



SEW
EURODRIVE

Assembly and Operating Instructions



PxG® Series Servo Gear Units



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1 General information

1.1 About this documentation

The documentation at hand is the original.

This documentation is an integral part of the product. The documentation is intended for all employees who perform work on the product.

Make sure this documentation is accessible and legible. Ensure that persons responsible for the systems and their operation as well as persons who work on the product independently have read through the documentation carefully and understood it. If you are unclear about any of the information in this documentation or if you require further information, contact SEW-EURODRIVE.

1.2 Structure of the safety notes

1.2.1 Meaning of signal words

The following table shows the grading and meaning of the signal words for safety notes.

Signal word	Meaning	Consequences if disregarded
▲ DANGER	Imminent hazard	Severe or fatal injuries
▲ WARNING	Possible dangerous situation	Severe or fatal injuries
▲ CAUTION	Possible dangerous situation	Minor injuries
NOTICE	Possible damage to property	Damage to the product or its environment
INFORMATION	Useful information or tip: Simplifies handling of the product.	

1.2.2 Structure of section-related safety notes

Section-related safety notes do not apply to a specific action but to several actions pertaining to one subject. The hazard symbols used either indicate a general hazard or a specific hazard.

This is the formal structure of a safety note for a specific section:



SIGNAL WORD

Type and source of hazard.




Possible consequence(s) if disregarded.

- Measure(s) to prevent the hazard.

Meaning of the hazard symbols

The hazard symbols in the safety notes have the following meaning:

Hazard symbol	Meaning
	General hazard

Hazard symbol	Meaning
	Warning of hot surfaces
	Warning of risk of crushing
	Warning of automatic restart

1.2.3 Structure of embedded safety notes

Embedded safety notes are directly integrated into the instructions just before the description of the dangerous action.

This is the formal structure of an embedded safety note:

⚠ SIGNAL WORD! Type and source of hazard. Possible consequence(s) if disregarded. Measure(s) to prevent the hazard.

1.3 Decimal separator in numerical values

In this document, a period is used to indicate the decimal separator.

Example: 30.5 kg

1.4 Rights to claim under limited warranty

Read the information in this documentation. This is essential for fault-free operation and fulfillment of any rights to claim under limited warranty. Read the documentation before you start working with the product.

1.5 Product names and trademarks

The brands and product names in this documentation are trademarks or registered trademarks of their respective titleholders.

1.6 Copyright notice

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2 Safety notes

2.1 Preliminary information

The following general safety notes serve the purpose of preventing injury to persons and damage to property. They primarily apply to the use of products described in this documentation. If you use additional components, also observe the relevant warning and safety notes.

2.2 Duties of the user

As the user, you must ensure that the basic safety notes are observed and complied with. Make sure that persons responsible for the machinery and its operation as well as persons who work on the device independently have read through the documentation carefully and understood it.

As the user, you must ensure that all of the work listed in the following is carried out only by qualified specialists:

- Setup and installation
- Installation and connection
- Startup
- Maintenance and repairs
- Shutdown
- Disassembly

Ensure that the persons who work on the product pay attention to the following regulations, conditions, documentation, and information:

- National and regional safety and accident prevention regulations
- Warning and safety signs on the product
- All other relevant project planning documents, installation and startup instructions, and wiring diagrams
- Do not assemble, install or operate damaged products
- All system-specific specifications and conditions

Ensure that systems in which the product is installed are equipped with additional monitoring and protection devices. Observe the applicable safety regulations and legislation governing technical work equipment and accident prevention regulations.

2.3 Target group

Specialist for mechanical work

Any mechanical work may be performed only by adequately qualified specialists. Specialists in the context of this documentation are persons who are familiar with the design, mechanical installation, troubleshooting, and maintenance of the product who possess the following qualifications:

- Qualifications in the field of mechanics in accordance with the national regulations
- Familiarity with this documentation

Specialist for electrotechnical work	<p>Any electrotechnical work may be performed only by electrically skilled persons with a suitable education. Electrically skilled persons in the context of this documentation are persons who are familiar with electrical installation, startup, troubleshooting, and maintenance of the product who possess the following qualifications:</p> <ul style="list-style-type: none"> • Qualifications in the field of electrical engineering in accordance with the national regulations • Familiarity with this documentation
Additional qualifications	<p>In addition to that, these persons must be familiar with the valid safety regulations and laws, as well as with the requirements of the standards, directives, and laws specified in this documentation.</p> <p>The persons must have the express authorization of the company to operate, program, parameterize, label, and ground devices, systems, and circuits in accordance with the standards of safety technology.</p>
Instructed persons	<p>All work in the areas of transportation, storage, operation and waste disposal must be carried out by persons who are trained appropriately. The purpose of the training is to give persons the ability to perform the required tasks and work steps in a safe and correct manner.</p>

2.4 Designated use

The gear units are a means of torque and speed transmission. Gear units and gear-motors of this gear unit series are designated to be installed in electrical systems or machines.

The product is intended for use in industrial and commercial systems.

In case of installation in electrical systems or machines, startup of the product is prohibited until it is determined that the machine meets the requirements stipulated in the local laws and directives. For Europe, Machinery Directive 2006/42/EC as well as the EMC Directive 2014/30/EU apply.

Using these products in potentially explosive atmospheres is prohibited, unless specifically designated otherwise.

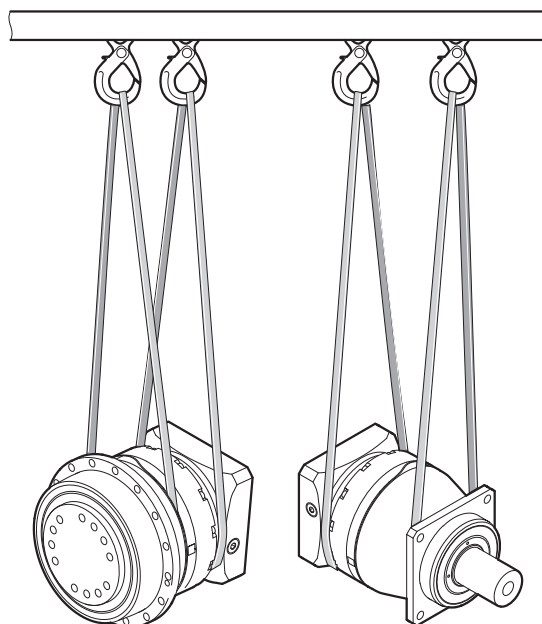
Unintended or improper use of the product may result in severe injury to persons and damage to property.

For the technical data, refer to the nameplate and chapter "Technical data" in the documentation. Always comply with the data and conditions.

2.5 Transportation/storage

Observe the following notes when transporting the device:

- Inspect the shipment for damage as soon as you receive the delivery. Inform the shipping company immediately about any damage. If the product is damaged, it must not be assembled, installed or started up.
- In case the product is not installed right away, store it horizontally, dry, dust-free and indoors at a storage temperature between -10 °C and +40 °C. The product can be stored for up to 24 months without requiring any special measures before startup. In case of storage period longer than 24 months, contact SEW-EURODRIVE.
- Note that retaining straps attached to the products might be under tension. To avoid cutting injuries, remove the retaining straps carefully from the product and wear suitable protective clothing, if necessary.
- If the product weighs more than 40 kg, use lifting equipment for transporting, e.g. straps. You can find the product weight on the nameplate of the product or in the order data sheet.



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- Note the hazard from suspended loads. Do not stand under suspended loads. Secure the area where suspended loads can fall down. Secure loads using suitable holding fixtures (e.g. belts) before lifting them.
- Sudden impacts, e.g. due to falling or sudden lowering of the product can cause damages to the product. Only use lifting equipment and load handling devices with a sufficient load capacity. Adhere to the permitted load of the lifting equipment. Lower the product carefully.

2.6 Installation/assembly

Protect the product from strong mechanical strain. The product and its mounting parts must never protrude into the path of persons or vehicles. Ensure that components are not deformed, particularly during transportation and handling. Electrical components must not be mechanically damaged or destroyed.

2.7 Carrying out electrical work safely

Observe the following information to carry out electrical work safely during installation and maintenance:

- Electrical work may only be carried out by electrically skilled persons.
- Always adhere to the 5 safety rules for working on electrical components:
 - Disconnect
 - Secure the drive against restart
 - Check that no voltage is applied
 - Ground and short-circuit it
 - Cover or safeguard neighboring live parts
- When the device is switched on, dangerous voltages are present at all power connections as well as at any connected cables and terminals. This also applies even when the product is inhibited and the motor is at standstill.

2.8 Startup/operation

Do not deactivate monitoring and protection devices even for a test run.

In the event of deviations from normal operation, switch the product off. Possible deviations are increased temperatures, noise, or vibration, for example. Determine the cause. Contact SEW-EURODRIVE if necessary.

Risk of burns: The surface temperature of the product can exceed 60 °C during operation. Do not touch the product during operation. Let the product cool down before touching it.

2.9 Cleaning

During cleaning work, protect the bearing and the sealing rings against contact with solvents. Solvents can damage the bearing and the sealing rings.

Only use commercial cleaning agents that are grease-dissolving but non-aggressive to prevent corrosion.

Do not use compressed air for cleaning the unit, but use a vacuum cleaner. Using compressed air can damage the product or lead to premature wear as particles are blown into the guides and bearings.

Only clean the gear unit in idle state. The pumping effect of a running gear unit can suck cleaning agent into the gear unit.

3 Gear unit structure

3.1 Basic structure

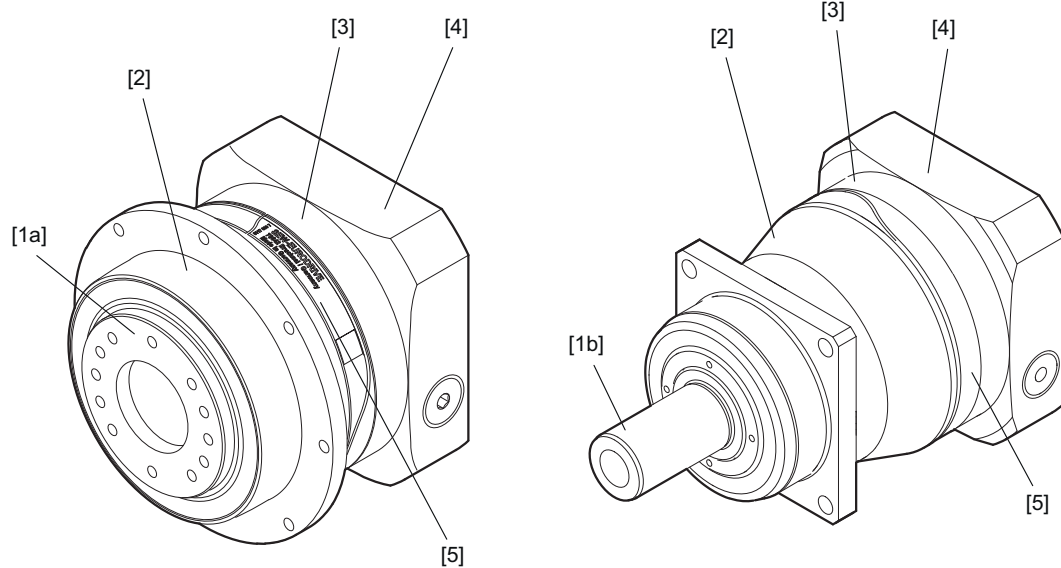
The gear units of the PxG® series are single- or multi-stage gear units with low backlash. They can be used in all mounting positions. The gear units are lubricated for life and so require little maintenance.

INFORMATION



The following illustrations serve as examples. Deviations are possible, depending on the design type and size.

The following figure shows an overview of the gear unit components.



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- [1a] Flange block shaft
- [1b] Output shaft
- [2] Gear unit housing

- [3] Adapter housing
- [4] Adapter flange
- [5] Nameplate

3.2 Output designs

INFORMATION



The dots in product designations are placeholders for letters and/or numbers. One dot represents one letter or one number, two dots represent two or more letters or numbers.

The output design is a characteristic feature of the gear units.

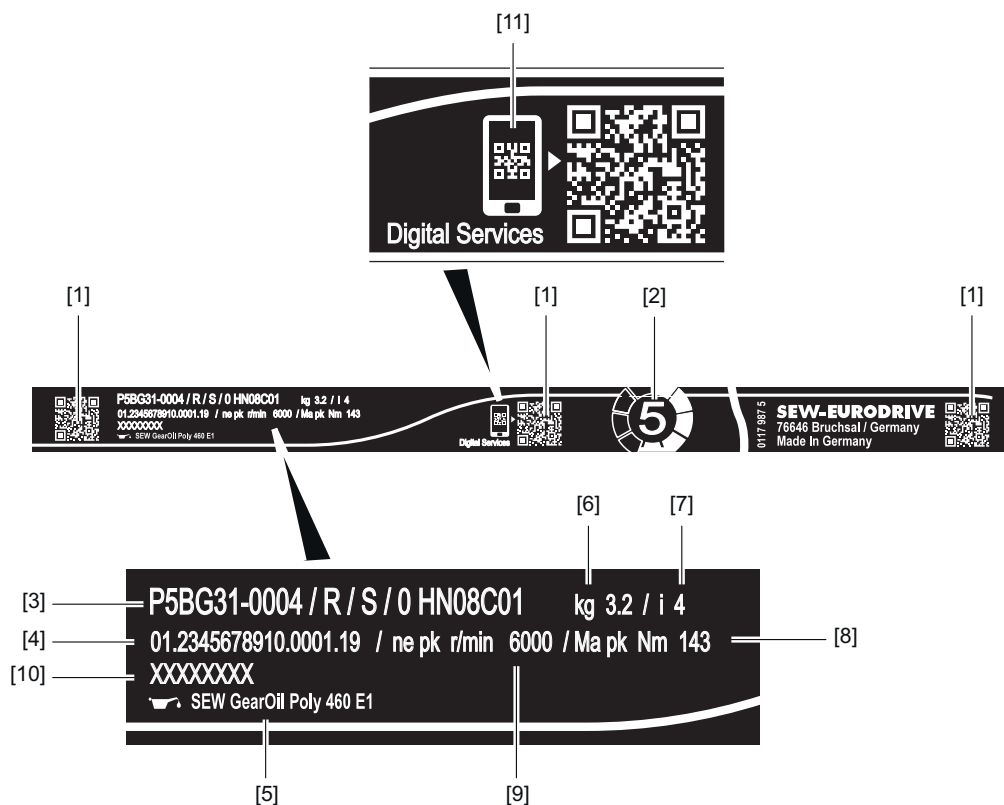
The following output designs are available:

- Flange block shaft
 - Flange block (P.BG..)
 - Flange block with index bore (P.CG..)
- Output shaft
 - Smooth solid shaft (P.NG..)
 - Solid shaft with keyway (P.KG..)
 - Splined solid shaft (P.VG..)

