SolidRotor

PHICOMP®



- **Solid single-piece rotor** with excellent concentricity
  - Low noise and low power consumption
  - Reduced load on magnetic bearing and motor
- **Curved thin wall design**
  - Reduced air friction decreases power consumption
  - Reduced moment of inertia enables quick start/stop
- **Coating DD** – High-End European nickel diamond coating
  - Extended coating for highest lifetimes*
  - Consistent yarn quality and strength over lifetime

Applicable for	• Autocoro 8 to 11
Rotor groove types	• Standard: G, T, Ts, Tc(TT), K, U, S • PhiComp customized types: Tx
Rotor groove diameter	• 28mm to 46mm**
Coating	• DD – Nickel diamond coating for extended lifetime • DDN – Nickel diamond coating and top (smooth) nickel layer
Expected service life*	• DD: > 35'000 h
Warranty	• 12 months / 8000 h

* Specific application may lead to reduced lifetimes: sandy cotton, bleached cotton. man-made fibers with titanoxyd, viscose

Rotor type	Order number
G 628 DD	12000014
G 630 DD	12000017
G 631 DD	12000020
G 633 DD	12000023
G 636 DD	12000026
T 633 DD	12000002
Tx 633 DD	12000053
T 636 DD	12000005
T 640 DD	12000008
T 646 DD	12000011
Tc 636 DD	12000059
Tc 640 DD	12000050
Tc 646 DD	12000035
U 640 DD	12000044
S 652 DD**	12000041
K 631 DD	12000038

** larger rotor diameters on request

Cannot find your rotor type or need a specific problem solution: please contact us

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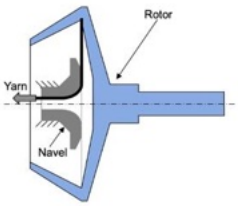
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Version 1.6

SolidRotor

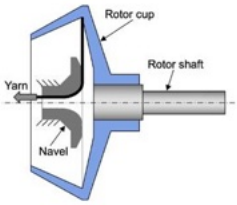
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- **Design SolidRotor**

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Others

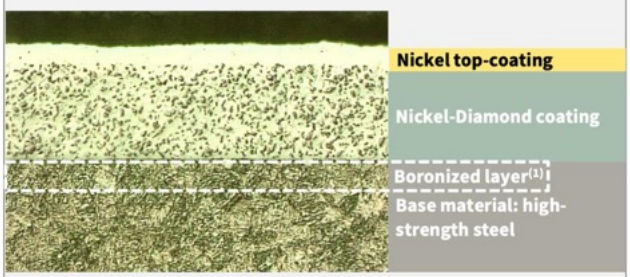


- **Single-piece design**
  1. Higher accuracy (run-out)
  2. Less noise
  3. Lower power consumption
  4. Reduced load on Rotor Motor



- **Diamond-Nickel Coating**
  - **European coating application**
    - **High yarn strengths and low CV** due to constant coating quality
    - **High wear resistance (lifetime)** due to superior distribution of diamond in a hardened nickel basis
    - **Low variation of technological yarn values over lifetime** due to superior evenness of the coating layer
  - **Options**
    1. DD-coating: **D + D**
    2. DDN-coating: **D + D +N**

- **Coating Design**

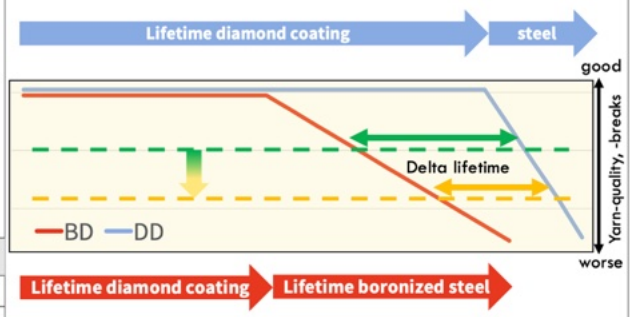


1) PhiComp rotors don't have (B) boronized layer underneath the nickel diamond coating

- **Key facts BD vs. DD**
  - Diamond coating (D) defines the yarn quality
  - The longer the spinning in diamond coating layer the longer the period of constant yarn quality
  - Boronizing (B) is a thin layer hardening process of the steel, which is causing deformation, cracks and tension of the cup due to high process temperatures
  - Yarn quality deteriorates gradually when spinning in the boronized steel or on the non-boronized steel

	BD	DD
Lifetime of rotor cup	100%	appr. 120%
Constant yarn quality period	100%	appr. 180%
Accuracy cup – run-out	worse	better
Power consumption due to run-out	higher	lower
Load on rotor motor due to run-out	higher	lower

- **Yarn quality over lifetime**



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