

HIGH PERFORMANCE PRECISION POWER TOOL SYSTEMS

Minimo® **ONE** **S**ERIES **Ver. 2**

Ideal Handpiece...

Evolutional Series



 MINITOR CO., LTD. JAPAN

Minimo[®]

Precision electrical driven micro grinder

ONE S^{ERIES} Ver. 2

Ideal Handpiece...Evolutional Series

Minitor launches the evolved Minimo with a motor identifying function. The new Minimo power pack enables separate control on each type of handpieces with a high-end microcomputer.

It derives the performance of the handpieces at the maximum which achieves tough torque in all rotation-speed range.

In addition to rotation speed display and LED load meter, external control function becomes standard on this series, which enables the handpieces to be installed in automatic machines.

Minitor puts all of the requirements professionals seek into this precision electrical driven hand grinder.

That is what the **ONE
S^{ERIES}
Ver. 2** is.



HANDPIECE

The Ver.2 handpieces compatible with the motor identification function generate the highest power ever. Hand switch is located in the middle of the handpiece and enables ON/OFF operation without shifting it to another hand. This handpiece can be used in various situations and satisfies any processing needs.

HIGH PERFORMANCE PRECISION POWER TOOL SYSTEMS



POWER PACK

The high-end power pack mounts new functions which maximize the performance of Minitor handpieces. This power pack identifies the type of the connected handpiece, displays rotation speed, and controls optimum torque. It is also compatible with the earlier handpieces which do not have the motor identification chip, and gives you more powerful feeling with digital display of its output rate (%).

New features

- Handpiece identification function
- Error code display
- New feedback control
- High-end microcomputer control
- Foot switch holding function
- Digital display (Rotation speed or Output Level)
- LED load meter
- New braking system
- External control function is equipped as standard.

The display on the power pack above is only for shooting. It is different from the actual display.

POWER PACK

POWER PACK

C2012 (100V) **C2112** (115V) / **C2212** (230V)



| Model | C2012 | C2112 | C2212 |
|----------------|---------------------|---------------------|---------------------|
| Input Voltage | AC100V±5% (50/60Hz) | AC115V±5% (50/60Hz) | AC230V±5% (50/60Hz) |
| Rated Input | 60VA | | |
| Output Voltage | D.C. 1~30V | | |
| Weight | 2.5kg (About) | | |

This Ver.2 power pack can be used with all the Minitor 30V handpieces.

Accessories

- Power Cable 1 (CA10 or CA11 or CA12)
- Rubber Cradle 1 (RM11)
- Fuse 2 (C2012, C2112 : PFU-2.0A / C2212: PFU-1.0A)

ACCESSORIES

Rubber Cradle

RM11

Handpiece rubber stand
Size : 72 (W) × 72 (D) × 30 (H) mm



Power Cable

(Cable length: 2m)

CA10

Input Voltage: 100V

CA11

Input Voltage: 115V

CA12

Input Voltage: 230V



Plug for remote control

RPG-8P

DIN 8 PIN Plug

This plug is used for controlling a handpiece via external input/output signals.



Fuse

PFU-2.0A

C2012 / C2112 (100V / 115V)

PFU-1.0A



Foot switch (Cable length: 1.5m)



FS201

[ON / OFF type]

Switch is ON while stepping on.

FS211

[2 way switching type]

A mode ... The first step turns ON and the next stop turns OFF.
B mode ... Switch is ON while stepping on.

VC301

[Variable type]

You can control rotation speed by tread adjustment.
Controllable range: 0 (stop) ~ MAX

Handpiece identification function

When a Ver.2 handpiece is connected, the power pack identifies its motor type, displays its rotational speed, and control optimum torque.

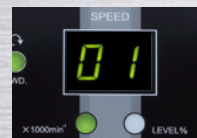
Digital display (rotation speed or output rate)

Identifying a connected handpiece type, the power pack automatically selects its display type (rotation speed (x1000min) or output rate (Rate %)).

