

VACUUM SYSTEM

Eliminates Porosity

In cold chamber die casting, the alloy is forced into the mold cavity with such force and velocity that small quantities of air and gases are often trapped in the casting.

If the casting is structural, heat treated, or porosity sensitive, air or gas inclusions usually result in rejection. This impacts directly on the die caster's bottom line. In today's competitive market, this preventable problem is no longer acceptable.

The solution is the Castool Vacuum System.

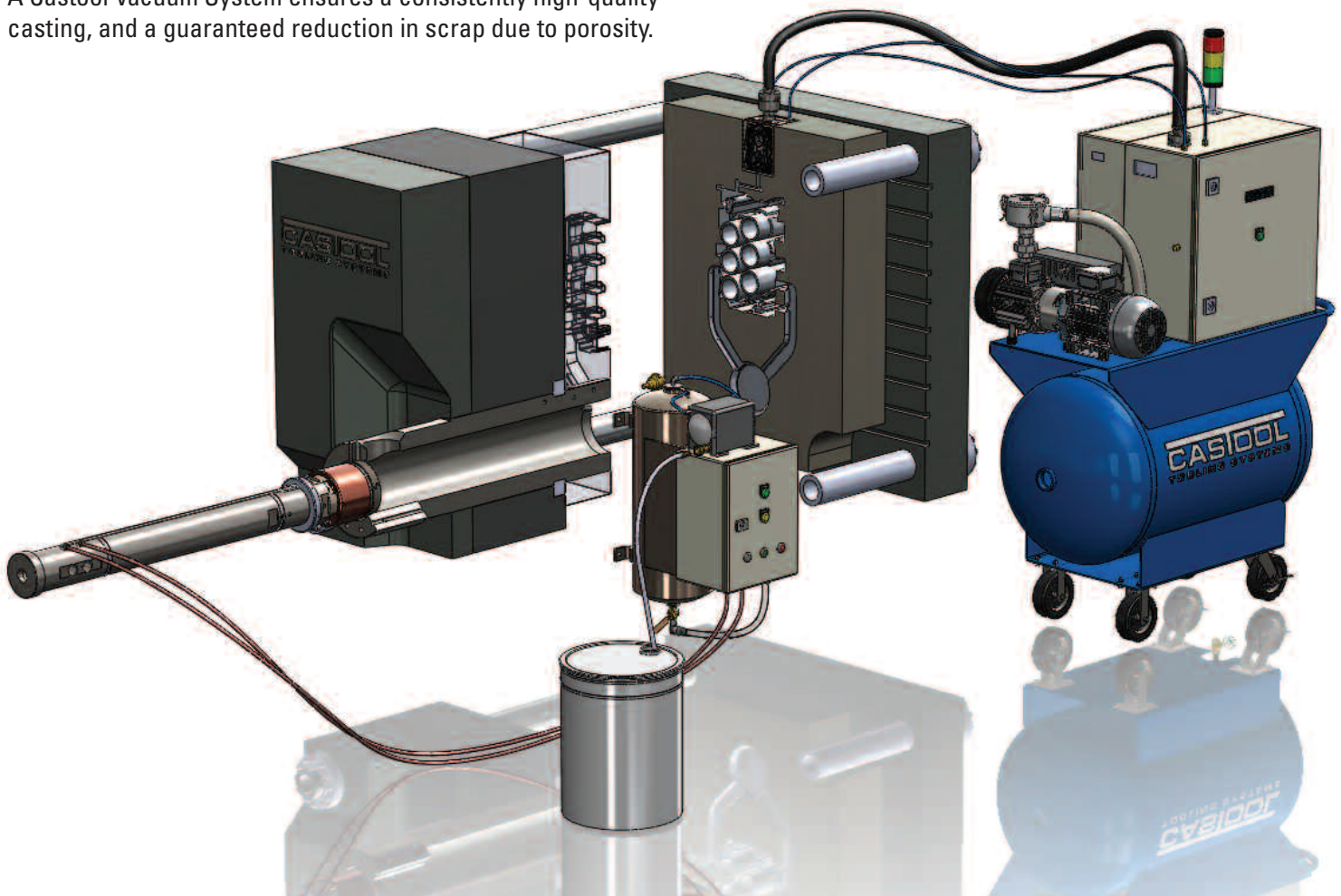
Before the shot occurs, a vacuum is drawn in both the shot sleeve and the mold cavity. The suction continues until the injection cycle has been completed. This reduces the chance of air and gas being trapped in the casting. The vacuum valve closes immediately by liquid metal pressure when the mold is filled.

