

FUJITEC

INSTRUCTION MANUAL

VIS SETTER Feeder

"PICKUP HANDY" SCREW FEEDER Unit

Model MK-3020V (NEW)



At this time our sincere thanks for your purchase of the Fujitec "PICKUP HANDEY" Screw Feeder (MK-3020V(NEW)).

To ensure safe operation, please read this instruction manual carefully before use.

Also be sure to always read the "Safety Precautions" before attempting use.

Keep this instruction manual in a secure location and consult if unclear about machine handling, operation or maintenance.

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Safety precautions

Always follow the instructions below

To ensure correct operation, always read these "Safety precautions" before attempting to use the machine.

The following cautionary points are "Warnings" and "Cautions" intended to prevent unforeseen accidents that are a hazard to the operator and others around him as well as causes of material damage or loss.

These contain important information for maintaining safety, so comply with them at all times.

- The following cautionary notes are grouped according to the hazard level in terms of injury and material damage that may occur if not used correctly.

	WARNING	indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION	indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to the equipment.

- Points you should comply with are grouped according to the following symbols.
(The following are examples.)

	This symbol indicates a caution or warning you must heed.
	This symbol indicates a prohibited action.
	This symbol indicates a mandatory action



WARNING

	● Do not alter or modify any part of this unit. Only authorized repair personnel are allowed to disassemble or repair this unit. Attempting this on your own may cause fire, electrical shock, or injury. Note: Consult your dealer if repairs are needed.
	● Do not damage the power cord or plug. Do not forcefully bend, pull, twist, or bundle the cord. Do not lay heavy objects on it or allow pinching or crushing. Neglecting this may cause injury, fire or electrical shock.
	● Do not operate with the side cover open. Never attempt to operate this unit with the side cover still open. Always turn off the power before opening the cover. Neglecting this may cause electrical shocks, short, or spark.
	● Do not use if the power cord or plug is worn or damaged or the plug is loosely inserted in the socket. Neglecting this point may cause electrical shock or fire.
	● Do not use a power source that is not 100 V AC. Neglecting this may cause electrical shock or fire.
	● Do not handle the power cord roughly. Do not carry the electric screwdriver while holding the power cord or pull on the power cord to extract the plug from the socket. Keep the power cord away from locations with heat, oil or sharp corners.
	● Do not connect the output connector to an AC voltage. Connecting the LOW screw supply (insufficient quantity) output connector (CN4) to an AC voltage may cause fire or breakdown.
	● Do not point the screwdriver tip at other persons. Feeding screws while the screwdriver is aimed at other persons may be hazardous if the screws fly outwards.
	● Ground the power supply securely. Electrical shock may result if not properly grounded.
	● Turn off the power before replacing fuses. Always be sure to turn off the power (supply) switch or unplug the power cord from the socket when replacing fuses. Failure to do so may cause electrical shock.

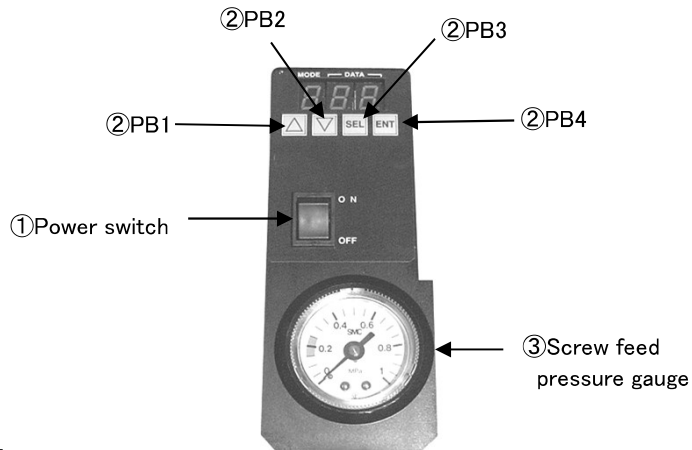


CAUTION

	● Do not use near watery or water spray locations. Equipment breakdowns may occur if used in locations exposed to water/water spray, extremely low or high temperatures, or high humidity.
	● Do not use under abnormal conditions. If the unit heats up or you notice an abnormal condition, then immediately stop operating the unit and send it out for inspection and repair. Failure to do so could cause breakdown or injury.
	● Do not install in locations where vibrations occur. Installing the unit in a location subject to vibrations may damage the control board. It might also cause smoke emission or fire
	● Inspect and service the feeder periodically Failure to inspect and service the feeder will prevent it from delivering full performance. This may also cause feeder breakdowns.

2. Part names and functions

2-1. Power switch



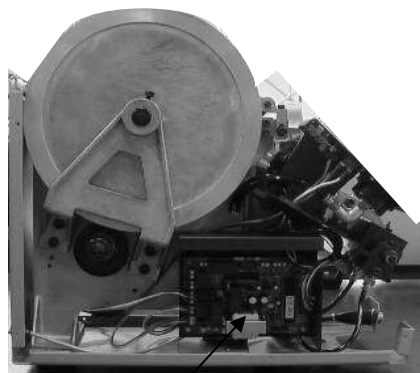
① Power switch

- ② PB1
 - ② PB2
 - ② PB3
 - ② PB4
- See page 6.

③ Screw feed pressure gauge

This is an air pressure gauge to indicate the air pressure at which screws are fed from the screw feed hose.

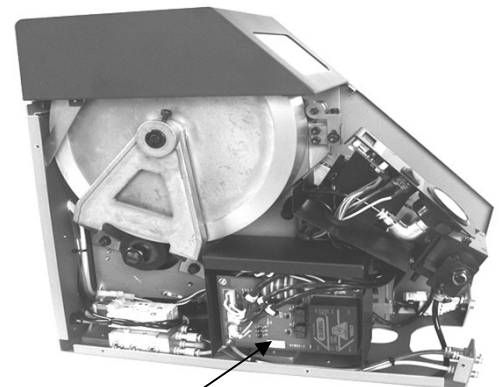
2-2. Control board



④-① Control board

④-① Control board

This board contains electrical circuits for controlling the screw feed and for stopping after feeding a fixed quantity of screws.

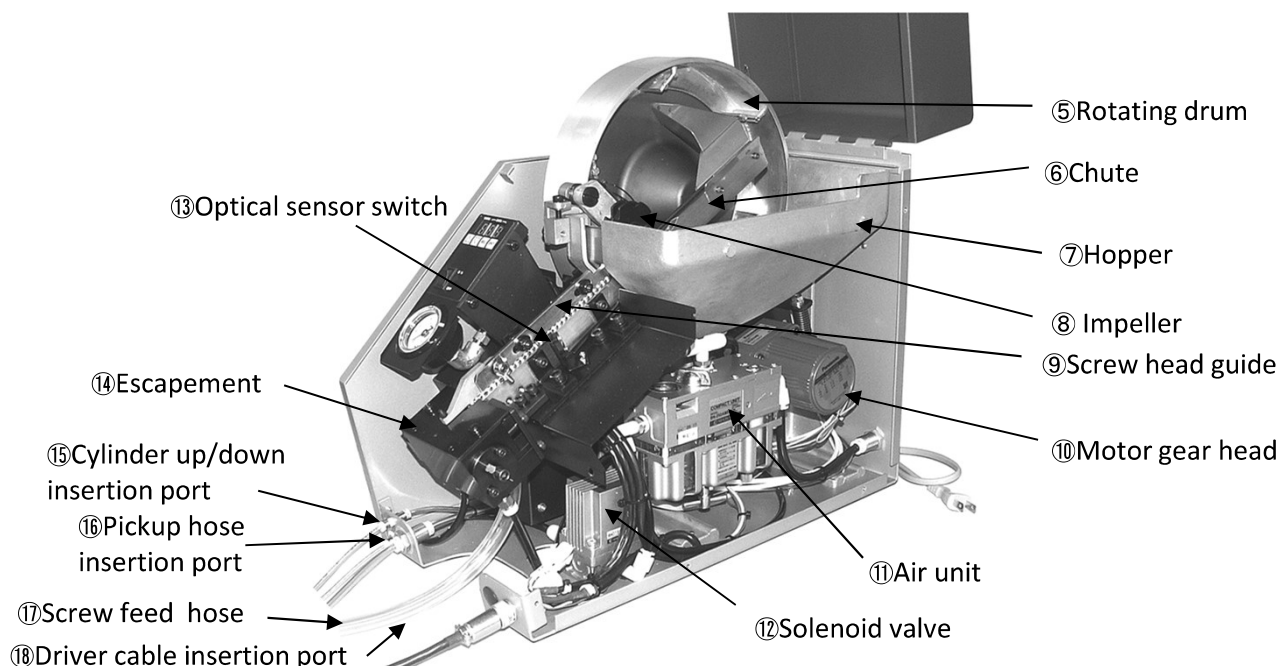


④-② Adsorption board

④-② Adsorption board

Adsorption type driver is use the board.

