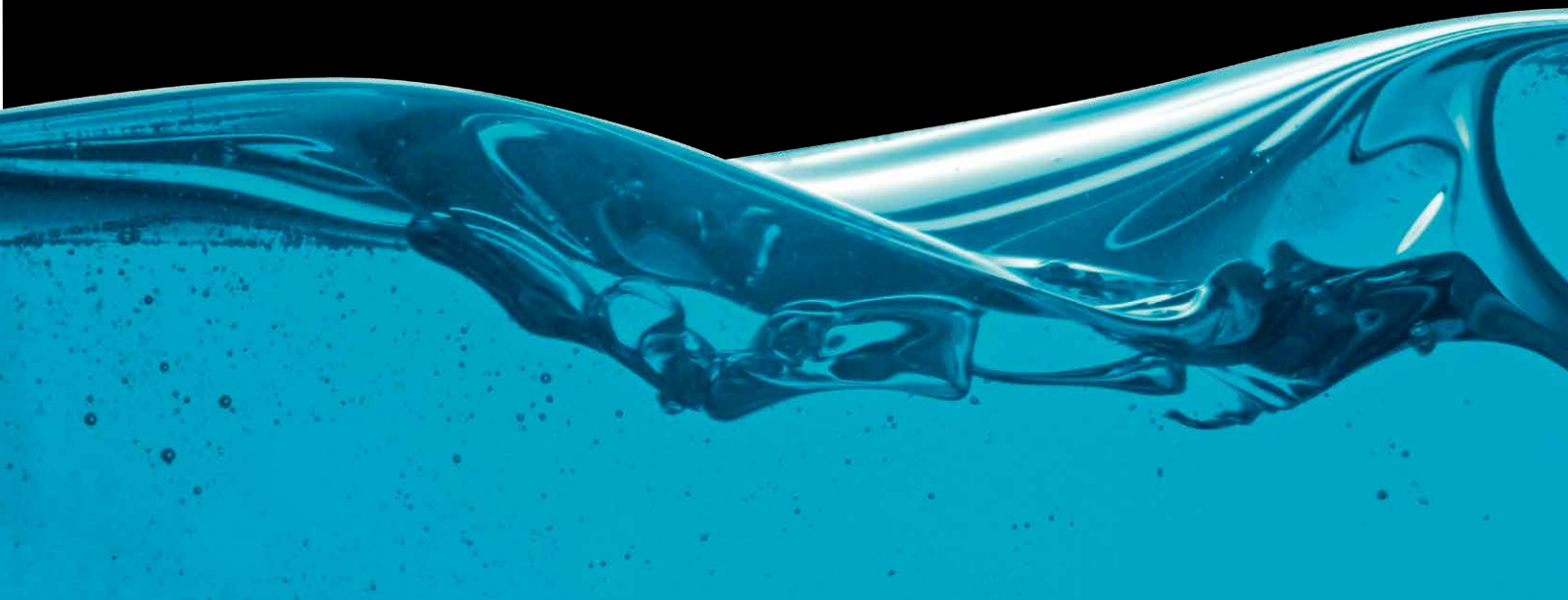




UMCUT®

Advanced Cutting Fluid Technology made in Germany



**Minimum Quantity Lubricants and -Systems**



Advanced Cutting Fluid Technology made in Germany

## Good ideas are the guarantee for your success

### FOUNDED IN 1968

SCOPE OF BUSINESS  
production, sale  
and development of  
minimum quantity lubricants  
and - systems, as well as  
tailor-made special fluid  
application systems and  
surface cleaning units

### BOARD OF MANAGEMENT

Wilfried Wahl  
Jürgen Wahl  
Monika Wahl

Perfect solutions are our motive – since the company's foundation in 1968 up to now. As experts for minimum quantity lubrication (MQL) and special spraying systems for the aluminium and steel processing industry we are developing products and systems promising and assuring our customers the maximum of quality innovation and efficiency.

The results are internationally patented high technology solutions in the field of minimum quantity lubrication and cooling, as well as special solutions for fluid application that proved to be excellent in practice. Minimal consumption, maximal performance and innovation strength are standards set by us. With the innovative UNICUT® Duo-System we succeeded in combining the advantages of a minimum quantity

Our experience of more than 50 years does not only flow into our product development but also into our service offer: We are always at your disposal when you need us, either on the phone or directly at the face. You can expect from us a competent consultation, professional many-sidedness and individual solutions for specific use optimizing your procedures for a long time.

