

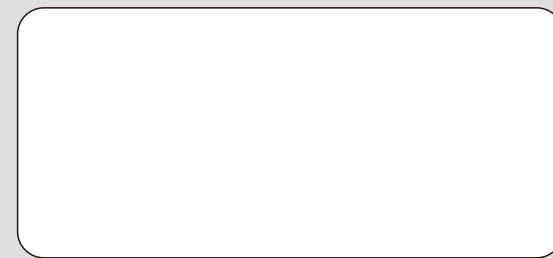


# CNC Lathe

# CPL Series



Campro USA  
5 Highland Avenue Suite C  
Bethlehem, PA 18017  
TEL: (484)892-6333  
E-mail: sales@campro-usa.com



QAC11-01



• Machine specifications and design are subject to change without prior notice due to on-going innovation.

2022-10-V2.0 16P GHXXX US



Campro Precision Machinery Co., Ltd.  
www.camprousa.com

# Line Up

Campro offers a full line of CNC Turning Centers with chuck sizes from 6" to 21". All lathes can be equipped with live tools, sub spindles, and Y-Axis for maximum efficiency.

Campro's lathe lineup was designed to maximize operator ergonomics, precision, and rigidity as well as offering high productivity.

**CPL-3518 / CPL-3520**



**CPL-158**



**CPL-208**



**CPL-3510**



**CPL-3512 / 3512 (1.5M)**



**CPL-106**



Automatic Loading / Unloading System





# High Speed, High Precision and High Stability

## HEADSTOCK



Powerful AC spindle motor provides high torque and is combined with a finned head stock construction for excellent heat dissipation which ensures optimal cutting performance, accuracy and superior machined finishes.

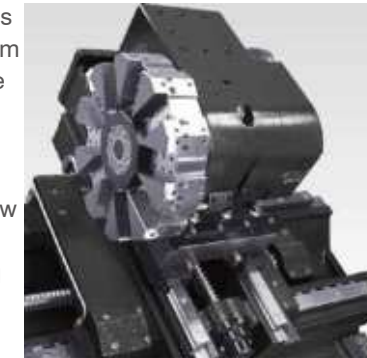
## TRANSMISSION SYSTEM

All lathes employ class C3 precision Ball screws combined with the use of class P4 bearings. Ball screws on X-axis / Z-axis are pretensioned to eliminate thermal displacement to ensure consistent machining accuracy.



## HYDRAULIC TURRET / SERVO TURRET (OPT)

The standard 10-station hydraulic turret features maximum rigidity and is achieved through a cam and curvic clutch mechanism. Fast tool change is accomplished in only 0.3 second (adjacent tool), and 0.9 second (opposite tool) which greatly upgrades working efficiency. The turret provides extremely accurate positioning and low noise. Each station has a powerful flushing nozzle directing position thereby ensuring long tool life and fine machined surface.



- Manual type steady rest (Option):  
CPL-208 / 3510  
(Clamping capacity :  
Ø20~150mm)  
CPL-3512  
(Clamping capacity :  
Ø1"~8" or Ø4"~12")

## MACHINE STRUCTURE

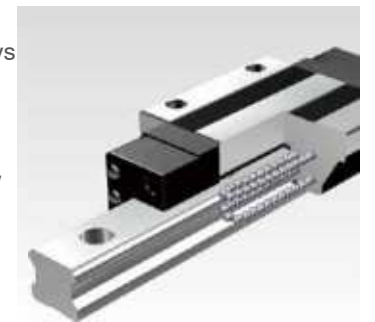
The one-piece constructed 45° box type structure is manufactured from high quality cast iron, assuring maximum rigidity and stability.

## SUPERIOR LINEAR GUIDEWAY



Long life with highly accurate motion linear guideways (CPL-106 / 158).

The two axes employ high rigidity and high precision linear guideways which provide unmatched performance than that of competitors. The linear guideway features high loading capacity, low noise and long service life. (CPL-208 / 3510 / 3512)



## COOLANT TANK AND CHIP CONVEYOR

Large capacity of coolant tank combined with high pressure pump ensures superior cooling effect for both workpiece and tool. To meet various working area requirements, the customer may choose chip conveyor at side or rear of the machine. Also, various chip conveyors are provided to suit different workpiece materials.

