



Technical Details

Fully Automatic Hot-stamping and

Die-cutting Machine

Model: KHD-1050H

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<https://www.kingsunmachinery.com>

◆ Brief Introduction to Equipment

The KHD series full-automatic **hot foil stamping**/stripping/creasing die-cutting machines, it can efficiently complete the die cutting and embossing of products, as well as maintaining the highest precision and product quality. The KHD series full-automatic/hot foil stamping/stripping/creasing die-cutting machines are well equipped and almost can adapt to all die cutting requirements of products.

- (1) Adopt nodular cast iron-QT500-7, the mainframe wallboard casting by special technology process, thus featuring by high strength, never deformation and ensure the safety of the mainframe wallboard.
- (2) Adopt Taiwan-imported intermittent mechanism to ensure that the machine operates accurately. Also, the main engine is equipped with overload protection device and torque limit clutch, to ensure that when they being impacted by external force can stop immediately to reduce the damage to the machine body and teeth precision and reduce the occurrence of failure rate.
- (3) The whole machine all uses SKF\NSK imported original bearing.
- (4) The whole machine uses original parts imported from France Schneider, Japanese OMRON, and Japanese Mitsubishi etc.
- (5) Key parts of teeth row are imported from Japan.
- (6) Die cutting and hot foil stamping accuracy reach to $\pm 0.1\text{mm}$, and the highest speed of machine reaches 7500 sheets/hours.
- (7) The craft shaft is adopts Germany Ni-Cr-Mo metal steel, with high precision and will never deforms.
- (8) Use the centerline positioning system to realize fast plate changing of worksheet.
- (9) Equiped with first-developed pressure servo control device, ensure fast and smooth when they adjusting of die cutting pressure.
- (10) Equip with touch-screen operation interface in both Chinese and English.
- (11) All adopt Taiwan AIRTAC pneumatic components to ensure every pneumatic action performs accurately.
- (12) Adopt double-sheet detector.
- (13) The paper collection platform machine is equipped with automatic auxiliary paper collecting mechanism and operate without stopping the machine.
- (14) The side gauge adopts photoelectric system.
- (15) Adopt automatic refueling system.
- (16) The oil pump adopts automatic cooling fan device.



► Overview



◇ Technical Parameters KHD-1050H

Max. sheet size	1050×750mm
Min. sheet size	400×360mm
Max. die cutting size	1040×720mm
Max. hot stamping size	1040×720mm
Gripper margin	9-17mm
Dimension of inner plate frame	1080mm×745mm
Sheet size	80~600g/m ² (Card paper) ≅ 4mm (Thickness of corrugated paper)
Precision of die cutting	≤ ±0.1mm
Max. working pressure	300t
Max. working speed	7500s/h die cutting
Max. paper feeding stacking height	1600mm (including wooden pallet)
Max. paper collecting stacking height	1400mm (including wooden pallet)
Max. gold foil diameter	250mm (Longitudinal) 200mm (horizontal)
Electric-heated system	20 temperature zone, 40-180°C adjustable
Foil width	20-1020mm
Main motor power	11kw
Whole machine dimension	7700mm (length: including pre-feeding track) × 5200mm (width: including the pedal) × 2600mm
Total weight of machine	About 18.5t
Full-load wattage	52kw

Technical Detail



◇ Configuration List

SN.	Name	Brand	Place of Origin	SN.	Name	Brand	Place of Origin
1	Man-machine interface	10.4TFT KUNLUNTONGTAI	Sino-foreign joint venture	14	Sensor	KEYENCE	Japan
2	Die pressing base plate	7mm HIGH ALLOY PLATE	Germany	15	Air cylinder	AIRTAC	Taiwan
3	Electromagnetic clutch	OMPI	Italy	16	Vacuum pump	SIEG	Sino-foreign joint venture
4	Air pump	SYG	China	17	Pressure adjustment system	ZHONGYI	China
5	Rotary joint	OMPI	Italy	18	Main motor	TECO	Taiwan
6	Main solenoid valve	AIRTAC	Taiwan	19	Main drive chain	RENOLD	England
7	Intermittent segmentation	TAN TZU	Taiwan	20	Secondary chain	TSUBAKIMOTO	Japan
8	Paper conveying belt	NITTA	Japan	21	Cable	TKD	Germany
9	Worm and gear	WANCENG	Taiwan	22	Tooth row, tooth slice	KUI	Japan
10	Crankshaft material	Ni-Cr-Mo METAL STEEL	Germany	23	Wallboard and machine body structure	QT500 -7 nodular cast iron	Tianjin, China
11	Inverter	HUICHUAN	Japan	24	Air volume regulator	AIRTAC	Taiwan
12	Photoelectric switch	OMRON	Japan	25	Brush	JSCC	China
13	Indicator light	SCHNEIDER	France	26	Lift motor of paper collecting platform	CHENGBANG	Taiwan

