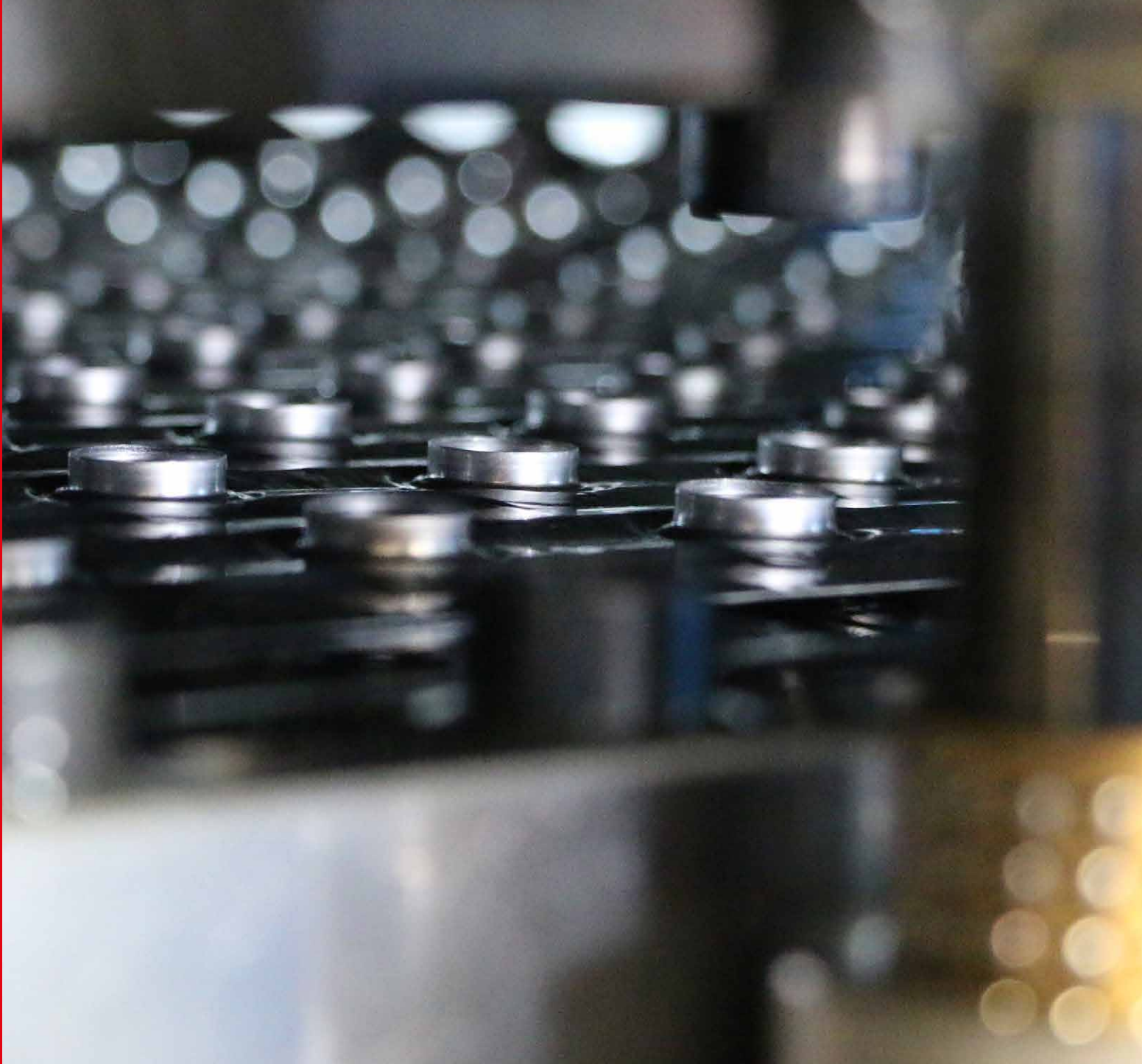


# DiaCut – DiaPress

Punching and Forming Oil





Philipp and Martin Storr • Managing Directors

## Your partner for cooling lubricants

oelheld is a medium-sized company, which has more than 130 years of tradition and experience. Since the foundation in 1887 by Carl Christian Held, oelheld has become an established specialist for lubricants. Partnerships, research, and human resources technology have grown as a valuable tradition of which we are proud of.

