

## SPECIFICATIONS

Item/Model	Unit	HT-400		HT-500		HT-630		HT-800	
<b>TRAVEL</b>									
X Axis	mm(inch)	820	(32.3)	820	(32.3)	1050	(41.3)	1400	(55.1)
Y Axis	mm(inch)	720	(28.3)	720	(28.3)	900	(35.4)	1100	(43.3)
Z Axis	mm(inch)	635	(25)	635	(25)	1000	(39.4)	1000	(39.4)
Spindle Center to Table Surface	mm(inch)	120-840	(4.7-33.1)	120-840	(4.7-33.1)	120-1020	(4.7-40.7)	120-1220	(4.7-48)
Spindle Nose to Table Center	mm(inch)	154-789	(6.1-31.1)	154-789	(6.1-31.1)	157-1157	(6.2-45.6)	259-1259	(10.2-49.6)
<b>SPINDLE</b>									
Spindle Speed	rpm	10000 (DDS)		10000 (DDS)		7000 (DDS)		7000 (DDS)	
Spindle Motor (Cont. / 30 min.)	kw(hp)	15/18.5	(20.1/24.8)	15/18.5	(20.1/24.8)	22/26	(29.5/34.9)	22/26	(29.5/34.9)
Spindle Nose	BT(CAT)	BT-40	(CAT-40)	BT-40	(CAT-40)	BT-50	(CAT-50)	BT-50	(CAT-50)
<b>PALLET SYSTEM</b>									
Pallet Change Type		Rotary		Rotary		Rotary		Rotary	
Pallet Size	mm(inch)	400x400	(15.7x15.7)	500x500	(19.7x19.7)	630x630	(24.8x24.8)	800x800	(31.5x31.5)
Max. Loading Capacity	kg(lbs)	400	(880)	600	(1320)	1200	(2640)	2000	(4400)
<b>FEEDRATE</b>									
X/Y/Z Rapid Feedrate	m/min(ipm)	48 / 48 / 48 (1889 / 1889 / 1889)		48 / 48 / 48 (1889 / 1889 / 1889)		48 / 48 / 48 (1889 / 1889 / 1889)		48 / 48 / 48 (1889 / 1889 / 1889)	
Cutting Feedrate	m/min(ipm)	1 - 10	(40-393)	1-10	(40-393)	1-10	(40-393)	1-10	(40-393)
X/Y/Z Axial Feed Motor	kw	3(x2)/7/4(F)		3/7/4(F)		4(x2)/6/7(F)		4(x2)/6/7(F)	
<b>ATC UNIT</b>									
Tool Change Type		Round-Rail		Round-Rail		Chain		Chain	
Tool Capacity	set	60		60		60		60	
Max. Tool Weight	kgs(lbs)	8	(17.6)	8	(17.6)	20	(44)	20	(44)
Max. Tool Length	mm(inch)	300	(11.8)	300	(11.8)	450	(17.7)	450	(17.7)
Max. Tool Diameter with Adj. Tool	mm(inch)	80	(3.1)	80	(3.1)	125	(4.9)	125	(4.9)
Max. Tool Diameter without Adj. Tool	mm(inch)	160	(6.3)	160	(6.3)	250	(9.9)	250	(9.9)
<b>MISCELLANEOUS</b>									
Air Pressure Required	kg/cm <sup>2</sup> (psi)	6	(85.3)	6	(85.3)	6	(85.3)	6	(85.3)
Dimension (L x W x H)	mm(inch)	5135x3555x3320 (202.1x199.9x130.7)		5135x3555x3320 (202.1x199.9x130.7)		6030x4000x3735 (237.4x159.8x147)		6670x4300x3735 (262.6x169.3x147)	
Net Weight	kgs(lbs)	18000	(39600)	18000	(39600)	25000	(55110)	27000	(59519)
Gross Weight	kgs(lbs)	18700	(41140)	18700	(41140)	26000	(57314)	28000	(61723)

■ The above specifications are subject to change without prior notice.