2-3. Main unit internal section



⑤ Rotating drum

The hopper side of the drum rotates, pick up the separate screws and supplies them to the chute.

⑥ Chute

The chute supplies screws from the hopper to the escapement where they are aligned.

⑦ Hopper

Screws are separately dumped and stored here.

⑧ Impeller

This gear rotates on the chute to prevent non-aligned screws from entering.

⑨ Screw head guide

This plate prevents screws on the chute from jumping outwards or falling.

⑩ Motor gear head

The motor gear head turns the rotating drum.

⑪ Air unit

This unit includes the filter, pressure-relief valve and oiler.

⑫ Solenoid valve

Switches the air path to the escapement and operates in synchronization with the screw feed signal.

⑬ Optical sensor switch

This sensor temporarily stops the rotating drum when a specified quantity of screws is aligned.

⑭ Escapement

This sorts one screw at a time on the chute, and pressure-feeds them along the screw feed hose to a specified position.

⑮ Cylinder up/down insertion port

Insert the air hose into this port for driving the Y pipe up and down when using the "Pickup Handy" Screw Fastener.

⑯ Pickup hose insertion port

Insert the pickup hose into this port when using the "Pickup Handy" Screw Fastener.

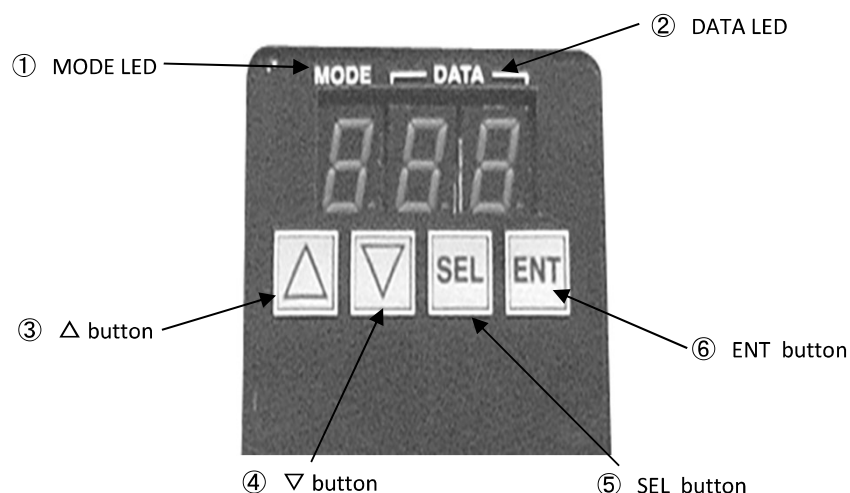
⑰ Screw feed hose

This hose feeds the screws from the escapement to a specific location.

⑱ Driver cable insertion port

Insert the driver cable into this metal socket when using the "Pickup Handy" Screw Fastener.

2-4. Date entry pad



① MODE LED

② DATA LED

MODE		DATA	
A	LOW screw alarm time	0~99	Time until alarm sounds after "screw full" sensor turns OFF
B	Motor stop time	0~99	Time until motor (for screw feed) stops after "screw full" sensor turns ON
C	Vibrator stop time	0~99	Time until vibrator stops
D	Screw feed time	0~9	Escapement operation time (seconds) simultaneous with screw feed time
D.	Screw feed time	. 00~. 99	Screw feed time simultaneous with escapement operation time (seconds)
E	Vibrator intensity	0~18	0:MAX 18:Minimum
F	Standby time	0.0~9.9	Standby time from start signal OFF to operation start
G	Forward time	0.0~9.9	Time in which the Y-pipe (cylinder) advances
H	Stabilizing time	0.0~9.9	Time the Y-pipe (cylinder) is in standby during advance
I	Retract time	0.0~9.9	Time in which the Y-pipe (cylinder) retracts
J	Valve setter switch	off	(for automatic operation) Timer is reset by input signal
		on	(for "Handy" operation) Solenoid valve opens and closes in synchronization with external screw feed signal
K	Mode selector	off	Does not count-up
		on	Cylinder advances during count-up, and pickup turns OFF
L	Simple counter	off	Not used
		on	Used (counter not connectable)
M	Count-up	0~99	Count-up value
O	Nominal rotation time	0.0~9.9	Nominal rotation time
P	Reverse rotation operation	0~99	Number of reverse rotation (Mode 2)
		0.0~9.9	Reverse rotation time (Mode 3)
Q	Reverse rotation error (number of times)	0~99	Up to reverse rotation number of times

MODE	DATA		
R	Reverse rotation error (time)	0.0~9.9	Up to reverse rotation errors time off
S	2-axis ES separation prediction time	0.0~9.9	2-axis ES separation prediction time
T	2-axis ES operation wait time	0.0~9.9	2-axis ES operation wait time
U	2-axis ES cylinder prediction time	0.0~9.9	2-axis ES cylinder prediction time
V	2-axis ES out put time	0.0~9.9	2-axis ES out put time
W	2-axis ES auto switch selection	OFF/ON	2-axis ES auto switch selection
X	Error release selection	0~2	Error release selection
Y	Inspection sensor passage judgment time	0.0~9.9	Inspection sensor passage judgment time
Z	Motor and vibrator operation deley time	0.0~9.9	Motor and vibrator operation deley time

Mode 「A」~「E」 and 「J」 extends in the case of the handy series.

But the setting of mode 「C」 and 「E」 is effective for only MK-3150V.

The setting of 「F」~「M」 is effective for only adsorption type handy 「J」 remove.

③ **▲button (PB1)**

Use this button to increase the mode data value on the display.
Data values differ depending on the selected mode.

④ **▼button (PB2)**

Use this button to decrease the mode data value on the display.

⑤ **SEL button (PB3)**

Use this button to select a mode and load the data from the ROM.

⑥ **ENT button (PB4)**

Press this button to save the mode data on the display to the ROM. Data is not stored if you change the mode by the SEL button.

Note: Mode "C" and "E" settings only work on the MK-3150V (horizontal vibrator chute type.)

Simple Counter (Mode:"L")

The simple counter can be selected by ON/OFF during MODE "L" display.
Set MODE "L" to ON to use the simple counter.

Use Mode "M" to set the number of pieces you want to count up to.

Set Mode "K" ON or OFF to select the count-up operation.

MODE "L" ON: Displays the counter when the torque-up signal is input from the screwdriver.

Press the ENT button to switch the display.

(The counter counts down. The MODE display LED is OFF while the counter value is displayed.)

A buzzer sounds (0.5 seconds) when the counter reaches 0.

Ignores the OK input when an external counter is connected.

MODE "K" ON : When the simple counter is ON, the pickup turns off when the count-up is reached and the screw feed advances and stands by.

When the escape input is ON (short circuit), the pickup turns ON, and screw feed is in retract.

Escape input serves as a reset signal when Mode "K" is ON.

The escape opens or closes when Mode "K" is OFF.

3. Accessories

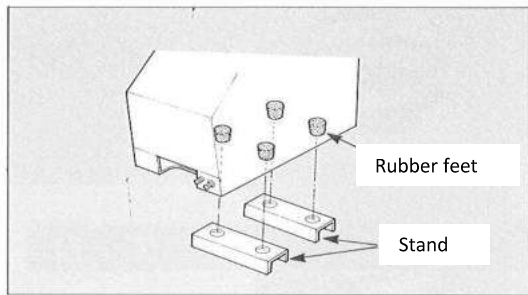
 Screw feed hose	Part No. N23102  Fuse (125V 3A $\phi 5.2 \times 20$)	Part No. N250M16P3FA  Screw feed signal plug (only for feeder section)
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4. Point to check before using

- Do not use screws not matching the mechanical specifications.
- Do not use screws that were picked up by magnets or that are coated with oil.
- Do not point the screw feed hose tip at other persons.
The screws may fly outwards creating a hazardous situation.

