QUALITY MADE IN GERMANY by unigrind GmbH & Co. KG

VALVE MACHINING AND TESTING TECHNOLOGY

THE HIGHEST STANDARD IN PRECISION
Please use your smartphone with the relevant software, scan the QR code and you will be connected to the university homepage. Here you will get further information about our Company and Products.
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THE COMPANY

unigrind GmbH & Co. KG
The Company
uni grind GmbH & Co. KG

The Highest Standard in Precision

Since 1984 uni grind has been offering high-quality machining and testing products for industrial valves. This includes products for the machining of sealing surfaces on industrial valves, pumps, pipelines, turbine housings, compressors, etc.

uni grind develops and produces industrial valve test stands for pressure, leak, and flow testing on gates, butterfly valves, valves, ball valves, safety valves, etc. Our company has been certified according to DIN EN ISO 9001 since 1999. Our products are developed and produced in-house. At uni grind ‘Made in Germany’ means ‘Made in Stolberg’. Only in this way is it possible to always provide our customers with products in the highest quality.

The uni grind product range includes:
- Portable grinding and lapping machines
- Technology and processes for grinding safety valves
- Portable turning and milling machines
- High-speed grinding technology
- Stationary grinding and turning technology
- Flat lapping machines
- Portable devices for pressure testing
- Stationary and mobile valve test stands
- Project planning of workshops for repair of valves
- Project planning and construction of special workshop containers

The introduction of a patented high-speed valve grinding machine in 1999 was a milestone for valve service. uni grind is a technological leader in high-speed grinding and safety valve grinding technology. uni grind currently sells products in more than 80 countries around the world. The industrial valves sector can rely on uni grind’s comprehensive know-how now and in the future.

Applications

- Plant construction
- Apparatus construction
- Valve trade
- Manufacturers of valves
- Valve service companies
- Mining
- Chemical industry
- Fertilizer plants
- Gas manufacturers
- Rubber manufacturers
- Combined heat and power stations
- Heating plant
- Nuclear power stations
- Boiler manufacturers
- Steel works
- Food industry
- Refuse incinerators
- Pharmaceutical industry
- Pipelines
- Steel industry
- Combined heat and power stations
- Heating plant
- Nuclear power stations
- Boiler manufacturers
- Steel works
- Food industry
- Refuse incinerators
- Pharmaceutical industry
- Pipelines
- Steel industry

Factory II, Jägerhausstraße
PORTABLE GRINDING & LAPPING MACHINES

uni\textit{grind} VENTA

Portable grinding and lapping machines for working on valves with flat seating faces:

- Globe valves
- Safety relief valves
- Check valves

Drives:

- Electric 230 V/110 V AC, 50/60 Hz,
- Battery drive for VENTA 50, 50 SV VENTA 150, 150 SV
- Pneumatic drive 5–7 bar (72–90 psi)

Comment:
VENTA 50 SV and VENTA 150 SV are supplied with special micro finishing film in the grits P150, 280, 500, 1000 and 1800 for grinding and polishing safety relief valve seat surfaces. Hand guided grinding machines up to working range DN 150 (6’’). For the machines type VENTA 300, 600 and 1600 a mounting device is used to fix the machine on the valves.

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>VENTA 50</td>
<td>DN 8–50 mm</td>
<td>1/4”–2”</td>
</tr>
<tr>
<td>VENTA 50 SV</td>
<td>DN 8–50 mm</td>
<td>1/4”–2”</td>
</tr>
<tr>
<td>VENTA 150</td>
<td>DN 8–150 mm</td>
<td>1/4”–6”</td>
</tr>
<tr>
<td>VENTA 150 SV</td>
<td>DN 15–150 mm</td>
<td>1/2”–6”</td>
</tr>
<tr>
<td>VENTA 300</td>
<td>DN 80–350 mm</td>
<td>3”–14”</td>
</tr>
<tr>
<td>VENTA 300 S</td>
<td>DN 80–450 mm</td>
<td>3”–18”</td>
</tr>
<tr>
<td>VENTA 600</td>
<td>DN 200–700 mm</td>
<td>8”–28”</td>
</tr>
<tr>
<td>VENTA 1600</td>
<td>DN 500–1600 mm</td>
<td>20”–64”</td>
</tr>
</tbody>
</table>
Options:
- Lapping equipment (lapping paste and lapping disks)
- Micro finishing film abrasives grit P80–1800 and 4000
- Working depth extensions
- Slight changes in working range
- Customized grinding tools
- Additional tools for grinding gate valve seats with VENTA 150 in workshop
- Grinding tools for tapered valve sealing surfaces with various angles (KVS tools)
- Stainless steel transport boxes for VENTA 300–600
- HDPE transport boxes for VENTA 50, 50 SV, 150, 150 SV

Standard:
- VENTA machines are supplied complete with all tools, accessories and abrasives in metal boxes
- Spring loaded drive spindle to control working pressure

Advantage:
VENTA tools are compatible with other uniGrind machines:
Spring loaded grinding adapters size 1–4 for stationary drill press, stationary grinding machines STM 500 and STM 800E.

Comment:
A large range of self-adhesive rings, disks and segments in quality aluminium oxide, silicon carbide and zirconium oxide available in various grits and DIAPLAN - CBN (= Cubic Boron Nitride) galvanic bonded high performance grinding heads are also available for the planet grinding disks.
PORTABLE GRINDING & LAPPING MACHINES

unigrind KVS

Portable grinding machine for working on valves with tapered seats:
- Globe valves
- Control valves

Standard:
- Angles: 30°, 60°, 90°
- Other available angles: 40°, 50°, 75°, 80°

Drives:
- Electric 230 V/110 V AC, 50/60 Hz,
- Battery drive for KVS up to DN 150
- Pneumatic drive 5 – 7 bar (72 – 90 psi)

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>KVS 369/50</td>
<td>DN 8–50 mm</td>
<td>1/4&quot;–2&quot;</td>
</tr>
<tr>
<td>KVS 369/65</td>
<td>DN 8–65 mm</td>
<td>1/4&quot;–2 1/2&quot;</td>
</tr>
<tr>
<td>KVS 369/100</td>
<td>DN 8–100 mm</td>
<td>1/4&quot;–4&quot;</td>
</tr>
<tr>
<td>KVS 369/150K</td>
<td>DN 8–150 mm</td>
<td>1/4&quot;–6&quot;</td>
</tr>
<tr>
<td>KVS 369/80–300K</td>
<td>DN 80–300 mm</td>
<td>3&quot;–12&quot;</td>
</tr>
<tr>
<td>KVS 369/8–300K</td>
<td>DN 8–300 mm</td>
<td>1/4&quot;–12&quot;</td>
</tr>
</tbody>
</table>

KVS 369 = for 30°, 60° and 90° seat angle grinding tools.

