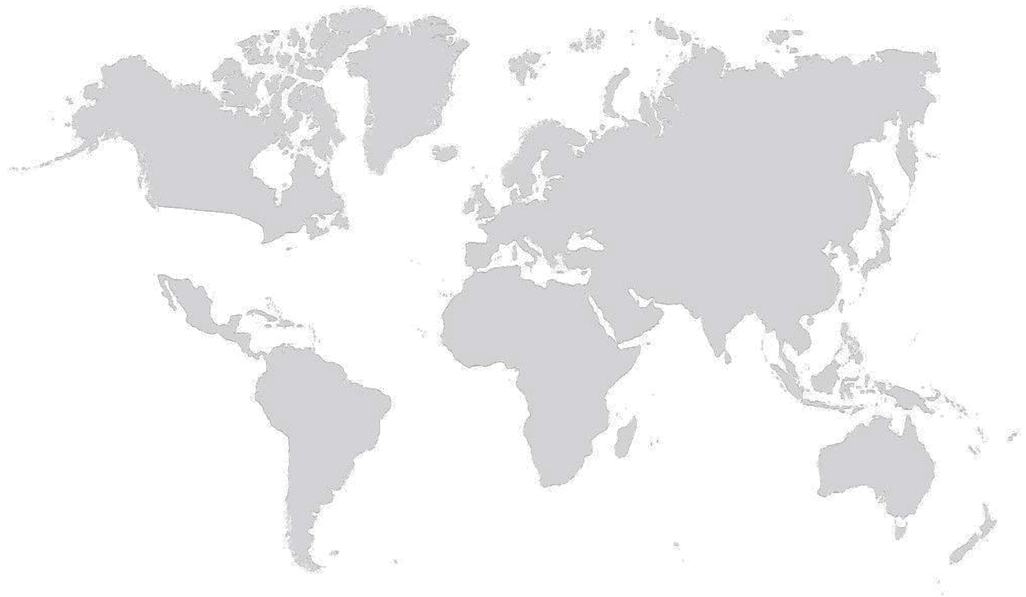
ORION
MACHINES

JI RFINE 喬鋒®



INTELLIGENT
PROCESSING SOLUTIONS

ORION
MACHINES

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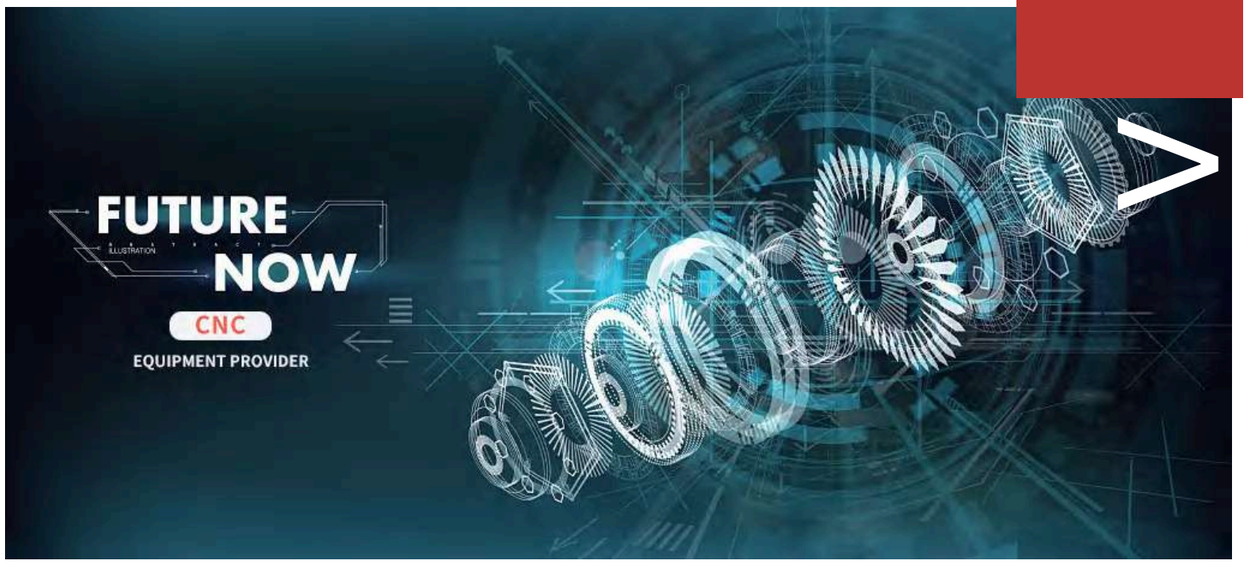
Atendimento em todo o Brasil



