

High Speed UV Spot and Overall Varnish Coating Machine



The HIS 1650 is the high speed overall and spot varnishing machine , adopt the front feeding structure and chain convey design of offset printing press. The drying section is a conveyor teflon belt structure, adopt the large diameter impression cylinder, so the finished varnish is very flat and even, accurate and bright. It is used for both thick and thin papers, and can be used for both full and partial UV varnish coating or water based varnish coating.

Application Sample





High Speed UV Spot and Overall Varnish Coating Machine

Model	Ecoo HIS-1650
Max.sheet size	1300x1650mm
MIN.sheet size	500X460mm
Max.coating size	1290x1640mm
Coating Media	Water-base varnish, UV varnish
Max coating thickness	0.025mm
Sheet thickness	80-600gsm
Coating registration accuracy	±0.2mm
Production speed	5000sheets/hour
Weight	12000kgs
Dimension	13411x3970x1941mm
Power	65KW(E) /54KW(W)

Remark: Production speed depending on sheet weight, size and quality

Standard Configurations:

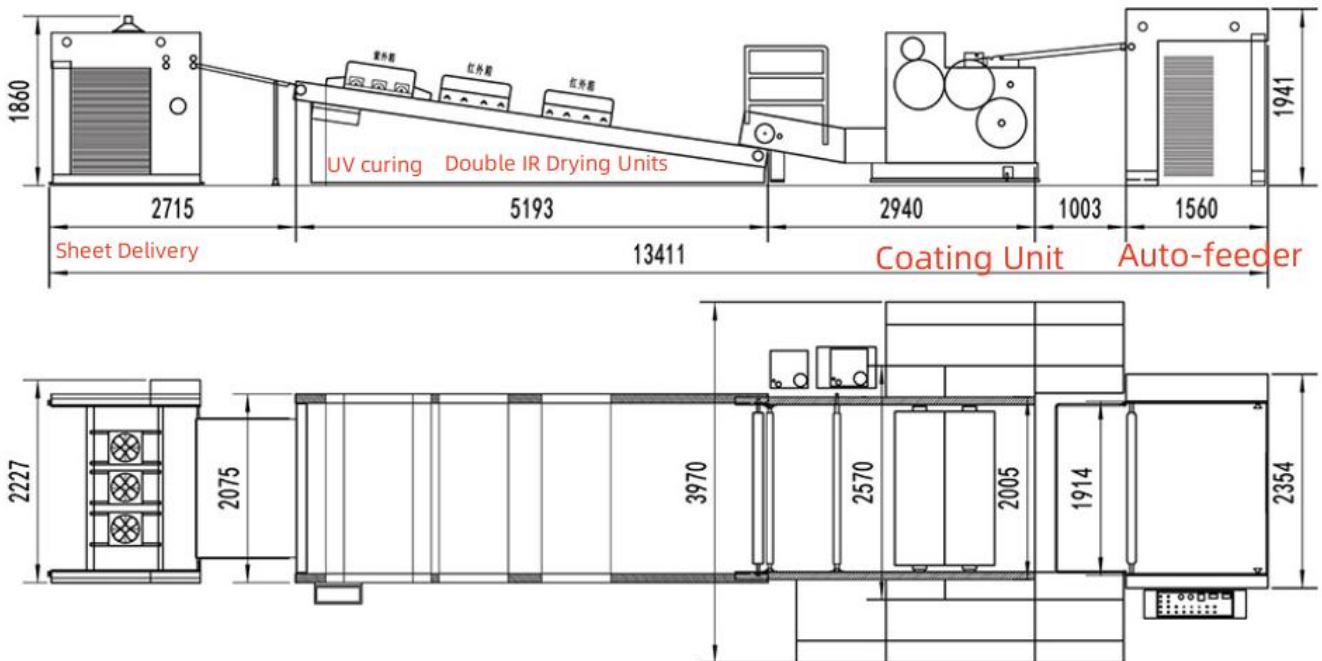
Standard Units:

- Auto Feeder
- Multifunctional Coating Unit
- IR Drying Unit*2
- UV Curing System
- Auto Delivery Unit
- Auto Control

Optional Units:

- Non-stop Feeding and Delivery System including the Preloading Trolley
- Preloading Trolley
- Ceramic Anilox Roller
- Remote Monitoring

Floor Plan







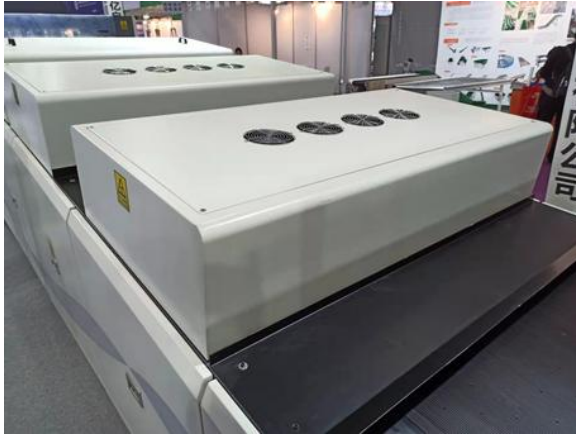


Configurations:

序	种类	名称	Name	规格	品牌	Brand
1	零件类	各种铸件、锻件、灰球铁	Various castings, forgings, gray ductile iron ductile iron		弘新	Hongxin
2		各种铸铜、铸铝	Various cast copper, cast	Bronze 10-1, 5-5-5	弘裕 业成	Hongyu Yecheng
3		胶滚	Roller		沃城	Wocheng
4		各种面板	All kinds of panel		达川	Dachuan
5		飞达	feeder		瑞达(广州)	Ruida
6	电机类	普通马达	Ordinary motor	1HP ... 5HP	紫光、TVT	Ziguang, TVT
7		减速机	speed reducer		禹神、TVT	Yushen TVT
8		UV 设备	UV equipment		凯威隆(进口灯)	Kaiweilong
		IR 系统	IR System		Sino-foreign joint venture	
9		真空泵	Vacuum pump		佛山祺铭	Qiming
10		气动隔膜泵	pneumatic diaphragm pump		三和(台湾)	Sanhe(Taiwan)
11	电器类	可编程控制器	programable controller	FBS series	汇川	Innovance
12		变频器	frequency converter	1HP ... 7.5HP	汇川	Innovance
13		电磁接触器	Electromagnetic contactor	LC1D0910N	施耐德(法国)	Schneider (France)
14		热继电器	Thermal relay	LR2D1307...1.7	施耐德/欧姆龙	Schneider/Omron
15		欧式插座	Europlug	6-core	国产	
16		转速表	Tachometer	BP-670	国产	
17		电流表	ammeter	BE-72 100/5A	国产	
18		电压表	voltmeter	SR-72 500V	国产	
19		行程开关	overtravel-limit switch	TM-1703...	天正	Tianzheng
20		电眼(感应器)	sensor	PM-12-04NPN	奇翰	Qihan
21		按钮	button	All kinds of buttons	金钟穆勒(德国)	Moeller(Germany))
22		小灵敏继电器	Small sensitive relay	MY2J MY4J	施耐德(法国)	Schneider (France)
23		电位器	potentiometer	B202	国产	
24		无熔丝断路器	non-fuse breaker		国产	
25	轴承类	深沟球轴承	deep groove ball bearing	6002 ...	HCH	HCH
26		滚针轴承	needle bearing	RNA6903 ...	HCH	HCH
27		推力轴承	thrust bearing	51106 ...	HCH	HCH
28		轴承座	Bearing pedestal	UCF206 ...	HCH	HCH
29		单向轴承	unilateral bearing	CSK25--PP(255215)	TSUBAKI(日本)	TSUBAKI (Japan)
30		单向轴承	unilateral bearing	CSK30--PP(306216)	TSUBAKI(日本)	TSUBAKI (Japan)
31		直线轴承	Linear bearing		HCH	HCH
32	油封类	油封	oil seal		NAK(日本)	NAK (Japan)
33	皮带类	三角带	V-belt	A49 ...	日本三星(日本)	MITSUBOSHI (Japan)
34		尼龙皮带	Nylon belt		艾姆特(台湾)	ILM (Taiwan)
35	链条类	链条	chain	1/2" ...	IWIS 德国(自)	IWIS (Germany)
36		链条接头	Chain joint	1/2" ...	IWIS 德国(自)	IWIS (Germany)
37	气动液	气缸	air cylinder	SC 80x25 ...	星辰	Xinchen
38		电磁阀	Solenoid valve	4V210-10 ...	星辰	Xinchen
39		气管接头	Air hose connector	1/2" xφ12 ...	星辰	Xinchen
40		三联组合	Triple combination	UFR/L-03D (for thick	星辰	Xinchen

