

FASTMIG™ SYNERGIC



Kemppi FastMig™ Synergic – All the elements needed for successful MIG/MAG welding from the same device

- Basic welding
- Synergic welding
- Root pass welding

The FastMig™ Synergic range is suitable for the MIG/MAG welding of all materials in the heavy and medium heavy metal industry. The range is modular, allowing the construction of different welding configurations by varying power source, wire feed and panel options.

The power to weight ratio of the energy-saving FastMig™ Synergic power sources for 300, 400 and 500 amperes is without peer.

The wire feed unit casings are designed for demanding conditions and different environments. Three models are available for 200 mm and 300 mm wire spools. MSF 53 and 57 have shock-proof, recyclable double plastic casings. A powerful engine with precise gears and power transmission guarantee an uninterrupted, reliable wire feed. Two panel options are available for each wire feed device to suite different welding needs.

The FastCool 10 provides effective cooling of liquid cooled MIG/MAG welding guns in heavy duty applications.

FastROOT™ process is an optional FastMig™ software product for fast, accurate root pass welding in Fe and Ss materials (See page 25).

Benefits

- **Easy to handle**
 - Lightweight, compact and modular design
- **Versatility**
 - Two panel options for each wire feeder
 - Synergic programs library for the most common materials
- **Spatterless MIG welding**
 - Optional FastROOT™ welding process software product for fast, accurate root closure welding in Fe and Ss materials

Main applications

- Heavy and medium heavy metal fabrication workshops
- Shipyards and Offshore
- Chemical and Process industry
- Steel structure workshops

FAST - Formula Arc System Technology

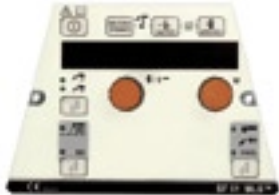
Arc properties guaranteed to increase welding productivity and quality

FastMig™ Synergic panels

- Choose the control level that suits your application

With clear and logical displays, the FastMig™ Synergic range panels have a large number of different features and special functionalities enabling further improvements in welding quality and productivity.

The MSF 53 wire feed unit can be equipped with either the SF 51 panel with basic functionality or the more versatile SF 52 synergic panel while the MSF 55 and 57 wire feed devices can be equipped with the basic SF 54 panel or the synergic SF 53 panel.



Panels 51 and 54 contain e.g. the following basic functions

- Digital displays
- Stepless welding voltage control
- Stepless wire feed control
- MMA welding option
- Gas test
- Wire inch
- MLS™ (Multi Logical System) allows exchangeable panels



In addition to the basic functions, synergic panels 52 and 53 include:

- Crater filling
- Hot start
- Creep start
- Memory locations for storing MIG parameters
- Optional FR-MIG process for root pass welding
- MLS™ (Multi Logical System) allows exchangeable panels



FastMig™ Synergic wire feeders – for different welding environments



MSF 53

- compact and lightweight making it easy to use in tight situations
- material: double skinned durable and impact resistant plastic
- for 200 mm wire spools
- Panels: basic 51, synergic 52



MSF 55

- functional, stylish and lightweight, suits conventional workshop applications
- material: glass fibre reinforced polyamide and aluminium
- for 300 mm wire spools
- Panels: basic 54, synergic 53



MSF 57

- designed for extra tough workshops and site use
- material: double skinned durable and impact resistant plastic
- for 300 mm wire spools
- Panels: basic 54, synergic 53

