

ProBlue[®] Flex Melter with BBconn Controls

Transformational Technology from Nordson

The ProBlue Flex melter from Nordson is advanced technology that adapts to any operation with ease and simplicity. As your business grows or changes, the ProBlue Flex can be outfitted with smart and simple field upgrades that are easily implemented with the support of Nordson's seasoned technical support representatives.

The ProBlue Flex incorporates intelligent technology that enables ultra-precise dispensing accuracy. It is complemented by Nordson's new BBconn control system, which allows for full remote operation, advanced diagnostics, real-time oversight, and the data and analytics needed for continuous improvement of your operations.



ProBlue Flex Features

- Drop in replacement for ProBlue melters
- Seamless, easy upgrades allow for advanced features to be added when needed
- Fast system start-up through reduced warm-up time
- Energy efficient design saves money
- Enhanced safety with touch safe enclosure, manifold guard, and optional lid lock
- Precision regulation & auto-tune PID temperature control minimizes bead variation allowing a smaller bead to save money
- Full parent-machine integration via autofill, remote electronic pressure set and PLC communications

General Specifications

| | |
|--|--|
| Type of system: | Non-circulating tank |
| Filter type: | Inside-out disposable |
| Viscosity range: | 800 to 10,000 cP |
| Range with reduced performance: | 1 to 800 cP and 10,000 to 30,000 cP |
| Temperature range: | |
| Melt section: | 40 to 204°C (100 to 400°F) |
| Hose and applicators: | 40 to 230°C (100 to 450°F) |
| Ambient temperature range: | -5 to 50°C (23 to 122°F) |
| Temperature control stability: | ±0.5°C (1°F) |
| Hose ports: | 9 |
| Hose and applicator power module: | |
| Number of H/A pairs per power module: | 2 |
| Number of H/A pairs: | 2, 4, or 6, internal; up to 10 with optional 2 or 4 H/A expansion base |
| Maximum power per power module: | 2000 W |
| Maximum power per pair: | 1200 W |
| Maximum power per channel: | 1000 W |
| Ingress Protection: | IP54 |
| Noise: | 64 dB (A) at maximum pump speed |



Simple user interface and easy connectivity with BBconn Controls.

Integrated OLED User interface

Four-line, multi-language, text-based display enables easy set-up, operation, and troubleshooting.

- Scheduled maintenance reminders
- Intuitive remote input and output set-up
- Simple navigation with day-to-day operator functions clearly delineated
- Two customizable password protection levels for operators and technicians
- 100-item event log available for export

Standard PLC Communication Protocols

- Unique OEM interface designed for the parent machine PLC interface
- Integrated Ethernet IP and Profinet protocols for easy PLC integration comes standard on all melters.

Optional PLC Communications Cards

Optional PLC communication cards are available as accessories to support all standard PLC protocols.

- Profibus
- Ethercat
- CC Link
- Sercos III
- Modbus TCP
- Powerlink
- CC Link IE

Remote Input and Output

- One remote input and one remote output standard
- I/O is programmable for function
- Legacy I/O accessory has 4 additional remote input & 3 remote output

Built-in webserver for optimal performance.

Remote Touch Screen

- Allows inaccessible melters to be controlled from a range of locations
- Control melters from up to 30 meters away via ethernet cable
- Allows for additional programming, reports and troubleshooting features
- Configurable screens for immediate access to the most vital information
- Webserver license included

Wireless Card

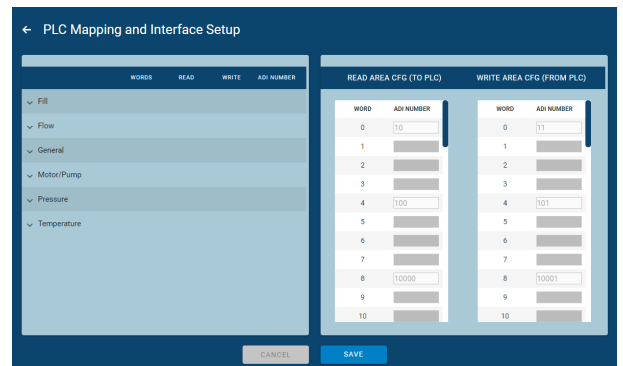
- Allows for wireless access point
- Allows users to connect to webserver via smart phone, tablet, or laptop
- Responsive user interface is optimized for all screen sizes
- Webserver license included

