

25/26

krafit

marathon

saeyang

# We, SAEYANG, has continued to grow.

Since its founding in 1976, Saeyang has steadily grown as a trusted manufacturer of  
micro-handpieces for dental and laboratory applications.

We are proud to serve customers in Korea and over 120 countries around the world.

Our commitment to exceptional product quality is at the heart of everything we do,  
ensuring customer satisfaction as our top priority.

Through continuous investment in R&D and state-of-the-art facilities,  
we strive to drive innovation and introduce at least two new models to the market each year.

Thank you for your continued trust and support.



**Company PR video**





## ***Technology Makes the Difference***

We consistently develop innovative products by leveraging new technologies and fresh ideas.

## ***Exhibition Participation***

We participate in over 20 renowned international exhibitions annually, including those in the United States, Germany, France, Spain, the UK, Italy, Hong Kong, and China. These events provide valuable opportunities to build and strengthen mutual trust and confidence with our buyers across more than 120 countries.



## ***SAEYANG is Attentive to Your Needs***

Technology Makes a Difference.  
At Saeyang, we are committed to listening to our customers' needs and requirements and continuously striving to meet them.

# THE PATH SAEYANG HAS TRAVELED



- **1976** - Company Established
- **1977** - Registered manufacturing of medical equipment.
- **1987** - Registered trading business
- **1989** - Registered Korea medical equipment cooperative association
- **1991** - Registered of designs for engine for dental laboratory
- **1998** - Certified ISO 9001 from TUV (Germany)
- **1999** - Certified CE Mark from TUV (Germany)
- **2000** - Certified Venture enterprise for high technology
- **2001** - Awarded official Superior Exporting Firm  
- Awarded Leading Enterprise
- **2002** - Certified CE Mark of New item "Escort"
- **2003** - Registered manufacturing Brushless motor  
- Certified CE Mark of "Marathon Multi 600" Brushless motor
- **2004** - Established R&D center  
- Certified CE Mark of New item "Marathon N7&N2"
- **2005** - Certified CE Mark of New item "Marathon HANDY700 Series"  
- Awarded official best Exporting Firm
- **2006** - Moved into a new factory  
- Certified PSE from TUV  
- Opening Ceremony of a new factory as well as the 30th anniversary
- **2008** - Certified ISO 9001 : 2000 from SGS (U.K)  
- Certified ISO 13485 : 2003 from SGS (U.K)  
- Certified Directive 93/42/EEC from SGS (U.K)





- **2011** - Development of Endo a class
- **2013** - Developed Implant Motor
  - Certified FDA (Endo Motor)
- **2014** - 60,000RPM Handpiece Developed
  - 20:1 Optic Handpiede Developed
- **2015** - Certified FDA CFDA(Implant Motor)
- **2016** - Awarded for Exporting US\$ 20 million
- **2017** - Factory expansion
  - Development of Endo E plus
  - Development of Ki-20 Advance
  - Development of K35 cube
- **2018** - Development of Endo A Class (APX)
  - Development of MINI cro
  - Korean World-class Product Award 2018
- **2019** - Development of Escort II pro (Ver2)
- **2020** - Good Design Selection 2020
  - Development of Escort III (Ver2)
- **2021** - Development of K35 mini
  - Development of Pro M Class
- **2022** - Development of K38 pro
  - Development of K48 pro
  - Development of CYCLONE-VAC
  - Development of Multi 800
- **2023** - Development of LEVENT
  - Selected for [Global Leading Company 1,000+]
- **2024** - Development of K48 pro
  - Selected for [Global Leading Company 1,000+]

krafit

**PRODUCT  
LINE UP**

## **DENTAL HANDPIECE**

**STRAIGHT HANDPIECE**

**CONTRA ANGLE**

**POLISHING HANDPIECE**

**SURGICAL HANDPIECE**

**IMPLANT HANDPIECE**

## **ORTHODONTICS**

**PRO M CLASS**

## **ORAL SURGERY & IMPLANTOLOGY**

**Ki-20**

**Ki-20 touch**

**SDT-DRIVER**

## **ENDODONTICS**

**Endo A Class**

**Endo A Class (LED)**

## **OTHERS**

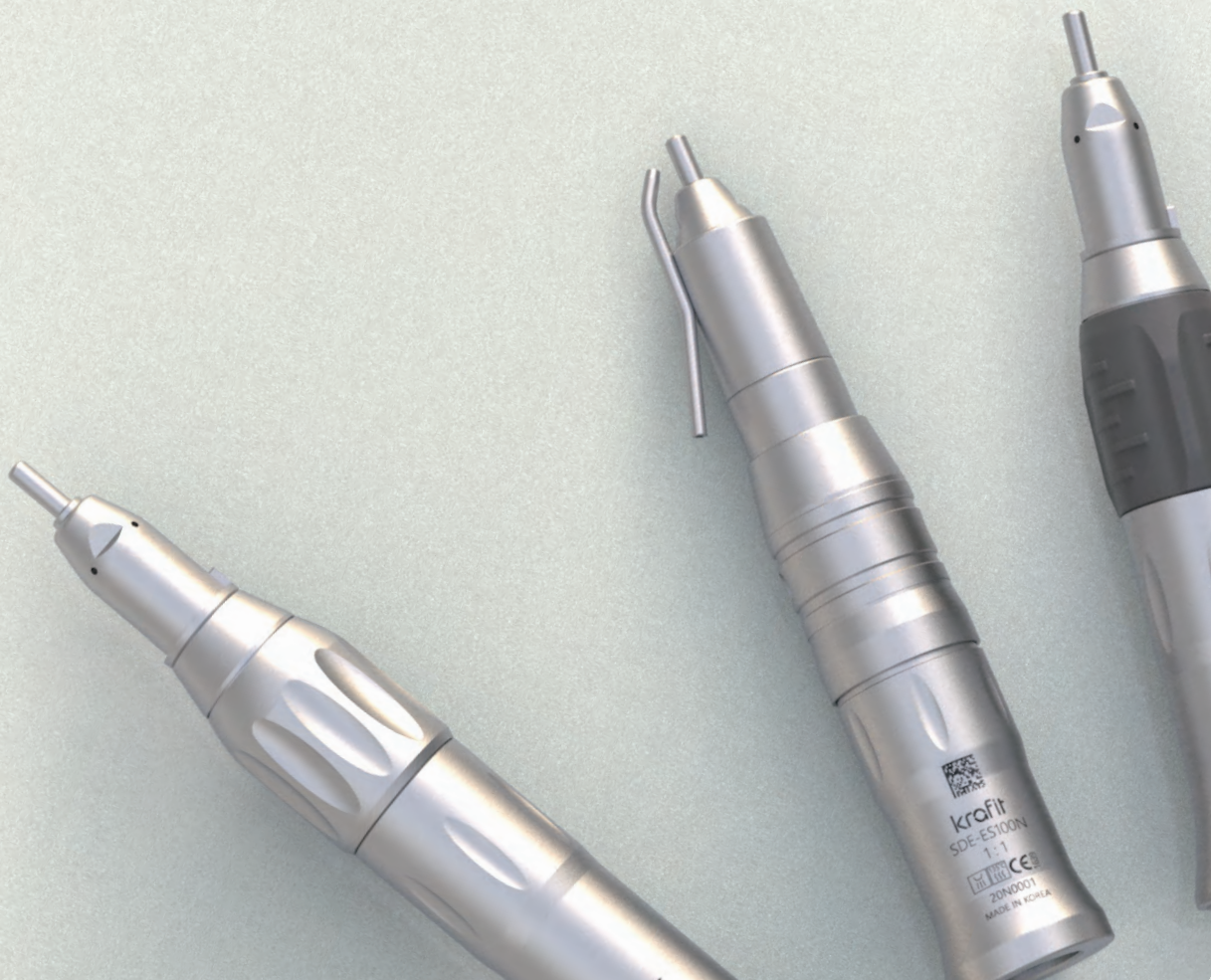
**K48 PRO / BS35E**

**MULTI800 / BS50E**

**MARATHON-37**

## **SPARE PARTS**

# **DENTAL HANDPIECE**



# CONTRA & STRAIGHT HANDPIECE



## SDE-ES6

<b>SPEED</b>	MAX. 40,000 rpm
<b>GEAR RATIO</b>	1 : 1
<b>WEIGHT</b>	71 g
<b>DIMENSIONS</b>	L85 x Ø20



## SDE-ES04

<b>SPEED</b>	MAX. 10,000 rpm
<b>GEAR RATIO</b>	4 : 1
<b>WEIGHT</b>	86 g
<b>DIMENSIONS</b>	L100 x Ø20



**EXTERNAL  
WATER SPRAY**

## SDE-ES100N

<b>SPEED</b>	MAX. 40,000 rpm
<b>GEAR RATIO</b>	1 : 1
<b>WEIGHT</b>	75 g
<b>DIMENSIONS</b>	L88 x Ø17.5



**PUSH TYPE**

## SP-CE

<b>SPEED</b>	MAX. 40,000 rpm
<b>GEAR RATIO</b>	1 : 1
<b>WEIGHT</b>	58 g
<b>DIMENSIONS</b>	L81 x Ø20

# CONTRA & STRAIGHT HANDPIECE



## SP-RE04

<b>SPEED</b>	MAX. 10,000 rpm
<b>GEAR RATIO</b>	4 : 1
<b>WEIGHT</b>	67 g
<b>DIMENSIONS</b>	L91 x Ø19,55



VERTICAL  
RECIPROCATING

## SO-RE04

<b>SPEED</b>	MAX. 10,000 rpm
<b>GEAR RATIO</b>	4 : 1
<b>WEIGHT</b>	68 g
<b>DIMENSIONS</b>	L93,7 x Ø19,55



FG BUR (Ø1.6)

## FP-CE

<b>SPEED</b>	MAX. 40,000 rpm
<b>GEAR RATIO</b>	1 : 1
<b>WEIGHT</b>	59.7 g
<b>DIMENSIONS</b>	L81,4 x Ø19,6

