

AIR TURBINES





	Ti-Max Z	S-Max M	Ti-Max X450	S-Max Pico	Pana-Max Plus	Pana-Max2
Grade	PREMIUM	ADVANCED	SPECIAL	SPECIAL	BASIC	BASIC
Body	Titanium	Stainless	Titanium	Stainless	Stainless	Stainless
DURAGRIP	●					
DURACOAT			●			
Ceramic Bearings	●	●	●	●	●	●
Cellular Glass Optics	●	●	●	●		
Clean Head System	●	●	●	●	●	●
Push Button Chuck	●	●	●	●	●	●
Water Spray	Quattro	Quattro	Triple	Single	Quattro	Single
Microfilter	●					
Ergo Grip	●	●	●	●	●	●

# Ti-Max Z

Premium



## POWERFUL

### Evolving to Redefine Performance

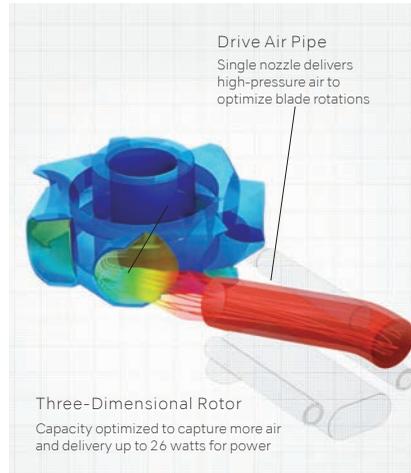
Z turbines deliver consistent power, and due to their ergonomic design they are easier to handle and give a more comfortable patient experience.

Z series turbines deliver everything and more than you would expect from a high performance air turbine.

All of this is the result of our ethos of consistently aiming to exceed expectations, uncompromising product design and ultra precision manufacturing technology to deliver ever improving levels of comfort for clinicians and patients.

With up to an incredible 26 watts\* of output, our air turbines will revolutionize your dental practice.

\*With the Z900L

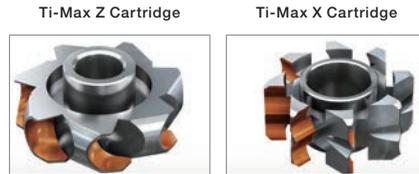


### Miniature Parts for Maximum Power, Reflecting NSK's Pursuit of The Optimum Rotor Shape

#### New Three-Dimensional Rotor

We harnessed the latest computer analysis software to develop a rotor with higher output. We created a new three-dimensional curved shape after relentless simulations and pilot production. The blade is 50% larger than that of the Ti-Max X Air Turbine. With this new rotor, the air turbine delivers an amazing 26 watts \*of power.

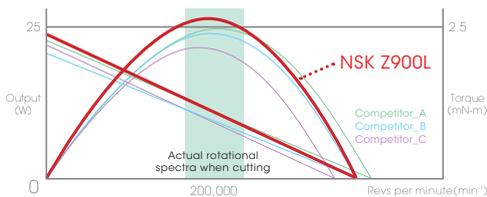
\*With the Z900L



Blade surface 50% larger

### High Output for Smoother Cutting

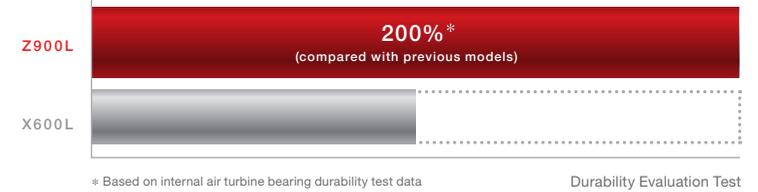
The 26 watts power output from the new rotor significantly enhances the performance during clinical applications. This can dramatically reduce treatment time and noticeably improve treatment comfort for the clinician and patient alike.



