

## Dry-Lubrication





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- **Modular concept**
- **Hygienically designed stainless steel housing**
- **Compatible with Ecolab lubricants**
- **Reliable and easy to operate**
- **Low maintenance**
- **For use with DryExx® control unit**
- **Complies with CE-norms**



The DryExx® dosing station with stainless steel housing is part of the DryExx® lubrication system to supply DryExx® lubricant to conveyor chains in Food & Beverage Industry.

An air-operated diaphragm pump transfers DryExx® lubricant through the DryExx® system to special nozzle-stations, which take care of optimum spraying to the conveyor chains when a lubrication circuit is activated.

After a lead time, the lubrication circuit valve opens during a time that can be set individually and the DryExx® lubricant is sprayed to the conveyor by the nozzles.

When the spray operation is completed, the pump stops, the lubrication circuit valve is closed and at the same time the relief valve in the dosing station opens. It discharges the pressure from the piping and nozzle-system.

Discharge is led through a return pipe and suction lance adapter into the product container.

The product pressure is set using a filter-pressure-regulator for the working air pressure of the diaphragm pump. If the pressure of the medium reaches the preset pump-air-pressure, the pump switches off automatically.

The conveyor chain lubricant is transferred from the product container by means of a suction lance with an empty level device. If there are no more products, the transfer pump is switched off by the control unit.

The system can only operate in conjunction with a DryExx® control unit.





**Simple control unit for DryExx® systems  
with up to 6 lubrication circuits**

- **Control via Unitronics Jazz**
- **Controller for dry lubrication of conveyor chains in dairy & beverage industry**
- **Controller for metering pump**
- **Individually changeable process times**
- **Status, parameter and archive displayed via integrated display**
- **Reliable and easy to operate**
- **Working hour counter for each lubrication circuit**
- **Complies with CE-norms**



DryExx® Small is a control unit for smaller DryExx® stations with up to 6 conveyor lubrication circuits.

The control is based on a Unitronics PLC Jazz in a plastic housing and controls all required times, cycles, procedures and reports.

DryExx® Basic is pre-programmed for the following functions:

- Controlling the pneumatic membrane metering pump with external release and if a spray phase is active
- Release dependent automatic operation
- Controlling the valves with individual time settings for each lubricating circuit.

- Status, parameter and archive displayed via integrated display
- Easy operation via integrated function keys
- Interruption of the functions when empty and registering an error.
- 2 Working hour counter, one can be reset
- Counter for the manual pray phase (Booster)

**DryExx® Small is designed to be used with the DryExx® dosing station.**

**Technical Data:**

Power supply	230 V / 50 Hz
Control voltage max.	24 V DC
Power consumption max.	250 W
Pre-fuse	10 A
Control module	Unitronics „Jazz“ with integrated display
Display/operation	with integrated display
Number of lubricating circuits	6
Number of systems	1
Weight	approx. 5 kg
Dimensions	250 x 350 x 170 mm (W * H * D)
Material housing	plastic
Protection class	IP 54
Mounting	Wall fastening

**Ordering Data:**

<b>Article</b>	<b>Material No.</b>
DryExx® Small	182835

**Base control unit for DryExx® systems  
with up to 8 lubrication circuits**

- **Controller for dry lubrication of conveyor chains in dairy & beverage industry**
- **Capable to control 8 lubrication circuits in combination with Lubo-DryExx® dosing unit**
- **Hygienically designed stainless steel housing**
- **Reliable and easy to operate**
- **Includes data-acquisition of operation time and consumptions per circuit**
- **Complies with CE-norms**



DryExx® Basic is a control unit in connection with the Lubo-DryExx® Dosing Station to control up to 8 lubrication circuits of the conveyor chains.

It operates on a Unitronic Vision 120 system.

The Vision 120 is used to control all times, timing devices, and operations required for the process.

DryExx® Basic is pre-programmed for the following functions:

- Operating mode - automatic
- Activation of Lubo-DryExx® Dosing Station at release of lubrication circuit during the spray phase.
- Manual activation of spray phase for each lubrication circuit if required. (e. g. for system-

filling. Can be repeated until the entire system has been filled).

