

Transforming your press into a servo press

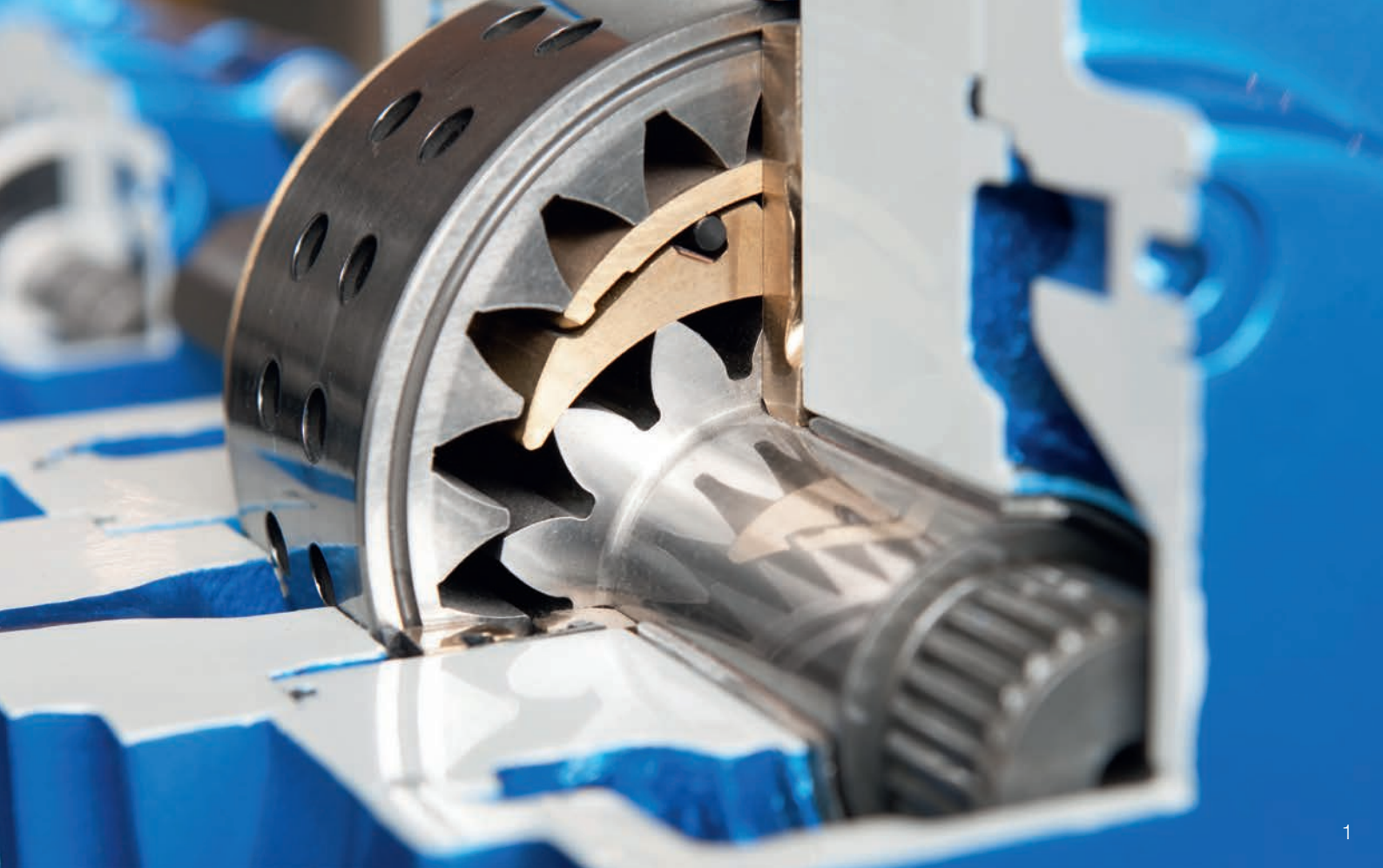
Press drive PSH

Innovation

In the hydraulic press drive PSH servo pumps replaces the classic valve and control technology. This concept allows for an optimum adjustment of power and speed to the pressing process and simplifies the design of the press drive.

The complete system includes

- Servo motor pump group
- Hydraulic power pack
- Safety systems
- Switching electronics
- Sensors
- CPU
- I/O peripherals
- Control panel with pre-built touch screen interface



Engineering

In close collaboration of Siemens with Voith, an optimal product combination was developed for the PSH series. The intelligent control allows a very flexible use of the press. Productivity increases and the manufactured parts have a very high quality.

You can benefit from our many years of expertise with regard to managing complete drive systems. Our system specialists are on hand to support you when it comes to starting the calculation and design process, moving on to the installation.

