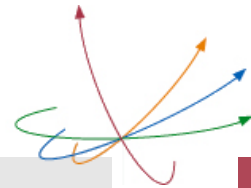


Maus

ROTATIONSGIESSFORMEN

- **Brief Company Overview**
- **Internal Water Cooling with ROTOCOOLER**



History & Development

Founded in **1925** as pattern making business

Since **1962** making of rotational moulds

1987 installment of in-house Aluminium foundry

Since **1998** CAD/CAM/CNC facilities

2000 Development of first BMCTM coatings

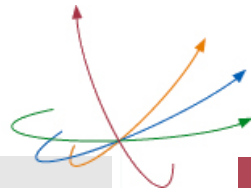
Starting **2005** to change over to Fast Cast Process

From **2007** introduction of Maus-Hole & Maus-Block



August Maus, Firmengründer





Operating figures

Employees today **75**

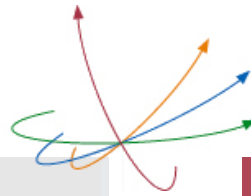
60.000 sq. ft. production facility

20 x CAD-CAM workstations

8 x HSC-CNC machines

Max. CNC dimensions **118" x 236" x 63"**
(3000 x 6000 x 1600mm)

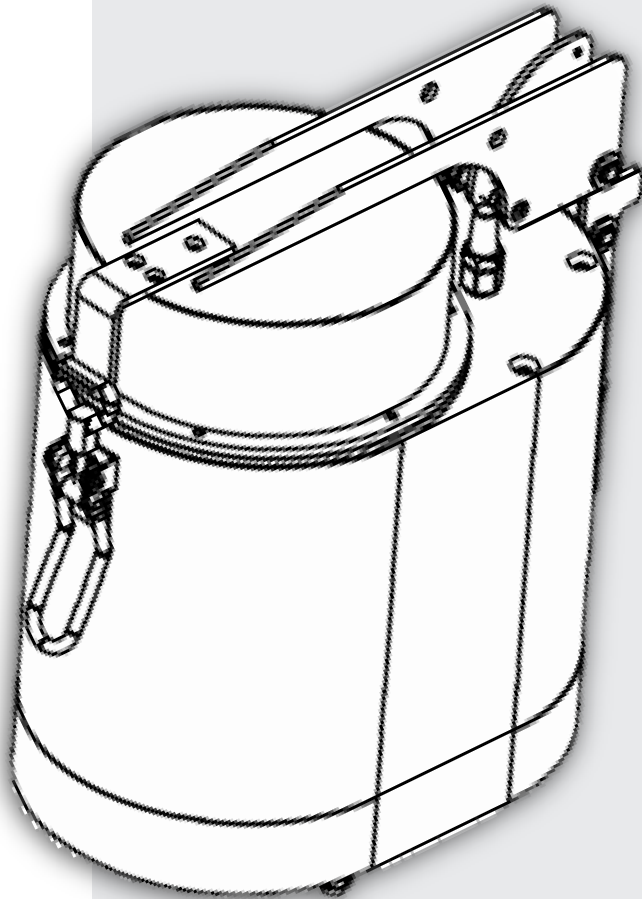
Max. Aluminium casting weight **3000lb** (1360KG)



Range of Services

100% focused on rotational moulding

Design ♦ Construction ♦ Patternmaking
Digitizing ♦ Re-engineering ♦ FEA ♦ Mock-ups
Prototype Moulds ♦ Prototype Parts
CNC- and Cast Aluminium (Kelch/Fast-Cast™)
Sheet metal and Galvanic rotational moulds
Permanent Coatings ♦ Mould Accessories
Automation ♦ Performance Solutions
Modifications ♦ Repairs ♦ Refurbishments



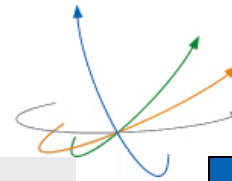
Maus

ROTATIONSGIESSFORMEN

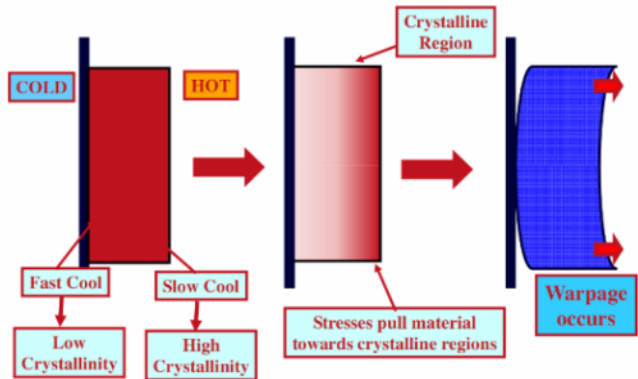
- **Brief Company Overview**
- **Internal Water Cooling with ROTOCOOLER**

