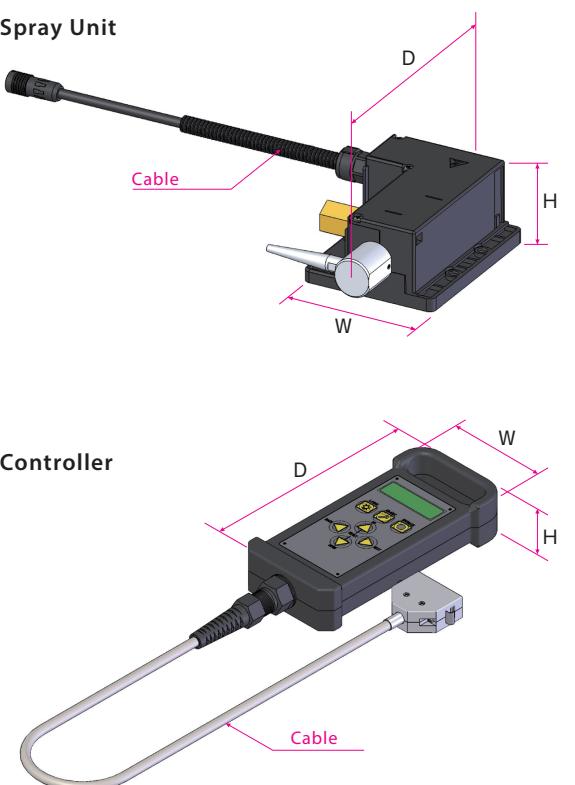


Wavy Nozzle®

Minebea
Passion to Exceed Precision

Product Specifications

Dimensions	Spray unit size (mm)	168.5 (D) x 103 (WD) x 59.3 (H) Cable length: 3000
Power supply	Control board size (mm)	99.8 (D) x 142.8 (W) x 18.6 (H)
Operation	Relay cable (between spray unit and control board) (mm)	3000
I/O signal	Relay cable (between controller and control board) (mm)	3000
Others	Controller (mm)	178 (D) x 84 (W) x 36 (H) Cable length: 3000
	Rated power supply voltage	+24 V DC ±10%
	Minimum starting current consumption	0.8 A
	Rated current consumption	0.45 A
	Input protection fuse	T 1.5 A/125 V
	Operating temperature range	0°C to +50°C
	Operating humidity range	85%RH or less
	Operating mode	3 modes (FIX, SWEEP, KICK)
	Nozzle movement range	75 counts (1 count = about 1.8 deg.)
	Maximum nozzle movement speed	100 counts (= 270 deg./sec: SWEEP mode)
	Maximum operation memories	99
	Operation calls	M-code control (one-to-one mode) M-code control (5-bit mode) Serial communication
	Error input signal	1 line
	M-code operation command signal	5 lines
	Discharge valve control signal input	1 line
	Discharge valve control signal output	1 line
	Serial communication input	1 line
	Alarm signal output	1 line
	Specification of the pump that can be connected to this unit	Theoretical discharge amount: 12.0 L/min. Maximum discharge pressure: 2.0 MPa
	Recommended cutting fluids	Oil-based coolants of Type N1 to Type N3 and water-based coolants of Type A1 and A2 specified in JIS K2241: 2000



Safety Precautions

! Warning: Failure to heed this warning may result in death or serious injury.

! Caution: Failure to heed this caution may result in injury or property damage.

Warning

- Do not use the unit in an explosive, inflammable, or corrosive atmosphere, in a place exposed to water splashes, or near combustible material. Doing so may cause fire or injury.
- Carefully read this instruction manual to familiarize yourself with the unit before performing the following tasks: installation and connection, running and operation, and inspection and troubleshooting. Failure to do so may cause fire or injury.
- When the protection function of the control board has been activated, resolve the problem. Continuing operation without the problem being resolved may cause malfunction of the spray unit, resulting in injury or damage to the unit.
- Do not disassemble or modify the spray unit or control board. Doing so may cause injury or damage to the unit.

Caution

- Be sure to turn off the power before wiring or removing the unit.
- Keep the cables connected to the unit as far away as possible from noise sources, such as a power supply cable, electromagnetic switch, inverter, or control I/O.
- When using an electrical conduit, provide a dedicated conduit and do not share it with other cables.
- Be sure to use the supplied cables to connect the spray unit and controller.
- Do not drop the unit on the floor. Do not apply a strong impact.
- Strictly observe the rated I/O signal voltage.

High Temperature Caution

- The spray unit becomes very hot when it is turned on.
- Touching a hot spray unit may cause a burn injury. Be sure to turn it off and leave it until it cools down sufficiently before touching it.

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2015.9.SE.3000



Wavy Nozzle®
Programmable Coolant System

Note 1: Wavy Nozzle is a registered trademark of Minebea Co., Ltd.
Japan Trademark registration number: 5645210, 5645226

Note 2: Patent pending.