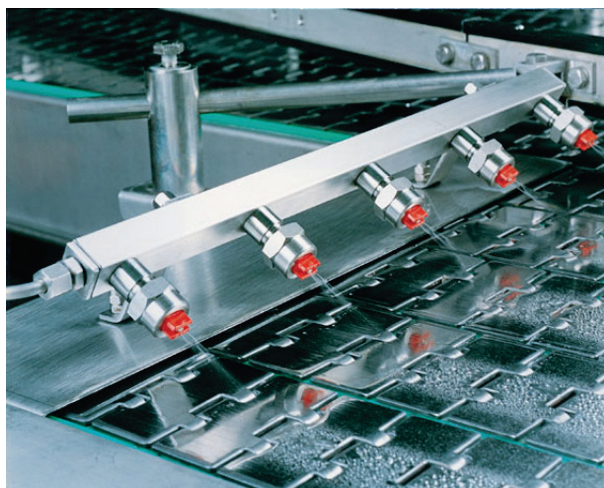


## Wet-Lubrication





**Contents:**

**Wet-Lubrication**

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- **Module structure**
- **Combination to manifold concentration lubrication metering station**
- **Accurate metering of the conveyor track lubricant concentrate to water**
- **Variable concentration setting**
- **Pump switches off automatically when „empty“ signal is triggered**
- **External, zero and internal changeover**
- **Pulse multiplier and divisor**
- **Simple to operate and easy to install**
- **Reliable and easy to maintain**



The Lub-O-Mat is a stand-alone central metering unit which serves to supply conveyor track lubricant to spraying valve systems of conveyor tracks. The selection of the metering unit is depended on the size of spraying valve system, the number and percentage of concentration of conveyor track lubricant required.

The conveyor track lubricant is metered in quantity-proportional form from the stream of water passing through. The water meter activated by the flow of fresh water sends a signal pulse to an electrically-driven diaphragm pump for every 150 ml.

At the standard setting (1:1), each water meter pulse produces a metering stroke. The pulses can be multiplied or divided by means of a selector switch on the metering pump. The required concentration of solution is determined both by

changing the multiplier/divisor factor and by adjusting the pump delivery capacity. The system can be operated both in continuous an intermittent mode.

The metering pump is going in out of operation independently by a suction unit, if the container with lubricant is empty.

The accessibility to all parts of the metering unit is easy, because the cover made of stainless steel is let down.

On the cover are main switcher, standby indicator (green lamp) and empty signal indicator (red lamp).

According to the necessary flow rate (size of nozzles) and the required concentration of solution the Lub-O-Mat can be delivered in four several versions / size of metering pump).



The Lub-O-Mat can be combined with following accessories depending on requirements:

- water unit incl. pipe disconnecter for fresh water separation in accordance with DIN 1988 and DVGW and water fine filter and pressure reducer
- suction pipe
- oval gear meter
- second dosing valve for cleaning product or disinfectant
- frame made of stainless steel (if wall fastening is not possible)

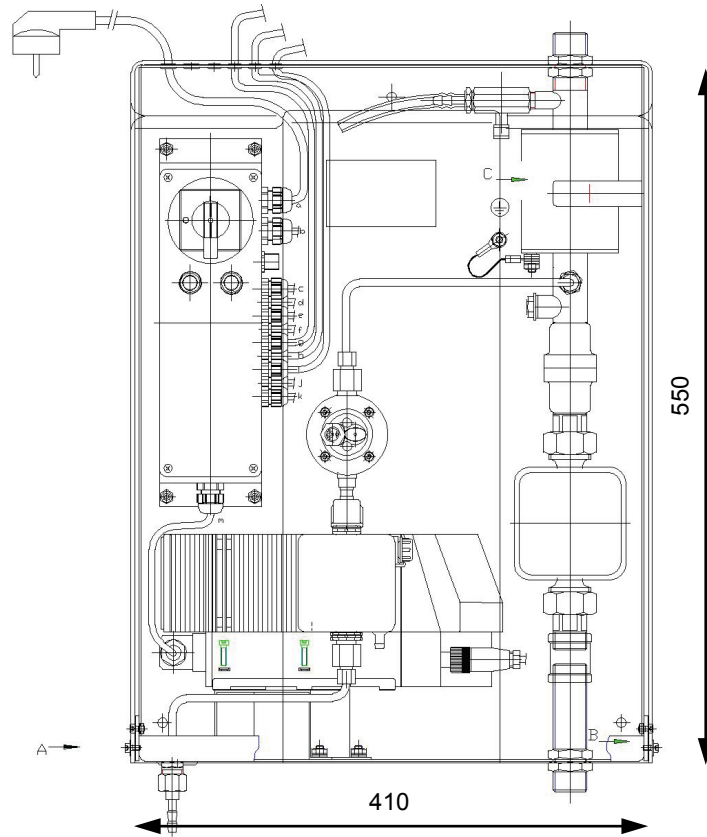
### Technical Data:

Pulse distance		150 ml/Imp
Fresh water supply connection		R 3/4" a
Consumer connection		G 3/4" a
Power supply	2.5 l/h 4.3 l/h 7.2 l/h / 11.2 l/h	230 V / 50/60 Hz 230 V / 50 Hz 95 - 265 V / 50/60 Hz
Connection power		0.2 kVA
Pre-fuse		10 A
Water inlet temperature		max. 40° C
Water inlet pressure		5 – 8 bar 5 – 6 bar (for 11.2 l/h)
Dimensions		550 x 410 x 220 mm (H * B * T)
Weight		approx.12.5 kg
Material: Console		Stainless steel
Cover		Stainless steel
Water meter		Brass coatet
Product touching parts:		Stainless steel
Fixing:		Wall fastening

Type			Lub-O-Mat 25	Lub-O-Mat 43	Lub-O-Mat 72	Lub-O-Mat 11.2
Metering pump capacity [l/h]			2.5	4.3	7.2	11.2
Metering rate per stroke [ml]			0.34	0.57	0.98	1.5
	Pulse factor	Flow capacity [l/h]	Concentration [%]			
Pulse division	2	2200	0.02 – 0.1	0.05 – 0.2	0.1- 0.33	0.15 – 0.5
↑ ↓	1	1100	0.05 – 0.22	0.1- 0.38	0.1 – 0.65	0.3 – 1.0
Pulse multiplication	2	550	0.1 – 0.45	0.2 – 0.75	0.2 – 1.3	0.6 – 2.0

**Dimensions:**

**Lub-O-Mat**



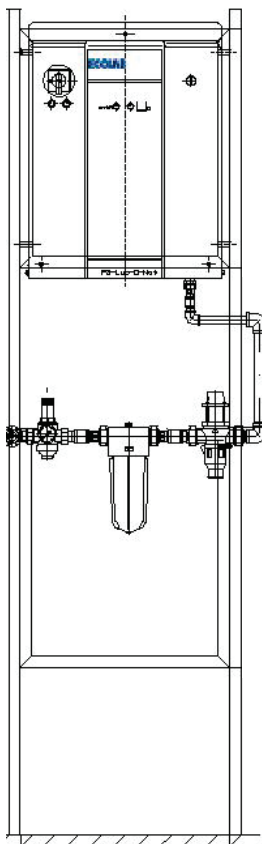
**Ordering Data:**

Article	Material No.
Lub-O-Mat 2.5	183042
Lub-O-Mat 4.3	183043
Lub-O-Mat 7.2	183044
Lub-O-Mat 11.2	183045

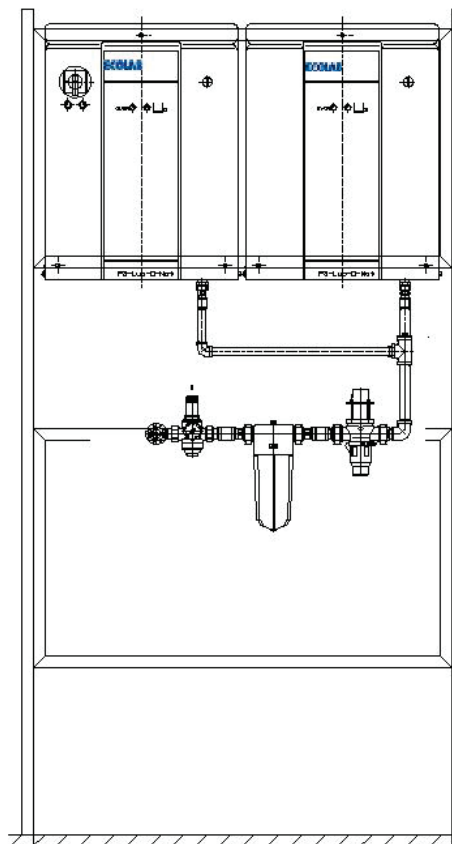
**Accessories:**

Article	Material No.
<b>Frame</b> complete with fastening for 1 Lub-O-Mat unit	38300301
<b>Accessories kit</b> for frame	283577
<b>Frame</b> complete with fastening for several Lub-O-Mat units	on request

