INDUSTRIAL
ENTIRE RANGE

LUKAS
moving your projects



LUKAS INDUSTRIAL

LUKAS has been developing and manufacturing top-of-the-range high-pressure hydraulics for industrial use in a wide variety of sectors since as early as 1948. Regardless of the load to be moved, we have the product for you.

We are extremely proud of the quality of our tools. We produce them ourselves, crafting them with great dedication and attention to detail. Each piece is created especially for your extraordinary projects. Yesterday and today – reliable, flexible and long-lasting.

Moving your projects.





LUKAS' CORE COMPETENCES

We are pioneers in the development of light-alloy cylinders. These are made of aluminium and therefore both very lightweight and extremely resistant to corrosion. LUKAS cylinders move reliably, have a long service life and are highly durable.

In the 500-bar range, we work with a special quick coupler system with built-in hose break protection that makes simple changeover a breeze. You can thus react to any situation quickly. In our 700-bar range we have also done without elaborate screw caps and instead are continuing to develop our screw coupler system, which can be individually enhanced using the hose break protection.

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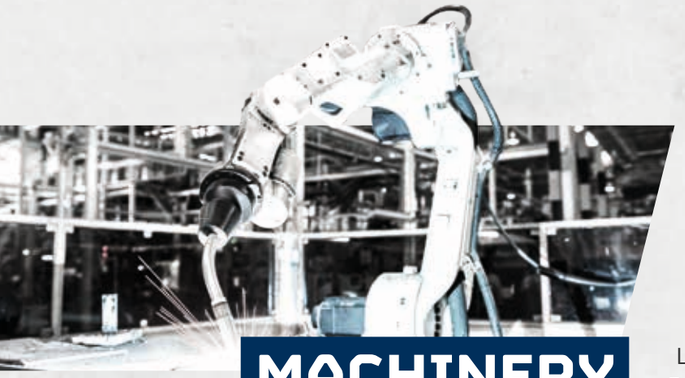
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LUKAS: writing the FUTURE with you



