



VMC II Series

Vertical Machining Center



A new generation of VMC II series continue to use cast iron of high rigidity , with strong bed and column of large span , to provide solid foundation and stable performances. It equips with mature spindle and feed system to ensure the stability and reliability of the machine. The full enclosure provides a safe environment for machine run.

Model	VMC760 II	VMC850 II	VMC1000 II	VMC1200 II	VMC1300 II
X/Y/Z travel (mm)	760/400/5 00	850/500/5 00	1000/600/6 00	1200/600/6 00	1300/650/6 50
Table size (mm)	900×400	1000×500	1200×600	1300×600	1500×650
Spindle speed (rpm)	8000rpm (belt)				



Parameter- VMC760II (M80B STD)

Item			Parameter	Item			Parameter	
Processing	X travel	mm	760	Tool magazine	Capacity	T	24	
	Y travel	mm	400		Driven system	-	Arm type	
	Z travel	mm	500		Holder	-	BT40	
	spindle nose to table surface	mm	150-650		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150	
Table	Table (A×B)	mm	900×400		Max. tool length	mm	300	
	Max. load	kg	300		Max. tool weight	kg/T	7	
	T slot (No.×width×distance)	mm	3×18×125		Tool change time (T-T)	s	2.5	
Spindle	Drive type	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm	0.007
	speed	rpm	8000			Y axis	mm	0.005
	Power (continuous/10mins)	kW	5.5/7.5			Z axis	mm	0.005
	Torque (continuous/10mins)	Nm	52.5/71.6	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.004	
	Taper	-	BT40		Y axis	mm	0.003	
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.003	
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	36/36/36	Controller		-	M80B	
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	5.5	
	X/Y/Z servo motor power	mm	1.5/2/3	Machine power		V/Hz	380/50	
	X/Y/Z cutting feed	m/min	15/15/15	Floor space(with water tank)		mm	2600×3300	



Parameter- VMC850II (M80B STD)

Item			Parameter	Item			Parameter
Processing	X travel	mm	850	Tool magazine	Capacity	T	24
	Y travel	mm	500		Driven system	-	Arm type
	Z travel	mm	500		Holder	-	BT40
	spindle nose to table surface	mm	150-650		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150
Table	Table (A×B)	mm	1000×500		Max. tool length	mm	300
	Max. load	kg	600		Max. tool weight	kg/T	7
	T slot (No.×width×distance)	mm	5×18×80		Tool change time (T-T)	s	2.5
Spindle	Drive type	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm
	speed	rpm	8000	Y axis		mm	0.005
	Power (continuous/10mins)	kW	7.5/11	Z axis		mm	0.005
	Torque (continuous/10mins)	Nm	53.7/105	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.005
	Taper	-	BT40		Y axis	mm	0.003
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.003
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	36/36/36	Controller		-	M80B
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	6
	X/Y/Z servo motor power	mm	2/2/3	Machine power		V/Hz	380/50
	X/Y/Z cutting feed	m/min	15/15/15	Floor space(with water tank)		mm	2600×3400

Parameter- VMC1000II (M80B STD)

Item			Parameter	Item			Parameter	
Processing	X travel	mm	1000	Tool magazine	Capacity	T	24	
	Y travel	mm	600		Driven system	-	Arm type	
	Z travel	mm	600		Holder	-	BT40	
	spindle nose to table surface	mm	150-750		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150	
Table	Table (A×B)	mm	1200×600		Max. tool length	mm	300	
	Max. load	kg	800		Max. tool weight	kg/T	7	
	T slot (No.×width×distance)	mm	5×18×100		Tool change time (T-T)	s	2.5	
Spindle	Drive type	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm	0.008
	speed	rpm	8000			Y axis	mm	0.006
	Power (continuous/10mins)	kW	7.5/11			Z axis	mm	0.006
	Torque (continuous/10mins)	Nm	53.7/105	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.005	
	Taper	-	BT40		Y axis	mm	0.004	
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.004	
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	36/36/36	Controller		-	M80B	
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	6.5	
	X/Y/Z servo motor power	mm	2/2/3	Machine power		V/Hz	380/50	
	X/Y/Z cutting feed	m/min	15/15/15	Floor space(with water tank)		mm	2800×3550	



Parameter- VMC1200II (M80B STD)

Item			Parameter	Item			Parameter
Processing	X travel	mm	1200	Tool magazine	Capacity	T	24
	Y travel	mm	600		Driven system	-	Arm type
	Z travel	mm	600		Holder	-	BT40
	spindle nose to table surface	mm	150-750		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150
Table	Table (A×B)	mm	1300×600		Max. tool length	mm	300
	Max. load	kg	600		Max. tool weight	kg/T	7
	T slot (No.×width×distance)	mm	5×18×100		Tool change time (T-T)	s	2.5
Spindle	Driven system	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm
	speed	rpm	8000	Y axis		mm	0.006
	Power (continuous/10mins)	kW	7.5/11	Z axis		mm	0.006
	Torque (continuous/10mins)	Nm	53.7/105	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.005
	Taper	-	BT40		Y axis	mm	0.004
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.004
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	36/36/36	Controller		-	M80B
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	7
	X/Y/Z servo motor power	mm	2/2/3	Machine power		V/Hz	380/50
	X/Y/Z cutting feed	m/min	15/15/15	Floor space(with water tank)		mm	3150×3550

Parameter- VMC1300II (M80B STD)

Item			Parameter	Item			Parameter
Processing	X travel	mm	1300	Tool magazine	Capacity	T	24
	Y travel	mm	650		Driven system	-	Arm type
	Z travel	mm	650		Holder	-	BT40
	spindle nose to table surface	mm	150-800		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150
Table	Table (A×B)	mm	1500×650		Max. tool length	mm	300
	Max. load	kg	1200		Max. tool weight	kg/T	7
	T slot (No.×width×distance)	mm	5×18×125		Tool change time (T-T)	s	2.5
Spindle	Driven system	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm
	speed	rpm	8000	Y axis		mm	0.008
	Power (continuous/10mins)	kW	7.5/11	Z axis		mm	0.008
	Torque (continuous/10mins)	Nm	53.7/105	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.007
	Taper	-	BT40		Y axis	mm	0.006
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.010
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	30/30/20	Controller		-	M80B
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	9
	X/Y/Z servo motor power	mm	3/3.5/3.5	Machine power		V/Hz	380/50
	X/Y/Z cutting feed	m/min	12/12/10	Floor space(with water tank)		mm	3350×3700

Parameter- VMCII Series

型号		VMC760II	VMC850II	VMC1000II	VMC1200II	VMC1300II
X/Y/Z stroke	mm	760/400/500	850/500/500	1000/600/600	1200/600/600	1300/650/650
Table size	mm	900×400	1000×500	1200×600	1300×600	1500×650
Table loading	kg	300	600	800	600	1200
Max. spindle speed	rpm	Belt 8000	Belt 8000	Belt 8000	Belt 8000	Belt 8000
Spindle power	kW	5.5/7.5	7.5/11	7.5/11	7.5/11	7.5/11
Spindle torque	Nm	52.5/71.6	53.7/105	53.7/105	53.7/105	53.7/105
The distance between spindle nose to table surface	mm	150-650	150-650	150-750	150-750	150-750
X/Y/Z rapid feed	m/min	36/36/36	36/36/36	36/36/36	36/36/36	30/30/20
X/Y/Z cutting feed	m/min	15	15	15	15	12/12/10
Tool capacity	-	24T arm ATC	24T arm ATC	24T arm ATC	24T arm ATC	24T arm ATC
Controller	-	Mitsubishi M80B	Mitsubishi M80B	Mitsubishi M80B	Mitsubishi M80B	Mitsubishi M80B



Parameter- VMC760II (OPT FANUC-β5 Package)

Item		Parameter	Item	Parameter			
Processing	X travel	mm	760	Tool magazine	Capacity	T	24
	Y travel	mm	400		Driven system	-	Arm type
	Z travel	mm	500		Holder	-	BT40
	spindle nose to table surface	mm	150-650		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150
Table	Table (A×B)	mm	900×400		Max. tool length	mm	300
	Max. load	kg	300		Max. tool weight	kg/T	7
	T slot (No.×width×distance)	mm	3×18×125		Tool change time (T-T)	s	2.5
Spindle	Driven system	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm
	speed	rpm	8000	Y axis		mm	0.005
	Power (continuous/10mins)	kW	7.5/11	Z axis		mm	0.005
	Torque (continuous/10mins)	Nm	53,7/105	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.004
	Taper	-	BT40		Y axis	mm	0.003
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.003
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	36/36/36	Controller		-	Fanuc 0i-β5
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	5.5
	X/Y/Z servo motor power	mm	1.2/1.8/3	Machine power		V/Hz	380/50
	X/Y/Z cutting feed	m/min	15/15/15	Floor space		mm	2600×3300

Parameter- VMC850II (OPT FANUC-β5 Package)

Item		Parameter		Item		Parameter	
Processing	X travel	mm	850	Tool magazine	Capacity	T	24
	Y travel	mm	500		Driven system	-	Arm type
	Z travel	mm	500		Holder	-	BT40
	spindle nose to table surface	mm	150-650		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150
Table	Table (A×B)	mm	1000×500		Max. tool length	mm	300
	Max. load	kg	600		Max. tool weight	kg/T	7
	T slot (No.×width×distance)	mm	5×18×80		Tool change time (T-T)	s	2.5
Spindle	Driven system	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm
	speed	rpm	8000	Y axis		mm	0.005
	Power (continuous/10mins)	kW	11/15	Z axis		mm	0.005
	Torque (continuous/10mins)	Nm	78.8/143.2	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.005
	Taper	-	BT40		Y axis	mm	0.003
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.003
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	36/36/36	Controller		-	Fanuc 0i-β5
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	6
	X/Y/Z servo motor power	mm	1.8/1.8/3	Machine power		V/Hz	380/50
	X/Y/Z cutting feed	m/min	15/15/15	Floor space		mm	2600×3400



Parameter- VMC1000II (OPT FANUC-β5 Package)

Item			Parameter	Item			Parameter
Processing	X travel	mm	1000	Tool magazine	Capacity	T	24
	Y travel	mm	600		Driven system	-	Arm type
	Z travel	mm	600		Holder	-	BT40
	spindle nose to table surface	mm	150-750		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150
Table	Table (A×B)	mm	1200×600		Max. tool length	mm	300
	Max. load	kg	800		Max. tool weight	kg/T	7
	T slot (No.×width×distance)	mm	5×18×100		Tool change time (T-T)	s	2.5
Spindle	Driven system	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm
	speed	rpm	8000	Y axis		mm	0.006
	Power (continuous/10mins)	kW	11/15	Z axis		mm	0.006
	Torque (continuous/10mins)	Nm	78.8/143.2	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.005
	Taper	-	BT40		Y axis	mm	0.004
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.004
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	36/36/36	Controller		-	Fanuc 0i-β5
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	6.5
	X/Y/Z servo motor power	mm	1.8/1.8/3	Machine power		V/Hz	380/50
	X/Y/Z cutting feed	m/min	15/15/15	Floor space		mm	2800×3550

Parameter- VMC1200II (OPT FANUC-β5 Package)

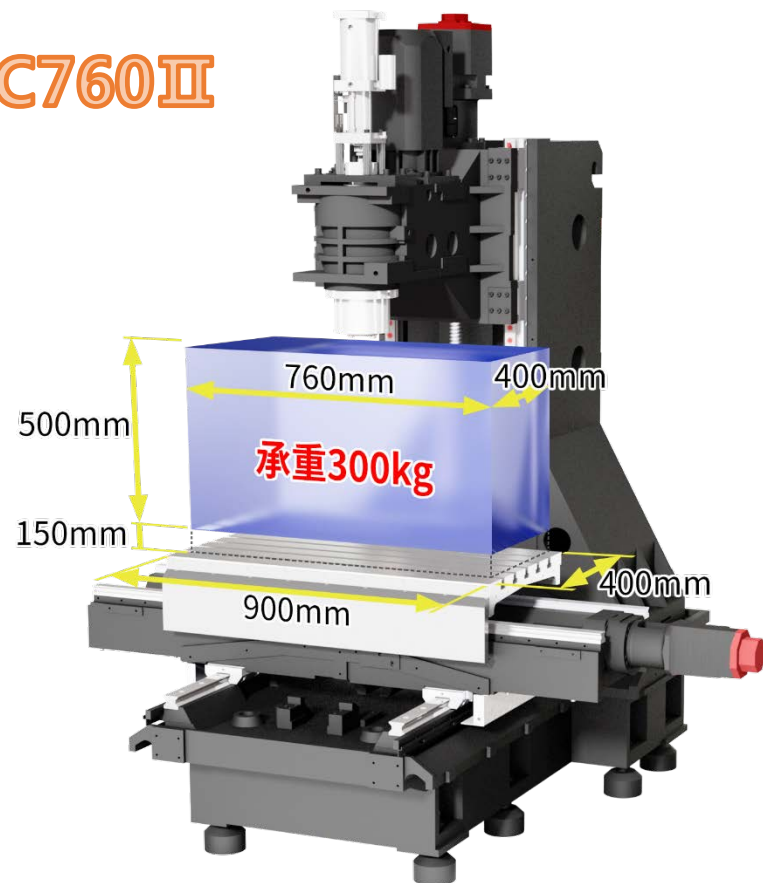
Item			Parameter	Item			Parameter
Processing	X travel	mm	1200	Tool magazine	Capacity	T	24
	Y travel	mm	600		Driven system	-	Arm type
	Z travel	mm	600		Holder	-	BT40
	spindle nose to table surface	mm	150-750		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150
Table	Table (A×B)	mm	1300×600		Max. tool length	mm	300
	Max. load	kg	600		Max. tool weight	kg/T	7
	T slot (No.×width×distance)	mm	5×18×100		Tool change time (T-T)	s	2.5
Spindle	Driven system	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm
	speed	rpm	8000	Y axis		mm	0.006
	Power (continuous/10mins)	kW	11/15	Z axis		mm	0.006
	Torque (continuous/10mins)	Nm	78.8/143.2	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.005
	Taper	-	BT40		Y axis	mm	0.004
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.004
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	36/36/36	Controller		-	Fanuc 0i-β5
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	7
	X/Y/Z servo motor power	mm	1.8/1.8/3	Machine power		V/Hz	380/50
	X/Y/Z cutting feed	m/min	15/15/15	Floor space		mm	3150×3550

Parameter- VMC1300II (OPT FANUC-β5 Package)

Item			Parameter	Item			Parameter	
Processing	X travel	mm	1300	Tool magazine	Capacity	T	24	
	Y travel	mm	650		Driven system	-	Arm type	
	Z travel	mm	650		Holder	-	BT40	
	spindle nose to table surface	mm	150-800		Max. tool dia. (full/empty adj. position)	mm	Φ78/Φ150	
Table	Table (A×B)	mm	1500×650		Max. tool length	mm	300	
	Max. load	kg	1200		Max. tool weight	kg/T	7	
	T slot (No.×width×distance)	mm	5×18×125		Tool change time (T-T)	s	2.5	
Spindle	Driven system	-	Belt		Positioning accuracy (standard GB/T20957.4-2007)	X axis	mm	0.008
	speed	rpm	8000			Y axis	mm	0.006
	Power (continuous/10mins)	kW	11/15			Z axis	mm	0.006
	Torque (continuous/10mins)	Nm	78.8/143.2	Repeatability (standard GB/T20957.4-2007)	X axis	mm	0.005	
	Taper	-	BT40		Y axis	mm	0.004	
	Pull stud	-	MAS403-P-40T-I(45°)		Z axis	mm	0.004	
Feed rate	X/Y/Z X/Y/Z rapid feed	m/min	30/30/20	Controller		-	Fanuc 0i-β5	
	X/Y/Z ball screw diameter	mm	40/40/40	Machine weight		t	7	
	X/Y/Z servo motor power	mm	3/3/3	Machine power		V/Hz	380/50	
	X/Y/Z cutting feed	m/min	12/12/10	Floor space		mm	3350×3700	

Working range

VMC760II



VMC850II



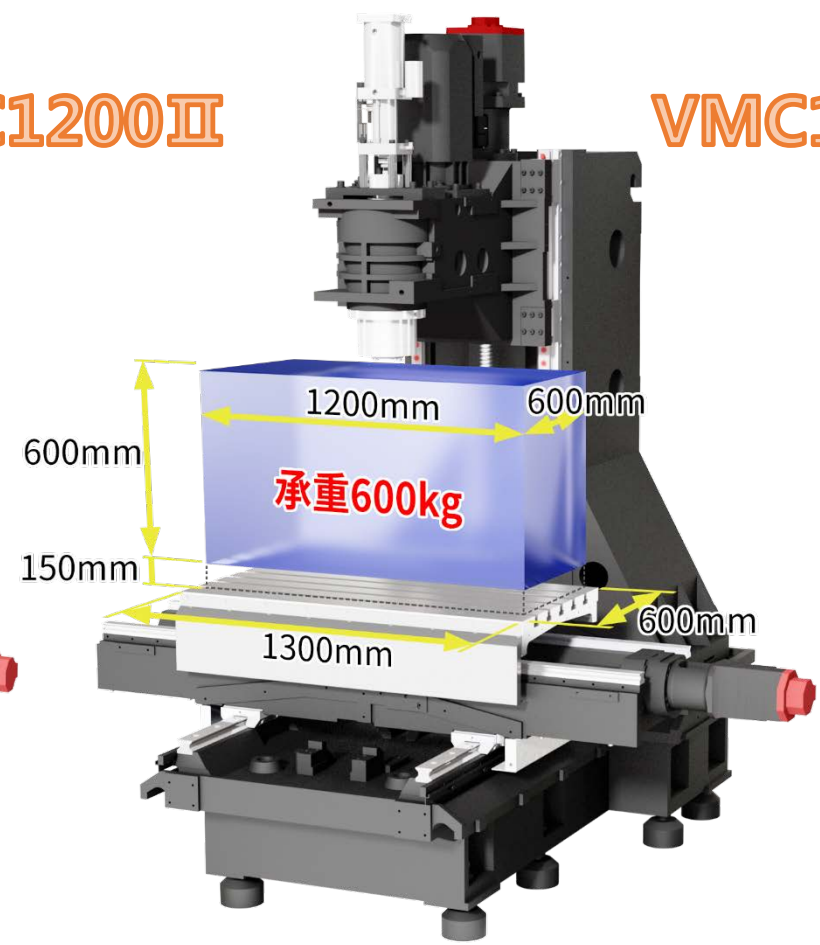
Model	VMC760II	VMC850II
Rapid feed X/Y/Z m/min	36/36/36	
Max. acceleration X/Y/Z	0.6g(Full load)	

Working range

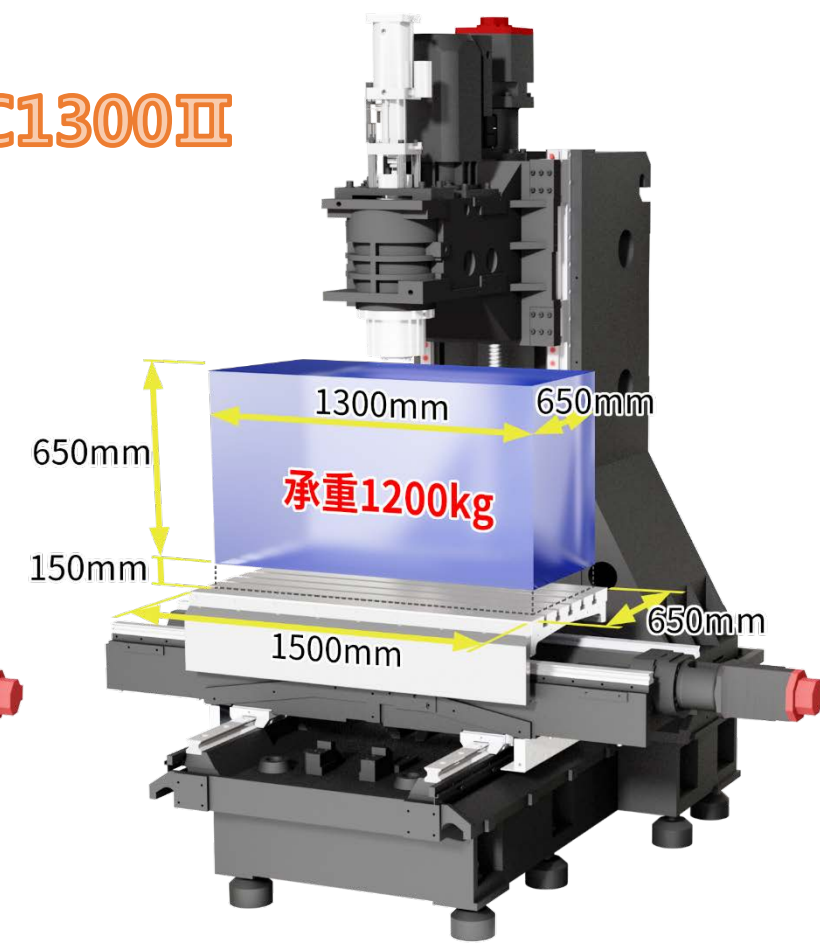
VMC1000II



VMC1200II



VMC1300II

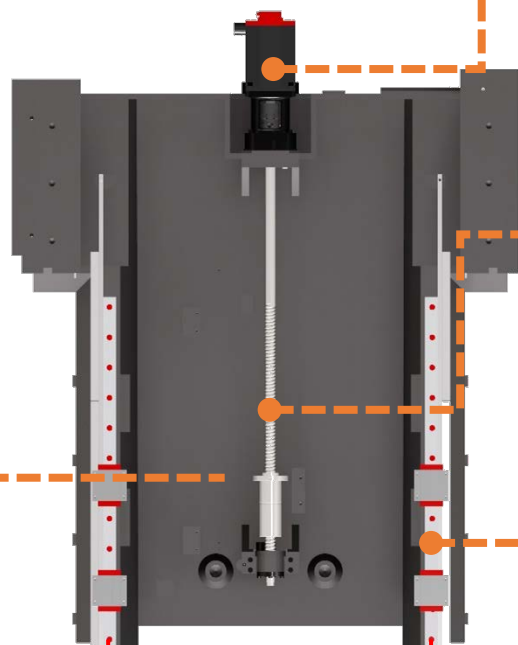


Model	VMC1000II	VMC1200II	VMC1300II
Rapid feed X/Y/Z m/min	36/36/36		30/30/20
Max. acceleration X/Y/Z	0.6g(Full load)		

