

HAKKO 374 SELF FEEDER

FEEDER WITH
SOLDER CUTTING FUNCTION

Instruction Manual

●

Thank you for purchasing the Hakko 374 Self Feeder. Please read this manual carefully before operating the Hakko 374. Store the manual in a safe, easily accessible place for future reference.

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SAFETY INSTRUCTIONS

- To avoid injury, do not attempt to assemble while the soldering iron is hot.
- The cutting plate is sharp. Be careful not to cut your fingers.
- When resin core solder that has been cut is not used, the properties of the resin (flux) may deteriorate with time.
- Once the solder has been cut and is inside the guide pipe, the heat from the soldering iron may accelerate the deterioration of the resin (flux). Use solder that is inside the guide pipe as soon as possible.
- Do not damage the guide pipe by bending or twisting it.
- Do not allow the tube to be bent at a severe angle. Otherwise, it will become clogged with solder.
- Keep the cutting blade, driving pulley, and following pulley clean of solder and flux using a brush or other suitable cleaning device.
- The switch input is no-voltage input. Do not apply voltage to the switch jack.
- Periodically remove the nozzle and clean off any accumulated flux.
- Do not damage the return length adjustment knob by turning it with excessive force.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.

SPECIFICATIONS

Power consumption	6 W
Motor rating	24V DC, 3.2 W
Solder diameter	0.6, 0.8, 1.0, 1.2, 1.6 mm (0.02, 0.03, 0.04, 0.05, 0.06 in.)
Solder feed time	0 to 7 sec.
Solder feed speed	4.5 to 26 mm/sec. (0.18 to 1.02 in./sec.)
Solder feed quantity	0 to 182 mm (0 to 7.17 in.)
Solder return quantity	0 to 5 mm (fixed speed) (0 to 0.2 in.)
Outer dimensions	107(W) 106(H) 215(D) mm (4.2(W) 4.2(H) 8.5(D) in.)
Weight	1.6 kg (3.5 lb.)

*This product is protected against electrostatic discharge.
*Specifications and design subject to change without notice.

● Solder diameters

The solder diameters that can be used with the Hakko 374 are shown in the table below. Certain parts may need to be changed to accommodate the desired diameter. See “Changing the solder diameter” on page 4 for details.
Up to 1-kg bobbins of solder can be used.

CAUTION

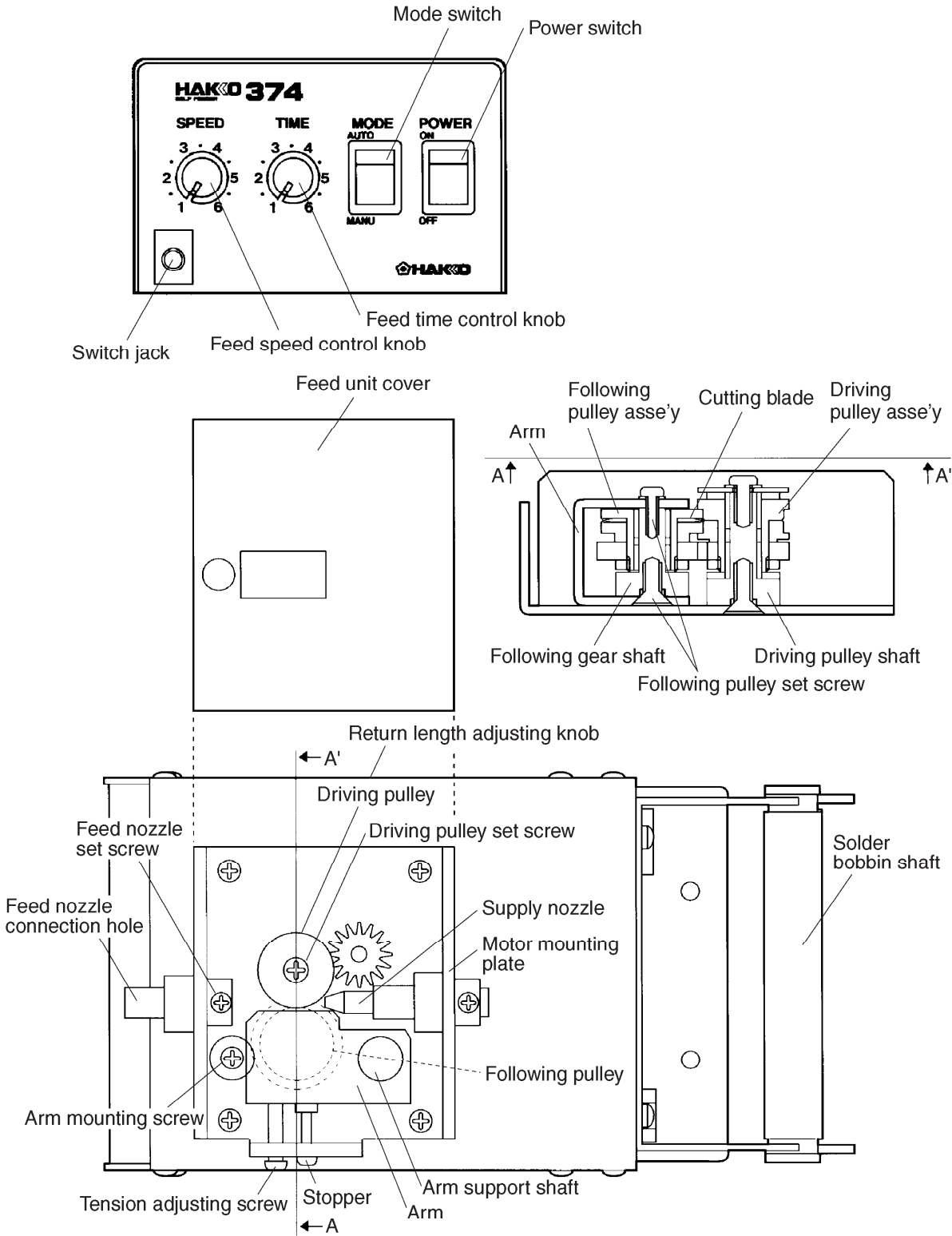
1.6 mm dia. lead free solder is not available for use.

