PATON

USER MANUAL
ПОСІБНИК КОРИСТУВАЧА
РУКОВОДСТВО ПОЛЬЗОВАТЕЛЯ

StandardTIG-160

S/N: A_____S

StandardTIG-200

S/N: A 2002223 S

StandardTIG-250

S/N: A_____S

StandardTIG-270-400V

S/N: A_____S

StandardTIG-350-400V

S/N: A_____S

OTK
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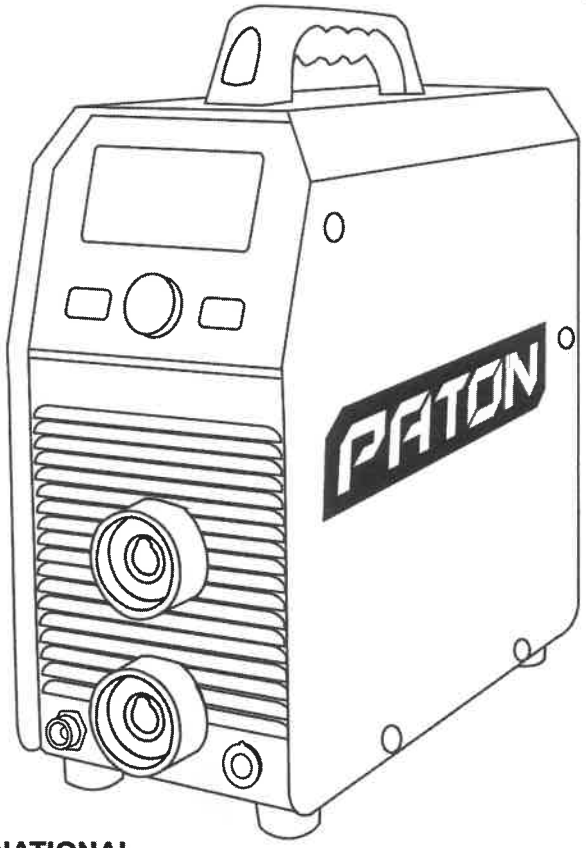

PATON INTERNATIONAL

УВАГА!!! Перед використанням обладнання рекомендуємо ознайомитися з розширеною версією інструкції з експлуатації за адресою: https://paton.ua/files/passports/StandardTIG_GEN5.pdf

ATTENTION!!! Before using the equipment, we recommend you to read the extended version of the operating manual by the link: https://paton.ua/files/passports/StandardTIG_GEN5.pdf

Аргонодуговий інвертор / Argon-arc inverter
PATON StandardTIG-160 / 200 / 250 / 270-400V / 350-400V

Дата продажу / Purchase date "_____" _____ 20_____ г.

М.П.

_____
(Підпис продавця / Vendor signature)

EU DECLARATION OF CONFORMITY

Manufacturer

PATON INTERNATIONAL LLC

Novopyrohivska 66, 03045 Kiev, UKRAINE

We hereby declare that the DoC is issued under our sole responsibility and belongs to the following product:

Product designation: PATON™ StandardTIG-160, PATON™ StandardTIG-200, PATON™ StandardTIG-250, PATON™ StandardTIG-270-400V, PATON™ StandardTIG-350-400V

The object of the declaration is in conformity with the relevant directives and standards:

Directives:

Safety of machinery - Electrical equipment of machines -	**EN IEC 60204-1:2018**
Arc welding equipment - Part 1: Welding power sources	**EN IEC 60974-1:2018/A1:2019** **EN IEC 60974-1:2022/A1:2022**
Arc welding equipment - Part 10: Electromagnetic compatibility (EMC) requirements	**EN IEC 60974-10:2014/A1:2015** **EN IEC 60974-10:2021/A1:2021**

Signed on behalf of: **PATON International LLC**
Place and Date: 03045 Kiev, UKRAINE 04.08.2022

Signature
Name, Function: Mark Tokmakov
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ГАРАНТІЙНЕ ОБСЛУГОВУВАННЯ

Шановний споживач!

