CNC Vertical Lathes / CNC Turning Centers

VTLex Series

O-M ltd.

Exceptional Durability and Reliability

Our latest and most powerful next-generation machines for:

High speed, Heavy Duty Cutting, Higher Accuracy, Less Environmental Pollution, and Easy Operations

VTLex1600 with 5 stations 4 pallets APC

VTLex Series

VTLex

■Two-axis CNC vertical lathe.
■Ensures high rigidity, high speed operation, and high accuracy.

VTLex-M

■Three-axis CNC turning center.
■Milling and C-axis table indexing are added to the VTLex-M turning capabilities. These added functions allow a wider range of machining applications and implementation of integration of machining processes.

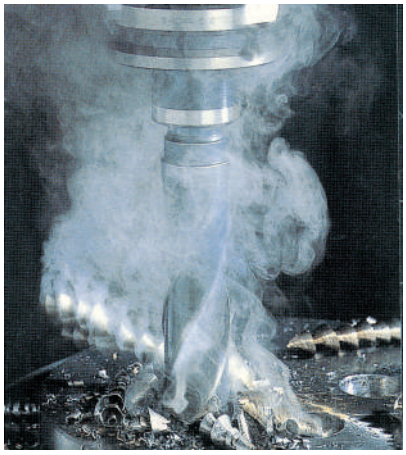
VTLex915

Environmental Measures

■An optional fully enclosure chip cover and an internal conveyor scheme are employed. Thus, the scattering of chips and coolant is prevented for minimum environmental pollution (described on a later page).
■Semi-dry cutting for reduced coolant consumption can also be achieved using an optional heat vaporization cooling system (described on a later page).

Energy-Saving Measures

■These machines are provided with numerous energy-saving measures, including: hardware-related measures such as the adoption of a LCD unit and an inverter controlled hydraulic unit, and energy saving measures such as automatic light-off, automatic screen off, and automatic spindle fan motor stopping functions.



Main Construction

Column

Dynamic loads transmitted through the crossrail are absorbed by the highly rigid column. The box-construction high-grade cast iron column used in every model of the VTLex(-M) Series has high rigidity to ensure sufficient strength. (VTLex2000･2500･3000:fabricated steel)
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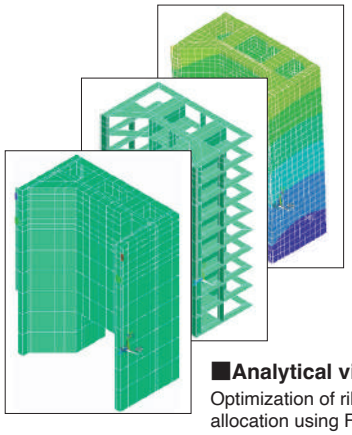
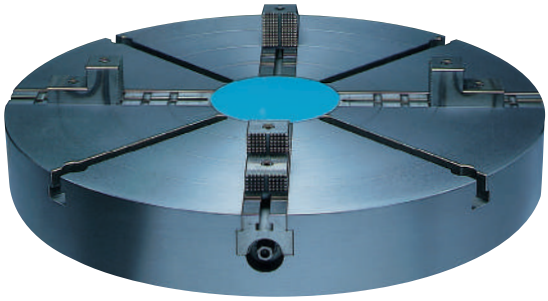


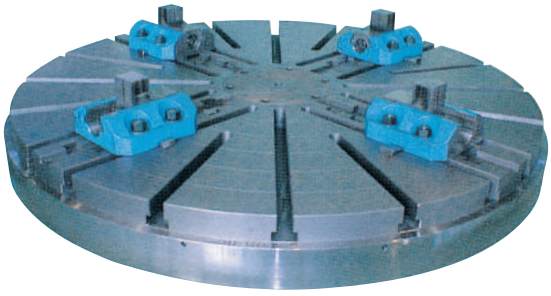
■**Analytical views**
Optimization of rib allocation using FEM.

Table

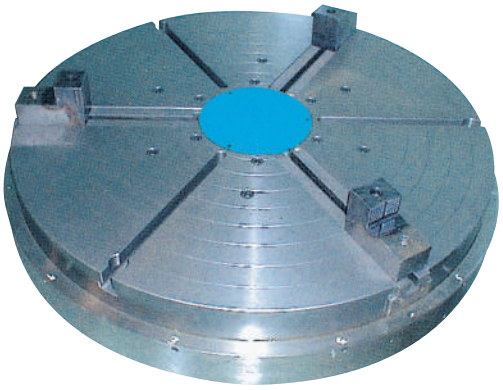
Addition to standard independent four-jaw chuck table, various optional chuck tables are available to meet different workpiece machining requirements. All tables are of a highly rigid design with sufficient thickness.



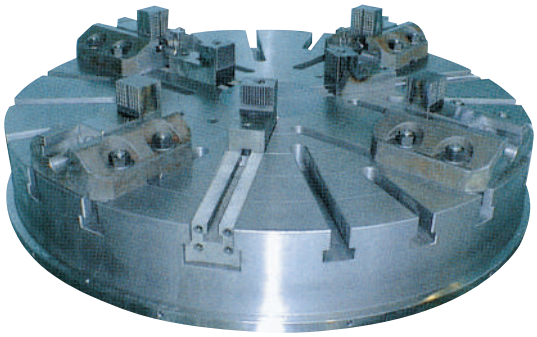
■Standard independent sliding four-jaw chuck table
(VTLex915(M) ~ 1100(M))



■Standard independent four-jaw chuck table
(VTLex1250(M) ~ 3000(M))



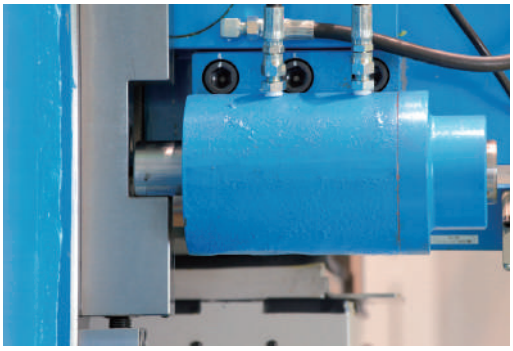
■Hydraulic three-jaw chuck table (Optional)



