



CNC MILLING MACHINE TOOLS AND DESCRIPTION

1 MAZAK VERTICAL MACHINE CENTRE VTC 20C

Spindle Speed	40 - 10000rpm
X - Axis	1660mm
Y - Axis	510mm
Z - Axis	510mm
Distance from Table Bed to	180mm - 690mm
Distance from Column Front to	550mm
X - Axis Rapid Traverse Feedrate	24000 mm/Min. (24 M/Min)
Y - Axis Rapid Traverse Feedrate	24000 mm/Min. (24 M/Min)
Z - Axis Rapid Traverse Feedrate	20000 mm/Min. (20 M/Min)
Cutting Feedrate	1 - 5000 mm/Min.
Positioning Accuracy	+/- 0.005mm (+/- 0.0002")
Repeatability	+/- 0.0015mm (+/- 0.00006")

1 BRIDGEPORT VMC 560 - 4 AXIS

Spindle Speed	100 - 10000rpm
X - Axis	580mm
Y - Axis	410mm
Z - Axis	480mm
X - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Y - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Z - Axis Rapid Traverse Feedrate	16000 mm/Min. (16 M/Min)
Cutting Feedrate	1 - 5000 mm/Min.
Positioning Accuracy	+/- 0.0050mm (+/- 0.0002")
Repeatability	+/- 0.0020mm (+/- 0.00008")



CNC MILLING MACHINE TOOLS AND DESCRIPTION

1 BRIDGEPORT VMC 760 - 4 AXIS

Spindle Speed	100 - 6000rpm
X - Axis	800mm
Y - Axis	510mm
Z - Axis	500mm
X - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Y - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Z - Axis Rapid Traverse Feedrate	16000 mm/Min. (16 M/Min)
Cutting Feedrate	1 - 5000 mm/Min.
Positioning Accuracy	+/- 0.0050mm (+/- 0.0002")
Repeatability	+/- 0.0020mm (+/- 0.00008")

1 BRIDGEPORT VMC 800 - 4 AXIS

Spindle Speed	100 - 6000rpm
X - Axis	800mm
Y - Axis	510mm
Z - Axis	500mm
X - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Y - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Z - Axis Rapid Traverse Feedrate	16000 mm/Min. (16 M/Min)
Cutting Feedrate	1 - 5000 mm/Min.
Positioning Accuracy	+/- 0.0050mm (+/- 0.0002")
Repeatability	+/- 0.0020mm (+/- 0.00008")



CNC MILLING MACHINE TOOLS AND DESCRIPTION

1 BRIDGEPORT VMC 1000 - 4 AXIS

Spindle Speed	100 - 6000rpm
Y - Axis	1020mm
Y - Axis	510mm
Z - Axis	500mm
X - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Y - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Z - Axis Rapid Traverse Feedrate	16000 mm/Min. (16 M/Min)
Cutting Feedrate	1 - 5000 mm/Min.
Positioning Accuracy	+/- 0.0050mm (+/- 0.0002")
Repeatability	+/- 0.0020mm (+/- 0.00008")

1 BRIDGEPORT VMC 1000 410 DIGITAL CONTROL

Spindle Speed	100 - 6000rpm
Y - Axis	1020mm
Y - Axis	510mm
Z - Axis	500mm
X - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Y - Axis Rapid Traverse Feedrate	32000 mm/Min. (32 M/Min)
Z - Axis Rapid Traverse Feedrate	16000 mm/Min. (16 M/Min)
Cutting Feedrate	1 - 5000 mm/Min.
Positioning Accuracy	+/- 0.0050mm (+/- 0.0002")
Repeatability	+/- 0.0020mm (+/- 0.00008")



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2 **MAZAK FH4800 MAZATROL PC-FUSION 640M**