Comment:
The grinding tools for the corresponding angles and nominal width can also be combined according to the customer’s individual wishes. The machine’s working range can be extended with additional tools at any time.

Options:
Other combination of angles or additional angles are available on customer request.
Also slight changes in the working range are possible. Tool holders for working depth extension.
PORTABLE GRINDING & LAPPING MACHINES

unigrind KVS

unigrind KVS 369/300K grinding machine with 3-jaw-chuck

For the big sizes DN 6”–12” and the very deep valves we recommend to use the machine arm with upper gear housing and internal spring loaded grinding spindle.
Grinding tools for working on tapered sealing surfaces
for metallic lens sealing rings on:
- High pressure pipes
- Flanges
- Valves
- Sealing Surface angle 140°
- Special design for TechLoc and GrayLoc
- Working range: DN 10 – 300 (3/8”–12”)
- Grinding tools according to DIN and other manufacturer standards
- Working ranges as per your request

Comment:
Ranges of grinding tools are combined according to the customer’s individual wishes.
**PORTABLE GRINDING & LAPPING MACHINES**

**uni** **grind** **SVS 1**

Portable grinding and lapping machine for working on sealing surfaces of safety (relief) valves and disks:

For grinding/lapping big valves and butt-welded valves the machine is mounted with 3-jaw chuck on the valve-housing.

Small valves and globes are done on the machine stand with centring device and pneumatic lifting device for the machine.

**Working ranges:**

- DN 15 – 300 mm (1/2”–12”)
- Optional:
  - DN 10 – 400 mm (3/8”–16”)

**Advantages of SVS 1:**

- Crosshatched grinding/lapping to achieve absolute seat flatness
- Accurate centring of the machine with the 3-jaw chuck
- Accurate and fast centring of small valves and disks on the machine stand
- Reproducable grinding/lapping results within minutes
- Easy and safe operation
- Pneumatic control unit with timer for setting grinding time
- Eccentricity adjustable 0 – 3 mm
- Machine stand with pneumatic cylinder

**Drives:**

- Electric 230 V/110 V AC, 50/60 Hz
- Pneumatic drive 5 – 7 bar (72 – 90 psi)
PORTABLE GRINDING & LAPPING MACHINES

**uniGrind SLIM**

![SLIM 600](image)

**Portable grinding and lapping machine for working on sealing surfaces of:**
- Gate valves
- Swing check valves
- Gate valve wedges and disks
- Valve flanges

Both for on site or in workshop use.

**Drives:**
- Electric 230 V/110 V AC, 50/60 Hz
- Pneumatic 90 psi (5 – 7 bar)
- Battery drive for SLIM 75

**Comment:**
The type SLIM 300 and SLIM 600 are also available in combined versions for gate- and globe valves.

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLIM 32</td>
<td>DN 15–50 mm</td>
<td>1/2&quot;–2&quot;</td>
</tr>
<tr>
<td>SLIM 75</td>
<td>DN 20–80 mm</td>
<td>3/4&quot;–3&quot;</td>
</tr>
<tr>
<td>SLIM 150</td>
<td>DN 40–200 mm</td>
<td>1 1/2&quot;–8&quot;</td>
</tr>
<tr>
<td>SLIM 300</td>
<td>DN 50–350 mm</td>
<td>2&quot;–14&quot;</td>
</tr>
<tr>
<td>SLIM 300S</td>
<td>DN 65–450 mm</td>
<td>2 1/2&quot;–18&quot;</td>
</tr>
<tr>
<td>SLIM 600</td>
<td>DN 200–700 mm</td>
<td>8”–28”</td>
</tr>
<tr>
<td>SLIM 600S</td>
<td>DN 200–900 mm</td>
<td>8”–36”</td>
</tr>
<tr>
<td>SLIM 1000</td>
<td>DN 400–1600 mm</td>
<td>14”–64”</td>
</tr>
</tbody>
</table>

**Combined machines for gate and globe valves**
- SLIM 300-COMBI DN 50–350 mm 2”–14”
- SLIM 300S-COMBI DN 65–450 mm 2 1/2”–18”
- SLIM 600-COMBI DN 200–700 mm 8”–28”
- SLIM 600S-COMBI DN 200–900 mm 8”–36”
PORTABLE GRINDING & LAPPING MACHINES

**unigrind SLIM**

Options:
- Lapping equipment (lapping paste and lapping disks)
- Transport boxes stainless steel
- Swing check valve adapter-set
- Portable grinding table for gate valve wedges

**DIAPLAN BOR:**
High performance CBN (Cubic Boron Nitride) grinding heads.
PORTABLE GRINDING & LAPPING MACHINES

uniGrind SHS 600

Portable high-speed gate valve grinding machine for on site or in shop use, for working on sealing surfaces of:
- Gate valves
- Swing check valves
- Gate valve wedges and disks

Advantages:
- Excellent removal rates thanks to high cutting speeds: 6–8 times above standard
- Absolutely flat surfaces
- Grinding heads rotate with 2000 rpm
- Free tilting SHS planet grinding disks
- Particularly applicable where clearance between seats and casing is very limited

Drives:
- Electric 230/110 V AC, 50/60 Hz
- Pneumatic 90 psi (5–7 bar)

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHS 600-1</td>
<td>DN 125–350 mm</td>
<td>5”–14”</td>
</tr>
<tr>
<td>SHS 600-2</td>
<td>DN 125–600 mm</td>
<td>5”–24”</td>
</tr>
<tr>
<td>SHS 600-3</td>
<td>DN 200–600 mm</td>
<td>8”–24”</td>
</tr>
<tr>
<td>SHS 600-4</td>
<td>DN 200–800 mm</td>
<td>8”–32”</td>
</tr>
</tbody>
</table>

