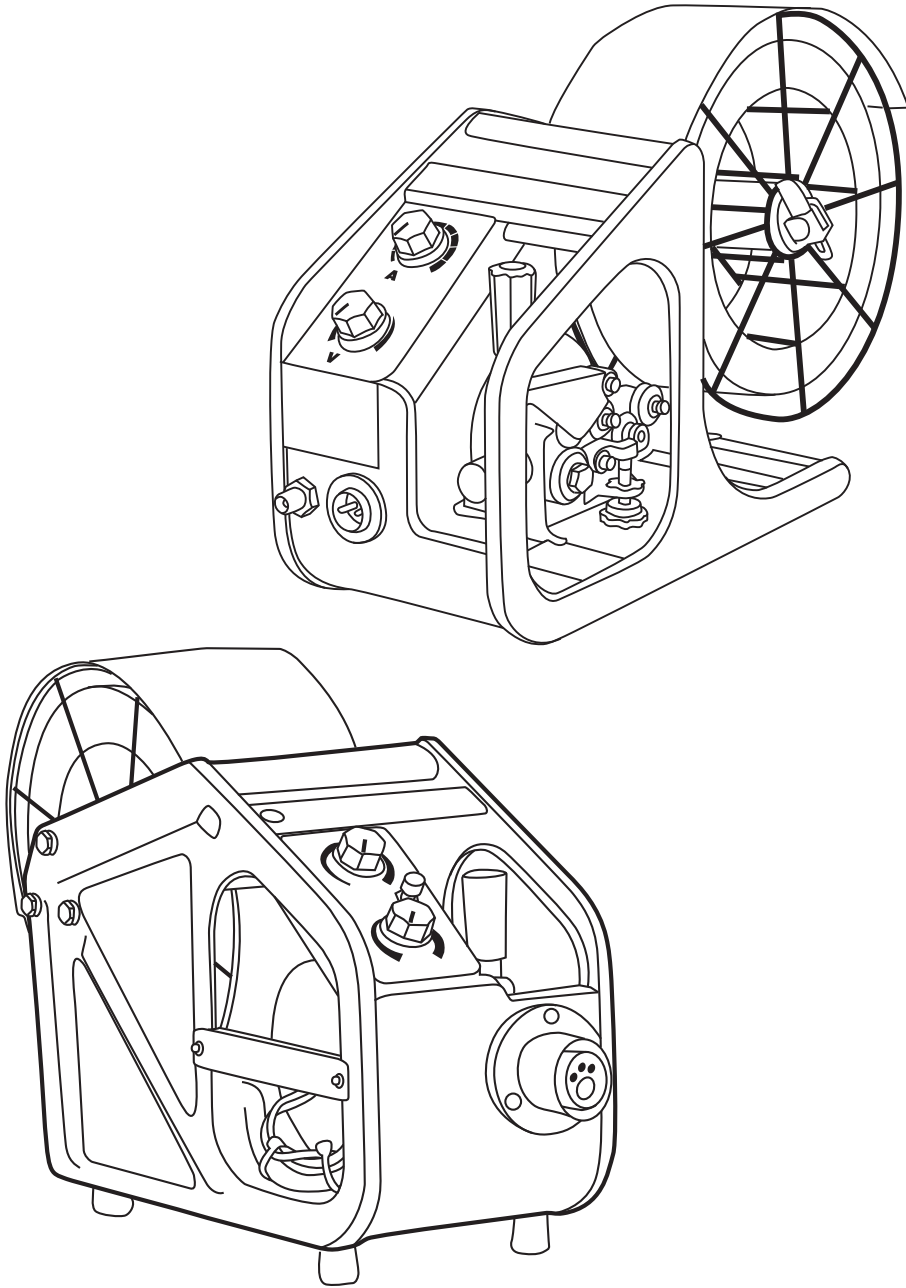


HF

10E, 10P



Operating manual *EN*

操作手册 *ZH*

OPERATING MANUAL

English

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EN

1. INTRODUCTION

1.1 General

Congratulations on choosing the Kemppi HF wire feeder. Used correctly, Kemppi products can significantly increase the productivity of your welding, and provide years of economical service.

