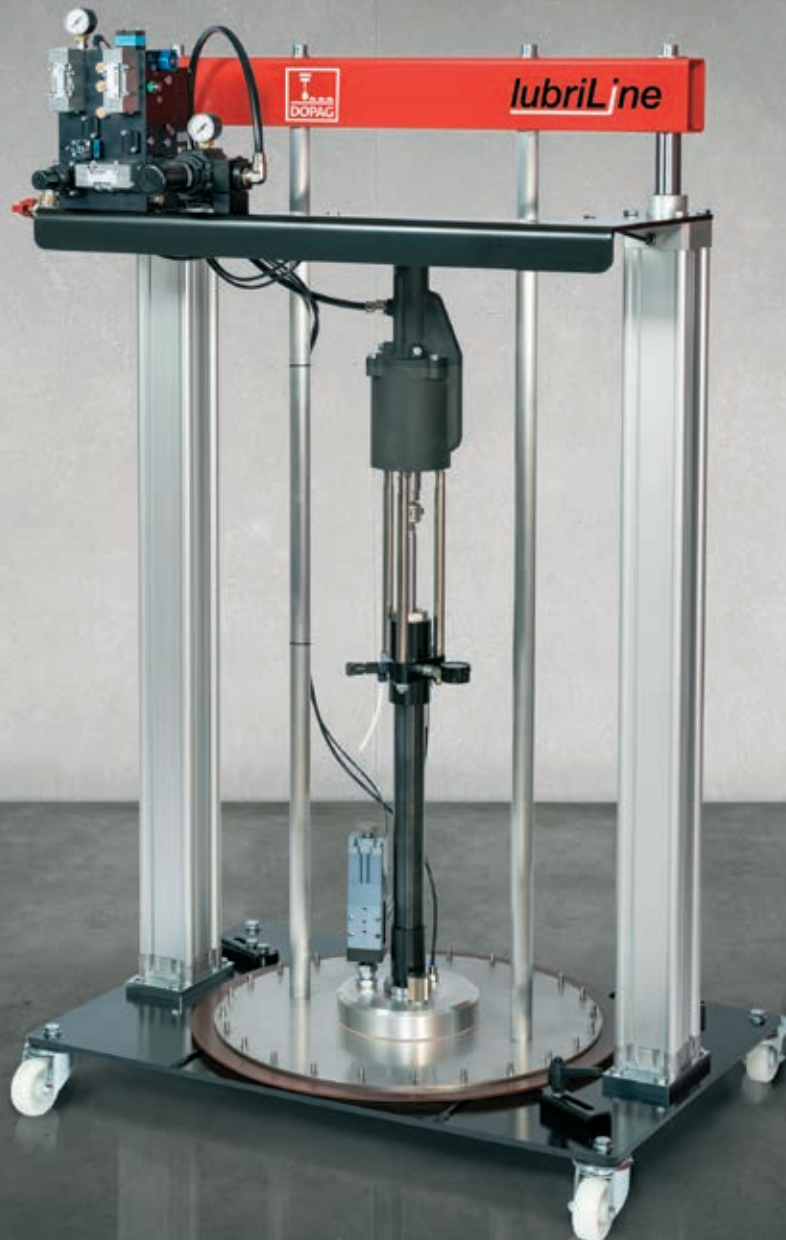




METER · MIX · DISPENSE

# lubriLine

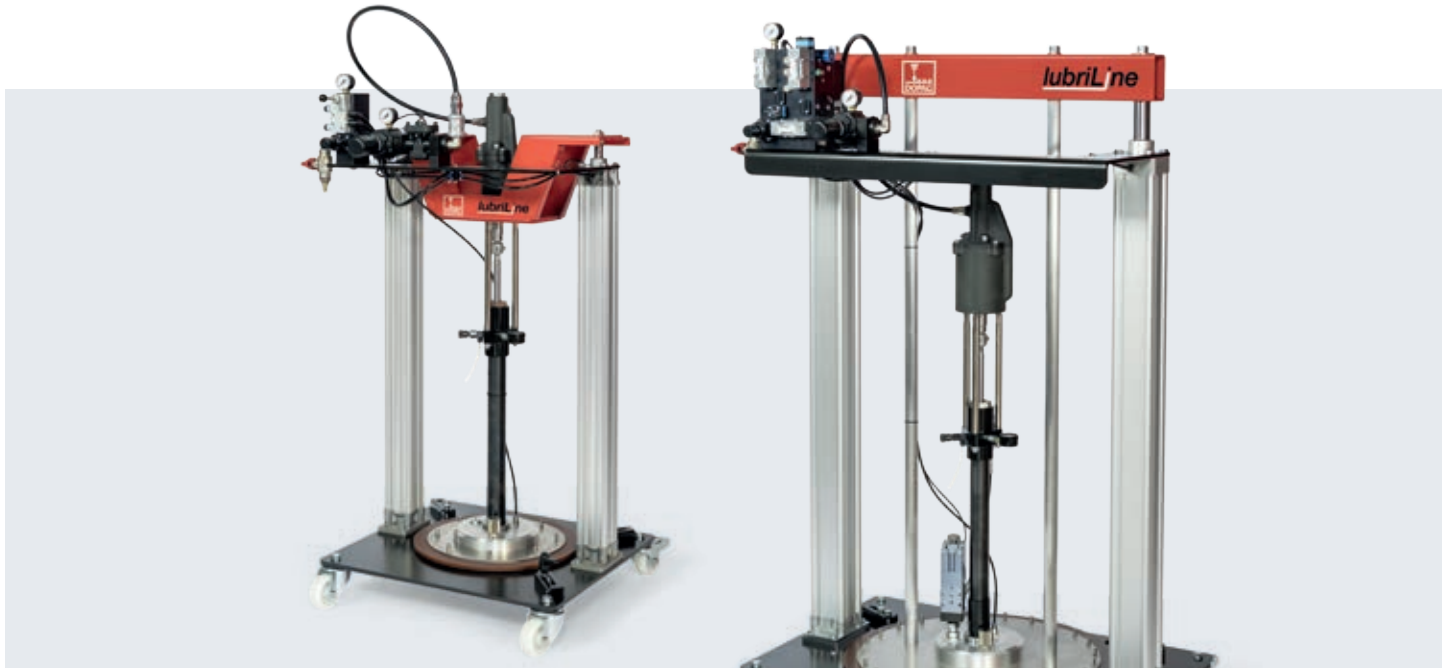
SOLUTIONS FOR  
APPLYING LUBRICANTS



# Drum pumps

DOPAG has completely reengineered its product range in the area of drum pumps suiting the needs of its customers specifically having grease application in mind. The DOPAG LUBRILINE drum pumps are featuring double acting ball valve or chop check pumps. They feed single component media such as greases and oils from NLGI0

