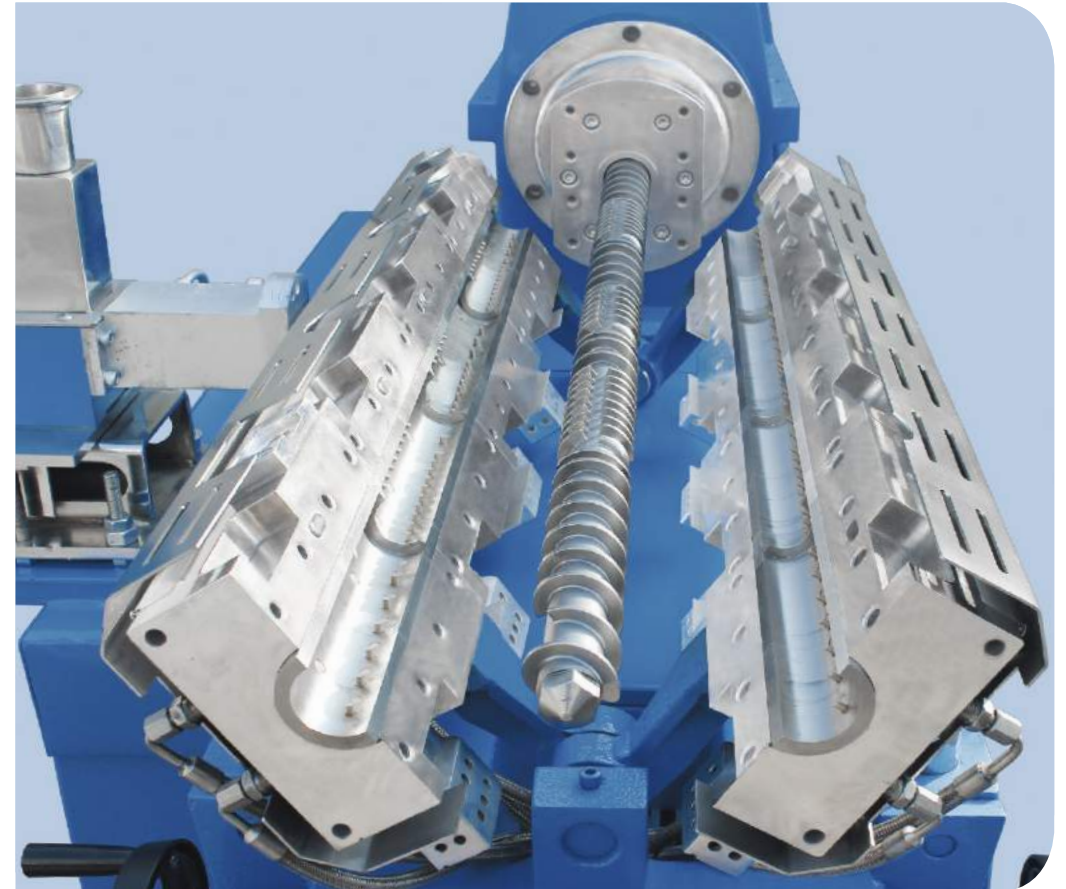


Compounding System



Jiangsu Xinda Tech Limited

江苏新达科技有限公司

XINDA is located in the southern suburb of a scenic city named Jiangyin which is only two-hour drive from Shanghai. Our company is on the Huangtang exit of Xicheng expressway.

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About XINDA

XINDA, founded by Mr.Kong xiangming in 1988, is a prominent enterprise known for its outstanding products in are both domestic and abroad. The main products are compounding systems (Co-Kneader & Twin screw extruder), plastics recycling equipments, color masterbatches and various polyester staple fibers. XINDA products have been sold to over 50 countries worldwide. The first set of reciprocating kneading and extruding system was born in Xinda in 1999. On 16th March, 2000, Prof. Geng Xiaozheng (Beijing Chemical Technology University), Prof. Zhao Anchi (Tsinghua University) and Liu Yingjun (Senior engineer, Institute of Plastics Processing and Application of Light Industry) etc. seven experts came to examine and testify the machine. Then, on 10th July 2000, Liao Zhengpin (Board chairman, China Plastics Process industry Association) also came to authenticate it with some other experts. All of them confirmed that it is a great success to be able to produce reciprocating kneading and extruding system independently. **It ends the history during which no Chinese company could manufacture such a machine independently and had to rely on importing. Additionally, which is more important, it supplies a gap that twin screw extruders only can cut folium materials. The new machine can cut, tropism, incise, fold and elongate the materials variously and thoroughly. Therefore, high-quality dispersive and distributive mixing can be provided.**

新达集团中国第一台往复混炼挤出机的诞生地，是由孔祥明先生于1988年创立，向海内外客户提供优质的产品和完善的服务。我们的主要产品有：往复混炼挤出机、剖分式同向平行双螺杆混炼挤出机、塑料回收再生成套设备、涤纶色母粒和涤纶短纤维。新达产品远销世界 50 多个国家及地区。1999 年我国第一台往复单螺杆混炼挤出机诞生于新达公司。2000 年3月16日北京化工大学耿孝正教授、清华大学赵安赤教授、轻工业塑料研究所刘英俊高级工程师等7名专家亲临现场对该机进行了考察和认证，同年7月10日由中国塑料加工协会廖正副理事长亲自主持鉴定，与会专家一致认为：往复混炼挤出机的研制成功填补了国内空白，结束我国不能独立制造长期依靠进口的历史，弥补了双螺杆挤出机只能对一薄层物料进行剪切的缺陷，对物料进行剪切、取向、切割、折叠、拉伸，达到高效的分散和分布混合。



Company Profile

XINDA believes business is driven by the knowledge, commitment and motivation of every individual employee. A culture of openness and dedication transcends the entire firm for XINDA 500 employees. This encourages XINDA people to proactively network their know-how and develop an extraordinary team spirit. The low staff floatation rate ensures the stable development of XINDA.

新达认为企业发展的动力来自每一个员工的专业水平和敬业的工作态度。开放活跃的公司文化为集团 500 余名企业员工提供了创新的动力。他们乐于学习，敢于实践。每年公司为员工举办各类应知应会的训练班，以及出资培养一些优秀员工进行深造。同时企业的较低的员工浮动率也保证了企业的长期稳定的发展。

Certificate



Advantages of the Xinda Co-Kneader



图

XINDA Co-Kneader

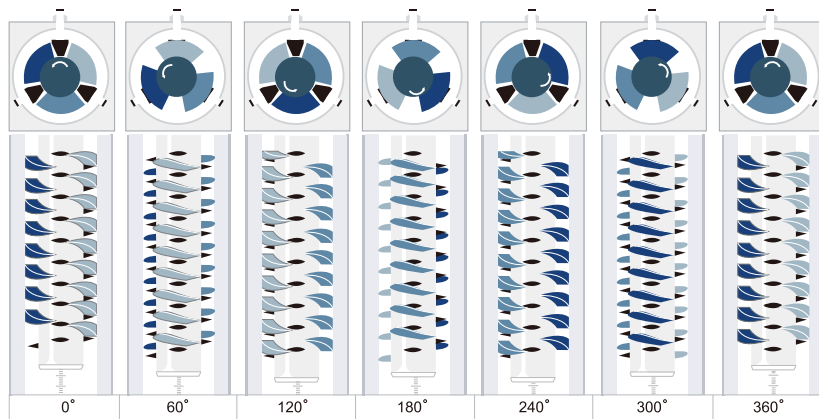
The Co-Kneader, a mild-shear rotating and reciprocating single-screw extruder, is designed for shear and temperature sensitive compounds. The flights on the screw are interrupted and interact with three rows of stationary kneading pins located in the barrel wall. The interaction between the moving flights and the stationary pins provide dispersive and distributive mixing simultaneously.

Axially opened split barrel guarantees ease of cleaning. Those splined, segmented screw elements and pins can be changed easily according to different processing techniques. In addition, some pins are hollow inside, thermocouples can be inserted to get the accurate temperature of the materials inside the barrels, so as to liquid additives injection. Different from other extruders, the kneading process is achieved radially and axially at the same time. All in all, Co-Kneader has outstanding kneading, mixing efficiency and high degree of self-wiping. It is the most suitable for compounding purposes.