SHS 600 grinding on-site

SHS 600 grinding of gate valve wedge

SHS 600 planet disk

SHS 600 planet disk
PORTABLE GRINDING & LAPPING MACHINES

uni grind HTS

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTS 150</td>
<td>DN 50 – 250 mm</td>
<td>2” - 10”</td>
</tr>
<tr>
<td>HTS 400</td>
<td>DN 80 – 600 mm</td>
<td>3” - 24”</td>
</tr>
<tr>
<td>HTS 800</td>
<td>DN 200 – 1000 mm</td>
<td>8” - 40”</td>
</tr>
</tbody>
</table>

The max. working range of HTS 400 diameter 700 mm

Portable High Speed grinding machine for flat and tapered sealing surfaces in:
Control valves, globe valves, check valves, safety relief valves

Advantages:
- Accurate centring and adjusting the machine
- Precise grinding of flat and tapered surfaces
- Control and correction of existing seat surfaces
- Automatic and manual feed

Drives:
- Pneumatic 90 psi (5 – 7 bar)

Options:
- Grinding of cylindrical surfaces with bore grinding device
- Dressing device for grinding stones
- Cubic Boron Nitride grinding tools

Comment:
The working range of the HTS machine can be increased with additional tools. Slight changes in the working range are possible.
Stationary valve grinding and lapping machine for sealing surfaces in gate, globe, check valves, gate valve wedges and safety relief valves.

STM 500 SV-Combi:
- Working range DN 10 – 300/350 (3/8”–12”/14”)
- Max. flange diameter 600 mm (23,6”)
- Max. valve height 700 mm (27,5”)
- Tilt table size 500 x 500 mm (19,7”)
- Tilting range +/- 13°
- Rotary table diameter Ø 500 mm (19,7”)
- Eccentric adjustment 0 – 20 mm (0,8”)

STM 500 SV-1 (special for safety relief valves):
- Working range DN 10 – 300 (3/8”–12”)
- Max. valve height 700 mm (27,5”)
- With one rotary table diameter Ø 500 mm (19,7”)
- Eccentric adjustment 0 – 20 mm (0,8”)

STM 500 SV-2 (special for safety relief valves):
- Working range DN 10 – 300 (3/8”–12”)
- Max. valve height 700 mm (27,5”)
- With two rotary table diameter Ø 500 mm (19,7”)
- Eccentric adjustment 0 – 20 mm (0,8”)

STM 500:
Also available only with one or two tilting tables.
- Working range DN 10 – 350 (3/8”–14”)
- Max. flange diameter 600 mm (23,6”)
- Tilt table size 500 x 500 mm (19,7”)
- Tilting range +/- 13°
STM 800 E:

- Working range DN 15 – 1000 (1/2” – 40”)
- Eccentric spindle drive adjustable 0 – 10 mm
- Max. flange diameter 1370 mm (53.7”)
- Max. valve height on the table 1100 mm (43.3”)
- Tilting table dimension 800 x 900 mm (31.5” x 35.4”)
- Tilting range +/- 13°

Comment:
The Model STM 800 E is available with 1 or 2 tilting tables as well as in combination with tilting- and rotary table.
Stationary grinding tables for surface grinding of:
- Gate valve wedges
- Wedge disks
- Valve disks
- Other valve parts

Drives:
- Electric 400 V AC, 50/60 Hz, 3 kW
- Speed of table plate infinitely adjustable

Comment:
Self-adhesive abrasive disks in different grits and quality are used on the grinding table.
### Spring loaded grinding adapter

<table>
<thead>
<tr>
<th>SIZE</th>
<th>Working ranges</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (MT 2)</td>
<td>DN 15–400 mm</td>
<td>1/2”–16”</td>
</tr>
<tr>
<td>2 (MT 3)</td>
<td>DN 80–700 mm</td>
<td>3”–28”</td>
</tr>
<tr>
<td>3 (MT 4)</td>
<td>DN 80–900 mm</td>
<td>3”–36”</td>
</tr>
<tr>
<td>4 (MT 5)</td>
<td>DN 400–1600 mm</td>
<td>16”–64”</td>
</tr>
</tbody>
</table>

### Tilt Table

<table>
<thead>
<tr>
<th>Tilt Table</th>
<th>Table size:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNT 1</td>
<td>350 x 350 mm</td>
<td>13,8”</td>
</tr>
<tr>
<td>UNT 2</td>
<td>500 x 500 mm</td>
<td>19,7”</td>
</tr>
<tr>
<td>UNT 3</td>
<td>1000 x 1000 mm</td>
<td>39,4”</td>
</tr>
<tr>
<td>UNT 4</td>
<td>1500 x 1500 mm</td>
<td>59”</td>
</tr>
</tbody>
</table>

**Grinding Adapters and Tilt Tables:**

Grinding adapters as well as grinding, lapping and planet grinding disks are used for working of valve sealing surfaces on stationary drill press. Tilt tables are recommended for accurate alignment of gate valves and wedges (continuous adjustable 0°–13°).
**Description:**
For grinding/lapping of sealing surfaces in gate-, globe-, check valves and gate valve wedges on stationary drill press and radial drill machine.

The grinding heads of the planet disks are infinitely adjustable according to the required working diameter.

**Working ranges:**
- Planet grinding disks DN 65–1600 mm (2 1/2”–64”)
- Solid flat grinding disks DN 10–400 mm (3/8”–16”)

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**Grinding of gate valve seat**

**Grinding of gate valve wedge**
TILTING TABLE FOR LATHE MACHINE

unigrind SKD 500

SKD 500:
Tilting table for precise alignment and machining of gate valve wedges and seat in gate valve bodies.

- Mounting flange for fixing on the lathe machine
- Table plate Ø 500 mm with 8 T-Grooves,
- Angle infinitely adjustable 0 – 13°.
- Radial adjustment of seat surface to the machine centre max. 30 mm

Tableplate with 4 T-Groves

Adjusting the tilting angle with digital measuring device

SKD 500 tilting table with gate valve body

SKD 500 tilting table with gate valve wedge
BORING, TURNING AND FACING MACHINES

uni\textit{grind} MD

Portable on-site boring and facing machine for precision machining of valve seats, pressure seal areas, bores and flanges, also for:

- Compressor casings
- Turbine casings
- Pump casings

Drives:
- Electric 230 V AC, 50/60 Hz
- Pneumatic 90 psi (5 – 7 bar)
- Hydraulic

For MD 1 to MD 3:
- Automatic and manual axial feed: infinitely adjustable

For MD 250 to MD 3:
- Automatic radial feed

Optional available:
- High speed grinding device
- Taper boring heads
- Spindle extensions
- Extended spindle length
- Custom made cutting and grinding tools