to NLGI3 directly and clean from original containers. DOPAG drum pumps have proved themselves useful as central material supply systems as well as supplying single stations. DOPAG drum pumps are manufactured as modular, robust and fail-safe, as well as remarkably service and maintenance friendly.

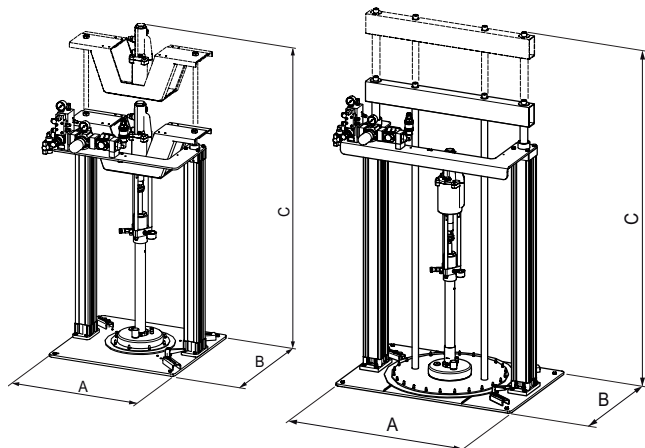


P80/1H-LL1B1-W000000

P200/2H-LL2C3-W000P00

## Product features

- Modular component configuration
- 1- or 2-hand operation
- Ball valve or chop check pumps
- Double acting, fast change-over air motor
- Flow rate up to 1.2 litre/minute
- Pressure ratio 10:1 and 30:1

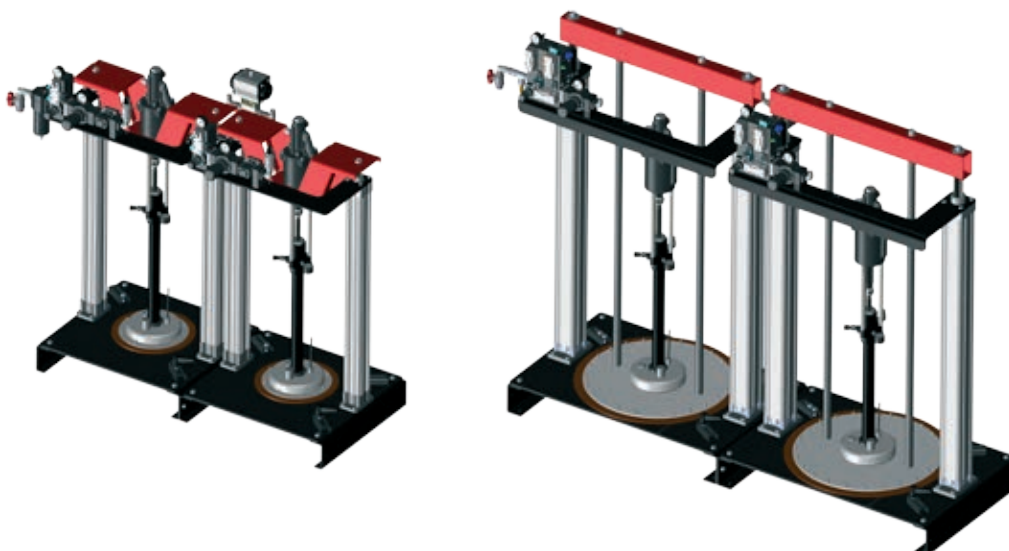


## Technical data

Basic version		P80/1H-LL	P80/2H-LL	P200/1H-LL	P200/2H-LL
1-hand operation		X		X	
2-hand security operation			X		X
Pressure ratio (Drive)		10:1/30:1	10:1/30:1	10:1/30:1	10:1/30:1
Flow rate (at 40 double strokes)	l/min	1.2	1.2	1.2	1.2
Material viscosity (Ball valve pump/Chop check pump)	NLGI	0-2/0-3	0-2/0-3	0-2/0-3	0-2/0-3
Working pressure (Drive 10:1/30:1)	bar	10-60/30-180	10-60/30-180	10-60/30-180	10-60/30-180
Air consumption at 40 double strokes (Drive 10:1/30:1)	l/min	110/270	110/270	110/270	110/270
Dimensions base plate (A x B)	mm	600 x 550	600 x 550	900 x 600	900 x 600
Height when lifter not extended (C)	mm	1170	1220	1440	1480
Height when lifter extended (C)	mm	1900	1900	2450	2450
Maximum container height	mm	750	750	880	880
Maximum container size	l	80	80	200	200
Maximum external Ø container	mm	444	444	575	575

## Tandem versions









All configurations can be extended to a tandem version for interruption free production.



