New Turbine Features

Dynamic Speed Control (DSC)

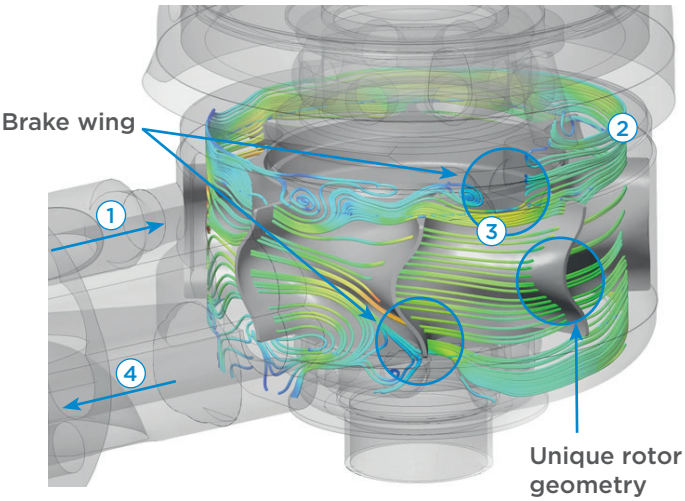
Dynamic Speed Control (DSC) is the second evolution stage of the unique patented speed brake system in Dentsply Sironas Turbine range. Start of the art engineering in air flow design contributes to a sophisticated system fitted into our smallest head size ever. Our new brake wings and a redesigned rotor geometry are what make this technology possible.

How does this work?

1. Air enters the handpiece head
2. The incoming air turns the rotor
3. The air swirls at the brake vanes which keeps the rotor at a constant speed on both the top and bottom ends of the motor head.
4. The air exits the handpiece at the air outlet point

The DSC ensures:

- High torque at a constant level
- No vibration
- Notably smoother and quieter running
- Longer cutting performance of the burr
- No thermal damage at the tooth
- Longer lifetime of the rotors



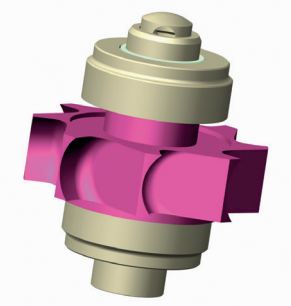
Quick Stop Function

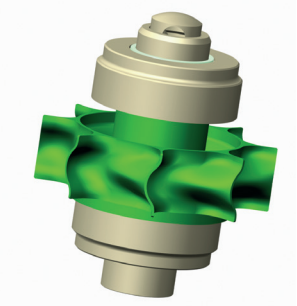
The new Quick Stop Function provides a wear free mechanism that functions without a mechanical influence. The result is a run-down time of less than one second.

How does it work?

- The air turbulence at the DSC brake wing site allows the rotor to stop faster than ever before
- The lightweight rotor (see comparison pictures below) reduces the given mass inertia which also leads to a quick stop of the rotor

This picture shows a **standard rotor** without any weight reduction or aerodynamic optimisation.





This picture shows the **new rotor design** which is lighter and more aerodynamic in its shape and design

New Turbine Features

Power Function with smallest heads:

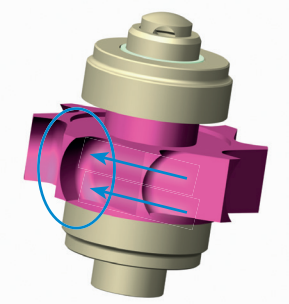
- Optimised new rotor due to latest construction and production technology (free form geometry)
- Ensures high power with very small head dimensions

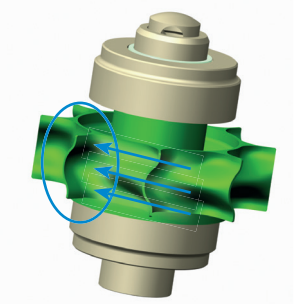
This picture shows the design of a **standard rotor**, without any advantages

a. Conventional design

b. High inertia

c. Less contact surface for the air





This picture shows the **new design of the rotor** in the turbine

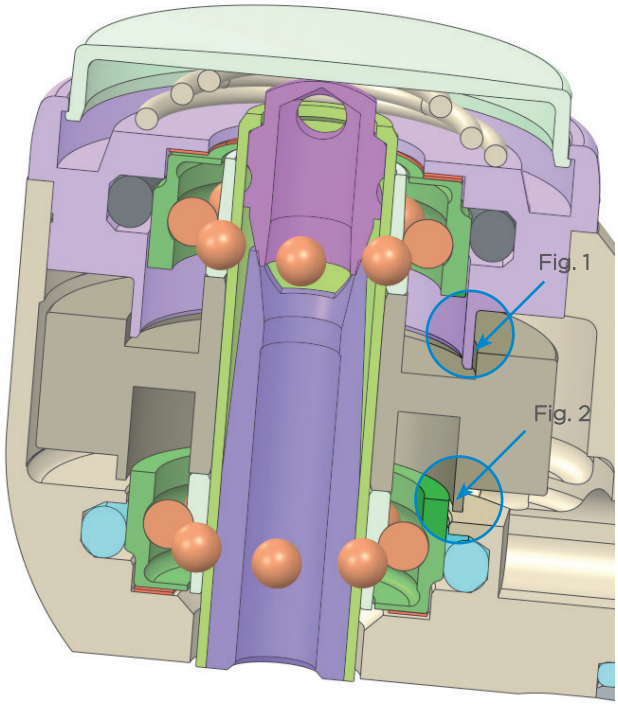
a. Lightweight

b. Low inertia

c. More contact surface for the air (arrow)

Suck back function

- Suck back function is enabled due to the gap seal
- The gap seal (shown in fig. 1 & 2) is located between the rotor and the interior of the head
- This narrow gap is filled with air during the rotor turns
- This avoids the passage of contaminated liquids



Cross-section of the new turbine head

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