Machining applications for MD machines

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Working depth:</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD 250</td>
<td>Ø 400 mm to Ø 400 mm</td>
<td>15,7&quot; to 200 mm</td>
</tr>
<tr>
<td>MD 1</td>
<td>Ø 400 mm to Ø 400 mm</td>
<td>15,7&quot; to 430 mm</td>
</tr>
<tr>
<td>MD 2</td>
<td>Ø 600 mm to Ø 600 mm</td>
<td>23&quot; to 600 mm</td>
</tr>
<tr>
<td>MD 3</td>
<td>Ø 1000 mm to Ø 1000 mm</td>
<td>39,4&quot; to 600–1000 mm</td>
</tr>
</tbody>
</table>
BORING, TURNING AND FACING MACHINES

uniGrind MD

MD 250 with boring and facing head

MD 250 with taper boring head

MD Application on site on a safety relief valve

MD Application on site, overhead machining
PORTABLE FLANGE FACING MACHINES

unigrind FD

Internal mounted flange facing machine for working on:
- Flanges
- RTJ "V" grooves
- Tapered surfaces (e.g. for lens sealing rings)
- Weld prep
- Heat exchangers

Features:
- Facing and boring with continuous feed
- Toolpost 360° swivel
- Linear guide and ball screw for tool post

Drives:
- Electric 230 V AC, 50/60 Hz
- Pneumatic 90 psi (5 – 7 bar)
- Hydraulic

<table>
<thead>
<tr>
<th>Type:</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FD 600</td>
<td>Ø 50–600 mm</td>
<td>24&quot;</td>
</tr>
<tr>
<td>FD 1000</td>
<td>Ø 150–1000 mm</td>
<td>40&quot;</td>
</tr>
<tr>
<td>FD 1500</td>
<td>Ø 300–1500 mm</td>
<td>59&quot;</td>
</tr>
</tbody>
</table>

FD 1500

FD 1000

FD transport container with accessories

Sample of application
PORTABLE FLANGE FACING MACHINES

uni\textit{grind} FDA

External mounted flange facing machine for working on:
- Flanges
- RTJ "V" grooves
- Tapered surfaces (e.g. for lens sealing rings)

Features:
- Facing with continuous feed
- Boring feed with striker
- Toolpost max. 120° swivel

Drives:
- Electric 230 V AC, 50/60 Hz
- Pneumatic 90 psi (5 – 7 bar)
- Hydraulic

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDA 500</td>
<td>Ø 0–500 mm</td>
<td>0&quot;–20&quot;</td>
</tr>
<tr>
<td>FDA 1000</td>
<td>Ø 200–1000 mm</td>
<td>8&quot;–40&quot;</td>
</tr>
<tr>
<td>FDA 1200</td>
<td>Ø 300–1200 mm</td>
<td>12&quot;–48&quot;</td>
</tr>
</tbody>
</table>

FDA 1200

FDA 500

FDA 500, RTJ "V" grooves machining

FDA 1200, RTJ "V" grooves machining
SINGLE-PLATE SURFACE LAPPING MACHINES

unigrind ULM

Single-plate surface lapping machine for precision lapping and polishing of surfaces from components such as:

- Valve parts (valve disks and wedges)
- Compressor parts
- Mechanical seals of pumps

Design:

- Grooved lapping plate made of high density cast iron (Optional other materials)
- Conditioning rings made of cast iron
- Tubular steel construction of machine base
- Three adjustable roller guide arms with guide rolls
- Work table vertically adjustable
- Timer (0 – 60 min) included
- Drive with infinite Speed setting via Frequency Converter
- Lapping compound mixing facility with adjustable feeding system.
  The lapping plate is continuously fed with lapping mixture via a pump system. The Volume of the lapping mixture fed is precisely adjustable by the pump speed.
SINGLE-PLATE SURFACE LAPPING MACHINES

uni
grind  ULM

ULM 400 Stand machine

View into the machine

Control desktop

<table>
<thead>
<tr>
<th>Type</th>
<th>Lapping wheel:</th>
<th>Max. work piece:</th>
<th>Lapping wheel speed:</th>
<th>Drive:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mm/Inch</td>
<td>mm/Inch</td>
<td>rpm</td>
<td>kW</td>
</tr>
<tr>
<td>ULM 400</td>
<td>Ø 420 mm / 16,50&quot;</td>
<td>Ø 160 mm / 6,30&quot;</td>
<td>15–100 rpm</td>
<td>0,55 kW</td>
</tr>
<tr>
<td>ULM 600</td>
<td>Ø 620 mm / 24,40&quot;</td>
<td>Ø 250 mm / 9,85&quot;</td>
<td>8–70 rpm</td>
<td>3 kW</td>
</tr>
<tr>
<td>ULM 900</td>
<td>Ø 920 mm / 36,20&quot;</td>
<td>Ø 380 mm / 14,96&quot;</td>
<td>7–50 rpm</td>
<td>7,5 kW</td>
</tr>
<tr>
<td>ULM 1200</td>
<td>Ø 1220 mm / 48,00&quot;</td>
<td>Ø 510 mm / 20,00&quot;</td>
<td>7–40 rpm</td>
<td>11 kW</td>
</tr>
<tr>
<td>ULM 1500</td>
<td>Ø 1510 mm / 59,45&quot;</td>
<td>Ø 625 mm / 24,60&quot;</td>
<td>7–40 rpm</td>
<td>11 kW</td>
</tr>
</tbody>
</table>
**Thread Cleaning Equipment**

**IR** Female thread cleaning head

**Portable Female Thread Cleaning Equipment: Type IR**
Mechanical cleaning of female threads in housings, nuts and blind holes by using adjustable cleaning heads with stainless steel brushes.

**Working ranges:**
8–180 mm thread diameter

**Drives:**
- Electric 230 V AC, 50/60 Hz
- Pneumatic 90 psi (5–7 bar)

**Comment:**
For sizes below diameter 60 mm single cleaning brushes, infinitely adjustable female thread cleaning heads for thread diameter 60–180 mm.