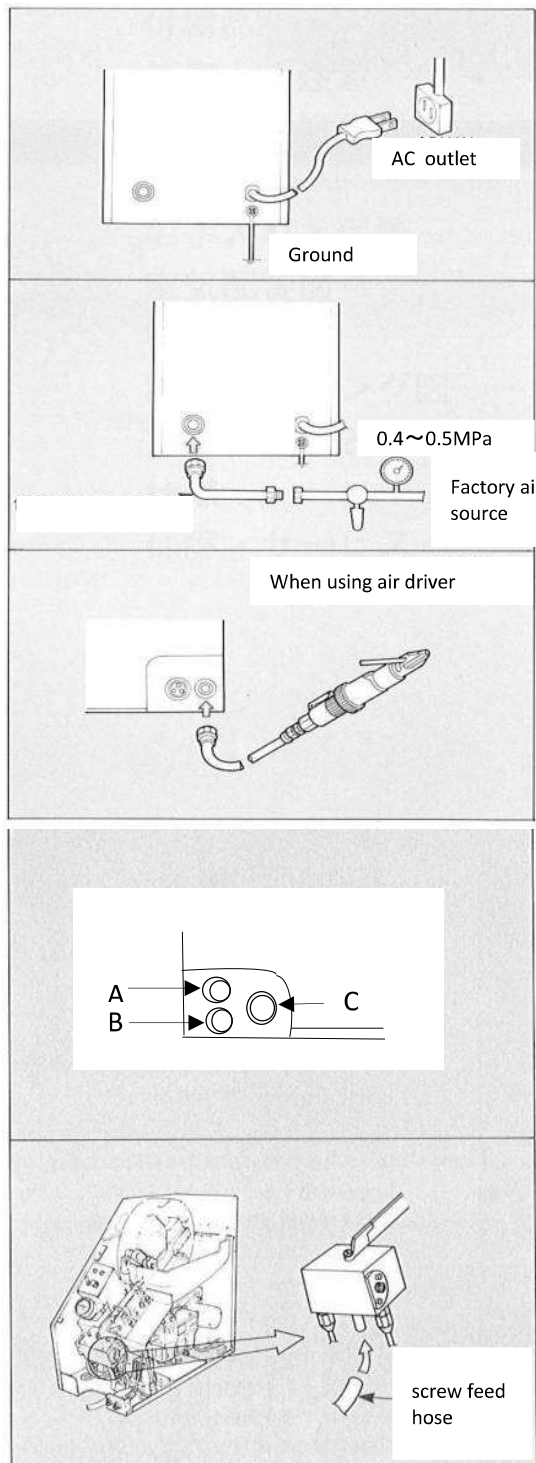
5. Pre-operating setup

5-1. How to install



- 1) Install at a position 200 to 250 mm higher than the location where the screws are supplied and be careful not to twist or forcibly bend the feed hose.
- 2) Prepare a stand block for use during installation and set so that the rubber feet of the feeder unit are on the stand block. Installing directly without using a stand block will cause a drastic bend in the screw feed hose.

5-2. Installing the wiring and piping

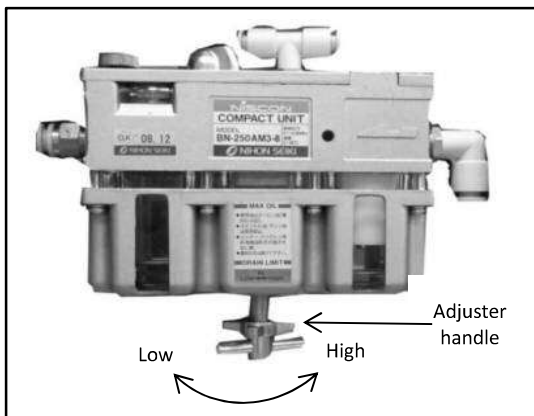


CAUTION

Always connect to ground line. Failure to connect to ground may cause electrical shocks.

- 1) Connect the ground terminal on the rear panel to ground by using a ground wire.
- 2) Then connect power supply cord to a power supply.
- 3) Connect the air hose to the factory air source.
(or air compressor.)
The air hose fitting is the $\phi 8$
The source air pressure cannot be adjusted on this unit, so adjust the factory source air pressure to a range within 0.4 to 0.5 MPa.
- 4) Please connect the plug with the receptacle (7P) at the right of the front side of the feeder about the screw driver. (DLV-08,15,30-SPC)
- 5) Please connect urethane tube $\phi 4$ or $\phi 6$ for the cylinder operation in A and B and connect urethane tube $\phi 6$ for adsorption with C
- 6) Install the screw feed hose on to the escapement.

5-3. Setup prior to installation work



① Setting the screw feed pressure

Open the factory air source (or air compressor) knob and use the pressure-relief valve on the air unit to adjust the pressure as needed while checking the pressure gauge on the front panel.

Raising the air pressure higher than necessary will damage the screw feed hose, or the solenoid valve. Setting the pressure too low on the other hand will cause poor screw feed. Normally use a pressure within 0.15 to 0.25 MPa.



② Setting the screw feed timer

Set a suitable time on the front side of the screw feed timer (FEEDTIMER), from feeding the screw through the hose unit reaching the specified location.

See ② DATA LED MODES "D" and "D." on page 6 for detailed information.

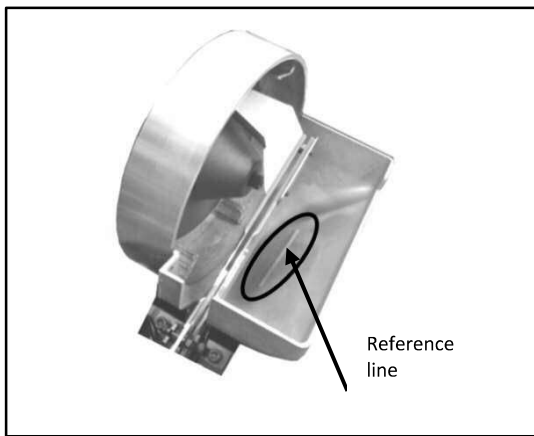


③ Adjust the empty screw warning time

A buzzer sounds and an error signal is sent when the rotating drum has run longer than a preset time.

Note: The buzzer and error signal are optional features. See ② DATA LED MODES "A" on page 6 for detailed information.

6. How to use



① Fill screws up to or below the reference line in the hopper.

Refill after finished using up the last loaded screws. Do not let malformed, different type screws or metal scrap get mixed in with the screws you are loading. Do not use screws that were picked up by magnets or that are coated with oil.



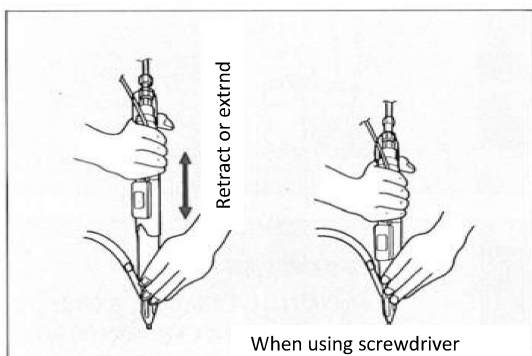
② Turn on the power switch

The three digit LED lamp then light up and the rotating drum starts turning. Screws are then fed along the chute and the unit rotates for a fixed quantity of screws. The rotating drum automatically stops when the screws are aligned and the motor lamp turns off.



CAUTION

Do not point the screw feed hose tip at other persons. The screws may fly outwards creating a hazardous situation.



③ Send a screw feed signal from external source.

