



F120, F160, FD120 - Spot Welding Heads for Automation

Thanks to their excellent dynamic response and their stable follow-up properties the F series weld heads represent the best solutions for a wide range of resistance welding applications. Maximum reliability and ease of maintenance generate an outstanding cost of ownership and a very long product life in operation. The F120, F160 and FD120 series is designed for welding of materials which require precise and reliable welds continuously. All three weld head types deliver outstanding weld process stability and consistent reproducibility.

The F120, F160 and FD120 weld heads are designed to be used in combination with a variety of electrodes, force sensors and power supplies.

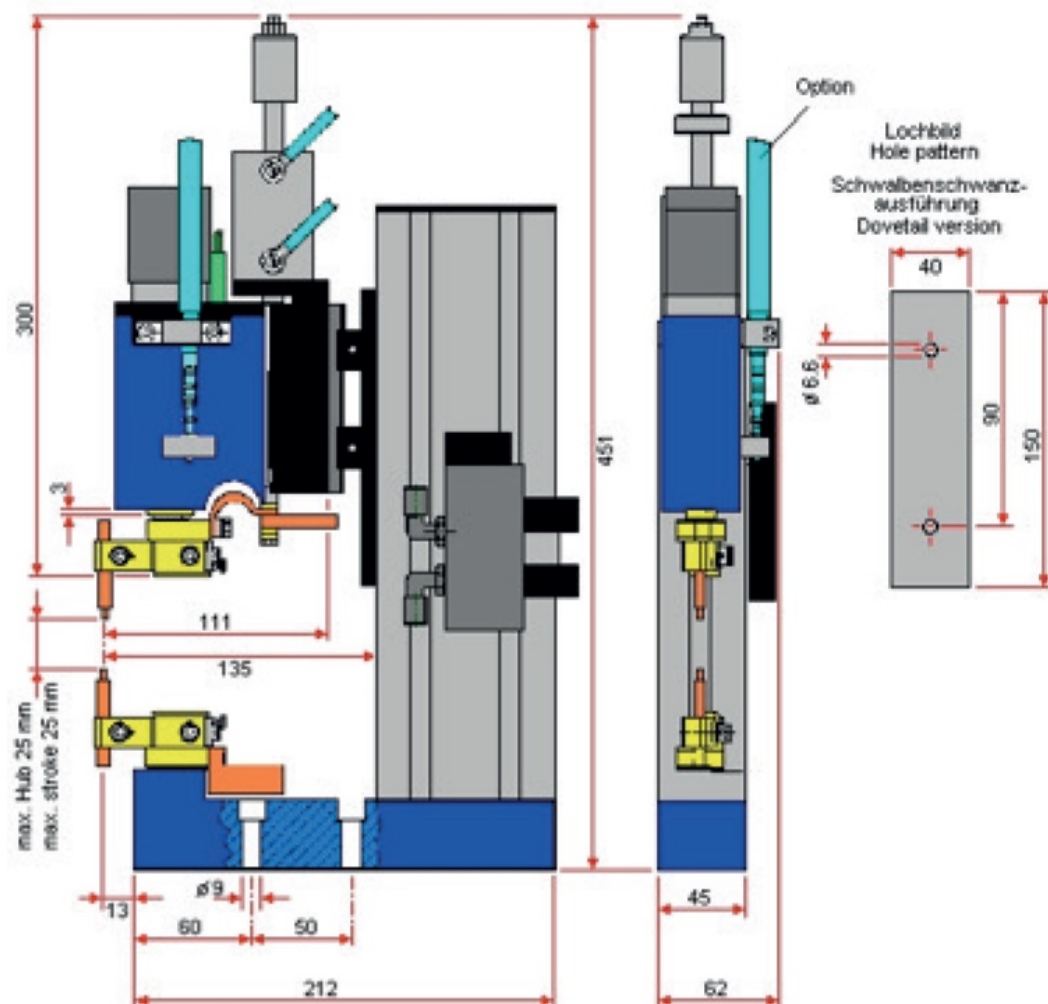
Key features F120, F160, FD120 - Spot Welding Heads for Automation

