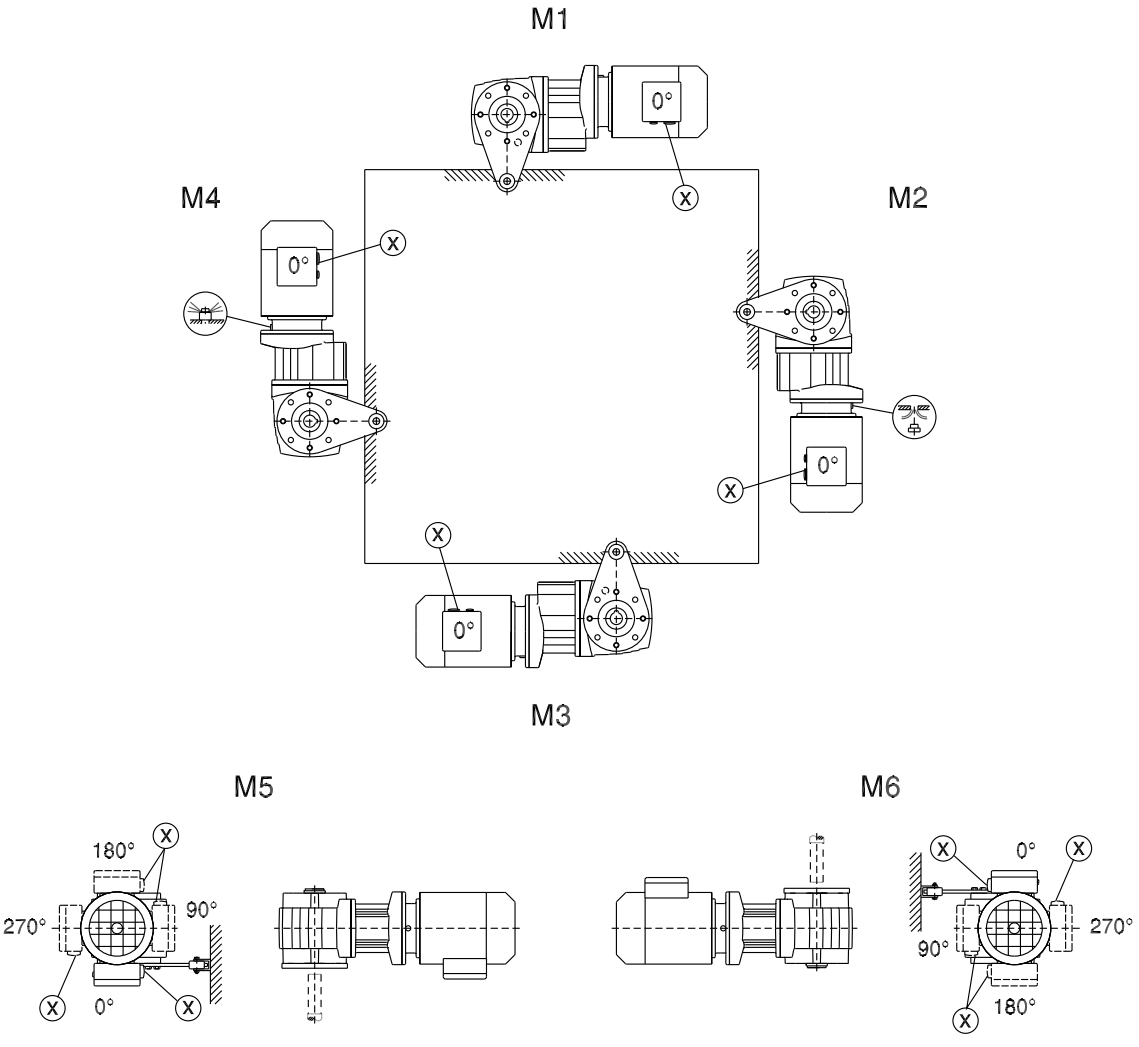




→ page 69

WA/WH/WT.7

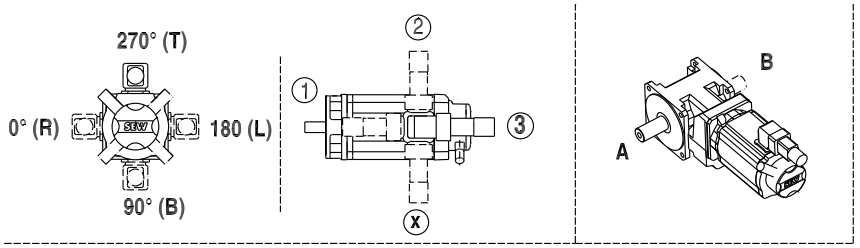


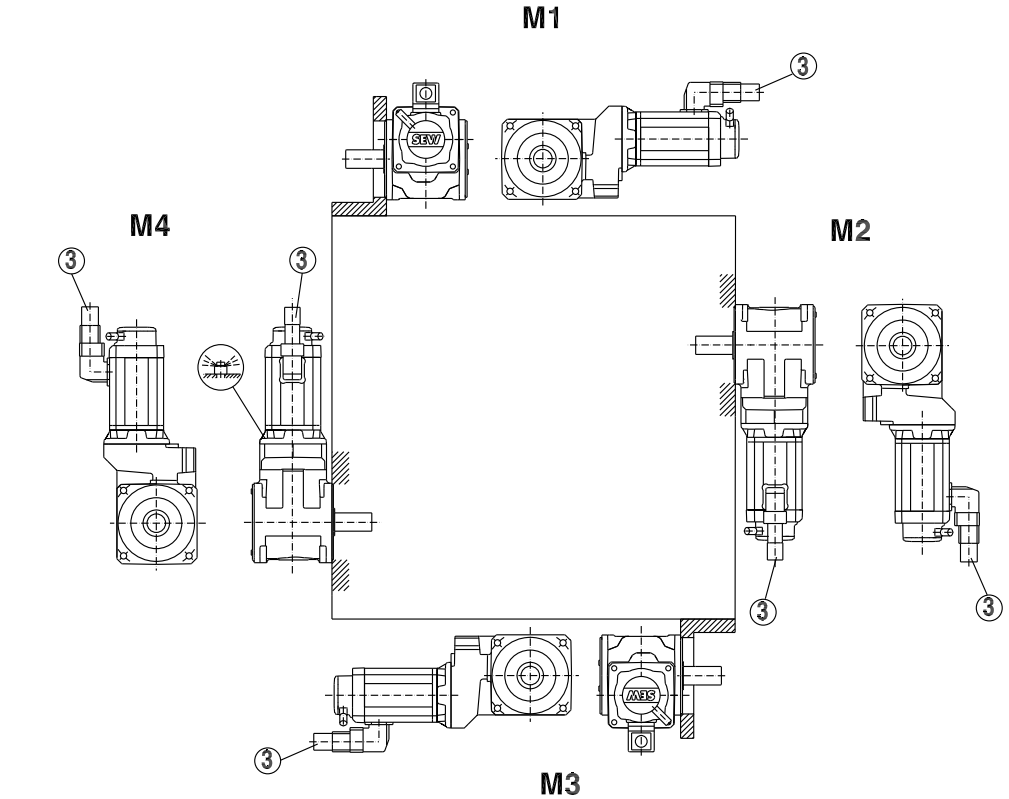


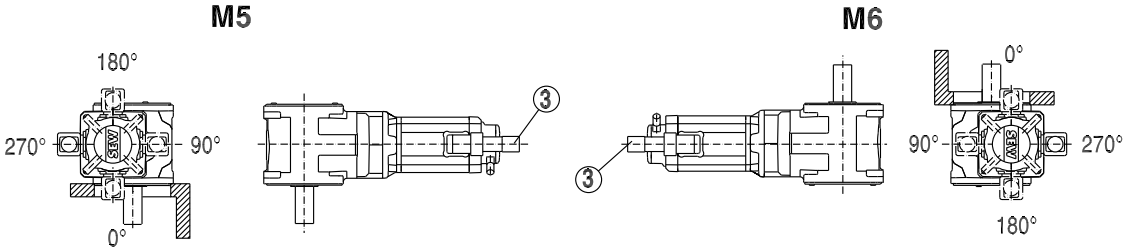
→ page 69

5.11 Mounting positions of BS.F helical-bevel gear units

