REV27012022

lubrication systems

MINIMAX

Electric Piston Pump

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CE

All ILC products must only be used for their intended purposes, as specified in this brochure and in all instructions. If the product is supplied together with user instructions, the user is required to read them and comply with them. Not all lubricants are suitable for centralised lubrication systems. ILC lubrication systems or their components may not be used in combination with gases, gas liquids, pressurised gases in solution and liquids whose vapour pressure exceeds the normal atmospheric pressure (1013 mbar) by more than 0.5 bar, maximum permissible temperature +60°C. Any type of dangerous materials, namely those classified as such by European Community Directive (EC) 67/548/EEC, Article 2 (2), can only be used in ILC centralised lubrication systems or relative components upon consultation with ILC and after having received written approval from the company.

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Features and benefits

The Minimax electric pump is designed to combine the technology of progressive distributors with multi-line distributors. Versions can be equipped with two pumping elements to feed progressive distributors and send lubricant to the points. In addition to this, up to eight points can be lubricated directly. The electrical connections designed for outdoor use, together with the various sealing measures, give the pump a high protection level.

The pump is driven by a 12 V DC or 24 V DC gearmotor and is capable of pumping grease and oils with a max consistency of NLGI 2. A spatulator is located in the lower area of the tank to facilitate grease suction. The pump is available with and without a timer.

Applications

Movement Earth

Industry

Agriculture

Machinery Construction

Automotive

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General technical data

Speed	20 RPM (12 V DC), 24 RPM (24 V DC)
Pumping System	Cam actuation, spring return
Max number of outlets/pumping elements	8 single utilities – 2 progressive feeds
Delivery connection (pumping outlet)	Progressive power supply 1/4" GAS Single utilities 1/8" GAS
Pumping element for single utilities nominal flow rate	5 mm³/rev 10 mm³/rev 15 mm³/rev 25 mm³/rev 50 mm³/rev
Fixed pumping element nominal flow rate	120 mm³/rev
Adjustable pumping element nominal flow rate	0-120 mm³/rev
Maximum reachable pressure	250 bar
Tank capacity	1 Kg
Max Grease Consistency	NLGI2 at actual working temperature
Operating temperature	-10°C to +60° C (with suitable grease down to -40° C)
Storage temperature	-20°C to +80° C
Max relative humidity without operating condensation	90%
Sound pressure level	< 70 db (A)
Minimum level indication	Reed contact triggered by presser disk 1.5 A 250 V AC – 200 V DC 50 W – NC or NO contact
Net weight	2.75 kg

Internal timer technical data

Supply voltage	12 V DC - 24 V DC
Selectable working modes	Pause time hours-minutes-pulses (external) / work time minutes-seconds
Controls	Pre-lubrication Minimum electric level management Remote manual pushbutton Remote alarm signal Progressive distributor cycle control