# POLISHING HANDPIECE

---



## SDE-EP6

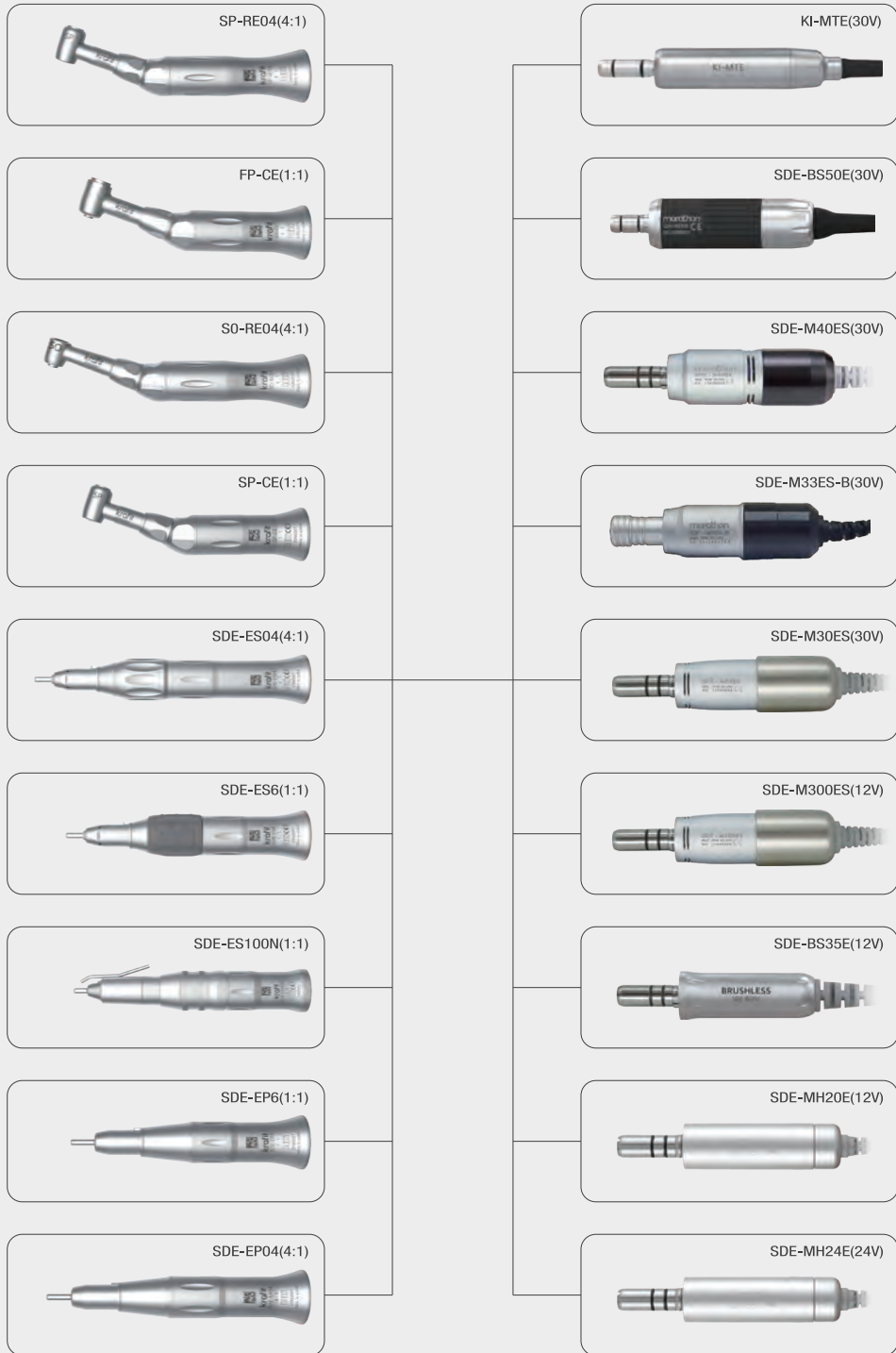
<b>SPEED</b>	MAX. 20,000 rpm
<b>GEAR RATIO</b>	1 : 1
<b>WEIGHT</b>	70 g
<b>DIMENSIONS</b>	L88 x Ø20



## SDE-EP04

<b>SPEED</b>	MAX. 5,000 rpm
<b>GEAR RATIO</b>	4 : 1
<b>WEIGHT</b>	80 g
<b>DIMENSIONS</b>	L95.5 x Ø20

# COMPATIBLE E-TYPE MOTOR



# IMPLANT HANDPIECE



**OPTIC**

**RIGHT-HANDED  
LEFT-HANDED**

**INTERNAL  
WATER SPRAY**

**EXTERNAL  
WATER SPRAY**

## Ki-AG20L

<b>SPEED</b>	MAX. 2,000 rpm
<b>GEAR RATIO</b>	20 : 1
<b>TORQUE</b>	MAX. 70Ncm
<b>WEIGHT</b>	85 g
<b>DIMENSIONS</b>	L98 x Ø20



**NON-OPTIC**

**RIGHT-HANDED  
LEFT-HANDED**

**INTERNAL  
WATER SPRAY**

**EXTERNAL  
WATER SPRAY**

## Ki-AG20

<b>SPEED</b>	MAX. 2,000 rpm
<b>GEAR RATIO</b>	20 : 1
<b>TORQUE</b>	MAX. 70Ncm
<b>WEIGHT</b>	95 g
<b>DIMENSIONS</b>	L95 x Ø20



**NON-OPTIC**

**DETACHABLE  
TYPE**

**EXTERNAL  
WATER SPRAY**

## Ki-AG20S

<b>SPEED</b>	MAX. 2,000 rpm
<b>GEAR RATIO</b>	20 : 1
<b>TORQUE</b>	MAX. 70Ncm
<b>WEIGHT</b>	80.4 g
<b>DIMENSIONS</b>	L96 x Ø19,8

**COMPATIBLE  
E-TYPE MOTOR**



# SURGICAL HANDPIECE



EXTERNAL  
WATER SPRAY

## SGC-S101

<b>SPEED</b>	MAX. 40,000 rpm
<b>GEAR RATIO</b>	1 : 1
<b>WEIGHT</b>	85 g
<b>DIMENSIONS</b>	L110 x Ø20

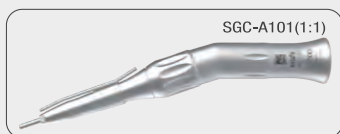
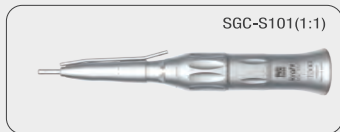


EXTERNAL  
WATER SPRAY

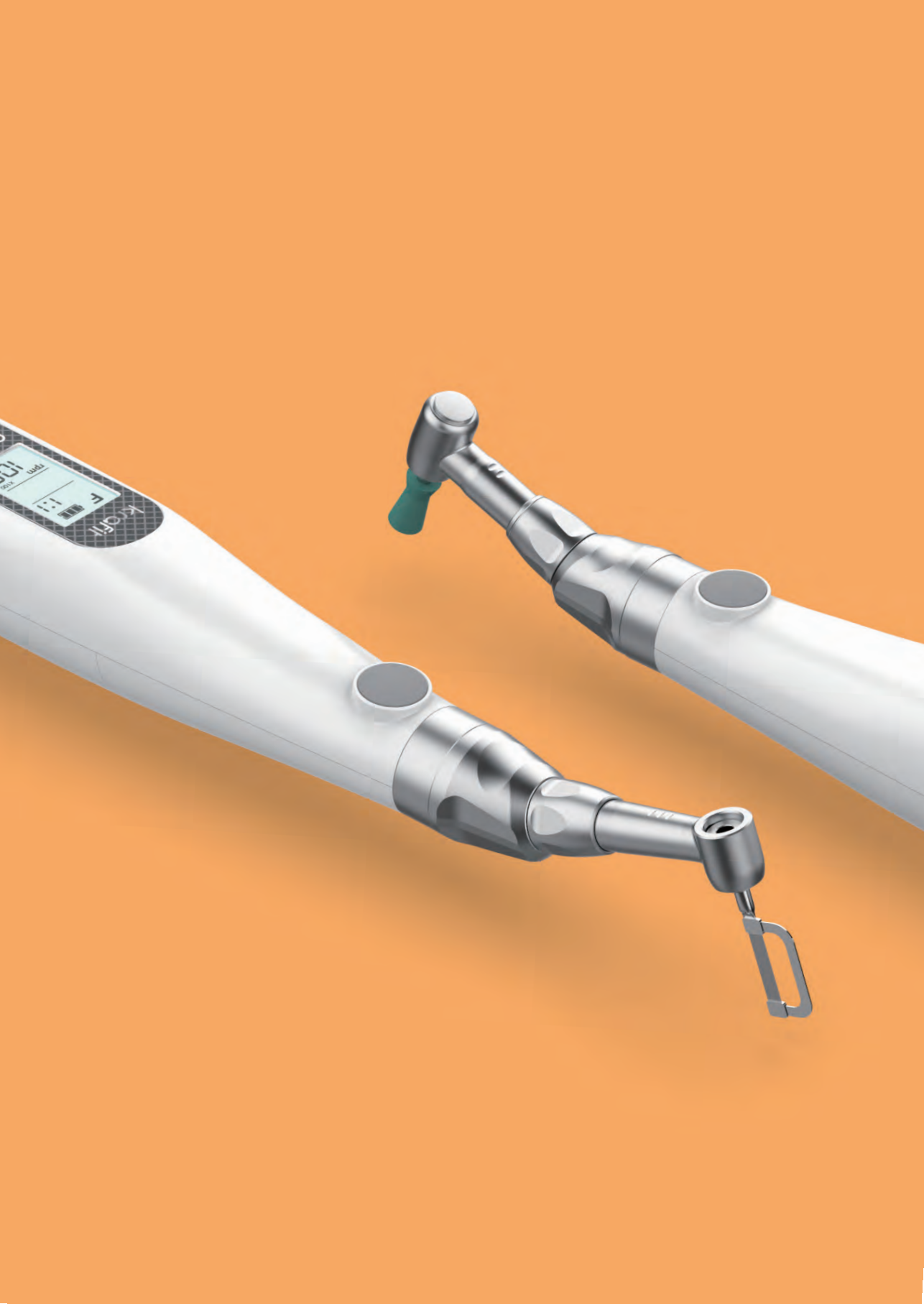
## SGC-A101

<b>STROKES</b>	MAX. 40,000 rpm
<b>GEAR RATIO</b>	1 : 1
<b>WEIGHT</b>	100 g
<b>DIMENSIONS</b>	L119,7 x Ø19,6

## COMPATIBLE *E-TYPE* MOTOR



# ORTHODONTICS



# PRO M CLASS

All in one System

- LI-ION battery (rechargeable)
- Wireless & wired charging (C type)
- 5 gear ratio (1:1, 4:1, 16:1, 160:1, 320:1)
- Charging time for 90 min



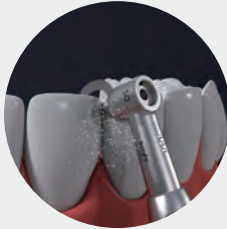
Product video

## VERSATILE MOTOR HANDPIECE CAPABLE OF MULTIPLE TREATMENT APPLICATIONS

It can be used in various procedures by changing the angle and gear ratio.



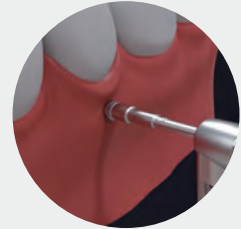
SO-0T6



Stripping



TD-160



Mini implant

### ORTHODONTIC



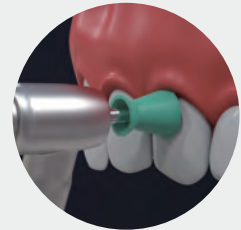
SC-R04  
Screw type



SPC-R04  
Push type



PR-04



### POLISHING



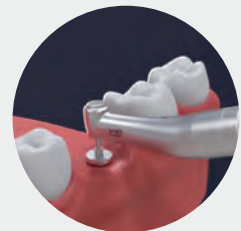
SP-RA16M



### ENDODONTICS



TD-320



### IMPLANT TORQUE DRIVER



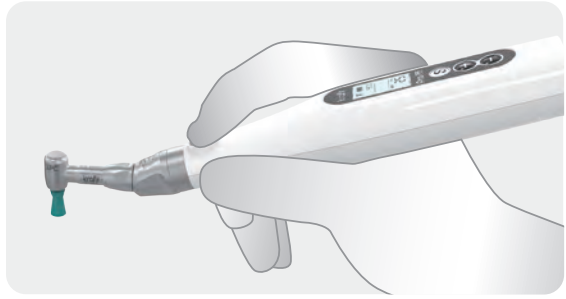
krafit  
F █  
4:1  
25  
pro m  
S  
+  
-

krafit  
D-320

krafit  
F █  
320:1  
15  
50  
pro m  
S  
+  
-

## WIRELESS

PRO M CLASS is a wireless type, and it is free to move during the procedure, reducing the operator's fatigue.



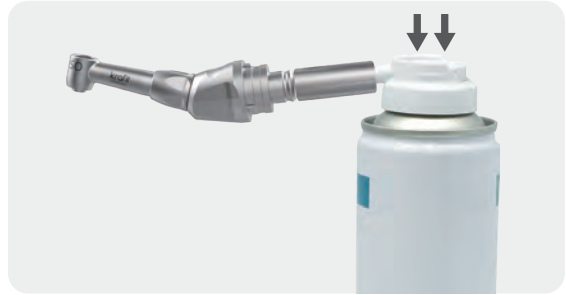
## C TYPE CABLE

It can be charged with a highly compatible C TYPE cable.



