

# Hydraulic Fluids on a Mineral Oil Basis for Axial Piston Units

RE 90 220-1/08.06  
Replaces: 07.06

Table of mineral oil included in groups HLP(HM) and HVLP to DIN 51524, parts 2 and 3  
The following table is not necessarily exhaustive and no recommendation is implied.  
Subject to revision!

ISO Viscosity Class	VG 22	VG 32		VG 46		VG 68		VG 100
	Manufacturer ↓	HLP	HVLP	HLP	HVLP	HLP	HVLP	HLP
ADDINOL	Hydrauliköl HLP 22	Hydrauliköl HLVP 32	Hydrauliköl HLP 32	Hydrauliköl HVLP 46	Hydrauliköl HLP 46	Hydrauliköl HVLP 32	Hydrauliköl HLP 68	Hydrauliköl HLP 100
ARAL	Aral Vitam GF 22	Aral Vitam HF 32	Aral Vitam GF 32	Aral Vitam HF 46	Aral Vitam GF 46		Aral Vitam GF 68	Aral Vitam GF 100
AVIA	Avia Fluid RSL 22	Avia Fluid HVI 32	Avia Fluid RSL 32	Avia Fluid HVI 46	Avia Fluid RSL 46  Avia Fluid ZAD 46	Avia Fluid HVI 68	Avia Fluid RSL 68	Avia Fluid RSL 100
Best Lubricant Blending LTD			Hercules (LISHI) Zona Hydraulic Oil VG 32		Hercules (LISHI) Zona Hydraulic Oil VG 46		Hercules (LISHI) Zona Hydraulic Oil VG 68	Hercules (LISHI) Zona Hydraulic Oil VG 100
BP	Energol HLP-HM 22  Bartran 22  Bartran HVX 22	Bartran HV 32  Bartran HVX 32	Energol HLP-HM 32  Bartran 32  Autran MBX	Bartran HV 46  Bartran HVX 46	Energol HLP-HM 46  Bartran 46  Bartran SHF-S46	Bartran HV 68  Bartran HVX 68	Energol HLP-HM 68  Bartran 68	Energol HLP-HM 100  Bartran 100
Brugarolas	Fluid Drive HM-22	Beslux Divol HV 32	Fluid Drive HM-32	Beslux Divol HV 46	Fluid Drive HM-46	Beslux Divol HV 68	Fluid Drive HM-68	Fluid Drive HM-100
Bucher & CIE Motorex AG	COREX HLP 22	COREX EP VI 360	COREX HLP 32	COREX EP VI 510  COREX HV 515  Alpine Granat HV 515	COREX HLP 46	COREX EP VI 610	COREX HLP 68	COREX HLP 100
CALTEX	Rando HD 22	Rando HDZ 32	Rando HD 32	Rando HDZ 46	Rando HD 46	Rando HDZ 68	Rando HD 68	Rando HD 100
CASTROL	HYSPIN AWS 22	HYSPIN AWH 32	HYSPIN AWS 32 Paradene 32 AW TQ-D	HYSPIN AWH 46	HYSPIN AWS 46 Paradene 46 AW	HYSPIN AWH 68	HYSPIN AWS 68 Paradene 68 AW	HYSPIN AWS 100

