TwinPower Turbine® High Speed Handpieces

Thinking ahead. Focused on life.
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Focused on life.
Double-impeller Technology
Provides class leading, high-powered performance (up to 25 W) while delivering constantly balanced torque.

Ceramic Ball Bearings
40% lighter and 3 times harder than conventional bearings, they offer an extended turbine life, reduced operation noise, and less vibration.

Quick-stop Brake System
Rapid braking for optimal operator and patient safety.

Unique Zero Drawback Technology
Prevents the intake of aerosol and other particles when it is stopped.

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

Quiet Operation
Advanced fluid dynamics enables extremely quiet, high speed instrumentation.

Compact Head
Offers enhanced maneuverability and superior access.

Glass Rod Optics
Highly focused and stable illumination – 25,000 LUX.

Flexible Coupling Options
Direct connection to various commonly used couplings.

Push-button Chuck
Simple to operate, this high-precision function ensures safe attachment to the preparation instrument.

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

TwinPower Turbine High Speed Handpieces
Equipping You with Numerous Advantages

Not all features available on all handpiece models.
With Morita’s unique design, TwinPower forms a perfect balance of efficiency and operator comfort. Light, compact, convenient, and highly functional – in a word: perfection.

Well-balanced, ergonomic design
The compact and lightweight design of TwinPower is extremely comfortable to work with – even over extended periods of use. Weighing as little as 48 grams, fatigue of the operator’s hand, wrist, and fingers is significantly reduced.

Ideal angulation
The practical 15° angle of TwinPower’s standard head handpiece enables you to easily maneuver around the various areas of the oral cavity. The head is also perfectly angled at 21.5° to enhance alignment of the bur shaft with the tooth’s axis.

New grip design and surface treatment
TwinPower features a newly designed grip, which enables a relaxed hold of the handpiece. The unique ceramic coating treatment offers up to 30% greater friction forces, improving grip and durability throughout multiple sterilization cycles.
TwinPower 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

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

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 cutting power allows you to prepare with far greater precision.

Advanced Engineering with Double-impeller Technology

1 Rapid stop brake ring
For enhanced preparation safety, the TwinPower series features a unique quick stop brake ring that stops the turbine within 2 seconds. It also reduces the risk of contaminated aerosol drawback 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. Usually this discomfort occurs from a vertical cold air stream on the preparation area from other high speed handpieces.

3 Glass rod optics
Autoclave tested, glass rod optics guide for stable brightness of 25,000 LUX.

4 Push-button chuck
The push-button chuck is simple to operate. This high-precision function ensures safe attachment to the preparation instrument while providing high-level durability for heavy-load applications.
Zero Drawback
Through Innovative Fluid Dynamics

Zero Drawback
1. Drive air flows into an Anti Drawback Diffuser within the capsule. Air in the diffuser 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 diffuser and remains pressurized even after drive air is stopped.

3. The pressurized air in the diffuser is released to the outside at the bottom of the head.

4. Exhaust air is also directed over the diffuser through rotation and is released at the bottom of the head.

5. The pressurized air in the diffuser prevents depressurization in the head, thus enabling true zero drawback.

Rapid braking poses a particular challenge for ball bearing high speed 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.
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 36 impeller blades. 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 high speed 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.

**Compact and powerful design**

Thanks to double-impeller technology, the turbines of the TwinPower series are extremely powerful and can be used for both ceramic and metal prosthetics.

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Graph represents the range of power offered by various TwinPower Turbine handpieces.
The most powerful model yet

At times, standard turbines are unable to meet high demand preparations with performance dropping off under heavy loads. The TwinPower Turbine High Torque model is the solution.

The most powerful of the product line, it delivers the highest level of cutting efficiency. With a head diameter of 12 mm and a height of just 13.2 mm, visibility is excellent and users have noted the head size is relatively small especially compared to other high torque models on the market.

Worldwide, the high torque model is a best-seller due to its solid performance and reliability. For large preparations, or simply more power, this model is an exceptional choice.

- Morita’s most powerful handpiece
- High torque head competitively small
- Head size: 12 mm (diameter) x 13.2 mm (height)
- 2-year warranty
The Standard model is an excellent handpiece for everyday use. It provides a balance of power, access, and ergonomics. With high torque and up to 22 watts of power, the standard head ensures a constant, steady removal rate for precise and efficient preparations.

