

Supplier Approval

01 751 18 04
63085461.18



SEW drives of the series

R.../ K37-K187/ F.../ K.9/ S.../ HS.../ W.../ HW.../ PS-F/ PS-C/ BS-F/ MGF

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Change information:

| Chap. /page | Description (changes to the previous edition) | Modification no. |
|-----------------|--|------------------|
| 1.3/5 | Lubricant change intervals extended, SEW GearOil Synth. | 190797 |
| 2/8 | SEW GearOil Poly 150 E1 approved for gear unit series R, F, K.7. | |
| 2/7;4/12 | SEW GearOil Base US1 series added. | |
| 2/7;4/12 | Shell Omala SG series replaces Shell Omala S2G series. | |
| 2/8;4/13 | SEW GearOil Poly 150-220-460 H1 E1 approved for gear unit series R, F, K.7 & S. | |
| 4/13 | SEW GearOil Poly 150-220-460 E1 approved for gear unit series S. | |
| 4/13 | Approval CLP PG 680 is revoked for gear unit series S. | |
| 5/16 | SEW GearOil Poly 150 E1 approved for gear unit series W / W.7. | |
| 2/9; 4/14; 9/19 | SEW GearOil Synth 150-220-460 approved for gear unit series R, F, K.7, MGF2-4. | |
| 2/9; 4/14; 9/19 | Castrol Optigear Synthetic PD 150-220-460 revoked for gear unit series R, F, K.7, S, MGF2-4. | |

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1. Introduction/area of application

This document describes the approved/recommended lubricants for SEW gear unit series. The approvals/recommendations are worldwide valid.

If other lubricants are used in the gear units and/or lubricants are used with other temperature ranges than the ones recommended, the right to claim under warranty will become invalid.

Lubricants for standard gear units are subject to approval, the approval will be made according to the document 07004__13 "Supplier approval for qualification and approval of lubricants – gear unit oils" in its current version.

NOTE: Printed documents may not include the latest changes. For the latest version of this document, refer to <https://www.sew-eurodrive.de/lubricants>.

1.1. Explanations of the structure of the tables

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil |
|--|---|------------------|---------------|---|-----------------|---|--------------------------------------|--------------------------------------|
| R.. RES K..7 KES HK.. F.. | Standard -15 40 | CLP | VG 220 | -15 +80 SEW GearOil Base 220 E ¹ SEW 070040313 | | -15 +80 Optigear BM 220 | -15 +80 Renolin CLP 220 Plus | -15 +80 Mobilgear 600 XP 220 |
| | | | | | | | | |
| R.. RES K..7 KES HK.. F.. | -20 30 | CLP PG | VG 150 | -20 +80 SEW GearOil Base 150 E ¹ SEW 070040313 | | -20 +80 Optigear BM 150 | -20 +80 Renolin CLP 150 Plus | -20 +80 Mobilgear 600 XP 150 |
| | | | | | | | | |
| R.. RES K..7 KES HK.. F.. | -25 80 | CLP PG - PSS | VG 220 | -25 +115 SEW GearOil Poly 220 E ¹ SEW 070040313 | | -25 +115 Optigear Synthetic 800/220 | -25 +115 Renolin PG 220 | -25 +115 Mobil Glygoyle 220 |
| | | | | | | | | |

The specified **ambient (environment) temperatures** are **rough guide values for a preselection** of a suitable lubricant. The exact upper and lower temperature limit for the project planning must be taken from the table with the corresponding trade name! Please note during project planning that the starting behavior may change with low temperatures due to the increasing viscosity.

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Abbreviations:

 Synthetic lubricant

 Mineral lubricant


CLP Mineral oil


CLP PG Polyglycol (PG)

CLP HC Synthetic hydrocarbons – polyalphaolefins (PAO)

E Oil based on esters

 Lubricant suitable for ATEX environment

 Lubricant for the food processing industry and feed industry. Oils are NSF-H1 registered and compliant according to FDA 21 CFR § 178.3570.

