

#### 4. THE COLLET CHUCK OPTIONS

##### H231 APPLICABLE COLLET CHUCKS

SHANK DIA.	φ 1.0	φ 1.2	φ 1.4	φ 1.6	φ 1.8	φ 2.0	φ 2.34	φ 3.0	φ 3.175
CODE NO.	KP-050	KP-051	KP-007	KP-005	KP-052	KP-031	KP-036	KP-032	KP-033

#### 5. MAINTENANCE

- THE CHIPS AND DUST MAY COLLECT IN THE COLLET CHUCK. CLEAN IT BY TAKING OUT THE COLLET CHUCK FROM THE HANDPIECE.
- WHEN THE HANDPIECE GETS DIRT, WIPE OUT WITH THE CLOTH MOISTENED WITH LUKE WARM WATER OR DETERGENT.

#### 6. IMPORTANT NOTICE

- DO NOT TURN THE COLLET RELEASE KNOB WHEN THE MOTOR IS RUNNING.
- NO LUBRICANT IS NEEDED.
- KEEP WATER OFF THE HANDPIECE AND MOTOR.

#### 7. TROUBLE SHOOTING

##### ☆ THE MOTOR DOES NOT OPERATE.

- CHECK IF THE AC CABLE IS CERTAINLY PLUGGED IN.
- CHECK IF THE FUSE OF THE POWER PACK IS BURNED OUT.
- CHECK IF THE CURLED CORD IS CERTAINLY CONNECTED.
- CHECK IF THE CARBON BRUSH OF THE MOTOR IS WORN OUT.
- CHECK IF THE COLLET RELEASE LEVER IS IN "SET" POSITION.

##### ☆ THE REMOTE SWITCH DOES NOT OPERATE.

- CHECK IF THE FOOT SWITCH IS CONNECTED TO THE POWER PACK.
- CHECK IF THE POWER PACK IS EITHER MINIMO 1 SERIES OR 7 SERIES.

# INSTRUCTION MANUAL

H 2 3 1 A N G L O N 1 2 0 H E A D

READ FOLLOWING INSTRUCTIONS THOROUGHLY BEFORE ATTEMPTING TO USE.  
KEEP THIS MANUAL ALWAYS IN THE VICINITY OF USE FOR YOUR REFERENCE.  
BEFORE USING THE UNIT, CHECK IF THERE ARE ANY DAMAGES ON THE UNIT DUE TO TRANSPORT CONDITIONS. IF ANY DAMAGES ARE FOUND, CONTACT OUR MINIMO DEALER.

## SAFETY PRECAUTIONS

**⚠ WARNING** (INDICATES THAT INCORRECT OPERATION PRESENTS SIGNIFICANT DANGER OF ACCIDENT RESULTING IN DEATH OR SERIOUS INJURY TO THE USER.)

- DO NOT START TO RUN THE HANDPIECE WHILE ITS COLLECT CHUCK OPENS.  
FAILURE TO DO SO COULD CAUSE THE MOTOR TO BE OVERHEATED, RESULTING IN FIRE OR FAILURE.
- MAKE SURE WHETHER OR NOT THE HANDPIECE RUNS AFTER SWITCHING ON.  
IF THE HANDPIECE DOES NOT RUN AFTER SWITCHING ON, STOP USING IT.  
FAILURE TO DO SO COULD CAUSE THE MOTOR TO BE OVERHEATED, RESULTING IN FIRE OR FAILURE.
- WEAR AN APPROPRIATE EYE PROTECTION AND A DUST PROTECTING MASK WHEN USING THE HANDPIECE.
- TURN OFF THE MAIN SWITCH IMMEDIATELY AND UNPLUG THE AC CABLE WHEN ONE OR MORE OF THE FOLLOWINGS ARE RECOGNIZED. SMOKING;NASTY SMELL;STRANGE NOISE.
- DO NOT DISASSEMBLE AND REMODEL THE UNIT. ANY ACCIDENT OR MALFUNCTION CAUSED BY DISASSEMBLING AND/OR REMODELING WILL NOT BE COVERED BY OUR RESPONSIBILITY.
- NEVER PUSH THE SENTAN TOOL HARD ONTO THE WORKPIECE. EXCESSIVE FORCE ON THE TOOL WILL CAUSE DAMAGE TO THE TOOL AND ALSO REDUCE THE POWER OF THE MOTOR.
- WHEN TURNING ON THE POWER SWITCH, HOLD THE HANDPIECE FIRMLY.
- DO NOT TOUCH ANY REVOLVING BODIES SUCH AS SENTAN TOOL AND COLLET CHUCK.