### Standard & Optional Equipment ■ Standard ■ Optional

- |  |  |   |   |
|--|--|---|---|
| <ul style="list-style-type: none"> <li>■ Spindle oil cooler</li> <li>■ Full chip enclosure</li> <li>■ Coolant flush system</li> <li>■ MPG</li> <li>■ Heat exchanger for electrical cabinet</li> <li>■ Work lamp</li> </ul> | <ul style="list-style-type: none"> <li>■ Tri-color indicator lamp</li> <li>■ Leveling bolts and pads</li> <li>■ Tool box</li> <li>■ Link Type Chip Conveyor</li> </ul> | <ul style="list-style-type: none"> <li>■ Direct drive 12000 rpm spindle (HT-400 / 500)</li> <li>■ Built in 15000 rpm spindle (HT-400 / 500)</li> <li>■ Direct drive 6000 rpm spindle &amp; CTS(S) (HT-630 / 800)</li> <li>■ Direct drive 8000 rpm spindle &amp; CTS(S) (HT-630 / 800)</li> <li>■ Built in 10000 rpm(F)(HT-630 / 800)</li> </ul> | <ul style="list-style-type: none"> <li>■ Tool magazine capacity - 90 tools (HT-400 / 500)</li> <li>■ Tool magazine capacity - 96 tools (HT-630 / 800)</li> <li>■ Coolant through spindle</li> <li>■ Screw type chip conveyor</li> <li>■ Tool length measurement system</li> <li>■ Oil skimmer</li> <li>■ Air conditioner for electrical cabinet</li> <li>■ Linear scales on X/Y/Z axis</li> </ul> |
|--|--|---|---|



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L.K. MACHINERY



## Horizontal Machining Centers New HT Series

### True Dynamic, True Rigidity

- ▶ Box-in-box Double Column Design
- ▶ 400 / 500 / 630 / 800 mm Pallet size
- ▶ Ball Screw on the Center of Gravity
- ▶ Extraordinary Damping Coefficient

# HT-400 HT-500

## Crane Type APC System



- ▶ With a table load of 750 kg, the Crane Type pallet change unit is the perfect solution. The driving system on top of the pallet changer design provides rapid and smooth movement and fast cycle completion. Moreover, the pallet change unit is independently installed on the machine top; it is easy for technical service and regular maintenance.
- ▶ The pallet change unit is independently installed on the top of the machine allowing for easy maintenance.

## Round-Rail Type ATC



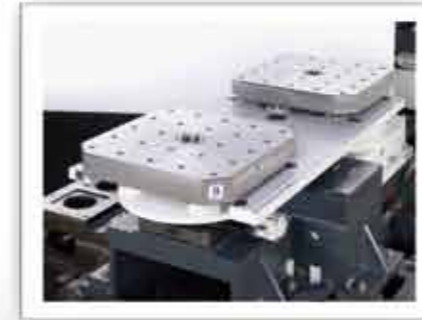
- ▶ The floor-type system is installed beside the machine's APC unit, free from side-bending force that affects the static accuracy of machine.



- ▶ Driven by a highly efficient and reliable servo motor
- ▶ The circular motion tool plate reduces structural vibration while high speed indexing
- ▶ A capacity of 60 tools is standard

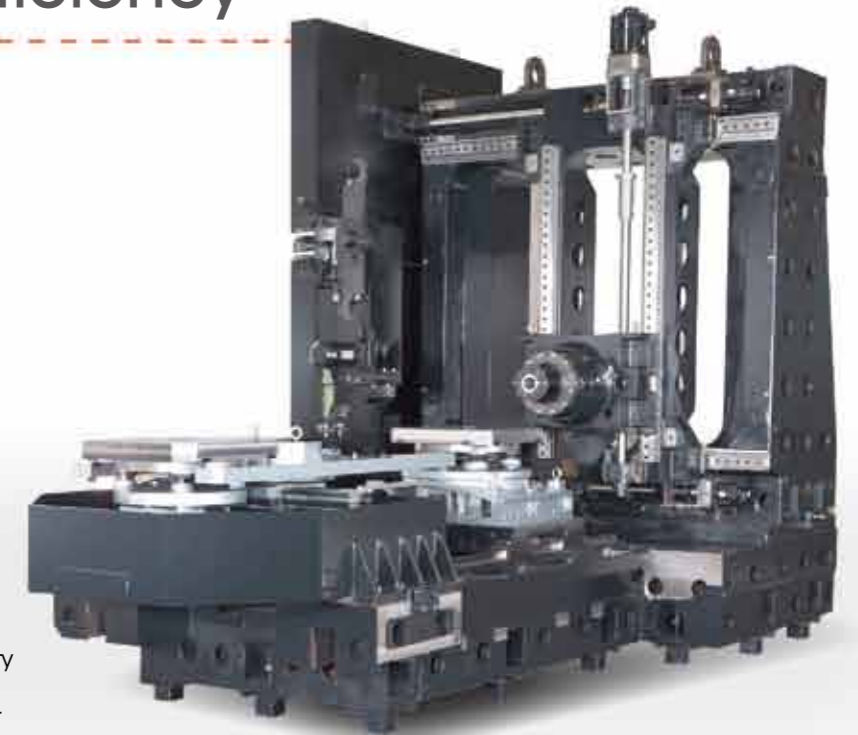
# HT-630 HT-800

## Heavy Duty with Efficiency



1° indexing / 0.001° indexing (optional)

