

SUCCESS THROUGH EFFICIENCY

Van Dorn EXTRA

28 - 220

DemagPlastics Group
VAN DORN

V A N D O R N E X T R A

THE SUCCESS STORY

Excellent Price to Performance Ratio

Productive, reliable, straightforward, favorably priced – a sound concept that has made the Van Dorn EXTRA a winner worldwide – synonymous with versatility and high efficiency for a wide spectrum of molded parts, in a clamping force range from 28 to 220 tons.

The Van Dorn EXTRA is a comprehensive performance package of field-proven standard components for user-friendly solutions: From the high-precision clamp and injection unit through the operator-friendly controller to its ergonomic design.

The concept: Success through flexibility and efficiency

The success of the Van Dorn EXTRA is a result of incorporating productive injection molding machine technologies. Such technologies include an electronically controlled variable-delivery pump (DFEE), compact dynamic clamping unit, easy-to-maintain injection unit, and the proven Ergocontrol system which you can extend with a range of add-on packages and peripheral components.

The details: Success through ergonomics

Ergonomic design down to the last detail – the trademark of the Van Dorn machine family – is a standard feature of the Van Dorn EXTRA. Readily accessible components, straightforward setup parameters, generous distance between the tie bars for large and heavy molds, as well as a user-friendly operator terminal are examples of the many smart details that combine to make operation easier and more efficient. Whether the requirement is prototyping or proving parts for smaller or large production runs, the Van Dorn EXTRA is the smart choice.

Succeed  with smart solutions.



Key benefits of the Van Dorn EXTRA at a glance

- **Readily accessible injection unit;** quick-connect coupling for the screw, choice of three screw diameters
- **Compact footprint**
- **Parallel ejector movement**
- **Energy-saving hydraulic system** with variable-delivery pump (DFEE)
- **Robust machine base**
- **User-friendly Ergocontrol** available with predefined extension packages
- **Time-saving and economical automatic start-up/shut-down system**
- **Configurable with peripheral interfaces**



SUCCESS THROUGH SOUND CONCEPTS

Proven Technology for Productivity

From the clamp cylinder to the machine bed construction to the quick-connect screw coupling, we have incorporated field-proven components into the Van Dorn EXTRA. The result is a machine configuration that offers outstanding economic efficiencies.

Injection unit: open and ergonomic

The open, readily accessible design of the injection unit is a prominent feature of the Van Dorn EXTRA. The quick-connect screw coupling permits convenient and fast screw changes, simplifies the coupling-up of the injection unit, and facilitates the cleaning of the non-return valve and screw.

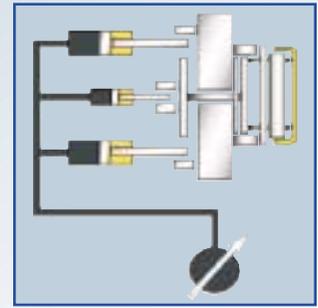
Clamping unit: compact and fast

The clamping unit parameters are fully programmable and it provides ample space for large molds despite its compact footprint. Integrated in the end platen of the straight hydraulic clamping unit (up to 120 tons), there are two clamping cylinders (A) and a flow multiplier (B). This enables the machine to perform fast movements even with low flow rates thanks to the variable delivery pump (C).

The EXTRA models 140 tons and the above, use the powerful kinematics of the 5-point double toggle to ensure short locking times and high locking forces.

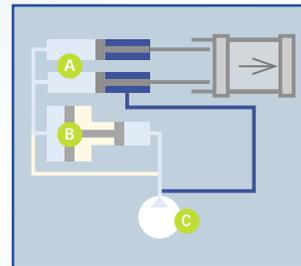
Hydraulics: economical and dynamic

The hydraulic system of the Van Dorn EXTRA is powered by an electronically controlled DFEE pump. Any desired pressure-flow characteristic can be precisely set. The electronic control unit is installed directly on the proportional valve of the pump to be readily accessible.

