

5 Mounting Positions

5.1 General information on mounting positions

Mounting position designation: SEW-EURODRIVE differentiates between six mounting positions M1...M6 for variable speed gearmotors. The following figure shows the position of the variable speed gearmotor in mounting positions M1...M6.

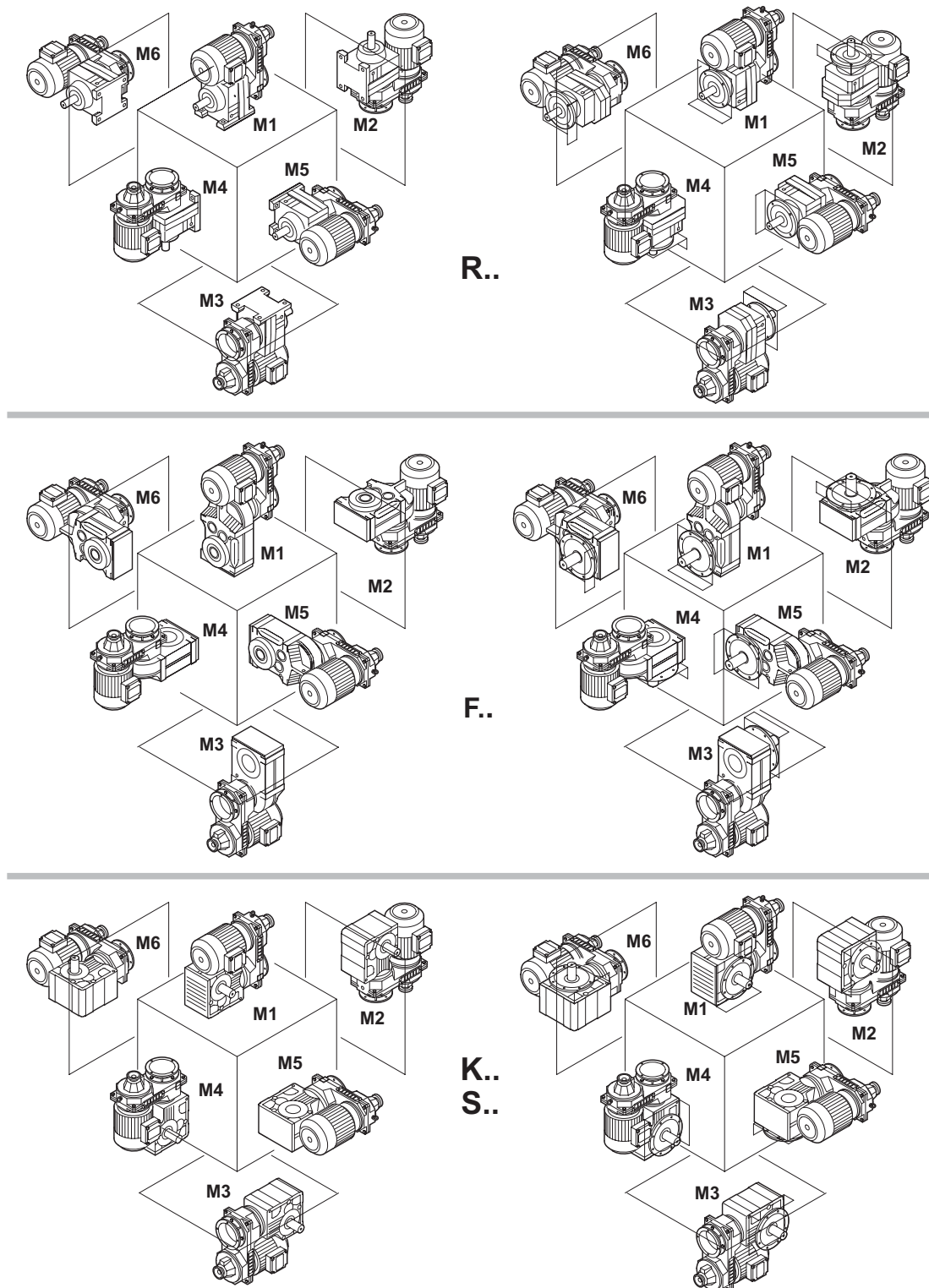


Figure 5: Mounting positions M1...M6

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5.2 Important order information

The following order information is required in addition to the mounting position to exactly determine the design of the drive:

- Position of the handwheel or adjusting device (0°, 90°, 180° or 270°) in VARIBLOC® and VARIMOT® variable speed gear units can be selected as required
- Position of the setting position indicator in VARIMOT® variable speed gear units: 0°, 180° or 0° + 180°

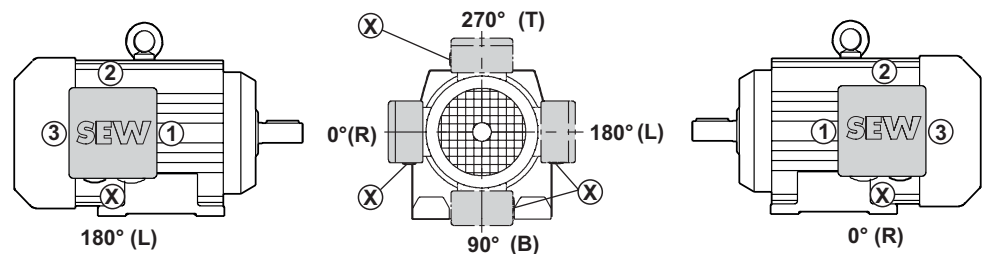
Position of the VARIBLOC® variable speed gear unit VU/VZ

Only those combinations listed in the section "Combination overviews VARIBLOC® and Gear Units" (gear unit – variable speed gear unit – motor) are available. If a VARIBLOC® is to be delivered in one of the inclined mounting positions X, Y or Z opposite the gear unit as defined in that section, the desired inclined mounting position designation has to be added to the mounting position designation (e.g. M1X).

Position of motor terminal box and cable entry

Possible positions of the terminal box are 0°, 90°, 180° or 270° as viewed onto the fan guard = B-end.

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



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Figure 6: Position of terminal box and cable entry

Unless indicated otherwise, you will receive the terminal box type 0° with "X" cable entry.

We recommend selecting cable entry "2" for mounting position M3.



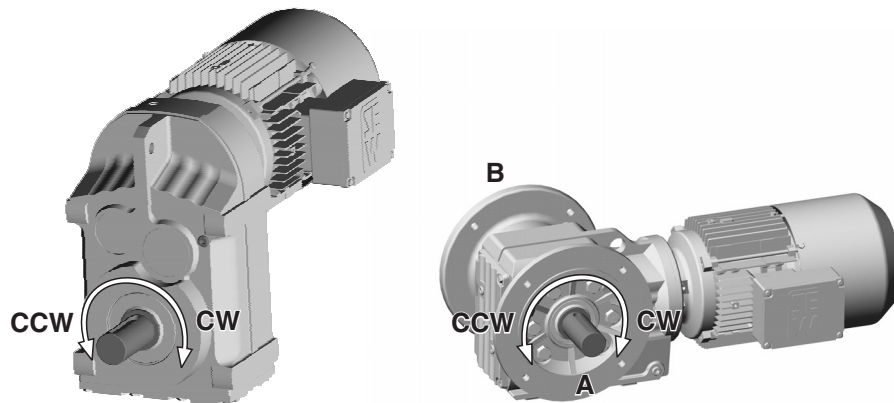
Important: For DR63 motors, **only** cable entries (X) and "2" are possible.

Exception: This restriction does not apply with the IS plug connection.

Direction of rotation of the drive with a backstop

If the drive has a backstop RS, it will be necessary to indicate the direction of rotation for the drive. The following definition applies:

Looking onto the output shaft: Clockwise (CW) = Rotating clockwise
Counterclockwise (CCW) = Rotating counterclockwise



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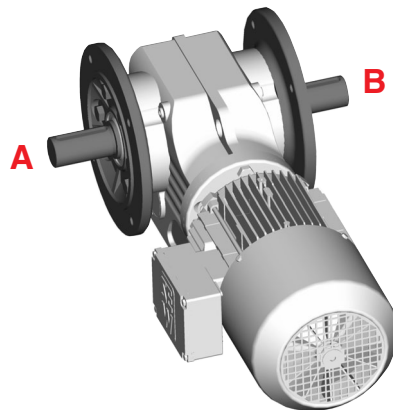
Figure 7: Direction of rotation of output

In right-angle gear units, it is also necessary to indicate if the direction of rotation is given looking onto the A or B end.

Position of the output shaft and the output flange

In right-angle gear units, it is also necessary to indicate the position of the output shaft and the output flange:

- A or B or AB



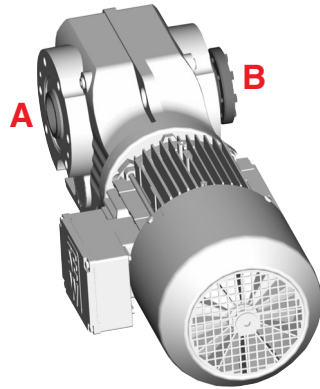
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Figure 8: Position of the output shaft and the output flange

Position of the output end in right-angle gear units

In shaft mounted right-angle gear units with a shrink disc, it is also necessary to indicate whether the A or B end is the output end. In figure 13, 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 9: Position of the output end

You will find the permitted mounting surfaces (= hatched area) in the mounting position sheets (page 107 and 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.

Sample orders

Type (examples)	Mounting position	Shaft position	Flange position	Position of terminal box	Position of cable entry	Direction of rotation of output
K47DT71D4/RS	M2	A	-	0°	"X"	CW
SF77DV100L4	M6	AB	AB	90°	"3"	-
KA97DV132M4	M4	B	-	270°	"2"	-
KH107DV160L4	M1	A	-	180°	"3"	-
KAF67A	M3	A	B	-	-	-

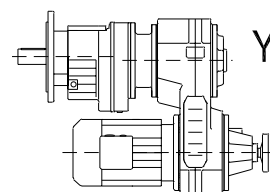
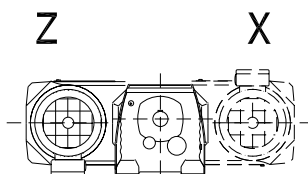
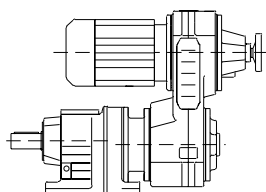
Change in mounting position

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.
EURODRIVE einschalten.
- For helical-worm gearmotors: Contact the SEW-EURODRIVE customer service when changing to mounting position M2.

5.3 Overview of standard VARIBLOC® and gear unit combinations

Standard VARIBLOC® VU.. with helical gear unit



Type	VU01	VU11	VU21	VU31	VU41	VU51	VU6	VU01	VU11	VU21	VU31	VU41	VU51	VU6	VU01	VU11	VU21	VU31	VU41	VU51	VU6
R27	1							1							1						
RF27	1							1							1						
R37	1	1						1	3						1						
RF37	1	1						1	1						1	1					
R47	1	1	1					1	1	1	1				1	1	1				
RF47	1	1	1					1	1	1					1	1	1				
RX57	1	1	1					1	1	1											
RXF57	1	1	1					1	1	1						1					
R57	1	1	1	1				1	1	1	1										
RF57	1	1	1	4				1	1	1	4					1	1	4			
RX67	1	1	1					1	1	1											
RXF67	1	1	1						1	1						3	1				
R67	1	1	1	1				2	1	1	1				2	1	1	1			
RF67	1	1	1	1				2	1	1	1				2	1	1	1			
RX77		1	1	1					1	1	1										
RXF77		1	1	1					1	1	1					3	1				
R77		1	1	1	1				1	1	1	1									
RF77		1	1	1	1				1	1	1	1				1	1	1	1		
RX87			1	1	1					1	1	1									
RXF87			1	1	1						1	1						1	1		
R87			1	1	1	1				1	1	1	1								
RF87			1	1	1	1				1	1	1	1					1	1	1	
RX97				1	1	1					1	1	1								
RXF97				1	1	1					1	1	1						1	1	
R97				1	1	1					1	1	1								
RF97				1	1	1					1	1	1						1	1	
RX107					1	1						1	1								
RXF107					1	1						1	1							1	
R107					1	1	1					1	1	1							
RF107					1	1	1					1	1	1					1	1	1
R137						1	1						1	1							
RF137						1	1						1	1							1
R147						1	1						1	1							
RF147						1	1						1	1							1
R167							1							1							
RF167							1							1							1

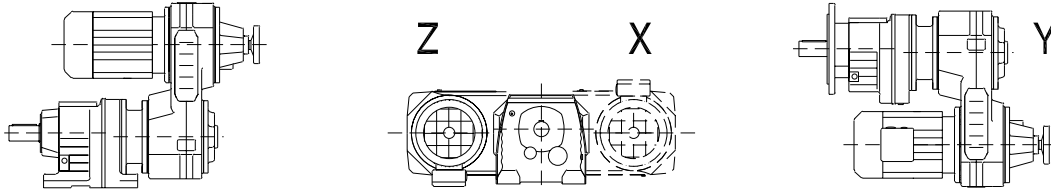
1) Combination possible without restriction

