

安全第一 预防为主

MOUSII series Fixed crossrail Double Machining Center -Introduction

Application Scope of MOUS II Series



Industry	Segment Industry		MOUS II Series			
			MOUS13 II		MOUS16 II	
			15000	20000	15000	20000
			8/16/21		20/25	
Mould	Die-casting die	Semi precision machining	□□□	□□	□□□	□□
		precision machining	□□□	□□□	□□□	□□□
	Plastic mould	Semi precision machining	□□□	□□□	□□□	□□□
		precision machining	□□□	□□□	□□□	□□□



Description of machine characteristics



Main parameters :

Mode	MOUS13II	MOUS16II
X travel	1300mm、1600mm	2000mm、2500mm
Y travel	800mm、1300mm	1500mm
Z travel	700mm	800mm
Table width	1300mm	1500mm
Table length	850mm、1800mm	2000mm、2500mm
Gantry width	1380mm	1580mm
Ram	Regular Octagon	
Spindle speed	15000rpm (20000/24000rpm-HSK-A63)	
Spindle power	LOW:15/18.5kW High:18.5/22 (25/40kW , 16/24kW)	
Spindle torque	305/623N.m (87/135N.m , 67/100N.m)	

Machine parameter-MOUS13II×8



Item			Parameter	Item			Parameter	
Processing	X travel		mm	1300	Tool magazine (OP)	Capacity	T	16/24
	Y travel		mm	800		Driven system	-	HSK-A63
	Z travel		mm	700		Max. tool dia. (full/empty adj. position)	mm	Φ35(Φ66)
	Gantry width		mm	1380		Max. tool length	mm	300
	Distance between spindle center and table surface		mm	150-850		Max. tool weight	kg	8
Table	Table (A×B)		mm	1300×850		Position accuracy	X axis	mm
	Max. load		t	1.5	Y axis		mm	0.012
	T slot		mm	22×160×5	Z axis		mm	0.010
Spindle	Driven system		-	电主轴直驱	Repeatability position accuracy	X axis	mm	0.008
	Spindle speed		rpm	15000		Y axis	mm	0.008
	Spindle power	High	kW	18.5/22		Z axis	mm	0.006
		Low	kW	15/18.5	Machine voltage		kVA	65
	Spindle torque	High	Nm	50.5/81.7	Machine weight		t	12.5
		Low	Nm	95.5/167	Machine size		cm	360×355×420
	Taper hole		-	HSK-A63	Controller		-	Mitsubishi M80A
Ram section		mm	350×350					
Feed	X/Y/Z feed		m/min	20/20/20				
	X/Y/Z rapid feed		m/min	20/24/24				

Machine parameter-MOUS13II×16



Item			Parameter	Item			Parameter
Processing	X travel	mm	1600	Tool magazine (OP)	Capacity	T	16/24
	Y travel	mm	1300		Driven system	-	HSK-A63
	Z travel	mm	700		Max. tool dia. (full/empty adj. position)	mm	Φ35(Φ66)
	Gantry width	mm	1380		Max. tool length	mm	300
	Distance between spindle center and table surface	mm	150-850		Max. tool weight	kg	8
Table	Table (A×B)	mm	1300×1800		Position accuracy	X axis	mm
	Max. load	t	4	Y axis		mm	0.012
	T slot	mm	22×160×8	Z axis		mm	0.010
Spindle	Driven system	-	电主轴直驱	Repeatability position accuracy	X axis	mm	0.008
	Spindle speed	rpm	15000		Y axis	mm	0.008
	Spindle power	High	kW		18.5/22	Z axis	mm
		Low	kW	15/18.5	Machine voltage	kVA	65
	Spindle torque	High	Nm	50.5/81.7	Machine weight	t	16.5
		Low	Nm	95.5/167	Machine size	cm	560×388×420
	Taper hole	-	HSK-A63	Controller	-	Mitsubishi M80A	
Feed	Ram section	mm	350×350				
	X/Y/Z feed	m/min	20/24/24				
	X/Y/Z rapid feed	m/min	20/20/20				

