

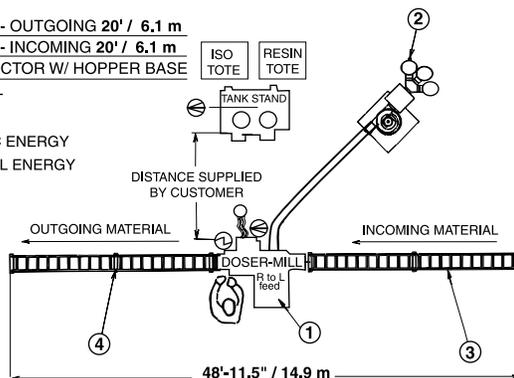
**Thermal Barrier Machinery:
metering, mixing, dispensing, and debridging**



DOSER-MILL™ FILL AND DEBRIDGE LINE

- 4 | CONVEYOR - OUTGOING 20' / 6.1 m
- 3 | CONVEYOR - INCOMING 20' / 6.1 m
- 2 | CHIP COLLECTOR W/ HOPPER BASE
- 1 | DOSER-MILL

⊖ = PNEUMATIC ENERGY
⊕ = ELECTRICAL ENERGY



For producing Azon thermal barrier in an aluminium window, door or curtainwall profile –
The Azon Doser-Mill™ combines in a single machinery base, a low-pressure metering, mixing and dispensing, two-component fill machine and debridger that removes the connecting metal web under the insulating polymer.

Designed specifically for the entry-level producer of the Azon process. It is capable of handling most (typical) profiles with fast setup, using simple adjustments.

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Doser-Mill™

Blade drive

The Azon Doser-Mill™ is equipped with a 15hp (11.2kW) 3,600rpm (3,000rpm at 50Hz) three phase 230/460 VAC, 50/60 Hz motor with brake turning a 1.437-inch (36.5 mm) diameter arbor through a heavy duty double bearing pillow block.

Metering

Precise metering of two-part polyurethane components is performed using precision gear pumps driven by a single hydraulic motor. With this method of calibration, drift is virtually eliminated. The material ratio is determined by the use of appropriately sized gear pulleys, and is adjustable. The material flow is controlled hydraulically, providing a maximum efficiency.

Extrusion drive

Extrusions are driven through the Doser-Mill by six hydraulic motors. These motors turn 4-inch (101.6 mm) diameter polyurethane drive wheels. Four of the motors are on the debridge side of the machine the remaining two motors are on the fill side. Hold-up wheels are located on the inlet and outlet sides of the machine to provide alignment of the extrusion. Three hold-down wheels are positioned over the blade to prevent extrusion from lifting up during debridging. One hold-down wheel is mounted to the tabletop on the fill side to provide additional alignment for the extrusion. Hold-up and hold-down wheels move vertically and laterally to accommodate any shape extrusion. Extrusion feed is only right to left.

Material reservoirs

Each 20 gal (75.7 L) tank is fitted with a sight gauge, 1,000 watts of heating capacity and pneumatically driven agitators for high production, temperature controlled output. Each reservoir has an overflow protection return line which doubles as conduit for the introduction of nitrogen into the system. Each tank has a diaphragm pump, which transfers its respective chemical from a tote or drum to the material reservoir. The chemical level is maintained inside the tank via an electronic level sensor.

Hydraulic power

Hydraulic power is supplied to the drive motors by a 2hp (1.5kW) 3.2 gal/min (12.1 L/min) power unit. Power unit is pre-wired for three phase 230/460 VAC, 50/60 Hz electrical power. Reservoir tank holds 6.65 gal (25.1 L).

Mixing

Mixing is accomplished by the use of the Tornado III™ hydraulic mixer. The mixing head design offers simple, low maintenance service. Chemical flow is controlled at the mixer. The mixing head rotates horizontally and vertically for universal location of the pour nozzle to the thermal barrier cavity.

Purging

The mixing chamber is purged through manual valves that draw solvent from a 5 gal (19 L) pressurized stainless steel reservoir.

Ventilation

The Doser-Mill is equipped with a 2,060 cfm (58 kL/min) blower to exhaust fumes from the waste chamber.

Blade usage

- Designed to accept a 12-inch (304.8 mm) diameter blade. Blade must have a 1-inch (25.4 mm) diameter arbor hole. One 12-inch (304.8 mm) diameter, 3/16-inch kerf blade is supplied with machine.
- Maximum vertical extension above the tabletop is 3.25 inches (82.6 mm). The blade position is not adjustable front to back on machine.
- Blades may be changed quickly via rear access door in the internal chip chute. Tools for blade removal are supplied with machine.

Processing capability

The work opening is adjustable through manual hand crank slides on the front and rear of the machine. The maximum opening is 7.25 inches, (184.1 mm). The largest cavity offset from either edge of the extrusion is 4 inches, (101.6 mm). The drive wheels may be elevated 1.5 inches (38.1 mm) for total versatility. Extrusion feed rates from 30-180 ft/min (9.1-54.8 m/min) and chemical flow rates of 1.75 gal/min, 16 lb/min (6.62 L/min, 35 kg/min) are achieved through infinitely variable adjustments of flow control valves.

Safety

Worker protection is provided by a safety hood that automatically disconnects electrical power when opened. The rear access door is also protected with an interlock switch to disconnect electrical power when opened. Any loss of electrical power energizes the brake on the blade motor stopping the blade.

Construction

The Doser-Mill is constructed from heavy gauge steel plate and tubing, welded to form a rigid heavy-duty framework. The frame is equipped with lifting tubes to facilitate easy transport with a forklift.

Electronic controls

Temperature is monitored and automatically controlled by digital readout devices in the control panel. Chemical level in 20 gal (75.7 L) tanks is controlled by an electronic level sensor.

Electrical requirements

208/230/380/460/600 VAC, 80/40 Amp, 3 Phase, 50/60 Hz service. All electrical components are mounted inside NEMA 12 enclosures.

Air requirements

Clean, dry air is required for pneumatically operated components. Minimum requirements are 80 psi, 40 scfm (5.5 bars, 3,964 L/min).

Options

Chip Collector - The model DK-8 cyclone collector is available for efficient removal of aluminum chips.

