MOTEC
cnc-technik

CNC VERTICAL TURNING LATHE

NT & VTC SERIES

HNK MACHINE TOOL CO., LTD.

SINCE 1960

Introducing 'HNK's CNC Ver

HNK's state-of-art CNC Vertical Turning Lathe Series deliver high speed and high precision machining to meet the needs of today's metal cutting industry.

NT Series

NT-50/95F

- Two-axis CNC vertical lathe.

- This model guarantees high rigidity, high speed operation and high accuracy due to the improved machine features such as rigid body construction and the latest control system.

NT-63/70D

tical Turning Series...

VTC Series

VTC-16/20

- Three-axis CNC vertical turning center

- Thanks to an indexing table and a live spindle, this model can do milling, tapping and other various machining jobs.

- The machine can complete its machining process after a single setup, which can save your time and cost.
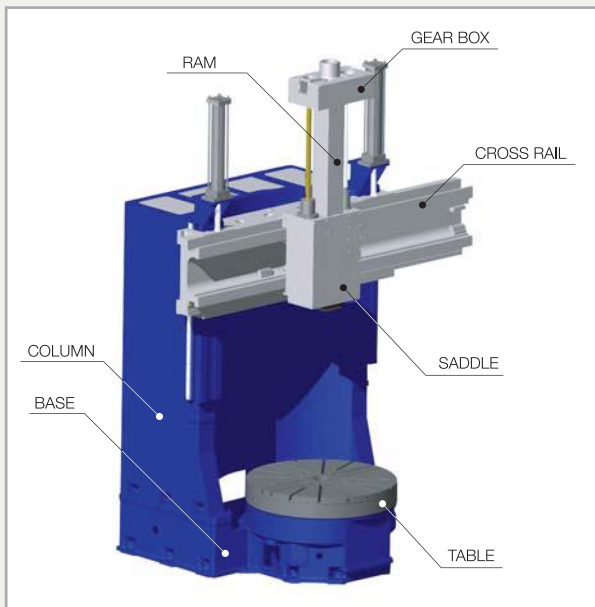
VTC-60/95

Main Construction

Compact-Models NT & VTC Models

RAM
GEAR BOX
CROSS RAIL
COLUMN
SADDLE
BASE
TABLE

Rigid table base and column construction
The column is bolted to the top of table base. This type of construction minimizes any misalignment or out-of squareness to provide high accuracy.

Grand-Models NT & VTC Models

RAM
CROSS RAIL
COLUMN
TABLE
TABLE BASE
C-AXIS GEAR BOX
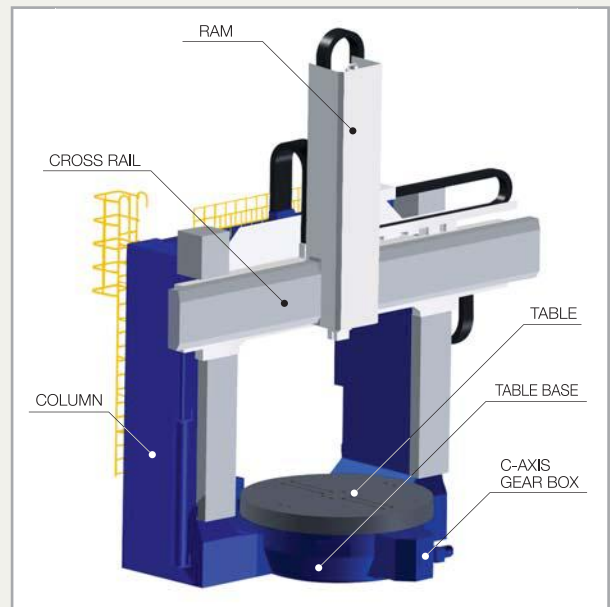
Rigid double column construction
The bottom of double column is fixed on both floor and the table base, and the top is fixed against the top beam. Overall construction design is suitable for heavy loads and heavy duty cutting.

Y-axis application as an option(Table moving / Column moving type)
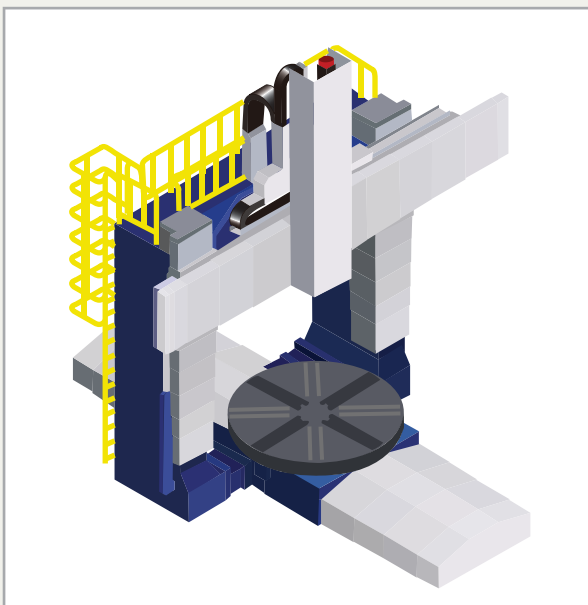
• Y-axis maximizes the capability of VTC-series.

• Easy job loading /unloding on the table.

• Y-axis makes it possible 「off-centered」 cutting process.

• Y-axis travel is flexible to customers requirments.

• Mostly the table moving type is applied as Y-axis but some large machine models(ex.VTC-50/60) adopt the cloumn moving type. because of their heavy loading capacity.

FEM

From the stage of design, the optimized machine accuracy and cutting condition is achieved by analyzing the rigidity and stress distribution of the structure through FEM system.
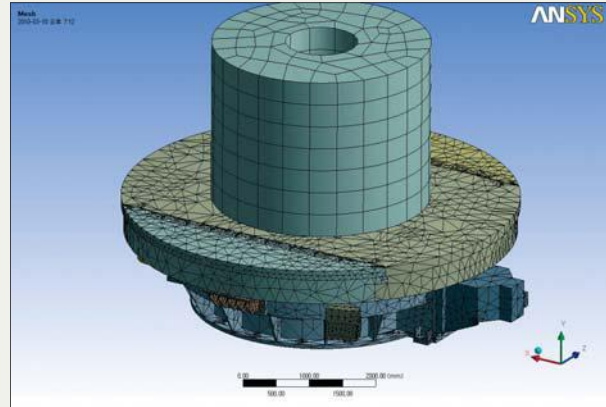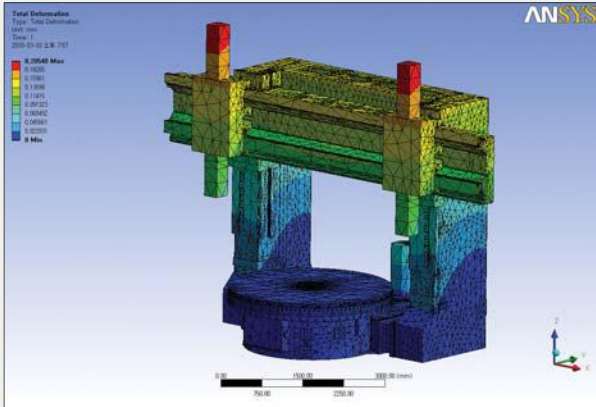
RAM HEAD

NT & VTC-Series

Turning

VTC-Series

Drilling

Rigid RAM Structure

Hardened, ground, and hydraulically balanced forged steel square ram is firmly encased in the heavily ribbed saddle.

