PATON

USER MANUAL
ПОСІБНИК КОРИСТУВАЧА
РУКОВОДСТВО ПОЛЬЗОВАТЕЛЯ

PROMIG-160

S/N:P_____P

PROMIG-200

S/N:P_____P

PROMIG-250

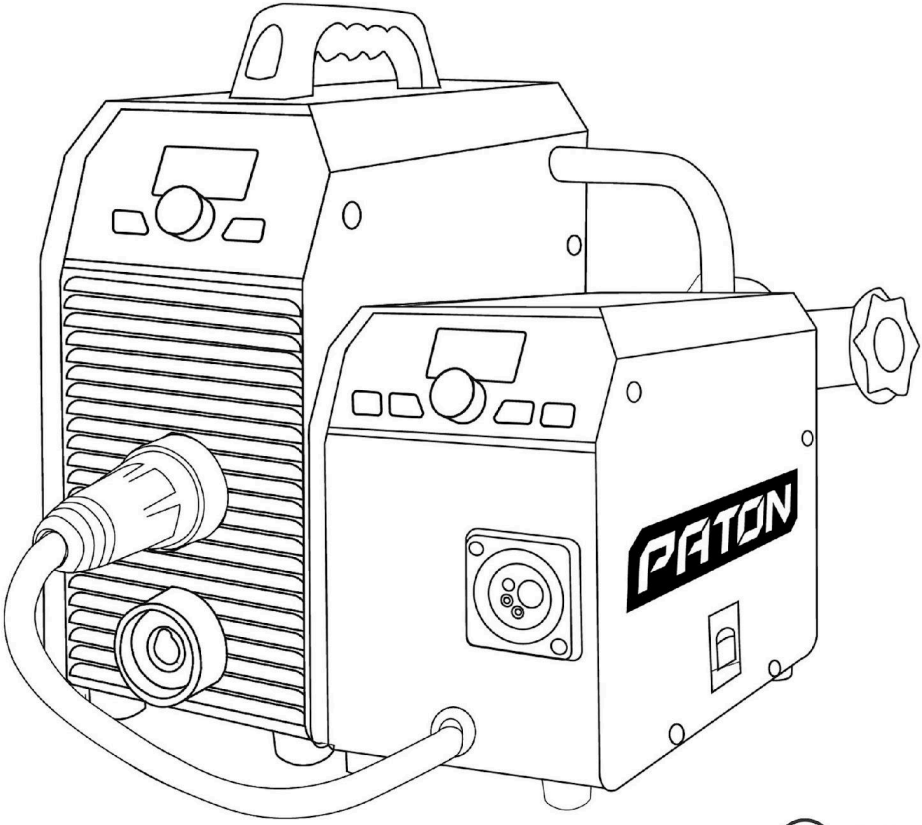
S/N:P_____P

PROMIG-270

S/N:P_____P

PROMIG-350

S/N:P_____P



PATON INTERNATIONAL

- с механическими повреждениями, повлиявшими на работоспособность аппарата (деформация корпуса и деталей в следствии падения с высоты или падения на оборудование тяжёлых предметов, выпадение кнопок и разъёмов);
- со следами коррозии, которая стала причиной неисправного состояния;
- вышедшее из строя по причине воздействия на его силовые и электронные элементы обильной влаги;
- вышедшее из строя по причине накопления внутри токопроводящей пыли (угольная пыль, металлическая стружка и др.);
- в случае попытки самостоятельного ремонта его узлов и/или замены электронных элементов;
- данное оборудование, в зависимости от условий эксплуатации рекомендуется, один раз в полгода, во избежание выхода аппарата из строя, проводить чистку внутренних элементов и узлов сжатым воздухом, снять защитную крышку. Чистку необходимо проводить аккуратно, удерживая шланг компрессора на достаточном расстоянии во избежание повреждения пайки электронных компонентов и механических частей.

Также основные гарантийные обязательства **не распространяются** на вышедшие из строя внешние элементы оборудования, подверженные физическому контакту, и сопутствующие/расходные материалы, претензии по которым принимаются не позже двух недель после продажи:
- кнопка включения и выключения;
- ручки регулировки сварочных параметров;
- разъёмы подключения кабелей и рукавов;
- разъёмы управления;
- сетевой кабель и вилка сетевого кабеля;
- ручка для переноски, наплечный ремень, кейс, коробка;
- электрододержатель, клемма «массы», горелка, сварочные кабели и рукава.

Продавец оставляет за собой право отказать в предоставлении гарантийного ремонта, либо установить в качестве даты начала исполнения гарантийных обязательств месяц и год выпуска аппарата (устанавливаются по серийному номеру):
- при утере гарантийного талона владельцем;
- при отсутствии корректного или вообще какого-либо заполнения паспорта продавцом при продаже аппарата. Гарантийный срок продлевается, на срок гарантийного обслуживания аппарата в сервисном центре.