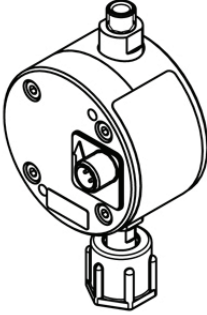
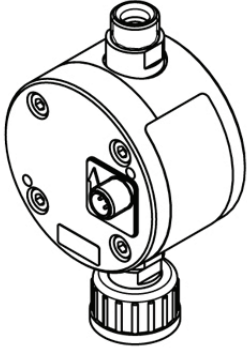

Gestell für 1 Lub-O-Mat



Gestell für 2 Geräte Lub-O-Mat

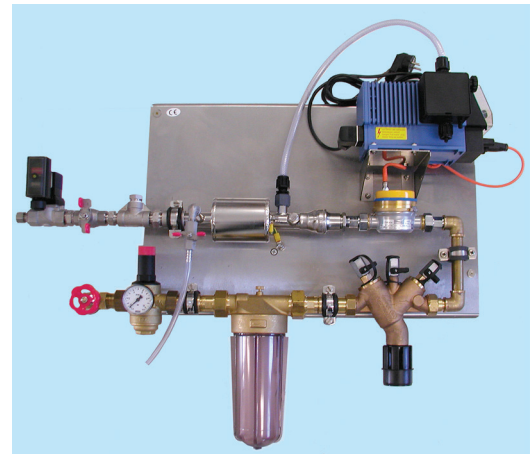




	Article	Material No.	
 <p><b>Type 00112</b></p>	<b>Oval gear meter</b>		
	OGM <sup>PLUS</sup> type 00112 complete	283046	
	Flow rate [l/h]	min. 0.5	
		max. 13.5	
	Flow rate [l/min]	min. 0.0083	
		max. 0.23	
	Signal output [pulses/l]	156000	
	Inlet pressure max. [bar]	10	
Medium temperature max. [°C]	40		
 <p><b>Type 00540</b></p>	Viscosity max. [mPas]	1000	
	Accuracy [%]	5	
	Reproducibility [%]	>99	
	Input connection	3/8"i	
	Output connection	d6	
	<b>Material</b>		
	Housing	PVC grey	
	Cover	PVC (transparent)	
	O-rings	FPM (Viton B)	
	Oval wheels	PEEK	
	Sensor pins	Titan	
Axes	Ceramics		
<b>Extent of supply:</b>			
OGM <sup>PLUS</sup> with connection adapter for metering pump outlet and stainless steel connection pipe d6/10 for Lub-O-Mat installation.			
	<b>ELADOS® EMP II E 60<sup>PLUS</sup></b>		
	With the add-on unit (Dongle Box) for connection of an OGM <sup>PLUS</sup> oval gear meter the version E 60 turns to version E 60 <sup>PLUS</sup>		
	<b>Dongle Box</b> with the following additional functions: <ul style="list-style-type: none"> <li>• Display of real metering quantity/time and automatic readjustment of pump output (only in combination with external flow monitoring system, e.g. oval gear meter)</li> <li>• Automatic calibration function via oval gear meter</li> <li>• Consumption data control by means of oval gear meter</li> </ul>	248606	



- **Exact volumetric metering**
- **Concentration adjustable from 0-1.8 %**
- **Accurate metering of the P3 conveyor track lubricant concentrate to water**
- **Pump switches off automatically when “empty” signal is triggered**
- **External, zero and internal changeover**
- **Pulse multiplier and divisor**
- **Simple to operate and easy to install**
- **Reliable and easy to maintain**
- **Assembled ready-to-connect on stainless steel plate**



The Ket-O-Mat 400 has been designed for use in filling plants as a compact metering system for the supply of P3 track lubricant to conveyor track spraying valve systems.

The P3 track lubricant is metered in quantity-proportional form to the stream of water passing through. The water meter activated by the flow of fresh water sends a single pulse to the electrically-driven diaphragm pump for every 32 ml of water passing through.

At the standard setting (1:1), each pulse of the water meter produces a metering stroke. The pulses received can be multiplied or divided by means of a selector switch mounted on the metering pump. The required concentration of the solution is determined both by changing the multiplier/divisor factor and by adjusting the pump delivery capacity.

The system can be operated both in continuous and intermittent operating mode. The valve time control unit (on the solenoid valve coil) regulates the opening of the built-in solenoid valve at adjustable intervals, thus opening the flow line to the distribution line system.

The building block principle means that the Ket-O-Mat 400 can be supplied in the following versions according to requirement:

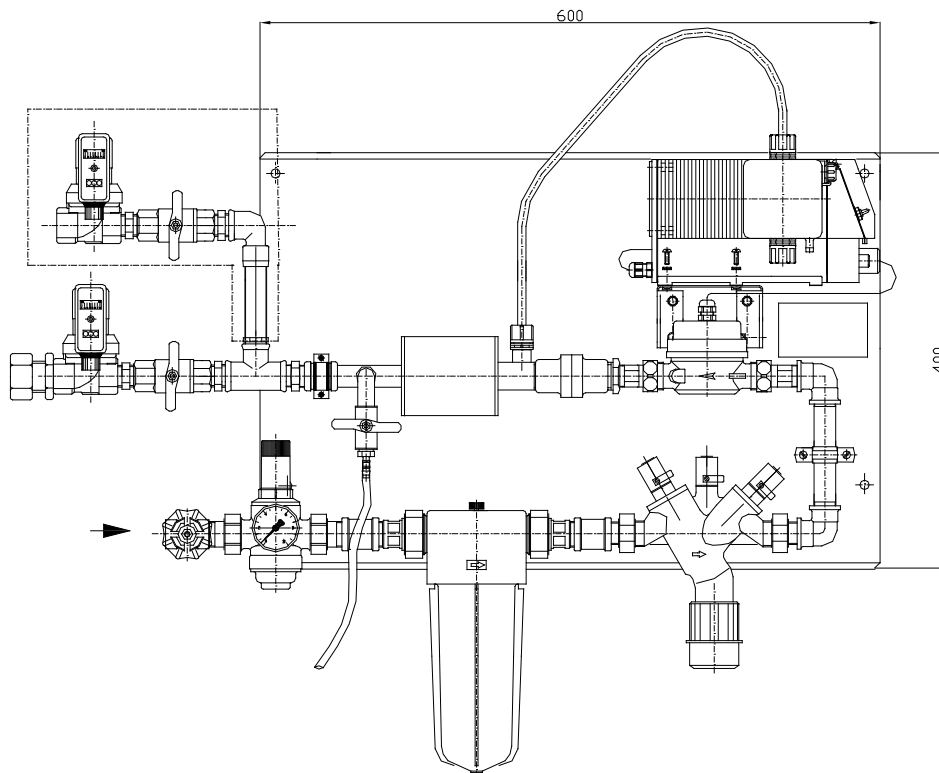
- with or without pipe disconnecter for fresh water system separation in accordance with DIN 1988 and DVGW
- with one or two valve time control/solenoid valve sub-assemblies



## Technical Data:

Flow capacity [l/h]	min. max.	30 230	30 460	30 700	30 920
Concentration setting [%]	max.	1.8	0.9	0.6	0.45
Pulse divisor		1 : 1	2 : 1	3 : 1	4 : 1
Pulse interval [l/Imp.]		0.032	0.064	0.096	0.128
Metering pump capacity [l/h] [strokes/h]	max. max.	4.3 7320			
Fresh water connection		3/4"i			
Water pre-pressure [bar]		3 - 8			
Consumer connection		1/2" i - d 10			
Power supply - metering pump		230 V / 50 Hz (230/ 60 – on request) 30 VA			
Power supply – solenoid valve		24 V DC 8 W			
Valve time control	On/Off	0.5 s...10 h			
Water inlet temperature [°C]	max.	40			
Dimensions [mm]		780 x 615 x 170			
Weight [kg]		approx. 15			

## Dimensions:





**Ordering Data:**

Article	Material No.
<b>Ket-O-Mat 400, 24 V DC/STR</b> (with system separator)	183592
<b>Ket-O-Mat 400, 24 V DC/o.STR</b> (without system separator)	183593
<b>Solenoid valve group (accessories)</b> consisting of: Double nipple, ball cock, solenoid valve, valve time control, straight threaded connection, tube double nipple, angle	283579

**Accessories:**

Suction lance / textile-reinforced hose, see chapter "Suction Connection" on page 14.

