HYPERTRON®

We are waterjet

THE NEW HIGH-PRESSURE PUMP WITH 90,000 PSI OPERATING PRESSURE

Pure power, less effort: The drive systems of the future

QUALITY FROM AUSTRIA EUROPE

NOW AVAILABLE IN THE US ★ NOW AVAILABLE IN THE US

WWW.BFT-PUMPS.COM

BFT PUMPS

90,000 psi for highest cutting performance.

Your advantages

1 **DRIVE VIA AXIAL PISTON PUMP WITH ELECTRONIC PRESSURE/FLOW CONTROLLER**
Minor pressure fluctuation due to short switching times

2 **SIMPLE OPERATION**
Colour touch display, available with several languages and comprehensive information output

3 **HYPERTRON® HIGH-PRESSURE PUMPS MEET THE STANDARD FOR INDUSTRY 4.0**

4 **STEPLESS OPERATING PRESSURE CONTROL FROM 7,500 TO 90,000 PSI**
Extends the range of applications of the entire cutting system

5 **PRACTICALLY NO PULSATIONS DURING CONNECTION**
No chipping with brittle materials, and that from 7,500 psi onwards

6 **LOWEST PRESSURE FLUCTUATIONS OF ONLY +/- 2 % AT FULL LOAD**
Increased service life of the high-pressure components and improved cutting quality

7 **NO OVERSHOOTING AND MINIMAL PRESSURE DROPS WHEN SWITCHING THE WATER JET ON AND OFF**
Protects the entire high-pressure system from the pump to the cutting head

8 **LOGBOOK INTEGRATED INTO THE CONTROL**
Simplified handling, output of operating data via USB connection

9 **CLIENT CONNECTION VIA NETWORK CABLE**
Transfer of the pump control into the control of the cutting system

10 **CURRENT LIMITATION WHEN SWITCHING ON THE HIGH-PRESSURE PUMP BY FREQUENCY CONVERTER**
Reduced current consumption during start-up current

11 **PERFORMANCE LEVEL c**

12 **REDUCED OPERATING TEMPERATURE IN THE OIL CIRCUIT OF THE DRIVE HYDRAULICS**
Lower cooling efficiency required, extension of the service life of the hydraulic components

HYPERTRON®

90,000 PSI FOR HIGHEST POWER REQUIREMENTS

The HYPERTRON® series operates in the power class 75 HP with up to 1.2 GPM flow rate at an operating pressure of 90,000 psi. The high operating pressure makes the HYPERTRON® also suitable for the most demanding requirements.

QUALITY FROM AUSTRIA · EUROPE

EASY MAINTENANCE · EASY MAINTENANCE

Multi-voltage and multi-frequency motors are also available on request for the high-pressure pumps of the HYPERTRON® series.

BFT, THE WORLD'S LEADING SUPPLIER OF HIGH-PRESSURE PUMP SYSTEMS, PRESENTS:

HYPERTRON®
A new dimension of performance for your waterjet applications up to 90,000 psi!

HIGH-PRESSURE PUMPS OF THE HYPERTRON® SERIES ARE DISTINGUISHED BY THE FOLLOWING FEATURES:

THE BASIS
The HYPERTRON® pump series is based on the high-pressure pump series ECOTRON®, HYTRON® and SERVOTRON®, which are well-known in our market for their reliability and ease of maintenance.

HIGH REGULATION DYNAMICS
In the HYPERTRON® high-pressure pumps, an axial piston pump with electronic pressure/flow controller is driven by an asynchronous motor with frequency converter.
The hydraulic units have high control dynamics. The use of two soft-switching hydraulic valves with specially matched control geometry ensures extremely short switching times.

OIL FILTRATION AND COOLING
The hydraulic oil is cooled either via oil/air or oil/water heat exchangers. The hydraulic oil is filtered and cooled in a separate and constant oil circuit. The resulting high oil quality has a positive influence on the operational safety and service life of the entire hydraulic system. A patented dual cooler system is available as an option with series-connected oil/air and oil/water coolers for high ambient temperatures.

THE INTENSIFIER – THE CORE PART
The distinguishing features of the intensifier are the long service lives of the patented high-pressure seals and the non-return valves. The special design of the external non-return valves ensures that the intensifier is very easy to maintain. Wear parts like high-pressure seals and non-return valves can be replaced individually. A complete disassembly of the intensifier is not necessary.

