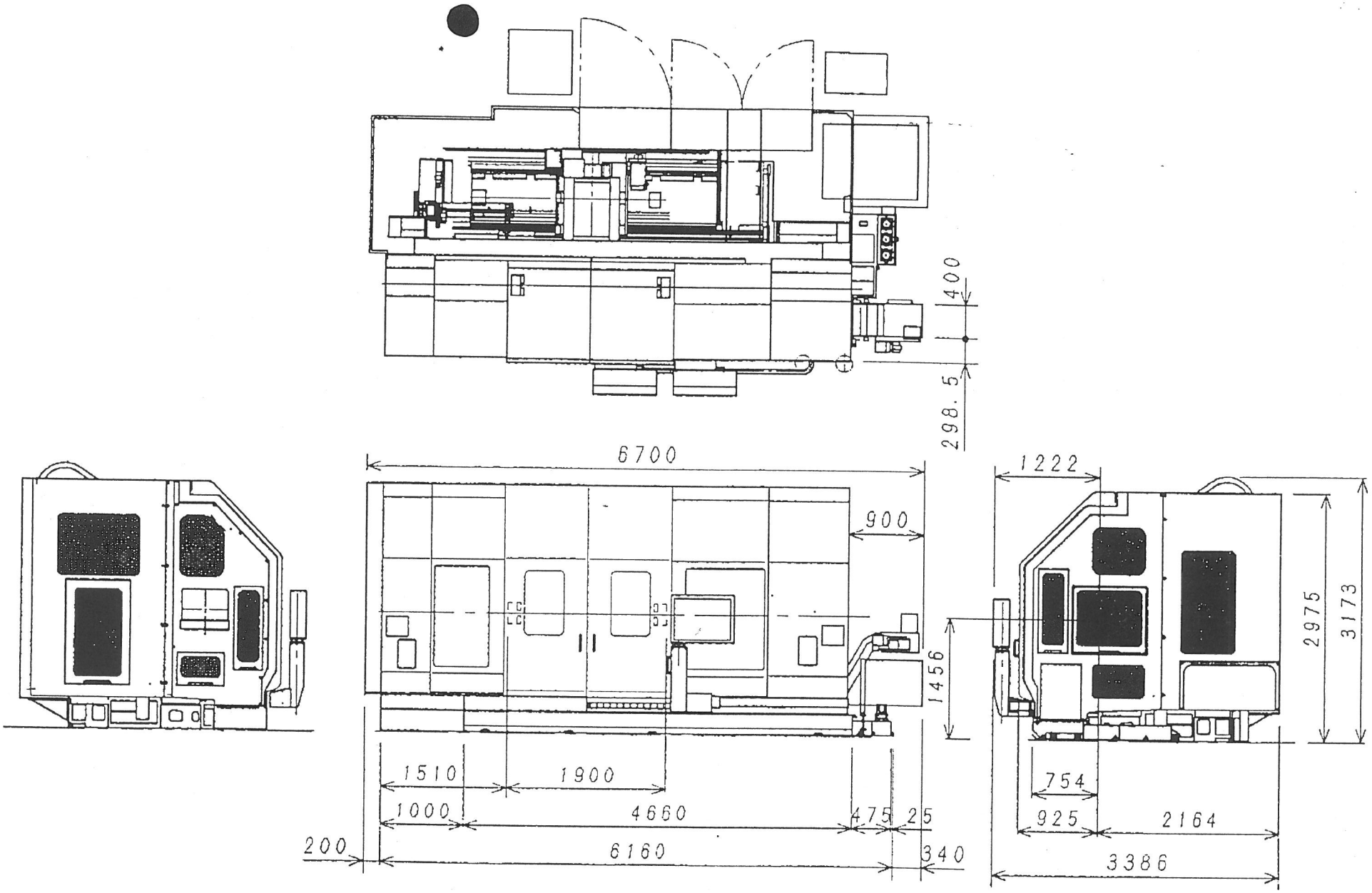
