



# COLD CHAMBER DIE CASTING MACHINE

DAK1100-112

Fully automated test facility on an industrial scale  
for process and material development

## OUR SERVICES

- Process and customer specific modification of aluminum alloys
- Development of flame resistant magnesium alloys
- Testing laboratory for microstructure, material and process characterization
- Component development with a focus on mechanical properties and weight
- Development of temperature control concepts
- Energy management of the die casting cell with a focus on the mould
- Novaflow & Solid filling and solidification simulation
- FEM component simulation
- Prototypes and small series
- Training in the field of die casting and its peripherals:  
Cold chamber die casting production 850-9200 T clamping force

LKR Leichtmetallkompetenzzentrum is, to name but a view,  
development partner of

**MELTEC.** **VDS**

Christian Windolph Consulting *cwc*



## TECHNICAL DATA

- **Manufacturer:** Oskar Frech GmbH & Co. KG
- **Locking Unit:**  
locking force: 12.100 kN  
mould height: 400 – 1.200 mm  
mounting plate: 1.630 x 1.630 mm  
max. casting area: 1.692 cm<sup>2</sup>
- **Casting Unit:**  
max. casting force.: 1.120 kN  
shot position: 0 - 420 mm  
casting stroke: 750 mm  
injec. plunger diameter: 80 - 140 mm
- **Dosing Unit:**  
Meltec linear dosing system for aluminium and magnesium  
shot weight aluminum: 1 - 20 kg  
shot weight magnesium: 1 - 5 kg
- **Crucible Furnace:**  
Type KLEM 1200  
melting capacity up to 1.000 kg Al and up to 330 kg magnesium
- **Peripherals:**  
Wollin spraying unit PSM3 Standard / minimum quantity  
spraying unit EcoSpray FSD nozzles  
Robamat heating/cooling units oil, water  
Central HKG heat supply incl. thermal energy storage tank  
KUKA Loading and unloading robot  
VDS ProVac® PLC-350 TP vacuum system 1000 standard  
- metal pressure controlled  
IR thermal imaging camera incl. live monitoring and process control station control  
HTS-Alrotec chamber piston system incl. nozzle lubrication unit  
Rotary hearth furnace (solution heat treatment) and patern-oster furnace (ageing) on the line incl. robot loading



With many years of experience in research and innovation for the lightweight design of the future, AIT's **LKR Leichtmetallkompetenzzentrum Ranshofen** is a leader in the development of high-quality light metal alloys, their sustainable processing through to the development of functionally integrated lightweight components and their recycling.

This makes LKR a powerful and independent partner for your development projects.

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