



金亿螺杆
JINYI SCREW

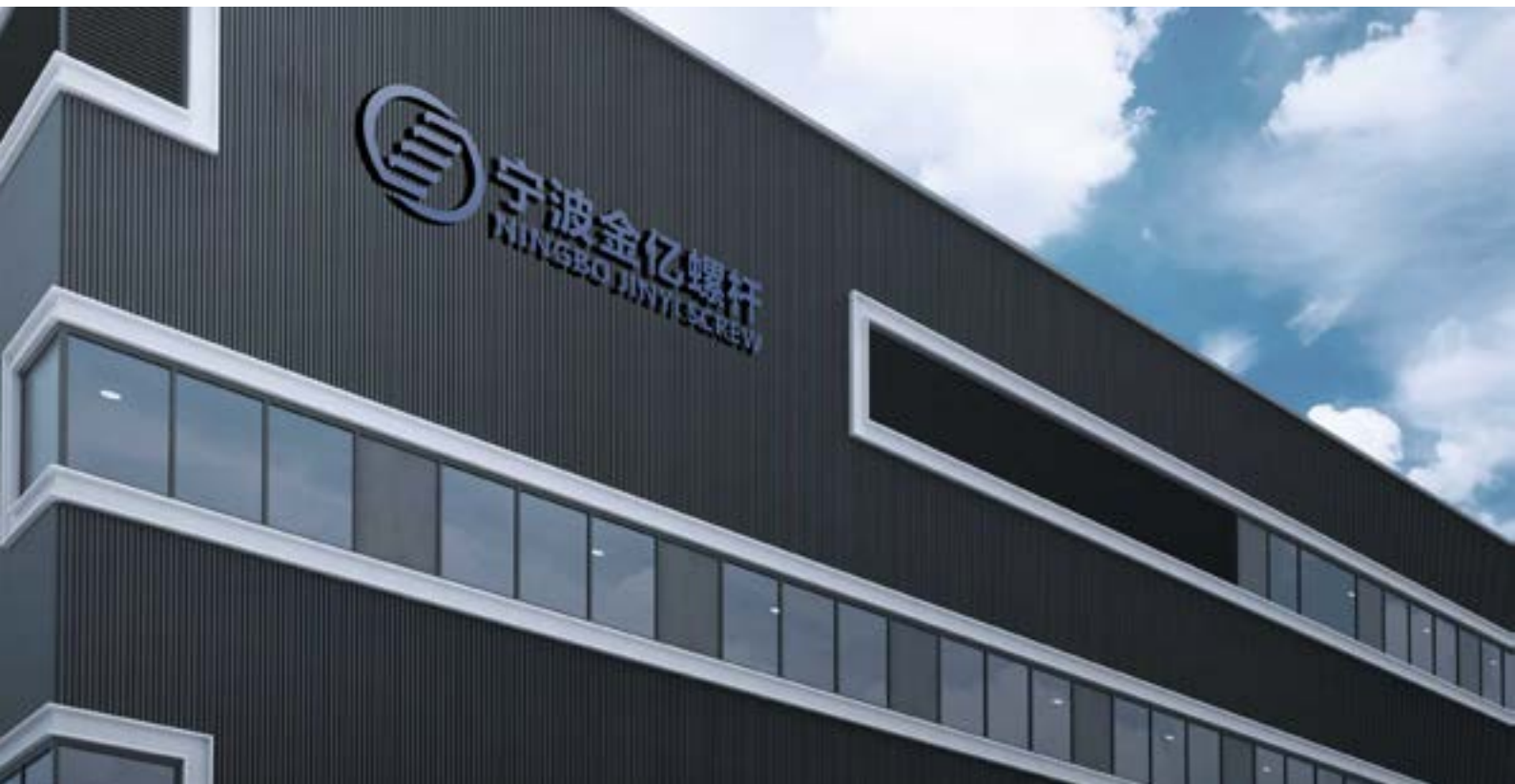


ABOUT JINYI SCREW

With over 25 years development, Ningbo Jinyi Precision Machinery Co.,Ltd is now one of the larger companies specialized in manufacturing Screws, Barrels & Tie Bars. With our 300 employees and 5 factories based in Ningbo & Zhoushan, JINYI commits to designing and supplying precision parts for the plastics, rubber, food and medical industries.

Focusing on Precise Machining, JINYI has an extremely large database of prints, drawings, and factory OEM specifications. While paying attention to skilled personnel training, we also imported series of advanced equipment, such as CNC Machining Center, CNC Turning Machine, Inner Hole Grinding Machine, 13 Meters Deep Hole Boring Machine, NC drilling machine, Nitriding Furnace Computer Control System, Centrifugal Casting Furnace, PTA Bimetallic Spraying Equipment, gear milling machine and so on .

At the same time, JINYI continues to improve Quality Control System through precise inspection during every step of the production. With our excellent quality, we have already established long term cooperation with many well-known companies both in China and overseas. We are one of the first companies to implement the ISO9001 & SGS Certification in our industry.



DEVELOPMENT HISTORY

1993

The company "Lichao" was established with the rise of screw industry in Chin.

1995

Took the lead in introducing CNC machining in the industry.

1997

We firstly started to manufacture alloy bushing barrel, which greatly improved the service life of barrel.

2000

The annual output exceeded RMB 50 million yuan for the first time.

2002

In order to better serve customers, the main plant was relocated to Ningbo.

2003

Jinyi recruited technical talents from Taiwan Province to guide and study alloy casting process.

2005

The centrifugal casting equipment was introduced from Taiwan and put into use.

2007

PTA plasma automatic bimetallic alloy spraying equipment was installed and put into use.

2010

Zhoushan new plant was built.

