

DPH-400

High Speed Rotary Blister Packing Machine



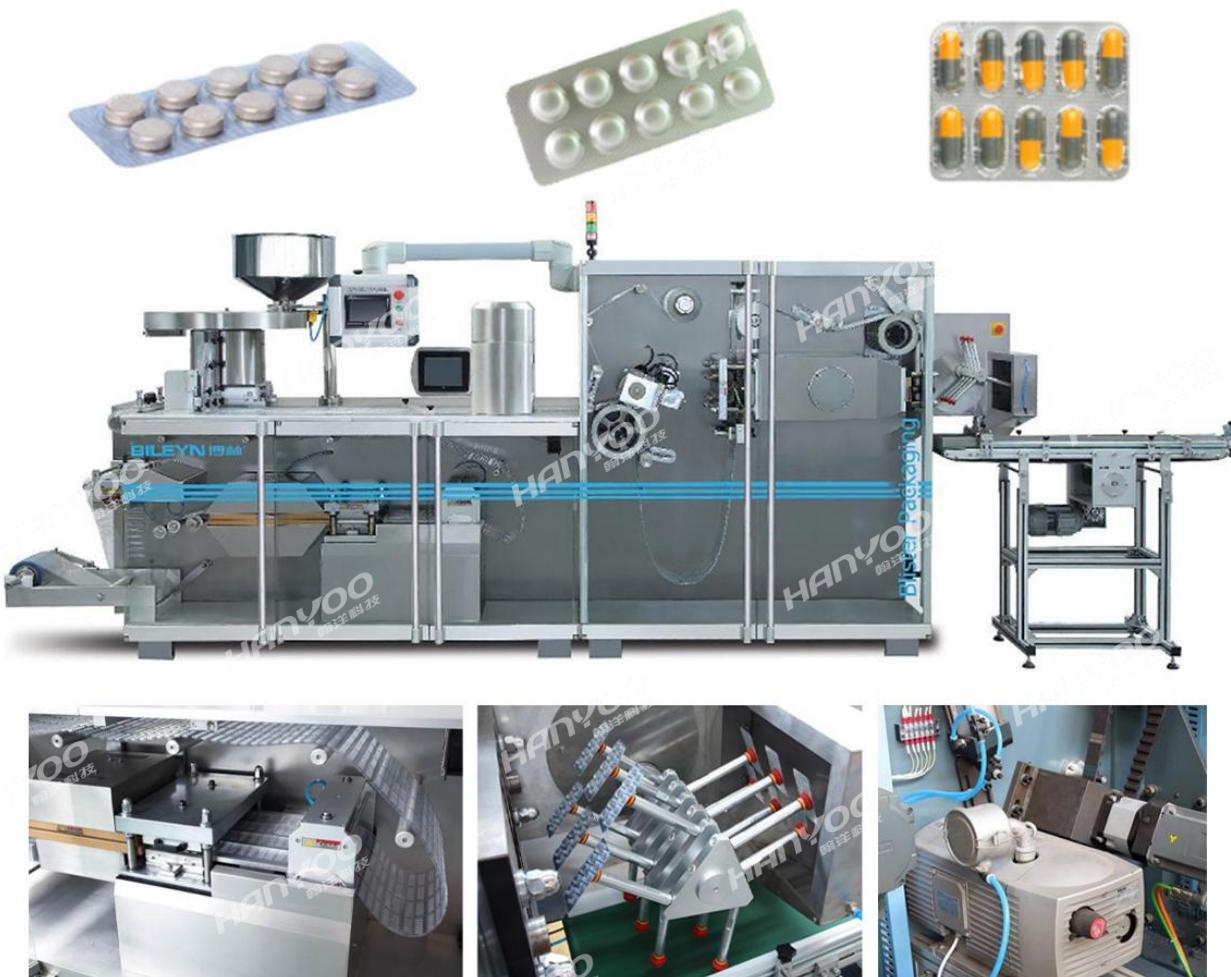
**EQUIPMENT
TECHNICAL PARAMETER**

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NANJING HANYOO PHARMATECH CO., LTD.



