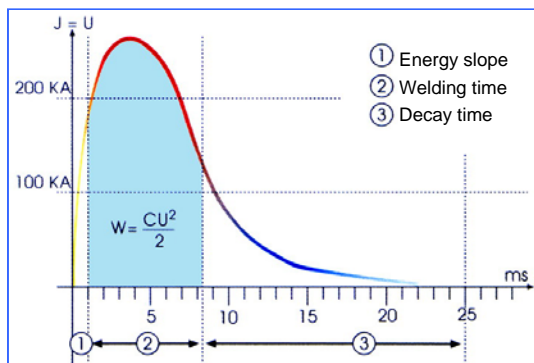


Capacitor-discharge welding machines with servo motor drive



- welding in highest quality
- welding of welding nuts and welding screws made of usibor
- welding of coated components
- welding of workpieces with very different cross sections and surfaces
- welding of different materials
- welding of steel types with high carbon content $C > 0,2\%$
- welding of high-strength and multiphase steels



The extremely high welding current allows welding of multiple projection at the same time and large connected ring projections can be welded in only one working step. The welding current of KES application produces lense shaped spot welding joints. Due to the very short welding time the heat production is concentrated only at the welding lense and the surrounding material is spared.

NIMAK Qualy-KES™

The NIMAK QualyKES provides real-time, non-destructive quality assurance. During welding, the following parameters are continually measured:

- Welding energy
- Welding current
- Welding time
- Component tolerances
- Penetration behavior
- Electrode force

Simultaneous monitoring of these six parameters ensures accurate assessment of welding quality. In order to measure these parameters, every system ordered with QualyKES is equipped with a path measurement system on the welding head, as well as a Rogowski belt for recording current flow.

WMA is general distributor for NIMAK welding machines in Baden-Württemberg

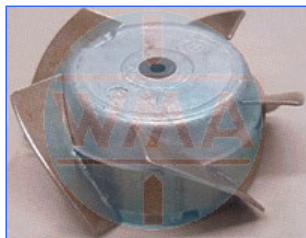


The QualyKES is integrated into the individual machine PLCs. The display and documentation of all parameters, with comparison of target and actual results, is performed by the system PC.

Performance	800 Ws up to 10.000 Ws	6.000 Ws up to 20.000 Ws	18.000 Ws up to 100.000 Ws
Electrode force	40 daN up to 1.600 daN	100 daN up to 3.000 daN	1.000 daN up to 20.000 daN
Fuse protection: 16 A up to 63 A, Welding currents of up to 700 kA			

Welding examples:

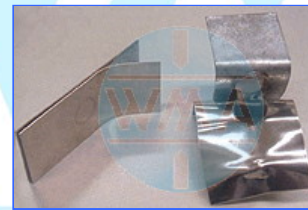
- 1 Contour projection welding
- 2 Double circular projection welding
- 3 Discoloration free welding
- 4 Welding without reworking
- 5 Hardened steel ball ductile welded
- 6 Steel-Brass-Welding
- 7 Zinced component (rear and front view)



1



2



3



4



5



6



7



Power-KES

Version: 01-2011

Example: Technical data POWER-KES 10000



Power:	6000 Ws
Nominal primary voltage:	400 V
Nominal frequency:	50 Hz
Fuse:	32 A
Cross section (cable length 15 m):	4 mm ²
Secondary open-circuit voltage:	11-22 V
Number of steps:	2
max. secondary welding current:	120 kA

Dimension of groove plates:	200-500 mm
Depth of throat:	250 mm
Stroke:	150 mm
Electrode force at 6 bar:	2000 daN
Air pressure min.:	2 bar
Dimensions:	
Width:	1750 mm
Depth (without start console):	1650 mm
Height:	2450 mm
Weight:	2500 kg

We reserve the right to make changes which are in the interest of technical progress.

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info@wma-sb.de or wma-sb@t-online.de, <http://www.wma-sb.de>

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