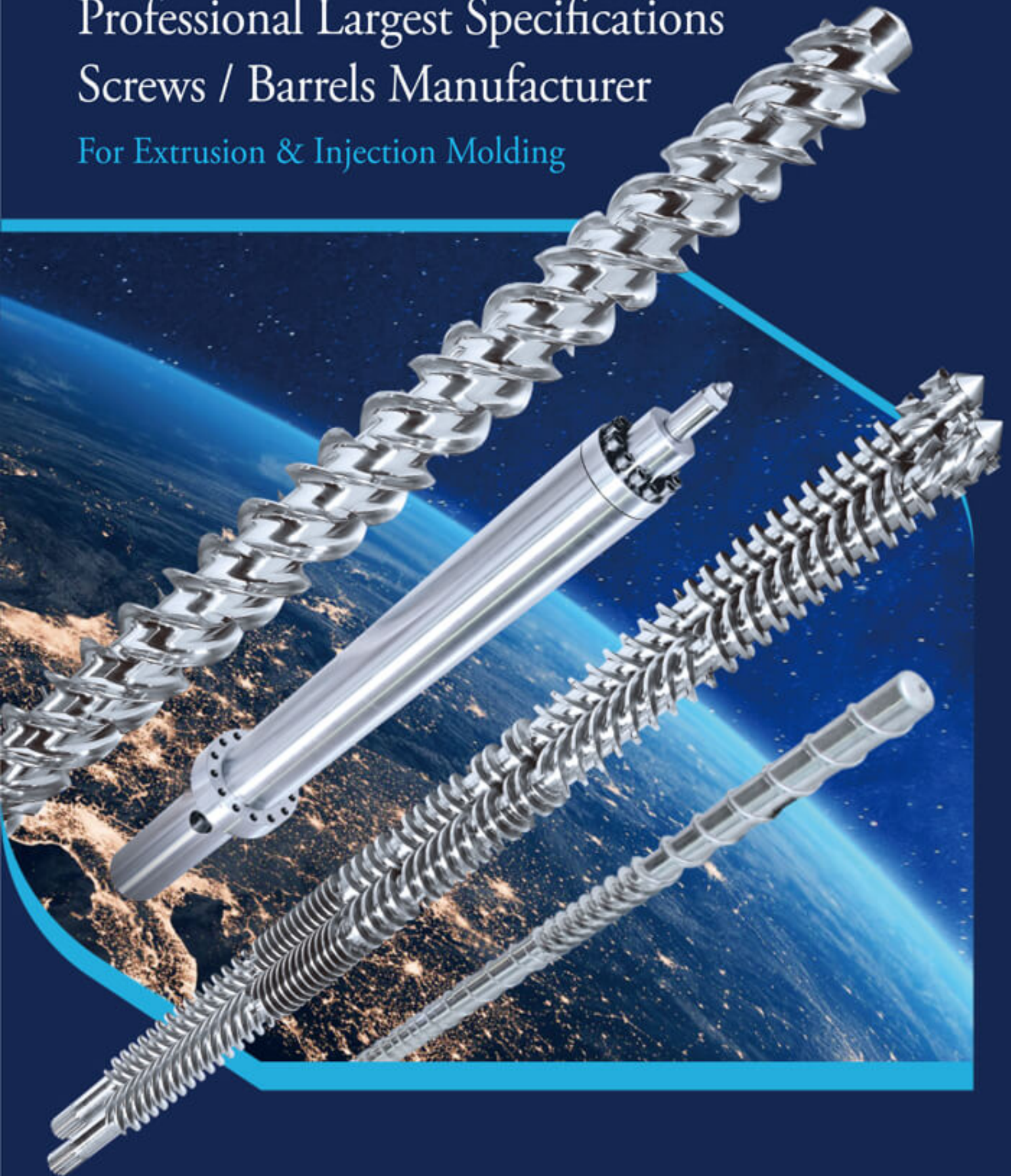


# Professional Largest Specifications Screws / Barrels Manufacturer

For Extrusion & Injection Molding







## NAN YUN Has What No One Else Does

### Extra Large Screws / Barrels Manufacturing Capabilities



First Factory

Established in 1993, NAN YUN Industrial Co., Ltd. specializes in design and manufacture of a full series of screws and barrels, applied for various extruding machines and injection machines. In addition, we also design and manufacture screws with special alloys and special flight geometry to meet specific customer applications.