● Soldering irons

Soldering iron	Comments
Hakko 900M (used with Hakko 926, 927, and 928)	
Hakko 900L (used with Hakko 926, 927, and 928)	
Hakko 902 (used with Hakko 931 and 932)	
Hakko 904 (used with Hakko 929)	
Hakko Dash	
Hakko Mach I	Only when foot-switch is used.
Hakko 907 (used with 936 and 937)	
Hakko 908 (used with 936 and 937)	
Hakko FM-2027 (used with Hakko FM-202/203/204/205)	
Hakko FM-2028 (used with Hakko FX-950/951/952)	
Hakko 912 (Long nipple)	

PART NAMES

● Feed controller unit



ASSEMBLY (IRON SIDE)

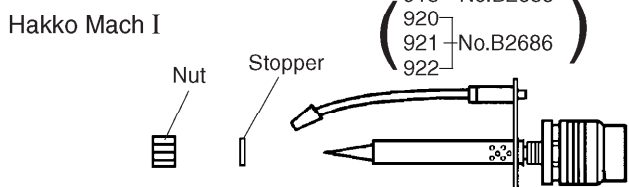
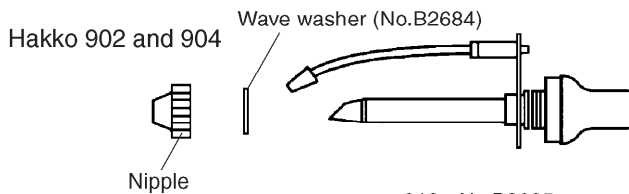
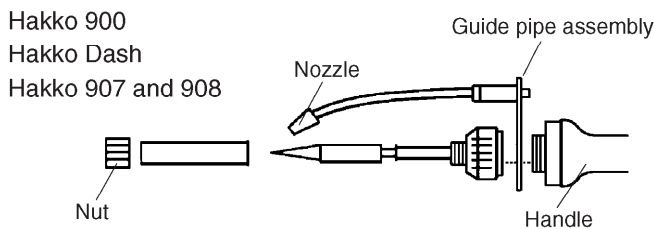
Make sure the selected guide pipe assembly or tube unit matches the soldering iron and solder diameter to be used.

(1) Attaching the guide pipe assembly

The guide pipe assembly is attached between the nipple (or nut) and the handle. Depending on the type of soldering iron, a washer may be necessary. See the figures below.

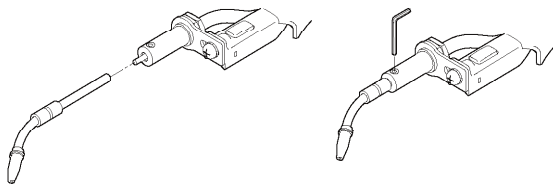
CAUTION

- To avoid injury, do not attempt to assemble while the soldering iron is hot.
- Do not damage the guide pipe by bending or twisting it.
- Do not allow the tube to be bent at a severe angle. Otherwise, it will become clogged with solder.



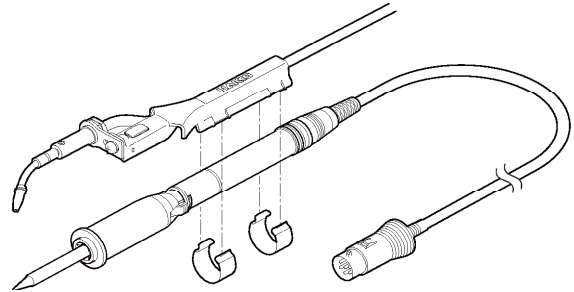
Hakko FM-2027
Hakko FM-2028
Hakko 912

Please insert the guide pipe assembly directly in the tube unit, and tighten lightly with a hex wrench (M3).

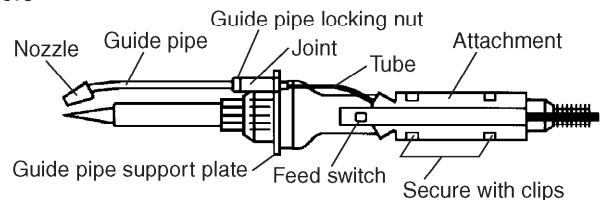


(2) Attaching the tube unit

Hakko FM-2027
Hakko FM-2028
Hakko 912



Others

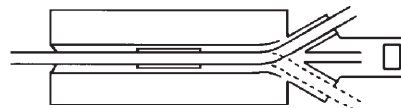


(a) Attach the guide pipe assembly to the tube. The tube is double structure. Insert the inner tube into the joint and pass the outer tube over the outside of the joint so that it covers the threaded portion. Do not bend the tube.

(b) Attach the attachment to the soldering iron
Note) The attachment is not necessary when using the Hakko Mach I.

1. Decide from which side of the attachment you will pass the tube. Then, position the attachment so that the tube connects to the guide pipe as straight as possible.

