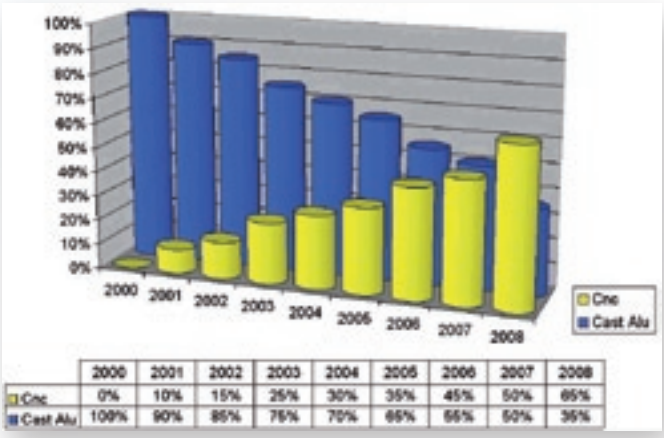
CNC MACHINED MOULDS - FROM DESIGN TO FINISHED PRODUCT

Persico

Manufacturing revolution

Constant demand of increased quality and shorter mould delivery times from the market are the keys to the revolution of mould manufacturing in Persico.

From the year 2000 when 100% of all moulds were manufactured by Cast Aluminium to 2008 during which an estimated 65% will be produced by CNC, Persico has introduced new possibilities and opened new doors into mould manufacturing for the Rotational Moulding industry.



	2000	2001	2002	2003	2004	2005	2006	2007	2008
Cnc	0%	10%	15%	25%	30%	35%	45%	50%	65%
Cast Alu	100%	90%	85%	75%	70%	65%	55%	50%	35%

Persico moulds production trend 2000-2008

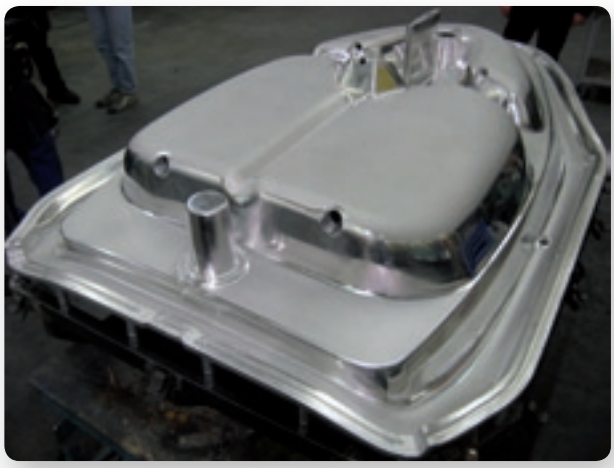
Persico capabilities

During the past 3 years Persico's investments have been focused on increasing CNC Machining capabilities (currently there are 20 CNC machines within Persico and a further 60 at associated partners) in order to guarantee availability of the latest technology, faster mould delivery time and the ability to manufacture more than 60 moulds simultaneously.

Day after day bigger and bigger

The latest investments have increased the size of mould parts which can be manufactured out of single blocks of aluminium.

This brings the advantages of CNC machined moulds, such as quality, tighter tolerances, improved aluminium properties and faster delivery times to large moulds which have typically been manufactured by cast aluminium only.



CNC Machined Mould for a Sailing Boat 102x39x23 inches (2600x1000x600mm)

Mould frame innovations

The design of mould frames via CAD files and their manufacture by laser cutting allows the mould and frame to be produced in parallel using an advanced process to reduce human influence on final quality.

Frame 3D view during concept development

The benefits of complexity

In comparison to a cast mould, the higher the complexity, the greater are the benefits that can be obtained by choosing a CNC machined mould.

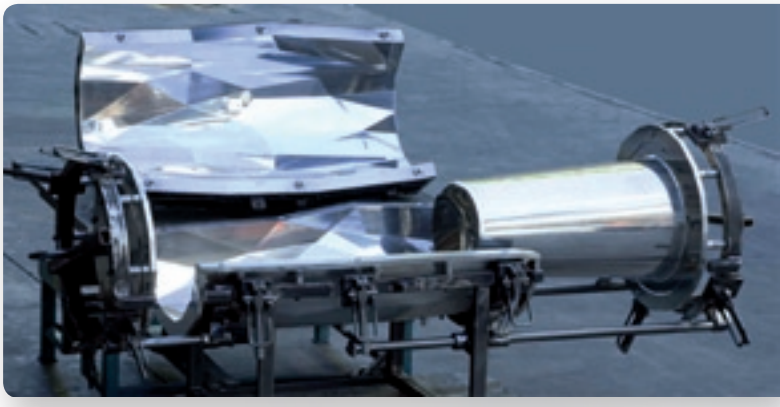
Flange assembly and the internal surface profile are extremely accurate and permit a drastic reduction of the time needed to complete a mould after machining.

The possibility for multiple parts to be joined together after machining eliminates the limit in size and complexity that can be achieved with CNC machined moulds.

The ultimate surface finish

Starting from aluminium blocks the ability to achieve higher degrees of surface finish is guaranteed by better aluminium quality vs. cast and by the optimum internal finishing of the moulds once machined.

High-gloss polished textures can much more quickly be achieved due to the advanced starting level of a machined surface, drastically reducing the cost for mould completion.



CNC Machined Mould in 4 Pieces
(a total of 35 aluminium parts joined together)
for Offshore Buoyancy Module 95x50x36 inches
(2421x1270x916mm)
Courtesy of Remcon Plastics Inc.