



Nordson OptiBond™ Solution

Produce higher-quality products faster, more efficiently
and at lower cost

Measure - Understand - Improve

OptiBond variation management solutions are supported by a broad range of products that enable Nordson systems to help any disposable hygiene manufacturer optimize material delivery and dispensing. Implementing a program of variation management helps disposable hygiene manufacturers.

- Improved production efficiency; claim acceptable product faster
- Decreased maintenance; both time and cost
- Enhanced product quality; reduce product defects
- Optimized material use; lower production costs and waste



OptiBond solutions can easily be added to existing production lines or included in new system installations.

The simple Nordson variation management methodology is to **Measure, Understand and Improve** material delivery and dispensing during all phases of production including demanding ramp up and ramp down as well as steady-state operation. The ability to accurately measure material delivery and dispensing in real-time helps manufacturers better understand their processes and identify opportunities for improvement. Process control is vastly improved by enabling sophisticated closed-loop control of material delivery.

OptiBond solutions address two primary causes of production inconsistency; machine direction and cross-web variation. Machine direction variation is reduced through accurate measurement, understanding and control of adhesive flow across the entire machine speed range. Cross-web variation is reduced through point-of-application flow dividing and metering. Nordson's OptiBond solutions include: melter-integrated or standalone control; intermediate or point-of-application system components; and passive or active metering.

Flow Monitoring and Control with Meters, Dividers or Remote Metering Stations

Intermediate system components offer a cost-effective entry into variation management. These meters and dividers enable monitoring and control of material flow to either single or multiple application points.

The TruFlow meter is a simple, positive-displacement meter that accurately measures actual material flow rates during all production phases. The versatile meter operates across a broad flow range as well as a wide spectrum of material viscosities and temperatures. TruFlow meters can be linked directly to a parent machine PLC if desired.

Like the TruFlow meter, the TruFlow divider is a passive metering system, splitting a single adhesive stream into as many as eight (8) individual flow-metered streams. The divider locates material metering closer to the point of application improving add-on accuracy and reducing waste. TruFlow dividers allow a single melter to supply material to multiple delivery points reducing equipment costs and system complexity.

TruFlow applicators are versatile applicators offering flow-metered material delivery in continuous or intermittent spray and slot applications. The passively-driven gear design simplifies system set-up and integration while optimizing adhesive use and improving pattern accuracy. The flow control means add-on precision is improved as is pattern stability

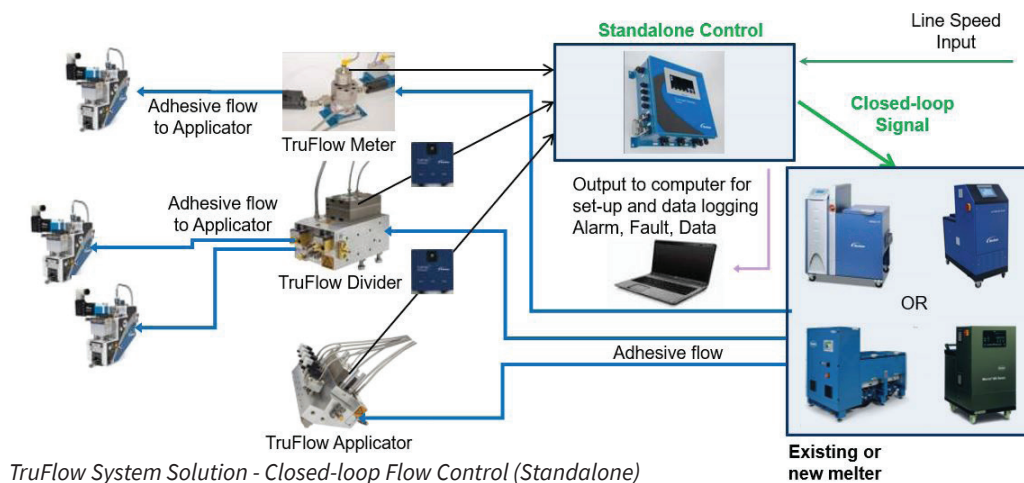
Melter-integrated or Standalone Flow Control

The TruFlow controllers monitor and provide feedback of dispensing application pressure along with optical sensor measurement of volume in order to maintain precise add-on weights.

