Operation instructions • english

1923790E
0509

PROMIG

200 ML

KEMPPI
The Joy of Welding

CONTENTS

1. PREFACE

1.1. Introduction

Congratulations on having purchased this product. Properly installed Kemppi products should prove to be productive machines requiring maintenance at only regular intervals. This manual is arranged to give you a good understanding of the equipment and its safe operation. It also contains maintenance information and technical specifications. Read this manual from front to back before installing, operating or maintaining the equipment for the first time. For further information on Kemppi products please contact us or your nearest Kemppi distributor.
The specifications and designs presented in this manual are subject to change without prior notice.

In this document, for danger to life or injury the following symbol is used:

Read the warning texts carefully and follow the instructions. Please also study the Operation safety instructions and respect them when installing, operating and servicing the machine.

1.2. Product introduction

PROMIG 200 ML is a mobile wire feed unit designed for dock yards and heavy metal industry. PROMIG wire feed units are used with PRO multi-function power sources. Due to its operational properties and mechanical durability, PROMIG 200 is very suitable for flux-cored electrode welding with long intermediate cables. Operation of wire feed unit is controlled and adjusted with microprocessor. The Tacho generator of wire feed motor enables an accurate and even adjustment of wire feed speed.
PROMIG 200 is designed to be used with filler wire reels of max 200 mm (5 kg).

This equipment's electromagnetic compatibility (EMC) is designed for use in an industrial environment. Class A equipment is not intended for use in residential location where the electrical power is provided by the public low-voltage supply system.

1.3. Operation safety

Please study these Operation safety instructions and respect them when installing, operating and servicing the machine.

Welding arc and spatters

Welding arc hurts unprotected eyes. Be careful also with reflecting arc flash. Welding arc and spatter burn unprotected skin. Use safety gloves and protective clothing.

Danger for fire or explosion

Pay attention to fire safety regulations. Remove flammable or explosive materials from welding place. Always reserve sufficient fire-fighting equipment on welding place. Be prepared for hazards in special welding jobs, eg. for the danger of fire or explosion when welding container type work pieces. Note! Fire can break out from sparks even several hours after the welding work has been finished!

Mains voltage

Never take welding machine inside a work piece (eg. container or truck). Do not place welding machine on a wet surface. Always check cables before operating the machine. Change defect cables without delay. Defect cables may cause an injury or set out a fire. Connection cable must not be compressed, it must not touch sharp edges or hot work pieces.

Welding power circuit

Isolate yourself by using proper protective clothing, do not wear wet clothing. Never work on a wet surface or use defect cables. Do not put MIG-gun or welding cables on welding machine or on other electric equipment. Do not press MIG-gun switch, if the gun is not directed towards a work piece.

Welding fumes

Take care that there is sufficient ventilation during welding. Take special safety precautions when welding metals which contain lead, cadmium, zinc, mercury or beryllium.

2. INSTALLATION

2.1. Removal from packaging

The equipment is packed in a durable package specially designed for it. It is however necessary to check the equipment before taking it in use, to make sure that the equipment or a part of it have not got damaged during the transportation. Also check that the delivery corresponds your order and that you have received all the necessary instructions for installing and operating the equipment. The packaging material can be recycled.

2.2. Locating the machine

Place the machine on a horizontal, stable and clean ground. Protect the machine from heavy rain and burning sunshine. Check that there is enough space for cooling air circulation in front of and behind the machine.

2.3. Serial number

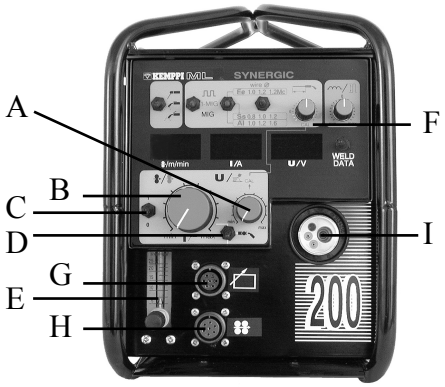
The serial number of the machine is marked on the machine CE-marking. Identification of the serial number is the only proper means of maintaining and identifying parts for a specific product. It is important to make correct reference to the serial number of the product when making repairs or ordering spare parts.