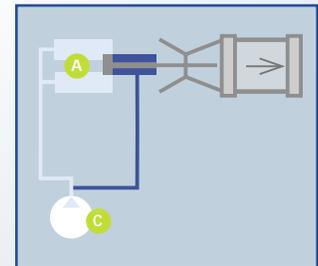


All Van Dorn EXTRAs feature an ejector capable of extending and retracting in parallel with the opening of the mold so you can eject the molded part before the mold "open" position is reached. Pressure and speed are manually adjustable. This saves cycle time and substantially increases part output.

The compact footprint of the clamping unit with a highly integrated end platen keeps hose connections and sealing points to a minimum.



Up to 120 tons



140 tons and above

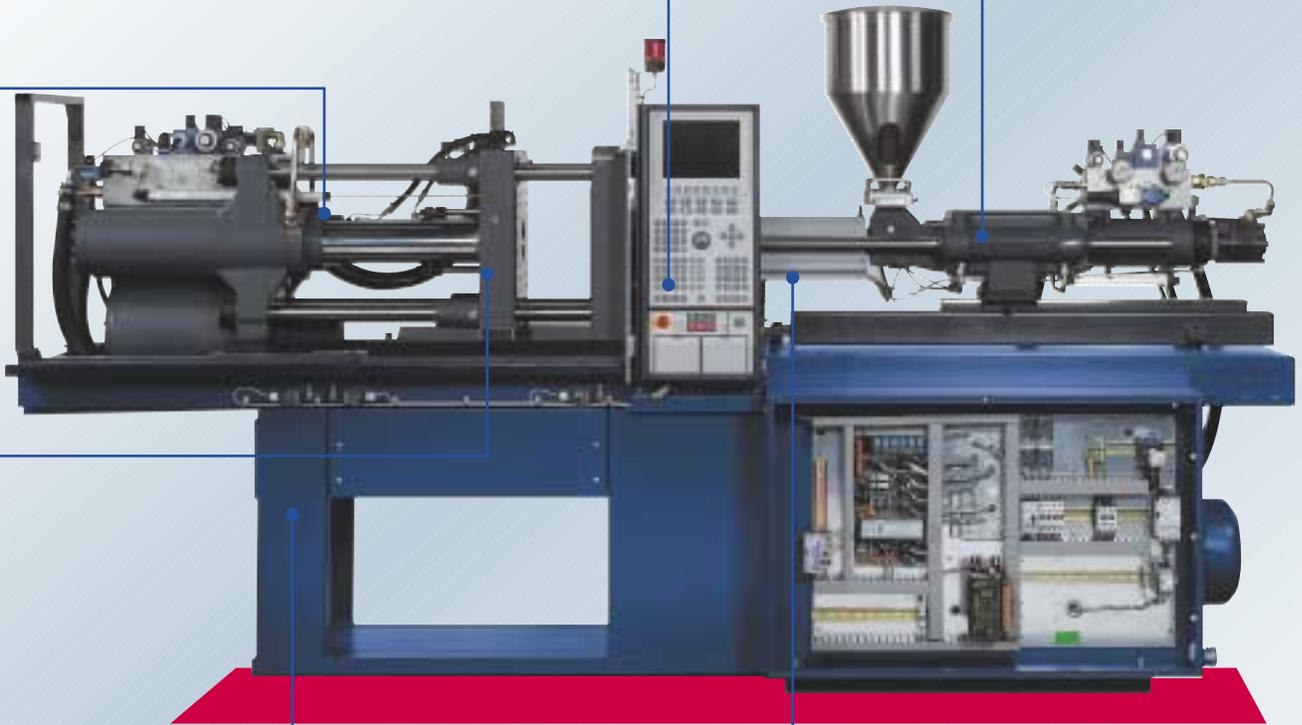
The Van Dorn hydraulic system with its DFEE pump ensures low energy consumption, fast, harmonic movements, dynamic pressure and flow control, and high repeatability.