Put us to the test!

UNICUT®  
Advanced Cutting Fluid Technology made in Germany

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## long-standing experience

Top quality oils for minimum quantity lubrication (MQL) and minimum quantity cooling lubrication (MQCL) complemented by internationally patented high-tech solutions – this is and has been our core business for more than 50 years.

As experts in the manufacture of minimum quantity lubricants and high-performance cutting oils we place great emphasis on our products and systems being of top quality. We set our benchmark at minimum consumption and maximum performance, and at the same time we care about the future of our planet by using environmentally friendly formulas. We keep developing and improving innovative products which in practice have proven to be outstanding.

With our many years of experience combined with our professional expertise we are considered to be a reliable and first-rate supplier especially for the aluminium and also for the large-scale steel processing industry. Likewise, we are known for our sophisticated and application-specific solutions. In fact, our product range covers more than high-quality lubricants: we can also supply the suitable spraying systems and provide professional support and assistance quickly and easily – we can meet you wherever you are or we can help you by telephone.

### UNICUT®

High-performance cutting oils and spraying systems

### UNICUT®

Minimum quantity lubrication with maximum efficiency

UNICUT®

## Quality is our ambition

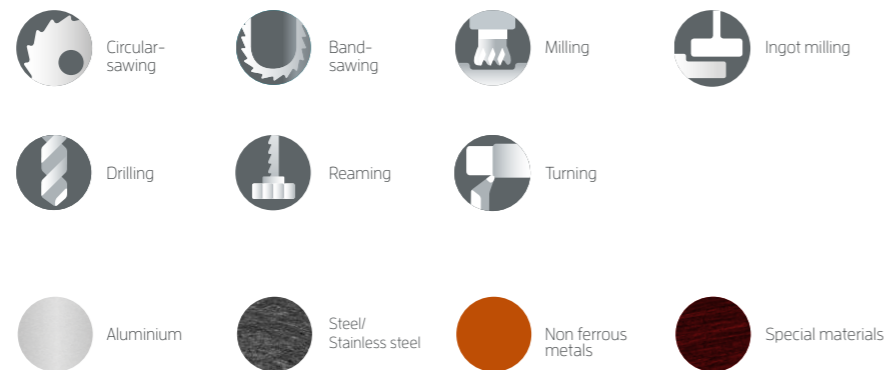
**UNICUT®**  
MQL on the  
highest level

To take account of technological advancements and our customers' expectations, we strongly rely on customised and application-specific solutions which means for you that we meet your individual requirements – both in the high-end and standard segment.

Our products are manufactured IT-based in state-of-the-art production facilities. A stringent monitoring regime with regular checks and the annual certifications according to DIN ISO EN 9001 as well as DIN ISO EN 14001 ensure a consistently high and reliable quality standard.

With a view to our oils and spraying systems, we expect top quality from ourselves. Nevertheless, our comprehensive project experience that we have acquired in numerous application scenarios and a wide variety of tasks have made us highly qualified professionals able to accommodate.

### WAY OF MACHINING:



## We are thinking ahead

And of a better environment

To meet our high demand we are constantly refining our products, especially as to their environmental compatibility. Already nowadays UNICUT® products are considered to be a progressive contribution to improve the environmental balance of metal processing companies. Numerous products are mineral oil free and biodegradable, all are free of silicone, PCP, PCT, chlorine and other halogens. Metal cuttings coming up during working stay dry and can be recycled comfortably.

### Clean production

In the UNICUT® company building most modern energy saving measures are applied: Power generation is made by an own photovoltaic equipment (capacity 30 KW/h). Production emissions will not be found in our company or are avoided as far as possible.

# UNICUT® Minimum Quantity Lubrication Systems

## • FIELDS OF APPLICATION

UNICUT® minimum quantity lubrication systems offer a wide range of possible applications with the focus on circular saws, band saws, die cutting and slitting lines. Additionally, we can realize custom-made solutions to meet our clients' individual needs..

## • OPERATION

UNICUT® MQL systems work with air pressure which means that the fluid is supplied by excess pressure and therefore pumps that are prone to malfunction are no longer necessary. The UNICUT® MQL systems is a fully reliable system which is particularly suited for large-scale industry applications.

The dosage nozzle, developed by UNICUT®, always feeds the right amount of lubricant. Fluid amounts can be adjusted easily and precisely and reproduced without any difficulties since the fluid dosage is only controlled by the pressure inside the container. A proportional valve is available as an option which allows the electronic control of fluid quantity.

