

low pressure and gravity die casting  
machines and tooling





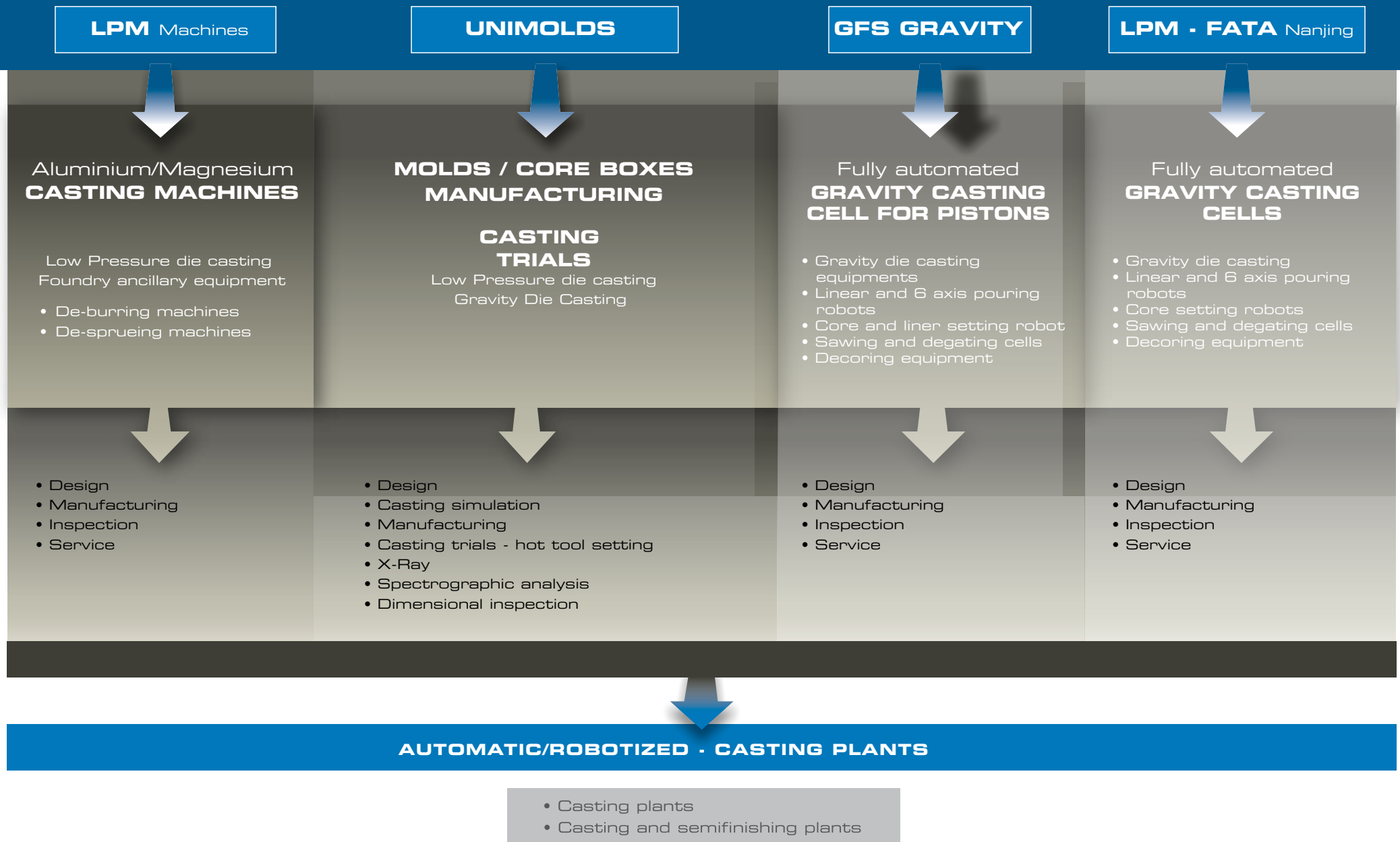
**More than 900** machines sold around the world



**Italy** Germany France Austria Thailand Indonesia China Taiwan Mexico USA Norway Iran Venezuela South Africa Brazil India  
Czech Republic Hungary Turkey Australia South Korea Spain Slovenia Poland Croatia Russia Ethiopia Canada Argentina United Kingdom



# Group activities and manufacturing









# Low pressure die casting machines

## I° SERIES

### BP3

the origins



### BPD

OEM production



### BPT

innovation



# Low pressure die casting machines

## II° SERIES

### BPB

the evolution



### BPB double

double print



### BPC

tradition



① motorbike wheels  
twin cavity

② reverse furnace  
motion





# Low pressure die casting machines

## III° SERIES

### BPS

Simply practical



### BPS-8

Practical and effective



### BPS-C

Practical with crucible



③



④

③ automated wheel casting cell

④ furnace with tilting feature  
and automatic door open/close







### BPSC 800S

crucible shuttle solution



- ① Rotating degassing system
- ② Shuttle fully automatic crucible furnace exchange
- ③ Crucible furnace with lid connected to the lower press plate



