

Machine Tools Line-Up

SMEC

Machine Tools Line-Up



SMEC Co., Ltd.

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Smart One, Global One

SMEC

"A company a better future and dreams"

Samsung Machine Tools Engineering Company
S M E C

We produce machine tools, semiconductor equipment, robots with the technology and management successfully for 30 years..

We are certified by ISO9001 and CE for our manufacturing technology.

We are exporting our manufacturing technology to Europe, America, South America, Asia, Africa and Oceania

And as a reliable partner, we supply parts and equipment for many world-class major companies of automobile, aerospace, semiconductor, display and robot industry.

We promise we will have a new takeoff based on new factory moving to Gimhae and do our best as your reliable partner with the best-proved technology.

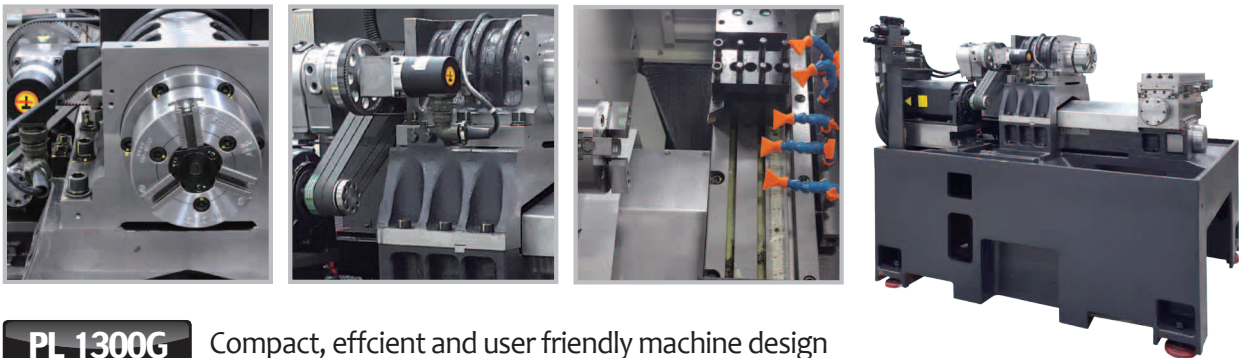
HISTORY IN BRIEF

- 1988 Started as Machine Tools Division of Samsung Heavy Industries, Ltd.
- 1989 Horizontal and vertical machining center technology partnership with OKK (Japan)
- 1991 Turning center and vertical machining center technology partnership with Mori Seiki
- 1995 Transferred to Samsung Aerospace Industries
- 1996 5-sided processing center technology partnership with Toshiba
- 1999 Spun out from Samsung Aerospace Industries and established SMEC Co., Ltd
- 2003 Developed 7th generation LCD robot
- 2005 Developed 8th generation LCD robot, domestic and international sales
- 2007 Developed laser equipment for circuit board
- 2008 Developed Y-axis complex turning center series
- 2011 Merger with NewGrid, Inc. (Managed both Machine and Telecom Business Divisions)
Developed multi-axis Multi-Tasking Machine (iMT420ST)
- 2012 Developed 5-axis machine (FTV 630)
- 2013 Developed 3D hardening solution and 7-axis hollow robot



PL 1300G

GANG TYPE CNC TURNING CENTER



PL 1300G Compact, efficient and user friendly machine design



- Powerful cutting made possible with dovetail slide.
- Ensure more reliable cutting compared to LM Guide.
- Strong configuration to prevent vibration even during intermittent cutting.

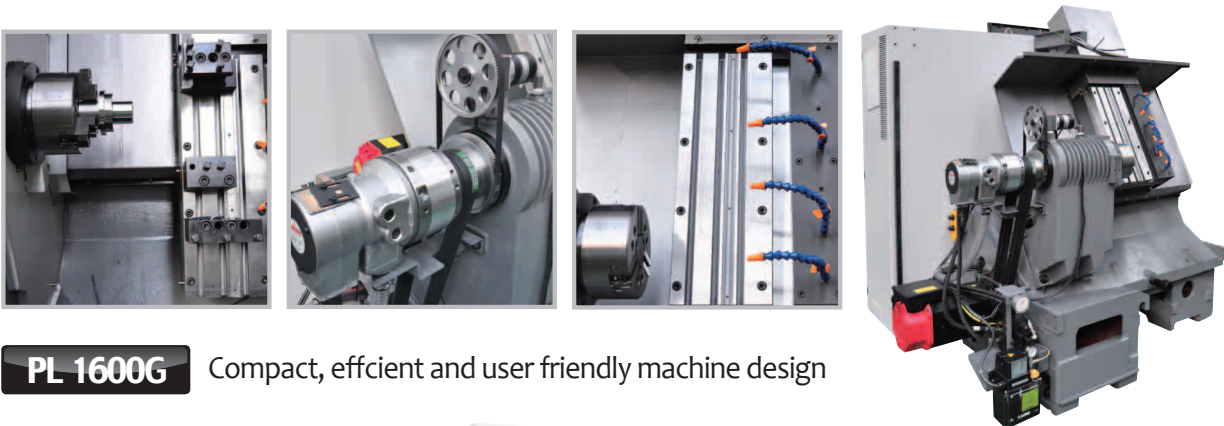
Major Specifications

[] : Option

DESCRIPTION		PL 1300G
Swing over the bed	mm	360
Max. machining diameterxlength	mm	120x270
Max. machining bar size	mm	35
Chuck size	inch	5
Spindle speed	rpm	60~6,000
Spindle nose	ASA	FLAT
Spindle motor(cont./30min)	kW	5.5/7.5
Rapid traverse (X/Z)	m/min	24/24
Axis travel (X/Z)	mm	300/235
Number of tool positions	ea	5
Shank size for square tool	mm	20x20
Shank size for boring bar	mm	25
Tailstock travel	mm	-
Machine weight	kgf	1,700
Required floor space (LxW)	mm	1,887x1,577
Controller		Fanuc Oi-Mate TD

PL 1600G / 1600CG

GANG TYPE CNC TURNING CENTER



PL 1600G Compact, efficient and user friendly machine design



High Speed 60° degree slant type one bed casting structure

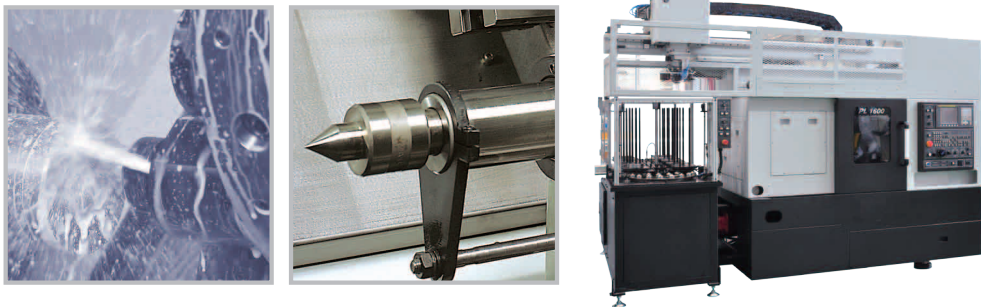
Major Specifications

[] : Option

DESCRIPTION		PL 1600G	PL 1600CG
Swing over the bed	mm	540	540
Max. machining diameterxlength	mm	170x250	170x220
Max. machining bar size	mm	46	52
Chuck size	inch	6	8
Spindle speed	rpm	6,000	4,500
Spindle nose	ASA	A2-5"	A2-6"
Spindle motor(cont./30min)	kW	7.5/11	11/15
Rapid traverse (X/Z)	m/min	30/36	30/36
Axis travel (X/Z)	mm	420/250	420/220
Number of tool positions	ea	6	6
Shank size for square tool	mm	20x20	20x20
Shank size for boring bar	mm	32	32
Tailstock travel	mm	-	-
Machine weight	kgf	3,000	3,200
Required floor space (LxW)	mm	2,475x1,697	2,475x1,697
Controller		Fanuc Oi-Mate TD [Fanuc Oi-TD]	

PL 1600 / 1600C / 1600M / 1600CM

LM & BOX TYPE CNC TURNING CENTER



PL 1600 High precision and maximum productivity



Excellent vibration absorbing 45 degree slant type one bed casting structure to ensure heavy loads and superior finishes

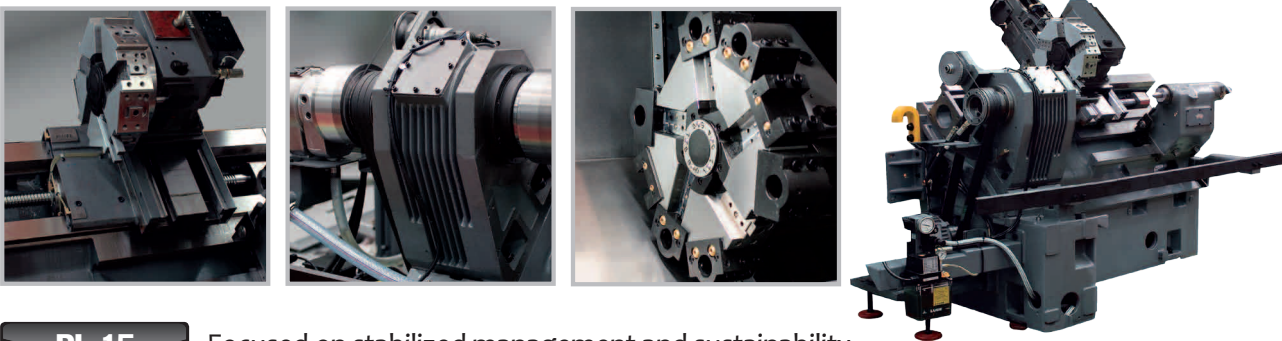
Major Specifications

[] : Option

DESCRIPTION		PL 1600	PL 1600C	PL 1600M	PL 1600CM
Swing over the bed	mm	530	530	530	530
Max. machining diameterxlength	mm	290x307	290x271	250x291	250x262
Max. machining bar size	mm	46	52	46	52
Max. milling diameter	mm	-	-	268	268
Chuck size	inch	6	8	6	8
Spindle speed	rpm	6,000	4,500	6,000	4,500
Spindle nose	ASA	A2-5"	A2-6"	A2-5"	A2-6"
Spindle motor(cont./30min)	kW	11/15	11/15	11/15	11/15
Rapid traverse (X/Z)	m/min	24/30	24/30	24/30	24/30
Axis travel (X/Z)	mm	165/350	165/350	165/350	165/350
Number of tool positions	ea	12	10	12 (BMT 45)	12 (BMT 45)
Shank size for square tool	mm	20x20	25x25	20x20 (BMT 45)	20x20 (BMT 45)
Shank size for boring bar	mm	32	40	32	32
Milling motor(cont./30min)	kW	-	-	2.2/3.7	2.2/3.7
Tailstock travel	mm	[80]	[80]	[80]	[80]
Machine weight	kgf	2,850	2,940	3,100	3,190
Required floor space (LxW)	mm	2,295x1,760	2,395x1,760	2,580x1,760	2,680x1,760
Controller		Fanuc Oi-Mate TD [Fanuc Oi-TD]			

PL 15 / 15L / 20 / 20L

BOX WAY TYPE TURNING CENTER



PL 15 Focused on stabilized management and sustainability



The strongest spindle power in similar spec. machine adaptation broad and stabilized motor compact size
The smallest floor space in similar spec. machine

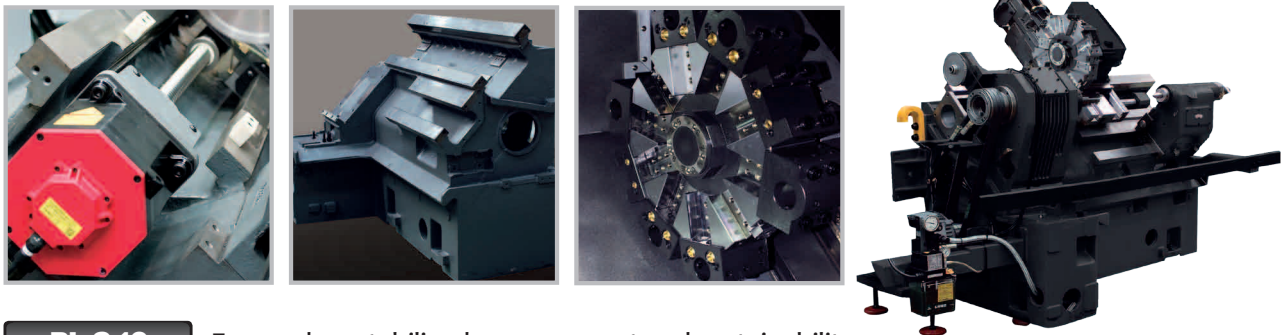
Major Specifications

() : Big Bore [] : Option

DESCRIPTION		PL 15	PL 15L	PL 20	PL 20L
Swing over the bed	mm	450	450	450	450
Max. machining diameterxlength	mm	300x300	300x520	300x300	300x520
Max. machining bar size	mm	46	46	52 (68)	52 (68)
Chuck size	inch	6	6	8	8
Spindle speed	rpm	6,000	6,000	4,000	4,000
Spindle nose	ASA	A2-5"	A2-5"	A2-6"	A2-6"
Spindle motor(cont./30min)	kW	11/15	11/15	15/18.5 [11/15]	15/18.5 [F Oi-TD : 11/15]
Rapid traverse (X/Z)	m/min	24/24	24/20	24/24	24/24
Axis travel (X/Z)	mm	180/330	180/560	180/330	180/560
Number of tool positions	ea	10 [12]	10 [12]	10 [12]	10 [12]
Shank size for square tool	mm	25x25 [20x20]	25x25 [20x20]	25x25 [20x20]	25x25 [20x20]
Shank size for boring bar	mm	40 [32]	40 [32]	40 [32]	40 [32]
Tailstock travel	mm	80	80	80	80
Machine weight	kgf	3,500	3,700	3,700	3,900
Required floor space (LxW)	mm	2,533x1,505	2,783x1,505	2,551x1,505	2,783x1,505
Controller		Fanuc Oi-Mate TD, Fanuc Oi-TD			