Live Spindle (VTC-Series)

The VTC models are equipped with live spindle and 0.001° table indexing as standard to offer flexible machining capabilities.
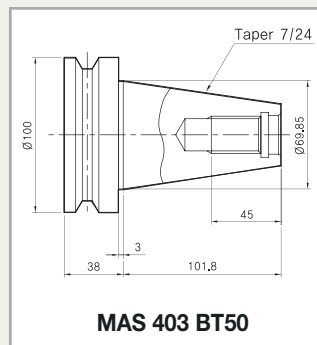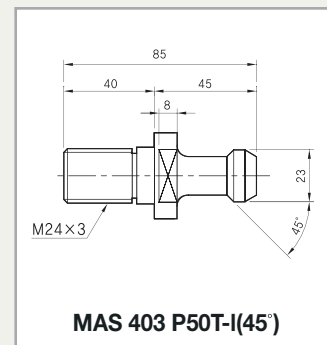
VTC-Series

Milling

VTC-Series

Tapping

Tool Shank

Taper 7/24
Ø100
Ø69.85
45
3
38
101.8

MAS 403 BT50

Pull Stud Bolt

85
40
45
8
23
M24×3
45°

MAS 403 P50T-I(45°)

HNK MACHINE TOOL CO., LTD.

Turning Tool Holder

NT-Series	VTC-Series	Grand-Model Tool Holder

200 HK-01

240 TC-01

400 TC-01

The Ram head pulls the T-bolt with hydraulic power to clamp tool holder.
To insure accurate positioning and firm clamping of tool holder, Curvic coupling is used between the ram and tool holder.

Tool holder clamping mechanism of the VTC-series is the pull-stud bolt type.
To accept both turning and milling tools the Ram is designed to hold ISO.50 spindle taper.
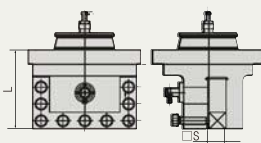
In case of Grand Models, the tool holder is clamped by pull stud bolts & 8 sub-clamp wedges which are placed at the middle of Tool holder.

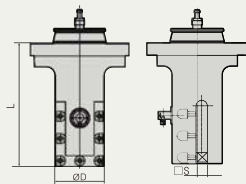## Turning Tool Holder NT/VTC-Series(Grand Model)

■ **Standard Tool Holder**
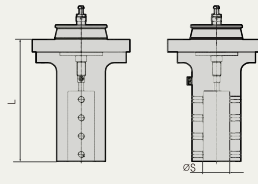(Thru-tool-coolant type)

unit : mm

TYPE	L	S
350TC-01	280	40
400TC-01	280	60

■ **Tool Holder**

TYPE	ØD	S	L
350TC-02	160	32	350
400TC-02	200	40	500

■ **Holder for Boring bar**

TYPE	L	S
350TC-04	350	100
400TC-04	500	110

■ **Tool Holder**
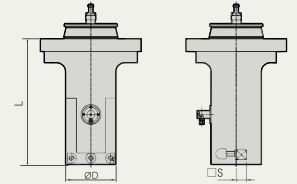
TYPE	ØD	S	L
350TC-05	160	32	350
400TC-05	200	40	500.7

■ **Holder** (right or left)
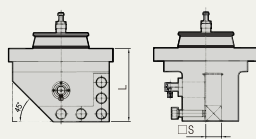
TYPE	L	S
350TC-06	280	40
400TC-06	280	60

■ **Holder base**
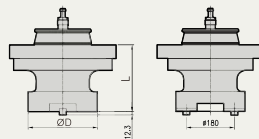
TYPE	ØD	L
350TC-07	210	250
400TC-07	260	250

■ **Boring bar**
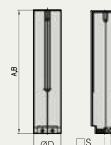
TYPE	ØD	L		S
350TC-08	100	A=400, B=500	25
400TC-08	110	A=400, B=500	25

■ **Boring bar** (right or left)
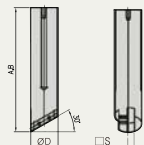
TYPE	ØD	L		S
350TC-09	100	A=400, B=500	25
400TC-09	110	A=400, B=500	25

Turning Tool Holders for NT-Series

Standard Tool Holder (Thru-tool-coolant type)

unit : mm
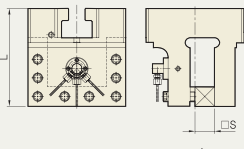
TYPE	L	S
200HK-01	200	40
240HK-01	200	40
300HK-01	250	40

Tool Holder
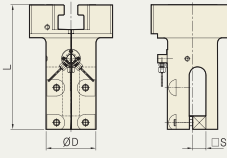
TYPE	øD	L	S
200HK-02	130	300	32
240HK-02	130	300	32
300HK-02	130	300	32

Morse Taper Holder

TYPE	øD	L
200HK-03	130	300
240HK-03	130	300
300HK-03	130	300

Standard for Boring bar
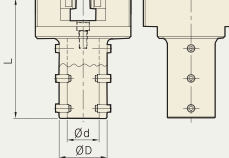
TYPE	øD	ød	L
200HK-04	130	90	300
240HK-04	130	90	300
300HK-04	130	90	300

Tool Holder
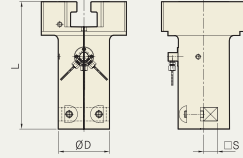
TYPE	øD	L	S
200HK-05	130	300	32
240HK-05	130	300	32
300HK-05	130	300	32

Holder (right or left)
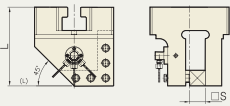
TYPE	L	S
200HK-06	200	40
240HK-06	200	40
300HK-06	250	40

Holder base
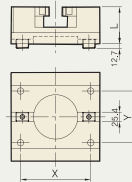
TYPE	L	X	Y
200HK-07	100	160	140
240HK-07	100	200	140
300HK-07	110	200	140