BS.F202...802

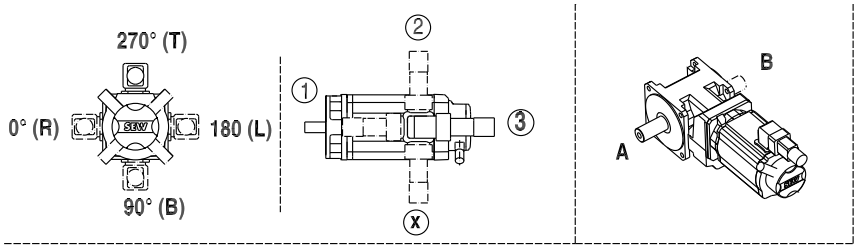




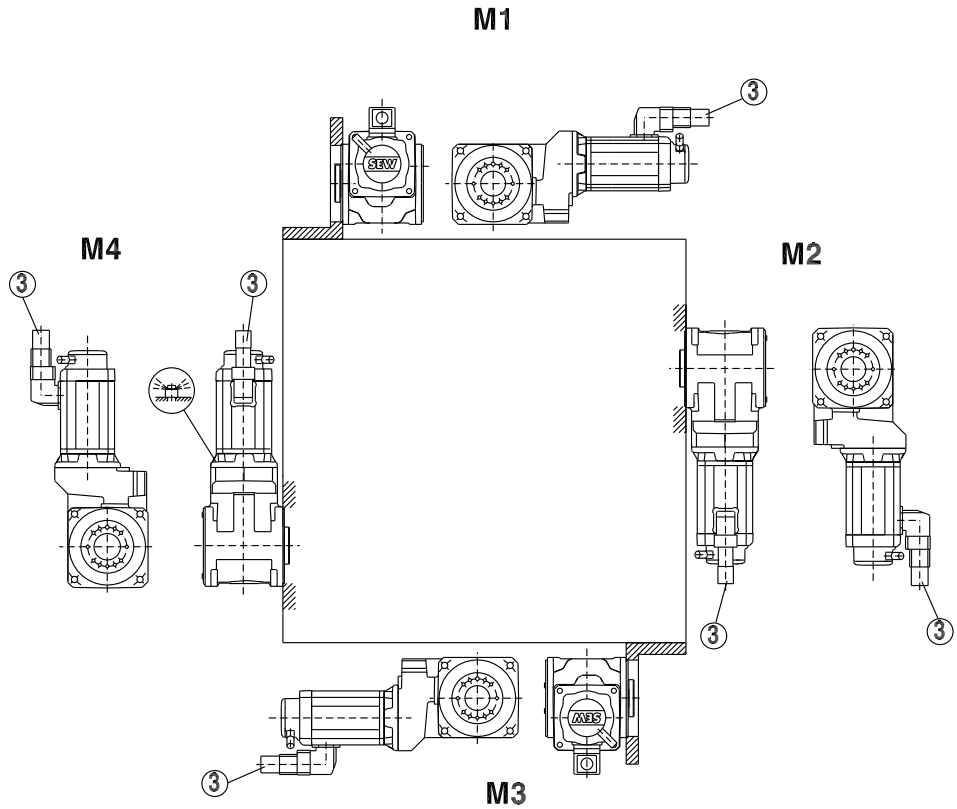


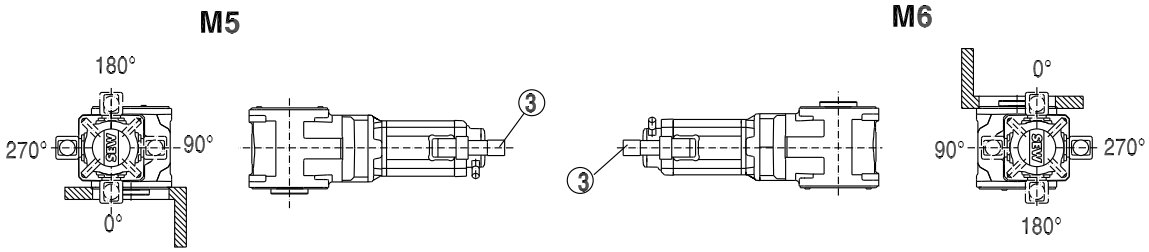
3 → page 68

BSBF202...802



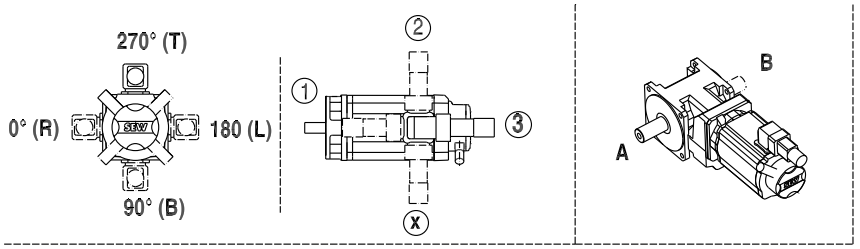