ROTOCOOLER

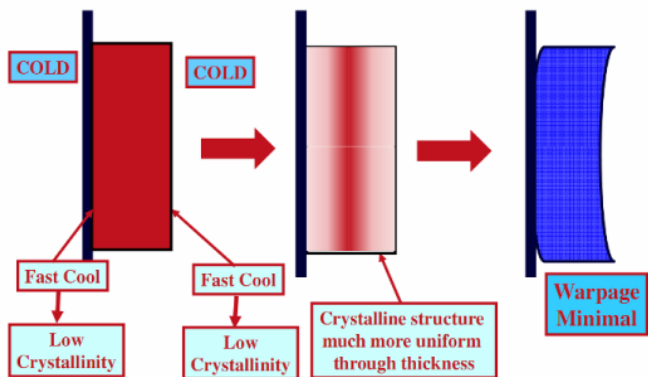
3



External Forced Air Cooling



External and Internal Water Cooling



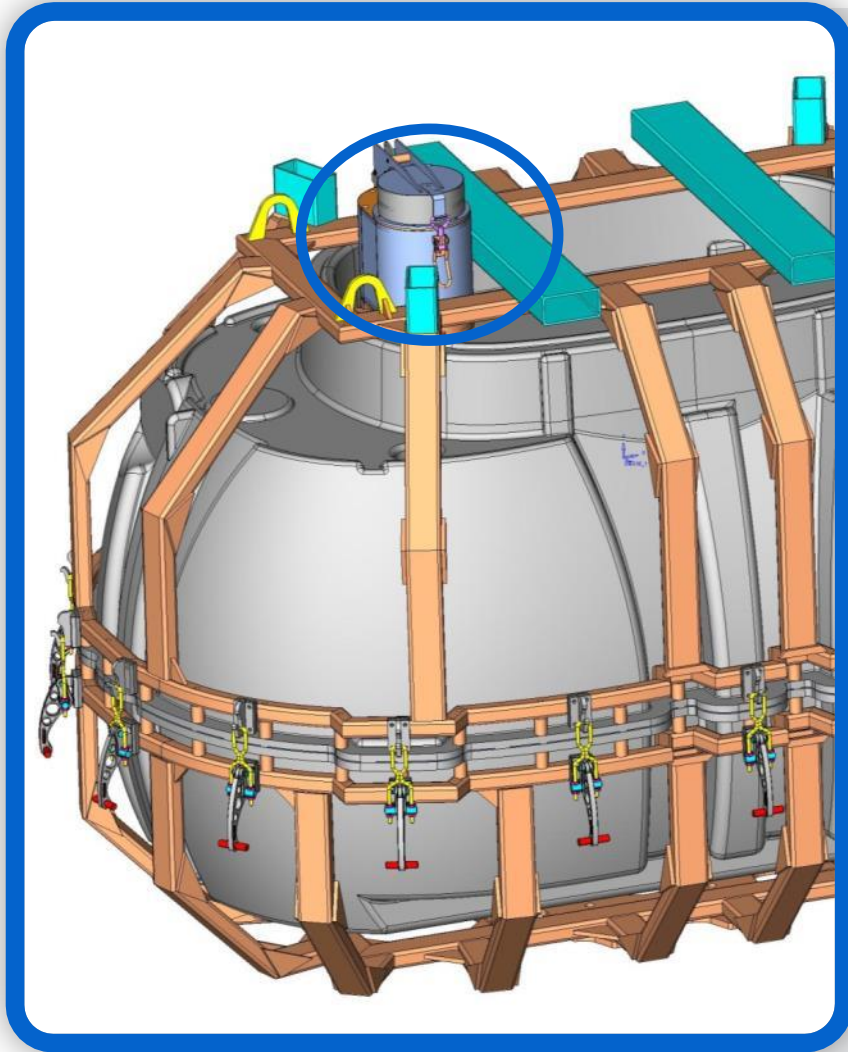
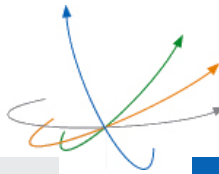
- Joint development from



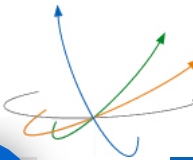
in building and marketing
an internal water cooling unit

- for the most energy efficient cooling (inside + outside)
- for reduction of warpage on plastic mouldings

ROTOCOOLER

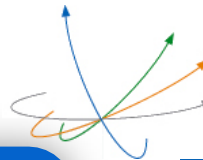


- pressure-less and **safe** inner water cooling system
- easy charging and handling
- exact dosing of water
- injects air + water mist
- greatly reduced cooling times (up to 30 - 40%)
- reduced warpage, better dimensional accuracy

