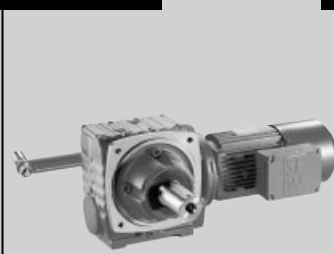
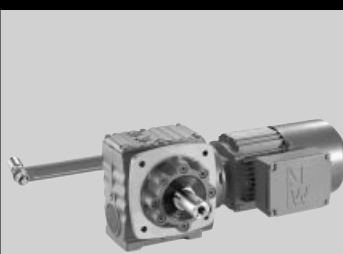


Gear Units for Overhead Trolley Systems

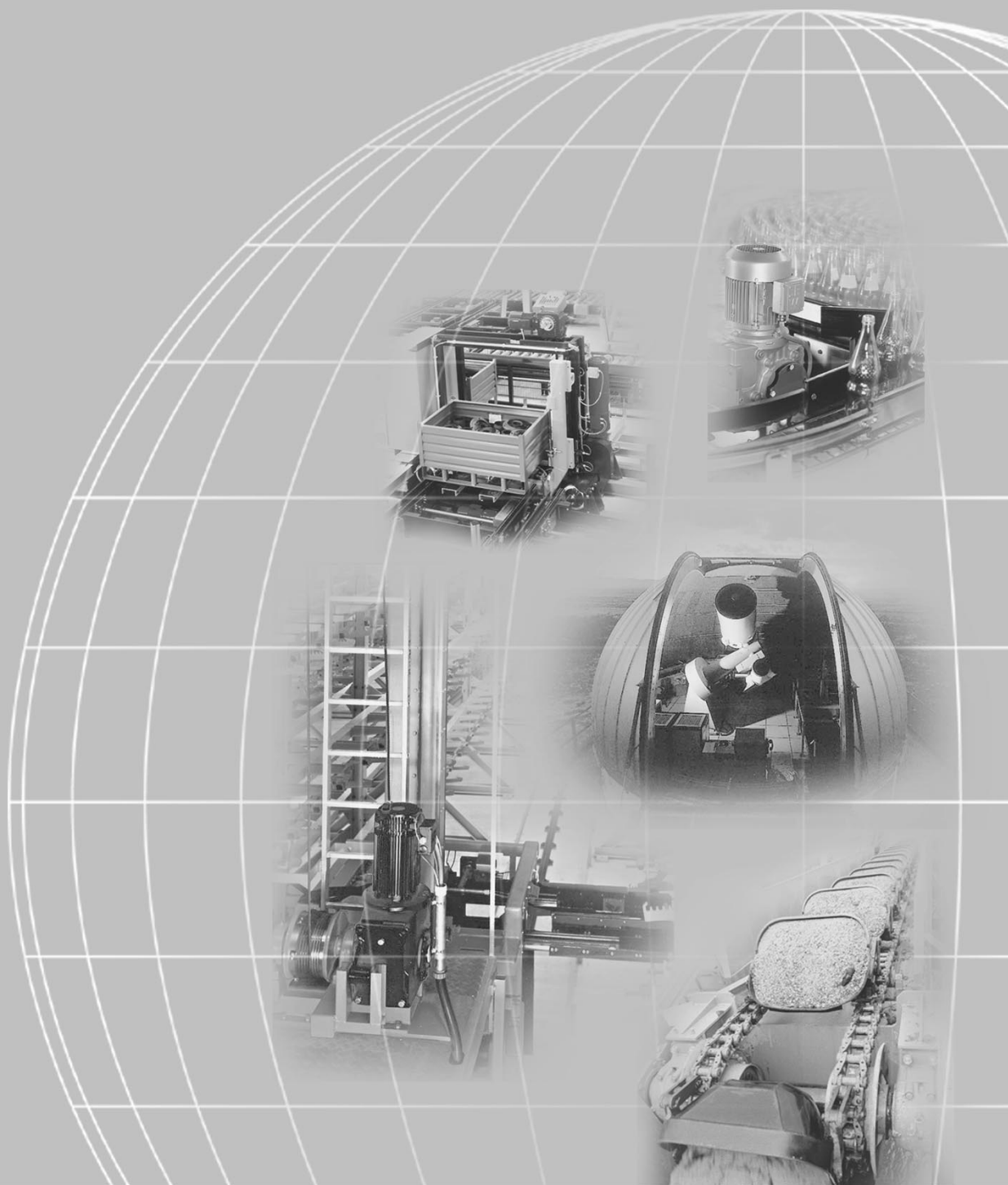
Edition

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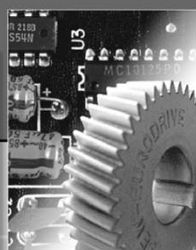


Operating Instructions

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SEW-EURODRIVE





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1 Important Notes

Safety and warning instructions

Always follow the safety and warning instructions in this publication!



Electrical hazard

Possible consequences: Severe or fatal injuries.



Hazard

Possible consequences: Severe or fatal injuries.



Hazardous situation

Possible consequences: Slight or minor injuries.



Harmful situation

Possible consequences: Damage to the drive and the environment.



Tips and useful information.



A requirement of fault-free operation and fulfillment of any rights to claim under guarantee is that you adhere to the information in the operating instructions. Consequently, read the operating instructions before you start working with the drive!

The operating instructions contain important information about servicing, i.e. you should keep them in the vicinity of the unit.



- **Adjust the lubricant fill volumes and position of the breather valve accordingly in the event of a change of mounting position (see sections "Lubricants" and "Mounting Positions").**
- **Please follow the instructions in section "Mechanical Installation" / "Installing the gear unit!"**

Waste disposal



Please follow the current instructions:

- Dispose of housing parts, gears, shafts and anti-friction bearings of the gear units as steel scrap. The same applies to gray cast iron castings unless there are separate collection arrangements.
- Some worm gears are made of non-ferrous metals and must be disposed of accordingly.
- Collect waste oil and dispose of it in an appropriate manner.

Changes to edition 10504206 are indicated by a gray bar in the margin.



2 Safety Notes

Preliminary remarks

The following safety notes are principally concerned with the use of gear units. If using **geared motors**, please also refer to the safety notes for motors in the corresponding operating instructions.

Please also take account of the supplementary safety notes in the individual sections of these operating instructions.

General information

During and after operation, geared motors, gear units and motors have live and moving parts and their surfaces may be hot.

All work related to transport, storage, setting up/mounting, connection, startup, maintenance and service may only be performed by trained personnel observing

- the corresponding detailed operating instruction(s) and wiring diagrams
- the warning and safety signs on the gear unit/geared motor
- the specific regulations and requirements for the system and
- national/regional regulations governing safety and accident prevention

Severe injuries and damage to property may result from

- incorrect use
- incorrect installation or operation
- removal of required protective covers or the housing when this is not permitted

Designated use

These geared motors/gear units are intended for industrial systems. They correspond to the applicable standards and regulations.

The technical data and the information about approved operating conditions are found on the nameplate and in the documentation.

It is essential to observe all specified information!

Transport / storage

Inspect the delivery for any damage in transit as soon as you receive the delivery. Inform the shipping company immediately. It may be necessary to preclude startup.

Fasten installed transportation lugs. They are only designed for the weight of the geared motor/gear unit; do not attach any additional loads.

The installed lifting eyebolts are in accordance with DIN 580. The loads and regulations specified in that document must always be observed. If the geared motor is equipped with two suspension eye lugs or lifting eyebolts, then both of the suspension eye lugs should be used for transport. In this case, the tension force vector of the slings must not exceed a 45° angle in accordance with DIN 580.

Use suitable, sufficiently rated handling equipment if necessary. Remove any transport fixtures prior to startup.

***Installation/
mounting***

Follow the instructions in the "Mechanical Installation" section!

Startup/operation

Check the correct direction of rotation of the geared motor. Listen for unusual grinding noises when turning the shaft.

Secure the shaft keys for test mode without drive components. Do not render monitoring and protection equipment inoperative even for test mode.

Switch off the geared motor if in doubt whenever changes occur in relation to normal operation (e.g. increased temperature, noise, vibration). Determine the cause; contact SEW if necessary.

***Inspection /
maintenance***

Follow the instructions in the "Inspection/Maintenance" section!



3 Mechanical Installation

3.1 Required tools / resources

- Set of spanners
- Mounting device
- Required compensating elements (shims, spacers)
- Fastening devices for input and output elements
- Lubricant (e.g. NOCO® fluid)

Installation tolerances

Shaft end	Flanges
Diametric tolerance in accordance with DIN 748 <ul style="list-style-type: none"> • ISO k6 for solid shafts with $d_1 \leq 50$ mm • ISO m6 for solid shafts with $d_1 > 50$ mm • Center hole in accordance with DIN 332, shape DR.. 	Centering shoulder tolerance in accordance with DIN 42948 <ul style="list-style-type: none"> • ISO j6 at $b_1 \leq 230$ mm • ISO h6 at $b_1 > 230$ mm

3.2 Before you begin

The drive may only be installed if ...

