

# DeZURIK CUSTOM HYDRAULIC POWER UNIT

## Design and Construction

DeZURIK's Hydraulic Power Unit (HPU) is designed and manufactured to meet custom field application requirements. The HPU skid design includes all necessary components and a control panel to drive single or multiple hydraulic cylinder valve actuators. Custom HPU skids are utilized in industrial applications across various markets including mining, refining, power, marine, and metal processing.

The custom HPU is available in a range of configurations, including high pressure hydraulic with or without accumulation, low pressure air over water, or nitrogen over water. Custom designs can accept various power sources such as electric, gas, or diesel.

Custom HPU skid designs are engineered to meet challenging environmental criteria and site space constraints. Control panels are designed to operate the HPU as a stand alone system or integrate with an existing SCADA system.

## Application

Custom HPU systems are designed for a wide range of applications across multiple industries. Applications requiring consistent hydraulic power delivered at specific pressures and flows are strong targets

for custom HPU units. Examples include marine deck equipment such as winches and cranes and rolling applications in metal processing.

## Base Frame

Custom HPU skids utilize a carbon steel C channel frame design with forklift pockets and lifting lugs for ease of handling. Reservoirs are offered in 316 stainless steel construction. Skid frames are epoxy primed and powder coated as standard, although application-specific paint systems can be applied as necessary.



## Controls

Both mechanical and electrical devices help control the HPU skid.

Direct operated solenoid valves are integrated into the design, allowing for flow control with a manual override option. Pilot operated check or counter balance valves are installed for load holding and load control, while pressure reducing valves are utilized for force control. When required, accumulated systems utilize zero leakage poppet valves to prevent loss of accumulator energy.

HPU control panels are custom engineered to meet customer requirements, ranging from hard wire relays to PLC controls. Control panel enclosures are offered as NEMA 12 carbon steel or NEMA 4X stainless steel as standard, but can meet more stringent NEMA ratings if required. The control panel is manufactured in accordance with UL 508A and is designed to be DCS compatible.

## Additional Features

Additional features included in custom HPU skids include:

- Pump start-up manifolds designed with outlet check valve, main system relief valve, and gauges to ensure clean pump starts.
- Pump motors are offered as IEEE 841 compliant as standard for optimal performance in extreme operating conditions.
- Air bleed valves help prevent cavitation by venting trapped air to the HPU skid reservoir.
- 10 micron pressure filtration is utilized for low contaminate levels and increased component life.
- Accumulators are available in either piston or bladder format to enable consistent hydraulic fluid flow while the HPU is in service and provide stored fluid energy for emergency actuation upon power loss.

## Sales and Service

For information about our worldwide locations, approvals, certifications and local representative:

**Web Site:** [DeZURIK.com](http://DeZURIK.com) **E-Mail:** [info@DeZURIK.com](mailto:info@DeZURIK.com)



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