

NDV SERIES

SERIES

High Speed Vertical Machining Center



AWEA[®]

THE ULTIMATE MACHINING POWER

NDV Series 1060

High Speed Vertical Machining Center

With AWEA's innovative technology, the NDV series is specially designed for high precision parts and mold machining industry. It offers excellent cost performance with the high accuracy and high efficiency machining capacity among the market.

- High speed and high performance direct-drive spindle design.
- Acquiring AICC2 contouring control and machining condition select ensure the smoothy of contour machining to fulfill the high precision mold industry.
- Standard FANUC 0i-MF control with 10.4" LCD
- The rotary control panel and spacious operating area provide an ergonomic working environment.

- The NDV series adopts chain type chip conveyor as standard with high pressure chips flush coolant system, which provide the optimal chip removal capability.

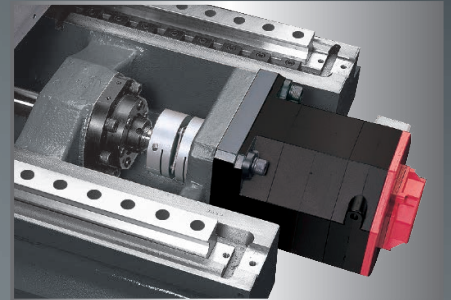


High Precision Axial Feeding System

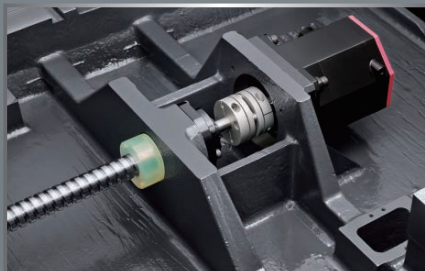
- 3 axes are driven by FANUC series absolute AC direct drive servo motor, which provides powerful thrust and fast acceleration and deceleration movement. It can greatly decrease motor load, and lower thermal expansion effects to minimum, while ensuring optimal performance and precision.
- The high precision twin rotating nut ball screws provide outstanding heavy-duty cutting and ensure precision and long life span.
- The one-piece ball screw motor mount and bearing box allow the cutting pressure to evenly distribute across the casting body, which increases the axial system overall rigidity and prevents the ball screw from deformation.



