

CNC Vertical Boring & Turning Center

VTC series



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Heavy Duty series ▶



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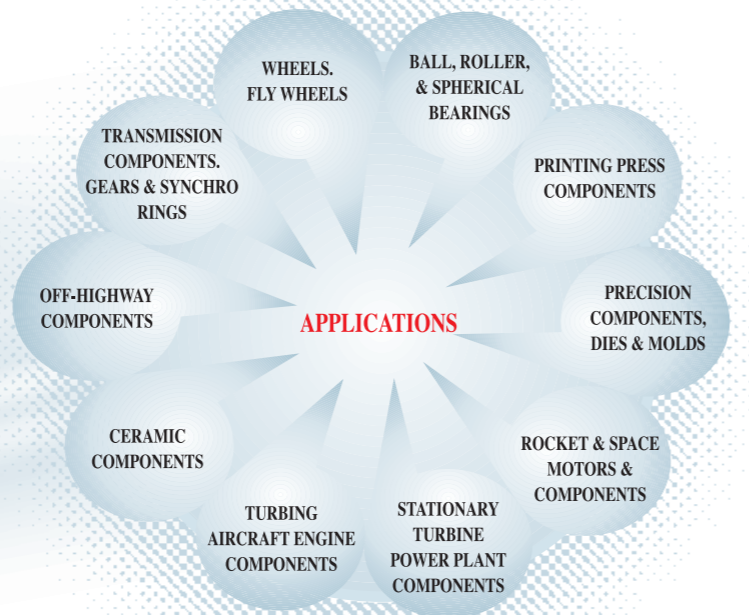
Standard Feature

VTC-1600



▶ Symmetrical and high rigid construction for Model: VTC-1600ATC / VTC-2000ATC / VTC-2500ATC / VTC-3000ATC

The extremely rigid and box-shaped symmetrical column has two extra wide guideways. The crossrail box ways are protected from chips and coolant by telescopic steel covers.



▶ The vertical movement of the crossrail is performed by a large dia. lead screw with automatic hydraulic clamping for precise positioning.



▶ The thick-walled, well-ribbed and box-shaped column.

Standard Feature



► Symmetrical and high rigid construction for Model: VTC-850 / 1050 / 1200 series

Cross-rail

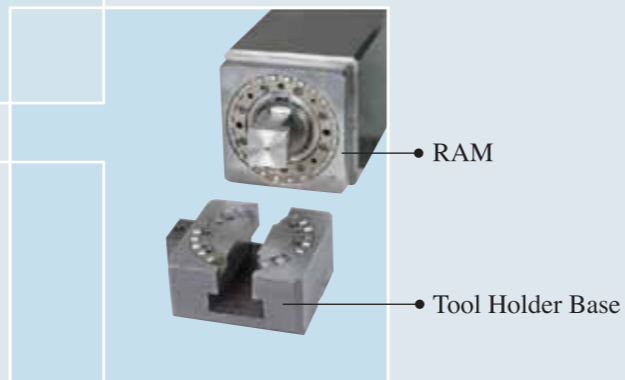
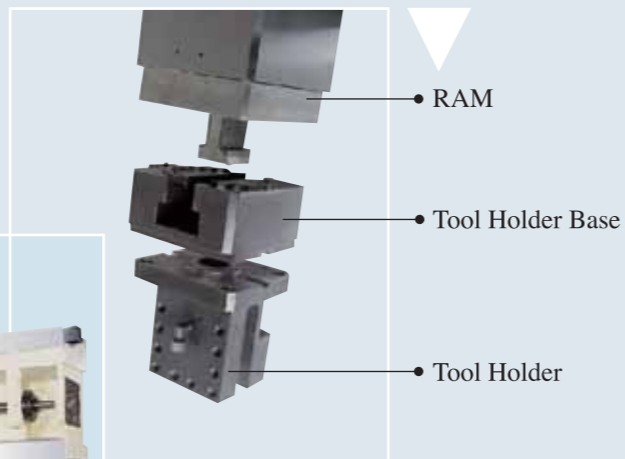
The rigidly thermally symmetrical designed cross-rail ensures thermal stability.

The wide precision ground square slide-ways guarantee high feed and traverse rates. Direct coupling of motor to re-circulating ball-screws ensure positional accuracy and repeatability.



Tool Holder Clamping System

Enhanced tool clamping system incorporating "T-shaped" hydraulic draw-bolt curve coupling mechanism provides vibration free heavy-duty cutting.



"Z" Axis Square Slide

The Z Axis square slide has been specifically designed to ensure the added rigidity offered by the Cyclone VTC range.

This coupled with the "Z" Axis having a square ram configuration provides maximum cutting capabilities; other machines in it's class could never achieve.

The tool set connected by a curve coupling ensuring repeatability and positive location of the tool-holders.

