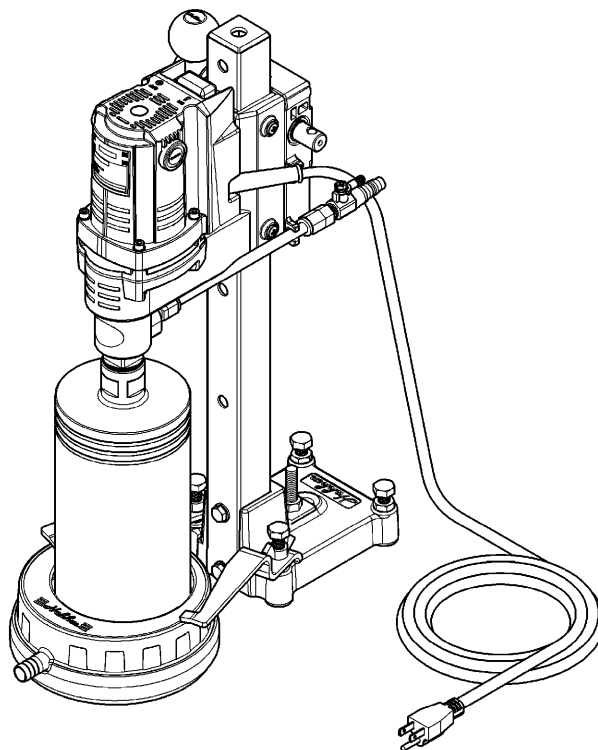




DIAMOND CORE DRILL

SPJ - 122Ct



INSTRUCTION MANUAL





- © Thank you for purchasing our products.
- © Before using, please read Instruction manual carefully, and use the machine safety by following the instructions.
- © After reading, please keep it where anyone can utilize.

CONSEC CORPORATION

MEANING OF SIGNAL WARDS WARNING , CAUTION AND POINT

The instruction manual includes three signal words ;  WARNING,  CAUTION and POINT which mean as follows.

 WARNING : It is assumed that if the user use the machine wrongly, it would be the risks that the user could be died or injured.

 CAUTION : It is assumed that if the user use the machine wrongly, it would be the risks that the user could remain the disabled or damage for the materials.

POINT : Important notices for the installation of machine, instructions, maintenance and servicing.

"CAUTION" might cause the serious accidents depending on the situations. Since we mention the important notices, please strictly follow the instruction in order to avoid the accidents.

"Diamond core drill" is described as "Core drill" in context.

"Diamond core bit" is described as "Core bit" in context.

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1 . WARNING AND CAUTION

- ⊙ To avoid the accidents such as fire, electric shock and personally injury, make sure to follow all instruction "Safety notice for electric tools" and "Notes for usage of core drill".
- ⊙ Before using, please read "WARNING & CAUTION", and follow the instructions and use safely.
- ⊙ Save the manual for future reference.

【1】 Safety Notice for Electric Tools

WARNING

1. Do not use for other than specified purposes.
2. No one allow to get close to the working area except the workers.
 - ⊙ No one allow to contact to the electric tools and cord except the workers.
3. Avoid dangerous environments.
 - ⊙ Do not use the electric tools in the rain, moisten and wet place.
 - ⊙ Keep working area lightly.
 - ⊙ Do not use the machine where there are flammable gas or flammable liquid.
 - ⊙ Cluttered work areas invite accidents.
4. Wear appropriate work clothes.
 - ⊙ Do not wear the loose clothing or jewelries in order to avoid to being caught in the rotating parts.
 - ⊙ Wear rubber gloves and slip stopper footwear.
 - ⊙ Wear cap or hair cover in case that you have long hair.
5. Wear safety glasses.
 - ⊙ Wear safety glasses during working. If there are many dust, please wear the dust mask.
6. Do not work with improperly posture.
 - ⊙ Fix the footing and maintain the balance at all times.
7. Work carefully without staying alert.
 - ⊙ When using the electric tools, please operate carefully by considering operation methods, how to use and surrounding area.
 - ⊙ Do not come close to the rotating parts. It will be dangerous to being caught in or injured.
 - ⊙ Be careful for not to tuck the hands and the foots into the moving parts or connecting parts.
 - ⊙ Do not use machine when you are tired or distracted.

⚠ WARNING

8. Be careful for receiving electric shocks.

- ⊙ During operation, be careful for not to contact your body to the objects which are grounded such as microwave and refrigerator and so on.
- ⊙ Use power source equipped with earth leakage breaker.

9. Do not treat the cords and the hoses roughly.

- ⊙ Do not carry the electric tool by holding the cord.
- ⊙ Do not remove the machines by pulling the cord from the power receptacle.
- ⊙ Do not get close the cord near the heat, oil and sharp objects.

10. Use CONSEC recommended accessories and options.

- ⊙ In case that you use the accessories and the options which are not listed in the manual or CONSEC's catalogue, it might cause the accidents or personal injury. Please do not use the accessories and the options which CONSEC does not recommend.

11. Inspect for the damaged parts.

- ⊙ Before using, please inspect the protection cover and other parts damages carefully, and make sure that whether the machine operate properly and the designed functions work or not.
- ⊙ Check for alignment, binding of moving parts, parts damages, mounting, and any other conditions that may affect operation.
- ⊙ Regarding the exchange or the repair for the damaged parts, please follow the instruction.
- ⊙ In case that there are no instructions in the manual, please contact to the distributors or CONSEC.
- ⊙ Do not use the electric tool if the switch does not turn on or off.
- ⊙ If the switch is broken, please contact to the distributors or CONSEC for repairing.

12. Turn the electric tool off and remove the plug from the power supply as following cases.

- ⊙ In case that the machine is not used or repaired.
- ⊙ When exchanging the options such as blade or core bits.
- ⊙ In case that you can anticipate other hazardous situations.

13. Remove the key or the wrench for sure.

- ⊙ Before turning on the switch, please make sure that the key and the wrench which are used for the inspection and adjusting are removed.

14. The electric machines are maintained carefully.

- ⊙ Regarding exchanging the options, please follow the instruction.
- ⊙ Keep the grip dry and clean, and avoid the oil or grease.
- ⊙ Inspect the cord regularly. In case that there are damages, please contact to the distributors or CONSEC.
- ⊙ In case that you use the extended cord, inspect it regularly. If there are damages, please replace it.

⚠ WARNING

15. In case that you do not use the tools, please store it appropriately.

- ⊙ Store the place where keep children away, locking is available and dried place.

16. Avoid accidental starting.

- ⊙ Do not carry the tools with connecting to the power supply.
- ⊙ Before plugging the plug into the power supply, please make sure that the switch is off.

17. Use an appropriate extension cord for outdoors.

- ⊙ In case that you use it in outdoors, please use the extension cord of cab tire cord or cab tire cable.

18. Use the appropriate tools according to your work.

- ⊙ Do not use the small electric tools and accessories for the work which is done by using the large electric tools.

19. Contact CONSEC's sales (service) reprehensive for repairing of the electric tools.

- ⊙ The machine is manufactured in complaisance with applicable safety standards. Do not remodel machine and tool.
- ⊙ In case that the unauthorized person repairs it, it might cause the machine failure, accident or personal injury.
- ⊙ Contact to CONSEC's sales (service) representative for repairing.

【2】 Notes for usage of Core Drill

⚠ WARNING

1. Check for the embedded conduit etc.

- ⊙ In case that you contact to the electric wire or conduit in that there are electric current, you may receive the electric shocks.
- ⊙ Before drilling the wall or the floor, check for the embedded conduit etc adequately.

2. Be sure to wear the rubber gloves and the rubber shoes.

- ⊙ Since this machine uses the water, be sure to wear the rubber gloves and the rubber shoes.

3. Do not use for the ceiling plane.

- ⊙ Since the core drill uses the water, it is extremely dangerous to drill for the ceiling plane due to flowing the water into the inside of motor.

4. Regarding the operation of high-place work, please follow the applicable laws and regulations.

- ⊙ Secure the safe scaffold, and do not operate the machine 1.5m higher than the scaffold.
- ⊙ In case that you work at high place, secure the enough scaffold space and secured scaffold.
- ⊙ In case that you work at high place, keep any person away under your working area.

⚠ WARNING

5. **Be careful for the safety of the penetration side.**
 - ⊙ When drilling for the penetration, cutting core bit might fall out or the cutting water might be leaked. Therefore, please do the safeguard and the drain water handling in order not to avoid to hit the human beings or objects. Then, please start operating.
6. **Use the proper voltage which is indicated on the nameplate.**
 - ⊙ In case that you apply for the voltage which is over the indicated voltage, it will cause the accidents.
7. **Fix the pole base properly.**
 - ⊙ It is extremely important to fix the pole base securely. If it is not fixed securely, the core bit might be damaged by rattling of core drill or jammed.
8. **Use the water collector for sure.**
 - ⊙ Use water collector pad for sure in order to avoid the water flowing into the inside of motor by flying apart the water during operation.
 - ⊙ When using water collector pad, please install it adequately in order not to leak the water.
9. **Do not contact to the rotating core bit and main shaft.**
 - ⊙ Do not contact your hands and body to the rotating core bit and main shaft. It might be caught in or injured.
10. **Do not block the air hole of motor, and do not put the materials into the air hole.**
11. **Turn the switch off immediately if any abnormality is found.**
 - ⊙ When the core bit stops or you hear the strange noise during the operation, please turn switch off immediately.
12. **Asbestos is the harmful to human beings. In case that you drill containing such materials, please follow the applicable laws and regulations, and take a measure for dust control.**
13. **Do not use the core bit which has a outshoot.**
 - ⊙ If the rotating objects has a outshoot, it might be the risk for being caught in or injured.
14. **Do not use the core bit which exceeds the maximum diameter of core bit.**

 CAUTION

1. Do not overload with core drill.

- ◎ Use the machine according to the machine capacity of specifications in order to use safely and efficiently.

