

CS/CM/CL/CX series

CONVERSATIONAL PRECISION HIGH SPEED LATHE



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First edition third print 07. Aug. 2024

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Force One conventional lathes include High-Speed (CS/CM/CL) and Heavy-Duty (CX) models. High-speed types use FAG/SKF bearings with Ø58-Ø120 mm spindles for precision turning. Heavy-duty models feature 3V bedways, Ø153/Ø230 mm spindles, and 3-point support for heavy cutting. All machines use heat-treated gears and support multiple thread types. Optional (Opt.) features include DRO, optical scale, quick-change tool post, and CE electrical system.



Optional plastic idler gear at the rear (S Series) ensure smooth, quiet operation and protects headstock gears and spindle during crash.



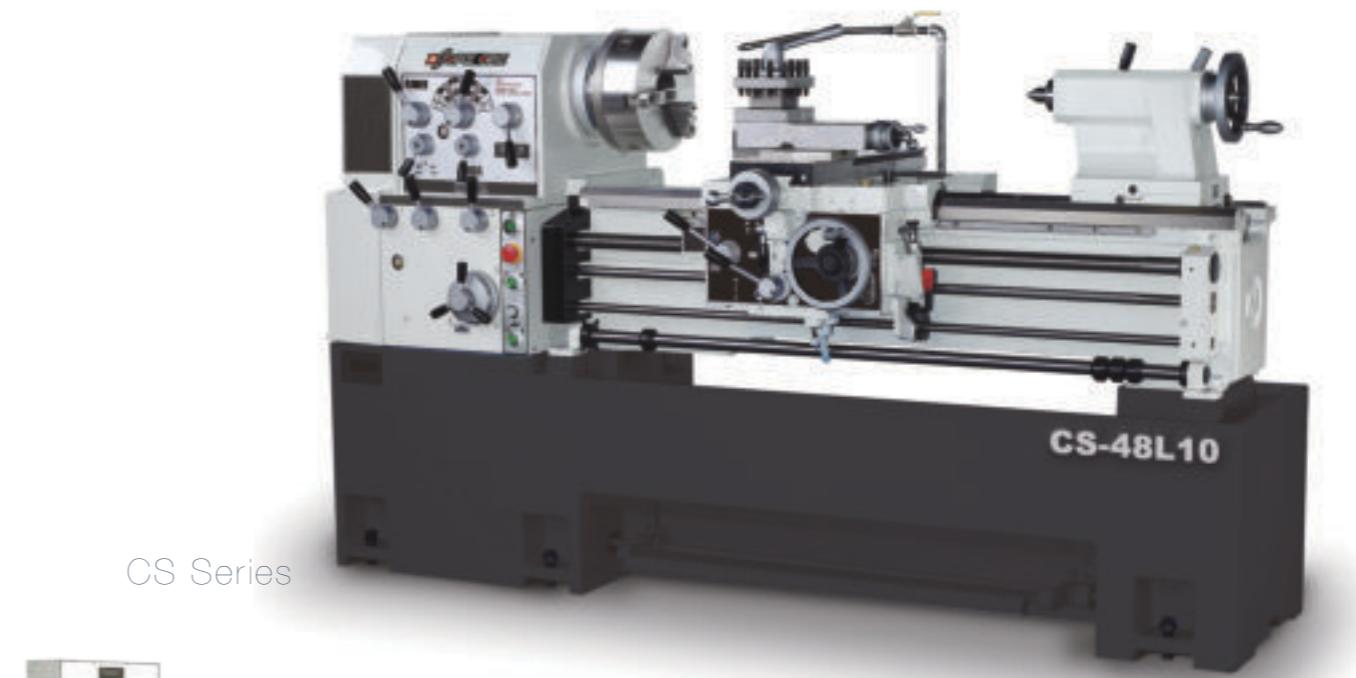
CL Series



Reservoir Oil Bath Type Cross Slide



Bearings on the spindle are imported from Germany.
Varied spindle bore diameters



CS Series



INVERTER TRANSMISSION WITH MONITOR (opt.):

1. Provides stable electric current, low power consumption and fine cutting trace.
2. Being controlled by a rotary switch, gear shifting is simplified.
3. Stepless speed shifting, any speed in the range is available.



