DRFF-520SS

Setup & Operation Manual

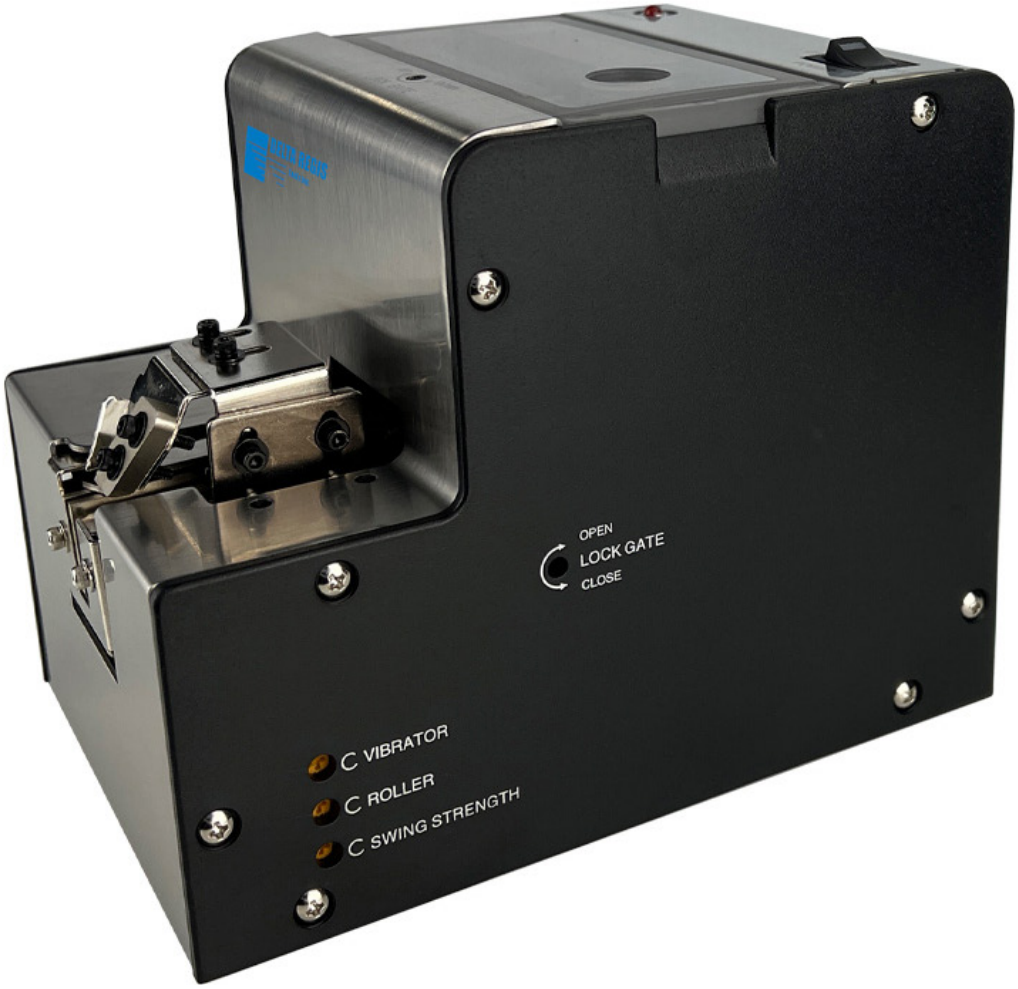

Table of Contents:

Delta Regis_DRFF-520SS_M_R0.0

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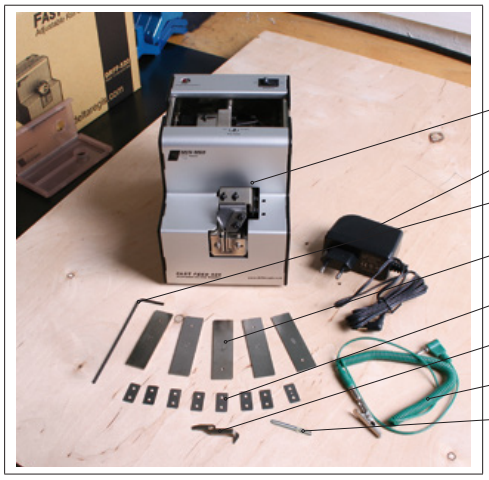
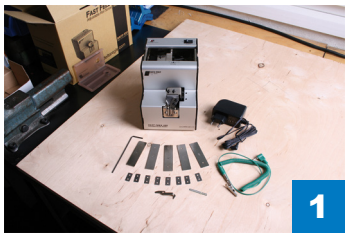
Setup instructions