DPH-400

High Speed Rotary Blister Packing Machine



MACHINE INTRODUCTION

DPH-400 automatic high-speed blister packaging machine set flat forming, roller heat sealing as one of the high-speed blister packaging machine, suitable for a variety of specifications of sugar coated tablets, vegetarian tablets, capsules, capsules and other drugs packaging, can also be used in the shape of the drug similar to the above hardware, electronic components, medical equipment and food packaging.

EQUIPMENT CHARACTERISTICS

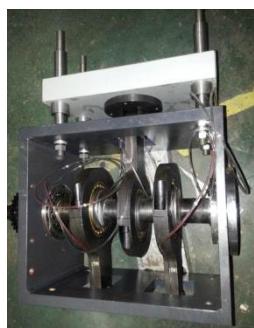
1. Fast speed, the stability and accuracy of the whole machine operation are relatively high;
2. The width of PVC and PTP is 260mm, the design is more humane;
3. PLC man-machine interface control, stepless frequency conversion speed regulation, high-speed range sprint 40-200 times/min, (Note: plate length, determine the number of blanking);
4. Main motor: from the original 1.5KW to 2.2KW, increase the motor power, ensure the smooth running speed;
5. Forming: from the original upper forming to the lower forming;
6. Charging station:
 - ① with a long filling platform, can improve the yield;
 - ② Convenient addition of camera detection and elimination system, to achieve the connection function;
 - ③ Optional special plate automatic feeder, the feeder is changed from the original electromagnet vibration to compressed air vibration, reducing noise;
7. Dual servo traction: Change to direct servo motor and silicone traction, reduce the original traction error of stretching and tightness through the synchronous belt traction, as shown in the following figure:
8. Heat seal:
 - ① The bearing of the heat sealing roller is changed to a high temperature sealing bearing, which strengthens the durability and flexibility, does not need refueling, and does not cause pollution;
 - ② The heat sealing roller increases the number and power of heating tubes, so that the heat sealing and uniformity are improved under high-speed operation;
9. Heating method: internal heat type, automatic temperature control, so that forming, heat

sealing, batch number correct and reliable;

10. Blanking and automatic culling system:

- ① The blanking adopts crankshaft drive with uniform force;
- ② The vacuum pump is increased to ensure the precision of the servo drive and the removal rate of the waste board under high-speed operation;
- ③ Vertical and horizontal two-way endless blanking, saving 10% of packaging material;
(Note: single mode without elimination)

11. The parts with the greatest force on the machine are (blanking, indentation, batch number station). The machine will (traditional eccentric shaft to automobile crankshaft), the transmission principle makes the bearing balance, greatly improve the stability of the whole machine, so that its service life is longer, the daily maintenance cost is reduced, maintenance is simple and convenient. The details are as follows:



Automobile crankshaft diagram



Conventional eccentric shaft



Forming double CAM



New conductive slip ring built-in circuit, safer and more durable



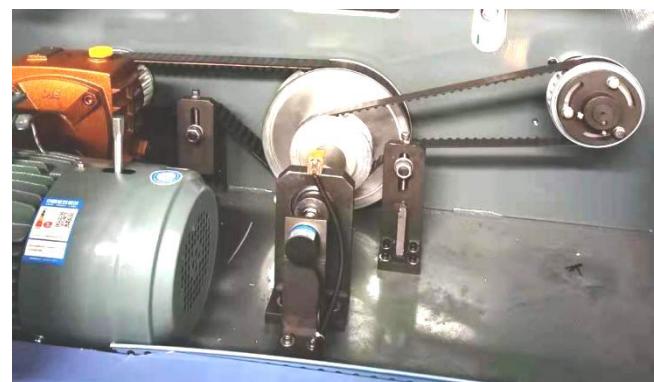
New servomechanism



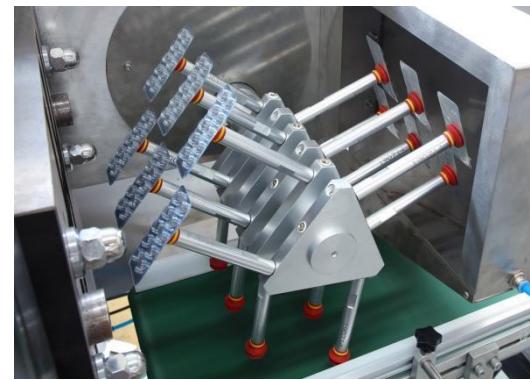
Transmission structure drawing



Cursor to plate device, hot marking station

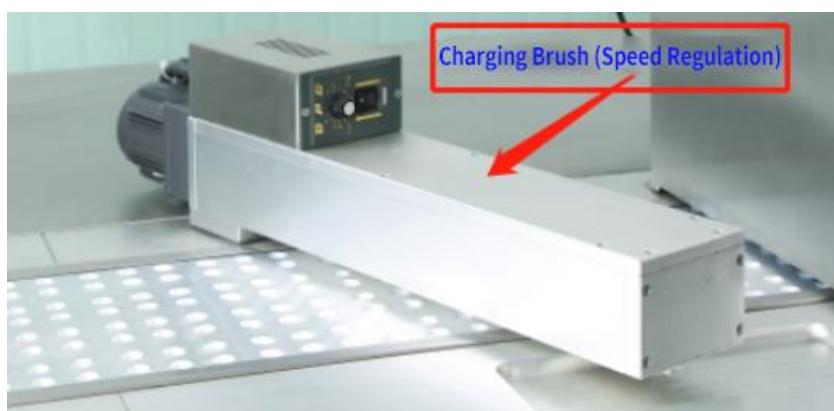
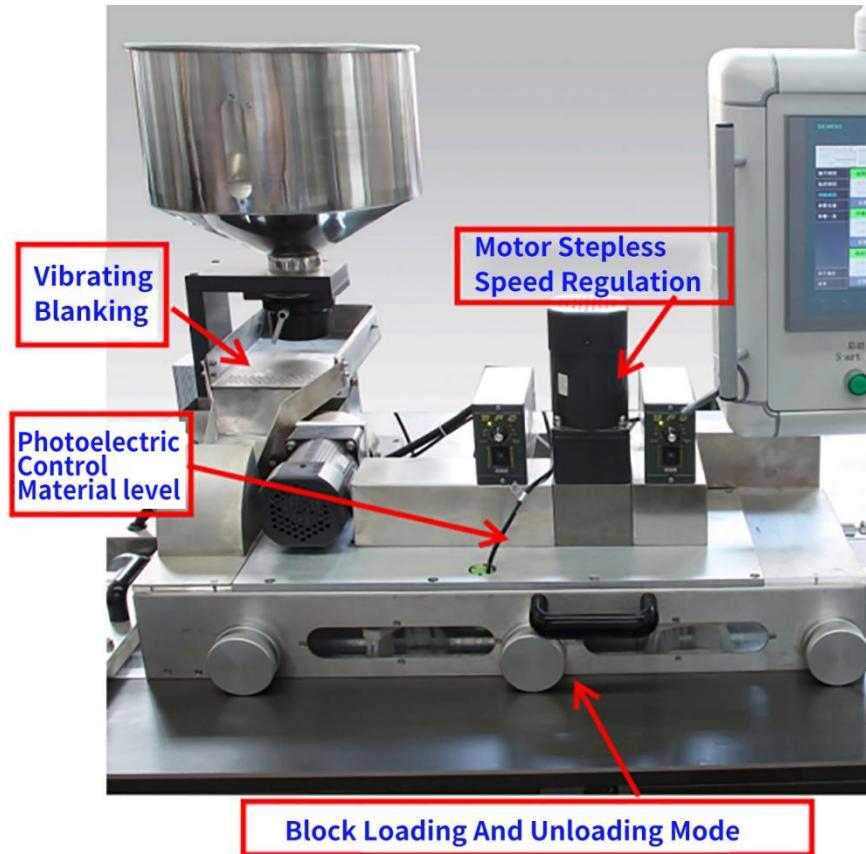


Transmission structure drawing



Servo rotating vacuum suction plate, eliminating device (connection mode has this function, single mode does not have this function)

RANDOM EQUIPMENT: VIBRATING UNIVERSAL AUTOMATIC FEEDER (NEW)