Boring bar
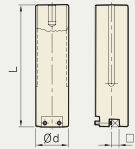
TYPE	øD	L	S
200HK-08	90	A=300, B=400	25
240HK-08	90	A=300, B=400	25
300HK-08	100	A=400, B=500	25

Boring bar (right or left)

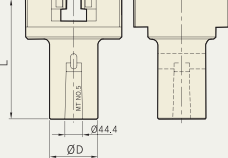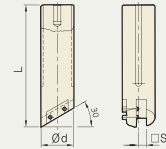| TYPE	øD	L	S
200HK-09	90	A=300, B=400	25
240HK-09	90	A=300, B=400	25
300HK-09	100	A=400, B=500	25

Turning Tool Holders for VTC-Series

Standard Tool Holder (Thru-tool-coolant type)

unit : mm
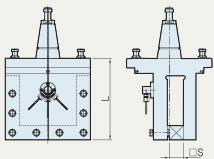
TYPE	L	S
240TC-01	200	40
300TC-01	250	40

Tool Holder
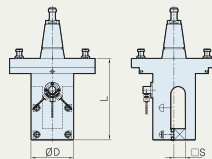
TYPE	øD	S	L
240TC-02	130	32	229
300TC-02	130	32	277

Morse Taper Holder
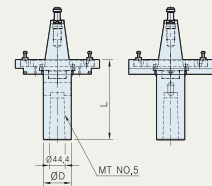
TYPE	øD	L
240TC-03	80	229
300TC-03	80	277

Holder for Boring bar
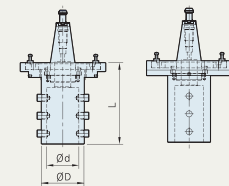
TYPE	øD	ød	L
240TC-04	130	90	229
300TC-04	130	90	277

Tool Holder
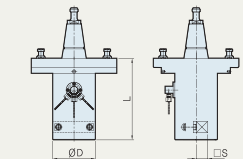
TYPE	øD	L	S
240TC-05	130	229	32
300TC-05	130	277	32

Holder (right or left)
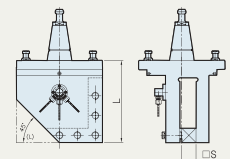
TYPE	L	S
240TC-06	200	40
300TC-06	250	40

Holder base
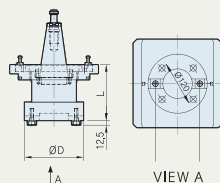
TYPE	øD	L
240TC-07	180	152
300TC-07	180	152

VIEW A
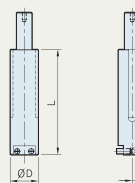
Boring bar

TYPE	øD	L	S
240TC-08	90	A=300, B=400	25
300TC-08	90	A=300, B=400	25

Boring bar (right or left)
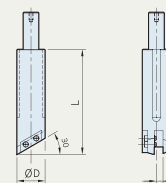
TYPE	øD	L	S
240TC-09	90	A=300, B=400	25
300TC-09	90	A=300, B=400	25

Major Capabilities

Table Power & Torque diagram

- - - - - - - - -	Torque (30min)
————————	Torque (continuous)
- - - - - - - - -	Power (30min)
————————	Power (continuous)
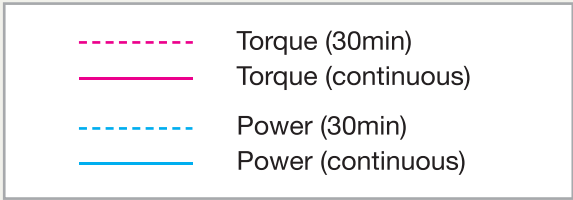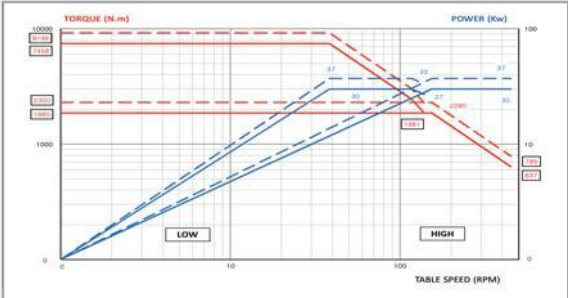
NT & VTC   10/12(F)
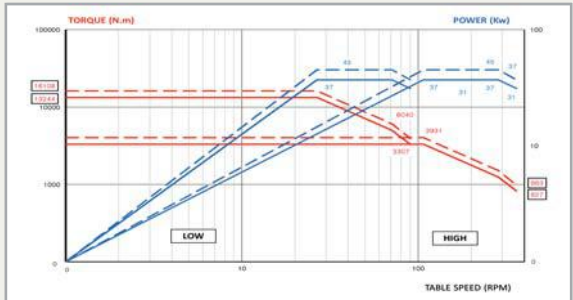
NT & VTC   12/16(F)

