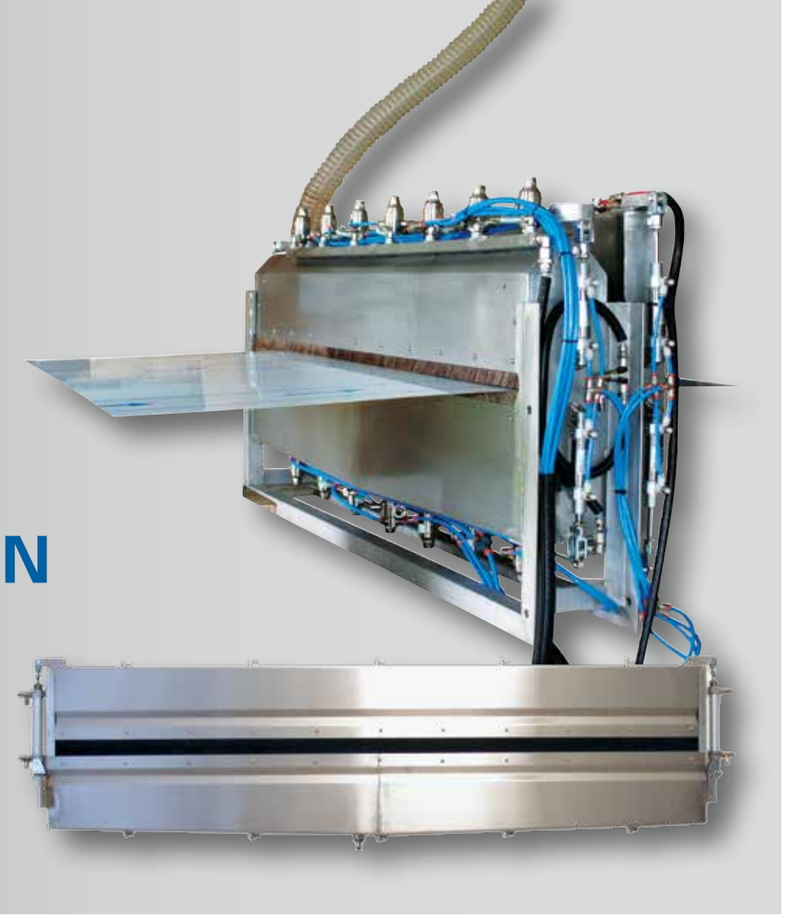
AUTOJET®
LUBRICATION SYSTEMS

HIGHLY EFFICIENT METHOD OF APPLYING LUBRICANTS AND CORROSION PROTECTION FLUIDS

Spraying Systems Co.®
Experts in Spray Technology

AUTOJET® LUBRICATION SYSTEMS



AutoJet Lubrication Systems provide a highly efficient method of applying lubricants and corrosion protection fluids. In addition to lubricating blanks, coils, pipe sections and stamping or forming tools, wires and bars can also be treated.

We know how important it is – especially today – to reduce production costs and our worldwide leadership in spray technology can help you operate more efficiently and save money. Precise control of lubricating applications can reduce oil consumption by up to 90 % and can eliminate time-consuming cleaning of parts.

Both systems consist of a **base unit** and a **coil lubricator.** An optional filter unit prevents air containing oil from polluting the surrounding air.

The **base unit** consists of an air-operated diaphragm pump which draws the lubricating fluid from the container through a suction filter. Lubricant is pushed through the lines to the spray nozzles mounted in the coil lubricator using low pressure. Double air jets distribute the lubricant over the work piece in a uniform film.

The **coil lubricator** is an effective solution for the lubrication of bands in automatic presses. Due to the sturdy stainless steel construction it is also able to withstand heavy loads. For band widths between 100 – 1,600 mm. Pneumatic lifting cylinders open the coil lubricator – fixed versions are also available. The coil lubricator is fitted with a return line with an optional filter.

