

# DGP

Digital production of castings

A manufacturing technology from BENNINGER GUSS AG



DGP

Prototypes

Individual parts

Small series

Spare parts

Ingeniously simple.  
Quickly into shape.

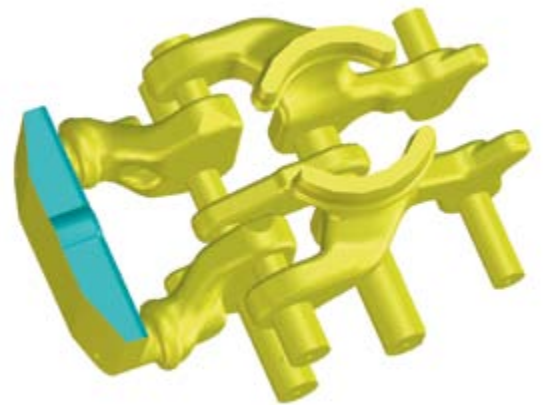
**BENNINGER**  **GUSS**

# DGP is made for the flexible development and realisation of casting parts.

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## Unlimited design possibilities

Thanks to DGP technology, we can realise any geometry that can be produced by casting. Undercuts, slots and a negative bevel of the mould are no longer a hurdle with DGP technology and can be manufactured more precisely than with conventional methods.



3D design data

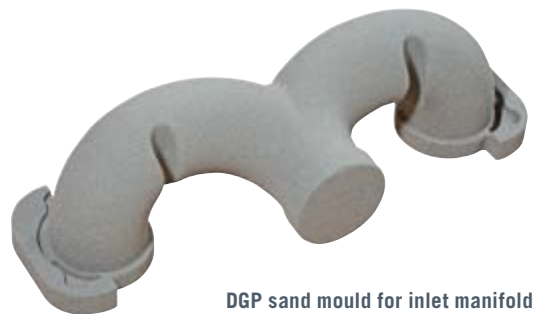
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## From a single piece to a series

Trust in castings from the word go! Forget expensive and time-consuming welded parts. Don't take any risks and trust in the right solution for prototypes and serial production. Casting!

## Your DGP advantages

- Direct and fast realisation of your 3D design data
- No initial costs for tools
- Can be realised within three weeks
- Constant component properties for prototypes, small and medium-sized series



DGP sand mould for inlet manifold

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## Fast implementation of changes in design

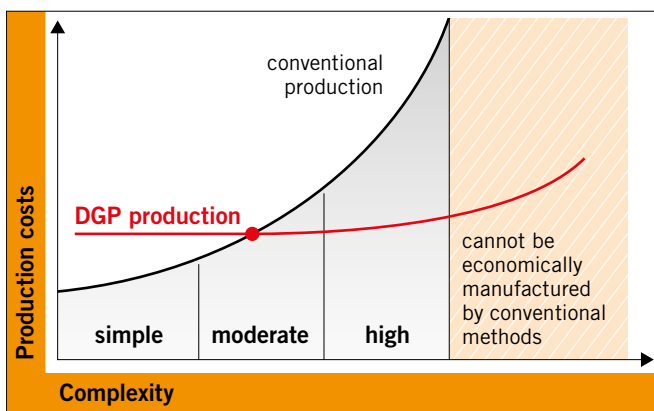
No model and tool costs are incurred for changes in the design and the modified casting parts are available in next to no time.



Crankcase made with the DGP method  
Weight: 620 kg

# The more complex the model – the more economical the solution.

## Cost behaviour



The complexity speaks for the DGP method.



High-pressure cylinder  
Weight: 580 kg

### Double-wall, complex components

Can only be realised conventionally with high tool costs and complicated mould technology.



Conventional manufacture for  
– Initial sample  
– Medium and large-sized series

Delivery time  
as of 10 weeks



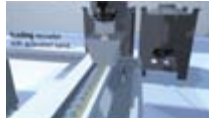
Digital manufacture for  
– Prototypes  
– Initial sample  
– Small and medium-sized series  
– Spare parts

Delivery time  
as of 3 weeks

# DGP – the ingenious way to get into shape quickly and efficiently.



3D plotter with job box



Lay sand layer



Insert binder



## Use the advantages:

- Sand moulds up to 1800 × 1000 × 700 mm – larger sizes possible by assembly
- Sand moulds can be made from 3D design data within a few days
- Casting parts made by applying the DGP method have the same component properties as conventionally made components
- High attention to detail through thin sand layers
- Free shapes; undercuts, slots and a negative bevel of the mould can be realised with no cores
- Changes in design can be realised immediately with changed CAD data
- Individual parts up to medium-sized series with no expensive mould device

## Sand moulds as a service

We produce sand moulds and cores for metal casting (iron, steel and aluminium) according to customer data. The moulds are manufactured without tools and fully automatically by the layer construction process starting from 3D design data. This does away with the complicated and time-consuming diversion via models and core boxes.



## Time to market. Faster! Better! More cost efficient!