- *Modular Design, guarantees flexible solutions to customer machining requirements.*
- *Rigidly built construction from high quality Meehanite cast iron eliminates vibration and absorbs cutting forces.*



VTC-850 / 1050 Structure



VTC-1200 Structure

The Z axis ram's square construction ensures maximum cutting rates at it's extreme travel.



The rigidly constructed cross-rail encompasses a square slide design, ensuring absorption of cutting forces. The square slides are hardened and precision ground to ensure accuracy.



Standard Feature

Versatile tool carries

► Thermally symmetrical bed design

The rigidly constructed table and column are mounted on a common bed, distortion is minimized by the ribbed section of the machine bed. For added reliability and performance the table driver is integral to the machine bed.



Table Drive

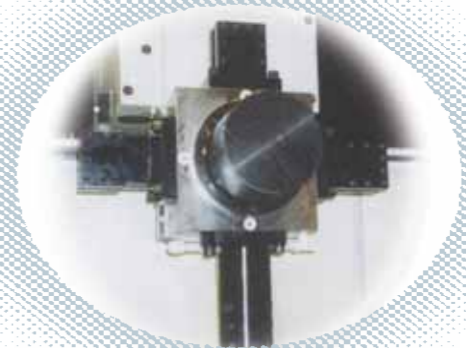
The large diameter helical gear ring is driven by a ZF two speed gearbox from the main motor. Table speed change is performed by simple hydraulic selection ensuring minimum heat generation.



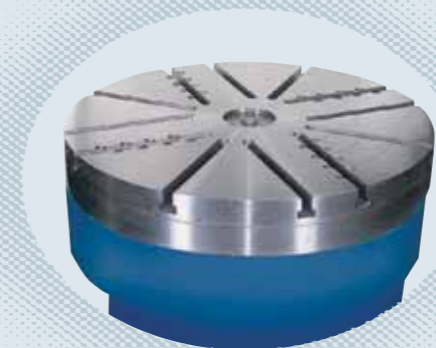
The 12 station automatic tool changer (ATC) is a standard feature of the Cyclone VTC range of vertical lathes. The ATC is protected by means of an automatic door during machining. ATC loading and unloading is by a conveniently positioned door.



Turret utilizes a quick hydraulic position motor for fast, random tool selection, and bi-directional path selection of next tool.



Curve coupling ensures repeatability and positional accuracy.



"T" slotted table incorporating 4 independent manually operated jaws.