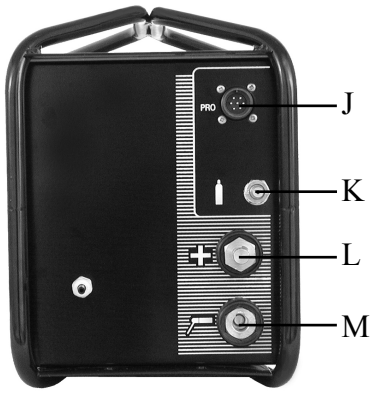
2.4. Installation and main parts

2.4.1. Assembling the equipment

Fasten the units by using the screws and bolts delivered with the equipment. Install welding gun and tighten carefully. Cable connections are presented in the following chapters.

2.4.2. Main parts and connections





Front machine

A Welding voltage (MIG)
B Wire feed speed (MIG) / Welding current (MMA)
C Main switch
D Control mode
E Flowmeter / regulator for shielding gas
F Function panel

Connections:

G Control cable of remote control
H Control cable connector for subfeeder / motorized gun
I Welding gun cable

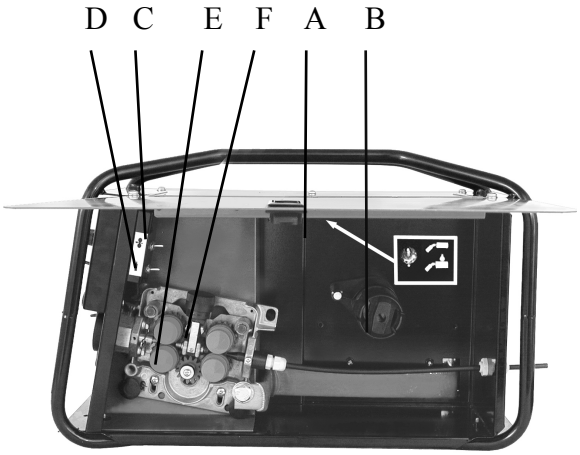
Back side

Connections:

J Control cable to power source
K Shielding gas hose (snap connector)
L Welding current cable
M Connection for MMA

Inside

A Selection of air/liquid cooling
B Wire reel locking
C Wire inch
D Gas test
E Tightening screw
F Feed roll



2.5. Lifting the equipment

For transferring the equipment or a part of it, use the machine handles. Machines can be lifted with ropes. Fasten the ropes carefully round the machine. Note! Check that the machine can not move vertically between the ropes.

2.6. Filler wire materials and equipment

2.6.1. Filler wires and wire feed

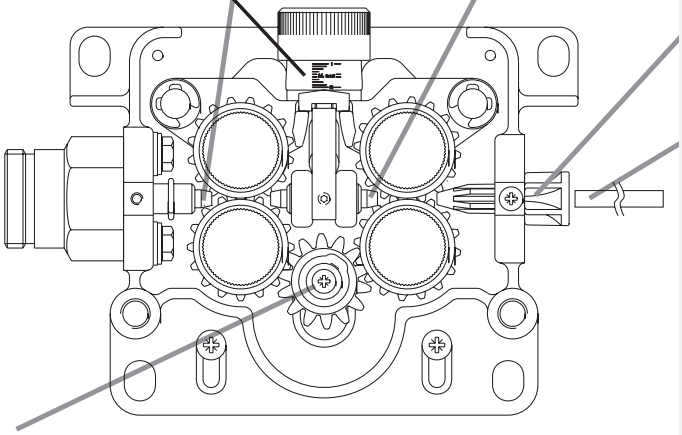
Choose contact tube, wire conduit and feed roll according to welding wire. Filler wires and the corresponding wire feed equipment are presented in the following scheme. The factory assembly includes feed rolls with plain groove and with orange wire guide tubes for welding filler wires of 0.9-1.2 mm (0.035”, 0.045” and 0.052”).