## LUBRICATING THE CONTRA ANGLE

Insert the spray nozzle into the rear part of the contra angle attachment and lubricate until oil comes out from the attachment head which is approximately 2~3 seconds. Attachments should be vertically positioned so all extra oil will drain out then wipe off outside surface



### CONTENTS

Motor handpiece / Contra angle / Charger / Adapter / Spray nozzle / Switch lever / Motor handpiece cap

### SPECIFICATION

Model	Motor handpiece
Rechargeable battery	Li-ion, 3.7V, 800mA
Weight	86.5g
Dimension(mm)	W26.6 x D27.2 x H145.1

Model	Adapter
Input	AC 100-240V, 50/60Hz, 0.6A
Output	DC 5V 1.2A
Weight	104.0g
Dimension(mm)	W43.5 x D74.0 x H36.8

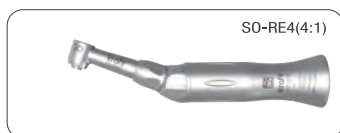
Model	Charger
Weight	97.5
Dimension(mm)	W81.4 x D103.7 x H46.7

### Contra angle

Model	SO-OT6	SC-R04	SPC-R04	PR-04	SP-RA16M	TD-160	TD-320
Gear ratio	1:1	4:1	4:1	4:1	16:1	160:1	320:1
Max. speed	10,000 rpm	2,500 rpm	2,500 rpm	2,500 rpm	600 rpm	70 rpm	25 rpm
Weight	35.5g	34.0g	35g	36g	34g	66g	65.5g
Dimension(mm)	L62.1 x Ø16.7	L59.8 x Ø16.7	L59.7 x Ø16.7	L55.5 x Ø16.7	L63.6 x Ø16.7	L75.2 x Ø16.9	L75.2 x Ø16.9

# K48 PRO FOR ORTHODONTICS

- Used for interproximal reduction, stripping
- LI-ION battery (rechargeable)
- Color LCD display
- Pause function
- Power save
- Overload protection (warning signal)
- On/Off Foot Switch (SFP-27)



## Optional



## CONTENTS

Control unit / E-type motor / Handpiece stand / Charger / Control unit stand(optional) / Foot pedal(optional) / Handpiece holder(optional)

## SPECIFICATION

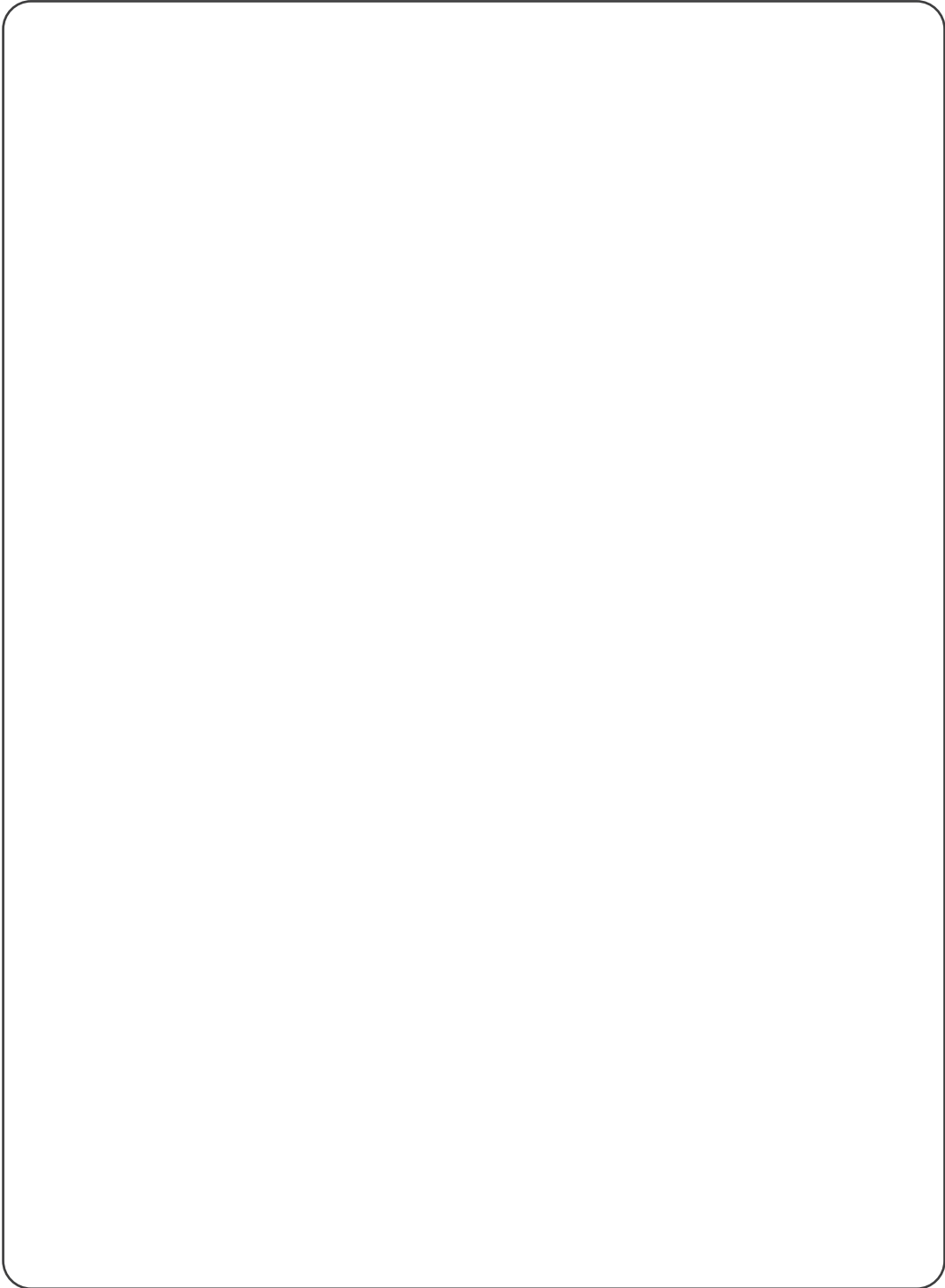
Model	Control unit (K48 PRO)
Input	12.6Vdc
Output	12Vdc
Weight	290g
Dimension(mm)	W74 x D138 x H30

Model	Charger
Input	100~240V, 50/60Hz
Output	12.6Vdc

Model	E-type motor (SDE-BS35E)
Max.speed	35,000 rpm
Torque	2.4 Ncm
Weight	60g
Dimension(mm)	L89.3 x Ø18.8

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# NOTE



# **ORAL SURGERY & IMPLANTOLOGY**



# Ki-20 *touch*

Touch panel

9 memory programs can be stored on single motor

Large LCD display



## INTUITIVE TOUCH PANEL

The touch panel allows for intuitive and fast operation. It's much easier to clean and maintain, and you can avoid problems with wear and tear. The smooth screen and simple interface enhance the overall aesthetic of the product.



## ERGONOMIC ANGLE SHAPE TO IMPROVE HANDGRIP

Efficient cooling provides high cooling without disturbing visibility, and it is divided into two types, right-handed and left-handed, so that the treatment can be performed under optimal conditions.



## POWERFUL OPTIC MICRO MOTOR

Ki-MTO motor is equipped with powerful optic function, which helps to improve the accuracy of operation with high visibility.



Krafit

### CONTENTS

Control unit / Micromotor / Motor cable / Implant handpiece / Foot control / Foot hanger / Handpiece stand / Coolant hanger / Power cord / Irrigation tube / Motor plug

### SPECIFICATION

Model	Control unit(Ki-20 touch)
Input	AC 100-120V, 50/60Hz AC 220-240V, 50/60Hz
Output	100VA
Weight	2,943g
Dimension(mm)	W240 x D225 x H97

Model	Micromotor (Ki-MTO)
Max. Speed	40,000 rpm
Weight	265g
Dimension(mm)	L117 x Ø22

Model	Foot control(Ki-F20)	
Weight	1,015g	
Dimension(mm)	W218 x D190 x H57	

Implant handpiece		
Model	KI-AG20L (OPTIC)	KI-AG20 (NON-OPTIC)
Gear ratio	20 : 1	20 : 1
Max. speed	2,000 rpm	2,000 rpm
Max. torque	70Ncm	70Ncm
Weight	85 g	95 g
Dimension(mm)	L98 x Ø20	L95 x Ø20



# Ki-20

Optic led control

9 memory programs can be stored on single motor

Large LCD display



Product video

## ERGONOMIC ANGLE SHAPE TO IMPROVE HANDGRIP

Efficient cooling provides high cooling without disturbing visibility, and it is divided into two types, right-handed and left-handed, so that the treatment can be performed under optimal conditions.



## POWERFUL OPTIC MICRO MOTOR

Ki-MTO motor is equipped with powerful optic function, which helps to improve the accuracy of operation with high visibility.



### CONTENTS

Control unit / Micromotor / Motor cable / Implant handpiece / Foot control / Foot hanger / Handpiece stand / Coolant hanger / Power cord / Irrigation tube / Motor plug

### SPECIFICATION

Model	Control unit(Ki-20)
Input	AC 100-120V, 50/60Hz AC 220-240V, 50/60Hz
Output	100VA
Weight	2,606g
Dimension(mm)	W240 x D225 x H97

Model	Micromotor (Ki-MTO)
Max. Speed	40,000 rpm
Weight	265g
Dimension(mm)	L117 x Ø22

Model	Foot control(Ki-F20)	
Weight	1,015g	
Dimension(mm)	W218 x D190 x H57	

Implant handpiece		
Model	KI-AG20L (OPTIC)	KI-AG20 (NON-OPTIC)
Gear ratio	20 : 1	20 : 1
Max. speed	2,000 rpm	2,000 rpm
Max. torque	70Ncm	70Ncm
Weight	85 g	95 g
Dimension(mm)	L98 x Ø20	L95 x Ø20



# SD-T Driver

## For Implant Screw Driver

Universal manual screw driver  
 Contra angle type (easy to access in mouth)  
 3 torque values ( $\infty$  or 20,35Ncm)  
 Good to use maxilla, mandible jaw surgery



Krafit



**SDA**

No limited torque

**SDA-20**

20Ncm

**SDA-35**

35Ncm

### CONTENTS

SD-T Driver / SDA / SDA-20 / SDA-35 / Spray nozzle

### SPECIFICATION

Model	SD-T Driver
Weight	57g
Dimension(mm)	L119 x Ø11

Model	SDA
Torque	$\infty$
Weight	22.5g
Dimension(mm)	L48.96 x Ø15.75

Model	SDA-20
Torque	20Ncm
Weight	47.5g
Dimension(mm)	L52.1 x Ø21.87

Model	SDA-35
Torque	35Ncm
Weight	47.5g
Dimension(mm)	L52.1 x Ø21.87

Model	Spray nozzle
Weight	11.5g
Dimension(mm)	L30 x Ø19.5



# ENDODONTICS



# Endo A Class

Suitable for endodontic procedures

Auto stop reverse feature

6 Memory programs

Ni-MH battery

Operatable for 90 min



## Auto Stop Reverse Forward **QA**

When the motor handpiece is overloaded, it stops running immediately and runs in reserve direction until the overload is solved. After the overload is solved, the handpiece starts and runs again in forward direction.

## Auto Stop Reverse Stop **A**

When the motor handpiece is overloaded, it stops running immediately and runs in reserve direction until the overload is solved. After the overload is solved, the handpiece stops running.

## Auto Stop **NO INDICATION**

When the motor handpiece is overloaded, it stops running. If you need to run the motor handpiece in forward direction, press the on/off switch.

## CONTENTS

Motor handpiece / Contra angle / Charger / Power Cord / Spray nozzle / Motor handpiece cap

## SPECIFICATION

Model	Motor handpiece
Rechargeable battery	Li-MH, 2.4V, 1000mA
Weight	150g
Dimension(mm)	W135 x D27 x H28

Model	Charger
Input power	AC 100-240V, 11VA
Rated current	800mA
Weight	160g
Dimension(mm)	W98 x D115 x H60



Model	Contra angle(SP-RA16)
Gear ratio	16:1
Speed	140 - 500 rpm
Weight	366g
Dimension(mm)	L76 x Ø18

# Endo A Class (LED)

- Wireless endo motor
- Suitable for endodontic procedures with LED light
- Wider LCD display
- Auto stop reverse feature
- 9 Memory programs
- Li-ion battery
- Operatable for 90 min



## LUBRICATING THE CONTRA ANGLE

Insert the spray nozzle into the rear part of the contra angle attachment and lubricate until oil comes out from the attachment head which is approximately 2~3 seconds.