**Delivery specification:**

<b>Ket-O-Mat 400</b>	<b>24 V DC/STR</b>	<b>24 V DC/o. STR</b>
<b>Material No.</b>	<b>183592</b>	<b>183593</b>
Shut-off cock	X	X
Shut-off cock with backflow prevention	--	X
Pressure reducer with manometer	X	X
Water fine filter	X	X
Disconnecter	X	--
Water meter	X	X
Non-return valve	X	X
Mixing chamber with metering valve	X	X
Sampling valve	X	X
Solenoid valve	X	X
Valve time control	X	X
Power supply 230 V, 50/60 Hz	plug	plug
Power supply for solenoid valves with valve time control: 24 V DC	customer	customer

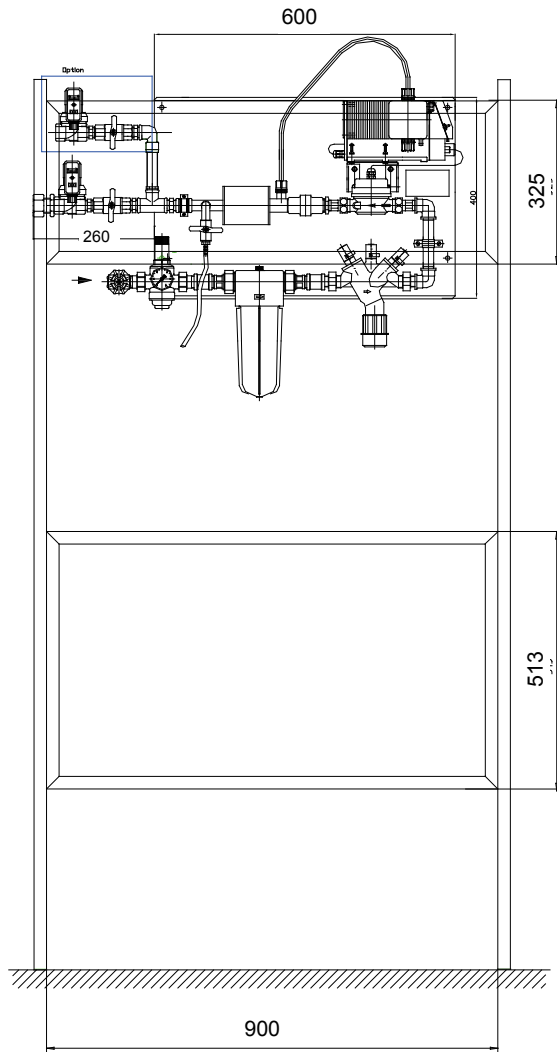
X = included in device

-- = not included



**Frame for Ket-O-Mat 400**

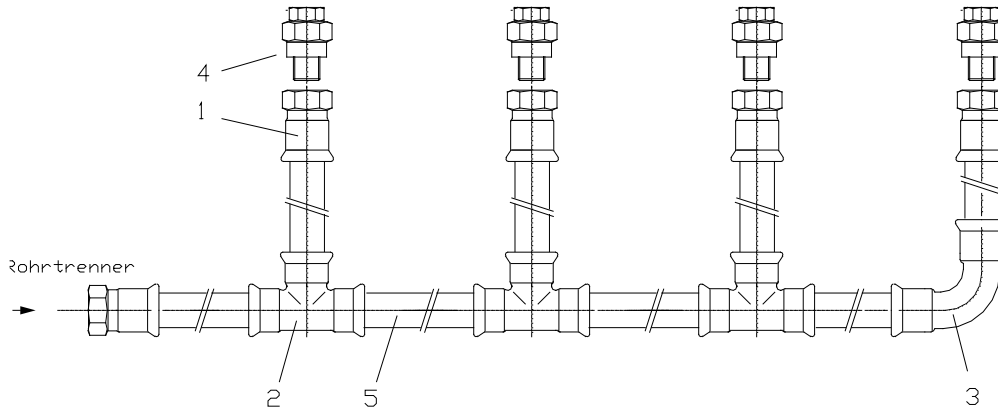
Frame, complete with fastening available on request.







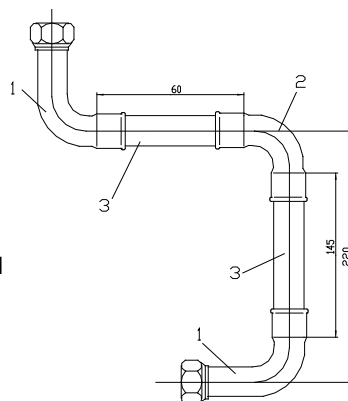
**Water Distributor**



Pos.	Article	Material No.
1	Transition bush 22 x R 3/4", stainless steel	415200584
2	T-piece DN 20, stainless steel	415200569
3	90°-bend DN 20	415200552
4	Coupling screw 3/4"i-a, stainless steel	415504222
5	Stainless steel pipe Ø22 x 1	415031168

**Water Connection**

Article	Material No.
Water connection single	283007-01
Water connection double	283007-02
Water connection triple	283007-03
Water connection 4-fold	283007-04
Water connection single, pre-installed	283032







**Connection group:  
Water connection single, pre-installed**

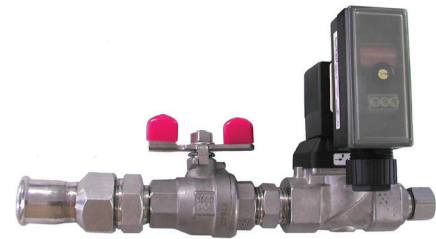


### Suction distributor

Article	Material No.
T piece with hose connection 3 x 6 mm, stainless steel	204604
Y hose connection port, 6 mm, POM	415100703
Hose clip, D.12, stainless steel	415013183

	Article	Material No.
	<b>Suction lance</b> with circular plug	
	Length 475 mm for container 20 l	288431
	Length 725 mm for container 30/60 l	288432
	Length 975 mm for container 100/200 l	288433
	Length 1125 mm for container 200 l	288434
	<b>Protective cap</b> PVDF, for suction lance	286191
	<b>PVC-fabric</b> 6/12 (ID/AD)	417400123
	<b>Spiral coiled tube</b> 14/10 mm PE (for fastening connection cable)	417400561

- **Pulse-pause control for conveyor track lubrication circuits**
- **Independent activation of individual lubrication circuits with variable setting of the spraying and pause cycles**
- **Low-noise and low shutting-impact valves**
- **High flow and compact design**
- **Compatible with lubrication systems and P3 products**
- **Easy to operate and assemble**



The valve time control unit is mounted directly onto the coil of the corresponding solenoid valve. Both parts go together to form a compact single unit for timing the conveyor belt lubrication cycles.

The pulse ( $t_{open}$ ) and pause ( $t_{closed}$ ) cycles for the time range are set internally via DIP switches. It is possible to select from among 8 time ranges ranging from 0.5 seconds to 10 hours. The time within a range is set on a percentage basis by means of a potentiometer. For example, a setting of 8 s in the 0.5 - 10 s time range yields a value of 8 hours when the changeover is made to the 0.5 - 10 hour time range.

The function is set by means of two further DIP switches. There are four function options ( $t_{open} + t_{closed}$  /  $t_{closed} + t_{open}$  /  $t_{open}$  only /  $t_{closed}$  only).

The selected program commences as soon as the supply voltage of 24 V / DC or AC is applied. This is indicated by a LED lighting up. A second LED display lights up during the opening cycle ( $t_{open}$ ).

The pilot solenoid valves with servo-diaphragms are closed at zero current. Pressure builds up above the servo-diaphragm, thus pressing it down and keeping the valve closed. Upon being switched on, the pressure in the space above the servo-diaphragm is reduced by the pilot valve so that the servo-diaphragm is raised by the pressure of the medium and the main valve opened.