往复机原理

该机在结构上与现有螺杆挤出机有很大的不同，其螺杆上的螺纹不是连续的，螺纹每转一圈，中断三次。机筒是剖分式的，可迅速打开，清理物料，内表面按一定规律安排着三排捏合销钉，可以调整和更换，销钉是中空的，以便安装热传感器或注入液体。螺杆由不同螺纹元件组成，积木式的套在芯轴上，芯轴和机筒可以分别加热或冷却。

该机与常规挤出机的不同是：螺杆在连续旋转的同时还按一定规律做轴向往复运动。这使物料在螺杆和机筒中的运动大为复杂，机筒上的固定销钉如同第二根螺杆，它起到了对螺棱的清扫，对物料的混炼和输送，对物料进行分布和分散混合的作用。它非常不同于普通单螺杆和双螺杆挤出机的是：混合作用是在轴向和径向同时发生的。该机还具有彻底的混合、捏合和自洁作用。



SJW Reciprocating kneader consists essentially of the following assemblies: gearbox, oscillating equipment, vertical feeder, side feeder, screw, barrel, temperature control system, lubricant system. The construction characteristic are shown below.

- > The barrel is split for lengthwise opening and is held together by fastening screws. It is easy to clean and maintain. It also can be reorganized for different purposes.
- > Reciprocating design makes sure that the moment is transversely and lengthways, so high-quality dispersive and distributive mixing can be gained.
- > The wear parts such as mixing and kneading screw, liner bushes and kneading pins are designed as element-type, and can be replaced individually.
- > The new machine can cut, tropism, incise, fold and elongate the materials variously and thoroughly. High efficiency of sending and stable time for material to pause.
- > Equipped with various sensors, like pressure sensor on the die, and thermocouples located at each barrel section. In addition, thermocouples are inserted into the barrel through hollow pins, ensuring to get the real temperature of the melting material.
- > Equipped with melt pump or single screw extruder for extruding. The Extruding pressure is even, and the highest pressure can reach 20mpa.
- > Equipped with electric safety system. Keep the machine and workers safe.
- > According to different requirements, different kinds of feeders can be equipped, such as volumetric and gravimetric feeders.

SJW 型往复式混炼挤出机由减速箱、往复机构、垂直加料、侧向加料、螺杆、机筒、溶体泵、机架、油箱等组成。它的结构特点如下：

- > 机筒由多组开孔和闭孔筒体组成，筒体是剖分式的，可快速打开进行清洗物料、检修。根据物料品种、不同的工艺要求，灵活组合成理想的结构形式。
- > 往复机构设计独特，实现了螺杆在作旋转运动过程中，同时进行轴向往复运动。这种往复运动可产生强烈混炼效果。
- > 在螺杆上的每一个螺块，其螺旋线都是不连续的。螺杆每转一周，螺纹中段三次。这与传统单螺杆、双螺杆有很大不同。螺块和内衬套、销钉等易损件是积木式设计。
- > 随着螺杆的旋转运动和轴向往复运动，销钉与每个螺块的相对运动轨迹呈∞曲线，使物料承受连续的剪切、取向、切割、折叠、拉伸等过程，得到良好的混炼效果。而且机筒内表面都被螺棱原件横扫过，没有物流死角，使螺杆具有很好的自洁能力、较高的输送效率和稳定均匀的物料停留时间等优点。
- > 本机配套仪表齐全，机头有压力传感器、熔体温度传感器，筒壁上除有筒壁温控元件外，配有多组深入机筒内的熔体传感器，可真实反映筒体内各区熔体的温度。
- > 本机配置齿轮式熔体输送泵出料或单螺杆挤出机出料，出料压力均匀，最大输送压力达到 20MPa。
- > 本机有机械、电气安全联锁装置，可有效保护机组及人身安全。
- > 主机根据用户要求，可配多种喂料系统，如体积计量、失重计量等。
- > Lower energy input, lower melt temperatures.
- > Extremely homogenous mixing, no shear spikes, equal treatment of polymer matrix.
- > High degree of self-wiping and have no dead spot.
- > Dispersive mixing without destroying delicate fillers.
- > High volumetric loadings of fillers and additives.
- > Efficient blending of liquid components.
- > Broad application for compounding without changing hardware.
- > Axially opened split barrel guarantees ease of cleaning and fast maintenance.
- > Replacement parts, such as screws, barrel lining and pins can be changed individually.

往复机优势

- > 极佳的控温效果，较低的加工温度。
- > 温和的剪切效果，没有温度波动。
- > 很强的自洁能力，无混炼死区。
- > 对精细填料结构不产生破坏。
- > 较高的填料填充率。
- > 有效的液体注射混合。
- > 无需更换硬件，即可进行多种物料的加工。
- > 机筒能自由打开，方便清理和维护。
- > 螺块、内衬套和销钉可以个别更换。



图

Co-Kneader Barrel

Working Principle

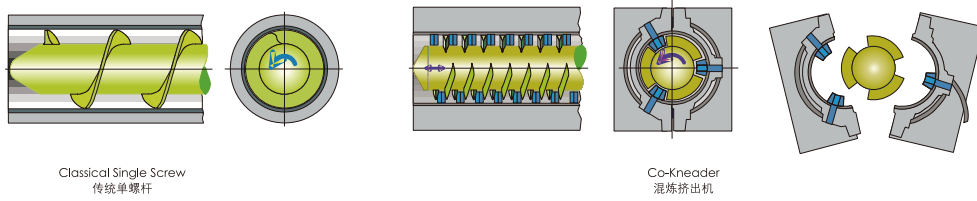


图 Shear Mechanism in the Co-Kneader
混炼挤出机的剪切机理

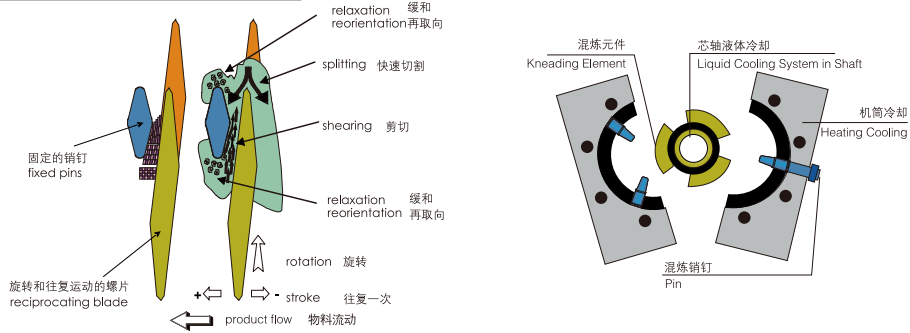


图 Tempering
调温

Barrel: fluid or electrically heated / water cooled
机筒: 液体或电加热 / 水冷却
Screw: fluid heated / cooled
螺杆: 液体加热 / 冷却

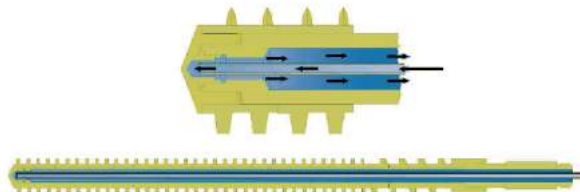
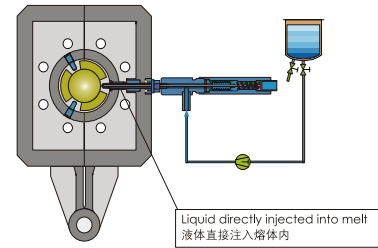


图 Liquid Injection System
液体注射系统



- The liquids are directly injected into the stock at the appropriate time and place
液体在适当的时间和位置直接注入熔体内
- There are no losses due to volatilisation and no deposits on metal surfaces
无挥发带来的损耗, 在金属表面无附着
- The process is extremely accurate, safe and hazard free
工艺过程准确、安全和无害

图 Drilled Pins for Thermocouple Placing
热电偶插入销钉内

Direct immersion in polymer
直接深入聚合物内
Precise stock temperature
准确的熔体温度
Temperature profile of process
加工过程中物料的受热均匀
Process control
工艺控制

