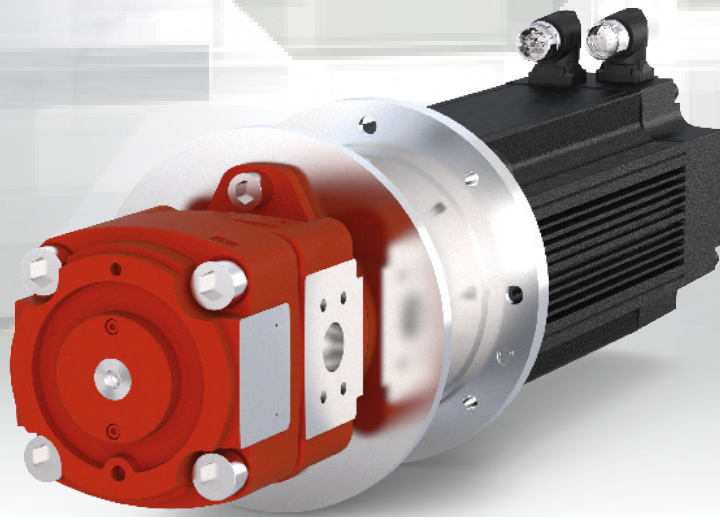


KEB



SOLUTION SERVO PUMP

EN

SOLUTION SERVO PUMP



SERVO PUMP KERNEL

Intelligent servo pump control



COMBIVIS STUDIO 6

Automation tool for CNC, PLC, safety and drives



COMBIVIS STUDIO HMI

Machine visualization



COMBIVIS CLOUD

Ready for IoT



COMBIVIS CONNECT

Remote maintenance



In the same way that we have been able to support our mechanical engineering customers in the transition from asynchronous motors to servomotors, KEB is now offering support for its hydraulic partners for the transition to even more economical and available servo pump solutions.

The use of servo pumps allows real-time control of the flow and/or pressure of a system directly from the motor, without the use of valves. Energy savings (more than 70 percent) but also noise savings (up to -20dB) can be achieved, in particular by reducing the motor speed during phases when the actuators of a machine are not operating.

Thanks to the combined use of a frequency inverter and a controller to drive the pumps, it is thus possible to eliminate a large number of valves and thus reduce cycle times and the overall inertia of a system. A permanent magnet motor operates over a wide range of speed (flow) and torque (pressure) without excessive consumption or overheating. Applications are even more dynamic. Tank to cylinder and cooling system distances are reduced. In addition, the real-time control allows the pumps to be protected, especially against cavitation.

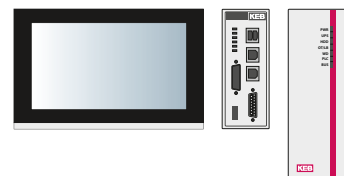
HOW THE SOLUTION WORKS WITH KEB

Thanks to our mechanical expertise, and in collaboration with a team of hydraulic engineers, hydraulic machine and pump manufacturers, we have developed solutions dedicated to the control of your pumps and servo pumps.



