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Gantry type portal milling machine PFGA X – 32

## **Simultaneous machining up to eight work pieces**

*The high-speed aluminium machining, as it is important for the aviation and astronautics industry for example, requires a permanent optimization of the machining processes. Apart from the actual machining speed, also a continuously growing complexity of machining is the focus of consideration. Reduced tolerance ranges or improved surface qualities are examples of the increasing demands on products. The Gantry type portal milling machine PFGA X – 32 is a completely new developed machine tool in modular structure especially designed for this field.*

The modular system allows for an uncomplicated and low-price adjustment of the machine to the special requirements of the individual customer. Another advantage of such a modular system is the maintenance where non-productive times are minimized to a large extent. Service works are carried out without any noteworthy production loss.

The Gantry type portal milling machine PFGA X – 32 can be provided with up to 8 separate headstocks, each with a power of 32 kW in continuous operation. Thus 8 work pieces can be machined simultaneously. Two separate clamping surfaces on the machine table guarantee clamping of the work piece during primary processing time whereby the non-productive times are reduced.

Drive elements pre-stressed free from backlash and powerful servo geared motors in the feeding axes ensure optimal cutting conditions with the rough machining as well as the fine machining. All guiding and feed elements are amply dimensioned so as to guarantee a high long-time accuracy also under high load.

The basis for stability and accuracy is the strongly ribbed machine column. It has a high stiffness and is designed as welded steel construction by default. The good damping properties are achieved by friction damping through a special workmanship of the weld grooves.

By tradition Rottler machine tools guarantee a long life, a high process reliability and accuracy with small maintenance effort. A long-lasting high load factor is ensured by the specialization on a specific machining task and by a high flexibility. Maintaining the flexibility was an important aim when constructing this machine.

Thus the PFGA x -32 machine can be used not only as a high productive line machine in the aluminium machining field but also for the machining of large steel or cast parts with no need of changing mechanical parts since the speed range can be adjusted via an automatic change speed gear. Furthermore the modular structure of the machine allows for an exten-

sive adjustment of the machine to new machining tasks, for example by exchanging the existing headstocks for new ones with other parameters.

The machine is completed by an automatic tool changer that is able to change the tools of up to 8 headstocks at the same time. It can be installed either stationary at the table end or travelling with the portal. The great amount of chips is smoothly discharged by an automatic suction unit in combination with powerful chip conveyors.

The modular machine system allows for the integration of existing framework components. Older heavy duty metal removing machines often have very solid cast frame assemblies. If for example a used portal milling or planing machine is already available, the column, bed or table units may be integrated into the new machine. Thereby, the costs can be considerably reduced. Whether the existing assemblies are suitable should be examined already in the offer phase.