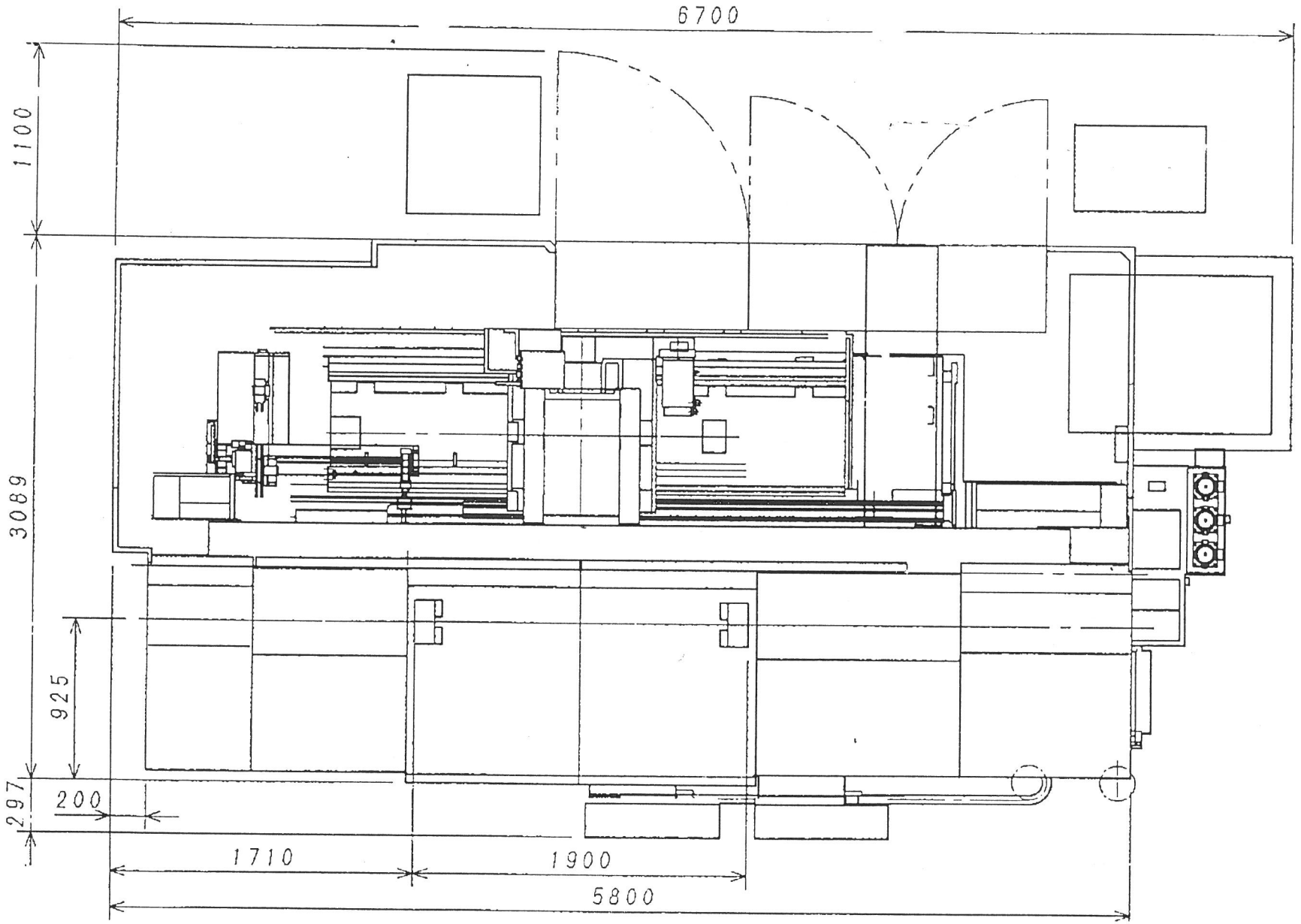