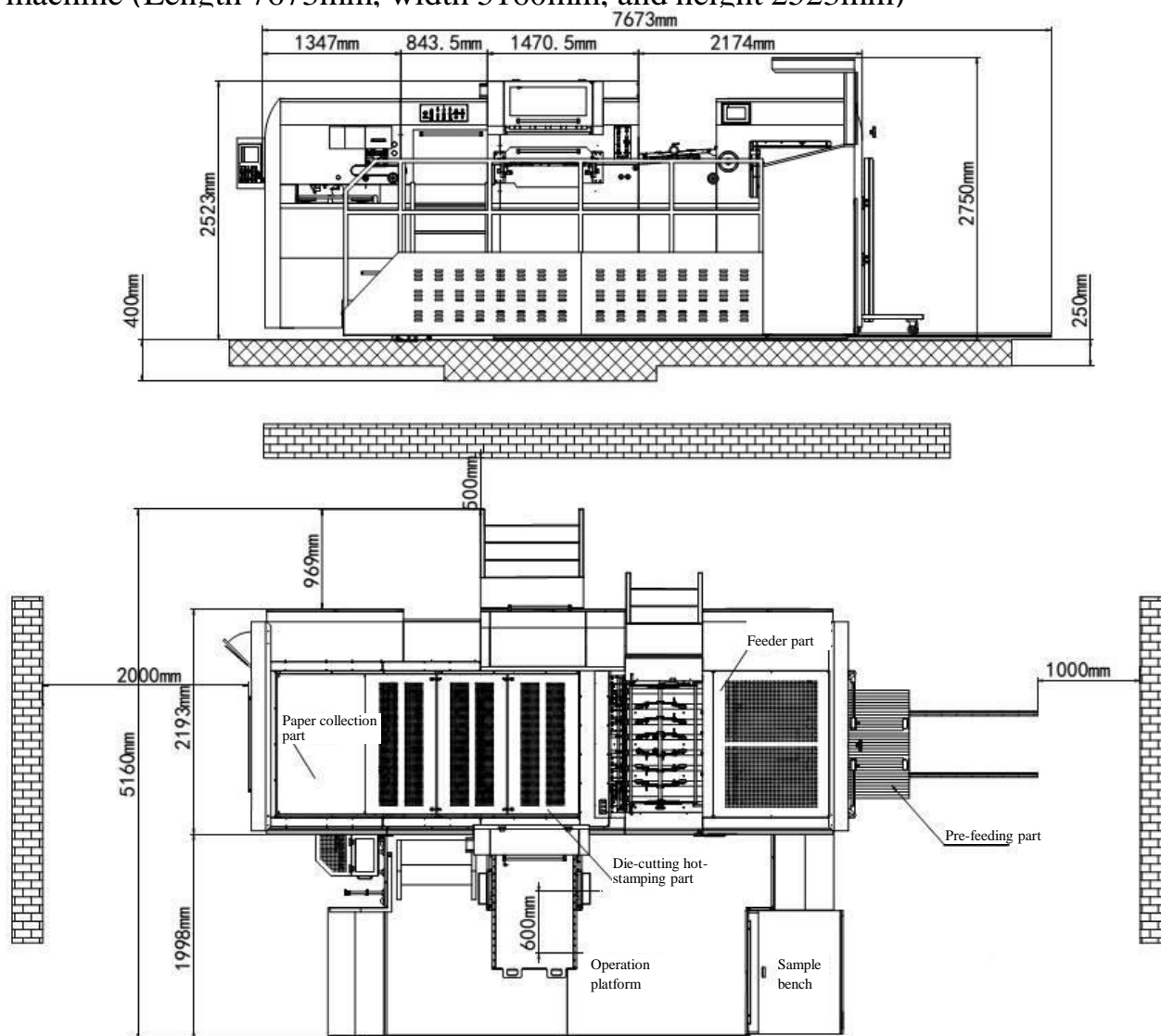
◇ **Configuration List**

27	Button	SCHNEIDER	France	39	Safety relay	SCHNEIDER	France
28	Program controller	HUICHUAN	China (listed company)	40	Security module	SCHNEIDER	France
29	Encoder	OMRON	Japan	41	Circuit breaker	SCHNEIDER	France
30	Oil pressure, pressure switch	ELEPTROPEC	Italy	42	Wiring terminal	SCHNEIDER	France
31	Proximity switch	OMRON	Japan	43	Button	SCHNEIDER	France
32	Relay	SCHNEIDER	France	44	Motor protector	SCHNEIDER	France
33	Main paper feeding motor	SHENGBANG	Taiwan	45	Relay seat	OMRON	Japan
34	Linear guide	ABBA	Taiwan	46	Magnetic switch	SCHNEIDER	France
35	Feeder	YONGCHUAN	Taiwan	47	Electromagnetic gear clutch	OMPI	Italy
36	Chip	MITSUBISHI	Japan	48	Bearing	NSK	Japan
37	Control center	MITSUBISHI	Japan	49	Three-vertical and two- horizontal servo	SCHNEIDER	France
38	AC contactor	SCHNEIDER	France	50	Hot stamping control system	SCHNEIDER	France

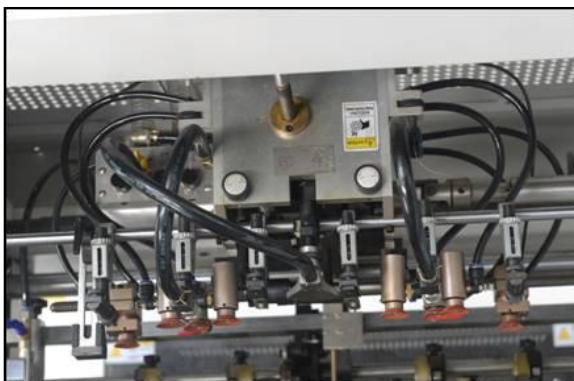
Technical Detail



◇ Installation dimension of KHD-1050H full-automatic hot foil stamping creasing die-cutting machine (Length 7673mm, width 5160mm, and height 2523mm)



◇ Exploded view → Working mode and principle of paper feeding mechanism



Paper feeding

- * Precision feeder head that adopts European manufacturing technology, can be used for card paper, corrugated paper and grey board
- * Four suction and four sent, the suction angle and height can be adjusted according to the deformation of paper
- * Unique paper receiving mechanism, suitable for different deformed papers
- * High-speed feeder head is specially manufactured for special aluminum alloy material, and all parts are imported
- * Dual-Feeder head anti-collision detection device
- * Main and auxiliary paper feeding, can switch without stopping the machine
- * A set of pre-feeding mechanism (optional)
- * Fish scale type paper feeding, smooth and accurate