At the same time, an ergonomic design helps ensure pleasant working conditions. The standard model weighs as little as 48 grams. Its compact head offers enhanced maneuverability and access, while glass rod optics provide focused and stable illumination.

Clinically evaluated by several institutions, the Standard model has earned high marks for its fit to hand ergonomics, balance, visibility, power output, and braking ability.
The Ultra Series includes the UltraM and UltraE

The TwinPower Turbine Ultra Series offers excellent cutting ability with smooth, chatter-free revolutions. A compact head design allows for exceptional posterior access and offers improved views with a mirror or microscope. Although they are ‘mini’ handpieces, clinician reviews have noted this series is powerful enough for everyday tooth preparation.

- Twice as powerful as other popular mini handpieces
- Compact design offers exceptional posterior access
- Improved views with a mirror or microscope
- More comfortable for patients
- 2-year warranty

Head type comparison

UltraM
UltraM delivers 18 watts, twice the power of some other popular mini handpieces, and offers an extremely compact head height for exceptional posterior access.
Accepts burs up to 20 mm.

UltraE
UltraE is a bit larger and more powerful at 20 watts, but still offers a compact head that improves the clinician’s view when using a mirror or microscope.
Accepts standard burs.
Case 1. Pulp Chamber Opening

The UltraE head facilitates an improved view with a mirror or a microscope. The bur can easily be seen while accessing the pulp chamber. The small head allows for improved mirror positioning and better vision.

Case 2. Molar Caries Preparation

With UltraM, the bur can be held upright for use on molars (including wisdom teeth) or for patients who have limited opening.

The bur must be slanted with a standard head to gain access which leads to excessive drilling of the tooth structure. The mirror is placed to the side of the handpiece head and gets wet resulting in poor visibility.
More Comfortable for Patients

Case 3. Posterior Occlusal Surface Treatment

![Image](UltraM (PAR-4HUMX-O))

The UltraM head is more comfortable for patients and offers better access in the posterior region. It is especially helpful on the occlusal surface when the patient has limited opening.

UltraM (PAR-4HUMX-O)

A standard sized head strikes opposing teeth in the treatment area. The sensation of this can be stressful and uncomfortable for patients.

Standard (PAR-4HEX-O)

Case 4. Posterior Caries Treatment

![Image](UltraM (PAR-4HUMX-O))

The handpiece head may be placed perpendicular to the tooth even in the posterior region. The labial and buccal gingiva do not prevent this due to the small head size of UltraM.

UltraM (PAR-4HUMX-O)

A standard size head presses up against the labial and buccal gingiva, which can be unpleasant for the patient.

Standard (PAR-4HEX-O)

**15° head angle**

This is the ideal angle to hold the bur parallel to the tooth axis when resting your little finger on a tooth.

**Wide field of view**

A compact head leaves a wide field of view in line with the axis of the tooth. The dentist can see the tip of the bur during procedures. (shown with 19 mm bur)
TwinPower Turbine 45
Applications in Surgery, Periodontics, and Endodontics

TwinPower Turbine 45 offers maximum access and visibility with a 45° angle and an overall head size smaller than competitive units. Extremely powerful, it delivers up to 20 watts for smooth, efficient cutting.

Rear-facing exhaust vents direct air flow away from the surgical site for patient protection. With zero drawback in the air line, TwinPower also provides excellent contamination control, especially important in surgical procedures such as sectioning of 3rd molars.

- Maximum access and visibility with compact, 45° head
- Safe, rear-facing exhaust vents
- High torque; up to 20 watts of power
- Excellent contamination control with zero drawback
- 2-year warranty

TwinPower Turbine 45 is also available in a Non-Optic version.

TwinPower Turbine 45 is one of the most powerful 45° handpieces available.

45° Handpiece Power Comparison

<table>
<thead>
<tr>
<th>Watts (Power)</th>
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<tbody>
<tr>
<td>0.0</td>
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<td>COMPANY A</td>
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</table>

Exhaust vents direct the air flow away from the work site – an important design for patient safety during surgical procedures.
TwinPower Turbine Basic Series

TwinPower Turbine Basic handpieces offer several features of the original product line, above and beyond those in their class. Common features include double-impeller rotor design, ceramic bearings, zero drawback in the air line, and rapid braking technology. As a more economical option, Basic Series handpieces offer a chrome body, 4-hole connection, no fiber optics, and a 1-year warranty.

