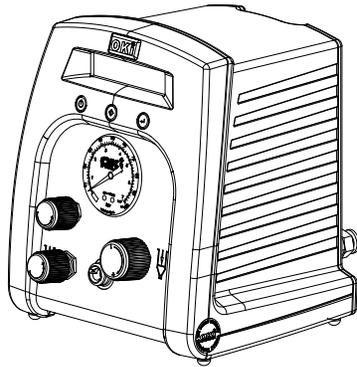


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Metcal DX-250 / 255 Precision Dispensers

User Guide

English, German, French, Italian and Spanish version



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1 SAFETY

1.1 Intended Use:

WARNING: Use of this equipment in ways other than those described in this User Guide may result in injury to persons or damage to property. Use this equipment only as described in this User Guide.

Metcal cannot be responsible for injuries or damages resulting from unintended applications of its equipment. Unintended uses may result from taking the following actions:

- Making changes to equipment that has not been recommended in the User Guide
- Using incompatible or damaged replacement parts Using unapproved accessories or auxiliary equipment

1.2 Safety Precautions:

- Do not operate this unit in excess of maximum ratings/settings
- Always wear appropriate personal protective clothing or apparel
- Use only the following power adaptor models: PSA15R-240P(ZJ) or PW118RA2403B01, PW118RA2403H01, PW118RA2403M01, PW118RA2403G01
- Care must be taken to prevent the ingress of corrosive or flammable fluid back into the unit. If corrosive or flammable fluids are used, an inline filter (881-000-000), not included, must be installed on the dispenser to help prevent the fluids from being sucked back into the unit
- The fluid being dispensed may be toxic and/or hazardous. Refer to Material Safety Data Sheet for proper handling and safety precautions
- If a piston is not used with the barrel, an inline filter (881-000-000), not included, and must be installed on the receiver head to help prevent fluids from



being sucked back into the unit. Also do not overfill the barrel and to lay the barrel on its side

- Do not smoke or use open flame when flammable materials are being dispensed
- This equipment is for indoor use only

2 SYMBOL DEFINITIONS

Symbol	Definition
	Power On/Off
	Cycle Mode
	Timer
	Vacuum
	Pressure

3 SPECIFICATIONS

Size	152mm X 165mm X 178mm (6" X 6.5" X 7")
Weight	1.2 kg (2.6lbs)
Input Voltage	24 VDC
Rated Power	10 W
Air Input	100 psi (6.9 bar) Max.
Pollution Degree	II
Installation Category	I
Indoor Use	Altitude up to 2,000m (6,562ft)
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-10°C to 60°C (14°F to 140°F)
Max. Relative Humidity	80% for temperature up to 31°C (87.8°F) Decreasing linearly to 50% relative humidity at 40°C (104°F)
Air Output	DX-250 = 0-100 psi (0- 6.9 bar) DX-255 = 0-15 psi (0-1.03 bar)
Vacuum	406mm (16") of Hg
Timer	0.020-60.000 seconds
Cycle Mode	PURGE, TIMED
Timing Repeat Tolerance	+/- 0.001%
Cycle Rate	600 cycles/min
LCD	16 X 2 display segments