ПАТОН ІНТЕРНЕШНЛ дякує Вам за вибір продукції PATON та гарантує високу якість та бездоганне функціонування даного виробу за умови дотримання правил його експлуатації.

УВАГА!!! Перед використанням обладнання рекомендуємо ознайомитися з розширеною інструкцією з експлуатації, а також перевірити правильність заповнення гарантійного талона: назва моделі придбаного Вами виробу, та його серійний номер повинні бути ідентичні записам в гарантійному талоні. Не допускається внесення в талон будь-яких змін чи виправлень.

ГАРАНТІЙНІ ЗОБОВ'ЯЗАННЯ

ПАТОН ІНТЕРНЕШНЛ гарантує справну роботу джерела живлення у разі дотримання споживачем умов експлуатації, зберігання й транспортування.

УВАГА! Безкоштовне гарантійне обслуговування відсутнє за умови механічних пошкоджень зварювального апарату!

Термін основної гарантії на зварювальне обладнання становить:

Модель апарату	Термін гарантії
StandardTIG-160	5 років
StandardTIG-200	
StandardTIG-250	3 роки
StandardTIG-270-400V	
StandardTIG-350-400V	2 роки

Основний гарантійний період обчислюється з дня продажу інверторного обладнання кінцевому покупцеві.

Протягом основного гарантійного періоду продавець зобов'язується (**у випадку гарантійного ремонту**), безкоштовно для власника інверторного обладнання PATON:
- **протягом 1 року з дати придбання клієнтом обладнання**, оплатити доставку обладнання в Серівсний центр і назад клієнту, використовуючи послуги компанії Нова пошта;
- провести діагностику та виявити причину несправності;
- забезпечити необхідними для виконання ремонту вузлами та елементами;
- провести роботи із заміни елементів та вузлів, що вийшли з ладу;
- провести тестування відремонтованого обладнання.

Основні гарантійні зобов'язання **не поширюються** на обладнання:
- з механічними пошкодженнями, що вплинули на працездатність апарату (деформація корпусу й деталей внаслідок падіння з висоти або падіння на обладнання важких предметів, випадання кнопок та роз'ємів);
- зі слідами корозії, яка стала причиною несправного стану;
- яке вийшло з ладу через вплив сильного зволоження на його силові й електронні елементи;
- яке вийшло з ладу через накопичення струмопровідного пилу (вугільний пил, металева стружка та ін.) всередині;
- у разі спроби самостійного ремонту його вузлів та/або заміни електронних елементів, рекомендується, залежно від умов експлуатації , один раз на півроку, задля уникнення виходу апарату з ладу, проводити чистку внутрішніх елементів і вузлів даного обладнання стисненим повітрям, зняти захисну кришку. Чищення необхідно проводити акуратно, утримуючи шланг компресора на достатній відстані, задля уникнення пошкодження пайки електронних компонентів і механічних частин.

Також основні гарантійні зобов'язання **не поширюються** на зовнішні елементи обладнання, що вийшли з ладу, які піддаються фізичному контакту, а також на супутні/витратні матеріали, претензії щодо яких приймаються не пізніше двох тижнів після продажу:
- кнопка увімкнення та вимкнення;
- ручки регулювання параметрів зварювання;
- роз'єми підключення кабелів і рукавів;
- роз'єми управління;
- мережевий кабель і вилка мережевого кабелю;
- ручка для перенесення, ремінь через плече, кейс, коробка;
- тримачі електродів, клема «маси», пальник, зварювальні кабелі та рукави.

Продавець залишає за собою право відмовити у наданні гарантійного ремонту, або встановити датою початку виконання гарантійних зобов'язань місяць і рік випуску апарату (встановлюються за серійним номером):
- у разі втрати паспорта власником;
- у разі відсутності коректного або взагалі будь-якого заповнення паспорта продавцем під час продажу апарату.

Гарантійний строк продовжується, на термін гарантійного обслуговування апарату у сервісному центрі.

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

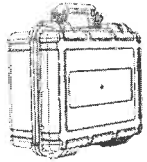
The arc generated during welding can emit sounds above 85 dB during 8 hours of working time. Welders working with the equipment wear ear protection during work.

