

Operation instructions • english
Gebrauchsanweisung • deutsch
Gebruiksaanwijzing • nederlands
Manuel d'utilisation • français

1923540E

0537

PROMIG

200, 300



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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 and Promig 300 are mobile wire feeders designed for dock yards and heavy metal industry. PRO multi function power sources are used as power sources for Promig wire feeders. Due to operational properties and mechanical durability of wire feeders, Promig 200 and 300 units are very suitable for flux-cored wire welding with long intermediate cables. Operations of wire feed unit are controlled and adjusted with a microprocessor and a tacho generator of wire feed speed. Promig 200 and 300 are based on same technical basic solutions, the units are different from each other in the first place in respect of size or filler wire reel. Promig 200 is designed to be used with filler wire reel of max 200 mm (5kg), whereas Promig 300 is for reels of max 300 mm (20 kg).

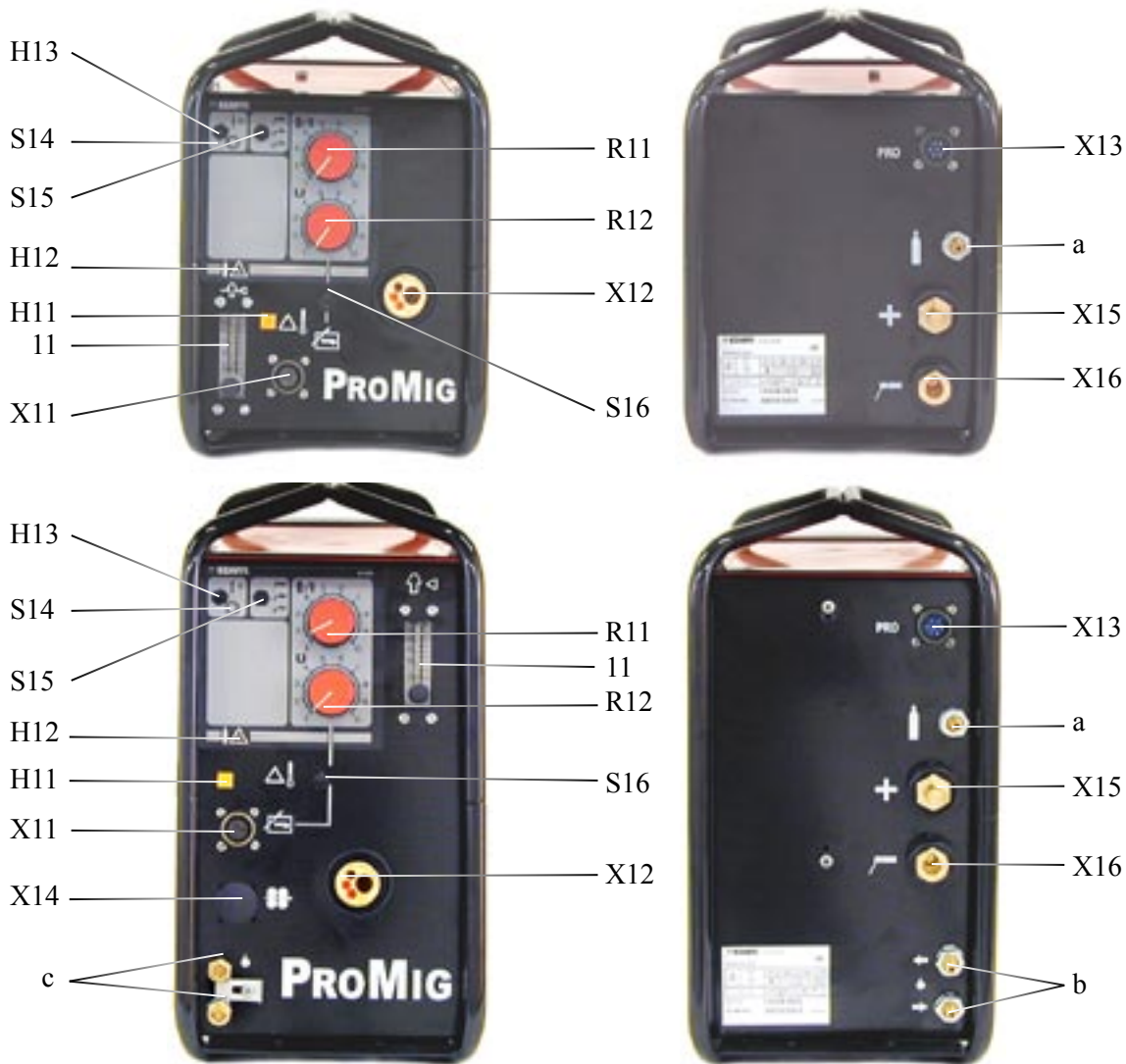
These operation instructions handle Promig 200 and Promig 300 wire feed units, assembly, installation and operation functions of MIG-system.

 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.

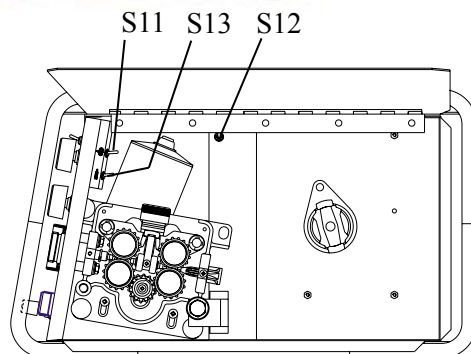
1.2.1. Main functions

Main switch
Adjustment of welding voltage (MIG/MAG) and current (MMA)
Adjustment of wire feed speed
Selection of welding method MIG/MAG / MMA
Regulator/meter for shielding gas flow
Control of shielding gas