4 FEATURES

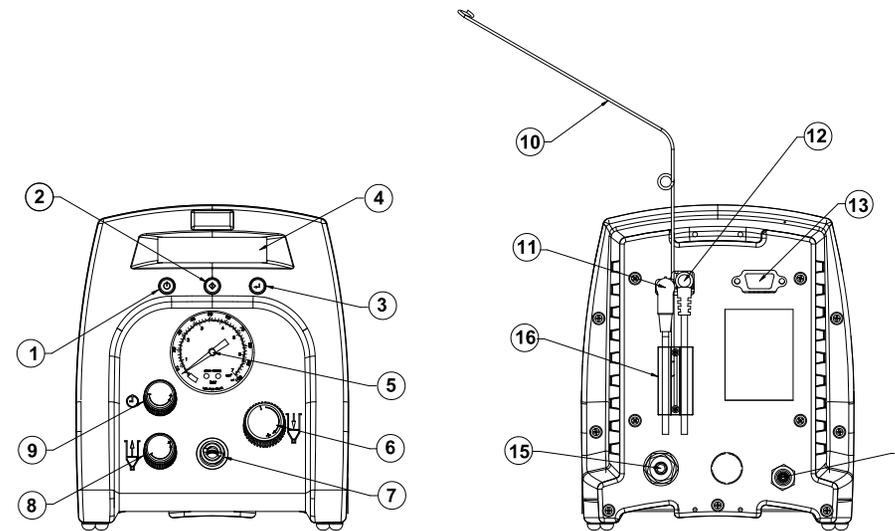


Figure 1.0

Items	Description
1	Power Button
2	Mode Button
3	Counter Reset Button
4	Display
5	Air Pressure Gauge
6	Air Pressure Regulator
7	Pulsed Air Outlet
8	Vacuum Control
9	Time Control Knob
10	Receiver head air hose holder
11	Foot Switch Receptacle
12	Power Receptacle
13	I/O Connection
14	Exhaust Port
15	Air Inlet
16	Cord Lock

5 CONNECTING THE UNIT

CAUTION: A 5-micron filter (TSD800-6), not included, must be installed with the unit to ensure proper air filtration.

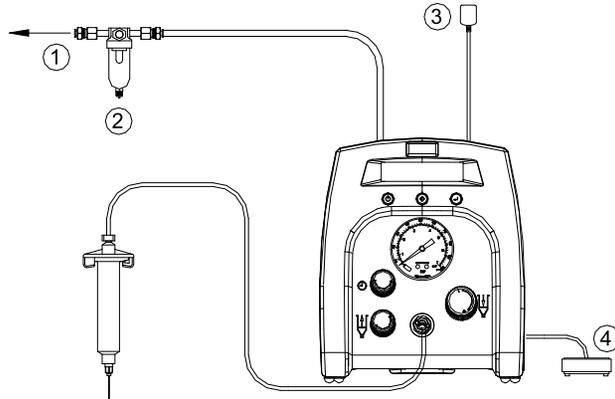


Figure 2.0

Items	Description
1	To Air Source
2	Air Filter (Not included)
3	Power Adapter
4	Foot Switch

6 SETUP INSTRUCTIONS

Refer to Figure 1.0

6.1 Manual Dispense Cycle Setting:

1. Turn on the unit by pressing the Power button (1)
2. Press the Mode button (2) until "PURGE" appears on the Display.
3. Turn up the air pressure by rotating the Air pressure regulator knob (6) until the desired pressure is indicated on the Air pressure gauge (5)
4. After filling the barrel or using pre-packaged adhesive, attach syringe to receiver head assembly. Make certain that the syringe locks into place.
5. Connect the plug end of the receiver head assembly to one of the air dispense outlet (7)
6. If vacuum "suck back" is needed, rotate the Vacuum regulator (8) counter clockwise until the desired vacuum pressure is obtained
7. Press and hold the Foot switch to activate dispensed cycle. (The Purge/Manual Mode is now activated)

6.2 Automatic Dispense Cycle Setting:

1. Push the Mode button (2) to select "TIMED" mode
2. Rotate the Time control knob (9) to set desired dispense time
3. Repeat step 3 to 6 in Section 6.1
4. Depress Foot switch to activate timed dispensed cycle

6.3 Cycle Counter

The cycle counter records the numbers of dispense cycle being activated. Up to 65,535 cycles can be recorded. This number is shown at the lower right hand corner of the LCD. Press the Counter Reset button (3) to clear the counter.

7 TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTION
LCD does not light	<ul style="list-style-type: none"> No power input 	<ul style="list-style-type: none"> Check power cord connections Turn on power
System will not actuate	<ul style="list-style-type: none"> Foot switch not plugged in or improperly plugged in Defective foot switch Broken wire or loose connection inside unit Defective solenoid Defective PC board 	<ul style="list-style-type: none"> Check foot switch connection Foot switch needs to be repaired or replaced Unplug power cord and disconnect air supply. Remove cover and check for broken wires or loose connections Replace solenoid Replace PC board
System will not pressurize	<ul style="list-style-type: none"> Insufficient air pressure Air hoses not plugged in Regulator defective 	<ul style="list-style-type: none"> Increase air supply pressure Check connection Replace regulator
System will not pull vacuum	<ul style="list-style-type: none"> Vacuum setting is too low Defective solenoid Defective vacuum venturi Defective vacuum needle valve 	<ul style="list-style-type: none"> Increase vacuum setting Replace solenoid valve Replace venturi Replace needle valve
Inconsistent dispensing	<ul style="list-style-type: none"> Air bubbles in adhesive Dispense time is too low Dispense needle started to clog 	<ul style="list-style-type: none"> Reduce vacuum setting Increase dispensing time Replace needle

