

NEW COMPACT, SIMULTANEOUS 5-AXIS MACHINING CENTER
FOR HIGH-SPEED MACHINING

DVF 5000 2nd Gen.



NEW **DVF 5000** 2nd Gen.

DVF 5000^{2nd} generation provides significantly improved accuracy and higher productivity for simultaneous 5 axis machining compared to the previous model. The machine has stable bed structure/units and the top level cooling system for long-term base high accuracy condition. Its integrated automation, AWC(Auto Workpiece Changer) and Round Magazine provide "easy to make" automation solutions and enable to accelerate customer return on investment.

From small high precision medical parts to medium-sized automobile, aerospace and semiconductor parts, it is possible to cover various applications for both AL die-cast high-speed light cutting and titanium, inconel, Co-Cr difficult-to-cut machining with DVF's high rigidity, high speed spindle and rigid column/table structure.

CONTENTS

Product Overview	Basic Information	Detailed Information	Customer Support Service
	04 Basic Structure	08 Standard / Optional Specifications	23 Customer Support and Services
	05 Spindle Specifications	10 Peripheral Equipment	23 Global Network
	06 Magazine	11 AWC Automation	
	07 Cooling & Thermal Compensation	12 AWC External Dimensions	
		15 CUFOS	
		17 Conveninet Operation	
		19 Power Torque	
		20 External Dimensions	
		21 Working Range	
		22 Machine Specifications	



**FAST & PRECISE 5-AXIS
EXCEEDS EXPECTATIONS**



**FURTHER INCREASED
MACHINING CAPACITY**



**EASY ACCESS,
EASIER OPERATION**



- 15000, 20000 r/min high speed spindle
- Tool change time(C-T-C) 3.8s, 28% faster than previous model
- Increased X/Y/Z-axis rapid traverse speed & acc./dec.
- Cooling functions as std. on spindle, motor/ LM guide/ball screw(X/Y/Z), C-axis table motor
- Integrated thermal compensation systems for spindle and structure
- Ø630mm dia. 2-axis tilting table, 26% increased compared to previous model
- Max. Ø600 x H500mm machining area, 32% increased compared to previous model
- Max. 400kg table load capacity with stable table support structure
- X/Y/Z axis travel distance 650/520/480mm, up to 20% increased compared to previous model
- Easy setup of workpieces with 580mm distance between operator and table center
- Easy tool exchange by placing the tool magazine door on the front and applying a tool removal device (Auto Kicking Device)
- Improved chip disposal capability with enhanced coolant flood & flushing functions
- Grease lubrication system
- Compact integrated automation system(AWC)



BASIC STRUCTURE

Roller LM guideways on X/Y/Z axes and 0.001 deg. High accuracy B/C axis get higher accuracy and structural stability.

Table size

Ø630 x 450 mm
(Ø24.8 inch x 17.7 inch)

Maximum workpiece size

Ø600 x 500 mm
(Ø23.6 inch x 19.7 inch)

Maximum workpiece weight

400 kg
(881.8 lbs)



Travel distance

X/Y/Z

650 / 520 / 480 mm
(25.6/20.5/18.9 inch)

B/C

140(-30~+110) / **360** deg

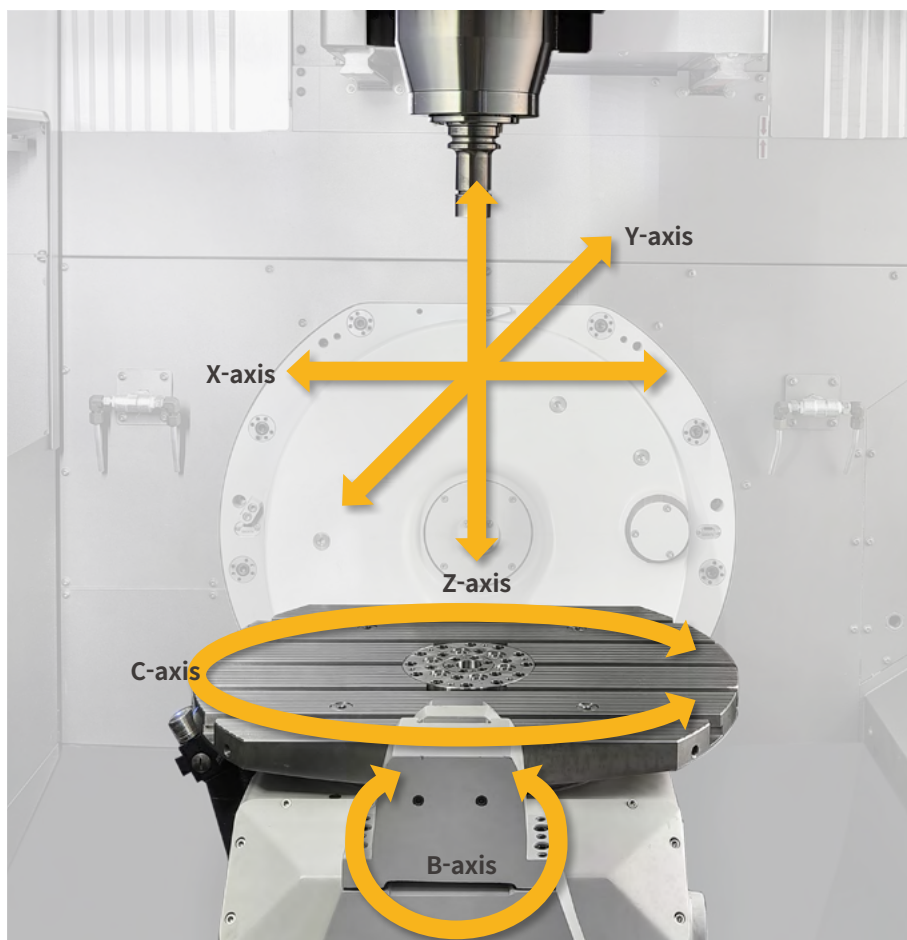
Rapid traverse rate

X/Y/Z

42 / 42 / 42 m/min
(1653.5/1653.5/1653.5 ipm)

B/C

25 / 25 r/min



SPINDLE SPECIFICATIONS

Providing stable machining performance with a high-speed, direct-coupled or a built-in spindle.

- Oil cooling spindle thermal compensation as standard
- Tool clamp confirmation sensor
- FANUC, HEIDENHAIN, SIEMENS controls

15000 r/min, Direct-coupled

18.5 kW / 118 N·m
(24.8 Hp / 87.1 ft-lbs)

(FANUC)

17 kW / 108 N·m
(22.8 Hp / 79.7 ft-lbs)

(HEIDENHAIN)

16.5 kW / 79 N·m
(22.1 Hp / 58.3 ft-lbs)

(SIEMENS)

15000 r/min High Torque Built-in

30 kW / 230 N·m
(40.2 Hp / 169.7 ft-lbs)

(FANUC / HEIDENHAIN / SIEMENS)

20000 r/min, High Speed Built-in

37 kW / 221 N·m
(49.6 Hp / 163.1 ft-lbs)

(FANUC)

30 kW / 155 N·m
(40.2 Hp / 114.4 ft-lbs)

(HEIDENHAIN / SIEMENS)



MAGAZINE SPECIFICATIONS

Servo tool magazine delivers high productivity and reliability.