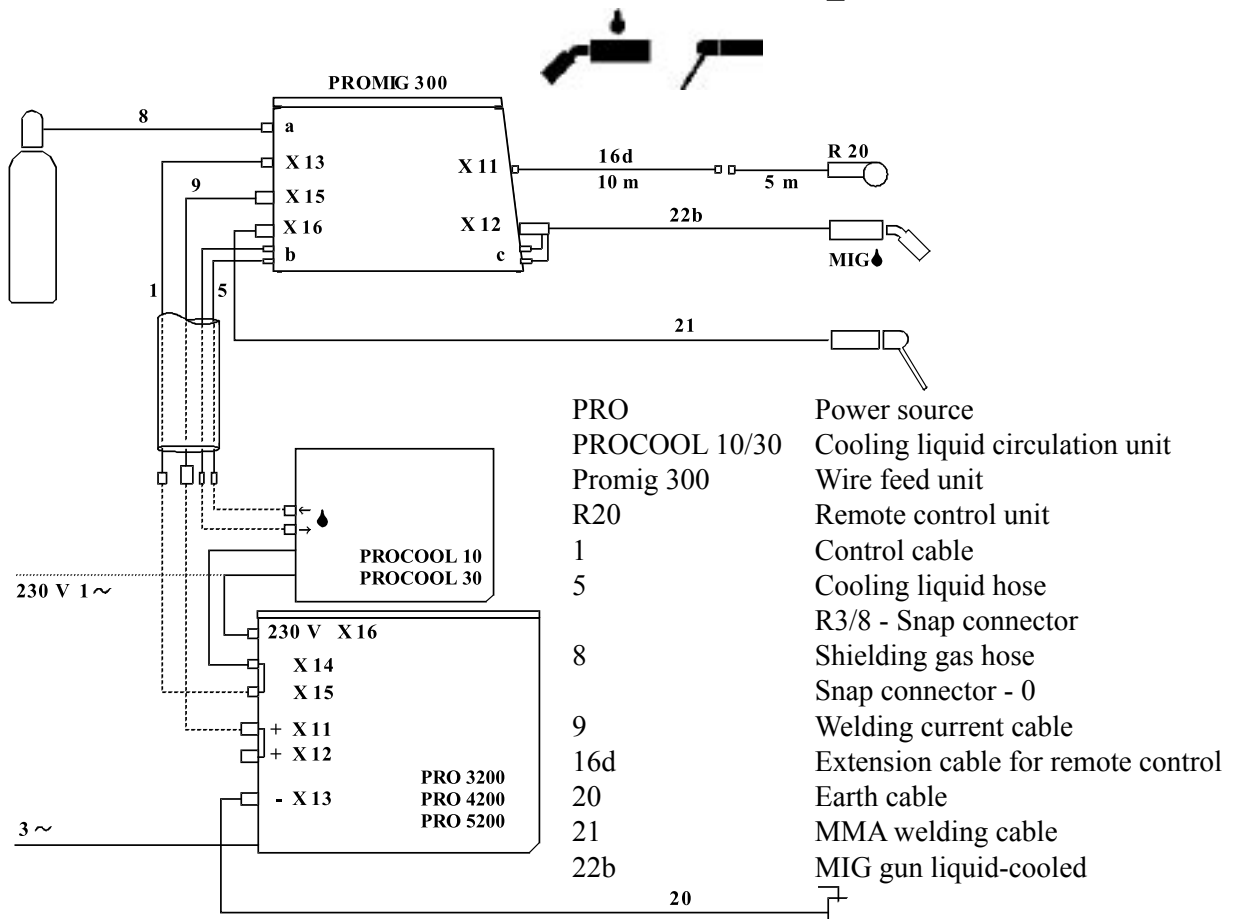
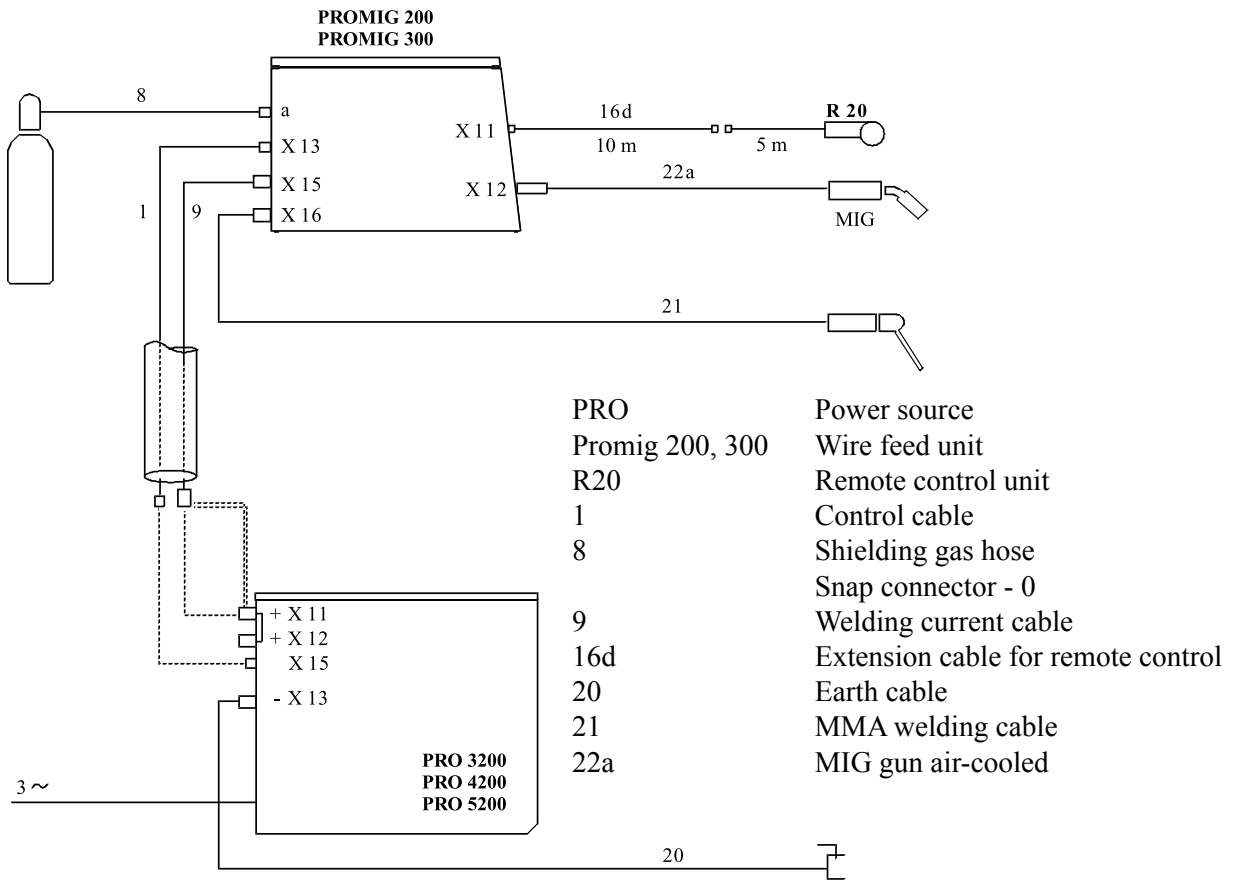
1.2.2. Operation control and connectors



