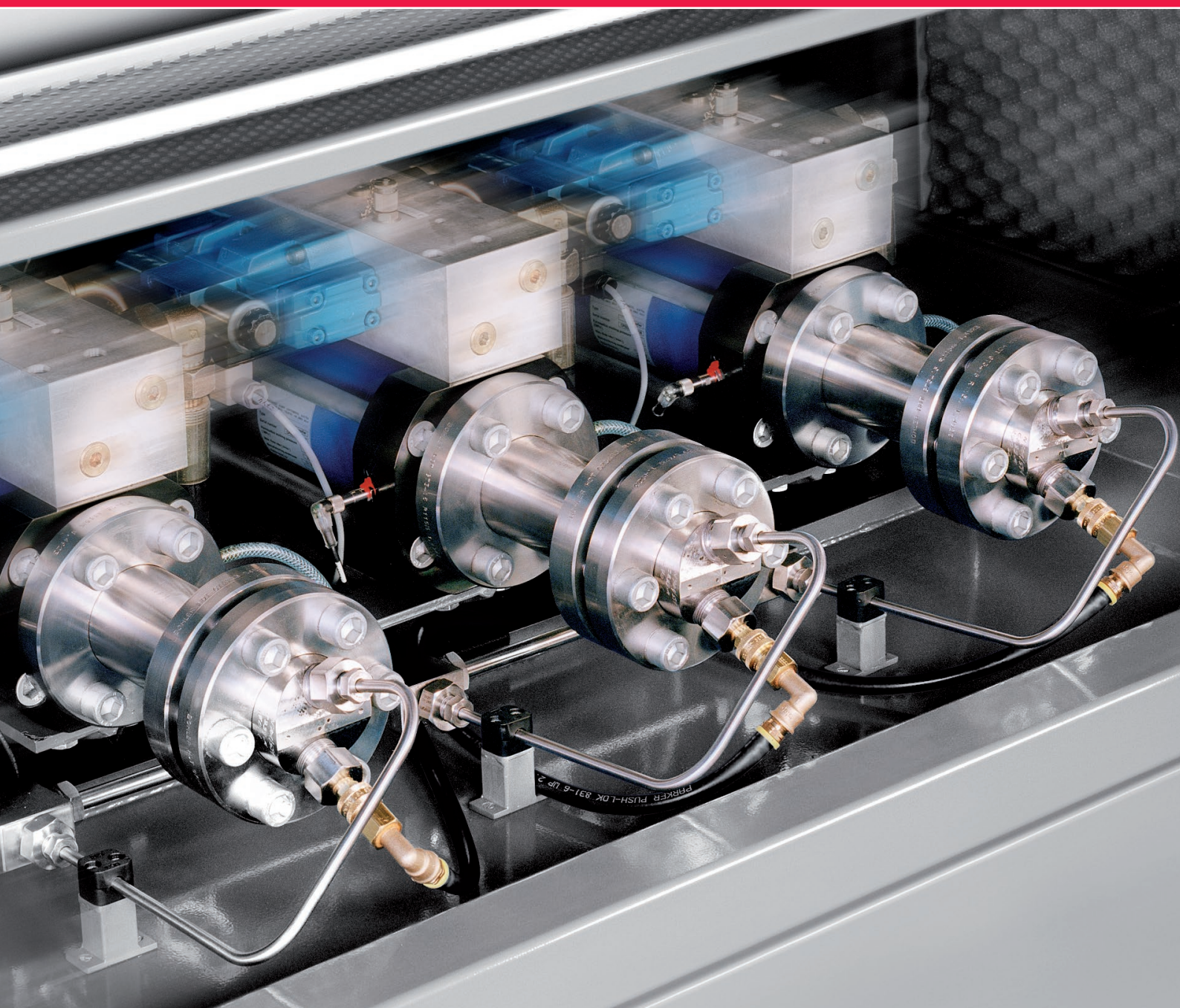




*Best High Pressure & Drilling Technology*

## **HIGH PRESSURE PUMPS**





BHD Pump Production and Welding Center, Hoenigsberg



BHD Headquarters, Kapfenberg

BHD Tube Works, Kapfenberg



## BHDT - YOUR PARTNER FOR HIGHEST QUALITY AND RELIABILITY.

### EUROPE'S LARGEST MANUFACTURER OF PUMPS – ONE OF THE WORLD'S LEADING SUPPLIERS OF HIGH PRESSURE SYSTEMS!

The BHDT success story starts in 1958. 21 years later, the first high pressure pumps were produced. Today, BHDT is the largest European pump manufacturer for operating pressures of between 200 and 1,200 MPa, and one of the world's leading suppliers of high pressure systems for the chemical and petrochemical industries.

