



Mikhak Pharmmed Co.

Pharmaceutical machinery and equipment
Validation and technical engineering services

میخک فارمد

2023
Catalog

www.mikhakpharma.com



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ABOUT US

درباره ما

شرکت میخک فارمد مفتخر است با بهره‌گیری از تجربیات ارزشمند و موفق مدیران خود و همکاری با شرکت‌های معتبر و با در اختیار داشتن پرسنل با تجربه و مجرب و با رعایت استانداردهای کیفی با شتابی بیشتر از گذشته، جایگاه خود را در زمینه بهبود صنعت داروسازی و اتاق‌های تمیز در کشور ارتقا دهد. در همین راستا، با هدف ارائه خدمات فنی و مهندسی، خدمات فروش و پس از فروش متناسب با نیاز مشتری اقدام به معرفی و ارائه محصولات ممتاز و با کیفیت و همکاری با شرکت‌های معتبر بین‌المللی نموده است.

پس از گذشت چندین سال و کسب تجربیات تخصصی فراوان از سال ۱۳۸۸ این شرکت با شماره ۵۵۶۶۸۸ به ثبت رسید و با جذب یک تیم جوان، پرانرژی، خلاق و متخصص در زمینه طراحی اتاق‌های تمیز داروسازی و همچنین چندین تیم با تجربه به منظور اجرای این اتاق‌ها، به فعالیت‌های خود دامنه بیشتری بخشید. از آن پس و با توجه به کیفیت مطلوب پروژه‌های انجام شده و نیز به منظور جلب سیستم نظارتی کشور بر شرکت‌های داروسازی، تیم اعتبارسنجی نیز در این شرکت شکل گرفت تا صحت عملکرد اتاق‌های تمیز را اندازه‌گیری و اعتبارسنجی نماید و هم‌اکنون با شرکت‌های بزرگ اروپایی در زمینه ارائه خدمات احراز کیفیت و اعتبارسنجی همکاری می‌نماید.

امروزه شرکت میخک فارمد مفتخر است که با قدرت و پا به پای داروسازان و دانش پژوهان عزیز کشورمان، در زمینه‌های مشاوره، طراحی، نظارت، ساخت، معتبرسازی اتاق‌های تمیز، اصلاح سیستم‌های داروسازی بر مبنای استانداردهای بین‌المللی، تامین تجهیزات و ماشین‌آلات مورد نیاز و همچنین مشاوره تخصصی در این زمینه‌ها، فعالیت دارد.



مهندس امیر خزعلی
مدیرعامل

Chart چارت سازمانی



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Engineering Technical Chart

چارت فنی مهندسی



فنی مهندسی



TECHNICAL SERVICES

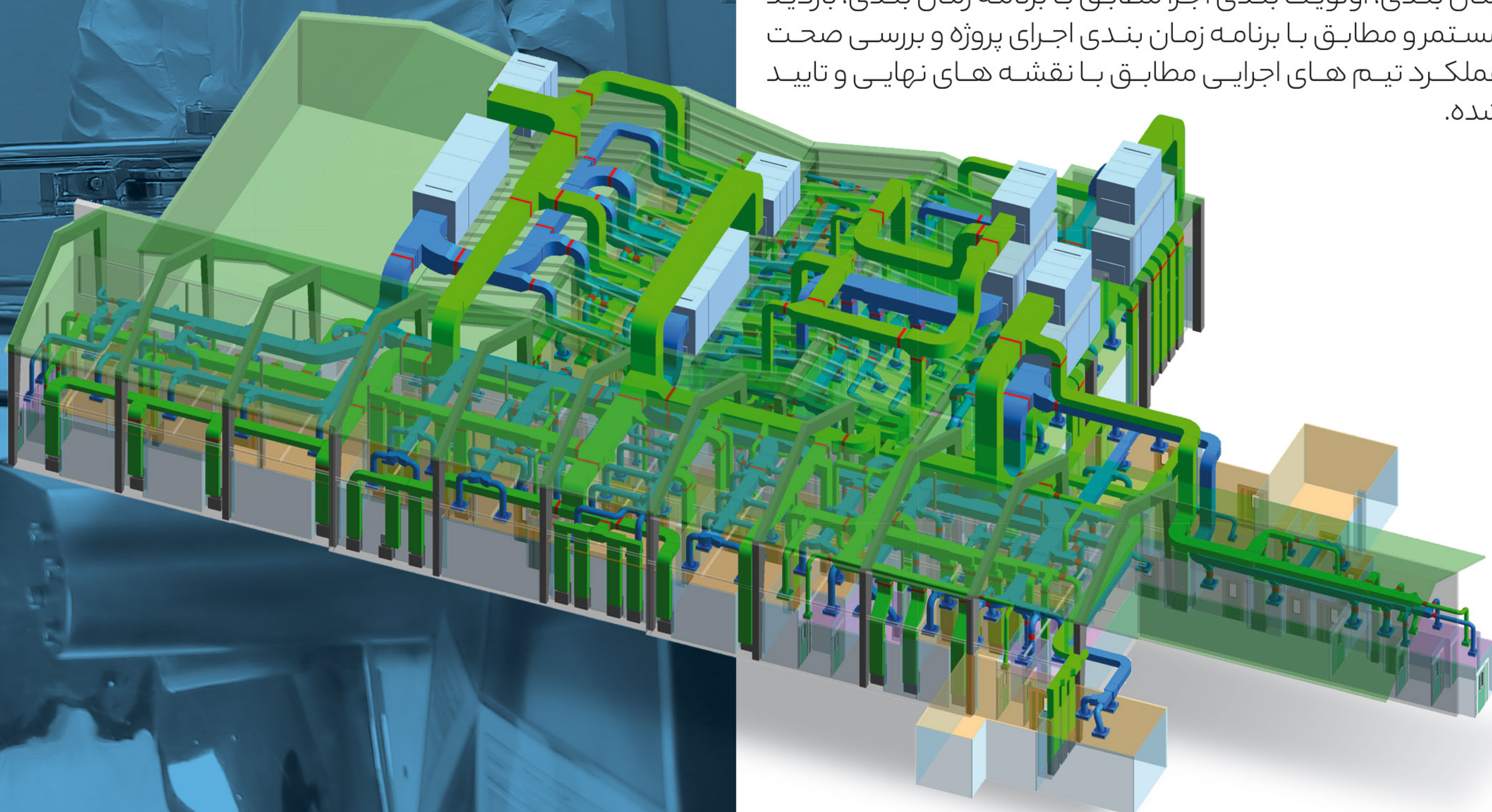
خدمات فنی و مهندسی مشاوره، طراحی و نظارت

خدمات فنی و مهندسی شرکت میخک فارمد در زمینه مشاوره، طراحی و نظارت شامل موارد ذیل می باشد:

- برگزاری جلسات اولیه با کارفرما قبل از شروع عملیات طراحی و بررسی درخواست ها و نیازمندی های کارفرما جهت تاسیس و راه اندازی داروسازی و تهیه نقشه راه و URS تجهیزات و ماشین آلات

- طراحی مفهومی، طراحی پایه ای و طراحی تفصیلی بر پایه استاندارد GMP و استانداردهای بین المللی کارخانجات داروسازی و لازم کار طراحی، شامل نقشه های: معماری موجود و مشخصات آن، جانمایی اتاق های تمیز، اندازه گذاری، فلوی پرسنل، ظروف، لباس، مواد، کلاس بندی، ارتفاع، اختلاف فشار، جانمایی تجهیزات و ماشین آلات، نرخ تعویض هوا، ناحیه بندی هواسازها و فلو دیاگرام ها، چیدمان پانل دیواری و سقف، برش سقف و جانمایی دریچه ها و چراغ ها، جانمایی پنجره ها، جانمایی درب ها و مشخصات آن، جانمایی پس باکس ها و مشخصات آن، محاسبات بار حرارتی و برودتی و هواسازها و فن فیلترها، محاسبات نیازمندی های الکتریکال، محاسبات تاسیسات دارویی و نیازمندی های مصرفی آب و بخار و گازهای مورد نیاز تولید، لوله کشی فاضلاب و آب و گازهای مورد نیاز تولید، کانال کشی هوای رفت و برگشت و اگزاست، جانمایی پریز و کلید و دوربین مداربسته و بلندگوی سقفی و تابلو قدرت، کابل کشی و سینی کشی جریان قوی و ضعیف و ...

- برگزاری جلسات با کارفرما و تیم های اجرایی و تشریح برنامه زمان بندی، اولویت بندی اجرا مطابق با برنامه زمان بندی، بازدید مستمر و مطابق با برنامه زمان بندی اجرای پروژه و بررسی صحت عملکرد تیم های اجرایی مطابق با نقشه های نهایی و تایید شده.



احراز کیفیت و ولیدیشن Quality assurance and validation

خدمات فنی و مهندسی شرکت میخک فارمد در زمینه احراز کیفیت و ولیدیشن برای هواسازها، اتاق های تمیز، تجهیزات و ماشین آلات داروسازی شامل موارد ذیل می باشد:

- احراز کیفیت طراحی Design Qualification
- احراز کیفیت نصب Installation Qualification
- احراز کیفیت راه اندازی Operation Qualification
- احراز کیفیت عملکرد Performance Qualification
- انجام خدمات (TAB) Testing, Adjusting and Balancing
- اجرای نقشه دمایی انبارها شامل موارد: ارزیابی ریسک جهت تعیین نقاط مانیتورینگ، اجرای تست توزیع دما و رطوبت در دو فصل گرم و سرد، آنالیز داده ها، مشخص کردن نقاط خارج از رنج دمایی، تعیین تعداد دیتالاگر های مورد نیاز و تعیین پلان مانیتورینگ دائمی سیستم پس از اجرای نقشه دمایی، ارائه گزارش داده های برداشت شده و آنالیز داده ها
- اجرای تست نشتی و صحت عملکرد فیلترهای هپا به روش اینتگریتی (Photometric)
- تست میکروبی هوا، آنالیز داده ها و ارائه نمودار روند تغییرات، ارائه محدوده های Alert & Action
- مشاوره جهت تغییر، ارتقاء، نوسازی و اتوماسیون، کنترل و مانیتورینگ و طراحی سیستم های تولید، ذخیره و توزیع آب دارویی به منظور انطباق با استانداردهای جهانی
- احراز کیفیت سیستم تولید، ذخیره و توزیع آب دارویی
- برگزاری سمینارها و دوره های آموزشی

برخی از مشتریان



پارسیان کر پروتئین دارو
شماره ثبت: ۳۶۳۹۹
(سهامی خاص)



کیش مدیفارم
Caring your health



ویتان فارمد



شرکت کارخانجات داروپخش



فرآورده یافت
ایرانیان
Iranian Tissue Product Co.



صنایع شیمیایی
و داروی تبریز
Tabriz Pharma
Tabriz Chemical and Pharmaceutical Ind.



تهران دارو



مکمل سلامت فارمد



یزد مکمل
Yazd Mokamel



داروسازی مینا



شرکت پراین پارس



یاس کویرمید



کاسپین تامین
شرکت داروسازی



یزد سرنگ
yazd syringe co.



نوش داروی البرز
NOOSH DARU
AIBORZ CO.



کیمیاگران امروز



گسترش میلاد فارمد



کیان فراپارس
KFP



داروسازی الحاوی
الحاوی



شرکت داروسازی
تهران شیمی



ویرا رهش فارمد
VIRA RAMEH
Pharmaceutical Co.



سجاد دارو



مجتمع صنعتی بعثت
BIC



کیمیا مکمل آزاد
Qimia
Supplement



کیمیا کالای رازی
KIMAZI
Kimia Kala Rtazi
Pharmaceutical Co.



شفا فارمد
SHIFA
شرکت گروه صنایع شفا فارمد
SHIFAPHARMED Industrial Group Co
Biotech Production Facility



سپیداج
شرکت داروسازی سپیداج
SEPIDAJ PHARMACEUTICAL Co.
سپیداج : همواره سپید : همیشه جوان



داروسازی فارابی
FARABI
Pharmaceutical Co.



سینا دارو
Sina Darou



واریان فارمد
VARIAN
PHARMED



داروسازی رها
RAHA Pharmaceutical Co.