Based on over 20 years of extensive experience, NAN YUN not only constantly upgrades its manufacturing technology in screws and barrels, but also is dedicated to research and development. Our objective is to produce high accuracy and high efficiency screws / barrels to help product's quality become international and let the company can produce products worldwide.

Land area: **13,220** square meters

Number of employees: **100** people

Monthly Production Capacity: **300~500** sets of screws and barrels



# 100% Quality Inspection

## Insisting on Quality is Nan Yun's Tradition

As the screw and barrel are critical parts for an extruding machine and injection molding machine, they dramatically affect the machine performance and product quality.

Therefore, Nan Yun is dedicated to providing the best possible quality of screws and barrels for our customers.

Nan Yun's quality control department adopts high precision inspection instruments to conduct incoming inspections, on-process inspections and final product inspections. What we do is to guarantee the highest level of quality for each screw and barrel from Nan Yun.

Furthermore, we have been fully recognized by numerous world-famous companies, which offer an approval of Nan Yun's efforts in quality control.



Test sample cutting, polishing and inserting



Microscopic Hardness Tester



Interior Inspection



Surface Roughness Inspection



Plated Thickness Inspection



Surface Hardness Inspection



Screw Exterior Inspection



## Outstanding Design Capabilities

A Perfect Combination of Theorem & Experience



Before processing, our technicians create 3D drawings based on your drawings

Nan Yun's design engineers have outstanding theoretical background and practical experience, providing optimum designs of screws and barrels for our customers.

Our engineers conduct thorough analysis according to the customer's machine model, production capacity required and resin properties before designing. All related parameters that may affect screw performance are designed based on theorem, such as screw type, L/D ratio, flight depth, flight density, helix angle and so on. This outstanding design capability will ensure Nan Yun's screws and barrels help customers upgrade product quality and production efficiency.



## High Skilled Machining Capability

Nan Yun's machinists are highly experienced. They always pay special attention to every detail during machining.



## Integrated Production Process

### Full Quality Controlled In-house



Over the years, Nan Yun's screws and barrels have been fully satisfactory to all manufacturers of injection molding machinery and extruding machinery both domestically and overseas. We have established a long term relationship with all these manufacturers. One of the most important factors comes from our constant investment in various advanced machining equipment to set up more integrated manufacturing processes.

In addition, we also adopt a modern production management system to fully control quality at each step throughout the entire manufacturing process. From product design, turning, alloy spray welding, polishing grinding and so on, are all accomplished in our integrated manufacturing lines.

