

MaxMT™ Chemical Dispense System

Maximizes chemical utilization using a control box and two connectors



The MaxMT™ chemical dispense system is an innovative solution for maximizing chemical utilization, representing Entegris' next generation ND-CD connector offering. The dispense system consists of a control box and two connectors with A-to-B switching, headspace gas removal, and empty detect features.

APPLICATIONS

- Photoresist/color resist
- Low-viscosity material for microelectronics applications
- Other liquid material coating markets
- The system integrates with the production tools and is designed for use with 10- to 40-liter NOWPak® liner-based canister systems and closures

MaxMT chemical dispense system mounted to NOWPak liner-based canisters

FEATURES & BENEFITS

Control box	Provides a user interface that contains the logic for efficiently operating the system and controlling the dispense process
Two connectors with empty detection technology	Facilitates dispense of chemical out of the canister and includes technology for removing the headspace gas prior to dispensing chemical and detecting an empty condition
Automatic A-to-B switching	Helps reduce operating costs
Chemical dispense system design	Allows maximum chemical utilization with reduced bubble defects

SPECIFICATIONS

CONTROL BOX		
Requirements	Power	24 VDC, minimum of 1 amp service
	Pressure	551.6 kPa (80 psig) high-purity nitrogen required (grade 5.0 or higher)
Connections	Power	24 VDC, 3-wire female power cable with loose leads for customer interface, 1.8 m (6 ft) cable included
	Empty detect signal for tool interface	3-wire, 6-contact male connector with loose leads for customer interface, 1.8 m (6 ft) cable included
	Nitrogen supply	8 mm diameter tube connection (tubing for nitrogen supply not included)
Materials of construction (non-wetted)	Enclosure	Stainless steel
	Window	PTFE coated polycarbonate
	Start and stop buttons, on/off switch, emergency stop (EMO) button	Polyester
	Labels	Aluminum
	Air fittings	Stainless steel
	Empty detect signal cable	Polypropylene
	Power cable	Polypropylene
	Exhaust muffler	Polyethylene, polyacetal
Tubing/wire distance between control box and connectors	1.8 m (6 ft)	
Weight	10.6 kg (23.3 lbs)	

CONNECTOR		
Connections	Level sensor cable	4-contact pin cable to connect to the control box, 1.8 m (6 ft) length included
	Empty detect sensor cable	4-contact pin cable to connect to the control box, 1.8 m (6 ft) cable included
	Headspace gas removal valve actuation	4 mm tubing to connect to the control box, 1.8 m (6 ft) cable included
	Liquid out valve actuation	6 mm tubing to connect to the control box, 1.8 m (6 ft) cable included
	Canister pressurization	8 mm tubing to connect to the control box, 1.8 m (6 ft) cable included
	Headspace gas removal valve to drain	3 mm (0.13") PFA tubing, 1.8 m (6 ft) length included
	Connector probe fluid path diameter	6.35 mm (0.25") minimum diameter
	Liquid out valve diameter	4 mm with a 1.2 mm fixed orifice restriction

SPECIFICATIONS

	Headspace gas removal valve diameter	2 mm with a 1 mm fixed orifice restriction
	Liquid out valve to manual valve assembly	6 mm PFA tubing, 1.8 m (6 ft) length included
	Manual valve assembly	2 pcs, 6 mm PFA tee fittings and manual valve assembly
Thread type	2-1/4 ACME double start	
Performance	Operating pressure	103.4 kPa (15 psig) maximum (within the U.S.)
		206.8 kPa (30 psig) maximum (outside the U.S.)
	Connector pressure relief valve	241.3 kPa (35 psig) nominal cracking pressure
	Fluid temperature	25°C (77°F)
Materials of construction (wetted)	Probe/reservoir	PTFE
	Reservoir nozzle/filter	PTFE
	Reservoir plug	PTFE
	Reservoir O-ring	Chemraz®
	Headspace gas removal valve	PFA
	Liquid out valve	PFA
	Fixed orifices	PTFE
	Probe O-rings	Kalrez®
	Elbow fitting	PFA
	Pressure transducer	PTFE with a PFA cable sleeve
	3 mm headspace gas removal drain tubing	PFA
	6 mm liquid out valve tubing	PFA
	Manual assembly tee	PFA
	Manual assembly valve	PFA
Materials of construction (non-wetted)	Screws	Stainless steel
	Lock washers	Stainless steel
	Cover	Anodized aluminum
	Connecting rods	Anodized aluminum
	Level sensor cable	PE with a PFA cable sleeve
	Mounting pins	Stainless steel
	Dowel pins	Stainless steel
	Base	Anodized aluminum
	Gas inlet fitting	Stainless steel and polypropylene
	Pressure relief valve	Stainless steel and Viton®
	Bushing	PTFE
	Retainer gasket	EPDM
	Retainer	Natural polypropylene

