



www.jbctools.com

INSTRUCTION MANUAL



SFR

Solder Feeder for Robot

This manual corresponds to the following reference:

SFR-B

Packing List

The following items are included:



Solder Feeder 1 unit
Ref. 0024561



Reel Support 1 unit
Ref. 0024561



**Communications
Cable 3 m**..... 1 unit
Ref. 0024563



Allen Key 1,5 mm 1 unit
Ref. 0741610



Allen Key 2,5 mm 1 unit
Ref. 0012574



Allen Key 3 mm 1 unit
Ref. 0013609



**Screws
DIN 912 M4x65**..... 2 units
Ref. 0024552



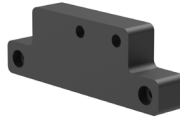
**Screws
DIN 912 M4x20**..... 2 units
Ref. 0921890



**Screws
DIN 7991 M4x10**..... 1 unit
Ref. 0490180



Spanner 10 mm..... 1 unit
Ref. 0017631



Insulator 1 unit
Ref. 0024588



Manual 1 unit
Ref. 0027875

Functions

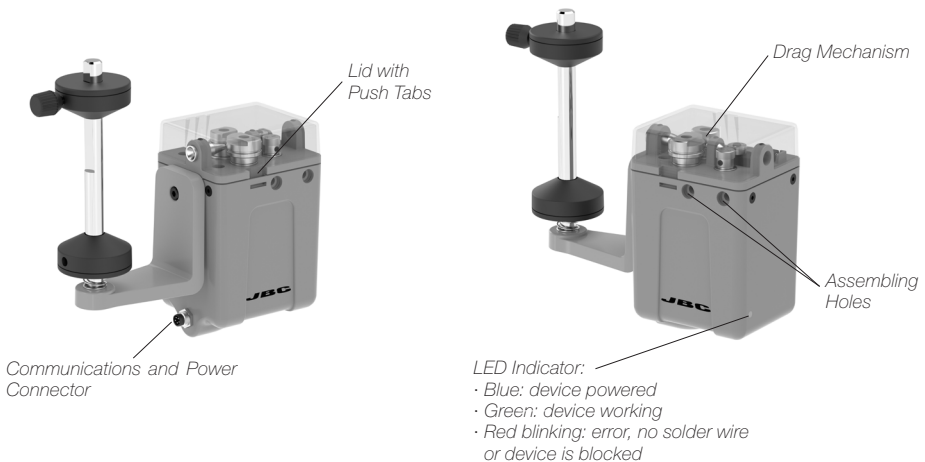
There are up to 30 functions* to control the station, such as:

- Temperature Control
- Sleep and Hibernation Control
- Station Status
- Error Information
- Counters (Working Time, Sleep, Hibernation...)

*Download the Robot Communication Protocol for SFR at www.jbctools.com/jbcsoftware.html

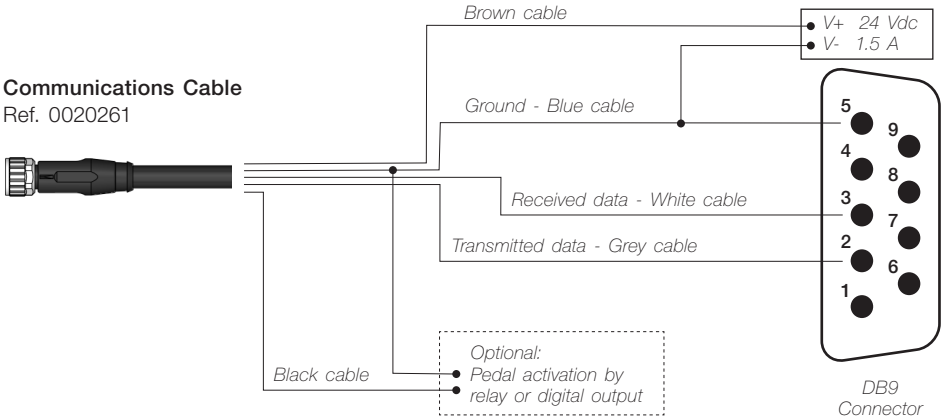
Features and Connections

SFR Solder Feeder for Robot works together with one of the different GSFR Guide Kits, available for various solder wire diameters, with or without solder wire perforation. GSFR Guide Kits are sold separately.