Numerous customers and machine manufacturers along with national and international universities have partnered with us to develop high quality lubricants. Through this cooperation we are able to focus intensively on meeting and adjusting to specific requirements on a wide range of different manufacturing processes. Our laboratories are equipped with state-of-the-art analytical equipment and numerous application testing systems that guarantee today's demanding requirements, and many of tomorrow's ever changing new standards.

**„Innovative product development, strengthened by continuous quality control and comprehensive customer service, is the key to the success of our products.“**



## Human Technology

### Innovations for man, environment and machines

Hutec is our main focus in the development and production of our products. It is also our mission statement in our use of resources and at oelheld always presence.

### What does this mean?

- REACH requirements are fulfilled
- Skin reviews and approvals available for most products
- Low emission and aromatics free / low aromatic products
- Products free of heavy metal
- State-of-the-art production facilities
- Environmentally friendly production processes
- Products are tested for compatibility with machine components
- Sustainability in the selection of raw materials
- Environmentally friendly and resource-saving products







## Punching and Forming Oil

The products of our DiaCut series are heavy duty lubricants for every level of difficulty which are free from chlorine and heavy metals.

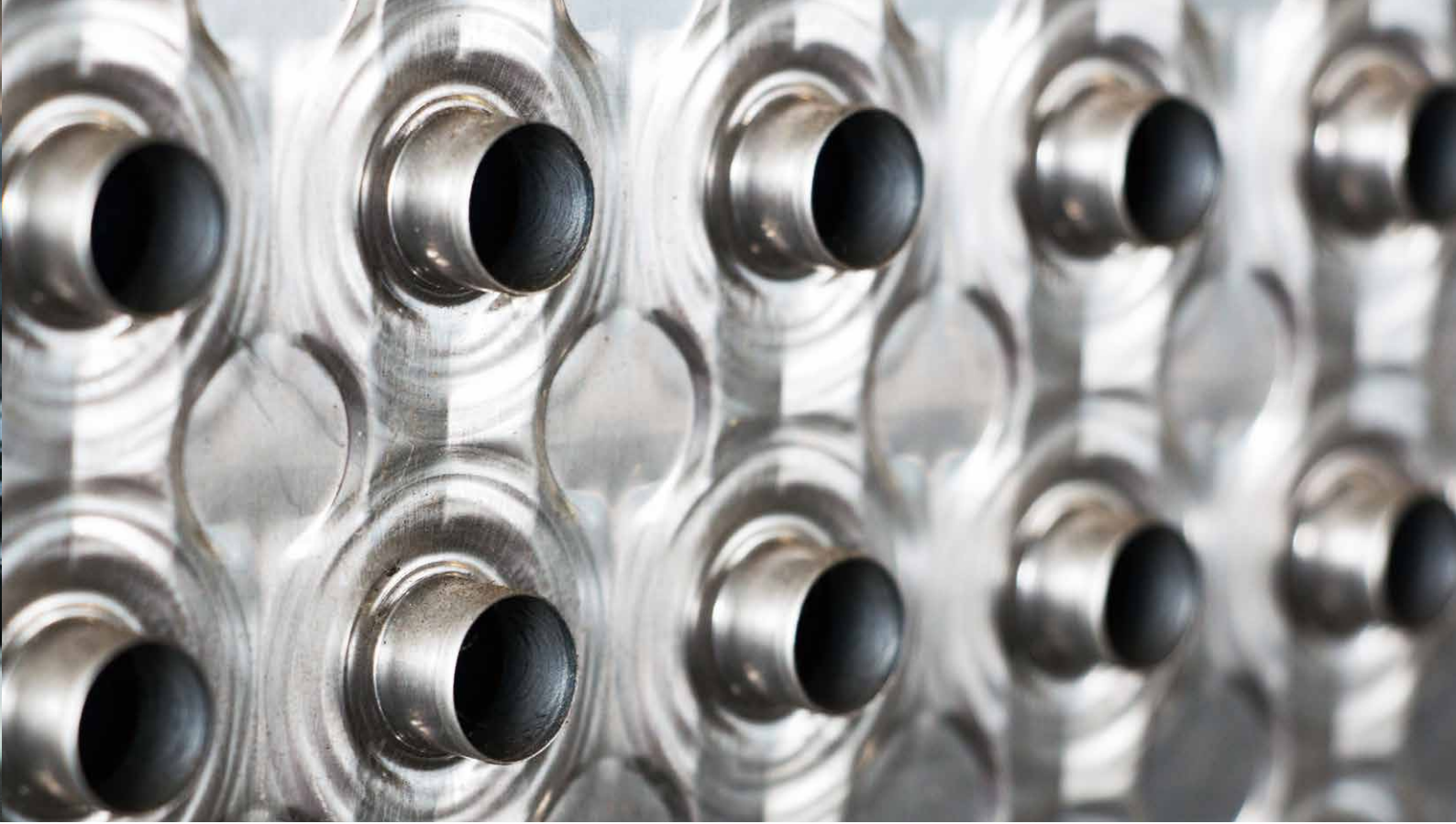
Selected base oils and additives are generating mechanically and thermally extreme stable lubricating films with a high pressure resistance for the ideal material flow and less tool wear. Adapted for the requirements of your punching process our products offer you the best wetting and separating properties for punching of thin aluminium sheets or fine cutting works with high alloy steels.

Forming oils of our DiaPress series are made of base oils with low aromatic content. They are free from chlorine, heavy metal and oil mist, occupy a high aging resistance and a good viscosity-temperature behavior. By using physiological harmless high-performance extreme-pressure additives we reach the highest pressure resistance even at strong thermal heavy duty. Forming oils of our DiaPress Series are surface-active, adhesive and are showing good wetting and release properties. They are easily sprayable and pumpable. Our DiaPress series can be used in all forming processes. Different viscosities allow for an optimal adaption to existing spray and pump requirements. DiaPress can be used for all cold formed steels but not for non-ferrous metal.

Volatile punching oils

Non-volatile punching oils

Biodegradable punching oils



## Benefits

Our broad punching and forming program offers many advantages:

- Free from chlorine and heavy metals
- Keeps work pieces residue free
- Can be welded without prior cleaning
- Ash-free evaporation during heat treatment
- Easy to wash off
- Spray-able, electrostatic application is also possible
- Suitable for a variety of materials or alloys
- Optimal wetting and adhesion for multi-stage tools
- Offers corrosion protection
- Cost savings through process optimization
- The ideal product for every application

Test it!

# Our punching and forming program

| Product Name | Density at 15 °C (g/cm <sup>3</sup> ) | Flash point (°C) | Kin. Visc. 40°C (mm <sup>2</sup> /s) | Material | Application |
|--------------|---------------------------------------|------------------|--------------------------------------|----------|-------------|
|--------------|---------------------------------------|------------------|--------------------------------------|----------|-------------|

## Cutting oils

|                        |      |      |    |   |   |
|------------------------|------|------|----|---|---|
| <b>SulFol LCO 1500</b> | 0,87 | >160 | 15 | Nitrided and quenched/tempered steel, tool steel and high-alloyed steel | Broaching, honing, deep drilling, milling, turning, drilling and punching |
|------------------------|------|------|----|---|---|

## Punching oils

|                        |      |      |     |   |   |
|------------------------|------|------|-----|---|---|
| <b>DiaCut CP1/63</b>   | 0,78 | >61  | 1,6 | non-ferrous, stainless steel, steel, aluminum | Very low viscosity punching oil of highest purity. Evaporates almost residue-free.  |
| <b>DiaCut CP 5</b>     | 0,80 | >56  | 1,7 | non-ferrous, stainless steel, steel, aluminum | Low-residue punching and forming oil which, among other things, offers increased temporary corrosion protection.                                    |
| <b>DiaCut EMM 1000</b> | 0,87 | 200  | 10  | non-ferrous, steel                            | Punching, forming and deep drawing  |
| <b>DiaCut EMM 2500</b> | 0,90 | >200 | 25  | non-ferrous, steel                            | Punching, forming and deep drawing  |
| <b>DiaCut EMM 4300</b> | 0,93 | >200 | 43  | non-ferrous, steel                            | Punching, forming and deep drawing  |
| <b>DiaCut EMM 9000</b> | 0,96 | >200 | 90  | non-ferrous, steel                            | Punching, forming and deep drawing  |
| <b>DiaCut FD</b>       | 0,77 | >56  | 1,3 | non-ferrous, stainless steel, steel, aluminum | Extremely thin punching oil that evaporates without leaving any residue within a very short period of time.   |
| <b>DiaCut FMS 130</b>  | 0,77 | >63  | 1,3 | non-ferrous, steel, aluminum                  | Extremely low viscosity punching oil that evaporates within a very short time, leaving almost no residue.   |
| <b>DiaCut VSS 76</b>   | 0,91 | >180 | 76  | stainless steel, steel, aluminum              | Universal micro blanking, punching and forming oil for highest requirements up to 8 mm material thickness. Also ideal for deep drawing and bending. |

## Drawing and forming oils

|                          |      |      |     |   |  |
|--------------------------|------|------|-----|---|--|
| <b>DiaPress CS 12000</b> | 0,94 | >150 | 120 | High-tensile steel, stainless steel           | Chipless machining, demanding punching, deep drawing, bending and extrusion applications.          |
| <b>DiaPress LCI 3200</b> | 0,88 | >160 | 32  | stainless steel, steel, aluminum              | Special forming oil for rotary swaging of rods, pipes and wires.                                   |
| <b>DiaPress MFP</b>      | 0,93 | >160 | 32  | non-ferrous, stainless steel, steel, aluminum | Forming oil for demanding jobs. Solid lubricants are included to improve the compressive strength. |
| <b>DiaPress TZE</b>      | 0,96 | >160 | 170 | non-ferrous, stainless steel, steel, aluminum | Special deep-drawing oil with special high-pressure additives.                                     |
| <b>DiaPress ZHO</b>      | 1,04 | >180 | 160 | stainless steel, steel, aluminum              | Heavy duty forming oil for machining very demanding parts with a high degree of forming.           |

## Part of our customer base



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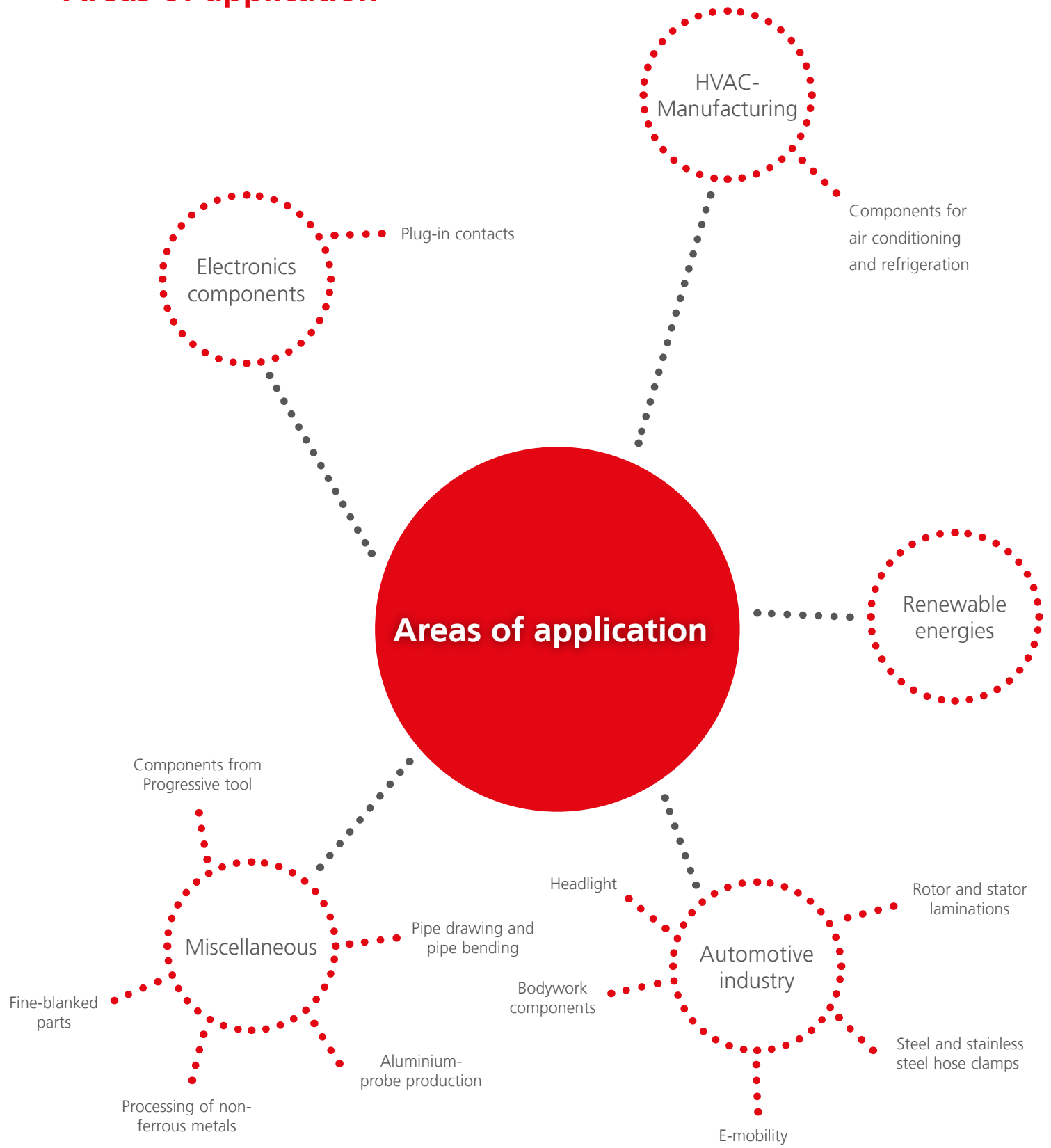
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# Areas of application



You like to have further information?  
Request a free sample!



# The hero of tomorrow...



## ...is the fluid you use today!

### Advantages

- Your product for all punched, bent, and deep-drawn parts
- Suitable for minimum quantity lubrication (MQL)
- Highest performance in stamping/bending processes
- Suitable for all metals (including non-ferrous and special metals)
- PER compatible
- No pictograms or classifications (not CLP classified)
- Toxicologically harmless
- Easily biodegradable (OECD 301B passed)
- Can be used across applications

### DiaCut EMM - Punching oil series

- DiaCut EMM 1000
- DiaCut EMM 2500
- DiaCut EMM 4300
- DiaCut EMM 5400
- DiaCut EMM 9000

**bio-  
degradable**



## Application examples



- Measurements: 60 mm wide
- Material thickness: 1,8 mm
- Material: 1.4301
- Stroke rate: 850 1/min
- Residues: very low

Product recommendation:

**DiaCut CP1/63**



- Measurements: 70 mm wide
- Material thickness: 2 mm
- Material: CuZn and Iron
- Stroke rate: 250 1/min
- Residues: very low

Product recommendation:

**DiaCut FD**



- Measurements: 160 mm wide
- Material thickness: 2,5 mm
- Material: Aluminium

Product recommendation:

**DiaPress MFP**



- Measurements: 200 mm wide
- Material thickness: 1,7 mm
- Material: Stainless steel

Product recommendation:

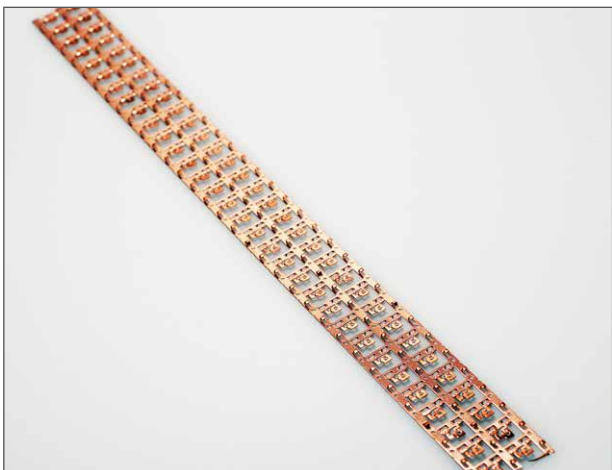
**DiaCut FMB 600**



- Measurements: 50 mm wide
- Material thickness: 2 mm
- Material: Steel
- Residues: low

Product recommendation:

**DiaCut NCL**



- Measurements: 35 mm wide
- Material thickness: 0,6 mm
- Material: Cu-ETP
- Stroke rate: 7000 1/min
- Residues: very low

Product recommendation:

**DiaCut FD**

Every stamping and forming operation has different requirements for a processing medium and should be coordinated in an individual consultation with our specialists in order to optimally design your process!



## Service analytics and technical advice for your all-round service

- We accompany you right from the start with our technical service on site and our service analysis.
- With us each customer has a direct technical service contact person, who provides advice and support.

The combination of service analytics and technical service in particular offers our customers added value and the security of receiving the appropriate service for the product.

Our service analytics offer a wide range of methods and state-of-the-art analytical instruments, which are used specifically for the requirements of our customers. With this know-how we can provide assistance in troubleshooting and optimize production processes. Employees in these areas take part in training courses and exchange knowledge with each other. This systematic transfer of knowledge ensures that know-how continues to grow and plays an important role in future product developments.

**Contact us to learn more about our role for future service!**

# Process optimization

You want your machine to be more efficient?

1



Contact oelheld

2



First analysis on site by an expert

3



Detailed consultation and proposal

6



Purchase

5



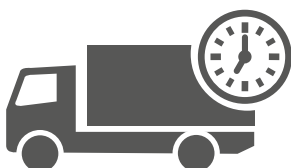
Optimal laboratory analyses

4



Testing phase (if applicable)

7



Fast delivery

8



Regular checks by your oelheld contact

9



Seminars



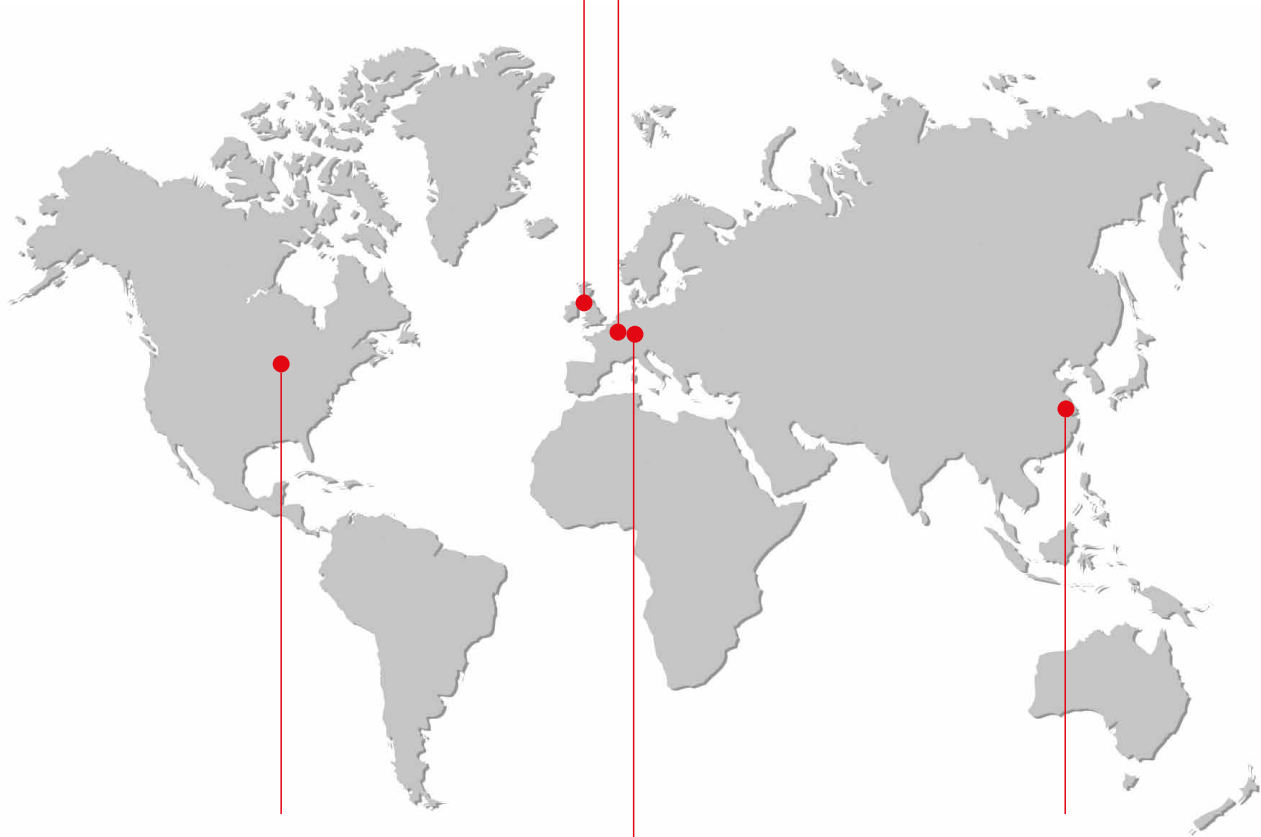
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## oelheld UK Ltd.

Unit 16, Colomendy Business Park, Erw Las  
Denbigh, LL16 5TA. • United Kingdom  
Phone: +44 1745 814-777  
E-mail: sales@oelheldgroup.co.uk  
Internet: www.oelheld.com

## oelheld technologies SAS

Technopôle de Forbach-Sud  
140, Avenue Jean-Eric Bousch,  
57600 Oeting • France  
Phone: +33 387 90 42 14  
E-mail: hutec-fr@oelheld.com  
Internet : www.oelheld.com



## oelheld U.S., Inc.

1100 Wesemann Dr  
West Dundee, IL 60118 • USA  
Phone: +1 847 531 8501  
E-mail: hutec-us@oelheld.com  
Internet: www.oelheld.com

## oelheld GmbH

Ulmer Strasse 133-139  
70188 Stuttgart • Germany  
Phone: +49 711 168 63-0  
E-mail: hutec@oelheld.de  
Internet: www.oelheld.com

## oelheld innovative fluid technology (Taicang) Co., Ltd

No. 5 Suzhou Road, Jiangsu  
215400 Taicang • China  
Phone: +86 512 8278 0027  
E-mail: service@oelheld.com.cn  
Internet: www.oelheld.com

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innovative fluid technology

oelheld GmbH • Ulmer Strasse 133-139 • 70188 Stuttgart • Germany  
Phone: +49 711 16863-0 • Fax: +49 711 16863-3500  
E-mail: hutec@oelheld.de • Internet: www.oelheld.com