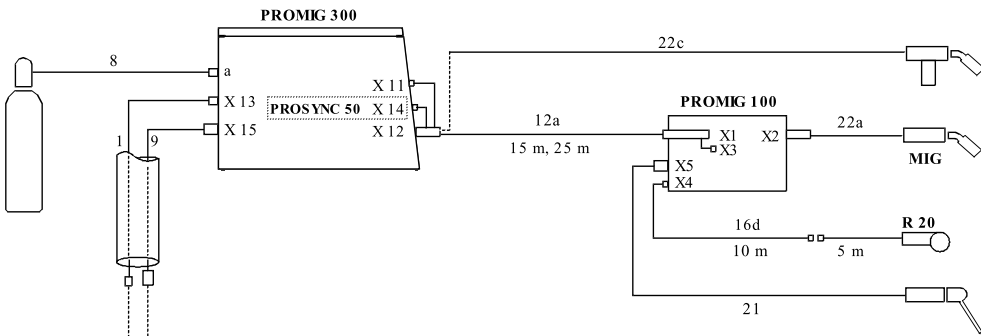
- H11 Error signal lamp
- H12 Warning lamp for shielding gas guard
- H13 Signal lamp for main switch
- X11 Connection for control cable Remote control unit
- X12 Connection of welding gun EURO
- X13 Connection for control cable PRO power sources
- X14 (PROSYNC 50 / Promig 300) Control cable connector for sub-feeder / motorized gun, accessory
- X15 Welding current connection PRO power source
- W16 Connection for MMA
- a Shielding gas connection (Snap connector)
- b (Promig 300) Cooling liquid connection
- c (Promig 300) Cooling liquid connections for gun
- R11 Adjustment for wire feed speed (MIG) / welding current (MMA)
- R12 Adjustment for welding voltage (MIG)
- S11 Wire inch switch
- S12 Selecting switch of air/liquid cooling
- S13 Gas purge switch
- S14 Main connector
- S15 Selecting switch for welding mode
- S16 Selecting switch for control mode (local/remote control)
- 11 Flowmeter/regulator for shielding gas



