

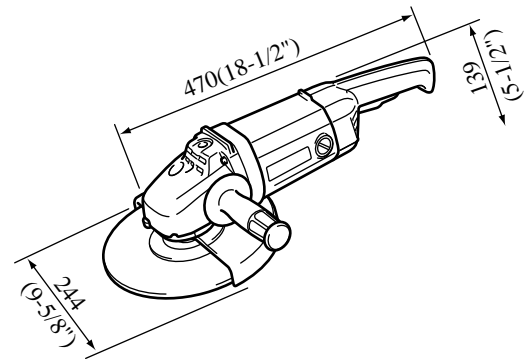
Models No. ▶ 9047

Description ▶ 230mm Dish Grinder

CONCEPTION AND MAIN APPLICATIONS

230mm Disk grinder based on #9029 and developed intending the improvement of Motor durability and the prevention of Lock nut from fastening too much by Torque limiter.

#9049 F: 9049 with Super flange



► Specifications

Voltage (V)	Current(A)	Cycle(Hz)	Consuming power(W)	Nominal output(W)	Max. output(W)
100	15.0	50/60	1,430	600	2,600
120	15.0	50/60	1,650	850	2,600
200	11.0	50/60	2,100	1,350	3,500
220	10.0	50/60	2,100	1,350	3,500
230	9.6	50/60	2,100	1,350	3,500
240	9.2	50/60	2,100	1,350	3,500

Motor	Series commutator motor
Speed at no load	6600 rpm
Grinding wheel	Outer dia.230 x Inner dia. 22.23 x Thickness 6 (9" x 7/8" x 1/4")

► Standard equipment

Lock nut wrench 35
Grip

► Optional accesories

Inner flange 47 set (DIN spec., Super flange)
Depressed center wheel
Diamond wheel
Wire cup brush 110 set
Dust collecting wheel cover
Loop handle

With Torque limiter

Prevents Lock nut from too much fastening caused by starting and heavy load operation , and makes removing Wheel easier.

Motor of which durability has been improved

Durability has been improved by making measures against Motor wire cutting and Dust particles owing to Varnish treatment of Armature and Taping treatment of Field.

With Soft start

Large switch of good operativity

With Super flange

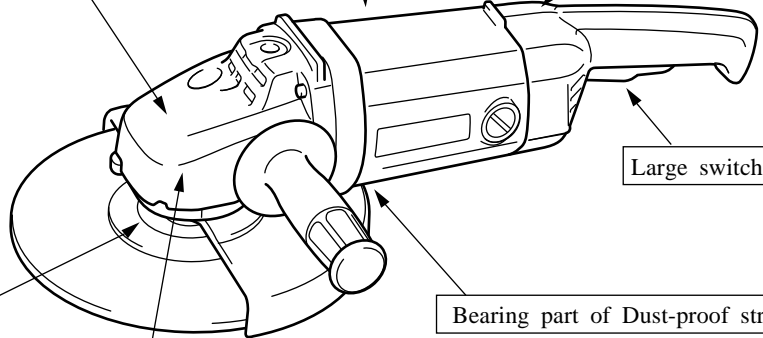
(only F spec. model)

Bearing part of Dust-proof structure

Labyrinth structure (Maze system to prevent dusts from entering) is applied in Commutator side of Armature and Fan side of Bearing.

Gear housing turning 90° every time and attachable

Useful for cutting works



► Comparison with other models

1) 230mm Model

Spec.	Model name	Makita		Makita		BOSCH	
	W/out Super flange	9049	9049S	9029	9029S	GWS21-230S	GWS21-230JS
	W/Super flange	9049F	9049SF	9029F	9029SF	(w/ SDS- click)	(w/SDS-click)
Soft start		No	Yes	No	Yes	No	Yes
*1 Wheel diameter(mm)		230(9")	←	←	←	←	←
Consuming power (W)		2100	←	←	←	←	←
Speed at no load (rpm)		6600	←	←	←	6500	←
*2 Weight (actual value)	Machine (kg)	4.8(10.6lbs)	←	4.7(10.4lbs)	←	4.2(9.6lbs)	←
	W/out Wheel (kg)	5.8(12.8lbs)	←	5.5(12.1lbs)	←	←	←
Breaking carbon brush		Yes (One side: 1pc)	←	←	←	←	←

*1 Comparison in the specifications for high voltage areas (200~240V).

*2 "Machine" means a weight excluding Wheel, Wheel cover, Inner flange, Lock nut and Power supply cord.

"W/out Wheel" means a weight excluding Wheel and Power supply cord.

