



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.

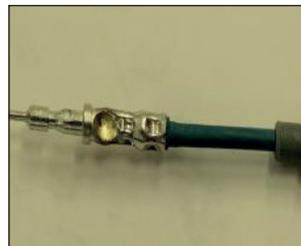
The F120, F160 and FD120 series is designed for welding of materials which require precise and reliable welds continuously

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.

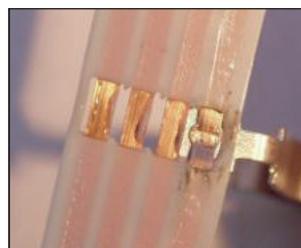
TYPICAL APPLICATIONS



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

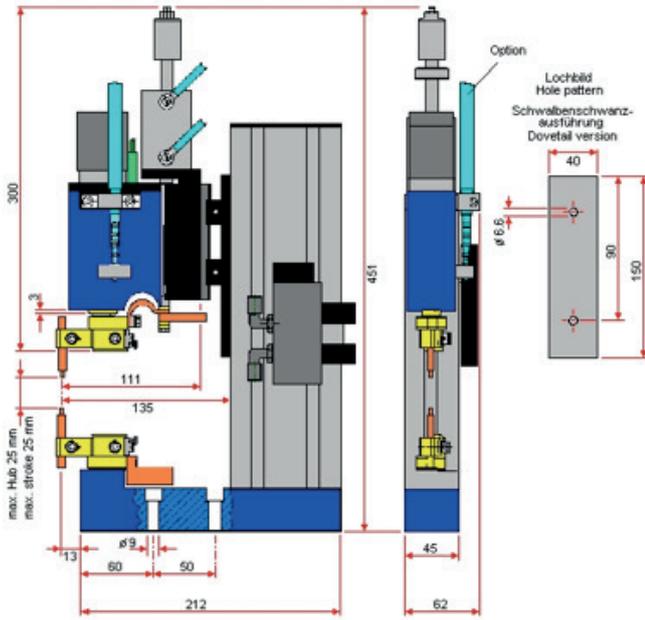
	F120	F160	FD120
Configuration	See product overview on page 1; F120 can be equipped with three and F160 with four different springs		
Options	Add-on set - displacement measuring sensor; automatic weld head without stand and without lower electrode holder	Add-on set - displacement measuring sensor; electrode 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

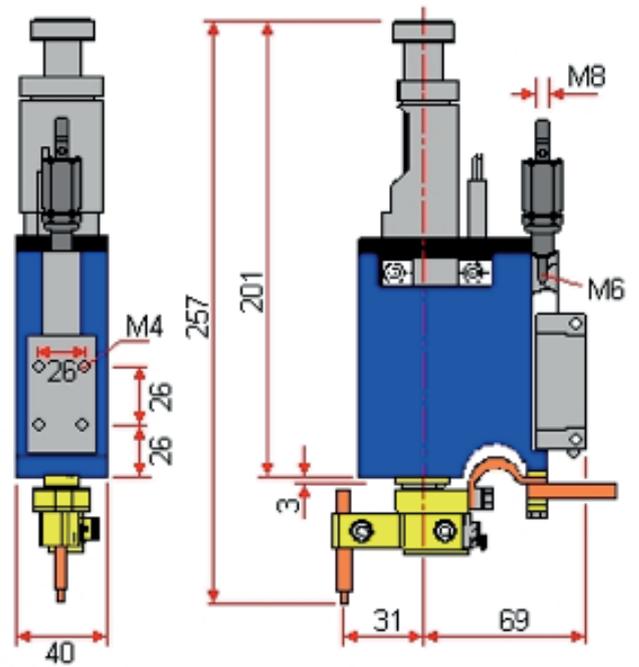
	F120	F160	FD120
Weight	from 5,5 to 7 kg	approx. 8 kg	approx. 5,5 kg
Dimensions (LxHxD)	vary	vary	260x420x90 mm