EASY MAINTENANCE
The special design of the high-pressure cylinder and the external non-return valves ensures that the intensifier is very easy to maintain. Wear parts like high-pressure seals and non-return valves can be replaced quickly and easily.

LONG SERVICE LIFE AND HIGH OPERATIONAL RELIABILITY
The high-pressure pump is equipped with a high-volume accumulator. Due to the combination of dynamic drive and 1.7 l accumuluator volume, the pressure fluctuation in the high-pressure system is only +/- 2 % of the maximum operating pressure. This protects the entire pump system, extends the service lives of high-pressure seals and non-return valves and also has a positive effect on the cutting result.

OPTIMAL PRESSURE PROCESS
When switching the cutting valve on and off, there is practically no pressure overshoot. The integral pressure transducer measures the actual operating pressure so that it can be adjusted immediately, if necessary. This means a significant reduction of oscillations within the pump and at the same time a longer service life of all the high-pressure components that are located between high-pressure pump and cutting head.

RELIEF VALVE IN THE HIGH-PRESSURE CIRCUIT
A relief valve is installed in the high-pressure circuit of the pump. It is pneumatically actuated and activated via the stop button or via the emergency stop circuit. It can additionally be controlled externally so that, if e.g. for abrasive waterjet cutting requires it, the piercing pressure can be steplessly adjusted from 7,500 psi.

OPERATION VIA TOUCH DISPLAY
The pump is operated via the master computer. The HYPERTRON® high-pressure pump has stepless settings from 7,500 to 90,000 psi. All warning and monitoring func-