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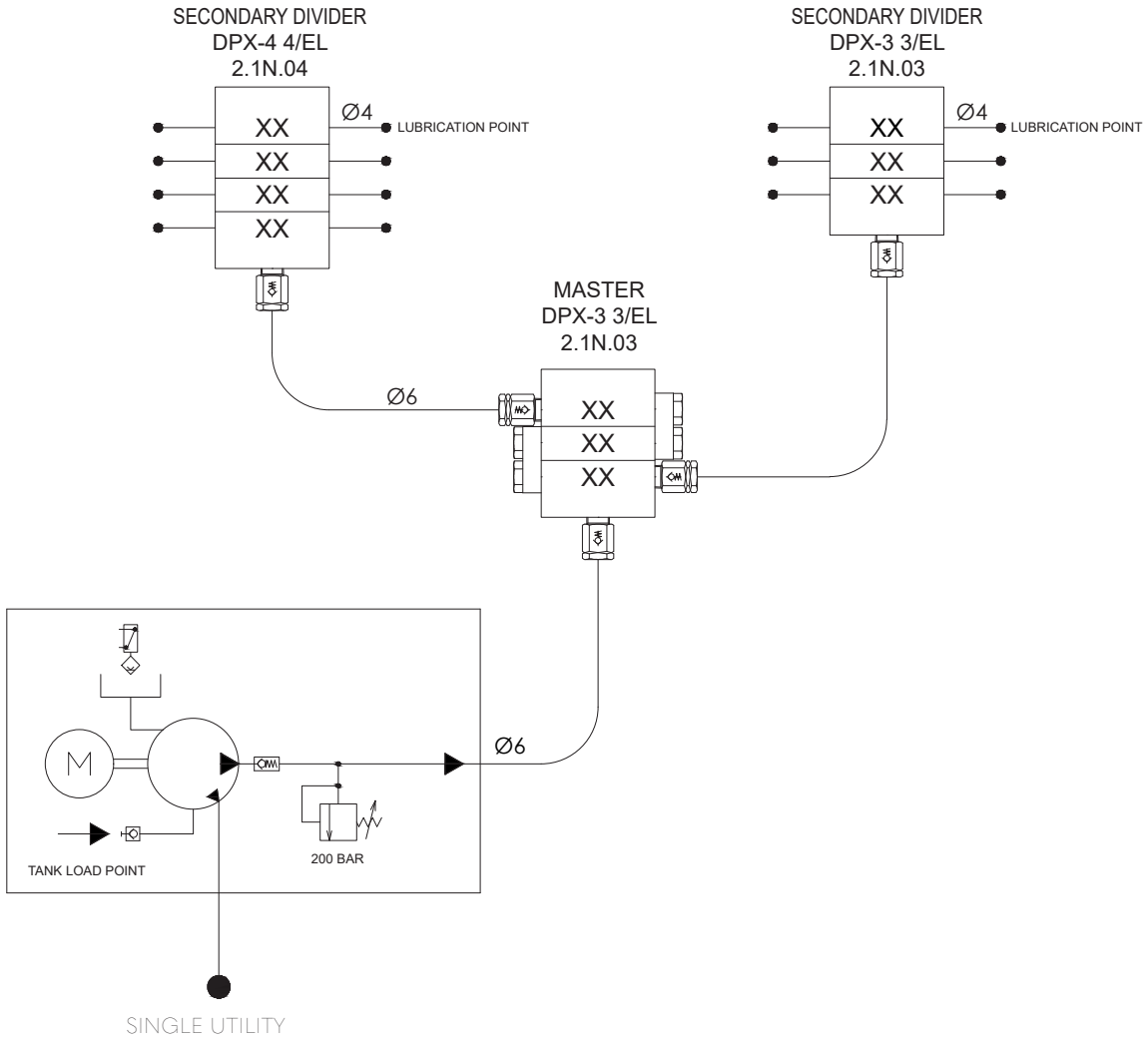
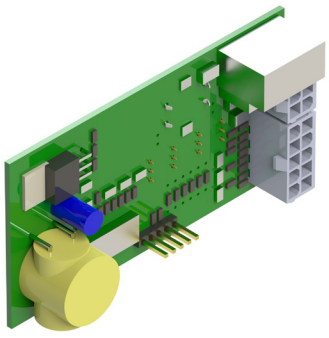
Hydraulic Diagram



Internal timer



The MINI-MAX pump timer is housed inside the structure near the gearmotor and can be accessed by removing the transparent protective cap.

Its transparency makes it is possible to externally view the two LEDs indicating pump running and cycle level alarm or lack of lubricant.

Once the protection has been removed, it is possible to set the times and functions in the desired mode as well as operate the manual button.

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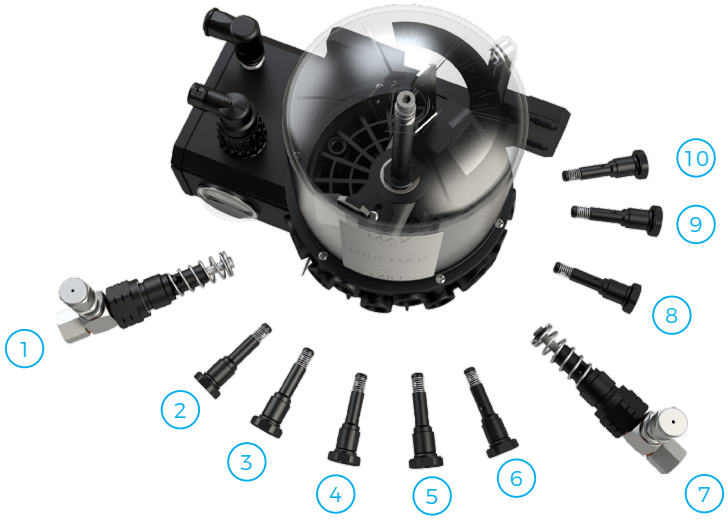
Order code configurator