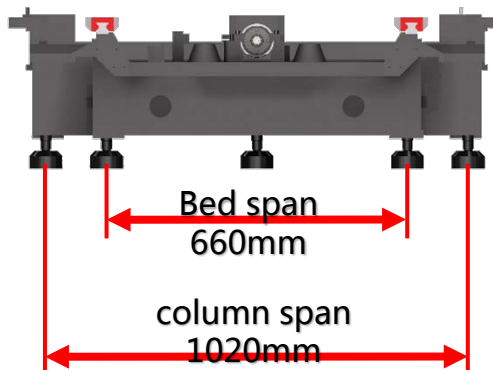
Bed-VMC760II



Manual work-scrape



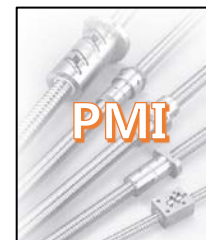
Linear guideway span 680mm



Bed span 660mm

column span 1020mm

Servo motor direct drive



PMI

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC760II	Y	40	12	6420	18410	C3

Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC760II	Y	(ball bearing)	35	75500	52000	P



PMI

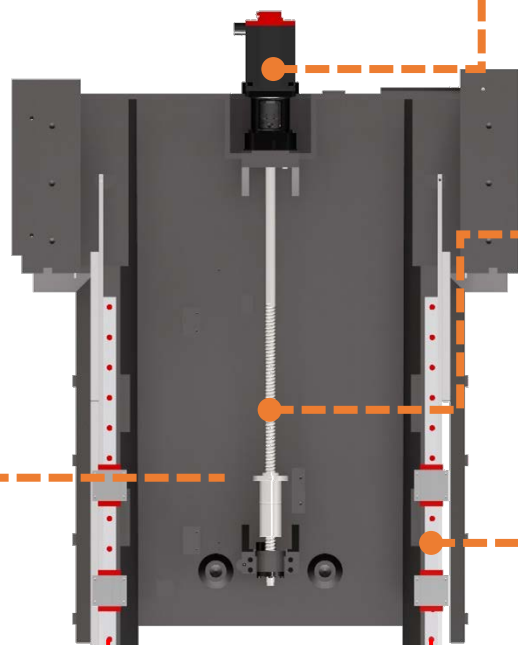
Large span- stability



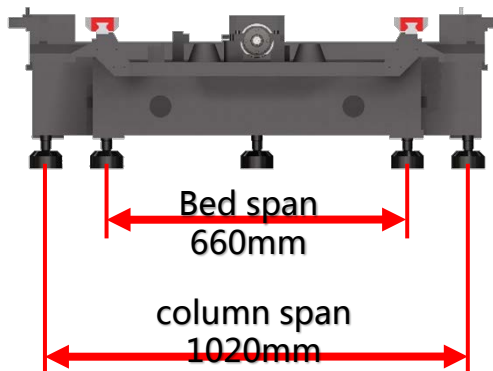
Bed-VMC850II



Manual work-scrape



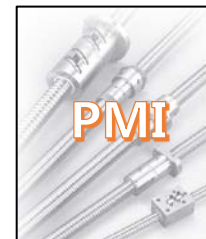
Linear guideway span 680mm



Bed span 660mm

column span 1020mm

Servo motor direct drive



PMI

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC850II	Y	40	12	6420	18410	C3

Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC850II	Y	(ball bearing)	45	117900	83800	P

PMI



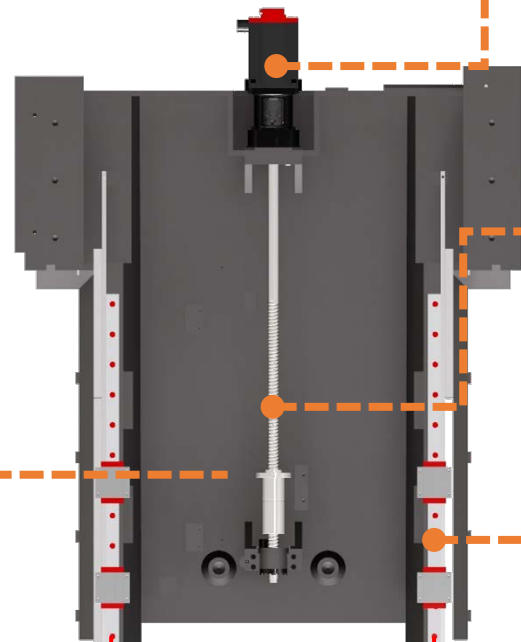
Large span - stability



Bed-VMC1000II



Manual work-scrape



Servo motor direct drive

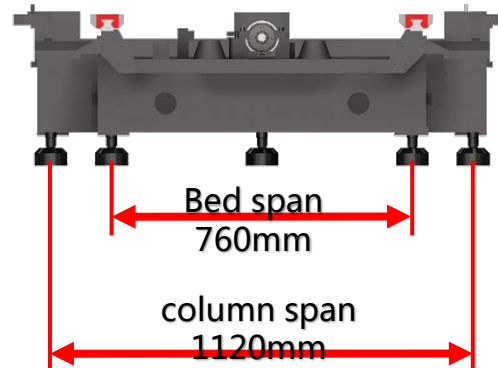


PMI

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC1000II	Y	40	12	6420	18410	C3

Linear guideway span 785mm

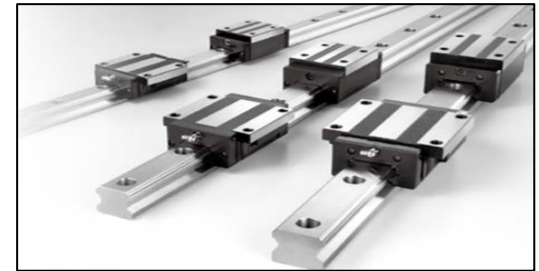
Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC1000II	Y	(ball bearing)	45	117900	83800	P



Bed span 760mm

column span 1120mm

PMI

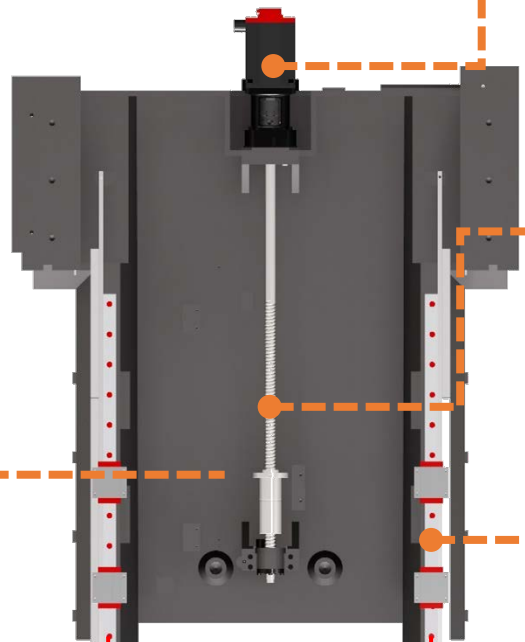


Large span- stability

Bed-VMC1200II



Manual work-scrape



Servo motor direct drive

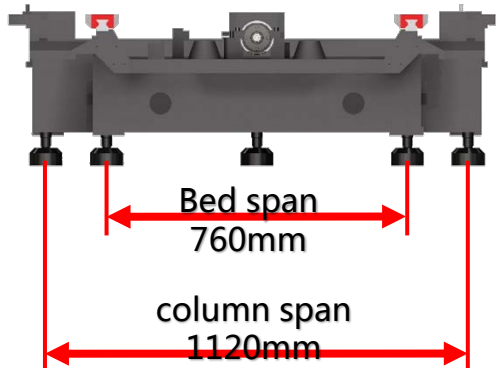


PMI

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC1200 II	Y	40	12	6420	18410	C3

Linear guideway span 785mm

Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC1200II	Y	(ball bearing)	45	117900	83800	P



Bed span 760mm

column span 1120mm

PMI

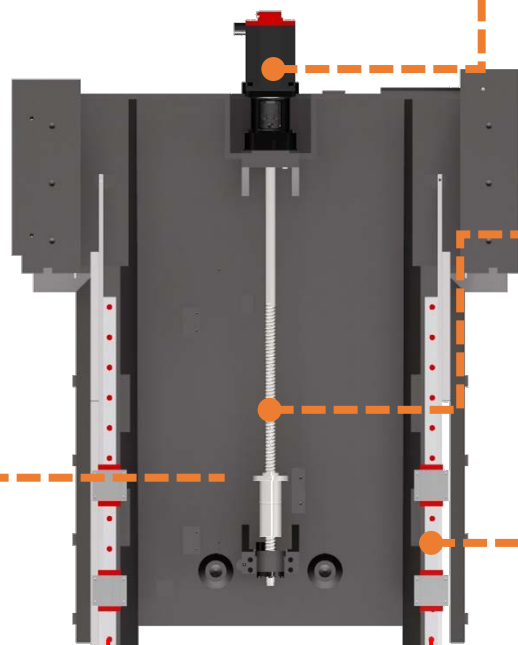


Large span - stability

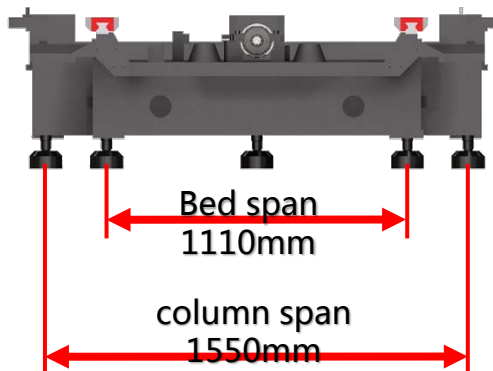
Bed-VMC1300II



Manual work-scrape



Linear guideway span 1120mm



Bed span 1110mm

column span 1550mm

Servo motor direct drive



PMI

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC1300 II	Y	40	10	6430	18440	C3

Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC1300II	Y	(ball bearing)	45	261600	117200	P

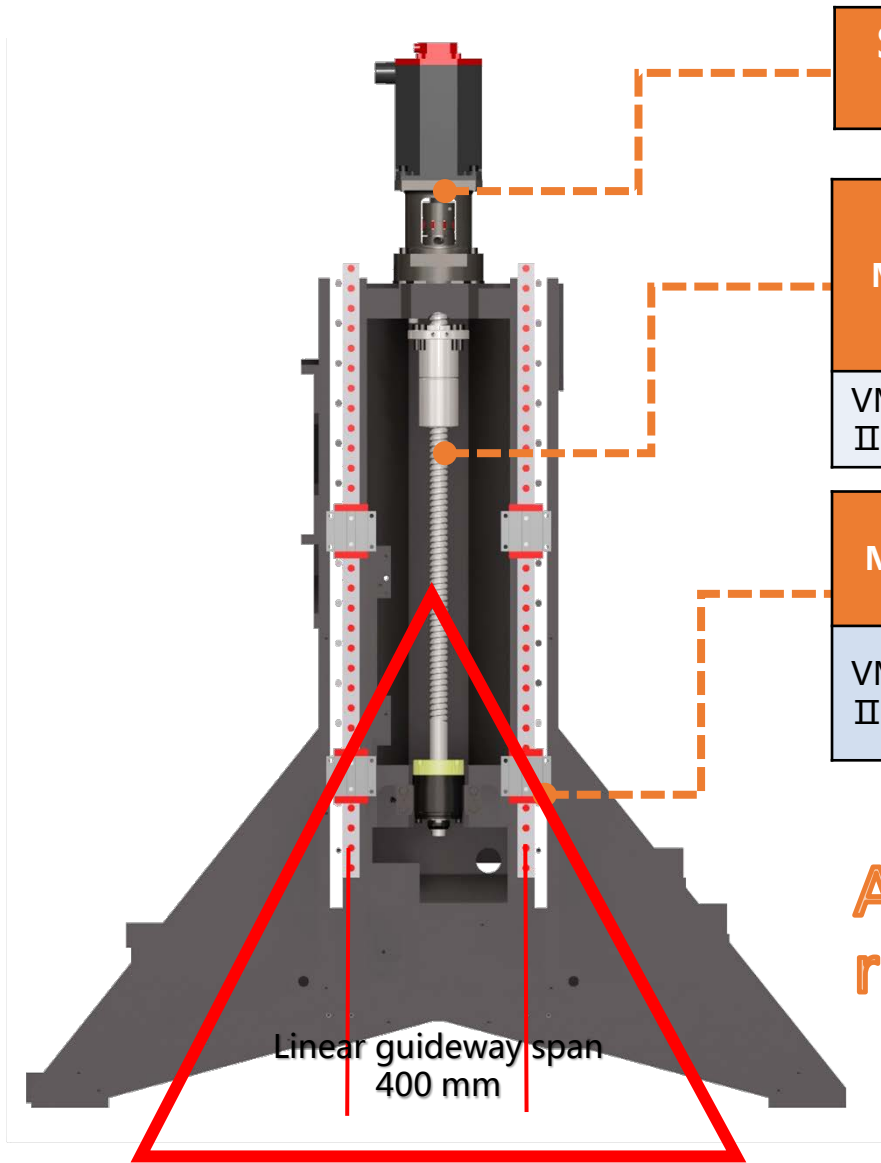
PMI



Large span- stability



Column-VMC760II

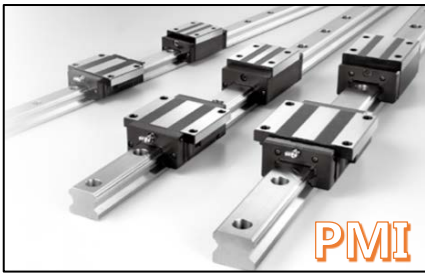


Servo motor direct drive

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynami c	Static	
VMC760 II	Z	40	12	6420	18410	C3



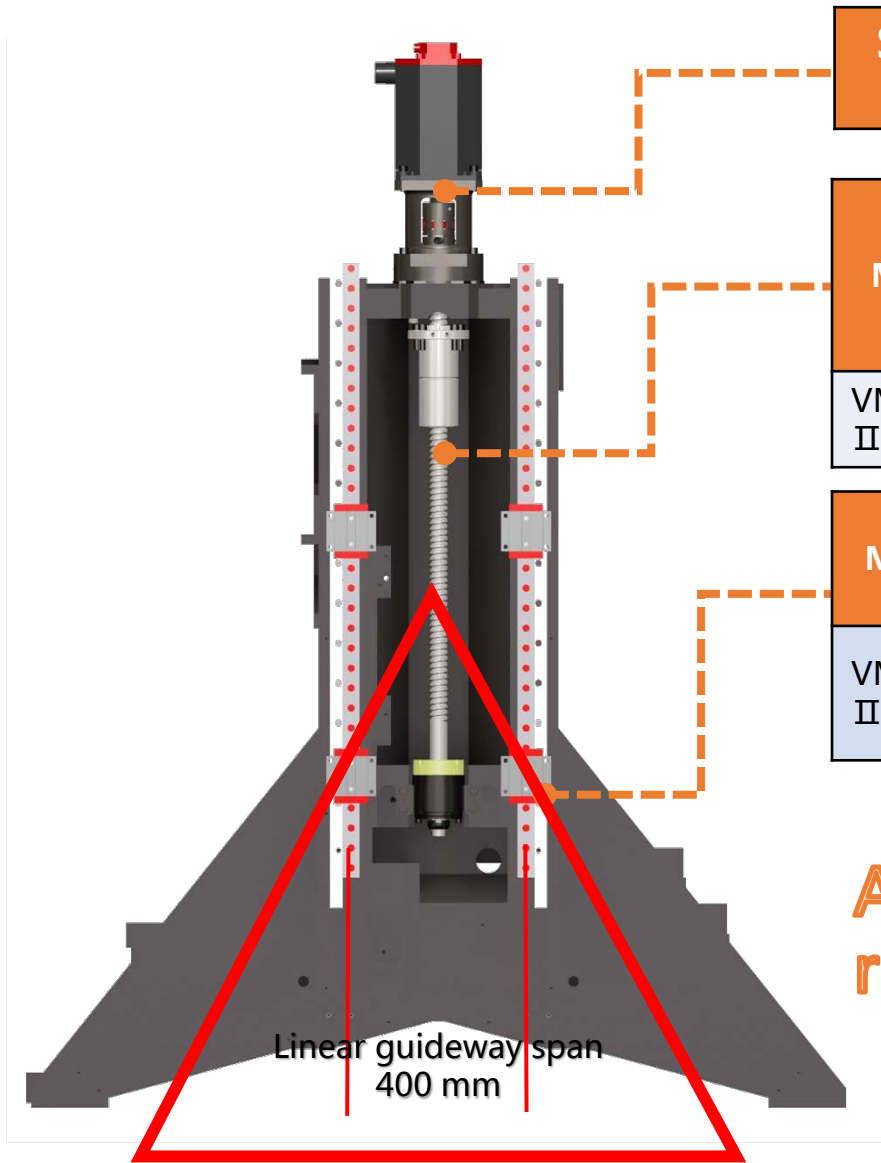
Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precisi on grade
VMC760 II	Z	(cylindrical roller bearing)	35	123500	57900	p



A-shaped column-rigidity

Linear guideway span 400 mm

Column-VMC850II

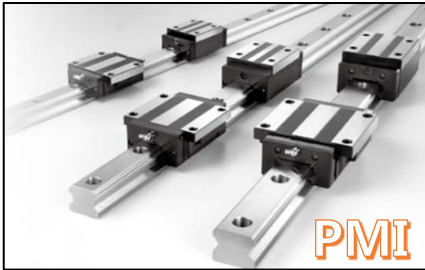


Servo motor direct drive

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynami c	Static	
VMC850 II	Z	40	12	6420	18410	C3



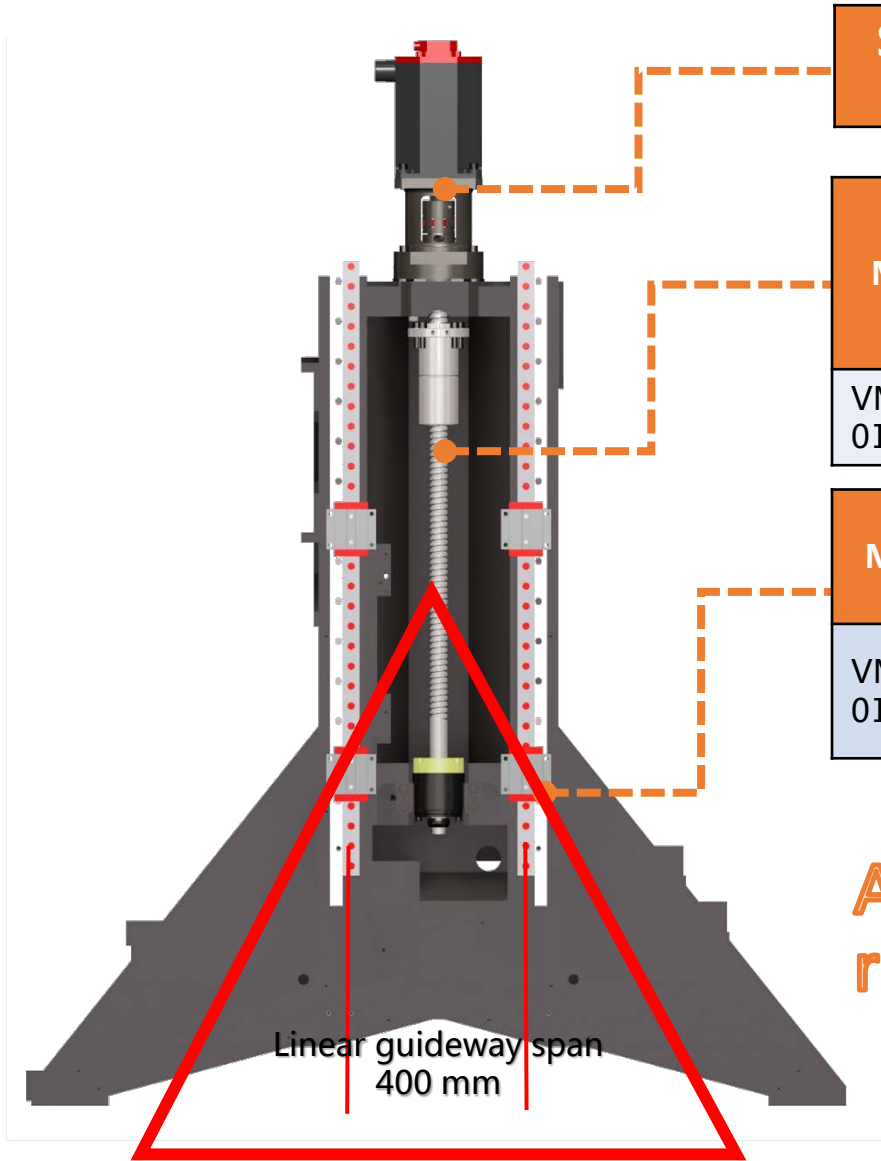
Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precisi on grade
VMC850 II	Z	(cylindrical roller bearing)	35	123500	57900	P