UNPACKING

The device delivery set includes:

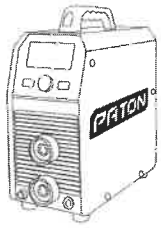
4 m TIG welding torch[2]

Operating manual



Universal case[1]

3 m welding cable with ABICOR BINZEL ground terminal[2]



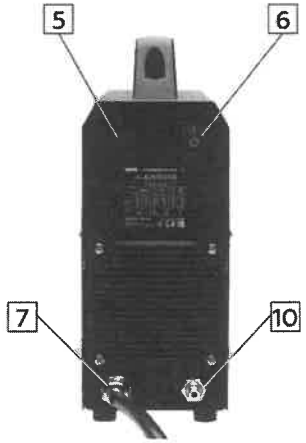
Welding arc supply source with a mains cable

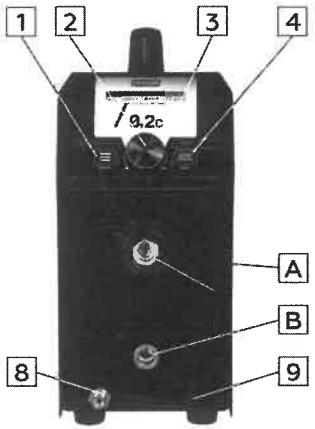
Shoulder carrying strap

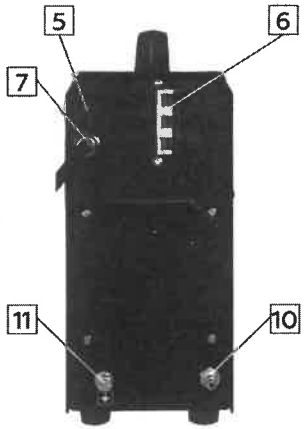
[1]For StandardTIG-160/200/250 models

[2]Except model with 'WA' index

CONTROL ELEMENTS AND INDICATION







1 – 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;

2 – The regulator for selecting the functions (parameters) of the current mode and adjusting their values. 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. Press the regulator knob again to return to the function/parameter selection menu;

3 – Digital display;

4 – Welding program selection button (couple of previously saved user parameters);

5 – Connector for feeding signals from the wire feeder to turn the welding current source on and off;

6 – Button/automatic breaker for turning the unit ON/OFF (color – decorative);

7 – Power supply cable;

8 – Socket for shielding gas supply to the torch;

9 – Connector for controlling torch buttons;

10 – Connection for shielding gas supply from a gas bottle;

11 – Location for connecting the grounding cable;

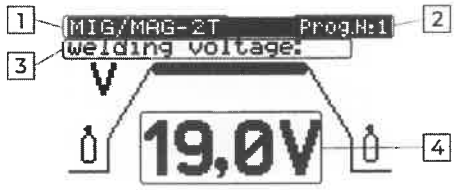
A – Bayonet-type power current socket "+";
- a) MMA welding - the electrode cable is connected (in more rare cases, when using special electrodes, the ground cable is connected);
- b) TIG welding – only the ground cable is connected;
- c) MIG/MAG welding with **solid wire** - the cable from the wire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

B – Bayonet-type power current socket "-":
- a) MMA welding – the grounding cable is connected (in 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 from the wire feeder is connected.

INDICATION OF MACHINE OPERATION IN MODES

TIG

MIG/MAG



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

MMA

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.

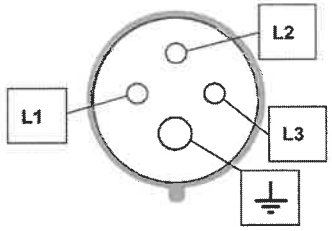
INSTALLATION REQUIREMENTS

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 StandardTIG-160/200/250.
2. Three-phase mains voltage is 3x380V or 3x400V (for StandardTIG-270/350-400V), 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).

Use a four-wire cable that complies with the IEC 60445 standard to connect PATON welding machines to a 3-phase power supply:
- Brown wire - phase L1;
- Black wire - phase L2;
- Blue wire - phase L3;
- Yellow-green wire - ground.