4 - roll wire feed mechanism

KEMPPI The Joy of Welding

Wire guide tubes

Fe Mc	ø 0,6…0,8 mm	ø 1,0 mm white	3134140	ø 2,0 mm orange	3134120	ø 2,0 mm plastic	4267220	ø 2,4 mm yellow	4268210
						ø 2,0 mm plastic	4266970		
Fc	ø 0,9…1,6 mm	ø 2,0 mm orange	3133700			ø 4,0 mm plastic	4270180	*Promig 511*	
	ø 1,6…2,4 mm	ø 4,0 mm blue	3134130	ø 4,0 mm blue	3134110	ø 4,0 mm brass	4267030		
Ss	ø 0,8…1,6 mm	ø 2,5 mm silver	3134290	ø 2,5 mm silver	3134300	ø 2,0 mm plastic	4267220	ø 3,0 mm yellow	4268560
Al	ø 1,6…2,4 mm	ø 3,0 mm yellow	3134710	ø 3,0 mm yellow	3134720	ø 4,0 mm plastic	4270180		

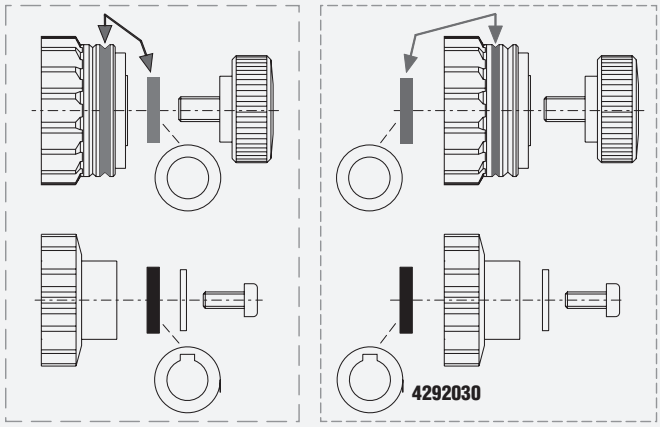


Vetoratas, drivhjul, trekktannhjul, drivhjul, gearwheel, Aufziehrad, aandrijfrol, galet d'entrainement

ø 28 mm (0 - 18 m/min) **4265240, ø 40 mm** (0 - 25 m/min) **4265250**
Muovi, plast, plast, plastic, plastic, Kunststoff, plastic, plastique

ø 28 mm (0 - 18 m/min) **4287860, ø 40 mm** (0 - 25 m/min) **4297270**
Teräs, stål, stål, stål, steel, Stahl, staal, acier

Syöttöpyörän uran valinta, val av matarhjulspår, valg av matehjul spor, valg af spor i trådhjul, selection of feed wheel groove, Auswahl der Transportrollennut, selectie van de draaddiameter groef, sélection de la gorge du galet



Vetorattaan valintalevyn siirto, flyttning av distansbricka, flytting av avstandsskive for matehjul, hvordan flytter man justerskiven, relocation of selection plate, Versetzen der Wahlschalterplatte, verplaatsing van selectie plaat, remise en place de la rondelle de sélection

Feed rolls

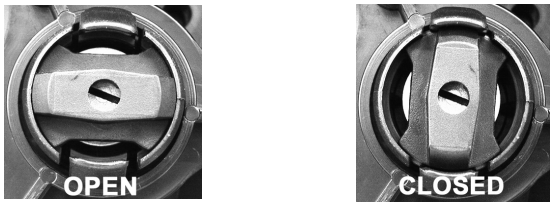
Fe Ss Al	Plain	ø 0,6/0,8	3133810	ø 1,0/1,2	3133210	ø 1,4-1,6/2,0	3133820	ø 2,4 black	3133880
		ø 0,8/0,8 (L) white	3143180	ø 1,0/1,0 (L) red	3138650	ø 1,6/1,6 (L) yellow	3141120	ø 3,2 blue	3133910
				ø 1,2/1,2 (L) orange	3137390				
Fe Fc Mc	Knurled			ø 1,0/1,2 red	3133940	ø 1,4-1,6/2,0	3133990	ø 2,4 black	3134030
				ø 1,2/1,2 (L) orange	3137380	ø 1,6/1,6 (L) yellow	3141130	ø 3,2 blue	3134060
Fe Fc Mc Ss Al	Trapezoid			ø 1,2/1,2 (L) orange	3142210	ø 1,4/1,4 (L) brown	3142220	ø 2,0/2,0 (L) grey	3142230
						ø 1,6/1,6 (L) yellow	3142200	ø 2,4 (L) black	3142240

(L) = Ball race

W000574

2.6.2. Installing wire reel

1. Install wire reel so that the hole in the reel is aligned with the pin on the reel holder. Use reel adaptor, if necessary.
2. Release the locking claws of wire reel locking by turning the latch 45 degrees.
3. Push the reel into its place. Note! Check the reel rotation direction.
4. Lock the reel by turning the locking latch.