A-shaped column-rigidity

Linear guideway span
400 mm

Column-VMC1000II

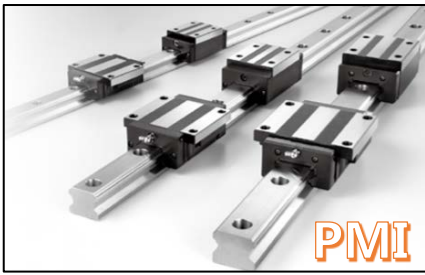


Servo motor direct drive

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC1000II	Z	40	12	6420	18410	C3



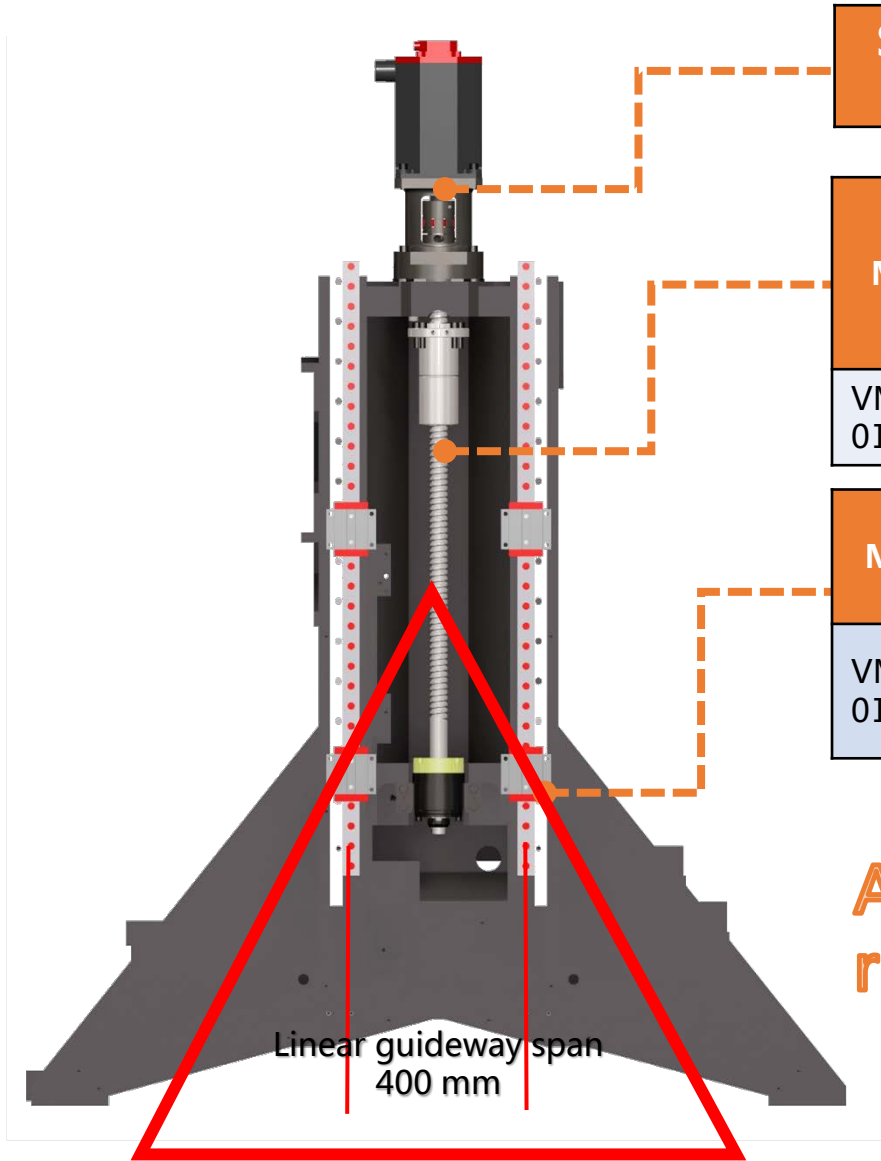
Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC1000II	Z	(cylindrical roller bearing)	45	193800	92800	P



A-shaped column-rigidity

Linear guideway span 400 mm

Column-VMC1200II

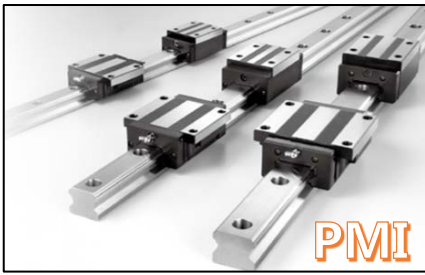


Servo motor direct drive

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynami c	Static	
VMC1200II	Z	40	12	6420	18410	C3



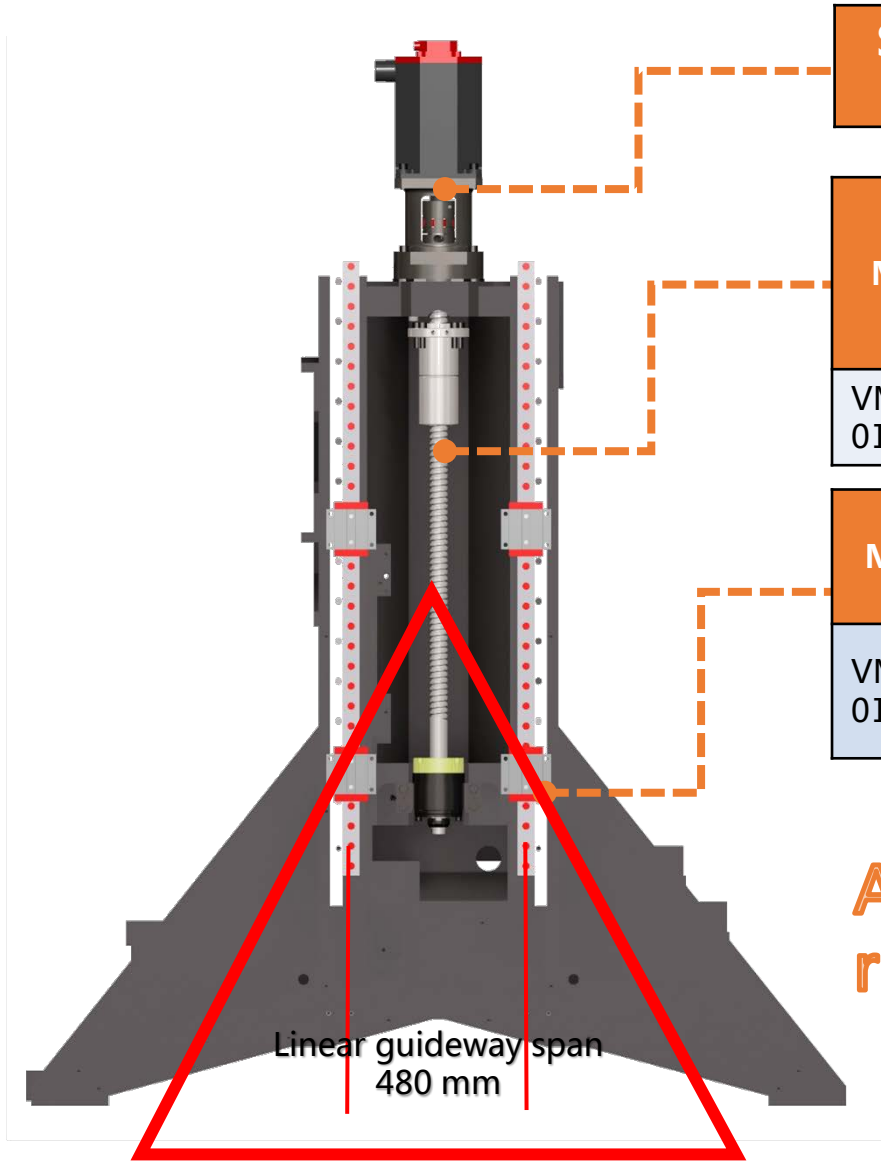
Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precisi on grade
VMC1200II	Z	(cylindrical roller bearing)	45	193800	92800	P



A-shaped column-rigidity

Linear guideway span 400 mm

Column-VMC1300II

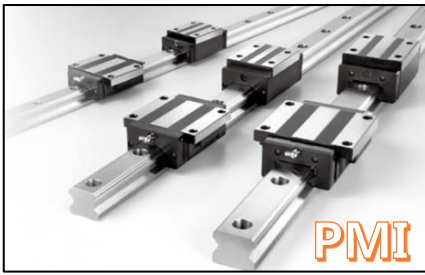


Servo motor direct drive

Model	Axis	Ball screw (mm)		Corrected rated load(kgf)		Precision grade
		Dia.	Lead	Dynami c	Static	
VMC1300II	Z	40	10	6430	18440	C3



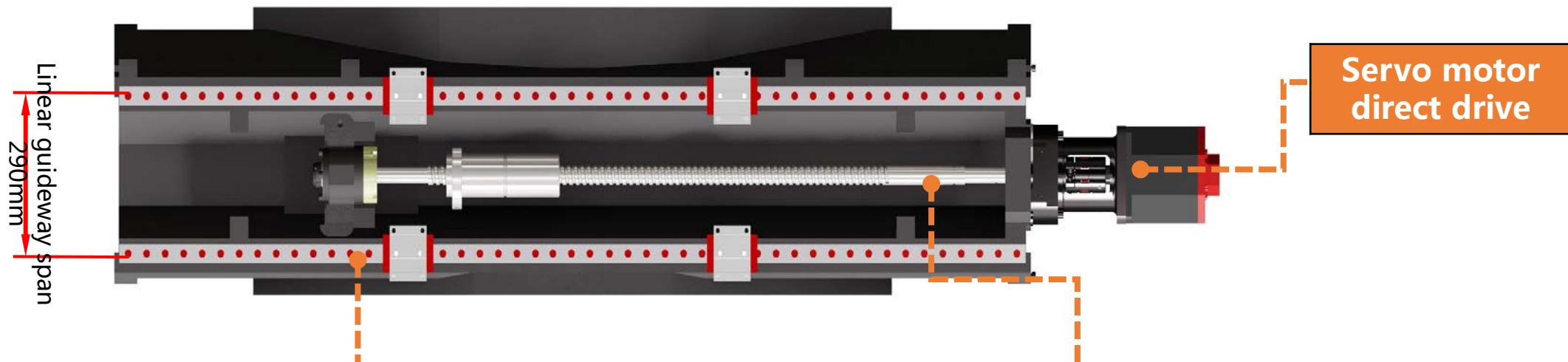
Model	Axis	Linear guideway	Width (mm)	Static load (N)	Dynamic load (N)	Precisi on grade
VMC1300II	Z	(cylindrical roller bearing)	45	193800	92800	P



A-shaped column-rigidity

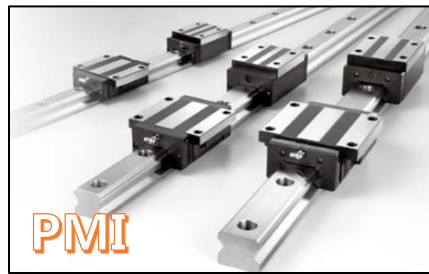
Linear guideway span 480 mm

Saddle-VMC760 II



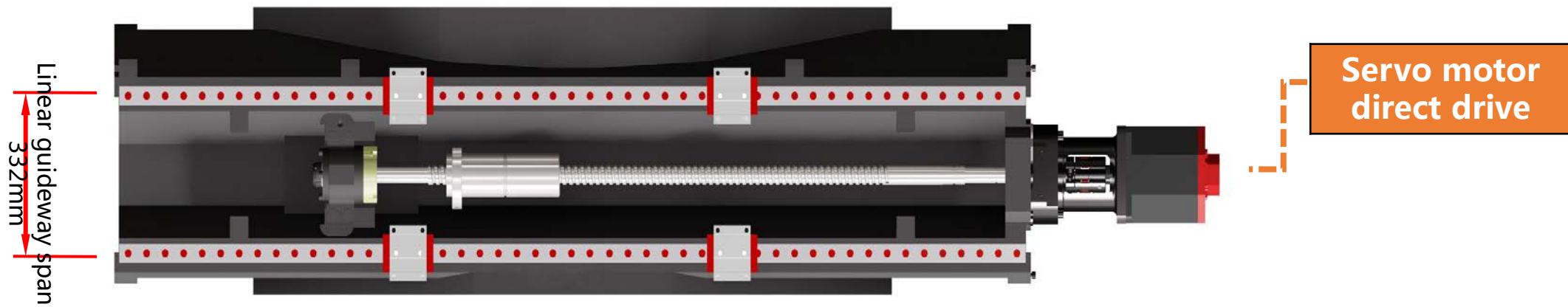
Model	Ax is	Ball screw (mm)		Corrected rated load(kg/f)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC760 II	X	40	12	6420	18410	C3

Model	Ax is	Brand	Width (mm)	Static load (N)	Dynamic load (N)	Precisi on grade
VMC760 II	X	Ball bearing	30	57800	39200	P



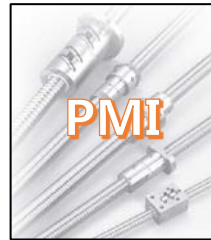
➤ Motor seat integrated design - compact structure

Saddle-VMC850 II



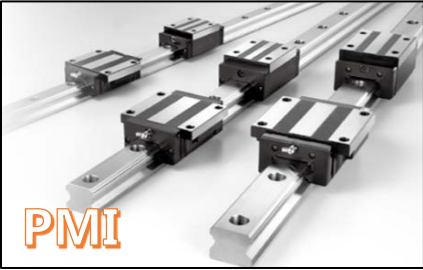
Servo motor direct drive

Linear guideway span
332mm



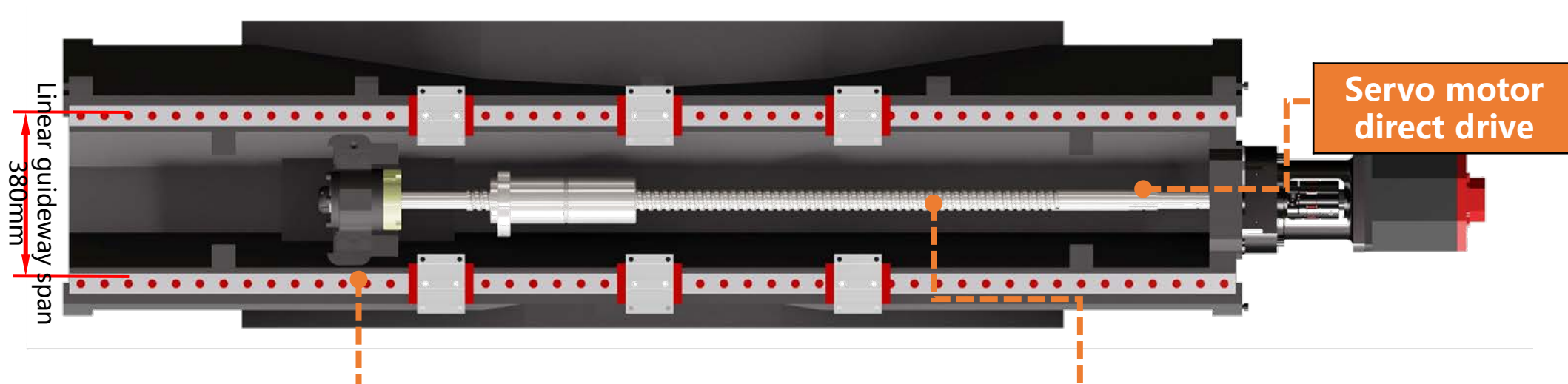
Model	Axis	Ball screw (mm)		Corrected rated load(kg/f)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC850 II	X	40	12	6420	18410	C3

Model	Axis	Brand	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC850 II	X	Ball bearing	35	75500	52000	P



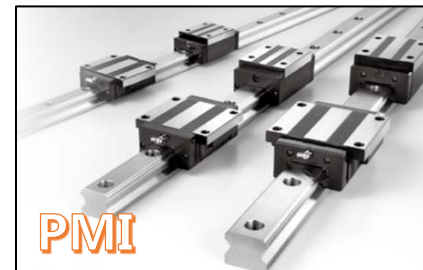
➤ Motor seat integrated design - compact structure

Saddle-VMC1000 II



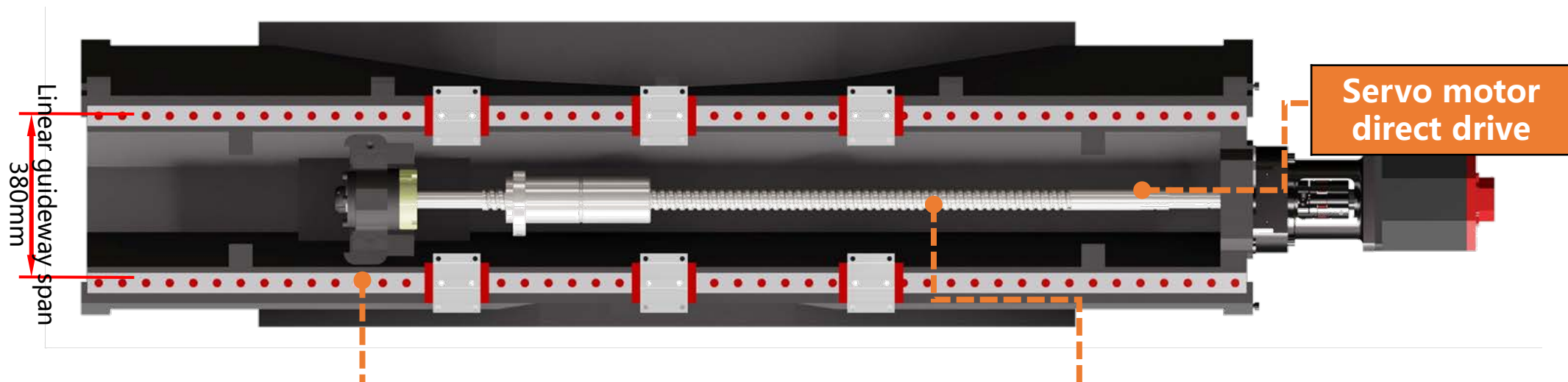
Model	Ax is	Ball screw (mm)		Corrected rated load(kg/f)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC1000 II	X	40	12	6420	18410	C3

Model	Ax is	Brand	Width (mm)	Static load (N)	Dynamic load (N)	Precisi on grade
VMC1000 II	X	Ball bearing	35	75500	52000	P



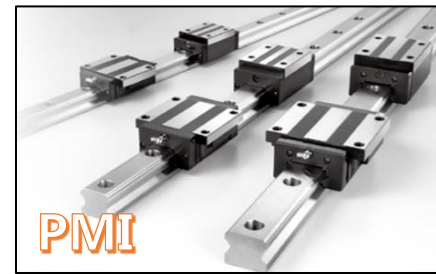
- 2 Linear guideways with 6 sliders - table load ↑
- Motor seat integrated design - rigidity

Saddle-VMC1200II



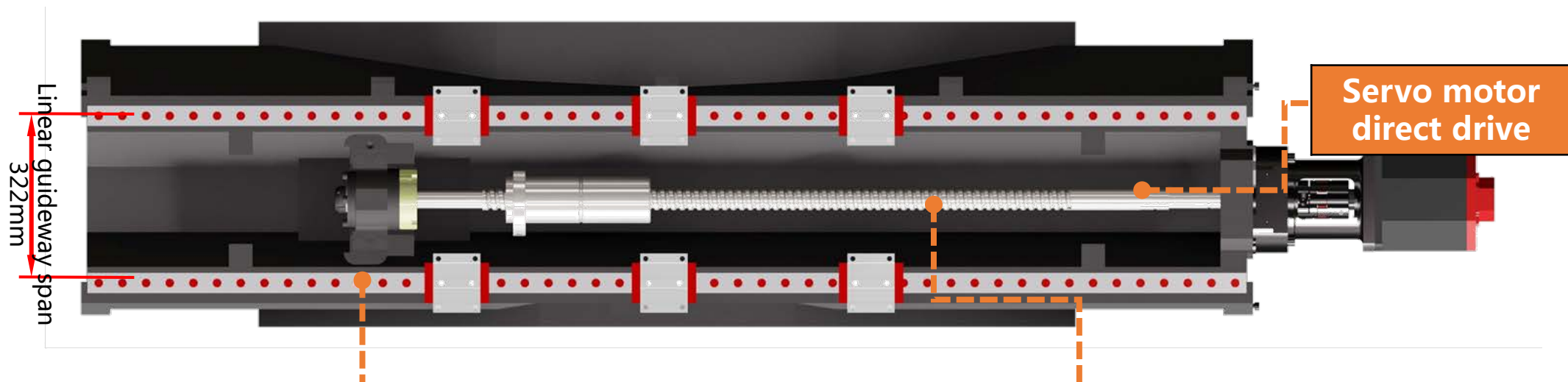
Model	Axis	Ball screw (mm)		Corrected rated load(kg/f)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC1200II	X	40	12	6420	18410	C3

Model	Axis	Brand	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC1200II	X	Ball bearing	35	75500	52000	P



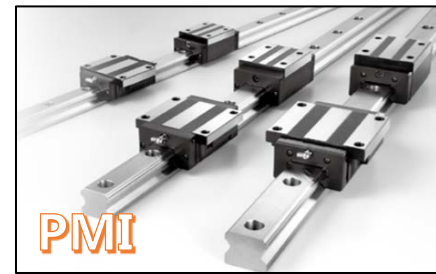
- 2 Linear guideways with 6 sliders - table load ↑
- Motor seat integrated design - rigidity

