



NINGBO JIACHENG INDUSTRY CO., LIMITED

Founded in 2019 and located in Zhoushan City, Zhejiang Province, China, Jiacheng is a specialized manufacturer focusing on R&D, design and production of high-performance screw & barrel for plastic injection and extrusion machinery. Equipped with advanced PTA full-automatic plasma surfacing and large bimetallic centrifugal casting production lines imported globally, we develop three grades of bimetallic alloys (Grade A/B/C) with outstanding wear & corrosion resistance, working up to 600°C maximum temperature. Our product portfolio covers single/parallel/conical twin screw & barrel for injection, extrusion, rubber, food and engineering plastic processing, including nitrided, chrome-plated and bimetallic overlay solutions from ID 14mm to 250mm.

We provide standard products as well as customized OEM & ODM service for plastic modification, pipe/profile extrusion, compounding and masterbatch industries, with products widely supplied to domestic and global machinery manufacturers across Asia, Europe and North America.





PTA螺杆全自动等离子堆焊机
PTA Full-automatic Plasma Welding Machine

优势：

★代替传统手工堆焊，提高生产效率和合金加工精度

★率先引进国际先进的技术及设备、双金属全自动流水线，生产与德美日同水准品质的双金属机筒螺杆

1. 铁基合金+NiCo5：耐磨性优、耐腐蚀型良，适合含30%以下玻纤树脂

2. 镍基合金+20%碳化钨：耐磨性优、耐腐蚀型优、适合含45%以下玻纤树脂

3. 镍基合金+50%碳化钨：耐磨性优、耐腐蚀型特优、适合含65%以下玻纤树脂

4. 钴基合金：耐磨性特优、耐腐蚀型优、耐高速、耐高压、耐高温

≤600℃铁粉、磁粉、陶瓷粉、铜粉

Advantages：

★Replace traditional manual welding,PTA can significantly improve production efficiency and bimetallic precision.

★We take the lead in introducing international advanced technology and equipment, bimetallic automatic production line, and produce bimetallic screw barrel with the same quality as Germany, America and Japan.

QY1. iron-based alloy + NiCo5:

excellent wear resistance and corrosion resistance, suitable for glass fiber resin containing less than 30%.

QY2.nickel-based alloy + 20% tungsten carbide:

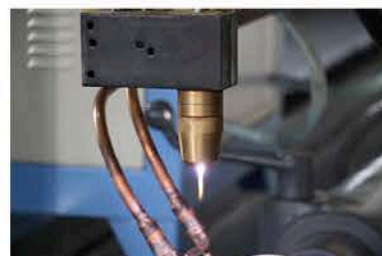
excellent wear resistance and corrosion resistance, suitable for glass fiber resin containing less than 45%.

QY3.nickel-based alloy + 50% tungsten carbide:

excellent wear resistance and corrosion resistance, suitable for glass fiber resin containing less than 65%.

QY4.Co-based alloy:

excellent wear resistance, corrosion resistance, high speed resistance, high pressure resistance, high temperature resistance ≤ 600℃ iron powder, magnetic powder, ceramic powder, copper powder



国际先进的大型合金离心浇铸设备
International advanced large bimetallic centrifugal casting equipment

