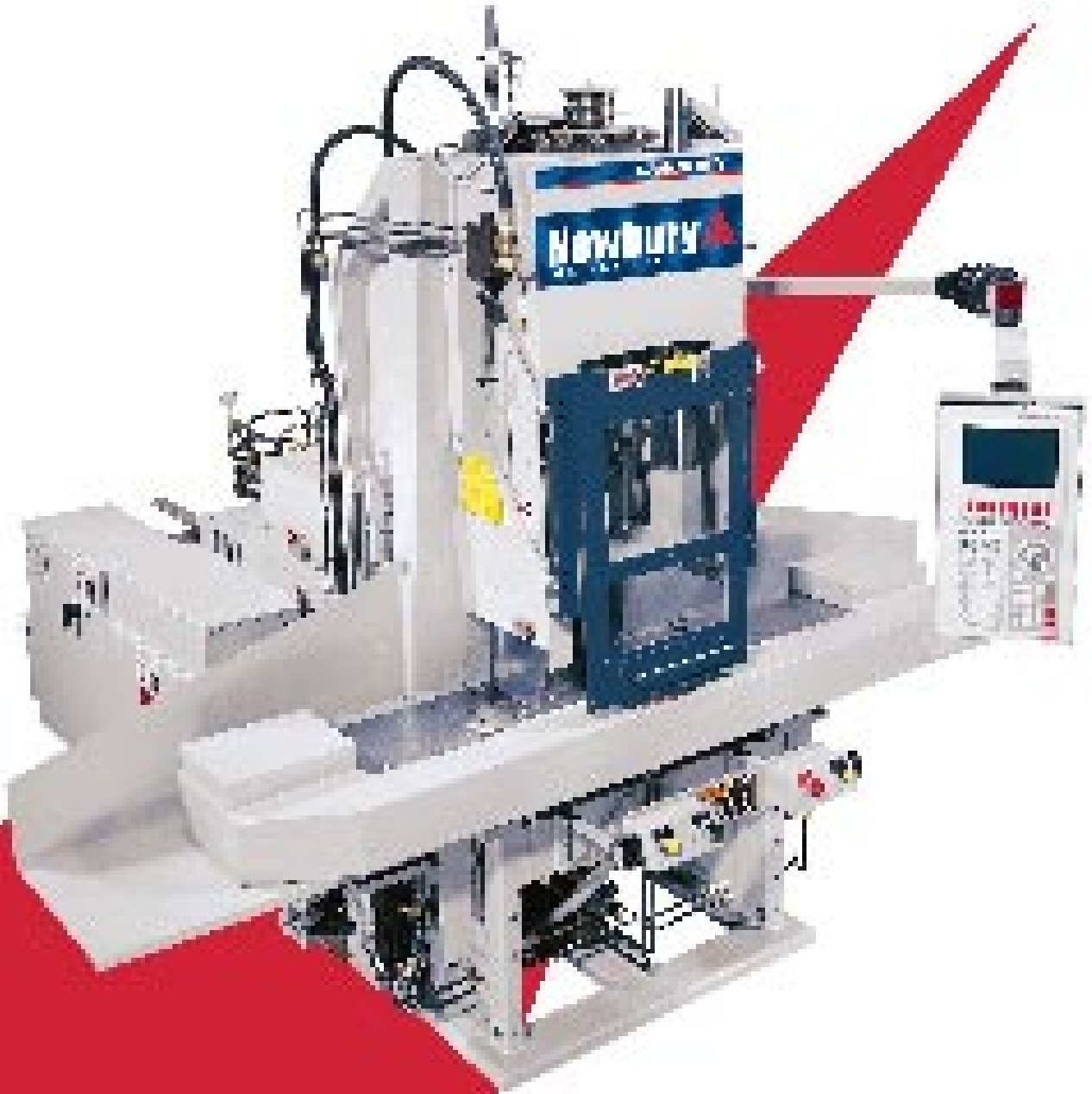


VANDORN™



30 to 400 tons

Newbury 
SERIES

VERSATILE TECHNOLOGY

Satisfying All of Your Insert-Molding Needs



There are more Newbury machine installations in U.S. molding plants than by any other vertical manufacturer.

Today's molders want machinery that makes quality parts consistently and quickly. Van Dorn Demag meets these needs with a complete line of injection molding machines for every application.

Van Dorn Demag offers a vertical product line with the Van Dorn Newbury Series – a respected industry expert for more than 40 years. The Newbury 30 to 400 Series offers a variety of vertical clamp configurations to meet nearly any insert-molding application. We've combined Newbury's vertical expertise with Van Dorn

Demag's global resources and in-depth capability to take vertical technology to the next level.