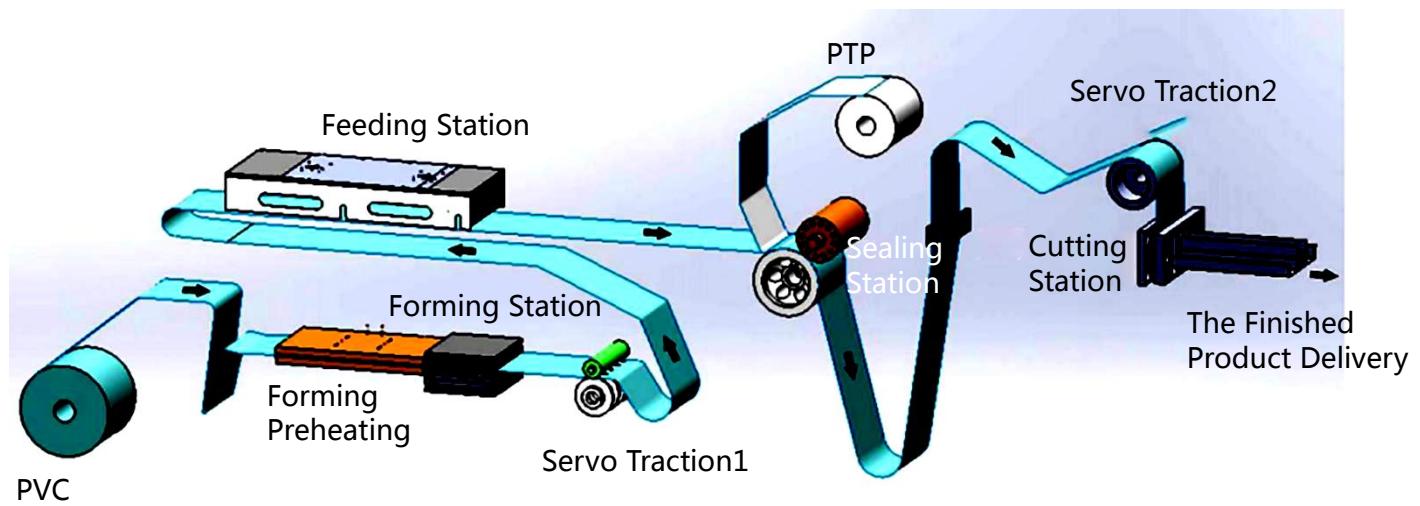
TECHNICAL PARAMETER

MODEL	DPH-400
Blanking	ALU PVC: 40 ~ 200 times/min
Max. Forming Area	380×200mm
Maximum Forming Depth	12mm
Adjustable Range of Travel	150 ~ 250mm
Standard Blister Size	80×57mm
PVC Width & Thickness	Thickness 0.15 ~ 0.30mm Width 230~ 260mm Roll Dia. $\leq \varphi 600$ mm; Inner Roll Dia. $\varphi 72-76$ mm
PTP Width & Thickness	Thickness 0.02 ~ 0.03mm Width 230~ 260mm Roll Dia. $\leq \varphi 260$ mm; Inner Roll Dia. $\varphi 72-76$ mm
Power	380V 50HZ, main motor: 2.2KW, heating: 17KW
Air	$\geq 0.5\text{m}^3/\text{min}$
Water Cooling	60L/hour
Overall Size	4350×1386×2200 mm
Weight	3500KG

