

Grip Ring GR-30 • GR-40

OPERATION MANUAL

Thank you for purchasing the Grip Ring GR-30/GR-40. The Grip Ring is an adjustable type flange, which is mountable at a predetermined position along the outside diameter of the spindle. Read this Operation Manual carefully before use.

1. CAUTIONS FOR HANDLING AND OPERATION

- Read these cautions carefully and only use in the manner intended.
- Warnings and cautions are intended to avoid potential hazards that could result in personal injury or damage to the device. These are classified as follows in accordance with the seriousness of the risk.

Class	Degree of Risk
WARNING	A safety hazard could result in bodily injury or damage to the device if the safety instructions are not properly followed.
CAUTION	A hazard that could result in light or moderate bodily injury or damage to the device if the safety instructions are not followed.

WARNING

- ① This Grip Ring is a special adjustable type flange that affixes the spindle to a machine. Install it on your machine tool or special purpose machine. Do not use the Grip Ring for any purpose other than mounting the spindle.
- ② Do not touch the Grip Ring while spindle is running. This is very dangerous.
- ③ Wear safety glasses, dust mask, and use a protective cover around the spindle whenever the spindle is rotating.
- ④ Never operate or handle the Grip Ring until you have thoroughly read the owner's manual and safe operation has been confirmed.
 - 1) To prevent injuries/damage, check the spindle and cutting tool for proper installation, before starting the spindle.
 - 2) Before disconnecting the spindle, always turn the control power off and turn the compressed air supply to the control unit off. Only then is it safe to remove the spindle.
- ⑤ When installing a spindle, tighten the lock bolt correctly and securely. Before using the spindle, recheck that the Grip Ring is securely installed and the spindle is securely clamped.

CAUTION

- ① Do not drop or hit the Grip Ring. This may cause damage to the spindle and/or motor.
- ② Never use oil or grease of a molybdenum type or oil or grease containing an extreme-pressure additive in the Grip Ring. Using grease in the Grip Ring will cause insufficient gripping force on the spindle.
- ③ When sizing the correct spindle housing diameter, a tolerance of $+0 \sim -0.01\text{mm}$ is strongly recommended. A spindle-housing diameter within the $+0 \sim -0.1\text{mm}$ tolerance range is mountable, however, this tolerance may cause poor concentricity and/or insufficient spindle housing gripping force.
- ④ Before using the Grip Ring, check that the Grip Ring is free from deformation, chipping, flaws, etc. If there is any deformation, chipping, or flaws on the Grip Ring, replace the Grip Ring with a new unit.
- ⑤ Stop working immediately when unusual vibration is observed. Afterwards, check that the Grip Ring is securely installed on the machine and to the spindle.
- ⑥ Always insure the Grip Ring is securely installed to the spindle before and after operating.
- ⑦ Do not disassemble, modify or attempt to repair the Grip Ring. Additional damage will occur to the Grip Ring. Service must be performed by NSK NAKANISHI or an authorized service center.

2. FEATURES

- ① The Grip Ring can be easily installed and uninstalled from the spindle and machine.
- ② The Grip Ring can be installed to an arbitrary position in the Clamping Area on the outside diameter of the spindle.
- ③ No spindle damage (crushing) will occur due to over tightening of the lock bolt when installing the spindle.
- ④ Easily mountable to machines.

3. SPECIFICATIONS AND DIMENSIONS

3-1 Specifications

Product Name	Grip Ring GR-30	Grip Ring GR-40
Model	GR-30	GR-40
Weight	385g	535g
Effective spindle housing diameter dimension	$\phi 30 \pm_{0.01}$	$\phi 40 \pm_{0.01}$

Standard Accessories	
GR-30	GR-40
<ul style="list-style-type: none"> • Mounting Bolt (M5 X 25) • 3pcs. • Operation Manual • 1set. 	<ul style="list-style-type: none"> • Mounting Bolt (M5 X 30) • 4pcs. • Operation Manual • 1set.