- ▶ The hydraulic pallet change system allows for a 1200 to 2000 kg workpiece. The low center of gravity design of the axial driving system and heavy duty pallet changer provides a solid platform for superior cutting capability



## Chain Type Automatic Tool Magazine

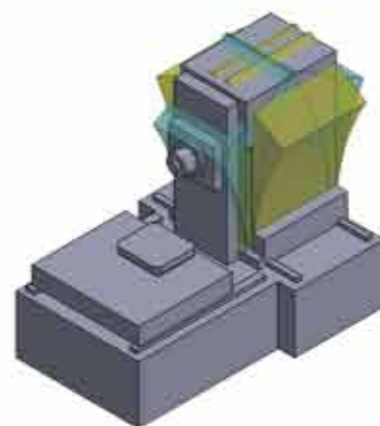
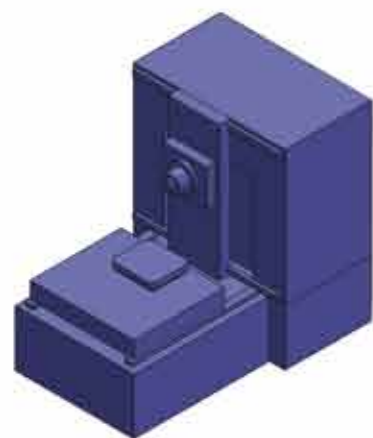
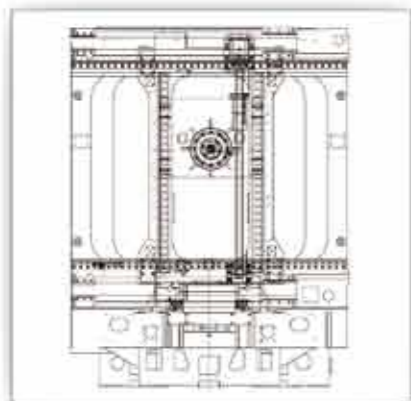


- ▶ Arm type design also with total water-proof, which can be avoided the coolant seeping in the magazine.
- ▶ BT spindle taper as standard, but the options of CAT, DIN & HSK are available surely.
- ▶ Special design of tool magazine to reach t low noise & vibration.
- ▶ Put tools from tool magazine to spare tool sleeve. Adopt linear guideway to make sure the stability & accuracy.



- ▶ The 4 taper cones mechanically provide the optimum repeatability positioning accuracy for pallets.

## Box-in-Box Structure



### Rigidity with Outstanding Dynamic Accuracy

► High acceleration/deceleration requires absolute structural rigidity to keep cutting time short. The LK HT horizontal machining centers adopt Box-in-Box design which firmly anchors two pre-tensioned X Axis ball screws for the optimum motion control performance and it upholds the best cutting results.

► The conventional single column jerks while moving at high speed which leads to poor workpiece surface and also reduces the life span of the ball screw and linear guide ways.

## VERSATILE FEATURES

### Premium Class Linear Guide Ways

High performance linear guides are standard on all LK Horizontal Machining Centers. The pre-tensioned ball screws provide superior load carrying capacity, less power consumption, low friction and high reliability. The maximum rapid feedrate on X/Y/Z axes is 48 M/Min.



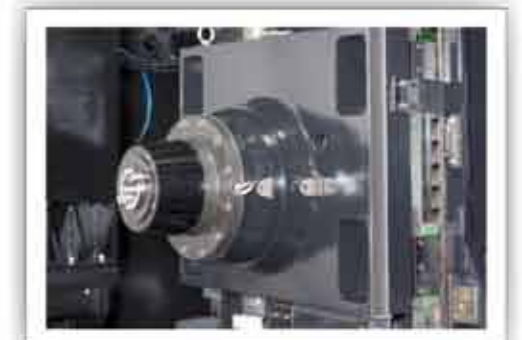
### Pre-tensioned Ball Screws

The pre-loaded ball screws on X/Y/Z axes are installed to deliver more torque and thrust, featuring low thermo deformation and high dynamic positioning accuracy.