种类及特性 types and characteristics	硬度 (HRC) Hardness	合金粉产地 Alloy Powder Place of origin	耐磨耗性 Abrasion resistance	耐腐蚀性 Corrosion resistance	温度范围 (℃) Temperature Range	合金成分 Alloy composition	树脂种类 Resin Type	
C级镍基合金 C grade nickel- based alloy	55-62	中国 China	良 Good	优 Excellent	≤400	Fe+Ni+Cr+ Co+B	Universal general resins and engineering resins. Containing30% glass fiber PE, PP, ABS, AS, PS, TPE, PA, PC, PEI, PEEK, PPS, PAR, LCP.	通用一般树脂和工程树脂。 含玻纤30%以下PE、 PP、ABS、AS、PS、 TPE、PA、PC、PEI、 PEEK、PPS、PAR、LCP
B级碳化钨镍基 合金Grade B tungsten carbide nickel-based alloy	55-62	美国 U.S.A	优 Excellent	优 Excellent	≤450	Ni+Cr+W+B	Universal general resins and engineering resins. Containing 40% glass fiber PE, PP, ABS, AS, PS, TPE, PA, PC, PEI, PEEK, PPS, PAR, LCP.	通用一般树脂和工程树脂。 含玻纤40%以下PE、 PP、ABS、AS、PS、 TPE、PA、PC、PEI、 PEEK、PPS、PAR、LCP
A级碳化钨钴基 合金A grade tungsten carbide cobalt-based alloy	55-65	德国 German	特优 Particularly good	优 Excellent	≤600	Co+Cr+W+ Ni+B	Special engineering resins. Iron powder, ceramic powder, powder, copper powder, glass fiber and other engineering plastics and halogen-free + sticky little plastic	特殊工程树脂。铁粉、陶 瓷粉、磁粉、铜粉、无卤 +玻纤等工程塑料及粘性 不大的塑料



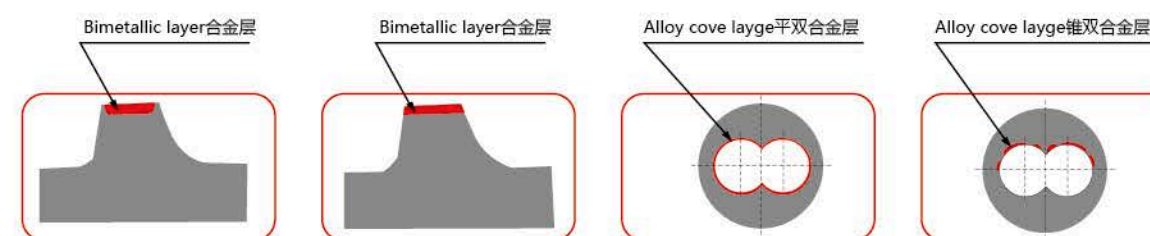
合金层（喷焊）
Bimetallic alloy layer(welded)

双金属双机筒就是在机筒内壁喷焊一层1-3mm的耐磨耐腐蚀、耐高温的合金，其有效使用寿命比普通氮化机筒大大提高，对于加工PVC钙粉高的配方，增加磨损寿命，双金属的优越性尤为明显。

本公司生产的双金属双螺杆，采用特殊合金粉末在螺杆螺棱部分喷焊合金，可以针对不同功用的螺杆，采用不同的合金和喷焊方式。

The bimetallic barrel for twin screw extruder is a kind of barrel spray a 1-3mm thick alloy coat on the barrel inner wall which has excellent corrosion resistance, abrasion resistance and high working temperature. And its useful service life is greatly improved contrast to common nitrided barrel. Bimetal has more obvious advantages when processing high calcium carbonate powder PVC mixture to enhance the abrasion life.

Our company use special alloy powders being sprayed and welded on the top of screw flights, and use different alloys and welding methods for the screw of different functions.



双金属单机筒就是在机筒内壁浇筑一层2-5mm的耐磨耐腐蚀、耐高温的合金，其有效使用寿命比普通氮化机筒大大提高，对于加工工程塑料、氟塑料、聚砜、PPO特殊类型的塑料等，双金属的优越性尤为明显。

本公司生产的双金属单螺杆，采用特殊合金粉末在螺杆螺棱部分喷焊合金，可以针对不同功用的螺杆，采用不同的合金和喷焊方式。

The bimetallic barrel for single screw extruder is a kind of barrel spray 2-5mm thick alloy coat on the barrel inner wall which has excellent corrosion resistance, abrasion resistance and high working temperature. And its useful service life is greatly improved contrast to common nitrided barrel. Bimetal has more obvious advantages when processing special plastics to enhance the abrasion life, such as engineering plastics, fluoride plastics, PPO etc.

Our company use special alloy powders being sprayed and welded on the top of screw flights, and use different alloys and welding methods for the screw of different functions.