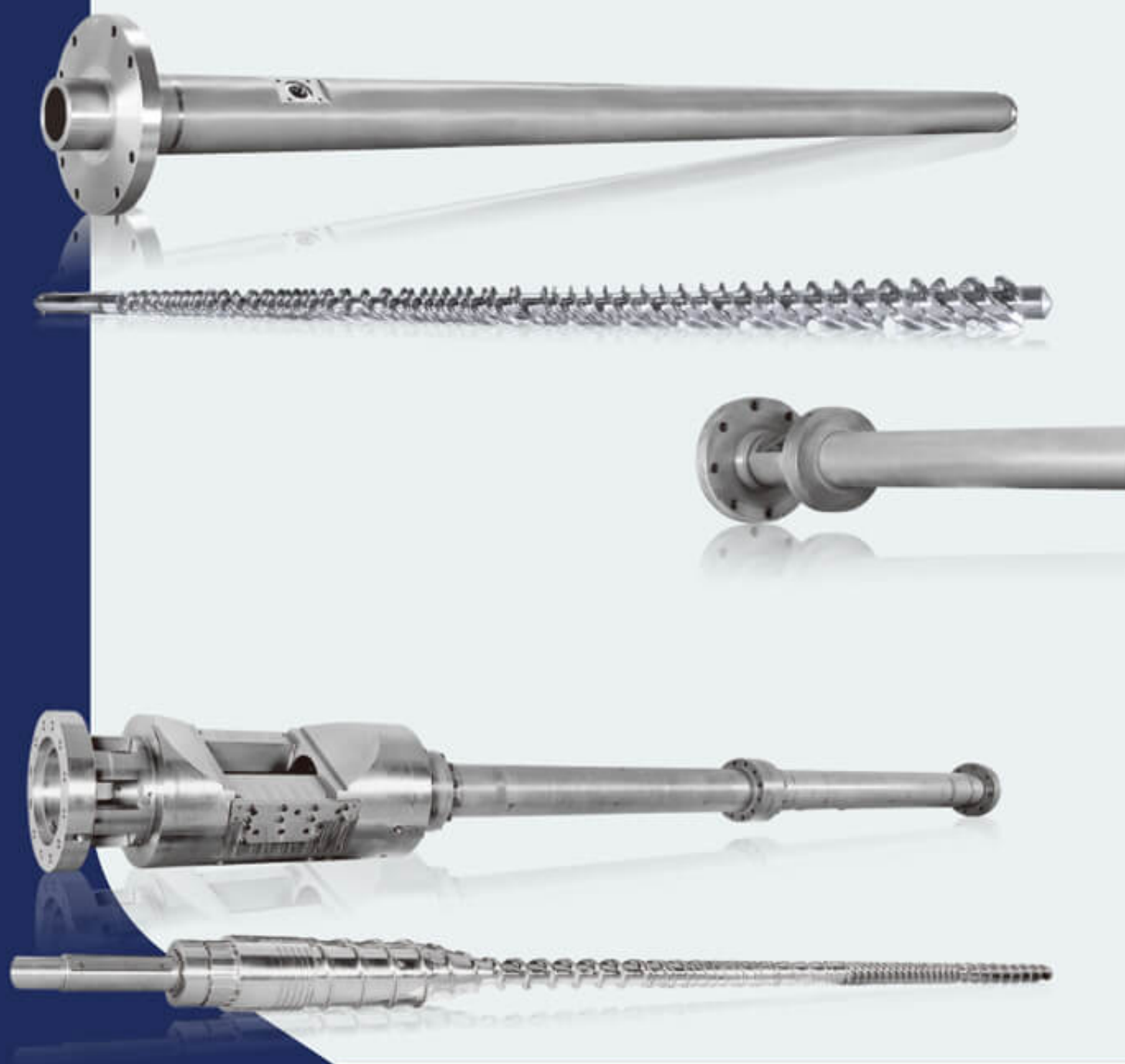
## A Guarantee for Quality And Accuracy

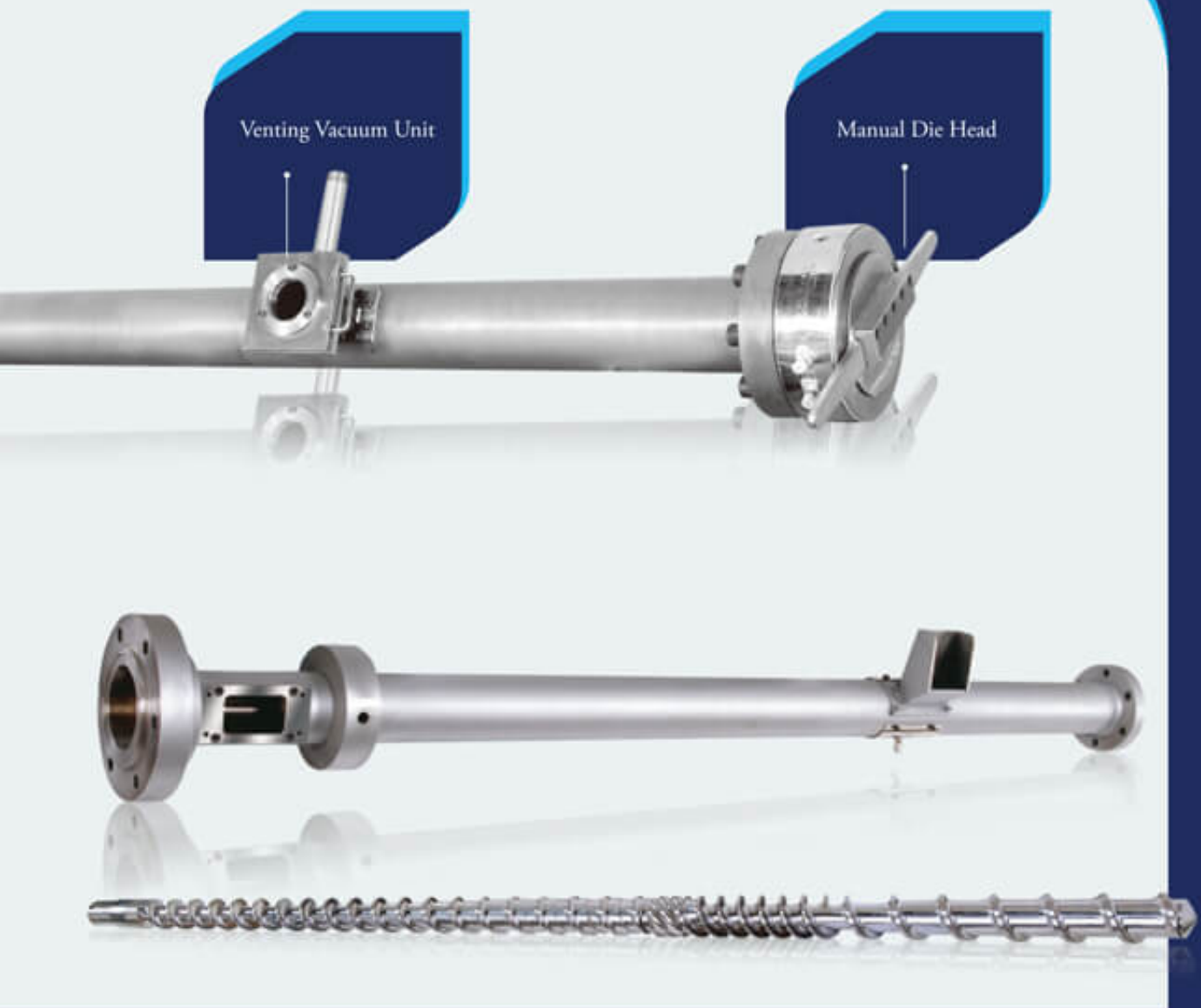
Constantly upgrading the screw / barrel manufacturing technology has been Nan Yun's core strategy since its inception, as such we have continually invested in introducing various advanced barrel machining equipment, such as horizontal CNC four-axis machining equipment, bimetal centrifugal manufacturing equipment, twin-hole barrel machining equipment and rifle grooving machine, etc. As a result, the best roundness, straightness and surface roughness can be achieved. Furthermore, these advanced machining equipment also allow us to upgrade machining efficiency, lower production costs while offering higher quality, competitively priced screws / barrels to our customers.





## Extrusion Screws / Barrels





## Extrusion Screws / Barrels







Static Mixer