Dongguan headquarters

Nanjing R&D bases

Ningxia R&D bases

Company profile

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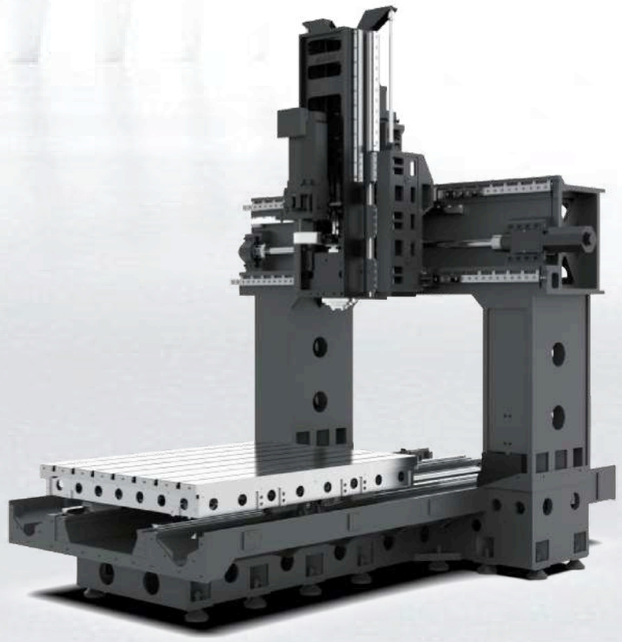
Jirfine Intelligent Equipment Co., Ltd., established in 2009, is a national-level specialized and innovative "Little Giant" enterprise engaged in the design, research and development, production, sales, and service of mid-to-high-end CNC machine tools, Jirfine successfully listed on the GEM Board of Shenzhen Stock Exchange in 2024. Our products are widely used in strategic industries such as aerospace, marine engineering, rail transit, automotive, semiconductors, and consumer electronics. Jirfine is committed to the mission of "making manufacturing more stable, precise, efficient, and intelligent," and aims to be a leading provider of CNC equipment with the vision of "building a century-old enterprise." The company supports the high quality development of China's manufacturing industry and contributes to the upgrade of "Made in China" to "Intelligent Manufacturing in China," helping the country transition from a major manufacturing power to a strong manufacturing power.

1700+ Employees	3 R&D Bases	200+ Patent
10000+ Customer service	10 Categories	20 Series

ORION

Gantry Machining Center

Linear Rail Gantry Series



Model body display

Features

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CUTTING FREELY

- Modular spindle design provides different cutting characteristics to meet diverse processing needs.
- The design of the centrally symmetrical spindle system effectively suppresses thermal displacement and unbalanced moment, ensures machining precision and eliminates blade grain.
- The working table is designed with a bilayer structure and closed back,which can improve the structural rigidity and cutting capacity. And increase the maximum bearing weight by 30%

Application field

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Suitable for all kinds of large and medium-sized castings and structural parts. Excellent performance in heavy cutting, suitable for automobiles, aerospace, electric power, locomotives, plastic machinery, engineering machinery and other fields.