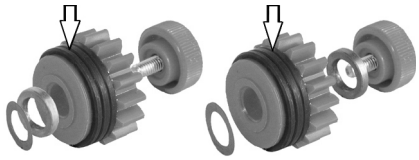
⚠ **Note! Check that the wire or wire reel does not touch the equipment body!**

2.6.3. Installing welding wire

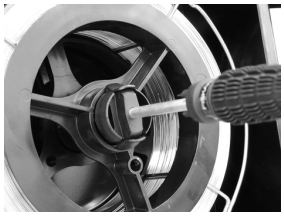
⚠ **Do not direct welding gun to yourself or to persons around you!**

Before installing welding wire, check that feed rolls, wire conduit and contact tip are suitable for the wire.

1. Install feed rolls, check that the right groove is in the wire feed line. The groove can be changed by changing the position of the adjusting plate.
2. Check that there are no sharp edges on wire end, round off if necessary. Sharp edges may damage wire guide and wire conduit. Watch out that the wire does not get loose!



3. Push the wire through wire guide tube into feed rolls. Do not release the pressure of the feed rolls.
4. Use wire inch switch to make the wire roll into the gun. You can also feed the wire to the gun by pressing the gun switch and pushing the wire slightly until it automatically rolls through the feed rolls into the gun. Note! Check that the wire runs in the grooves of the both feed roll pairs!
5. Adjust the pressure of wire feed rolls with adjusting screw. The press force to the feed rolls is suitable when wire can be slightly restrained with fingers when coming out of wire conduit, without feed rolls slipping. Note! If the pressure is too high, filler wire flattens and its coating may fall off. Feed rolls wear out more quickly and friction increases.
6. Adjust the wire reel braking force by turning the adjusting screw in the middle of the locking latch with a screwdriver. Note! To avoid over-loading wire feed motor, do not tighten too much.



2.7. Shielding gas

⚠ **Handle gas bottle with care. There is a risk of injury if gas bottle or bottle valve gets damaged!**

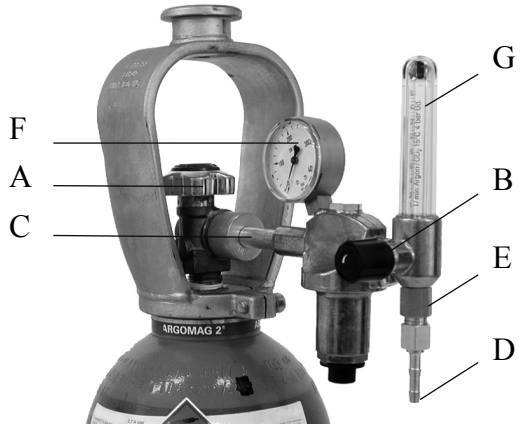
For welding stainless steels, mixed gases are normally used. Check that the gas bottle valve is suitable for the gas. The flow rate is set according to the welding power used in the job. A suitable flow rate is normally 8 - 10 l/min. If the gas flow is not suitable, the welded joint will be sporous. Contact your local Kemppi-dealer for choosing gas and equipment.

2.7.1. Installing gas bottle

⚠ **Always fasten gas bottle properly in vertical position in a special holder on the wall or on a carriage. Remember to close gas bottle valve after having finished welding.**

Parts of gas flow regulator

A Gas bottle valve
B Press regulation screw
C Connecting nut
D Hose spindle
E Jacket nut
F Gas bottle pressure meter
G Gas hose pressure meter



The following installation instructions are valid for most of the gas flow regulator types:

1. Step aside and open the bottle valve (A) for a while to blow out possible impurities from the bottle valve.
2. Turn the press regulation screw (B) of the regulator until no spring pressure can be felt.
3. Close needle valve, if there is one in the regulator.
4. Install the regulator on bottle valve and tighten connecting nut (C) with a wrench.
5. Install hose spindle (D) and jacket nut (E) into gas hose and tighten with hose clamp.
6. Connect the hose with the regulator and the other end with the wire feed unit. See 2.5.2. Main parts of wire feed mechanism. Tighten the jacket nut.
7. Open bottle valve slowly. Gas bottle pressure meter (F) shows the bottle pressure. Note! Do not use the whole contents of the bottle. The bottle should be filled when the bottle pressure is 2 bar.
8. Open needle valve if there is one in the regulator.
9. Turn regulation screw (B) until hose pressure meter (G) shows the required flow (or pressure). When regulating flow amount, the power source should be in switched on and the gun switch pressed simultaniously.

