

CNC Precision Lathes



CNC · CRL · CNL · CSC · CHL · CHC Series

CNC



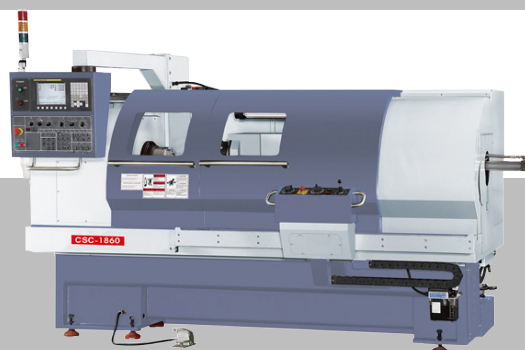
CRL



CNL



CSC



CHL



CHC



Efficient, Accurate Power Turret

- The electric H4 turret is driven by a worm gear mechanism for convenient tool change. It is powered by a 375W motor with great clamping force up to 1 ton.
- Specially designed post body prevents coolant and chips getting into post. Body will not move up and down during indexing.
- P8 hydraulic turret and quick change tool post are available upon request.



Tailstock

- Rigid construction and increased throat depth on tailstock with MT #4 interior taper quill. When applying manual 4-way tool post, electric H4 turret or hydraulic P8 turret, it allows free cutting of long workpieces.
- When preferring manual drilling, the quill can be set to zero for drill depth measurement.
- Can be optionally equipped with a hydraulic quill to automatically forward and reverse.



MODEL		CNC-1440	CNC-1640	CNC-1660	
CAPACITY	No. of Control Axis		2 Axis		
	Swing Over Bed		14.17"	16.14"	
	Distance between centers		35.82"		55.9"
	Maximum Working Length	4-Way Tool Post	27.55"		47.63"
		Hyd. P8 Turret	N/A	26.77"	46.85"
	Maximum Working Diameter	4-Way Tool Post	6.7"	8.66"	
Hyd. P8 Turret		N/A	8.27"		
Width of Bed		10.236"			
HEADSTOCK & MAIN SPINDLE	Spindle Nose, Internal Taper		ASA A2-5, 52mm Taper 1/19.18		
	Spindle Bore		1.811" / 1.417"		
	Spindle Speed		40-5000 RPM		
CROSS SLIDE (X-AXIS) & CARRIAGE (Z-AXIS)	X-Axis Travel	4-Way Tool Post	8.07"	8.5"	
		Hyd P8 Turret	N/A	7"	
	Z-Axis Travel	4-Way Tool Post	34"		54"
		Hyd P8 Turret	N/A	27.95"	48.03"
	AC Servo Motor (X-Axis)		0.75kW 3.5 N.m		
	AC Servo Motor (Z-Axis)		1.2kW 7.0 N.m		
	Diameter of Ball Screw (X-Axis)		0.787" P5 C5		
	Diameter of Ball Screw (Z-Axis)		1.259" P10 C5		
	Rapid Traverse Speed (X- Axis)		7.5m / min		
	Rapid Traverse Speed (Z-Axis)		10m / min		
TURRET	Tool Station		Manual 4-way Tool Post (Optional Electric H4 or Hydraulic P8 Turrets)		
	Size of External Turning Tool		0.787"		
	Boring Bar Diameter		0.787"		
TAILSTOCK	Manual Style	Quill Diameter	2.283"		
		Quill Travel	5.5		
	Taper of Center		MT No. 4		
MOTOR	Main Spindle Motor		STD 5.5KW/7.5KW (Optional 7.5KW/11KW)		
	Hydraulic Oil Pump		Optional 1HP, Optional 2HP		
	Coolant Pump		1/6 HP		
TANK CAPACITY	Hydraulic Tank		Optional 40 L		
	Coolant Tank		50 L	70 L	
MEASUREMENTS	Weight (Net / Gross) Approx.		2100kgs / 2600kgs	2150kgs / 2650kgs	2250kgs / 2750kgs
	Packaging Size	Length	105.51"		125.6"
		Width x Height	79.92" x 86.61"		

Note: Specification and design subject to change without prior notice.