- the entries on the nameplate of the geared motor match the voltage supply system,
- the drive is undamaged (no damage caused by transportation or storage) and
- it is certain that the following requirements have been fulfilled:
 - **with standard gear units:**
ambient temperature according to the lubricant table in "Lubricants" section (see standard), no oil, acid, gas, vapors, radiation, etc.
 - **with special versions:**
drive configured in accordance with the ambient conditions
 - **with Spiroplan® HW30 gear units and HS.. helical-worm gear units:**
no large external mass moments of inertia which could exert a retrodriving load on the gear unit

3.3 Preliminary work

Remove any anti-corrosion agents, contamination or similar (use a commercially available solvent) from the output shafts and flange surfaces. Do not let the solvent come into contact with the sealing lips of the oil seals – danger of damage to the material!

Extended storage of the gear unit

Gear units of the "extended storage" type have

- an oil fill suitable for the mounting position so the unit is ready to run (mineral oil CLP and synthetic oil CLPHC). You should still check the oil level before startup (see "Inspection/Maintenance" / "Inspection and maintenance of the gear unit" section).
- a higher oil level in some cases (synthetic oil CLP PG). Adjust the oil level prior to startup (see "Inspection/Maintenance" / "Inspection and maintenance of the gear unit" section).



3.4 Installing the gear unit

The gear unit or geared motor may only be flange-mounted or installed in the specified mounting position on a level¹, vibration damping and torsionally rigid trolley structure. Do not tighten the mounting flanges and housing legs against one another and comply with the permitted overhung and axial loads!

Always use bolts of quality 8.8 for mounting the geared motors.



The oil checking and drain plugs as well as the breather valves must be freely accessible!

At the same time, also check that the oil fill is as specified for the mounting position (see "Lubricants" / "Lubricant fill quantities" section or refer to the information on the nameplate). **Adjust the lubricant fill volumes accordingly in the event of a change in mounting position.**

Use plastic inserts (2 – 3 mm thick) if there is a risk of electrochemical corrosion between the gear unit and the driven machine (connection between different metals such as cast iron/stainless steel)! Fit the bolts with plastic washers! Ground the housing using the grounding bolts on the motor.

Installation in damp areas or in the open air

Drives are supplied in corrosion-resistant versions for use in damp areas or in the open. Any damage to the paintwork (e.g. on the breather valve) must be repaired.

Gear unit venting

All gear units are delivered by SEW ready for the mounting position with the breather valve fitted and activated. No venting is possible for Spiroplan® HW30 gear units in mounting positions M3 and M4.

Exception:

Gear units for extended storage, pivoting mounting positions and mounting at an angle are delivered with a screw plug installed at the existing vent hole. The customer must replace the highest screw plug by the supplied breather valve on each individual gear unit prior to startup!

- The supplied breather valve is located in the **terminal box of the motor with geared motors** for extended storage, pivoting mounting positions and mounting at an angle.
- **Enclosed gear units** are delivered **without** a breather valve.

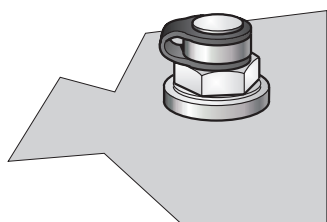
1. Maximum permitted flatness defect for flange mounting (approximate values with reference to DIN ISO 1101): with → flange 120...600 mm max. error 0.2...0.5 mm



Activating the breather valve

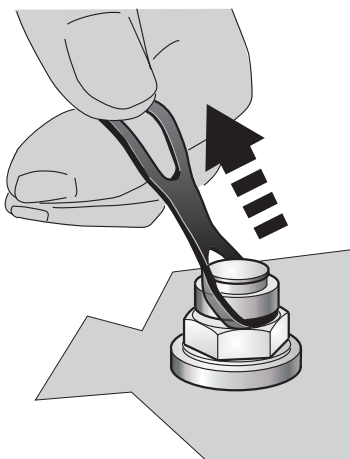
As a rule, the breather valve is already activated at the factory. If this is not the case, remove the transport fixture from the breather valve before starting up the gear unit!

1. Breather valve with transport fixture



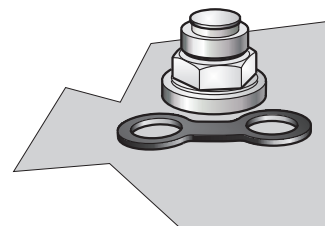
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2. Remove the transport fixture



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3. Activated breather valve



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Painting the gear unit

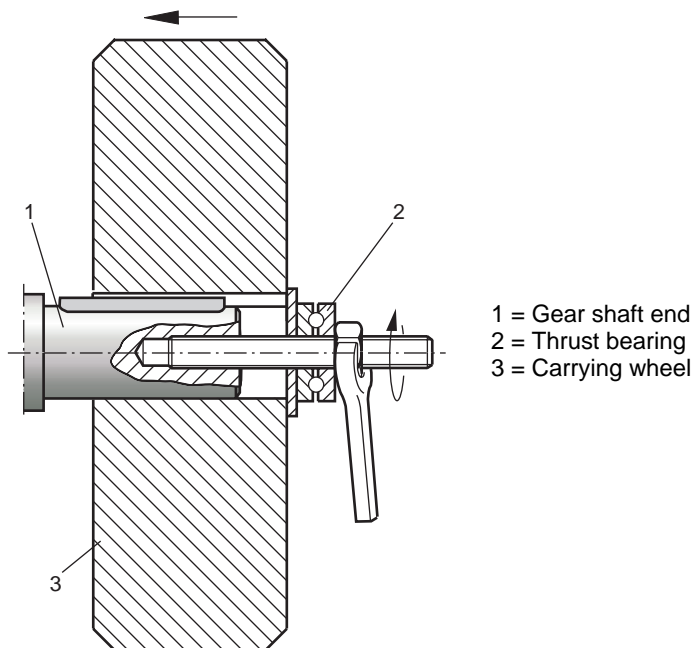
Make sure that you carefully cover the breather valve and the oil seals if all or some of the drive surface is to be painted. Remove the strips of tape after completing the paint job.



3.5 Mounting

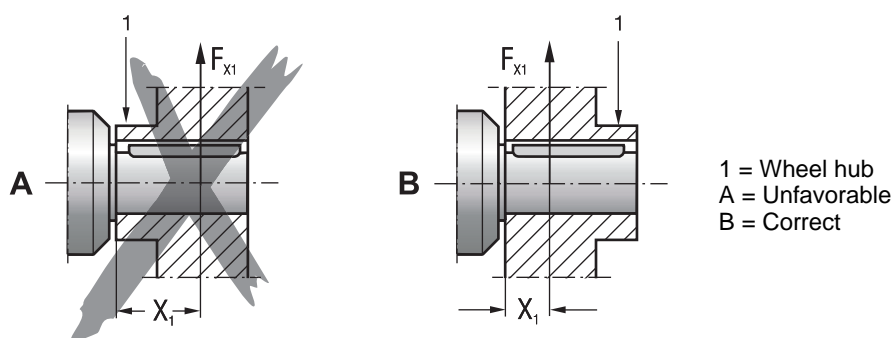
Mounting carrying wheels

The illustration below shows a sample mounting device for fitting a carrying wheel onto a gear shaft end. You may not have to install the thrust bearing on the mounting device.



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The following illustration shows the correct mounting arrangement **B** of a carrying wheel to avoid excessively high overhung loads.



03369BXX

- Use only a mounting device for installation of the input and output elements. Use the center bore and the thread on the shaft end for positioning purposes.
- **Never drive carrying wheels, etc. onto the shaft end by hitting them with a hammer (damage to bearings, housing and the shaft!).**



Note:

Applying lubricant to the carrying wheel hub prior to mounting makes the job easier.



Input and output elements such as carrying wheels, etc. must be equipped with a touchguard!

Mechanical clutch



By actuating the clutch, it is possible to mechanically separate the output from the motor which continues to turn.

Engage the clutch at low output speeds with pole-changing motors and motors controlled by a frequency inverter.

3.6 Mounting the operating lever

With Spiroplan® HW30 gear units and HS40/41 helical-worm gear units, install the supplied operating lever into the existing sliding selector shaft and secure with a lock nut.



4 Startup

4.1 Startup of HW30 gear units and HS.. helical-worm gear units



Please note: The direction of rotation of the output shaft in series HS40/41 helical-worm gear units has been changed from CW to CCW; this is different to the SHB4 series. Change direction of rotation: Swap over two motor feeder cables.

Running-in period

The Spiroplan® HW30 gear unit and HS.. helical-worm gear units require a running-in period of at least 24 hours before reaching their maximum efficiency. A separate running-in period applies for each direction of rotation if the gear unit is operated in both directions of rotation. The table shows the average power reduction during the running-in period.

No. of starts	HS.. helical-worm gear unit		Spiroplan® HW30 gear unit	
	Power reduction	i range	Power reduction	i range
1 start	approx. 12%	appr. 55... 220	approx. 15%	approx. 39...75
2 start	approx. 6%	appr. 20...75	approx. 10%	approx. 19.5...32.5
3 start	-	-	approx. 8%	appr. 14.33...16.33
4 start	-	-	approx. 8%	approx. 10.25
5 start	approx. 3%	appr. 6...25	approx. 5%	approx. 8.2

Self-locking

Spiroplan® HW30 gear units (1 and 2-start, $i > 16.5$) and the HS.. helical-worm gear unit (1-start, $i > 55$) are statically self-locking. This means they cannot be moved when the trolley drive clutch is engaged, even when the brake is released. In the event of a malfunction, positioning or movement of the trolley is only possible when the clutch is disengaged.

