Solutions for water-jet cutting

CERATIZIT is a high-tech engineering group specialised in tooling and hard material technologies.

Tooling the Future

www.ceratizit.com
Precise water-jet cutting

Water-jet cutting enables the precise and burr-free cutting of a variety of materials in industrial-scale production.

Hard Material Solutions by CERATIZIT offers you three focusing tube product lines for this application – Economy, Standard and now also Premium+. Particularly wear-resistant carbide grades protect the water-jet nozzles from erosion by abrasive materials in the water-jet.

On request our focusing tubes are also available with either integrated or separate mixing chamber to suit your preference. In addition we offer customised catcher cups, based on drawings, in wear-resistant carbide grades.

Environmentally-friendly abrasive cutting can be used in the machining of harder materials such as stone, metals, ceramics, composite materials or glass.

Together towards profitable growth: we can give you the decisive competitive advantage.
Advantages & benefits

**Economic efficiency**
- 3-line concept with optimal price-performance ratio; customer-specific special solutions can also be supplied on request → the right solution for every application
- Suitable for all modern cutting head systems; supports automatic centring when clamping the tube → particularly flexible and economical
- Long tool life and repeatability of the new Premium+ product line → minimised machine downtime resulting in maximum productivity

**Technical expertise**
- All process phases from a single source, from the carbide powder to the ready-to-use solution → top-class product quality, precision and performance at the highest quality level
- Close hole tolerances, perfect grind and concentricity → precise working results

**Safety**
- High product availability, orders 24/7 via the E-Techstore → quick and flexible delivery
- Worldwide service and sales → comprehensive technical advice on site within 24 hours

Our carbide grades

Our top-quality and individually coordinated carbide grades withstand maximum pressures and are very resistant to wear.

Because we are able to offer the entire process chain from a single source – from the production of the raw materials and mineral ores through to the composition and ongoing further development of the carbide powder – we can guarantee you supreme quality at all times.

<table>
<thead>
<tr>
<th>CERATIZIT grade code</th>
<th>Binder (m%)</th>
<th>Density (g/cm³)</th>
<th>Hardness HV10 (MPa)</th>
<th>Transverse rupture strength (P.S.I.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMG01</td>
<td>0,40</td>
<td>15,55</td>
<td>2675</td>
<td>2400</td>
</tr>
<tr>
<td>CTN01L</td>
<td>0,25</td>
<td>15,60</td>
<td>2825</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>290,000</td>
</tr>
</tbody>
</table>
Three product lines for improved economic efficiency

Focusing tubes are particularly stressed by the severe erosion of the abrasive during water-jet cutting.

Hard Material Solutions by CERATIZIT has developed improved wear protection for this. Constantly high cutting quality is achieved thanks to our optimised carbide grades.

To ensure that you always receive the optimal solution for your application, we have developed 3 innovative lines for you based on state-of-the-art manufacturing technology:

- **Economy**
  - Cost-optimised high quality

- **Standard**
  - Ideal price-performance ratio

- **Premium+**
  - Further development of the existing premium product line: up to 30% more tool life and performance

Ordering description for focusing tubes

All water-jet nozzles are offered with CERATIZIT branding, including the matching coloured packaging.
Economy-Line
Cost-optimised high quality

The Economy-Line was specifically developed for applications where cost optimisation is decisive, simultaneously without having to forgo European-quality.

Technical specifications
- Grade UMG01
- Marked green
- Wire-eroded internal diameter
- All surfaces ground
- Marked blue
- Grade CTN01L
- Technical specifications

The story of the well-known UMG01 focusing tubes. The long test life* guarantees you highly efficient cutting processes. The all-rubber nozzle has proved its worth in standard applications as well as in demanding industrial contexts. The Standard-Line stands for excellent quality in many constant cutting performance in all materials and geometries.

Extract from our product portfolio (additional dimensions upon request)

<table>
<thead>
<tr>
<th>Type, description</th>
<th>Material</th>
<th>D mm</th>
<th>d mm</th>
<th>L mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>WJNR 0635-076-0762-25-15</td>
<td>11780235</td>
<td>6,35</td>
<td>0,76</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNR 0635-102-0762-25-15</td>
<td>11780239</td>
<td>6,35</td>
<td>1,02</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNR 0714-076-0762-25-15</td>
<td>11780240</td>
<td>7,14</td>
<td>0,76</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNR 0714-102-0762-25-15</td>
<td>11780242</td>
<td>7,14</td>
<td>1,02</td>
<td>76,2</td>
</tr>
</tbody>
</table>

* The tool life varies according to the operational and working conditions of the nozzle. www.ceratizit.com/water-jet-cutting

For more information and application tips go to: www.ceratizit.com/water-jet-cutting

WATER-JET CUTTING www.ceratizit.com/water-jet-cutting

Standard-Line
Ideal price-performance ratio

The Standard-Line continues the success story of the well-known UMG01 focusing tubes. The long test life* guarantees you highly efficient cutting processes. The all-rubber nozzle has proved its worth in standard applications as well as in demanding industrial contexts. The Standard-Line stands for excellent quality in many constant cutting performance in all materials and geometries.