- 22 watts of power (equal to standard head)
- Chrome body
- Lightweight (45 grams)
- 4-hole connection
- 1-year warranty

- 20 watts of power (equal to standard 45)
- Chrome body
- Compact, 45° head
- Rear-facing exhaust vents
- 4-hole connection
- 1-year warranty
TwinPower Turbine Product Line

**TwinPower Turbine High Torque**  
- Head Diameter: 12 mm  
- Head Height: 13.2 mm  
The new TwinPower Turbine high torque model is the most powerful of the product line. It delivers superior cutting efficiency and reduced preparation time.

**TwinPower Turbine Standard**  
- Head Diameter: 10.5 mm  
- Head Height: 13.2 mm  
The TwinPower Turbine standard model offers 22 watts of smooth cutting power. Clinically evaluated by several institutions, TwinPower has earned high marks for its fit to hand ergonomics, balance, visibility, power output, and braking ability.

**TwinPower Turbine UltraE**  
- Head Diameter: 9 mm  
- Head Height: 12.7 mm  
UltraE (mini) is slightly taller than UltraM and more powerful at 20 watts, but still offers a compact head that improves the clinician’s view when using a mirror or microscope.

**TwinPower Turbine UltraM**  
- Head Diameter: 9 mm  
- Head Height: 10.6 mm  
UltraM (mini) delivers 18 watts, twice the power of other popular mini handpieces. With the shortest head height, it offers exceptional posterior access.

**TwinPower Turbine 45**  
- Head Diameter: 10.5 mm  
- Head Height: 13.2 mm  
The TwinPower Turbine 45 model offers maximum access and visibility with a 45° angle and an overall head size smaller than competitive units. Rear-facing exhaust vents direct air flow away from the surgical site for patient protection.

**TwinPower Turbine 45 Non-Optic**  
- Head Diameter: 10.5 mm  
- Head Height: 13.2 mm  
The TwinPower Turbine 45 Non-Optic offers the same features as the standard 45, but without optics.

**TwinPower Turbine 45 Basic**  
- Head Diameter: 10.5 mm  
- Head Height: 13.2 mm  
The TwinPower Turbine 45 Basic offers several features of the standard 45 including rear-facing exhaust vents. As a more economical version, it has a 4-hole connection and a chrome body.

**TwinPower Turbine 45 Non-Optic Basic**  
- Head Diameter: 10.5 mm  
- Head Height: 13.2 mm  
The TwinPower Turbine Basic includes several features of the original TwinPower product line at a very economical price. It offers a 4-hole connection and chrome body.
TwinPower Turbine offers several coupling options compatible with 4-hole, 5-hole, or 6-pin connections. Each of these coupling options feature an extremely smooth 360° rotation and quick disconnect for ease of use.

### TwinPower Morita Coupling Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Connection Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CP4-LD (with LED light)</strong></td>
<td>6-Pin Connection</td>
<td>Compatible with 6-pin connection ISO 9168 Type 3 (formerly Type C')&lt;sup&gt;†&lt;/sup&gt; Non-retractive valve</td>
</tr>
<tr>
<td><strong>CP4-W-LD (water adjustment &amp; LED light)</strong></td>
<td>6-Pin Connection</td>
<td>Compatible with 6-pin connection ISO 9168 Type 3 (formerly Type C')&lt;sup&gt;†&lt;/sup&gt; Non-retractive valve Water adjustment valve</td>
</tr>
<tr>
<td><strong>CP4-O (with light)</strong></td>
<td>6-Pin Connection</td>
<td>Compatible with 6-pin connection ISO 9168 Type 3 (formerly Type C')&lt;sup&gt;†&lt;/sup&gt; Non-retractive valve</td>
</tr>
<tr>
<td><strong>CP4-WO (with water adjustment &amp; light)</strong></td>
<td>6-Pin Connection</td>
<td>Compatible with 6-pin connection ISO 9168 Type 3 (formerly Type C')&lt;sup&gt;†&lt;/sup&gt; Non-retractive valve Water adjustment valve</td>
</tr>
<tr>
<td><strong>CP4 (without light)</strong></td>
<td>4-Hole Connection</td>
<td>Compatible with 4-hole connection ISO 9168 Type 3 (formerly Type C')&lt;sup&gt;†&lt;/sup&gt; Non-retractive valve</td>
</tr>
<tr>
<td><strong>CP5-O (with optics)</strong></td>
<td>5-Hole Connection</td>
<td>Compatible with 5-hole connection ISO 9168 Type 2 (formerly Type B') Use with standard fiber optic tubing Non-retractive valve</td>
</tr>
</tbody>
</table>