Grooved Feed Bush



Gear Pump





# Bimetallic Screw

## Production Method

The **PTA** powder plasma welding applies the positive and negative electrodes of arc welding, allowing the welding path to be completely welded with the base material. The minimum possibility of the welding path becoming less rigid fully prevents the welding layer from peeling off thereby effectively upgrading the life time of the screws.

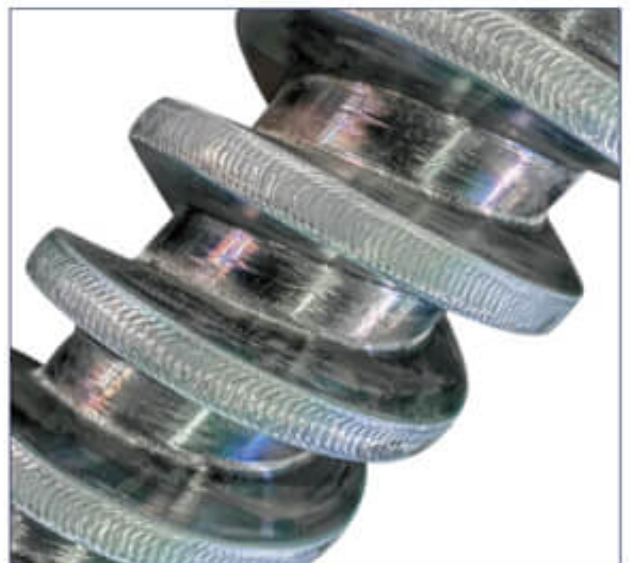
## Outstanding Features

1. Hardness HRC58-62.
2. Hardness layer reaches 1.5-1.8mm thickness.  
Hardness does not decrease with depth.
3. Hardness does not decrease under normal temperature.
4. Outstanding wear-resistance and corrosion-resistance.
5. Abrasion resistance / wear resistance on the hardened layer is 2-3 times higher than nitrided screws.