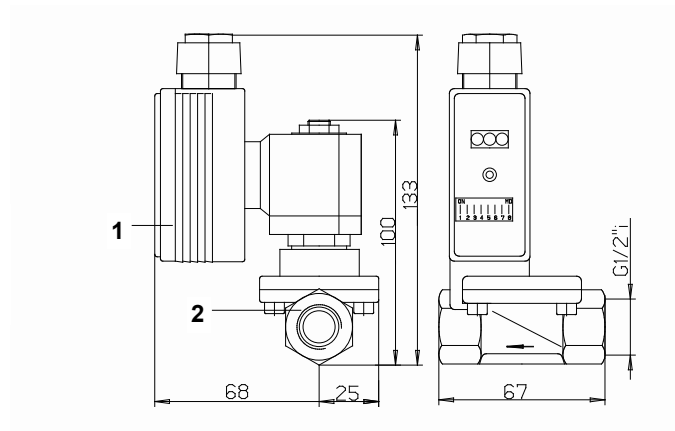
For the complete unit (valve time control + solenoid valve), the voltage is supplied by means of the valve time control unit.

### Technical Data:

Protection class	IP 65
Power supply	24 V DC or AC
Valve time control pulsing $t_{open}/t_{closed}$	every 0.5 s ... 10 h
<b>Solenoid valve</b>	
Line connection DN / G	13 / 1/2"i
Protection class	IP 65
Weight rate of flow, water	4 m <sup>3</sup> /h
Pressure range	0.5-10 bar
Power consumption	DC: 8 W / AC: 21 VA
Power supply	24 V DC or AC depending on version
Sealing material	FPM (Viton)
Housing material	MsNi or stainless steel depending on version
Internal parts of valve	stainless steel
Ambient temperature max.	55° C

**Dimensions:**

1	Valve time control
2	Solenoid valve



**Ordering Data:**

Article	Material No.
<b>Solenoid valve group with time control, complete</b> Scope of delivery: Solenoid valve 24 V DC, stainless steel with ball cock, marker plate, time control Connection: Inlet d22 / outlet d10	283580
<b>Solenoid valve group without time control, complete</b> Scope of delivery: Solenoid valve 24 V DC, stainless steel with ball cock, marker plate Connection: Inlet d22 / outlet d10	283599
Solenoid valve, DN 12, G 1/2", 24 V/DC, stainless steel	417704342
Solenoid valve, DN 12, G 1/2", 24 V/DC, MsNi / inner parts stainless steel	417704340
Solenoid valve, DN 12, G 1/2", 24 V/AC, MsNi / inner parts stainless steel	417704341
Valve time control	417704324
Solenoid valve connection plug for use without timer	418468002



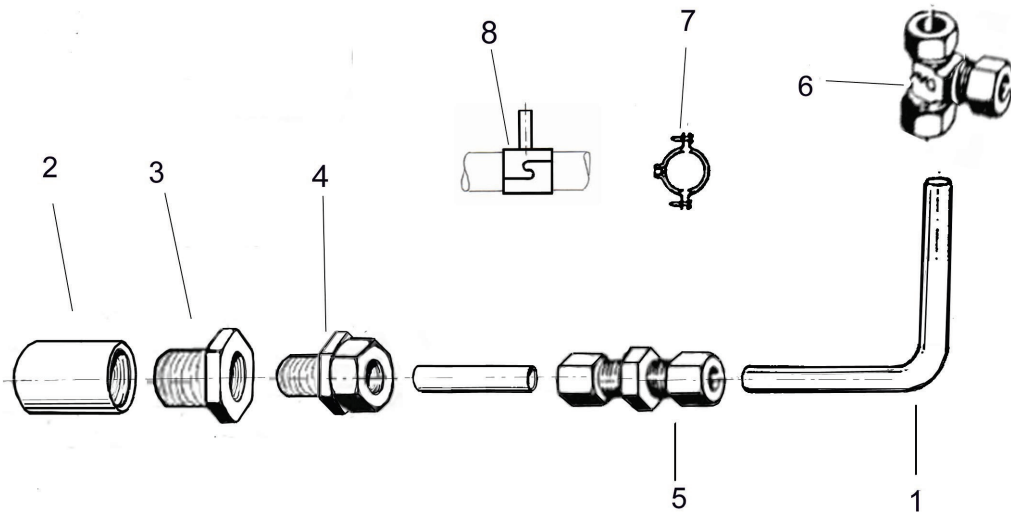


**Accessories:**

<b>Article</b>	<b>Material No.</b>
Ball cock, DN 12, G 1/2", stainless steel	415502024
Ball cock, DN 12, G 1/2", MsNi	415502020
Double nipple 1/2", stainless steel	415203604
Double nipple 1/2", MsNi	415203564
Straight threaded connection, 1/2" - d10, stainless steel	415101893
Straight threaded connection, 1/2" - d10, MsNi	415101738
<b>With hose connection:</b>	
Reducing nipple 1/2" a - 3/8" I, Ms chrome-plated	415202889
Threaded stud 3/8" – 10, POM	415101552
<b>Set of wearing parts for solenoid valve 417704342</b>	
consisting of:       - diaphragm with stainless steel attachment - 2 springs - O-ring	
Sealing material:    FPM	417704352
EPDM	417704351



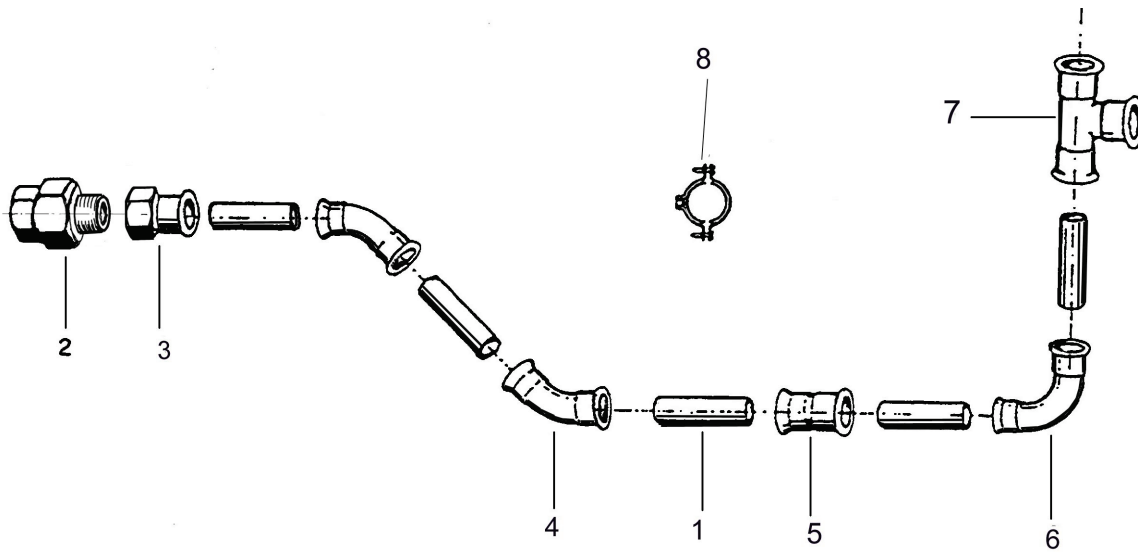
**Branch Line DN10, Stainless Steel**



Pos.	Article	Material No.
1	Stainless steel pipe 12 x 1	415031207
2	Connecting sleeve 3/4"	415203505
3	Reducer 3/4" - 1/2"	415202821
4	Straight threaded connection 1/2" - Ø12	415101910
5	Straight connection Ø12 - Ø12	415101867
6	Tee connector Ø12	415101940
	Fastening elements:	
7	Pipe clip	415014020
	Threaded rod M8 (1000 mm)	413078008
	Welding bolt M8 (25 mm)	413134030
8	Clip with internal thread	415018846
	Threaded rod M6 (1000 mm)	413078007
	Welding bolt M6 x 25	413134014