DRAWINGS

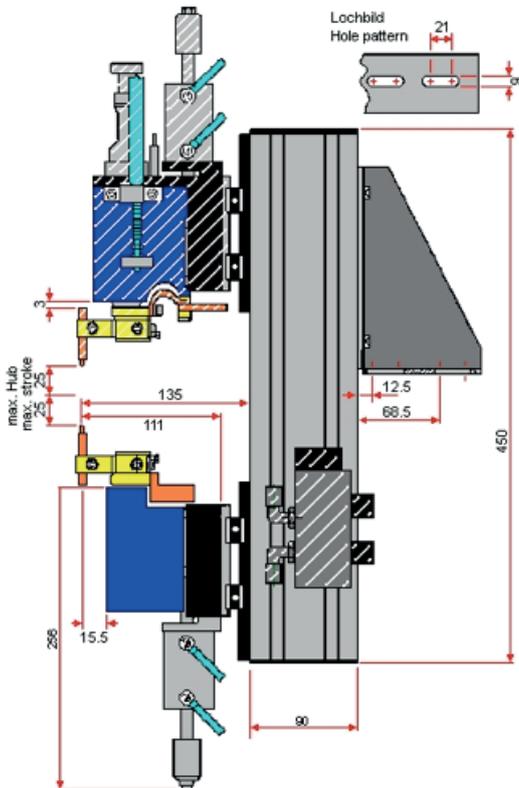
F120-S



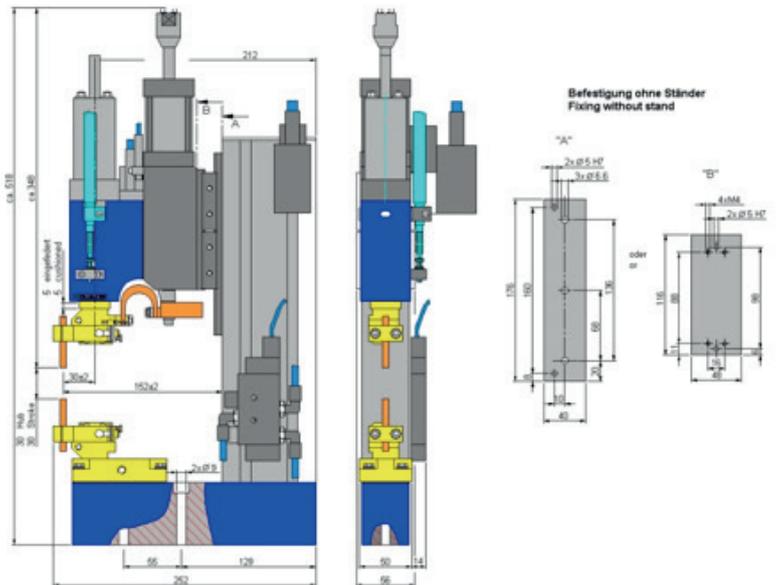
F120-M



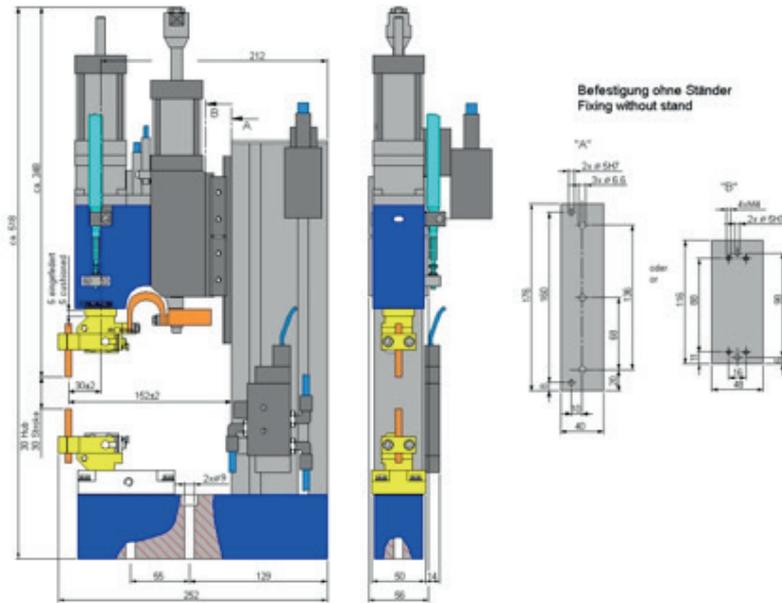
F120-H



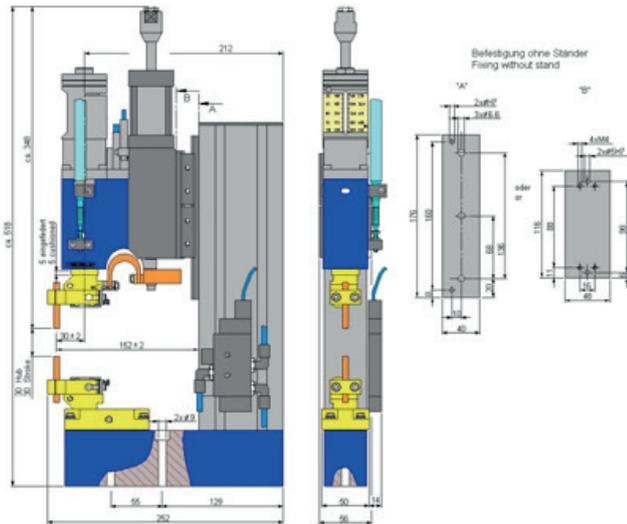
F160-S



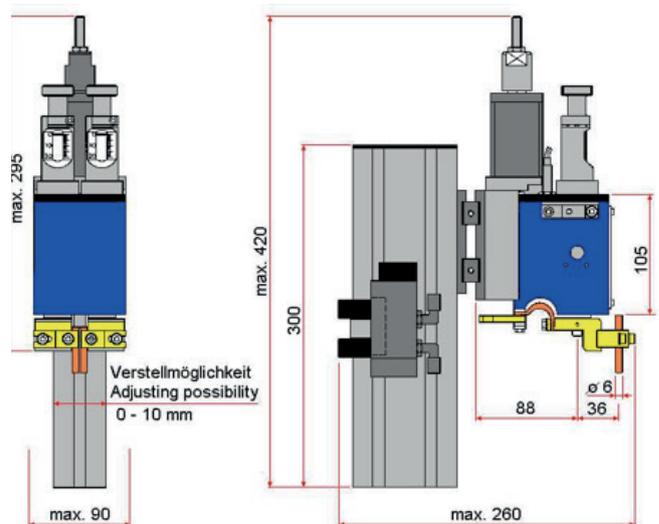
F160-240



F160-550



FD120



Lindberghstrasse 1 • DE-82178 Puchheim, Germany
 T: +49 (0) 89 83 94 030 • Fax : +49 (0) 89 839403 68
 info@amadamiyachi.eu • www.amadamiyachieurope.com
 ISO 9001 Certified Company



EUROPE

Amada Miyachi Europe BV
 Helmond, The Netherlands
 T: +31 (0) 492 542 225
 info@amadamiyachi.eu

Amada Miyachi Europe Kft.
 Budapest, Hungary
 T: +36 1 431 9927
 info@amadamiyachi.eu

Amada Miyachi Europe
 Derby, United Kingdom
 T: +44 (0) 1332 361 238
 info@amadamiyachi.eu

Amada Miyachi Europe
 Saint Germain en Laye, France
 T: +33 (0) 139 046 430
 info@amadamiyachi.eu

Amada Miyachi Europe
 Torino, Italy
 T: +39 011 223 83 16
 info@amadamiyachi.eu

Amada Miyachi Europe