Machine parameter-MOUS16II×20



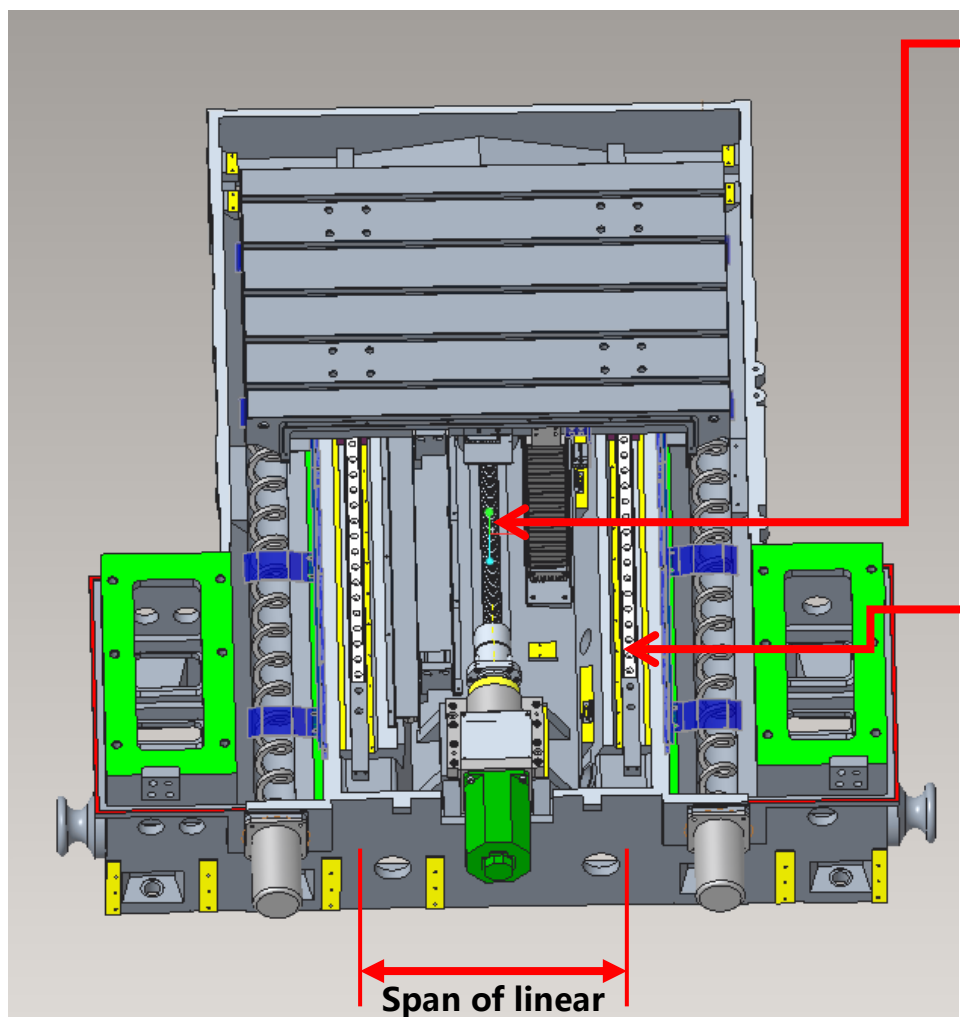
Item				Parameter	Item			Parameter	
Processing	X travel		mm	2000	Tool magazine (OP)	Capacity		T	16/24
	Y travel		mm	1500		Driven system		-	HSK-A63
	Z travel		mm	800		Max. tool dia. (full/empty adj. position)		mm	Φ35(Φ66)
	Gantry width		mm	1580		Max. tool length		mm	300
	Distance between spindle center and table surface		mm	200-1000		Max. tool weight		kg	8
Table	Table (A×B)		mm	1500×2000		Position accuracy	X axis		mm
	Max. load		t	6	Y axis		mm	0.012	
	T slot		mm	22×160×9	Z axis		mm	0.010	
Spindle	Driven system		-	电主轴直驱	Repeatability position accuracy	X axis		mm	0.008
	Spindle speed		rpm	15000		Y axis		mm	0.008
	Spindle power	High	kW	18.5/22		Z axis		mm	0.006
		Low	kW	15/18.5	Machine voltage		kVA	65	
	Spindle torque	High	Nm	50.5/81.7	Machine weight		t	20	
		Low	Nm	95.5/167	Machine size		cm	741×400×435	
	Taper hole		-	HSK-A63	Controller		-	Mitsubishi M80A	
Ram section		mm	350×350						
Feed	X/Y/Z feed		m/min	18/24/24					
	X/Y/Z rapid feed		m/min	16/20/20					

Machine parameter-MOUS16II×25



Item			Parameter	Item			Parameter
Processing	X travel	mm	2500	Tool magazine (OP)	Capacity	T	16/24
	Y travel	mm	1500		Driven system	-	HSK-A63
	Z travel	mm	800		Max. tool dia. (full/empty adj. position)	mm	Φ35(Φ66)
	Gantry width	mm	1580		Max. tool length	mm	300
	Distance between spindle center and table surface	mm	200-1000		Max. tool weight	kg	8
Table	Table (A×B)	mm	1500×2500		Position accuracy	X axis	mm
	Max. load	t	8	Y axis		mm	0.012
	T slot	mm	22×160×9	Z axis		mm	0.010
Spindle	Driven system	-	电主轴直驱	Repeatability position accuracy	X axis	mm	0.008
	Spindle speed	rpm	15000		Y axis	mm	0.008
	Spindle power	High	kW		18.5/22	Z axis	mm
		Low	kW	15/18.5	Machine voltage	kVA	65
	Spindle torque	High	Nm	50.5/81.7	Machine weight	t	23
		Low	Nm	95.5/167	Machine size	cm	777×400×435
	Taper hole	-	HSK-A63	Controller	-	Mitsubishi M80A	
	Ram section	mm	350×350				
Feed	X/Y/Z feed	m/min	18/24/24				
	X/Y/Z rapid feed	m/min	16/20/20				

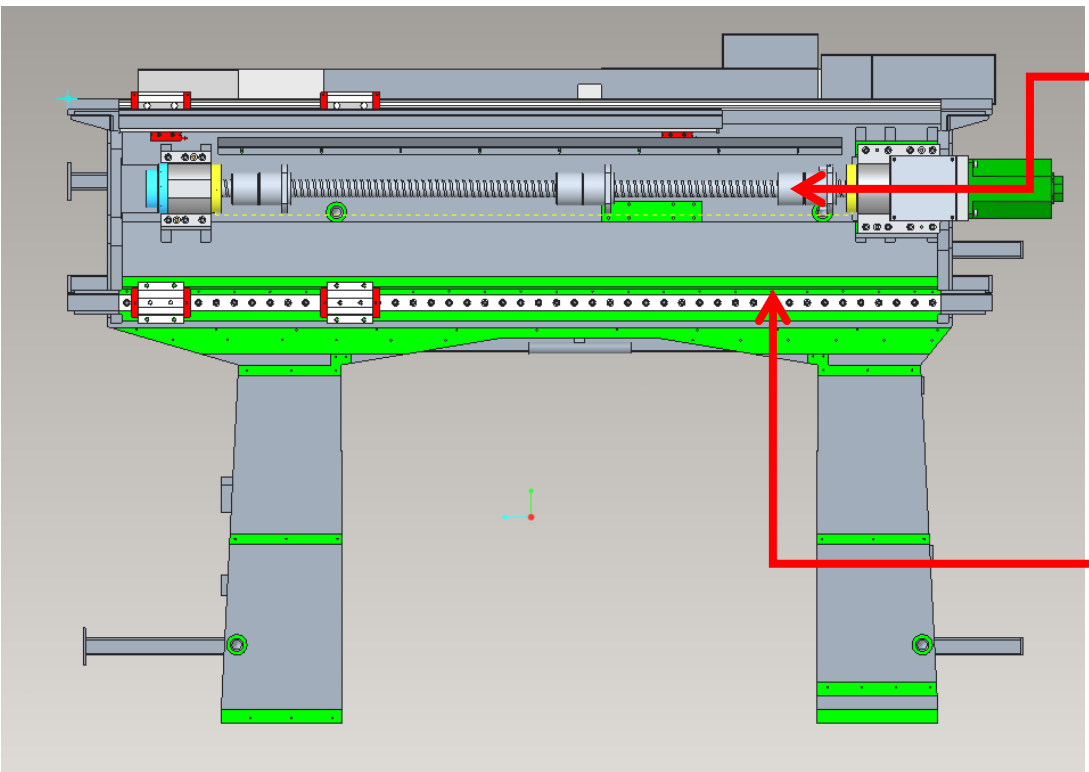
Structural features - ball screw and linear guideway -X axis



