

Dynorbital® Silver Supreme

12,000 RPM Random Orbital Sander

Safety, Operation and Maintenance – Save This Document and Educate All Personnel

3/8" Orbit Models:

69000, 69003, 69004, 69005, 69008,
69009, 69010, 69013, 69014, 69060,
69100, 69103, 69104

3/16" Orbit Models:

69015, 69018, 69019, 69020, 69021,
69023, 69024, 69025, 69026, 69028,
69029, 69061, 69105, 69108, 69109

3/32" Orbit Models:

69030, 69033, 69034, 69035, 69038,
69039, 69040, 69043, 69044, 69062,
69110, 69113, 69114



Model 69020

⚠ WARNING

Read and understand this tool manual before operating your air tool. Follow all safety rules for the protection of operating personnel as well as adjacent areas. Always operate, inspect and maintain this tool in accordance with the American National Standards Institute (ANSI) Safety Code for Portable Air Tools – B186.1. For additional safety information, refer to Safety Requirements for the Use, Care and Protection of Abrasive Wheels – ANSI B7.1, Code of Federal Regulation – CFR 29 Part 1910, European Committee for Standards (EN) Hand Held Non-Electric Power Tools – Safety Requirements and applicable State and Local Regulations.



Read and understand tool manual before work starts to reduce risk of injury to operator, visitors, and tool.



Eye protection must be worn at all times, eye protection to conform to ANSI Z87.1.



Ear protection to be worn when exposure to sound, exceeds the limits of applicable Federal, State or local statutes, ordinances and/or regulations.



Practice safety requirements. Work alert, have proper attire, and do not operate tools under the influence of alcohol or drugs.



Respiratory protection to be used when exposed to contaminants that exceed the applicable threshold limit values required by law.



Air line hazard, pressurized supply lines and flexible hoses can cause serious injury. Do not use damaged, frayed or deteriorated air hoses and fittings.

Some dust created by sanding, grinding, drilling, and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- Lead from lead-based paints
- Crystalline silica from bricks and cement and other masonry products
- Arsenic and chromium from chemically treated lumber

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

SAFETY and OPERATING INSTRUCTIONS



Carefully Read and Understand the General and Sander/Polisher sections found in Tool Safety and Operating Guidelines (PN00001676) Before Handling or Using Tool.

Carefully Read all instructions before operating or servicing any Dynabrade® Abrasive Power Tool. Products offered by Dynabrade are not to be modified, converted or otherwise altered from the original design.

Tool Intent: Dynorbital® Silver Supreme Sanders are used for sanding and finishing a variety of materials including wood, metal, plastic, fiberglass, solid surfaces, composites, rubber, glass and stone.

DO NOT USE Tool for Anything Other Than Its Intended Applications.

Training: Proper care, maintenance, and storage of your air tool will maximize tools performance and reduce chance for accident.

Employer's Responsibility: Provide operators with safety instructions and training for safe use of tools and accessories.

Report to Your Supervisor any Condition of the Tool, Accessories or Operation you Consider Unsafe.

MAINTENANCE INSTRUCTIONS

Important: To keep tool safe, a Preventative Maintenance Program is recommended. The program should include inspection of the tool and all related accessories and consumables, including air lines, pressure regulators, filters, oilers, etc. (refer to CAGI B186.1 for additional maintenance information). If accessory or tool breakage occurs, investigate failure to determine the cause and correct before issuing tool for work. Use the following schedule as a starting point in developing a Preventative Maintenance Program. If tool does not operate properly (RPM, vibration, start/stop) after these scheduled checks or at any time, the tool must be repaired and corrected before returning tool to use.

INSTALLATION

- To ensure long life and dependable service, use a Closed Loop Air System and Filter-Regulator-Lubricator (FRL) as diagramed below.
- Each tool should have its own dedicated hose connected to an air supply FRL. Quick disconnects should be installed at the FRL in an effort to reduce contamination into the tool. Securely affix all fittings and hose assemblies.
- It is strongly recommended that all Dynabrade rotary vane air tools be used with a Filter-Regulator-Lubricator to minimize the possibility of misuse due to unclean air, wet air or insufficient lubrication. Dynabrade recommends the following: **10681** Air Line Filter-Regulator-Lubricator — Provides accurate air pressure regulation, two-stage filtration of water contaminants and micro-mist lubrication of pneumatic components.
- Dynabrade recommends 1 drop of air lube per minute for each 20 SCFM (example: if the tool specification states 40 SCFM, set the drip rate on the filter-lubricator to 2 drops per minute). **95842** Dynabrade Air Lube is recommended.