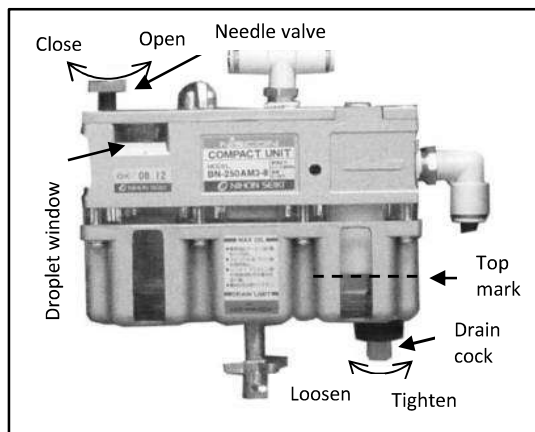
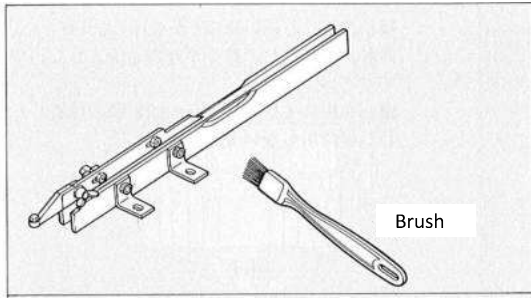
Sending a first signal causes the escapement to move back and forth one time, sorts out one screw on the chute, and sends it by compressed air along the screw feed hose to a specified location.

Never point the tip of the screw feed hose at someone since the screw may fly outwards causing injuries or hazardous situations.

If using the VIS SETTER Handy as the screwdriver, you can send a feed screw signal from the screwdriver switch to the VIS SETTER by retracting-extending the Y-pipe on the driver one time by hand as shown in the figure.

7. Maintenance and storage

7-1. Maintenance after daily work



Always turn off the power switch before cleaning or servicing the unit. Unplug the power cord from the outlet (socket) if not planning to use it for a long time.

① Cleaning the chute

Use a brush or similar tool to clean dust or metal powder that is sticking to the screw sliding surfaces of the chute.

Gently wipe away oil using new cloth moistened with alcohol. Take care not to scratch or dent the sliding surfaces during cleaning.

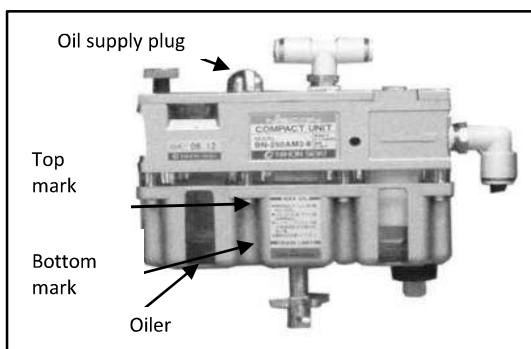
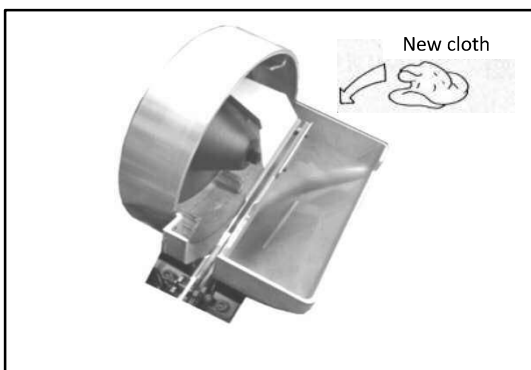
② Supplying oil and draining water from the filter

If using the VIS SETTER Handy as an air screwdriver, loosen the needle valve on the oiler and check from the droplet window that 3 to 5 drops of oil fall while operating the air screwdriver under no load (run with no load on the tip).

Then tighten the needle valve. Finally operate the air screwdriver under no load for 1 to 2 minutes.

Loosen the drain cock and let water from inside the tank drain off. Do not let water accumulate above the upper limit line in the drain window.

7-2. Once a week maintenance



① Cleaning the inside of the hopper

Take out the screws from inside the hopper and remove debris.

If extremely dirty or oil is adhering, wipe away gently with a fresh cloth moistened with alcohol.

Do not use anything other than alcohol.

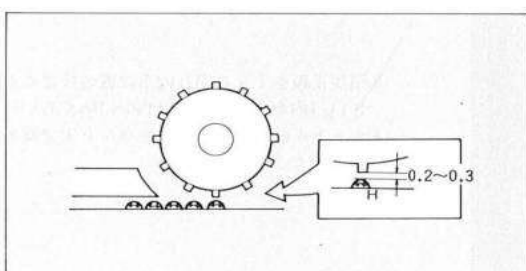
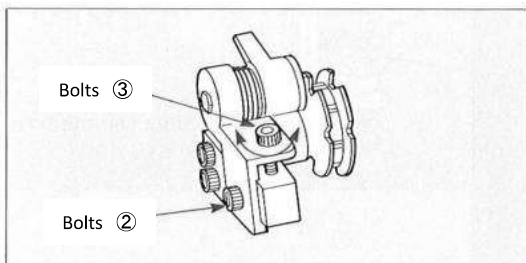
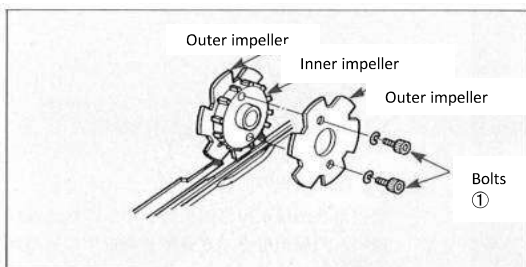
② Checking the oil level in the oiler.

If using the VIS SETTER Handy as an air screwdriver, check whether the oil level in the oiler is within the upper and lower limits. If the oil level is low, shut off the air source (compressor, etc.), remove the oil fill plug, and fill with oil.

You should use turbine oil (class 1) ISO-VG32.

Note: Do not use spindle oil or machine oil.

7-3. Adjustments



① Adjusting the impeller vane height

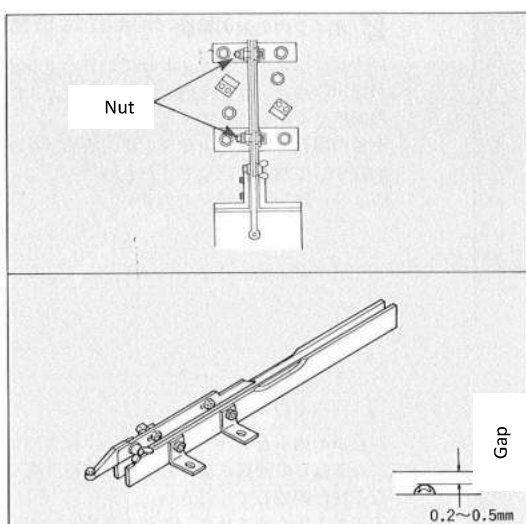
Adjust so that the gap between the chute and the inner impeller of the impeller is approximately 0.2 to 0.3 mm higher than the screw heads being used.

1) Loosen the two bolts ① and remove the outer impeller(nearest you).

2) Loosen the bolt ②

3) Adjust the gap between the inner impeller and chute by turning the bolt ③ so that the inner impeller is about 0.2 to 0.3 mm higher than the screw heads (see figure at left). Turning the bolt ③ to the right narrows the gap, while turning it to the left widens the gap.

4) When finished adjusting the gap, tighten the bolt ②.



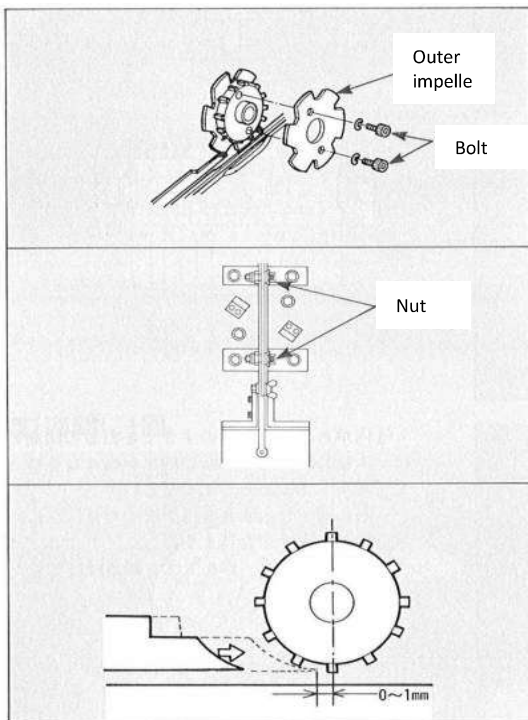
② Adjusting the head guide plate height

Adjust the head limiter to a height 0.2 to 0.3mm higher than the screw heads you will be using.