4.2 Startup of helical-bevel gear units

No special startup instructions are required for helical-bevel gear units providing the gear units have been installed in accordance with the "Mechanical Installation" section.

4.3 Clutch

The integrated, positive clutch enables separation of the power flow between the gear unit final gear and the output shaft.

The clutch can be engaged

- at standstill of motor and output shaft
- with running motor in positioning or trailing mode (gear unit final gear and output shaft are turning approximately synchronously)
- at low output speed
 - in low-speed mode with pole-changing motors
 - at low frequency (10...15 Hz) when operating with a frequency inverter



5 Malfunctions

5.1 Gear unit malfunctions

Malfunction	Possible cause	Remedy
Unusual, regular running noise	A Meshing/grinding noise: Bearing damage B Knocking noise: Irregularity in the gearing	A Check the oil (see "Inspection and maintenance of the gear unit"), replace bearings B Contact customer service
Unusual, irregular running noise	Foreign bodies in the oil	<ul style="list-style-type: none"> Check the oil (see "Inspection and maintenance of the gear unit") Stop the drive, contact customer service
Oil leaking ¹⁾ <ul style="list-style-type: none"> from the gear unit cover from the motor flange from the motor oil seal from the gear unit flange from the output end oil seal 	A Rubber seal on the gear unit cover leaking B Oil seal defective C Gear unit not vented	A Tighten the bolts on the gear unit cover and observe the gear unit. Oil still leaking: Contact customer service B Contact customer service C Vent the gear unit (see "Mounting Positions")
Oil dripping from breather valve	A Too much oil B Drive operated in incorrect mounting position C Frequent cold starts (oil foams) and/or high oil level	A Correct oil volume (see "Inspection and maintenance of the gear unit") B Mount the breather valve correctly (see "Mounting Positions") and correct the oil level (see "Lubricants")
Output shaft does not turn although the motor is running or the input shaft is rotated	Connection between shaft and hub in gear unit is interrupted	<ul style="list-style-type: none"> Check the clutch function Send in gear unit/geared motor for service

1) It is normal for small amounts of oil/grease to emerge from the oil seal during the running-in phase (24 hour running time (see also DIN 3761).

Please have the following information available if you require the assistance of our customer service:

- Nameplate data (complete)
- Nature and extent of the fault
- Time of occurrence and accompanying circumstances of the fault
- Presumed cause

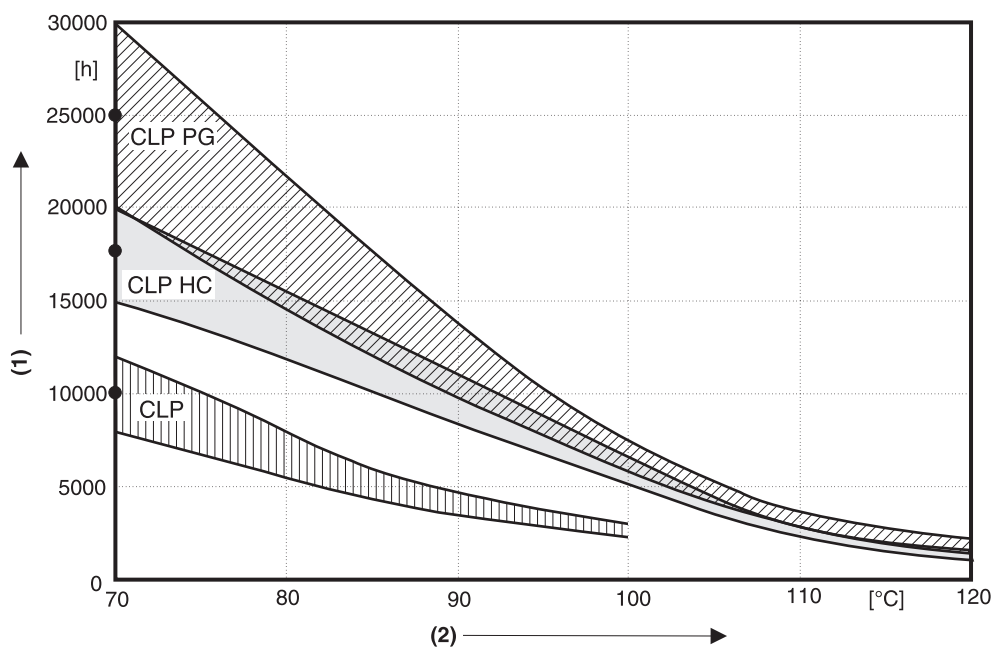


6 Inspection and Maintenance

6.1 Inspection and maintenance periods

Frequency	What to do
<ul style="list-style-type: none"> Every 3000 machine hours, at least every 6 months 	<ul style="list-style-type: none"> Check the oil
<ul style="list-style-type: none"> Depending on the operating conditions (see illustration below), at the latest every 3 years 	<ul style="list-style-type: none"> Change mineral oil Renew the anti-friction bearing grease
<ul style="list-style-type: none"> Depending on the operating conditions (see illustration below), at the latest every 5 years 	<ul style="list-style-type: none"> Change synthetic oil Renew the anti-friction bearing grease
<ul style="list-style-type: none"> The Spiroplan® HW30 gear unit has lubrication for life and is therefore maintenance-free 	
<ul style="list-style-type: none"> Varying (depending on external factors) 	<ul style="list-style-type: none"> Touch up or renew the surface/ anticorrosion coating

6.2 Lubricant change intervals



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Fig. 1: Oil change intervals for standard gear units under normal ambient conditions.

- (1) Operating hours
 (2) Sustained oil bath temperature
 • Average value per oil type at 70 °C

Change the oil more frequently when operating special versions subject to more severe/aggressive ambient conditions!



6.3 Inspection and maintenance of the gear unit

Do not blend synthetic lubricants with each other and do not blend synthetic with mineral lubricants!

The standard lubricant is mineral oil.

The position of the oil level plug, the oil drain plug and the breather valve depends on the mounting position. Refer to the mounting positions diagrams.

Checking the oil level



1. **Disconnect geared motor from voltage supply and secure it to prevent unintentional restart!**

Wait until the gear unit has cooled down – Danger of burns!

2. Refer to "Installing the gear unit" section when changing the mounting position!
3. For gear units with oil level screw: Remove oil level plug, check the fill level and correct it if necessary. Reinstall the oil level plug.

Checking the oil



1. **Disconnect geared motor from voltage supply and secure it to prevent unintentional restart!**

Wait until the gear unit has cooled down – Danger of burns!

2. Remove some oil from the oil drain plug.
3. Check the oil consistency
 - Viscosity
 - If you can see that the oil is heavily contaminated, we recommend that you change the oil even if this is outside the service intervals specified in "Inspection and maintenance periods" on page 14
4. For gear units with oil level plug: Remove oil level plug, check the fill level and correct it if necessary. Reinstall the oil level plug.

Changing the oil



Change the oil only when the gear unit is at operating temperature.

1. **Disconnect geared motor from voltage supply and secure it to prevent unintentional restart!**

Wait until the gear unit has cooled down – Danger of burns!

Note: The gear unit must still be warm, since the high viscosity of cold oil will make it more difficult to drain the oil correctly.

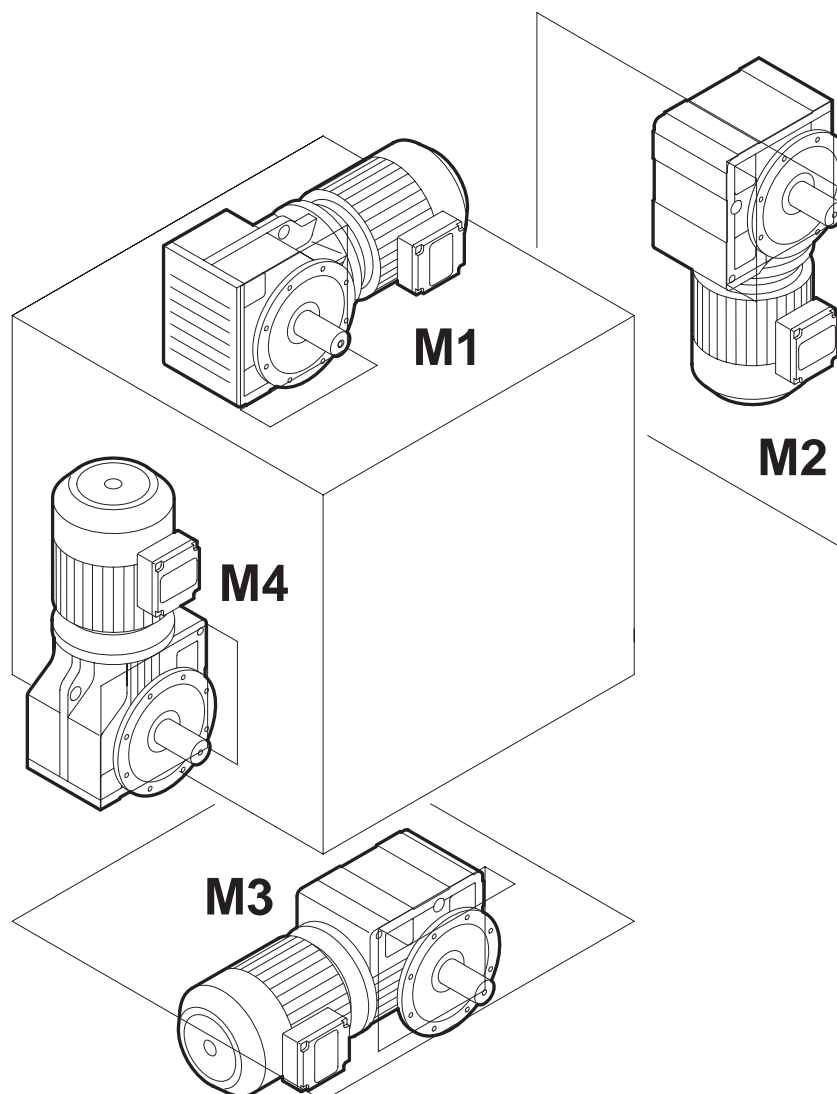
2. Place a container underneath the oil drain plug.
3. Remove the oil level plug, breather plug/breather valve and oil drain plug.
4. Drain the oil completely.
5. Install the oil drain plug.
6. Pour in new oil of the same type through the vent hole. Please first contact SEW customer service If you are planning to change the oil type.
 - Pour in the correct amount of oil in accordance with the mounting position (see "Lubricant fill quantities") or as stated on the nameplate.
 - Check at the oil level plug
7. Reinstall the oil level plug
8. Reinstall the breather plug/breather valve