2. When drilling, please feed the water for sure.

- ◎ Overheating of core bit reduces not only drilling performance but also its life. So make sure to keep feeding water during drilling operation.
- ◎ Use clean water only. Using the dirty water may cause machine failure.

3. Do not turn on the motor with core bit facing to the drilling surface.

- ◎ It causes the damages for core bit and core drill.

4. When starting the drilling, please wait until the rotating is increased.

- ◎ Regarding the drilling work, turn the switch on and wait until the rotating is increased fully.

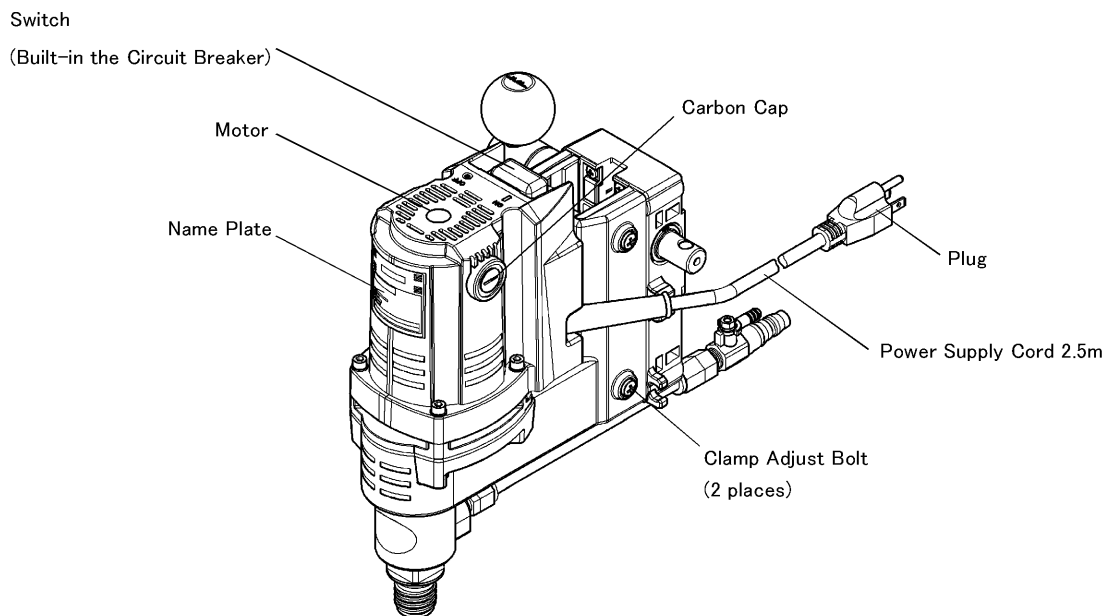
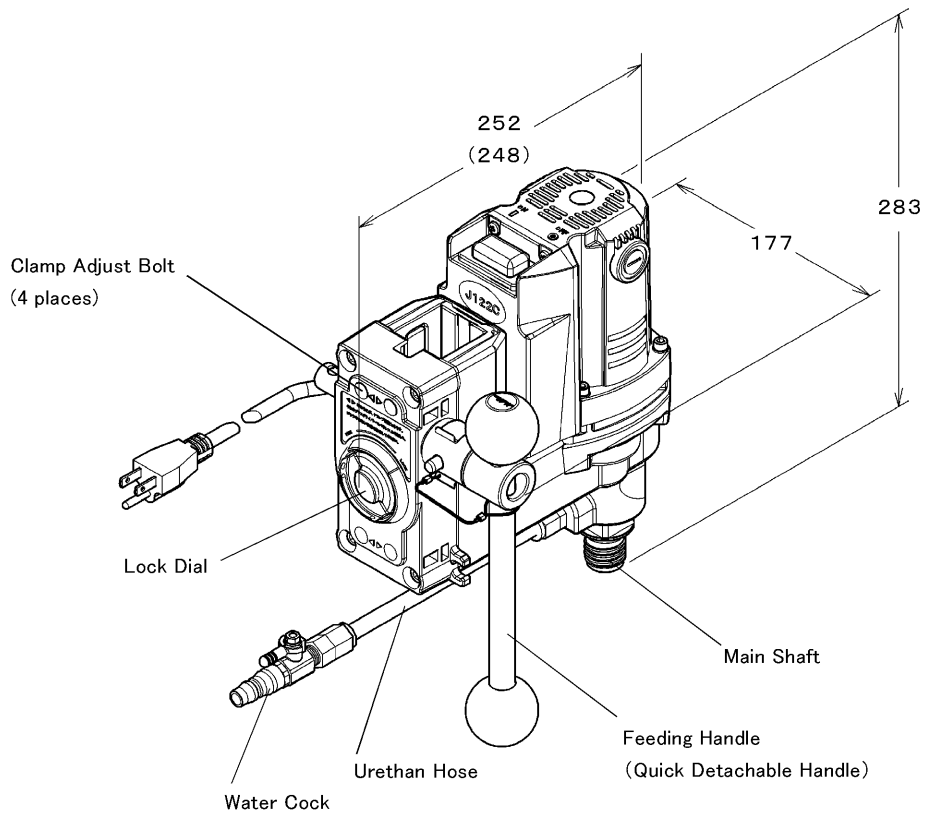
5. Do not stop rotating of core bit by forcing the power on the feeding handle during drilling, and do not lock the core bit.

- ◎ It might cause the damages for the chip of core bit and core drill.

6. When releasing your hands from the feeding handle, make sure that the lock dial must be "LOCK", then fix the drill head.

7. When the lock dial is at "FREE" position, make sure to hold the feeding handle in order not to move the drill head.

2 . DESCRIPTION

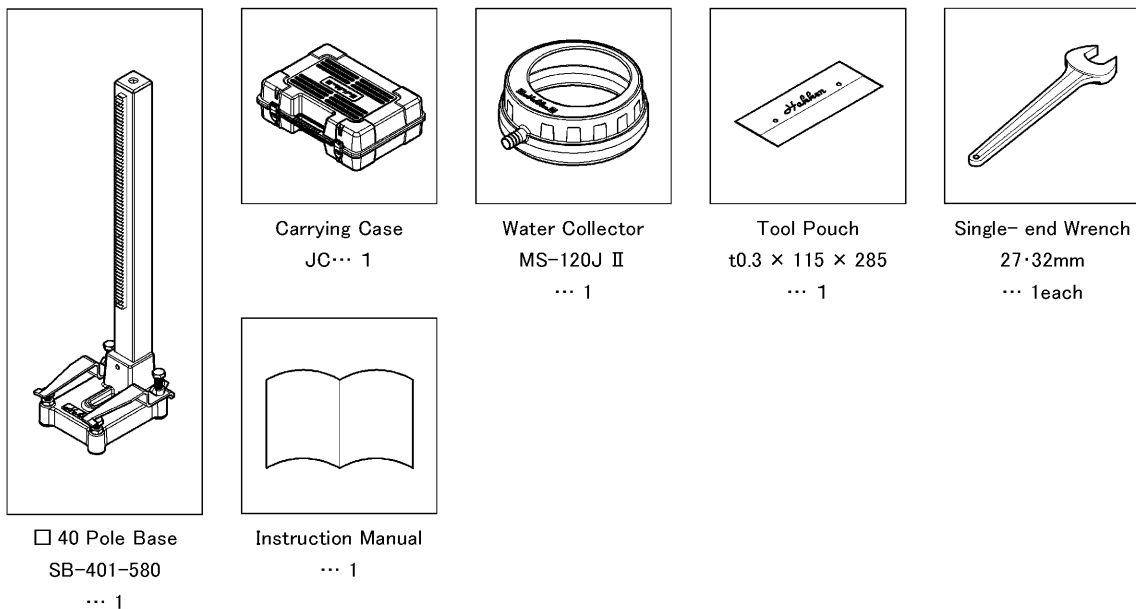


Inside of () is the size when the lock dial is 「LOCK」

3 . SPECIFICATIONS (Drill Head)

Model Name	SPJ-122Ct
Motor	Single Phase Series Commutator Motor
Power Supply	Single Phase A.C.110V 60Hz
Rated Current	14A
Max. Output	1500W
No-load Rotation Speed	900min ⁻¹
Applicable Bit Dia.	14.5~120mm
Max. Bit Dia.	160mm
Core Bit Installing Screw	C Rod Screw
Geared Motor Weight (Excluding cord)	4.9kg

4 . STANDARD ACCESSORIES

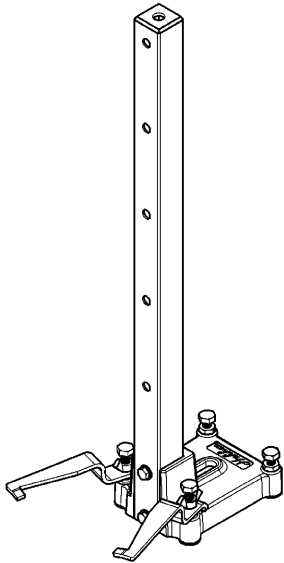


5 . APPLICATIONS

- ⊙ Core drilling in concrete for road, dam, tunnel and bridge construction
- ⊙ Sampling test pieces
- ⊙ Core drilling of pilot hole for guard rail post and fence post
- ⊙ Core drilling in reinforced concrete such as wiring and plumbing for air conditioning, telephone, electricity, water and gas supply.