BBconn Cloud

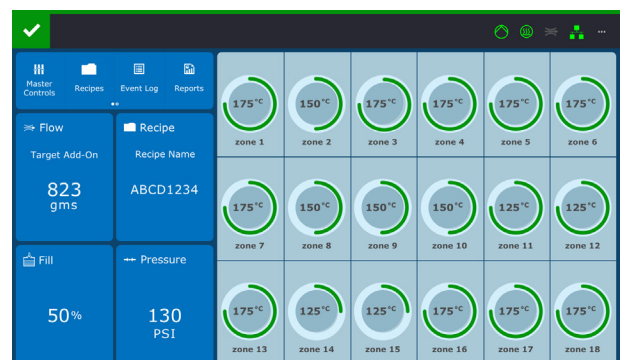
- Completely set-up melter, including PLC data map
- Securely save system set-up information, recipes and data
- Remote troubleshooting
- Easily share setup and event history data with Nordson technical support
- One-stop-shop for all ProBlue Flex resources such as manuals, instruction sheets, software upgrades and licenses.



OLED User Interface



PLC Map with BBconn Cloud



Remote Touch Screen (Webserver)
Home Screen



Track and minimize adhesive usage with TrueFlow ATS.

- Track total adhesive consumption and add-on weight per product
- Track total number of products
- Download historical data via USB, and process, analyze and export it to BBconn cloud
- Real-time monitoring and control via integrated OLED display on the melter
- View real-time graphs when using webserver (with remote touchscreen or wireless card)
- Multiple, user-adjustable adhesive-volume tolerance band limits (upper and lower) to identify out of tolerance product

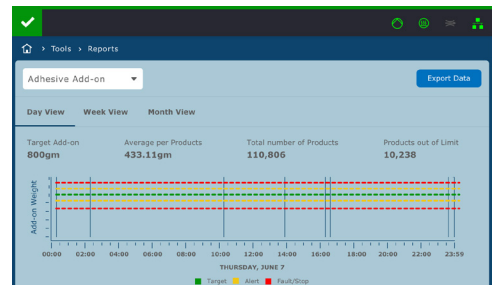


TrueFlow ATS Flow Meter

TrueFlow ATS Specifications

- Minimum recommended add-on weight per product without averaging:** 1 gram
- Minimum recommended add-on weight per product with averaging:** 30mg
- Native Resolution :** 0.0128 cc = 12.2mg (0.00003 lb)
- Viscosity range:** 800 - 10,000 mPa-s (cP)
- Alarm Range:** 5% to 50% of target add-on
- Fault Range:** 5% to 50% of target add-on

¹Assuming SG=.96



Real Time Charting

Pressure Management Options and Accessories

- Mechanical adjust with gauge (local to melter)
- Electronic pressure setting with digital readout (local to melter and remote) allows alarm limits to be set
- Electronic pressure run-up with digital readout (local to melter and remote) allows password protection

Pressure Management Specifications

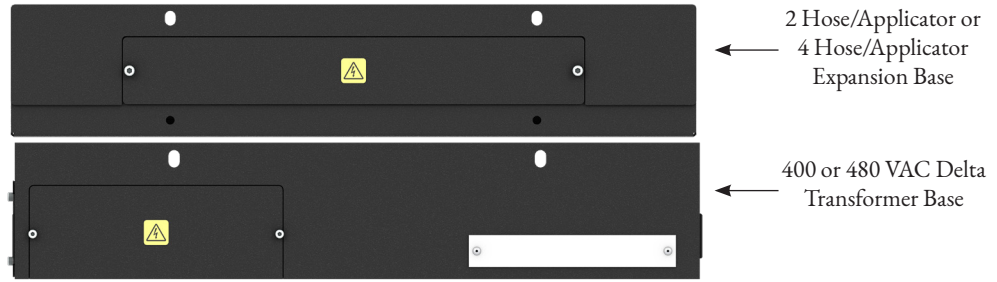
- Air pressure range:** 1 to 6.2 Bar (15 to 90 psi)
- Maximum hydraulic pressure:** Up to 110 Bar (1600 psi) depending on pump



Pressure Gauge

ProBlue® Flex Melter Stacked Bases

ProBlue Flex melter bases are stackable to allow the melter to be customized to meet exact application requirements.



