
Outline

We shall send you the delivered machine specifications for the VTM-1200YB 5-axis vertical multitasking machine. After confirming the descriptions contained in this specification sheet, we would like you to return part of the receipt drawings.

1. Machine structure

VTM-1200YB

- Spindle: Standard spindle $\phi 380$ flat 30/22 kW (30 min/cont) 5 to 500 min⁻¹
- Turret: CAPTO C8 37/30/22 kW (short time/30 min/cont) Max. 500 min⁻¹
Compatible with B-axis contouring

2. Optional specifications

1) High-column specification

- The machine is provided with high-column structure to extend Z-axis travel from 1,080 to 1,530 mm. Please see the attached drawings for the working range.

2) Matrix magazine

- The ATC magazine is a matrix type that can store up to 120 tools.
The magazine adopts a fixed address coding technique for selecting tool.

3) APC specifications

- The machine is equipped with a 6-pallet APC (with automatic turning setup station). We shall prepare six sets of 1,000-mm diameter 4-jaw pallet chucks.

4) Handling centralized coolant

- We are ready for installation of outlet ports for discharging coolant flowing from the tank on the machine (two 150-mm diameter ducts attached on the side of the tank) and connectors for supplying coolant to the machine. For details, see the attached drawings.

3. Notes

- Always use water-soluble coolant for fire prevention during automatic operation.
- The machine adopts a standard hinge type chip conveyor. This type of chip conveyor has a structure that is hard to prevent fine chips from flowing into the coolant tank. Thus we ask you to clean the tank as needed.

Machine Specifications

Specification		Unit	VTM-1200YB
Capacity and accuracy	Max chuck size	mm	φ1,250
	Max swing	mm	φ1,500
	Max turning diameter	mm	φ1,200
	Max turning length (height)	mm	1,080
	Max work weight	kg	3,000
Travel	X-axis	mm	1,270
	Z-axis	mm	1,080 [1,530]
	Y-axis	mm	1,000 (-500 to +500) [1,240 (-620 to +620)]
	C-axis	deg.	360 (min control angle 0.001)
	B-axis	deg.	150 (min control angle 0.001)
Table (turning spindle)	Spindle speed	min ⁻¹	5 to 500
	Spindle speed ranges		Infinitely variable×2
	Max spindle torque	N·m	6,093/4,062 (20 min/cont)
	Spindle nose shape		φ380 flat nose (JIS B6109-2)
	Spindle bore diameter/front bearing diameter	mm	φ160 / φ260
Turret	Type		H1
	No. of tools		1 for both L- and M-tools
	Tool shank/boring bar shank diameters	mm	□25, □32 / φ40, φ50
Rotary tool spindle	Speed	min ⁻¹	40 to 5,000 [10,000]
	Max torque	N·m	505/300/205 (3 min/30 min/cont)
	Diameter	mm	φ90
Feed	Cutting feedrate command range	mm/rev	0.001 to 1,000.000
	Rapid traverse	mm/min	X, Z, Y: 32,000
		min ⁻¹	B: 19.5, C: 20
ATC	Tool shank/pull stud types		MAS BT50/P50T2 type [CAPTO-C8, HSK A100]
	Tool storage capacity	tools	36
	Max tool diameter	mm	φ290 (w/o adjacent tool) φ170 (w/ adjacent tool)
	Max tool length	mm	500 [600] (from gauge line)
	Max tool weight	kg	30
Motor	Table (turning spindle) drive	kW	30/22 (30 min/cont)
	Rotary tool spindle drive	kW	37/30/22 (3 min/30 min/cont)
	Z-axis	kW	4.6×2
	X-axis	kW	5.2
	Y-axis	kW	4.6
	B-axis	kW	4.6
	Coolant pump	kW	3.0×1 (through M-spindle) 0.25×1 (filter supplies) 1.2×3 (through M-spindle periphery x 1, chip flushing x 2)
Machine size	Height	mm	4,272
	Floor space (including tank)	mm×mm	5,848×5,370
	Weight (including NC unit)	kg	28,000

[]: Optional

[Delivered Machine Specifications]

Machine Model: <u>VTM-1200YB</u>	
Delivery Destination: <u>ROLLS ROYCE MARINE</u> Norway	
Project No.:	159128