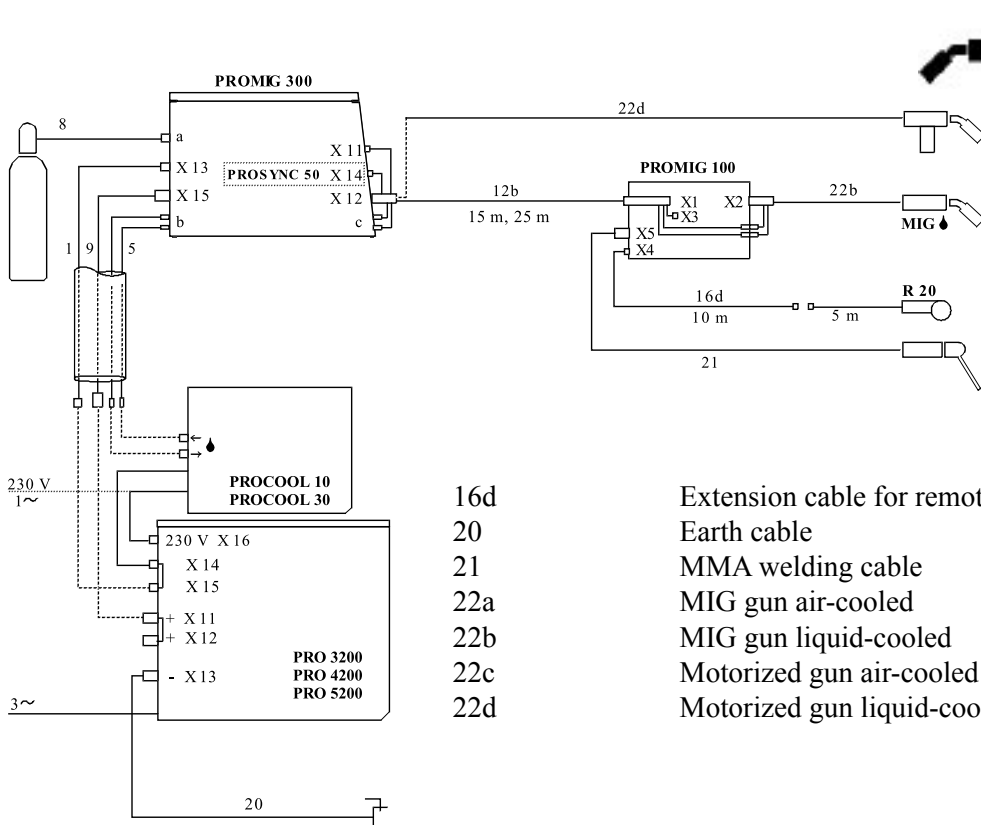
1.2.3. Accessories and cables



1.2.4. Promig 300, Promig 100 sub-feeder equipment



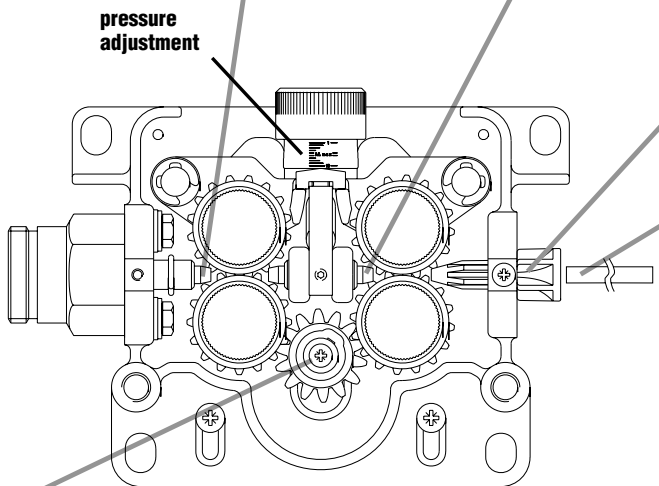
- | | | |
|---------------|---------------------------------|-----------------------|
| PRO | Power source | |
| PROCOOL 10/30 | Cooling liquid circulation unit | |
| Promig 300 | Wire feed unit | |
| PROSYNC 50 | Synchronization unit | |
| Promig 100 | Sub-feeder | |
| R20 | Remote control unit | |
| 1 | Control cable | |
| 5 | Cooling liquid hose | R3/8 - Snap connector |
| 8 | Shielding gas hose | Snap connector - 0 |
| 9 | Welding current cable | |
| 12a | (Promig 100) | |
| 12b | MIG intermediate cable | air-cooled |
| | MIG intermediate cable | liquid-cooled |



- | | |
|-----|------------------------------------|
| 16d | Extension cable for remote control |
| 20 | Earth cable |
| 21 | MMA welding cable |
| 22a | MIG gun air-cooled |
| 22b | MIG gun liquid-cooled |
| 22c | Motorized gun air-cooled |
| 22d | Motorized gun liquid-cooled |

1.2.5. Parts of wire feed mechanism

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



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

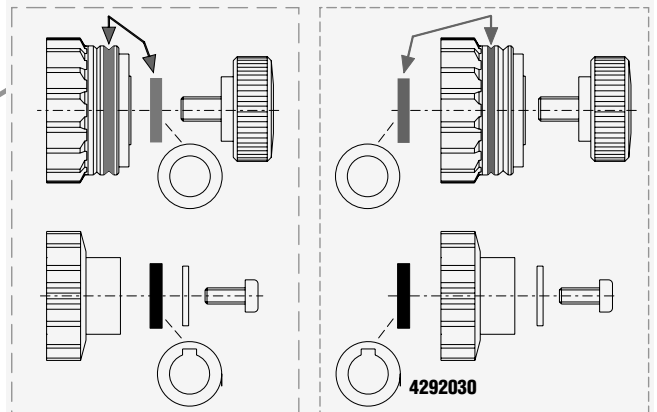
∅ 28 mm (0 - 18 m/min) 4265240, ∅ 40 mm (0 - 25 m/min) 4265250

Muovi, plast, plast, plastic, plastic, Kunststoff, plastic, plastique

∅ 28 mm (0 - 18 m/min) 4287860, ∅ 40 mm (0 - 25 m/min) 4297270

Teräs, stål, stål, steel, Stahl, staal, acier

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



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

(L) = Ball race

W000574

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 ensure that you have sufficient fire fighting equipment available where you are welding. 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 damaged cables without delay. Damaged cables may cause an injury or set out a fire. Connection cable must not be crushed, 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 the MIG-gun or welding cables on welding machine or on other electric equipment. Do not press the 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. ASSEMBLY OF MIG SYSTEM

Assemble the units in below-mentioned order and follow mounting and operation instructions which are delivered in packages.

2.1.1. Installation of power source

Read paragraph: "installation" in operation instructions 1913130E for PRO power sources and carry out the installation according to that.

2.1.2. Mounting of PRO power source to transport unit

P40 6185264, air-cooled MIG system

P40L 6185264L

P30W 6185262, liquid-cooled MIG system

2.1.3. Connecting cables

Connect cables according to figures on pages 5-6.

Air-cooled system on page 5. Liquid-cooled system on page 5.

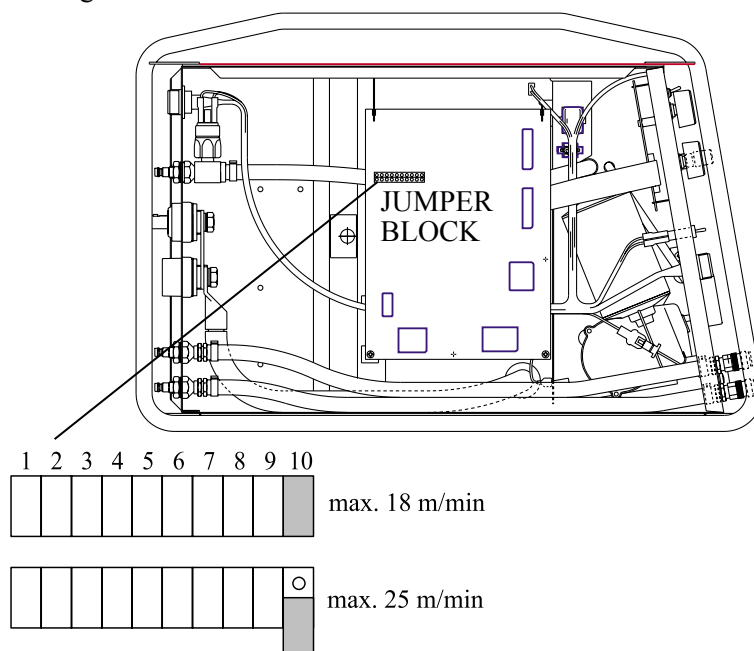
Promig 300 sub-feeders on page 6.

You can change polarity of filler wire by interchanging the Promig welding current cable and earth cable with welding cable connectors from PRO power source.

2.1.4. Max. wire feed speed (Promig 300)

When the unit is delivered the max. wire feed speed is 18 m/min, which is enough for most welding applications. If you need a higher speed, you can increase the max. wire feed speed to 25 m/min by replacing the gear wheel on motor shaft to a bigger one. The big gear wheel D40 is delivered only with the feed unit Promig 300.