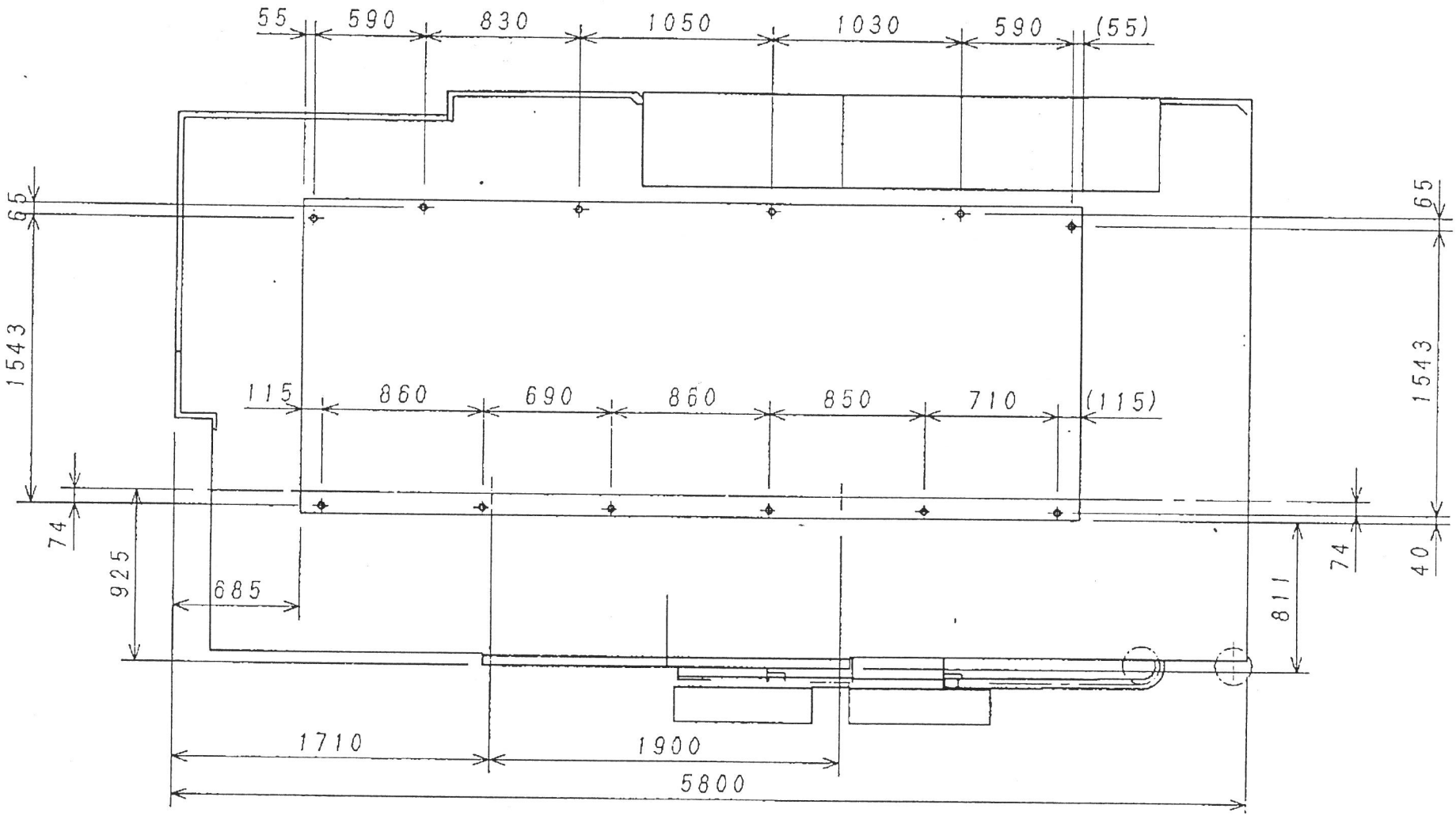


