

FMS Flexible Manufacturing System, a modular approach!

for low volume - high mix manufacturing



Flexible Manufacturing Platform:

From a totally new perspective on flexible manufacturing Grauel has developed a multifunctional modular printing and assembly platform, for low volume - high mix manufacturing.

The FMS modules, with integrated linear magnetic transportation carriers, can be connected fast and seamlessly into a manufacturing line for completely different kind of products.

Each stand-alone-module is equipped with its own main-controller, and can have multiple functions by loading processes like, feeding, welding, assembly, testing, printing etc. The different processes themselves are also modular, have their own controls and can be (re)-used on any module! The FMS platform can be configured by the end user from 2 up to 10 modules (approx. 18 manufacturing steps, approx. 2-10 meters of length).

Specifications:

Carrier process track:	Linear magnetic transportation
Carrier identification:	RFID - chip
Positioning accuracy:	+/- 0.02 mm
Indexing time:	0.5 s
Module dimensions:	1000*1200*2250 [mm]
Process dimensions:	395*720*900 [mm]
Max. product dimensions:	225*150*250 [mm]
Max. carrier load:	2.7 Kg
Processes / Module:	1-2
Max no. of modules:	10
Examples of processes:	assembly, force testing, leakage testing, ultra sonic welding, printing, robot handling, part feeding etc.