VersaBlue® Plus and AltaBlue™ Plus melters offer optional melter-integrated flow monitoring and closed-loop flow control when used with TruFlow™ passive metering applicators, dividers or meters. Integrated closed-loop control continuously measures and compares material flow rate to the application's flow requirement, automatically adjusting material delivery in real-time to minimize the difference between the requirement and actual flow rates. Integrating flow control into melters simplifies installation and necessary equipment as well as provides ease-of-use through melter touch-screen interfaces. -

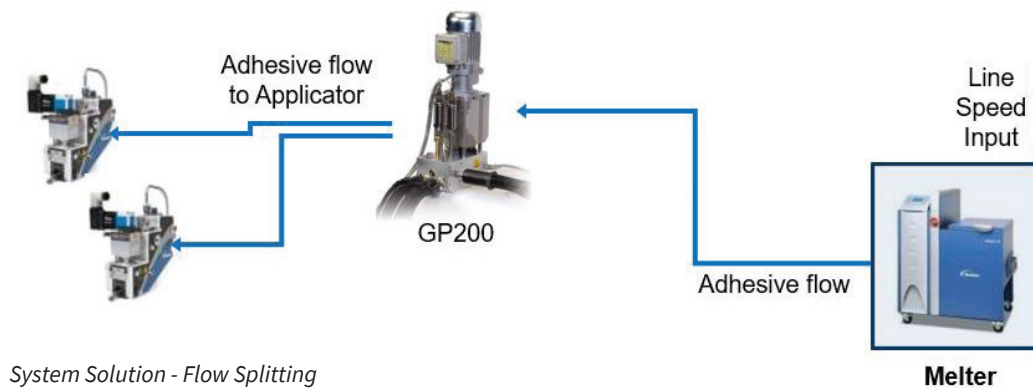
VersaBlue Plus melters introduce optional melter integrated flow monitoring and control for up to four (4) channels to the existing fullfeature set of the established VersaBlue melters. Additionally, VersaBlue Plus melters offer optional integrated closed-loop pattern control for up to eight (8) channels for intermittent dispensing. And, the module response monitoring option verifies correct adhesive placement for up to 32 channels. AltaBlue Plus melters with a large, integrated touch-screen interface enable pressure and flow monitoring and control. This integrated solution can measure and control material delivery and dispense rates in response to production rate changes.

Concert™ series standalone flow controllers also allows for monitoring and control of material flow during all phases of production, enabling this advanced functionality for existing melter installations. Concert flow controllers measure actual material delivery, compare it to the production requirement and continuously adjust melter pump output in real-time, vastly improving accuracy of material delivery especially during production start.



Flow Control with Remote Metering Stations

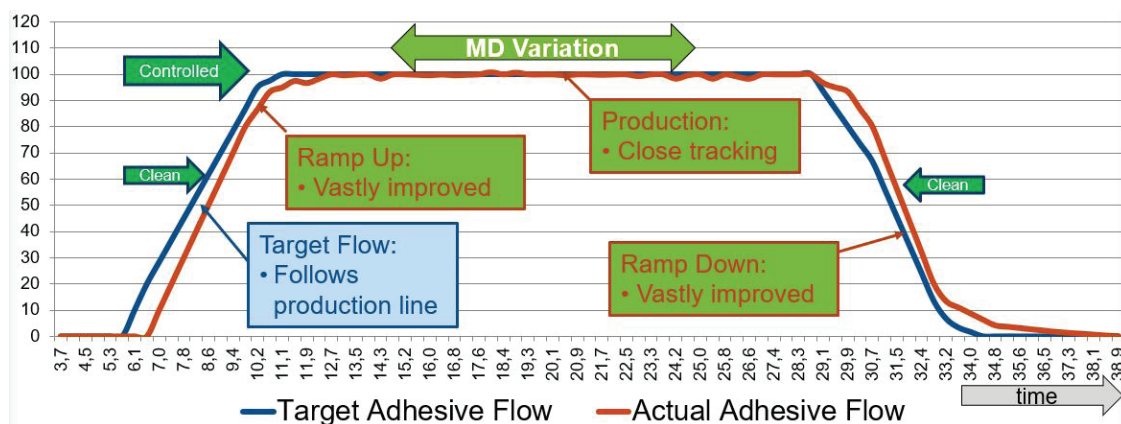
GP-200 remote metering stations use active metering to control pressure drops that can cause production challenges such as inconsistent add-on rates resulting in bleed-through and burn-through of thin or heat-sensitive substrates. Additionally, GP-200 stations can increase the number of delivery points for individual melters. GP-200 stations can also be linked together to further increase productivity and reduce equipment costs without adversely affecting add-on precision.



Point of Application Metering

Nordson offers both active and passive metering applicators for flow control at the point of application. With passive metering, the material flow moves the gears, delivering a consistent add-on rate to all modules. Active metering involves motors and motor drives that provide independent control for each of the modules, thereby increasing application flexibility. Both passive and active metering applicators can incorporate quick-exchange nozzle capability to further support production flexibility.

The strict application control provided by the active-metering of the Universal™ Slice applicators helps increase application flexibility and improve add-on rates, resulting in better production consistency and efficiency as well as product quality. Even at high speeds and intermittent operation, Universal Slice applicators optimize material use and maximize usable finished product. Not only does add-on rate precision reduce adhesive use, but it also supports the use of thinner, heat-sensitive substrates.



Closed-loop Flow Control Enabled (IMPROVE)



Worldwide Service and Support

Nordson helps protect your investment with exceptional people, programs and service to keep your equipment in peak operating condition. For your satisfaction, Nordson solutions are backed by a Package of Values® that includes:

- Locally-available service network
- Global service and distribution centers
- Repair and exchange programs

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

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