

## **Machining of large surfaces**

### **Portal Milling Machine PFA 130 for machining aluminum blocks and sheets**

ROTTLER designs and manufactures machines for special machining applications since over 30 years. Goal of the development was to design a machine that machines the surface of aluminum blocks and sheets more economically.

The PFA 130 portal milling machine was designed for the machining of big surfaces, for example of aluminum blocks and sheets. Its structure is modular and comprises the following main assemblies:

- fixed column with vertically traversing or fixed cross rail
- moving table with 2 separate clamping surfaces
- headstock with integrated vertical ram as well as main drive and working spindle

By default, the column module is designed as welded steel construction. A high damping is achieved owing to the constructional design and a special ribbing. The moving table consists of a cast iron clamping plate and a powerful feeding drive.

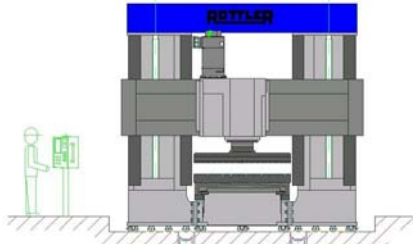
The headstock is especially designed for big tools and a high machining efficiency. Special tool holding fixtures allow for the use of milling heads having a diameter of up to 2,100 mm. Thereby the machining time is considerably reduced, because also large work pieces of up to 2 m width can be finish-machined in one single milling cycle.

- The A.C. main spindle drive provides a power of 130 kW in continuous operation and with that, it is the optimal prerequisite for an economical rough machining operation.
- A high precision, absolute measuring system, combined with pre-stressed feed elements which are free of backlash, forms the basis for a positioning accuracy of the Z-axis of less than 10 µm. This high accuracy allows to finish-machine semi-finished products within tight tolerance limits.

The modular structure of the PFA 130 allows for an uncomplicated and cost effective adjustment to the individual customer requirements. If it should become necessary, for example, to modify the machine after several years in production to a different machining operation, such a modification can be realized by just exchanging the components concerned without high downtimes and high costs. This concept offers a maximum flexibility with high specialization.



Modular designed portal milling machine for machining of large surfaces – e.g. blocks or sheets



sketch of the portal milling machine PFA 130