

# 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. Depending on your unique requirements, you can choose from factory options direct from Nordson, or smart and simple field upgrades, supported by 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
- Flexible design allows for the perfect configuration for the application
- 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 and auto-tune PID temperature control minimizes bead variation allowing a smaller bead that saves 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



## Experience Multiple User Interface and Connectivity Options with Nordson's New 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

### OEM User Interface

- Unique OEM interface designed for the parent machine PLC interface
- Integrated Ethernet IP and Profinet protocols for easy PLC integration

### Optional PLC Communications Cards

Configurable screens ensure the most important information is at your fingertips.

- 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 option has four additional remote input & three remote output
- Legacy I/O is programmable for function

### 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 required

### Wireless Card

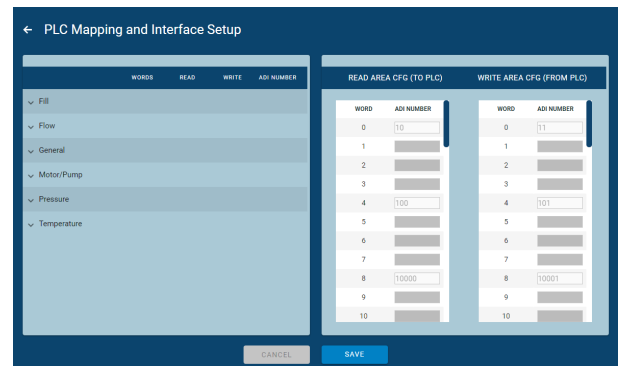
- Allows for wireless access point
- Allows users to connect to webserver via smart phone, tablet, or laptop
- Responsive user interface is optimized for all screen sizes
- Webserver license required

### BBconn Cloud

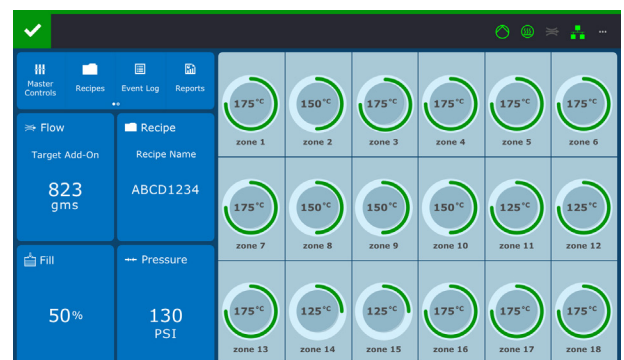
- Completely set-up melter, including PLC data map
- Securely save system set-up information, recipes and data
- Remote troubleshooting
- Easily share setup and event history data with Nordson technical support
- One-stop-shop for all ProBlue Flex resources such as manuals, instruction sheets, software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



OLED User Interface



PLC Map with BBconn Cloud



Remote Touch Screen (Webserver)  
Home Screen



## 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 optional webserver (with remote touchscreen or wireless card)
- Multiple, user-adjustable adhesive-volume tolerance band limits (upper and lower) to identify out of tolerance product

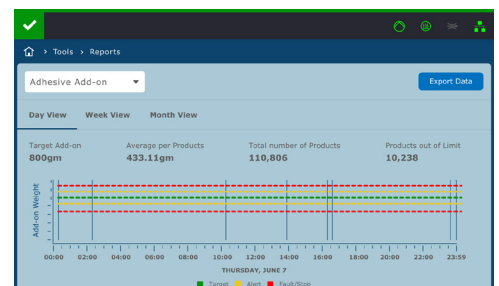


TrueFlow ATS Flow Meter

## 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<sup>1</sup>:** 0.025 cc = 25mg (0.055 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

<sup>1</sup> Assuming SG=1.0



Real Time Charting

## Pressure Management Options

- Mechanical adjust with gauge (local to melter)
- Mechanical adjust with digital readout (local to melter)
- Electronic pressure setting with digital readout (local to melter and remote)
- Electronic pressure run-up with digital readout (local to melter and remote)

## Pressure Management Specifications

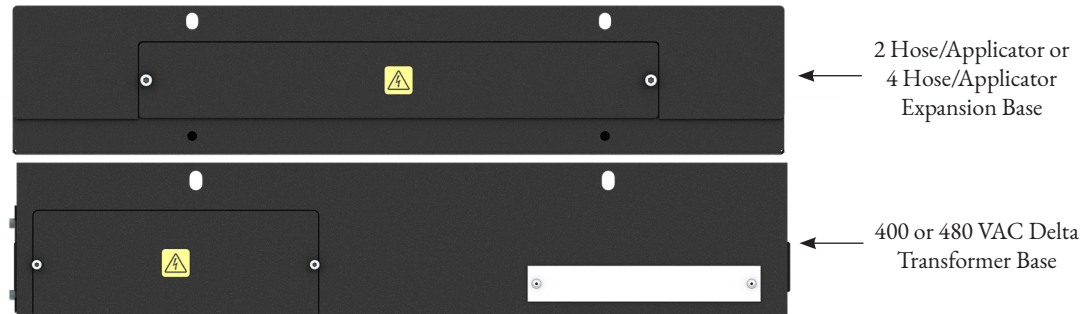
**Air pressure range:** 1 to 6.2 Bar (15 to 90 psi)  
**Maximum hydraulic pressure:** Up to 110 Bar (1600 psi) depending on pump



Pressure Gauge

## Bases

The ProBlue Flex 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

### 3 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	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

Tank / Melt-On-Demand Size	Base Dimensions
Tank Size - 4 KG	570 mm x 593 mm x 367 mm (22.5 in x 23.5 in x 14.5 in)
Tank Size - 7 KG	634 mm x 593 mm x 367 mm (25 in x 23.5 in x 14.5 in)
Tank Size - 10 KG	634 mm x 593 mm x 367 mm (25 in x 23.5 in x 14.5 in)
Melt-On-Demand ( 7 KG)	570 mm x 593 mm x 367 mm (22.5 in x 23.5 in x 14.5 in)
Melt-On-Demand (14 KG)	570 mm x 593 mm x 367 mm (22.5 in x 23.5 in x 14.5 in)

## ProBlue Flex 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 672mm (32 in x 25 in x 26.5 in)

## ProBlue Flex with Melt-on-Demand Technology

- Tankless with Smart Melt technology that virtually eliminates char
- Enables product standardization; 7 kg/hr and 14 kg/hr melt rate, built on same chassis as 4 kg tank

## 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)

## 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 Transformational Technology from Nordson

## Electrical Specifications

<b>Electrical Service</b>	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
<b>With optional transformer</b>	400 to 480 VAC 3Ø 50/60 Hz
<b>Tolerance</b>	+10% -15%

### Maximum Amperage (6 H/A Melter)

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

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

			Tank			Melt-On-Demand	
		Voltage	4 kg	7 kg	10 kg	7 kg/hr	14 kg/hr
Legacy Warm-Up	Δ	200-240, 1-phase	N/A	N/A	N/A	N/A	N/A
		200-240, 3-phase	28	29	29	29	29
	Y	400-230, 1-phase	N/A	N/A	N/A	N/A	N/A
		400-230, 3-phase	18	18	18	18	18
Fast Warm-Up	Δ	200-240, 1-phase	N/A	N/A	N/A	N/A	N/A
		200-240, 3-phase	34	34	34	34	34
	Y	400-230, 1-phase	N/A	N/A	N/A	N/A	N/A
		400-230, 3-phase	20	20	20	20	20

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

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