2017

"Ningbo Lichao Tie Bar Precision Machinery Co., Ltd." was established, mainly engaged in tiebars manufacturing.

2011

A new electroplating plant was built in Zhenhai Chemical Industrial Park. So far, all the production processes of Jinyi can be under internal control.

2016

The third factory in Ningbo was built, forming a pattern of 2 bases and 5 factory areas in Ningbo and Zhoushan.

2012

The second factory in Ningbo was built.

ABOUT JINYI

JINYI SERVICE

APPLICATIONS

PRODUCTS

OUR CAPABILITIES



Since 1993, Ningbo Jinyi Precision has started to serve a broad spectrum of industries with the successful manufacture of screw barrel sets. We continue to consistently produce work of the highest standard both locally and abroad. The successful completion of innovative and effective engineering solutions is attributable to the skills of our production team; committed project management from our sales team; and the excellent working relationship we share with our customers. Ningbo Jinyi Precision is committed to providing unsurpassed service to all customers big and small. Our sales people will provide you the ultimate in service, direction and value for money!

Total In-house Machine Shop Capability

- Turning up to $\varnothing 1250\text{mm} \times 8\text{m}$
- Grinding up to $\varnothing 600\text{mm} \times 4\text{m}$
- CNC Lathes with Live Tooling $\varnothing 500\text{mm} \times 3\text{m}$
- 4 Axis Machining Centre $4\text{m} \times 2\text{m}$ Table
- Gun Drilling
- Honing
- Bimetallic Spraying
- PTA Alloy Welding
- Bimetallic Spraying
- Nitriding & Stress Relieving $\varnothing 575\text{mm} \times 5.5\text{m}$
- Centrifugal bimetallic casting

Screw barrel set

- Manufacturing
- Reconditioning
- Injection Moulders / Extruders - Screws, Barrels, accessories

Tiebars, Nuts, Pistons

- Manufacturing
- Reconditioning - Tiebars, Nuts, Pistons, Rods

General Engineering

Other fabrication

- Orifice Plates
- Thermowells
- Flanges
- Meter Runs
- Venturis
- Flow Nozzles
- Manifolds





Fast Turnaround

Based in the dynamic port city of Ningbo, we complete and ship your orders quickly. You can count on us to deliver high quality products on time.



Full Year Warranty

We are confident with providing a one-year warranty on materials and workmanship on all our products.



Cost Effective

We strive to exceed client expectations with our products and services. Comprehensive pre-planning insures all work is done in cost-effective manner.



Measurement Devices

JINYI offers a complete line of highly accurate bore gauges and wear measurement devices.

OUR SERVICE

We support you in every process, whether it's related to material combinations or complete plasticizing units.



PRODUCTS DESIGN

As a leading supplier of Injection, Blow Molding and Extruder screw barrel sets, JINYI has accumulated an extremely large database of prints, drawings, and factory OEM specifications through these 25 years manufacturing.

We design general-purpose screw barrel sets with the flexibility to run a wide variety of materials, as well as design and consult a custom screw to match your material needs. These designs incorporate mixing, improved output, low shear designs for heat sensitive plastics, venting, up-sizing and down-sizing injection units.

CAD service. With the combination of skilled professionals and state of the art technology, JINYI delivers an extensive range of CAD drafting services. Our CAD services aim at delivering complete satisfaction based our long experience and expertise in mechanical engineering.

ADVANCED MANUFACTURING

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BIMETALLIC ALLOY

For barrels

JINYI invested in metallurgical research and this allowed us to offer an exclusive range of bimetallic alloys that solve wear problems. The bimetallic alloys are produced in modern sophisticated centrifugal casting facilities.

The advantage of our bimetallic alloys is the high and homogeneous hardness throughout the whole layer thickness which ranges from 1.5 to 2 mm thickness. The lifetime increase of the bimetallic cylinder against a nitrided cylinder may exceed 12 times or more. The price-quality-lifetime ratio is therefore very beneficial for the bimetallic cylinder. We have three different alloy solutions listed in the table below. We qualified the quality of the different alloys according abrasion and or corrosion resistance to enable a quick selection.