**⚠ CAUTION** (INDICATES THAT INCORRECT OPERATION PRESENTS POSSIBILITY OF INJURY TO THE USER OR DAMAGE TO THE UNIT.)

- DO NOT USE THE UNIT IN EXCESSIVELY HUMID PLACE. THE CONDENSATION OF VAPOR ON AND/OR INSIDE OF THE UNIT CAUSES A MALFUNCTION OF THE UNIT, A SHORT CIRCUIT, FIRE OR AN ELECTRIC SHOCK
- DO NOT USE THE UNIT WHERE CORROSIVE GASES AND CHEMICALS POSSIBLY EXIST.
- THE AMBIENT TEMPARATURE SHOULD BE IN THE RANGE OF 0° ~ 40° C
- KEEP THE UNIT AWAY FROM CHILDREN.
- AVOID ANY HEAVY IMPACT TO THE UNIT. DO NOT DROP!
- KEEP ALL LIQUIDS SUCH AS OIL, WATER, AND ETC. OFF THE UNIT. THIS MAY CAUSE A MALFUNCTION OF THE UNIT, CATCH FIRE AND/OR GET AN ELECTRIC SHOCK.
- READ THE INSTRUCTION MANUAL OF THE MOTOR AND THE POWER PACK AS WELL.

## MINITOR CO., LTD. JAPAN

21-1 Ryogoku 3-chome, Sumida-ku, Tokyo 130-0026 JAPAN  
Phone +81 3 (6630) 5800 FAX +81 3 (6630) 5795

## 1. SPECIFICATION • PACKING LIST

(The accessory tools are subject to change without any notice.)

◇ RATED SPEED : 15,000min<sup>-1</sup>

◇ RATED WHEEL DIAMETER : φ 30

◇ APPLICABLE MOTORS : KM212, KM212L, KM112G

◇ COLLETTCHUCK φ 2.34 (KP-036) . . . . . 1pc.  
(THE COLLETTCHUCK φ 3.0 (KP-032) IS MOUNTED.)

◇ V- SPANNER (KP-609A) . . . . . 1pc.

◇ JOINT SHAFT HOLD PLATE (KP-M01) . . . . . 1pc.

SOFT RUBBER PAD φ 20 (SA2002) . . . 1PC

SOFT RUBBER PAD φ 30 (SA2003) . . . 1PC

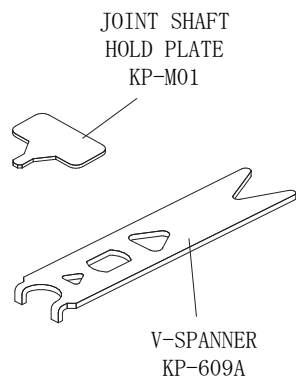
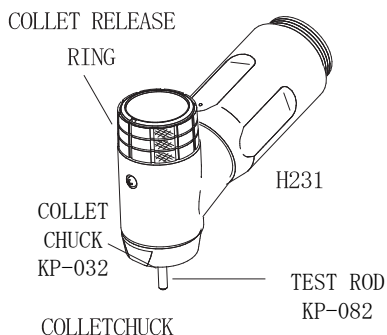
SAND DISK #240 φ 21 (SA2135) . . . 5PC

SAND DISK #120 φ 31 (SA2153) . . . 5PC

FELT DISK φ 21 (SA3102) . . . . . 2PC

FELT DISK φ 31 (SA3103) . . . . . 2PC

## 2. NAMES OF PARTS



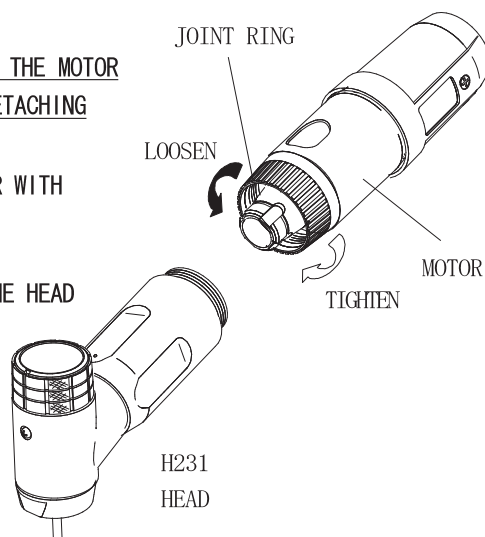
## 3. INSTALLATION

### 3-1. ATTACHING TO THE MOTOR

**!** NOTE: FOR YOUR SAFETY, DO NOT CONNECT THE MOTOR TO THE POWER PACK WHEN ATTACHING OR DETACHING THE HEAD TO THE MOTOR.