1) 180mm Model

Spec.	Model name	Makita		Makita		BOSCH	
	W/out Super flange	9047	9047S	9027	9027S	GWS21-180S	GWS21-180JS
	W/Super flange	9047F	9047SF	9027F	9027SF	(w/ SDS- click)	(w/SDS-click)
Soft start		No	Yes	No	Yes	No	Yes
*1 Wheel diameter(mm)		180(7")	←	←	←	←	←
Consuming power (W)		2100	←	←	←	←	←
Speed at no load (rpm)		8500	←	←	←	←	←
*2 Weight (actual value)	Machine (kg)	4.8(10.6lbs)	←	4.7(10.4lbs)	←	4.2(9.6lbs)	←
	W/out Wheel (kg)	5.5(12.1lbs)	←	5.4(11.9lbs)	←	←	←
Breaking carbon brush		Yes (One side: 1pc)	←	←	←	←	←

*1 Comparison in the specifications for high voltage areas (200~240V).

*2 "Machine" means a weight excluding Wheel, Wheel cover, Inner flange, Lock nut and Power supply cord.

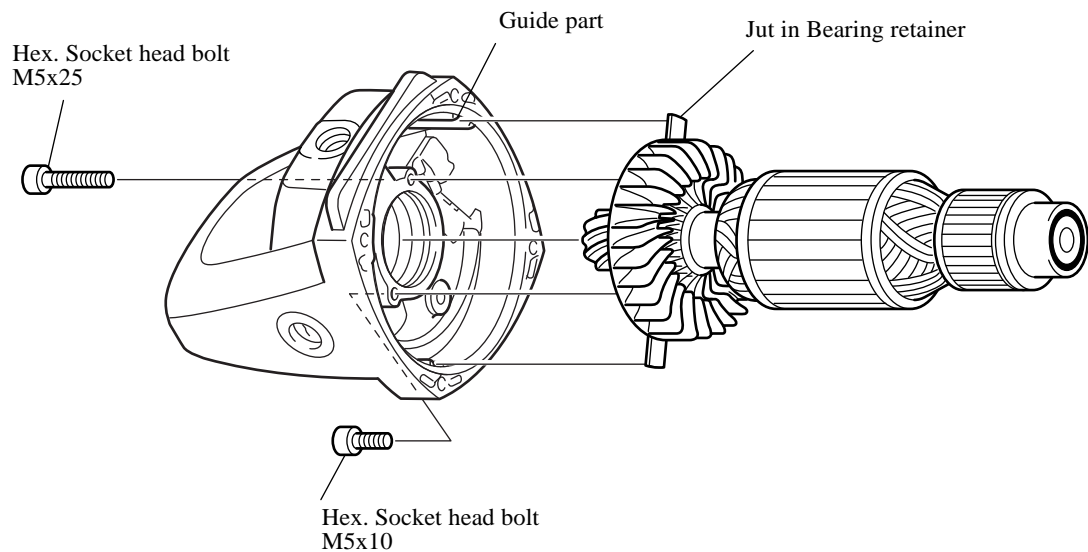
"W/out Wheel" means a weight excluding Wheel and Power supply cord.

► Repair

1) Exchange of Armature

- i. Remove Wheel, Wheel cover, Bearing box respectively.
- ii. After removing Carbon brush, take out a unit of Gear housing and Armature from Motor housing.
- iii. Remove Bearing retainer fixing bolts (Hex. Socket head bolt, M5x10, M5x25) and pull out Armature.
- iv. In attaching Armature to Gear housing, put Bearing retainer guide of Gear housing together with Jut of Bearing retainer and insert it, fastening by Hex.

Socket head bolts. Be sure to use Hex. Socket head bolt with adhesives, and replace it with new one after removing it.



2) How to exchange Spiral gear 12 (16)

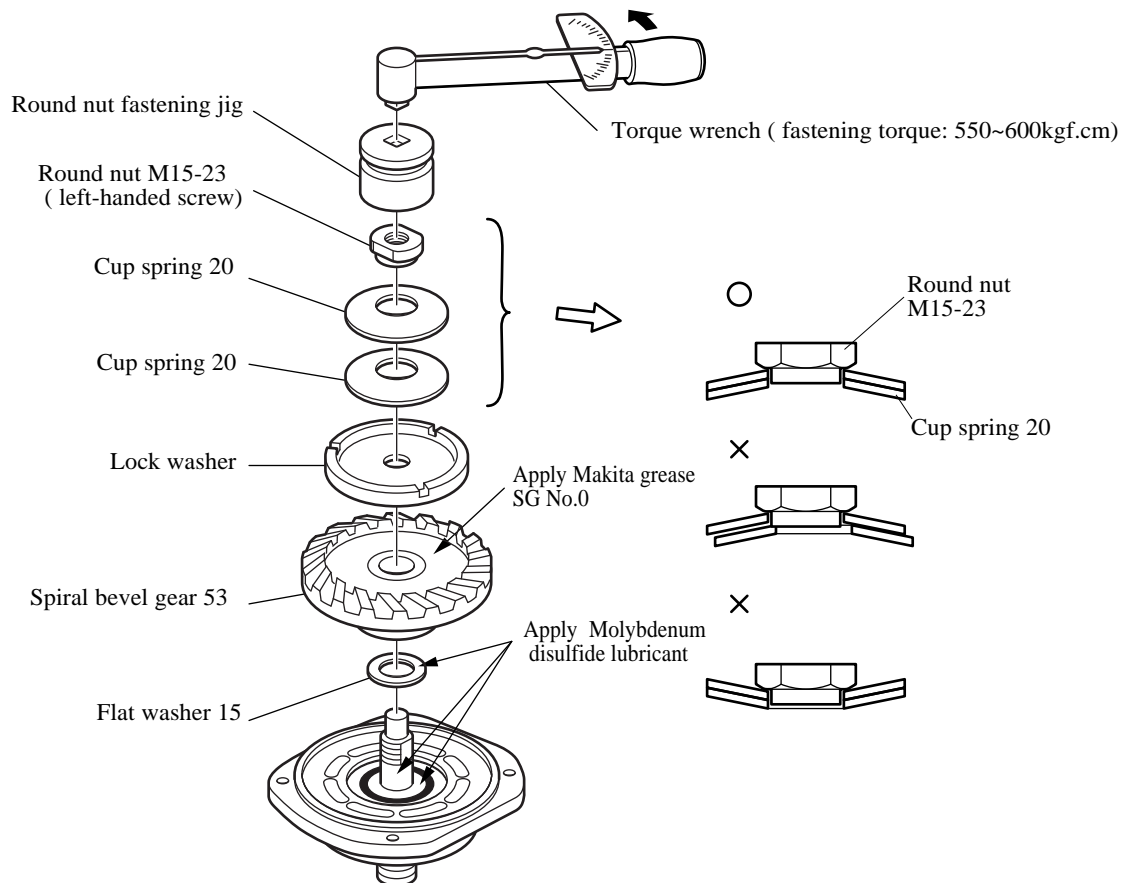
After having removed Armature from Gear housing according to the way above 1), remove Retaining ring in upper part of Gear and exchange it.