Saddle-VMC1300II



Model	Axis	Ball screw (mm)		Corrected rated load(kg/f)		Precision grade
		Dia.	Lead	Dynamic	Static	
VMC1300II	X	40	10	6430	18440	C3

Model	Axis	Brand	Width (mm)	Static load (N)	Dynamic load (N)	Precision grade
VMC1300II	X	Ball bearing	35	169000	73900	P

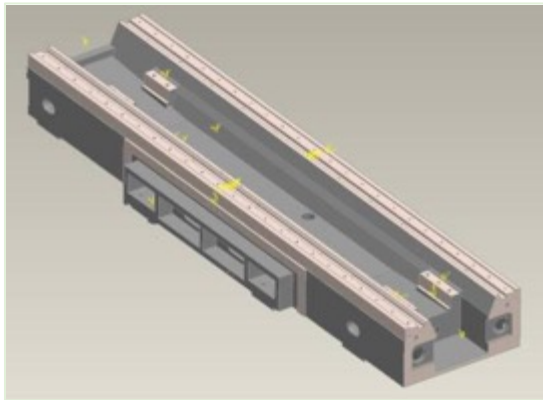
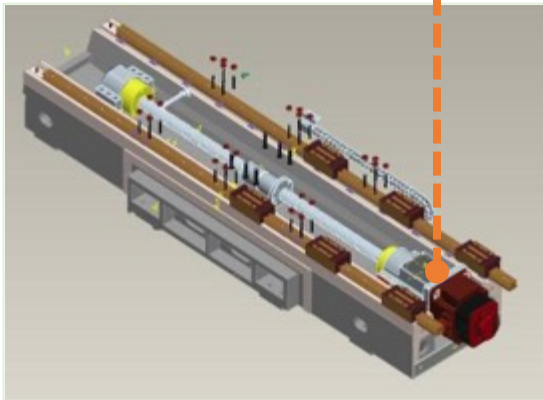


- 2 Linear guideways with 6 sliders - table load ↑
- Motor seat integrated design - rigidity

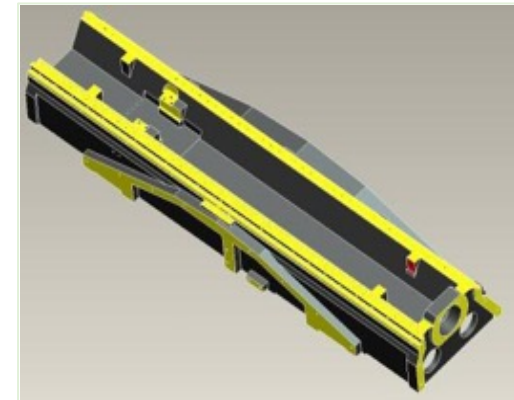
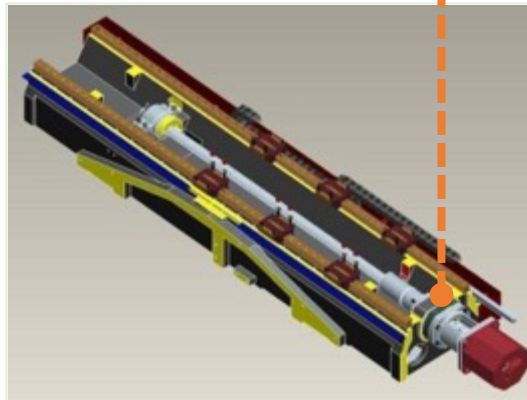
Saddle

Motor seat

Common :



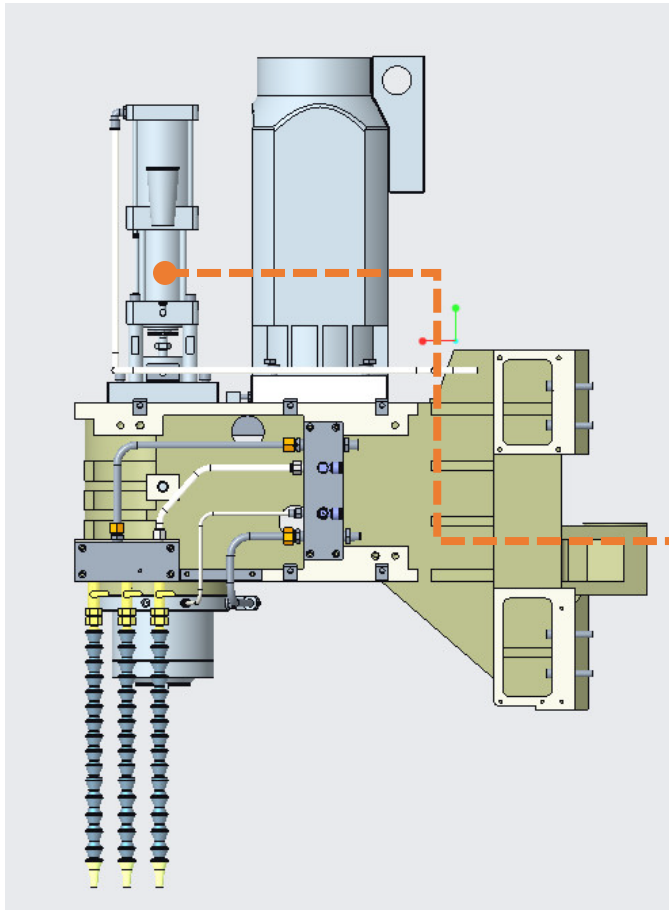
VMCI :



- The integrated design of motor seat and bed enhances the overall rigidity of the foundation parts
- The bridge type saddle provides reliable support for table and the prestretching of the ball screw

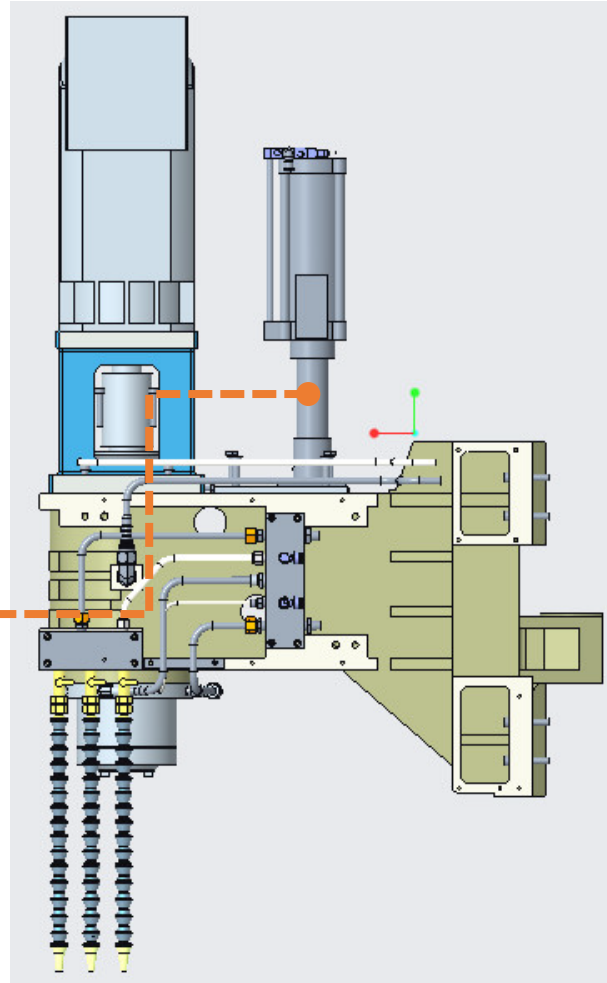


Spindle box



STD : Belt 8000rpm
OPT: Belt 10000rpm

Pneumo-
hydraulic
pressure-
cylinder



OPT : Direct drive 12000rpm

- Spindle box :
- Tool release cylinder changes pneumatic power to hydraulic power to realize stable tool release
 - The spindle uses Taiwan Royal brand with dynamic balance grade G0.4

Spindle

STD : Belt 8000rpm
OPT: Belt 10000rpm

OPT : Direct drive 12000rpm



	Belt dirve	Belt drive	Direct drive
Diameter (mm)	Ø150	Ø150	Ø150
Spindle taper	BT (std)/BBT(opt)	BT (std)/BBT(opt)	BT (std)/BBT(opt)
Max speed (rpm)	8000	10000	12000
Bearing	big steel ball	small steel ball	ceramic ball
Bearing inner diameter (mm)	Ø70	Ø70	Ø70
Bearing lubrication type	Grease	Grease	Grease
Tool clamping force (KGF)	1000±100	1000±100	1000±100
Cooling type	NO (Oil cooling OPT)	Oil cooling	Oil cooling
CTS	OPT	OPT	OPT

Disc type ATC (Taiwan)

T-T
2.5s



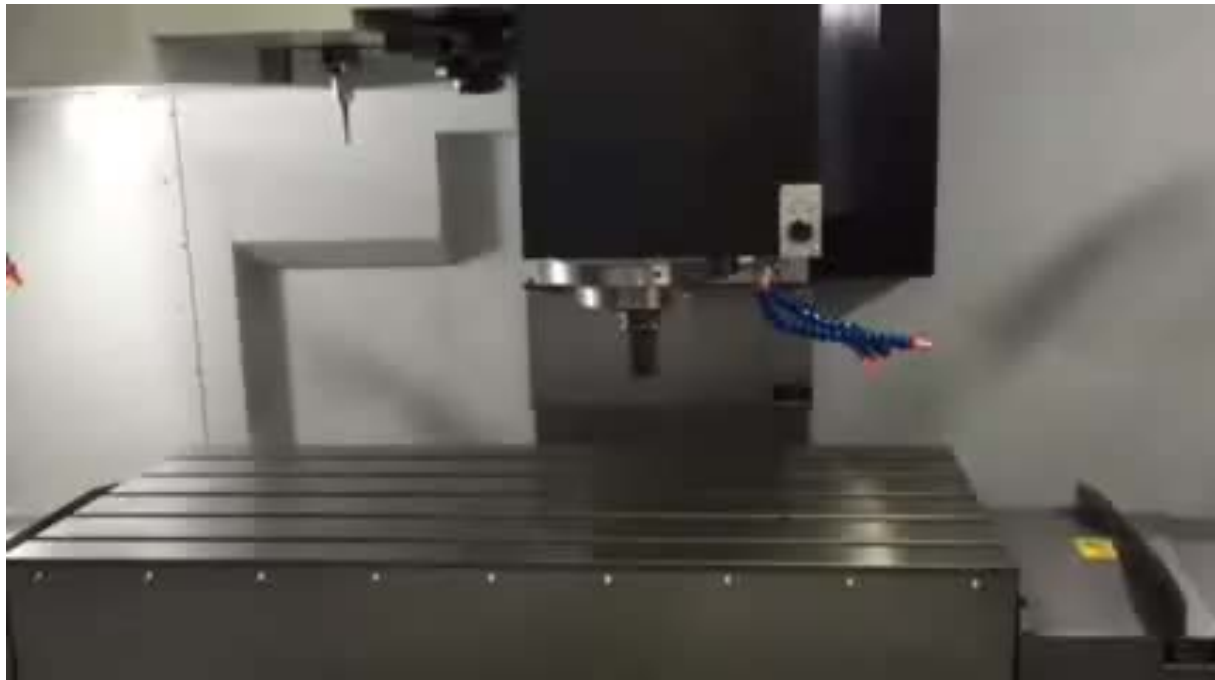
Tool capacity
24T

- Cylindrical CAM segmentation, high segmentation accuracy, low failure rate
- Long service life, simple structure, convenient maintenance ,
- Double bearing separated tool arm, high concentricity, low noise
- The whole series of electronic switch adopt import original, quality guarantee



Intelligent standby tool mode

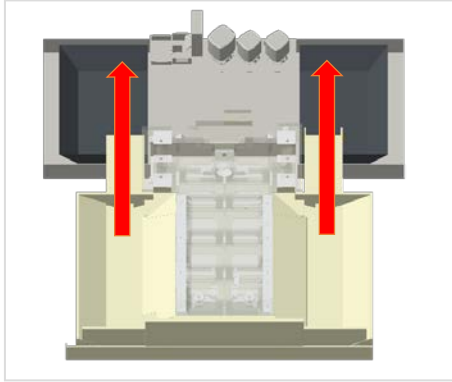
- To prepare the next tool in advance to shorten tool change time



Technical advantage - diversified chip conveyors

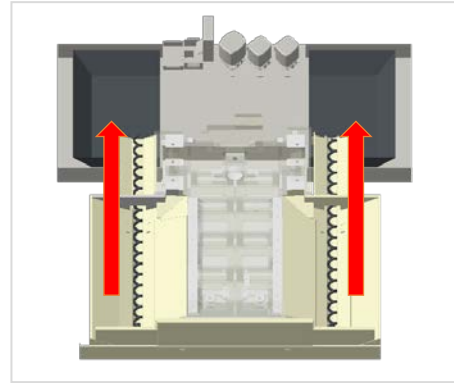
STD

Internal flush type
External chip bucket

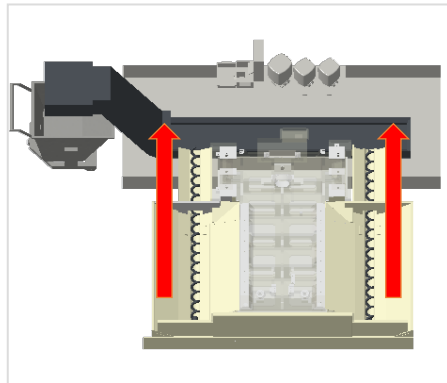


OPT

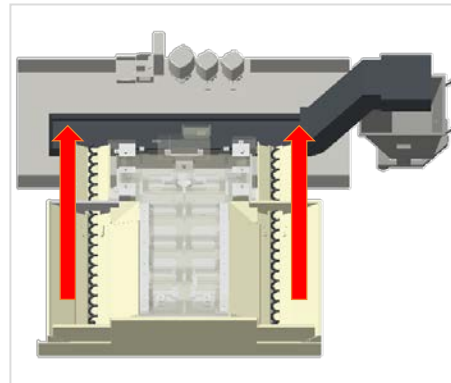
Internal helix type
External chip bucket



Internal helix type
External CC (left rear)

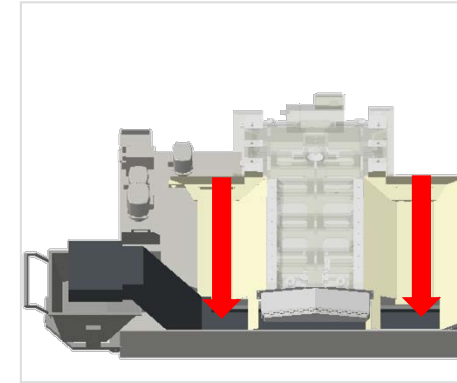


Internal helix type
External CC (right rear)

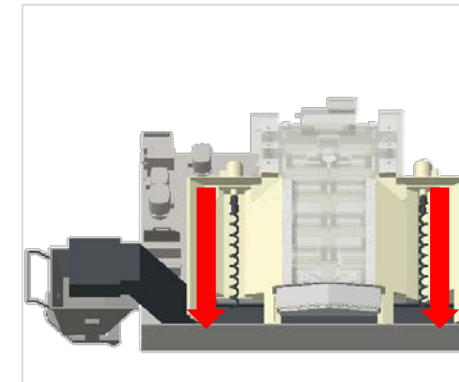


OPT

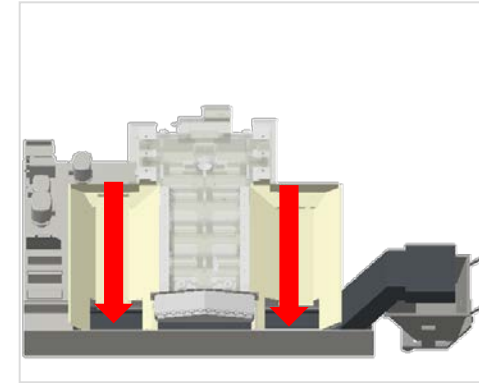
Internal flush type
External CC (left front)



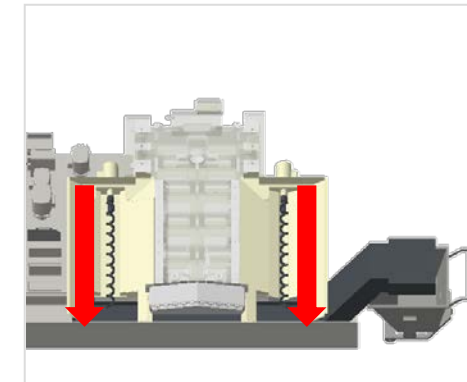
Internal helix type
External CC (left front)



Internal flush type
External CC (right front)








Internal helix type
External CC (right front)



Chip conveyor selection

●: Recommend ○: can use ×: cannot use

Material		Steel	Iron cast	Nodular cast iron	Aluminum, copper, non-metallic	Mixture
Chip shape						
Internal chip conveyor	Flush	○	○	○	○	○
	Helix	●	●	●	○	●
External chip conveyor	Scrap er	×	○	○	●	○
	Chain	●	●	●	○	●



Technical advantage - Professional automation interface

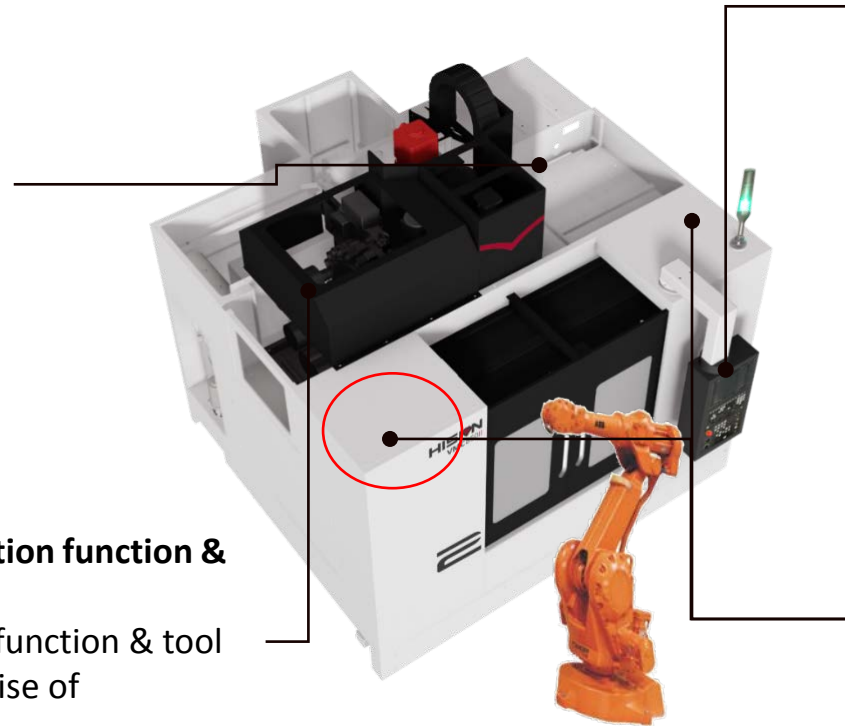
VMC II

- **Reserved interface**

Enough interfaces are reserved for 4 axes, workpiece check, tool check, etc

- **Tool automatic compensation function & tool life management**

Tool automatic compensation function & tool life management are the premise of automation



- **Multiple communication protocols**

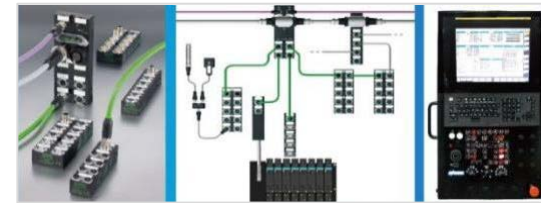
Modbus/TCP(standard)

FOCAS2

profinet IO

profibus

EtherNET/IP

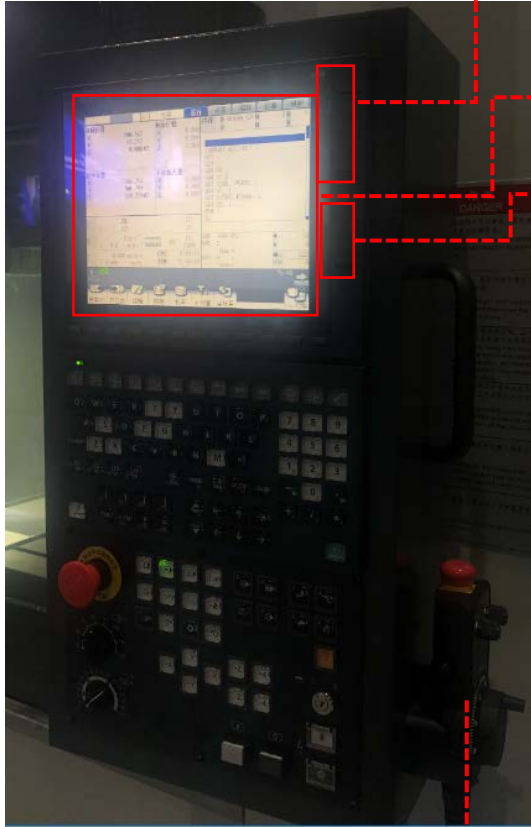


- **Auto-door**

Interfaces is reserved to easily upgrade the manual door to auto door



Controller -MITSUBISHI (STD)



◆ CF card

◆ 10.4" TFT LCD
capacitive touch screen

◆ USB interface

◆ Hand wheel

Mitsubishi M80B

No.	Item
1	Super smooth surface (SSS) function
2	Inserted ethernet interface (RJ45) +16GB SD card
3	SD slot + USB slot+RS232
4	10.4 capacitive touch screen
5	Process condition choose
6	High speed high accuracy mode I /II 33.7KB/min, 67.5KB/min (part)