Automobile

Hardware industry

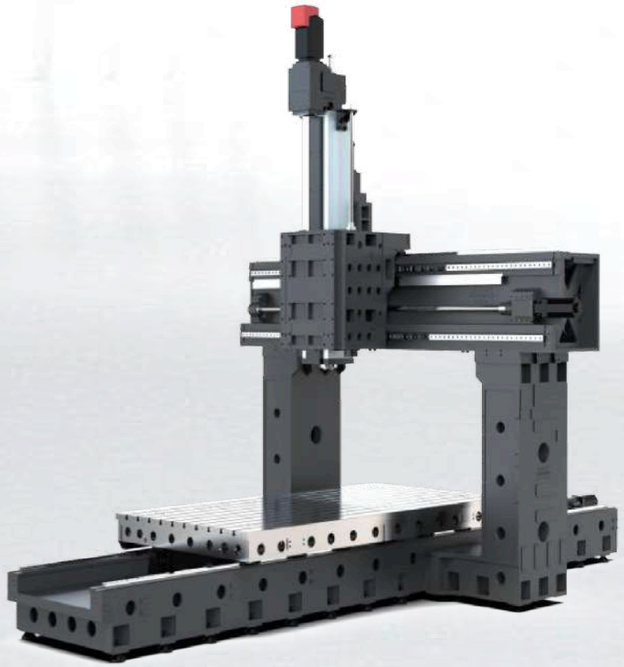
Communication

Aerospace

Mold

Medical industry

Hard Rail Gantry Series



Model body display

Features CUTTING FREELY

>>>>>

- The base rails have a large span and high rigidity, providing excellent support for the machine.
- The X-axis 6 meters and below travel base is a one-piece bed casting, which will not cause instability of bed accuracy due to splicing errors.
- The internal bar-crossing structure makes the force more uniform, which makes the beam more rigid and the bearing capacity better.
- The X-axis is equipped with a screw support device as standard, which reduces the vibration of the long-stroke screw overhanging rotation and prevents the deformation of the screw from affecting the working accuracy, and the full-stroke support of the screw protects the full-length working accuracy of the screw in a more comprehensive way. (5 meters and above series)
- LMB series adopts high rigidity square ram spindle box (LMB-13/18 series use T-type square ram), which has strong and stable cutting performance, and the four hard-rails have the rigidity to withstand the strong cutting of transverse spindle, which can realize the z-axis heavy cutting for full-stroke.

Application field

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The machine is suitable for multi-species batch processing of complex parts such as various large and medium-sized castings and structural parts for heavy cutting in automobile, aerospace, electric power and other industries. It is also suitable for processing of box parts, valve parts, and processing of various types of structural steel parts.

Automobile manufacturing

Hardware industry

Aerospace

Electric power industry

Multifunctional exchange head

>>>>>

Manual milling head is optional .

Manual milling head

90°head

Max.speed:2000rpm
Max. horsepower:38KW
Max. tool diameter:Ø150mm
Transmission ratio:1: 1

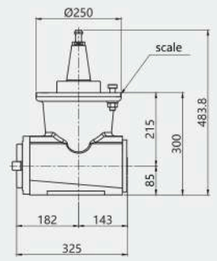
Extension head

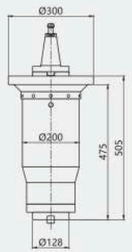
Manual lock head
Max.speed:2000rpm
Max. horsepower :38KW
Max. tool diameter:Ø150mm
Transmission ratio:1: 1

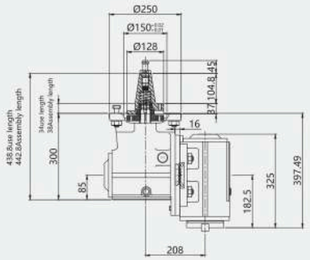
Universal head

Manual lock head
Max.speed:2000rpm
Max. horsepower :38KW
Max. tool diameter:Ø150mm
Transmission ratio:1: 1

>>>>>







Dimensions of working table

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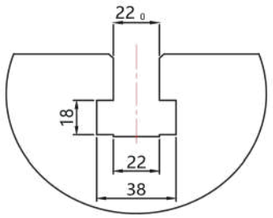
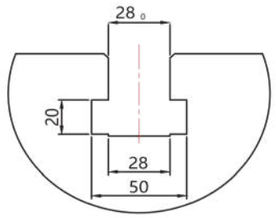
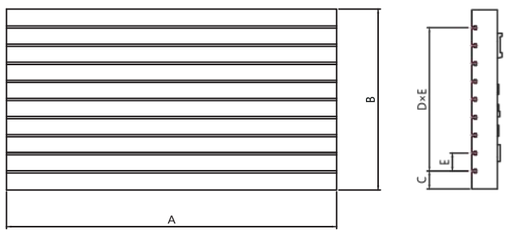