合金级别types：超耐磨型A:含碳化钨50%-60% Alloy powder including 50%-60% Wolfram Carbon

耐磨型B:含碳化钨25% Alloy powder including 25% Wolfram Carbon

合金型C:含碳化钨10% Alloy powder including 10% Wolfram Carbon

加工范围Specification：内径Internal Diameterφ14-200mm 长度Length 4000mm

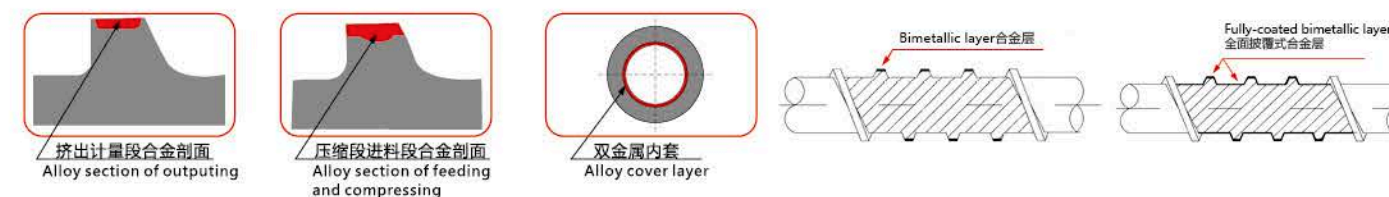
合金硬度Alloy Hardness：HRC60°~ 70°

表面硬度Hardness of Surface：HV1100°~ 1400°

适用塑料范围Applied range of plastic：

适用于各类塑料添加玻璃纤维及PPA、PPS、PSU、LCP、磁粉、高温PC、PEI、PEEK、无卤素等特殊工程塑料。

Plastics raw material with glass fiber additive and special engineering Plastics, such as PPA, PPS, PSU, LCP, porcelain powder, PEI, PEEK and halogen free material..etc.





技术指标及用途

规格：内径 Φ 14-250mm
氮化深度：0.5mm-0.8mm
氮化硬度：HV850°-1000°以上
镀铬厚度：2-3mm
双合金深度：1.5-3mm

Specifications and application

Specifications: diameter Φ 14-250mm
Nitriding depth: 0.5mm-0.8mm
Nitride hardness: HV850 ° -1000 °
Chromium plating thickness: 0.05mm
Alloy Unilateral Depth: 2-3mm
Scope of application: PP, PE, ABS, AS, PS, PC, PET, bakelite.

