#### SLIM MOTOR SERIES

Primado2 Slim Motor Slim Handpiece 200 Super Slim Handpiece 200 Standard Angled Handpiece 200 Standard Straight Handpiece 200 Perforator / Drill Handpiece 200 Craniotome / Metal Cutting

#### MICRO BONE SAW SERIES

Reciprocating Saw Handpiec Sagittal Saw Handpiece Oscillating Saw Handpiece

#### FOOT CONTROL

Primado2 Foot Control

#### WIRE PIN DRIVER SERIES

Primado2 Wire Pin Drive Wire & Pin Collet Drill Attachment Reamer Attachment Saw Attachment

#### HIGH TORQUE MOTOR SERIES

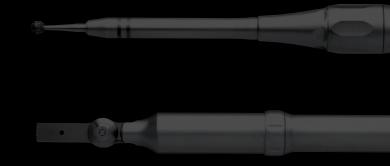
Primado2 High Torque Motor High Speed Handpiece 200 Slim Handpiece Super Slim Handpiece Standard Angled Handpiece Standard Straight Handpiece Perforator / Craniotome Handpiece Drill / Contra Angle Handpiece





Made in Japan, Primado2 is NSK's second generation high-speed total surgical system developed to meet strict demands from surgeons.

Since the launch of the first generation of Primado in 2006, we have been working with surgeons across the world. Their needs and requests gave shape to the new Primado2 which we created with balance, power, and a lightweight design to prevent stress from long operating hours. We invite you to experience Primado2 – the next evolution of high speed drills.



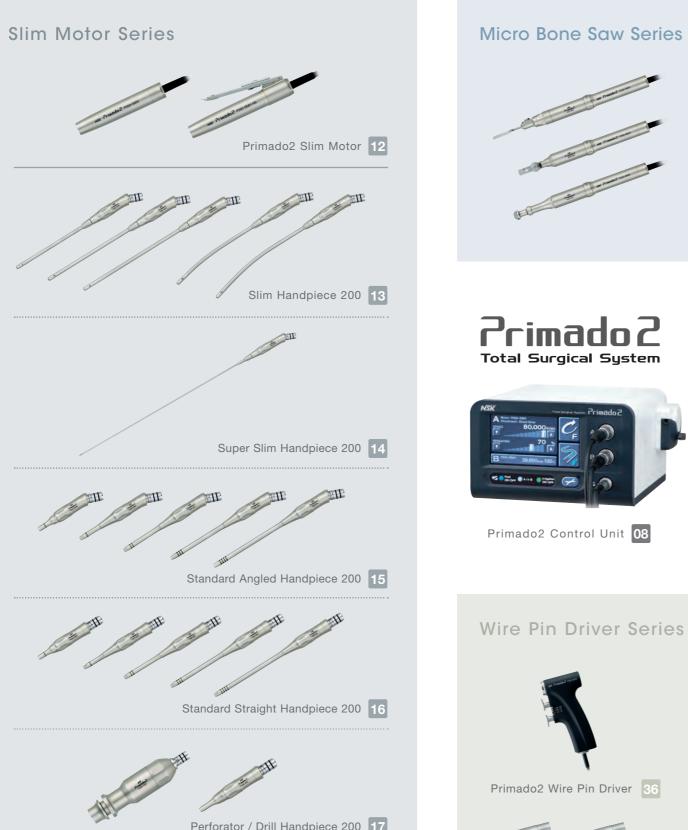
A Motor : P200 Attachment :	<b>Direct Drive</b>	
SPEED	80,0	000/mi
		70 <u>9</u>
В Р200-ВМН	20,00	0/min <b>100</b> %
Foot		Irrigation



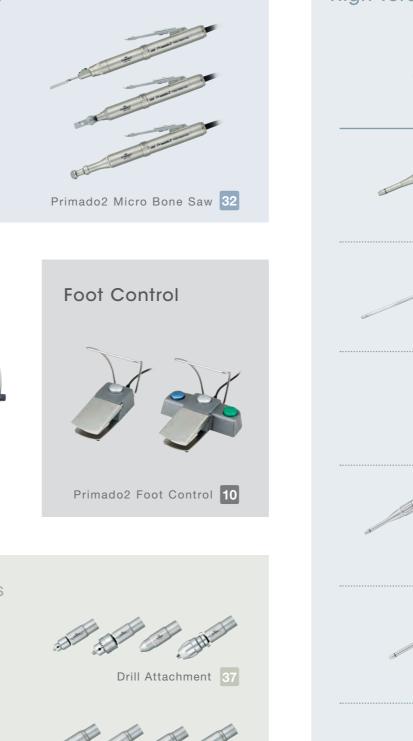




## Primado2 Product Lineup







Reamer Attachment 38

Wire & Pin Collet 37

Saw Attachment 38





Primado2

02

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High Torque Motor Series

## FEEL THE DIFFERENCE

Made in Japan, Primado2 is NSK's second generation high-speed total surgical system developed to meet strict demands from surgeons.