Vertical molders handle a variety of insert- and over-molding applications from simple wiring harnesses and cord sets to complex automotive assemblies, precision medical catheters and surgical tools, as well as delicate ceramic cores used in aerospace airfoil technology. We have machines to handle all of these applications. In addition, we support our customers from the lowest volume application to high-volume environments with optional equipment and automation.



A new rotary table design and state-of-the-art hydraulics appear on the 30-ton Newbury.

INJECTION UNIT

Maximize your operating time with a pivoting injection assembly with a long carriage stroke. The pivoting injection unit makes it easy to remove or change the screw and barrel. That means you eliminate the difficult task of pulling components from the front of the machine. The long carriage stroke is ideal for easy access to the nozzle for routine maintenance.

The twin-cylinder design of the injection unit minimizes the footprint, an advantage in today's productivity-focused environment. Containment of the four guide rod supports on the thrust housing ensures precision application of force. Low-lubrication bushings on the guide rods reduce your maintenance requirements. The screw and barrel are ion-nitrided to extend the lifetime of these critical front-end parts.

A range of injection unit sizes is available for maximum flexibility in configuring your vertical machine. Shot sizes from 1/2 ounce to 59 ounces are obtainable. Van Dorn Demag offers many special application screws should you have any unique processing requirements.

Precision position sensing of the injection unit is accomplished with linear transducer to ensure accurate and repeatable performance.

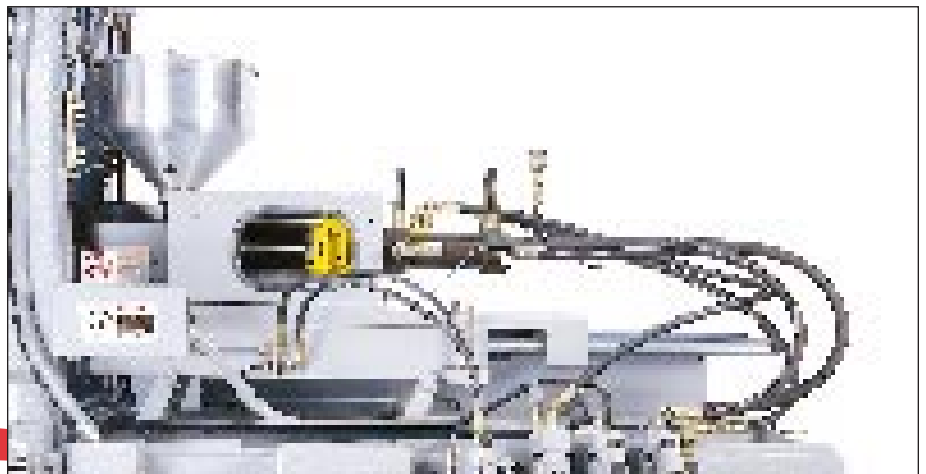
Adjustable center line is a standard feature on the Newbury machine. This is critical for a custom molder who needs to adapt quickly to different tools for just-in-time manufacturing projects.

State Temperature Control of the nozzle and barrel zones is state-of-the-art. This patented system sets barrel temperatures to quickly reach temperature setpoints. It saves energy by reducing overshooting of temperatures as it protects temperature-sensitive materials. In addition, State Temperature Control predicts the effects of thermal disturbances such as shear heat or adjacent barrel zone activity and responds quickly to maintain accurate temperatures. Your production benefits because material degradation is reduced, shot consistency is enhanced, and part quality is improved. Barrel high/low temperature alarms and thermocouple break alarms provide meaningful messages to the control as well as visual and audible alerts.

Standard features of the injection unit:

- High-torque, direct drive hydraulic screw motor
- Two-piece 1/2 inch radius nozzle
- Water-cooled feed-throat
- Digital screw tachometer
- Cold-screw start-up protection
- Automatic heater start
- Standby heat control
- Extended carriage stroke
- Pivoting injection for ease of maintenance

The adjustable center line allows greater flexibility for designing conventional and hot-runner molds.



CLAMP UNIT

The Newbury Series offers a proprietary mono-toggle clamp design for fast, accurate clamp closure to enhance cycle time.



Van Dorn Demag's vertical-clamp machines are designed to meet two key goals: to give you fast, repeatable performance and to ease your maintenance requirements.