LM-13/18/23/28/32 series

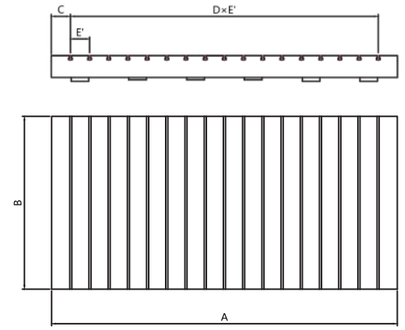


LM-38 series



Model/Item	A	B	C	D	E
LM/LMB-2013	2200	1100	100	6	150
LM/LMB-3013	3200	1100	100	6	150
LM/LMB-2218	2000	1500	150	6	200
LM/LMB-2718	2500	1500	150	6	200
LM/LMB-3218	3000	1500	150	6	200
LM/LMB-3223	3000	2000	190	9	180
LMLMB-4223	4000	2000	190	9	180
LMLMB-4228	4000	2000	190	9	180

CUTTING FREELY



Model/Item	A	B	C	D	E
LM/LMB-6223	6000	2000	250	22	250
LMLMB-8523	8000	2000	250	30	250
LMLMB-6228	6000	2000	250	22	250
LM/LMB-8528	8000	2000	250	30	250
LM/LMB-6232	6000	2500	250	22	250
LM/LMB-8532	8000	2500	250	30	250
LM/LMB-6238	6000	3000	250	22	250
LM/LMB-8538	8000	3000	250	30	250

Model Appearance Dimensions

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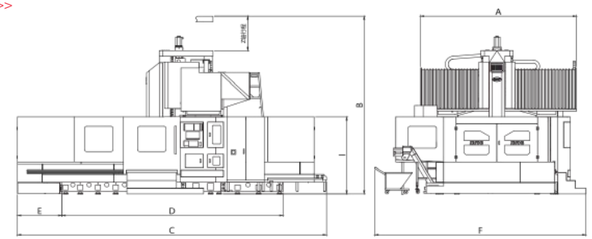
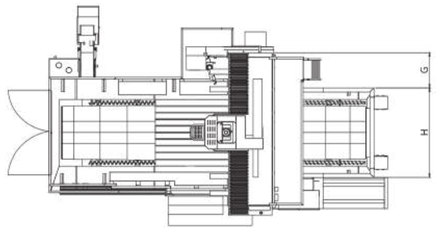




LM-2013/3013/2218/2718/3218/3223/4223 for full cover,

LM-6223/8523/4228/6228/8528/6232/8532/6238/8538 for half cover,

The full cover is fully enclosed and not capped.

The half cover is a simple type and is only closed with sheet metal on the side of the operation box and the side of the tool magazine

Model/Item	Travel of Z axis	A	B	C	D	E	F	G	H	I
LM/LMB-2013	800	2802	4200	6075	4140	870	4647	870	1496	1950
LM/LMB-3013	800	2802	4200	8109	6140	870	4647	870	1496	1950
LM/LMB-2218	800	3640	4200	6220	4000	975	5130	790	1920	2020
LM/LMB-2718	800	3640	4200	7300	5000	975	5130	790	1920	2020
LM/LMB-3218	800	3640	4200	8300	6000	975	5130	790	1920	2020
LM/LMB-3223	1000	4600	5138	8500	6025	1260	5929	947	2427	2140
LM/LMB-4223	1000	4600	5138	10700	8225	1260	5929	947	2427	2140
LM/LMB-6223	1000	4600	5138	15100	12625	1260	5929	947	2427	2140
LM/LMB-8523	1000	4600	5138	19500	17025	1260	5929	947	2427	2140
LM/LMB-4228	1000	5240	5138	10500	8095	1200	6000	1040	2950	2080
LM/LMB-6228	1000	5240	5138	14900	12495	1200	6000	1040	2950	2080
LM/LMB-8528	1000	5240	5138	19300	16895	1200	6000	1040	2950	2080
LM/LMB-6232	1300	5835	6000	14705	12652	1195	6690	1183	3257	2079
LM/LMB-8532	1300	5835	6000	19490	16660	1195	6690	1183	3257	2079
LM/LMB-6238	1300	6805	6000	14815	12495	1195	7730	1276	4046	2530
LM/LMB-8538	1300	6805	6000	19510	16660	1195	7730	1276	4046	2530

※The specification of the machine will change with the improvement of quality without notice.