7 Mounting Positions

7.1 General information on mounting positions

Mounting position designation

In the case of right-angle geared motors for overhead trolley systems, SEW distinguishes between four mounting positions M1...M4. The following figure shows the spatial orientation of the gear unit in mounting positions M1...M4.



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Fig. 2: Diagram of mounting positions M1...M4 for overhead trolley systems

Symbols used

The following table shows which symbols are used in the mounting position sheets and what they mean:

Symbol	Meaning
	Breather valve
	Oil level plug
	Oil drain plug

Position of the motor terminal box and the cable entry

Possible positions of the terminal box are 0°, 90°, 180° or 270° as viewed onto the fan guard = B-side (→ Fig. 3).

Furthermore, the position of the cable entry can be selected. The possibilities are "X" (= normal position), "1", "2" or "3" (→ Fig. 3).

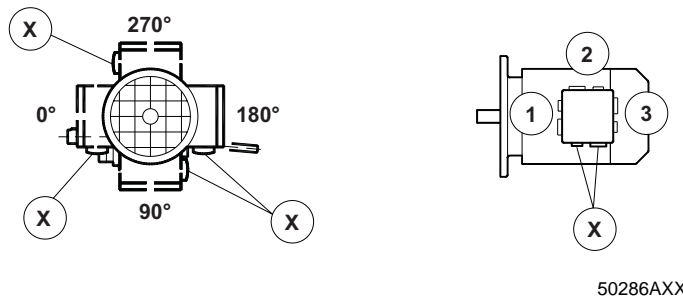


Fig. 3: Position of the terminal box and the cable entry

Unless other information is given regarding the terminal box, the 180° type with "X" cable entry will be supplied. We recommend selecting cable entry "2" with mounting position M3.

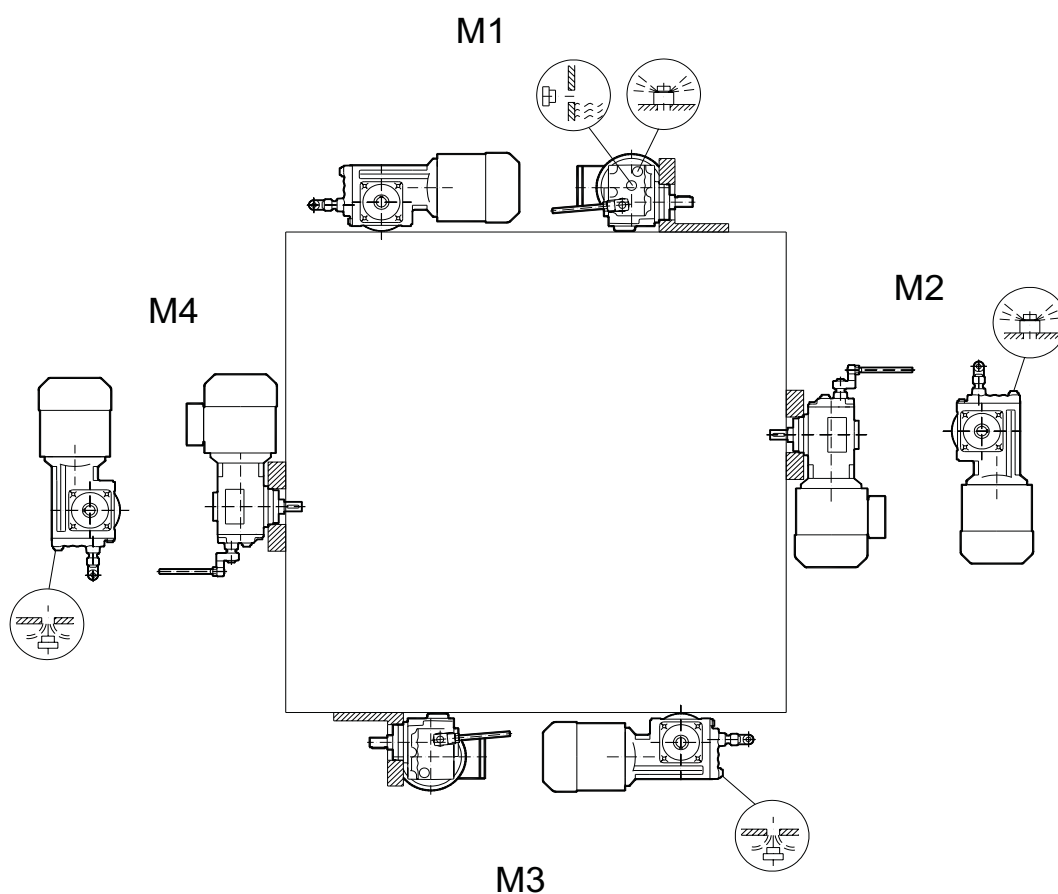
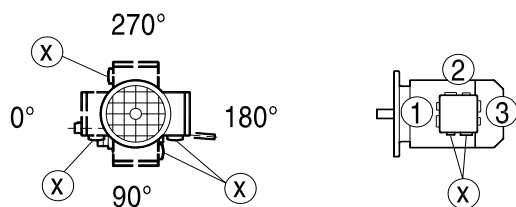


Important: Only cable entries "X" and "2" are available with the **DR63** motor.

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

7.2 HW30 DR/DT..

06 007 200



M3, M4



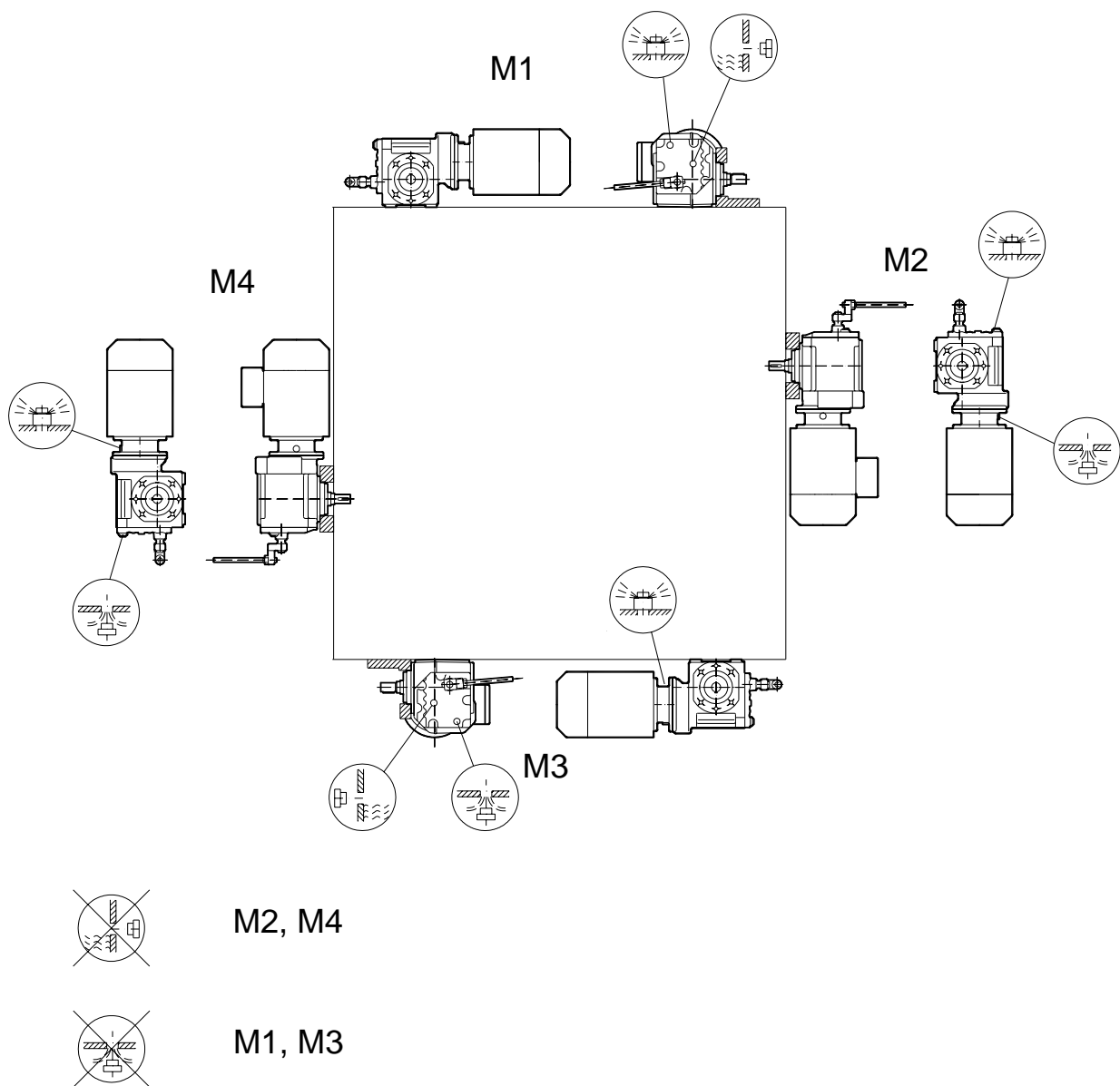
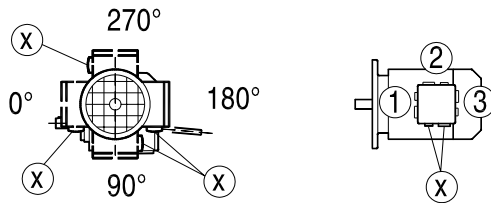
M2, M3, M4