■Combination chuck table (Optional)

Crossrail

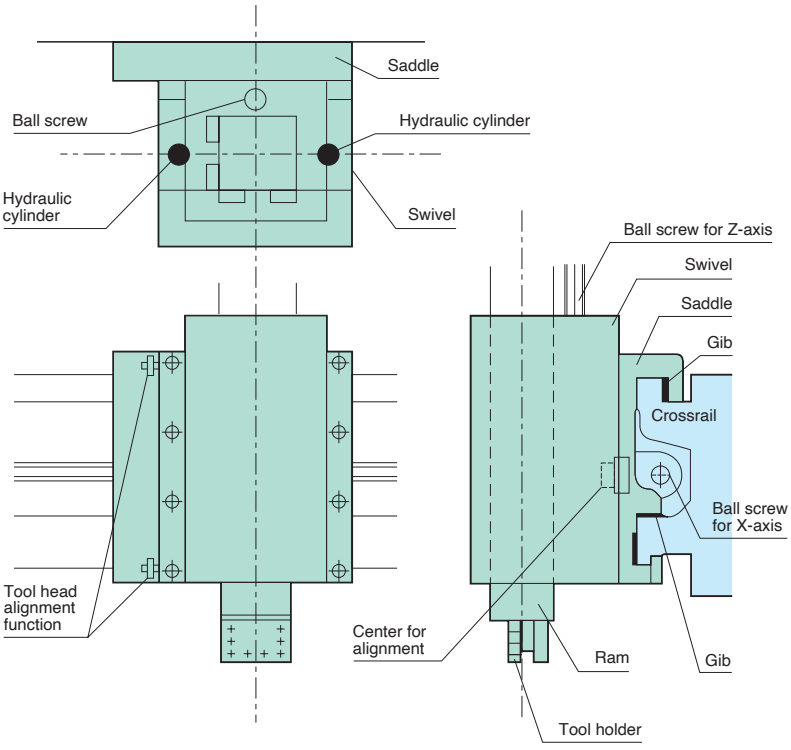
The quench-polished double-way wide sliding surface develops excellent wear resistance, and stable accuracy is maintained over a long term. The vertical drive uses 200-mm pitched step plates and hydraulic locating pins to obtain high positioning accuracy and parallelism.
The crossrail, after being positioned, is fixed by strong clamps.
(For the VTLex915/1100, the cross rail is fixed type.)



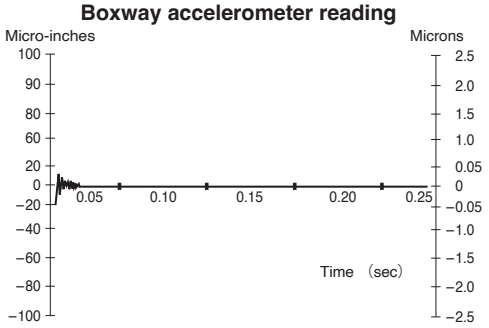
■Crossrail positioning mechanism

Feed Drive Mechanism

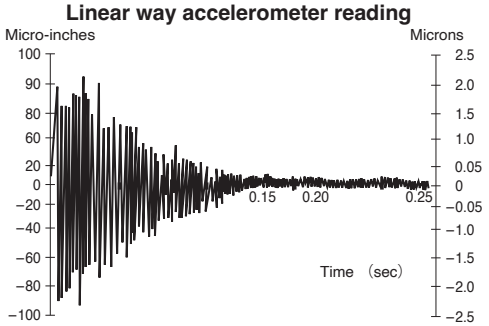
Both the vertical (Z-AXIS) drive and the horizontal (X-AXIS) drive employ an AC servomotor and a large-diameter ball screw. The design of the feed mechanism (**BOXWAY guide**) proves to be excellent to absorb vibration, especially during grooving, intermittent cutting, heavy cutting and finish cutting. **The tool head aligment function** provides easy aligment whenever needed.



Boxway accelerometer reading



Linear way accelerometer reading

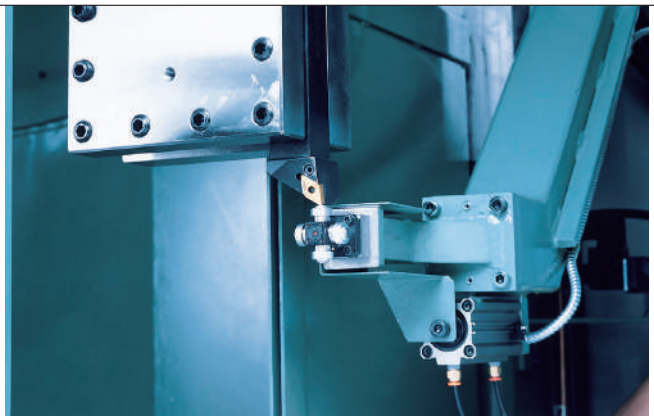


Data from a study done at Penn State University

Standard Accessories

Tool presetter

Deviation will be registered in the “software” offset area. Tool nose wear and breakage can be monitored.



Automatic Tool Changer (ATC)

The ATC magazine is mounted at the right end of the crossrail, and is separated from the cutting area by the automatic shutter. During ATC indexing, the command-specified location is selected on a random basis and this unit is indexed to this location by high-speed shortcut rotation. For VTLex-M, the tool change time is reduced to about half that of our conventional model.

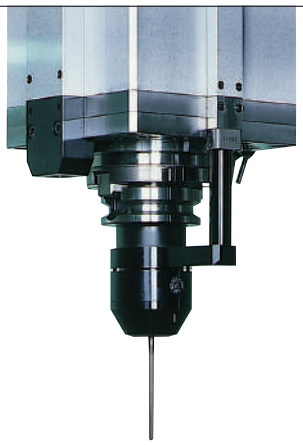
Chip conveyor and chip tank

They are designed for easy chip removal.