▶ Twin rotating nut ball screw



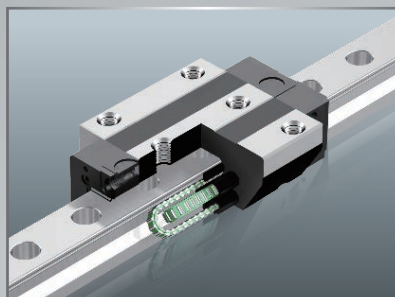
▶ Direct drive servo motor



▶ One-piece motor mount



▶ One-piece bearing box

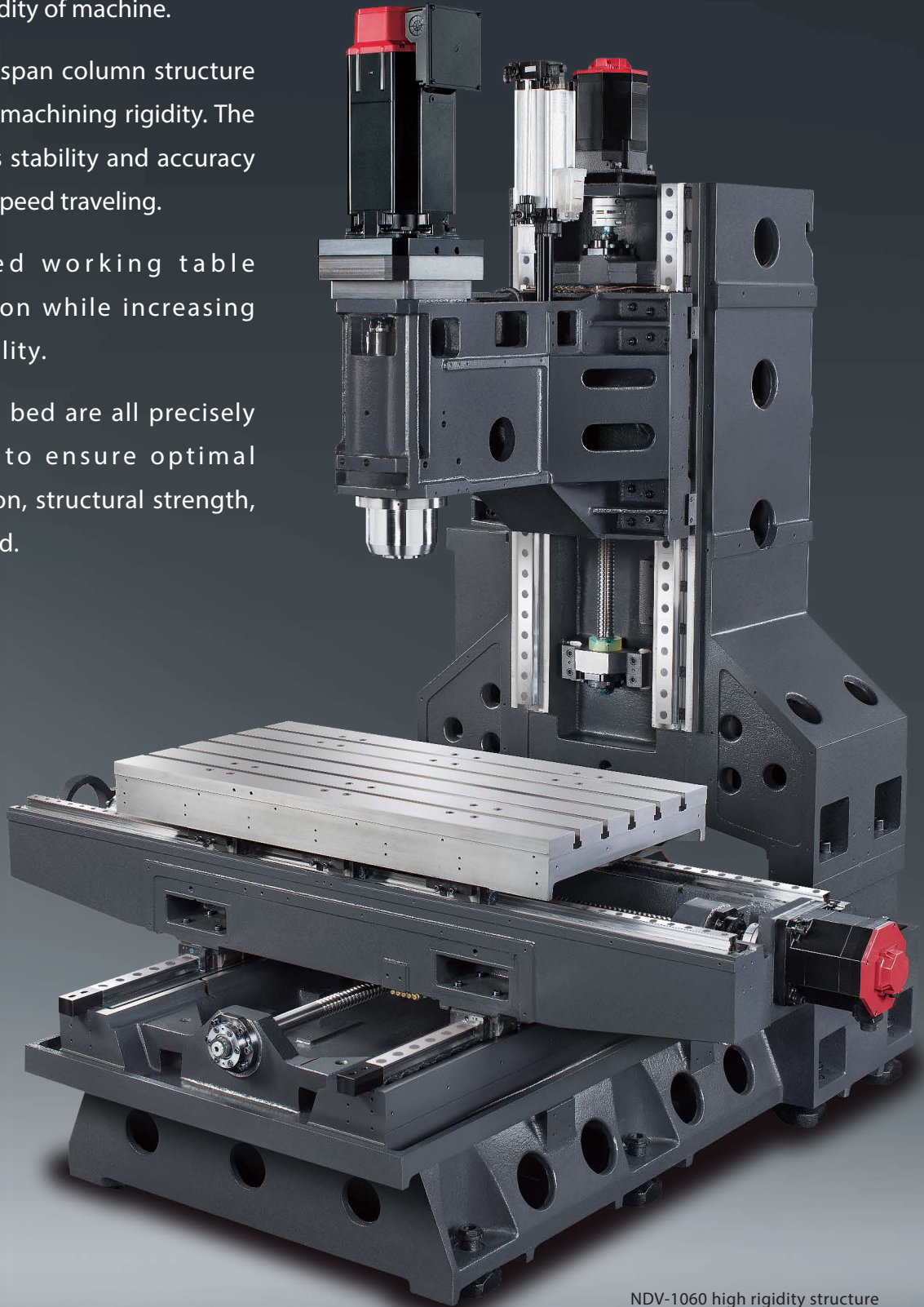


X/Y/Z axes adopt high rigidity roller type linear guide way which combines heavy cutting ability and fast movement with low abrasion ability completely improves rigidity and control of machine.

NDV-1060
(X : 1,060 / Y : 600 / Z : 600 mm)

High Rigidity Structure

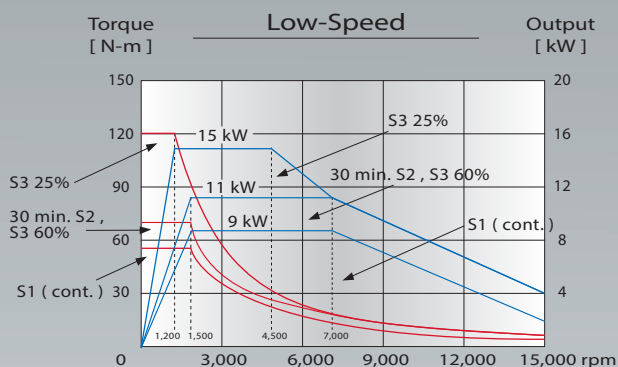
- The Finite Element Method (FEM) provides optimal machine design and light-weight structure advantage while ensuring high rigidity of machine.
- Δ (Delta) Wide span column structure provides optimal machining rigidity. The headstock retains stability and accuracy even under high speed traveling.
- Rib reinforced working table retains vibration while increasing machining stability.
- The column and bed are all precisely hand scraped to ensure optimal assembly precision, structural strength, and balanced load.



High Performance Spindle System

- Direct-drive spindle efficiently separates the heat generated from the motor, which reduces deformation, therefore increasing machining accuracy.

HSK-A63 15,000 rpm Direct-drive Spindle



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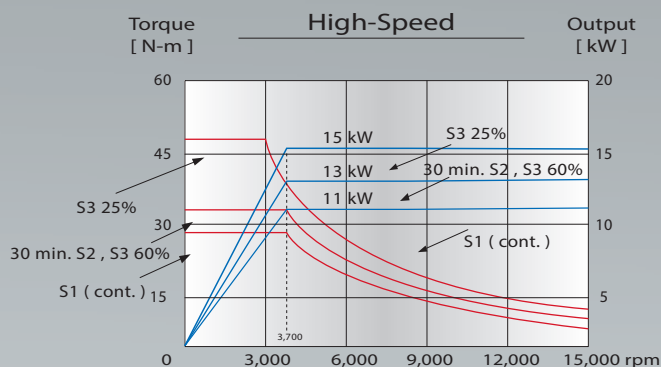
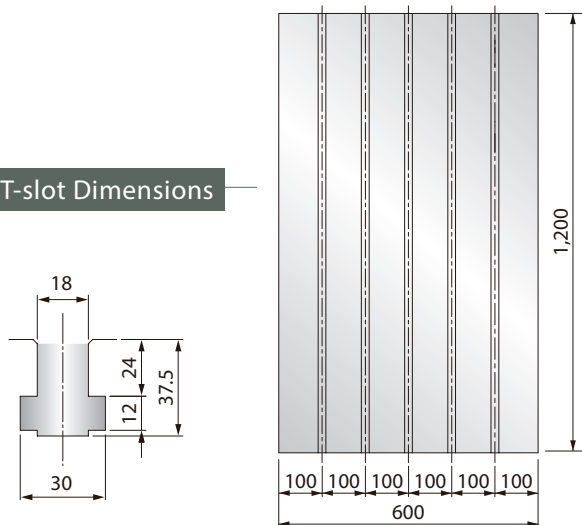
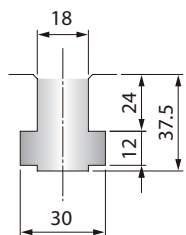