Follow these step by step instructions to setup the DRFF-520SS according to the screw's thread diameter and screw's head height.



- DRFF-520SS Precision Screw Feeder
- AC Power Adapter
- Hex Wrench (2 mm)
- Measurement Shim (1x 2.0 / 1.5 / 1.2 / 1.0 / 0.8 mm)
- Spacer Shim (10x 0.5 mm/ 2x 0.2 mm) 3x 0.5mm / 1x 0.2 mm pre-installed
- Large Stopper (Use with M2.0 mm - M5.0 mm) Small Stopper pre-installed
- Grounding Cable
- Adjustment Tool



Check contents
Contents listed above

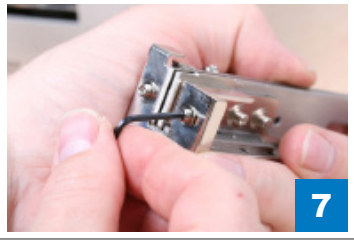
Turn top gate screw in clockwise direction until gate is fully open

Turn side gate screw in clockwise direction until gate is fully open

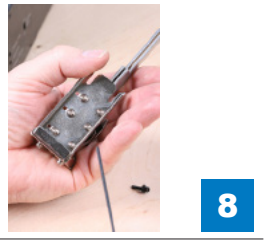
Slightly loosen the rail fixing screw in counter-clockwise direction

Guide rail assembly out of the feeder

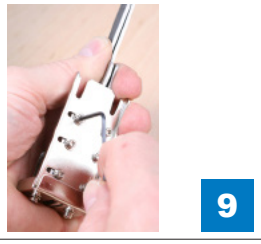
Measure the diameter of the screw to be used
3 mm screw used for demo



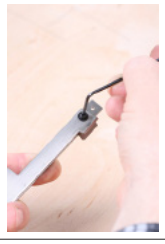
Slightly loosen screw shown in counter-clockwise direction



Turn rail assembly over



Slightly loosen screws shown in counter-clockwise direction



Remove screw found at rear of rail assembly

Remove pre-installed spacer shims

Choose the correct combination of spacer shims according to screw diameter
Used 3.2 mm for demo

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Setup instructions (continued)

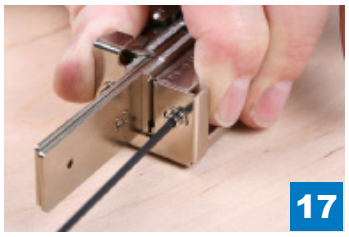
Insert the spacer shims into rail assembly

Install and tighten screw removed from step 10

Choose correct combination measurement shims according to screw diameter
+0.2 mm

Insert measurement shims into rail assembly as shown

With the previous screws loosened, squeeze the rail sides until the rails bottom against the measurement shims



Tighten screws in steps 7 & 9

Remove measurement shims

Place screw into rail groove...

...and test to ensure smooth movement from front to back of rail

Guide rail assembly into the feeder

...and push until rail stops
Note - the bent angle of the rail assembly slides under the sensor plate

Tighten the rail fixing screw in clockwise direction

Measure the fastener head height
Used 2.5 mm for demo

Slightly loosen screws shown in counter-clockwise direction

Bit guide can now move freely up and down

Choose the correct combination of measurement shims according to the fastener head height
+0.5 mm

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Setup instructions (continued)

Insert measurement shims between rail and bit guide
Shims cannot rest on top of stopper, must be pushed aside