MACHINERY

ROBOTS

STRAIGHTENING PRESSES

MACHINES

LIFTING, ADJUSTING OR POSITIONING HEAVY LOADS



ENERGY

CONSTRUCTION

MAINTENANCE

WIND FARMS

LIFTING AND ADJUSTING TURBINES



CONSTRUCTION

BRIDGES

EXPANSION BEARINGS

BUILDINGS AND TUNNELS

TESTING GROUND PERMEABILITY



STAHLINDUSTRIE

PRESSING

STAMPING

ADJUSTING

TRIMMING EDGES, LIFTING ROLLED PARTS



SHIPBUILDING

SUPPORTING

LIFTING

POSITIONING

PREPARING PARTS FOR WELDING



QUARRYING & STONE-CRUSHING

REPAIR

LARGE MACHINES

MOVING HEAVY MATERIALS



MINING

EXTRACTION

RAW MATERIALS

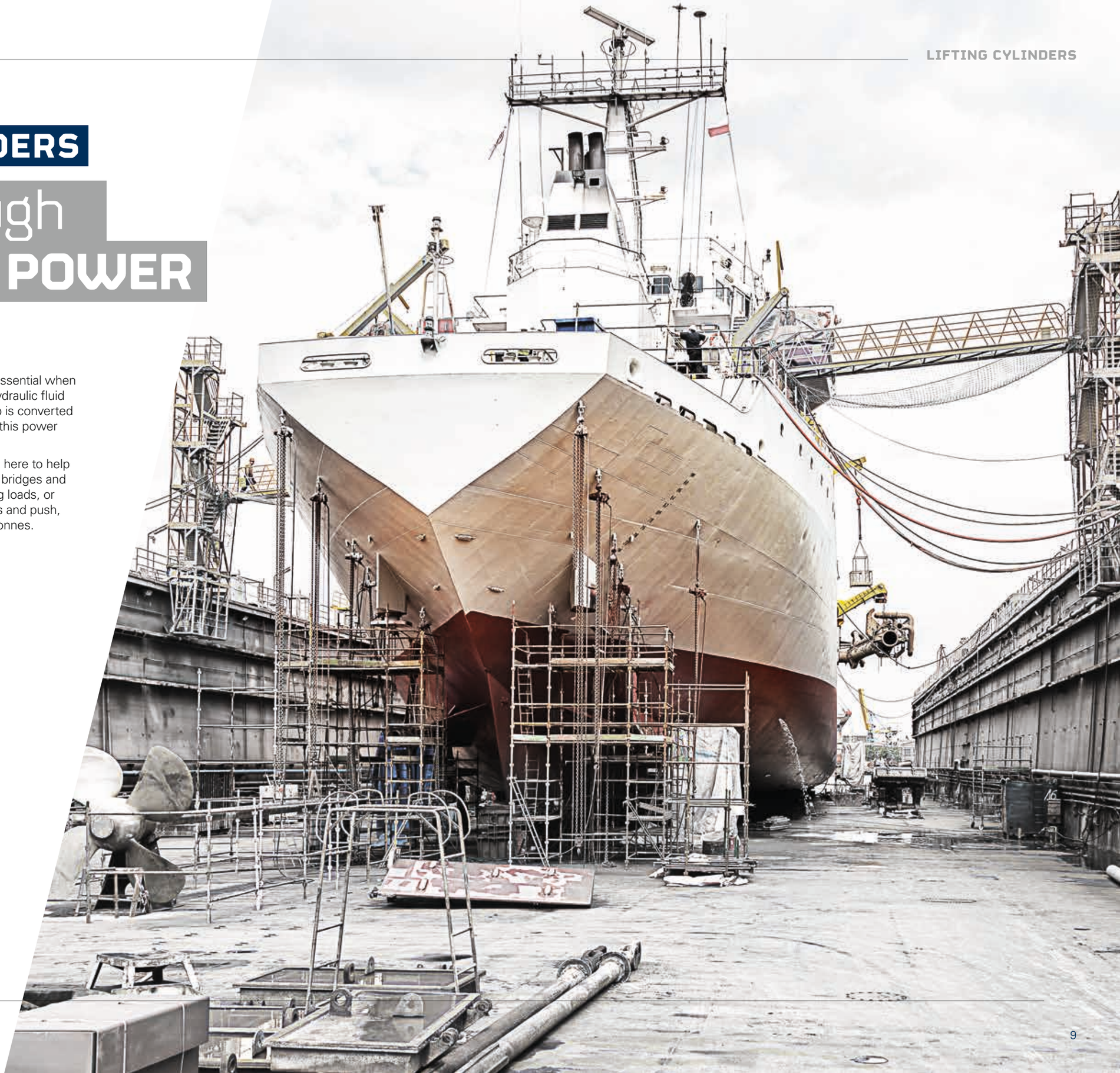
WORKING BELOW GROUND

LIFTING CYLINDERS

Safety through CONTROLLED POWER

Our lifting cylinders are run using mineral oil, and are essential when working with hydraulics. Here, the energy from the hydraulic fluid supplied by a hydraulic accumulator or hydraulic pump is converted into an easy-to-control, straight-line force. Controlling this power correctly is one of our core areas of expertise.

Take advantage of this safety in your projects! We are here to help you – whether lifting ships in dockyards, constructing bridges and motorways, testing materials for securing and pushing loads, or building tunnels. LUKAS cylinders lift, form, compress and push, and are suitable for loads of between five and 1,100 tonnes.



LIGHT-ALLOY CYLINDERS

SINGLE AND DOUBLE-ACTING – 500/700 BAR

LUKAS offers a wide range of high-performance light-alloy cylinders. These are available in both a single-acting and a double-acting version. All of the cylinders are lightweight and simple to transport, easy to handle and resistant to corrosion.



FACTS

- Quick-release coupler and quick-stop system
- Internationally typical screw couplers
- Available with metric external thread
- High lateral load tolerance
- Scraper rings to reduce soiling and wear
- Full-load stroke limit
- Strong return spring for fast retraction
- Especially light due to aluminium construction
- Loads up to 140 tonnes
- Up to 200 mm total stroke
- Attachment holes in the cylinder base (optional)

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

HOLLOW PISTON CYLINDERS

SINGLE AND DOUBLE-ACTING – 500 BAR

Our hollow piston cylinders are used to lift loads, pull fixed elements from rods, push in bearings or tension steel cables. They are particularly light, making them much easier to use in all positions. These are also available in single and double-acting versions.