2) Combination possible with DR63 only

3) Combination possible with DT80 only

4) Combination possible with DV112 only

Standard VARIBLOC® VU.. with two helical gear units

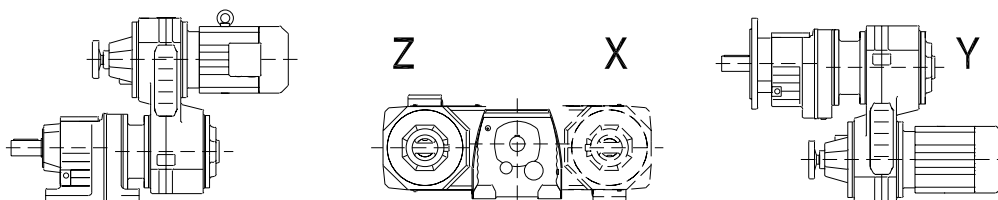


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Type	VU01	VU11	VU21	VU31	VU41	VU51	VU6	VU01	VU11	VU21	VU31	VU41	VU51	VU6	VU01	VU11	VU21	VU31	VU41	VU51	VU6
R47R37	1	1						1	1												
RF47R37	1	1						1	1						1	1					
R57R37	1	1						1	1												
RF57R37	1	1						1	1						1	1					
R67R37	1	1						1	1												
RF67R37	1	1						1	1						1	1					
R77R37	1	1						1	1												
RF77R37	1	1						1	1						1	1					
R87R57	1	1	1	1				1	1	1	1										
RF87R57	1	1	1	1	1			1	1	1	1						1	1	1		
R97R57	1	1	1	1	1			1	1	1	1										
RF97R57	1	1	1	1	1			1	1	1	1						1	1			
R107R77		1	1	4	1				1	1	4	1									
RF107R77		1	1	4	1				1	1	4	1					1	1	4	1	
R137R77		1	1	4	1				1	1	4	1									
R137R77		1	1	4	1				1	1	4	1					1	1	4	5	
R147R77		1	1	4	5				1	1	4	5									
RF147R77		1	1	4	5				1	1	4	5					1	1	4	5	
R147R87			1	1	1	1					1	5	1								
RF147R87			1	1	1	1					1	5	1					1	5		
R167R97				1	1	1					1	1	6								
RF167R97				1	1	1					1	1	6						1	6	
R167R107					1	1	1					1	1	1							
RF167R107					1	1	1					1	1	1					1	1	1

- 1) Combination possible without restriction
- 4) Combination possible with DV112 only
- 5) Combination possible with DV132M only
- 6) Combination possible with DV160L only

Standard VARIBLOC® VZ.. with helical gear unit

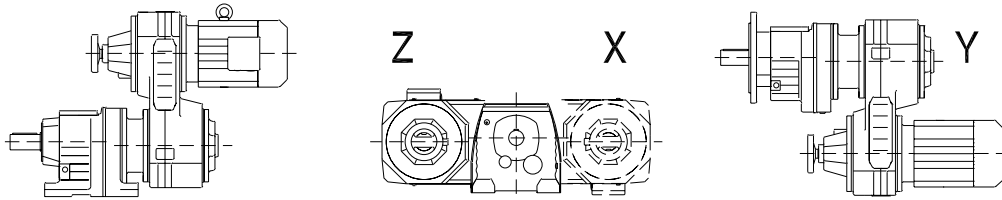


Type	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41
R27	1					1					1				
RF27	1					1					1				
R37	1	1				1	1				1	1			
RF37	1	1				1	1				1	1			
R47	1	1	1			1	1	1	1		2	1	1	1	
RF47	1	1	1			1	1	1	1		2	1	1	1	
RX57	1	1	1			1	1	1			2	1	1		
RF57	1	1	1			1	1	1			2	1	1		
R57	1	1	1	1		1	1	1	1		2	1	1	1	
RF57	1	1	1	1		1	1	1	1		2	1	1	1	
RX67	1	1	1			1	1	1			2	1	1		
RF67	1	1	1			1	1	1			2	1	1		
R67	1	1	1	1		1	1	1	1		2	1	1	1	
RF67	1	1	1	1		1	1	1	1		2	1	1	1	
RX77		1	1	1			1	1	1			1	1	1	
RF77		1	1	1			1	1	1			1	1	1	
R77		1	1	1	1		1	1	1	1		1	1	1	1
RF77		1	1	1	1		1	1	1	1		1	1	1	1
RX87			1	1	1			1	1	1				1	1
RF87			1	1	1			1	1	1				1	1
R87			1	1	1			1	1	1			2	1	1
RF87			1	1	1			1	1	1			2	1	1
RX97				1	1				1	1				2	1
RF97				1	1				1	1				2	1
R97				1	1				1	1				2	1
RF97				1	1				1	1				2	1
RX107					1					1					2
RF107					1					1					2
R107					1					1					2
RF107					1					1					2

1) Combination possible without restriction

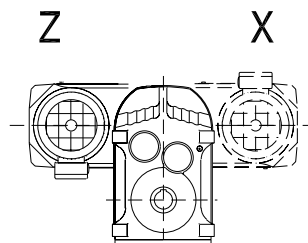
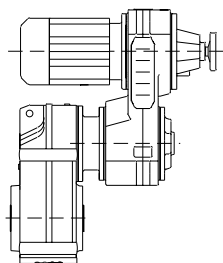
2) Combination only possible in conjunction with control head (NV, H, HS, EF)

Standard VARIBLOC® VZ.. with two helical gear units



Type	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41
R47R37	1	1				1	1				1	1			
RF47R37	1	1				1	1				1	1			
R57R37	1	1				1	1				1	1			
RF57R37	1	1				1	1				1	1			
R67R37	1	1				1	1				1	1			
RF67R37	1	1				1	1				1	1			
R77R37	1	1				1	1				1	1			
RF77R37	1	1				1	1				1	1			
R87R57	1	1	1	1		1	1	1	1		1	1	1	1	
RF87R57	1	1	1	1		1	1	1	1		1	1	1	1	
R97R57	1	1	1	1		1	1	1	1		1	1	1	1	
RF97R57	1	1	1	1		1	1	1	1		1	1	1	1	
R107R77		1	1	1	1		1	1	1	1		1	1	1	1
RF107R77		1	1	1	1		1	1	1	1		1	1	1	1
R137R77		1	1	1	1		1	1	1	1		1	1	1	1
RF137R77		1	1	1	1		1	1	1	1		1	1	1	1
R147R77		1	1	1	1		1	1	1	1		1	1	1	1
RF147R77		1	1	1	1		1	1	1	1		1	1	1	1
R147R87			1	1	1			1	1	1					
RF147R87			1	1	1			1	1	1			2	1	1
R167R97				1	1				1	1					
RF167R97				1	1				1	1				2	1
R167R107					1					1					
RF167R107					1					1					2

- 1) Combination possible
- 2) Combination only possible in conjunction with control head (NV, H, HS, EF)
- 3) Gear unit must be mounted on a base

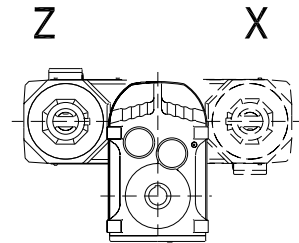
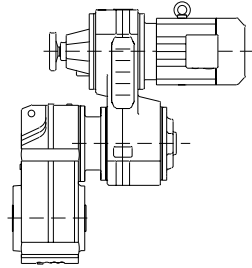
Standard VARIBLOC® VU.. with parallel shaft helical gear unit

Type	VU01	VU11	VU21	VU31	VU41	VU51	VU6	VU01	VU11	VU21	VU31	VU41	VU51	VU6
F37	1	1						1	1					
FF37	1	1						1	1					
FA37	1	1						1	1					
F47	1	1						1	1					
FF47	1	1						1	1					
FA47	1	1						1	1					
F57	1	1	1	1				1	1	1	1			
FF57	1	1	1	1				1	1	1	1			
FA57	1	1	1	1				1	1	1	1			
F67	1	1	1	1				1	1	1	1			
FF67	1	1	1	1				1	1	1	1			
FA67	1	1	1	1				1	1	1	1			
F77		1	1	1	1				2	1	1	1		
FF77		1	1	1	1				2	1	1	1		
FA77		1	1	1	1				2	1	1	1		
F87			1	1	1	1					1	1	1	
FF87			1	1	1	1					1	1	1	
FA87			1	1	1	1					1	1	1	
F97				1	1	1						1	1	
FF97				1	1	1						1	1	
FA97				1	1	1						1	1	
F107					1	1	1					1	1	1
FF107					1	1	1					1	1	1
FA107					1	1	1					1	1	1
F127						1	1						1	1
FF127						1	1						1	1
FA127						1	1						1	1
F157						1	1							1
FF157						1	1							1
FA157						1	1							1

1) Combination possible without restriction

2) Combination possible with DT80 only

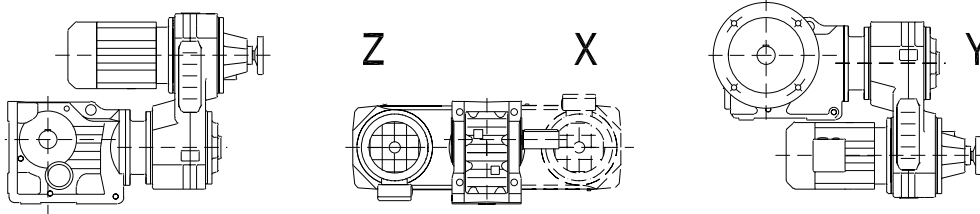
Standard VARIBLOC® VZ.. with parallel shaft helical gear unit



Type	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41
F37	1	1				1	1			
FF37	1	1				1	1			
FA37	1	1				1	1			
F47	1	1				1	1			
FF47	1	1				1	1			
FA47	1	1				1	1			
F57	1	1	1	1		1	1	1	1	
FF57	1	1	1	1		1	1	1	1	
FA57	1	1	1	1		1	1	1	1	
F67	1	1	1	1		1	1	1	1	
FF67	1	1	1	1		1	1	1	1	
FA67	1	1	1	1		1	1	1	1	
F77		1	1	1	1		1	1	1	1
FF77		1	1	1	1		1	1	1	1
FA77		1	1	1	1		1	1	1	1
F87			1	1	1			1	1	1
FF87			1	1	1			1	1	1
FA87			1	1	1			1	1	1
F97				1	1				1	1
FF97				1	1				1	1
FA97				1	1				1	1
F107					1					1
FF107					1					1
FA107					1					1

1) Combination possible without restriction

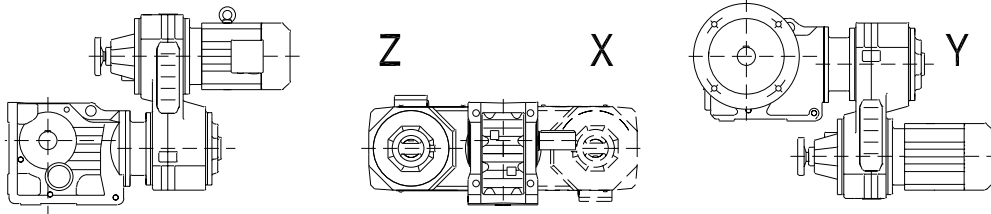
Standard VARIBLOC® VU.. with helical-bevel gear unit



Type	VU01	VU11	VU21	VU31	VU41	VU51	VU6	VU01	VU11	VU21	VU31	VU41	VU51	VU6	VU01	VU11	VU21	VU31	VU41	VU51	VU6
K37	1	1						1	1						1	1					
KF37	1	1						1	1						3	3					
KA37	1	1						1	1						3	3					
K47	1	1	1					1	1	1					1	1	1				
KF47	1	1	1					1	1	1					3	3	3				
KA47	1	1	1					1	1	1					3	3	3				
K57	1	1	1	1				1	1	1	1					1	1	1			
KF57	1	1	1	1				1	1	1	1					3	3	3			
KA57	1	1	1	1				1	1	1	1					3	3	3			
K67	1	1	1	1				1	1	1	1					1	1	1			
KF67	1	1	1	1				1	1	1	1					3	3	3			
KA67	1	1	1	1				1	1	1	1					3	3	3			
K77		2	1	1	1				1	1	1	1						1	1		
KF77		2	1	1	1				1	1	1	1						3	3		
KA77		2	1	1	1				1	1	1	1						3	3		
K87				1	1	1				1	1	1	1					1	1	1	
KF87				1	1	1				1	1	1	1					3	3	3	
KA87				1	1	1				1	1	1	1					3	3	3	
K97				1	1	1				1	1	1	1						1	1	
KF97				1	1	1				1	1	1	1						3	3	
KA97				1	1	1				1	1	1	1						3	3	
K107					1	1	1					1	1	1							
KF107					1	1	1					1	1	1						1	1
KA107					1	1	1					1	1	1						3	3
K127						1	1						1	1							
KF127						1	1						1	1							1
KA127						1	1						1	1							3
K157							1							1							
KF157							1							1							1
KA157							1							1							1

- 1) Combination possible without restriction
- 2) Combination possible with DT80 only
- 3) Contact SEW-EURODRIVE if you want to install a torque arm