原材料 Raw Material

38CrMoAlA、SACM645、42CrMo
9Cr18Mov
SKD61、SKD11、DC53
High speed steel for powder

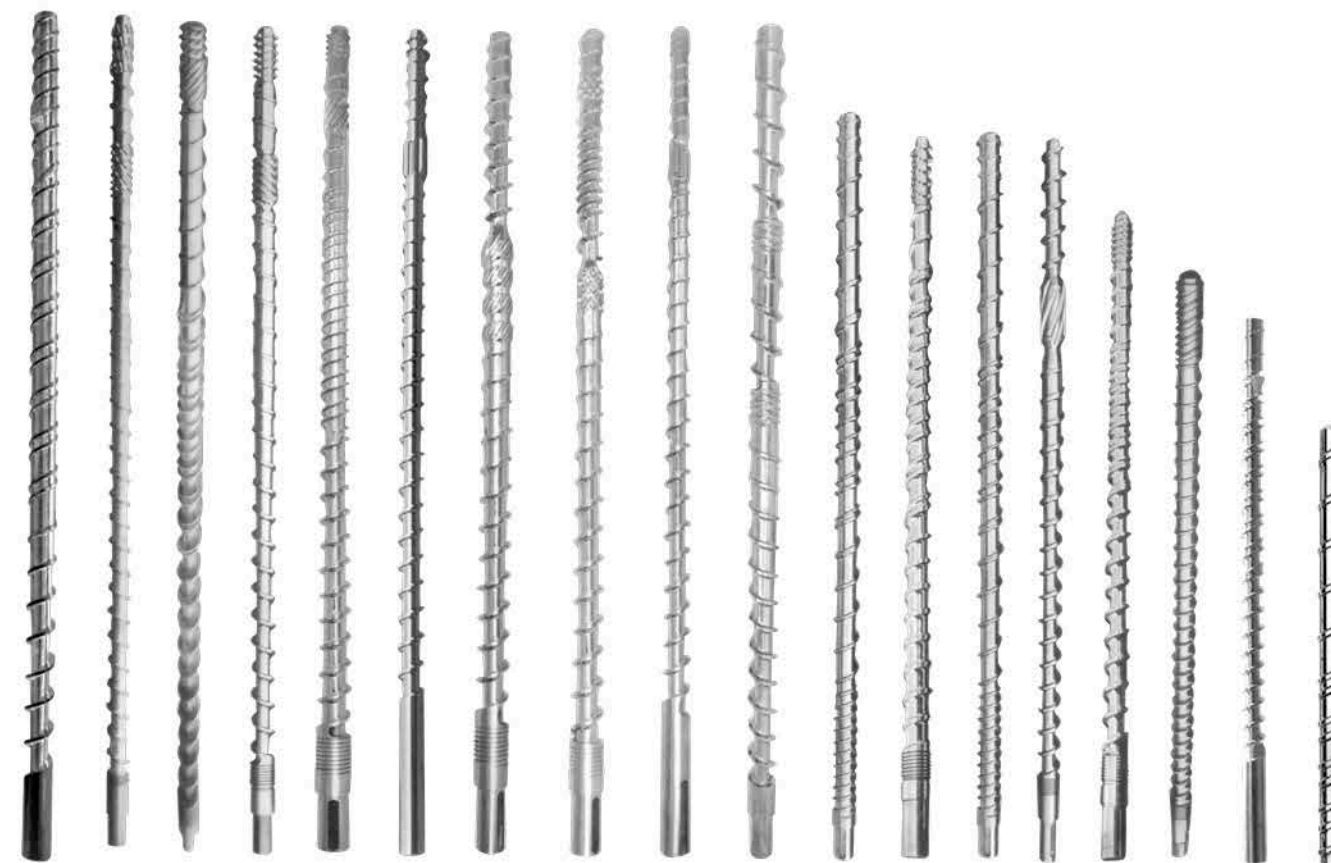


螺杆类型：

渐变型、突变型、波浪形、屏障型、双屏型、分流型、分离型、排气型、销钉型、混合型、双头型、三头型、多头型、造粒型等。

Types of screw :

Gradual type, mutant type, wave type, barrier type, double screen type, shunt type, separation type, exhaust type, pin type, mixed type, double- head type, three-head type, multi head type etc.





锥形双螺杆、机筒 Conical Twin Screw And Barrel



产品技术指标Technique:

- 1、国产38CrMoALA材质，经调质氮化处理，表面硬度HV860-1000，氮化深度0.5-0.6mm，脆性≤2级。
- 2、进口高强度合金钢材质，螺杆易损部位等离子堆焊镍基、钼基合金1-1.5毫米厚，使用寿命提高1.5倍以上。

1. Nitrided screw and barrel:
Material: 38CrMoAlA,SACM 645, nitrided
Surface hardness: ≥HV900
Nitriding depth: 0.5-0.6mm
2. Bimetallic screw and barrel



螺杆规格(d/D) specification	工作长度(mm) Working length	挤出能力 (Kg/h) Extrusion ability	螺杆转速(rpm) Rotation speed of screw
Φ35/Φ77	810	40-70	5~50
Φ45/Φ90	990	50-80	5~45
Φ50/Φ105	1070	100-150	4~45
Φ51/Φ105	1220	100-150	4~45
Φ55/Φ110	1220	120-180	4~40
Φ60/Φ125	1320	150-200	4~40
Φ65/Φ120	1440	200-250	4~40
Φ65/Φ132	1440	200-250	4~40
Φ70/Φ140	1460	220-300	4~40
Φ75/Φ150	1480	250-300	4~35
Φ80/Φ143	1800	300-360	4~35
Φ80/Φ156	1660	300-360	4~35
Φ92/Φ188	2000	400-500	4~35

螺杆结构及压缩比可根据不同原料及不同产品进行设计。
Screw structure and compression rate can be designed for different materials and products.