6 . OPTIONS (Sold Separately)

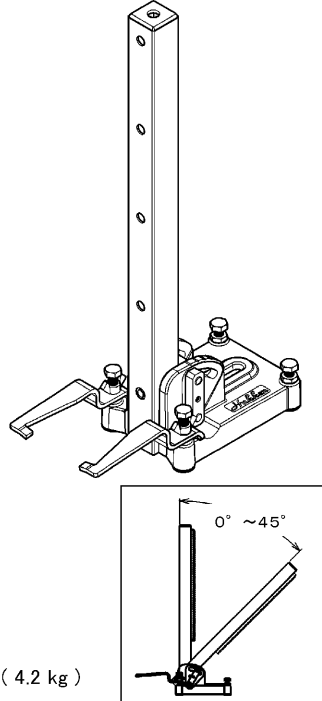
□ 40 Pole Base
SB-401-700



(3.6 kg)

The pole base is that the size of pole is □ 40 and total height is 700mm.

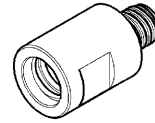
□ 40 Angle Adjustable Base
AB-401-580



(4.2 kg)

The pole base is that the size of pole is □ 40, no shift from 0° (Vertical) to 45° , and available to adjust the angle.

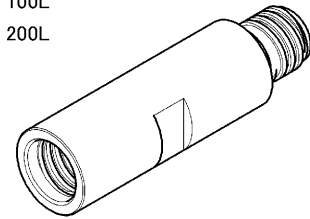
Reducer



Available for several core bits installing screws.

Extension Rod
(C Rod Screw)

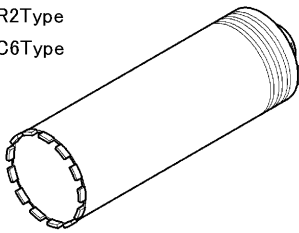
100L
200L



For drilling a deep hole. Not available for less than the bit dia. of 32mm.

Core Bit

R1Type
R2Type
C6Type

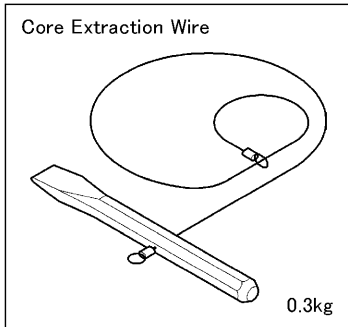


One body type core bit which has thinner tip than three separate type bit.

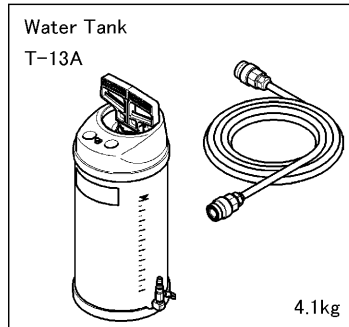
Dimension of one body type core bit

Type			Bit Name	Outer × Inner (mm)	Drilling Depth (mm)	Overall Length (mm)
R1	R2	C6				
●			14.5	14.5 × ...	250	290
●			19	19 × ...		
●			22	22 × ...		
●		●	25	25 × ...		
	●	●	27	27 × 21	250	295
	●	●	32	32 × 26		
	●	●	40	40 × 34		
	●	●	52	52 × 46		
	●	●	65	65 × 59		
	●	●	70	70 × 64		
		●	75	75 × 69		
	●	●	80	80 × 74		
	●	●	90	90 × 84		
		●	100	100 × 94		
	●	●	106	106 × 100		
	●	●	110	110 × 104		
	●	●	120	120 × 114		
		●	130	130 × 124		
		●	150	150 × 144		
		●	160	160 × 154		

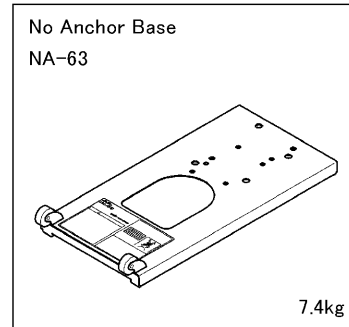
※ The size with ●-mark is available for each type. "Overall Length" does not include the height of diamond segment tip.



Use together with a hammer to remove the drilled core



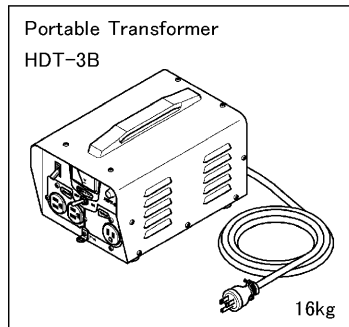
For use where water supply is inconvenient. Tank capacity is 13L and water can be fed at high place by air pressure.



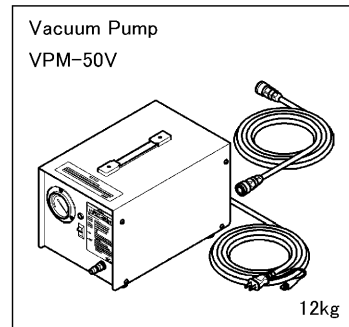
For use in sampling test pieces at the asphalt road.



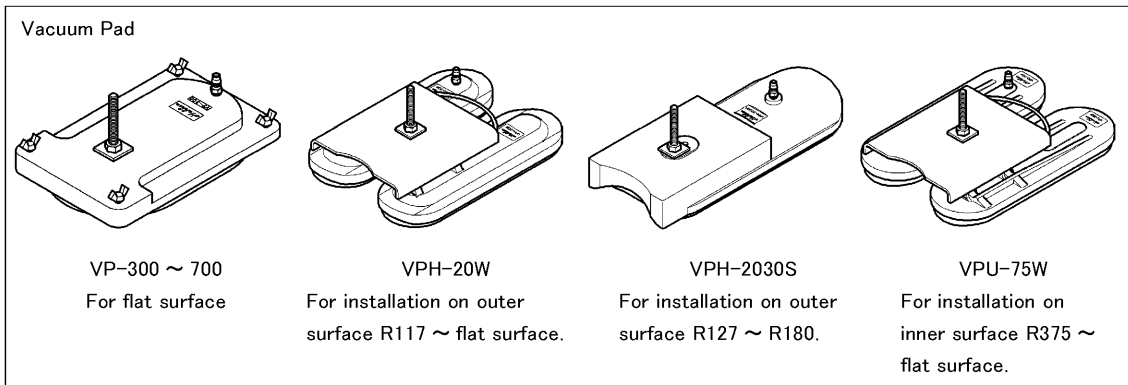
It prevents from flying apart the cutting water, and it is available for collecting the drain water during the operation. Available for the bit diameter maximum 160 mm.



For use when supply voltage gets lower or 200V is changed into 100·115·120V.



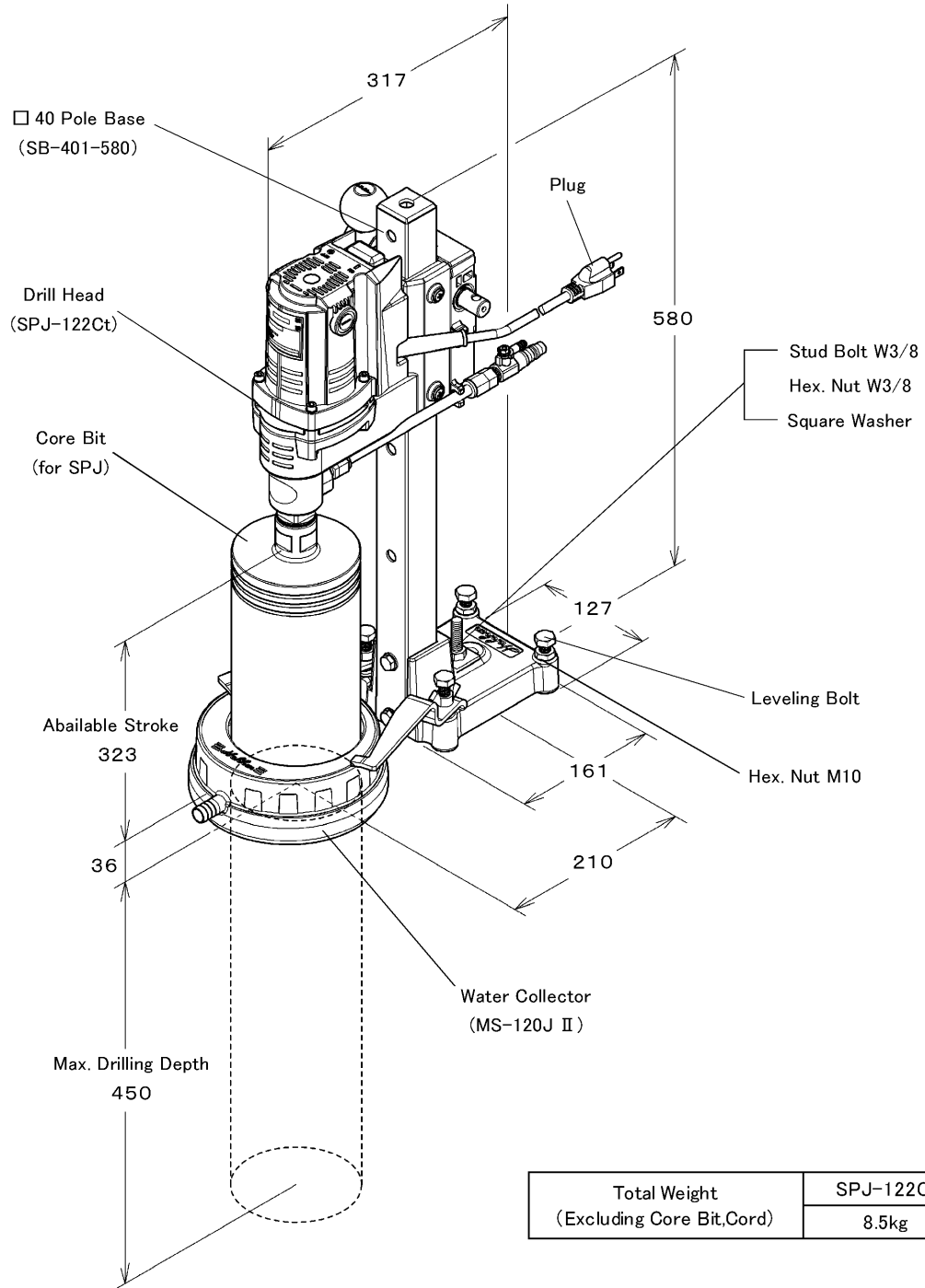
For use in vacuum anchoring with vacuum pad.