PL 240 / 240LM

BOX WAY TYPE TURNING CENTER



PL 240 Focused on stabilized management and sustainability

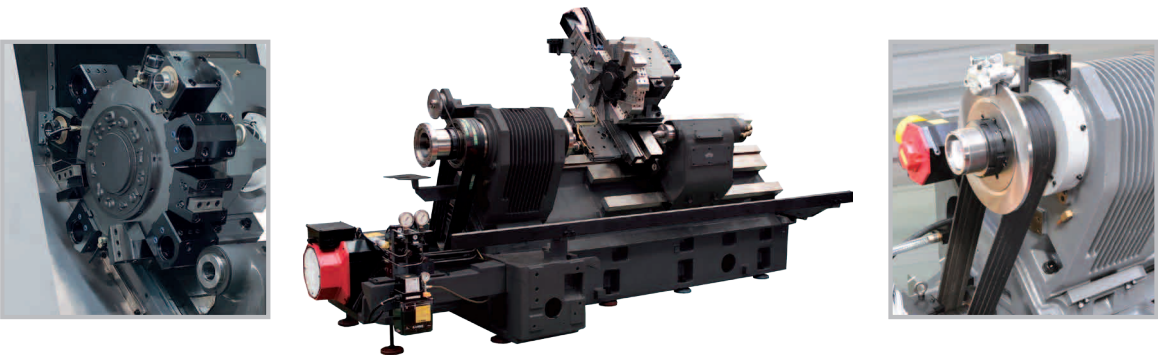


The strongest spindle power in similar spec. machine
adaptation broad and stabilized motor compact size
The smallest floor space in similar spec. machine

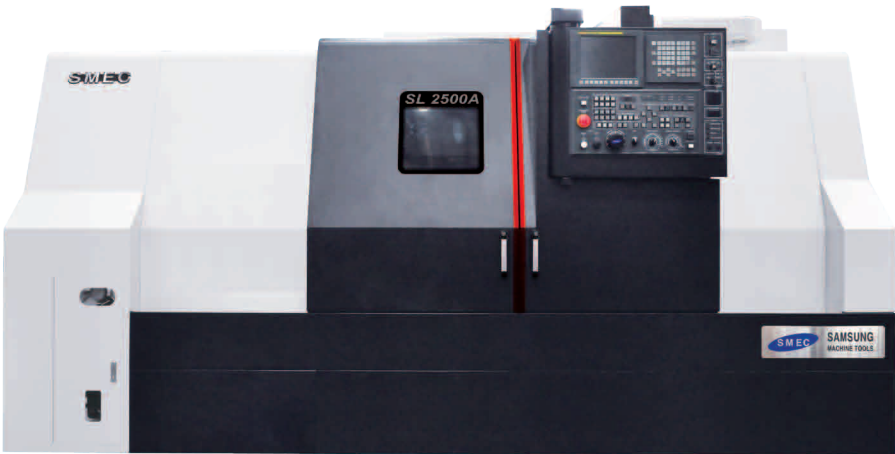
Major Specifications			
DESCRIPTION		PL 240	PL 240LM
Swing over the bed	mm	510	510
Max. machining diameter×length	mm	350×540	350×540
Max. machining bar size	mm	68	52 [68]
Chuck size	inch	8	8
Spindle speed	rpm	4,000	4,000
Spindle nose	ASA	A2-6"	A2-6"
Spindle motor(cont./30min)	kW	15/18.5	11/15 [15/18.5]
Rapid traverse (X/Z)	m/min	24/24	24/24
Axis travel (X/Z)	mm	200/560	200/560
Number of tool positions	ea	10	12/BMT55
Shank size for square tool	mm	25×25	25×25
Shank size for boring bar	mm	40	40
Tailstock travel	mm	80	80
Machine weight	kgf	4,000	4,000
Required floor space (L×W)	mm	2,783×1,505	2,783×1,560
Controller		Fanuc Oi-TD [Fanuc Oi-Mate TD]	

SL 2500 Series

BOX WAY TYPE TURNING CENTER



SL 2500A Stabilized Structure that Optimizing Productivity

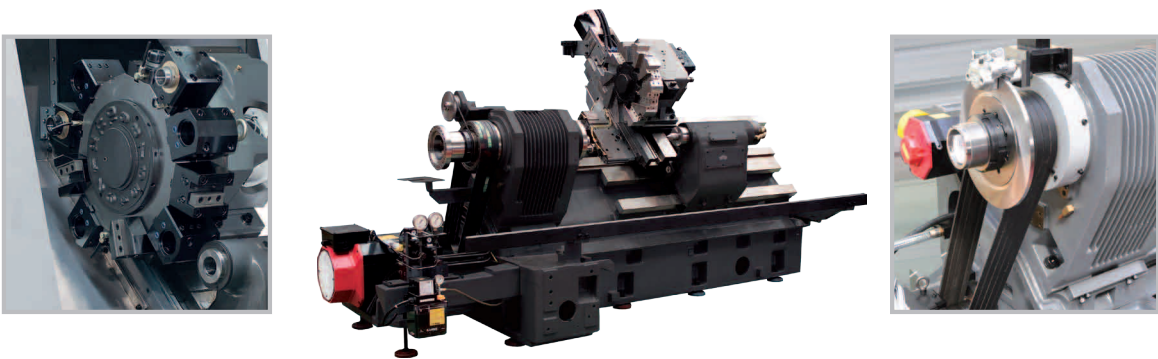


'Curvic' Coupling turret for easy maintenance after collision.
Rigid single tube type bed design (45 degree slant) ensures minimum bending and torsion even during heavy duty cutting and high speed turning operations.
Wide guide area sufficient to absorb working loads.

Major Specifications						[] : Option
DESCRIPTION		SL 2500A	SL 2500AM	SL 2500B	SL 2500BM	
Swing over the bed	mm	650	650	650	650	
Max. machining diameter×length	mm	400×520	365×520	400×550	365×520	
Max. machining bar size	mm	65	68	77	77	
Chuck size	inch	8	8	10	10	
Spindle speed	rpm	4,000	4,000	3,500	3,500	
Spindle nose	ASA	A2-6	A2-6	A2-8	A2-8	
Spindle motor(cont./30min)	kW	18.5/15	18.5/15	18.5/15	18.5/15	
Rapid traverse (X/Z)	m/min	24/24	24/24	24/24	24/24	
Axis travel (X/Z)	mm	225/540	237.5/540	230/590	237.5/540	
Number of tool positions	ea	12	12/BMT65	12	12/BMT65	
Shank size for square tool	mm	25×25	25×25	25×25	25×25	
Shank size for boring bar	mm	50	50	50	50	
Tailstock travel	mm	100	100	80	100	
Machine weight	kgf	5,100	5,100	5,100	5,300	
Required floor space (L×W)	mm	3,308×1,605	3,308×1,605	3,308×1,605	3,308×1,605	
Controller		Fanuc Oi-TD				

PL 20M / 25 / 25L / 25M / 25LM

BOX WAY TYPE TURNING CENTER



PL 25 Stabilized Structure that Optimizing Productivity

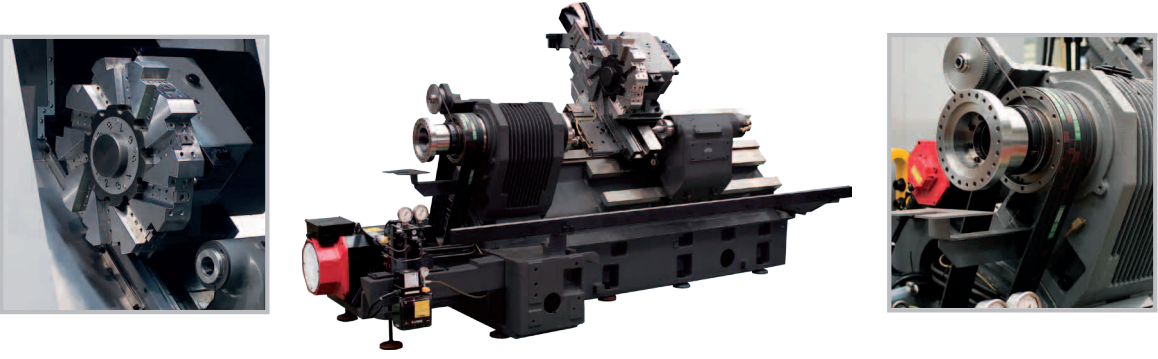


'Curvic' Coupling turret for easy maintenance after collision.
Rigid single tube type bed design (45 degree slant) ensures minimum bending and torsion even during heavy duty cutting and high speed turning operations.
Wide guide area sufficient to absorb working loads.

Major Specifications		[] : Option				
DESCRIPTION		PL 20M	PL 25	PL 25L	PL 25M	PL 25LM
Swing over the bed	mm	650	520	520	650	650
Max. machining diameterxlength	mm	365x520	380x530	380x1,030	365x520	365x1,020
Max. machining bar size	mm	68	77	77	77	77
Chuck size	inch	8	10	10	10	10
Spindle speed	rpm	4,000	3,500	3,500	3,500	3,500
Spindle nose	ASA	A2-6	A2-8	A2-8	A2-8	A2-8
Spindle motor(cont./30min)	kW	11/15	18.5/22	18.5/22	18.5/22	18.5/22
Rapid traverse (X/Z)	m/min	18/24	18/24	18/24	18/24	18/24
Axis travel (X/Z)	mm	225/540	220/590	220/1,090	225/540	225/1,040
Number of tool positions	ea	12/BMT65	10 [12]	10 [12]	12/BMT65	12/BMT65
Shank size for square tool	mm	25x25	25x25	25x25	25x25	25x25
Shank size for boring bar	mm	50	50	50	50	50
Tailstock travel	mm	100	80	100	100	100
Machine weight	kgf	5,100	5,000	6,200	5,300	6,600
Required floor space (LxW)	mm	3,308x1,670	3,305x1,617	3,880x1,617	3,308x1,670	3,885x1,705
Controller				Fanuc Oi-TD		

PL 30 Series

BOX WAY TYPE TURNING CENTER



PL 30 Stabilized Structure that Optimizing Productivity

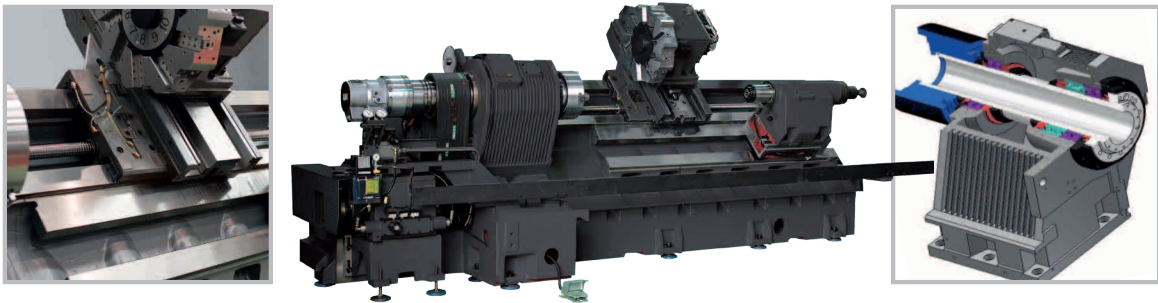


'Curvic' Coupling turret for easy maintenance after collision.
Rigid single tube type bed design (45 degree slant) ensures minimum bending and torsion even during heavy duty cutting and high speed turning operations.
Wide guide area sufficient to absorb working loads.

Major Specifications		() : Big Bore [] : Option	
DESCRIPTION		PL 30	PL 30L
Swing over the bed	mm	650	650
Max. machining diameterxlength	mm	400x550	400x1,050
Max. machining bar size	mm	77 (91)	77 (91)
Chuck size	inch	10 [12]	10 [12]
Spindle speed	rpm	3,500 (2,500)	3,500 (2,500)
Spindle nose	ASA	A2-8	A2-8
Spindle motor(cont./30min)	kW	18.5/22	18.5/22
Rapid traverse (X/Z)	m/min	18/24	18/24
Axis travel (X/Z)	mm	230/600	230/1,100
Number of tool positions	ea	10 [12]	10 [12]
Shank size for square tool	mm	25x25	25x25
Shank size for boring bar	mm	50	50
Tailstock travel	mm	80	100
Machine weight	kgf	5,100	6,500
Required floor space (LxW)	mm	3,308x1,670	3,885x1,705
Controller		Fanuc Oi-TD	

PL 35 Series

BOX WAY TYPE TURNING CENTER



PL 35 The Special Design that Achieve High Rigidity



Radiator fan-like pin tube rib design dissipates heat generated by axis movements, maintaining minimal thermal expansion. Low vibration & high rigidity are maintained by seperation the spindle motor & gear box from spindle.