Standard Accessories

CNC Controller
Hydraulic Chuck
Dead Center MT4 with Carbide Tip
Leveling Pads
Toolset and Box
Machine Light

Electric H4 Turret
Hydraulic P8 Turret
Boring Socket
Drilling Socket
Steady Rest
Follow Rest

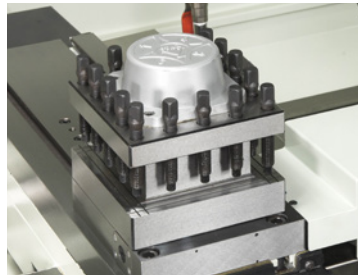
Optional Accessories

Drill Chuck & Arbor
High Pressure Coolant Pump 3bar 750W
Quick Change Tool Post
Rotating Center MT 4
Hydraulic Tailstock Quill

Quill Diameter 63
Quill Travel 76mm
Chip Conveyor & Chip Bucket Cart
Hydraulic Hollow Chuck
CNC Controller Fagor 8040TC

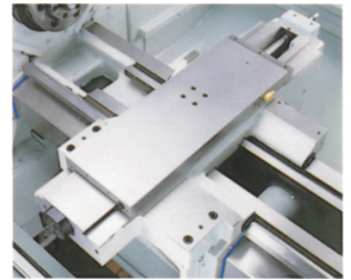
Efficient, Accurate Power Turret

- The electric H4 turret is driven by a worm gear mechanism for convenient tool change. It is powered by a 375W motor with great clamping force up to 1 ton.
- Speacially designed post body prevents coolant and chips getting into post. Body will not move up and down during indexing.
- P8 hydraulic turret and quick change tool post are available upon request.



Massive Bed and Carriage

- Strong, stable, wider bed way which is vibration absorbent. The entire bed features outstanding structural rigidity.
- Dovetailed carriage and cross slide are hardened, high precision ground, coated with Turcite-B and scrape finished to ensure uniform surfaces.
- Forced auto lubrication on X,Z axis ball screws ensures longer resistance to wear.



MODEL		CRL-1440	CRL-1640	CRL-1660	
CAPACITY	No. of Control Axis	2 Axis			
	Swing Over Bed	14.17"	16.14"		
	STD. D1-6 distance between centers	35"		55"	
	Maximum Working Length	4-way Tool Post	29.52"		49.61"
		Hyd. P8 Turret	N/A	24.80"	44.88"
	Maximum Working Diameter	4-way Tool Post	6.7"	8.66"	
		Hyd. P8 Turret	N/A	8.27"	
Width of Bed		10.236"			
HEADSTOCK & MAIN SPINDLE	Spindle Nose, Internal Taper	D1-6, MT No. 6 (Optional A1-6, MT No. 6)			
	Spindle Bore	2.066" (Optional 2")			
	Spindle Speed	25-3000 RPM (2 Steps)			
CROSS SLIDE (X-AXIS) & CARRIAGE (Z-AXIS)	Cross Slide Travel (X-Axis) STD.	8.07"	8.5"		
	Longitudinal Travel (Z-Axis) STD.	32.08"		52.16"	
	AC Servo Motor (X-Axis)	0.45kW 2.84 N.m			
	AC Servo Motor (Z-Axis)	0.85kW 5.39 N.m			
	Diameter of Ball Screw (X-Axis)	0.787" P5 C5			
	Diameter of Ball Screw (Z-Axis)	1.259" P10 C5			
	Rapid Traverse Speed (Z-Axis)	7.5m / min			
TURRET	Tool Station	Manual 4-way Tool Post (Optional Electric H4 or Hydraulic P8 Turrets)			
	Size of External Turning Tool	0.787"			
	Boring Bar Diameter	0.787"			
TAILSTOCK	Manual Style	Quill Diameter	2.283"		
		Quill Travel	5.5"		
	Taper of Center		MT No. 4		
MOTOR	Main Spindle Motor	Inverter Motor AC 5HP, Inverter 7.5HP			
	Hydraulic Oil Pump	Optional 1HP, Optional 2HP			
	Forced Lubrication of Headstock	1/4 HP			
	Coolant Pump	1/6 HP			
TANK CAPACITY	Hydraulic Tank	Optional 25 L		Optional 40 L	
	Coolant Tank	50 L		70 L	
MEASUREMENTS	Weight (Net / Gross) Approx.		2100kgs / 2600kgs	2150kgs / 2650kgs	2250kgs / 2750kgs
	Packing Size	Length	97.24"		117.32"
		Width x Height	79.92" x 86.61"		

Note: Specification and design subject to change without prior notice.

