

somai



TECHNOLOGY
JUST
FOR YOU

Including
**PRODUCT
CATALOG**

Getting to the heart
of lubricant dosing.



**Dosing
Technology**

somoi

straight

open

save

allaround

in time

The full dosing technology range

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Facts, figures, dates

50 years of machine construction

Over **10 years** of dosing technology

More than **200** feasibility analyses

Over **2500** applications

Countless **individual** special solutions and complete systems

1000s of **hours** spent on development and support

1000s of **kilometres** travelled to visit our customers

Partners all around the world

3 divisions

We are here for you.



 **Test
Technology &
Automation**

 **Dosing
Technology**

 **Worker
Assistance**

ABOUT / PHILOSOPHY



TECHNOLOGY
JUST
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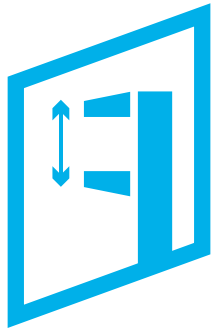
Philosophy

Quality starts before the valve. We begin at earlier stage and end at a later one.

For us, it is always all about the entire system, particularly the individual requirements of your application.

From the original idea to after-sales support, we are here for you at every stage.

The principle



Evaluate



Lubricate



Support







Evaluate



Dosing
Technology

EVALUATE





Turning ideas into results

To achieve your ambitious goals, you need professionals. We advise international industrial customers on how to plan and digitalise their production facilities.

Technical centre

WORKING TOGETHER. SAFELY AND RELIABLY.

Be it automotive, installation technology or engine construction, SOMA dosing technology is used in all sectors involving movement. Our fully-equipped technical centre is brimming with 50 years of high-tech experience in plant engineering and construction. Here you can experience and test your solution first-hand.

Advice

THINKING AHEAD TOGETHER.

Every company is different. You are in good hands with our industry experts and their international project experience. We provide practical, individual and personal advice. We work together to find a solution.

Concept

TRANSLATING IDEAS INTO RESULTS.

You have a job to do – we have the solution. We guide you through the planning stages needed for your ideas to take shape and deliver reliable results – in a smooth, scalable and sustainable process.



Just give it a go.
Visit our technical centre to discover
how your requirements can be met –
in a practical and personal way.



Technical centre


See for yourself how a solution is produced. We look forward to welcoming you.

- ✓ **Practical feasibility analyses with your sample parts**
- ✓ **Experience functionality and reliability for yourself**
- ✓ **The joint approach to finding the solution**

Advice

Benefit from experience

- ✓ **The right solution for every industry**
- ✓ **Real-life examples and sharing experiences**
- ✓ **Discuss and optimise solutions**

A close-up photograph of a person's hand holding a black plastic dosing device. A blue-handled screwdriver is being used to adjust a small screw on the device. The device has a complex internal structure with various slots and components. In the background, a technical drawing or schematic is visible on a table.

Success depends on the detail.
Get to the heart of every aspect of dosing.

Good planning is crucial: we create your individual solution without losing sight of what is essential.



Creation of concept

Finding the solution together.

- ✓ Documented results
- ✓ Functionality as planned
- ✓ Safe and reliable production processes







Lubricate

2024
product catalogue



**Dosing
Technology**

LUBRICATE



Systematic lubricant dosing

The full dosing technology range



Supplying

**QUALITY STARTS
BEFORE THE VALVE.**

PMP Precision Medium Pump
FHS Grease Handling System
DAS Pressure Balance System



Dosing

**GET TO THE HEART
OF IT.**

IDV Impulse Dosing Valve
VDV Volumetric Dosing Valve
RDS Rotation Dosing System
ISV Impulse Spray Valve
FGS Flexible Greasing System



Monitoring

**COMPLETE CONTROL
OF YOUR PROCESSES.**

DIS Dosing Inspection System





Supplying

A good supply is key to the solution.

The quality of components needs to be considered far in advance of dosing. Many things need to be taken into account right from the point at which sensitive lubricants are received and conveyed. SOMA GmbH provides complete systems to supply your dosing applications, all designed to protect materials.



Precision Medium Pump



Grease Handling System



Pressure Balance System



PMP Precision Medium Pump

Robust medium supply to greasing systems from containers



Benefits

Standard, intelligent pressure relief:

- ✓ Lubricant supply
- ✓ Integrated safety PLC for safe two-handed operation as per the Machinery Directive
- ✓ Low gear ratio for lubricant supply designed to protect materials
- ✓ Minimal material losses when starting the container due to optimised starter technology
- ✓ Communication interface to a higher-level control unit (PLC)
- ✓ Automated evacuation of the air under the follower plate
- ✓ CE-compliant operation also possible without enclosure

Application

- ✓ The pump is used wherever there are very stringent reliability, safety and traceability requirements. This includes production facilities for automotive and vehicle construction, consumer goods as well as energy plants and the environmental industry.
- ✓ Thanks to its low gear ratio, the pump prevents even sensitive media from flushing out at speed, and the intelligent control unit automatically relieves the static pressure in the medium supply when stationary for long periods.

Function

Based on the Follower Plate Principle with a very low gear ratio, the SOMA PMP Precision Medium Pump gently supplies your lubricant application with medium. The special follower plate geometry ensures rapid venting with very low loss levels. A safety PLC as per the Machinery Directive and a digital interface to a higher-level control unit deliver a safe and controllable process at all times.

Advice on lubricant supply

Do you have questions about lubricant supply? We are happy to help. Please contact me.

Your contact

Niklas Kinzl

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SOMA PMP Precision Medium Pump

SOMA barrel pump for container sizes of between 5 - 50 kg

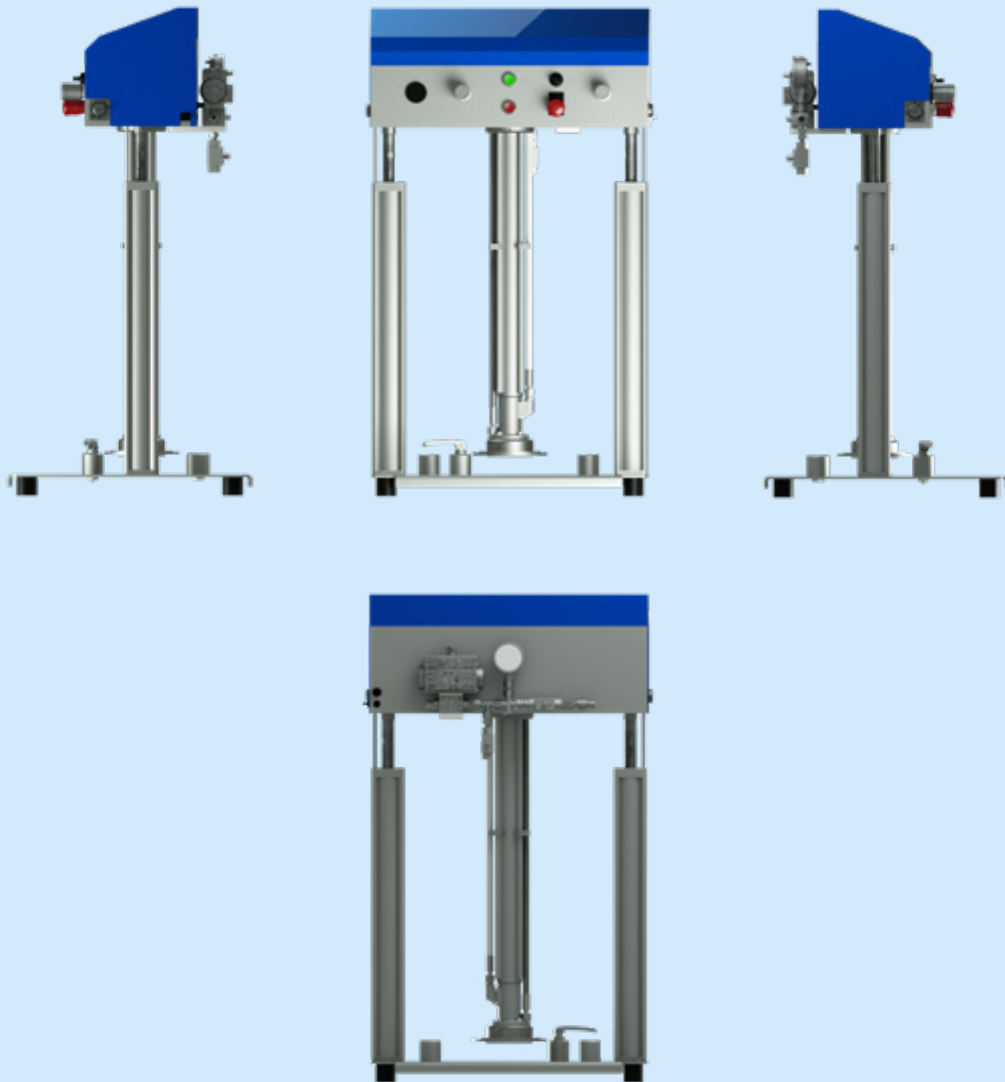
Including:

- ✓ Safe two-handed operation via safety PLC as per Machinery Directive
- ✓ Intelligent pressure relief of grease supply when stationary
- ✓ SOMA SPF standard dirt particle filter
- ✓ Digital interface for communicating with higher-level control unit
- ✓ Low gear ratio of 1:10 or 1:20 for gentle supply to application
- ✓ Minimum material loss when starting new containers due to optimised venting system and special follower plate geometry
- ✓ Sensors with variable adjustment for level monitoring



Technical data:

| | |
|--------------------------------------|----------------------------|
| Operating voltage: | 24 V DC |
| Control voltage: | 24 V DC |
| Preliminary fuse: | 2 A |
| Power consumption: | 40 VA |
| Hydraulic ratio: | 1:10 or 1:20 |
| Compressed air: | 6 bar |
| Air quality: | Dried and filtered air |
| Air consumption: | 80 l/min |
| Ambient air temperature (operation): | +15 °C – +40 °C |
| Air humidity (operation): | < 75 % (non-condensing) |
| Noise level: | < 70 dB(A) |
| Level of contamination: | 1 pursuant to IEC 60664- 1 |



SOMA high-pressure hose

R8 high-pressure hose with an internal diameter of 8 mm
 For supplying material between central supply or barrel pump and
 SOMA DAS Pressure Balance System and/or FHS Filling Station.
 Pre-assembled with straight Internal thread 16 x 1.5 / L10 connectors.
 Including 1/4" – L10 fitting for mounting on the FHS loading station.