FUNCTIONAL DIFFERENCES

Type L210	Type P400
For low-viscosity media	For all types of viscosity media (up to 600 cSt.)
Airless nozzles (hydraulic spray)	External mix air atomizing spray

FEATURES & BENEFITS:

Exact metering of the lubricant guarantees absolute repeatability: **L210:** precise indexing of pumps **P400:** precise air pressure control
Optimum distribution of the lubricating fluid on the coil (top, bottom, both sides)
Easy to maintain due to pneumatic lifting cylinders
Quick and easy assembly
No misting or pollution of the work environment
Optional installation of additional nozzles for spot lubrication of critical points
Solenoid valves direct the return flow of different lubricants to the proper container
Surplus amounts of lubrication oil are returned to the supply container
Containers are non-pressurized and can be filled during operation
Effective full-flow filters guarantee that no contaminants are allowed to enter the pump or the nozzles
Easy change-over between various lubricants

NOZZLES FOR TYPE P400:

The P400 lubrication system uses air atomizing spray nozzles to apply high viscosity media (more than 600 cSt). All nozzles have a needle which precisely opens and closes the nozzle with each spray pulse and which effectively cleans the orifice from any residue or debris.

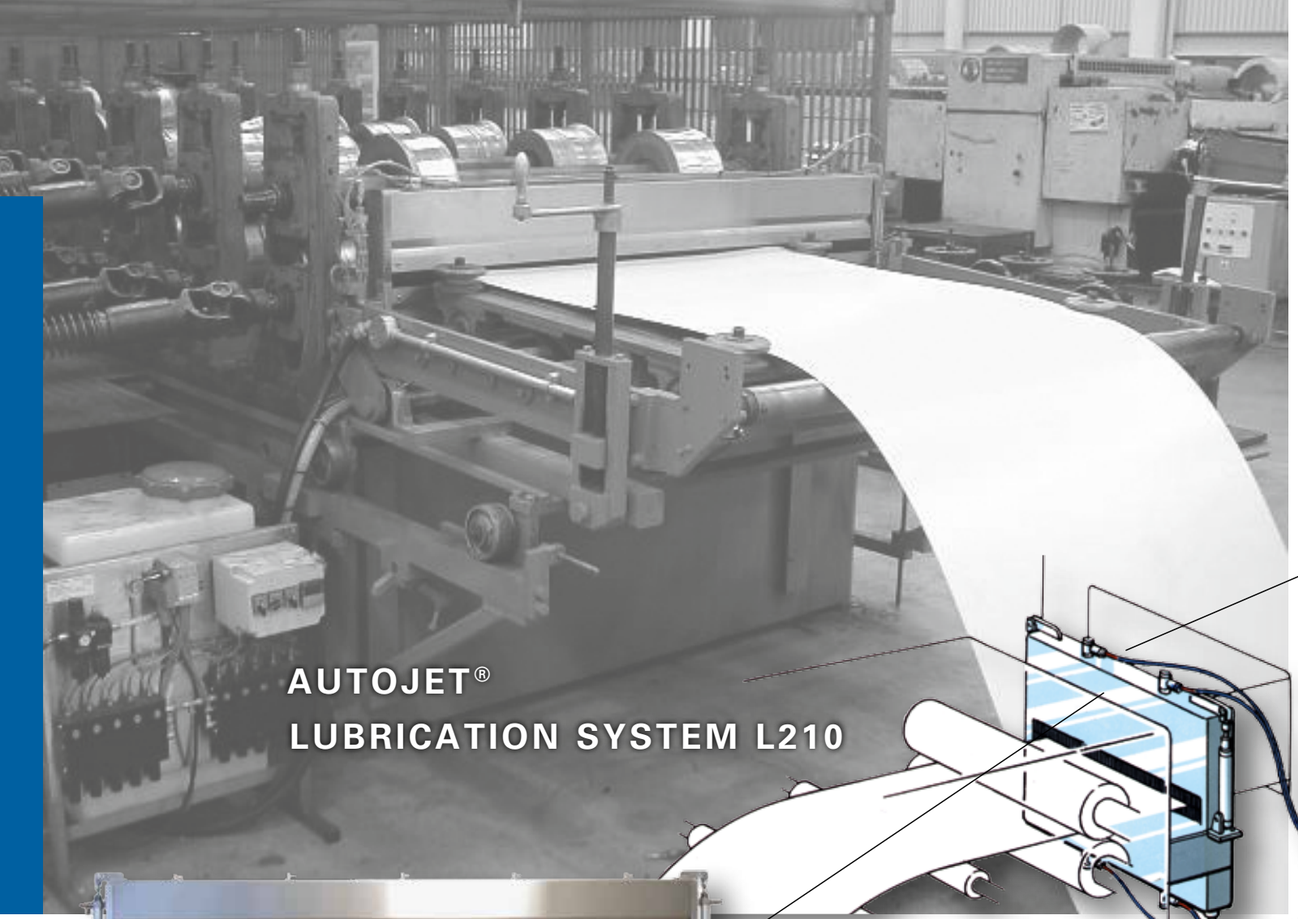
The nozzles are air-controlled and all circuits can be controlled independently. This allows exact control and repeatable metering of the circulated oil and provides full control over the applied amount and the thickness of the oil/lubricant layer.