Parts and Functions:

	<p>1 Feeder</p> <p>Enlarged feeder with four sucking and four forwarding suckers and air blowing for spool can feed sheet easily and smoothly. In case of double sheet or multi-sheet misalignment, the feeding action will be stopped emergently.</p>
	<p>2 Front Side Paper Feeding</p> <p>There are two sensors to reflect on the sheet-transferring table. When the sensors detect sheet feeding stopped suddenly, impression roller will automatically retreat , U.V. lamp will transfer to half lamp ,to avoid sheet burning, and the bottom roller will be under no varnish condition.</p>
	<p>3 Varnish Coating Supply</p> <p>Steel pressure cylinder with ceramic anilox roller and doctor blade design can do the image partial spot coating precisely (Varnish consumption and volume are determined by LPI of ceramic anilox roller) ;</p> <p>Steel pressure cylinder and rubber roller with rubber blanket can do the partial reserved coating and full coating,by reversing the steel roller and doctor blade , the varnish thickness and volume can be adjusted to meet the demand of products and operate easily.</p>
	<p>4 Transferring Unit</p> <p>After sheet is transferred from pressure cylinder to gripper, air blowing can support and reverse the paper sheet smoothly, which can prevent sheet surface from being scratched.</p>



5 IR Drying

There are double IR drying units with 24 IR tubes, for drying the water based varnish.

Divided into four groups of separate switches, freely take the power saving mode.

The lower suction by the conveying Teflon belt, makes the water evaporation fast, sheet varnishing more gloss.



6 UV Curing

UV Curing is for the UV varnishing, with 3 separate UV lamps, better for power saving.

Temperature switch is installed in the U.V. lamp chamber (box), such as when there being malfunction or over-heat in lamp chamber, the temperature will switch off automatically.

Perfect pumping device can pump the ozone out of the factory to avoid operator breathing in too much ozone and leads to bad health. On the other hand, lamp tubes can be cooled for long time using.

When the paper feeding is stopped, the UV lamp will automatically half lamp and enter the power saving mode.



7 Conveying Unit

By the lower suction, the conveying Teflon mesh belt to convey paper, with the automatic deviation correction device, so that thick and thin paper can be conveyed stably and smoothly.



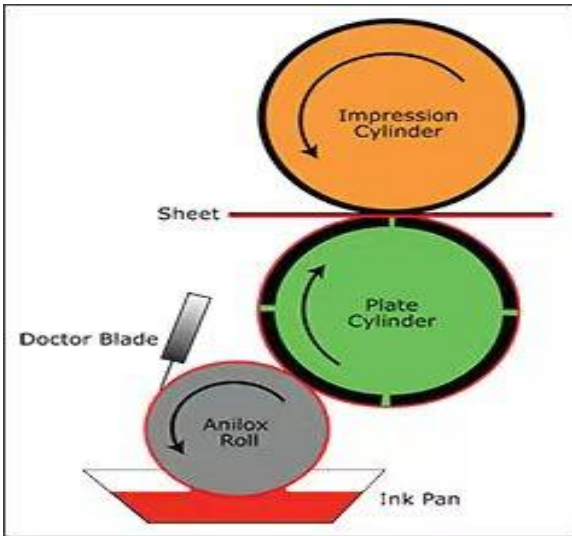
8 Sheet Delivery

Automatic pneumatic patting sheet controlled by photoelectric detecting sensor make sheet pile fall automatically and collect sheet neatly.