FHS Grease Handling System

Supplying dosing equipment with industrial greases: in a reliable, clean, cost-effective way





Benefits of a Grease Handling System

- ✓ Decentralised storage and changing of grease containers
- ✓ Compact unloading stations take the place of barrel pumps in the production environment
- ✓ Short supply routes with low pressure designed to protect medium
- ✓ Dosing valves are constantly supplied with grease
- ✓ No interruptions to production required to change containers
- ✓ Clean production environment where grease does not have to be carried over
- ✓ No air entry into the lubricant system
- ✓ Automatic venting in disconnected state

Can be used to apply grease in

- ✓ production set-ups with more than one dosing application
- ✓ dosing cells and production lines
- ✓ cramped production environments

Function

The patented Grease Handling System (FHS) consists of replaceable grease storage containers, a central filling station and any number of decentralised unloading stations. Supply concept with numerous logistical and technical benefits, providing a cost-effective alternative to standard ways of supplying grease to dosing equipment.

Advice on lubricant supply

Do you have questions about lubricant supply? We are happy to help. Please contact me.

Your contact

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SOMA FHS-B

Filling station for the decentralised filling of SOMA FHS storage containers.

- ✓ Can be connected straight onto a barrel pump
- ✓ Pneumatic flat-face couplings are used to connect the FHS storage canisters to prevent air contamination
- ✓ Provides the barrel pump with compressed air and relieves the line when canisters are not being filled
- ✓ Can be mechanically coded to prevent mix-ups
- ✓ 24 V power supply unit included in scope of delivery (FHS-N)



Technical data:

| | |
|-------------------------|---|
| Dimensions (L x W x H): | 200 mm x 230 mm x 640 mm |
| Weight: | approx. 17 kg (excluding storage canister) |
| Voltage supply: | 24 V DC (via PLC interface, 7-pin BG1, pin 1) |
| Air pressure: | 6 bar – 8 bar |
| Air consumption: | 150 l/min depending on barrel pump |
| Compressed air hose: | 6 mm diameter |
| Type of grease: | NGLI 1-3 |
| Connector: | 1/4" bolted connection |
| Max. input pressure: | 60 bar |

SOMA FHS-E

Extraction station for SOMA FHS storage canisters for directly supplying dosing valves in the assembly system or at the manual workstation.

- ✓ Quick and clean canister changes thanks to pneumatic flat-face couplings
- ✓ Level monitoring which reports to the higher-level control unit at 15 % and 0 %
- ✓ Gentle supply of lubricant at system pressure
- ✓ Can be retrofitted with pressure booster for high-viscosity greases as an option
- ✓ Can be mechanically coded to prevent mix-ups



Technical data:

| Dimensions (L x W x H): | 200 mm x 230 mm x 640 mm | | | | | | |
|-------------------------|--|-------------------|--------|-------|-------|-------|-------|
| Weight: | approx. 17 kg (excluding storage canister) | | | | | | |
| Voltage supply: | 24 V DC (via PLC interface, 7-pin BG1, Harting industrial connector) | | | | | | |
| Air pressure: | 6 bar – 8 bar | | | | | | |
| Air consumption: | 10 l/min | | | | | | |
| Compressed air hose: | 6 mm diameter | | | | | | |
| Type of grease: | NGLI 1-3 | | | | | | |
| Grease hose: | Recommended lengths: (depending on dosing medium) | | | | | | |
| | <table> <tr> <th>External diameter</th><th>Length</th></tr> <tr> <td>10 mm</td><td>2.0 m</td></tr> <tr> <td>12 mm</td><td>2.5 m</td></tr> </table> | External diameter | Length | 10 mm | 2.0 m | 12 mm | 2.5 m |
| External diameter | Length | | | | | | |
| 10 mm | 2.0 m | | | | | | |
| 12 mm | 2.5 m | | | | | | |
| Connector: | 1/4" bolted connection or plug connector | | | | | | |
| Max. input pressure: | 6 bar / 14 bar | | | | | | |
| Max. output pressure: | Without pressure booster: 6 bar, with pressure booster: 12 bar | | | | | | |

SOMA FHS-S

Storage container for SOMA FHS Grease Handling System. Aluminium container with fold-up handle and a capacity of 3 litres. Can be mechanically coded to prevent mix-ups between different types of lubricant. Twin pistons to reliably keep lubricant and air separate.



Technical data:

| | |
|-------------------------|---------------------------------|
| Dimensions (L x W x H): | 135 mm x 135 mm x 410 mm |
| Maximum capacity: | 3.0 l |
| Weight (empty): | approx. 7.5 kg |

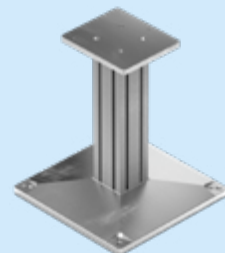
SOMA FHS-N

24 V power supply unit. Pre-assembled with plug to supply power to the SOMA FHS loading station.



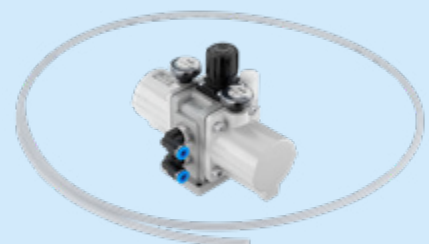
SOMA FHS-SF

Stable pedestal for ergonomic operation of the SOMA FHS loading and unloading station. Pedestal with a 400 mm x 400 mm base and height of approx. 500 mm. The base can be bolted to the floor through 4 holes. To simplify the process of changing canisters at SOMA FHS stations.



SOMA FHS-DV

Pneumatic pressure booster to increase output pressure at the SOMA FHS unloading station for high-viscosity greases. The compressed air supply is increased at a separate input of the unloading station. Includes high-pressure pneumatic hose (1.5 m) and fittings





SOMA FHS-FT10

Y piece to distribute the grease supply to two outlets.

Is fitted directly on the SOMA FHS unloading station. Suitable for 10 mm hoses.

Input - 1/4" external thread | Output – 2 x 10 mm hose connector



SOMA FHS-FT12

Y piece to distribute the grease supply to two outlets.

Is fitted directly on the SOMA FHS unloading station. Suitable for 12 mm hoses.

Input - 1/4" external thread | Output – 2 x 12 mm hose connector



SOMA FHS-FG10

Connector for the lubricant supply on one of the stations of the SOMA FHS Grease Handling System. Straight version, quick-release fastener, suitable for 10 mm hoses.

Input - 1/4" external thread | Output – 1 x 10 mm hose connector



SOMA FHS-FW10

Connector for the lubricant supply on one of the stations of the SOMA FHS Grease Handling System, 90° angle quick-release fastener, suitable for 10 mm hoses.

Input - 1/4" external thread | Output – 1 x 10 mm hose connector



SOMA FHS-FG12

Connector for the lubricant supply on one of the stations of the SOMA FHS Grease Handling System. Straight version, quick-release fastener, suitable for 12 mm hoses.

Input - 1/4" external thread | Output – 1 x 12 mm hose connector



SOMA FHS-FW12

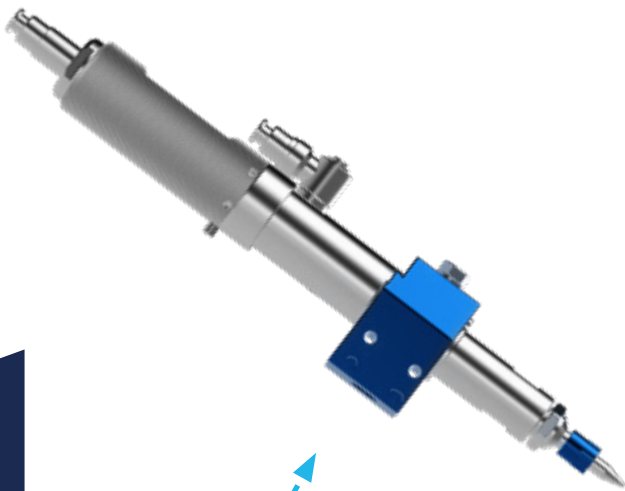
Connector for the lubricant supply on one of the stations of the SOMA FHS Grease Handling System, 90° angle quick-release fastener, fits 12 mm hoses.

Input - 1/4" external thread | Output – 1 x 12 mm hose connector



DAS Pressure Balance System

Dosing quality starts
before the valve





Benefits of a Pressure Balance System

- ✓ One unit, which both reduces system pressure and compensates for pressure fluctuations
- ✓ Compensation tank interrogated by a sensor
- ✓ Interface to higher-level control unit
- ✓ Integrated SOMA SPF particle filter
- ✓ Continuous supply of lubricant
- ✓ Even more safety with optional digital pressure switch SOMA DAS-DDW

Application

The SOMA DAS-120/12 is used whenever applications require the medium pressure to be reduced quickly to a level compatible with the material without any cascades.