The Newbury Series uses a mono-toggle clamp design to deliver speed and precision. To achieve fast cycles, a quick-response hydraulic cylinder actuates the linkage system, delivering greater speed than hydraulic clamping systems. The time trimmed from mold opening and closing increases productivity and, consequently, your profitability.

The mono-toggle applies clamping pressure at one point in the center of the platen. Pressure is then spread

evenly over the entire platen, giving you better part quality under high injection pressures. This also lets you run a wider range of mold sizes in a single model.

Mono-toggle clamps eliminate the need for holding pressure to maintain tonnage after clamp lock-up. Because of this, the clamp is energy efficient and highly repeatable and doesn't require accumulators or regen circuits to perform parallel functions.

The inherent simplicity of mono-toggle clamp design means fewer components, improved wear tolerance, higher reliability, less maintenance and easy accessibility. In its larger versions, the mono-toggle has a lower profile than other designs, without sacrificing accessibility to the clamp.

The mono-toggle vertical clamp is available in two different frame styles to meet the demands of distinct molding requirements.

The Four Tie-Bar Frame Maximizes Mold Space

For large parts, high cavity counts or maximum mold-stack height, the four tie-bar design gives you more productivity for your investment. The four tie-bar model comes standard with a single station that's perfect for parts with long cycle times. A shuttle-table configuration is available for speeding productivity. The four tie-bar machine is also ideal for utilizing hot runner molds with elevated injection center line heights.



C-frame clamps with rotary tables are preferred when automating an insert-molding operation.

The C-Frame Offers Versatility

The open C-frame gives you versatility to handle nearly any basic insert-molding application. Our one-piece, foundry-cast C-frame is durable and dependable. A standard shuttle-table configuration meets most molding needs. Molders who want multiple stations for auxiliary functions or who plan to automate their operations choose our C-frame with a rotary-table configuration.

You can have confidence in the clamp position using the Pathfinder Control's patented Digital Feed Forward technology. It predicts clamp position and automatically determines, with pinpoint accuracy, the location at which it needs to slow the clamp to safely reach the stop position, enhancing repeatability while maximizing cycle time. Low-pressure mold close and slow mold breakaway protect your tooling investment.

Standard ejector systems on the Newbury Series feature an adjustable knock-out stroke that can be set by an operator using the computer screen. Position sensing of the ejection unit is provided by a linear transducer.

Choose the proper frame for your application.

	FOUR TIE BAR	C-FRAME
OPTIONS	<ul style="list-style-type: none"> • single-station (standard) • shuttle-table (optional) • rotary-table not available 	<ul style="list-style-type: none"> • shuttle-table (standard) • rotary-table (optional) • single-station (optional)
BENEFITS	<ul style="list-style-type: none"> • wide platen area between tie bars • long clamp stroke • high mold-stack height • ideal for tools with loose cores or for inserts requiring total encapsulation or molds with slides and externally mounted cylinders 	<ul style="list-style-type: none"> • open-front for protruding or cumbersome inserts • rotary table option for multiple stations, auxiliary functions or automation
COMMON APPLICATIONS	<ul style="list-style-type: none"> • automotive seals, gaskets, housings • automotive coils, sensors and controls • automotive window and door components • ceramic cores • golf balls • filters • prototype tooling 	<ul style="list-style-type: none"> • wiring harnesses • cord sets (plugs, receptacles) • tool handles/soft-grip overmolding • medical components • electrical grommets • strain reliefs, grommets • test leads, probes • antennas • automotive housings and components



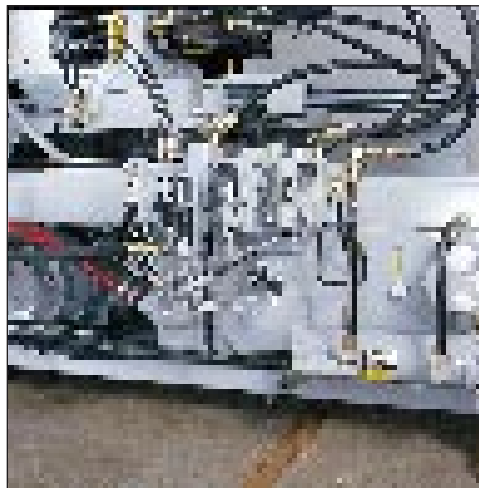
Four tie-bar frames are best-suited for large parts, high cavity counts or greater mold stack height. These machines are standard with light curtains (not shown).

HYDRAULIC SYSTEM

Hydraulics Designed for Simplicity

The standard hydraulic system on the Newbury Series gives you speed, accuracy and repeatability.