ASSEMBLY POSITION

1	7	2	3	4	5	6	8	9	10
39	.	12	.	X	.	X	.	X	F	.	X	X	X	X	X	X	X	X
		A		B		C		D			E							



A (Voltage)		B (Timer)		C (Electric Level)	
12 V DC	12	With timer	T	With level	L
24 V DC	24	Without timer	X	Without level	X

D (Pumping element for progressive systems)		E (Pumping element for single pump)			
Fixed (120 mm³ /rev)	F	Metering 5 mm³	A	Metering 25 mm³	D
Adjustable (0 -120 mm³ /rev)	R	Metering 10 mm³	B	Metering 50 mm³	E
No	X	Metering 15 mm³	C		

Pumping elements codes

For single utilities		For Progressive Metering Devices	
90.940.0.05	5 mm³ /rev	00.900.0	Fixed (120 mm³ /rev)
90.940.0.10	10 mm³ /rev	00.900.3	Adjustable (0 -120 mm³ /rev)
90.940.0.15	15 mm³ /rev		
90.940.0.25	25 mm³ /rev		
90.940.0.50	50 mm³ /rev		

Note: *No pressure relief valve is installed for the single utility. A pressure relief valve set at 200 bar is installed for progressive metering devices.*

IMPORTANT

If the model, quantity and position of the pumping elements are not specified, the pump is supplied with a single pumping element for progressive metering devices installed in position 7. Additional pumping elements can be ordered separately using the codes provided in the tables below.

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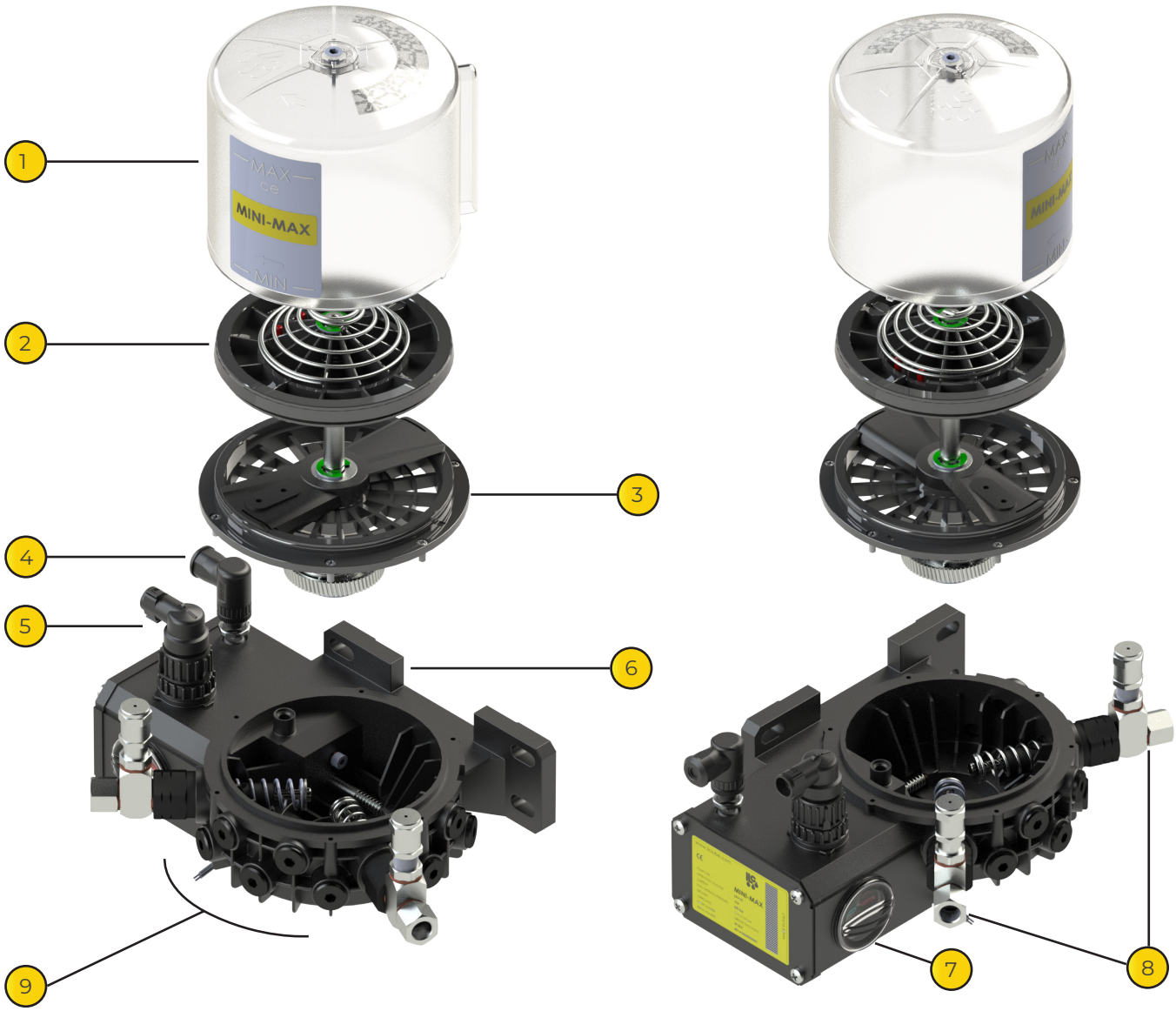
Components



