

JOEWELL PRODUCT GUIDE

【Specification of Scissors】

LENGTH	②
MATERIAL 【BLADE】	②
MATERIAL 【HANDLE】	⑤
HANDLE	⑤
BLADE 【SHAPE&EDGE】	⑥
BLADE 【WIDTH】	⑥
BLADE 【LINES】	⑦
SCREW	⑦

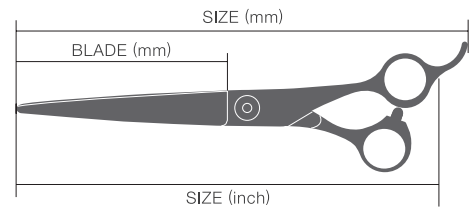
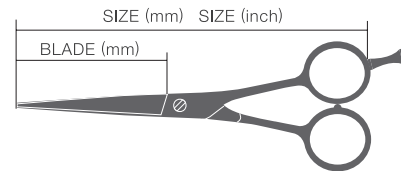
LENGTH

The size of scissors is usually indicated in inches. The short ones are 4.5 inches, and long ones are up to about 8 inches. Size is selected depending on the cut techniques.

Shorter scissors are more suitable for detailed work, and longer scissors are more suitable for powerful work. Cutting accurately in a straight line is the basic of the blunt cut and, therefore,

the 5-inch size is the mainstream. In Asia, where the longer size is more popular, tends to be appreciated due to the greater power and different hair characteristics.

The characteristics of long scissors enable efficient work because more hair can be cut at one time, and a higher flexibility can be achieved depending on the method of use.



Length of Scissors

4 1/2" (shorter) ~ 7" (longer)

more suitable for detailed work ~ more suitable for powerful work

MATERIAL 【BLADE】

◎ Supreme Stainless Alloys

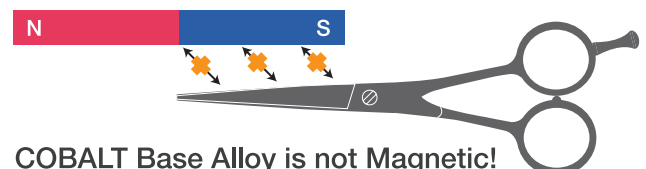
Top quality special alloys born through the pursuit of ultra-fine composition. This material was developed from the long-term experience in manufacturing techniques and the accumulation of user comments and is suitable for hairdressing scissors. It has the best edge sharpness and durability.

◎ Cobalt Base Alloys

Based on the scarce metal cobalt, it includes chrome, tungsten, and carbon. Cobalt base alloys do not require heat treatment as the material already has hardness, which is suitable for blades. The other characteristics include chemical-resistance and rust-resistance. JOEWELL uses CBA1, which has higher hardness and longer life, and is suitable for dry hair, and CBA12, which has lower hardness and the characteristic of soft

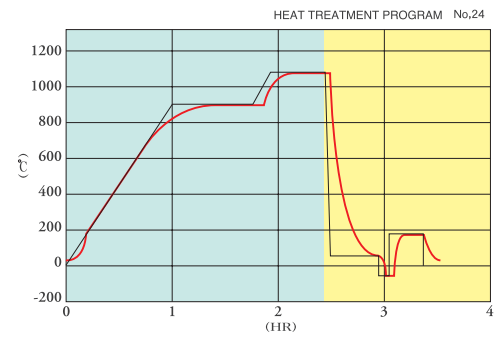
cutting. Compared to cobalt base alloys, stainless has greater hardness but cobalt has higher wear resistance. Therefore, looking at all the elements, a cobalt base alloy has a longer life. Stainless

requires heat treatment (quenching) but cobalt does not. **Cobalt is not magnetic; therefore, you can determine whether it is a cobalt base alloy or stainless (stainless including cobalt) by placing a magnet over the blade.** Some products claiming to be cobalt are actually stainless. By placing a magnet over the blade, the material can be distinguished from a cobalt base alloy or stainless.



Latest Heat Treatment Techniques

Heat treatment is applied to stainless blade materials except for cobalt base alloys. A computer-controlled, full automatic vacuum heat treatment method is adopted. It can maximize the quality of the material and achieve consistent heat treatment. JOEWELL manufactures its products at the highest level of hardness that is practically possible, and the hardness is 15% higher than the general hardness of competitors' products. It produces the best edge and durability.



Hardness and Wear Resistance:

Does the sharpness keep longer if the material is harder?

(Hardness is not proportional to long lasting.)

For stainless steel, sharpness generally lasts a long time when the hardness of the material is high; however, in the case of scissors, the feeling of sharpness becomes harsh with an increase in hardness. Therefore, we adjust the hardness of stainless steel with heat treatment so that it is best suited as a material for scissors.