دارو سازی زهراوی
Zehra



دانش پژوهان اریا دارو
ARYA DARU



دارو سازی اکترو
ACTERO



هامردارو
HAMER DARU



سام ارای افق
Sam Aray



داروسازی نصر



داروسازی خوارزمی



جالینوس
JALINOUS
PHARMACEUTICAL COMPANY



آنتی بیوتیک سازی ایران
ASICO



پارس حیان
PARS HAYAN
Pharmaceuticals



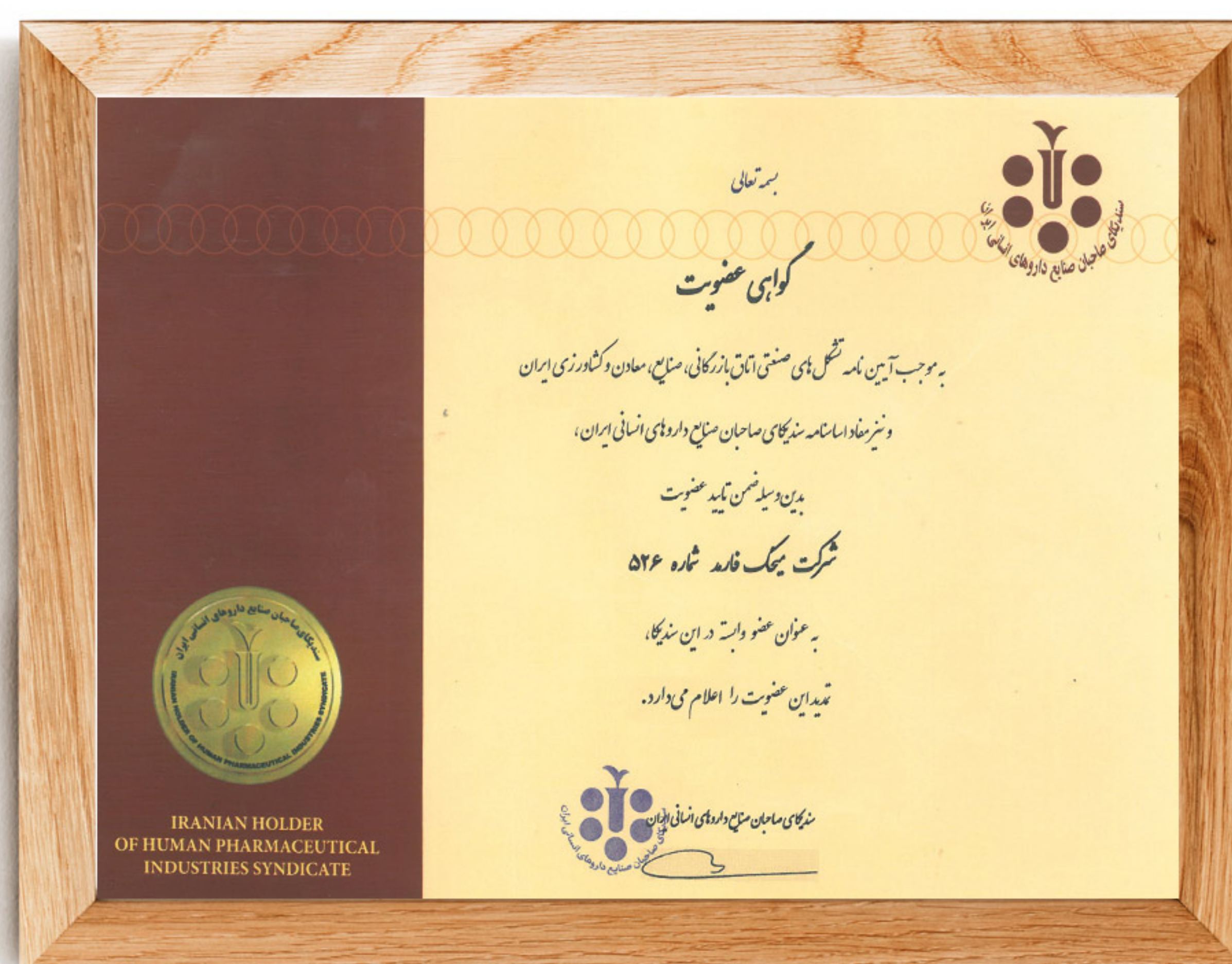
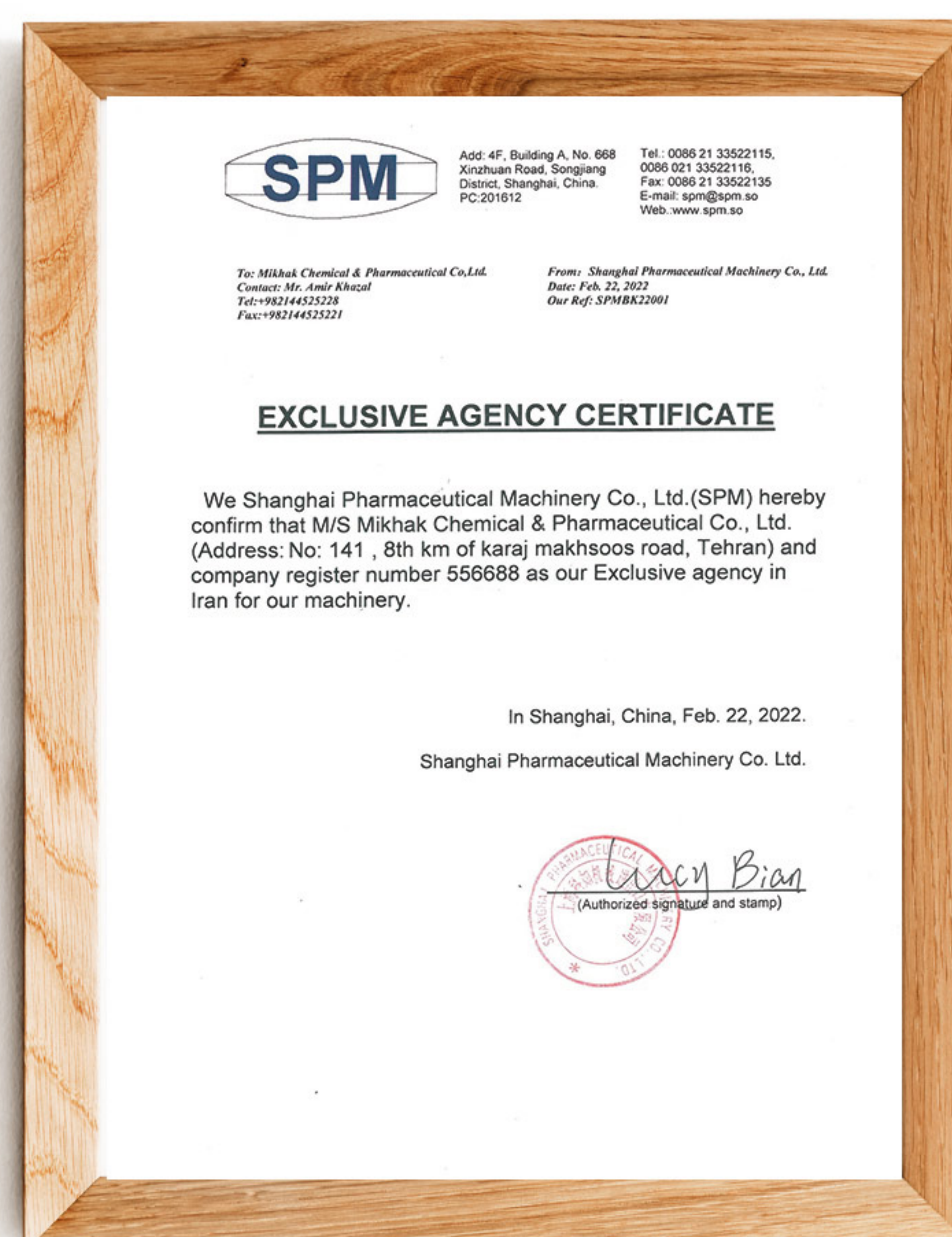
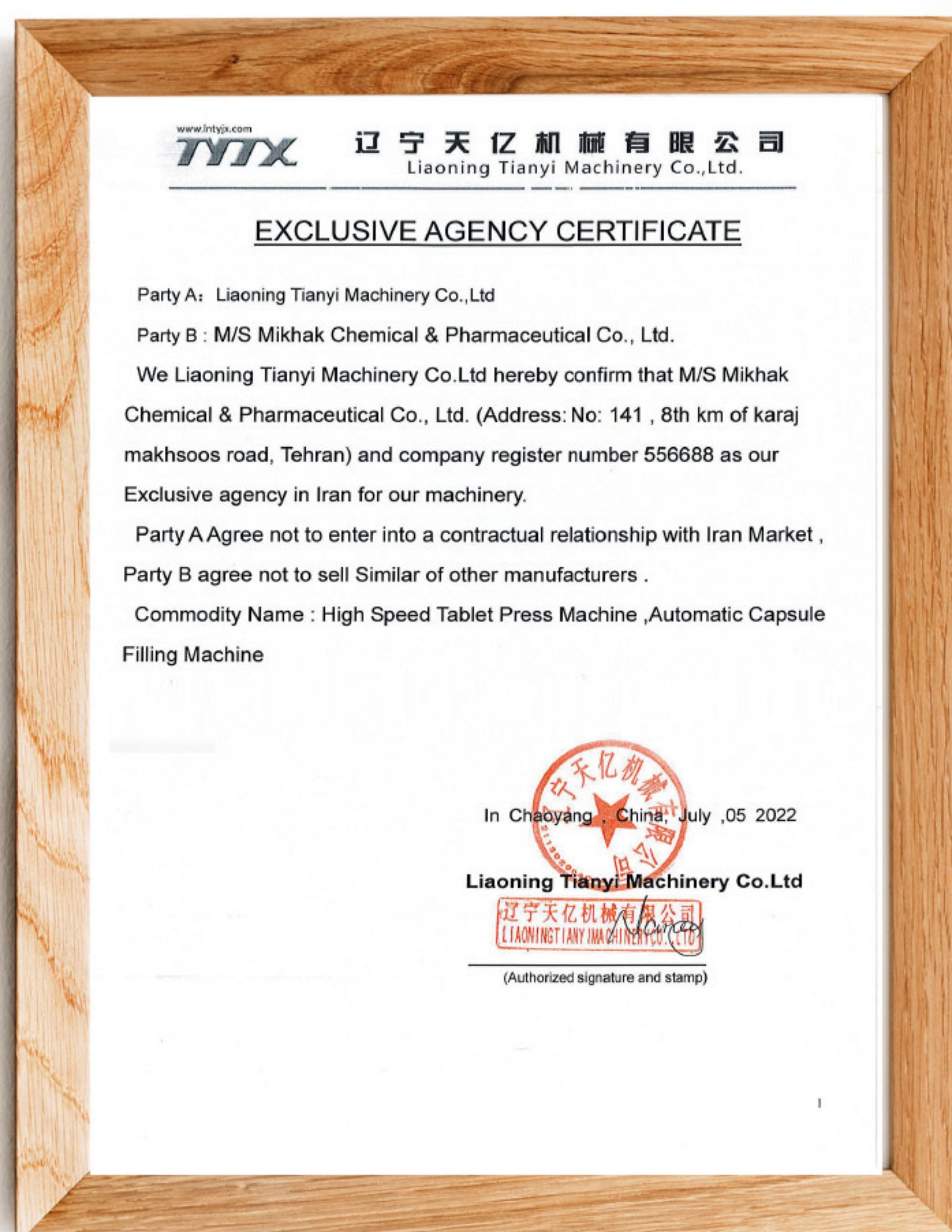
داروسازی شنامد

SOME CUSTOMERS

 تماد تهران	 گل قطره طوس	 تولید دارو	 داروسازی حنان	 آتی فارمد	 روز دارو	 لکمان
 آنی جهش فارمد	 البرز دارو	 خورشید کادوس	 مجتمع صنعتی دینه ایران	 دارو درمان برنا	 رشد دانه	
 سامی ساز	 بیوسان فارمد	 پارس دارو	 پارس ویتامین خاورمیانه	 دارو پلاستیک پارس	 نانوزاو دارو	
 شرکت بهروزان	 پویش دارو	 بیمارستان میلاد اصفهان	 گیاهان قائم دارو	 زیست تخمیر	 بهستان دارو	
 شرکت کیمیاگروپوس	 الکترو اپتیک صایران	 ریحان نقش جهان	 پارس تک رخ	 گروه دارویی سه دال	 داروسازی امین	
 آتیه فارمد	 اکسین دارو	 دارو صنعت ویانا	 رامو فارمین	 پوراطب گستر ایرانیان	 البرز بالک	
 داروسازی دانا	 کارخانه داروسازی طاها	 ابوریحان	 امید پارسینا دماوند	 داروسازی سها	 سبحان دارو	 اکسیر گل سرخ

CERTIFICATES

گواهی نامه ها



PRODUCTS

محصولات



ALX-I MODEL AMPOULE WASHING DRYING FILLING SEALING PRODUCTION LINE



The ALX-I model ampoule washing-drying-filling-sealing production line is composed of the QCL series vertical ultrasonic washing machine, ASMR series depyrogenation tunnel and AGF series vertical filling-sealing machine, whilst the three machines can also be used independently. Suitable for production of ampoules of 1-20ml, it can complete more than 20 work procedures such as ultrasonic bathing, three-time WFI and recycled water washing, three-time compressed air flushing, exterior wall water washing and compressed air flushing, preheating, drying, sterilizing, depyrogenation, cooling, pre-fill gas purging, filling, post-fill gas purging, heating and sealing. This production line is a new-type processing line which is researched and developed based on customer needs.



BGB-COATER

HIGH-EFFICIENCY FILM COATING MACHINE

Application Overview

The high-efficiency coating machine is mainly used in the pharmaceutical and food industries. It is an efficient, energy-saving, safe, clean, and GMP compliant electromechanical integrated coating equipment for organic film coating, water-soluble film coating, slow and controlled release coating, drop pill coating, sugar coating, and chocolate and candy coating of tablets, pills, candies, etc.

Equipment characteristics

- Constant pressure variable displacement peristaltic pump, with the cancellation of the return pipe.
- Touch screen display.
- Expand the PLC module, all parameters are set on the control panel.
- Sound insulation and insulation, providing insulation for the interior of the machine.
- Fully sealed, negative pressure operation.
- Spray gun (Iwata, Japan) - uniform atomization, large spray surface, adjustable direction, no leakage and blockage of the nozzle.
- Promote the frequent mixing, rolling, and exchange of materials to avoid fragmentation and improve the yield.