# Low pressure die casting machines

## V° SERIES

### BPS-8/TC

twin chamber furnace solution



### BPB 1500 TC

twin chamber furnace solution



### BPS 1500 TC

twin chamber furnace solution

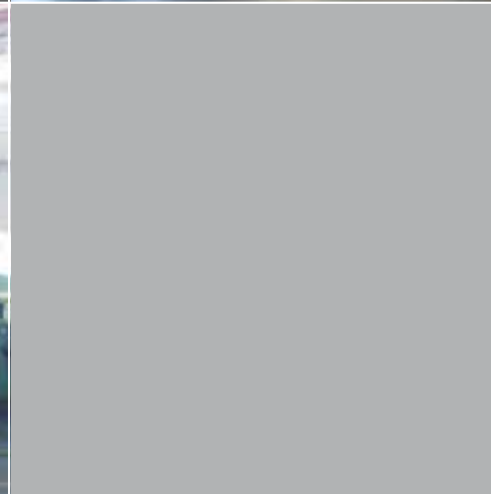


- ① Manual Plug for furnace emptying
- ② Automatic door for molten bath cleaning
- ③ Immersed heating elements





## Casting facilities realized by LPM





# Aluminium and magnesium gravity sand casting



- ① crucible for magnesium
- ② electric magnesium melting/holding furnace
- ③ movable heated ladle for magnesium





# Aluminium and magnesium low pressure sand casting



④ aluminium and magnesium low pressure sand casting machine

⑤ low pressure furnace for magnesium

⑥ sand molds shuttle

⑦ low pressure riser tube



④



⑤



⑥



⑦





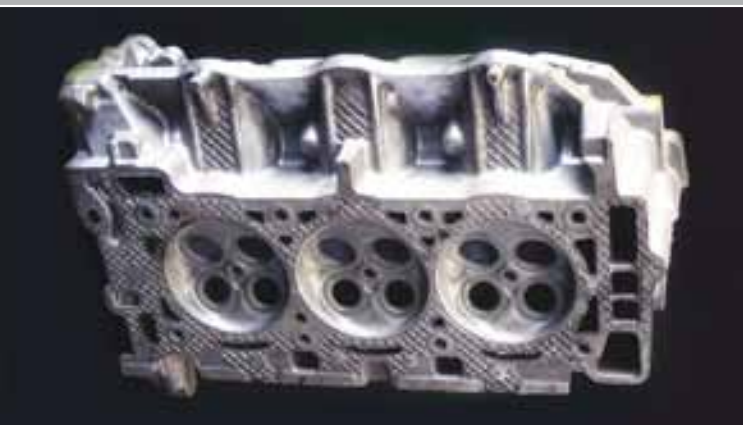
# GFS gravity die casting machines



- ① GCA - Flexible mobile casting station for cylinder heads
- ② GMS/Z - Gravity diecasting machine
- ③ MSG Decoring machine
- ④ Salt core automatic insertion







⑤ Multiple cavity die for pistons

⑥ Ergo 4 - tilting gravity die casting machine





# GFS gravity die casting machines



- ① Piston casting cell
- ② Ergo 4 - tilting bench
- ③ Ergo 2 - tilting bench







④ FCM - flexible casting mobile

⑤ MUB 90 - tilting bench





# LPM casting solutions



- ① Low pressure die casting machine for aluminium engine blocks
- ② Low pressure die casting machine for aluminium "fly housing"
- ③ Low pressure robotized casting cell for double casting





# Low pressure die casting multi stalk technology



①



②

- ① Double casting machine with multi stalk technology
- ② typical casting cell with manual sand core loading
- ③ four-cavity mold for turbocharger bodies
- ④ castings after extraction



③



④





# Ancillary equipment



①



②



③



④



⑤



⑤



⑥







- ① hydraulic unit with accumulator
- ② digital and proportional cooling rack
- ③ leak test machine (air in water)
- ④ Hydraulic Unit with inverter for energy saving
- ⑤ shuttle electric heated ladle
- ⑥ upper hydraulic unit.
- ⑦ automatic funnel
- ⑧ automatic marker
- ⑨ hydraulic unit for multiple casting machines
- ⑩ automatic screen loader
- ⑪ linear catching retriever





## Optional feature



①



②



③



④



④



⑤

- ① quick riser tube changeover
- ② water quench system
- ③ protection system for heating elements
- ④ automatic furnace door opening
- ⑤ press upper tilting plate







- ① furnace automatic filling door
- ② die loading device (upper solution)
- ③ die loading device (lower solution)
- ④ press upper tilting plate



# De-sprueing machine



③



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- ① spare punching head
- ② die/punch tooling
- ③ punching cell







