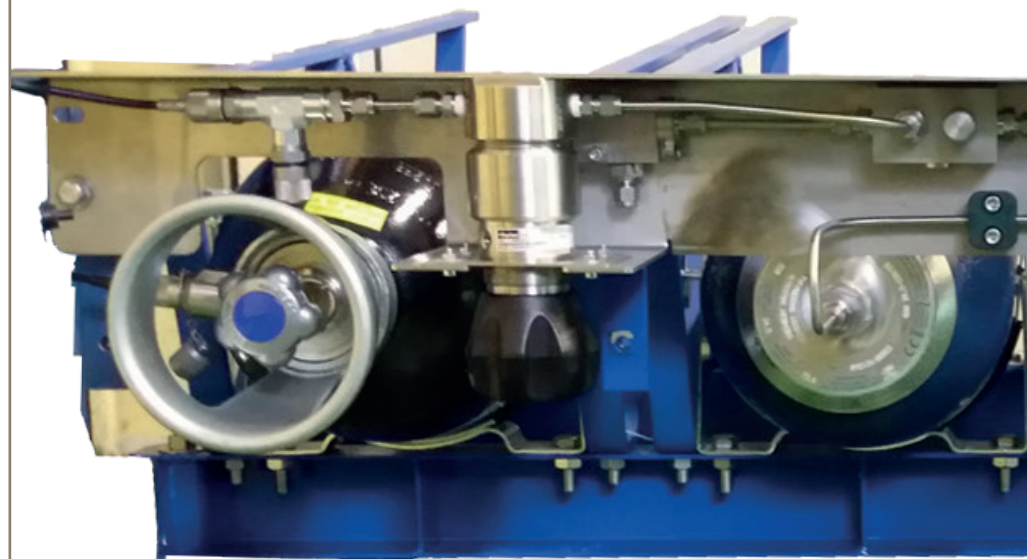
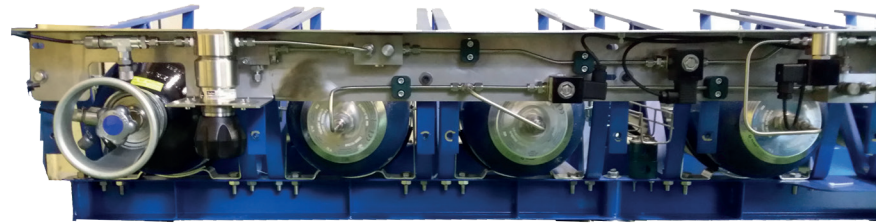




aerospace
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Closed Loop System (CLS)

Automatic maintenance system for
hydropneumatic accumulators



ENGINEERING YOUR SUCCESS.

Description

Accumulator maintenance can be a significant issue in applications where the product is working in severe conditions and/or difficult to access. Field maintenance is expensive and generates health & safety concerns.

Utilizing a wealth of experience and understanding of customer applications Parker Olaer has developed an automated nitrogen top-up system for gas charging of accumulators. This ensures accumulators are pre-charged to an accurate level and reduces human intervention on site, providing a virtually maintenance free solution.

The CLS and CLS+ options also remotely inject a specified precharge into the accumulators with a high level of accuracy and are suitable for a wide temperature range.

The Closed Loop System is composed of a Nitrogen source, gas circuit and programmable logic controller. Nitrogen source when limited is sized based on customer application with the following input data:

- Number of accumulators
- Application details
- Maintenance free time requested

Benefits

The CLS ensures accumulators are pre-charged to an accurate level and reduces human intervention on site, providing a virtually maintenance free solution.

Health & Safety

The CLS reduces human intervention on site, therefore lowering the risks associated with maintaining applications in remote or hazardous environments.

Cost Saving

The reduction in accumulator maintenance provided by the Closed Loop System provides a significant cost saving especially for applications which are difficult or costly to access.

Efficiency

The CLS optimizes the efficiency of your hydraulic system by maintaining an accurate precharge for your accumulator vessels.

Flexibility

The CLS can be supplied with a range of accumulators and in vertical or horizontal positions to suit the application.

Applications

Parker accumulators are used in a broad variety of applications. Below are several examples of applications in which the accumulator products can be utilized, however please contact us for more information.