3.3 Nameplate/type designation

3.3.1 Example nameplate

The following figure shows an example of the nameplate for the gear unit:



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	Information regarding the following:
[1]	• Data matrix code
[2]	• Performance class
[3]	• Type designation
[4]	• Serial number
[5]	• Lubricant
[6]	• Weight
[7]	• Gear unit ratio
[8]	• Peak torque, output end
[9]	• Peak speed, input end
[10]	• Customer-specific designation (optional)
[11]	• Digital Services

3.3.2 Sample type designation

P5BG31-0004/R/S/0 HN08C01		
P	Gear unit type	Servo gear unit
5	Performance class	Dynamics
W	Output design	Flange block (without index hole)
G	Gear unit design	Planetary gear unit
3	Size	Size 3
1	No. of stages	Single-stage
0004	Gear ratio	i = 4
R	Rotational clearance	R: Reduced
S	Lubricant	Standard lubricant – oil
0	Design	0: Standard
H.	Adapter type	Smooth shaft
.N	Adapter design	Rigid shaft, clamp-force-optimized
08C01	Adapter code	08: Size 8 adapter shaft C: With coupling sleeve C 01: Flange code number

4 Mechanical installation

4.1 Prerequisites for installation



⚠ CAUTION

The surfaces on the drive can become very hot during operation.

Risk of burns.

- Make sure that hot surfaces cannot be touched unintentionally or during normal operation. Install covers or warning signs according to regulations.
- Let the motor cool down sufficiently before you start working on it.



⚠ CAUTION

Risk of injury and malfunctions due to burrs at the cut edges.

Cut injuries and malfunctions.

- Deburr all edges of the used components carefully.
- Use work gloves.

Ensure that the following requirements have been met:

- The drive has not been damaged during transportation or storage.
- The data on the nameplate of the gear unit matches the requirements.
- Unless the gear unit was designed specifically for liquids, dust, aggressive oils, acids, gases, vapors, or radiation, no contact with these substances is permitted.
- Ensure that no foreign objects (e.g. falling objects or coverings) affect the operation of the gear unit.
- Thoroughly clean the output shafts and the flange surfaces, so that they are free from anti-corrosion agents, dirt, or the like. Do not use compressed air. Use a mild commercially available solvent. Do not expose the sealing lips of the oil seals to the solvent.
- In the case of operation outdoors, the drives must not be exposed to direct sunlight. Install an appropriate protection device, e.g. a cover or a canopy. The protection device must not cause heat build-up.
- Protect the gear unit against icing, because otherwise the seals may suffer damage.
- When the drive is installed in abrasive ambient conditions, protect the output end oil seals against wear.
- Protect the gear unit from cold air flows. Condensed water in the gear unit can cause damage.
- Mount the drive in such a way that sufficient ventilation is guaranteed after installation.
- Make sure that the nameplate is legible after assembly.

4.2 Required tools and resources

- Set of wrenches
- Torque wrench
- Mounting device (recommended)
- Compensation elements (e.g. shims, spacer rings, etc.), if necessary
- Fixing devices for input and output elements
- Set of Allen keys
- Sealant (e.g. LOCTITE® 573 or 574)
- Thread locking compound (e.g. LOCTITE® 243)

4.2.1 Installation tolerances

For the tolerances, refer to the dimension sheet included in the product delivery. Contact SEW-EURODRIVE, if necessary.

4.3 Mounting the motor to the gear unit**INFORMATION**

Observe the operating instructions of the motor.

INFORMATION

Observe the safety and processing instructions of the used thread locking adhesive.

4.3.1 Motor mounting using an H. adapter**NOTICE**

Damage to the adapter due to penetration of moisture or dirt (e.g. dust) during the attachment of a motor or an input component.

Damage to the adapter.

- If the motor being attached or the input component has openings or holes with access to the interior of the adapter, seal them so that they are dustproof and liquidproof.

NOTICE

Affected friction coefficient due to cleaning agent sprayed on the clamping hub.

Malfunctions.

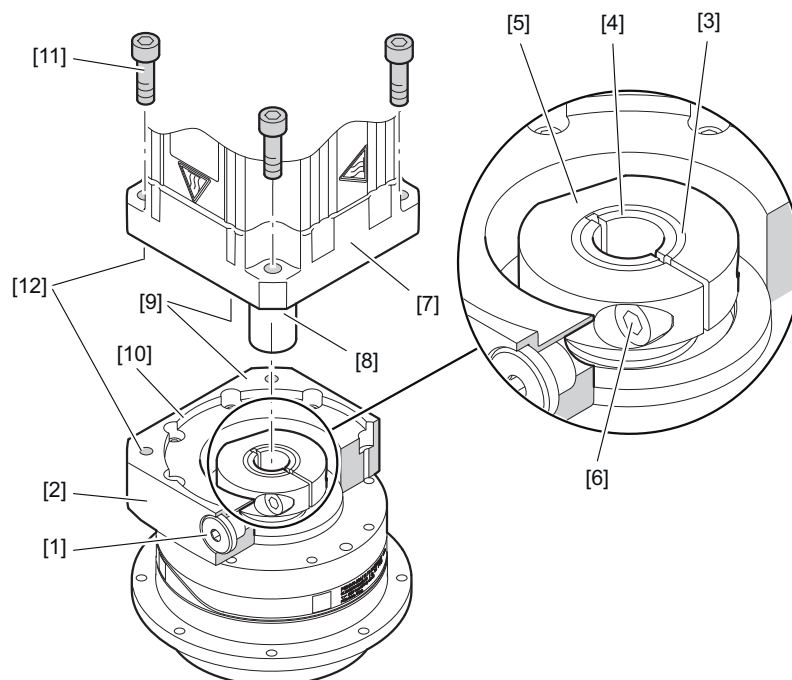
- Spray the cleaning agent onto a cloth to clean the clamping hub.



INFORMATION

In case of gear units with grease lubrication, small amounts of lubricant may escape (sweat out). SEW-EURODRIVE recommends sealing the surfaces between adapter flange and adapter housing, as well as between adapter flange and motor using a suitable sealing compound (e.g. LOCTITE® 573 or 574).

The following figure shows an example for mounting a motor to adapter H.:

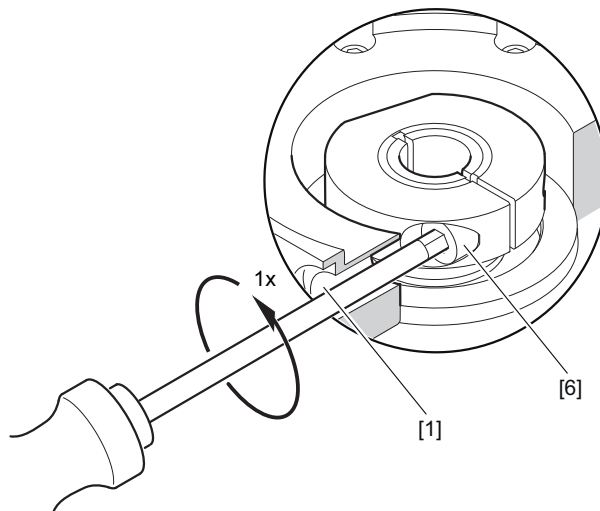


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- | | |
|------------------------------------|----------------------------|
| [1] Mounting bore with screw plug | [7] Motor flange |
| [2] Adapter flange | [8] Motor shaft |
| [3] Adapter shaft | [9] Flange contact surface |
| [4] Coupling sleeve (if available) | [10] Flange centering |
| [5] Clamping ring | [11] Connection screws |
| [6] Clamping screw | [12] Connection bores |

- ✓ **Important information** Mount the motor in a vertical position if possible. The drive component with the lighter weight (either motor or gear unit) must be mounted in the top position. You can perform the assembly in a different location only if the application or space circumstances do not permit the standard position.
- ✓ **Important information regarding corrosion-resistant gear units** Check that the sealing surfaces are aligned prior to mounting the motor. Use a sealant (such as Loctite® 573) to prevent leakage. SEW-EURODRIVE offers a suitable sealing plate to cover the screws as an option.
- ✓ To avoid tensions due to misalignments, you must support the motor and align the motor shaft.
- ✓ The motor must demonstrate at least true-running, face runout, and coaxiality accuracy level "N" to DIN 42955.

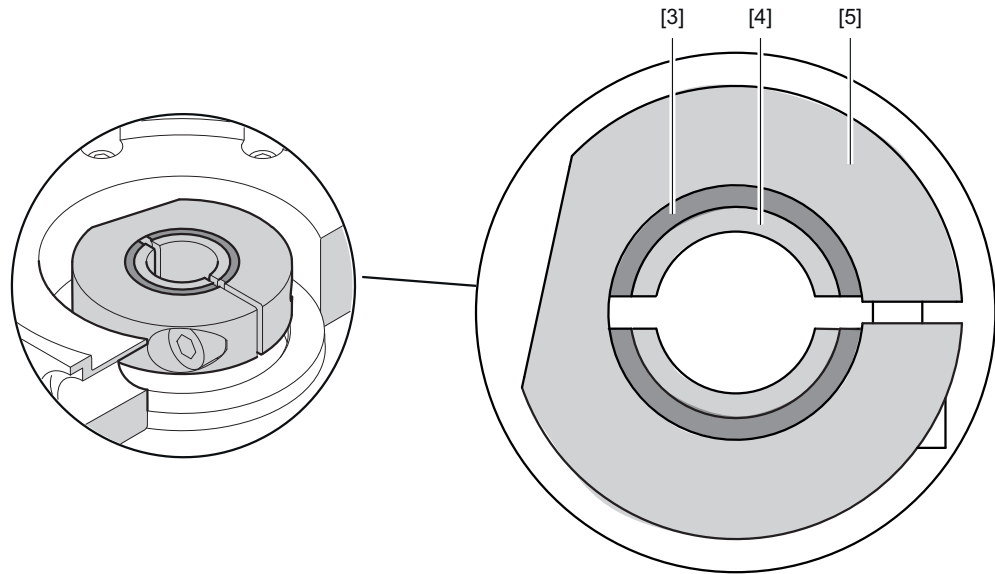
1. **⚠ WARNING!** Risk of injury if the drive starts up unintentionally. Severe or fatal injuries. Disconnect the drive from the power supply before you start work. Prevent the drive from starting up unintentionally, for example by locking the key switch or removing the fuses from the current supply. Set up a caution sign to warn that it is forbidden to switch the drive on.
2. Check the flange surfaces [9] of the motor and adapter for possible scoring and smoothen them if necessary.
3. Clean, degrease and dry the following drive components. Use a grease-dissolving, non-aggressive cleaning agent:
 - ⇒ The hollow shaft bore of the adapter shaft [3]
 - ⇒ The coupling sleeve [4] (if available)
 - ⇒ The motor shaft [8]
 - ⇒ The flange contact surfaces of motor and adapter [9]
 - ⇒ The flange centering of motor and adapter [10]
4. Remove the screw plug from the mounting bore [1] at the adapter flange [2].
5. Turn the adapter shaft [3] with clamping ring [5] until the screw head of the clamping screw [6] can be accessed via the mounting bore [1] in the adapter housing.
6. Loosen the clamping screw [6] by 1 turn.



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- [1] Mounting bore
[6] Clamping screw

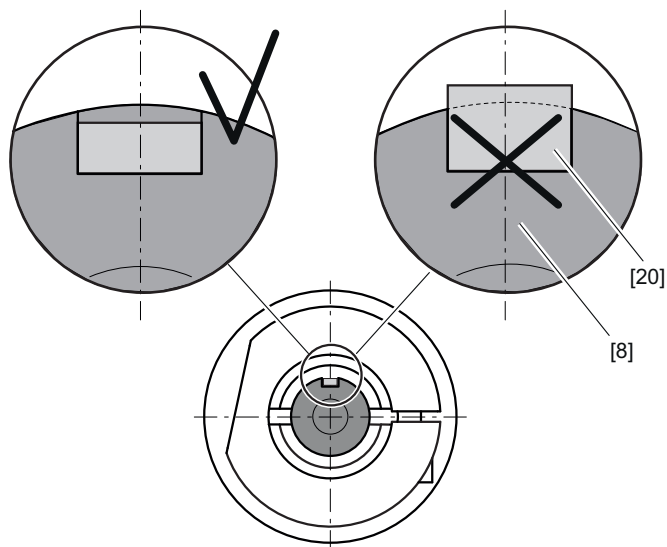
7. When using coupling sleeves [4], make sure to align the slots in the coupling sleeve [4], the adapter shaft [3] and the clamping ring [5].



