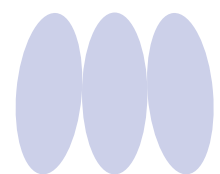


TwinPower 4H Highspeed Series
State-of-the-Art Engineering



J.MORITA MFG.CORP.

Thinking ahead. Focused on life.



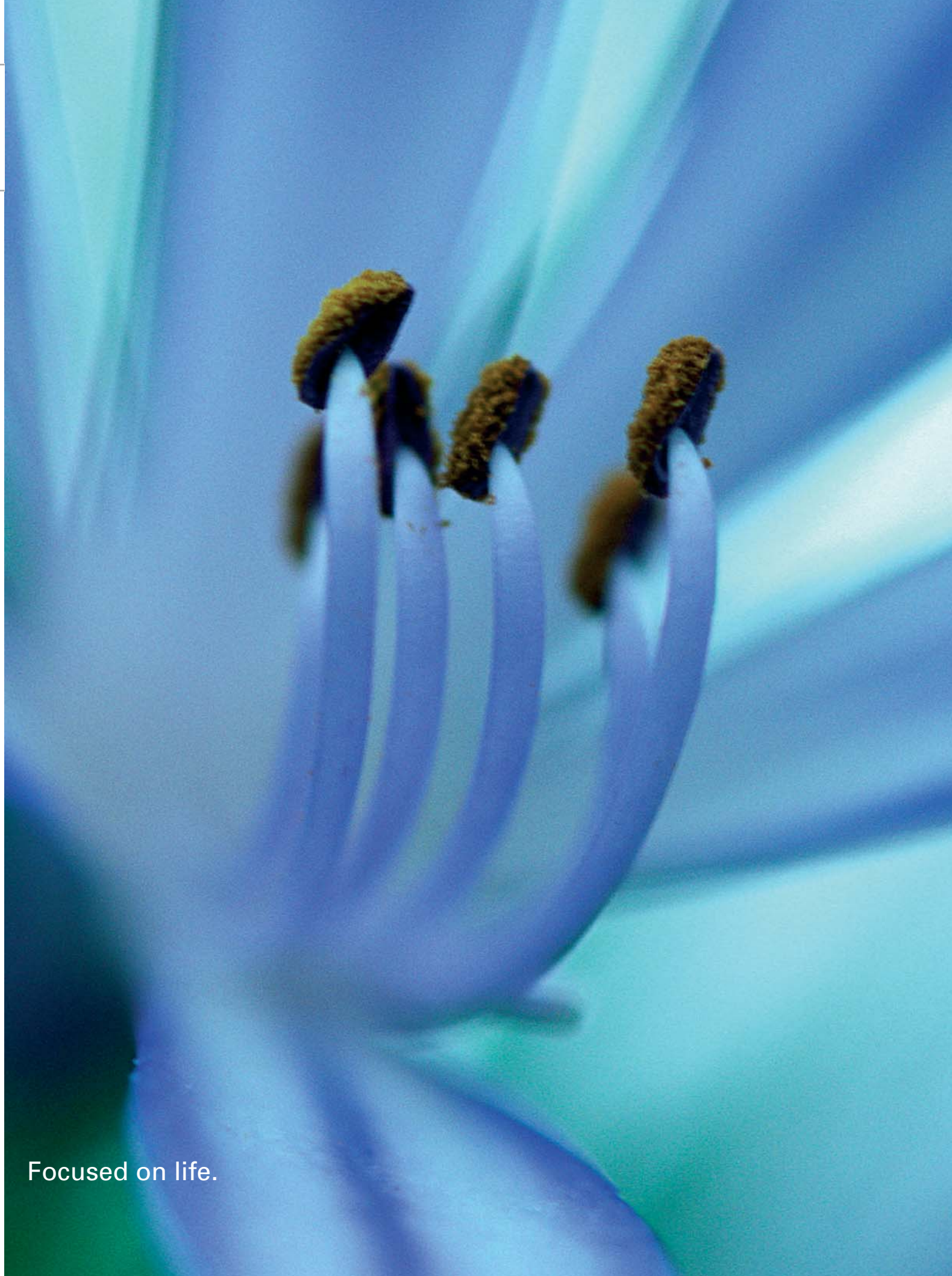
MORITA



IMMORITA MFG. CORP. ^{the} Ball _{MARK}

TRANSPOWER TURBINE AIR
MORITA
PAR-4HX-0
SN U 10700
CE

Thinking ahead.