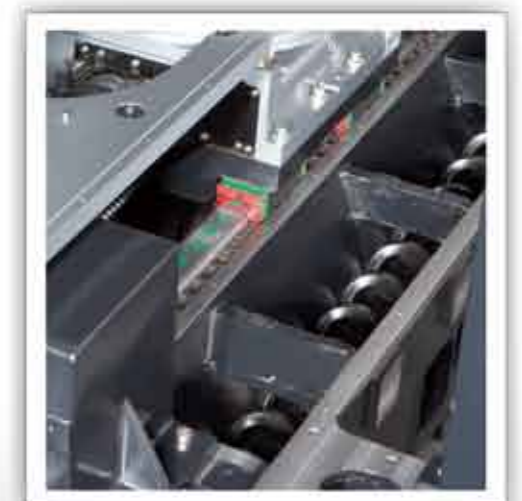
### High Speed Spindle

LK HT Series Horizontal Machining Centers offer standard direct drive spindles of different configurations to meet various machining requirements. With the Coolant Through Spindle Function (optional), the coolant jet is capable of increasing cutting, and drilling capability with better surface finish; in addition, the tool life time is greatly extended.



### Twin Chip Augers

Cutting chips are efficiently conveyed to the chip tanks via the standard two chip augers, in combination with the coolant shower from the top of cutting chamber, the cutting heat is exhausted with chips at the same time. Lift up type chip conveyor is standard.