This operating manual contains important information on the use, maintenance and safety of your Kemppi product. The technical specifications of the device can be found at the end of the manual.

Please read the manual carefully before using the equipment for the first time. For your own safety and that of your working environment, pay particular attention to the safety instructions in the manual.

For more information on Kemppi products, contact Kemppi Oy, consult an authorised Kemppi dealer, or visit the Kemppi web site at www.kemppi.com.

The specifications presented in this manual are subject to change without prior notice.

NOTE! Items in the manual that require particular attention in order to minimise damage and personal harm are indicated with this symbol. Read these sections carefully and follow their instructions.

Disclaimer

While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions. Kemppi reserves the right to change the specification of the product described at any time without prior notice. Do not copy, record, reproduce or transmit the contents of this guide without prior permission from Kemppi.

1.2 About HF wire feeder

Kemppi's HF wire feeder is designed to be used especially with Kemppi's HiArc power sources. They are inverter MIG/MAG welding power sources to be used in 3-phase mains power supply. There are two power classes available, the 350-ampere version (HiArc 350A), and the 500-ampere version (HiArc 500A).

The HiArc power sources are equipped with automatic adjustment features. This means that you can use either manual mode or automatic mode when adjusting the welding parameters. In automatic mode, the HiArc chooses automatically the suitable preset welding parameters according to your wire and gas selections.

Welding gun connection:

- HF 10E is equipped with a Euro connector
- HF 10P is equipped with a Panasonic connector

Enjoy welding with your Kemppi product!

2. INSTALLATION

2.1 Before use

The product is packed in cartons designed specifically for them. However, always make sure before use that the products have not been damaged during transportation.

Check also that you have received the components you ordered and the instruction manuals needed. Product packaging material is recyclable.

NOTE! When moving the welding machine, always lift it from the handle, never pull it from the welding gun or other cables.

Operating environment

This machine is suitable for both indoor and outdoor use. Always make sure that the air flow in the machine is unrestricted. The recommended operating temperature range is -20...+40 °C.

Please read also the safety instructions concerning the operating environment earlier in this manual.

2.2 Power source connection

The HF wire feeder is recommended to be used with the Kemppi HiArc power source, but it can be used with other power source brands as well.

To connect the wire feeder to the power source, do the following:

1. Attach the wire feeder interconnection cable to the plus connector of the power source.
2. Attach the wire feeder control cable to the control connector of the power source.

NOTE! Normally the wire feeder should be connected to the plus pole. However, with some filler wires and shielding gases, you should connect the feeder to the minus pole, and the earth return cable to the plus pole.

2.3 Shielding gas connection

The shielding gas hose is fixed to the magnet valve of the HF wire feeder.

Connect the other end of the gas hose to a gas cylinder's control valve or to the shielding gas distribution network at your worksite.

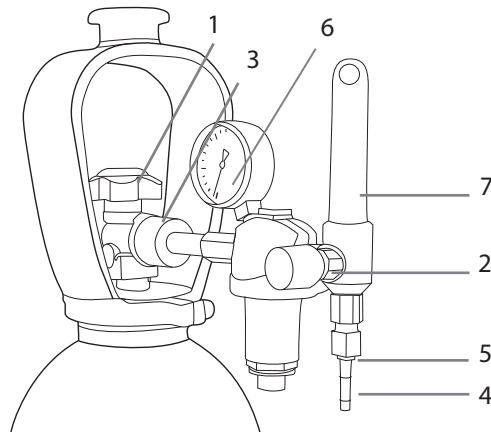
The thickness of the parent material, joint type and welding power define the required shielding gas flow rate.

NOTE! Make sure that you are using the correct type of shielding gas for the welding application.

To connect the shielding gas hose to a suitable regulator for MIG/MAG welding

1. Connect the shielding gas hose to the gas cylinder's control valve and tighten the connector (connector is not supplied in the package).
2. Adjust the shielding gas flow rate with the control valve screw.
3. Always close the cylinder valve after use.