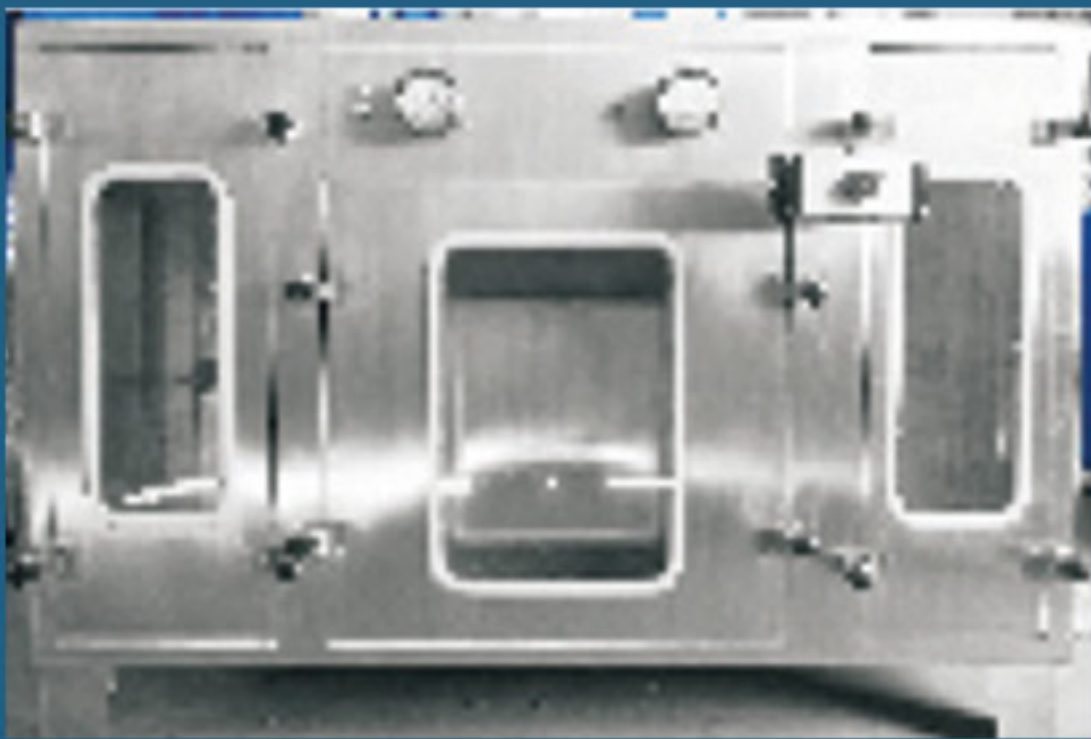
Project specifications	BGB-5	BGB-40	BGB-80	BGB-150
Production capacity (kg/batch)	5	40	80	150
Drum speed (rpm)	6-30	6-30	3-15	3-15
Main motor power (kw)	0.75	1.1	1.5	2.2
Efficient filtration hot air cabinet motor power (kw)	0.35	0.55	1.1	1.5
Dust removal exhaust fan motor power(kw)	2.2	3	3	5.5
Overall dimensions of the host (length × wide × High)(mm)	810×710×1410	1000×800×1600	1250×990×1880	1570×1260×2060

All parameters are for reference only, and our company has the right to make changes based on the material situation without prior notice.

[illegible]

Equipment characteristics

- PLC intelligent control, high degree of automation, convenient operation and maintenance.
- Fully automatic sealed feeding and unloading system, pipeline type connection, quick opening clamp type connection, no dead corners, easy disassembly, and easy cleaning.
- The equipment is designed according to the 2bar withstand voltage standard, and all components of the entire machine have good grounding methods.
- Cart type whole grain head, easy and flexible installation.
- Made of all stainless steel, the part in contact with the material is made of 316L high-quality stainless steel.



Application Overview

FLP multi-function fluidization granulation coating machine is a multifunctional equipment integrating spray drying granulation centrifugal pelleting fluidization coating drying. This machine is compatible with various process operations. Especially suitable for multi variety and multi dosage granulation, pill making, and coating in industries such as medicine, food, and chemical industry.

Equipment characteristics

- Integrating multiple functions such as granulation, pill making, coating, and drying.
- Granulation of powder materials.
- Powder material coating.
- Powder material pelletizing.
- Traditional Chinese medicine spray granulation and coating.
- Prepare 10-30 mesh large particle granules.
- Thin film, enteric coated, slow and controlled release coating for powders, granules, and pellets.
- Masking, moisture-proof, oxidation resistant, waterproof, insulated, colored, and insulated coating.
- Drying of powdery, granular, and pelletized materials.

Project specifications			10	15	20	30	45	60	90	120
Container diameter		mm	700	800	900	1000	1100	1200	1400	1500
Production capacity		kg/batch	2.5-10	3-15	5-20	7.5-30	10-45	15-60	20-90	30-120
Fan power		kw	5.5	7.5	7.5	7.5	11	15	18.5	22
Steam	Pressure	Mpa	0.4-0.6							
	Consumption	kg/h	35	42	47	60	140	160	180	240
Compressed air	Pressure	Mpa	0.6							
	Consumption	m³/min	0.6	0.6	0.6	0.9	0.9	1.1	1.3	1.5
Noise		dB	Fan isolation processing noise below 75 decibels							
Host size		H1(mm)	2790	3350	3650	3720	3720	3850	3950	4190
		H2(mm)	340	490	540	590	640	690	740	790
		H3(mm)	2570	3130	3430	3500	3500	3630	3720	3975
		Ø(mm)	250	250	250	280	280	280	280	315
		L(mm)	1250	1400	1450	1500	1550	1600	1650	1700
		B1(mm)	1160	1460	1560	1600	1760	1860	1960	2060
		B2(mm)	1860	2460	2660	2860	3060	3260	3460	3660

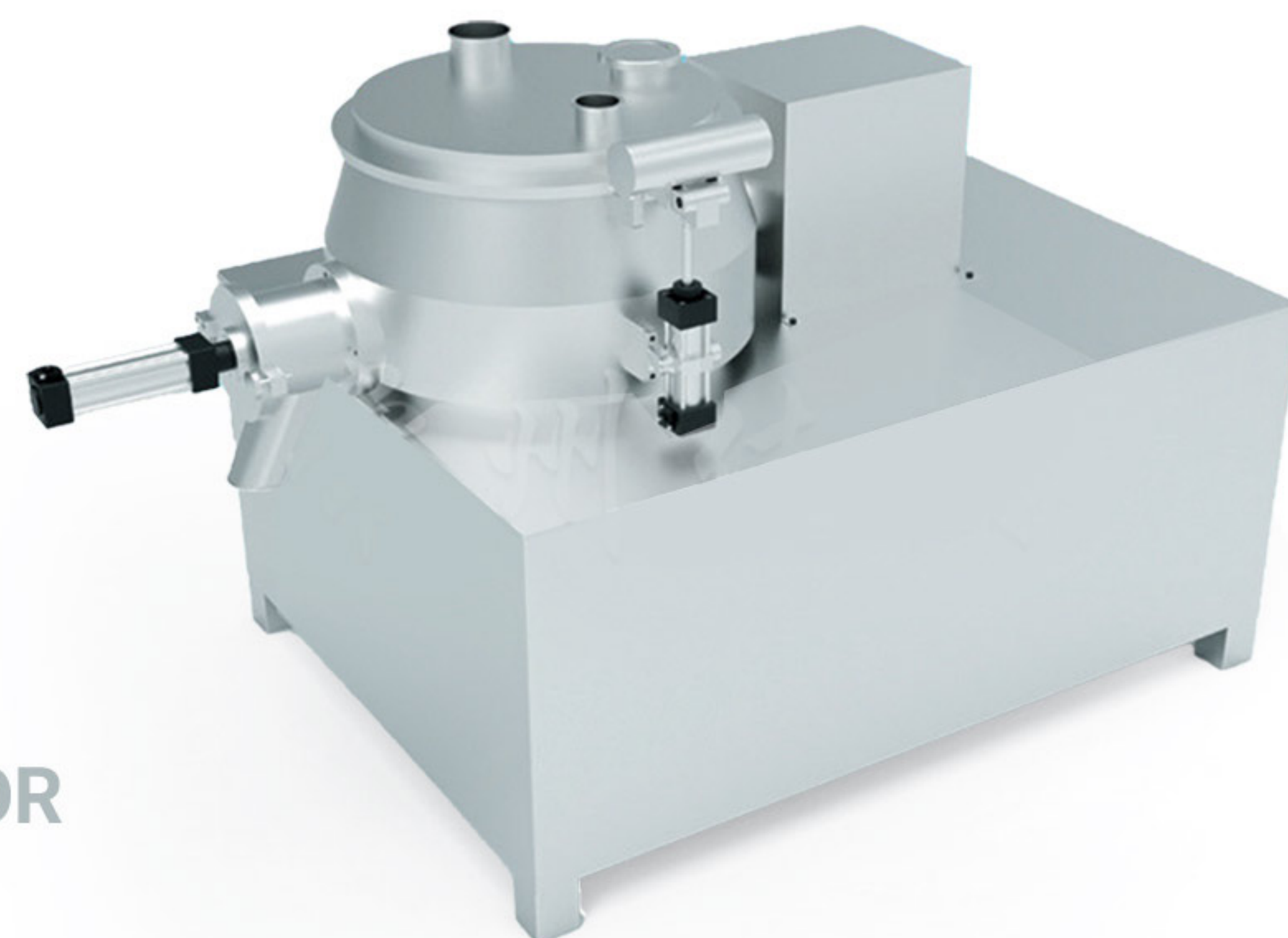
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GHL

HIGH SPEED MIXER GRANULATOR



Application Overview

The GHL high-speed mixing granulator is a high-efficiency equipment that mixes different powdered materials in one process and produces particles, widely used in industries such as pharmaceuticals, food, and chemical.

Equipment characteristics

- This machine adopts a horizontal cylindrical or conical structure, and users can freely choose.
- The internal surface of the equipment has no dead corners and operates in a closed state, meeting the requirements of "GMP".
- Short granulation time, efficient and energy-saving.
- The particles produced have uniform texture and good flowability, providing the most ideal granular raw material for the tablet pressing process.
- Compared to traditional processes, it reduces adhesive by 25% and shortens drying time.
- Each batch is only dry mixed for 2 minutes and pelletized for 1-4 minutes, which improves the efficiency by 4-5 times compared to traditional processes.
- The entire operation has strict safety protection measures.
- When there is a significant difference between the main drug and the excipients, uniform binding can still be achieved without layering.



Specification Items	2.5/7	10	50	100	150	200	250	300	400	600	800	1000
Production capacity (Kg/batch)	0.3-1	3	15	35	50	60	80	100	135	200	280	350
Particle size (mesh)	20-80											
作业时间 (min)	5-7											
Container volume (L)	7/2.5	10	50	100	150	200	250	300	400	600	800	1000
Mixing motor power (Kw)	0.75	2.2	4/5.5	6.5/8	6.5/8	11/14	11/14	13/16	18.5/22	22/28	30/37	45/55
Knife motor power (Kw)	0.75	1.1/1.5	1.5/2.2	2.2/3	2.2/3	4/5.5	4/5.5	4/5.5	5.5/7.5	7.5/11	7.5/11	7.5/11
Stirring speed (r/min)	30-950	30-950	30-340	30-320	30-300	30-280	30-280	30-230	30-180	30-180	30-180	30-120
Cutter speed (r/min)	300/3000		1500/3000									
Compressed air pressure (Mpa)	0.3-0.6											
Compressed air consumption (m³/min)	Not have	0.1	0.11	0.13	0.2	0.25	0.25	0.3	0.4	0.4	0.4/0.5	0.5
Machine weight (Kg)	150	300	400	800	900	1200	1500	1550	1650	1800	2000	2200
Main dimensions of the product (Long × wide × Height mm)	800×450×900	1250×550×1160	1730×750×1610	1950×750×1810	1950×750×1810	2210×880×2000	2210×880×2000	2310×1050×2000	2485×1080×2050	2585×1400×2100	2850×1400×2350	3140×1500×2800