Caution! When the unit is connected to a mains voltage higher than 270V (for StandardTIG-160/200/250) or 450V (for StandardTIG-270/350-400V), all manufacturer's warranty obligations become invalid! This situation can occur with a very huge imbalance

in the phase voltage in a standard mains or when using a non-standard connection. 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.

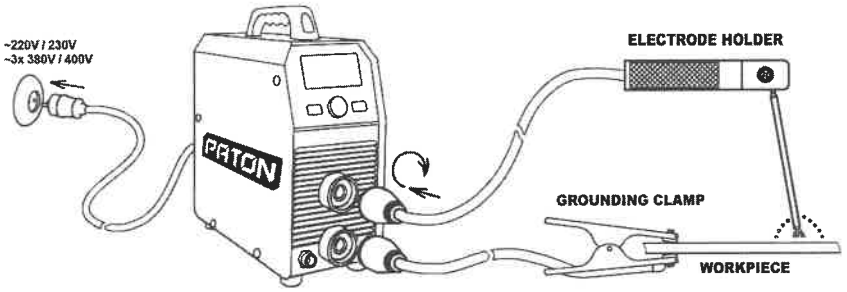
SELECTING THE DEVICE MENU LANGUAGE

To select/change the menu language of the device, hold down button 1 and turn on the device. After that, the language selection menu will be displayed on the screen. Select the desired language with the regulator knob 2 and press it to confirm your choice. 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 the mains wire, sq. mm	Max. wire length, m
StandardTIG-160, StandardTIG-200, StandardTIG-250				
Ø2 mm	not more than 80A	not more than Ø0,6 mm	1,0	75
			1,5	115
			2,0	155
			2,5	195
			4,0	310
Ø3 mm	not more than 120A	not more than Ø0,8 mm	1,5	75
			2,0	105
			2,5	130
			4,0	205
			6,0	310
Ø4 mm	not more than 160A	not more than Ø1,0 mm	2,0	75
			2,5	95
			4,0	155
			6,0	230
Ø5 mm	not more than 200A		2,5	60
			4,0	100
			6,0	150
Ø5 mm Ø6 mm fusible	up to 250A	up to Ø1,2 mm	2,5	48
			4	80
			6	120
3 x 380/400V – StandardTIG-270-400V, StandardTIG-350-400V				
Ø3 mm	not more than 120A	not more than Ø0,8 mm	1,5	135
			2	175
			2,5	220
			4	350
			6	525
Ø4 mm	not more than 160A	not more than Ø1,0 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 than270A	not more than Ø1,2 mm	2,5	85
			4	135
			6	205
Ø6 mm	up to 350A	up to Ø1,4 mm	2,5	65
			4	100
			6	150

ATTENTION! Supply button on the rear panel of the machine (for StandardTIG-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.

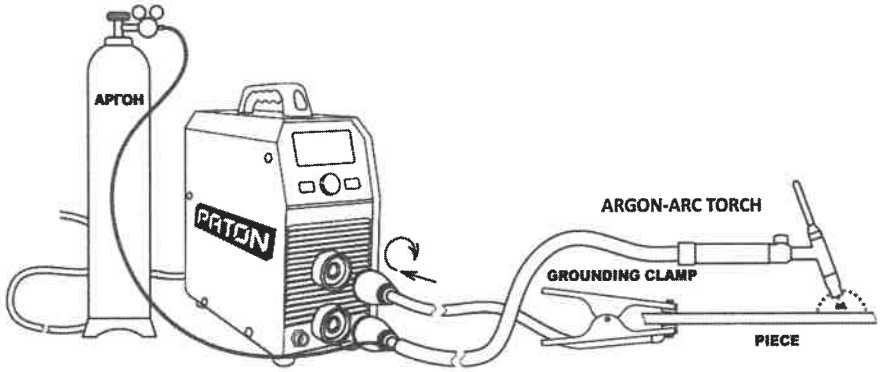
MACHINE CONNECTION DIAGRAM FOR WELDING WITH STICK ELECTRODES (MMA)