Tool type

ISO #40

Tool capacity

Drum type

30 {40 OPTION}

Chain type

{60/120 OPTION}

Maximum tool diameter

Continuous

75 mm (3.0 inch)

W/O Adjacent tools

125 mm (4.9 inch)

Maximum tool length

300 mm
(11.8 inch)

Maximum tool weight

8 kg (17.6 lb)

Tool-to-tool

T-T-T

1.3 sec

C-T-C

3.8 sec

High-capacity tool Handling system for VMC with improved space efficiency and tool change time

Description		Round tool magazine
Available Model	-	DVF series
Max. Tool Diameter	mm	80(cont.), 125 (Adjacen Pots Empty)
Max. Tool Length	mm	300
Tool Storage Capacity	ea	204/252/300
Max. Tool Weight	kg	8
Max. Tool Moment	N·m	5.88
Max. Tool Searching Time	sec	26
Pull Out	ea	5
Waiting Pot	ea	4
Tool	-	Verticality
Structure	-	Round Type
Control	-	Built-in
Carrier Driving Mechanism	U-Axis	- Servo Motor & Rack / Pinion w / LMG
	V-Axis	- Servo Motor & Ball Screw w / LMG
	R-Axis	- Servo Motor & Gear
Dimension	mm	1875 x 2069

Features

- Optimized solution for high-capacity vertical tool storage and handling
- Enhanced tool change time through Multi-Waiting Pot Station with multiple next tool places
- Up to 5 tools can be taken out and brought in simultaneously
- Easy installation for local environment
- Large touch screen provided
- Servo motor applied to all axis
- Built-in controller

120 tools



40 tools



Tool magazine door at front side helps easy tooling setup and operation.



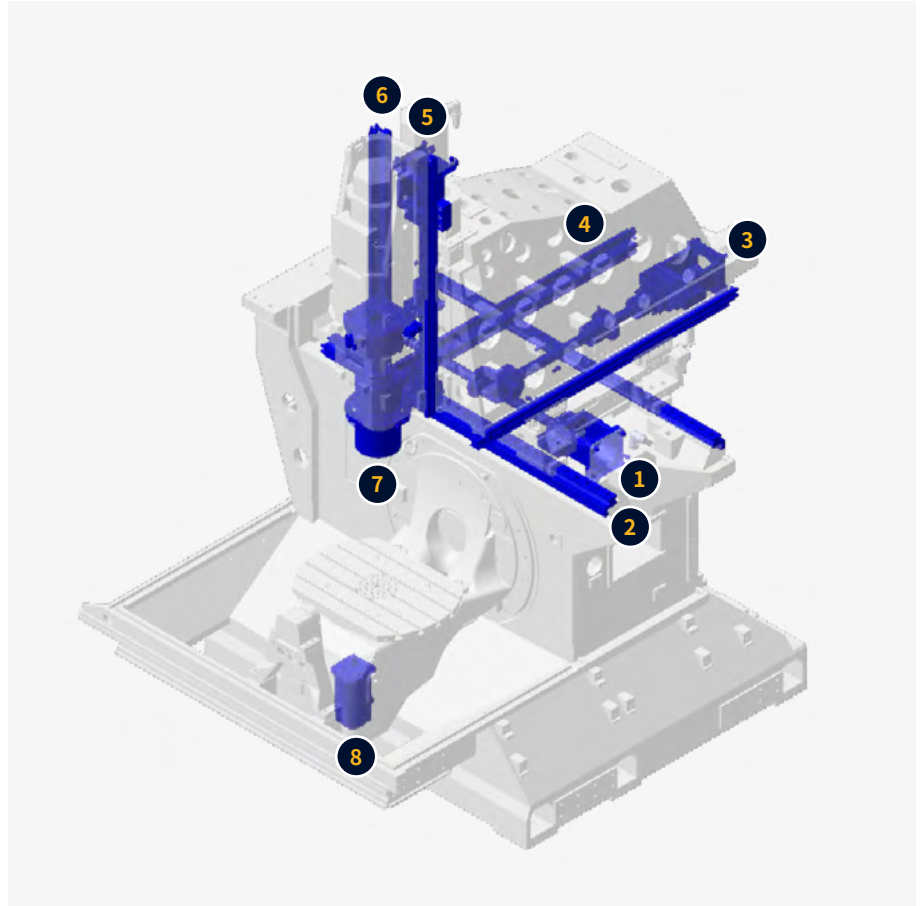
Round tool magazine



COOLING & THERMAL COMPENSATION CONCEPT TO ACHIEVE HIGH ACCURACIES OVER LONG MACHINING RUN

X/Y/Z-axis Cooling (Guideways, Ball screw, Motor) & Cooled motor plate in C axis

- ❶ Cooled motor plate in X axis & ball screw shaft
- ❷ Cooled X axis linear guideways
- ❸ Cooled motor plate in Y axis & ball screw shaft
- ❹ Cooled Y axis linear guideways
- ❺ Cooled motor plate in Z axis & ball screw shaft
- ❻ Cooled Z axis linear guideways
- ❼ Cooled Spindle bearing & Motor plate
- ❽ Cooled motor plate in C axis



Thermal compensation function for Spindle and Structure as standard

- Real-time thermal displacement measuring and compensation through active thermal sensors
- 8 sensors are located



STANDARD | OPTIONAL SPECIFICATIONS

A range of options is available to suit individual requirements.

Description			DVF 5000 ^{2nd}
Spindle	12000 r/min(Direct-coupled)		X
	12000 r/min(Built-in)		X
	15000 r/min(Direct-coupled)		●
	15000 r/min(Built-in)		○
	18000 r/min		X
	20000 r/min		○
Magazine	Tool storage capacity	30 ea	●
		40 ea	○
		60 ea	○
		120 ea	○
		175 ea	X
		204 ea	○
	Multi-Level round	252 ea	○
		300 ea	○
		120 ea	X
		150 ea	X
		210 ea	X
		258 ea	X
Tool type(shank)	BIG-PLUS BT40		●
	BIG-PLUS BT50		X
	CAT/DIN40/HSK63		○
	CAT/DIN50/HSK A100		X
	HSK T63		X
	HSK T100		X
Coolant	FLOOD&FLUSHING		●
	1.5Kw, 0.2Mpa		X
	2.5kW,0.2MPa		○
	TSC		○
	2.9kW, 2.0Mpa, Cyclone filter		○
	2.9kW,3.0MPa,Cyclone filter		○
Chip disposal	OIL SKIMMER		○
	Coolant level switch		○
	Coolant chiller		○
	Chip pan		○
	Chip conveyor	Hinge+scraper belt type/Left side	○
		Hinge+scraper belt type/Lear side	X
		Scraper Drum filter type/Left side	○
		Scraper Drum filter type/Lear side	X
		Hinged Drum filter type/Lear side	X
		CCS II / Scraper Drum	X
	Chip bucket	CCS II / Hinge Drum	X
		folklift type, 300L	○
	Air blower	Rotation type, 300L	○
			○
	Air gun		○
			○
	Coolant gun		○
			○
	Paper filter		○
			○
Rotary table	Mist collector		○
	Water soluble		○
	None water soluble		○
	B-axis/C-axis		-
	Air clamping		X
	Rotary joint		○
Accuracy	Hyd. Fixture line thru table center(Max. 4 port)		○
	Hyd. Fixture line thru table center(Max. 6 port)		○
	Fixture interface		X
	2AB		○
	2AB+GAP SENSING(5PORT)		○
	Structure Smart Thermal Control		○
Measurment	Spindle		●
	Structure		●
	Linear scale		○
	Rotary encoder		○
	S/W ONLY		●
	IKC-READY	RENISHAW (RM-QE)+S/W	○
		HEIDENHAIN(SE660)+S/W	○
		BLUM(RC66)+S/W	○
		NONE	○
		RTS RENISHAW	○
		TT460 HEIDENHAIN	○
	Auto tool length measurement	ZX SPEED BLUM	○
		NC4F RENISHAW	○
		LC50 BLUM	○
		NC4F HYBRID RENISHAW	X
	Auto workpiece measurement	LC52 BLUM	X
		NONE	●
		RMP60 RENISHAW	○
		RMP600 RENISHAW	○
	DATUM BALL FOR IKC	TS460 HEIDENHAIN	○
		TC60 BLUM	○
	MASTER TOOL		○
	SINGLE LEVEL AWC		○
	MULTI LEVEL AWC		○
Others	APC		○
	RPS		X
	LPS		X
	AUTO DOOR		X
	With safety edge		○
	LED work light		○
	Signal tower		○
	Electric cabinet cooling	Fan cooler	○
		A/C(Air Conditioner)	○
	EZ WORK		○
	EZ GUIDE 1		○
Option	Automatic power off		○
	Tool load monitornig		○
	BK9		○
	SPIN WINDOW		○
	TSC		○
			○

* Please contact your DN Solutions representative for detailed machine information.