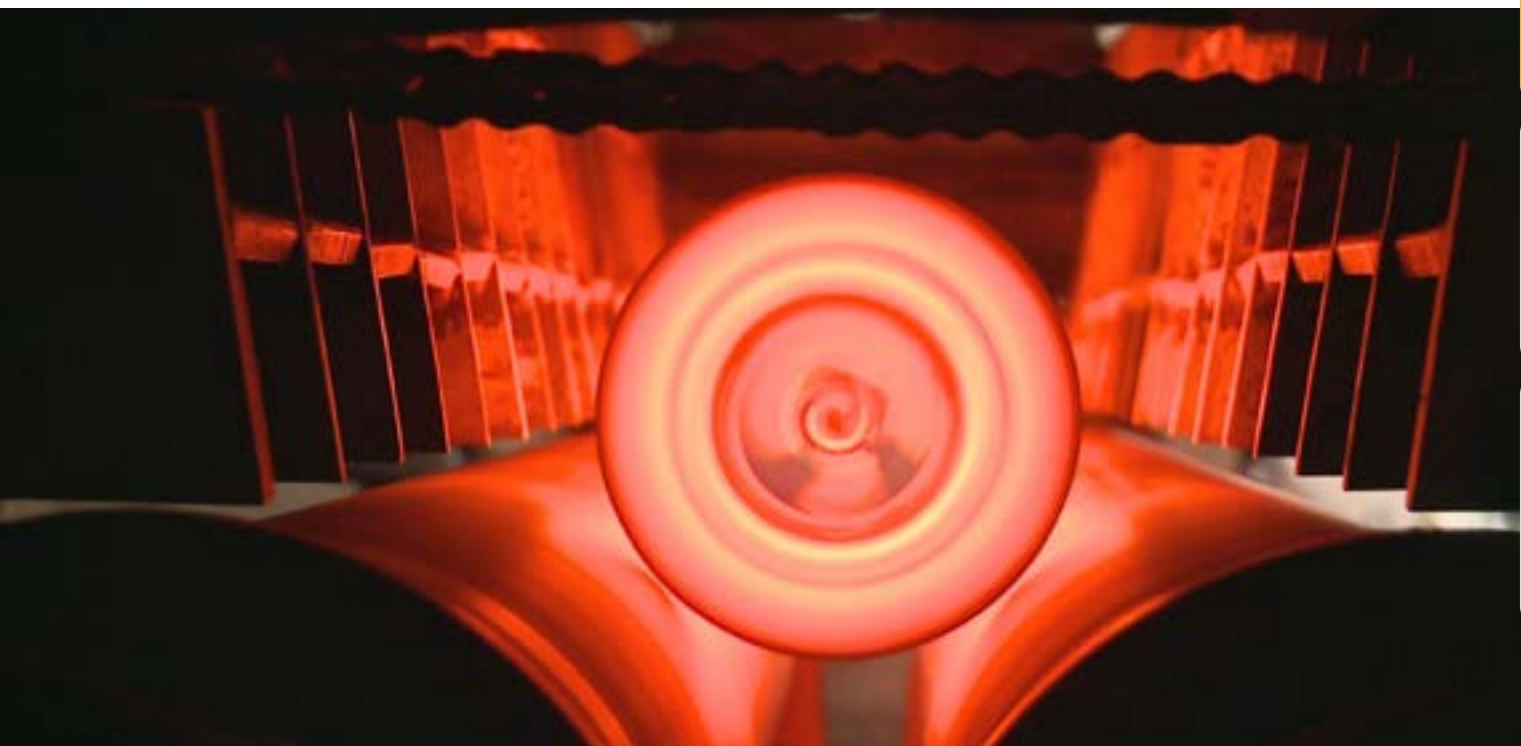
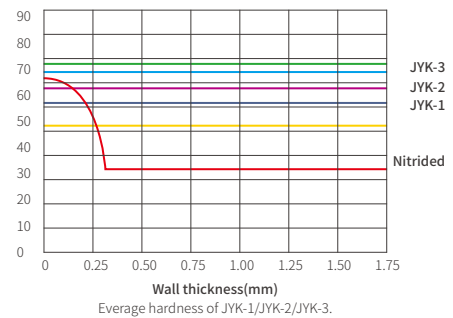
JYK series bimetallic alloys for barrels.

TYPE	ALLOY COMPONENTS	HARDNESS (HRC)	ABRASIVE RESISTANCE	CORROSION RESISTANCE	APPLICATIONS
JYK-1, C	Fe, Cr, Ni	56 – 60	★	★	Recycling & engineering plastics, reinforced additives less than 20%.
JYK-2, B	Ni, W, Cr	58 – 62	★★	★★	Moderate corrosive, reinforced additives less than 35%
JYK-3, D	Ni, W, Cr	60 – 64	★★★	★★	High abrasive and moderate corrosive plastics

Suitability: (★ good) to (★★★ excellent).

TYPE	COMPOSITION (WEIGHT %)								
	Cr	C	Fe	B	Si	W *	Mn	Ni	Others
JYK-1, C	8	1.2	Bal	4.3	4	/	0.65	10.8	< 1.0
JYK-2, B	8	1.4	5	4	3.3	16.5	0.5	Bal	< 1.0
JYK-3, D	8	1.4	5	4	3.3	16.5	0.5	Bal	< 1.0

* Highest composition of tungsten carbide can go up to 45%, which enables the barrels have 5 times wear-resistance capability than normal bimetallic barrels and up to 60% glass fibre filling in general & engineering plastics materials.



For screws

JINYI offers a full range of single and twin screws. Based on our extensive experience we offer different materials types and treatments to fight wear. The materials range from nitriding steels, stainless steels, tool steels up to steels produced by powder technology (PM).

JYS series bimetallic alloys for screws.

TYPE	ALLOY COMPONENTS	HARDNESS (HRC)	ABRASIVE RESISTANCE	CORROSION RESISTANCE	APPLICATIONS
JYS-1, B	Ni, Cr, Si	52-56	★	★	Recycling & engineering plastics.
JYS-2, A	Ni, Cr, W	54-58	★★	★	Engineering plastics, reinforced additives less than 20%.
JYS-3, C	Co, Cr, W	44-48	★	★★	Reinforced additives and corrosive plastics less than 15%.

Suitability: (★ good) to (★★★ excellent).

Furthermore, we have 3 different screw coating methods.

COATING TYPE	COATING METHOD	COATING THICKNESS (mm)	HARDNESS (HV)	MAX. L (mm)	APPLICATIONS
TIN	PVD	0.002 - 0.003	2000 - 2200	1900	Optical products & abrasive plastics processing.
CHROME PLATE	Electroplating	0.02 - 0.08	650 - 720	6000	Transparent products & corrosive plastics processing.
TUNGSTEN COATING	HVOF	1.0-1.5	1100 - 1400	2300	High abrasive plastics processing.

For Base Materials

Here is a list of our regular base materials.

