

ACE *Series*

DB130C

DB250C

DB250T



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Daewoo has poured all of its efforts and energies to achieve high performance and rigidity. In the meantime, wide selections of optional accessories are available to fulfill your special applications.

We guarantee that you will be totally satisfied with Daewoo ACE-DB Series.



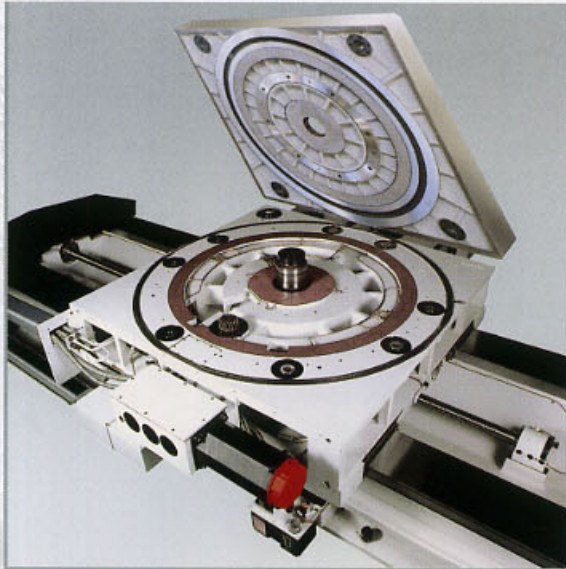
(This machine has optional accessories.)

ACE Series DB130C (Column Moving Type)

Boring spindle diameter: \varnothing 130mm	• High power and wide work space for large parts
X-axis travel : 3,000mm {3,500, 4,000}	• High accuracy of spindle movement by rigid box slide ways
Y-axis travel : 2,000mm	• Rich array of peripherals
Z-axis travel : 1,600mm {2,000}	• Spindle delivering heavy-duty cutting capability
W-axis travel : 700mm	• Maximum allowable load : 15,000kgf

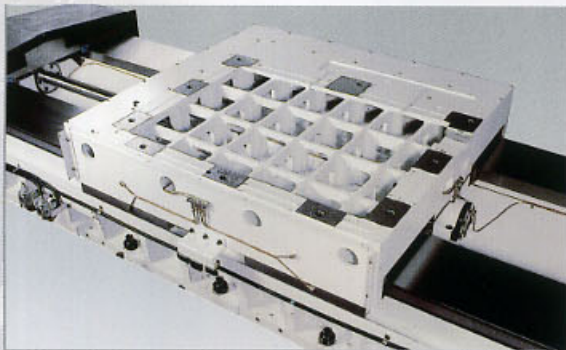
* Note : Dimensions in { } are optional

You expect more and get more



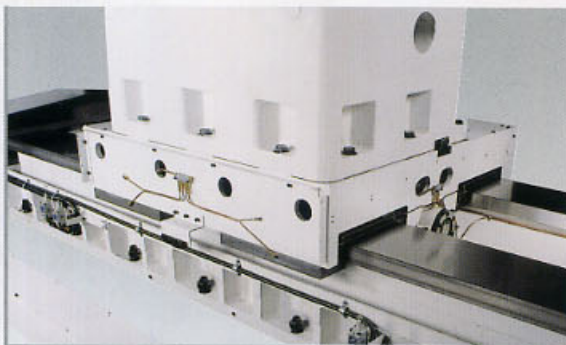
● ACCURATE TABLE

High precision indexing at every 90° is automatically and precisely fixed with a locating pin. (ACE-DB130C/250C)



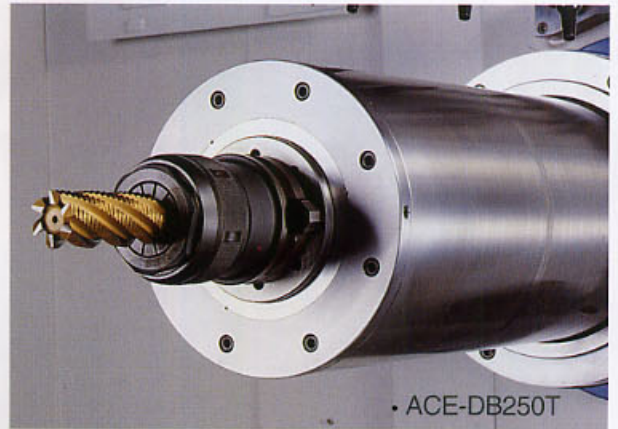
● COLUMN BED

Column bed is thermally hardened and then precisely ground to provide high rigidity. (ACE-DB130C/250C)