**Type:** | **Working Range:** | **Type:** | **Working Range:**
--- | --- | --- | ---
IR | Ø 8–72 mm | IR | Ø 90–110 mm
IR | Ø 60–72 mm | IR | Ø 110–130 mm
IR | Ø 70–80 mm | IR | Ø 130–150 mm
IR | Ø 80–90 mm | IR | Ø 150–180 mm

**AR** Male thread cleaning head

**Portable Male Thread Cleaning Equipment: Type AR**
Mechanical cleaning of male threads and bolts with infinitely adjustable cleaning heads with stainless steel brushes.

**Working ranges:**
M 10–110, 6–106 mm diameter

**Drives:**
- Electric 230 V AC, 50/60 Hz
- Pneumatic 90 psi (5–7 bar)

Vacuum device and extensions are available for the complete AR & IR tools. The thread cleaning equipment is supplied in a steel case with all accessories.

For sizes below diameter 60 mm single cleaning brushes, infinitely adjustable female thread cleaning heads for thread diameter 60–180 mm.

**Type:** | **Working Range:** | **Type:** | **Working Range:**
--- | --- | --- | ---
AR | 124 M 10–M 24 | Ø 6–22 mm
AR | 2748 M 27–M 48 | Ø 23–42 mm
AR | 4868 M 48–M 68 | Ø 43–64 mm
AR | 6890 M 68–M 90 | Ø 64–88 mm
AR | 90110 M 90–M 110 | Ø 86–106 mm

**IR Cleaning brushes**

**IR transport box with accessories**

**AR Adjustable cleaning head**
### Portable Male Thread Cleaning Equipment: Type ARG
Mechanical cleaning of male threads and bolts with infinitely adjustable cleaning heads with stainless steel brushes.

**Working ranges:**
M 10—120

**Drives:**
- Electric 230 V AC, 50/60 Hz
- Pneumatic 90 psi (5–7 bar)

Vacuum device and extensions are available for the complete ARG tools. The thread cleaning equipment is supplied in a steel case with all accessories.

### Stationary Male Thread Cleaning Equipment: Type SAM 80
Mechanical cleaning of male threads and bolts with infinitely adjustable cleaning heads with stainless steel brushes.

**Drives:**
- Electric 230 V AC, 50/60 Hz
- Pneumatic 90 psi (5–7 bar)

Vacuum device and extensions are available.

**Working ranges:**
Outer diameter of thread 10—80 mm (1/2”—3”)
Cleaning length 450 mm (18”)

**Optional extras:**
Cleaning equipment for female threads to also clean nuts.

<table>
<thead>
<tr>
<th>Type</th>
<th>Working Range:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARG 10-27</td>
<td>M 10—M 27</td>
</tr>
<tr>
<td>ARG 22-54</td>
<td>M 22—M 54</td>
</tr>
<tr>
<td>ARG 36-68</td>
<td>M 36—M 68</td>
</tr>
<tr>
<td>ARG 52-88</td>
<td>M 52—M 88</td>
</tr>
<tr>
<td>ARG 86-120</td>
<td>M 86—M 120</td>
</tr>
</tbody>
</table>
unigrind designs, manufactures and delivers test units for pressure and leak testing of any type of: gate, globe, plug, ball, check, butterfly and safety relief valves according to the international standards.

The selection of the test unit and clamping system is made according to:
- Test types
- Valve sizes
- Valve types
- Test pressure according to size

Test types:
- Body Test
- Leakage test of spindle glands
- Leak test of valve seat
- Set pressure of safety relief valves

Valve size:
1/4”–40” (DN 10–1000 mm)

Test pressures:
- Water: 0–690 bar/0–10000 psi
- Compressed Air: 0–400 bar/0–5800 psi
- Nitrogen: 0–680 bar/0–9860 psi
- Other pressure ranges on request
- Vacuum 0 to -0.8 bar/0 to -11.6 psi

Test Media:
- Water
- Compressed air
- Nitrogen

Design:
- Stationary test units for work shop
- Portable test units for on-site use or installation in containers etc.
- Data Acquisition System for valve data, test results and test report
- Hydraulic clamping system with manual clamping force control according to test pressure
- Hydraulic clamping system with automatic proportional clamping force control
- Vertical hydraulic quick clamping system — the valves are clamped only by the flange
- Vertical hydraulic quick clamping system — the valves are clamped only by the valve flange or between the test table plates
- Automatic centring system for clamping brackets
- Horizontal clamping system
- Horizontal and tilting clamping system for testing in horizontal and vertical position
- Portable power packs for testing pipes and pressure vessel etc.

Optional features:
- Data Acquisition System for valve data, test results and test report
- Set pressure detection system for Safety Relief valves
- Analogue and digital indication of test pressures
- Hydraulic clamping system with automatic clamping force control
- Electric or pneumatic driven high pressure compressor and storage system
- Adapters for male and female thread connections
- Quick clamp tools for clamping and sealing of flanges
- Flow meters for leak detection
- 0–30 psi and 0–50 psi air actuator and positioner circuit, 1–26 V DC Power supply
- 4–20 mA controller, Data Acquisition system
- Digital bubble counter
TEST UNITS

uni grind TS

Test unit for testing of Safety Relief Valves, Control valves and Shut-Off valves:
- Test unit with Vertical hydraulic quick clamping system
- The valves are clamped by the flange only
- Valves with thread connection are clamped with adapter flange
- For body testing of the valves it is required to close the outlet flange with a blind flange or special quick clamp and sealing tool
- Test units are also available in a combined version with two clamping devices of different design, working range or clamping force

Hydraulic clamping systems are available with:
18, 30, 55, 85 and 105 tons clamping force

Optional features:
- Flow meters for leak detection
- 0 – 30 psi + 0 – 50 psi air actuator and positioner circuit
- 1 – 26 V DC Power supply, 4 – 20 mA controller
- Data acquisition system
- Hydraulic clamping system with automatic clamping force control
- Digital bubble counter
- Combined Test Units

Standard features:
- Hydraulic clamping system
- Hydrostatic test circuit
- Air test circuit
- Nitrogen test circuit
- Bubble counter for leak test
- Safety interlock system
- Gauge calibration ports
- Pre-filling and filter system for test medium water

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS 18</td>
<td>DN 10 – 250 mm</td>
<td>3/8” – 10”</td>
</tr>
<tr>
<td>TS 30</td>
<td>DN 10 – 250, 300, 400 mm</td>
<td>3/8” – 16”</td>
</tr>
<tr>
<td>TS 50</td>
<td>DN 10 – 250, 400, 500, 600 mm</td>
<td>3/8” – 24”</td>
</tr>
<tr>
<td>TS 80</td>
<td>DN 25 – 250, 400, 500, 600 mm</td>
<td>1” – 24”</td>
</tr>
<tr>
<td>TS 100</td>
<td>DN 50 – 400, 600 mm</td>
<td>2” – 24”</td>
</tr>
</tbody>
</table>
**Test Units**