# Modules

Basic module	<b>P80:</b> Usable for containers up to 80 l		<b>P200:</b> Usable for drums of 200 l	
Control unit	<b>1-hand:</b> The control unit is operated with one hand Air ventilation during the drum change is manually		<b>2-hand:</b> The control unit is operated with two hands for safety Air ventilation during the drum change is automatically	
Drive	<b>10:1:</b> This drive operates on a 10:1 pressure ratio, allowing a working pressure of 10-60 bar (at input pressure 1-6 bar)		<b>30:1:</b> This drive operates on a 30:1 pressure ratio, allowing a working pressure of 30-180 bar (at input pressure 1-6 bar)	
Pump	<b>Ball valve version:</b> This version is able to process grease from NLGI0 to NLGI2 The 30 ml pump feeds up to 1.2 l / minute (at 40 double strokes)		<b>Chop check version:</b> This version is able to process grease from NLGI0 to NLGI3 The 30 ml pump feeds up to 1.2 l / minute (at 40 double strokes)	
Follower plate	<b>P80 version 1:</b> Follower plate (1-fold) for cylindrical or conical container with a max. internal difference of Ø 25 mm  <b>P80 version 2:</b> Follower plate (2-fold) for container with reinforced rings	 	<b>P200:</b> Follower plate (1-fold) for all 200 l drums	

# Options

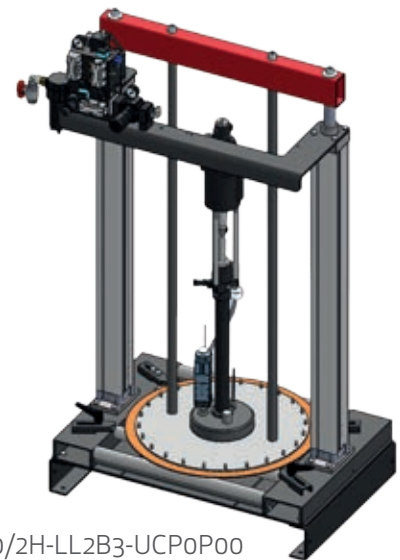
Chassis upgrade	<b>Levelling feet:</b> Are used to level out the pump on an uneven ground		<b>Wheels:</b> Are used for displacement		<b>U-profiles:</b> Are used to move the pump with a forklift	
Drum change support (only for P200)	<b>Drum roll-in mechanism:</b> This mechanism supports the drum change (only in combination with U-profile)		<b>Drum roller conveyor:</b> Offers an easy drum change for 200 l drums (not in combination with wheels)			
Level alarm	<b>Version 1 = acoustic:</b> Acoustic alarm indicates, that the drum is empty	<b>Version 2 = acoustic incl. pre-alarm:</b> Is used to indicate when a pre-defined level is reached, another alarm sounds when the drum is empty	<b>Version 3 = acoustic incl. pre-alarm and reset option:</b> Is used to indicate when a pre-defined level is reached (reset option), another alarm sounds when the drum is empty			
External communication	<b>Pneumatic:</b> Is required if the pump is operated by an external pneumatic signals e.g. by a handle on a metering valve		<b>Electric:</b> Is required if the pump is operated by an external electric signals e.g. with a master control unit			
Gentle material handling	<b>Pressure release:</b> Is used to release pressure from the elevators, follower plate and pump. Is used for pressure sensitive materials which tend to separate.					
Contaminated air	<b>Air filter:</b> To clean and dehumidify contaminated air for pneumatic components if air quality does not comply with ISO 8573-1:2010					
Tandem	Pump configuration as a tandem version for an interruption free production (only in combination with U-profile)					

# Product ID code

The modularity of the new drum pump range enables a great number of combinations. DOPAG has developed an easy to use product ID code to be able to create pump configurations just within minutes.

By knowing the material characteristics it will be possible to choose the right modules and if required additional options. This ID code can be used to order your customised pump or just as a request for quotation.

**Let us know your required configuration?**



Example: P200/2H-LL2B3-UCP0P00

Module (Minimum selection)	Modul ID											
Basic module P80	<b>P80/</b>											
Basic module P200	<b>P200/</b>											
Control unit 1-hand		<b>1H-LL</b>										
Control unit 2-hand		<b>2H-LL</b>										
Drive 10:1			<b>1</b>									
Drive 30:1			<b>2</b>									
Pump ball valve version				<b>B</b>								
Pump chop check version				<b>C</b>								
Follower plate P80 version 1					<b>1</b>							
Follower plate P80 version 2					<b>2</b>							
Follower plate P200					<b>3</b>							
Options	Option ID											
Levelling feet						<b>F</b>						
Wheels						<b>W</b>						
U-profile						<b>U</b>						
Drum roll-in mechanism							<b>R</b>					
Drum roller conveyor							<b>C</b>					
Level alarm version 1								<b>E</b>				
Level alarm version 2								<b>P</b>				
Level alarm version 3								<b>R</b>				
External communication pneumatic									<b>P</b>			
External communication electric									<b>E</b>			
Pressure release									<b>P</b>			
Air filter										<b>A</b>		
Tandem version											<b>T</b>	
<b>Drum pump ID</b>						-						

If no option is used on a position a **0** is used as a space holder!

# Material pressure regulators with piston

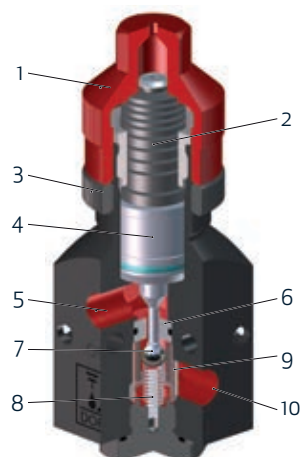
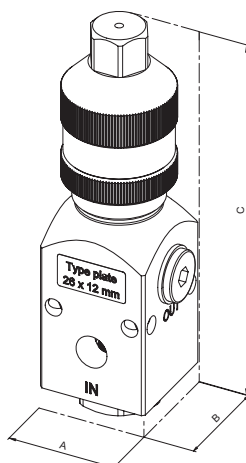
Material pressure regulators reduce the pressure of the delivered material to the required working pressure. Apart from reducing pressure (main function), these valves compensate the pulsations which occur during the material delivery with piston pumps due to the changeover position of the pump.

Such pulsations would cause a short-time drop of pressure and lead to a slight reduction of the material flow. In case of small metering quantities, this might impair product quality as especially for such applications an absolutely consistent material flow must be ensured.



