

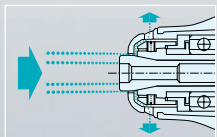


LABORATORY

ULTIMATE 500 Series

BRUSHLESS

Special Dust-Proof Mechanism



The handpiece has a Patented built-in dust-proof system to prevent the infiltration of debris into the bearings.

Ergonomically Designed

The grip is ergonomically designed. The lightweight and excellent balance characteristics dramatically reduce hand fatigue during extended applications.



Precision Technology

NSK super precision technology ensures the bur concentricity of 0.02 mm or less.

Long Term Durability

The high power brushless motor does not require replacement of carbon brushes. NSK in-house load testing has proven the durability of continuous use for more than 5,000 hours.



Lowest Noise and Vibration

The hermetically enclosed brushless motor reduces the noise level by 20% compared to other conventional models. This results in a quieter and more comfortable work environment.

ULTIMATE 500

BRUSHLESS MICROMOTOR

Speed : 1,000~50,000 min⁻¹

Rotation speed can be steplessly controlled between 1,000 and 50,000 min⁻¹. Smooth and powerful torque is delivered throughout the entire speed range. At the highest speed of 50,000 min⁻¹ Ultimate 500 allows precision micro-machining.

Torque *Best Power in its class 250 W*



Torque Micromotor & Cord

• Speed	: 1,000~50,000 min ⁻¹
• Max. Power	: 250 W
• Max. Torque	: 8.7 N-cm
• Dimensions	: L164 x ø29 (mm)
• Weight	: 230 g (Cord not included)
• Cord Length	: 1.2 m

MODEL	ORDER CODE
UM50T	Y140-562

Compact *Smallest and Lightest in its class 148 mm / 185 g*



Compact Micromotor & Cord

• Speed	: 1,000~50,000 min ⁻¹
• Max. Power	: 140 W
• Max. Torque	: 6.0 N-cm
• Dimensions	: L148 x ø27 (mm)
• Weight	: 185 g (Cord not included)
• Cord Length	: 1.2 m

UM50C	Y140-563
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E-type



ISO E-Type Micromotor & Cord

• Speed	: 1,000~50,000 min ⁻¹
• Max. Power	: 140 W
• Max. Torque	: 6.0 N-cm
• Dimensions	: L91 x ø27 (mm)
• Weight	: 120 g (Cord not included)
• Cord Length	: 1.2 m

UM50EM	E192
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Compliance with EMC & Other Safety Standards

NSK considers passive performance important. Ultimate 500 complies with the world's most rigorous European EMC* Standards. In electromagnetic terms, Ultimate 500 will not generate electromagnetic waves which may cause failure or a malfunction to other equipment. Conversely, Ultimate 500 will not be affected by external electromagnetic wave interference.

* EMC (Electromagnetic Compatibility)

Features

- Self-Diagnosis Function
- Smooth Operation
- Audible Check System
- User Friendly Display Panel
- Maintenance Mode Setting (500 / 500D / 500K)
- Digital Speed Display (500 / 500D / 500K)
- Error Code Display Function (500 / 500D / 500K)
- Connection Jack for air turbine handpiece (500D / 500K / 500F)



UM500SB
Translucent Blue

Ultimate 500 Series

Choice of 2 micromotors and 5 control units are available.



ULTIMATE 500
BENCH TOP SYSTEM

BRUSHLESS



Features

- Speed of 1,000~50,000 min⁻¹
- Eco-Friendly Design
- Self-Diagnosis Function
- Easy-to-operate Display Panel
- Digital Speed Display
- Optimal Control by Microprocessor
- Auto Speed Function
- Audible Function Check
- Maintenance Mode Setting
- Error Code Display Function

*Not able to connect with an air turbine handpiece

Specifications

- Power Supply : AC 120V or 230V 50/60 Hz
- Weight : 2.6 kg
- Dimensions : W172 x D230 x H94 (mm)



Ultimate 500 Systems

Ultimate 500 Translucent Blue Control Unit



- Torque Micromotor System
- Compact Micromotor System

MODEL	ORDER CODE
UM500SBT (120V)	Y140-557
UM500SBT (230V)	Y140-558
UM500SBC (120V)	Y140-560
UM500SBC (230V)	Y140-561

Ultimate 500 Light Gray Control Unit



- Torque Micromotor System
- Compact Micromotor System

UM500LGT (120V)	Y140-551
UM500LGT (230V)	Y140-552
UM500LGC (120V)	Y140-554
UM500LGC (230V)	Y140-555

Contents

- Control unit
- Micromotor Handpiece
- Foot Control
- Handpiece Stand

ULTIMATE 500D

BRUSHLESS

BENCH TOP TOWER SYSTEM



Tower Type

Features

- Speed of 1,000~50,000 min⁻¹
- Optimal Control by Microprocessor
- Capability to operate an air turbine handpiece
- Eco-Friendly Design
- Auto Speed Function
- Self-Diagnosis Function
- Audible Function Check
- Easy-to-operate Display Panel
- Maintenance Mode Setting
- Digital Speed Display
- Error Code Display Function

Ultimate 500D can also operate air turbine handpieces by simply attaching the optional air turbine adaptor.



