# Rotors Manufacturing

Figure N°1 – *Rotor made by Samputensili*

From the experience of more than 50 years in the field of cutting tools for gears, Samputensili is at customer's disposal to assist with its experience in the manufacturing of rotors for air/gas compressors and to enhance the quality of the mating between the screws (thanks to the software developed by our engineers) on job order basis.
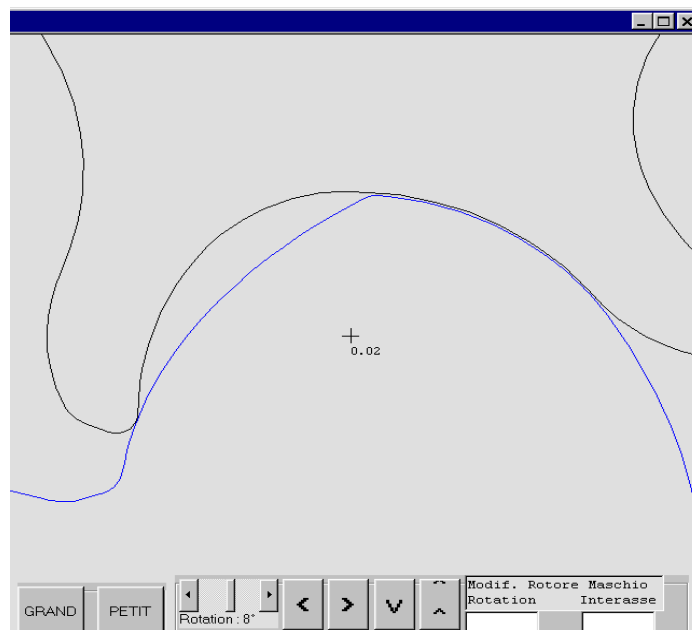
Figure N°2- *Study of the best profile*

CNC profile grinding machines give us a clear advantage in terms of flexibility and reaction time when prototypes are needed in short time.
In this case, we can grind from solid turned blanks and transform them in the first usable pair of rotors in a few hours.
Profile grinding machines can use both ceramic dressable as well as electroplated CBN grinding wheels, engineered and manufactured only by specialized companies.

Figure N°3- *Both ceramic and CBN wheels can be used*

A full range of state of the art CNC machinery, covering the roughing of the profile, shaft and profile grinding, (also rotor balancing when required) are carried out directly in our own manufacturing plant in order to keep the most critical operations under our direct control.
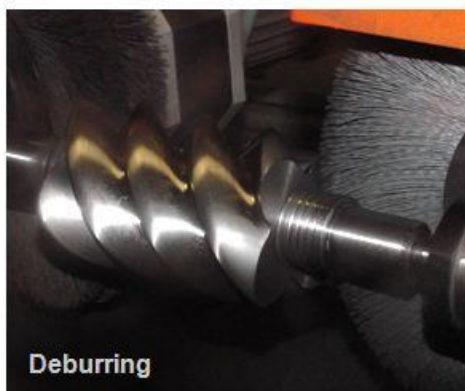
Figure N°4- *All operation are done with modern machines*

To ensure the highest standard quality level, CNC checking equipment are widely employed at any step of manufacturing cycle.
Linked to the profile grinding machine via a P.C. in order to correct in manual or automatic mode eventual profile points out of tolerance band .

Figure N°5 - *Checking equipment linked with grinding machine*

Types of rotor produced by Samputensili
  ➢ *Rotors for air compressors, oil flooded*
  ➢ *Rotors for refrigerating compressors, oil flooded*
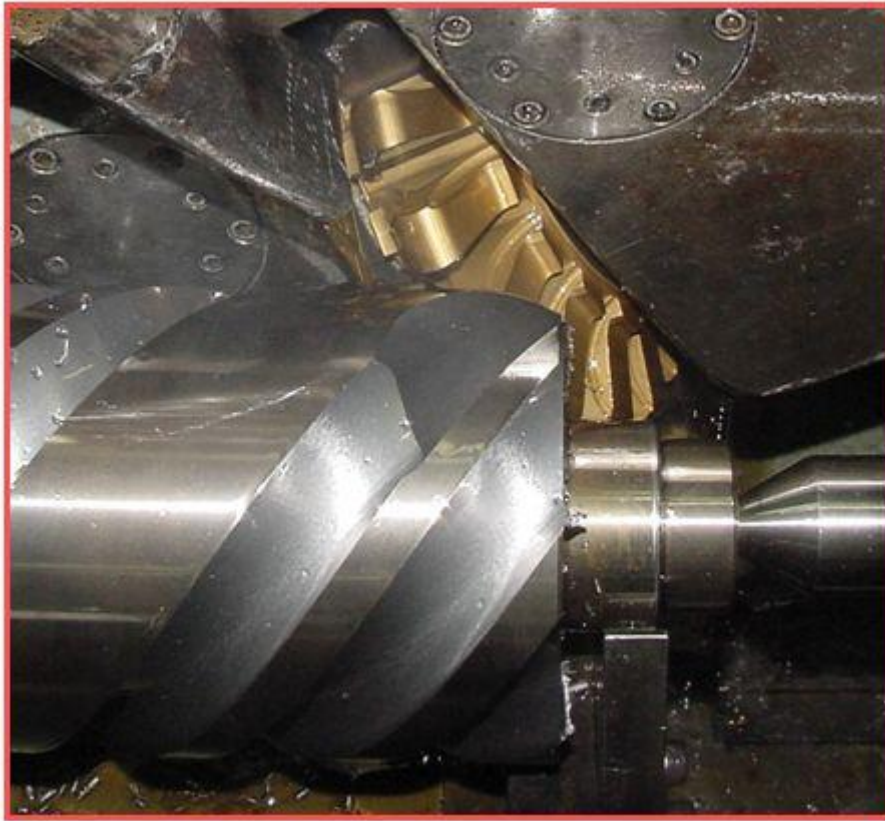 ➢ *Rotors for dry type application*

Rotor sizes range:
  ➢ *O.D. up to   370 mm*
  ➢ *Overall length   up to   1.000 mm (longer parts on request)*
  ➢ *Grinding length up to   500 mm ca.*
  ➢ *Max weight up to   150 kg.*

Figure N°6 - *Profile checking*

Figure N°7- *Roughing operation with milling cutter*