Loosen the two screws on the left side of the head guide plate as viewed from the front of the VIS SETTER.

Adjust so the plate is parallel with the chute, and 0.2 to 0.3 mm higher than the screw heads.

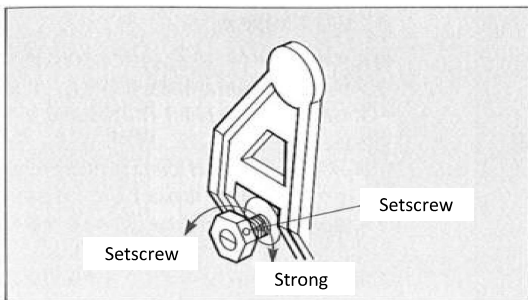
When finished, tighten the nuts.(Differs according to screws being used).



③ Head guide plate forward-back adjustment

Bring the head impeller plate as close to the impeller vane as possible without letting the screws become jammed between the impeller vane and head guide plate.

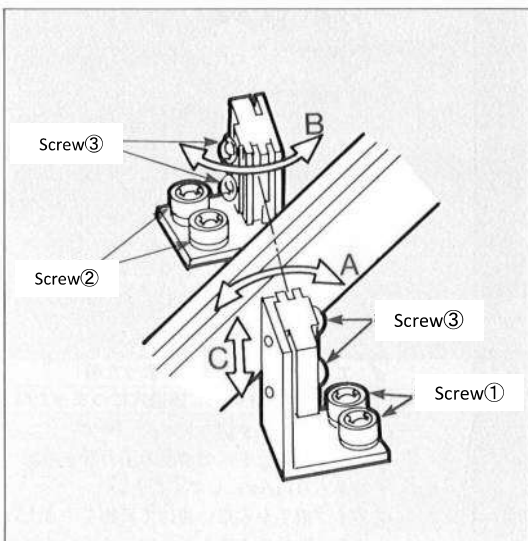
- 1) Loosen the bolts and remove the colser outer impeller.
- 2) Loosen the two nuts on the right side of the head impeller plate as viewed from the front of the VIS SETTER.
- 3) Bring the head guide plate as close to the inner gear as possible.
(about 0 to 1 mm from the inner impeller center line).
- 4) Tighten the nuts, and tighten the bolts ① to secure the outer gear.



④ Adjusting the drive roller transmission force

Adjust the transmission force by the drive roller to prevent the motor gear head from seizing up when the rotating drum makes an emergency stop.

- 1) Remove the screws from inside the hopper and chute.
- 2) Turn on the power and after loosening the setscrew, adjust the spring holder nut so that the roller shaft still turns even if the rotating drum is stopped by hand. Turn to the right to increase the transmission force or turn to the left to reduce the transmission force.



⑤ Adjusting the optical axis of the optical switch

The optical sensor switch temporarily stops the drive motor for the rotating drum in order to prevent damage to the specified number of screws aligned on the chute and to reduce power consumption. However, if the optical axis deviates from the proper position, this function is disabled, so adjust the optical axis as follows:

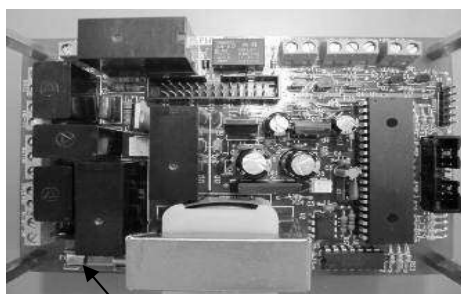
- 1) Remove the screws from inside the hopper and chute.
- 2) Turn on the power and if the motor lamp lights up, then the optical axis is in the roughly correct range.
- 3) Loosen the screw ① on the right side bracket, swing it along the direction of arrow A and tighten the screw ① at the middle position in the range where the motor lamp lights up.

4) If just adjusting the right side bracket is insufficient, then also loosen the left side bracket, swing it along the direction of arrow B and adjust the left and right brackets at the mid-position where the motor lamp lights up.

5) If the adjustment is still unsatisfactory, then loosen the setscrew ③ for the optical sensor and slide the optical sensor along the direction of arrow C, to adjust it to a mid-position where the motor lamp lights up.

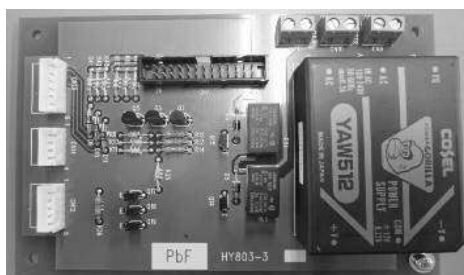
6) After finishing the adjustment, tighten all the screws ① to ③ securely.

<Main board>



F1 fuse(3A)

<Adsorption board>



WARNING

Always turn off the power or unplug the power cord from the outlet before attempting to replace the fuse.
Failing to turn off the power may lead to electrical shocks.

⑥ Replacing the fuse

If the ON lamp does not light up when the POWER (power switch) is turned on, and the VIS SETTER does not operate, then the fuse is probably blown. Replace it as follows:

- 1) Open the upper cover and remove the front cover.
- 2) Remove the screws on the left side cover and take off the cover.
- 3) Replace the fuse (3A) that is on the main board.

※ Note: Fuse is 125V / 3A (5.2 dia × 20)

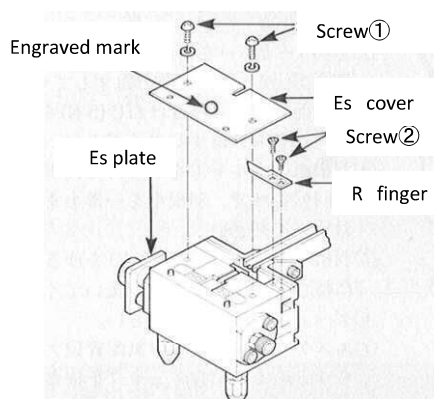
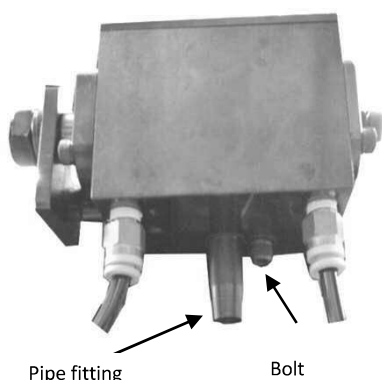
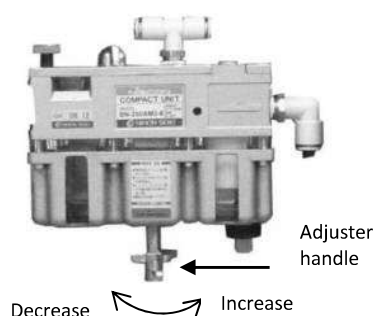
⑦ When escapement is clogged with debris

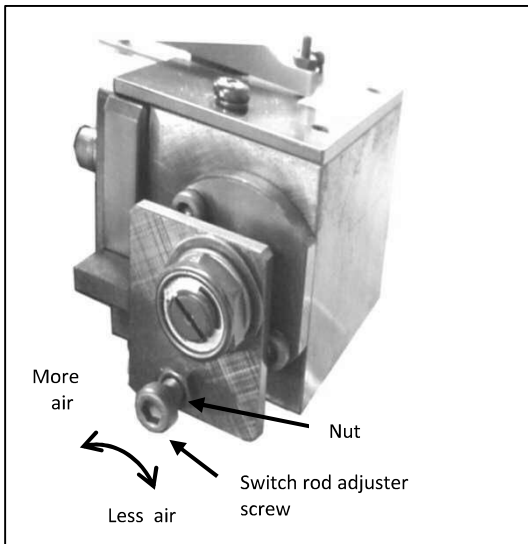
【When screws are clogged in escape body through hole】

- 1) Turn off the power switch, and adjust the air pressure to 0 MPa with the adjuster handle on the air unit while checking the pressure gauge on the front panel.
- 2) Poke a narrow rod or pin through the pipe fitting into the debris or loosen the installation bolt(1), remove the pipe fitting, and remove the debris.