FACTS

- Quick-release coupler and quick-stop system
- Available with metric external thread
- High lateral load tolerance
- Scraper rings to reduce soiling and wear
- Full-load stroke limit
- Especially light due to aluminium construction
- Overpressure protection with safety coupler StNi 6-D
- Fast piston return
- Piston rods with through bores for a wide range of applications
- Attachment holes in the cylinder base (optional)

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

STEEL CYLINDERS

SINGLE-ACTING, WITH SPRING RETURN – 700 BAR

LUKAS steel cylinders are mainly used to lift and move heavy loads, to position and secure components, or to form metal parts. Because of the wide range of models and their high level of standardisation, they can be integrated in existing systems at any time.



FACTS

- Robust and solid
- Corrosion-protected thanks to baked enamel surfaces
- Hard chrome plated pistons to prevent scoring and corrosion
- External thread (as standard)
- Attachment holes in the cylinder base (as standard)
- Internationally typical screw couplers
- Internal thread in the piston rod for additional tools
- Full-load stroke limit
- Scraper rings to reduce soiling and wear
- LUKAS quick coupler for integration in an existing 500-bar system (including hose break protection)
- Internationally typical screw couplers

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

STEEL CYLINDERS

DOUBLE-ACTING – 700 BAR

The double-acting steel cylinders from LUKAS feature hydraulic retraction, making them even more versatile. They retract faster and can also be used for pulling work. In addition, thanks to a special overpressure valve, they also offer the user more safety. Lifting and moving ultra-heavy loads is no problem for these cylinders.



FACTS

- Corrosion-protected thanks to baked enamel surfaces
- Hard chrome plated pistons to prevent scoring and corrosion
- External thread (as standard)
- Attachment holes in the cylinder base (as standard)
- Internationally typical screw couplers
- Internal thread in the piston rod for additional tools
- Lateral load tolerance thanks to guide rings
- Full-load stroke limit
- Scraper rings to reduce soiling and wear
- LUKAS quick coupler for integration in an existing 500-bar system (including hose break protection)
- Hydraulic piston retraction
- For large loads up to 220 tonnes
- Overpressure valve for user protection
- Internationally typical screw couplers

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

HOLLOW PISTON STEEL CYLINDERS

SINGLE-ACTING, WITH SPRING RETURN – 700 BAR

Our rugged hollow piston steel cylinders are ideal for moving heavy bearings or tensioning steel cables. Single-acting steel hollow piston cylinders are retracted with a powerful spring and can be integrated into existing systems with ease.



FACTS

- Suitable for lifting work
- Corrosion-protected thanks to baked enamel surfaces
- Hard chrome plated pistons to prevent scoring and corrosion
- External thread (as standard)
- Attachment holes in the cylinder base (as standard)
- Internationally typical screw couplers
- Lateral load tolerance
- Full-load stroke limit
- Scraper rings to reduce soiling and wear
- LUKAS quick coupler for integration in an existing 500-bar system (including hose break protection)

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

HOLLOW PISTON STEEL CYLINDERS

DOUBLE-ACTING, WITH HYDRAULIC PISTON RETURN – 700 BAR

Our rugged hollow piston steel cylinders are ideal for moving heavy bearings or tensioning steel cables. Double-acting steel hollow piston cylinders can extend and retract hydraulically.



FACTS

- Double-acting version for two working directions
- Suitable for lifting work
- Corrosion-protected thanks to baked enamel surfaces
- Hard chrome plated pistons to prevent scoring and corrosion
- External thread (as standard)
- Attachment holes in the cylinder base (as standard)
- Internationally typical screw couplers
- Lateral load tolerance
- Full-load stroke limit
- Scraper rings to reduce soiling and wear
- LUKAS quick coupler for integration in an existing 500-bar system (including hose break protection)
- User protection thanks to overpressure valve

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

STAINLESS STEEL CYLINDERS

SINGLE-ACTING, WITH SPRING RETURN – 700 BAR

Our stainless steel cylinders have to be extremely tough as they are used on drilling rigs, in the chemical industry, in power stations and in the food industry. Thanks to their high surface quality, they have an unusually long service life and are very robust.