Secure the pole base easily on a flat or round surface where the bolt anchor installation is not available.

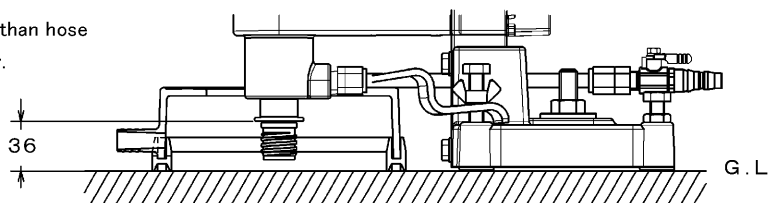
7 . GENERAL DRAWING AND SPECIFICATIONS IN OPERATION

【1】 Fixing by the Anchor for □ 40 Pole Base SB-401-580

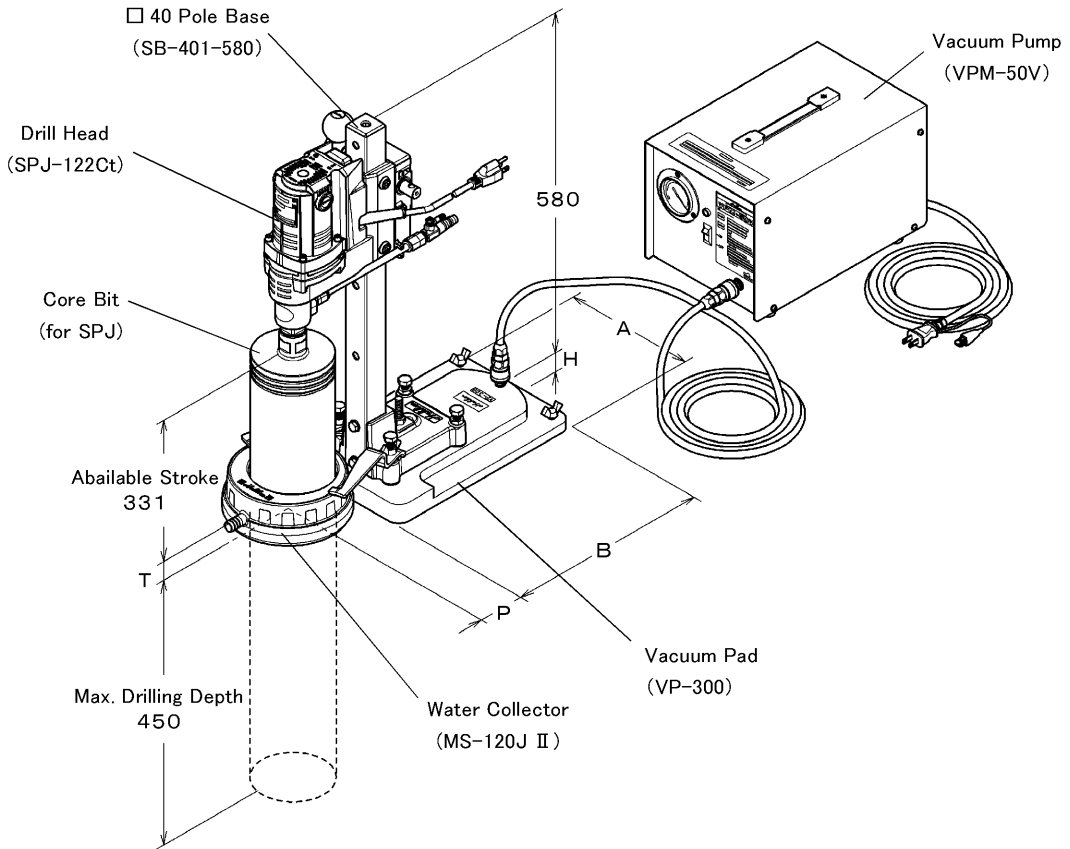


Detail drawing about core bit edge face and G.L interval in stroke end.

※ Stroke end is when the urethan hose touches the water collector.

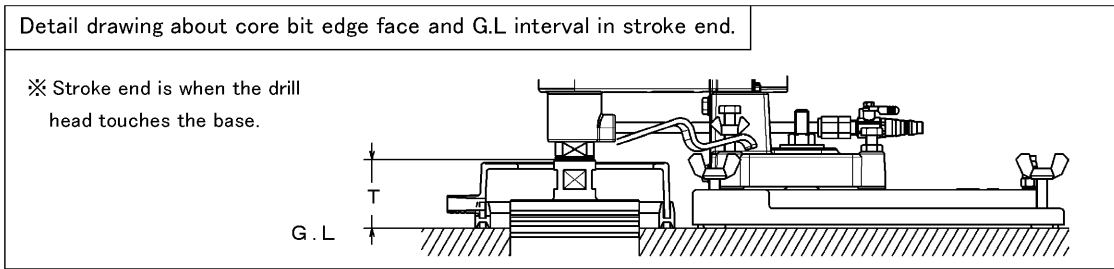


【2】 Fixing by the Vacuum Pad for □ 40 Pole Base SB-401-580



⚠ CAUTION

In case of fixing the machine to curved surface by using VPH-2030S, VPH-20W or VPU-75W, the water collector pad is not available.

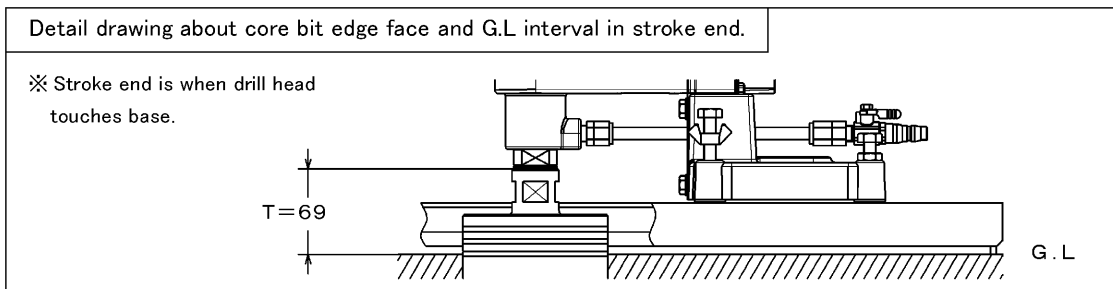
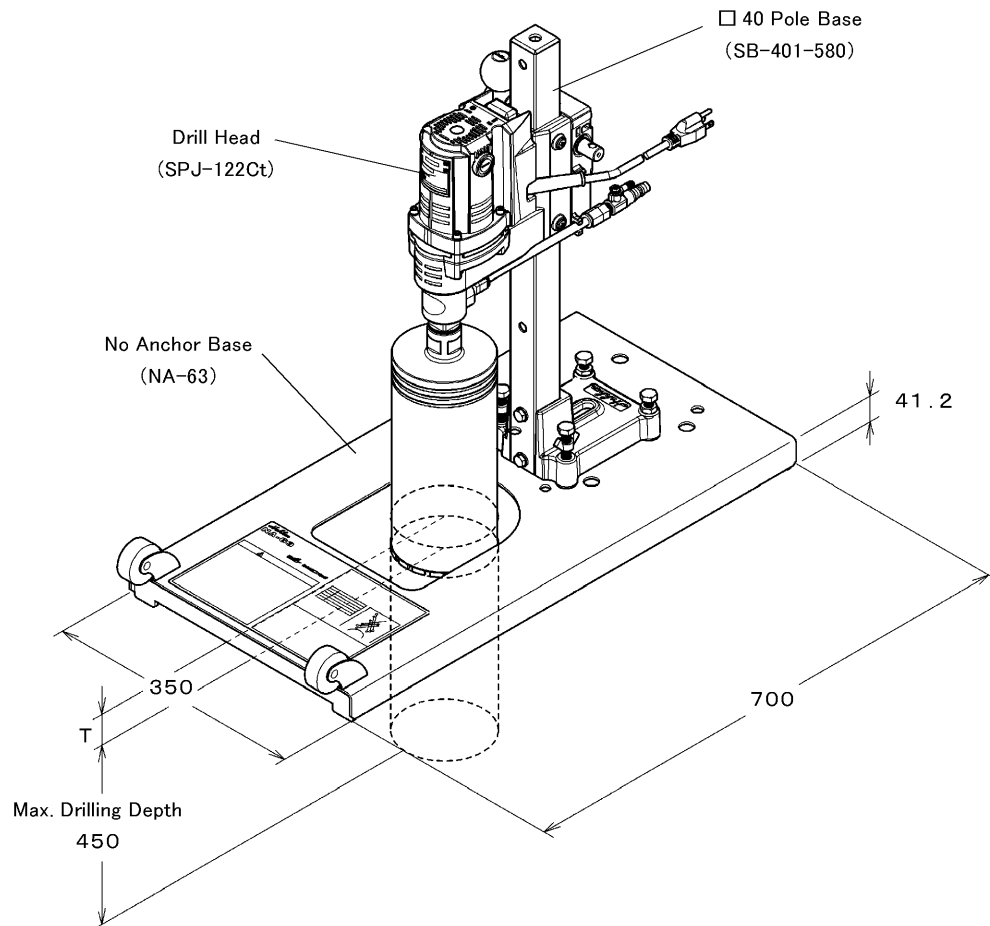


Model name	A × B × H (mm)	T Size (mm)	P Size (mm)	Adsorption power	Application
VP-300	220 × 340 × 35	63	※99(+26)	3kN	Flat Surface
VP-600	300 × 360 × 35		※57(+27)	6kN	
VP-700	330 × 400 × 35		48(+17,-9)	7kN	
VPH-2030S	200 × 500 × 33	61~68	47~100	5kN	Outer R127~R180
VPH-20W	314 × 420 × 48~80	76~108	54~80		Outer R117~Flat
VPU-75W	314 × 420 × 67	95~101			Inner R375~Flat

◎ P size is based on the position in which vacuum pad contacts to the water collector (MS-120J II) . + means a movable distance of pole base forward and - means a movable distance of pole base backward. In case of backward movement, the size is no installation of the water collector. (※ is the position in which water collector (MS-120J II) does not contact to the vacuum pad.)