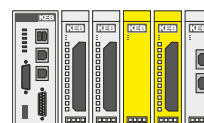
EMBEDDED CONTROLS IPC CONTROLS

Scalable real time control solutions



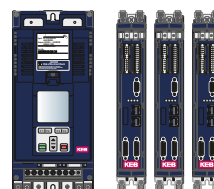
REMOTE I/O SAFETY PLC

EtherCAT® based I/O system,
Safety over EtherCAT®



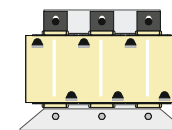
DRIVE UNITS

Modular drive systems



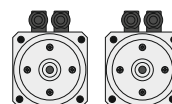
FILTER

Flexible mains and motor filters



MOTORS

Extensive range of motors



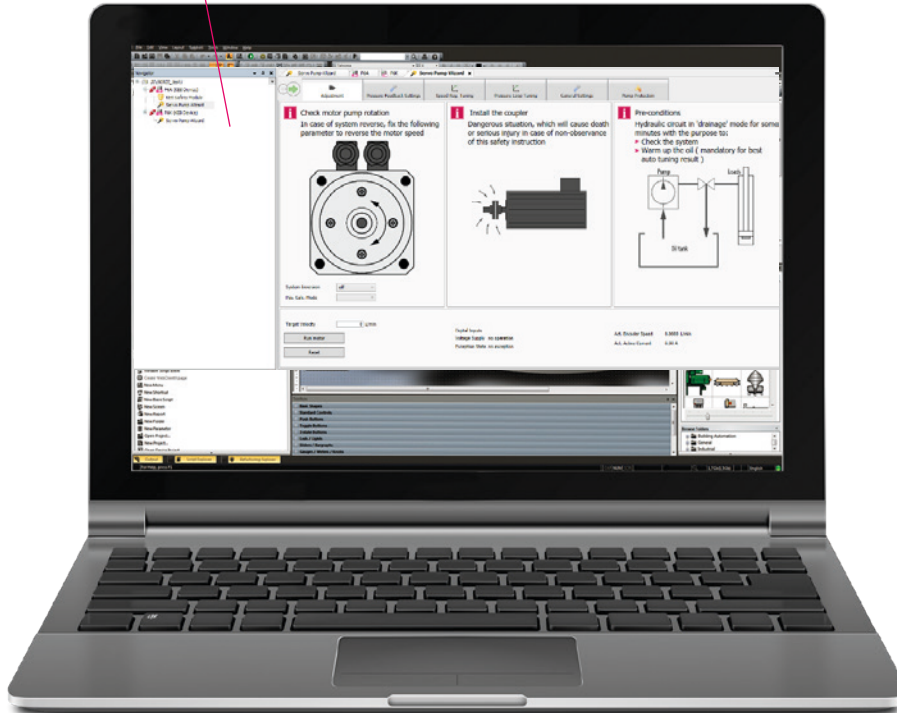
THERE ARE MANY ADVANTAGES TO USING KEB SOLUTIONS:

- Dual loop pressure/flow control integrated in the drive
- Dedicated function libraries in our controllers
- Control in Bar and L/min
- Eight parameter sets for programming hydraulic cycles
- Communication: real-time fieldbus, analog and digital I/O, OPC UA
- Two encoder inputs integrated in the drive, motor and cylinder feedback for optimal control
no more risk of over shoot in dynamic applications
- Real-time diagnostics predictive maintenance
- Energy Recovery Solutions
- Wide power range 0.75 kW ... 450 kW

FUNCTIONALITY DEDICATED TO PUMPS AND SERVO PUMPS

WIZARD

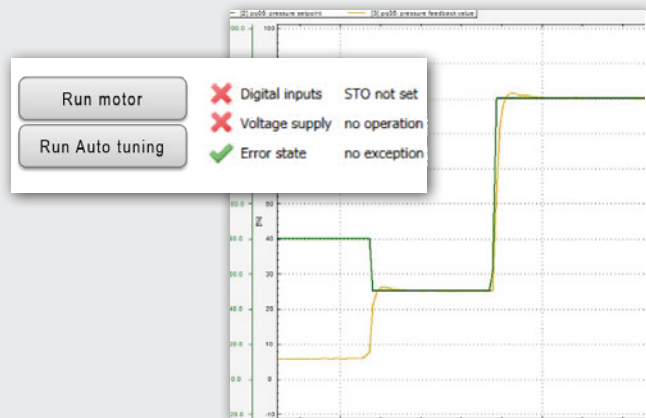
Quick and intuitive start-up of your pumps from our free software.



