

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

 RE 90220-01/10.11  
 Replaces: 08.11

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- Viskositäts- klasse	VG 22	VG 32		VG 46		VG 68		VG 100
	HLP	HVLP	HLP	HVLP	HLP	HVLP	HLP	HLP
ADDINOL	Hydraulic Oil HLP 22	Hydraulic Oil HLVP 32	Hydraulic Oil HLP 32	Hydraulic Oil HVLP 46	Hydraulic Oil HLP 46	Hydraulic Oil HVLP 68	Hydraulic Oil HLP 68	Hydraulic Oil HLP 100
APAR Industries Ltd.		Power Ultimo 32	Power Hydrol HLP 32	Power Ultimo 46	Power Hydrol HLP 46	Power Ultimo 68	Power Hydrol 68	
ARAL	Aral Vitam GF 22		Aral Vitam GF 32		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
BELGIN MADENI YAGLAR			HIDROTEX BS32		HIDROTEX BS46		HIDROTEX BS68	HIDROTEX BS100
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 HV 32	Energol HLP-HM 32  Bartran 32  Autran MBX	Bartran HV 46	Energol HLP-HM 46  Bartran 46	Bartran HV 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

ISO Viscosity Class	VG 22	VG 32		VG 46		VG 68		VG 100
Manufacturer ↓	HLP	HVLP	HLP	HVLP	HLP	HVLP	HLP	HLP
CASTROL	HYSPIN AWS 22  HYSPIN ZZ 22  Tribol 943 AW-22  Tribol Foodproof 1840/22	HYSPIN AWH-M 32  HYSPIN HVI 32	HYSPIN AWS 32 Paradene 32 AW TQ-D  HYSPIN ZZ 32  Tribol 943 AW-32  Tribol Foodproof 1840/32	HYSPIN AWH-M 46  HYSPIN HVI 46	HYSPIN AWS 46 Paradene 46 AW  HYSPIN ZZ 46  Tribol 943 AW-46  Tribol Foodproof 1840/46	HYSPIN AWH-M 68  HYSPIN HVI 68	HYSPIN AWS 68 Paradene 68 AW  HYSPIN ZZ 68  Tribol 943 AW-68  Tribol Foodproof 1840/68	HYSPIN AWS 100  HYSPIN ZZ 100  Tribol 943 AW-100
CEPSA LUBRICANTES, S.A.		CEPSA HIDROSTAR HVLP 32	CEPSA Hidraulico HM 32	CEPSA HIDROSTAR HVLP 46	CEPSA Hidraulico HM 46	CEPSA HIDROSTAR HVLP 68	CEPSA Hidraulico HM 68	
CHEVRON	Hydraulic Oil AW 22  Chevron Rando HD ISO 22	Mechanism LPS 32	Hydraulic Oil AW 32  Chevron Rykon Oil AW ISO 32  Chevron Rando HD ISO 32	Mechanism LPS 46	Hydraulic Oil AW 46  Chevron Rykon Oil AW ISO 46  Chevron Rando HD ISO 46	Mechanism LPS 68	Hydraulic Oil AW 68  Chevron Rykon Oil AW ISO 68  Chevron Rando HD ISO 68	Hydraulic Oil AW 100  Chevron Rando HD ISO 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 22	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