Technical specifications
- Grade UMG01
- Marked white
- All surfaces ground
- Marked green
- Grade UMG01
- Proven tolerances

The story of the well-known UMG01 focusing tubes. The long test life* guarantees you highly efficient cutting processes. The all-rubber nozzle has proved its worth in standard applications as well as in demanding industrial contexts. The Standard-Line stands for excellent quality in many constant cutting performance in all materials and geometries.

Extract from our product portfolio (additional dimensions upon request)

<table>
<thead>
<tr>
<th>Type, description</th>
<th>Material</th>
<th>D mm</th>
<th>d mm</th>
<th>L mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>WJNS 0635-076-0762-25-15</td>
<td>6234852</td>
<td>6,35</td>
<td>0,76</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNS 0635-091-0762-25-15</td>
<td>6261074</td>
<td>6,35</td>
<td>0,91</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNS 0635-102-0762-25-15</td>
<td>6261078</td>
<td>6,35</td>
<td>1,02</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNS 0714-076-0762-25-15</td>
<td>6239413</td>
<td>7,14</td>
<td>0,76</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNS 0714-076-1016-25-15</td>
<td>6268298</td>
<td>7,14</td>
<td>1,02</td>
<td>101,6</td>
</tr>
<tr>
<td>WJNS 0714-076-0762-25-15</td>
<td>6234943</td>
<td>7,14</td>
<td>0,76</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNS 0714-102-0762-25-15</td>
<td>6210224</td>
<td>7,14</td>
<td>1,02</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNS 0714-102-1016-25-15</td>
<td>11198317</td>
<td>7,14</td>
<td>1,02</td>
<td>101,6</td>
</tr>
</tbody>
</table>

* The tool life varies according to the operational and working conditions of the nozzle. www.ceratizit.com/water-jet-cutting

For more information and application tips go to: www.ceratizit.com/water-jet-cutting

WATER-JET CUTTING www.ceratizit.com/water-jet-cutting

Premium+-Line
Up to 30% increase in tool life

The Premium+-line represents a further development of our Premium line. Premium+ is perfectly suited for demanding cutting applications, for example with exotic and compound materials, split cuts or precision cuts. Long tool life and reliability of the focusing tubes ensure minimum machine downtime, and thus maximum productivity and cost savings. With its exceptional quality features, Premium+ sets new performance standards for water-jet cutting.

Technical specifications
- Grade CTN01L
- Marked blue
- Suction of the UltraMant 2000 and Premium nozzles
- All surfaces ground
- Wire-eroded internal diameter
- Proven tolerances
- New geometry and adapted production processes
- Same product variety as with our established Standard-Line
- Customised variants possible on request

Extract from our product portfolio (additional dimensions upon request)

<table>
<thead>
<tr>
<th>Type, description</th>
<th>Material</th>
<th>D mm</th>
<th>d mm</th>
<th>L mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>WJNP+ 0635-076-0762-32-15</td>
<td>12432555</td>
<td>6,35</td>
<td>0,76</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNP+ 0635-102-0762-32-15</td>
<td>12432562</td>
<td>6,35</td>
<td>1,02</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNP+ 0714-076-0762-32-15</td>
<td>12432549</td>
<td>7,14</td>
<td>0,76</td>
<td>76,2</td>
</tr>
<tr>
<td>WJNP+ 0714-102-0762-32-15</td>
<td>12432527</td>
<td>7,14</td>
<td>1,02</td>
<td>76,2</td>
</tr>
</tbody>
</table>

For more information and application tips go to: www.ceratizit.com/water-jet-cutting

WATER-JET CUTTING www.ceratizit.com/water-jet-cutting

For more information and application tips go to: www.ceratizit.com/water-jet-cutting

WATER-JET CUTTING www.ceratizit.com/water-jet-cutting

For more information and application tips go to: www.ceratizit.com/water-jet-cutting
E-Techstore
the benefit to you

Improved economic efficiency is just one click away: simply order online from our E-Techstore.

Here we offer you a comprehensive product range for wear protection 24 hours a day.

You will receive up-to-date detailed technical information and graphic illustrations for all solutions in the E-Techstore.

Orders are automatically forwarded on to the responsible sales organisation.