Since the launch of the first generation of Primado in 2006, we have been working with surgeons across the world. Their needs and requests gave shape to the new Primado2 which we created with balance, power, and a lightweight design to prevent stress from long operating hours.

We invite you to experience Primado2 – the next evolution of high speed drills.



04

# THE SIGN OF EXCELLENCE

Primado2 makes it possible to conduct various types of procedures. New features include a control unit with LCD display touch screen, a multifunctional foot control, four lineups of motor and extensive attachments. Since all Primado2 motors and handpieces are thermo disinfector compatible, easy maintenance is achievable.



05

06

#### Total Surgical Syste

1

07



# Primado2 Control Unit

The control unit has a new 6.5 inch LCD screen and a simple design that makes it user friendly. Two motors can be connected to the unit simultaneously, allowing for quick and easy switching between motors.

#### order code P200-CU-120

Primado2 Control Unit for 120V

order code P200-CU-230

Primado2 Control Unit for 230V

• Power Supply : AC120V / 230V 50/60 Hz • Dimension : W278 x D268 x H160 (mm) • Weight : 6.9 kg

## **Settings**

Extensive options are available

#### Control Unit

- Brightness Volume
- Language (English, Japanese, German, French, Spanish, Italian)

#### Motor Handpiece

- Accelerator adjustment (min. 10% max. 100%)
- Brake adjustment (min. 10% max. 100%)
- Torque adjustment (min. 30% 100%)
- Oscillation adjustment (1 5 times, available only for Wire Pin Driver)

#### Attachment

• Handpiece selection (Displays rotation speed of engaged handpiece)

## **Touch Panel**

#### Main Panel

- Speed control
- Irrigation control
- Reverse rotation control
- Priming control

#### Sub Panel

• Displays the assigned function of each.

#### Mini Panel

• Button for optional settings.

## **Configuration Settings**

The control unit saves the configurations made by the last user except for speed, allowing the surgeons to proceed quickly.

## **Automatic Recognition for** Motors

Four types of motor are automatically recognized by the control unit which displays the corresponding models and rotation speed for each.

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## **Integrated High Performance Irrigation Pump**

Primado2 comes equipped with an irrigation pump. Irrigation is adjusted up to a max of 75ml/min.



# Primado2 Foot Control

The foot control is available in two models: single (one functional button), and multi (three functional buttons). Each button can be set to a specific function to meet the operator's preference.

## **Functional Options**

#### <Allocatable Features>

- Foot control ON/OFF
- A ⇔ B control (switching between motors)
- Speed control
  - (adjust rotational speed; min.  $30\% \Rightarrow$  default  $\Rightarrow$  max. 100%)
- Reverse rotation mode
- Irrigation ON/OFF
- Flush (continuous 100% irrigation when pressed)
- Disable (Set the status as no function)





order code FC-73

#### Primado2 Single Foot Control

• 1 pedal with 1 functional button Speed control : variable

• IP rating : IPX8

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order code FC-74

#### Primado2 Multi Foot Control

- 1 pedal with 3 functional buttons
- Speed control : variable
- IP rating : IPX8

# Slim Motor Series

Slim Design	: A new compact and lightweight design reduces surgeon fatigue during long operations.
High Speed	: High speed rotation with a maximum of 80,000min <sup>-1</sup> ensures precise cutting.
Versatile	: Foot control and hand control options available.
Easy Maintenance	: All motors and handpieces can be processed by a thermo disinfector.
Durable	: The Slim Motor Series features a durable design as a result of NSK's long history with high

precision technology. The wear-resistant coating contributes to long-lasting and scratch-free products of the high quality.







Handpiece 200

Prinddo 2 P200-SMH



## Primado2 Slim Motor



#### order code P200-SMH-HS

#### Primado2 Slim Motor/HS

- Hand Control type
- Speed: Max. 80,000 min-1 Available handpieces: 20 types
- Bundled Item: P200-EZ-SM (see p.40)

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#### Primado2 Slim Motor

- Speed: Max. 80,000 min-1
- Available handpieces: 20 types
- Bundled Item: P200-EZ-SM (see p.40)

## Slim Handpiece 200 for ø1.0 mm bur 80,000 min.

The Slim Handpiece 200 has a 4.8mm diameter bur guard. Various length in curved and straight models that deliver great visualization in endoscopic and minimally invasive spine procedures. The bur guard can be removed with a wrench that is included to provide easy maintenance.