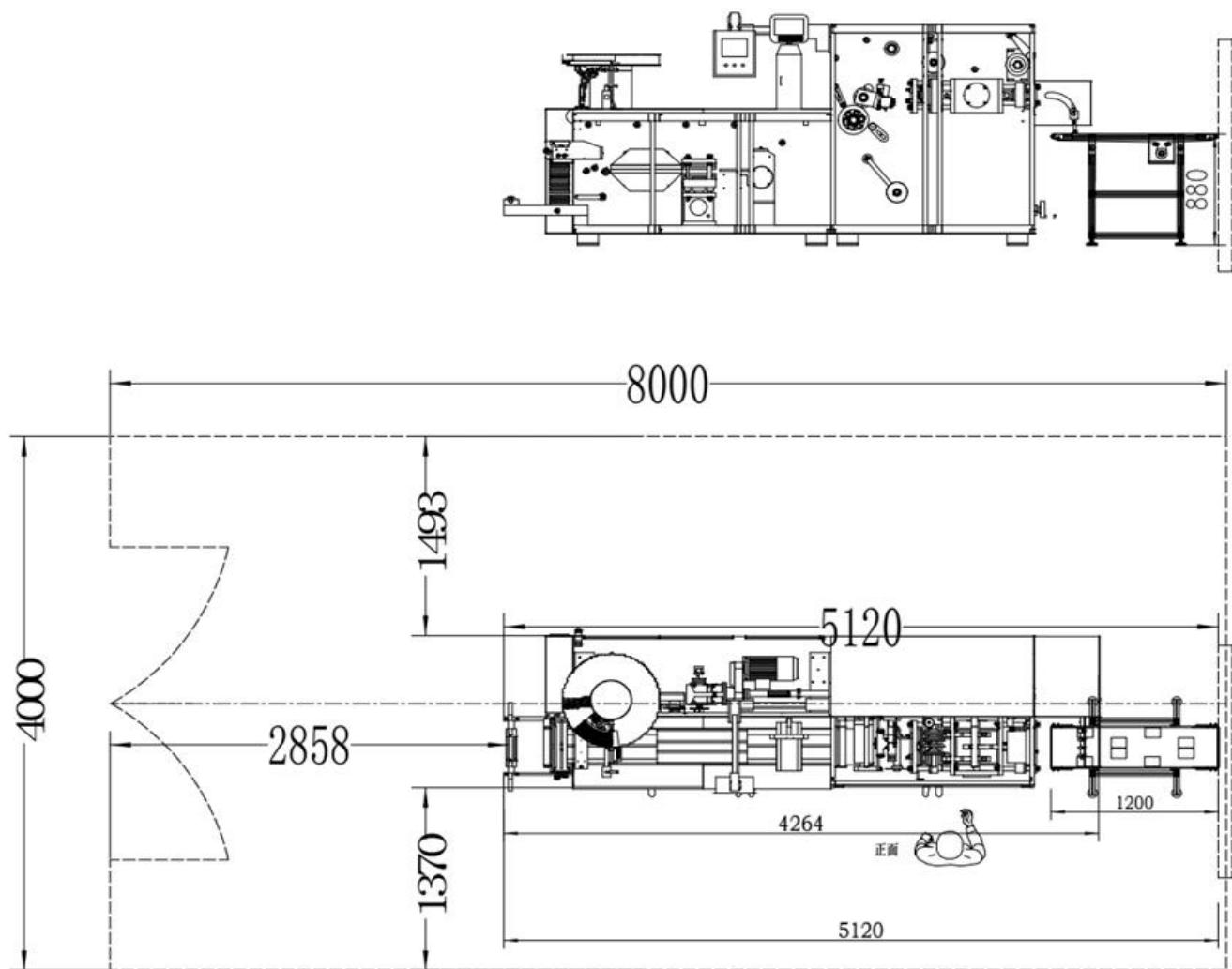
ELECTRONIC PART LIST

NO.	PRODUCT NAME	MANUFACTURER	MODEL
1	Electromagnetic valve	Airtac	4V210-08
2	Reducing Valve	Airtac	AC2010-02
3	Double Reducing Valve	Airtac	BFC4000-N
4	Frequency Converter	INOVANCE	2.2KW
5	Power Supply	Taiwan Meanwell	NES-350-24
6	CPU Module	INOVANCE	H3S-1616MT-XP
7	Expansion Module	INOVANCE	GL10-0016ER
8	Temperature Module	Shengtang Electronics	AX6-C
9	Touch Screen	Taiwan Weinview	MT6071IP
10	German Basler blister detection system (1.3 million colors), see attachment for details		
11	Servo Motor 750W	INOVANCE	MS1H4-75B30CB-T331Z
12	Servo Motor 750W	INOVANCE	SV630PS5R5I
13	Worm Reducer	JIEPAI	WPX80/10:1/C WPA80/40:1/E WPX80/10:1/B
14	Main Motor	WANNAN	YEJ2-100L1-4
15	Encoder	USA REP-AVAGO	ZSP3806-003G-1500BZ3-5-24F
16	Vacuum three-way Valve	Airtac	3V210-08-NC
17	Oil-free Vacuum Pump	Germany BECKER	VT4.25 3Ph 0.75/0.9KW
18	Other Electrical Appliances	France Schneider	
19	Stainless steel plate	Korea and Japan	304/316
20	Metal Steel		Cr12 40Cr Gcr15 45# Q235-A

