

Laser Welding Double Wire Feeder LightWIRE 2 Instructions



Catalogue

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Introduction to operation panel

"SET" key: Set Key is used for setting up the difference choices that can be made on set up of the Double Wire Feeder. Hit Set and toggle to item being set. Adjust + or - key to set the value.

"RUN" key: After parameters have been changed in the Set function hitting the Run Key makes the unit ready to run.

"Manual Feed Feed Key will continuously feed wire. This is used when threading the liners to feed wire thru the liners.

"Manual Retract" Hitting this key retracts the wire until not being pressed.

"Check Operation key: This key checks the retract and feed motion when the LightWELD trigger is released.

Below Key Values can be changed when in the SET Mode with + or - buttons

"Feed Delay " Wire Feed delay sets the time after trigger two is pressed until the wire starts feeding. This is normally set at 0.

"Wire Speed" Wire Speed sets the speed of the wire. This is in mm/sec. To convert cm/min to mm/sec divide cm/min by 6. Input this value into the wire speed section. For example if you wanted to set 60 cm/min you would divide $60 / 6 = 10$. You would set the Wire Speed at 10 mm/sec = 60 cm/min

"Wire Stick Out" This is the speed of the wire retract after trigger is released. This is normally set at 40.

"Retract Distance" Retract distance is the time wire retracts after trigger is released. This is normally set at 120 or about 1/8 of a second.

"RUN" indicator light: under normal operation, the operation indicator flashes and is always on during parameter setting.

"SET" indicator light: in the setting parameter state, the operation indicator light flashes.

"Three Digit LED Display " Will show the current or new settings that are input.

2. Maximum and Minimum Values of the Adjustments Possible

Parameter item	set range	Numerical definition
FEED DELAY	0-999	999=1s
WIRE FEED	0-80	Wire feed is set in mm/sec. To convert this to cm/min divide cm/min by 6 = mm/sec. For example 60 cm/min = 10 mm/sec = what is input into double wire feeder
WIRE STICK OUT	0-80	Wire Stick out is actually the speed the wire pulls back out of the weld pool to prevent stick of the wire. Normally this is set at 40 – (40 = 40mm/sec = 95ipm)
RETRACT DISTANCE	0-999	999=1s . This is the total time the wire is retracted after the trigger is released. Normally set at 120 or about 1/8 th of second

Remarks: Factory default parameter values: FEED DELAY = "0", WIRE SPEED = "12", WIRE STICK OUT = "40", RETRACT DISTANCE = "120". After changing a setting – if power is cycled off the unit will retain the last setting . If you want to restore the factory setting after setting change, press "+" "-" at the same time, After 3 seconds, the screen displays "888", which means that the factory setting is restored.

Technical parameters

Installation of welding wire

1. Connect the wire feeder to a 120 volt outlet with supplied cable. Plug into bottom port on the front control panel.
2. Hang the welding wire reels on the reel shaft in the wire feeder.
3. Select the groove diameter of the wire feeder, loosen the pressure handle of the wire feeder, pass the welding wire through the wire guide nozzle, align it with the groove of the wire feeder, and press the pressure handle
4. Press the MANUAL FEED key on the panel to send the welding wire out of the wire guide pipe interface, insert it into the wire guide pipe liner and hold MANUAL FEED KEY until wire is coming out the end of the liner.
5. Pass the welding wire through the wire feeding nozzle and reinstall the wire feeding nozzle back to the wire feeding gun.

Note: the installed wire reel shall ensure that the welding wire is not knotted. If this phenomenon occurs, the welding wire must be straightened out again.

Main technical parameters	
Model	LightWIRE 2
Voltage	120 V input voltage
Phase number	single-phase
Electric machinery	DC permanent magnet
Speed	1200rpm
Welding wire size	.045 or .062 wire
Wire feeding speed	0.1-18M/min
Overall dimension	17.5 * 10 * 23 inches
Weight	34 lbs.

Machine fault diagnosis and treatment methods:

Serial number	Fault phenomenon	Cause of failure	Processing method
1	The power on indicator is not on	Power Cord is disconnected	Replace the input power cord
		The power switch is broken	Replace the power switch
2	Press the welding gun switch without wire feeding	Poor welding / disconnection of internal wire of welding gun switch plug	Replace the plug and check the connecting wire
		Wire feeding motor broken	Replace the wire feeding motor
		Exhausted welding wire	Replace welding wire disc
		Loose plug of drive board motor	Plug in the plug again
		Welding wire knotting	Loosen the hold down wheel and rewind the wire
		Wire feeding tube knotting	Straighten out the wire feed pipe
		The welding wire is blocked at the outlet of the wire feeder	Adjust the wire guide tube to align with the outlet of the wire feeder
		Wire feed pipe blocked	Replace the wire feed

