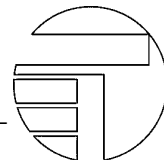


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CONTROL BOX - OPERATING MANUAL

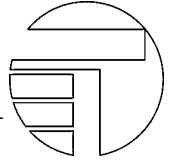


CONTROL BOX



Spool Gun Power supplier

OPERATING MANUAL



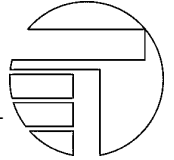
CONTROL BOX Spool Gun Power supplier

1 Introduction

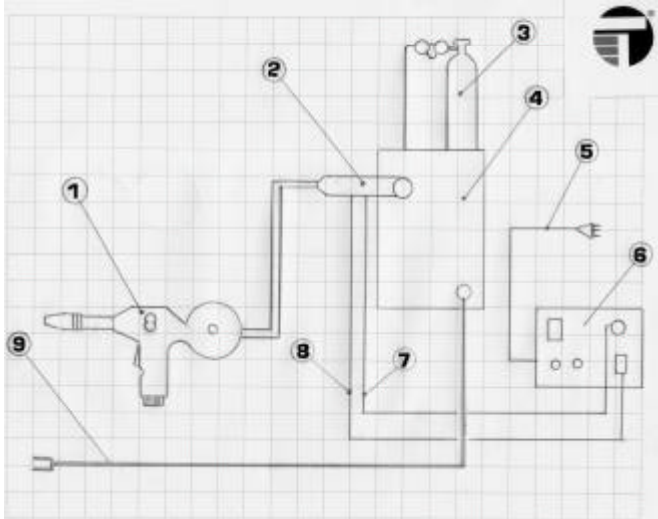
The Spool Gun is a Mig torch great for welding carbon steel, stainless steel or aluminium, using solid wire (.023-in to .045-in) and cored wire (.030-in to .052-in). The potentiometer, integrated into the handle, simplifies welding operations by granting a continuous wire feed speed control to fit virtually any MIG welder. The wire feeder speed control increases deposition rate and welding speed with no consumable waste.

The CONTROL BOX allow to connect easily any TRAFIMET Spool Gun torch to whatever MIG generator. The only operation requested is to disable the wirefeeder motor supply or to remove pressure to the wirefeeder drive rolls in order to avoid the wire feeding. This Power box could be used both GPZ and REVOLUTION spool gun torches.

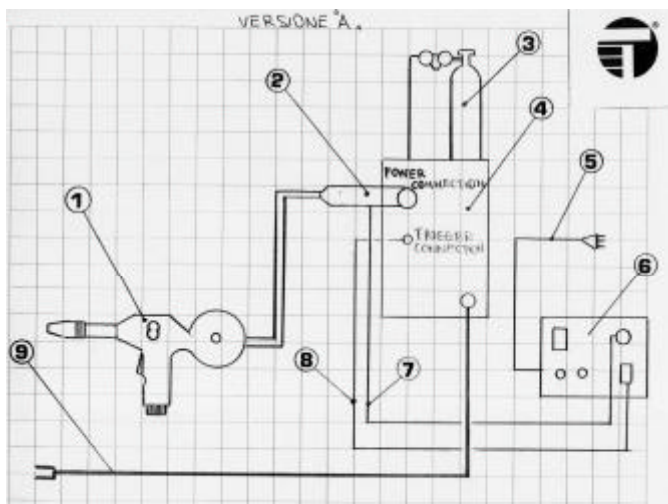




CONTROL BOX CONNECTIONS



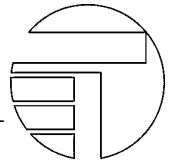
Connections Schema for MIG generator with EURO adapter



Connections Schema for MIG generator without EURO adapter

The above electrical schema, shows the connections that are necessary between the Spool Gun, the Control box and a MIG generator provided with EURO central adapter.