The Van Dorn EXTRA 140 tons and above is a 5-point double toggle



The Ergocontrol operator terminal with programmable back pressure is a standard feature.

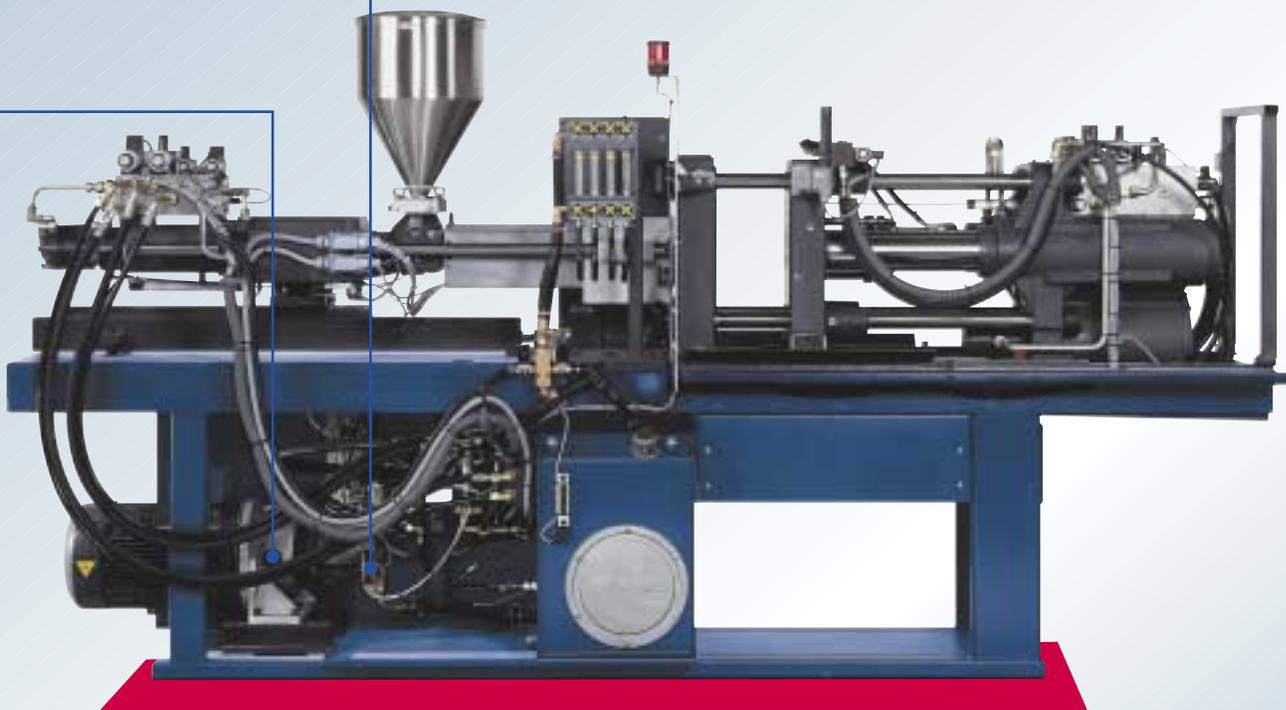
The injection unit features unrestricted access and easy maintenance of the screw and barrel, nozzle, hydraulic motor, and hydraulic power pack. Users have a choice of three screw diameters for optimum melt quality.



Convenient parts handling and integration of peripheral components are the result of a wide part drop area chute which is open on three sides.

Control electronics and valves operate in perfect harmony, which eliminates the need for complex tuning of the electronics.

The screw produces a homogeneous, uniform melt with excellent color disbursement.



SUCCESS IN DETAIL

Modules that Enhance your Flexibility

User-friendly navigation, easy integration of peripheral components, 100 percent quality control – the modular Ergocontrol includes a host of standard and optional features that provide the degree of flexibility that you need.