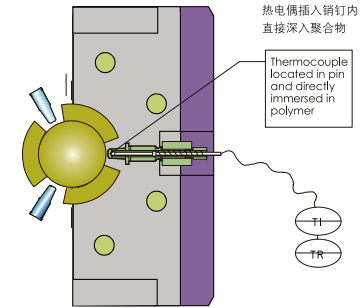
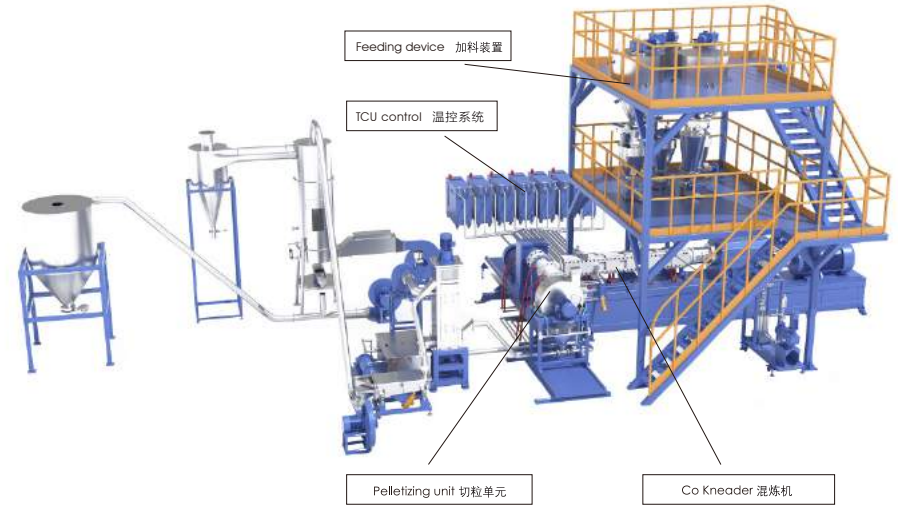
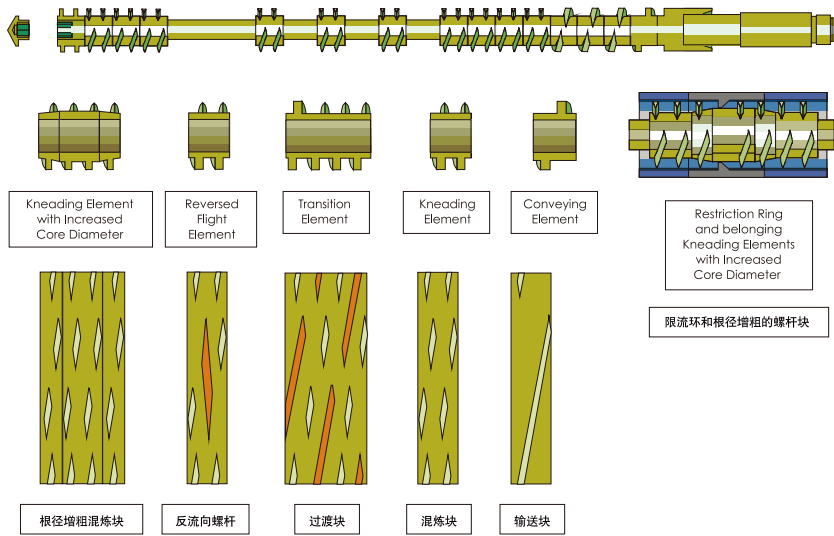
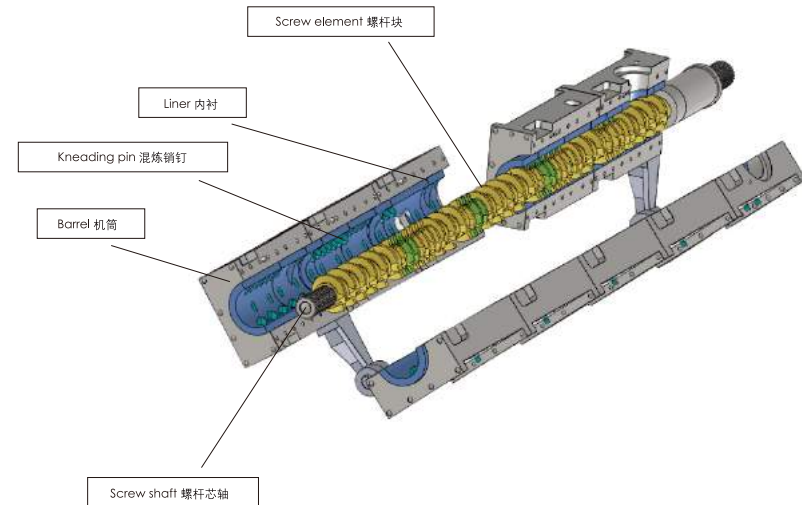
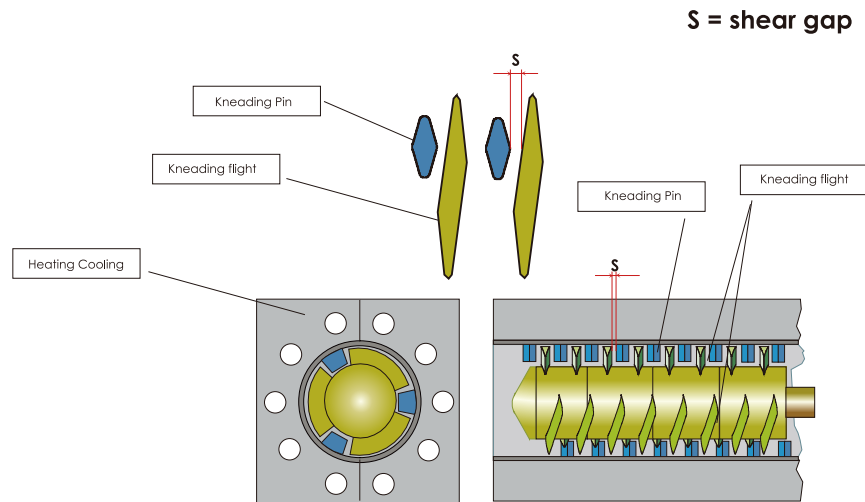


图 Easy adaptation of screw configuration
螺杆结构易于触及和调整

The screw consists of individual elements, that can easily be exchanged or replaced.
积木式螺杆, 螺杆块调整或更换简便快捷



Key processing parts 主要加工元件



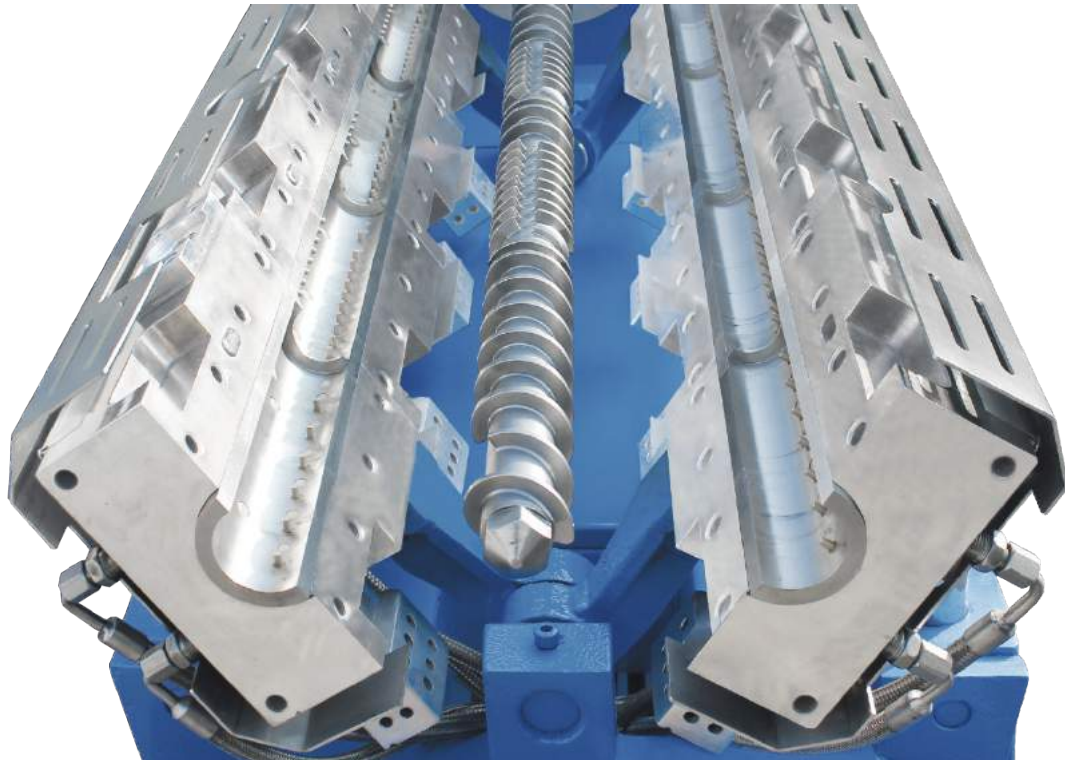
SJW(M) Reciprocating Kneading and Extruding System

Melt pump is installed between the main extruder and the die. The benefits of melt pumps for extrusion operations includes the elimination of surging and other fluctuations, reduction of inconsistent melt temperatures, high pressures at lower product temperatures, compensation for the pumping or mixing capacity of the extruder, possibly reduced start-up times, and reduction of energy required by the extruder.

