Rotor cup and bearing

Semi-automated rotor spinning machines

PHICOMP®



- **Coating** – High-End European nickel diamond coating
  - Superior coating for highest lifetimes
  - Consistent yarn quality and strength over lifetime
- **Curved thin wall design**
  - Reduced air friction decreases power consumption
  - Reduced moment of inertia enables quick start/stop
- **Bearing**
  - Standard bearings up to 100’000 rpm
  - High-speed bearing up to 110’000 rpm

Applicable for	• Schlafhorst/Oerlikon/Saurer BD3xx, BD4xx, BD6,7,8 • Rieter BT9xx, R3x • Taitan, Rifa and others
Rotor groove types	• Standard: T, V, Z, R, Tc U, Tr, and customized types
Rotor groove diameter	• 30mm to 46mm (>46mm **)
Material	• Steel: high-strength quality • Aluminum
Coating	• D(D) – Nickel diamond coating for extended lifetime • D(D)N – Nickel diamond coating + top (smooth) nickel layer • N – Smooth surface for sensitive application (steel rotor only)
Expected service life*	• D: > 20’000 h, 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

		Order number	
Rotor type	**Rotor speed**	**Cup**	**Rotor complete**
C533/U-D	<110’000	10000074	10000075
C536/U-D	<90’000	10000078	10000079
C536/U-DN	<90’000	10000220	10000221
S536/U-D	<90’000	10000197	10000198
C338/U-D	<90’000	10000082	10000083
C341/U-D	<90’000	10000086	10000087
C344/U-D	<70’000	10000090	10000091
C250/U-D**	<65’000	10000094	10000095
C254/U-D**	<60’000	10000098	10000099
C531/T-D	<110’000	10000062	10000063
C533/T-D	<110’000	10000066	10000067
S533/Tr-D	<110’000	10000213	10000214
C533/Tr-D	<110’000	10000070	10000071
C531/R-D	<110’000	10000106	10000107
C248/S-D**	<65’000	10000102	10000103

** larger rotor diameters on request

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

		Order number	
Rotor type	**Rotor speed**	**Cup**	**Rotor complete**
T 32 D	<110’000	10000135	10000136
T 32 DN	<110’000	10000139	10000140
T 33 D	<110’000	10000131	10000132
T 33 DN	<110’000	10000169	10000170
T 34 D	<110’000	10000002	10000003
T 34 DN	<110’000	10000125	10000126
T 34 DD	<110’000	10000147	10000148
T 34 DDN	<110’000	10000150	10000151
Ts 36 D	<90’000	10000012	10000013
Ts 36 DN	<90’000	10000006	10000007
Ts 40 D	<80’000	10000128	10000023
Ts 40 DN	<80’000	10000110	10000115
Ts 43 D	<75’000	10000026	10000027
Ts 43 DN	<75’000	10000113	10000114
Vs 34 DN	<110’000	10000176	10000177
Vs 36 DN	<90’000	10000122	10000123
Vs 43 DN	<75’000	10000118	10000119
Z 37 DN	<90’000	10000166	10000167
Z 40 DN	<80’000	10000162	10000163
Z 43 DN	<75’000	10000158	10000159
Tc 36 DN	<90’000	10000193	10000194
R 36 D	<90’000	10000217	10000218

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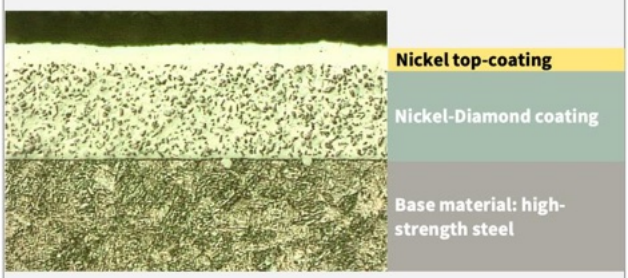
PHICOMP®

- **Rotor bearing**
  - **High-speed rotor bearing**
    - **High productivity** due to rotor speeds up to 110'000 rpm
    - **Long lifetime** due to superior materials applied (e.g.: special bearing steel and ceramic)
    - **Options**
      - PC 105-9C1 – one relubrication port
      - PC 105-9C2 – two relubrication port
  - **Other rotor bearings**
    - <80'000 rpm : PC 80-10C1/2
    - <90'000 rpm : PC 90-9C1/2
    - <100'000 rpm : PC 100-9C1/2



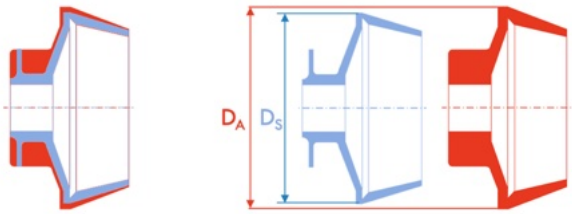
- **Diamond-Nickel Coating**
  - **European coating application**
    - **High yarn strengths and low CV** due to constant coating quality
    - **High wear resistance (lifetime)** due to superior distribution of diamond in a hardened nickel basis
    - **Low variation of technological yarn values over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

- **Coating Design**



- **Advantage of Steel rotor cups**
  - **Lower power consumption** due to a smaller outer diameter of the steel rotor cup
    - Smaller Diameter = less air-friction = lower power consumption
  - **Extended lifetime** due to higher strength and hardness of the steel
    - Rotor can be used for a limited time if the coating is already worn (replacement phase)
  - **Lower sensitivity to spin finish** under coating surface corrosion (e.g., viscose, PES)

- **Comparison**



	Steel	Aluminum
Material strength	100%	appr. 50%
Material hardness	100%	appr. 40%
Weight of rotor cup	100 – 105%	100%
Outer diameter (D)	D_S	$D_A=D_S+1.5mm$

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