

MinarcMig Evo 200

An adaptive tool for the mobile welder

Product training



Energy efficient

Main advantages

- Easy to use
- Good welding characteristics
- Light weight and portable
- For all common wire materials
- Power generator use
- Maximum power from 16 A supply



Welding applications

- Thin sheet fabrication
- Installation & maintenance
- Car repair
- Education
- Rental & hire
- Agriculture



Kemppi quality

**MinarcMig Evo 200 is designed and manufactured by Kemppi Oy (Finland)
according to arc welding equipment standards
IEC 60974-1, -10 and complies with IEC 61000-3-12**

Fulfil

Rated values

Electrical safety requirements

Mechanical strength tests

Welding environment tests

Wherever welding takes you

- Precise weld quality and arc ignition
- 200 amps of MIG/MAG welding power from a 16 A supply
- Automatic and Manual operation modes
- Use with Fe, FCW, Ss, Al and CuSi filler wires, 1 and 5 kg spools
- Large graphical display guides user
- PFC technology for ultimate energy efficiency
- Designed for use even with 100 m long supply cables
- Suitable for mains network or generator use
- Lightweight and portable (13 kg)



Energy efficient

Wherever welding takes you

- Simple power adjustment and step-less power setting in Automatic mode
- Fast to find the correct welding parameters
- Intuitive plate thickness regulation (mm) for fast set-up
- LCD interface benefits welding education
- Ideal machine for rental/hire business



PFC technology

- Complies with IEC 61000-3-12
- Excellent generator usability
 - Work even with 4,2 kW generator
 - Work even with 100 m supply cable
- 70% less electromagnetic interference for electrical network
- Less current demands from the mains network
- Better tolerance for input voltage fluctuations than none PFC machines
- Input voltage tolerance is 230 V \pm 15%
- Suitable for use with power generators



Energy efficient

PFC technology

MinarcMig Evo offers to user great welding power utilisation and energy efficiency from the given 1ph 230V power supply. Compared to the classic Minarc range, Minarc Evo models deliver their maximum welding output and large duty cycle from 16 A fused power supplies or allow significantly reduced energy demands where welding current is lower. For example, reducing supply fuse demands to 10 A for 100 A of welding current. So, PFC gives better welding power utilisation on limited supplies with 16 A fused supply is available, it gives the best welding output and duty cycle in its class.

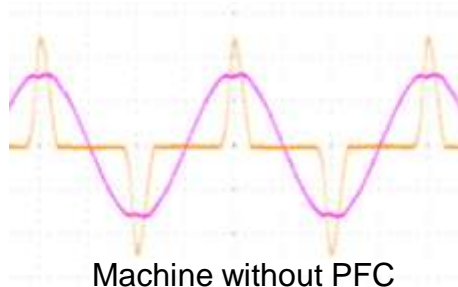
Without PFC

100 A output → 16 A fuse

Power factor at 100% ED 0,65

= supply voltage

= input current

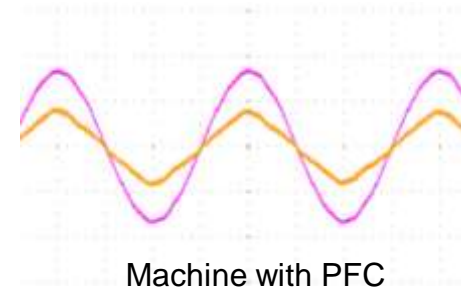


Less efficiency and available welding output

With PFC

100 A output → 10 A fuse

Power factor at 100% ED 0,99



Maximum utilisation of supply current



Wherever welding takes you

- **Specification provides large operational area, ideal for site work applications**
- Excellent welding characteristics even with the >100 m supply cable (2,5 mm²)
- Single phase 230 V net is widely available → Large input Voltage tolerance **± 15%**
- **Generator use and size**
- Protected against input Voltage variations
- **For min. welding current MinarcMig Evo 200 needs 4,2 KW**
- **For max. welding current MinarcMid Evo 200 needs 8,0 KW**