The hydraulic design uses fixed-volume pumps for energy conservation and easy maintenance. The main pump feeds a central manifold. This manifold incorporates one closed-loop proportional pressure control valve and one closed-loop proportional flow control valve to manage speed and pressure of primary machine functions. No additional proportional valves are required.



These hydraulics feature a simple design and the fittings required to minimize potential leak points.



24-volt DC solenoids – of plug-in construction – are used for consistent, accurate response.

Hydraulic components are protected by standard alarms and other measures. The ability to monitor the full-flow filtration is easily accomplished with a highly visible bypass indicator. The closed-loop oil-temperature control and oil-low level also have alarms. A dedicated second pump is used for accessories to provide flow and pressure control. This allows core and knockouts to function without causing variation in the all-important injection cycle.

Hydraulics have been designed to eliminate leakage. For this reason the hydraulic system uses SAE O-ring fittings at manifold connections. O-ring face-seal fittings are also used on all hose and tube connectors to ensure leak-free operation.



The accessible fixed-volume pump is quiet, durable and poses minimal maintenance challenges.

PATHFINDER CONTROLS

You can get the Newbury Series with the proprietary, industry-leading Pathfinder® family of controls. These controls are easily understood yet take an injection molding machine's performance to the next level. Each version provides a choice of capability and cost. For more information on the family of Pathfinder Controls, consult your Van Dorn Demag representative.



The Newbury E Series represents the next generation of the widely-used, 30-ton Newbury relay machines. Ideal for low-pressure PVC applications, the E Series gives you the versatility to handle a wide variety of basic insert molding applications at a cost-effective price.

GENERAL FEATURES

The Newbury Series also includes:

- Integrated control cabinet
- Ergonomic clamp-close push buttons
- Standard paint color is morning gray and midnight blue – optional colors are available
- Standard machine is wired for 230-3-60

Components may vary by model. On certain models fully programmable rotary tables are available. In photos, gates and guards have been removed to show details.

Since continuous improvement is Van Dorn Demag's policy, we reserve the right to change information without prior notice or obligation.

OPTIONS

The Newbury Series is available with a broad range of options:

- Enhanced semi-automatic cycling (light curtains are standard on rotary table configuration)
- Special application screws and barrels
- Configurable inputs and outputs
- Hard guarding package with robot interface
- Horizontal knockouts
- Power-operated front gate
- Skip station
- Thermoset kit
- Rigid PVC kit
- Closed-loop clamp tonnage control
- Core pull: choice of set and pull sequences
- Cut off based on cavity pressure

Additional pre-engineered options are available. Consult your Van Dorn Demag representative for information on these options and special application requirements.

MOLDER ACTION NETWORK

Supportive. Responsive. Dependable. Our commitment to realizing 100% customer satisfaction relies on these directives, giving you the highest level of after-sale service. That is why we invested in the strongest molder resource in the industry – the Molder Action Network.

The Molder Action Network links our customer support services to coordinate support, enhance delivery and improve uptime over the life of your machine.



Field Service

Choose either our telephone or e-mail troubleshooting service – whichever is more convenient for you. When necessary, our friendly, factory-trained Service Engineers provide fast response to requests for machine service or advice on machine maintenance and operation.



Customer Training

Complementing our World Headquarters in Strongsville, Ohio, satellite locations are conveniently located across the United States to provide molders with comprehensive training on all machinery and control systems, including hands-on experience in a demonstration lab. Training programs at your plant can also be arranged.



Replacement Parts

Van Dorn Demag maintains an extensive, computerized inventory of replacement parts to assure customers of quick delivery. All orders from stock are shipped within 24 hours. Simply call 1/800/872.9119 or visit our Web site for more information. Our industry leading Quick TrackSM provides the opportunity to check parts pricing and availability or order status with a simple phone call at 1/888/327.8730.



Process Solutions

The Processing Solutions Center is available to customers both before and after a sale. Whether running trials on a mold, machine run-off prior to delivery, or troubleshooting processes in the field, our Process Solutions Staff is ready and waiting to Deliver More for you.

A1577  ISO 9001
QS9000 TE-Supplement

Van Dorn Demag
Injection Molding Machine Series
Van Dorn 28–110 Cadence Series
Van Dorn 30–400 Newbury Vertical Series
Van Dorn 85–650 HT Series
Van Dorn 140–625 Integra Series
Van Dorn 500–880 Spectra Series
Van Dorn 1100–4400 Caliber Series



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