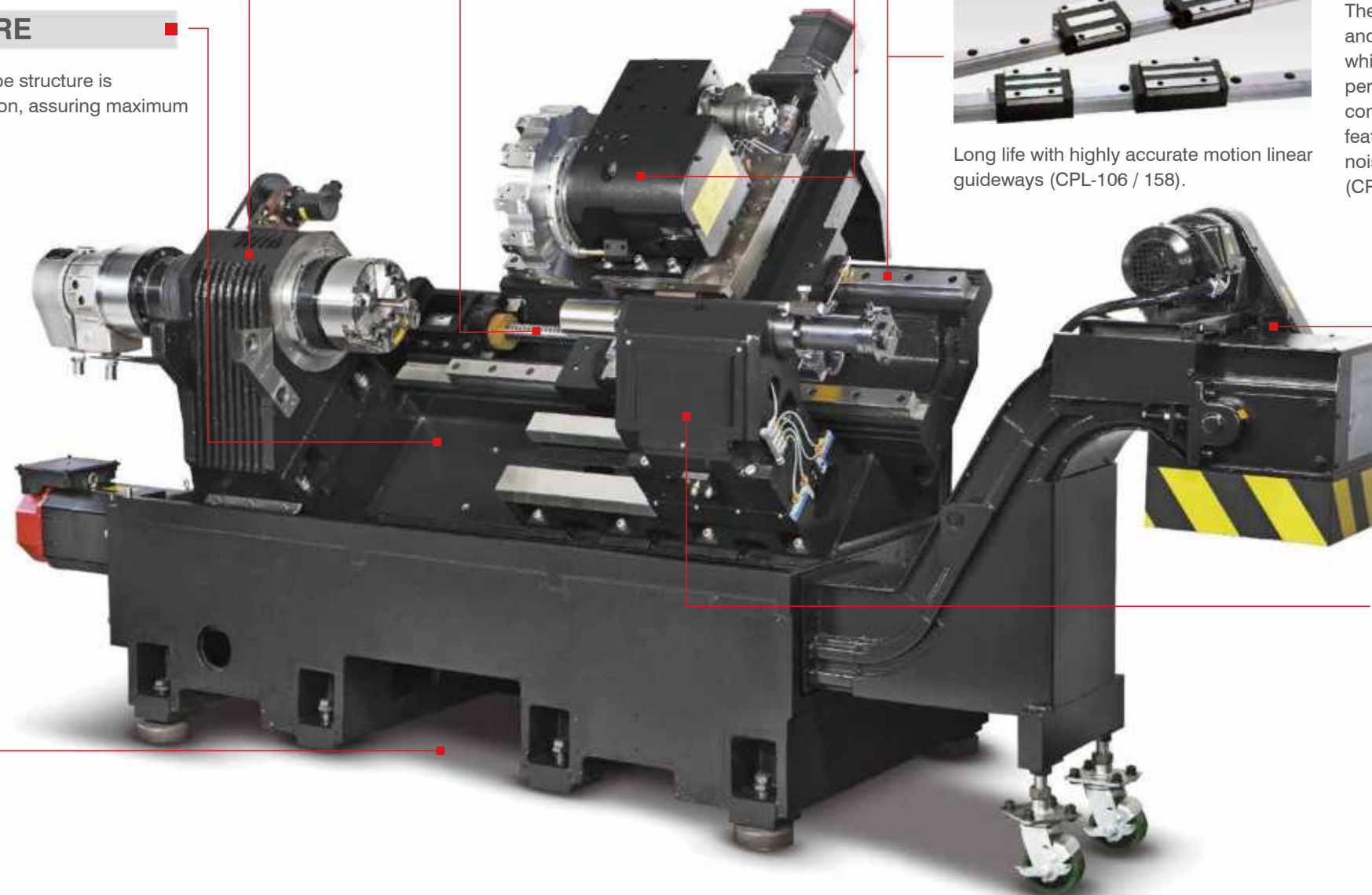
## OIL SKIMMER



Effectively improve the life cycle of coolant.

## HYDRAULIC MANUAL TAILSTOCK

The manual tailstock can be moved to meet workpiece length. Upon request, a programmable tailstock is available as an option.





# High Removal, High Precision and High Stability

## CPL-3518 / 3520

### GEAR TYPE HEADSTOCK

Finned head stock for excellent heat dissipation. Powerful AC spindle motor indirect drive by two steps gear box to provide wide range of cutting capacity for heavy cutting at low speed and fine cutting at high speed.

### OIL SKIMMER (DISK TYPE)



Equipped the synchronous motor which will automatically slip when there are overload in order to protect motor of oil skimmer. Not only the hydrophilic disk is used to bring up oil, but the scraping is used to scrape the oil on the disk to ensure the coolant is used in a long time.

### MACHINE STRUCTURE

The one-piece constructed 45° box type structure from high quality cast iron, and heat treated to relieve stress thereby assuring maximum rigidity and accuracy.

### TRANSMISSION SYSTEM

All lathes employ class C3 precision Ball screws combined with the use of class P4 bearings. Ball screws on X-axis / Z-axis are pretensioned to eliminate thermal displacement to ensure consistent machining accuracy.

### HYDRAULIC TURRET

The 8-station hydraulic turret is standard. Fast tool change is accomplished in only 0.3 second (adjacent tool), and 0.9 second (opposite tool) which greatly upgrades working efficiency and extremely accurate positioning. Each station has a powerful flushing nozzle direction position thereby ensuring long tool life and fine machined surface. Servo turret is also available to offer as option.



### PRECISION GRINDING BOX WAY

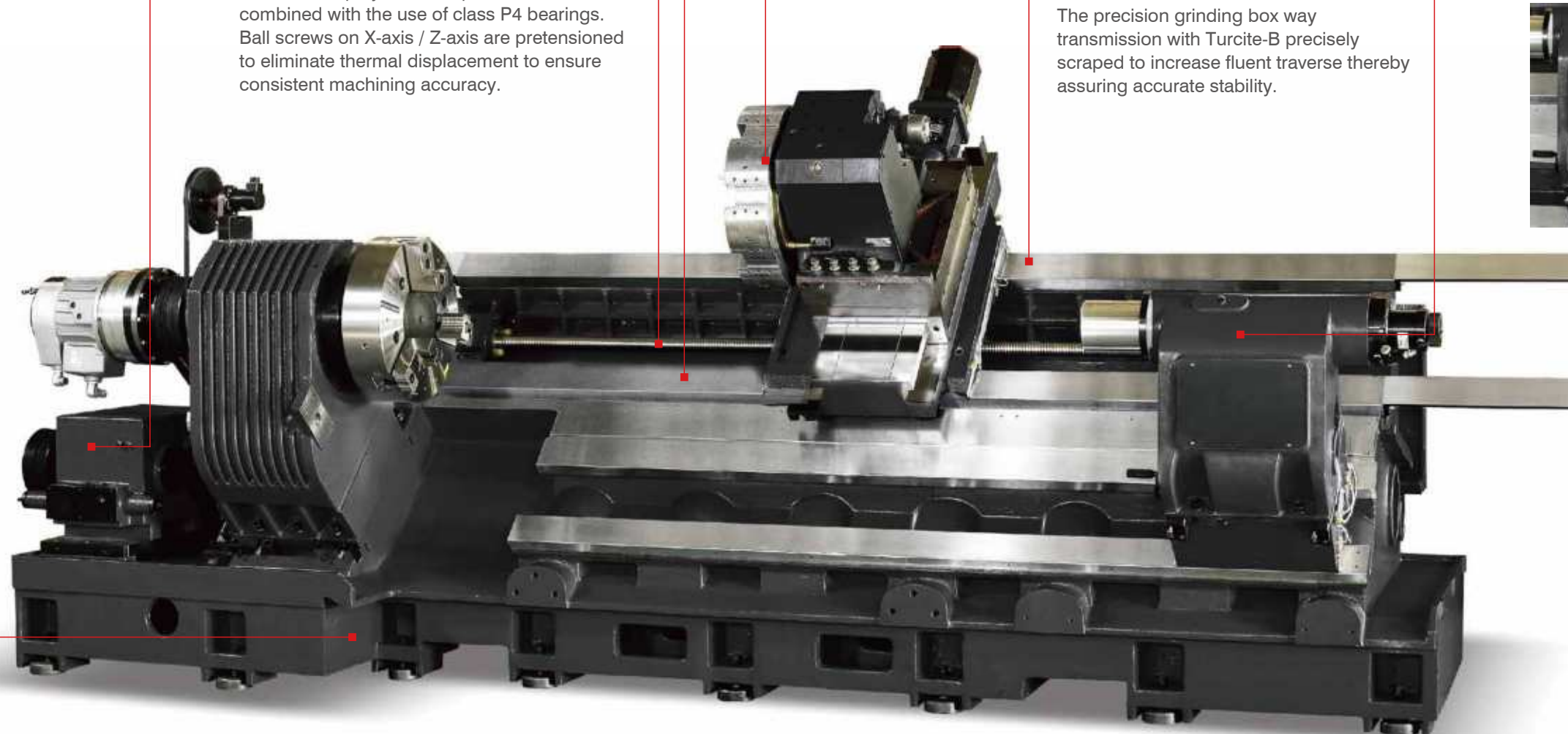
The precision grinding box way transmission with Turcite-B precisely scraped to increase fluent traverse thereby assuring accurate stability.

