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**SAM 021969** **FINETECH Type SMV 1370 H3L**

| | |
|---|---|
| **Groupe** | Centre d'usinage 3 axes |
| **Fabricant** | FINETECH |
| **Type** | SMV 1370 H3L |
| **Commande** | FANUC 0i-MF Plus |
| **Année** | 2022 |

| | |
|---|---|
| Nombre d'axes total | 3 |
| Longueur de la table | 1450 mm |
| Largeur de la table | 700 mm |
| Nombre rainures en T | 5 |
| Distance entre les rainures en T | 100 mm |
| Largeur rainures en T | 18 mm |
| Charge admise sur la table max. | 1500 kg |
| Course longitudinale (axe-X) | 1300 mm |
| Course transversale (Y) | 700 mm |
| Course verticale (axe-Z) | 700 mm |
| Magasin nombre de places d'outils | 30 |
| Cône de la broche: BT | 40 |
| Distance nez de broche et table | 130 - 830 mm |
| Vitesse de la broche: | |
| Variateur (réglage progressif) | |
| de | 0 t/min |
| à | 12000 t/min |
| Avances rapide: | 25 m/min |
| Moteur de la broche | 18.5 kW |
| Puissance totale installée | 45 kVA |
| Poids de la machine env. | 9000 kg |
| Encombrement machine: | |
| Longueur | 4188 mm |
| Largeur | 2414 mm |
| Hauteur | 2560 mm |

**Accessoires divers:**

| | |
|---|---|
| Axes linéaires entraînements directs | |
| Dispositif d'arrosage | |
| Dispositif d'arrosage | 510 l |
| Arrosage par le centre de la broche | 20 bar |
| Soufflage du cône | |
| Evacuateur de copeaux | |
| Manivelle électronique | |
| Lampe | |
| Refroidissement de la broche | |
| Refroidisseur d'huile de broche | |
| Pistolet de rincage | |
| Soufflets air comprimé | |
| Extinction automatique | |


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Graissage central
Climatiseur armoire de commande
Lampe de statut

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## Internationally Recognized Machine Tools From Finetech

From its beginnings in 1979, Finetech has been one of the top machine tool manufacturers in the world. Finetech manufactures a wide range of CNC vertical machining centers. Finetech's machines are built to deliver high speed with more accuracy, efficiency and durability with more standard features, high-tech innovations and solid engineering.

Every Finetech machine is designed to provide more flexibility and productivity, making for a very sound investment.

Finetech

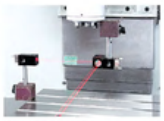
## Extensive Quality Control

Before shipping, each machining center from Finetech is subject to rigorous quality inspections during assembly. If it does not measure up to our standards, it does not leave our factory. Our objective is to ensure that each machine will provide optimum performance and fully satisfy customers.

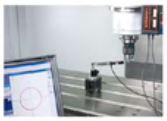
**SPINDLE DYNAMIC BALANCE TESTING**
After machine assembly, the spindle is re-balanced to ensure smooth operation.

**SPINDLE THERMAL GROWTH TESTING**
Each spindle is tested through the complete speed range and thermal growth is measured to ensure the spindle is within normal values.

**FINAL TEST CUT**
Dynamic cutting process test ensures precision and performance of machine.

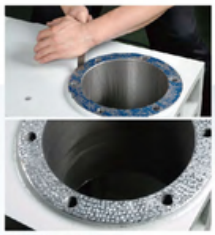


**CALIBRATION**
Every Finetech machine is laser calibrated for pitch error compensation and backlash.



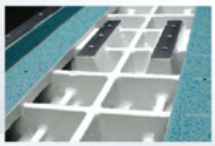
**BALL BAR TESTING**
Every machine is put through a Dynamic Ballbar test to test circularity and reversal spike errors.

## *Extensive Quality Control During Assembly*



**SPINDLE TRAM**
Every spindle mount is hand scraped to ensure accurate alignment of the spindle to worktable.

**BALLSCREW ALIGNMENT**
The ballscrew bearing mounts are aligned using a precision test mandrel.
The mounting surface is hand scraped to ensure a highly precise alignment.



**GUIDEWAYS ARE FITTED WITH "TURCITE B"**
Box way type machines are hand scraped and set matched to ensure high geometric accuracy.

**STRAIGHTNESS**
Every linear guideway has a precision ground mounting surface and is checked using a high precision Granite straight edge.

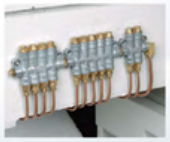
Finetech

**LEVEL**
The machine level is continuously checked through each stage of the assembly process using precision levels.

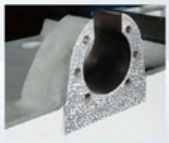
**SCREW AND LINEAR RAIL PARALLEL TEST**
The straightness of the ballscrew is measured against the straightness of the linear guideway to ensure both components are parallel to each other.

**THRUST BEARING ASSEMBLY**
The thrust bearing housings are inspected and ground for proper clearances to allow the ballscrew to be properly supported.

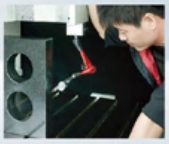
**SERVO MOTOR MOUNT**
Each servo motor mounting surface is ground to ensure the motor is correctly aligned to the ballscrew.



**EFFICIENT AXES LUBRICATION**
Each axis uses volumetric oil or grease distribution to ensure even and efficient lubrication.