Focused on life.

Where Design Meets Function

The new TwinPower 4H highspeed series is a masterful symbiosis of design and function. Combining state-of-the-art engineering with highly practical and user-friendly handling features. TwinPower highspeeds are well equipped to provide you first-rate instrumentation for performing all clinical procedures.





Double-Impeller Technology

Provides class-leading, high-powered performance (up to 25 W) while delivering constantly balanced torque.

Quick Stop Brake System

Rapid braking for optimal operator and patient safety.

Unique Zero Suck-Back Technology

Prevents the intake of aerosol and other particles in the hand-piece, coupling, air-line and treatment unit.

Ceramic Ball Bearings

40% lighter and 3 times more durable than traditional stainless steel ball bearings.

Radial Air Bypass

Minimizes patient discomfort by displacing exhaust air away from the preparation area.

Quiet Operation

Advanced fluid dynamics enables extremely quiet, highspeed instrumentation.

Compact Head

Offers enhanced maneuverability and superior access.

Optical Glass Rod

Highly focused and stable illumination (25,000 LUX).

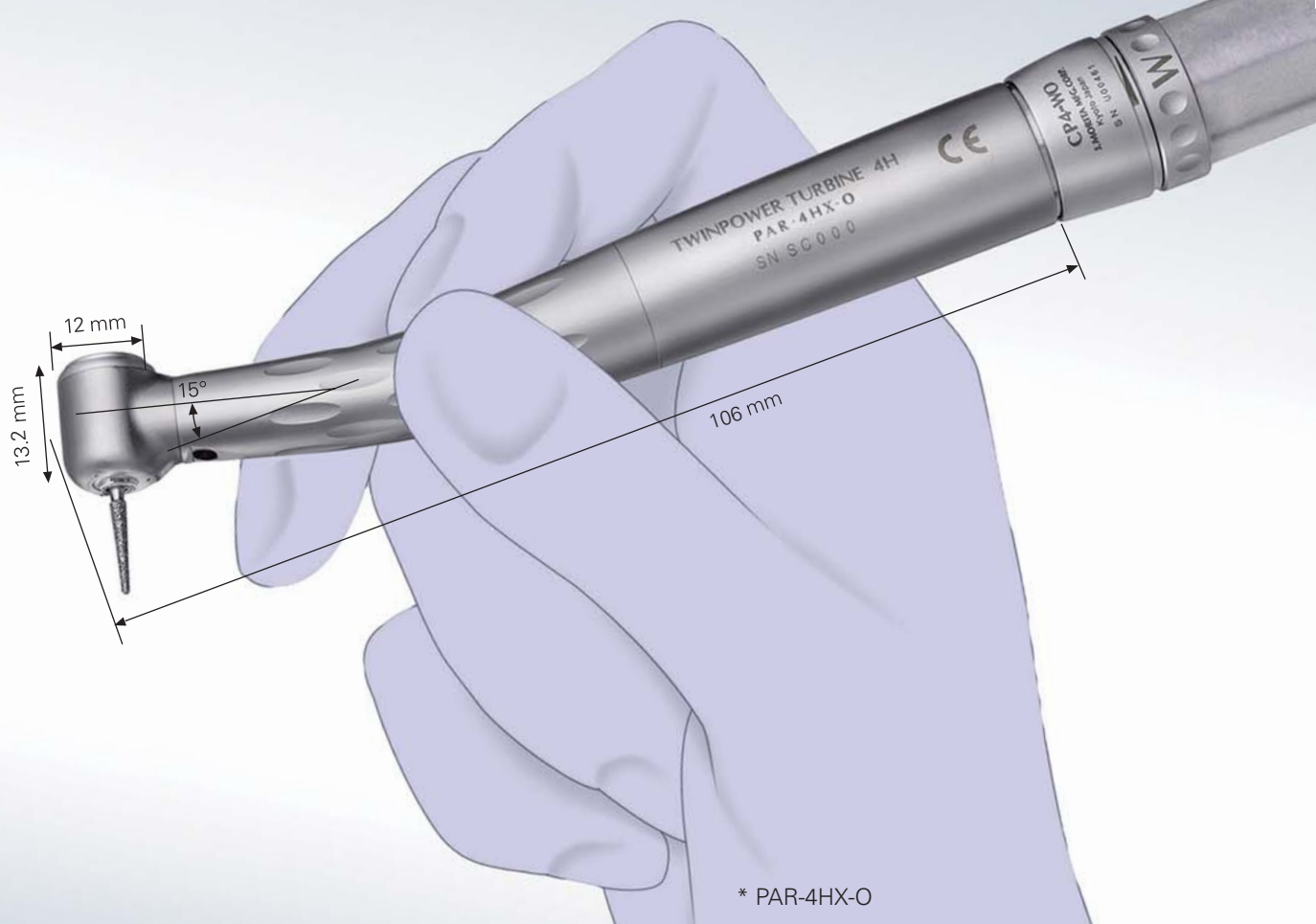
TwinPower Connection Options

Direct connection to most commonly used coupling types.

Easy Cartridge Replacement

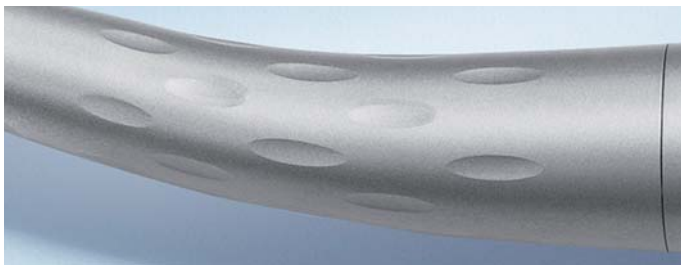
Capsule-type cartridge rotor allows for simple exchange when required.

**TwinPower 4H Highspeed Series
Features at a Glance**



Well-Balanced – Where Ergonomics Meets Design

With Morita's unique design, TwinPower highspeeds form a perfect balance of efficiency and operator comfort. Light, compact, convenient and highly functional – in a word: perfection.