If Armature is attaching to Gear housing, you cannot exchange Gear.

3) How to exchange Lock washer and Spiral bevel gear

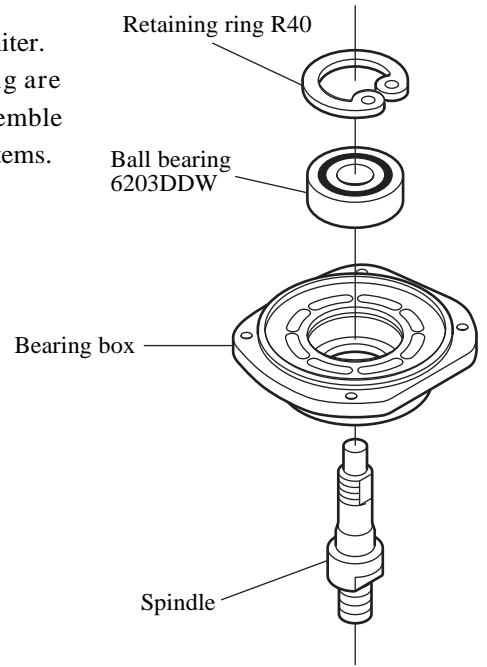
When exchanging components, check every contact face, and exchange them together if the surfaces are rough (scratched) to make Torque limiter function properly. Also, replace Round nut M15 (w/adhesive) and Cup spring 20 with new ones in disassembly.

- I. Remove Torque limiter assembly from Gear housing.
- II. Remove Round nut M15-23, and pull out Cup spring 20, Lock washer, Spiral bevel gear 53 and Flat washer 15. (Note: Round nut for left-handed screw)
- III After exchanging components, install Cup spring 20, Lock washer, Spiral bevel gear 53 and Flat washer. At that time be careful so that Molybdenum disulfide lubricant and Makita grease SG No.0 may not stick to Spindle screw and install them according to the following procedure. Further, see to it that dusts never enter the contact face of each component.
 - i) Apply Molybdenum disulfide lubricant to the part where Ball bearing inner wheel and Spiral bevel gear of Spindle are placed.
 - ii) Put Flat washer 15 into Spindle, and apply Molybdenum disulfide lubricant to Flat washer 15.
 - iii) Put Spiral bevel gear 53 into Spindle, apply Makita grease SG No.0 on upper face of Spiral bevel gear, and install Lock washer and Cup spring in this order.
- IV. Fix two faces of Spindle by Vice, twist Round nut M15-23, preventing its Convex part from coming to Cup spring, and fasten it by Torque 550~600kgf.cm. Besides, please ask a bout Nut fastening jig to our Sales Management Section or International Planning Room.



How to exchange Spindle and Ball bearing 6203

- i) According to the above I , II procedures, disassemble Torque limiter.
- ii) Spindle, Bearing box, Ball bearing 6203 and Retaining ring are assembled as shown in the illustration. After disassembly, assemble them in the order of above III and IV , having exchanged faulty items.



4) Reference: Adjusting Gear housing angles.

- In Gear housing, angles can be adjusted to four directions every 90 . When adjusting, obey the following procedures.
- i. Remove Wheel and Wheel cover.
- ii. Remove Gear housing fixing screws (Tapping screws: Flange PT 5x35).
- iii. Attach Gear housing again in correspondence with a desirable angle.