## DURABLE

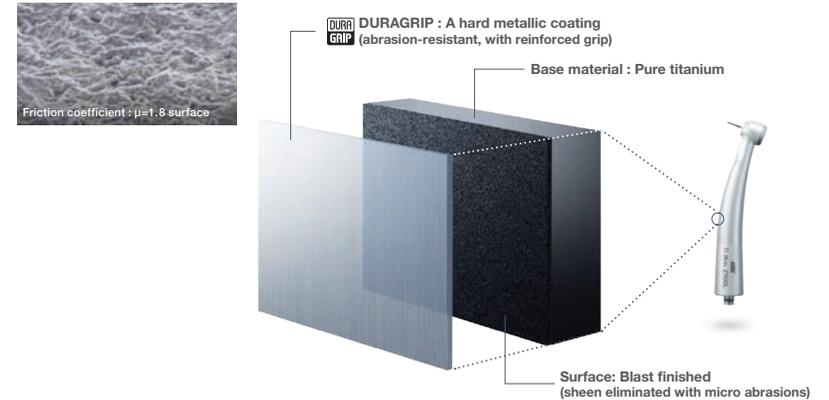
### Advanced Technology a Key Factor in Significantly Increased Durability of Ti-Max Z

We completely redesigned the shape and found better materials for the bearing retainer to reduce frictional resistance and developed a new type of bearing to almost double the durability to accommodate constant thermodisinfector and autoclave usage.



### DURAGRIP Non-Slip, Scratch-Resistant Surface Treatment Technology

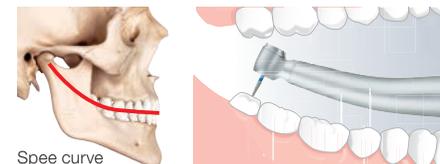
We blast-finish the pure titanium body surface utilising micro-abrasion before applying the DURAGRIP surface finish. The micro-abrasion enhances resistance to scratches and contributes to the firm, reliable non-slip grip.



### Z micro USABILITY

#### Good accessibility using the mini head at a 100° angle.

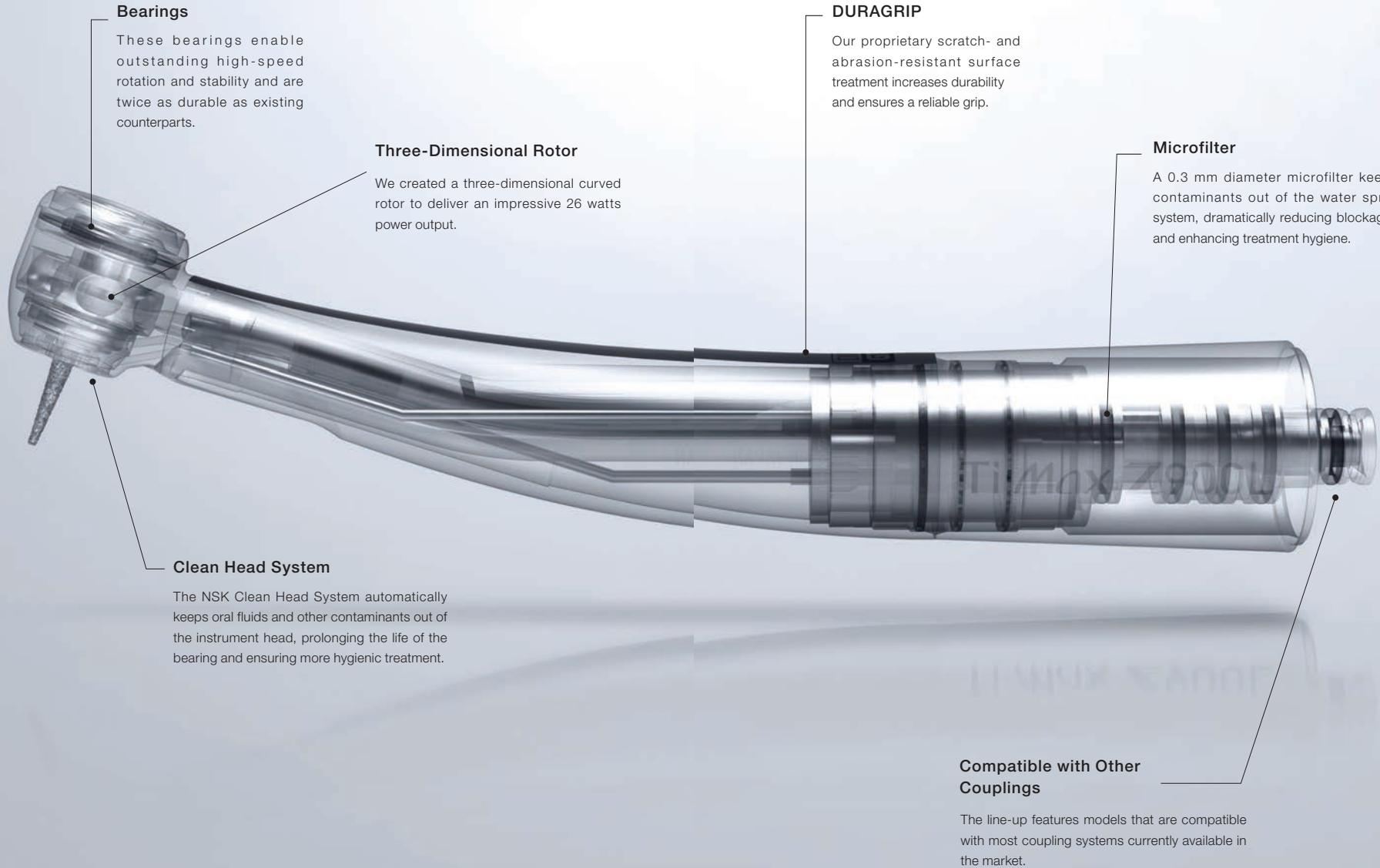
The 100° angle head allows better access to the posterior region. The mini head ensures a wide field of vision. The design is based upon the physiological shape of the oral cavity, facilitating low-stress operations when accessing the posterior region.