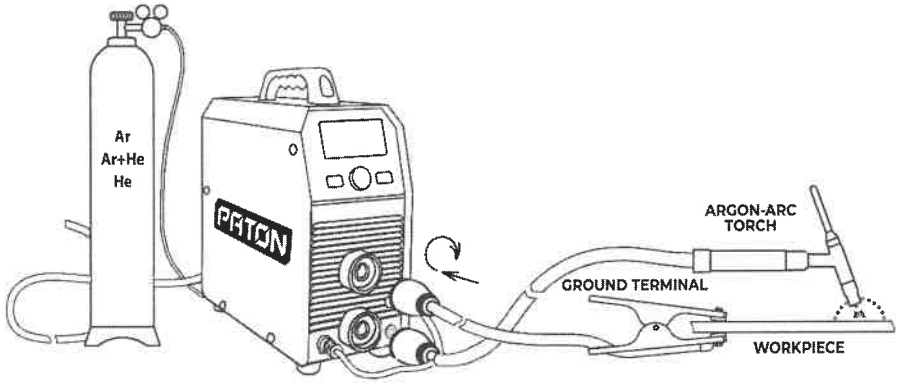
RECOMMENDED LENGTH OF POWER WELDING CABLES DURING WELDING:

Set current value	Cable length (one way)	Cross-section area	Cable brand
not more than 100A	2 ... 9 m	10 mm²	KG 1x10
	3 ... 14 m	16 mm²	KG 1x16
not more than 160A	2 ... 9 m	16 mm²	KG 1x16
	3 ... 14 m	25 mm²	KG 1x25
not more than 200A	2 ... 7 m	16 mm²	KG 1x16
	3 ... 10 m	25 mm²	KG 1x25
not more than 250A	2...8 m	25 mm²	KG 1x25
	3...12 m	35 mm²	KG 1x35
not more than 270A	5 ... 11 m	35 mm²	KG 1x35
up to 350A	6 ... 14 m	35 mm²	KG 1x35

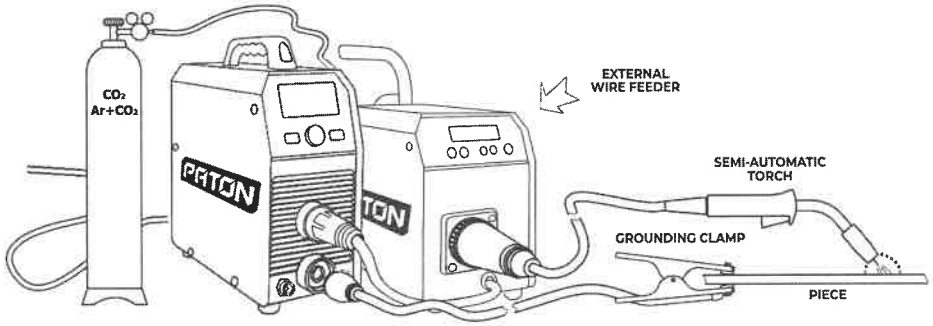
MACHINE CONNECTION DIAGRAM FOR TUNGSTEN-ARC INERT-GAS (TIG) WELDING – TIG-LIFT



MACHINE CONNECTION DIAGRAM FOR TUNGSTEN-ARC INERT-GAS (TIG) WELDING – 2T/4T/ALT.4T



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



SPECIFICATIONS

PARAMETERS	StandardTIG-160	StandardTIG-200	StandardTIG-250	StandardTIG-270-400V	StandardTIG-350-400V
Rated supply voltage 50Hz, V	220/230	220/230	220/230	3x380 3x400	3x380 3x400
Rated current consumption from the mains, A	18 ... 21	25 ... 28	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
Load duration (LD)	45%/at 160A 100%/at 106A	45%/at 200A 100%/at 134A	45%/at 250A 100%/at 167A	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
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
Welding pulse modes, Hz	MMA: 0,2...500 – adjustable; TIG: 0,2...500 – adjustable; MIG/MAG: automatic				
Hot-Start in the MMA mode	Adjustable				
Arc Force in the MMA mode	Adjustable				

