

FITWELD 300 | Product introduction



What's in the box:

- FitWeld 300 delivery includes a new product information package containing:
 - a printed quick guide and safety instructions leaflet.
 - a CD containing a FitWeld 300 video and all language versions of the FitWeld 300 operating manual and Kemppi product catalogue.



A printed quick guide is included in the machine's delivery package. It is a quick, visual way to get started with the FitWeld. It contains following information:

- delivery package contents
- list of additional components needed
- details and codes of the consumables
- cable connections
- changing the wire spool and feed rolls
- welding wire preparation and connection
- gas flow rate adjustment for GasGuard operation
- polarity change instructions (FCW & MCW use)
- basic controls of the machine
- how to connect the welding circuit



FITWELD 300 | Portable and compact

- Designed for free movement, for the mobile user
- Easy to carry around in a workshop or a worksite



FITWELD 300 | Efficient and powerful

- FitWeld's welding heritage shines through with precise and crisp arc characteristic



FITWELD 300 | Practical protection

- Designed for tough welding environment
- Degree of protection is IP 23S
- Machine is designed for outdoor use, but not in rain



FITWELD 300 | Customer segments

- Shipyards and offshore, tack welding
- Metal fabrication
- Installation & maintenance
- Rental & hire
- Agriculture
- Process industry
- Automotive industry

Applications

- Thin & medium thickness sheet welding
- Tacking of heavier plate thickness
- Pipe welding
- Solid, flux-cored and metal-cored wires



FITWELD 300 | Product features

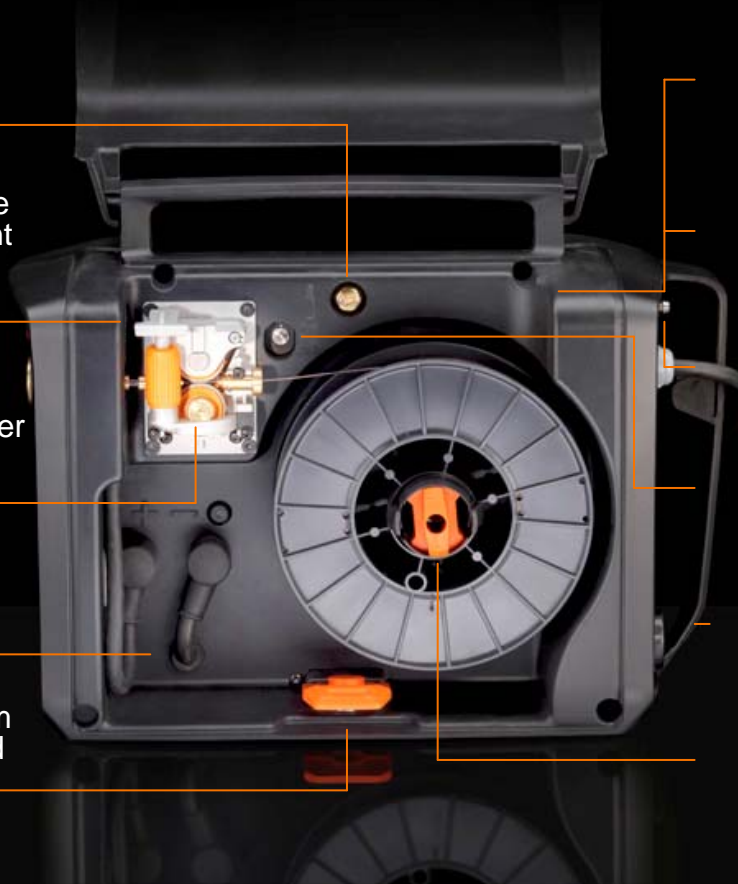
Adjustment for shielding gas flow to welding gun.

Brights™ LEDs illuminate the wire feed cabinet, making wire spool changes and adjustment easy and safe in dark conditions.

GT WireDrive™ is compact and strong, giving rapid response to welding gun trigger signals. Designed for multiple arc start use.

Easy polarity change allows either positive or negative welding.

Cabinet door latch mechanism is protected from damage and accidental opening.