Energy use in line with the process

Compared to conventional systems, the PSH offers energy savings up to 60%. Energy-efficient, with PSH modernized systems use only as much energy as the press requires in the various phases.

The comprehensive portfolio also for modernization

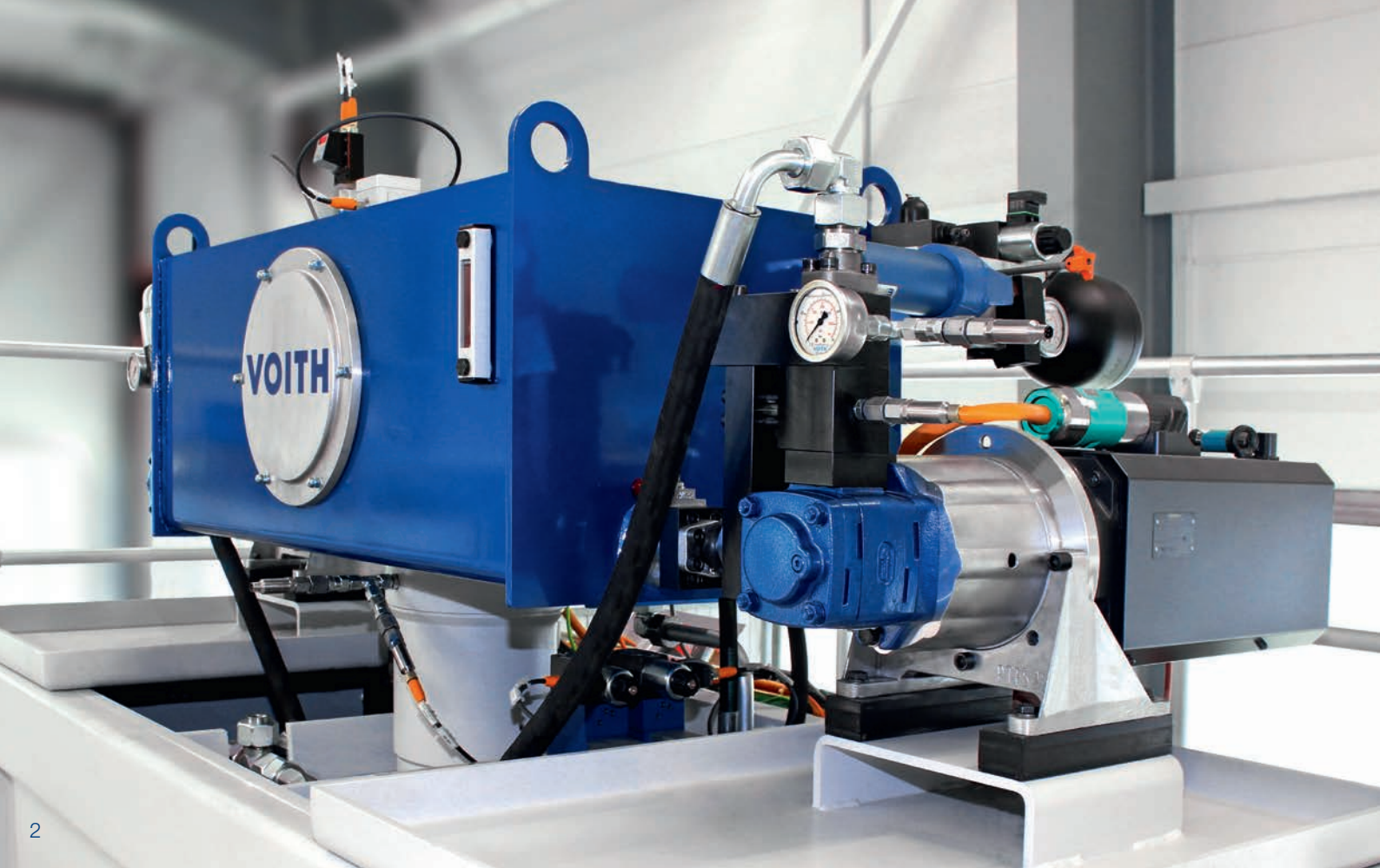
Press drive PSH can be easily integrated into the press and is suitable for new installations and for retrofits. The new drive solution requires significantly less space and less oil volume than older hydraulic systems; this makes it predestined for modernizing systems (retrofits).

Running costs

The PSH concept includes low cost of commissioning, training and maintenance. The state-of-the-art sensor system provides additional diagnostic capabilities, which supports preventive maintenance and, in the ideal case, condition-oriented maintenance.

Service

The use of proven standard components that are available around the globe and around the clock permits fast and simple access to replacement parts, and, as a consequence, secures the high availability and productivity of the press.