- 1) Spool Gun Torch (GPZ or REVOLUTION)
- 2) Torch adaptor (EURO, TWECO, MILLER, ESAB, ...)
- 3) Gas
- 4) MIG/MAG welding generator
- 5) Power supply with ground (for the Control Box)
- 6) Control Box
- 7) Spool Gun/Control Box connection for motor supply and speed regulation
- 8) Spool Gun/Control Box connection for the welding start
- 9) Ground connection



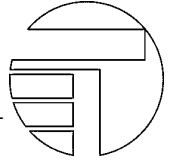
2. Safety Instructions

The following safety information is provided to you as a guideline. Use it to operate your new torch under the safest possible conditions. Any equipment that uses electrical power is potentially dangerous to use when the safety or safe handling instructions are not known and/or are not followed. This safety information gives you the necessary information for safe use and operation.

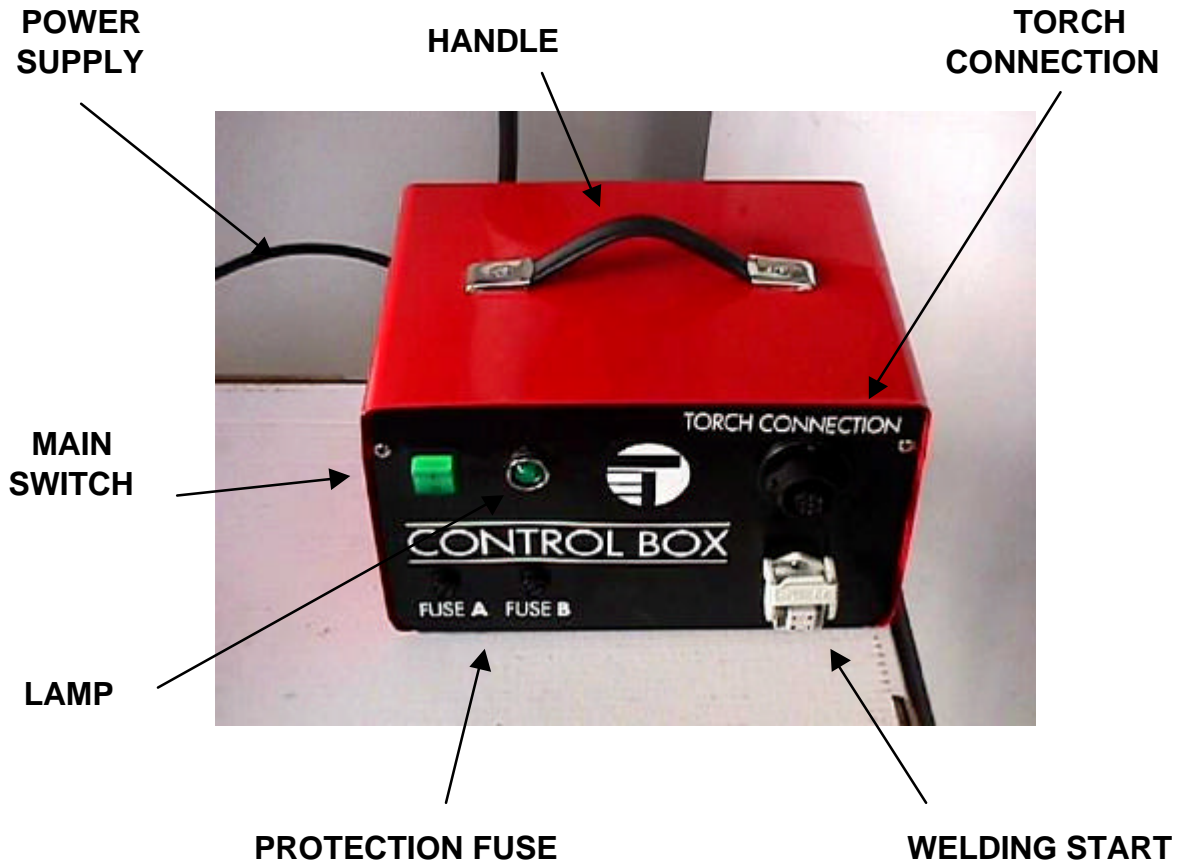
READ ALL SAFETY AND WARNING INSTRUCTIONS CAREFULLY before attempting to install, operate or service this welding torch. Your failure to comply with the instructions could result in personal injury and/or property damage.

