

## Specifications

### <Control Unit>

Model	2.1	P200-CU-120 P200-CU-230
Power source		AC 120V 50/60 Hz AC 230V 50/60 Hz
Electricity consumption		65 VA
Maximum feed rate of Irrigation Pump		75 ml/min
Dimensions		W278×D250×H160 mm
Weight		6.9Kg
Length of Power Cord		3.5 m

### <Micromotor>

Model	P200-HMH P200-HMH-HS	P200-SMH P200-SMH-HS	P200-BMH P200-BMH-HS	P200-WPD
Rotational speed	60,000min <sup>-1</sup>	80,000min <sup>-1</sup>	20,000min <sup>-1</sup>	1,200min <sup>-1</sup>
Rated input	DC 39.5V	DC 23.7V	DC 21.8V	DC 39.1V
Dimensions	φ23×L99mm φ23×L99mm	φ18×L99.7mm φ19.3×L117.5mm	φ18×L100.4mm φ20.2×L101.8mm	W75.5×D28.0 ×H141.3
Weight	361g 390g	305g 340g	302g 359g	790g
Torque	6.0 Ncm	4.2 Ncm	40 Ncm	125 Ncm
Length of Handpiece Cord	3.5 m			

### <Foot Control>

Model	FC-73	FC-74
Dimensions	W153×D223×H175.5	W220×D223×H175.5
Weight	1.4Kg	2.0Kg
Cord length	3.5 m	

	Temperature	Humidity	Atmospheric pressure
Use Environment	0-40°C (no condensation)	30-75% RH	700-1,060hPa
Store and Transportation Environment	-10-50°C	10-85% RH	500-1,060hPa

### Classifications of equipment

- Type of protection against electric shock:
  - Class I equipment
- Degree of protection against electric shock:
  - Type BF applied part:  $\square$
- Method of sterilization or disinfection recommended by the manufacture:
  - See 8. Sterilization
- Degree of protection against ingress of water as detailed in the current edition of IEC 60529:
  - Foot Control: IPX8 (Protected against immersion in water)
- Degree of safety of application in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide:
  - Foot Control: AP Equipment  $\odot$
- Mode of operation:
  - Intermittent operation

## 12 Disposing Product

In order to avoid the health risks of operators handling the disposal of medical equipment, as well as the risks of environmental contamination caused thereof, ask specialist firms who are licensed to dispose of specially controlled industrial wastes, to dispose the product for you.



  
**CAUTION**

- Be sure to clean and sterilize the Micromotor after use. Remaining blood may result in product failure due to internal blood coagulation.
- In order to prevent infection, put on a mask, rubber gloves and a pair of protection goggles.
- Sterilize only the Micromotor.
- When cleaning or sterilizing Attachments, refer to the Operation Manual of each Attachment.

### 8-1 Cleaning the Control Unit and Foot Control

#### 8-1-1 Preparation before cleaning

- Disconnect the Motor Cord, Foot Control Cord and Power Cord from the Control Unit.
- Check for any damage or deterioration on the outer surface of each component or each cord, and for any deformation or loss of each connector pin.

#### 8-1-2 Cleaning

- Clean the surface of each component product, using a lint-free cloth moistened with neutral detergent for medical use.
- Remove the detergent from the surface using a lint-free cloth moistened with distilled water, deionized water, or demineralized water.

  
**CAUTION**

- Do not soak the Control Unit and the Foot Control into water.
- Prevent water from entering the Connector portion.
- Do not attempt to sterilize the Control Unit and the Foot Control.

### 8-2 Cleaning and Sterilization of the Micromotor


#### 8-2-1 Preparation prior to washing

- Remove the Attachment from each Micromotor.
- Check for any damage or deterioration on the outer surface of each Micromotor or Motor Cord, and for any deformation or loss of each connector pin.

#### 8-2-2 Cleaning

- Wipe stains off the surface of the Micromotor (including the Motor Cord) thoroughly using a lint-free cloth moistened with neutral detergent for medical use or a non-metallic brush.
- Remove the detergent solution using a lint-free cloth moistened with distilled, deionized or demineralized water.

#### 8-2-3 Washing and disinfecting

 The Micromotor can be washed via Thermo Disinfector.

If a Thermo-Disinfector is not available, proceed to 8-2-4 Sterilization below.

The following conditions are recommended for Thermo Disinfector: (It is recommended to use a thermo disinfectant compatible with ISO 15883)

- a. Cleaning: at 45°C for 3 minutes
- b. Intermediate rinse: At least 1 minute (using distilled, deionized or demineralized water)
- c. Thermal disinfecting: at 93°C for 5 minutes (using distilled, deionized or demineralized water)
- d. Drying: at least 10 minutes

#### 8-2-4 Sterilization 2.2

We verify the validity of sterilization in the following conditions.

1) Place it in a Primado Sterilization Cassette

2) Autoclave under the following conditions;

- Pre-vacuum Autoclave: at 134°C for 3 minutes or longer
- Gravity-displacement Autoclave: at 132°C for 15 minutes or longer

  
**CAUTION**

- Do not soak the Micromotor into water, or failure might occur.
- The Micromotor is not suitable for EOG sterilization.
- Sterilize the Micromotor after each patient.
- Do not use chlorinated cleaner.
- Do not clean the Micromotor with an ultrasonic cleaning apparatus.
- Do not clean the Micromotor with a washer sterilizer.
- The Micromotors do not require lubrication. Never lubricate them.

### 8-3 Storage

Store the sterilized Micromotor in a place where it can be kept sterile until the next use.



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สำเนาถูกต้อง

# Primado2 Control Unit

- 3.1.1. A 6.5 inch LCD touch screen is newly adopted. The simple design makes it user friendly and easy to use.  
Two motor handpieces can be connected to the unit, allowing for easy switching between handpieces.

order code  
**P200-CU-120**

Primado2 Control Unit for 120V

3.1. order code  
**P200-CU-230**

Primado2 Control Unit for 230V

- Power Supply : AC120V / 230V 50/60 Hz
- Dimension : W278 x D265 x H160 (mm)
- Weight : 6.9 kg



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## Configuration Settings

The control unit saves the last configurations made user the Option Set Up button, allowing the operator to proceed right away.

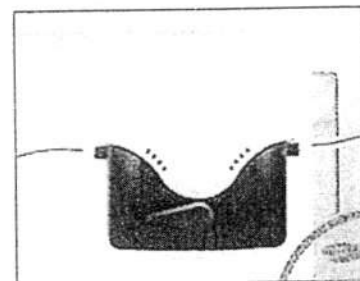
## Automatic recognition for Motor Handpieces

Four types of motor handpieces are automatically recognized by the control unit which displays the corresponding models and rotational speeds for each.

## Regulation Equipment- Irrigation Pump

Primado2 comes equipped with an irrigation pump. Irrigation can be adjusted interval 1-100% of values allowing up to max. 75ml/min.

