

Machine Safety Information

General Safety Information

1. Ventilation

Systematic Automation Inc provides you with all the information needed to safely use FieroSil. When coupled with the FLSP Cylindrical Part Flame Treater your FieroSil System will be equipped with a fume hood and high temperature venting blowers.

The exhaust fumes contain crystalline silica which is harmful to breathe. Therefore, the exhaust from the Fierosil, Pyrosil, Arcosil or any HMDSO based vapor deposit system must be vented out of your building.

OSHA has clear guidelines for protecting operators from crystalline silica which is commonly generated in the stone, tile and granite cutting industry.

Refer to the following attached OSHA resources for guidelines. Your HVAC contractor will install a ventilation system that freely takes up the exhaust air of the FLSP flame treater. To verify and check that ventilation is working properly you can use an incense stick or cigarette to visualize and confirm that all the fumes are being channeled into the fume hood and out of your building.

Systematic Automation is committed to making sure you have an installation that is safe for your operators and surrounding employees. We will check in and make sure everything is working and venting as it should.

Relevant OSHA Standards:

[1910.134 - Respiratory protection. | Occupational Safety and Health Administration \(osha.gov\)](#)

[1910.1053 - Respirable crystalline silica. | Occupational Safety and Health Administration \(osha.gov\)](#)

2. Emergency Stop (E-stop):

- Emergency stop integrated to burner control system.
 - Dosing process terminated upon activation

3. Lockout/Tagout (LOTO):

- When accessing enclosures, the red disconnect switch located on the door of the bottom enclosure should be in the OFF position
- Disconnect compressed air from manifold located on the back of the dosing unit by turning the ON/OFF valve to the OFF position

4. Safety Interlocks:

- Pressure safety switch will allow machine operation when air is detected (factory set to 50PSIG)
 - If no pressure is detected, the dosing mechanism will terminate until air is supplied to the machine. Reference user manual for troubleshooting information.

5. Machine Safety Training:

- Detailed training videos and written documentation for operators and maintenance personnel on safe machine operation and emergency procedures. Reference user manual provided with equipment.

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Machine Safety Features

- Low pressure system
 - Description: Machine operates between 3-27 PSIG
- Ventilation: 2X Overhead Blowers @ 310 SCFM each
 - Description: Local exhaust ventilation (LEV) hookup or ventilation to outside is required via hose/duct connection to dual overhead blowers
 - Location: Directly above flame unit
- Re-fill ON/OFF Valve
 - Description: Liquid consumable cannot be supplied to reservoir tank while machine function is ON. Dosing function must be turned OFF to access the re-fill control ON button in SET-UP > REFILL menu of the HMI
 - Location: Top left corner of dosing unit
- Flame ON detection
 - Description: Dosing unit will not dispense if a flame is not detected
 - Location: Burner Control Unit on air/gas panel
- Pressure relief valve
 - Description: A relief valve set to 5PSIG will release any buildup of pressure inside the fluid tank
 - Location: Top of pressurized fluid tank
- Pressure safety switch
 - Description: Machine will not operate unless pressure is detected
 - Location: Pneumatic panel located on the back of the machine base