Anti-Stick in the MMA mode	Automatic				
No-load voltage reduction unit	on / off				
MMA no-load voltage, V	12 / 70				
Arc striking voltage, V	110				
Rated power consumption, kVA	4,2 ... 4,8	5,2 ... 6,2	6,5 ... 7,7	7,9 ... 9,3	10,6 ... 12,2
Maximum power consumption, kVA	6,3	8,1	9,4	11,5	15,2
Efficiency, %	90				
Cooling	Adaptive				
Operating temperature range	–25 ... +45°C				
Overall dimensions, mm (length, width, height)	345 x 112 x 290	345 x 112 x 290	345 x 112 x 290	390 x 145 x 335	390 x 145 x 335
Weight without coil and accessories, kg	5,7	5,9	6,0	10,1	10,3
Protection class	IP33	IP33	IP33	IP33	IP33

SELECTING AND SETTING THE MACHINE FUNCTIONS

When the buttons on the front panel are not touched, the unit always displays the value of the main parameter of the used welding mode on the digital indicator:

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

Regulator **2** 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 s).

Button **1** on the front panel is responsible for changing the welding mode (switching in a circle).

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 **2**, 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 **2** 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 **2** to the right or left, the current name of the function and its value will be displayed on the digital display.

SWITCHING TO THE REQUIRED WELDING MODE

Pressing button **1** leads to switching to the next welding mode in a circle, this can be seen on display **3** on the front panel of the machine.

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 **2** 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.

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 of the machine. 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** and then the LCD displays the current program number, which can be changed turning the regulator **2** to the right or left.

GENERAL LIST AND SEQUENCE OF FUNCTIONS

MMA welding mode

0) [-1-] main display parameter CURRENT = 80A (by default);
   a) 8 ... 160 A (adjustment step 1 A) for StandardTIG-160;
   b) 10 ... 200 A (adjustment step 1 A) for StandardTIG-200;
   c) 12 ... 250 A (adjustment step 1 A) for StandardTIG-250;
   d) 12 ... 270 A (adjustment step 1 A) for StandardTIG-270-400V;
   e) 14...350 A (adjustment step 1 A) for StandardTIG-350-400V;
1) [H.St] Hot start power = 50% (by default);

   a) 0[OFF] ... 100% at low currents (adjustment step 5%);
2) [t.HS] Hot start time = 0.3 s (by default);
   a) 0.1 ... 1.0 s (adjustment step 0.1 s);
3) [Ar.F] Arc Force power = 50% (by default);
   a) 0[OFF] ... 100% at low currents (adjustment step 5%);
4) [u.AF] Arc Force trigger level = 12 V (by default);
   a) 9 ... 18 V (adjustment step 1 V);
5) [CVS] current-voltage characteristic slope = 1.4 V/A (by default);
   a) 0.2 ... 1.8 V/A (adjustment step 0.4 V/A);
6) [Sh.A] short arc welding = OFF (by default);
   a) 0[OFF] ... 3 stage (adjustment step 1 stage);
7) [BSn] voltage reduction unit = OFF (by default);
   a) ON;
   b) OFF;
8) [Po.P] pulse mode = OFF (by default);
   a) ON – enabled;
   b) OFF – disabled;
9) [I.PS] pause current = 15A (by default);
   a) 8 ... 160 A (adjustment step 1 A) for StandardTIG-160;
   b) 10 ... 200 A (adjustment step 1 A) for StandardTIG-200;
   c) 12 ... 250 A (adjustment step 1 A) for StandardTIG-250;
   d) 12 ... 270 A (adjustment step 1 A) for StandardTIG-270-400V;
   e) 14...350 A (adjustment step 1 A) for StandardTIG-350-400V;
10) [Fr.P] current pulsation frequency = 5.0 Hz (by default);
   a) 0.2 ... 500 Hz (dynamic adjustment step 0.1 Hz...1 Hz);
11) [dut] pulse/pause balance = 50% (by default);
   a) 20 ... 80% (adjustment step 2%).