Standard VARIBLOC® VZ.. with helical-bevel gear unit



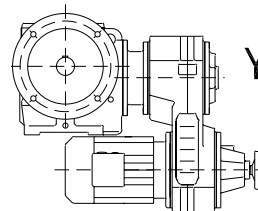
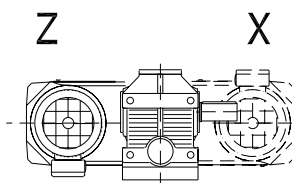
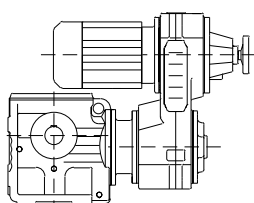
Type	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41
K37	1	1				1	1				1	1			
KF37	1	1				1	1				3	3			
KA37	1	1				1	1								
K47	1	1	1			1	1	1			1	1	1		
KF47	1	1	1			1	1	1			3	3	3		
KA47	1	1	1			1	1	1							
K57	1	1	1	1		1	1	1	1		2	1	1	1	
KF57	1	1	1	1		1	1	1	1			3	3	3	
KA57	1	1	1	1		1	1	1	1						
K67	1	1	1	1		1	1	1	1		2	1	1	1	
KF67	1	1	1	1		1	1	1	1			3	3	3	
KA67	1	1	1	1		1	1	1	1						
K77		1	1	1	1		1	1	1	1		1	1	1	1
KF77		1	1	1	1		1	1	1	1		2/3	3	3	3
KA77		1	1	1	1		1	1	1	1					
K87			1	1	1			1	1	1			2	1	1
KF87			1	1	1			1	1	1			2/3	3	3
KA87			1	1	1			1	1	1					
K97				1	1				1	1				2	1
KF97				1	1				1	1				2/3	3
KA97				1	1				1	1					
K107					1					1					2
KF107					1					1					3
KA107					1					1					

1) Combination possible without restriction

2) Combination only possible in conjunction with control head (NV, H, HS, EF)

3) Contact SEW-EURODRIVE if you want to install a torque arm

Standard VARIBLOC® VU.. with helical-worm gear unit

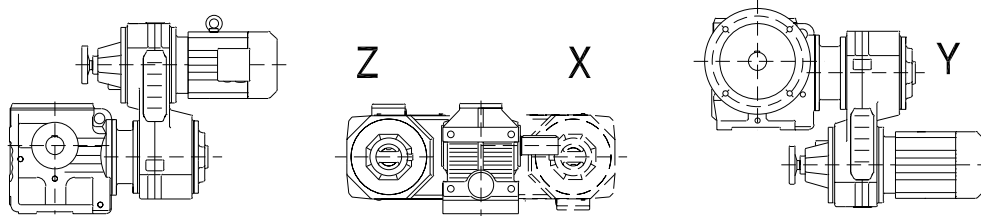


Type	VU01	VU11	VU21	VU31	VU41	VU51	VU01	VU11	VU21	VU31	VU41	VU51	VU01	VU11	VU21	VU31	VU41	VU51
S37	1						1						1					
SF37	1						1						1					
SA37	1						1						1					
S47	1	1					1	1					1	1				
SF47	1	1					1	1					1	1				
SA47	1	1					1	1					1	1				
S57	1	1					1	1					1	1				
SF57	1	1					1	1					1	1				
SA57	1	1					1	1					1	1				
S67		1	1	1			1	1	1	1				1	1	1		
SF67		1	1	1			1	1	1	1				1	1	1		
SA67		1	1	1			1	1	1	1				1	1	1		
S77		2		1	1			1	1	1	1			2		1	1	
SF77		2		1	1			1	1	1	1			2		1	1	
SA77		2		1	1			1	1	1	1			2		1	1	
S87				1	1	1			1	1	1					1	1	1
SF87				1	1	1			1	1	1					1	1	1
SA87				1	1	1			1	1	1					1	1	1
S97					1	1			1	1	1							
SF97					1	1			1	1	1							
SA97					1	1			1	1	1						1	1

1) Combination possible without restriction

2) Combination possible with DT80 only

Standard VARIBLOC® VZ.. with helical-worm gear unit



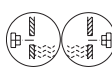
Type	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41	VZ01	VZ11	VZ21	VZ31	VZ41
S37	1					1					1				
SF37	1					1					1				
SA37	1					1					1				
S47	1	1				1	1				1	1			
SF47	1	1				1	1				1	1			
SA47	1	1				1	1				1	1			
S57	1	1				1	1				1	1			
SF57	1	1				1	1				1	1			
SA57	1	1				1	1				1	1			
S67		1	1	1		1	1	1	1			1	1	1	
SF67		1	1	1		1	1	1	1			1	1	1	
SA67		1	1	1		1	1	1	1			1	1	1	
S77		1	1	1	1		1	1	1	1		1	1	1	1
SF77		1	1	1	1		1	1	1	1		1	1	1	1
SA77		1	1	1	1		1	1	1	1		1	1	1	1
S87			1	1	1			1	1	1				1	1
SF87			1	1	1			1	1	1				1	1
SA87			1	1	1			1	1	1				1	1
S97				1	1				1	1					1
SF97				1	1				1	1					1
SA97				1	1				1	1					1

1) Combination possible without restriction

5.4 Key to mounting position sheets

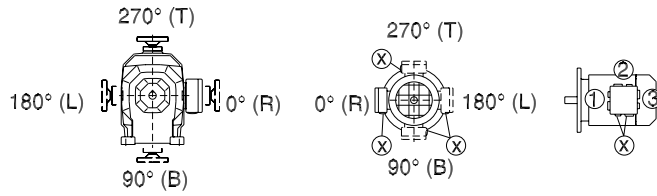
Symbols used

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

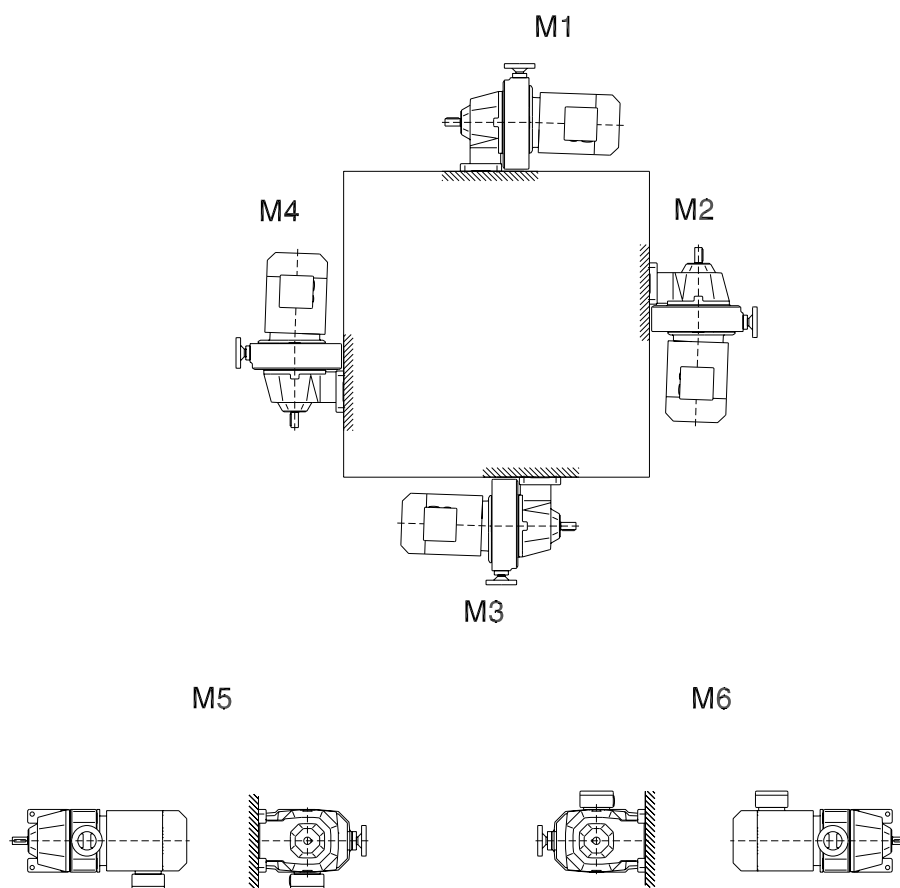
Symbol	Meaning
	Breather valve
	Oil level plug
	Oil drain plug
	Cable entry "standard position"

5.5 VARIMOT® D.. variable speed gear units

15 002 01 01



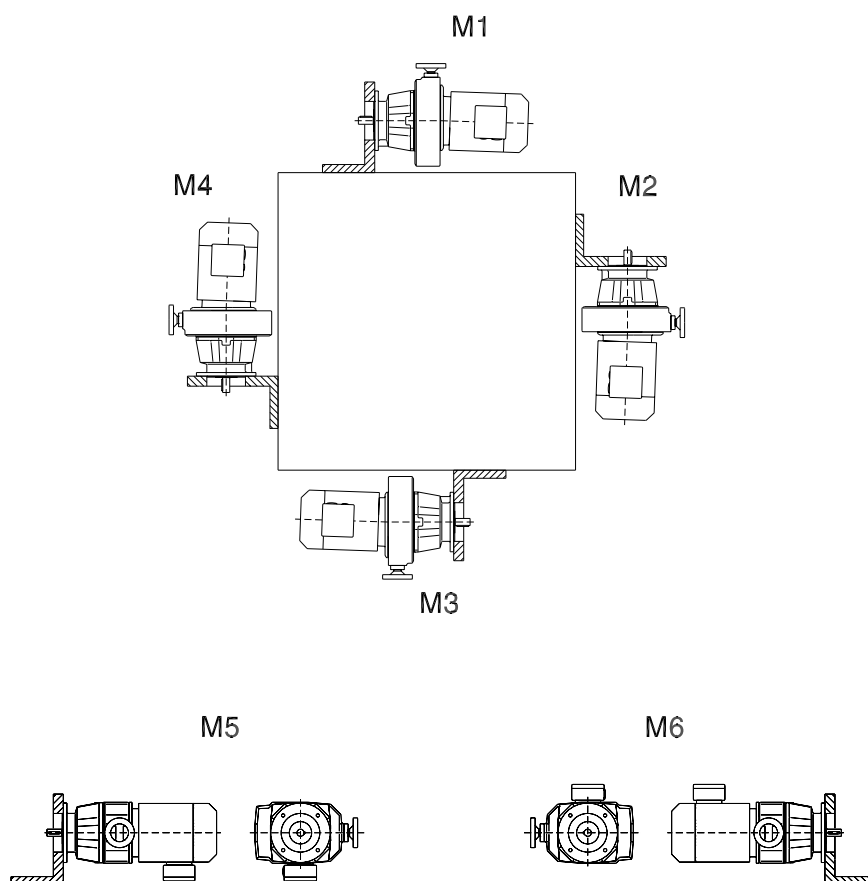
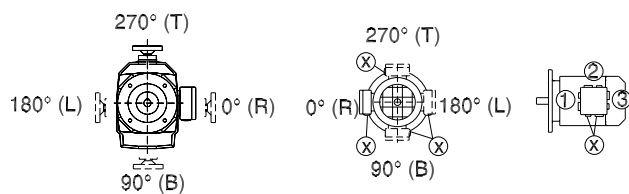
5



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5.6 VARIMOT® DF... variable speed gear units

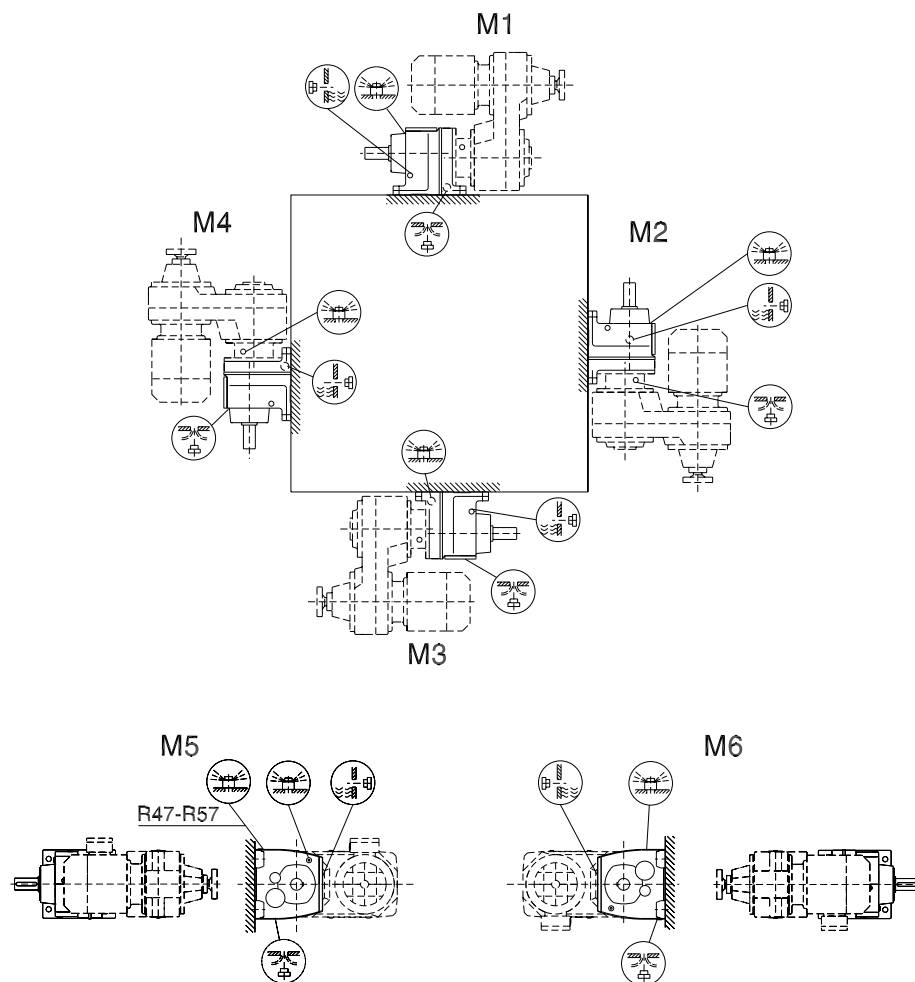
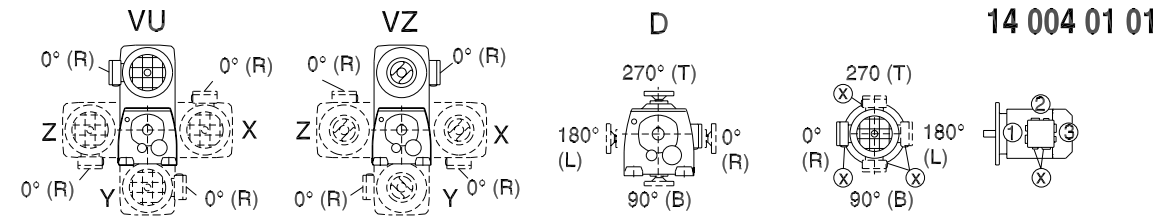
15 003 01 01