Test unit for testing Shut-Off valves, Control valves and Safety relief Valves:
- Test unit with vertical hydraulic quick clamping system
- The valves will clamped by the flange or between lower and upper test table
- Swing out top plate for clamping and testing valves from both sides
- Valves with welding ends are clamped between bottom and top plate by using special seal adapters
- For body testing the valves are clamped and sealed between bottom and top plate
- Test units are also available in a combined version with two clamping devices of different design, working range or clamping force

Hydraulic clamping systems are available with: 18, 30, 55, 85, 105 and 150 tons clamping force

Optional features:
- Flow meters for leak detection
- 0 – 30 psi + 0 – 50 psi air actuator and positioner circuit
- 1 – 26 V DC Power supply, 4 – 20 mA controller
- Data acquisition system
- Hydraulic clamping system with automatic clamping force control
- Digital bubble counter

### Standard features:
- Hydraulic clamping system
- Hydrostatic test circuit
- Air test circuit
- Nitrogen test circuit
- Bubble counter for leak test
- Safety Interlock System
- Gauge calibration ports
- Pre-filling and filter system for test medium water

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS 18-S</td>
<td>DN 10–250 mm</td>
<td>3/8”–10”</td>
</tr>
<tr>
<td>TS 30-S</td>
<td>DN 10–250, 300, 400 mm</td>
<td>3/8”–16”</td>
</tr>
<tr>
<td>TS 50-S</td>
<td>DN 10–250, 400, 500, 600 mm</td>
<td>3/8”–24”</td>
</tr>
<tr>
<td>TS 80-S</td>
<td>DN 25–250, 400, 500, 600 mm</td>
<td>1”–24”</td>
</tr>
<tr>
<td>TS 100-S</td>
<td>DN 50–400, 600 mm</td>
<td>2”–24”</td>
</tr>
<tr>
<td>TS 150-S</td>
<td>DN 100–400, 600, 800 mm</td>
<td>4”–32”</td>
</tr>
</tbody>
</table>
**TEST UNITS**

**uni grind TSH S**

**TSH 30-S**

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSH 18-S</td>
<td>DN 10–250 mm</td>
<td>3/8”–10”</td>
</tr>
<tr>
<td>TSH 30-S</td>
<td>DN 10–250, 400 mm</td>
<td>3/8”–16”</td>
</tr>
<tr>
<td>TSH 50-S</td>
<td>DN 10–250, 500 mm</td>
<td>3/8”–20”</td>
</tr>
<tr>
<td>TSH 80-S</td>
<td>DN 25–250, 500 mm</td>
<td>1”–20”</td>
</tr>
<tr>
<td>TSH 150-S</td>
<td>DN 100–400, 600 mm</td>
<td>4”–24”</td>
</tr>
</tbody>
</table>

**Standard features:**
- Hydraulic clamping system
- Hydrostatic test circuit
- Air test circuit
- Nitrogen test circuit
- Bubble counter for leak test
- Safety Interlock System
- Gauge calibration ports
- Pre-filling and filter system for test medium water

**Optional features:**
- Flow meters for leak detection
- 0–30 psi + 0–50 psi air actuator and positioner circuit
- 1–26 V DC power supply, 4–20 mA controller
- Data Acquisition system
- Hydraulic clamping system with automatic clamping force control
- Digital bubble counter

**Test unit for testing shut-off valves and control valves:**
- Test unit with horizontal hydraulic clamping system for clamping the valve at both flanges between the test tables
- For testing valves with butt-weld or socket-weld connections, special seal adapters are required
- In horizontal position it is easier to load the valve with actuators inside the clamping system
- Test units are also available in a combined version with two clamping devices of different design, working range or clamping force

**Hydraulic clamping systems are available with:**
- 18, 30, 55, 85, 105 and 150 tons clamping force
Test unit for testing shut-off valves and control valves:
- Test unit with horizontal hydraulic clamping system and 90 degree rotation for clamping the valve at both flanges between the test tables.
- The clamping system is able to test valves in a horizontal, vertical or inclined position.
- Advantages of the rotating clamping system are:
  - it is easier to load the valve with actuators inside the clamping system in the horizontal position. In a vertical position the evacuation of the air out of the valve is assured during filling with water.
- For testing valves with butt-weld or socket-weld connections, special seal adapters are required.
- Test units are also available in combined version with two clamping devices of different design, working range or clamping force.

Hydraulic clamping systems are available with clamping force of:
- 30, 55 and 85 tons

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSHV 30-S</td>
<td>DN 10–250 mm</td>
<td>3/8″–10″</td>
</tr>
<tr>
<td>TSHV 50-S</td>
<td>DN 10–250, 500 mm</td>
<td>3/8″–20″</td>
</tr>
<tr>
<td>TSHV 80-S</td>
<td>DN 25–250, 400, 500 mm</td>
<td>1″–20″</td>
</tr>
</tbody>
</table>

Standard features:
- Hydraulic clamping system
- Hydrostatic test circuit
- Air test circuit
- Nitrogen test circuit
- Bubble counter for leak test
- Safety Interlock System
- Gauge calibration ports
- Pre-filling and filter system for test medium water

Optional features:
- Flow meters for leak detection
- 0 – 30 psi + 0 – 50 psi air actuator and positioner circuit
- 1 – 26 V DC Power supply, 4 – 20 mA controller
- Data Acquisition system
- Hydraulic clamping system with automatic clamping force control
- Digital bubble counter
TEST UNITS

uni-grind TSC

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC 18</td>
<td>DN 10–250 mm</td>
<td>3/8”–10”</td>
</tr>
<tr>
<td>TSC 30</td>
<td>DN 10–250, 400 mm</td>
<td>3/8”–16”</td>
</tr>
<tr>
<td>TSC 50</td>
<td>DN 10–250, 400, 600 mm</td>
<td>3/8”–24”</td>
</tr>
</tbody>
</table>

Portable Test unit for testing of safety relief valves and shut-off valves:
- Test unit with vertical hydraulic quick clamping system – the valves are clamped only by the flange
- Valves with thread connection are clamped with adapter flange
- For body testing of the valve it is required to close the outlet flange with blind flange or special quick clamp and sealing tools (hydraulic and manual)