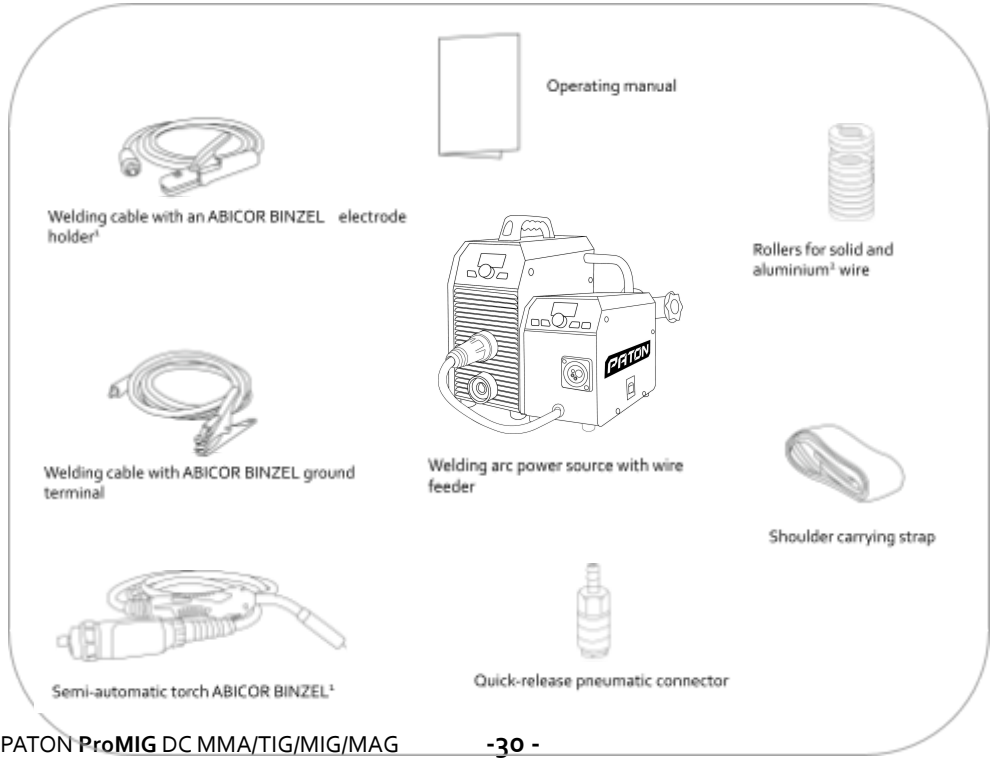
ENGLISH

	The welding machine is manufactured in accordance with technical standards and established safety rules. However, incorrect handling results in the following dangers: - injury of maintenance personnel or third persons; - damage of the machine or property of the enterprise; - derangement of efficient working process.
	All persons dealing with start-up, operation, attendance and maintenance of the machine must: - undergo relevant qualifying examination; - have knowledge about welding; - carefully follow these instructions. Malfunctions that can reduce safety must be eliminated immediately.
SAFETY RULES	
	**DANGER OF MAINS AND ARC CURRENT** - electric shock can lead to death; - magnetic fields created by this machine can have adverse effect on operability of electrical appliances (such as cardiac pacemakers). People who use such appliances shall consult with a doctor before approaching the operating welding area; - welding cable must be robust, intact and insulated. Loose connections and damaged cables must be immediately replaced. Mains cables and cables of the welding machine must be checked for insulation integrity by an electrical engineer on a regular basis; - when using the machine, never remove its outer case.
	**DANGER OF WELDING ARC RADIATION** It is forbidden to observe the welding arc with the naked eye. The arc and splashing generated during operation can burn the skin or cause a flame, therefore a protective mask with a tinted filter should always be worn (goggles must be equipped with goggles with a DIN 9 10 filter). Unauthorized persons in the operating area of the device must protect their eyes with special goggles or use non-flammable, radiation-absorbing screens.
	**DANGER OF HAZARDOUS GASES AND VAPOURS** - if smoke and hazardous gases emerge in the operating zone, remove them with special means; - provide sufficient fresh air inflow; - arc radiation field must be free from solvent vapours.

	**DANGER OF MAGNETIC FIELD** Magnetic fields created by this machine can have adverse effect on operability of electrical appliances (such as cardiac pacemakers). People who use such appliances shall consult with a doctor before approaching the operating welding area.
	**DANGER OF SPARKING** - remove flammable objects from the operating zone; - it is not allowed to weld vessels where gases, fuel or oil products are stored or used to be stored. Residues of these products may explode; - when working in fire-dangerous or explosion-dangerous rooms, adhere to special rules in compliance with national and international regulations.
	**INDIVIDUAL PROTECTIVE EQUIPMENT** To ensure individual protection, adhere to the following rules: - wear robust footwear, which retains insulating properties in moist conditions as well; - protect the hands with insulating gloves; - protect the eyes with a headshield, with is equipped with a black-light filter complying with safety standards; - wear only proper low-flammable clothes.
	**DANGER OF INTENSE NOISE** The arc generated during welding can emit sounds above 85 dB during 8 hours of working time. Welders working with the equipment wear ear protection during work.