3.1.3



*Signature*

# Primado2 Control Unit

- Compact design for easy set-up
- Extensive options can be set up individually (e.g., Acceleration/Brake adjustment, Irrigation, etc.)
- Main panel's simple operation makes it user-friendly



Order Code  
**P200-CU-120**  
Primado2 Control Unit 120V

Order Code  
**P200-CU-230**  
Primado2 Control Unit 230V

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

## HOME Screen

- Speed control 3.1.1.1
- Irrigation control 3.1.1.2
- Reverse rotation control 3.1.1.3
- Priming control
- Foot Control setting displayed

## Setting Options

### [Control Unit]

- Brightness
- Volume
- Language settings (6 languages available)
- Displays rotation speed of engaged motor/attachment

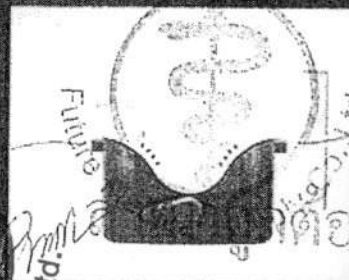
### [Motor]

- Acceleration adjustment
- Brake adjustment
- Torque adjustment
- Oscillation adjustment (available for Wire Pin Driver only)

## Configuration Settings

### Automatic motor recognition

### Integrated High Performance Irrigation Pump



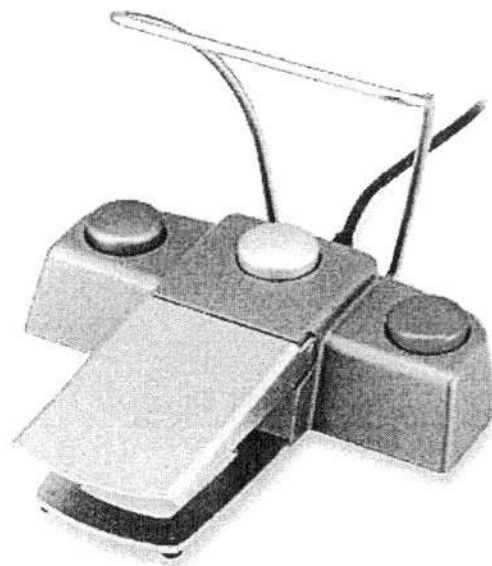
Medical Supply Center  
2020

# Foot Control

- | Available in two models: single function button and multi-function button
- | An open pedal design enables precise and easy control
- | Each button can be set to a specific function to meet the operator's preference



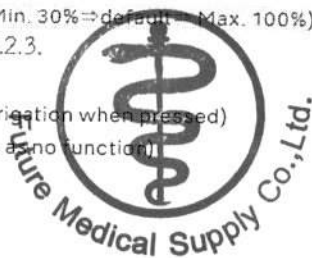
Order Code  
**3.2. FC-73**  
Primado2 Single Foot Control  
• 1 pedal with 1 function button



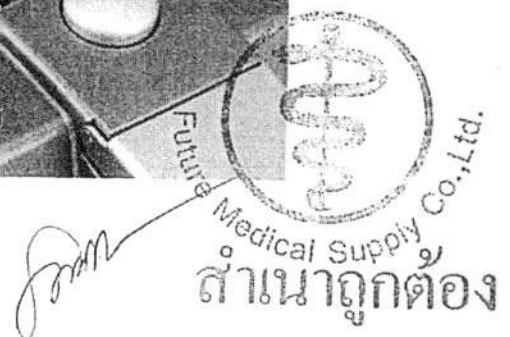
Order Code  
**FC-74**  
Primado2 Multi Foot Control  
• 1 pedal with 3 function buttons

## Functional Options

- Foot control ON/OFF 3.2.1.
- A↔B control (switching between motors) 3.2.2.
- Speed control 3.2.5.  
(adjust rotational speed; Min. 30%⇒default⇒Max. 100%)
- Reverse rotation mode 3.2.3.
- Irrigation ON/OFF 3.2.4
- Flush (continuous 100% irrigation when pressed)
- Disable (i.e., set the status as no function)
- Speed control : variable
- IP rating : IPX8



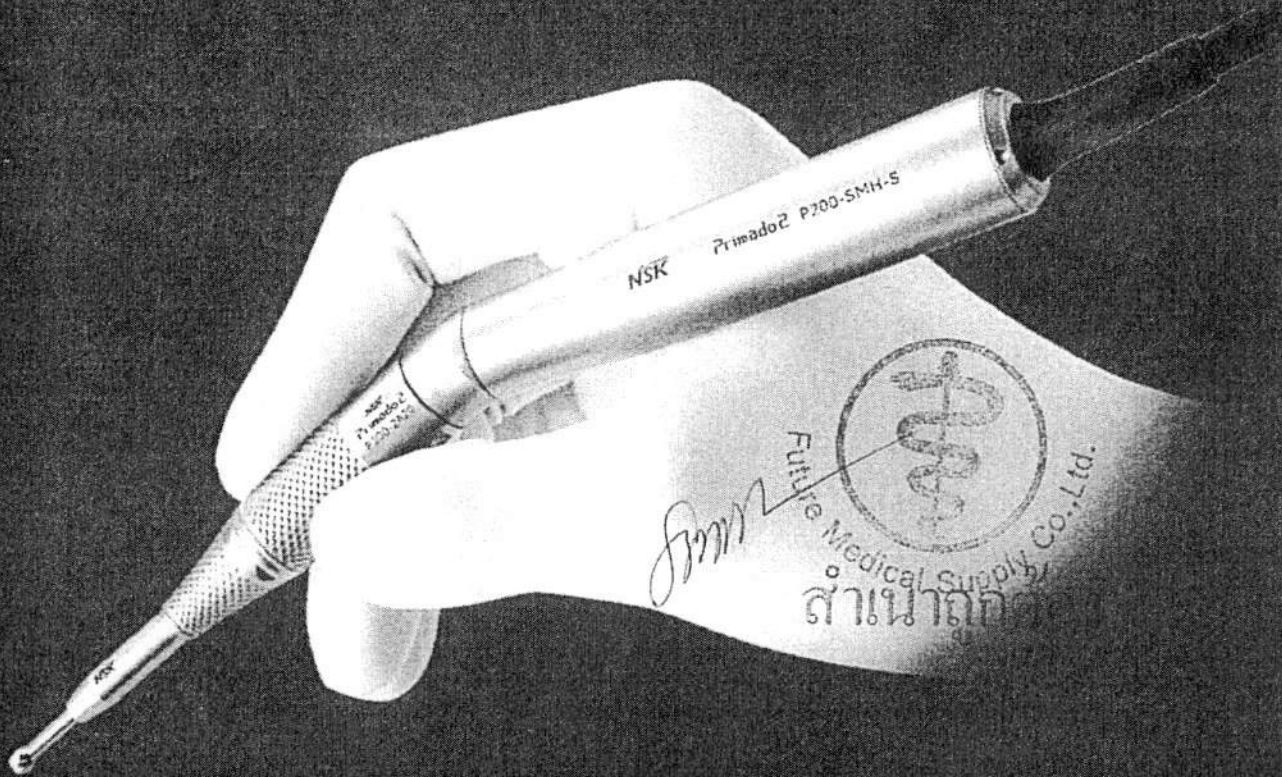
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ตัวแทนถูกต้อง