NOZZLES FOR TYPE L210:

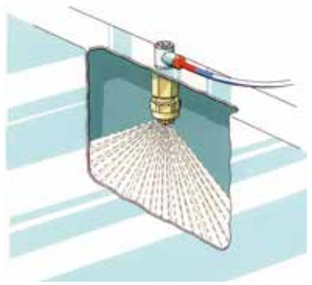
The L210 lubrication system uses airless nozzles to apply low-viscosity media. Due to their flat spray pattern the nozzles cover a substantial width and are thus very economical.

COMBINED UNIT P400/L210:

- Perfect solution if both high-viscosity oils (e.g. for deep drawing) and emulsions, thin-fluid or volatile vanishing oils are used
- Units work independently of one another – no intermixing of lubricants
- Simultaneous control of both units reduces set-up times to a minimum and facilitates the staff's work



AUTOJET®
LUBRICATION SYSTEM L210



SPRAY NOZZLE

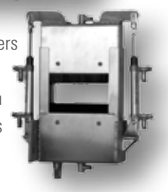
Flat-spray nozzle in the coil lubricator

TIMER AND CONTROL UNIT

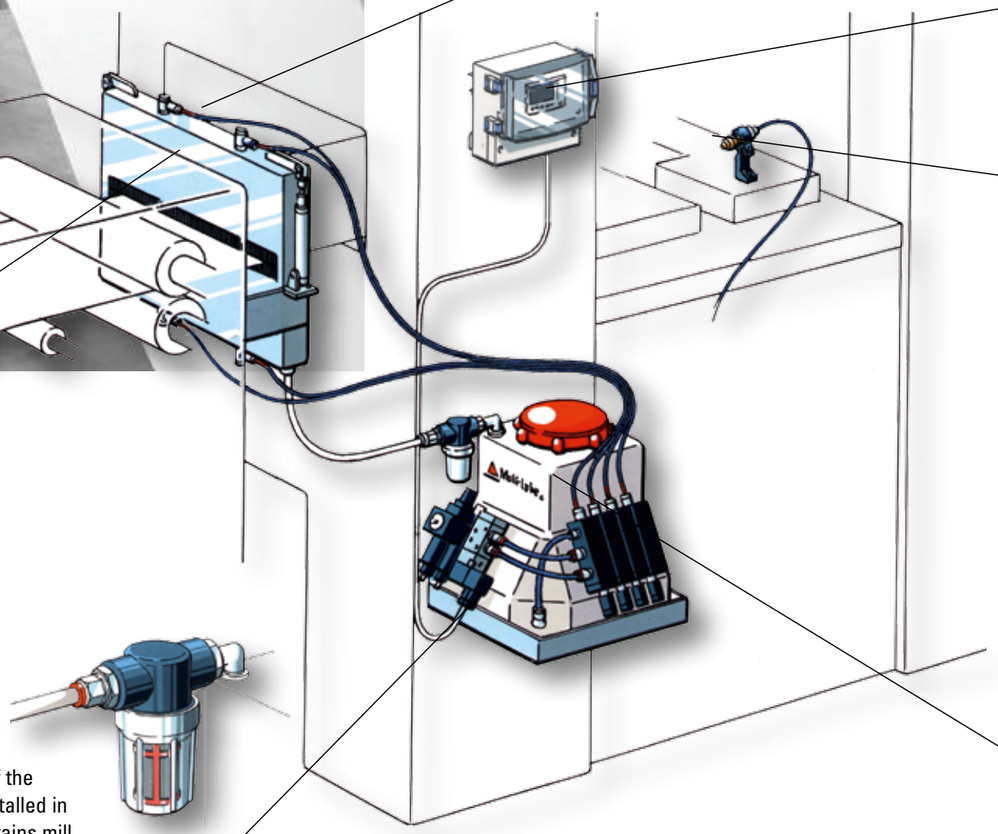
Feed lengths over 100 mm require several lubrication pulses per stroke. The T100 timer/counter unit allows up to 10 lubrication pulses per second.