UNPACKAGING

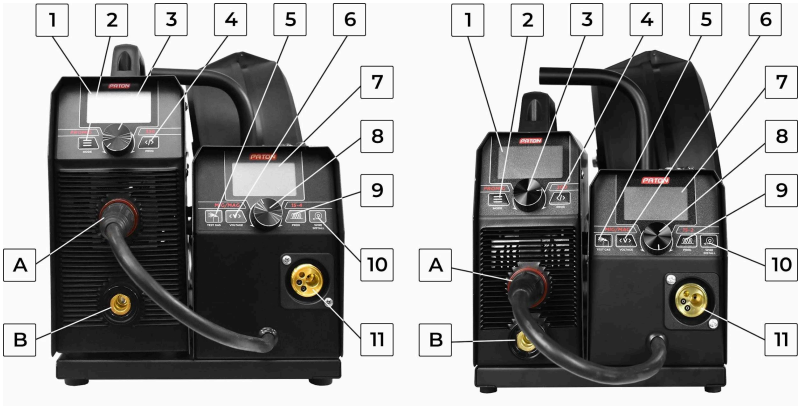
The delivery set of the device includes:

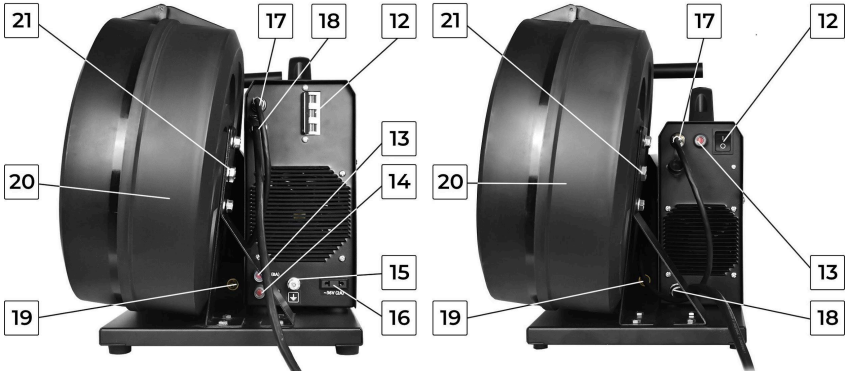


[1] Except models with delivery set index WA or WAM

[2] For ProMIG-250-15-4/270-15-4/350-15-4

CONTROL ELEMENTS AND INDICATION





1 – Digital display;
2 – Welding mode selection button:
a) manual metal arc welding, MMA;
b) tungsten-arc inert-gas welding, TIG;
c) metal-arc inert-gas welding/metal active gas welding, MIG/MAG;
3 – The regulator for selecting the functions (parameters) of the current mode and adjusting their values/Setting-up the welding voltage parameter in MIG/MAG mode. The selection of functions is done by turning the knob to the right and left. To move to editing the value of a selected parameter, you need to press the regulator knob. Values are set by turning the regulator knob. To return to the function/parameter selection menu, press the regulator knob again;
4 – Welding program selection button (set of parameters previously set by the user) / additional function: Inductance level adjustment (when it is pressed down for more than 1 second);
5 – Button for testing shielding gas supply (wire is not fed);
6 – Button for adjusting the welding voltage on the wire feeder;
7 – Digital display of the wire feeder;
8 – The regulator for selecting the functions (parameters) of the current mode and adjusting their values on the wire feeder (by default – adjusting the wire feed speed in MIG/MAG mode);
9 – Welding program selection button on a wire feeder (set of parameters previously set by the user) / additional function: Inductance level adjustment (when it is pressed down for more than 1 second);

10 – Wire threading button (no gas is supplied);
11 – EURO type KZ-2 connector for connecting a semi-automatic torch;
12 – Breaker/button for turning on/off the welding current source;
13 – Fuse of wire feeder;

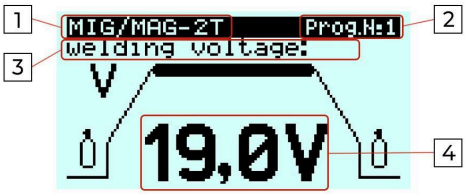
A – Bayonet-type power current socket "+":
a) MMA welding – the electrode cable is connected (in more rare cases, when using special electrodes, the ground cable is connected);
b) TIG welding – only the ground cable is connected;
c) MIG/MAG welding with **solid wire** – the cable is connected to the feeder from inside (by default);
d) MIG/MAG welding with **flux-cored wire** – the ground cable is connected;

B – Bayonet-type power current socket "-":
a) MMA welding – the ground cable is connected (in more rare cases, when using special electrodes, the electrode cable is connected);
b) TIG welding – only the TIG torch is connected;
c) MIG/MAG welding with **solid wire** – the ground cable is connected;
d) MIG/MAG welding with **flux-cored wire** – the cable is connected to the feeder from the inside (it is possible to connect it yourself);

14 – Fuse of gas heater;
15 – Location for connecting the grounding cable;
16 – Socket for 36V gas heater;
17 – Connector for connecting the control cable from the wire feeder;
18 – Power supply cable;
19 – Shielding gas connection;
20 – Protective cover for wire coil;
21 – Wire coil holder with spring-loaded braking device.

INDICATION OF MACHINE OPERATION IN MODES

MIG/MAG



Main screen

Screen of wire feeder

MMA

Menu is locked

X

Screen of wire feeder

TIG

Menu is locked

X

Screen of wire feeder

1 - Current welding mode
2 - Current program number
3 - Name of function / parameter
4 - Value of selected function / parameter
5 - List and values of the next 2 parameters in the menu

START-UP

The welding unit is designed exclusively for MMA welding, tungsten-arc inert-gas (TIG) welding, as well as metal-arc inert-gas welding/metal active gas welding (MIG/MAG). Other use of the machine is considered undue. The manufacturer is not responsible for damage cause by undue use of the machine. Intended use of the machine implies adherence to instructions of this operating manual.