An optional bracket is available for wall mounting the Ultimate 500D unit.

Specifications

- Power Supply : AC 120V or 230V 50/60 Hz
- Weight : 3.1 kg
- Dimensions : W81 x D270 x H230 (mm)

Ultimate 500D Systems



Torque Micromotor System

Compact Micromotor System

MODEL	ORDER CODE
UM500DSBT (120V) UM500DSBT (230V)	— Y140-749
UM500DSBC (120V) UM500DSBC (230V)	— Y140-750

Contents

- Control unit
- Micromotor Handpiece
- Foot Control
- Handpiece Stand

ULTIMATE 500K

BRUSHLESS

KNEE CONTROL SYSTEM

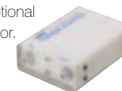


Knee Type

Features

- Speed of 1,000~50,000 min⁻¹
- Optimal Control by Microprocessor
- Capability to operate an air turbine handpiece
- Eco-Friendly Design
- Auto Speed Function
- Self-Diagnosis Function
- Audible Function Check
- Easy-to-operate Display Panel
- Maintenance Mode Setting
- Digital Speed Display
- Error Code Display Function

Ultimate 500K can also operate air turbine handpieces by simply attaching the optional air turbine adaptor.



Specifications

- Power Supply : AC 120V or 230V 50/60 Hz
- Weight : 3.0 kg
- Dimensions : W98 x D270 x H230 (mm)

Ultimate 500K Systems



Torque Micromotor System

Compact Micromotor System

MODEL	ORDER CODE
UM500KLGT (120V) UM500KLGT (230V)	Y140-664 Y140-666
UM500KLCG (120V) UM500KLCG (230V)	Y140-665 Y140-667

Contents

- Control unit
- Micromotor Handpiece
- Handpiece Stand

ULTIMATE 500F

FLOOR TYPE FOOT CONTROL SYSTEM

BRUSHLESS



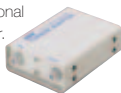
Features

- Speed of 1,000~40,000 min⁻¹
- Optimal Control by Microprocessor
- Capability to operate an air turbine handpiece
- Eco-Friendly Design
- Auto Speed Function
- Self-Diagnosis Function
- Audible Function Check

* Ultimate 500F maximum speed is preset to 40,000 min⁻¹.



Ultimate 500F can also operate air turbine handpieces by simply attaching the optional air turbine adaptor.



Specifications

- Power Supply : AC 120V or 230V 50/60 Hz
- Weight : 3.5 kg
- Dimensions : W230 x D209 x H99 (mm)

Ultimate 500F Systems



Torque Micromotor System

Compact Micromotor System

	MODEL	ORDER CODE
Torque Micromotor System	UM500FLGT (120V)	Y140-770
	UM500FLGT (230V)	Y140-769
Compact Micromotor System	UM500FLGC (120V)	Y140-774
	UM500FLGC (230V)	Y140-773

