The DS-eVUE combines full process control with affordability. This mid-level system is engineered for controlling smaller lines with one or two extruders and offers the features and flexibility of advanced systems in a value-added, compact package. Processors can take advantage of features such as trending and recipe storage without incurring costs for additional functions not required for their processes.
SYSTEM ARCHITECTURE
The DS-eVUE system architecture is divided into two basic parts – computer/HMI, and process controller.

COMPUTER/HMI
The integrated computer/HMI contains Windows®-based operating software, SCADA (System Control and Data Acquisition) foundation software, and custom applications software. The HMI features an integral 15-inch (380mm) high-resolution color LCD with touch-screen and functions as the main operator interface for controlling drives, pressures, and temperatures. The operator can implement control functions, make set-point changes, monitor line status, alarms and events, focus on specific process areas, create and download recipes, and conduct supervisory functions such as trending and reporting.

TEMPERATURE CONTROL
Standard temperature control is maintained by the PLC control utilizing Davis-Standard’s advanced dual thermocouple algorithm. All temperature zone information is entered and displayed through the HMI.

PROCESS CONTROLLER
The process controller (PLC) is selected according to application and is based on either a Siemens or Allen-Bradley PLC hardware system. It is supplied with an Ethernet port to allow for easy data extraction of line parameters to a host data collection system with options for remote view notes and web browsing capabilities. PLC components include an industrial input and output rack/rail with power supply, a CPU module, analog input and output modules, binary input and output modules, and modem for remote diagnostics and trouble-shooting. Davis-Standard supplies a customized process control program for various applications in standard PLC language.

SOFTWARE ADVANTAGES
The DS-eVUE is powered by a Windows® embedded operating system with an anti-virus program, zip program, and PLC interface program as needed. Run-Time SCADA software package. Davis-Standard offers a customized application program for controlling and monitoring the extrusion process.

All DS-eVUE systems include, or are available with, the following features and functions:

- Main menu
- Multi-level programmable security access to protect critical set-up functions and limit access to selected control functions
- Operator screen with shift/product/run data entry
- Extrusion temperature control and monitoring
- Set-points and other numeric data entered on the touch-screen via a pop-up keypad
- Ability to manipulate heat zone temperature set-points with single data entry
- Extrusion pressure monitoring, calibration, and set up
- Extrusion pressure control of screw speed, based upon melt pump suction press set point and measured value
- Line overview screen with a summary of key process data
- Screens for extruder(s), die(s), and downstream equipment
- Line and drive(s) set/monitor — drive start/stop, machine speed, drive percent load, drive mode select, drive status monitor
- Recipe creation, storage, down-loading, editing, snapshot (captures current set-points)
- System alarm and event log — 60 days
- Historical trending of predefined groups — 60 days
- Electronic status reports
- Help screens for set-up, maintenance, and trouble-shooting
- Provision for system networking via Ethernet LAN; DS-eVUE process data is available over the LAN
- Optional communication interface to a single intelligent device (Davis-Standard has an extensive list of tested and proven device drivers from which to choose.)
- Optional language selector
- Electronic signatures and For 21 Part11 ready

<table>
<thead>
<tr>
<th>COMPUTER/HMI</th>
<th>PLC</th>
<th>SOFTWARE</th>
<th>DRIVE OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 15-inch wide screen 16:9</td>
<td>• Siemens Series S7-300</td>
<td>• OS: Windows® embedded</td>
<td>• Independent: each drive is controlled independently of all other system drives</td>
</tr>
<tr>
<td>• Solid state hard drive</td>
<td>• Allen-Bradley ControlLogix</td>
<td>• SCADA: Run-Time</td>
<td>• Coordinated: drive Start/Stop is controlled independently</td>
</tr>
<tr>
<td>• LAN ports</td>
<td></td>
<td></td>
<td>• Speed control depends on the drive’s function and may follow the master reference, downstream drive, or melt pump if provided</td>
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<tr>
<td>• USB ports</td>
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<tr>
<td>TEMPERATURE CONTROL</td>
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<tr>
<td>• PLC – dual or single T/C</td>
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<tr>
<td>• Single T/C (Autotune option)</td>
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