The hardness of the material for the scissors edge is not simply proportional to wear resistance. Hardness does not simply mean long lasting sharpness. **For scissors, long lasting sharpness is dependent on a balance of three factors: hardness, mode of wear (difference in how the material wears [see Note 1]), and wear resistance.** The cobalt base alloy that we use has lower hardness than stainless steel, but it has higher wear resistance.

Note 1: Mode of wear

Each material wears differently. For scissors, wear dust generated during cutting significantly affects the feeling of sharpness. In the case of a material that generates very minute wear particle, the worn surface of the edge will remain smooth and thus the effect on the feeling of sharpness is minimal, but for material that generates a considerable size of wear particle, the surface of the cutting edge becomes rough with wear and the feeling of sharpness may deteriorate.

Forging and Casting:

Which type of procedure is recommended?

There are various ways to form metal products, such as forging, casting, powder forming, or machining from a blank, but in the production of scissors, forging and casting are most common. Both methods require dies for forming, which are expensive and vary with the volume of production. Therefore, it is impossible to say which method is generally less costly.

Which material is best suited as a material for scissors?

A key to selecting the most appropriate material for scissors is to base the selection on the individual function of the edge and the function of the handle.

As a material for an edge, the hardness, mode of wear, wear resistance, and toughness (ability of the material to deform absorbing sudden external forces [see Note 2]) should be appropriate. Generally, casting materials include defects, and the toughness is poor. Such defects may be exposed on the surface of the cutting edge, or the scissors may break easily if dropped. Accordingly, it is desirable to use a plastic forming material that we use for stainless steel (material after plastic forming, such as forgings or rolled products), as the edges for scissors. However, we use a cobalt base alloy as a casting material because of its excellent wear resistance.

As the material for the handle, the ability to be formed into various shapes and flexibility in the selection of raw materials are required. Generally, the forming ability of forged products is less compared with casting, and this means that casting is suitable as a material for scissors handles. **We principally use casting free of nickel (nickel is included only as an impurity) as a material for scissors handles in consideration of metal allergies.**

The combination of materials suitable for cutting edges and materials friendly to the human hand are ideal for making scissors. This is an essential manufacturing method for high quality and high value-added scissors, although manufacturing costs are significantly higher than with forging material.

Note 2: Toughness

The ability of the material to deform under sudden external forces is called toughness. Like ceramics, material with low toughness will easily fracture from an impact even if the hardness is excellent, while material with high toughness can absorb the energy from an external force by deformation of the material itself, and fractures can be avoided.

MATERIAL [HANDLE]

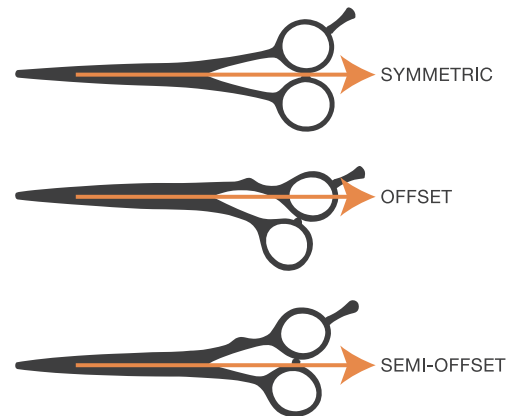
JOEWELL is also concerned about the handle material. **We use nickel-less (0.1% or less) stainless in most of our products to ensure against metal (nickel) allergies.** The countermeasure against nickel allergies is specially demanded in Europe so all of JOEWELL products in Europe are nickel allergy resistant. Also, because of the hard material used, the handle is difficult to be deformed (scissors do not easily go out of tune), and its face is difficult to get scratched. Please inquire separately for details of each product.

HANDLE

◎ Symmetric Handle

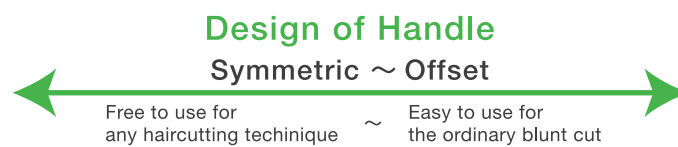
The symmetry of the handle design is widely appreciated as the basic style for beauty salons.

Symmetric design makes it possible to use both sides of the scissors or to change the way the scissors are held for a greater degree of freedom.



◎ Offset Handle

The length of the handle grip differs between still blade and moving blade. **Offset handles easily fit the hand so the wrist, elbow, and shoulder do not tire easily when opening or closing the scissors.** It is especially easy and popular for the ordinary blunt cut. Another name for this is the ergonomic handle. Various angles and designs are available in offset types so please select according to your preference.

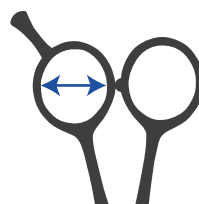


The Size of the Finger Hole

Small and large sizes are available.