● Ver.2 Handpiece
(except Recipron and Mini Belt Sander)



X1000min lump is turned green



Approx. 1,000 r.p.m



Approx. 30,000 r.p.m

● Ver.2 Recipron, Mini Belt Sander, and handpieces except Ver.2



LEVEL lump becomes orange.



50% (Approx. 15V)



100% (Approx. 30V)

● Rotation speed display of KM212L (Max.8,000rpm) and KM112G (Max.6,600rpm)



The display shows a decimal point for KM212L and KM112G.

Example 5.2

Rotation speed, approx. 5,200 rpm, is shown, while with Rubron, amplitude, approx. 5,200 times / every minute is displayed.

● Rotation speed display of angle head



With angle heads (H211, H221, H231) which have a bevel gear inside, the actual rotation speed is approx. 5% down from the displayed number.

Example 10

The actual rotation speed is approx. 9,500 r.p.m.

Error code display function

Errors of a power pack or handpiece are displayed with the following signs.

- In an error case, 「E.-」 is first displayed, and then its simple error-cause sign is shown.
「oL...Overload」 「Po...Power pack」 「HP...Handpiece」 「Fo...Foot switch」 「oH...Overheat」 「E.-」 and the error cause sign are displayed alternately.



● The error code is displayed by continuously pressing the rotation switch while the signs above are shown.



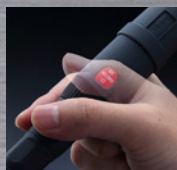
Error code display example
[Error code 13]
A handpiece is unplugged while it is running.
Abnormal signals from a handpiece are detected, etc.

HANDPIECE



Hand switch

You can switch ON/OFF with the single hand. It should be convenient if you press the ON/OFF switch frequently or use a handpiece away from the power pack.



Handpiece Identification Function

Suitable for Handpiece Identification Function. You can use each handpieces with optimum control.

Extreme accuracy

Our products achieve the world's leading accuracy, and the most suitable for precision processing. Especially, with small diameter diamond plated points, the small amount of runout enables you to process more smoothly. Also, the small runout value makes the tools last longer as chipping due to high runout value infrequently occurs.

Separate type

MINIMO Handpiece can be separated between a head and a motor. You can select your favorite head and motor for your job.



Quick and Easy Exchange of Tools

Tools are easily exchanged by turning the collet release ring without any special tools.



Collet chuck type

We have many types of collet chucks to fit a wide variety of shaft diameters.

$\phi 1.0 / \phi 1.2 / \phi 1.4 / \phi 1.6 / \phi 1.8 / \phi 2.0 / \phi 2.34 / \phi 3.0 / \phi 3.175 / \phi 4.0 / \phi 5.0 / \phi 6.0 / \phi 6.35$



Handpiece Upgrade

The handpiece of MINIMO ONE SERIES can be upgraded to Ver.2. (charged)

If you need to upgrade your handpiece, please contact and ask us or our distributors.

- ※After upgrading, the handpiece can only be used with Ver.2 power packs.
- ※This upgrade service is only for the motors. (Your ONE Series heads can still be used with the upgraded motor.)
- ※The upgrade costs include exchanging parts and overhaul.
- ※Upgrading of power packs is not available.

Standard Rotary

Standard type that can be used for a wide range of work including deburring and mirror polishing. Selection from among 9 types differing in the number of revolution and torque.

V112H

Speed Range:
2,000~50,000 r.p.m
Maximum Torque: 2.3 cN·m



V212H

Speed Range:
2,000~40,000 r.p.m
Maximum Torque: 2.7 cN·m



M112H

Speed Range:
1,000~35,000 r.p.m
Maximum Torque: 3.4 cN·m



M212H

Speed Range:
1,000~30,000 r.p.m
Maximum Torque: 4.2 cN·m



V212

Speed Range:
1,000~25,000 r.p.m
Maximum Torque: 3.9 cN·m



Slender Rotary

Features ease of precision work by means of the slim tip that fits your fingertip.

V112HS

Speed Range:
2,000~50,000 r.p.m
Maximum Torque: 2.3 cN·m



V212HS

Speed Range:
2,000~40,000 r.p.m
Maximum Torque: 2.7 cN·m



ANGLOIN

Angle grinder with angles of 90 and 120 degrees that are suitable for polishing flat, curved and end surfaces.