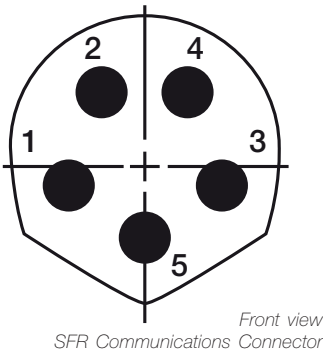


Connection

- SFR unit can be connected to a PLC by a five-pin Communications Cable (Ref. 0020261).
- Connect the cables to the corresponding pins to match your PLC connection. To communicate with a computer, use a DB9 female connector.
- Download the Communication Protocol at www.jbctools.com



For detailed information about pin distribution see the following table:



Pin Distribution		
Pin	Color	Description
1	Brown	Power supply input: 24Vdc (±5%). 1.5 A current required
2	White	Serial input: RS232 RX
3	Blue	Common reference: GND for RS232 and witch
4	Black	Switch input: 0V or 24V to start feeding. Leave it open to stop
5	Grey	Serial output: RS232 TX

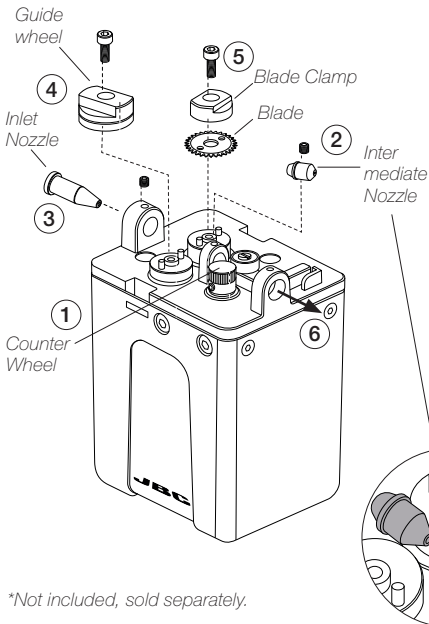
Assembly: GSFR* Wheels to SFR

For this operation, disconnect the device, and take off the cover by pressing the tabs.

First disassemble the guide tube (6), the nozzles (1)+(4), then the Wheels, Blade and Clamp (2)+(3). Disassemble the Counter Wheel (5). Use the Allen key and the spanner, provided with SFR.

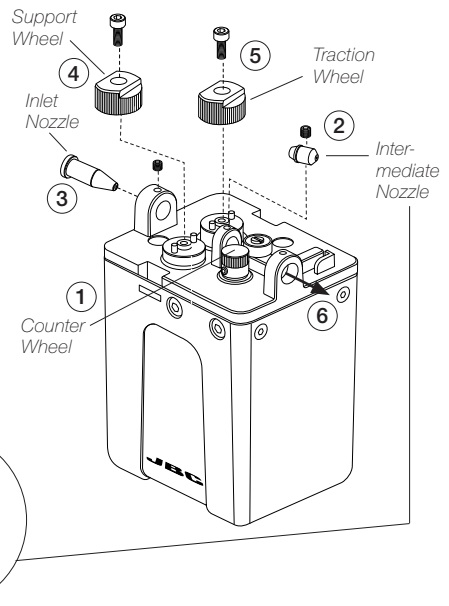
Assembly with Solder Wire Perforation

1. Assemble the counter wheel (1).
2. Insert the intermediate nozzle (2) until its collar rests against the housing and tighten the screw.
3. Assemble the inlet nozzle (3) and tighten the screw.
4. Assemble the guide wheel (4) and tighten the screw. **Attention:** Always use the correct wheel set for each wire thickness.
5. Assemble the blade first, then mount the blade clamp (5) onto the same axis and tighten the screw. **Caution:** handle the blade carefully to avoid injury.