Standard Accessories
 CNC Controller
 Dead Center MT4 with Carbine Tip
 Leveling Pads
 Toolset and Box
 Machine Light
 Operation Manual and Parts List

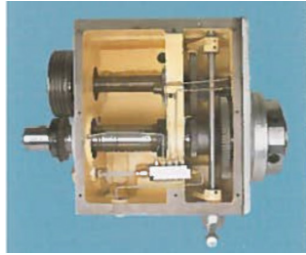
3-Jaw Chuck
 4-Jaw Chuck
 Electric H4 Turret
 Hydraulic P8 Turret
 Boring Socket
 Drilling Socket

Optional Accessories
 Steady Rest
 Follow Rest
 High Pressure Coolant Pump 3bar 750W
 Quick Change Tool Post
 Drill Chuck & Arbor

Rotating Center MT 4
 Hydraulic Tailstock Quill
 Chip Conveyor & Chip Bucket Cart
 Hydraulic Hollow Chuck

Headstock (Gears and Bearings)

- Headstock gears and bearings are supplied with oil delivered by a pump attached to take on the rear plinth.
- A distributor within the headstock supplies oil to the drive gears and bearings.



Tailstock

- Rigid construction and increased throat depth on tailstock with MT #4 interior taper quill. When applying manual 4-way tool post, electric H4 turret or hydraulic P8 turret, it allows free cutting of long workpieces.
- When preferring manual drilling, the quill can be set to zero for drill depth measurement.
- Can be optionally equipped with a hydraulic quill to automatically forward and reverse.



MODEL		CNL-1740	CNL-1760	
CAPACITY	No. of Control Axis		2 Axis	
	Swing Over Bed		17.12"	
	STD. D1-6 distance between centers		37.40"	57.08"
	Maximum Working Length	4-way Tool Post	31.50"	51.18"
		Hyd. P8 Turret	25.59"	45.27"
	Maximum Working Diameter	4-way Tool Post	9.45"	
		Hyd. P8 Turret	8.27"	
Width of Bed		12"		
HEADSTOCK & MAIN SPINDLE	Spindle Nose, Internal Taper		D1-6, MT No. 6 (Optional A1-6, MT No. 6)	
	Spindle Bore		2.066" (Optional 2")	
	Spindle Speed		30-2800 RPM (2 Steps)	
CROSS SLIDE (X-AXIS) & CARRIAGE (Z-AXIS)	Cross Slide Travel (X-Axis) STD.		9.05"	
	Longitudinal Travel (Z-Axis) STD.		35.43"	55.11"
	AC Servo Motor (X-Axis)		0.85kW 5.39 N.m	
	AC Servo Motor (Z-Axis)		1.3kW 8.34 N.m	
	Diameter of Ball Screw (X-Axis)		0.787" P5 C5	
	Diameter of Ball Screw (Z-Axis)		1.57" P10 C5	
	Rapid Traverse Speed (X- Axis)		5m / min	
	Rapid Traverse Speed (Z-Axis)		7.5m / min	
TURRET	Tool Station		Manual 4-way Tool Post (Optional Electric H4 or Hydraulic P8 Turrets)	
	Size of External Turning Tool		0.787"	
	Boring Bar Diameter		0.787"	
TAILSTOCK	Manual Style	Quill Diameter	2.677"	
		Quill Travel	6"	
	Taper of Center		MT No. 4	
MOTOR	Main Spindle Motor		Inverter Motor AC 7.5HP, Inverter 10HP	
	Hydraulic Oil Pump		Optional 1HP, Optional 2HP	
	Forced Lubrication of Headstock		1/4 HP	
	Coolant Pump		1/6 HP	
TANK CAPACITY	Hydraulic Tank		Optional 25 L	Optional 40 L
	Coolant Tank		60 L	85 L
MEASUREMENTS	Weight (Net / Gross) Approx.		2150kgs / 2650kgs	2400kgs / 2900kgs
	Packing Size	Length	104.72"	124.4"
		Width x Height	79.33" x 88.2"	

Note: Specification and design subject to change without prior notice.