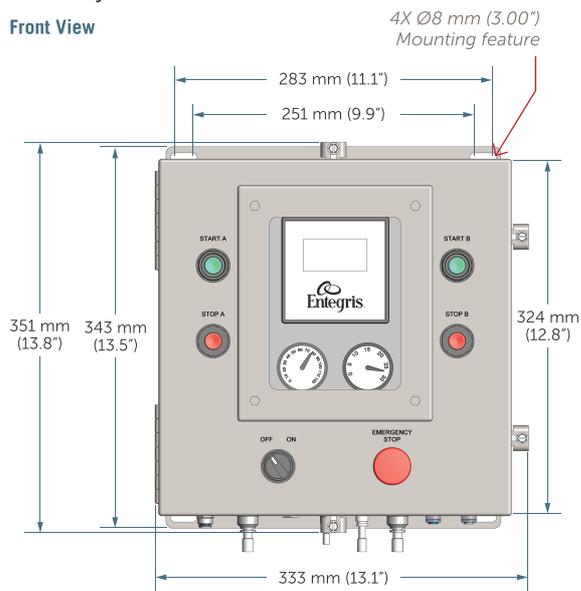
SPECIFICATIONS

	Retainer O-ring	EPDM
	Collar	Anodized aluminum
	Red 4 mm tubing	Polyurethane
	Red 6 mm tubing	Polyurethane
	Red 8 mm tubing	Polyurethane
	Blue 4 mm tubing	Polyurethane
	Blue 6 mm tubing	Polyurethane
	Blue 8 mm tubing	Polyurethane
	Cable sleeve	PET
Weight	2.81 kg (6.2 lbs)	
Manufacturing standards	Fabricated and tested in a Class 5 clean room as per International Standard ISO 14644-1:1999 cleanrooms and associated controlled environments - Part 1: Classification of air cleanliness. Connectors are 100% pressure decay tested using high-purity nitrogen.	
Cleanliness	Connector is to be free from lubricants and other foreign materials consistent with Entegris' processes and procedures.	
Packaging	The control box has two foam end protectors and is shipped in a corrugated shipping carton. Each connector is double bagged with a PE inner bag that is cleanroom processed and heat sealed, and a PE outer bag that is heat sealed. The connectors are packaged with foam on all sides and shipped in a corrugated shipping carton.	
Labeling	For traceability, each control box has a serial number located inside the control box	
	For traceability, each connector is labeled with the part number and serial number	

DRAWINGS

MaxMT System Control Box

Front View



MaxMT System Control Box

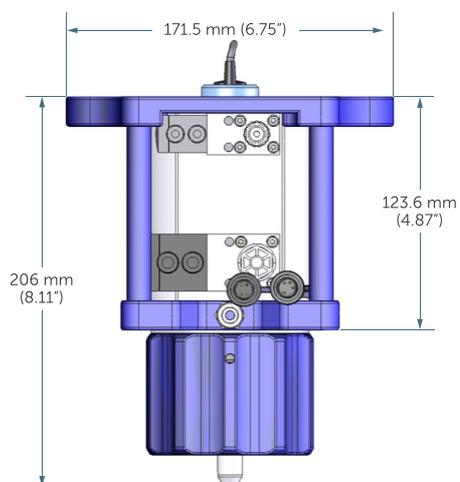
Bottom View



DRAWINGS

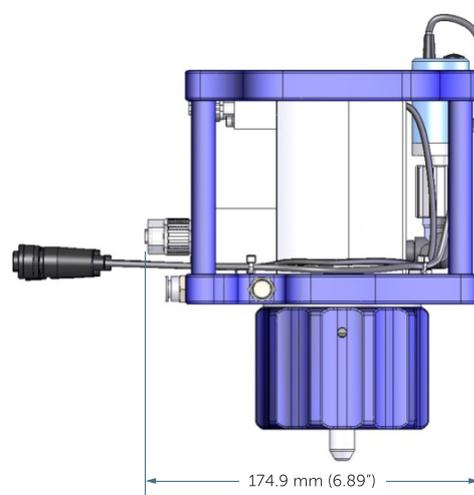
MaxMT System Connector

Front View



MaxMT System Connector

Side View



ORDERING INFORMATION

PART NUMBER	PRODUCT TYPE
EDA-B	MaxMT™ connector bracket
EDA-D	Gas cleaning fixture for MaxMT™ system connector
EDA-E	Solvent cleaning fixture for MaxMT™ system connector
EDA-G	In/out extension cable kit
ND-ED-CB-2	MaxMT™ control box
ND-ED-CN-2	MaxMT™ dispense connector
ND-ED-S-2	MaxMT™ chemical dispense system
PA-06	Probe O-rings, Kalrez®, 2 pc
PA-08	Retainer O-rings, EPDM, 10 pc

FOR MORE INFORMATION

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit [entegris.com](https://www.entegris.com) and select the [Contact Us](#) link to find the customer service center nearest you.

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