* When using a semi-synthetic type or synthetic type, contact our sales representative or service center in advance.

● Standard ○ Optional X N/A

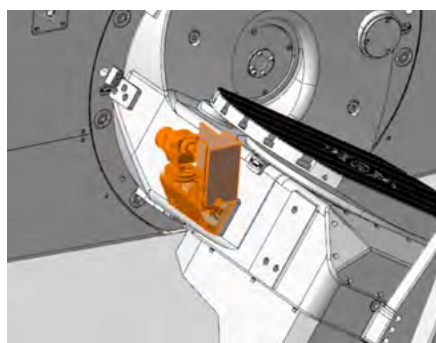
PERIPHERAL EQUIPMENT

Automatic Workpiece Measurement

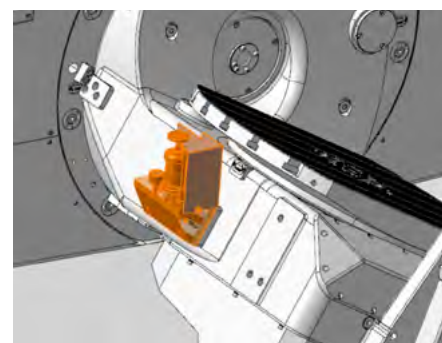


Touch probe : RMP60(Renishaw), TC-60(Blum)

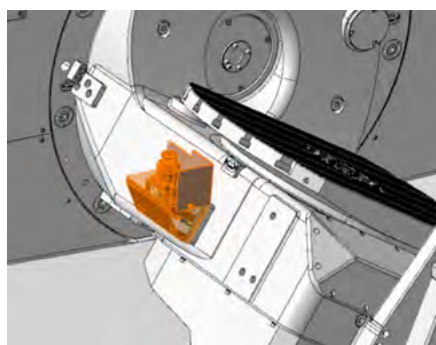
Automatic Tool Measurement



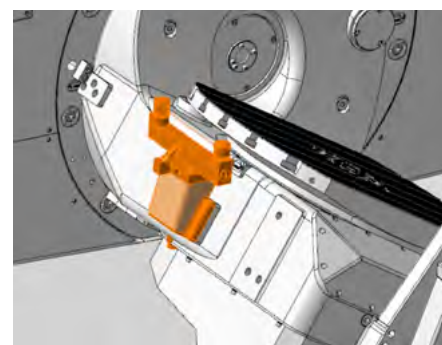
Renishaw(RTS)



Heidenhain(TT460)



Blum(ZX Speed)



Renishaw(NC4F)

Touch type

RENISHAW

RTS

HEIDENHAIN

TT460

BLUM

ZX SPEED

Laser type

RENISHAW

NC4F

BLUM

LC50

Intelligent Kinematic Compensation for 5-axis

For high-accuracy 5-axis machining, the Intelligent Kinematic Compensation function is recommended. This function minimizes errors in complex 5-axis machining applications by maintaining the tool point in the correct position relative to the workpiece.

In order to use this function, the following optional items are required :

SOFTWARE



FANUC NC ; IKC



HEIDENHAIN NC ; IKC

RECEIVER Recommended Option



TOUCH PROBE

Recommended Option



DATUM BALL

Recommended Option



AUTO TOOL MEASUREMENT

Recommended Option



MASTER TOOL

Recommended Option



AWC

A compact loading/unloading automation capable of mounting up to 40 workpieces.

AWC

A compact automation system providing fast, reliable and high productivity workpiece change capabilities.



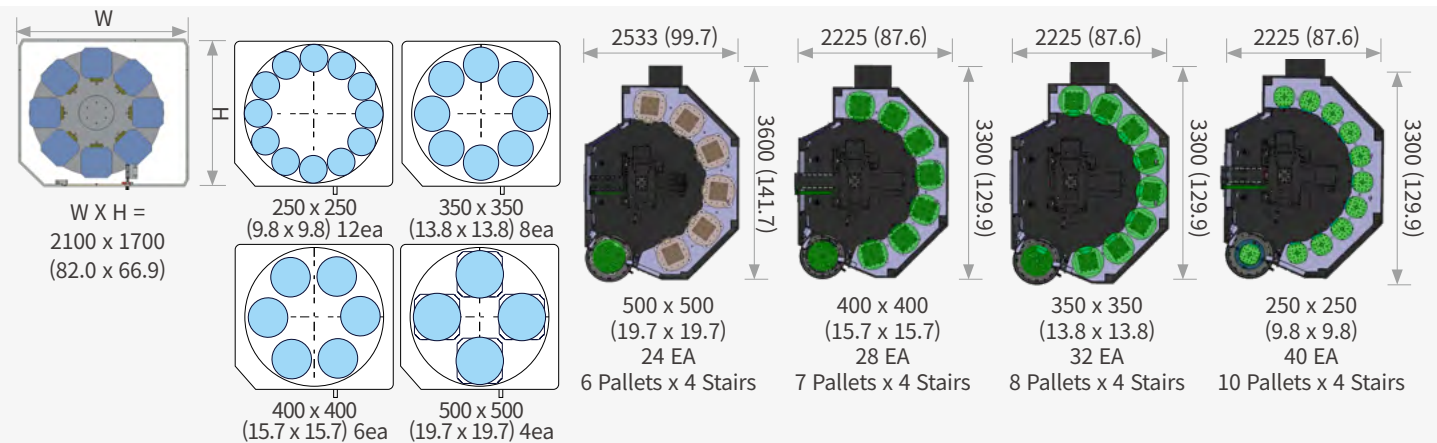
Multi-AWC

Automation solution capable of mounting up to 40 workpieces.

Description	Pallet size	No. of pallets	Max. workpiece dia. x height	Max. workpiece weight
AWC	250x250 mm (9.8x9.8 inch)	12ea	Ø300x350 mm (11.8x13.8 inch)	130 kg (286.6 lb)
	350x350 mm (13.8x13.8 inch)	8ea	Ø400x350 mm (15.7x13.8 inch)	300 kg (661.4 lb)
	400x400mm (15.7x15.7 inch)	6ea	Ø450x350 mm (17.7x13.8 inch)	300 kg (661.4 lb)
	500x500mm (19.7x19.7 inch)	4ea	Ø550x350 mm (21.7x13.8 inch)	300 kg (661.4 lb)
Multi-AWC	Ø160 mm (6.3 inch) (HSK A100 Tool Type)	40ea	Ø350x315mm (13.8 x 12.4 inch)	80 kg (176.4 lb)
	250x250mm (9.8x9.8 inch)	40ea	Ø300x350 mm (11.8x13.8 inch)	130 kg (286.6 lb)
	350x350mm (13.8x13.8 inch)	32ea	Ø400x350 mm (15.7x13.8 inch)	300 kg (661.4 lb)
	400x400mm (15.7x15.7 inch)	28ea	Ø450x350 mm (17.7x13.8 inch)	300 kg (661.4 lb)
	500x500mm (19.7x19.7 inch)	24ea	Ø550x350 mm (21.7x13.8 inch)	300 kg (661.4 lb)

