Freedom® Adhesive Dispensing Systems

System and Component Specifications
# Freedom® Adhesive Dispensing Systems
## Packaging Equipment that Pays You Back

### Freedom Series Melter
- **Type of System**: Tankless, automatically filled, non-circulating, 15:1 dual acting piston pump
- **Maximum Pump Rate**: 33 kg/hr (72 lb/hr) at 90 strokes/min
- **Filter Type**: Inside/out
- **Maximum Working Hydraulic Pressure**: 10.3 MPa (1500 psi)
- **Temperature Range**: 40 to 204°C (100 to 400°F)
- **Ambient Temp. Range**: 0 to 40°C (32 to 104°F)
- **Temp. Control Stability**: ± 0.5°C (±1°F)
- **Input/Output Capability**: 4 inputs & 3 outputs
- **Hose Ports**: Up to four
- **Electrical Service**: 200 to 240 VAC, 1 or 3 phase, 50/60 Hz
  - 1 phase N/PE 50/60 Hz
  - 400/230 VAC
  - Transformer Option: 400/480 VAC 3 phase 50/60 Hz, 15 kVA
- **Melt Rate (per hour)**: 9 to 12 kg/hr (20 to 27 lbs/hr)
- **Maximum Hose/Applicator Power Capacity**
  - 2 hoses/applicators: 2000 W*
  - 4 hoses/applicators: 4000 W*
  - *2000 W per 2 hose/2 applicator pair; 1200 W per hose/applicator pair and 1000 W per single channel
- **Melter Enclosure Rating**: IP 54
- **Melter Weight (empty)**: 45.4 kg (100 lb)
- **Dimensions W x H x D**
  - 838mm x 533mm x 279mm
  - 33” x 21” x 11”
- **Installation mm (in)**
  - Service Envelope (WxHxD): 889mm x 787mm x 406mm
  - 35” x 31” x 16”

### Integrated Adhesive Filling
- **Adhesive Forms**: Pellets
- **Maximum Size**: 7.0 mm (0.275 in) spherical
- **Adhesive Transfer Maximum Rate**: 275 kg/hr (600 lbs/hr) (dependent on adhesive type)
- **Operating Air (Dynamic)**
  - Minimum Pressure: 2.75 bar (0.275 Mpa or 40 psi)
  - Maximum Pressure: 5.5 bar (0.55 Mpa or 80 psi)
- **Operating Air (Static)**
  - Maximum Pressure: 6.9 bar (0.69 Mpa or 100 psi)
- **Total Air Consumption**
  - 17 CFM at 3.4 bar (50 psi) to transfer 105.3 kg/hr (223.2 lb/hr) with a 4-m hose at a 4-m rise
  - 22 CFM at 4.1 bar (60 psi) to transfer 112.5 kg (248 lb/hr) with a 9-m hose at a 4-m rise
  - 30 CFM at 6.2 bar (90 psi) to transfer 90.7 kg/hr (200 lb/hr) with an 18-m hose at a 4-m rise
- **Conditioning**
  - Dry, non lubricated
- **Air Inlet Connection**: 3/8" NPT
- **Transfer Pump Type**: Venturi
- **Filter Mesh Size**: 6 MERV
- **Adhesive Storage Container Capacity**
  - 40Kg (88 lb) usable with grate
  - 64 Kg (141 lb) usable without grate
- **Enclosure Rating**: IP54
Program Storage: 50 with customer-defined name
Service Intervals: 1 customer settable (with customer-defined name)
Password Protection: 3 levels, numerical
Touch Screen: 7-inch color, (800 x 480 WVGA)

EcoBead™ Intermittent Bead Capability:
Adhesive Savings: 30-40-50-60%
Pre-programmed Patterns: 10 per glue savings selection (total of 40)
Beads per Product: 1 to 8

System Inventory:
Automatically Identified Components: Hoses, applicators, melter
Displayed Information: Part number, serial number, installation date

Electronic Nameplate Information: Watts, amps, voltage

Input/Output Interface:
Inputs: 4, customer assignable functions
Input Voltage: 10 to 30 VDC, polarity insensitive
Outputs: 3, customer assignable functions
Output Type: N.O. potential free contact. All open when melter is off
Contact Rating: 240VAC @ 2A and 30VDC @ 2A

Temperature Control:
Stability: ± 0.5°C (±1°F)
Temperature Range: 40 to 204°C (100 to 400°F)
PID Control Values: Optimized by component I.D.

Optix Controls:
- Text-based fault and diagnostic messaging
- Component identification functionality
- Choice of languages
- Touch screen GUI

Freedom Series Hoses:
- Maximum Operating Temperature: 204°C (400°F)
- Maximum Hydraulic Pressure: 10.34 MPa (1500 psi) diameter
- Input Voltage: 240 VAC

Freedom Series Applicators:
- Single body for multiple module types
- Industry best service life
- Self-cleaning modules

Operating Temperature: 204°C (400°F) maximum
Operating Air Pressure: 3.4 to 5.5 bar (50 to 80 psi)
Working Hydraulic Pressure: 103 bar (1500 psi) maximum
Nozzles: MiniBlue® II: Saturn®, standard MiniBlue II SureBead®: .008, .012,.016,.020,.032,.040
Saturn® Solenoid Valves: Single module: SP, 4-way, 24 VDC
Multi module: SP multi-module, 4-way, 24 VDC
Electrical Service: 240 VAC, 50/60 Hz initial 200 VAC, 50/60 Hz optional
Maximum Cycle Rate: 8000/min
Minimum Bead Deposition: 2ms (adhesive dependent)
Adhesive Viscosity: 500 to 1500 cps optimal 500 to >5000 cps capability
Hydraulic Seal: Elastomer bellow (long service life)
Start Saving Now

The typical Freedom system pays for itself in 12 months or less and continues to save you money throughout the life of the system.

For more information, talk with your Nordson representative or contact your Nordson regional office.

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<thead>
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