

Technical Data		HYTRON® 35.11	40.19	40.30	40.37	40.55	40.75
Power supply, main motor	kW	11,0	18,5	30,0	37,0	55,0	75,0
Auxiliary unit, oil/air cooler	kW	0,18	0,18	0,18	0,18	0,37	0,37
Auxiliary unit, booster pump	kW	0,63	0,63	0,63	0,63	0,63	0,63
Flow rate, max.	l/min	1,2	1,9	3,4	3,8	6,8	7,6
Design pressure	MPa	420	420	420	420	420	420
Permissible operating pressure, max.	MPa	350	400	400	400	400	400
Continuous operating pressure, max.	MPa	350	380	380	380	380	380
Double strokes, max.	min-1	20	17	30	35	30 (2x)	35 (2x)
Intensification ratio		1:21,78	1:21,78	1:21,78	1:21,78	1:21,78	1:21,78
Oil tank volume	l	130	130	130	130	250	250
Ambient temperature with oil/air cooler	°C	10-35	10-35	10-35	10-35	10-35	10-35
Air flow with oil/air cooler	kg/s	0,48	0,48	1,15	1,15	1,50	1,50
Ambient temperature with oil/water cooler	°C	10-45	10-45	10-45	10-45	10-45	10-45
Average water consumption with oil/water cooler	l/min	3	5	8	9	14	16

Supply lines

Water inlet		1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Water pre-pressure without booster pump, min./max. MPa	MPa	0,3-1,0	0,3-1,0	0,3-1,0	0,3-1,0	0,3-1,0	0,3-1,0
Water pre-pressure with booster pump, min./max. MPa	MPa	0,1-2,5	0,1-2,5	0,1-2,5	0,1-2,5	0,1-2,5	0,1-2,5
Drainage connector		3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
High pressure connector for HP tubes 3/8" and 9/16"		M20x1,5	M20x1,5	M20x1,5	M20x1,5	M30x2	M30x2
Pneumatic pressure, min./max.	MPa	0,55-0,70	0,55-0,70	0,55-0,70	0,55-0,70	0,55-0,70	0,55-0,70
Pneumatic connection for hose (O.D.)	mm	6	6	6	6	6	6
Supply voltage	V	400	400	400	400	400	400
Frequency	Hz	50	50	50	50	50	50
Current consumption at 400V/50 Hz	A	21,0	35,2	56,3	68,7	98,5	134,0
Protection type, control box		IP55	IP55	IP55	IP55	IP55	IP55
Protection type, all other components		IP54	IP54	IP54	IP54	IP54	IP54

Miscellaneous

Width	mm	1.900	1.900	1.900	1.900	1.950	1.950
Depth	mm	970	970	970	970	1.400	1.400
Height	mm	1.410	1.410	1.410	1.410	1.410	1.410
Total weight (without auxiliaries)	kg	1.100	1.200	1.300	1.400	2.000	2.200
Sound level, max.	dB(A)	76	76	76	76	78	78
Coating		silver/gray	silver/gray	silver/gray	silver/gray	silver/gray	silver/gray

Subject to technical alterations



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BHDH GmbH is a member of:



Best High Pressure & Drilling Technology

HIGH PRESSURE PUMPS



... for waterjet cutting

HYTRON®

BHDT, ONE OF THE WORLD'S LEADING SUPPLIERS OF HIGH PRESSURE PUMP SYSTEMS, PRESENTS:

HYTRON®. THE COMPLETE UNIT. OPTIMIZED FOR YOUR WATERJET CUTTING APPLICATIONS!

HYTRON® SERIES HIGH PRESSURE PUMPS ARE CHARACTERIZED BY THE FOLLOWING FEATURES:

EXCELLENT OPERATING SAFETY AND SERVICE-FRIENDLINESS.

The HYTRON® series uses standard hydraulic components. The base frame follows best practices and guarantees easy access to all components.

HIGHLY DYNAMIC CONTROLS.

The hydraulic units used are characterized by highly dynamic controls. Use of a soft-switching hydraulic valve with specially designed control geometry guarantees extremely short switch-over times.

LONG LIFE EXPECTANCY.

The hydraulic oil is cooled by either an oil/air or oil/water heat exchanger. Oil filtering and cooling take place in a separate and constant oil circuit, driven by an integrated gear pump. The excellent oil quality this achieves has a positive influence on operational safety and the life expectancy of the whole hydraulic system.

OPTIMUM FEED WATER SUPPLY.

The fitted pre-filtering unit with 5 µm and 1,2 µm filters guarantees optimum feed water supply.

OPTION: BOOSTER PUMP.

If the feed water supply pressure is less than 0.3 MPa, an optional booster pump is available to increase the water pre-pressure.

AT THE CORE: INTENSIFIER.

The high pressure components in the intensifier are characterized by a long life expectancy. Besides the special stainless steels developed specifically for this application, a large plunger diameter and a long stroke both help to achieve this.

SIMPLE REPLACEMENT OF WEARING PARTS.

Thanks to the special flange design and externally accessible check valves, the intensifier is easy to maintain. Wearing parts like seals and check valves can be replaced quickly and easily.