FACTS

- Strong return spring
- Internationally typical screw couplers
- Resistant to acid and saltwater
- Can be decontaminated
- Corrosion-resistant
- Thread in the cylinder base (optional)
- Also permitted for 800 bar
- LUKAS quick coupler for integration in an existing 500-bar system (including hose break protection)

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**



SPECIAL CYLINDERS

LUKAS – experts in unusual applications

LUKAS' special cylinders are flat, compact and powerful. They can be used to replace expansion bearings and lift machinery, and are a perfect choice wherever there is a lack of space.

Want to move heavy loads? Need to support something for a long time but don't have much room to manoeuvre? Not a problem – LUKAS' special cylinders are here to support you in completing your tasks.



FLAT CYLINDERS

500/700 BAR

Our flat cylinders are designed for use in projects involving tight spaces or heavy items. They are perfect for lifting machinery, replacing expansion bearings or preparing for the next process step with a higher cylinder. The flat cylinders are retracted by a load or spring return.



FACTS

- 500-bar series with quick-release coupler and quick-stop system
- 700-bar series with internationally typical screw couplers
- Attachment holes for 700-bar cylinders as standard (LFC)
- Full-load stroke limit
- Extremely low retracted height (from 32 mm)
- Made from hardened special steel
- Some equipped with handles
- 700 bar with spring return

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

COMPACT CYLINDERS

WITH SPRING RETURN – 700 BAR

LUKAS compact cylinders close the gap between our flat cylinders and standard lifting cylinders. Our compact cylinders are the perfect choice when flat cylinders are too low and lifting cylinders too high. They feature a clever combination of low retracted height and relatively long stroke.



FACTS

- Relatively long stroke with compact installation height
- Made from hardened special steel for high strength
- Grooved piston without additional spherical saddles
- Internationally typical screw couplers (serienmäßig)
- Lateral load tolerance
- Full-load stroke limit
- Scraper rings to reduce soiling and wear
- LUKAS quick coupler for integration in an existing 500-bar system (optional)

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

SHORT-STROKE LOCK NUT CYLINDERS

700 BAR

LUKAS short-stroke lock nut cylinders are very compact and have sturdy lock nuts. They can securely support loads of up to 550 tonnes in tight spaces and over long periods. The mechanical locking and high-strength special steel make for greater safety.



FACTS

- Long, secure hold under heavy loads
- High-strength special steel
- Internationally typical screw couplers
- Piston retracts under load
- An ejection hole limits the lifting height
- Tilting saddles for optimum alignment (as standard)
- LUKAS quick coupler for integration in an existing 500-bar system (optional)

Please note: On an uneven substrate, the cylinders must be completely supported by a stable foundation!