CUTTING FREELY

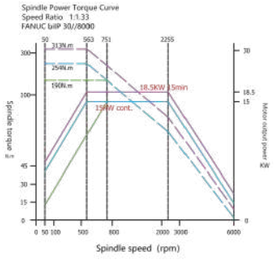
ITEM		LM/LMB -2013	LM/LMB -3013	LM/LMB - 2218	LM/LMB - 2718	LM/LMB - 3218	LM/LMB - 3223	LM/LMB - 4223		LM/LMB - 6223	LM/LMB - 8523	LM/LMB - 4228	LM/LMB - 6228	LM/LMB - 8528	LM/LMB -6232	LM/LMB - 8532	LM/LMB - 6238	LM/LMB - 8538
Processing range																		
X axis travel	mm	2000	3000	2200	2700	3200	3200	4200		6200	8500	4200	6200	8500	6200	8500	6200	8500
Y axis travel	mm	1500	1500	1950	1900	1900	2770	2770		2770	2770	3350	3350	3350	3850	3850	4500	4500
Z axis travel	mm	800	800	800	800	800	1000 (OPT1200)	1000 (OPT1200)		1000 (OPT1200)	1000 (OPT1200)	1000 (OPT1200)	1000 (OPT1200)	1000 (OPT1200)	1300	1300	1300	1300
Double column spacing (door width)	mm	1300	1300	1800	1800	1800	2300	2300		2300	2300	2800	2800	2800	3200	3200	3800	3800
Spindle nose to worktable distance	mm	200-1000	200-1000	200-1000	200-1000	200-1000	300-1300	300-1300		300-1300	300-1300	300-1300	300-1300	300-1300	300-1600	300-1600	300-1600	300-1600
Workbench																		
Workbench size (X direction)	mm	2200	3200	2000	2500	3000	3000	4000		6000	8000	4000	6000	8000	6000	8000	6000	8000
Workbench size (Y direction)	mm	1100	1100	1500	1500	1500	2000	2000		2000	2000	2000	2000	2000	2500	2500	3000	3000
Maximum load of workbench	T	5	6	6	8	10	15	18		25	35	18	25	35	28	35	35	40
Spindle																		
Drive method		Belt drive		Belt drive (Direct drive)			Direct drive + gear box											
Spindle taper		BT-50Ø190 (Short nose)		BT-50Ø190 (Short nose)			BT-50Ø190 (long nose)											
Spindle speed	r.p.m	6000	6000	6000	6000	6000	4000/6000	4000/6000		4000/6000	4000/6000	4000/6000	4000/6000	4000/6000	4000/6000	4000/6000	4000/6000	4000/6000
The maximum output torque of the spindle	N.m	190/313	190/313	190/313	190/313	190/313	770/1089	770/1089		770/1089	770/1089	770/1089	770/1089	770/1089	770/1089	770/1089	770/1089	770/1089
Spindle power	kW	15/18.5	15/18.5	15/18.5	15/18.5	15/18.5	22/26	22/26		22/26	22/26	22/26	22/26	22/26	22/26	22/26	22/26	22/26
Feed system																		
Rapid feed rateX/Y/Z	m/min	12/12/12	12/12/12	12/12/12	12/12/12	12/12/12	10/12/12	10/12/12		10/12/12	10/12/12	10/12/12	10/12/12	10/12/12	10/12/12	10/12/12	10/12/12	10/12/12
Cutting feed rateX/Y/Z	mm/min	1-8000	1-8000	1-8000	1-8000	1-8000	1-8000	1-8000		1-8000	1-8000	1-8000	1-8000	1-8000	1-8000	1-8000	1-8000	1-8000
X/Y/Zmotor power	kW	3/3/3	3/3/3	3/3/3	7/3/3	7/3/3	6/7/7	6/7/7		6/7/7	9/7/7	6/7/7	6/7/7	9/7/7	6/7/7	9/7/7	6/7/7	9/7/7
Precision																		
X axis positioning precision (full travel)	mm	0.015	0.020	0.015	0.015	0.025	0.025	0.025		0.035	0.045	0.025	0.035	0.045	0.035	0.045	0.035	0.045
Y axis positioning precision (full travel)	mm	0.012	0.015	0.012	0.015	0.015	0.020	0.020		0.020	0.020	0.020	0.020	0.020	0.030	0.030	0.035	0.035
Z axis positioning precision (full travel)	mm	0.001	0.010	0.001	0.010	0.010	0.015	0.015		0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
X axis Repeatability	mm	0.015	0.020	0.015	0.015	0.020	0.020	0.020		0.030	0.035	0.020	0.030	0.035	0.030	0.035	0.030	0.035
Y axis Repeatability	mm	0.012	0.015	0.012	0.010	0.015	0.015	0.015		0.015	0.015	0.015	0.015	0.015	0.025	0.025	0.030	0.030
Z axis Repeatability	mm	0.001	0.010	0.001	0.010	0.010	0.015	0.010		0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Others																		
Electricity demand	kVA	45	45	45	45	45	60	60		60	60	60	60	60	60	60	60	60
Air pressure specification	bar	6.5	6.5	6.5	6.5	6.5	6.5	6.5		6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Machine weight	T	16	18	19	20	21	30	35		45	55	35	48	60	58	78	67	81