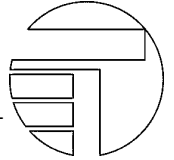
	Turn torch away from yourself and others.
	Use mask. Arc is dangerous to eyes. Nearby people should wear eye protection.
	Use gloves and suitable wear.
	Protect all cables for damages.
	Do not fasten torch with a tools.
	Never use a rise or rise-grips to exchange parts, could damage the torch.
	Fumes are hazardous for health. Operate under a hood or in ventilated areas only.
	Protect welding from drafts of air
	Never use a torch in close range to flammable material.
	Do not weld on painted surfaces.
	Do not weld in humid surroundings.

RETAIN THESE INSTRUCTIONS FOR YOUR FUTURE REFERENCE.



3. Product Description






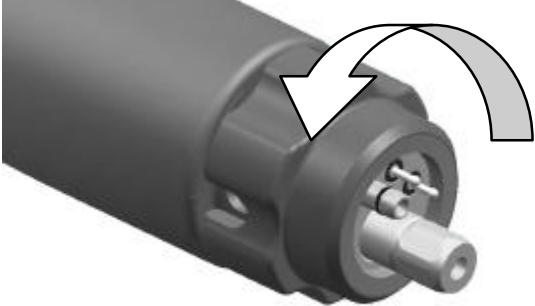

4. Installation

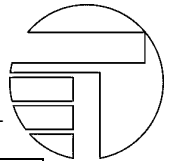
The constructor will not be responsible for damages caused by incorrect installation. Any service required due to incorrect installation will not be covered by the guarantee.


4.1. Connecting Spool Gun to MIG Generator provided with EURO central adapter

The torch is provided with three connectors:

- Euro Central adapter for power cable, gas hose, trigger cable connection.
- 7 pins connector for Torch Connection.
- 4 pins connector for Welding Start Connection.

1. Before connecting the torch, switch off the generator.	
2. Connect spool gun EURO central adapter to generator terminal and rotate the lock ring clockwise till blockage.	
3. Connect spool gun 7 pins connector to CONTROL BOX terminal and rotate the lock ring clockwise till blockage.	





<p>4. Connect spool gun 4 pins connector to CONTROL BOX terminal and rotate the lock ring till blockage.</p>	
<p>5. Connect the CONTROL BOX power cable to the correct power supply.</p>	
<p>6. Once tested that the connections have been carried out properly, switch the generators on.</p>	

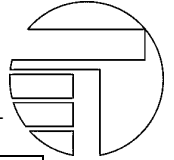
For more information please refer to spool gun electric schema (see par. 7.).



4.2. Connecting Spool Gun to MIG Generator provided without EURO central adapter

The torch is provided with two connectors:

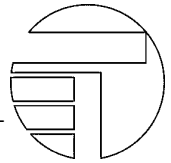
- Central adapter for power cable, gas hose connection.
- 7 pins connector for Torch Connection.

<p>1. Before connecting the torch, switch off the generator.</p>	
<p>2. Connect spool gun central adapter to generator terminal</p>	



<p>3. Connect spool gun 7 pins connector to CONTROL BOX terminal and rotate the lock ring clockwise till blockage.</p>	
<p>4. Connect the command cable provided with the torch to the CONTROL BOX terminal (4 pins connector) and the generator trigger connection</p>	
<p>5. Connect the CONTROL BOX power cable to the correct power supply.</p>	
<p>6. Once tested that the connections have been carried out properly, switch the generators on.</p>	

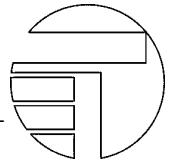
For more information please refer to spool gun electric schema (see par. 7.).