 Easily biodegradable oil for environmentally sensitive areas

1) Helical-worm gear units with CLP-PG: contact SEW-EURODRIVE

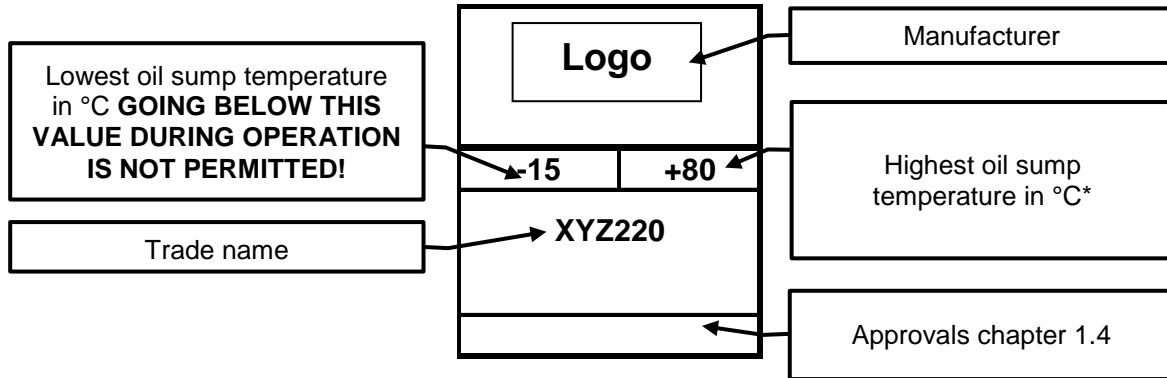
2) Low-viscosity grease

3) Ambient temperatures up to -40 °C can be implemented with appropriate measures. Please contact SEW-EURODRIVE.

RWDR Radial oil seal

PSS Radial oil seal type PSS (Premium Sine Seal).
The addendum "PSS" at the lubricant type signals compatibility with the sealing system.

1.2. Explanations on the individual lubricants

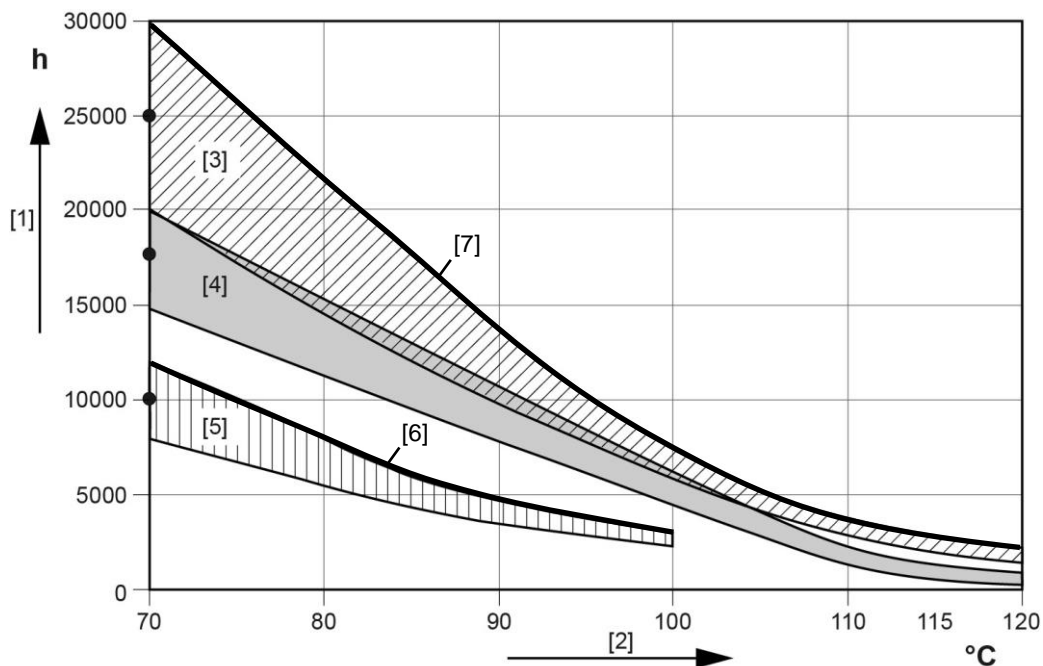


* The service life will be considerably reduced when exceeded. Observe the lubricant change intervals according to chapter 1.3.

1.3. Lubricant change intervals

The following image depicts the change intervals for standard gear units under normal ambient conditions. In case of special designs under severe/aggressive ambient conditions, change the lubricant more frequently.

Notice: Filling of wrong lubricant may lead to a loss of the lubricant properties and thus damage the gear unit. Do not mix synthetic lubricants and mineral lubricants. In general, the guideline FVA 606 must be adhered to.



