

Approved Suppliers

47 049 07 05



SEW drives of the series

X.F... / X.K... / P... / XP... / P-X...

Lubricant approvals - latest version: www.sew-eurodrive.de/lubricants

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EGT-TD 13.09.2016

Change information:

Chap. /page	Description (changes to the previous edition)	Modification no.
Page 7	CLP HC 320 / Mobil SHC Gear 320 / highest oil bath temperature changed from 95°C to 100°C	

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1. Introduction/area of application

The present document describes the approved lubricants for SEW-EURODRIVE industrial gear units (helical gear units, bevel-helical gear units and planetary gear units). The approvals are valid worldwide.

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. Exceptions are application-specific approvals that have to be confirmed by SEW-EURODRIVE in written form.

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

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

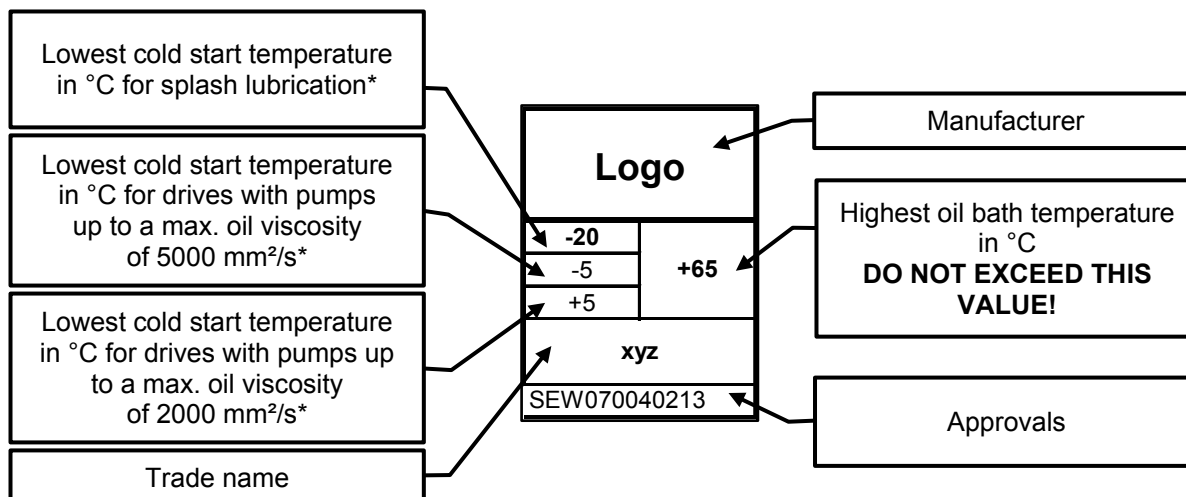
1.1. Explanations of the structure of the tables and abbreviations

Viscosity class	Typ / Type	DIN (ISO) API	ISO, SAE NLGI	bremer & leguil	Castrol
Lubricant type	X...	NSF H1 CLP HC	VG 68 ¹⁾	-35 -20 -10	+45 -25 -15
Note on special approvals			VG 220 ¹⁾	Cassida Fluid HF 68	
			VG 460 ¹⁾	Optileb HY 68	
Gear unit type	P...			-20 -5 +5	+75 -5 +5
				Cassida Fluid GL 220	
				Optileb GT 220	
				SEW070040213	
				-15 +5 +20	+90 +5 +20
				Cassida Fluid GL 460	
				Optileb GT 460	
				SEW070040213	

Abbreviations:

- Synthetic lubricant
- Mineral lubricant
- CLP** Mineral oil
- CLP HC** Synthetic hydrocarbons (PAO)
- E** Oil based on esters
- Lubricant for the food industry (NSF H1-compliant)
- Biodegradable oil (lubricant for agriculture, forestry, and water management)
- 1)** Lubricants must only be used if service factor is $F_s \geq 1.3$

1.2. Explanations on the individual lubricants



* In case of low temperatures, the oil must be heated to the specified minimum temperature, for example by using an oil heater. The maximum permitted oil viscosity per pump type can be found in chapter 1.3.

1.3. Explanations on oil supply systems and their viscosity

Type	Name	Supplier	Maximum oil viscosity mm ² /s	Example illustration	Comments
Shaft end pump for pressure lubrication	SEP		5000		Flange-mounted to the gear unit housing
			2000		Mounted in the agitator housing
Motor pump for pressure lubrication	ONP		2000		
Motor pump with oil-air cooling for pressure lubrication	OAP		2000		
Motor pump with oil-water cooling for pressure lubrication	OWP				

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.

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

Material class	Manufacturer	Material	Permitted oil sump temperature	
S	1 NBR	1 Freudenberg	72 NBR 902	-40°C to +80°C
		2 Trelleborg	4NV11	-40°C to +80°C
	2 FKM	1 Freudenberg	1 75 FKM 585	-25°C to +115°C
			2 75 FKM 170055	-25°C to +115°C
2 Trelleborg		1 VCBVR	-25°C to +115°C	

Example 1:

S11 - Only the elastomer Freudenberg 72NBR902 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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2. Industrial gear units (X.F..., X.K..., P..., XP..., P-X...)

Typ / Type	DIN (ISO) API	ISO, SAE NLGI										Mobil									
				-20	+65	-20	+65	-20	+65	-20	+65	-20	+65	-20	+65	-20	+65	-20	+65	-20	+65
X... 	CLP	VG 150 ¹⁾																			
P... 	CLP	VG 220																			
P... 	CLP	VG 320																			
P... 	CLP	VG 460																			
P... 	CLP	VG 680																			
P... 	CLP	VG 1000																			

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

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Typ / Type	DIN (ISO) API	ISO, SAE NLGI										
X... 	CLP HC	VG 32 ¹⁾										
P... 	CLP HC	VG 68 ¹⁾										
P... 	CLP HC	VG 150 ¹⁾										
P... 	CLP HC	VG 220										
P... 	CLP HC	VG 320										
P... 	CLP HC	VG 460										
P... 	CLP HC	VG 680										
P... 	CLP HC	VG 1000										

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