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Primado2



## Super Slim Handpiece 200 for ø1.0 mm bur 20,000 min.

The Super Slim Handpiece 200 has a 2.1mm diameter bur guard. It is exclusively designed to perform the endoscopic procedure with precise and sensitive drilling of 20,000min-1 at maximum in rotation speed. The bur guard can be removed with a wrench that is included to provide easy maintenance.

ø2.1





Wrench for Slim/Super Slim

• Corresponding wrench for bur guard • Included with Super Slim Handpiece 200 Primado2

Ρ

## Standard Angled Handpiece 200 for ø2.35 mm bur 80,000 min-1

order code

Mini type

order code

order code

Short type

order code

P200-2AMS

• Bur: ø2.35mm / MS

P200-2AES

• Bur: ø2.35mm / Extra Short

• Extra Short type

P200-2AS

• Bur: ø2.35mm / Short

P200-2AM

 Medium type • Bur: ø2.35mm / Medium

order code

Long type

P200-2AL

• Bur: ø2.35mm / Long

Irrigation Nozzle

order code PD-IN-D For P200-2AMS (MS)

order code PD-IN-2ES

order code PD-IN-2S For P200-2AS (S) order code PD-IN-2M For P200-2AM (M)

order code PD-IN-2L For P200-2AL (L)

For P200-2AES (ES)

Std. Angled Handpiece200 MS

Std. Angled Handpiece200 ES

Std. Angled Handpiece200 S

Std. Angled Handpiece200 M

Std. Angled Handpiece200 L

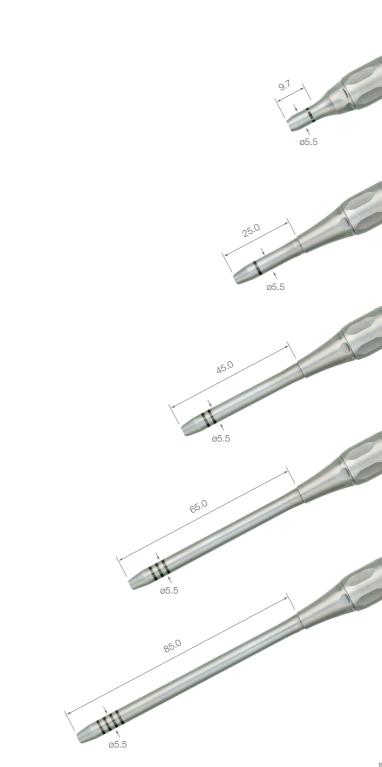
Five different lengths of handpieces are available with the Standard Angled Handpiece 200 to address various types of procedures. Consistent rotation and well-balanced ergonomic design relieves fatigue.







Five different lengths of handpieces are available with the Standard Straight Handpiece 200 to address various types of procedures. Consistent rotation and well-balanced ergonomic design relieves fatigue.



#### order code P200-2SMS

#### Std. Straight Handpiece200 MS • Mini type

• Bur: ø2.35mm / MS

#### order code

P200-2SES

#### Std. Straight Handpiece200 ES

 Extra Short type • Bur: ø2.35mm / Extra Short

#### order code P200-2SS

#### Std. Straight Handpiece200 S

- Short type
- Bur: ø2.35mm / Short

#### order code P200-2SM

#### Std. Straight Handpiece200 M

- Medium type
- Bur: ø2.35mm / Medium

P200-2SL

- Long type

#### Irrigation Nozzle

order code PD-IN-D For P200-2SMS (MS)

order code PD-IN-2ES For P200-2SES (ES)

order code PD-IN-2S For P200-2SS (S)

order code PD-IN-2M For P200-2SM (M)

order code PD-IN-2L For P200-2SL (L)





order code



#### Std. Straight Handpiece200 L

- Bur: ø2.35mm / Long

## Perforator Handpiece 200 1,250 min<sup>-1</sup>

The perforator handpiece for trephination. It delivers stable torque and achieves smooth and powerful cutting performance.

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Primado2

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## Drill Handpiece 200 for ø2.35 mm Twist Drill 80,000 min-1

The corresponding handpiece for a trephination.