- | | |
|---|-----------------------|
| [1] Operating hours | [5] CLP (CC)/E |
| [2] Sustained oil bath temperature Average value per oil type at 70 °C | [6] SEW GearOil Base |
| [3] CLP PG/CPL PG NSF H1 | [7] SEW GearOil Poly |
| [4] CLP HC/CLP HC NSF H1 | [8] SEW GearOil Synth |

1.4. Compatibility of lubricants with radial oil seals

SEW07004__13: A lubricant especially recommended by SEW-EURODRIVE, also in regard of compatibility with the approved oil seals. The lubricant exceeds the state-of-the-art requirements.

Approved application temperature range of the oil seals

| Oil seal material class | Approved oil sump temperature |
|-------------------------|-------------------------------|
| NBR | -40 °C ... +80 °C |
| FKM | -25 °C ... +115 °C |
| FKM-PSS | -25 °C ... +115 °C |

In the low temperature range, oil seals can withstand shaft deflections (e. g. through overhung load) only to a limited extent. Especially avoid or limit pulsating or changing radial displacements of the shaft. Please contact SEW-EURODRIVE if required.

Limitations of use of radial oil seals with the specific lubricant are indicated in the following table:

| Material class | | Manufacturer | | Material | | |
|----------------|---|--------------|---|-------------|------------|------------|
| S | 1 | NBR | 1 | Freudenberg | 72 NBR 902 | |
| | | | 2 | Trelleborg | 4NV11 | |
| | 2 | FKM | 1 | Freudenberg | 1 | 75 FKM 585 |
| | | | | | | 2 |
| | | | 2 | Trelleborg | 1 | VCBVR |

Example 1:

S11 - Only the elastomer Freudenberg 72 NBR 902 meets the requirements of the SEW-EURODRIVE approval in regard of the specific lubricant.

Example 2:

S2 - Only the elastomer FKM meets the requirements of the SEW-EURODRIVE approval in regard of the specific lubricant.

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
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2. Helical gear units (R..), helical-bevel gear units (K.7), parallel-shaft helical gear units (F..)

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL | | |
|--|---|------------------|---------------|--|--|--|--|--------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|----------------------------|--|
|  R.. RES K..7 KES HK.. F.. | Standard -15 40 | CLP | VG 220 | -15 +80 SEW GearOil Base 220 E1 / US1 SEW 070040313 | | -15 +80 Optigear BM 220 | -15 +80 Renolin CLP 220 Plus | -15 +80 Mobilgear 600 XP 220 | -15 +80 Klüberoil GEM 1-220 N | -15 +80 Shell Omala SG 220 | -15 +80 Carter EP 220 | | |
| | -20 30 | | | | -20 +80 SEW GearOil Base 150 E1 / US1 SEW 070040313 | | -20 +80 Optigear BM 150 | -20 +80 Renolin CLP 150 Plus | -20 +80 Mobilgear 600 XP 150 | -20 +80 Klüberoil GEM 1-150 N | -20 +80 Shell Omala SG 150 | -20 +80 Carter EP 150 | |
| | Standard -15 40 | | | CLP - PSS | VG 220 | -15 +80 SEW GearOil Base 220 E1 / US1 SEW 070040313 | | | | | | | |
| | -20 30 | | | | | | -20 +80 SEW GearOil Base 150 E1 / US1 SEW 070040313 | | | | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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| Produkt / Product | Umgebungstemperatur / Environment Temperature | | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | b bremer & leguil | Castrol | | FUCHS | | Mobil | | KLÜBER LUBRICATION | | Shell | | TOTAL | | | |
|--|---|----------------------------|----------------------|----------------------------|----------------------------|-----------------------|----------------------------|----------------|--------------------|-----------------------|-----------------------|---------------|--------------------|------|-------|------|-------|------|-----------------------|----------------------|
| | | | | | | | -25 | +115 | -25 | +115 | -25 | +115 | -25 | +115 | -25 | +115 | -25 | +115 | | |
|  | Standard | | CLP PG | VG 220 | -25 | +115 | Optigear Synthetic 800/220 | Renolin PG 220 | Mobil Glygoyle 220 | Klübersynth GH 6-220 | Shell Omala S4 WE 220 | Carter SY 220 | | | | | | | | |
| | -25 | 80 | | | SEW GearOil Poly 220 E1 | | | | | | | | | | | | | | | |
| | | | | | SEW 070040313 | | | | | | | | | | | | | | | |
| | -30 | | | 70 | VG150 | -30 | | | | | | | | | | | | | +115 | Klübersynth GH 6-150 |
| | -30 | 70 | | SEW GearOil Poly 150 E1 | | | | | | | | | | | | | | | | |
| | | | | SEW 070040313 | | | | | | | | | | | | | | | | |
| R.. RES K..7 KES HK.. F.. | Standard | | CLP PG - PSS | VG 220 | -25 | +115 | | | | Klübersynth GH 6-220 | | | | | | | | | | |
| | -25 | 80 | | | SEW GearOil Poly 220 E1 | | | | | | | | | | | | | | | |
| | | | | | SEW 070040313 | | | | | | | | | | | | | | | |
| | -30 | | | 70 | VG150 | -30 | | | | | | | | | | | | +115 | Klübersynth GH 6-150 | |
| | -30 | 70 | | SEW GearOil Poly 150 E1 | | | | | | | | | | | | | | | | |
| | | | | SEW 070040313 | | | | | | | | | | | | | | | | |
|   | Standard | | CLP PG-NSF H1 (-PSS) | VG 220 | -25 | +95 | | | | Klübersynth UH1 6-220 | | | | | | | | | | |
| | -25 | 40 | | | SEW GearOil Poly 220 H1 E1 | | | | | | | | | | | | | | | |
| | | | | | SEW 070040313 | | | | | | | | | | | | | | | |
| | -20 | | | 80 | VG 460 | -20 | | | | | | | | | | | | +115 | Klübersynth UH1 6-460 | |
| | -20 | 80 | | SEW GearOil Poly 460 H1 E1 | | | | | | | | | | | | | | | | |
| | | | | SEW 070040313 | | | | | | | | | | | | | | | | |
| -30 | | 30 | VG 150 | -30 | +80 | Klübersynth UH1 6-150 | | | | | | | | | | | | | | |
| -30 | 30 | SEW GearOil Poly 150 H1 E1 | | | | | | | | | | | | | | | | | | |
| | | SEW 070040313 | | | | | | | | | | | | | | | | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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