平行双螺杆、机筒

Parallel Twin Screw And Barrel

螺杆种类：

PVC木塑，PE木塑，超高分子板材，免烧砖托板，1比2以上高钙扣板，50-400份以上高钙管材，50-300高钙型材，软PVC片材，PVC发泡板等普通塑料、PP、PE、ABS、PVC、原料造粒、生产管材、异型材、片材等产品。

Scope of application：

WPC PVC,WPC PE,Super high molecular sheet,1/2 high Calcium buckle,50-400 high Calcium pipe,50-300 high Calcium Profile,soft PVC sheet,XPS -PVCetc.

PP、PE、ABS、PVC,raw material ,pelletzing,pipe,profile,sheet etc.





产品技术指标Technique:

橡胶挤出机冷喂料销钉式机筒、螺杆

直径: $\Phi 60\text{mm} \sim \Phi 250\text{mm}$

长径比: 12-18

橡胶挤出机冷喂料机筒、螺杆

直径: $\Phi 45\text{mm} \sim \Phi 300\text{mm}$

长径比: 8-20

橡胶挤出机热喂料衬套、螺杆

直径: $\Phi 45\text{mm} \sim \Phi 250\text{mm}$

长径比: 4-6

COLD FEED PINNED SCREW & BARREL OF RUBBER MACHINE

Diameter: $\Phi 60\text{mm} \sim \Phi 250\text{mm}$

L/D: 12-18

COLD FEED SCREW & BARREL OF RUBBER MACHINE

Diameter: $\Phi 45\text{mm} \sim \Phi 300\text{mm}$

L/D: 8-20

HOT FEED SCREW & BARREL OF RUBBER MACHINE

Diameter: $\Phi 45\text{mm} \sim \Phi 250\text{mm}$

L/D: 4-6



积木式螺杆和机筒 Segment Screw And Barrel

规格:

直径: $\Phi 18 \sim \Phi 177$

材料:

1) W6Mo5Cr4V2

2) 38CrMoAlA (JIS SACM 645)

3) 42CrMo (AISI 4140)

4) SKD61

5) S45C

我们根据物料的配比来设计机筒螺杆

Specification:

Diameter: $\Phi 18 \sim \Phi 177$

Materials:

1) W6Mo5Cr4V2

2) 38CrMoAlA (JIS SACM 645)

3) 42CrMo (AISI 4140)

4) SKD61

5) S45C

We can design the screw and barrel for you according to the proportioning of raw material.



行星机螺杆和机筒 Planetary Screw And Barrel

行星机筒螺杆主要用于热敏性材料，如加工硬PVC。PVC透明片压延生产线采用行星机筒螺杆来塑炼、混合原料，使所有熔融的原料、助剂、改性剂均匀地混合和分散。具有塑化质量好、自洁性能佳、产量高、使用寿命长等特点。

The planetary screw barrel is mainly used for heat sensitive materials, such as processing rigid PVC. In the calender production line of PVC transparent chip, adopt planetary screw barrel to plastify and mixing raw materials for calender. It can make all melting materials, accessory ingredient and modifier uniformly mixing and dispersing. It has features of good plasticization self-cleaning, high productivity, long using life and so on.





单螺杆挤出机减速箱（选购）推荐参数
Recommended parameters of reduction gearboxes for single-screw extrusion machine

型号Type	规格Spec	输入功率Kw	n入	n出	输出扭矩 N.m Torque	输出轴轴向推力KN Axial thrust	螺杆直径 Screw diameter	长径比 Length-diameter ratio
ZLJ	112-8	5.5	800	100	525	35	≤Φ35	25:1
	133-8	8	800	100	764	39	≤Φ50	25:1
	146-10	11	1000	100	1050	54	≤Φ55	25:1
	173-10	18.5	900	90	1962	110	≤Φ65	25:1
	200-12.5	30	1000	80	3581	155	≤Φ75	25:1
	225-12.5	45	1000	80	5371	180	≤Φ90	25:1
	250-16	55	1120	70	7503	192	≤Φ105	25:1
	280-16	75	960	60	7643	258	≤Φ110	25:1
	315-16	85	960	60	13528	287	≤Φ120	25:1
	330-16	110	960	60	17507	360	≤Φ135	25:1
	375-16	132	960	60	21008	390	≤Φ150	25:1
	395-16	185	960	60	29442	400	≤Φ160	25:1
	420-16	160/220	960	60	31831	430	≤Φ160	≤Φ170
	450-20	213	1000	60	40640	500	≤Φ180	25:1