Pallet storage-table configuration

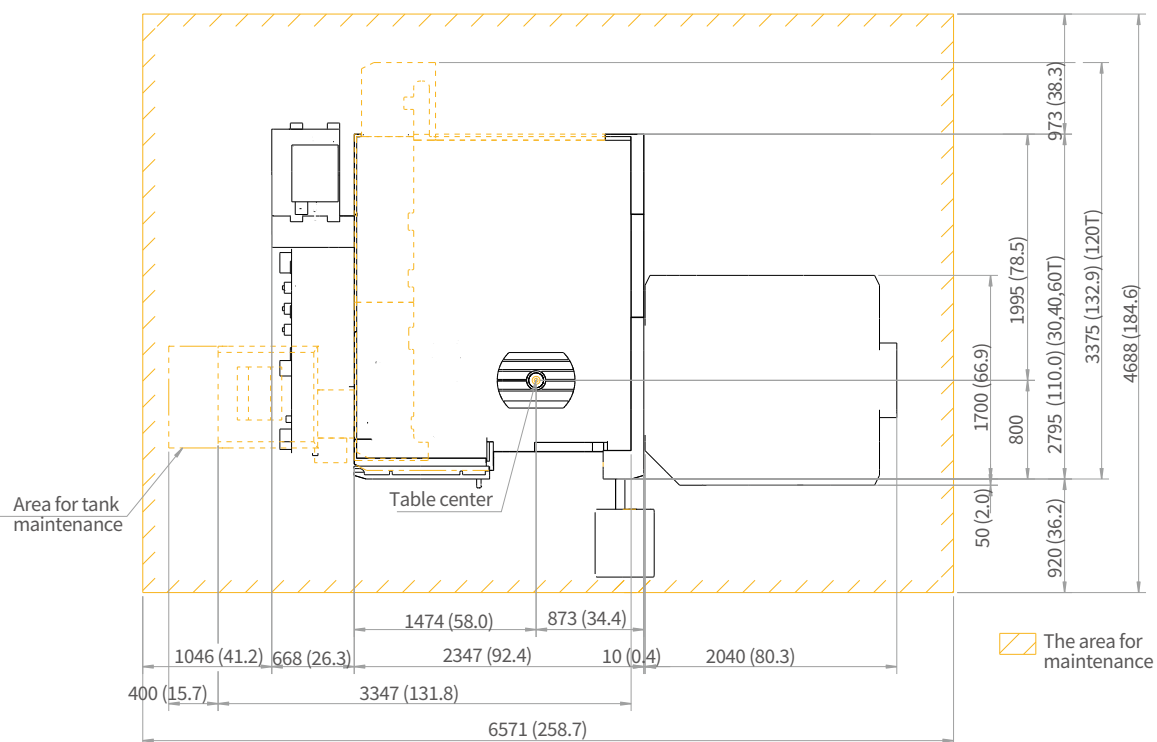
unit : mm (inch)



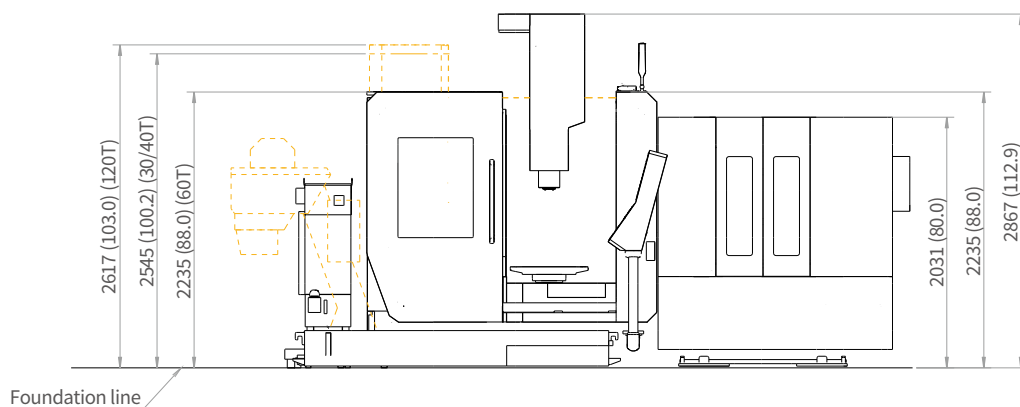
S-AWC DIMENSIONS

Units : mm (inch)

TOP



FRONT



24P

Units : mm (inch)

Area for tank maintenance

Table center

400 (15.7) 1046 (41.2) 668 (26.3) 3347 (131.8) 1474 (58.0) 2347 (92.4) 873 (34.4) 10 (0.4) 2533 (99.7) 7064 (278.1)

841 (33.1) 920 (36.2) 800 (31.5) 2795 (110.0) (30,40,60T) 2396 (94.3) 1995 (78.5) 973 (38.3) 3375 (132.9) (120T) 4688 (184.6)

Legend: The area for maintenance

Technical drawing of the machine's side profile. The drawing shows the machine's structure with various components labeled. Dimensions are provided for the overall height and the height of the main body. The foundation line is indicated at the bottom.

Dimensions (mm):

- Overall height: 2617 (103.0) (120T)
- Height to top of main body: 2545 (100.2) (30/40T)
- Height to top of main body (alternative): 2235 (88.0) (60T)
- Height to top of main body (alternative): 2235 (88.0)
- Height to top of main body (alternative): 2867 (112.9)
- Height to top of main body (alternative): 3185 (125.4)