SJW(M) 型往复式混炼挤出机

熔体泵安装在挤出主机和模头之间，它可以使物料进一步均化，确保挤出过程压力稳定，物料输出均匀，能够降低物料挤出温度，减少能量损耗，提高整个挤出系统的稳定性和产品质量。

图 Split Barrel



Application

- > Color masterbatch / Concentrates
 - > High loading filler masterbatch
 - > Hot-melt adhesive
 - > Engineering plastics compounding
 - > Engineered elastomers
 - > Food
- > 色母粒 / 功能母粒
 - > 高填充母料
 - > 热熔胶
 - > 工程塑料
 - > 弹性体
 - > 食品

Model	SJW-45(M)	SJW-70(M)	SJW-100(M)	SJW-140(M)
型号				
Screw Diameter 螺杆直径 MM	45	70	100	140
Length Diameter Ratio 长径比	15 ~ 25	15 ~ 25	15 ~ 25	15 ~ 25
Main Motor Power 主电机功率 KW	15 ~ 30	55 ~ 75	90 ~ 132	160 ~ 220
Max. Screw Speed 螺杆最大转速 RPM	500	500	500	500
Reference Output 参考产量 KG/HOUR	40 ~ 50	150 ~ 200	300 ~ 400	800 ~ 1000

图 SJW(M) Serial Co-kneader



SJW(C) Reciprocating Kneading and Extruding System

The cascade type of Co-Kneader compounding line is consisted of Co-Kneader main machine and another large size single screw extruder. The stock will fall into the extruding single screw after fully dispersed and distributed in Co-Kneader. It will ensure the materials are processed at a lower temperature with the stable extruding. The whole process is divided into two parts. Co-Kneader is in charge of kneading while the second single screw is focusing on extruding. The cascade system is very helpful to achieve the better final quality.

SJW(C) 双阶型往复式混炼挤出机组

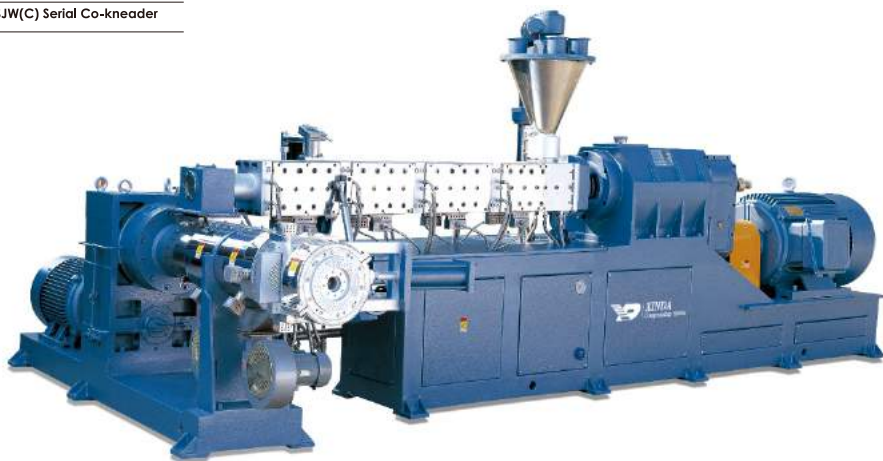
双阶式挤出机由往复式混炼挤出机和大口径单螺杆挤出机组成。物料在经过往复机充分混炼后进入第二阶的单螺杆后加压。在降温的同时，低速平稳的将物料挤出。双阶机组的组合将加工工艺分解成两步，提高了设备的独立加工变量，十分有利于材料的加工。

Application

- > PVC compounding pelletizing
- > Shoe sole compounds
- > Wire & cable compounds (XLPE,HFFR,Semi-conductive compounds,etc)
- > Concentrated color masterbatch
- > Rubber, Final-batch rubber, Master batch, Mixed compound
- > Elastomers
- > Bio-degradable compounds
- > Metal injection molding

- > PVC配混造粒
- > 鞋底发泡料
- > 电缆料（低烟无卤电缆料，交联电缆料，半导屏蔽电缆料等）
- > 浓缩色母料
- > 橡胶、终炼胶、母炼胶、混炼胶
- > 弹性体
- > 降解塑料
- > 粉末冶金

图 SJW(C) Serial Co-kneader



Model 型号	SJW-45(C)	SJW-70(C)	SJW-100(C)	SJW-140(C)	SJW-200(C)	WKS-120(C)
Screw Diameter 螺杆直径 MM	45	70	100	140	200	120
Length Diameter Ratio 长径比	20 ~ 25	20 ~ 25	20 ~ 25	20 ~ 25	20 ~ 25	9~15
Main Motor Power 主电机功率 KW	15 ~ 30	55 ~ 75	90 ~ 132	160 ~ 300	350 ~ 550	250~280
Second-stage Screw Diameter 第二阶螺杆直径 MM	60	120	150	200	280	220
Second-stage 第二阶长径比 L/D	7 ~ 8	7 ~ 8	7 ~ 8	7 ~ 8	7 ~ 8	7~8
Second-stage Power 第二阶功率 KW	15 ~ 22	37 ~ 45	55 ~ 75	90 ~ 110	132 ~ 160	90~132
Max. Screw Speed 螺杆最大转速 RPM	500	500	500	500	500	600
Reference Output 参考产量 KG/HOUR	40 ~ 70	150 ~ 250	300 ~ 500	800 ~ 1200	1900 ~ 3600	1800~2500

SJW(T) Reciprocating Kneading and Extruding System

With the special working principle and shorter L/D ratio of XINDA Co-Kneader enjoys wide application in the field of thermoset plastics compounds and powder coating. Thermocouples can be mounted in drilled kneading pins at various different points along the process section to get the direct contact with the melt. The combination of a liquid heating and cooling system and an extremely precise monitoring of the melt temperature makes Co-Kneader a very successful solution in thermoset plastics compounds and powder coating & toner.

