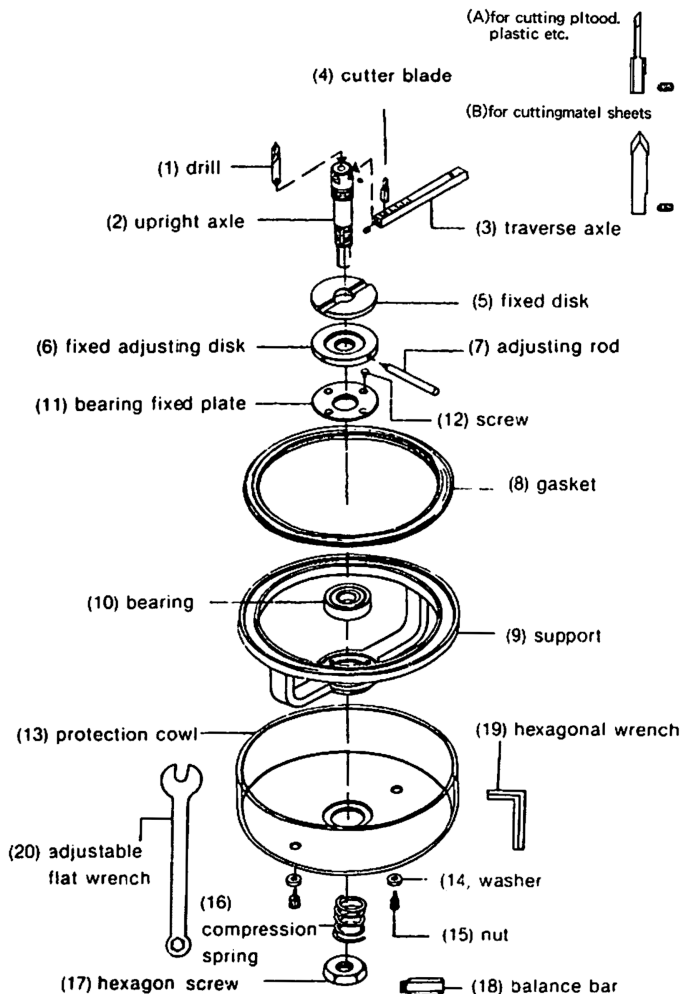
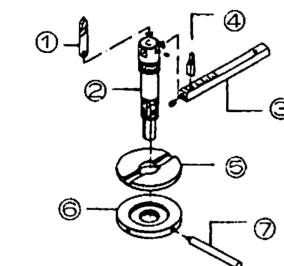


NICOR Model# 17999

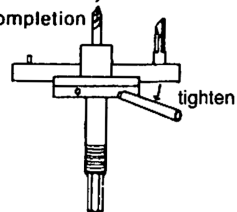
MULTIFUNCTIONAL ROUND HOLE CUTTER WITH ADJUSTABLE RADIUS BLADES PART LIST & CODE



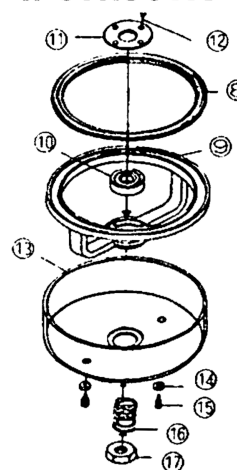
INTERNAL ASSEMBLY & INSTRUCTIONS



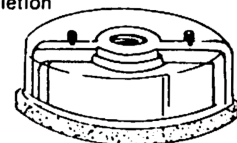
Internal Assembly
after completion



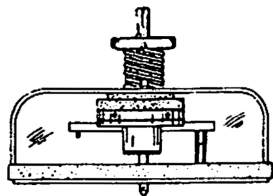
EXTERNAL HOUSING ASSEMBLY & INSTRUCTIONS



1. Insert the gasket (8) tightly into the slot of the support (9).
 2. Insert the bearing (10) into the middle bore of the support (8).
 3. Fix the bearing (10) by means of a bearing fixed plate.
 4. Adhere the protection cowl (13) on the external side of the support (9) and fix it with a washer (14) and screws (15).
 5. The assembly of above mentioned Point 1. to 4. is shown as the following drawing.
- Drawing of External Housing Assembly after completion



INSTRUCTIONS OF ROUND HOLE CUTTER ASSEMBLY



Insert the internal assembly into the bearing bore located at the internal side of the support, put on the compression spring (16) and fix it with a hexagon screw, see left drawing.