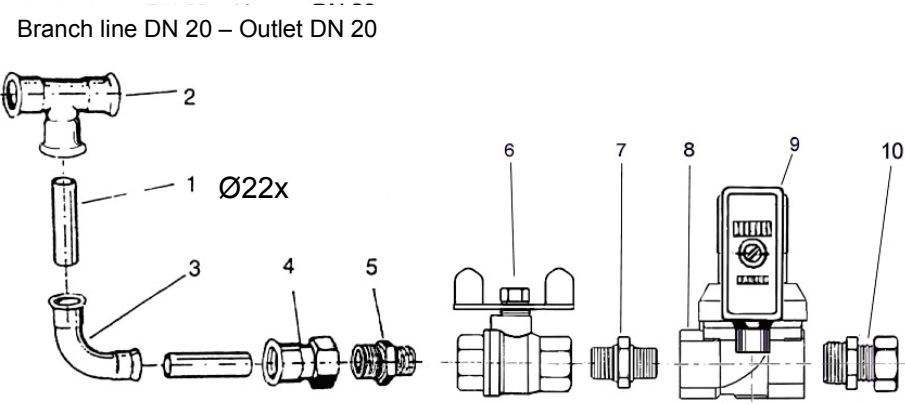
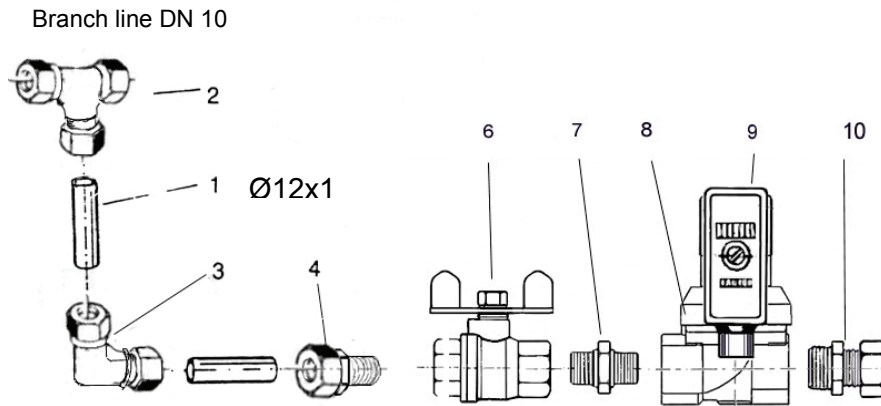
**Branch Line DN20, Stainless Steel**



Pos.	Article	Material No.
1	Stainless steel pipe 22 x 1	415031168
2	Pipe fittings	415504222
3	Reducing coupling	415200584
4	Elbow 45°	415200557
5	Connecting sleeve	415200574
6	Elbow 90°	415200552
7	Tee connector	415200569
	Fastening elements:	
8	Pipe clip	415014036
	Threaded rod M8 (1000 mm)	413078008
	Welding bolt M8 (25 mm)	413134030



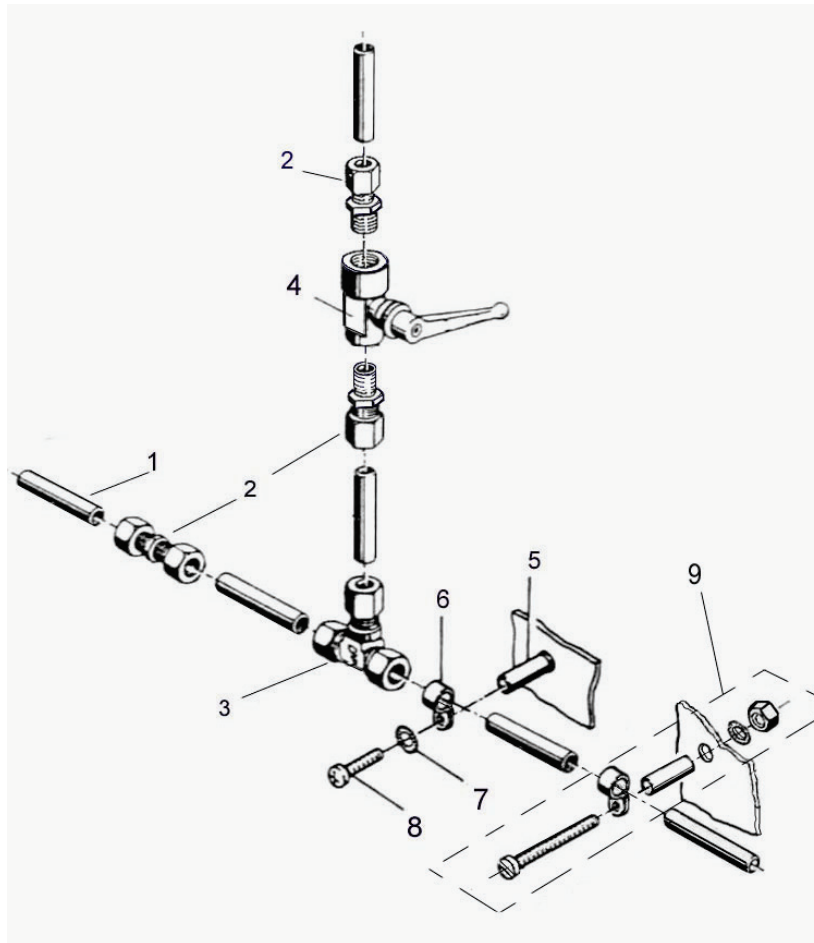
**Branch Line - Feeder to the solenoid valves**



Pos.	Article	Material No.	
		DN 10	DN 20
1	Stainless steel pipe	415031207	415031168
2	Tee fitting	415101940	-
2	Tee connector	-	415200569
3	Elbow fitting	415101927	-
3	Elbow 90°	-	415200552
4	Straight threaded connection	415101910	-
4	Reducing sleeve	-	415200582
6	Ball cock	415502024	
7	Double nipple	415203604	
8	Solenoid valve	417704342	
9	Valve time control	417704324	
10	Straight threaded connection	415101893	



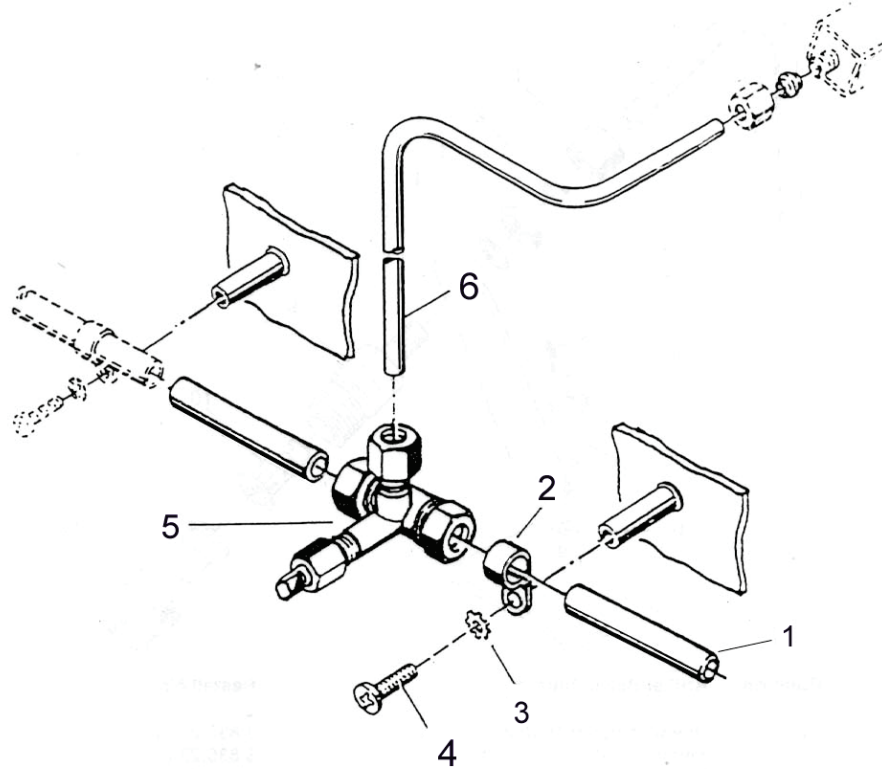
**Distribution Line, Stainless Steel**



Pos.	Article	Material No.
1	Stainless steel pipe 10 x 1	415031204
2	Straight connection Ø10 - Ø 10	415101868
2a	Locking ring Ø10	38352006
3	Tee fitting 3 x Ø10	415101939
4	Ball cock 3/8"	415502023
5	Weld-on threaded sleeve M 4 x 15	413134063
6	Pipe clip d 9.5	415014016
7	Lock washer di 4.3	413300250
8	Oval-head screw 4 x 8	413119226
	Alternative fastening:	
9	Distance sleeve	38358606
	Cheese head screw M4 x 28	413018315
	Hexagon nut M4	413200006