SJW(T) 型往复式混炼挤出机

往复式独特的工作原理和精确温控特点使得这种机型在热固性塑料和粉末涂料领域中得到广泛的应用。热电偶可以在不同位置的空心销钉中插入，测量到精确的熔体温度。完善的冷却加热系统和精确的测温方式保证了新达往复式在温度敏感性材料加工中的独特地位。

图 SJW(T) Serial Co-kneader



Application

- > Thermoset plastics
 - > Powder coating and toner
 - > Bakelite molding compounds
 - > Polymer: epoxy, acrylic, urethane, polyester, etc.
-
- > 热固性材料
 - > 粉末涂料与磁粉
 - > 酚醛模塑料
 - > 聚合物：环氧树脂，丙烯酸树脂，氨基树脂，聚酯等



图1 Kneading Elements

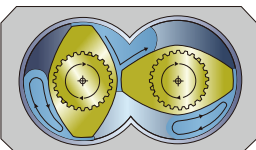
图2 Side Feeder

Model 型号	SJW-45(T)	SJW-70(T)	SJW-100(T)	SJW-140(T)	SJW-200(T)
Screw Diameter 螺杆直径 MM	45	70	100	140	200
Length Diameter Ratio 长径比 L/D	7 ~ 15	7 ~ 15	7 ~ 15	7 ~ 15	7 ~ 15
Main Motor Power 主电机功率 KW	15 ~ 30	55 ~ 75	90 ~ 132	160 ~ 220	350 ~ 450
Max. Screw Speed 螺杆最大转速 RPM	500	500	500	500	500
Reference Output 参考产量 KG/HOUR	40 ~ 100	100 ~ 400	300 ~ 600	500 ~ 1000	1000 ~ 2000

SJW Reciprocating Kneading and Extruding System							
Specifications of Reciprocating Extruders		SJW-45	SJW-70	SJW-100	SJW-140	SJW-200	
Purpose	Raw Materials	Capacity KG/H					
Filling 填充料	PE, PP, EVA+CaCO ₃ (≥85%), talcum powder, Titanium pigment (≥80%)	20—60	100-300	200-500	400—800	1900-3600	
	ABS, PC, PS+Al(OH) ₃ , Mg(OH) ₂ , AL ₂ O ₃ (≥70%)	20—50	100-200	200-400	400—700	1800-3300	
	PP, PA, ABS+Fe powder, Magnetic powder, Ceramic powder (≥90%)	20—70	100-350	200-500	400—800	1900-3600	
	PE, PP, PS, PA, EVA+SBS, EPDM, NBR, Silastic etc.	20—50	150-250	200-400	400—700	1800-3300	
Blending 共混母粒	PE, PA, PC+ABS; TPU+ABS; PBT+PET; PP+PE etc.	20—50	150-200	100-300	400—700	1800-3300	
	PE, PA, ABS, PS, PVC, PET, PP+Pigment and Additives	20—50	80-300	100-400	300—600	1700-3000	
Masterbatch/ 色母粒	Degradable Masterbatch: PE, PP, PS+Amylum	20—50	100-200	200-500	400—800	1900-3600	
	Flame retardant Masterbatch: PE, PP, PA, ABS, PBT, PET	20—50	100-250	200-600	400—800	1900-3600	
	Flame retardant and Additives						
	Carbon black Masterbatch: PE, PP, PET, ABS, EVA+Carbon (30-50%)	20—40	80-200	100-250	400—700	1800-3300	
	Cooling pellet, Anti-fog pellet, Heat-preserving pellet, Anti-bacterial pellet etc.	20—60	100-300	250-500	400—800	1900-3600	
	EVA thermo-soluble glue, Polyurethane, Lightening pellet, Fluorplastic, UV-resistant plastic, Antistatic material, Conductive material etc.	20—60	100-300	100-500	400—800	1900-3600	
	Low-smoking and non-halogen flame-retardant compounds	15—30	100-300	150-450	400—800	1900-3600	
	Toughening & Reinforcing 增强增韧	PP, ABS, PPS, PA6, PA66, PC, PET, POM+Choppable glass fibre, Crystal whisker or Carbon fiber (20-50%)	20—50	100-300	200-500	400—800	1900-3600
		Wire&Cable Compounds 电线电缆料	HDPE, LDPE, LLDPE, MDPE, Jacketed compounds, insulated material, Radiating cross-linking compounds; Flame-retardant wire&cable compounds; PP wire&cable compounds.	30—80	150-250	200-550	400—800
Conductive/semi-conductive compounds, shading compounds	20—50		80-200	100-300	300—700	1800-3300	
Thermosets 热固性材料	Phenolic aldehyde+Glass-fibre, Urea-formaldehyde compounds, Epoxide powder coating, Potting material, etc. various of Thermosets with serial production.		20—50	100-150	200-300	500—800	2200-4300
	Heat-Sensitive Material (Cascade type) 热敏性材料	PVC wire&cable compounds, Undersole compounds.	40—80	200-300	500-650	800—1500	2500-4500
Flexible/Rigid-PVC compounds and Semirigid compounds etc.		40—80	150-350	200-700	600—1500	2200-4500	
Non-toxic transparent PVC-bottle material, Perfusion-tube material, Blood transfusion-haustrom material		30—60	100-300	200-500	600—1000	2200-3800	
Low-smoking&non-halogen flame-retardant wire&cable compounds		20—50	100-150	200-350	400—800	1900-3600	
PE cross-linking/peroxide crosslinking compounds							
Dynamic state cross-linking thermoplastic-elastomer compounds, Radiating cross-linking wire&cable compounds.		20—50	100-300	200-400	400—800	1900-3600	

PSHJ & SHJ Co-rotating Twin Screw Extruder							
Specifications of Twin Screw Extruder		PSHJ-20	PSHJ-35	PSHJ-50	PSHJ-65	PSHJ-75	SHJ-95
Purpose	Raw Materials	Capacity KG/H					
Filling & Modification 填充改性	PE, PP, PS, EVA+CaCO ₃ , Talcum powder, TiO ₂	2-5	30-60	60-150	140-250	250-400	400-800
	PP, PA6, PA66, ABS+ Ferrous Powder, Magnetic Powder, Ceramic powder	2-6	40-80	90-160	180-280	260-420	600-900
Blending Modification 共混改性	PP, PA, PE+EPDM; PE, PP, PS+SBS; PP+NBR; EVA+ Silastic; TPR compounds	2-5	30-60	80-160	160-240	280-400	500-800
	PP+PE; PBT+PET; PA, PA, PC, CPE, TPU+ABS	2-4	30-50	60-140	140-220	240-360	400-700
Masterbatch 色母粒	PE, PP, PS, ABS, EVA, PET+Pigment and additives	2-5	30-60	60-160	140-240	240-400	400-800
Functional Masterbatch 功能母粒	CB masterbatch; PE, PP, PS, ABS, EVA...+ carbon	2-4	20-40	60-100	120-200	220-300	400-600
	Flame retardant master batch: PE, ABS, PA, PBT...+ flame retardant & additives	2-5	40-60	80-160	160-260	240-400	550-950
	Degradative masterbatch; PE, PS...+ starch; PP+CaCO ₃ , Talcum powder	2-4	30-60	80-140	140-200	240-360	600-800
	Safeguard function masterbatch; Masterbatch of heat insulator...	1-4	25-40	60-90	120-180	160-260	400-700
Glass fiber (carbon fiber, wood fiber) Reinforcement 增强增韧	PE, ABS, AS, PBT, PET, PA, PC, PPS+Carbon fiber	2-4	30-60	60-140	140-200	220-300	500-700
	PP, ABS, AS, PBT, PET, PA, PC, PPS, PPO...+long glass fiber or short glass fiber.	1-4	25-45	80-140	180-260	280-360	550-750
Various cable material 各种电缆料	HDPE, LDPE, LLDPE, MDPE insulating bush, cable shield.	2-4	30-60	90-140	160-240	250-350	450-650
	PE SI-XLPE cable compounds, PE chemical crosslink cable compounds, PE radiation crosslinking cable compounds, H-cable compounds.	1-4	20-50	80-120	140-200	220-300	400-600
	PVC wire & cable compounds.	2-6	40-80	120-180	200-300	300-400	500-700
	HFFR, Polyolefine cable compounds.	2-5	40-60	80-120	140-200	220-300	400-600
Powder coating 粉末涂料	Polyester coating, Polyurethane coating, epoxy resin coating, Propyl coating, Pcrlyic coating.	2-10	60-100	150-250	300-400	400-600	800-1200
Thermosets 热固性材料	Phenolic aldehyde+Glass-fibre, Urea-formaldehyde, compounds Epoxide powder coating, Potting material, etc. Various of Thermosets with serial production.	2-6	40-80	100-200	200-320	320-500	500-1000
	Heat-Sensitive Material (Cascade type) 热敏性材料	PVC wire&cable compounds, Undersole compounds.	2-6	40-80	120-180	200-300	300-400
Flexible/Rigid-PVC compounds and Semirigid compounds etc.		2-6	40-70	100-160	180-280	250-380	400-650
Non-toxic transparent PVC-bottle material, Perfusion-tube material, Blood transfusion-haustrom material		2-6	40-70	100-160	180-280	250-380	400-650
Low-smoking&non-halogen flame-retardant wire&cable compounds.		2-5	30-60	90-140	160-240	250-350	450-650
PE cross-linking/peroxide crosslinking compounds							
Dynamic state cross-linking thermoplastic-elastomer compounds, Radiating cross-linking wire&cable compounds.		2-6	40-70	100-160	180-280	250-380	400-650

SHJ Co-rotating Twin Screw Extruder



The XINDA SHJ twin screw series are built on a modular system. The major advantage of this modular design is the versatile configurations. Processing tasks can be optimally accomplished with only a few barrel and screw variations.