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- 1 Cutaway of internal gear pump model IPVP
- 2 Servo pump in the testing field

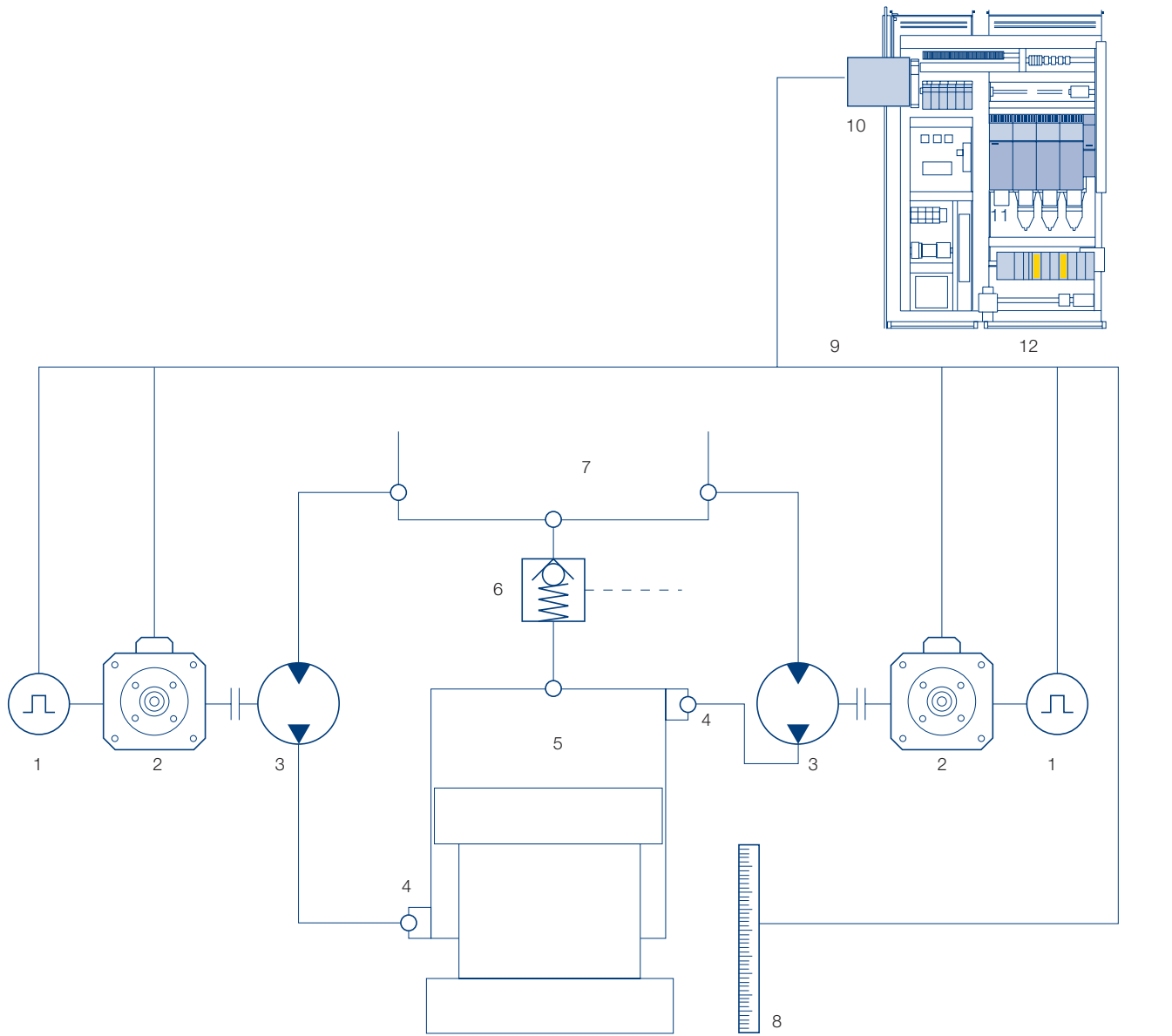
Comparison of energy consumption



- Energierückspeisung CSH in den Prozess
- Energieverbrauch Pressenantrieb PSH
- Energy consumption conventional press drive



PSH diagram



- | | |
|----------------------|----------------------|
| 1 Encoder | 7 Oil tank |
| 2 Motor | 8 Measuring system |
| 3 Internal gear pump | 9 DriveCliqu |
| 4 Safety module | 10 Touchscreen MP377 |
| 5 Main cylinder | 11 Converter |
| 6 Suction valve | 12 Technology PSH |

Scope of delivery

- Servo motor pump group
- Hydraulic safety modules
- Cabinet incl. Converter, Control Simatic S7, Software package, Control buttons
- Sensors
- Cable with a defined length for: Sensors, Motor, Valves of scope of delivery
- Performance Fluid PF-400 (For the press drive PSH, exclusive use of PF-400 is mandatory.)