Assembly without Solder Wire Perforation

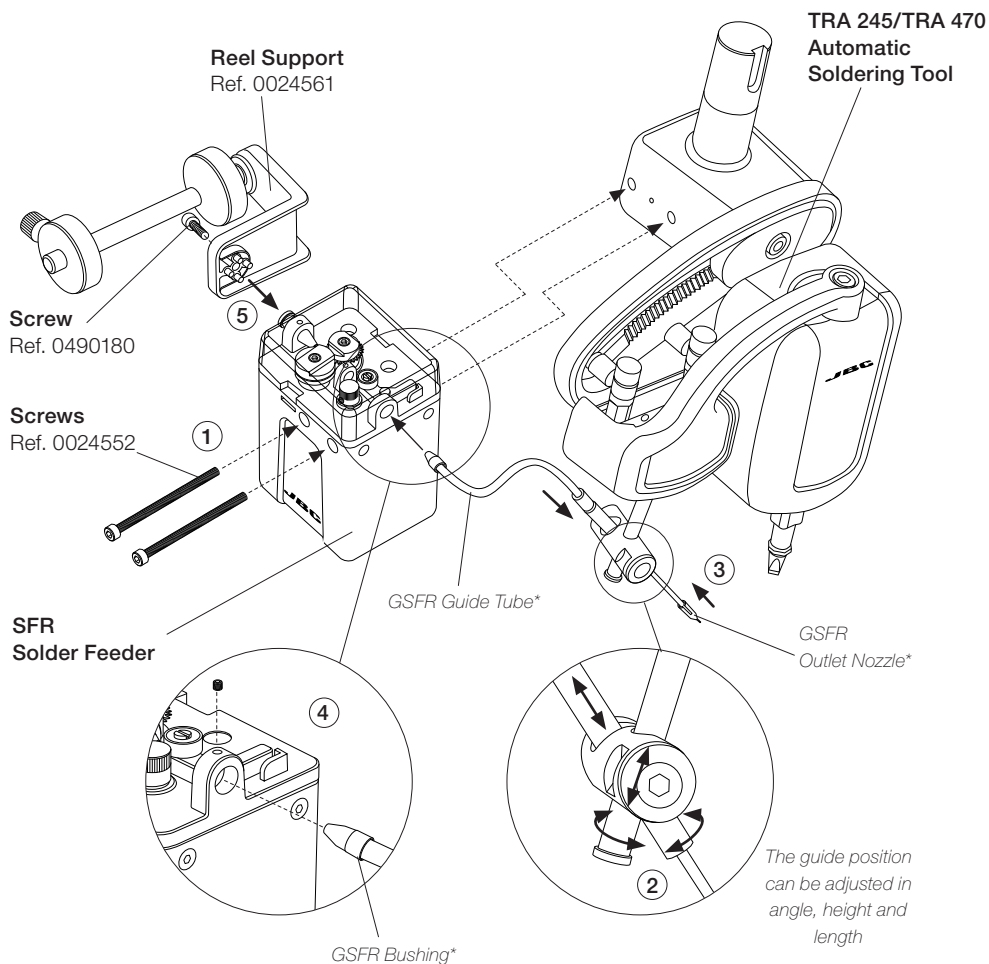
1. Assemble the counter wheel (1).
2. Insert the intermediate nozzle (2) until its collar rests against the housing and tighten the screw.
3. Assemble the inlet nozzle (3) and tighten the screw.
4. Assemble the support wheel (4) and tighten the screw. **Attention:** Always use the correct wheel set for each wire thickness.
5. Assemble the traction wheel (5) onto the axis and tighten the screw.



*Not included, sold separately.

Assembly: GSFR Tube to SFR* and TRA*

1. Assemble SFR to TRA with the screws.
2. Assemble GSFR Guide Tube to TRA and tighten the screw.
3. Assemble the Outlet Nozzle onto the Dispensing Tube.
4. Assemble GSFR Bushing into the SFR hole and tighten the screw.
5. Finally attach the Reel Support to SFR with its screw.



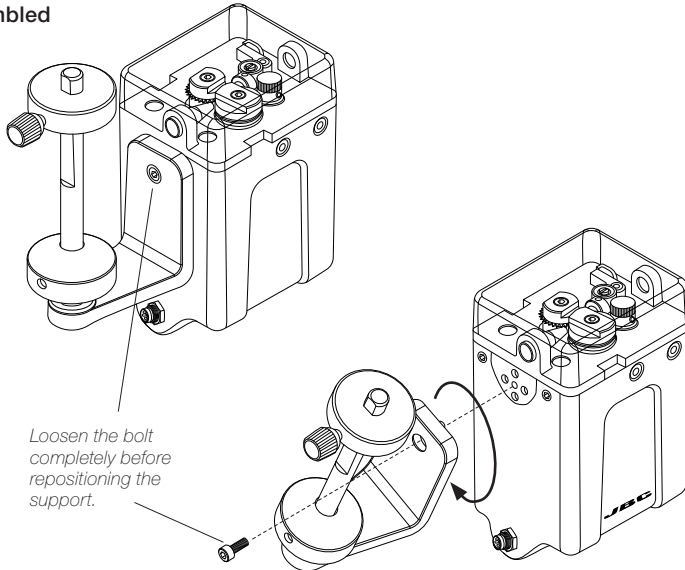
*Not included, sold separately

Assembly: Reel support positions

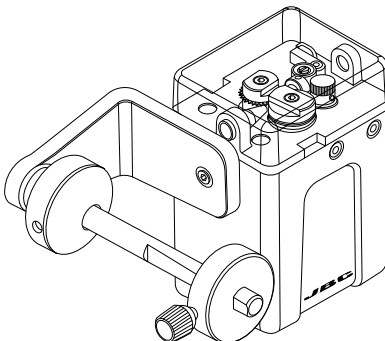
The Reel Support can be installed both vertically and horizontally to match your preferences.