High-speed presses or similar applications do not need a lubrication pulse for each stroke. The T100 control unit features a preselection counter which triggers a lubrication pulse once the selected number of strokes is reached. This feature is particularly useful for roll-forming applications in order to ensure constant lubrication regardless of band/strip speed.

Coil lubricator, 1,500 mm in width with 10 spray nozzles and lifting cylinders



Coil lubricator, 200 mm in width with 2 spray nozzles and lifting cylinders



ADDITIONAL NOZZLES

Lubrication of critical points, e.g. a single punching tool, can be effected using additional nozzles. The nozzles are available with a magnetic foot that may be mounted directly onto any base or may be easily built into a tool. To create a suitable spray pattern, a large variety of nozzle inserts with solid stream, hollow or full cone spray patterns and various spray angles are available. Additional pumps and nozzles can easily be retrofitted.

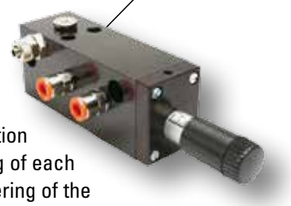
COIL LUBRICATORS

The coil lubricator is placed between the feeder and the press. In the coil lubricator, the lubricant is evenly distributed over the band. Excessive oil is contained in the coil lubricator and returned to the supply container, preventing contamination of the surrounding area. Flat spray nozzles evenly and economically cover the full width of the band. It is possible to design coil lubricators for a wide range of widths. Pneumatic lifting cylinders open the coil lubricator for maintenance purposes or for feeding the band. On request, they can also be made in a fixed configuration.

To retain the oil in the lubricator, brush lists are fitted on the inlet and outlet sides. For an optimized distribution of the lubricating fluid on the band it is possible to equip the lubricators with spring loaded felt strike-off units on the outlet sides.

RETURN LINE FILTER

To prevent contamination of the return flow, a strainer is installed in the oil return line, which retains mill scale and dirt.