## Product features

- Manually adjustable
- Easy maintenance
- Ball sealing
- Valve seat sharp edged
- Material filter 30 mesh integrated



- 1 Pre-stressing nut
- 2 Spring assembly
- 3 Lock nut
- 4 Piston
- 5 Material outlet / pressure gauge connection
- 6 Valve seat
- 7 Ball
- 8 Compression spring
- 9 Filter element, 30 mesh
- 10 Material inlet / pressure gauge connection

## Technical data

Basic article no.		450.00.00*	450.00.02*	450.00.13*	450.00.10*	450.00.11*	450.00.12*
Version		LD4/50 bar	LD4/100 bar	LD4/150 bar	LD8/50 bar	LD12/50 bar	LD12/150 bar
Flow rate at 50,000 mPa s	l/min	<0.13	<0.26	<0.39	<1.4	<5	<15
Input pressure max.	bar	250	250	400	250	250	250
Output pressure max.	bar	50	100	150	50	50	150
Internal diameter Ø	mm	4	4	4	8	12	12
Connection	G	1/4"	1/4"	3/8"	3/8"	1/2"	1/2"
Dimensions (A x B)	mm	40 x 40	40 x 40	60 x 60	60 x 60	60 x 60	60 x 60
Height max. (C)	mm	150	150	200	200	200	200
Weight	kg	1.0	1.0	3.1	3.0	3.0	3.1

\* All valves can be fitted with either one or two pressure gauges

## Product numbers Basic version including pressure gauges (PG)

Basic version 450.00.00	no inlet PG	inlet PG 0-400
outlet PG 0-60	450.00.05	450.00.01
outlet PG 0-160	450.00.06	

Basic version 450.00.02	no inlet PG	inlet PG 0-400
outlet PG 0-60		
outlet PG 0-160		450.00.03




Basic version 450.00.13	no inlet PG	inlet PG 0-400
outlet PG 0-60		
outlet PG 0-160	450.00.23	450.00.22

Basic version 450.00.10	no inlet PG	inlet PG 0-400
outlet PG 0-60	450.00.15	450.00.14
outlet PG 0-160	450.00.16	

Basic version 450.00.11	no inlet PG	inlet PG 0-400
outlet PG 0-60	450.00.18	450.00.17
outlet PG 0-160	450.00.19	

Basic version 450.00.12	no inlet PG	inlet PG 0-400
outlet PG 0-60		
outlet PG 0-160	450.00.21	450.00.20

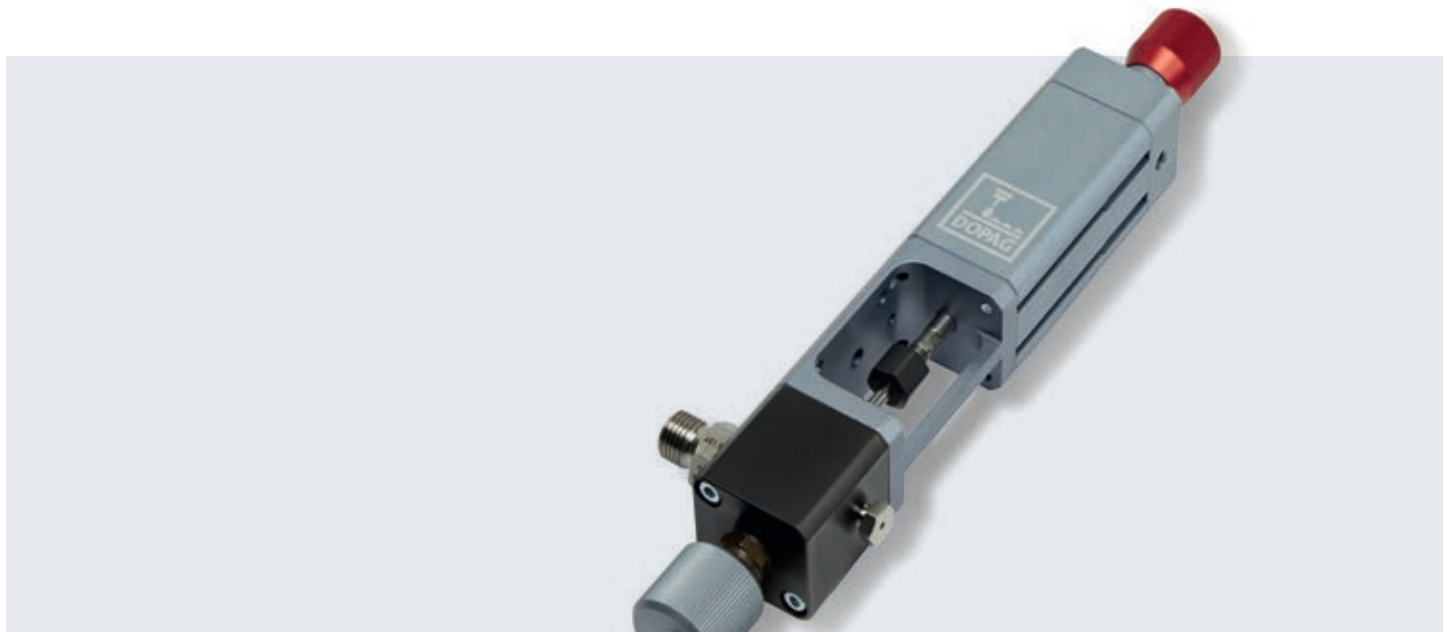
## Options

	Pressure gauge 0-60 bar 135902	Pressure gauge 0-160 bar 135904	Pressure gauge 0-400 bar 135906
	Pressure gauge 0-60 bar 135903	Pressure gauge 0-160 bar 135905	Pressure gauge 0-400 bar 135907
	Material filter mesh 100 400.25.69		