For P200-2SD

order code

order code

P200-2SD

• Bur: ø2.35mm twist drill

Irrigation Nozzle

order code PD-IN-D

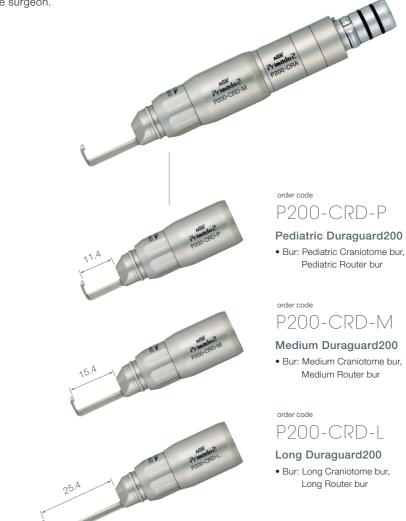
Straight Drill Handpiece200

P200-PER

Perforator Handpiece200 Compatible Chuck: Hudson Chuck

## Craniotome Handpiece 200 for ø3.17 mm bur 80,000 min-1

The craniotome handpiece designed for cranial surgery. Three different types of duraguards are available for variable cranial bone thickness from pediatric to adult. The smooth and powerful cutting performance avoids adding additional stress to the surgeon.



## Metal Cutting Handpiece 200 for ø3.17 mm bur 80,000 min<sup>-1</sup>

The corresponding handpiece for cutting implants.



order code P200-CRA

Craniotome Handpiece200

• Bur: Craniotome bur, Router bur

• Bundled Item: P200-CRD-M

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order code P200-3MC

Metal Cutting Handpiece200 • Bur: Metal Cutting Carbide Bur Metal Cutting Diamond Disc

# High Torque Motor Series

High Torque	: High torque motor delivers advanced cutting performance.
Versatile	: Foot control and hand control options available.
Easy Maintenance	: All motors and handpieces can be processed by a thermo disinfector.
Durable	: The High Torque Motor Series features a durable design as a result o

NSK's long history with high precision technology. The wear-resistant coating contributes to long-lasting and scratch-free products of the high quality.

# NSK Primada2 P200-HIMH September 200

## Primado2 High Torque Motor

P200-HMH-HS



#### order code P200-HMH-HS

#### Primado2 High Torque Motor/HS

- Hand Control type
- Speed: Max. 60,000 min-1 Available handpieces: 22 types

High Speed Handpiece 200



Slim Handpiece

Super Slim . Handpiece



Straight Handpiece

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P200-HMH



#### Primado2 High Torque Motor

- Speed: Max. 60,000 min-1
- Available handpieces: 22 types

## High Speed Handpiece 200 for ø3.17 mm bur 100,000 min<sup>-1</sup>

The maximum rotational speed of 100,000min-1 is attained by combining the High Speed Motor with a High Speed Handpiece. Its powerful cutting perfomance is suitable for open surgery.



order code P200-3GAS

High Speed Handpiece200 S

 Short type • Bur: ø3.17mm / Short

order code P200-3GAM

High Speed Handpiece200 M

 Medium type • Bur: ø3.17mm / Medium

order code P200-3GAL

High Speed Handpiece200 L

Long typeBur: ø3.17mm / Long



Irrigation Nozzle order code PD-IN-3S For P200-3GAS (S) order code PD-IN-3M For P200-3GAM (M)

order code PD-IN-3L For P200-3GAL (L)

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Primado2

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## Slim Handpiece for ø1.0 mm bur 60,000 min<sup>-1</sup>

