

Karl H. Arnold Maschinenfabrik GmbH & Co. KG develops special laser machines based on the requirements of the respective customer. For this purpose, the specific data for the components, which will later be on the machine should be processed, queried by the customer and then taken into account in the design process of the system. sighted. The type of machine varies depending on the size of the component. Especially for large components, the space requirement is in the Plant not to be underestimated. The solution from Karl H. Arnold Maschinenfabrik GmbH & Co. KG is a 3D Laser machining center, the gantry. This large, massive system with travels of 2500 mm in X- as well as up to 5000 mm in Y- and 1000 mm in Z-direction, is therefore also capable of components with unusual Dimensions and still impresses with a positioning accuracy of the axes of  $\pm 0.02$  mm, which enables the mapping of the most delicate processes

Originally the plant concept of the gantry for the laser cutting designed. For that too machined work-piece and the desired processing will

cylindrical drical workpieces simple and efficiently processed. In addition to laser cutting, this type of plant is also the sian laser welding imple-

In the industry stood out in in recent years the trend towards Laser deposition welding down. The application can by means of a Powder application process or via realizing a wire application process be sated. Depending on the application area, both methods have theirs Advantages. These processes in one Depicting the gantry has several rere advantages. Due to the open storage room, can the process dust, which in a powder application process arises, captured individually since the suction is here is not rigidly bound to the optics, but can be used freely. Therefore teren is the machine down open, that is, the system floor corresponds to this type of machine the hall floor, which is equal to completely closed Systems simple and without major Effort can be cleaned. The axes are also, in comparison to other sy tems, easily accessible and maintenance becomes thereby very relieved.



*Gantry for powder and wire application welding as well as laser cutting*

be added a suitable processing table selected which one in the machine is placed inside. So can for example large sheets, but also pipes or other

mented become. So can sometimes big Pipes are welded together or repair work on sol- to be carried out.

Gantry for powder and wire application welding as well as laser cutting  
There is a lot in the engine room  
There is room here for a wire application process too large rolls of wire or wire barrels be provided close to the process.

A great advantage of the Karl H. Arnold Maschinenfabrik GmbH & Co. KG is compared to the competition, that the flexibility of the additional components component is practically unlimited, since there is no

contractual obligation to a specific manufacturer gives. For the customer it is also match the laser to be used freely selectable. However, the customer will not with his decision al- left leash and it will be him here suggestions based on long-term ger experience submitted. So in Area of necessary optics for the process to be mapped either a specially developed one Optics of the Karl H. Arnold machine fabrik GmbH & Co. KG can be selected or optics from a manu-

facturer lens according to customer requirements. A fine example of flexibility quality is the implementation of a customer the desire for TIG welding. A TIG welding sysintegrated into the gantry so that the customer what he wants Repair work on damaged Components can perform.

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*Gantry for TIG welding*