Parts of the gas flow regulator



1. Gas bottle valve
2. Flow regulation screw
3. Connecting nut
4. Hose tail
5. Hose tail nut
6. Gas bottle pressure gauge
7. Shielding gas flow meter

2.4 Welding gun connection

HF 10E

Connect the welding gun cable to the Euro adapter socket located on the front of the machine and hand tighten only. Do not over tighten the collar.

HF 10P

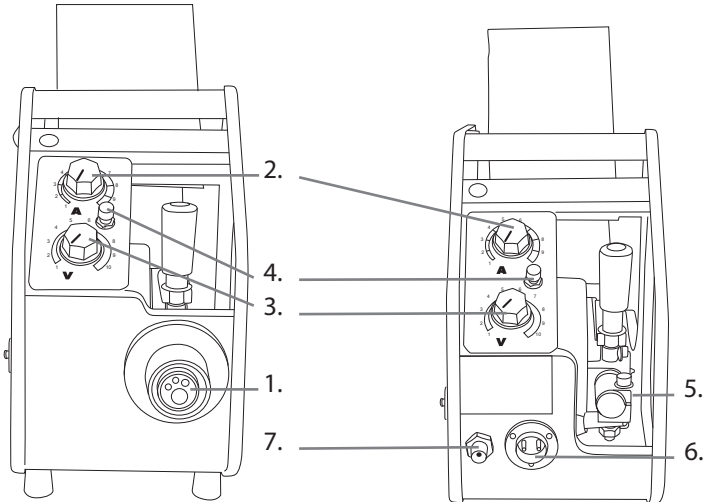
Attach the gun current cable to the connector on the wire feeder, and tighten the Allen screw. Attach the 2-pin connector of the control wire to the wire feeder connection. Connect the shielding gas hose to the wire feeder, and tighten the connection.

The welding gun leads the filler wire, shielding gas and electric current to the weld piece. When you press the welding gun trigger, shielding gas will flow and filler wire will begin to feed.

3. USING THE MACHINE

3.1 Machine introduction

3.1.1 Wire feeder front and side view

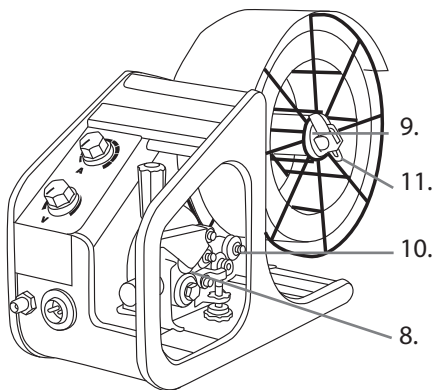


HF 10E front

1. EURO connector for welding gun
2. Amperage/WFS control knob
3. Voltage control knob
4. Wire inch button

HF 10P front

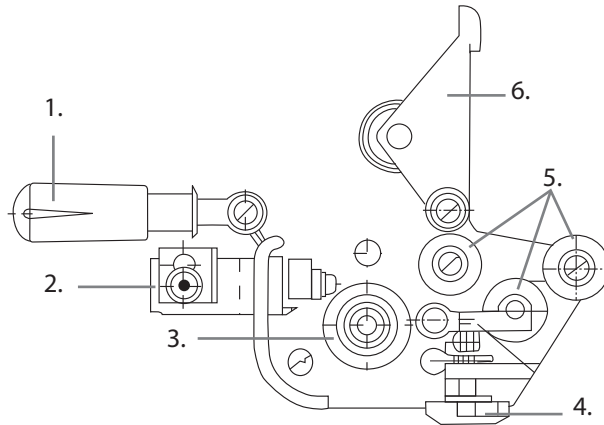
5. Panasonic connector for welding gun
6. Connector for trigger wires of gun
7. Gas connector for gun



Side

8. Wire feed mechanism
9. Wire spool hub
10. Shielding gas connector
11. Spool locking lever

3.1.2 Wire feed mechanism



1. Pressure arm
2. Front wire conduit
3. Wire drive roll
4. Straightening rolls adjustment knob
5. Straightening rolls
6. Top feed roll holder

3.2 Installing filler wire

With HF you can use 0.8 to 1.6 mm filler wires. The wire spool can be up to 300 mm in diameter and 105 mm in width.