● MOVING COLUMN

It features box slide ways with column moving type, which guarantees high accuracy of spindle movement and very rigid cutting capability. (ACE-DB130C/250C)

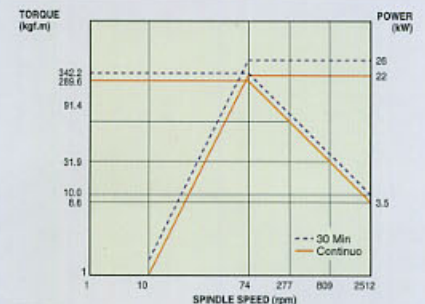


● SPINDLE HEAD (6,000rpm)

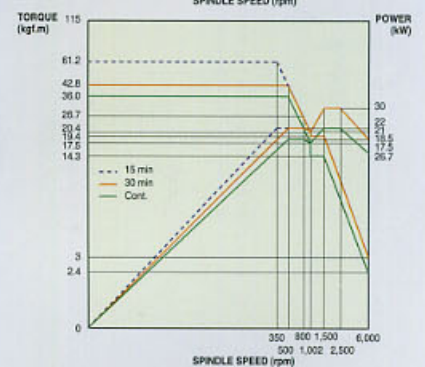
Use of ultra precision paired spindle bearings ensures high-speed, heavy-duty and high-precision machining. Long nose spindle requires a minimum quill extension and keeps the workpiece close.

■ Spindle power-torque diagram

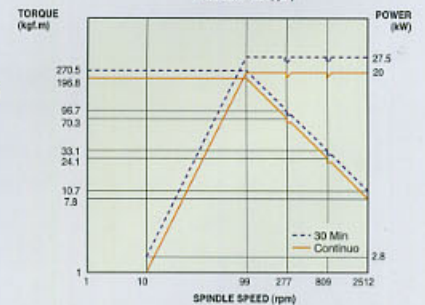
ACE-DB130C
· FANUC(α22)

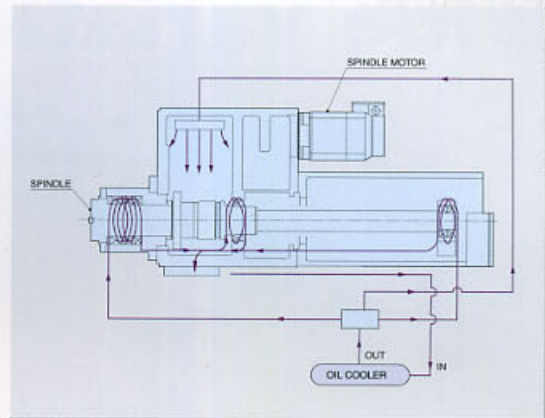


ACE-DB250T
· FANUC(αB180L-22)



ACE-DB130C
· SIEMENS
(1PH7133-2NG)
· Option





OIL COOLER

The temperature of the spindle cooling oil is regulated by a refrigerated cooling system. It maintains uniform controlled temperature required for high accuracy.

OIL COOLING SYSTEM

The refrigerated cooling system maintains a uniform spindle temperature required for high accuracy and extended production.



• ACE-DB250T

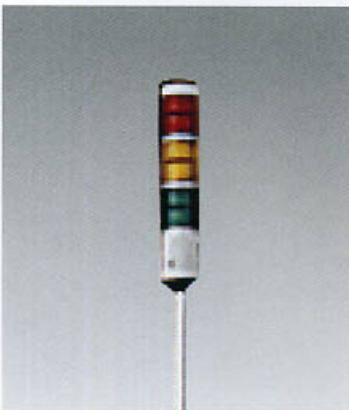


LUBRICATION

A lubrication system provides automatic lubrication to all guide-ways and ball screws. The way oil is delivered by piston distributors which precisely meter the volume. A low level alarm prevents the machine from restarting.

