Dart Controls is the exclusive provider of Digital DC drives to the market. The Dart MicroDrive is a microprocessor-based closed loop DC SCR drive offering an integrated, programmable digital display.

Originally developed for the conveyor pizza oven, MicroDrives have found broad application across many industries. Of particular value to the OEM designer/plant operator is the integrated drive, display, and logic controller functionality all in one unit.

The MicroDrive comes in two styles depending on the application - the MD Series (for continuous applications) and the MD Plus Series (for start/stop or applications requiring rapid drive response time).

The programmable display makes machine operation for the end user easier, providing drive speed information in meaningful engineering units (GPM, FPM, MM:SS, % of Master, etc.)

Both the MD and the MD Plus Series come in panel mount and stand alone enclosed versions. Each may be configured in three modes - Rate, Time and Follower. Follower mode allows for two or more motors to operate at speeds in proportion to each other - a common need in blending, batch and synchronized material feed and handling applications. Many times the logic controller functionality built into the MicroDrive can eliminate the need for a PLC and its custom programming.

The MD Plus offers the additional benefit of a velocity loop PID control algorithm, and options for 4-20mA process signal follower and industrial protocol serial communication. Development will continue on the MD Plus to offer additional serial communication protocols, additional program management tools and a Graphic User Interface (GUI) for both configuration and control.

The Dart MicroDrive is a prime example of how a customer need evolved into a successful, innovative drive product.
- Dual Voltage 120/240 VAC, 50/60Hz
- Full HP rated - no auxiliary heat sink required
- 85-250VAC line voltage operating range
- Closed loop - ± 0.1 % regulation*
- Encoder required - See Dart PU Series
- Barrier terminal strip - optional plug terminal strip
- Full wave bridge supply
- Configurable Minimum & Maximum speed
- Configurable Linear Acceleration and Deceleration
- Programmable display units
- Non-volatile memory retains custom programming
- Program lockout safety feature
- Custom user program memory storage & restore
- -10° to +45°C ambient temperature
- 100:1 speed range
- Overload capacity: 200% for one minute
- Transient voltage protection
- Configurable alarms with Form C relay output
- Inhibit circuit—permits low power start & stop
- Suitable for wash down applications

* Sensor PPR/application dependent

<table>
<thead>
<tr>
<th>Model</th>
<th>Width</th>
<th>Length</th>
<th>Depth</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD10P</td>
<td>3.62 in [9.19 cm]</td>
<td>1.66 in [4.21 cm]</td>
<td>4.63 in [11.75 cm]</td>
<td>1.32 lb [0.60 kg]</td>
</tr>
<tr>
<td>MD40P¹</td>
<td>3.62 in [9.19 cm]</td>
<td>3.50 in [8.88 cm]</td>
<td>4.63 in [11.75 cm]</td>
<td>2.17 lb [0.98 kg]</td>
</tr>
<tr>
<td>MD3E/ MD50P²</td>
<td>5.13 in [13.03 cm]</td>
<td>7.40 in [18.80 cm]</td>
<td>3.90 in [9.91 cm]</td>
<td>2.19 lb [0.99 kg]</td>
</tr>
</tbody>
</table>

1 - Front bezel is 4.54 x 2.29 in.  2 - Front bezel is 4.54 x 4.18 in.