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| Produkt / Product | Umgebungstemperatur / Environment Temperature | | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | b bremer & leguil | Castrol | FUCHS | Mobil | | KLÜBER LUBRICATION | | Shell | | TOTAL | | | | | | | |
|--|---|--|--|--------------------------|--------------------------|------------------------|--------------------------|-------------------------|-----------------------|-------------------------|-------------------------|---------------|--------------|-----------------------|---------------|------|-----|------|--|--|--|--|
| | | | | | | | | | -25 | +110 | -25 | +110 | -25 | +110 | -25 | +110 | -25 | +110 | | | | |
|  R.. RES K..7 KES HK.. F..   | Standard | |  CLP HC | VG 220 ³⁾ | -25 | +110 | | | | -25 | +110 | | | -25 | +110 | | | | | | | |
| | -25 | 60 | | | SEW GearOil Synth 220 E1 | Renolin Unisyn CLP 220 | | | | Mobil SHC 630 | Klübersynth GEM 4-220 N | | | Shell Omala S4 GX 220 | Carter SH 220 | | | | | | | |
| | | | | | SEW 070040313 | | | | | | | | | | | | | | | | | |
| | | | | | SEW 070040313 | | | | | | | | | | | | | | | | | |
| | -30 | 50 | | VG 150 ³⁾ | -30 | +100 | SEW GearOil Synth 150 E1 | Renolin Unisyn CLP 150 | Mobil SHC 629 | Klübersynth GEM 4-150 N | Shell Omala S4 GX 150 | Carter SH 150 | | | | | | | | | | |
| | | | | SEW 070040313 | | | | | | | | | | | | | | | | | | |
| | -35 | 20 | | VG 68 | -35 | +75 | Renolin Unisyn CLP 68 | Mobil SHC 626 | | | Shell Omala S4 GX 68 | | | | | | | | | | | |
| | | | | SEW 070040313 | | | | | | | | | | | | | | | | | | |
| -40 | 0 | VG 32 | -40 | +50 | Renolin Unisyn OL32 | Mobil SHC 624 | | | | | -40 | +50 | Dacnis SH 32 | | | | | | | | | |
| | | SEW 070040313 | | | | | | | | | | | | | | | | | | | | |
| Standard | |  CLP HC - PSS | VG 220 ³⁾ | -25 | +110 | | | | -25 | +110 | | | | | | | | | | | | |
| -25 | 60 | | | SEW GearOil Synth 220 E1 | Renolin Unisyn CLP 220 | | | | Mobil SHC 630 | | | | | | | | | | | | | |
| | | | SEW 070040313 | | | | | | | | | | | | | | | | | | | |
| | | | SEW 070040313 | | | | | | | | | | | | | | | | | | | |
| -30 | 50 | VG 150 ³⁾ | -30 | +100 | SEW GearOil Synth 150 E1 | Renolin Unisyn CLP 150 | Mobil SHC 629 | Klübersynth GEM 4-150 N | Shell Omala S4 GX 150 | Carter SH 150 | | | | | | | | | | | | |
| | | SEW 070040313 | | | | | | | | | | | | | | | | | | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL | |
|---|---|---|---------------|-------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|--|---------------------------------------|-------|-------|--|
|  R.. RES K..7 KES HK.. F.. | Standard -15 40 |   CLP HC - NSF H1 | VG 460 | | -15 +100 Cassida Fluid GL 460 | -15 +100 Optileb GT 460 | -15 +100 Cassida Fluid GL 460 | | -15 +105 Klüberoil 4UH1-460 N | | | |
| | | | | | | | | | | | | |
| | -25 30 | | VG 220 | | -25 +80 Cassida Fluid GL 220 | -25 +80 Optileb GT 220 | -25 +80 Cassida Fluid GL 220 | | -25 +80 Klüberoil 4UH1-220 N | | | |
| | | | | | | | | | | | | |
| -35 0 | VG 68 | | | -40 +50 Cassida Fluid HF 68 | -35 +50 Optileb HY 68 | -40 +50 Cassida Fluid HF 68 | | -35 +50 Klüberoil 4UH1-68 N | | | | |
| -40 -10 | VG 32 | | | -40 +30 Cassida Fluid HF 32 | -40 +30 Optileb HY 32 | -40 +30 Cassida Fluid HF 32 | | -40 +30 KlüberSummit HySyn FG 32 | | | | |
|   | Standard -15 40 |   CLP HC - NSF H1 - PSS | VG 460 | | | -15 +100 Optileb GT 460 | | | | | | |
| | | | | | | | | | | | | |
| | -25 30 | | VG 220 | | | -25 +80 Optileb GT 220 | | | | | | |
| -20 40 | VG 460 |   E | | | | | -20 +80 Plantogear 460 S | | -20 +80 Klüberbio CA2-460 | | | |
| | | | | | | | S2 | | S2 | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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
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3. Helical-bevel gear units (K.9)