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- [3] Adapter shaft
[4] Coupling sleeve (if available)
[5] Clamping ring

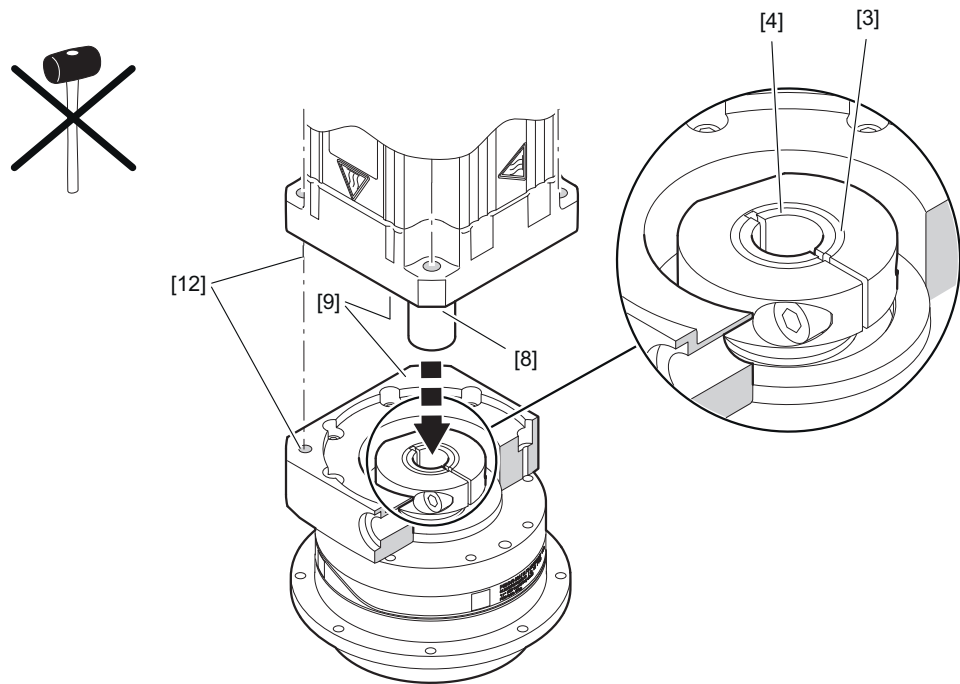
8. For motors with a keyway: SEW-EURODRIVE recommends to insert a half key into the keyway to compensate imbalance. The key half must not protrude out of the groove in the motor shaft extension. Turn the keyway by 90° to the slots in the adapter shaft [3].



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- [8] Motor shaft
[20] Half key

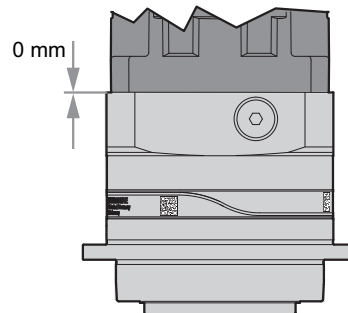
9. Carefully and without using force insert the motor shaft [8] into the hollow shaft bore of the adapter shaft [3] until the flange contact surfaces [9] of motor and adapter touch. The connection bores [12] must be positioned above each other.



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- | | |
|------------------------------------|-----------------------------|
| [3] Adapter shaft | [9] Flange contact surfaces |
| [4] Coupling sleeve (if available) | [12] Connection bores |
| [8] Motor shaft | |

⇒ No gap between the flange contact surfaces:



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10. Coat the 4 connection screws [11] for motor mounting with a threadlocker (e.g. LOCTITE® 243). Select the screws according to the specifications of the motor manufacturer. Observe the minimum screw-in depth according to the strength class (see chapter "Minimum screw-in depth for motor mounting" (→ 21)).
11. Insert the connecting screws [11] into the tapped holes of the adapter flange [2] via the through bores of the motor flange. Evenly tighten the connection screws in diametrically opposite sequence with increasing torque, as specified by the motor manufacturer.

12. Tighten the clamping screw [6] to the specified tightening torque using a suitable torque wrench¹⁾. For the required tightening torque, refer to the table "Tightening torques for clamping screws" (→ 21) or to the clamping ring.

13. Close the assembly bore [1] again with the relevant screw plug. You can find the required torque in chapter "Tightening torques for the screw plug" (→ 21).

1) Signal-generating torque wrenches or motorized torque wrenches with dynamic torque detection

4.3.2 Minimum screw-in depth for motor mounting

	Strength class of the screws ¹⁾	
	8.8	10.9
Minimum screw-in depth	1.5 × screw Ø	1.8 × screw Ø

1) Strength class according to the specifications of the motor manufacturer

For the maximum screw-in depth in the adapter flange, and for the screw diameter, refer to the respective dimension sheet.

4.3.3 Tightening torques for clamping screws

	Clamping screw wrench size in mm						
	3	4	5	6	8	10	14
Tightening torque ¹⁾ in Nm	4.2	8.3	14	35	68	117	285

1) Refer to the clamping ring for the tightening torque.

All values are calculated to VDI 2230, based on the following conditions:

The friction coefficient for threads in strength class 8.8 is $\mu = 0.14$, and in strength classes 10.9 and 12.9 it is $\mu = 0.09$ (to VDI 235-101). The level of utilization is 90% of the elastic limit, and signal-generating torque wrenches or motor torque wrenches with dynamic torque measurement are used as tools.

4.3.4 Tightening torques for the screw plug

	Unit	Screw thread					
		M8 × 1	M10 × 1	M12 × 1.5	M16 × 1.5	M22 × 1.5	M26 × 1.5
Wrench size	mm	4	5	6	6	10	12
Tightening torque	Nm	8	12	15	40	60	80

4.4 Mounting the gear unit to a machine

Customer construction

The customer construction must have the following characteristics:

- Level
- Vibration damping
- Torsionally rigid

The maximum permitted flatness error applies to flange mounting (guide values with reference to DIN ISO 1101):

- Gear unit sizes P..G21 – 72: max. 0.2 mm

Corrosion protection	Electrochemical corrosion occurs between various metals, for example, cast iron and stainless steel. Use plastic inserts (2 – 3 mm thick) if there is a risk of electrochemical corrosion between the gear unit and the driven machine. The material used must have an electrical leakage resistance $< 10^9 \Omega$. If necessary, insert the install the screws with plastic washers. Use the grounding screws on the motor housing to ground the motor.
Thread locking compound	Coat the retaining screws with a threadlocker e.g. LOCTITE® 243. Observe the safety and processing notes of the used thread locking compound.

4.4.1 Mounting on the output end

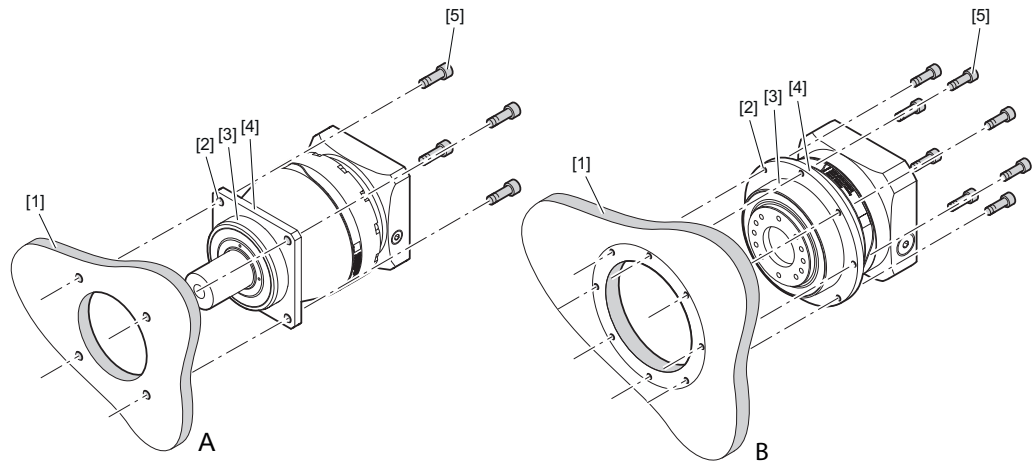
▲ CAUTION

Gear unit overload due to insufficient centering in the machine bed.

Destruction of the gear unit.

- Center the gear unit with as little play as possible in the machine bed using the centering collar.

The figures illustrate the basic procedure for mounting the gear unit at the output end.



A Output design: solid shaft

W Output design: Flange block

[1] Machine bed with tapped holes or through bores

[2] Mounting bores

[3] Output-end centering collar

[4] Gear unit housing

[5] Retaining screws

✓ **▲ WARNING!**

Risk of injury if the drive starts up unintentionally. Severe or fatal injuries. Disconnect the drive from the power supply before you start work. Prevent the drive from starting up unintentionally, for example by locking the key switch or removing the fuses from the current supply. Set up a sign to warn that it is forbidden to switch the drive on.

- ✓ Observe the notes in chapter "Prerequisites for installation" (→ 15).

1. Center the gear unit with as little play as possible in the machine bed.
2. Coat the retaining screws with a threadlocker e.g. LOCTITE® 243.
3. Mount the gear unit to the machine bed via the mounting bores. Using through bores and nuts is also permitted as an alternative to direct screw connections with threaded holes.
4. Tighten the screws evenly, in several stages, and with increasing torque using a suitable tool.¹⁾ For the suitable screw sizes and tightening torques, refer to chapter "Screw sizes for the gear units" (→ 24).

1) Signal-generating torque wrench or a motor torque wrench with dynamic torque measurement.

Screw sizes for the gear units

The following table shows the tightening torques of the gear unit retaining screws. The information refers to design 0 (standard), refer to chapter "Sample type designation" (→ 14). For deviating designs, refer to the information in the order documents or on the dimension sheet.

Type designation ¹⁾	Size	Mounting bore Number of screws × Ø mm	Screw size ²⁾	Tightening torque ²⁾ Nm
P5NG.., P6NG.. P5KG.., P6KG.. P5VG.., P6VG..	2	4 × 5.5	M5	8.3
	3	4 × 6.6	M6	14
	4	4 × 9	M8	35
	5	4 × 11	M10	68
	6	4 × 13.5	M12	117
	7	4 × 17	M16	285
P5BG.., P6BG.. P5CG.., P6CG..	2	8 × 4.5	M4	4.2
	3	8 × 5.5	M5	8.3
	4	8 × 5.5	M5	8.3
	5	12 × 6.6	M6	14
	6	12 × 9	M8	35
	7	16 × 13.5	M12	117
P7BG..	2	16 × 4.5	M4	4.2
	3	16 × 5.5	M5	8.3
	4	16 × 5.5	M5	8.3
	5	24 × 6.6	M6	14
	6	24 × 9	M8	35
	7	32 × 13.5	M12	117

1) See chapter "Output designs" (→ 12).

2) Strength class 12.9.

All values are calculated to VDI 2230, based on the following conditions:

The friction coefficient for threads in strength class 8.8 is $\mu = 0.14$, and in strength classes 10.9 and 12.9 it is $\mu = 0.09$ (to VDI 235-101). The level of utilization is 90% of the elastic limit, and signal-generating torque wrenches or motor torque wrenches with dynamic torque measurement are used as tools.

4.4.2 Mounting to the gear unit backside

▲ CAUTION

Gear unit overload due to insufficient centering in the machine bed.

Destruction of the gear unit.

- Center the gear unit with as little play as possible in the machine bed using the centering collar.

⚠ CAUTION

Damage to the gear unit caused by removing the adapter housing.

Gear unit damage.

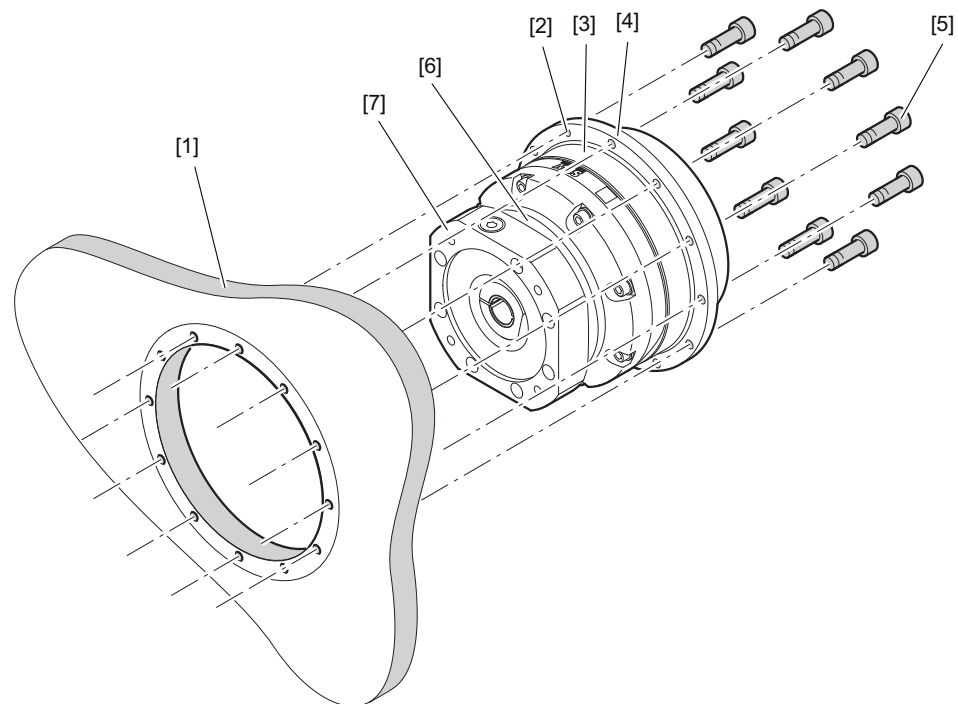
- Do not remove the adapter housing. It may be necessary to contact SEW-EURODRIVE. Disassembly renders any rights to claim under limited warranty null and void. Only the adapter flange may be disassembled to allow for rear attachment or replacement.