## WIRELESS

Endo A Class (LED) is a wireless type, and it is free to move during the procedure, reducing the operator's fatigue.

## LED LIGHT

Suitable for endodontic procedure with LED light



## CONTENTS

Motor handpiece / Contra angle / LED ass'y / Charger / Power Cord / Spray nozzle / LED cap

## SPECIFICATION

Model	Motor handpiece
Rechargeable battery	Li-ion, 3.7V, 800mA
Weight	130g
Dimension(mm)	W29.9 x D32.9 x H157.1

Model	Charger
Main Voltage	AC 100-240V, 50/60Hz
Rated Capacity	300mA
Weight	150g
Dimension(mm)	W100.0 x D100.0 x H49.4



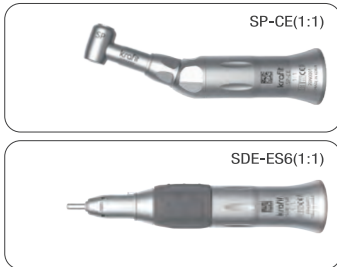
Model	Contra angle(SP-RA16N)
Gear ratio	1:1
Speed	150 - 600 rpm
Weight	30g
Dimension(mm)	L87.0 x Ø15.5

**OTHERS**



# K48 PRO 35K

- MAX 8hours
- LI-ION battery (rechargeable)
- Color LCD display
- Pause function
- Power save
- Overload protection (warning signal)
- On/Off Foot Switch (SFP-27)



## Optional



## CONTENTS

Control unit / E-type motor / Handpiece stand / Charger / Control unit stand(optional) / Foot pedal(optional) / Handpiece holder(optional)

## SPECIFICATION

Model	Control unit (K48 PRO)
Input	12.6Vdc
Output	12Vdc
Weight	290g
Dimension(mm)	W74 x D138 x H30

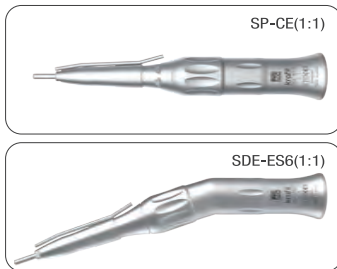
Model	Charger
Input	100~240V, 50/60Hz
Output	12.6Vdc

Model	E-type motor (SDE-BS35E)
Max.speed	35,000 rpm
Torque	2.4 Ncm
Weight	60g
Dimension(mm)	L89.3 x Ø18.8

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# MULTI 800 50K

- Knee-control type
- Digital speed display
- Less noise, less vibration
- Excellent durability
- Self-diagnosis function
- Auto-cruise function
- Variable speed control pedal (FS-80N)



Optional



## CONTENTS

Control unit / E-type motor / Foot pedal / Mounting bracket / Handpiece stand

## SPECIFICATION

Model	Control unit (MULTI800)
Input	230V~, 50Hz
Weight	2,550g
Dimension(mm)	W112.5 x D237 x H218

Model	E-type motor (SDE-BS50E)
Speed	1,000-50,000 rpm
Torque	7.6 Ncm
Weight	132.4 g
Dimension(mm)	L108 x Ø27

Model	Foot pedal (SDE-FS80N)
Weight	590g
Dimension(mm)	W117 x D171 x H62

# MARATHON-37 cartridge warmer

Maintains painless temperature with 37°C (98.6 °F)

Helps patients feel very comfortable

Effective for painless injection



## TEMPERATURE MAINTENANCE

Cartridge warmer is designed to give patients painless feelings when injection.

It is very effective to maintain same temperature of 37±3 °C throughout the whole day.

Please insert thermometer into center hole, and lidocaine into the bigger 15 holes round about.



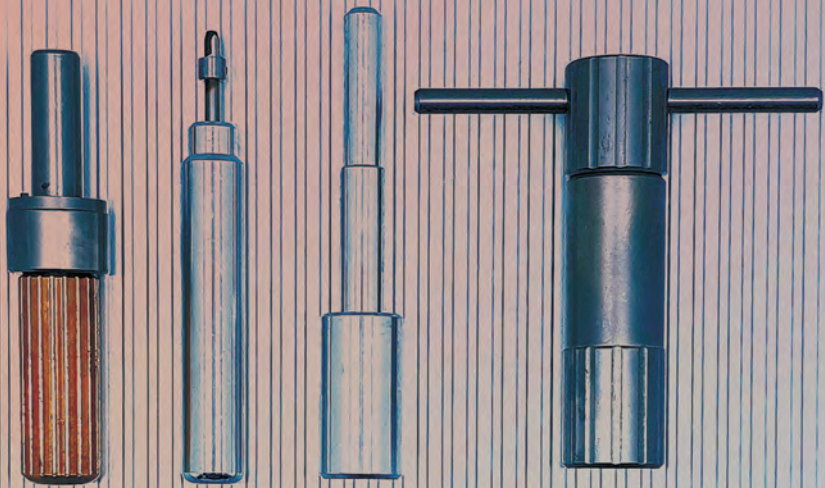
## SPECIFICATION

Model	Marathon-37
Electric power	AC110/220V, 50/60Hz, 60W
Temperature	37±3 °C
Weight	800g
Dimension(mm)	W92 x D116 x H132







# NOTE




# SPARE PARTS





## CONTRA & STRAIGHT HANDPIECE

MODEL	PART NAME	PICTURE
SDE-ES6 SDE-ES04	SPRAY NOZZLE	
SDE-ES100N	EXTERNAL WATER NOZZLE	
	SPRAY NOZZLE	
SP-CE	SP HEAD ASS'Y	
	BODY ASS'Y	
	SPRAY NOZZLE	







## POLISHING HANDPIECE

MODEL	PART NAME	PICTURE
SDE-EP6 SDE-EP04	SPRAY NOZZLE	


## SURGICAL HANDPIECE

MODEL	PART NAME	PICTURE
SGC-S101 SGC-A101	EXTERNAL WATER NOZZLE	
	SPRAY NOZZLE	














## IMPLANT HANDPIECE

MODEL	PART NAME	PICTURE
KI-AG20 KI-AG20L	HEAD GEAR HOUSING ASS'Y	
	MIDDLE GEAR HOUSING ASS'Y	
	NOZZLE CLAMP	 RIGHT HANDED    LEFT HANDED
	WRENCH	
	NOZZLE PIN	
	INTERNAL SPRAY NOZZLE	












## MAINTENANCE & REPAIR TOOL BOX

MODEL	PART NAME	PICTURE
REPAIR TOOL BOX	DENTAL HANDPIECE	






## ORTHODONTICS

MODEL	PART NAME	PICTURE
PRO M CLASS	MOTOR HANDPIECE	
	CHARGER	
	CONTRA ANGLE SO-0T6	
	CONTRA ANGLE SPC-R04	
	CONTRA ANGLE SC-R04	
	CONTRA ANGLE PR-04	
	CONTRA ANGLE SP-RA16M	
	CONTRA ANGLE TD-160	
	CONTRA ANGLE TD-320	
	ADAPTER	
	SPRAY NOZZLE	
	MOTOR HANDPIECE CAP	
	SWITCH LEVER	

## ORAL SURGERY & IMPLANTOLOGY

MODEL	PART NAME	PICTURE
KI-20	CONTROL UNIT KI-20	
	MICRO MOTOR KI-MTO	
	IMPLANT HANDPIECE KI-AG20 / NON-OPTIC	
	IMPLANT HANDPIECE KI-AG20L / OPTIC	
	FOOT CONTROL KI-F20	
	FOOT HANGER	
	POWER CORD	
	IRRIGATION TUBE	
	MOTOR PLUG	
	HANDPIECE STAND	
	COOLANT HANGER	

## ORAL SURGERY & IMPLANTOLOGY

MODEL	PART NAME	PICTURE
KI-20	CONTROL UNIT KI-20 touch	
	MICRO MOTOR KI-MTO	
	IMPLANT HANDPIECE KI-AG20 / NON-OPTIC	
	IMPLANT HANDPIECE KI-AG20L / OPTIC	
	FOOT CONTROL KI-F20	
	FOOT HANGER	
	POWER CORD	
	IRRIGATION TUBE	
	MOTOR PLUG	
	HANDPIECE STAND	
	COOLANT HANGER	

## OTHERS

MODEL	PART NAME	PICTURE
K48 PRO	CONTROL UNIT K48 PRO	
	E-TYPE MOTOR SDE-BS35E	
	CHARGER	
	HANDPIECE STAND	
	CONTROL UNIT STAND (OPTIONAL)	
	HANDPIECE HOLDER (OPTIONAL)	
	ON / OFF FOOT SWITCH SFP-27 (OPTIONAL)	
	MULTI 800	CONTROL UNIT MULTI 800
E-TYPE MOTOR SDE-BS50E		
HANDPIECE STAND		
MOUNTING BRACKET		

## ENDODONTICS

MODEL	PART NAME	PICTURE
ENDO A CLASS (LED)	MOTOR HANDPIECE	
	CHARGER	
	CONTRA ANGLE SP-RA16N	
	POWER CORD	
	OPTIC LED ASS'Y	
	SPRAY NOZZLE	
	LED CAP	
ENDO A CLASS	MOTOR HANDPIECE	
	CHARGER	
	CONTRA ANGLE SP-RA16N	
	POWER CORD	
	SPRAY NOZZLE	
	MOTOR HANDPIECE CAP	

marathon

---

**PRODUCT  
LINE UP**

## **DENTAL LABORATORY AIR TURBINE**

mat-300W

mat-300A

## **DENTAL LABORATORY BLDC**

BRUSHLESS MICROMOTOR

BRUSHLESS CONTROL UNIT

## **DENTAL LABORATORY DC**

BRUSH MICROMOTOR

BRUSH CONTROL UNIT

**EQUIPMENTS**

**SPARE PARTS**

**DENTAL  
LABORATORY  
AIR TURBINE**



# MAT-300A AIR TYPE

High Speed Lab Air Turbine  
Turbine speed up to 320,000 rpm  
Compact size  
Speed control pedal  
Easy to control of air pressure  
Simple chuck-handle system  
Less noise and vibration



## TURBINE FOR PRECISE WORK

The MAT-300A helps you to work quickly and accurately with a strong air breeze. It is very effective in crevice processing of occlusal surfaces, ceramics and zirconia.



Product video

## CONTENTS

Control unit / Handpiece / Foot switch / Handpiece tube /Bur-inserting tool / Handpiece holder

## SPECIFICATION

Model	Control unit(MAT-C300A)	Model	Handpiece(MAT-H300A)
Operation means	Compressed Air	Max. speed	320,000 rpm
Operation Pressure	2.0-2.5 bar	Weight	60g
Air Consumption	40L/min	Dimension(mm)	Ø16.9 x L131.9
Weight	545g		
Dimension(mm)	W115 x D90 x H178		
Model	Foot Switch(MAT-F300)		
Weight	720g		
Dimension(mm)	Ø142 x L39		



# MAT-300W WATER TYPE

High Speed Lab Air Tutbine  
 Turbine speed up to 320,000 rpm  
 Compact size  
 Speed control pedal  
 Easy to control of air pressure  
 Simple chuck-handle system  
 Less noise and vibration



Product video



## TURBINE FOR PRECISE WORK

The MAT-300W provides an optimal system for ceramic and prosthetic professionals. It is a rugged, easy-to-use device ideal for delicate and precise work. The superior quality of the MAT-300W unit really sets it apart. Equipped with a 170ml tank, it can work for a considerable amount of time.

