SONOFILE SF-650

Manual-type hand piece
HP-650

Clear cut with low processing pressure assists manual operations.

High-frequency ultrasonic cutter with the tool vibration frequency of 40 kHz (40,000 vibrations per second) and an amplitude of 30 microns, maximizing the effect of ultrasonic vibrations that are high-speed and microscopic. A wide range of materials, including newly-developed composite materials, rubber, and leather, can be cut freely with low processing pressure, a sharp cutting edge, and little dust.

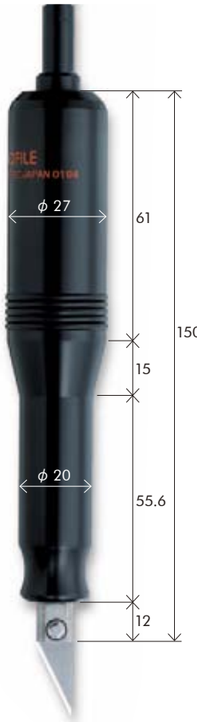
Features

- ◎ Stable vibrations with a maximum amplitude of 30 microns ensure remarkable cutting performance.
- ◎ Workability-oriented hand piece that is light and easy to hold (145 g).
- ◎ Simplified and secure installation of the tool with special square-headed screw and driver.

Oscillator SF-650

Hand piece HP-650

(Unit: mm)



Ultrasonic vibrations can be switched on/off by the foot switch.

Applicable materials

- ◎ A range of prepregs (boron, Kevlar, polyethylene fiber, etc.).
- ◎ Rubber (vulcanized latex, non-vulcanized latex, sheeting material, sealing material, and tube) and leather (natural and artificial).
- ◎ Thermoplastics (board, sheeting material, film, laminated material, and floor covers).
- ◎ Cloth, nonwoven fabric, and paper (specially treated paper and coated paper).

Standard tool

FB-3124 FB-3134

* Various options available for blade thickness and shape. Please contact us for details.

Specification: Oscillator

Frequency / adjustment	40KHz / Auto-tracking type
Max. power output / adjustment	45W / Infinitive adjustment
Power supply	AC100V 50/60Hz
Electricity consumption	135VA
Outer dimension	approx. 200W x 220D x 118H (mm)
Weight	approx. 3.0 kg

* 200 V version can also be manufactured.

Specification: Hand piece HP-650

Vibration element	PZT piezoelectric transducer
Code length	0.6-meter curled code, extended to 2.5 m
Housing material	Resin (polyoxymethylene)
Outer dimension	ϕ12/ϕ20/ϕ27 × 150 L (mm)
Weight	approx. 145 g
Blade thickness	Sole use for 0.4 mm (can be manufactured for 0.5 mm and 0.6 mm use)

* Specifications are subject to change without notice due to continual improvements.Please confirm when placing your order.

SONOFILE SF-651

Machine/robot-mounted-type transducer
HP-651

ULTRASONIC HAND-TOOLS SONOTEC

Allows for extended continuous use through our unique power circuit and air cooling system!

High-frequency ultrasonic cutter with vibration frequency of 40 kHz (40,000 vibrations per second) and an amplitude of 30 microns, maximizing the effect of ultrasonic vibrations that are high-speed and microscopic. A wide range of materials, including newly-developed composite materials, rubber, and leather, can be cut freely with low processing pressure, a sharp cutting edge, and little dust. Our unique power-control circuit and forced air inlet prevent the transducer from overheating, even at high amplitude, allowing for extended continuous use. (Please contact us in case it is used for long hours without air cooling.)

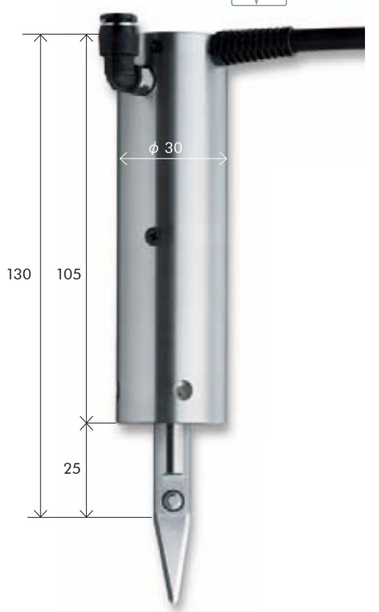
Features

- ◎ Stable vibrations with a maximum amplitude of 30 microns ensure remarkable cutting performance.
- ◎ Our unique development prevents the transducer from overheating, allowing for extended and continuous use.
- ◎ Simplified and secure installation of the tool with special square-headed screw and driver.

Oscillator SF-651

Hand piece HP-651

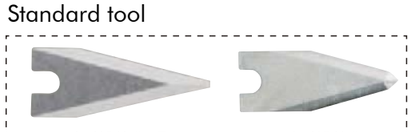
(Unit: mm)



Applicable materials

- ◎ A range of prepregs (boron, Kevlar, polyethylene fiber, etc.).
- ◎ Rubber (vulcanized latex, non-vulcanized latex, sheeting material, sealing material, and tube) and leather (natural and artificial).
- ◎ Thermoplastics (board, sheeting material, film, laminated material, and floor covers).
- ◎ Cloth, nonwoven fabric, and paper (specially treated paper and coated paper).