M1, M2

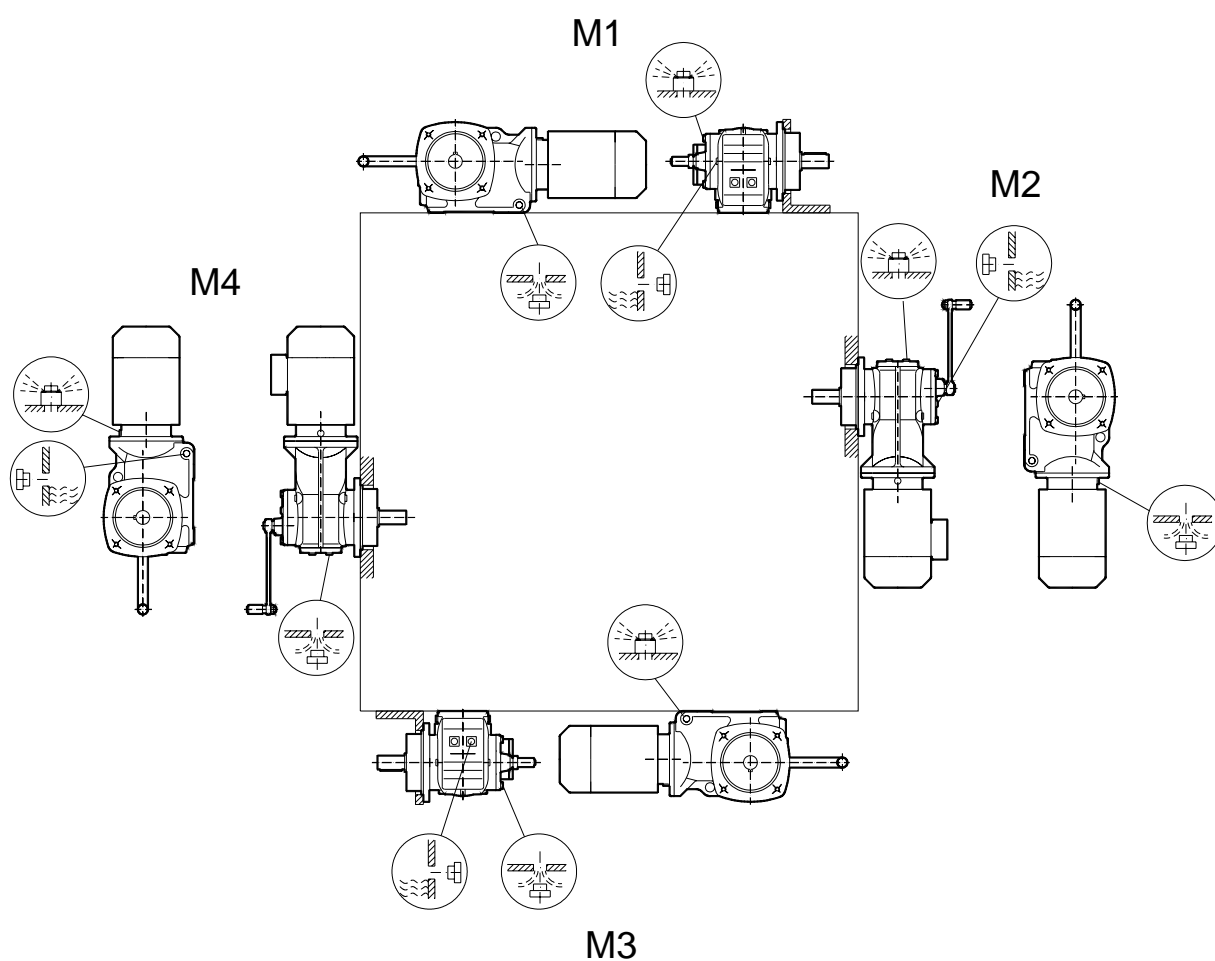
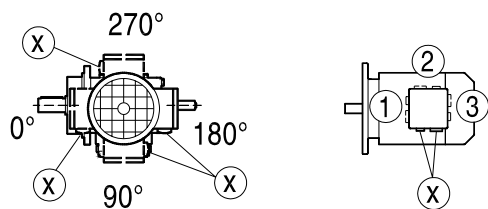
7.3 HS40 DR/DT., HS41 DR/DT..

06 008 100



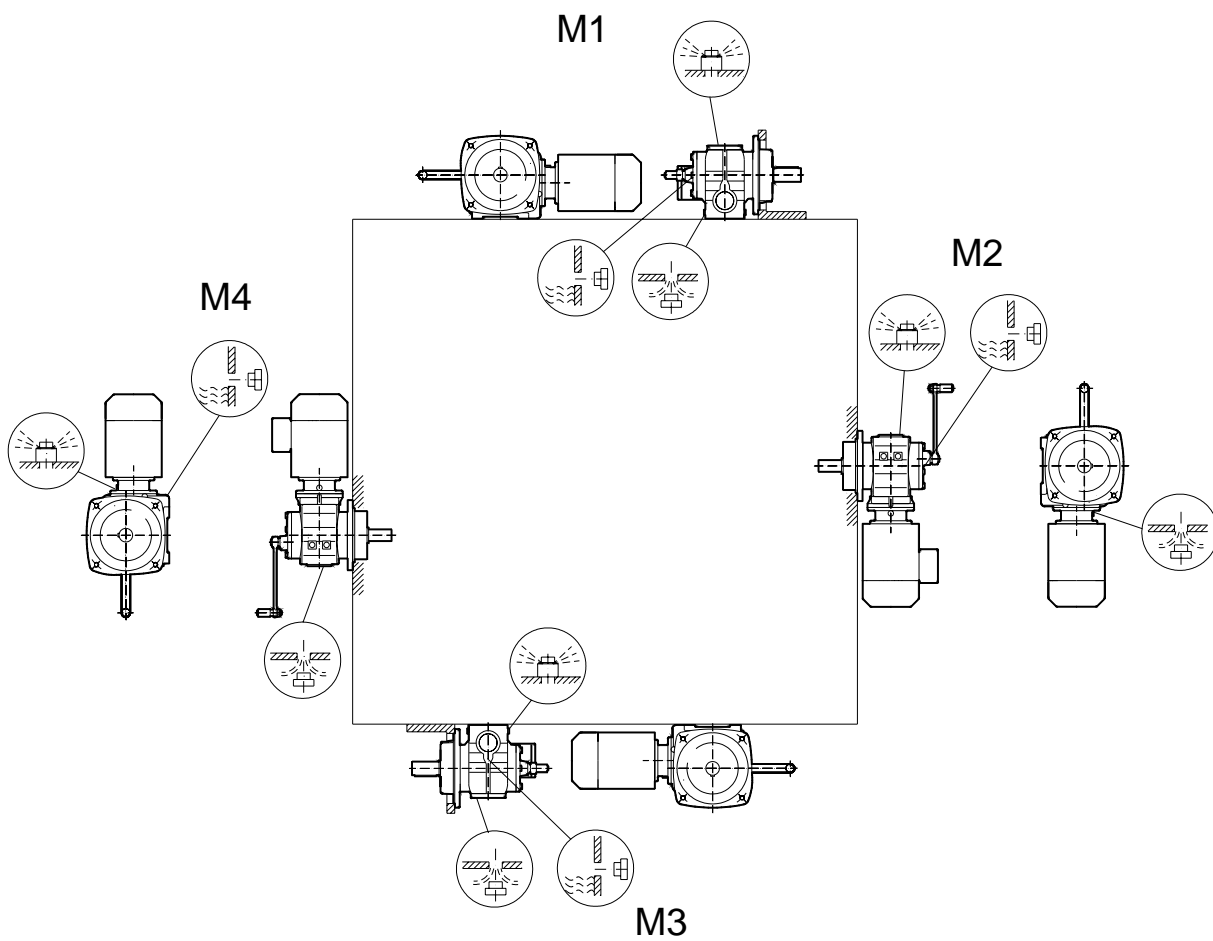
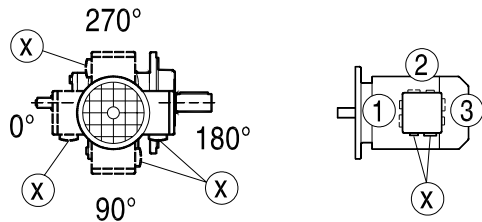
7.4 HK40 DR/DT/DV..