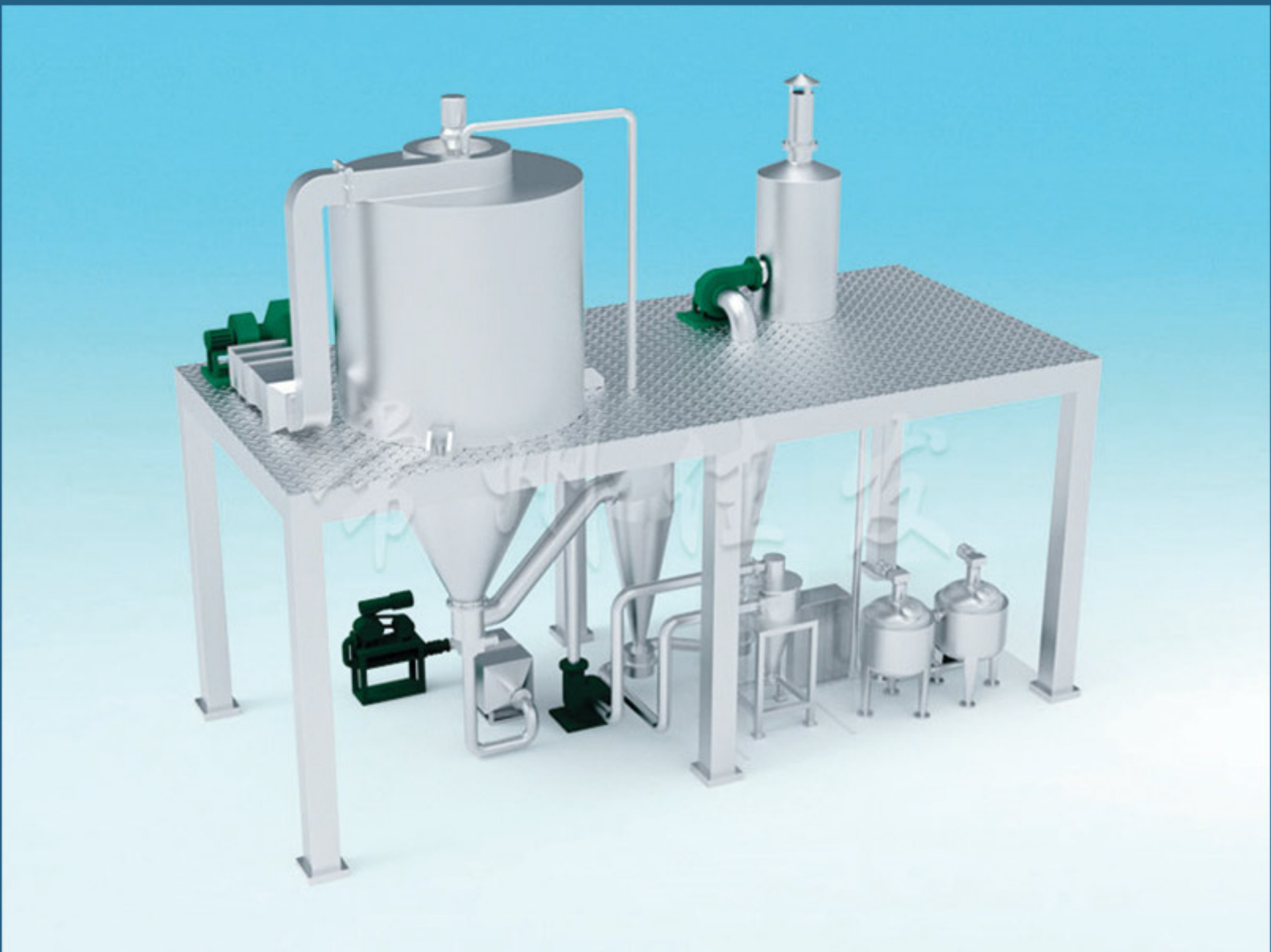
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LPG-SPRAY DRYER

Application Overview

Spray drying is the most widely used process in liquid forming and drying industries. It is most suitable for generating powdery and granular products from solutions, emulsion, suspensions and pumpable paste liquid raw materials. Therefore, spray drying is a very ideal process when the particle size distribution, residual moisture content, bulk density and particle shape of the finished product must meet accurate standards.



Equipment characteristics

The drying speed is fast, and the surface area of the material liquid greatly increases after atomization. In the hot air flow, 95% -98% of the water can be instantly evaporated, and the drying time is only 5-40 seconds. It is particularly suitable for drying heat-sensitive materials.

The product has good dispersibility, flowability, or solubility. As the drying process is completed in air, it can basically maintain a spherical shape similar to the liquid droplet phase, with good dispersibility, flowability, and solubility, resulting in high purity and good quality of the product.

The production process is simplified and the operation and control are convenient. Usually used for solutions with a moisture content of 40-60% (up to 90% for special materials), they can be dried into powder products in one go. After drying, there is no need for crushing and screening, reducing production processes and improving product purity. The product particle size, bulk density, and moisture can be adjusted within a certain range by changing operating conditions, simplifying the production process and making control and management very convenient.

Specification item		5	25	50	100	150	200-300
Inlet temperature		≤350℃					
output temperature		≤80℃~90℃					
Evaporation (kg/h)		5	25	50	100	150	200-300
Transmission form		compressed air drive	Mechanical transmission				
Rotating speed(rpm)		25000	22000	21500	18000	18000	15000
Spray disc diameter(mm)		50	120	120	120	150	180-340
heat source		electricity	electricity	Electricity + steam, fuel oil, gas	electricity + steam	Electricity + steam, fuel oil, gas	Solved by the user
Electric heating power(kw)		9	45	60	81	99	
dry powder recovery (%)		≥95	≥95	≥95	≥95	≥95	≥95
Host size	A(mm)	1000	1290	1730	2500	2800	According to the actual situation
	B(mm)	2100	3410	4245	5300	6000	
	C(mm)	2300	4260	4645	6000	6700	
	ØD(mm)	1060	1800	2133	2560	2860	
	E1(mm)	1050	1200	1640	2100	2180	
	E2(mm)	1050	1200	1640	2100	2180	
	F(mm)	750	1000	1250	1750	1970	
	G(mm)	530	1700	1750	1930	2080	
	H(mm)	530	1300	1800	2600	3050	
	I(mm)	530	1550	1600	1780	1960	

All parameters are for reference only, and the company reserves the right to change it without prior notice, depending on the condition of the material.



HSD SERIES LABORATORY HOPPER MIXER

Spray drying is the most widely used process in liquid forming and drying industries. It is most suitable for generating powdery and granular products from solutions, emulsion, suspensions and pumpable paste liquid raw materials. Therefore, spray drying is a very ideal process when the particle size distribution, residual moisture content, bulk density and particle shape of the finished product must meet accurate standards.



Model	Main structural dimensions										Mixed speed (rpm)	Net load (kg)	Total power (kw)	Machine weight (kg)
	L	L1	W	W1	W2	H	H1	H2	H3	DH				
HSD5	950	740	570	250	450	1000	470	980	830	50	3-25	2.5	0.25	150
HSD10	1050	740	650	340	450	1050	410	980	800	50	3-25	5	0.25	160
HSD15	1050	740	650	350	450	1050	410	980	880	50	3-25	7.5	0.25	170
HSD20	1150	740	700	420	450	1050	360	980	820	75	3-25	10	0.25	180
HSD25	1150	740	700	420	450	1050	370	980	880	75	3-25	12.5	0.55	185
HSD30	1150	740	700	430	450	1050	370	980	925	75	3-25	15	0.55	190
HSD50	1350	940	880	600	700	1320	440	1315	1085	100	3-25	25	0.55	200
HSD75	1350	940	1050	600	700	1415	370	1315	1155	100	3-25	37.5	0.75	230
HSD100	1350	940	900	770	700	1350	440	1315	1125	200	3-20	50	0.75	250

HTD SERIES COLUMN HOPPER MIXER

This machine has functions such as automatic lifting, mixing, and lowering. Equipped with a hopper mixer and multiple mixing hoppers of different specifications, it can meet the mixing requirements of multiple varieties and batches, making it an ideal equipment for general mixing in pharmaceutical factories. It is widely used in industries such as pharmaceuticals, chemicals, and food.



Project specifications	HTD-50	HTD-100	HTD-200	HTD-300	HTD-400	HTD-600	HTD-800
A	2100	2200	2350	2450	2800	3200	3200
B	1700	1800	1900	2000	2000	2400	2600
D	300	350	350	400	400	500	500
H	2500	2600	2700	2800	2800	2800	2800
Volume(L)	50	100	200	300	400	600	800
Power(Kw)	3	4	5	5.2	5.2	5.2	6.2
Weight(Kg)	700	800	850	900	1000	1300	1600

LVP

VSUN



AFP Aseptic Blow-Fill-Seal System For Plastic Container Parenterals(LVP)

- Because of its reliable assurance of aseptic production, BFS technology is well known for IV solution production.
- The packages using BFS technology for large volume parenterals often uses medical polypropylene (PP) plastic material.
- The produce is durable for high temperature sterilization, inert, has low water vapor permeability, environmentally friendly.
- No additional active additives are required thanks for the aseptic filling environment.

Application

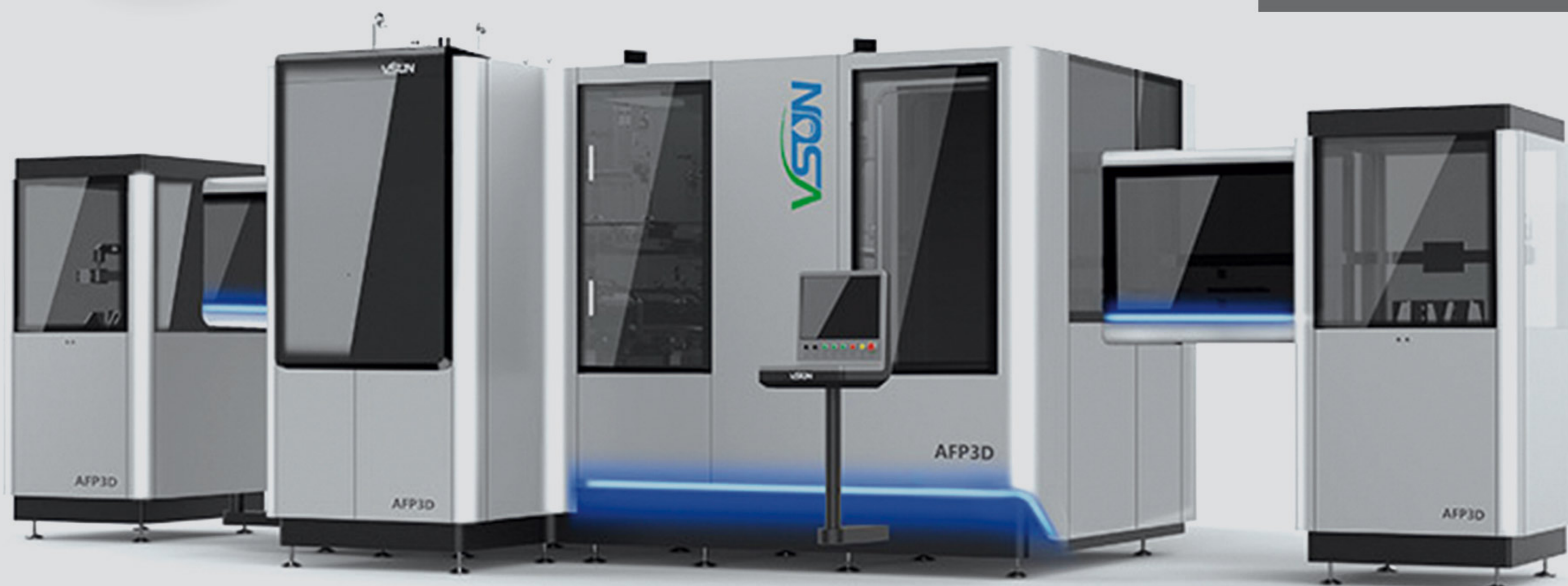
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TECHNICAL PARAMETERS

Model	Specification	Nos.of Extruding Head	Center Distance of Extruding Head	Qty. of Mould	Distribution of Cavity	Total number of cavity	Recycle Time (Unit : s)	Production Capacity (Unit:pcs/h)
AFPL6	500mL	6	80	1	6	6	18.5	1150
AFPL6	1000mL	6	80	1	6	6	20	1080
AFPL8	100mL	8	62	1	8	8	14.5	1950
AFPL8	250mL	8	62	1	8	8	16	1800
AFPL8	500mL	8	62	1	8	8	18.5	1550
AFPL6D	500mL	6	80	2	2*6	12	18.5	2350
AFPL6D	1000mL	6	80	2	2*6	12	20	2160
AFPL8D	100mL	8	62	2	2*8	16	14.5	4000
AFPL8D	250mL	8	62	2	2*8	16	16	3600



SVP



AFP Aseptic Blow-Fill-Seal System For Plastic Container Parenterals(SVP)

- Because of its reliable assurance of aseptic production, BFS technology is well known for IV solution
- BFS Plastic Ampoule Production Line are highly used in eye, ear, nose care products and cosmetic serums.
- Comparing to glass ampoule, plastic material has much more advantages such as convenient to use, eliminate potential hazards in handling, safe and environmentally friendly disposal, shatterproof transportation and low manufacturing cost.

Application

BFS Plastic Ampoule Production Line are highly used in eye, ear, nose care products and cosmetic serums. Comparing to glass ampoule, plastic material has much more advantages such as convenient to use, eliminate potential hazards in handling, safe and environmentally friendly disposal, shatterproof transportation and low manufacturing cost.

Single Station

single station provides our BFS system using aseptic packaging technology and continuous operation for an automatic completion of filling and sealing process. The medical polyethylene (PE) or polypropylene (PP) particles are often used as raw material. Various capping design such as twist off, multidose, euro cap and more can be chose upon request.