## Benefits compared to other Lubrication Systems

- Reproducible results
- Very low consumption between 0.5 - 1.0 gram/minute
- Extremely reliable
- Very precise low-mist spray pattern
- Up to 100 lubrication points can be connected to one pressure container
- Oil and air flow can be adjusted independently
- All hose lines have a diameter of > 2.0 mm
- Solid design



**UNICUT® MMS - 30**  
Capacity: 3 litres



**UNICUT® MMS - 50**  
Capacity: 5 litres



**UNICUT® MMS - 100**  
Capacity: 10 litres



- ① Pressure container made of solid aluminium
- ② Easy quantity control via container pressure
- ③ Optional level monitoring using float switch
- ④ Solid design for large-scale industry or industrial application
- ⑤ Visual level control
- ⑥ Pressure gauge only made of metal and glass
- ⑦ Dual filter

- Optionally extendable due to modular design
- Pre-fitted for automatic refill with the optionally available UNICUT® filling station
- Suitable for network systems of up to 100 nozzles

# Nozzles

UNICUT® Nozzles are precise and robust at the same time. Made of stainless steel, they are resistant against flying burrs and mechanical stress. The UNICUT® full cone nozzles are two-phase nozzles with a separate air and fluid flow. Due to the pressure-tight connection of nozzle and fluid line, air and fluid only come into direct contact when exiting the nozzle which enables a very precise and low-mist spray pattern. Another positive side effect of this type of connection is that fluid and spray air pressure can be controlled independently from one another.

## UNICUT® 1/8" Full Cone Nozzle



- ① Entirely made of 1.4301 stainless steel
- ② Fluid outlet
- ③ Air ring for low-mist spray pattern
- ④ Push-in screw connection for 3 mm hose

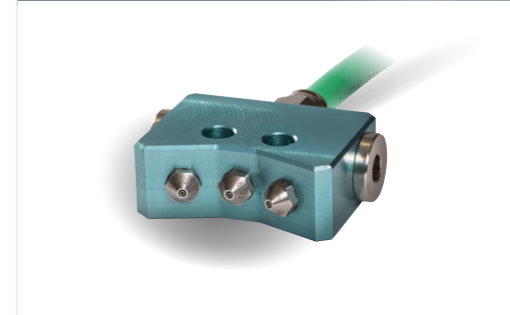
## UNICUT® 7mm Full Cone Nozzle



# Nozzles for Circular Saws

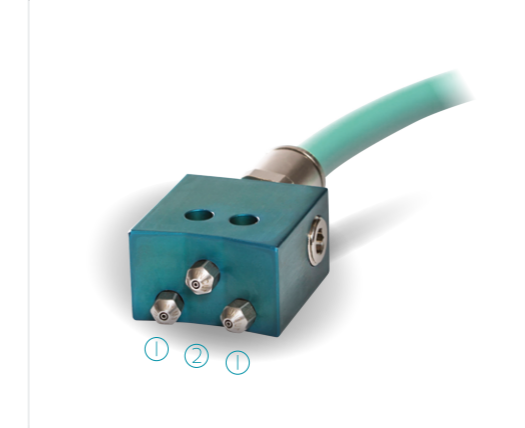
Nozzle heads for circular saw applications supplied by UNICUT® can be used to lubricate and cool circular saws, whatever your application may be. UNICUT® always offers the right solution for your equipment. Particularly the UNICUT® all-round nozzles make sure that the saw blade is lubricated by the nozzle head, while at the same time a coolant can be sprayed onto the steel blade, which means that in applications with hard metal saw blades the nozzle is not removed to exchange the saw blade.

## UNICUT® M-Nozzle Head



- Nozzle: 3 x 1/8"
- Application: circular saws
- From diameters of Ø 800 mm

## UNICUT® All-round Nozzle Head with 3 Nozzles



- ① Cooling nozzles
- ② Lubrication nozzles
- For cooling and lubricating the saw blade
- Nozzle: 3 x 7 mm, 1 x lubrication, 2 x cooling
- Application: Underfloor saws, circular saws
- up to diameters of Ø 800 mm

## UNICUT® 5-fold All-round Nozzle Head

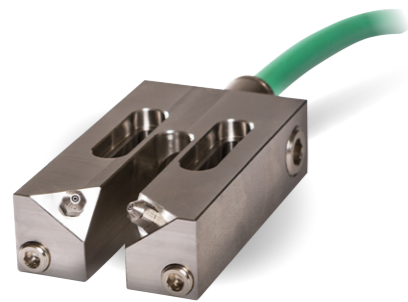



- ① Cooling nozzles
- ② Lubrication nozzles
- For cooling and lubricating the saw blade
- Nozzle: 5 x 1/8", 3 x lubrication, 2 x cooling
- Type of processing: Circular saw

## • Nozzles for Band Saws

Nozzle heads for band saws have been designed in such a way that saw blade heights from 34 – 90 mm can be covered. Due to the design with three nozzles fitted both the saw teeth as well as the back of the blade are lubricated.