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5.7 Variable speed gearmotors with helical gear unit

R27 - R167



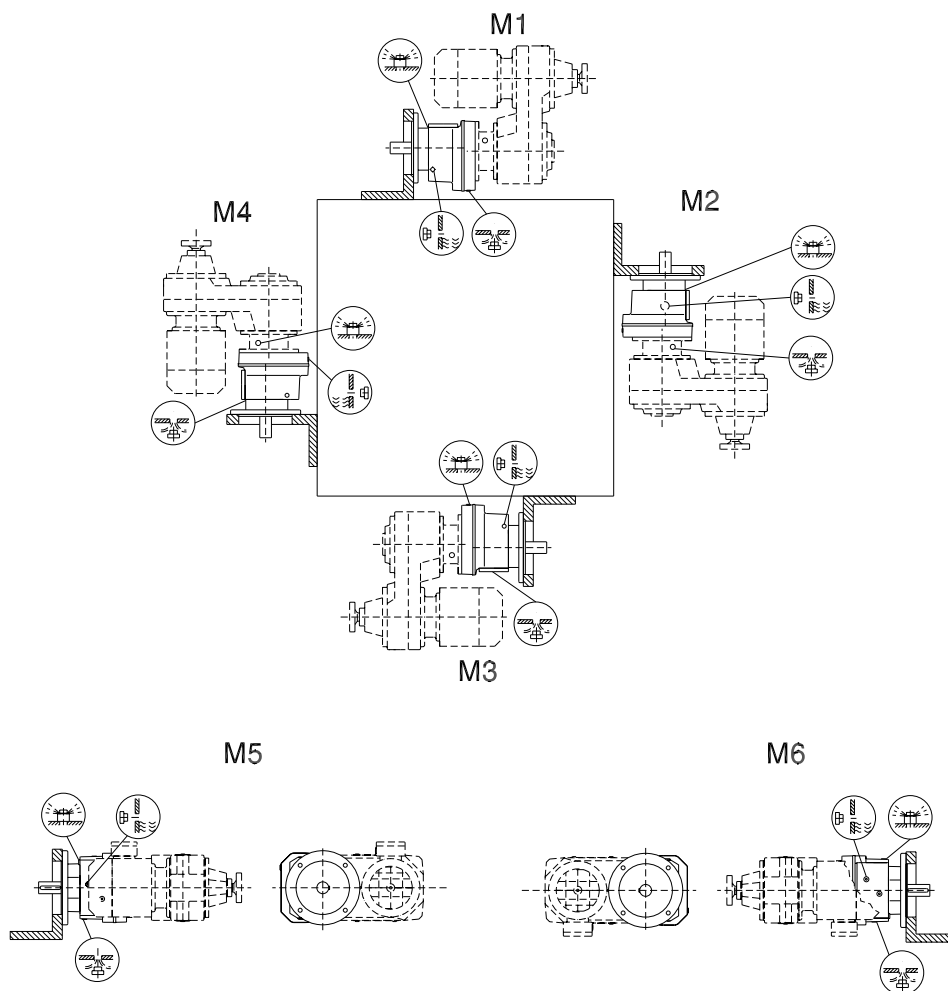
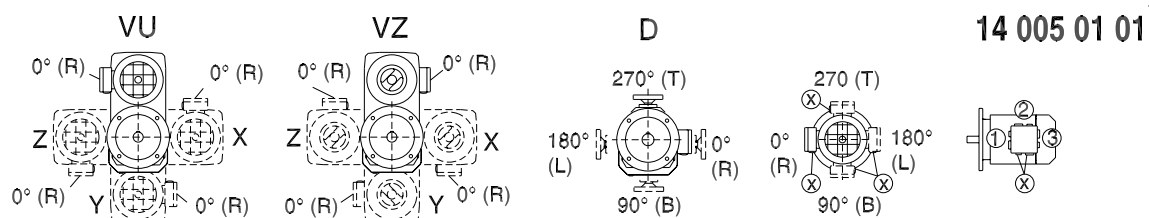
R27  M1, M3, M5, M6

R27  

R47, R57  M5

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RF27 - RF167



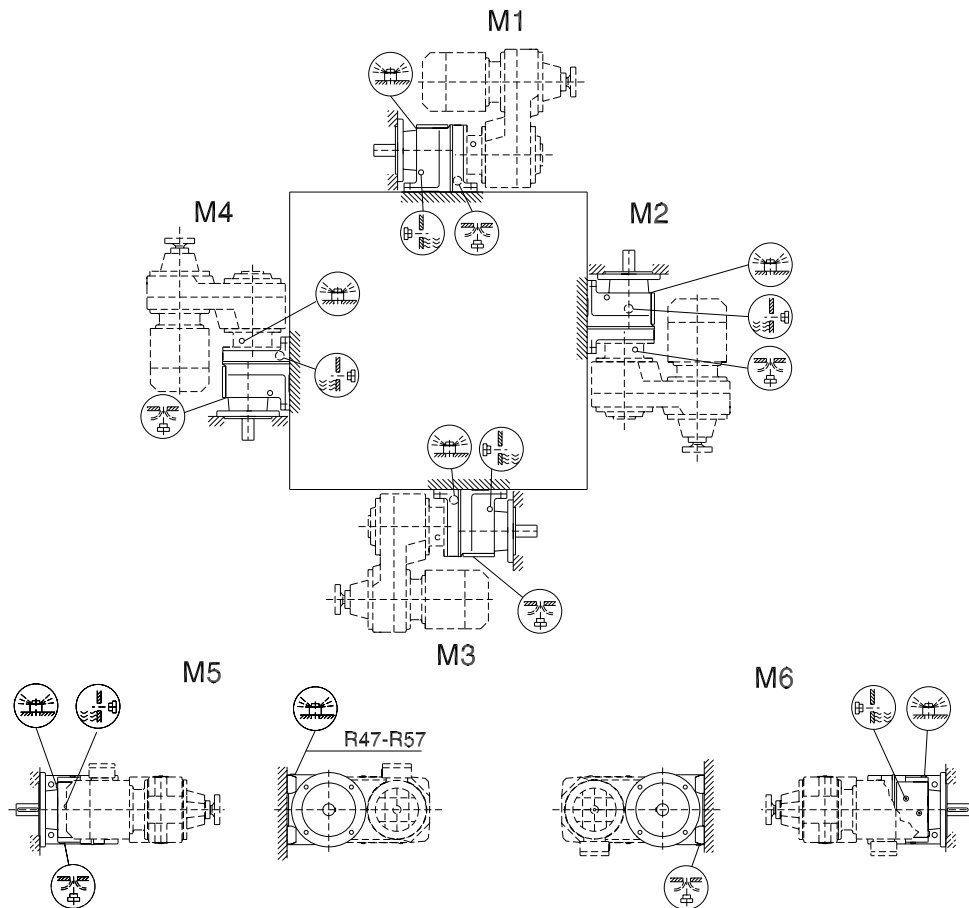
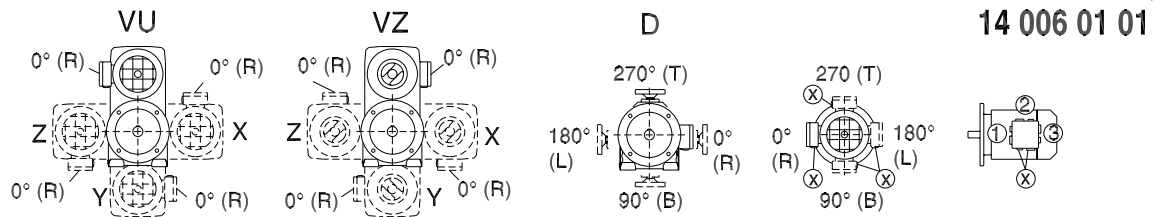
RF27  M1, M3, M5, M6

RF27  

RF47, RF57  M5

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R27F - R87F



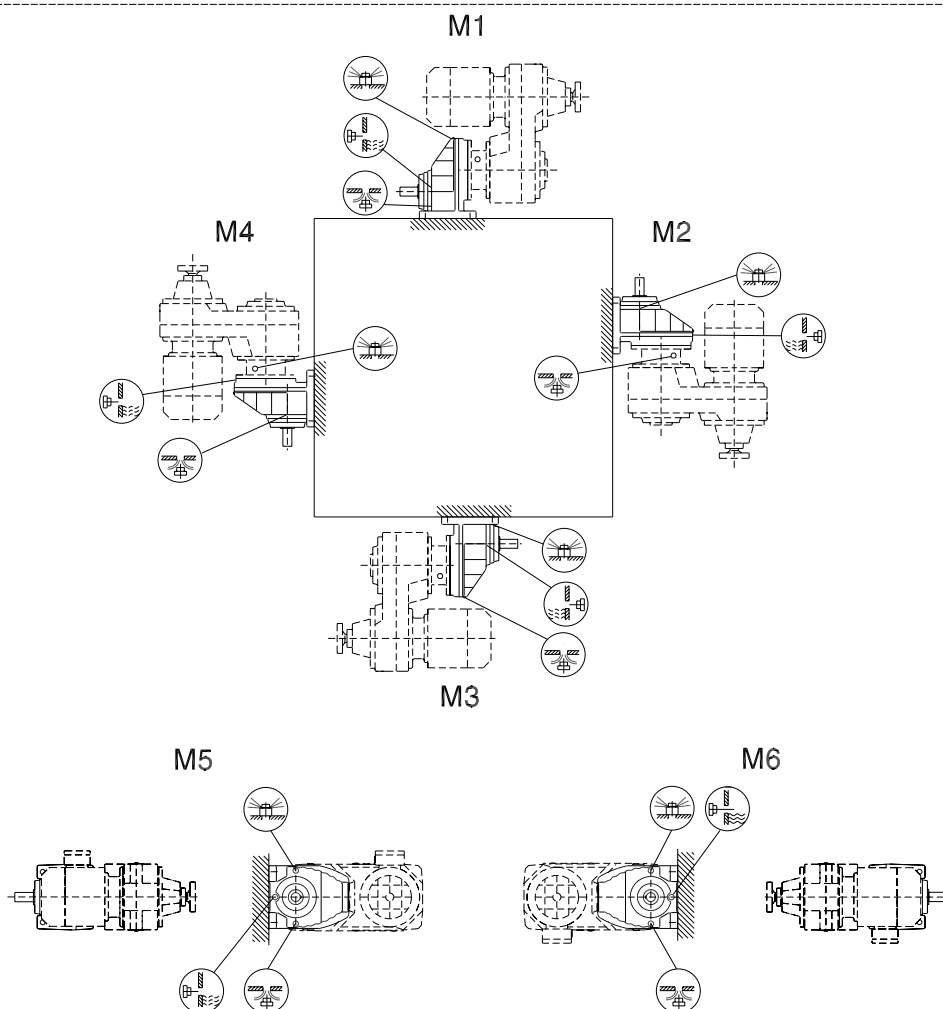
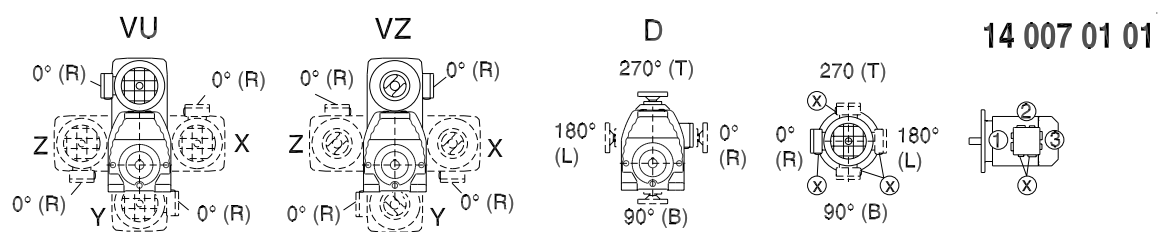
R27F  M1, M3, M5, M6