HEAVY-DUTY CUTTING CAPABILITY

ACE-DB series harmonizes heavy-duty cutting capability with the perfect balance of power and accuracy.



OPERATOR CALL LAMP (RED, YELLOW, GREEN)

Operator call lamp consists of green, yellow and red. Each color indicates machine state easily.



• FANUC 18i-M

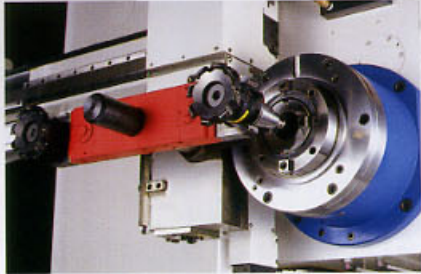


• HEIDENHAIN TNC426

OPERATOR'S PANEL (PENDANT TYPE)

It guarantees safe and comfortable operating area. Its angle is also adjustable for user's convenience.

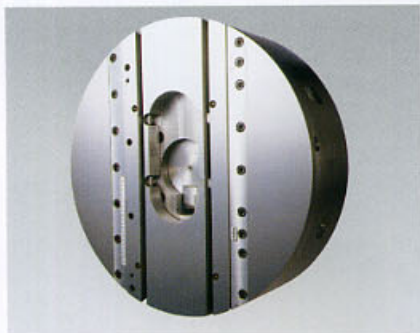
Wide variations according to your application(Opt.)



● Automatic tool changer



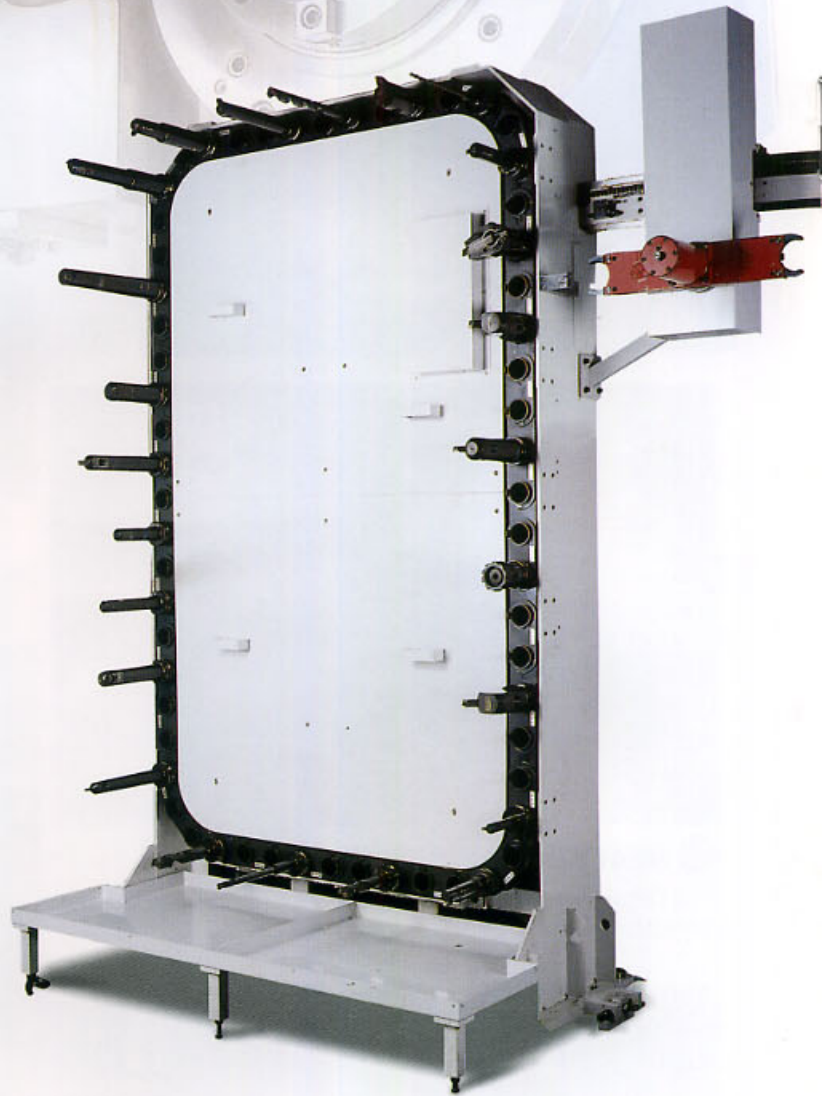
● Angular milling attachment



● Face plate



● Portable operation box for tool magazine



● Tool Magazine (40/60/90 Tools)