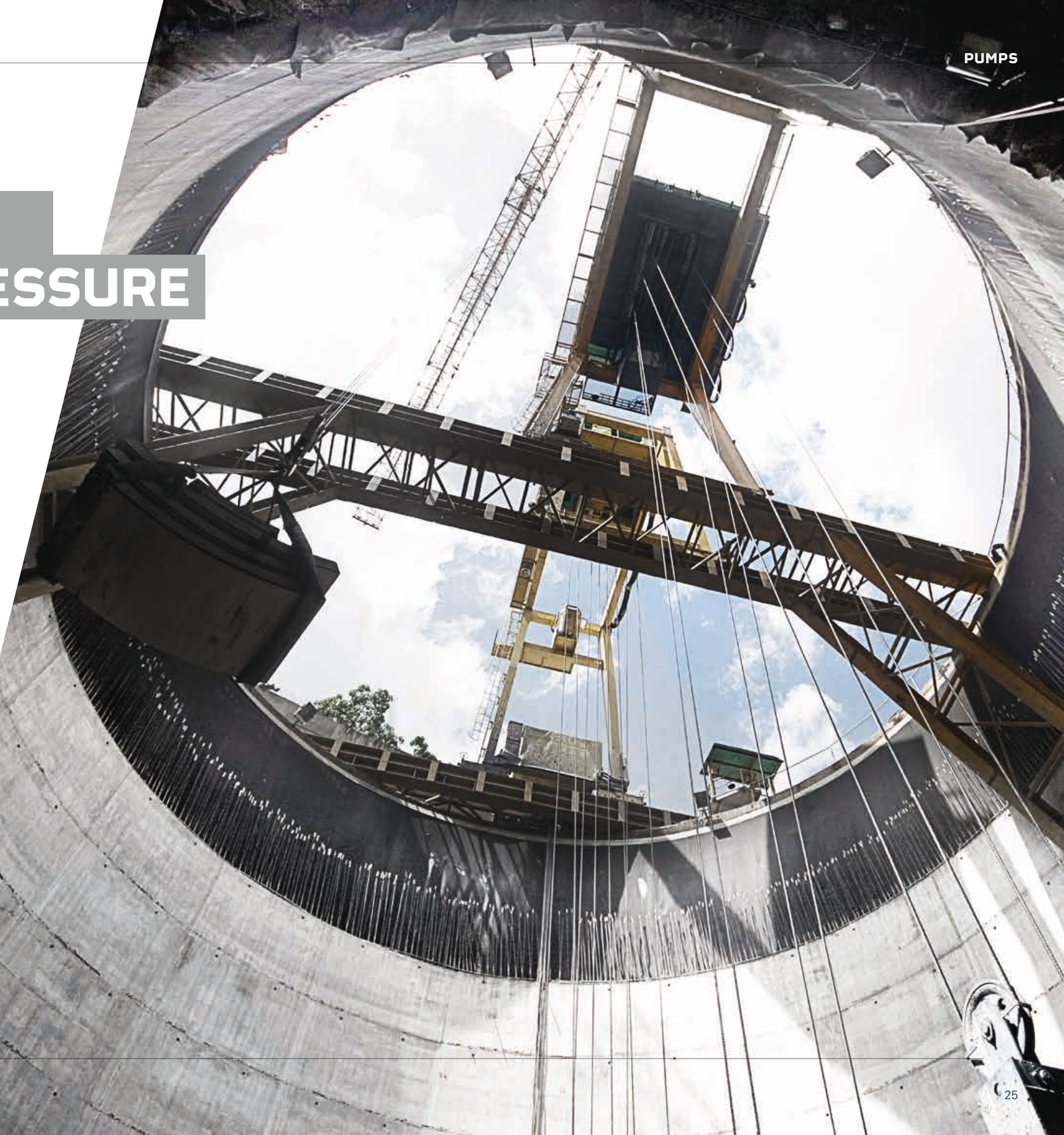
You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**



PUMPS

Getting the right OPERATING PRESSURE

LUKAS motor and hand pumps are lightweight, easy to use and suitable for use with most of the cylinders in our range. Precision and sensitive control of cylinders ensures a continual volume flow, making them especially powerful. They are used to generate and maintain the oil pressure required to extend the cylinder.



HAND PUMPS TYPES ZPH + LH

SINGLE AND DOUBLE-ACTING CYLINDERS – 500/700 BAR

LUKAS' ZPH hand pump series is ergonomic thanks to its compact design, and very intuitive to use. Optimum hand lever force means that a high capacity can always be achieved when using single and double-acting cylinders. The drain valve works with high precision.

Our LH-type hand pumps are low-maintenance and move loads in a single movement thanks to automatic switching between high and low pressure.



FACTS

- Intuitive operation
- Automatic switching from high and low pressure
- Drain valve for precision lowering of single-acting cylinders
- Can be used horizontally and vertically
- Large model ZPH 3 with particularly high capacity
- Handle in form of lockable pump lever
- Compact and stable
- Hand pump retrofitting kits for operation of single and double-acting cylinders

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

AIR-HYDRAULIC PUMPS

500/700 BAR

Lukas air-hydraulic pumps are quick and automatic, and you operate them with the foot. This leaves your hands free to actively support your project. Easy operation means work is particularly efficient and ergonomic.



FACTS

- Two variants with different capacities
- Drives both single and double-acting hydraulic cylinders
- Operated by means of a pedal (extend – stop – retract)
- Reciprocating pressure intensifier (air/oil) generates oil pressure proportional to primary air pressure
- Internal pressure limiting valve
- Can be connected to any workshop compressed air system
- 2,4 l + 5 l available

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

HYDRAULIC POWER UNITS PO 6

SINGLE AND DOUBLE-ACTING CYLINDERS – 500/700 BAR

Operating cylinders with a motor pump makes things easier and generates even more performance. The ability to switch from low to high pressure at 16 MPa (160 bar) allows them to reach higher working speeds in lower load ranges. These compact power packs can be relied on to work even for longer periods of time.