Two and Four Hose/Applicator Expansion Base

- Adds two or four additional hose/applicator channels to any melter size
- Installs quickly and easily via a sub-base
- Requires no modification to the melter
- Allows for easy access to circuit board and fuses from the front of the base

2.5 KVA Transformer Base

- Uses the same footprint as the melter, eliminating the need for a large secondary transformer installation on the parent machine
- Maintains low profile
 - Only hoses and applicators are stepped down from 400 / 480 VAC
 - Melt and hydraulic section use 400 / 480 VAC heaters
- Easy installation; requires no modification or additional wiring
- Allows for easy technical service via front drawer access

Specifications for Expansion Bases

| Specifications | 2 H/A Expansion Base | 4 H/A Expansion Base |
|-------------------------|----------------------|----------------------|
| Expands melter to | 8 H/A total | 10 H/A total |
| H/A Connectors on base | 2 | 4 |
| Added Hoses/Applicators | 2H & 2A | 4H & 4A |
| Added control channels | 4 | 8 |
| Max channel power (W) | 1000W | 1000W |
| Max H/A pair power (W) | 1200W | 1200W |
| Max total power (W) | 2000W | 2000W |
| Sensor | NI120 | NI120 |
| Control algorithm | Autotuning PID | Autotuning PID |

Base Dimensions

| Chassis Size | 2.5KVA Transformer Base | 9KVA Transformer Base | 2-4 H/A Expansion Base |
|---|--|---|--|
| Size A T04, MOD7, MOD14 | 554mm x 83mm x 323mm (21.8 in x 3.3 in x 12.7 in.) | 614.4 mm x 229mm x 320mm (24.2 in x 9.0 in x 12.6 in.) | 554mm x 83mm x 323mm (21.8 in x 3.3 in x 12.7 in.) |
| Size B T07, T10, MOD21, MOD28 | 617mm x 83mm x 323 mm (24.3 in x 3.3 in x 12.7 in.) | 614.4 mm x 229mm x 320mm (24.2 in x 9.0 in x 12.6 in.) | 617mm x 83mm x 323 mm (24.3 in x 3.3 in x 12.7 in.) |
| Size C T15 | N/A | 713.4mm x 229mm x 320mm (28.1 in x 9.0 in x 12.6 in) | 712mm x 83mm x 311mm (28.1 in x 3.3 in x 12.25 in) |
| Size D T30, T50 | N/A | N/A | 970mm x 83mm x 311mm (38.2 in x 3.3 in x 12.25 in) |

ProBlue® Flex Melter with Tank

- Standard capacitive level sensor indicates continuous level in tank
- Great for melting all adhesive shapes and sizes from pellets to bricks
- Autofill is an optional accessory

Tank Specifications

| Specification | Tank Size - 4 KG | Tank Size - 7 KG | Tank Size - 10 KG |
|---------------------|---|---|---|
| Melt Rate | 5 kg/hr (11 lb/hr) | 7 kg/hr (15.4 lb/hr) | 11 kg/hr (24 lb/hr) |
| Throughput | 5 kg/hr (11 lb/hr) | 7 kg/hr (15.4 lb/hr) | 11 kg/hr (24 lb/hr) |
| Melter Empty Weight | 49.8 kg (109.8 lb) | 50.9 kg (112.2 lb) | 53.7 kg (118.4 lb) |
| Holding Capacity | 4.5 kg (9.9 lb) | 6.7 kg (14.8 lb) | 9.7 kg (21.4 lb) |
| Overall Dimensions | 570 mm x 517 mm x 367 mm (22.5 in x 20.5 in x 14.5 in) | 634 mm x 517 mm x 367 mm (25 in x 20.5 in x 14.5 in) | 634 mm x 517 mm x 367 mm (25 in x 20.5 in x 14.5 in) |
| Mounting Dimensions | 381 mm x 249 mm (15 in x 9.8 in) | 436 mm x 249 mm (17.1 in x 9.8 in) | 436 mm x 249 mm (17.1 in x 9.8 in) |
| Service Dimensions | 748 mm x 635 mm x 672 mm (29.5 in x 25 in x 26.5 in) | 812 mm x 635 mm x 672 mm (32 in x 25 in x 26.5 in) | 812 mm x 635 mm x 672 mm (32 in x 25 in x 26.5 in) |