AUTOTUNING

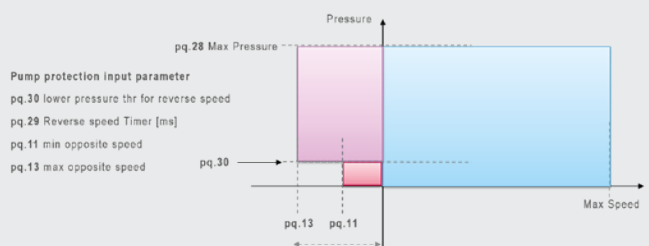
Automatic optimization of the control system and response time in 3 steps:

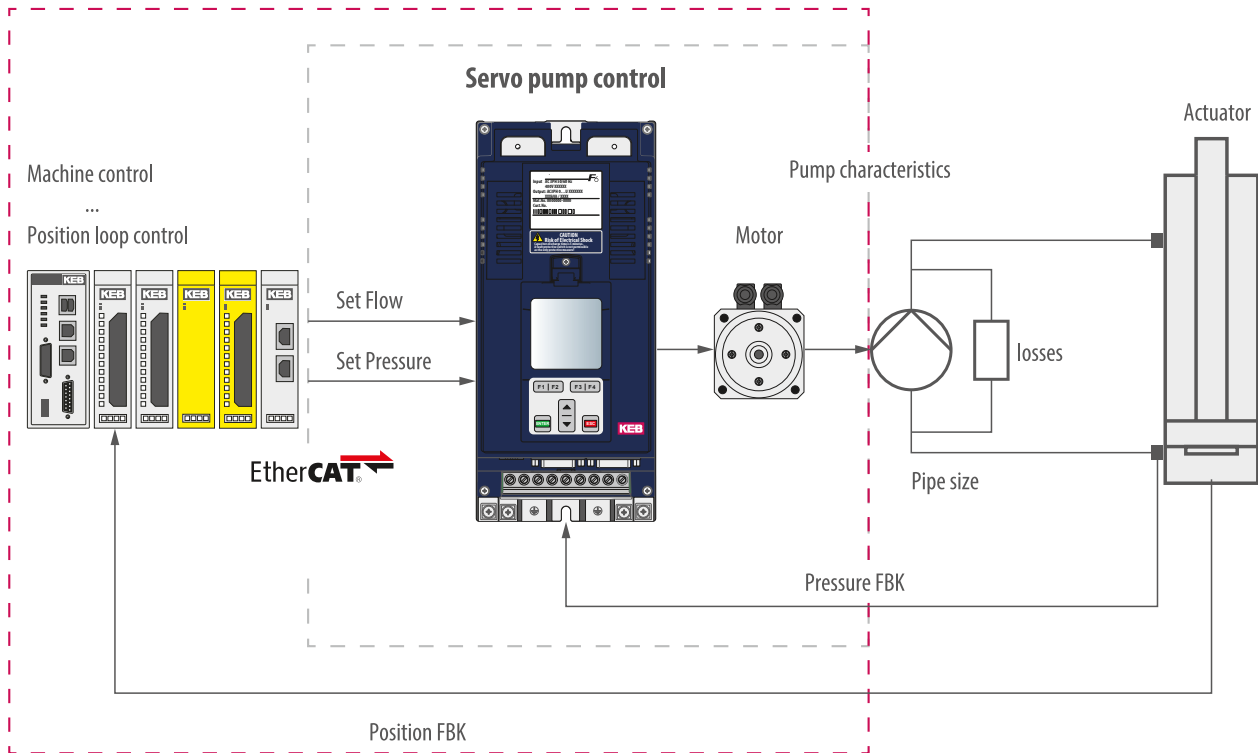
- In drainage mode
- Hydraulic circuit „under load“
- Automatic response time optimization



SECURITY AND PROTECTIONS

Pump protection



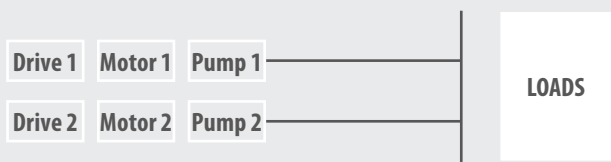


MULTI-PUMP FUNCTION

Parallel or series operation on a single circuit

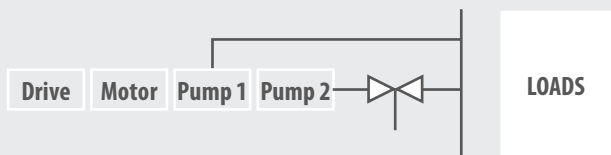
IN PARALLEL

This configuration extends the operating range of the system. Example: Pump #1 is used for high flow at low pressure and pump #2 is used for low flow at high pressure.