Model	Ball screw (mm)		Ball screw precision level	Brand
	Diameter	Pitch		
MOUS13II×8	50	12	C3	PMI
MOUS13II×16	63	10	C3	PMI
MOUS16II×20	80	25	C3	PMI
MOUS16II×25	80	25	C3	PMI

Model	Type	width (mm)	Slider type	precision level	No.	Span A(mm)	Brand
MOUS13II×8	MRS45	45	MRW45	G2	4	730	SCHNEEBERGER
MOUS13II×16	MRS45	45	MRW45	G2	8	730	SCHNEEBERGER
MOUS16II×20	MRS45	45	MRW45	G2	8	960	SCHNEEBERGER
MOUS16II×25	MRS45	45	MRW45	G2	10	960	SCHNEEBERGER

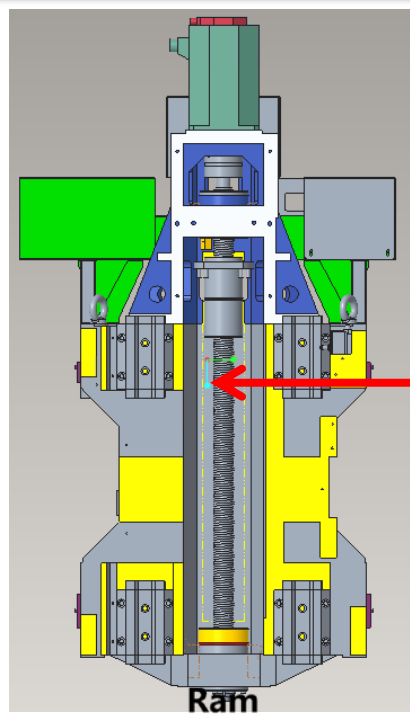
Structural features - ball screw and linear guideway -Y axis



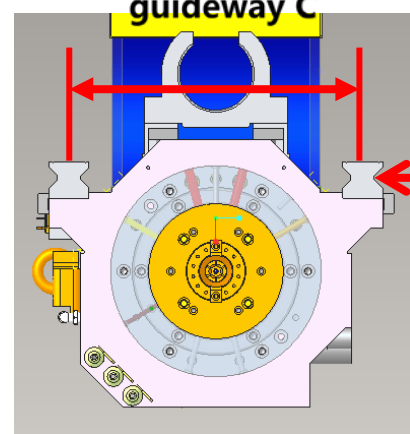
Model	Ball screw (mm)		Ball screw precision level	Brand
	Diameter	Pitch		
MOUS13II×8	50	12	C3	PMI
MOUS13II×16	50	12	C3	PMI
MOUS16II×20	50	12	C3	PMI
MOUS16II×25	50	12	C3	PMI

Model	Type	width (mm)	Slider type	No.	Span A(mm)	Brand
MOUS13II×8	MRS45	45	MRW45	4	G2	SCHNEEBERGER
MOUS13II×16	MRS45	45	MRW45	4	G2	SCHNEEBERGER
MOUS16II×20	MRS45	45	MRW45	4	G2	SCHNEEBERGER
MOUS16II×25	MRS45	45	MRW45	4	G2	SCHNEEBERGER