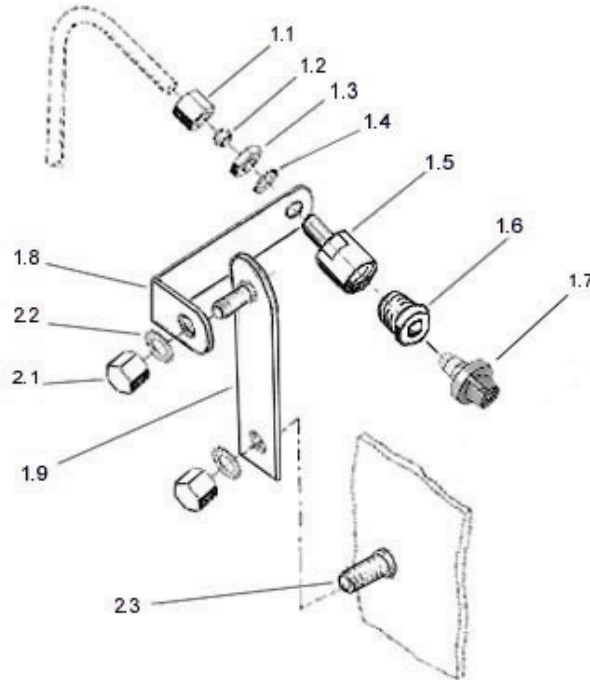
**Nozzle Station Connection**



Pos.	Article	Material No.
1	Stainless steel pipe 10 x 1	415031204
2	Pipe clip d 9.5	415014016
3	Lock washer di 4.3	413300250
4	Oval-head screw 4 x 8	413119226
5	Needle type control valve d10 - d6 - d10	415503903
6	Stainless steel pipe 6 x 1	415031173
7	Seal washer d15 EPDM (for end of pipe)	38352053



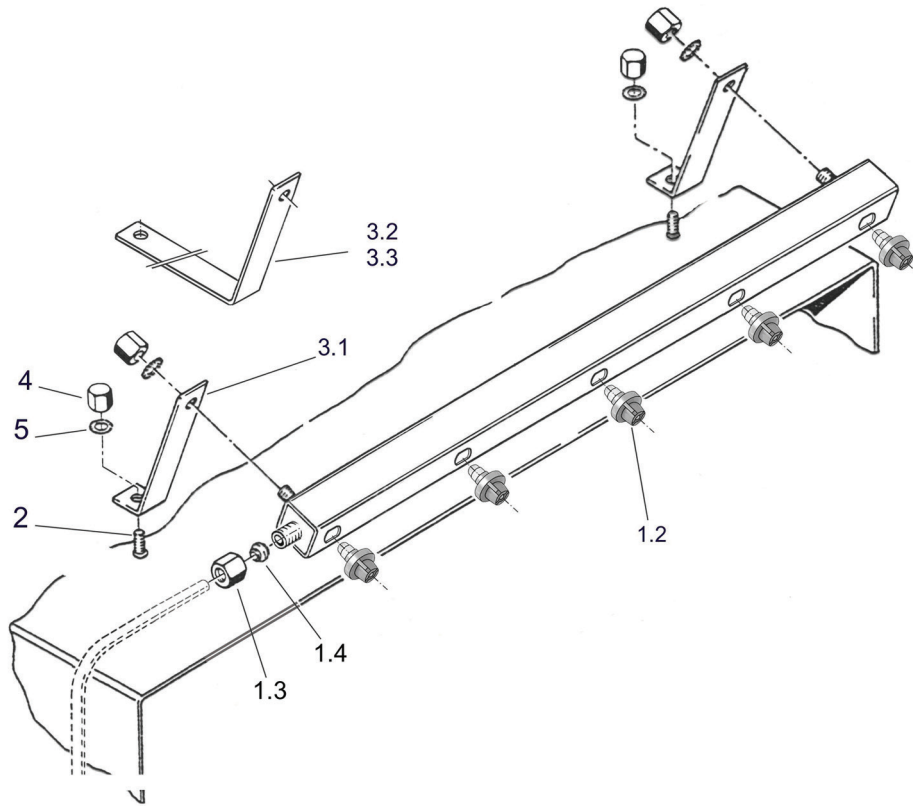
## Nozzle Station, Single for upper/bottom belt



Pos.	Article	Material No.
1	<b>Nozzle station, single, complete</b> Nozzle: red, 4.8 l/h, 65° Ball valve filter: blue, mesh 200, opening pressure 0.4 bar support plate: 100 mm	282421
	<b>Fastening elements (to be ordered separately):</b>	
2.1	Cap nut M6	413215003
2.2	Lock washer di 6.4	413300253
2.3	Welding bolt M 6 x 8	413134010
	<b>Spare parts:</b>	
1.1	Union nut M 10 x 1	38352017
1.2	Locking ring d 6	38352007
1.3	Flat head hex nut M 10 x 1	413200018
1.4	Lock washer di 10.5	413300257
1.5	Tube fitting	38300108
1.6	Nozzle seat, single	38352086
1.7	Nozzle group	see page 27
1.8	Supporting angle	38306122
1.9	Supporting plate with headless pin	38306121



## Upper Belt Nozzle Station, Multiple



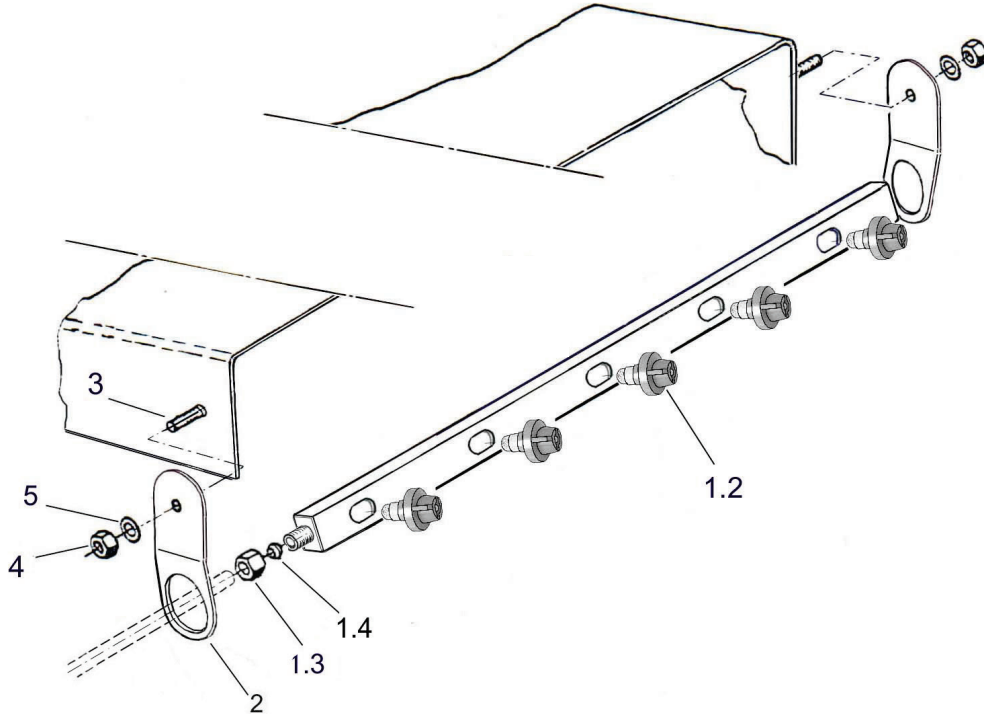
Pos.	Article	Material No.
1	<b>Upper belt nozzle station, multiple, complete</b> Nozzle: red, 4.8 l/h, 65°, nozzle distance 85 mm Ball valve filter: blue, mesh 200, opening pressure 0.4 bar	for material numbers please see page 33
	<b>Fastening elements (to be ordered separately):</b>	
2	Welding bolt M 6 x 8	413134010
3.1*	Supporting angle (20 mm)	38352018
3.2*	Supporting angle (155 mm)	38210103
4	Cap nut M6	413215003
5	Lock washer di 6.4	413300253
	<b>Spare parts:</b>	
1.2	Nozzle group	see page 27
1.3	Union nut M 10 x 1	38352017
1.4	Locking ring d 6	38352007