Unscrew the bolt using a 3mm Allen key and set the Reel Support as desired.
Tighten the bolt to fix the Reel Support in its position.

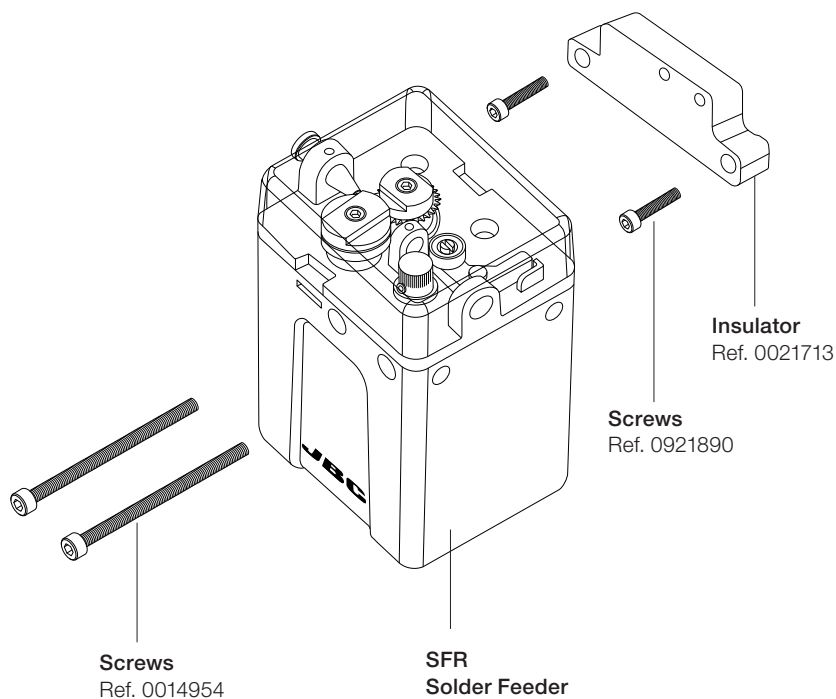
Reel Support vertically assembled



Reel Support horizontally assembled



Assembly: SFR independent from TRA*



If mounting SFR independently from TRA, the Electrical Insulator is required.

Assemble the Insulator to your device with the screws (ref. 0921890), and then SFR to the Insulator with its screws (ref. 0014954).

The Electrical Insulator must be assembled to ensure that SFR work properly.



Do not use the SFR without an insulator if it is mounted without the TRA.

**Not included, sold separately*

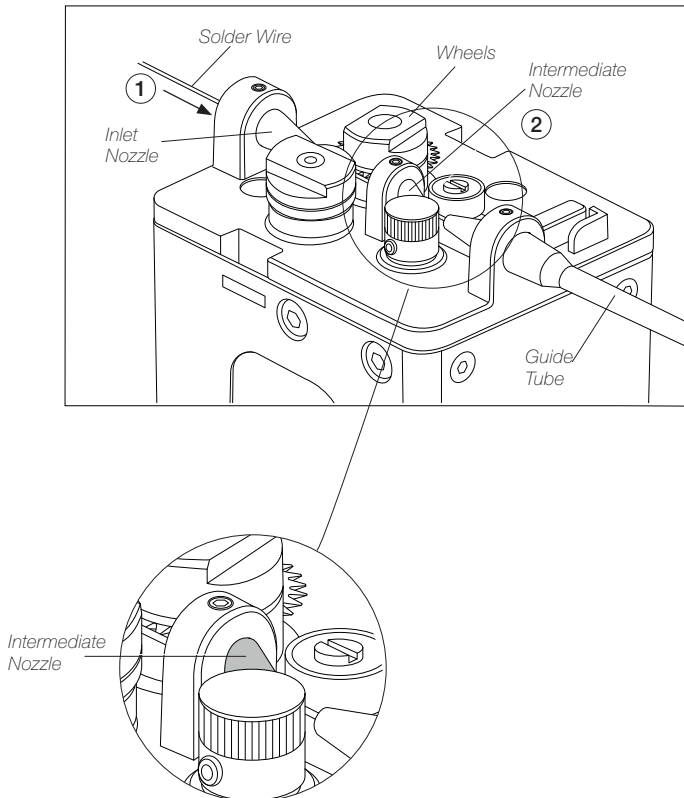
Solder Wire Loading

GSFR must be assembled previously.