# Needle metering valves

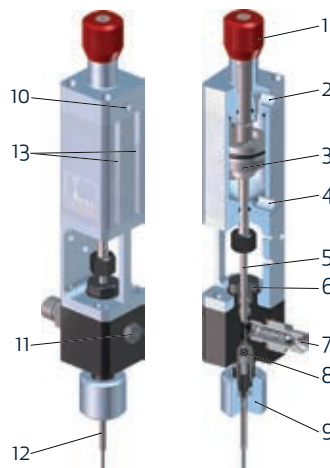
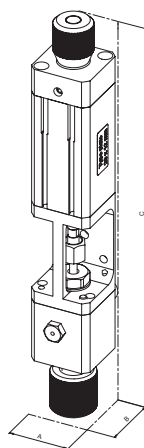
Needle metering valves are used to discharge low to high viscose media. The metering valve consists of two separate parts. The advantage of this separation is that material cannot enter into the drive cylinder and impair the movement of the valve needle. The valve needle is sealed by a special seal. The material amount per shot is adjustable via the stop screw of the metering needle. The metering cycle starts when the control connection, "filling" of the valve is charged with compressed air. The valve needle executes an upward stroke and the

metering chamber is filled with material. By applying pressure to the control connection "metering", the piston moves downward. The material in the metering chamber is discharged by the downward movement of the valve needle. In the bottom position, the valve needle closes the discharge opening of the metering chamber and stops the material flow.



## Product features

- High speed cycle time, up to two shots per second
- Metering shot or dot applications
- Design emphasis on reliability, accuracy and repeatability
- Low maintenance packing, extending valve life
- Air gap separation between wetted parts and pneumatic drive




- 1 Stop screw for metering volume
- 2 Control connection "Metering"
- 3 Valve Piston
- 4 Control connection "Filling"
- 5 Valve needle
- 6 Needle seal
- 7 Material inlet
- 8 Outlet non return valve
- 9 Spigot nut
- 10 Set screw
- 11 De-aeration screw
- 12 Hollow needle (optional)
- 13 Groove for signal transmitter



## Technical data

Part no.		450.20.00	450.20.03
Metering range	ml	0.003 – 0.200	0.003 – 0.200
Material input pressure min.	bar	3	3
Material input pressure max.	bar	20	50
Viscosity range	mPa s	10 – 200'000	10 – 200'000
Material inlet connection	G	1/4"	1/4"
Dimensions (A x B)	mm	35x35	35x35
Height max. (C)	mm	260	260
Weight	kg	0.75	0.75

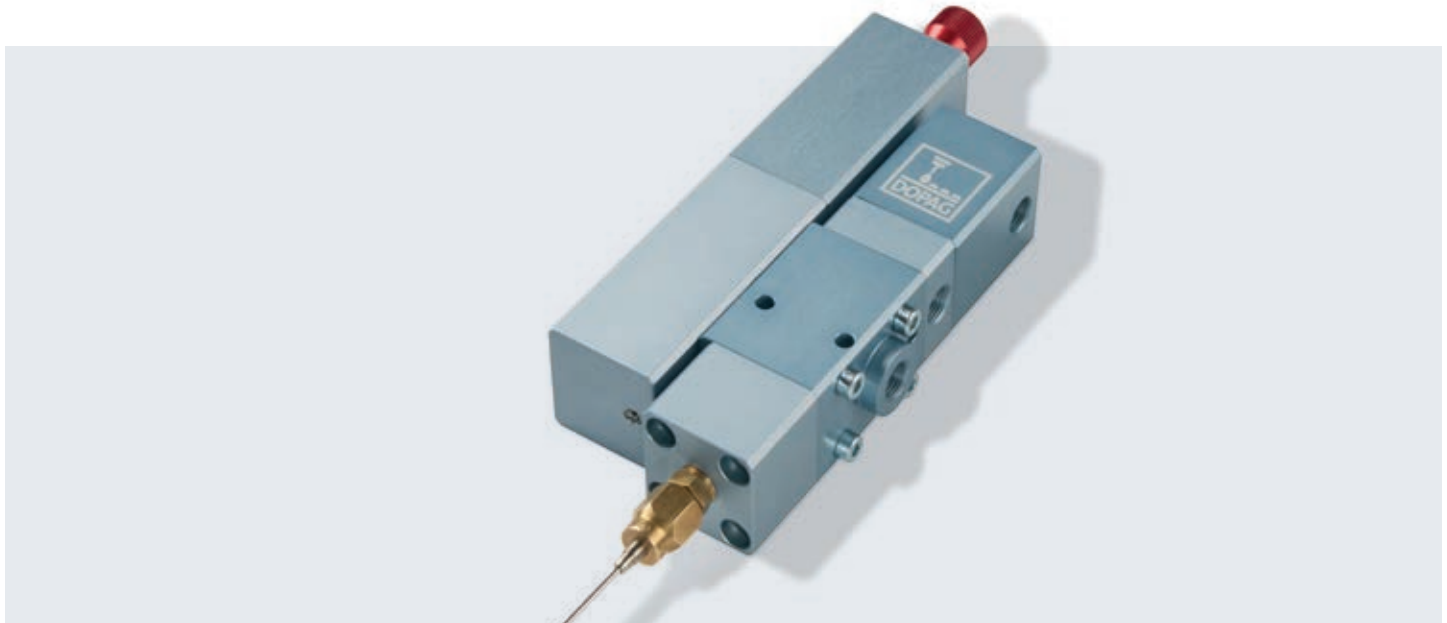
## Options

	401.03.50	Handle pneumatic
	401.03.60	Handle electric
	401.03.66	Handle with initiator
	401.05.25	Solenoid valve plate
	100.55.18	Solenoid valve plate with DIN plug (Use with robot arm or electric handle)
	130077	Stroke detection signal transmitter
	403.04.20	MICRO-FLOW Sensor complete