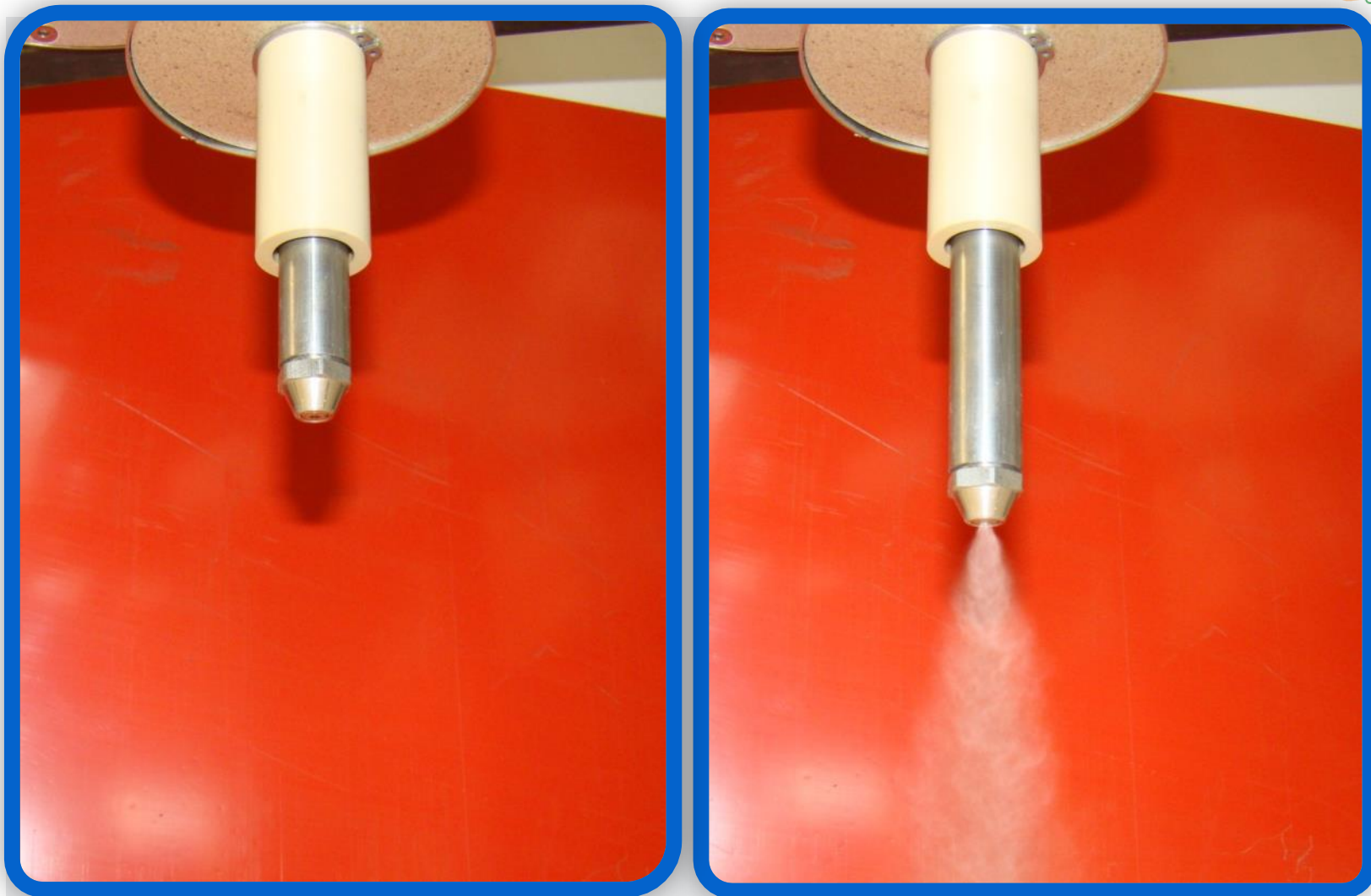


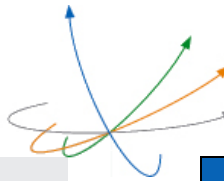
ROTOCOOLER





ROTOCOOLER



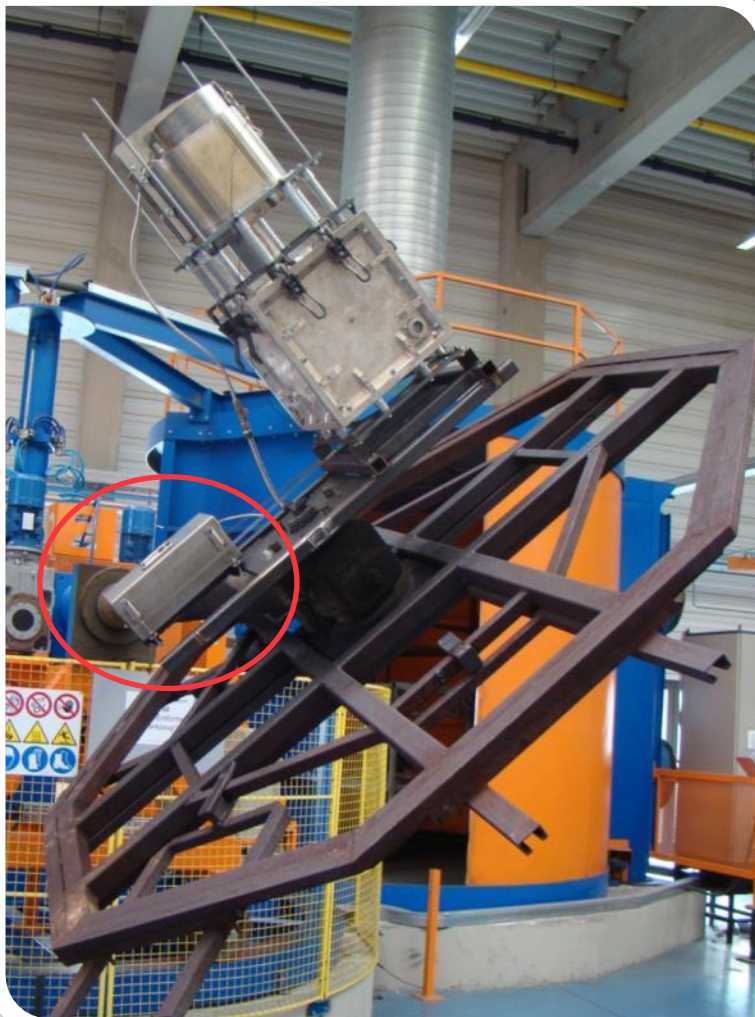


Small Mould with Rotocooler



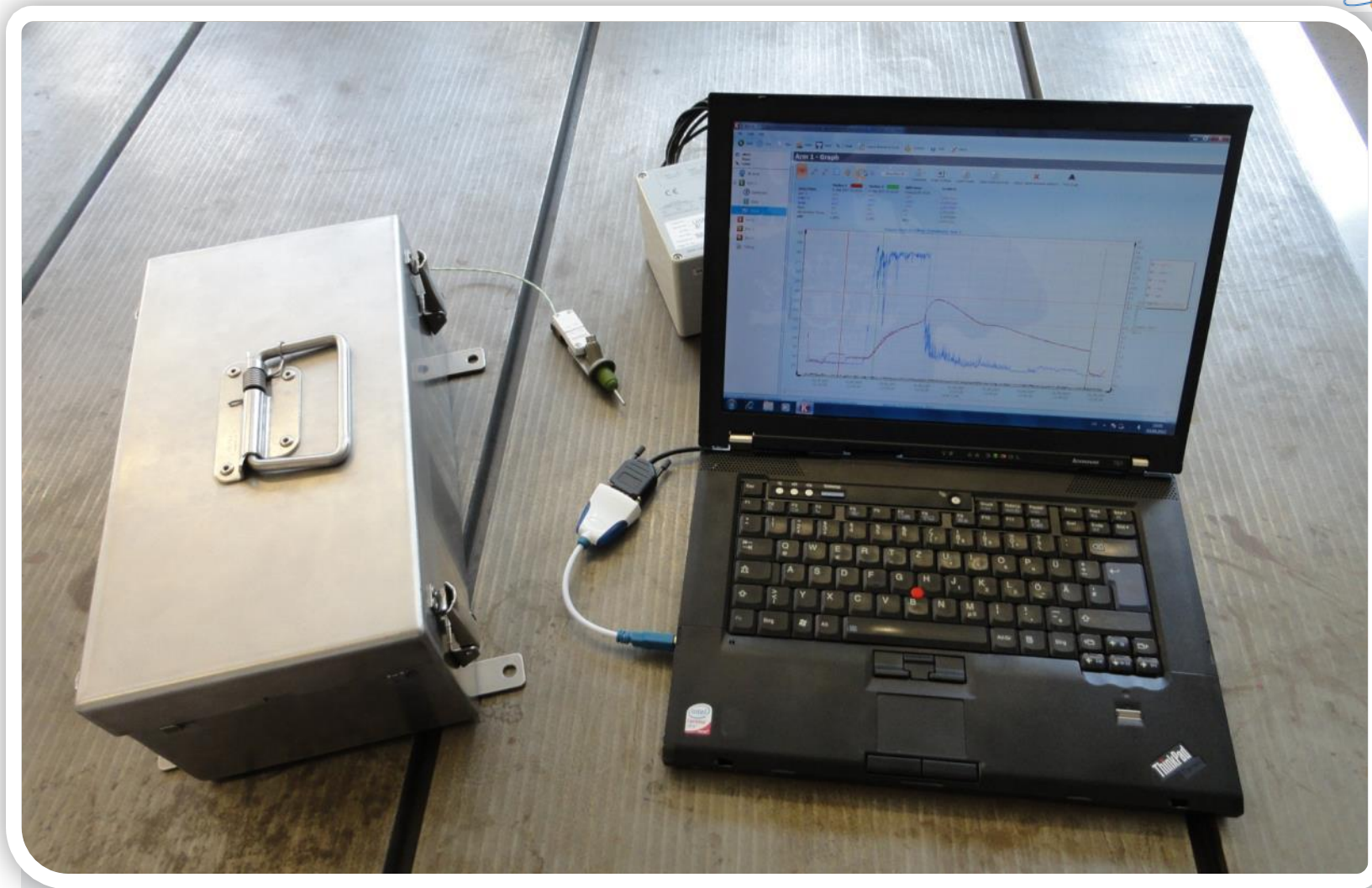
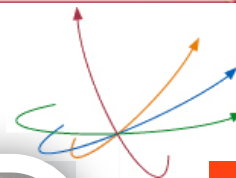
- CNC machined Cube mould (13x13x13")
- Perfectly flat sides
- Shot weight 7lb
- Wall thickness 1/5"
- Reduced cooling by 40%
- Greatly reduced warpage