1 Tank

2 Presser disc

3 Spatulator

4 Connection to inductive control sensor

5 Power connection/cycle and minimum level alarm

6 Pump body

7 Programming timer

8 Pumping element for progressive systems

9 Pump housing caps for single utility

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Block with pressure gauge

40.BMI.01

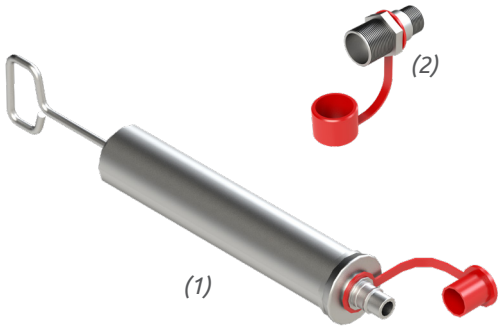
40.BMI.02

The block is installed on the delivery line to check pressure of the system and/or to fill it through the grease nipple.

It can only be installed in pumping elements for progressive distributors.

Standard	With safety valve
40.BMI.01	40.BMI.02

Manual loading pump and adapter



Manual loading of the pump can be carried out in two ways:

a) by removing the black plug of the progressive pump and inserting the filling connection.

b) through the grease nipple, located underneath the pump body.

Manual pump (1)	Adaptor (2)
ZZZ100-201	ZZZ100-208

Round illuminated reset button

Code	Volts	Colour	Material
40.PBG.12	12	Green	Plastic
40.PBG.24	24	Green	Plastic

Rectangular illuminated reset button

Code	Volts	Colour
40.PSG.12	12	Green
40.PSG.24	24	Green
40.PSR.12	12	Red
40.PSR.24	24	Red

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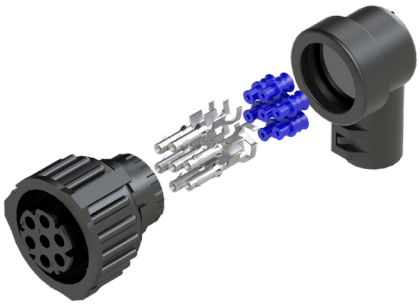
Electrical connections



The MINIMAX pump is supplied complete with a seven-pin electrical connector A91.111327, which powers the pump and manages any alarm signals. A total of twenty-one rubbers are included, seven per type, for different cable diameters and/or unused contacts.
On request, the connector can be ordered complete with a 3-wire or 7-wire cable (1 mm²) in 3 different lengths (5, 10, 15 m).

Both electrical connections are positioned on the left-hand side of the pump as indicated in the figure to the side.