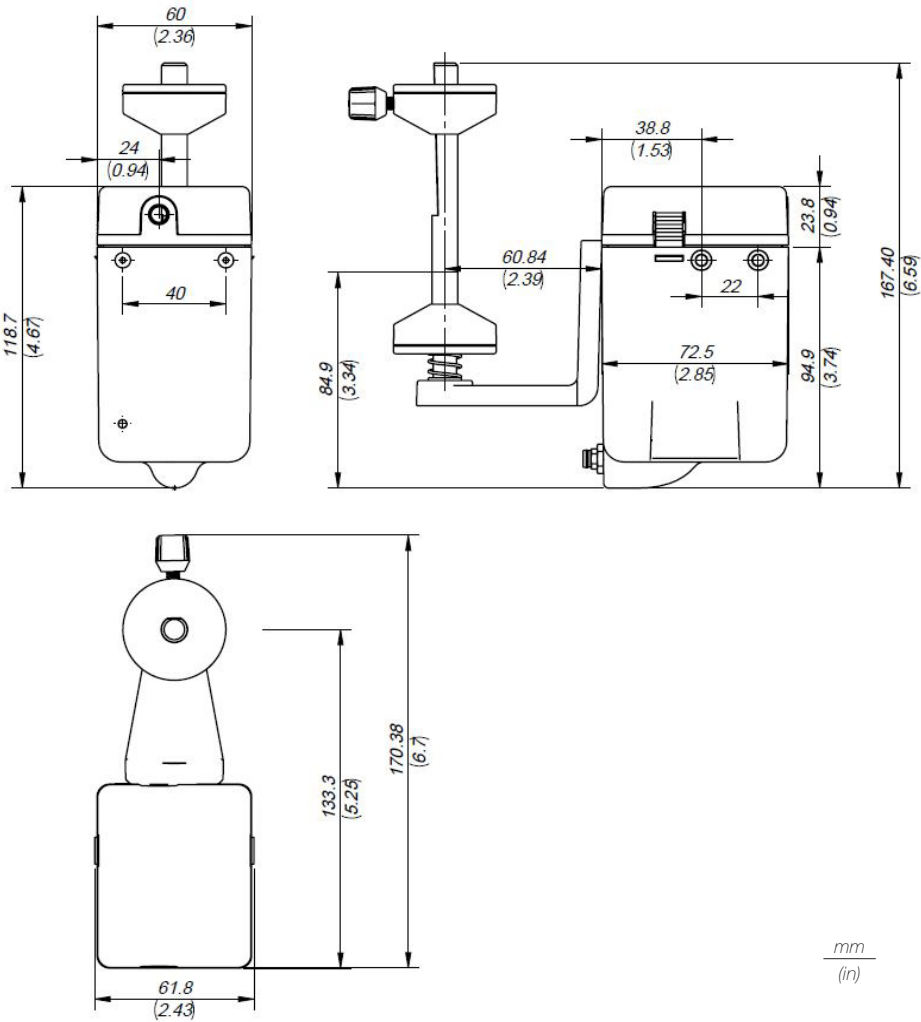
1. Feed the Solder Wire into the Inlet Nozzle until it reaches the wheels.
2. Make sure the wire passes through the Intermediate Nozzle and enters the Guide Tube.

Important: Set the wire thickness parameter before starting to dispense the wire. To set the W-THI command, see the Communication Protocol for the SFR unit at www.jbctools.com/jbcsoftware.html.

Wire feeding is controlled by an external controller (Robot/PLC/Computer). To start the wire loading process use the W-SLD command. See the Communication Protocol for the SFR unit at: www.jbctools.com/jbcsoftware.html