# Chamber metering valves

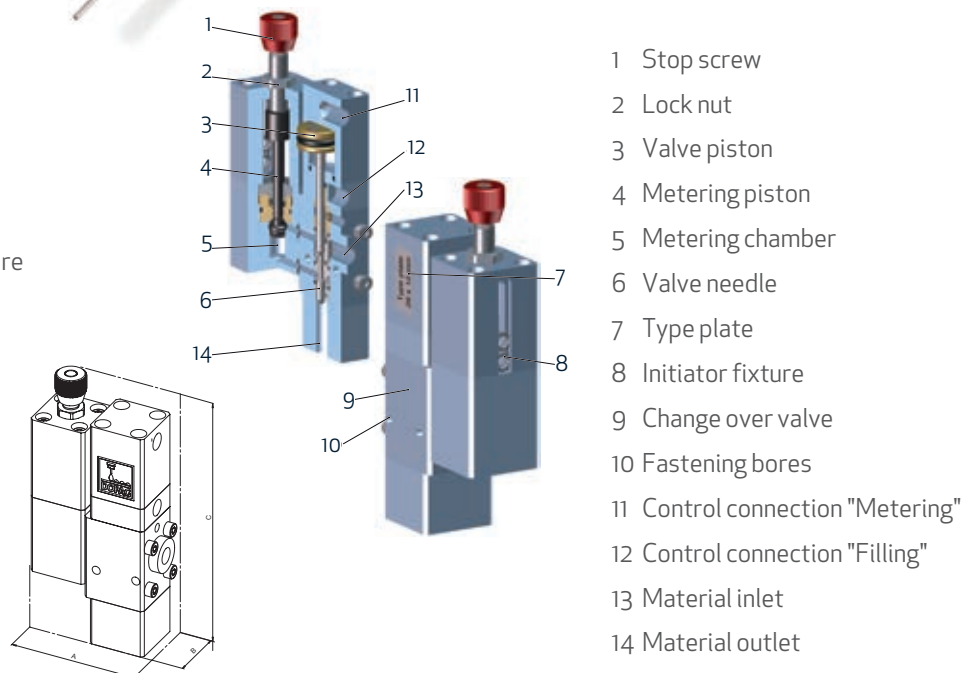
**Filling:** The valve is in the initial position when the control pressure applied on the compressed-air connection. The valve needle in the control valve is in the upper position, thus closing the material outlet. The material access to the metering chamber is open. The material enters the control valve by means of the material pressure and flows into the metering chamber. Due to the contact surface of the piston, the piston executes an upward stroke. The metering chamber fills up automatically to the pre-defined volume.

**Metering:** Material is metered when the compressed-air connection of the valve is charged with compressed air. The valve needle executes a downward stroke, thus closing the material access to the metering chamber. The material outlet opens. The material pressure has an effect on the piston step, which enters the metering chamber and feeds the material to the material outlet. An accurate metering volume is discharged. The snuff back effect carried out during the refilling, prevents the material from dripping after metering is finished.



## Product features

- Double acting chamber metering valve
- Use for metering shot or dot applications
- High maximum working pressure
- Low maintenance
- Snuff back effect to prevent material dripping








- 1 Stop screw
- 2 Lock nut
- 3 Valve piston
- 4 Metering piston
- 5 Metering chamber
- 6 Valve needle
- 7 Type plate
- 8 Initiator fixture
- 9 Change over valve
- 10 Fastening bores
- 11 Control connection "Metering"
- 12 Control connection "Filling"
- 13 Material inlet
- 14 Material outlet

## Technical data

Part no.		450.10.06	450.10.07
Metering range	ml	0.05 – 0.5	0.1 – 3
Material input pressure min.	bar	40	40
Material input pressure max.	bar	80	80
Viscosity range	mPa s	1'000 – 1'000'000	1'000 – 1'000'000
Material inlet connection	G	1/8"	1/8"
Dimensions (A x B)	mm	68 x 30	68 x 30
Height max. (C)	mm	151	194
Weight	kg	0.6	0.73

## Options

	401.01.11	Handle pneumatic with mounting plate
	401.01.12	Handle electric with mounting plate
	450.10.03	Solenoid valve plate
	143818	Proximity switch set signal transmitter for valve position
	410.18.11	Hollow needle connection

# High-speed valves

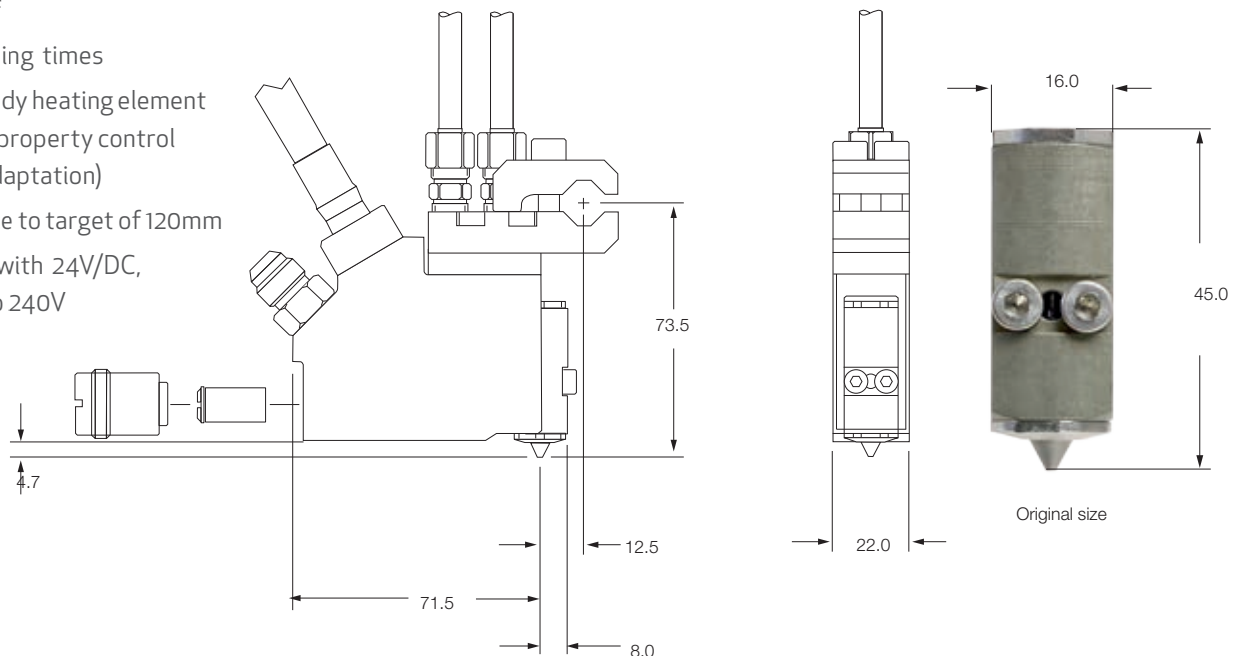
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 The High-speed valve can be used to apply grease or oil to the workpiece from a distance of up to 120 mm without stringing (contactless). An innovative valve nozzle has a self-cleaning effect that ensures a permanently clean application of material as well as a