Spindle Speed	12000rpm
Number of pallets	2
Pallet size	400 x400
B-axis	1 degree
Spindle motor	22kw
X - Axis	560mm
Y - Axis	610mm
Z - Axis	560mm
X - Axis Rapid Traverse Feedrate	50000 mm/Min. (50 M/Min)
Y - Axis Rapid Traverse Feedrate	50000 mm/Min. (50 M/Min)
Z - Axis Rapid Traverse Feedrate	50000 mm/Min. (50 M/Min)
Cutting Feedrate	1 - 5000 mm/Min.
Positioning Accuracy	+/- 0.0050mm (+/- 0.0002")
Repeatability	+/- 0.0020mm (+/- 0.00008")

1 **HAAS VF1 VERTICAL MACHINING CENTRE WITH 4TH AXIS**

Spindle Speed	100 - 7500rpm
X - Axis	508mm
Y - Axis	406mm
Z - Axis	508mm
X - Axis Rapid Traverse Feedrate	25400 mm/Min. (25.4 M/Min)
Y - Axis Rapid Traverse Feedrate	25400 mm/Min. (25.4 M/Min)
Z - Axis Rapid Traverse Feedrate	25400 mm/Min. (25.4 M/Min)
Cutting Feedrate	16.5 m/Min.
Positioning Accuracy	0.005mm
Repeatability	0.003mm



CNC MILLING MACHINE TOOLS AND DESCRIPTION

1 HAAS VF5 VERTICAL MACHINING CENTRE

Spindle Speed	100 - 7500rpm
X - Axis	1270mm
Y - Axis	660mm
Z - Axis	635mm
X - Axis Rapid Traverse Feedrate	18000 mm/Min.(18.0 M/Min)
Y - Axis Rapid Traverse Feedrate	18000 mm/Min.(18.0 M/Min)
Z - Axis Rapid Traverse Feedrate	18000 mm/Min.(18.0 M/Min)
Cutting Feedrate	12.7 m/Min.
Positioning Accuracy	0.005mm
Repeatability	0.003mm



CNC TURNING MACHINE TOOLS AND DESCRIPTION

2 MAZAK 18MSY-4 AXIS LATHE WITH SUB SPINDLE

Main Spindle Work Piece Weight	150 Kg
Max. Swing/Swing over Carriage	531mm / 420mm
Max. Machining Dia	300mm
Max. Machining Length	507mm
Max. Bar Capacity Through Spindle	64mm
Max Bar Length Through Spindle	1000mm
Full programmable C axis	

1 MAZAK 250B-2AXIS LATHE WITH TAILSTOCK

Main Spindle Work Piece Weight	150 Kg
Max. Swing/Swing over Carriage	525mm/350mm
Max. Machining Dia.	350mm
Max. Machining Length	483mm
Max. Bar Capacity Through Spindle	63mm
Max Bar Length Through Spindle	1000mm
Max. Spindle Speed	35 - 4000 r.p.m. (Stepless)

1 MAZAK 6T-2AXIS LATHE WITH TAILSTOCK

Max. Swing.	320mm
Max. Machining Dia.	130mm
Max. Machining Length	190mm
Max. Bar Capacity Through Spindle	32mm
Max Bar Length Through Spindle	1000mm
Max. Spindle Speed	35 - 7000 r.p.m. (Stepless)



CNC TURNING MACHINE TOOLS AND DESCRIPTION

3 DAEWOO PUMA 300MB- 3AXIS WITH TAILSTOCK

Main Spindle Work Piece Weight	150 Kg
Max. Swing/Swing over Carriage	525mm/350mm
Max. Machining Dia.	350mm
Max. Machining Length	483mm
Max. Bar Capacity Through Spindle	76mm
Max Bar Length Through Spindle	1000mm
Max. Spindle Speed	3500r.p.m.
Full programmable C axis	

1 DAEWOO PUMA 400MB- 3AXIS WITH TAILSTOCK

Chuck size	380mm
Max workpiece length	978mm
Max bar dia	116.5mm
Swing over bed	770mm
Max turning dia	560mm
Max Bar Length Through Spindle	1000mm
Max. Spindle Speed	2000r.p.m
Full programmable C axis	

1 DAEWOO PUMA 230MSB - 3AXIS WITH SUB SPINDLE

Chuck size	210mm
Max workpiece length	513mm
Max bar dia	65mm
Swing over bed	550mm
Max turning dia	300mm
Max Bar Length Through Spindle	65mm
Max. Spindle Speed	4500r.p.m
Full programmable C axis	