| Specification | Tank Size - 15 KG | Tank Size - 30 KG | Tank Size - 50 KG |
|---------------------|---|--|--|
| Melt Rate | 18 kg/hr (39.68 lb/hr) | 27.2 kg/hr (60 lb/hr) | 29.5 kg/hr (65 lb/hr) |
| Throughput | 18 kg/hr (39.68 lb/hr) | 27.2 kg/hr (60 lb/hr) | 29.5 kg/hr (65 lb/hr) |
| Melter Empty Weight | 66 kg (145 lb) | 81.6 kg (180 lb) | 87 kg (192 lb) |
| Holding Capacity | 14.5 kg (32 lb) | 29 kg (63.9 lb) | 48.5 kg (106.9 lb) |
| Overall Dimensions | "727 mm x 855 mm x 400 mm (28.7 in x 33.7 in x 15.8 in)" | "983 mm x 855 mm x 400 mm (38.7 in x 33.7 x 15.8 in)" | "983 mm x 1059 mm x 400 mm (38.7 in x 41.67 in x 15.74 in)" |
| Mounting Dimensions | "577 mm x 249 mm (22.72 in x 9.80 in)" | "665 mm x 249 mm (26.17 in x 9.80 in)" | "665 mm x 249 mm (26.17 in x 9.80 in)" |
| Service Dimensions | 905 mm x 1061 mm x 718 mm | 1161 mm x 859 mm x 718 mm | 1161 mm x 1062 mm x 718 mm |

Tankless ProBlue® Flex with SmartMelt Technology

SmartMelt technology with advanced temperature management saves energy, and keeps the melter ready for instant production ramp up. The SmartMelt design and algorithm reduces the grid temperature when production has stopped.

- A tankless melter combined with Smart Melt technology virtually eliminates char
- Tankless melters enable product standardization; 7 kg/hr. and 14 kg/hr. melt rate, built on same chassis as 4 kg tank
- MOD 21 kg/hr. and MOD 28 kg/hr. is on a much smaller chassis than the 15 kg, 30 kg, and 50 kg tank melters

Melt-On-Demand Specifications

| Specification | MOD 7 kg/hr. | MOD 14 kg/hr. |
|---------------------|---|---|
| Melt Rate | 7 kg/hr. (15.4 lb./hr.) | 14 kg/hr. (30.8 lb./hr.) |
| Throughput | 7 kg/hr. (15.4 lb./hr.) | 14 kg/hr. (30.8 lb./hr.) |
| Melter Empty Weight | 50 kg (110.3 lb.) | 50 kg (110.3 lb.) |
| Holding Capacity | 1 kg (2.2 lb.) | 1 kg (2.2 lb.) |
| Overall Dimensions | 570 mm x 517 mm x 367 mm (22.5 in x 20.5 in x 14.5 in) | 570 mm x 517 mm x 367 mm (22.5 in x 20.5 in x 14.5 in) |
| Mounting Dimensions | 381 mm x 249 mm (15 in x 9.8 in) | 381 mm x 249 mm (15 in x 9.8 in) |
| Service Dimensions | 748 mm x 635 mm x 672 mm (29.5 in x 25 in x 26.5 in) | 748 mm x 635 mm x 672 mm (29.5 in x 25 in x 26.5 in) |