QuickArc™ ignition ensures precise, clean arc ignition, so spatter is minimised and arc stabilisation is fast.

Reinforced fibre plastic case protects the power source in extreme conditions.

GasGuard™ function prevents welding without shielding gas in 2T/4T position.

Three position switch for self shielded and shielded filler wires.

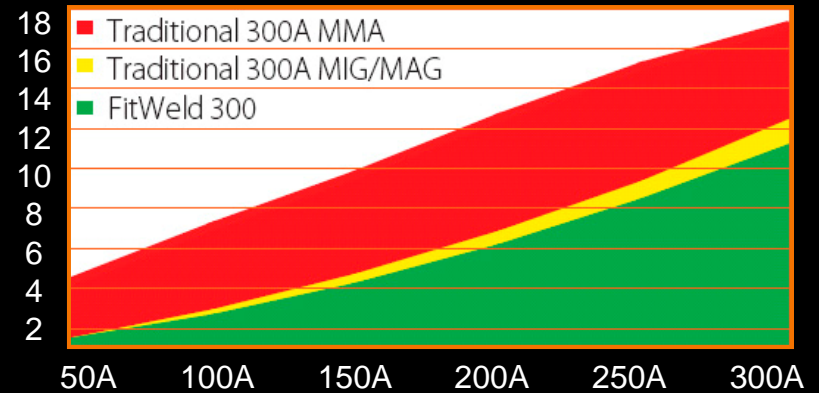
Strong grab handles make carrying and lifting easy, also protecting rear fittings.

Enclosed wire cabinet design helps to protect filler wire from the welding environment.

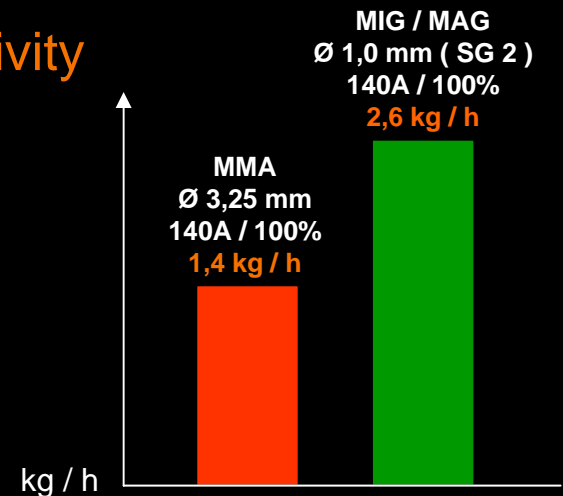
FITWELD 300 Real savings

- FitWeld™ 300 offers economy of power usage when compared to traditional welding equipment choices.
- Input power savings up to 57%, and welding speed appr. double compared to MMA welding.
- In comparison with traditional MIG/MAG, FitWeld power saving is 9%.