MAINTENANCE SCHEDULE

Maintenance schedules depend on the type and style of tool. Refer to page 3 to reference symbols associated with specific maintenance items/areas. Match maintenance schedules accordingly. See page 4 for any additional maintenance information.

Note: Turbine style air motors do not require oil.

Daily (every 8 hours):

- Inspect tool and accessories for damage or broken parts. Replace items as necessary to ensure proper operation and safety.
- **O** Lubricate motor as recommended. Use **95842** Dynabrade Air Lube (10W/NR). Apply 1 drop/minute of air lube per 20 SCFM.
- Check air line pressure with a gage. (MAX. 90 PSIG or 6.2 Bar operating pressure at the air inlet of the tool.)
- **W** Lubricate wick system and right angle gears through gear case fitting. Apply 3 plunges of **95848** Gear Oil. Use **95541** Lubricant Gun (Prime lubricant gun before use).
- Check tool for proper operation: If operating improperly or demonstrates unusual vibration, the tool must be serviced and problem corrected before further use.

Every 20 Hours/Once a Week (which ever comes first):

- **G** For tools without "wick system", lubricate right angle gears through lubricant fitting. Apply 1 plunge of **95542** Grease. Use **95541** Lubricant Gun. (Prime lubricant gun before use).
- Measure RPM (speed) by setting air pressure to 90 PSIG (6.2 Bar) at tool inlet, without accessory mounted, while the tool is running. Using

tachometer, check spindle speed of the tool. Unless otherwise stated the no-load speed may not exceed the rated speed. If tool speed exceeds maximum rated RPM, service as required and correct before use.

- If tool is running too fast: look for worn, damaged or missing governor, air control rings and silencer(s). Service as required.
- If tool is running too slow: look for malfunctioning governor, clogged inlet screen, silencer(s) or air stream. Service as required.

Note: Special care must be taken when servicing governors. Refer to specific tool manual for governor instructions and/or speed control devices. Governor assemblies made from molded plastic components are non-serviceable and must be replaced.

Every 50 Hours:

- **G** Lubricate planetary gears through gear case fitting with 3 plunges of **95544** Grease. Use **95541** Lubricant Gun. (Prime lubricant gun before use).

REPAIR

- Use only genuine Dynabrade replacement parts to ensure quality. To order replacement parts, specify Model#, Serial# and RPM of your air tool.
- Mineral spirits are recommended when cleaning the tool and parts. Do not clean tool or parts with any solvents or oils containing acids, esters, ketones, chlorinated hydrocarbons or nitro carbons.
- A Motor Tune-Up Kit is available which includes high wear and medium wear motor parts.
- Air tool markings must be kept legible at all times, if not, reorder housing and replace. User is responsible for maintaining specification information.

- **O** After maintenance is performed on tool, add a few drops of **95842** Dynabrade Air Lube to the tool inlet and start the tool a few times to lubricate air motor. Verify RPM (per 20 hr maintenance schedule), vibration and operation.

HANDLING & STORAGE

- Use of tool rests, hangers and/or balancers is recommended.
- Protect tool inlet from debris (see Notice below).
- **Do Not** carry tool by air hose or near the tool throttle lever.
- Store accessories in protective racks or compartments to prevent damage.
- Follow the handling instructions outlined in the operating instructions when carrying the tool and when changing accessories.
- Protect accessories from exposure to water, solvents, high humidity, freezing temperature and extreme temperature changes.

END OF USE/DISPOSAL

When tool has reached its end of useful service, disassemble tool into its primary components (i.e. steel, aluminum and plastic) and recycle or discard per local, state and/or federal regulations as to not harm the environment.

