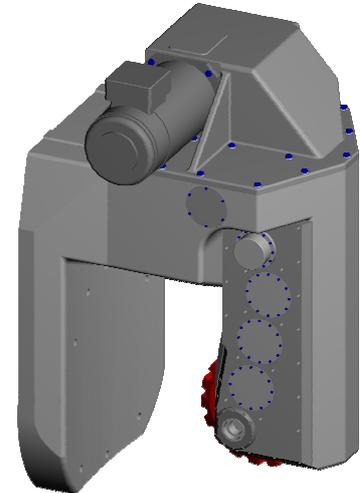
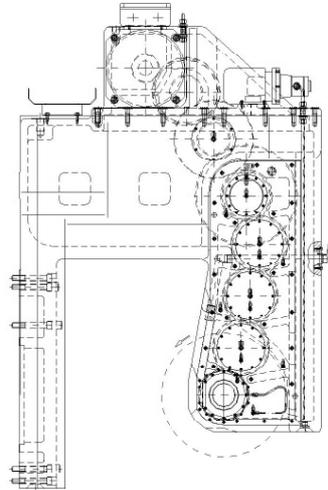
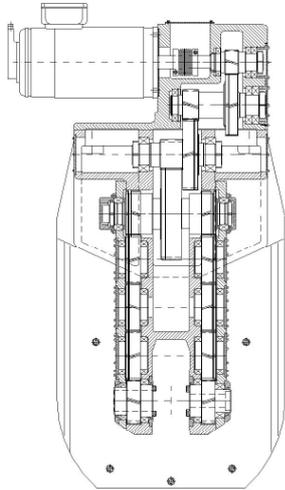


**Construction kit
for a gear hob-
bing head**

**Liebherr
Verzahntechnik
GmbH**

2000



....block building elements....modular design....structured product....QFD....

Problem „Liebherr“ is producer of gear hobbing machines for gears with a diameter 10 – 4000 mm. Especially for work piece diameters of more than 1200 mm the development of a hobbing head was necessary. The head should allow continuous internal gear hobbing as well as single step hobbing. Other fields of application and the necessary variants had to be evaluated according to the market requirements during this project.

The special problem of his project was the extremely high power which had to be transmitted through an extremely small part volume so that also small inner gears could be machined.

Project description and result

According to the application profile a family of hobbing heads has been defined. The housing was modelled as a ribbed cast design. The power train is a continuous gear chain in all versions. Target was the multiple use of the single elements in the different versions.

The power train is divided into two trains that transmit the power to the two shaft ends of the hob. The distribution shaft is axial not fixed so that the power will be divided exactly in a ratio of 50 % to each power train. The complete power train is internally preloaded to ensure 0-clearance.

Technical data

	IFK 4.1	IFK 3.11
hob length:	90, 120, 160 mm	70, 105 mm
hob diameter:	420 mm	320 mm
max. module:	m= 30	m =18
power input P:	53 KW	38 KW
hob speed n:	250/320 1/min	250/320 1/min
torque moment M:	5000 Nm	3500 Nm

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