Rear view of attachment

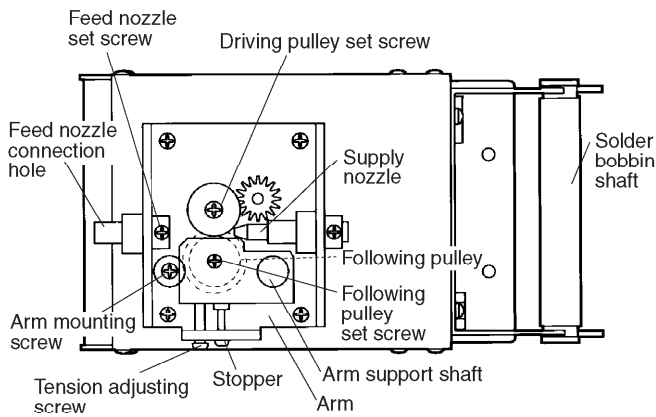


The tube can be passed through either the left or the right side of the attachment. When changing the tube, be careful not to damage the internal wiring.

2. Secure the attachment with the handle and the adhesive tape on the rear of the attachment.

Refer to the figure above and be sure to attach the attachment and the guide pipe at the correct angle.

ASSEMBLY (FEED CONTROLLER UNIT)



(1) Connect the feed nozzle

Insert the feed nozzle into the feed nozzle connection hole and tighten the set screw. Do not tighten the set screw excessively or you may crack the tube.

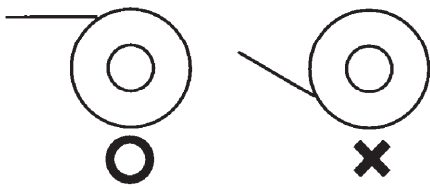
(2) Connect the mini plug

Insert the mini plug into the jack on the front of the station. When using the Mach-I, insert the footswitch plug into the jack on the front of the station.

(3) Setting the solder

If there is any solder in the tube, remove it before installing the new solder.

- (a) Pass the solder bobbin shaft through the solder bobbin and attach the shaft to the rear of the station. As shown below, attach the shaft so that the solder is fed from the top of the bobbin.



- (b) Pass the solder through the supply nozzle.
- (c) Turn the power switch ON and set the mode to MANUAL.
- (d) While pressing the feed switch (or footswitch), the solder is fed through the feed nozzle.
- (e) While pressing the feed switch (or footswitch), insert the tip of the solder between the driving pulley and the following pulley.

(4) Changing the solder diameter

The following parts may need to be changed in order to accommodate a change in the solder diameter or type of soldering iron used.

- Driving pulley assembly
- Following pulley assembly
- Supply nozzle
- Guide pipe assembly
- Tube unit

Change these parts as necessary according to the procedure below.

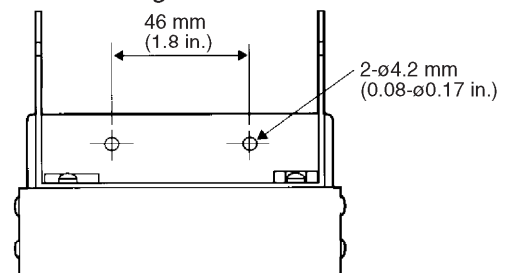
⚠ CAUTION

The position of the stopper was set at the factory before shipping. Do not move the stopper.

- (a) Turn the power OFF. Loosen the tension adjusting screw and the arm mounting screw, open the arm, and remove any solder remaining in the tube.
- (b) Remove the arm support shaft and remove the arm assembly.
- (c) Remove the following pulley set screws (two: top and bottom) and change the following pulley.
- (d) Remove the driving pulley set screw and change the driving pulley.
NOTE) Install both the top and bottom oil-less washers so that the black side of each is facing upward. (See parts list.)
- (e) Adjust so that the gears mesh properly and tighten the tension adjusting screw until the stopper screw touches the left end of the notch (screw hole) in the motor mounting plate.
- (f) Tighten the arm mounting screw.

(5) Vertical mounting

The Hakko 374 can be mounted vertically. Mount as shown in the figure.



OPERATION

To feed the solder, simply press the feed switch (or foot-switch). Details are explained below.

(1) Mode

AUTO MODE

In AUTO MODE, the solder is fed at the specified speed for the specified amount of time regardless of how long the feed switch is pressed.

MANUAL MODE

In MANUAL MODE, while pressing the switch the solder is fed at the specified speed.

(2) Setting the feed time and feed speed

Set the feed rate before setting the feed time. The feed speed setting is effective in both AUTO and MANUAL modes. The feed time is only effective in AUTO mode.

(3) Adjusting the return length

A specified length of solder can be retracted after the solder has been fed. This function is necessary when the Hakko 374 is used with an automatic soldering machine.

The return length setting range is 0 to 5 mm (0 to 0.2 in.). However, the solder will be wound back onto the bobbin if the return length is set to be longer than the feed length. Keep the return length setting as short as possible. Also, set the return length so that the tip of the solder stops short of the tip of the nozzle. Otherwise, the flux will tend to accumulate in the nozzle.

There is a hole on the side of unit which leads to the return length adjusting screw. Insert a screwdriver into this hole and turn the screw to adjust the return length.

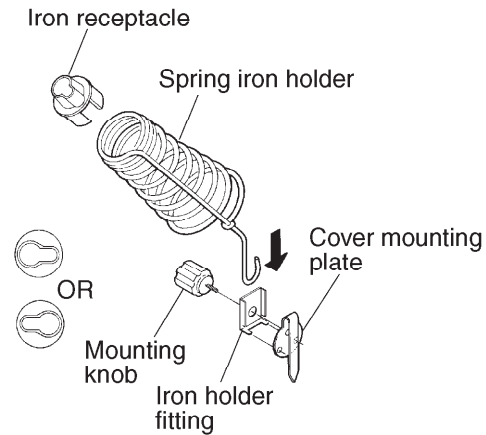
(4) Using the iron holder

CAUTION

Attach the iron receptacle so that the tip of the soldering iron and the guide pipe are parallel.