#### Head angle allows easy access

Easier to work with, better access without coming into contact with the anterior teeth, when working in the posterior region.

TECHNOLOGY & FUNCTION



**Bearings**

These bearings enable outstanding high-speed rotation and stability and are twice as durable as existing counterparts.

**Three-Dimensional Rotor**

We created a three-dimensional curved rotor to deliver an impressive 26 watts power output.

**DURAGRIP**

Our proprietary scratch- and abrasion-resistant surface treatment increases durability and ensures a reliable grip.

**Microfilter**

A 0.3 mm diameter microfilter keeps contaminants out of the water spray system, dramatically reducing blockages and enhancing treatment hygiene.

**Clean Head System**

The NSK Clean Head System automatically keeps oral fluids and other contaminants out of the instrument head, prolonging the life of the bearing and ensuring more hygienic treatment.

**Compatible with Other Couplings**

The line-up features models that are compatible with most coupling systems currently available in the market.

# Ti-Max Z Premium



- Titanium Body
- DURAGRIP
- Cellular Glass Optics
- Ceramic Bearings
- Clean Head System
- Push Button Chuck
- Quattro Spray
- Microfilter (Z800/Z900)
- Quick Stop (Z micro)
- Simple Cartridge Change (Z micro)



**Micro Head**  
 Power : 20 W  
 Speed : 380,000-450,000 min<sup>-1</sup>  
 Head Size : ø9.0 x H 10.8 mm  
 Dual use for regular standard bur / short shank bur

**Miniature Head**  
 Power : 23 W  
 : 21 W (except Z800L)  
 Speed : 360,000-440,000 min<sup>-1</sup>  
 Head Size : ø10.8 x H 12.1 mm  
 Dual use for regular standard bur / short shank bur

**Standard Head**  
 Power : 26 W  
 : 24 W (except Z900L)  
 Speed : 320,000-400,000 min<sup>-1</sup>  
 Head Size : ø12.5 x H 13.1 mm  
 Dual use for regular standard bur / short shank bur

NSK Couplings	Head	Optic	MODEL	ORDER CODE
	<b>Micro</b>	●	<b>Z micro</b>	<b>PA2357</b>
	<b>Miniature</b>	●	<b>Z800L</b>	<b>P1110</b>
	<b>Standard</b>	●	<b>Z900L</b>	<b>P1111</b>
KaVo® Coupling	Head	Optic	MODEL	ORDER CODE
	<b>Micro</b>	●	<b>Z micro KL</b>	<b>PA2358</b>
	<b>Miniature</b>	●	<b>Z800KL</b>	<b>P1112</b>
	<b>Standard</b>	●	<b>Z900KL</b>	<b>P1113</b>
Sirona® Coupling	Head	Optic	MODEL	ORDER CODE
	<b>Micro</b>	●	<b>Z micro SL</b>	<b>PA2359</b>
	<b>Miniature</b>	●	<b>Z800SL</b>	<b>P1114</b>
	<b>Standard</b>	●	<b>Z900SL</b>	<b>P1115</b>
W&H® Coupling	Head	Optic	MODEL	ORDER CODE
	<b>Miniature</b>	●	<b>Z800WL*</b>	<b>P1120</b>
	<b>Standard</b>	●	<b>Z900WL*</b>	<b>P1121</b>
Bien-Air® Coupling	Head	Optic	MODEL	ORDER CODE
	<b>Miniature</b>	●	<b>Z800BL*</b>	<b>P1116</b>
	<b>Standard</b>	●	<b>Z900BL*</b>	<b>P1117</b>

\*Compatible Turbines with Integral LED



# S-Max M

Advanced



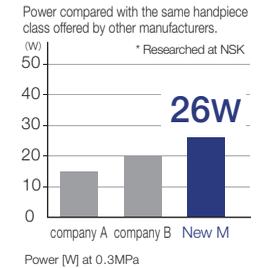
## MORE POWERFUL



The new rotor design is optimized using a rotating air flow simulation, resulting in 26W of power through the efficient use of air supply energy.