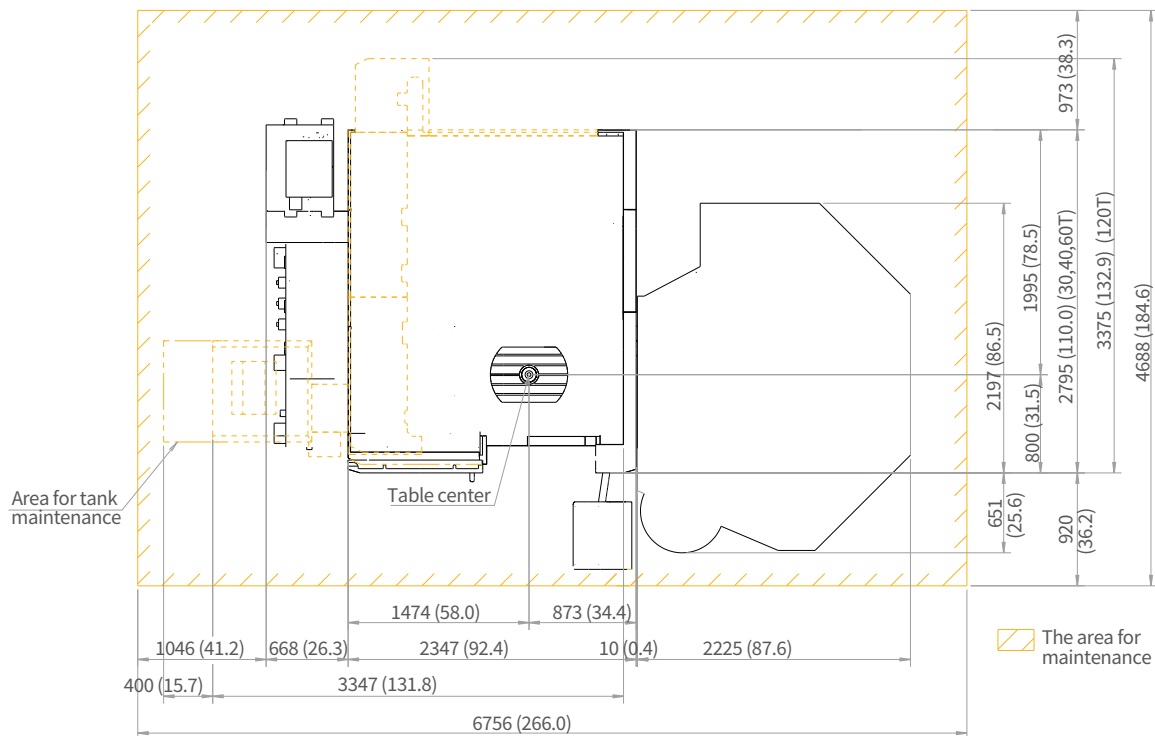
Foundation line

M-AWC DIMENSIONS

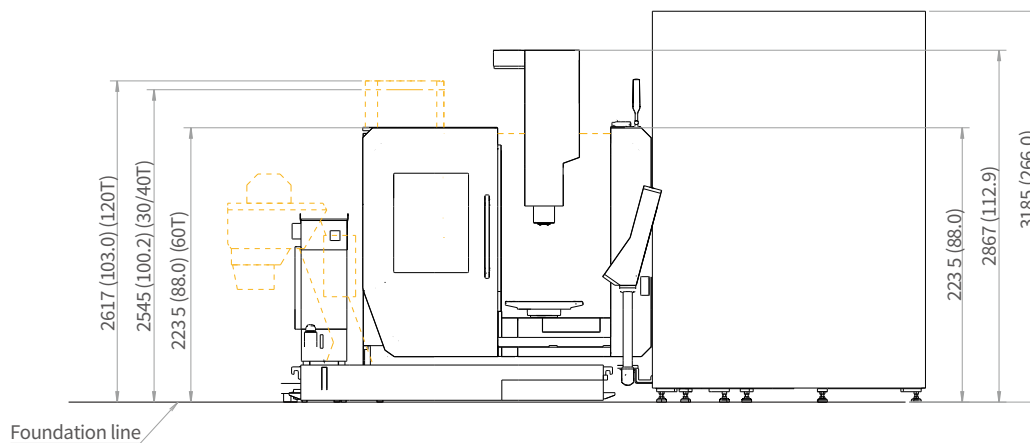
28 / 32 / 40P

Units : mm (inch)

TOP



FRONT



CUSTOMIZED USER-FRIENDLY FLEXIBLE OPERATION SOLUTIONS

CUFOS is a PC based control system created by DN Solutions. equipped with intuitive user-friendly functions such as a smart phone screen and easy customization, CUFOS helps to improve operational efficiency and performance for the user.

FEATURES

19 inch TOUCHSCREEN

- Program memory : 40GB
- App-based Interface like smart phone, tablet PC

EASY PROGRAMMING

- Sketch cycle :
Gear skiving, Gear hobbing, Polygon turning (continuously being added...)
- SSD data server : Program file sharing/managing (CF card/USB/External PC)

EASY SET-UP/OPERATION

- Tool management
- CPS(collision protection system)
- Manual viewer
- File manager & PDF viewer

EASY MAINTENANCE

- Status monitor
- Alarm guidance
- Maintenance manager

CUFOS



CUFOS INTERFACE

User-friendly screen controls

CUFOS, the PC-based control created by DN Solutions, is an integrated system solution using an intuitive 19-inch touchscreen. The system provides a convenient operator interface, a high level of customization and many useful high technology apps.



Supports various apps in three fields—setup, machining and utility

It provides easy configuration by allowing users to add and edit functions on the home screen according to job requirements.

Intuitive operation via touch screen

Simple customization is available for specific work environments



CUFOS Open CNC

CUFOS operation for enhanced productivity

The CUFOS operating system is based upon the integration of all aspects of the manufacturing process, including setting, machining and maintenance. It consolidates up-to-date software technology created by DN Solutions, to improve overall efficiency and productivity. Using the system's modular construction, each function can be easily integrated with external PC software systems and applications, such as CAM and Tool Data systems.



CUFOS

programming

set up

tool data

machining

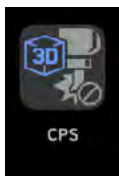
maintenance



PC software



Applications

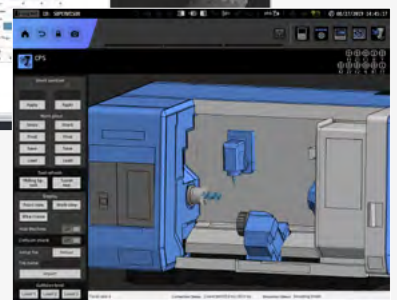
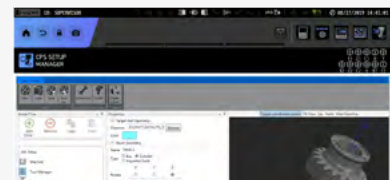
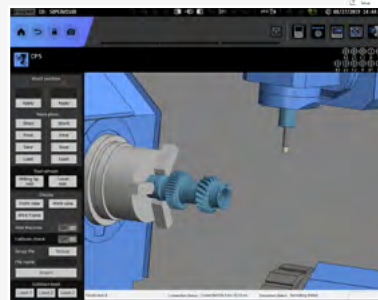


CPS (Collision Protection System)

A function to prevent real time collision in Auto/Manual mode between the tool and equipment / machine elements inside the working area.



Use the Setup Manager with the CPS app to build up the machine model, and add tool, workpiece and workholding equipment details.



CONVENIENT OPERATION

SIEMENS SINUMERIK ONE

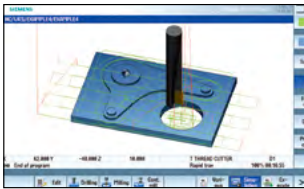
Even Faster & Easier processing + 21.5" screen

All programming, set-up, actual machining and verification process are getting easier and faster. Especially, intuitive conversational programming guidance with 3D UI(user interface) on 21.5" large touch screen is helpful for unskilled engineers.

- 21.5 inch touch screen
- 50% improvement in processing speed (compared to S840D)
- Graphic programming
- PLC-based flexible automation



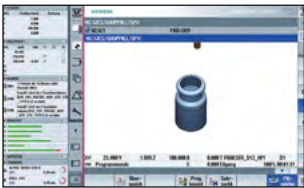
Conversational convenient function



Simulation and machining contour monitoring



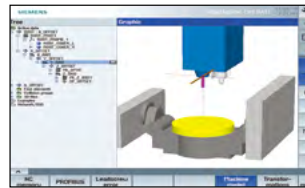
Smart function



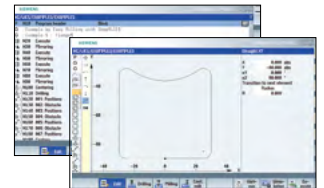
Side screen widget



5-axis kinematic measuring cycles



3D collision avoidance and collision avoidance ECO



Shop mill part programming

NUMERIC CONTROL SPECIFICATIONS

SIEMENS

	Item	Specifications	S-ONE
Controlled axis	Controlled axes		5 axes (X,Y,Z,C,B)
	Simultaneously controlled axes		5 axes
Data input/output	Memory card input/output	(Local drive)	●
	USB memory input/output		●
Interface function	Ethernet	(X130)	●
Operation	Execution from External Storage(EES)		○
	On network drive	(without EES option, Extcall)	●
Program input	On USB storage medium, e.g. memory stick	(without EES option, Extcall)	●
	Workpiece coordinate system	G54 - G57	●
Interpolation & Feed function	Addition of workpiece coordinate system	G505 - G599	●
	Top surface		○
Programming & Editing function	Look ahead number of block		1000
	monitoring for max. tool speed/ acceleration		○
Operation Guidance Function	Top Surface		○
	Top Speed Plus		○
Setting and display	3D simulation, finished part		●
	Simultaneous recording		●
Network	Measure kinematics		●
	DXF Reader for PC integrated in SINUMERIK Operate		○
Others	ShopMill		●
	EZ Work		●
Others	Operation via a VNC viewer		●
	MTConnect		●
Others	OPCUA		○
	18.5" color display with touch screen		○
Others	21.5" color display with touch screen		●
	CNC user memory	10 MB	●
Others	Max. CNC user memory	28 MB	○
	Collision avoidance (machine, working area)		○
Others	Collision avoidance ECO (machine, working area)		●
	Evaluation of internal drive		○
Others	CNC user memory extend		○
	TOOL ID		○
Others	PMM		○

CONVENIENT OPERATION

HEIDENHAIN TNC7

Visualized, intuitive task support, customized UI

The TNC7 makes machining even easier, for everything from programming to program validation and from machine setup to actual machining. You intuitively operate highly complex applications directly on the touchscreen with various integrated solutions for standard tasks.