JINYI	China	Japan	USA	Germany	Hardness	Applications	
CODE	GB	JIS	AISI/SAE	DIN			
JYN1	38CrMoAl	SACM645	6470E	41CrAlMo7	HV 950-1000	Common plastic	
JYN2	40Cr	SCr440	5140	1.7035	HRC 42-55	Bimetallic base	
JYN3	42CrMo	SCM440	4140	1.7223	HRC 48-52	Tiebar	
JYN4	45#	S45C	1045	1.1191	HRC 42-46	Accessories	
JYN5	Cr12MoV	~SKD11	D5	1.2601	HRC 56-58	Engineering plastic	
JYN6	4Cr5MoSiV1	SKD61	H13	1.2344	HRC 50-52	Engineering plastic	
JYN7	9Cr18MoV	SUS440b	440B	1.4112	HRC 56-58	Corrosive plastic	
JYG1	★ Confidential	Cr12Mo1V1	SKD11	D2	1.2379	HRC 54-60	<30% Glass fibre
JYG2						HRC 60-65	<50% Glass fibre
JYG3						HRC 58-62	<40% Glass fibre
JYG4						HRC 62-65	<50% Glass fibre
JYG5						HRC 62-65	<50% Glass fibre
JYG6						HRC62-65	<50% Glass fibre
JYG7						HRC 50-56	Optical products
JYG8						HRC 56-58	>300°C temperature

*Remark: The material listed above are for our regular use, and are subject to change without notice. The hardness and application depend on the specific requirements. The information in the table is for your reference only.



ON-SITE INSPECTION

If you are losing valuable production due to screw wear, barrel wear or barrel misalignment, or are concerned about the down time that results from sending parts out for inspection, we have a simple and cost-effective solution. Let us send one of our certified technicians to your facility to conduct an on-site inspection. You'll save time, money, and minimize disruption to your production schedule.



Our on-site inspection services include but not limited to the following:

- Preventive Maintenance inspections/services.
- Extruder installations, change outs, rigging, leveling and assembly.
- Extruder trouble shooting and maintenance.
- Extruders checked out mechanically and electrically.
- New control cabinets and panels per your requirements.
- Extruders rebuilt and modified.
- Gearcase (box) rebuilding. Gear ratio changes.
- New improved cooling systems. Reline feed sections.
- Drives, motors and heaters, replaced and repaired.
- Cooling and heating state-of-the-art conversions, water to air.
- Inefficient air systems upgraded.
- Reduce operating costs, energy costs, easier access to heaters, T/Cs .
- Reduce down time.
- Extend operating life, improved barrel temperature control.





REPAIR SERVICE

How can you know that your barrel and screw is worn out?

There are some empirical ways to guess it, but if you need precise information, JINYI engineers can help you. Our customer service can take precise measurements of your equipment and evaluate together with you whether repair it or let it operate some more time.

Barrel: Repair Through A Larger Inner Diameter

When a barrel, both bimetallic or nitrided, is worn out can be repaired by boring a larger inner diameter. In case of nitrided barrels, a new nitriding treatment shall be made with a depth of 0.4 - 0.5 mm to ensure the necessary hardness. A grinding operation must follow, so that all dimensions stay within manufacturing tolerances. In case of bimetallic barrels, only the boring is necessary without any other refinishing operation. Of course the outer diameter of the screw and eventually front end components must be modified to the new (larger) dimension of the barrel. This is a cheap solution but has one disadvantage: the repaired barrel and screw become non standard equipment and dedicate spare components shall be stored. In case of twin screw barrels repairing, please consider our technicalbulletin about extrusion.

Barrel: Repair Through Inside Bushing

In special cases a barrel can be repaired by fitting in the worn area an inside bushing. The bushing can be made of nitrided steel, hardened steel but also of bimetallic alloy.

Screw: Flight Top Welding

For screws with diameters larger than about 60 mm, may be convenient, depending on the type of wear, to restore them by welding new material on the top of worn out flights. This procedure can be applied only if wear did not affect the screw core or rear and front radius, but only the top and sides of the flights. There may be the need to apply also an inox material, but this shall be evaluated from case to case. Last thing to say is that a repaired screw will not last as a new one.



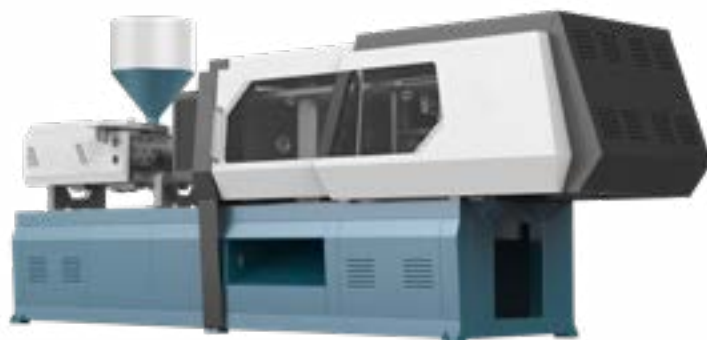
INDUSTRY APPLICATIONS

PLASTICS PROCESSING

- + Injection Molding
- + Extrusion
- + Structural Foam Molding
- + Blow Molding

JINYI manufactures bimetallic and nitrided screw barrel sets for all applications and major makers of plastic processing equipment. Our products are found worldwide in mild to severe abrasion and corrosion wear environments.

Alloys for the full range of polymers and process environments.



Wear solutions from complex to general-purpose applications.

- High Performance alloys to sustain wear life and peak production.
- Custom design or manufactured to print.
- Auxiliary Components – Feed Throat Assemblies, flanges and end caps.

Bi-metal construction combines a protective wear surface inseparably bound to a high strength micro-alloy backing material. The design allows efficient energy transfer between the bore lining and the backing. This feature provides a rapid detection of process changes, quick response to heat and cool commands, and precise control of zone temperatures. The wear resistant bore alloy is engineered for maximum compatibility between the feed screw flight OD and the barrel inner diameter.