Contents

- Control unit
- Micromotor Handpiece
- Handpiece Stand

Turbine Adaptor TA50

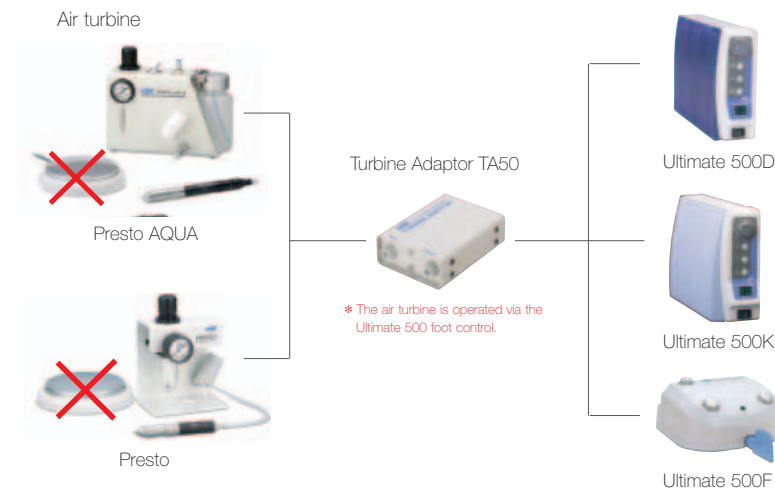
FOR ULTIMATE 500D, 500K AND 500F

Install the turbine adaptor TA50 to activate an air turbine handpiece. It is possible to operate an air turbine handpiece in addition to the electric micromotor via the one foot pedal / knee pedal. The air turbine adaptor TA50 can be installed on the Ultimate 500 Tower type, Knee type and Floor type. Operation between the air turbine and electronic micromotor is transferred by the touch of one switch.

MODEL ORDER CODE

TA50	U375
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- Turbine adaptor
- W75 x D100 x H30 (mm)



ULTIMATE 450 Series

BRUSHLESS

Perfect for In-Surgery Lab Work

Speed : 1,000~35,000 min⁻¹

Max. Torque : 4.5 N·cm

Precision Technology

NSK super precision technology ensures the bur concentricity of 0.02 mm or less.



Ergo Grip

Lowest Noise and Vibration

The hermetically enclosed brushless motor reduces the noise level by 20% compared to other conventional models. This results in a quieter and more comfortable work environment.

Ergonomically Designed

The grip is ergonomically designed. The light weight and excellent balance characteristics dramatically reduce hand fatigue during extended applications.



Long Term Durability

The high power brushless motor does not require replacement of carbon brushes. NSK in-house load testing has proven the durability of continuous use for more than 5,000 hours.



Ultimate 450 Micromotor *Lightweight and Compact*



Specifications

- | | |
|--|--------------------------------------|
| • Speed : 1,000~35,000 min ⁻¹ | • Weight : 185 g (Cord not included) |
| • Max. Torque : 4.5 N·cm | • Cord Length : 2 m |
| • Dimensions : L148 x ø27 (mm) | |

MODEL ORDER CODE

UM45C	Y141-266
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ULTIMATE 450

BENCH TOP SYSTEM

BRUSHLESS



Features

- Speed : 1,000~35,000 min⁻¹
- Max. Torque : 4.5 N·cm
- Eco-Friendly Design
- Self-Diagnosis Function
- Easy-to-operate Display Panel
- Digital Speed Display
- Optimal Control by Microprocessor
- Auto Speed Function
- Audible Function Check
- Maintenance Mode Setting
- Error Code Display Function

Specifications

- | | |
|----------------|--------------------------|
| • Power Supply | : AC 230V 50/60 Hz |
| • Weight | : 2.6 kg |
| • Dimensions | : W172 x D230 x H94 (mm) |



Ultimate 450 System



MODEL

ORDER CODE

UM450 SGC (230V)

Y141-263

Contents

- Control unit
- Micromotor Handpiece
- Foot Control
- Handpiece Stand

ULTIMATE 450K

BRUSHLESS



KNEE CONTROL SYSTEM

Features

- Speed : 1,000~35,000 min⁻¹
- Max. Torque : 4.5 N·cm
- Optimal Control by Microprocessor
- Eco-Friendly Design
- Auto Speed Function
- Self-Diagnosis Function
- Audible Function Check
- Easy-to-operate Display Panel
- Maintenance Mode Setting
- Digital Speed Display
- Error Code Display Function



Specifications

- Power Supply : AC 230V 50/60 Hz
- Weight : 3.0 kg
- Dimensions : W98 x D270 x H230 (mm)

Ultimate 450K System



MODEL

ORDER CODE

UM450KC (230V)

Y141-264

Contents

- Control unit
- Micromotor Handpiece
- Handpiece Stand

ULTIMATE 450F

BRUSHLESS



FLOOR TYPE FOOT CONTROL SYSTEM

Features

- Speed : 1,000~35,000 min⁻¹
- Max. Torque : 4.5 N·cm
- Optimal Control by Microprocessor
- Eco-Friendly Design
- Auto Speed Function
- Self-Diagnosis Function
- Audible Function Check



Specifications

- Power Supply : AC 230V 50/60 Hz
- Weight : 3.5 kg
- Dimensions : W230 x D209 x H99 (mm)

Ultimate 450F System



MODEL

ORDER CODE

UM450FC (230V)

Y141-265

Contents

- Control unit
- Micromotor Handpiece
- Handpiece Stand