R27F  

R47F, R57F  M5

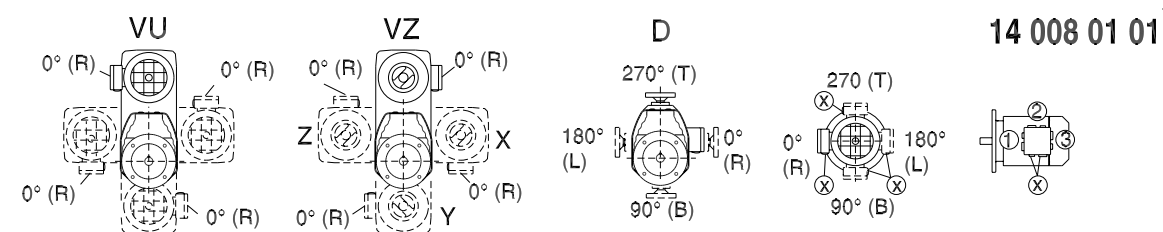
* → page 106

RX57-RX107

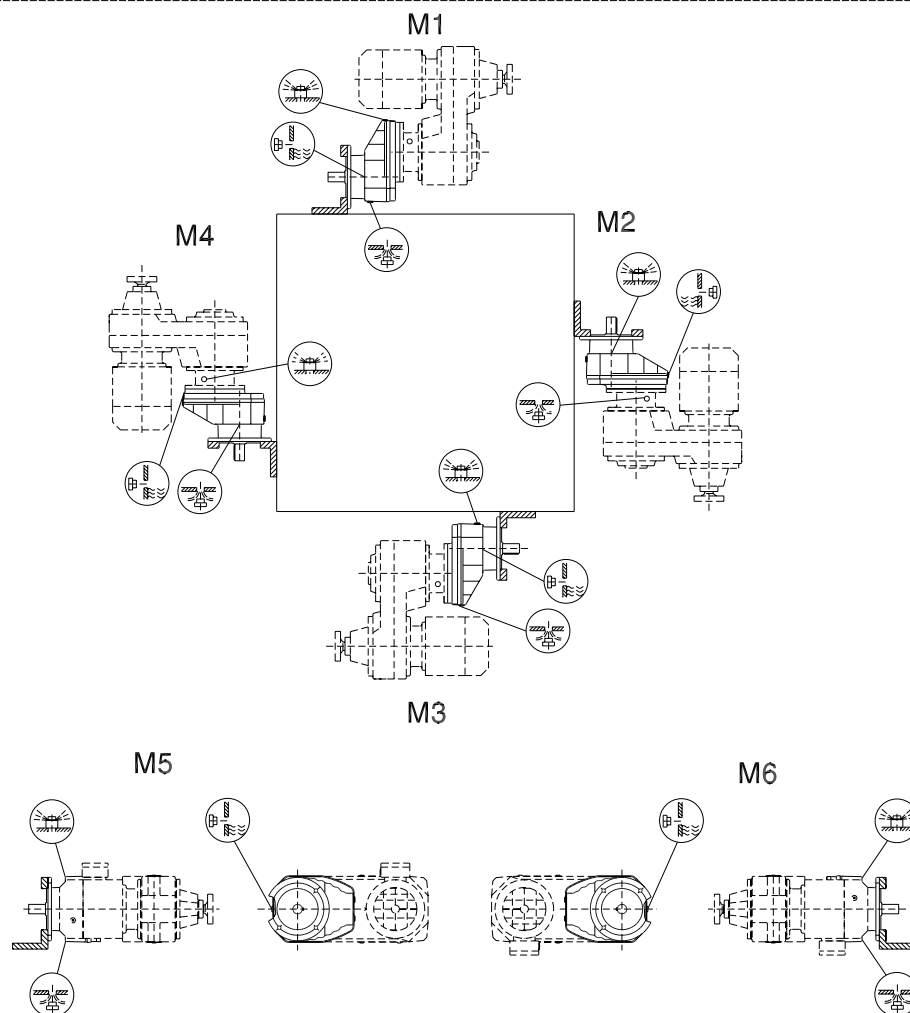


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RXF57 - RXF107



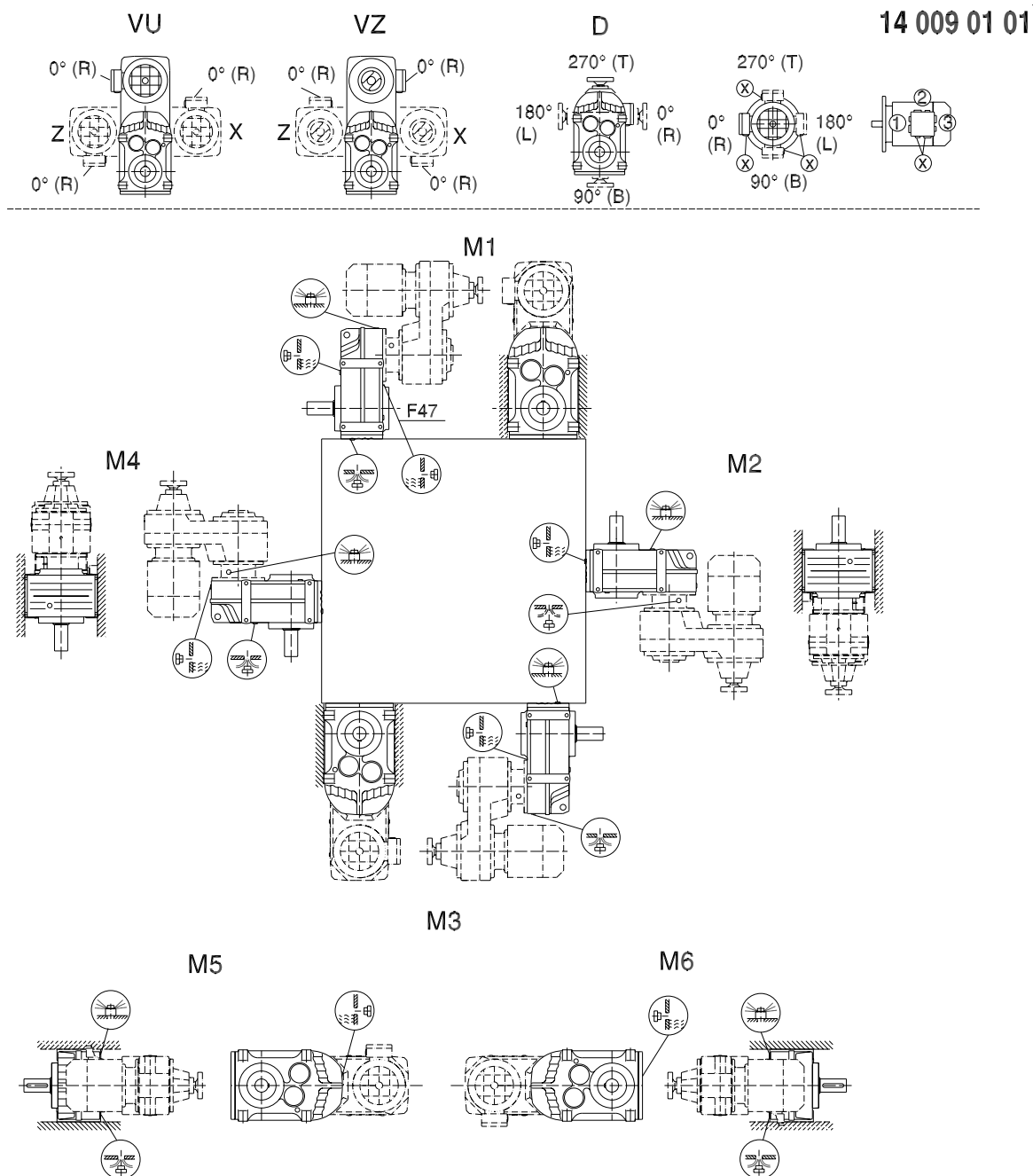
14 008 01 01



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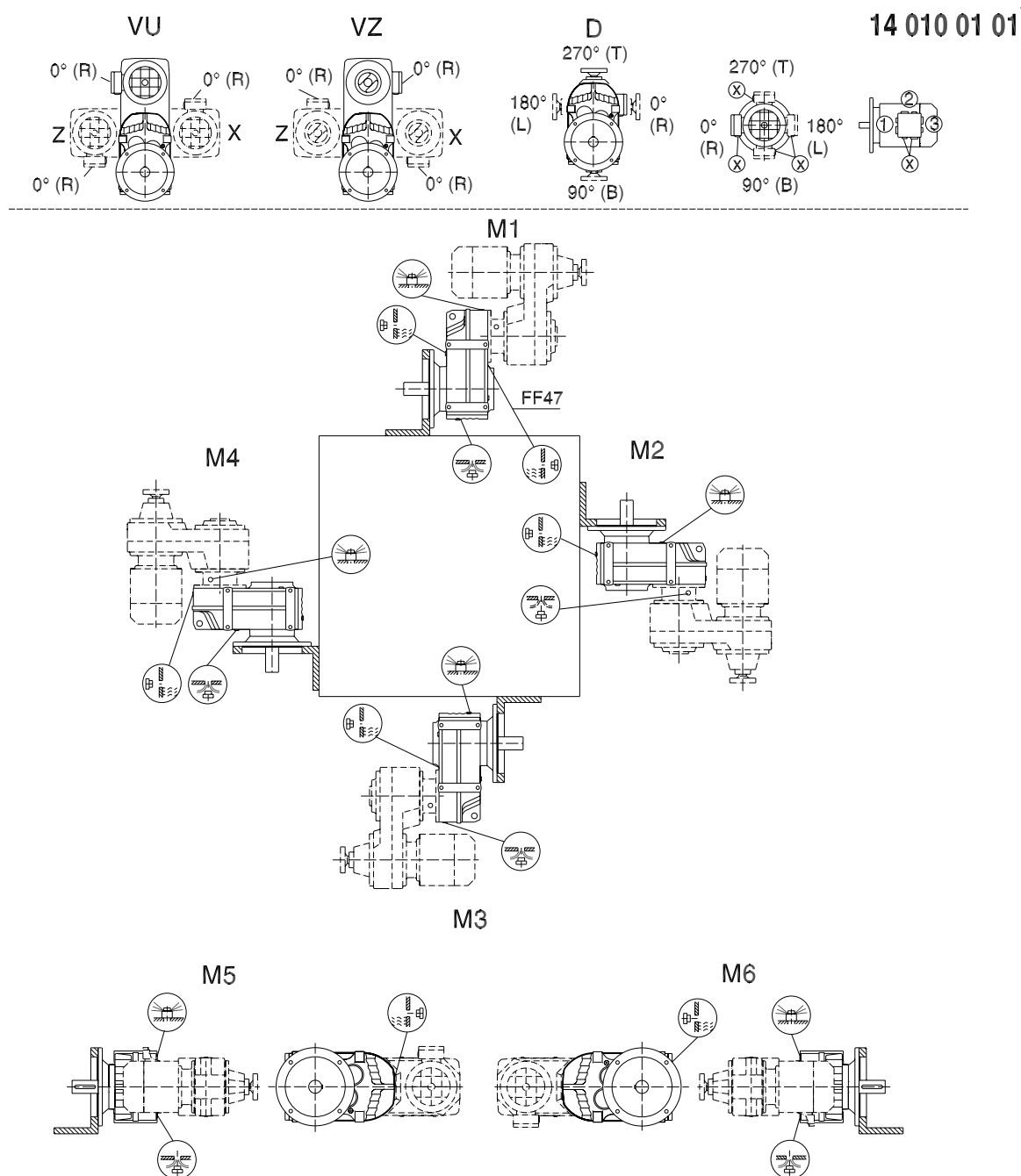
5.8 Variable speed gearmotors with parallel shaft helical gear unit