◎ The water collector is not available for VPH-2030S, VPH-20W and VPU-75W, and each size is indicated without the water collector .

【3】 Fixing by the No Anchor Base NA-63 for □ 40 Pole Base SB-401-580



Notes for usage of No Anchor Base NA-63

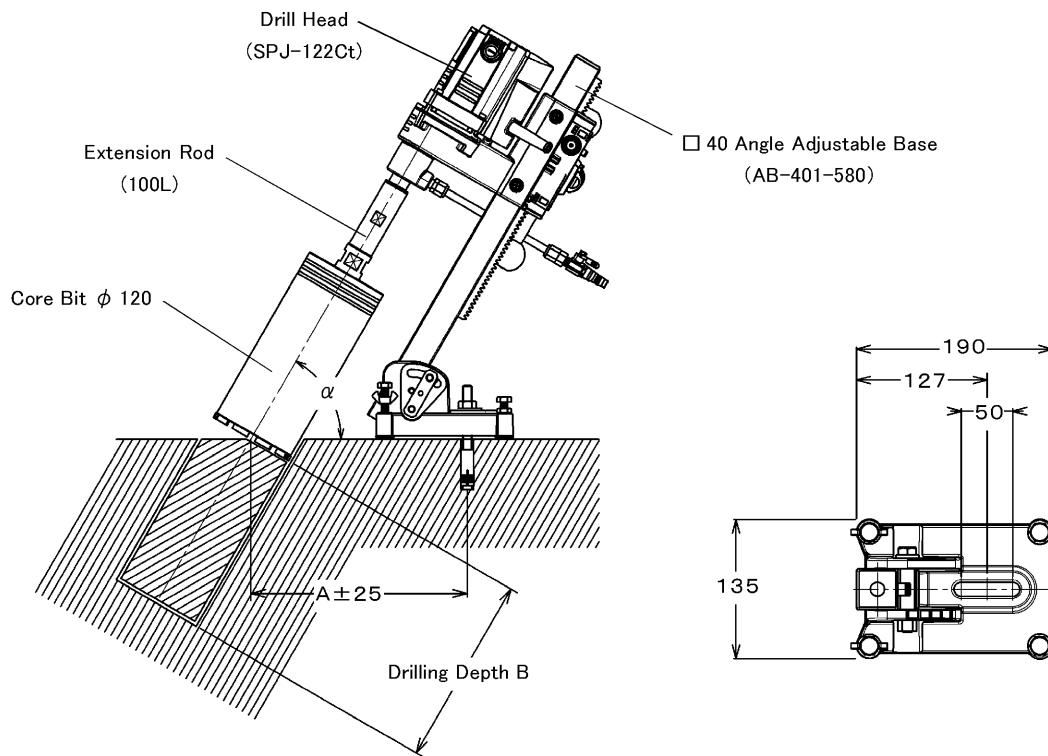
⚠ WARNING

1. Do not use for drilling except asphalt.
2. Take care of your body being not injured with the sharp edge of No Anchor Base NA-63.
3. When drilling, both of foots must be setting on the No Anchor Base NA-63.
4. Avoid to cut by force where the No Anchor Base NA-63 rises from the ground.
5. Do not use on the steep slope.

POINT

When you use the No Anchor Base NA-63, Max. core bit dia. is 160 mm.

【4】 Fixing by the Anchor for □ 40 Angle Adjustable Base AB-401-580



⚠ CAUTION

The water collector pad is only available when the angle α is 90-degree (cutting vertically).

Angle α	A (Drilling position ~ Anchor position)	B (The depth of drilling when each extension rod is used)		
		None	100L	200L
90°	249mm	257mm	※	※
80°	253mm	227mm	327mm	※
70°	265mm	195mm	295mm	※
60°	288mm	157mm	257mm	357mm
50°	325mm	107mm	207mm	307mm
45°	352mm	74mm	174mm	274mm

Note 1) The maximum drilling depth B is the depth which is drilled on the above combination drilling.

Note 2) The drilling depth in the chart shows the depth from the center of bit.

Note 3) Since drilling depth in the heavy-line is over the valid length of core bit, cutting core is taken by breaking. The depth shows re-cutting depth.

Note 4) This chart shows whether it is available to install extension rod or not. Be careful that If you start to cut with installing extension rod, the vibration could be generated.

Note 5) ※ It is not available to install the extension rod from beginning of cutting due to less valid stroke.

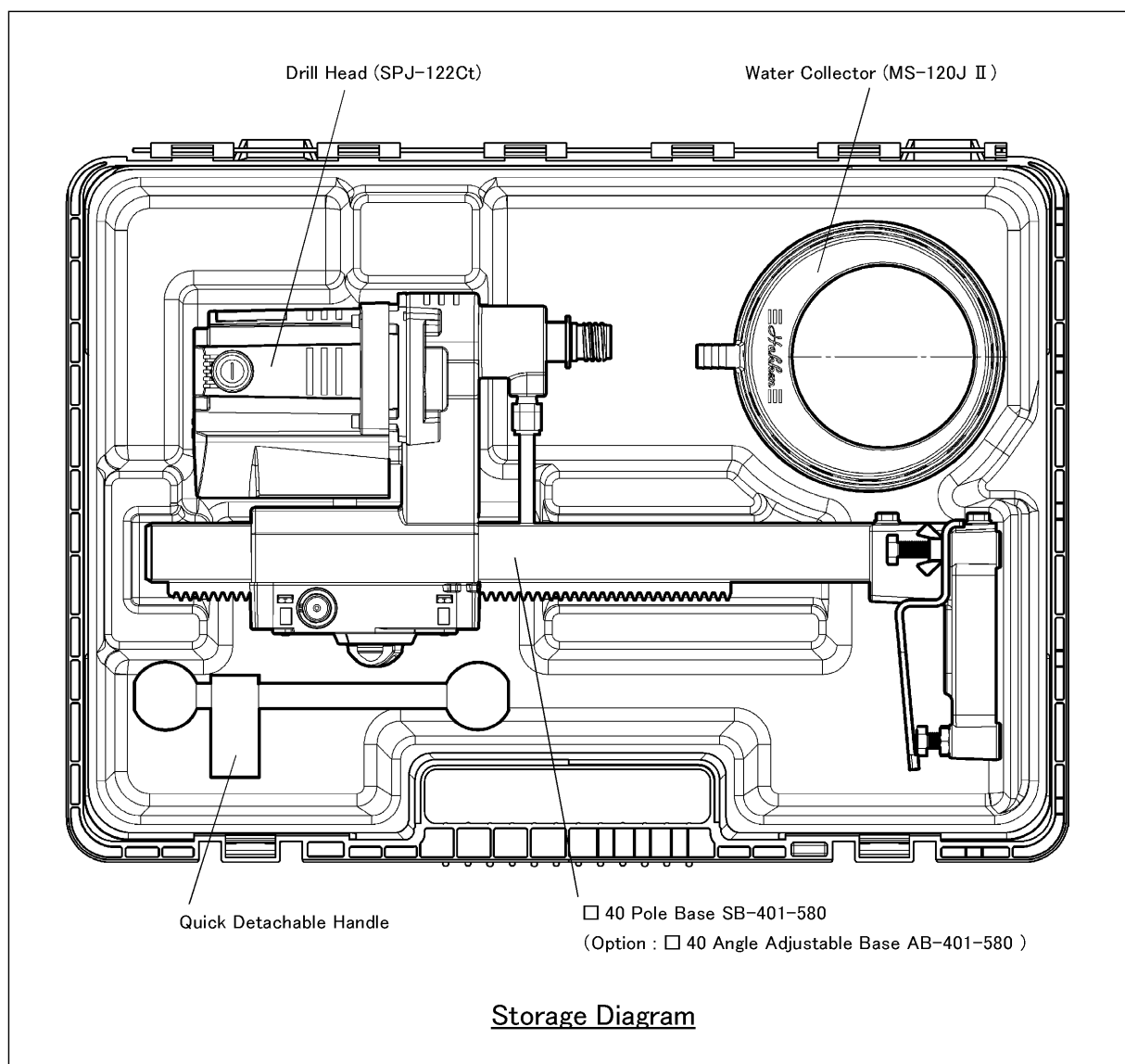
8 . STORAGE CONDITION FOR SPJ-122C† IN THE CARRYING CASE

⚠ CAUTION

Make sure that the lock dial is at “LOCK” position when the drill head is stored in the carrying case.