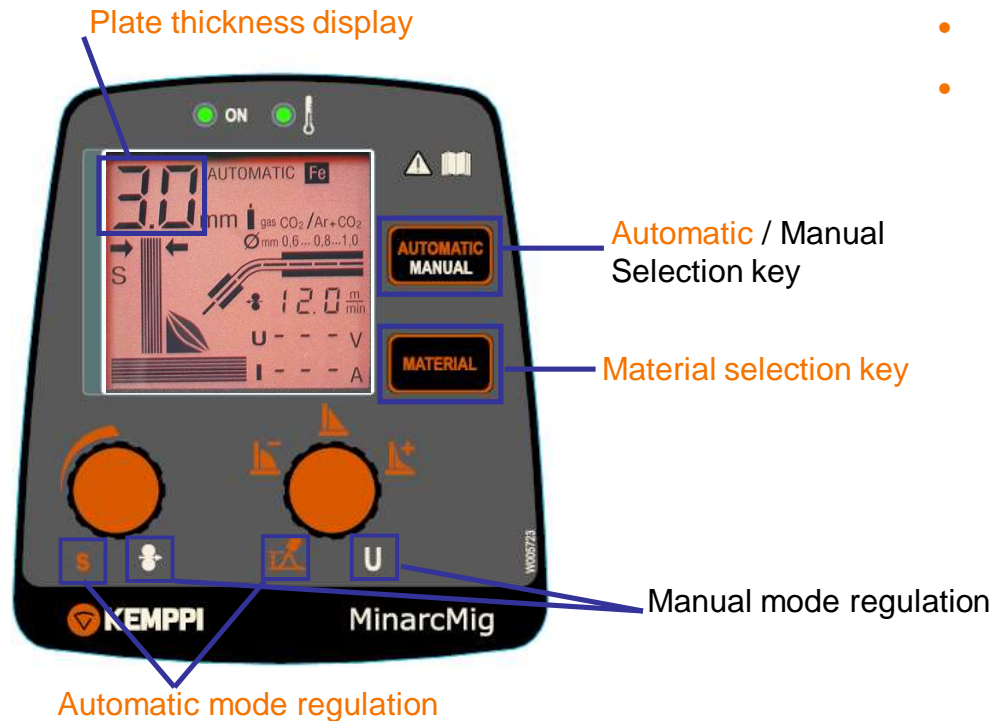
Welding characteristic

- Good welding characteristics for all common material types
- Automatic Arc dynamics (automatic mode)
- Two different choices for arc dynamics settings (manual mode)



LCD display

- **MinarcMIG Evo 200** has a large, clear LCD display
- Two different operation / welding modes **Automatic** and **Manual**



- Full display U, I, WFS
- Menu for material and shielding gas
 - Fe → Ar + CO₂ and CO₂
 - Ss → Ar + CO₂
 - Al → Ar
 - CuSi → Ar

Display mode and functions

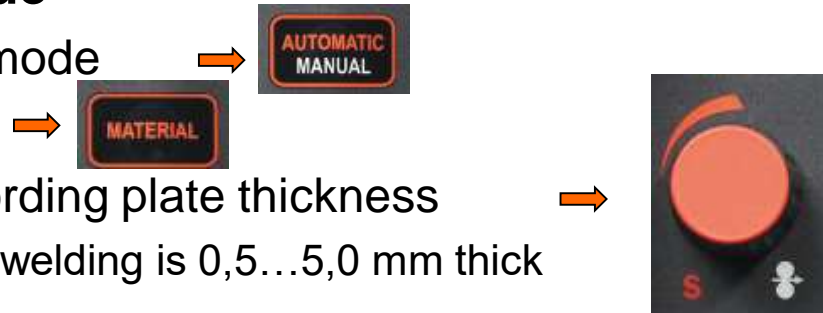
- **Automatic welding mode**

Select Automatic welding mode

Select welded material

Select welding power according plate thickness

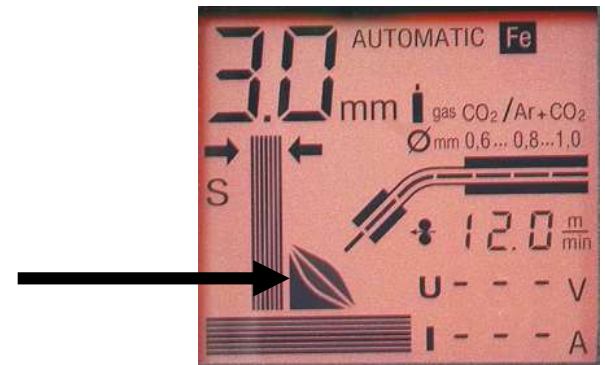
Optimum range for steel welding is 0,5...5,0 mm thick




- **Arc dynamics** for arc length fine tuning

Regulation range -9..0..+9

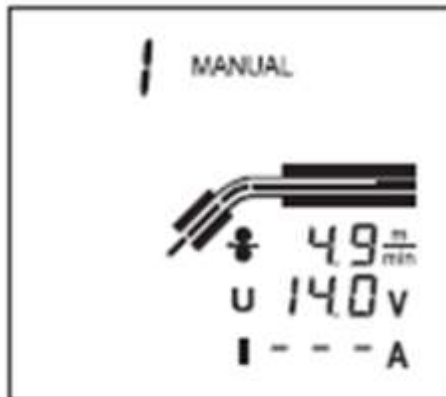
Factory setting is 0



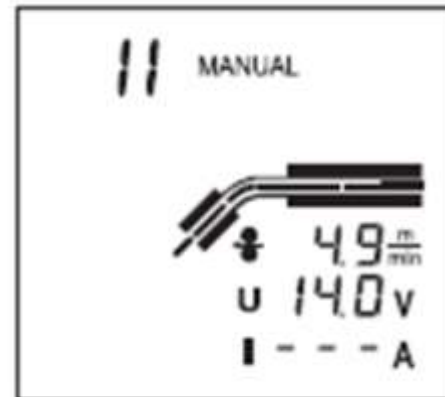
Display mode and functions

- **Manual** welding mode
 - Select Manual welding mode from key
 - Separate **Wfs** (**m/min**) and **U** (**V**) regulation → 
 - Two choice for arc dynamics settings – manual I OR manual II