【When the R-L finger is clogged】

- 1) Turn off the power switch, and set the air pressure to 0 MPa with the adjuster handle on the air unit while checking the pressure gauge on the front panel.
- 2) Loosen the screws (1) and remove the Es cover. Loosen the screw (2) and remove the R finger.
- 3) Grip the Es plate and move right and left to remove the debris. (Using tweezers may be helpful.)
- 4) When reassembling, be sure the front and rear of the Es cover faces in the correct direction. The side with the engraved mark is the front side.

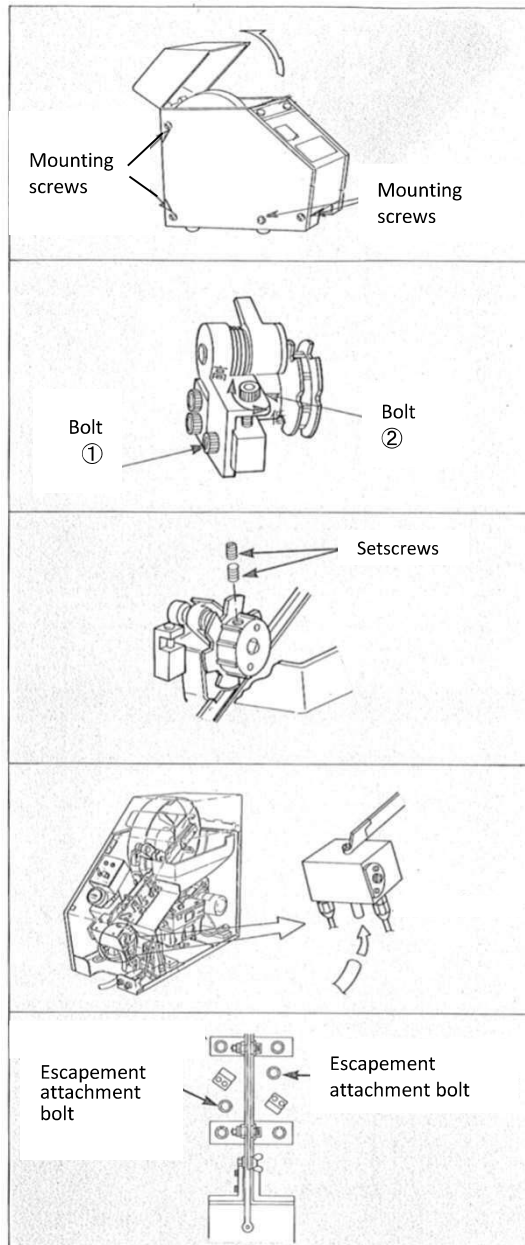




Note: In the auto feeder unit, screws are pressured-fed from the hose fitting air-blow unit (pressure feed block) of the ES unit, so the switch rod adjuster screw is tightened in the clockwise direction. (see page 17 clause 8)

⑧ Adjusting the screw feed air flow rate

If operation is still unsatisfactory after adjusting the screw feed air pressure and time, then try adjusting the feed air flow rate. Adjust this by using the switch rod adjuster screw on the left side of the escapement of the feeder unit. To make the screw feed speed faster, increase the air flow in the screw feed hose by first loosening the nut and then turning the switch rod adjuster screw counterclockwise. To lower the screw feed speed on the other hand, turn the adjuster screw clockwise to lower the air intake flow. Setting too high an air flow rate will speed up the screw feed speed but also damage the screw feed hose's internal surfaces. Use caution here because the screw feed will also use more compressed air so that the escapement operation will worsen somewhat.

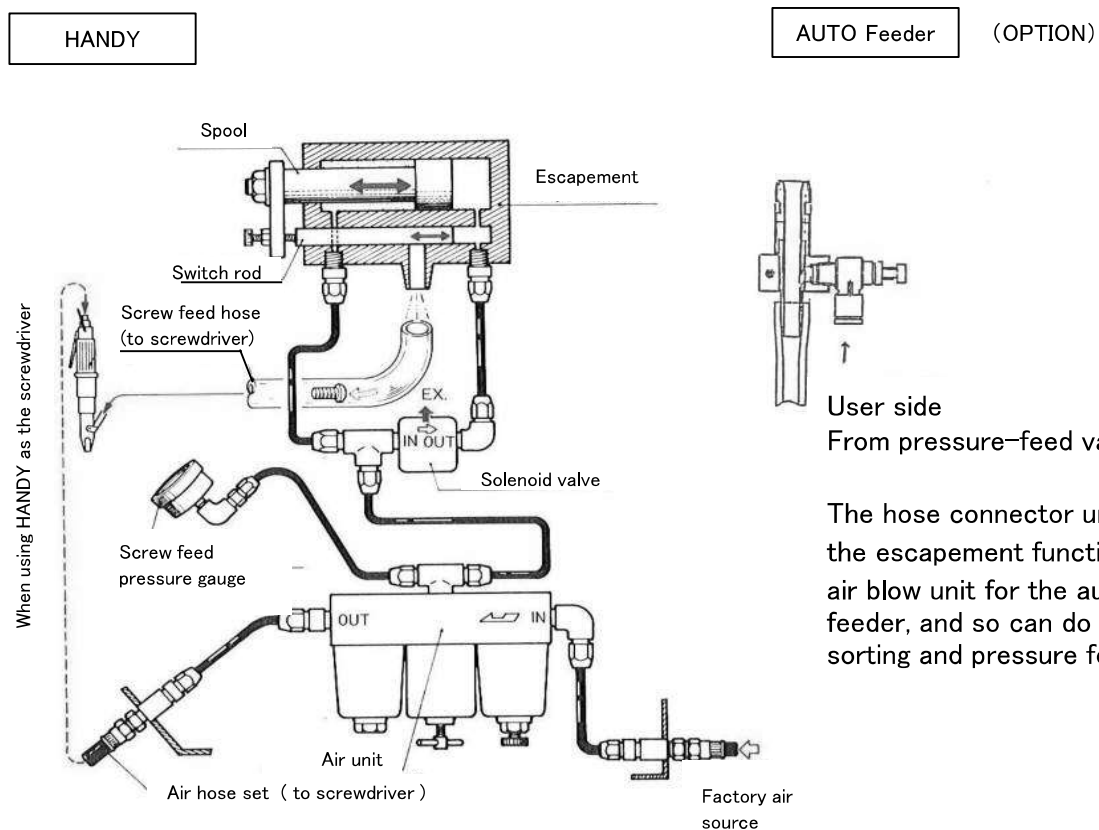


⑨ Changing the screw specifications

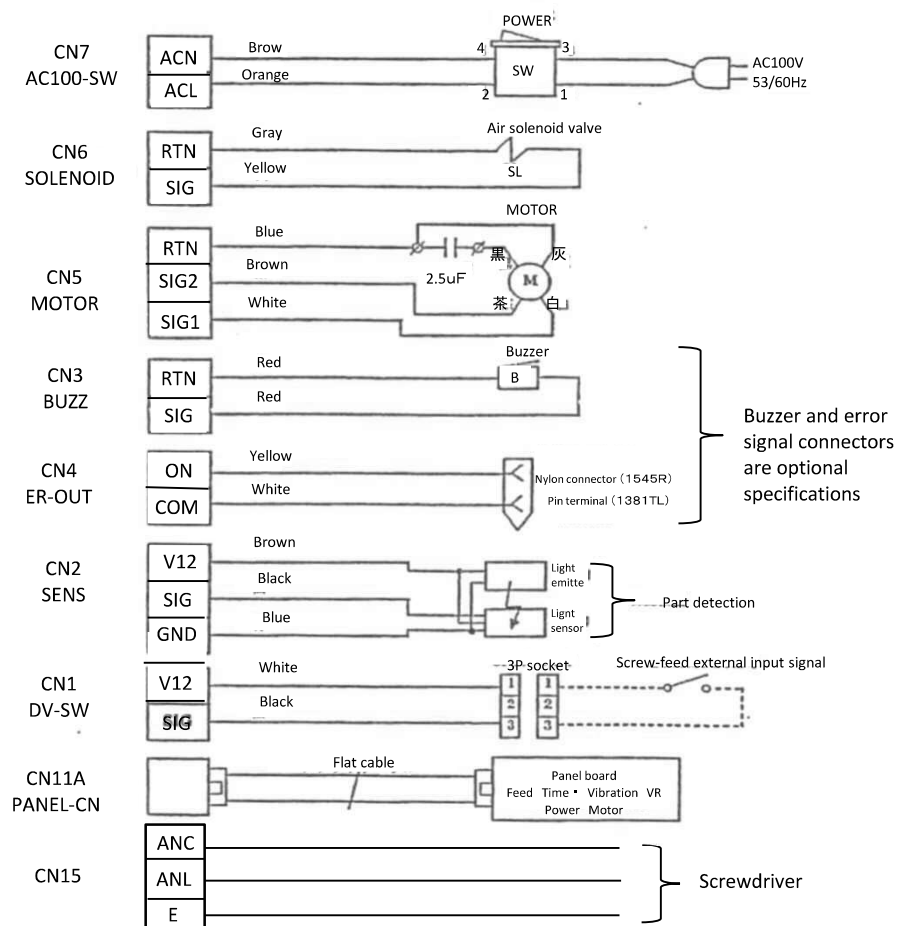
Screw specifications on the MK-3020 can be changed by replacing the cartridge type escape attachment. (You must also change the screwdriver if using the VIS SETTER Handy as the screwdriver.) In that case, consult your dealer for information.

