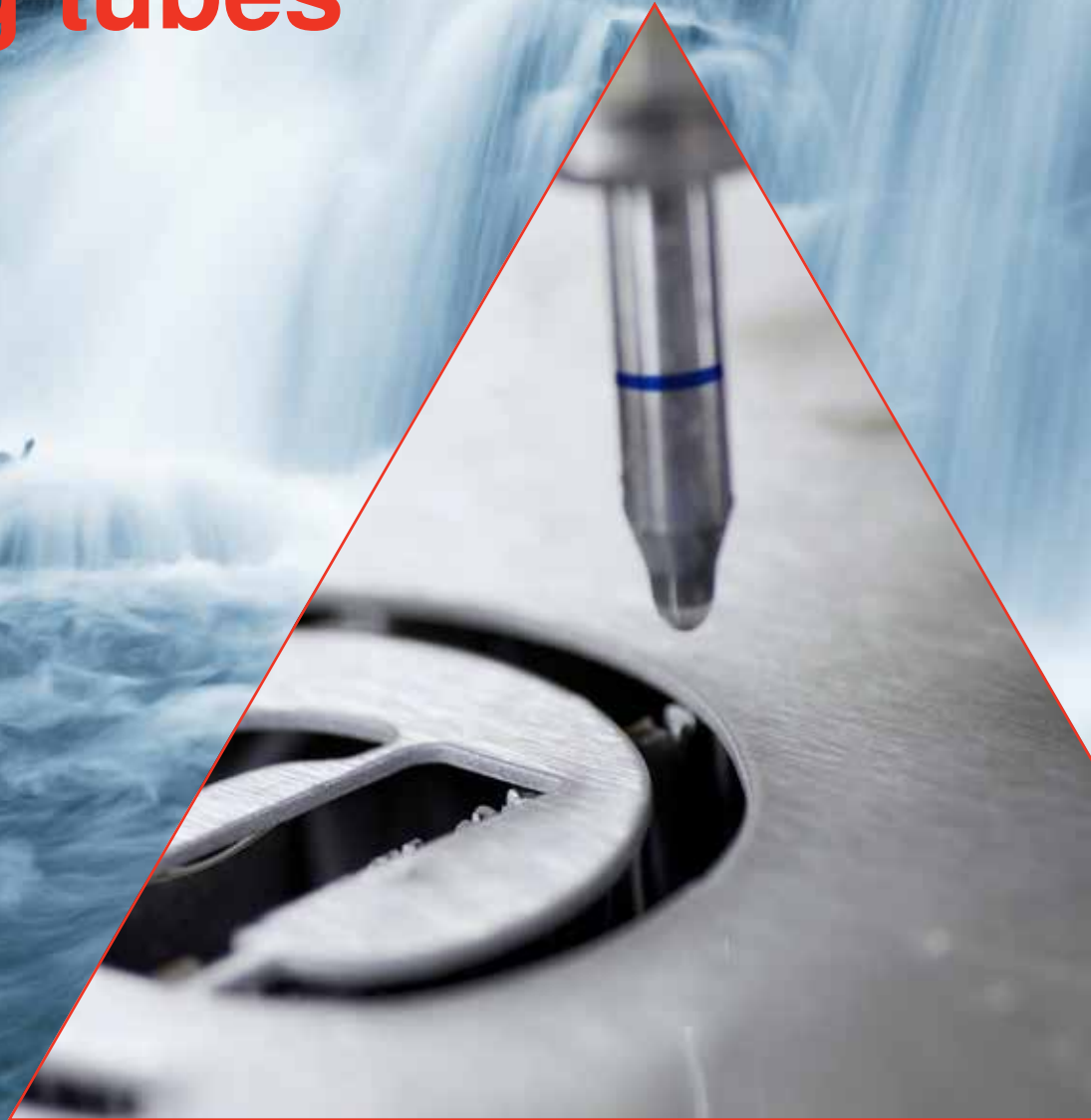


Water-jet cutting


Carbide focusing tubes



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

Tooling the Future.

www.ceratizit.com



Sarah-Jane Breitenreiter,
Customer Service Centre

**Together towards
profitable growth:
we can give you the
decisive competitive
advantage.**

Precise water-jet cutting with focusing tubes made of optimised carbide grades

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 **Premium**. Particularly wear-resistant carbide grades **protect** the

water-jet nozzles from erosion by abrasive materials in the water-jet.

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





Advantages & benefits

Advantage

Benefit

Economic efficiency

3-line concept with the best price-performance ratio

→ the right solution for every application

Suitable for all modern cutting head systems; supports automatic centring when clamping the tube

→ particularly flexible and economical

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.