● Glass scale

ACE-DB130C/DB250C

External Dimensions

unit : mm

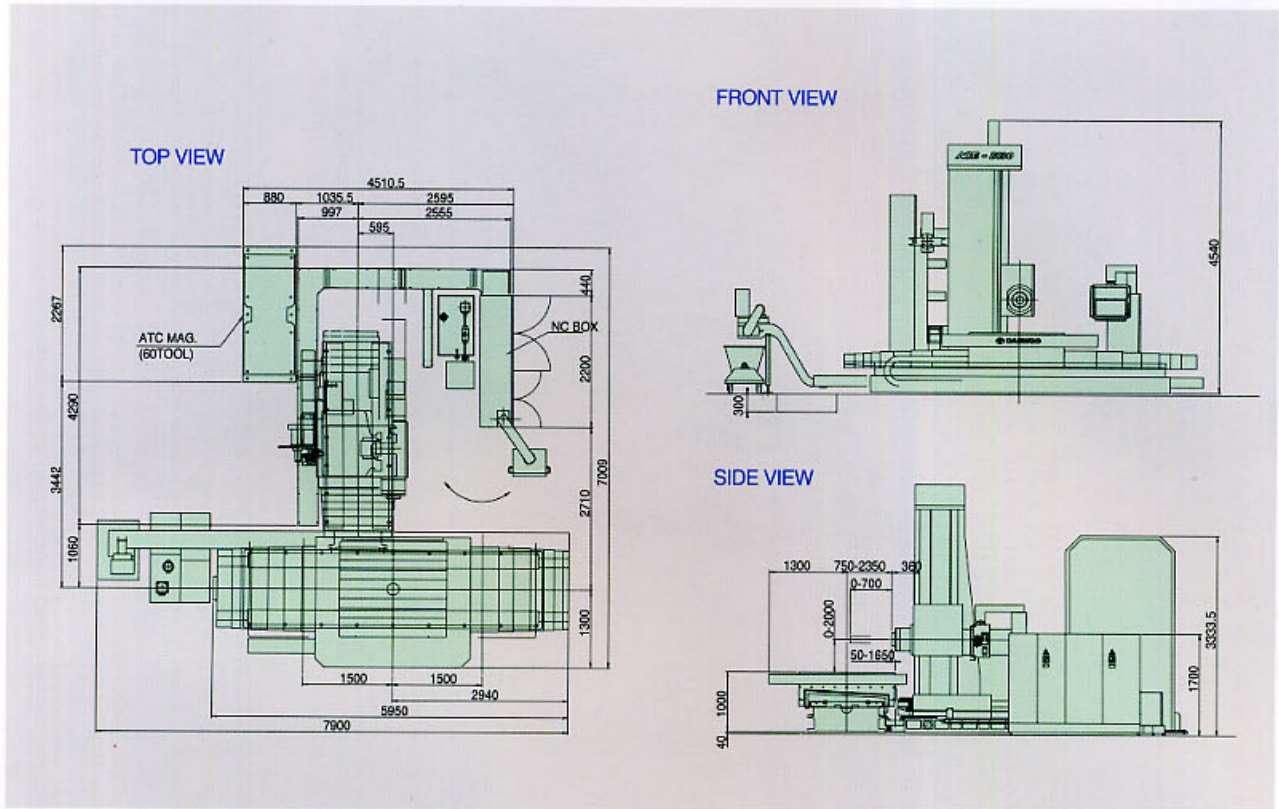
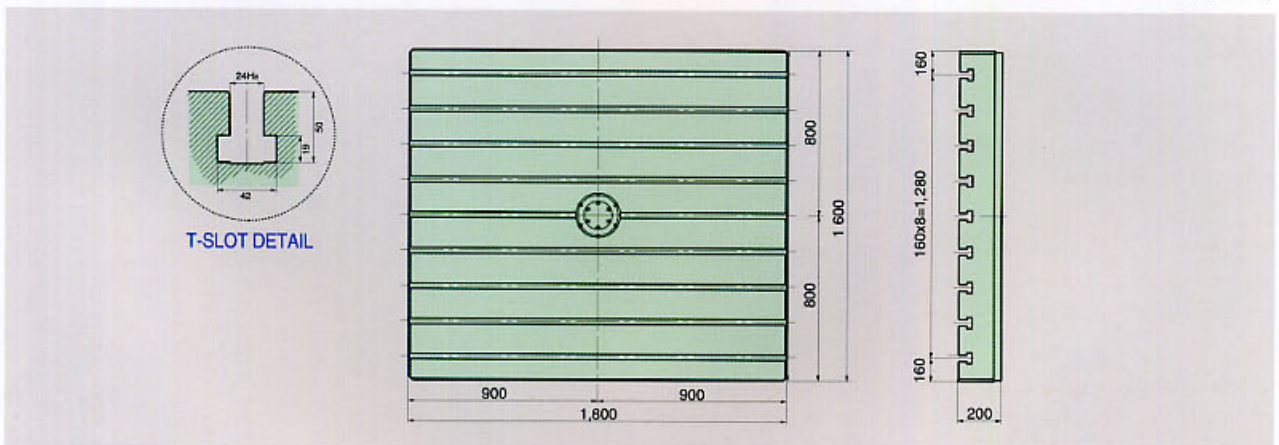