Marine

Deck Machinery

- Winches
- Shark Jaws & Guide Pins
- Drill rigs
- Jack up rigs

Ship Equipment

- Steering Gear

Cargo Handling

- Ship Cranes
- FPSO

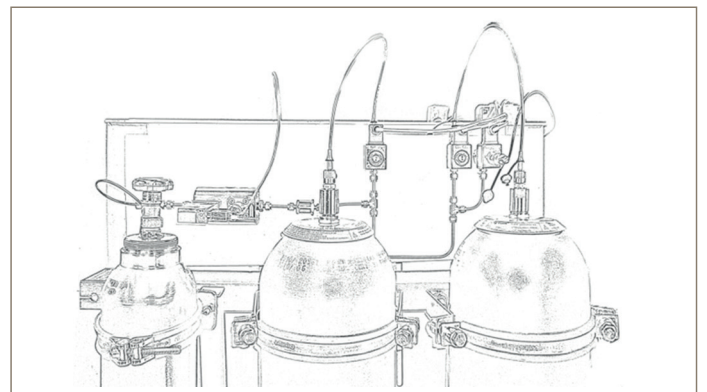
Diesel Engine

- Main engine
- Power supply engine

Wind Power

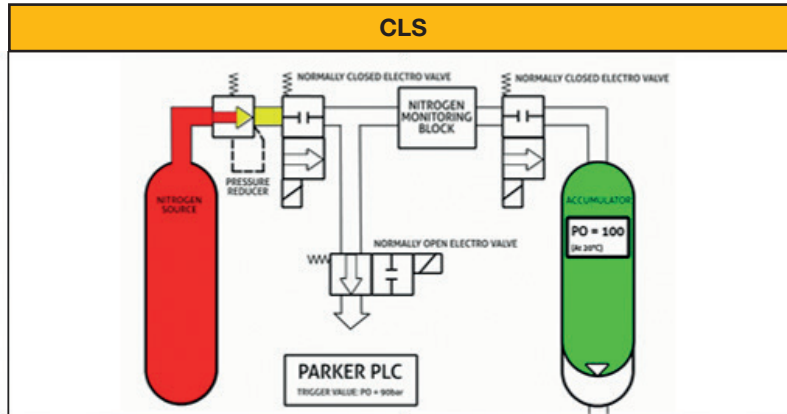
Wind Turbine

- Pitch Systems
- Pitch Gear Box
- Shaft Brake
- Yaw Brake
- Yaw Drive



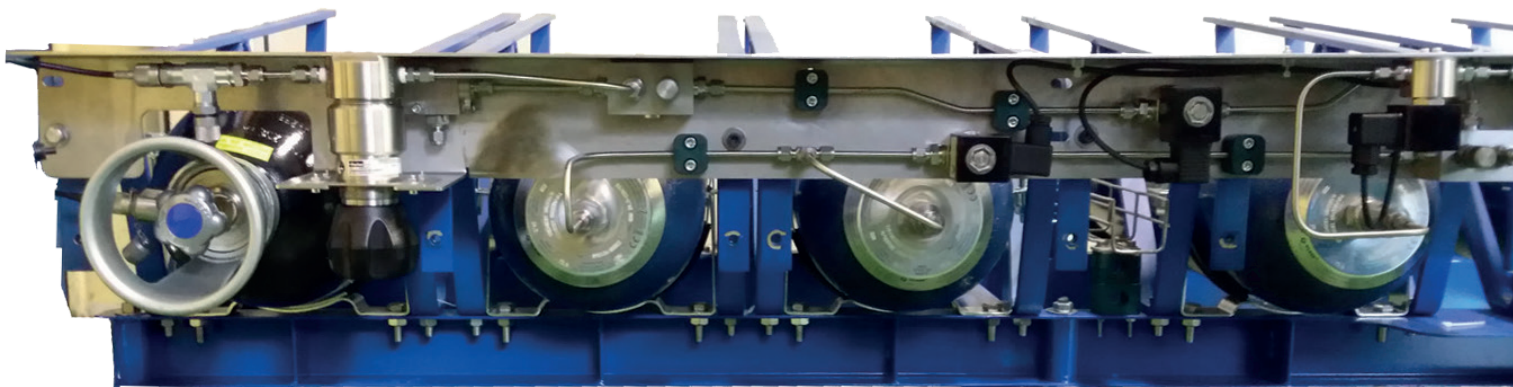
CLS on a set of two accumulators.

Technical Features



Working temperature	-20°C to +60°C
Pre charge accuracy	Target ± 2%*
Power supply	24VDC / 80W
Trigger type	External
Need to be hydraulically discharged for injection	Yes
Design pressure	300 bar
Materials	Stainless Steel/ Nitrile
Alerts / monitoring	Yes

* Depends on application and may be higher in some cases.



CLS on a set of four accumulators.

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