# Slim Motor Series

- Compact and lightweight design prevents surgeon fatigue during procedures
- A variety of attachments are available
- Quick Joint allows for an easy attachment-motor connection



## Primado2 Slim Motor

- Speed : Max. 80,000 min<sup>-1</sup>
- Bundled Item : P200-EZ-SM (see p.30)



Order Code  
**P200-SMH-S**  
Primado2 Slim Motor Short

Order Code  
**P200-SMH**  
Primado2 Slim Motor

Order Code  
**P200-SMH-HS**  
Primado2 Slim Motor/HS  
\*Hand Control type

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## Specifications

### <Control Unit>

Model	P200-CU-120 P200-CU-230
Power source	AC 120V 50/60 Hz AC 230V 50/60 Hz
Electricity consumption	65 VA
Maximum feed rate of Irrigation Pump	75 ml/min
Dimensions	W278×D250×H160 mm
Weight	6.9Kg
Length of Power Cord	3.5 m

### <Micromotor>

3.3



Model	P200-HMH P200-HMH-HS	P200-SMH P200-SMH-HS	P200-BMH P200-BMH-HS	P200-WPD
Rotational speed	60,000min <sup>-1</sup>	80,000min <sup>-1</sup>	20,000min <sup>-1</sup>	1,200min <sup>-1</sup>
Rated input	DC 39.5V	DC 23.7V	DC 21.8V	DC 39.1V
Dimensions	φ23×L99mm φ23×L99mm	φ18×L99.7mm φ19.3×L117.5mm	φ18×L100.4mm φ20.2×L101.8mm	W75.5×D28.0 ×H141.3
Weight	361g 390g	305g 340g	302g 359g	790g
Torque	6.0 Ncm	4.2 Ncm	40 Ncm	125 Ncm
Length of Handpiece Cord	3.5 m			

### <Foot Control>

Model	FC-73	FC-74
Dimensions	W153×D223×H175.5	W220×D223×H175.5
Weight	1.4Kg	2.0Kg
Cord length	3.5 m	

	Temperature	Humidity	Atmospheric pressure
Use Environment	0-40°C (no condensation)	30-75% RH	700-1,060hPa
Store and Transportation Environment	-10-50°C	10-85% RH	500-1,060hPa

### Classifications of equipment

- Type of protection against electric shock:
  - Class I equipment
- Degree of protection against electric shock:
  - Type BF applied part: 
- Method of sterilization or disinfection recommended by the manufacture:
  - See 8. Sterilization
- Degree of protection against ingress of water as detailed in the current edition of IEC 60529:
  - Foot Control: IPX8 (Protected against immersion in water)
- Degree of safety of application in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide:
  - Foot Control: AP Equipment 
- Mode of operation:
  - Intermittent operation

## 12 Disposing Product

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



Order Code  
3.4 **P200-PER**  
Perforator Handpiece 200  
• Compatible Chuck: Hudson Chuck

# Drill Handpiece 200 80,000min<sup>-1</sup>



Order Code  
3.7 **P200-2SD**  
Straight Drill Handpiece 200

Irrigation Nozzle



Order Code  
3.8 **PD-IN-D**  
For P200-2SD



# Contra Angle Handpiece 200



Order Code  
**P200-CA-4**

Contra Angle Handpiece 200 4:1

- 4:1 Reduction (Speed: Max. 20,000 min<sup>-1</sup>)
- Latch Type Chuck
- Corresponds to ø 2.35mm CA burs



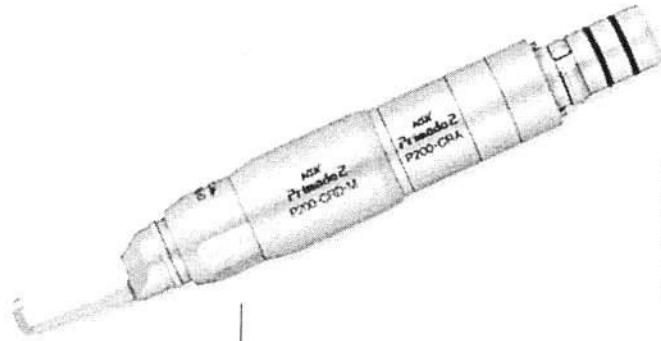
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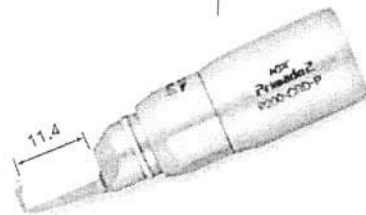
The high performance handpiece designed for cranial surgery. Three different types of duraguards are available for variable cranial bone thickness. The smooth and powerful cutting performance avoids adding additional stress to the surgeon.



order code  
**P200-CRA 3.5**

Craniotome Handpiece200

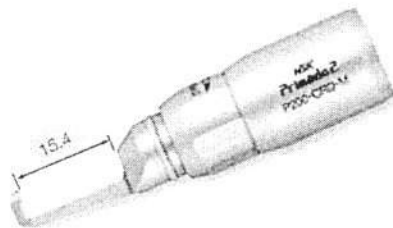
- Bur: Craniotome bur, Router bur
- Bundled Item: P200-CRD-M



order code  
**P200-CRD-P**

Pediatric Duraguard200

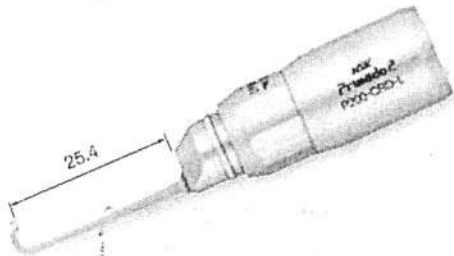
- Bur: Pediatric Craniotome bur, Pediatric Router bur



order code  
**P200-CRD-M 3.6**

Medium Duraguard200

- Bur: Medium Craniotome bur, Medium Router bur



order code  
**P200-CRD-L**

Long Duraguard200

- Bur: Long Craniotome bur, Long Router bur



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Signature

# Rotary Instruments

For Craniotome Handpiece 200/  
Craniotome Handpiece

Craniotome Handpiece Bur



Attachment		
P	M	L
PDS-CRA-P	PDS-CRA-M	PDS-CRA-L

3.9.