06 009 100



7.5 HS50 DR/DT/DV.., HS60 DR/DT/DV..

06 010 100





8 Lubricants

General information

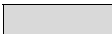
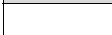


Unless a special arrangement is made, SEW supplies the drives with a lubricant fill specifically for the gear unit and mounting position. The decisive factor is the mounting position (M1...M4, → "Mounting Positions") specified when ordering the drive. You must adapt the lubricant fill to any subsequent changes made to the mounting position (→ "Lubricant fill quantities").

Lubricant table

The lubricant table for SEW drives on the following page shows the approved lubricants for SEW gear units. Please note the following key to the lubricant table.



Key to the lubricant table

Abbreviations used, meaning of shading and notes:

CLP	= Mineral oil
CLP PG	= Polyglycol (W gear units, conforms to USDA-H1)
CLP HC	= Synthetic hydrocarbons
E	= Ester oil (water pollution danger category WGK 1)
HCE	= Synthetic hydrocarbons + ester oil (USDA - H1 certification)
HLP	= Hydraulic oil
	= Synthetic lubricant (= synthetic-based anti-friction bearing grease)
	= Mineral lubricant (= mineral-based anti-friction bearing grease)
1)	Helical-worm gear units with PG oil: Please contact SEW
2)	Special lubricant for Spiroplan® gear units only
3)	Recommendation: Select SEW $f_B \geq 1.2$
4)	Note critical starting behavior at low temperatures!
5)	Low-viscosity grease
6)	Ambient temperature
	Lubricant for the food industry
	Biodegradable oil (lubricant for use in agriculture, forestry and water resources)

Anti-friction bearing greases

The anti-friction bearings in SEW gear units and motors are given a factory-fill with the greases listed below. SEW recommends regreasing anti-friction bearings with a grease fill at the same time as changing the oil.

	Ambient temperature	Manufacturer	Type
Anti-friction bearing in gear unit	-30 °C...+60 °C	Mobil	Mobilux EP 2
	-40 °C...+80 °C	Mobil	Mobiltemp SHC 100
Anti-friction bearing in motor	-25 °C...+80 °C	Esso	Unirex N3
	-25 °C...+60 °C	Shell	Alvania R3
	+80 °C...+100 °C	Klüber	Barrierta L55/2
	-45 °C...-25 °C	Shell	Aero Shell Grease 16
Special greases for anti-friction bearings in gear units:			
	-30 °C...+40 °C	Aral	Aral Eural Grease EP 2
	-20 °C...+40 °C	Aral Klüber	Aral Aralub BAB EP 2 Klüberbio M32-82



The following grease quantities are required:

- For fast-running bearings (motor and gear unit input end): Fill one-third of the cavities between rolling elements with grease.
- For slow-running bearings (in gear units and gear unit output end): Fill two-thirds of the cavities between rolling elements with grease.



Lubricant table

01 805 692

	6) °C -50 0 +50 +100 Standard -10 +40	DIN (ISO) Oil	ISO, NLGI	Mobil®	Shell	KLÜBER LUBRICATION	ARAL	BP	Tribol	TEXACO	Optimal	FUCHS
R...		CLP (CC)	VG 220	Mobilgear 630	Shell Omala 220	Klüberoil GEM 1-220	Aral Degol BG 220	BP Energol GR-XP 220	Tribol 1100/220	Meropa 220	Optigear BM 220	Renolin CLP 220
K... (HK...)		CLP PG	VG 220	Mobil Glygoyle 30	Shell Tivela WB	Klüberoil GH 6-220	Aral Degol GS 220	BP Energol SG-XP 220	Tribol 800/220	Synlube CLP 220	Optiflex A 220	
F...		CLP HC	VG 220	Mobilgear SHC 630	Shell Omala 220 HD	Klüberoil EG 4-220	Aral Degol PAS 220		Tribol 1510/220	Pinnacle EP 220	Optigear Synthetic A 220	Renolin Unisyn CLP 220
	4) -40		VG 150	Mobil SHC 629		Klüberoil EG 4-150				Pinnacle EP 150		
	4) -20	CLP (CC)	VG 150	Mobilgear 629	Shell Omala 100	Klüberoil GEM 1-150	Aral Degol BG 100	BP Energol GR-XP 100	Tribol 1100/100	Meropa 150	Optigear BM 100	Renolin CLP 150
	4) -30	HLP (HM)	VG 68-46	Mobil D.T.E. 15M	Shell Tellus T 32	Klüberoil GEM 1-68	Aral Degol BG 46		Tribol 1100/68	Rando EP Ashless 46	Optigear 32	Renolin B 46 HVI
	4) -40	CLP HC	VG 32	Mobil SHC 624		Klüber-Summit HySyn FG-32				Cetus PAO 46		
	4) -40	HLP (HM)	VG 22	Mobil D.T.E. 11M	Shell Tellus T 15	Isotex MT 30 ROT		BP Energol HLP-HM 10		Rando HDZ 15		
	Standard 0 +40	CLP (CC)	VG 680	Mobilgear 636	Shell Omala 680	Klüberoil GEM 1-680	Aral Degol BG 680	BP Energol GR-XP 680	Tribol 1100/680	Meropa 680	Optigear BM 680	Renolin CLP 680
S... (HS...)		CLP PG	VG 680 ¹⁾	Mobil Glygoyle HE 680		Klüberoil GH 6-680		BP Energol SG-XP 680	Tribol 800/680	Synlube CLP 680		
	4) -20		VG 460	Mobil SHC 634	Shell Omala 460 HD	Klüberoil EG 4-460				Pinnacle EP 460		
	4) -40	CLP HC	VG 150	Mobil SHC 629		Klüberoil EG 4-150				Pinnacle EP 150		
		CLP (CC)	VG 150	Mobil D.T.E. 18M	Shell Omala 100	Klüberoil GEM 1-150	Aral Degol BG 100	BP Energol GR-XP 100	Tribol 1100/100	Meropa 100	Optigear BM 100	Renolin CLP 150
	4) -25	CLP PG	VG 220 ¹⁾	Mobil Glygoyle 30		Klüberoil GH 6-220			Tribol 800/220	Synlube CLP 220	Optiflex A 220	
	4) -40	CLP HC	VG 32	Mobil SHC 624		Klüber-Summit HySyn FG-32				Cetus PAO 46		
R..., K... (HK...), F..., S... (HS...)		HCE	VG 460		Shell Cassida Fluid GL 460	Klüberoil 4UH1-460	Aral Eural Gear 460				Optileb GT 460	
		E	VG 460			Klüberoil CA2-460	Aral Degol BAB 460				Optisynth BS 460	
W... (HW...)		SEW PG	VG 460 ²⁾			Klüber SEW HT-460-5						
	4) -30		SAE 75W90 (~VG 100)	Mobilube SHC 75 W90-LS								
	4) -40	API GL5	VG 460 ³⁾			Klüberoil UH1 6-460						
		CLP PG	00	Glygoyle Grease 00	Shell Tivela Compound A	Klüberoil GE 46-1200				Multifak 6833 EP 00		
R32 R302		DIN 51 818 ⁵⁾	000 - 0	Mobilux EP 004	Shell Alvania GL 00		Aralub MFL 00	BP Energol LS-EP 00		Multifak EP 000	Longtime PD 00	Renolin SF 7 - 041

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Lubricant fill quantities

The following table shows the lubricant fill quantities depending on the mounting position M1...M4. When filling, it is essential to check the **oil level plug (if fitted) since this indicates the precise oil capacity**.