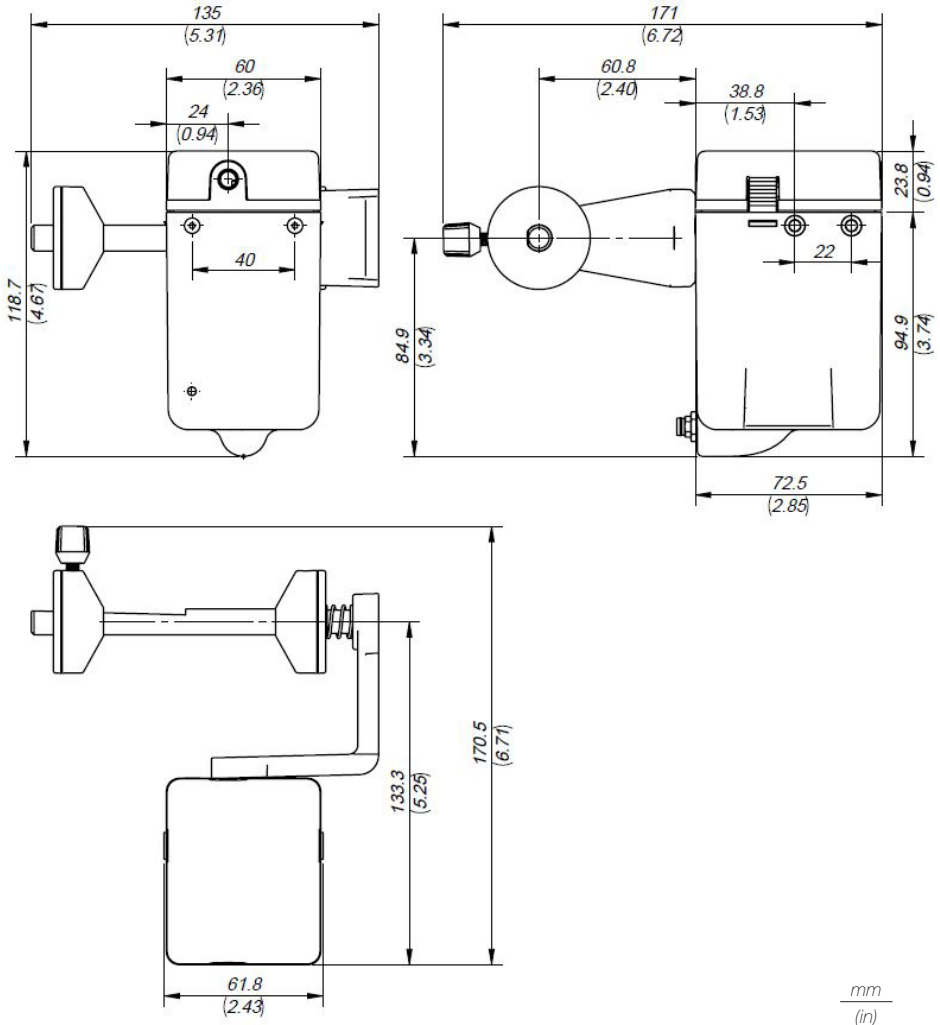


Dimensions (Vertical Reel Suport)



Solder Wire Reel dimensions: max. lenght 80mm (3.2 in), max. diameter 80mm (3.2 in), max. weight 1 kg (2.2 lb).

Dimensions (Horizontal Reel Suport)

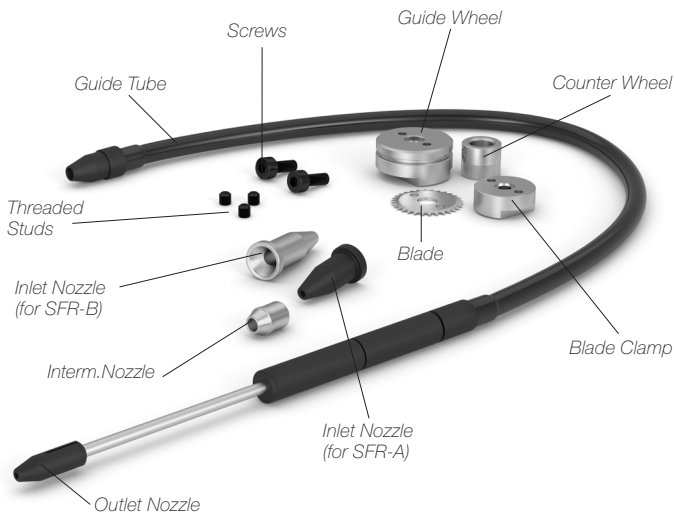


Solder Wire Reel dimensions: max. length 80mm (3.2 in), max. diameter 80mm (3.2 in), max. weight 1 kg (2.2 lb).