Optional Accessories

Work probe

This system automatically measures workpiece diameter and surface level differences and performs any necessary offset operations. The system minimizes mistakes in measured data reading and in correction data calculation and input, and thus contributes to reduction in working time, to improvement in machine availability, and to unattended machine operation.



Automatic Pallet Changer (APC)

This option greatly improves productivity. O-M's mechanical system assures rapid transfer of the pallet tables.
It is of a flexible design excellent in expandability so as to meet FMS specifications, including a multi-pallet (4-, 6-, or 10-pallet) pallet table scheme. The pallet change time is reduced to about half that of our conventional system (3-station 2-pallet type).

Grinding Wheel holder

Used for improving workpiece surface finish. This can be changed by the ATC.

Angle attachment

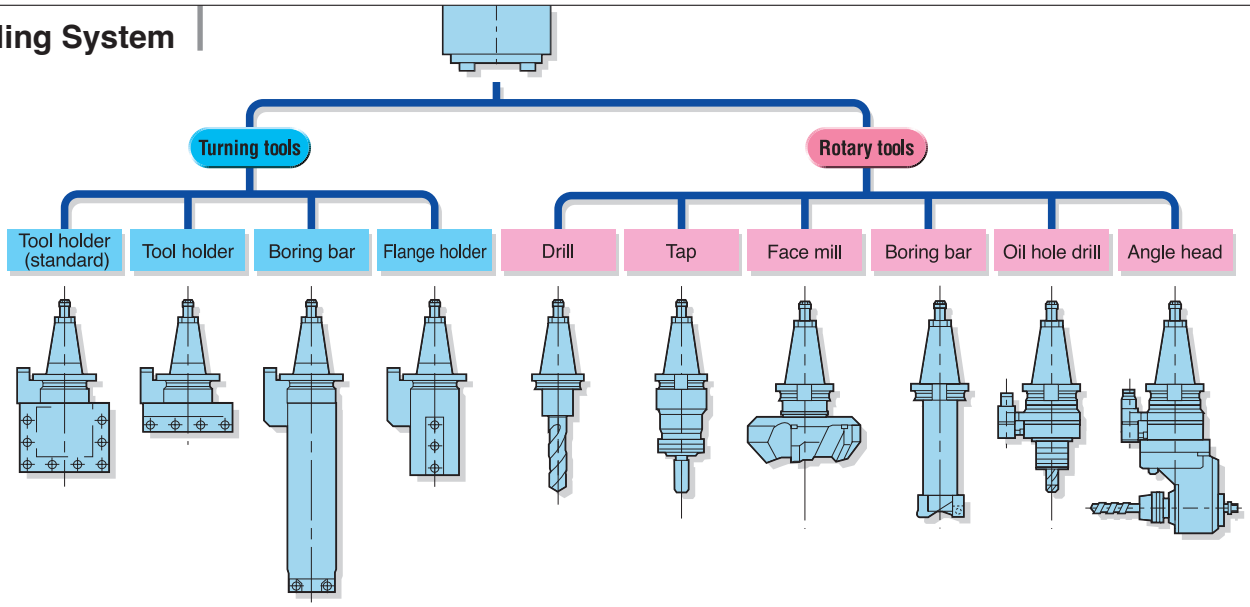
This can be changed by the ATC.

■Grinding holder

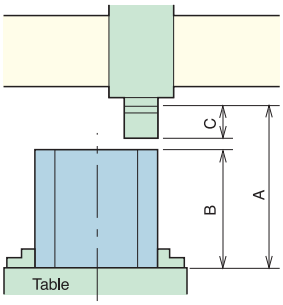
■Angle attachment

Major Capabilities

Tooling System



Max. Cutting Height



VTLex

mm (inch)

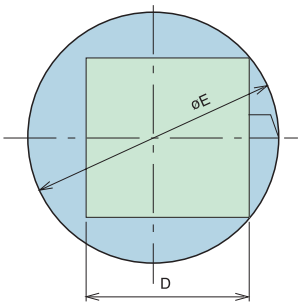
	VTLex915	VTLex1100	VTLex1250	VTLex1600	VTLex2000	VTLex2500	VTLex3000
A	965 (37.99)	965 (37.99)	1475 (58.07)	1825 (71.85)	2040 (80.31)	2440 (96.06)	2440 (96.06)
B	800 (31.5)	800 (31.5)	1250 (49.21)	1600 (62.99)	1815 (71.46)	2215 (87.2)	2215 (87.2)
C	130 (5.12)	130 (5.12)	180 (7.09)	180 (7.09)	180 (7.09)	180 (7.09)	180 (7.09)

VTLex - M

mm (inch)

	VTLex915M	VTLex1100M	VTLex1250M	VTLex1600M	VTLex2000M	VTLex2500M	VTLex3000M
A	880 (34.65)	880 (34.65)	1390 (54.72)	1740 (68.5)	1955 (76.97)	2355 (92.72)	2355 (92.72)
B	750 (29.53)	750 (29.53)	1250 (49.21)	1600 (62.99)	1815 (71.46)	2215 (87.2)	2215 (87.2)
C	120 (4.72)	120 (4.72)	120 (4.72)	120 (4.72)	120 (4.72)	120 (4.72)	120 (4.72)

Ram Head Cross-Sectional Sizes and Minimum bore for ram pass



VTLex

mm (inch)

	VTLex915	VTLex1100	VTLex1250	VTLex1600	VTLex2000	VTLex2500	VTLex3000
D	180 (7.09)	180 (7.09)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)
ϕE	260 (10.24)	260 (10.24)	330 (12.99)	330 (12.99)	330 (12.99)	330 (12.99)	330 (12.99)

