

Product variety and flexibility through fast tool change

Patent granted to KLN Ultraschall AG and Faurecia for heating element sandwich machines. On 29.06.06 KLN was informed of the positive decision on the granting of the European patent with no. 1572437.

An important milestone in the development of the KLN product range was reached with the granting of the patent. The so-called sandwich machines represent with their unique compact conception for the rapid conversion of heating element welding machines an important extension of the flexible production of a large variety of products.

The series Toolmaster and its machine types - Basic, Basic-eco, Advance, Semi-Automatic and Automatic – developed by KLN can be found in many segments of the automobile industry and in many companies working with plastics.

Toolmaster machine types are distinguished in the main by the design of the machines, the size of the active surface and the degree of automation in the change of tools.

Toolmaster Basic is a standard machine. The versions Advance, Semi-Automatic and Automatic work with tools in the sandwich system which enables the handling of upper tool, heating element and lower tool as one compact unit. They are designed especially for rapid and frequent production switches.

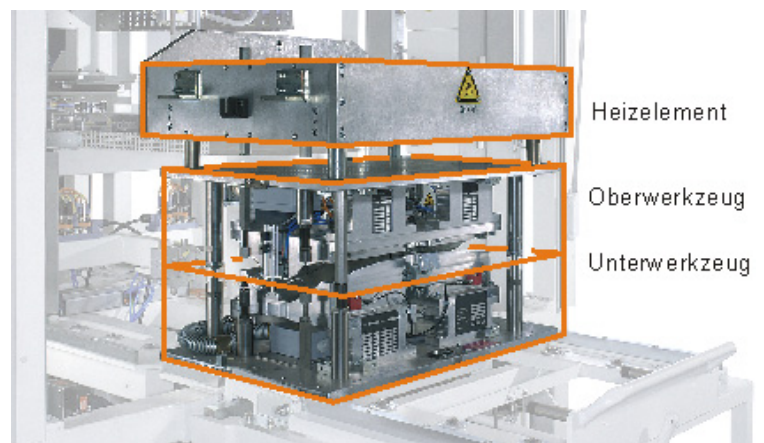


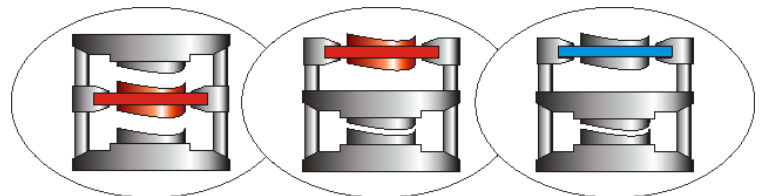
Illustration: Operation

Red= active heating element during the cycle

Blue= heating element in the park position

Sandwich: the heating element is "part" of the machine.

Compact design: Upper tool, heating element, lower element and frame give one unit



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Toolmaster-Automatic was developed to allow the changing of tools without qualified fitters. Upper tool, heating element and lower tool are at the press of a button brought together in the machine, put into the park position as sandwich and according to the application moved into the integrated pre-heating station or prepared for the move out of it.

While welding is being carried out with one sandwich, a second can be in the pre-heating stage. The Toolmaster can interchange two sandwiches within only 90 seconds!

The great advantage of this machine conception is that any number of sandwiches, also interchange dollies, can be made ready and integrated into the flow process. Apart from this series KLN also manufactures customized machines to your special requirements..

All versions of the series are suitable for high temperatures and as a standard fitted with fire prevention technology, which in case of a power cut or exceeding the time limit will quickly separate the machine. The machine types Basic, Advance and Semi- Automatic are equipped in the basic configuration with pneumatic drives. If required, servo or hydraulic drives can be supplied.



Photo: Toolmaster-Automatic

Machine type	Active surface	Dimensions	Required personnel	
Basic				
Name	(mm)	L x W x H / mm		
/300	300 x 250	1650 x 1450 x 3070	Special qualification for operations	None
/500	500 x 350	1650 x 1450 x 3070	Special qualification / tool change	Trained worker, fitter
/620	620 x 350	1800 x 1850 x 3070	Automation degree / tool change	Manual interchange
/800	800 x 350	1800 x 1850 x 3070		
/500 ECO	500 x 350	1650 x 1450 x 3070		
Advance				
Standard	900 x 450	2070 x 1930 x 3020	Special qualification for operations	None
			Special qualification / tool change	Trained worker, fitter
			Automation degree / tool change	Fast manual interchange
Semi-Automatic				
/500	500 x 400	2070 x 1930 x 3020	Special qualification for operations	None
/900	900 x 450	2100 x 2100 x 3420	Special qualification / tool change	None
			Automation degree / tool change	Automatic in the machine
Automatic				
Standard	500 x 450	3260 x 1800 x 3060	Special qualification for operations	None
			Special qualification / tool change	None
			Automation degree / tool change	Fully automatic

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