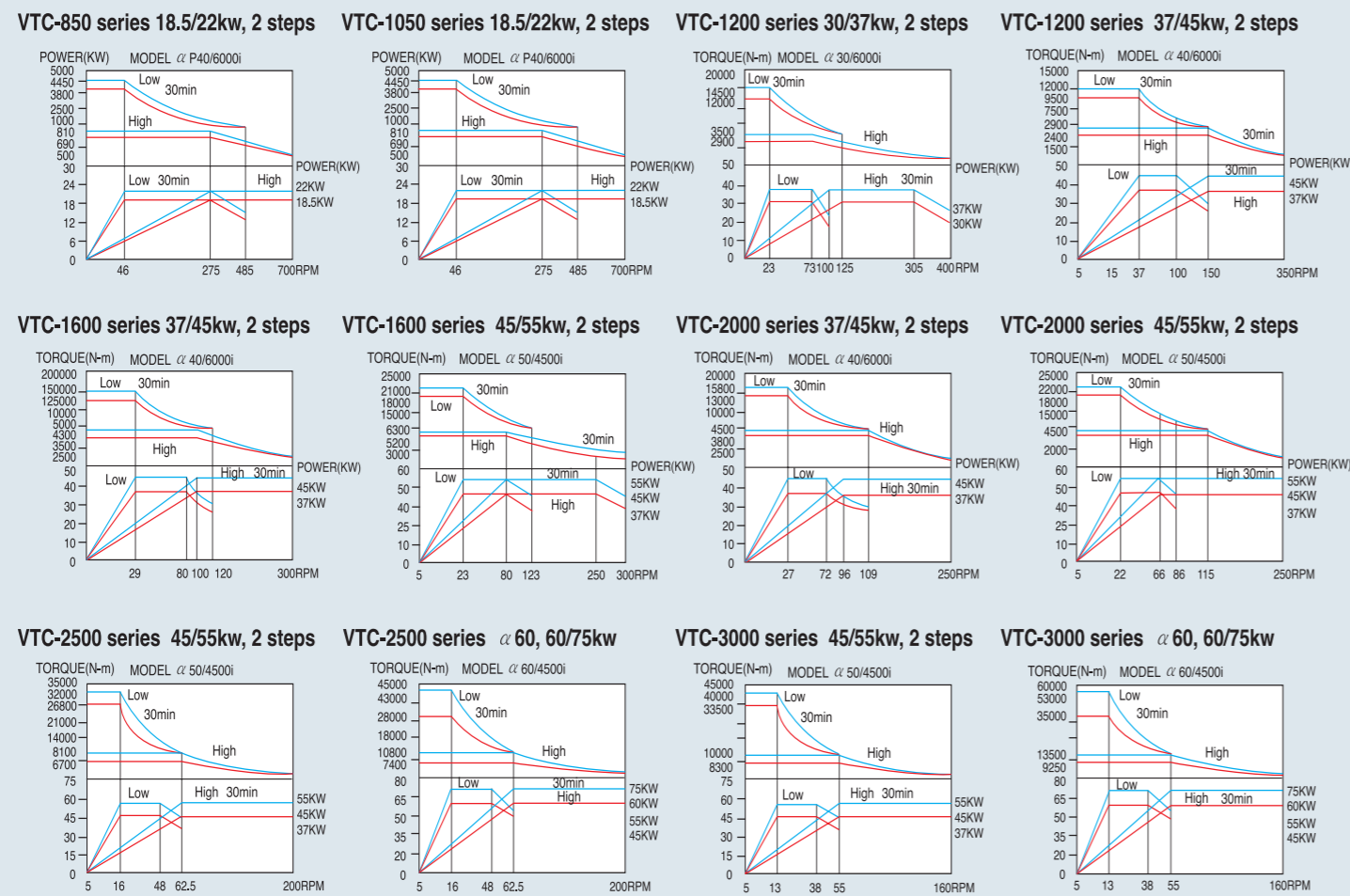
Technical Data & Quality Assurance

Standard Features

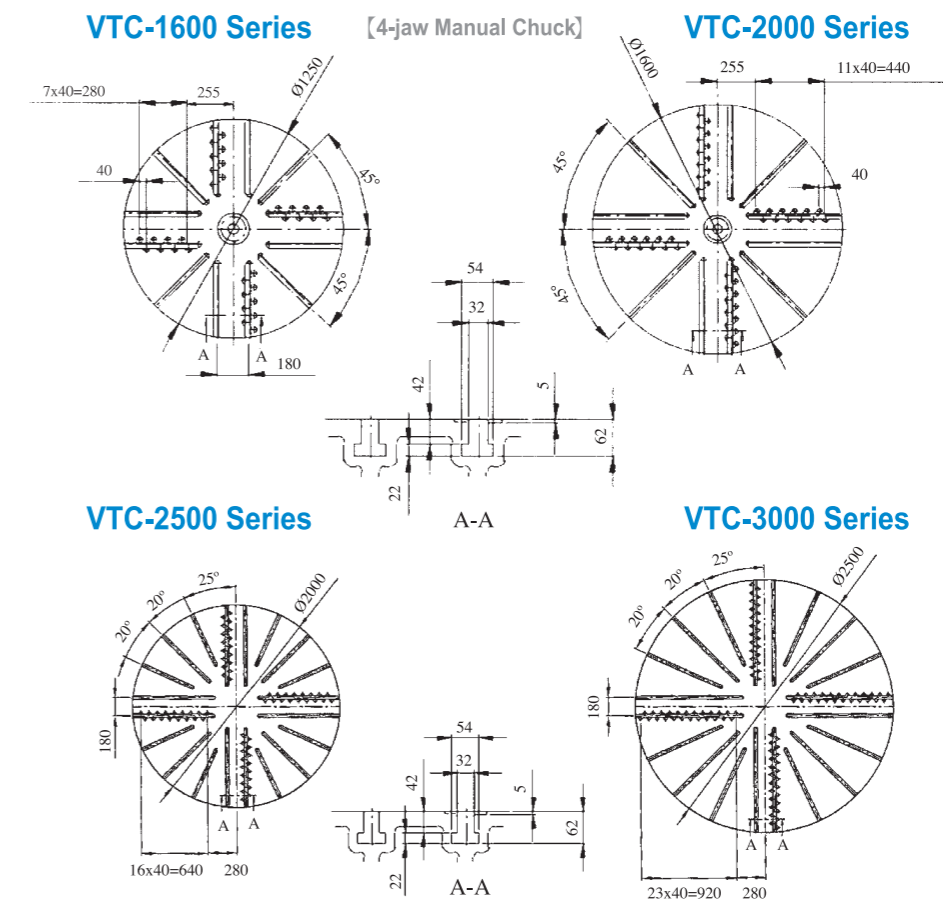
VTC-850/1050/1200/1600/2000/2500/3000 Series:

Independent manually-operated jaws

Table-speed, torque, output chart



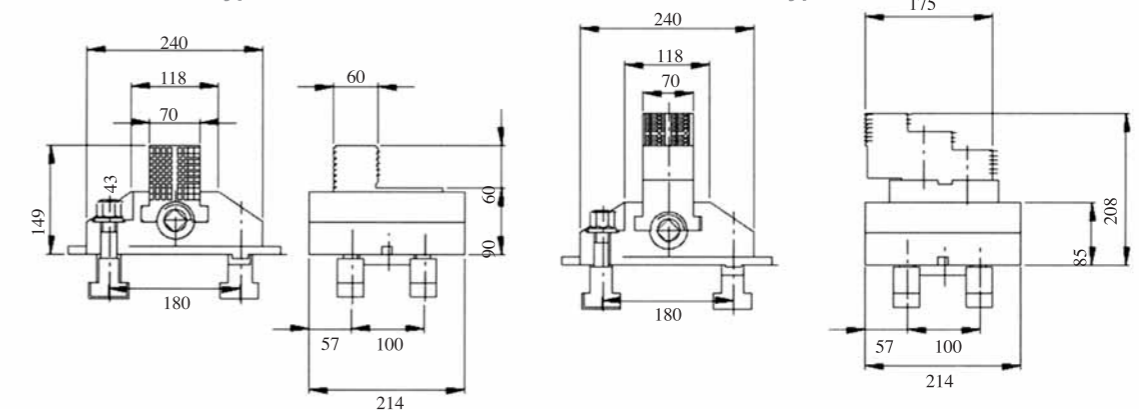
Table, jaw-chuck, workpiece dimensions (Unit: mm)



VTC-1600, VTC-2000, VTC-2500, VTC-3000 Series

[Manual Chuck: F-type]

[Manual Chuck: C-type]



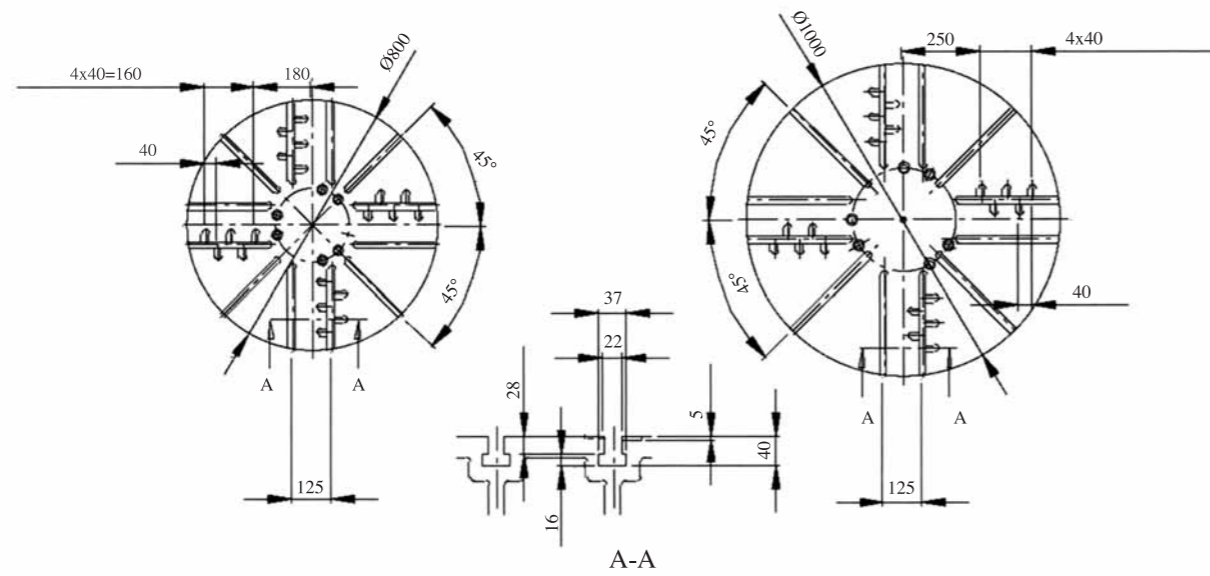
- Laser calibration system checks positioning and repeatability accuracy.
- The picture above shows the result on VDI 3441 standard.
- Data in picture is measured on the correct foundation and constant temperature 20°C±1°C.

▶ Table, jaw-chuck, workpiece dimensions

VTC-1050 Series

VTC-1200 Series

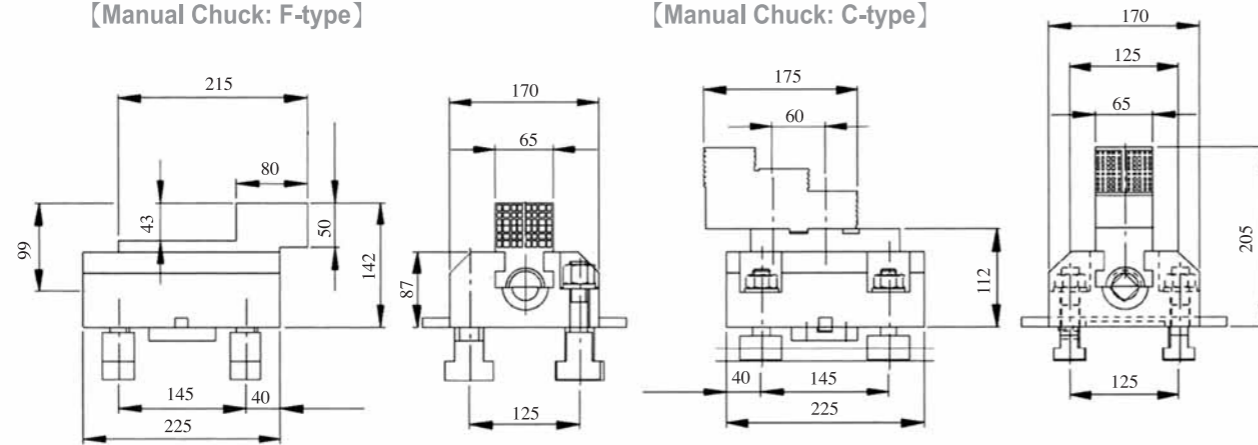
[4-jaw Manual Chuck]