Router Bur



Attachment		
P	M	L
PDS-ROU-P	PDS-ROU-M	PDS-ROU-L

For Metal Cutting Handpiece 200

Metal Cutting Carbide Bur



Head Size (mm)	Attachment
	3MC
1.6	PDS-3MCS-CB16



Head Size (mm)	Attachment
	3MC
3.0	PDS-3MCS-CB30

Metal Cutting Diamond Disc



Head Size (mm)	Attachment
	3MC
25.4	PDS-3MCS-DD254



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# Rotary Instruments

## For Drill Handpiece 200/Drill Handpiece

### Twist Drill Flat Tail



Head Size (mm)	Attachment	
	2SD/2AD	
1.0	PDS-2TD-10	
1.5	PDS-2TD-15 3.10.	
2.0	PDS-2TD-20	

## For High Speed Handpiece 200

### Diamond Bur



Head Size (mm)	Attachment				
	S	M	M Extended	L	L Extended
1.0	PDS-3DS-10	PDS-3DM-10	—	—	—
2.0	PDS-3DS-20	PDS-3DM-20	PDS-3DM-20E	PDS-3DL-20	PDS-3DL-20E
3.0	PDS-3DS-30	PDS-3DM-30	—	PDS-3DL-30	—
4.0	PDS-3DS-40	PDS-3DM-40	—	PDS-3DL-40	—
5.0	PDS-3DS-50	PDS-3DM-50	—	PDS-3DL-50	—
6.0	PDS-3DS-60	PDS-3DM-60	—	PDS-3DL-60	—
7.0	PDS-3DS-70	PDS-3DM-70	—	PDS-3DL-70	—

**Extended** The burs can be extended by 10 mm from the original length.

### Coarse Diamond Bur



Head Size (mm)	Attachment				
	S	M	M Extended	L	L Extended
2.0	PDS-3CDS-20	PDS-3CDM-20	—	PDS-3CDL-20	—
3.0	PDS-3CDS-30	PDS-3CDM-30	PDS-3CDM-30E	PDS-3CDL-30	PDS-3CDL-30E
4.0	PDS-3CDS-40	PDS-3CDM-40	PDS-3CDM-40E	PDS-3CDL-40	PDS-3CDL-40E
5.0	PDS-3CDS-50	PDS-3CDM-50	PDS-3CDM-50E	PDS-3CDL-50	PDS-3CDL-50E
6.0	PDS-3CDS-60	PDS-3CDM-60	—	PDS-3CDL-60	—
7.0	PDS-3CDS-70	PDS-3CDM-70	—	PDS-3CDL-70	—

**Extended** The burs can be extended by 10 mm from the original length.

### Round Fluted Bur



Head Size (mm)	Attachment		
	S	M	L
1.0	PDS-3CS-10	PDS-3CM-10	
2.0	PDS-3CS-20	PDS-3CM-20	PDS-3CL-20
3.0	PDS-3CS-30	PDS-3CM-30	PDS-3CL-30
4.0	PDS-3CS-40	PDS-3CM-40	PDS-3CL-40
5.0	PDS-3CS-50	PDS-3CM-50	PDS-3CL-50
6.0	PDS-3CS-60	PDS-3CM-60	PDS-3CL-60
7.0	PDS-3CS-70	PDS-3CM-70	PDS-3CL-70

### Neuro Bur



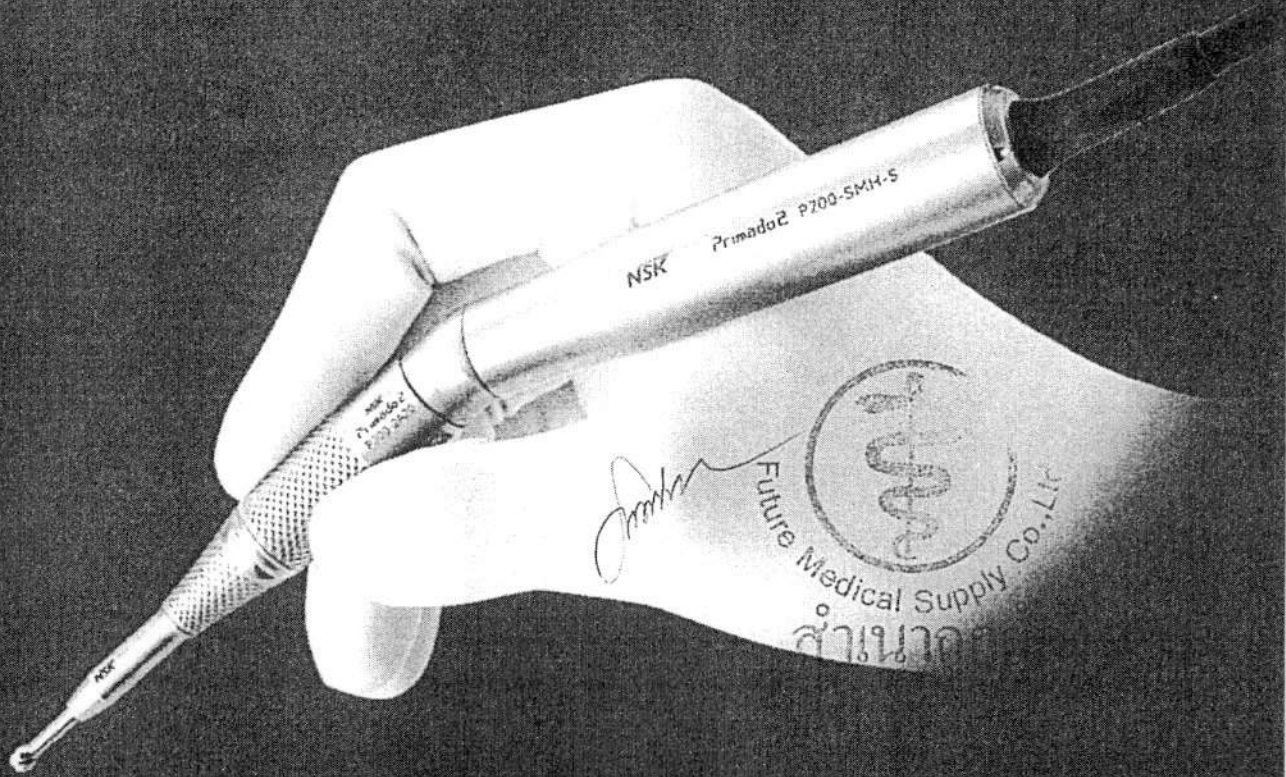
Head Size (mm)	Attachment		
	S	M	L
1.8	PDS-3NS-18	PDS-3NM-18	PDS-3NL-18
2.2	PDS-3NS-22	PDS-3NM-22	PDS-3NL-22
3.0	PDS-3NS-30	PDS-3NM-30	PDS-3NL-30