order code

 Long type • Bur: ø1.0mm / Long

order code

order code

PD-1A135

Long Slim Handpiece

PD-1A155-10

• Extra Long type • Bur: ø1.0mm / Extra Long

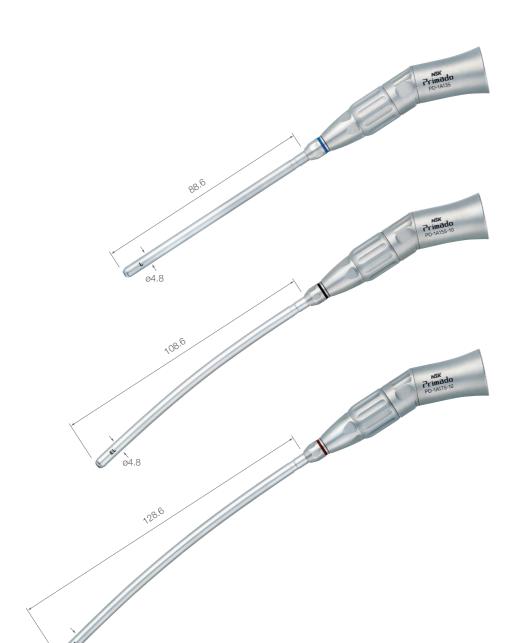
PD-1A175-10

 Super Long type • Bur: ø1.0mm / Super Long

Super Long Slim Handpieces with a curvature of  $10^\circ$ 

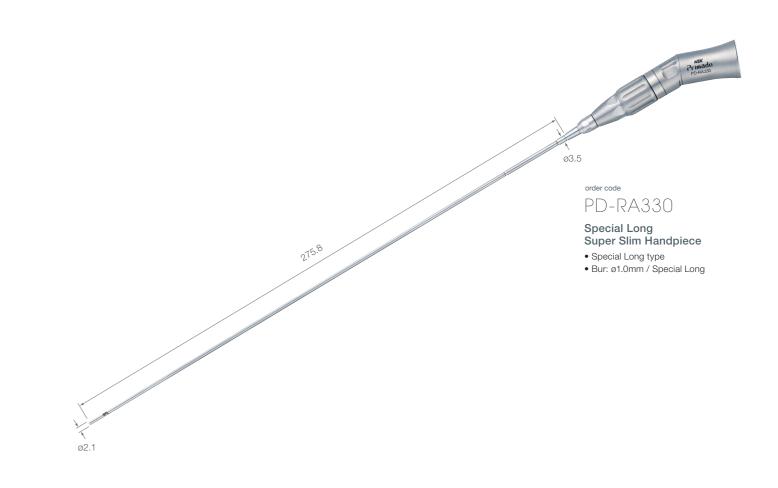
Extra Long Slim Handpieces with a curvature of 10°

The Slim Handpiece has a 4.8mm diameter bur guard that delivers great visualization in endoscopic and minimally invasive spine procedures.



## Super Slim Handpiece for ø1.0 mm bur 24,000 min<sup>-1</sup>

The Super Slim Handpiece has a 2.1mm diameter bur guard. It is exclusively designed to perform the endoscopic procedure with precise and sensitive drilling of 24,000min<sup>-1</sup> at maximum in rotation speed.

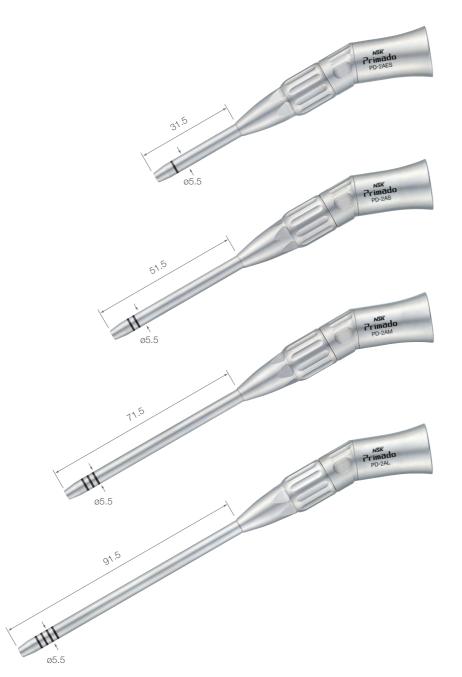


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## Standard Angled Handpiece for ø2.35 mm bur 60,000 min<sup>-1</sup>

Four different lengths of handpieces are available with the Standard Angled Handpiece to address various types of procedures. Consistent rotation and well-balanced ergonomic design relieves fatigue.





Extra Short Standard Angle Handpiece Extra Short type • Bur: ø2.35mm / Extra Short

order code PD-2AS

Short Standard Angle Handpiece Short type • Bur: ø2.35mm / Short

order code PD-2AM

Medium Standard Angle Handpiece Medium type Bur: ø2.35mm / Medium

order code PD-2AL

Long Standard Angle Handpiece Long type • Bur: ø2.35mm / Long

## Standard Straight Handpiece for ø2.35 mm bur 60,000 min<sup>-1</sup>

Three different lengths of handpieces are available with the Standard Straight Handpiece to address various types of procedures. Consistent rotation and well-balanced ergonomic design relieves fatigue.