Close bottle valve after having finished welding. If the machine will be out of use for a long time, unscrew the pressure regulation screw.

3. OPERATION

⚠ **Welding in places presenting an immediate fire or explosion hazard is forbidden!**

3.1. Welding processes

3.1.1. MIG/MAG -welding

In MIG/MAG-welding the filler wire is feeded through welding gun wire conduit to the welding joint. Welding current strenght and wire feed speed are chosen according to the characteristics of the work piece to be welded. The values are selected and adjusted with separate potentiometers.

3.1.2. Synergic MIG/MAG -welding or 1-MIG

In synergic MIG-welding the parameters are determined by the wire feed speed setting. This means that in the synergic process, welding power can be adjusted using one potentiometer only. In the beginning of the process, a synergic curve suitable for the filler wire and gas must be chosen, to make the parameters adjustable from wire feed potentiometer.

3.1.3. Synergic pulsed MIG-welding

In synergic pulsed MIG-welding the welding current is cut in pulses, so that the filler material can be transferred to work piece controlled and without spatter. In the synergic process, welding power can be adjusted using one potentiometer only. In the beginning of the process, a synergic curve suitable for the filler wire and gas must be chosen, to make the parameters adjustable from wire feed potentiometer. The pulse parameters of power source change automatically when wire feed speed is changed.

3.2. Special functions

3.2.1. Welding gun trigger 2-sequence function

Gas flow and wire inch start, when the gun switch is pressed and stop when the switch is released.

3.2.2. Welding gun trigger 4-sequence function

Gas flow starts, when the gun switch is pressed. When the switch is released, wire inch starts and welding begins. When the gun switch is pressed again, wire inch stops and when the switch is released, gas flow stops.

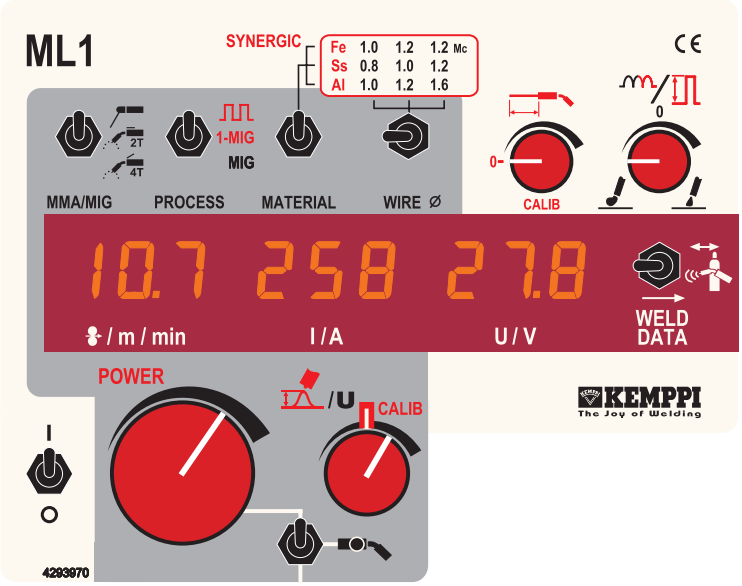
3.3. Operation functions

See also 2.4. Installation and main parts.

3.3.1. Wire feed unit and function panel

Before starting welding, welding settings suitable for the work piece are chosen in function panel. See 3.1. Welding processes. When needed, the settings can be adjusted on function panel. The main functions of the ML-panel are presented on the following page.

ML-function panel



Main switch

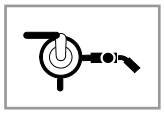
When the switch is in position1 the unit is ready for welding. In position 0 the machine gets no voltage and power source or wire feed motor cannot not be started. In MIG/MAG welding the wire drive switch is working.