NT & VTC   16/20(F)
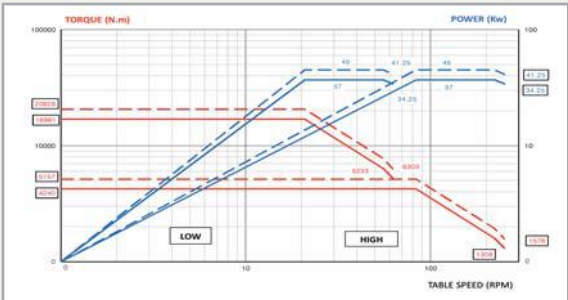
NT & VTC   20/25
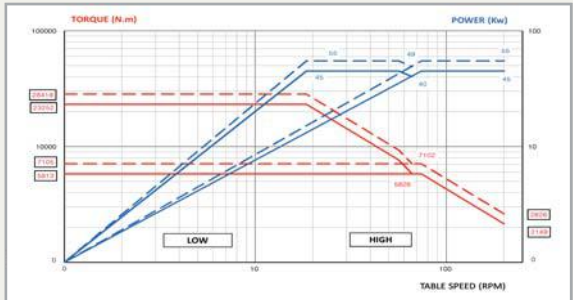
NT & VTC   25/30
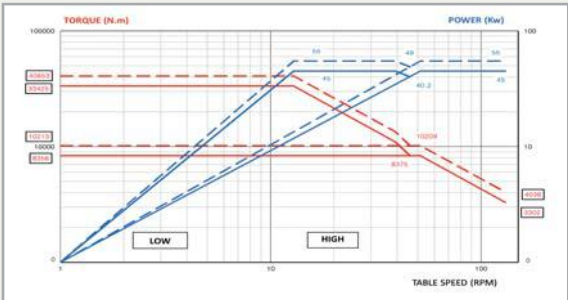
NT & VTC   30/40
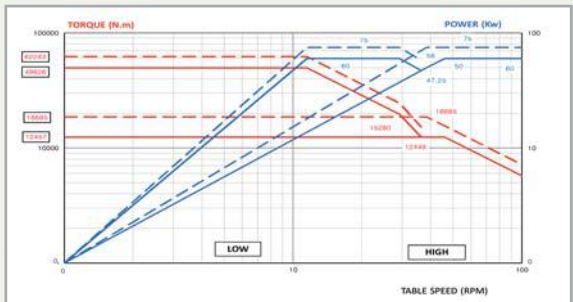
NT & VTC   40/50
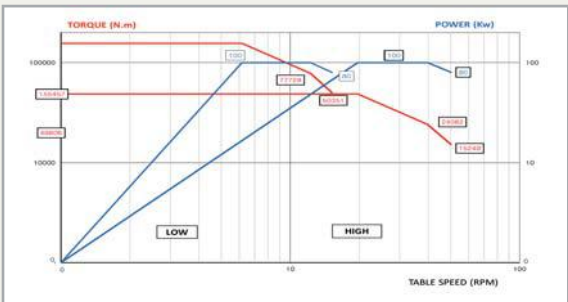
NT & VTC   50/60
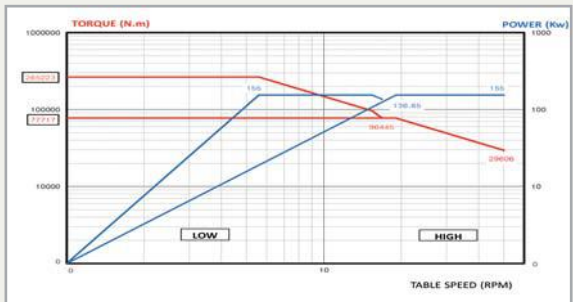
NT & VTC   60/70

Machining Range

Standard tool holder

A

B

C

Table

Minimum Boring

ØD

Bite

Ram Center
(Table Center)

Ram

E

F

Chucking Range

J

I

H

G

Workpiece

Workpiece

Workpiece

Workpiece
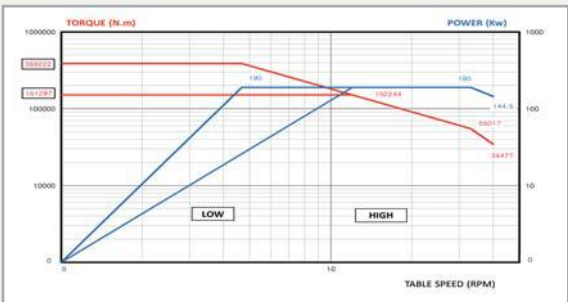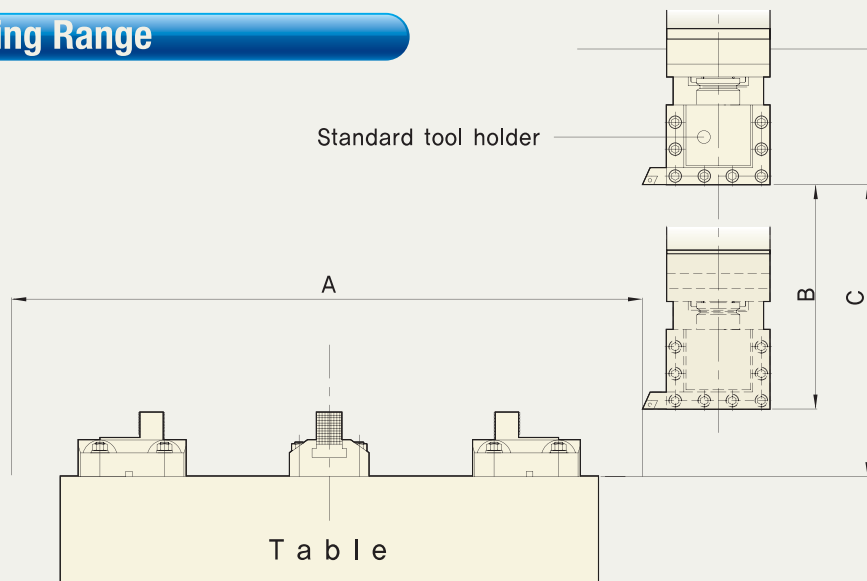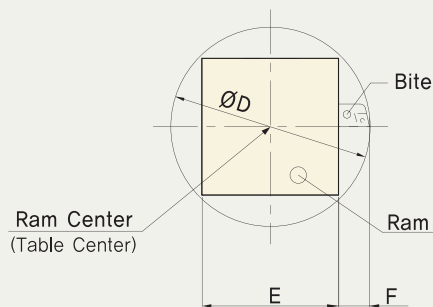
Table
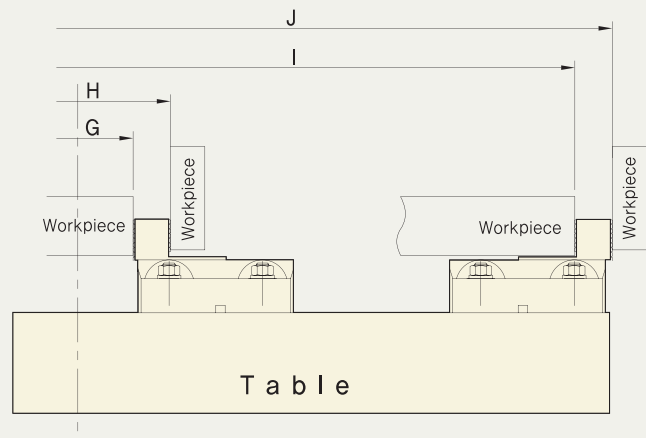
unit : mm

	A	B	C	D	E	F	G	H	I	J
NT&VTC-10/12F	1,250	750	800	285/350	200/240	42/53	190	480	770	1,020
NT&VTC-12/16F	1,600	900	1,000	285/350	200/240	42/53	190	300	1,180	1,290
NT&VTC-12/16	1,600	900	1,300	285/350	200/240	42/53	190	300	1,180	1,290
NT&VTC-16/20F	2,000	900	1,000	285/350	200/240	42/53	265	380	1,520	1,630
NT&VTC-16/20	2,000	900	1,660	285/350	200/240	42/53	265	380	1,520	1,630
NT&VTC-20/25	2,500	1,000	1,800	350	240	55	400	545	1,820	1,960
NT&VTC-25/30	3,000	1,200	2,000	350	240	55	600	743	2,340	2,480
NT&VTC-25/35	3,500	1,200	2,000	350	240	55	600	743	2,340	2,480
NT&VTC-30/40	4,000	1,300	2,200	425	300	62	600	743	2,820	2,960
NT&VTC-40/50	5,000	1,500	2,500	495	350	72	800	965	3,920	4,080
NT&VTC-50/60	6,000	2,000	3,000	570	400	85	1,158	1,734	4,450	4,703
NT&VTC-60/70	7,000	2,200	3,500	570	400	85	1,260	1,445	5,450	5,700
NT&VTC-80/100	10,000	3,000	6,000	720	500	110	2,344	2,470	7,840	8,020
NT&VTC-100/160	16,000	3,000	6,000	720	500	110	2,344	2,470	9,840	1,0020