IN SERIES

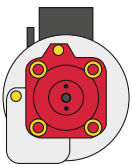
In this configuration, both pumps are connected to the same hydraulic circuit. The main pump is always active, the auxiliary pump is connected via a valve to increase the flow.



POWER CONSUMPTION OPTIMIZATION



HYBRID METAL PRESS



The trend towards increased energy efficiency in forming technology is unbroken and is experiencing new impulses day after day.

The next step towards eco-design has been taken with the new European Commission Regulation (EU) 2019/1781. The first measures will already come into force from 2021. Integrated drive systems that implement the requirements of the new standard already exist - of course at KEB Automation.



With the COMBIVERT F6 drive controllers - which already meet the IE2 energy efficiency, in connection with our IE3 motors or even more efficient servo motors - you already meet the new directives of the next years today.



REAL-TIME DISPLAY OF PUMP CONSUMPTION

KEB'S EXPERIENCE IN THE CONTROL OF PUMPS AND SERVO PUMPS

Over the years, we have acquired a great deal of experience in the control of pumps and servo pumps in a number of different areas:

- Plastic injection moulding
- Metal shears
- Hydraulic Presses
- Metal bending machines
- Punching machines

Today more than 150,000 KEB drive controllers are sold worldwide. Hydraulic pump control applications are one of the most important strategic industries in which our drives are used.



KEB'S COUNTRY ORGANISATIONS

Austria | KEB Automation GmbH

E-Mail: info@keb.at Web: keb-automation.com

Benelux | KEB Automation KG

E-Mail: info.benelux@keb.de Web: keb-automation.com

Czech Republic | KEB Automation s.r.o.

E-Mail: info@keb.cz Web: keb-automation.com

France | Société Française KEB SASU

E-Mail: info@keb.fr Web: keb-automation.com

Germany | **Geared Motors**

KEB Antriebstechnik GmbH

E-Mail: info@keb-drive.de Web: keb-automation.com

Germany | **Headquarters**

KEB Automation KG

E-Mail: info@keb.de Web: keb-automation.com

Italy | KEB Italia S.r.l. Unipersonale

E-Mail: info@keb.it Web: <https://blog.keb.it>

Japan | KEB Japan Ltd.

E-Mail: info@keb.jp Web: keb.jp

P. R. China | KEB Power Transmission Technology (Shanghai) Co. Ltd.

E-Mail: info@keb.cn Web: keb.cn

Poland | KEB Automation KG

E-Mail: roman.trinczek@keb.de Web: keb-automation.com

Republic of Korea | KEB Automation KG

E-Mail: vb.korea@keb.de Web: keb-automation.com

Spain | KEB Automation KG

E-Mail: vb.espana@keb.de Web: keb-automation.com

Switzerland | KEB Automation AG

E-Mail: info@keb.ch Web: keb-automation.com

United Kingdom | KEB (UK) Ltd.

E-Mail: info@keb.co.uk Web: keb-automation.com

United States | KEB America, Inc.

E-Mail: info@kebamerica.com Web: kebamerica.com

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual application do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. We reserve the right to make technical changes.

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THE COMPLETE WORLDWIDE KEB PARTNER NETWORK



Automation with Drive

keb-automation.com

KEB Automation KG Südstraße 38 32683 Barntrup Germany Phone +49 5263 401-0 E-Mail: info@keb.de