Note : Suitable for general parts processing and simple 3D surface processing

Controller -MITSUBISHI (OPT)



◆ CF card

◆ 10.4" TFT LCD capacitive touch screen

◆ USB interface

◆ Hand wheel

Mitsubishi M80A	
No.	Name
1	Super smooth surface (SSS) function
2	Inserted ethernet interface (RJ45) +16GB SD card
3	SD slot + USB slot+RS232
4	10.4 capacitive touch screen
5	Process condition choose
6	High speed high accuracy mode I /II/III 33.7KB/min, 67.5KB/min、 135K/min

Note : Suitable for mode processing and complex 3D surface processing

Controller - FANUC (OPT)



Control panel

◆ Rotary operation control panel

◆ CF card

◆ USB interface

◆ 10.4" TFT LCD capacitive non touch screen

◆ Hand wheel

FANUC-β-type5	
STD	
No.	Name
1	AICCI (40 blocks)
2	Inserted ethernet interface
3	10.4 LCD non touch screen
4	CF slot +USB slot +RS232

Note : Suitable for general parts processing and simple 3D surface processing

Controller - FANUC (OPT)



Control panel

◆ Rotary operation control panel

◆ CF card

◆ USB interface

◆ 10.4" TFT LCD capacitive non touch screen

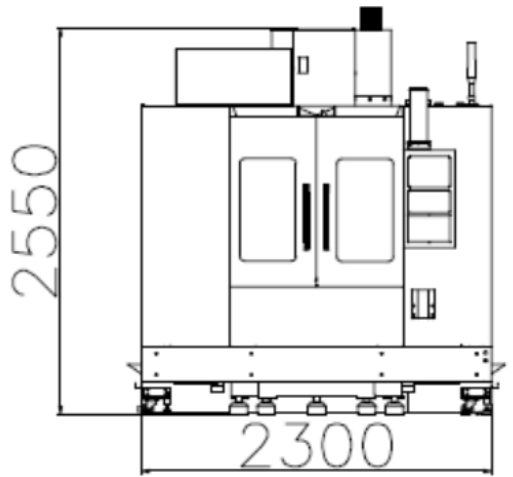
◆ Hand wheel

FANUC-β-type3	
STD	
No.	Name
1	AICCI (200 blocks)
2	Inserted ethernet interface
3	10.4 LCD non touch screen
4	CF slot +USB slot +RS232

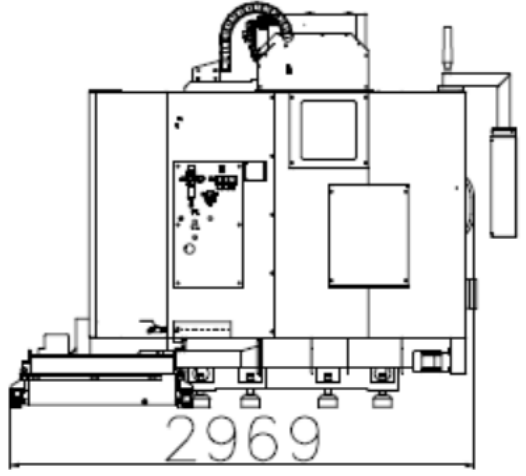
Note : Suitable for mold processing and complex 3D surface processing

Machine size-VMC760II

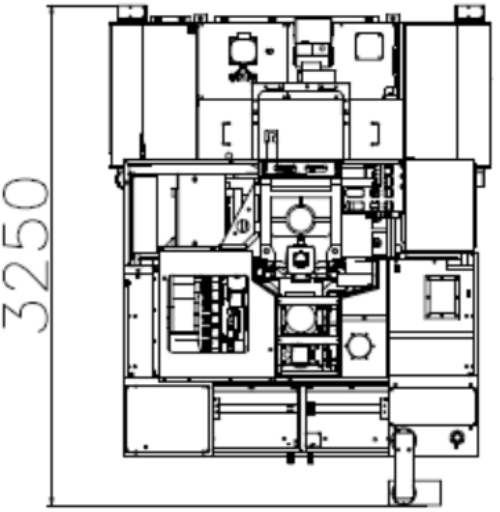
Front view



Left view

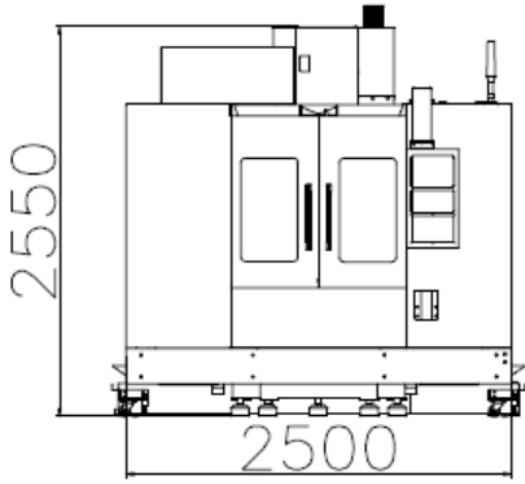


top view

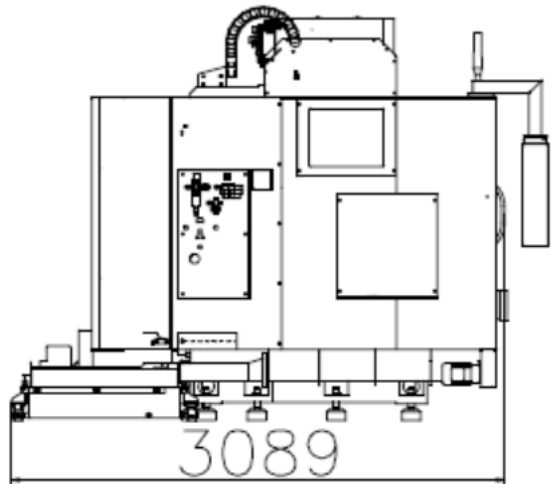


Machine size-VMC850II

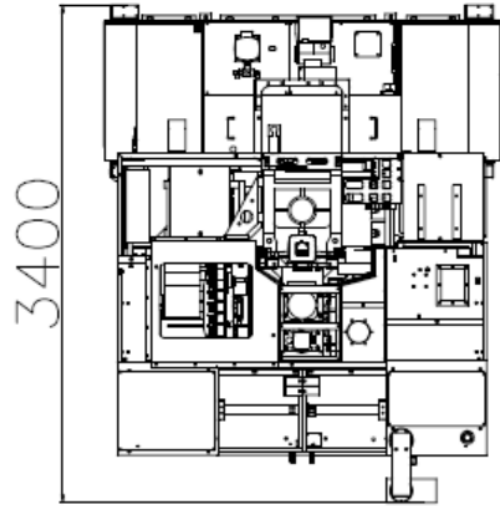
Front view



Left view

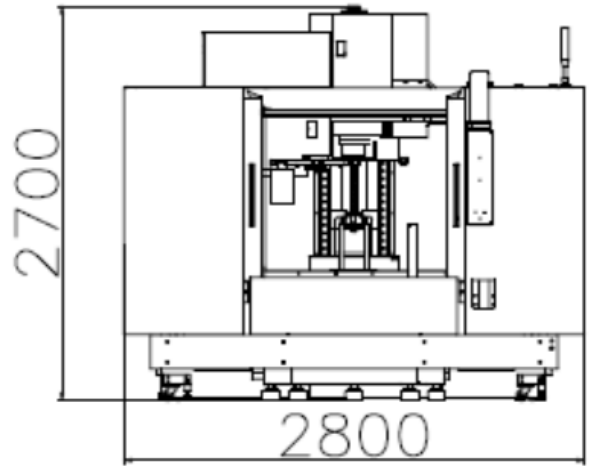


top view

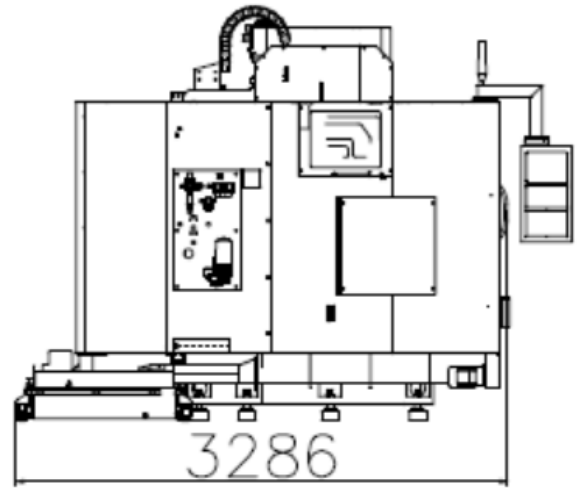


Machine size-VMC1000II

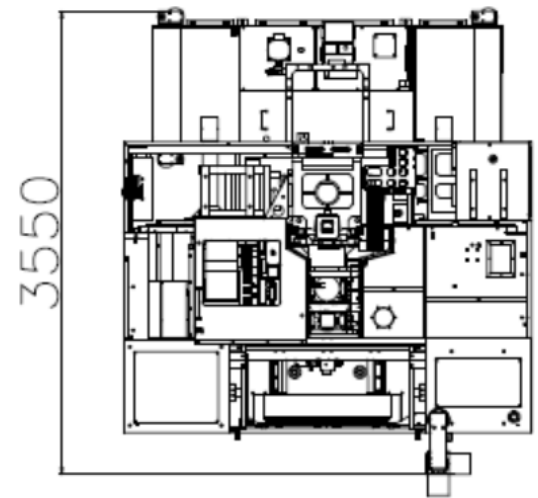
Front view



Left view

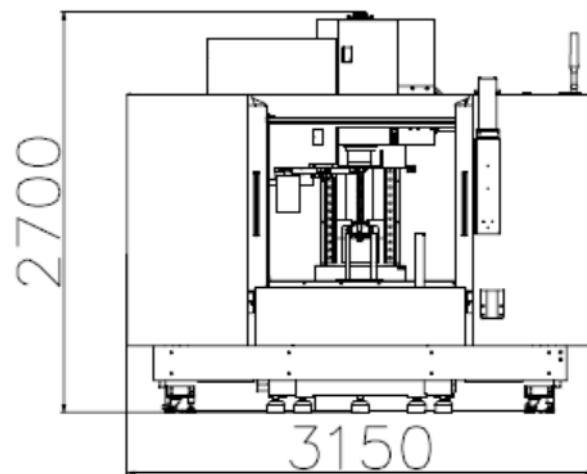


top view

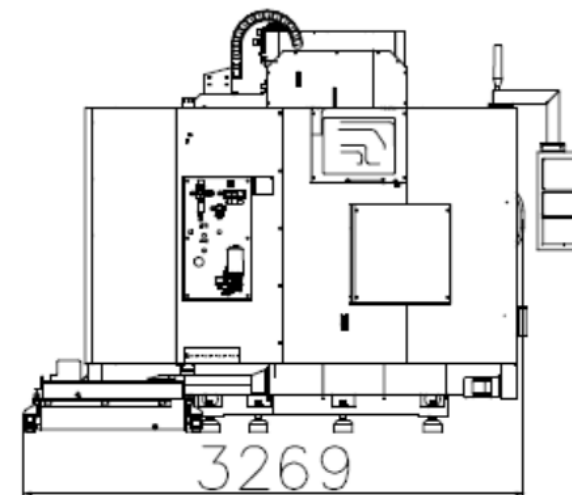


Machine size-VMC1200II

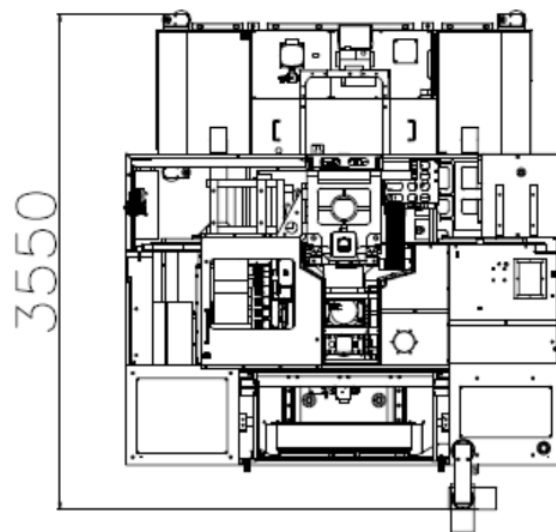
Front view



Left view

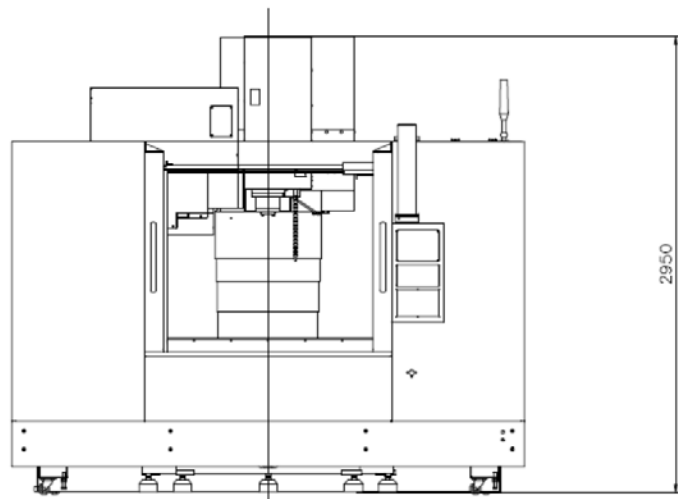


top view

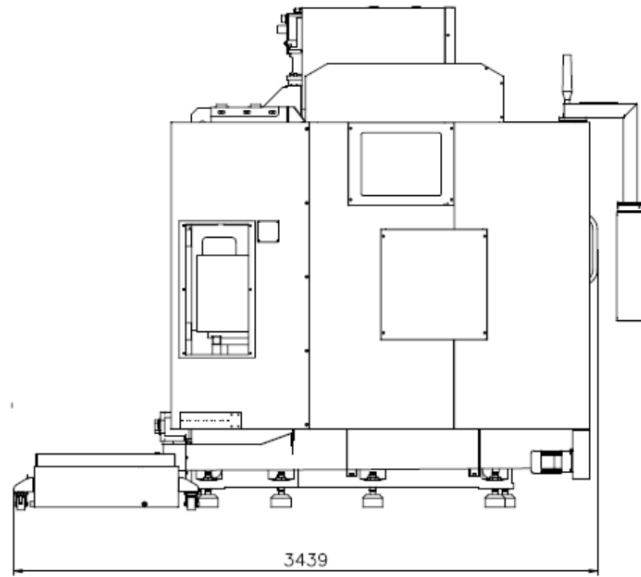


Machine size-VMC1300II

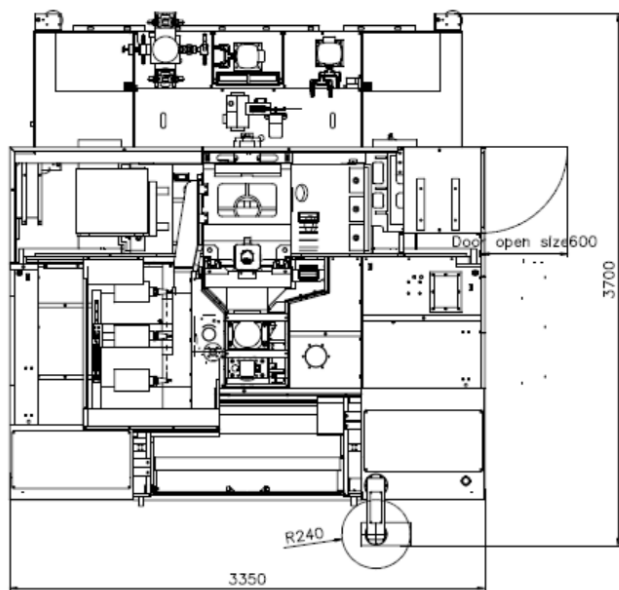
Front view



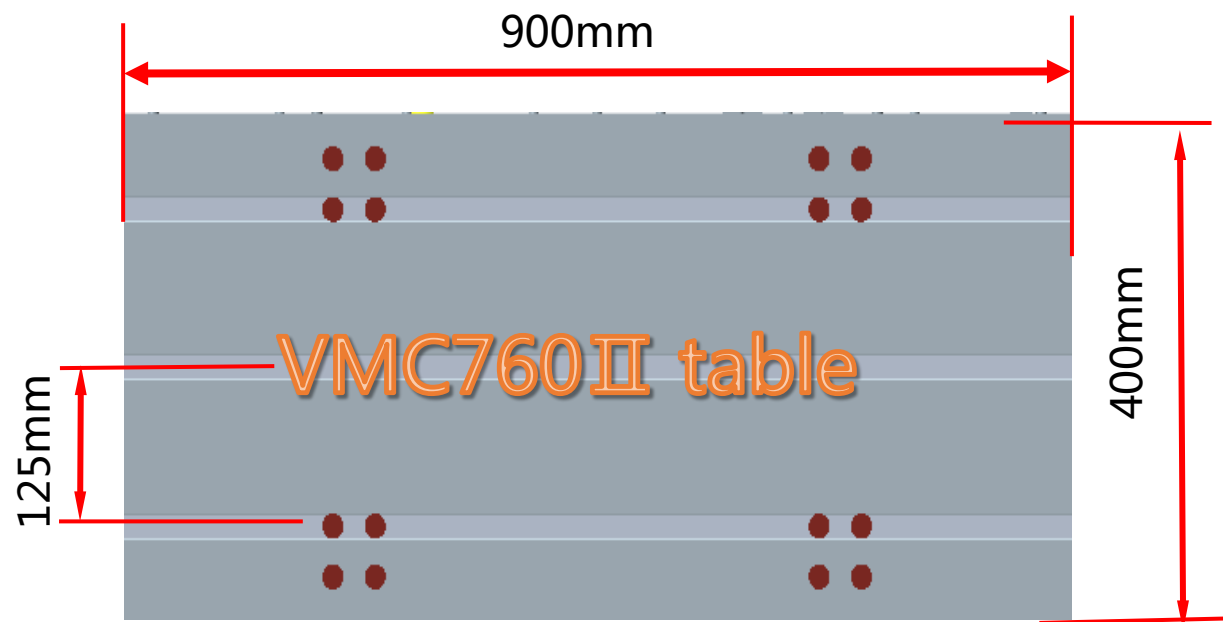
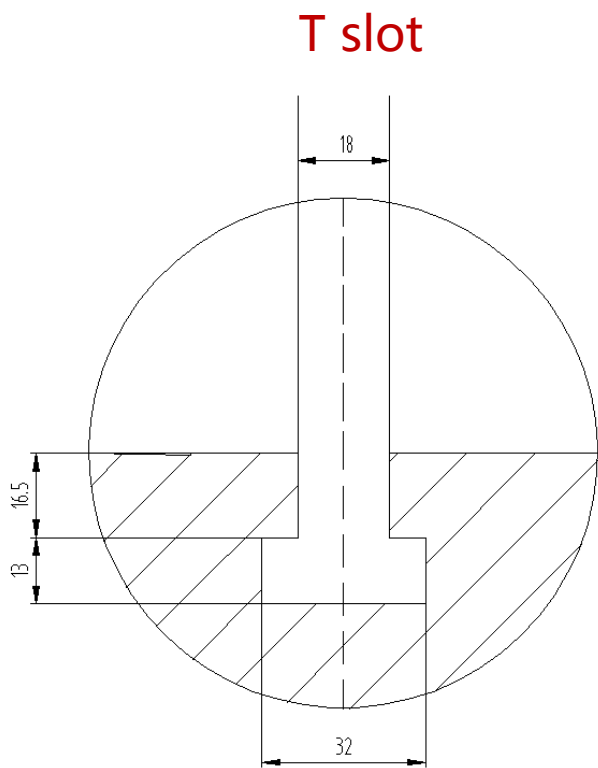
Left view