Mounting the gear unit backside to a machine is only possible in flange block design. In addition, the largest diameter of the adapter housing must be smaller than the centering collar on the backside of the gear unit housing. For the specified dimensions, refer to the dimension sheets.

The adapter housing must not be removed. Otherwise, the rights to claim under limited warranty become void.

Observe the notes in chapter "Prerequisites for installation" (→ 15).

The following figure shows the basic procedure for mounting the gear unit backside to a machine. For this procedure, the diameter of the adapter flange needs to be smaller than the diameter of the centering collar on the backside of the gear unit housing. For the specified dimensions, refer to the dimension sheet.



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- [1] Machine bed with tapped holes or through bores
- [2] Mounting bores
- [3] Backside centering collar
- [4] Gear unit housing
- [5] Retaining screws
- [6] Adapter housing
- [7] Adapter flange

✓ **⚠ WARNING!**

Risk of injury if the drive starts up unintentionally. Severe or fatal injuries. Disconnect the drive from the power supply before you start work. Prevent the drive from starting up unintentionally, for example by locking the key switch or removing the fuses from the current supply. Set up a sign to warn that it is forbidden to switch the drive on.

1. Center the gear unit with as little play as possible in the machine bed [1].
2. Coat the retaining screws [5] with a threadlocker e.g. LOCTITE® 243.
3. Mount the gear unit to the machine bed via the mounting bores. Using through bores and nuts is also permitted as an alternative to direct screw connections with threaded holes.
4. Tighten the screws evenly, in several stages, and with increasing torque using a suitable tool.¹⁾ For the suitable screw sizes and tightening torques, refer to chapter "Screw sizes for the gear units" (→ 24).

1) Signal-generating torque wrench or a motor torque wrench with dynamic torque measurement.

Removal/installation of the adapter flange**⚠ CAUTION**

Damage to the gear unit, if the gear unit is operated without an adapter flange.

Gear unit damage.

- Operation without an adapter flange is not permitted. Ideal operation is guaranteed only with the SEW adapter flange.

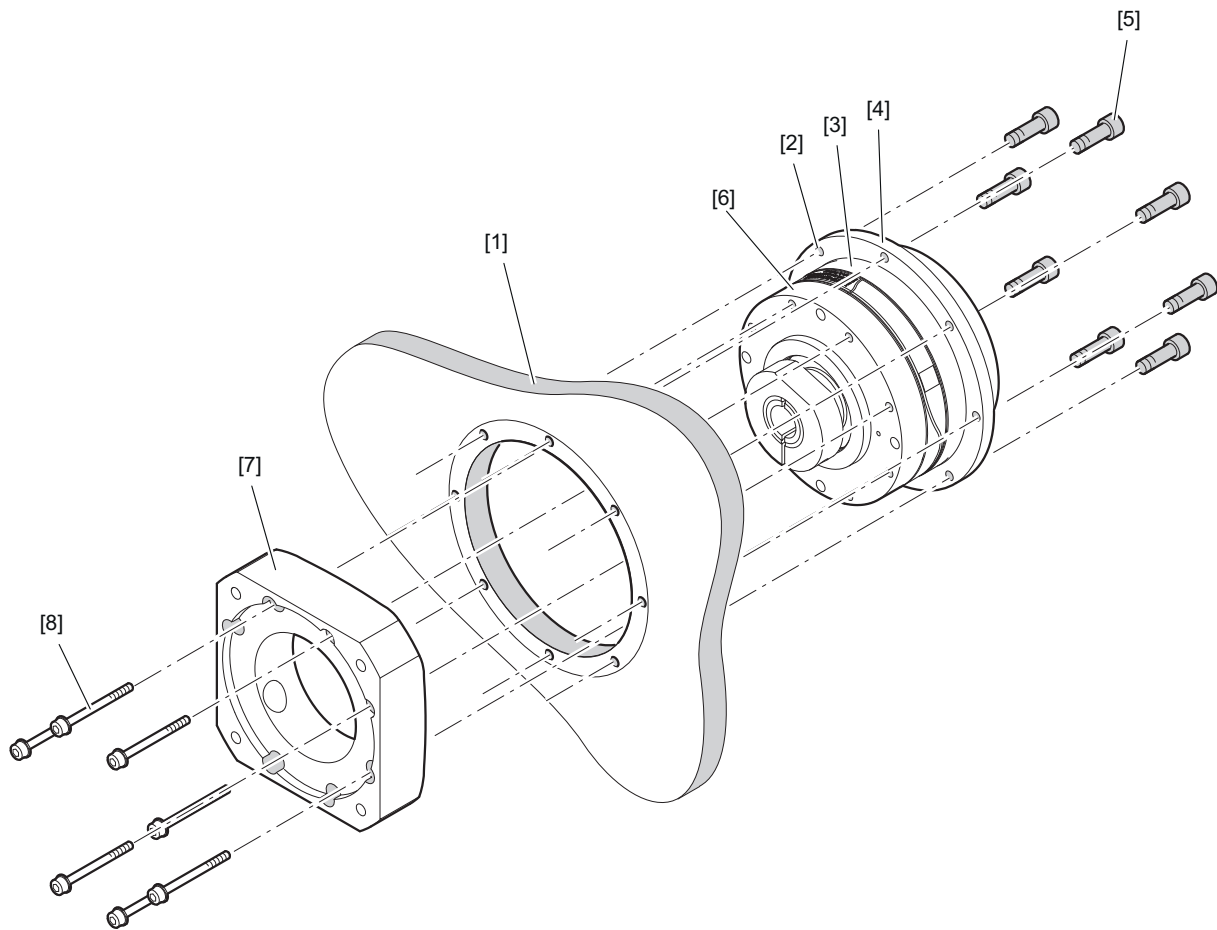
**INFORMATION**

In case of gear units with grease lubrication, small amounts of lubricant may escape (sweat out). SEW-EURODRIVE recommends sealing the surfaces between adapter flange and adapter housing, as well as between adapter flange and motor using a suitable sealing compound (e.g. LOCTITE® 573 or 574).

In case the diameter of the adapter flange is larger than the diameter of the backside centering collar, the adapter flange must be removed before the gear unit backside can be mounted to the machine. For the specified dimensions, refer to the dimension sheets.

The adapter housing must not be removed! Otherwise, the rights to claim under limited warranty become void.

The following figure shows the basic procedure for mounting the gear unit backside to a machine. For this procedure, the diameter of the adapter flange is larger than the diameter of the centering collar on the backside of the gear unit housing. For the specified dimensions, refer to the dimension sheets.



28228132875

- [1] Machine bed with tapped holes or through bores
- [2] Mounting bores
- [3] Backside centering collar
- [4] Gear unit housing
- [5] Retaining screws
- [6] Adapter housing
- [7] Adapter flange
- [8] Adapter flange retaining screws

- ✓ Make sure that the adapter flange is mounted in the same position as before it has been removed.
- 1. Loosen the screws [8] of the adapter flange [7]. Memorize the position of each screw in the adapter flange.
- 2. Clean the screws or use new, suitable screws. Contact SEW-EURODRIVE, if required.
- 3. Carefully remove the adapter flange.
- 4. Guide the gear unit through the centering in the machine bed [1] with the backside first.
- 5. Coat the retaining screws [5] with a threadlocker e.g. LOCTITE® 243.

6. Evenly tighten the screws in several turns with increasing torque using a suitable tool¹⁾. For the suitable screw sizes and tightening torques, refer to chapter "Screw sizes for the gear units" (→ 24).
7. Mount the adapter flange in its initial position (before removal).
8. Coat the adapter flange screws with a threadlocker (e.g. LOCTITE® 243). Insert the screws into their initial fastening bores of the adapter flange.
9. Evenly tighten the screws (of strength class 10.9) in several turns with increasing torque using a suitable tool¹⁾. For the suitable tightening torques depending on the screw size, refer to chapter "Standard tightening torques" (→ 28).

1) Signal-generating torque wrenches or motorized torque wrenches with dynamic torque detection

Standard tightening torques

The following table lists the tightening torques for common thread sizes of shank screws and nuts (as used in general mechanical engineering).

Strength class of screw/nut	M3	M4	M5	M6	M8	M10	M12	M16	M20	M24
8.8/8	1.5	3.4	6.7	12	28	56	96	235	460	795
10.9/10	1.5	3.5	6.9	12	29	57	98	235	465	800
12.9/12	1.8	4.2	8.3	14	35	68	117	285	557	960

All values are calculated to VDI 2230, based on the following conditions:

The friction coefficient for threads in strength class 8.8 is $\mu = 0.14$, and in strength classes 10.9 and 12.9 it is $\mu = 0.09$ (to VDI 235-101). The level of utilization is 90% of the elastic limit, and signal-generating torque wrenches or motor torque wrenches with dynamic torque measurement are used as tools.

4.5 Mounting the output elements to the output shaft



▲ WARNING

Risk of injury if the drive starts up unintentionally.

Severe or fatal injuries.

- Disconnect the drive from the power supply before you start work.
- Prevent the drive from starting up unintentionally, for example by locking the key switch or removing the fuses from the current supply, and set up a prohibition sign to prevent a restart.



▲ CAUTION

Risk of injury due to moving drive and output elements such as belt pulleys or couplings.

Risk of jamming and crushing.

- Cover the moving drive and output elements with a touch guard.

4.5.1 Mounting output elements onto solid shafts



▲ CAUTION

The bearing, housing, or shaft may be damaged due to improper assembly.

Possible damage to property.

- Use a mounting device for installing input and output elements if possible. Use the centering bore and the thread on the shaft end for positioning.
- Push all mount-on components (belt pulleys, couplings, pinions etc.) onto the shaft end without force.
- When installing the belt pulleys, make sure the belt is tensioned correctly in accordance with the manufacturer's instructions.
- Make sure the mounted transmission elements are balanced to prevent impermissible radial or axial forces.

Maximum permitted static axial forces at the output shaft

The following table lists the maximum permitted static axial forces $F_{A_stat_max}$ (axial forces at standstill), that may not be exceeded when a mount-on component is pushed or shrunk onto the output shaft. The values apply to a shaft unaffected by any radial loads ($F_R = 0$).

For the applicable bearing type, refer to the other documents.

Type designation ¹⁾	Size	$F_{A_stat_max}$ in N	
		Bearing type 1	Bearing type 2
P.NG., P.KG., P.VG..	3	12000	2000
	4	20250	3550
	5	34500	6250

1) See chapter "Output designs" (→ 12).

Mounting the gear unit – Solid shaft design with smooth output shaft**⚠ CAUTION**

Insufficient shaft-hub connection with the use of clamping sets on a smooth shaft end due to greasy or dirty shaft.

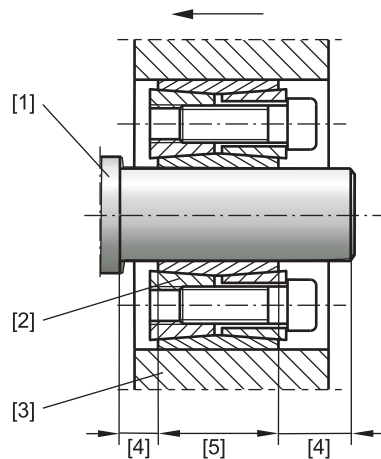
Malfunction.

- Make sure the clamping area [5] is free of dirt and grease. Otherwise the shaft-hub connection may not function properly.

INFORMATION

The shaft collar [1] can be used as defined stop for mounting output elements onto the solid shaft.

The following figures shows an example of shaft assembly with inner clamping set:



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- [1] Shaft shoulder
- [2] Clamping set
- [3] Output element, e. g. gear or sprocket
- [4] Greased shaft areas
- [5] Ungreased clamping area

Grease accessible areas [4] of the shaft after mounting.

Mounting the gear unit – Solid shaft design with key or splined solid shaft design**INFORMATION**

If you mount your gear unit in another way than described in the mounting example given in this chapter, observe the specifications on maximum permitted static axial forces in chapter "Maximum permitted static axial forces at the output shaft" (→ 29).

INFORMATION

For reversing operation, also observe the notes on required output elements in the applicable project planning documents and dimension sheets.

For mounting customer output elements, SEW-EURODRIVE recommends using a smaller hub fit and/or adhesive (e.g. LOCTITE® 243) to secure the hub additionally.

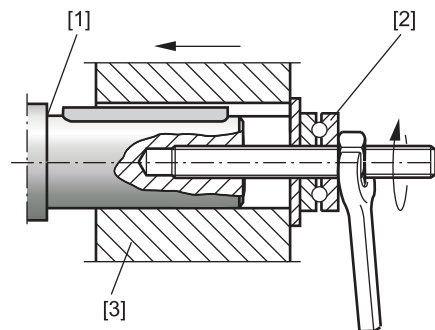
INFORMATION

The shaft collar [1] can be used as defined stop for mounting output elements onto the solid shaft.

INFORMATION

Mounting is easier if you first apply lubricant to the output element or heat it up (80 – 100 °C).

The following figure shows the example of a mounting device used to push hubs [3] onto gear shaft ends. The axial bearing [2] on the mounting device is optional. The figure also applies to the splined design (according to DIN 5480).

