

## Guidance for tip selection and examples for use

**HAKKO CORPORATION**

The most important point is to choose the suitable tip shape, which can transfer heat to the base material efficiently.

### **1. Shape B:**

Appearance: Conical shape and no direction

Feature: Useful for either big face or small face

### **2. Shape D:**

Appearance: Chisel shape with surface for soldering

Feature: Useful for the soldering place which needs lot of heat supply. Choose the width according to the thickness of terminal or the broad of soldering pattern of your work.

### **3. Shape C(CF): Bevel**

Appearance: Beveled shape of cylinder or cone.

Feature: Useful for the soldering place which needs a lot of heat supply. Choose the tip surface of beveled section according to the thickness of terminal or the broad of soldering pattern of your work.

0.5C, 1C, and 1.5C are especially suitable for soldering small area, cutting soldering bridge of SMD and repairing chip components.

In case you don't want to have much solder, CF type is recommendable which catches solder on its surface only.

2C and 3C can be applied to soldering resistance or diode as well as SOP or QFP (especially for the ones with longer lead pitch).

4C and 5C are good for soldering thick terminal, grounding area or power supply part, which requires a lot of heat.

### **4. Shape I: Conical**

Appearance: Similar to shape B but with narrower edge.

Feature: Useful for working in a small area or the point where precise soldering is required.

### **5. Shape K: Knife**

Appearance: Knife blade

Feature: Can make soldering in three ways;

( 1 ) Lay down --- Making a quite big surface

( 2 ) Stand up --- Making a line

( 3 ) Pointing --- Making a spot

Useful for SOJ, PLCC, SOP, QFP, power supply section, ground area, connectors and cutting soldering bridge.

#### **6. Shape H:**

Appearance: Chisel shape with surface for soldering

Feature: Useful for SOP and QFP (especially for the ones with longer lead pitch)

#### **7. Shape LB, LI:**

Appearance: Long conical shape (long B and long I)

Feature: Recommendable to use in the area surrounded by tall components such as connector and condenser, and tip can't reach with ordinary B or I shapes.

Good for cutting soldering bridge, too.

#### **8. Shape SB:**

Appearance: Small conical

Feature: It has shorter edge and thicker base than shape B. Therefore, it is recommendable to use in delicate but also need a lot of heat supply.

#### **9. Shape J: Bent**

Appearance: Bent conical (bent 4mm from the top edge)

Feature: Wide application – good for both point soldering with vertical use and wide area soldering with horizontal use. So it's useful for soldering and repair of terminal, connector, SOP, QFP and chip components.

There is a correlation between thermal capacity and weight of tip. (If same heater and same power consumption.) When the tip weight becomes large, the tip thermal capacity increases. Similarly, when the weight becomes small, the thermal capacity decreases.

Even if tip weight is same, amount of thermal supply varies according to the area size (covered with pre-tinning), which directly contacts to the base material to be soldered. So, we recommend examining tip shapes for correct selection thinking about various conditions of the part to be soldered.

If any standard tip does not meet with your work and you want to have special shape, custom made tip is available upon your order.

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