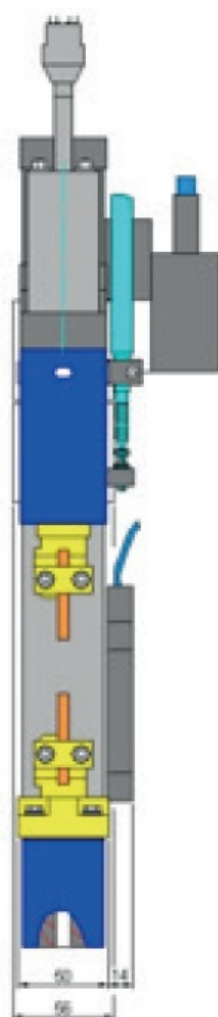
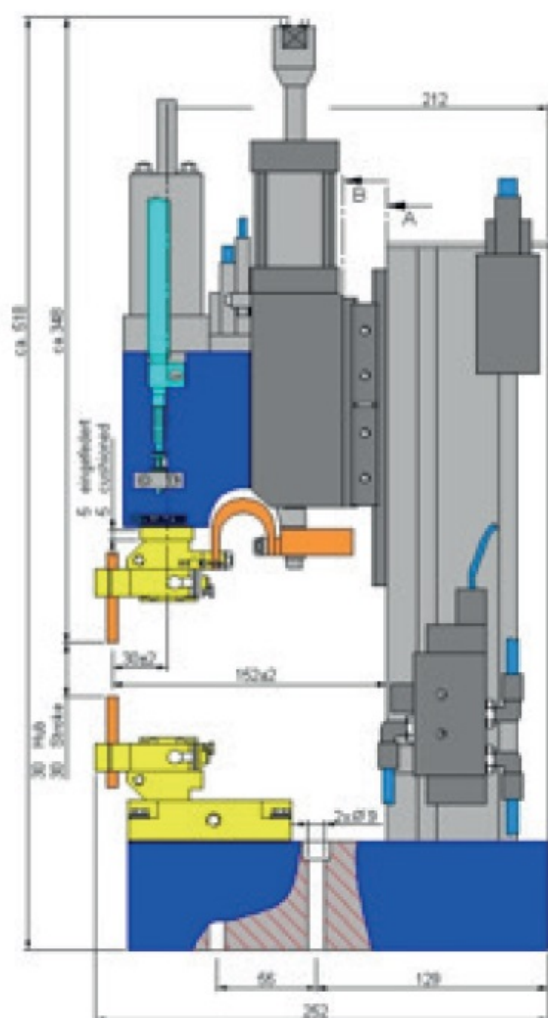
- Modular for easy integration for automation
- Adjustable force-firing from 1.2 N to 550N
- Fast follow-up
- Ideal for safety-critical applications

Specifications F120, F160, FD120 - Spot Welding Heads for Automation

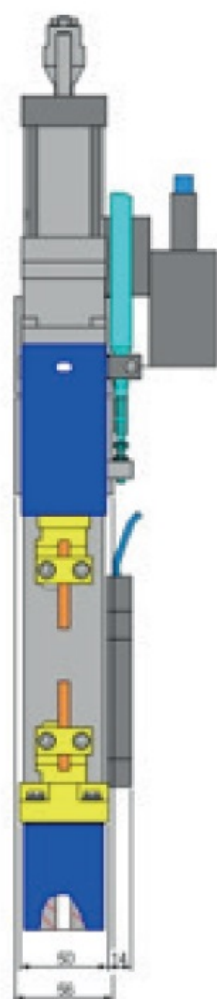
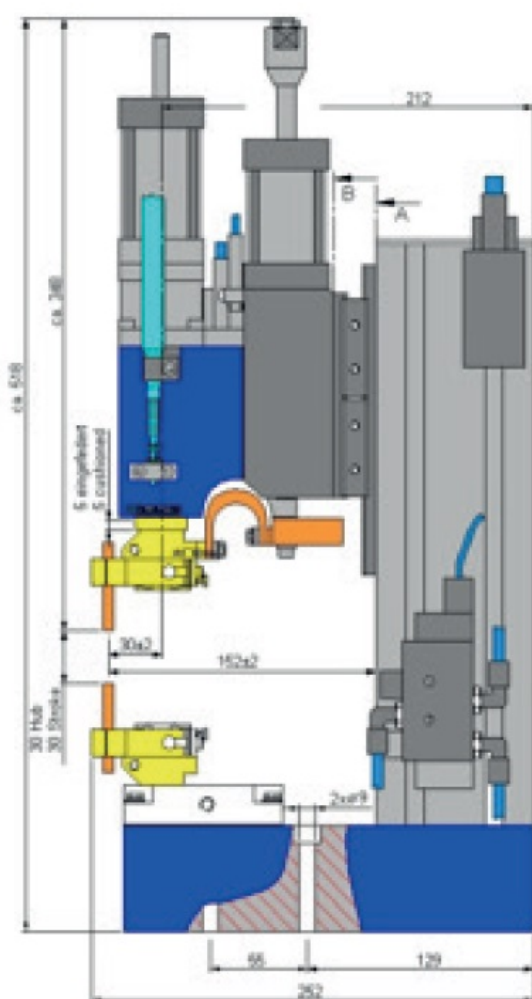
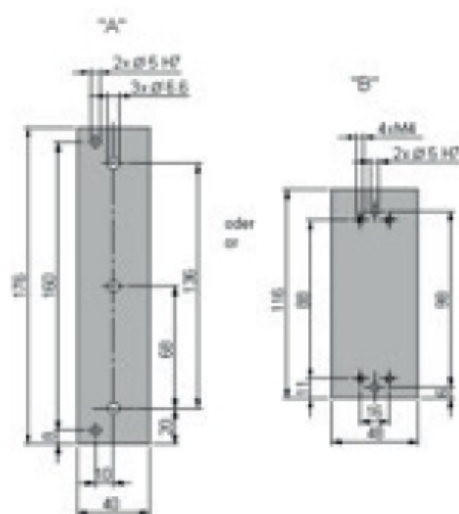
Model	F120	F160	FD120
Configuration	F120 can be equipped with three and F160 with four different springs	F120 can be equipped with three and F160 with four different springs	F120 can be equipped with three and F160 with four different springs
Options	Add-on set - displacement measuring sensor; automatic weld head without stand and without lower electrode holder	Add-on set - displacement measuring sensor; electrode 10 mm; anti torsion protection	With portal
Maximum rating	5 kA (2 kA with light current band)	5 kA (2 kA with light current band)	5 kA (2 kA with light current band)
Electrode stroke	25 mm	25 mm	25 mm
Closing stroke	pneumatic	pneumatic	pneumatic
Welding pressure	via pneumatic pre-tensioned spring	via pneumatic pre-tensioned spring	via pneumatic pre-tensioned spring
Weld force max	- 1.2 to 150 N -15: 1.2 to 15 N -45: 10 to 45 N -80: 18 to 80 N -150: 45 to 150 N (all depend on spring)	-240: 50 to 240 N -550: 150 to 550 N (all depend on spring)	15 to 150 N (depends on spring)
Air pressure supply	max 6 bar	max 6 bar	max 6 bar
Weld force adjustment	-S and FD versions: adjustable screws on the scale housing - All other versions: via adjustable pressure control valve or proportional valve	-S and FD versions: adjustable screws on the scale housing - All other versions: via adjustable pressure control valve or proportional valve	-S and FD versions: adjustable screws on the scale housing - All other versions: via adjustable pressure control valve or proportional valve
Electrode shape	cylindrical, d = 6 mm	cylindrical, d = 6 mm	cylindrical, d = 6 mm
Electrode holder	quick change holder made of gold-plated aluminium at the top and bottom	quick change holder without antitortion protection for electrodes	variable distance (max 10 mm) between the electrodes
Weld cables	2x95 mm ² , 700 mm long	4x95 mm ² , 700 mm long	2x95 mm ² , 700 mm long
Environment temp.	0-40 °C	0-40 °C	0-40 °C
Weight	from 5,5 to 7 kg	approx. 8 kg	approx. 5,5 kg
Dimensions (WxHxD)	vary	vary	260x420x90 mm

