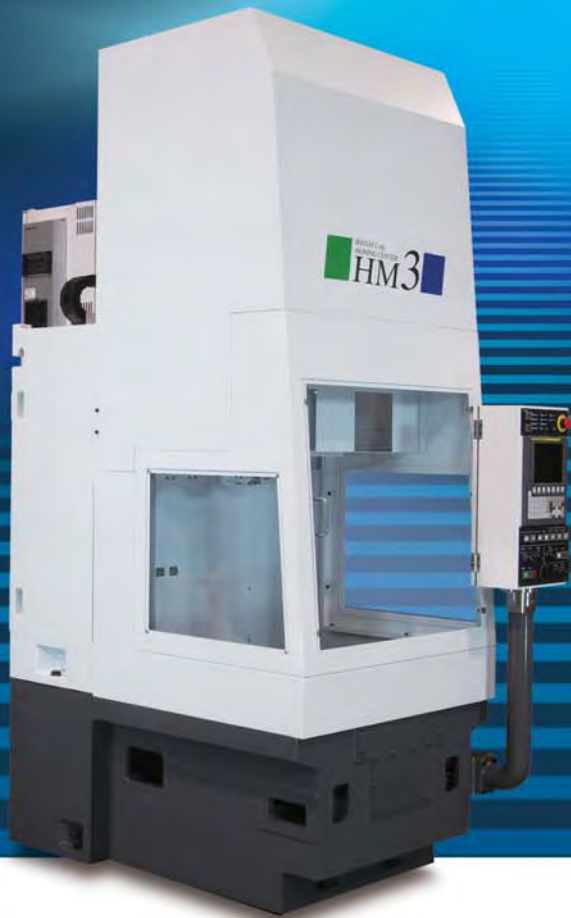


HONING CENTER

Honing & Boring

HM3
•
HM4
•
HM5



IKEGAI

*Rich Green on Land
Deep Blue in Sky and Sea*



New proposal for finishing machine **B&H** finishing

Boring Honing

IKEGAI's Honing Center was especially developed from customers' request, which was a machining center with honing function. This machine can shorten process error-less and also realize high efficiency and accuracy.

Various function & software is arranged for small ~ big bore honing.



Characteristics

Honing function

- Digital machining by NC extended function (U axis)
- Various bore honing finishing by Auto Tool Changer (ATC)
- Variety of tested plug sizing and air sizing supports stability.
- Useful honing software is available.

Honing function + Machining function

- High accurate finishing by boring of pre-honing holes.
- Saves machine cost, process, and waste of time.
- Full automatic functions.