- 1) Remove the screws from inside the hopper and chute.
- 2) Open the upper cover, pull the nylon latch on the front cover and remove it.
- 3) Remove the left side cover.
- 4) Loosen impeller bolt ①, turn the bolt ② to the right, and raise the impeller up all the way.
- 5) Loosen the impeller setscrews ① (two screws), and pull off (remove) the raised impeller.
- 6) Pull off (remove) the gate.
- 7) Remove the tube from the air pipe quick-release fitting on the escapement.
- 8) Loosen the escape attachment bolts, and remove them.
- 9) Install the new escape attachment (for new screw specifications).
- 10) To reassemble, reinstall the parts in the reverse of the above sequence or other words from ⑨ through ①. Now align the impeller with the chute center, adjust the impeller height (see page 13), and make the head guide forward-back adjustment (see page 14).
- 11) Replace the screw feed hose with one that matches the new screw specifications. (If using the VIS SETTER Handy as the screwdriver, you must also replace the screwdriver with one that matches the new screw specifications.)

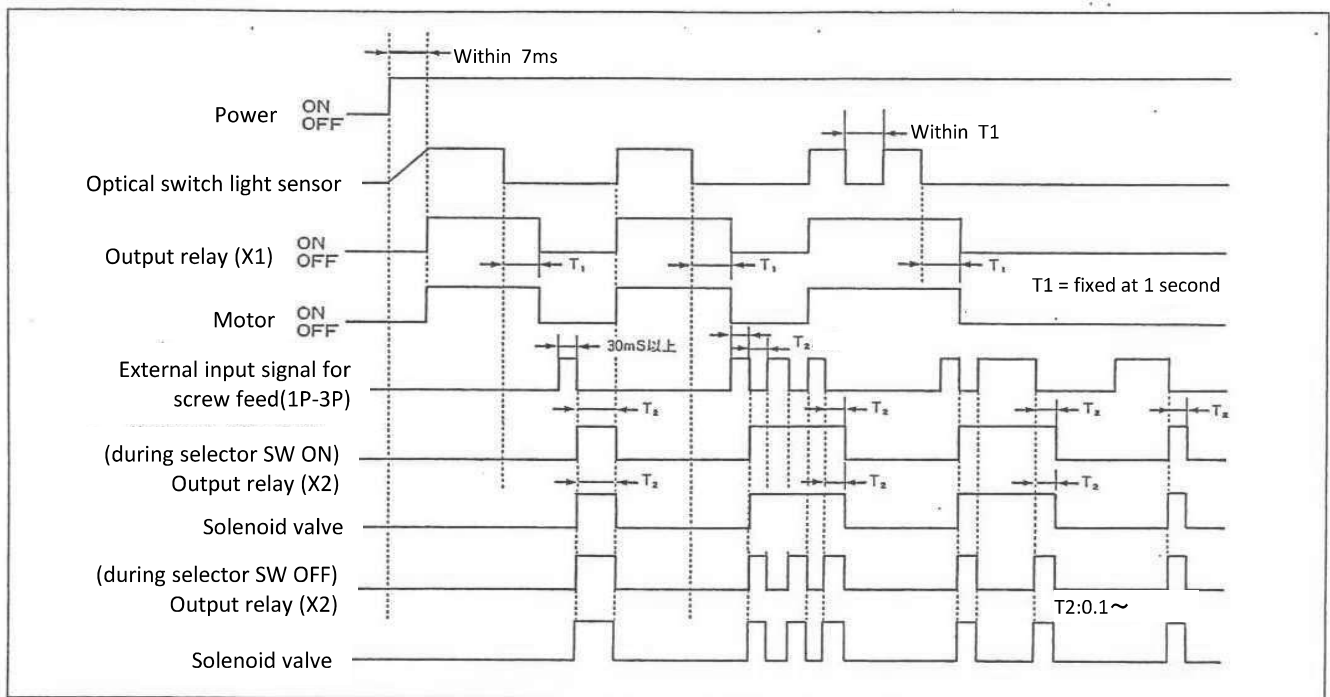
8. Air tubing diagram



9. Electrical wiring diagram



10. Operation timing diagram



- Output relay (X1) : Operates linked to the optical switch
 - Output relay (X2) : Operates linked to the screw-feed external input signal
 - Timer (T1) : Motor gear-head stop delay time
 - Timer (T2) : Used to adjust the screw feed time (solenoid valve)
- Note: Selector switch should be ON for Handy, and OFF for Auto Feeder.

11. Screw-feed external input signal selector

Set MODE (J) to "1" with the SEL button.



12. Troubleshooting

If problems should occur, then use the following chart to find and eliminate it. Consult your dealer if the following troubleshooting chart does not correct the problem. (Always consult the dealer in cases where a ✕ mark appears below.) Inadequate or incomplete troubleshooting will not only hurt machine performance but may also create hazardous situation.

Symptom	Cause	Action	Page
Rotary drum fails to rotate or stops abnormally	Power switch not turned on	Turn on power switch.	11
	Power lamp won't light up	Fuse(1A) on control board is blown. Replace it.	15
	Motor lamp won't light up	The optical axis of the optical switch has deviated. Adjust the optical axis.	14
	Screws have stopped along sliding surfaces of chute	Clean the screw sliding sections along the chute	12
	Screws are binding between rotating drum's scoop pawl and the hopper	Remove the screws and clean the interior of the hopper, reverse the rotating drum back slightly by hand, and remove the screws	12
	Driver roller transmission force is weak, causing slipping	Adjust the driver roller transmission force	14
	Motor won't turn	Consult your dealer, and request assistance	✕
Rotating drum won't stop even if screws are lined up in chute	Motor lamp won't light up	The optical axis of the optical switch has deviated. Adjust the optical axis	14
Impeller vane won't rotate	Screw are binding on impeller vane	Remove the screws that are binding, recheck the impeller height, and readjust it	13
	Impeller vane is binding on head plate	Adjust the impeller vane height	13
	Impeller is slipping	Clean the interior of the hopper. Drive (transmitting) force is low because the torsion spring has weakened. ✕ Replace the torsion spring	14

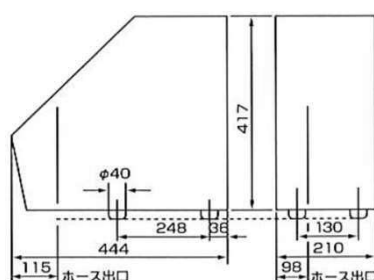
<u>Symptom</u>	<u>Cause</u>	<u>Action</u>	<u>Page</u>
Escapement won't operate	Screws have dropped and clogged up in the hole	Turn off the power switch and shut off the air source. Loosen the butterfly nut on the front part of the head limiter plate and raise it. Extract the clogged screws.	15
	Screw feed pressure is low (0.15MPa or less)	Adjust the screw feed pressure	10
	Screw-feed external input signal is out of range	Check while referring to the electrical wiring diagram and operation timing charts.	17 18
	Screw feed timer is at 0 scale	Adjust the time on the screw feed timer.	10
	Inoperative solenoid valve	Solenoid valve is defective Consult your dealer.	※
	Escapement is not working smoothly (It does not work smoothly when operated by hand after setting screw feed air pressure to 0 with the pressure-relief valve).	Grease has worn out or deteriorated. Apply grease to the spool in the escapement. (Recommended grease : Molykote U paste, etc.)	※
No screw feed air pressure.	Escapement does not operate correctly	Use the above countermeasures if the escapement does not function	20
	Switch rod adjustment is wrong	Adjust the screw feed air flow rate	16

Note: Consult your dealer for assistance if the above countermeasures marked with ※ do not solve the problem.

