

ハイカット ACE-20

FINECUT



A fully-automatic machine that was specifically designed for cutting solid bars and pipes, and which is the most suitable for use in mass producing electronic parts that require an even higher level of accuracy. This machine was also designed to have as simple as possible mechanism in ensuring ease of operation and problem-free use.

Characteristics

- 1 Traces cutting wheel abrasions with a sensor.
- 2 Automatic cycle stop function with cutting wheel minimization or lack of material.
- 3 Air pressure specifications and partial oil pressure drive using a hydro-converter for the cutting.
- 4 Equipped with water gun for cleaning.
- 5 Usable with automatic material feeder (option).
- 6 Quick measurement of cutting length via digital measurement unit (option).

*Please contact us for data on the details of the clamping and bundling method that suits your specifications.

For 2m SP-AS2

For 3m SP-AS3

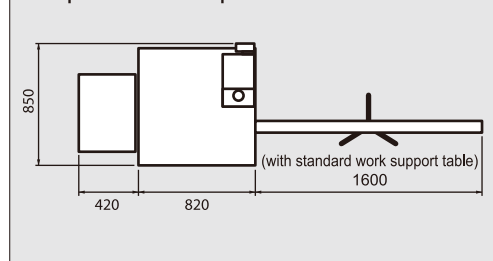
<Automatic material feeder for ACE>

Once cutting of a piece of predetermined material has completed the feeder sends the next material automatically into the machine (option).


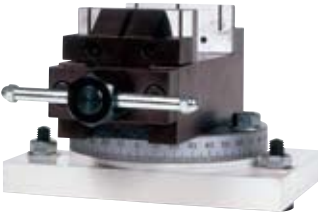
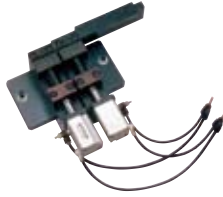


Standard Specifications

	ACE-20
Standard cutting capacity	○pipe 20mm, ●solid bar 20mm, □bundle 20mm
Length of cutting product	3mm-100mm
Remaining length for automatic feed	Min. 21mm Max 21mm + product length
Diameter of cutting wheel	φ230mm・φ205mm/φ25.4mm
Diameter of flange	φ90mm
Diameter of spindle, Revolutions per minute	25.4mm, 3000rpm・50Hz/60Hz
Spindle motor	AC200V・3 phase・2P・1.5kW
Coolant pump, Tank	AC200V・3 phase・40W, 60liters
Automatic cutting speed	10-180 seconds/Stepless-cycle speed control
Feed pitch control	0.01mm scaled
Dimensions (W x L x H)	1240mm x 850mm x 1400mm
Machine weight	360kg
Optional specifications	Automatic material feeder and digital measurement unit
Accessories	Work support table, 1 set of cutting wheels for testing, FINECOOL, spindle oil, turbine oil, and 1 set of Paper Filters

Required floor space



* See the available options on pages 12-13 for the lineup of optional accessories and specifications.

	<p>① Long Vise SP - V11</p> <p>Effective when cutting wider pieces of work that do not fit standard vises. The jaw opening size can be as wide as 120mm.</p>	<p>⑤ Long-type Double Vise SP - V15</p> <p>Long version of double vise (jaw opening size: 0-120mm).</p>	
	<p>② Surface Rotary Vise SP - V12</p> <p>Combination of a vise and flat table that rotates up to 90 degrees on both sides. Ideal for detailed cuttings that require the cutting position to be finely adjusted (jaw opening size: 0-80mm, scale of table: 1 degree).</p>	<p>⑥ Double Vise with Scale SP - V18</p> <p>Highly effective in constant-size cutting; the measuring stopper with fine adjustment scale enables more precise cutting.</p>	
<p>③ Long-type Surface Rotary Vise SP - V13</p>	<p>Combination of ② surface rotary vise and ① long vise. (jaw opening size: 0-120mm)</p>		<p>⑦ Air Vise SP - V17</p> <p>One-touch clamp with pneumatic ON/OFF switch.</p>
	<p>④ Double Vise SP - V14</p> <p>Ideal for not only fragile samples but also samples that can easily crack or be burred. (jaw opening size: 0-80mm)</p>		<p>⑧ Gonio Stage SP - V16</p> <p>A stage for cutting crystal orientations that supports angles from the flat surface up to up to 30 degrees along the X-axis and 20 degrees along the Y-axis.</p>
<p>⑨ Dedicated Jigs</p> <p>Dedicated jigs can be designed and produced corresponding to cut cores, glass lens, profiles, etc.</p>		<p>⑩ Special Flanges SP - W17</p> <p>Flanges of the required size can be produced.</p>	

List of Optional Vises and Products for FiNECUT Series

○ Applicable — Not applicable

Product Name	Model	Code No.	HS-100G	HS-45AC	HS-25/25A	ACE20	SP-7
① Long Vise		SP - V11	○	○	—	—	—
② Surface Rotary Vise		SP - V12	○	○	Dedicated type for 25	—	Dedicated type for SP
③ Long-type Surface Rotary Vise		SP - V13	○	○	—	—	—
④ Double Vise		SP - V14	○	○	—	—	Dedicated type for SP
⑤ Long-type Double Vise		SP - V15	○	○	—	—	—
⑥ Double Vise with Scale		SP - V18	○(requires consultation)	○(requires consultation)	—	—	Dedicated type for SP
⑦ Air Vise		SP - V17	○	○	—	—	Dedicated type for SP
⑧ Gonio Stage		SP - V16	○	—	Dedicated type for 25	—	—
⑨ Dedicated Jigs			○	○	○	○	○
⑩ Special Flange		SP - W17	○	○	○	○	○

Application Example of FiNECUT Series Cutting







Bundle Cutting

Place fine materials such as injection needles or materials to be cut in a thermal shrinking tube, heat the tube to shrink and thus bundle the materials, and then cut them in one go.