### UNICUT® Stainless Steel U-shaped Nozzle Head



- Nozzle: 3 x 7 mm
- Type of processing: Band saw 
- Up to a saw blade height of 67 mm

### UNICUT® U-shaped Nozzle Head



- Nozzle: 3 x 7 mm
- Type of processing: Band saw 
- Up to a saw blade height of 80 mm

## • Nozzles for Custom Application

Due to the modular design of the UNICUT® MMS systems custom solutions can be implemented easily and cost-effectively. Successfully accomplished projects include those in profile lubrication, profile cleaning, strip slitting and many more.

### UNICUT® Extended Nozzle with Stainless Steel Tube

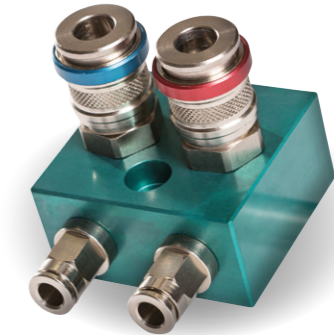


- Tube Ø 8 mm
- Nozzle: 1 x 7 mm
- Material: 1.4301

## Distribution Units

The intermediate distribution unit allows bridging long distances between container and nozzle. The intermediate distribution unit is connected to the pressure container via a traditional hose or tube line. The valve unit of the nozzle-valve-arrangement can then be linked with the intermediate distribution unit using a quick coupling connection. This particular design allows on the one hand that the pressure container can be placed outside the machine, so that it can be refilled without entering the exclusion zone of a machine, while on the other hand network systems comprising of up to 100 lubrication points can be set up.

### UNICUT® Intermediate Distribution Unit



- To bridge long pipe distances

### UNICUT® Dual Distribution Unit



- ① Control of fluid and air
- ② Flame-resistant outer hose
- ③ Nozzle heads for all applications

### UNICUT® All-round Distribution Unit



- ① Control of cooling, lubrication, air
- ② Flame-resistant outer hose
- ③ All-round nozzle heads

## Fluid Level Monitoring

The optionally available level switches will give you the opportunity to monitor the fluid level of your lubrication system. The switch signals when the fluid in the container has reached the minimum level via the SPS of the processing machine or the optionally available UNICUT® flashing light. A level switch that gives a signal of being full / empty is available for the MMS 100 system. So the container can be automatically refilled from a barrel or an IBC container by means of the UNICUT® filling station which is optionally available.

### UNICUT® Level Switch



- With 2 switching points full + empty (optional)

### UNICUT® Level Switch



- With 1 switching point (optional)

## Minimum Quantity Coolant

### UNICUT® Coolant-SAF

<b>RANGE OF SERVICE:</b>	High tech special product
<b>MATERIALS:</b>	C-steel, CrNi-steel, high-alloyed steels, titanium and special materials, non-ferrous metals
<b>CHARACTERISTICS:</b>	Fully synthetic, low viscosity, water mixable
<b>WAY OF MACHINING:</b>	Band sawing, circular sawing, milling, turning, drilling, reaming and rubbing



### TECHNICAL CHARACTERISTICS

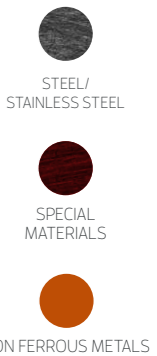
- Fully synthetic special concentrate
- Does not emulsify the cutting oil
- Specially developed for dual application
- Grants highest performance of cutting and cooling fluid
- Mixable in a ratio of 1:30 with purified water
- No residues

### ADVANTAGES

- Maximum productivity through maximum machine utilization rate while significantly extending tool life.
- Flash cooling of cutting edge through minimum quantity spray cooling and reduction of surface tension of cooling liquid.
- "Dry cut" = dry chips that are easily disposable due to minimum quantity, no disposal of cooling agent, no disposal of fluid bonding agent which means improved workplace environment.
- Extremely kind to your skin, no harmful vapours when used properly, paint-preserving characteristics.
- It has not been rated as a hazardous substance in the workplace, biodegradable.
- It has not been rated as a hazardous material
- Free from wax-like, sticky or resinous residue
- Free from DEA, PCB, PCT, chlorine, heavy metals, silicones, nitrosamines, halogens.
- Disposal according to EAK No. 120109 WGK I (VwVwS) rule of mixtures.