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | b bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL | |
|---|---|-------------------------|---------------|--|--|---------|-------|-------|------------------------------------|-------------------------------------|-------|--|
| K.9  | Standard -20 60 | CLP PG (- PSS) | VG 460 | -20 +95 SEW GearOil Poly 460 E1 SEW 070040313 | | | | | -20 +95 Klübersynth GH 6-460 | | | |
| | -15 80 | | | VG 680 | | | | | | -15 +115 Klübersynth GH 6-680 | | |
| | -25 40 | | | VG 220 | -25 +70 SEW GearOil Poly 220 E1 SEW 070040313 | | | | | -25 +70 Klübersynth GH 6-220 | | |
| | -30 30 | | | VG150 | -30 +60 SEW GearOil Poly 150 E1 SEW 070040313 | | | | | -30 +60 Klübersynth GH 6-150 | | |
| | Standard -20 60 | CLP PG - NSF H1 (- PSS) | VG 460 | -20 +95 SEW GearOil Poly 460 H1 E1 SEW 070040313 | | | | | -20 +95 Klübersynth UH1 6-460 | | | |
| | -15 80 | | | VG 680 | | | | | | -15 +115 Klübersynth UH1 6-680 | | |
| | -25 40 | | | VG 220 | -25 +70 SEW GearOil Poly 220 H1 E1 SEW 070040313 | | | | | -25 +70 Klübersynth UH1 6-220 | | |
| | -30 30 | | | VG 150 | -30 +60 SEW GearOil Poly 150 H1 E1 SEW 070040313 | | | | | -30 +60 Klübersynth UH1 6-150 | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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
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4. Helical-worm gear units (S., HS..)