5. Maintenance

5.1. Controls

	<p>Before you maintain or replace torch parts, turn the machine off. Never turn the machine off, before the post air-flow cycle has stopped.</p>
	<p>Replace contact tip if hole is enlarged or deformed. Always make sure to use the correct diameter for the Amp.</p>
	<p>Periodically clean inside of nozzle and holes of gas diffuser. Use an anti-adhesive spray. Periodically clean drive rolls.</p>
	<p>Check condition of cable. Do not make temporary repairs. Repairs should only be made by qualified personal.</p>
	<p>Do not bend cables and hoses too tightly, to avoid damage that may prevent gas and coolant from free flowing.</p>
	<p>Repairs must be done only by skilled and qualified personal.</p>
	<p>Used parts should be recycled in a proper way, meeting the local requirements.</p>

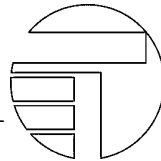


5.2. Changing fuse

<p>Before changing fuse, switch off the Control Box.</p>	
<p>Sostituire il fusibile A per il circuito primario, il fusibile B per il sencondario controllare esatto amperaggio fusibili come riportato nella scheda tecnica (capitolo6). Contollare che il problema sia stato risolto.</p>	

5.3. Troubleshooting Check List

Trouble	Possible cause	Remedy
<p>Drive rolls turn but wire will not feed or wire feeding is rough</p>	<p>Incorrect drive rolls</p>	<p>Be sure the wire diameter being used is stamped on drive rolls. Replace if necessary</p>
	<p>Incorrect drive rolls pressure</p>	<p>Check and correct drive rolls pressure turning anticlockwise screw, enough to prevent wire slipping (see par.4.2)</p>
	<p>Worn or dirty drive rolls</p>	<p>Clean or replace drive rolls (see par. 5.2)</p>
	<p>Incorrect wire spool friction</p>	<p>Adjust the friction nut on the spool shaft to find the correct wire tension (see par.4.2)</p>
	<p>Worn or dirty outlet liner</p>	<p>Clean or replace liner (see par. 5.3)</p>
	<p>Rusty or dirty wire</p>	<p>Replace wire (see par. 4.2)</p>
<p>Variable arc</p>	<p>Contact tip worn or incorrect size</p>	<p>Replace contact tip</p>
	<p>Incorrect wire feeder speed</p>	<p>Adjust wire speed by turning pot ring clockwise (to max) or anticlockwise (to min). (see par.4.3)</p>

