

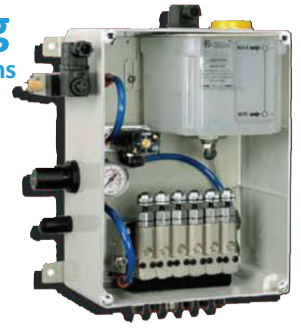


LUBETOOL Micro – Lubrication & Cooling

Cooling Systems for Metal Cutting Operations & General Lubricating Applications

Micro output vegetable oil lubrication cooling system replaces messy flood coolant systems and water soluble coolant spray systems: LUBETOOL produces finer machining finishes as well as extended tool life for reduced maintenance in the metal cutting process. Systems also deliver controlled oil feeds for improved lubrication situations.

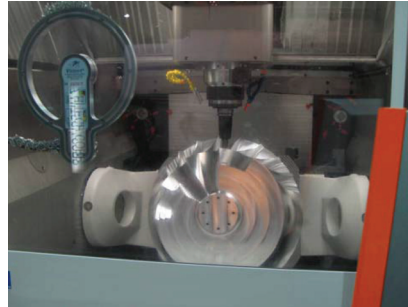
LUBETOOL's individual positive displacement injector's discharge closely controlled fluid for atomization at jet tips for pinpoint delivery. Single and multiple outlet models are available.



LUBETOOL totally enclosed cabinet model with 6 injector outlets



CNC Automatic Vertical and Horizontal Machining Centers with Loc-Line flexible nozzle



Vertical Milling Machine with single and/or double jets



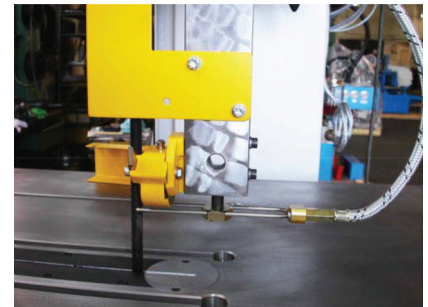
Punching Operation and Strip Lubrication



Circular Saw with special saddle spray adapter



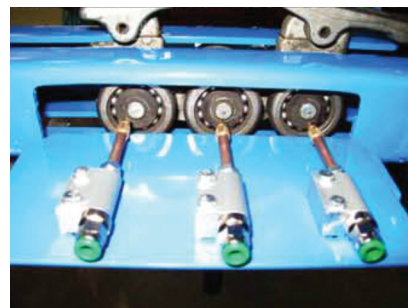
Horizontal Saw and special saddle spray adapter



Vertical Band Saw with saddle spray blade adapter



Rolling Operation with dual Loc-Line flexible jets



Mono-rails and Conveyors programmed deliveries from injectors



Chain Lubrication single or multiple strands



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LUBETOOL Micro – Lubrication Systems

The **LUBETOOL** assembly comprises an adjustable pneumatically operated pumping element (0mm³ to 41mm³ with 23 distinct settings). A pneumatic timer (frequency generator with wide control range (0 to 60 strokes per minute). Durable reservoirs in various sizes. Co-axial air/tubing with nozzles and special applicators.

Optional on some models: Air filter regulator, operational Solenoid valve, low level switch

Features

- Non pressurized reservoir
- Positive displacement outputs
- Hundreds of combinations available

Advantages

- Operational Safety
- Accurate deliveries
- Broad application range

Benefits

- Versatile applications
 - No Mess
 - Problem Solver

• Metal Cutting Operations with LUBETOOL and Eco-Friendly Vegetable Oil Natural 77 offers these advantages:

Improves Surface finish
 Extends Tool Life
 Eliminates Flood Cooling Cleaner Working environment
 Eliminates Oil Residue
 Eliminates Clean-up Expenses for milling, drilling, boring, tapping
 broaching, metal forming, shearing and punching operations



*Self-contained
LUBETOOL assembly*

• Natural-77 Vegetable Oil Lubricant/Coolant

Improves working conditions and cutting tool performance of mineral oil traditional coolants. Comprised of synthetic esters derived from natural origins. Odorless, light colored wholly biodegradable and non-toxic with high lubricity and EP (extreme pressure) characteristics reduces smoking and seize-up.
Supplied in 5 liter containers.