## PTA

**PTA** is a Nickel-based Tungsten Carbide Alloy. Its chemical composition includes Ni, WC, Co, Fe, Si, B, Cr and C.



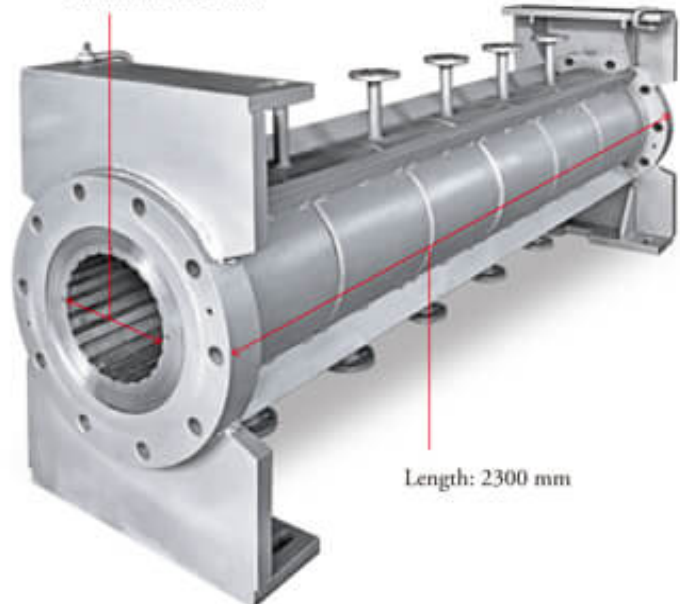
# Bimetallic Barrel



Bimetallic Thickness: 6m/m  
Hardness: HRC 55-60









Diameter: Ø254 mm



Length: 2300 mm



## Characteristic and Application of TCB Al

TCB Kinds and Major Composition	Hardness (HRC)	Wear-resistance	Corrosion-resistance
Fe-based Alloy <hr/> <b>TCB-12</b> <hr/> Fe-WC-Ni-Co-Cu-B	58~60 <hr/> WC 15% <hr/> Ni 15% <hr/>		
WC-based Alloy <hr/> <b>TCB-20</b> <hr/> WC-Ni-Co-Fe-Cu-B+Cr,Mo,V	62~66 <hr/> WC 25% <hr/> Ni 15% <hr/>	 Extra Wear-resistance	
Nickel-based Alloy <hr/> <b>TCB-60</b> <hr/> Ni-WC-Co-Fe-B-Si-B	52~56 <hr/> WC 25% <hr/> Ni 15% <hr/>		 Extra Corroosion-resistance

loy



Excellent



Good

Temp. Range (°C)	Thermal Expansion Co-efficient(Alloy) RT-250°C(/°C) RT-400°C(/°C)	Resin Category	
		General Resin	Applicable Resin
≤400	$11.0 \times 10^{-6}$ $11.4 \times 10^{-6}$	Medium Wear-resistance Medium Corrosion-resistance Glass fiber content: Within 30%	PE, PP, ABS, AS, PS, TPE EP, PU, PE, UP
		Engineering Resin	Applicable Resin
		Medium Wear-resistance Medium Corrosion-resistance Glass fiber content: Within 30%	PA, PC
≤450	$11.4 \times 10^{-6}$ $12.1 \times 10^{-6}$	General Resin	Applicable Resin
		Medium Wear-resistance High Corrosion-resistance Glass fiber content: Over 30%	PE, PP, ABS, AS, PS, TPE, PVC
		Engineering Resin	Applicable Resin
		Medium Wear-resistance High Corrosion-resistance Glass fiber content: Over 30%	PA, PC, PBT, PET, POM, PPO, PEEK, LCP, PPS, PAR, PES
≤450	$11.9 \times 10^{-6}$ $12.4 \times 10^{-6}$	General Resin	Applicable Resin
		High Wear-resistance Medium Corrosion-resistance Glass fiber content: Over 30%	PE, PP, ABS, AS, PS, TPE, PVC
		Engineering Resin	Applicable Resin
		High Wear-resistance Medium Corrosion-resistance Glass fiber content: Over 30%	PA, PBT, PET, POM, PC, PPO, PAR





Quality Recognized by Leading Plastic /  
Rubber Machinery Manufacturers



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# Injection Screws / Barrels

