

Pyramid Design Improvements

Clamp:

- 1) The clamp is a straight hydraulic clamp, eliminating the need for toggles or wedges and any lubrication on the clamp. A hydraulic regeneration circuit, along with a 15 GPM pump, allows the clamp open and close speed to remain as quick as other designs.
- 2) The clamp cylinder is a standard purchased part unlike the Autojector cylinder with its special head design.
- 3) The upper mold carrier does not travel inside the main c-frames, allowing for mold cooling or heating lines to exit the tool from any side.
- 4) Solid steel C-frames, not cast, have a higher yield point and better fatigue characteristics.

Inject Unit:

- 1) The screw coupling system eliminates the coupling pin and snap rings used by Autojectors and Newbury.
- 2) The nozzle thermocouple is the same design as the barrel rather than the probe design used by Autojectors and Newbury which can be difficult to replace.
- 3) Barrel thermocouples are accessed from the top of the barrel, through the heat shield, rather than under it where people can get burned or shocked while servicing.
- 4) The barrel end cap is a bolt on design rather than a threaded nozzle that requires special tools to remove.
- 5) Hydraulic actuators on the inject unit are standard parts rather than special castings that require OEM rebuild kits.
- 6) Greaseless bushings and wear plates are used on the injection unit and rotary table, eliminating the need for lubrication in these areas.
- 7) The high temperature wiring on the barrel uses a quick disconnect system so the entire barrel can be removed from the unit without unhooking several wires. This unit drops forward and up out of the machine from above.

Electrical:

- 1) Standard Allen Bradley components, used in place of the proprietary controls used by most competitors, allows for replacement part procurement from any Allen Bradley distributor.
- 2) Programming is done with ladder logic, a standard programming language that can be read and understood by other contract programmers who have the readily available Allen Bradley software.
- 3) External wiring utilizes off-the-shelf wiring harnesses. This allows all wiring to have part numbers and be a purchased item rather than custom ran by the OEM.

General:

- 1) The shuttle table, upper mold carrier, and guide rods are nickel plated to prevent corrosion.
- 2) All guarding is stainless steel as well as the purge chute.
- 3) The electrical cabinet is mounted low to provide access to the injection unit from three sides.
- 4) The operator interface is located on a multi-positional, pivoting swing arm assembly that allows access to the interface from the front of the machine as well as from the injection unit. This can allow customers to manually pour purging compound into the hopper while actuating the extrude.
- 5) Manufacturer's part numbers are provided for all purchased items so that customers may get replacement parts from local distributors. This is particularly useful for customers in Mexico that may need to wait on customs for shipments from the United States.
- 6) Parker hose assembly part numbers are provided on the schematic.
- 7) Fork holes incorporated in machine base are designed for riggers and set up people to easily handle machines.

Added Benefits:

- 1) Manual and schematics available on CD at no additional charge.
- 2) Voltages can be 208, 230 or 460 at no additional charge.
- 3) Customer provided mold mounting patterns added at no additional charge.
- 4) Screens can be customized to users requests.
- 5) Multiple levels of security are included and can be tailored to the customers requirements.
- 6) Ethernet or Allen Bradley data highway available