STW-40 General view (with chip conveyor)



STW-40 Floor space



Leveling position

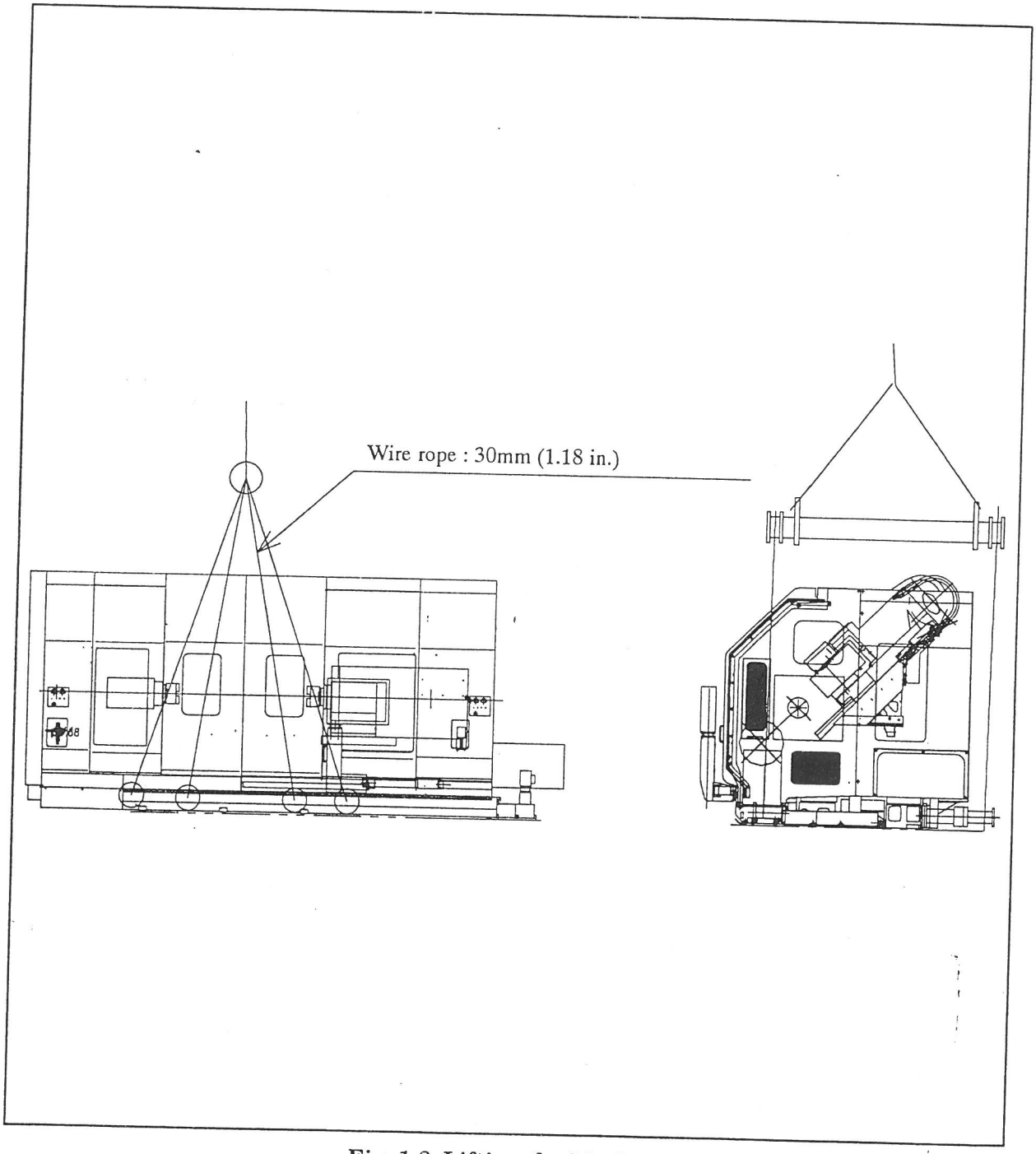


Fig. 1-2 Lifting the Machine

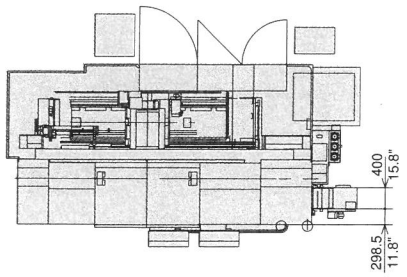
NOTE 1: If working with other people, coordinate orders and signals.