Contact JINYI for more information on plastics processing barrels, structural foam machine barrels, plastic extrusion, plastics injection molding, and barrel wear life.



RUBBER PROCESSING

- + Injection & Extrusion

JINYI manufactures bimetallic masticating barrels and liners for all types of rubber injection molding, cold and hot feed rubber twin and single screw extrusion machinery. Our products are found worldwide operating in mild to severe abrasion and corrosion wear environments.

- Injection Molding machine barrels and liners
- Pin barrel extruders – replacement bimetal liners
- Smooth bore extruders – vented and non-vented applications
- Twin bore extruders
- Special process cylinders
- A full range of designs for all compounds and equipment.
- Wear solutions from complex to standard applications.
- High performance alloys that sustain life and peak production.
- Custom engineered or manufactured to specifications.
- Thermal jackets, auxiliary flanges and feed housings
- Vented and non-vented design

SILICONE PROCESSING

JINYI manufactures custom bimetallic barrels for all types of LSR molding and extrusion applications, some include Silicone injection molding, LSR molding machines, Silicone extrusion barrels, Bimetallic barrels, and LSR molding. We work with system designers and machine builders to equip Silicone processes from ultra-pure medical, pharmaceutical and food to heavy industrial applications. Our products are found worldwide operating in mild to severe abrasion and corrosion wear environments.

- Alloys for the full range of LSR and elastomer process environments.
- Wear solutions from complex to general-purpose applications.
- High performance alloys to sustain wear life and peak production.
- Custom design or manufactured to print.

Liquid silicone rubber (LSR) injection molding and extrusion applications have become popular in recent times. Materials such as Fluorosilicone (FLSR) are specified for gaskets, seals and parts on food equipment, medical devices, analytical instruments telecommunications and automotive parts. Companies processing LSR compounds face challenges to produce acceptable part yields. An optimized process requires special screw and barrel design to achieve acceptable yield. In many cases process environments include abrasive and corrosive wear conditions. Abrasion wear caused by fillers causes contamination by metal particles. Other applications include severe corrosion wear. Corrosion causes pitting which results in premature curing or scorching. In most applications contamination is not acceptable. JINYI alloy is suitable bore materials for food, medical and drug applications. Whether the process environment is mildly to highly corrosive, abrasive or a combination of both we have an alloy for the application.



FOOD PROCESSING AND EXTRUSION

- + Aquatic feeds
- + Food
- + Pet foods and treats

Single and twin screw extrusion is used to process a variety of foods for human and pet consumption. Common extruded foods include sausages, processed meats, dough, pasta, cereals, snack foods, candy and animal feeds. JINYI manufactures monolithic Stainless steel screw barrel sets for ultra pure applications.

Food process extruders for the most part are single or twin screw design. There are various different equipment types and many custom designed machines. Each machine is configured for the specific application. General types include single screw cooking, continuous pasta, dough, pelletizing extruders and co and counter rotating twin screw extruders. It is imperative to use acceptable alloys for the construction of the component surfaces that come into contact with the food materials being processed. The barrel ID surface must be compatible with the feed screw and the material being worked. Of equal importance is resistance to abrasion and corrosion wear. Pitting of the ID surface can cause a stagnation of the material being processed leading to degradation and contamination. Significant abrasion wear can result in foreign elements being present in the end product.

Our food processing screws barrels are in various size with high durability and corrosion resistance. We use the supreme quality raw material to manufacture food processing screw barrel. The accurate dimensions given by our highly skilled professionals, the superior finish make all our clients happy and satisfied with our delivered products.



METAL DIE CASTING (TIEBARS)

Die casting is a metal casting process that is characterized by forcing molten metal under high pressure into a mould cavity. The mould cavity is created using two hardened tool steel dies which have been machined into shape and work similarly to an injection mould during the process. Most die castings are made from non-ferrous metals, specifically zinc, copper, aluminium, magnesium, lead, pewter, and tin-based alloys. Depending on the type of metal being cast, a hot- or cold-chamber machine is used.

We are specialized in manufacturing nitrided tie bars and traditional chrome plated tie bars injection molding machine and die-casting machine, together with matching guide rods, piston rods and other plastic machinery accessories. With a total of more than 100 machining equipment, such as CNC machinery, equipment specialized in polishing and grinding. The capability of manufacturing is up to diameters 600mm and length 10000mm. Meanwhile, a batch of advanced testing equipment, such as HRC tester, nitriding layer thickness tester, nitriding layer property tester, chrome gauge, which enable us testing microstructure, hardness, straightness, finish, thickness of nitriding layer and other tests.

BAKELITE AND THERMOSET INJECTION MOLDING, EXTRUSION

JINYI manufactures bimetallic barrels and liners for all makes and types of bakelite & thermoset injection molding machinery. Our products are found worldwide operating in mild to severe abrasion and corrosion wear environments.

For thermoset materials:

Energy transfer and accurate control of temperature zones is vital to prevent premature cross-linking of the material in the barrel. Thermal jackets positioned around the outer diameter of the barrel and arranged in two or more control zones typically control process temperatures. Barrel outer diameters are designed with OD grooves to accommodate circulating thermal fluid. Length to diameter ratios are lower than that found in thermoplastic molding. The optimum L/D depends on the machine's capacity and the material processed. Most thermoset machines have L/D ratios of 12:1 to 15:1.

Thermoset materials are often reinforced with mineral and fiber fillers that create an extreme wear environment. JINYI recommends a barrel lined with JYK-3 tungsten carbide alloy to sustain life and productivity.

For Bakelite materials:

It can be molded very quickly, decreasing production time. Moldings are smooth, retain their shape and are resistant to heat, scratches, and destructive solvents.

It is also resistant to electricity, which is for its low conductivity.