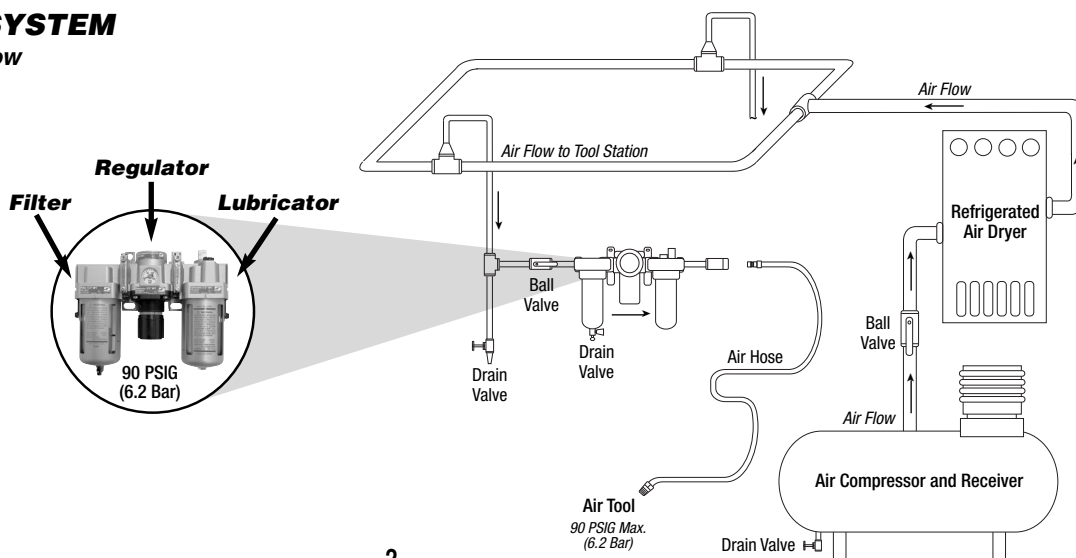
NOTICE

All Dynabrade air motors use the highest quality parts available and are manufactured to exacting tolerances. Air motor failures are often traced to lack of lubrication or unclean air supply. Compressed air can force dirt and other contaminants into motor bearings causing early failure. Contaminants can score cylinder wall and vanes resulting in reduced efficiency and power. Our warranty obligation is contingent upon proper use of our tools. Air motors which have been subjected to misuse, contaminated air or lack of lubrication will void warranty.

CLOSED LOOP AIR SYSTEM

Sloped in Direction of Air Flow

- Dynabrade Air Power Tools are designed to operate at 90 PSIG (6.2 Bar) maximum air pressure at the tool inlet, when the tool is running. Use recommended regulator to control air pressure.
- Ideally the air supply should be free from moisture. To facilitate removing moisture from air supply, the installation of a refrigerated air dryer after the compressor and the use of drain valves at each tool station is recommended.



Lubricator Setting

1 Drop/Minute per 20 SCFM

Dynorbital® Silver Supreme Complete Assembly

KEY

O Oil: O₁ = Air Lube

A Adhesive: A₂ = Loctite #271
A₈ = Loctite #567

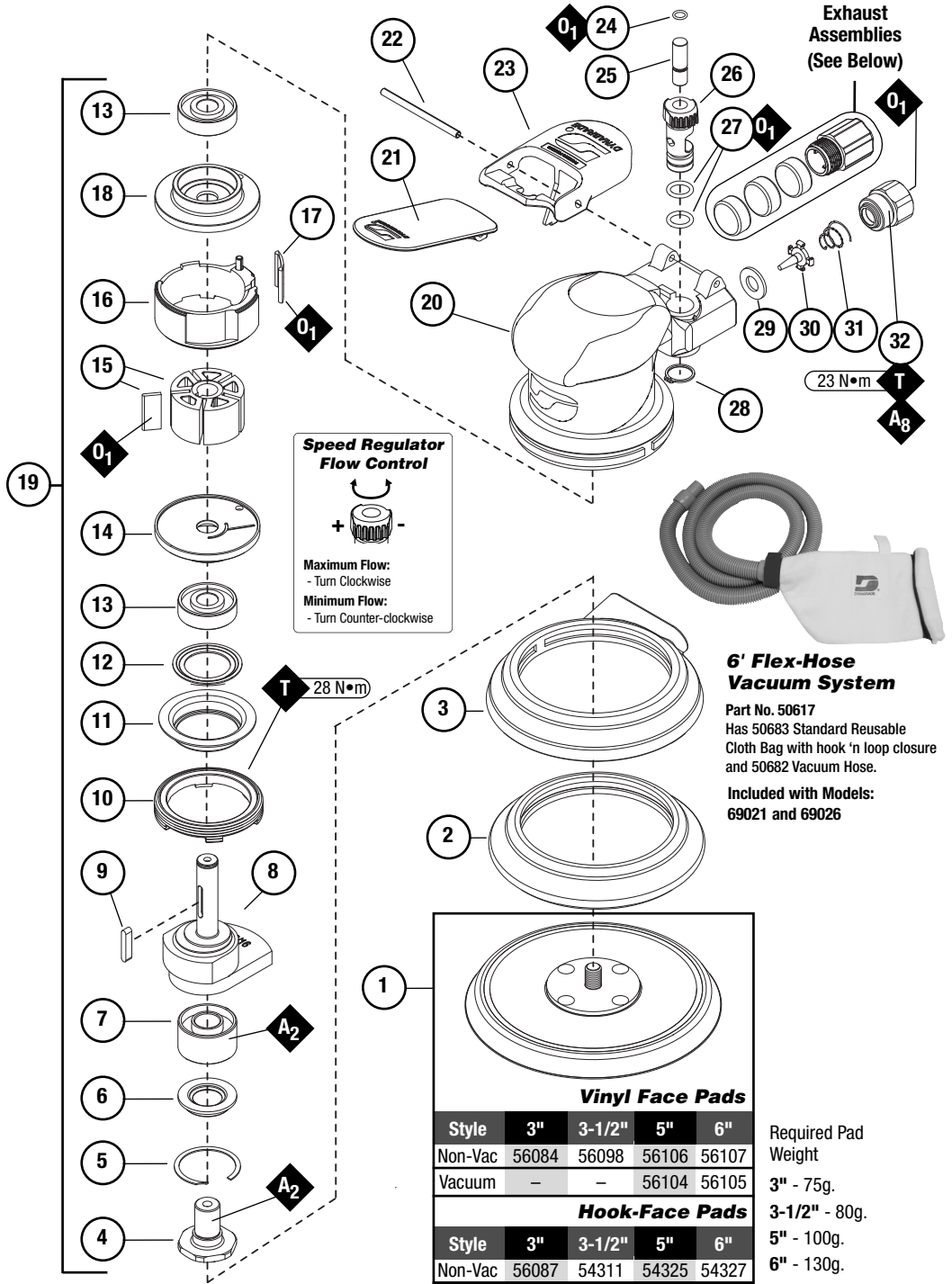
T Torque: N•m x 8.85 = In. - lbs.