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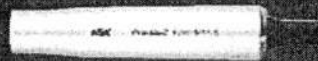
# Slim Motor Series

- | Compact and lightweight design prevents surgeon fatigue during procedures
- | A variety of attachments are available
- | Quick Joint allows for an easy attachment-motor connection

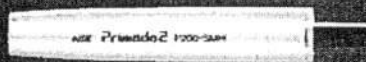


## Primado2 Slim Motor

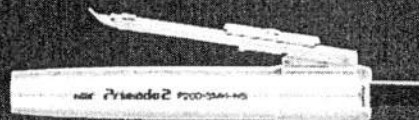
- Speed : Max. 80,000 min<sup>-1</sup>
- Bundled Item : P200-EZ-SM (see p.30)



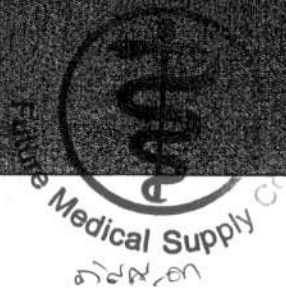
Order Code  
**P200-SMH-S**  
Primado2 Slim Motor Short



Order Code  
**P200-SMH** 3.11.1  
Primado2 Slim Motor



Order Code  
**P200-SMH-HS**  
Primado2 Slim Motor/HS  
• Hand Control type



## 11 Specifications

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Electricity consumption	65 VA
Maximum feed rate of Irrigation Pump	75 ml/min
Dimensions	W278×D250×H160 mm
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Length of Power Cord	3.5 m

### <Micromotor>

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Rotational speed	60,000min <sup>-1</sup>	80,000min <sup>-1</sup>	20,000min <sup>-1</sup>	1,200min <sup>-1</sup>
Rated input	DC 39.5V	DC 23.7V	DC 21.8V	DC 39.1V
Dimensions	ø23×L99mm ø23×L99mm	ø18×L99.7mm ø19.3×L117.5mm	ø18×L100.4mm ø20.2×L101.8mm	W75.5×D28.0 ×H141.3
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Torque	6.0 Ncm	4.2 Ncm	40 Ncm	125 Ncm
Length of Handpiece Cord	3.5 m			

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Cord length	3.5 m	

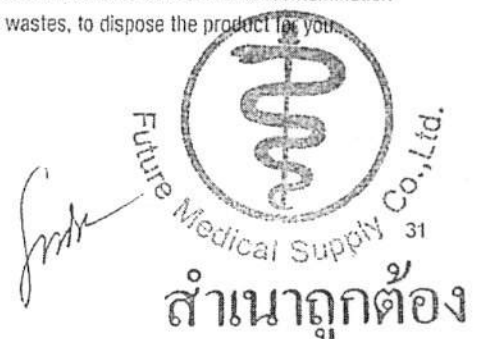
	Temperature	Humidity	Atmospheric pressure
Use Environment	0-40°C (no condensation)	30-75% RH	700-1,060hPa
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### Classifications of equipment

- Type of protection against electric shock:
  - Class I equipment
- Degree of protection against electric shock:
  - Type BF applied part:
- Method of sterilization or disinfection recommended by the manufacture:
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  - Foot Control: IPX8 (Protected against immersion in water)
- Degree of safety of application in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide:
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- Mode of operation:
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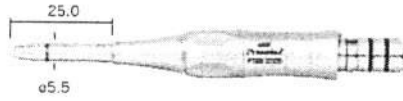


# Standard Handpiece 200 80,000min<sup>-1</sup>

## Straight



Order Code  
**P200-2SMS**  
Std. Straight Handpiece200 MS



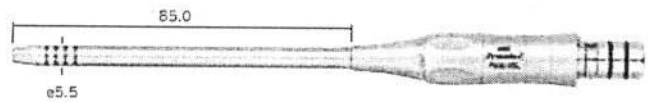
Order Code  
**P200-2SES**  
Std. Straight Handpiece200 ES



Order Code  
**P200-2SS**  
Std. Straight Handpiece200 S



Order Code  
**P200-2SM**  
Std. Straight Handpiece200 M

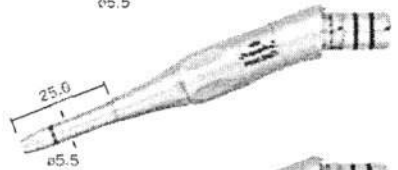


Order Code  
**P200-2SL**  
Std. Straight Handpiece200 L

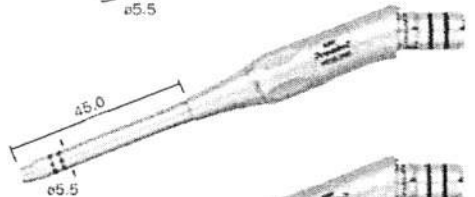
## Angled



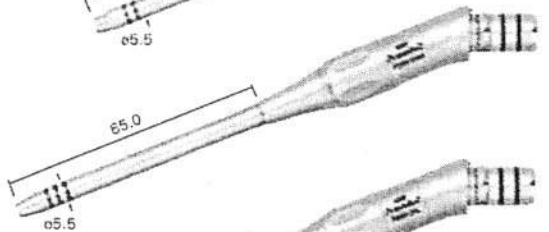
Order Code  
**P200-2AMS**  
Std. Angled Handpiece200 MS



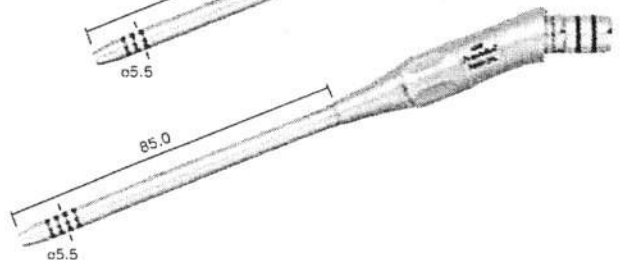
Order Code  
**P200-2AES** 3.12.  
Std. Angled Handpiece200 ES



Order Code  
**P200-2AS** 3.13.  
Std. Angled Handpiece200 S



Order Code  
**P200-2AM**  
Std. Angled Handpiece200 M



Order Code  
**P200-2AL**  
Std. Angled Handpiece200 L

## Irrigation Nozzle



Order Code  
**PD-IN-D**  
For P200-2SMS(MS)  
P200-2AMS(MS)

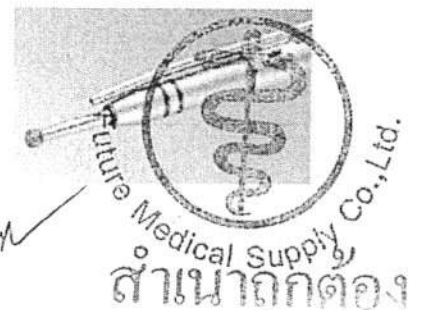
Order Code  
**PD-IN-2S**  
For P200-2SES(ES)  
P200-2AS(S)

Order Code  
**PD-IN-2L**  
For P200-2SL(L)  
P200-2AL(L)

Order Code  
**PD-IN-2ES**  
For P200-2SES(ES)  
P200-2AES(ES)

Order Code  
**PD-IN-2M**  
For P200-2SM(M)  
P200-2AM(M)





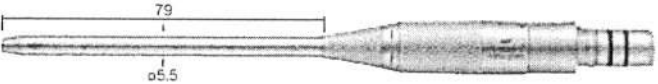
Future Medical Supply Co., Ltd.