It is not flexible and makes Bakelite particularly suitable as a molding compound.

For Bakelite injection molding, the barrel temperature is set to 70-90°C to heat (with screw shear) the raw materials flowing. The screw is only for compressing and delivering the material into the mold, without melting it. Mold is heated to a temperature (180°C, for instance) to cure the raw materials. Screw configuration - The compression ratio of the screw for Bakelite is 1:1, and for thermoplastics, it's about 1:3 to 1:4.5. Process - Molding of thermoplastics involve melting, but for molding of Bakelite, the fusing takes place between particles so as no melting is involved.



MELT BLOWN NON-WOVEN FABRIC EXTRUSION

The melt blown process is a non-woven manufacturing system involving direct conversion of a polymer into continuous filaments, integrated with the conversion of the filaments into a random laid non-woven fabric.

The melt blown process involves the attenuation of the filaments using high-velocity hot air streams that impinge on the extruded filaments as they are emerged from the extrusion nozzles to obtain much finer filaments.

Melt blown Non-woven as the filter of the face masks, in recently because of the COVID-19 outbreak, the demand is increased so much. And the melt blown non-woven extruder becomes the hot sale machine besides the face mask making machine.

Various screw barrel sets with customerised design for melt blown non-woven fabric extrusion machines are available from JINYI.

PRODUCT INTRODUCTION



ABOUT JINYI

JINYI SERVICE

APPLICATIONS

PRODUCTS



BIMETALLIC SCREW

PTA (Plasma Transferred Arc) automatic alloy spraying is a newly applied technology, especially for precise requirement of screws. Comparing to traditional manual alloy spraying, PTA has better performance with the stability and outlook of screws.

Advantages

By spraying high quality alloy powder on screw flight with layer thickness 1.5-2.0mm, screws can get higher performance in both wearing & corrosion resistant performance.

Application

General plastics & engineering plastics with below 15% glass fibre filling.

JYS Series Alloy

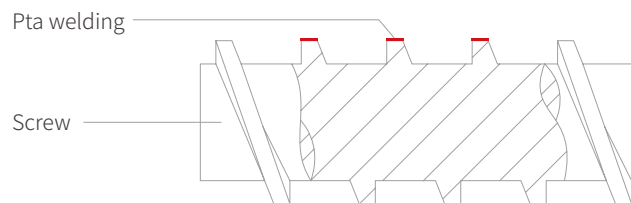
At this stage, we have JYS-1, JYS-2 and JYS-3 alloy types and treatments for wear fighting.

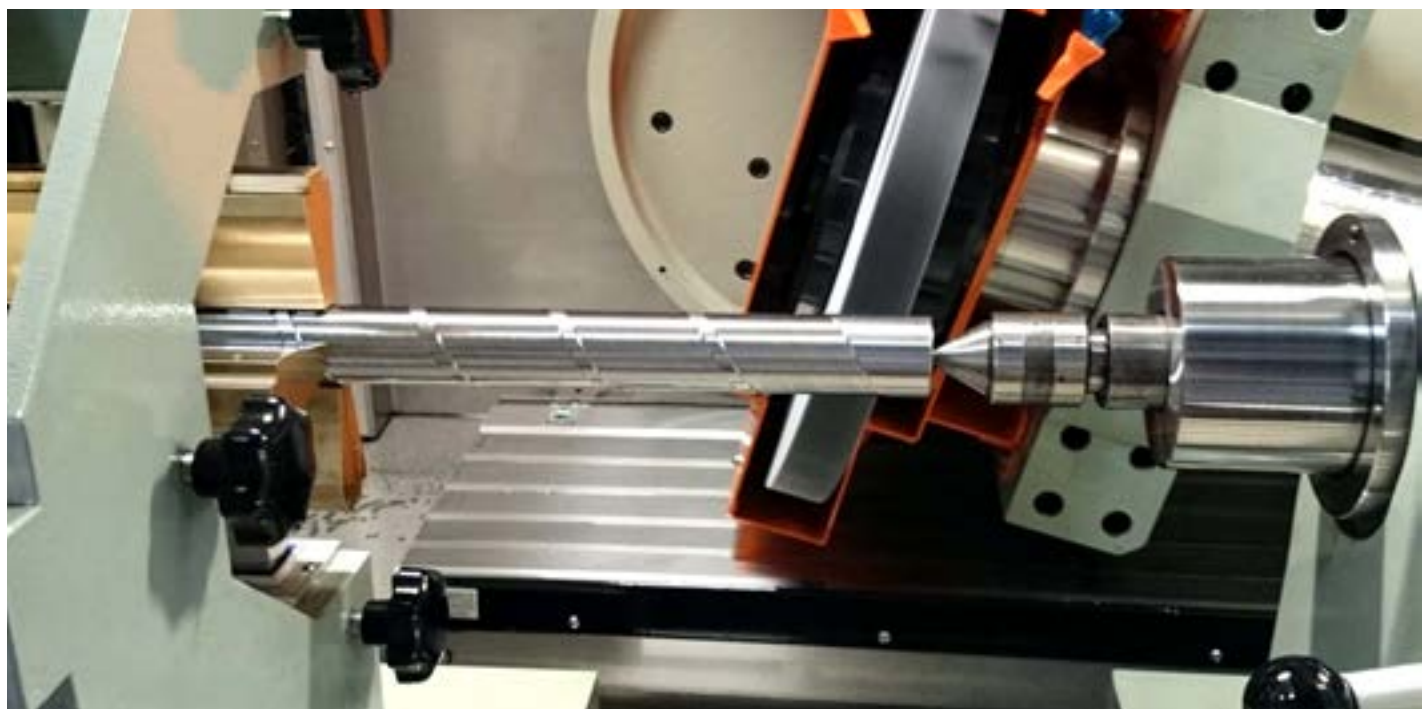
TYPE	ALLOY COMPONENTS	HARDNESS (HRC)	ABRASION RESISTANCE	CORROSION RESISTANCES	APPLICATIONS
JYS-1, B	Ni, Cr, Si	52-56	★	★	Recycling & engineering plastics.
JYS-2, A	Ni, Cr, W	54-58	★★	★	Engineering plastics, reinforced additives less than 20%.
JYS-3, D	Co, Cr, W	44-48	★	★★	Reinforced additives and corrosive plastics less than

Suitability: (★ good) to (★★★ excellent).