Comfortable Even During Extensive Use

The compact and lightweight design of TwinPower is extremely comfortable to work with – even over extended periods of use. Weighing only 51 g*, fatigue of the operator's hand, wrist and fingers is significantly reduced.

Ideal Angulation

The practical 15° angle of TwinPower's handpiece enables you to easily maneuver around the various areas of the oral cavity. It is also perfectly angled to enhance alignment of the bur shaft with the tooth's axis.

New Grip Design and Surface Treatment

The TwinPower 4H series features a newly designed grip, which enables a relaxed hold of the handpiece. The new special ceramic-impregnated surface treatment offers up to 30% greater frictional forces, improving grip and durability throughout multiple sterilization cycles.



Power and Dimensions The Facts at a Glance

**TwinPower 4H highsPEEDs are available
in two powerful models.**

TwinPower 4HX: Torque Up Model



- Head size: Ø 12 mm
- Head height: 13.2 mm
- Power: 25 W
- 3 air/water spray nozzles
- Weight: 48–57 g*
- Push-button chuck
- Optical glass rod

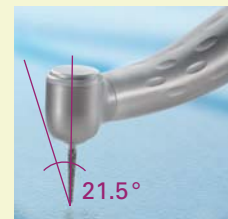
*Weight is dependent on connection option.

TwinPower 4HEX: Standard Torque Model



Powerful even with a small head

- Head size: Ø 10.5 mm
- Head height: 13.2 mm
- Power: 22 W
- 3 air/water spray nozzles
- Weight: 48–57 g*
- Push-button chuck
- Optical glass rod



*The new angle of the head
provides greater visibility*

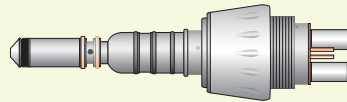


TwinPower Connection Options Total Versatility

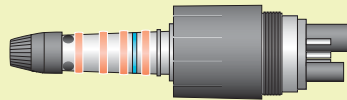
TwinPower highspeeds can now be connected to most commonly used couplings.



