

Damcos™ Choice of Hydraulic Oil

Recommended brands and types (non-extreme conditions)

Hydraulic Mineral Oils

Product	ISO norm	Type/New indication
BP	15	Energol HLP 15 (Batran HV)
	22	Energol HLP 22 (Batran HV)
	32	Energol HLP 32 (Batran HV)
	46	Energol HLP 46 (Batran HV)
CASTROL	15	hYPSIN AWS 15
	22	hYPSIN AWS 22
	32	hYPSIN AWS 32
	46	hYPSIN AWS 46
	15	hYPSIN AWH-M 15
	32	hYPSIN AWH-M 32
CHEVRON	15	Mechanism LPS 15
	32	Mechanism LPS 32
	46	Mechanism LPS 46
ELF	15	Visga 15
	22	Visga 22
	32	Visga 32
	46	Visga 46
ESSO/EXXON	15	Nuto H 15
	32	Nuto H 32
	15	Univis N 15
	32	Univis N 32
	46	Univis N 46
	26	Univis J 26
GULF OIL MARINE	32	GulfSea Hydraulic HVI ZF 32
	46	GulfSea Hydraulic HVI ZF 46

Product	ISO norm	Type/New indication
MOBIL	15	DTE 11 M
	32	DTE 13 M
	32	DTE 24
PETROBRAS	32	LUBRAX HYDRA XP 32
	46	LUBRAX HYDRA XP 46
	15	MARBRAX HV 15
	32	MARBRAX HV 32
Q8-KUWAIT PETROLEUM	46	MARBRAX HV 46
	15	Haydn 15
	22	Haydn 22
	32	Haydn 32
SHELL	46	Haydn 46
	15	Shell S2V15
	37	Shell S2V32
	46	Shell S2V46
STATOIL	22	Shell S3M15
	32	Shell S3M32
	46	Shell S3M46
	22	Hydraway 22
SUN OIL	46	Hydraway 46
	15	Sunvis 815-WR
TEXACO	22	Sunvis 822-WR
	32	Sunvis 832-WR
	46	Sunvis 846-WR
	15	Rando HD 15
TEXACO	22	Rando HD 22
	32	Rando HD 32
	46	Rando HD 46

Biodegradable Oils

Environmental Acceptable Lubricants (EAL)

Product	ISO norm	Type/New indication
PANOLIN	15	Panolin Atlantis no. 36060
	22	Panolin Atlantis no. 36062
	32 N	Panolin Atlantis no. 36065

IMPORTANT!

Upon selecting EALs for new buildings with Emerson equipment it is important to inform Emerson about the selected Panolin Atlantis type in order to secure correct oil type usage at testing and to assure that only the approved minimum amount of mineral hydraulic oil will be used during assembly.

For existing vessels, please read further information!

Description

Hydraulic oil provides the hydraulic working processes with energy. In Damcos connection this means energy for valve motions. The viscosity of the different kinds of oil varies according to the temperature; i.e. high temperature renders a low viscosity and vice versa. Some hydraulic oil types vary more than others. The oil viscosity is an indication of “how sluggish” the oil is. If you change the viscosity, you also change the lubricating characteristics of the oil, especially the adhesion that normally results in the well-known dilemma: **to choose suitable hydraulic oil, which means oil with suitable viscosity and temperature conditions.**

In order to decrease operating times and to reduce the power loss in pipes, elbows and various components (solenoid valves etc.), which the oil is to pass on its way to the actuator, the lowest possible viscosity is preferred, whereas the “highest possible” viscosity is preferable in order to protect pumps, solenoid valves and other movable mechanisms.

There are naturally technically and scientifically other conditions than the viscosity (e.g. the vapour pressure) which determine the lubricating characteristics of the oil and minimize the risk of pump cavitation, but based on experience a viscosity within the range

15 cSt. (min.) and 200 cSt.

can comply with the above-mentioned conditions.

The choice of oil is not only a choice of viscosity, but also an evaluation of how cold and warm the oil can get during normal operation under different ambient temperatures (arctic versus tropical conditions).

The choice of oil type is customer’s responsibility as the oil is dependent on various conditions, such as pressure, temperature etc.

Green Oil Technology - Biodegradable Oils (EAL)



This system uses
Panolin Atlantis.
Do not mix with
any other fluid.

Systems using the biodegradable oil Panolin are marked with labels to assure that correct handling of the equipment are followed, this includes:

- equipment test with power units containing Panolin
- minimum use of mineral oil at assembly
- re-labelling with Green Oil Technology - Panolin stickers when removed during service, maintenance, painting or any other reason

Labels and instruction on how to place them can be supplied by Damcos upon request.

Handling of Valve Remote Control Systems on Existing Vessels

Change of oil from mineral oil to EALs can lead to oil leakage, filter blocking and functional defects. Therefore, we cannot recommend changing to EALs for vessels already tested and delivered with mineral oil, so oil change to EALs is to be considered technical infeasible for Valve Remote Control Systems onboard existing vessels.

Handling of Valve Remote Control Systems on New Buildings

For new ships, the use of the EAL types Panolin Atlantis (15), (22) and (32) has been tested and approved for use in new hydraulic and electro-hydraulic Valve Remote Control Systems delivered and accepted by Emerson Process Management MTM.

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