



F120, F160, FD120 Weld Heads

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.

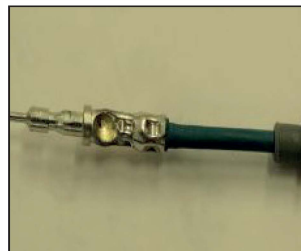
The F120, F160 and FD120 series is designed for welding of materials which require precise and reliable welds continuously

All three weld head types deliver outstanding weld process stability and consistent reproducibility

CONFIGURATION OPTIONS

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

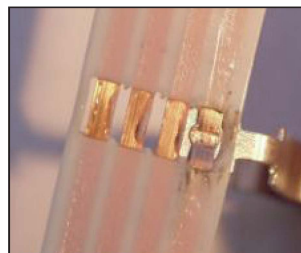
TYPICAL APPLICATIONS



Crimp Weld Connector at gear box



Electronics



Interior Lighting

PRODUCT OVERVIEW

F-series	F120	-S, -SM, -SH, -SZ right, -SZ left
With 1 scale housing	F160	-S, -SM, -SH, -SZ right, -SZ left
Twin pincers w/2 scale housings	F160-	DZ
twin heads w/2 scale housings	FD120	-S, -M, -H
With 1 support cylinder	F120	-M, -H, -Z right, -Z left
Weld force range options	F160	15 (1.2 to 15 N), 45 (10 to 45 N), 80 (18 to 80 N) and 150 (45 to 150 N)
Weld force range options		240 (50 to 240 N) and 550 (150 to 550 N)
Twin head w/2 support cylinders		FD120
Weld force range options		15 (1.2 to 15 N), 45 (10 to 45 N), 80 (18 to 80 N) and 150 (45 to 150 N)
Description	S = Standard; M = Mechanically actuated; H = with lower stroke cylinder; Z = acting as floating cylinders; DZ = dual cylinder	
The product differences are described in the Technical Specifications table below as well as in the comprehensive user manual of the F-series.		

TECHNICAL SPECIFICATIONS

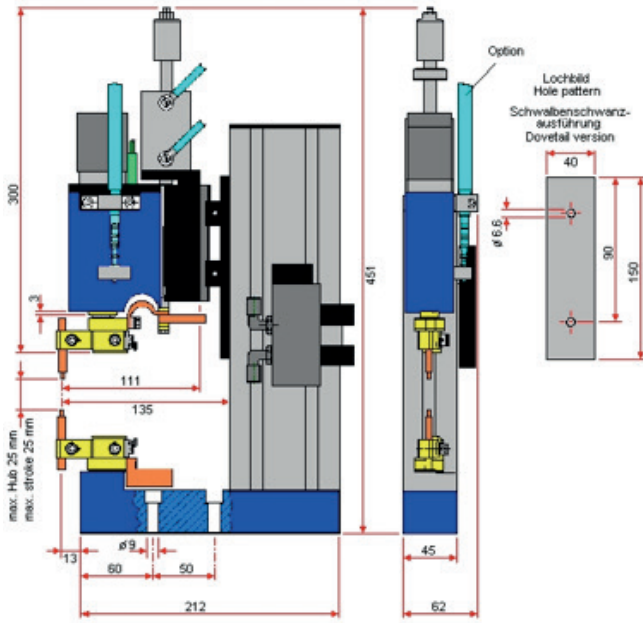
	F120	F160	FD120
Configuration	See product overview on page 1; F120 can be equipped with three and F160 with four different springs		
Options	Add-on set - displacement measuring sensor; automatic weld head without stand and without lower electrode holder	Add-on set - displacement measuring sensor; electrode 10 mm; anti torsion protection	With portal
Maximum rating	5 kA (2 kA with light current band)		
Electrode stroke	25 mm		
Closing stroke	pneumatic		
Welding pressure	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		
Weld force adjustment	-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		
Electrode holder	quick change holder made of gold-plated aluminium at the top and bottom	quick change holder without anti-torsion 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		

WEIGHT & DIMENSIONS

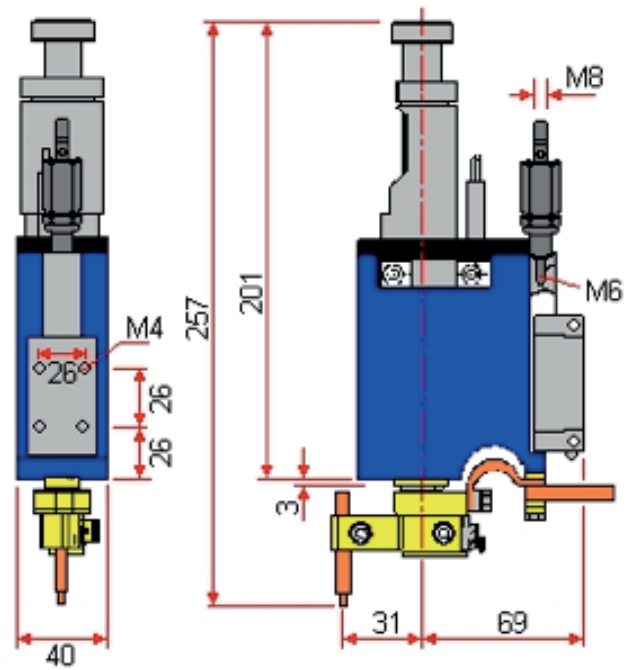
	F120	F160	FD120
Weight	from 5,5 to 7 kg	approx. 8 kg	approx. 5,5 kg
Dimensions (LxHxD)	vary	vary	260x420x90 mm