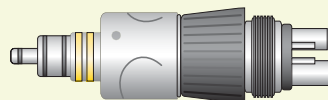
**TwinPower
4-hole coupling**



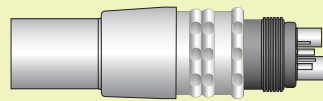
KaVo® MULTIflex® LUX*



Sirona® R/F coupling*



W&H® Roto Quick*



**NSK® Mach/Phatelus®/
FlexiQuick Coupling****

* KaVo MULTIflex LUX is a registered trademark of Kaltenbach & Voight GmbH. Sirona is a registered trademark of Sirona Dental Systems GmbH. W&H and Roto Quick are registered trademarks of W&H Dental Bürmoos GmbH. NSK and Phatelus are registered trademarks of NAKANISHI INC.

** Name of the coupling varies by country.

Overview of the TwinPower 4H Highspeed Series

	TwinPower 4HX Series					TwinPower 4HEX Series				
										
Name	TwinPower Turbine® 4H									
Coupling	PAR-4HX-O		MORITA 4H coupling			PAR-4HEX-O		MORITA 4H coupling		
	PAR-4HX-O-KV		KaVo® MULTIflex LUX*			PAR-4HEX-O-KV		KaVo® MULTIflex LUX*		
	PAR-4HX-O-SR		Sirona® R/F coupling*			PAR-4HEX-O-SR		Sirona® R/F coupling*		
	PAR-4HX-O-WH		W&H® Roto Quick*			PAR-4HEX-O-WH		W&H® Roto Quick*		
	PAR-4HX-O-NK		NSK® Mach/Phatelus®/ FlexiQuick Coupling**			PAR-4HEX-O-NK		NSK® Mach/Phatelus®/ FlexiQuick Coupling**		
	  					  				
Chuck type	Push-button chuck					Push-button chuck				
Power (watts)	25 W					22 W				
Rotation speed (rpm)	350,000 / ± 30,000 (at 0.2 MPa/29 psi)					370,000 / ± 30,000 (at 0.2 MPa/29 psi)				
Air/water spray nozzles	3					3				
Head diameter (mm)	12.0					10.5				
Head height (mm)	13.2					13.2				
Type	for CP4-O	KV	WH	SR	NK	for CP4-O	KV	WH	SR	NK
Weight (g)	51	57	51	50	48	51	57	51	50	48
Driving air pressure	0.2 ~ 0.29 MPa/29–42 psi					0.2 ~ 0.29 MPa/29–42 psi				

Symbol key:



Light



Push-button chuck



Ball bearing handpiece

** Name of the coupling varies by country.

*** Design and specifications are subject to be change without notification.



4-Hole Coupling (with light) CP4-WO

- Water adjustment valve
- Extremely smooth 360° axis rotation
- Coupling for 4-hole (ISO 9168 C-type) hose connection with non-retraction valve

Lubrina – Fast, economical hand-piece maintenance unit

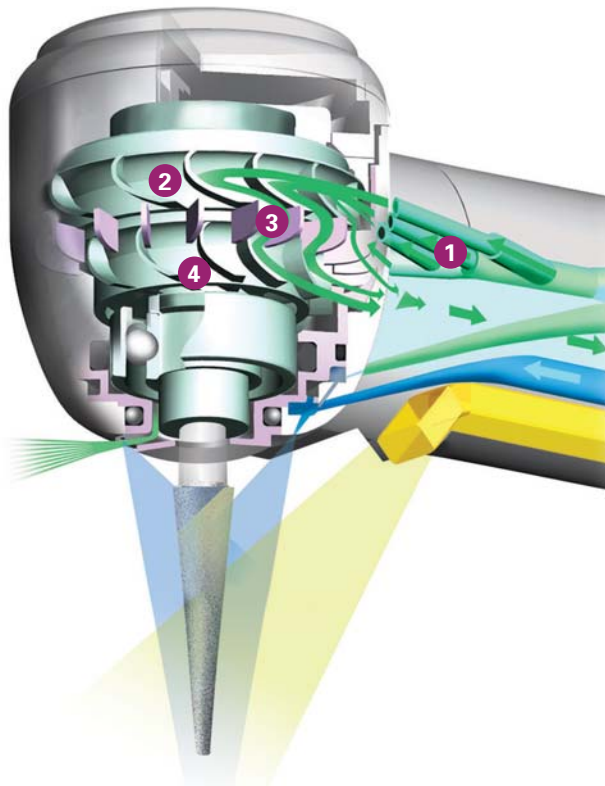
Lubrina is a real time- and cost-saver, servicing up to four handpieces in as little as 100 seconds. Compared with manual lubrication, Lubrina requires only 1/3 of the lubricant.