Dimensions
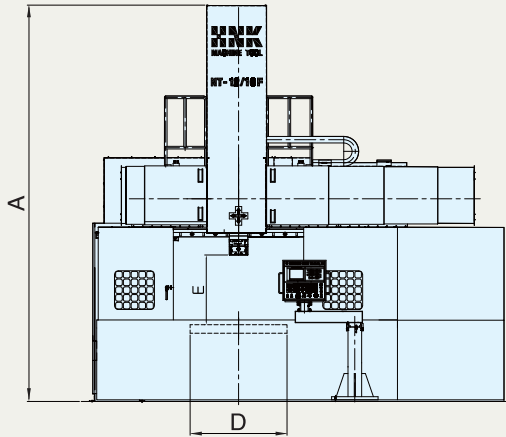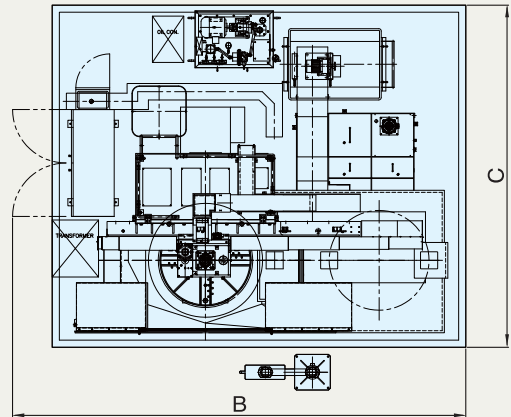
unit : mm

	A	B	C	D	E
N T-10/12F	4,700	5,400	4,800	1,000	800
VTC-10/12F	5,100	5,400	4,800	1,000	800
N T-12/16F	5,115	6,355	4,800	1,250	900
VTC-12/16F	5,400	5,800	5,100	1,250	900
N T-16/20F	5,500	6,000	5,400	1,600	1,000
VTC-16/20F	5,500	6,500	5,400	1,600	1,000

FRONT VIEW
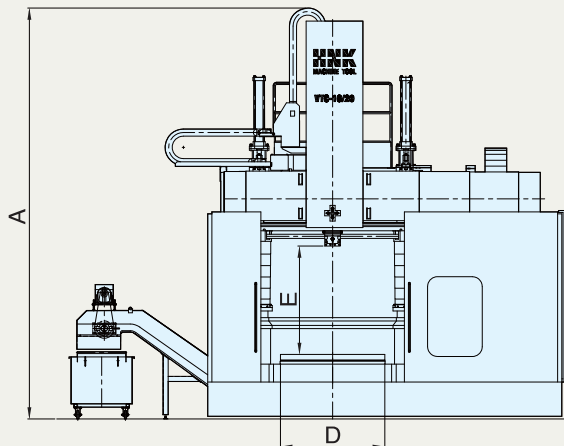
TOP VIEW
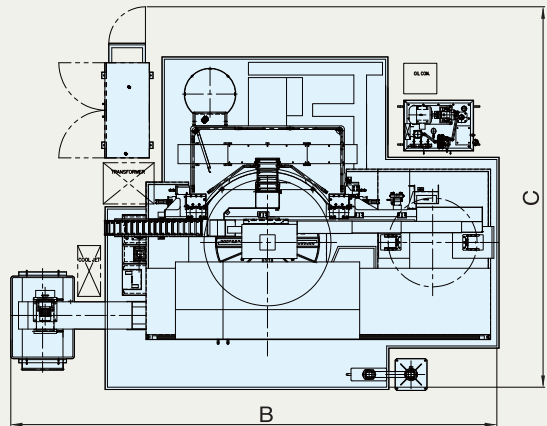
unit : mm

	A	B	C	D	E
N T-12/16	5,800	6,800	4,200	1,250	1,300
VTC-12/16	5,800	6,800	4,200	1,250	1,300
N T-16/20	6,200	7,100	4,200	1,600	1,660
VTC-16/20	6,300	7,650	5,990	1,600	1,660
N T-20/25	6,600	6,900	6,300	2,000	1,800
VTC-20/25	6,600	6,900	6,300	2,000	1,800
N T-25/30	7,400	8,600	6,700	2,500	2,000
VTC-25/30	7,400	8,600	6,700	2,500	2,000

FRONT VIEW
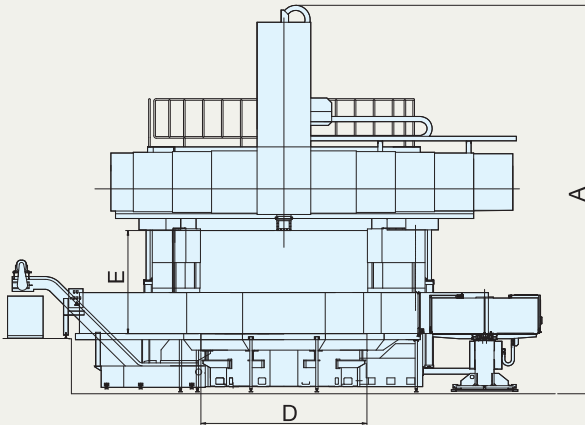
TOP VIEW
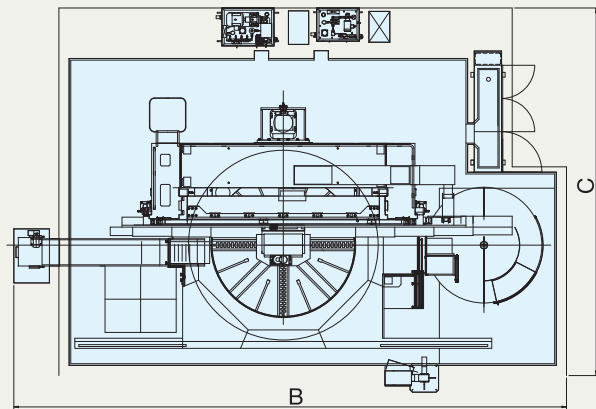
unit : mm