Standard Accessories

CNC Controller
 Dead Center MT4 with Carbine Tip
 Leveling Pads
 Toolset and Box
 Machine Light
 Operation Manual and Parts List

3-Jaw Chuck
 4-Jaw Chuck
 Electric H4 Turret
 Hydraulic P8 Turret
 Boring Socket
 Drilling Socket

Optional Accessories

Steady Rest
 Follow Rest
 High Pressure Coolant Pump 3bar 750W
 Quick Change Tool Post
 Drill Chuck & Arbor

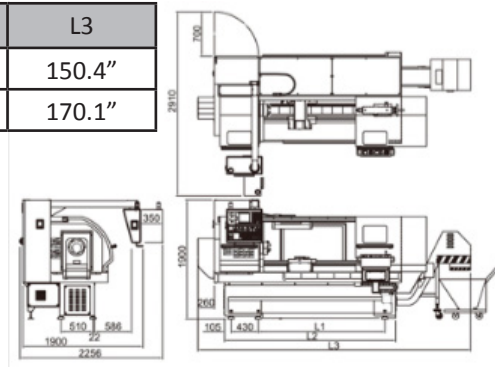
Rotating Center MT 4
 Hydraulic Tailstock Quill
 Chip Conveyor & Chip Conveyor Cart
 Hydraulic Hollow Chuck
 Chuck Safety Guard



Gearless Spindle

- The spindle is supported by a single cylinder bearing housing equipped with SP level precision angular contact thrust bearings and lubricated with HI-class grease. The front spindle is designed with a labyrinthian collar and protector cover to prevent coolant or chips from entering.
- Encased in a well-ribbed headstock for maximum heat dissipation. Prevents any thermal distortion after long periods of turning, thereby ensuring accurate cutting.

Model	L1	L2	L3
CSC-1840	59.3"	87"	150.4"
CSC-1860	78.9"	106.7"	170.1"



MODEL		CSC-1840	CSC-1860	
CAPACITY	No. of Control Axis	2 Axis		
	Swing Over Bed	18.11"		
	Swing Over Cross Slide	10"		
	STD. A1-6 distance between centers	37.40"	57.08"	
	STD. A1-6 Max. Working Length	4-way Tool Post	31.50"	51.18"
		Hyd. P8 Turret	25.59"	45.27"
	Maximum Working Diameter	4-way Tool Post	Std. 10" Max. 16"	
Hyd. P8 Turret		Std. 10" Max. 12.2"		
Width of Bed		12"		
HEADSTOCK & MAIN SPINDLE	Spindle Nose, Internal Taper	A2-6, 2.7" Taper 1/20		
	Spindle Bore	2.56"		
	Spindle Speed	40-4000 RPM (Infinitely Variable)		
CROSS SLIDE (X-AXIS) & CARRIAGE (Z-AXIS)	Cross Slide Travel (X-Axis) STD.	9.56"		
	Longitudinal Travel (Z-Axis) STD.	33.46"	53.15"	
	AC Servo Motor (X-Axis)	7.0N.m - FANUC β8 / 3000is		
	AC Servo Motor (Z-Axis)	7.0N.m - FANUC β8 / 3000is		
	Diameter of Ball Screw (X-Axis)	0.787" P5 C5		
	Diameter of Ball Screw (Z-Axis)	1.57" P10 C5		
	Rapid Traverse Speed (Z-Axis)	10m / min		
TURRET	Tool Station	Electric H4 or Hydraulic P8 Turrets		
	Size of External Turning Tool	0.787"		
	Boring Bar Diameter	0.787"		
TAILSTOCK	Manual Style	Quill Diameter	2.677"	
		Quill Travel	6"	
	Taper of Center		MT No. 4	
MOTOR	Main Spindle Motor (Continuous Rated)	STD. AC11kW (15HP) - FANUC β8 / 3000is		
	Hydraulic Oil Pump	Optional 1HP, Optional 2HP		
	Forced Lubrication of Headstock	1/4 HP		
	Coolant Pump	1/6 HP		
TANK CAPACITY	Hydraulic Tank	Optional 25 L	Optional 40 L	
	Coolant Tank	60 L	85 L	
MEASUREMENTS	Weight (Net / Gross) Approx.		2150kgs / 2650kgs	
	Packing Size	Length	112.6"	
		Width x Height	83.3" x 92.1"	

Note: Specification and design subject to change without prior notice.