Specification	Quantity
Machine model	
Machine model	VTM-1200YB
Compatible with automated operation specifications	
Compatible with automated operation specifications	APC to be attached (ϕ 1,000-mm pallet, tapered cone type)
Place of destination	
Place of destination	EC (CE compliance)
Controller	
Controller	OSP-P200LA
Types of coolant	
Designated type of coolant	Water-soluble
Standards related matters	
Export/safety standards	CE mark compliance including EMC Directives
Scale/power supply	
Scale	In millimeters
Power supply (EC/Asia/China)	230 V
Frequency	50 Hz
Operating voltage	100 V
Indication plate (nameplate/message)	
Indication plate (EC)	Danish*
Paint color	2011 standard color
Main units of the machine	
Turning spindle	Standard (ϕ 380 flat, JIS B6109-2)
B-axis indexing	NC-B-axis
Turning spindle speed	Standard speed 5 to 500 min ⁻¹
Turning spindle motor	22/30 kW (cont/30 min)
Milling tool spindle motor	22/30/37 kW (cont/30 min/short time)
Milling tool spindle	5,000 min ⁻¹
Tool shank shape	CAPTO C8
ATC tool storage capacity	120 tools (matrix magazine)*
Tool selection method	Fixed address
High-pressure coolant handling system	Provided (Only low-pressure coolant flows around periphery of M spindle.)
Standard accessories	

CAPTO C8		
Compatible with high-pressure OD toolholder type A bolt clamp		1
CAPTO C8		
Compatible with high-pressure ID toolholder type H63		1
Chip disposal		
Chip disposal	See the separate sheet for details.	1
In-machine chip flushing	Coil type chip conveyor	1
Automated operation specifications		
Door interlock (CE)	CE compliance	1
Lubrication condition monitor	B-1*	1
Optional specifications relating to coolant		
Coolant tank	See the separate sheet for details.	1
Coolant level detection (compatible with automated operation)	See the separate sheet for details.	1
Coolant through M-spindle	See the separate sheet for details.	1
Turret provided with function capable of switching between high- and low-pressure coolant	High-pressure coolant through L-/M-spindle, and low-pressure coolant around periphery of M-spindle	1
Optional specifications relating to coolant jetting device		
Coolant flowing through passage of tool spindle	Standard 1.21/0.73 kW (60/50 Hz)	1
Chip flushing coolant	Standard 1.21/0.73 kW (60/50 Hz)	1
Additional chip flushing coolant	*Increased volume 3.0/2.2 kW (60/50 Hz)	1
Optional specifications for oil mist collector		
Oil mist collector to be attached	Can be equipped with an oil mist collector (see the separate sheet for details).	1
APC attachment specifications		
APC (pallet not included)	With 6-pallet APC automatic turning setup station	1
Type of APC	Shuttle + external swivel type	1
1,000-mm diameter 4-jaw pallet chuck		6
Optional specifications relating to gauging		
In-process work gauging (radius gauging)	FM radio	1
Feeler gauges	φ6 x L50, L100 each one equipped as standard	1
Optional specifications relating to touch setter		
Touch setter	A (switchable automatic/manual control)	1
Optional specifications relating to export		
Equipment nameplate (CE)		1
Alignment marks on pipes		1
Two-hand operation buttons	The buttons are all housed in the auxiliary control box.	1
Export applications	Certificates that do not correspond to the judgement	1
Machine directives	2006/42/EC compliance (revised at the end of 2009)	1
Optional specifications compatible with equipment and facility criteria		

Compatible with equipment and facility criteria	See the separate sheet for details.	1
Coolant level detector	Provided (coolant lower limit detection, standard type)	1
Nameplate for indicating axial direction		1
Equipped with high columns (the machine shipped disassembled)	450 mm (Be careful for overhead clearance)	1
Y-axis travel	Design of wide Y-axis travel (± 620 mm)	1
Multi-voltage transformer	100 kVA 220 to 480 V transformer to be attached	1
AbsoScale to be attached	X-axis, Z-axis, Y-axis	1
Computerized numerical controller (CNC)		
Controller	OSP-P200LA	1
High class type (handling B-axis contouring)	H specification	1
OSP NC operation panel		
NC operation panel	15-in color TFT (standard)	1
Display languages on OSP monitor screen		
Monitor-on-screen display languages	Multi European language full lingual specifications	1
OSP kits (P200)		
OSP Advanced One-Touch IGF (M-D)		1
Cycle time over check		1*
NC operating monitor (NC counter included)		1*
Spindle speed variation control		1*
Cycle time reduction function		1*
Coordinate conversion		1*
Profile generation		1*
Circular threading		1*
Tool service life management		1*
Spindle orientation (electrical)		1*
Advanced one-touch L (multitasking)	Real 3D included	1*
Load monitoring function (spindle + feed axis)		1*
Status indicator (CE/automated)	3-color type CE compliance	1*
Individual specifications of OSP		
Slope machining	Provided as standard	1
Capacity for storing programs	2GB or more warranted (standard)	1
Buffer capacity	2 MB (standard)	1
M-spindle synchronized tapping	Provided as standard	1
Pitch error compensation	X-axis, Y-axis, Z-axis, B-axis, C-axis	1
Environmentally induced thermal deformation control (TAS-C)	Provided as standard	1
H1 spindle thermal deformation control (TAS-S)	Provided as standard	1
Programmable coordinate systems	10 sets	1
Cutting at very low spindle speed		1
Helical cutting		1
Tool compensation	200 sets	1
Measured data output	Output to file	1
Y-axis gauging (in-process)		1
Y-axis center height compensation		1
External M signals	4 sets	1