Always follow adhesive manufacturers cleaning and priming recommendations.

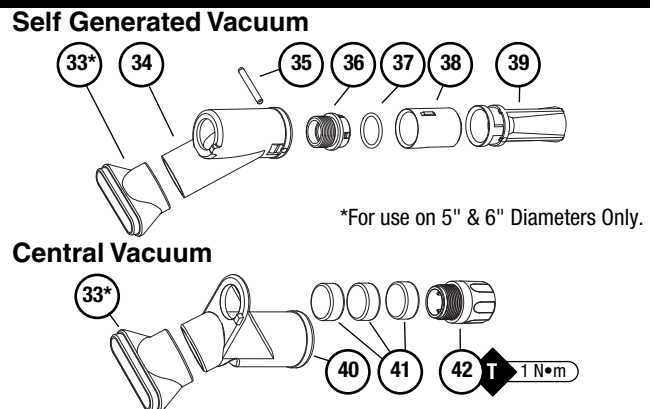
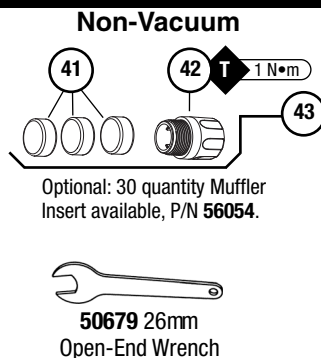
INDEX KEY