POINT

1. Make sure that the tools or accessories are not moved in the carrying case. Fix them by sponge in order not to be scattered.
2. If inside of main shaft or cock is wet, dry well before storing in the carrying case.
3. 40 Pole Base SB-401-700 (Total height is over 600 mm) can not store in the carrying case.
 40 Angle Adjustable Base AB-401-580 (Option) can store in the carrying case.



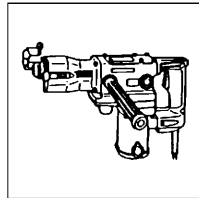
9 . HOW TO USE

- ◎ There are some fixing methods of core drill such as the anchor bolt, the vacuum pad and so on. We show how to fix □ 40 Pole Base SB-401-580 by using the anchor here.

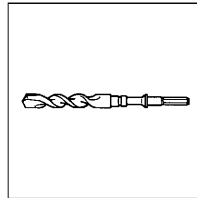
【1】 Installation of Anchor Bolt

- ◎ Follow the instruction manual of hammer drill.

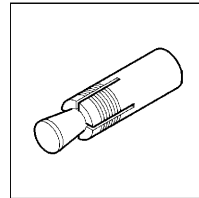
Preparations



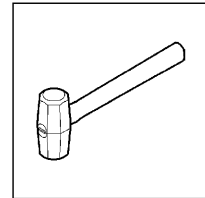
Hammer Drill
... 1



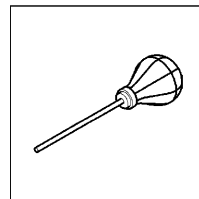
Drill Bit
... 1



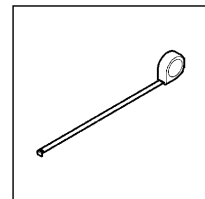
Anchor Bolt
... 1



Hammer
... 1



Dust Blower
... 1

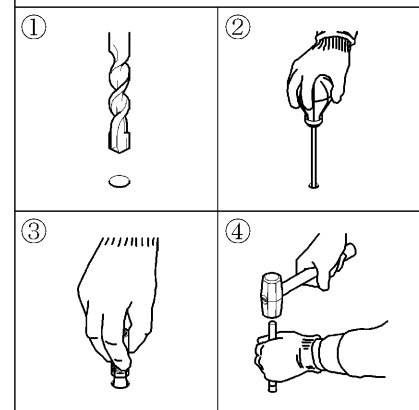
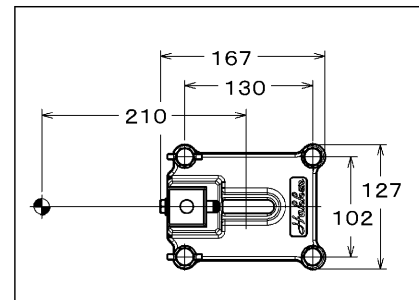


Scale
... 1

- ① Drill the anchor bolt hole 210 (+15,-11)mm away from a hole to be drilled.

	W3/8	W1/2
Drill Bit Size	14.5mm	18mm
Drilling Depth	55mm	65mm

- ② Blow off chips from the hole by using the dust blower.
- ③ Put the anchor bolt in the hole.
- ④ Hammer driving holder down by holding driving holder securely.

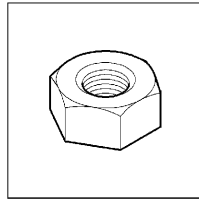


⚠ WARNING

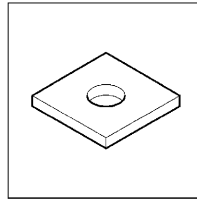
1. Remaining dust in the anchor bolt hole or lack of hammering the driving holder are extremely dangerous, because they will cause the pulling out of anchor bolt. So these operations should be done by professional anchoring operator.
2. Use CONSEC specified anchor bolt.

【2】 Installation of Core Drill

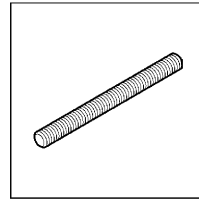
Preparations



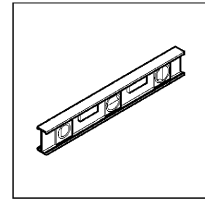
Hex. Nut
… 1



Square Washer
… 1



Stud Bolt
… 1ヶ



Level
… 1

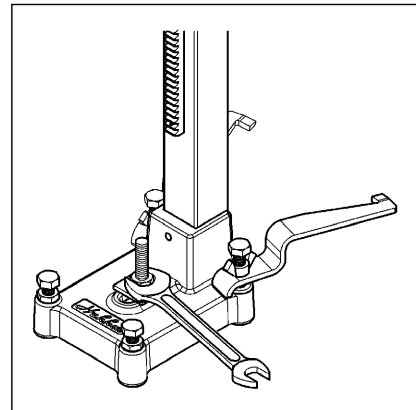
⚠ CAUTION

When bringing out the core drill from the carrying case, make sure that the lock dial is in “LOCK” position.

- 1) Temporally fix by screwing a bolt into an anchor, setting up a pole base, tightening hex. nut by wrench.

⚠ WARNING

1. Bolt must be screwed more than five times. If you can not screw, the bolt could be damaged. Replace the bolt or try to install the anchor bolt again.
2. Take special care to prevent pole base from falling down.



- 2) Install the quick detachable handle on the drill head.

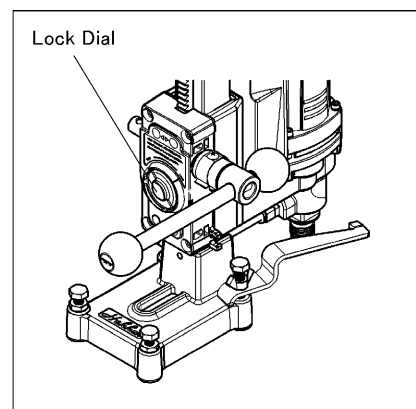
POINT

Before using, make sure to adjust the clamp (Refer this instruction “Regular Inspection”)

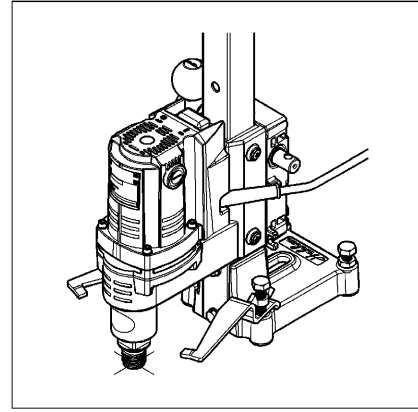
- 3) Make sure the lock dial at “FREE” position, turning the feeding handle, feed the drill head until the main shaft end comes in contact with work surface. Set the lock dial at “LOCK” position to secure the drill head.

⚠ CAUTION

Before releasing your hands from the feeding handle, make sure that lock dial is at “LOCK” position to secure.



- 4) Loosen the hex. nut by using the wrench, move the pole base to align the main shaft with the hole to be drilled.
- 5) Adjust leveling with leveling bolts so as to eliminate rattling of pole base. After completing the adjustment, tighten the hex. nut with wrench and secure the pole base. Regarding vertical or horizontal adjustment, use such as level vial for adjustment.

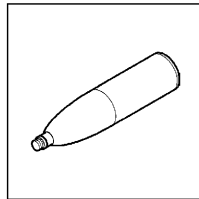


⚠ CAUTION

If pole base still rattles, readjust the leveling.

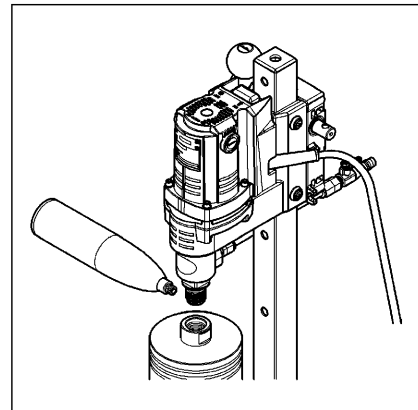
【3】 Installation of Core Bit

Preparations



Grease
... 1

- 1) Turn the lock dial to "FREE" and move the drill head up to top of pole base by using the feeding handle, then fix the drill head by turning the lock dial to "LOCK".
- 2) Apply little grease on the main shaft thread. Thread the core bit onto the main shaft to the full.



⚠ WARNING

When attaching or detaching the core bit, make sure to disconnect the electric cable from the power supply.

⚠ CAUTION

1. When handling the core bit, always wear rubber gloves in order to avoid injury.
2. Take care to prevent the core bit from falling down.

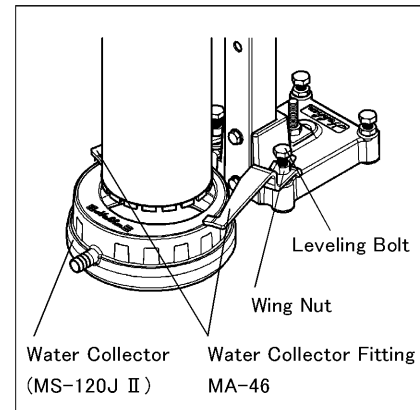
POINT

By applying the grease, the core bit can be easily dismantled after the operation.

【4】 Installation of Water Collector

- ◎ Set the water collector on the drilling position, and hold by the water collector fitting. regarding adjustment of holding, use the wing nut.

⚠ CAUTION
1. Set water collector and water collector fitting in order not to contact to the core bit.
2. In case of setting up the water collector on the wall, the drain angle is limited. Take care not to overflow the water from the drain of water collector.



【5】 Preparation for treatment of drain water

1. Examples of water disposal on the floor installation

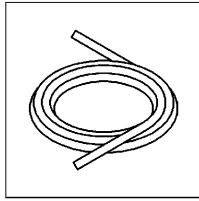
- Ex. 1) To connect the suction port of a vacuum cleaner with the drain port of water collector.
- Ex. 2) To connect one end of a hose to drain port of water collector and the other hose end sets into the bucket.