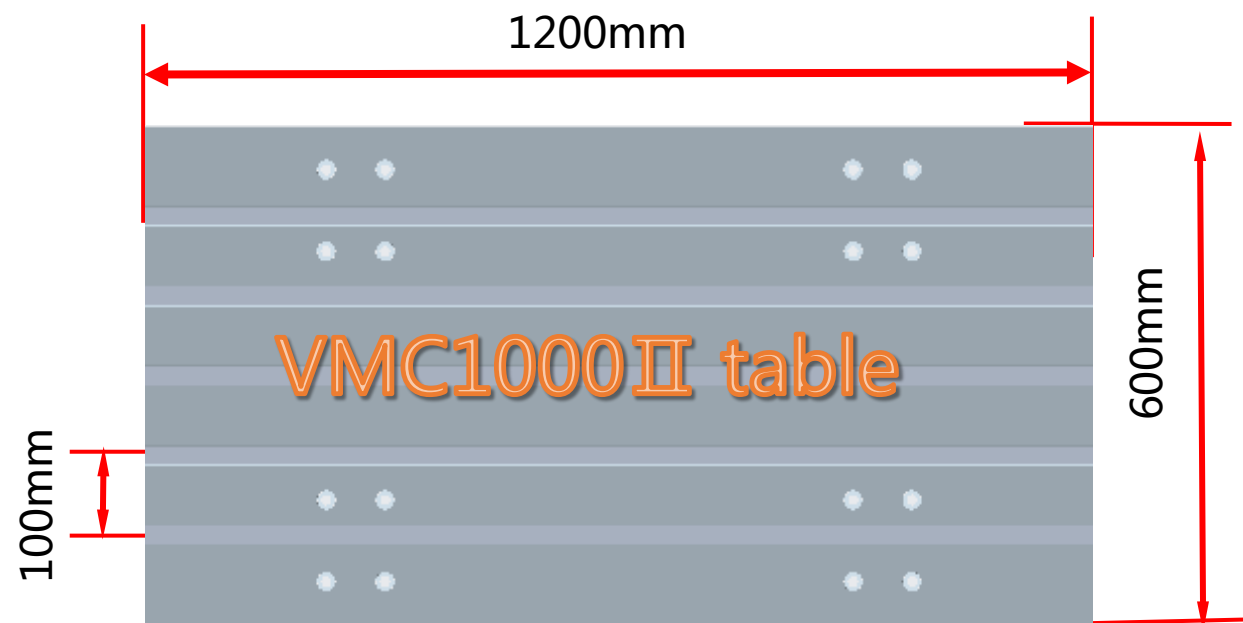
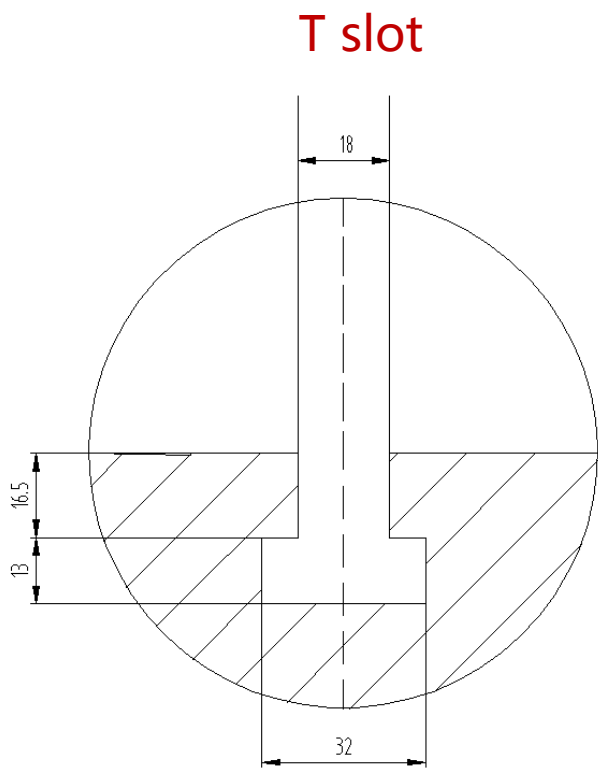
top view



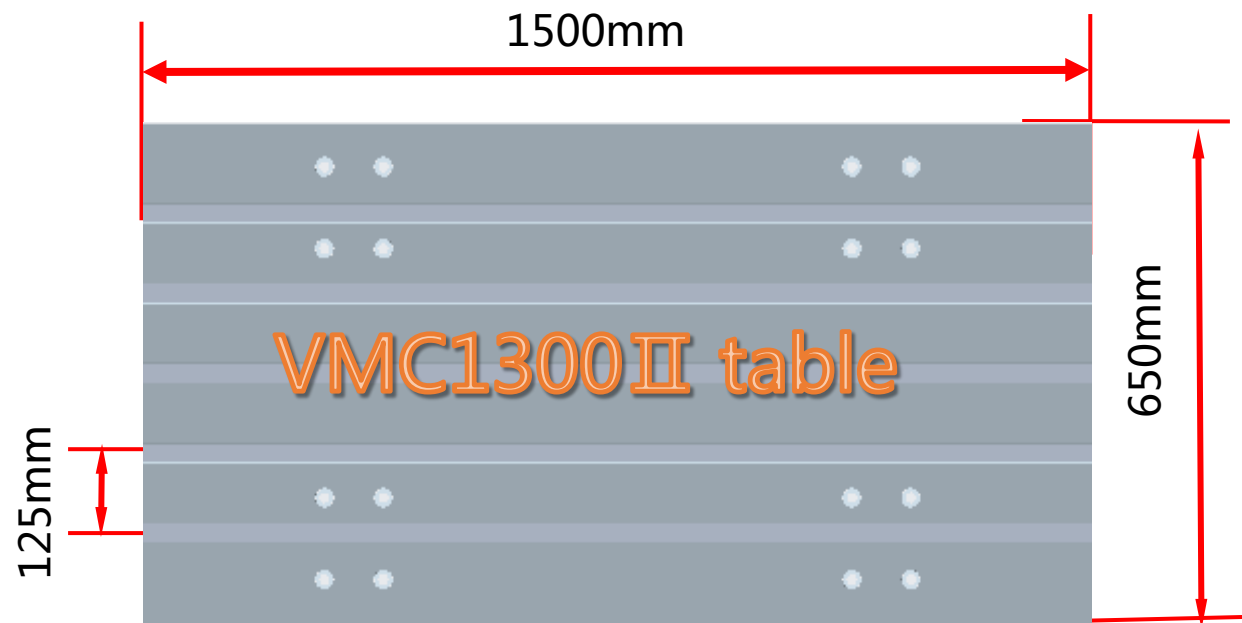
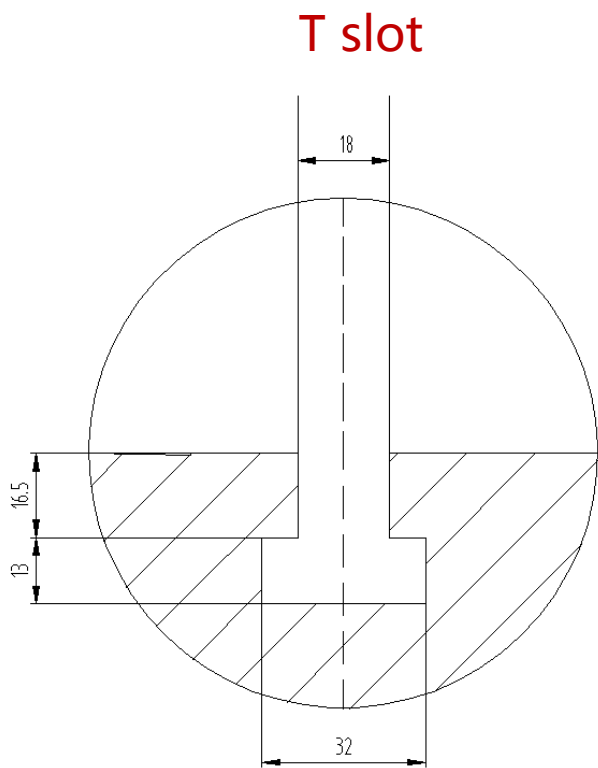
Basic size-table



Basic size-table

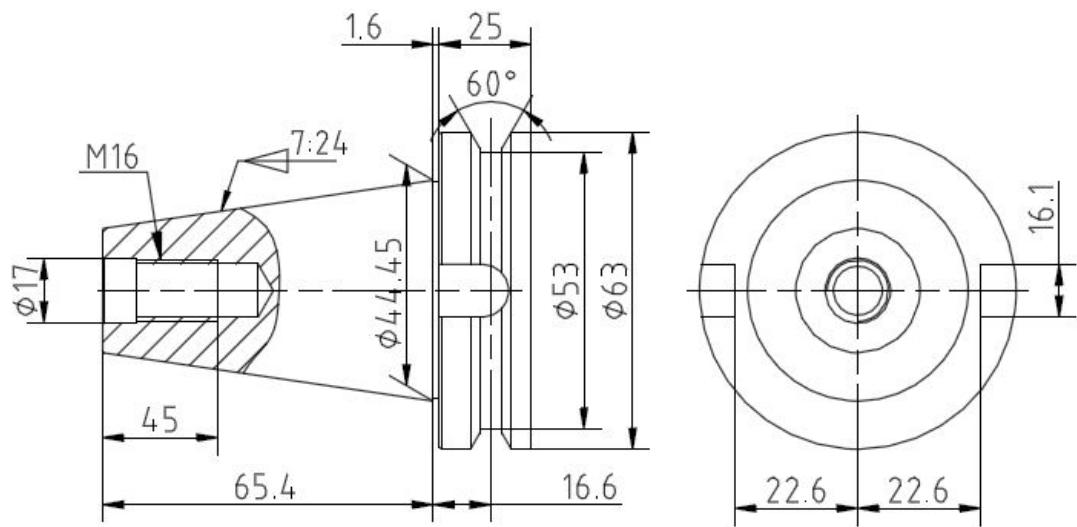


Basic size-table

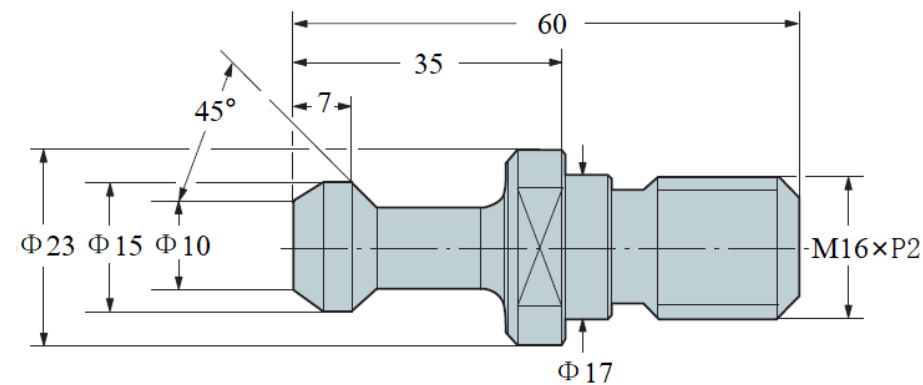


Basic size-tool holder & pull stud

ISO7:24 NO.40 (BT40)



MAS-P40T-I (45°)

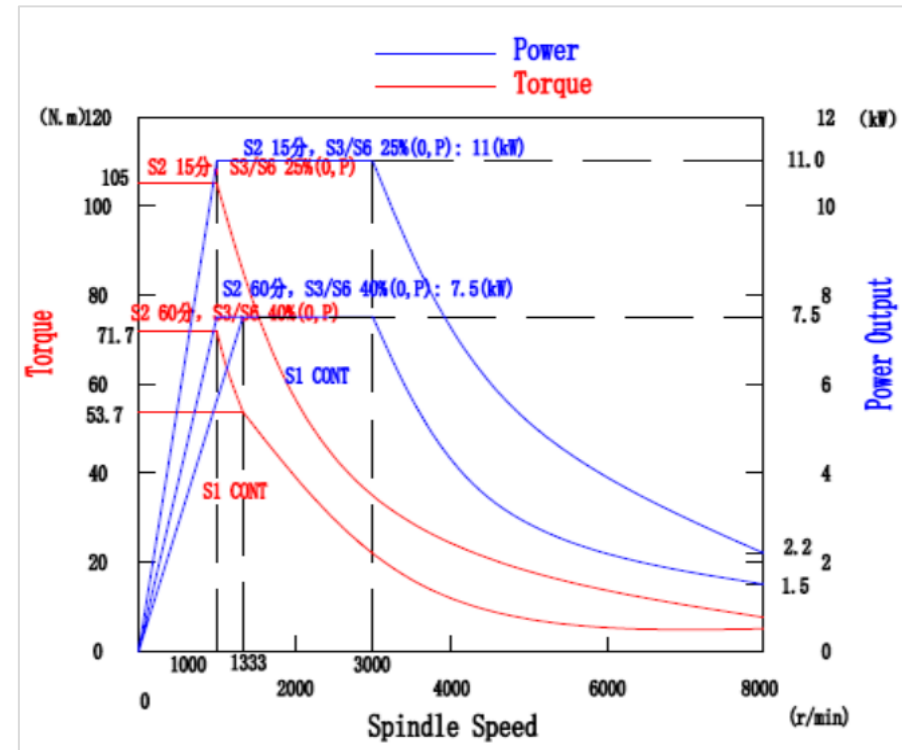
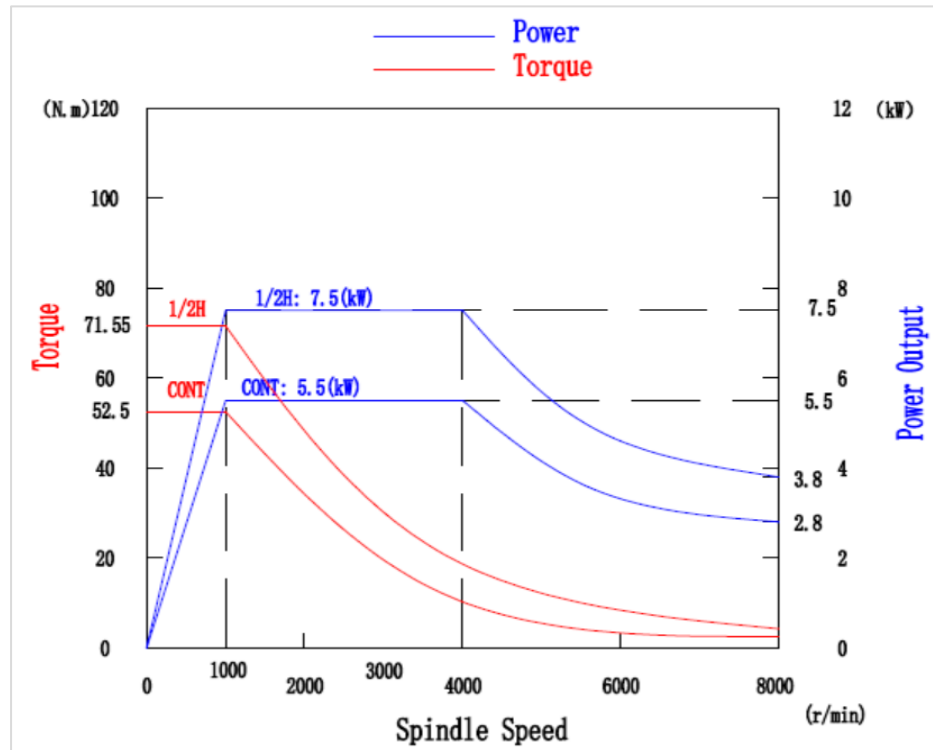


Spindle Power & Torque (belt 8000rpm STD)

VMC760II

Mitsubishi spindle (8000rpm)

FANUC spindle (8000rpm)



Power & torque :

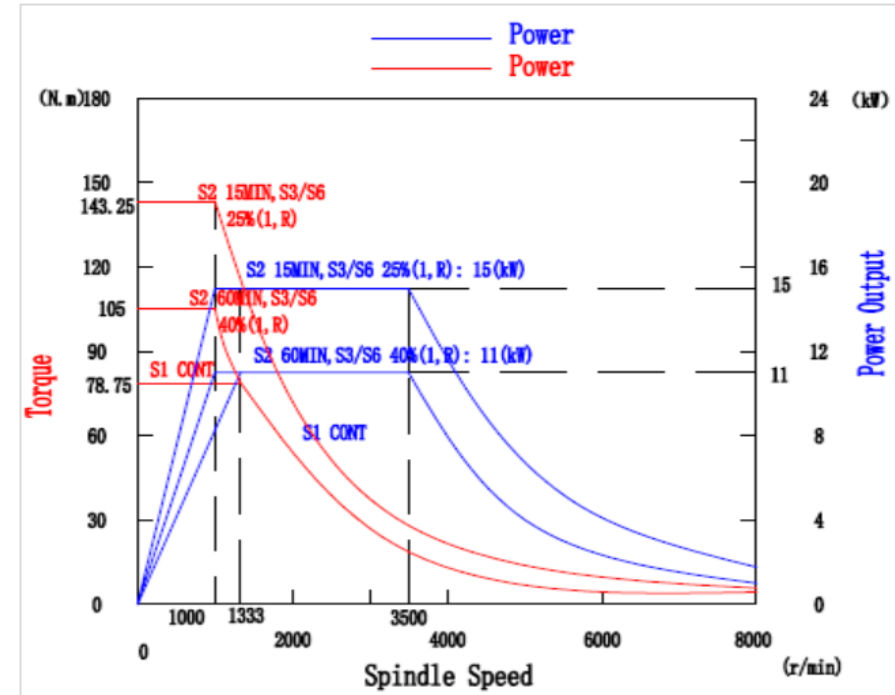
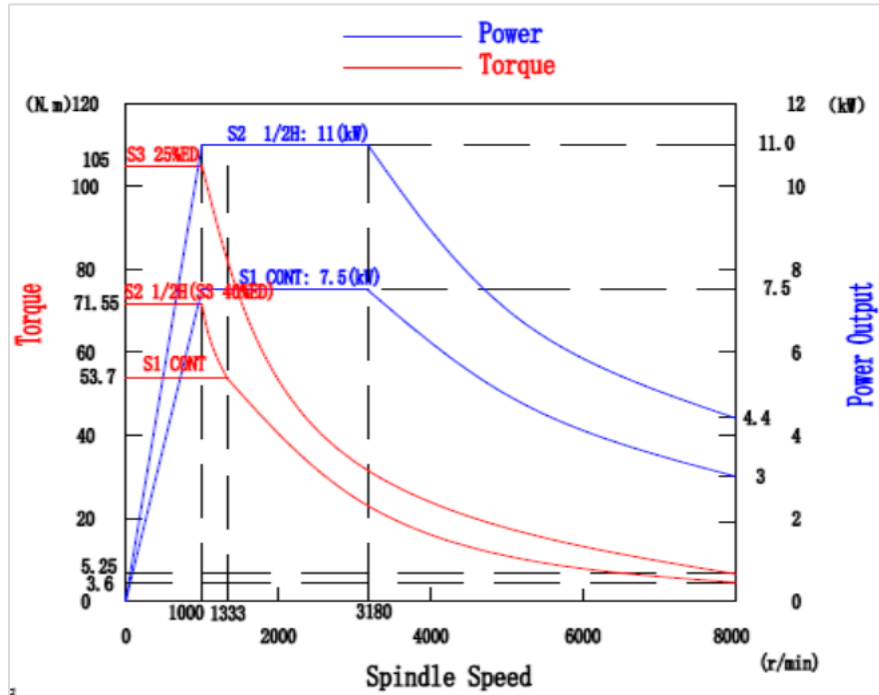
- 8000rpm belt spindle, 1:1.5 transmission ratio realizes better processing at low speed, compared with other machine tools at same power.

Spindle Power & Torque (belt 8000rpm STD)

VMC850II/1000II/1200II/1300II

Mitsubishi spindle (8000rpm)

FANUC spindle (8000rpm)



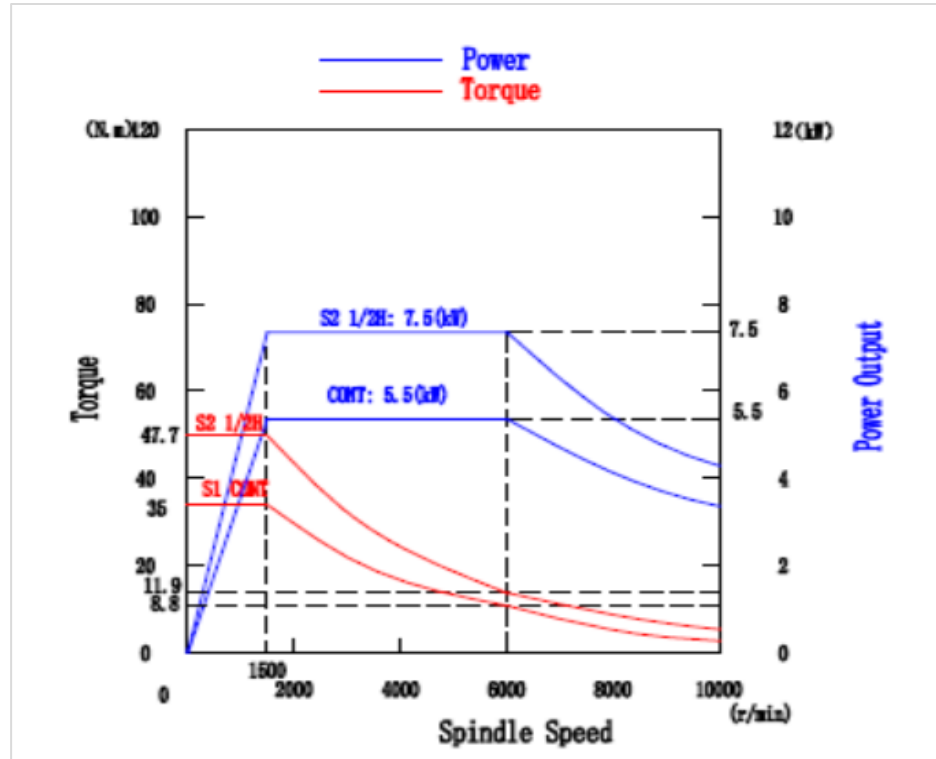
Power & torque :

- 8000rpm belt spindle, 1:1.5 transmission ratio realizes better processing at low speed, compared with other machine tools at same power.