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CHEVRON	Hydraulic Oil AW 22	Mechanism LPS 32	Hydraulic Oil AW 32	Mechanism LPS 46	Hydraulic Oil AW 46	Mechanism LPS 68	Hydraulic Oil AW 68	Hydraulic Oil AW 100
COFRAN	Cofraline extra 22 S	Hydroline Equigrade 32 Speziale 32	Cofraline extra 32 S	Hydroline Equigrade 46	Cofraline extra 46 S	Hydroline Equigrade 68 Speziale 68	Cofraline extra 68 S	Cofraline extra 100 S
CONOCO			Hydroclear AW Hydraulic ISO 32 Super Hydraulic Oil ISO 32		Hydroclear AW Hydraulic ISO 46 Super Hydraulic Oil ISO 46		Hydroclear AW Hydraulic ISO 68	
ENGEN		Engen TQH 10/32	Engen TQH 20/32	Engen TQH 10/46	Engen TQH 20/46	Engen TQH 10/68	Engen TQH 20/68	Engen TQH 20/100
ENI S.p.A.	OSO 22 ARNICA 22 Precis HLP 22 Autol Hys 32	ARNICA 32	OSO 32  Precis HLP 32	ARNICA 46 H Lift 46  Autol Hys 46	OSO 46  Precis HLP 46	ARNICA 68	OSO 68  Precis HLP 68 Autol Hys 68	OSO 100
ESSO	NUTO H 22	UNIVIS N 32	NUTO H 32  Hydraulic Oil HLP 32	UNIVIS N 46	NUTO H 46  Hydraulic Oil HLP 46	UNIVIS N 68	NUTO H 68  Hydraulic Oil HLP 68	NUTO H 100
EUROL	Eurol HLP 22	Eurol HV 32	Eurol HLP 32 HLP 32 VA	Eurol HV 46	Eurol HLP 46 HLP 46 VA	Eurol HV 68	Eurol HLP 68 HLP 68 VA	Eurol HLP 100
FUCHS	RENOLIN MR 5 VG 22  RENOLIN B5 VG 22  RENOLIN ZAF 22 B	RENOLIN MR 32 MC  RENOLIN B 32 HVI  RENOLIN ZAF 32 MC	RENOLIN MR 10 VG 32  RENOLIN B10 VG 32  RENOLIN ZAF 32 B	RENOLIN MR 46 MC  RENOLIN B 46 HVI  RENOLIN ZAF 46 MC	RENOLIN MR 15 VG 46  RENOLIN B15 VG 46  RENOLIN ZAF 46 B	RENOLIN MR 68 MC  RENOLIN B 68 HVI  RENOLIN ZAF 68 MC	RENOLIN MR 20 VG 68  RENOLIN B20 VG 68  RENOLIN ZAF 68 B	RENOLIN MR 30 VG 100  RENOLIN B30 VG 100  RENOLIN ZAF 100 B
Greatwall Oil Company CHINA			HPAW 32		HPAW 46		HPAW 68	
KLÜBER			LAMORA HLP 32		LAMORA HLP 46		LAMORA HLP 68	

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KUWAIT Petroleum Q8	Q8 Haydn 22		Q8 Haydn 32 Holst 32 Hydraulik S32		Q8 Haydn 46 Holst 46 Hydraulik S46		Q8 Haydn 68 Holst 68 Hydraulik S68	Q8 Haydn 100
		Q8 Händel 32 Heller 32		Q8 Hoffmeister HVLP-D-46		Q8 Händel 46 Heller 46	Q8 Händel 68 Heller 68	
LIQUI MOLY	HLP 22 ISO	HVLP 32 ISO	HLP 32 ISO	HVLP 46 ISO	HLP 46 ISO	HVLP 68 ISO	HLP 68 ISO	HLP 100 ISO
MOBIL	Mobil DTE 22  Mobil DTE Excel 22		Mobil DTE 24  Mobil DTE Excel 32		Mobil DTE 25  Mobil DTE Excel 46		Mobil DTE 26  Mobil DTE Excel 68	Mobil DTE 27  Mobil DTE Excel 100
		Mobil DTE 13 M		Mobil DTE 15 M		Mobil DTE 16 M		
MOL RT Ungarn	HIDROKOMOL P-22 U-22	HIDROKOMOL HV-U 32	HIDROKOMOL P-32 U-32 D-32	HIDROKOMOL HV-U 46	HIDROKOMOL P-46 U-46 D-46	HIDROKOMOL HV-U 68	HIDROKOMOL P-68 U-68 D-68	HIDROKOMOL P-100 U-100
ÖMV	HLP 22	HLP-M 32	HLP 32  ZNF 32	HLP-M 46  HLP-S	HLP 46  ZNF 46	HLP-M 68	HLP 68  ZNF 68	HLP 100
PAKELO	Raisol Oil 22		Raisol Oil 32		Raisol Oil 46		Raisol Oil 68	Raisol Oil 100
PANOLIN	HLP 22  HLP Plus 22		HLP 32  HLP Plus 32		HLP 46  HLP Plus 46		HLP 68  HLP Plus 68	HLP 100
		HLP Universal 32		HLP Universal 46		GP 55		
PETRO- CANADA	HYDREX AW 22  HYDREX MV 22		HYDREX AW 32		HYDREX AW 46		HYDREX AW 68	HYDREX AW 100
		HYDREX MV 32  ENVIRON MV32 / Premium ECO 36	ENVIRON AW 32  Purity FG AW 32	HYDREX XV  ENVIRON MV46 / Premium ECO 46	ENVIRON AW 46  Purity FG AW 46	HYDREX MV 60	ENVIRON AW 68  Purity FG AW 68	Purity FG AW 100
PETROFER	Isolubric VG 22		Isolubric VG 32		Isolubric VG 46		Isolubric VG 68	Isolubric VG 100
REPSOL Spain	E-22		E-32		E-46		E-68	E-100
SHELL	Shell Tellus 22  Shell Tellus DO 22  Shell Tellus S 22	Shell Tellus T 32  Shell Tellus TD 46  Shell Tellus TX 32	Shell Tellus 32  Shell Tellus DO 32  Shell Tellus S 32	Shell Tellus T 46  Shell Tellus TD 46  Shell Tellus TX 46	Shell Tellus 46  Shell Tellus DO 46  Shell Tellus S 46	Shell Tellus T 68  Shell Tellus TD 46  Shell Tellus TX 68	Shell Tellus 68  Shell Tellus DO 68  Shell Tellus S 68	Shell Tellus Oil 100  Shell Tellus DO 100  Shell Tellus S 100
STATOIL	HYDRAWAY HMA 22	HYDRAWAY HVXA 32	HYDRAWAY HMA 32	HYDRAWAY HVXA 46	HYDRAWAY HMA 46	HYDRAWAY HVXA 68	HYDRAWAY HMA 68	HYDRAWAY HMA 100