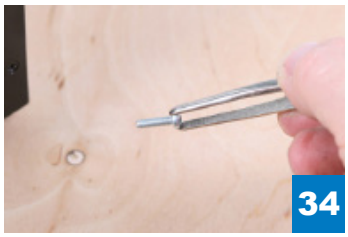
Press down on bit guide

Tighten screws from step 25

Remove measurement shims

Now the brush height can be adjusted

Slightly loosen screws shown in counter-clockwise direction



Grab 2 fasteners with tweezers

...and insert them into the rail. Move brush up or down until brush just touches the screw heads

Tighten screws from step 33

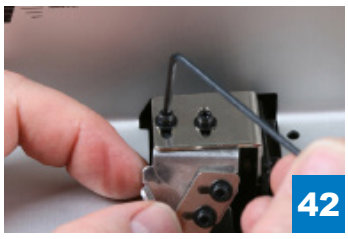
Tilt the DRFF-520 slightly forward. The previously inserted screws should slide forward and stop at the stopper

Now the chute can be adjusted

Slightly loosen the screws shown in counter-clockwise direction...

...and center chute with rail assembly

Tighten screws from step 39



Slightly loosen screws shown

Slightly loosen screws shown

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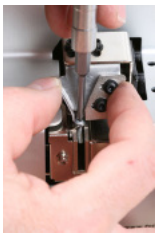
Setup instructions (continued)



Take a screwdriver bit that will be used to pick the screws, center the x- and y- axis
Bitguideshouldbe+0.2mmwiderthan bit diameter

Tighten screws from step 42

Tighten screws from step 43

Turn the top gate screw counter-clockwise until lightly tightened and back off two full turns clockwise
Nomorethan0.2mmgapbetweengate and screw plate

Turn the side gate screw counter-clockwise until lightly tightened and back off two full turns clockwise
Nomorethan0.2mmgapbetweengate and rail

Plug AC power adapter into the back of feeder...

...and plug AC power adapter into proper outlet

Pour a few screws into the hopper

Switch power 'ON'
Thefeederstartstovibrateandroller assemblybeginstoturn.Thefeederstops automaticallywhenascrewarrivesat the stopper

Test picking screws with a magnetized bit to familiarize yourself with the feeders' operation

If required, plug in the supplied grounding cord...

...and connect the clip to any metal grounding point

Operating instructions

After completing the setup adjustments, reconfirm that the rail assembly is installed correctly (step 22) and that the top and side gates are properly closed before filling the hopper (steps 47-48).

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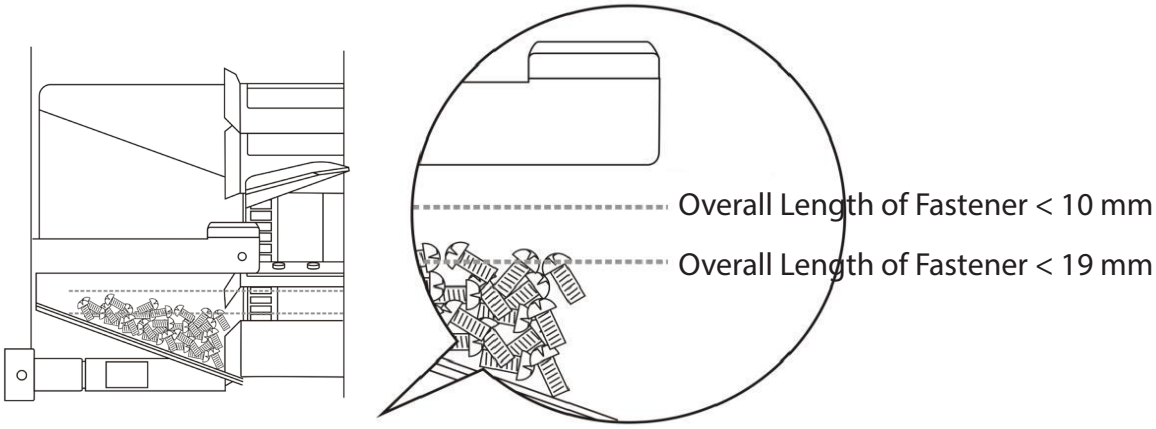
Operating instructions (continued)

Loading the hopper

With the power 'OFF' and the accessory box removed. Ensure no foreign materials are loaded into hopper. Pour in screws until they are approximately 1 - 2 mm below the bottom of the rail. Replace cover (accessory box) on hopper opening. Keep cover on at all times while feeder is in use.



