

Introduction

Water based hydraulics combine the high power density of oil based hydraulics with clean “green” environment friendly operation.
Environmentally responsible without a sacrifice to performance and reliability!

The advantages of water based hydraulics HEPG (hydraulic environmental poly glycol) are their fire resistant properties, non-toxic, biodegradable, cheaper and higher efficiency as oil based hydraulic fluid.

-  -Fire resistant. Systems operating in high fire risk areas can not adopt standard oil systems. The non-flammable hydraulic alternatives are usually highly toxic. Water offers neither a fire risk nor a toxic threat. Therefore resulting in a safer system.
-  -Non-toxic. Almost all hydraulic systems leak at sometime within their life span. Potential contamination the environment, marine life and, or the persons working with the system. Water based is non-toxic, so no risk to either.
-  -Biodegradable, more easily assimilated by the environment and cause less damage should it spill. Environmentally responsible, less impact on delicate eco systems.
-  -Cheaper. Due to cost of the fluid itself per liter, the disposal of the fluid and not so obvious the improved safety for workers because the water based fluid is non-toxic as well as non-flammable. These attributes can reduce plant insurance rates. Spills cost less to clean up, absorbents are unnecessary.
-  -Individual components offer the same and in some cases improved performance to that of a comparable oil unit. The transmission of fluid offers greater efficiency improvements thereby reducing absorbed power for a given output.

The disadvantages are; must be monitored more closely (water/additive concentration), components are more expensive due to special design for water based fluid (material, seal material, cavities, etc.).

Water based hydraulics or water-glycol fluids contain water to provide the fire resistance, plus non-toxic and biodegradable antifreeze and a thickener to provide the required viscosity. These fluids also provide all important additives such as antiwear, foam, rust, microbiological degradation and corrosion inhibitors.

System description

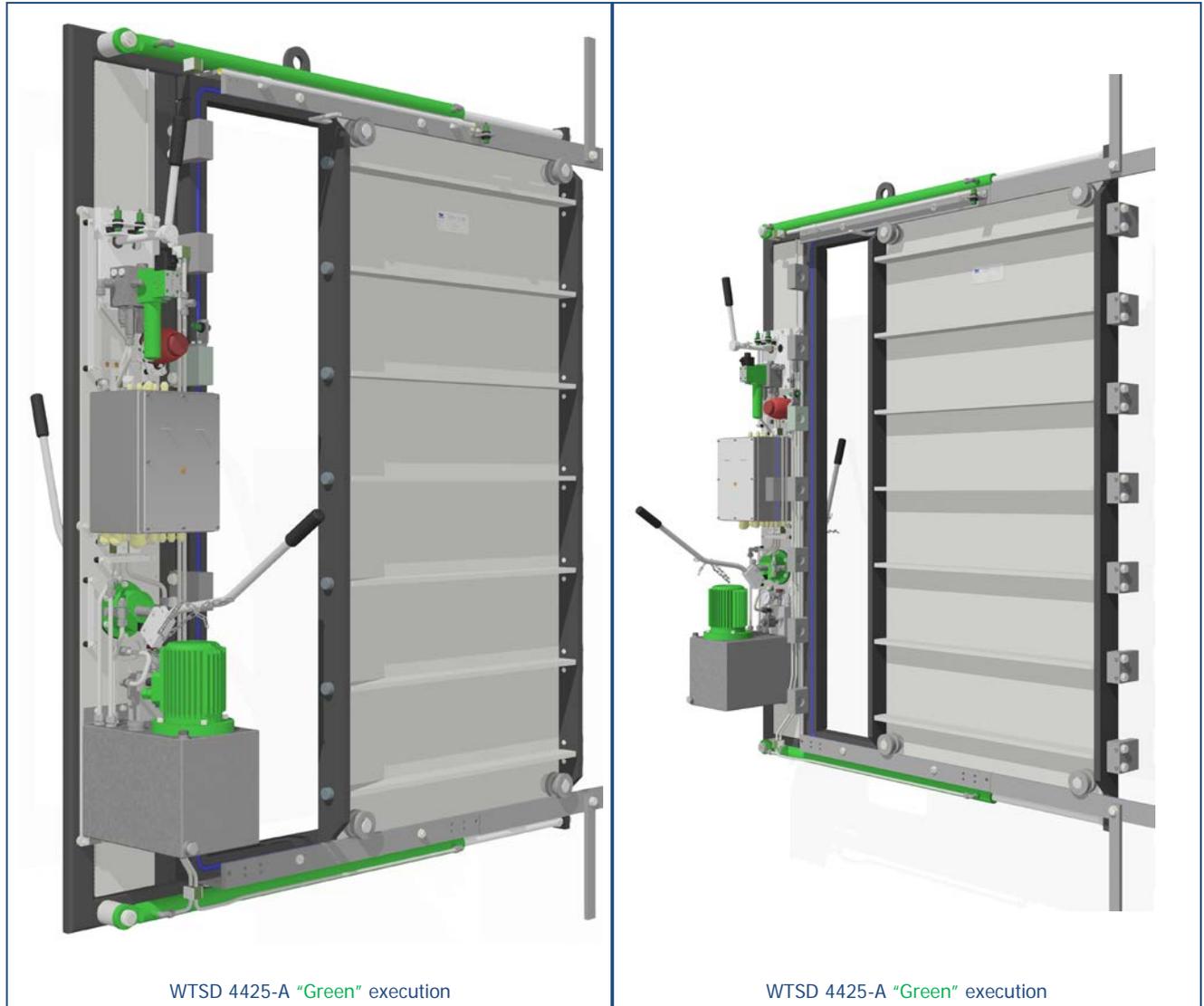
The operation/working of the “green” Winel water tight sliding door (water based fluid) won't change in comparison to the “normal” Winel water tight sliding door (with oil based fluid).
Specific components will be updated and/or changed for the “green” WTSD.
The electrics of the “green” WTSD and or related item's will stay the same as the “normal” Winel WTSD systems.

The below components will be updated/changed for the “green” execution depending on the ordered door type:

- Hydraulic power unit (inner parts).
- Hydraulic direction control manifold parts.
- Hydraulic accu control manifold parts (when execution with accumulator).
- Accumulator bladder (when applicable).
- Local handpump.
- Door cylinder(s).

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PD drawings/pictures



WTSD 4425-A "Green" execution

WTSD 4425-A "Green" execution

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CSA 4425-A "Green" execution