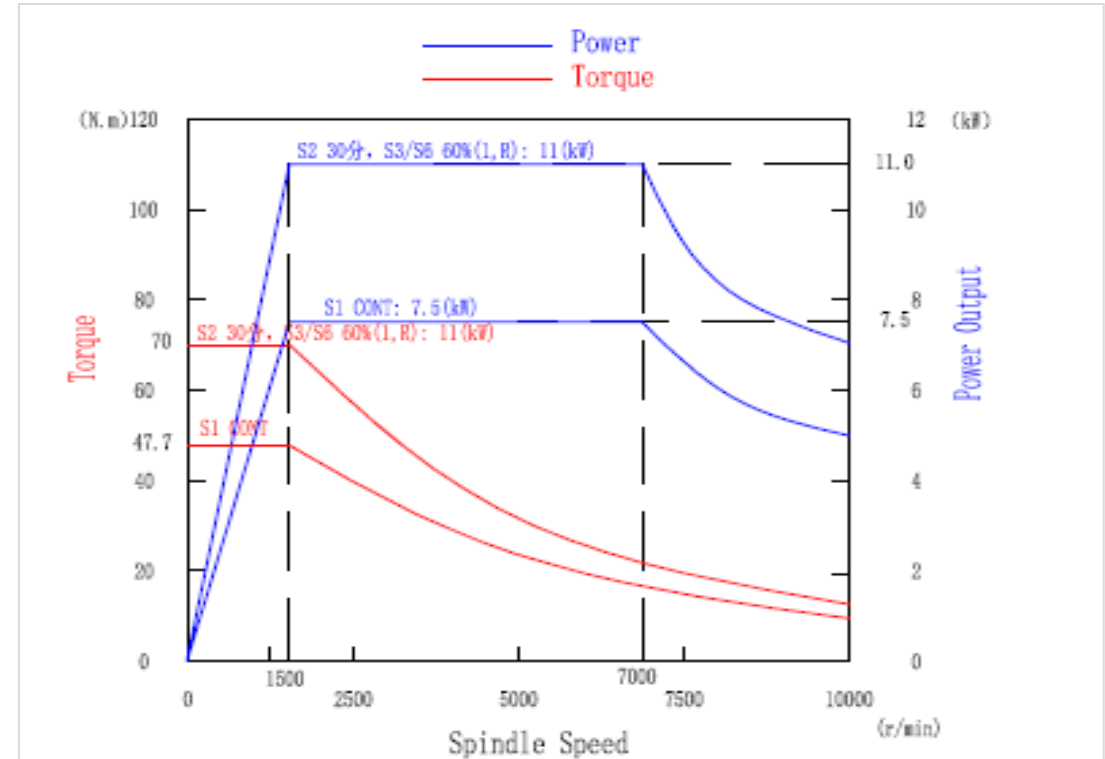
Spindle Power & Torque (belt 10000rpm OPT)

VMC760II

Mitsubishi spindle (10000rpm)



FANUC spindle (10000rpm)

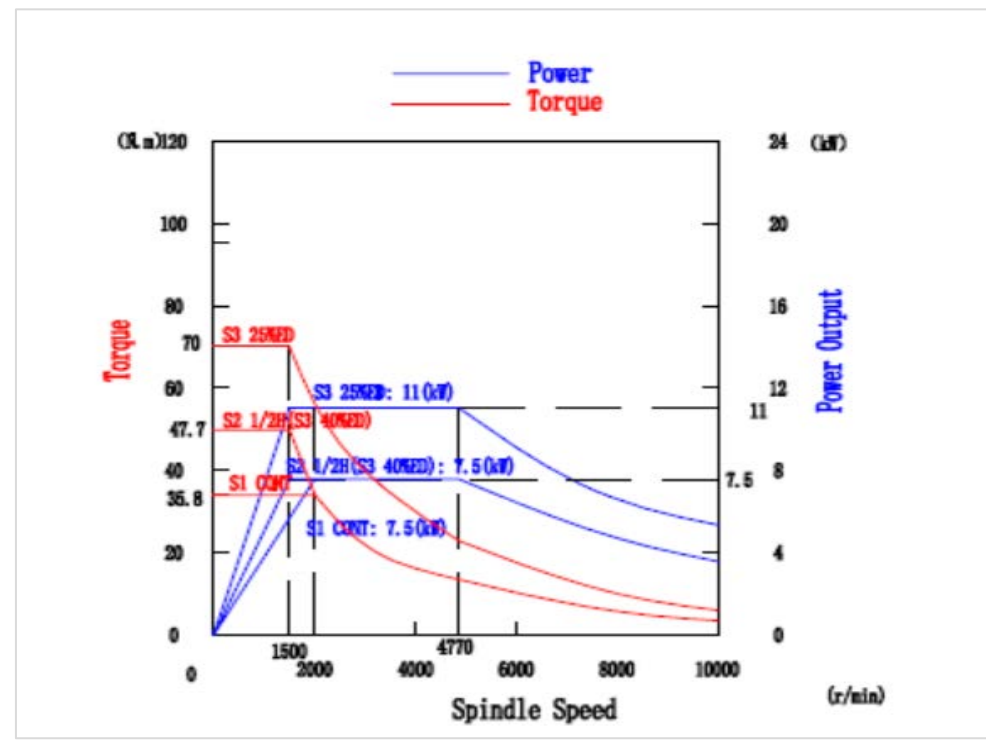


Power & torque :
● 10000rpm belt spindle, 1:1 transmission ratio , optional CTS is more affordable.

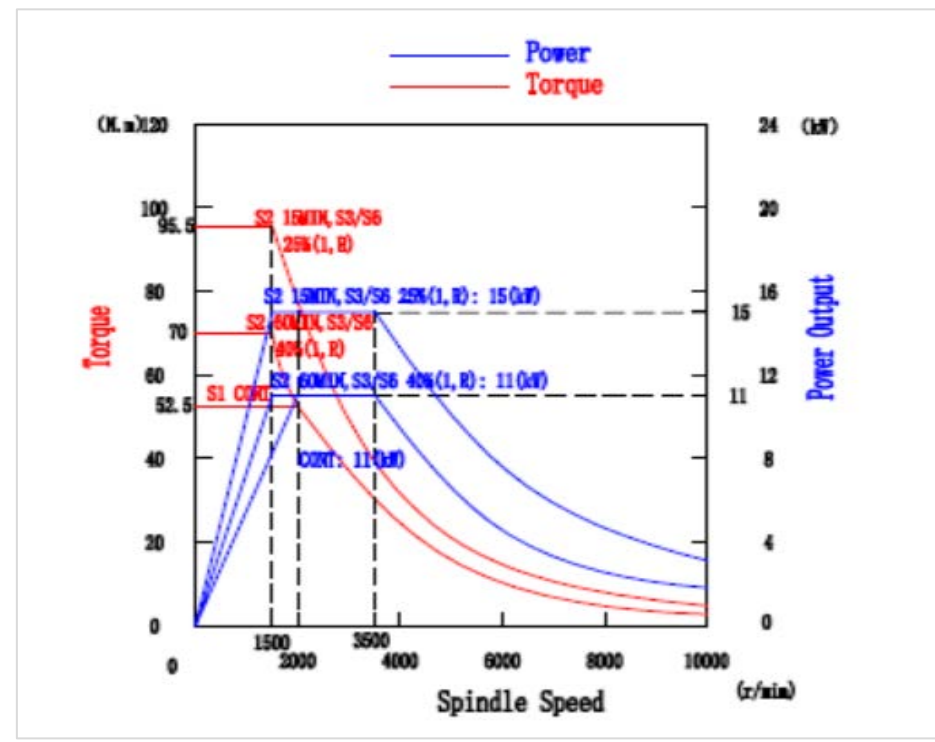
Spindle Power & Torque (belt 10000rpm OPT)

VMC850II/VMC1000II/VMC1200II/VMC1300II

Mitsubishi spindle (10000rpm)



FANUC spindle (10000rpm)



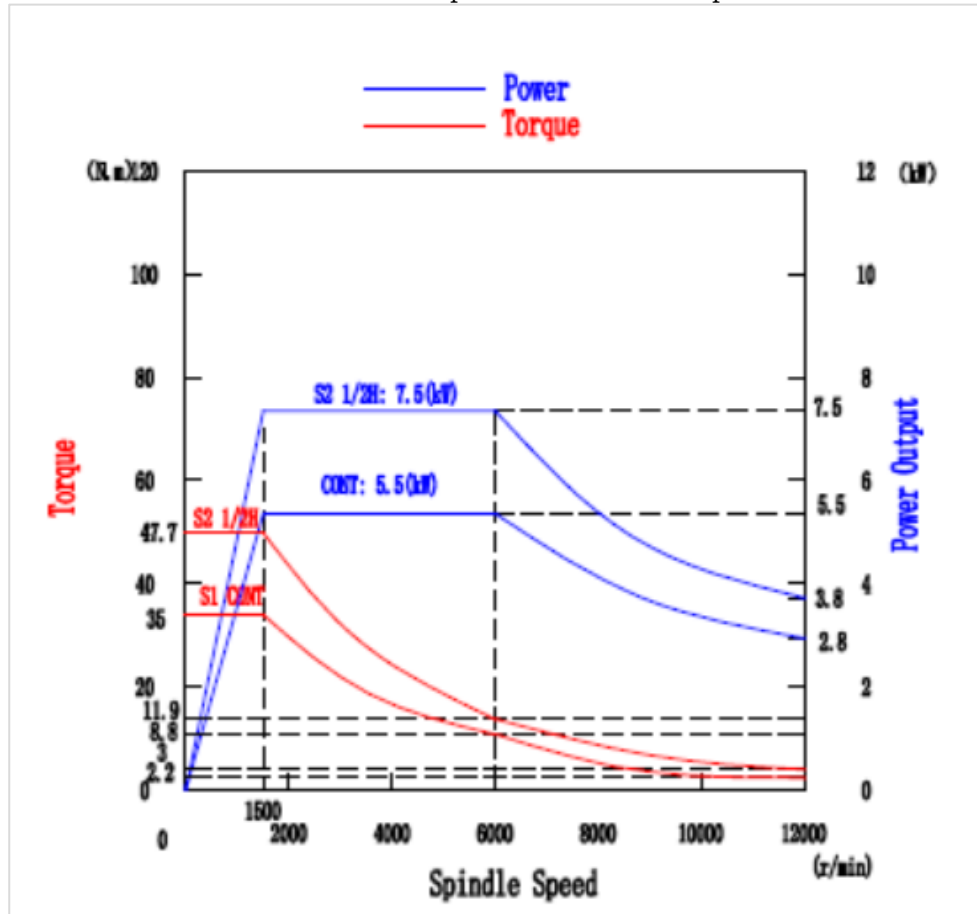
Power & torque :

- 10000rpm belt spindle, 1:1 transmission ratio , optional CTS is more affordable.

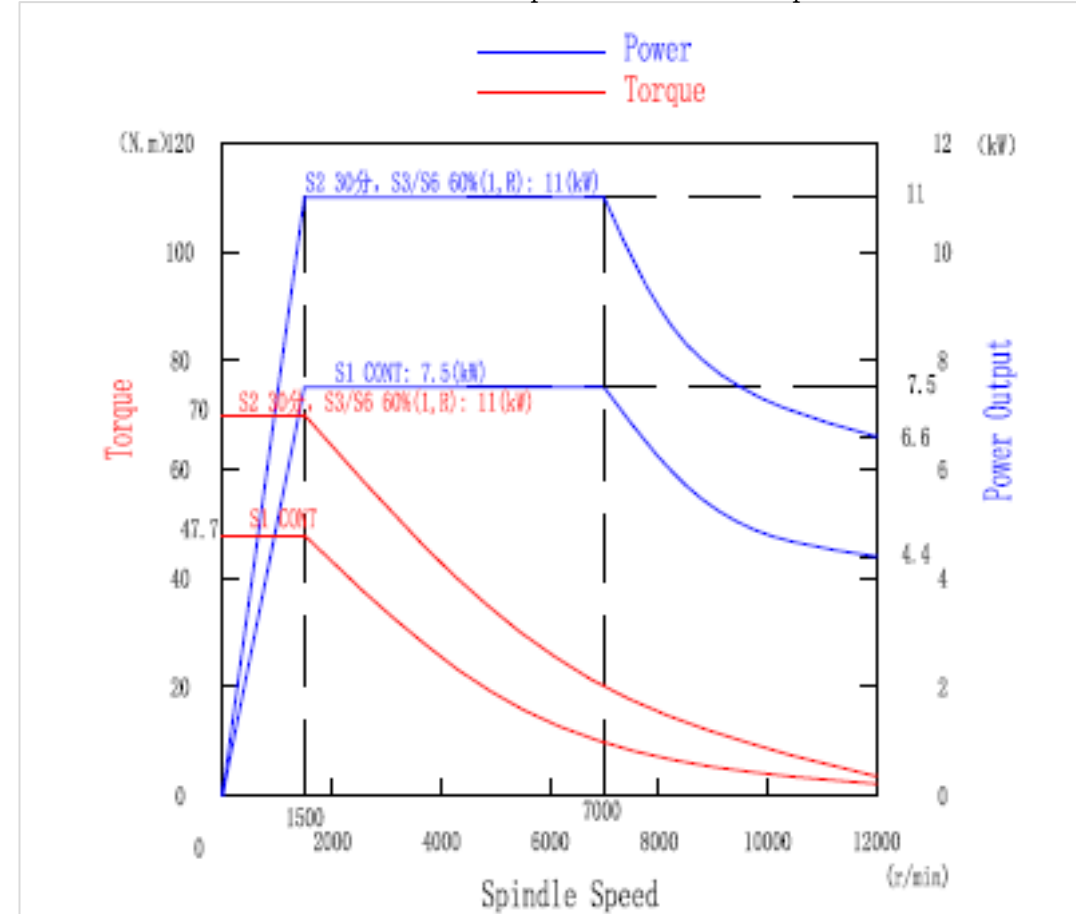
Spindle Power & Torque (direct drive 12000rpm OPT)

VMC760II

Mitsubishi spindle (12000rpm)



FANUC spindle (12000rpm)



Power & torque :

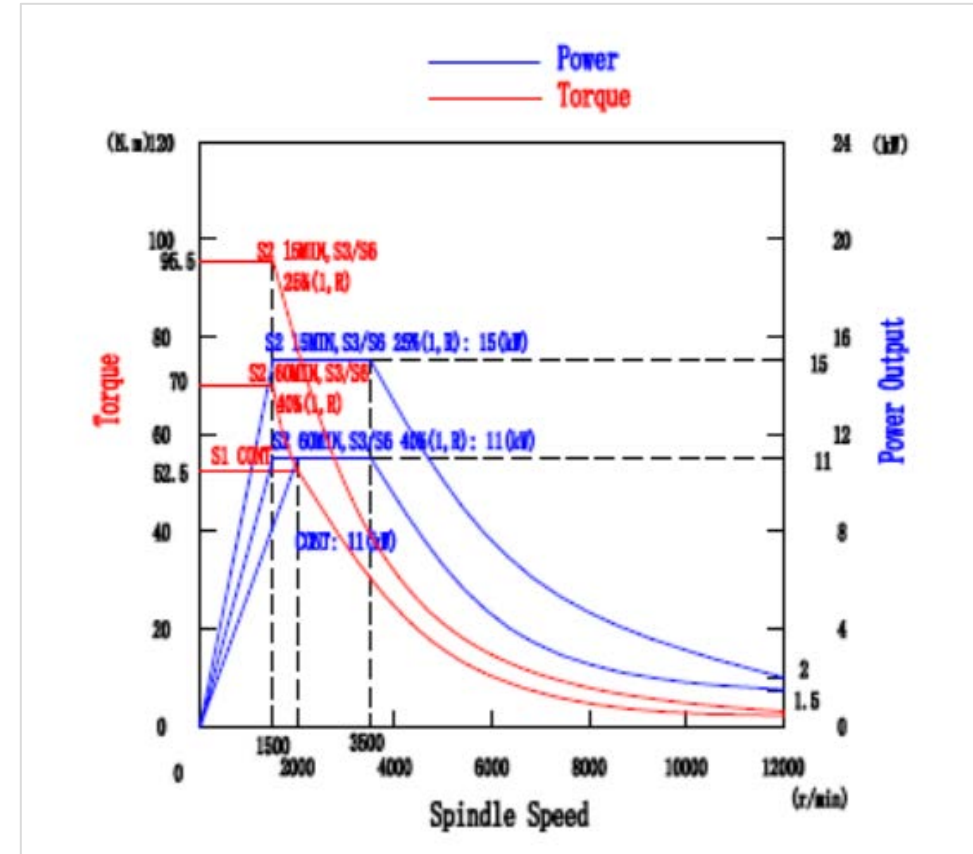
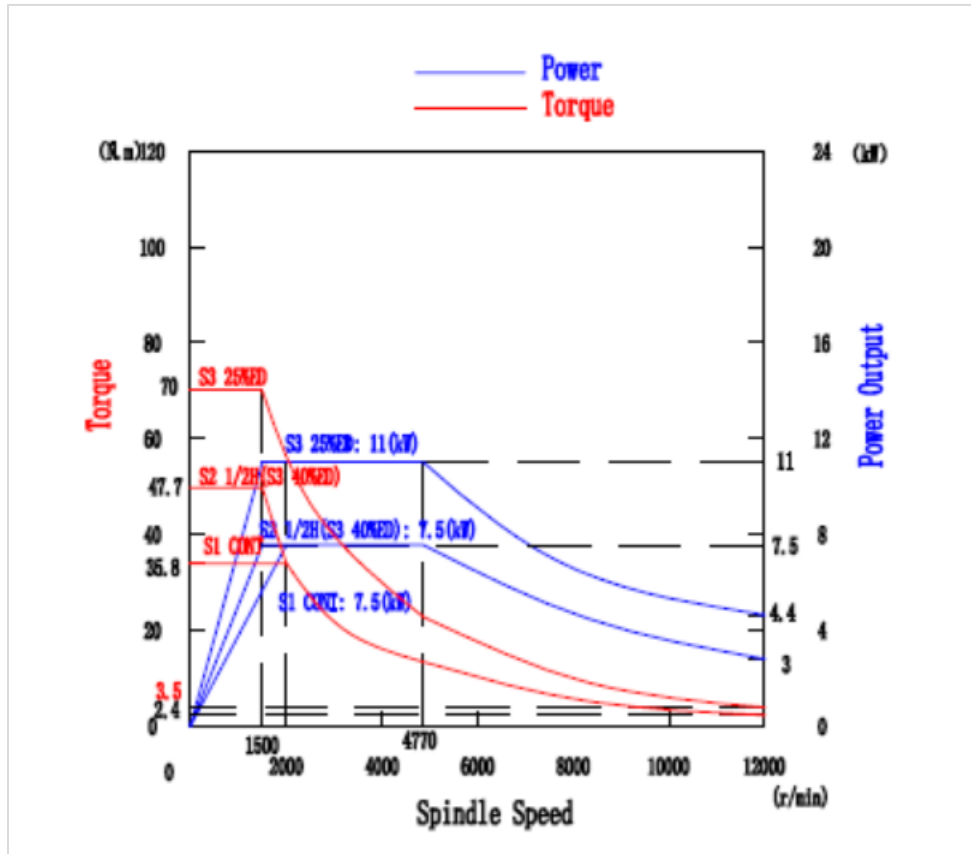
- 12000rpm direct drive spindle, 1:1 transmission ratio.

Spindle Power & Torque (direct drive 12000rpm OPT)

VMC850II/VMC1000II/VMC1200II/VMC1300II

Mitsubishi spindle (12000rpm)

FANUC spindle (12000rpm)



Power & torque :

- 12000rpm direct drive spindle, 1:1 transmission ratio.

