



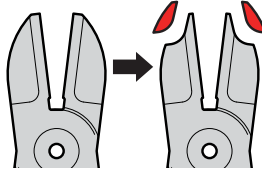
VESSEL Air Nippers for all your needs (5)

VESSEL has solved users' problems.
Here are some examples of our solutions.

Problem #1

Cutting edges are bent due to lack of strength.

Workpiece: Copper wire
Blade that was used: Blade for metal (carbide tipped)



Causes: Since the blade tip had to be thin for insert into the equipment, the standard blade was grinded by the user to make it thinner. As a result, strength of the blade tip was reduced, which caused its bending and misalignment of the cutting edges.

Our Solutions

Custom-made thin tip blade

Nipper: GT-NWS20
Custom-made blade: NW20BJ[***]

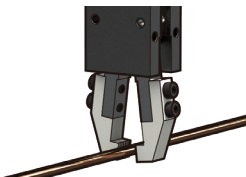


We have designed a blade to meet the customer's requirements by asking about specifications of the workpiece and restrictions around the equipment. Some standard blades can be additionally machined to be thinner, but in this case it is necessary to beware the blade tip strength.

Problem #2

Need to retain the copper wire after cutting.

Workpiece: Copper wire 2.8~4.5Φ
Blade that was used: Commercially available robotic hand air chuck

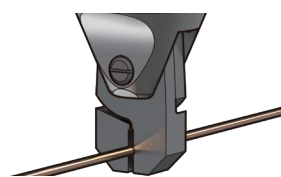


Causes: A non-slip chuck jaws will scratch the enameled coating of the copper wire when they grip it. With a straight chuck, the copper wire will be displaced and scratched.

Our Solutions

Custom-made wire retaining blade

Nipper: GT-NS20
Custom-made blade: N20DI[***]

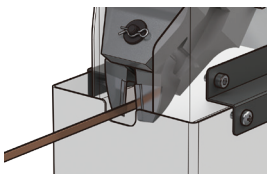


We designed a special retaining blade with an "hollow" that matches the wire diameter. Multiple shapes were designed according to various sizes of the wire. The place where the wire comes in contact is chamfered, and the retaining force is adjusted by a decompression valve so as not to crush the wire.

Problem #3

When cutting brass material, there is a cutting residue.

Workpiece: Brass hoop material (4×0.6mm)
Blade that was used: Blade for metal

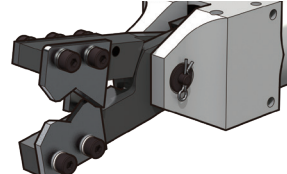


Causes: Used to use the carbide tipped blade and the NS30 nipper. The nipping blade sometimes did not cut fully the material, leaving some that was not cut, because it is soft and thin rather than because of the capability of the nipper itself.

Our Solutions

Custom-made scissor blade with carbide chip

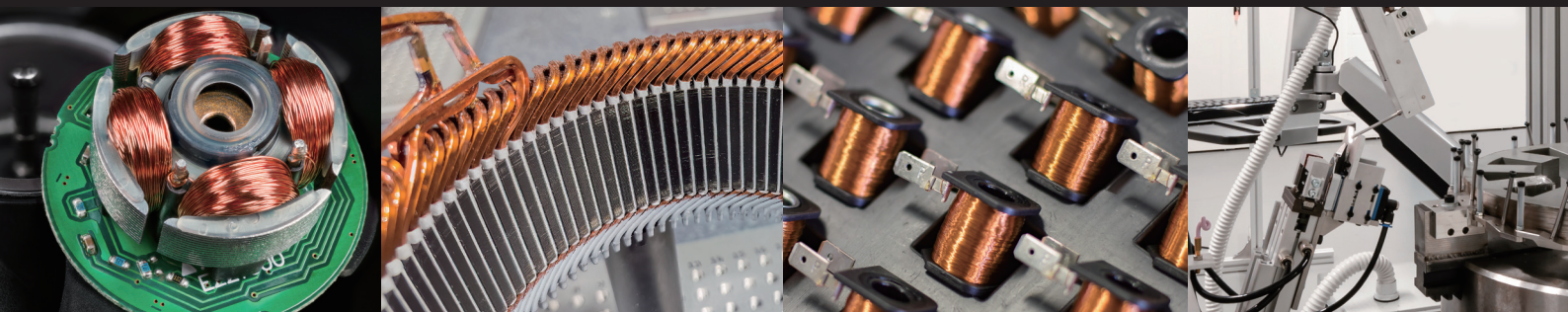
Custom-made nipper: GT-NS20
Blade: N20VHAB[***]



