

Quality castings for pumps and compressors



:huh is a reliable partner for manufacturers of compressors and pumps. We are certified according to DIN EN ISO 9001 and work as development partner and supplier for this industry since many years.



Fig. 1: Rotor
Material: EN-GJS-400; Weight: 340 kg;
Dimensions: \varnothing 500 x 860 mm
Delivery type: Raw casting

Comprehensive know-how has been collected in

- development and design,
- moulding of hand formed and machine formed castings,
- machining of castings according to the necessary tolerances,
- heat treatment and painting,
- quality assurance with dye penetrant inspection, ultrasonic and X-ray testing.

:huh is a competent partner for pump and compressor manufacturers! In our development department computer-aided design and finite element calculation of the transmission cases inclusive strength check are professionally performed.

An example for this is the case for a high-pressure valve (fig. 2), which has been designed at **:huh** for a customer.

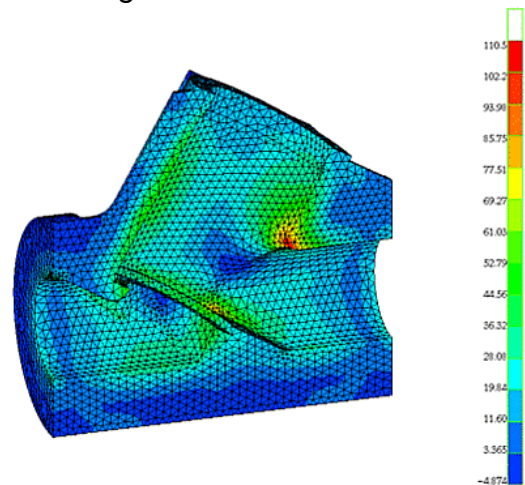


Fig. 2: Case for high pressure valve
Material: EN-GJS-500; Weight: 390 kg;
Dimensions: 690 x 600 x 450 mm³
Delivery type: Raw casting

At **:huh** the development is performed on state of the art 3D-CAD-systems. Out of this data we generate volume models for the computation of the tensions with finite elements method (FEM). On basis of these tensions the strength check is conducted based on the FKM guideline.

Also the computation models for the solidification simulation are derived from the CAD data. This guarantees a process-safe manufacturing already for the first sample.

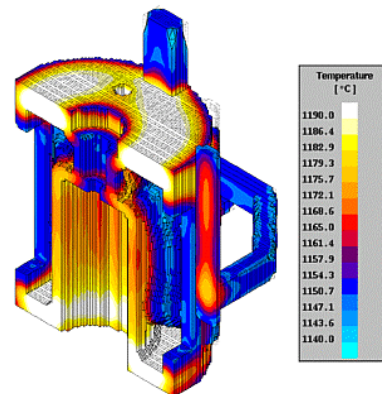
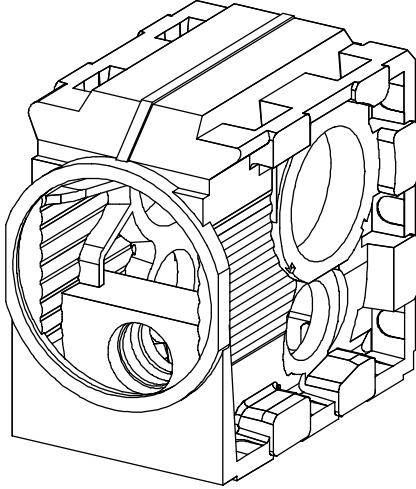


Fig. 3: Simulation of casting technology
EN-GJS-400 / EN-GJL-250; Weight: 880 kg;
Dimensions: 725 x 600 x 590 mm³
Delivery type: Raw casting

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:huh offers and carries out a restricting of the cost-driving tolerances of the raw casting for minimization of the machining operation costs.



Position Maß	(\pm TB 15) h u. h	Grafische Soll-Ist-Darstellung				
		-2	-1	0	1	2
1 \varnothing 586 mm	(\pm 2,3) \pm 0,8	[Red bar from -2 to 2, Green bar from -1 to 1]				
2 \varnothing 350 mm	(\pm 2,0) \pm 0,5	[Red bar from -2 to 2, Green bar from 0 to 1]				
3 550 mm	(\pm 2,3) \pm 0,4	[Red bar from -2 to 2, Green bar from -1 to 1]				
4 451,5 mm	(\pm 2,1) \pm 0,4	[Red bar from -2 to 2, Green bar from 0 to 1]				
5 588 mm	(\pm 2,3) \pm 0,7	[Red bar from -2 to 2, Green bar from -1 to 1]				
6 \varnothing 536,7 mm	(\pm 2,3) \pm 0,7	[Red bar from -2 to 2, Green bar from -1 to 1]				

* Toleranzbereich vergleichbar mit DIN ISO 8062 CT10

Fig. 4: Reduced variability of raw casting dimensions for hand formed transmission case

Material: EN-GJL-200; Weight: 850 kg;
Dimensions: 950 x 650 x 950 mm³
Delivery type: Raw casting



Fig. 5: Cylinder

Material: EN-GJL-250; Weight: 240 kg;
Dimensions: 700 x 500 x 650 mm³
Delivery type: Painted casting

As a result of the combination of foundry and machining plant under one roof processes are simplified and shorter. The supply of pattern, casting and machining to the requested date does not have to be coordinated at large expenditure with several suppliers.



Fig. 6: Support

EN-GJL-250; Weight of casting: 215 kg;
Dimensions: 1.350 x 1.220 x 600 mm³
Delivery type: Assembled and machined ready to mount incl. strength test and leak test

The customer receives the casted, painted, machined and tested component ready to be installed out of one hand. In German we call this:



For this quality stands the Logo of the AGQ (german working group quality casting) !