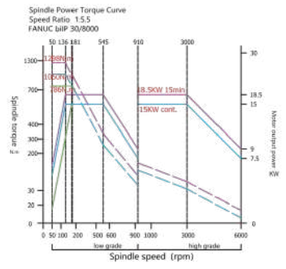
※pecifications and quality of this model are subject to change without notice.
The X-axis travel can be increased correspondingly according to customer requirements. If the customer has special requirements, please negotiate with our company.
Models with "*" are abnormal production models.

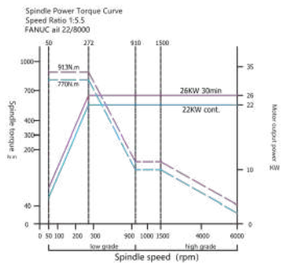
ORION

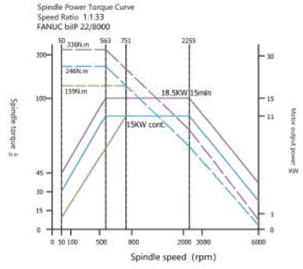
ITEM		LM/LMB - 2013	LM/LMB - 3013	LM/LMB - 2218	LM/LMB - 2718	LM/LMB - 3218	LM/LMB - 3223	LM/LMB - 4223		LM/LMB - 6223	LM/LMB - 8523	LM/LMB - 4228	LM/LMB - 6228	LM/LMB - 8528	LM/LMB - 6232	LM/LMB - 8532	LM/LMB - 6238	LM/LMB - 8538
Controller	Fanuc 0iMF(10.4 Full keyboard screen)	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Fanuc 31iMB (10.4"Full key screen)	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	SIEMENS 828D Controller	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	SIEMENS 840D Controller	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Rigid tapping	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
Spindle specification	Belt Spindle 6000rpm	●	●	●	●	●	○	○		○	○	○	○	○	○	○	○	○
	Belt drive spindle+ gearbox 6000rpm	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Direct-type spindle with gearbox 3500rpm	×	×	×	×	×	×	×		×	×	×	×	×	×	×	×	×
	Direct spindle 6000rpm	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○
	Direct-coupled spindle with gearbox 6000rpm	×	×	×	×	×	●	●		●	●	●	●	●	●	●	●	●
	Spindle two-shift gearbox	○	○	○	○	○	●	●		●	●	●	●	●	●	●	●	●
	Spindle oil temperature cooling device	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Coolant through spindle	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Spindle processing air blowing device	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Spindle annular sprinkling	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Spindle oil mist cutting device	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Pedal type tool release switch of spindle	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Manual tool release button on the spindle side	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
Axial travel and specifications	XYZ Three-axis optical ruler	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Hydraulic system	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Z-axis double cylinder hydraulic counterweight	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Z axis travel 800	●	●	●	●	●	×	×		×	×	×	×	×	×	×	×	×
	Z axis travel1000	×	×	○	○	○	●	●		●	●	●	●	●	×	×	×	×
	Z axis travel1200	×	×	×	×	×	○	○		○	○	○	○	○	×	×	×	×
	Z axis travel1300	×	×	×	×	×	○	○		○	○	○	○	○	●	●	●	●
	Column heightening 300	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Column heightening 500	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
Tool magazine specification	Disc type 24T tool magazine	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Disc type 30T tool magazine	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Chain 32T tool magazine	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Chain 40T tool magazine	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Chain 60T tool magazine	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Vertical and horizontal 40T tool magazine	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○
	Vertical and horizontal 60T tool magazine	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○
Cover sheet metal type	Full cover cover sheet metal	●	●	●	●	●	●	●		○	○	○	○	○	○	○	○	○
	Half cover cover sheet metal	○	○	○	○	○	○	○		●	●	●	●	●	●	●	●	●