2. Examples of water disposal on the wall installation

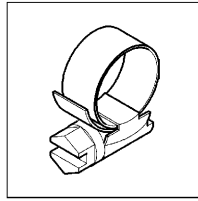
- Ex. 1) To connect the suction port of a vacuum cleaner with the drain port of water collector.
- Ex. 2) To connect one end of a hose to drain port of water collector and the other hose end sets into the bucket.

【6】 Preparation for feeding water

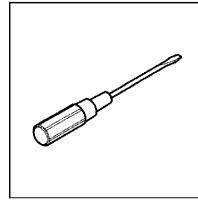
Preparations



Hose
... 1



Hose Band
... 1



Screw Driver
... 1

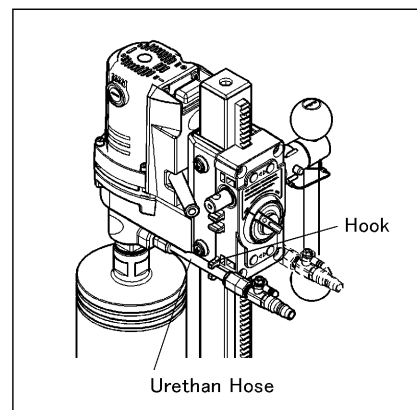
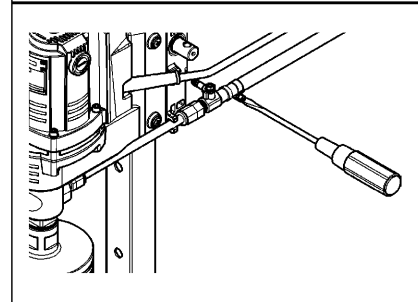
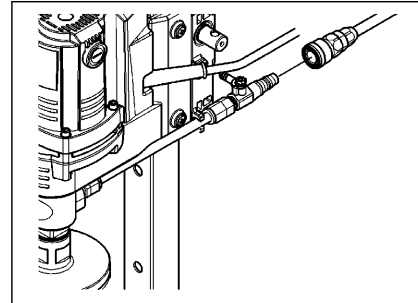
- ◎ Shut the water cock, then connect a hose from a water source with a water cock by using the water coupler or hose band.

⚠ CAUTION

1. Be sure to use clear water as feeding water to prevent from damaging the core drill.
2. Do not stop water feeding during operation.

POINT

Water cock can be fixed both of right and left by installing the urethan hose into the hook of the clamp cover.



【7】 Core Drilling

- 1) Turn the motor switch off, and plug your machine into the power supply.
- 2) Turn on the water tap, and open the water cock gradually, then adjust the water supply amount.

⚠ CAUTION

Allow the water to flow at about 2 L/min.

- 3) Turn the lock dial to “FREE” and move the drill head down to the point where the end of core bit is a little away from the work surface.

⚠ CAUTION

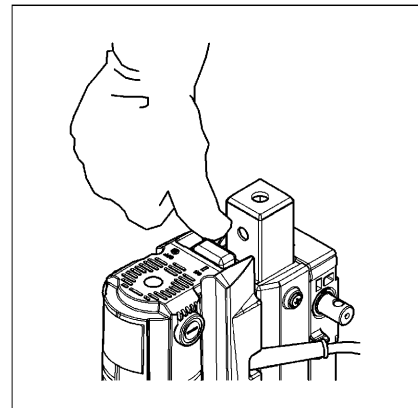
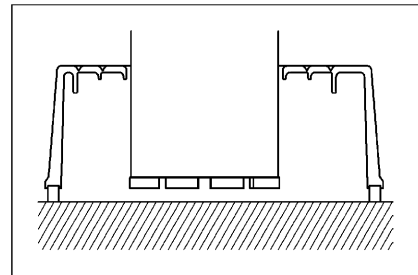
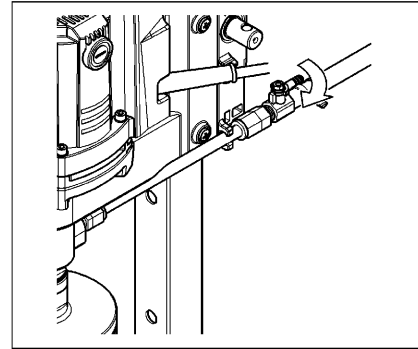
When you start the core drill in which the core bit contacts to the drilling surface, it will be dangerous that the core bit or the core drill could be damaged.

- 4) Turn the motor switch on, then start to drill.

Feed the core drill by turning the feeding handle slowly until the core bit comes in light contact with work surface.

While starting to drill, apply light pressure on the feeding handle until the drill bit penetrates to 5-10 mm depth.

Then keep drilling under uniform pressure.



⚠ WARNING

1. When irregular noises or vibration is sensed, turn the motor switch off immediately.
2. While rotating the core bit, do not close the air hole of motor or do not put things. And, do not touch the rotating part.
3. If the feeding handle is turned quickly, the core bit will hit to the work surface hardly which will cause the damaging of core bit or core drill and also will invite the accidents.

⚠ CAUTION

Excessive force on the feeding handle will cause wearing of core bit and reducing the drilling performance.

POINT

When the circuit breaker is activated and cuts the motor switch off, pull out the core bit from the hole by turning the feeding handle. And then turn the motor switch on again.

- 5) After drilling to desired depth, stop the water supply. Move the drill head by turning the feeding handle until the core bit is free from the hole and secure it by turning the lock dial into "LOCK" .

⚠ CAUTION

1. After stopping water supply, get the core bit out of the hole immediately.
2. Be careful not to fly apart the water which is remained in the core bit.

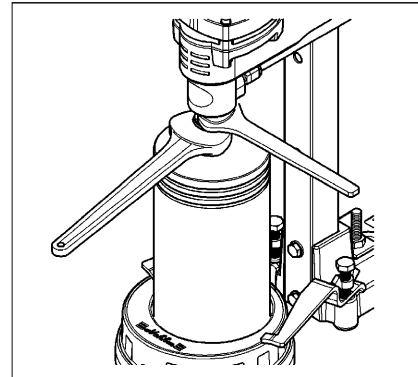
- 6) Turn the motor switch off and unplug the cord from the power supply.

⚠ WARNING

1. Do not unplug the machine by yanking cord.
2. When you touch the plug or power supply by wet hands or grove, it will be dangerous to cause the electric shock.

【8】 After Completion of Drilling

- 1) Turn the lock dial to "FREE" and move the drill head up to top of pole base by using the feeding handle, then fix the drill head by turning the lock dial to "LOCK".
- 2) Remove the water supply hose, then take the core bit out from the main shaft by using the single-end wrench.
- 3) Remove the water collector from the pole base.



⚠ CAUTION

When removing the water collector, be careful of remaining of wastewater and sludge in it. Clean them by using the vacuum cleaner or etc.

- 4) Detach the drill head from the pole base.
- 5) Remove the pole base.
- 6) Clear off the slag and the water in any part.
- 7) Put the drill head into the pole base, move to allow for storage place in the carrying case, then do the lock dial "LOCK" .
- 8) Detach the quick detachable handle and storage the core dill (drill head & pole base) and the water collector in the carrying case.

POINT

After removing the core bit, apply the grease on the screw part which will prevents from being rust.

10 . TROUBLE SHOOTING DURING OPERATION

【1】 Trouble Shooting During Operation

If some irregular situation is sensed, turn the motor switch off immediately. Make sure of safety and check the following under the safe conditions.

Trouble	Cause	Countermeasure
Core bit stops.	Core bit is locked.	Refer to “Core bit is locked” below in this table.
	Failure of gear box.	Repair
	Motor stops.	Refer to “Motor stops” below in this table.
Core bit is locked.	Iron chips or aggregates is caught between core and core bit.	Refer to “When the Core Bit is Locked” in this manual.
	Interference against drilled core.	Refer to “Interference against drilled core” below in this table.
Motor stops.	Circuit breaker is activated.	Refer to “Circuit breaker is activated” below in this table.
	Defective carbon brush.	Refer to “Regular Inspection” in this manual.
	Failure of motor.	Repair
Abnormal vibration	Drilled concrete core is broken.	Remove the drilled core from the core bit.
	Drill Head clamp is not well adjusted.	Refer to “Regular Inspection” in this manual.
	Anchor bolt is not screwed enough to secure pole base.	Fix pole base properly again.
	Level of pole base is not well adjusted.	Adjust the level again.
	Main shaft is misaligned.	Repair
	Core bit is misaligned.	Replace core bit with new one.
Power breaker is activated.	Power supply capacity is small.	Increase the power supply capacity or turn down the cutting power.
	Failure	Repair
Circuit breaker is activated.	Decrease the drilling force.	Turn down the cutting power.
	Failure of motor and circuit breaker.	Repair
	Vibration can activate circuit breaker.	Refer to “Abnormal vibration” below in this table.
	The temperature of around the switch is high.	When the temperature is over 50°C, the switch will be easily downed. So, stop the operation, and wait for awhile until the temperature is down.
Cutting is not well.	Cutting steel inside.	—
	Amount of feeding water is too much.	Decrease the quantity of water supply.
	Power supply capacity is small.	Increase the power supply capacity.
	Clogging up of core bit.	Contact our sales representative.
	Wearing of core bit.	Replace core bit with new one.
	Interference against drilled core.	Refer to “Interference against drilled core” below in this table.
Interference against drilled core. Refer to “When Drilling is Misaligned and Interfering with the Rotation of Core Bit” in this manual.	Too much load at starting.	—
	Decrease the drilling force.	Turn down the cutting power.
	Too little water feeding.	Increase the quantity of water supply.
	Too much vibration.	Refer to “Abnormal vibration” below in this table.
	Pole base is bent.	Repair
	Core bit is worn away, cutting groove became narrower.	Replace core bit with new one.