SHJ 型同向平行双螺杆混炼挤出机

SHJ 型同向平行双螺杆挤出机采用积木式原理设计制造，根据加工物料体系与工艺配方要求其长径比与机筒结构，螺杆排列，换网方式，排气孔数量及位置，喂料方式，电气控制系统等均可进行合理优化和配置，实现多功能，多用途来适应加工高分子材料。



图 Twin Screws



图 SHJ-65 Twin Screw Extruder

Model 型号	SHJ-20	SHJ-35	SHJ-50	SHJ-65	SHJ-75	SHJ-95
Screw Diameter 螺杆直径 MM	φ21.7	φ35.6	φ50.5	φ62.4	φ71	φ91
Central Distance 螺杆中心距	18	30	42	52	60	78
Length Diameter Ratio 长径比 L/D	28-52	28-52	28-52	28-52	28-52	28-52
Main Motor Power 主电机功率 KW	4-5.5	22-45	75-110	110-185	160-280	180-355
Max. Screw Speed 螺杆最大转速 RPM	600	600	600	600	600	600
Output Torque per Shaft 单轴扭矩 N.m	32-43	175-358	597-875	875-1472	1273-2228	1432-2825
Reference Output 参考产量 KG/HOUR	5-20	20-80	80-200	150-350	300-600	700-1500

Application

- > Masterbatch
- > Plastics modification
- > Fiber glass reinforcement
- > Cable compounds
- > Alloy plastics
- > Powder coating and toners, etc
- > 母粒
- > 塑料改性
- > 玻纤增强
- > 电缆料
- > 塑料合金
- > 粉末涂料等



图 Screen Changer

Model 型号	C-SHJ-35	C-SHJ-50	C-SHJ-65	C-SHJ-75	C-SHJ-95
Screw Diameter 螺杆直径 MM	φ35.6	φ50.5	φ62.4	φ71	φ91
Central Distance 螺杆中心距	30	42	52	60	78
Length Diameter Ratio 长径比 L/D	28-52	28-52	28-52	28-52	28-52
Main Motor Power 主电机功率 KW	22-45	75-132	110-250	160-355	315-650
Max. Screw Speed 螺杆最大转速 RPM	800	800	800	800	800
Output Torque per Shaft 单轴扭矩 N.m	131-269	448-788	657-1492	955-2119	1880-3880
Reference Output 参考产量 KG/HOUR	150-300	200-500	400-800	500-1000	800-2000

PSHJ Clamshell Barrel Co-rotating Twin Screw Extruder

The barrel can be opened in minutes. This makes product changeover, maintenance and research fast and easy. Both screws and barrels are designed using the building block principle. The screw configuration, barrel setup, feeding and venting, screen changing, way of pelletizing and process requirements, in consideration of the machine's versatility in other general applications.

PSHJ 型同向平行双螺杆混炼挤出机

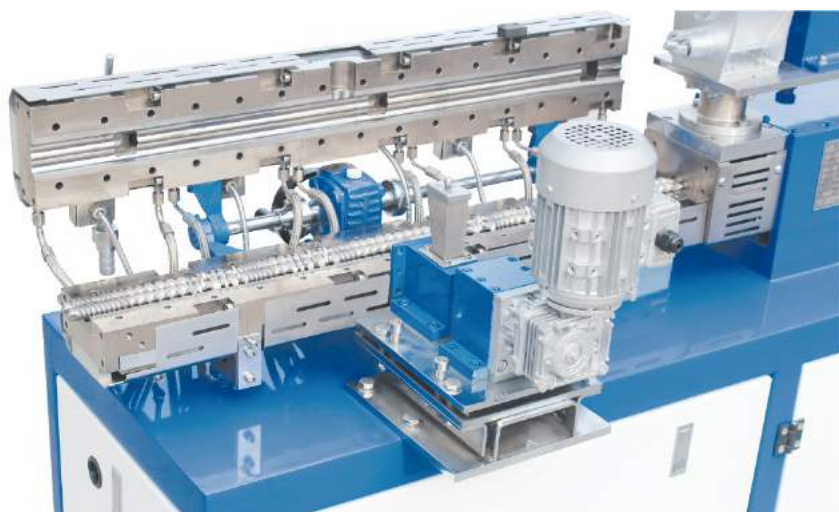
剖分式同向平行双螺杆机筒可以在数分钟内打开。这种设计使产品的转换，设备的维护以及新产品研发变得非常便捷。



图1 Kneading Screw

图2 Die Head

图3 PSHJ-35 Twin Screw Extruder



Application

- > Various plastic inorganic filler, polymer blending (plastic alloy), plastic coloring, etc.
- > Various engineering plastic reinforcement of glass fiber, flame-retardant pellets.
- > Various antibacterial, insulated, toughening materials for specific uses.
- > Light/biology degradable film materials, amyllum degradable plastics and multi-functional anti-fog film materials, etc.
- > Specific material for automobiles and household appliance and cable materials, etc.
- > Thermoplastic elastomers, such as TPR, TPE, and SBS, etc.
- > Regenerate pellets for PVC airproof pieces, thermo-soluble glue, etc.

- > 各种塑料无机填充，橡塑共混，塑料合金，塑料着色等
- > 各种工程塑料的玻纤增强，阻燃造粒等
- > 各种抗菌，耐候，绝缘，增韧等特殊用途的专用母粒
- > 光 / 生物降解膜料，全淀粉降解塑料，多功能防雾滴膜料等
- > 汽车专用料，家电专用料，通讯，动力电缆料等
- > TPR, TPE, SBS 等热塑性弹性体
- > PVC 密封条，热溶胶等改性造粒