VTC-1050, VTC-1200 Series

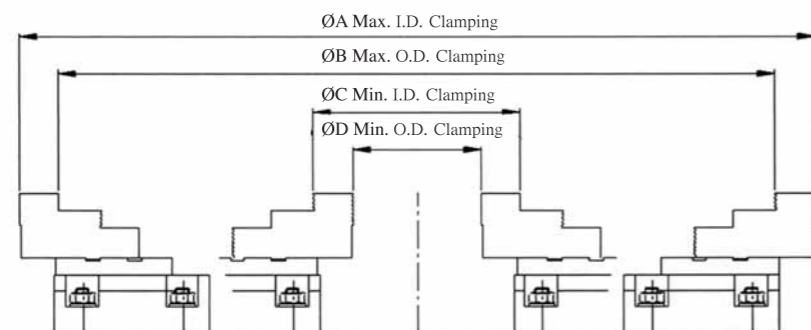
[Manual Chuck: F-type]

[Manual Chuck: C-type]



VTC-1050, VTC-1200, VTC-1600, VTC-2000, VTC-2500, VTC-3000 Series

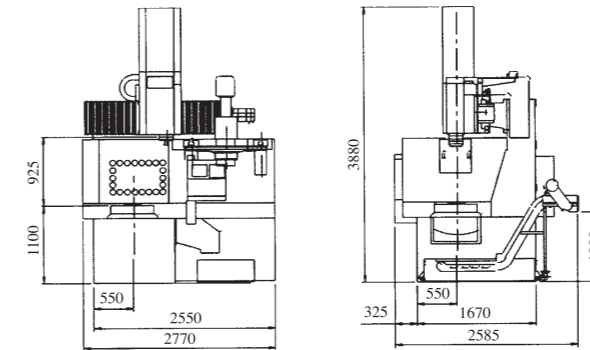
[Workpiece Clamping]



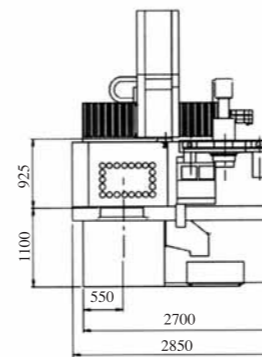
Model	A	B	C	D
VTC-1050	1050	900	160	50
VTC-1200	1200	1040	300	190
VTC-1600	1450	1320	360	250
VTC-2000	1720	1600	410	300
VTC-2500	2120	2000	410	300
VTC-3000	2600	2480	410	300

▶ Machine Dimensions (Unit: mm)