Power usage

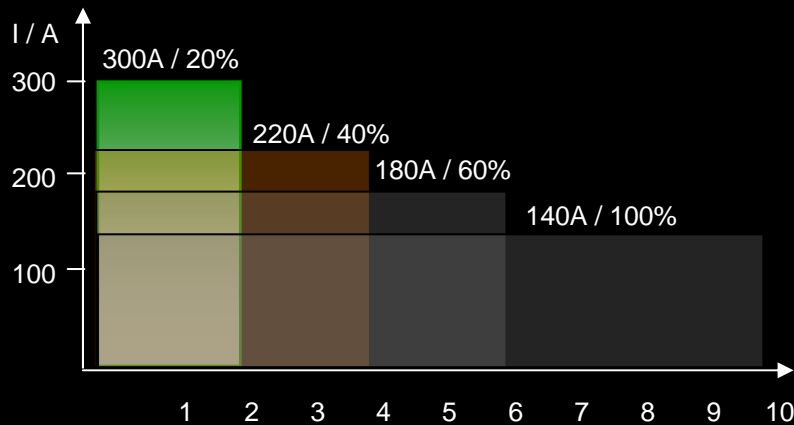


Productivity



FITWELD 300 | Load capacity

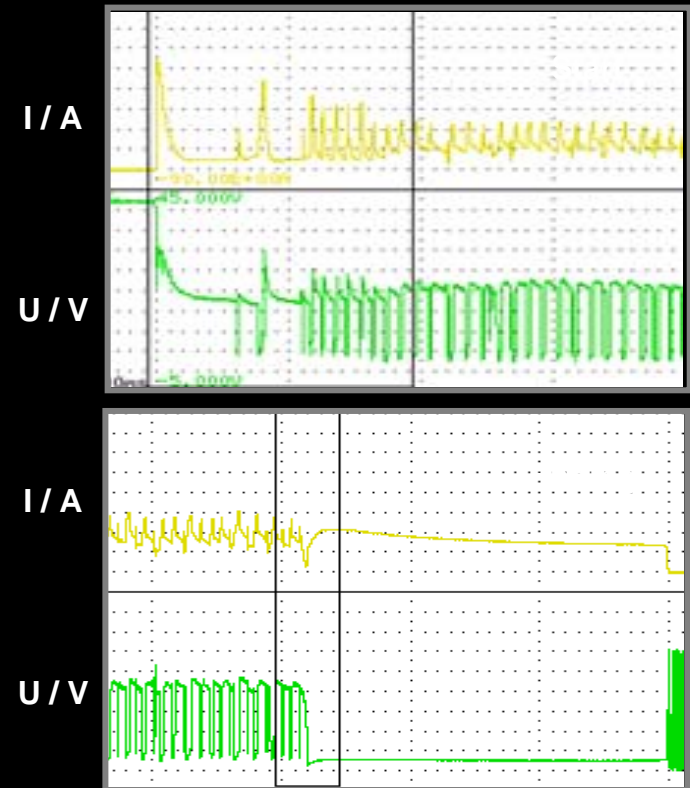
- FitWeld 300 load capacity is 300A at 20% duty cycle
 - Load capacity is measured in 40°C
 - Measurement is based on 10 min ED
 - Load capacity is comparable to Kempomat 2500



FITWELD 300 | Welding characteristics

Fe / 1.0mm / SG 2 / Mix gas / Wfs 4,0m / min
QuickARC™ in start 200 ms

- QuickArc™ ignition ensures
 - precise and clean arc ignition
 - fast arc stabilization
 - minimal spatter during the arc ignition phase
 - fast, controlled current rise: 1000 A/ms
- Auto end process
 - Auto burn back during arc termination phase
 - Controlled finish aids restart



FITWELD 300 | MIG/MAG compared to MMA

- Benefits of the MIG/MAG welding compared to MMA
 - It is easier
 - It has higher arc time
 - It is faster and more productive
 - It is more flexible (FCW/MCW use etc.)
 - It has more penetration
 - It is possible to mechanize
 - It is more environmentally friendly
 - MIG/MAG filler wire is more economical compared to MMA electrodes
- All together
 - MIG/MAG improves productivity and speed of welding, because it's more effective than MMA welding
 - In total the biggest cost of welding is the salary cost (appr. 80%)