Products by BHDT are manufactured to highest technological standards and to customer specifications, in cooperation with chemical process licensors, using high precision, computer-controlled tooling machines.

Our production portfolio includes a range of products for high pressure systems, including reactors, coolers, high pressure valves, fittings, isometrics and high pressure pumps, along with accessories. BHDT's benefits include both manufacturing of

individual products and supplies of systems and subassemblies that require project management and detail engineering skills, along with expert knowledge of the systems involved.

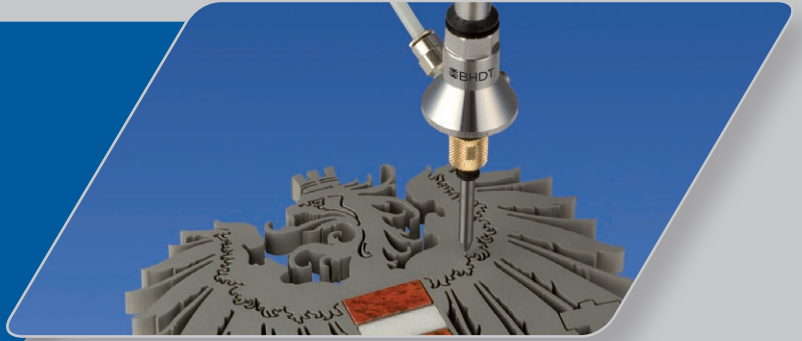
### WE GUARANTEE PREMIUM QUALITY AND RELIABILITY.

Highest international standards are a matter of course for BHDT. This is one of the reasons why we are ISO 9001 certified. In addition to this, material certificates and test results for finished components are documented in cooperation with TÜV, LLOYD's, and other internationally recognized certification and testing authorities, and made available to our customers.

## HIGH PRESSURE PUMPS: OUR 4 PRODUCT DIVISIONS.

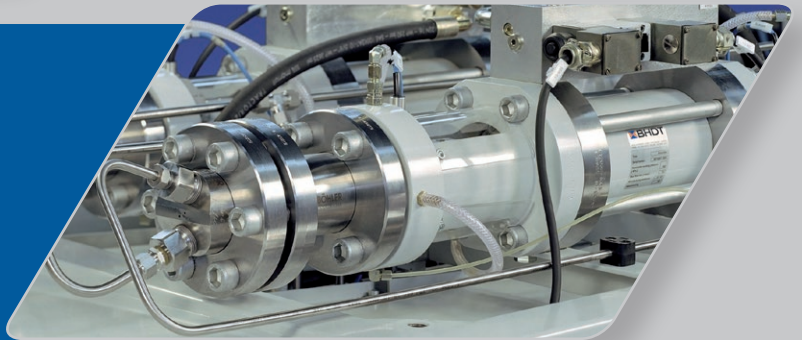
1.

**HIGH PRESSURE PUMPS  
FOR WATERJET CUTTING.**



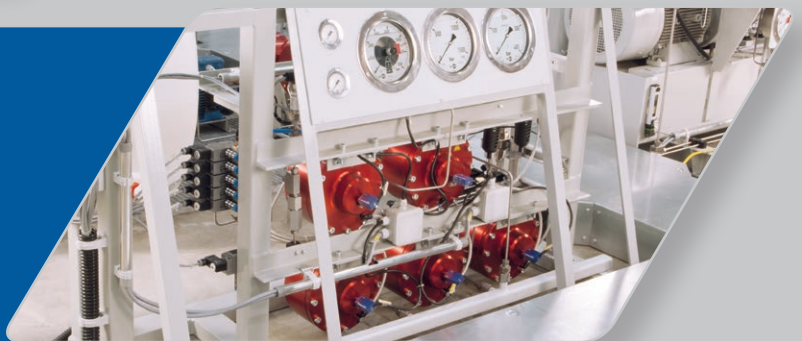
2.