TARGETED REDUCTION OF PRESSURE FLUCTUATIONS.

Depending on the flow rate, the integrated accumulator has a large storage volume of up to 2.49 liters. This reduces pressure fluctuations to a minimum and thus prevents wear on the high pressure system. For larger flow rates, the pump is fitted with two intensifiers. Strokes are electronically controlled, which in turn helps to prevent pressure fluctuation.

BLEED DOWN VALVE IN HIGH PRESSURE LINE.

A bleed down valve is fitted to the pump's high pressure line. The valve is pneumatically controlled and actuated via the stop

button or the emergency stop circuit. It can also be controlled externally; this means you can set the pressure as needed, e.g. for the piercing process with abrasive waterjet.

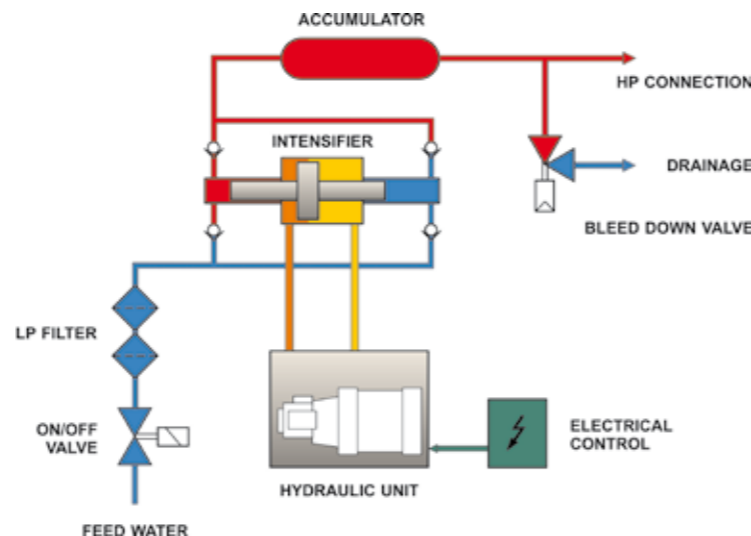
TOUCH SCREEN CONTROLS.

The pump is touch screen controlled. The operating pressure is continuously adjustable between 50 and 400 MPa. All warnings and monitoring functions are displayed in clear text. Operating data are logged and can be accessed via the display.

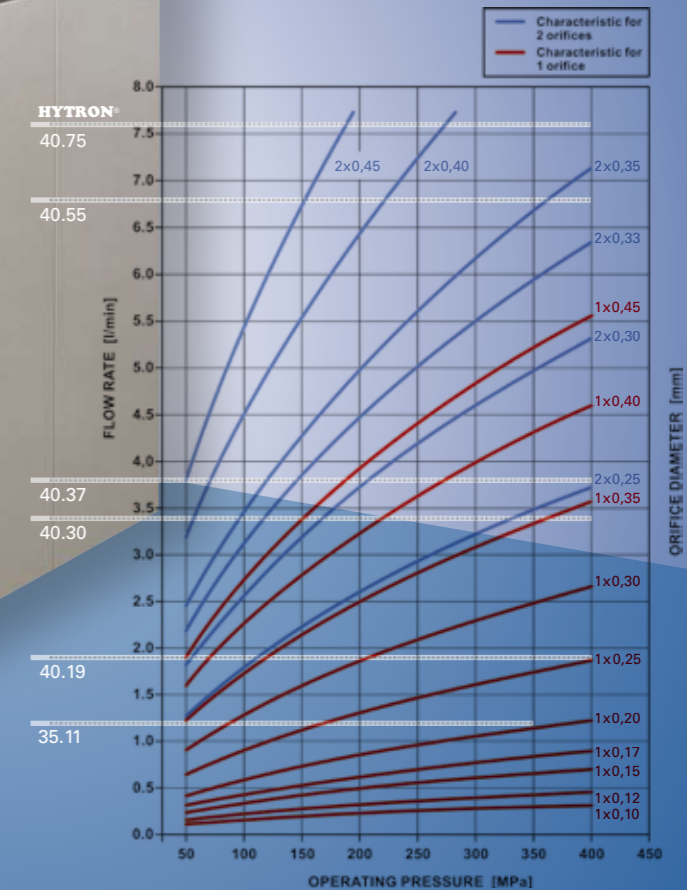
REMOTE CONTROL SUPPORT.

All critical functions can be remotely controlled. External connectors for start/stop, emergency stop circuit, enable signal, set pressure setting of 0 to 10 V, current operating status, group malfunction and operating messages are available by default.

On request, multiple-voltage and multiple-frequency motors are available for HYTRON® series high pressure pumps.



System schematic for high pressure Hytron® pump



Correlation between operating pressure, flow rate and orifice diameter

HYTRON® HIGH PRESSURE PUMPS

are built in compliance with Safety of Machinery Directive 89/392/EWG and the Pressure Equipment Directive 97/23/EC. The declaration of conformity is included with the documentation.



Robust drive hydraulics with axial piston pump and separate gear pump.



Excellent accessibility, easy to maintain and operate.



Optimum feed water supply with booster pump and double filter.



Control box with electrical components. Simple controls via touch screen.