

V700

High Speed
Machining Center



FIRST 龍昌
機械
LONG CHANG MACHINERY

Exterior Features

Compact, Stylish & Trendy

FIRST (LONG CHANG MACHINERY) started a new stylish machine look in Taiwan.

We have proved we can make great machines at reasonable price and also with great look.

This new version of V700 looks like a coffee machine at first glance.



- Rotatable Panel / Remote MPG



- Water Gun / Air Gun



- Magazine Protect Guard



- LED Tri-colors Signal Tower



- Fully Enclosed Splashguard
- Thorough Protection Brushes
- Flip-cap Design for Easy Hanging Doods



- Preparation Ready for Mist Collection System

- 10.4 " LCD Screen

- Compact Control Panel Arrangement

- 760 mm Wide Open Front Door

- Auto-doors Function is Optional for the Front & Side Ones

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*The combinations of specially designed iron-gray and white front door & Interior sheet metal polish your factory with styles & classes!
From now on, you can get good-looking machines from FIRST in Taiwan.*

NEW



Foundation

Surrounding Protection Eliminated Leakage Rigid Structure Endurance & Stability



For those who've once used First Long Chang Machinery products, when being asked, "endurance" and "stability" are the first few words popped up into their minds.

"Endurance & stability" is not only a slogan but a routine quality control standard. "Is it durable?" "Will it break down easily?" "Can we make it better?" are daily questions technicians ask themselves.

- **Arch Type and Slope Design Bed**

Spiral type chip conveyor (Standard)

- **3 Axis Large Scale Linear Guide**

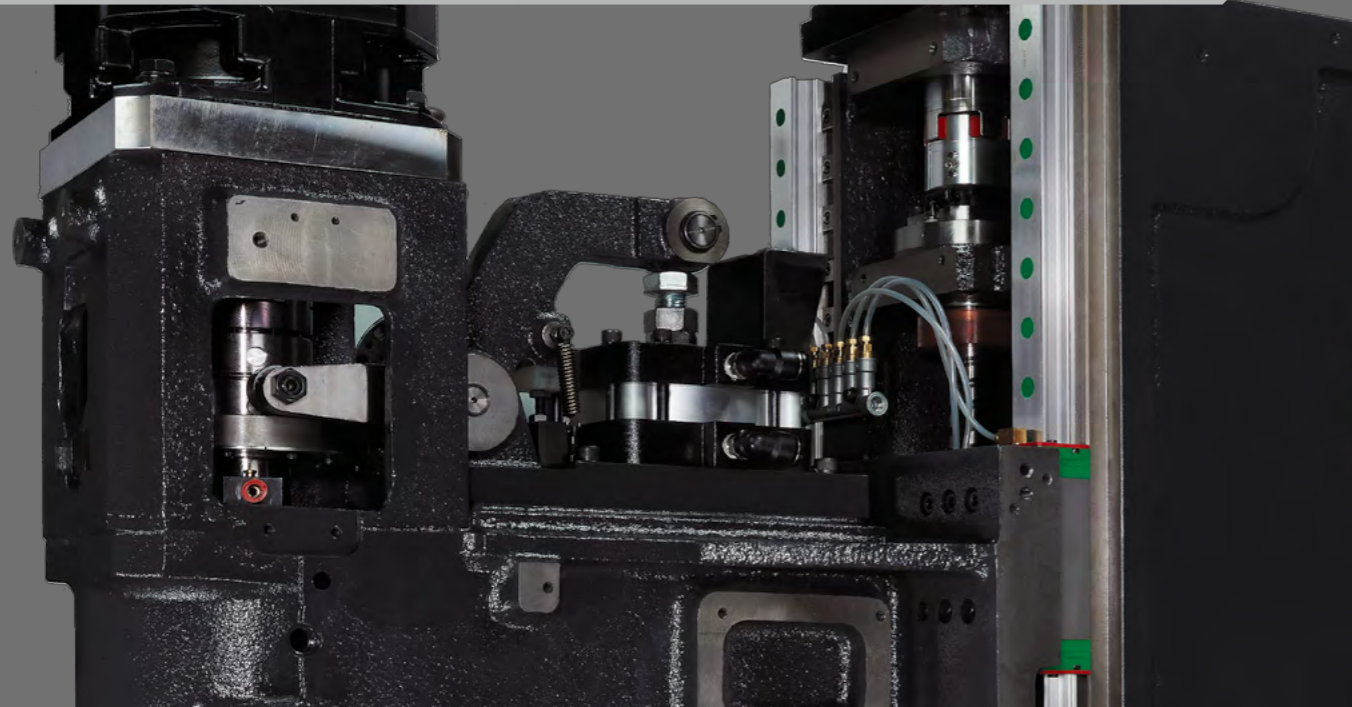
Bigger roller type linear guide (35 mm)

- **C3 Grade Precision Ball Screw**

Adapting C3 grade Precision Ball Screw (Pitch 16mm) and Super S recycling system Low abrasion. Decelerated temperature rise. Low noise. High precision.