Standard tool



FB-3136-5 FB-3136

* Various options available for blade thickness and shape. Please contact us for details.

Specification: Oscillator

Frequency / adjustment	40KHz / Auto-tracking type
Max. power output / adjustment	45W / Infinitive adjustment
Power supply	AC100V 50/60Hz
Electricity consumption	135VA
Outer dimension	approx. 200W x 220D x 118H (mm)
Weight	approx. 3.0 kg

* 200 V version can also be manufactured.

Specification: Hand piece HP-650

Vibration element	PZT piezoelectric transducer
Code length	4 m
Housing material	SUS 303
Outer dimension	ϕ12/ϕ30 × 130 L (mm)
Weight	approx. 270 g
Blade thickness	0.6 mm

* Specifications are subject to change without notice due to continual improvements.Please confirm when placing your order.

ULTRASONIC HAND-TOOLS SONOTEC

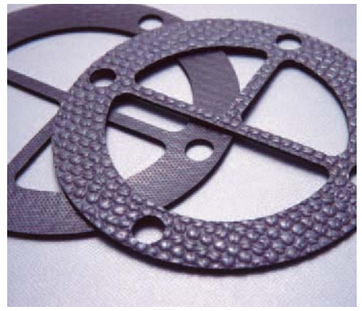
Specification

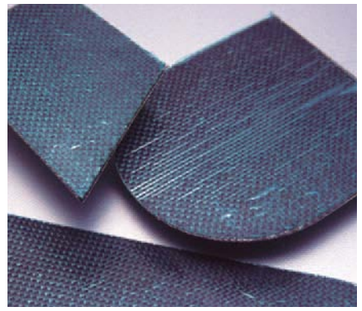
Oscillator	Oscillator	SH-3510		SF-3441		SF-3410			SF-3400		SF-650	SF-651	SF-60		
	Transducer	SH-8700	SG-110	SF-8541	SF-8541R	SF-8500	SF-8500R	SF-3110	SF-7400	SF-3140	HP-650	HP-651	SF-9400	SF-6100	SF-6000
	Frequency	30kHz		40kHz		22kHz			22kHz		40kHz		25kHz		
	Maximum output power	500W		300W		220W			220W		45W		45W		
	Power supply voltage *1	200V		200V		200V			100V		100V		100V		
Transducer	Maximum amplitude *2	80 μ	-	60 μ		60 μ		-	-	60 μ	30 μ		10 μ		
	Automated machinery-mounted-type	O	O	O	O	O	O	O				O		O	O
	Manual-operation type								O	O	O		O		
	Rotary connector	(O)*3			O		O								O
	Forced air cooling (for extended continuous use)	O		O	O	O	O			O		O			
	Vice-gripping blade	O		O	O	O	O			O	O	O	O	O	O
	Carbide blade	O	O			O	O			O					
	Exclusive tool *4		O					O	O						
	Robot code	O	O	O	O	O	O	O	O	O		△*5			O
	Curled code										O		O		
	Straight code													O	
	Standard code length *6	4m		4m		4m			4m		2m	4m	2.5m	4m	
	Weight	1200g	1400g	550g	660g	560g	560g	800g	305g	560g	145g	270g	130g	150g	150g
External switch	External connection	O		O		O						O			
	DIN connector													O	O
	Foot switch								Hand switch	O	O		O		
Applicable material *7	Carbon	O													
	Range of prepregs	O		△		O				O	△				
	Composite materials	O		O		O				O	△				
	Rubber	O	O	O		O		O		O	O				
	Thermoplastics	O	O	△		O		O		O	△				
	Cloth, paper, and corrugated cardboard	O		O		O			△	O	O		O		
	Sponge and foaming materials	O		O		△				△	O				
	Exterior walls of buildings		O					O	O						
	Foods (frozen foods, cakes, and breads)	O	O	△		△		O	O	△	△				
	Sheeting materials	O	O	O		O		△		O	O		O		

*1 Power supply voltage can be changed. *2 The maximum amplitude changes according to the tool to be used. *3 Rotary type can also be manufactured. *4 It is a built-to-order item (variable price). *5 The code near the transducer is a straight code, and it changes to a robot code afterwards. *6 The robot code can be extended to 10 m. Please specify the transducer's code length when placing your order. *7 Please consider the applicable materials as standards. Since the ideal model may vary depending on the shape and other conditions, please confirm the performance by a test cut or using a demonstration machine.

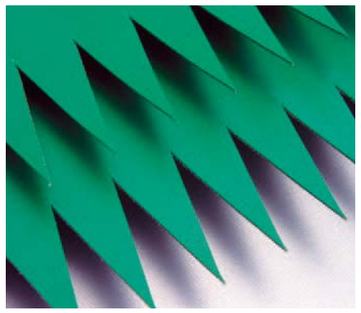
Recommendation of our Test Cut

The model and blade shapes you should choose vary depending on your material, its thickness, and the application.
We will provide a free test cut if you send us a sample piece. You will be able to see the actual result of the machining performance. In case you have your own special blade manufactured, however, the extra cost will be applied.





Carbon (CFRP)



Examples of materials applicable to SONOFILE®

NR Sponge

Corrugated elbow

Wide-mouthed bottles