56 038 00 03



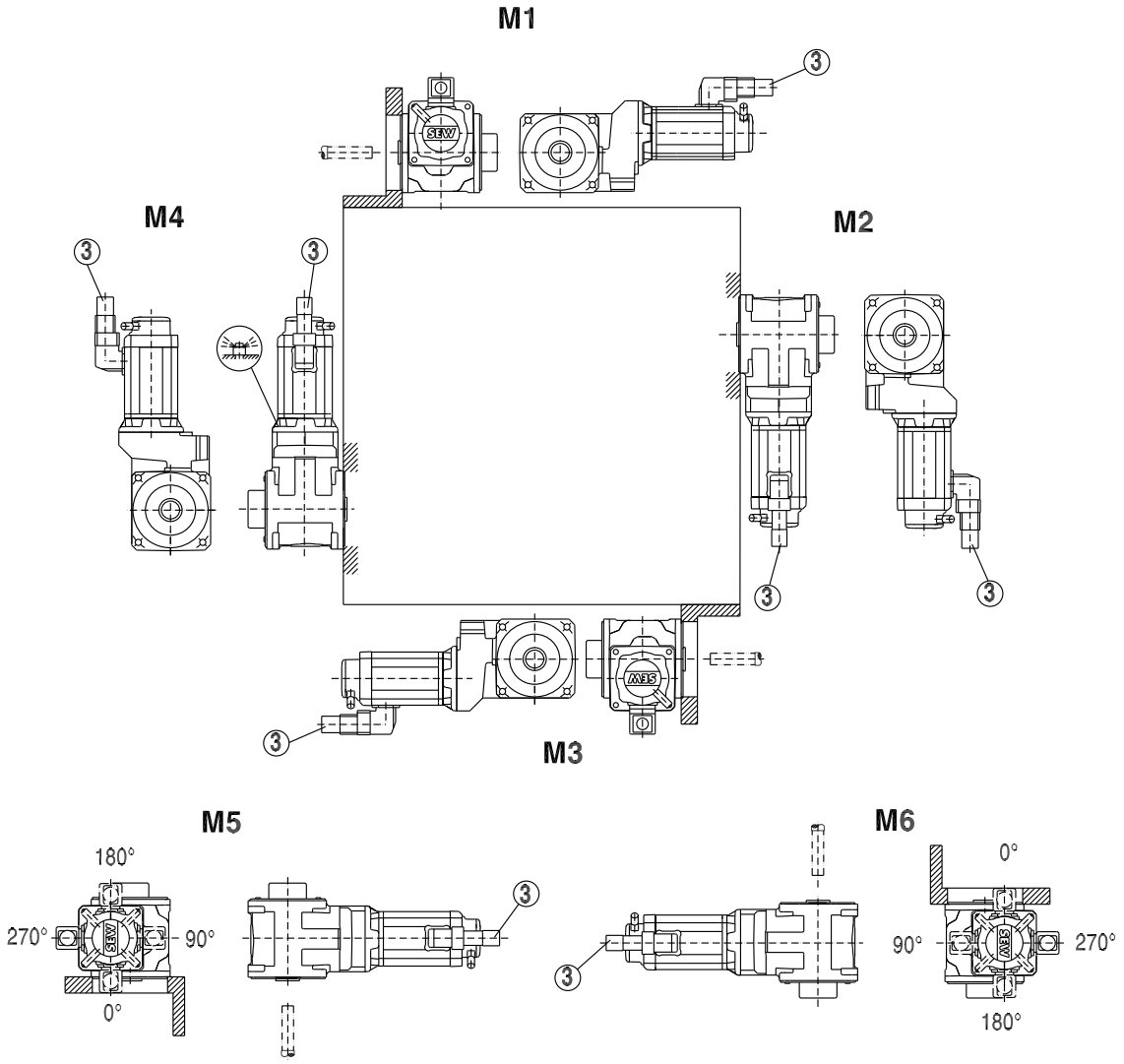


3 → page 68

BSHF202...802

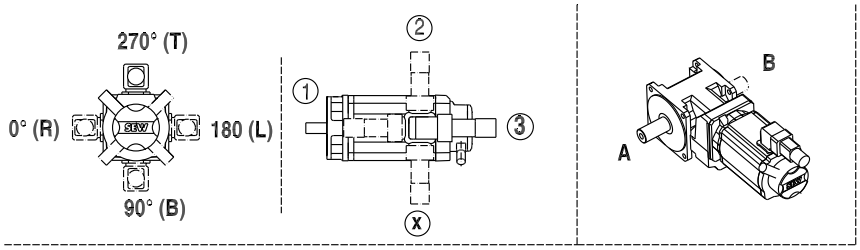


56 056 00 03

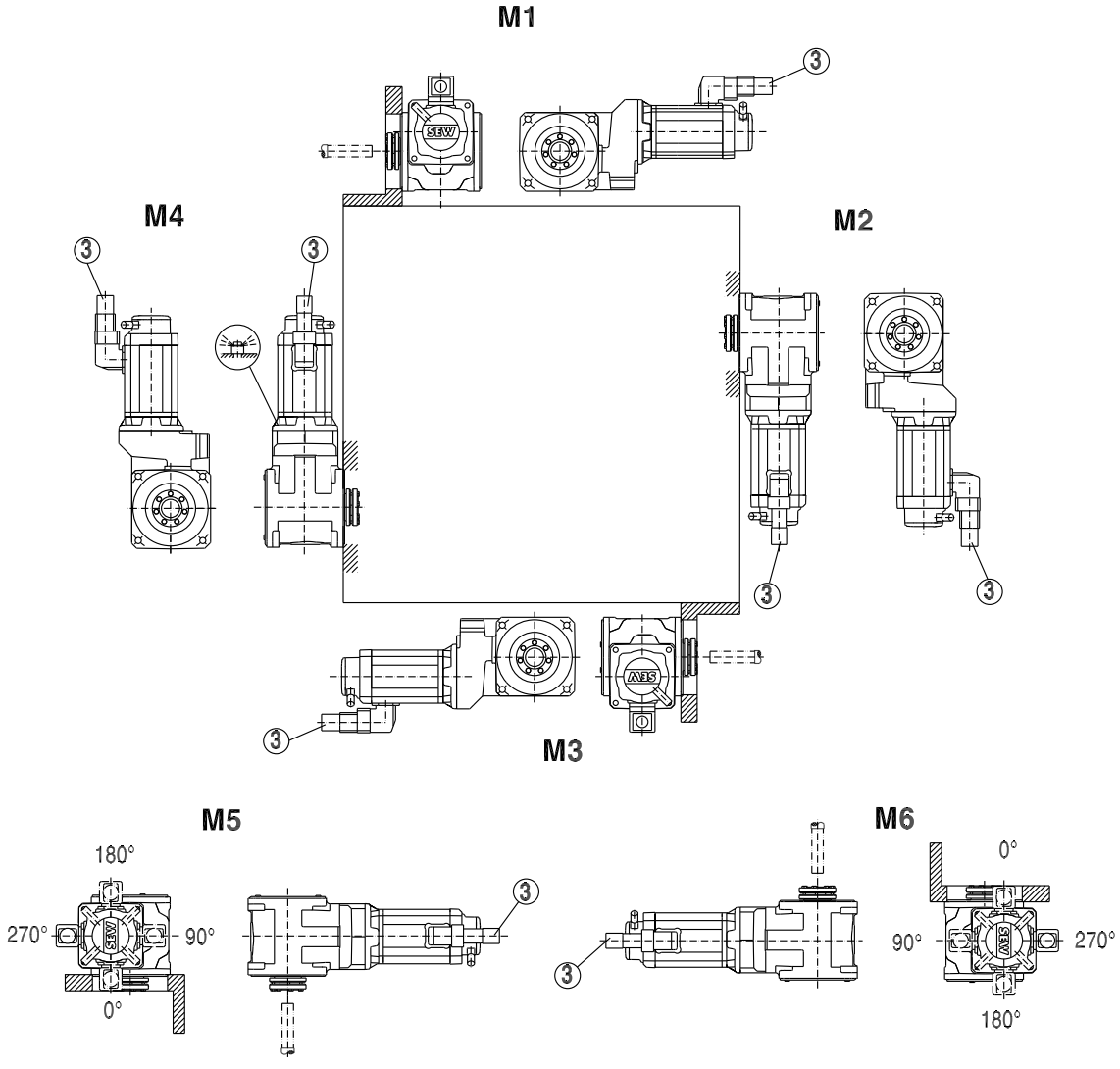


3 → page 68

BSHF202...802 /I

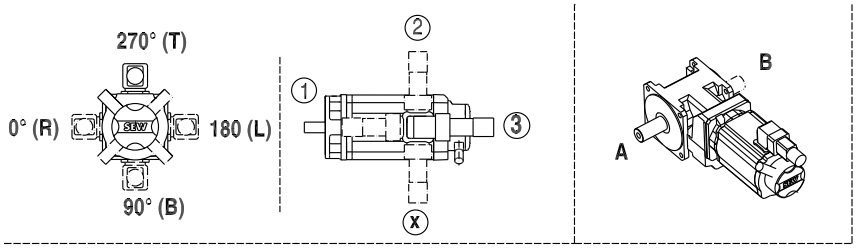