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	Manufacturer ↓	HVLP	HLP	HVLP	HLP	HVLP	HLP	HLP
Strub & Co Schmiertechnik CH-Reiden	Vulcolube HLP 22	Vulcolube EP VI 32	Vulcolube HLP 32	Vulcolube EP VI 46	Vulcolube HLP 46	Vulcolube EP VI 68	Vulcolube HLP 68	Vulcolube HLP 100
TEXACO	Rando HD 22	Rando HDZ 32	Rando HD 32	Rando HDZ 46	Rando HD 46	Rando HDZ 68	Rando HD 68	Rando HD 100
TOTAL FINA ELF	Total Azolla ZS 22	Total Equivis ZS 32	Total Azolla ZS 32 Total Azolla DZF 32	Total Equivis ZS 46	Total Azolla ZS 46 Total Azolla DZF 46	Total Equivis ZS 68	Total Azolla ZS 68 Total Azolla DZF 68	Total Azolla ZS 100
TRIBOL	Tribol 1840/22 Tribol 943 AW 22		Tribol 771 Tribol 1840/32 Tribol 943 AW 32		Tribol 772 Tribol 1840/46 Tribol 943 AW 46		Tribol 773 Tribol 1840/68 Tribol 943 AW 68	Tribol 775
UNIL	HFO 22		HFO 32		HFO 46		HFO 68	HFO 100
Van Meeuwen	Black Point Turbin 22	Black Point Turbin HVI 32	Black Point Turbin 32	Black Point Turbin HVI 46	Black Point Turbin 46	Black Point Turbin HVI 68	Black Point Turbin 68	Black Point Turbin 100
Valpercan Spain		Hidroval 32 HV Vesta HV 32	Hidroval 32 HLP	Hidroval 46 HV Vesta HV 46	Hidroval 46 HLP	Hidroval 68 HV Vesta HV 68	Hidroval 68 HLP	Hidroval 100 HLP
WINTERS-HALL	WIOLAN HS 22 WIOLAN HX 22	WIOLAN HV 32	WIOLAN HS 32 WIOLAN HX 32	WIOLAN HV 46	WIOLAN HS 46 WIOLAN HX 46	WIOLAN HV 68	WIOLAN HS 68 WIOLAN HX 68	WIOLAN HS 100 WIOLAN HX 100
YORK Ginouves	YORK 772 VG 22	YORK 775 VG 32 YORK 779 VG 32	YORK 772 VG 32	YORK 775 VG 46 YORK 779 VG 46	YORK 772 VG 46	YORK 775 VG 68 YORK 779 VG 68	YORK 772 VG 68	YORK 772 VG 100
SAE-Motorenöle	SAE 5 W		SAE 10 W	SAE 10 W 30		SAE 10 W 30	SAE 20 W 20	SAE 30

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