FITWELD
300

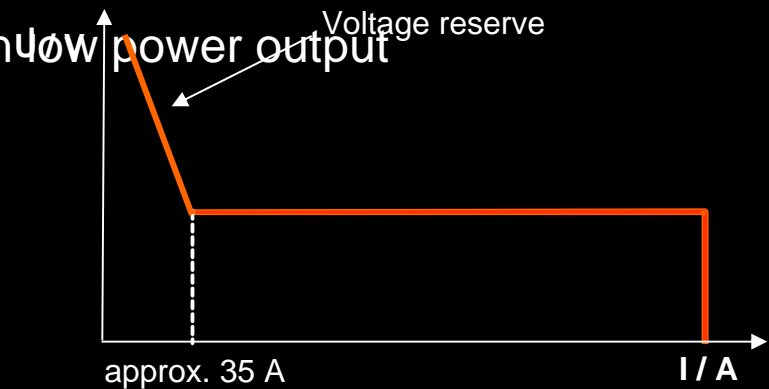
A confident basic MIG/MAG machine

For all common MIG/MAG wires

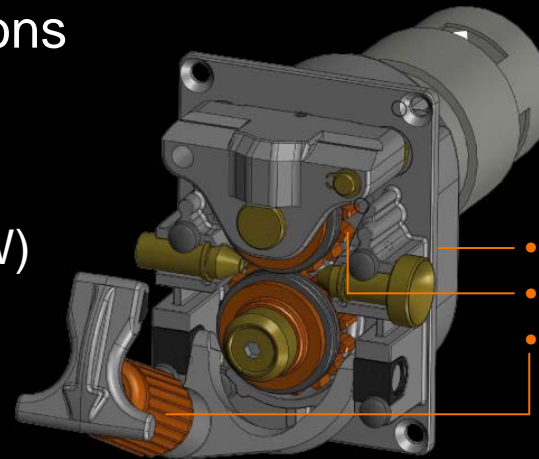
- Good welding characteristics
- Fe, stainless steel, Al alloys
- Fe 0.8/1.0/1.2mm
 - CO₂ or mix gases
- Ss 0.8/1.0/1.2 mm
 - 98% Ar + 2% CO₂ (O₂)
- Al alloys 1.0/1.2mm
 - Argon
- CuSi3 1.0 mm
 - Argon or 98% Ar + 2% CO₂ (O₂)
- FCW/MCW 0.9/1.0/1.2mm
 - CO₂ or mix gases



- High inverter operational frequency is 27 kHz (54 kHz output)
 - Stable and constant power output
- FitWeld incorporates a new type of characteristic curve to improve arc performance
 - Improved arc stability
 - Keeps arc alive at low welding power (Better for CO₂ applications)
 - Significant spatter reduction even on low power output



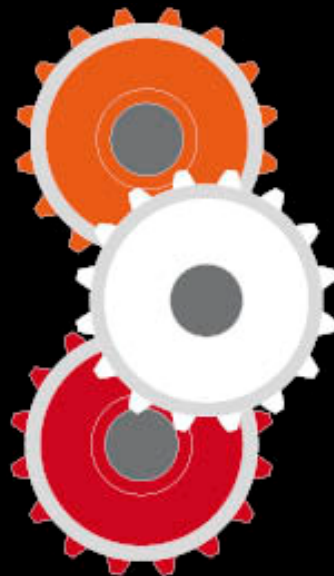
- Delivery set-up is for 1.2 mm solid wire (SG 2)
- One wire size and feed roll pair with symmetric V-groove profiles
- Geared feed rolls (both grooved, upper roll with bearing)
- Three groove profiles for different wire alloys, wire types and welding applications
- General recommendation:
 - V-groove (solid)
 - Knurled V-groove (FCW / MCW)
 - U-groove (Al)





New GT WireDrive™
design – GT02

- Long life gearbox
- Geared feed rolls
- Easy regulation of wire feed pressure

FITWELD 300 Quick guide



	ø mm		
M	0.8/0.9	(1)	W001047
	0.8/0.9	(2)	W001048
	1.0	(1)	W000675
	1.0	(2)	W000676
	1.2	(1)	W000960
	1.2	(2)	W000961
M	1.0	(1)	W001057
	1.0	(2)	W001058
	1.2	(1)	W001059
	1.2	(2)	W001060
M	1.0	(1)	W001067
	1.0	(2)	W001068
	1.2	(1)	W001069
	1.2	(2)	W001070

			
Fe, Mg, Fc	0,8...1,2 mm	steel W003881	brass W003536
Ss, Al, Fe, Mg, Fc	0,8...1,2 mm	plastic W003963	plastic W003962