**PEROXIDE DOSING PUMPS  
FOR LDPE SYSTEMS.**



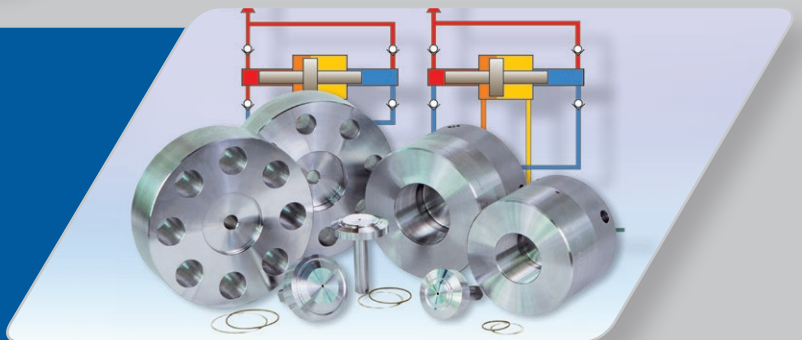
3.

**PRESSURE TESTING  
PUMPS AND SYSTEMS.**

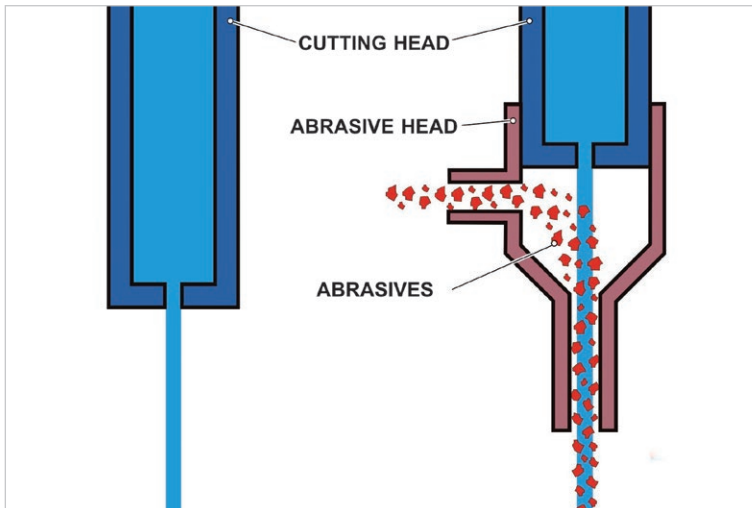


4.

**AUTOFRETTAGE SYSTEMS.**



# 1. HIGH PRESSURE PUMPS FOR WATERJET CUTTING (420 MPa).



The first technical applications to use waterjet technology date back some 140 years. Waterjets were first used in about 1870 for gold mining. In the years that followed, this technology has seen rapid changes.

## 2 DIFFERENT APPROACHES!

Today, there are two fundamentally different approaches to waterjet technology: pure waterjet and abrasive waterjet. Applications can handle material thicknesses of up to approx. 300 mm.

### THE WATERJET.

Waterjet cutting relies on a highly focused jet. Waterjet diameters are between 0.10 and 0.45 mm. To achieve the required energy concentration, pressures of up to 420 MPa are required to generate the jet. This is equivalent to the pressure a 42 km column of water would exert on the ground.

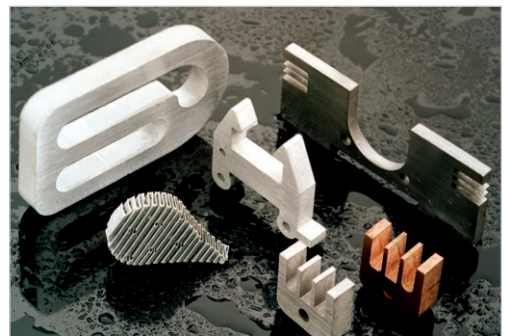
### THE ABRASIVE WATERJET.

The energy density of a pure waterjet is not adequate for processing many technical materials. In applications of this type, solid particles (typically garnet sand) are added. This gives users the ability to boost the cutting performance compared with a pure waterjet application.

All told, waterjet technology gives users the ability to process a large variety of materials. Due to the benefits of this approach, it is a better choice than conventional cutting for many applications.



Various materials, cut with a pure waterjet.



Technical parts, cut with an abrasive waterjet.



Stainless steel coat of arms with abrasive cutting head.



## SERVOTRON<sup>®</sup>, HYTRON<sup>®</sup> and ECOTRON<sup>®</sup>

### THE NEW STANDARD FOR WATERJET CUTTING

High pressure pumps are available as open-type OEM units like ECOTRON<sup>®</sup> or as complete units with sound insulated housing. HYTRON<sup>®</sup> and SERVOTRON<sup>®</sup> high pressure pumps are characterized by excellent accessibility, easy maintenance and use. Units with flow rates of between 0.8 and 7.6 l/min and power ratings of between 7.5 and 75 kW are available.