\* to order alternatively





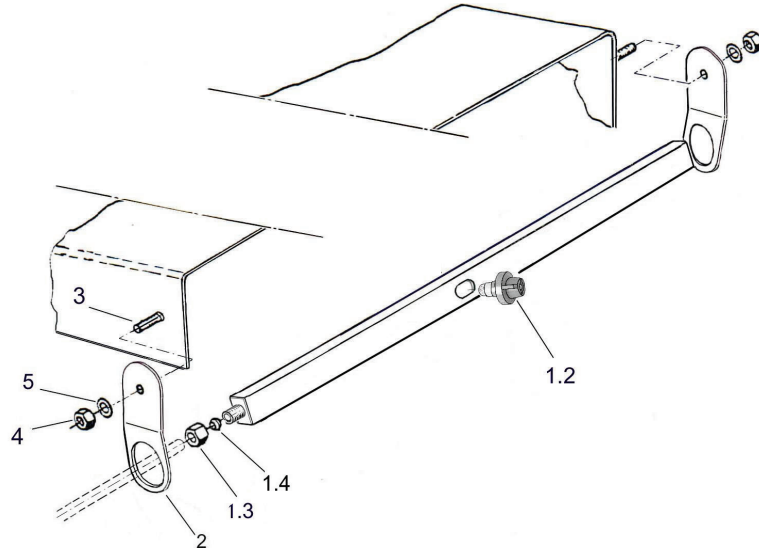
**Bottom Belt Nozzle Station, Multiple**



Pos.	Article	Material No.
1	<b>Bottom belt nozzle station, multiple, complete</b> Nozzle: red, 4.8 l/h, 65°, nozzle distance 85 mm Ball valve filter: blue, mesh 200, opening pressure 0.4 bar	for material numbers please see page 34
	<b>Fastening elements (to be ordered separately):</b>	
2	Supporting angle, bottom belt	38306024
3	Welding bolt M 6 x 8	413134010
4	Hexagon nut M6	413200008
5	Lock washer di 6.4	413300253
	<b>Spare parts:</b>	
1.2	Nozzle group	see page 27
1.3	Union nut M 10 x 1	38352017
1.4	Locking ring d 6	38352007



## Nozzle Station – Crate Transport



Pos.	Article	Material No.
	<b>Nozzle holder with 1 nozzle, complete</b> Nozzle: grey, 5.0 l/h, 100°, Total length: 500 mm Ball valve filter: blue, mesh 200, opening pressure 0.4 bar	282441
	<b>Nozzle holder with 2 nozzles, complete</b> Nozzle: red, 4.8 l/h, 65°, nozzle distance 240 mm Total length: 610 mm Ball valve filter: blue, mesh 200, opening pressure 0.4 bar	282442
	<b>Fastening elements (to be ordered separately):</b>	
2	Supporting angle, bottom belt	38306024
3	Welding bolt M 6 x 8	413134010
4	Hexagon nut M6	413200008
5	Lock washer di 6.4	413300253
	<b>Spare parts:</b>	
1.2	Nozzle group red, 4.8 l/h, 65°	38306032
	Nozzle group grey, 5.0 l/h, 100°	38306035
1.3	Union nut M 10 x 1	38352017
1.4	Locking ring d 6	38352007

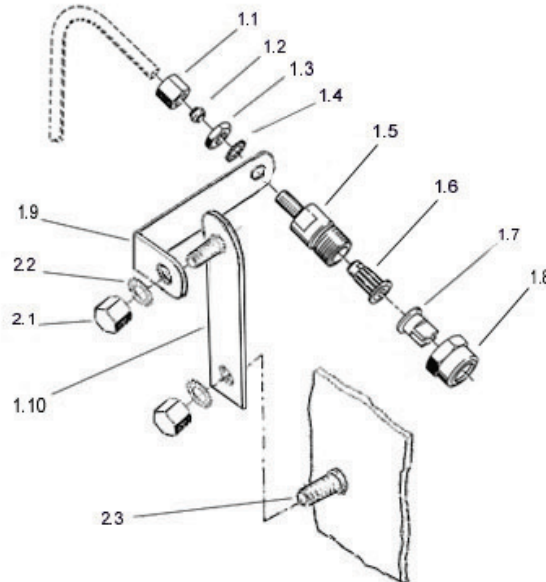


### Spare Parts Nozzles/Filter:

	Article	Material No.
	<b>Clip nozzle</b>	
	green 3.0 l/h 65°	415505246
	red 4.8 l/h 65°	415505247
	blue 7.0 l/h 65°	415505248
	orange 9.6 l/h 65°	415505249
	grey 5.0 l/h 100°	415505250
	<b>Clip filter</b>	415501015
	<b>Dummy nozzle</b>	415505604
	<b>Metering disc</b>	
	red 0.06 l/min	415505601
	blue 0.10 l/min	415505602
	orange 0.16 l/min	415505603
	<b>Nozzle group</b>	
	green 3.0 l/h 65°	38306031
	red 4.8 l/h 65°	38306032
	blue 7.0 l/h 65°	38306033
	orange 9.6 l/h 65°	38306034
	grey 5.0 l/h 100°	38306035
	<b>Auxiliary tool for nozzle station assembly (clip system)</b>	
	Fit-up aid for filter replacement	on request
	Fit-up aid for nozzle replacement	on request





### Nozzle Station, Single for upper/bottom belt

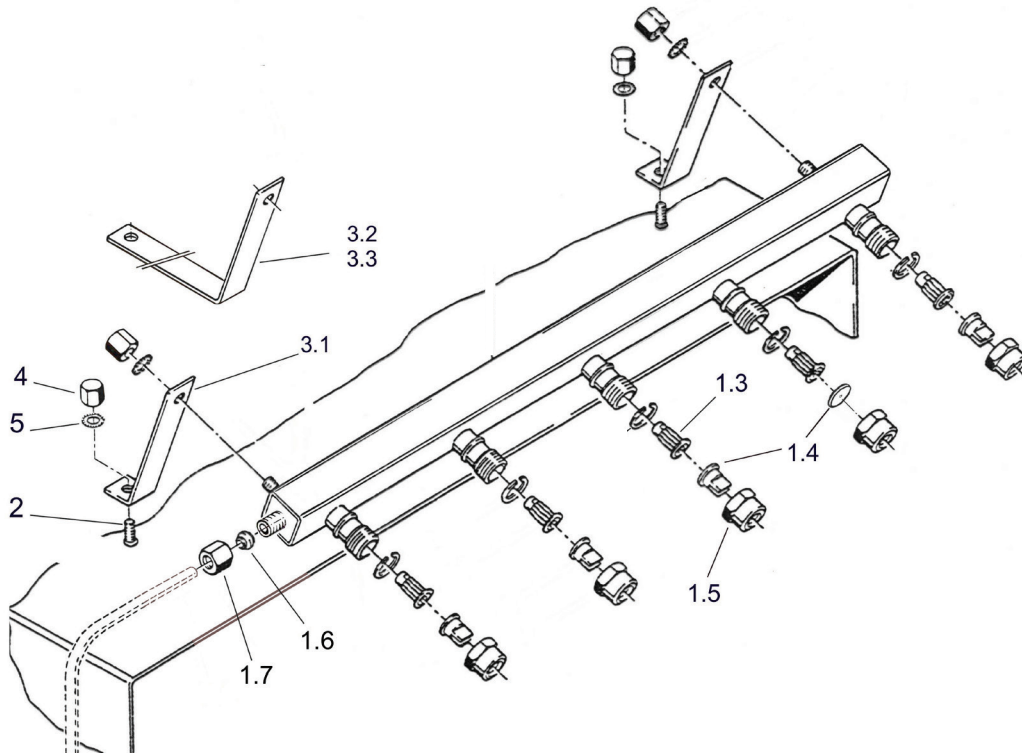


Pos.	Article	Material No.
1	<b>Nozzle station, single, complete</b> Nozzle: red, 4.8 l/h, 65° Ball valve filter: blue, mesh 200, opening pressure 0.4 bar Support plate: 100 mm	283501
	<b>Fastening elements (to be ordered separately):</b>	
2.1	Cap nut M6	413215003
2.2	Lock washer di 6.4	413300253
2.3	Welding bolt M 6 x 8	413134010
	<b>Spare parts:</b>	
1.1	Union nut M 10 x 1	38352017
1.2	Locking ring d 6	38352007
1.3	Flat head hex nut M 10 x 1	413200018
1.4	Lock washer di 10.5	413300257
1.5	Nozzle seat	38352004
1.6	Ball valve filter	415501016



Pos.	Article	Material No.
1.7	Flat jet nozzle	
	green 3.0 l/h 65°	415505271
	red 4.8 l/h 65°	415505272
	blue 7.0 l/h 65°	415505253
	orange 9.6 l/h 65°	415505254
	grey 5.0 l/h 100°	415505258
	Metering disc	415505259
	O-ring	417003327
1.8	Union nut SW19	38352019
1.9	Supporting angle	38306122
1.10	Supporting plate with headless pin	38306121