1 HYDRAULIC SWITCHING BLOCK

2 RELIEF VALVE

3 INTENSIFIER

4 PRE-PRESSURE DISPLAY, HYDRAULIC PRESSURE DISPLAY, OIL FILTER CONDITION

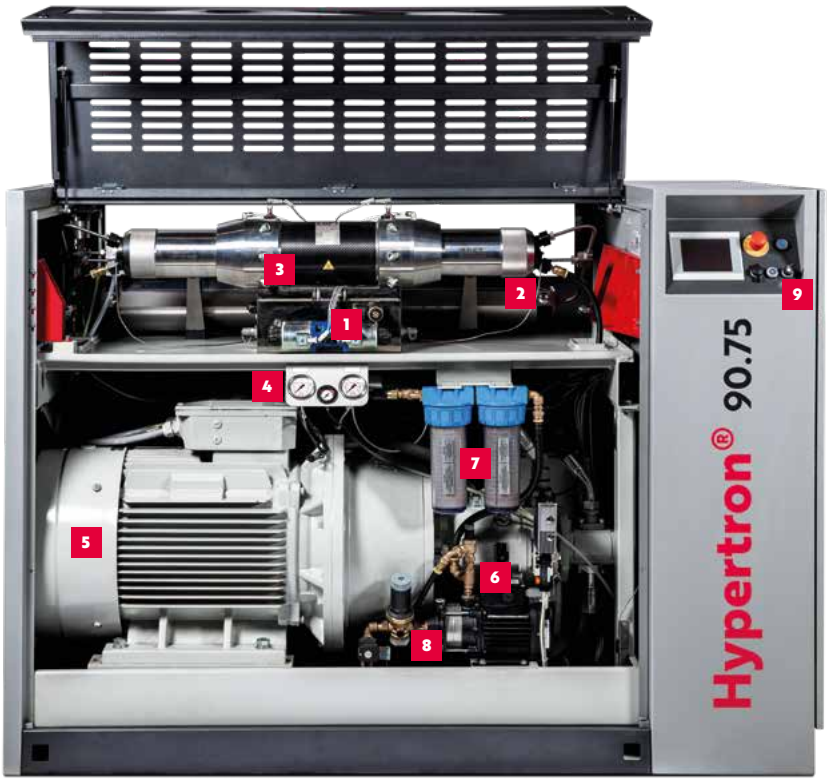
5 ASYNCHRONOUS ELECTRIC MOTOR

6 AXIAL PISTON PUMP

7 DOUBLE FILTER UNIT 5 AND 1,2 µM

8 PRE-PRESSURE PUMP

9 TOUCH DISPLAY

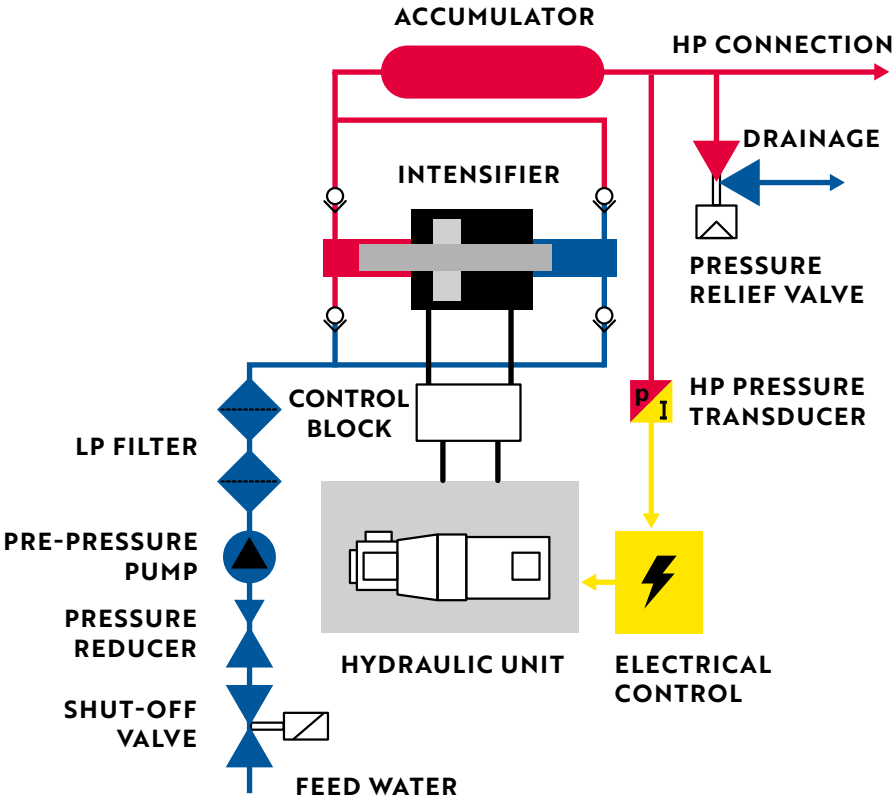


tions appear in plain text. Operating data are recorded and can be called up via the display. In addition, the pump has a diagnostic system and an electronic logbook where the operating data and service lives of the individual components can be read out via USB connection.

REMOTELY CONTROLLABLE

All important functions can be controlled remotely with client connection via network cable. External connections for start/stop, emergency stop circuit, pressure relief valve, error and operating messages are available. The target pressure values is specified via a signal from 0 to 10 V. The HYPERTRON® high-pressure pumps comply with the Industry 4.0 standard.

SYSTEM DIAGRAM OF THE HYPERTRON® HIGH-PRESSURE PUMP



The intensifier used in the HYPERTRON® is unique even among BFT pumps.
It is easy to maintain and convinces with uniquely long service lives.

The central connection strip of the HYPERTRON® simplifies commissioning.

TECHNICAL DETAILS HYPERTRON®		90.75
Power, main motor	HP	75
Flow rate, max at 87,000 psi (nozzle 0.011")	GPM	0.9
Flow rate, max at 77,000 psi (nozzle 0.013")	GPM	0.9
Flow rate, max at 65,000 psi (nozzle 0.014")	GPM	1.1
Flow rate, max at 60,000 psi (nozzle 0.016")	GPM	1.2
Design pressure	psi	90,000
Permissible operating pressure, max.	psi	87,000
Permissible uninterrupted operating pressure, max.	psi	77,000
Stroke rate, max.	min^{-1}	35
Intensification ratio		1:29.75
Accumulator volume	l	1.7
Oil tank volume	GPM	42.2
Ambient temperature on oil/air cooler	°F	50–95
Ambient temperature on oil/water cooler	°F	50–113
Water consumption with oil/water cooler, approx.	GPM	3.1

Technical changes reserved.

BFT PUMPS

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