Forming of tubes, gear teeth and rods
(internal and external machining)
Application: Axial forming of vehicle shafts with built-in minimum-quantity lubrication

- Lubricant: free from chlorine and heavy metals for highest dynamic stresses
- Nozzle ring: external lubrication
- Atomizing nozzle: internal lubrication
- Minimum application of lubricant
- Improved tool service life
- High throughput
- High manufacturing quality
- Higher production capacity

Lubrication of knives on a slitting installation in service centre

- Finest metered oiling of each cutting knife
- Result: improved cutting accuracy (tolerances)
- No generation of burrs
- Increased number of cuts
- Improved service life
- Shorter set-up time
- Improved manufacturing quality
- Higher production and throughput capacity

Your Benefits

- **Tools**
  Longer tool service life, reduced tool friction.

- **Workplace and working environment**
  Cleaner workplace, dry workpieces.

- **Machines**
  Shorter downtimes thanks to less maintenance and shorter set-up times.

- **Production**
  Production rise through increased cutting parameters and tool service life.
  Improved manufacturing quality.

- **Cleaning**
  Costs for cleaning workpieces, machines and their immediate environment can be considerably reduced.

- **Safety**
  Reduced risk of accident thanks to clean, oil-free floors, no skin diseases caused by bacteria or fungus infections, none of the resulting staff failures.

- **Economy of operation**
  Shortest pay-off time, often less than a year.
  Lubricant savings of up to 80%.
  Profitable recycling of raw materials.

Our Adress

Wir sprühen vor Innovation.
Control system and visualization

**SPS Control system**

**Touchscreen**

**Easy operation through direct input**

**Fast and immediate treatment**

**Visualization**

**Partial, sectorial or extensive oiling zones**

**Differing oiling patterns on upper and lower side of steel strip or plate**

**Applied quantities 0.2 – 5 g/m²**

**Layer thickness 0.2 – 5 µm**

Nozzle module (50/35)

- with built-in shut-off valve for air and liquid, electric or pneumatic drive, at choice

**Design:**

- Two microjet® dual-phase nozzles
- with wide spraying attachment, spraying width 100 mm
- Electric drive

**Partial oiling (spraying patterns)**

**Housing** with built-in nozzle modules for upper and lower side

**Spraying width per module 50 mm**

**Options:**

- Fully telescopic for maintenance work
- Built-in heating system for high-viscosity wax-based lubricating media.

**Applied quantities 0.2 – 5 g/m²**

**Layer thickness 0.2 – 5 µm**

**SURFACE OILING IN FORMING PRACTICE**

The microjet®-minimum-quantity lubricating technique allows to oil steel strips, sheet steel, tubes, wires and sectional steel through finest oil metering prior to the forming process.

To avoid situations where wear and tool rupture during the forming operation the surface of tools and workpieces has to be previously oiled with an accurate water-thin film of a suitable lubricant.

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The microjet®-minimum-quantity lubricating technique simultaneously meters out and atomizes the liquid into the finest particles using compressed air. This generates a fine uniform mixture, the microscopic particles of which penetrate deep into the surface of the forming area and extremely well adhere to it.

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