No matter whether you are using a barrel pump or central supply, the SOMA DAS-120/12 supplies every dosing valve with constant pressure.

Function

The medium enters the compensation tank, which is interrogated by a sensor, via a pneumatic ball valve. Once the upper limit position is reached, the ball valve closes the supply.

This process is repeated once the lower limit position has been reached. The special function provided by the compensation tank allows the pressure at the output of the SOMA DAS-120/12 to be kept constant and the dosing valves to be supplied with medium.

Advice on lubricant supply

Do you have questions about lubricant supply? We are happy to help. Please contact me.

Your contact

Niklas Kinzl

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SOMA DAS-120/12 Pressure Balance System

- ✓ Pressure Balance System for supplying the dosing valves with grease free from fluctuations in pressure. Compensates for fluctuations in the lubricant supply and reduces the system pressure to a maximum output pressure of 12 bar
- ✓ Interface to higher-level control unit
- ✓ Integrated dirt particle filter to prevent damage in the Pressure Balance System or dosing valve
- ✓ Maximum input pressure: 250 bar
- ✓ Maximum output pressure: 12 bar
- ✓ M12/8-pin connection cable, 5 m cable length, open cable end included in delivery



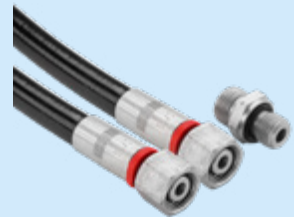
Technical data:

| Dimensions (L x W x H): | 375 mm x 125 mm x 290 mm | | | | | | |
|-------------------------|--|-------------------|--------|-------|-------|-------|-------|
| Weight: | approx. 9.3 kg | | | | | | |
| Voltage supply: | 24 V DC (via 8-pin M12) | | | | | | |
| Air pressure: | 6 bar – 8 bar | | | | | | |
| Compressed air hose: | 4 mm diameter | | | | | | |
| Dosing medium: | NGLI 1-3 | | | | | | |
| Input: | M16x1.5 L10, approved for pressure of connected barrel pump, recommended length: 3 m | | | | | | |
| Output: | Recommended hose length (depending on dosing medium): | | | | | | |
| | <table> <tr> <th>External diameter</th><th>Length</th></tr> <tr> <td>10 mm</td><td>2.0 m</td></tr> <tr> <td>12 mm</td><td>2.5 m</td></tr> </table> | External diameter | Length | 10 mm | 2.0 m | 12 mm | 2.5 m |
| External diameter | Length | | | | | | |
| 10 mm | 2.0 m | | | | | | |
| 12 mm | 2.5 m | | | | | | |
| Max. input pressure: | 250 bar | | | | | | |
| Max. output pressure: | 12 bar | | | | | | |



SOMA high-pressure hose

R8 high-pressure hose with an internal diameter of 8 mm.
For supplying material between the central supply or barrel pump and the SOMA DAS Pressure Balance System and/or FHS loading station.
Pre-assembled with straight Internal thread 16 x 1.5 / L10 connectors.
Including 1/4" – L10 fitting for mounting on the FHS loading station.



SOMA DAS-DDW

Digital pressure control device to monitor output pressure on the SOMA DAS-120/12.
Pressure control device is fitted in the place of the analogue pressure manometer.
Power supply and feedback via DAS to higher-level control unit. Adjustable limit values.



SOMA DAS-K

M12/8-pin connection cable, cable length: 5 m, cable end open.



SOMA PKH

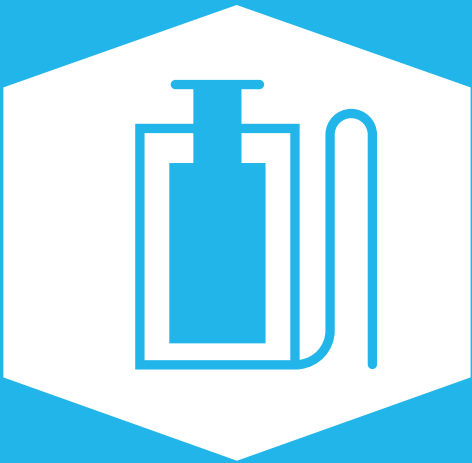
Pneumatic ball valve to control the inflow of medium in SOMA DAS-120/12. Spare part should damage occur.



SOMA SPF

Dirt particle filter to prevent foreign bodies from entering the grease supply.
Replacement filter for SOMA DAS-120/12 Pressure Balance System.
Can, however, also be retrofitted in older systems. Can also be used in the infeed line of the SOMA FHS Grease Handling System.





SUPPLYING



BENEFIT FROM OUR EXPERTISE

Advice on lubricant supply

Do you have questions about lubricant supply?
We are happy to help. Talk to me.

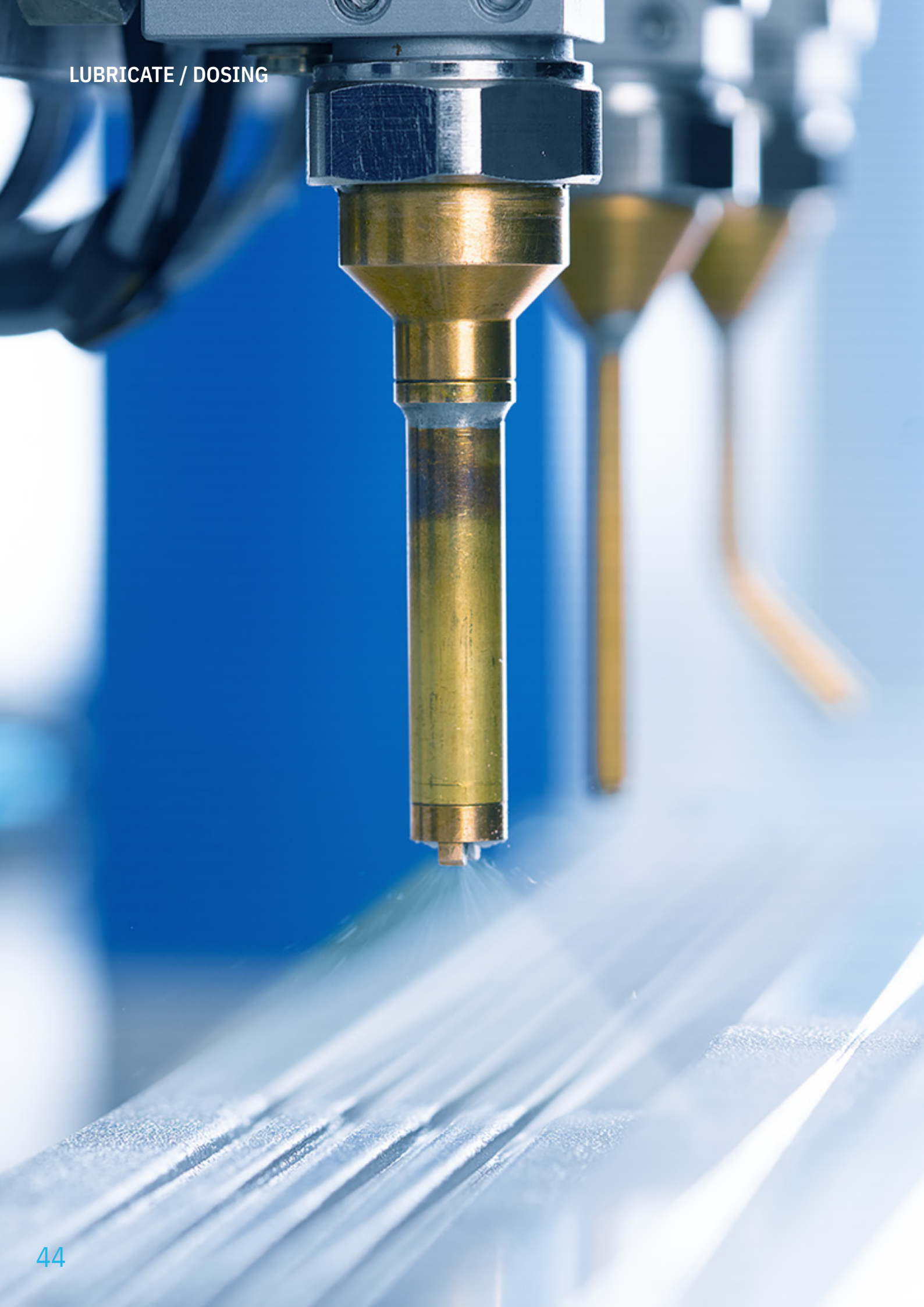
Your contact

Niklas Kinzl

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LUBRICATE / DOSING





Dosing

Selectively, by volume or flat?

Semi or fully-automatically?

Rotatory or linear?

SOMA dosing valves provide the right solution for every application.