TECHNICAL PARAMETERS

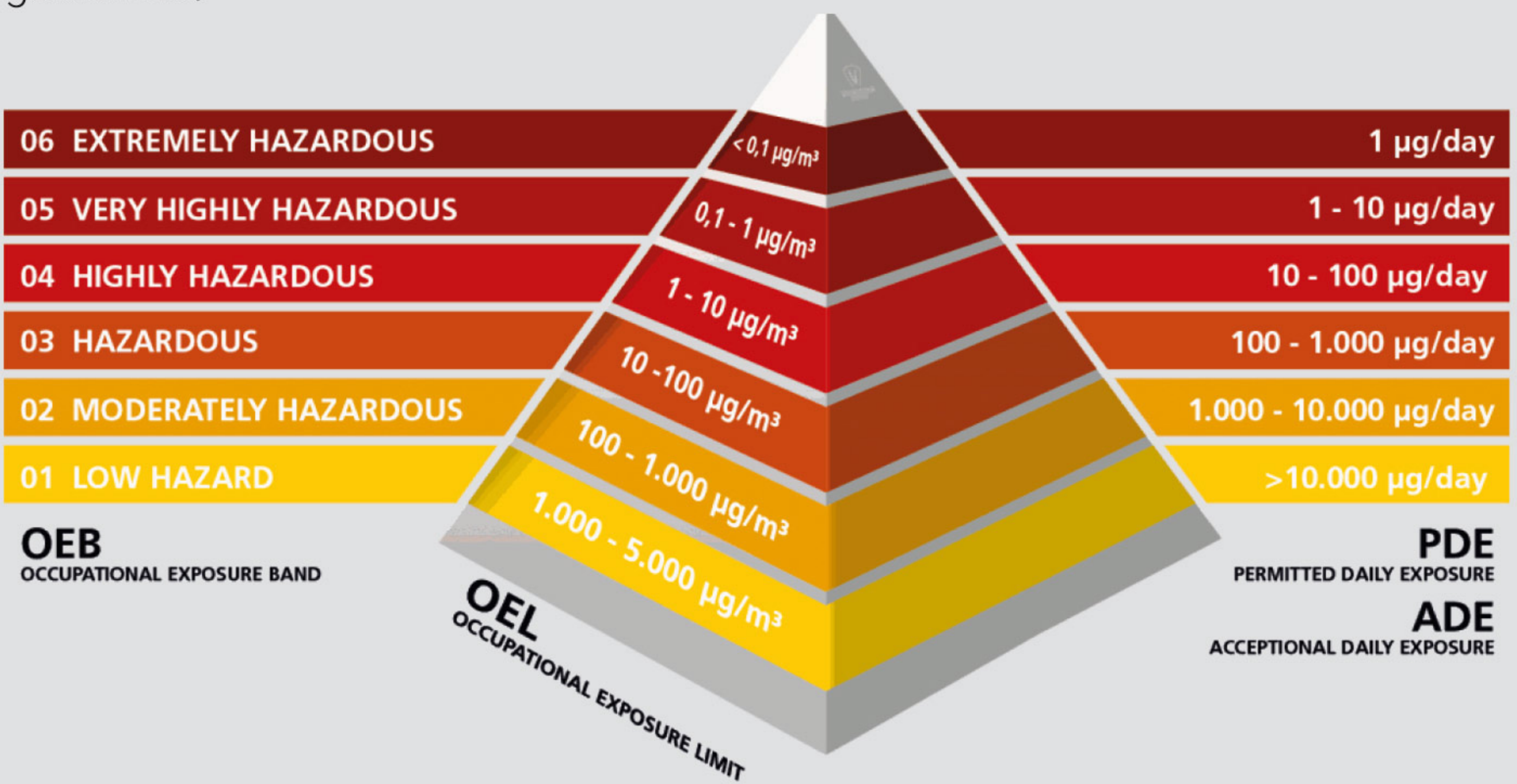
Model	Specification	Nos.of Extruding Head	Center Distance of Extruding Head	Qty. of Mould	Distribution of Cavity	Total number of cavity	Recycle Time (Unit : s)	Production Capacity (Unit:pcs/h)
AFP1	0.4-2mL	1	/	1	1×(5+5)	10	12	3000
AFP1	5-20mL	1	/	1	1×6	6	12	1800
AFP3	0.4-2mL	3	145	1	3×(5+5)	30	12	9000
AFP3	5-20mL	3	145	1	3×6	18	12	5400
AFP4	0.4-2mL	4	110	1	4×8	32	12	9600
AFP4	5-20mL	4	110	1	4×5	20	12	6000

HAZARDOUS LINE

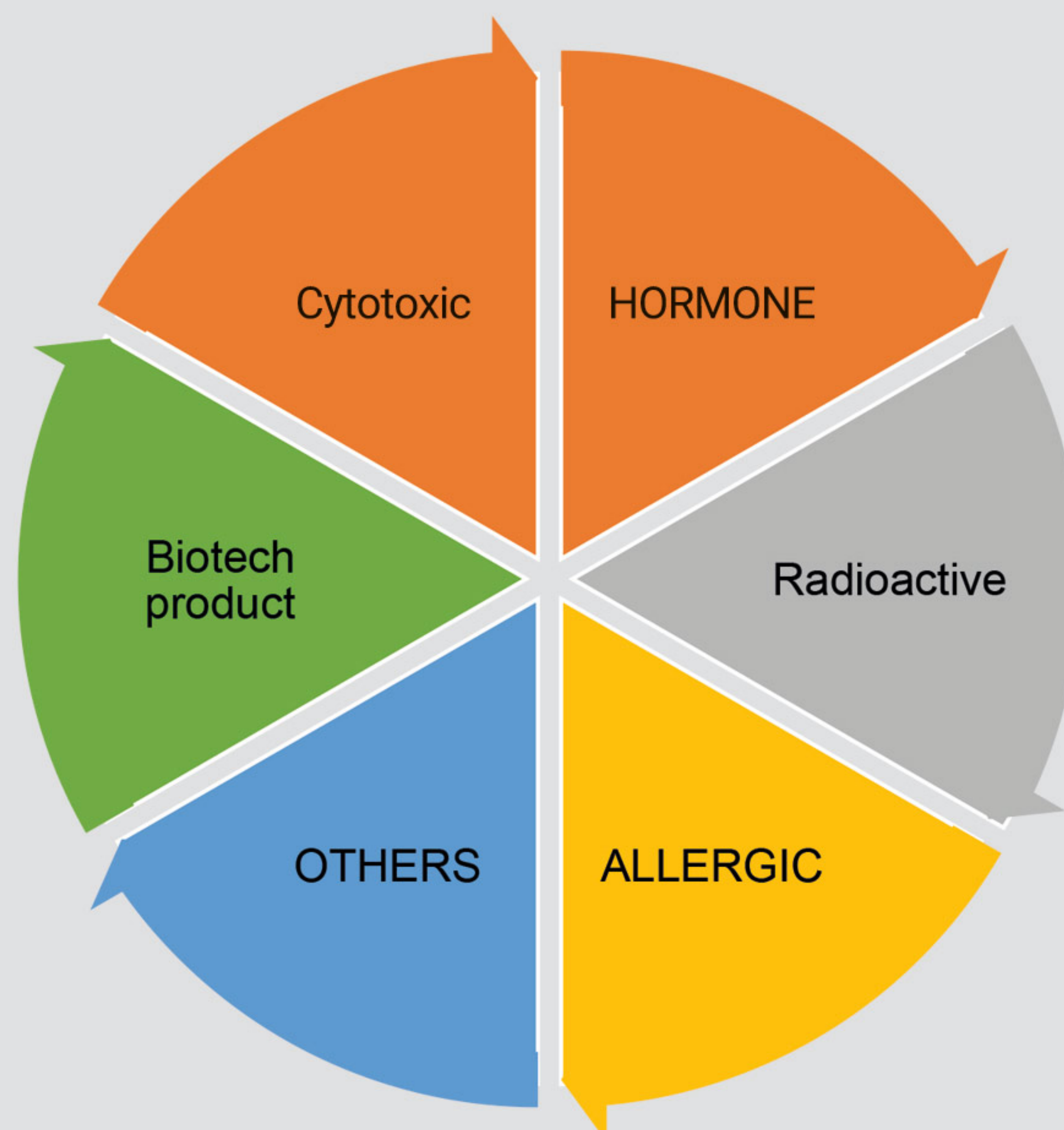


OEB PRODUCTS (Occupational Exposure Band)

Is a mechanism used to precisely assign chemicals into “categories” or “bands” based on their adverse health outcomes and potency considerations. It also aligns chemicals in groupings based on OEL in order to establish safe handling guidelines.



HIGH POTENT DRUGS



SOLUTIONS FOR HIGH POTENT DRUGS

1-HIGH POTENT PRODUCTS - API

The process solutions for high potent products:

API (STERIL OR NON-STERIL):

- Crushing, mixing and quantitative loading;
- Closure transfer technology and some connection valves solution (such as RTP and AB valve)
- Protection system, including RABS and isolators.

2-HIGH POTENT PRODUCTS – SOLID DOSE

The process solutions for high potent products:

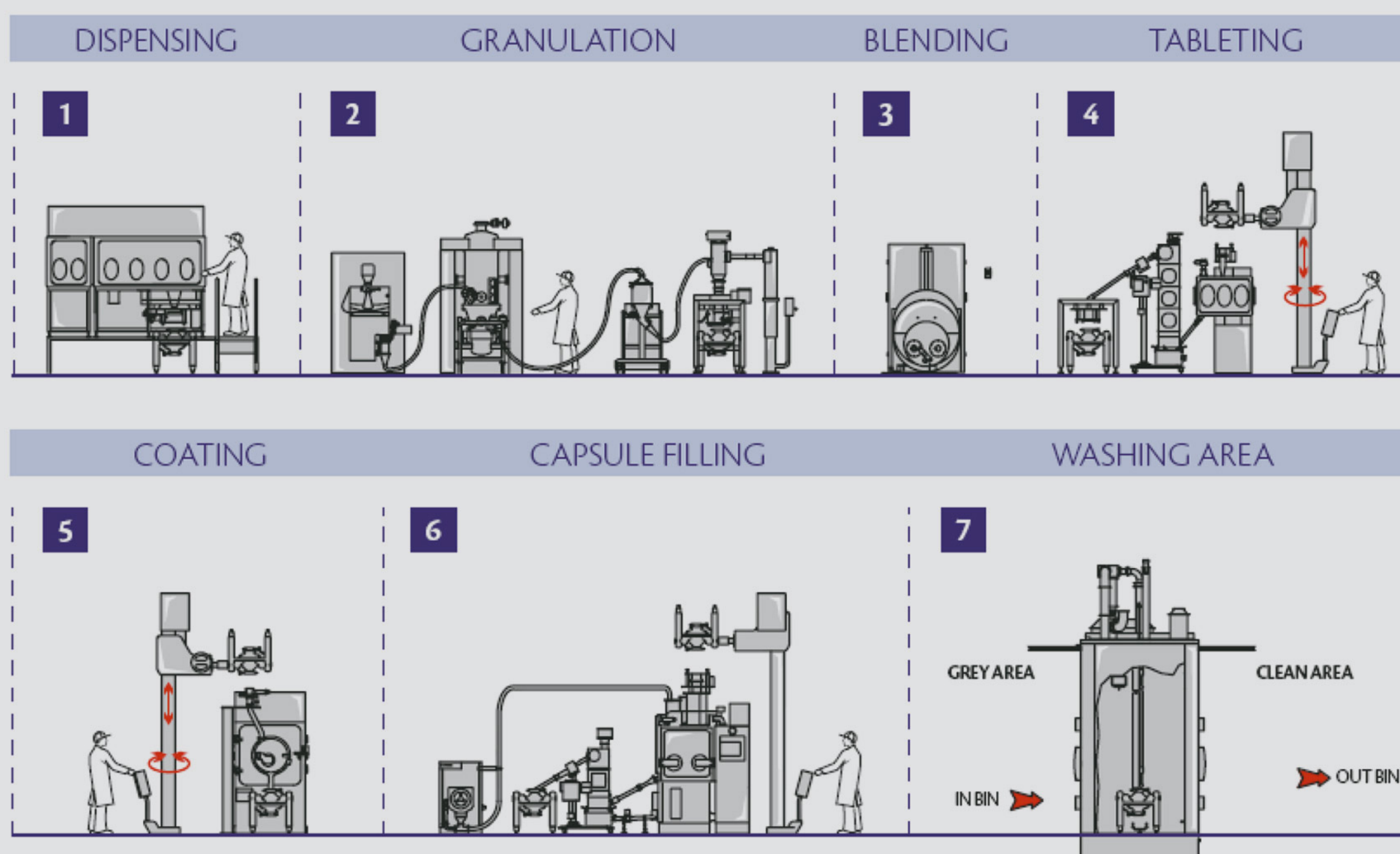
Solid dose product:

- The process including Pelletizing, drying, mixing and sifting
- The powder transfer process between the process above, and the connection (such as RTP/ AB valve)
- The protection for the operators during the above process.

3-HIGH POTENT PRODUCTS – STERIL PRODUCT

The process solutions for high potent products:

- Sterile product
- Weighing protection before compounding;
- Assembly protection for Sterile filters and the decontamination protection after sterile filtration;
- The protection for whole filling, stoppering, lyophilizing, and capping process, both for sterile and high potent consideration
- Sterile material transfer;
- VHP decontamination technology: including VHP generator and VHP transfer chamber.



LVP INSPECTION MACHINE



DESCRIPTION

The machine is for automatic inspection for LVP glass and plastic infusion of 50-1,000ml. The capacity is up to 200 bottles per min.

Inspection Stations:

- Capping quality
- Filling volume
- Impurities in the bottom, such as glass fragments, metal fragments, black spots and etc.
- Impurities inside the infusion, such as glass fragments, hairs, fibers, black spots, white spots, and etc.
- Floating particles

SVP & AMPOULE INSPECTION MACHINE



DESCRIPTION

The AIS series SVP Inspection machine is mainly suitable for ampoules, vials, and oral liquid of 1-30ml. It can also be used for vial powder inspection.