Additional features	Automatic lubrication system	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Automatic Workpiece Measuring System	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Automatic Tool Length Measuring System	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Boom type operation box	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○
	Side hanging operation box	×	×	×	×	×	●	●		●	●	●	●	●	●	●	●	●
	Maintenance guardrail & stairs	○	○	○	○	○	●	●		●	●	●	●	●	●	●	●	●
	Cooling system installed in oil pressure tank	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Disc oil-water separator	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Electric box air conditioner	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Cutting fluid system (including water tank and pump)	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Cleaning water gun	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Transformer	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Working lamp	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Level adjustment screw and foundation bolt	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Ground anchor bolt	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	Foundation gasket	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●
	CNC rotary table	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Auxiliary workbench	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
Various additional heads: please consider the Z-axis travel and column heightening, etc.	Manual extension head	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Manual Right Angle Milling Head	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Manual universal milling head	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Manual double right angle milling head	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Manual Right Angle Extended Milling Head	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○
	Automatic Right Angle Milling Head	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○
	Automatic extension head	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○
	Automatic universal milling head	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○
	Automatic Right Angle Extended Milling Head	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○
	Auto-Swap Header Library	×	×	×	×	×	○	○		○	○	○	○	○	○	○	○	○

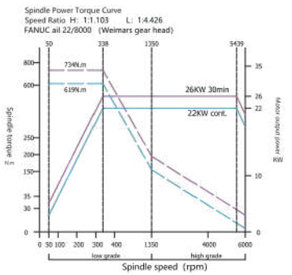
● Standard ○ Optional ╳ Not applicable ★ Need to inquire











ORION

High-Speed Moving Column Gantry Machining Center

DLM-3020

DETONATE PRODUCTIVITY

Features >>>>>

- The column and crossbeam are made as a one-piece structure.
- High rigidity and large load-bearing bed base (integrated casting of the base and worktable). casting of the base and worktable).
- Lightweight, high-dynamic response moving components.
- High lead screw with high-speed displacement (X: 30 m/min, Y: 40 m/min, Z: 24 m/min).
- Spindle Upgrade: High-speed, high-power electric spindle with BBT40 taper, offering better tool connection rigidity.
- Strong driving force and high acceleration: the X-axis is driven by dual servo motors.

Application field >>>>>

Applicable to the new energy vehicle industry, as well as various other industries such as aerospace, rail transportation, and general machinery for the processing of various large aluminum alloy structural components.


new energy vehicle industry


Aerospace


Rail transportation


Aluminum processing

System Configuration >>>>>

Using FANUC 0I MF (3) or SINUMERIK 828D-280 systems, with high dynamic response for high-precision smooth machining; equipped with a high-speed PLC engine to enhance computing speed and achieve high-speed processing.