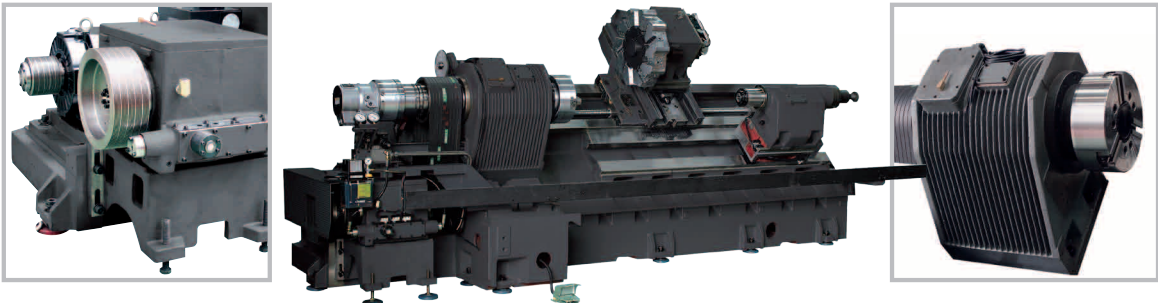
Major Specifications

() : Big Bore [] : Option

DESCRIPTION		PL 35	PL 35L	PL 35M	PL 35LM
Swing over the bed	mm	600	600	680	680
Max. machining diameterxlength	mm	420×780	420×1,530	500×750	500×1,500
Max. machining bar size	mm	91 (117.5)	91 (117.5)	91 (117.5)	91 (117.5)
Chuck size	inch	12 [15]	12 [15]	12 [15]	12 [15]
Spindle speed	rpm	2,500 (2,000)	2,500 (2,000)	2,500 (2,000)	2,500 (2,000)
Spindle nose	ASA	A2-8 (A2-11)	A2-8 (A2-11)	A2-8 (A2-11)	A2-8 (A2-11)
Spindle motor(cont./30min)	kW	18.5/22	18.5/22	18.5/22	18.5/22
Rapid traverse (X/Z)	m/min	12/15	12/15	20/24	20/24
Axis travel (X/Z)	mm	240/855	240/1,605	280/825	280/1,575
Number of tool positions	ea	10 [12]	10 [12]	12/BMT65	12/BMT65
Shank size for square tool	mm	25×25	25×25	25×25	25×25
Shank size for boring bar	mm	50	50	50	50
Tailstock travel	mm	120	120	120	120
Machine weight	kgf	8,000	9,000	8,300	9,300
Required floor space (L×W)	mm	3,987×1,845	5,092×1,845	3,885×1,901	4,976×1,885
Controller		Fanuc Oi-TD			

PL 40 Series

BOX WAY TYPE TURNING CENTER



PL 40 The Special Design that Achieve High Rigidity



Radiator fan-like pin tube rib design dissipates heat generated by axis movements, maintaining minimal thermal expansion. Low vibration & high rigidity are maintained by seperation the spindle motor & gear box from spindle.

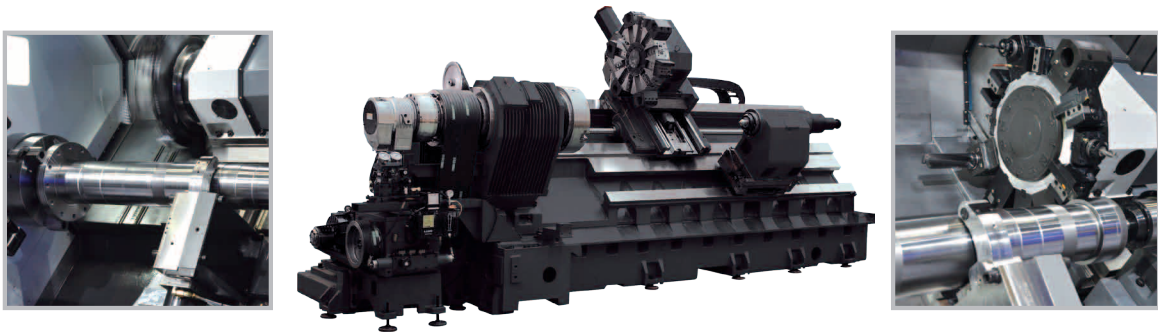
Major Specifications

[] : Option

DESCRIPTION		PL 40	PL 40L
Swing over the bed	mm	680	680
Max. machining diameterxlength	mm	500×780	500×1,530
Max. machining bar size	mm	117.5	117.5
Chuck size	inch	15	15
Spindle speed	rpm	2,000	2,000
Spindle nose	ASA	A2-11	A2-11
Spindle motor(cont./30min)	kW	18.5/22	18.5/22
Rapid traverse (X/Z)	m/min	12/15	12/15
Axis travel (X/Z)	mm	280/855	280/1,605
Number of tool positions	ea	10 [12]	10 [12]
Shank size for square tool	mm	25×25	25×25
Shank size for boring bar	mm	50	50
Tailstock travel	mm	120	120
Machine weight	kgf	8,300	9,200
Required floor space (L×W)	mm	3,885×1,901	4,976×1,885
Controller		Fanuc Oi-TD	

PL 45 Series

BOX WAY TYPE TURNING CENTER



PL 45 Once-only Chucking lets You Turn, Mill, Drill and Top

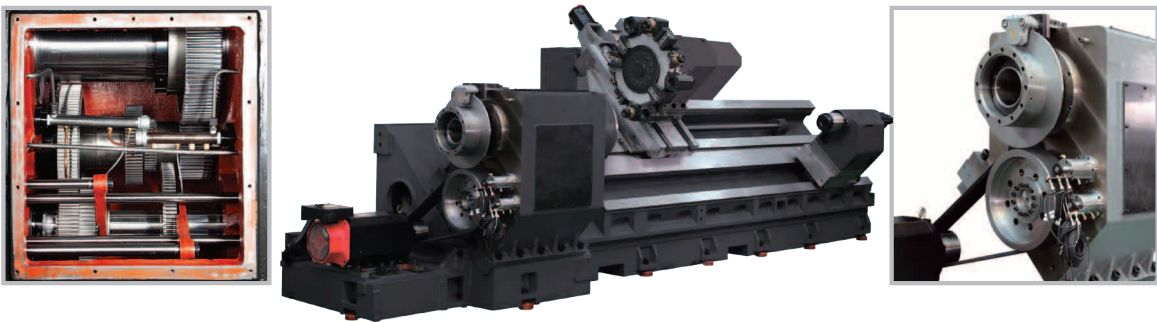


Enhancing your productivity by design that reducing idle-time.
Enhancing accuracy by process without tools shift between machines.

Major Specifications							() : Big Bore [] : Option
DESCRIPTION		PL 45L	PL 45XL	PL 45LM	PL 45XLM	PL 45LY	PL 45XLY
Swing over the bed	mm	775		775		975	
Max. machining diameter×length	mm	690×2,255	690×3,055	620×2255	620×3,055	620×2,140	620×2,930
Max. machining bar size	mm	117.5 (166.5)		117.5 (166.5)		117	
Chuck size	inch	15 [18/21/24]		15 [18/21/24]		15 [18/21/24]	
Spindle speed	rpm	2,000 [1,800/1,500/1,200]		2,000 [1,800/1,500/1,200]		2,000 [1,800/1,500/1,200]	
Spindle nose	ASA	A2-11 [A2-15]		A2-11 [A2-15]		A2-11 [A2-15]	
Spindle motor(cont./30min)	kW	30/37		30/37		30/37	
Rapid traverse (X/Z)	m/min	20/-/18	20/-/10	20/-/18	20/-/10	20/15/18	
Axis travel (X/Z)	mm	350/-/2,330		350/-/2,330		350/200/2,330	
Number of tool positions	ea	12		12/BMT75		12/BMT75	
Shank size for square tool	mm	32×32		32×32		32×32	
Shank size for boring bar	mm	60		60		60	
Tailstock travel	mm	150		150		150	
Machine weight	kgf	13,000	20,000	13,000	20,000	17,000	22,000
Required floor space (L×W)	mm	5,570×2,153	6,350×2,284	5,570×2,153	6,350×2,284	5,570×2,260	6,350×2,374
Controller		Fanuc Oi-TD					

PL 60 Series

BOX WAY TYPE TURNING CENTER



PL 60 High-performance Large Machining Capacity Turning Center



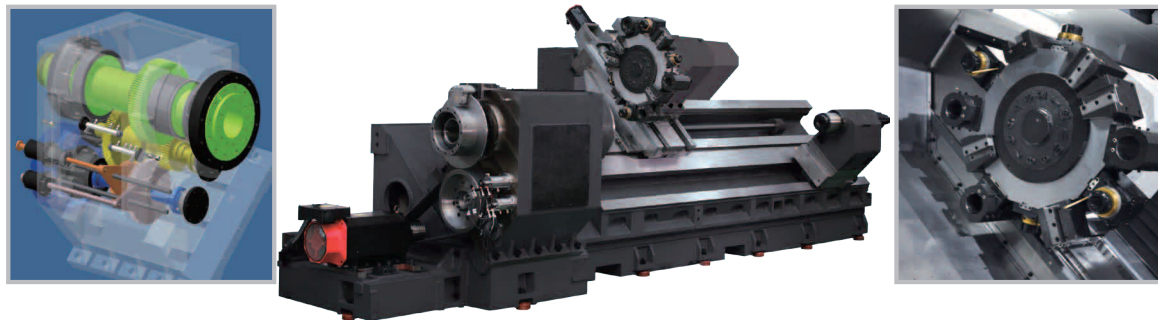
The strongest power and the highest accuracy in its class, by optimized design.

Major Specifications						[] : Option
DESCRIPTION		PL 60	PL 60L	PL 60M	PL 60LM	
Swing over the bed	mm	1,030	1,030	1,030	1,030	
Max. machining diameter×length(*)	mm	900×1,000	900×3,200	900×1,000	900×3,200	
Max. machining bar size	mm	140	140	140	140	
Chuck size	inch	21 [24]	21 [24]	21 [24]	21 [24]	
Spindle speed	rpm	1,500 [1,200]	1,500 [1,200]	1,500 [1,200]	1,500 [1,200]	
Spindle nose	ASA	A2-15	A2-15	A2-15	A2-15	
Spindle motor(cont./30min)	kW	37/45	37/45	37/45	37/45	
Rapid traverse (X/Z)	m/min	12/18	12/10	12/18	12/10	
Axis travel (X/Z)	mm	470/1,050	470/3,270	470/1,050	470/3,270	
Number of tool positions	ea	12	12	12(BMT85)	12(BMT85)	
Shank size for square tool	mm	32×32	32×32	32×32	32×32	
Shank size for boring bar	mm	80	80	80	80	
Tailstock travel	mm	150	150	150	150	
Machine weight	kgf	16,500	22,000	16,500	22,000	
Required floor space (L×W)	mm	5,186×2,564	7,400×2,760	5,186×2,564	7,400×2,760	
Controller		Fanuc Oi-TD				

(*) : 1000, 2000, 3200, 5000 Possible

PL 70 Series

BOX WAY TYPE TURNING CENTER

**PL 70**

High-performance Large Machining Capacity Turning Center



The strongest power and the highest accuracy in its class, by optimized design.

Major Specifications

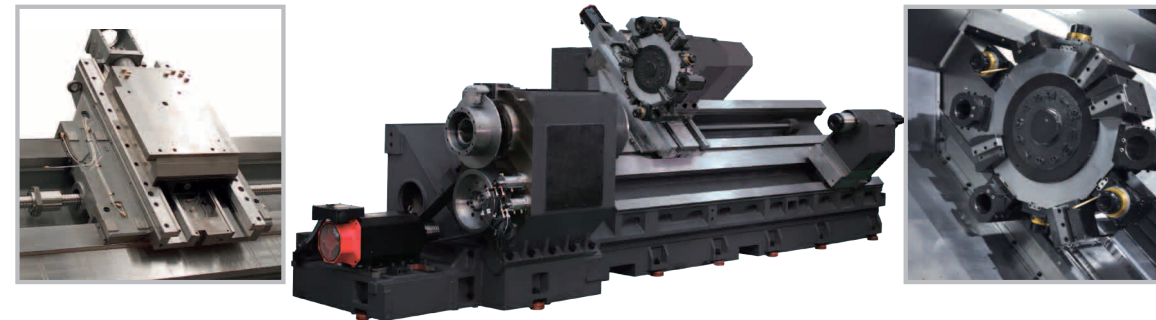
[] : Option

DESCRIPTION		PL 70	PL 70L	PL 70M	PL 70LM
Swing over the bed	mm	1,030	1,030	1,030	1,030
Max. machining diameter×length(*)	mm	900×1,000	900×3,200	900×1,000	900×3,200
Max. machining bar size	mm	181	181	181	181
Chuck size	inch	24 [21]	24 [21]	24 [21]	24 [21]
Spindle speed	rpm	1,200 [1,500]	1,200 [1,500]	1,200 [1,500]	1,200 [1,500]
Spindle nose	ASA	A2-15	A2-15	A2-15	A2-15
Spindle motor(cont./30min)	kW	37/45	37/45	37/45	37/45
Rapid traverse (X/Z)	m/min	12/18	12/10	12/18	12/10
Axis travel (X/Z)	mm	470/1,050	470/3,270	470/1,050	470/3,270
Number of tool positions	ea	12	12	12/BMT85	12/BMT85
Shank size for square tool	mm	32×32	32×32	32×32	32×32
Shank size for boring bar	mm	80	80	80	80
Tailstock travel	mm	150	150	150	150
Machine weight	kgf	17,000	22,500	17,000	22,500
Required floor space (L×W)	mm	5,158×2,564	7,400×2,760	5,158×2,564	7,400×2,760
Controller	Fanuc Oi-TD				

(*) : 1000, 2000, 3200, 5000 Possible

PL 80 Series

BOX WAY TYPE TURNING CENTER

**PL 80**

High-performance Large Machining Capacity Turning Center



The strongest power and the highest accuracy in its class, by optimized design.