## CONTENTS

Control unit / Handpiece / Foot switch / Handpiece tube /Bur-inserting tool / Handpiece holder

## SPECIFICATION

Model	Control unit(MAT-C300W)	Model	Handpiece(MAT-H300W)
Operation means	Compressed Air	Max. speed	320,000 rpm
Operation Pressure	2.5-3.0 bar	Weight	85.5g
Air Consumption	40L/min	Dimension(mm)	Ø17.2 x L124.1
Weight	1,700g		
Dimension(mm)	W234 x D99 x H190		
Model	Foot Switch(MAT-F300)		
Weight	720g		
Dimension(mm)	Ø142 x L39		



**DENTAL  
LABORATORY  
BLDC**



marathon  
*Multi 800*

marathon



AUTO  
CRUISE



AUTO  
CRUISE



marathon  
BHC  
210000001

marathon  
SDE-BS50C  
NO.23000001

SDE-BS50

# BLDC HANDPIECE



**30V** **50K**

## SDE-BM50S1

<b>SPEED</b>	1,000-50,000 rpm
<b>MAX.TORQUE</b>	7.8Ncm
<b>WEIGHT</b>	231 g
<b>DIMENSIONS</b>	L160 x Ø27



**30V** **40K**

## SDE-BM40S1

<b>SPEED</b>	1,000-40,000 rpm
<b>MAX.TORQUE</b>	8.5Ncm
<b>WEIGHT</b>	231 g
<b>DIMENSIONS</b>	L160 x Ø27



**30V** **50K**

## SDE-BS50C for Multi800/Multi800s

<b>SPEED</b>	1,000-50,000 rpm
<b>MAX.TORQUE</b>	7.6Ncm
<b>WEIGHT</b>	215 g
<b>DIMENSIONS</b>	L160 x Ø27



**12V** **35K**

## SDE-BS35

<b>SPEED</b>	0-35,000 rpm
<b>MAX.TORQUE</b>	2.4Ncm
<b>WEIGHT</b>	120 g
<b>DIMENSIONS</b>	L123 x Ø20



**12V** **35K**

## SDE-BS30

<b>SPEED</b>	0-35,000 rpm
<b>MAX.TORQUE</b>	2.4Ncm
<b>WEIGHT</b>	120 g
<b>DIMENSIONS</b>	L123 x Ø20

# BLDC E-TYPE MOTOR

30V

50K



## KI-MTE

SPEED	1,000-50,000 rpm
WEIGHT	265 g
DIMENSIONS	L117 x Ø22

30V

50K



## SDE-BS50E

SPEED	1,000-50,000 rpm
MAX.TORQUE	7.6Ncm
WEIGHT	132.4 g
DIMENSIONS	L108 x Ø27

12V

35K



## SDE-BS35E

SPEED	0-35,000 rpm
MAX.TORQUE	2.4Ncm
WEIGHT	60 g
DIMENSIONS	L89.3 x Ø18.8

# MULTI 800 50K



- Knee-control type
- Digital speed display
- Less noise, less vibration
- Excellent durability
- Self-diagnosis function
- Auto-cruise function
- Variable speed control pedal (FS-80N)



## KNEE CONTROL TYPE

There is a desktop type that is controlled with a hand dial or foot pedal, and a type that is controlled with a knee by putting the tongue on the lower side of the work desk. The knee control type can respond sensitively to speed changes, so it is useful for detailed work.



Product video

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Mounting bracket / Handpiece stand

## SPECIFICATION

Model	Control unit (MULTI800)
Input	230V~, 50Hz
Weight	2,550g
Dimension(mm)	W112.5 x D237 x H218

Model	Handpiece (SDE-BS50C)
Speed	1,000-50,000 rpm
Torque	7.6 Ncm
Weight	215g
Dimension(mm)	Ø27 x L160

Model	Foot pedal (SDE-FS80N)
Weight	590g
Dimension(mm)	W117 x D171 x H62

# MULTI 800S 50K



marathon

- Stand type
- Digital speed display
- Less noise, less vibration
- Excellent durability
- Self-diagnosis function
- Auto-cruise function
- Variable speed control pedal (FS-80N)



## AUTO-CRUISE FUNCTION

Once the footmode is set, maintaining the foot(knee)pedal at a constant speed for 2 seconds activates the auto-cruise mode. This mode can be disengaged by either pressing the pedal or pressing the button again.



Product video

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece stand

## SPECIFICATION

Model	Control unit (MULTI800S)	Model	Handpiece (SDE-BS50C)
Input	230V~, 50Hz	Speed	1,000-50,000 rpm
Weight	2.230g	Torque	7.6 Ncm
Dimension(mm)	W82.5 x D225 x H202.5	Weight	215g
		Dimension(mm)	Ø27 x L160
Model	Foot pedal (SDE-FS80N)		
Weight	590g		
Dimension(mm)	W117 x D171 x H62		

# MULTI 600 50K

- Digital speed display
- Less noise, less vibration
- Excellent durability
- Knee-control type
- Self-diagnosis function
- Auto-cruise function
- Variable speed control pedal (FS-60N)



## KNEE CONTROL TYPE

There are two types available : a desktop model controlled by a handdial or foot pedal, and a knee-operated model activated by placing the tongue on the lower side of the work desk.  
The knee control type is particularly responsive to speed changes, making it ideal for precise, detailed work.



Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Mounting bracket / Handpiece stand

## SPECIFICATION

Model	Control unit (MULTI600)
Input	AC 100~120V, 50/60Hz AC 220~240V, 50/60Hz
Weight	3,100g
Dimension(mm)	W122 x D268 x H237

Model	Handpiece (SDE-BM50S1)
Speed	1,000~50,000 rpm
Torque	7.8 Ncm
Weight	231g
Dimension(mm)	Ø27 x L160

Model	Foot pedal (SDE-FS60N)
Weight	558g
Dimension(mm)	W170 x D110 x H58

# MULTI 600 DUO 50K

Brushless & brush micromotor / Dual control system

Digital speed display

Less noise, less vibration

Excellent durability

Knee-control type

Self-diagnosis function

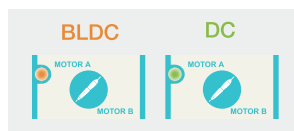
Auto-cruise function

Variable speed control pedal (FS-60N)

marathon



## DUAL CONTROL SYSTEM



Optional



Choose 1 handpiece

## CONTENTS

Control unit / Handpiece / Foot pedal / Mounting bracket / Handpiece stand

## SPECIFICATION

Model	Control unit (MULTI600 DUO)
Input	AC 100-120V, 50/60Hz AC 220-240V, 50/60Hz
Weight	3,100g
Dimension(mm)	W122 x D268 x H237

Model	Handpiece (SDE-SM45C)
Speed	0-40,000 rpm
Torque	4.5 Ncm
Weight	230g
Dimension(mm)	Ø30 x L155

Model	Handpiece (SDE-BM50S1)
Speed	1,000-50,000 rpm
Torque	7.8 Ncm
Weight	231g
Dimension(mm)	Ø27 x L160

Model	Foot pedal (SDE-FS60N)
Weight	558g
Dimension(mm)	W170 x D110 x H58

# HANDY 700 50K

- Brushless & brush micromotor / Dual control system
- Digital speed display
- Maximum speed set mode possible
- Less noise, less vibration
- Excellent durability
- Self-diagnosis function
- Auto-cruise function
- Variable speed control pedal (FS-60N)
- Handpiece cradle attached
- Magnetic bur holder attached
- Easy-carry with handle

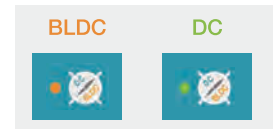


## EASY-CARRY WITH HANDLE

The handy 700 features a built-in handle, making it easy and convenient to carry.



## DUAL CONTROL SYSTEM



Optional



Choose 1 handpiece

## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (HANDY700)
Input	AC 100~120V, 50/60Hz AC 220~240V, 50/60Hz
Weight	2,700g
Dimension(mm)	W137 x D232 x H180

Model	Handpiece (SDE-S40)
Speed	0~40,000 rpm
Torque	5.0 Ncm
Weight	220g
Dimension(mm)	Ø30 x L150

Model	Handpiece (SDE-BM50S1)
Speed	1,000-50,000 rpm
Torque	7.8 Ncm
Weight	231g
Dimension(mm)	Ø27 x L160

Model	Foot pedal (SDE-FS60N)
Weight	558g
Dimension(mm)	W170 x D110 x H58

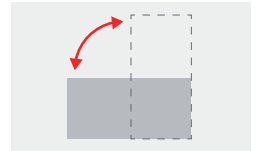
# HANDY-ECO 50K

- Digital speed display
- Automatic safety overload protection system
- Less noise, less vibration
- Excellent durability
- Variable speed control pedal (FS60N)
- Vertical and horizontal style



## VERTICAL & HORIZONTAL STYLE

HANDY-ECO stands out for its impressive coverage, accommodating both vertical and horizontal applications. Compact and portable, it is easy to carry.



Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (HANDY-ECO)
Input	AC 100-120V, 50/60Hz AC 220-240V, 50/60Hz
Weight	1,600g
Dimension(mm)	W141 x D186 x H97

Model	Handpiece (SDE-BM50S1)
Speed	1,000-50,000 rpm
Torque	7.8 Ncm
Weight	231g
Dimension(mm)	Ø27 x L160

Model	Foot pedal (SDE-FS60N)
Weight	558g
Dimension(mm)	W170 x D110 x H58

# K48 PRO 35K

- MAX 8hours
- LI-ION battery (rechargeable)
- Color LCD display
- Pause function
- Power save
- Overload protection (warning signal)
- On/Off Foot Switch (SFP-27)



## PAUSE FUNCTION

Press the knob once to pause operation.  
Press it again to resume at the previous speed.



Product video

### Optional



## CONTENTS

Control unit / Handpiece / Handpiece stand / Charger / Control unit stand(optional)  
/ Foot pedal(optional) / Handpiece holder(optional)

## SPECIFICATION

Model	Control unit (K48 PRO)
Input	12.6Vdc
Output	12Vdc
Weight	290g
Dimension(mm)	W74 x D138 x H30

Model	Handpiece (SDE-BS35)
Max.speed	35,000 rpm
Torque	2.4 Ncm
Weight	120g
Dimension(mm)	Ø19.8 x L126

Model	Charger
Input	100-240V, 50/60Hz
Output	12.6Vdc

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# K38 PRO 35K

- MAX 8hours
- LI-ION battery (rechargeable)
- Digital speed display
- Pause function
- Power save
- Overload protection (warning signal)
- On/Off Foot Switch (SFP-27)



marathon

## WIRELESS & PORTABLE

It offers up to 8 hours of use on a full 3-hour charge. Its lightweight and compact design makes it easy to carry wherever you go



Product video

Optional



## CONTENTS

Control unit / Handpiece / Handpiece stand / Charger / Control unit stand(optional) / Foot pedal(optional) / Handpiece holder(optional)

## SPECIFICATION

Model	Control unit (K38 PRO)
Input	12.6Vdc
Output	12Vdc
Weight	253g
Dimension(mm)	W67 x D128 x H30

Model	Charger
Input	100-240V, 50/60Hz
Output	12.6Vdc

Model	Handpiece (SDE-BS30)
Max.speed	35,000 rpm
Torque	2.4 Ncm
Weight	120g
Dimension(mm)	Ø20 x L120

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# MINI CRO 30K



- MAX 8hours
- LI-ION battery (rechargeable)
- Speed display LED [white >> sky blue >> blue >> pink]
- Pause function
- Overload protection
- Forward / Reverse direction switch



## WIRELESS & PORTABLE

It offers up to 8 hours of use on a full 3-hour charge. Its lightweight and compact design makes it easy to carry wherever you go

## CONTENTS

Control unit / Handpiece / Handpiece stand / Charger / Handpiece holder / Clip / Control unit stand(optional)

## SPECIFICATION

Model	Control unit (MINI CRO)
Input	12.6Vdc
Output	12Vdc
Weight	225g
Dimension(mm)	W65 x D147 x H25

Model	Handpiece (SDE-BS30)
Max.speed	35,000 rpm
Torque	2.4 Ncm
Weight	120g
Dimension(mm)	Ø20 x L120