Standard Accessories

CNC Controller
 Leveling Pads
 Toolset and Box
 Machine Light
 Operation Manual and Parts List
 3-jaw Hydraulic Chuck 8"
 Roating Center
 Fully Enclosed Sheet Metal

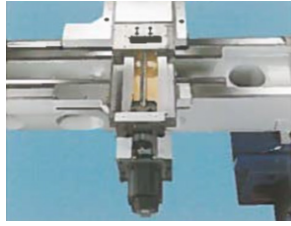
Hydraulic P8 Turret
 Boring Bar Holder (20mm - 2 sets)
 Boring Bar Holder (25mm - 1 set)
 OD Tool Holder (3 sets)
 ID Tool Holder (1 set)
 Boring Socket

Optional Accessories

Drilling Socket
 Steady Rest w/ Ball Bearing
 Follow rest w/ Bronze Tip
 Transformer
 Hydraulic Tailstock Quill
 High Pressure Coolant Pump (3 boxes)
 Drill Chuck & Arbor
 Chip conveyor & Cart
 CE Mark
 CS Axis w/ Live Tooling System, P8

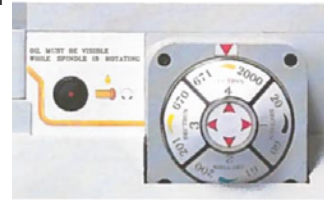
Enlarged saddles and fully supported cross slides (x-axis)

- Bed ways and cross slide are hardened and grounded to min HS70.
- Turcite B coating between the bed and carriage



Headstock

- Four gear range of spindle speeds driven by built-in AC motor. The operator can input the required spindle speed by M code, and the spindle will automatically reach the required speed.
- The headstock has forced oil lubrication, with lubricant pumped from a large tank to maintain constant temperature.
- The 3 ultra-precision bearing spindle support maintains stability in heavy cuts. D3.15" spindle bore through diameter shafts.
- ASA A2-8 short taper for power chuck or Cam-Lock D1-8 spindle nose for quick and accurate chuck mounting.



MODEL		CHL-2140	CHL-2160	CHL-2180	CHL-21120	
CAPACITY	No. of Control Axis	2 Axis				
	Swing Over Bed	20.98"				
	STD. D1-6 distance between centers	33.27"	52.95"	72.64"	112"	
	Maximum Working Length	4-Way Tool Post	24.41"	44.09"	63.78"	103.1"
		Hyd. P8 Turret	20.87"	40.55"	60.24"	99.61"
		Elec. VDI Turret	19.29"	38.98"	58.66"	98.03"
	Maximum Working Diameter	12"				
Width of Bed	13.58"					
HEADSTOCK & MAIN SPINDLE	Spindle Nose, Internal Taper	D 1-8 (Optional A2-8), 85mm Taper 1/19.18				
	Spindle Center Sleeve	85mm, Taper 1/19.18 x MT No. 5				
	Spindle Bore	3.149"				
	Spindle Speed	20-2000 RPM (4 Steps)				
CROSS SLIDE (X-AXIS) & CARRIAGE (Z-AXIS)	Cross Slide Travel (X-Axis) STD.	11.8"				
	Longitudinal Travel (Z-Axis) STD.	28.3"	48.0"	67.7"	107.1"	
	AC Servo Motor (X-Axis)	1.3kW 8.34 N.m				
	AC Servo Motor (Z-Axis)	2.9kW 18.6 N.m				
	Diameter of Ball Screw (X-Axis)	0.98" P5 C5				
	Diameter of Ball Screw (Z-Axis)	1.97" P10 C5			2.48" P10 C5	
	Rapid Traverse Speed (X- Axis)	7.5m / min				
	Rapid Traverse Speed (Z-Axis)	10m / min				
TURRET	Tool Station	Manual 4-way Tool Post (Optional Electric VDI V8 or Hydraulic P8 Turrets)				
	Size of External Turning Tool	0.98"				
	Boring Bar Diameter	1.575"			1.26"	
TAILSTOCK	Manual Style	Quill Diameter	3.346"			
		Quill Travel	7"			
MOTOR	Taper of Center	MT No. 5				
	Main Spindle	Inverter Motor AC 15 HP, Inverter 15 HP				
	Hydraulic Oil Pump	1 HP / 2 HP				
	Forced Lubrication of Headstock	60 W				
	Coolant Pump	1/6 HP				
TANK CAPACITY	Hydraulic Tank	25 L (Optional 40 L)				
	Coolant Tank	60 L	120 L	180 L	240 L	
MEASUREMENTS	Weight (Net / Gross) Approx.		4050kgs / 4450kgs	4400kgs / 4900kgs	4800kgs / 5400kgs	5300kgs / 6000kgs
	Packing Size	Length	126"	145.7"	165.4"	204.7"
		Width x Height	90.6" x 88.2"			

Note: Specification and design subject to change without prior notice.