Maus-O-Meter



- quick set-up times
- real-time temperature monitoring (+ recording)
- easy to use software
- for optimizing heating & cooling cycles
- for quality control
- **for best setting of Rotocooler system**

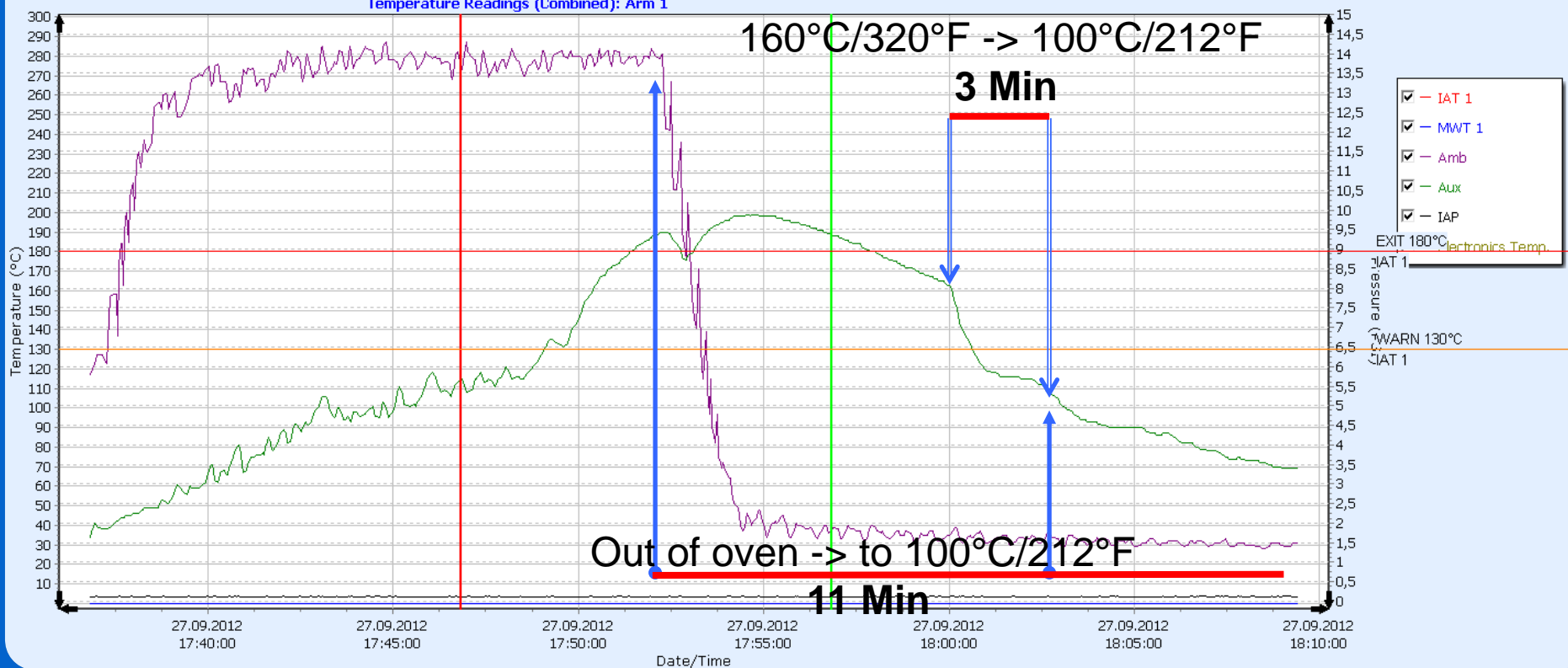
Maus-o-Meter

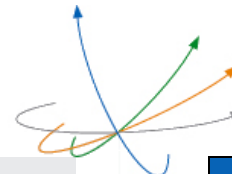


Date/Time:	Marker 1	Marker 2	Difference	Gradient
IAT 1:	27 Sep 2012 17:46:49	27 Sep 2012 17:56:49	0 Day(s) 00:10:00	0,00°C/min
MWT 1:	0°C	0°C	0°C	0,00°C/min
Amb:	277°C	36°C	241°C	-24,10°C/min
Aux:	114°C	189°C	-75°C	7,50°C/min
Electronics Temp.:	34°C	35°C	-1°C	0,10°C/min
IAP:	0,1PSI	0,1PSI	0PSI	0,00PSI/min