Model	Charger
Input	100-240V, 50/60Hz
Output	12.6Vdc

Optional



**DENTAL  
LABORATORY  
DC**



# DC HANDPIECE



**30V** **40K**

## SDE-S40

<b>SPEED</b>	0-40,000 rpm
<b>MAX. TORQUE</b>	5.0Ncm
<b>WEIGHT</b>	220 g
<b>DIMENSIONS</b>	L150 x Ø30



**30V** **40K**

## SDE-SM45C

<b>SPEED</b>	0-40,000 rpm
<b>MAX. TORQUE</b>	4.5Ncm
<b>WEIGHT</b>	235 g
<b>DIMENSIONS</b>	L155 x Ø30



**30V** **40K**

## SDE-SH37LN

<b>SPEED</b>	0-40,000 rpm
<b>MAX. TORQUE</b>	4.5Ncm
<b>WEIGHT</b>	210 g
<b>DIMENSIONS</b>	L152 x Ø28



**30V** **40K**

## SDE-SH37L(M45)

<b>SPEED</b>	0-40,000 rpm
<b>MAX. TORQUE</b>	4.5Ncm
<b>WEIGHT</b>	210 g
<b>DIMENSIONS</b>	L154 x Ø30



**30V** **35K**

## SDE-H38L

<b>SPEED</b>	0-35,000 rpm
<b>MAX. TORQUE</b>	3.5Ncm
<b>WEIGHT</b>	200 g
<b>DIMENSIONS</b>	L151 x Ø30

# DC HANDPIECE



30V 35K

## SDE-H37L1

SPEED	0-35,000 rpm
MAX.TORQUE	3.2Ncm
WEIGHT	210 g
DIMENSIONS	L155 x Ø30



30V 35K

## SDE-H35SP1

SPEED	0-35,000 rpm
MAX.TORQUE	3.2Ncm
WEIGHT	210 g
DIMENSIONS	L152 x Ø28



30V 35K

## SDE-H37LSP

SPEED	0-35,000 rpm
MAX.TORQUE	3.2Ncm
WEIGHT	215 g
DIMENSIONS	L154 x Ø30



30V 35K

## SDE-H37SP FOR SURVEYOR

SPEED	0-35,000 rpm
MAX.TORQUE	3.2Ncm
WEIGHT	205 g
DIMENSIONS	L154 x Ø30



12V 24V 30V 30K

## SDE-H200

SPEED	0-30,000 rpm
MAX.TORQUE	2.9Ncm
WEIGHT	150 g
DIMENSIONS	L129 x Ø22

# DC HANDPIECE



12V 30K

## SDE-MH20(30K)

SPEED	0-30,000 rpm
MAX.TORQUE	1.3Ncm
WEIGHT	130 g
DIMENSIONS	L120 x Ø20



30V 40K

## SDE-M40Es

SPEED	0-40,000 rpm
MAX.TORQUE	2.2Ncm
WEIGHT	109 g
DIMENSIONS	L99 x Ø25



30V 35K

## SDE-M33Es-B

SPEED	0-35,000 rpm
MAX.TORQUE	2.6Ncm
WEIGHT	142 g
DIMENSIONS	L104 x Ø25.7



30V 30K

## SDE-M30Es

SPEED	0-30,000 rpm
MAX.TORQUE	3.2Ncm
WEIGHT	90 g
DIMENSIONS	L97 x Ø23



12V 30K

## SDE-M300Es

SPEED	0-30,000 rpm
MAX.TORQUE	3.2Ncm
WEIGHT	90 g
DIMENSIONS	L97 x Ø23

# HANDY 702 40K

- Digital speed display window
- Less noise, less vibration
- Excellent durability
- Self-diagnosis function
- Auto-cruise function
- Handpiece cradle attached
- Magnetic bur holder attached
- Easy-carry with handle
- Variable speed control pedal (FS-60N)



marathon

## EASY-CARRY WITH HANDLE

The handy 702 features a built-in handle, making it easy and convenient to carry.



Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (HANDY702)
Input	AC 100~120V, 50/60Hz
	AC 220~240V, 50/60Hz
Weight	1,900g
Dimension(mm)	W137 x D232 x H180

Model	Handpiece (SDE-SM45C)
Speed	0~40,000 rpm
Torque	4.5 Ncm
Weight	230g
Dimension(mm)	Ø30 x L155

Model	Foot pedal (SDE-FS60N)
Weight	558g
Dimension(mm)	W170 x D110 x H58

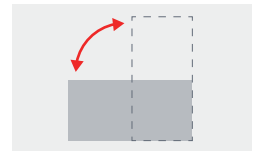
# ECO 450 40K

- Automatic safety overload protection system
- Less noise, less vibration
- Excellent durability
- Variable speed control pedal (FS-60N)
- Vertical and horizontal style



## VERTICAL & HORIZONTAL STYLE

ECO 450 stands out for its impressive coverage, accommodating both vertical and horizontal applications. Compact and portable, it is easy to carry.



Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (ECO450)
Input	AC 100~120V, 50/60Hz AC 220~240V, 50/60Hz
Weight	1,600g
Dimension(mm)	W141 x D186 x H97

Model	Handpiece (SDE-SM45C)
Speed	0~40,000 rpm
Torque	4.5 Ncm
Weight	230g
Dimension(mm)	Ø30 x L155

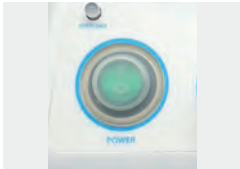
Model	Foot pedal (SDE-FS60N)
Weight	558g
Dimension(mm)	W170 x D110 x H58

# MARATHON-N7 40K

- Automatic safety overload protection system
- Dust-proof cover for switch
- Built-in handpiece cradle & bit stand
- Forward / Reverse direction switch
- On / Off foot switch (SFP-27)
- Variable speed control pedal (FS-60)



marathon



## DUST-PROOF COVER FOR SWITCH

The power switch is equipped with a cover to prevent dust from entering the inside of the controller, ensuring better durability and performance.

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (MARATHON-N7)	Model	Handpiece (SDE-SH37LN)
Input	AC 100~120V, 50/60Hz	Speed	0~40,000 rpm
	AC 220~240V, 50/60Hz	Torque	4.5 Ncm
Weight	1,700g	Weight	210g
Dimension(mm)	W115 x D147 x H96	Dimension(mm)	Ø28 x L152
Model	Foot pedal (SDE-FS60)	Model	Foot pedal (SDE-SFP27)
Weight	558g	Weight	195g
Dimension(mm)	W170 x D110 x H58	Dimension(mm)	W68 x D107 x H35

# MARATHON-N2 35K

Automatic safety overload protection system

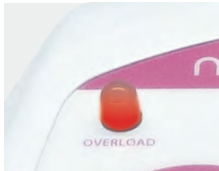
Dust - proof cover for switch

Built - in handpiece cradle & bit stand

Forward / Reverse direction switch

On / Off foot switch (SFP-27)

Variable speed control pedal (FS-60)



## AUTOMATIC SAFETY OVERLOAD PROTECTION SYSTEM

The Marathon-N2 equipped with an automatic protection system that activates in case of overload, indicated by the illumination of an LED light.

Optional



## CONTENTS

Control unit / Handpiece / Handpiece holder / Handpiece stand / Foot pedal(optional)

## SPECIFICATION

Model	Control unit (MARATHONN2)
Input	AC 100~120V, 50/60Hz
	AC 220~240V, 50/60Hz
Weight	1,700g
Dimension(mm)	W115 x D147 x H96

Model	Handpiece (SDE-H35SP1)
Speed	0-35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø28 x L152

Model	Foot pedal (SDE-FS60)
Weight	558g
Dimension(mm)	W170 x D110 x H58

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# NEW MARATHON-3 CHAMPION 35K

- Sleek & minimal design
- Compact size
- Hidden power LED
- Built-in handpiece cradle and bit stand
- Forward / Reverse direction switch
- On / Off foot switch (SFP-27)



marathon



## HIDDEN LED DISPLAY

The champion boasts an innovative Hidden LED design that subtly lights up when the device is powered on or off, allowing users to easily recognize the power status. When the device is off, the LED remains completely concealed, preserving a sleek and minimalist look.

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (NEW CHAMPION)
Input	AC 100~120V, 50/60Hz AC 220~240V, 50/60Hz
Weight	1,148.5g
Dimension(mm)	W116 x D159 x H84

Model	Handpiece (SDE-H37L1)
Speed	0~35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø30 x L155

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# MARATHON-3 CHAMPION 35K



white black pink blue mint

- Compact size
- Built-in handpiece cradle and bit stand
- Forward / Reverse direction switch
- On / Off foot switch (SFP-27)



## BUILT-IN HANDPIECE CRADLE

A separate handpiece holder is included, allowing the handpiece to be securely stored, which optimizes space utilization.

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (CHAMPION)
Input	AC 100~120V, 50/60Hz
	AC 220~240V, 50/60Hz
Weight	1,250g
Dimension(mm)	W118 x D156 x H78

Model	Handpiece (SDE-H37L1)
Speed	0~35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø30 x L155

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# K35 35K



silver

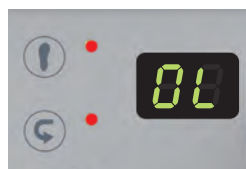
rose gold

yellow

- Digital speed display window
- Auto - cruise control
  - in case of connection variable speed control
- Automatic system
  - power save
  - overload protection, warning LED
- Forward / Reverse button
- Pause function
- Variable speed control pedal (FS-60)
- On / Off foot switch (SFP-27)



marathon



## AUTOMATIC SAFETY OVERLOAD PROTECTION SYSTEM

The K35 is equipped with an automatic protection system that activates in the event of an overload, signaled by the illumination of an LED light

Optional



## CONTENTS

Control unit / Handpiece / Handpiece stand / Foot pedal(optional)

## SPECIFICATION

Model	Control unit (K35)	Model	Handpiece (SDE-H37L1)
Input	AC 100~120V, 50/60Hz	Speed	0~35,000 rpm
	AC 220~240V, 50/60Hz	Torque	3.2 Ncm
Weight	1,130g	Weight	210g
Dimension(mm)	W120 x D120 x H75	Dimension(mm)	Ø30 x L155
Model	Foot pedal (SDE-FS60)	Model	Foot pedal (SDE-SFP27)
Weight	384g	Weight	195g
Dimension(mm)	W110 x D172 x H42	Dimension(mm)	W68 x D107 x H35

# K35 mini 35K

- Compact & Light weight
- Digital speed display window
- Overload protection, warning LED
- Pause function
- Forward / Reverse button
- On / Off foot switch (SFP-27)



Product video

## LIGHT WEIGHT OF 549.5g

It is a desk-type product with a light weight and slim design, so it can be carried lightly even when moving.

## AUTOMATIC SAFETY OVERLOAD PROTECTION SYSTEM

The K35 mini is equipped with an automatic protection system that activates in the event of an overload, signaled by the illumination of an LED light

Optional



## CONTENTS

Control unit / Handpiece / Handpiece stand / Foot pedal(optional)

## SPECIFICATION

Model	Control unit (K35 MINI)
Input	AC 100~120V, 50/60Hz
	AC 220~240V, 50/60Hz
Weight	549.5g
Dimension(mm)	W122 x D121 x H52

Model	Handpiece (SDE-H37L1)
Speed	0~35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø30 x L155

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# K35 CUBE 35K



white pink hot pink blue mint black

Non - stage speed control volume dialing system

Built-in handpiece cradle and bit stand

Forward / Reverse direction switch

On / Off foot switch (SFP-27)



marathon

Optional



## CONTENTS

Control unit / Handpiece / Handpiece holder / Handpiece stand / Foot pedal(optional)

## SPECIFICATION

Model	Control unit (K35 CUBE)
Input	AC 100-120V, 50/60Hz AC 220-240V, 50/60Hz
Weight	1,300g
Dimension(mm)	W120 x D120 x H85

Model	Handpiece (SDE-H37L1)
Speed	0-35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø30 x L155

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# ESCORT II PRO 35K



white pink red blue mint black

- Powerful performance with low noise & vibration
- Built-in handpiece cradle and bit stand
- Automatic safety overload protection system
- Forward / Reverse direction switch
- Variable speed control pedal (FS-60)
- On / Off foot switch (SFP-27)



Product video



## AUTOMATIC SAFETY OVERLOAD PROTECTION SYSTEM

The ESCORT II PRO automatically activates the protection system in case of overload and the LED light turns on.