M212RA

Speed Range:
1,000~14,200 r.p.m
Maximum Torque: 5.9 cN·m



M212RAD

Speed Range:
1,000~14,200 r.p.m
Maximum Torque: 5.9 cN·m



M212A

Speed Range:
1,000~14,200 r.p.m
Maximum Torque: 5.9 cN·m



Standard collets: $\phi 2.34$ (Accessory: $\phi 3.0$ /carbon brush 1 set)

M112

Speed Range:
1,000~20,000r.p.m
Maximum Torque: 4.5cN·m



M212

Speed Range:
1,000~15,000r.p.m
Maximum Torque: 5.9cN·m



M212L

Speed Range:
800~8,000r.p.m
Maximum Torque: 6.9cN·m



M112G

Speed Range:
660~6,600r.p.m
Maximum Torque: 9.8cN·m



Standard collets: $\phi 2.34$ (Accessory: $\phi 3.0$ /carbon brush 1 set)

M112HS

Speed Range:
1,000~35,000r.p.m
Maximum Torque: 3.4cN·m



M112S

Speed Range:
1,000~20,000r.p.m
Maximum Torque: 4.5cN·m



Standard collets: $\phi 3.0$ (Accessory: $\phi 2.34$ /carbon brush 1 set)

M112GRA

Speed Range:
620~6,200r.p.m
Maximum Torque: 9.8cN·m



M112GRAD

Speed Range:
620~6,200r.p.m
Maximum Torque: 9.8cN·m



M112GA

Speed Range:
630~6,300r.p.m
Maximum Torque: 9.8cN·m



Heavy Duty Rotary

The reinforced Head Housing allows you to handle large load work easier.
Accommodates tools with shaft size up to 6.35mm diameter

Standard collets: $\phi 6.0$ (Accessory: $\phi 3.0$ /carbon brush 1 set)

M212HD

Speed Range:
1,000~30,000r.p.m
Maximum Torque: 4.2cN·m



M212D

Speed Range:
1,000~15,000r.p.m
Maximum Torque: 5.9cN·m



RUBRON

Lateral swing motion that is effective in polishing grooves
and narrow portions.



M212LRV

Frequency: 800~8,000 times/min
Maximum Torque: 6.9cN·m

RECIPRON

The handpiece generates a reciprocating stroke,
ideal for filing, lapping, stoning, polishing
and scraping operations. Comfortable hand
fitting pistol grip with built-in ON/OFF
SWITCH provides greater processing
accuracy. Smooth operation, vibration
free. Eliminates operation fatigue.

RE112

Stroke: 0~8mm
Speed Range: 260~3,500 times/min

RE212

Stroke: 0~2mm
Speed Range: 460~7,000 times/min



Mini Belt Sander

A handy type belt sander, equipped with
ON/OFF SWITCH, that exerts its great
effect in deburring, grinding and
polishing.

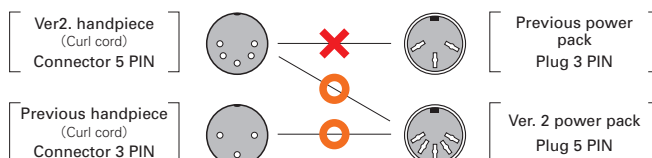
BS312

No-load Belt Speed:
49.2~700m/min



Notice

You can not use the Ver.2 handpiece with an earlier models of power packs.
(Connector 5 PIN) You need a Ver.2 power pack.