56 039 00 03

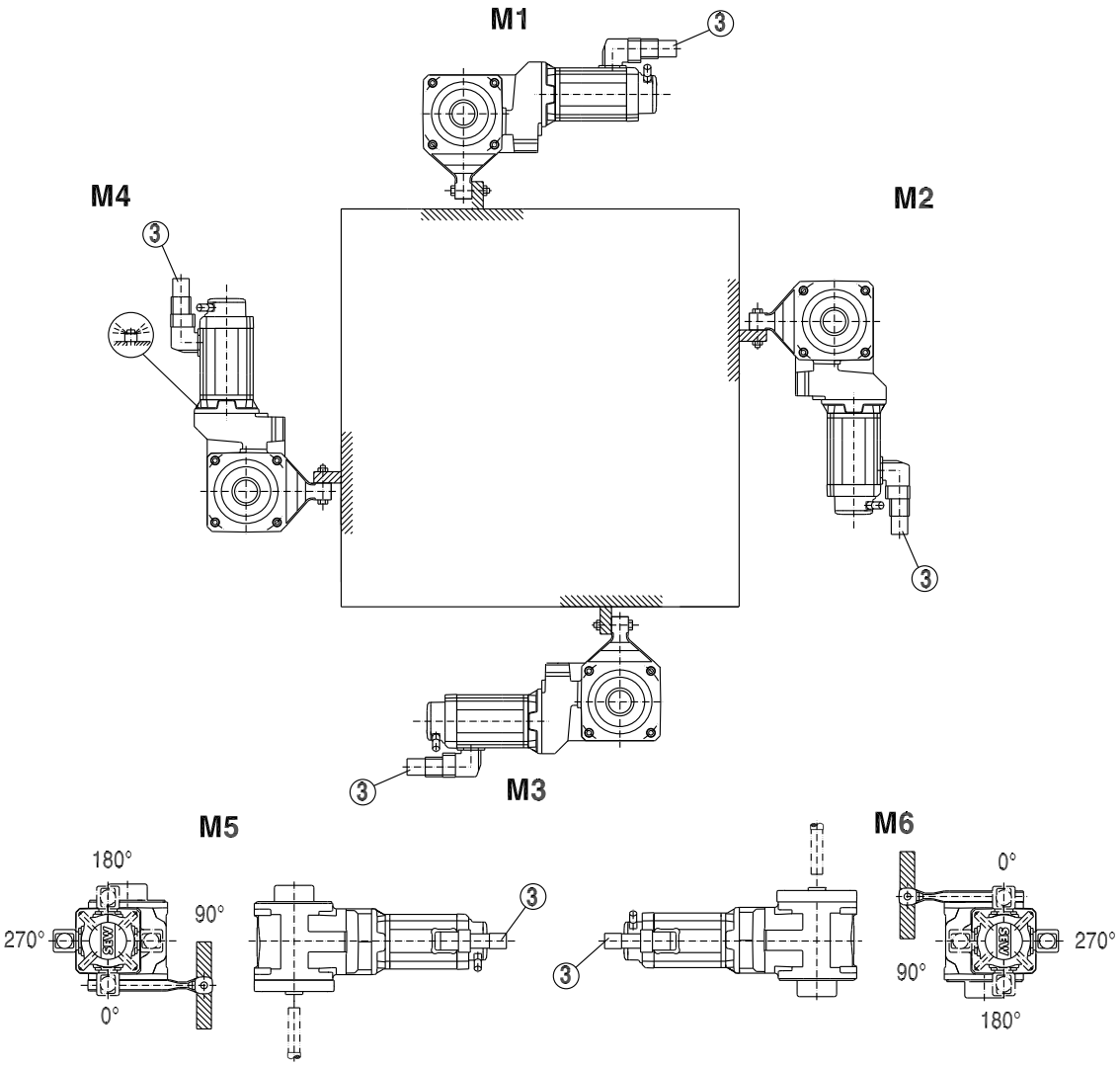


3 → page 68

BSHF202...802 /T

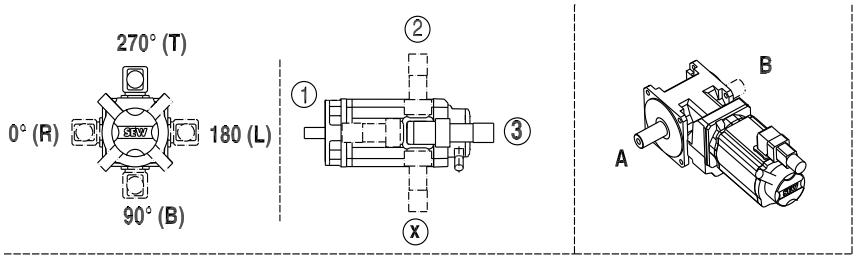


56 043 00 03

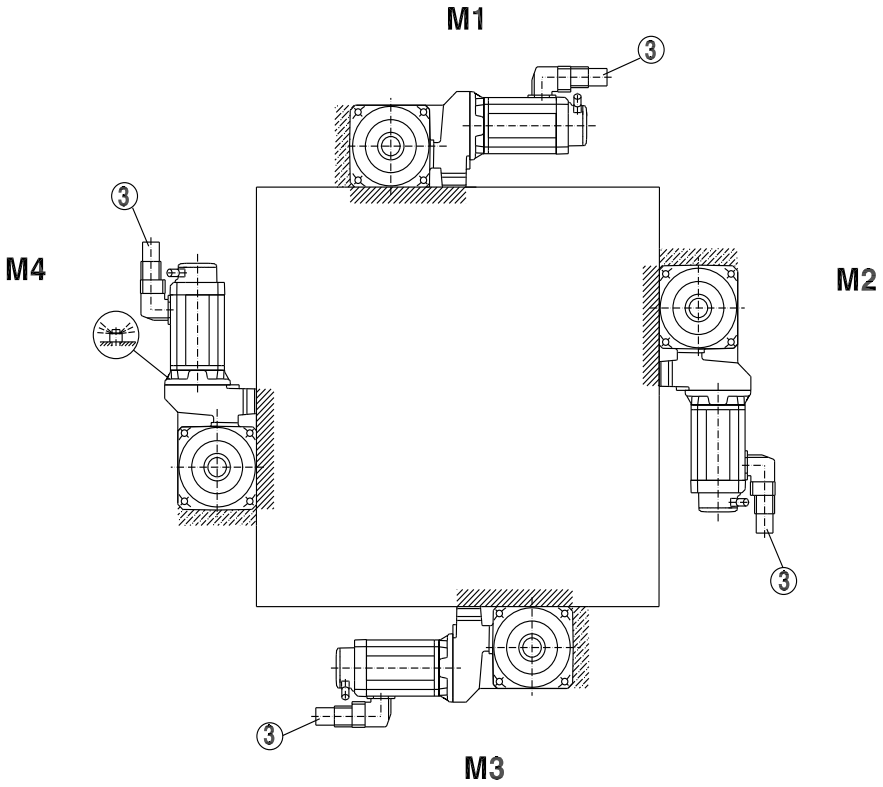


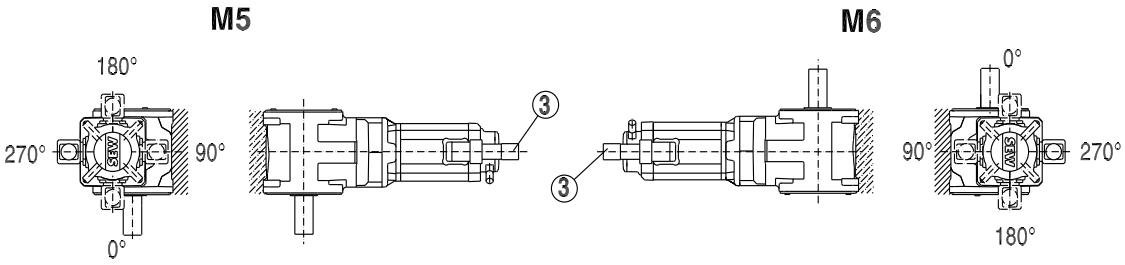