- 1) INSERT THE H231 HEAD ONTO THE MOTOR WITH PLACING THE CLAW OF THE HEAD IN A GROOVE OF THE MOTOR.
- 2) TIGHTEN THE JOINT RING TO SECURE THE HEAD IN POSITION.

\* 4 GROOVES ARE PROVIDED ON THE MOTOR SO THAT YOU CAN CHOOSE A SUITABLE REMOTE SWITCH POSITION IN ACCORDANCE WITH YOUR OPERATION CONDITIONS.



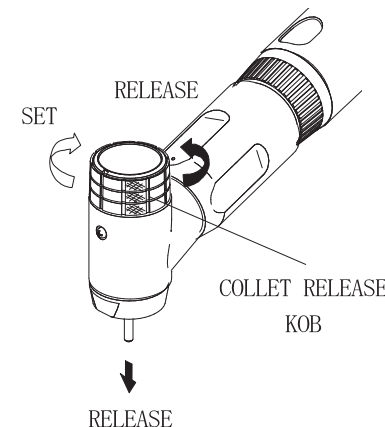
### 3-2. CHANGING THE SENTAN TOOLS

**!** ALWAYS KEEPS THE MAIN SWITCH OFF ON THE POWER PACK WHEN CHANDING THE TOOLS.

- 1) HOLD THE HANDPIECE AND TURM THE COLLET RELEASE KNOB UNTILL IT LOCKS IN THE "R" POSITION.
- 2) PULL OUT THE TEST ROD OR SENTAN TOOL AND INSERT THE SENTAN TOOL SUITABLE TO THE WORK.
- 3) TURN THE KNOB TILL IT LOCKS IN THE "S" OSITION.

\*THE H231 IS SHIPPED WITH A TEST ROD TO PROTECT THE COLLET CHUCK.  
CHANGE IT TO THE SENTAN TOOL SUITABLE TO THE WORK.

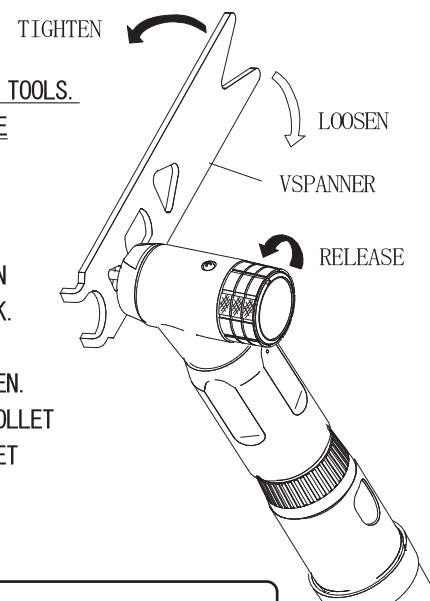
◆THE KNOB WILL BE TIGHT IF YOU TURN IT TO "S" POSITION WITHOUT ANY TOOLS OR TEST ROD IN THE COLLET CHUCK.



### 3-3. CHANGING THE COLLET CHUCK

**!** ALWAYS KEEP THE POWER OFF WHEN CHANGING THE TOOLS.  
NEVER TURN THE COLLET RELEASE LEVER WHEN THE MOTOR ROTATING.

- 1) PULL OUT THE SENTAN TOOL AS MENTIONED ABOVE.
- 2) KEEP THE COLLET RELEASE KNOB IN "R" POSITION AND INSERT THE TEST ROD INTO THE COLLET CHUCK.
- 3) USE THE SMALL TRIANGLE HOLE ON THE V-SPANNER TO HOOK THE COLLET CHUCK AND TURN IT TO LOOSEN.
- 4) PULL OUT THE COLLET CHUCK AND SCREW IN THE COLLET CHUCK SUITABLE TO THE TEST ROD INTO THE COLLET AND USE THE V-SPANNER TO TIGHTEN IT.



**!** CAUTION

WHEN TIGHTENING THE COLLET CHUCK, ALWAYS GET TEST ROD INSERTED INTO THE COLLET CHUCK. TIGHTENING THE COLLET CHUCK WITHOUT TEST ROD WILL DAMAGE THE COLLET CHUCK.