ISO Viscosity Class	VG 22	VG 32		VG 46		VG 68		VG 100
	Manufacturer ↓ HLP	HVLP	HLP	HVLP	HLP	HVLP	HLP	HLP
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
Galp Energia					Galp HIDROLEP 46			
Hessol Lubrication	Hydraulic Oil HLP 22	Hydraulic Oil HVLP 32	Hydraulic Oil HLP 32	Hydraulic Oil HVLP 46	Hydraulic Oil HLP 46	Hydraulic Oil HVLP 68	Hydraulic Oil HLP 68	Hydraulic Oil HLP 100
Gazpromneft Lubricants		Gazpromneft Hydraulic HVLP 32	Gazpromneft Hydraulic HLP 32 Gazpromneft Hydraulic HD 32 Gazpromneft Hydraulic HZF 32	Gazpromneft Hydraulic HVLP 46	Gazpromneft Hydraulic HLP 46 Gazpromneft Hydraulic HD 46 Gazpromneft Hydraulic HZF 46	Gazpromneft Hydraulic HVLP 68	Gazpromneft Hydraulic HLP 68 Gazpromneft Hydraulic HD 68 Gazpromneft Hydraulic HZF 68	
KLÜBER			LAMORA HLP 32		LAMORA HLP 46		LAMORA HLP 68	
Kompressol	Kompressol CH 22	Kompressol CH 32 V	Kompressol CH 32	Kompressol CH 46 V	Kompressol CH 46	Kompressol CH 68 V	Kompressol CH 68	Kompressol CH 100
KUWAIT Petroleum Q8	Q8 Haydn 22	Q8 Händel 32 Heller 32	Q8 Haydn 32 Holst 32 Hydraulik S32	Q8 Hoffmeister HVLP-D-46 Q8 Händel 46 Heller 46	Q8 Haydn 46 Holst 46 Hydraulik S46	Q8 Händel 68 Heller 68	Q8 Haydn 68 Holst 68 Hydraulik S68	Q8 Haydn 100
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
LUBRICANT COMPANY, SINOPEC CORP.			SINOPEC HM32		SINOPEC HM46 SINOPEC METALLURGY SPECIAL HYDRAULIC OIL		SINOPEC HM68	
LUKOIL Lubricants Company		LUKOIL GEYSER LT 32	LUKOIL GEYSER ST 32 LUKOIL GEYSER ZF 32	LUKOIL GEYSER LT 46	LUKOIL GEYSER ST 46 LUKOIL GEYSER ZF46	LUKOIL GEYSER LT 68	LUKOIL GEYSER ST 68 LUKOIL GEYSER ZF 68	
LOTOS Oil					Hydromil Super L-HM 46			