Accessories

Guide Kit for SFR with Solder Wire Perforation

Ref. GSFRXXVLL



GSFR XX V LL

With Solder Wire Perforation

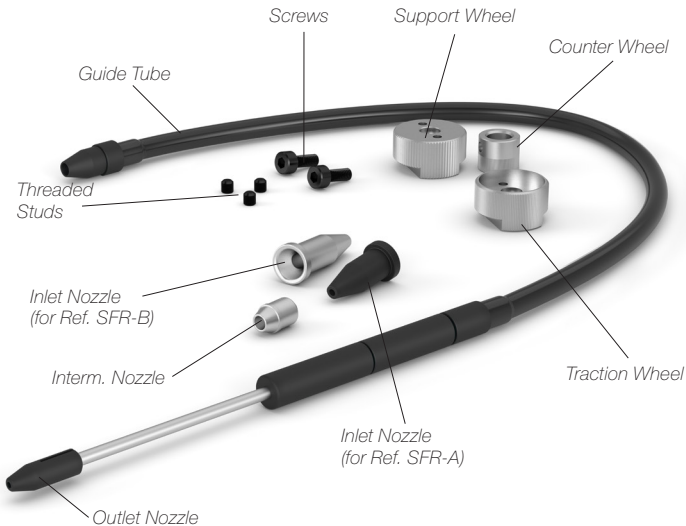
Tube lenght		
LL	Lenght	
03	0,3 m	11,81 in
04	0,4 m	15,75 in
05	0,5 m	19,69 in
07	0,7m	27,56 in
10	1,0 m	39,37 in
15	1,5 m	59,05 in

Wire diameter		
XX	Diameter of use	
08	Ø 0,8 mm	Ø 0,032 in
10	Ø 1,0 mm	Ø 0,040 in
12	Ø 1,2 mm	Ø 0,047 in
15	Ø 1,5 mm	Ø 0,059 in
16	Ø 1,6 mm	Ø 0,063 in

Guide kits are sold separately. Find JBC Guide kits at www.jbctools.com

Accessories

Guide Kit for SFR without Solder Wire Perforation Ref. GSFRXXDLL



GSFR XX D LL Without Solder Wire Perforation

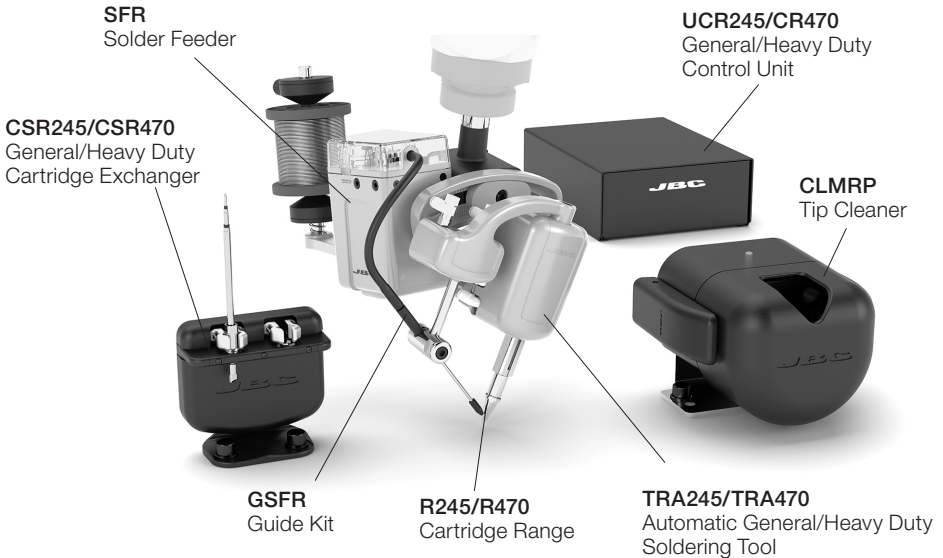
Tube lenght		
LL	Lenght	
03	0.3 m	11.81 in
04	0.4 m	15.75 in
05	0.5 m	19.68 in
07	0.7 m	27.92 in
10	1.0 m	39.37 in
15	1.5 m	59.05 in

Wire diameter		
XX	Range of use	
05	Ø0.5 mm	Ø0.020 in
06	Ø0.6 mm	Ø0.025 in
07	Ø0.7 mm	Ø0.028 in
08	Ø0.8 mm	Ø0.032 in
10	Ø1.0 mm	Ø0.040 in
12	Ø1.2 mm	Ø0.047 in
15	Ø1.5 mm	Ø0.059 in
16	Ø1.6 mm	Ø0.063 in