●Hakko 926

Attach the iron holder for the Hakko 926 as shown in the figure at the top of the next column. (In the case of the Hakko 926, the holder can only be attached on the left toward the front of the unit.)



●Hakko 900, 902, 904

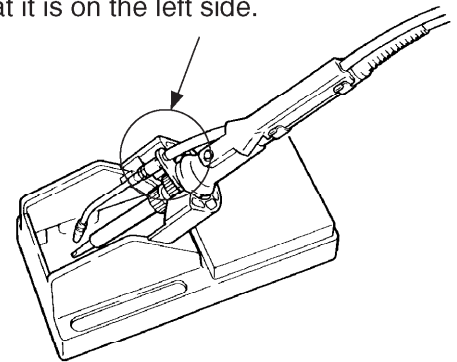
When attaching soldering units other than the Hakko 926 to the Hakko 631, all you have to do is to change the spring iron holder.

●Hakko Dash and Hakko Mach I

Use the Hakko 631 (product number: 631-07).

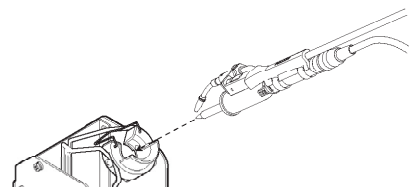
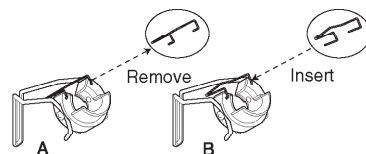
●Hakko 907 and 908

Use the iron holder made for the Hakko 907 and 908. Place the handpiece on the holder so that the right side of the holder and the right side of the guide pipe support plate are aligned as shown below. To align with the left side, remove the guide pipe locking nut and the joint and install the guide pipe support plate so that it is on the left side.



●Iron holder for the FM-207, FM-208, 912

Replace the spring holder with the spring holder included in the set before placing the iron in the iron holder.



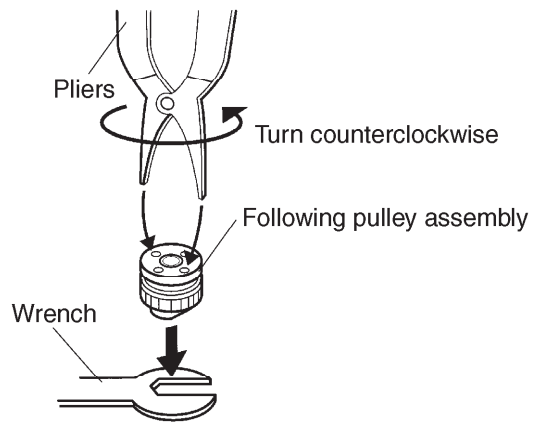
MAINTENANCE

⚠ CAUTION: The cutting blade is sharp. Be very careful when handling the cutting blade.

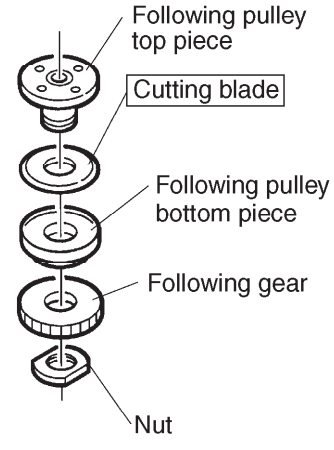
Keep the cutting blade, driving pulley, and following pulley clean of solder and flux using a brush or other suitable cleaning device. If the solder is not being cut properly or the unit is generating solder balls even though the unit is well maintained, the cutting blade may be worn. Follow the procedure below to change the cutting blade.

Replacing the cutting blade

1. Follow steps (a) through (c) under “Changing the solder diameter” on page 4 and remove the following pulley assembly.
2. Use a 14-mm wrench and a pair of C-ring pliers (or other pliers with a tip-size of about 2 mm 0.08 in.) to disassemble the following pulley assembly.



3. Remove the cutting blade from between the top and bottom pieces of the following pulley. If the cutting blade is difficult to remove due to accumulated flux and solder, push a pin downward through the four holes on the top piece and pry the pieces apart.
4. Clean any accumulated flux or solder off each part.
5. Assemble in the reverse order of disassembly.



OPTIONAL FEEDER PEN

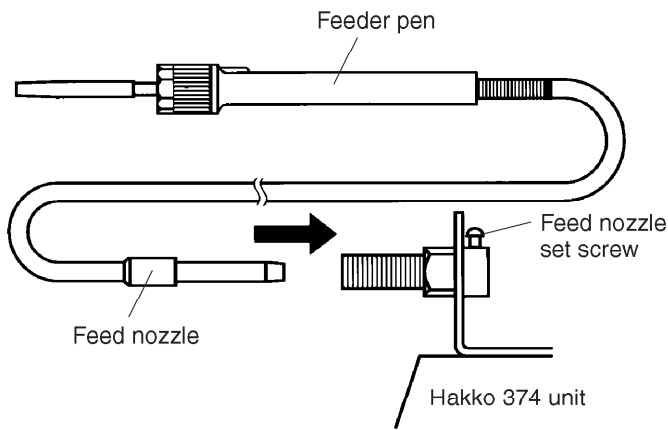
Thread solder can be fed automatically by connecting the optional feeder pen to the Hakko 374 feed controller unit. The feeder pen can be used for the following purposes.