+ ROTOCOOLER

Temperature Readings (Combined): Arm 1



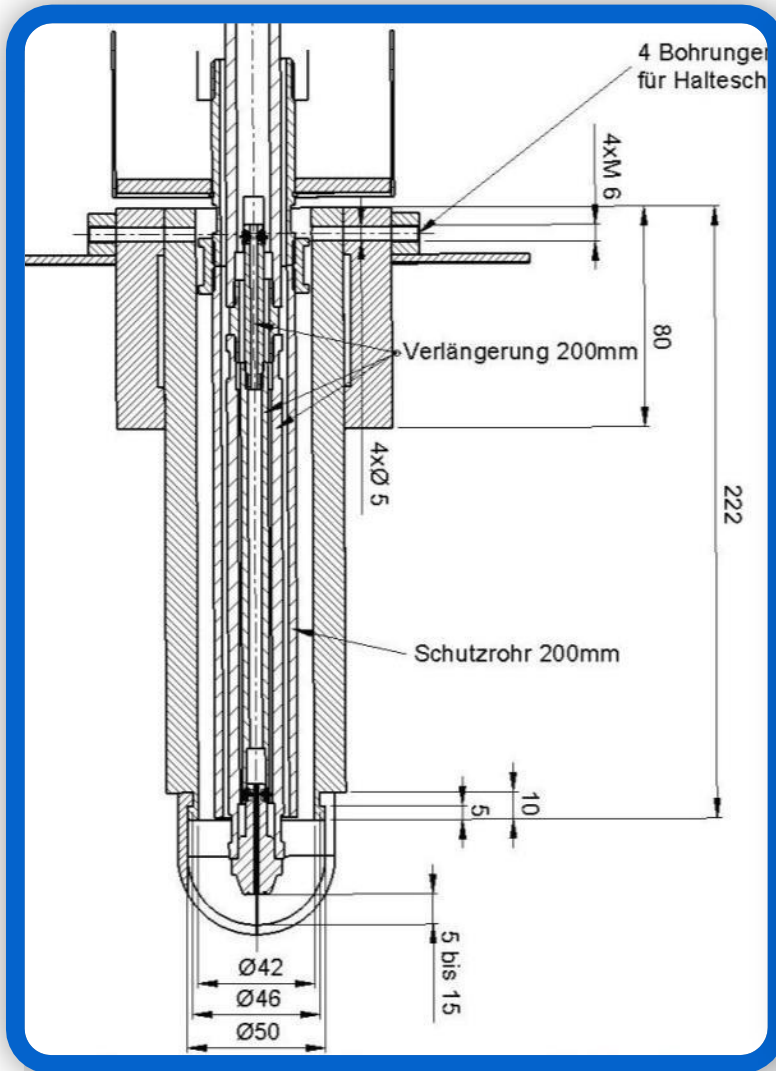


Large Mould with Rotocooler



1637 Gallons Tank

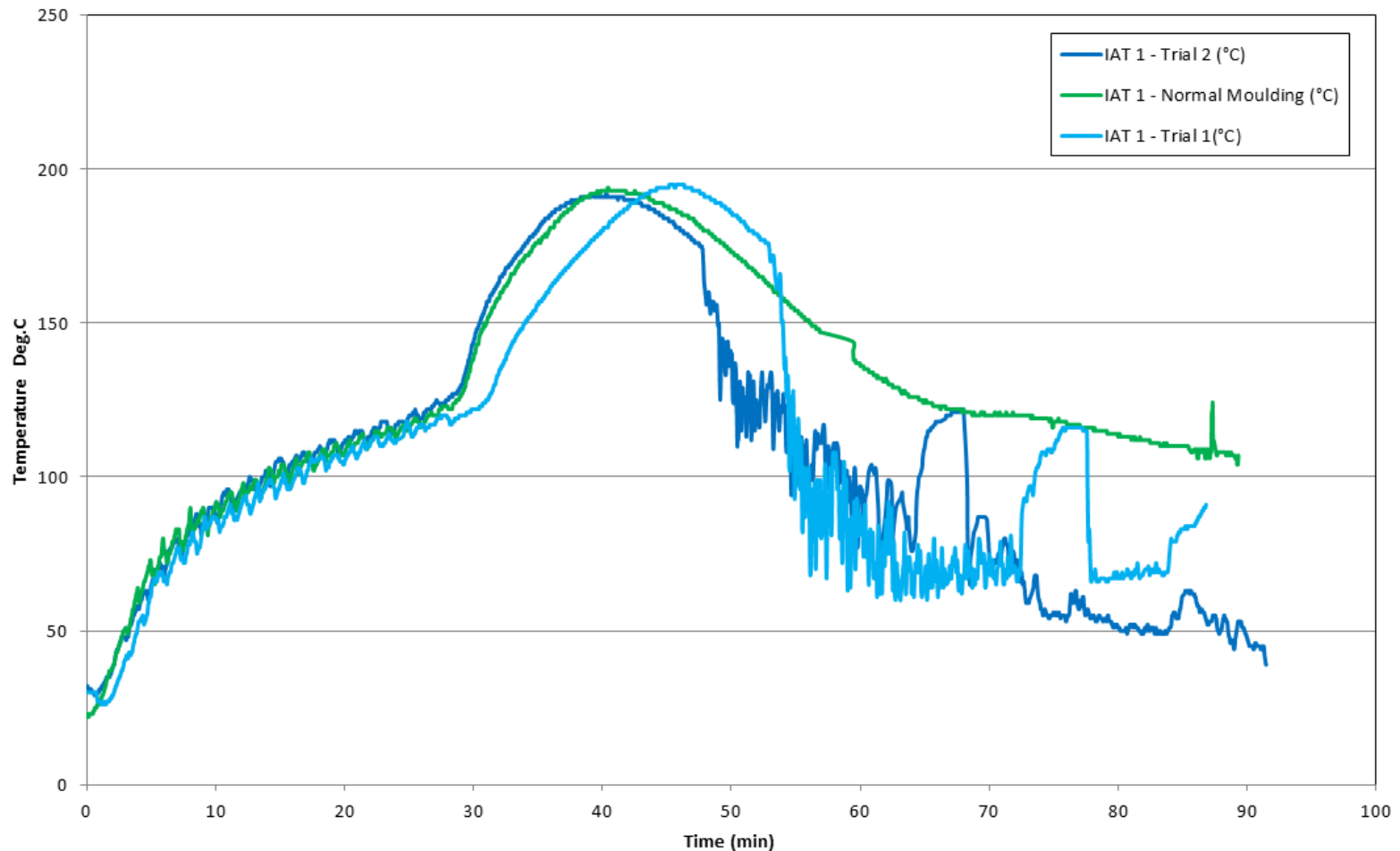
- Steel mould for 6200L (1637Gal) water tank
- Shot weight 400lb
- Wall thickness $\frac{1}{2}$ "
- Straight walls + ribs
- Reduced cooling by 35%
(normal 52min / with Rotocooler 33min)
- Straight walls and ribs greatly improved