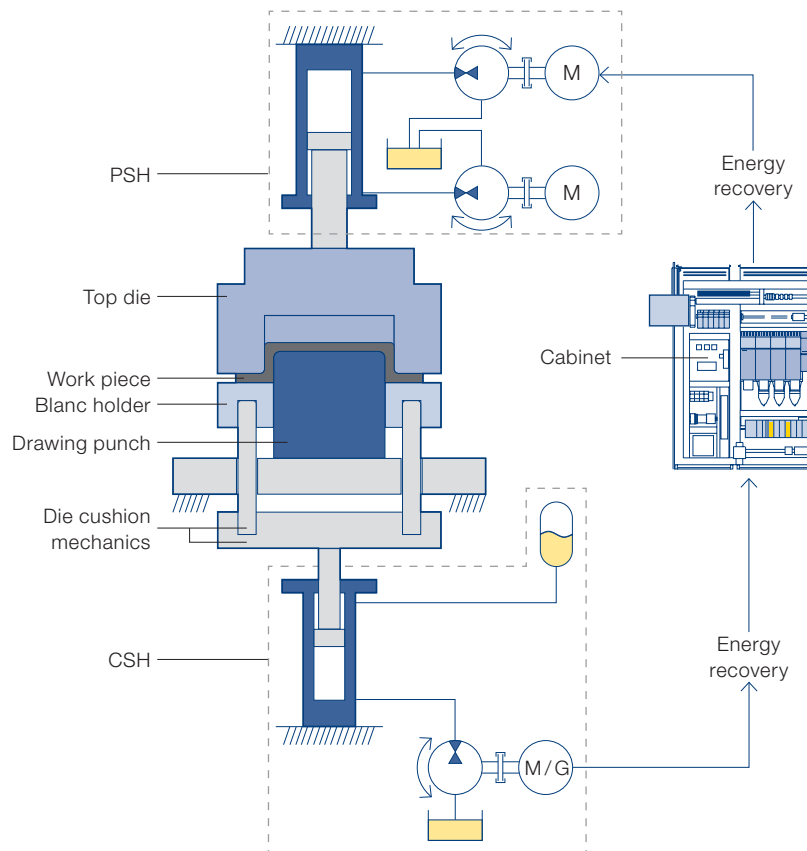
Options

- Power Pack (optimum filtering circuit, cooling, ...)
- Hoses, tubes (hydraulics)
- Suction valve
- Cylinder
- Measuring system
- HMI (in Cabinet)
- Start up assistance

Advanced scope of delivery

- Advanced safety features in Simatic S7 CPU
- Die cushion control

The option – Servo cushion for more flexibility



Advantages using PSH

Features	Advantages	Benefits
<ul style="list-style-type: none"> • Actively controlled servo pump • No classic valve and control technology 	<ul style="list-style-type: none"> • The drive features high overall efficiency • The press is highly energy-efficient 	<ul style="list-style-type: none"> + Your energy costs are reduced by up to 60 %, improving your total cost of ownership (TCO) + The press produces with lower costs per piece
<ul style="list-style-type: none"> • Modular design • Few components • Small oil tank 	<ul style="list-style-type: none"> • The press drive is simply designed and highly functional • Installation space savings run up to 50 % 	<ul style="list-style-type: none"> + Integrating the drive into your press is easy and economical + Suitable both for new equipment and retrofits + Commissioning and training costs are low
	System oil volume is reduced by up to 80 %	+ Low maintenance costs
Force / speed / position control by servo pump	<ul style="list-style-type: none"> • No classic valve technology • Force, speed, and position parameters can be selected freely for the press process • Speed, force, position, and cycle rate can be reproduced exactly 	<ul style="list-style-type: none"> + Low system complexity increases the reliability and availability of your press + Your press is highly flexible and productive + The quality of the parts produced is very high + Significantly lower tool wear reduces operating costs
Integrated process monitoring	The drive system has its own diagnostics	<ul style="list-style-type: none"> + Maintenance needs can be detected extremely quickly + Downtime of the press is considerably lower + On-site service calls can be reduced by up to 70 %
Control algorithms are perfectly adapted to the hydraulics and electronics	<ul style="list-style-type: none"> • The press drive is a complete, single-source solution • Startup is easy and can be done in one to two days 	<ul style="list-style-type: none"> + Shorter development and startup times save you money + The press drive is easy and cost-effective to integrate

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