VTLex - M

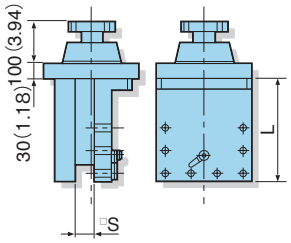
mm (inch)

	VTLex915M	VTLex1100M	VTLex1250M	VTLex1600M	VTLex2000M	VTLex2500M	VTLex3000M
D	180 (7.09)	180 (7.09)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)	210 (8.27)
ϕE	280 (11.02)	280 (11.02)	330 (12.99)	330 (12.99)	330 (12.99)	330 (12.99)	330 (12.99)

D: Cross-sectional size of the ram head øE: Minimum through-hole inside diameter of the ram head

Tool Holders (VTLex)

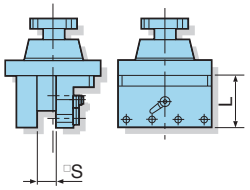
Cutting tool holder
Type: RH1



mm (inch)

Type	L	□S
RH1-150-1¼"	150 (5.91)	31.75 (1.25)
RH1-200-1¼"	200 (7.87)	31.75 (1.25)

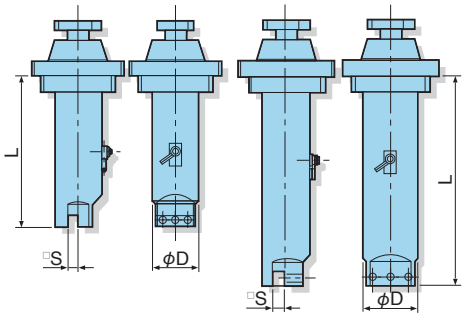
Cutting tool holder
Type: RH2



mm (inch)

Type	L	□S
RH2-100-1¼"	100 (3.94)	31.75 (1.25)
RH2-100-1½"	100 (3.94)	38.1 (1.5)

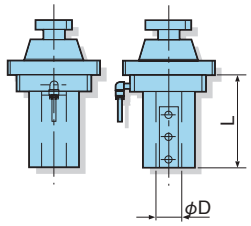
Boring bar
Type: RB1



mm (inch)

Type	ϕD	L	□S
RB1-90-300-¾"	90 (3.54)	300 (11.81)	19.1 (0.75)
RB1-100-450-1"	100 (3.94)	450 (17.72)	25.4 (1)

Flange holder
Type: RS2



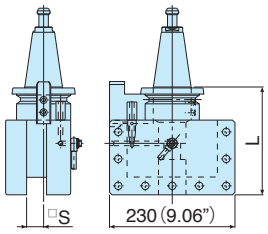
mm (inch)

Type	L	ϕD
RS2-1¼"	180 (7.09)	31.75 (1.25)
RS2-1½"	180 (7.09)	38.1 (1.5)
RS2-2"	180 (7.09)	50.4 (2)

Tool Holders (VTLex-M)

■ Tool holder for turning tools

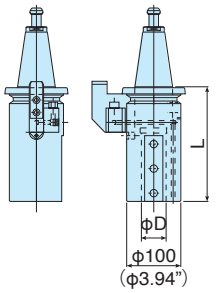
■ Tool Holder



mm (inch)

Type	L	□S
ANH1-200-1¼"	200 (7.87)	31.75 (1.25)
ANH1-250-1¼"	250 (9.84)	31.75 (1.25)
ANH2-170-1¼"	170 (6.69)	31.75 (1.25)

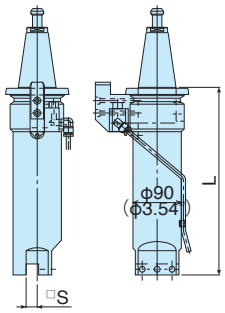
■ Flange Holder



mm (inch)

Type	L	□S
ANS2-1¼"	210 (8.27)	31.75 (1.25)
ANS2-1½"	210 (8.27)	38.1 (1.5)
ANS2-2"	210 (8.27)	50.4 (2)

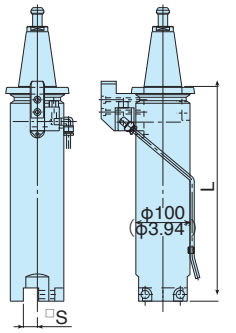
■ Boring Bar (φ90)



mm (inch)

Type	L	□S
ANB1-90-300-¾"	300 (11.8)	19.1 (0.75)
ANB1-90-350-¾"	350 (13.8)	19.1 (0.75)

■ Boring Bar (φ100)



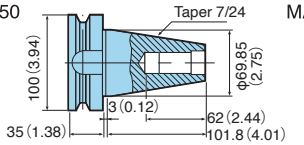
mm (inch)

Type	L	□S
ANB1-100-300-1"	300 (11.8)	25.4 (1)
ANB1-100-400-1"	400 (15.7)	25.4 (1)

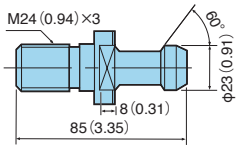
■ Tool holders for rotary tools

mm (inch)

MAS403 BT50



MAS403 P50T-2

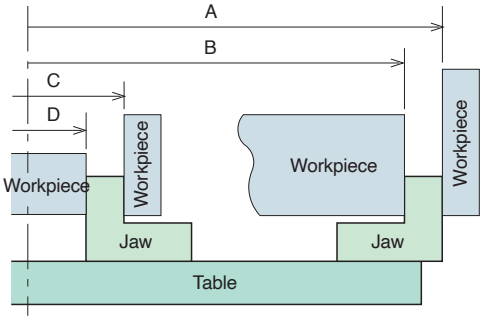


* Tool shank can't be set vertically to ANH2-170-1¼"

Holders other than those shown on this page are also available. When you need one, please contact the O-M product sales representative in your area.