No. Part # Description

- 1 Back-Up Pads - See Chart
 - 2 Non-Vacuum Shroud
 - 3 54458 3" & 3-1/2"
 - 3 56051 5" & 6"
 - 4 Vacuum Shroud
 - 5 57084 3" & 3-1/2"
 - 6 69362 5"
 - 6 69363 6"
 - 4 57069 Balancer Shaft
 - 5 95630 Snap Ring
 - 6 59084 V-Seal
 - 7 56052 Bearing
 - 8 Motor Shaft Balancer
- | Orbit | 3" | 3-1/2" | 5" | 6" |
|-------|-------|--------|-------|-------|
| 3/8" | 59122 | 59070 | 59071 | 59072 |
| 3/16" | 59120 | 59060 | 59061 | 59062 |
| 3/32" | 59121 | 59065 | 59066 | 59067 |
- 9 56047 Key
 - 10 59058 Lock Ring
 - 11 59057 Front Bearing Seal
 - 12 59083 Felt
 - 13 58368 Bearing (2)
 - 14 69361 Front Bearing Plate
 - 15 57113 Rotor/Vane Set
 - 16 69350 Cylinder
 - 17 69352 Seal
 - 18 57891 Rear Bearing Plate
 - 19 Drop-In Motor Assembly (See Chart -Page 4)
 - 20 Housing (See Chart - Page 4)
 - 21 69356 Throttle Lever - 3/8"
 - 21 69360 Throttle Lever - 3/16"
 - 21 69357 Throttle Lever - 3/32"
 - 22 94590 Pin
 - 23 57041 Comfort Platform
 - 24 98459 O-Ring
 - 25 58363 Valve Stem
 - 26 59075 Speed Regulator
 - 27 01025 O-Ring (2)
 - 28 95697 Retaining Ring
 - 29 01464 Seal
 - 30 58365 Tip Valve
 - 31 01468 Spring
 - 32 01494 Inlet Bushing
 - 33 69364 Shroud Adapter (5" & 6")
 - 34 57083 Vacuum Adapter
 - 35 96197 Dowel Pin
 - 36 57066 Muffler Body
 - 37 95526 O-Ring
 - 38 69353 Vac Nozzle
 - 39 57067 Vac Tube
 - 40 57093 Vacuum Adapter
 - 41 56027 Muffler Insert (3)
 - 42 69359 Muffler Cap
 - 43 69272 Muffler Assembly (Includes 2 Inserts)



Note: 56027 Muffler Insert(s) are installed with (1) in the housing body and (2) in the muffler cap. Replace accordingly.



MACHINE SPECIFICATIONS

Motor .26 hp (194 W) • 12,000 RPM • 5/16"-24 Pad Thread • 1/4" NPT Air Inlet Thread
 Hose I.D. 1/4" (6 mm) • Air Flow 16 SCFM (450 LPM) • Air Pressure 90 PSIG (6.2 Bar)
 Sound Level is the pressure measurement according to ISO - 15744.