Gear unit type	Fill quantity in liters			
	M1	M2	M3	M4
HW30	0.65	0.65	0.65	0.75
HS40	1.2	1.45	0.95	1.9
HS41	1.2	1.45	0.95	1.9
HK40	2.0	2.0	2.3	2.8
HS50	1.4	1.4	1.5	1.9
HS60	2.8	2.7	2.8	4.1



Address List

Germany			
Headquarters Production Sales Service	Bruchsal	SEW-EURODRIVE GmbH & Co Ernst-Blickle-Straße 42 D-76646 Bruchsal P.O. Box Postfach 3023 · D-76642 Bruchsal	Tel. (0 72 51) 75-0 Fax (0 72 51) 75-19 70 http://www.SEW-EURODRIVE.de sew@sew-eurodrive.de
Production	Graben	SEW-EURODRIVE GmbH & Co Ernst-Blickle-Straße 1 D-76676 Graben-Neudorf P.O. Box Postfach 1220 · D-76671 Graben-Neudorf	Tel. (0 72 51) 75-0 Fax (0 72 51) 75-29 70 Telex 7 822 276
Assembly Service	Garbsen (near Hannover)	SEW-EURODRIVE GmbH & Co Alte Ricklinger Straße 40-42 D-30823 Garbsen P.O. Box Postfach 110453 · D-30804 Garbsen	Tel. (0 51 37) 87 98-30 Fax (0 51 37) 87 98-55
	Kirchheim (near München)	SEW-EURODRIVE GmbH & Co Domagkstraße 5 D-85551 Kirchheim	Tel. (0 89) 90 95 52-10 Fax (0 89) 90 95 52-50
	Langenfeld (near Düsseldorf)	SEW-EURODRIVE GmbH & Co Siemensstraße 1 D-40764 Langenfeld	Tel. (0 21 73) 85 07-30 Fax (0 21 73) 85 07-55
	Meerane (near Zwickau)	SEW-EURODRIVE GmbH & Co Dänkritzter Weg 1 D-08393 Meerane	Tel. (0 37 64) 76 06-0 Fax (0 37 64) 76 06-30
	Additional addresses for service in Germany provided on request!		
France			
Production Sales Service	Hagenau	SEW-USOCOME SAS 48-54, route de Soufflenheim B. P. 185 F-67506 Hagenau Cedex	Tel. 03 88 73 67 00 Fax 03 88 73 66 00 http://www.usocome.com sew@usocome.com
Assembly Sales Service	Bordeaux	SEW-USOCOME SAS Parc d'activités de Magellan 62, avenue de Magellan - B. P. 182 F-33607 Pessac Cedex	Tel. 05 57 26 39 00 Fax 05 57 26 39 09
	Lyon	SEW-USOCOME SAS Parc d'Affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin	Tel. 04 72 15 37 00 Fax 04 72 15 37 15
	Paris	SEW-USOCOME SAS Zone industrielle 2, rue Denis Papin F-77390 Verneuil l'Etang	Tel. 01 64 42 40 80 Fax 01 64 42 40 88
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Argentina			
Assembly Sales Service	Buenos Aires	SEW EURODRIVE ARGENTINA S.A. Centro Industrial Garin, Lote 35 Ruta Panamericana Km 37,5 1619 Garin	Tel. (3327) 45 72 84 Fax (3327) 45 72 21 sewar@sew-eurodrive.com.ar
Australia			
Assembly Sales Service	Melbourne	SEW-EURODRIVE PTY. LTD. 27 Beverage Drive Tullamarine, Victoria 3043	Tel. (03) 99 33 10 00 Fax (03) 99 33 10 03
	Sydney	SEW-EURODRIVE PTY. LTD. 9, Sleigh Place, Wetherill Park New South Wales, 2164	Tel. (02) 97 25 99 00 Fax (02) 97 25 99 05
Austria			
Assembly Sales Service	Wien	SEW-EURODRIVE Ges.m.b.H. Richard-Strauss-Strasse 24 A-1230 Wien	Tel. (01) 6 17 55 00-0 Fax (01) 6 17 55 00-30 sew@sew-eurodrive.at



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Belgium			
Assembly Sales Service	Brüssel	CARON-VECTOR S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. (010) 23 13 11 Fax (010) 2313 36 http://www.caron-vector.be info@caron-vector.be
Brazil			
Production Sales Service	Sao Paulo	SEW DO BRASIL Motores-Redutores Ltda. Rodovia Presidente Dutra, km 208 CEP 07210-000 - Guarulhos - SP	Tel. (011) 64 60-64 33 Fax (011) 64 80 33 28 sew@sew.com.br
Additional addresses for service in Brazil provided on request!			
Bulgaria			
Sales	Sofia	BEVER-DRIVE GMBH Bogdanovetz Str.1 BG-1606 Sofia	Tel. (92) 9 53 25 65 Fax (92) 9 54 93 45 bever@mbbox.infotel.bg
Canada			
Assembly Sales Service	Toronto	SEW-EURODRIVE CO. OF CANADA LTD. 210 Walker Drive Bramalea, Ontario L6T3W1	Tel. (905) 7 91-15 53 Fax (905) 7 91-29 99 www.sew-eurodrive.ca
	Vancouver	SEW-EURODRIVE CO. OF CANADA LTD. 7188 Honeyman Street Delta. B.C. V4G 1 E2	Tel. (604) 9 46-55 35 Fax (604) 946-2513
	Montreal	SEW-EURODRIVE CO. OF CANADA LTD. 2555 Rue Leger Street LaSalle, Quebec H8N 2V9	Tel. (514) 3 67-11 24 Fax (514) 3 67-36 77
Additional addresses for service in Canada provided on request!			
Chile			
Assembly Sales Service	Santiago de Chile	SEW-EURODRIVE CHILE Motores-Reductores LTDA. Panamericana Norte No 9261 Casilla 23 - Correo Quilicura RCH-Santiago de Chile	Tel. (02) 6 23 82 03+6 23 81 63 Fax (02) 6 23 81 79
China			
Production Assembly Sales Service	Tianjin	SEW-EURODRIVE (Tianjin) Co., Ltd. No. 46, 7th Avenue, TEDA Tianjin 300457	Tel. (022) 25 32 26 12 Fax (022) 25 32 26 11
Colombia			
Assembly Sales Service	Bogotá	SEW-EURODRIVE COLOMBIA LTDA. Calle 22 No. 132-60 Bodega 6, Manzana B Santafé de Bogotá	Tel. (0571) 5 47 50 50 Fax (0571) 5 47 50 44 sewcol@andinet.com
Croatia			
Sales Service	Zagreb	KOMPEKS d. o. o. PIT Erdödy 4 II HR 10 000 Zagreb	Tel. +385 14 61 31 58 Fax +385 14 61 31 58
Czech Republic			
Sales	Praha	SEW-EURODRIVE S.R.O. Business Centrum Praha Luná 591 16000 Praha 6	Tel. 02/20 12 12 34 + 20 12 12 36 Fax 02/20 12 12 37 sew@sew-eurodrive.cz
Denmark			
Assembly Sales Service	Kopenhagen	SEW-EURODRIVEA/S Geminivej 28-30, P.O. Box 100 DK-2670 Greve	Tel. 4395 8500 Fax 4395 8509 http://www.sew-eurodrive.dk sew@sew-eurodrive.dk
Estonia			
Sales	Tallin	ALAS-KUUL AS Paldiski mnt.125 EE 0006 Tallin	Tel. 6 59 32 30 Fax 6 59 32 31



Finland			
Assembly Sales Service	Lahti	SEW-EURODRIVE OY Vesimäentie 4 FIN-15860 Hollola 2	Tel. (3) 589 300 Fax (3) 780 6211
Great Britain			
Assembly Sales Service	Normanton	SEW-EURODRIVE Ltd. Beckbridge Industrial Estate P.O. Box No.1 GB-Normanton, West- Yorkshire WF6 1QR	Tel. 19 24 89 38 55 Fax 19 24 89 37 02
Greece			
Sales Service	Athen	Christ. Boznos & Son S.A. 12, Mavromichali Street P.O. Box 80136, GR-18545 Piraeus	Tel. 14 22 51 34 Fax 14 22 51 59 Boznos@otenet.gr
Hong Kong			
Assembly Sales Service	Hong Kong	SEW-EURODRIVE LTD. Unit No. 801-806, 8th Floor Hong Leong Industrial Complex No. 4, Wang Kwong Road Kowloon, Hong Kong	Tel. 2-7 96 04 77 + 79 60 46 54 Fax 2-7 95-91 29 sew@sewhk.com
Hungary			
Sales Service	Budapest	SEW-EURODRIVE Kft. H-1037 Budapest Kunigunda u. 18	Tel. +36 1 437 06 58 Fax +36 1 437 06 50
India			
Assembly Sales Service	Baroda	SEW-EURODRIVE India Pvt. Ltd. Plot No. 4, Gidc Por Ramangamdi · Baroda - 391 243 Gujarat	Tel. 0 265-83 10 86 Fax 0 265-83 10 87 sew.baroda@gecsil.com
Ireland			
Sales Service	Dublin	Alpert Engineering Ltd. 48 Moyle Road Dublin Industrial Estate Glasnevin, Dublin 11	Tel. (01) 8 30 62 77 Fax (01) 8 30 64 58
Italy			
Assembly Sales Service	Milano	SEW-EURODRIVE di R. Blicke & Co.s.a.s. Via Bernini,14 I-20020 Solaro (Milano)	Tel. (02) 96 98 01 Fax (02) 96 79 97 81
Japan			
Assembly Sales Service	Toyoda-cho	SEW-EURODRIVE JAPAN CO., LTD 250-1, Shimoman-no, Toyoda-cho, Iwata gun Shizuoka prefecture, P.O. Box 438-0818	Tel. (0 53 83) 7 3811-13 Fax (0 53 83) 7 3814
Korea			
Assembly Sales Service	Ansan-City	SEW-EURODRIVE KOREA CO., LTD. B 601-4, Banweol Industrial Estate Unit 1048-4, Shingil-Dong Ansan 425-120	Tel. (031) 4 92-80 51 Fax (031) 4 92-80 56
Luxembourg			
Assembly Sales Service	Brüssel	CARON-VECTOR S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. (010) 23 13 11 Fax (010) 2313 36 http://www.caron-vector.be info@caron-vector.be
Macedonia			
Sales	Skopje	SGS-Skopje / Macedonia "Teodosij Sinactaski" 6691000 Skopje / Macedonia	Tel. (0991) 38 43 90 Fax (0991) 38 43 90
Malaysia			
Assembly Sales Service	Johore	SEW-EURODRIVE SDN BHD No. 95, Jalan Seroja 39, Taman Johor Jaya 81000 Johor Bahru, Johor West Malaysia	Tel. (07) 3 54 57 07 + 3 54 94 09 Fax (07) 3 5414 04