Structure Features



- **Exclusive ATC Tool Grabbing system Design**

Precise and fast responses. No leakage problems.



- **Direct Drive Spindle Design**

- **Spindle Chiller**

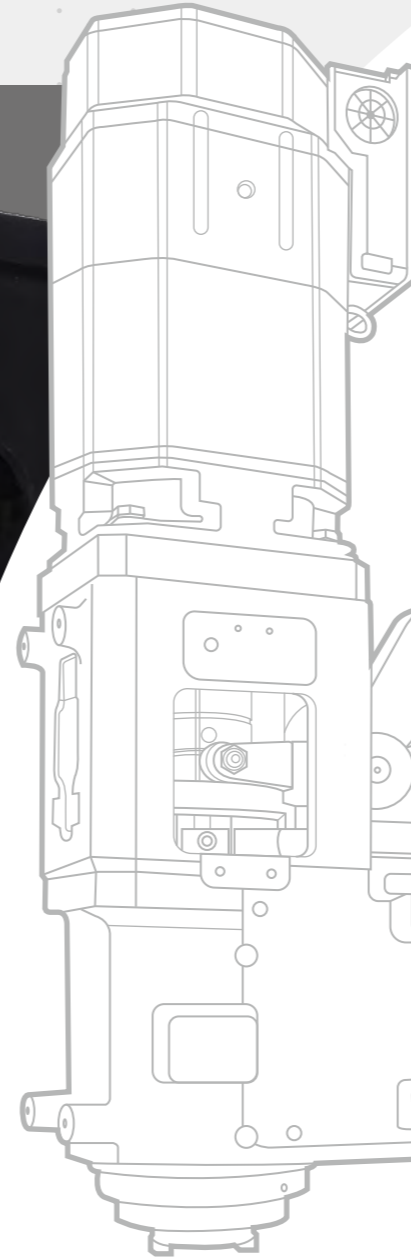


- **Inverter System for ATC**

No brake lining
No abrasion problems

- **One-Button Trouble Shooting**

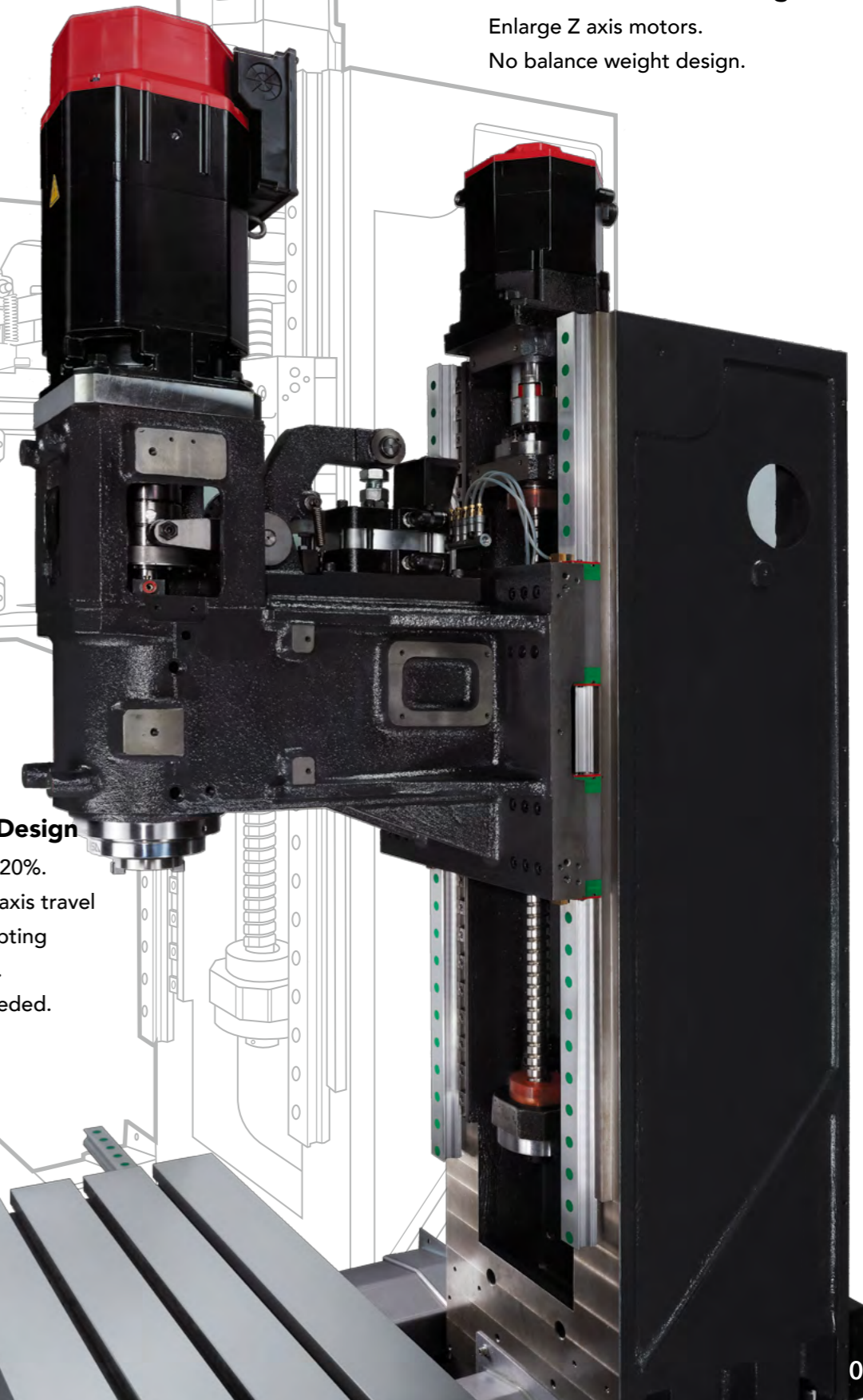
Exclusive trouble shooting design for ATC



- 12,000 rpm / 15,000 rpm High Speed Spindles (Option)
- 3 Axes Direct Driven Design. High Rapid Traverse Speed (48M/min.)
- 30 Tools Magazine (Option)
- 7.5 kW Continuing Output (Max:11kw)

- **Z Axis Direct Driven Design**

Enlarge Z axis motors.
No balance weight design.



- **Integrated Column Design**

Exceed other Brands by 20%.
Special designed long Z axis travel column (600mm) for adapting 4th or 4th/5th Axes Unit.
No riser block option needed.

Operation Space and Size



Enlarged Operation Space

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Coolant tank placed at the rear.
Keep the face width compact.



Space Efficient

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This V700 mode is more than its dashing appearance.
This compact machine has super big operation space!