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container





## UNICUT® Basic-EP



<b>RANGE OF SERVICE:</b>	Broadband-allround product
<b>MATERIALS:</b>	Aluminium, non-ferrous metals, C-steels and CrNi-steels
<b>CHARACTERISTICS:</b>	Based on mineral oil, medium viscous, all-purpose use
<b>WAY OF MACHINING:</b>	Drilling, rubbing, band sawing, milling, turning, circular sawing, reaming



### TECHNICAL CHARACTERISTICS

- Viscosity 60 cSt at 40 degrees Celsius
- Based on mineral oil
- Excellent lubrication effect
- Usable with every commercially approved MQL-spraying station
- Free of evaporation promoting solvents
- Free of silicone as well as chlorine and other halogens

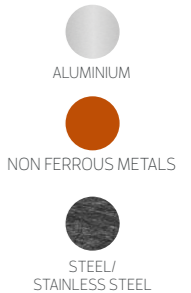
### ADVANTAGES

- Cost saving by increasing the machining speed
- Reduction of tool costs
- Avoiding of built-up edges
- Less standstills by tool change
- No costs for cooling agent odour
- Ideal for companies with high material variety
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container

## UNICUT® Basic-HT



<b>RANGE OF SERVICE:</b>	Broadband-allround product
<b>MATERIALS:</b>	Aluminium, non-ferrous metals, C-steels and CrNi-steels
<b>CHARACTERISTICS:</b>	Based on mineral oil, highly viscous, high temperature resistant, all-purpose use
<b>WAY OF MACHINING:</b>	Drilling, rubbing, band sawing, milling, turning, circular sawing, reaming



### TECHNICAL CHARACTERISTICS

- Viscosity 220 cSt at 40 degrees Celsius
- Based on mineral oil
- High temperature resistant
- For high performance processing machines
- Excellent lubrication effect
- Especially adhesive
- Also suitable and well-tried for aviation and space flight alloys
- Suitable for silicon bearing alloys and pure aluminium
- Suitable for special non-ferrous metal alloys
- Usable with every commercially approved pumping and spraying MQL station
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Cost saving by increasing the machining speed
- Reduction of tool costs
- Avoiding of built-up edges
- Less standstills by tool change
- No costs for cooling agent odour
- Ideal for companies with high material fluctuation
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly
- No staining during heating-up on hot rolling temperature
- Grooveless milled surfaces

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container

## UNICUT® Basic-V

<b>RANGE OF SERVICE:</b>	Broadband-allround product
<b>MATERIALS:</b>	Aluminium, non-ferrous metals, C-steels and CrNi-steels
<b>CHARACTERISTICS:</b>	Based on mineral oil, medium viscous, high temperature resistant, all-purpose use
<b>WAY OF MACHINING:</b>	Circular- and band-sawing, rubbing, reaming, milling, ingot milling, turning Drehen



### TECHNICAL CHARACTERISTICS

- Viscosity 100 cSt at 40 degrees Celsius
- Based on mineral oil
- for high performance processing machines
- For milling processes with following plating
- Excellent lubrication effect
- Also suitable and well-tried for aviation and space flight alloys
- Suitable for silicon bearing alloys and pure aluminium
- Suitable for special non-ferrous metal alloys
- Usable with every commercially approved pumping and spraying MQL station
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Cost saving by increasing the machining speed
- Reduction of tool costs
- Avoiding of built-up edges
- Less standstills by tool change
- No costs for cooling agent odour
- Ideal for companies with high variety of materials
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly
- Dry and grooveless milled surfaces

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container



## UNICUT® Alu-MF

<b>RANGE OF SERVICE:</b>	Hightech special product
<b>MATERIALS:</b>	Aluminium and its alloys, non-ferrous metals
<b>CHARACTERISTICS:</b>	Free of mineral oil, lowly viscous
<b>WAY OF MACHINING:</b>	Circular sawing, band sawing, milling, drilling, turning