CX Series

OPTIONS



SPECIFICATIONS

ITEM	UNIT	CS			CM			
		CS43	CS48	CS53	CM50	CM60		
Swing Over Bed	mm	430(17")	470(18.5")	520(20.5")	500(22")	600(26")		
Swing Over Cross Slide	mm	240(9.5")	280(11")	330(13")	340(13.4")	440(17.4")		
Center Height	mm	215(8.5")	235(9.25")	260(10.25")	280(11")	330(13")		
Center Distance	mm	500/700/1000/1500/2200	500/700/1000/1500/2200	500/700/1000/1500/2200	1000/1500/2200	1000/1500/2200		
		(22°/30°/40°/60°/90°)	(22°/30°/40°/60°/90°)	(22°/30°/40°/60°/90°)	(40°/60°/90°)	(40°/60°/90°)		
Swing Over Gap	mm	050(25.5")	090(27.125")	740(29.125")	788(31")	890(35")		
Bed Width	mm	300(11.8")			350(13.75")			
Spindle Nose		ASA D1.0/D1.8(OPT.)			D1.8(OPT.)			
Spindle Bore	mm	58(2.25")/80(3") (OPT.)		80(3")	85(3.4")/105(4") (OPT.)			
Taper of Spindle Bore		MT6/MT7(OPT.)			MT7			
Spindle Speed	rpm	Spindle bore 58(mm): 20~2000(12 STEP)/ Spindle bore 80(mm): 40~2000(12 STEP)			15-1500/14~1380(12 STEP)			
Inch Threads Range	TPI	4~50			2~50			
Metric Threads Range	mm	0.5~7			0.5~14			
Longitudinal Feeds Range	mm/rev	0.05~0.82(0.002~0.032")			0.05~0.82(0.002~0.032")			
Cross Feeds Range	mm/rev	0.02~0.4(0.001~0.0094")			0.02~0.4(0.001~0.0094")			
Leadscrew Diameter	mm	35(1.4")			38(1.5")			
Leadscrew Pitch	mm	6(4TPI)			6(4TPI)			
Taper of Tail Center		MT4			MT5			
Tail Spindle Travel	mm	150(5.875")			190(7.5")			
Tail Spindle Diameter	mm	58(2.25")	68(2.7")		75(7.825")			
Main Drive Motor	HP(KW)	5(3.75)/7.5(5.625) (OPT.)	7.5(5.625)/10(7.5) (OPT.)		7.5(5.625)/10(7.5) (OPT.)			
Coolant Pump	HP(KW)	0.125(0.1)			0.125(0.1)			
Compound Rest Travel	mm	125(4.825")			200(7.825")			
Cross Slide Travel	mm	250(9.7")	275(10.8")		300(13")			
Machine Dimensions	cm	L:105/189/215/265/342			L:229/278/353			
		W:81			W:99			
		H:119	H:122	H:125	H:125	H:130		
Packing Dimensions	cm	L:182/200/228/279/355			L:243/294/307			
		W:95			W:115			
		H:108			H:193			
Net Weight	Kgs	1300/1380/1450/1000/2000	1350/1430/1500/1050/2050	1400/1480/1550/1700/2100	2000/2200/2000	2050/2250/2050		
Gross Weight	Kgs	1400/1480/1570/1730/2170	1450/1530/1020/1780/2220	1500/1580/1070/1830/2270	2150/2370/2800	2200/2420/2850		

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STANDARD ACCESSORIES

- Tool Box
- Centers
- Safety pin
- Screw wrench for cutter setting
- Back plate
- Coolant system
- 4-way tool post
- Auto-feed stopper ring
- Center sleeve
- Levelling pads

OPTIONS ACCESSORIES

- 3-jaw scroll chuck
- 4-jaw independent chuck
- Face plate
- Steady rest
- Follow rest
- Work light
- 4-position carriage stop
- Micro carriage stop
- Quick change tool post
- linear scale
- Hydraulic copying machine
- Chip guard
- Driving plate
- 5C lever collet closer
- Live centers
- Rear cutter rest
- Taper turning attachment
- Rear splash guard
- Chuck guard
- American tool post
- Change gears for D.P and module thread
- 5C lever collet closer
- Driving plate
- Quick change tool post
- linear scale
- Hydraulic copying machine
- Chip guard
- ID/OD Grinder
- Rapid Traverse(CL series)

SPECIFICATIONS

ITEM	UNIT	CL					
		CL56	CL66	CL76	CL83		
Swing Over Bed	mm	500(22")	600(26")	700(30")	830(33")		
Swing Over Cross Slide	mm	340(13.4")	440(17.4")	540(21.25")	610(24")		
Center Height	mm	280(11")	330(13")	380(15")	415(16")		
Center Distance	mm	1000/1500/2000/2500/3300/4300 (40°/60°/80°/100°/132°/172°)					
Swing Over Gap	mm	788(31")	890(35")	990(39")	1000(42")		
Bed Width	mm	400(15.75")					
Spindle Nose		ASA D1-8/D1-11(OPT.)		ASA D1-11			
Spindle Bore	mm	58(2.25")/80(3") (OPT.)		120(4.5")			
Taper of Spindle Bore		MT7					
Spindle Speed	rpm	Spindle Bore 85(mm): 15~1500(12 STEP)/ Spindle Bore 120(mm): 10~1000(12 STEP)					
Inch Threads Range	TPI	2~50					
Metric Threads Range	mm	0.5~14					
Longitudinal Feeds Range	mm/rev	0.05~0.82(0.002~0.032")					
Cross Feeds Range	mm/rev	0.02~0.4(0.001~0.0094")					
Leadscrew Diameter	mm	38(1.5")					
Leadscrew Pitch	mm	6(4TPI)					
Taper of Tail Center		MT5					
Tail Spindle Travel	mm	190(7.5")					
Tail Spindle Diameter	mm	85(3.4")					
Main Drive Motor	HP(KW)	10(7.5)/ 15HP/6P(11) (OPT.)		15HP/6P(11)			
Coolant Pump	HP(KW)	190(7.5")					
Compound Rest Travel	mm	200(8")					
Cross Slide Travel	mm	375(14.75")		450(17.75")			
Machine Dimensions	cm	L:238/290/347/398/473/555					
		W:103					
		H:120	H:131	H:137	H:141		
Packing Dimensions	cm	L:270/315/361/410/485/588					
		W:115					
		H:190					
Net Weight	Kgs	2120/2420/2770/3120/3520/4420	2200/2500/2850/3200/3600/4500	2300/2000/2950/3300/3700/4600	2400/2700/3050/3400/3800/4700		
Gross Weight	Kgs	2200/2590/2970/3350/3820/4820	2340/2670/3050/3430/3900/4900	2440/2770/3150/3530/4000/5000	2540/2870/3250/3630/4100/5100		