Z-axis automatic zero offset		1
C-axis automatic zero offset		1
Input signal 1 used exclusively for Europe		1
Operation end lamp	Not provided	1
Portable pulse handle to be attached		1
Automatic power shutoff M02/alarm		1
API library 2	Specification code OFF	1
Super-NURBS	X-axis, Y-axis, Z-axis, B-axis, C-axis	Y
Tool tip control	Tool posture control included	1
Status indicator position		
Status indicator position	Upper right side of the machine	1
Packing and conveyance charges		
Packing charges (for exporting one single machine)	Seaworthy packing, F.O.B. Nagoya Port, shipping charges	1
Machine shipping method	Machine shipped disassembled	1
Machine lifting hook	1 set	1
On-spot-testing		
On-spot-testing	On-spot-testing shall be specified.	1
Instruction manual (OSP-P200)*		
Standard set of instruction manuals	One copy of English manual (electrical drawings and parts book included)	1
Multi-language instruction manual (CD)	One set of the instruction manual for European B specifications	1

Note: The row corresponding to the numeric value marked with an asterisk (*) in the quantity column represents the concrete specification descriptions and quantity included in your selected kit specifications.

Detailed Optional Specifications	
Separate Sheet	
Contents	Quantity
Equipped with high-columns to extend Z-axis travel from 1,080 to 1,530 mm	1
Max tool length: 600 mm	1
6-pallet APC max swing: ϕ 1,500 mm	1
6-pallet APC max loading capacity (chuck weight included): ϕ 2,500 kg	1
APC pallet clamping device (tapered cone type)	1
APC vertical cylinder HH9C175	1
APC pallet clamp confirmation NS	1
APC pallet clamp seating device	1
APC interface	1
Specifications of APC equipped with this machine (APC supplied with automatic open/close shutters at the front and on the both sides, modified electrical equipment, and other apparatuses)	1
The APC control panel is installed on the left side of the APC unit (on the opposite side of the setup station), not at the front.	1
A reference hole for centering is drilled at the center of the chuck on the 1,000-mm diameter 4-jaw single acting chuck pallet (one set of hard jaws included).	6
In-process gauging sensor, air blower	1
Capable of installing through-spindle coolant piping (This specification shall be applicable only to pipes for feeding 7.0-MPa coolant.)	1
One of the coolant pumps (0.73 kW) used for flushing chips off the column cover and underside of the doors need not be installed (wires and pipes supplied with this machine)	1
One of the coolant pumps (2.2 kW) used for flushing chips off the periphery of the spindle, and side cover need not be installed (wires and pipes supplied with this machine)	1
Removing standard pump to feed coolant flowing through the passage of tool spindle (wires and pipes supplied with this machine)	1
Flat conveyor mounted on the left side of the machine (discharging chips from inside to outside)	1
Hinge type lift-up chip conveyor, rear discharge (from outside the machine to pit) (chip discharge height 1,500 mm and supplied with tank)	1
Installing two 150-mm diameter ducts to the side of the coolant tank for the above chip conveyor (for handling centralized coolant)	1
Installing a upper limit coolant detecting unit in the above coolant tank	1

Capable of mounting an oil mist collector (not controlled electrically, 250-mm diameter duct to be attached, supplied with blind cover)	1
Supplied with full enclosure shielding and ceiling cover (equipped as standard)	1
Placing an oil controller onto the frame covering the multi-voltage transformer (in the two tiered form)	1
Multi-voltage transformer 100 kVA	1
This machine is fixed with foundation anchor bolts	1
Fasteners for shipping	1
Collision avoidance system	1
Specified on-spot testing, geometric accuracy, specifications and function check, milling and heavy-duty cutting tests using S45C materials	1
Delivery destination Messrs. Rolls Royce Marine	Machine model VTM-1200YB