Impulse Dosing Valve



Volumetric Dosing Valve



Rotation Dosing System



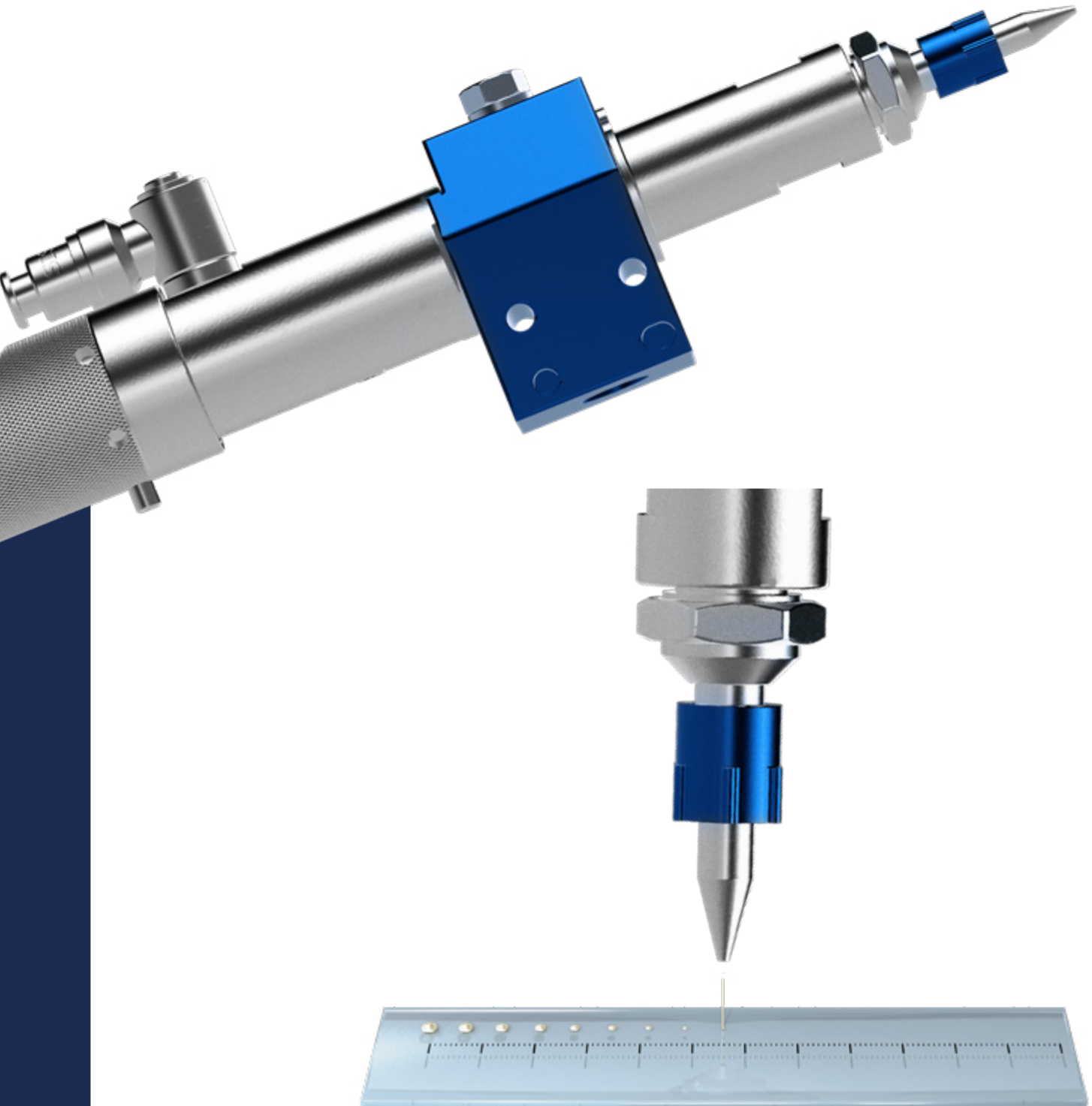
Impulse Spray Valve



Flexible Greasing System

..IDV Impulse Dosing Valve

Non-contact, reproducible, fast.





Benefits of an Impulse Dosing Valve

- ✓ Patented non-contact method of dosing technical lubricants
- ✓ The valve's small design and flexible positioning allow it to be used in automated handling systems
- ✓ High process and repeat accuracy thanks to volume principle
- ✓ Low primary medium pressure to prevent lubricant separation
- ✓ High dosing speed up to 20 Hz. 100% monitoring in combination with SOMA DIS Dosing Inspection System

Application

The benefits of the SOMA IDV Impulse Dosing Valve come to the fore wherever the prevailing geometry hampers access to the point needing to be greased. Since the lubricant is dosed without contact, there is no additional movement in the system. The high speed also permits a large volume to be discharged and a bead-like application.

Function

The SOMA IDV Impulse Dosing Valve has a continuously variable volume chamber and is sealed by a ball check valve.

An upstream 5/2-way quick-action valve enables the air impulse to draw the dosing piston into the chamber in a matter of milliseconds and thereby to override the ball check valve.

The dynamics produced convey your medium to their destination without any contact.

The SOMA IDV Impulse Dosing Valve therefore combines the repeat accuracy of a volumetric dosing feeder with the flexibility of a jet valve.

Advice on dosing technology and dosing valves

Do you have questions about grease and lubricant metering? We are happy to help. Talk to me.

Your contact

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SOMA IDV-2 Impulse Dosing Valve

Volumetric dosing valve for non-contact dosing of lubricants. Suited to dosing volumes of between 1 mm³ to 18 mm³. Maximum dosing frequency of 20 impulses/second. Includes SOMA IDV-KRV ball check valve.



Technical data:

| | |
|---|---|
| Dimensions (L x W x H): | 216 mm x 100 mm x 80 mm |
| Dosing medium: | NGLI 1-3 |
| Medium form | 0.5 – 12 bar |
| Dosing frequency (f _{max}): | 20 Hz |
| Dosing volume: | 1 – 18 mm ³ / dosing impulse |
| Dosing medium hose: | Diameter 10 mm, diameter 12 mm; length depends on dosing medium |
| Dosing nozzles: | 0.4 / 0.6 / 0.8 / 1.0 / 1.2 / 1.5 mm / special nozzles |
| Compressed air supply between IDV and quick-acting valve: | Diameter 4 mm, length < 300 mm |
| IDV PV supply hose: | Diameter ≥ 6 mm |
| Air pressure: | 4 – 7 bar |
| Air consumption: | 13 l/min |


1-18 MM³

SOMA IDV-2-INI Impulse Dosing Valve

Volumetric dosing valve for non-contact dosing of lubricants. Suited to dosing volumes of between 1 mm³ to 18 mm³. Maximum dosing frequency of 20 impulses/second. Includes SOMA IDV-KRV ball check valve and SOMA IDV-INI dosing piston stroke monitor.



Technical data:

See above: SOMA IDV-2 Impulse Dosing Valve


WITH STROKE
INTERROGATION

1-18 MM³

SOMA IDV-3 Impulse Dosing Valve

Volumetric dosing valve for non-contact dosing of lubricants. Suited to dosing volumes of between 5 mm³ to 45 mm³. Maximum dosing frequency of 20 impulses/second. Includes SOMA IDV-KRV ball check valve.



Technical data:

| | |
|--------------------------|---|
| Dimensions (L x W x H): | 216 mm x 100 mm x 80 mm |
| Dosing medium: | NGLI 1-3 |
| Static system pressure: | 0.5 – 12 bar |
| Dosing frequency (fmax): | 20 Hz |
| Dosing volume IDV3: | 5 – 45 mm ³ / dosing impulse |
| Dosing medium hose: | Diameter 10 mm, diameter 12 mm; length depends on dosing medium |
| Dosing nozzles: | 0.4 / 0.6 / 0.8 / 1.0 / 1.2 / 1.5 mm / special nozzles |
| IDV supply hose: | Diameter 4 mm, length < 300 mm |
| Piston return hose: | Diameter 4 mm, length < 300 mm |
| IDV PV supply hose: | Diameter ≥ 6 mm |
| Air pressure: | 4 – 7 bar |
| Air consumption: | 13 l/min |



5-45 MM³

SOMA IDV-3-INI Impulse Dosing Valve

Volumetric dosing valve for non-contact dosing of lubricants. Suited to dosing volumes of between 5 mm³ to 45 mm³. Maximum dosing frequency of 20 impulses/second. Includes SOMA IDV-KRV ball check valve and SOMA IDV-INI dosing piston stroke interrogation.



Technical data:

See above: SOMA IDV-2 Impulse Dosing Valve



WITH STROKE
INTERROGATION



5-45 MM³

SOMA IDV-3S Impulse Dosing Valve

Volumetric dosing valve for non-contact dosing of special lubricants containing a high proportion of abrasive elements. Suited to dosing volumes of between 5 mm³ to 45 mm³. Maximum dosing frequency of 20 impulses/second. Includes IDV-KRV ball check valve.



Technical data:

| | |
|---------------------------------------|---|
| Dimensions (L x W x H): | 216 mm x 100mm x 80 mm |
| Dosing medium: | NGLI 1-3 |
| Static system pressure: | 0.5 – 12 bar |
| Dosing frequency (f _{max}): | 20 Hz |
| Dosing volume IDV3: | 5 – 45 mm ³ / dosing impulse |
| Dosing medium hose: | Diameter 10 mm, diameter 12 mm; length depends on dosing medium |
| Dosing nozzles: | 0.4 / 0.6 / 0.8 / 1.0 / 1.2 / 1.5 mm / special nozzles |
| IDV supply hose: | Diameter 4 mm, length < 300 mm |
| Piston return hose: | Diameter 4 mm, length < 300 mm |
| IDV PV supply hose: | Diameter ≥ 6 mm |
| Air pressure: | 4 – 7 bar |
| Air consumption: | 13 l/min |


5-45 MM³

ABRASIVE
MEDIA

SOMA IDV-3S-INI Impulse Dosing Valve

Volumetric dosing valve for non-contact dosing of special lubricants containing a high proportion of abrasive elements. Suited to dosing volumes of between 5 mm³ to 45 mm³. Maximum dosing frequency of 20 impulses/second. Includes IDV-KRV ball check valve and SOMA IDV-INI dosing piston stroke interrogation.