Ergocontrol – pinpoint control and functionality

The heart of the Van Dorn EXTRA is the Ergocontrol operator terminal. Function keys are organized conveniently and logically to assist the operator with setup of the machine. The central shuttle wheel permits effortless navigation through the menus and graphics. The disk drive enables software, machine and quality data to be uploaded, downloaded or printed out on the optional integrated printer. An optional interface to a master computer permits the machine to be tied back into the higher level production structure.

Start-up and shut-down programs for time-saving operation

Another feature that makes operation easier is the start-up/shut-down program which allows machine functions to be programmed with ease and speed.

Oil preheating, barrel cylinder and mold temperature control as well as the plug connector combination can be individually programmed to the minute in the start-up program. This reduces the time needed to start up the machine for production. Shut-down can also be automatic: A shut-down matrix enables you to define when and under what conditions the machine operates. For example a user can define when the pump or the mold heating circuit are to be shut down.



Ergonomics in detail:
The Ergocontrol terminal can pivot for convenient access to the injection unit.



Clamping unit	Distance between tie bars in./mm	Injection units	Pump Capacity kW
28 tons	11 x 11 280 x 280	80	5.5
40 tons	11 x 11 280 x 280	80/115	7.5
55 tons	14 x 14 355 x 355	200/310	11.0
90 tons	15.7 x 15.7 400 x 400	310/430	15.0
110 tons	15.7 x 15.7 400 x 400	310/430	18.5
120 tons	18.5 x 18.5 470 x 470	430/600	18.5
140 tons	18.7 x 18.7 475 x 475	430/600	18.5
165 tons	20.4 x 20.4 520 x 520	430/600	22.0
220 tons	22.8 x 22.8 580 x 580	600/840	30.0



Sprue picker



Part diverter



Colibri robot

Peripherals – precise automation

The Van Dorn EXTRA is adaptable to a wide variety of automation. These include high-speed robots for removal of parts and placement of inserts, or an integrated sprue picker. The sprue picker is integrated into the control system and machine enclosure (housing a sprue grinder, where needed), and conveyors to deliver parts to the diverter which separates accepted parts, parts to be tested, and rejects.

Upgrade packages for quality and flexibility

A variety of standard packages are available to upgrade your Van Dorn EXTRA at reasonable costs for higher quality levels and greater versatility.

- **Quality package** for higher molded part quality and quality control. This package consists of the following options:
 - Integrated printer
 - Cut-off based on hydraulic pressure
 - Closed loop injection speed
 - Process statistics
- **Flexibility package A** for greater versatility includes the following options:
 - Auxiliary outlet package
 - Selectable digital two inputs and two outputs for peripheral devices
 - Air valve 1 stage on stationary platen
 - Interface for second nozzle heating band
- **Flexibility package B** provides an additional single-core pull in addition to the Flexibility package A features

MOLDER ACTION NETWORK

Our commitment to 100 percent customer satisfaction is part of the Van Dorn experience. That is why we created the Molder Action Network – total support with one call. Contact us at (866) 491-1045 or visit www.molderactionnetwork.com.



REPLACEMENT PARTS

Van Dorn maintains an extensive, computerized inventory of replacement parts to assure customers of quick delivery.



TECHNICAL SERVICE

The Molder Action Network's Technical Service Department is standing by with a wide range of services – installation and start-up, troubleshooting, field service and preventive maintenance.



TRAINING

We offer classes at three different customer training centers located in Strongsville, Ohio; Greenville, South Carolina; and Roselle, Illinois. Training, tailored to meet your needs, can also be arranged at your facility.



PROCESS SOLUTIONS CENTER

This center, available to customers before and after a sale, is a state-of-the-art lab facility for mold trials, machine run-offs prior to delivery or troubleshooting processes in the field.

ENERGY SAVINGS

Sky-rocketing energy costs have changed the economics of the injection molding business. The Molder Action Network can help you cut your power bills down to size.

ONLINE STORE

Order parts from our new online store where convenience and ease are our main priority. We can accept payment via credit cards or purchase orders.

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