3 → page 68

BS.F202...802B



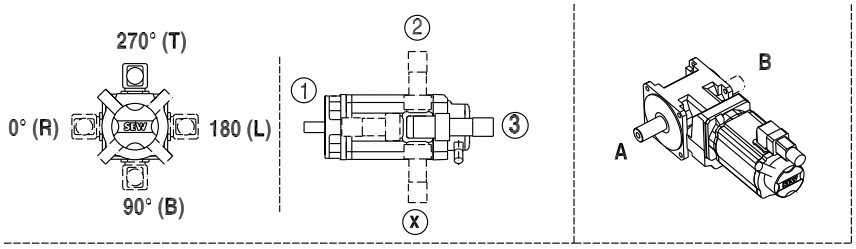
56 040 00 03



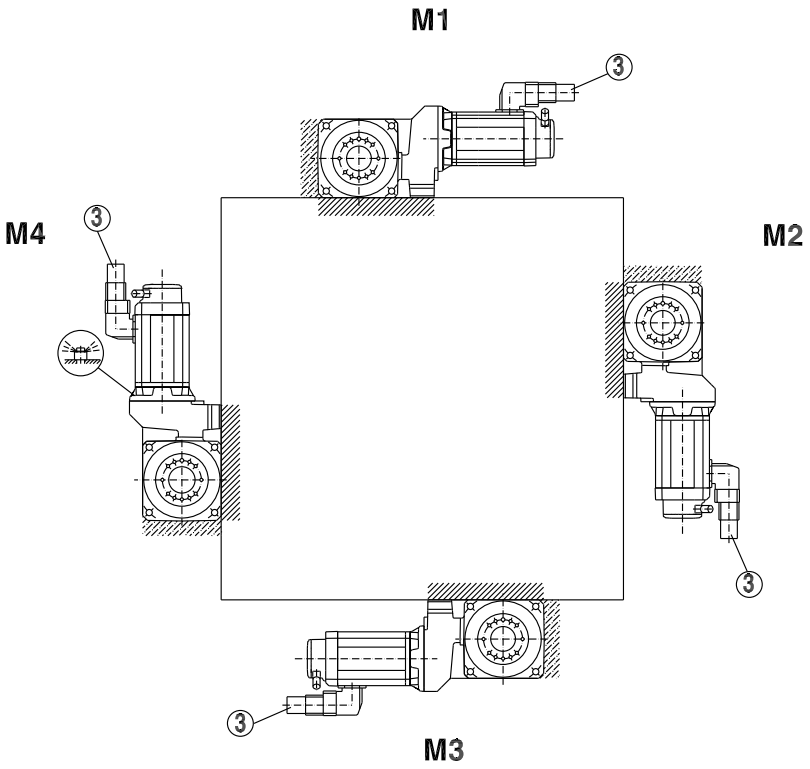


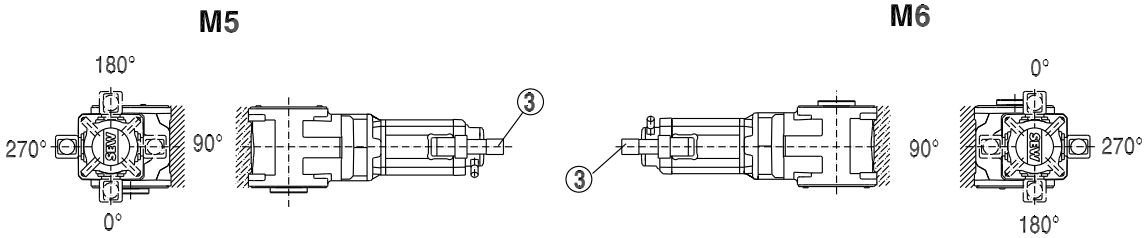
3 → page 68

BSBF202...802B



56 041 00 03