DRAWINGS

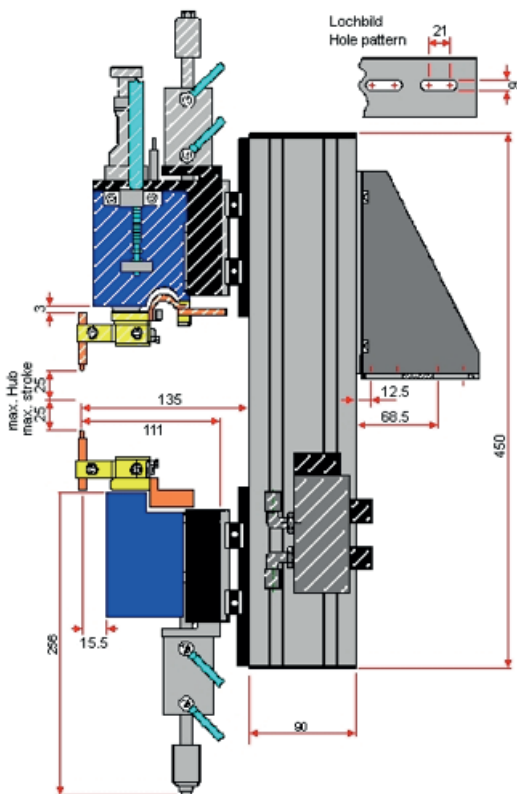
F120-S



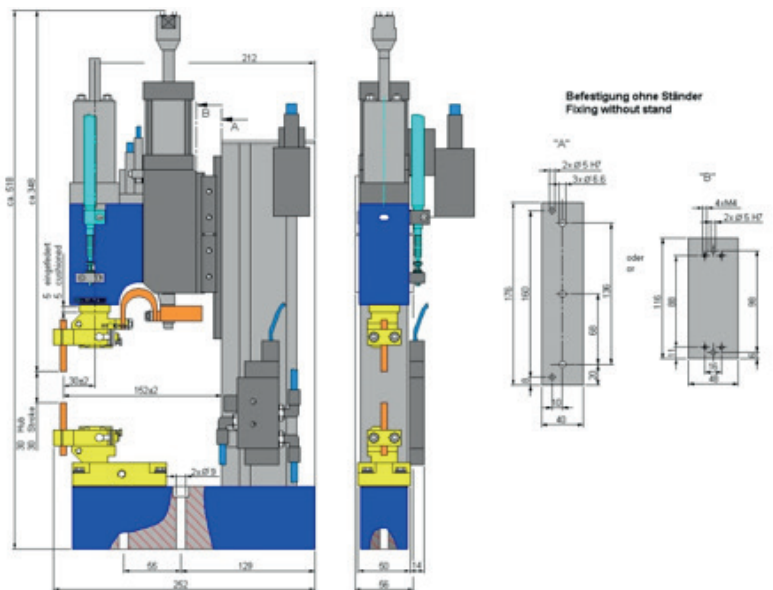
F120-M



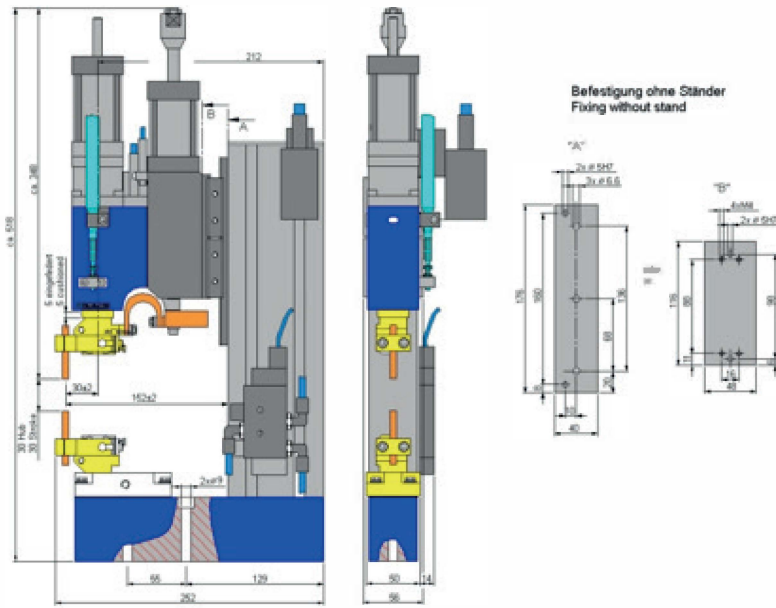
F120-H



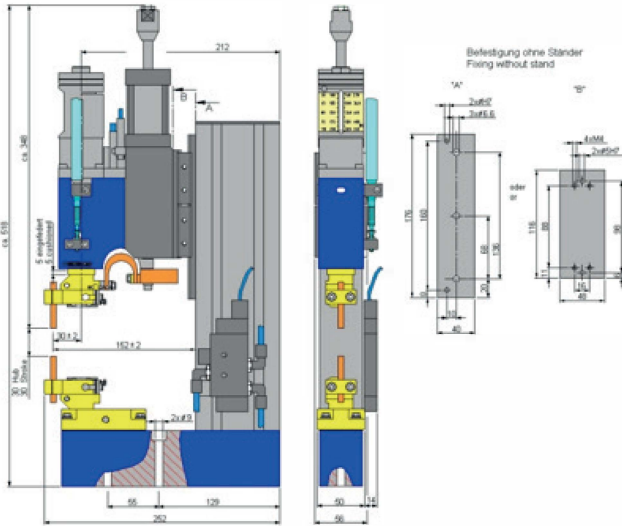
F160-S



F160-240



F160-550



FD120