TIG welding mode

0) [-2-] main displayed parameter CURRENT = 60 A (by default);
   a) 8 ... 160 A (adjustment step 1 A) for StandardTIG-160;
   b) 10 ... 200 A (adjustment step 1 A) for StandardTIG-200;
   c) 12 ... 250 A (adjustment step 1 A) for StandardTIG-250;
   d) 12 ... 270 A (adjustment step 1 A) for StandardTIG-270-400V;
   e) 14...350 A (adjustment step 1 A) for StandardTIG-350-400V;
1) [But] torch button mode = 2T (by default);
   a) LIFT - TIG-LIFT contact striking mode (valve-type torch);
   b) LIFT2T - contact striking mode, TIG-LIFT2T button mode (torch with button);
   c) LIFT4T - contact striking mode, TIG-LIFT4T button mode (torch with button);
   d) HF2T - non-contact striking mode, TIG-2T button mode;
   e) HF4T - non-contact striking mode, TIG-4T button mode;
2) [t.Pr] pre-purge time = 0.4 s (by default);
   a) 0.1 ... 25.0 s (adjustment step 0.1 s);
3) [t.Po] gas post-purge time = 4.0 s (by default);
   a) 1.0 ... 35.0 s (adjustment step 0.1 s);
4) [Pr.A] pre-current (pilot arc) = 20 A (by default);
   a) 8 ... 50 A (adjustment step 1 A) for StandardTIG-160;
   b) 10 ... 50 A (adjustment step 1 A) for StandardTIG-200;
   c) 12 ... 50 A (adjustment step 1 A) for StandardTIG-250;
   d) 12 ... 50 A (adjustment step 1 A) for StandardTIG-270-400V;
   e) 14 ... 50 A (adjustment step 1 A) for StandardTIG-350-400V;
5) [Po.A] crater filling current = 20 A (by default);
   a) 8 ... 50 A (adjustment step 1 A) for StandardTIG-160;
   b) 10 ... 50 A (adjustment step 1 A) for StandardTIG-200;
   c) 12 ... 50 A (adjustment step 1 A) for StandardTIG-250;
   d) 12 ... 50 A (adjustment step 1 A) for StandardTIG-270-400V;
   e) 14 ... 50 A (adjustment step 1 A) for StandardTIG-350-400V;
6) [t.uP] current build-up time = 0.2 s (by default);
   a) 0[OFF] ... 15.0 s (adjustment step 0.1 s);
7) [t.dn] current ramp-down time = 0.2 s (by default);
   a) 0[OFF] ... 15.0 s (adjustment step 0.1 s);
8) [Po.P] pulse mode = OFF (by default);
   a) ON – enabled;
   b) OFF – disabled;
9) [I.PS] pause current = 25 A (by default);
   a) 8 ... 160 A (adjustment step 1 A) for StandardTIG-160;

b) 10 ... 200 A (adjustment step 1 A) for StandardTIG-200;
c) 12 ... 250 A (adjustment step 1 A) for StandardTIG-250;
d) 12 ... 270 A (adjustment step 1 A) for StandardTIG-270-400V;
e) 14...350 A (adjustment step 1 A) for StandardTIG-350-400V;

10) [Fr.P] current pulsation frequency = 10.0 Hz (by default);
a) 0.2 ... 500 Hz (dynamic adjustment step 0.1 Hz...1 Hz);

11) [dut] pulse/pause ratio (duty cycle) – it is the percentage of the current pulse to the period of repetition of these pulses = 50% (by default);
a) 4 ... 80% (adjustment step 2%);

12) [SPT] SPOT mode = OFF (by default);
a) ON – enabled;
b) OFF – disabled;

13) [I.SPT] dot current = 160A (by default);
a) 8 ... 160 A (adjustment step 1 A) for StandardTIG-160;
b) 10 ... 200 A (adjustment step 1 A) for StandardTIG-200;
c) 12 ... 250 A (adjustment step 1 A) for StandardTIG-250;
d) 12 ... 270 A (adjustment step 1 A) for StandardTIG-270-400V;
e) 14...350 A (adjustment step 1 A) for StandardTIG-350-400V;