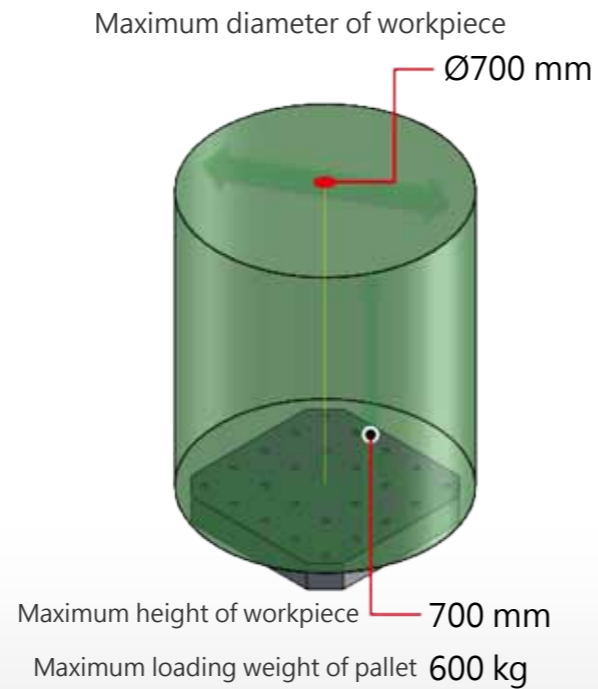


# Machining area

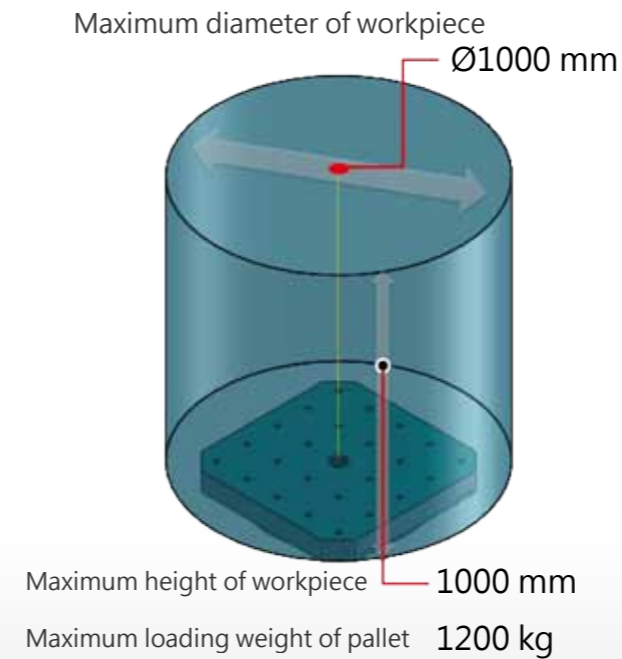
## ▶ HT-400



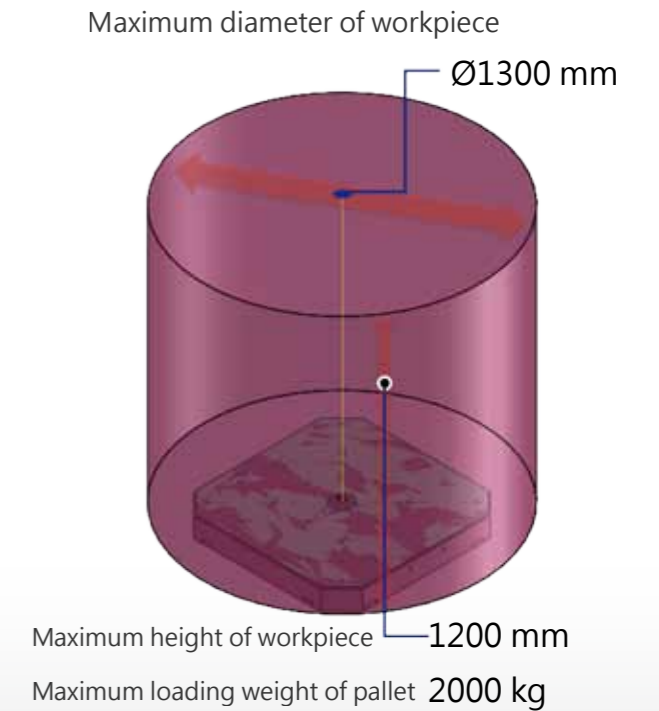
## ▶ HT-500



## ▶ HT-630



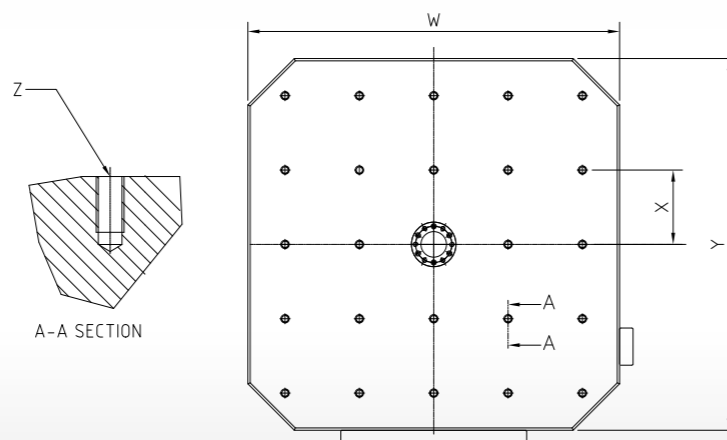
## ▶ HT-800



## ▶ Pallet dimension

	HT-400	HT-500
<b>W</b>	400	500
<b>X</b>	80	100
<b>Y</b>	400	500
<b>Z</b>	24-M16	24-M16

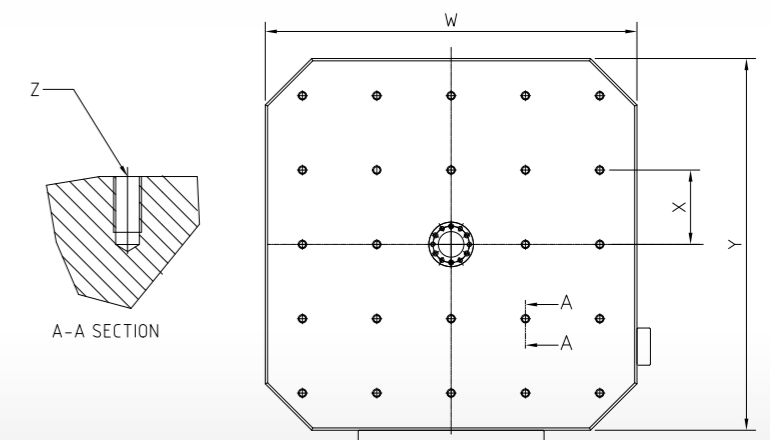
Unit:mm



## ▶ Pallet dimension

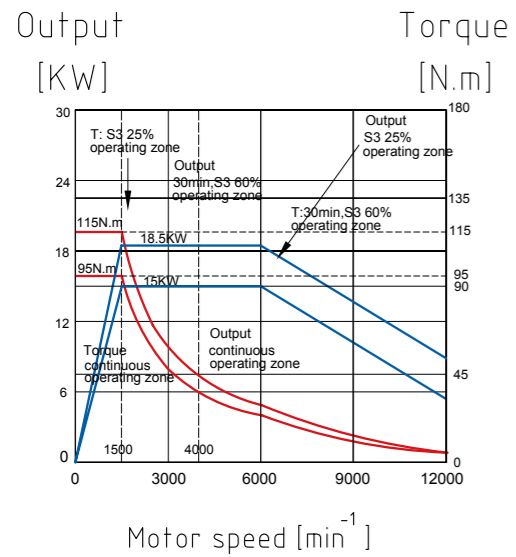
	HT-630	HT-800
<b>W</b>	630	800
<b>X</b>	125	160
<b>Y</b>	630	800
<b>Z</b>	24-M16	24-M16