Line Up

HM3



HM4



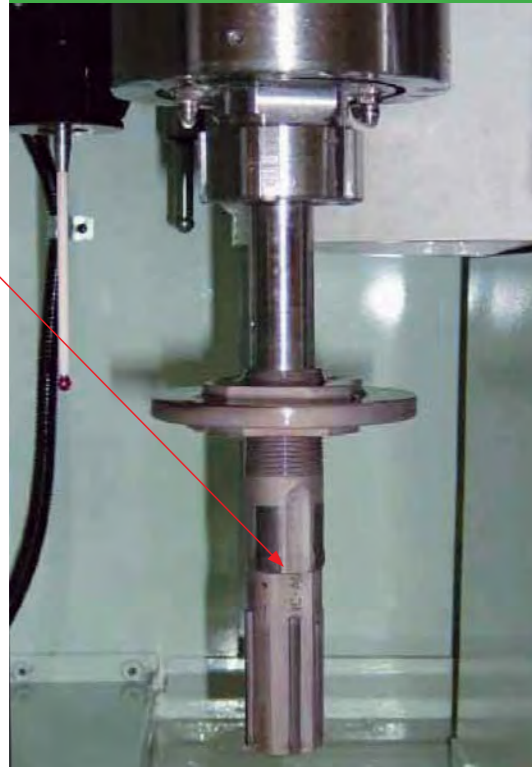
HM5



IKEGAI HONING CENTER

Variety of functions

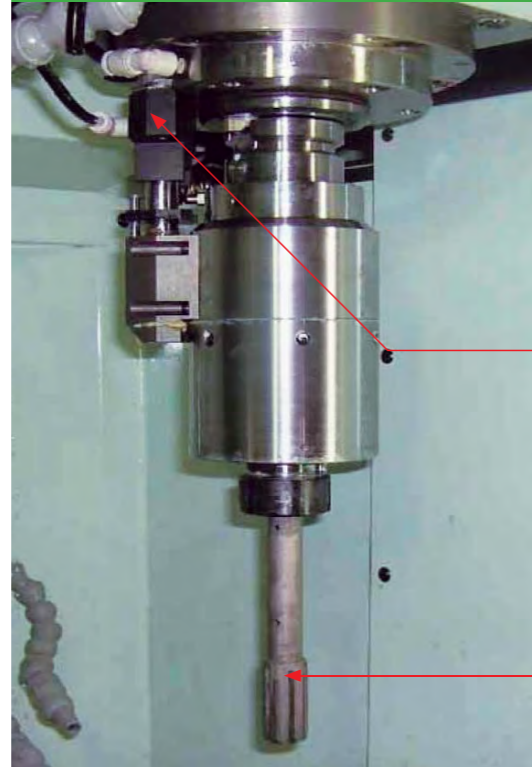
Plug sizing



Plug gauge
(Cemented carbide)

Plug sizing type honing tool

Air sizing



Air inlet

Air outlet

APC(Auto Pallet Changer: Option)



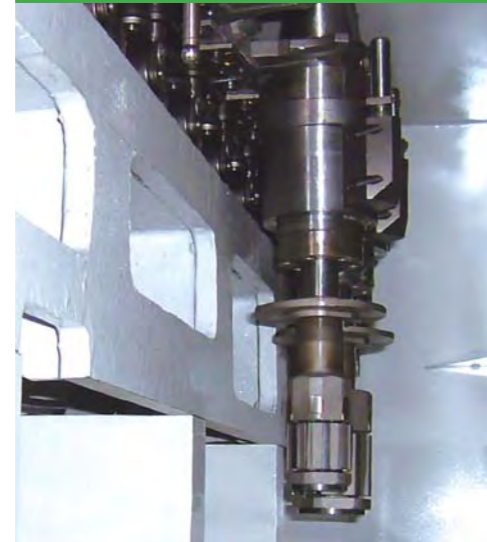
Coolant unit and chip conveyor (Option)



ATC(BT40) and honing tool



ATC(BT50) and honing tool



Touch sensor (Option)



Actual machining results

Honing positioning accuracy	±0.002mm
Diameter dispersion (mutual error)	0.003mm
Roundness	0.001~0.002mm
Surface roughness	Ra0.13~0.17

*Above is a example, as per conditions they may change.

Main specification

Basic specifications		Unit	HM3	HM4	HM5	
The diameter of recommendation processing		mm	φ10~φ40	φ10~φ60	φ10~φ100	
Spindle	Spindle taper	—	BT30(MAS403-BT30)	BT40(MAS403-BT40)	BT50(MAS403-BT50)	
	Spindle pull stud	—	JISB63390P	JISB633940P	MAS-1Type	
	Spindle speed	min ⁻¹	100~3000	1000~8000	40~3000	
Table	Table size	mm	350×500	420×700	510×1100	
	Max. loading weight	kg	200	300	800	
	T-slot size	mm	—	3-slot×18×125	5-slot×18×100	
	Height from floor to table top	mm	760	750	1155	
Stroke	X-axis (left and right along saddle)	mm	400	560	1000	
	Y-axis (forward and backward along table)	mm	350	410	510	
	Z-axis (upward and downward along)	mm	400	400	530	
	Distance between the end of the main axis and the table top	mm	300~700	350~760	350~880	
Feed Rate	Cutting feed	X Y Z axis	mm/min	1~24000	1~5000	1~5000
	Honing feed	Z axis	mm/min	MAX.30000	MAX.20000 Coolant for ball screw	MAX.20000 Air balancer, coolant for ball screw
	Rapid feed traverse	X Y axis	mm/min	24000	24000	18000
		Z axis	mm/min	30000	24000	20000
ATC	Tool change		—	Direct type	Direct type	Direct type
	No. of tools			8	16	30
	Max. tool dia. × length		mm	φ50×350	φ100×450	φ120×450
	Max. tool weight		kg	5	8	15
	Tool selection		—	Fixed address method	Fixed address method	Fixed address method
Motor out put	Main motor		kW	3.7/5.5	AC7.5/5.5	AC15/11
	Feed motor	X Y axis	kW	AC1.2	AC2.1	AC2.1
		Z axis	kW	AC3.0	AC5.5	AC5.5
Total power capacity		kVA	20	50	60	
Required air pressure		MPa	0.4	0.5	0.5	
Required air volume		L/min	200	250	600	
Machine size (Width × Length)		mm	1000×2500	2500×2700	3000×2700	
Machine height		mm	2950	2800	3500	
Machine weight		kg	3000	4500	8000	

Standard accessories

HM3, HM4, HM5

- Leveling screw and sheet plates
- Splash cover
- Adjustment tool
- Coolant unit
- Illumination unit
- Software for Honing process
- U axis control function (HM4, HM5)