Standard Accessories

CNC Controller
Dead Center MT5 with Carbide Tip
Leveling Pads
Toolset and Box
Machine Light
Operation Manual and Parts List

3-Jaw Scroll Chuck
4-Jaw Independent Chuck
Electric VDI40 Turret
Hydraulic P8 Turret
Boring Socket
Drilling Socket

Optional Accessories

Steady Rest
Follow Rest
High Pressure Coolant Pump 3bar 750W
Quick Change Tool Post
Drill Chuck & Arbor

Rotating Center MT 5
Manual Quill Feed
Hydraulic Tailstock Quill
Chip Conveyor & Chip Bucket Cart
Hydraulic Hollow Chuck

Convenient Manual Control

- Providing convenient manual control for X, Y axes. Moveable operation control box is also equipped with a remote manual pulse generator.
- Comprehensive, waterproof function keys and push buttons enhance operational convenience.



Spindle

- The main spindle motor is direct driven. The spindle is supported by a single cycle bearing housing equipped with SP level precision double row cylindrical roller bearings / angular contact thrust bearings and lubricated with HI-class grease. The front spindle is designed with a labyrinthian collar and protector cover to prevent the entering of coolant or chips.



MODEL		CHC-2240	CHC-2260	CHC-2280	CHC-22120	
CAPACITY	No. of Control Axis	2 Axis				
	Swing Over Bed	21.653"				
	STD. D1-6 distance between centers	34.25"	53.93"	73.62"	113"	
	Maximum Working Length	4-Way Tool Post	26.77"	46.45"	66.14"	105.5"
		Hyd. P8 Turret	23.22"	42.91"	62.60"	102"
		Elec. VDI Turret	21.65"	41.33"	61.02"	100.4"
	Maximum Working Diameter	12.8"				
Width of Bed	13.58"					
HEADSTOCK & MAIN SPINDLE	Spindle Nose, Internal Taper	ASA A2-8, 97mm Taper 1/20				
	Spindle Bore	3.582" / 3.07"				
	Spindle Speed	35-3500 RPM				
CROSS SLIDE (X-AXIS) & CARRIAGE (Z-AXIS)	Cross Slide Travel (X-Axis) STD.	11.8"				
	Longitudinal Travel (Z-Axis) STD.	30.7"	50.4"	70.1"	109.4"	
	AC Servo Motor (X-Axis)	1.8kW 11 N.m				
	AC Servo Motor (Z-Axis)	2.5kW 20 N.m				
	Diameter of Ball Screw (X-Axis)	0.98" P5 C5				
	Diameter of Ball Screw (Z-Axis)	1.97" P10 C5			2.48" P10 C5	
	Rapid Traverse Speed (X- Axis)	7.5m / min				
Rapid Traverse Speed (Z-Axis)	10m / min					
TURRET	Tool Station	Manual 4-way Tool Post (Optional Electric VDI V8 or Hydraulic P8 Turrets)				
	Size of External Turning Tool	25mm				
	Boring Bar Diameter	1.575"			1.26"	
TAILSTOCK	Manual Style	Quill Diameter	3.346"			
		Quill Travel	7"			
	Taper of Center	MT No. 5				
MOTOR	Main Spindle (Continuous)	AC 12HP, Wide Range, Heavy Duty FANUC AC Spindle Motor				
	Main Spindle (30 min. rated)	AC15HP Model 6000				
	Hydraulic Oil Pump	1 HP / 2 HP				
	Coolant Pump	1/6 HP				
TANK CAPACITY	Hydraulic Tank	25 L (Optional 40 L)				
	Coolant Tank	60 L	120 L	180 L	240 L	
MEASUREMENTS	Weight (Net / Gross) Approx.		4050kgs / 4450kgs	4400kgs / 4900kgs	4800kgs / 5400kgs	5300kgs / 6000kgs
	Packing Size	Length	126"	145.7"	165.4"	204.7"
		Width x Height	90.6" x 87.8"			

