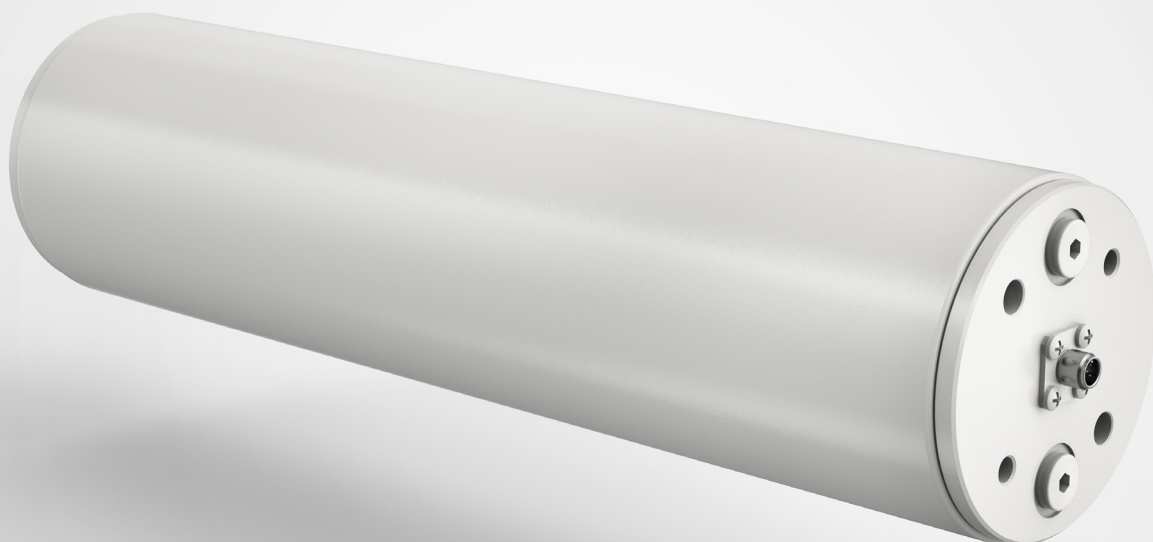


Piston accumulator series-production range

Works best under pressure



LIEBHERR

Your requirement. Our solution.

Liebherr offers piston accumulators to complement its hydraulic cylinder portfolio. The hydropneumatic accumulators are used for hydrostatic energy absorption and output in oil-hydraulic systems.

The piston accumulator series by Liebherr can be used flexibly in numerous mobile and stationary applications. In order to be ideally adapted to customer requirements, the series is offered in the pressure stages 250 and 350 bar.

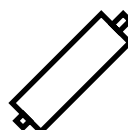
There is a lot of energy in it



Certification as standard

Liebherr piston accumulators are designed in accordance with the applicable standards and regulations DGRL 2014/68/EU and ASME Code Section VIII as standard.

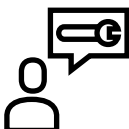
Further certifications can be realised on customer request.



Maximum compatibility

Due to the large number of possible combinations, the piston accumulators can be integrated into many applications.

Attachment parts can be offered additionally on request.



Optimised service and maintenance concept

Thanks to an optimised design, the products are made for a long service life and minimal frictional effects. A screwed construction ensures uncomplicated and easy maintenance.



Many years of experience and global presence

Liebherr has been producing hydraulic cylinders since 1958 and has thus developed reliable technologies that have proven their worth over many years.

This know-how forms the basis of the piston accumulator series.

Customers also benefit from the group's worldwide service network.

We have a system

If required, Liebherr offers complete hydraulic solutions consisting of hydraulic power units, hydraulic cylinders and piston accumulators in addition to the individual product – and thus supplies optimally matched components from a single source.

Did you know?

Piston accumulators can be adapted to special conditions at the customer's request. This requires a separate approval by our specialists.

Please get in touch with your contact person to realise individual solutions such as integrated position transducer, low-temperature variants or a seawater coating.

Large selection. Simple configuration.

The piston accumulator series at a glance

- Max. operating pressure: 250 / 350 bar
- Piston diameter: 100-360 mm
- Max. lengths: 5,000 mm
- Oil volume up to 400 l
- Lifting speeds up to 2 m / s
- Operating temperature range: -20 °C to +90 °C*

Installation position

The solutions can be flexibly integrated by using soft position rings. They can be installed both vertically and horizontally. This means that the piston accumulators can be used in many mobile and stationary applications. The assembly situation is checked in each individual case.

Painting

The piston accumulators are delivered primed as standard. On customer request, the products can also be supplied with a Liebherr grey painting or as a special painting in a selected RAL colour.

Temperature range

The standard series is designed for use in temperatures from -20 °C to +90 °C* as well as for low temperatures from -40 °C to +80 °C. Thus, the piston accumulators can be adapted to the ambient conditions of the respective application.

Oil connections

The standard series includes various oil connections according to the standards ISO 6162-2 (SAE connections), ISO 11926-1 (ANSI thread) and fluid connections according to ISO 228. The choice of connection depends on the operating pressure of the piston accumulator.

Gas connections

In addition to the selection of different gas connections, an additional screw-in thread (G 1/4") can be provided for a VSTI or a bursting plug. Another option is a minimes with pressure and/or temperature measurement.