CNC TURNING MACHINE TOOLS AND DESCRIPTION

3 HAAS SL10 LATHE WITH BARFEED

Chuck size	165mm
Max workpiece length w/o support	330mm
Max bar dia	44.5mm
Max turning dia	279mm
Max Bar Length Through Spindle	1000mm
Max. Spindle Speed	6000r.p.m
Max. Machining length	356mm

3 HAAS ST20 LATHE WITH BARFEED

Chuck size	210mm
Max workpiece length w/o support	350mm
Max bar dia	50mm
Max turning dia	305mm
Max Bar Length Through Spindle	1000mm
Max. Spindle Speed	4000r.p.m
Max. Machining length	520mm

1 TANGENTIAL THREAD ROLLING UNIT

5mm - 32mm(Limited to 26mm in length)

5 AXIAL THREAD ROLLING UNITS

3mm - 16mm



SMALL CONVENTIONAL MACHINE TOOLS AND DESCRIPTION

2 Hardinge C5 Tool Room Lathes

5C Chucking Capacity.	100mm
5C Collet Round Through Spindle Capacity.	25.4mm
5C Collet Hexagon Through Spindle Capacity.	22.23mm
5C Soft Collet Capacity.	120mm

1 1 - Off Smart & Brown Capstan Lathe

Collet Capacity	25.4mm Max.
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(Note : This Machine is used only for Tapping / Thread Die Boxing of low volume product only)

1 Bridgeport Universal Milling Machine

200mm³ MAX.

1 Bridgeport Horizontal Milling Machine.

1 Jones & Shipman Multi Spindle Pillar Drills.

1 Pollard Multi Spindle Pillar Drills

1 1 - Off Wickman Scrivener Centreless Grinder. 3mm - 150mm

1 1- Off Jones & Shipman Cylindrical Grinder.

5mm - 150mm/MAX. LENGTH 200mm

1 1 - Off Jones & Shipman Surface Grinder

2 Conventional Lathes

Max. Swing over Bed Available.	915mm (36")
Max Swing over Saddle Available.	355mm (14")
Max. Turning Length Available.	1575mm (62")
Max. Face Plate. (Including Magnetic Chuck Work)	785mm (31")



PRESS CAPACITY

Double dies

Steel – 1.6mm max
Stainless steel- 1.2mm max
Aluminium- 2.6mm max
Copper- 2.6mm max
Brass- 1.6mm max

Tool sizes

largest is 1.375 o/d
smallest 0.150 o/d

Punch press die set

Steel- 1.6mm max
Stainless steel- 1.6mm max
Aluminium- 2.6mm max
Copper- 2.6mm max
Brass- 2.0mm max

O/D sizes

largest 2.750 o/d
smallest n/a o/d

Single tools

Steel- 3.0mm max
Stainless steel- 2.6mm max
Aluminium-4.0mm max
Copper- 3.0mm max
Brass- 3.0mm max

O/D sizes

largest 3.700 o/d
smallest 0.199 o/d

Minimum thickness for all processes is 0.050mm



PRESS CAPACITY

Hand presses

Steel- 2.0mm max
Stainless steel- 1.6 max
Aluminium- 2.0mm max
Copper- 2.0mm max
Brass- 2.0mm max

O/D sizes

smallest 0.199 o/d

Size of single tools that go into power presses

Largest is 5.5000 inch wide which drops into the main bolster.

These three sizes are tools that fit into bolsters which go into the main bolster.

Then 4.000 inch

Then 3.000 inch

Smallest is 2.5000 inch wide



DATA TRANSFER

CAD System	Manufacturing	File Manager	Design	CNC Program	Drawings	Turning	Milling	CAD Drawing
Catia V5 R19 SP05	✓		✓	✓	✓	✓	✓	✓
Solidworks 2010	✓		✓		✓			✓
Alphacam V10	✓			✓		✓	✓	
CAPT C/Y (Fanuc)	✓			✓		✓	✓	✓
Camware (Mazatrol)	✓	✓		✓		✓	✓	