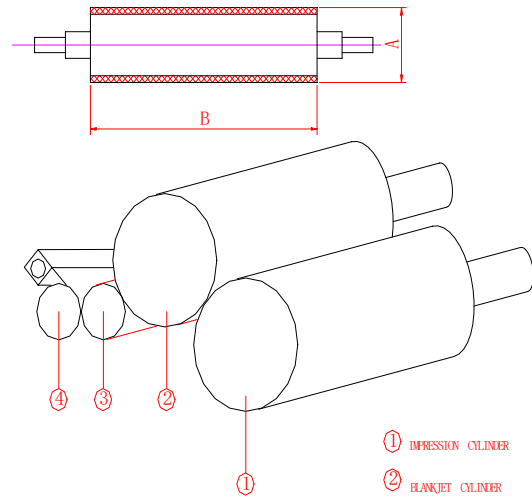
Electronic control can take out sheet sample safely and quickly for inspecting.



Coating rollers



Coating with Anilox Roller



Coating with Rubber roller

*Anilox roller is suitable for some high precision UV coatings, but different varnish thickness needs different lines of anilox roller.

No.	Name of machine	Name of material
1	Impression roller	Fine grinding
2	Plate or Blanket Rubber roller	Fine grinding
3	Coating material roller	U.V rubber coated
4	Chromed roller	Surface chromed

* Rubber roller is suitable for different varnish thickness, varnish volume can be adjusted by the pressure between the rollers and metering of speed. It can do the varnish thickness up to 7g/m².

Rubber roller

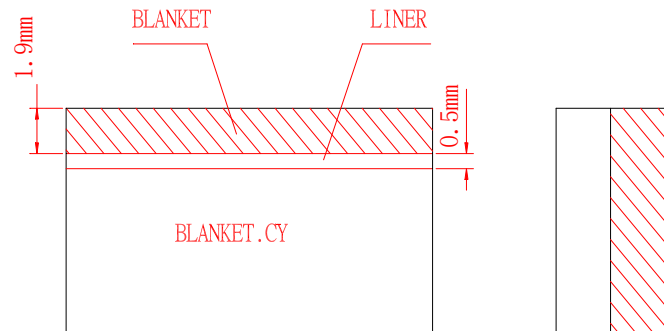
U.V Roller (Full) coating

- 將橡皮布兩端扣上夾板並鎖緊。 Clamp and lock both ends of the rubber blanket.
- 準備一厚度 0.5 mm 之紙張或膠布作為襯紙。

Prepare a piece of paper (thickness: 0.5mm) or transparent plastic sheet for backing support paper.

- 將橡皮布之一端掛於橡皮胴之胴皮夾板上，將橡皮布拉平。
- 放入襯紙利用寸動逐步，將橡皮布的另一端，掛入胴夾板的另一端。

According to Inching, load the backing paper and hang another end of the rubber blanket onto the other end of the clamp.



局部上光 U.V. Spot Coating

紙張經前規及側規定位後，由中間過渡遞紙爪接住並交由壓力滾筒之咬紙嘴咬住，帶入壓力滾筒及橡皮胴之間壓印，而將沾在橡皮胴之局部樹脂版表面上 U.V 油塗佈到紙張之欲上光部份。

After the positioning by front lays and side lays, the middle pass gripper catch and relay the paper into the paper gripping mouth, and bring them into the impression cylinder and the rubber roller for impression . The U.V. varnish on the flexo plate will be coated on the paper surface .

1. 準備 0.5 mm 厚之鋁板或鋅板，作為轉介底板之用。

Prepare an paper sheet or transparent plastic sheet with 0.5mm in thickness for the use of backing sheet.