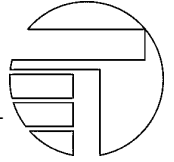


6. Technical Data Sheet

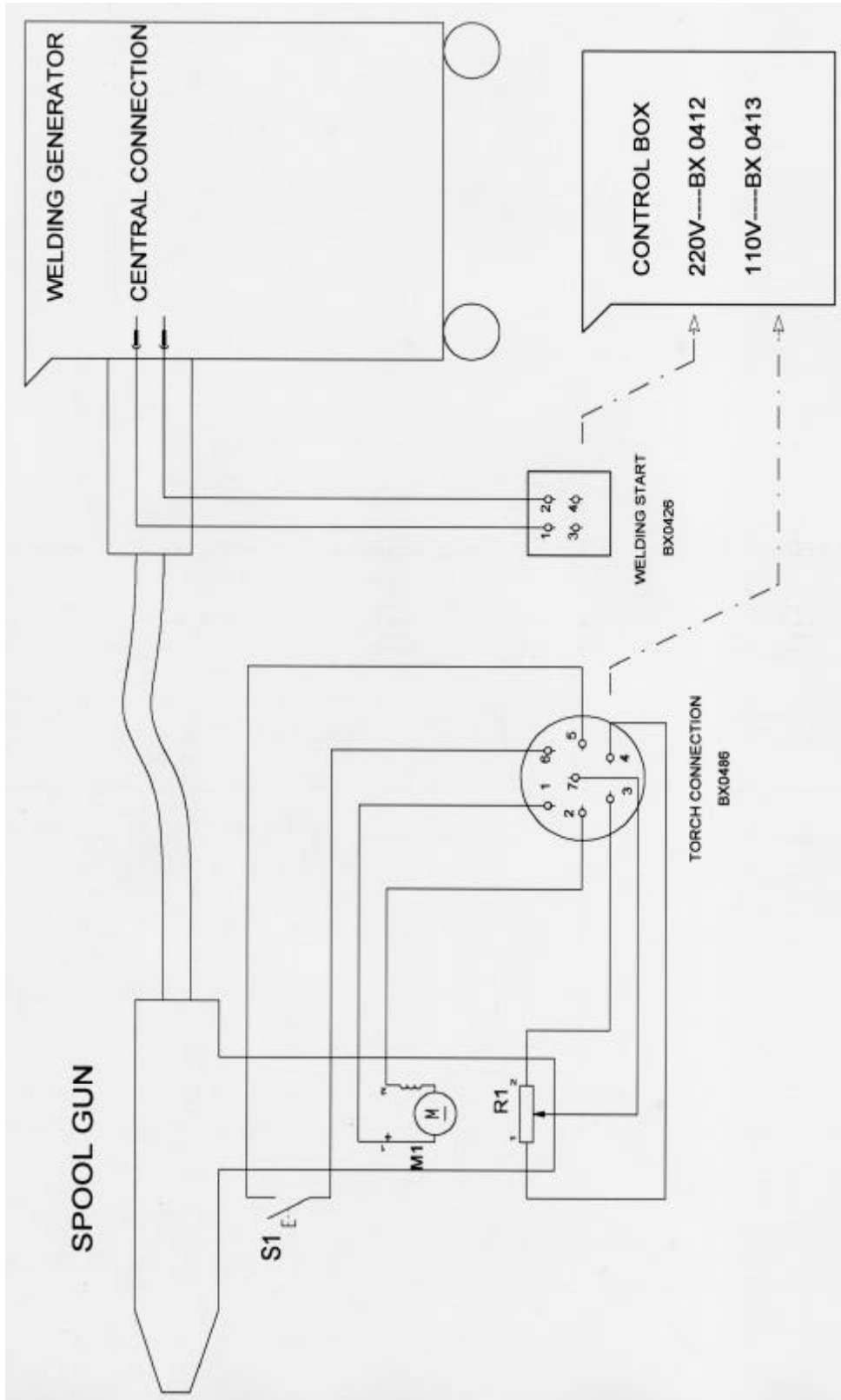
CONTROL BOX	
Input Voltage	220-240V single phase 110-115V single phase
Frequency	50/60 Hz
Output voltage	24 V
Rated power	70 VA
Protection degree	IP 21
Sizes (lpxh)	255x230x185 mm
Net Weight	3,5 kg
Potentiometer (inside torch)	100 KOhm
Fuse A (5x20) input	1A – 220V 2A – 110V
Fuse B (5x20) output	4A – 24V
Features	Wire speed and torque control trough a Motor breakage using relays and breaking resistance

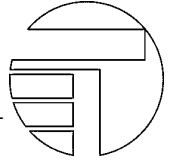
7. Electric Connections

See next pages.