 Prague-West, Czech Republic
 T: +420 251 512 157
 info@amadamiyachi.eu

AMERICAS
Amada Miyachi America Inc.
 Monrovia, CA, USA
 T: +1-626-303-5676
 info@amadamiyachi.com

Amada Miyachi do Brasil Ltda.
 Sao Paulo, Brasil
 T: +55-11-4193-1187
 antonio.ruiz@miyachi.com

ASIA
Amada Miyachi Co., Ltd.
 Noda, Japan
 T: +81-4-7125-6177
 sales@miyachi.com

Amada Miyachi Shanghai, Co., Ltd.
 Shanghai, China
 T: +86-21-6448-6000
 zqzhang@msc.miyachi.com

Amada Miyachi Korea Co., Ltd.
 Gyeonggi-do, Korea
 T: +82-31-8015-6810
 dykim@mkc.miyachi.com

Amada Miyachi Taiwan Co., Ltd.
 Taipei, Taiwan R.O.C.
 T: 886-2-2397-4778
 keigaku@miyachi.com

Amada Miyachi (Thailand) Co., Ltd.
 Samutprakarn, Thailand
 T: +66-2751-9337-8
 info@mtl.miyachi.com

Amada Miyachi Vietnam Co., Ltd.
 Ho Chi Minh City, Vietnam
 T: +84-8-3771-7972

Amada Miyachi India Pvt., Ltd.
 Bangalore, Karnataka
 info@miyachiindia.com

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