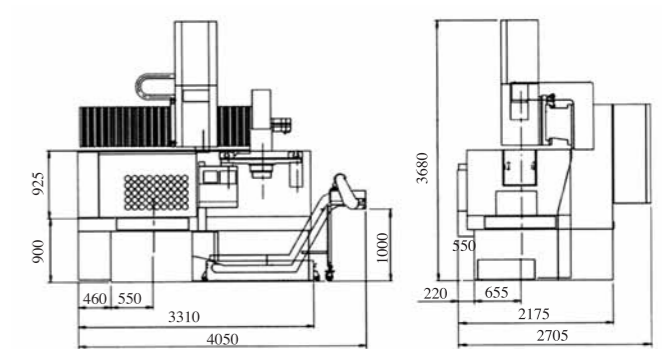
VTC-850ATC



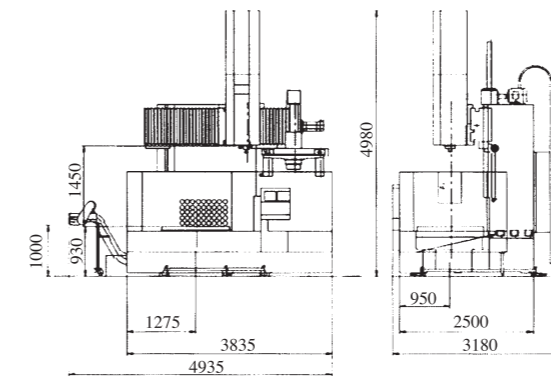
VTC-1050ATC



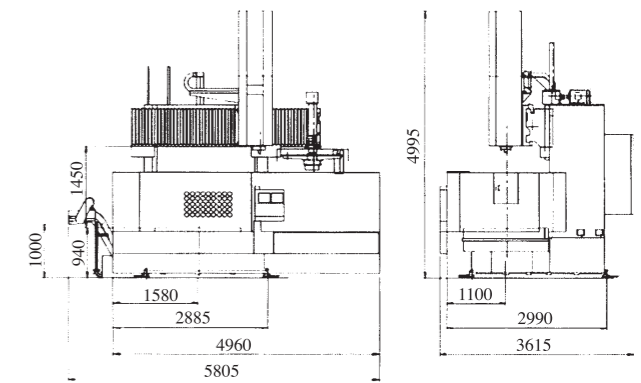
VTC-1200ATC



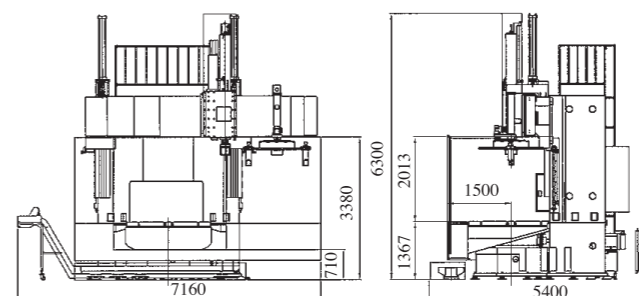
VTC-1600ATC



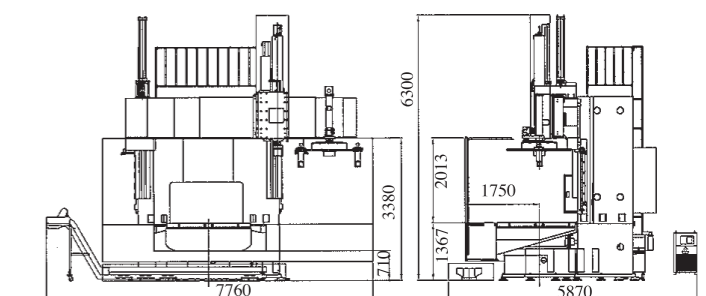
VTC-2000ATC



VTC-2500ATC



VTC-3000ATC

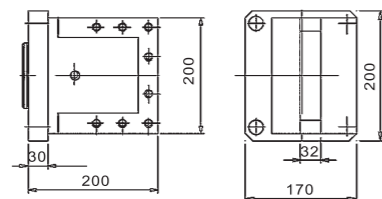


Technical Data

Technical Data

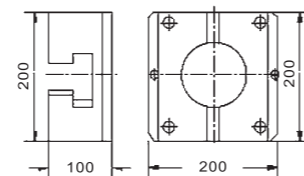
Tool Holder Model and Dimensions (ATC Series) (Unit: mm)

Tool Holder for RAM head tool holder



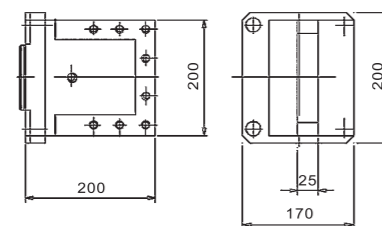
Model: IDF32-200-200

Tool Holder base (Gear type)



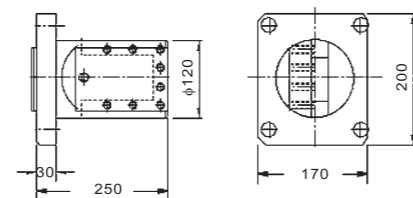
Model: GS-200

Tool Holder



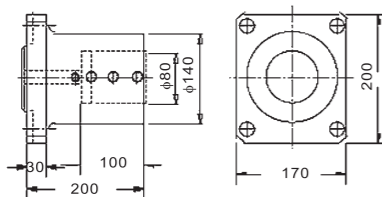
Model: IDF25-200-200

Boring tool holder



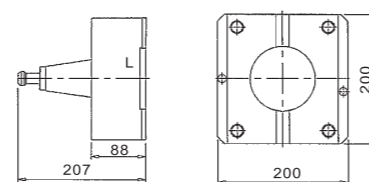
Model: IFL25-120-250

Boring Tool Holder (Assembled type)



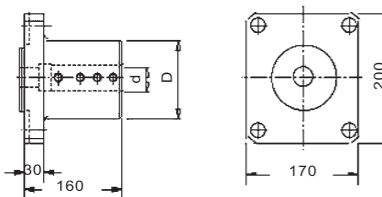
Model: BOB80-140-200

Tool Holder base (BT50 type)