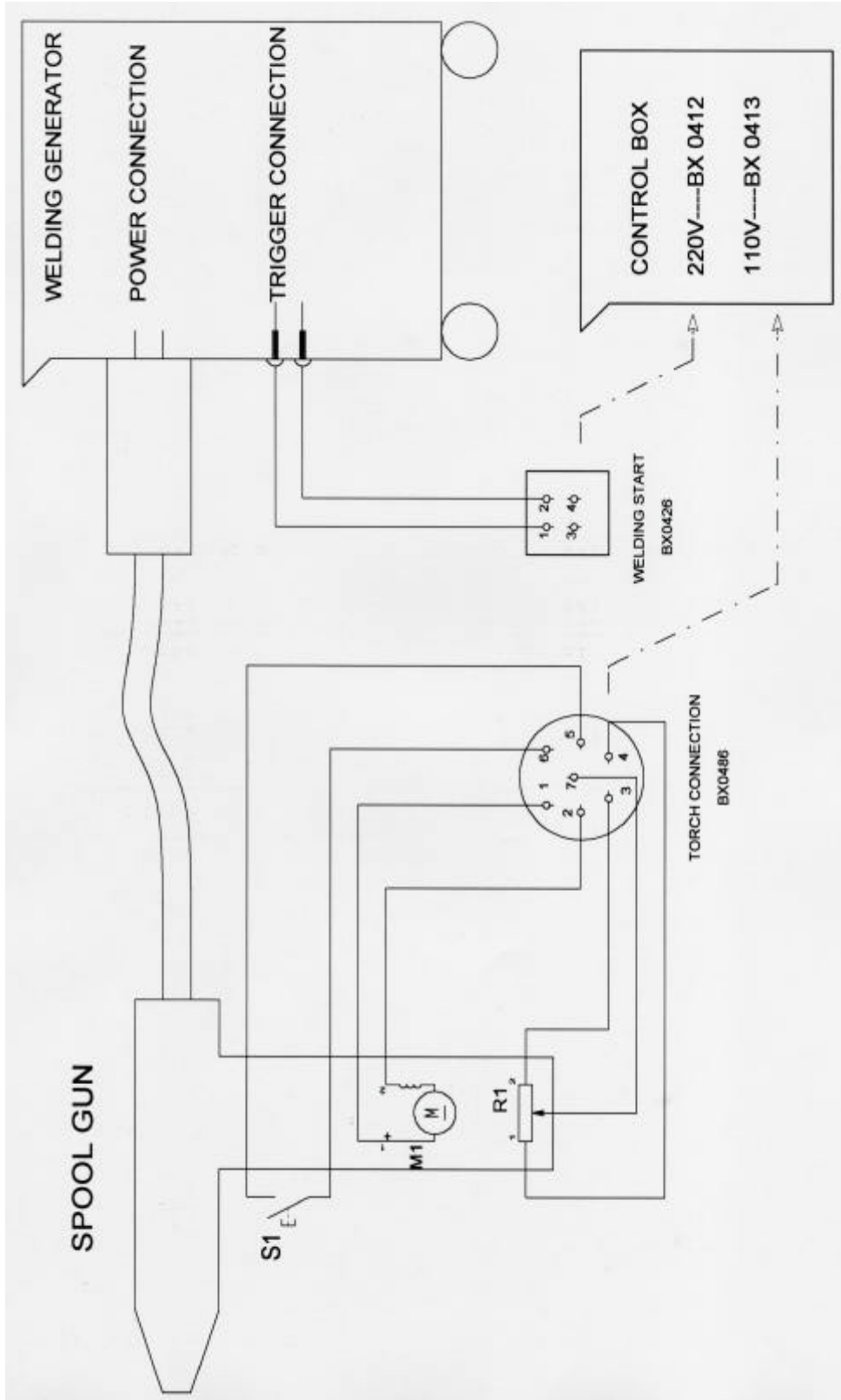


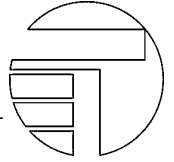
7.1. Spool Gun to MIG Generator provided with EURO central adapter