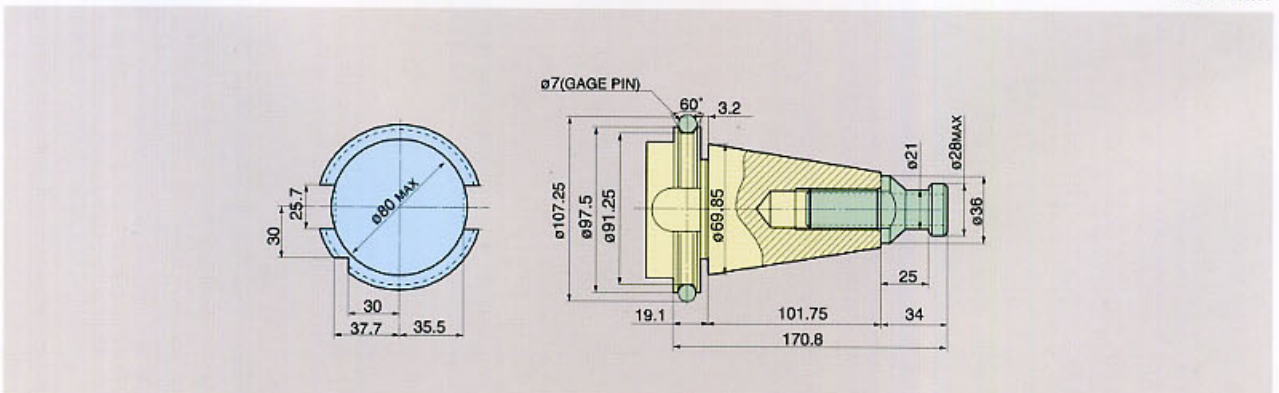
Table Dimensions

unit : mm



Tool Shank (DIN 50 : Opt.)