参数parameters	规格Spec.	SZ45	SZ50	SZ55	SZ65	SZ80	SZ92
输入转速 max input r/min		1500	1500	1500	1500	1500	1500
输出转速 max output r/min		44.8	37.8	37.5	39.1	38.7	40
输入功率 input KW		18.5	22	30	37	55	110
单轴输出扭矩 Revolution output torque of single draft N.m		1972	2779	3820	4518	6786	13130



铸铝加热圈
Casting aluminum heater



陶瓷加热圈
Ceramics heater



云母加热圈
Mica heater



积木式螺杆和机筒加热圈
Segment Screw And Barrel heater



风机
Fan



风机罩壳
Fan cover



LDPP模头 (单层)
LDPP DIE HEAD (1LAYER)
模头规格: $\Phi 100 \sim \Phi 400 \text{m/m}$ (以模盖内径尺寸为准)
温度控制点: 2点
适用原料: LDPE、PP
DIE DIAMETER: $\Phi 100 \sim \Phi 400 \text{m/m}$ (Based on mould cover inside size)
THERMO CONTROL: 2 SETS
SUITABLE MATERIAL: LDPE、PP



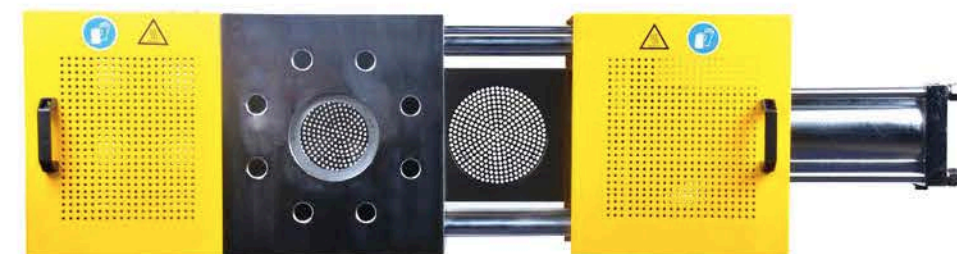
HDPE模头 (互换)
HDPE DIE
模头规格: $\Phi 30 \sim \Phi 300 \text{m/m}$ (以模盖内径尺寸为准)
温度控制点: 2~3点
适用原料: HDPE
DIE DIAMETER: $\Phi 30 \sim \Phi 300 \text{m/m}$ (Based on mould cover inside size)
THERMO CONTROL: 2~3 SETS
SUITABLE MATERIAL: HDPE



LDPE双层冷却风环
LDPE Air ring(double layer)



液压快速换网系统
Hydraulic screen changer



单板双工位液压换网器
NON-OSCILLATING SCREEN CHANGER



手动换网装置
MANUAL SCREEN CHANGER

规格: $\Phi 40 \sim \Phi 120 \text{m/m}$
温度控制点: 1点
DIE DIAMETER: $\Phi 40 \sim 120 \text{m/m}$
THERMO CONTROL: 1S SETS

手动式换网过滤器
Manual screen changer

- 安装方便, 操作简单
- 适合 $\Phi 90$ 低产量的挤出生产
- 操作杆可根据生产现场空间状况而多位放置
- 独特的柔性密封装置, 拥有良好密封效果
- 定位精确, 保证了物料的顺畅流通
- Easy installation and simple operation
- Suitable for low output extruder under 90kg/h
- Operating bar position can be adjusted according to specific layout of the workshop
- Unique flexible sealing system guarantees perfect sealing effect
- Precise location of the screen ensures very fluent plastic flow





塑料干燥机
Plastic dryer



上料机
Feeder



塑料混色机
Plastic mixing machine



塑料粉碎机
Plastic grinder



干燥机
Dry machine