Electrical power connector
A91.111327

Power connector with cable		
3 wires	7 wires	Length
40.CBL.3.05	40.CBL.7.05	5 m
40.CBL.3.10	40.CBL.7.10	10 m
40.CBL.3.15	40.CBL.7.15	15 m

Part No.	Rubbers
A91.111315	For 1.2 to 2.1 mm² cable
A91.111314	For 2.2 to 3 mm² cable
A91.111314	Closing cap

Connecting Control Elements

A second connector, for the management of a progressive feeder cycle control (if foreseen in the system) or for high pressure control in the main line, can be installed in versions equipped with an internal timer. Also for this connector, the connector complete with cable can be ordered on request.

Optional 90° Male Connector
A91.111352

Optional connector with cable	
Part No.	Length
40.CDC.4.05	5 m
40.CDC.4.10	10 m
40.CDC.4.15	15 m

only for version with internal timer.

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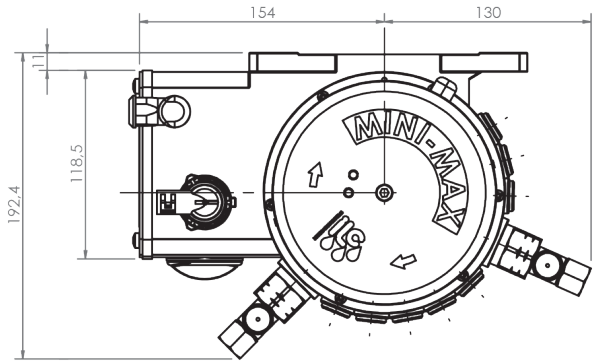
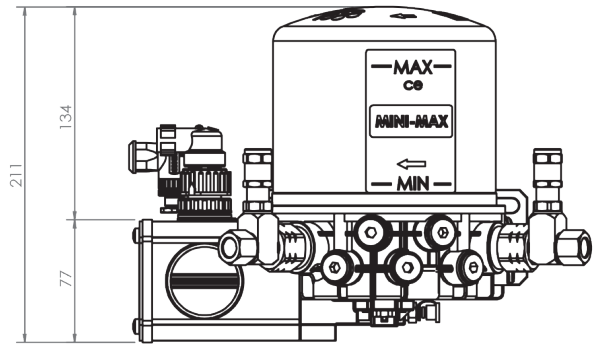
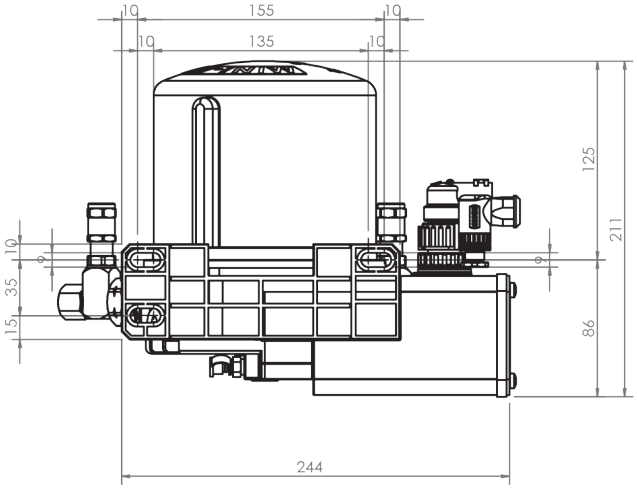
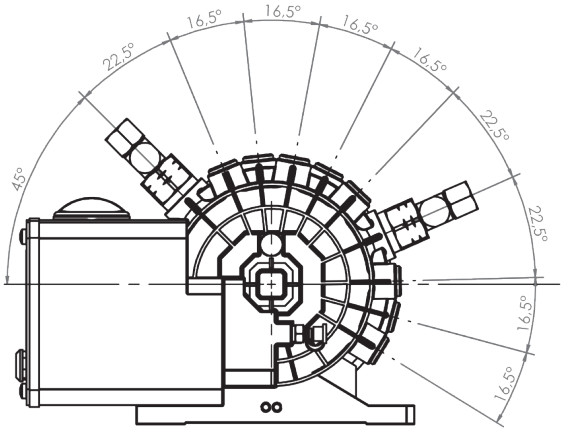
Dimensioni di ingombro









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