Inspection Stations:

- Foreign particles inside the solution, such as fibers, glass fragments, and etc.
- Foreign particles inside the powder, such as fibers, glass fragments, and black spots
- Filling Volume
- Capping quality

PSMDP-DC-8 WATER STERILIZER

large infusion sterilization equipment, which is mainly used for the sterilization of plastic IV bottle. High-temperature superheated water is used as heating media and sprays on product evenly from the top of the chamber. The heat energy carried by the superheated water is transferred to the products, thus ensuring the uniformity of the sterilization temperature. High-temperature circulating water is used

as sterilization media and uniform sterilization can be realized at a low temperature. There is no problem of temperature dead leg caused by cold air in the steam sterilization and no product recontamination due to the unclean cooling water in the cooling step. The unique pressure balancing technology used in the sterilization process ensures that plastic bottles will remain in good shape after sterilization.





WASB-A-1200D AMPOULE WATER STERILIZER

WAS series ampoule water sterilizer is mainly used for sterilization, leak detection of ampoules, oral liquid and small-volume IV solution. High-temperature circulating water is used as sterilization media and uniform sterilization can be realized at a low temperature (not more than 100°C). There is no problem of temperature dead leg caused by cold air and no product recontamination due to the unclean cooling water in the cooling step. After sterilization, the vacuum detection and colored water ensure that defect products are detected.





TABLET COUNTING LINE



Feature

- High speed bottle sorting and feeding.
- Accuracy of counting.
- Accuracy dessicant pouch inserting.
- Accuracy cotton strip inserting.
- Good performancy of capping.
- Good performance of aluminum foil sealing.
- High speed of labeling and code printing.

The Consist of Production Line

- Bottle automatic arranging machine (SLP-200)
- Counting and filling machine (GS-16)
- Cotton inserting machine (CI-200)
- Desiccant filling machine (DI-200)
- High speed capping machine (GX-200)
- Aluminum foil induction sealing machine



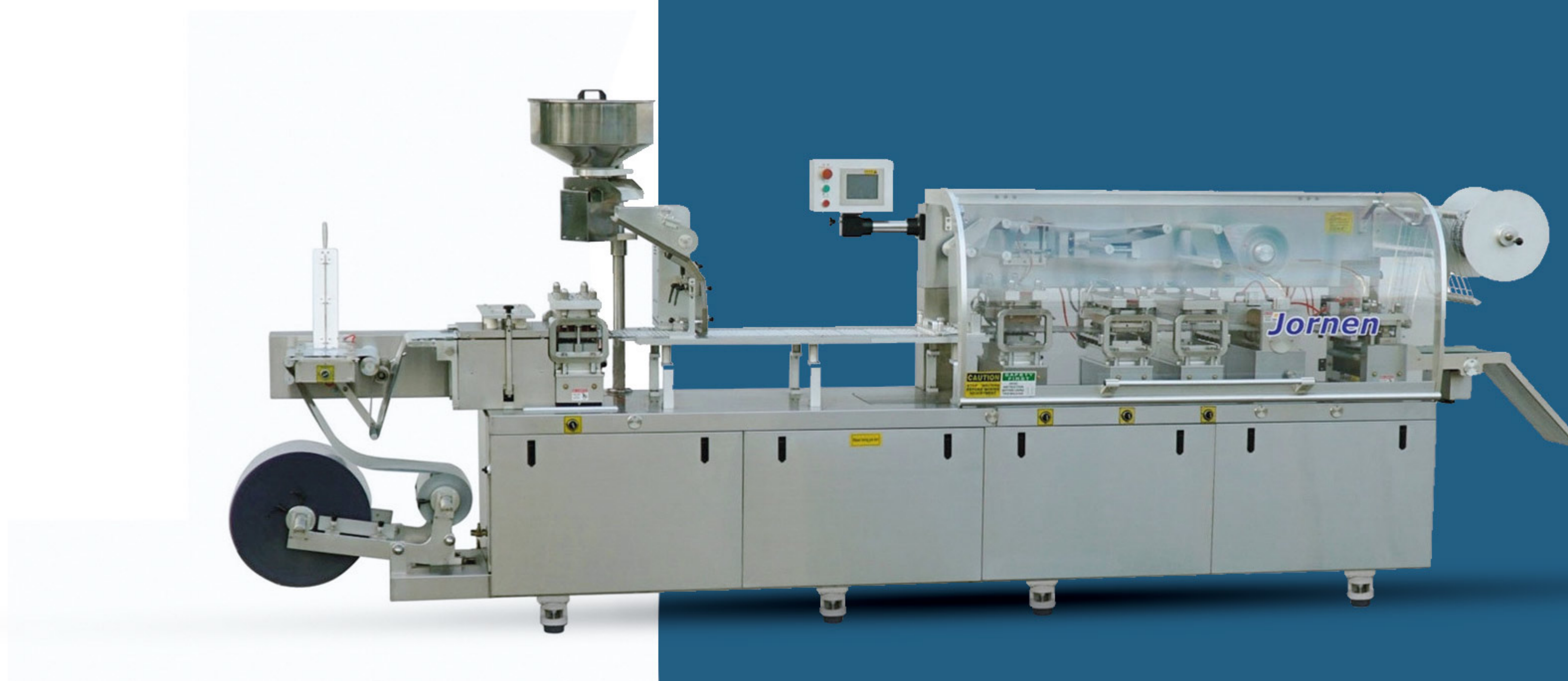
BLISTER LINE-BPL500R

MAIN TECHNICAL PARAMETERS

- Max. Output: 500 cartons/min.
- Range of Carton Size: Max.: 200x90x60mm Min.: 75x35x15mm
- Machine Power: 47kw
- Machine Dimension: 1150x1800x2100mm
- Machine Weight: 7600kg



- High-speed, fully servo regulated, the culmination of our more than 30 years of professional experience.
- By integrating a rotary-style blistering and continuous motion cartoning module for packaging of pharmaceutical tablets and capsules, high efficiency and highly flexible, maximum output reaches 500carton/; it is ideal for mass production.
- Processes all common solid dose products and all types of forming material.
- The machine can achieve 90 minutes of uninterrupted production thanks to the Blister module with forming material reels of up to 600mm in diameter and a waste material trimming cutter.
- Capable of all standard types of closure systems for cartons from tuck-in to hot-melt.
- The heart of a Blister Line is the connection between the Blister module and Cartoner module. In this line, the connection phase is truly innovative thanks to blister cards pick-up arms, vacuum conveyors, and the blister counting magazines that adopt precise servo technology. These accurately control blister transfer, faulty blister rejection, positioning, and feeding, etc., to assure the stability of high running speed.
- GMP-compliant cantilever (balcony type) layout for easy pharmaceutically compliant cleaning.
- In the blister unit when the first reel's film runs out in the blister module, it can automatically connect with the second without interruption to the machine (optional).
- The cartoning machine is truly ergonomic thanks to the innovative design whereby the product inserting device is placed at the rear; The conventional cartoning machine's inserting device is placed at the front side, where it protrudes from the operation side and is less ergonomic.
- The cartoner module equipped a servo-regulated robot that can automatically load cartons when the carton magazine is low (optional).
- The blister and cartoner unit were optimally combined in this line, less than 12 meters in length, it provides easy changeover for different sizes of formats and cartons.
- This line adopts the fully-enclosed structure and safety door; it aligns with the stringent safety standards.



BLISTER-DPP260KI-2

Description

Equipped with automatic format locking, the positioning system achieves an extremely straightforward format changeover (new).

. In the sealing station, when the machine stops, the heating sealing mold can rise up automatically to prevent hot air from getting into the blister pockets so that medicine effectiveness is preserved.

. Sealing pressure adopts the gas-hydraulic pressure cylinder, so the pressure can be set freely according to the sealing area (commonly, a larger sealing area requires higher pressure) (new).

. All the main parts are made of premium stainless steel and alu-alloy material and machined by advanced high-precision CNC tooling machines.

. Accommodates two forming material reels. One of the reel's diameters can reach up to 600mm; if it equips the waste material trimming cutter(optional), it could allow production runs of approximately 90 minutes, therefore, reducing the material replacement frequency.

. This machine is equipped with an integrated forming material splicer to enhance efficiency during material replacement.

. Using a fast lock method enables the replacement of lidding material easily within 10 seconds.

. Add a perforation station to separate the perforation from the embossing station. Conventionally, perforation and embossing remain in one station, but this will influence the clarity of each (optional).

. The blister length can be set freely through Touch Screen User Interface, which reduces the time for a format changeover.

MAIN TECHNICAL PARAMETERS

- Max. Speed: alu/alu 40punches/min. alu/pvc 60punches/min.
- Max. Forming Area: 250×158mm
- Max Forming Depth: 12mm
- Material: Max. width 265mm
- Machine Power: 9.6kw
- Machine Dimension: 4200×740×1700mm (4 stations)
4450×740×1700mm (5 stations)
- Machine Weight: 1800kg (4 stations) 1950kg (5 stations)



ZH150 CARTONING MACHINE

MAIN TECHNICAL PARAMETERS

- **Max.Output:** 150 cartons/min.
- **Range of Carton Size:** Max.150x115x50mm
Min.55x30x15mm
- **Machine Power:** 1.8kw
- **Machine Dimension:** 3500x1500x1800mm
- **Machine Weight:** 1200kg



The characteristics of Cartonning Machine ZH150:

Cartoner ZH150, automatic intermittent motion horizontal cartonning machine, very compact and reliable. The working area is in cantilever (balcony type) layout. The main structure has a vertical partition to separate the drive section (rear) from the operating zones (front). It is suitable for packaging of blisters, bottles, vials, pillow packs, etc. The machine runs stable and provides easy changeover for different sizes of cartons.

It can fold leaflets, open cartons, insert the products and leaflets into cartons, emboss, tuck-in or hot-melt closures and automatically discharge cartons.

The machine is equipped with a series of sensors and automatic protective devices to assure the machine runs safely and effectively. It can connect with Blister Machine, Pillow Pack Machine, Overwrapper, etc., to form a Production Packaging Line.

Main units of this Cartoner

Main units of this Cartonning Machine

- **Gear Device:**
The gear drives the carton conveyor chain and blister conveyor chain running in continuous motion.
- **Carton Conveyor Chain:**
The carton conveyor chain is used to transfer opened cartons to every station, which can automatically complete the actions of inserting of blister cards and leaflets into cartons, embossing, closing of cartons, discharging of cartons.
- **Leaflet Conveyor Chain:**
The leaflet conveyor chain is applied to send folded leaflets to the blister feeding station then the leaflets and the blister cards are inserted into cartons together.
- **Rotary carton pick-up device:**
The rotary carton pick-up with four sets of suction cups can suck the cartons from the carton magazine, open the carton, place it on the carton conveyor.
- **The Leaflet Folding Device:**
The leaflet folding device can make the leaflet fold one to four folds according to the customer's demand.
- **Inserter device:**
The inserter device can push the blister cards into the carton in continuous motion.



CARTOONER-ZH500

MAIN TECHNICAL PARAMETERS

- Max.Output: 500 cartons/min.
- Range of Carton Size: Max.200x90x60mm
Min.75x30x15mm
- Machine Power: 11kw
- Machine Dimension: 5600x1700x2100mm
- Machine Weight: 4300kg

The characteristics of Cartooning Machine ZH500:

ZH500 is the fastest Continuous Motion Cartooning Machine in our company. It is suitable for pharmaceuticals, food, household chemicals, hardware, and electrical industries for the packaging of blisters, bottles, vials, pillow packs, toothpaste, etc. It can fold leaflets, open cartons, insert the products and leaflets into cartons, emboss, tuck-in, or hot-melt closures and automatically discharge cartons.

The machine is equipped with a series of sensors and automatic protective devices to assure the machine runs safely and effectively.

It can connect with the Blister Machine, Pillow Packaging Machine, Shrink-Wrapper, etc., to form a Packaging Line. It is the best choice for mass production.

Main units of this Cartooning Machine

- **Gear Device:**
The gear drives the carton conveyor chain and blister cards conveyor chain running in continuous motion.
- **Carton Conveyor Chain:**
The carton conveyor chain is used to transfer opened cartons to every station, which can automatically complete the actions of inserting blister cards and leaflets into cartons, embossing, closing of cartons, discharging cartons.
- **Leaflet Conveyor Chain:**
The leaflet conveyor chain is applied to send folded leaflets to the blister feeding station then the leaflets and the blister cards are inserted into cartons together.
- **Rotary Carton Pick-up Device:**
The rotary carton pick-up with four sets of suction cups can suck the cartons from the carton magazine, open the carton, place it on the carton conveyor.
- **Leaflet Folding Device:**
The leaflet folding device can make the leaflet fold one to four folds according to the customer's demand.
- **Inserter Device:**
The inserter device can push the blister cards into the carton in continuous motion. This cartooning machine is truly ergonomic thanks to the innovative design whereby the product inserting device is placed at the rear; The conventional cartooning machine's inserting device is placed at the front side, where it protrudes from the operation side and is less ergonomic.
- **Carton Magazine Device:**
Adopt a long carton magazine for approximately 1000 cartons.