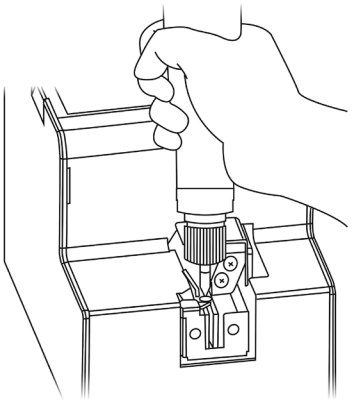
The hopper can hold approximately 200 - 220 cc of screws. All objects other than applied screws are deemed as foreign material which should be removed first or they will affect the performance of this feeder.

Powering 'ON'

Plug in the AC power adapter supplied with the feeder into the feeder first. Then plug the AC power adapter into proper outlet. Connect ground cable. Turn the power switch 'ON' at the top right side of the screw hopper. The power indicator will illuminate, the overload LED will illuminate momentarily and the buzzer will emit a short 'beep'. The roller assembly will turn and the rail assembly will vibrate. The feeder will start to feed screws to the bit guide.

Picking screws

Make sure the bit type in your electric screwdriver matches the head of the screw and the bit is magnetized before use. (Bits that are not magnetized will not work - For stainless steel applications, a vacuum pickup is required).
Hold the screwdriver, place the driver bit above the bit guide as shown. You do not need to aim directly for the head of the screw, allow the point of the screwdriver bit to move down the bit guide and engage into the recess of the screw head.



Caution

· Do not push the driver down with too much force when picking up the screw or it will damage the rail assembly
· Do not deliberately apply force on the rail assembly as this will damage the feeder

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Operating instructions (continued)

Location of controls and components

A - **Vibration Timer:** Adjustable time delay, controls how long the rail continues to vibrate after a screw is detected at the pick-up position.

B - **Drum Timer:** Adjustable time delay, controls how long the drum and brush continue to operate after a screw is detected at the pick-up position.

C - **Vibration Intensity:** Allows for adjustment of the intensity of the vibration for proper screw feeding.

Note - When making adjustments to the above controls, please use the included adjustment tool and do not force the control past its stopping points. Little effort is required to make adjustments. Forcing the controls past their stopping points will damage the feeder and void the warranty.

E - **Gates:** The top and side gates perform two functions - they allow the feeder to accommodate different rail/screw adjustment settings and they can be opened fully to allow the rail to be removed for setup purposes. It is extremely important that the gates be properly closed (steps 47-48) before the feeder is put into service.