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

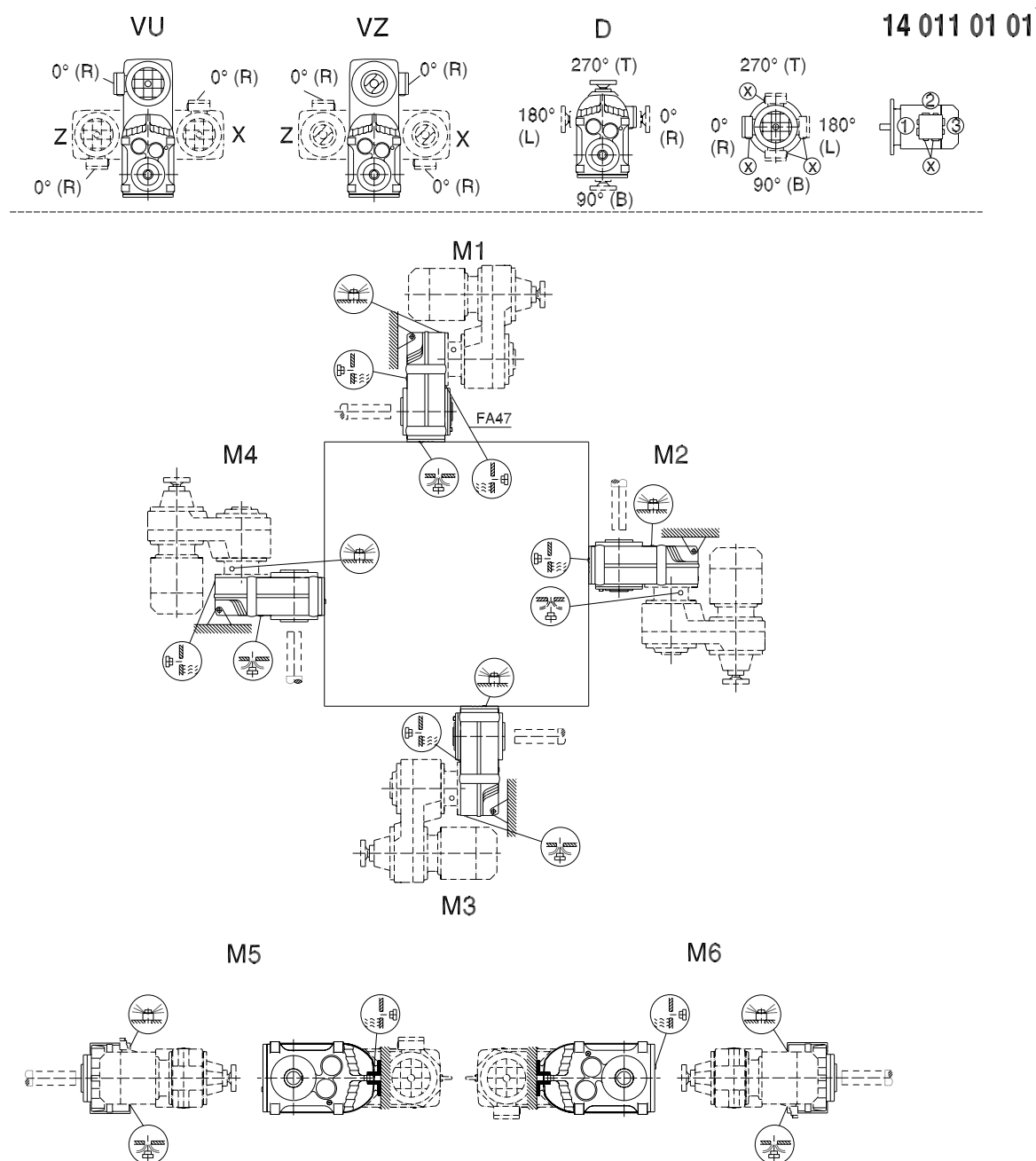


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FF/FAF/FHF/FAZ/FHZ27 - 157, FVF/FVZ37 - 107



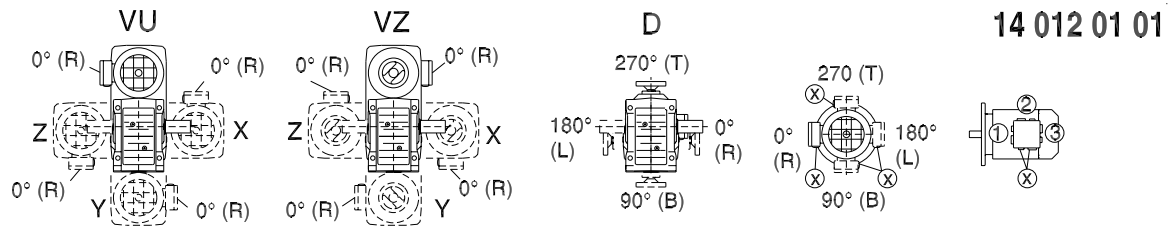
FA/FH27 - 157, FV27 - 107



* → page 106

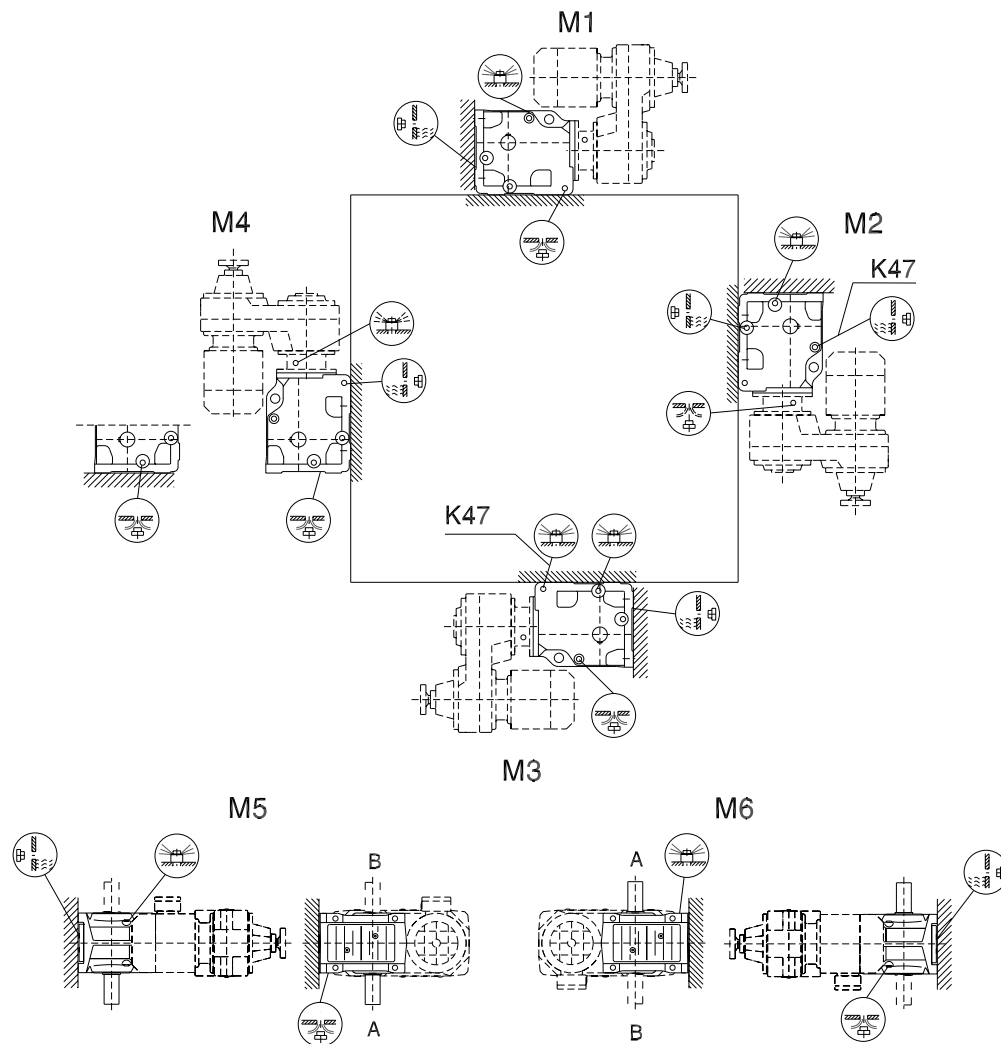
5.9 Variable speed gearmotors with helical-bevel gear unit

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



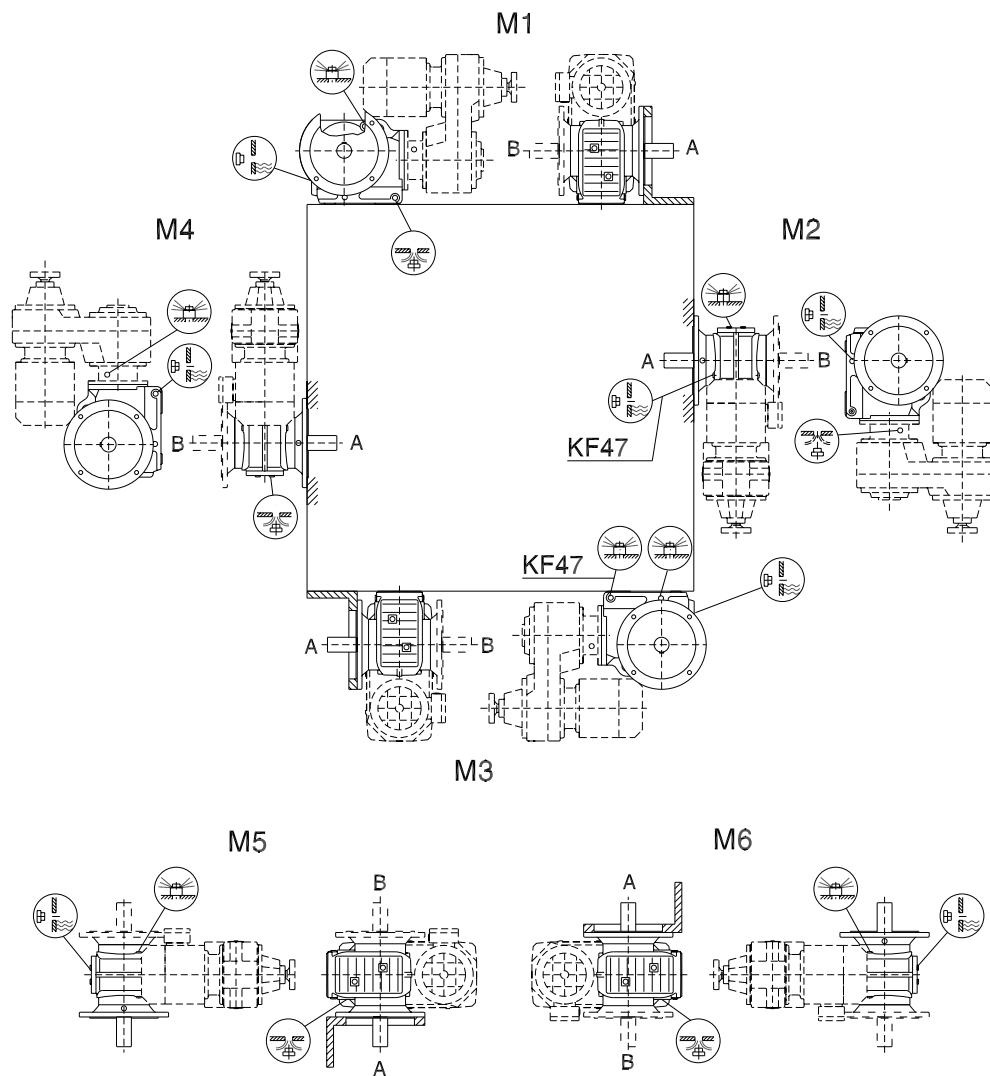
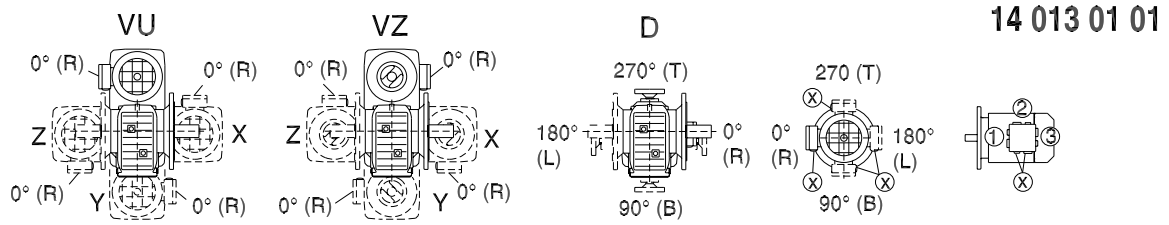
14 012 01 01