Structural features - ball screw and linear guideway -Z axis

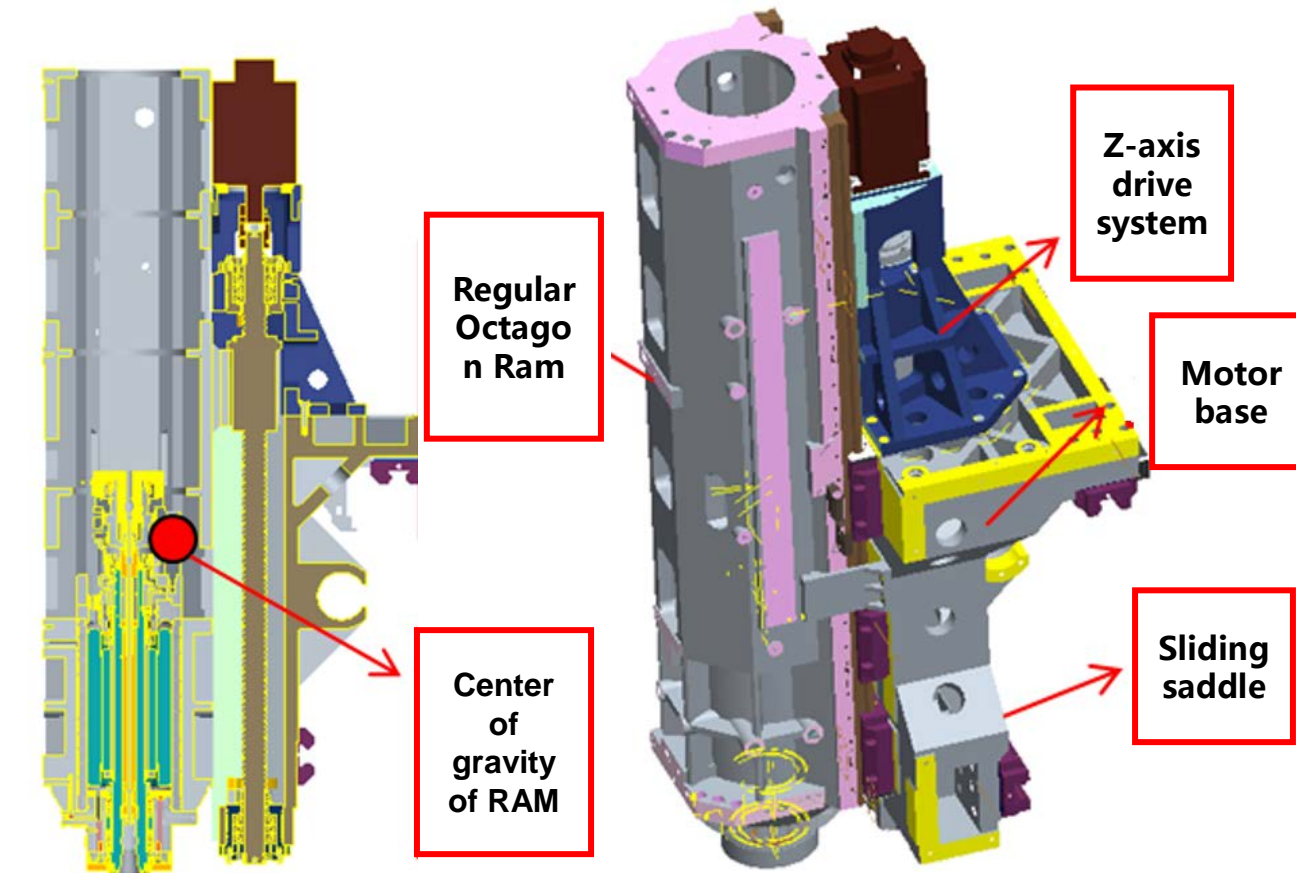


Model	Ball screw (mm)		Ball screw precision level	Brand	Ram guideway C
	Diameter	Pitch			
MOUS13II×8	50	12	C3	PMI	135
MOUS13II×16	50	12	C3	PMI	135
MOUS16II×20	50	12	C3	PMI	135
MOUS16II×25	50	12	C3	PMI	135



Model	Type	width (mm)	Slider type	precision level	No.	Span A(mm)	Brand
MOUS13II×8	MRS55	34	MRD55	4	G2	390	SCHNEEBERGER
MOUS13II×16	MRS55	34	MRD55	4	G2	390	SCHNEEBERGER
MOUS16II×20	MRS55	34	MRD55	4	G2	460	SCHNEEBERGER
MOUS16II×25	MRS55	34	MRD55	4	G2	460	SCHNEEBERGER

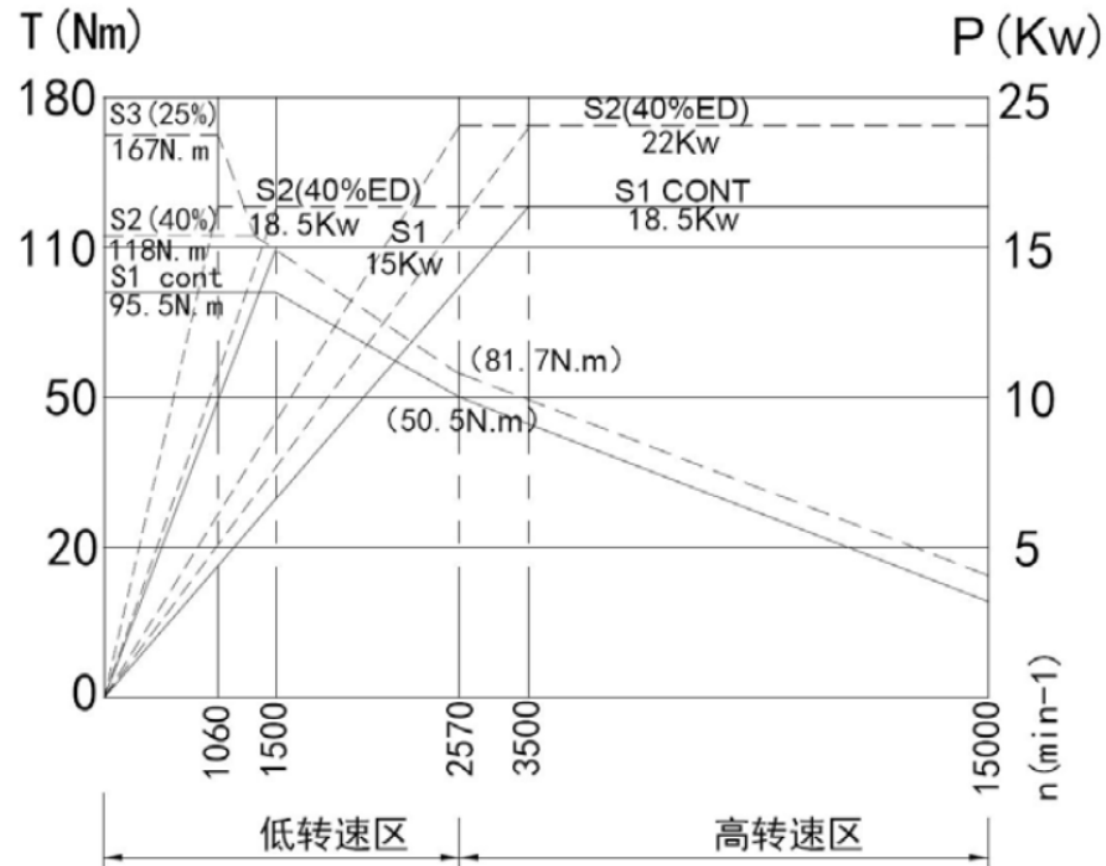
Structural features - Advantages of ram components



Good heat balance and mature structure technology

The way for the sliding saddle to close the sliding block is 6 screws to give full play to the absolute rigidity of the line rail

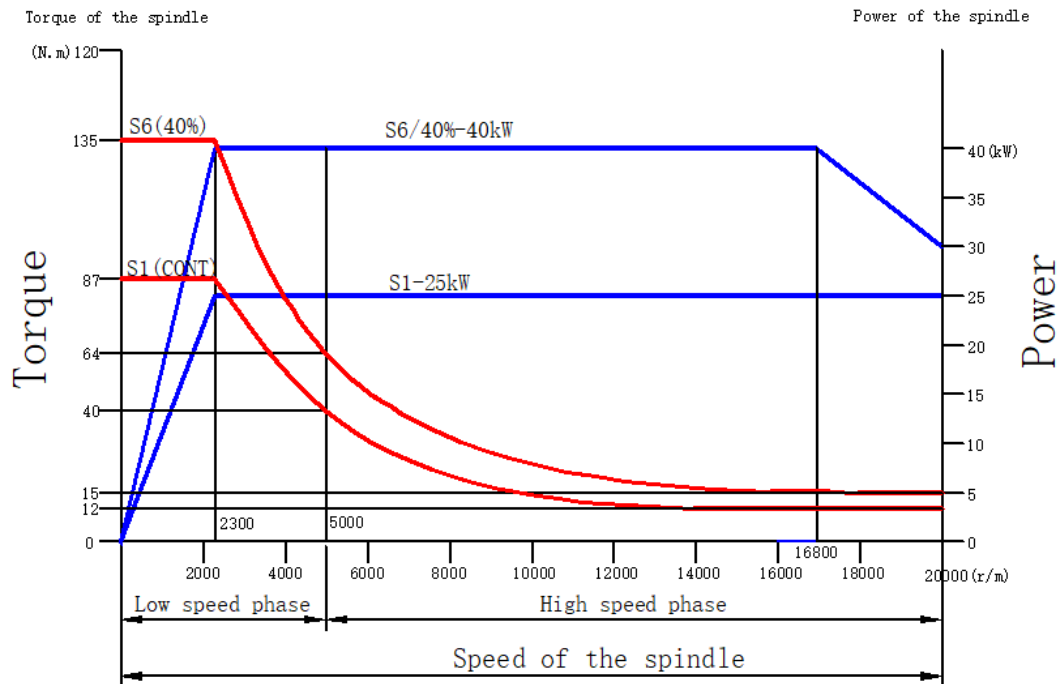
Structural Characteristics - Self Made Hision built-in Spindle