unit : mm



Machine Specifications



Features		ACE-DB250T	ACE-DB130C	ACE-DB250C	
Travel	X-axis(table longitudinal)	mm	2,000	3,000{3,500,4,000}	
	Y-axis(spindle vertical)	mm	1,500	2,000	
	Z-axis(table/column cross)	mm	1,500	1,600{2,000}	
	W-axis(spindle axial)	mm	500	700	500
	Distance from spindle center to pallet top	mm	0 ~ 1,500	0 ~ 2,000	
	Distance from spindle nose to table center	mm	550 ~ 2,050	750 ~ 2,350	
Table	Table size	mm	1,400 × 1,600	1,600 × 1,800	
	Table loading capacity	kgf	7,000	15,000	
	Table surface			9-24H8	
	Least command increment	deg		0.001	
	Index degree(by rotary table & indexing pin)	deg		90	
Spindle	Max. spindle speed	rpm	6,000	2,500	6,000
	Spindle taper			ISO #50 7/24 Taper	
	Max. spindle torque	kgf.m	61.2	342.2	61.2
	Boring spindle diameter	kgf.m	-	130	-
	Quill diameter	kgf.m	250	-	250
Feedrate	Rapid traverse rate(X/Y/Z/W)	m/min	10/10/10/10		
	Cutting feedrate	mm/min	4,000		
Automatic tool changer (Option)	Type of tool shank		MAS403 BT50		
	Tool storage capacity		{40/60/90}		
	Max. tool diameter	mm	130		
	Max. tool diameter without adjacent tools	mm	250		
	Max. tool length	mm	600		
	Max. tool weight	kgf	25		
Automatic pallet changer (Option)	Method of tool selection		Fixed address		
	Number of pallet	EA	-	{2}	
	Type		-	{Parallel shuttle}	
	Pallet size	mm	N/A	{1,600 × 1,600}	
Motor	Pallet loading capacity	kgf	-	{7,000}	
	Spindle motor(15min)	kW	30	26	30
Power source	Feed motor(X/Y/Z/B/W)	kW	7.3/7.3/7.3/3.8/3.0	7.3/7.3/7.3/4.5/3.0	
	Electric power supply	kVA	66.1	58.7	66.1
Tank capacity	Compressed air supply	kgf/cm ²		5.5	
	Coolant tank capacity(Opt)		{280}	{450}	
Machine size	Lubrication tank capacity		6 l × 2ea	4 l × 3ea	
	Machine height	mm	4,000	4,600	
	Machine dimension(W x L)	mm	7,800 × 5,000	7,900 × 6,700	
Accuracy	Machine weight	kgf	24,000	34,000	
	Positioning accuracy	mm		±0.01(W:±0.02)	
	Repeatability	mm		±0.005(W:±0.01)	

· Note : Dimensions in () are optional

Standard Features

- 90° indexing table
- Chip cover for slide ways
- Chip tray
- Leveling block and foundation plate
- Manual pulse generator (Portable type)
- Operator call lamp (red, green yellow)
- Rigid tapping
- Spindle oil cooling unit
- Spindle orientation stop device
- Thread cutting device
- Tool clamp / unclamp device
- W-axis clamp device
- Y-axis clamp device
- Y-axis protective covering from chip

Optional Features

- Angle plate
- Angular milling attachment**
- Automatic pallet changer (APC)*1
- Automatic tool changer (ATC)
- Automatic tool length measurement with sensor
- Safety guard
- Chip conveyor & chip bucket
- Face plate**
- Feed back system
- Flood coolant device
- Spindle support**
- Table covering
- Table size extension*1
- Through the spindle coolant preparation
- Through the spindle coolant system
- X-axis extension*1
- Z-axis extension*1

** ACE DB130C/DB250C only
*1 ACE DB130C only

- in alphabetic order

· Daewoo is not responsible for difference between the information in the catalogue and the actual machine.

● NC Unit Specifications (Standard)