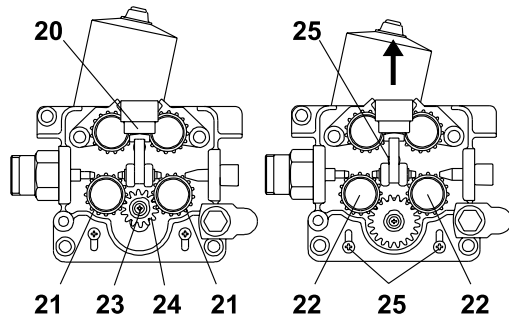
Promig 300



When necessary speed is changed according to following:

- Open side plate and move jumper block's 10th jumper on control card A001 to point 25 m/min.
- Open tightening lever (20). Remove lower feed rolls (21). Release screw (23) and its washer. Remove gear wheel D28 (24) from motor shaft.
- Loosen screws (25) (3 pc) 1 twist. Mount the D40 gear wheel onto motor shaft. Screw the screw (23) with its washer back.
- Put feed rolls (21) back to their axles, however don't fasten yet fastening screws of feed rolls (22).
- Lift the motor so that the gear tooth gap between gear wheel and both lower feed rolls is approx. 0,2 mm.
- Tighten screws (25). Check gear teeth gaps, when necessary put the motor into a better position. Screw on the mounting screws of feed rolls (22).

NOTE! Too small gap between gear wheel and feed rolls will overload motor. Too big gap for its part might cause too rapid wearing for teeth of feed rolls and gear wheel.



2.1.5. Mounting of Promig 200, 300 to boom



Wire unit must be mounted to boom in such a way that its chassis is galvanised separated both from swing arm and boom.

For boom hanging you get with Promig 300 delivery plastic grip (is mounted onto rear plate of the unit) as well as metallic suspension hook.

2.2. INSTALLATION OF MIG SYSTEM

2.2.1. Accessories corresponding to wire diameter

Promig wire feed rolls are available with plain groove, knurled groove and with U groove for different purposes.

Feed rolls with plain groove: Universal feed roll for welding of all kinds of wires.

Feed rolls with knurled groove: Special feed roll for cored wires and steel wires.

Feed rolls with U groove: Special feed roll for aluminium wires.

Promig wire feed rolls have two grooves for different filler wire diameters. Correct wire groove is selected by moving selecting washer (28) from one side to another in feed roll.

colour..... filler wire \varnothing mm (inch)

white	0,6 and 0,8 (0,030)
red	0,9/1,0 and 1,2 (0,035, 0,045 and 0,052)
yellow	1,4, 1,6 and 2,0 (1/16 and 5/64)
black	2,4 (3/32)

colour..... filler wire \varnothing mm (inch)

orange	0,6-1,6 (0,024-1/16)
blue.....	over 1,6 (over 1/16)

Feed rolls and wire guide tubes of wire feed unit have colour codes in order to make identification easier (see table on page 7).

In delivery Promig 200 and 300 are equipped with red feed rolls with orange wire guide tubes for welding filler wires of 0,9-1,2 mm (0,035", 0,045" and 0,052").

2.2.2. Mounting of MIG welding gun

In order to ensure trouble-free welding check the operation instructions of the gun used, that the wire guide tube and contact tip are suitable for the wire diameter and type you are using. Too tight a wire guide tube might cause for wire feed unit a bigger stress than normally as well as disturbances in wire feed.

Ensure that the screw nut of the snap connector on the gun is done up tightly when fitted to the Promig feeder so that there will not be any voltage losses through the snap connector. A loose connection will heat gun and wire feed unit. When you are using liquid-cooled gun, mount cooling liquid hoses according to fig. on pages 5, 6.

Error signal lamp H11 of Promig 200 and 300 units have operations for overheating of liquid-cooled MIG gun and for overload of wire feed motor. By operation of the signal lamp its so-called short flashes indicate the error code in question (also see operation of error signal lamp, page 16):

8 short flashes Err 8: Liquid-cooled gun MIG is overheated.

9 short flashes Err 9: Overload of wire feed motor, which can come from blocked wire liner of gun.

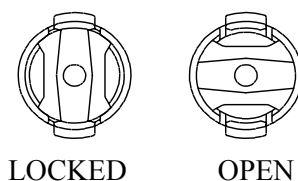
Blinking of H11 lamp which follows error codes Err 8 and Err 9 ends by following start, if the fact which caused the error code has been eliminated, or if the gun has cooled down or the motor is no more overheated.

2.2.3. Mounting and locking of wire reel

- Release locking tongues of wire reel hub by turning locking knob a quarter of a turn.
- Mount the reel at its place.

Note rotating direction of reel!

- Lock the reel with locking knob, locking tongues of hub remain to outside position and will lock the reel.

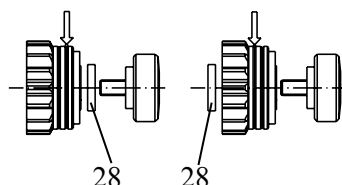


Check that in filler wire reel there are no parts sticking out, which could e.g. scrub against chassis or door of wire feed unit. Dragging parts might expose chassis of wire feed unit under voltage.

2.2.4. Automatic wire feed to gun

When changing the wire reel the pressure of the feed rolls need not be released as the filler wire will automatically feed into the correct wire line.

- Make sure that groove of feed roll match the diameter of welding wire used. Feed roll groove is selected by moving the groove selecting washer (28).



- Release the wire end from reel and cut off the bent length.

Be careful that the wire does not unwind and spill from the reel!



Straighten about 20 cm of the wire and see that the end of it has no sharp edges (file off if necessary). A sharp edge may damage the wire guide tube and contact tip of the welding gun.

- Draw a bit of loose wire from reel. Feed wire through back liner to feed rolls.

Don't release pressure of feed rolls!

- Press the wire drive switch S11 or the gun switch and feed a bit wire until wire goes through feed rolls to gun.

See that wire is in grooves of both feed roll pairs!

- Press still the wire drive or the gun switch until wire has come through contact tip.

Automatic feed may sometimes fail with thin wires (Fe, Fc, Ss: 0,6 and 0,8 mm (0,030") (Al: 0,8 and 1,0 mm (0,030" and 0,035"). Then it might be possible that you must open feed rolls and feed wire manually through feed rolls.