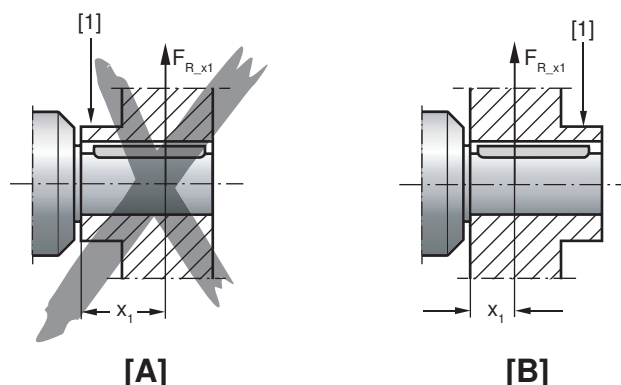


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- | | |
|-----|----------------|
| [1] | Shaft shoulder |
| [2] | Thrust bearing |
| [3] | Hub |

Avoiding high radial loads

To avoid high radial loads, mount gears and sprockets according to figure B.



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[1] Hub
[A] Incorrect assembly

$F_{R,x1}$ Radial load at position x_1
[B] Correct assembly

4.5.2 Mounting the output elements to the flange block shaft

1. Clean and degrease the flange surfaces.
2. Tighten the screws evenly, in several stages, and with increasing torque. For the respective maximum screw-in depth and the tightening torques, refer to the following table.

The table refers to the design 0 (Standard); see chapter "Sample type designation" (→ 14). In the case of a different design, refer to the respective order documents or dimension sheet.

Type designation ²⁾	Size	Number of screws × screw size ¹⁾	Screw-in depth		Tightening torque ¹⁾
			Minimum mm	Maximum mm	
P5BG.., P6BG..	2	8 × M5	5	7	8.3
	3	8 × M6	6	10	14
	4	12 × M6	6	12	14
	5	12 × M8	8	15	35
	6	12 × M10	10	20	68
	7	12 × M16	16	31	285
P5CG.., P6CG.. ³⁾	2	7 × M5	5	7	8.3
	3	7 × M6	6	10	14
	4	11 × M6	6	12	14
	5	11 × M8	8	15	35
	6	11 × M10	10	20	68
	7	11 × M16	16	31	285

Type designation ²⁾	Size	Number of screws × screw size ¹⁾	Screw-in depth		Tightening torque ¹⁾
			Minimum mm	Maximum mm	
P7BG..	2	10 × M5	5	7	8.3
	3	12 × M6	6	10	14
	4	12 × M8	8	12	35
	5	12 × M10	10	15	68
	6	12 × M12	12	19	117
	7	12 × M20	20	31	557

1) Strength class 12.9.

2) See chapter "Output designs" (→ 12).

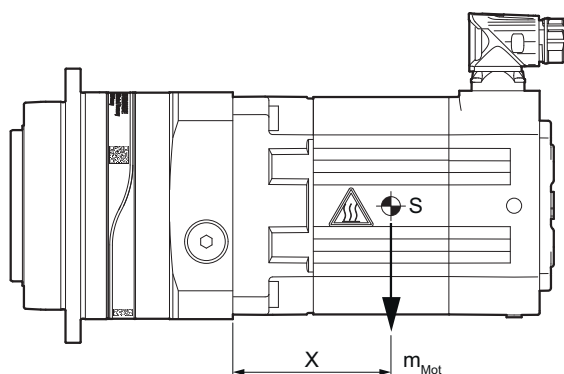
3) For the geometry of the index bore, refer to the dimension sheet.

All values are calculated to VDI 2230, based on the following conditions:

The friction coefficient for threads in strength class 8.8 is $\mu = 0.14$, and in strength classes 10.9 and 12.9 it is $\mu = 0.09$ (to VDI 235-101). The level of utilization is 90% of the elastic limit, and signal-generating torque wrenches or motor torque wrenches with dynamic torque measurement are used as tools.

4.6 Maximum permitted motor weight

The following figure shows the center of mass of the motor at the example of a motor by SEW-EURODRIVE.



[S] Center of mass of the motor

[x] Distance from the adapter flange to the center of mass of the motor

m_{Mot} Maximum permitted motor weight referring to x for stationary applications

Strictly adhere to the specified distances and masses in the following table to prevent overload on the connection screws.

The following table shows the maximum permitted motor mass referring to the distance from the center of gravity and adapter flange at the example of a motor from SEW-EURODRIVE.

If the motor weight is increased in stationary applications, you must reduce the distance to center in linear fashion. If the motor weight is reduced, you can increase the distance to center in linear fashion.

Size	Ø of the adapter shaft ¹⁾ mm	Example: Motor by SEW-EUR ODRIVE	Distance x mm	Maximum permitted motor mass m_{Mot} in relation to x	
				P.BG..., P.CG.. ²⁾ kg	P.NG..., P.KG..., P.VG.. ²⁾ kg
21	11 – 14	CMP63L	144	39	56
21	19	CM71L	165	60	85
22	11	CMP50L	120	75	76
22	14	CMP63L	144	70	71
31	14 – 19	CM71L	165	43	60
31	24	CMP71L	137	85	119
32	11 – 14	CMP63L	144	59	64
32	19	CM71L	165	82	98
41	19 – 28	CMP80L	167	116	106
41	32 – 38	CMP112E	302	137	124
42	14 – 19	CM71L	165	96	93
42	24 – 28	CMP80L	167	200	197
43	11 – 14	CMP63L	144	69	-
43	19	CM71L	165	109	-
51	24 – 38	CMP112E	302	261	261
51	48	CMP112E	302	249	249
52	19 – 28	CMP80L	167	196	196
52	32 – 38	CMP112E	302	250	250
53	14 – 19	CM71L	165	109	-
53	24 – 28	CMP80L	167	184	-
61	38 – 48	CMP112E	302	471	471
61	55	CMP112E	302	455	455
62	24 – 38	CMP112E	302	201	201
62	48	CMP112E	302	440	440
71	55	CMP112E	302	1011	1011
72	38 – 48	CMP112E	302	367	367
72	55	CMP112E	302	373	373

¹⁾ For the adapter shaft diameter, refer to the order documents.

²⁾ See chapter "Output designs" (→ 12).



INFORMATION

The mass specifications in the table apply to stationary applications only. For mobile applications (e.g. travel drives), use the conversion formula below or consult SEW-EURODRIVE.

Conversion formula¹⁾ for calculating the maximum permitted motor mass in mobile applications:

$$m_{Mot_dyn} = m_{Mot} \times \frac{g}{g + a}$$

m_{Mot_dyn}	= Maximum permitted mass of the motor in mobile applications	$[m_{Mot_dyn}] = \text{kg}$
m_{Mot}	= Maximum permitted mass of the motor in stationary applications	$[m_{Mot}] = \text{kg}$
g	= Simple gravitational acceleration (9.81 m s ⁻²)	$[g] = \text{m s}^{-2}$
a	= Acceleration of the mobile application	$[a] = \text{m s}^{-2}$

1) Simplified, without consideration of the direction of acceleration and the mounting position.

5 Startup



⚠ WARNING

Uncontrolled behavior in test mode.

Severe or fatal injuries.

- Secure the key in test mode without drive components.
- Also activate all the monitoring and protection devices in test mode.

NOTICE

Gear unit damage due to overheating of the lubricant.

Gear unit damage.

- Check the surface temperature during startup.
- If the surface temperature exceeds 90 °C, stop the drive and contact SEW-EURODRIVE.



⚠ CAUTION

The surfaces of the drive can be very hot during operation.

Risk of burns.

- Make sure that hot surfaces cannot be touched unintentionally or during normal operation. Install covers or warning signs according to regulations.
- Let the motor cool down sufficiently before you start working on it.

Observe the following points during startup:

- Do not exceed the maximum operating temperature of 90 °C. Measure the temperature as described in chapter "Measuring the surface temperature" (→ 36).
- In the event of unusual noises or vibrations, switch the gearmotor off. Determine the cause. It may be necessary to contact SEW-EURODRIVE.
- Operate the device only within the specified maximum limit values according to the order documents. It may be necessary to contact SEW-EURODRIVE.
- The permitted range for the ambient temperature is between -15 °C and +40 °C.
- The application environment should be dustfree as far as possible.
- Protect the gear unit against icing, because otherwise the seals may suffer damage.

5.1 Measuring the surface temperature

It is essential to measure the surface temperature at maximum load when starting up the gear unit. Commercially available thermometers can be used to measure the temperature.

Measure the surface temperature at the joint between gear unit and adapter, and at the joint between adapter and motor. The maximum surface temperature is reached after approx. 3 hours. It must not exceed a value of 90 °C.

6 Inspection/maintenance



⚠ WARNING

Risk of injury if the drive starts up unintentionally.

Severe or fatal injuries.

- Disconnect the drive from the power supply before you start working on the unit.
- Prevent the drive from starting up unintentionally for example, by locking the key switch or removing the fuses from the current supply, and attach a warning sign that prohibits switching on the drive.



⚠ WARNING

Unsecured key skidding out of the keyway.

Severe or fatal injuries due to flying parts.

- Only operate the motor with attached customer output element (e.g. gear unit), or with a suitably secured key.



⚠ WARNING

Risk of injury if preloaded shaft connections are loosened.

Severe or fatal injuries.

- Before releasing any shaft connections, make sure there is no active torsional torque present that could lead to tension within the system.



⚠ CAUTION

The surfaces of the drive can be very hot during operation.

Risk of burns.

- Make sure that hot surfaces cannot be touched unintentionally or during normal operation. Install covers or warning signs according to regulations.
- Let the motor cool down sufficiently before you start working on it.



⚠ CAUTION

Risk of slipping and hazard for the environment due to spilled or leaked lubricant.

Injuries and environmental hazard.

- Absorb any leaked or spilled lubricant with a suitable binding agent. Dispose of the mixture in accordance with the regulations.

NOTICE

Damage to oil seal caused by cleaning the gear unit with a high pressure device.

Gear unit damage.

- Do not clean the gear unit with a high-pressure cleaning device.

NOTICE

Damage to gear unit due to ingress of foreign objects during maintenance and inspection work.

Gear unit failure.

- Prevent foreign particles from entering into the gear unit during maintenance and inspection work.
-



INFORMATION

Perform a safety check and functional check following maintenance and repair work.

6.1 Inspection and maintenance intervals

INFORMATION



Maintain the inspection and maintenance intervals. This is necessary to ensure operational safety.

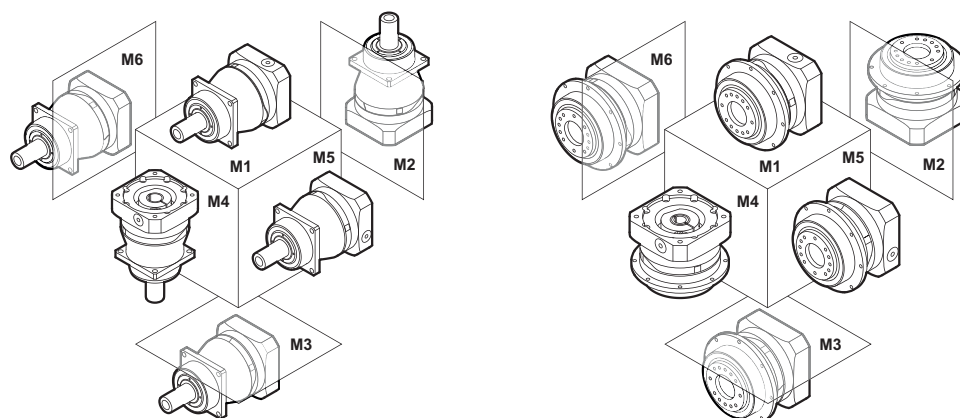
Time interval	What to do?
<ul style="list-style-type: none"> 500 operating hours or 3 months after startup 	<ul style="list-style-type: none"> Visual inspection for external damage and leakage at the seals. Check the tightening torque of the clamping screws for the clamping ring. For the applicable tightening torque, refer to the table "Tightening torques for clamping screws" (→ 21) or to the clamping ring. Check the tightening torques of the screw connections between gear unit and machine (→ 24) and between output elements and output shaft (→ 32).
<ul style="list-style-type: none"> Every 3 months 	<ul style="list-style-type: none"> Visual check for external damages and leakage at the seals.
<ul style="list-style-type: none"> Annually 	<ul style="list-style-type: none"> Check the tightening torque of the clamping screws for the clamping ring. For the applicable tightening torque, refer to the table "Tightening torques for clamping screws" (→ 21) or to the clamping ring. Check the tightening torques of the screw connections between gear unit and machine (→ 24) and between output elements and output shaft (→ 32).

6.2 Lubricants

All gear units are lubricated for life and filled at the factory with a high-quality synthetic lubricant from the SEW GearOil Poly E1 or SEW Grease HL2 E1 series. Both lubricants are also available for applications in the food industry (NSF H1).

7 Mounting positions

The following figure shows the mounting positions M1 – M6 by SEW-EURODRIVE.



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Mount the gear unit in the mounting position as stated in the order documentation. The mounting position can be freely selected unless specified otherwise.

8 Technical data

8.1 Gear unit weight

The table specifies the maximum weight of the gear unit depending on the size. The actual weight may be lower, depending on the design. Refer to the nameplate for the actual weight.

Maximum mass kg	Size					
	21	31	41	51	61	71
P.NG.1, P.KG.1, P.VG.1 ¹⁾	3.0	6.5	14	25	55	72
P.BG.1, P.CG.1 ¹⁾	2.5	6.5	13	21	46	69

Maximum mass kg	Size					
	22	32	42	52	62	72
P.NG.2, P.KG.2, P.VG.2 ¹⁾	3.0	5.0	12	23	51	76
P.BG.2, P.CG.2 ¹⁾	2.5	5.0	11	22	42	73

Maximum mass kg	Size	
	43	53
P7BG.3 ¹⁾	7.5	17.7

1) See chapter "Output designs" (→ 12).