GZPT26-HIGH SPEED TABLET PRESS

Specification of GZPT Series of High-speed Rotary Tablet Press Machine

Model	GZPT-26	GZPT-32	GZPT-40	GZPT-45
Punch&die type (EU)	D	B	BB	BBS
Number of press station	26	32	40	45
Max tablet diameter (mm)	25	16	13	11
Max abnormal prelate axis size (mm)	25	18	16	13
Max output (Tablet/h)	170000	210000	260000	280000
Max filling depth (mm)	20	18	18	18
Max main pressure (KN)	100	100	100	100
Max pre pressure (KN)	20	20	20	20
Idle load noise dB (A)	<75			
Power	380v 50HZ 12KW			
Size L×W×H (mm)	830×870×1995			
Weight (kg)	1650			

※Double-layer tablet, ring tablet function or IPC control (for your choice)

Re: No additional information noted if there are any changes caused by the technical development.



Benefit of GZPT Series of High-speed Rotary Tablet Press Machine

The pharma tablet manufacturing machine of Gzpt Series adopts an automatic thin oil lubrication system. The first among tablet press machine suppliers who adopt the no-handwheel system, high automation. Steady hydraulic pressure system, stable running, and low noise.



NJP1200-CAPSULE FILLING

Specification of NJP-1200
Automatic Hard Capsule Filling Machine

Model	NJP-500	NJP-800	NJP-1200
No.of die orifice	4	6	9
Max output (capsule/hour)	30000	48000	72000
Vacuum	-0.02~-0.08 Mpa		
Capsule number	00#-5#; (safety A, B)		
Filling percentage	≥99.9%		
Filling difference	<±3		
Idle load noise dB (A)	<70		
Power	380V 50HZ 5KW		
Size L*W*H (MM)	1350×1020×1950		
Weight (kg)	850		

*Data printing function, pellet device, dry vacuum pump, or IPC control (for your choice).
Re: No additional information noted if there is any change caused by the technical development.



NJP-3200-CAPSULE FILLING

NJP-3200 Hard Capsule Encapsulation Machine Specifications

	NJP-2200	NJP-3200
No.of die orifice	19	23
Max output (capsule/hour)	132000	192000
Vacuum	-0.08~-0.04 Mpa	
Capsule number	00#-5#; (safety A, B)	
Filling percentage	≥99.9%	
Filling difference	<±3	
Idle load noise dB (A)	<73	
Power	380V 50HZ 8KW	380V 50HZ 10KW
Size L*W*H (MM)	1200×1070×2100	1420×1180×2200
Weight (kg)	2500	3000
*Data printing function, pellet device, dry vacuum pump or IPC control (for your choice). Re: No additional information noted if there is any changed caused by the technical development.		

ZPT-TABLET PRESS



ZPT Series of Rotary Tablet Press Machine

The automatic tablet press machine for sale in contact with the product adopts stainless steel. The hole of the punches & die is with a special anti-leakage and anti-dust device. Convenient for disassembling the structure, make sure the maintenance. The automatic pill press machine adopts the high definition, isolated window design. Automatic tablet making machine also adopts reliable safe sealing and dustproof design.



Specification of ZPT Series Rotary Press Machine

Model	ZPT-15	ZPT-17	ZPT-20	ZPT-25
Punch&die type (EU)	D	B	BB	BBS
Number of press station	15	17	20	25
Max tablet diameter (mm)	25	16	13	11
Max abnormal prelate axis size (mm)	25	18	16	—
Max output (Tablet/h)	70000	80000	95000	118000
Max filling depth (mm)	20	16	16	16
Max main pressure (KN)	100	80	80	80
Max pre pressure (KN)	12	12	12	12
Idle load noise dB (A)	<75			
Power	380v 50HZ 8.0KW			
Size L×W×H (mm)	640×675×1620			
Weight (kg)	675			
Re: No additional information noted if there are any changes caused by the technical development.				

Mikhak Pharmed Co.

LAB EQUIPMENT



METEOROLOGICAL
CHROMATOGRAPH GC112A



RCZ-6C3 SIX-CUP MEDICINE
DISSOLUTION TESTER



T860 Titrator



Water purifier



Polarimeter P3



Conductivity meter



ZK-82B Electric Vacuum Drying Oven
(Include Vacuum Pump)



Fume Hood



Single-person 100 Class Super Clean Bench



Rotary Evaporator
RE 100



NDJ-1 Viscosity tester



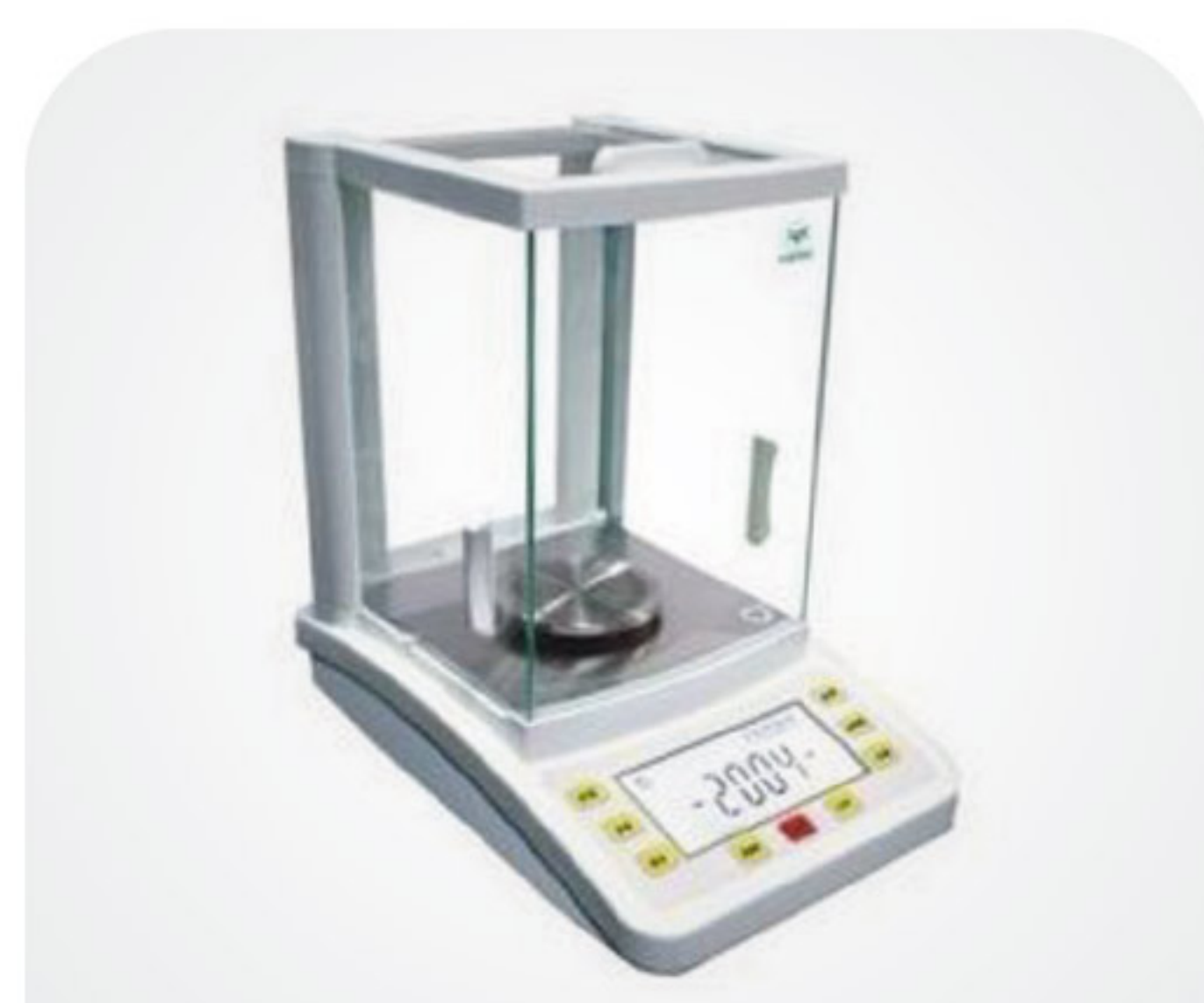
ABBE Digital Refractometer



DHP-9082B Incubator 80L



18L Autoclave



Analytical balance
4 digits (0.001 gm)



LC-4 2000-degree gradient liquid chromatograph



Flammable chemicals storage cabinet



UV-VIS spectrophotometer

Mikhak Pharmed Co.