EQUIPMENT OPERATION FLOW DIAGRAM



INSTALLATION STRUCTURE DRAWING



German Basler blister detection system (1.3 million colors)



SUMMARY

Basler was founded in 1988 and is headquartered in Arensberg, Germany. As a global visual technology leader and listed company, Basler has become one of the world's best-selling industrial digital camera manufacturers with rich experience, sharp market insights, and good human resources. Its products are characterized by meeting industrial needs, easy integration, compact appearance, and high cost-effectiveness, and are widely used in industrial, medical, life sciences, intelligent transportation systems, and video surveillance fields. Successfully implemented a comprehensive quality management system, strictly adhering to the provisions of ISO9001:2008, and continuously focusing on improving the orderliness of the entire operational process. We have obtained the authorized operator certification (AEO), companies that pass this certification must possess various requirements, including high credibility, strong financial resources, strict compliance with national laws, regulations, and safety standards. The product has passed LRQA (Lloyd's Quality Certification) and is monitored annually to ensure the efficiency of our entire quality management system.

DETECTION SCOPE

The Basler blister detection system is used on a blister machine to visually detect the area, shape, and color of pills/capsules. It is mainly used for detecting:

- ✓ Existence or absence ✓ External dimensions ✓ Color differences
- ✓ Integrity ✓ Foreign objects or damage

TECHNICAL PARAMETERS

Industrial computer	Brand	CELLTECH H10 "industrial computer
	Operating system	Windows10
	CPU	Intel J1900,2.0GHz
	Internal memory	2G
	Hard disk	64GB solid state drive
Industrial Camera	Imagine(Germany) color camera: Model: DFK22BUC03	
Lens	0614MM zoom lens	
Siemens PLC	SIEMENS S7-200CN SMART	
Light source plate	LED light (CELLTECH Machine vision backlight)	
France Celtec aluminum plastic testing software	CELLTECH Special Inspection Software (V1.0)	
Equipment enclosure	Stainless steel SS 304	
Ambient temperature	10 to 25 °C	

DETECTION PERFORMANCE

MODEL	CJLS-270	CJLS-340	CJLS-380
Detection accuracy	tablet	Missing grain15% defect, double grain	
	capsule	Missing grain, missing cap, missing body, double grain, double cap	
	Soft capsules	Lack of grain, double grain	
Blister package	Aluminum-plastic blister		
Applicable packaging machine type	Flat Type/Roller Type		
Detection speed	Plate machine: 60 cuts/min, roller machine: 200 cuts/min		
Blister size	≤270mm	≤270mm	≤270mm
Number of tablets per cut	6 boards/cuts and below (Note: more than 6 boards can be customized)		

Sample	Defect	Defect Picture	Detection Standard
8mm White disc	Missing		Missing Tablet
	Defect		Defect≥20%
	Double Tablets		Leakage area ≥ 2 * 2mm
	Surface stains on tablets		Stain area≤1.5*1.5mm
	Foreign body on medicine board		Foreign object area≥2*2mm
Sample	Defect	Defect Picture	Detection Standard
1# Orange White Dual Color Capsules	Missing Capsule		Missing Capsule
	Half Capsule		Half Capsule
	Half Capsule		Half Capsule
	Double Capsules		Several Capsule in Blister
	Powder leakage		Powder leakage outside

REMARKS

1. For the aluminum-plastic 260 packaging machine, with a 1.3 million pixel configuration and a detection object of 8mm diameter tablets as an example, surface dirt points with a diameter of 1.5mm or more can be stably detected; A permeability damage area of over 15% can be stably detected.
2. The detection of a small amount of capsule leakage powder is unreliable, and the same color leakage powder as the capsule shell cannot be detected
3. For the detection of cracks or hair strands, due to the significant influence of objective external factors, there is a certain probability that they cannot be detected. Therefore, we do not promise 100% detection.
4. The above non laboratory data is obtained from on-site use by domestic customers, taking into account various objective factors, and is in line with actual production and testing capabilities.



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