Optional



## CONTENTS

Control unit / Handpiece / Handpiece holder / Handpiece stand / Foot pedal(optional)

## SPECIFICATION

Model	Control unit (ESCORT II PRO)
Input	AC 100-120V, 50/60Hz AC 220-240V, 50/60Hz
Weight	1,250g
Dimension(mm)	W134x D154 x H82.4

Model	Handpiece (SDE-H35SP1)
Speed	0-35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø28 x L152

Model	Foot pedal (SDE-FS60)
Weight	558g
Dimension(mm)	W170 x D110 x H58

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# ESCORT III 35K

- Powerful performance with low noise & vibration
- Built-in handpiece cradle and bit stand
- Lightening push power button
- Non - stage speed control volume dialing system
- Forward / Reverse direction switch
- On / Off foot switch (SFP-27)



marathon



Product video



## LIGHTENING PUSH POWER BUTTON

The push-type Lightning power button is placed on the front. so you can easily turn on/off the power of the control unit.

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

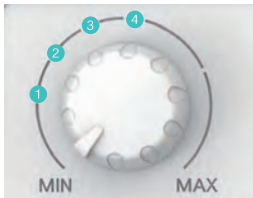
Model	Control unit (ESCORT III)
Input	AC 100~120V, 50/60Hz AC 220~240V, 50/60Hz
Weight	1,184g
Dimension(mm)	W115 x D147 x H71

Model	Handpiece (SDE-H37L1)
Speed	0~35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø30 x L155

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# MARATHON-4 35K

- Powerful performance with low noise & vibration
- Built-in handpiece cradle and bit stand
- Lightening push power button
- 4 stage speed control
- Forward / Reverse direction switch
- On / Off foot switch (SFP-27)



## 4 STAGE SPEED CONTROL

The 4-step control dial system allows you to work at a constant speed at all times.

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (MARATHON-4)
Input	AC 100~120V, 50/60Hz AC 220~240V, 50/60Hz
Weight	1,184g
Dimension(mm)	W115 x D147 x H71

Model	Handpiece (SDE-H35SP1)
Speed	0~35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø28 x L152

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# MARATHON-4 MINI 35K

- Compact size
- 4 stage speed control
- Forward / Reverse direction switch
- On / Off foot switch (SFP-27)



marathon



## 4 STAGE SPEED CONTROL

The 4-step control dial system allows you to work at a constant speed at all times.

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece stand

## SPECIFICATION

Model	Control unit (M4 MINI)
Input	AC 230V, 50Hz
Weight	1,100g
Dimension(mm)	W79 x D127 x H66

Model	Handpiece (SDE-H37L1)
Speed	0-35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø30 x L155

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# MARATHON-3 MIGHTY 35K

Compact size

Built-in handpiece cradle and bit stand

Forward / Reverse direction switch

On / Off foot switch (SFP-27)



## BUILT-IN HANDPIECE CRADLE

A separate handpiece holder is included, allowing the handpiece to be securely stored, which optimizes space utilization.

Optional



## CONTENTS

Control unit / Handpiece / Foot pedal / Handpiece holder / Handpiece stand

## SPECIFICATION

Model	Control unit (MIGHTY)
Input	AC 100~120V, 50/60Hz
	AC 220~240V, 50/60Hz
Weight	1,260g
Dimension(mm)	W118 x D156 x H78

Model	Handpiece (SDE-H37L1)
Speed	0~35,000 rpm
Torque	3.2 Ncm
Weight	210g
Dimension(mm)	Ø30 x L155

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

# K38 30K



- Standard type / Clip type
- MAX 8hours (MH20)
- LI-ION battery (rechargeable)
- Digital speed display window
- LED display for battery charging level
- Pause function
- Automatic system
  - Power save
  - Overload protection (warning signal)
- Forward / Reverse direction button
- On/Off Foot Switch (SFP-27)



## PAUSE FUNCTION

Press the button shown in the picture above to pause.  
Press the button again will resume operation at the previous speed.



marathon

## CONTENTS

Control unit / Handpiece / Handpiece stand / Charger / Control unit stand(optional) / Foot pedal(optional) / Handpiece holder(optional) / Clip(optional)

## SPECIFICATION

Model	Control unit (K38)
Input	12Vdc
Output	12Vdc
Weight	285g
Dimension(mm)	W67 x D128 x H30

Model	Handpiece (SDE-MH20)
Max.speed	30,000 rpm
Torque	1.3 Ncm
Weight	130g
Dimension(mm)	Ø20 x L120

Model	Charger
Input	100-240V, 50/60Hz
Output	12Vdc / 2.0A

Model	Foot pedal (SDE-SFP27)
Weight	195g
Dimension(mm)	W68 x D107 x H35

Optional



# EQUIPMENTS



# SDE-SM110 hammer handpiece

5,000 Strokes/min.

Control function of Impact Force

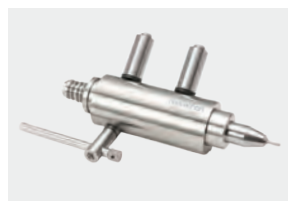
D.C 30V



# SDE-LS200 laboratory lathe spindle

Max.speed: 28,000 rpm

Compatible Automatic Spindle with laboratory alloy grinders

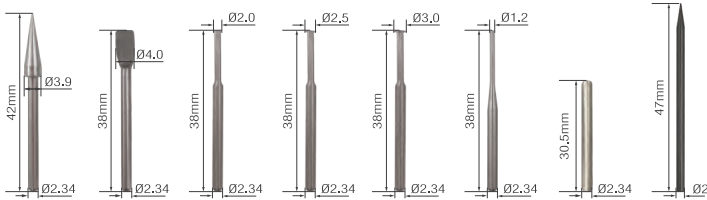


# MARATHON-103 surveyor

- Precise instrument with exact movement
- Easy exchangeable system(spindle, model table, cone former & plaster)
- Excellent finished surface
- Variable application possible
- Surveyor tools available



▲ Surveyor tool pin set



marathon

# MARATHON-20 center grinder

- Max.Speed: 3,200 rpm
- Grinding plaster model
- Grinding edge part of plaster model with an upper acetate plate
- Human-friendly dust collecting system
- Tools can easily change
- Good & effective design




























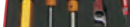
**SPARE PARTS**



## LABORATORY AIR TURBINE

MODEL	PART NAME	PICTURE
MAT-300W	CONTROL UNIT MAT-C300W	
	HANDPIECE MAT-H300W	
	FOOT SWITCH MAT-F300	
	HANDPIECE TUBE	
	BUR-INSERTING TOOL	
	HANDPIECE HOLDER	
	MAT-H300W	CARTRIDGE
COLLET CHUCK		
BEARING		
SPANNER		
MAT-300A	CONTROL UNIT MAT-C300A	
	HANDPIECE MAT-H300A	
	FOOT SWITCH MAT-F300	
	HANDPIECE TUBE	
	BUR-INSERTING TOOL	
	HANDPIECE HOLDER	
MAT-H300A	CARTRIDGE	
	COLLET CHUCK	
	BEARING	
	SPANNER	

## LABORATORY BLDC

MODEL	PART NAME	PICTURE
BLDC HANDPIECE	SPINDLE ASS'Y	
	HEAD ASS'Y (BHS1) SDE-BM50S1 / SDE-BM40S1	
	HEAD ASS'Y (BHC) SDE-BS50C	
	BLDC MOTOR BM50M / BM40M	
	BLDC MOTOR SDE-BS50C	
	MOTOR CORD SDE-BM50S1 / SDE-BM40S1	
	MOTOR CORD SDE-BS50C	
	BALL BEARING 814	
	BALL BEARING 1360	
	CHUCK WRENCH	
	COLLET CHUCK	
	COLLET SLEEVE	$\begin{matrix} \text{Ø1.6} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø2.35} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$
		$\begin{matrix} \text{Ø0.4} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$
		$\begin{matrix} \text{Ø0.5} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$
$\begin{matrix} \text{Ø0.6} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø0.7} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø0.8} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø0.9} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø1.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø1.2} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø1.5} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø1.6} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø2.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø2.35} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.0} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø1.6} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.175} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		
$\begin{matrix} \text{Ø2.35} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$  $\begin{matrix} \text{Ø3.175} \\ \text{+0.00} \\ \text{-0.01} \end{matrix}$		













## MAINTENANCE & REPAIR TOOL BOX

MODEL	PART NAME	PICTURE
REPAIR TOOL BOX	BRUSHLESS	

## LABORATORY BLDC

MODEL	PART NAME	PICTURE
MULTI 800	CONTROL UNIT MULTI 800	
	BLDC HANDPIECE SDE-BS50C	
	HANDPIECE STAND	
	MOUNTING BRACKET	
MULTI 800S	CONTROL UNIT MULTI 800S	
	BLDC HANDPIECE SDE-BS50C	
	HANDPIECE STAND	
MULTI 600	CONTROL UNIT MULTI 600	
	BLDC HANDPIECE SDE-BM50S1	
	HANDPIECE STAND	
	MOUNTING BRACKET	
MULTI 600 (DUO)	CONTROL UNIT MULTI 600 (DUO)	
	BLDC HANDPIECE SDE-BM50S1	
	DC HANDPIECE SDE-SM45C	
	HANDPIECE STAND	
HANDY 700	CONTROL UNIT HANDY 700	
	BLDC HANDPIECE SDE-BM50S1	
	DC HANDPIECE SDE-S40	
	HANDPIECE HOLDER	
	HANDPIECE STAND	

## LABORATORY BLDC

MODEL	PART NAME	PICTURE
HANDY ECO	CONTROL UNIT HANDY ECO	
	BLDC HANDPIECE SDE-BM50S1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
K48 PRO	CONTROL UNIT K48 PRO	
	HANDPIECE SDE-BS35	
	CHARGER	
	HANDPIECE STAND	
K38 PRO	CONTROL UNIT K38 PRO	
	HANDPIECE SDE-BS30	
	CHARGER	
	HANDPIECE STAND	
MINICRO	CONTROL UNIT MINICRO	
	HANDPIECE SDE-BS35	
	CHARGER	
	HANDPIECE STAND	
K48 MAX	CONTROL UNIT K48 MAX	
	HANDPIECE SDE-BS35	
	CHARGER	
	HANDPIECE STAND	

# LABORATORY DC

MODEL	PART NAME	PICTURE
DC HANDPIECE	SPINDLE ASS'Y SDE-H37L1 / SDE-H37LN	
	HEAD ASS'Y SDE-H37L1 / SDE-H37LN	
	SPINDLE ASS'Y SDM-H35SP1	
	HEAD ASS'Y SDM-H35SP1	
	ARMATURE SDE-SH37LN	
	ARMATURE SDM-H37L1 / SDM-H35SP1	
	ARMATURE SDM-M33Es	
	ARMATURE SDM-M33E	
	BALL BEARING 1260	
	BALL BEARING 1060	
	BALL BEARING 830	
	BALL BEARING 1480	
	BALL BEARING 1040	
	BALL BEARING 1030	
	CARBON BRUSH ASS'Y	
	CHUCK JOINT WRENCH CHUCK WRENCH	
	MOTOR CORD	
	COLLET CHUCK	
	COLLET SLEEVE	<ul style="list-style-type: none"> <li>Ø1.6 ±0.01 / Ø3.0 ±0.01</li> <li>Ø0.4 ±0.01 / Ø3.0 ±0.01</li> <li>Ø0.5 ±0.01 / Ø3.0 ±0.01</li> <li>Ø0.6 ±0.01 / Ø3.0 ±0.01</li> <li>Ø0.7 ±0.01 / Ø3.0 ±0.01</li> <li>Ø0.8 ±0.01 / Ø3.0 ±0.01</li> <li>Ø0.9 ±0.01 / Ø3.0 ±0.01</li> <li>Ø1.0 ±0.01 / Ø3.0 ±0.01</li> <li>Ø1.2 ±0.01 / Ø3.0 ±0.01</li> <li>Ø1.5 ±0.01 / Ø3.0 ±0.01</li> <li>Ø1.6 ±0.01 / Ø3.0 ±0.01</li> <li>Ø1.8 ±0.01 / Ø3.0 ±0.01</li> <li>Ø2.0 ±0.01 / Ø3.0 ±0.01</li> <li>Ø2.35 ±0.01 / Ø3.0 ±0.01</li> <li>Ø1.6 ±0.01 / Ø3.175 ±0.01</li> <li>Ø2.35 ±0.01 / Ø3.175 ±0.01</li> </ul>