ORION

Mechanical specifications

>>>>>

Item		DLM-3020	DLM-14045	DLM-20045
Workbench				
Dimensions (width × length)	mm	2000x3000	3000x14600	3000x20000
T-slot (size × quantity × spacing)	mm	18x12x250	28x12x250	28x12x250
Longmen	t/m²	2	10	10
Spacing between columns	mm	2000	4500	4500
Distance from spindle end face to table	mm	600~700	600~2100	600~2100
Distance from spindle center to table (90°)	mm	360~960	360~960	360~960
travel	mm			
X-axis	mm	3000	20000	20000
Y-axis	mm	2000	5800	5840
Z-axis	mm	600	1500	1500
Fast speed				
X-axis	mm/min	30000	10000	10000
Y-axis	mm/min	40000	10000	10000
Z-axis		30000	10000	10000
Feed speed				
X/Y-axis	mm/min	1~8000	5~5000	5~5000
Z-axis	mm/min	1~8000	5~3000	5~3000
Spindle				
Spindle power rating	Kw	35	41	41
Spindle torque	Nm	60.7	2000	2000
Spindle speed	rpm	18000	3500	3500
Spindle taper hole	#	HSK A63	BT50	BT50
Ram cross section	mm	/	500X500	500X500
Precision				
Positioning accuracy(X/Y/Z-axis)	mm	0.050/0.035/0.015(Total length)	0.010/0.035/0.015	0.015/0.025/0.012
Repeated positioning accuracy	mm	0.045/0.030/0.010	0.010/0.025/0.012	0.010/0.030/0.010
Standard for inspection accuracy	#	GB/T 19362.1—2003	GB/T17421.2-2003	GB/T17421.2-2000
Other				
Total power capacity of machine tool	KVA	45	110	150
Atmospheric pressure	bar	6.5	6.5	6.5
Overall Dimension(L × W × H)	mm	6500X3500X400	24500X9200X6500	30500X9200X6500

DETONATE
PRODUCTIVITY

Appearance drawing

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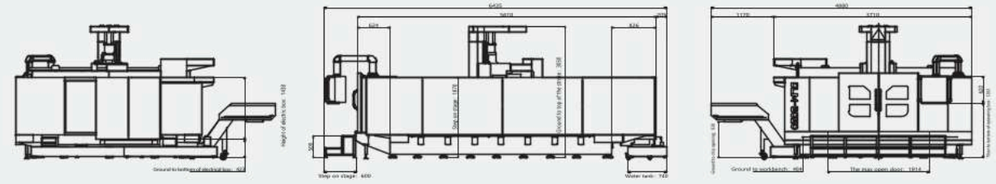
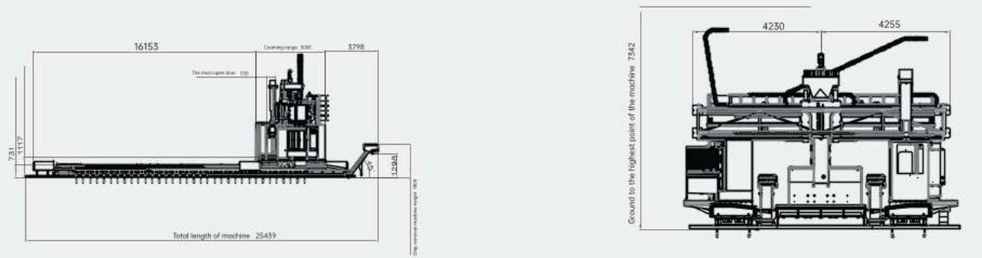
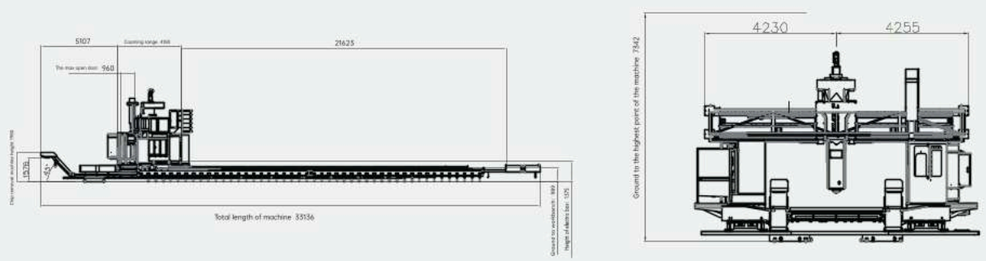


DLM-3020



DLM-14045



DLM-20045