Main motor power : 10/22kW
Torque : 95.5/167N.m
Max Spindle : 15000rpm (cont 15min), cont 12000rpm
Spindle taper : HSK-A63

Kessler 20000rpm
HSK-A63

— Torque
— Power



Main motor power : 25/40kW

Torque : 87/135N.m

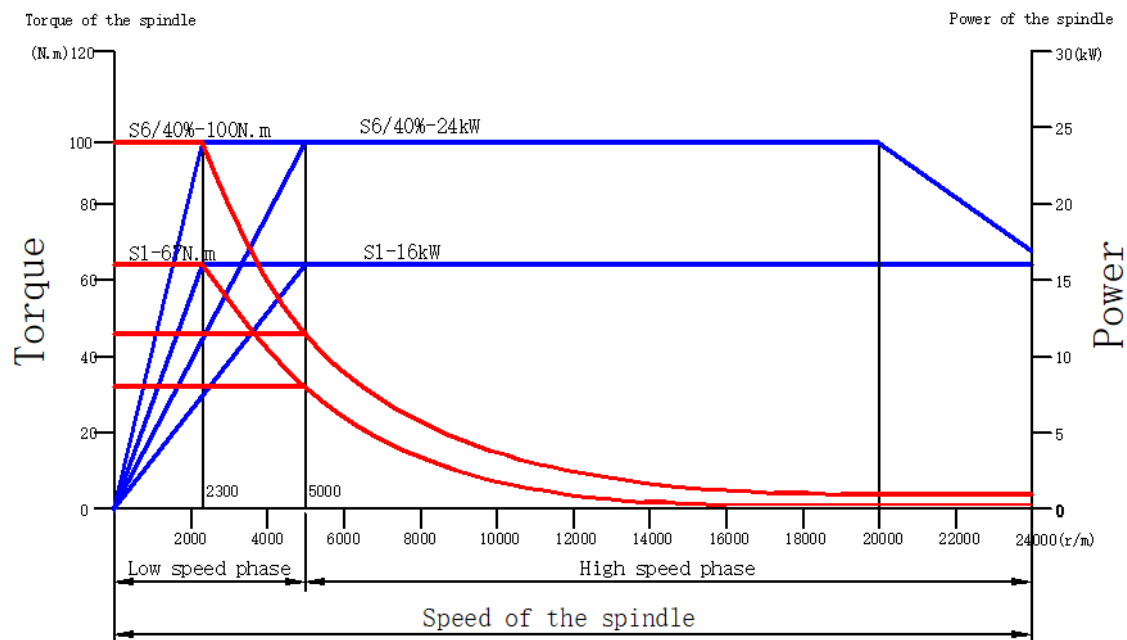
Max spindle speed :

20000rpm

Spindle taper : HSK-A63

Kessler 24000rpm
HSK-A63

— Torque
— Power



Main motor power : 16/24kW

Torque : 67/100N.m

Max spindle speed :

24000rpm

Spindle taper : HSK-A63

Power and torque of three axis-FANUC/Mitsubishi



Model	axis	type	Power kW	Torque Nm	Max torque Nm	Model	axis	type	Power kW	Torque Nm	Max torque Nm
MOUS13II ×8(FANUC)	X	αiF 30/4000	7	30	83	MOUS13II ×8 (Mitsubishi)	X	HG-H703S-D48	7	49	152
	Y	αiF 30/4000	7	30	83		Y	HG-H703S-D48	7	49	152
	Z	αiF 40B/3000FAN	9	53	130		Z	HG-H703S-D48	7	49	152
	Spindle	BiI112M/15000	10/22	63.7/118			Spindle	SJ-4B4360TK	15/22	95.5/167	
MOUS13II ×16(FANUC)	X	αiF 40/3000FAN	9	53	130	MOUS13II ×16 (Mitsubishi)	X	HG-H703S-D48	7	49	152
	Y	αiF 30/4000	7	30	83		Y	HG-H703S-D48	7	49	152
	Z	αiF 40B/3000FAN	9	53	130		Z	HG-H703S-D48	7	49	152
	Spindle	BiI112M/15000	10/22	63.7/118			Spindle	SJ-4B4360TK	15/22	95.5/167	
MOUS16II ×20(FANUC)	X	αiF 30/4000	7	30	83	MOUS16II ×20 (Mitsubishi)	X	HG-H703S-D48	7	49	152
	Y	αiF 30/4000	7	30	83		Y	HG-H703S-D48	7	49	152
	Z	αiF 40B/3000FAN	9	53	130		Z	HG-H703S-D48	7	49	152
	Spindle	BiI112M/15000	10/22	63.7/118			Spindle	SJ-4B4360TK	15/22	95.5/167	
MOUS16II ×25(FANUC)	X	αiF 30/4000	7	30	83	MOUS16II ×25 (Mitsubishi)	X	HG-H703S-D48	7	49	152
	Y	αiF 30/4000	7	30	83		Y	HG-H703S-D48	7	49	152
	Z	αiF 40B/3000FAN	9	53	130		Z	HG-H703S-D48	7	49	152
	Spindle	BiI112M/15000	10/22	63.7/118			Spindle	SJ-4B4360TK	15/22	95.5/167	