2.2.5. Adjustment of pressure

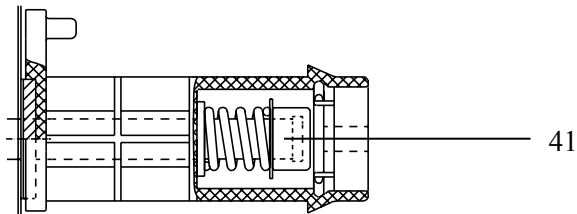
Adjust the pressure of feed rolls with the control screw (20) so that the wire is fed into the wire guide tube evenly and allows a little braking when coming out from the contact tip without slipping at the feed rolls.



Excessive pressure causes flattening of the filler wire and damage to the coating. It also causes undue wear of the feed rolls as well as friction.

2.2.6. Adjustment of tightness of reel brake

Brake force is adjusted through hole in locking device of reel hub by screwing the control screw (41) with screwdriver.



Adjust the brake force to a point where the wire reel will not continue to overrun once the drive motor has stopped. If this is too loose the wire will spill from the reel. If this is too tight the brake puts excess load on the wire drive motor. The brake force may be different for high wire feed speeds and the varied weights of the wire reels and filler materials.

2.2.7. Burn back time

Electronics of the unit controls stopping of welding automatically so that the wire end doesn't melt to fastened to the contact tip or the work piece. Automatics work regardless of the wire feed speed. End automatics eliminate also forming so-called "ball" at wire tip, disturbing next start.

2.2.8. Ground cable

Fasten earth clamp of ground cable carefully, preferably direct to welding piece. Contact surface of clamp always should be as large as possible.

Clean the fastening surface from paint and rust!

Use in your MIG equipment only 70 mm² cable. Thinner cross-sectional area might cause overheating of connectors and insulations.

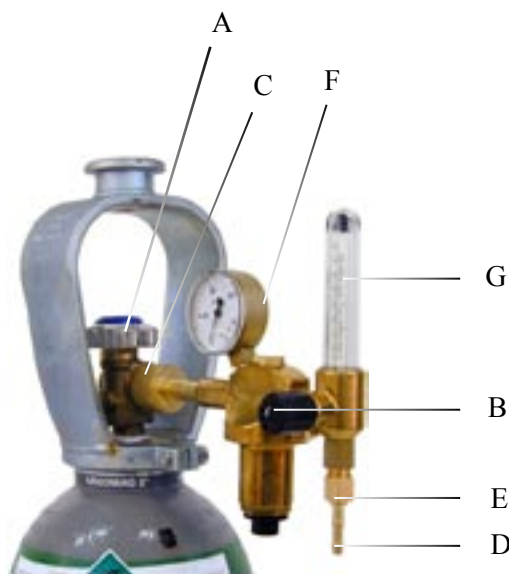
Make sure that the welding gun in use is designed for max. welding current and loading capacity needed by you!

Never use a damaged welding gun!

2.2.9. Shielding gas

⚠ Handle gas bottle with care. There is a risk for injury if gas bottle or bottle valve is 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.



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

2.2.10. 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.

The following installing 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.
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 simultaneously.

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

2.2.11. Main switch I/O of PRO power source

When you turn the switch into I-position, pilot lamp on the front face is illuminated, and the machine is ready for use. The equipment is returned to that welding method with which the welding was last carried out before the main switch was turned to zero position.

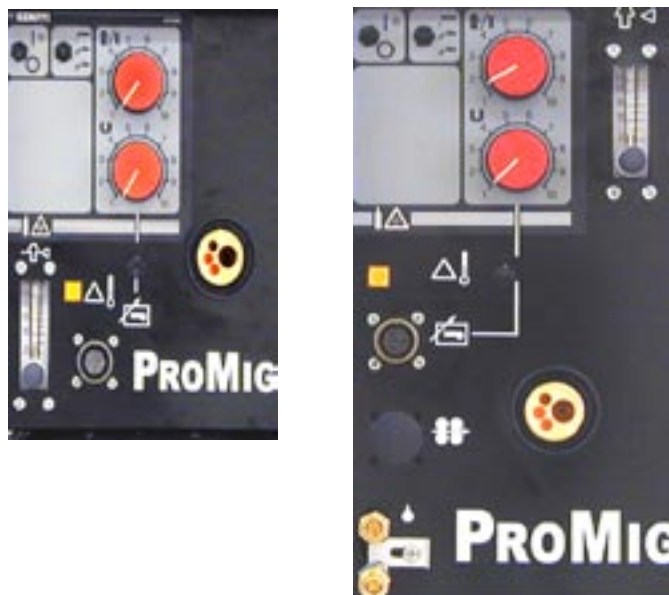
Always turn the machine on and off with the mains switch, never use the mains plug as a switch!

2.2.12. Operation of cooling unit (PROCOOL 10, PROCOOL 30)

Operation of cooling unit is controlled in such a way that pump is started when welding is started. After the welding has stopped the pump is rotating for approx. 5 min cooling the liquid to ambient temperature. Purpose of this operation is to make maintenance intervals of pump longer.

Read in operation instructions for the PROCOOL 10/30 unit the trouble situations of the liquid circulation system and protection against gun etc. damage.

3. OPERATIONAL FUNCTIONS



3.1. MAIN SWITCH S14



Position I

Unit is ready for welding and this is indicated by green pilot lamp H13.

Position O

MIG/MAG welding: operations are arrested, power source and wire feed motor don't start and solenoid valve for gas is not opened though start switch of gun is pressed down. Wire drive switch S11 for filler wire needed by reel change is operating. MMA welding: Operations are arrested, welding circuit is dead.

3.2. WELDING METHOD SELECTING SWITCH S15



MMA

MMA welding with stepless welding current control

MIG two-sequence procedure (normal function)

MIG/MAG welding with two-sequence procedure of welding gun start switch

1. switch pressed: welding starts
2. switch released: welding stops

MIG four-sequence procedure (hold switch)

MIG/MAG welding with four-sequence procedure of welding gun start switch

1. switch pressed: shielding gas flow starts
2. switch released: welding starts
3. switch pressed: welding stops
4. switch released: shielding gas flow stops

3.3. CONTROL MODE SELECTING SWITCH S16



Local control:

Control potentiometers R11 and R12 on panel are used.