FastMig™ Synergic -range includes

3 power sources: KMS 300, KMS 400, KMS 500

3 wire feeders: MSF 53, MSF 55, MSF 57

4 panel options: SF 51, 52, 53 and 54

Cooling unit FastCool 10

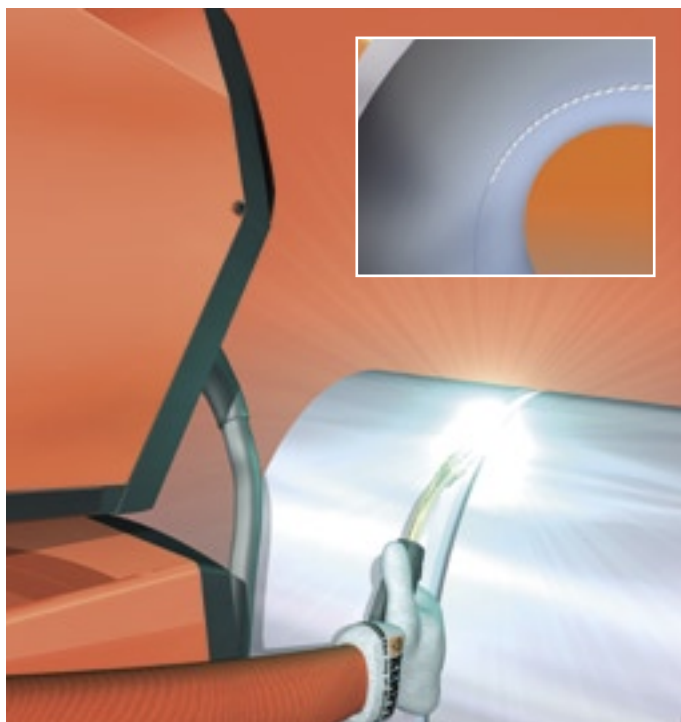
Transport unit PM 500

Technical Data

| FastMig™ Power sources | | KMS 300 | KMS 400 | KMS 500 |
|-------------------------------|------------|----------------------|----------------------|----------------------|
| Mains voltage | 3~50/60 Hz | 400 V -15 %...+20 | 400 V -15 %...+20 | 400 V -15 %...+20 |
| Rated power | 60% ED | - | - | 26.1 kVA |
| | 80% ED | - | 19,5 kVA | - |
| | 100% ED | 13.9 kVA | 18.5 kVA | 20.3 kVA |
| Connection cable/fuse delayed | | 4 x 6 S - 5 m / 25 A | 4 x 6 S - 5 m / 35 A | 4 x 6 S - 5 m / 35 A |
| Load capacity 40 °C | 60% ED | - | - | 500 A / 39 V |
| | 80% ED | - | 400 A / 34 V | - |
| | 100% ED | 300 A / 29 V | 380 A / 33 V | 430 A / 35.5 V |
| Open circuit voltage | | 50 V | 50 V | 50 V |
| Power ratio at max current | | 0.9 | 0.9 | 0.9 |
| Efficiency at max current | | 87 % | 87 % | 87 % |
| Welding range | MIG | 10 V...37 V | 10 V...39 V | 10 V...42 V |
| | MMA | 10 A...300 A | 10 A...400 A | 10 A...500 A |
| External dimensions | L x W x H | 590 x 230 x 430 mm | 590 x 230 x 430 mm | 590 x 230 x 430 mm |
| Weight | | 34 kg | 35 kg | 36 kg |

| FastMig™ Wire feeders | | MSF 53 | MSF 55 | MSF 57 |
|------------------------------|------------|--------------------|--------------------|--------------------|
| Operating voltage | | 50 V DC | 50 VDC | 50 VDC |
| Rated power | | 100W | 100 W | 100 W |
| Load capacity 40 °C | 60% ED | 520 A | 520 A | 520 A |
| | 100% ED | 440 A | 440 A | 440 A |
| Feeding mechanism | | 4-roll feed | 4-roll feed | 4-roll feed |
| Wire feed speed | | 0...25 m/min | 0...25 m/min | 0...25 m/min |
| Spool, max. ø | | 200 mm | 300 mm | 300 mm |
| Filler wires ø | Fe, Ss | 0.6...1.6 mm | 0.6...1.6 mm | 0.6...1.6 mm |
| | Cored wire | 0.8...1.6 mm | 0.8...2.0 mm | 0.8...2.0 mm |
| | Al | 1.0...1.6 mm | 1.0...2.4 mm | 1.0...2.4 mm |
| External dimensions | L x W x H | 510 x 200 x 310 mm | 620 x 210 x 445 mm | 625 x 243 x 476 mm |
| Weight | | 9.4 kg | 11.1 kg | 14 kg |
| Material | | plastic | metal | plastic |

| FastMig™ Cooling unit | | FastCool 10 |
|------------------------------|-----------|---------------------------------|
| Operating voltage | | 1 ~, 50/60 Hz 400 V -15%...+20% |
| Connection capacity | 100% ED | 120 W |
| Cooling power | | 1.25 kW |
| Maximum pressure | | 400 kPa |
| Recommended cooling liquid | | 20 % - 40 % ethanol/water |
| Tank volume | | 3 l |
| External dimensions | L x W x H | 570 x 230 x 280 mm |
| Weight | | 13 kg |