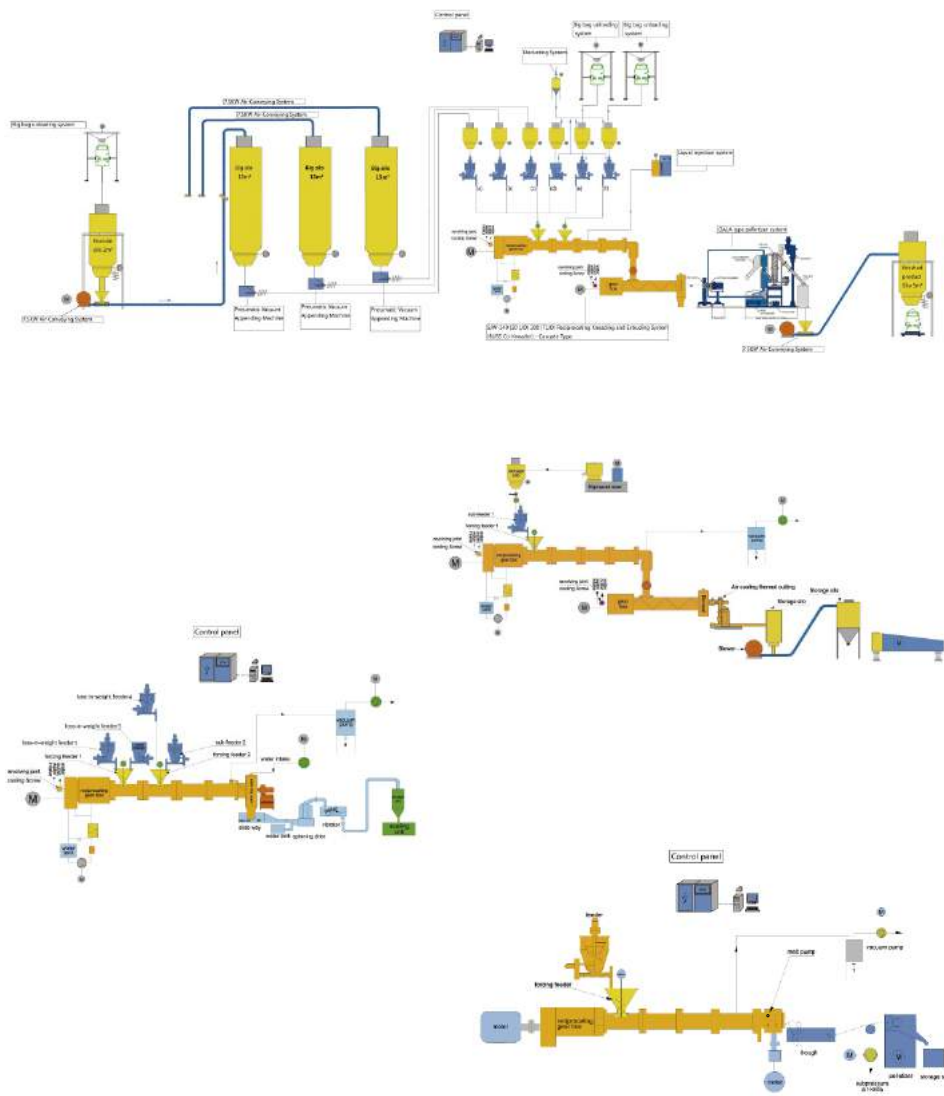
图4 Screw Elements

Model 型号	PSHJ-20	PSHJ-35	PSHJ-50	PSHJ-65	PSHJ-P75	PSHJ-127
Screw Diameter 螺杆直径 MM	φ21.7	φ35.6	φ50.5	φ62.4	φ71	φ126
Central Distance 螺杆中心距	18	30	42	52	60	102
Length Diameter Ratio 长径比 L/D	28~52	28~52	28~52	28~52	28~52	13~18
Main Motor Power 主电机功率 KW	4~5.5	22~45	75~110	110~185	160~280	90~160
Max. Screw Speed 螺杆最大转速 RPM	600	600	600	600	600	500
Output Torque per Shaft 单轴扭矩 N.m	32~43	175~358	597~875	875~1472	1273~2228	850~1528
Reference Output 参考产量 KG/HOUR	5~20	20~80	80~200	150~350	300~600	800~1500

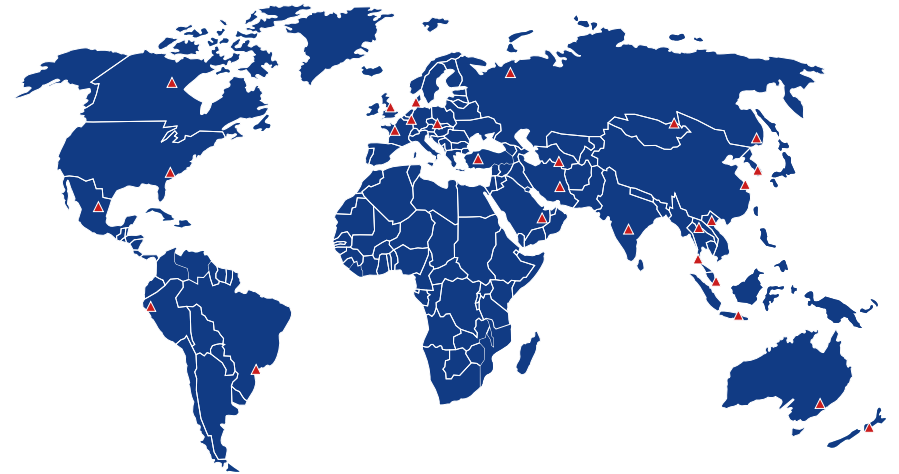
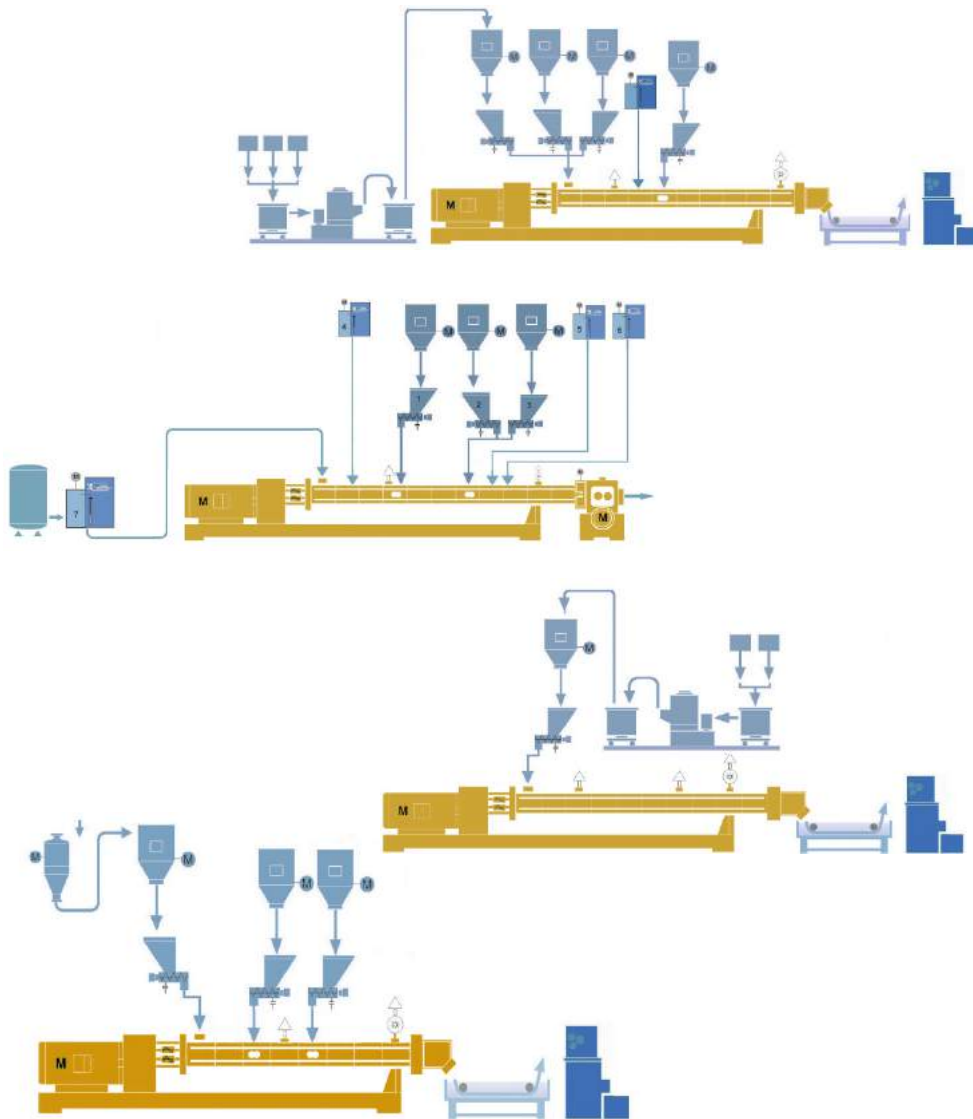
Model 型号	C-PSHJ-35	C-PSHJ-50	C-PSHJ-65	C-PSHJ-75	C-PSHJ-127
Screw Diameter 螺杆直径 MM	φ35.6	φ50.5	φ62.4	φ71	φ126
Central Distance 螺杆中心距	30	42	52	60	102
Length Diameter Ratio 长径比 L/D	28~52	28~52	28~52	28~52	13~18
Main Motor Power 主电机功率 KW	22~45	75~132	110~250	160~355	90~160
Max. Screw Speed 螺杆最大转速 RPM	800	800	800	800	500
Output Torque per Shaft 单轴扭矩 N.m	131~269	448~788	657~1492	955~2119	850~1528
Reference Output 参考产量 KG/HOUR	150~300	200~500	400~800	500~1000	800~1500