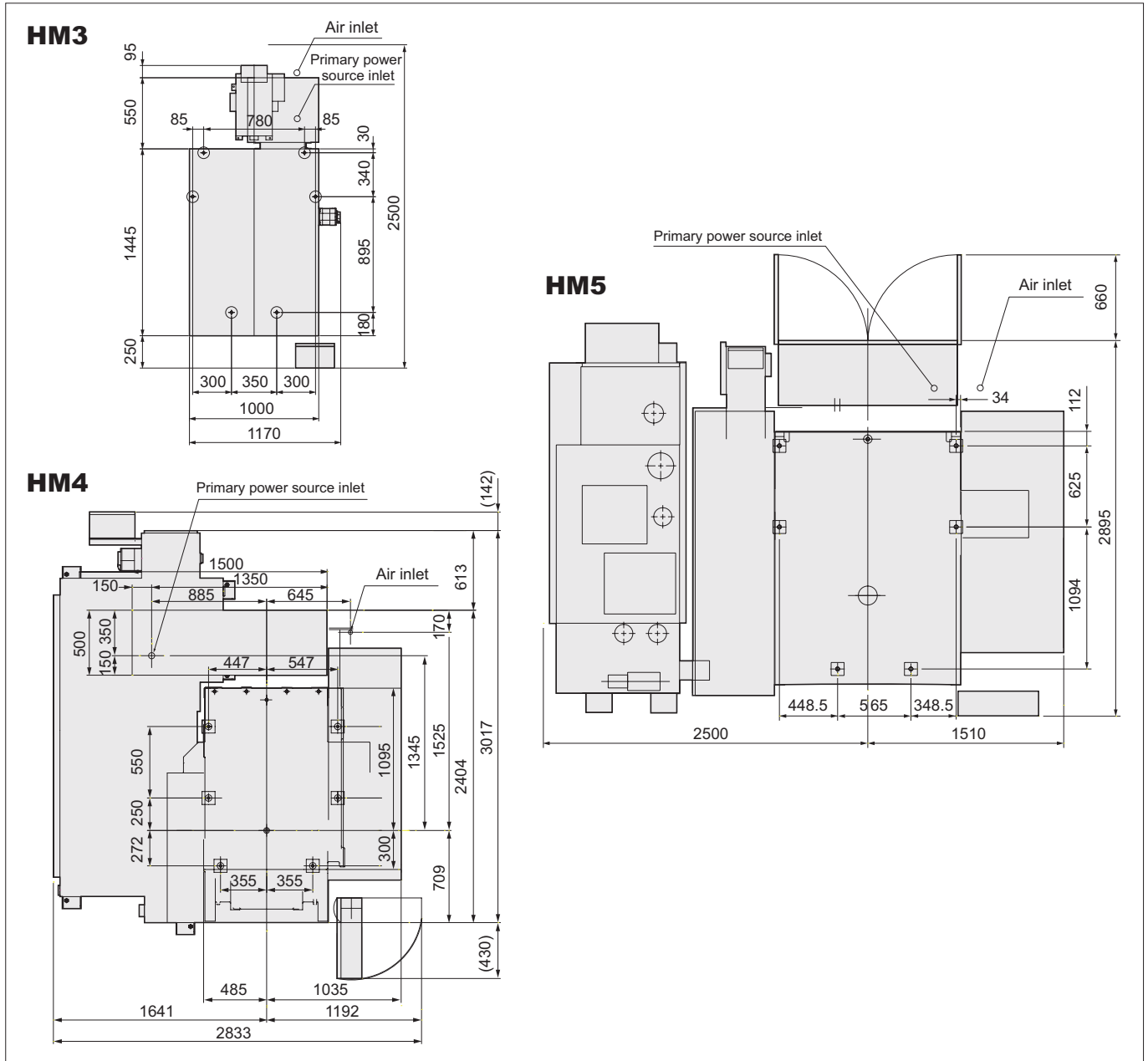
Option

HM3, HM4, HM5

Item	Specification
Selected specification	High column 200 mm / 300 mm
	Air sizing method
Machine outside	Magnetic scraper type chip conveyor
	Cyclone type separator
	Coolant unit
	Fixed coolant unit
	Coolant gun for cleaning
Honing head	Air gun for cleaning
	To be discussed
Automation functions	Auto. measuring system (3D touch sensor)
	Scale feed back (X, Y axis)
	Automatic doors open-close
	Touch switch function
	Door front area sensor
Carrier frequency devices	



Installation



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Please read the instruction manual carefully to ensure that you use the machine correctly and safely.