Hydraulic clamping systems are available with:
18, 30, 55 tons clamping force

Standard features:
- Hydraulic clamping system
- Hydrostatic test circuit
- Air test circuit
- Nitrogen test circuit
- Bubble counter for leak test
- Safety interlock system
- Gauge calibration ports
- Pre-filling and filter system for test medium water

Optional features:
- Data acquisition system
- Digital bubble counter

thread adapters for valves with NPT and BSP thread
TEST UNITS

uni\textsuperscript{\textregistered}grind TSC S

Portable Test unit for testing of shut-off, safety relief and control valves:

- Test unit with vertical hydraulic quick clamping system
- The valves are clamped by the flange or between lower and upper test table
- Swing out top plate for clamping and testing valves from both sides
- Valves with thread connection are clamped with adapter flange
- Valves with welding ends are clamped between bottom and top plate by using special seal adapters
- For body testing the valves are clamped and sealed between bottom and top plate

Hydraulic clamping systems are available with clamping force of:

18, 30, 55 tons

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSC 18 S</td>
<td>DN 10–250 mm</td>
<td>3/8”–10”</td>
</tr>
<tr>
<td>TSC 30 S</td>
<td>DN 10–250, 400 mm</td>
<td>3/8”–16”</td>
</tr>
<tr>
<td>TSC 50 S</td>
<td>DN 10–250, 400, 500, 600 mm</td>
<td>3/8”–24”</td>
</tr>
</tbody>
</table>

Standard features:
- Hydraulic clamping system
- Hydrostatic test circuit
- Air test circuit
- Nitrogen test circuit
- Bubble counter for leak test
- Safety interlock system
- Gauge calibration ports
- Pre-filling and filter system for test medium water

Optional features:
- Flow meters for leak detection
- 0–30 psi + 0–50 psi air actuator and positioner circuit
- 1–26 V DC Power supply, 4–20 mA controller
- Data Acquisition system
- Digital bubble counter
Portable Test unit for testing of shut-off valves and safety relief valves:
- Portable valve test unit with manual vertical clamping system
- The valves are clamped by the flange with 2, 3 or 4 pc. clamping brackets only
- Valves with thread connection are clamped with adapter flange
- For body testing of the valve it is required to close the outlet flange with blind flange or special quick clamp and sealing tools (hydraulic and manual)

Mechanical clamping system with clamping force of:
- 10 tons

Working range:
- 1/4” – 10”

Pressure range:
- 0 – 240 bar (0 – 3480 psi)

Test systems TS 10 M:
- Compressed Air and Nitrogen test circuit 0 – 240 bar (0 – 3480 psi)
- Bubble counter for leak test

Test systems TS 10 M-h:
- Compressed air and nitrogen test circuit 0 – 240 bar (0 – 3480 psi)
- Bubble counter for leak test
- Hydrostatic test circuit 0 – 240 bar (0 – 3480 psi)
- Water tank

Standard features:
- Stainless steel frame and control panel
- Galvanized: test table
- O-Ring plates
- Clamping brackets and screws
- Safety screen
- Tool cabinet with accessories
For existing valve test units we supply hydraulic clamping systems for Safety Relief valves, shut-off valves and control valves.

Standard features:
- Hydraulic clamping system, clamping force adjustable according to test pressure
- Requires only air supply 70–90 psi, and 230 V, 50-60Hz.
- Clamping brackets with adapter clamps
- Safety interlock system
- Interchangeable test table plates
- O-Ring seal plates

Hydraulic clamping systems build with clamping force of:
18, 30, 55, 85 tons

Design of clamping systems:
- Model TS clamping by the flange alone
- TS-S clamping by the flange and with swing out top plate and stem screw for clamping between bottom and top plate

Comment:
The Clamping system can also be supplied with stainless steel water reservoir for test medium.

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS 18</td>
<td>DN 10–250 mm</td>
<td>3/8”–10”</td>
</tr>
<tr>
<td>TS 18-S</td>
<td>DN 10–250 mm</td>
<td>3/8”–10”</td>
</tr>
<tr>
<td>TS 30</td>
<td>DN 10–250, 300, 400 mm</td>
<td>3/8”–16”</td>
</tr>
<tr>
<td>TS 30-S</td>
<td>DN 10–250, 300, 400 mm</td>
<td>3/8”–16”</td>
</tr>
<tr>
<td>TS 50</td>
<td>DN 10–250, 400, 500, 600 mm</td>
<td>3/8”–24”</td>
</tr>
<tr>
<td>TS 50-S</td>
<td>DN 10–250, 400, 500, 600 mm</td>
<td>3/8”–24”</td>
</tr>
<tr>
<td>TS 80</td>
<td>DN 10–250, 400, 500, 600 mm</td>
<td>1”–24”</td>
</tr>
<tr>
<td>TS 80-S</td>
<td>DN 10–250, 400, 500, 600 mm</td>
<td>1”–24”</td>
</tr>
</tbody>
</table>
PORTABLE TEST UNITS

**TSP**

**Pressure ranges:**

<table>
<thead>
<tr>
<th>Pressure</th>
<th>psi</th>
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</thead>
<tbody>
<tr>
<td>0–100</td>
<td>1450</td>
</tr>
<tr>
<td>0–240</td>
<td>3480</td>
</tr>
<tr>
<td>0–400</td>
<td>5800</td>
</tr>
<tr>
<td>0–630</td>
<td>9135</td>
</tr>
<tr>
<td>0–1000</td>
<td>14500</td>
</tr>
</tbody>
</table>

**Required air supply:**

5–6 bar/70–85 psi

**Comment:**

other portable test systems on request

- Vacuum test 0 to -0.8 bar
- Leakage test 0 to 1000 l/min.

**Portable test unit is a fully-assembled unit, ready for installation.**

The test unit can be used in all applications where high pressure and low flow rates are required.

**For example for testing of:**

pipes, vessels, valves etc.

**Standard features:**

- Water tank
- Available with 2 or 4 wheels
- Air driven water pump with wide adjustable pressure ranges
- Test circuit with pressure regulator, pressure gauge, shut-off and pressure release valve
- Air filter, water separator and pressure regulator
- Frame stainless steel
Digital data acquisition system:
For data acquisition and test report generation a pre-installed, ready-to-use software package is used. A network version is also available. The communication in several languages is supported.