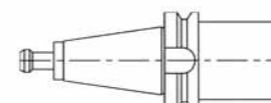
Model: BT50-200

Boring/Drilling tool holder



Model: BOS60-130-160

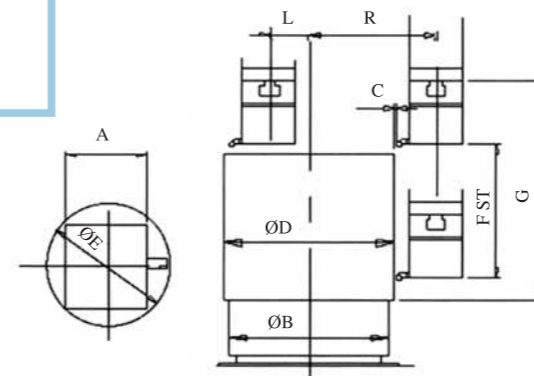
Live Tool Holder base (BT50 type)



Model: BT50

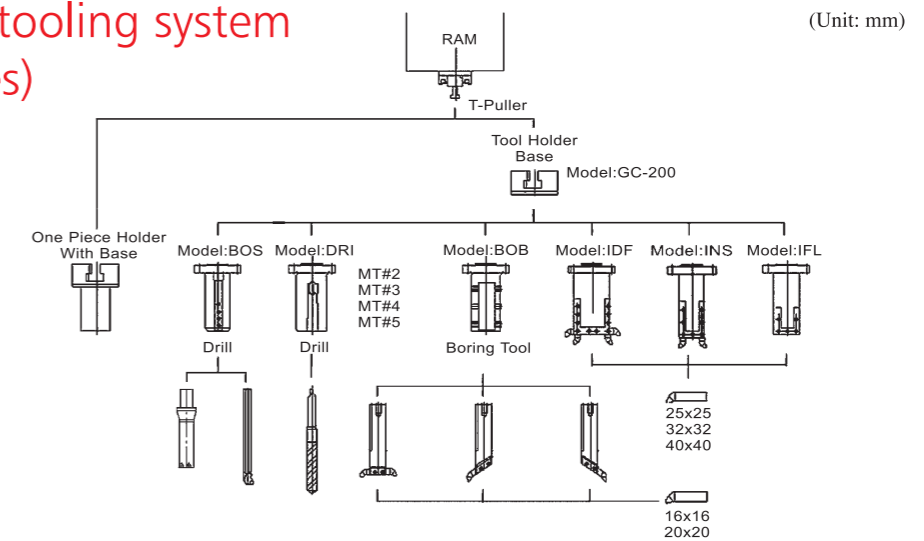
Working Area and Tool Interference

VTC-850ATC, VTC-1050ATC, VTC-1200ATC, VTC-1600ATC, VTC-2000ATC

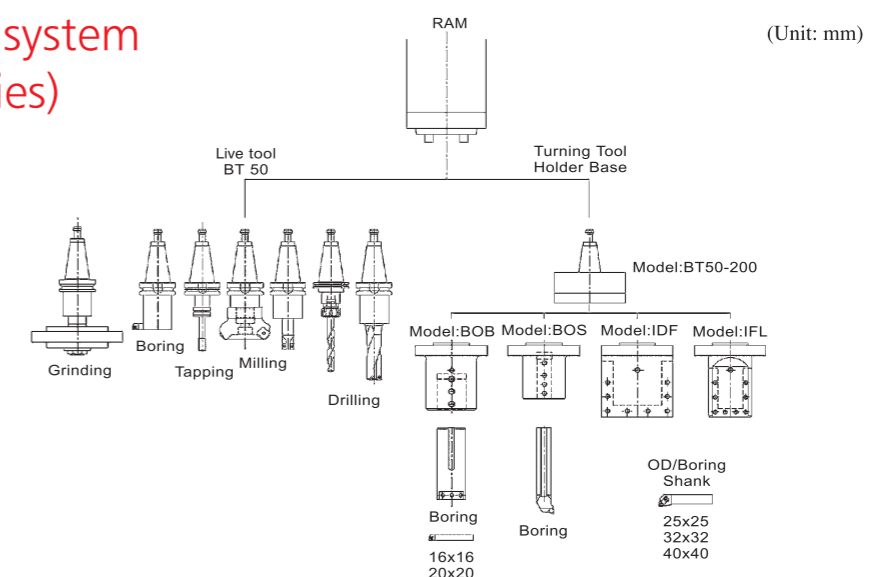


Model	A	ØB	C	ØD	ØE	F	G	R	L
VTC-850ATC	200	533	5	650	300	600	925	480	100
VTC-1050ATC	200	610	25	850	300	600	925	600	100
VTC-1200ATC	200	1000	25	1050	300	600	925	700	100
VTC-1600ATC	220	1250	100	1350	330	900	650-1450	950	200
VTC-2000ATC	220	1600	100	1750	330	900	650-1450	1150	200
VTC-2500ATC	250	2000	5	2450	360	1200	800-1800	1350	300
VTC-3000ATC	250	2000	5	2450	360	1200	800-1800	1600	300

Standard tooling system (ATC Series)



Live tooling system (ATC+C Series)