- * Micro-adjusting mechanism for paper feeding platform, can be adjusted without stopping the machine
- * Two-purpose paper feeding machine
- * A set of auxiliary paper support device and two sets of paper supporting board

◇ Exploded view



Conveying paper platform

- *Electromechanical dual-sheet detector
- *Adopt advanced control system to control the speed of conveying device, making paper feeding smoothly and reducing collision
- *Conveying paper platform can be controlled separately, and vacuum conveying paper platform is optional
- *Imported conveying paper belt
- *Super wear-resistant polyurethane conveying paper wheel
- *Adjustable rubber wheel and brush wheel, to ensure accurate positioning when they reached front gauge and side gauge.



- *Front gauge detection, to guarantee the arrival rate of paper
- *Adopt left/right dual-push pull gauge way to meet different printing and alignment requirements



Die cutting part

- *Pressure-containing member adopts high-strength nodular cast iron-QT500 and special casting process, thus it has high strength and never deforms.
- *The Ni-Cr-Mo metal steel crank shaft through the special craft processing, imported from Germany.
- *Super wear-resistant worm and gear imported from Taiwan
- *Knife template turnover device that is convenient and fast
- *Strong oil supply lubrication system
- *Imported intermittent box with torque limit & limit cutting protector, to ensure the machine is smooth and safe operation.
- *High-precision 240 degree intermittent mechanism
- *Pneumatic locking device, safe and fast
- *High-speed rotary joint
- *Automatically adjust the pressure ,when the maximum pressure reached 300t.
- *Adopt advanced Taiwan TECO motor, to increased the die cutting speed to 7500 sheets/hour
- *Die cutting plate frame, adopting central positioning system and being equipped with micro-adjustment device
- *10.4 inch color screen, displaying the working state of machine all the time.