Welding process selection switch

MMA welding with stepless welding current control
MIG two-sequence procedure (normal function)
MIG four-sequence procedure (hold switch)

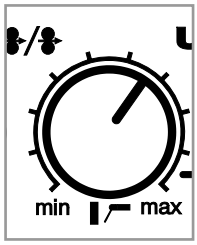
MIG-process selection switch

Pulsed MIG
Synergic MIG (1-MIG)
Normal MIG



Control mode selection switch

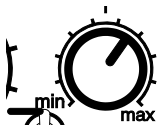
Local control
Remote control



Wire feed speed and current control

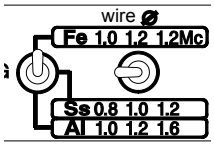
MIG/MAG welding: local control of wire feed speed
MMA welding: welding current control.

Voltage control



MIG/MAG: local control of voltage
MMA welding: no operation

Filler wire material and diameter selection



Filler wire type selection
Filler wire diameter selection
On the basis of the selections, the equipment generates optimal welding characteristics for the wire in question.

Compensating cable length

With this function the voltage losses with long interconnecting cables and different welding guns can be compensated. Cable compensation is adjusted as follows:
If interconnecting cables are not used, set cable compensation at position zero.
If the zero position does not operate wanted, check the adjustment as follows:

1. Select arc length at = CAL, which corresponds to normal arc length.
2. Weld at required power level.
3. Select a suitable arc length with the potentiometer.
4. Check adjustment range of arc length by adjusting arc length -9...0...9
5. When needed repeat the procedure.

Cable compensation is adjusted for each cable and MIG welding gun combination only once.

Control of welding dynamics

MIG and MMA welding dynamics are adjusted with the same potentiometer. When you adjust welding dynamics the adjustment value -9...0...9 is shown in display V, which otherwise shows set value/welding voltage. Value of dynamics is shown in display still for approx. 3 s after stopping the adjustments.

Control of MIG/MAG welding dynamics

With control of MIG/MAG welding dynamics you can influence on how stable the arc is and how much spatter there is. With this control you can also optimize the welding result for wire type and shielding gas mixture you are using.

-9...-1 Softer arc. Object: minimizing spatter
0 Recommendable basic setting for all wires
1...9 Harder arc. Object: e.g. maximizing stability of the arc on short circuit and welding of steel with 100 % CO2 shielding gas (settings 7...9).

Control of SYNERGIC MIG welding dynamics

In SYNERGIC MIG the control of welding dynamics is optimized for wire type you are using. With this control you can influence on stability of arc and how much spatter there is.

-9...-1 Softer arc. Object: Minimizing spatter
0 Recommendable basic setting
1...9 Harder arc. Object: e.g. maximizing stability of the arc on short circuit

NOTE! The control range for MIG welding dynamics -9...0...9 is a relative range according to wire and is different from control range -9...0...9 for dynamics of normal MIG/MAG welding.

Shape of arc in SYNERGIC PULSED MIG:

In SYNERGIC PULSMIG the control for welding dynamics has an influence on shape of pulsed MIG arc.

-9...-1 Wider pulsed MIG arc. Object: e.g. welding of square butt preparation
0 Recommendable basic setting
1...9 More narrow and better directed arc. Object: e.g. fillet weld seams of thin basic materials

Control of MMA dynamics

With control of MMA dynamics you can influence on arc in different situations.
When you make the arc harder, blow and at the same time spatter is increased.

-9...-1 Softer arc. Object: Minimizing spatter in welding at upper end of recommen ded currents for electrode.
0 Factory setup. Normal setting for all electrode types.
1...9 Harder arc. Object: e.g. cellulose covered electrodes (9) and thin stainless electrodes in welding at lower end of recommended currents for electrode.

Shielding gas flow regulation

Shielding gas flow can be regulated with a flow regulator 5....25 l/min. The display is calibrated for Ar CO2 mixed gas (75% Ar, 25% CO2). With other gases the meter error tolerance remains within ±10% compared with real flow. This is reached only when the angle of deflection is smaller than 15° in regard to vertical. Regulate the meter always having the unit is in vertical position. Gas flow is shown in the centre of swimmer.

3.4. Selecting and adjusting welding settings

See 3.3. Operation functions

3.4.1. MIG/MAG -welding

1. Select welding process MIG 2T or 4T with selection switch.
2. Select welding settings control mode local control, gun control or remote control with selection switch.
3. Select xx from special functions.
4. Select wire feed speed m/min and welding voltage with potentiometres.
5. If necessary, set welding dynamics from the potentiometer.
6. Start welding and adjust wire feed speed and voltage if needed.