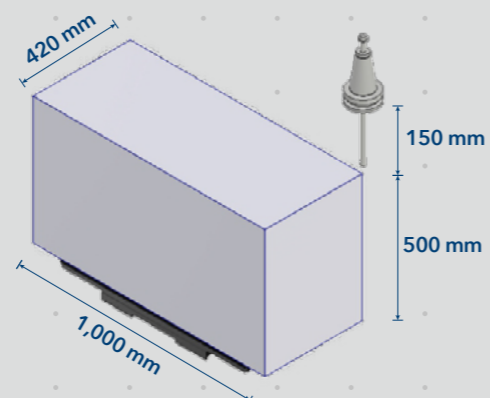


• Non-closed Telescopic Covers

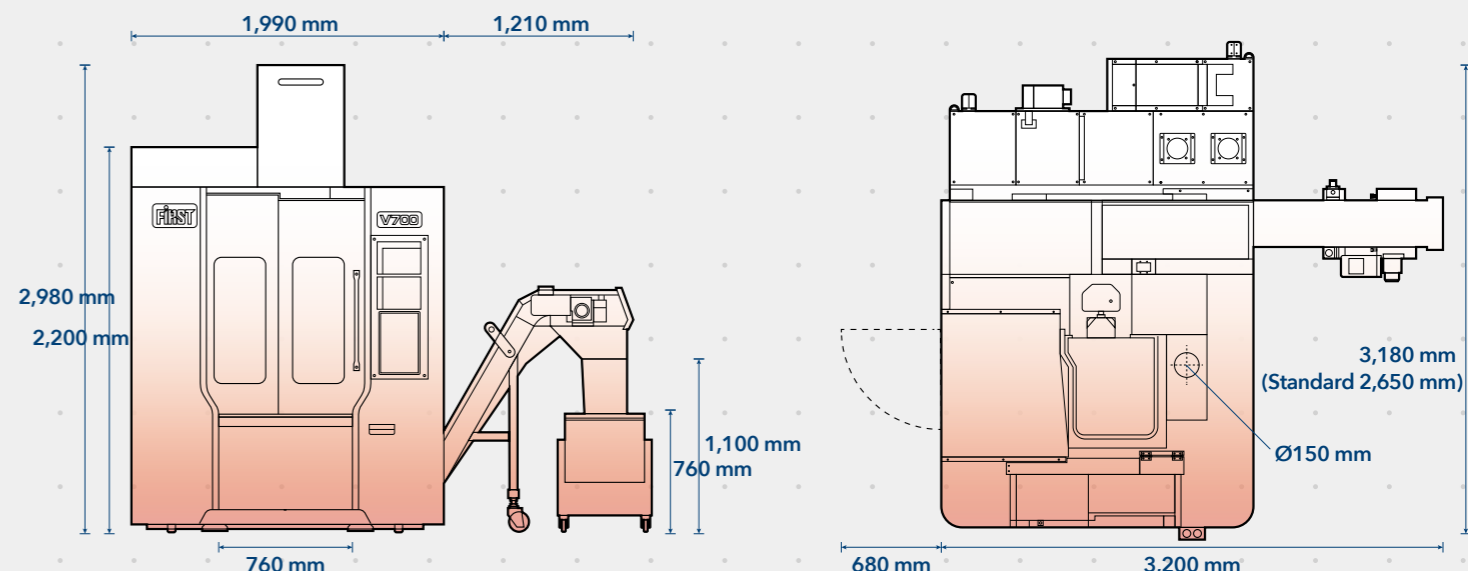
Easy collection of coolant and chips.
Decrease chips on covers. Reduce abrasion.
Longer service life. Separated replaceable covers.
Economical and easy maintenance.

• Large Stretch Y axis Linear Guide

Span length 640 mm
Worktables remain horizontal while operating.