Unit:mm

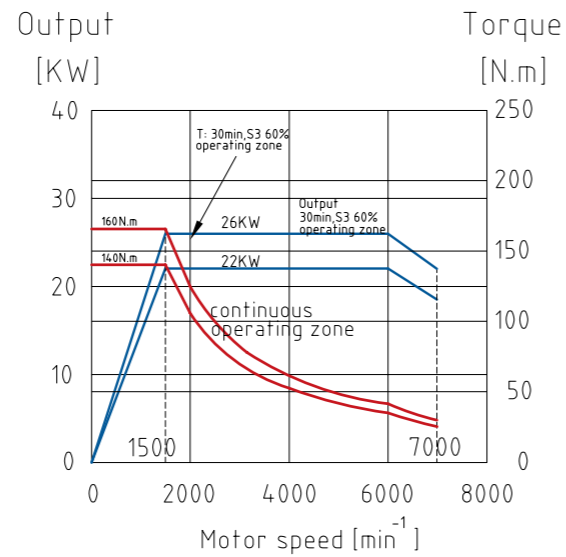


# Power Chart

## ▶ HT-400/HT-500



## ▶ HT-630/HT-800



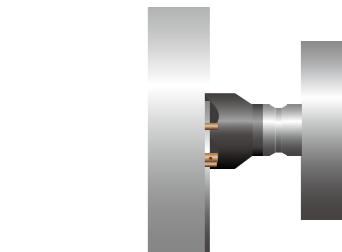
# Cutting Performance

## ▶ HT-400/HT-500



TAPPING CAPACITY		
Tool	M30x3.5P	M30x3.5P
Material	S45C	FC30
Spindle Speed	150rpm	250rpm
Feedrate	525mm	875mm

DRILLING CAPACITY		
Tool	φ 38	φ 50
Material	SC45	ADC
Spindle Speed	200rpm	220rpm
Feedrate	30mm	80mm



FACE MILLING		
Tool	D80-6 face milling tool	D63-5 face milling tool
Material	FC30	ADC
Spindle Speed	1000rpm	8000rpm
Feedrate	2000mm	12000mm
Removal Rate	560c.c.	2970c.c.

# Tool Change time

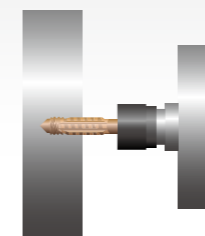


HT-400/500 ( 60 Tools )	4 SEC (T-T)	12 SEC (C-C)
HT-630/800 ( 60 Tools )	5 SEC (T-T)	14 SEC (C-C)

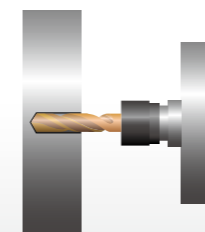
# Marketing Synergy



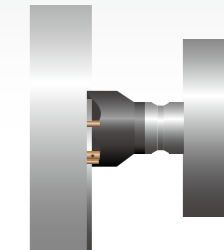
## ▶ HT-630/HT-800



TAPPING CAPACITY	
Tool	M42 x P4.5P
Material	S45C
Spindle Speed	150rpm
Feedrate	675mm



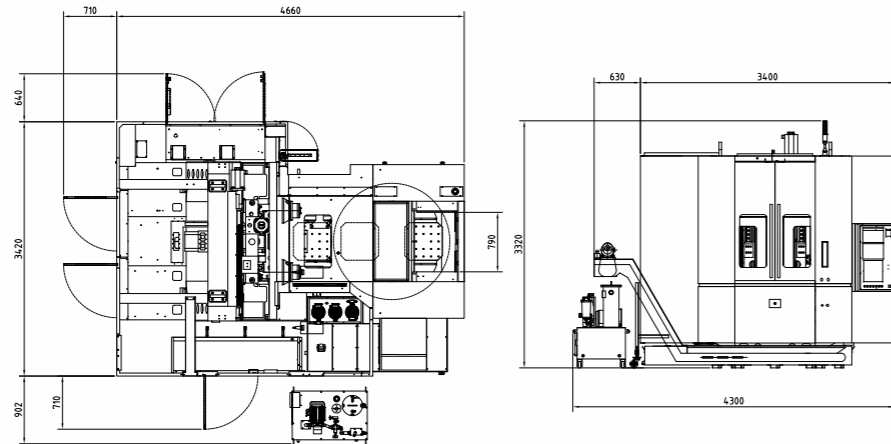
DRILLING CAPACITY		
Tool	φ 50x0.6	φ 50x0.7
Material	S45C	FC30
Spindle Speed	200rpm	150rpm
Feedrate	120mm	105mm