System Characteristics:
The system comprises the data base for storing the results and the graphs obtained by testing.

Contains relevant general and technical data, results and graph if pressure values obtained during the test.

The test report which can be printed immediately after test, contains all required data and results, diagrams, data related to certainty of measurement and accuracy of measuring chain/equipment, identification, safety and protections are also provided.

Standard Characteristic parameters for safety relief valves:
- Opening pressure (bar/psi)
- Maximum opening pressure (bar/psi)
- Closing pressure - point (bar/psi)
- Repeatability of results
- Seat leakage after closing
- Set pressure detection by lift and acoustic sensor (option)

For shut-off and control valves:
- Test pressure
- Time
- Temperature
- Seat leakage
**SPECIAL MACHINES**

**uni**

**grind**

**MFM-2 AXIS MILLING MACHINE**

Portable milling machine. Used on heat exchangers, pump and motor pads, ship, building and many more applications.

**Drive:**
- Pneumatic drive, electric drive, hydraulic drive

**Feed Stroke:**
- 1000/1500/2000 mm

**Feed:**
- 20 – 210 mm/Min.

**Milling spindle revolution:**
- 550 R.P.M

**Axial stroke:**
- 100 mm

---

**uni**

**grind**

**PORTABLE DRILLING, BORING AND FACING MACHINE**

Mobile boring and turning machine for all boring and turning operations during steel work.

**Maximum drill capacity:**
- Ø 65 mm

**with Boring/Facing head**

**Facing and Boring capacity:**
- Ø 20 – 250 mm

**Axial stroke, manual (optional automatic feed):**
- 200 mm (other lengths are available)

**Machine spindle:**
- ISO 40 taper for mounting all kinds of standard tools

**Drives:**
- Electric 230 V, 50-60 Hz,
  Pneumatic 5 – 7 bar, Hydraulic
SPECIAL MACHINES

uni\textit{grind} PIPE SHAVER

<table>
<thead>
<tr>
<th>Type</th>
<th>Working ranges:</th>
<th>Inches:</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDS 300</td>
<td>DN 50–300 mm</td>
<td>2”–12”</td>
</tr>
<tr>
<td>RDS 400</td>
<td>DN 100–400 mm</td>
<td>4”–16”</td>
</tr>
<tr>
<td>RDS 600</td>
<td>DN 300–600 mm</td>
<td>12”–24”</td>
</tr>
<tr>
<td>RDS 800</td>
<td>DN 300–800 mm</td>
<td>12”–32”</td>
</tr>
<tr>
<td>RDS 900</td>
<td>DN 300–900 mm</td>
<td>12”–36”</td>
</tr>
</tbody>
</table>

Portable pipe shaving machine for preparation for FRP pipes:

to produce taper and cylindrical pipe ends for adhesive joints

Standard angles:
  • 0°, 1,5°, 1,75°, 2° and 2,5° (other or additional angles on request)

Drives:
  • Electric 230 V AC, 50/60 Hz
  • Automatic axial feed
High quality abrasives with various backings
We supply a wide range of high quality abrasives with various backings for all applications in all required forms and dimensions.

**Abrasive:**
- Grits P 40–P 4000
- Rough grinding
- Finish grinding
- Polishing (lapping)

**Product range Form:**
- Grinding rings in all dimensions
- Grinding disks
- Grinding segments
- Sheets

**Backing:**
- paper, cloth, polyester and plastic film

**Abrasive:**
- Silicon carbide (SiC)
- Aluminium oxide (Al2O3)
- Zirconium oxide (ZrO2)
ABRASIVE/ACCESSORIES

uni\textit{grind}

\textbf{DIAPLAN BOR}

High performance CBN (Cubic Boron Nitride) grinding heads, cup wheels and grinding cones for the portable and stationary uni\textit{grind} machines stand for:

- Grinding surfaces made of wear-resistant and corrosion-proof Cr-steel or CrNi-steel, Stellite, Inconel, Hastelloy, High alloy steel
- High and constant material removal
- Aggressive grinding
- High temperature and chemical resistant

\begin{itemize}
  \item Planet disk
  \item Grinding gate valve wedge with planet grinding disk
  \item CBN Grinding stone for facegrinding or circumference grinding
  \item CBN Grinding cones
  \item uni\textit{grind} DIAPLAN BOR, grinding disk
\end{itemize}
40 ft or 20 ft High Cube overseas Containers equipped with:

- Electric installation with tube light and power outlets 230 V and 400 V
- Air Conditioning system for cooling and heating
- Compressed air installation 7 bar/100 psi, with quick coupler outlets
- Container thermal insulation of walls, back door and roof
- On request additional doors and windows
- Separate compartment with Ventilation system for Compressors, dryer and storage tanks for compressed air

Specifications of valve test and machining equipment in the Containers:

- Universal pressure test unit for Safety Relief valves and Shut-off valves, unigrind type TS and TS-S with 30 t and 55 t clamping force Range ¼”–10” or ½”–16”
- Gas test system up to 300 bar/4350 psi
- Hydrostatic pressure test system up to 400 bar/5800 psi
- Seat leakage test of PSV’s according to API 527
- Test unit for Control valves for testing according to ANSI FCI 70-2, unigrind TSH-S with 18 or 30 t clamping force
- Test units for Vacuum valves unigrind TM 600 and TM 900
- Combined Pressure test units for valves on Customer request
- Air compressor 7 bar/100 psi with air dryer and 200 litre storage tank
- High pressure Air Compressor 300 bar with 80 liter storage tank, to supply the test medium GAS/Air
- Pre-filling and filtering system with water reservoir for the test medium
- Lifting equipment to lift the valves with chain block 500 kg, 1000 kg, on request electric or pneumatic operated chain hoist
- Crane bridge with electric chain hoist max. capacity 2000 kg (optional)
- Work bench with vice and drawers, additional storage cabinets and shelf
- Portable Valve grinding and Lapping machines for Safety Relief valves, Globe valves, Control valves, Gate valves and Gate valve wedges, unigrind VENTA, KVS, SVS 1, SLIM and HTS
- On request Stationary Grinding and Lapping machines Type STM 500 SV, ULM 400 or KSM 600
- On request Portable Boring and Facing machines for Valves: unigrind MD 250, MD 1, FD 600, FD 1000
WORKSHOP CONTAINER FOR VALVES