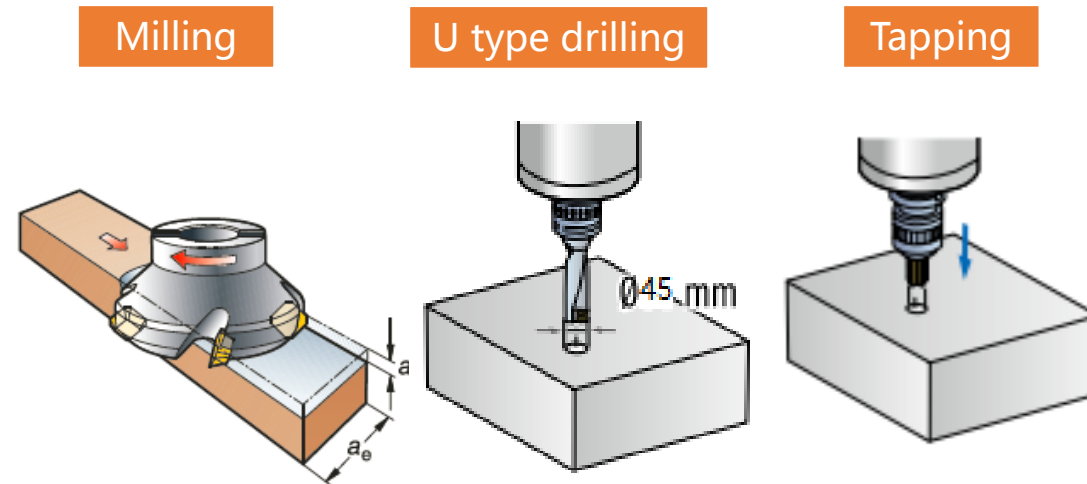


Spindle-process ability

Test data:
M80 7.5/11kw
FANUC 7.5/11kw

Face Milling

Tool	-	Φ80×6z	Φ80×6z	Φ80×6z
Material	-	Aluminum AL6061	Iron cast HT250	45#Steel SM45C
Spindle speed	rpm	3000	990	990
Deep	mm	4.5	4.1	2.7
Width	mm	60	65	60
Feed	mm/min	6000	2780	2510
Metal removal rate	cm ³ /min	1620	688	407



Tapping

Tool	-	M24 (Max.)	M2×0.4 (Min.)
Material	-	45#Steel (SM45C)	Aluminum (AL6061)
Spindle speed	rpm	600	1400
Depth	mm	55	5
Feed	mm/min	1800	560

Drilling

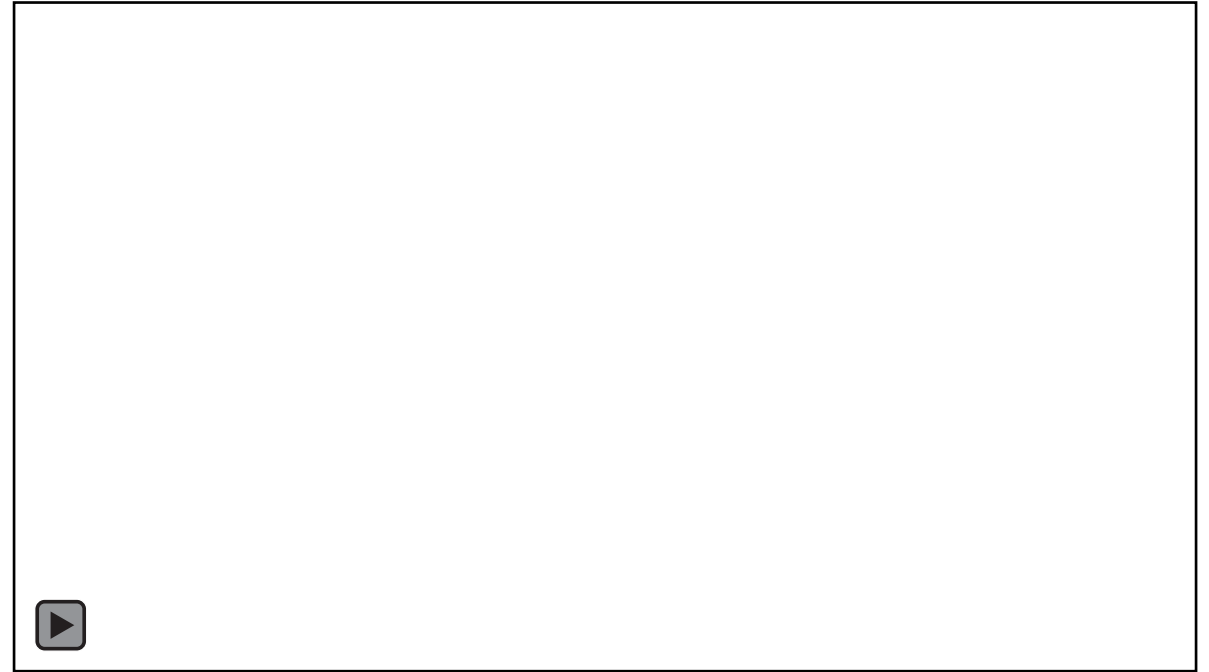
Tool	-	Φ42U drill	Φ1.2 drill (Min.)
Material	-	45#Steel (SM45C)	Aluminum (AL6061)
Spindle speed	rpm	800	1500
Depth	mm	80	8
Feed	mm/min	90	30



Processing video (VMC850II)



42 U drilling, rotation 1000rpm,
feed 100mm/min , Machine load 56%
feed 150mm/min , Machine load 92%

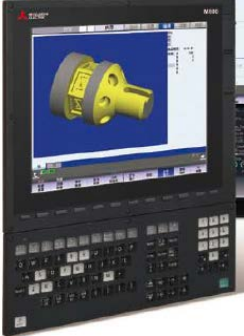


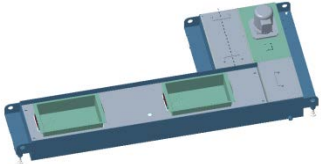

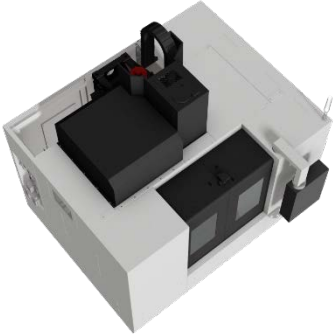



50 face milling, depth 7mm,
width 40mm, rotation 1000rpm
feed 800mm/min, machine load 91%

Machine standard configuration

No.	VMCII	Note
1	Controller : Mitsubishi M80B	
2	Mechanical spindle unit	
3	Arm type ATC	
4	Pneumatic system	
5	Centralized oil lubrication system	
6	External spindle cooling system	
7	Internal helix chip conveyor/Internal flush	
8	External manual bucket chip conveyor	
9	Air gun	
10	Three color light、 working light	
11	Full enclosure with top	
12	Standard attachment and relevant document	
13	Door interlock	Safety protection
13	Transformer	
14	Air tank	

Machine standard configuration

Controller: M80B	8000rpm mechanical spindle	Arm type ATC	Cooling system	External manual chip bucket
				
Air gun	Full enclosure	Air tank		
				

Note: For reference

Machine optional configuration

No.	VMC II	Note
1	Controller : FANUC 0i	α1 package/β5 package/β3 package
2	Controller : M80A	
3	Air conditioner	
4	Spindle ring spray	
5	CTS (2/3-6MPa)	
6	Tool auto probe (2D)	
7	Workpiece auto probe	
8	10000rpm belt drive spindle	
9	12000rpm direct drive spindle	
10	External chain type chip conveyor and trolley	left rear/right rear/left front/right front
11	External scrape type chip conveyor and trolley	left rear/right rear/left front/right front
12	CNC rotary table	
13	Column heighten 200mm	available for 4 Models(no change for Z axis travel)
14	ATC protection door	
15	Auto door	For automation or automatic door
16	Oil mist collector	
17	Oil skimmer	
18	Water gun	
19	Spindle oil chiller	



Machine option configuration

	<p>Air conditioner</p>		<p>2-6Mpa CTS</p>		<p>Spindle ring spray</p>		<p>Tool auto probe</p>		<p>Workpiece auto probe</p>
	<p>CNC rotary table</p>		<p>Water gun</p>		<p>Spindle oil chiller</p>		<p>Oil mist collector</p>		

Note: For reference

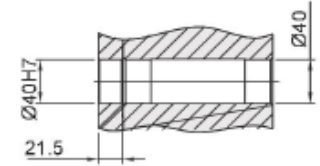
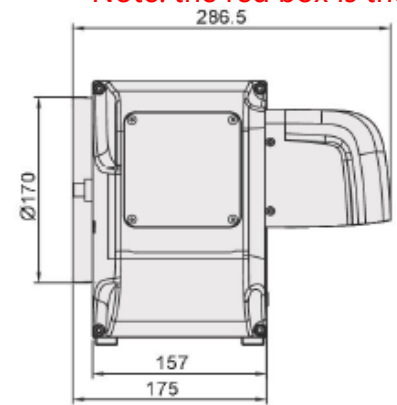
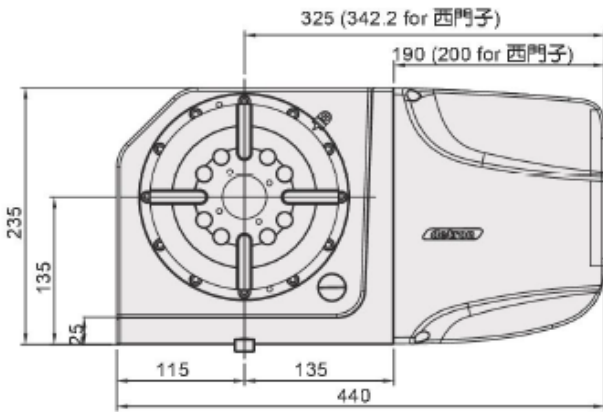
Machine option configuration-CNC rotary table (Detrol)

型號	單位	GXA-125S	GXA-170S	GXA-210S GVA-210SL	GXA-250S
旋轉台直徑	mm	Ø125	Ø170	Ø210	Ø255
中心孔直徑	mm	Ø30H7	Ø40H7	Ø65H7	Ø65H7
中心貫穿孔直徑	mm	Ø25	Ø40	Ø65	Ø65
工作台高度(臥式位置)	mm	155	175	175	190
中心高度(立式位置)	mm	110	135	160	160
工作台T型槽寬度	mm	12H7	12H7	12H7	12H7
導塊寬度	mm	14	14	18	18
驅動方式/驅動壓力	MPa	空壓 / 0.55 ~ 0.7	空壓 / 0.55 ~ 0.7	空壓 / 0.55 ~ 0.7	空壓 / 0.55 ~ 0.7
鎖緊扭矩	N.m	140	300	400	400
伺服馬達型號		請參考本型錄第69頁			
減速比		1 / 40	1 / 60	1 / 72	1 / 72
線面最大轉速	min ⁻¹	66.6	53.3	53.3	53.3
容許負載慣性容量 $(\frac{WD^2}{2})$	Kg.m ²	0.2	0.72	1.38	1.38
最小設定單位	deg.	0.001	0.001	0.001	0.001
分度精度	sec.	40	20	20	20
重複精度	sec.	6	6	6	6
旋轉工作台重量(不含伺服馬達)	Kg	32	52	60	67
容許負載容量	立式	Kg	50	100	
	臥式	Kg	100	200	
	使用尾座	Kg	100	200	
容許切削力 (轉台剎車時)	F	N	9700	14000	
	FXL	N.m	410	1020	
	FXL	N.m	140	300	
蝸輪容許扭矩	N.m	85	200		



GXA-170S (pneumatic)

Note: the red box is the option model

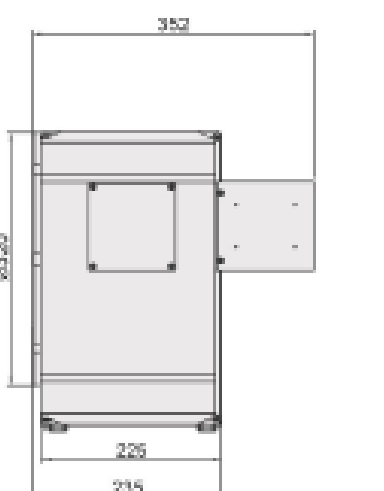
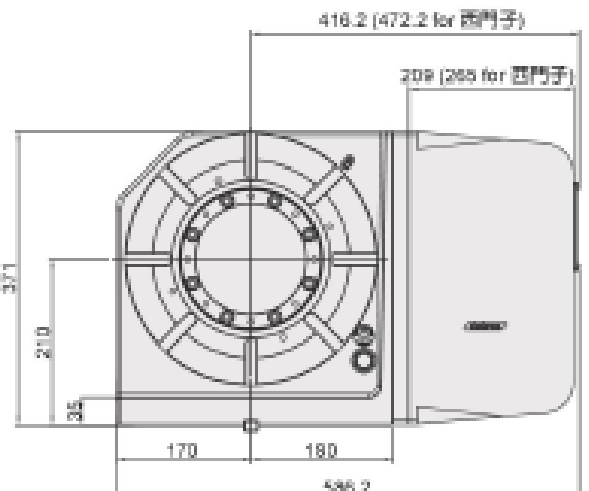
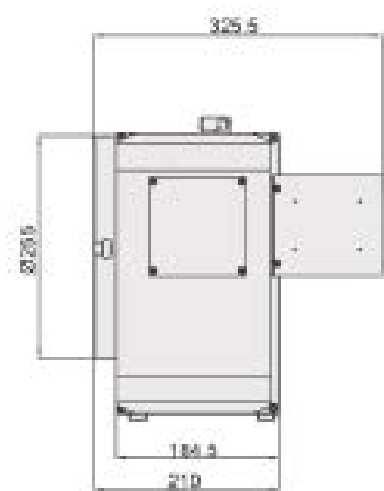
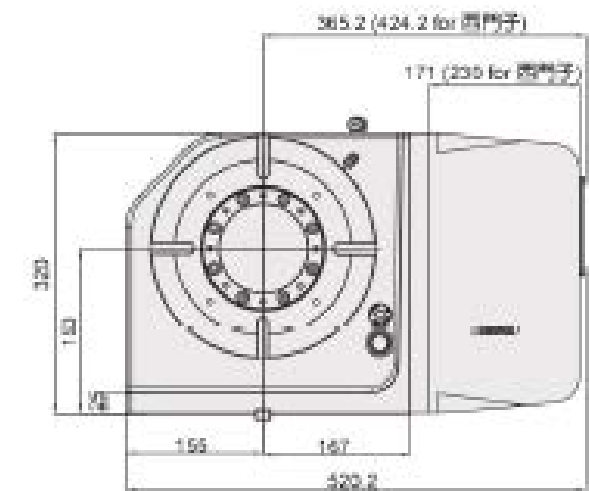


中心孔尺寸

註 1. 蝸輪容許扭矩是指分度盤旋轉速度1min⁻¹時蝸輪的耐負荷扭矩。

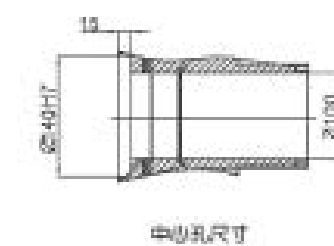
Machine option configuration-CNC rotary table (Detrol)

型號	單位	GXA-255H	GXA-320H	
旋轉台直徑	mm	Ø255	Ø320	
中心孔直徑	mm	Ø140H7	Ø180H7	
中心貫穿孔直徑	mm	Ø100	Ø140	
工作台高度(臥式位置)	mm	210	235	
中心高度(立式位置)	mm	190	210	
工作台T型槽寬度	mm	12H7	14H7	
導塊寬度	mm	18	18	
驅動方式/驅動壓力	MPa	油壓 / 5	油壓 / 5	
鎖緊扭矩	N.m	900	1600	
伺服馬達型號		請參考本型錄第69頁		
減速比		1 / 120	1 / 120	
盤面最大轉速	min ⁻¹	22.2	22.2	
容許負載慣性容量 $(\frac{W D^2}{8})$	Kg.m ²	2.43	5.12	
最小設定單位	deg.	0.001	0.001	
分度精度	sec.	15	15	
重複精度	sec.	6	6	
旋轉工作台重量(不含伺服馬達)	Kg	114	147	
容許負載容量	立式	Kg	150	200
	臥式	Kg	300	400
	使用尾座	Kg	300	400
容許切削力 (轉台刹車時)	 F	N	20000	28000
	 FXL	N.m	1700	3000
	 FXL	N.m	900	1600
蝸輪容許扭矩	 N.m	550	780	

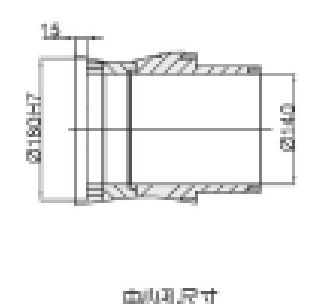


GXA-255H
(hydraulic)

Note: the red box is the option model



GXA-320H
(hydraulic)



註 1. 蝸輪容許扭矩是指分度盤旋轉速度1min⁻¹時蝸輪的耐負荷扭矩。

Machine option configuration-CNC rotary table (TANSHING)

規格 / 型號		單位	MRNC-255/255N	MRNC-320/320N	MRNC-400/400N
旋台直徑		mm	Ø255	Ø320	Ø400
工作台高度	臥式位置	mm	167	222	250
中心高度	立式位置	mm	160	210	255
總高度		mm	350	385	465
中心孔直徑		mm	Ø40 ^{H7}	Ø40 ^{H7}	Ø40 ^{H7}
貫穿孔徑		mm	Ø33	Ø42	Ø42
工作台 T 型槽寬度		mm	12 ^{H7}	14 ^{H7}	14 ^{H7}
導塊寬度		mm	18 ^{h7}	18 ^{h7}	18 ^{h7}
最小設定單位		deg.	0.001°	0.001°	0.001°
分度精度		sec.	15"	15"	15"
重覆精度		sec.	4"	4"	4"
伺服馬達 (廠牌可依需求指定)	FANUC		αiF4 ◆ αiF8	αiF12	αiF12
	MELDAS		HF-104S ◆ HF-154S	HF-204S	HF-204S
總減速比			1/180	1/180	1/180
盤面最高轉數		r.p.m.	16.6	16.6	16.6
最大工件慣性		kg-cm-sec ²	8.29	19.59	40.82
容許旋轉切削力		kgf-m	48	78	170
使用壓力 (鎖緊方式)		kg/cm ²	35 (油壓)	35 (油壓)	35 (油壓)
剎車扭力		kgf-m	50	85	180
最大工件負載	立式	kgs	100	150	200
	臥式		250	350	500
	使用尾座		250	350	500
最大工件直徑		mm	Ø255	Ø320	Ø400
旋台重量 (不含伺服馬達)		kgs	93	174	262

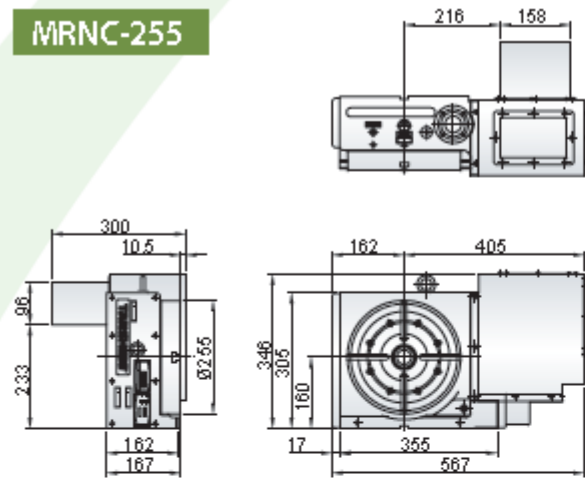


**CNC rotary table
(TANSHING)**

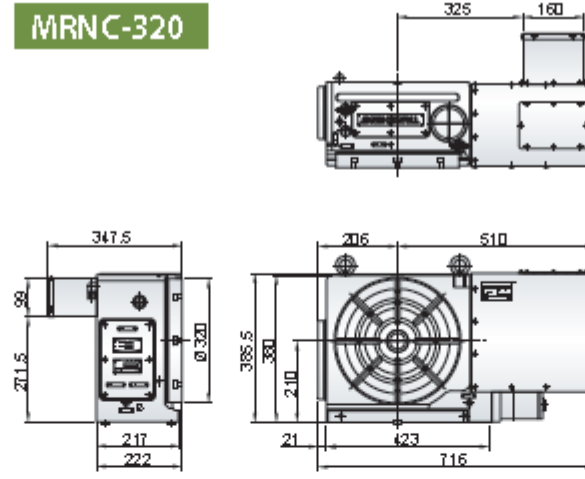
Note: the red box is the option model

Machine option configuration-CNC rotary table (TANSHING)

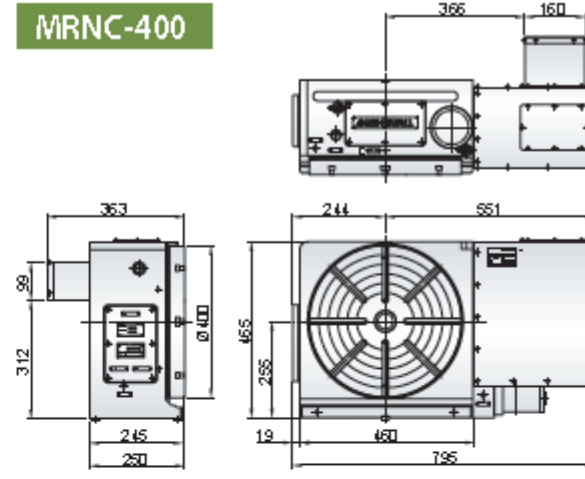
MRNC-255



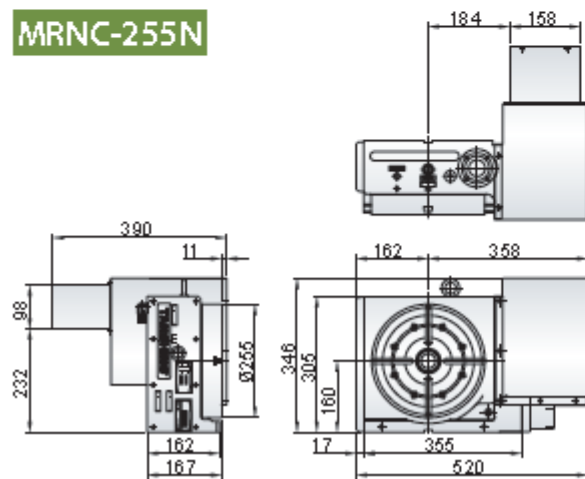
MRNC-320



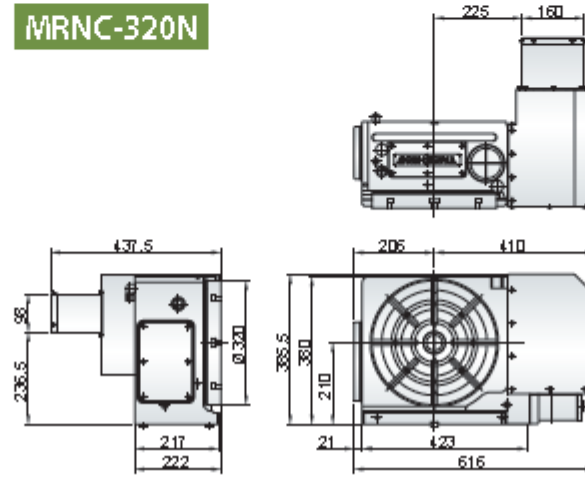
MRNC-400



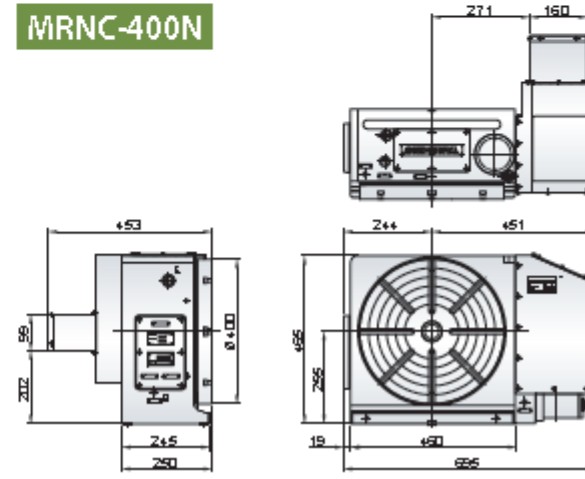
MRNC-255N



MRNC-320N



MRNC-400N



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