### TECHNICAL CHARACTERISTICS

- Viscosity 30 cSt at 40 degrees Celsius
- Free of mineral oil
- Developed in cooperation with leading producers of band saws
- Excellent lubrication effect
- Also suitable and well-tried for aviation and space flight alloys
- Suitable for high-silicon content alloys and pure aluminium
- Usable with every commercially approved MQL-spraying station
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Very high tool service lives, at band saws up to 3,000 m<sup>2</sup> /band
- Cost saving by enormous increase of the machining speed
- Reduction of tool costs
- Avoiding of built-up edges
- Less standstills by tool change
- No costs for cooling agent odour
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly
- Dry and grooveless milled surfaces

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container



## UNICUT® Alu-MF-LT

<b>RANGE OF SERVICE:</b>	Hightech special product
<b>MATERIALS:</b>	AlSi-alloys, aluminium, non-ferrous metals
<b>CHARACTERISTICS:</b>	Free of mineral oil, lowly viscous
<b>WAY OF MACHINING:</b>	Band sawing, circular sawing, milling, drilling, turning



### TECHNICAL CHARACTERISTICS

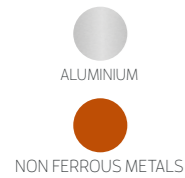
- Viscosity 23 cSt at 40 degrees Celsius - low temperature resistant up to -40°C
- Free of mineral oil
- Developed in cooperation with leading producers of band saws
- Excellent lubrication effect
- Also suitable and well-tried for aviation and space flight alloys
- Suitable for high-silicon content alloys and pure aluminium
- Usable with every commercially approved MQL-spraying station
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Very high tool service lives - Stain-free after heat treatment of profiles
- Cost saving by enormous increase of the machining speed
- Reduction of tool costs
- Avoiding of built-up edges
- Less standstills by tool change
- No costs for cooling agent odour
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container



## UNICUT® Alu-SI

<b>RANGE OF SERVICE:</b>	Hightech special product
<b>MATERIALS:</b>	AlSi-alloys, aluminium, non-ferrous metals
<b>CHARACTERISTICS:</b>	Free of mineral oil, lowly viscous
<b>WAY OF MACHINING:</b>	Band sawing, circular sawing, milling, drilling, turning



### TECHNICAL CHARACTERISTICS

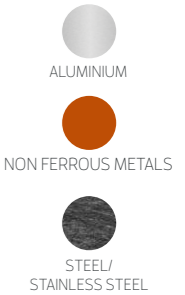
- Viscosity 25 cSt at 40 degrees Celsius
- Free of mineral oil
- Developed in cooperation with leading producers of band saws
- Excellent lubrication effect
- Developed especially for highly silicon bearing alloys
- Also suitable and well-tried for aviation and space flight alloys
- Usable with every commercially approved MQL-spraying station
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Very high tool service lives, at band saws up to 3,000 m<sup>2</sup> /band
- Cost saving by enormous increase of the machining speed
- Reduction of tool costs
- Avoiding of built-up edges
- Less standstills by tool change
- No costs for cooling agent odour
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container



## UNICUT® Alu-Milling

<b>RANGE OF SERVICE:</b>	Hightech special product
<b>MATERIALS:</b>	Aluminium and its alloys, non-ferrous metals
<b>CHARACTERISTICS:</b>	Free of mineral oil, lowly viscous
<b>WAY OF MACHINING:</b>	Ingot milling



### TECHNICAL CHARACTERISTICS

- Viscosity 30 cSt at 40 degrees Celsius
- Free of mineral oil
- Especially suitable for milling of aluminium
- Developed in cooperation with leading producers of ingot milling machines
- Excellent lubrication effect
- Also suitable and well-tried for aviation and space flight alloys
- Surfaces suitable to be plated after milling
- Also suitable for high-silicon content alloys as well as pure aluminium
- Preferably usable with the UNICUT® special spraying equipment UDDS
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Very high tool service lives
- Cost saving by enormous increase of the machining speed
- Clean glassy surfaces
- No built-up edges
- Machine parts are suitable to be plated without time-consuming finishing treatment
- Enormous reduction of tool costs
- Less standstills by tool change
- No costs for cooling agent odour
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly
- Dry and grooveless milled surfaces

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container

## UNICUT® Alu-SF

<b>RANGE OF SERVICE:</b>	Hightech special product
<b>MATERIALS:</b>	Aluminium and its alloys, non-ferrous metals
<b>CHARACTERISTICS:</b>	Free of mineral oil, lowly viscous
<b>WAY OF MACHINING:</b>	Band sawing, circular sawing, milling, drilling, turning