FACTS

- Constant high-pressure flow rate up to maximum pressure
- Special LUKAS radial piston pump with suction valves for continuous flow rate and maximum efficiency
- Compact design and low weight

MODELS

PO 6 1E for one single-acting cylinder

Drain valve for precise speed control when lifting or lowering. Load is being held when drain valve is closed and motor is turned off.

PO 6 2E for two single-acting cylinders

Precise speed control of both cylinders when lifting or lowering by throttling the control valve. Separate closing of both oil flows possible. Holding of loads with motor running or turned-off when control valves are closed.

PO 6 1D for one single-acting or double-acting cylinder

Lifting and lowering of loads by switchover valve. Holding of loads with switch-over valve in centre position. Retraction of a double-acting cylinder is only permitted while the motor is running.

To reduce weight, the power units are delivered with only 7.5 litres or 15 litres of oil. When necessary, they can be filled to 10 litres or 24 litres. Optional carry frames are available.

Petrol versions also available

- GO 6 1E
- GO 6 2E
- GO 6 1D

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

HYDRAULIC POWER UNITS PO 4

500/700 BAR

Our compact motor pumps from the PO 4 series are suitable if you frequently need to operate small and medium-sized cylinders at different locations. They are available in a variety of models.



FACTS

- Portable and particularly suitable for mobile use
- Long service life and little maintenance required
- Constant high-pressure flow rate up to maximum pressure
- Special LUKAS radial piston pump with suction valves for continuous flow rate.
- Switchover pressure for fast lifting without load
- Remote control
- Cable length 3 m

MODELS

Version N3 for single-acting cylinders

Precision lifting and positioning of the load. Hold load with motor switched on (pressureless oil flow). Can retract with motor switched on or off.

Version N4 for double-acting cylinders

Extend and hold load with motor switched on (pressureless oil flow). Can only retract with motor switched on.

Version L 2/2 – without load-holding function

Motor start-up when remote control is activated, solenoid valve closes. The connected hydraulic cylinder extends as long as the push-button is held down. To retract, release the button, motor stops, solenoid valve in neutral gear, cylinder retracts with spring return.

Version G 2/2 – with load-holding function

Remote control with 3 setting switch, setting „1“ = motor on, solenoid valve closed, cylinder extends, middle setting „0“ = motor off, solenoid valve closed, load is held, setting „2“ = motor off, solenoid valve in neutral gear, cylinder retracts with spring return.