5



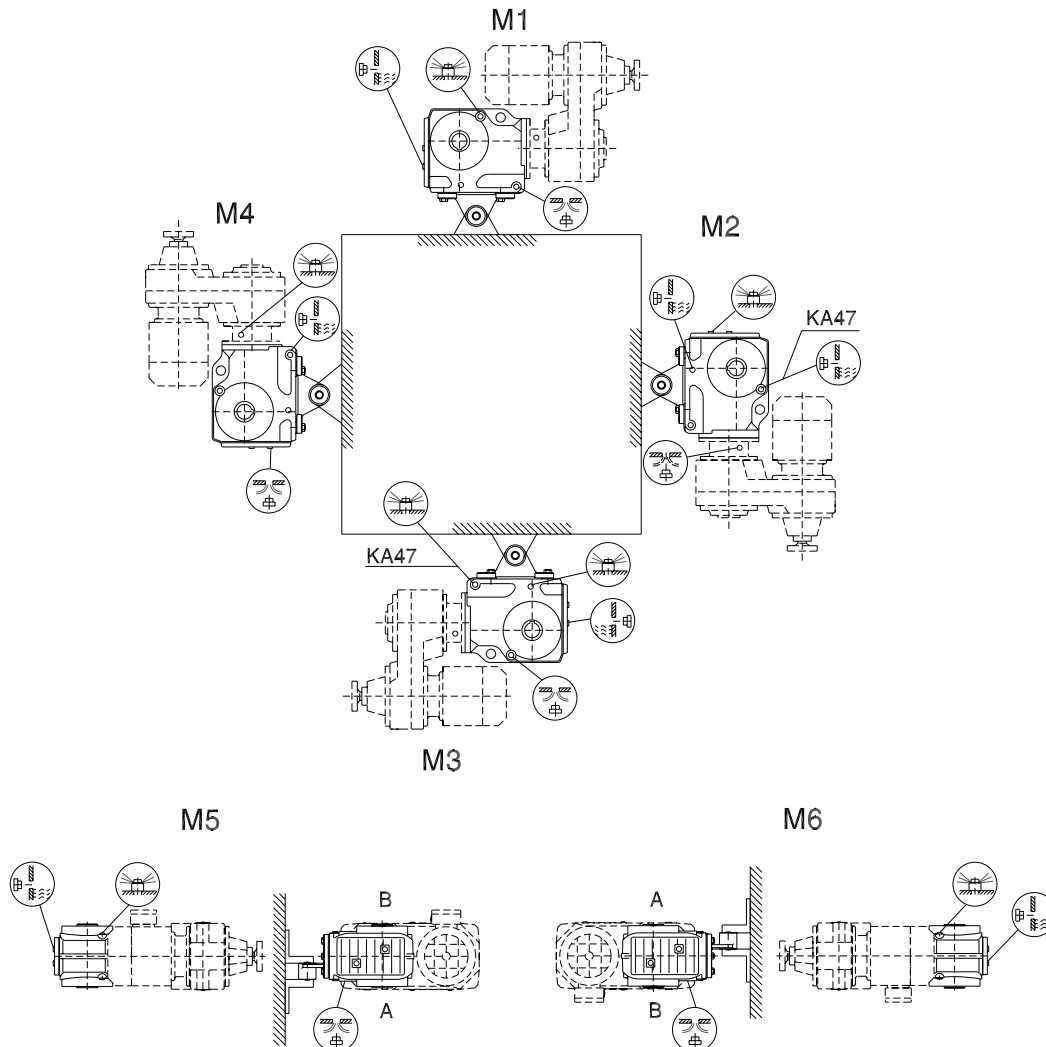
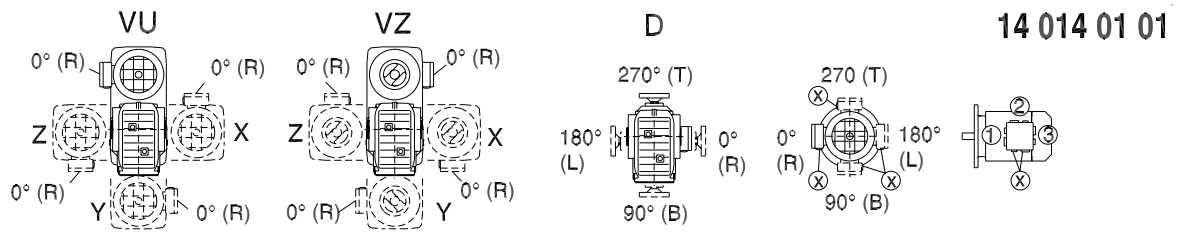
* → page 106

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



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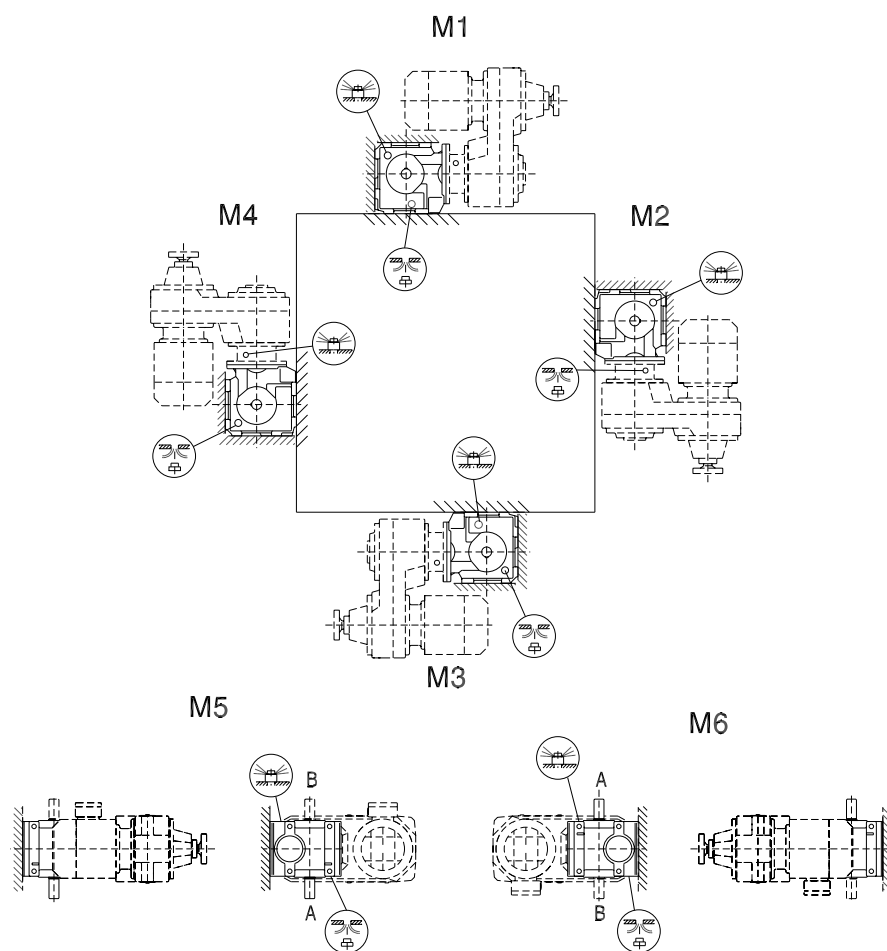
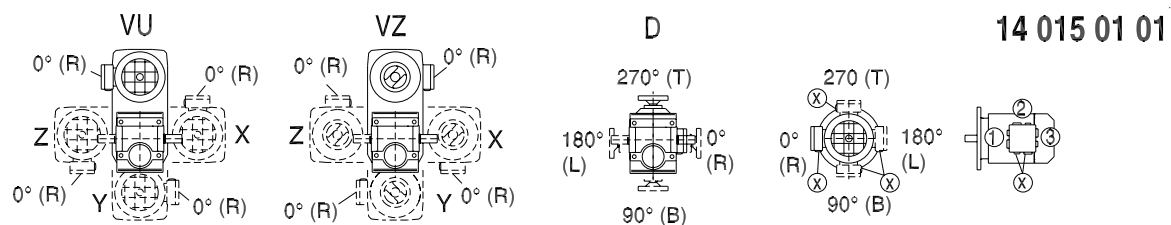
KA/KH37 - 157, KV37 - 107



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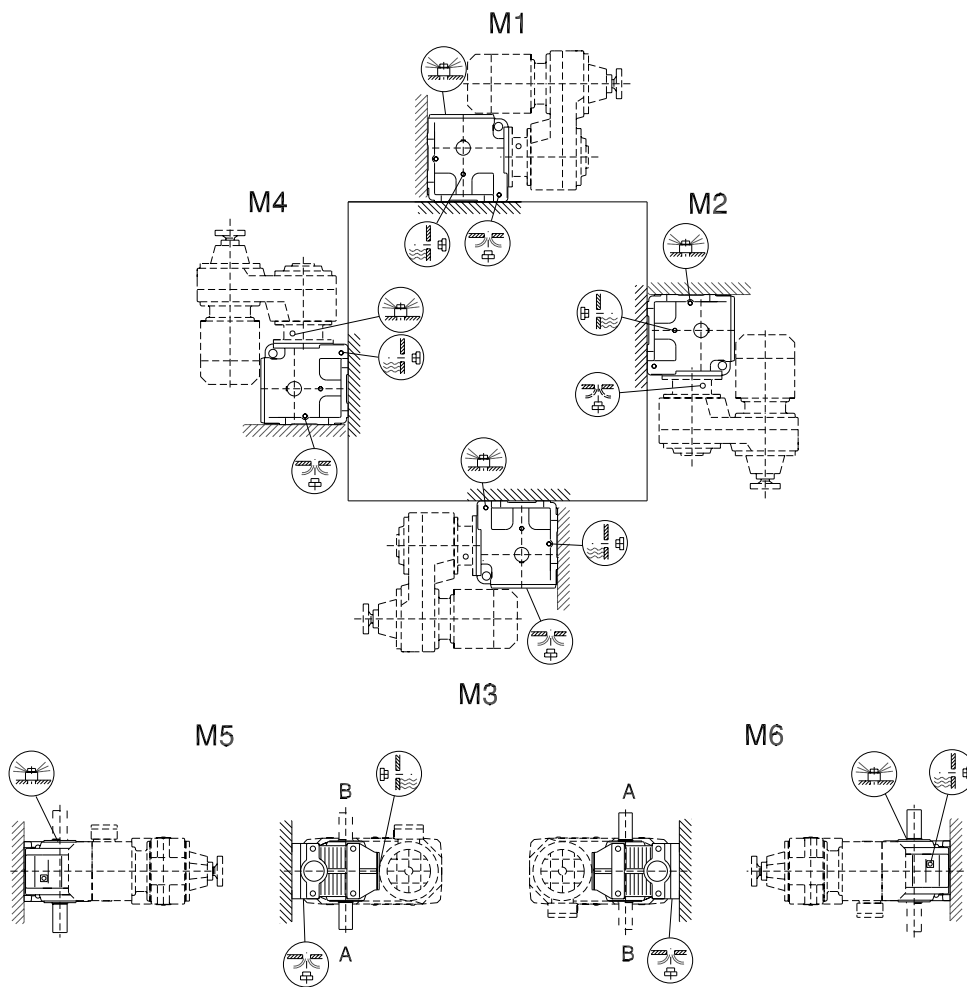
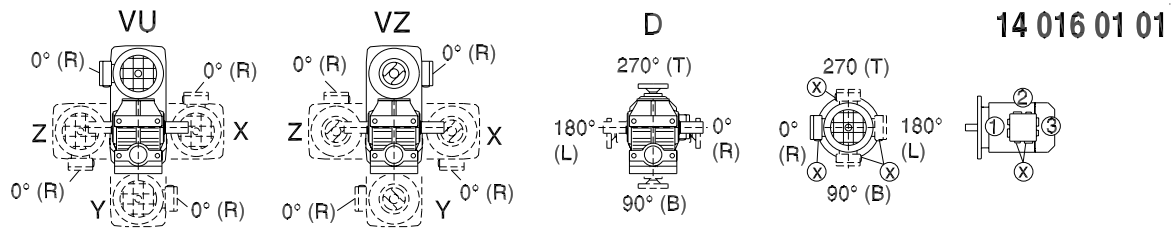
5.10 Variable speed gearmotors with helical-worm gear unit

S37



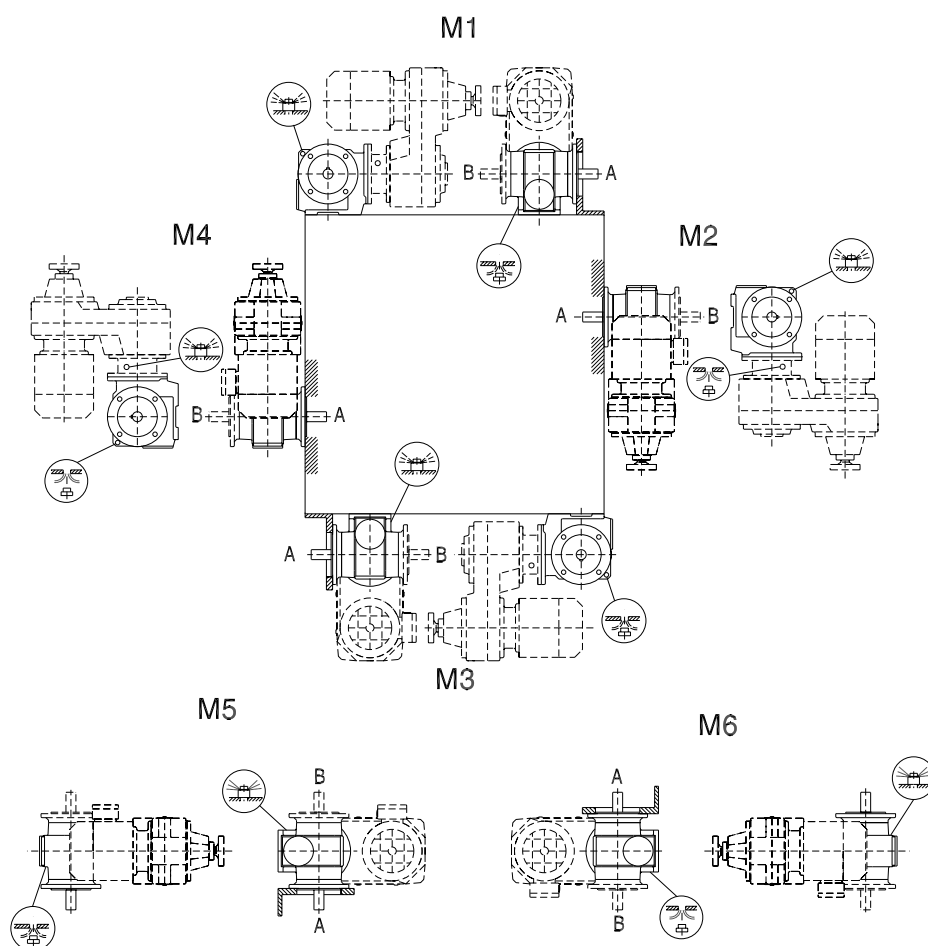
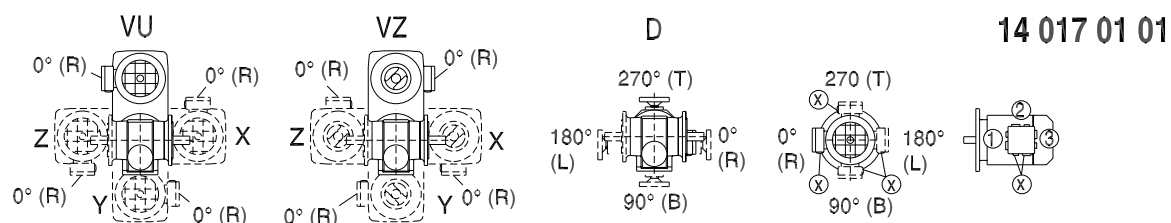
* → page 106