INSTALLATION REQUIREMENTS

The machine must be placed so as to ensure free inlet and outlet of cooling air through vent holes on the front and the rear panels. Take care that metal dust (for example, during emery grinding) does drawn directly into the machine by the cooling fan.

POWER CONNECTION

The standard welding unit is rated for:

1. Mains voltage is 220V (-27% +18%) – for ProMIG-160/200/250;
2. Three-phase mains voltage is 3x380V or 3x400V (for ProMIG-270/350), three wires are dedicated for this. Safety rules when working with welding equipment require grounding of the unit housing. There are two ways to do this: 1) by using the fourth wire in the mains yellow-green cable (international marking standard); 2) by using a bolted terminal on the rear wall of the unit (a stricter grounding standard, used in the CIS countries).

Caution! When the unit is connected to a mains voltage higher than 270V (for ProMIG-160/200/250) or 450V (for ProMIG-270/350), all manufacturer's warranty obligations become invalid! The manufacturer's warranty obligations also become invalid in case of an erroneous connection of the mains phase to the source ground.

The mains connector, the cross-sections of the mains cables, as well as the mains fuses need to be selected based on the unit technical data.

SELECTING THE DEVICE MENU LANGUAGE

To select/change the menu language of the device, hold down button **2** and turn on the device. After that, the language selection menu will be displayed on the screen. You can select the desired language using the regulator **3** and confirm your choice by pressing the the regulator **3**. Then, the machine will continue working with the interface in the corresponding language.

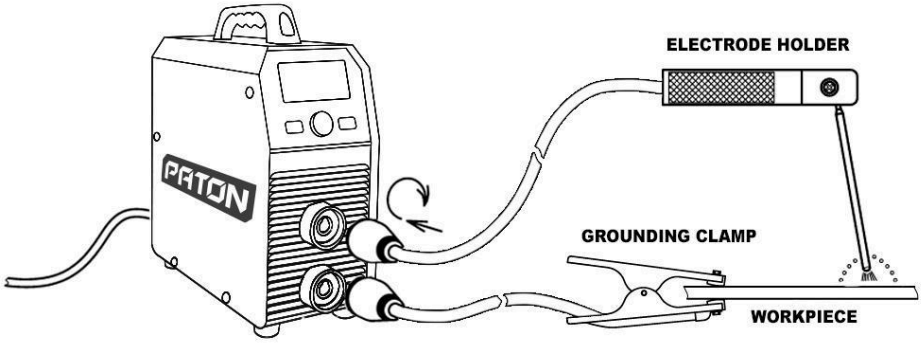
Used MMA electrode	Set current value for MMA and TIG	Wire cross-section diameter for MIG/MAG	Cross-section of each core of the mains wire, sq. mm	Max. wire length, m
1x220V – ProMIG-160, ProMIG-200, ProMIG-250				
Ø2 mm	not more than 80A	not more than Ø0.6 mm	1	75
			1.5	115
			2	155
			2.5	195
			4	310
			6	465
Ø3 mm	not more than 120A	not more than Ø0.8 mm	1.5	75
			2	105
			2.5	130
			4	205
			6	310
Ø4 mm	not more than 160A	not more than Ø1.0 mm	2	75
			2.5	95

			4	155
			6	230
Ø5 mm	not more than 200A		2.5	75
			4	125
			6	185
Ø5 mm Ø6 mm fusible	up to 250 A	not more than Ø 1.2 mm	2.5	60
			4	100
			6	150

Used MMA electrode	Set current value for MMA and TIG	Wire cross-section diameter for MIG/MAG	Cross-section of each core of the mains wire, sq. mm	Max. wire length, m
3 x 380/400V – ProMIG-270, ProMIG-350				
Ø3 mm	not more than 120A	not more than Ø 0.8 mm	1.5	135
			2	175
			2.5	220
			4	350
			6	525
Ø4 mm	not more than 160A	not more than Ø 1.0 mm	2	130
			2.5	160
			4	260
			6	385
Ø5 mm	not more than 220A		2.5	115
			4	180
			6	270
Ø6 mm fusible	not more than 270A	not more than Ø 1.2 mm	2.5	85
			4	135
			6	205
Ø6 mm	not more than 350A	not more than Ø 1.4 mm	2.5	65
			4	100
			6	150

ATTENTION! Supply button on the rear panel of the machine (for ProMIG-160/200/250) is not a power button, so it does not provide complete de-energization of internal electronic parts, when the machine is switched off. Therefore, in accordance with safety rules, disconnect the plug from the mains after completion of welding.