### TECHNICAL CHARACTERISTICS

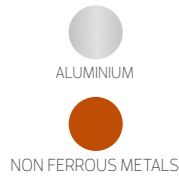
- Viscosity 23 cSt at 40 degrees Celsius
- low temperature resistant up to -60°C
- Totally stainfree after heat treatment.
- Free of mineral oil
- Developed in cooperation with leading producers of band saws
- Excellent lubrication effect
- Also suitable and well-tried for aviation and space flight alloys
- Suitable for high-silicon content alloys and pure aluminium
- Usable with every commercially approved MQL-spraying station
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Very high tool service lives - Stain-free after heat treatment of 180°C and 500°C
- Cost saving by enormous increase of the machining speed
- Reduction of tool costs
- Avoiding of built-up edges
- Less standstills by tool change
- No costs for cooling agent odour
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container



## UNICUT® Alu-HT-MF

<b>RANGE OF SERVICE:</b>	High-tech special product for hot machining
<b>MATERIALS:</b>	Aluminium, Non ferrous metals and C-steels
<b>CHARACTERISTICS:</b>	Free of mineral oil, high viscous
<b>WAY OF MACHINING:</b>	circular sawing



### TECHNICAL CHARACTERISTICS

- Viscosity 175 cSt at 40 degrees Celsius
- Free of mineral oil
- For high performance metal cutting machines
- Extremely suitable for difficult-to-machine materials like austenitic steels, special materials like Nimonic and Hastelloy as well as highly heat resistant steels
- Excellent lubrication effect
- Usable with every commercially approved MQL equipment
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Very high tool service lives
- Cost saving by enormous increase of the machining speed
- Reduction of tool costs
- No built-up edges
- Less standstills by tool change
- No costs for cooling agent odour
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly
- Dry chips

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container



## UNICUT® Steel-A4

<b>RANGE OF SERVICE:</b>	Hightech special product
<b>MATERIALS:</b>	C-steel, CrNi-steel, high-alloyed steels, titanium and special materials
<b>CHARACTERISTICS:</b>	Free of mineral oil, medium viscous
<b>WAY OF MACHINING:</b>	Band sawing, circular sawing, milling, turning, drilling, reaming and rubbing



### TECHNICAL CHARACTERISTICS

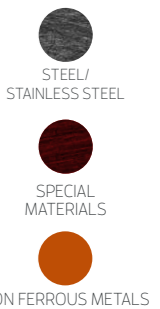
- Viscosity 60 cSt at 40 degrees Celsius
- Free of mineral oil
- For high performance metal cutting machines
- Extremely suitable for difficult-to-machine materials like austenitic steels, special materials like Nimonic and Hastelloy as well as highly heat resistant steels
- Excellent lubrication effect
- Usable with every commercially approved MQL equipment
- Recyclable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Very high tool service lives
- Cost saving by enormous increase of the machining speed
- Clean and smooth surfaces
- Reduction of tool costs
- Less standstills by tool change
- No costs for cooling agent odour
- Cost-effective by low consumption
- Good skin tolerance and environmentally friendly

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container



# Minimum Quantity Lubricants

## UNICUT® Duo-System

-  STEEL/  
STAINLESS STEEL
-  SPECIAL  
MATERIALS
-  NON FERROUS METALS

<b>RANGE OF SERVICE:</b>	Highend special solution
<b>MATERIALS:</b>	C-steel, CrNi-steel, highest-alloyed steels and high-grade steels, titanium and most difficult-to-machine special materials
<b>CHARACTERISTICS:</b>	Minimal Quantity Coolant Lubrication (MQL), free of mineral oil
<b>WAY OF MACHINING:</b>	Band sawing, circular sawing, milling, turning, drilling