Position transducer

Optionally, the piston accumulators can be equipped with a suitable position transducer. This is installed on the gas side.

How can we support?

If you have any questions or requirements, please do not hesitate to contact us.

Simon Ebner

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✉ piston-accumulator.cok@liebherr.com

*peak temperatures up to +100°C

In use. Always and everywhere.

Functional areas of piston accumulators

- Storage of energy
- Provision of high volume flows and pressures
- Emergency operation / safety reserve
- Pulsation damping and shock absorption
- Energy transfer through media separation
- Additional oil reservoir

Areas of application for Liebherr piston accumulators



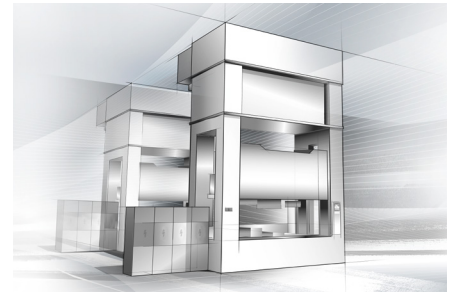
Building construction and civil engineering

In construction machinery and other mobile equipment, the piston accumulator can be used to provide volume flows and pressures at short notice. This efficient use reduces energy and fuel consumption. As a result, cost savings and increased performance can be achieved.



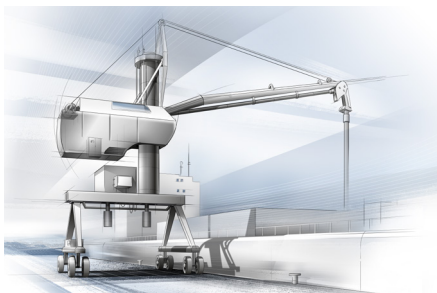
Mining

As an emergency braking function in the event of brake system failure in the mining truck, the piston accumulator represents an important safety device. The previously stored energy is released in emergency operation to ensure functionality.



Machinery and plant construction

Piston accumulators provides additional energy in case of failure of the main source of energy. Thus it is secured that in the event of an emergency cycles of operation can be enclosed.



Maritime applications

In ships and offshore platforms, the piston accumulator can be used as an emergency actuator or for media separation. In mobile harbour cranes, it helps to increase efficiency by providing additional energy storage.



Wind energy

In wind turbines, the energy stored in the piston accumulator is released again in extreme situations to adjust the rotor blades. In this way, damage to the turbine can be avoided and failure prevented.



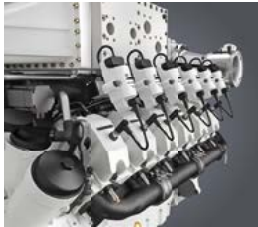
Agriculture and forestry

In mobile equipment in agriculture, the piston accumulator compensates for pressure surges in the hydraulic lines. This absorption minimises the need for maintenance, prevents damage and reduces equipment downtime.

There is something for everyone here.

Piston diameter [mm]		100	120	150	180	200	250	300	360
Oil volume [l]		2							
		4							
		6							
		8							
		10							
		12							
		15							
		20							
		25							
		30							
		40							
		50							
		70							
		100							
		150							
		200							
		250							
		300							
		400							
	Oil connection	Oil connections (fluid connections according to ISO 228)	G1/2"						
G3/4"									
G1"									
G1 1/2"									
G2"									
SAE connections (according to ISO 6162-2)		DN19							
		DN25							
		DN32							
		DN38							
		DN51							
Oil connections (according to ISO 11926-1)		7/8-14 UNF-2B							
		1 1/16-12 UN-2B							
		1 5/16-12 UN-2B							
		1 7/8-12 UN-2B							
Gas connection		M16x1,5							
		M28x1,5							
		G1/4"							
Optional gas connection	Additional gas connection for G1/4" und M16x1,5	G1/4"							
Optional gas connection	Additional gas connection for M28x1,5	G1/4"							

Liebherr Components



Gas engines



Diesel engines



Fuel injection systems



Axial piston hydraulics



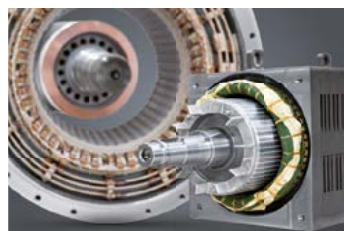
Hydraulic cylinders



Slewing bearings



Gearboxes and winches



Electric machines



Remanufacturing



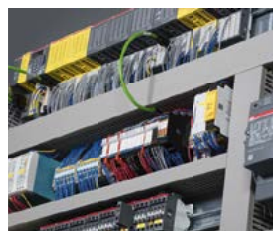
Human-machine interfaces and gateways



Control electronics and sensor technology



Power electronics



Control cabinets



Software

From A to Z – the components division of the Liebherr Group offers a broad range of solutions in the area of mechanical, hydraulic, electric and electronic drive system and control technology. The efficient components and systems are produced at a total of ten production sites around the world to the highest standards of quality. Central contact persons for all product lines are available to our customers at Liebherr-

Components AG and the regional sales and distribution branches.

Liebherr is your partner for joint success: from the product idea to development, manufacture and commissioning right through to customer service solutions like remanufacturing.

components.liebherr.com