- Servicing 4 handpieces in 100 seconds
- Built-in chuck maintenance system
- Maintains and lubricates all types of handpieces
- Unique dual lubrication system



Truly Unique TwinPower's Double-Impeller Technology

The TwinPower 4H highspeed series features the all new double-impeller technology – a truly unique engineering advancement.



TwinPower's Design and Operational Concept

The air from the drive air nozzles (1) powers the primary impeller (2). The exhaust air is directed through fixed fins (3) to power the secondary impeller (4). The operational result is a more powerful, constant torque and controlled speed, even under load.

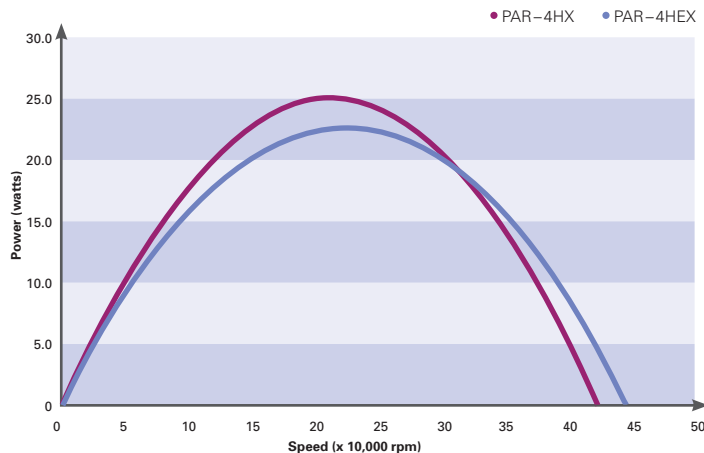
- 1 Three drive air nozzles
- 2 Primary impeller
- 3 Fixed fins to direct the exhaust air
- 4 Secondary impeller

Greater Precision Through Higher Torque

The unique double-impeller technology of TwinPower offers high continuous torque and improved stability, even under high-load conditions. The consistent power provides greater precision during all preparations.

Quiet Operation

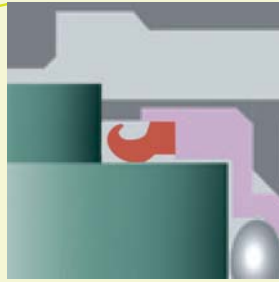
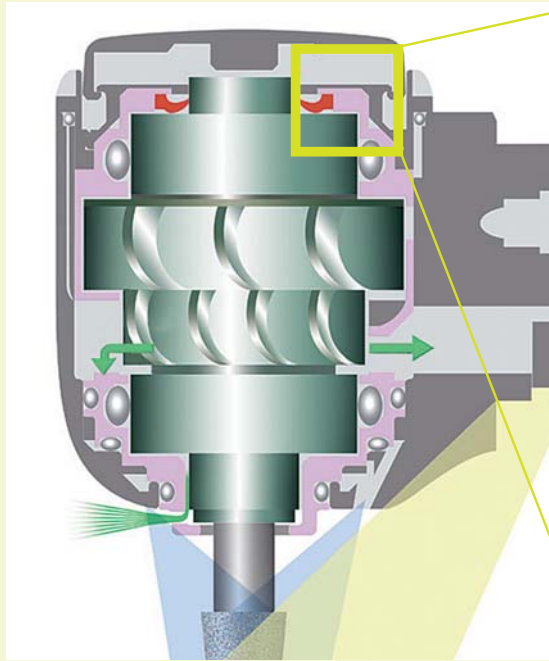
Advanced fluid dynamics reduces high-pitch noise typically found in highspeed handpieces in the 6–7 kHz range. The result is quieter operation for both the dental team and patients.



Extremely Powerful

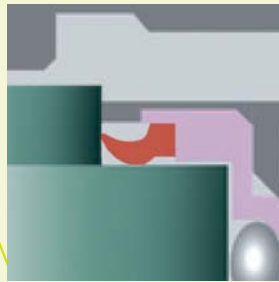
Thanks to the double-impeller technology, the turbines of the TwinPower 4H series are extremely powerful (up to 25 W). Even with the TwinPower's 4HEX smaller head, it still delivers 22 W of high preparation power.