Remote control:

Adjustments are carried out from remote control unit which is connected to remote control connector X11 of wire feed unit. See operations of remote control units R20 and R10 on page 18.

NOTE! If the remote control unit is not connected to the Promig unit and you have selected remote control, controls operate with local control potentiometers like in local control position.

3.4. LOCAL CONTROLS



I - potentiometer R11

MIG/MAG: Local control for wire feed speed 0...18 m/min or 0...25 m/min (Promig 300)

MMA welding: Welding current control, 10 A ... max current of power source

U - potentiometer R12

MIG/MAG: Local control for voltage of PRO power source, 10 V ... max. MIG voltage of power source

MMA welding: No operation

3.5. REGULATION FOR SHIELDING GAS FLOW

Shielding gas flow can be regulated with flow regulator 5...25 l/min. Display is calibrated for Ar CO₂ mixed gas (75% Ar, 25% CO₂). By other gases the meter error remains within ±10% limits compared with real flow.



The gas flow regulator shows within ± 10% limits right only when angle of deflection is smaller than 15° in regard to vertical.

Regulate the meter always when the unit is in vertical position.



Gas flow is read in the centre of swimmer.

3.6. SIGNAL LAMP H12 INDICATING MISSING OF SHIELDING GAS



The unit is equipped with shielding gas guard which by missing of shielding gas prevents welding start and stops welding, if arrival of shielding gas is prevented during welding.

Red signal lamp is illuminated:

Welding is prevented until shielding gas pressure is adequate.

Red signal lamp is not illuminated:

Welding is allowed.

3.7. SIGNAL LAMP H11 FOR ERRORS



By Promig 200 and 300 units check by each start, if there are error states in the equipment, if error states are observed, the error state is shown by blinking of signal lamp H11 for errors. E.g. one short flash means error code Err 1 and two short flashes indicate error code Err 2 etc.



Error codes are:

- 1 short flash, Err 1: Promig has gone over to MMA welding, though you have already selected MMA welding on power source panel.
- 2 short flashes, 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.
- 4 short flashes, Err 4: You are pressing on start switch of gun and selecting switch S12 for cooling mode is in liquid position and you have forgotten to switch-on the PROCOOL cooling unit or you have forgotten to connect it to equipment.

-
- 5 short flashes, 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.
- 6 short flashes, Err 6: Wire feed unit has stopped welding in liquid position of selecting S12 of liquid/air-cooled gun for Promig, because data communication to cooling unit is broken (defect in intermediate cable or in connection).
- 7 short flashes, Err 7: Selecting switch S12 of liquid/air-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, when the selecting switch S12 for liquid/air-cooling is in wrong position.
- 8 short flashes, Err 8: Liquid-cooled MIG gun is overheated.
- 9 short flashes, 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.
- 10 short flashes, Err 10: Operation of thermal protection of PRO power source has stopped welding.

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 causer of error before next start.

Blinking of error codes Err 5-10 stops by next start, if the causer of error code has been eliminated.

3.8. WIRE INCH SWITCH S11

Inside the wire reel compartment there is a switch with which you can feed filler wire without starting power source and opening the gas valve. The operation is used e.g. by reel change.

3.9. GAS PURGE SWITCH S13

Inside the wire reel compartment there is a switch, which the gas valve can be opened without starting power source or wire feed motor. The operation is used e.g. by gas flow regulation.

3.10. SELECTION OF MIG GUN'S COOLING MODE S12

In the wire reel compartment there is a switch which is set according to cooling mode of MIG gun which is used.

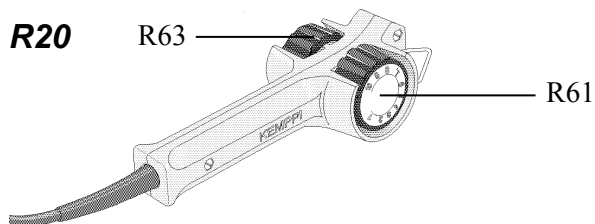
 **Air-cooling**

This position is used when you are using an AIR cooled MIG gun. The equipment allows welding when you have not connected a switched-on PROCOOL cooling unit to equipment (see also operations of error signal lamp H11).

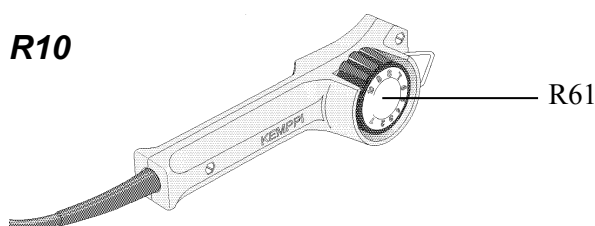
 **Liquid-cooling**

This position is used when you are using a liquid cooled MIG gun. The equipment stops welding if you have not connected a switched-on PROCOOL cooling unit to equipment, Err4. (see also operations of error signal lamp H11).

4. OPERATIONS OF REMOTE CONTROL UNITS IN PROMIG 200 AND 300 WIRE FEED UNITS



..... **R63** **R61**
 MIG..... Setting for wire feed: Setting for voltage:
 I 1...18 m/min
 II 1...25 m/min 10 V...max. voltage of power source (35...46 V)
 MMA Setting for power:
 10 A...max. power of power source..... NO OPERATION



..... **R61**
 MIG..... Setting for wire feed:
 I 1...18 m/min
 II 1...25 m/min
 MMA Setting for power:
 10 A...max. power of power source

5. SERVICE, OPERATION DISTURBANCES


The amount of use and the working environment should be taken into consideration when planning the frequency of maintenance of Promig. Careful use and preventive maintenance will help to ensure trouble-free operation.