### HYDRAULIC MANUAL TAILSTOCK



The manual tailstock can be moved to meet workpiece length. Upon request, a programmable tailstock is available as an option.

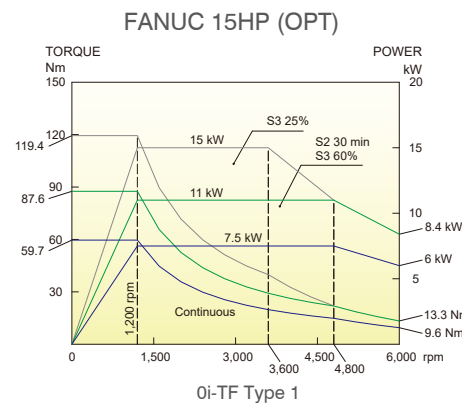
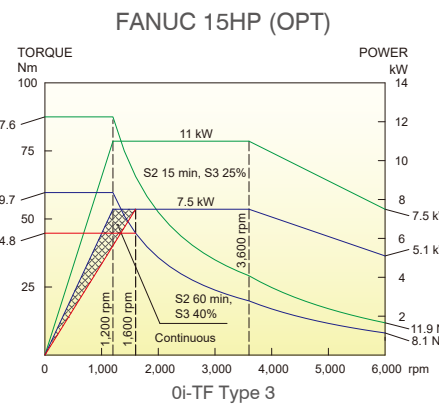
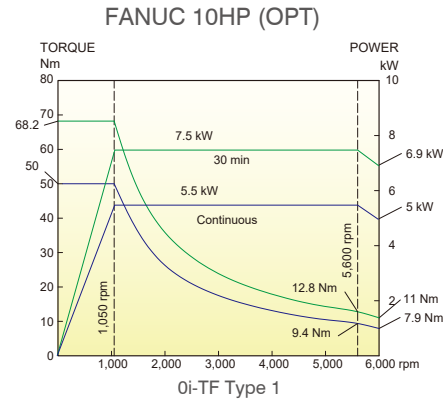
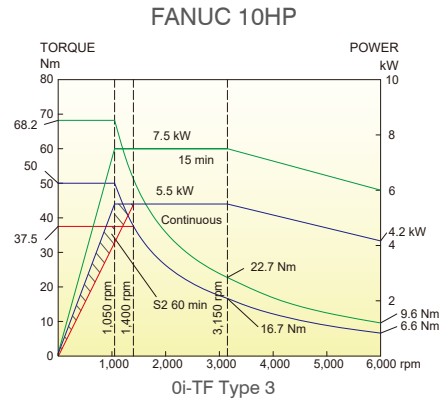
- Manual type steady rest (Option):  
CPL-3518 / 3520  
(Clamping capacity : Ø3"~10" or Ø10"~18")



# Spindle Diagram

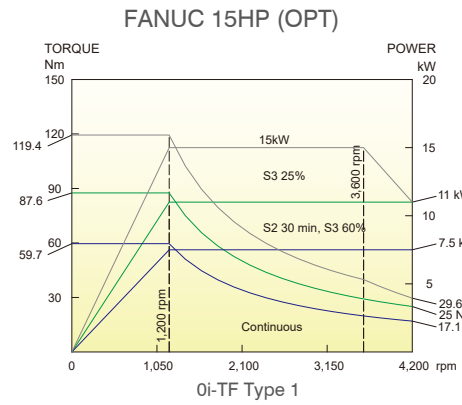
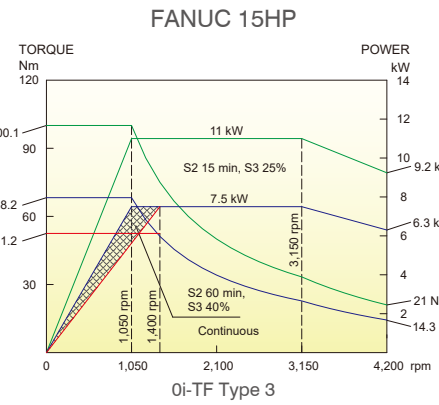
## CPL-106

- 6" Chuck
- Belt Spindle
- 6,000 rpm



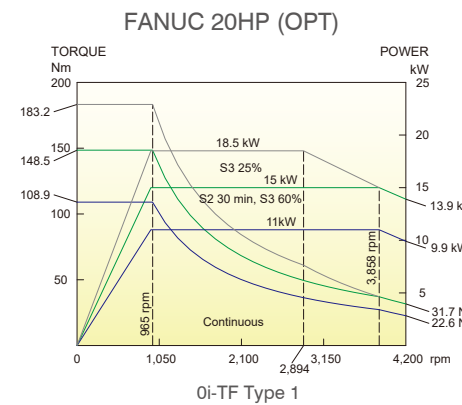
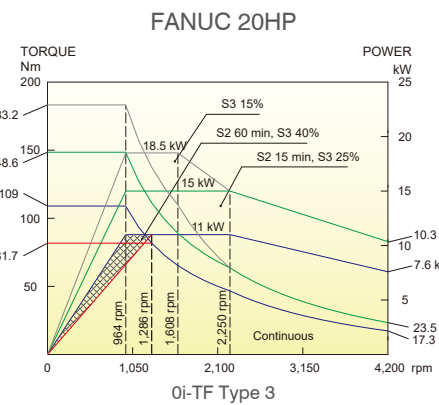
## CPL-158