13. Specifications

Applicable screw types	:	Small screws, tapping screws, wood screws
Applicable screw dimensions	:	φ2 to 6 mm ※, ℓ= 5 to 25 mm ※
Hopper storage capacity	:	450 cc ※
Hopper chute type	:	Rotating drum
Air pressure	:	0.5 MPa
Power	:	100 V, 50/60Hz, 20 VA
Dimension (without boss)	:	210(width)x444(depth)x417(height)mm
Product weight	:	20 kg
"Fixed quantity of screws" stop detection on chute	:	Provided
Remarks	:	Designed for "Handy" and "Multi" with internal air and air regulation

External Dimensions



▪ We also handle specifications other than listed above, so consult us or our dealer if needed.

▪ Specifications marked with ※ will vary according to the screw specifications.

14. Service

14-1. When requesting repairs

Before requesting a repair, inspect the unit again while referring to "Troubleshooting" on page 19. If the steps listed there do not solve the problem, then consult the dealer where you purchased the unit. If repairing the product will restore its performance, then we will provide the requested repair for a fee.

14-2. After-sales service

If you still have any questions, please inquire at the dealer where you purchased the unit.

14-3. Repair parts

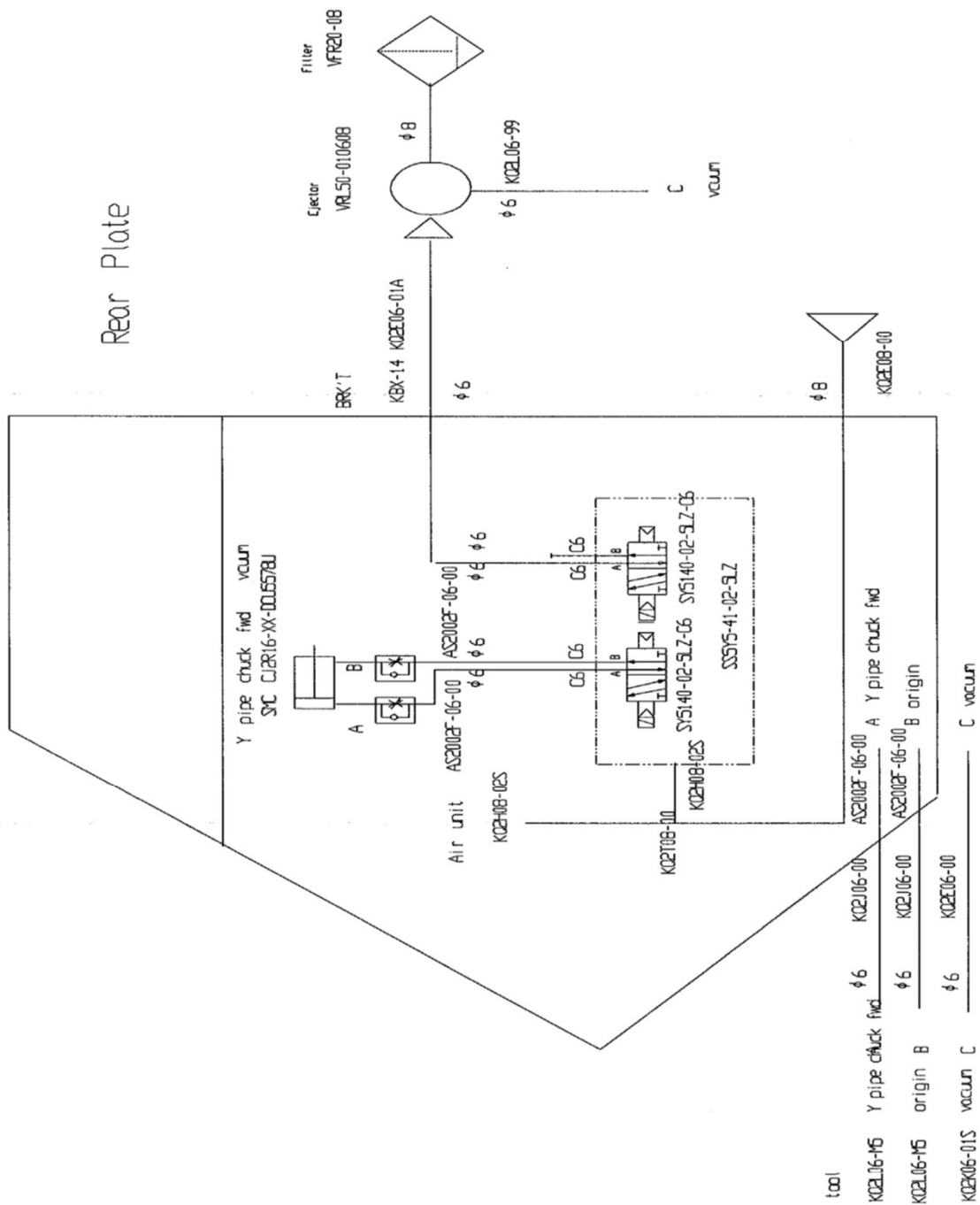
Please see the separate parts list if repair/service parts are needed.

Order consumable parts (parts subject to constant wear) before the available spare parts are used up.

※ May vary according to the screw specifications.

Name	Part No.
Screw feed hose	※
R finger	※
Pipe fitting	※
M finger	※

15. VACUUM HANDY AIR CIRCUIT



Error display(Only the option specification is applied)

No.	Display	Error item	Error contents	Recovery method
1	Er 0	Reverse rotation abnormal(number)	「Q」when the number of setting items has been exceeded (「Q」Invalid when the setting is 「00」)	Button operation or restart
2	Er 1	Reverse rotation abnormal(time)	「R」when the time of setting items has been exceeded (「R」Invalid when the setting is 「00」)	Button operation or restart
3	Er 2	Backup date error	When setting date is broken at power-on	Repair if not recovered by restart
4	Er 3	Escape error	「Y」when the inspection is not performed after the setting time of the setting item (「Y」invalid when the setting is 0.0) ※Setting 0 Release at next start ※Setting 1 Release by panel operation ※Setting 2 Release by external signal	How to cancel settings or restart
5	Er 4	High voltage error	High voltage in the board when input	Restart with correct power input
6	Er 5	Phase detection error	When the phase of the power supply is not detected	Restart with correct power input
7	Er 6	EEPROM error	Date NG when writing to EEPROM	Restart with correct power input
8	Er 7	2 Axis ES error 1	「S+T+U」when the time set in the setting item is exceeded by moving from axis 1 to axis 2 (When「S」setting is less than 「D+D. 」 when 「T」and 「U」 setting is 00 invalid) ※Setting 0 Release at next start ※Setting 1 Release by panel operation ※Setting 2 Release by external signal	How to cancel settings or restart
9	Er 8	2 Axis ES error 2	「S+T+U」when the time set in the setting item is exceeded by moving from axis 2 to axis 1 (When「S」setting is less than 「D+D. 」 when 「T」and 「U」 setting is 00 invalid) ※Setting 0 Release at next start ※Setting 1 Release by panel operation ※Setting 2 Release by external signal	How to cancel settings or restart
10	Er 9	Low voltage error	When low voltage is input into the board	Restart with correct power input
11		Screw shortage error	When the set time of 「A」has passed since the screw full sensor turned off give and alarm	Supply screws

Item No.	
Dated purchased	年 月 日
Dealer	TEL:

FUJITEC

FUJITEC CO ., LTD

1-10-6 Ryoke, Nakaku, Hmamamatsu-city

Shizuoka-ken 430-0852, JAPAN

TEL : 053-462-3636

FAX : 053-462-1818