### TECHNICAL CHARACTERISTICS

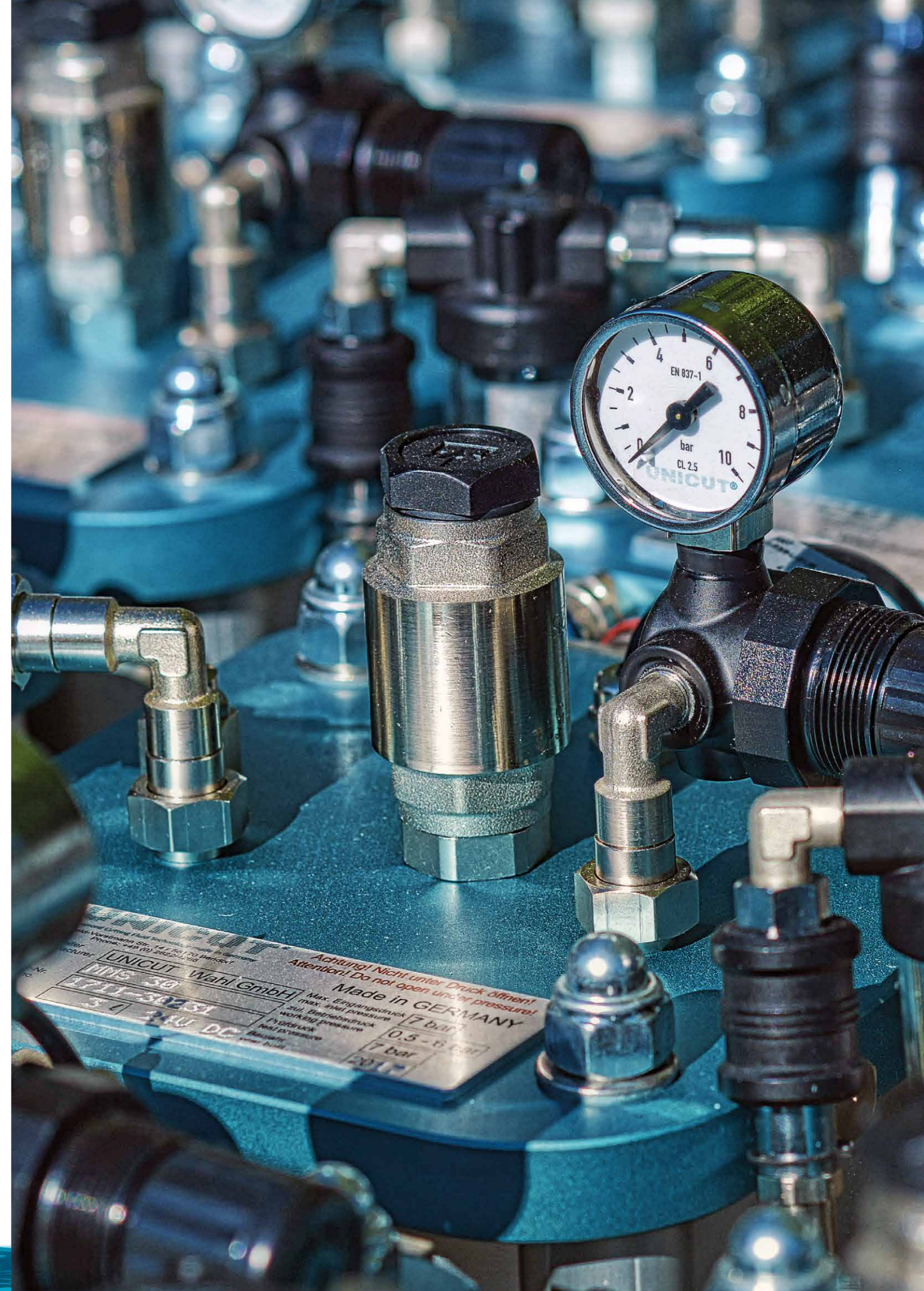
- Machining with very efficient synergetic effect: the arising rubbing is reduced to a minimum by means of a special high performance lubrication fluid. The remaining afterheat is then eliminated by a microfog out of the high performance fluid especially fine-tuned to the cooling fluid
- Minimal Quantity Coolant Lubrication (MQL)
- For the machining of steel, C-steels, high-grade steel as well as special materials like titanium, CrNi-Mo-steels, Vanadium-steels, nickel, Ni-base alloys, Hastelloy and Inconel
- Free of mineral oil
- Excellent lubrication and cooling efficiency
- With HM-tools self-induction hot cut is possible
- Recycable and dry shavings
- Free of silicone as well as chlorine and other halogens

### ADVANTAGES

- Clean and smooth surfaces
- Considerable tool cost savings
- Noticeable increase of production efficiency
- Considerably reduced fixed cycles at equal tool life
- No adhesive or resinous residues
- No costs for cooling agent odour
- Good skin tolerance and environmentally friendly

### AVAILABLE CONTAINER SIZES

- 10, 20, 30 litres HDPE-container
- 200 litres in throw-away barrels
- 1,000 litres container





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