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL | | |
|---|---|------------------|---------------|---|------------------------------|---|-----------------------------------|------------------------------------|----------------------------------|-------------------------------|--------------------------|--|--|
| S.. HS..  | Standard 0 40 | CLP | VG 680 | 0 +80 SEW GearOil Base 680 S E1 SEW 070040313 | | 0 +80 Optigear BM 680 | 0 +80 Renolin CLP 680 Plus | 0 +80 Mobilgear 600 XP 680 | 0 +80 Klüberoil GEM 1-680 N | 0 +80 Shell Omala SG 680 | 0 +80 Carter EP 680 | | |
| | -20 25 | | | -20 +65 SEW GearOil Base 150 E1 / US1 SEW 070040313 | -20 +65 Optigear BM 150 | -20 +65 Renolin CLP 150 Plus | -20 +65 Mobilgear 600 XP 150 | -20 +65 Klüberoil GEM 1-150 N | -20 +65 Shell Omala SG 150 | -20 +65 Carter EP 150 | | | |
| | Standard 0 40 | | | CLP - PSS | VG 680 | 0 +80 SEW GearOil Base 680 S E1 SEW 070040313 | | | | | | | |
| | -20 25 | | | | | -20 +65 SEW GearOil Base 150 E1 / US1 SEW 070040313 | | | | | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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
R.../ K37-K187/ F.../ K.9/ S.../ HS.../ W.../ HW.../ PS-F/ PS-C/ BS-F/ MGF

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| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL | |
|--|---|-------------------------|----------------------|---|----------------------|--|--|----------------|------------------------------------|-------------------------------------|------------------------------------|---------------|
| S.. HS..  | Standard -20 80 | CLP PG | VG 460 ¹⁾ | -20 +115 SEW GearOil Poly 460 E1 SEW 070040313 | | | | | -20 +115 Klübersynth GH 6-460 | | | |
| | -25 60 | | | ⊕ | VG 220 ¹⁾ | -25 +100 SEW GearOil Poly 220 E1 SEW 070040313 | Optigear Synthetic 800/220 | Renolin PG 220 | Mobil Glygoyle 220 | -25 +100 Klübersynth GH 6-220 | Shell Omala S4 WE 220 | Carter SY 220 |
| | -30 40 | | | | | VG 150 ¹⁾ | -30 +85 SEW GearOil Poly 150 E1 SEW 070040313 | | | | -30 +85 Klübersynth GH 6-150 | |
| | Standard -20 80 | CLP PG - PSS | VG 460 ¹⁾ | -20 +115 SEW GearOil Poly 460 E1 SEW 070040313 | | | | | | -20 +115 Klübersynth GH 6-460 | | |
| | -25 60 | | | ⊕ | VG 220 ¹⁾ | -25 +100 SEW GearOil Poly 220 E1 SEW 070040313 | | | | -25 +100 Klübersynth GH 6-220 | | |
| | -30 40 | | | | | VG 150 ¹⁾ | -30 +85 SEW GearOil Poly 150 E1 SEW 070040313 | | | | -30 +85 Klübersynth GH 6-150 | |
| | Standard -20 70 | CLP PG - NSF H1 (- PSS) | VG 460 ¹⁾ | -20 +110 SEW GearOil Poly 460 H1 E1 SEW 070040313 | | | | | | -20 +110 Klübersynth UH1 6-460 | | |
| | -25 40 | | | ⊕ | VG 220 ¹⁾ | -25 +80 SEW GearOil Poly 220 H1 E1 SEW 070040313 | | | | -25 +80 Klübersynth UH1 6-220 | | |
| | -30 20 | | | ⌘ | | VG 150 ¹⁾ | -30 +65 SEW GearOil Poly 150 H1 E1 SEW 070040313 | | | | -30 +65 Klübersynth UH1 6-150 | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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SEW drives of the series