Major Specifications

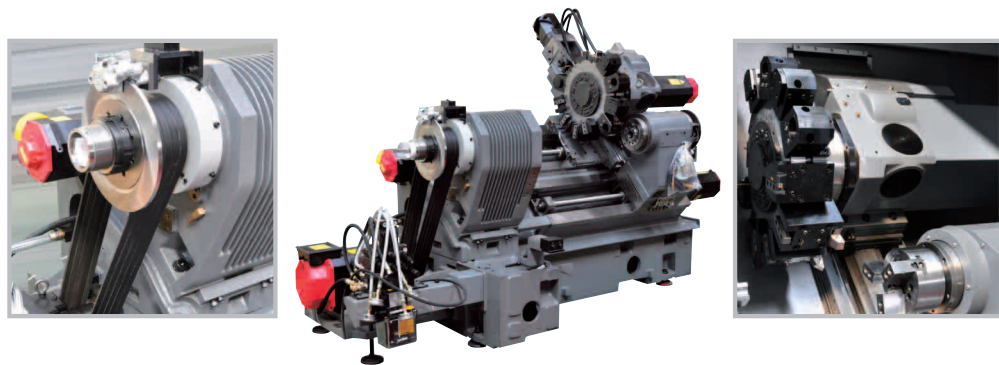
[] : Option

DESCRIPTION		PL 80	PL 80L	PL 80M	PL 80LM
Swing over the bed	mm	1,030	1,030	1,030	1,030
Max. machining diameter×length(*)	mm	900×1,000	900×3,200	900×1,000	900×3,200
Max. machining bar size	mm	321[321, 365]	321[321, 365]	321[321, 365]	321[321, 365]
Chuck size	inch	[32]	[32]	[32]	[32]
Spindle speed	rpm	500[320, 300]	500[320, 300]	500[320, 300]	500[320, 300]
Spindle nose	ASA	A1-20[A1-20, A2-20]	A1-20[A1-20, A2-20]	A1-20[A1-20, A2-20]	A1-20
Spindle motor(cont./30min)	kW	45/37	45/37	45/37	45/37
Rapid traverse (X/Z)	m/min	12/18	12/10	12/18	12/10
Axis travel (X/Z)	mm	470/1,050	470/3,270	470/1,050	470/3,270
Number of tool positions	ea	12	12	12/BMT85	12/BMT85
Shank size for square tool	mm	32×32	32×32	32×32	32×32
Shank size for boring bar	mm	80	80	80	80
Tailstock travel	mm	150	150	150	150
Machine weight	kgf	17,500	23,000	17,500	23,000
Required floor space (L×W)	mm	5,158×2,564	7,400×2,760	5,158×2,564	7,400×2,760
Controller	Fanuc Oi-TD				

(*) : 1000, 2000, 3200, 5000 Possible

PL 2000MS / 2500MS

INTEGRATED CNC TURNING CENTER



PL 2500MS Integrated machining operations in one set-up through Sub-spindle and Y-Axis

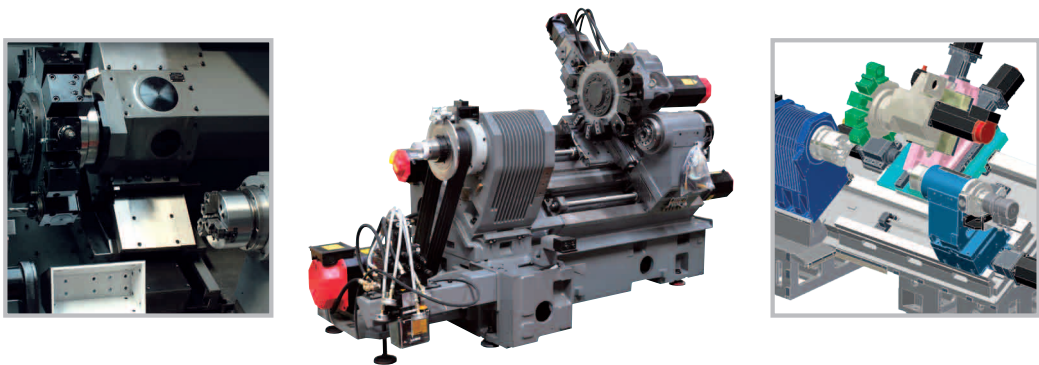


- BMT Type machining feature providing ultimated integrated machining capability on the workpiece
- Synchronized C1-axis(Main spindle) and C2-axis(Subspindle) indexing provides machining flexibility in a wide variety of workpiece configurations.

Major Specifications		[] : Option	
DESCRIPTION		PL 2000MS	PL 2500MS
Swing over the bed	mm	650	650
Max. machining diameter×length	mm	354×460	354×445
Max. machining bar size(Main/Sub[Opt.])	mm	66/36	77/36[52]
Chuck size (Main/Sub[Opt.])	inch	8/6	10/6[8]
Spindle speed(Main/Sub[Opt.])	rpm	4,000/6,000	3,500/6,000[4,500]
Main Spindle motor(cont./30min)	kW	11/15	18.5/22
Sub Spindle motor(cont./30min) [Opt.]	kW	5.5/7.5	5.5/7.5[11/15]
Max. traverse (X/Z/Y/B)	mm	210/515/500	210/515/500
Number of tool positions	ea	12(BMT65)	12(BMT65)
Shank size for square tool	mm	25×25	25×25
Shank size for boring bar	mm	50	50
Machine weight	kgf	5,500	5,500
Required floor space (L×W)	mm	3,458×1,695	3,458×1,695
Controller		Fanuc Oi-TD [32i-B]	Fanuc Oi-TD [32i-B]

PL 2000Y / SY / 2500Y /SY

INTEGRATED CNC TURNING CENTER



PL 2000SY Integrated machining operations in one set-up through Sub-spindle and Y-Axis

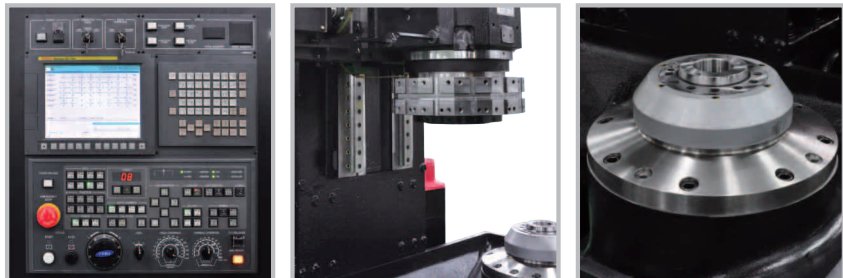


- BMT Type machining feature providing ultimated integrated machining capability on the workpiece
- Synchronized C1-axis(Main spindle) and C2-axis(Subspindle) indexing provides machining flexibility in a wide variety of workpiece configurations.

Major Specifications		[] : Option			
DESCRIPTION		PL 2000Y	PL 2000SY	PL 2500Y	PL 2500SY
Swing over the bed	mm	650	650	650	650
Max. machining diameter×length	mm	360×535	360×520	360×535	36×520[505]
Max. machining bar size(Main/Sub[Opt.])	mm	68/-	68/36	77/-	77/36[52]
Chuck size (Main/Sub[Opt.])	inch	8/-	8/6	10/-	10/6[8]
Spindle speed(Main/Sub[Opt.])	rpm	4,000/-	4,000/6,000	3,500/-	3,500/6,000[4,500]
Main Spindle motor(cont./30min)	kW	11/15	11/15	18.5/22	18.5/22
Sub Spindle motor(cont./30min) [Opt.]	kW	-	5.5/7.5	-	5.5/7.5 [11/15]
Max. traverse (X/Z/Y/B)	mm	235/580/100/580	235/580/100/580	235/580/100/565	235/580/100/565
Number of tool positions	ea	12(BMT65)	12(BMT65)	12(BMT65)	12(BMT65)
Shank size for square tool	mm	25×25	25×25	25×25	25×25
Shank size for boring bar	mm	50	50	50	50
Machine weight	kgf	5,600	5,800	5,800	6,000
Required floor space (L×W)	mm	3,658×1,930	3,658×1,930	3,658×1,930	3,658×1,930
Controller		Fanuc Oi-TD [32i-B]	Fanuc Oi-TD [32i-B]	Fanuc Oi-TD [32i-B]	Fanuc Oi-TD [32i-B]

PL 250V / 250VM(R,L) / 300V / 300VM(R,L)

VERTICAL LATHE



PL 250V

Vertical lathe developed for automatic process line of automobile and electric parts and maintain high accuracy in long-term machining process



- Quiet & Heat Design
- Possible to make versatile automatic system line

Major Specifications

DESCRIPTION		PL 250V(R,L)	PL 250VM(R,L)	PL 300V(R,L)	PL 300VM(R,L)
Swing over the bed	mm	550	550	550	550
Max. machining diameter×length	mm	400×280	400×280	400×280	400×280
Chuck size	inch	8	8	10	10
Spindle speed	rpm	4,000	4,000	3,500	3,500
Spindle nose	ASA	A2-6	A2-6	A2-8	A2-8
Spindle motor(cont./30min)	kW	11/15	11/15	18.5/22	18.5/22
Rapid traverse (X/Z)	m/min	24/24	24/24	24/24	24/24
Axis travel (X/Z)	mm	230/280	230/280	230/280	230/280
Number of tool positions	ea	12	12/BMT55	12	12/BMT55
Shank size for square tool	mm	25×25	25×25	25×25	25×25
Shank size for boring bar	mm	40	40	50	50
Machine weight	kgf	5,000	5,100	5,400	5,500
Required floor space (L×W)	mm	1,500×1,760	1,500×1,760	1,570×1,770	1,570×1,770
Controller		Fanuc Oi-TD			

PL 800V(R,L) / 800VM(R,L)

VERTICAL LATHE



PL 800V

PL 800V is a heavy duty, ultra precision turning center, box way design, 2 step gear box, servo driven turret adopted.



- 2 Step Gear box (Opt.)
- High rigidity Box type column

Major Specifications

DESCRIPTION		PL 800V(R,L)	PL 800VM(R,L)
Swing over the bed	mm	890	890
Max. turning diameter×length	mm	810×800	810×775
Chuck size	inch	18[15, 21, 24]	18[15, 21, 24]
Spindle speed	rpm	2,000	2,000
Spindle nose	ASA	A2-11	A2-11
Main spindle motor(cont./30min)	kW	22/30 [30/37]	22/30 [30/37]
Rapid traverse (X/Z)	m/min	20/20	20/20
Axis travel (X/Z)	mm	430/800	430/800
Number of tool positions	ea	12	12/BMT75
OD tool Shank size	mm	32×32	32×32
Boring bar diameter	mm	63	63
Machine weight	kgf	11,000	11,200
Required floor space (L×W)	mm	2,050×2,822	2,050×2,822
Controller		Fanuc Oi-TD	

[] : Option

PL 800GB

GANG CNC TURNING CENTER



PL 800GB High speed, high precision ceramic and quart grinding



- Grinding Spindle installed on Gang Type lathe for grinding
- With ID and OD cutting capabilities and Slide Unit installed, simultaneous rough grinding and polishing as well as ceramic grinding is possible

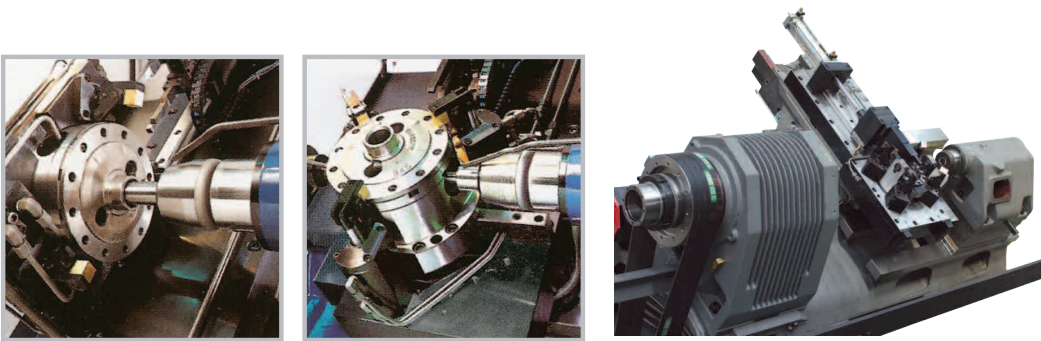
Major Specifications

[] : Option

DESCRIPTION		PL 800GB
Swing over the bed	mm	800
Max. machining diameterxlength	mm	600x150
Chuck size	inch	12
Spindle speed	rpm	0~200
Spindle nose	ASA	A2-5
Spindle motor(cont./30min)	kW	11/15
Rapid traverse (X/Z)	m/min	30/36
Axis travel (X/Z)	mm	375/260
Number of tool positions	ea	1(2)
Slide type	-	L/M GUIDE
Grinding Spindle speed	rpm	6,000
Machine weight	kgf	2,700
Required floor space (LxWxH)	mm	2,100x1,745x1,830
Controller		Fanuc Oi-Mate TD

PL 25DC(DIFF.CASE)

CNC TURNING CENTER



PL 25DC Creating epoch-making DIFF case spherical / face milling machining using CNC Lathe DIFF.CASE machining tools



- Operator accessible automatic hydraulic fixture and tool mounting and removing unit
- Work automatic clamp / unclamp
- 45° Slant bed structure, Access, Operation and rapid chips removing is easy.