	Item	FANUC 18-IM
Controls	Controlled axes	5(X, Y, Z, B, W) axes
	Simultaneous controllable axes	Positioning (G00) / linear interpolation (G01) 3axes Circular interpolation (G02, G03) 2axes
	Least command increment	0.001mm
	Least input increment	0.001mm
Spindle functions	Spindle speed command	S5 digits
	Spindle speed override (10% increment)	50 -150 %
	Spindle orientation	Spindle orientation
Feed functions	Feedrate override (10% increment)	0 - 200%
	Dwell	G04
	Reference point return	G27, G28, G29, G30
	Pulse handle feed	Manual pulse generator: 0.001/0.01/0.1 mm
	Dry run	Dry run
	Rapid traverse rate override	F0 (fine feed), 25/50/100%
Tool functions	Tool number command	T2 digits
	Tool length compensation	G43, G44, G49
	Cutter compensation C	G40, G41, G42
	Number of tool offsets	99 EA
Programming functions	Absolute/incremental programming	G90/G91
	Canned cycle	G73, G74, G76, G80 - G89, G98, G99
	Decimal point input	Input values with decimal input
	Circular interpolation by radius programming	Satisfying by radius R instead of I, J and K command
	Sub program	Up to 4 nesting
	Work coordinate system	G54-G59
	Local / Machine coordinate system	G52/G53
	Maximum commandable value	±99999.999 mm
M function	M2 digits	
Tape functions	Input code	ISO/EIA Automatic discrimination
	I/O interface	RS-232-C
	Part program storage	80m
	stored programs	125EA
	Search function	Sequence NO./Program NO./Address search
Other functions	MDI / CRT unit	9.5" mono LCD, Keyboard for data input, soft key
	Synchronized tapping	Rigid tapping function
	Background editing	Part program storage and editing during automatic operation
	Backlash compensation	Backlash compensation
	Stored pitch error compensation	Pitch error offset compensation for each axis
	Safety function	Emergency stop/overtravel
	Program test functions	Machine lock(Z-axis)/single block
	Operation functions	Tape/Memory/MDI/Manual
	Mirror image	Reverse axis movement(setting screen and M-function)
	Run hour and part number display	Run hour and part number display
	Self-diagnostic function	Self-diagnostic test
	Program restart	Program restart
	Display of PMC alarm message	Message display when PMC alarm occurred
Stored stroke check 1	Overtravel controlled by software	
Options	Part program storage	320/640/1,280/2,560/5,120m
	Stored programs	125/200/400/1,000EA
	Number of tool offsets	200/400/499/999EA
	Others	Helical interpolation, Coordinate rotation, Scaling, Playback function, Graphic display

● NC Unit Specifications (Option)

	Item	HEIDENHAIN TNC 426
Controls	Controlled axes	5(X, Y, Z, B, W) axes
	Simultaneous controllable axes	Positioning / linear interpolation 4axes Circular interpolation 2axes, helical interpolation 3axes
	Least command increment	0.001mm
	Least input increment	0.001mm
	Max. commandable value	±99999.999 mm
	Feedrate override	0 -150 %
	Reference point return	Reference point return
	Pulse handle feed	Portable manual pulse generator
	Error compensation	Linear / non-linear axis error, backlash Reversal spikes during circular movement offset, thermal expansion, stiction, sliding friction
Spindle functions	Spindle speed command	S5 digits
	Spindle speed override	150 %
	Spindle orientation	Spindle orientation
Tool functions	Tool number command	T3 digits
	Tool management (tool table)	Tool numbers and names, tool length L and tool radius R Tool life management & replacement tool
	Number of tool offsets	254 EA
Programming functions	Program memory	Hard disk with 1500MB for NC programs (no limit on number of programs)
	Programming support	Functions for approaching / departing the contour On-screen pocket calculator, structuring of programs
	Program jumps	Subprograms, program section repeats
	Mathematical functions	+ , - , × , ÷ , √ , sin, cos, tan, arcsin, arccos, arctan Logical comparison (=, ≠, <, >, ≤, ≥)
	Contour elements	Straight line, circular arc, circle center, circle radius
	Fixed cycle (canned cycle)	Drilling cycle (drilling, pecking, reaming, boring, tapping, rigid tapping) Milling, finishing rectangular, circular pockets Linear and circular hole patterns, cycle for milling linear and circular slots Milling pockets and islands, cylindrical surface interpolation
	Coordinate transformation	Coordinate shift, coordinate rotation, mirror image Scaling, tilting the working plane
	3-D touch probe application	Touch probe functions for compensating workpiece misalignment Touch probe functions for setting data Touch probe functions for automatic workpiece measurement
	Data interface	RS-232-C
	Graphic functions	MDI / CRT unit
Graphic display		Interactive programming graphics, test run graphics (3-D representation) Program run graphics (3-D representation)
Options	Ethernet interface	200 - 1,000 kbaud
	Others	Digitizing with 3-D triggering touch probe Digitizing with 3-D measuring touch probe



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Design and specifications are subject to change without prior notice.



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