- Activation of solenoid valves with individual time setting for each lubrication circuit
- Release of lubrication circuit
- Stops the system at empty signal of DryExx® product.
- Integrated counter for recording operation time for each lubrication circuit
- Optionally registration of consumption of DryExx® product and number of packaging units and storage in memory.
- Display of operation, alarm and archive.

**DryExx® Basic is designed to be used with the DryExx® dosing station.**

**Technical Data:**

Power supply	230 V / 50 Hz
Control voltage max.	24 V DC
Power consumption max.	250 W
Pre-fuse	10 A
Control module	Unitronics „Vision 120“with integrated display
Display/operation	with integrated display
Number of lubricating circuits	8
Number of systems	1
Weight	approx. 20 kg
Dimensions	500 x 500 x 210 mm (W * H * D)
Material housing	stainless steel
Protection class	IP 65
Mounting	Wall fastening

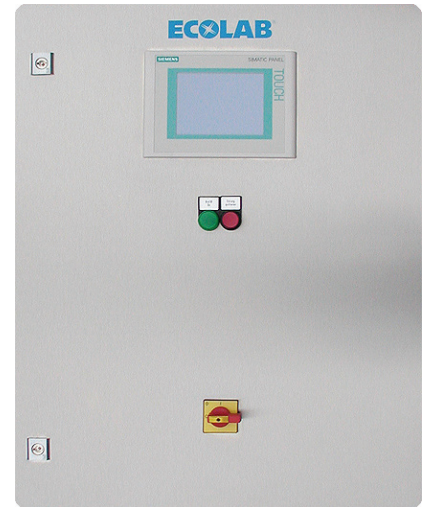
**Ordering Data:**

<b>Article</b>	<b>Material No.</b>
DryExx® Basic	182836



**Extended control unit for DryExx® systems  
with up to 16 lubrication circuits in max. 10 plants**

- **Controller for dry lubrication of conveyor chains in dairy & beverage industry**
- **Capable to control 16 lubrication circuits for max. 10 filling lines in combination with Lubo-DryExx® dosing unit**
- **Hygienically designed stainless steel housing**
- **Reliable and easy to operate**
- **Includes data-acquisition of operation time and consumptions per circuit**
- **Complies with CE-norms**



DryExx® Advanced is a control unit in connection with the Lubo-DryExx® Dosing Station for up to 10 Packaging/Filling lines to control up to 16 lubrication circuits of the conveyor chains.

It operates on a Siemens CPU 313C system.

The CPU 313C is used to control all times, timing devices, and operations required for the process.

DryExx® Advanced is pre-programmed for the following functions:

- Operating mode - automatic
- Activation of Lubo-DryExx® Dosing Station at release of lubrication circuit during the spray phase.
- Manual activation of spray phase for each lubrication circuit if required. (e. g. for system-

filling. Can be repeated until the entire system has been filled).

- Activation of solenoid valves with individual time setting for each lubrication circuit
- Release of lubrication circuit
- Stops the system at empty signal of DryExx® product.
- Integrated counter for recording operation time for each lubrication circuit
- Optionally registration of consumption of DryExx® product and number of packaging units and storage in memory.
- Display of operation, alarm and archive

**DryExx® Advanced is designed to be used with the Lubo- DryExx® dosing station.**



**Technical Data:**

Power supply	230 V / 50 Hz
Control voltage max.	24 V DC
Power consumption max.	500 W
Back-up fuse max.	10 A
Control module	Siemens S7-313C
Display/operation	Siemens TP177B monochrom
max. number of lubrication circuits	16
max. number of systems	10
Weight	approx. 35 kg
Dimensions	600 x 600 x 210 mm (W * H * D)
Housing material	stainless steel
Protection class	IP 65
Mounting	Wall fastening