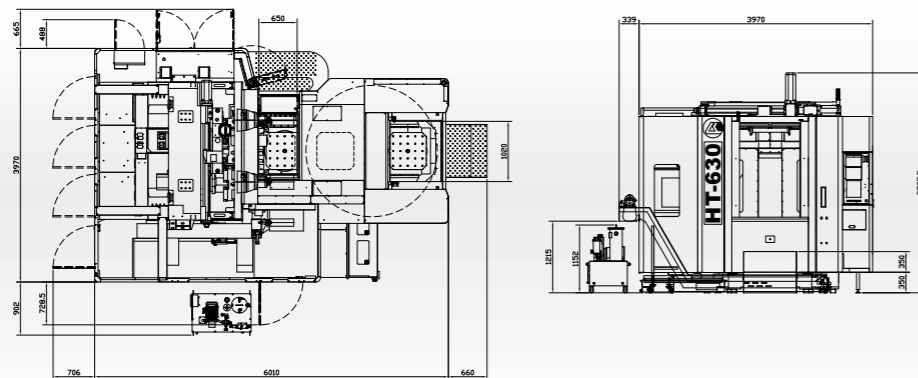
FACE MILLING	
Tool	D160-45° shell type milling tool
Material	S45C
Spindle Speed	400rpm
Feedrate	1000mm(F)
Removal Rate	675c.c.

