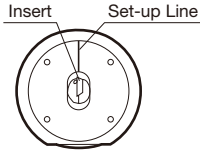


OPERATION MANUAL

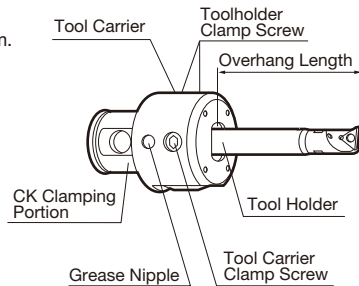
Please read these instructions before use and keep them where the operator may refer to them whenever necessary.

INSERT HOLDER INSTALLATION

- Align the insert with the Set-up Line on the EWN Boring Head.

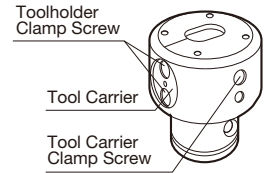


- Keep the Overhang Length to a minimum.



- Tighten the Toolholder Clamp Screw securely.

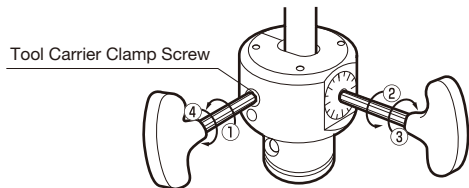
Model	Tightening torque N·m (lbf·Ft)
EWN04-15E -CK3	1.5 (1.11)
EWN 2-22E -CK4	2.5 (1.84)
EWN 2-32E -CK5	4 (2.95)
EWN 2-54EM-CK6	8 (5.9)
EWN 2-54E -CK6	8 (5.9)



- Always loosen the Tool Carrier Clamp Screw before trying to install or remove the Toolholder from the EWN boring Head.
- Use within the overhang range of the Toolholder shown in the General Catalog as "A = Overhang". Failure to do so could result in damage to the boring head.

BORING DIAMETER ADJUSTMENT

- Loosen the Tool Carrier Clamp Screw in a counterclockwise direction.
- Rotate the scale dial in a counterclockwise direction passed the desired size required.
- Rotate the scale dial in a clockwise direction until the desired bore is reached. The boring diameter is adjusted on the basis of the line "0" on the vernier.
- Tighten the Tool Carrier Clamp Screw with reference to the tightening torque shown. If the Tool Carrier Clamp Screw is tightened excessively, it may be broken or the dimensional accuracy becomes wrong.

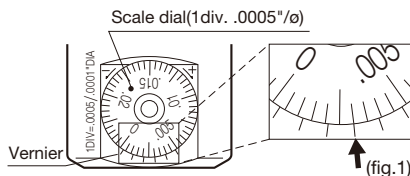


Model	Stroke (inch)	Tightening torque N·m (lbf·Ft)
EWN04-15E -CK3	-0.008 - +.080	1.5 (1.11)
EWN 2-22E -CK4	-0.008 - +.087	2.5 (1.84)
EWN 2-32E -CK5	-0.008 - +.138	4 (2.95)
EWN 2-54EM-CK6	-0.008 - +.177	8 (5.9)
EWN 2-54E -CK6	-0.008 - +.177	8 (5.9)

● How to use the vernier.

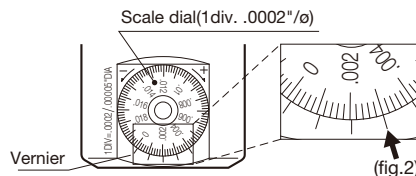
EWN04-15 , 2-22

It is possible to read .0001"/ø from the value at which the vernier and the scale dial are matched. (.0003" in the fig.1)



EWN2-32 , 2-54

It is possible to read .00005"/ø from the value at which the vernier and the scale dial are matched. (.00015 in the fig.2)



⚠ CAUTION

- Rotate the scale dial gently by applying a key with fingers.
- NEVER adjust the diameter before loosening the Tool Carrier Clamp Screw or exceed the adjustable boring range. Precision components in the head are damaged.
- Use only genuine hexagon key for unclamping, clamping and any adjustments.

ADDITIONAL GENERAL CAUTION NOTES

! CAUTION

- Never tighten the Toolholder Clamp Screw without the Toolholder inserted into the EWN Boring Head. Failure to do so will result in damage to the clamping mechanism.
- Use only genuine clamping screws to avoid any unnecessary damage. Care must be taken not to cause any injury when indexing insert.
- Regularly replace clamping screws to ensure the maximum clamping force can be maintained.
- Boring range of the boring head must not be exceeded.
- It is recommended that a semi-finished bore diameter is machined to determine the influence of the cutting conditions to the actual bored diameter.
- NEVER conduct boring under unsuitable cutting conditions. Refer to the General Catalog for recommended cutting conditions.
- Ensure that CK Clamping Portion is free of damage, particles rust.
- KAISER BORING SYSTEM components are not interchangeable with any other boring system.
- Never continue using the boring head if it has been subjected to any shock or damage.
- Safety Goggles MUST be worn during any boring operation.

RECOMMENDED MAXIMUM SPINDLE SPEED

Model	MAX. (RPM)
EWN04-15E -CK3	20,000
EWN 2-22E -CK4	16,000
EWN 2-32E -CK5	14,000
EWN 2-54EM-CK6	10,000
EWN 2-54E -CK6	10,000

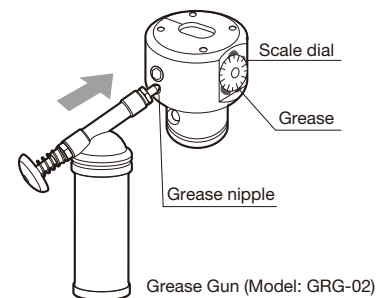
! CAUTION

- The MAX. RPM is valid with a center offset in max. .008" and with the shortest tool combination.
- NEVER exceed the maximum allowable spindle speed.
- This maximum allowable spindle speed is the limit value determined from the structure of the tool. It is not guaranteed to be applicable for actual boring.
- When actually determining cutting condition, check the rigidity of a machine spindle and workpiece and the length of a tool which change the condition of vibration and etc. Therefore, increase the cutting condition gradually from general one.

MAINTENANCE

- Regularly apply grease into the grease nipple installed so that adequate lubrication of moving parts is maintained and to keep moving parts free from dust and coolant.
Grease Model : HSG50 (50g/net)
- The boring head must be set on the smallest diameter when greased.
- Continue to inject grease until it appears to ooze out from behind the scale dial.
- Occasionally adjust the boring head through its entire range when storing for a period of time to avoid the grease from hardening.

※Continue to inject grease until it appears to ooze out from behind the scale dial.



! CAUTION

Never overhaul boring heads.