◇ Exploded view → Working mode and principle of hot foil stamping part



Hot foil stamping part

- *The aluminum horizontal axis can be increased to two according to customer requirements, which is controlled by the independent servo (France SCHNEIDER servo system).
- *The aluminum vertical axis can be increased to six according to customer requirements, which is controlled by the independent servo (France SCHNEIDER servo system). Brush roller is used to clear waste foil. The user-friendly foil bracket can be pulled out from the machine, facilitating replacing of foil. Maximum foil diameter is 250 mm (vertical)

Technical Detail



◇ Exploded view → Working mode and principle of hot-stamping part



- *Man-machine interactive touch function, can set different long pull and short pull
- *The alarm will be triggered when the foil is shorter than 6cm
- *The computer deal with foil monitoring system, used to display remaining and have used foil length

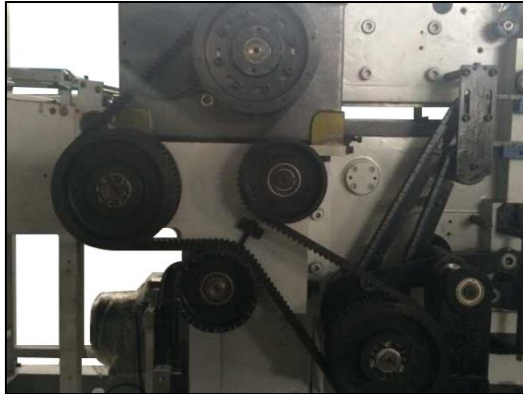


- *Vertical & comprehensive foil feeding system, can realized vertical and horizontal hot foil stamping at the same time, reducing the foil usage and saving foil replaced time

► Technical Detail



◇ Exploded view → Working mode and principle of paper collection part



*Japan imported synchronous belt, to ensure wide range of speed choice and huge bearing capacity, dispensing with maintenance and long service life

*Adopt Taiwan-imported intermittent mechanism to ensure that the machine operates accurately. Also, the main engine is equipped with overload protection device and torque limit clutch, to ensure that when they being impacted by external force can stops immediately to reduce the damage to the machine body and teeth precision and reduce the occurrence of failure rate.

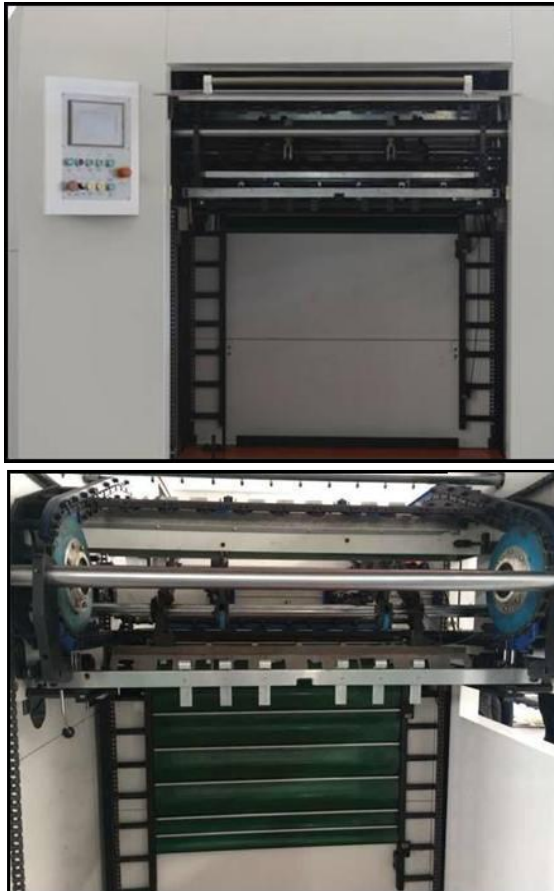


*Paper collection part can adjust & control completely of machine through the 10.4 inch touch screen

Technical Detail



◇ Exploded view → Working mode and principle of paper collection part



Paper collection part

- *Automatic paper aligning device and two blowers for paper collection can ensure neat collection of thin and thick papers
- * Paper collection part with touch screen control, it is convenient for operation and has data display, and all operations can be performed through the touch screen
- *Paper collection part is equipped with control panel to realize more personalized operation
- *Paper collection photoelectric device, to ensure neat paper collection
- *Automatic lift control system of paper collection platform
- *Manual auxiliary paper collection system
- *The main chain protection device
- *Prevent the paper returning device
- *Equipped with non-stop device

► Equipment



◇ Machine image



Fully Automatic Hot Foil Stamping and Die-cutting Machine