# FLOOR SPACE

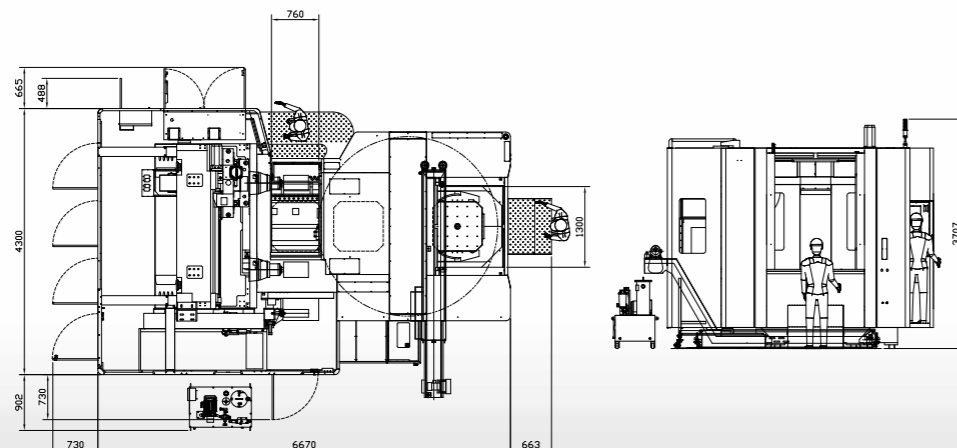
## ▶ HT-400/HT-500



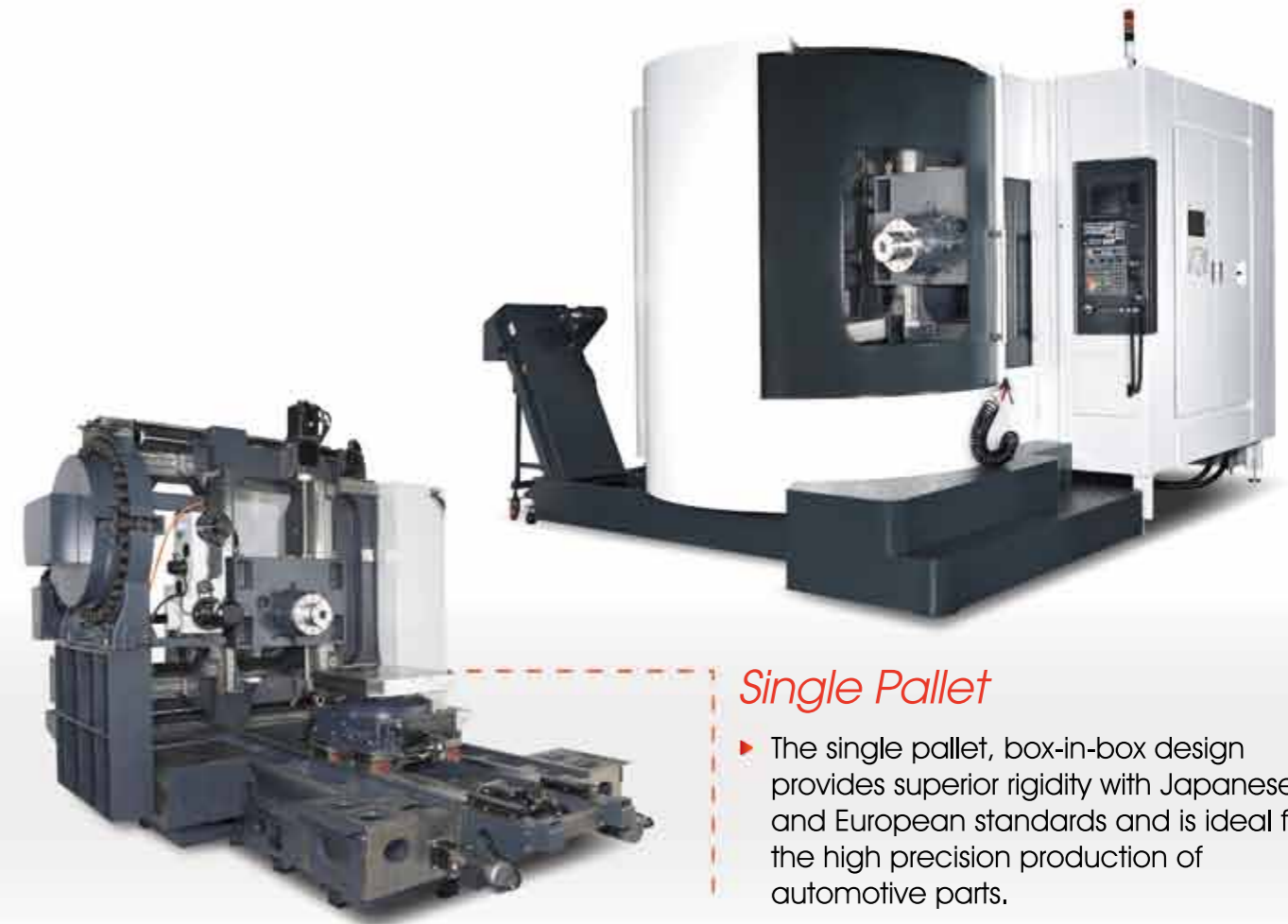
## ▶ HT-630



## ▶ HT-800



# HORIZONTAL TYPE CNC Machining Center



### Single Pallet

- ▶ The single pallet, box-in-box design provides superior rigidity with Japanese and European standards and is ideal for the high precision production of automotive parts.

Item/Model	Unit	HT-500SP	HT-630SP	HT-800SP	HT-1000SP
Travel X/Y/Z	mm(inch)	820x720x635 (32.3x24x25)	1050x900x100 (41.3x35.4x39.9)	1400x1100x1000 (55.1x43.3x39.9)	1400x1030x935 (55.1x40.6x36.8)
Table dimension	mm(inch)	500x500 (19.7x19.7)	630x630 (24.8x24.8)	800x800 (31.4x31.4)	1000x1000 (39.4x39.4)
Max. table load	kgs(lbs)	600 (1320)	1200 (2640)	3000 (6600)	2600 (5731)
Rapid traverse	m/min(ipm)	48/48/48 (1889/1889/1889)	48/48/48 (1889/1889/1889)	48/48/48 (1889/1889/1889)	48/48/48 (1889/1889/1889)
Cutting feedrate	m/min(ipm)	1-10 (40-393)	1-10 (40-393)	1-10 (40-393)	1-10 (40-393)
Spindle speed	rpm	10000 (DDS)	7000 (DDS)	7000 (DDS)	7000 (DDS)
Spindle nose	BT(CAT)	BT-40 (CAT-40)	BT-50 (CAT-50)	BT-50 (CAT-50)	BT-50 (CAT-50)
Spindle motor	kw(hp)	15/18.5 (20.1/24.8)	22/26 (29.5/34.9)	22/26 (29.5/34.9)	22/26 (29.5/34.9)
Tool changer		60 (Chain)	60 (Chain)	60 (Chain)	60 (Chain)
Machine dimension	mm(inch)	4550x3555x2810 (173.2x140x11.7)	5720x4000x3600 (225.3x157.6x141.8)	5900x4300x3900 (232.3x169.3x153.5)	5900x4300x3900 (232.3x169.3x153.5)
Machine weight	kgs(lbs)	13734 (30214)	27922 (61428)	29850 (65801)	29850 (65801)

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