TNC7 NEW

- 24 inch touch screen
- 189GB Program memory
- Look-ahead 5000 blocks
- Touch Probe Cycles Graphical Programming

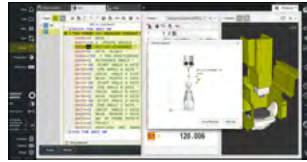


<TNC7>

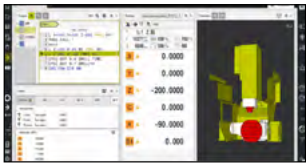
Conversational convenient function



Data are controlled in the folder structure; convenient communication via USB devices



KinematicOpt & KinematicComp (Touch probe cycle for automatic measurement) OPTION



Collision protection system OPTION



Graphic simulation



Various built-in pattern cycles for a wider scope of application (Software standard)



Enhanced collision protection function DCMv2 OPTION



Improved maintenance environment



Highly practical programming and setup based on touch operation

NUMERIC CONTROL SPECIFICATIONS



HEIDENHAIN

	Item	Specifications	TNC7
Controlled axis	Controlled axis		5 axes (X,Y,Z,C,B)
	Simultaneously controlled axis		5 axes
Interface function	Embedded ethernet		●
	USB interface (USB 2.0)		●
Feed function	HEIDENHAIN DNC		○
	Look-ahead	5000 blocks	●
	Adaptive Feed Control		○
Axis compensation	KinematicsOpt	Automatic measurement and optimization of machine kinematics	●
Collision monitoring	Dynamic collision monitoring (DCM)		○
	Dynamic Collision Monitoring v2		○
Network	MT Connect		✱
	Display unit	touch panel	19"
Others	Program memory for NC programs		189GB
	CAD Import		○
	Ext. Tool Management		○
	Active Chatter Control		○
	Model Aided Setup		○
	Opt. Contour Milling		○
	Process Monitoring		○

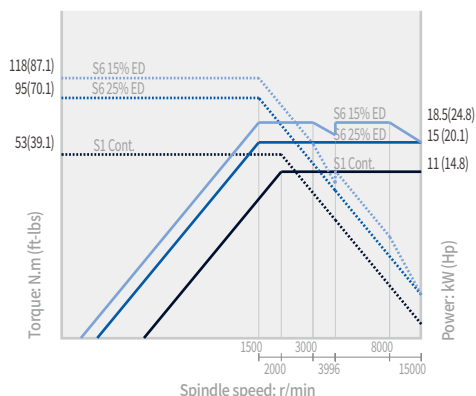
POWER | TORQUE

FANUC

15000r/min Direct

Power 18.5/11 kW (24.8/14.8 Hp)

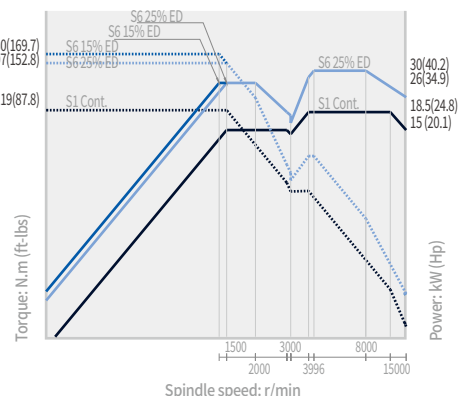
Torque 118 N·m (87.1 ft-lbs)



15000r/min Built in OPTION

Power 30/18.5 kW (40.2/24.8 Hp)

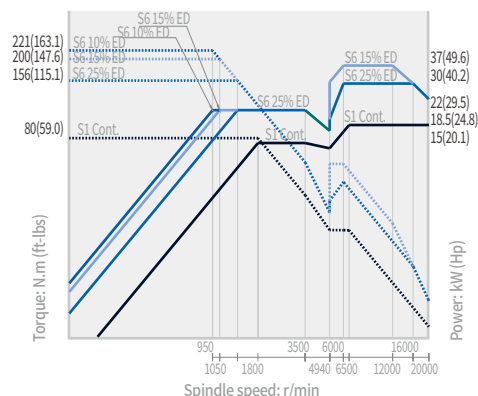
Torque 230 N·m (169.7 ft-lbs)



20000r/min Built in OPTION

Power 37/18.5 kW (49.6/24.8 Hp)

Torque 221 N·m (163.1 ft-lbs)

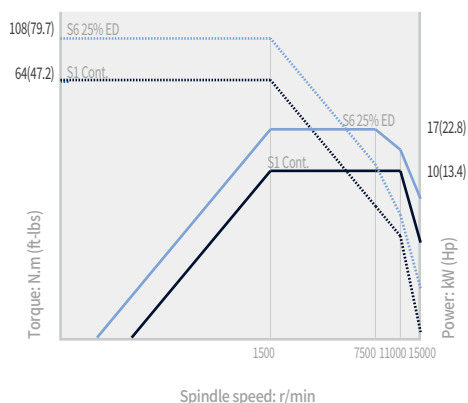


HEIDENHAIN

15000r/min Direct

Power 17/10 kW (22.8/13.4 Hp)

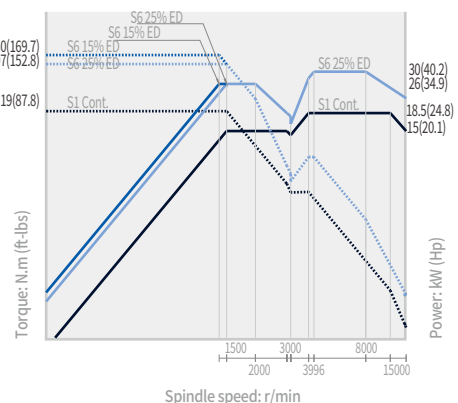
Torque 108 N·m (79.7 ft-lbs)



15000r/min Built in OPTION

Power 30/18.5 kW (40.2/24.8 Hp)

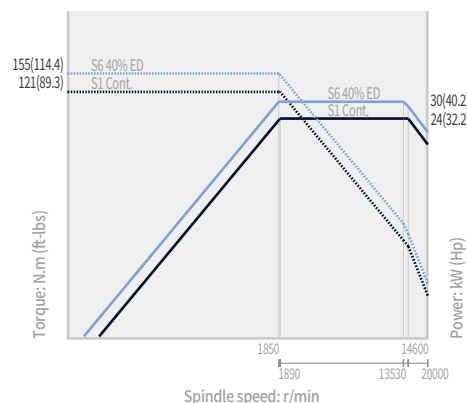
Torque 230 N·m (169.7 ft-lbs)



20000r/min Built in OPTION

Power 30/24 kW (42.9/32.2 Hp)

Torque 155 N·m (114.4 ft-lbs)