CERATIZIT grade code	Binder [m %]	Density [g/cm ³]	Hardness HV10	Transverse rupture strength [MPa]	Transverse rupture strength [P.S.I.]
UMG01	0,40	15,55	2675	2400	348.000
CTN01L	0,25	15,60	2825	2000	290.000

(Nano-grades)



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

Tool life increased up to 30%

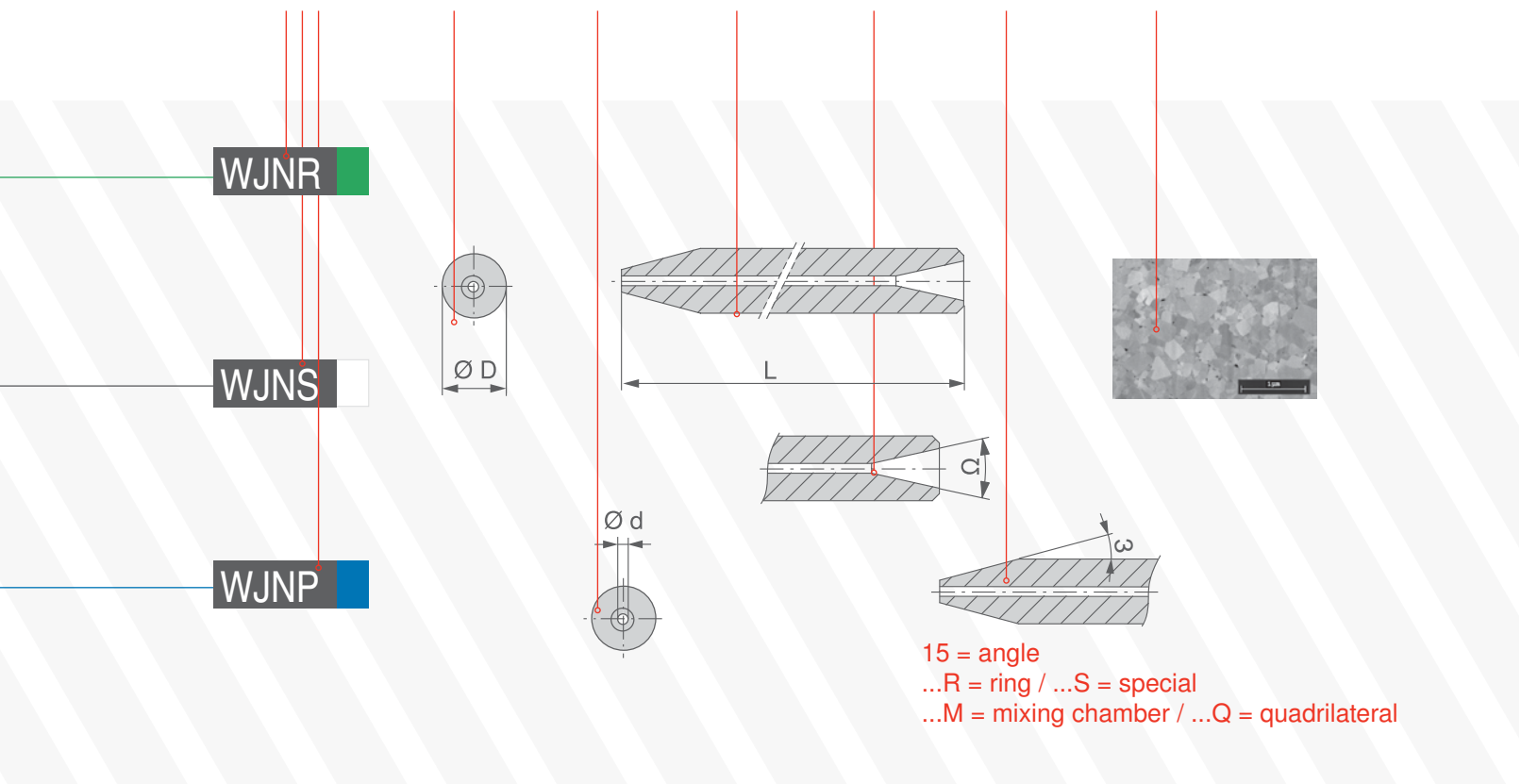


All water-jet nozzles are offered with CERATIZIT branding, including the matching coloured packaging.

Ordering description for focusing tubes

WJNS - 0714 - 102 - 0762 - 25 - 15R - UMG01

Type	External diameter	Internal diameter	Length	Type	External taper	Grade
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Economy-Line

Cost-optimised high quality


 WJNR

The **Economy-Line** is the most recent offshoot of Hard Material Solutions by CERATIZIT's successful product range of abrasive nozzles.

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
- ▲ External diameter and ground front faces
- ▲ Internal diameter and external taper as sintered
- ▲ Greater production tolerances
- ▲ Limited to 4 different water-jet nozzles

Focusing tubes Economy

Type, description	Material	D inch	d inch	L inch	UMG01
WJNR 0635-076-0762-25-15	11783235	1/4	0.030	3	•
WJNR 0635-102-0762-25-15	11783236	1/4	0.040	3	•
WJNR 0714-076-0762-25-15	11783240	0.281	0.030	3	•
WJNR 0714-102-0762-25-15	11783242	0.281	0.040	3	•

- = stock item
 - = limited stock or upon request
- Other dimensions upon request

Standard-Line

Ideal price-performance ratio

WJNS

The **Standard-Line** continues the success story of the well-known UMG01 focusing tubes. The tool life* of up to 80 hours guarantees you highly efficient cutting processes. The all-rounder nozzle has proved its worth in standard applications as well as in demanding industrial contexts.