2. 將底板兩端鎖緊於快換夾板上。Lock the two ends of backing sheet on the clamped board tightly.

3. 底板上距離 夾板 c 處 40 mm 處，平行劃出一直線基準線，待此底板掛在橡皮胴時，此線須對齊橡皮胴之折角線。

Draw a straight basic line parallely at the distance of 40 mm from position C on the bottom board. When the backing sheet is hung on the rubber roller, this line should be aligned with the folded line of the rubber roller.

4. 取出一張欲上光之紙張，規劃局部上光之尺寸將欲上光之紙張正面朝上置於工作臺上，割下欲局部上光之部份，再將紙張反面覆置於底板上，（此時紙張前端須與基準線或折角對齊）用筆將欲上光部份之輪廓描在底板上。

Take out a piece of paper to be coated, make an arrangement of size of the to-be-coated part. Put the positive surface of the to-be-coated paper on the working table, cut the part of the to-be-coated paper, and then put the negative surface of the to-be-coated paper on the backing sheet.(At this time, the front side of paper should be on the same line of the basic line or forded line), draw the outline of the to-be-coated part on the backing sheet.

5. 依照割制紙張之欲局部上光之部份，製作尺寸相同之橡皮布或樹脂版，將此橡皮布或樹脂版，用雙面膠黏貼在已描繪之底板上。

According to the cut part for coating of the paper, make a rubber blanket of the same size or flexo plate which will be stuck to the outlined backing sheet with double-face glues.

6. 將底版扣到橡皮胴夾板上，再利用寸動轉動橡皮胴，使底版另一端扣到橡皮胴另一夾板上，用扳手扳動偏心軸，扳至最高位時咬緊底版兩端使底版緊貼於橡皮胴上。

Lock the backing sheet to the rubber roller and run the rubber roller by inching to make another side of the backing sheet to another clamp of rubber roller. Move the offset shaft with a wrench to the top position and gripper both sides of the backing sheet and make it stick to the rubber roller tightly.

7. 橡皮布規格尺寸為：周長 820x1050(寬)。The size of the rubber blanket: (perimeter) 820 x 1050mm(width)

8. Anilox Lines and Varnish Volume

Anilox Lines	Varnish Volume
180 L/Inch	6g/m ²
220 L/Inch	4g/m ²



Spare Parts:

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3		胶滚	Roller		沃城	Wocheng
4		各种面板	All kinds of panel		达川	Dachuan
5		飞达	feeder		瑞达(广州)	Ruida
6	电机类	普通马达	Ordinary motor	1HP ... 5HP	紫光、TVT	Ziguang,TVT
7		减速机	speed reducer		禹神、TVT	Yushen TVT
8		UV 设备	UV equipment		凯威隆(进口灯管)	Kaiweilong
		IR 系统	IR System		Sino-foreign joint venture	
9		真空泵	Vacuum pump		佛山祺铭	Qiming
10		气动隔膜泵	pneumatic diaphragm pump		三和(台湾)	Sanhe(Taiwan)
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36		链条接头	Chain joint	1/2" ...	IWIS 德国(自强)	IWIS(Germany)
37	气动液	气缸	air cylinder	SC 80x25 ...	星辰	Xinchen
38		电磁阀	Solenoid valve	4V210-10 ...	星辰	Xinchen
39		气管接头	Air hose connector	1/2" xφ12 ...	星辰	Xinchen
40		三联组合	Triple combination	UFR/L-03D (for thick	星辰	Xinchen



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Installations worldwide:

About our technology and strength, most of our technicians (and the owner) are from Tsai Yi of Taiwan, which was the leading manufacturer of the packaging machines, including the coating machine, flute lamination machine, die cutter and so on, they have more than 30years' technical skill and experience, and pay highly importance on the machine quality. There are hundreds of the varnish coating machines installed worldwide, about 50sets in China, 50sets more in Thailand, Netherlands, Greece, Turkey, Egypt, Colombia, Mexico and many in other countries, too.





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