3-2 Outside View

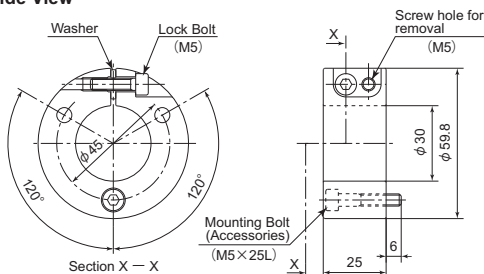


Fig.1 GR-30

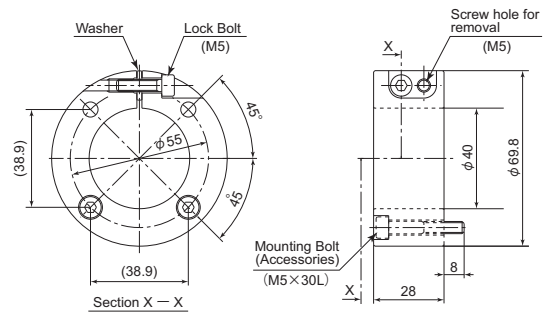


Fig.2 GR-40

4. DIAGRAM FOR INSTALLATION ON MACHINES

Dimensions for machine installation, refer to Fig. 3 and Fig. 4.

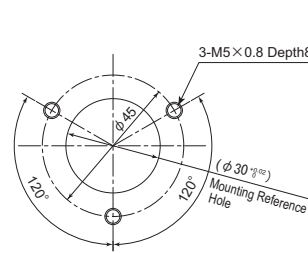


Fig.3 GR-30

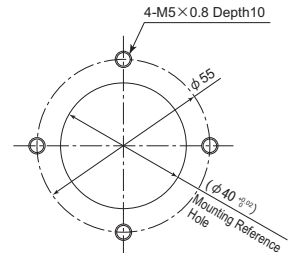
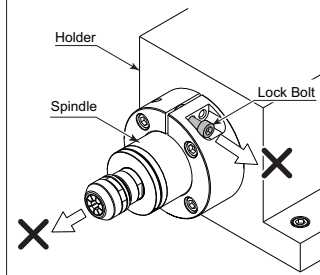


Fig.4 GR-40

5. INSTALLATION OF THE Grip Ring

CAUTION



- Never operate or handle the Grip Ring until you have thoroughly read the owner's manual and safe operation has been confirmed.
- Never remove the lock bolt. Removing the lock bolt will cause the washer to be permanently mis-located. Once the washer has moved, it may be impossible to attach the lock bolt.
- Do not move the spindle while the Grip Ring is attached to the machine. This may cause deformation and damage to the Grip Ring.

- ① Before installing the Grip Ring to the Spindle, wipe debris and dirt from the spindle surface as well as the inside diameter of the Grip Ring with alcohol, etc. to remove any debris or oil.
- ② Loosen the lock bolt of the Grip Ring, tighten the provided mounting bolt in the screw hole for removal, and widen the inside diameter of the Grip Ring, and then insert the spindle.
- ③ After positioning the Grip Ring around the outside diameter of the spindle, remove the provided mounting bolt, and tighten the lock bolt with a torque of $4\text{N} \cdot \text{m}$.
- ④ After checking that the spindle will not move in the Grip Ring, secure them to the machine with the provided mounting bolts. (Recommended tightening torque : $4\text{N} \cdot \text{m}$)
- ⑤ Remove the Grip Ring in the reverse order of installation. Loosen the lock bolt, insert the provided mounting bolt in the screw hole for spindle removal, then widen the inside diameter of the Grip Ring to allow the removal of the spindle.

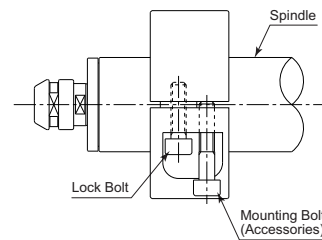


Fig.5

※Specifications may be changed without notice.

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