<sup>†</sup> ISO 9168 - Hose connectors for air driven dental handpieces was revised July 1, 2009. The type designation of handpiece joints was changed from letters to numbers.
TwinPower Turbine High Speed Handpieces
Total Versatility

TwinPower can be connected to various commonly used couplings.

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Ceramic ball bearing handpiece</th>
<th>Push-button chuck</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>High Torque</td>
<td>Ball</td>
</tr>
<tr>
<td>Power</td>
<td>25 W</td>
<td>Push-button chuck</td>
</tr>
<tr>
<td>Rotation speed</td>
<td>370,000 rpm ± 30,000 rpm (at 0.2 MPa/29 psi)</td>
<td></td>
</tr>
<tr>
<td>Air/Water ports</td>
<td>Air/Water: 3</td>
<td></td>
</tr>
<tr>
<td>Head diameter</td>
<td>12 mm</td>
<td></td>
</tr>
<tr>
<td>Head height</td>
<td>13.2 mm</td>
<td></td>
</tr>
<tr>
<td>Body/Coating</td>
<td>Ceramic coating</td>
<td>Chrome</td>
</tr>
<tr>
<td>Optics</td>
<td>Glass rod optics</td>
<td>Chrome</td>
</tr>
<tr>
<td>Light intensity</td>
<td>25,000 LUX</td>
<td>None</td>
</tr>
<tr>
<td>Weight*</td>
<td>48 - 57 g</td>
<td>None</td>
</tr>
<tr>
<td>Driving air pressure</td>
<td>0.2 – 0.29 MPa/29 - 42 psi</td>
<td></td>
</tr>
<tr>
<td>Warranty</td>
<td>2 years</td>
<td></td>
</tr>
</tbody>
</table>

Note: TwinPower Turbine 45 is available only in Morita and KaVo® type. TwinPower Turbine Basic and 45 Basic are only available with 4-Hole connection.

* Weight varies depending on connection type
## Ordering Information

### TwinPower Turbine High Torque

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-5339049</td>
<td>TwinPower Turbine 4H PAR-4HX-O (TwinPower Morita)</td>
</tr>
<tr>
<td>16-5901111</td>
<td>TwinPower Turbine 4H PAR-4HX-O-KV (KaVo® MULTIflex® LUX*)</td>
</tr>
<tr>
<td>16-5901154</td>
<td>TwinPower Turbine 4H PAR-4HX-O-SR (Sirona® R/F*)</td>
</tr>
<tr>
<td>16-5901146</td>
<td>TwinPower Turbine 4H PAR-4HX-O-QH (W&amp;H® Roto Quick*)</td>
</tr>
<tr>
<td>16-5901138</td>
<td>TwinPower Turbine 4H PAR-4HX-O-NK (NSK® FlexiQuick**)</td>
</tr>
</tbody>
</table>

### TwinPower Turbine Standard

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-5340888</td>
<td>TwinPower Turbine 4H PAR-4HEX-O (TwinPower Morita)</td>
</tr>
<tr>
<td>16-5340608</td>
<td>TwinPower Turbine 4H PAR-4HEX-O-KV (KaVo® MULTIflex® LUX*)</td>
</tr>
<tr>
<td>16-5340632</td>
<td>TwinPower Turbine 4H PAR-4HEX-O-SR (Sirona® R/F*)</td>
</tr>
<tr>
<td>16-5340624</td>
<td>TwinPower Turbine 4H PAR-4HEX-O-WH (W&amp;H® Roto Quick*)</td>
</tr>
<tr>
<td>16-5340616</td>
<td>TwinPower Turbine 4H PAR-4HEX-O-NK (NSK® FlexiQuick**)</td>
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### TwinPower Turbine UltraE (Mini)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-5356970</td>
<td>TwinPower Turbine 4H PAR-4HUEX-O (TwinPower Morita)</td>
</tr>
<tr>
<td>16-5357497</td>
<td>TwinPower Turbine 4H PAR-4HUEX-O-KV (KaVo® MULTIflex® LUX*)</td>
</tr>
<tr>
<td>16-5357527</td>
<td>TwinPower Turbine 4H PAR-4HUEX-O-SR (Sirona® R/F*)</td>
</tr>
<tr>
<td>16-5357519</td>
<td>TwinPower Turbine 4H PAR-4HUEX-O-WH (W&amp;H® Roto Quick*)</td>
</tr>
<tr>
<td>16-5357500</td>
<td>TwinPower Turbine 4H PAR-4HUEX-O-NK (NSK® FlexiQuick**)</td>
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</table>

### TwinPower Turbine UltraM (Mini)

<table>
<thead>
<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>16-5356989</td>
<td>TwinPower Turbine 4H PAR-4HUMX-O (TwinPower Morita)</td>
</tr>
<tr>
<td>16-5357578</td>
<td>TwinPower Turbine 4H PAR-4HUMX-O-KV (KaVo® MULTIflex® LUX*)</td>
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<tr>
<td>16-5357608</td>
<td>TwinPower Turbine 4H PAR-4HUMX-O-SR (Sirona® R/F*)</td>
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<td>16-5357594</td>
<td>TwinPower Turbine 4H PAR-4HUMX-O-WH (W&amp;H® Roto Quick*)</td>
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<tr>
<td>16-5357586</td>
<td>TwinPower Turbine 4H PAR-4HUMX-O-NK (NSK® FlexiQuick**)</td>
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</table>

### TwinPower Turbine 45 and TwinPower Turbine 45 Non-Optic (45°)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-5344670</td>
<td>TwinPower Turbine (With Optics) 4H PAR-4HEX-O-45 (TwinPower Morita)</td>
</tr>
<tr>
<td>16-5350522</td>
<td>TwinPower Turbine (With Optics) 4H PAR-4HEX-O-KV-45 (KaVo® MULTIflex® LUX*)</td>
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<tr>
<td>16-5361087</td>
<td>TwinPower Turbine (Non-Optic) 4H PAR-4HEX-45 (TwinPower Morita)</td>
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<tr>
<td>16-5361079</td>
<td>TwinPower Turbine (Non-Optic) 4H PAR-4HEX-KV-45 (KaVo® MULTIflex® LUX*)</td>
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### TwinPower Turbine Basic

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-5360838</td>
<td>TwinPower Turbine 4H PAR-4HEX-B (4-Hole)</td>
</tr>
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</table>

### TwinPower Turbine 45 Basic (45°)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>16-5606322</td>
<td>TwinPower Turbine 4H PAR-4HEX-B-45 (4-Hole)</td>
</tr>
</tbody>
</table>

### TwinPower Morita Coupling Options

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-5354978</td>
<td>TwinPower coupling CP4-LD (with LED light)</td>
</tr>
<tr>
<td>16-5354951</td>
<td>TwinPower coupling CP4-W-LD (with water adjustment &amp; LED light)</td>
</tr>
<tr>
<td>16-5333830</td>
<td>TwinPower coupling CP4-O (with light)</td>
</tr>
<tr>
<td>16-5339421</td>
<td>TwinPower coupling CP4-WO (with water adjustment &amp; light)</td>
</tr>
<tr>
<td>16-5333881</td>
<td>TwinPower coupling CP4 (without light)</td>
</tr>
<tr>
<td>16-5349214</td>
<td>TwinPower coupling CP5-O (with optics)</td>
</tr>
</tbody>
</table>

* KaVo MULTIflex LUX is a registered trademark of Kaltenbach & Voigt 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 coupling varies by country.
Diagnostic and Imaging Equipment
Treatment Units
Handpieces & Instruments
Endodontic Systems
Laser Equipment
Laboratory Devices
Educational and Training Systems
Auxiliaries