**BALLSCREW MOUNT**
The ball nut is hand scraped and aligned using a precision test mandrel.



**Z AXIS ALIGNMENT TEST**
The Z axis is tested for accuracy using a high precision granite square in X, Z and Y, Z directions.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## Excellent Mechanical Features

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## LINEAR WAY

CNC Vertical **Machining Center**

### High Speed and Precision

- The casting assembly of the SMV machining centers has been designed using a Finite-Element-Analysis process to ensure the machine will handle cutting forces and weight loads associated with the demands of the machine specifications.
- All axes use an extra wide 45mm roller type linear guideway to allow the machining center to accommodate heavy loads with fast accelerations and low friction while maintaining accurate positioning.
- The machine base and saddle base utilize a wide design to prevent sagging and overhanging concerns with heavy work piece loads.
- The Z axis casting uses a reinforced rib design to achieve structural strength through the entire casting length.
- Each axis motor is directly coupled to the ball screw.
- Each axis will use a grade C3 precision ground ball screw and will use a pre-tensioned design to improve machine performance.

▲ SMV-1270-H3L

## LINEAR WAY SERIES

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## BOX WAY

Heavy Cutting Vertical **Machining Center**

- The casting assembly of the SMV machining centers has been designed using a Finite-Element-Analysis process to ensure the machine will handle cutting forces and weight loads associated with the demands of the machine specifications.
- All axes use box way design to allow the machining center to accommodate extremely heavy loads with smooth motion while increasing dampening of vibrations and cutting force characteristics.
- The machine base and saddle base utilize a wide design to prevent sagging and overhanging concerns with heavy work piece loads.
- The Z axis casting uses a reinforced rib design to achieve structural strength through the entire casting length.
- Each axis motor is directly coupled to the ball screw.
- Each axis will use a grade C3 precision ground ball screw and will use a pre-tensioned design to improve machine performance.

▲ SMV-2590-3B

## BOX WAY SERIES

▲ 650-3B
- Travel : X650 Y500 Z500 mm
- Table : L800 × W470 mm

▲ 1060-3B
- Travel : X1000 Y600 Z650 mm
- Table : L1100 × W500 mm

▲ 1270-3B
- Travel : X1200 Y700 Z650 mm
- Table : L1300 × W700 mm

▲ 1570-3B
- Travel : X1500 Y700 Z650 mm
- Table : L1650 × W700 mm

▲ 1670-3B
- Travel : X1600 Y700 Z650 mm
- Table : L1750 × W700 mm

▲ 1890-3B
- Travel : X1800 Y1000 Z900 mm
- Table : L1950 × W900 mm

▲ 2090-3B
- Travel : X2000 Y1000 Z900 mm
- Table : L2150 × W900 mm

▲ 2290-3B
- Travel : X2200 Y1000 Z900 mm
- Table : L2350 × W1000 mm

▲ 2590-3B
- Travel : X2500 Y1000 Z900 mm
- Table : L2600 × W1000 mm

## COMBINATION WAY

Combination Type Vertical **Machining Center**

- The casting assembly of the SMV machining centers has been designed using a Finite-Element-Analysis process to ensure the machine will handle cutting forces and weight loads associated with the demands of the machine specifications.
- The X and Y axes utilize roller type linear guideways to allow the machining center to accommodate heavy work piece loads with fast accelerations and low friction while maintaining accurate positioning.
- The Z axis uses box way design to allow the machining center to dampen heavier cutting forces.
- The machine base and saddle base utilize a wide design to prevent sagging and overhanging concerns with heavy work piece loads.
- The Z axis casting uses a reinforced rib design to achieve structural strength through the entire casting length.
- Each axis motor is directly coupled to the ball screw.
- Each axis will use a grade C3 precision ground ball screw and will use a pre-tensioned design to improve machine performance.

▲ SMV-2090-2LB

## COMBINATION WAY SERIES

▲ 1060-2LB
- Travel : X1000 Y600 Z650 mm
- Table : L1100 × W600 mm

▲ 1270-2LB
- Travel : X1200 Y700 Z650 mm
- Table : L1350 × W700 mm

▲ 1570-2LB
- Travel : X1500 Y700 Z650 mm
- Table : L1650 × W700 mm

▲ 1670-2LB
- Travel : X1600 Y700 Z650 mm
- Table : L1750 × W700 mm

▲ 1890-2LB
- Travel : X1800 Y900 Z900 mm
- Table : L1950 × W900 mm

▲ 2070-2LB
- Travel : X2000 Y700 Z700 mm
- Table : L2150 × W700 mm

▲ 2090-2LB
- Travel : X2000 Y1000 Z1000 mm
- Table : L2150 × W1000 mm

▲ 2290-2LB
- Travel : X2200 Y1000 Z1000 mm
- Table : L2350 × W1000 mm

▲ 2590-2LB
- Travel : X2500 Y1000 Z1000 mm
- Table : L2600 × W1000 mm


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## Optional Equipment

| Work Piece Measuring System | Tool Measuring System | CTS-Coolant Through Spindle |
|---|---|---|
| RENISHAW ( OMP 40/60 ) | RENISHAW ( TS27R ) | 20 BAR |
| BLUM ( TC 50 ) | BLUM ( Z3D ) | 50 BAR |
| HEIDENHAIN ( TS 640 ) | HEIDENHAIN ( TT 160 ) | 60 BAR |
| | RENISHAW ( NC-4 ) | 70 BAR |
| | BLUM ( NT ) | 120 BAR |

| All Of Matching Checklist | | |
|---|---|---|
| HEIDENHAIN Linear Scale | 4/5th Axis Rotary Table | Screw Type Chip Auger |
| Built-in Coolant Nozzles | HEIDENHAIN Rotary Encoder | |
| Oil Skimmer | Gear Box | |
| Spindle Oil Cooler | Transformer | |
| 4th Axis Rotary Table | Chain Type Chip Conveyor | |


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