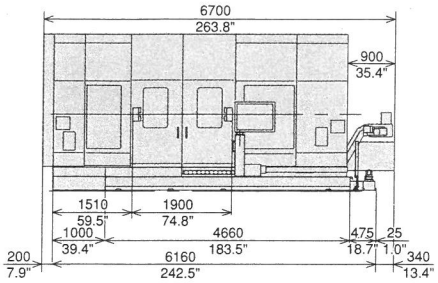
NOTE 2: When transporting the machine to a distant place,

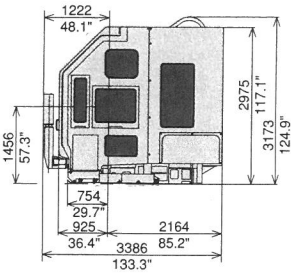
- Secure the Y, Z-axis slides with fixing plates.
  Refer to Fig. 1-3, Fig. 1-4 Y, Z-axis Slide Fixing Plates.
- *Discharge the hydraulic unit tank, coolant tank, and centralized lubricating oil reservoir completely.*
  For details of discharge procedure, refer to Sections 5-3-2 5-4-2, and 5-6-2 in the Maintenance manual.

Machine dimensions / specifications

mm
inch







Standard specification for machine			*STW-40*	*STS-40*
Capacity	Swing over slides		440 mm 17.32"	
	Distance between spindle		1900 mm 74.80"	
	Max. turning dia.		570 mm 22.44"	
	Max. turning length		1500 mm 59.06"	
	Bar capacity		71 mm 2-3/4"	
	Chuck size		255 mm 10", 305 mm 12"	
L,R- spindle	Spindle speeds (max.)		3500 min⁻¹(rpm.)	
	Spindle nose		A1-8	
	Hole through draw tube		72 mm 2.83"	
	Spindle bore		85 mm 3.35"	
	Inner dia. of front bearing		130 mm 5.12"	
Tool spindle	Spindle speeds (max.)		6000 min⁻¹(rpm.) op.12000 min⁻¹	
	Face mill size(max.)		100 mm 4"	
	End mill size(max.)		32 mm 1-1/4"	
	Drill size(max.)		30 mm 1-11/64"	
	Tap size(max.)		M24 x 3 7/8"	
	Tool size square		□25 mm 1"	
Turret head (Dodecagonal)	No. of turret head		2	1
	No. of tool stations(rotating tool)		24st. (12st.x2)	12st.
	Tool size square		25 mm 1"	
	Tool size round		32, 40, 50 mm 1-1/4", 1-1/2", 2"	
	Drill size		2~20 mm 0.08"~0.79"	
	Tap size		M16 5/8"	
	Rotating tool speeds		27~3600 min⁻¹(rpm.)	
Slide travel	L,R-Spindle	C-axis least command increment	0.001degree	
	Tool Spindle	X1-axis	620 mm 24.41"	
		Z1-axis	1600 mm 63.0"	
		Y-axis	200 (+110 / -90) mm 7.87"(+4.33"/ -3.54")	
		B1-axis index degree	200 (+/- 100) degree	
		B1-axis least command increment	0.001degree	
	Turret Head	X2 , X3-axis	275 mm 10.83"	275 mm 10.83" (X2-axis only)
		Z2 , Z3-axis	550 mm 21.65"	1530 mm 60.20" (Z2-axis only)
	R- Spindle	B2-axis	1600 mm 63.0"	
Rapid feed	L,R-Spindle	C-axis	400 min⁻¹(rpm.)	
	Tool Spindle	X1-axis	25 m/min 985ipm	
		Z1-axis	30 m/min 1180ipm	
		Y-axis	20 m/min 785 ipm	
		B1-axis	12.5 min⁻¹(rpm.)	
	Turret Head	X2 , X3-axis	25 m/min 985ipm	
		Z2 , Z3-axis	30 m/min 1180ipm	
	R-Spindle	B2-axis	30 m/min 1180ipm	
Auto tool change devise	Tool shank type		KM63 , CAPTO C6 (op.)	
	Number of stock tool		40 tools (op.80 , 120tools)	
	Tool dia.(max.)	*without adjacent tool	90 mm 3.54" (* 120 mm tools 4.72")	
	Tool length(max.)		250 mm 9.84"	
	Tool weight		8 kgf	
	Changing time		1.5sec	
Motor (50%ED/cont.)	Main spindle motor (Built-in type)		22/15kW	
	Tool spindle motor		15/11kW	
	Rotating tool spindle motor		5.5/3.7kW	
	X1-axis servo motor		4.4kW	
	Z1,Y,X2,X3,Z2,Z3,B2-axis servo motor		3.8kW	
Machine weight *including tooling			25000 kg 55000 lbs.	24000 kg 52800 lbs.
Power supply *depends on options and peripherals attached *different voltage through a transformer down to AC200/220 volts			AC 200/220 V +10%-15% 170kVA	