9 Malfunctions

9.1 Gear unit malfunctions

Fault	Possible cause	Measure
Unusual, increased operating noise.	• Evenly meshing/grinding noise: Bearing damage or strain on motor mounting	• Contact SEW-EURODRIVE.
	• Evenly knocking noise: Damage to gearing	• Contact SEW-EURODRIVE.
	• Incorrect controller setting	• Check the controller settings.
Loss of lubricant ¹⁾ at the <ul style="list-style-type: none"> • Adapter • Oil seal on the output end 	• Seal defective	• Contact SEW-EURODRIVE.
	• Increased internal pressure	<ul style="list-style-type: none"> • Check that the air supply is unhindered. • Check the design. • Check the wiring of the motor. • Check the cooling of the motor. • Check the ambient temperature. • Contact SEW-EURODRIVE.
Increased operating temperature (> 90 °C)	• Restricted air supply	• Ensure unrestricted air supply and/or contact SEW-EURODRIVE.
	• Speed/torque is too high	<ul style="list-style-type: none"> • Check the configuration. • Contact SEW-EURODRIVE.
	• The motor heats up the gear unit	<ul style="list-style-type: none"> • Check the configuration. • Check the motor connection. • Cool the motor. • Contact SEW-EURODRIVE.
	• Ambient temperature too high	<ul style="list-style-type: none"> • Lower the ambient temperature. • Check the configuration. • Contact SEW-EURODRIVE.

1) Short-term lubricant leakage at the adapter or the oil seal is possible in the run-in phase (48 hours running time).

9.2 Service

Have the following information available when you contact the SEW-EURODRIVE Service:

- All nameplate data
- Type and extent of the malfunction
- Time the problem occurred and any accompanying circumstances
- Assumed cause
- Digital photo, if applicable

10 Waste disposal

Dispose of the product and all parts separately in accordance with their material structure and the national regulations. Put the product through a recycling process or contact a specialist waste disposal company. If possible, divide the product into the following categories:

- Iron, steel or cast iron
- Stainless steel
- Aluminum
- Copper
- Electronic parts
- Magnets
- Plastics

The following materials are hazardous to health and the environment. These materials must be collected and disposed of separately.

- Oil and grease

Collect used oil and grease separately according to type. Ensure that the used oil is not mixed with solvent. Dispose of used oil and grease correctly.

11 Address list

Argentina

Assembly Sales	Buenos Aires	SEW EURODRIVE ARGENTINA S.A. Ruta Panamericana Km 37.5, Lote 35 (B1619IEA) Centro Industrial Garín Prov. de Buenos Aires	Tel. +54 3327 4572-84 Fax +54 3327 4572-21 http://www.sew-eurodrive.com.ar sewar@sew-eurodrive.com.ar
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Australia

Assembly Sales Service	Melbourne	SEW-EURODRIVE PTY. LTD. 27 Beverage Drive Tullamarine, Victoria 3043	Tel. +61 3 9933-1000 Fax +61 3 9933-1003 http://www.sew-eurodrive.com.au enquires@sew-eurodrive.com.au
	Sydney	SEW-EURODRIVE PTY. LTD. 9, Sleigh Place, Wetherill Park New South Wales, 2164	Tel. +61 2 9725-9900 Fax +61 2 9725-9905 enquires@sew-eurodrive.com.au

Austria

Assembly Sales Service	Vienna	SEW-EURODRIVE Ges.m.b.H. Richard-Strauss-Straße 24 1230 Wien	Tel. +43 1 617 55 00-0 Fax +43 1 617 55 00-30 http://www.sew-eurodrive.at sew@sew-eurodrive.at
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Bangladesh

Sales	Bangladesh	SEW-EURODRIVE INDIA PRIVATE LIMITED 345 DIT Road East Rampura Dhaka-1219, Bangladesh	Tel. +88 01729 097309 salesdhaka@seweurodrivebangladesh.com
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Belarus

Sales	Minsk	Foreign unitary production enterprise SEW- EURODRIVE Rybalko Str. 26 220033 Minsk	Tel. +375 17 298 47 56 / 298 47 58 Fax +375 17 298 47 54 http://www.sew.by sales@sew.by
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Belgium

Assembly Sales Service	Brussels	SEW-EURODRIVE n.v./s.a. Researchpark Haasrode 1060 Evenementenlaan 7 3001 Leuven	Tel. +32 16 386-311 Fax +32 16 386-336 http://www.sew-eurodrive.be info@sew-eurodrive.be
Service Competence Center	Industrial Gears	SEW-EURODRIVE n.v./s.a. Rue du Parc Industriel, 31 6900 Marche-en-Famenne	Tel. +32 84 219-878 Fax +32 84 219-879 http://www.sew-eurodrive.be info@sew.be

Brazil

Production Sales Service	São Paulo	SEW-EURODRIVE Brasil Ltda. Estrada Municipal José Rubim, 205 – Rodovia Santos Dumont Km 49 Indaiatuba – 13347-510 – SP	Tel. +55 19 3835-8000 sew@sew.com.br
Assembly Sales Service	Rio Claro	SEW-EURODRIVE Brasil Ltda. Rodovia Washington Luiz, Km 172 Condomínio Industrial Conpark Caixa Postal: 327 13501-600 – Rio Claro / SP	Tel. +55 19 3522-3100 Fax +55 19 3524-6653 montadora.rc@sew.com.br
	Joinville	SEW-EURODRIVE Brasil Ltda. Jvl / Ind Rua Dona Francisca, 12.346 – Pirabeiraba 89239-270 – Joinville / SC	Tel. +55 47 3027-6886 Fax +55 47 3027-6888 filial.sc@sew.com.br

Bulgaria

Sales	Sofia	BEVER-DRIVE GmbH Bogdanovetz Str.1 1606 Sofia	Tel. +359 2 9151160 Fax +359 2 9151166 bever@bever.bg
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Cameroon

Sales	Douala	SEW-EURODRIVE S.A.R.L. Ancienne Route Bonabéri P.O. Box B.P 8674 Douala-Cameroun	Tel. +237 233 39 02 10 Fax +237 233 39 02 10 sew@sew-eurodrive-cm
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Canada

Assembly Sales Service	Toronto	SEW-EURODRIVE CO. OF CANADA LTD. 210 Walker Drive Bramalea, ON L6T 3W1	Tel. +1 905 791-1553 Fax +1 905 791-2999 http://www.sew-eurodrive.ca l.watson@sew-eurodrive.ca
	Vancouver	SEW-EURODRIVE CO. OF CANADA LTD. Tilbury Industrial Park 7188 Honeyman Street Delta, BC V4G 1G1	Tel. +1 604 946-5535 Fax +1 604 946-2513 b.wake@sew-eurodrive.ca
	Montreal	SEW-EURODRIVE CO. OF CANADA LTD. 2001 Ch. de l'Aviation Dorval Quebec H9P 2X6	Tel. +1 514 367-1124 Fax +1 514 367-3677 n.paradis@sew-eurodrive.ca

Chile

Assembly Sales Service	Santiago de Chile	SEW-EURODRIVE CHILE LTDA Las Encinas 1295 Parque Industrial Valle Grande LAMP Santiago de Chile P.O. Box Casilla 23 Correo Quilicura - Santiago - Chile	Tel. +56 2 2757 7000 Fax +56 2 2757 7001 http://www.sew-eurodrive.cl ventas@sew-eurodrive.cl
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China

Production Assembly Sales Service	Tianjin	SEW-EURODRIVE (Tianjin) Co., Ltd. No. 78, 13th Avenue, TEDA Tianjin 300457	Tel. +86 22 25322612 Fax +86 22 25323273 http://www.sew-eurodrive.cn info@sew-eurodrive.cn
Assembly Sales Service	Suzhou	SEW-EURODRIVE (Suzhou) Co., Ltd. 333, Suhong Middle Road Suzhou Industrial Park Jiangsu Province, 215021	Tel. +86 512 62581781 Fax +86 512 62581783 suzhou@sew-eurodrive.cn
	Guangzhou	SEW-EURODRIVE (Guangzhou) Co., Ltd. No. 9, JunDa Road East Section of GETDD Guangzhou 510530	Tel. +86 20 82267890 Fax +86 20 82267922 guangzhou@sew-eurodrive.cn
	Shenyang	SEW-EURODRIVE (Shenyang) Co., Ltd. 10A-2, 6th Road Shenyang Economic Technological Development Area Shenyang, 110141	Tel. +86 24 25382538 Fax +86 24 25382580 shenyang@sew-eurodrive.cn
	Taiyuan	SEW-EURODRIVE (Taiyuan) Co., Ltd. No.3, HuaZhang Street, TaiYuan Economic & Technical Development Zone ShanXi, 030032	Tel. +86-351-7117520 Fax +86-351-7117522 taiyuan@sew-eurodrive.cn
	Wuhan	SEW-EURODRIVE (Wuhan) Co., Ltd. 10A-2, 6th Road No. 59, the 4th Quanli Road, WEDA 430056 Wuhan	Tel. +86 27 84478388 Fax +86 27 84478389 wuhan@sew-eurodrive.cn
	Xi'An	SEW-EURODRIVE (Xi'An) Co., Ltd. No. 12 Jinye 2nd Road Xi'An High-Technology Industrial Development Zone Xi'An 710065	Tel. +86 29 68686262 Fax +86 29 68686311 xian@sew-eurodrive.cn
	Hong Kong	SEW-EURODRIVE LTD. Unit No. 801-806, 8th Floor Hong Leong Industrial Complex No. 4, Wang Kwong Road Kowloon, Hong Kong	Tel. +852 36902200 Fax +852 36902211 contact@sew-eurodrive.hk

Colombia			
Assembly Sales Service	Bogota	SEW-EURODRIVE COLOMBIA LTDA. Calle 17 No. 132-18 Interior 2 Bodega 6, Manzana B Santafé de Bogotá	Tel. +57 1 54750-50 Fax +57 1 54750-44 http://www.sew-eurodrive.com.co sew@sew-eurodrive.com.co
Croatia			
Sales Service	Zagreb	KOMPEKS d. o. o. Zeleni dol 10 10 000 Zagreb	Tel. +385 1 4613-158 Fax +385 1 4613-158 kompeks@inet.hr
Czech Republic			
Assembly Sales Service	Hostivice	SEW-EURODRIVE CZ s.r.o. Floriánova 2459 253 01 Hostivice	Tel. +420 255 709 601 Fax +420 235 350 613 http://www.sew-eurodrive.cz sew@sew-eurodrive.cz
Denmark			
Assembly Sales Service	Copenhagen	SEW-EURODRIVE A/S Geminivej 28-30 2670 Greve	Tel. +45 43 95 8500 Fax +45 43 9585-09 http://www.sew-eurodrive.dk sew@sew-eurodrive.dk
Service	Vejle	SEW-EURODRIVE A/S Bødkervej 2 7100 Vejle	Tel. +45 43 9585 00 http://www.sew-eurodrive.dk sew@sew-eurodrive.dk
Egypt			
Sales Service	Cairo	Copam Egypt for Engineering & Agencies Building 10, Block 13005, First Industrial Zone, Obour City Cairo	Tel. +202 44812673 / 79 (7 lines) Fax +202 44812685 http://www.copam-egypt.com copam@copam-egypt.com
Estonia			
Sales	Tallin	ALAS-KUUL AS Loomäe tee 1, Lehmja küla 75306 Rae vald Harjumaa	Tel. +372 6593230 Fax +372 6593231 http://www.alas-kuul.ee info@alas-kuul.ee
Finland			
Assembly Sales Service	Hollola	SEW-EURODRIVE OY Vesimäentie 4 15860 Hollola	Tel. +358 201 589-300 Fax +358 3 780-6211 http://www.sew-eurodrive.fi sew@sew.fi
Service	Hollola	SEW-EURODRIVE OY Keskikankaantie 21 15860 Hollola	Tel. +358 201 589-300 Fax +358 3 780-6211 http://www.sew-eurodrive.fi sew@sew.fi
	Tornio	SEW-EURODRIVE Oy Lossirannankatu 5 95420 Tornio	Tel. +358 201 589 300 Fax +358 3 780 6211 http://www.sew-eurodrive.fi sew@sew.fi
Production Assembly	Karkkila	SEW Industrial Gears Oy Santasalonkatu 6, PL 8 03620 Karkkila, 03601 Karkkila	Tel. +358 201 589-300 Fax +358 201 589-310 http://www.sew-eurodrive.fi sew@sew.fi
France			
Production Sales Service	Hagenau	SEW USOCOME 48-54 route de Soufflenheim B. P. 20185 67506 Hagenau Cedex	Tel. +33 3 88 73 67 00 Fax +33 3 88 73 66 00 http://www.usocom.com sew@usocom.com
Production	Forbach	SEW USOCOME Zone industrielle Technopôle Forbach Sud B. P. 30269 57604 Forbach Cedex	Tel. +33 3 87 29 38 00
	Brumath	SEW USOCOME 1 Rue de Bruxelles 67670 Mommenheim Cedex	Tel. +33 3 88 37 48 00

France

Assembly Sales Service	Bordeaux	SEW USOCOME Parc d'activités de Magellan 62 avenue de Magellan – B. P. 182 33607 Pessac Cedex	Tel. +33 5 57 26 39 00 Fax +33 5 57 26 39 09
	Lyon	SEW USOCOME 75 rue Antoine Condorcet 38090 Vaulx-Milieu	Tel. +33 4 74 99 60 00 Fax +33 4 74 99 60 15
	Nantes	SEW USOCOME Parc d'activités de la forêt 4 rue des Fontenelles 44140 Le Bignon	Tel. +33 2 40 78 42 00 Fax +33 2 40 78 42 20
	Paris	SEW USOCOME Zone industrielle 2 rue Denis Papin 77390 Verneuil l'Étang	Tel. +33 1 64 42 40 80 Fax +33 1 64 42 40 88