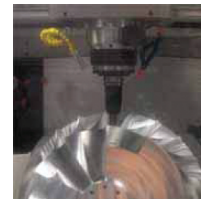


*Pinpoint control
of Micro-Droplets
eliminates
hazardous misting*

• Chain Lubrication/General Industry

Ideal for chain lubrication and industrial wetting applications, **LUBETOOL** adapts to many varied applications, including roller chains, mono and bi-rail conveyors, tube forming equipment, and stock lubrication

Learn more about **LUBETOOL** by downloading their catalog now



Milling Application



Loc-Line Jet with magnetic base



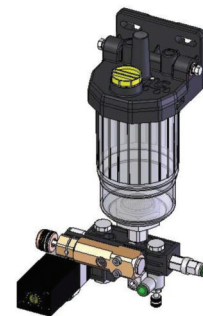
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LUBETOOL

Metal Cutting Operations, Near Dry Machining with Vegetable Oil (Green Machining)



LUBETOOL Assembly, 0.5 liter reservoir with one injector and frequency generator

• Minimum Quality Lubrication (MQL) Application Data and Techniques:

Direct small controlled oil amounts to the tool work-piece interface.

- Typical inlet air operating pressures: 5 to 10 bar,
- Adjustable Injector Output/Stroke: 0 to 40 mm³
- Injector operating frequency: 3 seconds to 1 cycle per minute

LUBETOOL air carrier accurately delivers vegetable oil in spray micro mist droplets right to the tool cutting edge for extended tool life, improved finishes and faster operations.

• Metal Machining Operations

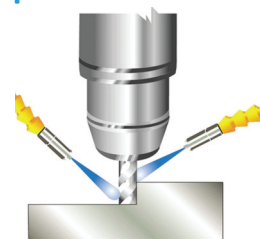
Locate cone jet nozzle close to the contact point between work and the tool. Note: Only a small amount of vegetable oil is required for successful results.

• Cutting/ Sawing Operations

Always direct nozzle lubrication discharge nozzle into the clearance crevice

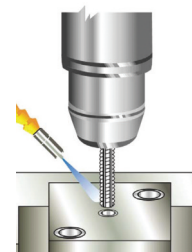
Notes:

- Number of nozzles used in set up depends on materials and processing speeds- use tables as a guide only.
- Increasing delivery amounts does not improve results – small discharges are better – **use drops not liters!**
- Rigid and flexible LUBETOOL jets for stationary and flexible mounting (magnetic jet holder) are available.
- A selection of nozzles are offered: flat discharge nozzles for lower speeds and cone shaped nozzles for high speed operations



Milling Operation

TOOL FROM 1 MM TO 12 MM	1 NOZZLE
TOOL FROM 13 MM TO 40 MM	2 NOZZLE
TOOL FROM 41 MM TO 100 MM	3 NOZZLE
TOOL FROM 101 MM TO 240 MM	4 NOZZLE



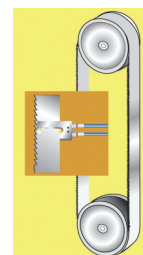
1 - Tapping



2 - Drilling-Boring

TOOL FROM 3 MM TO 10 MM	1 NOZZLE
TOOL FROM 11 MM TO 20 MM	2 NOZZLE
TOOL FROM 21 MM TO 40 MM	3 NOZZLE
TOOL FROM 41 MM TO 60 MM	4 NOZZLE

TOOL FROM 1 MM TO 12 MM	1 NOZZLE
TOOL FROM 13 MM TO 24 MM	2 NOZZLE
TOOL FROM 25 MM TO 48 MM	3 NOZZLE
TOOL FROM 49 MM TO 60 MM	4 NOZZLE



1 - Band Saw



2 - Circular Saw

BLADE FROM 6 MM TO 34 MM	1 INLET – 3 OUTLETS
BLADE FROM 41 MM TO 80 MM	2 INLETS – 5 OUTLETS

DISK FROM 175 MM TO 225 MM	1 INLET – 3 OUTLETS
DISK FROM 250 MM TO 400 MM	2 INLETS – 5 OUTLETS



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