### 26W power

The internal structure is completely redesigned to achieve superior noise and vibration reduction, including the new 26W high power rotor.



## DURABILITY

### All stainless body

The handpiece body is stainless steel, making it corrosion resistant and sturdy. Its satin-like finish fits comfortably in your hand.

### Ceramic bearings

The ceramic bearings are 25% harder than steel and around half the weight, meaning very little wear, which helps the cartridge to last longer.

### Clean Head System

The Clean Head System has an anti-suck back mechanism that stops blood and foreign matter from entering the head from the oral cavity. As a result, the ball bearings and mechanical parts last longer.

## USABILITY

### Simple cartridge change

The handpiece is designed with barrel type cartridge. The cartridge is easy to replace. Changing the cartridge also eliminates water blockage.

### Quattro spray

Sprays more effectively over the entire bur for better cooling.

### Push Button Chuck

The bur is released easily with the responsive and tactile push button.

# S-Max M Advanced



- Stainless Steel Body
- Cellular Glass Optics
- Ceramic Bearings
- Clean Head System
- Push Button Chuck
- Quattro Spray
- Simple Cartridge Change



**Miniature Head**  
 Power : 23 W  
 Speed : 380,000-450,000 min<sup>-1</sup>  
 Head Size : ø10.6 x H 12.4 mm



**Standard Head**  
 Power : 26 W  
 Speed : 325,000-430,000 min<sup>-1</sup>  
 Head Size : ø12.1 x H 13.3 mm

NSK Couplings	Head	Optic	MODEL	ORDER CODE
	<b>Miniature</b>	●	<b>M800L</b>	<b>P1253</b>
		—	<b>M800</b>	<b>P1255</b>
	<b>Standard</b>	●	<b>M900L</b>	<b>P1254</b>
		—	<b>M900</b>	<b>P1256</b>

KaVo® Coupling	Head	Optic	MODEL	ORDER CODE
	<b>Miniature</b>	●	<b>M800KL</b>	<b>P1257</b>
		●	<b>M900KL</b>	<b>P1258</b>
	<b>Standard</b>	—	<b>M900K</b>	<b>P1259</b>

Sirona® Coupling	Head	Optic	MODEL	ORDER CODE
	<b>Miniature</b>	●	<b>M800SL</b>	<b>P1261</b>
		●	<b>M900SL</b>	<b>P1262</b>

W&H® Coupling	Head	Optic	MODEL	ORDER CODE
	<b>Miniature</b>	●	<b>M800WL*</b>	<b>P1265</b>
		●	<b>M900WL*</b>	<b>P1266</b>
	<b>Standard</b>	—	<b>M900W</b>	<b>P1287</b>

Bien-Air® Coupling	Head	Optic	MODEL	ORDER CODE
	<b>Miniature</b>	●	<b>M800BL*</b>	<b>P1263</b>
		●	<b>M900BL*</b>	<b>P1264</b>

\*Compatible Turbines with Integral LED



# S-Max pico

Special



## The Innovative Air Turbine with Ultra Mini Head and Super Slim Body Shape

The NSK S-Max pico series has been developed for the operation of Minimal Intervention (M.I.). The ultra mini head and super slim handpiece design is the result of fine NSK precision engineering allowing a wider view of the operational field, and greater flexibility for dexterity.

### Comparison of head sizes



## Improve The Accuracy of Operation with The Microscope



The ultra mini head delivers expanded operational visibility and greater flexibility. Patient comfort is increased.

In combination with mirror technique



## Size Specifications of The S-Max Pico Series

### Dedicated Burs for S-Max pico Series

NSK has developed special ultra short shank burs to operate specifically with the pico handpiece. These high quality precision burs are concentric and durable. Use of NSK ultra short shank burs maximises the mini advantage of the pico handpiece.



Original bur of high precision  
(Rotational speed: 400,000 min<sup>-1</sup>)

# S-Max pico Special



- Stainless Steel Body
- Cellular Glass Optics
- Ceramic Bearings
- Clean Head System
- Push Button Chuck
- Single Spray

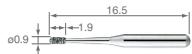


Power : 9 W  
 Speed : 380,000-450,000 min<sup>-1</sup>  
 Head Size : ø8.6 x H 9.0 mm  
 • For short shank burs / ultra short shank burs

NSK Couplings	Optic	MODEL	ORDER CODE
	●	<b>S-Max pico</b>	<b>P1140</b>
KaVo® Coupling	Optic	MODEL	ORDER CODE
	●	<b>S-Max pico KL</b>	<b>P1142</b>
Sirona® Coupling	Optic	MODEL	ORDER CODE
	●	<b>S-Max pico SL</b>	<b>P1143</b>
W&H® Coupling	Optic	MODEL	ORDER CODE
	●	<b>S-Max pico WLED*</b>	<b>P1145</b>
Bien-Air® Coupling	Optic	MODEL	ORDER CODE
	●	<b>S-Max pico BLED*</b>	<b>P1144</b>

\*Compatible Turbines with Integral LED

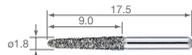
pico bur



MODEL	ORDER CODE
<b>PC1</b>	<b>Y1001817</b>
• Pack of 3	



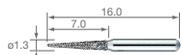
MODEL	ORDER CODE
<b>PC2</b>	<b>Y1001818</b>
• Pack of 3	



MODEL	ORDER CODE
<b>PC3</b>	<b>Y1001819</b>
• Pack of 3	



MODEL	ORDER CODE
<b>PC3ff</b>	<b>Y1002019</b>
• Extra fine bur	
• Pack of 3	



MODEL	ORDER CODE
<b>PC4</b>	<b>Y1001820</b>
• Pack of 3	



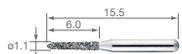
MODEL	ORDER CODE
<b>PC4ff</b>	<b>Y1002020</b>
• Extra fine bur	
• Pack of 3	



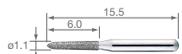
MODEL	ORDER CODE
<b>PC5</b>	<b>Y1001821</b>
• Pack of 3	



MODEL	ORDER CODE
<b>PC5ff</b>	<b>Y1002021</b>
• Extra fine bur	
• Pack of 3	



MODEL	ORDER CODE
<b>PC6</b>	<b>Y1001822</b>
• Pack of 3	



MODEL	ORDER CODE
<b>PC6ff</b>	<b>Y1002022</b>
• Extra fine bur	
• Pack of 3	

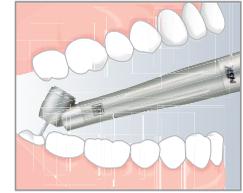


# Ti-Max X450

Special

## Unique 45-degree Angled Head Provides Incredible Accessibility

The slim-form Ti-Max X450 series possesses a unique 45-degree angled head specially designed to access hard-to-reach areas for sectioning and extraction of third molars and other impacted teeth. The X450's robust 21 watts of cutting power and effective cooling system - featuring triple water jets - ensure safe and effective treatment during a variety of surgical procedures.

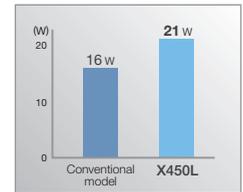


## Superior Accessibility

The 45-degree angled head offers excellent accessibility and visibility during root separation procedures and the removal of hard tissue covering impacted third molars.

## A Potent 21 W of Cutting Power

NSK's original twin-nozzle head fully transmits the power of the air turbine to the X450's rotor, generating the high torque needed for powerful, consistent cutting.



## Triple Water Jets & Cellular Glass Optics

NSK's Triple Water Jet system efficiently bathes the bur at all operating speeds, providing maximum cooling.



## The Ti-Max X450 Permits Optimal Access to Molars and a Diverse Range of Operative Procedures.

Mandibular Right Third Molar Extraction



Ti-Max X450

The labial and cheek mucous membranes do not interfere with treatment, and the bur can be maintained at a safe and optimal angle due to no contact on the turbine body. The X450's slim form factor also provides maximum visibility.



Standard Turbine's Head Angle

Extending the labial or cheek mucous membranes is hard, which makes feel delicate tactile sense while cutting difficult. Maintaining the bur at an optimal angle and direction is also problematic.

# Ti-Max X450 Special

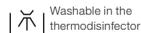


- Titanium Body with Scratch Resistant DURACOAT
- 45° Angle Head
- Cellular Glass Optics
- Ceramic Bearings
- Clean Head System
- Push Button Chuck
- Triple Water Jet

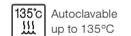
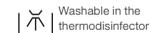


Power : 21 W  
 : 18 W (except X450L)  
 Speed : 380,000-450,000 min<sup>-1</sup>  
 Head Size : ø11.2 x H 13.5 mm  
 • For FG extra-long burs (25 mm) only

	Optic	MODEL	ORDER CODE
<b>NSK Couplings</b>	●	<b>X450L</b>	<b>P1078</b>
<b>KaVo® Coupling</b>	●	<b>X450KL</b>	<b>P1079</b>
<b>Sirona® Coupling</b>	●	<b>X450SL</b>	<b>P1080</b>
<b>W&amp;H® Coupling</b>	●	<b>X450WLED*</b>	<b>P1082</b>
<b>Bien-Air® Coupling</b>	●	<b>X450BLED*</b>	<b>P1081</b>



\*Compatible Turbines with Integral LED





# Pana-Max2

Basic

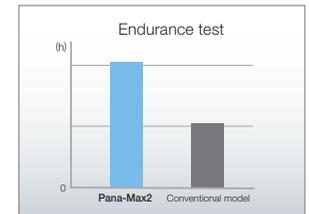
## Unsurpassed Durability

Built to Excel in Clinical Situations.  
 Featuring a Scratch-resistant  
 Stainless Steel Body and Sturdier Turbine Head.  
 Thanks to its uniquely designed shock-resistant head design,  
 Pana-Max2's turbine rotor won't get damaged even if  
 dropped from two meters onto a concrete floor.



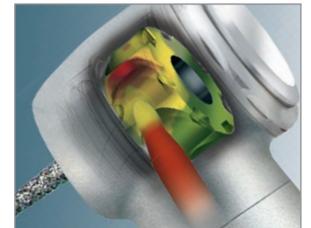
## Exceptional Longevity.

Newly designed bearing structure with greater wear resistants  
 and extended lifespan.



## 30% Power Boost

Pana-Max2 is dramatically more powerful than its predecessors thanks to the combination of NSK's air turbine simulation technologies. Rated at a maximum of 20 watts, this new model boasts the highest power rating in its class. That concentrated power, along with the bur's high rotational accuracy, creates a synergistic effect that ensures fast, precise treatments.



# Pana-Max2 Basic



- Stainless Steel Body
- Ceramic Bearings
- Clean Head System
- NSK Ultra Push Chuck
- Single Spray



Speed : 350,000-450,000 min<sup>-1</sup>  
 Head Size : ø11.2 x H 13.4 mm

NSK Couplings	MODEL	ORDER CODE
	<b>Pana-Max2 PTL</b>	<b>P1211</b>
KaVo® Coupling	MODEL	ORDER CODE
	<b>Pana-Max2 KV</b>	<b>P1212</b>
Midwest 4 hole (Direct-connect / Screw-on Type)	MODEL	ORDER CODE
	<b>Pana-Max2 M4</b>	<b>P1154</b>
Borden 2 hole (Direct-connect / Screw-on Type)	MODEL	ORDER CODE
	<b>Pana-Max2 B2</b>	<b>P1155</b>



# Pana-Max PLUS Basic



- Stainless Steel Body
- Ceramic Bearings
- Clean Head System
- Push Button Chuck
- Quattro Spray



**Miniature Head**  
 Speed : 380,000-450,000 min<sup>-1</sup>  
 Head Size : ø10.6 x H 12.4 mm

**Standard Head**  
 Speed : 340,000-410,000 min<sup>-1</sup>  
 Head Size : ø12.1 x H 13.3 mm

**Midwest 4 hole**  
 (Direct-connect / Screw-on Type)



Head	MODEL	ORDER CODE
<b>Miniature</b>	<b>PAP-MU M4</b>	<b>P1021</b>

<b>Standard</b>	<b>PAP-SU M4</b>	<b>P1022</b>
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**Borden 2 hole**  
 (Direct-connect / Screw-on Type)



Head	MODEL	ORDER CODE
<b>Miniature</b>	<b>PAP-MU B2</b>	<b>P1023</b>

<b>Standard</b>	<b>PAP-SU B2</b>	<b>P1024</b>
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