A finger ring can be attached to reduce the size of the finger hole. Please select the size according to your finger size and fitness.

Regular Size



Small Size



Regular with Finger Insert



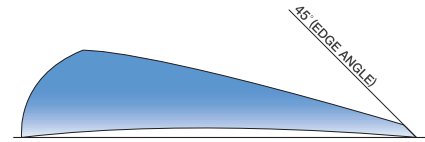
BLADE [SHAPE & EDGE]

The convex blade is sharp for softer cutting while the flat (single bevel blade) is superior for lightweight durability because the whole blade can be designed flat.

◎ The standard JOEWELL blade (flat single bevel blade)

This is the most popular, easy to use, and JOEWELL world standard original blade. Because **this is a flat blade and the blade body is light, a liting cut is possible.**

Other characteristics include a flat face that fits the hair and comb face.



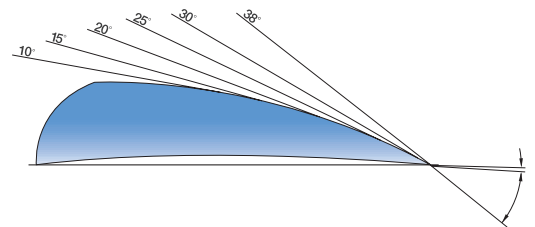
◎ Convex Pro blade

In pursuit of sharp, smooth cutting, this has the sharpest blade angle and setting. Final finishing is manually done by craftsman to achieve an artistic cutting.

Because the cross section of the blade shape is large, it is powerful. Because the point of the blade is smaller than a hair, hairs will not fly about.

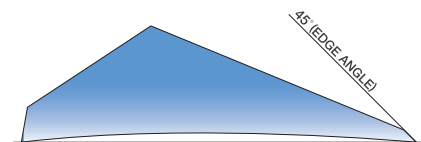
◎ Convex Shape blade

The semi-convex blade was developed by implementing the latest technology on top of the advantage of the convex blade. It maintains soft, sharp cutting and is suitable for anyone.



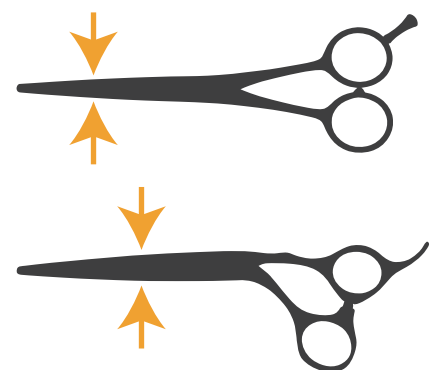
◎ Sword shape blade

This type is a sword shape. **The power is delivered to the point of the blade with this design.**



BLADE [WIDTH]

Various blade widths are available. **With the wider blade, it is more powerful for cutting hair, and the cut is light.** Those with a thin blade point are suitable for detailed work.



BLADE 【LINES】

Various blade lines are available from straight to curved. Generally, the straighter blade is called a straight blade, the ordinary one is called a willow blade, and the curved one is called the bamboo leaf blade. Tokosha designs blade lines according to the characteristic of each item. **The straighter the blade, the easier it is to hold hair for cutting without having the hair slide. The bigger the curve, the greater the amount of hair that will slide when cutting for a smooth, soft cut. The bamboo leaf blade type, which has the biggest curve, is suitable for slide cuts and slicing.**



SCREW

Flat screws will not hinder cutting because it has no bulge.
Adjustable screws can easily be adjusted to suit your preference.

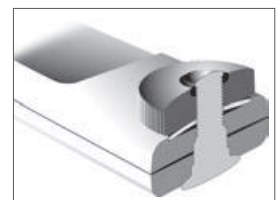
◎ Flat Screw

This is an ultra-precise NC manufacturing screw with little looseness. Because this screw is flat, it does not hinder the comb when cutting and can be adjusted with a coin (with 1.7 mm or less thickness).



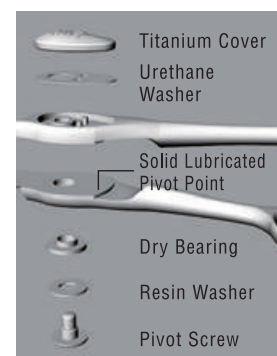
◎ Adjustable Screw

The fine screw in the 0.35 mm size makes fine tuning possible, and the locking and tension functions prevent loosening. By embedding a part of the screw, a more compact design was achieved.



◎ Dry Bearing System Screw

The dry bearing screw system is applied at the screw part to pursue smooth opening/closing operation. The solid lubricated pivot point contact and the dry bearing are made of resin. The features are light, smooth opening/closing operation, maintenance free, light weight, and thin body.






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