- The feeder pen can be used for conventional soldering where the soldering iron is held in one hand and the pen is held in the other to supply the solder.
- The feeder pen can be fixed in a certain position to supply solder to a substrate automatically.

Part No.	Part name
C1234	Feeder Pen, for solder diameters from 0.6 to 1.0 mm (0.02 to 0.04 in.)
C1235	Feeder Pen, for solder diameters from 1.2 to 1.6 mm (0.05 to 0.06 in.)
B2124	Feeder Switch (switch designed for the feeder pens)

Assembly

(1) Connecting to the main unit

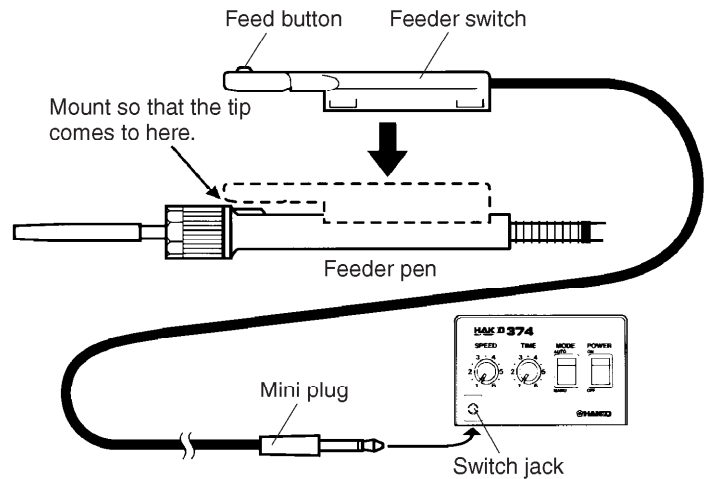


1. Make sure the feeder pen matches the solder diameter to be used.
2. Insert the feed nozzle into the feed nozzle connection hole on the feed controller unit.
3. Tighten the feed nozzle set screw.

(2) Mounting the feeder switch

(Part number: B2124)

The feeder switch is a hand-operated switch designed especially for used with the feeder pens. Solder is fed when the feed button is pressed.



1. Attach the feeder switch securely to the handle of the feeder pen with adhesive tape on the back of the feeder switch.
2. Insert the mini plug into the switch jack on the Hakko 374 unit.

* The feeder pen can also be used with a foot-switch instead of the feeder switch.

OPTIONS AND REPLACEMENT PARTS

Part No.	Part Name	Diameter of solder	Applicable Models
B1631	Tube unit A	0.6~1.0mm (0.02~0.04 in.)	900M, 900L DASH
B1672	Tube unit B	1.2mm (0.05 in.)	
B2125	Tube unit G	1.6mm (0.06 in.)	
B1632	Tube unit C	0.6~1.0mm (0.02~0.04 in.)	MACH
B1673	Tube unit D	1.2mm (0.05 in.)	
B2126	Tube unit H	1.6mm (0.06 in.)	
B1957	Tube unit E	0.6~1.0mm (0.02~0.04 in.)	902, 904
B1958	Tube unit F	1.2mm (0.05 in.)	
B2127	Tube unit I	1.6mm (0.06 in.)	
B2143	Tube unit J	0.6~1.0mm (0.02~0.04 in.)	907, 908
B2144	Tube unit K	1.2mm (0.05 in.)	
B2145	Tube unit L	1.6mm (0.06 in.)	

Part No.	Part Name	Diameter of solder	Applicable Models
B1704	Guide pipe A	0.6~1.0mm (0.02~0.04 in.)	900M, 920 921, 922 N452, N453 907
B1705	Guide pipe B	1.2mm (0.05 in.)	
B2116	Guide pipe G	1.6mm (0.06 in.)	
B1706	Guide pipe C	0.6~1.0mm (0.02~0.04 in.)	
B1707	Guide pipe D	1.2mm (0.05 in.)	900L, 918, N454, 908
B2117	Guide pipe H	1.6mm (0.06 in.)	
B1708	Guide pipe E	0.6~1.0mm (0.02~0.04 in.)	
B1709	Guide pipe F	1.2mm (0.05 in.)	902, 904
B2118	Guide pipe I	1.6mm (0.06 in.)	
B3485	Guide pipe J	0.6~1.0mm (0.02~0.04 in.)	
B3486	Guide pipe K	1.2mm (0.05 in.)	