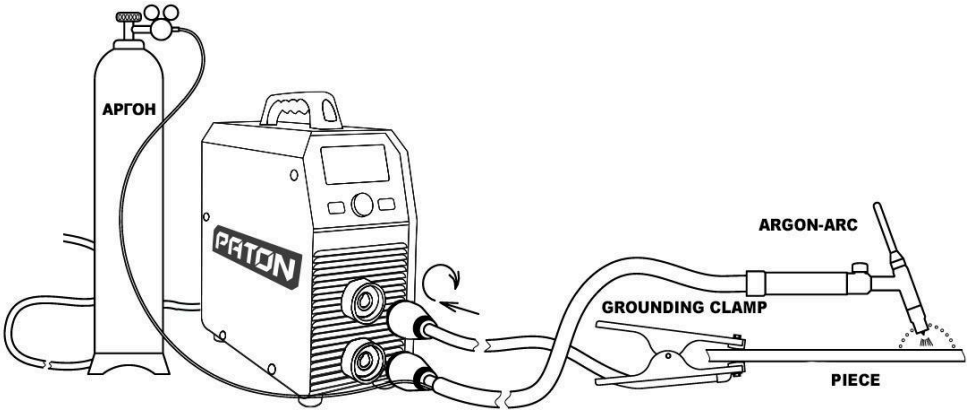
MACHINE CONNECTION DIAGRAM FOR WELDING WITH STICK ELECTRODES (MMA)



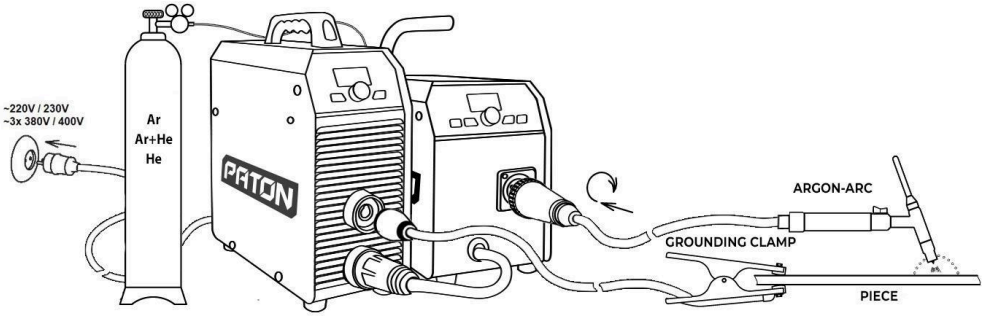
Recommended length of power welding cables during welding:

Maximum current	Cable length (one way)	Cross-section area	Cable brand
not more than 160A	2 ... 7 m	16 mm²	KG 1x16
not more than 200A	3 ... 9 m	25 mm²	KG 1x25
not more than 250A	5 ... 11 m	35 mm²	KG 1x35
not more than 270A	5 ... 11 m	35 mm²	KG 1x35
not more than 350A	6 ... 14 m	35 mm²	KG 1x35

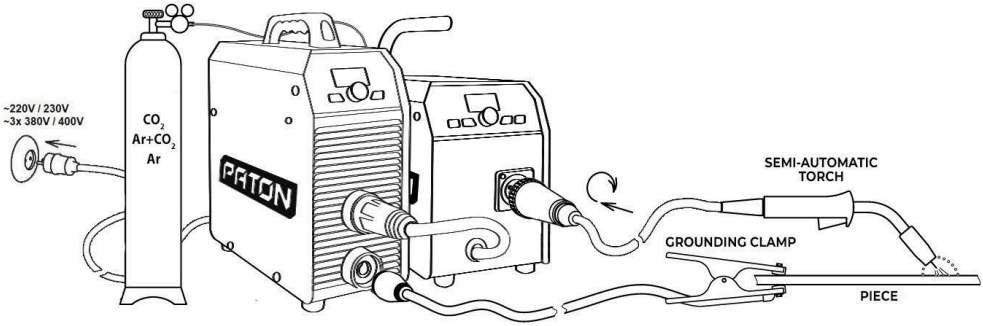
MACHINE CONNECTION DIAGRAM FOR TUNGSTEN-ARC INERT-GAS (TIG) WELDING – using the 35-50 TIG torch



MACHINE CONNECTION DIAGRAM FOR TUNGSTEN-ARC INERT-GAS (TIG) WELDING – using the GZ-2 TIG torch



MACHINE CONNECTION DIAGRAM FOR METAL-ARC INERT-GAS WELDING/METAL ACTIVE GAS WELDING (MIG/MAG)