	A	B	C	D	E
N T-25/35	7,200	10,850	6,950	2,500	2,000
VTC-25/35	7,600	10,850	6,950	2,500	2,000
N T-30/40	8,250	11,650	8,100	3,000	2,200
VTC-30/40	8,250	11,650	8,100	3,000	2,200

FRONT VIEW
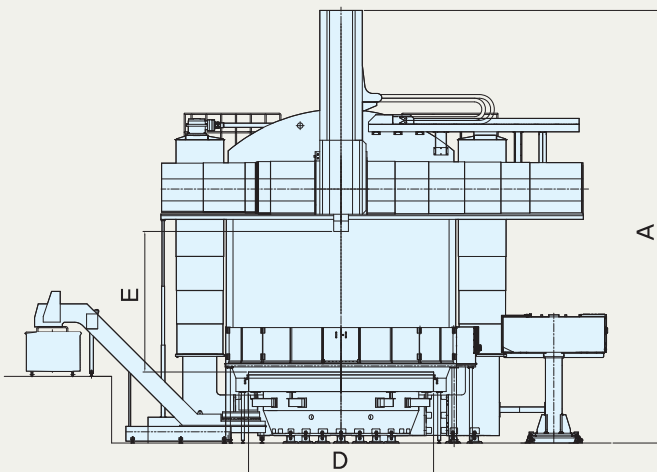
TOP VIEW
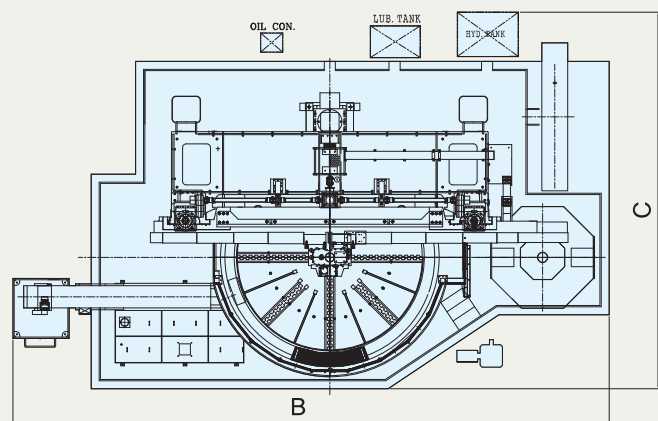
unit : mm

	A	B	C	D	E
N T-40/50	9,200	14,000	9,600	4,000	2,500
VTC-40/50	11,000	14,000	9,600	4,000	2,500
N T-50/60	10,000	15,500	10,000	5,000	3,000
VTC-50/60	11,000	15,200	11,000	5,000	3,000
N T-60/70	12,200	17,000	12,000	6,000	3,500
VTC-60/70	12,500	17,000	12,500	6,000	3,500
N T-80/100	14,700	18,500	14,000	8,000	6,000
VTC-80/100	16,000	18,500	14,000	8,000	6,000
N T-100/160	14,700	24,500	15,000	10,000	6,000
VTC-100/160	16,000	24,500	15,000	10,000	6,000

Machine Specifications

NT-Series CNC Vertical Lathe

Item		Unit	Compact Models				
			NT-10/12F	NT-12/16F	NT-12/16	NT-16/20F	NT-16/20
Capacity	Table Diameter	mm	1,000	1,250	1,250	1,600	1,600
	Max. Swing / Cutting diameter	mm	1,250	1,600	1,600	2,000	2,000
	Max. Turning Height *	mm	800	900	1,300	900	1,660
Table	Table Speed for Turning (2Steps) *	r.p.m	Max. ~ 450	Max. ~ 360	Max.~ 360	Max.~ 250	Max. ~ 250
	Max. Load on Table	kgs	4,500	8,000	8,000	10,000	10,000
	Max. Table torque	Nm	9,198	16,108	16,108	22,753	22,753
Ram Head	Horizontal Travel of Ram Head (X-axis)	mm	-200 ~ +795	-200 ~ +970	-200 ~ +970	-200 ~ +1,170	-200 ~ +1,170
	Vertical Travel of Ram Head (Z-axis) *	mm	750	900	900	900	900
	Rapid Feed of Ram Head (X-axis) *	mm/min	12,000	12,000	12,000	12,000	12,000
	Rapid Feed of Ram Head (Z-axis) *	mm/min	12,000	10,000	10,000	10,000	10,000
	Feed Rate of Ram Head (X & Z)	mm/min	1 ~ 6,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000
	Ram Size	mm	200 x 200	200 x 200	200 x 200	200 x 200	200 x 200
	Tool Shank Size	mm	40 x 40	40 x 40	40 x 40	40 x 40	40 x 40
Cross Rail	Vertical Travel of Cross Rail	mm	fixed type	fixed type	250 × 3 steps	fixed type	250 × 3 steps
Motor power	Main Motor for Table Drive (cont/30min)	kW	A.C 30/37	A.C 37/45	A.C 37/45	A.C 37/45	A.C 37/45
	Motor for Ram Head (X, Z-axis)	kW	4	4	4	4	4
Total Weight (Approx)		kgs	17,000	19,000	22,000	24,000	26,000