Technical data:

See above: SOMA IDV-2 Impulse Dosing Valve


WITH STROKE
INTERROGATION

5-45 MM³

ABRASIVE
MEDIA

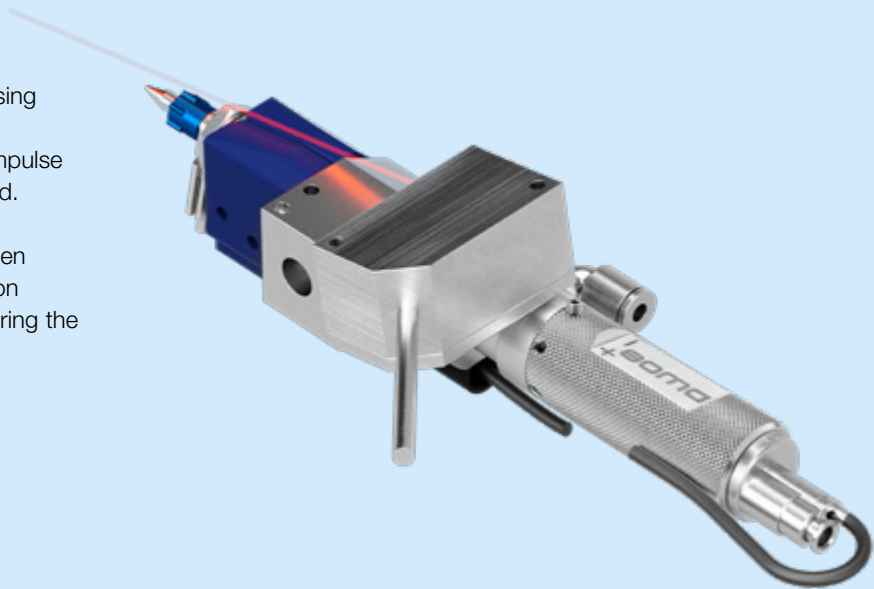
SOMA IDV-PD

Optional monitoring of the applied dosing point via remote sensor.

Simple assembly on the SOMA IDV Impulse Dosing Valve using the holder provided.

Supply voltage:

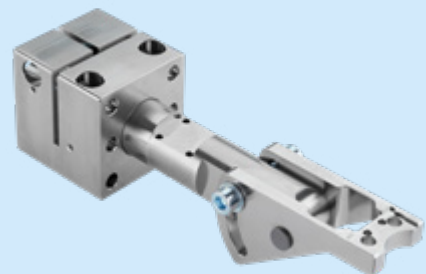
24 V, cable length: 2 m, 5-pin with open cable end. Configuration and evaluation directly in the system's control unit during the process.



SPARE PARTS

SOMA IDV-SH

Standard holder for SOMA IDV Impulse Dosing Valve to fit the dosing valves in your system with ease. Continuously adjustable in Z and Y. Can be swivelled radially. Adjustable angle of inclination. Screw connection provided for SOMA IDV PV quick-action valve.



SOMA IDV-A1

Connection block for 1 SOMA IDV Impulse Dosing Valve. Includes threaded holes, through-holes and mating holes for fitting in your application.



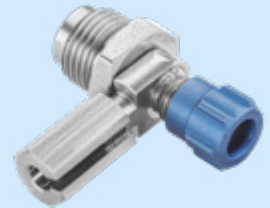
SOMA IDV-D

Nozzle adapter for fitting SOMA IDV-W replacement nozzles on the SOMA IDV Impulse Dosing Valve with ease.



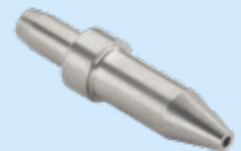
SOMA IDV-D2

Nozzle adapter for fitting SOMA IDV-W replacement nozzles on the SOMA IDV Impulse Dosing Valve with ease.
Nozzle adapter with mechanical interface for SOMA DIS-S piezo sensor for monitoring dosing.



SOMA IDV-W(0.4)

Standard replacement nozzle with an internal diameter of 0.4 mm.



SOMA IDV-W(0.6)

Standard replacement nozzle with an internal diameter of 0.6 mm.



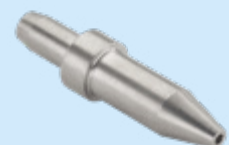
SOMA IDV-W(L0.6)

Standard replacement nozzle with an internal diameter of 0.6 mm, long version. 33 mm total length.



SOMA IDV-W(0.8)

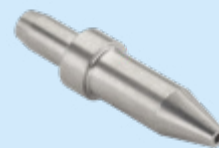
Standard replacement nozzle with an internal diameter of 0.8 mm.





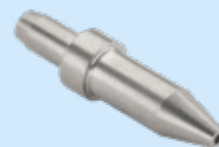
SOMA IDV-W(1.0)

Standard replacement nozzle with an internal diameter of 1.0 mm.



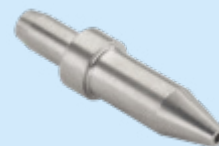
SOMA IDV-W(1.2)

Standard replacement nozzle with an internal diameter of 1.2 mm.



SOMA IDV-W(1.5)

Standard replacement nozzle with an internal diameter of 1.5 mm.



SOMA IDV-PV

Electro-pneumatic 5/2-way fast switch valve for pneumatic control of the SOMA IDV impulse dosing valve (manufactured by AirTec).



SOMA IDV-PVF

Electro-pneumatic 5/2-way fast switch valve for pneumatic control of the SOMA IDV Impulse Dosing Valve (manufactured by FESTO).



SOMA IDV-KRV4

Ball check valve for SOMA IDV Impulse Dosing Valve, comprising valve body, spring, 4 mm ball and ball seat. A free replacement tool for the ball seat is provided with the IDV-KRV.



SOMA IDV-RV2

Check valve for SOMA IDV-2 Impulse Dosing Valve. Seals by means of an O-ring and is therefore better suited to low-viscosity media, such as oils.
Pressure stable up to a primary material pressure of 6 bar.



SOMA IDV-INI

Initiator for interrogating the dosing piston inside the SOMA IDV Impulse Dosing Valve.
Cable length: 300 mm, connector: M8/3-pin



SOMA IDV-H

Valve heating for SOMA IDV Impulse Dosing Valve. Comprising: 24 V / 20 W heating cartridge, load relay, mechanical connection block for heating cartridge and heating controller.



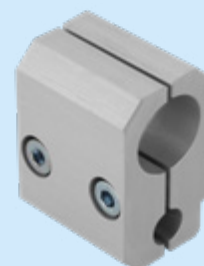
SOMA IDV-HP

Heating cartridge for SOMA IDV-H 24 V valve heating / 20 W J type temperature sensor, connection cable: 2.5 m



SOMA IDV-AH

Mechanical connection block for fastening SOMA IDV-HP heating cartridge to SOMA IDV Impulse Dosing Valve.



SOMA IDV-LR

Load relay for electrically controlling the SOMA IDV-HP heating cartridge.





SOMA IDV-HC

Heating controller for SOMA IDV-HP heating cartridge for configuring the heating. Setting for desired temperature, maximum specified/actual deviation. The cables for wiring the controller in the system are not included in the scope of delivery.



SOMA IDV-LG4

Pneumatic connection for moving dosing piston forwards and backwards in the SOMA IDV Impulse Dosing Valve.
Straight version, suitable for 4 mm pneumatic hoses.



SOMA IDV-LW4

Pneumatic connection for moving dosing piston forwards and backwards in the SOMA IDV Impulse Dosing Valve.
90° angle, suitable for 4 mm pneumatic hoses.



SOMA IDV-FG10

Connection for lubricant supply on SOMA IDV Impulse Dosing Valve.
Straight version, quick-release fastener, suitable for 10 mm hoses.



SOMA IDV-FW10

Connection for lubricant supply on SOMA IDV Impulse Dosing Valve.
90° angle, quick-release fastener, suitable for 10 mm hoses.



SOMA IDV-FG12

Connection for lubricant supply on SOMA IDV Impulse Dosing Valve.
Straight version, quick-release fastener, suitable for 12 mm hoses.



SOMA IDV-FW12

Connection for lubricant supply of IDV Impulse Dosing Valve. 90° angle, quick-release fastener, fits 12 mm hoses.



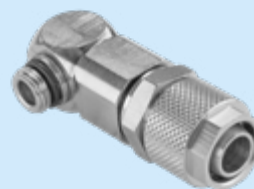
SOMA IDV-FGR10

Connection for lubricant supply of SOMA IDV Impulse Dosing Valve. Straight version with union nut. Suitable for 10 mm hoses. For dynamic applications.



SOMA IDV-FWR10

Connection for lubricant supply of SOMA IDV Impulse Dosing Valve. 90° angle with union nut. Suitable for 10 mm hoses. For dynamic applications.



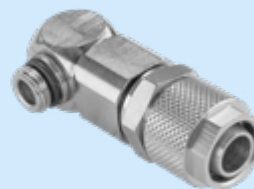
SOMA IDV-FGR12

Connection for lubricant supply of SOMA IDV Impulse Dosing Valve. Straight version with union nut. Suitable for 12 mm hoses. For dynamic applications.



SOMA IDV-FWR12

Connection for lubricant supply of SOMA IDV Impulse Dosing Valve. 90° angle with union nut. Suitable for 12 mm hoses. For dynamic applications.