Major Capabilities

Chucking Capabilities

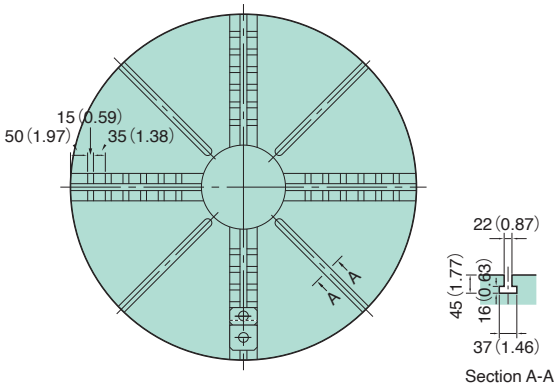


mm (inch)

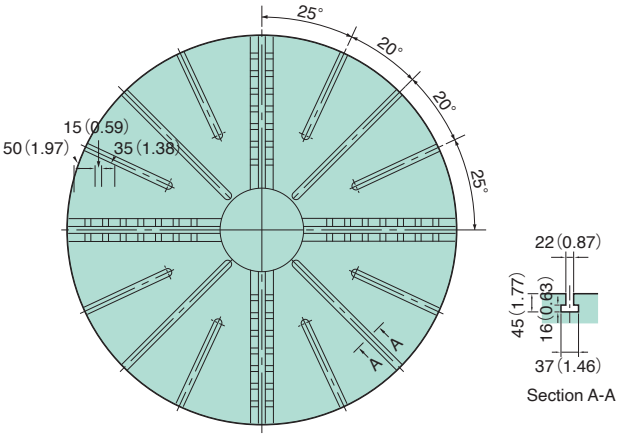
Model	Table diameter	A	B	C	D
VTLex915·915M	915 (36.02)	915 (36.02)	895 (35.24)	360 (14.17)	240 (9.45)
VTLex1100·1100M	1100 (43.31)	1100 (43.31)	1080 (42.52)	360 (14.17)	240 (9.45)
VTLex1250·1250M	1250 (49.21)	1315 (51.77)	1205 (47.44)	455 (17.91)	345 (13.58)
VTLex1600·1600M	1600 (62.99)	1665 (65.55)	1555 (61.22)	445 (17.52)	335 (13.19)
VTLex2000·2000M	2000 (78.74)	2085 (82.09)	1975 (77.76)	415 (16.34)	305 (12.01)
VTLex2500·2500M	2500 (98.43)	2585(101.77)	2475 (97.44)	465 (18.31)	355 (13.98)
VTLex3000·3000M	3000 (118.11)	3035(119.49)	2925(115.16)	465 (18.31)	355 (13.98)

Tables

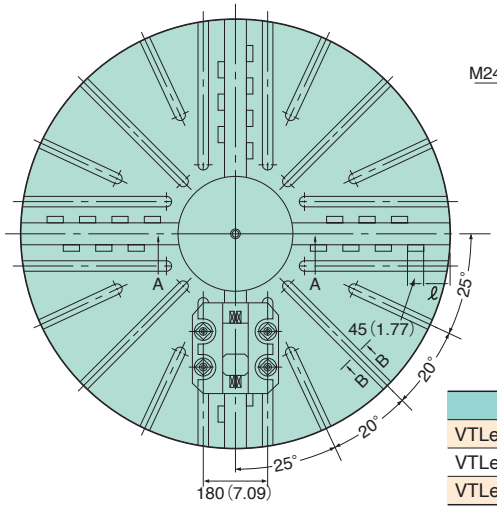
■VTLex915·915M mm (inch)

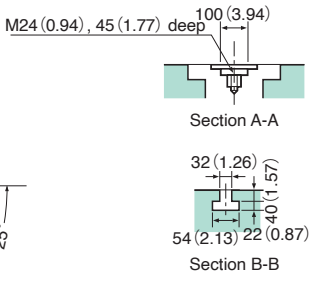


■VTLex1100·1100M mm (inch)



■VTLex1250·1250M～3000·3000M mm (inch)





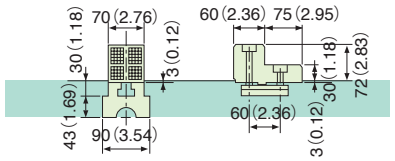
mm (inch)

Model	ℓ
VTLex1250·1250M·1600·1600M	75 (2.95)
VTLex2000·2000M·2500·2500M	65 (2.56)
VTLex3000·3000M	90 (3.54)

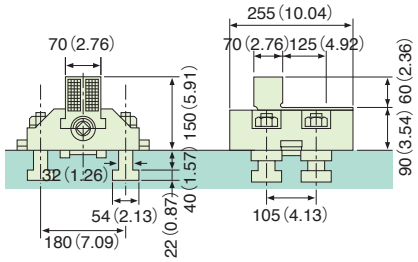
■Jaws

mm (inch)