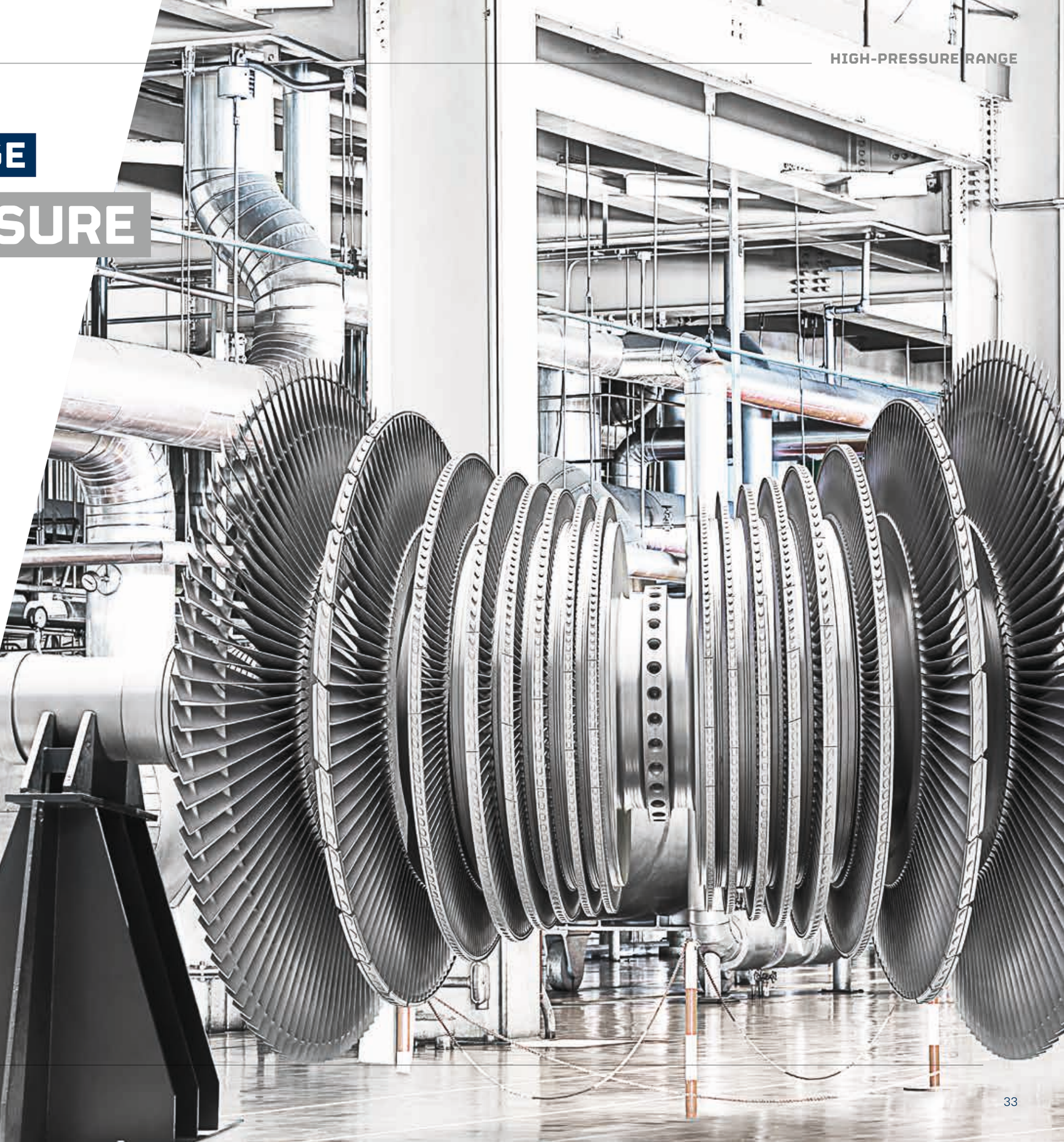
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HIGH-PRESSURE RANGE

The **RIGHT PRESSURE** for your special applications

Projects with extraordinary requirements – these are exactly the challenges that LUKAS likes to tackle. We have developed our high-pressure range for your special applications, with pressure ranges of up to 3,000 bar posing no problem.

Our products are the perfect choice when you need high pressure on account of the project or time restraints only, and do not need a permanent solution with this range.



PRESSURE MULTIPLIER

3000 BAR

The LUKAS pressure multiplier is mainly used to release pressed assemblies by widening the bearings, wheels or gear wheels to be pulled. To do this, the pressure multiplier increases the input pressure by a multiple up to a maximum output pressure of 3,000 bar.



FACTS

- Screwed directly into a hole in the part to be pulled
- Input pressure is generated with a hand pump
- Input pressure is increased from a maximum 450 bar in a ratio of 1:6.7

SCOPE OF DELIVERY

- 3000 bar multiplier
- ZPH 1 AF/1 hand pump with 450 bar pressure setting
- Pressure gauges
- Manual valve
- Hoses with couplers
- Transport container

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

HIGH-PRESSURE HAND PUMPS

1000/1600/2500 BAR

LUKAS high-pressure hand pumps were developed for special purposes in which particularly high pressures are needed, for example, when working in test laboratories on leak or material tests, when widening pressed assemblies, in screw pretensioning technology, or when doing work involving hydraulic assembly. Our single-stage pumps deliver a constant flow rate up to the maximum pressure. The hand lever forces are very low (e. g. 36 kg or at 2,500 bar).



FACTS

- Available with three different maximum pressures
- Constant flow rate up to the maximum pressure
- Labour-saving operation due to relatively low hand lever forces
- Reliable, long-life quality

You can find our accessories, type tables with item numbers and sketches at: **www.lukas.com**

What do you want to move?

Let us know, we' ll be glad to advise you.

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