SOMA IDV-FT10

T piece to distribute the grease supply to two outlets. Suitable for 10 mm hoses. Input: 1 x 10 mm | Output: 2 x 10 mm





SOMA IDV-FT12

T piece to distribute the grease supply to two outlets.
Suitable for 12 mm hoses.
Input: 1 x 12 mm | Output: 2 x 12 mm



SOMA IDV-FY10

Y piece to distribute the grease supply to two outlets.
Suitable for 10 mm hoses.
Input: 1 x 10 mm | Output: 2 x 10 mm



SOMA IDV-FY12

Y piece to distribute the grease supply to two outlets.
Suitable for 12 mm hoses.
Input: 1 x 12 mm | Output: 2 x 12 mm



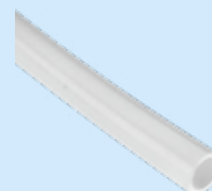
SOMA IDV-EV4

Vent valve which can be fitted in place of vent screw
on SOMA IDV A1 connection block.
To make it easier to vent the SOMA IDV Impulse
Dosing Valve.



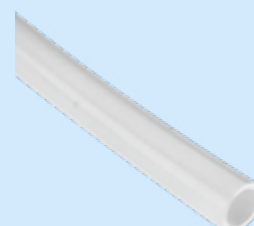
PTFE medium hose 10 mm

Special PTFE medium hose with an internal diameter of 8 mm and an external diameter of 10 mm.



PTFE medium hose 12 mm

Special PTFE medium hose with an internal diameter of 9 mm and an external diameter of 12 mm.



Rotation Dosing System

Intelligent greasing of rotationally symmetrical products: programmable, volumetric, non-contact



Benefits of a Rotation Dosing System

- ✓ Continuously adjustable, reproducible constant dosing volume
- ✓ Non-contact dosing with high angle accuracy
- ✓ Process reliability thanks to integrated dosing piston stroke monitor
- ✓ Simple integration using the motor controller provided
- ✓ Valve heating with temperature controller to improve dosing of viscous lubricants included
- ✓ Option for circumferential dosing at internal and external diameter using specific dosing nozzles
- ✓ The SOMA DIS Dosing Inspection System can be added for 100% monitoring

Application

- ✓ Rotationally symmetrical components. Circular segments needing to be greased
- ✓ Cylindrical greasing. Internal and external greasing
- ✓ Greasing of gears with high angle accuracy

Function

For reasons associated with cycle times and design constraints, sometimes it is not possible for the component to be taken off and turned in front of the nozzle. Based on the proven SOMA IDV Impulse Dosing Valve and a hollow shaft stepping motor, the benefits of the SOMA RDS Rotation Dosing System shine through in such cases. Any number of dosing points over 360° are freely programmable.

Provides the option of 100% monitoring in combination with the SOMA DIS Dosing Inspection System.

Advice on dosing technology and dosing valves

Do you have questions about grease and lubricant metering? We are happy to help. Talk to me.

Your contact

Marc Schorlemmer

Tel.: +49 2355 50828-941

Mail: m.schorlemmer@soma.de

SOMA RDS Rotation Dosing Valve

Freely configurable dosing system for non-contact and volumetric greasing of rotationally symmetrical products with high angle accuracy.

Includes:

- ✓ **SOMA RDS Rotation Dosing System**
Based on use of the proven SOMA IDV Impulse Dosing Valve and, in combination with a dosing nozzle driven by a hollow shaft stepping motor, the RDS enables non-contact dosing of adjustable and constant lubricant volumes with high angle accuracy.

At speeds in excess of 3.5 seconds/revolution, a 10 kHz pulse direction clamp is needed. A motor controller to install in your control cabinet is included in the scope of delivery. A higher-level control unit is used for control purposes.



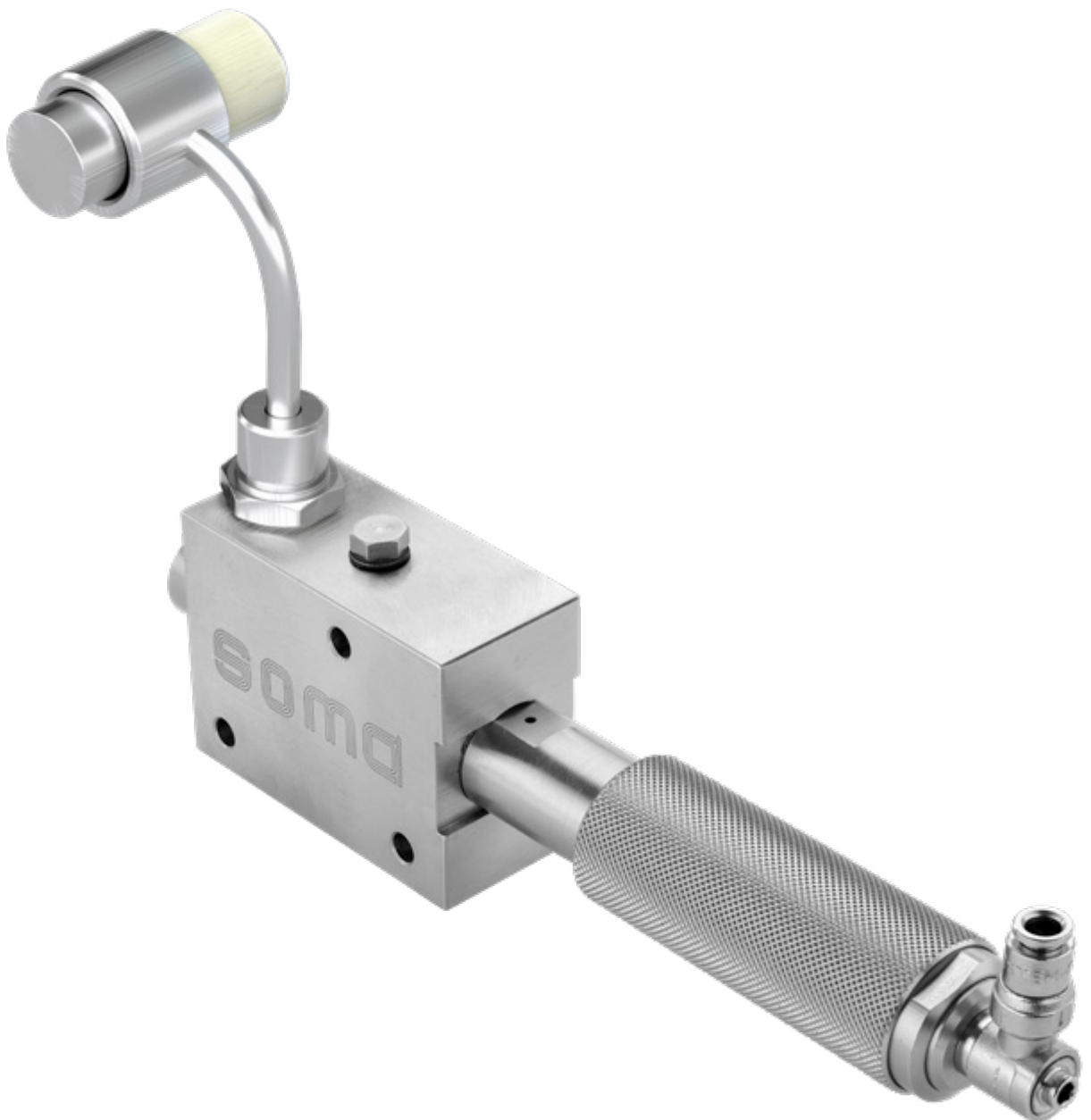
Technical data:

| | |
|---------------------------|--|
| Dimensions (L x W x H): | 250 mm x 80 mm x 100 mm |
| Input pressure of medium: | P _{max} = 0,5 - 12 bar |
| Compressed air supply: | P = 3-6 bar |
| Dosing volume: | V = 1-45 mm ³ /dosing impulse |
| Dosing frequency: | f _{max} = 20 Hz |
| Power supply: | 230 V AC, 50 - 60 Hz |



...VDI Volumetric Dosing Valve

Dosing lubricants at constant volumes: in a way that is reliable, volumetric, and can be reproduced





Benefits of a Volumetric Dosing Valve

- ✓ Continuously adjustable, reproducible dosing volumes
- ✓ Low primary medium pressure to prevent lubricant separation
- ✓ Can be combined with greasing tools in automated production facilities
- ✓ Material output can be monitored for increased safety and reliability when dosing

Application

Need a little bit more? If greasing tools or contact-based applications are used in production, the benefits of the SOMA VDV Volumetric Dosing Valve really shine through. With its dosing volumes of up to 235 mm³, it also supplies lubricant to large-scale greasing moulds precisely and with repeat accuracy.

Function

As a volumetric dosing feeder, the SOMA VDV Volumetric Dosing Valve also has a continuously adjustable dosing chamber. With the option of monitoring the check valve, it therefore provides a reliable solution for dosing volumes of up to 235 mm³. Controlled by a 3/2-way pneumatic valve, it is able to dose two complete volumes a second.

Advice on dosing technology and dosing valves

Do you have questions about grease and lubricant metering? We are happy to help. Talk to me.