The ultimate and most effective solution  
for wheels de-sprueing



# Drilling machines



①

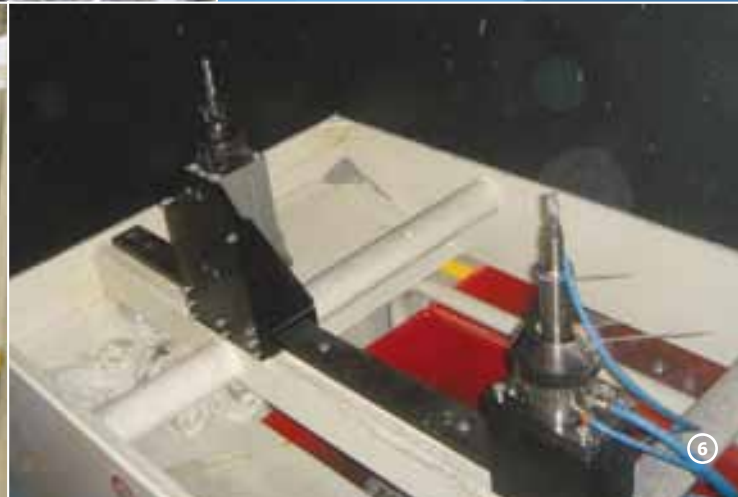


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- ① drilling machine with turntable
- ② typical aluminium components after processing







- ③ classifying conveyor
- ④ drilling machines with automatic door for robotized workpiece load/unload
- ⑤ riser cut-off and fettling system
- ⑥ fettling tooling





# Wheel profile de-flashing machine



- ① DP4 de-flashing machine with cabinet
- ② de-flashing tool for rear wheel profile
- ③ de-flashing tool for "rear and front" wheel profile





# Reference



# Molds and core boxes



①



②

- ① typical 4-cavity low pressure mold for automotive suspension parts
- ② machining of cylinder head mold







State of the art  
machining equipment



# Molds and core boxes



① Machining of  
"control arm" mold

② Machining of  
"cradle" mold



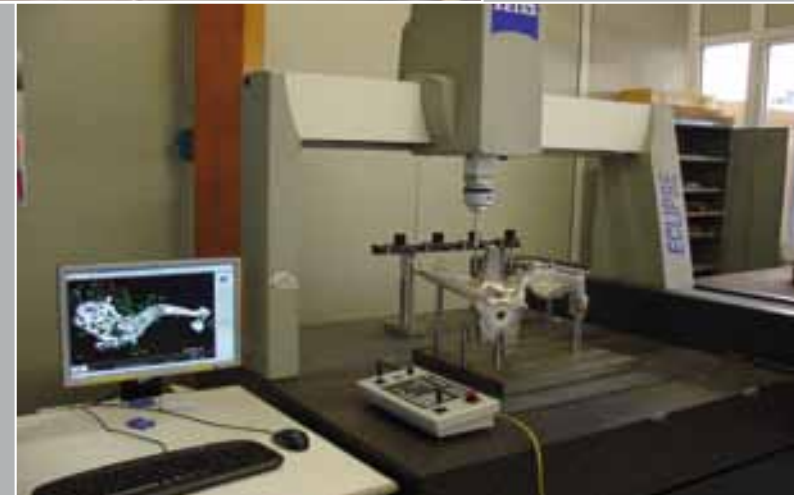
UNIMOLDS is equipped with:

2D and 3D CAD Software

- Auto CAD
- Pro E
- Catia V5
- Siemens NX 8.5

CAM Software:

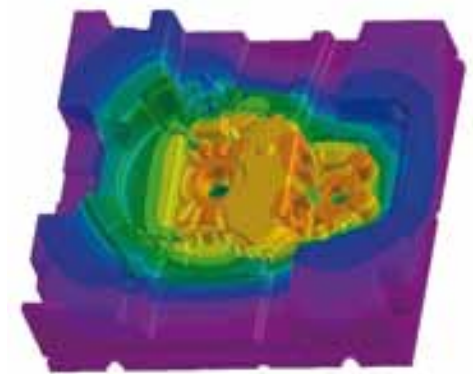
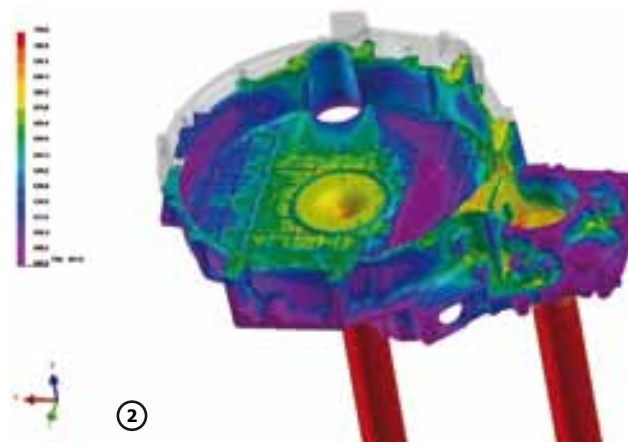
- Work NC;
- CG Tech Vericut







- ① Eight cavities core box
- ② "Procast" casting simulation
- ③ "Suspension node" die with tilting side cores
- ④ "Engine Block" die with tilting side cores





# LPM casting facility







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- ① LPDC machine
- ② X-RAY machine
- ③ spectrometer
- ④ gas heated ladle for aluminium loading





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