			pipe
		Insufficient tension	Loosen the welding wire disc brake
		Motherboard broken	Replace the motherboard
3	Unstable wire feeding speed and poor wire feeding	The welding wire is knotted in the welding wire reel	Remove the knotted part and rewind the wire
		Mismatch or wear of wire feed pipe	Replace the wire feed pipe
		Improper wire feeding wheel	Replace the wire feed roller
		The pressure of the hold down roller is incorrect	Adjust the pressure of the hold down roller
		Abnormal wire feeding motor	Replace the wire feeding motor
		Abnormal driving board	Replace the drive main control board
		Wire feed pipe blocked	Replace or clean the wire feed pipe
		The bending angle of wire feed pipe is less than 30 degrees	Try to put the wire feed pipe straight
		Deformation of wire feed	Replace the wire feed

		pipe after extrusion	pipe
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Preparation before use

1. Set up a place to use the Double Wire Feeder.

Please use the wire feeding device in places that meet the following conditions.

1.1 This machine is for indoor use and its protection grade is IP2X. Do not use it where there are water drops and raindrops.

1.2. Please use it in the environment with ambient temperature between - 10 °C and 40 °C.

1.3. Do not set it on the table with strong vibration or great impact.

2. Use attention

2.1 When installing the welding wire disc or inserting the welding wire into the wire guide tube, do not wear gloves to avoid winding accidents caused by the rotation of rotating parts.

2.2 Please confirm the weight of the welding wire reel. The weight of the welding wire shall not be greater than 44 lbs (20kg) , otherwise the wire reel may fall off.

2.3 During welding, please close all doors of the unit.

2.4 Before welding, please confirm whether the disc shaft end cover is tightened, otherwise the welding wire disc may fall off due to the inclination of the welding wire disc.

Routine maintenance

1. When not in use, the wire feeder should be shut down and placed in a cool, dry place away from dust.

2. Do not put other objects on the wire feeder to avoid damage.

3. Clean the impurities inside the new wire feed pipe with compressed air before installing it on the wire feed pipe.

4. The wire guide tube shall be kept smooth without extrusion, deformation and folding.
5. Regularly clean the dust in the machine and check the smooth rotation and noise of the motor.

Accessories

- 1. Intelligent laser welding machine** 1 Set

- 2. Communication Cable** 1 Piece – There is also an adapter that can be Used with existing LightWELD wire feed cable

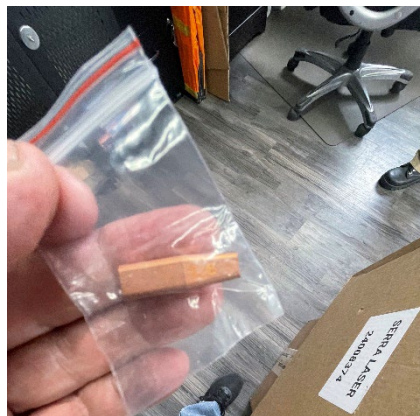
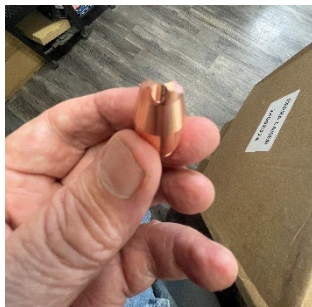
- 3. Set of wire guide tube** 3 Sets . There are two black sets – one for steel wire and one with Teflon tubes for aluminum wire. In addition included is the IPG double wire feed clip along with fittings needed to install it on the double wire feeder. At this time the IPG double wire feeder cannot be used with wire thicker than .047 or with aluminum.

- 4. Pair of wire feeding wheels** 1 Pair (1 pair is installed in the host, 2 pairs in total, with different specifications)

Communication Cable :

The left hand port is used for the communication cable that runs between the LightWELD and the Double wire feeder. An adapter is also included which can be used with the LightWELD communication cable for direct use with the LightWIRE Double wire feeder.

Black Liners – The double wire feeder comes set up for the black liners. There are two sets – one for steel liners and one for teflon liners. They use the cast combiner and can be used up to .060 wire. There are two different sized tips - .045 and .060 that go on the end of the combiner. The nozzles for this combiner have a square groove on the nozzles and there are two sized for .045 and .060 wire.



White Liners – the white liners use the IPG double combiner. This will work up to .045 wire. The pictures below show how it is hooked up into the Double Wire Feeder. You need to take out the hook up for the black liners. These liners are compatible with existing IPG wire feeders. It comes with a single nozzle with twin grooves on the nozzle.