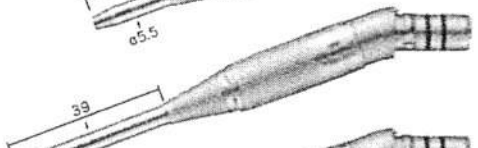
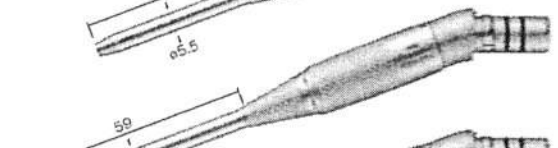
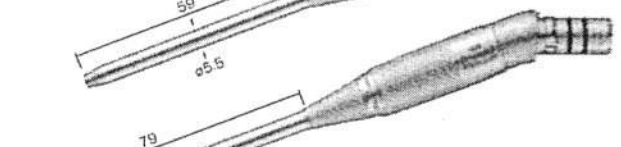
27.0.07

# Standard Attachment 300 80,000min<sup>-1</sup>

## Straight

	Order Code <b>P300-2S10</b> STD Attachment 10/Straight
	Order Code <b>P300-2S20</b> STD Attachment 20/Straight
	Order Code <b>P300-2S40</b> STD Attachment 40/Straight
	Order Code <b>P300-2S60</b> STD Attachment 60/Straight
	Order Code <b>P300-2S80</b> STD Attachment 80/Straight

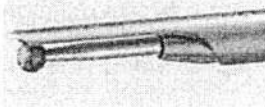
## Angled

	Order Code <b>P300-2A10</b> STD Attachment 10/Angled
	Order Code <b>P300-2A20</b> STD Attachment 20/Angled
	Order Code <b>P300-2A40</b> STD Attachment 40/Angled
	Order Code <b>P300-2A60</b> STD Attachment 60/Angled
	Order Code <b>P300-2A80</b> STD Attachment 80/Angled

## Accessory

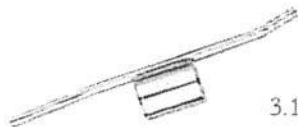


Order Code  
**P300-2-B**  
STD Attachment Beak



\* Cannot be used with the Irrigation Nozzle.

## Irrigation Nozzle

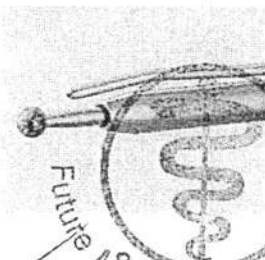


Order Code  
**PD-IN-D**  
For P300-2S10 / P300-2A10  
P300-2S20 / P300-2A20

Order Code  
3.14. **PD-IN-2ES**  
For P300-2S40 / P300-2A40

Order Code  
3.15. **PD-IN-2S**  
For P300-2S60 / P300-2A60

Order Code  
**PD-IN-2M**  
For P300-2S80 / P300-2A80



# Rotary Instruments

## For Standard Handpiece 200/Standard Handpiece

### Super Coarse Diamond Bur



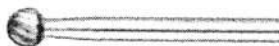
Head Size (mm)	Attachment				
	MS	ES	S	M	L
3.0	PDS-2SCDMS-30	PDS-2SCDES-30	PDS-2SCDS-30	PDS-2SCDM-30	PDS-2SCDL-30
4.0	PDS-2SCDMS-40	PDS-2SCDES-40	PDS-2SCDS-40	PDS-2SCDM-40	PDS-2SCDL-40
5.0	PDS-2SCDMS-50	PDS-2SCDES-50	PDS-2SCDS-50	PDS-2SCDM-50	PDS-2SCDL-50
6.0	PDS-2SCDMS-60	PDS-2SCDES-60	PDS-2SCDS-60	PDS-2SCDM-60	PDS-2SCDL-60

### Round Fluted Bur



Head Size (mm)	Attachment				
	MS	ES	S	M	L
1.0	PDS-2CMS-10	PDS-2CES-10	PDS-2CS-10	PDS-2CM-10	—
2.0	PDS-2CMS-20	PDS-2CES-20	PDS-2CS-20	PDS-2CM-20	PDS-2CL-20
3.0	PDS-2CMS-30	PDS-2CES-30	PDS-2CS-30	PDS-2CM-30	PDS-2CL-30
4.0	PDS-2CMS-40	PDS-2CES-40	PDS-2CS-40	PDS-2CM-40	PDS-2CL-40
5.0	PDS-2CMS-50	PDS-2CES-50	PDS-2CS-50	PDS-2CM-50	PDS-2CL-50
6.0	PDS-2CMS-60	PDS-2CES-60	PDS-2CS-60	PDS-2CM-60	PDS-2CL-60
7.0	PDS-2CMS-70	PDS-2CES-70	PDS-2CS-70	PDS-2CM-70	PDS-2CL-70

### Carbide Bur



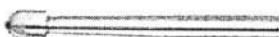
Head Size (mm)	Attachment				
	MS	ES	S	M	L
2.0	PDS-2CBMS-20	PDS-2CBES-20	PDS-2CBS-20	PDS-2CBM-20	PDS-2CBL-20
3.0	PDS-2CBMS-30	PDS-2CBES-30	PDS-2CBS-30	PDS-2CBM-30	PDS-2CBL-30
4.0	PDS-2CBMS-40	PDS-2CBES-40	PDS-2CBS-40	PDS-2CBM-40	PDS-2CBL-40
5.0	PDS-2CBMS-50	PDS-2CBES-50	PDS-2CBS-50	PDS-2CBM-50	PDS-2CBL-50
6.0	PDS-2CBMS-60	PDS-2CBES-60	PDS-2CBS-60	PDS-2CBM-60	PDS-2CBL-60
7.0	PDS-2CBMS-70	PDS-2CBES-70	PDS-2CBS-70	PDS-2CBM-70	PDS-2CBL-70

### Neuro Bur



Head Size (mm)	Attachment				
	MS	ES	S	M	L
1.8	PDS-2NMS-18	PDS-2NES-18	PDS-2NS-18	PDS-2NM-18	PDS-2NL-18
2.2	PDS-2NMS-22	PDS-2NES-22	PDS-2NS-22	PDS-2NM-22	PDS-2NL-22
3.0	PDS-2NMS-30	PDS-2NES-30	PDS-2NS-30	PDS-2NM-30	PDS-2NL-30