Table Dimensions

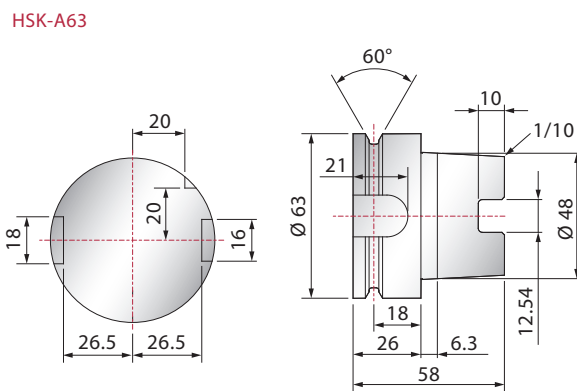


T-slot Dimensions



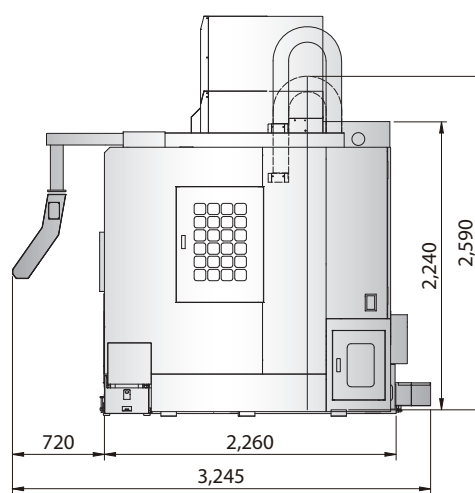
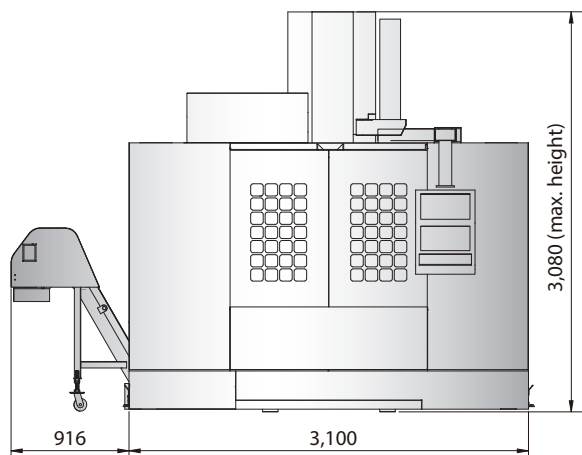
Tool Shank and Pull Stud Dimensions

(Unit : mm)



Machine Dimensions

(Unit : mm)



SPECIFICATIONS

X-axis travel	mm	1,060
Y-axis travel	mm	600
Z-axis travel	mm	600
Distance from spindle center to column	mm	800
Distance from spindle nose to table center	mm	100 ~ 700

WORKING TABLE

Table size (X direction)	mm	1,200
Table size (Y direction)	mm	600
Table load capacity	kg	700

SPINDLE

Spindle taper		HSK-A63
Spindle motor (S1 / S2 / S3)	kW	11 / 13 / 15
Spindle speed	rpm	Direct-drive 15,000

FEED RATE

X/Y/Z axis rapids feed rate	m/min	36 / 36 / 24
Cutting feed rate	m/min	1 - 10

TOOL MAGAZINE

Tool magazine capacity	T	without (opt. 24)
Max. tool length	mm	300
Max. tool weight	kg	7
Max. tool diameter / adj. pocket empty	mm	Ø 78 / Ø 150

ACCURACY

Positioning accuracy (JIS B 6338)	mm	± 0.01 / Full Travel
Positioning accuracy (VDI 3441)	mm	P ≤ 0.01
Repeatability (JIS B 6338)	mm	± 0.002
Repeatability (VDI 3441)	mm	Ps ≤ 0.007

GENERAL

Control system		FANUC 0i - MF
Pneumatic pressure requirement	kg/cm ²	6
Power requirement	kVA	30
Coolant tank capacity	liter	420
Machine weight	kg	7,200

Standard Accessories

- AICC 2 / 400 blocks look ahead / Machining condition select / Nano smoothy machining
- Spindle air curtain
- Coolant nozzle around spindle
- Spindle cooling system
- Gravity axis anti-drop function
- Chips flush coolant system
- Chain type chip conveyor
- Coolant system with pump and tank
- Centralized automatic lubricating system
- Transformer
- Fully enclosed splash guard w/ roof
- Alarm light
- Heat exchanger for electrical cabinet
- Oil skimmer
- Automatic power-off system
- Air /water gun system
- Leveling bolts & pads
- Tool kits

Optional Accessories

- X / Y / Z axes optical linear scale
- CNC rotary table
- 24 T tool magazine
- Auto. tool length measurement
- Auto. work-piece measurement
- AC cooler for electrical cabinet

Specifications are subject to change without notice.

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