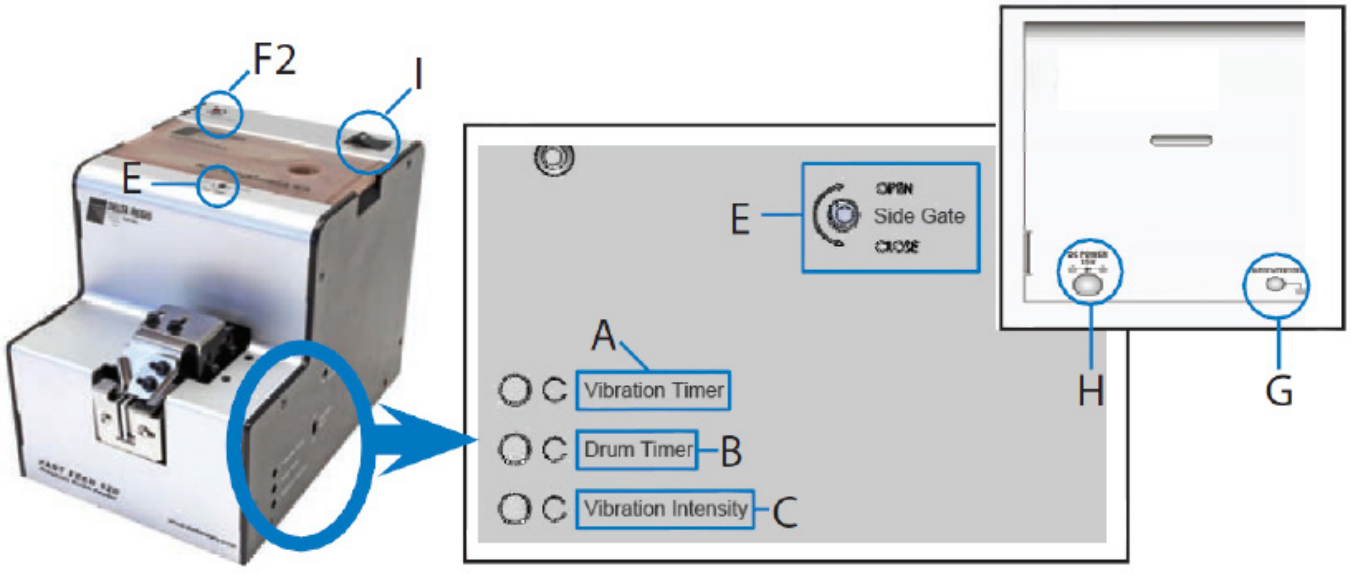
Indication LED:

F2 - Overload Indicator: Lights briefly when the feeder is powered on and provides a visual indication if the feeder is overloaded.

G - **Ground Connection:** Used with included ground cable to bond the feeder to a grounding point in the workstation.

H - **DC Power Input:** 15 VDC input connection for the AC power adapter provided with the feeder.

I - **Power Switch:** Illuminated switch used to turn the feeder 'ON/OFF'.



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Troubleshooting

PROBLEM	PROBABLE CAUSES	SOLUTION
Feeder does not power on or constant buzzing sound when power switch is 'ON'	Feeder is unplugged	Plug AC power adapter in the feeder and switch power switch to 'ON' position
	Faulty power switch, motor or PCB	Return unit to authorized service center for evaluation
Roller assembly not rotating	Faulty motor	Return unit to authorizes service center for evaluation
	Foreign object stuck in gears / gears stripped	Power 'OFF' feeder, remove any objects that may have fallen into the roller assembly gears / send feeder to authorized service center for evaluation
Feeder is not feeding screws	Screws are not falling into rail groove due to improper setup	See steps 2 - 23
	Dirty rail	Power 'OFF' the feeder, remove and clean the rail assembly
	Screw is caught at the holding plate	See steps 24 - 31
	Vibration intensity not strong enough for applied screw	Increase the vibration intensity
	Feeder not vibrating	Return unit to authorized service center for evaluation
Screws are not reaching the bit guide for pick up	Feeder improperly set up for applied screw	Power 'OFF' the feeder and follow the Setup and Operation Manual
Screwdriver bit unable to pick up screw at bit guide	Bit guide not properly adjusted to accommodate screwdriver bit diameter	See steps 42 - 46
Screws are falling into the feeder	Bit guide, rail assembly and/or gates not properly adjusted	Power 'OFF' the feeder, remove any screws that have fallen into the feeder and follow the Setup and Operation Manual

Caution

Please read, understand, and follow all setup and operating instructions in this manual before using this feeder. Do not attempt to modify this feeder. Repairs must only be performed by qualified repair personnel.

Warranty

Delta Regis DRFF-520SS are warranted for one year from the date of purchase against defects in material and workmanship. This warranty does not cover damage due to transportation, abuse, misuse, or improper service. Our sole remedy is to repair or replace (at our discretion) any unit found to be defective due to defects in material or workmanship. It is the responsibility of the user to return any product thought to be defective, freight prepaid, to our warehouse for inspection and evaluation.

There is no warranty of merchantability or fitness of purpose. In no event will Delta Regis Tools, Inc. be liable for business interruptions, loss of profits, harm, injury, damage, personal injury, cost of delay, or any other special, indirect, incidental, or consequential losses, costs, or damages.

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