Optional features

Peripheral devices for automation — Bar feeder ,MON-BEI Gantry loader(GR-210NEW), HAN-BEI Measuring device,Robot applications etc.

☐ Parts catcher	☐ Steady Rest (STS-40)
☐ Work counter	☐ High pressure coolant pump
☐ Cut-off detector	☐ Coolant level checker
☐ Part outlet conveyor	☐ High/low change of chucking pressure
☐ Tailstock (STS-40)	☐ Air blow for chuck
☐ Chip conveyor	☐ Automatic extinguisher
☐ Tool setter	☐ Automatic power off
☐ Auto door	
☐ Cycle stop alam light	

NC specifications

Standard control specifications	*STW-40 Nakamura-Tome Fanuc 16i-TA*	*STS-40 Nakamura-Tome Fanuc 18i-TA*
	Three-path control	Two-path control
No. of controlled axes	11 axes	9 axes
Simultaneous controlled axes	5(Tool spindle X,Z,C,Y,B1)+4(R-Turret X,Z,C,B2)+2(L-Turret X,Z)	5(Tool spindle X,Z,C,Y,B1)+4(Turret X,Z,C,B2)
Least input increment	0.001mm 0.001degree	0.001mm 0.001degree
Least command increment	X : 0.0005mm Z : 0.001mm Y : 0.001mm B2 : 0.001mm C, B1 : 0.001degree	X : 0.0005mm Z : 0.001mm Y : 0.001mm B2 : 0.001mm C, B1 : 0.001degree
Feed per minute,Feed per revolution	G98／G99	G98／G99
Manual handle feed	Manual pulse generator 0.001／0.01／0.1 mm per pulse	Manual pulse generator 0.001／0.01／0.1 mm per pulse
Automatic acceleration/deceleration	Rapid traverse:linear,Cutting feed : after interpolation	Rapid traverse:linear,Cutting feed : after interpolation
Rapid traverse override	F0(low)／25／100%	F0(low)／25／100%
Feedrate override	0～150% at 10% increment	0～150% at 10% increment
Dwell	G04	G04
Reference point return	G27／G28／G30	G27／G28／G30
Tool function	T 4 digit	T 4 digit
Tool offset pairs	99pairs each for Tool Spindle,L／R-Turret	99pairs each for Tool Spindle and Turret
Tool nose radius compensation	G41, G42／G40	G41, G42／G40
Tool geometry /wear compensation	Geometry and wear can be set separately	Geometry and wear can be set separately
LUCK-BEI (NT NURSE)	Graphical interactive part programming ／automatic process determination three-dimensional machining simulation	Graphical interactive part programming ／automatic process determination three-dimensional machining simulation
Absolute/incremental programming	X,Z,C,Y,B1・B2(absolute programming only)／U,W,H,V	X,Z,C,Y,B1・B2(absolute programming only)／U,W,H,V
Positioning	G00	G00
Linear interpolation	G01	G01
Circular interpolation	G02／G03, CW／CCW	G02／G03, CW／CCW
Thread cutting	G32	G32
Thread cutting retract	Retract,when feed hold is commanded,to the start point	Retract,when feed hold is commanded,to the start point
Canned cycles	G90, G92, G94	G90, G92, G94
Multiple repetitive cycles type Ⅰ／Ⅱ	G70～G76	G70～G76
Canned cycles for drilling	G80～G89	G80～G89
Polar coordinate interpolation	Available	Available
Cylindrical interpolation	Available	Available
Sub program	M98／M99 4 folds nested	M98／M99 4 folds nested