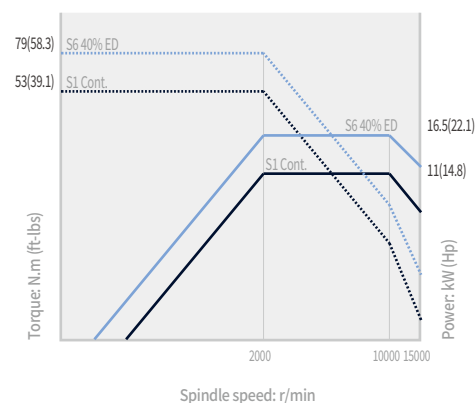


SIEMENS

15000r/min Direct

Power 16.5/11 kW (22.1/14.8 Hp)

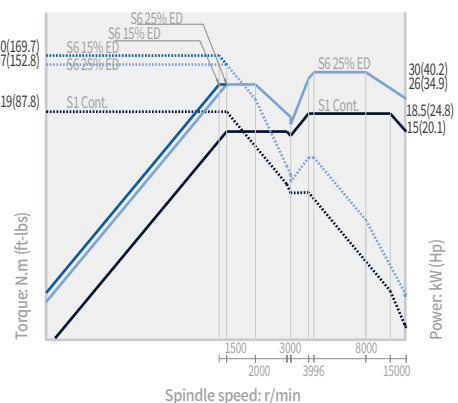
Torque 79 N·m (58.3 ft-lbs)



15000r/min Built in OPTION

Power 30/18.5 kW (40.2/24.8 Hp)

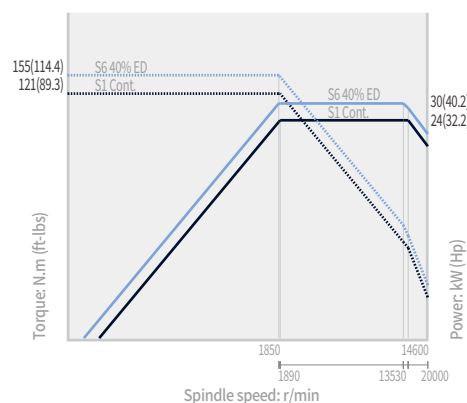
Torque 230 N·m (169.7 ft-lbs)



20000r/min Built in OPTION

Power 30/24 kW (42.9/32.2 Hp)

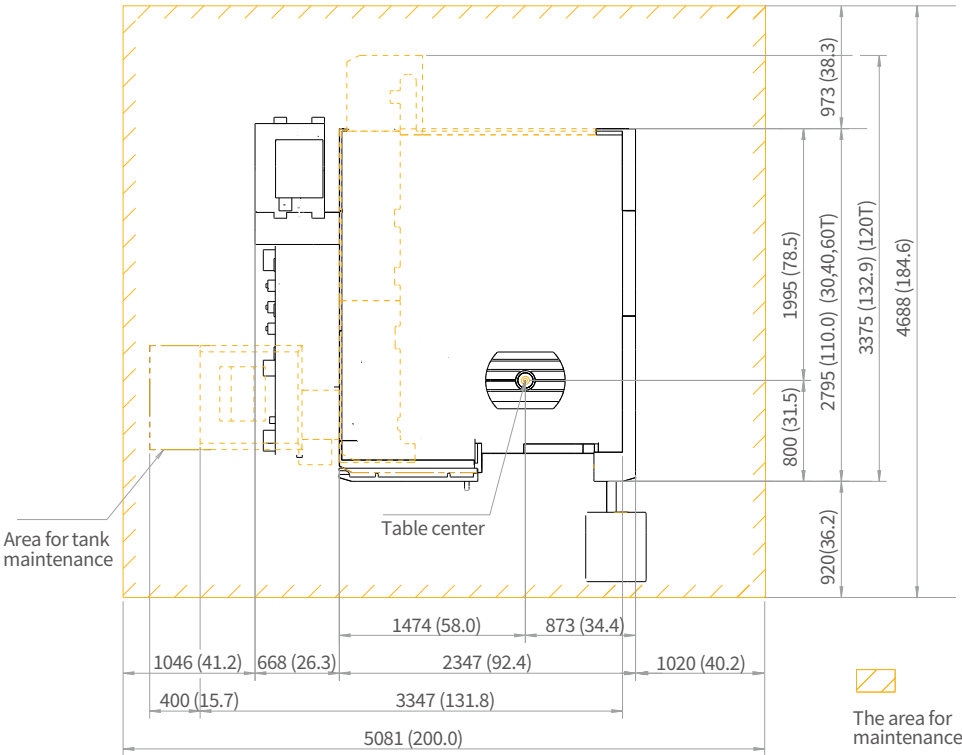
Torque 155 N·m (114.4 ft-lbs)



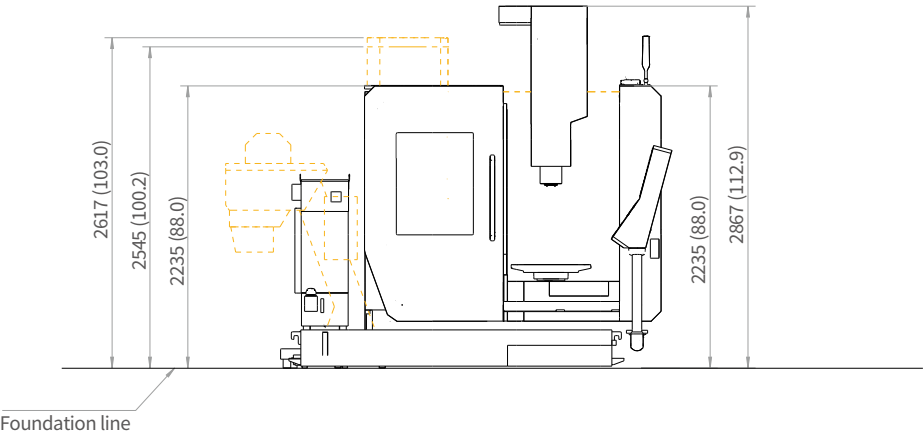
EXTERNAL DIMENSIONS

Units : mm (inch)

TOP



FRONT

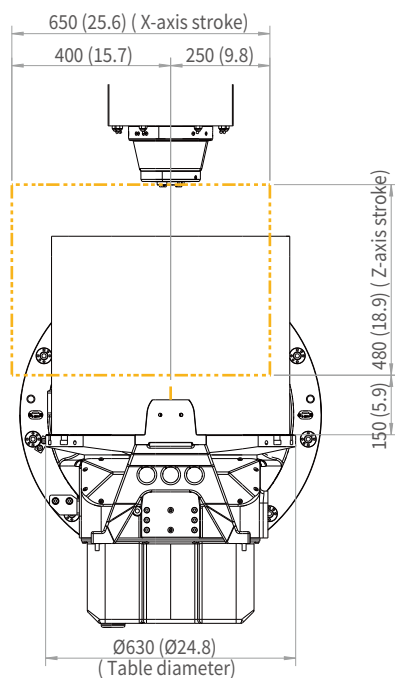


*Some peripheral equipment can be placed in other areas.