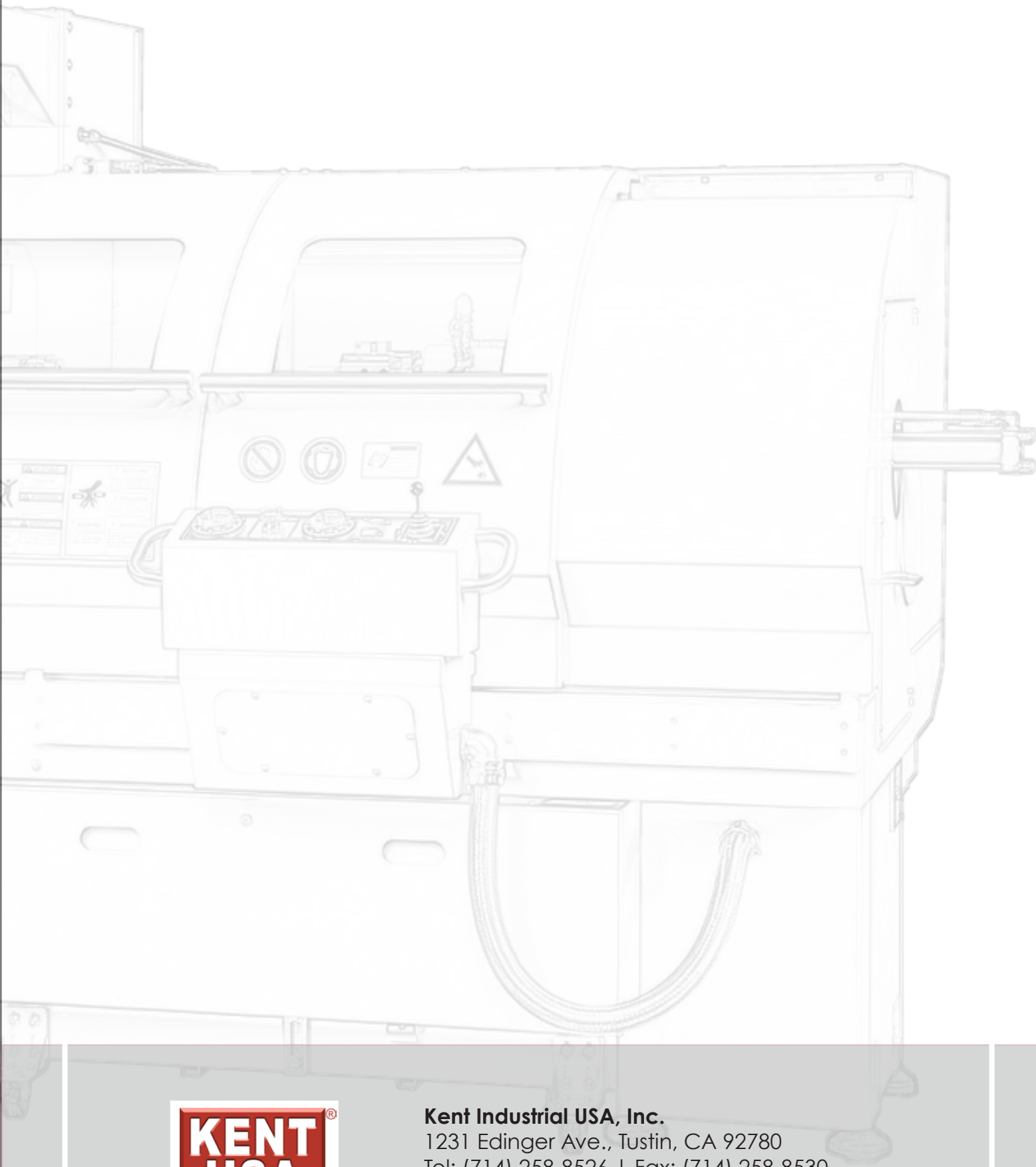
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Standard Accessories

- CNC Controller
- Hydraulic Chuck
- Dead Center MT5 with Carbide Tip
- Leveling Pads
- Toolset and Box
- Machine Light
- Operation Manual & Parts List

Optional Accessories

- Electric VDI Turret
- Hydraulic P8 Turret
- Boring Socket
- Drilling Socket
- Steady Rest
- Follow Rest
- High Pressure Coolant Pump 3bar 750W
- Quick Change Tool Post
- Drill Chuck & Arbor
- Manual Quill Feed
- Rotating Center MT 5
- Hydraulic Tailstock Quill
- Chip Conveyor & Chip Bucket Cart



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