

SHINI EUROPE

Plasticizing systems

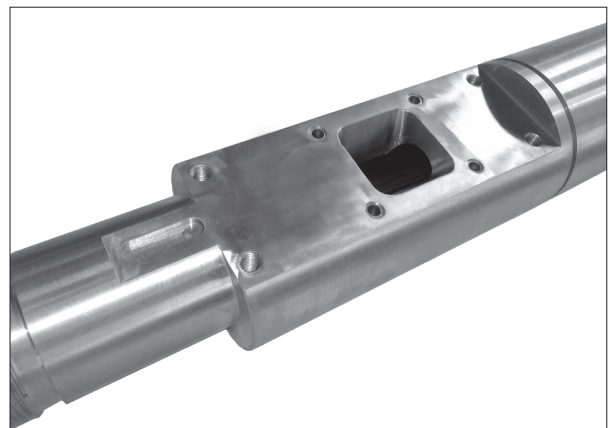
All you need in one place

Plasticizing systems

Shini Europe offers plasticizing systems of Asian production, designed on the basis of international standards. The elements are made of high-quality metal alloys and are characterized by high resistance to abrasion and chemical corrosion. Plasticizing systems are used for all types of injection molding machines for plastics.

In the offer

- nitrided and bimetallic screws and barrels for all kind of injection moulding machines.



- screw tips, check valves, check valve sleeves and mixing tips, accessories for barrels: heads, adapters, shut off nozzles, spring nozzle, flanges and cooling rings.



Every project is created individually based on the detailed technical documentation, information about processing materials provided by the client.

Features:

- depend of application: screws, barrels and other accesories are made by four main alloys: 38CrMoAlA, SKD 61, SKD 11, 42CrMo
- suitable for: PP, PC, PE, PA66, ABS, PS, PVC, PMMA and others, depend of customer demands
- screws and barrels are characterized by high resistance for high pressures, temperatures, scratches, chemical corrosion and they are polished to high-gloss
- during production used materials are processed by: mechanical cutting, laser treatment, electrolytic pickling and heat treating
- material hardness are measured using Rockwell method



1. Standard with nitrided layer

Depend on the needs, plasticizing screws with different geometry are used. They are used for plastics such as: ABS, PP, PE PA, PC, PS, PU, PVC, LCP, EVA.

Technical specification

Range of application

Screw diameter	15-360 mm
Clamping force	250-32000 KN
Injection process capacity	25-40000 grams

Mechanical and physical properties for nitrided screw and barrel

Nitrided layer depth	0.5-0.8mm
Nitrided layer hardness	950-1020HV
Nitrided layer brittleness	≤Grade 2
Surface roughness	Ra 0.4 μm
Screw straightness	0.015 mm
Chrome plating layer thickness	0.03-0.08 mm

2. Bimetallic grade version with additional anti-abrasion coating layer

Bimetallic coating is just like a suit of armour, with more antiwear and resistance ability, that can extend the life time of screw and barrel. Applications: Standard bimetallic grade is suitable for various types of plastic materials up to 30% of fibre glass. Bimetallic plus version is suitable for plastic materials include more than 30% fibre glass or other additives like: magnetic powder, ceramic powder, aluminium magnesium powder, iron powder etc.

Technical specification

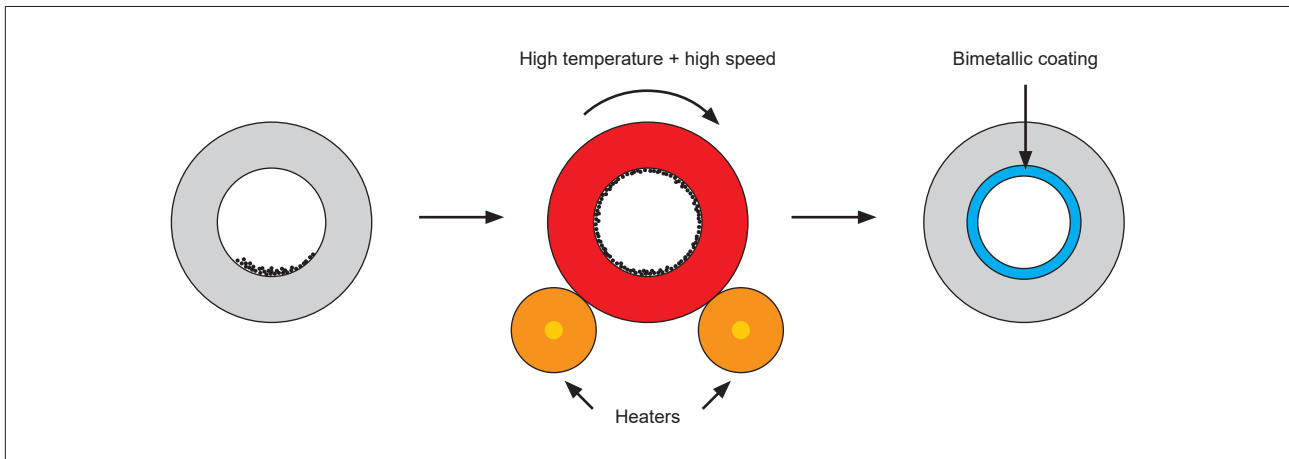
Range of application

Screw diameter	15-360 mm
Clamping force	250-32000 KN
Injection process capacity	25-40000 grams

Mechanical and physical properties for bimetallic screw and barrel

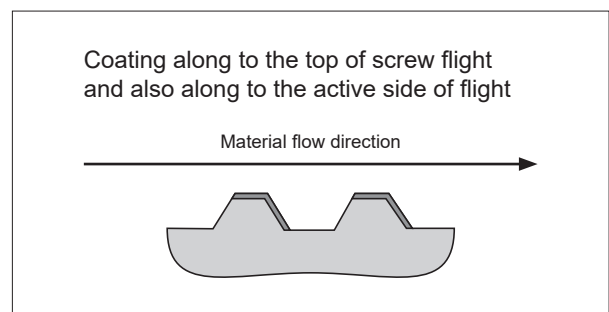
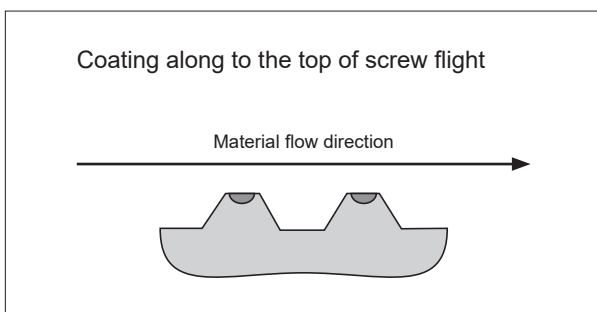
Nitrided layer depth	0.5-0.8 mm
Nitrided layer hardness	950-1020 HV
Nitrided layer brittleness	≤Grade 2
Surface roughness	Ra 0.4 μm
Screw straightness	0.015 mm
Bimetallic layer thickness	2-4 mm
Bimetallic layer hardness	62-64 HRC
Chrome plating layer thickness:	0.03-0.08 mm

View of bimetallic powder applying process for the barrel



Both bimetallic and bimetallic plus products are the same nitrited and got the same chrome plating layer. The difference is in production manufacturing and composition of bimetallic powder alloy.

For bimetallic products two different ways of coating can be distinguished. Standard products - coating is on the top of flight. Special request (or when the plastic flow make a great pressure) - coating is also on the active side of flight.



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