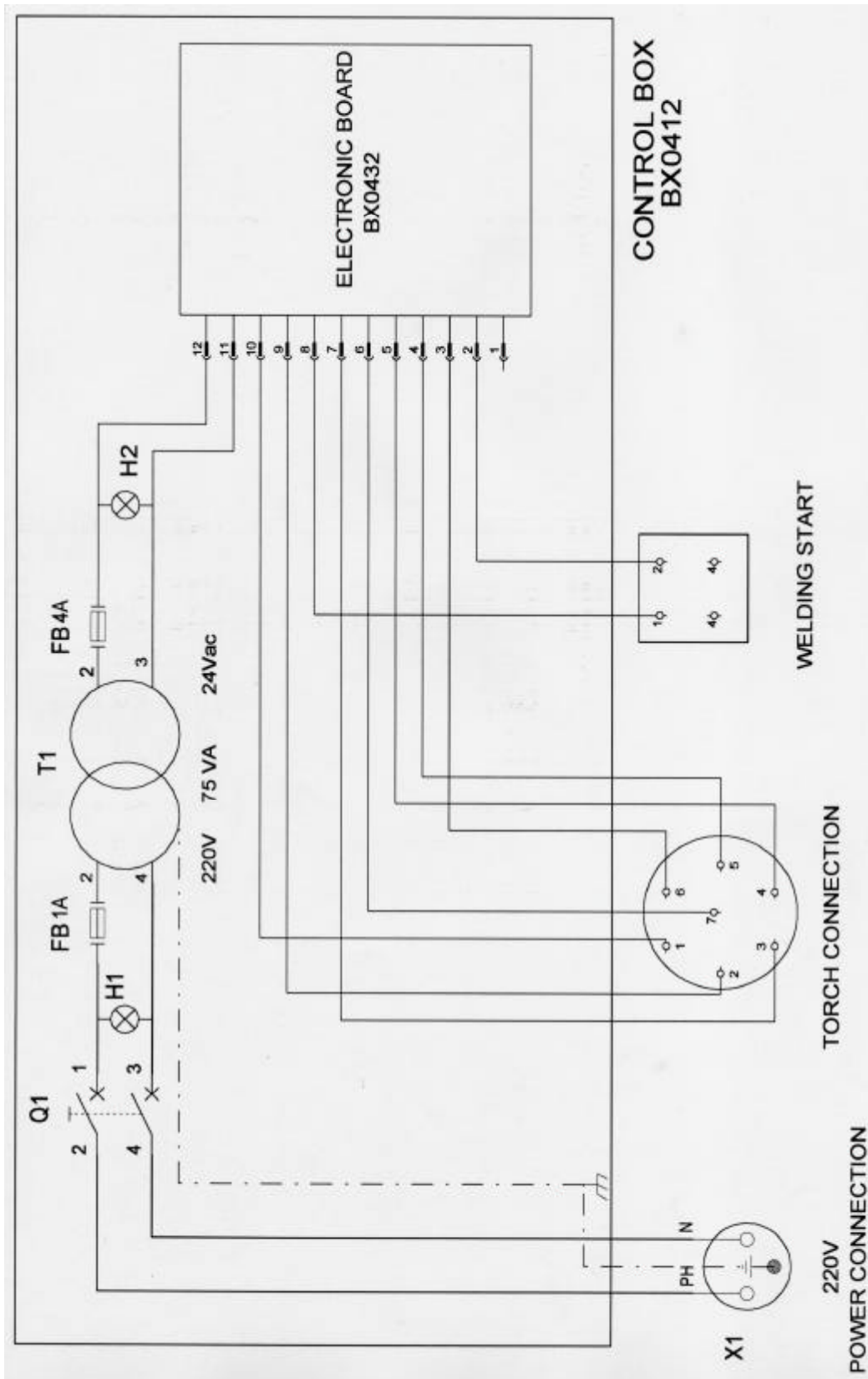


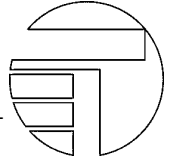
7.2. Spool Gun to MIG Generator provided without EURO central adapter