Scissors-shaped blade is custom-made to meet the application so as to cut the material while the cutting edges slide perfectly, and to prevent the wire material from remaining between the cutting edges. The model selection for nippers was reviewed, which reduced the weight of the whole equipment.

✓ Quotation is free. ✓ Trial cutting of your workpiece on request.

If you cannot find a suitable blade for your work among the standard blades, we will design and manufacture a blade to your specifications. We will provide you with approval drawings and pricing after discussing model selection and blade design. reverse side of this page.



Problem #4

When cutting a copper wire, there is a cutting residue.

Workpiece: Copper wire
Blade that was used: Blade for metal (carbide tipped)

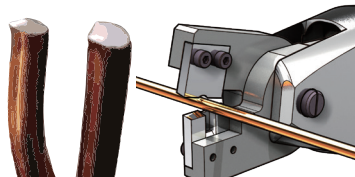


Causes: As the blade wears down, more gap between the cutting edges is made, leaving the residue from the cutting. Durability is improved with the carbide chip that is brazed, but the increase in the cost due to frequency of replacement of the whole blade because of wear is also an issue.

Our Solutions

Custom-made scissor blade with carbide chip

Nipper: GT-NR50
Custom-made blade: N50**[***]

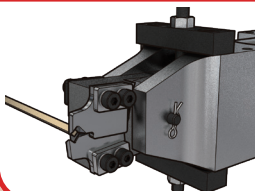


To cut a thick copper wire, the nipper must have the N50 type capability. Considering durability of the blade and ease of maintenance, the carbide chip of the same shape is adopted on the upper and lower side of the blade respectively, which allows easy replacement of the chips.

Problem #5

Thin wire is stuck and equipment stops.

Workpiece: Thin copper wire, Thin copper sheet
Blade that was used: N30VHAB****

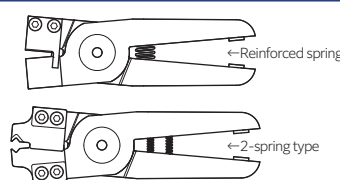


Causes: The soft copper wire may be stuck in the blade when it is worn or inserted to the wrong position. When the equipment stops because of these, the entire line comes to a halt and the production is disrupted.

Our Solutions

Custom-made blade with reinforced spring

Nipper: GT-NS30
Custom-made blade: N30VHAB****

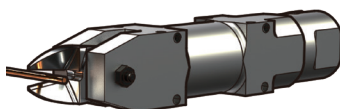


The piston inside the nipper makes the cutting edges close, and the blade spring opens them. If some copper wire that was uncut gets caught in the gap between the cutting edges, the blade will not work. In this case, use a reinforced spring to open the blade by force.

Problem #6

Equipment does not have enough space to have a nipper in it.

Workpiece: Copper wire
Blade that was used: N3BM



Causes: Since this is for application to cut thin wires, a small nipper is chosen, but actually it cannot be installed because even such a small type interrupts the equipment.

Our Solutions

Custom-made side opening blade

Nipper: GT-NS3
Blade: N3BM****



By using the side opening blade, the nipper can now be placed on the equipment without problems. If there is a space for the GT-NF05, the standard model can support, and further cost reduction can be expected.

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