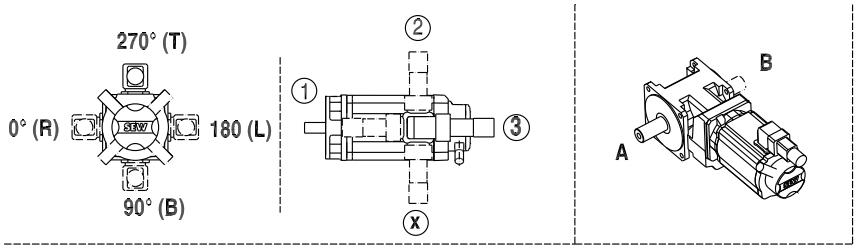


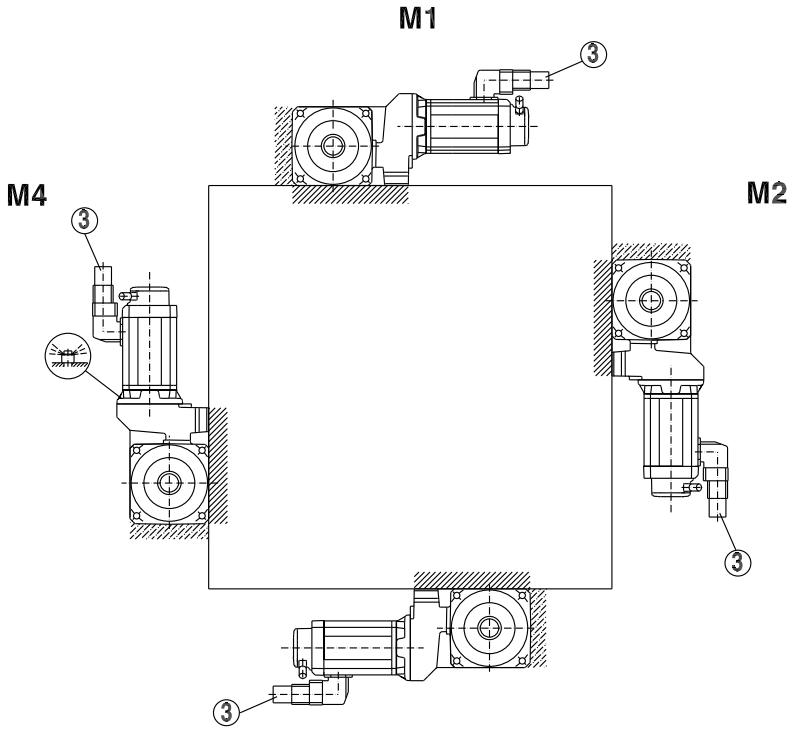


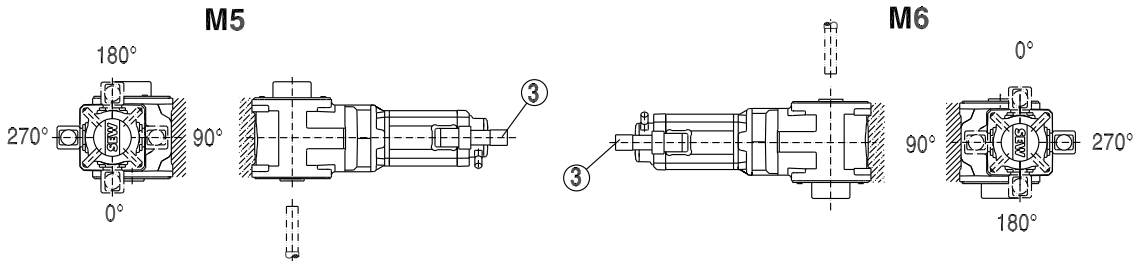
3 → page 68

BSHF202...802B

56 057 00 03

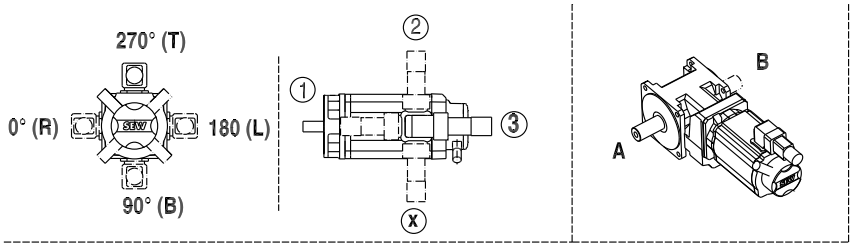




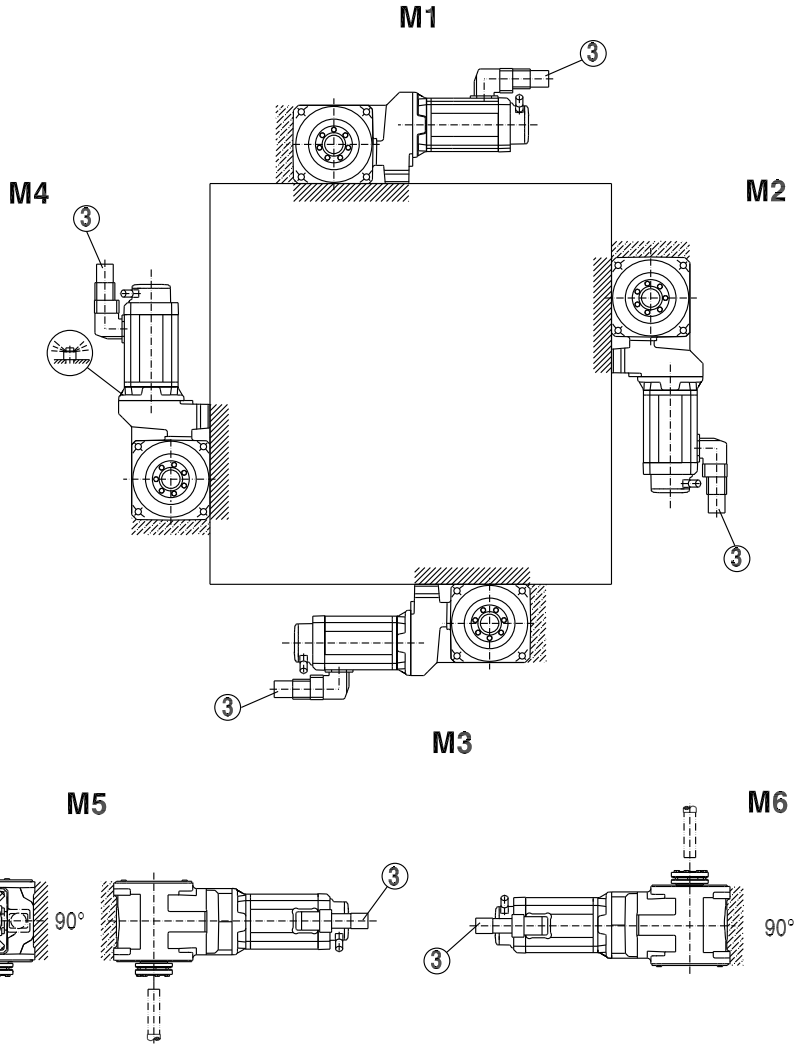