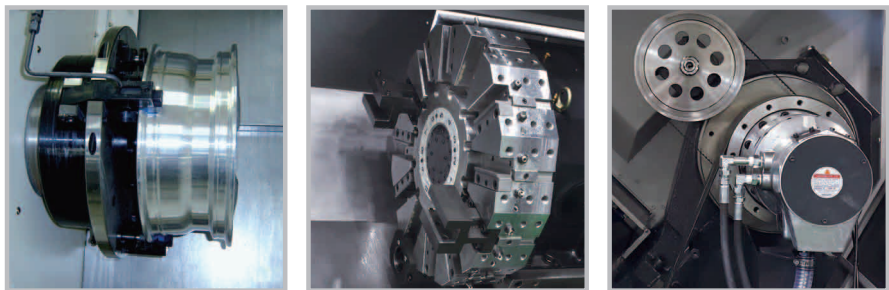


Major Specifications

DESCRIPTION		PL 25DC
Swing over the bed	mm	520
Spindle speed	rpm	2,500
Spindle node	-	A2-8
Spindle Bore Diameter	mm	86
Spindle motor(cont./30min)	kW	18.5/22
Rapid traverse (Z axis)	m/min	24
Max. moving distance (Z axis)	mm	390
Feed Motor (Z axis)	kW	3.0
Taper of Tailstock Spindle	-	MT5
Tailstock Spindle Diameter	mm	Ø85
Tailstock Spindle Travel	mm	80
Tailstock Travel	mm	200 (Hydraulic cylinder)
Tailstock Clamping(at 45kgf/cm²)	kgf	11,000
Machine weight	kgf	4,300
Required floor space (LxW)	mm	3,023x2,555
Controller		Fanuc Oi-TD

PL 500AW / 600AW

AL WHEEL MACHINING CENTER



PL 500AW High speed, high precision Al Wheel turning center



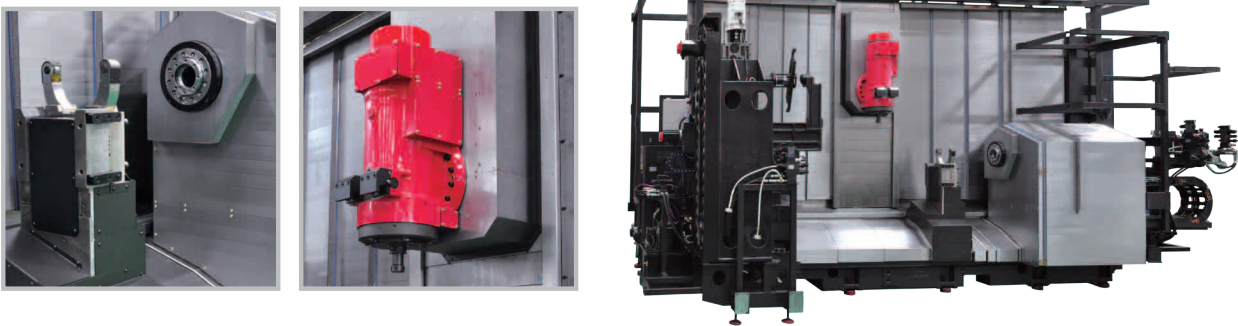
- Drastically reduce non-cutting time for high efficiency machining
- Low center of gravity design to minimize vibration, thermal distortion and provide high precision

Major Specifications

DESCRIPTION		PL 500AW	PL 600AW
Swing over the bed	mm	830	830
Max. machining diameterxlength	mm	670x710	670x710
Chuck size	inch	20	24
Spindle speed	rpm	3,000	2,000
Spindle nose	ASA	A2-8	A2-11
Spindle motor(cont./30min)	kW	30/37	30/37
Rapid traverse (X/Z)	m/min	20/24	20/24
Axis travel (X/Z)	mm	360/720	360/720
Number of tool positions	ea	12	12
Shank size for square tool	mm	32x32	32x32
Shank size for boring bar	mm	60	60
Machine weight	kgf	7,700	7,800
Required floor space (LxW)	mm	3,845x2,090	3,845x2,090
Controller	Fanuc Oi-TD		

iMT 420S

MULTI TASKING TURNING & MACHINING CENTER



iMT 420S 9-axis integrated Multi-tasking Machining Centers



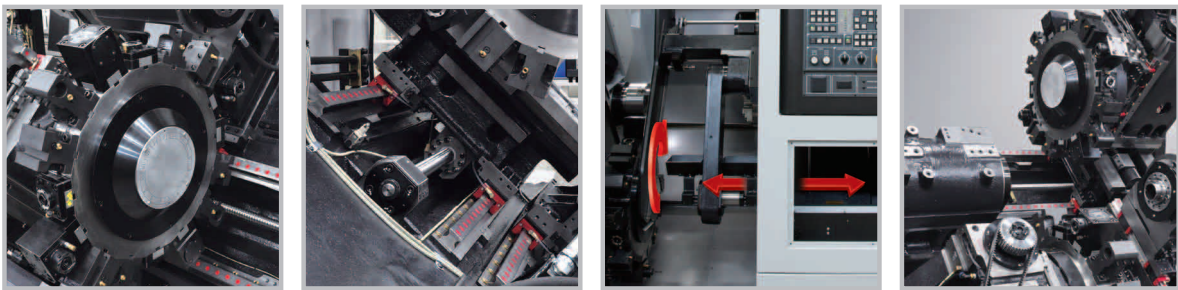
- Only one setting lets the material be ready and the task be achieved in completion!
- High speed / high rigidity muti-tasking

Major Specifications

DESCRIPTION			iMT 420S	DESCRIPTION			iMT 420S
Capacity	Swing over the bed	mm	670	ATC.	B axis index method	-	servo.M+CAM index+3Pcx.coupling
	Max. turning diameterxlength	mm	670(420)/2,018		Tool shank	-	HSK 63A
Travels	X1/Z1 axis	mm	850/2110(2050+60)		Magazine capacity (Opt.)	ea	40 (60,80)
	B axis	deg	±120		Max. tool dia./length/weight	mm	Ø90/400/8
	Y/W axis	mm	420(±210)/1,665		Tool change timg(T-T)	sec	1.8(T-T) / 8kgf
	X2/Z2 axis	mm	1,665	Turret shank	-	BMT55	
1st Spindle	Spindle speed	rpm	35~4,000	Turret (MC) [Option]	Number of tool stations	ea	8
	Chuck size (Opt.)	inch	10 (12)		Square shank size	mm	□25/40
	Spindle nose	ASA	A2-8		Tool indexing time	sec	0.2
2st Spindle	Spindle through hole diameter	mm	78	Feed rate	Rotary tool spindle speed	rpm	35~5,000
	Min. spindle indexing angle(C axis)	deg	0.001		X1/X2/Z1/Z2/Y/W axis	m/min	50/50/50/50/30/30
	Max. torque	Nm	600		B axis	rpm	50
Milling Spindle	Spindle speed	rpm	35~10,000		C1/C2 axis	rpm	500
	Turning tool size	mm	□25/40	Machine weight	kgf	18,000	
	Max. torque	Nm	233	Required floor space (L×W×H)	mm	6,354×3,218×3,092	
	Min.spindle indexing angle (B axis)	deg	0.001	Controller	Fanuc 31i-B5		

SYD 200T2Y2

MULTI AXIS TURNING CENTER



SYD 200T2Y2 Twin Spindle and Turrets for High Productivity



Upper and lower turrets are high-speed, highly-reliable servo drive turrets with up to 32 tool stations, enabling high-speed, high-precision machining of complicated parts with single setup.

Major Specifications

DESCRIPTION		SYD 200T2Y2
Swing over the bed		mm250
Max. turning diameter [Upper / Lower]×length		mm250[250]×250
Spindle speed		rpm5,000
Spindle nose		ASA A2-6
Main spindle motor [Sub spindle motor] (Max./Cont.)		kW18.5/22 [11/15]
Rapid traverse	X1/X2/E[X3]	m/min30
	Y1/Y2	m/min20
	Z1/Z2/W[Z3]	m/min40
Axis travel	X1/X2/E[X3]	mm230/230/100(0~120)
	Y1/Y2	mm±50/±50
	Z1/Z2/W[Z3]	mm450/450/450
Machine weight		kgf10,000
Required floor space (L×W)		mm3,000×2,650
Controller		Fanuc 31i-B

LCV 30A / 30B

TAPPING CENTER



LCV 30A Best in processing small parts with high productivity



- High speed tool changing time and rapid traverse
- Wide machining range from nonferrous metals to metal

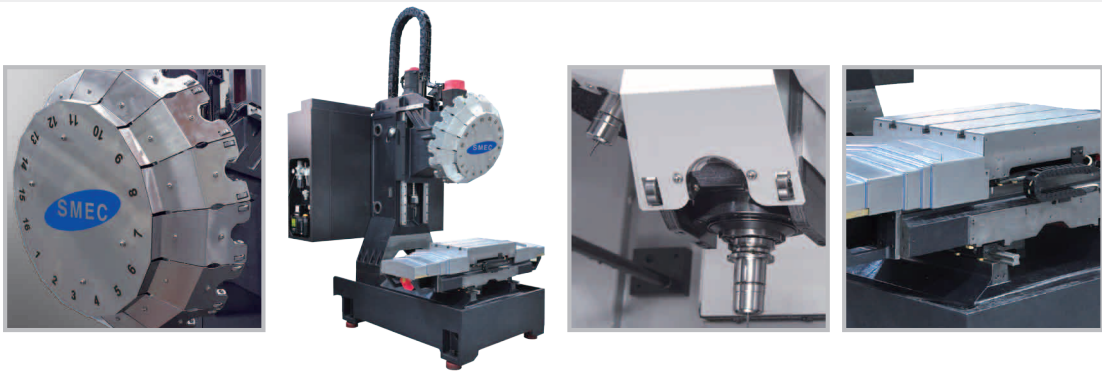
Major Specifications

() : Option ●a2/20,000 ●a1.5/20,000

DESCRIPTION		LCV 30A	LCV 30B
Travel X/Y/Z	mm	500×320×330	500×320×330
Distance from table top to spindle spindle nose	mm	150-480	220-550
Working Surface - table size	mm	2-500×1,000	400×600
Loading capacity	kgf	2-150	Fixed table
Table surface configuration	mm	40-M16×100×100	32-M16×80×80
Spindle Speed	min ⁻¹	10,000(15,000)(15,000)	10,000(15,000)(15,000)
Spindle Motor(30min/cont.)	kW	5.5/3.7(3.7/2.2)(2.2/1.5)	5.5/3.7(3.7/2.2)(2.2/1.5)
Rapid Traverse(X/Y/Z)	m/min	48/48/48	48/48/48
Tool Shank	-	BT30	BT30
Tool Changing Time(T-T)	sec	0.7	0.7
Magazine Capacity	ea	16	16
Required floor space (L×W×H)	mm	1,470×3,578×2,145	1,465×3,178×2,095
Machine weight	kgf	3,200	3,100
Controller		Fanuc Oi-MD	

SM 400

TAPPING CENTER



SM 400

A new leader in vertical tapping machine
It would be the best choice for mass producing automobile parts



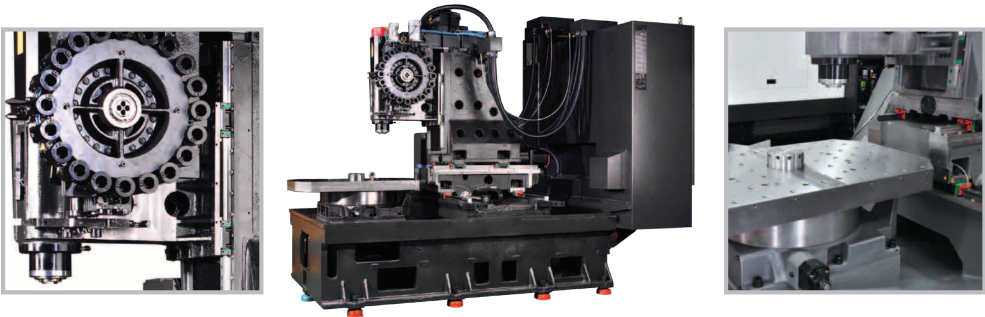
We have adapted the rigid tapping as a standard feature for all products, which should be able to maximize customers' productivity with "inch perfect" accurate/prompt tap processing. In addition, the precision of our rigid tap process has been proved in accordance with all relevant ISO certificates and also even tapping tool life can be extended. Furthermore the processing time has been saved on the reverse rotation with triple speed up return.

Major Specifications

DESCRIPTION		SM 400 (Fanuc)	SM 400 (Mitsubishi)
Travel X/Y/Z	mm	530×400×350	530×400×350
Distance from table top to spindle spindle nose	mm	150~500	150~500
Working Surface - table size	mm	600×400	600×400
Loading capacity	kgf	200	200
Table surface configuration	mm	14H8 × p125 × 3ea	14H8 × p125 × 3ea
Spindle Speed [Opt.]	min ⁻¹	12,000 [20,000]	12,000 [20,000]
Spindle Motor(Cont./Short) [Opt.]	kW	5.5/3.7 [3.7/2.2]	5.5/3.7 [3.7/2.2]
Rapid Traverse(X/Y/Z)	m/min	60/60/60	60/60/60
Tool Shank	-	BT30	BT30
Tool Changing Time(T-T)	sec	1.4	1.4
Magazine Capacity	ea	21	21
Required floor space (L×W×H)	mm	2,950×1,670×2,650	2,950×1,670×2,650
Machine weight	kgf	3,800	3,800
Controller		Fanuc Oi-MD	Mitsubishi M70VA

LCV 380D / 380S

TAPPING CENTER



LCV 380D

Superior Structure Design for Reliable Machining Performance



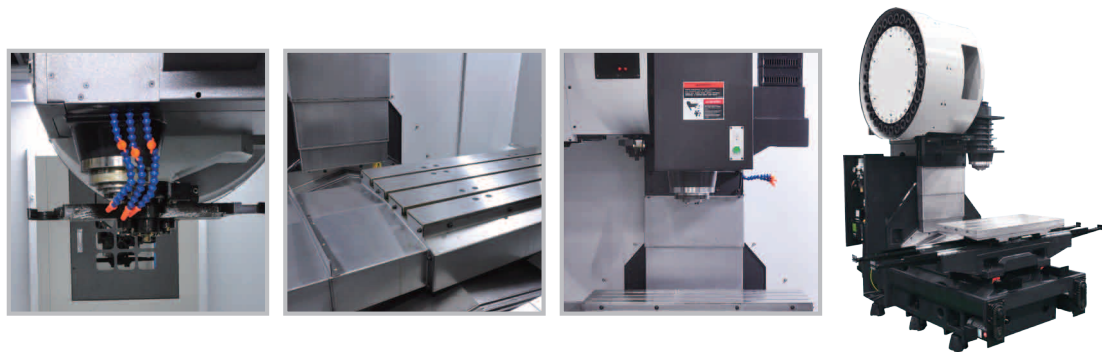
- Column traverse type high rigidity travel axis for high accuracy
- High rigidity roller guide & high accuracy ball screw(C3 Class)

Major Specifications

DESCRIPTION		LCV 380D	LCV 380S
Travel X/Y/Z	mm	520×380×350	520×380×350
Distance from table top to spindle spindle nose	mm	200-550	220-570
Working Surface - table size	mm	2-600×520	600×420
Loading capacity	kgf	2-200	Fixed table
Table surface configuration	mm	2×33-M16×90×90	35-M16×80×80
Spindle Speed [Opt.]	min ⁻¹	12,000[15,000]	12,000[15,000]
Spindle Motor(30min/cont.) [Opt.]	kW	5.5/3.7	5.5/3.7
Rapid Traverse(X/Y/Z)	m/min	48/48/48	48/48/48
Tool Shank	-	BT30	BT30
Tool Changing Time(T-T)	sec	0.85	0.85
Magazine Capacity	ea	20	20
Required floor space (L×W×H)	mm	1,898×3,476×2,443	1,870×3,190×2,443
Machine weight	kgf	4,500	4,000
Controller		Fanuc Oi-MD	

PCV 400 / MCV 400

SMALL MACHINING CENTER



MCV 400 High speed, Ultra precision Vertical machining center!