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STANDARD ACCESSORIES OPTIONS ACCESSORIES

- Tool Box
- Centers
- Safety pin
- Screw wrench for cutter setting
- Back plate
- Coolant system
- 4-way tool post
- Auto-feed stopper ring
- Center sleeve
- Levelling pads
- 3-jaw scroll chuck
- 4-jaw independent chuck
- Face plate
- Steady rest
- Follow rest
- Work light
- 4-position carriage stop
- Micro carriage stop
- Live centers
- Rear cutter rest
- Taper turning attachment
- Inverter transmission with monitor
- Rear splash guard
- Chuck guard
- American tool post
- Change gears for D.P and module thread
- 5C lever collet closer
- Driving plate
- Quick change tool post
- linear scale
- Hydraulic copying machine
- Chip guard
- ID/OD Grinder
- Rapid Traverse(CL series)

ITEM	UNIT	CX		
		CX33	CX37	CX41
Swing Over Bed	mm	800(33.5")	900(38")	1000(42")
Swing Over Cross Slide	mm	625(24.75")	725(28.5")	825(32.5")
Swing Over Gap	mm	1180(46.5")	1280(50")	1370(54")
Width of Gap	mm		475(19")	
Center Distance	mm	1810/2310/3310/4310/5310/6310/7310/8310 (72°/92°/132°/172°/212°/252°/292°/332°)		
Max. Length for Workpiece	mm	1050/2150/3150/4150/5150/6150/7150/8150 (65°/84.0°/124°/163.4°/202.75°/242°/281.5°/321°)		
Spindle Bore	mm	153(6")/230(9") (OPT.)		
Spindle Nose		A2-11/A2-15(OPT.)		
Taper of Spindle Bore		MT7#/ 1/20(OPT.)		
Spindle Speed	rpm	8-080/0-500		
Spindle Speed	TPI	12 STEP		
Spindle Center To Ground	mm	1178(46.4")	1228(48.3")	1278(50.3")
Longitudinal Feeds Range	mm/rev	0.05~0.7		
Cross Feeds Range	mm/rev	0.025~0.35		
Rapid Traverse	M/min	3.7 (Z-axis)/1.8 (X-axis)		
Inch Threads Range		8~28/4-50(DP)		
Metric Threads Range	mm	0.8~14 (M.P0.5-7)		
Leadscrew pitch	mm	45X2/P12(OPT.)		
Cross slide Travel	mm	520(20.5")		
Compound Rest Travel	HP(KW)	330(13")		
Tool Shank		40X40		
Tail Spindle Diameter	mm	120(4")		
Tail Spindle Travel	mm	290(11.375")		
Taper of Tail Center		MTC#		
Bed Width	mm	510(20")		
Spindle motor	HP	20/30(OPT.)		
Bed		One Piece		
Machine Dimensions	cm	L:375/625/525/725/825/925/1025 W:174		
Net Weight	Kgs	5700/6100/6800/7600/8400/9200/10000/10800		
Packing Dimensions	cm	L:373/425/531/625/728/850/950/1050 H:211 W:185		

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STANDARD ACCESSORIES

- Back plate
- Center sleeve
- Center
- Tool post wrench
- Anchor bolt
- Tool box & Tool
- Coolant pump
- Work light
- 4-position carriage stop
- Micro carriage stop
- Live center
- Rear cutter rest
- Taper turning attachment
- Inverter transmission with monitor
- Rapid Traverse(CL series)

OPTIONS ACCESSORIES

- 3-Jaw scroll chuck
- 4-Jaw face plate
- Face plate
- Taper turning attachment
- Follow rest
- Rear splash guard
- 4 Position carriage stop
- Micro carriage stop
- CE certificate
- Quick change tool post
- Live center
- linear scale