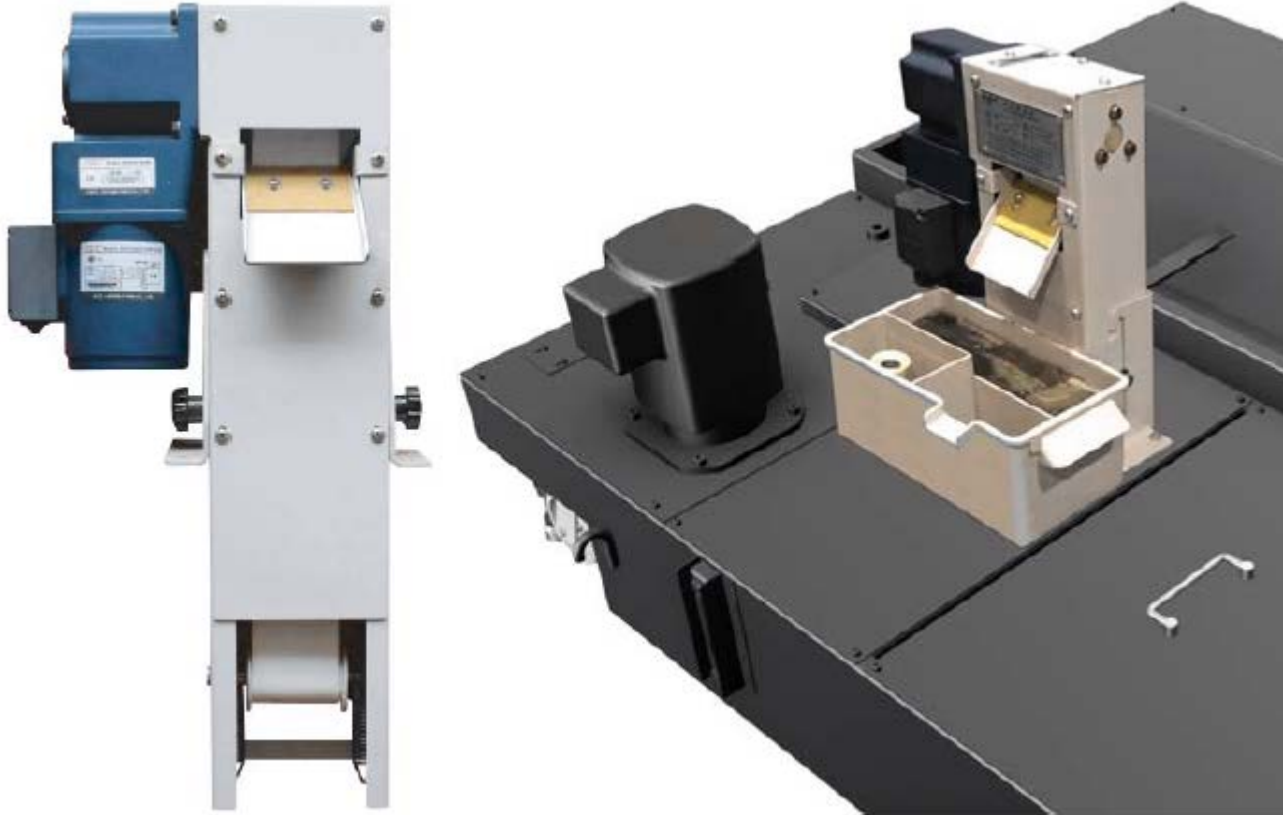
Option configuration - Spindle annular spray cooling & Tool center water outlet



Spindle annular spray cooling



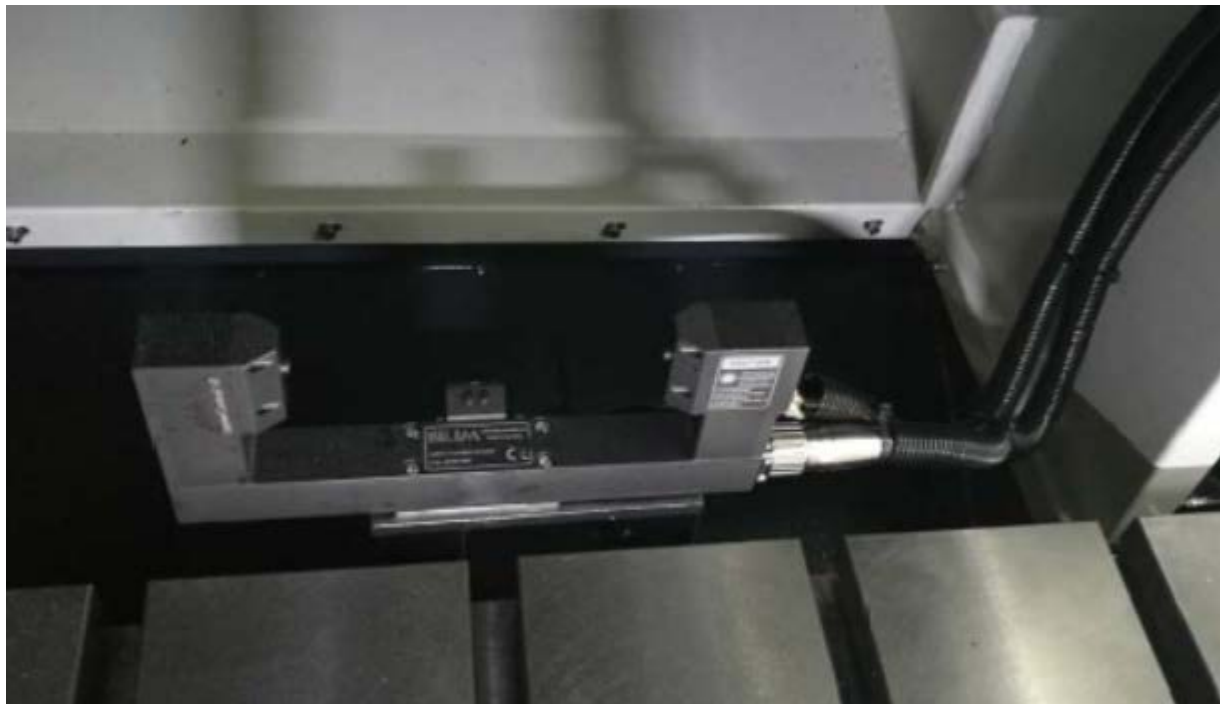
Tool center water outlet



Oil skimmer



Oil mist collector



1. **Non contact setting for rotating and non rotating tools;**
2. **Monitor the runout error of high speed rotating tool;**
3. **Accurate damage monitoring in rapid positioning;**
4. **Single cutting edge damage monitoring;**
5. **Temperature drift compensation of machine tool axis (horizontal axis);**
6. **Measure the runout value (analog quantity) of the rotating shaft in a non-contact way.**