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| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | | Mobil | | KLÜBER LUBRICATION | | Shell | | TOTAL | |
|---|---|---|----------------------|---------------|-----------------|---------|------------------------|---------------|-------------------------|-----------------------|--------------------|------|-------|------|-------|------|
| | | | | | | | -15 | +100 | -20 | +105 | -15 | +105 | -15 | +105 | -15 | +105 |
| S.. HS..  | Standard -15 60 |  CLP HC | VG 460 | | | | Renolin Unisyn CLP 460 | Mobil SHC 634 | Klübersynth GEM 4-460 N | Shell Omala S4 GX 460 | Carter SH 460 | | | | | |
| | -30 30 | | VG 150 ³⁾ | | | | Renolin Unisyn CLP 150 | Mobil SHC 629 | Klübersynth GEM 4-150 N | Shell Omala S4 GX 150 | Carter SH 150 | | | | | |
| | -35 20 | | VG 68 | | | | Renolin Unisyn CLP 68 | Mobil SHC 626 | | Shell Omala S4 GX 68 | | | | | | |
| | -40 0 | | VG 32 | | | | Renolin Unisyn OL32 | Mobil SHC 624 | | | Dacnis SH 32 | | | | | |
| | Standard -15 60 |  CLP HC - PSS | VG 460 | | | | | Mobil SHC 634 | | | | | | | | |
| | -30 30 | | VG 150 ³⁾ | | | | | Mobil SHC 629 | | | | | | | | |
| | | | | | | | | | | | | | | | | |
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NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguit | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL | |
|---|---|--|---------------|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|---------------------------------------|-----------------------------------|-------|-------|--|
| S.. HS..  | Standard -15 40 | CLP HC - NSF H1   | VG 460 | | -15 +85 Cassida Fluid GL 460 | -15 +90 Optileb GT 460 | -15 +85 Cassida Fluid GL 460 | | -15 +90 Klüberoil 4UH1-460 N | | | |
| | | | | | | SEW 070040313 | | | | | | |
| | -25 30 | | VG 220 | | -25 +75 Cassida Fluid GL 220 | -25 +70 Optileb GT 220 | -25 +75 Cassida Fluid GL 220 | | -25 +70 Klüberoil 4UH1-220 N | | | |
| | | | | | | SEW 070040313 | | | | | | |
| | -35 0 | VG 68 | | -35 +40 Cassida Fluid HF 68 | -35 +40 Optileb HY 68 | -35 +40 Cassida Fluid HF 68 | | -35 +40 Klüberoil 4UH1-68 N | | | | |
| | -40 -10 | VG 32 | | -40 +25 Cassida Fluid HF 32 | -40 +20 Optileb HY 32 | -40 +25 Cassida Fluid HF 32 | | -40 +25 KlüberSummit HySyn FG 32 | | | | |
| | Standard -15 40 | CLP HC - NSF H1 - PSS   | VG 460 | | | -15 +90 Optileb GT 460 | | | | | | |
| | | | | | | SEW 070040313 | | | | | | |
| | -25 30 | VG 220 | | | | -25 +70 Optileb GT 220 | | | | | | |
| | | | | | | SEW 070040313 | | | | | | |
| | -20 40 | E  | VG 460 | | | | -20 +80 Plantogear 460 S | | -20 +80 Klüberbio CA2-460 | | | |
| | | | | | | | S2 | | S2 | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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




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5. Spiroplan gear units (W.., HW..)

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL |
|---|---|---|---------------------|---|-----------------|---------|-------|-------|--|-------|-------|
| W.. HW..  | Standard -20 60 |  CLP PG (-PSS) | VG 460 | -20 +115 SEW GearOil Poly 460 W E1 SEW 070040313 | | | | | | | |
| | -20 60 |  CLP PG NSF H1 (-PSS) | VG 460 | -20 +115 SEW GearOil Poly 460 H1 E1 SEW 070040313 | | | | | -20 +115 Klübersynth UH1 6-460 | | |
| | -30 20 |  CLP PG NSF H1 (-PSS) | VG150 ¹⁾ | -30 65 SEW GearOil Poly 150 H1 E1 SEW 070040313 | | | | | -30 +65 Klübersynth UH1 6-150 | | |
| | -40 10 |  API GL5 | SAE 75W90 (-VG 100) | | | | | | -40 +65 Mobil Synth Gear Oil 75 W90 | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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SEW drives of the series

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


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6. PS.F gear units

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL |
|--|---|---|---------------|---|-----------------|---------|-------|----------------------------|-------------------------------------|-------|-------|
| PS.F  | Standard -25 80 |  CLP PG (- PSS) | VG 220 | -25 +100 SEW GearOil Poly 220 E1 SEW 070040313 | | | | | -25 +100 Klübersynth GH 6-220 | | |
| | -20 80 |  CLP PG NSF H1 (- PSS) | VG 460 | -20 +100 SEW GearOil Poly 460 H1 E1 SEW 070040313 | | | | | -20 +100 Klübersynth UH1 6-460 | | |
| | -40 0 |  CLP HC | VG 32 | | | | | -40 +50 Mobil SHC 624 | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

Supplier Approval

SEW drives of the series

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

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7. PS.C gear units

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL |
|--|---|------------------|-----------------------|---|-----------------|---------|-------|--|----------------------------|-------|-------|
| PS.C  | Standard -15 40 | CLP | VG 220 | -15 +80 SEW GearOil Base 220 E1 / US1 SEW 070040313 | | | | -15 +80 Mobilgear 600 XP 220 SEW 070040013 | | | |
| | -40 0 | | | CLP HC | VG 32 | | | | -40 +50 Mobil SHC 624 | | |
| | -20 40 | Fett / Grease | NLGI 00 ²⁾ | | | | | -20 +80 Mobilux EP 004 | | | |
| | -20 40 | | NLGI 1 | | | | | -20 +80 Klübersynth UH1 14-151 | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