Technical Parameters

Product Name	Bimetallic Screw
Material	JYN1 + JYS Series Alloy
Suitable Machine	Injection / Extrusion / Blowing
Available Size	Φ14-400mm, Length <8,000mm
Process Method	PTA Spray
Surface Hardness	46-58 HRC
Surface Roughness	< Ra 0.8
Screw Straightness	< 0.02mm/m





HARDENED SCREW

We use imported or local made special steel materials for Through Hardened Screws, including JYG1, JYG2, JYG3 ... JYG6. After series of quench & annealing process, to achieve high toughness & hardness, they are especially suitable for high wearing materials and production processing.

Advantages

High toughness and hardness.

Application

General plastics & engineering plastics with below 70% glass fibre filling.

Technical Parameters

Product Name	Through Hardened Screw
Material	JYG1, JYG2, JYG3 ... JYG6
Suitable Machine	Injection / Bakelite Machine
Available Size	Φ14 - 120mm, Length < 3000mm
Process Method	Quenching & Annealing
Surface Hardness	62-65 HRC





PVD COAT SCREW

PVD (Physical vapor deposition) is characterized by a process in which the material goes from a condensed phase to a vapor phase and then back to a thin film condensed phase. We are using this technology on our Titanium nitride coated screws.

Advantages

Physical vapour deposition coating is of high hardness and performance, which provide additional protection against abrasion & corrosion.

Application

Suitable for optical products & abrasive plastics processing.

Technical Parameters

Product Name	TiN-Coating Screw
Material	JYG3 + TiN
Suitable Machine	Injection / Extrusion / Blowing
Available Size	Φ14-80mm, L < 1800mm
Process Method	PVD Coating
Surface Hardness	2200-2500HV

Parameters of screw coatings:

COATING TYPE	COATING METHOD	COATING THICKNESS(mm)	HARDNESS (HV)	MAX. L (mm)	APPLICATIONS
TiN	PVD	0.002 – 0.003	2000 – 2200	1900	Optical products & abrasive plastics processing.
Chrome Plate	Electroplating	0.02 – 0.08	650 – 720	6000	Transparent products & corrosive plastics processing.
Tungsten Coating	HVOF	1.0 - 1.5	1100 – 1400	2300	High abrasive plastics processing.

HVOF Coat Screw

HVOF (High Velocity Oxygen Fuel) coating process is a kind of thermal spraying technique that melted (or heated) materials are sprayed into the surface.

Advantages

By HVOF technology, alloy powder spraying is under high pressure and high velocity. The adhesive force is over 10000PSI, and the powder density can be achieved up to 99.8%, which offers outstanding performance in wear & corrosion resistance.

Application

Specially for Halogen-free material with below 65% glass fibre filling.

Technical Parameters

Product Name	Full Coating WC Screw
Material	JYG3 + Tungsten Carbide Alloy Coating
Suitable Machine	Injection / Extrusion / Blowing
Available Size	Φ14-80mm, L < 2300mm
Process Method	HVOF Spray
Surface Hardness	1100-1400 HV





NITRIDED SCREW

Advantages

Automatic CNC lathe, milling machine equipment, deep hole boring machine, up to 10m depth nitriding and automatic heat treatment equipment; Professional operators to ensure the accuracy of each process; Various mixing heads design to meet the plasticizing requirements of different plastics.

Application

General plastics & engineering plastics with below 10% glass fibre filling.

Technical Parameters

Product Name	Nitrided Screw
Material	JYN1
Suitable Machine	Injection / Extrusion / Blowing
Available Size	Φ14 - 500mm, L < 8000mm
Process Method	Gas Nitriding
Surface Hardness	950-1000HV
Nitriding period	120 hours nitriding process
Effective Nitriding Depth	0.3-0.5mm
Max. Nitriding Depth	0.6-0.8mm
Surface Roughness	< Ra 0.8
Screw Straightness	< 0.02mm/m

CUSTOMIZE SCREW

- PVC Screw
- Rubber Screw
- Food Screw
- BMC Screw
- Silicone Screw
- Blowing Film Screw
- Recycling Screw





BIMETALLIC BARREL

Centrifugal casting or rotocasting is a casting technique that is typically used to cast thin-walled cylinders. It is chiefly used to manufacture rotationally symmetric stock materials in standard sizes for further machining, rather than shaped parts tailored to a particular end-use.

Advantages

By casting and sintering high quality alloy powder on barrel inside surface with thickness 1.5-2.0mm, screws can get higher performance in both wearing & corrosion resistant performance.