OPTIONS AND REPLACEMENT PARTS

Part No.	Part Name	Diameter of solder	Applicable Models
B3477	Tube unit M	0.6~1.0mm (0.02~0.04 in.)	FM-2027, FM-2028
B3478	Tube unit N	1.2mm (0.05 in.)	
B3479	Tube unit P	0.6~1.0mm (0.02~0.04 in.)	912
B3480	Tube unit Q	1.2mm (0.05 in.)	
B1674	Guide pipe asse'y	0.6mm (0.02 in.)	900M, N452
B1675	Guide pipe asse'y	0.8mm (0.03 in.)	N453
B1676	Guide pipe asse'y	1.0mm (0.04 in.)	
B1677	Guide pipe asse'y	1.2mm (0.05 in.)	
B2119	Guide pipe asse'y	1.6mm (0.06 in.)	
B1679	Guide pipe asse'y	0.6mm (0.02 in.)	900L, N454
B1680	Guide pipe asse'y	0.8mm (0.03 in.)	
B1681	Guide pipe asse'y	1.0mm (0.04 in.)	
B1682	Guide pipe asse'y	1.2mm (0.05 in.)	
B2120	Guide pipe asse'y	1.6mm (0.06 in.)	
B1684	Guide pipe asse'y	0.6mm (0.02 in.)	920, 921, 922
B1685	Guide pipe asse'y	0.8mm (0.03 in.)	
B1686	Guide pipe asse'y	1.0mm (0.04 in.)	
B1687	Guide pipe asse'y	1.2mm (0.05 in.)	
B2121	Guide pipe asse'y	1.6mm (0.06 in.)	
B1689	Guide pipe asse'y	0.6mm (0.02 in.)	918
B1690	Guide pipe asse'y	0.8mm (0.03 in.)	
B1691	Guide pipe asse'y	1.0mm (0.04 in.)	
B1692	Guide pipe asse'y	1.2mm (0.05 in.)	
B2122	Guide pipe asse'y	1.6mm (0.06 in.)	
B1694	Guide pipe asse'y	0.6mm (0.02 in.)	902, 904
B1695	Guide pipe asse'y	0.8mm (0.03 in.)	
B1696	Guide pipe asse'y	1.0mm (0.04 in.)	
B1697	Guide pipe asse'y	1.2mm (0.05 in.)	
B2123	Guide pipe asse'y	1.6mm (0.06 in.)	
B2146	Guide pipe asse'y	0.6mm (0.02 in.)	907
B2147	Guide pipe asse'y	0.8mm (0.03 in.)	
B2148	Guide pipe asse'y	1.0mm (0.04 in.)	
B2149	Guide pipe asse'y	1.2mm (0.05 in.)	
B2156	Guide pipe asse'y	1.6mm (0.06 in.)	
B2151	Guide pipe asse'y	0.6mm (0.02 in.)	908
B2152	Guide pipe asse'y	0.8mm (0.03 in.)	
B2153	Guide pipe asse'y	1.0mm (0.04 in.)	
B2154	Guide pipe asse'y	1.2mm (0.05 in.)	
B2157	Guide pipe asse'y	1.6mm (0.06 in.)	
B3481	Guide pipe asse'y	0.6mm (0.02 in.)	FM-2027, FM-2028, 912
B3482	Guide pipe asse'y	0.8mm (0.03 in.)	
B3483	Guide pipe asse'y	1.0mm (0.04 in.)	
B3484	Guide pipe asse'y	1.2mm (0.05 in.)	
B1699	Nozzle	0.6mm (0.02 in.)	-
B1700	Nozzle	0.8mm (0.03 in.)	-
B1701	Nozzle	1.0mm (0.04 in.)	-
B1702	Nozzle	1.2mm (0.05 in.)	-
B1703	Nozzle	1.6mm (0.06 in.)	-

Part No.	Part Name	Diameter of solder	Applicable Models
B2684	Wave washer	-	902, 924
B2685	Stopper	-	918
B2686	Stopeer	-	920, 921, 922
B1647	Spring iron holder A	-	926
B1648	Spring iron holder B	-	927, 928, 929, 931, 932
B3489	Retaining clip	-	FH-100, FH-200
B1649	Foot switch	-	-
B1650	Clip A / 1 pc.	-	900M, 900L, DASH
B1956	Clip B / 1 pc.	-	902, 904
B2158	Clip C / 1 pc.	-	907, 908
B3487	Clip D / 1 pc.	-	FM-2027, FM-2028
B3488	Clip E / 1 pc.	-	912
631-07	Hakko 631 Iron holder	-	DASH, MACH
C1141	Hakko 936/937 Iron holder	-	900S
C1142	Hakko 936/937 Iron holder	-	907, 908, 913, 914
B1863	Mini plug	-	-
B1805	Iron receptacle	-	-
C1234	Feeder pen	0.6~1.0mm (0.02~0.04 in.)	-
C1235	Feeder pen	1.2~1.6mm (0.05~0.06 in.)	-
B2124	Feeder switch	-	-
B1290	Hose coupling band/5 bands	-	-

■ The 900M and 900L are soldering irons used with the Hakko 926, Hakko 927, and Hakko 928.

■ The 902 is a soldering iron used with the Hakko 931 and the Hakko 932.

■ The 904 is a soldering iron used with the Hakko 929.

■ The 907 and 908 are solder irons used with the Hakko 936 and the Hakko 937.

■ 918, 920, 921, and 922 are product numbers from the Hakko Mach I series. Parts that support the entire series are indicated by MACH.

■ N452, N453, and N454 are product numbers from the Hakko Dash series. Parts that support the entire series are indicated by Dash.