Balance cut	G68／G69 (Cutting tools on Tool Spindle and L／R turrets move synchronously)	G68／G69 (Cutting tools on Tool Spindle and turret move synchronously)
Coordinate system setting	G50	G50
Work coordinate system setting	G52, G53, G54～G59	G52, G53, G54～G59
Part program storage length	320 meters each for Tool Spindle and L／R Turrets	320 meters each for Tool Spindle and Turret
No. of registerd programs	125 each for Tool Spindle and L／R Turrets	125 each for Tool spindle and Turret
Part program editing	Deletion／insertion／change	Deletion／insertion／change
Extended part program editing	Conversion of address／word,copy／move／merge of programs	Conversion of address／word,copy／move／merge of programs
Back ground ediging	Part program storage and editing can be done during machining	Part program storage and editing can be done during machining
Program number search	O 4 digids available by MDI	O 4 digids available by MDI
Sequence number search	N 5 digids available by MDI	N 5 digids available by MDI
Auxiliary function (M function)	M 3 digids	M 3 digids
Tape code	EIA／ISO automatic recognition	EIA／ISO automatic recognition
Input/output interface	RS-232-C, Memory card	RS-232-C, Memory card
Spindle function (S function)	S 4 digits	S 4 digits
Constant surface speed control	G96／G97	G96／G97
Operation panel :Display / Keyboard	10.4LCD color／Keyboard MDI and soft keys	10.4LCD color／Keyboard MDI and soft keys
Displayed language	English／German／French／Italian／Chinese／Spanish／Korean／Portuguese	English／German／French／Italian／Chinese／Spanish／Korean／Portuguese
Custom macro B	Available	Available
Tool post interference check	Available	Available
Look-ahead control	G08	G08
Programmable data input	G10	G10
Inch/metric	G20 ／ G21	G20 ／ G21
Display of run hour and parts count	Display of power-on time／cycle time,quantity of parts machined	Display of power-on time／cycle time,quantity of parts machined
Graphic display	Available	Available
Rigid tapping	Synchronization of spindle with linear axis	Synchronization of spindle with linear axis
Helical interpolation	G02 ／ G03	G02 ／ G03

Optional features	
☐ Part program storage length （640 ／ 1280 m）	☐ Program restart
☐ No. of registered programs （200 ／ 400 ／ 1000 pcs.）	☐ Additional custom macro common variables
☐ Continuous thread cutting	☐ DNC operation
☐ Variable lead thread cutting （G34）	☐ HSSB(High speed serial bus) interface
☐ Circular threading （G35／G36）	☐ NT WORK NAVIGATOR

ÖLSORTENPLAN

Hersteller	Zentralschmieröl	Hydrauliköl	Fett
Shell	Tonna T68 oder A-R 68	Tellus C32 oder J-H 32	Lethinax AM oder Sunlight MB2
Exxon	Febis K68	Teresso 32	Beacon Q2
Mobil	Mobil Vactra No. 2	DTE 24	Mobil Spezial

Hersteller	Spindelöl
Mobil	VG2

1 Hydrauliktank	50L / 37L
2 Zentralschmierung	4,6L
3 Spindelöl	24L

Bitte venib organisieren