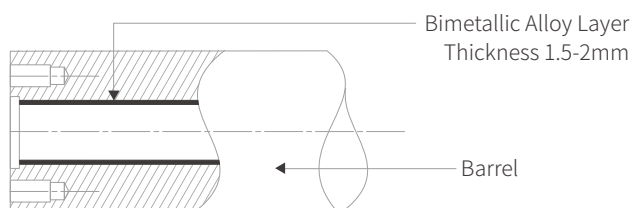
Application

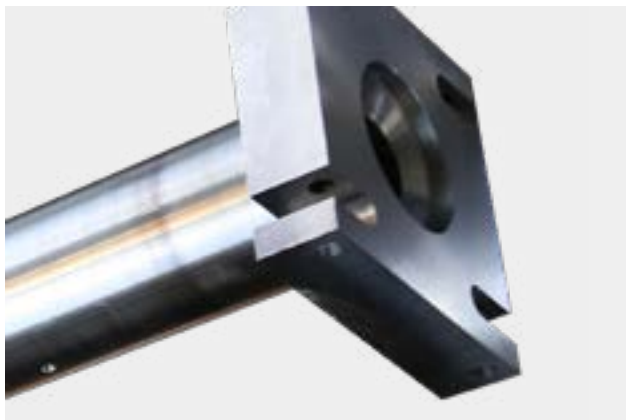
General plastics & engineering plastics with below 70% glass fibre filling.



Technical Parameters

Product Name	Bimetallic Barrel
Material	JYN3 + JYK Series Alloy
Suitable Machine	Injection / Extrusion / Blowing
Available Size	$\Phi < 500\text{mm}$, $L < 8000\text{mm}$
Process Method	Centrifugal Casting
Surface Hardness	52-62 HRC
Surface Roughness	$< \text{Ra } 0.8$
Screw Straightness	$< 0.02\text{mm/m}$





NITRIDED BARREL

Advantages

Automatic CNC lathe, milling machine equipment, deep hole boring machine, up to 10m depth nitriding and automatic heat treatment equipment;
Professional operators to ensure the accuracy of each process;
Various mixing heads design to meet the plasticizing requirements of different plastics.

Application

General plastics & engineering plastics with below 10% glass fibre filling.

Technical Parameters

Product Name	Nitrided Barrel
Material	JYN1
Suitable Machine	Injection / Extrusion / Blowing
Available Size	$\Phi < 500\text{mm}$, $L < 8000\text{mm}$
Process Method	Gas or Plasma Nitriding
Control System	Computer Control
Surface Hardness	950-1000HV
Nitriding period	120 hours nitriding process
Effective Nitriding Depth	0.3-0.5mm
Max. Nitriding Depth	0.6-0.8mm
Surface Roughness	<Ra 0.8
Screw Straightness	<0.02mm/m



TWIN SCREW BARRELS

Parallel Twin Screw Barrel

Twin screw barrel is gradually adopted by many manufacturers because of its high efficiency. Compared with single screw barrel, twin screw barrel has higher requirements for machining clearance. Our company has a professional team to help users solve design problems, and can also process according to the samples or drawings provided by customers.

Advantage

Unique technical design with larger output;
Advanced equipment with finest machining;
Perfect match of tolerance.

Applications

Suitable for RPVC, CPVC (both virgin & recycled material), PE pipe and granule

Conical Twin Screw Barrel

Suitable for PVC pipes, profiles, sheets and extrusion foaming products. Suitable for PE, PP corrugated pipe extrusion.

Technical Parameters

Product Name	Parallel /Conical Twin Screw Barre
Base Material	JYN1
Available Size	Φ35 - 188mm, L < 2500mm
Process Method	Nitrided or bimetallic

ACCESSORIES FOR SCREW BARREL

End Cap/Injection Nozzle/Screw Tip/Force-feeding Unit

Utilizing the most advanced technology in both the design and manufacturing process, we manufacture a wide range of screw tips, injection nozzles, barrel end caps and forced feeding units, to meet the needs of today's injection molders.





TIE BARS & ACCESSORIES

Our second factory, Ningbo Lichao Tiebar Precision Machinery Co., Ltd. is specialized in manufacturing nitriding and chrome plated tie bars together with matching guide rods, piston rods, nuts and other accessories for injection molding machine, die casting machine and forging machine.

Application

Injection molding machine, die casting machine and forging machine, etc.

Technical Parameters

Product Name	Tiebar or Tie Bar
Material	JYN3
Heat Treatment	Quench & Temper
Surface Treatment	Nitrided or Chrome Plated
Chrome Thickness	0.05mm
Surface Hardness	>55 HRC
Max. Diameter	600mm
Max. Length	10000mm



Nuts

We select material (such as 45#, 40Cr, 42CrMo and others) based on customer requirements and provide blacking, galvanizing, salt bath nitriding, gas nitriding and other heat treatment processes.

Pistons

Material : 45#, 40Cr, 42CrMo or casting
Heat treatment: Blacking, galvanizing, salt bath nitriding, gas nitriding and others.





SALES NETWORK



We dedicated to provide products and service in a fast-moving environment, With our excellent quality, we already established long term cooperation with many well-known customers in various industry sectors; On the local market, Jinyi Precision directly serve Haitian, Yizumi, Borch, HMD, Tederic and many other brands. Also, we have developed sales branches all around, including Guangzhou, Zhengzhou, Hangzhou, etc; Outside of China, we have over 100 clients and business partners in more than 30 countries (such as USA, Germany, Japan, Spain, Italy, UK, Korea, Canada, etc.).






Existing active overseas users mainly involve the following countries or regions:

Europe	France, Italy, Denmark, Russia, Spain, Hungary, Serbia, Poland, etc.
Africa	Egypt, Morocco, Nigeria, Algeria, Kenya, South Africa, etc.
Asia	Turkey, Iran, Israel, Saudi Arabia, Pakistan, India, Thailand, Vietnam, Malaysia, Singapore, Indonesia, Philippinest, South Korea, Taiwan.
Oceania	Australia, New Zealand.
America	Canada, United States, Mexico, Colombia, Chile, Brazil, Argentina.

A list of some main clients we are cooperating(injection molding):





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