

USA STANDARD SPECIFICATIONS

MACHINE WEIGHTS AND MEASURES - CONTROL FUNCTIONS AND FORMATS

CAPTAIN-L370

EQUIPMENT SPECIFICATIONS

MACHINE WEIGHTS AND MEASURES

PART CAPACITY	METRIC	INCH
Max. turn diameter	Ø 14.57 in.	Ø 370 mm
Swing over saddle	Ø 16.53 in.	Ø 420 mm
Swing over bed	Ø 20.86 in.	Ø 530 mm
X-axis travel	10.23 in.	260 mm
Z-axis travel	20.47 in.	520 mm
Maximum Turning length	19.685 in.	500 mm

STANDARD SPINDLE

Spindle nose	JIS A2-6	
Spindle speed range	45~4,500 rpm	
Number of ranges	2 speed by winding	
Spindle bore diameter	Ø 2.44 in.	Ø 62 mm
Spindle bearing inner diameter.	Ø 3.94 in.	Ø 100 mm
Spindle ID taper	10/1	
Spindle weight without tailstock	242 lbs.	110 kg
Spindle weight with tailstock	550 lbs.	250 kg

STANDARD A2-6 MAIN SPINDLE - MOTOR

Main spindle motor type	Integral VAC	
Number of ranges	2 ranges by coil winding	Stepless
Main spindle motor power – 20 minute rating	20 HP	15 kW
Main spindle max motor torque – 20 minute rating	241 lbf-ft	33.3 kgf-m

STANDARD CHUCK – HOLLOW TYPE

Chuck type	3-Jaw Hydraulic	B-208A601A
Chuck size	Ø 8"	Ø 203.2 mm
Chuck and draw tube ID *	Ø 2.04in	Ø 52 mm

* Close clearance applications should be confirmed prior to final specification selection

EQUIPMENT SPECIFICATIONS

MACHINE WEIGHTS AND MEASURES

STANDARD 8 INCH CHUCK – HOLLOW TYPE METRIC

INCH

TURRET

METRIC

INCH

Turret type - inch based – USA standard	12 Station – slotted –inch – wedge lock
Turret index drive	NC servo - Okuma patented PREX servo
Turret coupling system	Crown gear engagement
Diameter of crown gear	Ø 9.84 in. Ø 250 mm
Turret clamping	Hydraulic clamping
Turret clamping force	8,732 lb. 3,969 kg
Turret indexing time	0.1 sec. / Station (0.4 sec. / 180 degree index)

TOOLING

Tool retention per station	ID Base or OD + wedge clamp
Number of tools	12 tool stations - I.D. or OD Type
Tool shank OD	1" square / 1.5" ID base
Boring bar shank diameter	Ø 1.5 in.

EQUIPMENT SPECIFICATIONS

MACHINE WEIGHTS AND MEASURES

SERVO DRIVES

INCH	METRIC	
Rapid feedrate X-axis	787 inch/min.	20 m/min.
Rapid feedrate Z-axis	984 inch/min.	25 m/min.
X-axis Servo power - Okuma BL	4.1 hp	3 kW
Z-axis Servo power - Okuma BL	5.4 hp	4 kW
C-axis power – Okuma VAC	pending	

BALL SCREWS

	Diameter x Pitch	
Ball screw diameter X-axis	Ø 1.259 in. x 0.47 in.	Ø 32 mm x 12 mm
Ball screw diameter Z-axis	Ø 1.259 in. x 0.63 in.	Ø 32 mm x 16 mm
Effective thrust in X-axis	X minus, 45 minute rating 1452 lbf	660 kg
Effective thrust in Z-axis	45 minute 1408 lbf	640 kg
Bearing Location	Pre-Tensioned	

TAILSTOCK

Body positioning	Pulse wheel tow-along	
Body clamping	Bolt clamp/unclamp of body to box guideway	
Standard quill type	Dead quill (Employs self-contained revolving center)	
Quill diameter	Ø 3.54 in.	Ø 90 mm
Quill ID	MT No. 5	
Quill stroke	4.724 in.	120 mm
Quill Initiation	Foot Pedal / M-Code	
Quill actuation	Hydraulic	
Max thrust	1100 lbf.	500 kgf
Max. hydraulic pressure		21kgf/cm ²
Min. thrust	220 lbf.	100 kgf
Min. hydraulic pressure		4.2kgf/cm ²
Center tooling	MT 5 Revolving Center	

ACCURACY AND REPEATABILITY - SLIDES

Positioning accuracy in X-axis	0.00032 in.	0.0081 mm
Positioning accuracy in Z-axis	0.0005 in.	0.0127 mm
Repeatability in X-axis	+/- .00008 in.	+/- .002 mm
Repeatability in Z-axis	+/- .00012 in.	+/- .003 mm

ACCURACY AND REPEATABILITY – M-TYPE TOOL TOUCHSETTER

Repeatability in X-axis (adjacency)	+/- 0.00040 in.	+/- 0.010 mm
-------------------------------------	-----------------	--------------

Repeatability in Z-axis (adjacency)	+/- 0.00040 in.	+/- 0.010 mm
X-axis accumulation error / 20 time	+/- 0.00060 in.	+/- 0.015 mm
X-axis accumulation error / 20 time	+/- 0.00080 in.	+/- 0.020 mm

EQUIPMENT SPECIFICATIONS

MACHINE WEIGHTS AND MEASURES

ELECTRICAL

Machine power requirement	3-phase 220V 50/60 Hz
Apparent power – base offering	23 kVA
Control System	Okuma E100L

EQUIPMENT FLOOR SPACE 250T AND 500 BCD

Machine height	68.7"	1745 mm
Req. floor space required W x D	86.6" in x 67.7 in.	2203 mm x 1722 mm
Machine weight	9,240 lbs.	4,200 kg