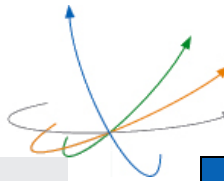


180kg Underground Water Tank 6000L - Comparison of Internal Air Traces





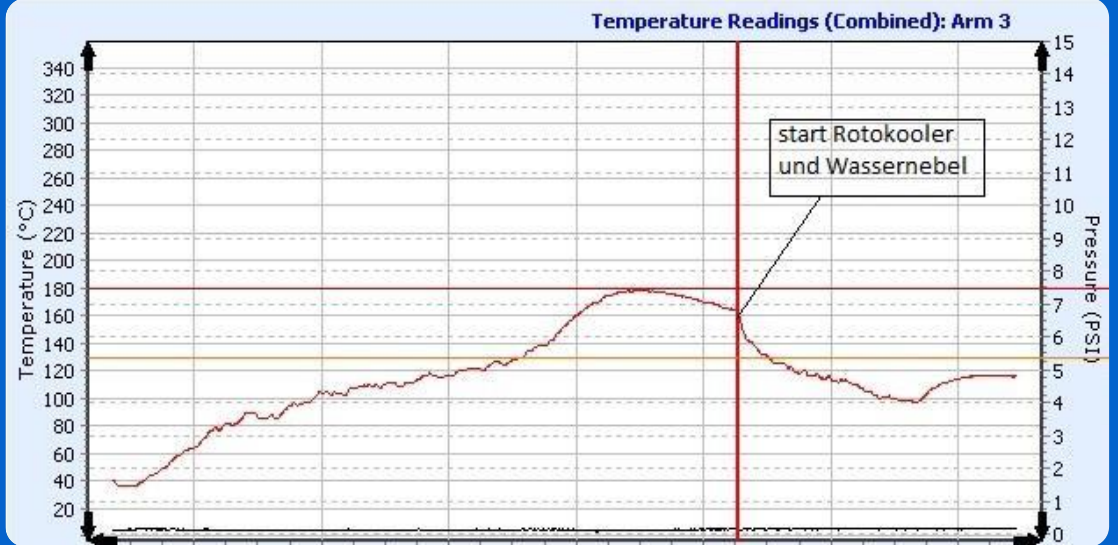
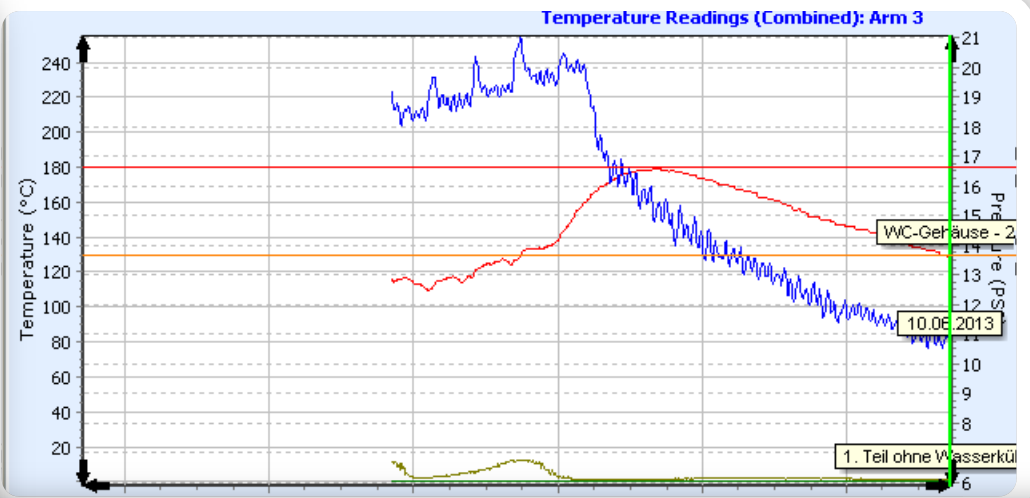
Medium Mould with Rotocooler



- Trial with toilet cabinet
- Shot weight 106 lb.
- Wall thickness 1/5"
- Very straight walls
- Reduced cooling by 28 %
- Straight walls stay flat

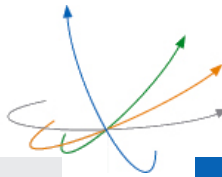
Jigging NOT necessary!

(normal 90min jigging + handling –
zero with Rotocooler)

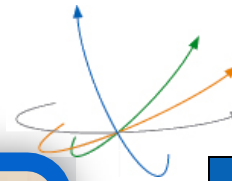




Rotocooler technical data

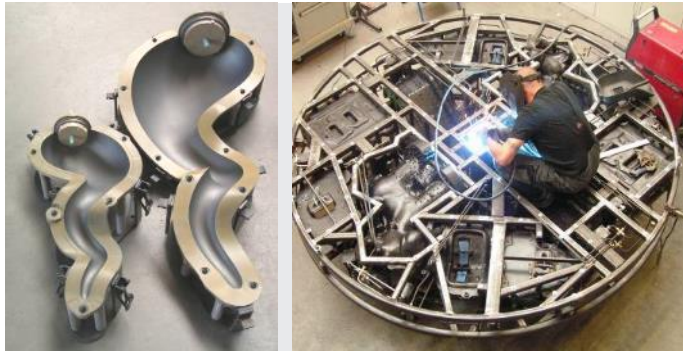


Maximum charge with demineralized water:	2,5 US Pt. (1,2 L)
Pressure in water cartridge :	at zero pressure
Spraying time [2,5 US Pt., Z30 nozzle, 58Psi] (extends by weaker nozzle and/or lower pressure - shortens by stronger nozzle and/or higher pressure)	approx. 18 min
Minimum air line pressure to activate Rotocooler	43 Psi (3Bar)
Recommended air pressure:	58 Psi (4Bar)
Compressed air consumption with Z30 nozzle: (weaker nozzles consume less air, the consumption depends on the pressure)	approx. 26 Gal/min (100 Liter/min) = 212 ft ³ /h (6m ³ /h)



ROTOCOOLER





Maus
ROTATIONAL MOULDS

**THANK YOU
FOR YOUR KIND
ATTENTION**



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