Quick Stop Brake For Preparation Safety



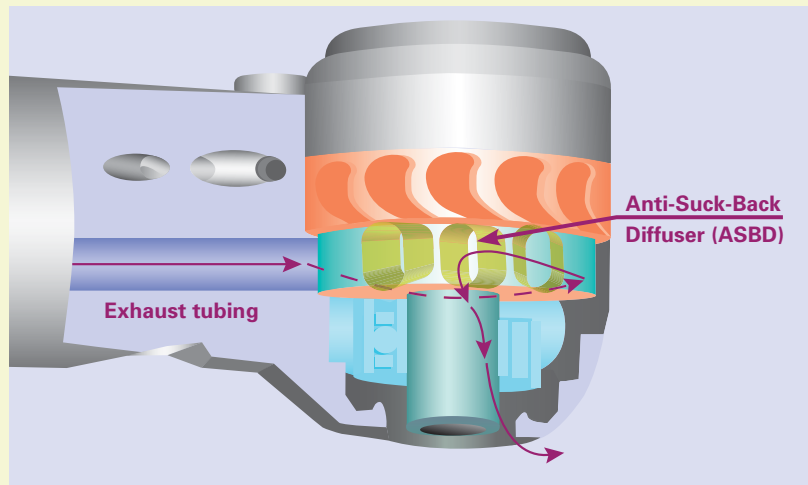
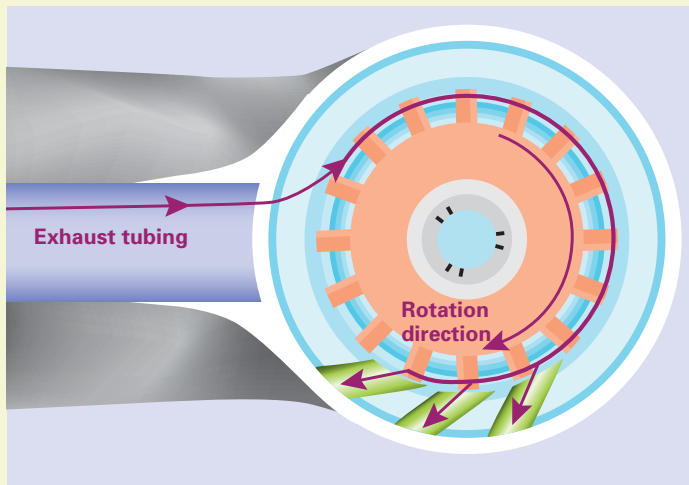
During rotation, the uniquely designed rubber brake ring in TwinPower is pulled away from the turbine axis.

Rapid braking poses a particular challenge for all ball bearing highspeed handpieces. Due to the unique rubber brake ring in the TwinPower quick stop system, it is now possible to rapidly stop the turbine within 2 seconds – allowing for safer and more efficient preparations.



During braking, the rubber brake ring rubs against the turbine axis, stopping TwinPower significantly faster than other highspeed handpieces.

Zero Suck-Back Through Innovative Fluid Dynamics



Zero Suck-Back

1. Drive air flows into an Anti-Suck-Back Diffuser (ASBD) within the capsule. Air in the ASBD is pressurized through centrifugal force created by the impeller rotation.
2. Through the centrifugal force and rotation of the impeller, air continues to flow into the ASBD and remains pressurized even after drive air is stopped.

3. The pressurized air in the ASBD is released to the outside at the bottom of the head.
4. Exhaust air is also directed through the ASBD and released at the bottom of the head.
5. The pressurized air in the ASBD prevents depressurization in the head, therefore enabling true zero suck-back.

Extremely Powerful, Balanced Constant Torque

Balanced constant torque is required to achieve exceptional, smooth tooth preparations. The unique functional design of TwinPower has delivered this balanced constant torque for the first time. Morita has turned this concept into reality.