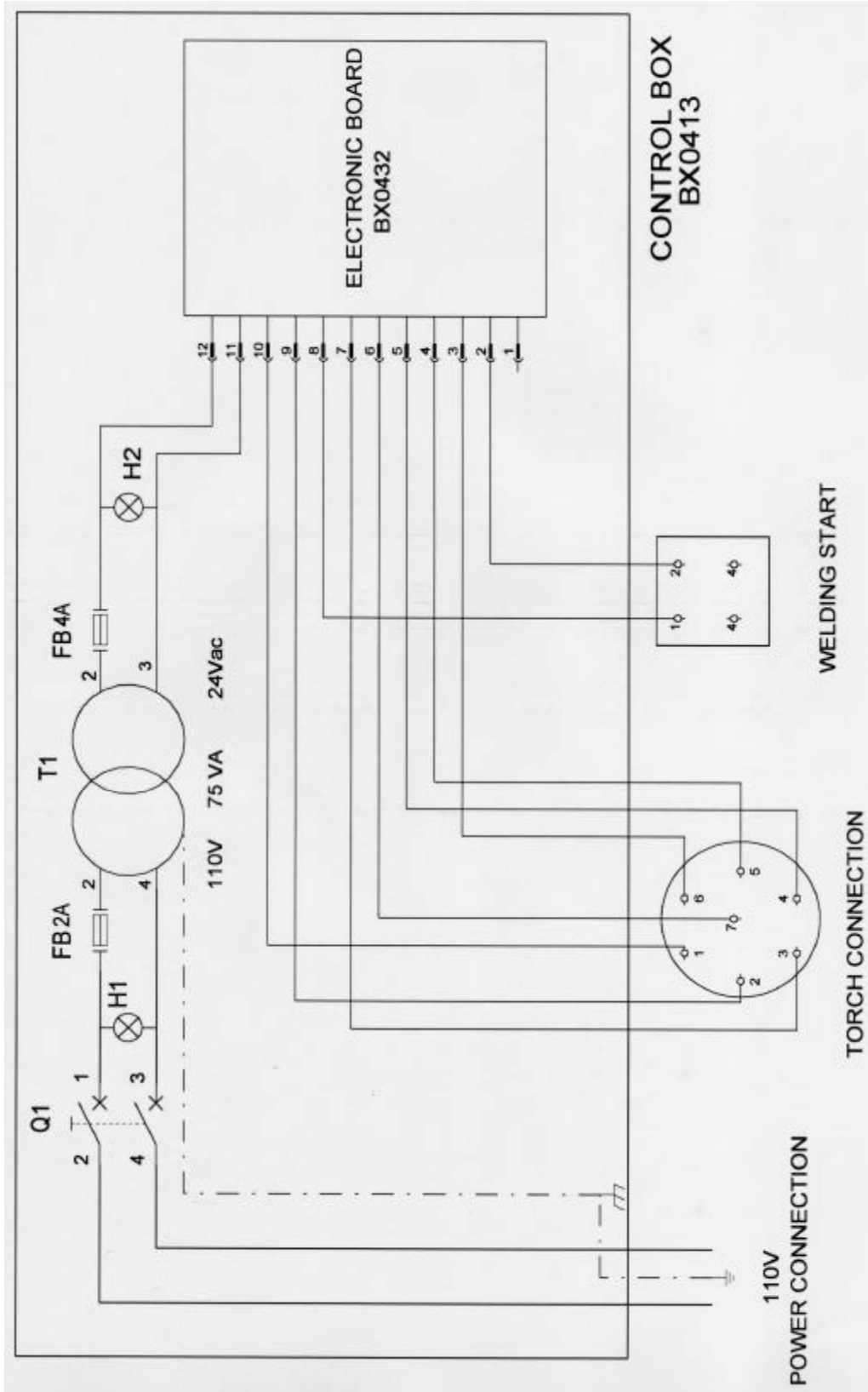


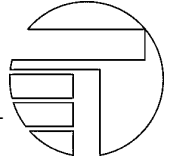
7.3. Control Box (220-240V)





7.4. Control Box (110-115V)





8. Spare Parts List

Pos.	Part No.	Description
	BX0412	Control Box 220-240V
	BX0413	Control Box 110-115V
	BX0432	Electronic board

To maintain the performance of your spool gun, use only original Manufacturer's Suggested Spare Parts listed above.