Gabon

Representation: Cameroon

Germany

Headquarters Production Sales	Bruchsal	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 http://www.sew-eurodrive.de sew@sew-eurodrive.de
Production / Industrial Gears	Bruchsal	SEW-EURODRIVE GmbH & Co KG Christian-Pähr-Str. 10 76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-2970
Production / Precision Gear Units	Bruchsal	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 sew@sew-eurodrive.de
Production	Graben	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 76676 Graben-Neudorf	Tel. +49 7251 75-0 Fax +49 7251-2970
Service Competence Center	Mechanics / Mechatronics	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 76676 Graben-Neudorf	Tel. +49 7251 75-1710 Fax +49 7251 75-1711 scc-mechanik@sew-eurodrive.de
	Electronics	SEW-EURODRIVE GmbH & Co KG Christian-Pähr-Straße 12 76646 Bruchsal	Tel. +49 7251 75-1780 Fax +49 7251 75-1769 scc-elektronik@sew-eurodrive.de
	MAXOLU- TION® Factory Automation	SEW-EURODRIVE GmbH & Co KG Eisenbahnstraße 11 76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 sew@sew-eurodrive.de
Drive Technology Center	North	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Straße 43 30823 Garbsen (Hannover)	Tel. +49 5137 8798-30 Fax +49 5137 8798-55 dtc-nord@sew-eurodrive.de
	East	SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg 1 08393 Meerane (Zwickau)	Tel. +49 3764 7606-0 Fax +49 3764 7606-20 dtc-ost@sew-eurodrive.de
	South	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 85551 Kirchheim (München)	Tel. +49 89 909551-21 Fax +49 89 909551-50 dtc-sued@sew-eurodrive.de
	West	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 40764 Langenfeld (Düsseldorf)	Tel. +49 2173 8507-10 Fax +49 2173 8507-50 dtc-west@sew-eurodrive.de
Drive Center	Berlin	SEW-EURODRIVE GmbH & Co KG Alexander-Meißner-Straße 44 12526 Berlin	Tel. +49 306331131-30 Fax +49 306331131-36 dc-berlin@sew-eurodrive.de
	Hamburg	SEW-EURODRIVE GmbH & Co KG Hasselbinnen 44 22869 Schenefeld	Tel. +49 40298109-60 Fax +49 40298109-70 dc-hamburg@sew-eurodrive.de
	Ludwigshafen	SEW-EURODRIVE GmbH & Co KG c/o BASF SE c/o BASF SE Gebäude W130 67056 Ludwigshafen	Tel. +49 7251 75 3759 Fax +49 7251 75 503759 dc-ludwigshafen@sew-eurodrive.de

Germany

Saarland	SEW-EURODRIVE GmbH & Co KG Gottlieb-Daimler-Straße 4 66773 Schwalbach Saar – Hülzweiler	Tel. +49 6831 48946 10 Fax +49 6831 48946 13 dc-saarland@sew-eurodrive.de
Ulm	SEW-EURODRIVE GmbH & Co KG Dieselstraße 18 89160 Dornstadt	Tel. +49 7348 9885-0 Fax +49 7348 9885-90 dc-ulm@sew-eurodrive.de
Würzburg	SEW-EURODRIVE GmbH & Co KG Nürnbergerstraße 118 97076 Würzburg-Lengfeld	Tel. +49 931 27886-60 Fax +49 931 27886-66 dc-wuerzburg@sew-eurodrive.de

Drive Service Hotline / 24 Hour Service

0 800 SEWHELP
0 800 7394357**Great Britain**

Assembly Sales Service	Normanton	SEW-EURODRIVE Ltd. DeVilliers Way Trident Park Normanton West Yorkshire WF6 1GX	Tel. +44 1924 893-855 Fax +44 1924 893-702 http://www.sew-eurodrive.co.uk info@sew-eurodrive.co.uk
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Greece

Sales	Athens	Christ. Boznos & Son S.A. 12, K. Mavromichali Street P.O. Box 80136 18545 Piraeus	Tel. +30 2 1042 251-34 Fax +30 2 1042 251-59 http://www.boznos.gr info@boznos.gr
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Hungary

Sales Service	Budapest	SEW-EURODRIVE Kft. Csillaghegyi út 13. 1037 Budapest	Tel. +36 1 437 06-58 Fax +36 1 437 06-50 http://www.sew-eurodrive.hu office@sew-eurodrive.hu
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Iceland

Sales	Reykjavik	Varma & Vélaverk ehf. Knarrarvogi 4 104 Reykjavik	Tel. +354 585 1070 Fax +354 585)1071 https://vov.is/ vov@vov.is
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India

Registered Office Assembly Sales Service	Vadodara	SEW-EURODRIVE India Private Limited Plot No. 4, GIDC POR Ramangamdi • Vadodara - 391 243 Gujarat	Tel. +91 265 3045200 Fax +91 265 3045300 http://www.seweurodriveindia.com salesvadodara@seweurodriveindia.com
Assembly Sales Service	Chennai	SEW-EURODRIVE India Private Limited Plot No. K3/1, Sipcot Industrial Park Phase II Mambakkam Village Sriperumbudur - 602105 Kancheepuram Dist, Tamil Nadu	Tel. +91 44 37188888 Fax +91 44 37188811 saleschennai@seweurodriveindia.com
	Pune	SEW-EURODRIVE India Private Limited Plant: Plot No. D236/1, Chakan Industrial Area Phase- II, Warale, Tal- Khed, Pune-410501, Maharashtra	Tel. +91 21 35 628700 Fax +91 21 35 628715 salespune@seweurodriveindia.com
Sales Service	Gurgaon	SEW-EURODRIVE India Private Limited Drive Center Gurugram Plot no 395, Phase-IV, UdyogVihar Gurugram , 122016 Haryana	Tel. +91 99588 78855 salesgurgaon@seweurodriveindia.com

Indonesia

Sales	Medan	PT. Serumpun Indah Lestari Jl.Pulau Solor no. 8, Kawasan Industri Medan II Medan 20252	Tel. +62 61 687 1221 Fax +62 61 6871429 / +62 61 6871458 / +62 61 30008041 sil@serumpunindah.com serumpunindah@yahoo.com http://www.serumpunindah.com
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Indonesia			
	Jakarta	PT. Cahaya Sukses Abadi Komplek Rukan Puri Mutiara Blok A no 99, Sunter Jakarta 14350	Tel. +62 21 65310599 Fax +62 21 65310600 csajkt@cbn.net.id
	Jakarta	PT. Agrindo Putra Lestari JL.Pantai Indah Selatan, Komplek Sentra In- dustri Terpadu, Pantai indah Kapuk Tahap III, Blok E No. 27 Jakarta 14470	Tel. +62 21 2921-8899 Fax +62 21 2921-8988 aplindo@indosat.net.id http://www.aplindo.com
	Surabaya	PT. TRIAGRI JAYA ABADI Jl. Sukosemolo No. 63, Galaxi Bumi Permai G6 No. 11 Surabaya 60111	Tel. +62 31 5990128 Fax +62 31 5962666 sales@triagri.co.id http://www.triagri.co.id
	Surabaya	CV. Multi Mas Jl. Raden Saleh 43A Kav. 18 Surabaya 60174	Tel. +62 31 5458589 Fax +62 31 5317220 sianhwa@sby.centrin.net.id http://www.cvmultimas.com
Ireland			
Sales Service	Dublin	Alpert Engineering Ltd. 48 Moyle Road Dublin Industrial Estate Glasnevin, Dublin 11	Tel. +353 1 830-6277 Fax +353 1 830-6458 http://www.alpert.ie info@alpert.ie
Israel			
Sales	Tel Aviv	Liraz Handasa Ltd. Ahofer Str 34B / 228 58858 Holon	Tel. +972 3 5599511 Fax +972 3 5599512 http://www.liraz-handasa.co.il office@liraz-handasa.co.il
Italy			
Assembly Sales Service	Milan	SEW-EURODRIVE S.a.s. di SEW S.r.l. & Co. Via Bernini,12 20020 Solaro (Milano)	Tel. +39 02 96 980229 Fax +39 02 96 980 999 http://www.sew-eurodrive.it milano@sew-eurodrive.it
Ivory Coast			
Sales	Abidjan	SEW-EURODRIVE SARL Ivory Coast Rue des Pêcheurs, Zone 3 26 BP 916 Abidjan 26	Tel. +225 21 21 81 05 Fax +225 21 25 30 47 info@sew-eurodrive.ci http://www.sew-eurodrive.ci
Japan			
Assembly Sales Service	Iwata	SEW-EURODRIVE JAPAN CO., LTD 250-1, Shimoman-no, Iwata Shizuoka 438-0818	Tel. +81 538 373811 Fax +81 538 373814 http://www.sew-eurodrive.co.jp sewjapan@sew-eurodrive.co.jp
Kazakhstan			
Sales Service	Almaty	SEW-EURODRIVE LLP 291-291A, Tole bi street 050031, Almaty	Tel. +7 (727) 350 5156 Fax +7 (727) 350 5156 http://www.sew-eurodrive.kz sew@sew-eurodrive.kz
	Tashkent	Representative Office SEW-EURODRIVE Representative office in Uzbekistan 95A Amir Temur ave, office 401/3 100084 Tashkent	Tel. +998 97 134 01 99 Fax http://www.sew-eurodrive.uz sew@sew-eurodrive.uz
	Ulaanbaatar	IM Trading LLC Olympic street 28B/3 Sukhbaatar district, Ulaanbaatar 14230, MN	Tel. +976-77109997 Fax +976-77109997 imt@imt.mn
Latvia			
Sales	Riga	SIA Alas-Kuul Katlakalna 11C 1073 Riga	Tel. +371 6 7139253 Fax +371 6 7139386 http://www.alas-kuul.lv info@alas-kuul.com

Lebanon			
Sales (Lebanon)	Beirut	Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut	Tel. +961 1 510 532 Fax +961 1 494 971 ssacar@inco.com.lb
Sales (Jordan, Kuwait , Beirut Saudi Arabia, Syria)		Middle East Drives S.A.L. (offshore) Sin El Fil. B. P. 55-378 Beirut	Tel. +961 1 494 786 Fax +961 1 494 971 http://www.medrives.com info@medrives.com
Lithuania			
Sales	Alytus	UAB Irseva Statybininku 106C 63431 Alytus	Tel. +370 315 79204 Fax +370 315 56175 http://www.irseva.lt irmantas@irseva.lt
Luxembourg			
Representation: Belgium			
Macedonia			
Sales	Skopje	Boznos DOOEL Dime Anicin 2A/7A 1000 Skopje	Tel. +389 23256553 Fax +389 23256554 http://www.boznos.mk
Malaysia			
Assembly Sales Service	Johor	SEW-EURODRIVE SDN BHD No. 95, Jalan Seroja 39, Taman Johor Jaya 81000 Johor Bahru, Johor West Malaysia	Tel. +60 7 3549409 Fax +60 7 3541404 sales@sew-eurodrive.com.my
Mexico			
Assembly Sales Service	Quéretaro	SEW-EURODRIVE MEXICO S.A. de C.V. SEM-981118-M93 Tequisquiapan No. 102 Parque Industrial Quéretaro C.P. 76220 Querétaro, México	Tel. +52 442 1030-300 Fax +52 442 1030-301 http://www.sew-eurodrive.com.mx scmexico@sew-eurodrive.com.mx
Sales Service	Puebla	SEW-EURODRIVE MEXICO S.A. de C.V. Calzada Zavaleta No. 3922 Piso 2 Local 6 Col. Santa Cruz Buenavista C.P. 72154 Puebla, México	Tel. +52 (222) 221 248 http://www.sew-eurodrive.com.mx scmexico@sew-eurodrive.com.mx
Mongolia			
Technical Office	Ulaanbaatar	IM Trading LLC Olympic street 28B/3 Sukhbaatar district, Ulaanbaatar 14230, MN	Tel. +976-77109997 Tel. +976-99070395 Fax +976-77109997 http://imt.mn/ imt@imt.mn
Morocco			
Sales Service Assembly	Bouskoura	SEW-EURODRIVE Morocco SARL Parc Industriel CFCIM, Lot. 55/59 27182 Bouskoura Grand Casablanca	Tel. +212 522 88 85 00 Fax +212 522 88 84 50 http://www.sew-eurodrive.ma sew@sew-eurodrive.ma
Namibia			
Sales	Swakopmund	DB MINING & INDUSTRIAL SUPPLIES CC Einstein Street Strauss Industrial Park Unit1 Swakopmund	Tel. +264 64 462 738 Fax +264 64 462 734 anton@dbminingnam.com
Netherlands			
Assembly Sales Service	Rotterdam	SEW-EURODRIVE B.V. Industrieweg 175 3044 AS Rotterdam Postbus 10085 3004 AB Rotterdam	Tel. +31 10 4463-700 Fax +31 10 4155-552 Service: 0800-SEWHELP http://www.sew-eurodrive.nl info@sew-eurodrive.nl