# LABORATORY DC

MODEL	PART NAME	PICTURE
HANDY 700	CONTROL UNIT HANDY 702	
	DC HANDPIECE SDE-SM45C	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
HANDY ECO	CONTROL UNIT ECO 450	
	DC HANDPIECE SDE-SM45C	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
MARATHON-N7	CONTROL UNIT MARATHON-N7	
	HANDPIECE SDE-SH37LN	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
MARATHON-N2	CONTROL UNIT MARATHON-N2	
	HANDPIECE SDE-H35SP1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
NEW MARATHON3 CHAMPION	CONTROL UNIT NEW MARATHON3 CHAMPION	
	DC HANDPIECE SDE-H37L1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
MARATHON3 CHAMPION	CONTROL UNIT MARATHON3 CHAMPION	
	DC HANDPIECE SDE-H37L1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	







## LABORATORY DC

MODEL	PART NAME	PICTURE
K35	CONTROL UNIT K35	
	HANDPIECE SDE-H37L1	
	HANDPIECE STAND	
K35 MINI	CONTROL UNIT K35 MINI	
	HANDPIECE SDE-H37L1	
	HANDPIECE STAND	
K35 CUBE	CONTROL UNIT K35 CUBE	
	DC HANDPIECE SDE-H37L1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
ESCORT II PRO	CONTROL UNIT ESCORT II PRO	
	DC HANDPIECE SDE-H35SP1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
ESCORT III	CONTROL UNIT ESCORT III	
	DC HANDPIECE SDE-H37L1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
MARATHON4	CONTROL UNIT MARATHON4	
	DC HANDPIECE SDE-H35SP1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	



## LABORATORY DC

MODEL	PART NAME	PICTURE
MARATHON4 MINI	CONTROL UNIT MARATHON4 MINI	
	DC HANDPIECE SDE-H37L1	
	HANDPIECE STAND	
MARATHON3 MIGHTY	CONTROL UNIT MARATHON3 MIGHTY	
	DC HANDPIECE SDE-H37L1	
	HANDPIECE HOLDER	
	HANDPIECE STAND	
K38	CONTROL UNIT K38	
	HANDPIECE SDE-MH20	
	CHARGER	
	HANDPIECE STAND	

## OPTIONAL

MODEL	PART NAME	PICTURE
FOOT PEDAL	ON / OFF FOOT SWITCH SFP-27	
	VARIABLE SPEED FOOT PEDAL FS-60 / FS-60N	
	VARIABLE SPEED FOOT PEDAL FS-80N	
K48 PRO K38 PRO K38 MINI CRO	CONTROL UNIT STAND	
	HANDPIECE HOLDER	
K38	CLIP	

## EQUIPMENTS

MODEL	PART NAME	PICTURE
SDE-LS200	SPINDLE CHUCK	
SDE-SM110	SPANNER	

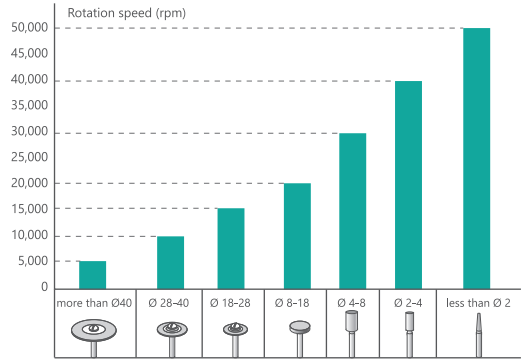
# USER GUIDE (For safety & efficiency)

## Precaution

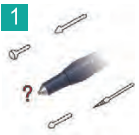
1. Do not operate a micromotor with a bent, asymmetrical or damaged bur. Must operate it with a standard bur.
2. Do not start the motor at a high rotation speed. Start from the low speed and change it slowly to the desired speed.
3. For your safety, do not exceed the rotation speed according to the type of bur.
4. Do not try to open/close the chuck handle during operation.
5. Clean the motor after use.

## Allowable rotation speed

Do not exceed the allowable rotation speed according to the type of bur for your safety. Allowable rotation speed according to the type of bur may be slightly different from the chart depends on the material of bur.



※ This chart for allowable rotation speed can be slight different depending on bur materials or types



Check the product if everything is set before use.



Do not drop the product. Dropping the motor may damage ball bearing or weaken durability of the motor



Check the product if there is any flaw, crack, or faulty adhesion before use.



In order to take the bur out of the handpiece, release the chuck handle (shift to the left side, R to open the collect chuck. Make sure to close the collect chuck(shift to the right side, S) before use )



Do not exceed the maximum speed.



Wear a safety goggles/shield and mask to protect your face from cutting and grinding works



Check if the product is overheated when you use it at the maximum speed for long. When it gets overheated, you must stop the product and cool it down before use.



If the product works abnormally, stop the product immediately and contact your dealer for repair.



For safety, make sure to read and understand the operation manual carefully before use.



Do not customize the product.



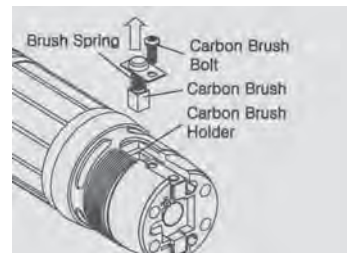
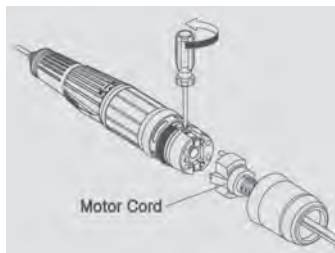
Avoid exposing the product to high temperature and humidity. Daily inspection & maintenance are required.



Make sure to turn off the product after use. Leaving the product turned on is very dangerous and may cause overheating.

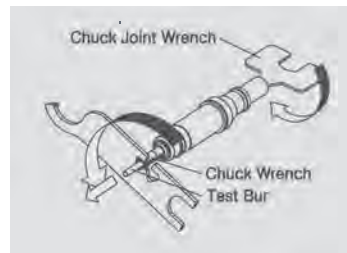
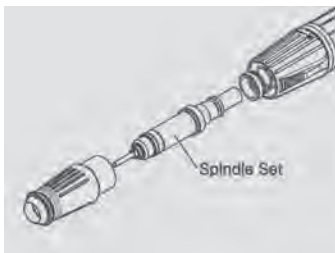
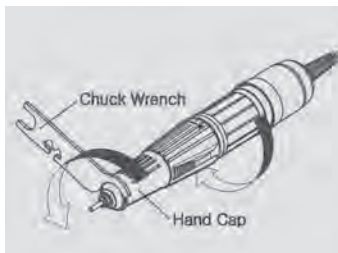
## Replacing Carbon Brushes

1. Turn off the power of the Control Unit and remove the Carbon Housing Cover and the Motor Cord from the rear of the handpiece.
2. Take off Carbon Brush Bolts using a screwdriver(+) and remove worn-out Carbon Brushes.
3. While replacing by new ones, the Brush Spring needs to get jammed in the Carbon Brush Holder.
4. Assemble the handpiece.
5. Run the handpiece at 20,000rpm for 30minutes under no load condition before use.



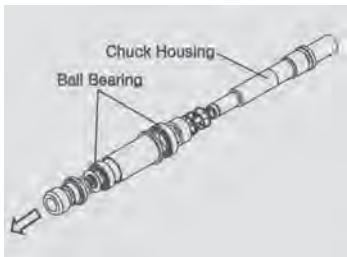
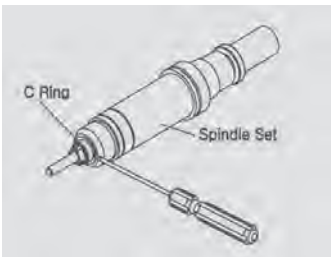
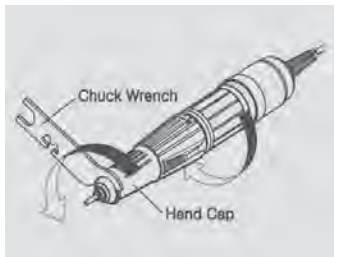
## Replacing the Collect Chuck

1. Turn the Hand Cap counterclockwise using the Chuck Wrench until the Hand Cap and the Spindle Set get disassembled.
  2. Keep turning it counterclockwise until the collect chuck gets disassembled.
  3. After replacing a new Collect Chuck, assemble the handpiece.
  4. Run the handpiece under no load condition to check if it works properly before use.
- ※ Collect chuck is supposed to be replaced every 2-3 years, depends on working hours or loading conditions



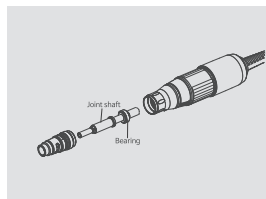
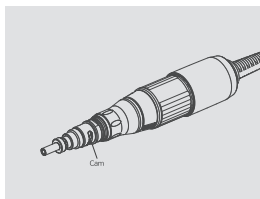
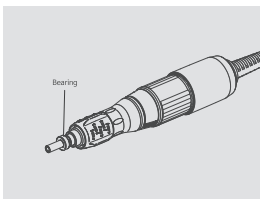
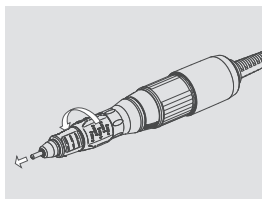
## Replacing Ball Bearings

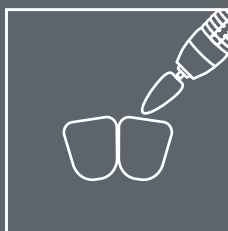
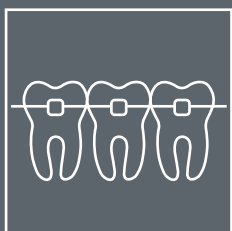
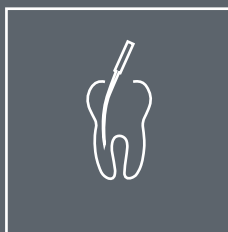
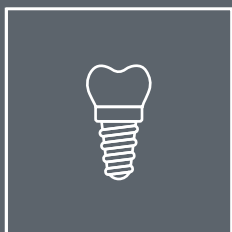
1. Disassemble the Hand Cap and the Spindle Set.
2. Remove the C Ring from the front of the Chuck Housing to disassemble Ball bearings and other parts.
3. Assemble other parts, replace it with new Ball Bearings, and install the C Ring.
4. Connect the Hand Cap and the Spindle Set.
5. Run the handpiece under no load condition to check if it works properly before use.



## Replacing Ball Bearings(SH300S)

1. After removing a bur, please open a handle of the handpiece. After that start to disassemble.
2. Disassembling nose-cone and bearing housing by wrench. After that pulling the bearing out.
3. Disassembling a handle and cam and related parts. After that pulling a joint shaft out.
4. Disassembling connector and related parts of joint shaft. After that pulling the bearing out.
5. Replacing bearing by inverse order of disassembly. It will require to apply removable glue on nose cone, bearing housing.
6. Run the handpiece under no load state and confirm proper replacement, and then use.





## **SAEYANG CO., LTD.**

(Galsan-dong) 348, seongseo-ro,  
Dalseo-gu, Daegu, 42697, Korea

**TEL** +82-53-582-9001

**FAX** +82-53-581-9003

marathon@saeyang.com

saeyang.com