14) [t.SP] dot time = 0.02 s (by default);
a) 0.01 ... 25.0 s (dynamic adjustment step 0.01 ...1 s);

15) [t.PS] pause time = 1 s (by default);
a) OFF ... 0.5 ... 5.0 s (adjustment step 0.1 s);

MIG/MAG welding mode

0) [- 3-] main display VOLTAGE = 18.0 V (by default);
a) 12,0...24,0 V (adjustment step 0,1 V) for StandardTIG-160;
b) 12,0...26,0 V (adjustment step 0,1 V) for StandardTIG-200;
c) 12,0...28,0 V (adjustment step 0,1 V) for StandardTIG-250;
d) 12,0...29,0 V (adjustment step 0,1 V) for StandardTIG-270-400V;
e) 12,0...32,0 V (adjustment step 0,1 V) for StandardTIG-350-400V;

1) [t.up] voltage rise-up time = 0.1 s (by default);
a) 0.0 ... 5.0 s (adjustment step 0.1 s);

2) [t.dn] voltage reduction time = 0.1 s (by default);
a) 0.0 ... 5.0 s (adjustment step 0.1 s);

3) [Ind] inductance = "0" (by default);
a) -5 ... +5 (adjustment step 1 stage);

4) [Po.P] Pulsed current mode = OFF (default);
a) ON – enabled;
b) OFF – disabled;

5) [Adu] main parameter in pulse mode – VOLTAGE ADJUSTMENT = 0.0 V (default);
a) -3.0...+3.0 V (adjustment step 0.1 V) The arc length increases with the parameter value;

6) [tYP] Wire material type = Fe (default);
a) Fe – ordinary steel wire (use 82%Ar+18%CO_2 shield gas[2] composition **only**);
b) St.St – stainless steel wire (use 98%Ar+2%CO_2 shield gas[2] composition **only**);
c) Al.Si – aluminum-silicon wire (use 100%Ar shield gas[2] **only**);
d) Al.Mg – aluminum-magnesium wire (use 100%Ar shield gas[2] **only**);

7) [dia] Wire diameter = 0.8 mm (default);
a) 0.6...1.0 mm for StandardTIG-160/200 steel wire;
b) 0.6...1.2 mm for StandardTIG -250/270-400V steel wire;
c) 0.6...1.4 mm for StandardTIG -350-400V steel wire;
d) . 0.8...1.2 mm for aluminum wire.

2 **recommended shield gas consumption rate: 7l/min or more**

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
StandardTIG-160	5 years
StandardTIG-200	
StandardTIG-250	3 years
StandardTIG-270-400V	
StandardTIG-350-400V	2 years

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.

INFORMATION ON USED EQUIPMENT DISPOSAL

The symbol on the products indicates that the device must not be disposed of as household waste. The device must be taken to an electrical and electronic equipment collection point for recycling, where it will be accepted free of charge. Information about the used equipment collection points can be found on websites. Correct disposal following Directive 2012/19/EU (WEEE) on waste electrical and electronic equipment will help to save valuable natural resources and prevent environmental pollution. Failure to comply with the above recommendations may result in fines following current regulations.

CONTACT YOUR NEAREST RETAILER OR THE IMPORTER FOR FURTHER INFORMATION ABOUT DEVICE RECYCLING.

Дата прийому в ремонт / Received to repair date _____ "____", 20____

_____
(підпис / signature)

Ознаки несправності / Malfunction symptoms:

_____

Причина / Cause: _____

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Дата прийому в ремонт / Received to repair date _____ "____", 20____

_____
(підпис / signature)

Ознаки несправності / Malfunction symptoms:

_____

Причина / Cause: _____

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Дата прийому в ремонт / Received to repair date _____ "____", 20____

_____
(підпис / signature)

Ознаки несправності / ``:

_____

Причина / Cause: _____

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Дата прийому в ремонт / Received to repair date _____ "____", 20____

_____
(підпис / signature)

Ознаки несправності / Malfunction symptoms:

_____

Причина / Cause: _____

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