3.4.2. Synergic MIG/MAG -welding (1-MIG)

1. Select welding process MIG 2T or 4T with selection switch.
2. Select synergic welding by switching on 1-MIG.
3. Select material and welding wire diameter with selection switches.
4. Select welding settings control mode local control, gun control or remote control with selection switch.
5. Set the welding power and arc lenght with the corresponding potentiometers. Values are shown in displays.
6. If necessary, set welding dynamics from the potentiometer.
7. Start welding and adjust welding power and arc length if needed.

3.4.3. Synergic pulsed MIG -welding

1. Select welding process MIG 2T or 4T with selection switch.
2. Select pulsed MIG welding with the selection switch.
3. Select material and welding wire diameter with selection switches.

4. Select welding settings control mode local control, gun control or remote control with selection switch.
5. Set the welding power and arc lenght with the corresponding potentiometers. Values are shown in displays.
6. If necessary, set welding dynamics from the potentiometer.
7. Start welding and adjust welding power and arc length if needed.

3.4.4. MMA-welding

1. Select welding process MMA with selection switch.
2. Select welding settings control mode local control, gun control or remote control with selection switch.
3. Set the welding current with the potentiometer. Values are shown in displays.
4. If necessary, set welding dynamics from the potentiometer.
5. Start welding and adjust welding current if needed.

3.5. Storage

The machine must be stored in a clean and dry room. Protect the machine from rain and keep it away from direct sunshine in places where temperature exceeds +25 °C. Check that there is free space in front of and behind the machine for air circulation.

3.6. Welding

Welding fumes may cause injury, take care of sufficient ventilation during welding!

Never watch the arc without a proper face shield designed for arc welding! Protect yourself and the surroundings for welding arc and hot spatters!

3.6.1. Choosing welding polarity

You can change the welding polarity for filler wire by interchanging the welding and return curren cable connections.

3.6.2. Earthing

If possible, always fasten the earth clamp of return current cable directly on work piece.

1. Clean contact surface from paint and rust.
2. Fasten clamp properly, so that contact surface is as large as possible.
3. Check that clamp is fastened firmly.

3.6.3. Welding operation

See also 3.4. Selecting welding setting. Note! It is recommended to make a test weld before starting to weld the actual work piece.
Welding operation can be started after the necessary selections and adjustments have been made. The operation starts when welding wire touches work piece and gun switch is pressed. Welding arc ignites, shielding gas starts to flow and wire feed mechanism inches welding wire. If necessary adjust wire feed and voltage, or in synergic welding welding power. Readjust until you have found suitable adjustments.

4. MAINTENANCE

⚠ **Watch out for mains voltage when handling electric cables!**

In planning product maintenance machine utilization degree and circumstances should be considered. Careful use and preventive maintenance help to avoid unnecessary production disturbances and breaks.

4.1. Daily maintenance

The following maintenance operations should be carried out daily:

- Clean the wire channel and check contact tip. Replace defect parts.
- Check the mains and welding cables always before operation. Replace defect cables.

4.2. Regular maintenance

4.2.1. Every sixth months

The following maintenance operations should be carried out at least every sixth month:

- Check the feed roll grooves for wear. Replace worn out parts. Excessive wear of grooves causes problems in wire feed.
- Check wire guide tubes for wear. Replace worn out parts.
- Check that the wire line is straight. The wire guide tube in the gun should be set as near the feed rolls as possible, but not touch them. Also check that the wire is in straight line from the end of the tube to the feed roll grooves.
- Check the wire reel pressure. Adjust if necessary.
- Check electric connections. Tighten if necessary and clean oxidized surfaces.
- Clean the equipment housing and power source filter. The filter can be cleaned with pressurized air or washed, if necessary.

4.2.2. Service contract

KEMPPI –service workshops make special service contracts with customers about regular maintenance. All parts are cleaned, checked and if necessary, repaired. Also the operation of welding machine is tested.

4.3. ORDERING NUMBERS

DERPROMIG 200 ML wire feed unit		6231520ML
Welding gun	PMT 30	6253013
Welding gun	PMT 30	6253013
Welding gun	PMT 30	6253013
Welding gun	PMT 30	6253013
Welding gun	PMT 30	6253013
Welding gun	PMT 30	6253013
Remote control unit	R 20	6185419

For parts of wire feed line see 2.6. Filler wire materials and equipment.

4.4. TROUBLE SHOOTING

There is no power supply.