* Interference against drilled core : The body of core bit is contacting against the inside wall of drilled core. As a result, it is becoming an obstacle for the normal rotation of core bit.

【2】 Example of Solution : When the Core Bit is Locked (Lodged)

⚠ WARNING

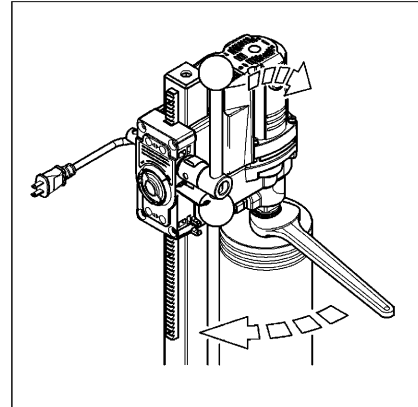
In order to avoid the accidents, turn the motor switch off and unplug the machine cord from the power supply.

- ◎ Using the single-end wrench, try to rotate the core bit slowly in both of directions to move and lift it out by turning the feeding handle little by little.

⚠ CAUTION

Too much force on the feeding handle can cause

1. Damage or breakage of core drill
2. Fracturing of core bit crown (segment)

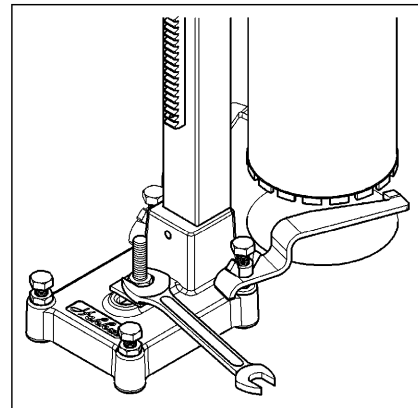


【3】 Example of Solution : When Drilling is Misaligned and Interfering with the Rotation of Core Bit

⚠ WARNING

In order to avoid the accidents, turn the motor switch off and unplug the machine cord from the power supply.

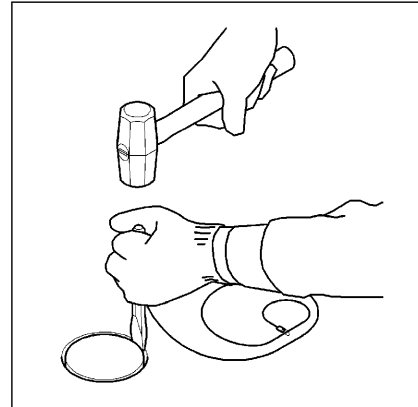
- 1) Loosen the fixing of pole base such as hex. nut or leveling bolts, and make fine adjustment so as to minimize such interference and secure it.
- 2) To remove the interfering portion, rotate the core bit, then start drilling again from the work surface in the drilled hole.
- 3) If the core bit is still interfering against the drilled core wall even after repeating 1) and 2), drill a hole in a different position or drill a larger hole to contain the original misaligned hole.



11 . HOW TO USE CORE EXTRACTING WIRE

◎ As one method of core extracting, there is a method for core extracting wire.

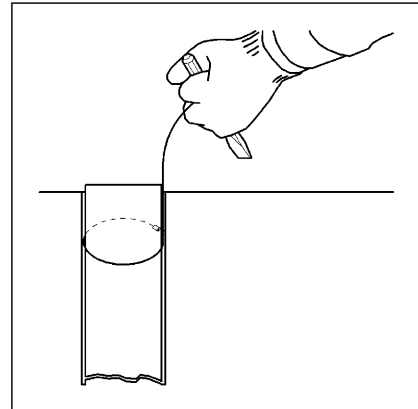
- 1) Insert the chisel of core extracting wire into the drilled groove and hammer it to break the drilled core.



- 2) When the drilled core starts to move, wind the looped wire of core extracting wire around the drilled core.

POINT

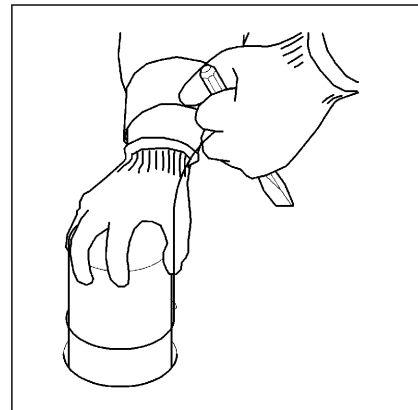
If the wire is applied at deeper position around the drilled core, the drilled core can be removed easily.



- 3) Slowly pull the core extracting wire to lift the drilled core out and then remove the core by holding by hand.

⚠ WARNING

1. Do not lift the drilled core high in the air by the core extracting wire.
2. Use the core extracting wire for core extracting purpose only.



12 . MAINTENANCE • INSPECTION • REPAIR

【1】 Maintenance

- 1) Clean the surface of the machine after using.

Regarding the outer frame of the drill head, the part of the gear case is made of aluminum, and the part of the motor is made of the sturdy synthetic resin.

If gasoline, thinner, petroleum or kerosene are adhered to the outer frame of the drill head, the surface of the drill head will be damaged.

When you clean the out frame of the drill head, use the dried cloth or the cloth which is soaked with the soapy water.

- 2) Maintenance of motor

After operating, fix the drill head to the pole base, operate the motor by no load, and blow down inside of the dust and trash by sending the wind.

【2】 Inspection

- ⊙ Check the drill head, pole base, water collector, water collector fitting and core bit for cracks and damages. Also check the ord sheathing and plug for cracks and damages.

If any of above problems are found, please contact its sales dealer or CONSEC's sales representative.

【3】 Regular Inspection

1. Inspection of each part of installation screw.

- ⊙ Check the looseness of installation screw regularly. When it is loosen, tighten it again.

⚠ CAUTION

If installation screw is loosen and use the machine, it is extremely dangerous to invite the accidents.

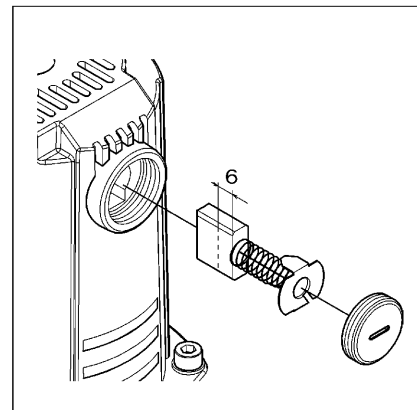
2. Inspection • Exchange for carbon brush.

- 1) How to inspect

- Remove the carbon brush cap by using the flathead screwdriver (No.2) etc, then,take the carbon brush out.

- 2) Item to be checked

- If the wearing of the carbon brush increases, it will cause the motor failure. Check it regularly, and if the length of the carbon brush is worn up to the wear limit line (6mm), replace with new ones.
- Keep the carbon brush clean for free sliding in the brush holder.



⚠ CAUTION

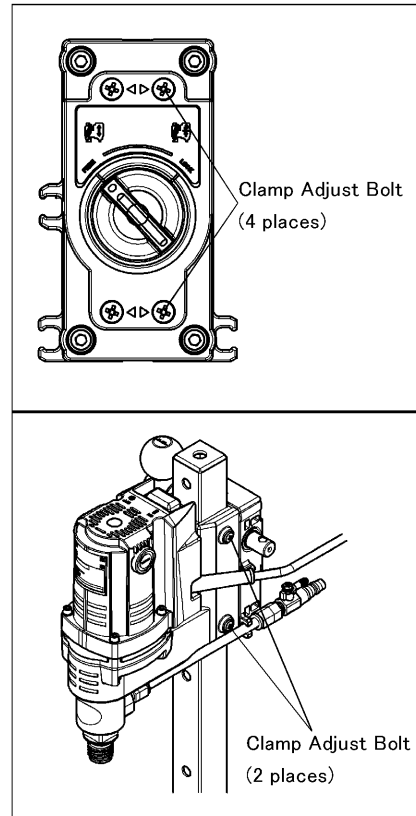
Use CONSEC specified carbon brush.

3. Inspection ▪ Adjustment for clamp adjustment part.

- ◎ Adjust the clearance between the pole and clamp by moving the feeding handle, and screw 6 places of clamp adjustment screw on the part of clamp by phillips screwdriver in a balanced.

POINT

1. If you screw the clamp adjustment screw tighten, it will be hard to rotate the feeding handle.
2. If the slide face is worn away, adjustment will be needed.



4. Exchange for Grease.

- ◎ The grease is enclosed in this machine. We recommend to exchange the grease every year in order to keep long operation life. When exchanging the grease, contact to sales dealer or CONSEC's sales representative to solve the problems such as disposal etc.

【4】 Repair

- ◎ The machine is manufactured by high precision. In case that the machine does not work well, please do not repair by yourself, and contact to the distributors.
- ◎ If you have any questions, please feel free to contact us.

13 . MAINTENANCE INSTRUCTIONS

Storing for the unit and accessories

When you store the units and the accessories, please store them in the safe and dried place, and avoid to store as following places.

- ◇Reaching easily for the children.
- ◇Unlocked place.
- ◇Avoid the rain and humidity.
- ◇The temperature extremely changes.
- ◇Avoid the direct sunlight.
- ◇There are inflammable and explosive substances.

Do not store such places.

We may change the product appearances in the manual without prior notice.

M E M O



CONSEC CORPORATION

Main office : 4-6-8 Shoko Center Nishi-ku Hiroshima 733-0833 Japan

International Department : 4-6-8 Shoko Center Nishi-ku Hiroshima 733-0833 Japan

Phone : 81-82-276-3231

Fax : 81-82-276-3239

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