- 8" Chuck
- Belt Spindle
- 4,200 rpm



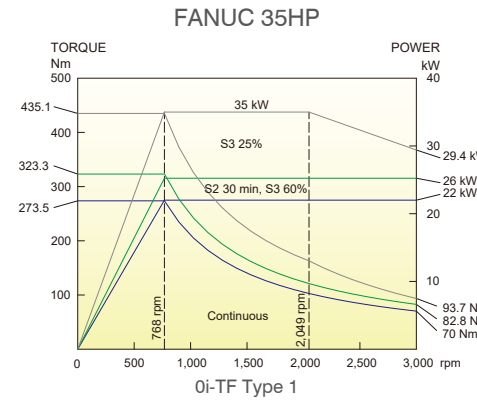
## CPL-208

- 8" Chuck
- Belt Spindle
- 4,200 rpm



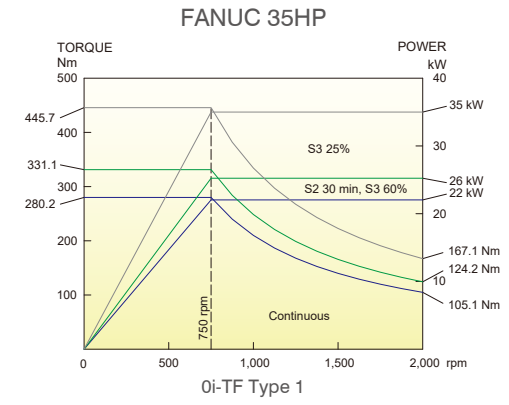
## CPL-3510

- 10" Chuck
- Belt Spindle
- 3,000 rpm



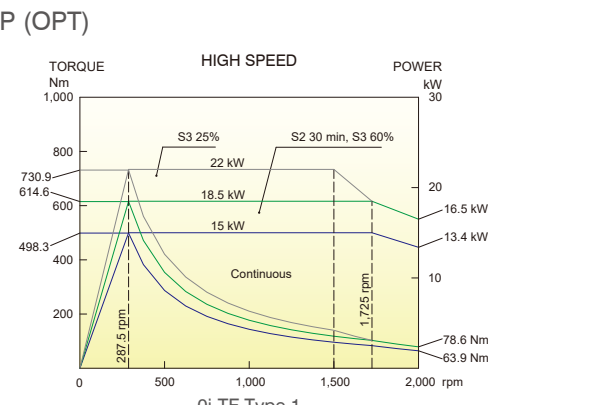
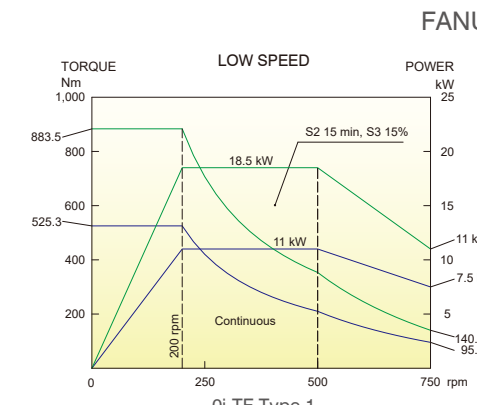
## CPL-3512

- 12" Chuck
- Belt Spindle
- 2,000 rpm



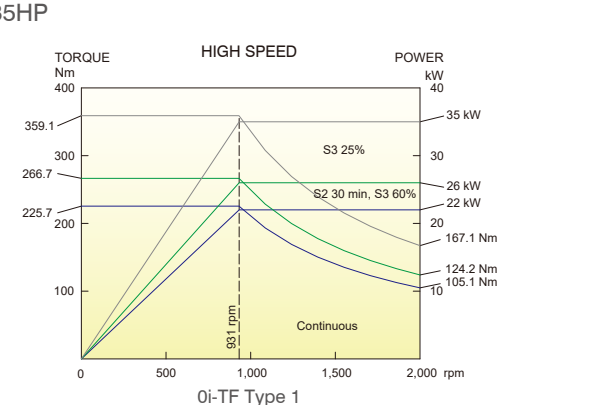
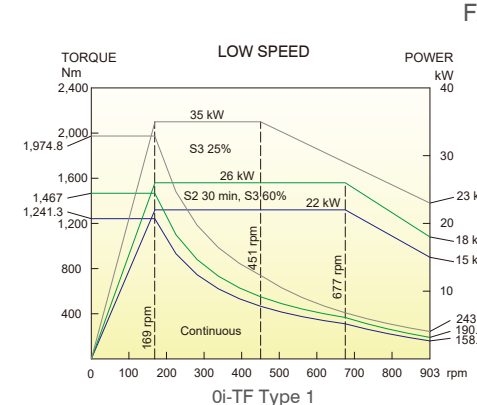
## CPL-3512

- 12" Chuck
- Belt Spindle
- 2,000 rpm



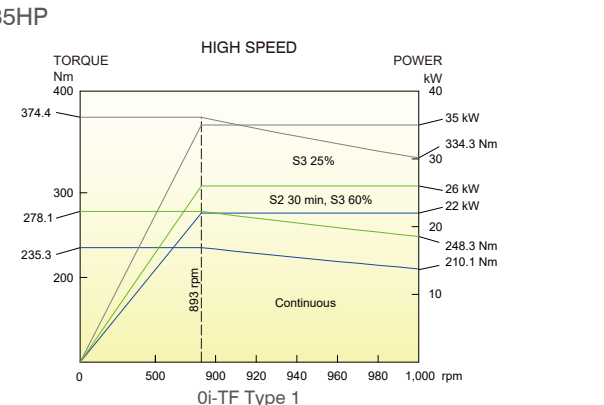
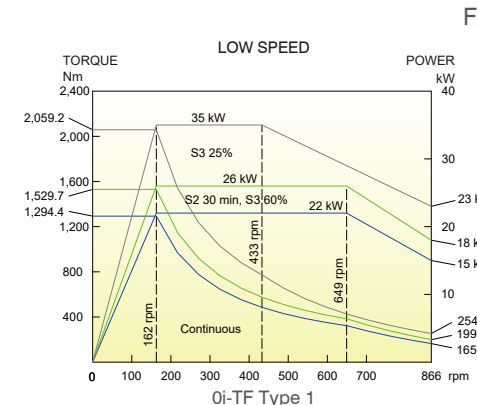
## CPL-3518