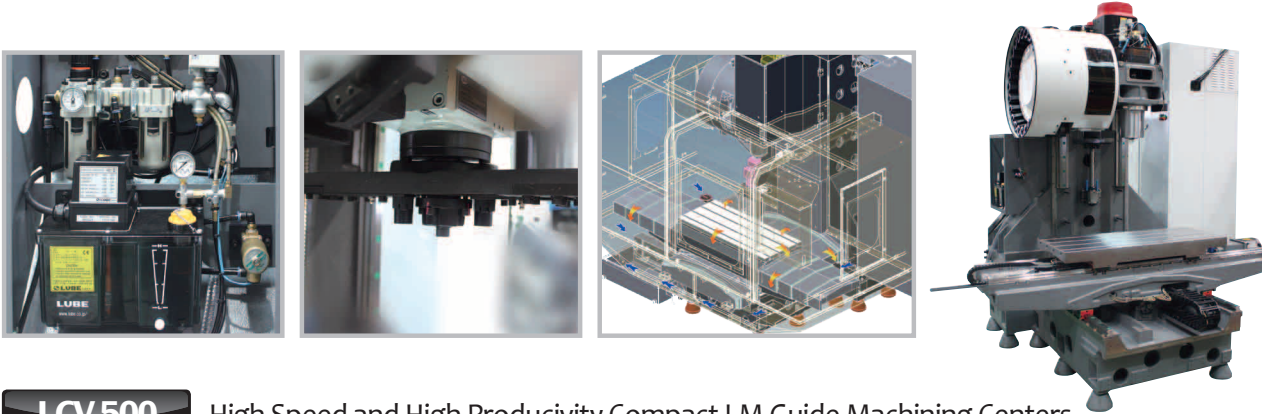
- The Largest machining capacity in its class
- Applying low-centered box structure and Rigid one piece cast iron bed
- Applying the widest linear guide way span and the widest saddle in its class to prevent overhang
- Available with direct drive spindle and belt drive spindle for user's preference.

Major Specifications

DESCRIPTION		PCV 400	MCV 400
Travel X/Y/Z	mm	770×420×510	770×430×510
Distance from table top to spindle spindle nose	mm	130~640	130~630
Working Surface - table size	mm	750×420	920×460
Loading capacity	kgf	500	500
Table surface configuration	mm	18H8 × p125 × 3ea	18H8 × p125 × 3ea
Spindle Speed [Opt.]	min ⁻¹	12,000	Direct/12,000 [Blet Drive/12,000]
Spindle Motor(30min/cont.)	kW	11/7.5	15/11
Rapid Traverse(X/Y/Z)	m/min	48/48/36	36/36/30
Tool Shank	-	BT40	BT40
Tool Changing Time(T-T)	sec	1.3	1.6
Magazine Capacity	ea	24	30
Required floor space (L×W×H)	mm	2,888×2,100×2,700	2,741×2,370×2,804
Machine weight	kgf	4,500	5,500
Controller		Fanuc Oi-MD	

LCV 500

MACHINING CENTER FOR PARTS



LCV 500 High Speed and High Producivity Compact LM Guide Machining Centers



- Various spindle structure**
- Belt type spindle : car, electric parts
 - Direct and built in spindle : high precision semi-conductor, aerospace parts, mold machining

Major Specifications

DESCRIPTION		LCV 500
Travel X/Y/Z	mm	1,050×520×520
Distance from table top to spindle spindle nose	mm	130-650
Working Surface - table size	mm	1,200×510
Loading capacity	kgf	800
Distance from pallet center to column	mm	587
Table surface configuration	mm	18H8 T-slot×P125×4ea
Spindle Speed (Opt.)	min ⁻¹	Direct : 10,000 (Belt : 8,000 / Direct : 12,000 / 15,000)
Spindle Motor(30min/cont.)	kW	15/11
Max spindle torque	N.m	95.1/69.6(95.1/69.6, 95.1/69.6, 95.1/70)
Rapid Traverse(X/Y/Z)	m/min	36/36/30
Tool Shank	-	BT40
Tool Changing Time(T-T)	sec	1.3
Magazine Capacity (Opt.)	ea	30 (24)
Required floor space (L×W×H)	mm	3,025×2,430×2,732
Machine weight	kgf	6,200
Controller		Fanuc Oi-MD, 31i-B

() : Option

LCV 500L

MACHINING CENTER FOR PARTS



LCV 500L

High Speed and High Productivity Compact LM Guide Machining Centers (X-axis expanded)



- Low centered triangle Rib structure
- X-axis stroke(1,550mm) and maximum table size in its class
- High rigidity Saddle and Arch type Column to High precision
- Protect to Overhang by Y-axis 4 rows Linear Guide Way
- High speed and rigidity direct spindle

Major Specifications

DESCRIPTION		LCV 500L
Travel X/Y/Z	mm	1,550×520×520
Distance from table top to spindle spindle nose	mm	150~670
Distance from pallet center to column	mm	640
Working Surface - table size	mm	1,600×510
Loading capacity	kgf	800
Spindle Speed [Opt.]	min ⁻¹	10,000 [12,000/15,000]
Spindle Motor(30min/cont.)	kW	15/11
Max spindle torque(30min/cont.)	N.m	95.1/69.6
Rapid Traverse(X/Y/Z)	m/min	30/30/30
Tool Shank	-	BT40
Tool Changing Time(T-T)	sec	1.3
Magazine Capacity	ea	30
Required floor space (L×W×H)	mm	4,030×2,826×2,946
Machine weight	kgf	8,000
Controller		Fanuc Oi-MD

LCV 550 / 650

MACHINING CENTER FOR PARTS



LCV 550

Box way type machining center for high degree of accuracy workpiece



- High accuracy and durability, market approved machining center
- High productivity for small mold of electric product

Major Specifications

DESCRIPTION		LCV 550	LCV 650
Travel X/Y/Z	mm	1,150×550×520	1,350×650×635
Distance from table top to spindle spindle nose	mm	150~670(High : 350~870)	200-835
Distance from pallet center to column	mm	600	675
Working Surface - table size	mm	1,200×550	1,550×650
Loading capacity	kgf	800	1,000
Table surface configuration	mm	18H8×P110×5ea	18H8×P125×5ea
Spindle Speed	min ⁻¹	Direct : 8,000 (Belt : 8,000 / Direct-BT40 : 12,000 / Gear : 6,000)	
Spindle Motor(30min/cont.)	kW	15/11	11/15
Max spindle torque(30min/cont.)	N.m	286.4/143.2 (286.4/140.2, 95.1/69.6, 95.5/63.7)	286.4/143.2 (286.4/140.2, 95.1/69.6, 95.5/63.7)
Rapid Traverse(X/Y/Z)	m/min	24/24/20	24/24/20
Tool Shank(Opt.)	-	BT50 (BT40)	BT50 (BT40)
Tool Changing Time(T-T)	sec	2.5 (1.8)	2.5 (1.8)
Magazine Capacity	ea	24 (BT40 : 30)	24 (BT40 : 30)
Required floor space (L×W×H)	mm	3,235×2,272×2,944	3,330×2,710×3,219
Machine weight	kgf	7,000	11,000
Controller		Fanuc Oi-MD, 31i-B	

() : Option

LCV 670 / 670L

MACHINING CENTER FOR PARTS



LCV 670L

High speed, high precision vertical machining center
High strength arch structure



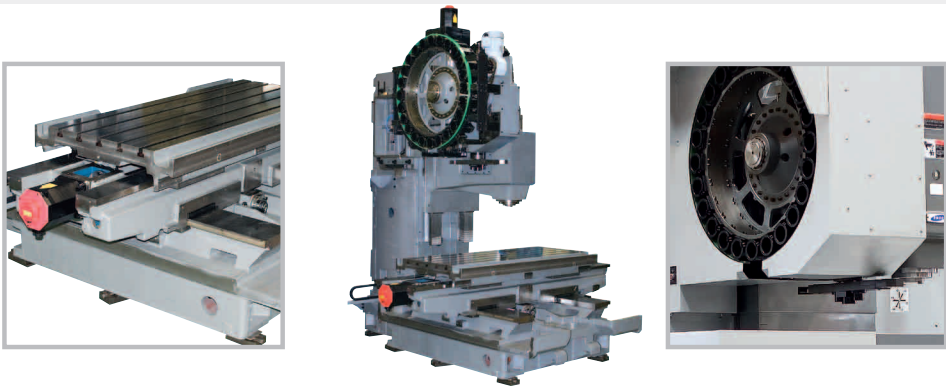
- Low center of gravity, triangular Rib structure with highly rigid integrated bed
- Largest in class x-stroke (2,100mm) and table cutting structure
- High rigidity saddle, integrated column structure providing high strength, high precision
- 4 rows of Linear Guide Way for Y-axis to prevent overhang

Major Specifications

DESCRIPTION		LCV 670	LCV 670L
Travel X/Y/Z	mm	1,600×670×520	2,100×670×520
Distance from table top to spindle spindle nose	mm	150-670	150-670
Working Surface - table size	mm	1,700×660	2,200×660
Loading capacity	kgf	1,300	1,200
Table surface configuration	mm	22H8×P125×5ea	18H8×P125×5ea
Spindle Speed	min ⁻¹	12,000	12,000
Spindle Motor(30min/cont.)	kW	15/11	15/11
Max spindle torque(30min/cont.)	N.m	95.1/69.6	95.1/69.6
Rapid Traverse(X/Y/Z)	m/min	36/36/30	30/30/30
Tool Shank	-	BT40	BT40
Tool Changing Time(T-T)	sec	1.3	1.3
Magazine Capacity	ea	30	30
Required floor space (L×W×H)	mm	4,105×3,400×3,000	4,900×3,400×3,000
Machine weight	kgf	8,500	9,500
Controller		Fanuc Oi-MD	Fanuc Oi-MD

LCV 66 / 80

MACHINING CENTER FOR PARTS



LCV 66

Machining center for high accurate mold of electric or semiconductor



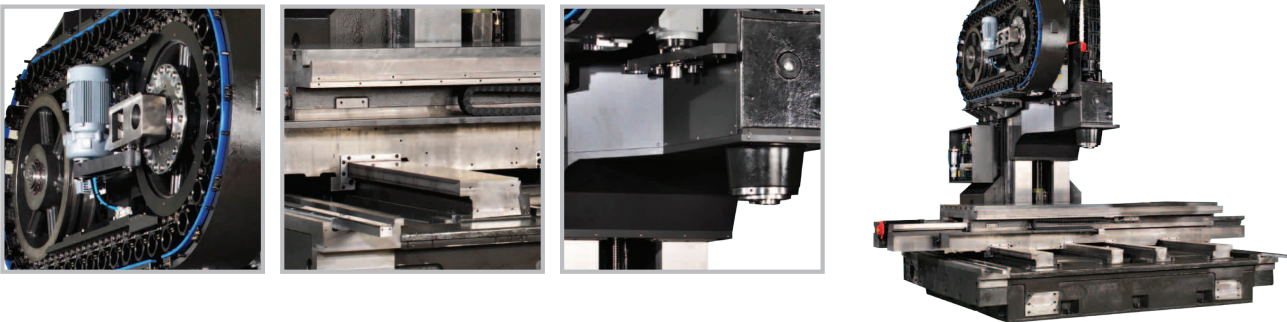
- Strong torque for work to mold manufacturing, and wide guide surface for distributing the loads

Major Specifications

DESCRIPTION		LCV 66	LCV 80
Travel X/Y/Z	mm	1,520×660×650	1,700×825×650
Distance from table top to spindle spindle nose	mm	200~850(High : 400~1,050)	200~850(High : 400~1,050)
Distance from pallet center to column	mm	685	835
Working Surface - table size	mm	1,700×650	1,700×800
Loading capacity	kgf	2,000	2,500
Table surface configuration	mm	22H8×P125×5ea	22H8×P125×5ea
Spindle Speed	r/min ⁻¹	6,000	6,000
Spindle Motor(30min/cont.)	kW	18.5/15	18.5/15
Max spindle torque(30min/cont.)	N.m	614/498.2	614/498.2
Rapid Traverse(X/Y/Z)	m/min	20/20/16	20/20/16
Tool Shank	-	BT50	BT50
Tool Changing Time(T-T)	sec	2.5	2.5
Magazine Capacity (Opt.)	ea	24 (30)	24 (30)
Required floor space (L×W×H)	mm	4,350×3,687×3,197	5,272×3,923×3,345
Machine weight	kgf	12,000	15,000
Controller		Fanuc Oi-MD, 31i-A	

LCV 850 / 1060

MACHINING CENTER FOR MOLDS



LCV 1060 Optimized machining tools for die or cast mold of electrics, automobile, aircraft parts machining.