Extract from our product portfolio

Your benefits:

- Product availability check
- Easy access with filtering for a quick overview
- Orders are automatically forwarded on to the responsible sales organisation
- Fast delivery: availability from the Kimpfen warehouse, 24 hours within Europe if in stock

For more information and application tips go to:
www.ceratizit.com/water-jet-cutting

Hard Material Solutions by CERATIZIT
wear protection for all applications and industries

- Individual carbide solutions for your application
- Tools for metal forming
- High-performance components for tool construction

For over 95 years, CERATIZIT has been a pioneer developing exceptional hard material products for cutting tools and wear protection.

The CERATIZIT Group is the global market leader in several wear part application areas, and successfully develops new types of cemented carbide, cemented carbide grades which are used for instance in the wood, metal and stone working industries.

CERATIZIT Group
Carbide pioneer and global player

For more information and application tips go to:
www.ceratizit.com

Facts and figures

1 headquarters
Mamer / Luxembourg

34 production sites

70 sales subsidiaries

8,200 employees

> 100,000 different products

> 1,000 patents and utility models

> 200 employees in R&D

> 10 innovation awards

30% new products created in the last 5 years

For more information and application tips go to:
www.ceratizit.com
Headquarters
CERATIZIT S.A.
LU-6232 Mamer
T. +352 31 20 85-1
E. info@ceratizit.com
www.ceratizit.com

Austria
CERATIZIT Austria GmbH
AT-6600 Reutte
T. +43 5672 200-0
E. info.austria@ceratizit.com

Brazil
CERATIZIT América Latina Ltda.
Campinas, São Paulo 13069-310
T. +55 19 3115 9500
E. info.americalatina@ceratizit.com

Bulgaria
CERATIZIT Bulgaria AG
BG-5301 Gabrovo
T. +359 66 812 206
E. info.bulgaria@ceratizit.com

China
CB-CERATIZIT Xiamen
CN-361022 Xiamen
T. +86 592 666 1000
E. sales@cbceratizit.com

Czech Republic / Slovak Republic
CERATIZIT Office Czech Republic
CZ-594 01 Velké Meziříčí
T. +420 566 520 341
E. info.czechrepublic@ceratizit.com

France/Luxembourg/Belgium
CERATIZIT Luxembourg S. a r.l.
LU-5232 Mamer
T. +352 31 20 85-1
E. info@ceratizit.com

Germany
CERATIZIT Empfingen GmbH
DE-72186 Empfingen
T. +49 7485 99802 0
E. info.deutschland@ceratizit.com

CERATIZIT Hitzacker GmbH
DE-29456 Hitzacker
T. +49 5862 969 100
E. info.hitzacker@ceratizit.com

Great Britain
CERATIZIT UK Ltd.
UK-Sheffield S9 1XU
Toll Free 0800 048 4877 / 4878
T. +44 1925 261 161
E. info.uk@ceratizit.com

Hungary
CERATIZIT Office Hungary
HU-1138 Budapest
T. +36 1 437 0930
E. info.hungary@ceratizit.com

India
CERATIZIT India Pvt. Ltd.
IN-Bengaluru 560099
T. +91 80 4043 1262
E. ctindia.south@ceratizit.com

CERATIZIT India Pvt. Ltd.
IN-Chennai 600037
T. +91 44 2273 3737
E. ctindia.south@ceratizit.com

CERATIZIT India Pvt. Ltd.
IN-Coimbatore 641009
T. +91 422 273 3737
E. ctindia.south@ceratizit.com

CERATIZIT India Pvt. Ltd.
IN-North India 115009
T. +91 11 4018 481
E. ctindia.north@ceratizit.com

Indonesia
CB-CERATIZIT Indonesia
ID-17530 Bekasi
T. +62 21 2951 2351
E. info.indonesia@ceratizit.com

Italy
CERATIZIT Como S.p.A.
IT-22040 Alserio (CO)
T. +39 031 6349 211
E. info.italia@ceratizit.com

Mexico
CERATIZIT México, S.A. de C.V.
MX-76900 Corregidora, QRO
T. +52 442 225 9173
E. info.mexico@ceratizit.com

Netherlands
CERATIZIT Nederland B.V.
NL-4707 AT Roosendaal
T. +31 165 55 08 00
E. info.nederland@ceratizit.com

Poland
CERATIZIT Office Poland
PL-30-443 Kraków
T. +48 12 252 8591
E. info.polska@ceratizit.com

Spain / Portugal
CERATIZIT Ibérica Herramientas de Precisión S.L.
ES-28660 Boadilla del Monte (Madrid)
T. +34 91 351 0609
E. info.iberica@ceratizit.com

Switzerland
CERATIZIT Schweiz AG
CH-2552 Orpund
T. +41 32 344 90 93

Taiwan
CB-CERATIZIT Tamsui
TW-25152-Tamsui
T. +886 2 2822 1668

USA / Canada
CERATIZIT USA, Inc.
US-Warren, MI 48089-1833
Toll free +1-800-783-2280
T. +1-586-759-2280
E. info.usa@ceratizit.com