### Neuro Carbide Bur



Head Size (mm)	Attachment				
	MS	ES	S	M	L
1.8	PDS-2NCBMS-18	PDS-2NCBES-18	PDS-2NCBS-18	PDS-2NCBM-18	PDS-2NCBL-18
2.2	PDS-2NCBMS-22	PDS-2NCBES-22	PDS-2NCBS-22	PDS-2NCBM-22	PDS-2NCBL-22
3.0	PDS-2NCBMS-30	PDS-2NCBES-30	PDS-2NCBS-30	PDS-2NCBM-30	PDS-2NCBL-30



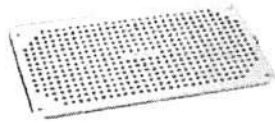
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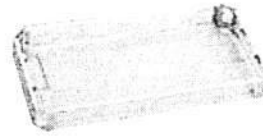
*Signature*



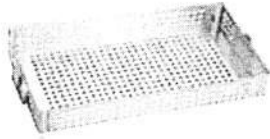
# Sterilization Case



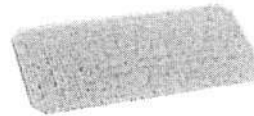
Order Code  
**SC-ML**  
Sterilization Metal Lid



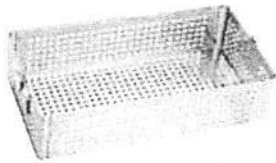
Order Code  
**SC-T-F**  
Sterilization Tray/Free  
• Dimensions : W450 x D250 x H60 (mm)



Order Code  
**SC-C-H70**  
Sterilization Case/H70  
• Dimensions : W512 x D262 x H70 (mm)  
• Single level case

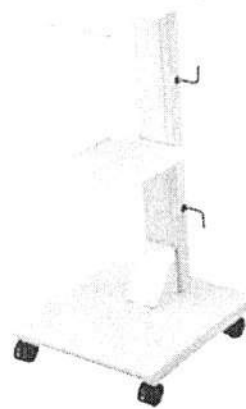


Order Code  
**SC-SM**  
Silicone Mat  
• The mat for the Sterilization Tray



Order Code  
**SC-C-H125**  
Sterilization Case/H125  
• Dimensions : W512 x D262 x H125 (mm)  
• Double level case

# Mobile Trolley



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

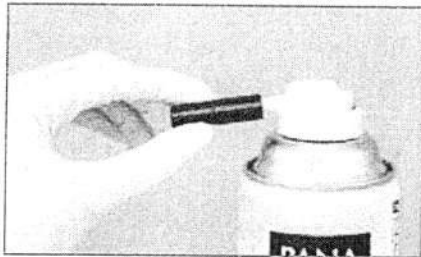
# Irrigation Tube



Order Code  
**PD-IT-S 3.22.**  
Surgical Irrigation Tube  
• 10 pcs/set (Sterilized)

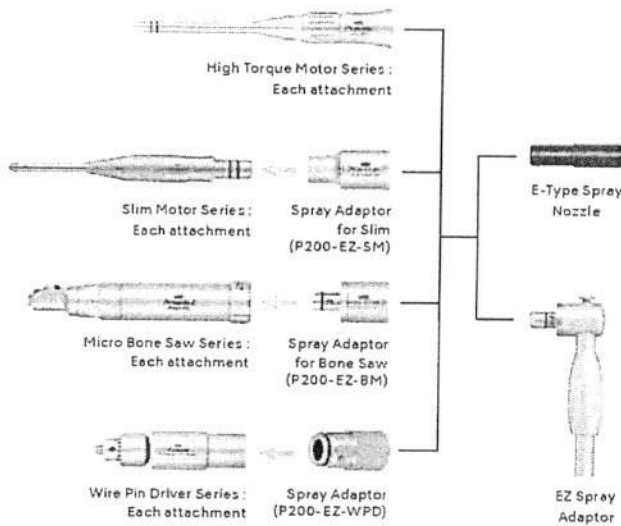


# Lubrication



Order code  
**Z182100** 3.23.  
PANA Spray Plus  
• For attachments, 480 mL

Order code  
**Y900630**  
PANA Spray Plus (6pcs)  
• Pack of 6

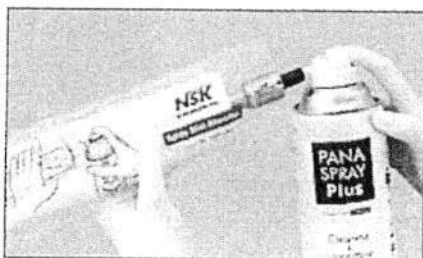


Order code  
**Z019090**  
E-Type Spray Nozzle  
• For attachments



Order code  
**PD-EZ-M** 3.24.  
EZ Spray Adaptor  
• PANA Spray Plus is not included

# Spray Mist Absorber



Order code  
**Y900084**  
Spray Mist Absorber  
• Pack of 10

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สำเนาถูกต้อง

## Product Safety Data Sheet

## [Maker information]

Name of company: NAKANISHI INC.  
 Address: 700 Shimohinata, Kanuma-shi, Tochigi  
 Responsible department: Quality Assurance Department  
 Phone: 0289-64-7277  
 Fax: 0289-62-9738  
 Prepared: August 13, 2002

Serial No.: 103136K

[Product name]	Panaspray PLUS Z182100	3.23.
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## [Product identification]

Product classification Lubricant (Aerosol) (UN1950)

## [Substance identification]

Distinction (single product/mixture)

Mixture

Main component

Lubricant (Ester lubricant, additive)

Solvent (Ethanol)

Power propellant (Propane, butane)

Component	Content	CAS No.	Number under the Law concerning the Examination & Regulation of Manufacture etc., of Chemical Substances	UN Number	UN classification
Ester lubricant, additive	5-10	Confidential information	Confidential information	None	None
Ethanol (Notification required under the Occupational Health and Safety Law)	25-35	64-17-5	(2)-202	1170	Class 3.2 Grade II
Propane	15-25	74-98-6	(2)-360	1075	Class 2.1
Butane (Notification required under the Occupational Health and Safety Law)	40-50	75-28-5 106-97-8	(2)-4	1075	Class 2.1

Note: The information in [ ] after component designation regards the following:

PRTR Special 1: Chemical substance specified as specific class 1 chemical substance under the Law Concerning the Promotion of Understanding and Management of Emissions into the Environment of Specific Chemical Substances

PRTR-1: Chemical substance specified as class 1 chemical substance under the Law Concerning the Promotion of Understanding and Management of Emissions into the Environment of Specific Chemical Substances

PRTR-2: Chemical substance specified as class 2 chemical substance under the Law Concerning the Promotion of Understanding and Management of Emissions into the Environment of Specific Chemical Substances

Notification required under the Occupational Health and Safety Law: Substance with its notification required under the Occupational Health and Safety Law

## [Classification of hazardousness and harmfulness]

Name under classification

Inflammable liquid, high-pressure gas

Hazardousness

The lubricant contains an inflammable gas and is inflammable at room temperature. Vapor produces an air-explosive gas mixture.