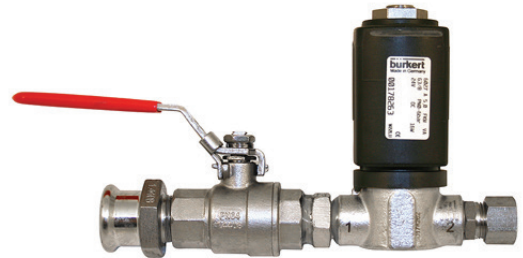
**Ordering Data:**

<b>Article</b>	<b>Material No.</b>
DryExx <sup>®</sup> Advanced Signal exchange via potential-free contacts	182837
DryExx <sup>®</sup> Advanced Signal exchange controllable via Profibus DP	182838

**Accessories:**

	<b>Article</b>	<b>Material No.</b>
	<b>Multicolour Light GH2</b> for wall fastening visual alarm in LED technology 5 different signal colours in one light 3 signal modi (flashlight, blinker light, continuous light)	418271054
	<b>Frame</b> for DryExx® dosing station and DryExx® Basic control 1080 x 1710 x 340 mm (W * H * D)	38282050
	<b>Fastening-Parts Kit</b> for 1 frame inclusive of stand support	283577
	<b>Suction Lance</b> with circular plug Length 1125 mm for 200 l container	288460
	<b>Protective Cap</b> PVDF, for suction lance	286191
	<b>PVC-Fabric</b> 6/12 (ID/AD) (8 m are required per station)	417400127
	<b>Spiral coiled tube</b> 14/10 mm PE for fastening connection cable (5 m are required per station)	417400561
	<b>Hose Clip</b> (3 pieces are required per station)	415013304
	<b>Suction Lance Adapter</b> with return connection 12/21 mm (ID/AD)	on request

- 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 directly controlled solenoid valve is suitable for all control systems Basic / Advance as from November 2008 (year of manufacturer). For older systems the externally controlled previous model 283599 has to be used.



#### Technical Data:

Protection class	IP 65
Power supply	24 V DC
Line connection	G 3/8, DN 5
Weight rate of flow, water	0.73 m³/h
Pressure range	0 – 6 bar
Sealing material	FKM
Housing material	stainless steel 1.4404
Internal parts of valve	stainless steel
Ambient temperature max.	55° C

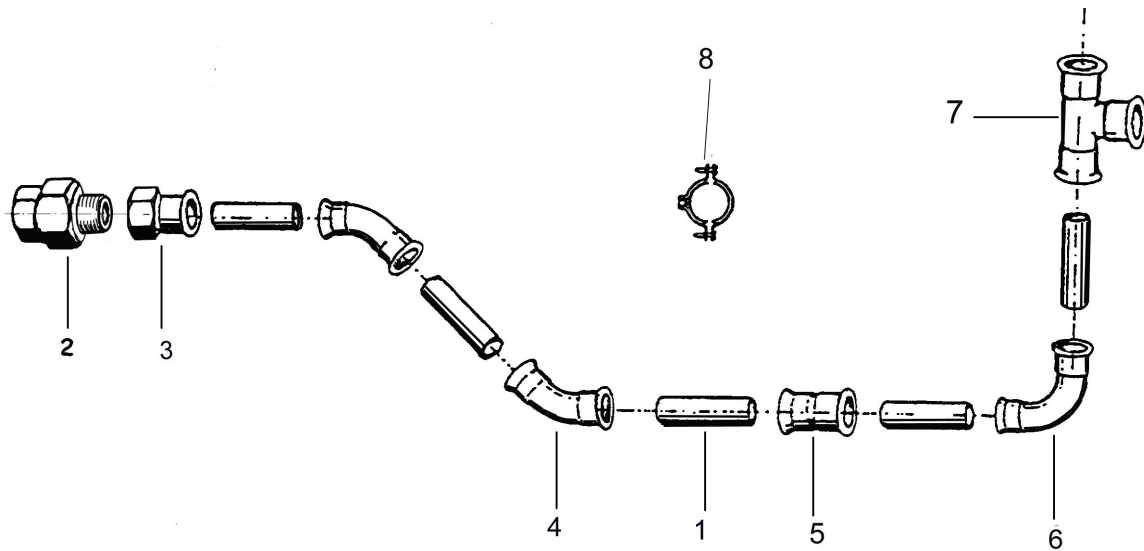
#### Ordering Data:

Article	Material No.
<b>Solenoid Valve Group, complete</b> Scope of delivery: Solenoid valve 24V DC, stainless steel with ball cock, marker plate Connection: Inlet d22 / outlet d10	282833

#### Accessories:

	Article	Material No.
	<b>Two-Way Ball Cock, 1/2", stainless steel</b>	415502024
	<b>2/2-Way Solenoid Valve, DN5, 1.4404, FKM</b>	417704368
	<b>Coupler Socket, 0-250 V, type 2508</b>	418468002

**Branch Line DN20, Stainless Steel**

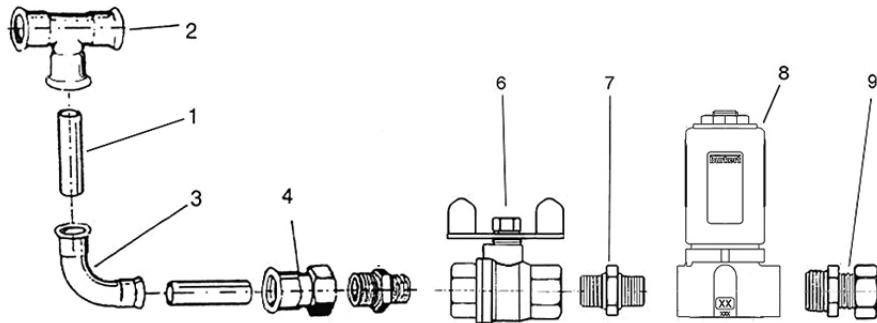


Pos.	Article	Material No.
1	Stainless steel pipe 22 x 1	415031168
2	Pipe fittings	415504222
3	Reducing coupling	415200584
4	Elbow 45°	415200557
5	Connecting sleeve	415200574
6	Elbow 90°	415200552
7	Tee connector	415200569
	Fastening elements:	
8	Pipe clip	415014036
	Threaded rod M8 (1000 mm)	413078008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



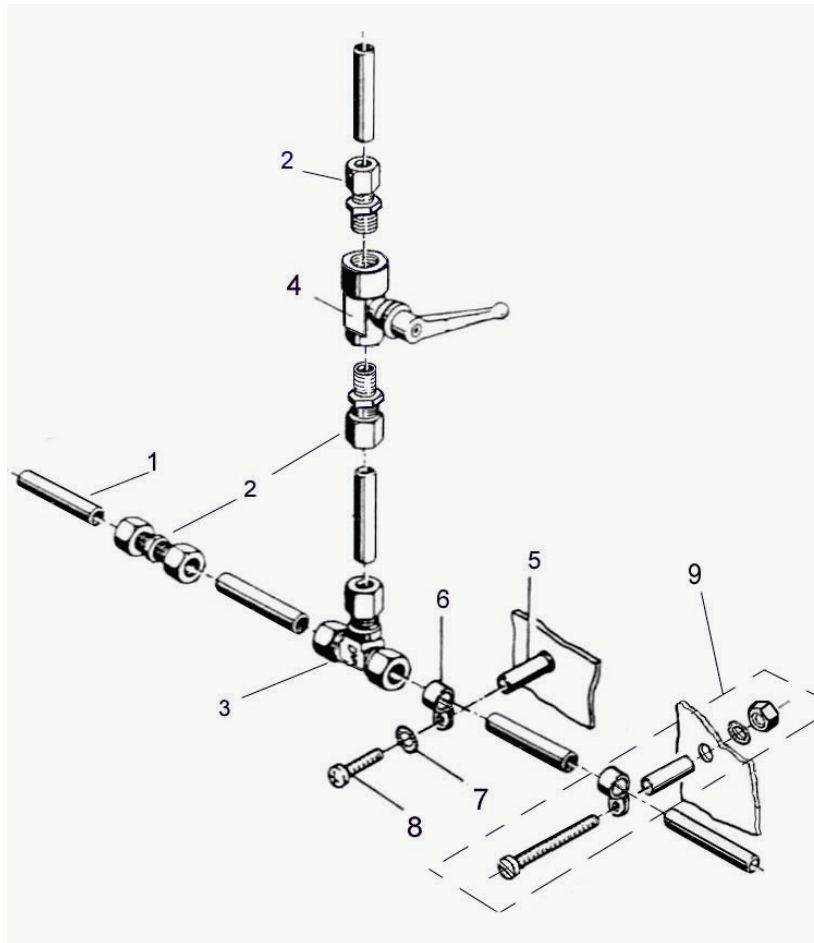
**Branch Line - Feeder to the solenoid valves**