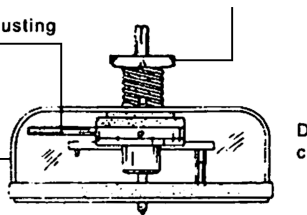
INSTRUCTION OF FUNCTIONS OF PARTS

Adjust the cutting thickness (internal ward adjustment for thin cutting, external ward adjustment for thick cutting)

Adjusting rod for adjusting the cutting size

Protection cowl prevents chips from flying

Drill for determine the cutting center

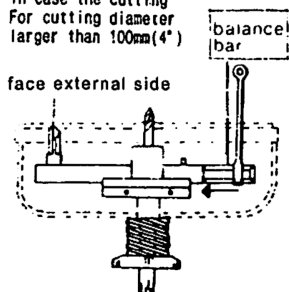


INSTRUCTIONS FOR USING BALANCE BAR

(The arrangement of a balance bar prevents vibrations from cutting)

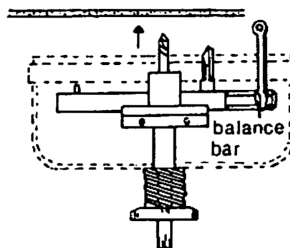
In case the cutting
For cutting diameter
larger than 100mm(4")

face external side



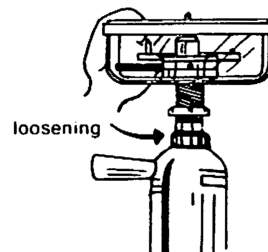
1. No need to use a balance bar if the max. cutting diameter is within 90mm(3 1/2") to 100mm(4").
2. Use 15, 21mm(3/4", 1 1/8") long balance bar if the max. cutting diameter is within 100mm(4") to 120mm(4 3/4").
3. Use 21, 36mm(1 1/8", 1 3/4") long balance bar if the max. cutting diameter is within 120mm(4 3/4") to 140mm(5 1/2").
4. Use 36, 56mm(1 3/4", 2 1/8") long balance bar if the max. cutting diameter is within 140mm(5 1/2") to 163mm(6 3/8").

For cutting diameter
smaller than 90mm(3 1/2")



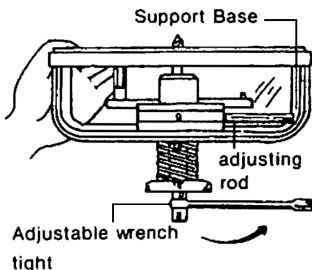
1. Use 15mm(3/4") balance bar if the max. cutting diameter is within 70mm(2 3/4") to 80mm(3 1/8").
2. Use 21mm(1 1/8") balance bar if the max. cutting diameter is within 60mm(2 3/8") to 70mm(2 3/4").
3. Use 36, 21mm(1 3/4", 1 1/8") balance bar if the max. cutting diameter is within 45mm(1 3/4") to 60mm(2 3/8").
4. Use 56, 36mm(2 1/8", 1 3/4") balance bar if the max. cutting diameter is within 30mm(1 1/8") to 45mm(1 3/4").

INSTRUCTIONS FOR USING ADJUSTING ROD



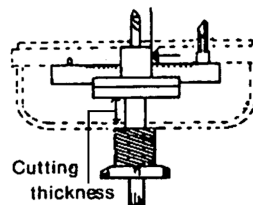
How to adjust it for drill cutting :

1. Insert the front part of the adjusting rod (7) into the fixed adjusting disk, hold the drill with your left hand and hold the side of the support and press it tightly to the inside as per arrow direction.
2. After pressing it to outside for releasing as per arrow directions, you can adjust the size.
3. Discharge the adjusting rod (7) before you start cutting.



How to adjust it using an flat wrench :

1. Insert the front part of the adjusting rod (7) into the fixed adjusting disk, hold the hole cutter with your left hand and adapt the adjustable wrench with your right hand into the hexagonal end of the upright axle (2) and screw it tightly to the external side and loosen it to the internal side.