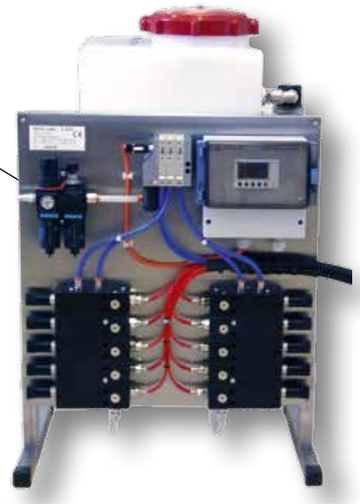


PUMP L210

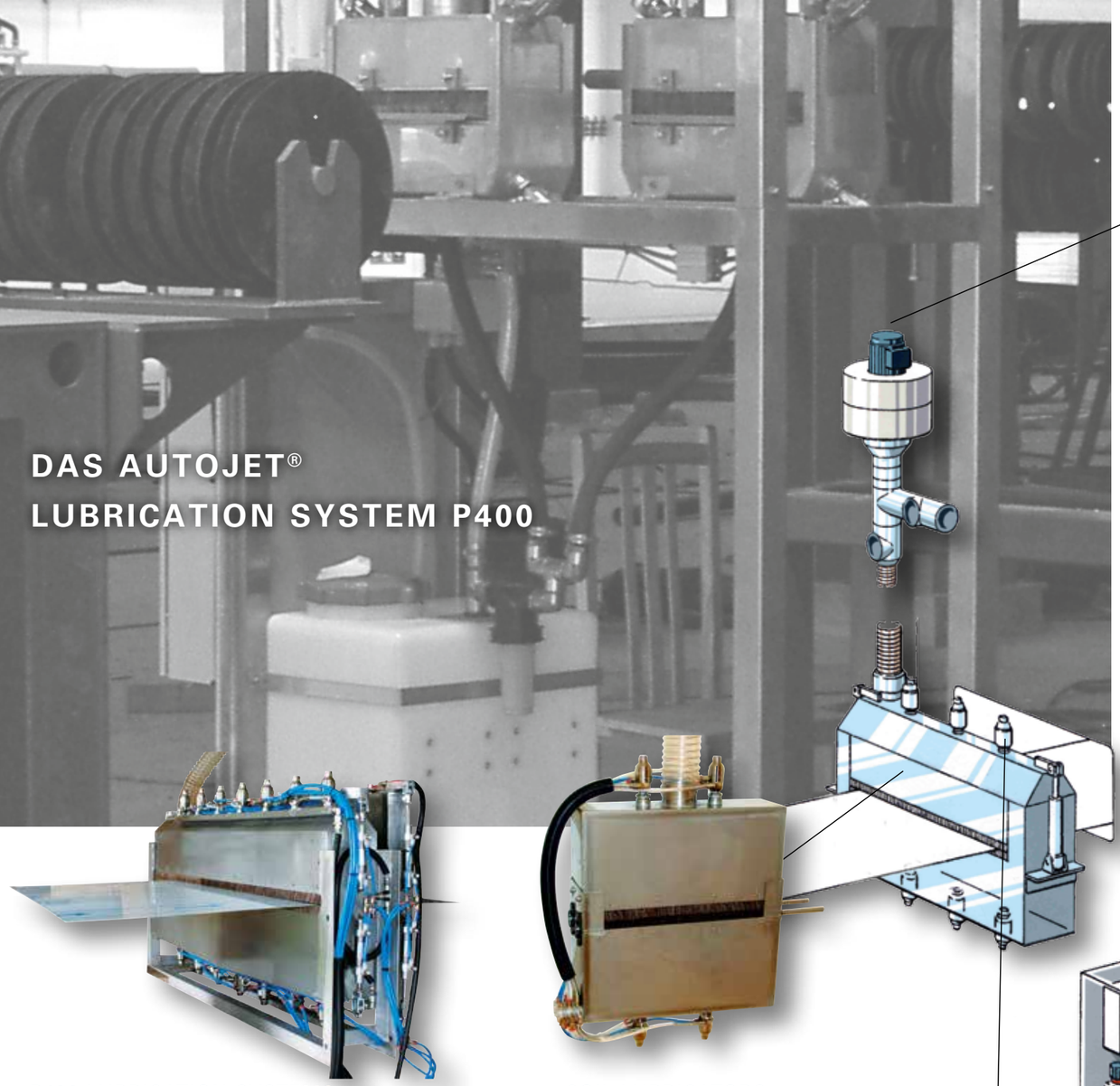
Type L210 is a high-pressure pump designed for the application of low-viscosity fluids. Indexing of each pump allows for accurate metering of the amount of lubricant applied to each lubrication point.

BASE UNITS

The base units are available in a variety of sizes with containers from 0.5 to 35 liters. When different types of lubricants are used, several containers can be installed. Electro-magnetic valves direct the return flow of surplus lubricant to the proper container.



DAS AUTOJET®
LUBRICATION SYSTEM P400



P400 LUBRICATION SYSTEMS

are mainly used for the application of high-viscosity lubricants. The system's application flexibility is further enhanced by the fact that it is possible to apply a very thin, even film of lubricant. Precise control of lubrication is critical, especially for deep-drawing applications.