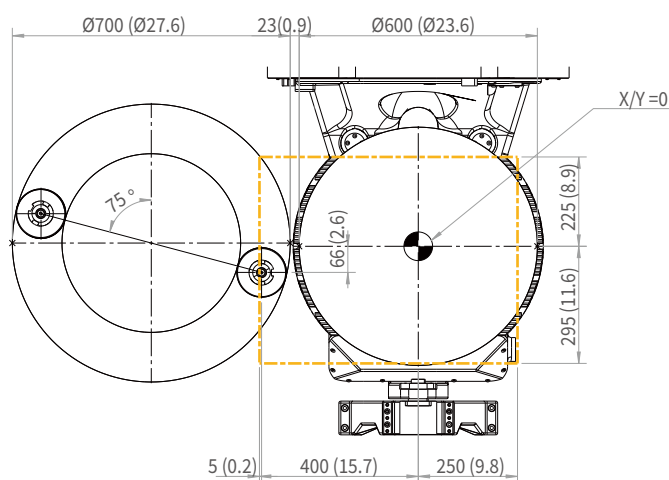
WORKING RANGE

Units : mm (inch)

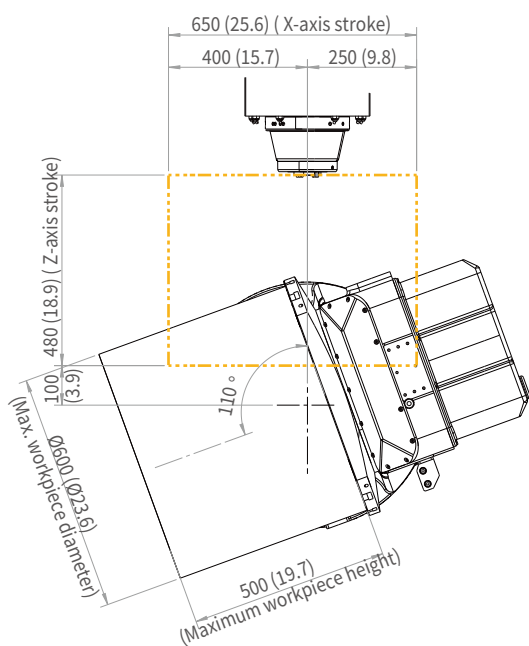
Front view



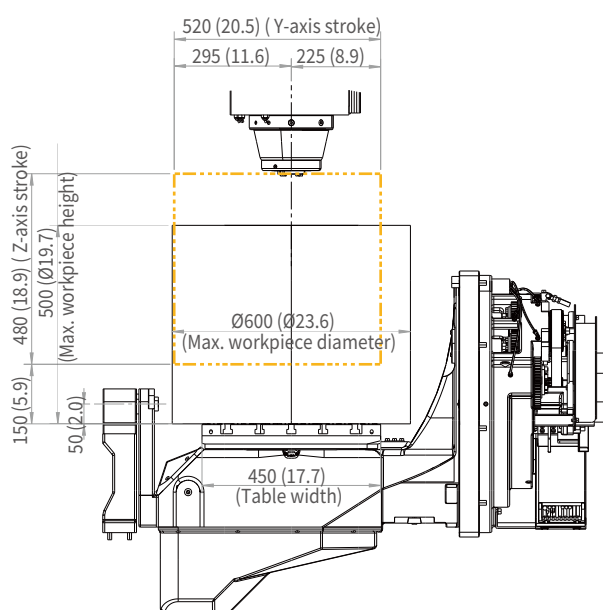
Front view



Front view



Right view



MACHINE SPECIFICATIONS

Description		Unit	DVF 5000 ^{2nd}		
Travel distance	X axis	mm (inch)	650 (25.6)		
	Y axis	mm (inch)	520 (20.5)		
	Z axis	mm (inch)	480 (18.9)		
	B axis	deg	B : 140(+110~-30)		
	C axis	deg	360		
Table	Table size	mm (inch)	Ø630 x 450 (Ø24.8 x 17.7)		
	Max. workpiece size	mm (inch)	Ø600 x H500 (Ø23.6 x H19.7)		
	Table loading capacity	kg (lb)	400 (881.8)		
Spindle	Max. speed	r/min	15000 {20000}		
	Max. power	kW (Hp)	CUFOS : 15K Direct 18.5/11 (S6 15%/cont.) 15K Built-in 30/18.5 (S6 25%/cont.) 20K Built-in 37/18.5 (S6 15%/cont.)	TNC7 : 15K Direct 17/10 (S6 25%/cont.) 15K Built-in 30/18.5 (S6 25%/cont.) 20K Built-in 30/24 (S6 40%/cont.)	Sinumerik One : 15K Direct 16.5/11 (S6 40%/cont.) 15K Built-in 30/18.5 (S6 25%/cont.) 20K Built-in 30/24 (S6 40%/cont.)
	Max.torque	N·m (ft-lbs)	CUFOS : 15K Direct 118 15K Built-in 230 20K Built-in 221	TNC7 : 15K Direct 108 15K Built-in 230 20K Built-in 155	Sinumerik One : 15K Direct 79 15K Built-in 230 20K Built-in 155
Rapid traverse rate	X axis	m/min (ipm)	42 (1653.5)		
	Y axis	m/min (ipm)	42 (1653.5)		
	Z axis	m/min (ipm)	42 (1653.5)		
	B axis	r/min	25		
	C axis	r/min	25		
Automatic tool changer	Tool shank		ISO #40		
	Tool storage capa.		ea 30 {40, 60, 120}		
	Max. tool diameter	Continuous	mm (inch)	75 (3.0)	
		Without adjacent tools	mm (inch)	125 (4.9)	
	Max. tool length		mm (inch)	300 (11.8)	
	Max. tool weight		kg (lb)	8 (17.6)	
	Tool change time	T-T-T	sec	1.3/1.5 (60Hz/50Hz)	
		C-T-C	sec	3.8/4.3 (60Hz/50Hz)	
Coolant	Coolant tank capacity		L (gal)	500 (132.1)	
Machine dimensions	Height		mm (inch)	3100 (122.0)	
	Length x Width		mm (inch)	2795 (110.0) (30, 40, 60T) x 2347 (93.5) , 3375 (120T) x 2347 (132.9 x 93.5)	
	Weight		kg (lb)	8000 (17636.7) (30, 40, 60T), 9000 (354.3) (120T)	
Control	NC system		-	CUFOS, TNC640/TNC7, Sinumerik One	

WHY 5-Axis machining?

SINGLE SETUP EFFICIENCY

5-axis machining allows you to approach the workpiece from all angles, with complete access to five sides of the part in a single setup. This reduces the overall number of part setups compared to traditional machining, which minimizes machine downtime and maximizes chip making time.



IMPROVED PART ACCURACY

When making parts with multi-sided features using traditional 3-axis machining, multiple part setups are required. This means new inaccuracies can arise each time the workpiece is repositioned. 5-axis machining eliminates stacked tolerances and improves overall part dimensional accuracy.

EXTENDED MACHINE SHOP CAPABILITY

DN Solutions 5-axis machines open up new doors for your machine shop. The increased efficiency will make you instantly more competitive, and full 5-axis machining capabilities give you the opportunity to quote on jobs that previously weren't possible. So, what are you going to make today?



“Compared with similar machines from Japan or Europe, DN Solutions has the same level of precision and quality at a better value for money.”

– **OMGM Group, Italy**

“Our DN Solutions 5-axis is making complex, high precision parts for aerospace and defense. Cycle times have been reduced dramatically.”

– **Aerotech Precision Manufacturing, Great Britain**

RESPONDING TO CUSTOMERS **ANYTIME, ANYWHERE**

DN SOLUTIONS GLOBAL NETWORK

66 COUNTRIES | **140** + SALES NETWORKS | **3** FACTORIES | **6** REGIONAL HQS



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WE'RE THERE FOR YOU WHENEVER YOU NEED US.

We help our customers operate at maximum efficiency by providing them with a range of tried, tested and trusted services - from pre-sales consultancy to post-sales support.



FIELD SERVICES

- On-site service
- Machine installation and testing
- Scheduled preventive maintenance
- Machine repair service



PARTS SUPPLY

- Supplying a wide range of original DN Solutions spare parts
- Parts repair service



TRAINING

- Programming, machine setup and operation
- Electrical and mechanical maintenance
- Applications engineering



TECHNICAL SUPPORT

- Supports machining methods and technology
- Responds to technical queries
- Provides technical consultancy

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