| Specification | MOD 21 kg/hr. | MOD 28 kg/hr. |
|---------------------|--|--|
| Melt Rate | 21 kg/hr. (46 lb./hr.) | 28 kg/hr. (62 lb./hr.) |
| Throughput | 21 kg/hr. (46 lb./hr.) | 28 kg/hr. (62 lb./hr.) |
| Melter Empty Weight | 54 kg (120 lb.) | 54 kg (120 lb.) |
| Holding Capacity | 2 kg (4.4 lb.) | 2 kg (4.4 lb.) |
| Overall Dimensions | 634 mm x 517 mm x 367 mm (25 x 20.5 in x 14.5 in)" | 634 mm x 517 mm x 367 mm (25 x 20.5 in x 14.5 in)" |
| Mounting Dimensions | 436 mm x 249 mm (17.1 in x 9.8 in)" | 436 mm x 249 mm (17.1 in x 9.8 in)" |
| Service Dimensions | 812 mm x 635 mm x 672 mm (32 in x 25 in x 26.5 in)" | 812 mm x 635 mm x 672 mm (32 in x 25 in x 26.5 in)" |

Pump Specifications

| Pump Specification | Standard Double-Acting | High-Output Double-Acting | High-Output Single-Acting |
|------------------------|--|---|---|
| Pressure Ratio | 15:1 | 16:1 | 12:1 |
| Viscosity Range | 800-10,000 cP | 800-10,000 cP | 800-10,000 cP |
| Test Viscosity | 1100 cP | 1100 cP | 1100 cP |
| Maximum Pump Rate | .54 kg/min. (1.2 lb./min.) | .98 Kg/min. (2.17 lb./min.) | 1.8 kg/min. (4.0 lb./min.) |
| Displacement | 7.20 cc/stroke (0.44 cu in/stroke) | 16 cc/stroke (1.0 cu in/stroke) | 36 cc/stroke (2.2 cu in/stroke) |
| Operating Air Pressure | .69 to 6.2 bar (10 to 90 psi) | .69 to 6.2 bar (10 to 90 psi) | .69 to 6.2 bar (10 to 90 psi) |
| Air Consumption | 56 l/min at 4.1 bar and .54 kg/min output (2.0 SCFM at 60 psi and 1.2 lb/min output) | 100 l/min at 4.1 bar and .91 kg/min output (3.5 SCFM at 60 psi and 2 lb/min output) | 133 l/min at 4.1 bar and maximum output (4.7 SCFM at 60 psi and maximum output) |
| Reset time | N/A | N/A | 800 msec @ 60 psi |

| Pump Specification | Low-Pressure Double-Acting | Low-Viscosity Double-Acting | Low-Pressure & Low-Viscosity Double-Acting |
|------------------------|---|--|---|
| Pressure Ratio | 6:1 | 15:1 | 6:1 |
| Viscosity Range | 800-10,000 cP | 1 - 800 cP | 1-800 cP |
| Test Viscosity | 1100 cP | 4 cP | 4 cP |
| Maximum Pump Rate | .54 kg/min (1.2 lb/min) | .54 kg/min (1.2 lb/min) | .54 kg/min (1.2 lb/min) |
| Displacement | 7.20 cc/stroke (0.44 cu in/stroke) | 7.20 cc/stroke (0.44 cu in/stroke) | 7.20 cc/stroke (0.44 cu in/stroke) |
| Operating Air Pressure | .69 to 6.2 bar (25 to 90 psi) | 1.72 to 6.2 bar (10 to 90 psi) | .69 to 6.2 bar (25 to 90 psi) |
| Air Consumption | 23 l/min at 4.1 bar and 0.54 kg/min output (0.8 SCFM at 60 psi and 1.2 lb/min output) | 56 l/min at 4.1 bar and .54 kg/min output (2.0 SCFM at 60 psi and 1.2 lb/min output) | 23 l/min at 4.1 bar and 0.54 kg/min output (0.8 SCFM at 60 psi and 1.2 lb/min output) |
| Reset time | N/A | N/A | N/A |

Fill System Features

- Level-monitoring window
- Quick-change exhaust filter
- Quick-disconnect air pump
- Removable inlet-tube

Fill System Specifications

Adhesive Forms / Shapes

Pellets

Pastilles:

Mini-slats:

up to 12 mm (0.472 in diameter)

up to 12 mm x 12 mm (0.472 x 0.472 in)

Adhesive Transfer Maximum Rate:

275 kg (600 lb)/hour

(dependent on adhesive type)

Transfer Hose Length:

4 m (13 ft.), 9 m (29.5 ft), or 18 m (59 ft)

Total Air Consumption (each feed):