1. **Workpiece measurement;**
2. **Radio transmission;**
3. **Omnidirectional probe;**
4. **Wear free measuring mechanism;**
5. **Compensation for temperature drift of machine tool axis (three axes);**
6. **3D profile measurement (additional software support).**

Option configuration- Armless horizontal pushing type magazine

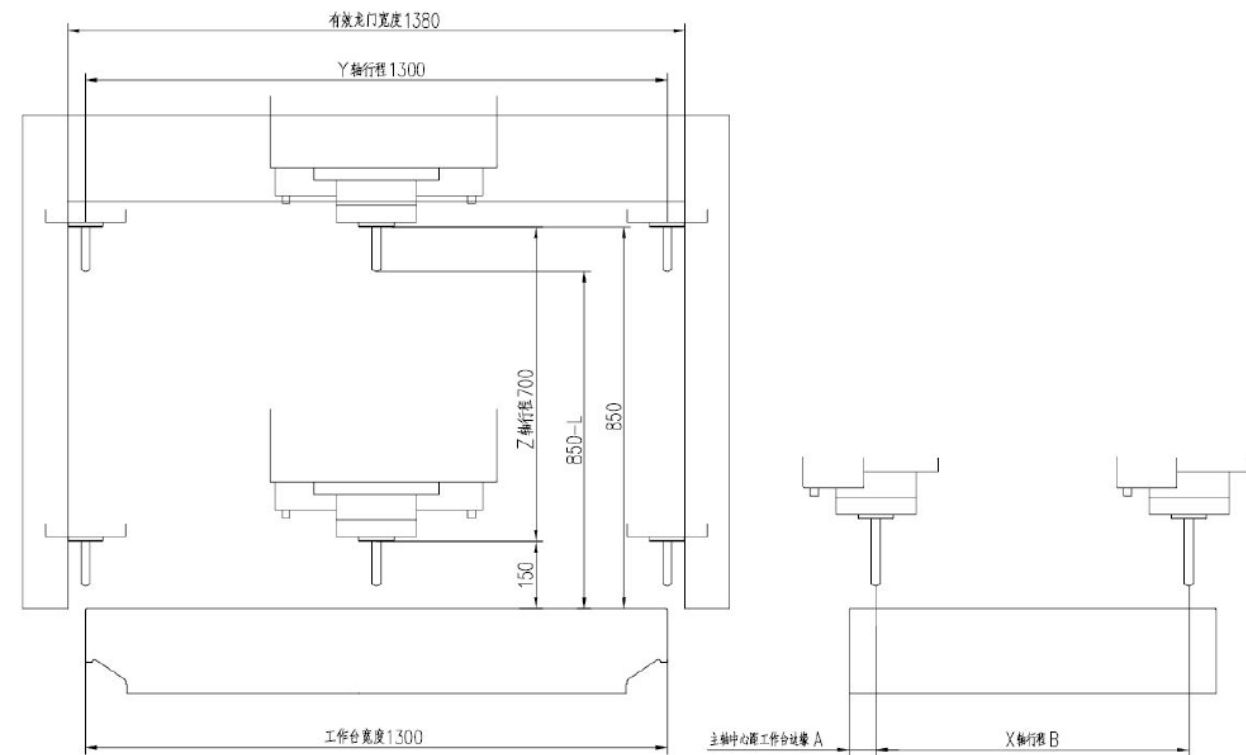
HISON



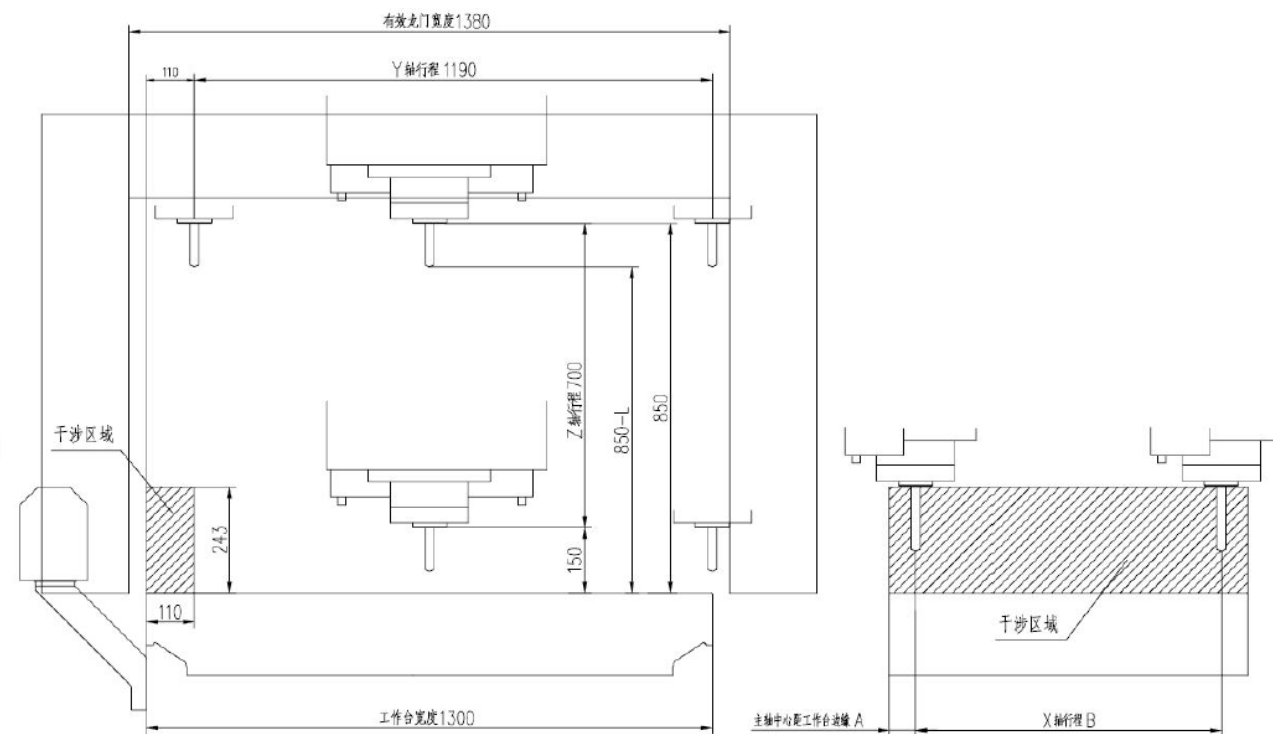
Note: select the model of the corresponding spindle toolholder.

