



Permold Vs. Sand Casting

Our Permanent Mold Process offers advantages over traditional sand casting...

TIGHTER DIMENSIONAL CONTROL: Permold boasts closer casting tolerances on several design fronts. Refer to our Quick Design Guide for details.

LOWER PIECE PRICES: Since our molds don't have to be shaken or broken, our cycle times are much shorter. This usually translates into lower casting costs for our customers.

LESS MACHINING: Machining is not cheap. And more often than not, sand castings will require more secondary operations like machining to get you to final net shape. However, through Permold's tighter dimensional control, costly operations like facing, milling, and lathe-work can often be eliminated. Try our molded inserts to say goodbye to the headaches of drilling and tapping holes.

SUPERIOR MECHANICAL PROPERTIES: Aluminum chills much faster when it comes in contact with iron or steel than with sand. Therefore, Permold leads to a casting with a much finer grain structure which directly translates into higher strength. In fact, comparing alloy to alloy, Permold castings will be approximately 10% stronger than their sand counterparts.

FINER SURFACE FINISH: Besides the obvious problem of sand crumbling, hardened sand has a much coarser texture than that of smooth steel. This fact accompanied with Gupta Permold's advanced coating technology leads to a casting with a much finer surface finish. In fact, our customers often use our as-cast surface for O-ring grooves. In any case, if our fantastic surface finish still doesn't meet your requirements, there's always our in-house Finishing Center. Contact us for details on how we can meet your aesthetic requirements.

TRUE REPRODUCIBILITY: Since our process uses a non-destructible mold made of continuous-cast iron, all castings are forced to be consistent with each other. Therefore, dimensional variance during production runs is never an issue.

POWDER-COAT READY: Our castings easily take the powder coating process for a beautiful finish. Sand casting often causes blistering of the powder coat during the heating cycle due to trapped gas. In fact, our **SILKFINISH** is ideal for a pre-powder coat or a pre-paint finish.

MOLDED INSERTS: Any metallic or ceramic piece can be cast integrally into the casting. Save cost over pressing inserts. Get stronger threads by casting threaded steel, brass, or stainless steel bushings and eliminate drilling and tapping. Reduce weight by casting a steel insert in high stress areas while keeping the bulk of material in lightweight aluminum. Please consult Gupta engineering for more information on molded inserts.

NO BLISTERING OR DISTORTION: Absolutely no casting blistering or distortion, even at near melting temperatures.

CONTACT

GUPTA PERMOLD:

If you would require more information on any of the ideas suggested, please feel free to contact us at your convenience. We look forward to working with you on your next project.

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