When choosing the filler wire, remember that the wire must have approximately the same melting point as the base material to be welded.

NOTE! When changing the filler wire, always check that the feed rolls, their groove shape and size and the wire liner inside the welding cable are suitable for the wire you are using. Also check that you are using right polarity for the filler wire.

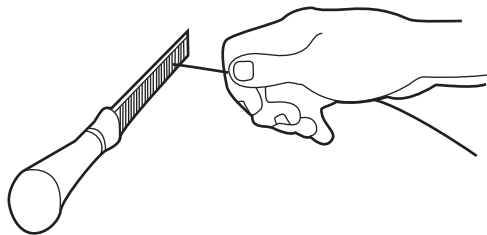
3.2.1 Mounting the wire spool

To mount the wire spool:

1. Turn the locking lever to open position.
2. Check the rotating direction of the wire spool and push the spool into its place so that it rotates in the right direction.
3. Turn the locking lever to closed position and tighten the securing screw.

3.2.2 Feeding the welding wire

NOTE! Remember to remove the sharp cut tip of the filler wire before loading the wire to the welding gun, so preventing damage to the liner inside the welding gun cable. It will also improve feed quality and increase the service life of your gun liner.



NOTE! When feeding the welding wire into the gun, be sure that you are not pointing the gun at anyone and that there isn't anything in front of the gun.

To feed the wire from the spool to the welding gun:

1. Open the pressure arm of the wire feed mechanism and lift the top roll holder to its up position.
2. Draw some loose wire from the spool and push it through the straightening rolls at the back of the mechanism. You can loosen the bottom straightening roll with the adjustment screw located below it.
3. Adjust the straightening rolls so that the wire is firmly fed into the drive roll.
4. Push the wire over the feed roll groove and through the front wire guide until it comes out from the Euro connector by about 150mm.
5. Replace the top feed roll holder over the wire and close the pressure arm.
6. Cut away any deformed wire section and dress the sharp wire tip as described above.
7. Connect the welding gun and tighten the collar.
8. Press the Wire inch button and allow the filler wire to feed through the gun cable to the contact tip.

3.3 Setting the pressure of the feed rolls

To make filler wire run smoothly into the wire liner and to the welding gun you can adjust the pressure of the feed rolls of the wire feed mechanism.

To increase the pressure applied to the welding filler wire, turn the black pressure adjustment knob in a clockwise direction.

To decrease the pressure applied to the welding filler wire, turn the black pressure adjustment knob in an anti-clockwise direction.

There is a graduation scale marked on the arm of the adjustment knob. The more pressure applied, the greater the number of graduation marks visible.

For hard steel and stainless steel filler wires, make sure there is sufficient pressure applied, so avoiding filler wire slippage in the feed rolls.

NOTE! Too much pressure may flatten the filler wire, damage its coating, cause friction and excessive wear to drive roll bearings and therefore reduced life.

3.4 Setting the spool brake force

To prevent the filler wire from uncoiling on overrun following use at high feed speeds, you can change the brake force of the welding spool.

The spool brake adjustment screw is located inside the spool hub. To adjust the brake force, unscrew the spool locking mechanism on the tip of the wire spool hub.

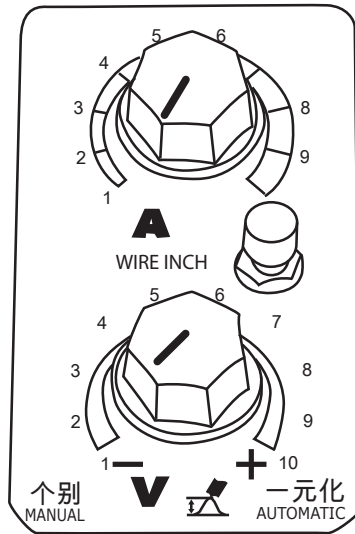
To increase the force turn the screw clockwise, and to decrease it, by turn the screw anticlockwise.

NOTE! Do not over tighten, and reduce the pressure for light filler wire types.

3.5 Changing the feed rolls

The drive roll has two different sized grooves in it. You can choose which groove to use by opening the drive roll securing screw and turning the drive roll other way round. The size of the groove currently in use is facing outward.

