## CMI Novacast PG Series Electromagnetic Liquid Metal Pumps

The CMI Novacast PG series electromagnetic pumps are used for transferring molten aluminum or zinc in a controlled and non-turbulent manner for low pressure filling of sand, permanent or semi-permanent molds. The pumps can also be used as a metering device for filling of molds via gravity. CMI Novacast electromagnetic pumps last longer in the furnace, cost less to maintain and operate, and deliver more consistent, precise, and better performance than any other pumps in their class.

As well as manufacturing new pumps from start to finish, CMI Novacast performs pump remanufacturing at its facility in Des Plaines, Illinois.

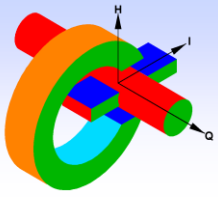
Both PG series pumps are suitable for most aluminum alloys at temperatures up to 800° C (1472° F). The pumps are immersed in molten metal so that only the top 10mm (3/8") of the top ceramic is above the metal surface. This allows the pump to draw only the cleanest metal from below the surface.

Unlike tilt pouring or automatic ladling, CMI Novacast PG pumps draw the metal from below the surface. This allows for only the cleanest metal, free from dross and other materials floating on the top of the melt. As an added feature, ceramic filters are on the bottom of the pumps to further clean the metal before it enters the pump. This allows the pumps to provide the cleanest possible metal to the molds.

The metal is then delivered to the mold through heated launders. The metal entering the mold is the same temperature as in the furnace. There is no heat loss as compared to ladling. The furnace does not have to be set at a higher temperature to compensate for heat loss during ladling.

The model PG450 pump is the "workhorse" pump being used in many different applications, most of which are low pressure. In low pressure precision sand, the pump provides very quick and precise control of mold filling. Because of its high degree of control and extremely fast response, it can help the low pressure sand foundry to produce castings with a very good surface finish, with minimal penetration and burn-in. Conventional low pressure sand foundries produce about 30 castings per hour, while foundries using the rollover scheme may produce castings at the rate of 70 to 90 per hour, even when the cast weight is 50 kg (110 lbs.) per mold.

For all other metals, contact CMI Novacast.

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## CMI Novacast PG450 Electromagnetic Liquid Metal Pump

The PG450 is the larger of the two electromagnetic liquid metal pumps. CMI Novacast's engineers can integrate this high performance pump to fit your foundry system needs.

**General Specifications for Aluminum**

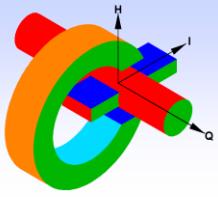
Head Pressure - Sustained: 87 in., 2.2 m
Head Pressure - Peak: 98 in., 2.5 m
Maximum Flow Rate: 22 lbs./sec, 10 kg./sec
Minimum Well Size: 24 x 20 x 22 in. deep, .6 x .5 x .56 m deep
Power Requirements: 0-14 kW, 380/480 Volts , 50/60 Hz
Furnace Type: Gas or Electric
Cooling Air: System supplied by CMI Novacast

## CMI Novacast PG300 Electromagnetic Liquid Metal Pump

The PG300 is the smaller, compact pump model designed for gravity filling of molds, or to fit a smaller furnace-crucible. Typical molding rates are 180 per hour with poured weights averaging 10-41 kg (22-90 lbs.) per mold, or approximately 2100 kg per hour (4700 lbs. per hour).

**General Specifications for Aluminum**

Head Pressure - Sustained: 40 in., 1.0 m
Head Pressure - Peak: 48 in., 1.2 m
Maximum Flow Rate: 8.5 lbs./sec, 3.9 kg./sec
Minimum Well Size: 19 x 16 x 20 in. deep, .48 x .4 x .5 m deep
Power Requirements: 0-9 kW, 380/480 Volts , 50/60 Hz
Furnace Type: Gas or Electric
Cooling Air: System supplied by CMI Novacast

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