3 → page 68

BSHF202...802B /I



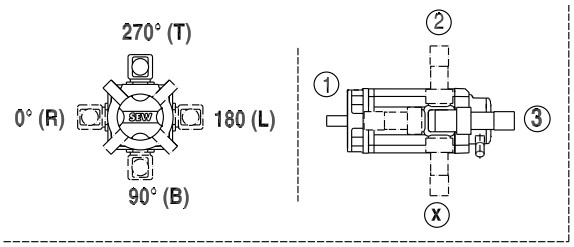
56 042 00 03



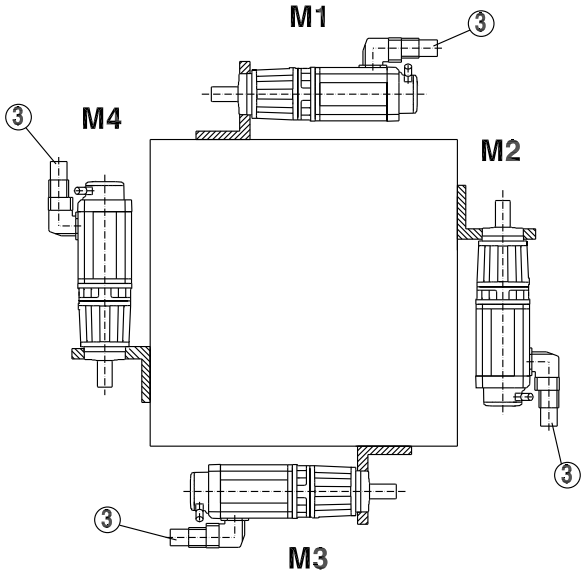
3 → page 68

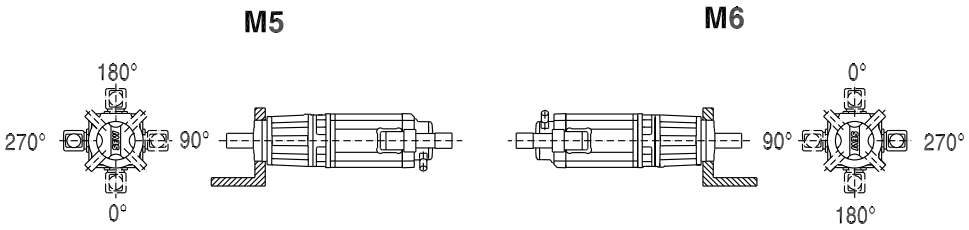
5.12 Mounting positions of PS.F, PS.C planetary gear units