Irrigation Nozzle



order code PD-IN-2ES For PD-2AES (ES) order code PD-IN-2S For PD-2AS (S)

order code PD-IN-2M For PD-2AM (M) order code PD-IN-2L For PD-2AL (L)



order code PD-2SES

#### Extra Short Standard Straight Handpiece Extra Short type

- Bur: ø2.35mm / Extra Short

order code

PD-2SS

#### Short Standard Straight Handpiece Short type

• Bur: ø2.35mm / Short

order code

#### PD-2SM Medium

#### Standard Straight Handpiece Medium type

• Bur: ø2.35mm / Medium





#### Irrigation Nozzle

order code PD-IN-2ES For PD-2SES (ES)

order code PD-IN-2S For PD-2SS (S)

order code PD-IN-2M For PD-2SM (M)

Primado2

## Perforator Handpiece 1,200 min<sup>-1</sup>

The high performance handpiece for trephination. It delivers stable torque, and achieves smooth and strong cutting performance.

The craniotome handpiece designed for cranial surgery. Three different types of duraguards are considered for variable cranial bone thickness from pediatric to adult. The smooth and powerful cutting performance avoids adding additional stress to the surgeon.



order code PD-PER Perforator Handpiece Compatible Chuck: Hudson Chuck



order code

Pediatric Duraguard



Medium Duraguard









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order code PD-CRA

#### Craniotome Handpiece

- Bur: Craniotome bur, Router bur
- Bundled Item: PD-CRD-M



## • Bur: Pediatric Craniotome bur,

Pediatric Router bur

• Bur: Medium Craniotome bur, Medium Router bur

PD-CRD-L

Long Duraguard • Bur: Long Craniotome bur, Long Router bur

## Drill Handpiece for ø2.35 mm Twist Drill 60,000 min<sup>-1</sup>

The corresponding handpiece for a trephination. The NSK Drill Handpiece is available in straight and angled models for various types of operations.

## Contra Angle Handpiece

The Contra Angle Handpiece is useful when approaching at a blind angle. It is available in two types of speed reduction: 16:1 and 64:1.



order code PD-2SD Straight Drill Handpiece • Bur: ø2.35 mm Twist Drill

#### order code PD-2SDM

• Corresponds to ø2.35 mm burs

#### order code PD-2AD

Angled Drill Handpiece • Bur: ø2.35 mm Twist Drill



order code PD-2ADM Angled Drill Handpiece M • Corresponds to ø2.35 mm burs







Irrigation Nozzle order code PD-IN-D For PD-2SD, PD-2AD

order code PD-IN-2ES For PD-2SDM, PD-2ADM

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#### order code PD-CA-16

#### Contra Angle Handpiece 16:1 Reduction

- 16:1 Reduction (Speed: Max. 3,750 min<sup>-1</sup>)
- Latch Type Chuck
- Corresponds to ø2.35mm CA burs

#### order code PD-CA-64

## Contra Angle Handpiece 64:1 Reduction

- 64:1 Reduction (Speed: Max. 940 min<sup>-1</sup>)
- Latch Type Chuck
- Corresponds to ø2.35mm CA burs

# Micro Bone Saw Series

Slim Design	: The streamlined lightweight design delivers well-balanced handling.
High Performance	: Excellent cutting performance paired with low rotational vibration creates smooth operation.
Easy Maintenance	: All motors and handpieces can be processed by a thermo disinfector.

Durable

: The Micro Bone Saw Series features a durable design as a result of NSK's long history with high precision technology. The wear-resistant coating contributes to long-lasting and scratch-free products of the highest quality.

NEK Primedia2 P201541H



## Primado2 Reciprocating Saw Handpiece 20,000 min-1



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# CUTTING ACCESSORIES : P16~17

#### order code P200-REC-S-HS

#### Primado2 Rec. Handpiece/HS

Hand Control type

order code

P200-REC-S

Primado2 Rec. Handpiece • Speed: Max. 20,000 min<sup>-1</sup> • Stroke Length: 2.5 mm • Blade: Reciprocating Saw Blades, Reciprocating Rasps

• Bundled Item: P200-EZ-BM (see p.40)