Your contact

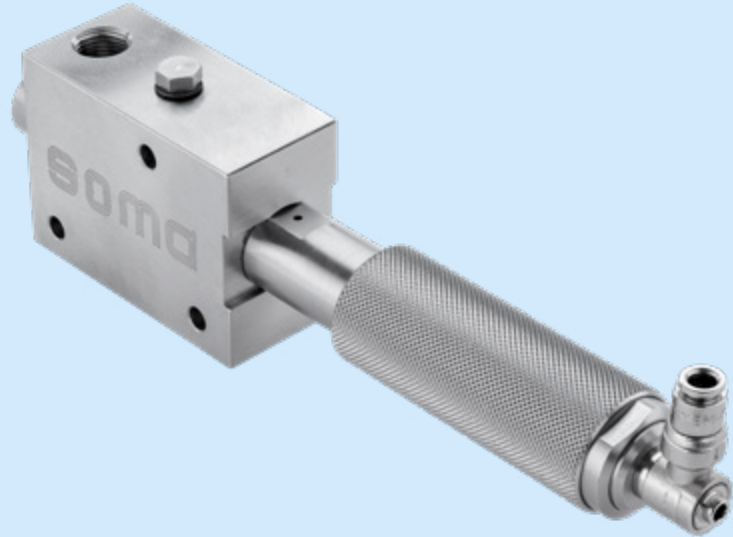
Marc Schorlemmer

Tel.: +49 2355 50828-941

Mail: m.schorlemmer@soma.de

SOMA VDV Volumetric Dosing Valve

Volume-based dosing valve for dosing volumes of between 5 mm³ and 235 mm³. Maximum of 2 strokes/second. Includes SOMA VDV-A1 connection block.



Technical data:

| | |
|--|--|
| Dimensions (L x W x H): | 43 mm x 24 mm x 168 mm |
| Dosing medium: | NGLI 1–3 |
| Static system pressure: | 6 bar |
| Dosing frequency (f _{max}): | 2 Hz |
| Dosing volume: | 5 – 235 mm ³ / dosing impulse |
| Dosing medium hose: | Diameter 10 mm, diameter 12 mm; length depends on dosing medium |
| Dosing nozzles: | 0.4 mm / 0.6 mm / 0.8 mm / 1.0 mm / 1.2 mm / 1.5 mm / special nozzles |
| Air pressure: | 2 – 7 bar |
| Air consumption: | 13 l/min |
| Compressed air supply between VDV and quick-acting valve:: | Diameter 4 mm, length < 800 mm |
| IDV PV supply hose: | Diameter ≥ 6 mm |



SOMA VDV- INI

Sensor-based stroke monitor of the check valve to monitor flow just before the nozzle outlet.



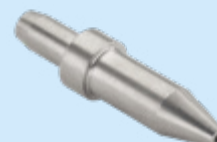
SOMA IDV-D

Nozzle adapter for fitting SOMA IDV-W replacement nozzles on the SOMA VDV Volumetric Dosing Valve with ease.



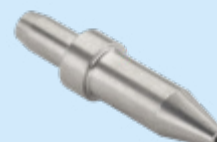
SOMA IDV-W(0.8)

Standard replacement nozzle with an internal diameter of 0.8 mm for IDV and VDV.



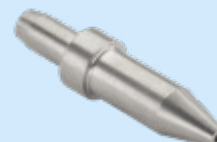
SOMA IDV-W(1.0)

Standard replacement nozzle with an internal diameter of 1.0 mm for IDV and VDV.



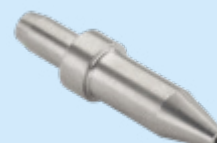
SOMA IDV-W(1.2)

Standard replacement nozzle with an internal diameter of 1.2 mm for IDV and VDV.



SOMA IDV-W(1.5)

Standard replacement nozzle with an internal diameter of 1.5 mm for IDV and VDV.

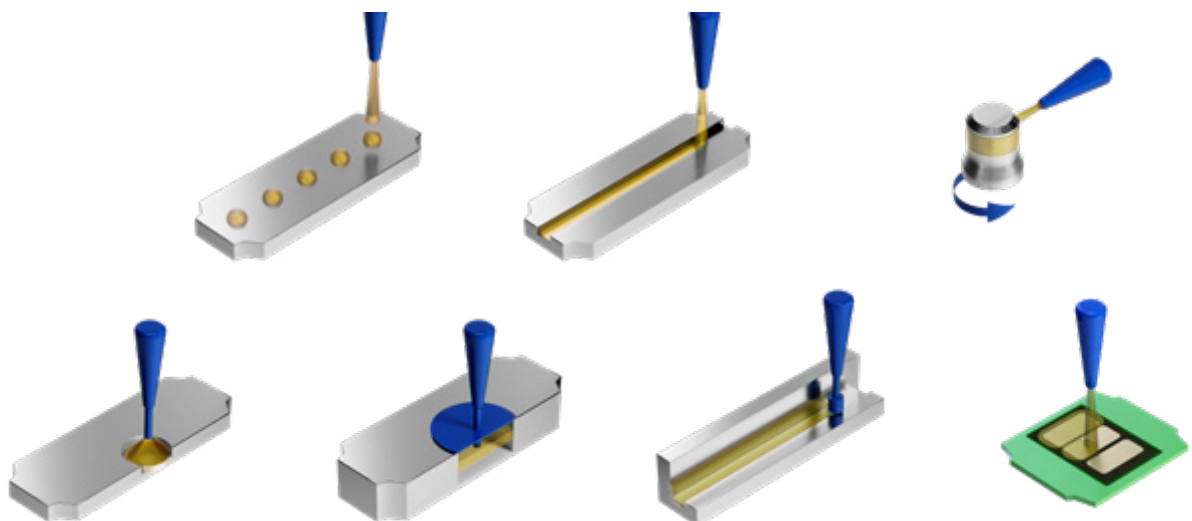




Impulse Spray Valve

The best of two worlds

NOVELTY



Benefits of an Impulse Spray Valve

- ✓ The best of 2 worlds
- ✓ Minimised over spray
- ✓ No additional air consumption due to use of IDV exhaust air
- ✓ Combination of repeatable precision and flat lubricant application
- ✓ Application-specific nozzles made by SOMA
- ✓ Full process monitoring by means of SOMA DIS dosing inspection system
- ✓ Dosing with 20Hz

Application

The new SOMA-ISV impulse spray valve combines the best of both worlds and offers an optimal solution for hard-to-reach areas and large-area applications.

With non-contact dispensing, you save movement and benefit from high speed for precise, uniform application. The SOMA ISV is ideal for guide elements such as sunroofs, grab handles, storage compartments and center console blinds. It is also used in the electrical industry and locks.

Function

The innovative SOMA-ISV impulse spray valve offers precise dosing through an infinitely adjustable volume chamber and a ball check valve.

Supported by pre- and after-air, it enables fine atomisation of the medium for a homogeneous, even application. With an individually nozzle it can be used to realise a wide variety of application types. The SOMA-ISV combines the precision of a volumetric dispenser with the flat application of a spray valve.

Advice on dosing technology and dosing valves

Do you have questions about grease and lubricant metering? We are happy to help. Talk to me.

Your contact

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Mail: m.schorlemmer@soma.de



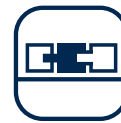
FGS

Flexible Greasing System

Highly customised as standard



ROBOTIC



INLINE



IOT READY



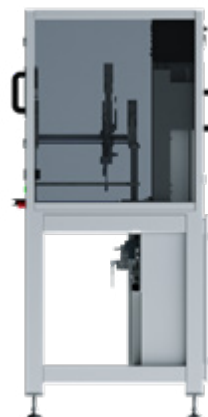
SMART
TEACHING



CO-BOT



View from
front



View from
rear



Benefits of a Flexible Greasing System

- ✓ Available in FGS-R (robot) or FGS-AX (axis system) versions
- ✓ Safety concept as per the current Machinery Directive
- ✓ Flexible lubricant supply via SOMA FHS Grease Handling System or SOMA DAS-120/12 Pressure Balance System
- ✓ Integrated HMI for simple programming and control
- ✓ Two monitored maintenance access points
- ✓ Application-specific jig on drawer
- ✓ Plenty of options for customising your application

Application

The SOMA FGS Flexible Greasing System can be both integrated into fully automatic production lines or used as a stand-alone solution for the controlled greasing of components.

Thanks to the smart control solution with integrated HMI, the system can also support manual workstations.

Function

Based on our proven components for the precise dosing of technical lubricants and 50 years of experience in machinery and plant engineering and construction, the SOMA FGS Flexible Greasing System offers a self-contained system delivering reproducible results. Along with all available options and an individual interface design for your higher-level control unit, the SOMA FGS Flexible Greasing System provides a flexible system solution for your production.

Advice on dosing technology and dosing valves

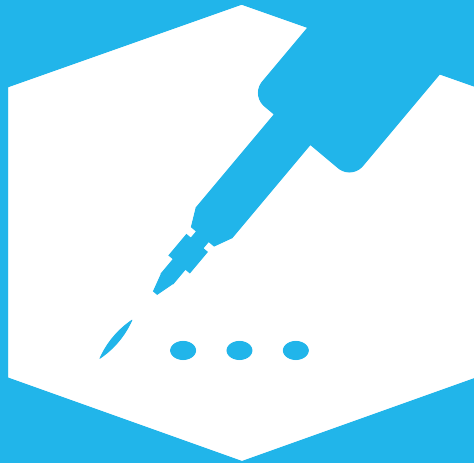
Do you have questions about grease and lubricant metering? We are happy to help. Talk to me.

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DOSING



BENEFIT FROM OUR EXPERTISE

Advice on dosing technology and dosing valves

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Monitoring

Better safe than sorry.



Dosing Inspection System

Dosing Inspection System

Intelligent monitoring of IDV dosing processes:
automatic, verifiable and in real time

Reproducible quality is the biggest challenge faced in industrial lubricant dosing.