PS.F121...922,
PS.C221...622



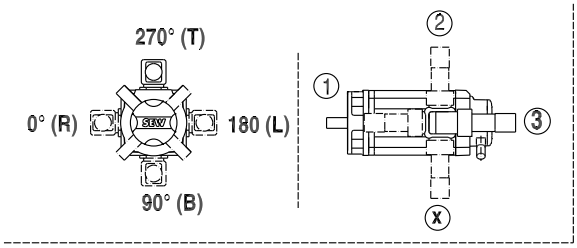
58 001 00 03



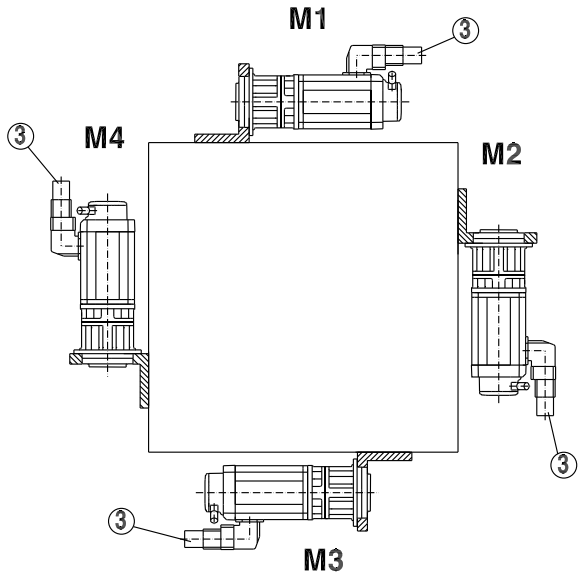


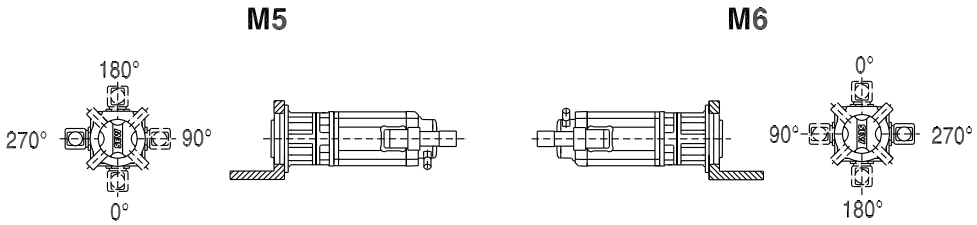
3 → page 68

PSBF221-822



58 002 00 03





3 → page 68