

Auxiliary Materials/Hydraulic Oil

Lubricants	Hydraulic oil*	Hydraulic oil*	Gear oil	Vacuum pump oil	Heat transferring oil	Antifriction bearing grease for thrust bearings**
Name of lubricant	A	B	D	Q	T	W
Viscosity 40 °C cSt mm ² /s	41,4 - 50,6	61,2 - 74,8	288 - 352	90,0 - 110,0	30-35	NLGI 2
Identification to	HLP 46 DIN 51502	HLP 68	CLP 320 DIN 51517		Q DIN 51522	KP 2 K DIN 51825
Identification to DIN EN ISO 6743-4	HM-ISO 46	HM-ISO 68		ISO VG 100		

* The minimum requirements for these hydraulic oils are defined in DIN 51524 part 2 or in DIN EN ISO 6743-4. Deviating from this recommendation is not permitted.

Local water-pollution regulations must be observed. If necessary, oil of water pollution class 0 (WGK 0) must be used.

** suitable for central grease lubricating systems.

When selecting the hydraulic oil, the following additional physical properties must be taken into account:

- The specification HLP 46 or HLP 68 refers to the viscosity at 40°C.
 - At 100°C, the oil should still have a minimum viscosity of approx. 8 cSt (centi Stokes). This is usually achieved with oils with an increased viscosity index (index greater than 120).
 - The Brugger value according to 54347 (lubricity at mixed friction) is greater than or equal to 30.
 - Air separating capacity less than 10 min.
 - Do not use HLPD oils as these make filtering more difficult.
 - If possible, use a low WGK (water hazard class see above).
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