Impurities or air inclusions in the lubricant affect the dosing process and may lead to poor results. The unique DIS Dosing Inspection System from SOMA automatically and reliably detects poor dosing results so that the products affected can be dealt with accordingly.



PC
connection

SPS
connection

Measurement
and calibration
connections



Benefits of a Dosing Inspection System

- ✓ 100% real-time monitoring of the dosing impulses on the SOMA IDV Impulse Dosing Valve
- ✓ Patented process monitoring using piezo pressure sensor on the nozzle output
- ✓ Can be configured via web interface digital I/O signal to the higher-level control unit
- ✓ Automatic determination of position in process using teach mode

Application

If the customer has stringent requirements in terms of the quality and traceability of the dosing process, the SOMA DIS Dosing Inspection System is ideal. Alongside digital I/O evaluation, the system backs up all measured data and saves it to an external FTP server via TCP/IP.

Function

The pressure profile in the nozzle is monitored using a piezo pressure sensor. The nominal values for maximum pressure, average pressure and pressure time integral are taught in advance using teach mode, monitored in real-time by the evaluation electronics and then forwarded to the higher-level control unit. All settings and configurations should be carried out using a front-end web development. No additional software is needed.

Advice on process monitoring

Do you have questions about safe process monitoring for lubricant dosing? Please contact me.

Your contact

Niklas Kinzl

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Mail: n.kinzl@soma.de

SOMA DIS Dosing Inspection System

Fully automatic interrogation of dosing by the SOMA IDV Impulse Dosing Valve via piezo pressure sensor in real time. System including evaluation unit for integration in a higher-level control unit.

- ✓ Teach mode and editable process parameters can be quickly and easily handled using a front-end web interface
- ✓ Evaluation either using digital IO or via TCP/IP with all the data needed for complete dosing traceability
- ✓ One system is needed for each SOMA IDV Impulse Dosing Valve and requires the use of valve heating (SOMA IDV-H) and dosing piston stroke monitor (SOMA IDV-INI)
- ✓ The SOMA IDV-PVF fast switch valve is needed for 100% interrogation in real time at a 20 Hz dosing frequency
- ✓ The maximum cable length between the SOMA IDV Impulse Dosing Valve and SOMA DIS evaluation unit is 3 m. SOMA IDV-D2 nozzle adapter with adapter for sensor is included in the scope of delivery
- ✓ Wiring harness: sensor cable; connection to IDV-PVF (control of SOMA IDV Impulse Dosing Valve) and connection cables to higher-level control unit (D-SUB), connection cable for SOMA IDV-INI and bridge between booster and evaluation electronics. All cables have a length of 3 m.



Technical data:

| | |
|------------------------------|-------------------------|
| Dimensions (L x W x H): | 200 mm x 60 mm x 300 mm |
| Weight: | 1.8 kg |
| Supply voltage: | 24 V |
| Power consumption: | 7.2 W |
| Wiring harness cable length: | 3 m |
| Internal memory: | 4 GB |

SOMA DIS-C

Complete evaluation electronics for SOMA DIS Dosing Inspection System. Unit without sensor and cable set.



SOMA DIS-NB

Optional network buffer for the SOMA DIS Dosing Inspection System.

- ✓ Buffer for the measurement results generated by the SOMA DIS Dosing Inspection System to bridge time delays in the network. Simple configuration via web front-end.
- ✓ Maximum number of dosing impulses which can be saved per upload: 50
- ✓ Industry-compatible housing. SD card slot. Ethernet connection for network.
- ✓ USB Ethernet adapter for loss-free connection with SOMA DIS Dosing Inspection System is included in the scope of delivery.
- ✓ 5 V power supply unit is included in the scope of delivery.



SOMA DIS-KS

Set of cables for SOMA DIS Dosing Inspection System (length 3 m)
Comprising:

- ✓ Connection cable to SOMA IDV-PVF quick-action valve
- ✓ Connection cable to higher-level control unit with D-SUB connector
- ✓ Connection cable to SOMA IDV-INI dosing piston stroke interrogation
- ✓ 150 mm bridging cable between booster and evaluation electronics



SOMA DIS-RS

Reset plug for resetting the DIS to its factory settings without accessing the user interface. Plug is plugged in once the RS232 interface has been removed. After a few seconds, the device is reset and can be re-configured.



SOMA DIS-S

Replacement sensor with attached cable for SOMA DIS Dosing Inspection System. Cable length 3 m.





MONITORING



BENEFIT FROM OUR EXPERTISE

Advice on Process monitoring

Do you have questions about process monitoring?
We are happy to help. Talk to me.

Your contact

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Mail: n.kinzl@soma.de





Support

SUPPORT





Your investment is in good hands

You are investing in the long term. We help you
to get the most out of your system.

Maintenance

REGULAR & RELIABLE

- ✓ Cyclic maintenance of your dosing components by our experienced technicians.
- ✓ Reconditioning and cleaning to give your systems longevity.

Training

KNOW-HOW FOR YOUR TEAM

Regardless of whether you prefer training on-site on your system or in our training facilities. We ensure that you and your staff are always kept up-to-date with all the latest technology.

Contacts

WE ARE HERE FOR YOU

Should anything jam at any time, we will come out to you at speed.

Partners

INTERNATIONAL

A local contact for all customers.

Maintenance

Looking for a partner who is familiar with your processes and regularly keeps your systems in perfect condition? Your system will run smoothly with our maintenance packages. Giving you peace of mind.



MAINTENANCE PACKAGE S

You send your IDV Impulse Dosing Valve to us. Our specialists dismantle the entire valve, clean it, replace all the seals and test it. The valve returned to you is therefore as good as new for smooth production processes.

MAINTENANCE PACKAGE L

Has something really broken or not working? No problem: with maintenance package L, all worn components are replaced for a flat fee during maintenance. It goes without saying that we test them afterwards too.

CUSTOM MAINTENANCE PACKAGE

Individual overhauls of the entire system from barrel pump to dosing valve can also be handled with ease. We are happy to advise and draw up an individual quotation for you.



Training

All lubricants act differently. Every application has its own particular challenges. We invite you to training sessions in our technical centre to prepare you ideally for every eventuality.



r Überblick

soma

Switch-Unit

8 Relais-
karten

Matrix-
karte

rasberry PI

Touch

imeter

TRAINING PACKAGE S

The basics of dosing technology and tribology. Function and special features of the SOMA dosing components. Theoretical introduction to installation and commissioning.

TRAINING PACKAGE L

For staff on the ground: After package S, the training gets practical. Installation and commissioning of SOMA dosing components with our technicians. Creation of a complete dosing chain from the barrel pump to monitoring.

CUSTOM TRAINING PACKAGE

We come to you. Learn everything you need to know during commissioning. Installation, commissioning, troubleshooting together with our specialists. Talk to us, we are happy to advise you.



We are here for you.
+49 2355 50828-0

soma-dosiertchnik.de



Your contacts

Sometimes you just need quick and simple assistance. We are there for you when it is really urgent.



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Partners

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RELANT, SA DE CV

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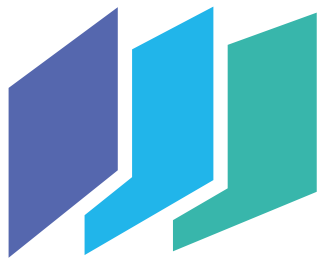
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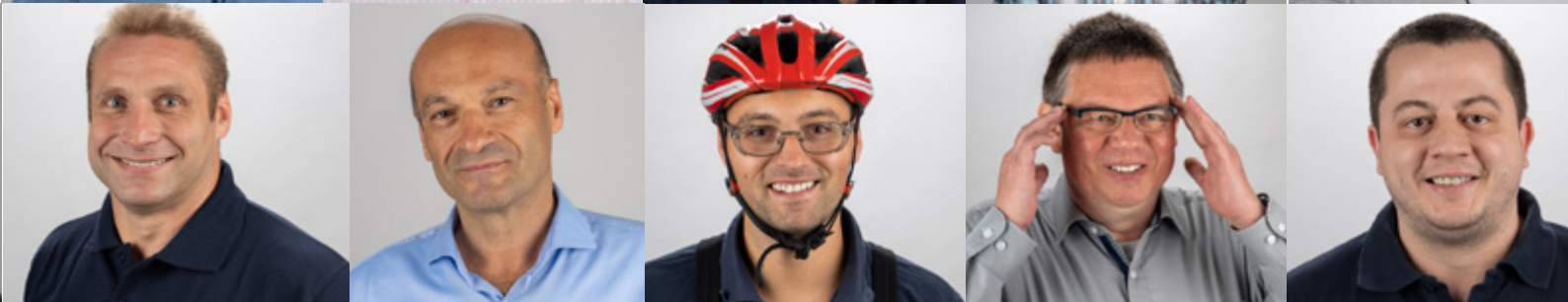
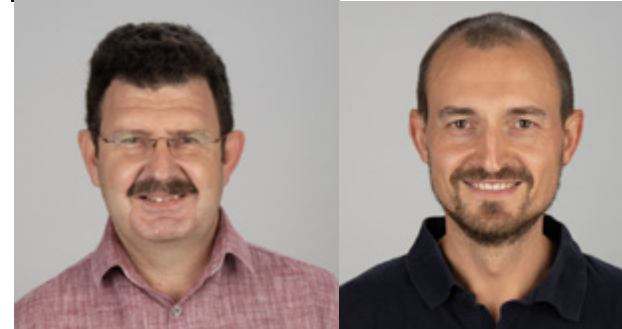
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