8 MAINTENANCE

The dispenser is designed and built to be relatively maintenance free. To assure trouble free operation, the following recommendations should be followed:

1. Make certain air supply is clean and dry.
2. Avoid turning barrels upside down or laying barrel so that material may run through air line to internal components.
3. Avoid connecting the unit to excessive moisture or solvent saturation.
4. Avoid connecting air supply exceeding 100 psi (6.9 bar) for the DX-250 and 15 psi (1.03 bar) for the DX-255.
5. Use only Amyl Alcohol to clean outside surface of the main housing.
6. Use only soft cloth to clean the LCD.

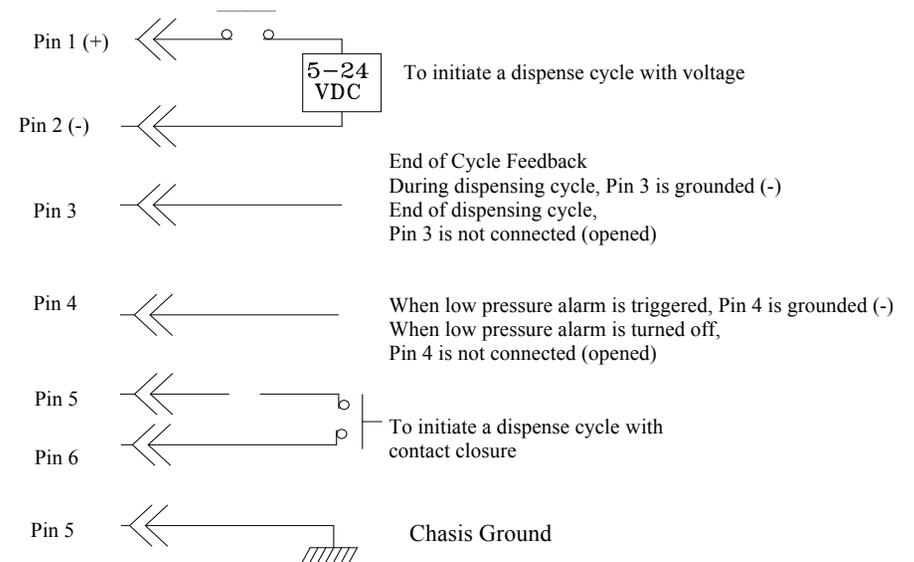
10 LIMITED WARRANTY

Metcal warrants this product to the original purchaser for a period of one (1) year from date of purchase to be free from material and workmanship defects but not normal wear-and-tear, abuse and faulty installation. Defective product or subassembly and components under warranty will be repaired or replaced (at Metcal's option) free of charge. Customer with defective product under warranty must contact the nearest Metcal office or distributor to secure a return authorization prior to shipping the product to the assigned Metcal authorized service center. Metcal reserves the right to make engineering product changes without notice.

During a dispense cycle, an open collector circuit closes and remains closed while the valve is dispensing. Pin 3 and 4 can be as feedback signal to synchronize with other devices. Power from an external source is allowed to pass through the circuit to operate a 5 to 24 VDC load. Power consumption must not exceed 250 mA. The load could be a relay, solenoid, counter, LED, or any device that will operate within a 5 to 24 VDC range and a maximum of 250 mA.

Note:

During the dispense cycle, pin 3 will be grounded. Please make sure the external device (your machine that controls the dispenser/controller) has the same ground as the DX-250/255 controller.



Pin 7, 8, and 9 = Available

11 I/O Configuration and End of Cycle Switch