Combination Set



CM40012

Contents

| | | |
|---------|----------------------|---|
| C2012 | Power Pack (100V±5%) | 1 |
| M212H | Standard Rotary | 1 |
| M212RA | ANGRON | 1 |
| M212LRV | RUBRON | 1 |
| RE112 | RECIPRON | 1 |
| BS312 | Mini Belt Sander | 1 |
| RM11 | Rubber Cradle | 2 |
| TX01 | Tool Case | 1 |
| BX022 | Carrying Case | 1 |

Two more models for international

CM40112 C2112 Power Pack (115V±5%)

CM40212 C2212 Power Pack (230V±5%)

Portable Set

CM5012



Contents

| | | |
|--------|----------------------|---|
| C2012 | Power Pack (100V±5%) | 1 |
| M112H | Standard Rotary | 1 |
| M212RA | ANGRON | 1 |
| RM11 | Rubber Cradle | 2 |
| BX01 | Carrying Case | 1 |

Two more models for international

CM5112 C2112 Power Pack (115V±5%)

CM5212 C2212 Power Pack (230V±5%)

CM6012

Contents

| | | |
|-------|----------------------|---|
| C2012 | Power Pack (100V±5%) | 1 |
| M212H | Standard Rotary | 1 |
| BS312 | Mini Belt Sander | 1 |
| RM11 | Rubber Cradle | 2 |
| BX01 | Carrying Case | 1 |

Two more models for international

CM6112 C2112 Power Pack (115V±5%)

CM6212 C2212 Power Pack (230V±5%)

CM10012

Contents

| | | |
|---------|----------------------|---|
| C2012 | Power Pack (100V±5%) | 1 |
| M212H | Standard Rotary | 1 |
| M212LRV | RUBRON | 1 |
| RM11 | Rubber Cradle | 2 |
| BX01 | Carrying Case | 1 |

Two more models for international

CM10112 C2112 Power Pack (115V±5%)

CM10212 C2212 Power Pack (230V±5%)

CM9012

Contents

| | | |
|-------|----------------------|---|
| C2012 | Power Pack (100V±5%) | 1 |
| M212H | Standard Rotary | 1 |
| RE112 | RECIPRON | 1 |
| RM11 | Rubber Cradle | 2 |
| BX01 | Carrying Case | 1 |

Two more models for international

CM9112 C2112 Power Pack (115V±5%)

CM9212 C2212 Power Pack (230V±5%)

CM11012

Contents

| | | |
|-------|--------------------------|---|
| C2012 | Power Pack (100V±5%) | 1 |
| M212 | Standard Rotary | 1 |
| H211 | ANGRON Head | 1 |
| H031 | Heavy Duty Head | 1 |
| MG03 | 1/4 Reduction Gear Joint | 1 |
| RM11 | Rubber Cradle | 2 |
| BX01 | Carrying Case | 1 |

Two more models for international

CM11112 C2112 Power Pack (115V±5%)

CM11212 C2212 Power Pack (230V±5%)

Motor & head compatibility table

| Model | Usable motor |
|-------|---|
| H011 | KV112H/KV212H/KM112H/KM212H/KV212/KM112/KM212/KM212L/KM112G |
| H021 | KV112H/KV212H/KM112H/KM212H/KV212/KM112/KM212/KM212L/KM112G |
| H031 | KM212H/KM212/KM212L/KM112G |
| H041 | KV212H/KM112H/KM212H/KV212/KM212/KM112/KM212L/KM112G |
| H051 | KV112H/KV212H/KM112H |
| H211 | KM212/KM212L/KM112G |
| H221 | KM212/KM212L/KM112G |
| H231 | KM212/KM212L/KM112G |
| H311 | KM212L/KM112G |

Collet chuck compatibility table

| Model | Usable collet chuck |
|-------|--|
| H011 | KP-050 (φ1.0) / KP-051 (φ1.2) |
| H021 | KP-007 (φ1.4) / KP-005 (φ1.6) |
| H041 | KP-052 (φ1.8) / KP-031 (φ2.0) |
| H221 | KP-036 (φ2.34) / KP-032 (φ3.0) |
| H231 | KP-033 (φ3.175) |
| H031 | KP-061 (φ2.34) / KP-062 (φ3.0) KP-063 (φ3.175) / KP-066 (φ4.0) KP-067 (φ5.0) / KP-060 (φ6.0) KP-064 (φ6.35) |
| H211 | KP-021 (φ2.34) / KP-022 (φ3.0) KP-025 (φ3.175) |

※Select a suitable collect chuck with your head.

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