Colder arc



Hotter arc



Arc fine tuning

- Depending on joint type, wire diameter and shielding gas
- Regulate arc behavior and arc length
- Also influences the amount of spatter



Normal arc length
(factory setting)

Short arc length

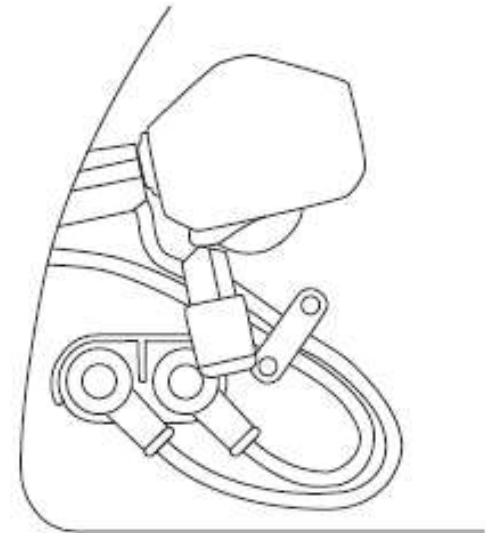


Longer arc length



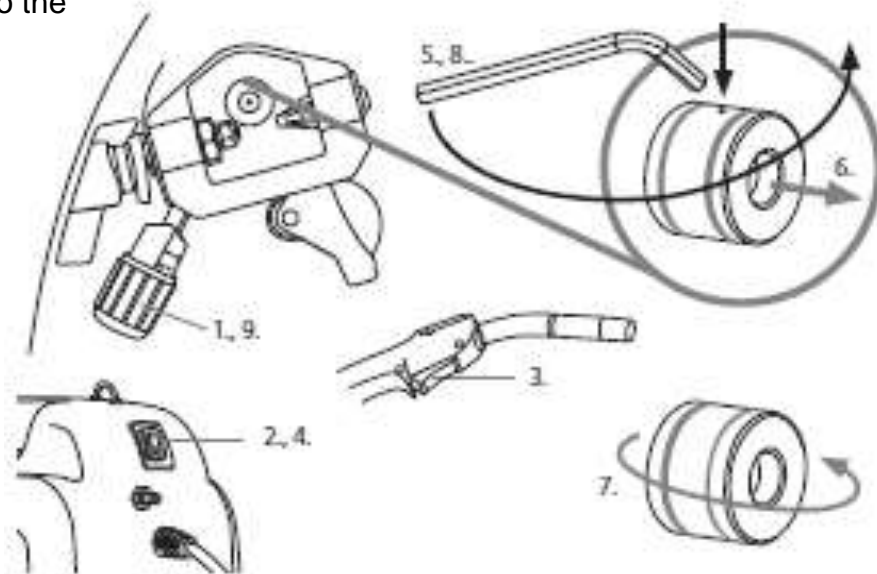
Polarity change

- **Polarity change may be required to suit alternative filler wires**
 - Weld with DC+ or DC- wires
 - DC+ polarity for solid wires
 - DC - polarity for gasless flux cored wire
 - Polarity selection is easily made by changing cable taps