Drawings F120, F160, FD120 - Spot Welding Heads for Automation

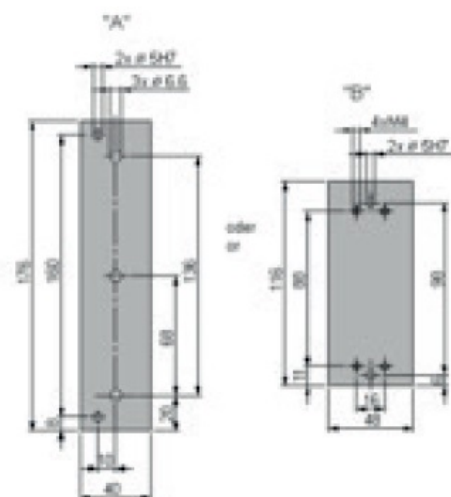




Befestigung ohne Ständer
Fixing without stand



Befestigung ohne Ständer
Fixing without stand



Product applications F120, F160, FD120 - Spot Welding Heads for Automation



Crimp Weld Connector at gear box



Electronics

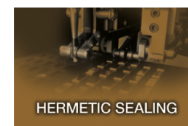


Interior Lighting

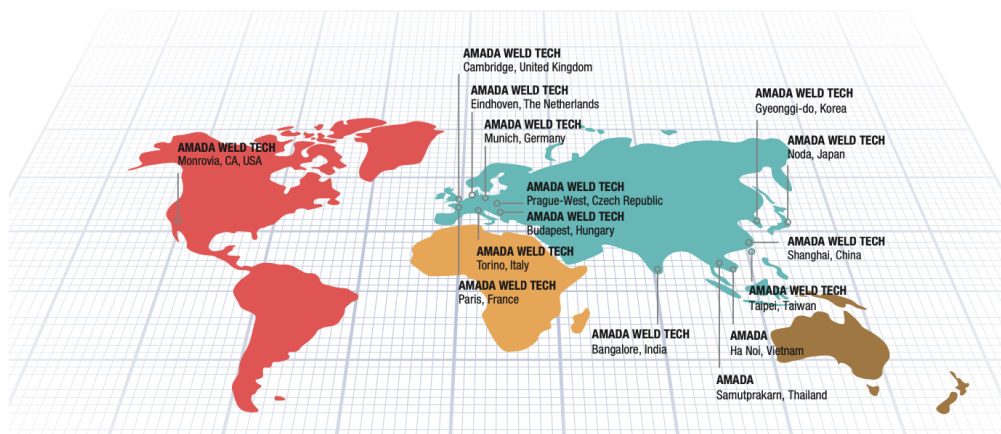
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