Branch Line DN 20 – Outlet DN 20



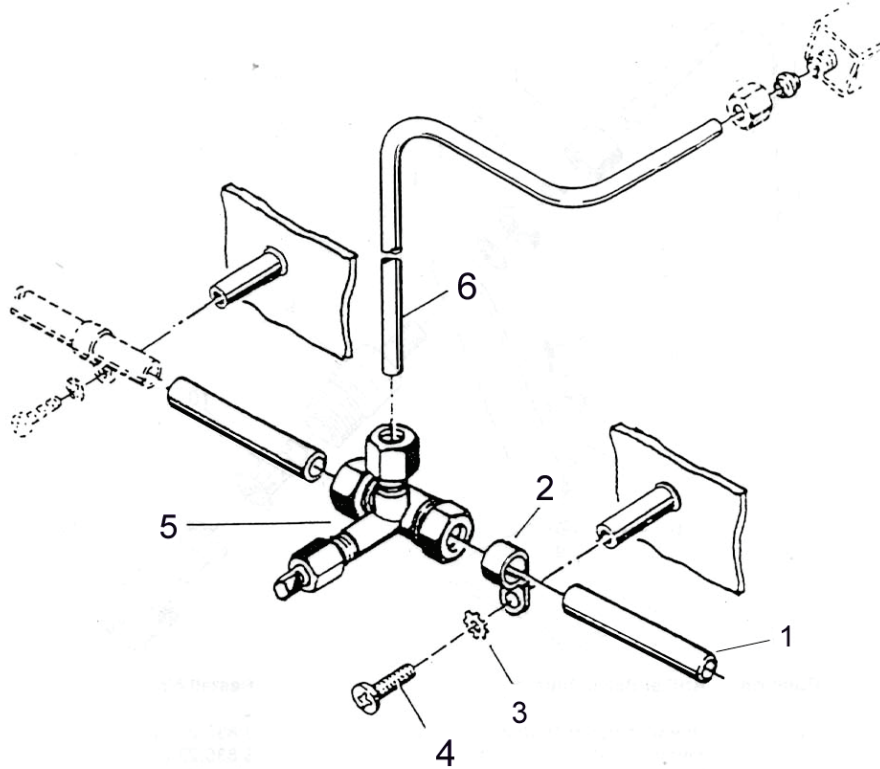
Pos.	Article	Material No.
1	Stainless steel pipe	415031168
2	Tee fitting	415200569
3	Elbow 90°	415200552
4	Reducing sleeve	415200582
6	Ball cock 1/2"	415502024
7	Double nipple reduced 1/2"-3/8"	415204936
8	Solenoid valve	417704368
9	Stub for straight connection 3/8"-d10	38352033
	Locking ring d10	38352006
	Union nut G3/8"	38352013