- Check mains fuses, replace blown fuses.
- Check mains cable and plug, replace defect parts.

The machine is not welding properly.

- Check welding settings and adjust if needed. See 3. Operation.
- Check that earth cable is properly fastened and is not defect. Chamge position, replace defect parts. See 3.5. Welding and 4. Maintenance.
- Check welding current cable and connector. Tighten the connection and replace parts.
- Check the wear parts of wire feed. Clean and replace defect parts. See 4. Maintence.
- Check mains fuses, replace blown fuses.

Wire feed does not work properly.

Wire feed pressure is too high or too low.

- Check wire feed line. If necessary, adjust wire feed pressure. Replace worn out feed rolls. See 2.9. Filler wire materials and equipments and 4. Maintenance.

Wire feed is stopped.

Wire feed pressure is too high or too low.

- Check wire reel adjusting screw, feed rolls, adjustment plate and gear wheel. See 2.4.3. Main parts of wire feed unit and 2.8. Filler wire materials and equipments.

Power source overheat signal lamp is lighting.

Power source is overheated. See 3.2. Signal lamps and funtion panel.

- Check there is enough free space behind the machine for cooling air circulation.

For further information and assistance, contact your nearest Kemppi service workshop. If an error code appears on function panel view, please also note the code number (Err+number).

4.4.1. Error codes

By PROMIG unit check by each start, if there are error states in the equipment; in case error states are observed, the error state in question is shown by means of Err textes appearing on (wire feed) display of panels.

Error codes are among others the following:

Err 1: PROMIG has gone over to MMA welding, though you have already selected MMA welding on power source panel.

Err 2: You are pressing on start switch of gun, when data transmission between PROMIG and PRO is broken (defect in control cable or in connector), or you are pressing on gun switch, when MMA welding has been selected on control panel of power source.

Err 4: You are pressing on start switch of gun and selecting switch S12 for cooling mode of gun is in liquid position and you have forgotten to switch-on the PROCOOL cooling unit or you have forgotten to connect it to equipment.

Err 5: PROCOOL cooling unit has stopped welding. Reason can be break of supply voltage from PROCOOL, pressure of liquid circulation doesn´t arise or temperature of cooling liquid has arisen too high.

Err 6: Wire feed unit has stopped welding in liquid position of selecting switch S12 of air/liquid-cooled gun for PROMIG, because data communication to cooling unit is broken (defect in intermediate cable or in connection).

Err 7: Selecting switch S12 of air/liquid-cooled gun for PROMIG is in air position, PROCOOL is switched-on and start switch is pressed down. Purpose of operation is to prevent the liquid-cooled gun from being destroyed, if the selecting switch S12 for air/liquid-cooling is in wrong position.

Err 8: Liquid-cooled PMT gun is overheated.

Err 9: Overload of wire feed motor, which can be caused e.g. by blocked wire guide of gun or by gun cable, which is too much curved.

Err 10: Operation of thermal release of PRO power source has stopped welding.

Err 11: You try to use the PMT gun, when their use is prevented with the 5. jumper operation.

Err 12: Welding has been stopped, because so called door switch or gas guard has operated (operations need extra mountings to standard unit).

Eliminate the error codes as follows:

Error code Err 1 is eliminated when PROMIG wire feed system is set into MIG state.

Blinking of error codes Err 2-4 ends automatically within 5 s, if the trigger is not pressed down.
Eliminate the reason of error before next start.

Blinking of error codes Err 5-12 ends by next start, if the reason of error code has been eliminated.

5. TECHNICAL DATA

5.1. Technical data

Promig 200 ML

Working voltage (safety voltage)		50 VDC
Rated power		100 W
Max. load	60% ED	460 A
(nominal values)	100% ED	355 A
Operation principle		4-roll-feed
Diameter of feed roll		32 mm
Wire feed speed		0 ... 18 m/min
Filler wires	Ø Fe, SS	0,6 ... 1,6
	Ø Flux cored	0,8 ... 1,6
Wire reel	max. weight	5 kg
	max. diameter	200 mm
Torch connector		Euro
Weight		13 kg
Overall dimensions:	lenght	500 mm
	width	230 mm
	height	315 mm
Operating temperature range		-20 … +40 °C
Storage temperature range		-40 … +60 °C
Degree of protection		IP 23 C

The product meets the conformity requirements of CE-marking.

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