S47 - S97



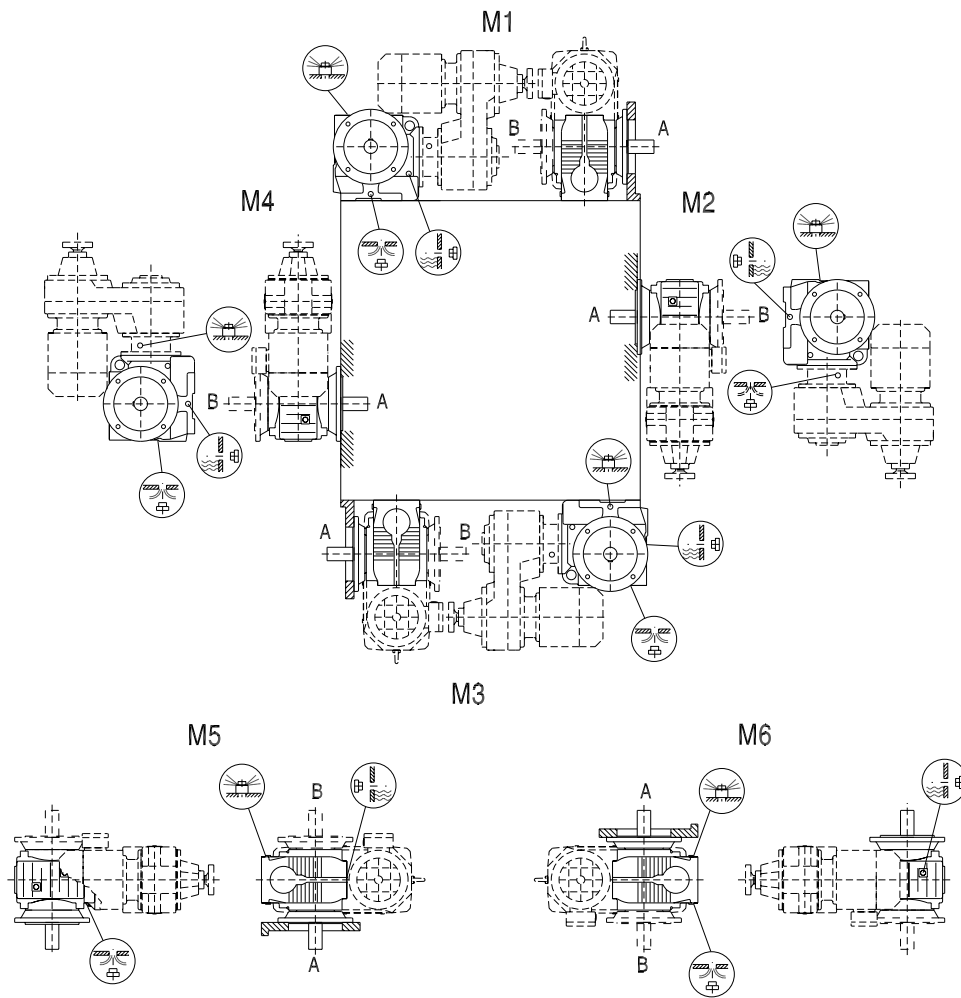
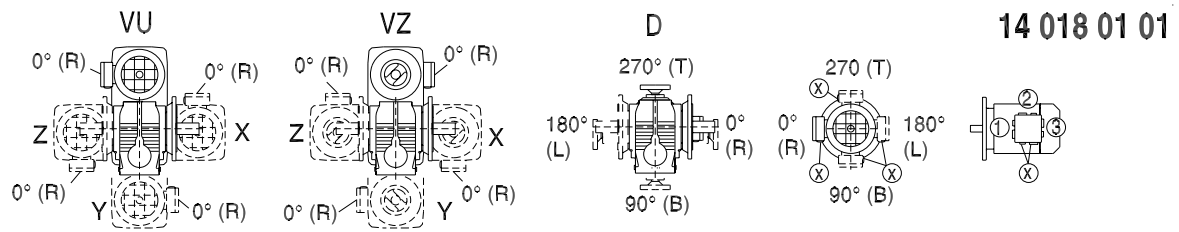
* → page 106

SF/SAF/SHF37



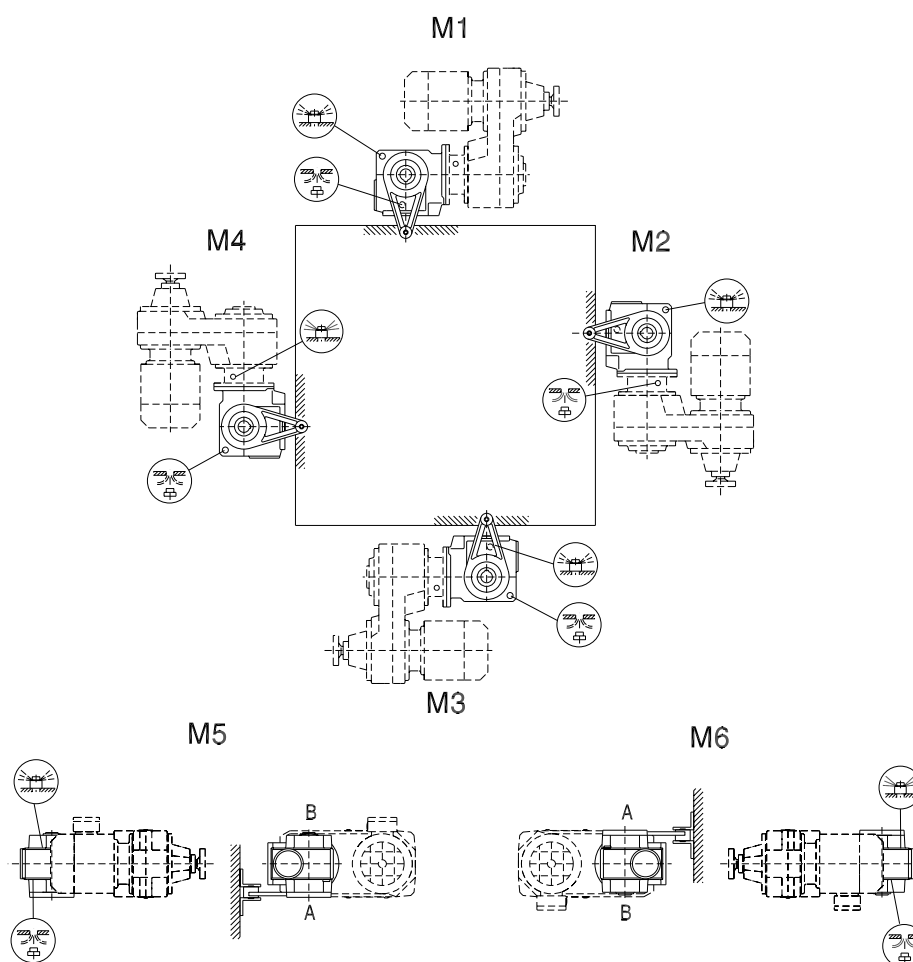
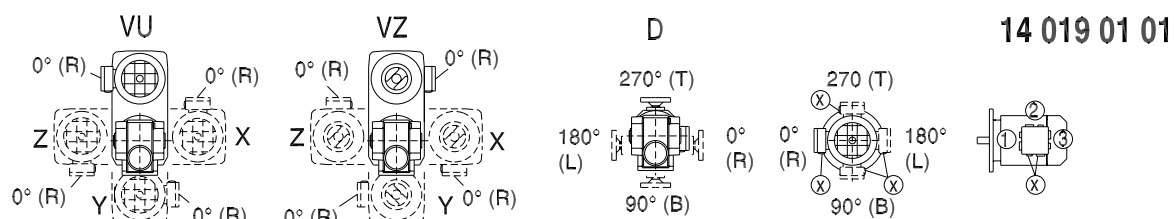
* → page 106

SF/SAF/SHF/SAZ/SHZ47 - 97



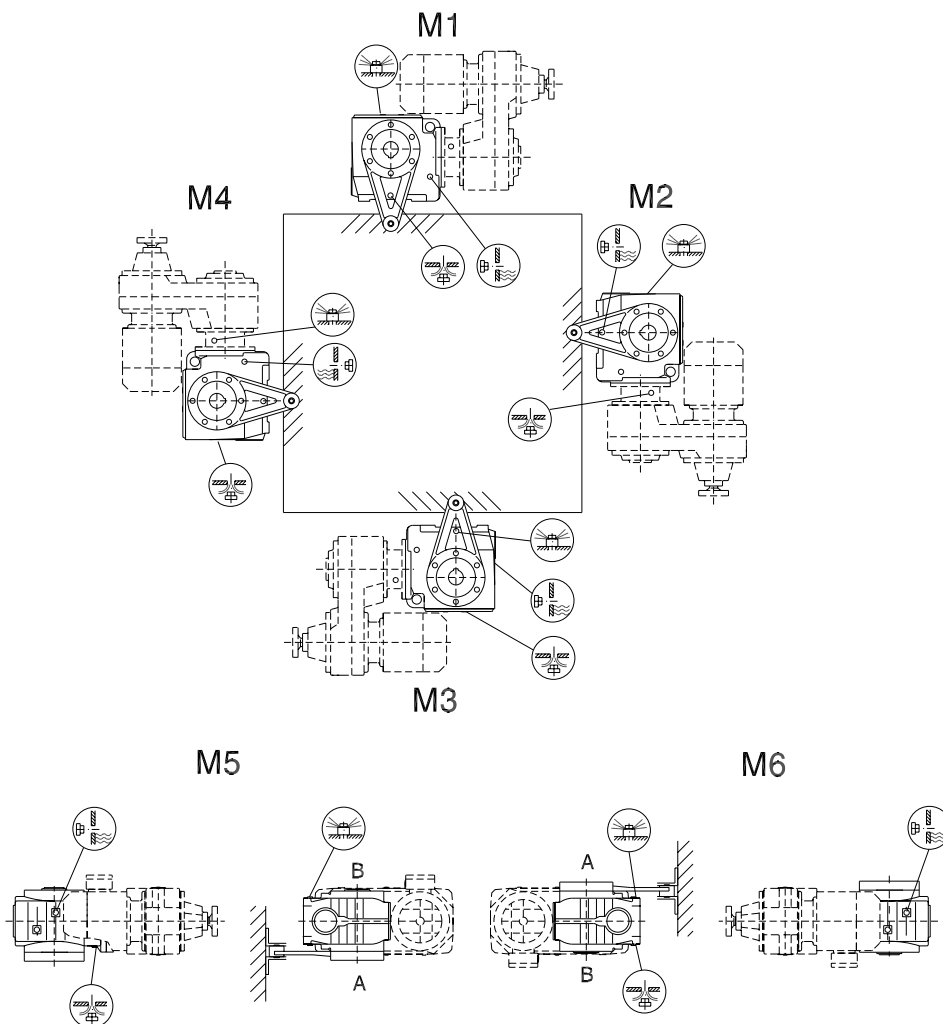
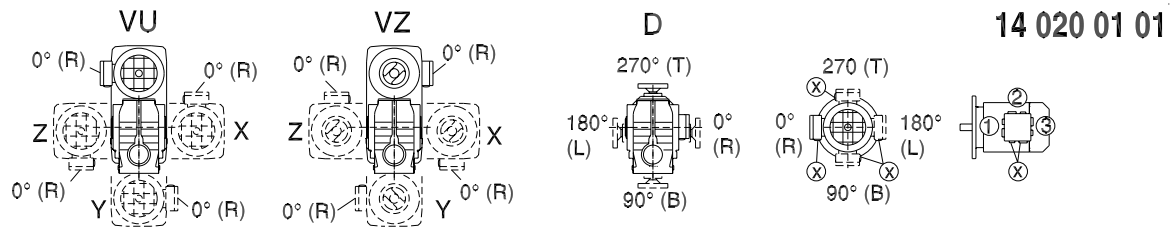
* → page 106

SA/SH37



* → page 106

SA/SH47 - 97



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