TECHNICAL PARAMETERS

PARAMETERS	ProMIG-160	ProMIG-200	ProMIG-250	ProMIG-270	ProMIG-350
Rated voltage of the three-phase mains 50 / 60Hz, V	220 230	220 230	220 230	3x380 3x400	3x380 3x400
Rated current consumption from the mains phase, A	18 ... 21	23 ... 27	29,5 ... 35	12 ... 14	16 ... 18,5
Rated welding current, A	160	200	250	270	350
Maximum operating current, A	215	270	335	350	450
Duty cycle	70%/at 160A 100%/at 134A	70% /at 200A 100% /at 167A	60% /at 250A 100% /at 193A	70%/at 270A 100%/at 225A	70%/at 350A 100%/at 290A
Supply voltage variation limits, V	160 – 260	160 – 260	160 – 260	±15%	±15%
Limits of regulation of welding current, A	8 – 160	10 – 200	12 – 250	12 – 270	14 – 350
Limits of regulation of welding voltage, V	12 – 24	12 – 26	12 – 28	12 – 29	12 – 30
Limits of wire feed speed control, m/min	2,0 – 16				
MMA electrode diameter, mm	1,6 – 4,0	1,6 – 5,0	1,6 – 6,0	1,6 – 6,0	1,6 – 6,0
Welding wire diameter, mm	0,6 – 1,0	0,6 – 1,0	0,6 – 1,2	0,6 – 1,2	0,6 – 1,4
Maximum coil weight, kg	15				
Welding pulse modes	MMA: 0,2...500 Hz; TIG: 0,2...500 Hz; MIG/MAG: 30...300 Hz				
"Hot-Start" in the MMA mode	Adjustable				
"Arc-Force" in MMA mode	Adjustable				
"Anti-Stick" in the MMA mode	Automatic				
Voltage reduction unit, no-load	on / off				
MMA no-load voltage, V	12 / 75				
Arc striking voltage, V	110				
Rated consumption power, kVA	4,1 ... 4,7	5,1 ... 6,1	6,6 ... 7,8	8,0 ... 9,4	10,7 ... 12,3
Maximum power consumption, kVA	5,9	7,5	9,5	11,4	15,3
Efficiency, %	90				
Cooling	Adaptive				
Operating temperature range	–25 ... +45°C				
Overall dimensions, mm (length, width, height)	360 x 260 x 270	360 x 260 x 270	360 x 260 x 270	540 x 360 x 400	540 x 360 x 400
Weight without coil and accessories, kg	13,1	13,2	14,0 (16,8)	22,5	22,9

Protection rating	IP33	IP33	IP33	IP33	IP33

SELECTING AND SETTING THE FUNCTIONS OF THE MACHINE

If you do not press the buttons on the front panel, the unit displays the value of the main parameter of the current welding mode on the digital indicator on the left:

1) in the MMA mode – welding current;
2) in the TIG mode – welding current;
3) in the MIG/MAG mode – welding voltage.

On the digital display in the MIG/MAG welding mode, the actual welding current value is shown during the welding process. It is worth noting that the actual welding current value is influenced by several factors, including the wire diameter used, the set welding voltage on the power source, the wire feed speed set on the feeder mechanism, the shielding gas used, the material and thickness of the welded workpiece, among others. After the welding process is completed, the actual welding current value remains displayed on the machine's screen for 8 seconds, allowing the welder to view the current value.

Regulator **3** on the front panel is multifunctional and is responsible for:

1) selecting any function in the current welding mode (turning left and right);
2) setting the value of the selected parameter (press the regulator and turning left or right);
3) reset all functions to factory settings of the current program of the current welding mode (press the regulator and hold for more than 12 sec.).

Button **2** on the front panel of the unit is responsible for selecting the welding mode.

SWITCHING TO THE REQUIRED FUNCTION

If the machine has an active protection system against unauthorized access to the function menu, then when turning the regulator **3**, adjustment of the value of the main parameter of the current welding mode occurs, also this means that the function menu is locked. To unlock it, press and hold down regulator **3** for more than 3.5 seconds. When unlocking, the indicator displays an image of opening lock, indicating the process of unlocking the function menu. After successful unlocking, when turning the regulator **3** to the right or left, the current name of the function and its value will be displayed on the digital display.

Similarly, by pressing and holding the regulator knob **8** on the wire feed unit for more than 3.5 seconds, the menu is unlocked, and the name and value of the function for the current welding mode are displayed on the digital screen **7**. By pressing the regulator knob **8** and turning it left or right, you can switch between functions and parameters of the mode and also adjust their values.

SWITCHING TO THE REQUIRED WELDING MODE

Pressing button **2** leads to switching to the next welding mode in a circle, this can be seen on display **1** on the front panel.

RESET ALL FUNCTIONS OF THE WELDING MODE USED

Situations may occur when the unit's settings have somewhat confused the user. In order to reset them to the standard factory settings, it is enough to press and hold down regulator **3** for more than 10 seconds (ignore the animation of the lock symbol). The scoreboard will start counting down 333...222...111 and when "000" is reached, all settings of the selected program of the current welding mode will be updated to factory settings. Reset parameters for each program each welding mode are made separately. This is provided for convenience, so as not to reset individual settings in the other programs and welding modes.

Similarly, you can reset the parameters of current welding mode on the wire feeder by using the regulator **8**.

CHANGE PROGRAM NUMBER IN CURRENT WELDING MODE

In each MMA, TIG, and MIG / MAG welding mode, it is possible for the user to save up to 16 different presets. The current preset (program) number is displayed in the upper right corner of the LCD of the source on the front panel. At the moment of the first switching on of the machine, the program is always under No. 1 for each welding mode. All changes in the setting of the machine in this welding mode and the current program number are saved. To switch to another program number and start setting again from the basic parameters, just press button 4 on the welding current source (or button 9 on the wire feeder). Then the LCD displays the current program number, which can be changed up or down by turning the regulator 3 (or the regulator 8 on the wire feeder) to the right or left. It is necessary to confirm the program selection by pressing the corresponding regulator knob **3** or **8**.