When used in combination with a powerful spray controller, recipe handling is available to ensure optimal fault-free production.

COIL LUBRICATORS

can be made in any width from 100 mm. They are available as fixed version or with lifting cylinders for opening the top part. To allow contact-less feeding or pulling through of the band/strip, it is also possible to simultaneously open the top and bottom parts.

SPRAY NOZZLES

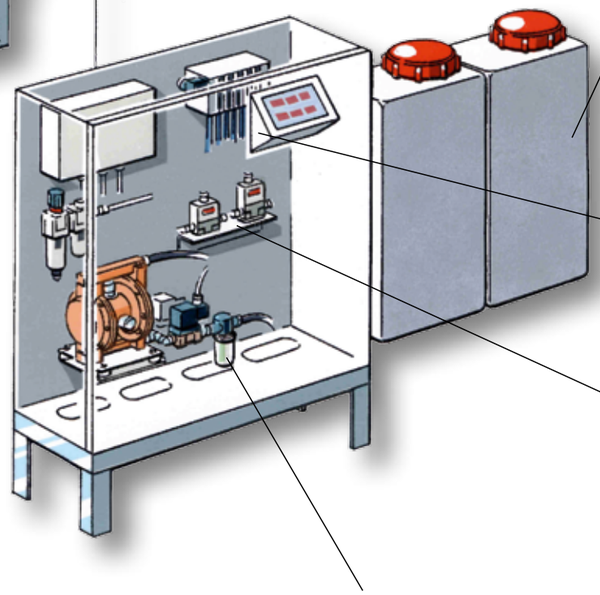
Using air atomizing nozzles with external mix air caps allows even high-viscosity lubricants to be applied precisely and evenly. The amount of lubricant is controlled by the pressure in the liquid circuit and may be adjusted with a high degree of accuracy.

AN OIL MIST SEPARATOR

ensures that no oil-mist is allowed to escape. This keeps the surrounding area dry and clean. Harmful aerosols are prevented from escaping into the surrounding air. Evacuating and cleaning the ambient air considerably improves the quality of air in the work environment.

PF250/3 APPLICATOR

for rust-proofing of wire. The P400 system is highly flexible and can be adapted to many different applications.



EFFECTIVE STRAINERS

in all suction lines prevent contamination of pumps and nozzles. This ensures a high degree of operational reliability.

THE BASE UNIT

is most commonly equipped with a 35 liter lubricant container. If multiple lubricants are required, the system can also be equipped with two, three containers or more. The proper container can be selected using a selected switch or via the spray controller. The containers are non-pressurized and can therefore be filled and serviced while the system is operating. A large lid facilitates filling. Automatic filling from drums or a central oil tank is also possible.

ELECTRONIC CONTROL

is effected by a special spray controller. Alternatively, connection to a central control system as a slave unit is also possible.

PRESSURE CONTROL

in the lubricant and compressed air systems is adjusted using regulators and pressure gauges. Automatic pressure control is achieved using an electronic control unit in combination with proportional valves.

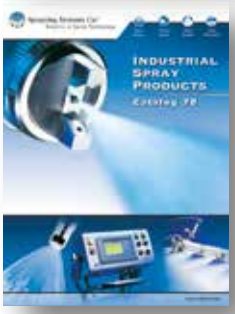
FURTHER REFERENCES

PRODUCTION OPTIMIZATION DUE TO PRECISE SPRAY CONTROL

BULLETIN 159

Provides an overview of the advantages of automated systems. This bulletin gives examples of how overspray can be minimized, product quality can be improved and production output can be increased.

INDUSTRIAL SPRAY PRODUCTS



CATALOG 70 M

Our full catalog with information about a wide variety of standard nozzles, accessories, technical data and application examples.

BULLETIN 1.616-GB

AutoJet® Spray System HP170
Heated System for high precision spraying on coils

BULLETIN 1.615-GB

Pressure PulseDetection for AutoJet Lubrication System L210

Spraying Systems Co.®
Experts in Spray Technology

Spray Nozzles · Spray Control · Spray Analysis · Spray Fabrication

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