Higher balance and stability during machining.



Dimension



Maintenance



**Brand new designs
Coolant and skylight framing flushing system**



- **Coolant & Flushing 2 independent Pumps**
High pressure and Intensive water flow
Increased coolant efficiency
* Fully-adopted IE3 pumps



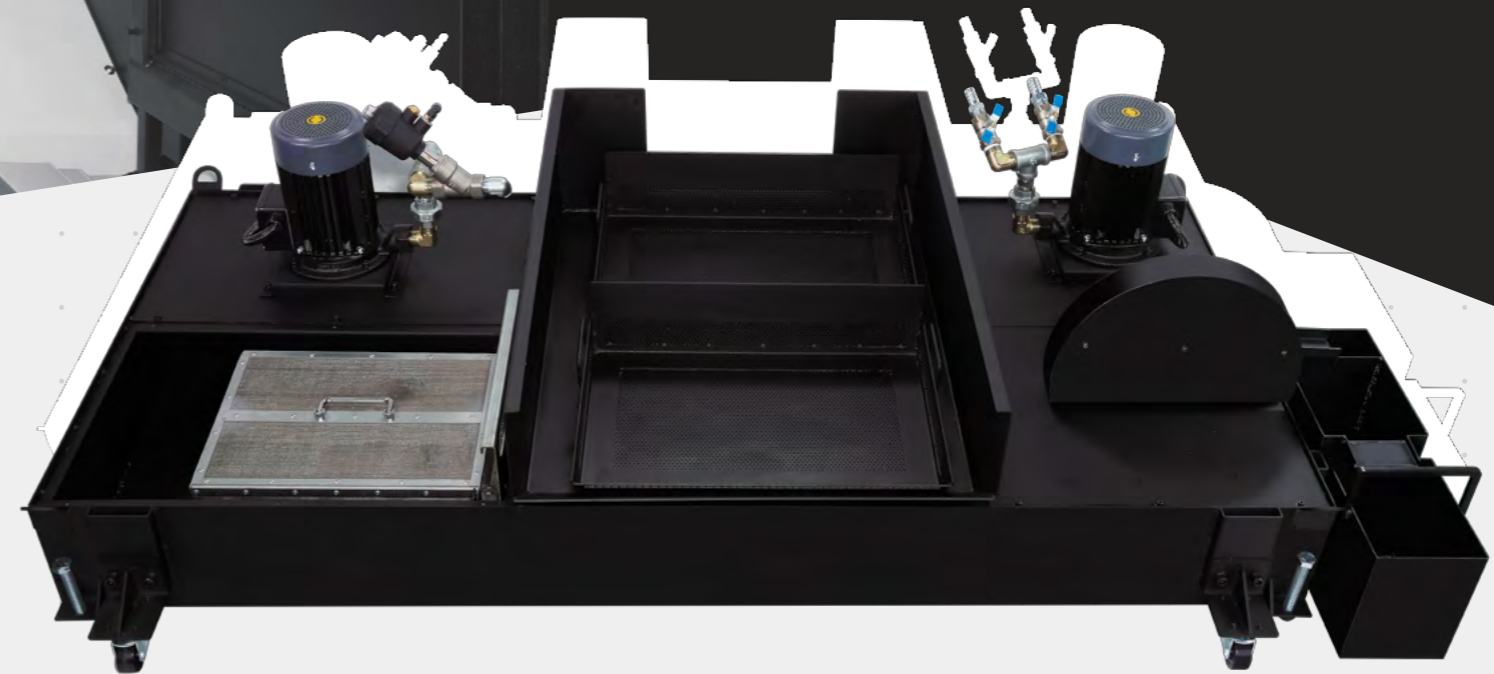
- **Exclusive Design**
Oil skimmer with stainless steel wiper
Simple. Effective
Eco-friendly