GENERAL LIST AND SEQUENCE OF FUNCTIONS

MMA welding mode

0) [-1-] Main displayable parameter CURRENT= 80A (default)
   a) 8 ... 160A (unit increment 1A) for ProMIG-160
   b) 10 ... 200A (unit increment 1A) for ProMIG-200
   c) 12 ... 250A (unit increment 1A) for ProMIG-250
   d) 12 ... 270A (unit increment 1A) for ProMIG-270-400V
   e) 14 ... 350A (unit increment 1A) for ProMIG-350-400V
1) [H.St] Hot Start power = 50% (default)
   a) 0[OFF] ... 100% (unit increment 5%)

2) [t.HS] Hot Start time = 0.3 sec (default)
   a) 0.1 ... 1.0 sec (unit increment 0.1 sec)
3) [Ar.F] Arc Force power = 50% (default)
   a) o[OFF] ... 100% (unit increment 5%)
4) [u.AF] Arc Force triggering level = 12V (default)
   a) 9 ... 18V (unit increment 1V)
5) [BAH] Voltage response slope = 1.4V/A (default)
   a) 0.2 ... 1.8V/A (unit increment 0.4V/A)
6) [Sh.A] Short arc welding = OFF (default)
   a) o[OFF] ... 3 stages (unit increment 1 stage)
7) [BSn] Voltage reduction unit = OFF (default)
   a) ON – enabled
   b) OFF – disabled
8) [Po.P] Current pulsation mode = OFF (by default)
   a) ON – enabled
   b) OFF – disabled
9) [I.PS] Pause current = 25A (by default)
   a) 8 ... 160A (unit increment 1A) for ProMIG-160
   b) 10 ... 200A (unit increment 1A) for ProMIG-200
   c) 12 ... 250A (unit increment 1A) for ProMIG-250
   d) 12 ... 270A (unit increment 1A) for ProMIG-270-400V
   e) 14 ... 350A (unit increment 1A) for ProMIG-350-400V
10) [Fr.P] current pulsation frequency = 5.0 Hz (by default)
   a) 0.2 ... 500 Hz (dynamic change step 0.1 Hz...1 Hz)
12) [dut] pulse/pause ratio (balance) - it is the percentage of the current pulse to the period of repetition of these pulses = 50% (by default)
   a) 20 ... 80% (change step 2%)

TIG welding mode

0) [-2-] Main displayable parameter CURRENT = 100A (default)
   a) 8 ... 160A (unit increment 1A) for ProMIG-160
   b) 10 ... 200A (unit increment 1A) for ProMIG-200
   c) 12 ... 250A (unit increment 1A) for ProMIG-250
   d) 12 ... 270A (unit increment 1A) for ProMIG-270-400V
   e) 14 ... 350A (unit increment 1A) for ProMIG-350-400V
1) [But] Torch button mode = [LIFT] (default)
   a) [LIFT] – No button mode TIG-LIFT (for valve-type torch)
   b) [LIFT2T] – Button mode TIG-LIFT2T (welding current stops when the torch button is released)
   c) [LIFT4T] – Button mode TIG-LIFT4T (pressing the torch button again reduces the current to the "Final Current" value, followed by welding current shutdown when the button is released)
2) [t.uP] Current ramp-up time = 0.2 sec (default)
   a) 0 ... 15.0 sec (adjustment step 0.1 sec)
3) [t.dn] Current ramp-down time = 0.2 sec (default)
   a) 0 ... 15.0 sec (adjustment step 0.1 sec)
4) [Po.A] Final current = 20A (default)
   a) 8 ... 50A (adjustment step 1A) for ProMIG-160
   b) 10 ... 50A (adjustment step 1A) for ProMIG-200
   c) 12 ... 50A (adjustment step 1A) for ProMIG-250
   d) 12 ... 50A (adjustment step 1A) for ProMIG-270-400V
   e) 14 ... 50A (adjustment step 1A) for ProMIG-350-400V
5) [t.Po] Post-gas time = 4.0 sec (default)
   a) 1.0 ... 35.0 sec (unit increment 0.1 sec)
6) [Po.P] current pulsation mode = OFF (by default)
   a) ON – enabled
   b) OFF – disabled
7) [I.PS] pause current = 25A (by default)
   a) 8 ... 160A (unit increment 1A) for ProMIG-160
   b) 10 ... 200A (unit increment 1A) for ProMIG-200
   c) 12 ... 250A (unit increment 1A) for ProMIG-250
   d) 12 ... 270A (unit increment 1A) for ProMIG-270-400V
   e) 14 ... 350A (unit increment 1A) for ProMIG-350-400V
8) [Fr.P] current pulsation frequency = 10.0 Hz (by default)
   a) 0.2 ... 500 Hz (dynamic change step 0.1 Hz...1 Hz)
9) [dut] pulse/pause ratio (balance) – it is the percentage of the current pulse to the period of repetition of these pulses = 50% (by default)
   a) 4 ... 80% (change step 2%)