* Please use air or dryer or boiling water for the heating process.
* Please contact us for more detailed product information on the tubes.



Parts Name (nominal folding width: mm)	Applicable bundle diameter (mm)	Code No.
29.0	17.0	HC-15
41.0	24.0	HC-20
50.0	29.0	HC-25
59.5	34.0	HC-30
66.5	38.0	HC-35

	① Simple Filter Separator ST – TF Removes abrasive grains and cut material contained in the coolant fluid easily.		④ Settling Tank Separator Separates sludge with a high specific gravity. Can also be used to collect noble metals.
	② Magnet Separator ST – TM Suitable for removing any magnetic material such as iron powder.		⑤ Pressure Filter Separator Excellent filtering capabilities; works very well with the precision cutting of nickel alloys and tungsten materials in which any coolant contamination can affect the cutting precision.
	③ Centrifugal Separator ST – TC Suitable for removing non-magnetic material such as carbon, glass, and stainless steel.		⑥ Standard Stainless Filter Stainless steel version of standard filter as a more environmentally-friendly option.
		⑬ Multi-blade OP – HM	Multiple blades and spacers on the spindle enable multiple parts to be simultaneously processed.

List of Optional Specifications for FiNECUT Series

Recommended option
Standard equipment
○ Applicable
— Not applicable

Type	Product Name	Code No.	HS-100G	HS-45AC	HS-25/25A	ACE20	SP-7
Coolant	① Simple Filter Separator	ST-TF	○	○	—	○	○
	② Magnet Separator	ST-TM	○	○	—	○	○
	③ Centrifugal Separator	ST-TC	○	○	—	○	○
	④ Settling Tank Separator		○	—	—	○	○
	⑤ Pressure Filter Separator		○	○	—	○	○
	⑥ Standard Stainless Filters		○	○	—	○	○
Safety Measures	⑦ Earth Leakage Circuit Breaker	OP-ELB	Standard Equipment	Standard Equipment	○	Standard Equipment	Standard Equipment
	⑧ Emergency Stop Button		○	○	○	○	○
	⑨ Front Cover Interlock	OP-IL	Standard Equipment	○	Standard Equipment	—	Standard Equipment
	⑩ Right/Left Cover Interlock		○	○	—	—	—
	⑪ Interlock with Magnetic Lock		○	○	—	—	○
	⑫ Indication Lights		○	○	○	○	○
Environment Measures etc.	⑬ Cleaning Water Gun (coolant circulation)	OP-WA	Standard Equipment	Standard Equipment	—	Standard Equipment	Standard Equipment
	⑭ Internal Light (ceiling moisture-proof LED)	OP-LF	○	○	—	—	Standard Equipment/○
	⑮ Moisture-proof LED Spot Light	OP-LS	○	○	—	—	○
	⑯ Multi-blade	OP-HM	○	—	—	—	—
	⑰ Enhanced Spindle Motor	OP-HI	—	—	—	—/○	○/—
	⑱ Embedded Spindle Rotation Inverter	OP-RCO	○	○	○	○/Standard Equipment	—/Standard Equipment
	⑲ Mist Collector	OP-MC	○	○	—	—	○
	⑳ Stainless Steel Upper Body Cover		○	○	—	—	○
	㉑ Antirust Treated Internal Body	OP-AC	○ (requires consultation)	○ (requires consultation)	○ (requires consultation)	○ (requires consultation)	○ (requires consultation)
	㉒ Colored Body	OP-CO	○	○	○	○	○
	㉓ Line Marker		○	○	—	—	—

Wax Cutting

Using thermo-softened wax materials that are difficult to clamp or are breakable are powerfully adhered to jigs for cutting. The material can be removed from the jig after the cutting by heating the wax.

Sample Cutting

* Please use an industrial dryer or hotplate for the heating process.

Wax Set

WS

- ① A wax (general purpose): softens at 68 degrees C/adhesive force 44kg/cm²
- ② B wax (small adhesive area): softens at 75 degrees C/adhesive force 162kg/cm²
- ③ Cleaning liquid I/II
- ④ Cleaning tray
- ⑤ Wax melting container
- ⑥ Abrasive stick WA/GC (for dresser)
- ⑦ Glass mount plate for cutting samples
- ⑧ Bake mount plate for fixing vice
(10 of the above 8 types of items are included in a set.)



Cutting Counseling Service



FAX
TO: HEIWA TECHNICA,
FINE CUT SALES
81-(0)46-255-5840

If you have any inquires, please feel free to contact us!
Please copy this page and fill up following:

Name _____

Company name _____

Department _____

Address _____

Country _____

TEL : _____ FAX : _____

e-mail : _____



•Please select as below:

- Send your products catalogue
- Select a suitable cutting machine
- Select a suitable cutting wheel
- Would like to see demonstration
- Free test-cutting my work piece and provide test-cutting data
- Paid test-cutting my work piece and provide test-cutting data
- Any other requests

• Please inform us current cutting method (→New)

• Purpose of cutting

- QC, Checking, study
- Production

QTY _____

Work piece, conditions

Material	
Size	
Precision	
Machine, model name	
Current cutting wheel	
Process condition	

•Please write your concerns as bellows:

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