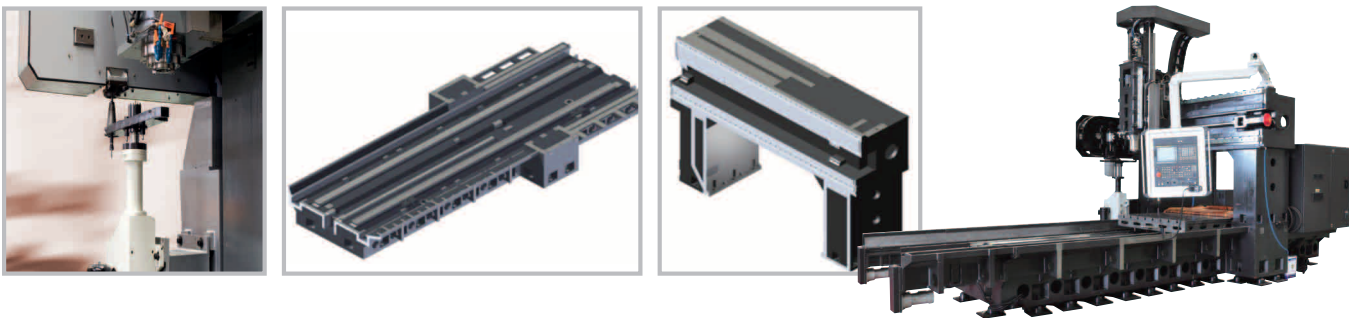


- Stabilized 6guide way BED structure for high rigidity

Major Specifications [] : Option			
DESCRIPTION		LCV 850	LCV 1060
Travel X/Y/Z	mm	2,000×850×800	2,500×1,060×900
Distance from table top to spindle spindle nose	mm	200~1,000(High : 300~1,100)	200~1,100(High : 400~1,300)
Distance from pallet center to column	mm	950	1,100
Working Surface - table size	mm	2,050×850	2,800×1,060
Loading capacity	kgf	3,000	5,000
Table surface configuration	mm	22H8×P125×6ea	22H8×P150×7ea
Spindle Speed	r/min ⁻¹	7,000 [12,000]	7,000 [12,000]
Spindle Motor(30min/cont.)	kW	18.5/15 [30/25]	18.5/15 [30/25]
Max spindle torque(30min/cont.)	N.m	614/498.2 [421/238]	614/498.2 [421/238]
Rapid Traverse(X/Y/Z)	m/min	20/20/16	16/16/16
Tool Shank	-	BT50 [BBT50]	BT50 [BBT50]
Tool Changing Time(T-T)	sec	2.5	2.5
Magazine Capacity	ea	24 [30,40]	24 [30,40]
Required floor space (L×W×H)	mm	5,500×4,100×3,752	6,700×4,545×3,658
Machine weight	kgf	18,000	25,000
Controller	Fanuc Oi-MD, 31i-AB		

MAAC 1730

MACHINING CENTER FOR PARTS



MAAC 1730 A machine for large size electric and autopart dies and molds



- Largest machining range in its class
- Wide column and outstanding structured spindle head

Major Specifications			[] : Option
DESCRIPTION		MAAC 1730	
Travel X/Y/Z	mm	3,200×1,600×800	
Distance from table top to spindle spindle nose	mm	200-1,000	
Distance from column to column	mm	1,750	
Working Surface - table size	mm	3,000×1,500	
Loading capacity	kgf	10,000	
Spindle Speed	min ⁻¹	6,000 [12,000]	
Spindle Motor(30min/const.)	kW	26/22 [30/25]	
Max spindle torque(30min/cont.)	N.m	683.5/561.9 [419.7/238.3]	
Rapid Traverse(X/Y/Z)	m/min	24/24/16	
Tool Shank	-	BT50 [BBT50]	
Tool Changing Time(T-T)	sec	5	
Magazine Capacity	ea	30 [40]	
Required floor space (L×W×H)	mm	8,200×3,600×4,000	
Machine weight	kgf	24,000	
Controller		Fanuc 31i-B, 0i-MD	

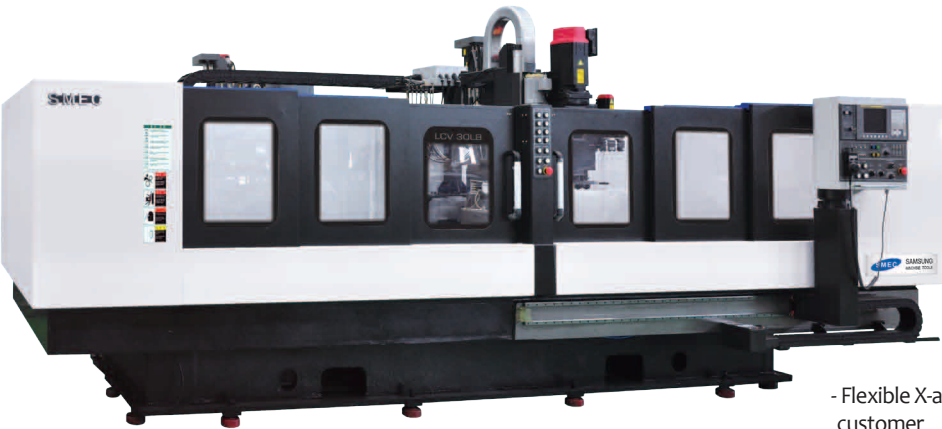
LCV 30LB / 30XLB / 420UL

MACHINING CENTER FOR PARTS



LCV 30LB

Unique structural design for high efficiency & high productivity in machining fields



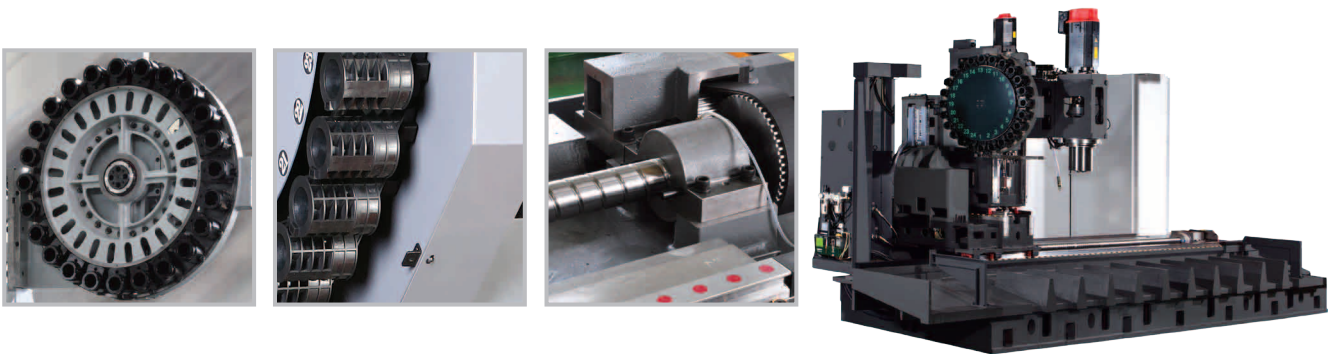
- Flexible X-axis dimension fit workpiece size of customer
- High speed tool changing time and rapid traverse
- The machining quality & accuracy approved from customer / user satisfaction

Major Specifications

DESCRIPTION		LCV 30LB	LCV 30XLB	LCV 420UL
Travel X/Y/Z	mm	2,000×350×330	4,000×350×330	6,200×420×450
Distance from table top to spindle spindle nose	mm	240-570	240-570	200-650
Distance from pallet center to column	mm	397	397	640
Working Surface - table size	mm	2,200×400	4,130×400	6,600×460
Loading capacity	kgf	Fixed table	Fixed table	Fixed table
Table surface configuration	mm	84-M12×100×100	160-M12×100×100	18H8xp125×3ea
Spindle Speed	min ⁻¹	10,000	10,000	10,000
Spindle Motor(30min/cont.)	kW	5.5/3.7	5.5/3.7	11/7.5(15min/cont.)
Max spindle torque(30min/cont.)	N.m	35.3/23.5	35.3/23.5	69.6/48
Rapid Traverse(X/Y/Z)	m/min	30/48/48	26/48/48	24/30/30
Tool Shank	-	BT30	BT30	BT40(CT40)
Tool Changing Time(T-T)	sec	0.7	0.7	1.3
Magazine Capacity	ea	16	16	24
Required floor space (L×W×H)	mm	4,767×2,798×2,440	6,550×2,787×2,535	8,400×3,100×2,800
Machine weight	kgf	8,500	13,000	21,506
Controller		Fanuc Oi-MD		

LCV 50XLB

MACHINING CENTER FOR PARTS



LCV 50XLB

Unique structural design for high efficiency & high productivity in machining fields



- Fit to machining to long-shaft workpiece or small quantity batch production
- All-axis high accuracy C3 type ball screw, roller guide for high speed, high rigidity and high accuracy
- Column loaded ATC structure for epoch-making time-loss reducing

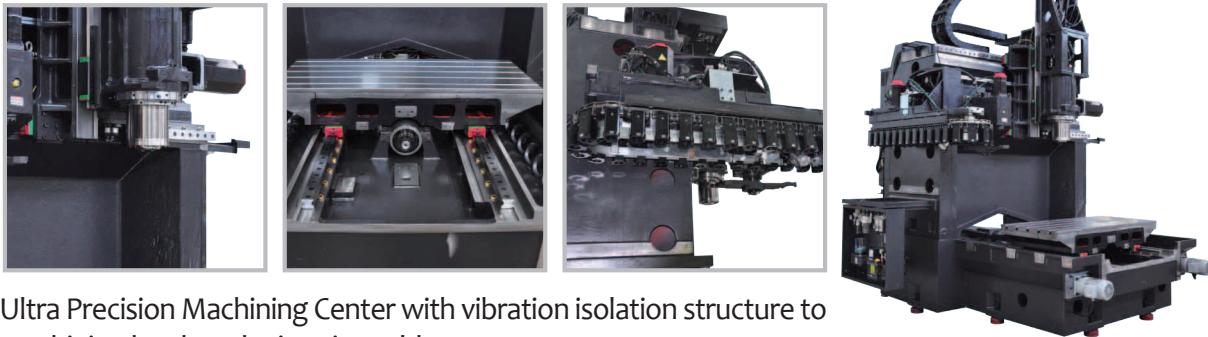
Major Specifications

[] : Option

DESCRIPTION		LCV 50XLB
Travel X/Y/Z	mm	4,000×510×550
Distance from table top to spindle spindle nose	mm	150-700
Distance from pallet center to column	mm	675
Working Surface - table size	mm	4,600×550
Loading capacity	kgf	10,000
Table surface configuration	mm	180-M16×110×125
Spindle Speed	min ⁻¹	10,000
Spindle Motor(30min/cont.)	kW	11/7.5
Max spindle torque(30min/cont.)	N.m	69.6/48
Rapid Traverse(X/Y/Z)	m/min	24/30/30
Tool Shank	-	BT40
Tool Changing Time(T-T)	sec	1.5
Magazine Capacity	ea	24
Required floor space (L×W×H)	mm	7,952×2,810×3,093
Machine weight	kgf	21,000
Controller		Fanuc Oi-MD

MAAC 650

MACHINING CENTER FOR DIE OR MOLDS



Ultra Precision Machining Center with vibration isolation structure to machining hard work piece in mold

MAAC 650

High speed and rigidity Vertical machining center
Forcial type structure with High precision

- Forcial type luxury model for mold machining with High precision
- Column and bed design with Stable forcial type
- Thermal symmetry and Overhang Minimized and structural analysis Methods to excellent machining
- Realize the precision machining by short distance between weight center and moving center



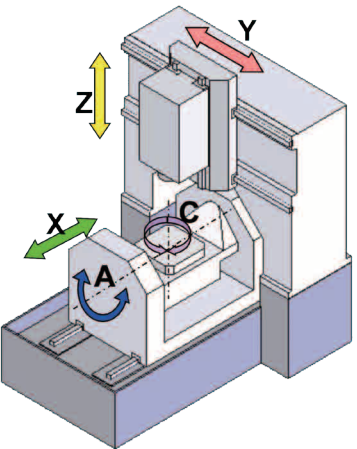
Major Specifications

[] : Option

DESCRIPTION		MAAC 650
Travel X/Y/Z	mm	1,100×650×550
Distance from column to column	mm	720
Distance from table top to spindle spindle nose	mm	150-700
Working Surface - table size	mm	1,300×650
Loading capacity	kgf	1,000
Table surface configuration	mm	18H8 P125×5ea
Spindle Speed	min ⁻¹	20,000
Spindle Motor(30min/cont.)	kW	22/18.5
Max spindle torque(30min/cont.)	N.m	118/80
Rapid Traverse(X/Y/Z)	m/min	40/40/40
Tool Shank (Opt.)	-	BBT40
Tool Changing Time(T-T)	sec	1.5
Magazine Capacity	ea	32 [48]
Required floor space (L×W×H)	mm	3,130×2,800×3,130
Machine weight	kgf	10,000
Controller		Fanuc Oi-MD, Fanuc 31i-B

FTV 630

5 AXIS MACHINING CENTER



FTV 630

A.C Axis swing table type 5 axis machining center for high accuracy productivity



- Aero parts, impeller, large tool!
- High rigidity, high reliability roller guide
- Process-intergrated 5axis machining center with easy access to workpiece

Major Specifications

[] : Option

DESCRIPTION		FTV 630
Travel X/Y/Z	mm	630×900×600
A-axis (Table Tilting)	deg	+30° ~ -120°
C-axis (Tabld Indexing)	deg	360°
Table size	mm	□500×500 cross:Ø630 [Ø630]
Loading capacity	kgf	500
Table surface configuration	mm	18H8×P100×5ea
Max. Spindle Speed	min ⁻¹	15,000 (20,000)
Spindle motor(15min/cont.)	kW	18.5/22
Maximum torque(15min/cont.)	N.m	17/12/9.7 [12/10/8.6]
Tool Shank	-	BT40 [BBT40]
Rapid Traverse(X/Y/Z)	m/min	48/48/48
Rapid Traverse(A/C)	m/min	30
Magazine Capacity	ea	40
Required floor space (L×W×H)	mm	3,145×3,600×3,600
Machine weight	kgf	20,000
Controller		Fanuc 31i-B5