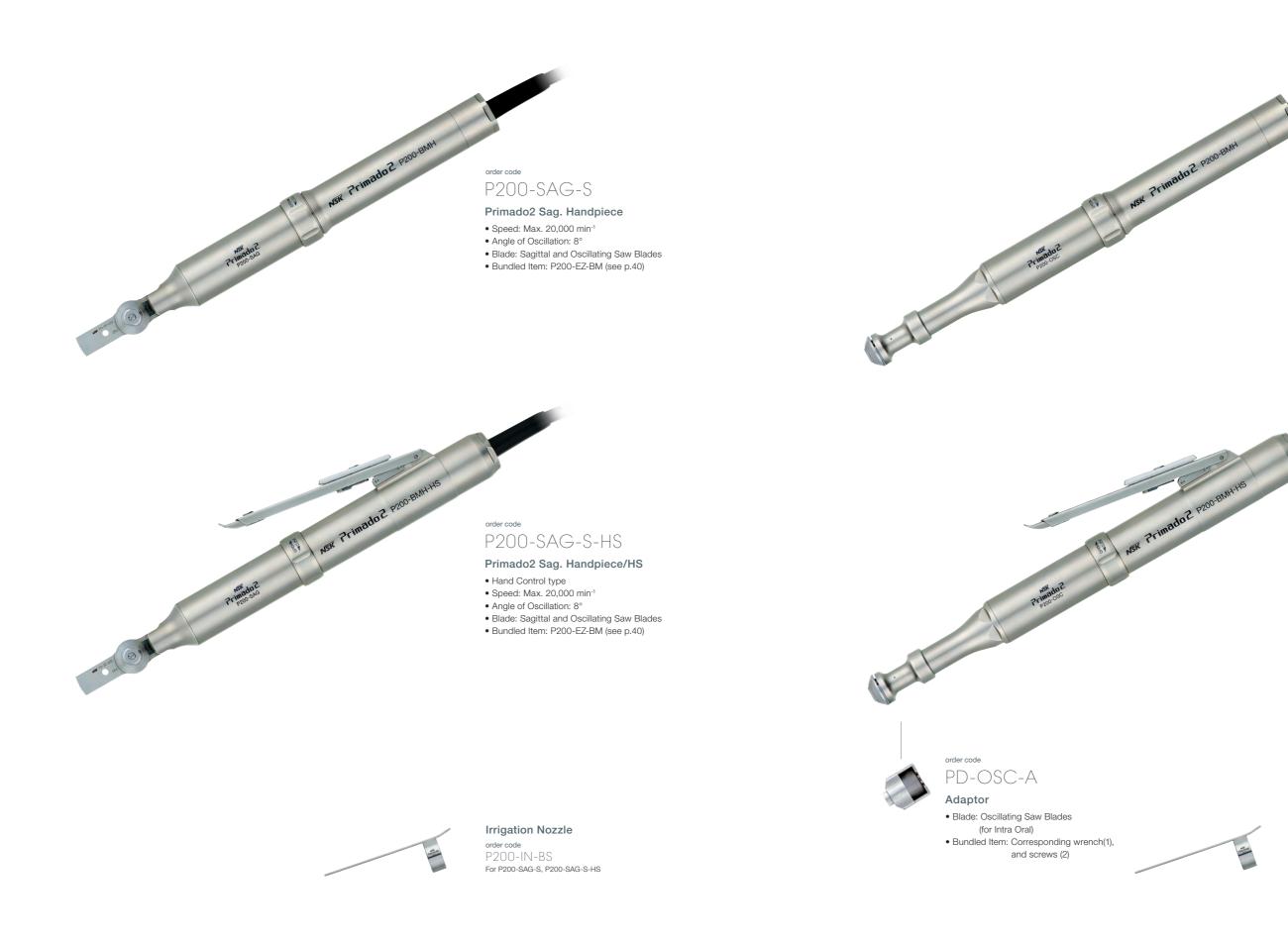
- Speed: Max. 20,000 min-1
- Stroke Length: 2.5 mm
- Blade: Reciprocating Saw Blades, Reciprocating Rasps
- Bundled Item: P200-EZ-BM (see p.40)

#### Irrigation Nozzle

order code P200-IN-BS For P200-REC-S, P200-REC-S-HS

## Primado2 Sagittal Saw Handpiece 20,000 min-1

## Primado2 Oscillating Saw Handpiece 20,000 min<sup>-1</sup>



Primado2

CUTTING

ACCESSORIES

P13~12

CUTTING ACCESSORIES : P13~15

## P200-OSC-S

## Primado2 Osc. Handpiece

- Speed: Max. 20,000 min-1
- Angle of Oscillation: 8°

order code

- Blade: Sagittal and Oscillation Saw Blades, Oscillating Saw Blades (for Intra Oral)
- Bundled Item: P200-EZ-BM (see p.40)

#### order code P200-OSC-S-HS

#### Primado2 Osc. Handpiece/HS

- Hand Control type
- Speed: Max. 20,000 min-1
- Angle of Oscillation: 8°
- Blade: Sagittal and Oscillation Saw Blades, Oscillating Saw Blades
  - (for Intra Oral)
- Bundled Item: P200-EZ-BM (see p.40)

#### Irrigation Nozzle

order code P200-IN-BS For P200-OSC-S, P200-OSC-S-HS

## Wire Pin Driver Series

Powerful

: Delivers powerful pinning, wiring, and drilling through elaborate design.