VTC-Series CNC Vertical Turning Center

Item		Unit	Compact Models				
			VTC-10/12F	VTC-12/16F	VTC-12/16	VTC-16/20F	VTC-16/20
Capacity	Table Diameter	mm	1,000	1,250	1,250	1,600	1,600
	Max. Swing / Cutting diameter	mm	1,250	1,600	1,600	2,000	2,000
	Max. Turning Height *	mm	800	900	1,300	900	1,660
Table	Table Speed for Turning (2Steps) *	r.p.m	Max. ~ 450	Max.~ 360	Max.~ 360	Max.~ 250	Max.~ 250
	Max. Load on Table	kg	4,500	8,000	8,000	10,000	10,000
	Table Speed for Indexing (C-axis)	r.p.m	0 ~ 3	0 ~ 3	0 ~ 3	0 ~ 3	0 ~ 3
		deg	0.001	0.001	0.001	0.001	0.00 1
	Max. Table torque	Nm	9,198	16,108	16,108	22,753	22,753
Ram Head	Horizontal Travel of Ram Head (X-axis)	mm	-200 ~ +795	-200 ~ +970	-200 ~ +970	-200 ~ +1,170	-200 ~ +1,170
	Vertical Travel of Ram Head (Z-axis) *	mm	750	900	900	900	900
	Rapid Feed of Ram Head (X-axis) *	mm/min	12,000	12,000	12,000	12,000	12,000
	Rapid Feed of Ram Head (Z-axis) *	mm/min	12,000	10,000	10,000	10,000	10,000
	Feed Rate of Ram Head (X & Z)	mm/min	1 ~ 6,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000
	Milling Spindle Speed	r.p.m	Max. ~ 2,500	Max. ~ 2,500	Max. ~ 2,500	Max. ~ 2,500	Max. ~ 2,500
	Milling Spindle Taper	-	ISO 50	ISO 50	ISO 50	ISO 50	ISO 50
	Ram Size	mm	240 × 240	240 × 240	240 × 240	240 × 240	240 × 240
	Tool Shank Size	mm	40 x 40	40 x 40	40 x 40	40 x 40	40 x 40
Cross Rail	Vertical Travel of Cross Rail	mm	Fixed type	Fixed type	250× 3 steps	fixed type	250× 3 steps
Motor power	Main Motor for Table Drive (cont/30min)	kW	A.C 30/37	A.C 37/45	A.C 37/45	A.C 37/45	A.C 37/45
	Motor for Milling Spindle (cont/30min)	kW	A.C 11/15	A.C 15/18.5	A.C 15/18.5	A.C 15/18.5	A.C 15/18.5
	Motor for Ram Head (X, Z-axis)	kW	4	4	4	4	4
	Motor for Table Indexing (C-axis)	kW	4	4	4	4	4
CNC Control System		-	Fanuc 31iB [Siemens 840D]				
Total Weight (Approx)		kg	18,000	20,000	23,000	25,000	29,000

		Grand Models					
NT-20/25	NT-25/30	NT-30/40	NT-40/50	NT-50/60	NT-60/70	NT-80/100	NT-100/160
2,000	2,500	3,000	4,000	5,000	6,000	8,000	10,000
2,500	3,000	4,000	5,000	6,000	7,000	10,000	16,000
1,800	2,000	2,200	2,500	3,000	3,500	6,000	6,000
Max. ~ 200	Max. ~ 130	Max. ~ 100	Max. ~ 50	Max. ~ 50	Max. ~ 40	Max. ~ 20	Max. ~ 15
12,000	20,000	30,000	50,000	60,000	150,000	350,000	450,000
28,419	40,853	62,283	155,457	265,223	388,222	850,000	1,180,000
-200 ~ +1,450	-200 ~ +1,700	-200 ~ +2,225	-200 ~ +2,750	-200 ~ +3,300	-200 ~ +3,800	-300 ~ +5,350	-300 ~ +8,350
1,000	1,20 0	1,300 / 1,500 / 2,000 / 2,200 / 2,500			2,200 / 2,500 / 3,000 / 3,500		
10,000	10,000	8,000	8,000	8,000	8,000	6,000	6,000
10,000	10,000	8,000	8,000	8,000	8,000	6,000	6,000
1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000
240 x 240	240 x 240	300x300 / 350x350 / 400x400			400x400 / 500x500 / 600x600		
40 x 40	40 x 40	40 x 40	40 x 40	60 x 60	60 x 60	60 x 60	60 x 60
250 × 3 steps	250 × 4 steps	250 × 6 steps	250 × 7 steps	250 × 7 steps	250 × 9 steps	500 × 9 steps	500 × 9 steps
A.C 45/55	A.C 45/55	A.C 60/75	A.C 100	A.C 155	A.C 190	D.C 265	D.C 265
7	7	6	9	9	14	14	14
45,000	55,000	80,000	140,000	200,000	280,000	500,000	680,000

		Grand Models					
VTC-20/25	VTC-25/30	VTC-30/40	VTC-40/50	VTC-50/60	VTC-60/70	VTC-80/100	VTC-100/160
2,000	2,500	3,000	4,000	5,000	6,000	8,000	10,000
2,500	3,000	4,000	5,000	6,000	7,000	10,000	16,000
1,800	2,000	2,200	2,500	3,000	3,500	6,000	6,000
Max. ~ 200	Max. ~ 130	Max. ~ 100	Max. ~ 50	Max. ~ 50	Max. ~ 40	Max. ~ 20	Max. ~ 15
12,000	20,000	30,000	50,000	60,000	150,000	350,000	450,000
0 ~ 2	0 ~ 1	0 ~ 0.5	0 ~ 0.5	0 ~ 0.3	0 ~ 0.3	0 ~ 0.3	0 ~ 0.3
0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
28,419	40,853	62,283	155,457	265,223	388,222	850,000	1,180,000
-200 ~ +1,450	-200 ~ +1,700	-200 ~ +2,225	-200 ~ +2,750	-200 ~ +3,300	-200 ~ +3,800	-300 ~ +5,350	-300 ~ +8,350
1,000	1,200	1,300 / 1,500 / 2,000 / 2,200 / 2,500			2,200 / 2,500 / 3,000 / 3,500		
10,000	10,000	8,000	8,000	8,000	8,000	6,000	6,000
10,000	10,000	8,000	8,000	8,000	8,000	6,000	6,000
1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000	1 ~ 3,000
Max. ~ 2,000	Max. ~ 2,000	Max. ~ 2,000	Max. ~ 2,000	Max. ~ 2,000	Max. ~ 1000	Max. ~ 1000	Max. ~ 1000
ISO 50	ISO 50	ISO 50	ISO 50	ISO 50	ISO 50	ISO 50	ISO 50
240 × 240	240 × 240	300x300 / 350x350 / 400x400			400x400 / 500x500 / 600x600		
40 x 40	40 x 40	40 x 40	40 x 40	60 x 60	60 x 60	60 x 60	60 x 60
250× 3 steps	250× 4 steps	250× 6 steps	250× 7 steps	250× 7 steps	250× 9 steps	500× 9 steps	500× 9 steps
A.C 45/55	A.C 45/55	A.C 60/75	A.C 100	A.C 155	A.C 190	D.C 265	D.C 265
A.C 15/18.5	A.C 15/18.5	A.C 22/26	A.C 22/26	A.C 22/26	A.C 37/45	A.C 45/55	A.C 45/55
7	7	6	9	9	14	14	14
7	7	6	9	9	14	16	16
		Fanuc 31iB [Siemens 840D]					
48,000	60,000	85,000	146,000	210,000	292,000	520,000	700,000

Accessories

STANDARD ACCESSORIES
- Automatic Tool Changer (12pots)
- Standard Turning Tool Holders (2pcs)
- Table Bearing Cooling Unit
- Chip Conveyor(Hinge Type)
- Chip Bucket
- External Coolant System
- Splash Guard
  - Full Type (Compact Models)
  - Table Type (Grand Models)
- 4-jaw Independant Manual Chuck
- Hydraulic Power Unit
- X-axis Steel Cover   • Work Light
- Patrol Light (3 colors)
- Foundation Bolts & Nuts
- Operating Tool Kits