### HIGH PRESSURE COMPONENTS

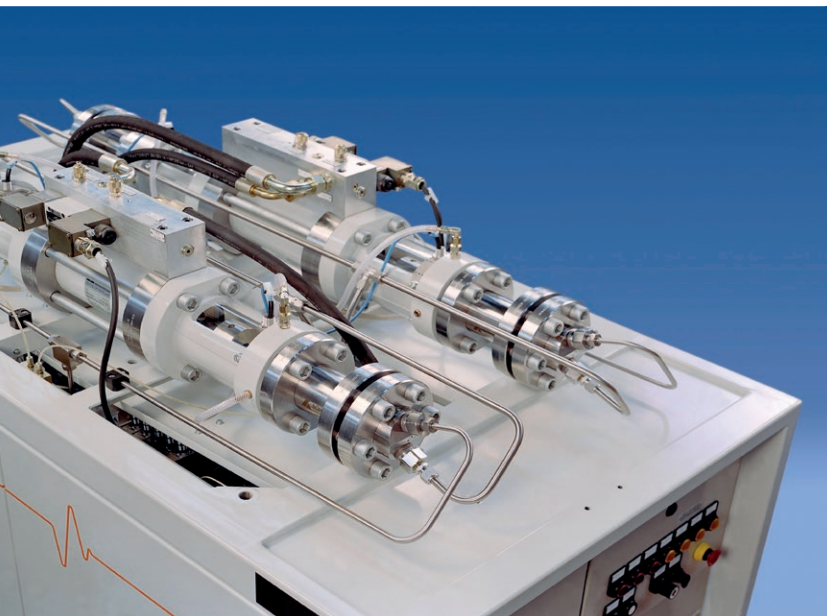
such as the TWINJET<sup>®</sup> abrasive waterjet cutting system, abrasives dosing systems, high pressure valves, swivels, fittings, and complete tubing systems for waterjet and abrasive waterjet cutting with operating pressures of up to 420 MPa are available.

2.

## PEROXIDE DOSING PUMPS FOR LDPE PLANTS (350 MPa).

### STAND-BY INTENSIFIERS

offer redundancy and improve the availability of the dosing pump. Switch-over can be effected directly at the pump or remotely controlled via the central control unit (DCS).



**PEROXIDE DOSING PUMPS** with intensifier in "single" and "stand-by" design, pressure range up to 350 MPa, flow rates up to 150 l/h, as well as high pressure tubing systems and injection nozzles for use in LDPE (Low Density Polyethylene) reactors.



Also available in phase flow design.

### 3. PRESSURE TESTING PUMPS AND SYSTEMS (550 MPa).



#### **PRESSURE TEST PUMPS**

mobile type for construction site use and as stationary plants for valve testing units, flow rates up to 1 l/min at a max. operating pressure of 550 MPa.

#### **STATIONARY VALVE TESTING STATION**

and complete pressure testing units for a max. operating pressure of up to 550 MPa.

### 4. AUTOFRETTAGE SYSTEMS (1,200 MPa).



#### **TOOLS AND COMPLETE SEALING SYSTEMS**

for pressure testing and autofrettage at operating pressures of up to 1,200 MPa.



#### **ULTRA HIGH PRESSURE PUMPS**

and components for autofrettage and pressure testing units with operating pressures of up to 1,200 MPa with a flow rate of up to 0.5 l/min.

# ADDITIONAL PRODUCTS:



**EQUIPMENT FOR FERTILIZER PLANTS**

- Angle valves
- Globe valves
- Safety relief valves
- Check valves
- Control valves
- Sampling valves
- Prefabricated piping isometrics
- Vessels
- Fittings



**HIGH PRESSURE SYSTEMS**

- Tubular reactors, interstage cooler
- Angle valves
- Control valves
- Safety relief valves
- Check valves
- Vessels
- Fittings
- Injection pumps, pressure test stations
- Bolt tensioning devices
- Isometrics, distribution blocks
- High pressure tubes



**OIL AND ENERGY**

- Special Flanges
- Prefabricated piping isometrics
- Valves



**BHDt SERVICE**

- Engineering Services
- Installation Services
- Corrosion Inspection Services
- Troubleshooting Services
- Emergency Repair Services
- Spare Parts Management
- Training Services

## CERTIFICATES



SAZ  
Österreich

**AD 2000-Merkblatt  
HP 0 / HP 100 R  
and EN ISO 3834-2**

according to  
PED 97/23/EC



EN ISO  
9001:2008



PED 97/23/EC



GOST TR  
for valves



Korea Gas  
Safety (KGS)



ASME-  
Stampholder



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### BHDt GMBH IS MEMBER OF:

