

# We stand for expertise!

**CERTIFICATE**  
ISO 9001:2008



twelve certifies that the company

**Raziol**  
Zibulla & Sohn GmbH

**business field:**  
Development, production and distribution of lubrication machines  
as well as of lubricants

**location:**  
Hauptstr. 144/152 • D-58642 Herdorf

has successfully implemented the above mentioned quality management system  
(ISO 9001) and applies it effectively. The conformity was confirmed during the  
audit report no. 24002/07. This certificate is only valid  
with the personal performance of the undersigned

Date of the first  
certification: 01.12.2005  
This certificate is  
valid until: 30.11.2008  
Last  
audit day: 29.11.2008

*G. Jeps*



**Raziol**  
Zibulla & Sohn GmbH

**RAZIOL**  
Angetriebene Rollenbänder/  
Plattenbefeuchtungsanlagen

Das ist ein Produkt für Menschen. Eine  
Erfindung, die den Menschen  
Freiheit und Wohlstand gibt.

Ein wunderbares Produkt aus  
Innovation und Professionalität.

Als Mensch-Anhänger haben wir  
das Beste für Sie gemacht. Und  
wir sind stolz auf unsere  
Produkte und auf Sie.

**Raziol**  
Zibulla & Sohn GmbH

... and everything is running smoothly



# Company history



**1977**  
Headquarters

**2002**  
New work shops

**2003**  
New department  
Raziol Lubrication

**2004**  
Introduction of the  
drying lubricant  
Raziol Drylub

**1941**  
Establishment

**1982**  
First roller lubricators

**1941**  
Established 1941 as manufacturer of additives for oils; today approx. 100 qualified employees at home and abroad with agencies in all federal states of German and Europe

**1948**  
Commencement of the Managing Director Georg Zibulla senior; the newly introduced product name RAZIOL becomes the quality term

**1977**  
Commencement of the today's Managing Director, engineer G.G. Zibulla; the product range is extended with the addition of pollution free products, contact lubrication systems for coils, parts and sheets

**1982**  
First registered designs for roller lubricators

**1985**  
Reorientation of the enterprise goals due to the increasing requirements of our customers for lubrication techniques / retirement of Georg Zibulla senior from the operational division

**2002**  
Building of new work shops

**2003**  
Establishment of the new department Raziol Lubrication

**2004**  
Development and introduction of the revolutionary drying lubricant Raziol Drylub

# Company history



**2005**

Successful implementation of quality management system in accordance with ISO 9001:2000

**2006**

First customer seminar

**2006**

Blank lubrication systems

**2007**

Southern Germany area office in Rothenburg

**2007**

Premium partner of Feintool Fineblanking Technology

**2008**

Vacuum extractors

**2005**

Successful implementation of quality management system in accordance with ISO of a 9001:2000 for the development of the ranges, production and sales of lubrication devices and lubricants

**2006**

Realization of the first customer seminar with over 120 participants from various sectors

**2007**

Opening of the southern Germany area office in Rothenburg  
Raziol is appointed to premium partner of Feintool Fineblanking Technology

**2008**

Successful introduction of vacuum extractors  
2nd customer seminar with large in house exhibition

# Raziol

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# Contact lubrication

Certified in accordance with ISO 9001:2008

## RAZIOL® contact lubrication

Internally lubricated felt, brush or cellpor rolls apply the forming medium to the coil or blanks. Suitable for different material widths and thicknesses. Blank lubricators allow full, one-sided, or two-sided lubricant application. Throttle valves facilitate setting different quantities of oil for the top and bottom side.

- ✓ Mist-free oil application
- ✓ Low wear rolls
- ✓ Quick, no-tool-needed roll change

- ✓ Full or partial lubricant application
- ✓ Lubrication of different material widths and thicknesses



### RB roller lubricators

Mist-free oil application to coil via low wear, internally lubricated felt, cellpor or brush rolls.



### PBA blank lubricator systems

RAZIOL blank lubricator systems are designed as a portable table trolley that can be used for many purposes.

The integrated open-loop control electronics and pressure reservoirs allow the lubricating rolls of the PBA to apply a defined layer of lubricant on round plates and blanks.



### RB MOT driven roller lubricators

The driven upper roll transports the blank through the roller lubricator. In the process, the internally lubricated felt or brush rolls lubricate the blanks.



### SBA sector lubrication systems

Sector lubrication systems are used for the oiling of strip stock of different widths.

Full or partial-surface lubrication medium application, even partially, is possible.

# Non-contact Lubrication

Certified in accordance with ISO 9001:2008

## RAZIOL® non-contact lubrication

RAZIOL does not only provide standard units for non-contact lubrication but is also specialised in delivering customised solutions that are perfectly adapted to meet specific customer requirements. Lubrication widths from 50 mm to 3000 mm; application amounts starting at 0.1 g/m<sup>2</sup>; partially programmable nozzle activation; automatic medium circulation and nozzle head cleaning – all of these features are merely a small part of our outstanding technological achievements.

- ✓ Part, coil and blank lubrication
- ✓ Reproducible
- ✓ On one or both sides
- ✓ Sectional or the entire surface
- ✓ Minimum dosing capability – cost-effective



- **SPR-SK spray chamber**
  - Straightforward design with just two minimum lubricator nozzles
  - Lubrication of narrow coils up to 300 mm wide



- **Spraying machine with SKT supply stand**
  - Individualised lubrication of coils or blanks up to 2000 mm wide
  - With supply stand including pressure reservoir, pump, heater and control unit



- **Customised lubricators** to lubricate coil and blanks with up to 3000 mm lubrication width

# Spray nozzles / lubricating points

Certified in accordance with ISO 9001:2008

## RAZIOL® spray nozzles/lubricating points

The block nozzle has been especially designed for spray chambers. It features high flexibility, adjustability and reproducibility, when compared to ordinary nozzles.

The lubricating points, LAMA and DUSTY, are exclusively used for minimum quantity lubrication in non-cutting and cutting metalworking applications.

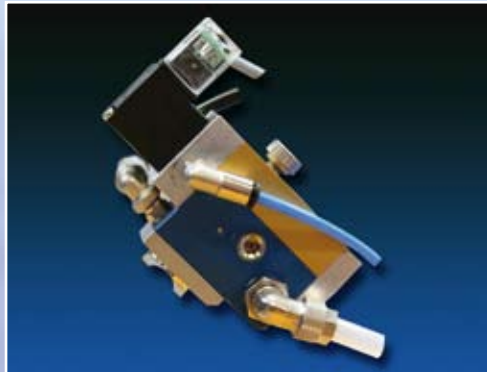
✓ Precision spray nozzles

✓ Change of the lubrication pattern

✓ Adjustable oil quantity

✓ Used in spray chambers

✓ Used in minimum lubrication systems



### BS block nozzles

Precision spray nozzles with adjustable oil quantity (in part automatic)

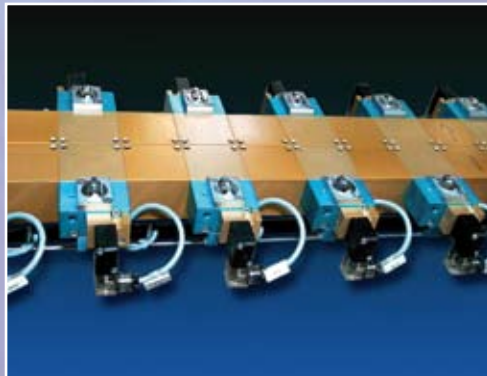
Adjustable lubrication pattern with the following parameters:  
Oil quantity, droplet size, oil mist formation, distribution, lubrication pattern, circle or ellipse



### LAMA

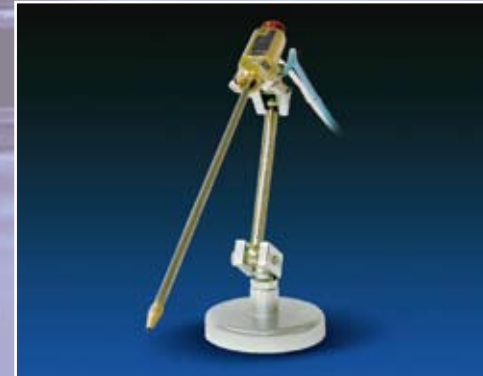
Precision spray nozzles to change the lubrication pattern

Minimum quantities (< 0.05 g/m<sup>2</sup>) can be applied



### Nozzle girders

Used in spray chambers



### DUSTY

Coaxial spray head with adjustable oil quantity and spray air

As accessories we carry magnetic stands and 4-setting ball and socket joint holders for the exact positioning of the nozzle

# Electronic controls

Certified in accordance with ISO 9001:2008

## RAZIOL® electronic controls

State-of-the-art electronic systems control RAZIOL lubrication units.

- ✓ Optimal oil dosage
- ✓ Reliable oil monitoring
- ✓ Automatic filling
- ✓ Can be adjusted to the speed
- ✓ Touchscreen for ease of use



- **ELS 2000 for roller lubricators and tool lubrication**
  - Activation of air and oil valves depending on machine cycle
  - Adjustable delay and lubrication time
  - Activation of a refill pump to prevent damage caused by lack of oil



- **EBAD 3000 for lubrication units**
  - Separate dosing for several lubricating points
  - The oil stock with automatic refill can be monitored from the barrel or the circular pipeline
  - Operated via touchscreen
  - Multilingual menu navigation
  - Reliable operation and easy to service



- **EBADE for roller lubricators and tool lubrication**
  - Advancement of the ELS 2000 with the function of separate activation of valves for the top and bottom surface of materials
  - Comfortable monitoring of media supplies
  - Avoidance of tool damage caused by lack of oil through the use of the machine output stop



- **SPS 4000 (Beckhoff/VISU)**
  - Control of the mechanical processes of the unstacking and roller table units and all the lubrication tasks such as partial lubrication and the monitoring and controlling of components involved with the spray medium
  - Interbus/Profibus port
  - Operated via commercial PC with touchscreen
  - Multilingual user interface



# Dosing systems

Certified in accordance with ISO 9001:2008

## RAZIOL® dosing systems

The integrated control unit, pressure reservoir and manifold in RAZIOL dosing systems allows the exact and reproducible medium supply of roller lubricators and other lubricating points.

- ✓ Cycle or time-dependent lubrication
- ✓ Infinitely adjustable oil quantity
- ✓ Comfortable monitoring of media supplies
- ✓ Maximum lubrication performance at minimum lubricant application
- ✓ Precise, reproducible and accurate lubrication



### Electronic dosing systems for contact lubrication

- Consisting of pressure reservoir, oil manifold and open-loop control electronics such as EBADE D-010 VBMV-2
- Lubrication is accurate, reproducible and cycle or time-dependent



### DUSTY minimum quantity lubrication system

- DUSTY is a special mixer unit in which RAZIOL minimum quantity lubricants such as D CLF 40 can be treated with air
- The fine oil mist it creates is fed to the tool via easily set up nozzles. It ensures homogeneous and clean lubrication, for example during thread rolling, turning, milling, cutting and other high-speed machining processes



### Electronic dosing systems for non-contact lubrication

- Consisting of pressure reservoir, valve control unit and open-loop control electronics such as the EBAD 3000 D-010 stand
- Lubrication is accurate, reproducible and cycle dependent
- The oil quantity is infinitely adjustable



### LAMA 4000 minimum quantity lubrication system with EBAD 3000

- The LAMA 4000 spray nozzle facilitates drop application or spray lubrication of tools
- All lubrication parameters such as oil quantity or lubrication duration are set on the EBAD 3000 electronic controls. Several spray nozzles can be connected by using special manifold units

# Lubricants

Certified in accordance with ISO 9001:2008

## RAZIOL® lubricants

Our product range includes lubricants for all fields of non-cutting metalworking and minimum lubricant technology. Chlorine free, partially evaporating stamping, precision blanking and drawing oils guarantee a high degree of environmental compatibility and long tool life. High-performance, highly stable, free from secondary amines concentrates for water soluble cooling lubricants top off the product range.

- ✓ Performance enhancing
- ✓ In part free from mineral oil
- ✓ Good wetting and adhesion capabilities
- ✓ In part water soluble
- ✓ Thermostable

### • Evaporating chlorine free stamping and drawing oils (e. g. CLF 11)

Fast evaporating with low aromatic content isoparaffins; with performance enhancing additives

**Applications:** Steel, Al, yellow metals and E-contacts

High lubricating and pressure absorbing capabilities. Longer tool life, improved surface finish of processed workpieces

### • Chlorine free forming oils (e. g. CLF 100)

Mineral oils or synthetic/native esters with EP additions, low oil mist; low in aromatic content

**Applications:** Steel, Al, yellow metals, stamping, drawing and deep drawing

### • Chlorine free, fine blanking oils (e. g. CLF 150 F)

Good wetting and adhesive properties, cutting strength up to 12 mm; low in aromatic content

**Applications:** Steel

### • Hydroforming external lubricants (e. g. IHU 150)

Virtually thermostable, good wetting and adhesion properties; longer tool life of stamping and forming tools

**Applications:** Hydroformings in part especially for processing brass parts

### • New product series

(RAZIOL CLF 12 - Evaporating chlorine free stamping and drawing oils)

The newly developed products of the RAZIOL CLF 12 series (same applications as for CLF 11) have been specifically designed to meet the requirements of the EC Solvents Emissions Directive and, according to the 31st German Ordinance on Implementing the Federal Pollution Control Act are not considered to be "volatile organic substances"

### • Chlorine free, water soluble lubricants (e. g. ECLF 100 N)

Chlorine free, water soluble, free from secondary amines

**Applications:** Steel, Al, yellow metals, zinc coated sheet metals

### • Chlorine free cutting oils (e. g. CLF 19 B)

Low in aromatic content, powerful mineral oils; longer tool life, improved surface finish of workpieces

**Applications:** Steel, yellow metals, stainless steel, Al

### • Minimum quantity lubricants (e. g. D-CLF)

Native, synthetic fatty acid esters or fatty alcohols

**Applications:** Steel, Al, yellow metals, thread rolling of high-strength alloys  
High cutting performance, above-average tool life

### • Special purpose products

Tool feed spray, cutting oil spray, special cleaners, hand protection lotion, surface protection shield spray

Do visit our separate homepage at

[www.drylub.de](http://www.drylub.de)

You'll find out everything about lubricants and the latest technologies from RAZIOL Lubrication.



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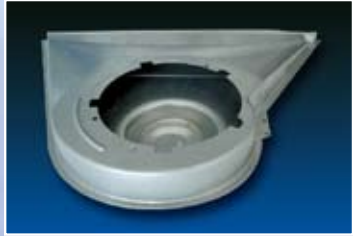
# RAZIOL® Drylub

## RAZIOL®-Drylub

RAZIOL Drylub is a forming lubricant free from chlorine and mineral oil based on a high-molecular polymer dispersion and Teflon.

RAZIOL Drylub masters challenging deep-drawn jobs with complicated geometries.

Successful forming of Al, magnesium, steel, high-strength steel, stainless steel and copper.



## Beneficial properties

- Not a dangerous medium
- Not a hazardous substance
- Free from mineral oil
- Chlorine free
- Free from heavy metal
- Can be applied at room temperature
- Coated blanks can be immediately stacked and unstacked
- Can be painted and enamelled without degreasing in many cases
- Considerable reduction in coating applied
- Cost reduction through less or no degreasing in some cases
- Successful forming of complicated geometries

## Applications

Black plate, coated sheets, aluminium, high-strength steels (e.g. H 400)

## Confirmed by large-scale tests

e. g. in tests with AEG-Rothenburg: Reduction in consumption of up to 1/200 of the previously applied amount of lubricant.

Previously with oil: 3,4 g/m<sup>2</sup> - Now with Drylub: 0,015 g/m<sup>2</sup>

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- ✓ Reduction in costs
- ✓ Environmentally friendly
- ✓ Reduction in coating applied
- ✓ Free from chlorine and mineral oil
- ✓ Successful forming of complicated geometries

## Surface coating / Cathodic dipping tolerance

Enamelling or degreasing processes approved by AEG Electrolux / Various varnish manufacturers verify the cathodic dipping tolerance.

## State-of-the-art Drylub application ensures efficiency

Space-efficient lubrication units feature high speeds; high dispersal with partial lubrication.



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# Extraction units

## Extraction units

Turnkey ready systems, begin from the basic planning to the after sales service.



### Filter procedure and products

#### Drying filtration

- Cartridge filter
- Bag filter
- Multi-function filter
- Disk filter
- Suction cabinets

#### Wet filtration

- Venturi washer
- Spin washer

#### Oil/emulsion mist vacuum

- Oil mist filter
- Oil mist cartridge filter
- electrostatic filters

#### Adsorbtion

- Solids absorber

#### Other

- Collection elements
- Control design
- Piping construction
- Cabinets

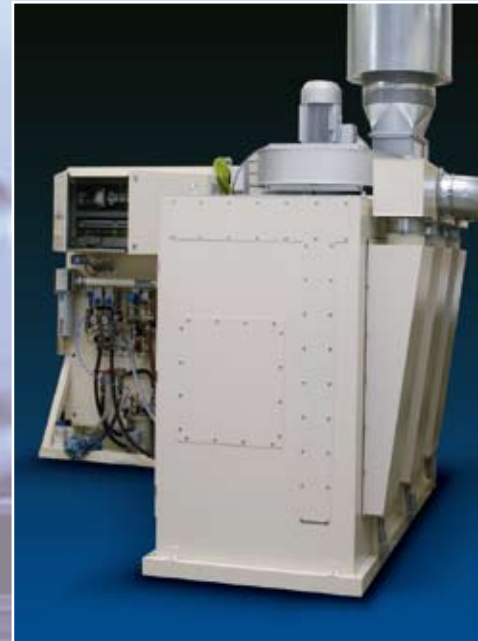
Certified in accordance with ISO 9001:2008

✓ Oil / emulsion mist separators

✓ Cartridge filter to eliminate welding smoke, abrasive dust etc.

✓ Multi-function filter for very fine particulate which is difficult to separate

✓ Explosion-proof oil mist separator in accordance with ATEX



### Applications

- Automotive
- Metalworking
- Laser/Pharmaceutical technology
- Steel industry
- Foodstuffs industry
- Plastic/rubber industry
- Paper industry
- Disposal/recycling
- Building materials/stones/earth