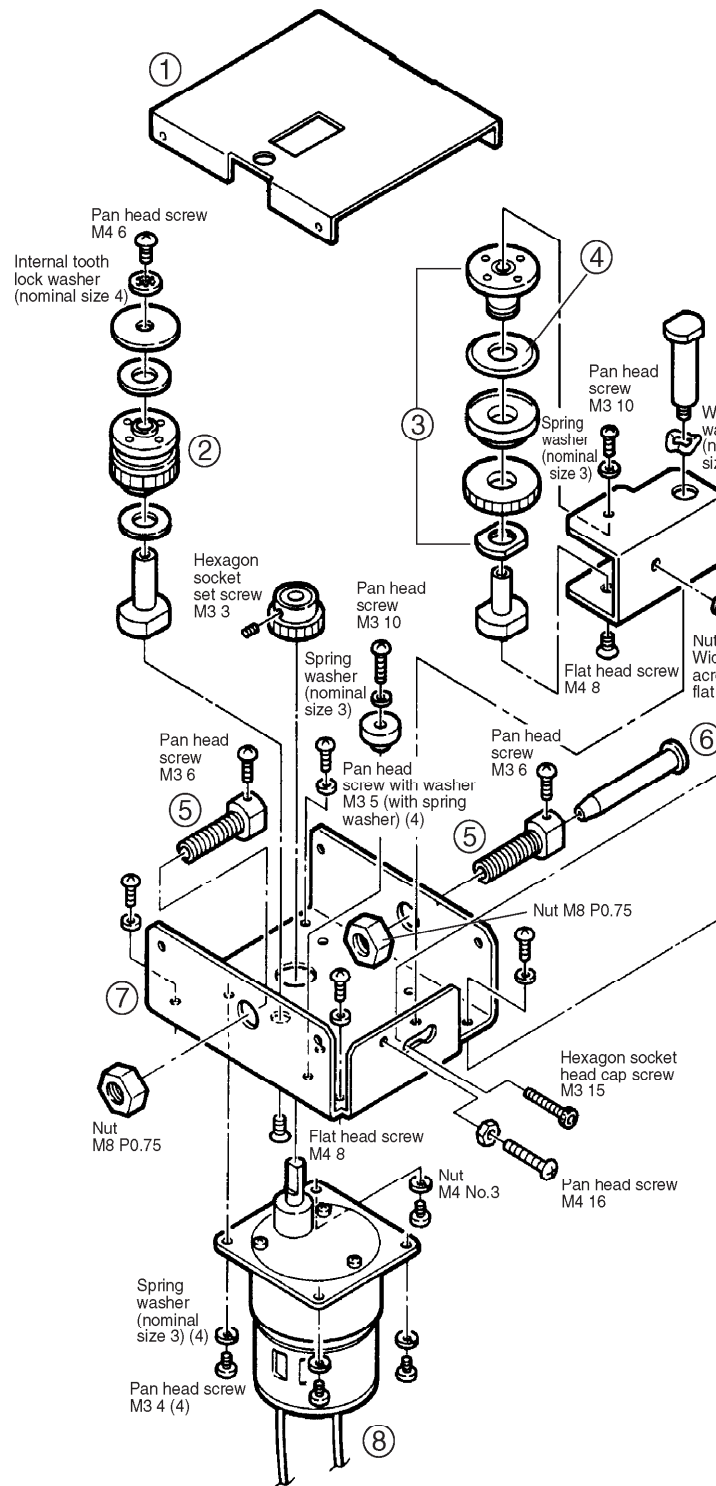
■ The following parts may need to be changed in order to accommodate a change in the solder diameter or type of soldering iron used.

- Driving pulley assembly
- Following pulley assembly
- Supply nozzle
- Guide pipe assembly
- Tube unit

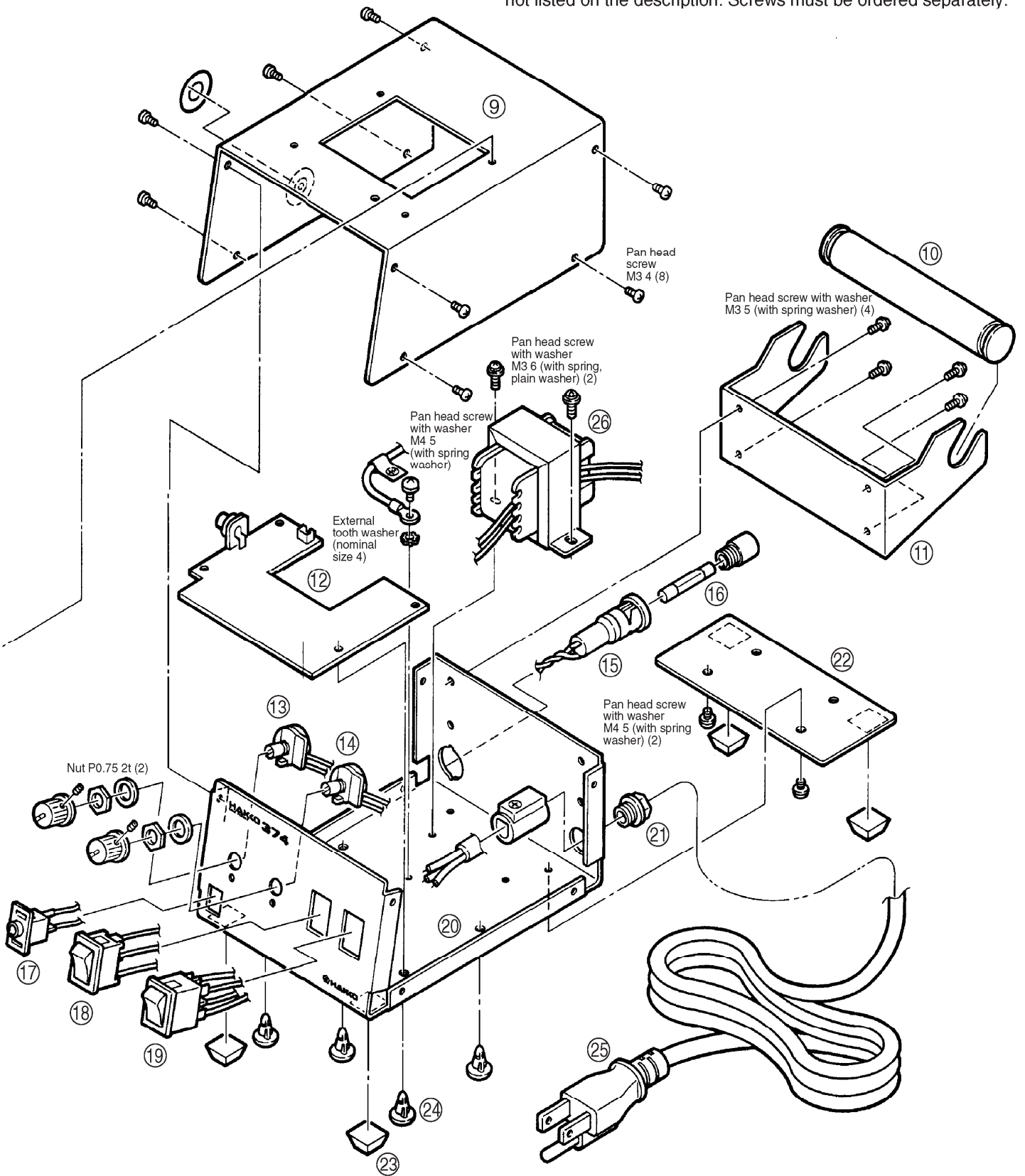
Change these parts as necessary.