The following maintenance operations should be carried out at least every six months:

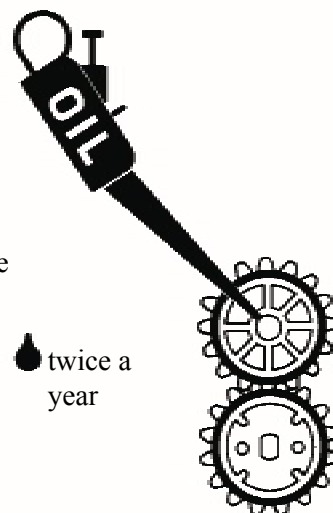
Check:

- The wear of the grooves of the feed rolls. Excessive wear of grooves causes problems in wire feed.
- The wear of the wire guide tubes of wire feed. Badly worn feed rolls and wire guide tubes should be discarded.
- The wire guide tube in the gun should be set as near the feed rolls as possible, but not touching them and the wire must follow a straight line from the end of the feed roll.
- Reel brake adjustment
- Electric connections
 - * Oxidized couplings must be cleaned
 - * Loose couplings must be tightened

Clean dust and dirt from the equipment.

 **When using compressed air, always protect your eyes with proper eye protection.**

In case of problems contact the KEMPPI works in Lahti, Finland or your KEMPPI dealer.



6. ORDERING NUMBERS

Promig 200		6231520
Promig 300		6231530
Kemppi Pro Evolution 3200		6131320
Kemppi Pro Evolution 4200		6131420
Kemppi Pro Evolution 5200		6131520
P20L		6185264L
P40		6185264
Remote control unit	R10	6185409
Remote control unit	R20	6185419
Shielding gas hose	1,5 m	4269030
Extension cable for remote unit	10 m	6185481
Earth cable	5 m – 50 mm ²	6184511
Earth cable	5 m – 70 mm ²	6184711
MMA welding cable	5 m – 50 mm ²	6184501
MMA welding cable	25 m – 70 mm ²	6184701
Heating resistor (Promig 200)		4299240
W1 = 1+9		
W1 / 20 m – 70 mm ²		6260327
PROCOOL 10		6262012
PROCOOL 30		6262016
P30W		6185262
W3 = 1+9+5+5		
W3 / 20 m – 70 mm ²		6260337
PROSYNC 50		6231530
MIG-intermediate cable air-cooled	15 m	6260211
MIG-intermediate cable air-cooled	25 m	6260213
MIG-intermediate cable liquid-cooled	15 m	6260225
MIG-intermediate cable liquid-cooled	25 m	6260227
Earth cable	70 mm ² , 5 m	6184711
Remote control	RMT10	6185475
Gun holder	GH20	6256020
Hub for wire reel		4289880
MIG guns		
Air-cooled:		
PMT 32	3 m	6253213
PMT 32	4,5 m	6253214
PMT 35	3 m	6253513
PMT 35	4,5 m	6253514
PMT 42	3 m	6254213
PMT 42	4,5 m	6254214
MMT 32	3 m	6253213MMT
MMT 32	4,5 m	6253214MMT
MMT 35	3 m	6253513MMT
MMT 35	4,5 m	6253514MMT
MMT 42	3 m	6254213MMT
MMT 42	4,5 m	6254214MMT

Liquid-cooled:

PMT 30W	3 m	6253043
PMT 30W	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
MMT 30W	3 m	6253043MMT
MMT 30W	4,5 m	6253044MMT
MMT 42W	3 m	6254203MMT
MMT 42W	4,5 m	6254204MMT
MMT 52W	3 m	6255203MMT
MMT 52W	4,5 m	6255204MMT

7. TECHNICAL DATA

	Promig 200	Promig 300
Working voltage (safety volt.)	50 VDC	50 VDC
Rated power	100 W	100 W
Max. load		
(nominal values) 60 % ED	460 A	460 A
100 % ED	355 A	355 A
Operation principle	4 roll feed	4 roll feed
Diameter of feed roll	32 mm	32 mm
Wire feed speed I	0...18 m/min	0...18 m/min
Wire feed speed II ¹⁾		0...25 m/min
Filler wires		
∅ Fe, Ss	0,6...1,6	0,6...1,6
∅ Cored wire	0,8...1,6	0,8...2,0
Wire reel		
max. weight	5 kg	20 kg
max. size	∅ 200 mm	∅ 300 mm
Torch connector	Euro	Euro
Operation temperature range	20...+40 °C	-20...+40 °C
Storage temperature range	-40...+60 °C	-40...+60 °C
Degree of protection	IP 23	IP 23
Dimensions with safety frame		
length	500 mm	600 mm
width	230 mm	225 mm
height	315 mm	415 mm
Weight	13 kg	17 kg

The products meet conformity requirements for CE marking.

1) Changes of speed are carried out by changing rear wheel and jumper block selection on circuit card A001.

8. DISPOSAL OF THE MACHINE



Do not dispose of electrical equipment together 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 returned to an environmentally compatible recycling facility. As the owner of the equipment, you should get information on approved collection systems from our local representative.

By applying this European Directive you will improve the environment and human health!

9. TERMS OF GUARANTEE

Kemppi Oy provides a guarantee for products manufactured and sold by them if defects in manufacture and materials occur. Guarantee repairs must be carried out only by an Authorised Kemppi Service Agent. Packing, freight and insurance costs to be paid by orderer. The guarantee is effected on the date of purchase. Verbal promises which do not comply with the terms of guarantee are not binding on guarantor.

Limitations on guarantee

The following conditions are not covered under the terms of guarantee: defects due to natural wear and tear, non-compliance with operating and maintenance instructions, connection to incorrect or faulty supply voltage (including voltage surges outside equipment spec.), incorrect gas pressure, overloading, transport or storage damage, fire or damage due to natural causes i.e. lightning or flooding.

This guarantee does not cover direct or indirect travelling costs, daily allowances or accommodation. Note: Under the terms of guarantee, welding torches and their consumables, feeder drive rolls and feeder guide tubes are not covered. Direct or indirect damage due to a defective product is not covered under the guarantee. The guarantee is void if changes are made to the product without approval of the manufacturer, or if repairs are carried out using non-approved spare parts.

The guarantee is also void if repairs are carried out by non-authorised agents.

Undertaking guarantee repairs

Guarantee defects must be informed to Kemppi or authorised Kemppi Service Agents within the guarantee period. Before any guarantee work is undertaken, the customer must provide proof of guarantee or proof of purchase, and serial number of the equipment in order to validate the guarantee. The parts replaced under the terms of guarantee remain the property of Kemppi.

Following the guarantee repair, the guarantee of the machine or equipment, repaired or replaced, will be continued to the end of the original guarantee period.

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