Ergonomic Design : Smart design fits comfortably in the surgeon's hand and creates smooth handling and high operability.

Easy Maintenance : All motors and handpieces can be processed by a thermo disinfector.

NST Primado 2 P200-WPD





Drill Attachment

**Reamer Attachment** 



## Primado2 Wire Pin Driver



Primado2 Wire Pin Driver

- Speed : Max. 1,200 min-1
- Rotation Mode: Forward, Reverse, Oscillating • Bundled Item: P200-EZ-WPD (see p.40)

Primado2

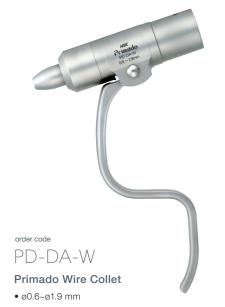
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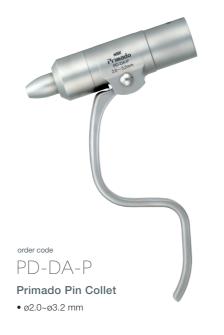


## Attachment for Wire Pin Driver

## Attachment for Wire Pin Driver

Wire & Pin Collet 1,200 min<sup>-1</sup>





## Reamer Attachment 300 min<sup>-1</sup>







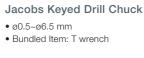
order code PD-DA-J4

Jacobs Keyed Drill Chuck

- ø0.5~ø4.0 mm
- Bundled Item: T wrench

order code PD-TW-J4

T wrench



order code PD-TW-J6

T wrench

order code

PD-DA-J6

AO Drill Chuck

order code PD-DA-A

PD-DA-K **Keyless Drill Chuck** • ø0.6~ø7.4 mm

order code

## Saw Attachment 12,000 min<sup>-1</sup>





**Reciprocating Saw Attachment** • Blade: Reciprocating Saw Blades, Reciprocating Rasps



order code PD-RA-A AO Reamer



order code PD-SA-S

Sagittal Saw Attachment • Blade: Sagittal and Oscillating Saw Blades

## Sterilization Case

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Primado2





order code

order code

Dimensions :

Double level case

SC-C-H70

• Dimensions :

Single level case

SC-C-H125

Sterilization Case/H125

W512 x D262 x H125 (mm)

Sterilization Case/H70

W512 x D262 x H70 (mm)





SC-T-F Sterilization Tray Divider-Free • Dimensions : W480 x D250 x H60 (mm)

order code

order code

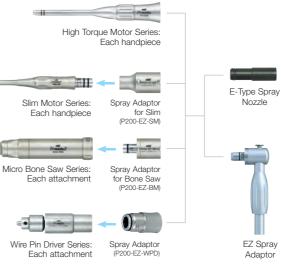
SC-SM Silicone Mat • The mat for the Sterilization Tray

## Maintenance

PANA SPRAY Plus is a specially formulated, highly effective general handpiece lubricant. Lubricating with PANA SPRAY Plus will ensure handpiece performance and durability. Apply PANA SPRAY Plus to handpieces after "Cleaning" in the maintenance process.



President





NSK offers a specially designed mobile trolley for the Primado control unit which is not only practical but also elegant. In this way, all the equipment can be stored in one place allowing easy access when needed. The trolley has adjustable height, lockable wheels and a bracket for the cable on the side.

Irrigation Tube



Z299 iCart-L Mobile Trolley • Dimensions : W360 x D420 x H800 (mm) • Weight : 10 kg

order code

## Spray Mist Absorber

A convenient way to avoid mist spray from escaping into the environment. Simply insert the handpiece into the Absorber Pack then apply the spray lubricant.







order code PD-IT-S Surgical Irrigation Tube • 10 pcs/ set (Sterilized)



#### order code Z182100

#### PANA Spray Plus

- For Handpieces, 480 mL
- Alcohol-contained Lubricant



#### PANA Spray Plus (6pcs)

Pack of 6





order code Z019090 E-Type Spray Nozzle

• For Handpieces

order code PD-F7-M

EZ Spray Adaptor • PANA Spray Plus is not included



order code Y900084

Spray Mist Absorber

Pack of 10

MEMO

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Primado2

Specifications are subject to change without notice.