perfect cut off of the material flow, whether the valve is used for shot or bead laying applications. The compact design offers the opportunity to use the valve even in the narrowest of spaces.



## Product features

- No stringing
- Optimized valve closing technique
- Compact construction
- Integrated material filter
- Splash proof
- Short switching times
- Complete body heating element for material property control (Viscosity adaptation)
- Max. distance to target of 120mm
- Control unit with 24V/DC, heating up to 240V



## Technical data

Flow rate	mm <sup>3</sup>	1.0 to 20 per shot
Viscosity	mPa s	< 150.000 (higher on request)
Switching frequency	Hz	up to 100
Apply distance	mm	up to 120
Environmental temperature	°C	-7 to +50
Material temperature	°C	up to 80
Working pressure	bar	1 to 70 (depending on the viscosity)
Weight	g	approx. 580
Dimensions	mm	71,5 x 73,5 x 22

## Options

### Flexible adjuster unit

For position control and optimised distance

### Metering control

Through the use of volume counters, volumetric metering control is possible.

In the MR15 control unit all application parameters can be controlled; Several programs possible, Temperature control, shot size, breaks are controllable.

### Light barrier

This option is used to control the shot quantity



# Spray valves

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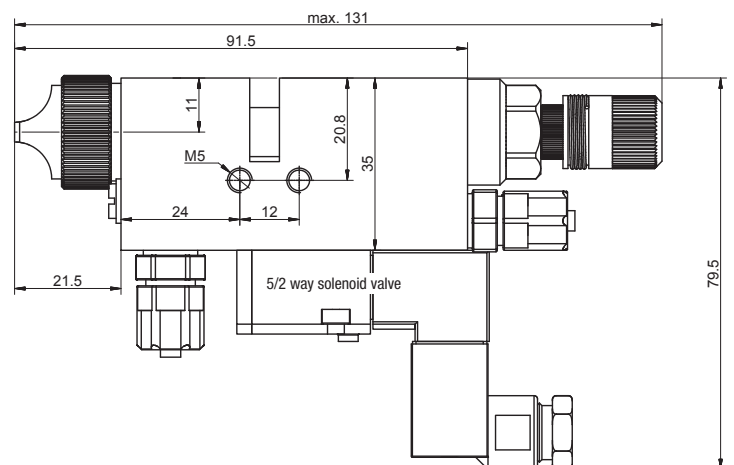
The Spray valve is specifically designed for application of grease and oil. The valves can be used with intermitting operation and for continuous spraying. Special for this type of valve is the integration of the spray air valve, which is used to control the air blow after material shot for cleaning of the nozzle.

Short air connection in the body of the valve and a flange mounted 5/2 way solenoid valve are supporting highly precise intermitting. Various different aircaps allow adaption of final spray results.



## Product features






- Various nozzle sizes available
- Raster regulation for simple control of the material volume
- Solenoid valve with different voltages (24V/DC, 110V/AC, 220V/AC)
- Various nozzle shapes and air caps depending on the final application available
- Optional needle detection



## Technical data

Material pressure max.	bar	35
Control air min.	bar	5-6
Intermitting max.	Cycles/Sec	30
Dimensions	mm	132 x 81 x 22 (incl. solenoid valve)
Main body material		Stainless steel
Nozzle + needle material		Stainless steel
Sealings		Viton® (other materials upon request)

## Options

	Extension ring beam Diameter 8 mm
	Extension frontal beam Diameter 8 mm
	Extension 45 degree sideways, flat beam Diameter 8 mm
	Extension frontal flat beam Diameter 8 mm
	Extension 45 degree angle side, round Diameter 4 mm
Heating plate	To adjust and control the material properties