4. CONTROLLING WELDING FUNCTIONS



In the HF control panel you can adjust the welding current and welding voltage (V). The functions of these adjustments depend on whether you are using the power source in automatic or basic operating mode.

With the Wire inch button you can feed the filler wire into the welding gun.

4.1 Control panel functions in basic operation

If you are using the power source in basic operating mode without automatic functions, the control knobs have the following functions:

With the amperage knob (A) you can adjust the welding current and the wire feed speed. The wire feed speed increases with the amperage level.

With the voltage knob (V) you can adjust the welding voltage level. The voltage level determines the arc length.

4.2 Control panel functions in automatic operation

If you are using the power source in automatic operating mode, the power source takes care of adjusting the wire feed speed and the welding voltage according to the welding power you adjust.

In automatic operating mode the control knobs have the following functions:

With the amperage knob (A) you can set the welding power. The welding current, wire feed speed and the welding voltage are adjusted automatically according to this setting.

With the voltage knob (V) you can make fine adjustments to the welding voltage. The middle position of the knob is the default value.

5. MAINTENANCE

5.1 Regular maintenance

Check regularly the electrical connections of the machine. Clean any oxidised connections, and tighten the loosened cable connections. Remove regularly any dust and filings from the wire conduit tip and feed rolls.

Do not try to open the motor and the reductor of the machine for repair or lubrication. They do not need maintenance.

NOTE! Remember that the machine may be repaired only by an electrical contractor or installer authorised to perform such operations.

5.2 Disposal of the machine



Do not dispose of electrical equipment with normal waste!

In observance of European Directive 2002/96/EC on waste electrical and electronic equipment, and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and taken to an appropriate environmentally responsible recycling facility.

The owner of the equipment is obliged to deliver a decommissioned unit to a regional collection centre, per the instructions of local authorities or a Kemppi representative. By applying this European Directive you will improve the environment and human health.

6. TECHNICAL DATA

| | | HF 10E/10P |
|-----------------------|-----------|--------------------|
| Operating voltage | | 24 V |
| Rated power | | 65 W |
| Load capacity | 60% ED | 500 A |
| | 100% ED | 390 A |
| Feed mechanism | | 2-roll feed |
| Diametre of feed roll | | |
| Wire feed speed | | 0...21 m/min |
| Filler wires | | 0.8...1.6 mm |
| Gun connection | HF 10E | Euro |
| | HF 10P | Panasonic |
| Operating temperature | | -20...+40°C |
| Storage temperature | | -40...+60°C |
| External dimensions | L x W x H | 480 x 200 x 280 mm |
| Weight | | 9 kg |

7. ORDERING CODES

| | |
|---|----------|
| Wire feeder | |
| HF 10E | 6300110 |
| HF 10P | 6300120 |
| Wire feeder consumables | |
| Remote control box | SP004650 |
| Pressure arm assembly | W004642 |
| Pressure roller assembly | W004643 |
| Wire guide tube, Euro adapter (HF 10E only) | W004644 |
| Wire guide tube, Panasonic adapter (HF 10P only) | W005046 |
| Euro adapter / HF 10E only | W004648 |
| Panasonic adapter / HF 10P only | W005047 |
| Wire feeder roll 1.0 / 1.2 mm | W004645 |
| Wire feeder roll 1.2 / 1.6 mm | W004646 |
| Straightening roll assembly | W004647 |
| Wire spool shaft | W004649 |
| Welding guns | |
| MTP 350, 3 m | 6258353 |
| MTP 350, 4.5 m | 6258354 |
| MTP 500, 3 m | 6258503 |
| MTP 500, 4.5 m | 6258504 |
| Welding guns (Panasonic connector) | |
| MTP 350P, 3 m | 6258351 |
| MTP 350P, 4.5 m | 6258352 |
| MTP 500P, 3 m | 6258501 |
| MTP 500P, 4.5 m | 6258502 |
| Interconnection cables – optional extensions | |
| HiArc 10-70-G | 6310710 |
| HiArc 15-70-G | 6310715 |
| HiArc 10-50-G | 6310510 |
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