**Distribution Line, Stainless Steel**



Pos.	Bezeichnung	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

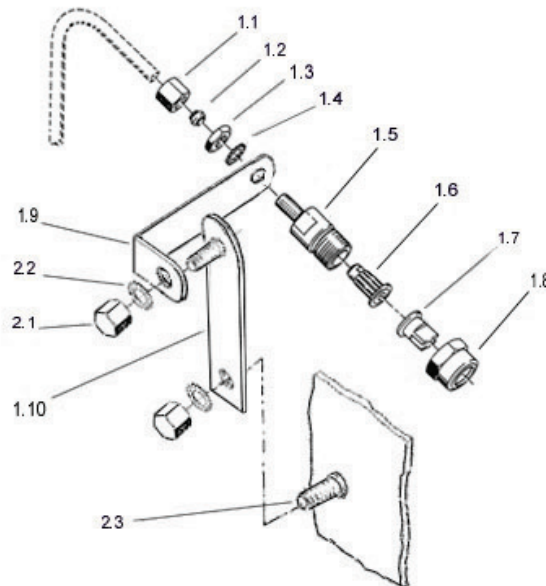
**Nozzle Station Connection**



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

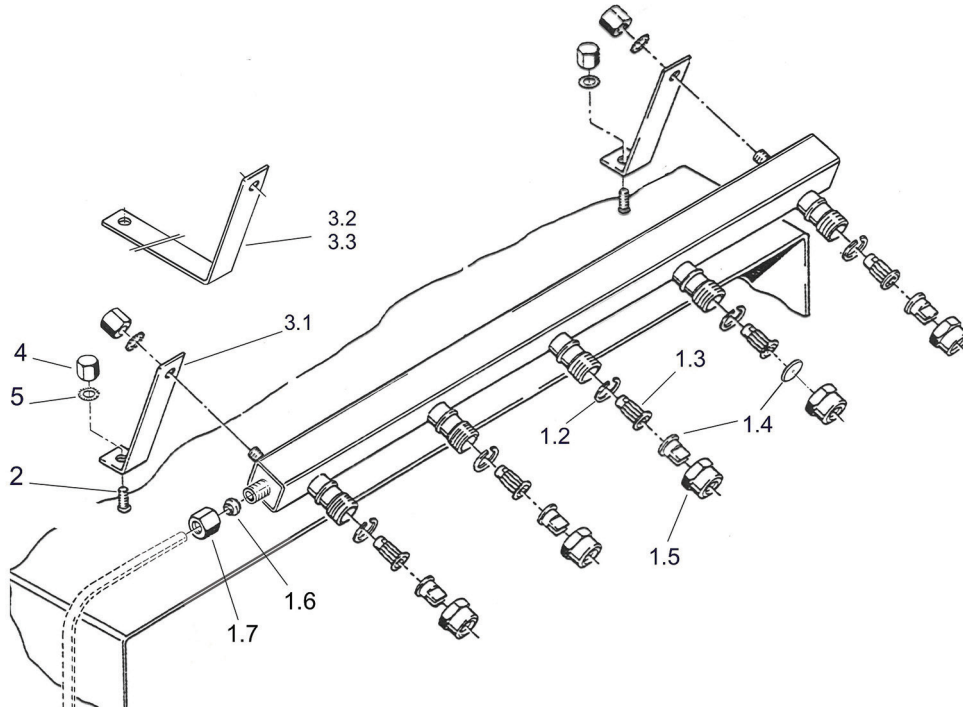


**Nozzle Station, Single  
for upper belt**



Pos.	Article	Material No.
1	<b>Nozzle station, single, complete</b> Nozzle: green, 3.0 l/h, 65° Ball valve filter: yellow, mesh 200, opening pressure 1.4 bar support plate: 100 mm	282150
	<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	415501012
1.7	Flat jet nozzle	415505271
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: green, 3.0 l/h, 65°, nozzle distance 85 mm Ball valve filter: yellow, mesh 200, opening pressure 1.4 bar	for material numbers please see page 19
	<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	415501012
1.4	Flat jet nozzle	415505271
1.5	Union nut SW19	38352019
1.6	Locking ring d 6	38352007
1.7	Union nut M10 x 1	38352017

\* to order alternatively

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

<b>Material No.</b>	<b>Number of nozzles Distance 85 mm</b>	<b>Number of supporting angles</b>
282152	2	2
282153	3	2
282154	4	2
282155	5	2
282156	6	2
282157	7	2
282158	8	2
282159	9	3
282160	10	3

By default the nozzle stations will be assembled with green nozzles (3.0 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.