LAB EQUIPMENT



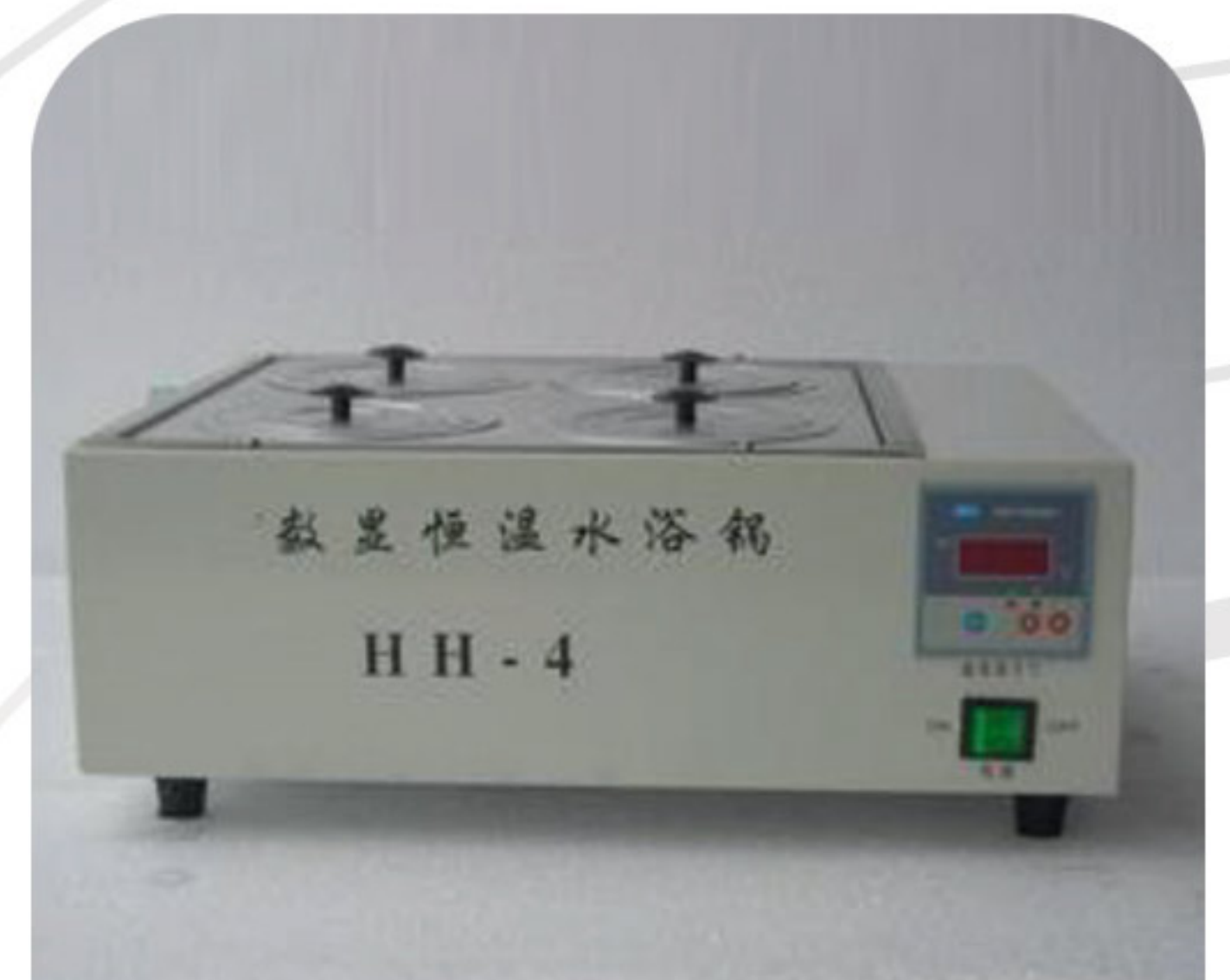
pH meter



Hot plate and
magnetic stirrer



Ultrasound water
cleaner 5 L



Ultrasound water
bath 10 L



Bacterial Colony
Counter BC-50



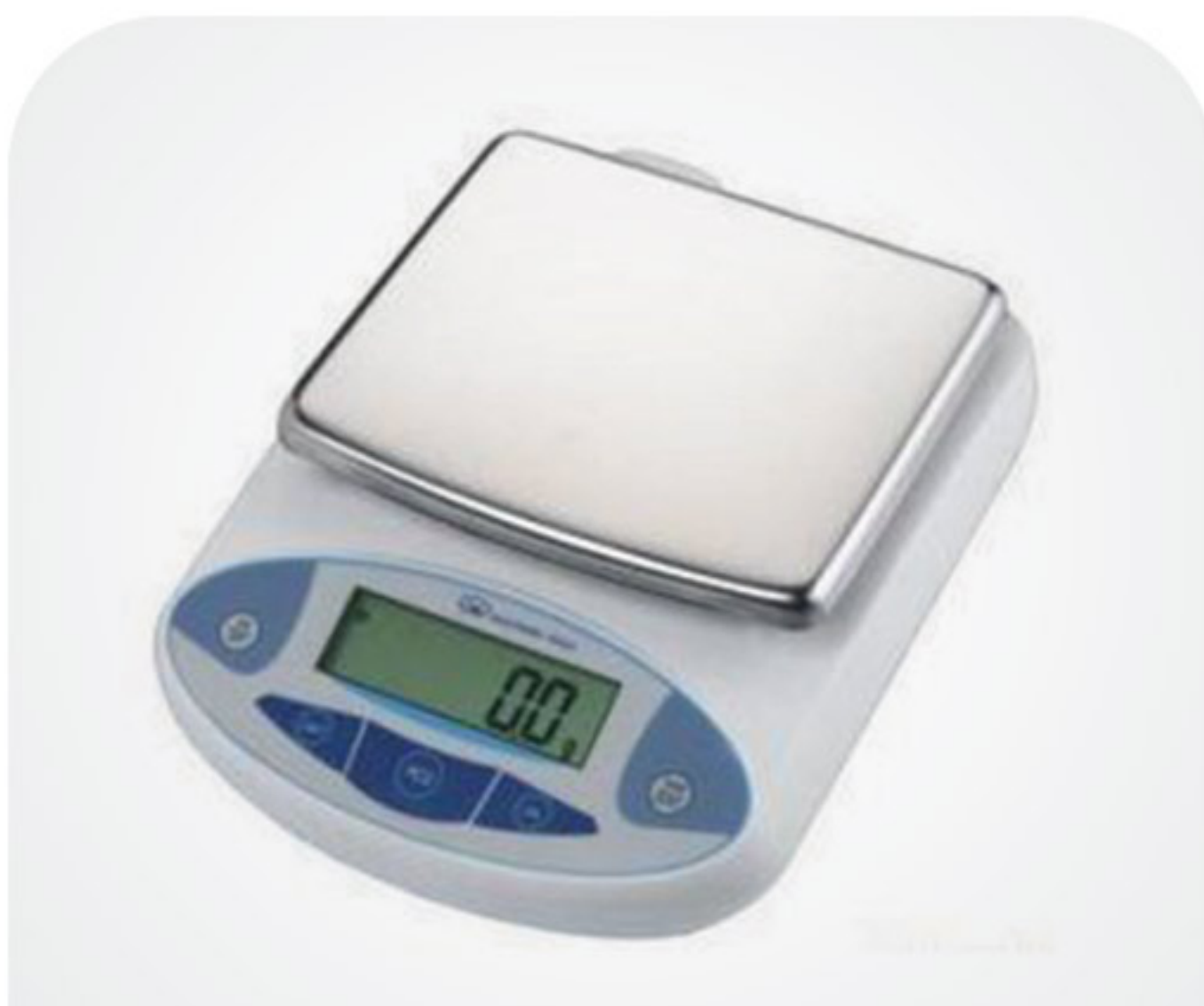
Pipette



Microscope
XS-208AB



Mechanical Stirrer



Balance 5 kg (0.1 g)



Negative pressure
weighing cover
(Single person)



Homogenizer



Balance 300 kg
(0.01 kg)



SF-1 Fast Moisture
Tester



YB-2 Clarity detector



Laboratory Cleaning
Room 200m²



Laboratory Cleaning
Room 200m²

ONLINE PARTICLE COUNTER



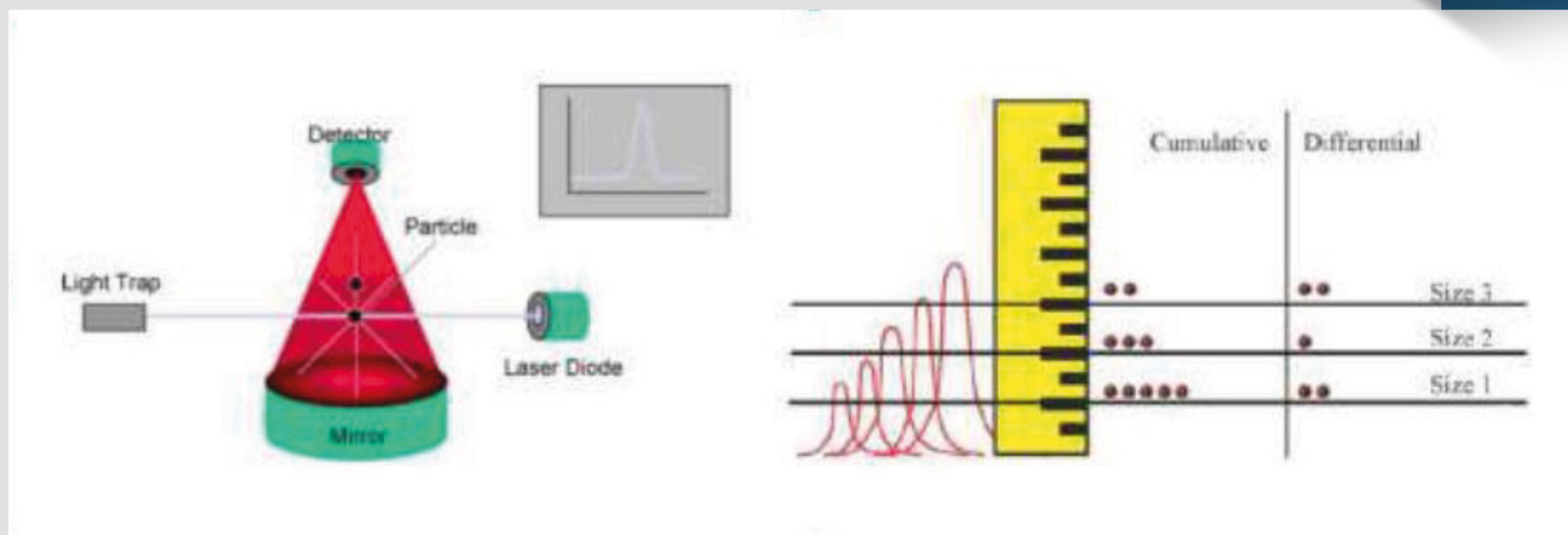
Application

Remote particle counter is used to measure the size of 0.5 μ m and 5 μ m dust particles per unit volume of air of aseptic room in the production area, and can directly detect class of ISO Class 5-9 (EU GMP Grade A-D) clean environments. The instrument is in line with the new version of GMP, ISO14644, FDA, JJF1190-2008 standard. It uses laser diode light source, built-in pump to achieve continuous monitoring. Signal transmission distance up to 1.2km, each size range can be set the maximum number of particles, and will alarm when exceeding limit.



Working principle

The instrument uses the light scattering principle. When the particles pass through the laser beam, it scatters the light. By detecting the light scattered, the quantity and the size of the particles will be determined.



MAIN TECHNICAL PARAMETERS

- Dimensions 275×450×175mm³ (W×D×H)
- Weight 4kg
- Maximum power consumption 40w
- Power supply DC24V
- Size channels 0.5, 5.0 (μ m)
- Sample flow rate 28.3L/min
- Operating environment Temperature: 10°C–40°C, RH: 20%–90% Atmospheric pressure : 86kPa–106kPa
- Zero count ≤ 10 mi



GC112A HIGH PERFORMANCE GAS CHROMATOGRAPH



TECHNICAL PARAMETER

Model	GC112A	
Oven	Temp. Range	RT+5°C~400°C
	Temp. Accuracy	±0.02°C
	Temp. Program	9-phase/ 10 platform
	Max Temp. Heating Rate	60°C/min
Sample Injector	Temp. Range	RT+7°C~420°C
	Column or split injector can be installed.	
	Split mode can directly set the split ratio.	
	Constant pressure mode.	
Detector	A separate injection system is connected.	
	Temp. Range	RT+7°C~420°C
	Hydrogen Flame Ionization Detector (FID)	Logarithmic amplifier
		High voltage switch control
		Baseline signal display
		Ignition coil control
		Detection limit: ≤3*10 ⁻¹² g/s (Sample: n-hexadecane)
	Thermal Conductivity Detector (TCD) (Optional)	Dynamic range: 10 ⁷
		Bridge voltage switch control
		Bridge current setting: 0-220mA
		Sensitivity: 6000mv.ml/mg
		Dynamic range: 10 ⁵
Power Supply	AC220V±10%, 50/60Hz	
Standard Accessory	FID detector, Capillary injection system, Chromatography workstation software.	
Optional Accessory	TCD detector, Chromatographic column, Gas purifier.	
Package Size (W*D*H)	1020*660*740mm	
Gross Weight	82kg	

Features

7-inch LCD display indicates temperature, gas flow and heating curve. Self-test function and automatic fault recognition function. 8 pcs external extension interfaces can connect with control valve. Equipped with a flame ionization detector (FID) which adopts APC control. Multi-core and 32-bit embedded hardware system ensures the reliable operation. Synchronous external trigger function and the external signal (auto sampler, hot analytical instruments, etc.) can start the equipment and workstation software at the same time. With chromatography workstation software to process data.



HIGH PERFORMANCE LIQUID CHROMATOGRAPHY SYSTEM BK3100

Application

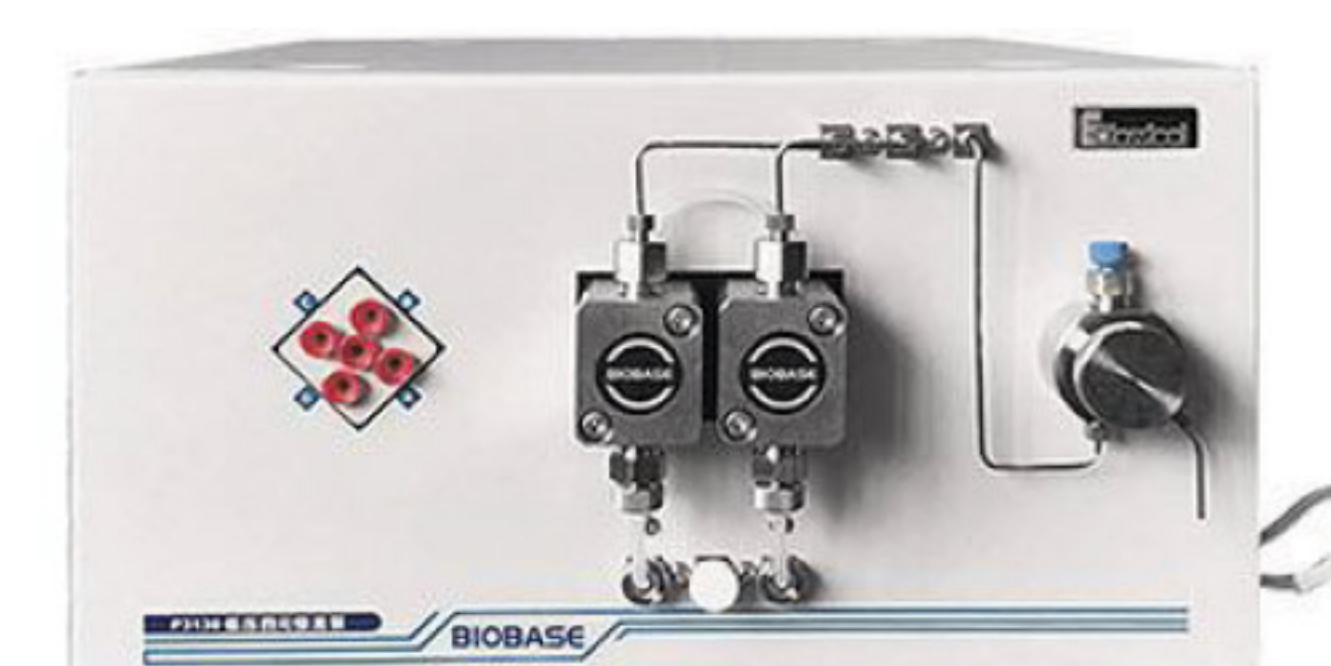
BK3100 System is perfected from classical HPLC systems manufactured by our company, the high quality has widely recognized by customer.

oo It is suitable for users who are looking for the versatility and robustness.

The excellent features ensure the reliability results and improve working efficiency.

Characteristics

- Comprehensive and flexible Isocratic system, binary gradient system, quaternary gradient system is available. Detection capabilities include DAD, UV/Vis, FL, RI and ELSD.
- Stable and reliable Advanced USB chip and optoelectronic isolation technology ensuring stable communication.
- Simple and safe Powerful software makes it simple to control, capture, manage and analyze. Real-time pressure display, maximum and minimum pressure warning ensure the security.



P3100 High-Pressure Constant Flow Pump

- Flow Range: 0.001~10.000 mL/min (step 0.001 mL/min)
- Accuracy: $\leq +0.2\%$
- Precision: $\leq 0.06\%$ RSD
- Pressure Range: 0-45 MPa
- Power: AC 220 V $\pm 10\%$, 50 Hz/80 W
- Dimensions/Weight: 420*300*175 mm (L* W*H*)/12 kg

P3130 Low-Pressure Quaternary Constant Flow Pump

- Flow Range: 0.001~+10.000 mL/min (step 0.001 mL/min)
- Gradient Accuracy: $\leq +1\%$
- Retention Time Repeatability: $\leq 0.1\%$
- Maximum Working Pressure: 63 MPa
- Communication Methods: UDP Network Communication
- Mixed Volume: 750uL
- Power: AC 220 V $\pm 10\%$, 50 Hz/100 W
- Dimensions/Weight: 400*300*180 mm (L* W*H*)/15 kg



Mikhak Pharmed Co.

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