8. BS.F gear units

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL |
|--|---|---|---------------|--|-----------------|---|-------|-------|------------------------------------|-------|-------------------------------------|
| BS.F  | Standard -25 60 |  CLP PG (- PSS) | VG 220 | -25 +100 SEW GearOil Poly 220 E1 SEW 070040313 | | | | | -25 +100 Klübersynth GH 6-220 | | |
| | -20 60 | | |  CLP PG NSF H1 (- PSS) | VG 460 | -20 +100 SEW GearOil Poly 460 H1 E1 SEW 070040313 | | | | | -20 +100 Klübersynth UH1 6-460 |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

Supplier Approval

SEW drives of the series

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
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9. MGF gear units

| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | | bremer & leguil | Castrol | FUCHS | Mobil | | KLÜBER LUBRICATION | | Shell | | TOTAL | | | | | | | | | | | | | | | |
|--|--|---------------------|------------------|------------------|------|-----------------|---------|-------|-------|------|-----------------------|------|-------|------|-------|------|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | -25 | +110 | | | | -25 | +110 | -25 | +110 | -25 | +110 | -25 | +110 | | | | | | | | | | | | | | |
| MGF..2 MGF..4  | Standard -25 60 | CLP HC | VG 220 | -25 | +110 | | | | -25 | +110 | -25 | +110 | -25 | +110 | -25 | +110 | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | -30 50 | CLP HC | VG 150 | -30 | +100 | | | | -30 | +95 | -30 | +100 | -30 | +100 | -30 | +100 | -30 | +95 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Standard -25 60 | CLP HC - PSS | VG 220 | -25 | +110 | | | | -25 | +110 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| -30 50 | CLP HC - PSS | VG 150 | -30 | +100 | | | | -30 | +100 | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

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
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| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL | |
|--|---|-----------------------|---------------|---------------|-----------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------|--|
| MGF..2 MGF..4  | Standard -15 40 | CLP HC - NSF H1 | VG 460 | | | -15 +100 | -15 +100 | -15 +100 | -15 +105 | | | |
| | | | | | | Cassida Fluid GL 460 | Optileb GT 460 | Cassida Fluid GL 460 | Klüberoil 4UH1-460 N | | | |
| | | | | | | SEW 070040313 | | | | | | |
| | | | | | | | | | | | | |
| | -25 30 | CLP HC - NSF H1 - PSS | VG 460 | | | | -25 +80 | -25 +80 | -25 +80 | -25 +80 | | |
| | | | | | | | Cassida Fluid GL 220 | Optileb GT 220 | Cassida Fluid GL 220 | Klüberoil 4UH1-220 N | | |
| | | | | | | | SEW 070040313 | | | | | |
| | | | | | | | | | | | | |
| Standard -15 40 | CLP HC - NSF H1 - PSS | VG 220 | | | | -15 +100 | | | | | | |
| | | | | | | Optileb GT 460 | | | | | | |
| | | | | | | SEW 070040313 | | | | | | |
| | | | | | | | | | | | | |
| -25 30 | CLP HC - NSF H1 - PSS | VG 220 | | | | -25 +80 | | | | | | |
| | | | | | | Optileb GT 220 | | | | | | |
| | | | | | | SEW 070040313 | | | | | | |
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NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.

Supplier Approval

SEW drives of the series


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| Produkt / Product | Umgebungstemperatur / Environment Temperature | Öltyp / Oil Type | ISO, SAE NLGI | SEW EURODRIVE | bremer & leguil | Castrol | FUCHS | Mobil | KLÜBER LUBRICATION | Shell | TOTAL |
|--|---|------------------------|---------------|---------------|-----------------|---------|---|-----------------------------|--------------------|-------|-------|
| MGF..1- DSM-C | Standard -25 60 | CLP HC (- PSS) | VG 220 | | | | | -25 +110 Mobil SHC 630 | | | |
| | -30 50 | | VG 150 | | | | | -30 +100 Mobil SHC 629 | | | |
| MGF..2 /PG MGF..4 /PG  | Standard -15 40 | CLP HC - NSF H1 (-PSS) | VG 460 | | | | -15 +100 Optileb GT 460 SEW 070040313 | | | | |
| | -25 30 | | VG 220 | | | | -25 +80 Optileb GT 220 SEW 070040313 | | | | |

NOTICE: The thermal application limits of radial oil seal materials (chapter 1.4) have to be considered as well.