- **Multilayer Filter System**
Decreasing chips flushed into coolant tank
Extend pumps service life



- **Independent Coolant Tank of C.T.S. system (Option)**
Excellent filtering system
Integrated Design
Space saving
- **Standard: 20 Bar**
Up to 70 Bar (Option)



Not only emphasize the front look, even the sides are tidied up.

- **User-friendly interface of maintenance**
Concealed pipeline, simple and tidy.

Optional Accessories

- **Flat type chip conveyor**
Options for right exit, according to clients' demands.



• Rotary table



• Rotary and tilting table



• Auto tool length measurement system



• Auto working piece measurement system



Machine Specification	
Travel	
X-Axis	700 mm (27.5")
Y-Axis	400 mm (15.7")
Z-Axis	600 mm (23.5")
Spindle nose to table	150 ~750 mm (5.9 ~ 29.5")
Table	
Table size	800*400 mm (31.5 ~15.7")
Floor to table	858 mm (33.77")
Max. table loading capacity	250 kg (551lbs)
T-slot (number x width x pitch)	3*18*100 mm (3*0.7*3.93")
Spindle center to column	500 mm (19.68")
Feed system	
Rapid traverse speed	X / Y / Z : 48 / 48 / 48 M/min
Feed motor (FANUC)	X / Y : 1.8 kW , Z: 3 kW
Ball screw diameter & Pitch	X / Y / Z : Ø32 mm / 16 mm (1.26/0.63")
Cutting feed rate	1~10,000 mm/min
Type of transmission	Direct Drive
Spindle	
Type of tool shank	BT 40 / CAT 40 / DIN 69871A
Max. spindle speed	10,000 rpm / 12,000 or 15,000 rpm (Option)
Spindle motor	7.5 / 11 kW
Type of transmission	Direct Drive
ATC	
Tool storage capacity	24T / 30T (Option)
ATC type	Arm type
Max. tool diameter	80 mm (3.14")
Without adjacent tool	Ø150 mm (5.9")
Max. tool length	250 mm (9.84")
Max. tool weight	7 kg (14.14lbs)
Tool changing time (Tool to Tool)	1.74 sec
Tool changing time (Chip to Chip)	4.6 sec
Method of tool selection	Random selection
	bi-directional magazine rotation
Special tool management	Yes
Coolant system	
Coolant tank size	200 L
Coolant capacity	130 L/min
Chip Flush capacity	130 L/min
Machine size	
Machine height	2,980 mm
Floor space	1,990 x 2,650 mm (78.3" x 104.3") (STD)
	1,990 x 3,180 mm (78.3" x 125.2") (CTS)
Weight	3,900 kg (8,794 lbs)
Power source	
Electrical power supply	20 kVA / 3PH , 220V 50/60 HZ
Compressed air supply	6.0 kgf/cm ² (85psi) (0.6Mpa)
Controller	
	FANUC / MITSUBISHI / SIEMENS / HEIDENHAIN / FAGOR

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