VTLex800·915·915M～1100·1100M



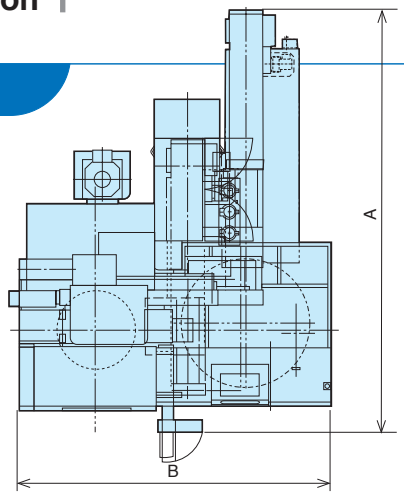
VTLex1250·1250M～3000·3000M

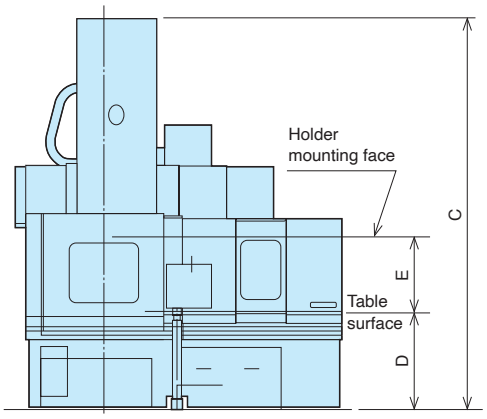


Machine Dimension

Standard

VTLex915·915M
VTLex1100·1100M



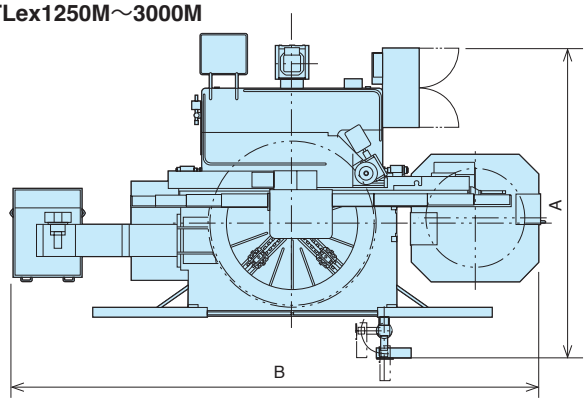


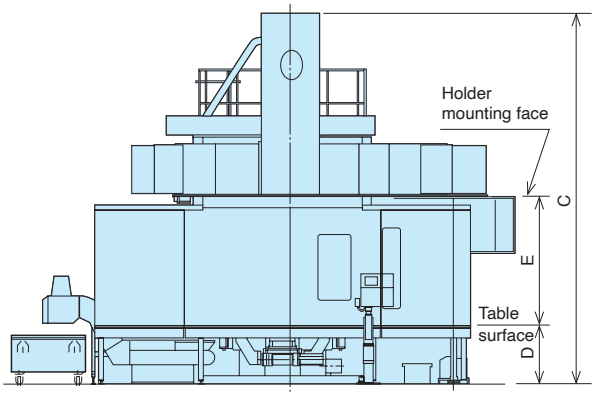
mm (inch)

	VTLex915	VTLex915M	VLTex1100	VTLex1100M	VTLex1250	VTLex1250M	VTLex1600	VTLex1600M	VTLex2000	VTLex2000M	VTLex2500	VTLex2500M	VTLex3000	VTLex3000M
A	3450 (135.83)		3530 (138.98)		4030 (158.66)		4320 (170.08)		4800 (188.98)		5650 (222.44)		6600 (259.84)	
B※1	3450 (135.83)	4000 (157.48)	5080 (200.0)	5640 (222.05)	6100 (240.16)	6750 (265.75)	6550 (257.87)	7200 (283.46)	7800 (307.09)	8250 (324.8)	8700 (342.52)	8900 (350.39)	8300 (326.77)	8500 (334.65)
C	4200 (165.35)	4525 (178.15)	4085 (160.83)	4410 (173.62)	5100 (200.79)	5390 (212.20)	5450 (214.57)	5740 (225.98)	5750 (226.38)	6050 (238.19)	6500 (255.91)		6500 (255.91)	
D	1065 (41.93)		950 (37.40)		930 (36.61)				980 (38.58)		1030 (40.55)			
E	965 (37.99)	880 (34.65)	965 (37.99)	880 (34.65)	1475 (58.07)	1390 (54.72)	1825 (71.85)	1740 (68.5)	2040 (80.31)	1955 (76.97)	2440 (96.06)	2355 (92.72)	2440 (96.06)	2355 (92.72)

*1 Including chip conveyor and bucket.

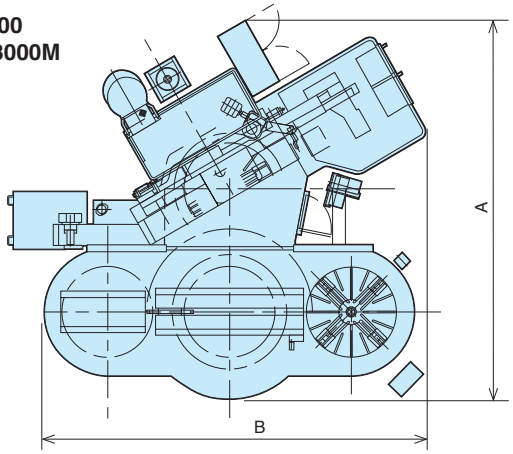
VTLex1250～3000
VTLex1250M～3000M



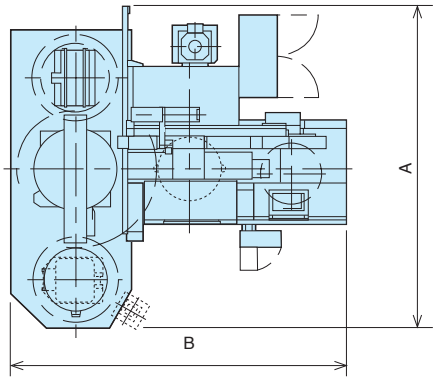


With APC Unit

VTLex1250～3000
VTLex1250M～3000M



VTLex 915·915M
VTLex 1100·1100M



mm (inch)

	VTLex915	VTLex915M	VTLex1100	VTLex1100M	VTLex1250	VTLex1250M	VTLex1600	VTLex1600M	VTLex2000	VTLex2000M	VTLex2500	VTLex2500M	VTLex3000	VTLex3000M
A	5130 (201.97)		5350 (210.63)		6050 (238.19)		6550 (257.87)		8100 (318.90)		9700 (381.89)		Depends on other specs	
B	4750 (187.01)	5300 (208.66)	6400 (251.97)	6950 (273.62)	6375 (250.98)	6975 (274.61)	7570 (298.03)		8500 (334.65)		10400 (409.45)			