TwinPower Rotor

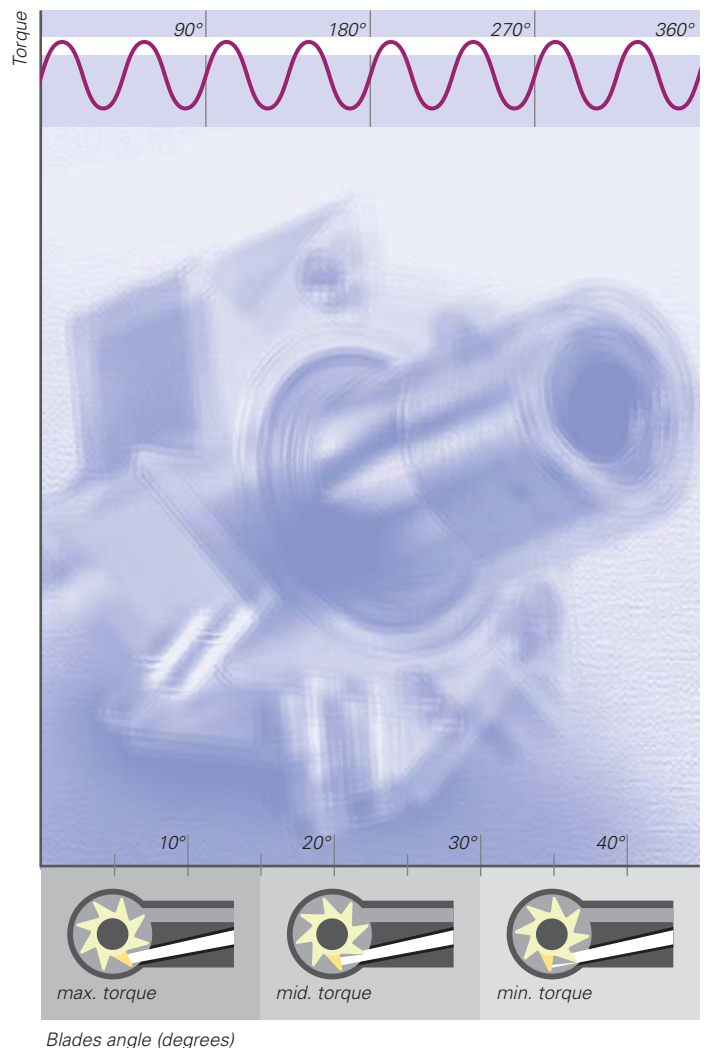
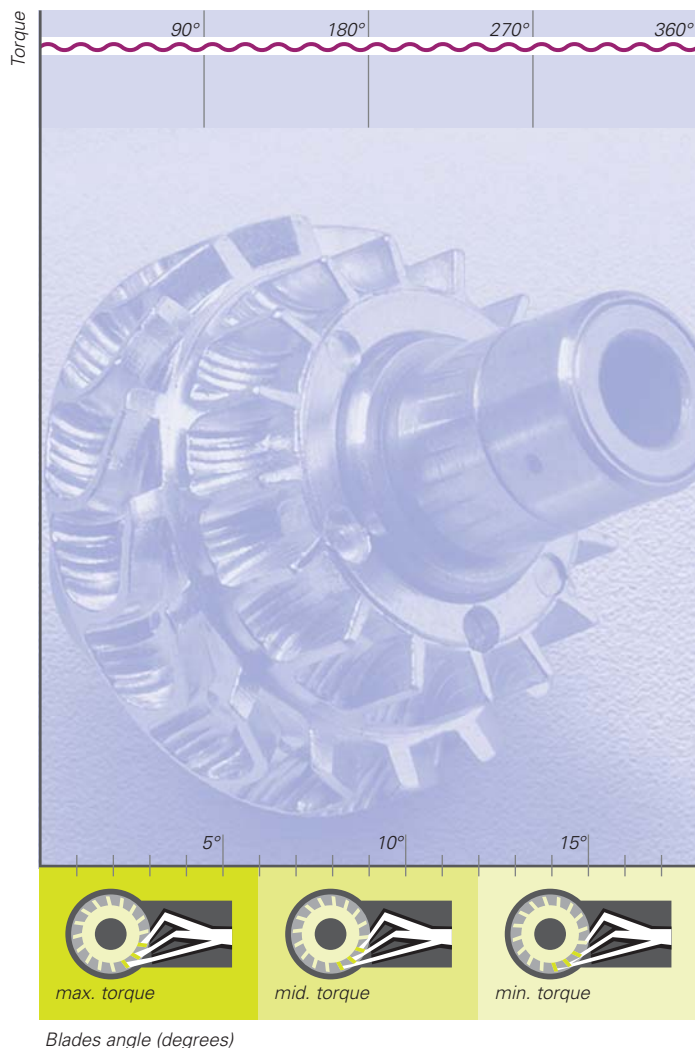


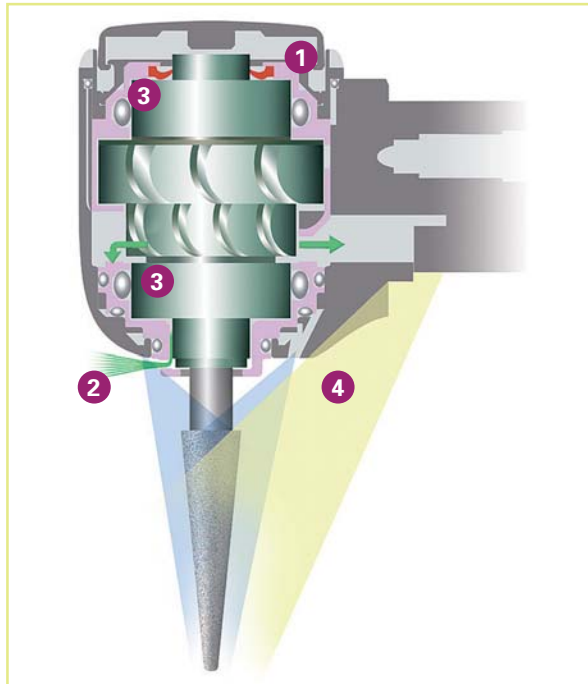
TwinPower's double-impeller technology features 40 impeller blades (PAR-4HX). Three drive air nozzles power the blades. Even when the blade angle changes, the drive air continues to be captured by multiple blades, generating superior power and constant torque, thus creating no vibration.

Conventional Rotor



Conventional highspeed rotors are typically equipped with 8 impeller blades and 1 drive air nozzle. Depending on the angle of the blade, the drive air is not directly captured by the blade, resulting in weak torque phases.





1 Rapid Stop Brake Ring

For enhanced preparation safety, the TwinPower series features a unique quick stop brake ring. This feature reduces the risk of contaminated aerosol suck-back flow and prolongs the life span of the bearings.

2 Radial Air Bypass

Unique and new: the air is dispersed sideways via the radial air bypass to minimize the patient's discomfort. From other highsPEEDs, this discomfort occurs from a vertical cold air stream on the preparation area.

3 Ceramic Ball Bearings

These ball bearings are 40% lighter and 3 times harder than conventional ball bearings, offering smooth rotation and high durability to greatly withstand sterilization cycles in an autoclave (max. 135 °C).

4 Optical Glass Rod

Autoclave-tested optical glass rod light guides for stable brightness (25,000 LUX).

TwinPower State-of-the-Art Preparation

The TwinPower 4H highsPEED series can now be adapted to perfectly fit all treatment units. Morita continues to define the cutting edge of modern engineering in terms of versatility and innovative design. Morita's attention to detail is expressed by groundbreaking features such as the unique double-impeller technology, advanced quick stop brake system, radial air bypass and zero suck-back technology.

Push-Button Chuck

Another unique feature: the push-button chuck. Simple to operate, this high-precision function ensures safe attachment to the preparation instrument while providing high-level durability for heavy-load applications.

Easy Cartridge Replacement

When required, the capsule-type cartridge rotor allows for easy exchange.



Thinking ahead. Focused on life.

In 1916, Junichi Morita started to import products of the leading dental equipment manufacturers into Japan, where demands for modern dentistry were growing. His venturesome attempts of supplying selected products for oral healthcare has grown steadily by receiving valuable support and guidance from the dental profession. His enterprising spirit lives through the decades, and all Morita Group Companies join in continuing to pursue marketing, distribution and services, as well as R&D and manufacturing, in collaboration with world leaders in healthcare products and research organizations.

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Instruments

Laser Equipment

Laboratory Devices

Educational and Training Systems

Auxiliaries

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