Harmfulness

The lubricant contains a combustible gas. The gas, if left as is, leads to a risk of explosion.

The lubricant is an irritant to skin and eyes. When the lubricant is swallowed or its vapor is inhaled in high concentrations, headaches, dizziness, vomiting, or blackouts can result.

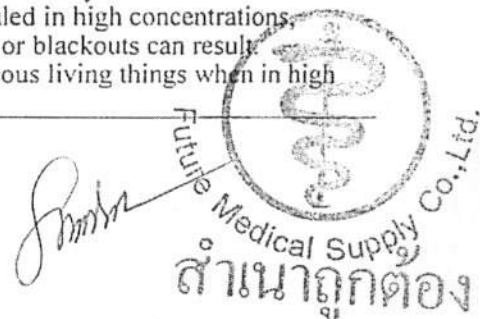
Environmental effect

The lubricant is harmful to aqueous living things when in high concentrations.



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[First-aid measures] Eye contact	Immediately wash eyes with clean water for 15 minutes or more and seek medical attention.
Skin contact Vapor inhalation	Immediately wipe off lubricant with a cloth and wash skin clean with water. Immediately move the affected person to a place with fresh air and keep him/her warm and quiet and seek medical attention. If he/she experiences irregular breathing or has already stopped breathing, carry out artificial respiration.
Ingestion	Force the person to drink water until he/she vomits. If he/she has already lost consciousness, do not give him/her anything but immediately seek medical attention.
[Action at the time of fire] Fire-fighting methods	<p>(In case of a surrounding fire) Promptly move the container to a safe place. If the lubricant cannot be moved, sprinkle the container and its surroundings with water and cool down the container. (If the lubricant has caught fire) At the initial stage of a fire, use powder carbon dioxide, dry sand, etc. In case of a larger fire, it is effective to use a foam fire extinguisher and block out the air. Wear proper protective equipment (rescue suit) and extinguish the fire from the windward side. Immediately remove any inflammable items from the surrounding area. Powder carbon dioxide, foam, and dry sand</p>
Fire-fighting agent	
[Measures if the lubricant leaks]	<p>Instruct people on the leeward side to seek shelter. Rope off the area where a leak has occurred to keep people away. Immediately remove any item that would act as a source of a fire. When necessary measures must be taken, wear proper protective equipment (gloves, protective mask, protective glasses, etc.). Do not stay on the leeward side. Prepare suitable fire extinguisher(s) in case of accidents. Supply earth and sand to absorb the lubricant before collecting it in an empty container. Use earth and sand to stop the flow of leaking lubricant and lead the lubricant to a safe area. Then cover the surface of the liquid with foam and collect as much of the liquid as possible in an empty container.</p>
(Small amounts of leaking lubricant) (Large amounts of leaking lubricant)	
[Notes for handling]	<p>Handle the lubricant in a well-ventilated place. Do not spray the lubricant toward a fire. Do not place the container of the lubricant in a place that may become hot, or the container may explode. Wear proper protective equipment so as to prevent the lubricant from contacting skin or vapor inhalation. Keep the source of vapor airtight or provide a local exhaust system. Be careful about fire. It is desirable that electrical equipment should be constructed to be explosion proof. The lubricant must be handled at room temperature as a rule while paying attention to prevent moisture and dirt from entering the lubricant.</p>
[Notes for storage]	<p>Avoid direct sunlight and store the lubricant in a well-ventilated dark and cool place. Keep the lubricant as far away as possible from fire and sources of heat. Do not place the lubricant in a place whose temperature exceeds 40°C. Keep the lubricant isolated from perchloric acid, hydrogen peroxide water, sodium peroxide, chromic acid, and nitric acid.</p>



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## [Measures for preventing exposure]

Chemical designation	Ethanol	Propane	Butane
Controlled concentration	No prescription	No prescription	No prescription
Allowable concentration			
Japan Society of Occupational Health	No prescription	1000 ppm	1000 ppm
ACGIH	1880 mg/m <sup>2</sup>	1800 mg/m <sup>3</sup>	1800 mg/m <sup>3</sup>
Equipment measures	Keep the source of vapor airtight or provide a local exhaust system. Do not handle the equipment near an ignition source.		
Protective equipment	Use equipment of the explosion proof type. Use protective glasses, gloves, and masks for organic gases, as required.		

## [Physical and chemical properties]

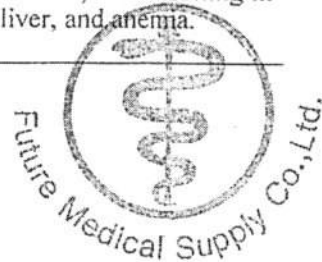
	Lubricant	Propane	Isobutan	Normal butan
Odor	Almost none	Almost none	Almost none	Almost none
Appearance	Colorless and transparent liquid	Colorless and transparent liquid	Colorless and transparent liquid	Colorless and transparent liquid
Specific gravity	0.803	0.501 (Liquid)	0.557 (Liquid)	0.579 (Liquid)
Boiling point	No data available	-42.04	-11.7	-0.5
Vapor pressure	No data available	0.735MPa	0.210MPa	0.116MPa
Water solubility	Soluble in water	Insoluble in water	Insoluble in water	Insoluble in water
Others				

## [Stability and reactivity]

	Lubricant	Propane	Isobutan	Normal butan
Firing point	12.0°C	-90°C	-81°C	-72°C
Ignition point	363°C	493°C	405°C	550°C
Explosion limit	No information available	2.2-9.5%	1.8-8.5%	1.8-8.5%
Spontaneous combustion	None	None	None	None
Reactivity with water	None	None	None	None
Oxidizability	None	None	None	None
Self reaction and explosiveness	Vapor procedures an air-explosive gas mixture.			
Reactivity and stability	Stable during normal use and not reactive			
Other hazard information	No information available			

## [Harmfulness information]

Acridity	Irritant to skin and mucous membranes
Sensitivity property	Skin contact with a liquefied gas in a liquid state may result in a dry ice burn. Long or repeated contact with skin can result in a defatting of skin and thereby in an irritation.
Acute toxicity	Swallowing the lubricant and inhaling its vapor in high concentrations can result in headaches, dizziness or blackouts.
Chronic toxicity	The lubricant affects the central nervous system, liver, and blood, thus resulting in a drop in the power of attention, bradypragia, injury to the liver, and anemia.
Carcinogenic property	No information available



สำเนาถูกต้อง

*Signature*