Technological process of compounding line



Technological process of compounding line

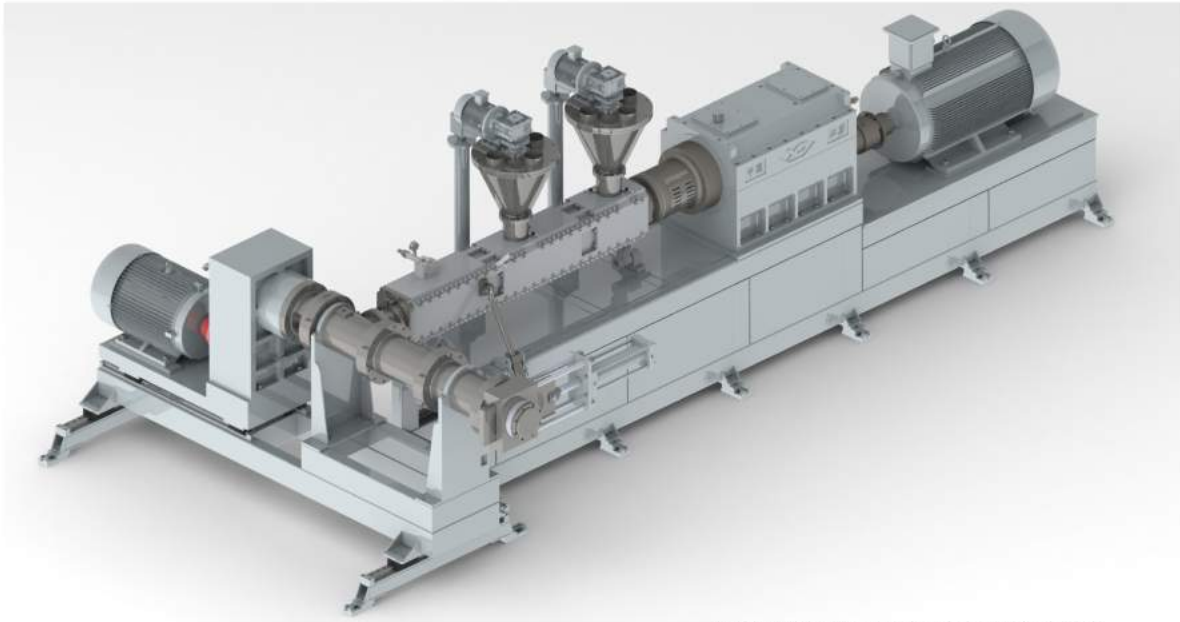


Main Customer



Xinda Worldwide





SKW 系列往复式混炼挤出机
SKW Series Compounding System
新型四螺片混炼技术
Four-flight Compounding Technology



Jiangsu Xinda Science & Technology Co., Ltd
江苏新达科技有限公司

XINDA is located in the southern suburb of a scenic city named Jiangyin which is only two-hour drive from Shanghai. Our company is on the Huanglang exit of Xicheng expressway.

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SKW 四螺片往复机组

基于原有三螺片往复机组，新达推出新型四螺片往复式混炼挤出机组，由原有390°圆周三片混炼螺片设计成四片混炼螺片，物料在长度不变的情况下，剪切次数增加，并且减少了单次剪切所产生的摩擦热，利用往复机独特的工作原理，物料在旋转的同时前后往复运动，每旋转一周，前后往复一次，螺杆芯轴上根据不同物料及挥发范围组合的混炼螺片与固定于内衬套内的混炼筒相对运动，使各种配方组分在螺片和筒壁之间受到比其它设备更多的剪切和分散混合。往复运动的螺杆使产品受到周而复始的剪切、取向、切割、折叠、拉伸。在轴向同时也得到高效的分布混合。

Four-flight Compounding System

Based on 3-flight compounding design, XINDA develops latest new technology with 4 flights. The XINDA SKW Kneader each spiral is broken by four gaps per revolution to locate the kneading flights. Four rows of kneading pins, which are individually inserted in the barrel per 90 degree, are intermeshed with these flights. With the same L/D ratio, it achieves more mixing, but less friction heat. The reciprocating wobble-box synchronizes the shaft rotation and oscillation so that each revolution of the screw is accompanied by one full stroke forward and backwards. This ensures optimal distributive and dispersive mixing with minimal energy consumption.

往复式混炼机技术的优点

由于独特的工作原理，往复混炼机系统具有如下优点，这些优点对塑胶配混加工是至关重要的

- > 均匀的剪切效应
- > 较低的产品温度
- > 精确的速度控制
- > 轴向前后同时混合
- > 产品停留时间短
- > 高填充的加工能力
- > 液体组分的有效注入
- > 优秀的自洁性能
- > 产品更换时间短设备使用率高
- > 混炼和造粒工艺可单独优化
- > Lower energy input, lower melt temperatures
- > Extremely homogeneous mixing, no shear spikes, equal treatment of polymer matrix
- > High degree of self-wiping and have no dead spot
- > Dispersive mixing without destroying delicate fillers
- > High volumetric loadings of fillers and additives
- > Efficient blending of liquid components
- > Broad application for compounding without changing hardware
- > Axially opened split barrel guarantees ease of cleaning and fast maintenance
- > Replacement parts, such as screws, barrel lining and pins can be changed individually

新达SKW四螺片往复机组 转速更快、产量更高、混炼更好、能耗更低
XINDA SKW Co-kneader: Higher speed, Bigger capacity, Better mixing, Lower energy consumption



图1 四螺片混炼系统
 Four-flight kneading elements
 图2 高填充量出料的混炼系统
 High capacity compounding Co-kneader

典型应用

- 电缆料:
- > 低烟无卤阻燃电缆料 (HFFR)
 - > 半导电屏蔽电缆料 (交联及非交联型)
 - > 硅橡胶交联电缆料
 - > 黑色护套电缆料

- 母粒:
- > 高浓度色母粒
 - > 炭黑母粒、钛白母粒
 - > 无机粉体高填充母粒
 - > PET/PP/PA 纤维母粒
 - > MIM 粉末冶金喂料

Application

Cable Compounds:

- > HFFR
- > XLPE
- > Semi-conductive insulating
- > Black sheathing

Masterbatches:

- > High concentrated color MB
- > Black and white MB
- > High loaded filler MB
- > PET/PP/PA fiber MB
- > Metal injection molding

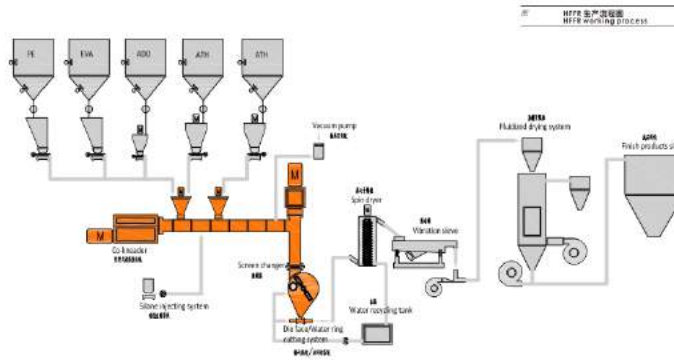


图 HFFR 生产流程图
 HFFR working process



图1 SJWB/SKW B&B
 Combination of SJWB/SKW
 图2 偏心轴驱动
 Eccentric cutting

SKW Serial Four-flight Co-kneader

Model 型号	SKW-85	SKW-105	SKW-125
Co-kneader Screw Diameter 螺杆直径 MM	85	105	125
L/D Ratio 长径比	15-22	15-22	15-22
Max. Screw Speed 螺杆最大转速 RPM	600	600	600
Main Motor Power 主电机功率 KW	110-160	200-280	300-450
Second-stage Screw Diameter 第二级螺杆直径 MM	150	180	220
Second-stage Screw L/D Ratio 第二级长径比	7	7	7
Max. Screw Speed 螺杆最大转速 RPM	60	60	60
Second-stage Motor Power 第二级电机功率 KW	55	75	110

Reference Output 参考产量 KG/HOUR	SKW-85	SKW-105	SKW-125
HFFR Cable Compounds 低烟无卤电缆料	200-400	500-800	800-1500
Black sheathing 黑色护套料	200-400	500-800	800-1500
Semi-conductive Insulating Compounds 半导电屏蔽电缆料	200-400	500-800	800-1500
Stone XLPE Cable Compounds 硅橡胶电缆料	200-400	500-800	800-1500
High Concentrated Color MB 高浓度色母粒	150-300	400-700	700-1200
Carbon Black MB 炭黑母粒	150-300	400-700	700-1200
High Loaded Filler MB 高填充母粒	200-400	600-1000	900-1600
Fiber MB 纤维母粒	150-300	400-700	700-1200