New Zealand			
Assembly Sales Service	Auckland	SEW-EURODRIVE NEW ZEALAND LTD. P.O. Box 58-428 82 Greenmount drive East Tamaki Auckland	Tel. +64 9 2745627 Fax +64 9 2740165 http://www.sew-eurodrive.co.nz sales@sew-eurodrive.co.nz
	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 30 Lodestar Avenue, Wigram Christchurch	Tel. +64 3 384-6251 Fax +64 3 384-6455 sales@sew-eurodrive.co.nz
Nigeria			
Sales	Lagos	Greenpeg Nig. Ltd Plot 296A, Adeyemo Akapo Str. Omole GRA Ikeja Lagos-Nigeria	Tel. +234-701-821-9200-1 http://www.greenpeg ltd.com sales@greenpeg ltd.com
Norway			
Assembly Sales Service	Moss	SEW-EURODRIVE A/S Solgaard skog 71 1599 Moss	Tel. +47 69 24 10 20 Fax +47 69 24 10 40 http://www.sew-eurodrive.no sew@sew-eurodrive.no
Pakistan			
Sales	Karachi	Industrial Power Drives Al-Fatah Chamber A/3, 1st Floor Central Com- mercial Area, Sultan Ahmed Shah Road, Block 7/8, Karachi	Tel. +92 21 452 9369 Fax +92-21-454 7365 seweurodrive@cyber.net.pk
Paraguay			
Sales	Fernando de la Mora	SEW-EURODRIVE PARAGUAY S.R.L De la Victoria 112, Esquina nueva Asunción Departamento Central Fernando de la Mora, Barrio Bernardino	Tel. +595 991 519695 Fax +595 21 3285539 sewpy@sew-eurodrive.com.py
Peru			
Assembly Sales Service	Lima	SEW EURODRIVE DEL PERU S.A.C. Los Calderos, 120-124 Urbanizacion Industrial Vulcano, ATE, Lima	Tel. +51 1 3495280 Fax +51 1 3493002 http://www.sew-eurodrive.com.pe sewperu@sew-eurodrive.com.pe
Philippines			
Sales	Makati	P.T. Cerna Corporation 4137 Ponte St., Brgy. Sta. Cruz Makati City 1205	Tel. +63 2 519 6214 Fax +63 2 890 2802 mech_drive_sys@ptcerna.com http://www.ptcerna.com
Poland			
Assembly Sales Service	Łódź	SEW-EURODRIVE Polska Sp.z.o.o. ul. Techniczna 5 92-518 Łódź	Tel. +48 42 293 00 00 Fax +48 42 293 00 49 http://www.sew-eurodrive.pl sew@sew-eurodrive.pl
	Service	Tel. +48 42 293 0030 Fax +48 42 293 0043	24 Hour Service Tel. +48 602 739 739 (+48 602 SEW SEW) serwis@sew-eurodrive.pl
Portugal			
Assembly Sales Service	Coimbra	SEW-EURODRIVE, LDA. Av. da Fonte Nova, n.º 86 3050-379 Mealhada	Tel. +351 231 20 9670 Fax +351 231 20 3685 http://www.sew-eurodrive.pt infosew@sew-eurodrive.pt
Romania			
Sales Service	Bucharest	Sialco Trading SRL str. Brazilia nr. 36 011783 Bucuresti	Tel. +40 21 230-1328 Fax +40 21 230-7170 http://www.sialco.ro sialco@sialco.ro

Russia			
Assembly Sales Service	St. Petersburg	ЗАО «СЕВ-ЕВРОДРАЙФ» 188660, Russia, Leningrad Region, Vse- volozhsky District, Korabselki, Aleksandra Nevskogo str. building 4, block 1 P.O. Box 36 195220 St. Petersburg	Tel. +7 812 3332522 / +7 812 5357142 Fax +7 812 3332523 http://www.sew-eurodrive.ru sew@sew-eurodrive.ru
Senegal			
Sales	Dakar	SENEMECA Mécanique Générale Km 8, Route de Rufisque B.P. 3251, Dakar	Tel. +221 338 494 770 Fax +221 338 494 771 http://www.senemeca.com senemeca@senemeca.sn
Serbia			
Sales	Belgrade	DIPAR d.o.o. Ustanicka 128a PC Košum, IV floor 11000 Beograd	Tel. +381 11 347 3244 / +381 11 288 0393 Fax +381 11 347 1337 office@dipar.rs
Singapore			
Assembly Sales Service	Singapore	SEW-EURODRIVE PTE. LTD. No 9, Tuas Drive 2 Jurong Industrial Estate Singapore 638644	Tel. +65 68621701 Fax +65 68612827 http://www.sew-eurodrive.com.sg sewsingapore@sew-eurodrive.com
Slovakia			
Sales	Bernolákovo	SEW-Eurodrive SK s.r.o. Priemyselná ulica 6267/7 900 27 Bernolákovo	Tel. +421 2 33595 202, 217, 201 Fax +421 2 33595 200 http://www.sew-eurodrive.sk sew@sew-eurodrive.sk
Slovenia			
Sales Service	Celje	Pakman - Pogonska Tehnika d.o.o. Ul. XIV. divizije 14 3000 Celje	Tel. +386 3 490 83-20 Fax +386 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 11 248-7000 Fax +27 11 248-7289 http://www.sew.co.za info@sew.co.za
	Cape Town	SEW-EURODRIVE (PROPRIETARY) LIMITED Rainbow Park Cnr. Racecourse & Omuramba Road Montague Gardens Cape Town P.O.Box 36556 Chempet 7442	Tel. +27 21 552-9820 Fax +27 21 552-9830 Telex 576 062 bgriffiths@sew.co.za
	Durban	SEW-EURODRIVE (PROPRIETARY) LIMITED 48 Prospecton Road Isipingo Durban P.O. Box 10433, Ashwood 3605	Tel. +27 31 902 3815 Fax +27 31 902 3826 cdejager@sew.co.za
	Nelspruit	SEW-EURODRIVE (PROPRIETARY) LIMITED 7 Christie Crescent Vintonia P.O.Box 1942 Nelspruit 1200	Tel. +27 13 752-8007 Fax +27 13 752-8008 robermeyer@sew.co.za
South Korea			
Assembly Sales Service	Ansan	SEW-EURODRIVE Korea Co., Ltd. 7, Dangaengi-ro, Danwon-gu, Ansan-si, Gyeonggi-do, Zip 425-839	Tel. +82 31 492-8051 Fax +82 31 492-8056 http://www.sew-eurodrive.kr master.korea@sew-eurodrive.com

South Korea

	Busan	SEW-EURODRIVE Korea Co., Ltd. 28, Noksansandan 262-ro 50beon-gil, Gangseo-gu, Busan, Zip 618-820	Tel. +82 51 832-0204 Fax +82 51 832-0230
Assembly Service	Siheung	SEW-EURODRIVE Korea Co., Ltd. 35, Emtibeui 26-ro 58beon-gil, Siheung-si, Gyeonggi-do	http://www.sew-eurodrive.kr

Spain

Assembly Sales Service	Bilbao	SEW-EURODRIVE ESPAÑA, S.L. Parque Tecnológico, Edificio, 302 48170 Zamudio (Vizcaya)	Tel. +34 94 43184-70 http://www.sew-eurodrive.es sew.spain@sew-eurodrive.es
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Sri Lanka

Sales	Colombo	SM International (Pte) Ltd 254, Galle Raod Colombo 4, Sri Lanka	Tel. +94 1 2584887 Fax +94 1 2582981
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Swaziland

Sales	Manzini	C G Trading Co. (Pty) Ltd Simunye street Matsapha, Manzini	Tel. +268 7602 0790 Fax +268 2 518 5033 charles@cgtrading.co.sz www.cgtradingwaziland.com
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Sweden

Assembly Sales Service	Jönköping	SEW-EURODRIVE AB Gnejsvägen 6-8 553 03 Jönköping Box 3100 S-550 03 Jönköping	Tel. +46 36 34 42 00 Fax +46 36 34 42 80 http://www.sew-eurodrive.se jonkoping@sew.se
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Switzerland

Assembly Sales Service	Basel	Alfred Imhof A.G. Jurastrasse 10 4142 Münchenstein bei Basel	Tel. +41 61 417 1717 Fax +41 61 417 1700 http://www.imhof-sew.ch info@imhof-sew.ch
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Taiwan

Sales	Taipei	Ting Shou Trading Co., Ltd. 6F-3, No. 267, Sec. 2 Tung Huw S. Road Taipei	Tel. +886 2 27383535 Fax +886 2 27368268 Telex 27 245 sewtwn@ms63.hinet.net http://www.tingshou.com.tw
	Nan Tou	Ting Shou Trading Co., Ltd. No. 55 Kung Yeh N. Road Industrial District Nan Tou 540	Tel. +886 49 255353 Fax +886 49 257878 sewtwn@ms63.hinet.net http://www.tingshou.com.tw

Tanzania

Sales	Daressalam	SEW-EURODRIVE PTY LIMITED TANZANIA Plot 52, Regent Estate PO Box 106274 Dar Es Salaam	Tel. +255 0 22 277 5780 Fax +255 0 22 277 5788 http://www.sew-eurodrive.co.tz info@sew.co.tz
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Thailand

Assembly Sales Service	Chonburi	SEW-EURODRIVE (Thailand) Ltd. 700/456, Moo.7, Donhuaroh Muang Chonburi 20000	Tel. +66 38 454281 Fax +66 38 454288 sewthailand@sew-eurodrive.com
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Tunisia

Sales	Tunis	T. M.S. Technic Marketing Service Zone Industrielle Mghira 2 Lot No. 39 2082 Fouchana	Tel. +216 79 40 88 77 Fax +216 79 40 88 66 http://www.tms.com.tn tms@tms.com.tn
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Turkey

Assembly Sales Service	Kocaeli-Gebze	SEW-EURODRIVE Ana Merkez Gebze Organize Sanayi Böl. 400 Sok No. 401 41480 Gebze Kocaeli	Tel. +90 262 9991000 04 Fax +90 262 9991009 http://www.sew-eurodrive.com.tr sew@sew-eurodrive.com.tr
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Uruguay

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Additional addresses for service provided on request!

Vietnam

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Zambia

Representation: South Africa

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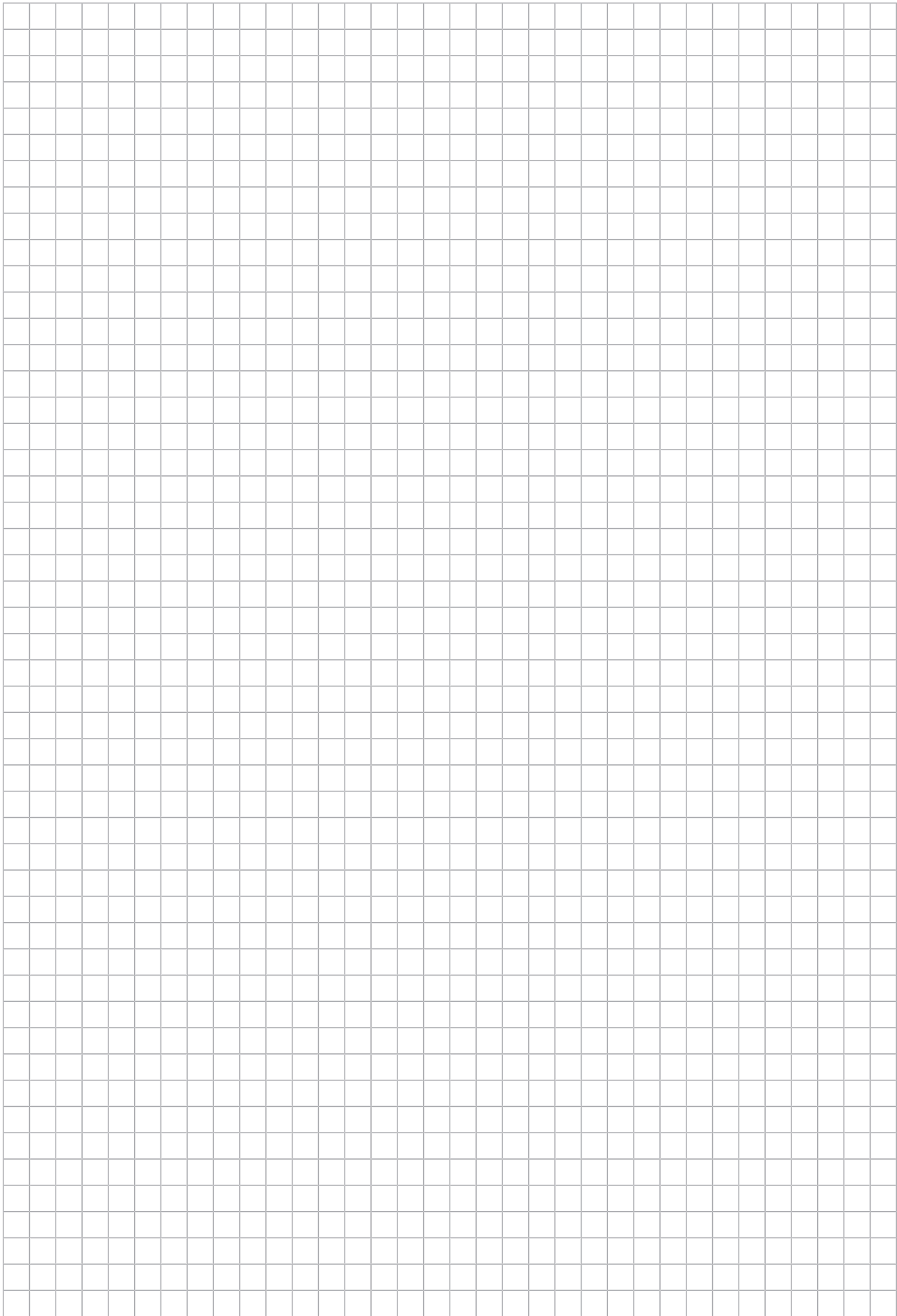
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Driving the world

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