17 CFM @ 3.4 bar to transfer 105.3 kg/hr

(223.2 lb/hr) - with 4 m hose @ 4 m rise

22 CFM @ 4.1 bar to transfer 112.5 kg

(248 lb/hr) - with 9 m hose @ 4 m rise

30 CFM @ 6.2 bar to transfer 90.7 kg/hr

(200 lb/hr) - with 18 m hose @ 4 m rise

Air Conditioning

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)

Inlet Air Connection:

¼-in. NPT female

¼-in. BSPP female

G ¼ female

Dimensions (W x D x H)

Single-feed Adhesive Container Clearance: 480 x 554 x 917 mm (19 x 22 x 36 in)

Single-feed Open Lid Height Clearance: 1471 mm (60 in)

Multi-feed Adhesive Container Clearance: 688 x 667 x 1656 mm (26 x 27 x 65 in)

Multi-feed Open Lid Height Clearance: 1790 mm (71 in)

Adhesive Container Capacity

Single-feed Bin:

40 kg (88 lb) usable with grate; 64 kg (141 lb) usable without grate

Multi-feed Bin:

110 kg (242 lb) usable with grate; 128 kg (282 lb) usable without grate

Enclosure Rating:

IP54

Noise Emission:

76 dBa



ProBlue® Flex Melter

Electrical Specifications

| | |
|----------------------------------|---|
| Electrical Service | 200 to 240 VAC 1Ø or 3Ø 50/60 Hz 200 to 240 VAC 1Ø N/PE 50/60 Hz 400/230 VAC 3Ø N/PE 50/60 Hz |
| With optional transformer | 400 to 480 VAC 3Ø 50/60 Hz |
| Tolerance | +10% -15% |

Maximum Amperage (6 H/A Melter)

| | | Tank | | | | | Melt-On-Demand | | | | |
|----------------|---|------------------|------|------|-------|-------|----------------|---------|----------|----------|----------|
| | | Voltage | 4 kg | 7 kg | 10 kg | 15 kg | 30 /50 kg | 7 kg/hr | 14 kg/hr | 21 kg/hr | 28 kg/hr |
| Legacy Warm-Up | Δ | 200-240, 1-phase | 37 | 38 | 38 | N/A | N/A | 36 | 38 | N/A | N/A |
| | | 200-240, 3-phase | 24 | 25 | 25 | 28 | 32 | 23 | 25 | 31 | 32 |
| | Y | 400-230, 1-phase | 36 | 37 | 37 | N/A | N/A | 34 | 37 | N/A | N/A |
| | | 400-230, 3-phase | 14 | 14 | 14 | 17 | 22 | 14 | 14 | 21 | 22 |
| Fast Warm-Up | Δ | 200-240, 1-phase | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 200-240, 3-phase | 30 | 31 | 31 | 33 | 38 | 29 | 31 | 37 | 38 |
| | Y | 400-230, 1-phase | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 400-230, 3-phase | 20 | 20 | 20 | 20 | 32 | 20 | 20 | 21 | 22 |

Maximum Amperage (6 H/A Melter with H/A Expansion Base)

| | | Tank | | | | | Melt-On-Demand | | | | |
|----------------|---|------------------|------|------|-------|-------|----------------|---------|----------|----------|----------|
| | | Voltage | 4 kg | 7 kg | 10 kg | 15 kg | 30/50KG | 7 kg/hr | 14 kg/hr | 21 kg/hr | 28 kg/hr |
| Legacy Warm-Up | Δ | 200-240, 1-phase | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 200-240, 3-phase | 28 | 29 | 29 | 32 | 36 | 29 | 29 | 33 | 36 |
| | Y | 400-230, 1-phase | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 400-230, 3-phase | 18 | 18 | 18 | 18 | 22 | 18 | 18 | 18 | 22 |
| Fast Warm-Up | Δ | 200-240, 1-phase | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 200-240, 3-phase | 34 | 34 | 34 | 34 | 37 | 34 | 34 | 34 | 37 |
| | Y | 400-230, 1-phase | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | 400-230, 3-phase | 20 | 20 | 20 | 20 | 22 | 20 | 20 | 20 | 22 |

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

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