- 18" Chuck
- Gear Spindle
- 2,000 rpm

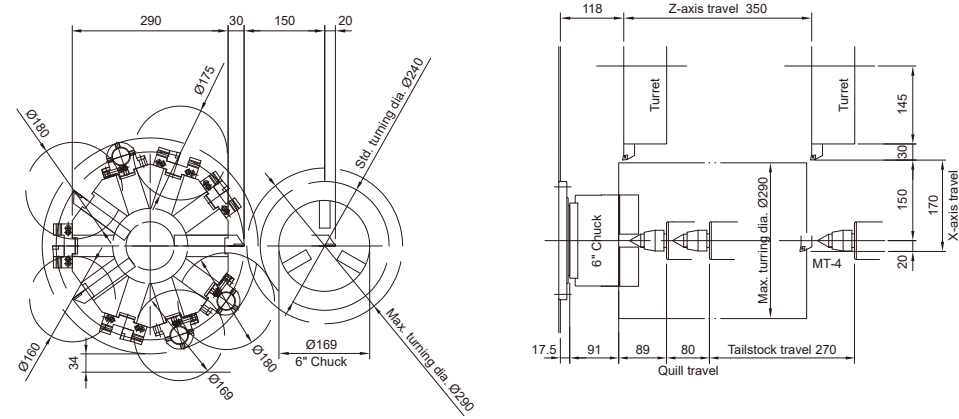


## CPL-3520

- 20" Chuck
- Gear Spindle
- 1,000 rpm

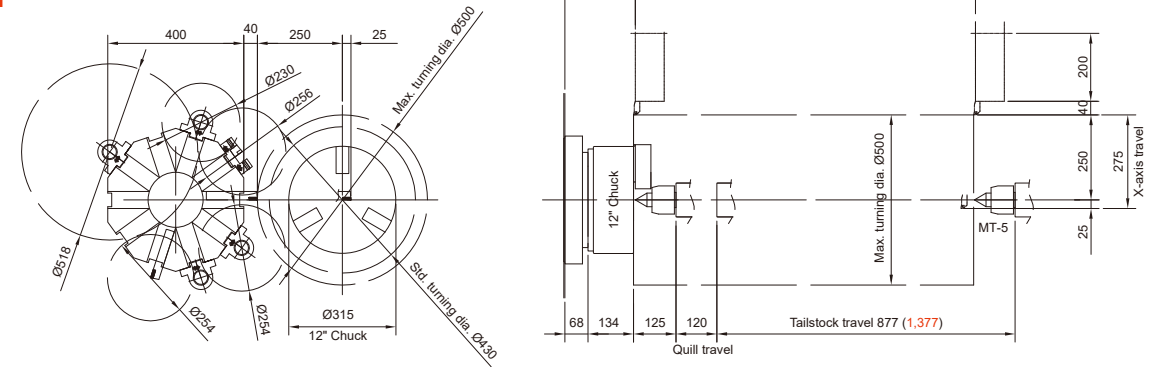


CPL-106

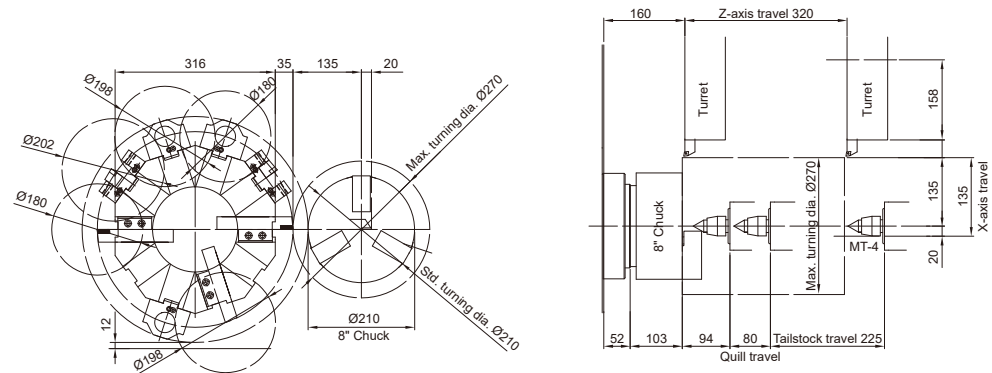


CPL-3512

1M  
1.5M

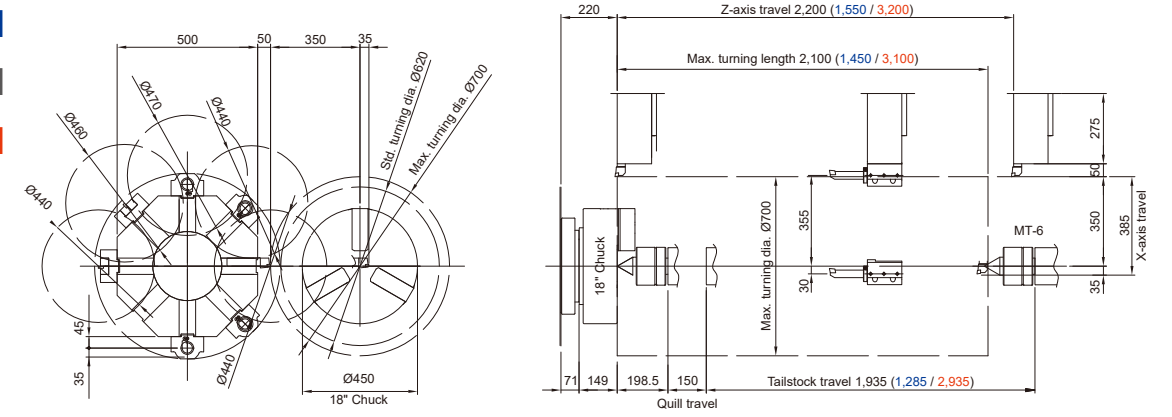


CPL-158

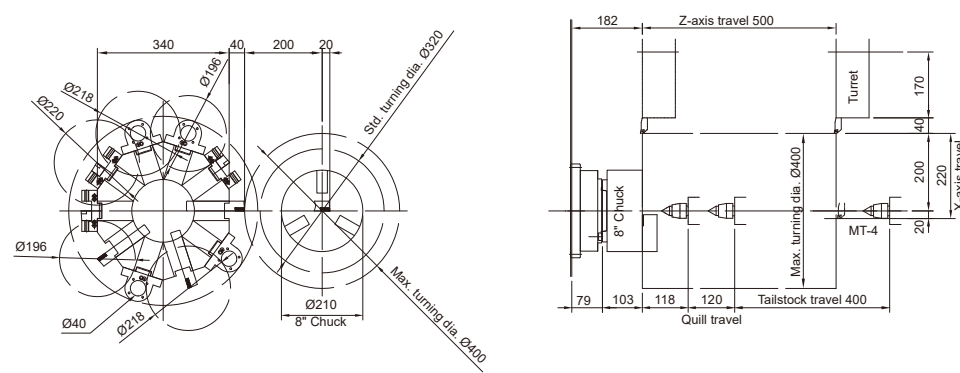


CPL-3518

1.5M  
2.2M  
3.2M

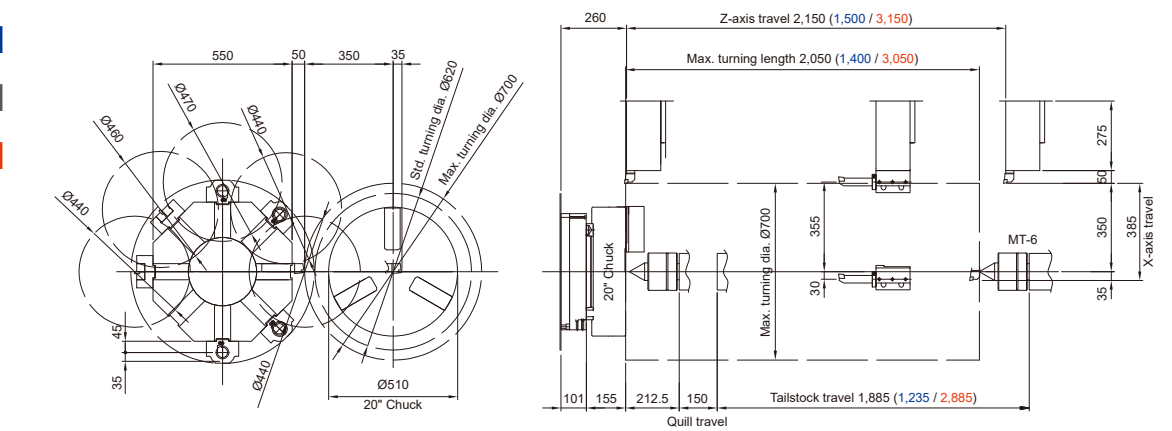


CPL-208

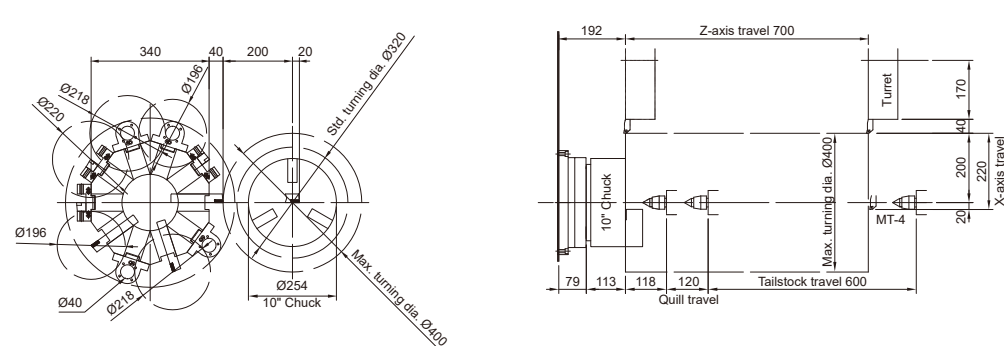


CPL-3520

1.5M  
2.2M  
3.2M

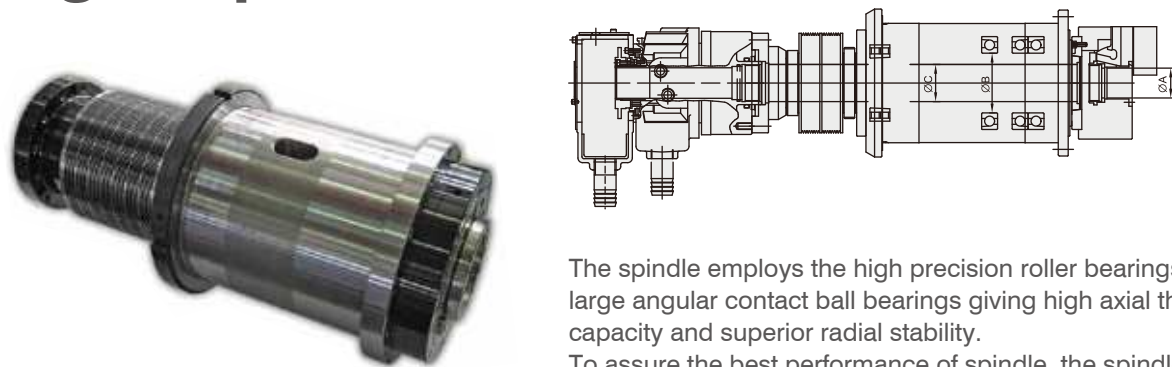


CPL-3510





# Rigid Spindle / Construction



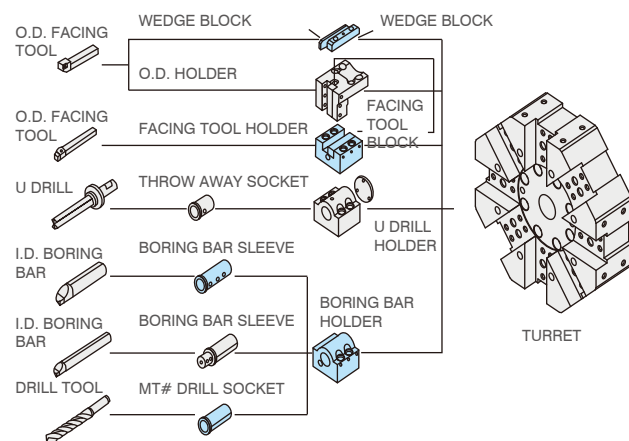
The spindle employs the high precision roller bearings and large angular contact ball bearings giving high axial thrust capacity and superior radial stability. To assure the best performance of spindle, the spindle shall be accepted after a long time running test before assembling on the machine.

Unit : mm (in)

TYPE	SPEED	SPINDLE NOSE	HOLE THROUGH DRAW TUBE (A)	SPINDLE O.D. (B)	HOLE THROUGH SPINDLE (C)
	6,000 rpm	A2-5	45 (1.7")	90 (3.5")	56 (2.2")
	4,200 rpm	A2-6	52 (2")	100 (3.9")	61 (2.4")
	3,000 rpm	A2-8	76.2 (3")	130 (5.1")	90 (3.5")
	2,000 rpm	A2-11	117.5 (4.6")	170 (6.6")	131 (5.1")
	1,000 rpm	A2-15	165 (6.4")	240 (9.4")	184 (7.2")

● Campro is also to offer a variety diameter of draw tube of spindle and A2-11/ 15" & 18" chuck (option).