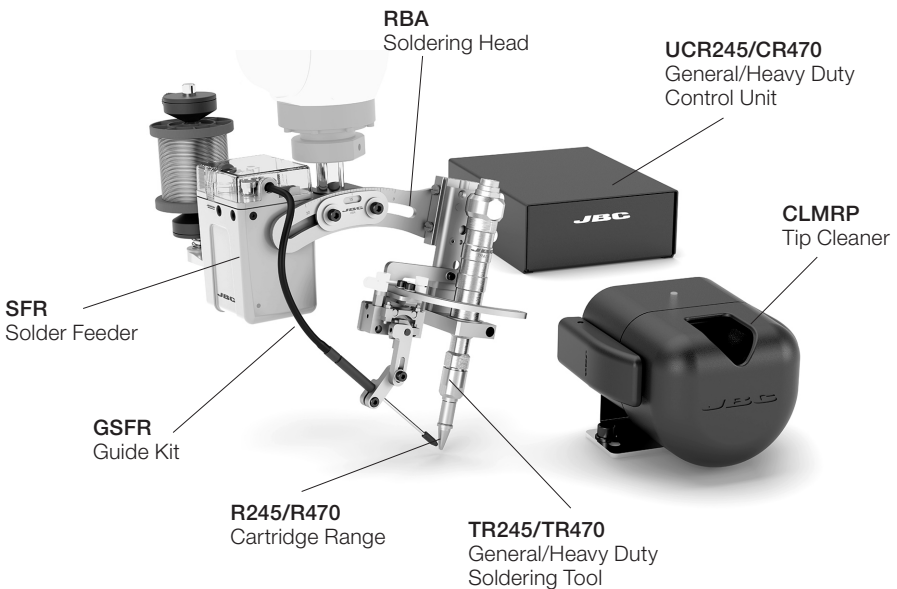
Guide kits are sold separately. Find JBC Guide kits at www.jbctools.com

Work Place Examples

HA Automatic Soldering Set for Robot



HM Soldering Set for Robot



Maintenance

- Before carrying out maintenance, always unplug the tool and the equipment.
- Use a damp cloth to clean the Solder Feeder. Alcohol can only be used to clean the metal parts.
- Periodically check all cables and tube connections.
- Replace any defective or damaged parts. Use original JBC spare parts only.
- Repairs should be performed only by a JBC authorized technical service.

Safety



It is imperative to follow safety guidelines to prevent electric shock, injury, fire or explosion.

- Do not use the equipment for any other purpose.
- Do not leave the appliance unattended when it is on.
- Be sure that the power supply is disconnected before changing any spare parts.
- The temperature of accessible surfaces may remain high after the device is turned off. Handle with care.
- Heat can cause inflammable products to ignite even when not visible.
- Avoid flux coming into contact with skin or eyes to prevent irritation.
- Be careful of fumes produced while soldering.
- Keep your workplace clean and tidy. Wear appropriate protective glasses and gloves while handling any component to avoid personal injury.
- Utmost care must be taken with liquid tin waste which can cause burns.

Specifications

SRF

Solder Feeder for Robot

Ref.: SFR-B

Solder Feeder

- Power Supply input: 24 Vdc ($\pm 5\%$). 1.5 A current required
- Ambient Operating Temp.: 10 - 50 °C / 50 - 122 °F
- Connections: M8-5 pin Communication Connector
- Max. Speed: 120 mm/s / 4.72 in/s
- Net Weight: 674 g / 1.49 lb
- Dimensions: see page 10 and 11

Reel Support

- Spool capacity: up to 1 kg / 2.2 lb
 - Max Spool Diam.: 80 mm / 3.15 in
 - Max. Spool Height: 80 mm / 3.15 in
 - Net Weight: 130 g / 0.29 lb
 - Dimensions: see page 10 and 11
- Total Net Weight: 984 g / 2.17 lb
 - Total Package Dimension/Weight: 221 x 136 x 126 mm / 1200 g
(L x W x H) 8.70 x 5.35 x 4.96 mm / 2.65 lb

Complies with CE Standards.
ESD safe.

JBC

Warranty

JBC's 2 year warranty covers this equipment against all manufacturing defects, including the replacement of defective parts and labour.

Warranty does not cover product wear or misuse.

In order for the warranty to be valid, equipment must be returned, postage paid, to the dealer where it was purchased.

Get 1 extra year JBC warranty by registering here:

<https://www.jbctools.com/productregistration/>
within 30 days of purchase.



This product should not be thrown in the garbage.

In accordance with the European directive 2012/19/EU, electronic equipment at the end of its life must be collected and returned to an authorized recycling facility.