ISO Viscosity Class	VG 22	VG 32		VG 46		VG 68		VG 100
Manufacturer ↓	HLP	HVLP	HLP	HVLP	HLP	HVLP	HLP	HLP
MOBIL	Mobil DTE 22 Mobil DTE Excel 22	Mobil DTE 13 M Mobil DTE 10 Excel 32	Mobil DTE 24 Mobil DTE Excel 32	Mobil DTE 15 M Mobil DTE 10 Excel 46	Mobil DTE 25 Mobil DTE Excel 46	Mobil DTE 16 M Mobil DTE 10 Excel 68	Mobil DTE 26 Mobil DTE Excel 68	Mobil DTE 27 Mobil DTE Excel 100
MOL RT Ungarn	MOL HYDRO HME22	MOL HYDRO HV32	MOL HYDRO HM32 HME32 HLPD32	MOL HYDRO HV46	MOL HYDRO HM46 HME46 HLPD46	MOL HYDRO HV68	MOL HYDRO HM68 HME68 HLPD68	MOL HYDRO HME100
Morris Lubricants			LIQUIMATIC 4		LIQUIMATIC 5		LIQUIMATIC 6	
MRD	PENNASOL HLP 22	PENNASOL HVLP 32	PENNASOL HLP 32	PENNASOL HVLP 46	PENNASOL HLP 46	PENNASOL HVLP 68	PENNASOL HLP 68	PENNASOL HLP 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
Orlen Oil			Hydrol® L-HM/ HLP 32		Hydrol® L-HM/ HLP 46		Hydrol® L-HM/ HLP 68	
PAKELO	Raisol Oil 22		Raisol Oil 32		Raisol Oil 46		Raisol Oil 68	Raisol Oil 100
PANOLIN	HLP 22 HLP Plus 22	HLP Universal 32	HLP 32 HLP Plus 32	HLP Universal 46	HLP 46 HLP Plus 46	GP 55	HLP 68 HLP Plus 68	HLP 100
PETRO-CANADA	HYDREX AW 22 HYDREX MV 22	HYDREX MV 36 ENVIRON MV32	HYDREX AW 32 ENVIRON AW 32 Purity FG AW 32	HYDREX XV ENVIRON MV46	HYDREX AW 46 ENVIRON AW 46 Purity FG AW 46		HYDREX AW 68 HYDREX MV 60 ENVIRON AW 68 Purity FG AW 68	HYDREX AW 100 Purity FG AW 100
PETROFER	Isolubric VG 22		Isolubric VG 32		Isolubric VG 46		Isolubric VG 68	Isolubric VG 100
REPSOL	Telex E 22	Telex HVLP 32	Telex E 32	Telex HVLP 46	Telex E 46	Telex HVLP 68	Telex E 68	Telex HVLP 100
SHELL (Previous name)	Shell Tellus S2 M 22 (Shell Tellus 22) Shell Tellus S2 MA 22 (Shell Tellus DO 22) Shell Tellus S 22	Shell Tellus S2 V 32 (Shell Tellus T 32) Shell Tellus S2 VA 32 (Shell Tellus TD 32)	Shell Tellus S2 M 32 (Shell Tellus 32) Shell Tellus S2 MA 32 (Shell Tellus DO 32) Shell Tellus S 32 Shell Tellus S4 ME 32 (Shell Tellus EE 32) Shell Tellus S3 V 32 (Shell Tellus STX 32)	Shell Tellus S2 V 46 (Shell Tellus T 46) Shell Tellus S2 VA 46 (Shell Tellus TD 46)	Shell Tellus S2 M 46 (Shell Tellus 46) Shell Tellus S2 MA 46 (Shell Tellus DO 46) Shell Tellus S 46 Shell Tellus S4 ME 46 (Shell Tellus EE 46) Shell Tellus SX-Z 46	Shell Tellus S2 V 68 (Shell Tellus T68) Shell Tellus S2 VA 68 (Shell Tellus TD 68)	Shell Tellus S2 M 68 (Shell Tellus 68) Shell Tellus S2 MA 68 (Shell Tellus DO 68) Shell Tellus S 68 Shell Tellus S4 ME 68 (Shell Tellus EE 68) Shell Tellus SX-Z 68	Shell Tellus S2 M 100 (Shell Tellus 100) Shell Tellus S2 MA 100 (Shell Tellus DO 100) Shell Tellus S 100

ISO Viscosity Class	VG 22	VG 32		VG 46		VG 68		VG 100
	HLP	HVLP	HLP	HVLP	HLP	HVLP	HLP	HLP
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
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
Tide Water Oil Co. India Limited							VEEDOL AVALON HLP 68 SC-6	
LLC TNK Lubricants		TNK Hydraulic HVLP 32	TNK Hydraulic HLP 32 TNK Hydraulic ZF 32	TNK Hydraulic HVLP 46	TNK Hydraulic HLP 46 TNK Hydraulic ZF 46	TNK Hydraulic HVLP 68	TNK Hydraulic HLP 68 TNK Hydraulic ZF 68	
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
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
SK Energy			ZIC SUPERVIS AW 32		ZIC SUPERVIS AW 46			
SRS	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
XADO Germany				XADO Atomic Oil VHLP46				
SAE-Motorenöle	SAE 5 W		SAE 10 W	SAE 10 W 30		SAE 10 W 30	SAE 20 W 20	SAE 30

Bosch Rexroth AG  
Hydraulics  
Product Unit Axial Piston Units  
Glockeraustrasse 2  
89275 Elchingen, Germany  
Telephone +49 (0) 73 08 82-0  
Facsimile +49 (0) 73 08 72 74  
info.brm-ak@boschrexroth.de  
[www.boschrexroth.com/axial-piston-pumps](http://www.boschrexroth.com/axial-piston-pumps)

An den Kelterwiesen 14  
72160 Horb, Germany  
Telephone +49 (0) 74 51 92-0  
Facsimile +49 (0) 74 51 82 21

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