FITWELD 300 | Polarity change

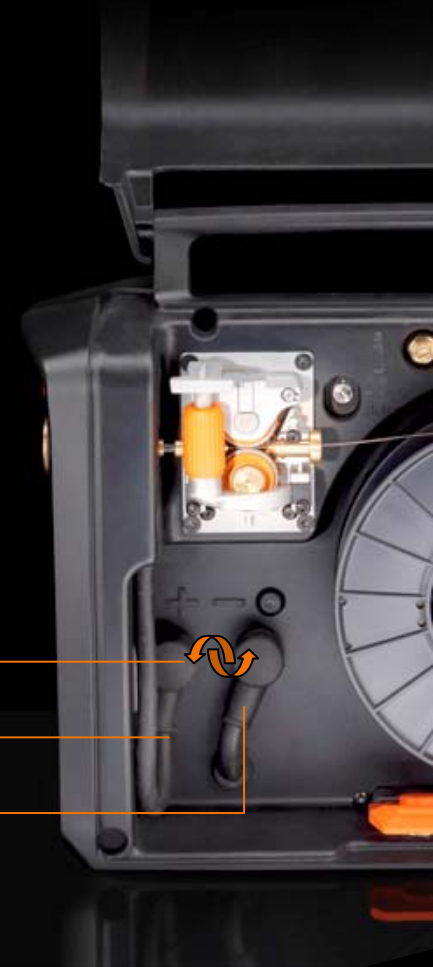
- For solid wires and all types of Fe/Ss flux-cored wires
- Use on either polarity (DC+ or DC-)
- Rubber protected polarity terminal connectors
- Clearly marked polarity symbols (+/-)

Polarity change connectors location

- Tool included for polarity change

• DC+ pole

• DC- pole



Technical data

Mains voltage	3 ~, 50/60 Hz 400 V -15% +10%	
Rated power max.	11.0 kVA	
Load capacity 40 °C	300 A / 20%	
Connection cable / fuse delayed	4G1.5 (5m) / 10A	
Open circuit voltage	43 V	
Power ratio at maximum current	0.95	
Efficiency at maximum current	0.85	
Welding range	11- 32 V	
Spool, max. ø	200 mm	
Feeding mechanism	2-roll feed	
Filler wires	Fe solid	0.8 – 1.2 mm
	Fe cored	0.8 – 1.2 mm
	Ss	0.8 – 1.2 mm
	Al	1.0 – 1.2 mm
External dimensions	L x W x H	457 x 226 x 339 mm
Weight		14.5 kg

FITWELD 300 | Ordering information

FitWeld™ 300 6291000

- Includes an earth return cable, a gas hose and a primary power cable
- Earth return cable 35 mm², length 5.0 m
- Gas hose length 6.0m
- Power connection cable 5.0m (4G 1.5 mm²)
- Instruction package containing printed quick guide and safety leaflet, a full operating manual in a pdf file and a commercial film

FitWeld™ 300 sales packages

- **FitWeld™ 300 MMT 32 3.0m 6291001**
 - Includes 6291000 + MMT 32 3.0m MIG gun 6253213MMT
- **FitWeld™ 300 MMT 32 4.5m 6291002**
 - Includes 6291000 + MMT 32 4.5m MIG gun 6253214MMT

FITWELD ₃₀₀ MMT 32 MIG gun

Reliable wire feed

- Flexible rubber support improves wire feeding
- Stiff and low-friction steel spiral for Fe solid wires and for FCW/MCW applications
- DL teflon liner for Al and Ss filler wires
- Efficient cooling, low contact tip temperatures

Welding gun	MMT 32
Ar + CO2	35% / 320A
Wire Ø / Fe, Ss	0.6 ... 1.2mm
Aluminium	1.0 ...1.2mm
Cooling	Gas



FITWELD 300 | Order information

FitWeld™ 300 optional feed rolls

Item	Type	Lower roll	Upper roll
• Feed roll 0.8/0.9mm V-groove	W001047	W001048	
• Feed roll 1.0mm V-groove	W000675	W000676	
• Feed roll 1.2mm V-groove#	W000960	W000961	
• Feed roll 1.0mm V-knurled	W001057	W001058	
• Feed roll 1.2mm V-knurled	W001059	W001060	
• Feed roll 1.0mm U-groove	W001067	W001068	
• Feed roll 1.2mm U-groove	W001069	W001070	

Standard on delivery

Transport unit for FitWeld 300 machine and gas cylinder

- **Transport unit ST 7 6185290**