Specifications

Model / Descriptions		Unit	VTC-850ATC	VTC-850ATC+C	VTC-1050ATC	VTC-1050ATC+C	VTC-1200ATC	VTC-1200ATC+C	VTC-1600ATC	VTC-1600ATC+C	VTC-2000ATC	VTC-2000ATC+C	VTC-2500ATC	VTC-2500ATC+C	VTC-3000ATC	VTC-3000ATC+C	
Capacity	Max. swing diameter	mm	900		1100		1200		1600		2000		2500		3000		
	Max. turning diameter	mm	800		1100		1100		1600		2000		2400		3000		
	Distance from ram to table	mm	925		925		925		650-1450		650-1450		835-1835		835-1835		
	Max. turning height	mm	660		660		800		1250		1250		1600		1600		
	Max. workpiece weight	kg	1500		2000		3500		5000		8000		12000		15000		
Spindle	Table diameter (Manual chuck)	mm	610		800		1000		1250		1600		2000		2500		
	Range of table speed	rpm	5-700		5-600		3-400		3-300		3-250		3-200		3-160		
	Change gear speed		2-step	---	2-step	---	2-step		2-step		2-step		2-step		2-step		
	Spindle nose	mm	A2-11		A2-11		---		---		---		---		---		
	Tool life spindle speed		---	50-2250	---	50-2250	---	50-2250	---	50-2250	---	50-2250	---	50-2250	---	50-2250	
ATC	ATC (Automatic tool change)		12		12		12	16	12	16	12	16	12	16	12	16	
	Tool Size	mm	□25, □32		□25, □32		□25, □32		□25, □32		□25, □32, □40		□25, □32, □40		□25, □32, □40		
	Cross-Section of Ram	mm	200x200	220x220	200x200	220x220	200x200	220x220	220x220	220x220	220x220	220x220	250x250	250x250	250x250	250x250	
Feed	Rapid rate (X-Axis)	m/min	10		10		10		10		10		10		10		
	Rapid rate (Z-Axis)	m/min	10		10		10		10		10		10		10		
	Horizontal travel (X-Axis)	mm	-100+480		-100+800		-100+700		-200+950		-200+1150		-300+1350		-300+1650		
	Vertical travel (Z-Axis)	mm	600		600		600		900		900		1200		1200		
	Cutting feed rate	mm/rev	0.001-500		0.001-500		0.001-500		0.001-500		0.001-500		0.001-500		0.001-500		
	Feed override	%	0-150		0-150		0-150		0-150		0-150		0-150		0-150		
	Cross-rail travel	mm	Fixed		Fixed		Fixed		800(200x4 step)		800(200x4 step)		1000(250x4 step)		1000(250x4 step)		
CNC Controller System			Fanuc 0i-T	Fanuc 18i-T	Fanuc 0i-T	Fanuc 18i-T	Fanuc 0i-T	Fanuc 18i-T	Fanuc 0i-T	Fanuc 18i-T	Fanuc 0i-T	Fanuc 18i-T	Fanuc 0i-T	Fanuc 18i-T	Fanuc 0i-T	Fanuc 18i-T	
			Semens 802D		Semens 802D		Semens 802D		Semens 802D		Semens 802D		Semens 802D		Semens 802D		
Motors	Spindle motor (Cont. / 30min)	kw	AC 18.5/22		AC 18.5/22		AC 30/37		AC 37/45		AC 37/45		AC 45/55		AC 45/55		
	Feed motor (X / Z axis)	kw	4.0 / 4.0		4.0 / 4.0		4.0 / 4.0		7.0 / 7.0		7.0 / 7.0		7.0 / 7.0		7.0 / 7.0		
	Live tool motor	kw	-	AC 11/15	-	AC 11/15	-	AC 11/15	-	AC 11/15	-	AC 11/15	-	AC 11/15	-	AC 11/15	
Power requirement		kva	40	55	40	55	75	90	75	90	75	90	90	105	90	105	
Machine Size	Floor space (LxW)	mm	2250 x 2700		2520 x 2800		4050 x 2900		4950 x 3200		5800 x 4000		7200 x 5500		7900 x 6100		
	Max. height (H)	mm	3900		3900		3700		5000		5500		6300		6800		
	Net. weight	kg	12500		13500		15500		16300		24500		25300		27500		28300

• L&W Machine Tools Inc. reserves the right to alter any mechanical specification without prior notice in the interests of product development.

Standard Accessories:

- Hydraulic 3-jaw chuck for VTC-850
- Table with manual 4-jaw chuck for VTC-1050~VTC-3000 series.
- Chip conveyor.
- Coolant system.
- Auto lubrication system.
- Complete splash guard.
- Work light
- Warning light.
- Heat exchanger for electrical cabinet.

- Protection door.
- Manual for operation & maintenance.
- Manual for electrical & hydraulic circuit diagram.
- Tool holder base x 5pcs.

Optional Accessories:

- Higher power motor.
- Skimmer.
- Transformer.
- Tool holder base.
- Tool holder.
- CNC controller options.
- Machine can be painted in customer's choice of color.
- Hard jaws of chuck.
- Turnkey project.
- CE Mark.
- Hydraulic chuck.