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New Zealand			
Assembly Sales Service	Auckland	SEW-EURODRIVE NEW ZEALAND LTD. P.O. Box 58-428 82 Greenmount drive East Tamaki Auckland	Tel. 0064-9-2 74 56 27 Fax 0064-9-2 74 01 65 sales@sew-eurodrive.co.nz
	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 10 Settlers Crescent, Ferrymead Christchurch	Tel. (09) 3 84 62 51 Fax (09) 3 84 64 55 sales@sew-eurodrive.co.nz
Norway			
Assembly Sales Service	Moss	SEW-EURODRIVE A/S Solgaard skog 71 N-1599 Moss	Tel. (69) 2410 20 Fax (69) 2410 40 sew@sew-eurodrive.no
Peru			
Assembly Sales Service	Lima	SEW DEL PERU MOTORES REDUCTORES S.A.C. Los Calderos # 120-124 Urbanizacion Industrial Vulcano, ATE, Lima	Tel. (511) 349-52 80 Fax (511) 349-30 02 sewperu@terra.com.pe
Poland			
Sales	Lodz	SEW-EURODRIVE Polska Sp.z.o.o. ul. Pojezierska 63 91-338 Lodz	Tel. (042) 6 16 22 00 Fax (042) 6 16 22 10 sew@sew-eurodrive.pl
Portugal			
Assembly Sales Service	Coimbra	SEW-EURODRIVE, LDA. Apartado 15 P-3050-901 Mealhada	Tel. (0231) 20 96 70 Fax (0231) 20 36 85 infosew@sew-eurodrive.pt
Romania			
Sales Service	Bucuresti	Sialco Trading SRL str. Madrid nr.4 71222 Bucuresti	Tel. (01) 2 30 13 28 Fax (01) 2 30 71 70 sialco@mediasat.ro
Russia			
Sales	St. Petersburg	ZAO SEW-EURODRIVE P.O. Box 193 193015 St. Petersburg	Tel. (812) 3 26 09 41 + 5 35 04 30 Fax (812) 5 35 22 87 sew@sew-eurodrive.ru
Singapore			
Assembly Sales Service		SEW-EURODRIVE PTE. LTD. No 9, Tuas Drive 2 Jurong Industrial Estate Singapore 638644	Tel. 8 62 17 01-705 Fax 8 61 28 27 Telex 38 659
Slovenia			
Sales Service	Celje	Pakman - Pogonska Tehnika d.o.o. Ul. XIV. divizije 14 SLO – 3000 Celje	Tel. 00386 3 490 83 20 Fax 00386 3 490 83 21 pakman@siol.net

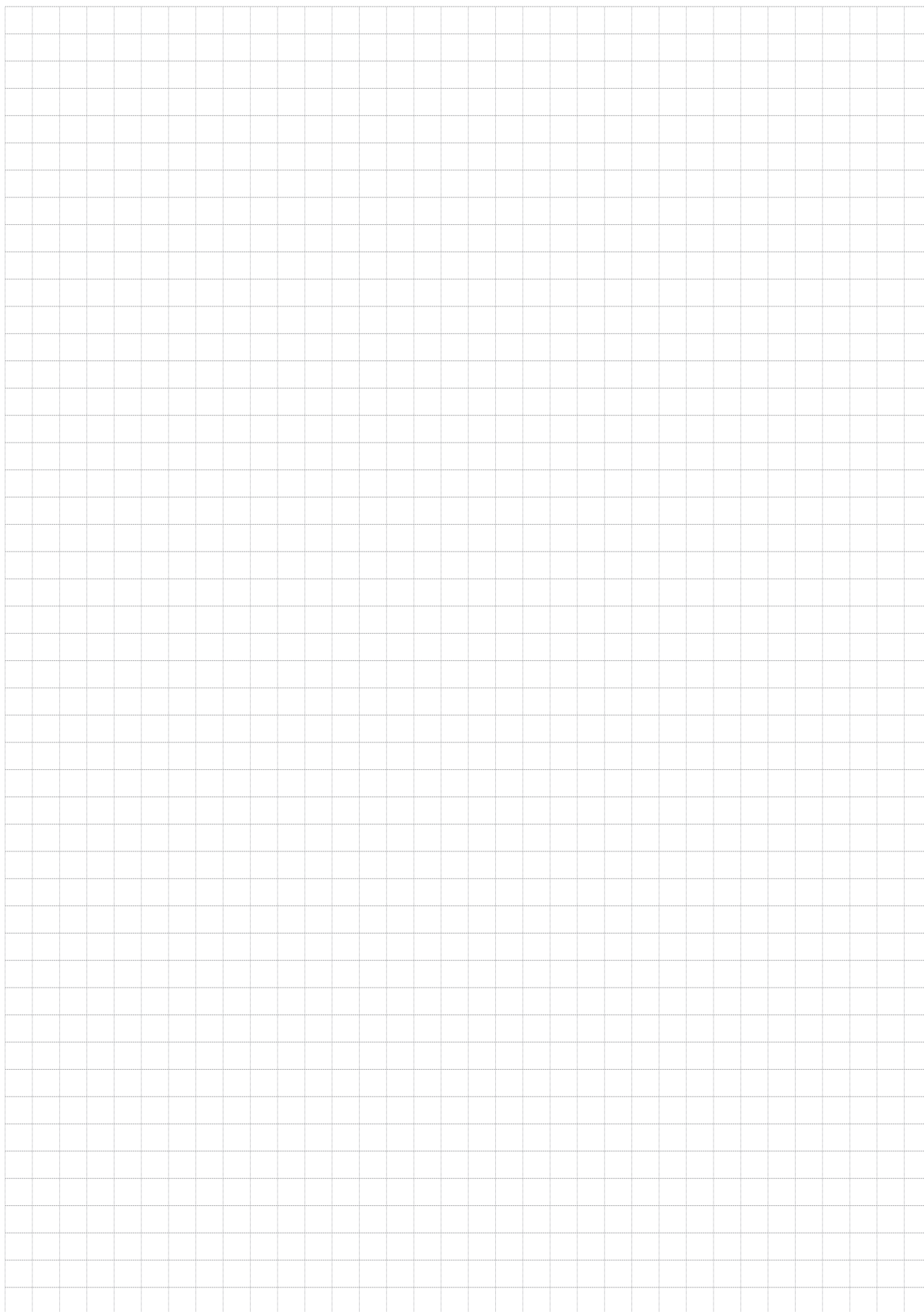


South Africa			
Assembly Sales Service	Johannesburg	SEW-EURODRIVE (PROPRIETARY) LIMITED Eurodrive House Cnr. Adcock Ingram and Aerodrome Roads Aeroton Ext. 2 Johannesburg 2013 P.O.Box 90004 Bertsham 2013	Tel. + 27 11 248 70 00 Fax +27 11 494 23 11 ljansen@sew.co.za
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Spain			
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Sweden			
Assembly Sales Service	Jönköping	SEW-EURODRIVE AB Gnejsvägen 6-8 S-55303 Jönköping Box 3100 S-55003 Jönköping	Tel. (036) 34 42 00 Fax (036) 34 42 80 www.sew-eurodrive.se
Switzerland			
Assembly Sales Service	Basel	Alfred Imhof A.G. Jurastrasse 10 CH-4142 Münchenstein bei Basel	Tel. (061) 4 17 17 17 Fax (061) 4 17 17 00 http://www.imhof-sew.ch info@imhof-sew.ch
Thailand			
Assembly Sales Service	Chon Buri	SEW-EURODRIVE (Thailand) Ltd. Bangpakong Industrial Park 2 700/456, Moo.7, Tambol Donhuaroh Muang District Chon Buri 20000	Tel. 0066-38 21 40 22 Fax 0066-38 21 45 31 sewthailand@sew-eurodrive.co.th
Turkey			
Assembly Sales Service	Istanbul	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti Bagdat Cad. Koruma Cikmazi No. 3 TR-81540 Maltepe ISTANBUL	Tel. (0216) 4 41 91 63 + 4 41 91 64 + 3 83 80 14 + 3 83 80 15 Fax (0216) 3 05 58 67 seweurodrive@superonline.com.tr
USA			
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Assembly Sales Service	San Francisco	SEW-EURODRIVE INC. 30599 San Antonio St. Hayward, California 94544-7101	Tel. (510) 4 87-35 60 Fax (510) 4 87-63 81
	Philadelphia/PA	SEW-EURODRIVE INC. Pureland Ind. Complex 200 High Hill Road, P.O. Box 481 Bridgeport, New Jersey 08014	Tel. (856) 4 67-22 77 Fax (856) 8 45-31 79
	Dayton	SEW-EURODRIVE INC. 2001 West Main Street Troy, Ohio 45373	Tel. (9 37) 3 35-00 36 Fax (9 37) 4 40-37 99
	Dallas	SEW-EURODRIVE INC. 3950 Platinum Way Dallas, Texas 75237	Tel. (214) 3 30-48 24 Fax (214) 3 30-47 24



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