HOW TO MEASURE SIZES

1. The scale on traverse axle (3) is in cm.
2. The measure of scale based on diameter.
3. Loosen the traverse axle before adjusting.
4. Align the cutting size to the square hole of upright axle as per arrow indicated. (See drawing)

CUTTING INSTRUCTIONS

1. Install the hole cutter on the drill chuck and lock it firmly.
2. Adjust the cutting size and thickness according to the above mentioned instruction for using adjusting rod.
3. In case of cutting wooden boards, the cutter blade should be arranged in such a way that its inclined surface to be faced internally and its perpendicular plane surface to be faced externally. Please refer to the drawing of Internal Assembly and Instructions.
4. In case of cutting metal sheets, the cutter blade should be arranged in such a way that its triangle inclined surface to be faced internally and its inclined surface to be faced externally.
5. Align the drill head of the hole cutter to the center point of the cutting range and turn on the drill switch to start cutting.
6. In case of ceiling cutting, press the drill slowly upwards depending on the revolution speed of the drill. Strong pressing is strictly prohibited. After finishing cutting, the power switch of the drill should be turn off first before you discharge it.
7. In case of cutting on the ground the rear side of the cutting surface should be lifted with wooden boards and press it slowly down depending on the revolution speed of the drill. Strong pressing is strictly prohibited. After finishing cutting, the power switch of the drill should be turn off first before you discharge it.
8. In order to maintain a long service life of the cutter, you should operate this tool correctly.

USED IN CEILING CUTTING:

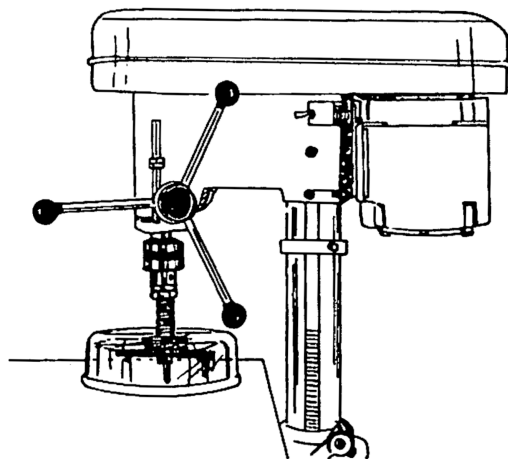
1. Cuts plywood, plasterboard, acrylic sheets and silicone sheets up to 2.4 cm. ($\frac{1}{4}$ ") (use blade with longer cutting surface).
2. Drilling on the ground based on the center point from the face and opposite side allows cuts up to 4.5 cm. ($1\frac{3}{4}$ ").
3. For cutting aluminum, brass and/or metal sheets up to 1mm thick, please use shorter blade, as Fig. B.
(A: for cutting diameter up to 11.5 cm. ($4\frac{1}{2}$ ") cutting speed 900 rpm.)
(B: for cutting diameter from 11.5mm ($4\frac{1}{2}$ ") to 163mm ($6\frac{3}{8}$ "), cutting speed up to 500rpm.)
4. Cutting diameter: max, 16.3 cm ($6\frac{3}{8}$ "), min, 3 cm ($1\frac{3}{16}$ ").

FEATURES

1. Use support base and drill to steady the cutting position.
2. Protection cowl is injection molded by PVC material, therefore it is robust and prevents chips from flying.
3. Cutter can be used with any variable speed drill safely and rapidly.

INSTRUCTION FOR USING WITH A DRILL

1. Adjust the cutting size and thickness as described above under "How to adjust it using an flat wrench : and lock it in the chuck of a drill.
2. The rear side of the cutting surface should be lifted with wooden board, turn on the drill switch, hold the handle of the drill with your hand, align the drill bit of the hole cutter to the center point and press it slowly down for cutting.
3. After finishing the cut, the handle of the drill should be loosened first.



*WARNING

1. The drill, blade traverse axle and balance rod must be fixed tightly while cutting.
2. If there is any noise during operation, please check whether the screws are loosened, if yes, please adjust it.
3. After size adjustment, the balance bar should be discharged prior to cutting.
4. After operation, the bearing (10) and upright axle (2) should be cleaned.