FastROOT™

Developed by Kemppi, FastROOT™ welding process is an optional FastMig™ software product for fast, accurate root pass welding in Fe and Ss materials.

The FastROOT™ welding process is only available for use with the FastMig™ SF 52 and SF 53 function panels. The Kemppi FastROOT™ welding process software can be purchased as an up-grade to standard FastMig™ Synergic machines at a later date if required.

FastROOT™ process is an excellent option over conventional root pass welding in MMA, TIG and MIG/MAG.

Order Information

| Power sources | | |
|--|----------------------|-----------|
| FastMig™ KMS 300 | | 6053000 |
| FastMig™ KMS 400 | | 6054000 |
| FastMig™ KMS 500 | | 6055000 |
| Panels | | |
| SF 51 | | 6085100 |
| SF 52 | | 6085200 |
| SF 53 | | 6085300 |
| SF 54 | | 6085400 |
| FastROOT™ -feature | | 6265011 |
| Wire feeders | | |
| MSF 53 | | 6065300 |
| MSF 55 | | 6065500 |
| MSF 57 | | 6065700 |
| Cooling unit | FastCool 10 | 6068100 |
| Transport units | | |
| | PM 500 | 6185291 |
| | PM 501 (with PSL 55) | 6185292 |
| | P 500 | 6185265 |
| | T 10* | 6185231 |
| Accessories | | |
| Remote control units | | |
| | R10, 5 m | 6185409 |
| | R10, 10 m | 618540901 |
| | R20, 5 m | 6185419 |
| | RMT 10 (for PMT) | 6185475 |
| Remote controlled interconnecting cable, 10 m | | 6185481 |
| MSF 53 hanging frame (incl. KPS mounting set) | | 6185285 |
| MSF 55 hanging kit | | W001694 |
| MSF 53 protection slides (incl. KPS mounting set) | | 6185286 |
| Swing arm KV 401 Fastmig MSF 55 and MSF 57 | | 6185248 |
| Gun holder | GH30 | 6256030 |

| MIG -guns | |
|--|---------|
| PMT 35 3 m | 6253513 |
| PMT 35 4,5 m | 6263514 |
| PMT 42 3 m | 6254213 |
| PMT 42 4,5 m | 6254214 |
| PMT 50 3 m | 6255013 |
| PMT 50 4,5 m | 6255014 |
| PMT 30 W 3 m | 6253043 |
| PMT 30 W 4,5 m | 6253044 |
| PMT 42W 3 m | 6254203 |
| PMT 42W 4,5 m | 6254204 |
| PMT 52W 3 m | 6255203 |
| PMT 52W 4,5 m | 6255204 |
| WeldSnake™ guns on page 33 | |
| Earth cable | |
| 5 m, 50 mm ² | 6184511 |
| 5 m, 70 mm ² | 6184711 |
| Cable for MMA welding | |
| 5 m, 50 mm ² | 6184501 |
| 5 m, 70 mm ² | 6184701 |
| Interconnection cables | |
| KWF 70-1,8-GH | 6260401 |
| KMS 70-1,8-WH | 6260410 |
| PROMIG 2/3 70-10-GH | 6260326 |
| PROMIG 2/3 70-10-WH | 6260334 |
| PROMIG 2/3 70-20-GH | 6260327 |
| PROMIG 2/3 70-20-WH | 6260337 |
| PROMIG 2/3 70-30-GH | 6260330 |
| PROMIG 2/3 70-30-WH | 6260340 |
| Other lengths subject to enquiry | |
| * FastMig™ requires mounting kit, order number W002085 | |