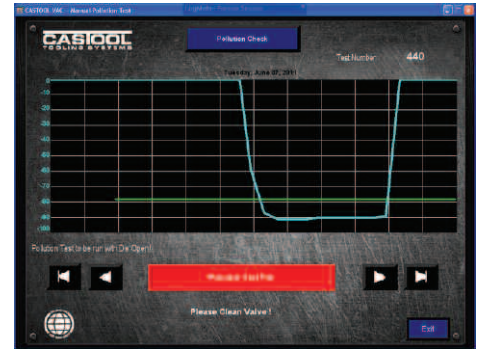
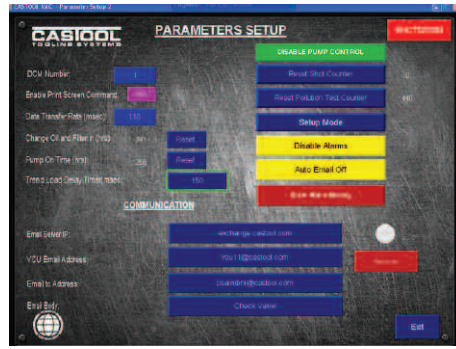
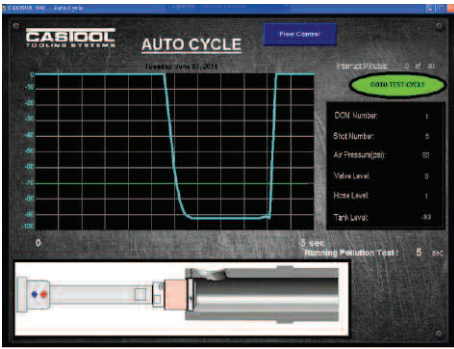
A Castool Vacuum System ensures a consistently high-quality casting, and a guaranteed reduction in scrap due to porosity.

Benefits to the Die Caster

- Ability to cast thin sectioned structural parts
- Reduces rate of rejection
- Ensures good surface finish for plating or powder coating
- Reduces shot pressure
- Increases mold life
- Increases density of product
- Used for aluminum, magnesium, zinc, or brass
- Easy to add to any cold chamber die casting process
- Maintenance is minimal

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Valves

These valves are designed to get the highest amount of vacuum until the very end of injection. They close within milliseconds after the flow of metal reaches the closing piston. They are recommended for extra high quality castings.

- HiVAC 100 - 80mm² high speed flow actuated valve
- HiVAC 150 - 120mm² high speed flow actuated valve

Controllers

VCS-UNIT250 High capacity Vacuum Unit with Control System

The control system uses Ethernet based forward communication and operates on an optional 480 or 600 volt power supply. Vacuum is consistently maintained with an oil sealed rotary vane Busch pump rated at 1412 cu.ft/hr (40 cu.m./hr). Standard tank capacity is 60 Imp. gal. (227.125L). Tank upgrades are available for larger volume demand. Floor space dimensions for the standard VCS-UNIT250 system are 42" x 27" x 75" (106.68cm x 68.58cm x 190.50cm).

Cost Effective

The Castool Vacuum System is a profitable upgrade for your die casting process. Your present cost of rejected product due to porosity is known, and the time needed to amortize the investment in a Castool Vacuum System is easily calculated. Additional savings are realized due to the increased mold life, and DCM life, that results from reduced shot pressure.

Contact Castool now for a quotation.