## Upper Belt Nozzle Station, Multiple

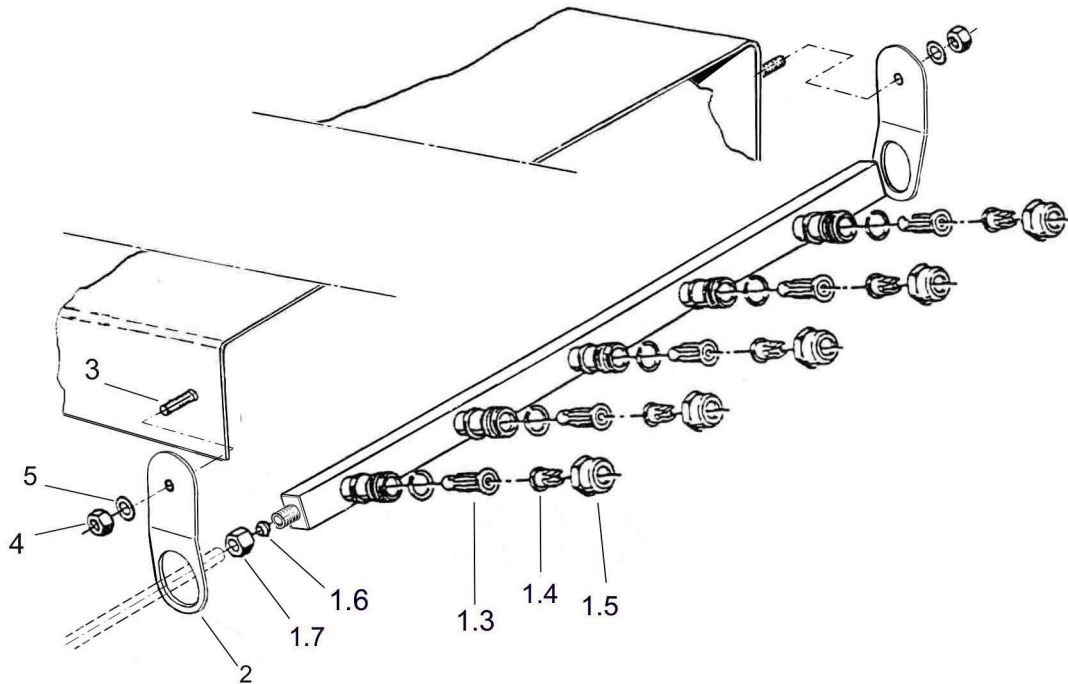


Pos.	Article	Material No.
1	<b>Upper belt nozzle station, multiple, complete</b> Nozzle: red, 4.8 l/h, 65°, nozzle distance 85 mm Ball valve filter: blue, mesh 200, opening pressure 0.4 bar	for material numbers please see page 33
	<b>Fastening elements (to be ordered separately):</b>	
2	Welding bolt M 6 x 8	413134010
3.1*	Supporting angle (20 mm)	38352018
3.2*	Supporting angle (120 mm)	38210103
4	Cap nut M6	413215003
5	Lock washer di 6.4	413300253
	<b>Spare parts:</b>	
1.3	Ball valve filter	415501016
1.4	Flat jet nozzle or metering disc	optional, see page 29
1.5	Union nut SW19	38352019
1.6	Locking ring d 6	38352007
1.7	Union nut M10 x 1	38352017

\* to order alternatively



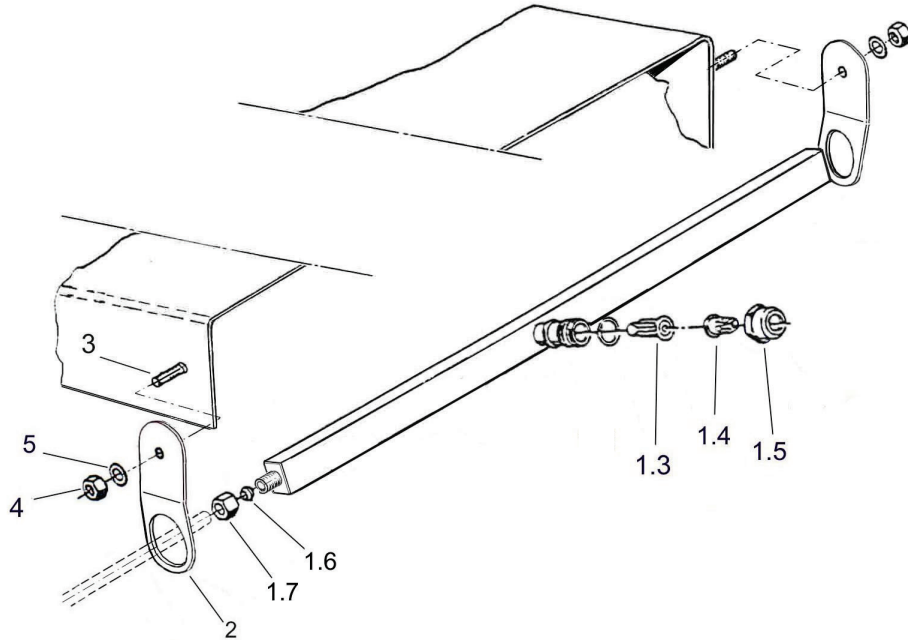
**Bottom Belt Nozzle Station, Multiple**



Pos.	Article	Material No.
1	<b>Bottom belt nozzle station, multiple, complete</b> Nozzle: red, 4.8 l/h, 65°, nozzle distance 85 mm Ball valve filter: blue, mesh 200, opening pressure 0.4 bar	for material numbers please see page 34
	<b>Fastening elements (to be ordered separately):</b>	
2	Supporting angle, bottom belt	38306024
3	Welding bolt M 6 x 8	413134010
4	Hexagon nut M6	413200008
5	Lock washer di 6.4	413300253
	<b>Spare parts:</b>	
1.3	Ball valve filter	415501016
1.4	Flat jet nozzle or metering disc	optional, see page 29
1.5	Union nut SW19	38352019
1.6	Locking ring d 6	38352007
1.7	Union nut M10 x 1	38352017



## Nozzle Holder Crate Transport



Pos.	Article	Material No.
	<b>Nozzle holder with 1 nozzle complete</b> Nozzle: grey, 5.0 l/h, 100° Total length: 500 mm Ball valve filter: blue, mesh 200, opening pressure 0.4 bar	282141
	<b>Nozzle holder with 2 nozzles complete</b> Nozzle: red, 4.8 l/h, 65°, nozzle distance 240 mm Total length: 610 mm Ball valve filter: blue, mesh 200, opening pressure 0.4 bar	282142
	<b>Fastening elements (to be ordered separately):</b>	
2	Supporting angle, bottom belt	38306024
3	Welding bolt M 6 x 8	413134010
4	Hexagon nut M6	413200008
5	Lock washer di 6.4	413300253
	<b>Spare parts:</b>	
1.3	Ball valve filter	415501016
1.5	Union nut SW19	38352019
1.6	Locking ring d 6	38352007
1.7	Union nut M 10 x 1	38352017





### Ordering data for upper belt nozzle station, multiple

Material No. Clip Version	Material No. Version with union nut	Number of nozzles Distance 85 mm	Number of supporting angles
282402	282102	2	2
282403	282103	3	2
282404	282104	4	2
282405	282105	5	2
282406	282106	6	2
282407	282107	7	2
282408	282108	8	2
282409	282109	9	3
282410	282110	10	3
282411	282111	11	3
282412	282112	12	3
282413	282113	13	4
282414	282114	14	4
282415	282115	15	4
282416	282116	16	4
282417	282117	17	4
282418	282118	18	4
282419	282119	19	4

By default the nozzle stations will be assembled with red nozzles (4.8 l/h).

If other flow rates are required, please indicate on order.

The number of supporting angles has to be ordered according to the selected nozzle station.



### Ordering data for bottom belt nozzle station, multiple

<b>Material No. Clip Version</b>	<b>Material No. Version with union nut</b>	<b>Number of nozzles Distance 85 mm</b>	<b>Number of supporting angles</b>
282422	282122	2	2
282423	282123	3	2
282424	282124	4	2
282425	282125	5	2
282426	282126	6	2
282427	282127	7	2
282428	282128	8	2
282429	282129	9	2
282430	282130	10	2
282431	282131	11	2
282432	282132	12	2
282433	282133	13	2
282434	282134	14	2
282435	282135	15	2
282436	282136	16	2
282437	282137	17	2
282438	282138	18	2
282439	282139	19	2