

AL-DATEC

tec

Werkzeugbau GmbH



*Production and regeneration of
barrels, screws, screw-tips*



COMPANY PROFILE

AL-DA TEC Werkzeugbau GmbH is leader in **production** and **reparation** of screws, barrels and screwtips for injection moulding machines and food and plastic extruders.

Our production philosophy is focus on client satisfaction.

That is why after **40 years** in the market, with a continuous research of new materials and development of technologies more and more enhanced, we are the leader in our field and we can satisfy all customer requests.

Our point of strength is our **flexibility** to meet client requirements by means of direct contact between technical and manufacturing department and a dynamic and young staff.

AL-DA TEC Werkzeugbau GmbH with his **production facility in Italy**, a few kilometers from Milan and from main airports in the North of Italy, is the leader in production and reparation of screws (**maximum length 5 meter**), barrels (**maximum diameter 220mm**) and screw-tips for injection moulding machines and extruders for plastics and food since **1975**.

COMPANY PROFILE





MANUFACTURING

Screw **manufacturing** can be done following **samples** or **by drawings** in several materials, with the possibility to make different **profile** based on material.

REPARATION

As soon as we receive the used screw we carry out the following checks:

- ⇒ crest diameter
- ⇒ thread conditions
- ⇒ coupling conditions
- ⇒ kernel wear and coupling diameter

The scope of such verifications is to estimate the operations to carry out, in order to bring back the screw to the original level, operating on the wearied parts, ruined or broken off during the use.

The restoration of the original diameter, essential condition to restore the capability to transport the plastic material to the original level, is done by means of welding material on the crest by means of automatic machines that assure a homogenous welding and absence of blows.

After that there is a finishing and final polishing, which assure a final rugosity lower then 0,06RA. There are several materials for repairing and the choice is based on customer requirements.

BARRELS



MANUFACTURING

Barrel **construction** can be done following **samples** or **drawings** in various materials: standard nitrided, hardened steel (for small dimension items), bimetallic, where there are materials with high abrasion and corrosion.

REPARATION

Barrel reparation depends on construction material.

Standard nitrided and hardened steel barrels:

Basic purpose is to restore the correct tolerance between barrel, screw and screw-tip in order to bring back the moulding to the original level.

Internal bushing:

The overlay (partial or total) is carried out in X155CrV121. We always propose an offer for a new barrel in standard nitrided steel and bimetallic as an alternative.

Bimetallic barrels:

If barrels are in Bimetallic material, the only way to proceed is to increase the inner bore with the re-newing or supply of the screw and of a series of valves (interchangeable with the existing) suitable for the cylinder. In such case the feasibility of this type of renewing is based on moulding material. are several materials for repairing and the choice is based on customer requirements.

- **Nitrided steel (41CrAlMo7) 60 HRC:** It is a steel, with aluminium, chrome, molybdenum which, during the heat treatment, create nitridi very strong, which rise hardness of 1050 HV approx. This material is suggested where there are not problems of corrosion and wear. (SCREWS and BARRELS)
- **Hardened steel (X155CrMoV121) 58-60 HRC:** It has a very high percentage of chrome, which gives a good strenght and long life. This material is suggested where there are wear problems. Life: 2-3 times standard nitrided. (SCREWS and BARRELS)
- **Hardened steel to 60-62 HRC – Isotrix:** This hardened steel has an high percentage of chrome, tungsten, vanadium which guarantee a very high resistance to wear and corrosion. These characteristics can give a life longer than a plasticized screw build in X155CrMoV121. Life: 4-5 times standard nitrided. (SCREWS ONLY)
- **(X155CrMoV121) with CLIN-NIVE 1200 Vichers:** CLIN-NIVE is an heat treatment for italian market only (for plastic stamping) which increase screw performances in terms of resistance to abrasive and corrosive materials with no impact in cost. Minimum delivery time: 6 working weeks (SCREWS ONLY)
- **Sintered steel:** Sintered steel screws complete our product range. These materials are chosen according to product characteristics to be processed, granting screw. **Lifetime equal to 12 times** of nitrided steel screws. (SCREWS ONLY)
- **Bimetallic (abrasive and corrosive plastics) 62-69 HRC:** There is an internal layer of very hard material, with a thickness of 5mm approx, with a high resistance to corrosion and wear, with an hardness value up to 65 HRC. This material is suggested where there are corrosion and wear problems. Life: 4-5 times standard nitrided. (BARRELS ONLY)

OVERLAYS TABLE

| Overlay | Hardness | Wear resistance (1-5) | Corrosion resistance (1-5) |
|----------------|-----------|-----------------------|----------------------------|
| Stellite Gr.1 | 50-55 HRC | 4 | 3 |
| Stellite Gr.12 | 45-48 HRC | 3 | 3 |
| Castotig 5 | 58-62 HRC | 5 | 3 |
| Base Nikel 56 | 52-55 HRC | 4 | 5 |

SCREW-TIPS

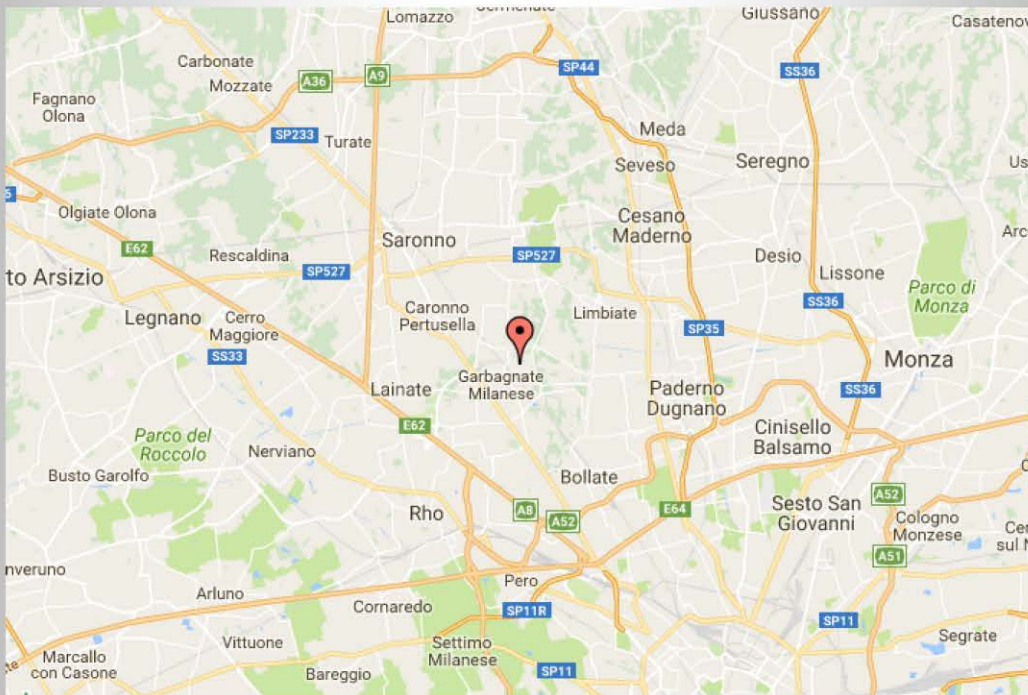


In our warehouse there are screw-tips available for the well-known brands in Italy and Europe, with the possibility however to supply by samples or drawing, groups of every kind.

All our screw tips are manufactured with hard metal overlay, valves and spacers in hardened X155Cr-MoV121.

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AL-DA TEC Werkzeugbau GmbH

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