MIG/MAG welding mode

0) [-3-] Main displayable parameter WELDING VOLTAGE = 19.0 V (default)
   a) 12.0 ... 24,0V (unit increment 0,1V) for ProMIG-160
   b) 12.0 ... 26,0V (unit increment 0,1V) for ProMIG-200
   c) 12.0 ... 28,0V (unit increment 0,1V) for ProMIG-250
   d) 12.0 ... 29,0V (unit increment 0,1V) for ProMIG-270-400V
   e) 12.0 ... 32,0V (unit increment 0,1V) for ProMIG-350-400V
1) [SPD] Second main parameter WIRE FEED SPEED = 4.5 m/min (default)
   a) 1.0 ... 16.0 m/min (adjustment step 0.1 m/min)
2) [t.Pr] Pre-gas flow time = 0.1 sec (default)
   a) 0.1 ... 25.0 sec (adjustment step 0.1 sec)
3) [t.Po] Post-gas flow time = 1.5 sec (default)
   a) 0.5 ... 25.0 sec (adjustment step 0.1 sec)
4) [t.uP] Voltage ramp-up time = 0.1 sec (default)
   a) 0 ... 5.0 sec (adjustment step 0.1 sec)
5) [t.dn] Voltage ramp-down time = 0.1 sec (default)
   a) 0 ... 5.0 sec (adjustment step 0.1 sec)
6) [But] Torch button mode = [2T] (default)
   a) [2T] – 2T torch button mode
   b) [4T] – Standard 4T torch button mode
   c) [a4T] – Alternative 4T torch button mode
7) [Ind] Inductance level = 0 (default)
   a) -5 ... 0 ... 5 stage (adjustment step 1 stage)
8) [SOA] Wire material type = Steel (default)
   a) Steel – Steel wire
   b) Alum – Aluminum wire
9) [Po.P] Pulsed current mode = OFF (default)
   a) ON – enabled
   b) OFF – disabled
10) [t.IP] Pulse duration = 2.2 ms (default)
   a) 0.5 ... 5 ms (adjustment step 0.1 ms)
11) [I.PS] Pulse current = 210A (default)
   a) 140 ... 210A (adjustment step 1A) for ProMIG-160
   b) 150 ... 260A (adjustment step 1A) for ProMIG-200
   c) 160 ... 320A (adjustment step 1A) for ProMIG-250
   d) 170 ... 360A (adjustment step 1A) for ProMIG-270-400V
   e) 190 ... 450A (adjustment step 1A) for ProMIG-350-400V
12) [I.PS] Base current = 50A (default)
   a) 30 ... 80A (adjustment step 5A)
13) [Fr.P] Pulse frequency = 100 Hz (default)
   a) 30 ... 300 Hz (adjustment step 1 Hz)

WARRANTY

Dear customer!

PATON INTERNATIONAL thanks you for choosing PATON™ products and guarantees high quality and flawless functioning of this product, subject to the rules of its operation.

ATTENTION!!! Before using the equipment, we recommend that you read the operating instructions, and also check the correctness of filling out the warranty card: the model name of the product you purchased, as well as the serial number must be identical to the entry in the warranty card. It is not allowed to make any changes and corrections to the coupon.

WARRANTY POLICY

PATON INTERNATIONAL guarantees the correct operation of the power source provided that the consumer observes the conditions of operation, storage and transportation.

ATTENTION! There is no free warranty service in case of mechanical damage to the welding machine!

The main warranty period for welding equipment is:

Unit model	Warranty period

ProMIG-160	**5 years**
ProMIG-200	
ProMIG-250	
ProMIG-270-400V	**3 years**
ProMIG-350-400V	

The main warranty period starts from the date the inverter equipment is sold to the end customer.

During the main warranty period, the seller undertakes, free of charge for the owner of PATON™ inverter equipment:
- make diagnostics and identify the cause of the breakdown;
- to provide units and elements necessary for the repair;
- to carry out work to replace the failed elements and assemblies;
- to test the repaired equipment.

The main warranty obligations do not apply to the equipment:
- with mechanical damage that affected the performance of the device (deformation of the case and parts as a result of falling from a height or falling on the equipment of heavy objects, falling out of buttons and connectors);
- with traces of corrosion, which caused a malfunction;
- out of order due to exposure to its power and electronic elements of abundant moisture;
- failed due to the accumulation of conductive dust inside (coal dust, metal shavings, etc.);
- in case of an attempt to independently repair its components and / or replace electronic elements;
- this equipment, depending on the operating conditions, is recommended once every six months, in order to avoid the breakdown of the device, to clean the internal elements and assemblies with compressed air, remove the protective cover. Cleaning should be done carefully, keeping the compressor hose at a sufficient distance to avoid damage to the soldering of the electronic components and mechanical parts.

Also, the main warranty obligations do not apply to out-of-order external elements of equipment subject to physical contact, and related / consumables, claims for which are accepted no later than two weeks after the sale:
- on and off button;
- knobs for adjusting welding parameters;
- connectors for connecting cables and sleeves;
- control connectors;
- mains cable and mains cable plug;
- carrying handle, shoulder strap, case, box;
- electrode holder, ground terminal, torch, welding cables and sleeves.

The seller reserves the right to refuse to provide warranty repairs, or to set the month and year of manufacture of the device as the start date for the fulfillment of warranty obligations (established by the serial number):
- if the owner loses the warranty card;
- in the absence of correct or even any kind of filling in the passport by the seller when selling the device.

The warranty period is extended for the period of warranty service of the device in the service center.

You can find out information about the nearest service center at the place of purchase.

Дата прийому на ремонт / Дата приёма на ремонт / Date of receipt for repair _____ "_____", 20____

_____
(підпис / подпись / signature)

Ознаки несправності / Признаки неработоспособности / Symptoms of non-operability:

_____

Причина / Cause:
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