Standard configuration		Option configuration	
1	Controller : Mitsubishi M80A(MOUSII ×8 is Mitsubishi M830)	1	Controller : FANUC 0i
2	HISION built-in spindle	2	KSL24000rpm (HSK-A63)
3	Spindle oil chiller	3	KSL20000rpm (HSK-A63)
4	Pneumatic, hydraulic and centralized lubrication system	4	20/24 armless ATC (HSK-A63)
5	Full enclosure without top cover	5	Coolant through spindle
6	Internal Helix chip conveyor	6	Spindle ring spray
7	cutting cooling	7	Linear scale(X/Y/Z)
8	3-color light, working light	8	CNC rotary table(4th)
9	Tool life management	9	Air conditioner
10	SSS mould function	10	Workpiece probe
11	Ethernet function	11	Tool probe
12	Original SD card 8G (Only for MITSUBISHI)	12	Oil skimmer
13	Standard attachments	13	Water gun
14	Common maintain tools	14	Oil mist collector
15	External chain chip conveyor	15	Cutting oil mist cooling
		16	Memory program capacity 2M (Only for FANUC)
		17	Data-server(only for FANUC 0i)
		18	3D dynamic graphic display function
		19	Air gun

Description of processing range

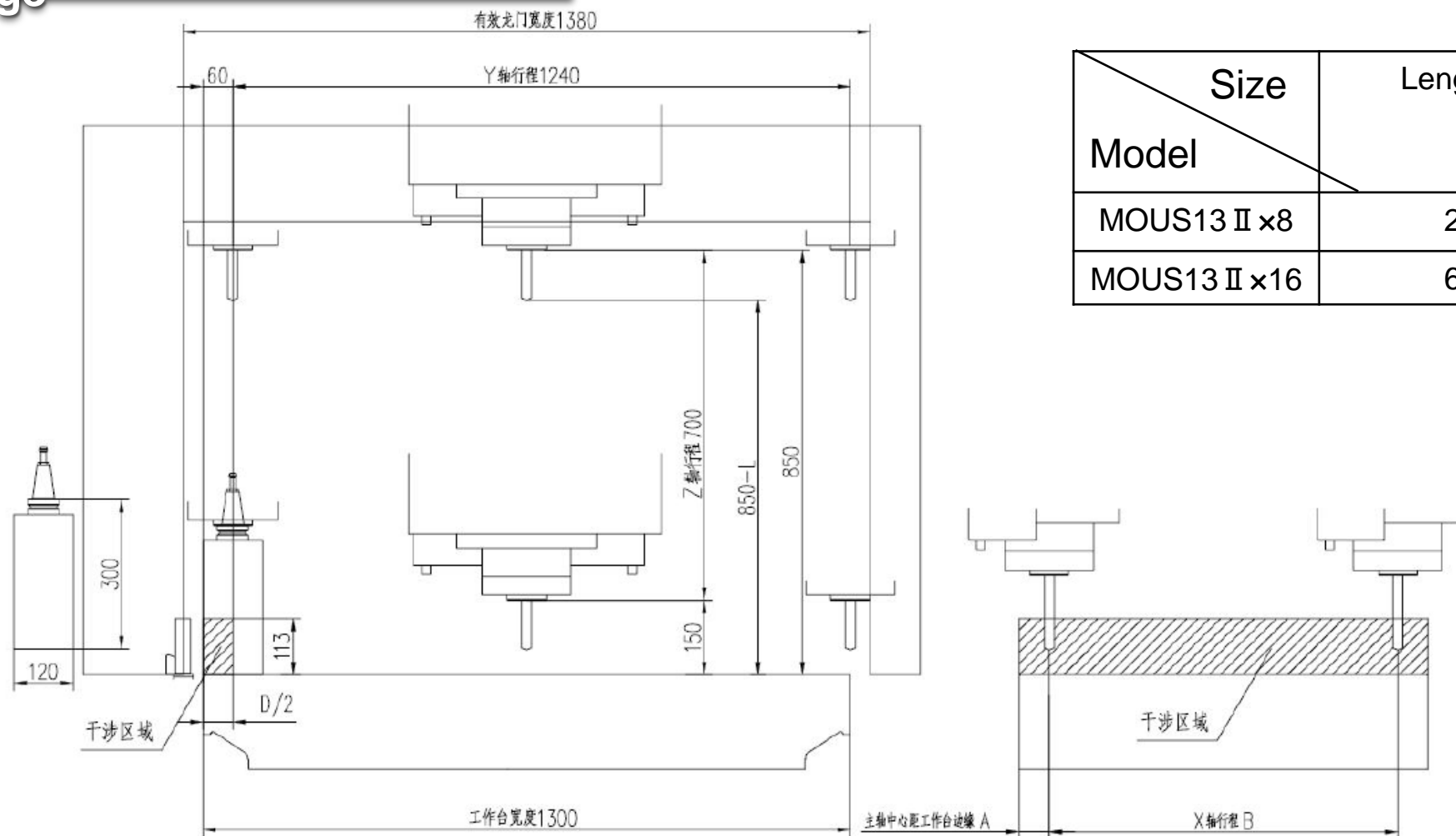


Standard configuration processing range, tool length $L \leq 300$ mm



When the laser tool setting instrument is selected, the machining range, when the tool length $L \leq 300$ mm

Description of processing range



Model	Size	Length A	X travel B
MOUS13 II ×8		25	800
MOUS13 II ×16		60	1500

The machining range of the manipulator free tool magazine and laser tool counter is selected. The tool length L ($L \leq 300\text{mm}$) tool diameter D ($D \leq 120\text{mm}$)

HISKON



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谢谢观看！

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