PARTS LIST

No	Part No.	Part Name	Description
1	B2132	Cover for feeding unit	
2	B2104	Driving pulley asse'y / for ϕ 0.6mm (0.02 in.) solder	
	B2105	Driving pulley asse'y / for ϕ 0.8mm (0.03 in.) solder	
	B2106	Driving pulley asse'y / for ϕ 1.0mm (0.04 in.) solder	
	B2107	Driving pulley asse'y / for ϕ 1.2mm (0.05 in.) solder	
	B2108	Driving pulley asse'y / for ϕ 1.6mm (0.06 in.) solder	
3	B2109	Following pulley asse'y / for ϕ 0.6mm (0.02 in.) solder	With cutting blade
	B2110	Following pulley asse'y / for ϕ 0.8mm (0.03 in.) solder	With cutting blade
	B2111	Following pulley asse'y / for ϕ 1.0mm (0.04 in.) solder	With cutting blade
	B2112	Following pulley asse'y / for ϕ 1.2mm (0.05 in.) solder	With cutting blade
	B2113	Following pulley asse'y / for ϕ 1.6mm (0.06 in.) solder	With cutting blade
4	A1323	Cutting blade	
5	B1890	Nozzle support	
6	B2133	Supply nozzle / for ϕ 0.6mm (0.02 in.) solder	
	B2134	Supply nozzle / for ϕ 0.8mm (0.03 in.) solder	
	B2135	Supply nozzle / for ϕ 1.0mm (0.04 in.) solder	
	B2136	Supply nozzle / for ϕ 1.2mm (0.05 in.) solder	
	B2137	Supply nozzle / for ϕ 1.6mm (0.06 in.) solder	
7	B2129	Motor fixing plate	
8	B2142	Motor	With wire, connector
9	B2130	Cover	
10	B1901	Solder bobbin shaft	
11	B1902	Solder bobbin support	
12	B1899	P.W.B.	With potentiometer
13	B1197	Potentiometer for feed speed control	5k Ω
14	B1905	Potentiometer for feed time control	1k Ω
15	B1041	Fuse holder	Without fuse, 100, 110V
	B1134	Fuse holder \odot	Without fuse, 220, 230V
16	B1907	Fuse	125V-1A/100, 110V
	B1139	Fuse	250V-1A \odot 220, 230V
17	B1903	Mini jack	
18	B1906	Switch	
19	B1487	Power switch	100 - 120V
	B2604	Power switch	220 - 240V
20	B2131	Chassis	
21	B1208	Cord stopper	
22	B1895	Chassis support plate	
23	B1037	Rubber stopper	Set of 4
24	B1114	Locking spacer	Set of 4
25	B1169	Power cord	3 core & European plug
26	B1900	Transformer	100V
	B1912	Transformer	240V



Note: Spare or repair parts do not include mounting screws, if they are not listed on the description. Screws must be ordered separately.



TROUBLESHOOTING

When the Hakko 374 fails to feed the solder properly, check the following items.

- Do the parts match the solder diameter?
- Is the tension adjusted properly?
- Is the tube bent or twisted?
- Have solder and flux accumulated on the driving pulley, the following pulley, and the cutting blade?
- Is the tension adjustment screw tight?
- Is the arm mounting screw tight?
- Is the guide pipe clogged with flux?
- Is the tip of the nozzle clogged with flux?
- Is the mini plug connected properly?
- Is the fuse blown?
- Is the power supply of the correct voltage and frequency?
- Are the feed speed and the feed time appropriate?
- Is the tip temperature appropriate?

CAUTION

This product includes such features as electrically conductive plastic parts and grounding of the handpiece and station as measures to protect the device to be soldered from the effects of static electricity. Be sure to observe the following instructions:

1. The handle and other plastic parts are not insulators, they are conductors. When replacing parts or repairing, take sufficient care not to expose live electrical parts or damage insulation materials.
2. Be sure to ground the unit during use.

■ 中國RoHS: 產品中有毒有害物質或元素的名稱及含量

部件名稱	有毒有害物質或元素					
	鉛(Pb)	汞(Hg)	鎘(Cd)	六價鉻(Cr(VI))	多溴聯苯(PBB)	多溴二苯醚(PBDE)
馬達	×	○	○	○	○	○
輸送組合	×	○	○	○	○	○
錫線軸	×	○	○	○	○	○
插頭	×	○	○	○	○	○

○ : 表示該有毒有害物質在該部件所有均質材料中的含量均在SJ/T 11363-2006標準規定的限量要求以下。
 × : 表示該有毒有害物質至少在該部件的某一均質材料中的含量超出SJ/T 11363-2006標準規定的限量要求。

注有「附帶BS插頭」之時,表示「插頭」為含有有害物質的部件。



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