VTLex Main Specifications

Description		Unit	VTLex915	VTLex1100	VTLex1250	VTLex1600	VTLex2000	VTLex2500	VTLex3000
Table diameter		mm	915	1100	1250	1600	2000	2500	3000
Max. turning diameter		mm	1000	1350	1600	2000	2500	3000	4000
Max. swing		mm	1250	1500	1600	2000	2500	3000	4000
Max. turning height※1		mm	800/600 (710/510)	800/600 (615/415)	1250 (880)	1600 (1225)	1815 (1415)	2215 (1705)	2215
Max. mass of workpiece※1		kg	1500(1000)	2000(1000)	8000(4000)	10000 (5000)	15000 (7000)	20000 (9000)	20000
Max. torque for turning		Nm	6500	9350	16000	20000	28000	35000	
Max. cutting force		N	25000	25000	35000				
Vertical travel of ram		mm	800		1100				
Horizontal travel	to right from table center	mm	1015	1410	1570	1770	2040	2290	2845
	to left from table center※2	mm	50(515)	50(600)	100(725)	100(900)	100(1165)	100(1415)	100(2010)
Ram size		mm	180×180		210×210				
Magazine capacity		tool	12(16, 24, 40, 60)						
Rapid feed speed	X axis	mm/min	16000		14000		10000	7000	10000
	Z axis	mm/min	12000		10000				
Feed per revolution		mm/rev	0.01 ～ 500						
Number of table speed		step	2						
Table speed for turning		min^{-1}	4 ～ 800	4 ～ 600	2 ～ 400	1.6 ～ 320	1.25 ～ 200	1～ 160	
Vertical travel of crossrail		mm	fixed type		600	800	1000	1200	
Crossrail positioning step(pitch 200mm)		step	–		4	5	6	7	
Main motor(AC)		kw	VAC37/45	VAC45/55					
Power supply		V	AC200/220						
Operating voltage		V	AC100･DC24						
Total power capacity		kVA	85	120					
Mass of machine		kg	12000	13000	15000	19000	24500	28000	39700

※1 : ( ) APC option ※2 : ( ) X axis full stroke

Standard Accessories

1 Independent four-jaw chuck table
2 ATC unit(VTLex: 12 tools, VTLex-M: 24 tools)
3 Standard tool holder for turning
4 Tool presetter
5 Chip cover(manual open/close type)
* 6 Chip conveyor
* 7 Table bed front cover
8 X axis telescopic cover
9 Coolant unit(Ram through)
* 10 Coolant unit(Center through, VTLex-M only)
* 11 High pressure coolant preparation(for VTLex-M)
12 Automatic lubrication unit
13 X axis scale feedback
* 14 C axis gear box(for VTLex-M only)
15 Crossrail positioning unit(Except for VTLex915(M)/1100(M))
* 16 Work light
* 17 Signal tower
18 NC unit
19 Energy-saving function
* 20 Automatic power off unit
21 Column top handrail and ladder
22 Disassembly operations tools
23 Foundation parts for installation

Optional Accessories

☐ Hydraulic three-jaw chuck table (with high and low pressure control)
☐ Combination chuck (with high and low pressure control)
☐ Automatic pallet changer (Except for VTLex3000(M))
☐ High column
☐ Special ATC unit
VTLex : 16, 24, 40, 60 tools
VTLex-M : 40, 60, 90 tools
☐ Tool holder
☐ Angle head(for VTLex-M only)
☐ Work probe
☐ Z axis scale feedback
☐ Automatic open/close chip cover
☐ Enclosure chip cover
☐ Mist collector
☐ High pressure coolant preparation (for VTLex)
☐ Table lubricant chiller
☐ Jib crane for tool holder mounting
☐ Table orientation
☐ Automatic power on unit
☐ M-code programming for vertical crossrail driving
☐ Pre-tapped hole air blow unit (for VTLex-M only)

VTLex Main Specifications

Description		Unit	VTLex915	VTLex1100	VTLex1250	VTLex1600	VTLex2000	VTLex2500	VTLex3000
Table diameter		inch	36.02	43.31	49.21	63.00	78.74	98.43	118.11
Max. turning diameter		inch	39.37	53.15	63.00	78.74	98.43	118.11	157.48
Max. swing		inch	49.21	59.06	63.00	78.74	98.43	118.11	157.48
Max. turning height※1		inch	31.50/23.62 (27.95/20.08)	31.50/23.62 (24.21/16.34)	49.21 (34.65)	63.00 (48.23)	71.46 (55.71)	87.20 (67.13)	87.20
Max. mass of workpiece※1		lbs	3300 (2200)	4400 (2200)	17640 (8820)	22050 (11020)	33070 (15430)	44090 (19840)	44100
Max. torque for turning		lbf·ft	4790	6920	11800	14750	20650	25810	
Max. cutting force		lbf	5620		7868				
Vertical travel of ram		inch	31.50		43.31				
Horizontal travel	to right from table center	inch	39.96	55.51	61.81	69.69	80.31	90.16	112.01
	to left from table center※2	inch	1.97 (20.28)	1.97 (23.62)	3.94 (28.54)	3.94 (35.43)	3.94 (45.87)	3.94 (55.71)	3.94 (79.13)
Ram size		inch	7.09×7.09		8.27×8.27				
Magazine capacity		tool	12(16, 24, 40, 60)						
Rapid feed speed	X axis	inch/min	629.92		551.18		393.70	275.60	393.70
	Z axis	inch/min	472.44		393.70				
Feed per revolution		inch/rev	0.0004 ～ 19.69						
Number of table speed		step	2						
Table speed for turning		min–1	4 ～ 800	4 ～ 600	2 ～ 400	1.6 ～ 320	1.25 ～ 250	1 ～ 160	
Vertical travel of crossrail		inch	fixed type		23.62	31.50	39.37	47.24	
Crossrail positioning step (pitch 200mm)		step	–		4	5	6	7	
Main motor(AC)		HP	50/60	60/75					
Power supply		V	AC200/220						
Operating voltage		V	AC100·DC24						
Total power capacity		kVA	85	120					
Mass of machine		lbs	26460	28660	33070	41890	54010	61730	87600