## Part numbers

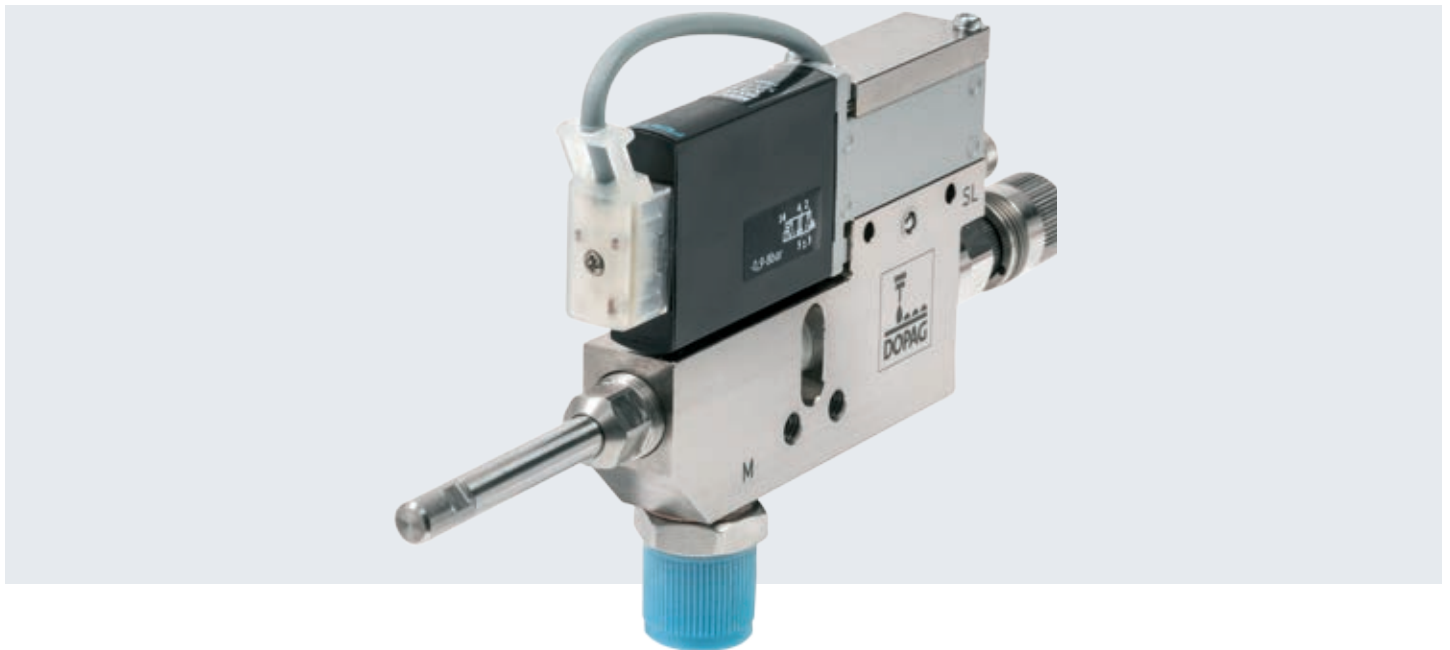
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# Shot valves

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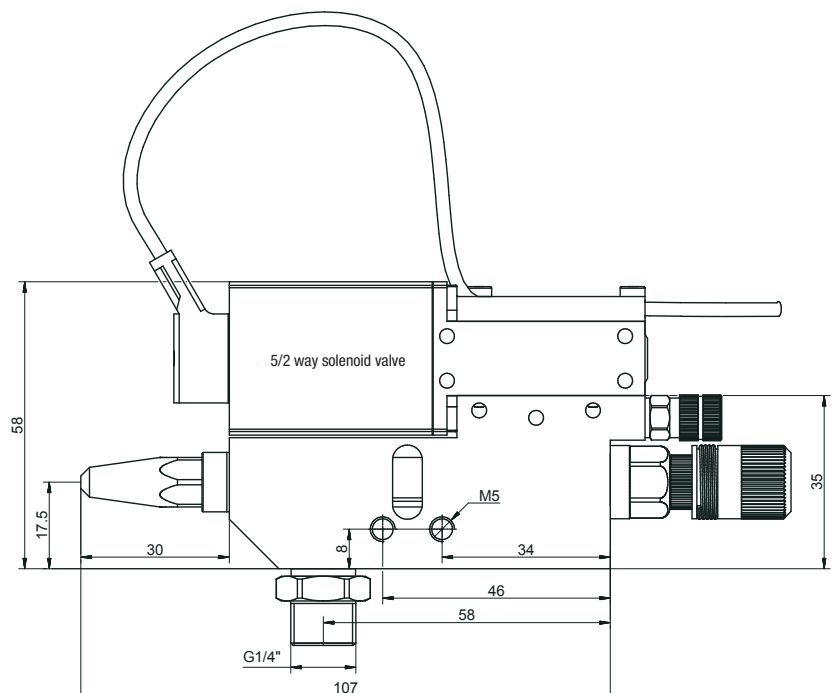
The Shot valve is an extremely fast switching valve. Short and long nozzle variants are available. Depending on the size of the nozzle various materials with different viscosities can be applied. Control is done

via an integrated 5/2 way solenoid valve. The extreme short distance inside the air support section allows a fast switching of the solenoid of up to 200 cycles per second.



## Product features

- Various nozzle sizes available
- Raster regulation for simple control of the material volume
- Optional with norm regulation via allen screw and counter nut for fixation
- Optional needle detection with raster regulation





## Technical data

Material pressure max.	bar	100
Control Air min.	bar	6
Intermitting max.	Cycles/Sec	200
Dimensions	mm	142 x 58 x 15 (short nozzle) 125 x 58 x 15 (long nozzle)
Weight	g	440
Main body material	-	Brass, nickel-plated
Nozzle material	-	Stainless steel
Needle material	-	Carbide metal
Sealings	-	Viton® (other materials upon request)

## Options

	Extension D6 0.3 mm straight
	Extension D6 0.3 mm 90 degrees
	Extension D6 0.3 mm 45 degrees
	Extension D6 0.3 mm 135 degrees
Heating plate	To adjust and control the material properties

## Part numbers

Please contact your DOPAG sales partner



Drum pump



Material pressure regulator



P/N

S/N

125

WATTS

MAX ADHES

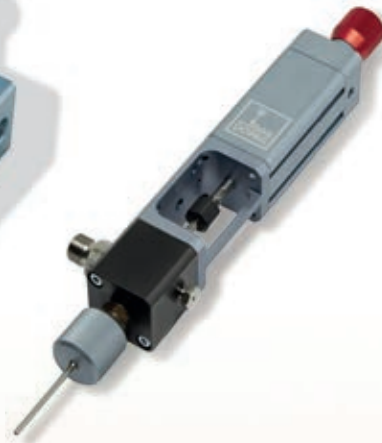
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Valves





DOPAG is one of the leading manufacturers of metering and mixing technology. In numerous industries, DOPAG systems and components are used for processing and application of multi-component polymers or 1-component media such as adhesives, greases and oils. The company employs more than 300 people and is represented in more than 30 countries by its subsidiaries and distributors.

DOPAG is a member of the HILGER & KERN GROUP that has been a reliable supplier and service partner for industrial enterprises across various market segments for more than 85 years.

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