# Accessories For Tooling System



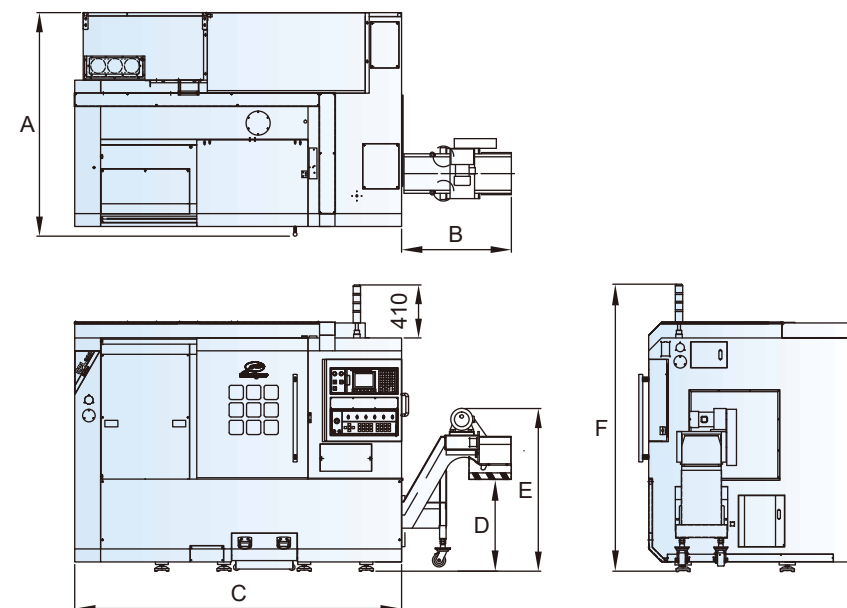
The figures which are shown in blue colour are standard accessories and the quantity as below table. Unit : PCS

Quantity				O.D. tool shank	Item	O.D. tool shank	Quantity			
20	25	32	32	I.D. tool shank		3/4"	1"	1-1/4"	1-1/4"	
Ø 32	Ø 40	Ø 50	Ø 60	Metric Size	Inch Size	Ø 1-1/4"	Ø 1-1/2"	Ø 2"	Ø 2-1/2"	
2	2	2	2		Facing tool block	2	2	2	2	
2	2	2	2		Facing tool holder	2	2	2	2	
5	5	4	4		Boring bar holder	5	5	4	4	
10	10	8	8		Wedge block	10	10	8	8	
10	10	8	8		Flushing nozzle	10	10	8	8	
2	2	X	X	Ø8 mm	Boring bar sleeve	Ø5/16"	2	2	X	X
2	2	X	X	Ø10 mm		Ø3/8"	2	2	X	X
2	2	1	1	Ø12 mm		Ø1/2"	2	2	1	1
2	2	1	1	Ø16 mm		Ø5/8"	2	2	1	1
2	2	1	1	Ø20 mm		Ø3/4"	2	2	1	1
2	2	1	1	Ø25 mm		Ø1"	2	2	1	1
X	2	1	1	Ø32 mm		Ø1-1/4"	X	2	1	1
X	X	1	1	Ø40 mm		Ø1-1/2"	X	X	1	1
X	X	X	1	Ø50 mm		Ø2"	X	X	X	1
1	1	X	X	MT#1		Drill socket	MT no. 1	1	1	X
1	1	1	1	MT#2	MT no. 2		1	1	1	1
X	1	1	1	MT#3	MT no. 3		X	1	1	1
X	X	1	1	MT#4	MT no. 4		X	X	1	1

\*Metric size

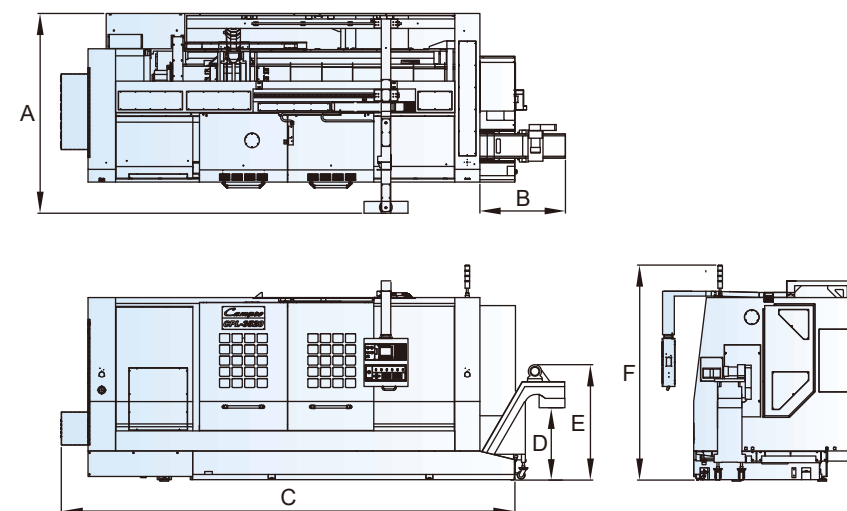
\*Inch size

# Machine Dimension



Unit : mm (in)

MODEL	A	B	C	D	E	F
CPL-106	1,591 (62")	810 (31")	2,152 (84")	670 (26")	1,210 (47")	2,100 (82")
CPL-158	1,591 (62")	810 (31")	2,152 (84")	670 (26")	1,210 (47")	2,100 (82")
CPL-208	1,727 (67")	820 (32")	2,525 (99")	710 (27")	1,255 (49")	2,210 (87")
CPL-3510	1,727 (67")	800 (31")	2,985 (117")	710 (27")	1,255 (49")	2,210 (87")
CPL-3512	2,110 (83")	990 (38")	3,550 (139")	735 (28")	1,275 (50")	2,350 (92")
CPL-3512 (1.5M)	2,110 (83")	990 (38")	4,215 (165")	735 (28")	1,275 (50")	2,350 (92")



Unit : mm (in)

MODEL	A	B	C	D	E	F
CPL-3518 (1.5M)	2,542 (100")	1,100 (43")	4,563 (179")	920 (36")	1,470 (57")	2,735 (107")
CPL-3518	2,542 (100")	1,100 (43")	5,213 (205")	920 (36")	1,470 (57")	2,735 (107")
CPL-3518 (3.2M)	2,542 (100")	1,100 (43")	6,213 (244")	920 (36")	1,470 (57")	2,735 (107")
CPL-3520 (1.5M)	2,542 (100")	1,100 (43")	4,683 (184")	920 (36")	1,470 (57")	2,735 (107")
CPL-3520	2,542 (100")	1,100 (43")	5,333 (209")	920 (36")	1,470 (57")	2,735 (107")
CPL-3520 (3.2M)	2,542 (100")	1,100 (43")	6,333 (249")	920 (36")	1,470 (57")	2,735 (107")