OPTIONAL ACCESSORIES
- Hydraulic Chuck (3Jaw/6Jaw)
- Automatic Pallet Changer
- Automatic Tool Changer (16/24/30/36 pots)
- Coolant-Thru-the Tool Device
- Turning Tool Holders
- Grining Attachment
- Scale Feedback System (X, Z-axis)
- Automatic Power Off
- Transfomer   • Work Probe
- Tool Setter
- Half Type Splash Guard (Grand Models)
- Full type Splash Guard (Grand Models)

OPTIONAL ACCESSORIES for VTC-SERIES ONLY
- Thru-the-Spindle-Coolant-Device (T.S.C)
- Right Angular Attachment (Auto. Tool Change)
- Universal Angular Attachment
- Spindle Speed (3,000 / 4,000 rpm)

Standard Accessories

Automatic Tool (Tool holder) Changer

■ **Large Tool Storage Capacity**
As a standard item, ATC has a useful function to change tool holders, and various attachments such as Right Angular Attachment, Universal Angular Attachment and Grinding Attachment

■ **Number of Tool Pots**
- NT-Series (12pots)
- VTC-Series (12pots for 6milling + 6 turning)
- Option : 16/24/30/36 pots

Splash Guard (Compact models)

Hinge Type Chip Conveyor

Oil Chiller

Optional Accessories

Automatic Pallet changer(A.P.C)
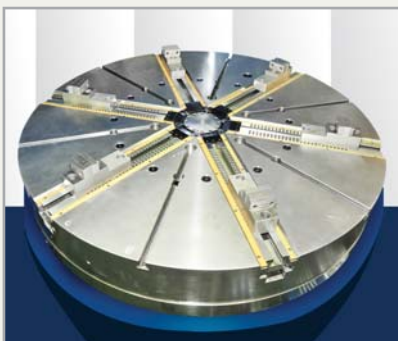

Right Angular Attachment

Universal Angular Attachment

Grinding Head

Hydraulic Chuck

Turret Head

Tool Length Measuring Device
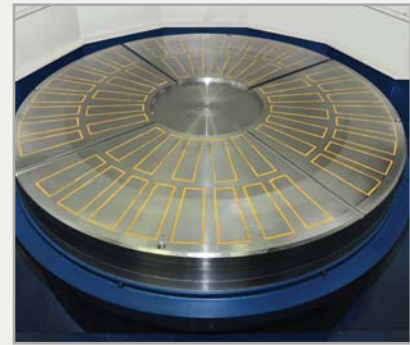

Auto. Workpiece Measuring Device

TSC Unit

Operator Elevator

Grinding Attachment

Magnetic Chunk

CNC Control (Fanuc 31iB)

Standard Specifications

- Max. controlled axes
  (NT, 2 axes / VTC, 3 axes)
- Simultaneously controlled axes (2 axes)
- Inch/Metric conversion
- Mirror image
- Backlash compensation
- Pitch error compensation
- MDI operation
- Program number search
- Sequence number search
- Dry run
- Single block
- JOG feed
- Incremental feed (×1, ×10, ×100, ×1000)
- Jog and handle simultaneous mode
- Manual handle feed (1unit/each path)
- Positioning-G00
- Linear interpolation
- Circular interpolation
- Dwell
- Threading, synchronous cutting
- Skip function-G31
- Reference position return-G28
- Reference position return check-G27
- 2nd reference position return
- Rapid traverse rate (Max. 10m/min)
- Rapid traverse override (F0,25,50,100%)
- Feed per minute/Feed per revolution
- Tangential speed constant control
- Cutting feedrate clamp
- Automatic acceleration/deceleration

- Coordinate system shift
- Direct input of coordinate system shift
- Manual absolute on and off
- G code system (A)
- Sub program call (4 folds nested)
- Canned cycles (G90, G92, G94)
- Custom macro B
- Chamfering/corner R
- Auxiliary Function (M8-digit)
- Spindle speed function (S5-digit)
- Spindle speed output (S5-digit)
- Constant surface speed control
- 1st spindle orientation
- Tool function (T4 digit)
- Tool offset pairs (32 pairs)
- Tool nose radius compensation (G40-G42)
- Tool offset value counter input
- Part program storage length 1Mb
- Number of registerable program (500)
- Part program editing
- Background editing
- Status display
- Clock function
- Self-diagnosis function
- Alarm display
- Alarm history display
- Operation history display
- Help function
- Servo setting screen
- Language display English
- Data protection key

Optional Specification

- Increment system 1/10 (0.0001mm, 0.00001˝)
- Tool retract recover
- Manual linear/circular interpolation
- Polar coordinatie Interpolation
- Continuous threading
- Variable lead threading
- Circular threading
- Polygon turning
- Rapid traverse ball shaped acceleration
  /deceleration
- Linear acceleration/deceleration before cutting
  feed interpolation
- Optional block skip (9)
- Program restart
- Cylinderical interpolation
- Helical interpolation
- Interruption type custom macro
- Multiple repetitive cycle
- Workpiece coordinate system
- Addition of custom macro common variables
  (#100-#199-#500-#999)
- Rigid tapping
- Conversational programming with graphic display
- Tool offset pairs (200/400 pairs)
- Tool life management function
- Automatic tool offset
- Direct input of tool offset value measured B
- Part program storage length(2/4/8 Mb)
- Number of regiterable programs (1000/2000)
- Graphic function
- Extemal workpiece number search 9999
- Extemal workpiece number search 15

CNC Control (Fanuc 31iB)

Standard Specifications

- Max. controlled axes
  (NT, 2 axes / VTC, 3 axes)
- Simultaneously controlled axes (2 axes)
- Inch/Metric conversion
- Mirror image
- Backlash compensation
- Pitch error compensation
- MDI operation
- Program number search
- Sequence number search
- Dry run
- Single block
- JOG feed
- Incremental feed (×1, ×10, ×100, ×1000)
- Jog and handle simultaneous mode
- Manual handle feed (1unit/each path)
- Positioning-G00
- Linear interpolation
- Circular interpolation
- Dwell
- Threading, synchronous cutting
- Skip function-G31
- Reference position return-G28
- Reference position return check-G27
- 2nd reference position return
- Rapid traverse rate (Max. 10m/min)
- Rapid traverse override (F0,25,50,100%)
- Feed per minute/Feed per revolution
- Tangential speed constant control
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- Automatic acceleration/deceleration

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- Direct input of coordinate system shift
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Optional Specification

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- Extermal workpiece number search 15

Note : HNK reserves the right to change design and specification without notice