The Standard-Line stands for excellent quality in many applications with constant cutting performance in all materials and geometries.

Technical specifications

- ▲ Grade UMG01
- ▲ Marked white
- ▲ All surfaces ground
- ▲ Wire-eroded internal diameter
- ▲ Proven tolerances

*The tool life varies according to the operational and working conditions of the customer requirements, for example with regards to the material to be cut, the wall thickness, the mounting of the nozzle, the throughput, etc.

Focusing tubes Standard

Type, description	Material	D inch	d inch	L inch	UMG01
WJNS 0635-076-0762-25-15	6234852	1/4	0.030	3	•
WJNS 0635-091-0762-25-15	6261074	1/4	0.036	3	•
WJNS 0600-102-0762-25-15	6234938	0.236	0.040	3	°
WJNS 0714-076-0762-25-15	6234943	0.281	0.030	3	•
WJNS 0714-091-0762-25-15	11557017	0.281	0.036	3	°
WJNS 0714-102-0762-25-15	6210224	0.281	0.040	3	•
WJNS 0714-102-1016-25-15	6248003	0.281	0.040	4	•
WJNS 0762-102-0762-25-15	6225154	0.300	0.040	3	•
WJNS 0797-076-1016-25-15	6234841	0.314	0.030	4	•
WJNS 0812-091-0762-25-15	11254622	0.320	0.036	3	•
WJNS 0812-102-0762-25-15	6282927	0.320	0.040	3	•
WJNS 0900-076-0762-40-15M	6254177	0.354	0.030	3	•
WJNS 0943-076-0762-25-15	6234942	0.371	0.030	3	•
WJNS 0943-102-0762-25-15	6219026	0.371	0.040	3	•

Premium-Line

Up to 30% increase in tool life



WJNP

We have developed the **Premium-Line** together with our customers. The goal was to present you with an extraordinary product – one that meets maximum demands and furthermore guarantees long tool life. A high-tech grade created by CERATIZIT is used, which provides an optimal balance of hardness and toughness. The nozzles provide you with a higher cutting speed and reduced abrasive consumption.

Technical specifications

- ▲ Grade CTN01L
- ▲ Marked blue
- ▲ Successor of the U3000 nozzles
- ▲ All surfaces ground
- ▲ Wire-eroded internal diameter
- ▲ Proven tolerances
- ▲ New geometry and adapted production process
- ▲ Same product variety as with our established Standard-Line

Focusing tubes Premium

Type, description	Material	D inch	d inch	L inch	CTN01L
WJNP 0635-076-0762-32-15	11796308	1/4	0.030	3	◦
WJNP 0635-091-0762-32-15	11796315	1/4	0.036	3	◦
WJNP 0635-102-0762-32-15	11796309	1/4	0.040	3	◦
WJNP 0714-076-0762-32-15	11796311	0.281	0.030	3	◦
WJNP 0714-076-1016-32-15	11796327	0.281	0.030	4	◦
WJNP 0714-102-0762-32-15	11796304	0.281	0.040	3	◦
WJNP 0714-102-1016-32-15	11796312	0.281	0.040	4	◦
WJNP 0762-102-0762-32-15	11796310	0.300	0.040	3	◦
WJNP 0797-076-1016-32-15	11796319	0.314	0.030	4	◦
WJNP 0943-076-0762-32-15	11796316	0.371	0.030	3	◦
WJNP 0943-102-0762-32-15	11796318	0.371	0.040	3	◦

• = stock item / ◦ = limited stock or upon request, other dimensions upon request

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.



e-techstore.com
24/24 7/7

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 Kempton warehouse, 24 hours within Europe if in stock

Hard Material Solutions by CERATIZIT

Wear protection for all applications and industries



- ▲ **Customer-specific carbide solutions**
for your application
- ▲ **Tools** for metal forming
- ▲ **High-performance components**
for the tool and die industry



Our product portfolio

Specialist for customised blanks and semi-finished products

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Tooling the Future.
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Solutions for the tool and die industry

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CERATIZIT Group

Carbide pioneer and global player

For over **90 years**, CERATIZIT has been a pioneer in the development of exceptional hard material products for cutting tools and wear protection.

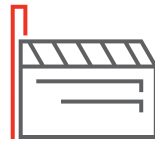
The privately owned company, headquartered in Mamer, Luxembourg, develops and manufactures highly specialised tungsten carbide cutting tools, inserts, rods and wear parts.

The CERATIZIT Group is the **market leader** in several wear part application areas and develops successful new types of hard metal, cermet and ceramic grades, which are used for instance in the wood and stone working industry.

Facts and figures



1 headquarters
Mamer / Luxembourg



24
production sites



50
sales subsidiaries



6,000
employees



> 90,000
different products



> 600
patents and utility models



> 100
employees in R&D



> 100
innovation awards



30%
new products created
in the last 5 years

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