※1：( ) APC option　※2：( ) X axis full stroke

VTLex-M Main Specifications

Description		Unit	VTLex915M	VTLex1100M	VTLex1250M	VTLex1600M	VTLex2000M	VTLex2500M	VTLex3000M
Table diameter		mm	915	1100	1250	1600	2000	2500	3000
Max. turning diameter		mm	1000	1350	1600	2000	2500	3000	4000
Max. swing		mm	1250	1500	1600	2000	2500	3000	4000
Max. turning height※1		mm	750/550 (660/460)	750/550 (565/365)	1250 (880)	1600 (1225)	1815 (1415)	2215 (1705)	2215
Max. mass of workpiece※1		kg	1500(1000)	2000(1000)	8000(4000)	10000(5000)	15000(7000)	20000(9000)	20000
Max. torque for turning		Nm	6500	9350	16000	20000	28000	35000	
Max. cutting force		N	25000		30000				
Max. torque for milling		Nm	225			230			225
Max. diameter for drilling		mm	60						
Max. diameter for tapping		mm	M30×3.5						
Vertical travel of ram		mm	800		1100				
Horizontal travel	to right from table center	mm	1015	1410	1570	1770	2040	2290	2845
	to left from table center※2	mm	50(515)	50(600)	100(725)	100(900)	100(1165)	100(1415)	100(2010)
Ram size		mm	180×180		210×210				
Magazine capacity		tool	24(40, 60, 90)						
Tool taper			BT50						
Pull stud(MAS403)			P50T-2						
Rapid feed speed	X axis	mm/min	16000		14000		10000	7000	10000
	Z axis	mm/min	12000		10000				
Feed per revolution		mm	0.01 ~ 500						
Table speed for indexing(C axis)		min^{-1}	5		4	3	2	1	
Number of table speed		step	2						
Table speed for turning		min^{-1}	4 ~ 800	4 ~ 600	2 ~ 400	1.6 ~ 320	1.25 ~ 200	1~ 160	
Number of spindle speed		step	1 speed only						
Spindle speed		min^{-1}	25 ~ 2500						
Vertical travel of crossrail		mm	fixed type		600	800	1000	1200	
Crossrail positioning step(pitch 200mm)		step	–	–	4	5	6	7	
Main motor(AC)		kw	VAC37/45	VAC45/55					
Motor for spindle(AC)		kw	VAC11/15						
Power supply		V	AC200/220						
Operating voltage		V	AC100･DC24						
Total power capacity		kVA	85	120					
Mass of machine		kg	13000	15000	17000	21000	26500	30000	41700

※1 : ( ) APC option ※2 : ( ) X axis full stroke

Control Panel

Control operations that allow manual/fully automatic operation

This control panel provides total control that includes manual control and CNC. All control operations for independent operation and fully automatic operation, including table rotation, operation mode selection, feed rate selection, manual pulse generation, feed override selection, X/Z axis return to home position, NC starting, dry run operation, tool nose radius compensation, etc., can be performed from this compact pendant-type control panel. The LCD display unit can display up to 480 characters at a time, and data can therefore be edited very easily. A trouble information monitoring safety system based on self-diagnostics is displayed on the LCD display unit so as to allow quick response to after-sale service requests.

Manufacturer of the NC unit: FANUC CNC

VTLex-M Main Specifications

Description		Unit	VTLex915M	VTLex1100M	VTLex1250M	VTLex1600M	VTLex2000M	VTLex2500M	VTLex3000M
Table diameter		inch	36.02	43.31	49.21	63.00	78.74	98.43	118.11
Max. turning diameter		inch	39.37	53.15	63.00	78.74	98.43	118.11	157.48
Max. swing		inch	49.21	59.06	63.00	78.74	98.43	118.11	157.48
Max. turning height※1		inch	29.53/21.65 (25.98/18.11)	29.53/21.65 (22.24/14.37)	49.21 (34.65)	63.00 (48.23)	71.46 (55.71)	87.20 (67.13)	87.20
Max. mass of workpiece※1		lbs	3300 (2200)	4400 (2200)	17640 (8820)	22050 (11020)	33070 (15430)	44070 (19840)	44100
Max. torque for turning		lbf·ft	4790	6920	11800	14750	20650	25810	
Max. cutting force		lbf	5620		6744				
Max. torque for milling		lbs·ft	166			170			166
Max. diameter for drilling		inch	2.36						
Max. diameter for tapping		inch	1.18						
Vertical travel of ram		inch	31.50		43.31				
Horizontal travel	to right from table center	inch	39.96	55.51	61.81	69.69	80.31	90.16	112.01
	to left from table center※2	inch	1.97 (20.28)	1.97 (23.62)	3.94 (28.54)	3.94 (35.43)	3.94 (45.87)	3.94 (55.71)	3.94 (79.13)
Ram size		inch	7.09×7.09		8.27×8.27				
Magazine capacity*4		tool	24(40, 60, 90)						
Tool taper			BT50						
Pull stud(MAS403)			P50T-2						
Rapid feed speed	X axis	inch/min	629.92		551.18		393.70	275.60	393.70
	Z axis	inch/min	472.44		393.70				
Feed per revolution		inch/rev	0.0004 ~ 19.69						
Table speed for indexing(C axis)		min^{-1}	5		4	3	2	1	
Number of table speed		step	2						
Table speed for turning		min^{-1}	4 ~ 800	4 ~ 600	2 ~ 400	1.6 ~ 320	1.25 ~ 200	1 ~ 160	
Number of spindle speed		step	1 speed only						
Spindle speed*5		min^{-1}	25 ~ 2500						
Vertical travel of crossrail		inch	fixed type		23.62	31.50	39.37	47.24	
Crossrail positioning step(pitch 7.874 inch)		step	–		4	5	6	7	
Main motor(AC)		HP	50/60	60/75					
Motor for spindle(AC)		HP	15/20						
Power supply		V	AC200/220						
Operating voltage		V	AC100·DC24						
Total power capacity		kVA	85	120					
Mass of machine		lbs	28660	33070	37480	46300	58420	66140	91900

※1 : ( ) APC option ※2 : ( ) X axis full stroke

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