LCV 630

HORIZONTAL MACHINING CENTER



LCH 630 Horizontal Machining Center for High Speed and Rigidity



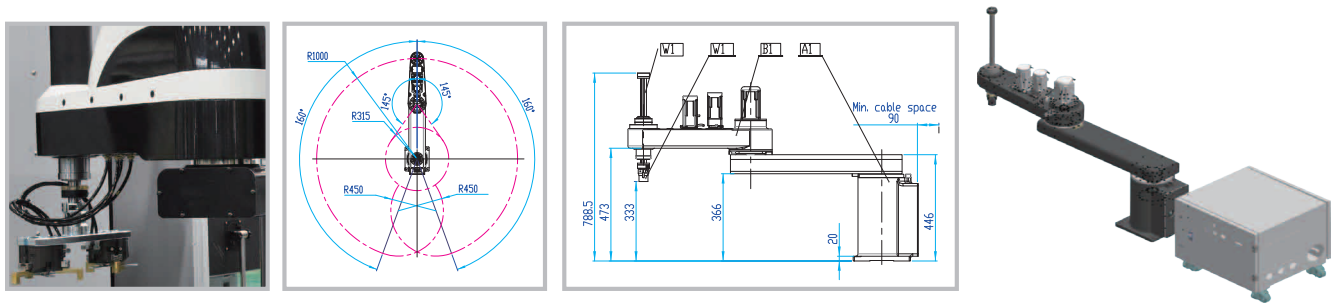
Major Specifications

[] : Option

DESCRIPTION		LCH 630
Travel X/Y/Z	mm	1,050×850×1,000
Distance from table top to spindle spindle nose	mm	75-925
Distance from pallet center to column	mm	100-1,100
Working Surface - table size	mm	2-630×630
Loading capacity	kgf	2-1,200
Spindle Speed	min ⁻¹	6,000
Spindle Motor(30min/cont.)	kW	22[15]/18.5
Max spindle torque	N.m	751/632
Rapid Traverse(X/Y/Z)	m/min	50
Tool Shank	-	BBT50
Tool Changing Time(T-T)	sec	2
Magazine Capacity	ea	40[60]
Required floor space (L×W×H)	mm	3,997×5,963×3,668
Machine weight	kgf	16,000
Controller		Fanuc Oi-MD [Fanuc 31i-B]

CL 600

UV LASER SYSTEM



DECART

- Horizontal Multi-axis Robot
- Payload 10kg(Max.20kg)
- A,B axis link 1000mm
- Z axis stroke 350mm



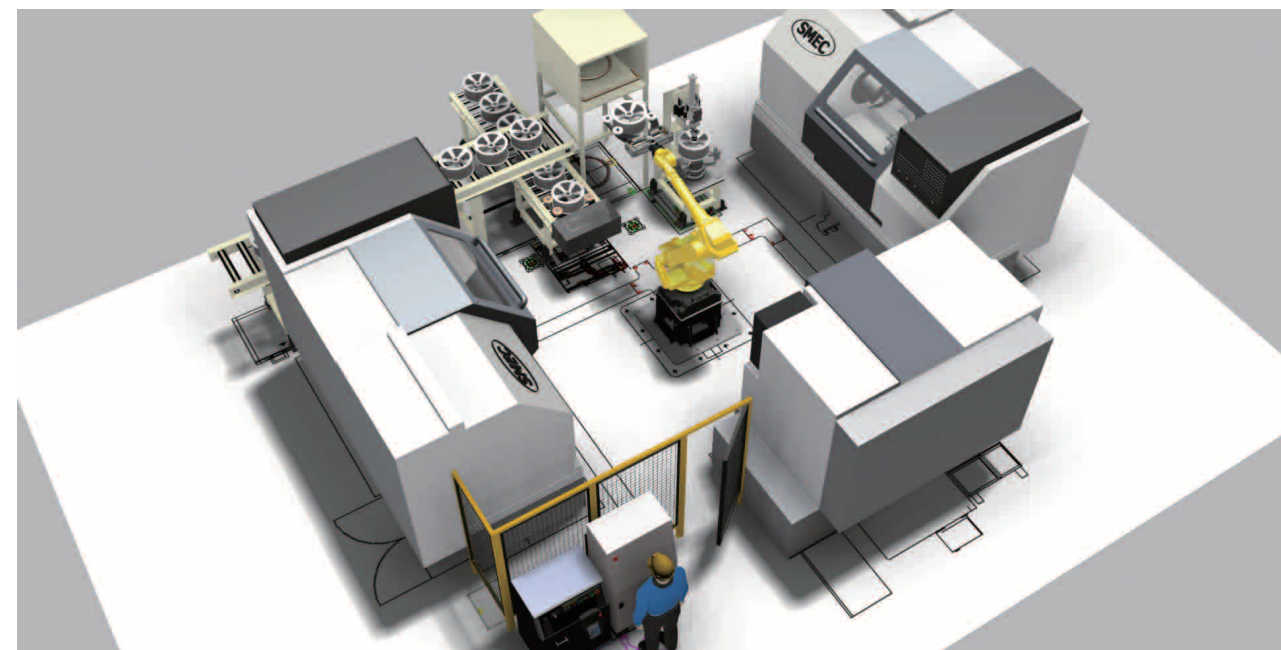
Major Specifications

DESCRIPTION		DECART			
Servo Motor		Abs Encoder 17bit			
axis		A-axis	B-axis	Z-axis	W-axis
Joint Range		±160°	±145°	400mm	±360°
Max Operation Speed (A/B axis summation)		375°	375°	2,080mm	2,000°
		9.5m/sec			
Payload		10kg(Max.20)			
Reapeatability		±0.01mm		±0.01mm	±0.04°
Arm Length		550mm	450mm		
Moment of Inertia		0.2kgm ²			
Standard Cycle Time		0.5sec			
Weight		85kg			
Motor		750W	600W	400W	200W
Air piping for Hand		ø6*4			
Applied Controller		G2420			

Automation System

AL WHEEL ROBOT / SCARA Automation System

■ AL Wheel Robot Automation System



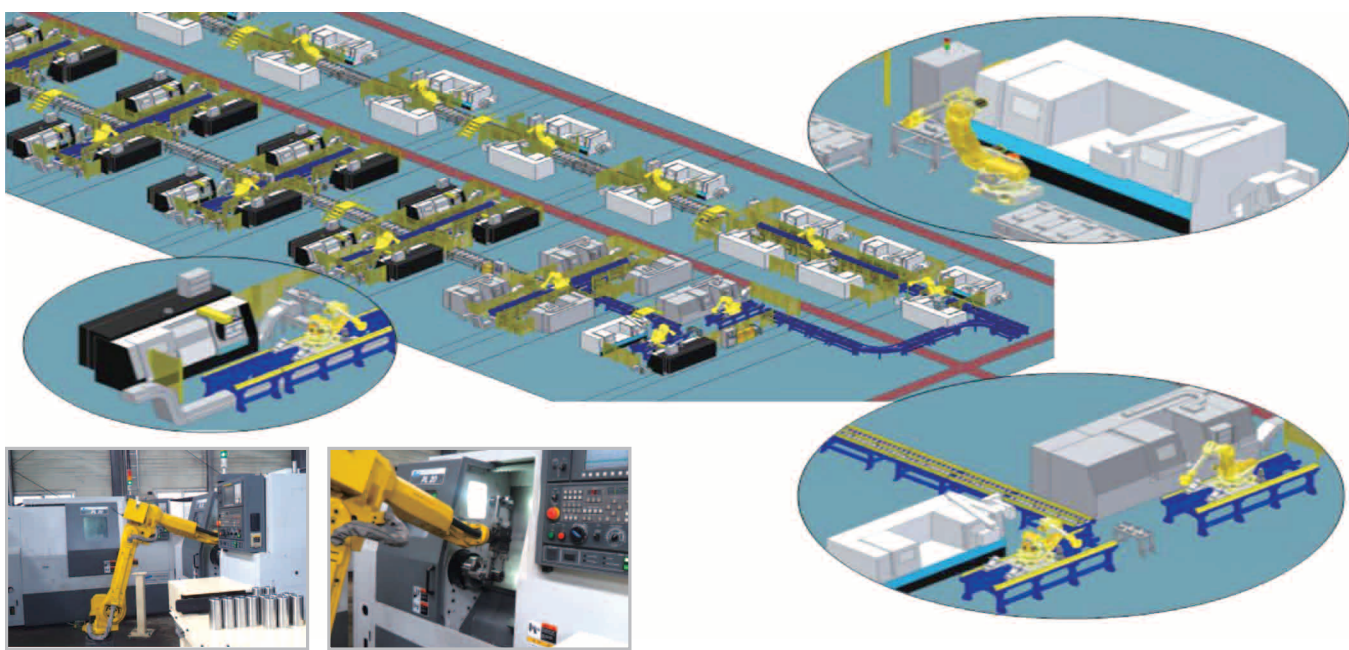
■ Scara Automation System



Automation System

ROBOT / GANTRY Automation System

■ Robot Automation System



■ Gantry Automation System



Controller

FANUC Series

Item		Specification	0i-MateTD	0i-TD
Controlled axis	Max. feed axes		3 AXIS	4 AXIS
	Max. simultaneously controlled axis		3	4
	Least command increment	0.001mm / 0.0001°	○	○
Operation functions	Pulse handle feed	X1, X10, X100	○	○
	Feedrate per minute	G98	○	○
	Feedrate per revolution	G99	○	-
Interpolation functions	Linear interpolation	G01	○	○
	Circular interpolation	G02, G03	○	○
	Dwell	G04	○	○
	Polar coordinate interpolation	G12.1, G13.1	○	○
	Cylindrical interpolation	G70.1	○	○
	Variable lead thread cutting	G34	○	○
	Continuous threading		○	○
	Reference position return	G28	○	○
	Reference position return check	G27	○	○
Feed function	Polygon machining with two spindle	G50.2, G51.2	-	(C)
	Rapid traverse rate override	F0, 25%, 50%, 100%	○	○
	Feedrate override		0~150%	0~150%
Spindle function	Spindle orientation		○	○
	Sub spindle orientation		-	Only SY,MS
	Rigid tapping		○	○
	Spindle synchronous control		-	Only SY,MS
Tool functions	Tool number command	T4-Digt / T2-Digt	T4-Digt	T4-Digt
	Tool nose radius compensation	G40 ~ G42	○	○
	Tool offset pairs		64	64
	Tool geometry/wear offset	GEOMETRY & WEAR DATA	○	○
	Tool life management		○	○
	Tool path graphic display		○	○
	Automatic tool offset		-	○
	Direct input of tool offset value measured B		○	○
Program input	Absolute/Incremental programming		○	○
	Multiple repetitive cycle	G70 ~ G76	○	○
	Canned cycles	G90, G92, G94	○	○
	Inch/metric conversion	G20 / G21	○	○
	Program restart		○	○
	Retraction for rigid tapping		○	○
	Max. programmable dimension	±99999.999mm/±9999.9999°	○	○
	M function	M3 digit	○	○
	Custom macro		○	○
	Canned cycle for drilling		○	○
	Direct drawing dimension programming		○	○
	Programmable data input	G10	-	○
	Optional block skip		○	○
	Workpiece coordinate system	G52 ~ G59	○	○
	Number of registerable programs		400EA	400EA
Setting and display	Alarm & Operator histor display	ALARM & OPERATION DISPLAY	○	○
	Run hour and parts count display	RUNNING TIME & PART NO. DISPLAY	○	○
	Display spindle & servo overload	SPINDLE & SERVO LOAD DISPLAY	○	○
	Self-diagnosis function		○	○
	Extended part program editing	COPY/MOVE, CHANGE OF NC PROGRAM	○	○
	Display screen		8.4" color	10.4" color
Data input/output	Memory card input/output		○	○
	USB memory input/output		○	○
Editing operation	Part program storage size	512Kbyte(1280m)	○	○
Manual guide i	Manual Guide I		-	Opt.

FANUC Series

Item		Specification	0i-MD	31i-B
Controlled axis	feed axes		X,Y,Z,(A,B)	X,Y,Z,(A,B)
	Max. feed axes		4(6) AXIS	4(6) AXIS
	Max. simultaneously controlled axis		4	4
	Least command increment	0.001mm / 0.0001°	○	○
Operation functions	Pulse handle feed	X1, X10, X100	○	○
	Feedrate per minute	G94	○	○
	Feedrate per revolution	G95	○	○
Interpolation functions	Linear interpolation	G01	○	○
	Circular interpolation	G02, G03	○	○
	Dwell	G04	○	○
	Cylindrical interpolation	G70.1	○	○
	Reference position return	G28	○	○
	Reference position return check	G27	○	○
Feed function	Rapid traverse rate override	F0, 25%, 50%, 100%	○	○
	Feedrate override		0~200%	0~200%
Spindle function	Spindle orientation		○	○
	Rigid tapping		○	○
Tool functions	Tool number command	T4-Digt / T2-Digt	T2-Digt	T2-Digt
	Tool nose radius compensation	G40 ~ G42	○	○
	Tool offset pairs		400	400
	Tool geometry/wear offset	GEOMETRY & WEAR DATA	○	○
	Tool life management		○	○
	Tool path graphic display		○	○
	Automatic tool length measurement		○	○
Program input	Absolute/Incremental programming		○	○
	Multiple repetitive cycle	G70 ~ G76	○	○
	Canned cycles	G90, G92, G94	○	○
	Inch/metric conversion	G20 / G21	○	○
	Program restart		○	○
	Retraction for rigid tapping		○	○
	Max. programmable dimension	±99999.999mm/±9999.9999°	○	○
	M function	M3 digit	○	○
	Custom macro		○	○
	Canned cycle for drilling		○	○
	Direct drawing dimension programming		○	○
	Programmable data input	G10	○	○
	Optional block skip		○	○
	Workpiece coordinate system	G52 ~ G59	○	○
	Number of registerable programs		400EA	400EA
Setting and display	Alarm & Operator histor display	ALARM & OPERATION DISPLAY	○	○
	Run hour and parts count display	RUNNING TIME & PART NO. DISPLAY	○	○
	Display spindle & servo overload	SPINDLE & SERVO LOAD DISPLAY	○	○
	Self-diagnosis function		○	○
	Extended part program editing	COPY/MOVE, CHANGE OF NC PROGRAM	○	○
	Display screen		10.4" color	10.4" color
Data input/output	Memory card input/output		○	○
	USB memory input/output		○	31i-A(x), 31i-B(○)
Editing operation	Part program storage size		1280M	640M
Manual guide i	Manual Guide I		Opt.	Opt.