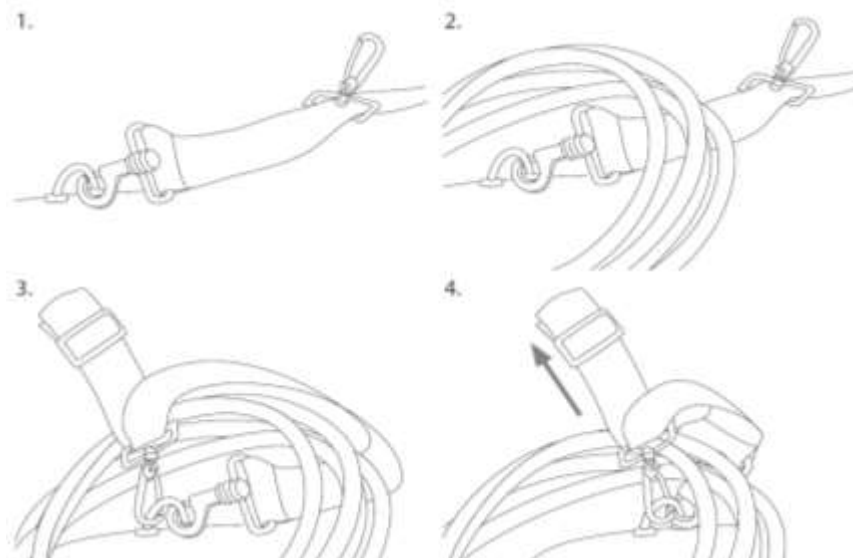
Feed roll groove change

1. Release the pressure control lever
2. Switch the machine on from the main switch
3. Press the welding gun trigger and drive the feed roll in such position that the locking screw is clearly visible and can be accessed
4. Switch the power off from the main switch
5. Release the feed roll locking screw with 3 mm Allen wrench approximately half a turn
6. Pull the feed roll from its shaft
7. Turn the feed roll and reinstall it to the shaft all the way to the bottom making sure that the screw is on the shafts level
8. Tighten the feed roll locking screw
9. Close the pressure control lever



Shoulder strap

- Easily adjusted to a comfortable length
- Can be used to transport machine and cables



Using the shoulder strap to secure the cable set during transport

Portability

- Easy to carry, 200 A, 35 % duty cycle, MIG/MAG welding machine
- Light weight IGBT inverter, weighing **13 kg** with all cables
- Machine weight inc Ø **200 mm** steel wire spool **18 kg**
- Machine dimensions **450 x 227 x 368 mm**
- **Operates with two wire spool sizes**
 - Ø 200 mm (5,0 kg)
 - Ø 100 mm mini spool (1,0 kg)
- *Note benefit:* All wire types are not available in both spool sizes

Reliable

At site

- Power sources are developed for indoor / outdoor use
 - Main switch is rubber protected against dirt and humidity
 - Operation switches are protected against external impacts
 - Plastic impact-resistant body
 - Black parts material PA 6-1 GF 15 FR(17)
 - Orange parts material ABS
 - Withstands impact in normal use

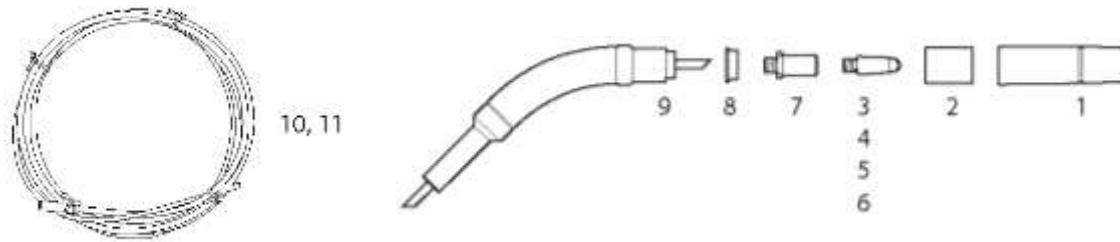


Transport unit MST 400

- Product code: 6185294 + SP600409
 - Narrow trolley design, 2 wheels
 - Easy machine release for car transportation
 - Max gas cylinder size 20 kg
 - Well balanced, large wheel design for easy movement



Daily maintenance



Remove welding spatter from the welding gun's tip and check the condition of the parts. Exchange damaged parts with new ones where necessary. Only use original Kemppi spare parts.

Change damaged insulation parts to new ones if required.

Check the tightness of the welding gun and earth return cable connections.

Check the condition of the supply voltage and welding cables, and replace if faulty or damaged.

Technical data

| | | |
|--------------------------------------|-------------|-------------------------------------|
| Connection voltage | 1~ 50/60 Hz | 230 V \pm 15 % |
| Rated power at max. current | 35 % ED | 200 A / 6.2 kVA |
| Output (40 °C) | 35 % ED | 200 A / 24 V |
| | 100 % ED | 120 A / 20 V |
| Power factor at 100 % ED | | 0.99 |
| Efficiency at 100 % ED | | 83,6 % |
| Wire spool | ∅ | 200 mm / 5 kg |
| External dimensions | L x W x H | 450 x 227 x 368 mm |
| Weight (incl. gun and cables 3.0 kg) | | 13 kg |
| EMC class | | A |
| Standards | | IEC 60974-1, -10, IEC 61000-3-12 |

Ordering numbers

| | | |
|--|-------|----------|
| MinarcMig Evo 200 (incl. gun, cables, gas hose and shoulder strap) | | 61008200 |
| Welding gun MMG22 | 3 m | 6250220 |
| Earthing cable and clamp | 3 m | 6184003 |
| Shielding gas hose | 4.5 m | W001077 |
| Shoulder strap | | 9592163 |
| BETA 90X electronic welding helmet | | 9873047 |