# Machine Specifications

MODEL	UNIT	CPL-106	CPL-158	CPL-208	CPL-3510	CPL-3512	CPL-3518	CPL-3520
<b>CAPACITY</b>								
Max. swing over bed	mm (in)	Ø450 (17.7")	Ø450 (17.7")	Ø540 (21.2")	Ø570 (22.4")	Ø700 (27.5")	Ø900 (35.4")	
Max. swing over carriage	mm (in)	Ø258 (10.1")	Ø258 (10.1")	Ø335 (13.1")	Ø367 (14.4")	Ø500 (19.6")	Ø700 (27.5")	
Distance between centers	mm (in)	350 (13.7")	320 (12.5")	580 (22.8")	810 (31.8")	1,000 (1,500) 39.3" (59")	2,100 (1,450 / 3,050) 82.6" (57" / 120")	2,050 (1,400 / 3,000) 80.7" (55.1" / 118.1")
Max. turning length	mm (in)	350 (13.7")	320 (12.5")	500 (19.6")	700 (27.5")	1,000 (1,500) 39.3" (59")	2,100 (1,450 / 3,050) 82.6" (57" / 120")	2,050 (1,400 / 3,000) 80.7" (55.1" / 118.1")
Standard turning diameter	mm (in)	Ø240 (9.4")	Ø210 (8.2")	Ø320 (12.5")	Ø320 (12.5")	Ø430 (16.9")	Ø620 (24.4")	
Max. turning diameter	mm (in)	Ø290 (11.4")	Ø270 (10.6")	Ø400 (15.7")	Ø400 (15.7")	Ø500 (19.6")	Ø700 (27.5")	
<b>X-AXIS</b>								
Travel	mm (in)	150 + 20 (5.9" + 0.7")	135 + 20 (5.3" + 0.7")	200 + 20 (7.8" + 0.7")	200 + 20 (7.8" + 0.7")	250 + 25 (9.8" + 0.9")	355 + 30 (13.9" + 1.1")	
Rapid traverse	m (in) / min.	24 (944.8)				24 (944.8)	20 (787.4)	
<b>Z-AXIS</b>								
Travel (Option)	mm (in)	350 (13.7")	320 (12.5")	500 (19.6")	700 (27.5")	1,000 (1,500) 39.3" (59")	2,200 (1,550 / 3,150) 86.6" (61" / 124")	2,150 (1,500 / 3,100) 84.6" (59" / 122")
Rapid traverse	m (in) / min.	24 (944.8)				24 (20) 944.8 (787.4)	15 (20 / 15) 590.5 (787.4 / 590.5)	
<b>SPINDLE</b>								
Spindle nose	type	A2-5	A2-6	A2-6	A2-8	A2-11	A2-11	A2-15
Hydraulic chuck (Option)	inch	6" (8")	8" (10")	8" (10")	10" (12")	12" (15")	18" (20")	20" (24")
Hole through draw tube	mm (in)	Ø45 (1.7")	Ø52 (2")	Ø52 (2")	Ø76.2 (3")	Ø117.5 (4.6")	Ø117.5 (4.6")	Ø165 (6.4")
Spindle bearing diameter	mm (in)	90 (3.5")	100 (3.9")	100 (3.9")	130 (5.1")	170 (6.6")	170 (6.6")	240 (9.4")
Spindle motor	HP	10	15	20	35	35	35 (Gear Type)	
Spindle speed	rpm	6,000	4,200	4,200	3,000	2,000	2,000	1,000
<b>TURRET</b>								
Turret type	type	10-Station				10-Station	8-Station	
O.D. tool shank	mm (in)	□20 (3/4")	□25 (1")	□25 (1")	□25 (1")	□25 (1")	□32 (1-1/4")	□32 (1-1/4")
I.D. tool shank	mm (in)	Ø32 (1-1/4")	Ø40 (1-1/2")	Ø40 (1-1/2")	Ø40 (1-1/2")	Ø40 (1-1/2")	Ø50 (2")	Ø60 (2-1/2")
Tool change time	sec.	0.3				0.3		
<b>TAILSTOCK</b>								
Quill diameter	mm (in)	Ø70 (2.7")	Ø70 (2.7")	Ø80 (3.1")		Ø100 (3.9")	Ø150 (5.9")	
Quill travel	mm (in)	80 (3.1")	80 (3.1")	120 (4.7")		120 (4.7")	150 (5.9")	
Quill taper	type	MT - #4				MT - #5	MT - #6	
<b>OTHER</b>								
Floor plan (with chip conveyor)	mm (in)	2,962 x 1,591 (116" x 62")	2,962 x 1,591 (116" x 62")	3,345 x 1,727 (131" x 67")	3,785 x 1,727 (149" x 67")	4,540 (5,205) x 2,110 (178" (204") x 83")	6,313 (5,663 / 7,313) x 2,542 (248" (222" / 287") x 100")	6,433 (5,783 / 7,433) x 2,542 (253" (227" / 292") x 100")
Machine weight	kg (lb)	3,000 (6,613 lbs)	3,500 (7,716 lbs)	4,500 (9,920 lbs)	5,500 (12,125 lbs)	6,500 (7,300) 14,330 lbs (16,093 lbs)	13,000 (11,500 / 16,000) 28,660 lbs (25,353 lbs / 35,273 lbs)	13,100 (11,600 / 16,100) 28,880 lbs (25,573 lbs / 35,494 lbs)
Coolant tank capacity	L (gal)	120 (31)	120 (31)	110 (29)	110 (29)	250 (66)	450 (118)	
Power capacity	kVA	15	15	20	30	30	40	

• Machine specifications and design are subject to change without prior notice due to on-going innovation.

## Standard accessories

- 3-Jaw power chuck
- Hard jaw: 1 set
- Soft jaw: 3 set
- Hydraulic unit
- Manual tailstock
- Chain type chip conveyor
- Coolant system
- Coolant pump
- Pretensioned ballscrews on 2 axes
- Hand wheel (MPG)
- Heat exchanger
- Oil skimmer

## Optional accessories

- 3-color signal light
- Working lamp
- Collet chuck
- Programmable tailstock
- Special purposed chip conveyor
- Back side chip removing (CPL-106 / 158 / 208 / 3510)
- Oil mist collector
- Tool setter
- Parts catcher
- Automatic bar feeder
- Auto. door
- Auto. power off
- Servo turret
- VDI turret
- Air condition
- CE modification
- Transformer