Model Number	Pad Diameter	Vacuum Style	Orbit	Sound	Weight	Height	Length	Replacement Housing
69000	3-1/2" (89 mm)	Non-Vac	3/8" (10 mm)	76 dB(A)	1.8 (.8)	3-1/2" (89)	6" (152 mm)	69300
69003	3-1/2" (89 mm)	Self Gen. Vac	3/8" (10 mm)	83 dB(A)	1.9 (.9)	3-1/2" (89)	8-1/2" (216 mm)	69301
69004	3-1/2" (89 mm)	Central Vac	3/8" (10 mm)	79 dB(A)	1.9 (.9)	3-1/2" (89)	7" (178 mm)	69302
69005	5" (127 mm)	Non-Vac	3/8" (10 mm)	79 dB(A)	1.9 (.9)	3-1/2" (89)	6-1/2" (165 mm)	69303
69008	5" (127 mm)	Self Gen. Vac	3/8" (10 mm)	80 dB(A)	2.0 (.9)	3-1/2" (89)	8-1/2" (216 mm)	69304
69009	5" (127 mm)	Central Vac	3/8" (10 mm)	80 dB(A)	2.0 (.9)	3-1/2" (89)	7-1/4" (184 mm)	69305
69010	6" (152 mm)	Non-Vac	3/8" (10 mm)	83 dB(A)	1.9 (.9)	3-1/2" (89)	7" (178 mm)	69306
69013	6" (152 mm)	Self Gen. Vac	3/8" (10 mm)	83 dB(A)	2.1 (.9)	3-1/2" (89)	9" (229 mm)	69307
69014	6" (152 mm)	Central Vac	3/8" (10 mm)	84 dB(A)	1.9 (.9)	3-1/2" (89)	7-3/4" (197 mm)	69308
69015	3-1/2" (89 mm)	Non-Vac	3/16" (5 mm)	77 dB(A)	1.7 (.8)	3-1/2" (89)	6" (152 mm)	69309
69018	3-1/2" (89 mm)	Self Gen. Vac	3/16" (5 mm)	82 dB(A)	1.8 (.8)	3-1/2" (89)	8-1/2" (216 mm)	69310
69019	3-1/2" (89 mm)	Central Vac	3/16" (5 mm)	83 dB(A)	1.8 (.8)	3-1/2" (89)	7" (178 mm)	69311
69020	5" (127 mm)	Non-Vac	3/16" (5 mm)	77 dB(A)	1.8 (.8)	3-1/2" (89)	6-1/2" (165 mm)	69312
69021/69023	5" (127 mm)	Self Gen. Vac	3/16" (5 mm)	81 dB(A)	1.9 (.9)	3-1/2" (89)	8-1/2" (216 mm)	69339/69313
69024	5" (127 mm)	Central Vac	3/16" (5 mm)	83 dB(A)	1.9 (.9)	3-1/2" (89)	7-1/4" (184 mm)	69314
69025	6" (152 mm)	Non-Vac	3/16" (5 mm)	77 dB(A)	1.8 (.8)	3-1/2" (89)	7" (178 mm)	69315
69026/69028	6" (152 mm)	Self Gen. Vac	3/16" (5 mm)	83 dB(A)	2.0 (.9)	3-1/2" (89)	9" (229 mm)	69340/69316
69029	6" (152 mm)	Central Vac	3/16" (5 mm)	83 dB(A)	2.0 (.9)	3-1/2" (89)	7-3/4" (197 mm)	69317
69030	3-1/2" (89 mm)	Non-Vac	3/32" (2 mm)	75 dB(A)	1.7 (.8)	3-1/2" (89)	6" (152 mm)	69318
69033	3-1/2" (89 mm)	Self Gen. Vac	3/32" (2 mm)	83 dB(A)	1.8 (.8)	3-1/2" (89)	8-1/2" (216 mm)	69319
69034	3-1/2" (89 mm)	Central Vac	3/32" (2 mm)	81 dB(A)	1.8 (.8)	3-1/2" (89)	7" (178 mm)	69320
69035	5" (127 mm)	Non-Vac	3/32" (2 mm)	77 dB(A)	1.7 (.8)	3-1/2" (89)	6-1/2" (165 mm)	69321
69038	5" (127 mm)	Self Gen. Vac	3/32" (2 mm)	84 dB(A)	1.9 (.9)	3-1/2" (89)	8-1/2" (216 mm)	69322
69039	5" (127 mm)	Central Vac	3/32" (2 mm)	81 dB(A)	1.8 (.8)	3-1/2" (89)	7-1/4" (184 mm)	69323
69040	6" (152 mm)	Non-Vac	3/32" (2 mm)	77 dB(A)	1.8 (.8)	3-1/2" (89)	7" (178 mm)	69324
69043	6" (152 mm)	Self Gen. Vac	3/32" (2 mm)	81 dB(A)	2.0 (.9)	3-1/2" (89)	9" (229 mm)	69325
69044	6" (152 mm)	Central Vac	3/32" (2 mm)	82 dB(A)	2.0 (.9)	3-1/2" (89)	7-3/4" (197 mm)	69326
69060	6" (152 mm)	Non-Vac	3/8" (10 mm)	83 dB(A)	1.9 (.9)	3-1/2" (89)	7" (178 mm)	69336
69061	6" (152 mm)	Non-Vac	3/16" (5 mm)	77 dB(A)	1.8 (.8)	3-1/2" (89)	7" (178 mm)	69337
69062	6" (152 mm)	Non-Vac	3/32" (2 mm)	77 dB(A)	1.8 (.8)	3-1/2" (89)	7" (178 mm)	69338
69100	3" (76 mm)	Non-Vac	3/8" (10 mm)	79 dB(A)	1.8 (.8)	3-1/2" (89)	6" (152 mm)	69327
69103	3" (76 mm)	Self Gen. Vac	3/8" (10 mm)	81 dB(A)	1.9 (.9)	3-1/2" (89)	8-1/2" (216 mm)	69328
69104	3" (76 mm)	Central Vac	3/8" (10 mm)	82 dB(A)	1.9 (.9)	3-1/2" (89)	7" (178 mm)	69329
69105	3" (76 mm)	Non-Vac	3/16" (5 mm)	80 dB(A)	1.7 (.8)	3-1/2" (89)	6-1/2" (165 mm)	69330
69108	3" (76 mm)	Self Gen. Vac	3/16" (5 mm)	82 dB(A)	1.8 (.8)	3-1/2" (89)	8-1/2" (216 mm)	69331
69109	3" (76 mm)	Central Vac	3/16" (5 mm)	82 dB(A)	1.8 (.8)	3-1/2" (89)	7-1/4" (184 mm)	69332
69110	3" (76 mm)	Non-Vac	3/32" (2 mm)	80 dB(A)	1.7 (.8)	3-1/2" (89)	7" (178 mm)	69333
69113	3" (76 mm)	Self Gen. Vac	3/32" (2 mm)	83 dB(A)	1.8 (.8)	3-1/2" (89)	9" (229 mm)	69334
69114	3" (76 mm)	Central Vac	3/32" (2 mm)	82 dB(A)	1.8 (.8)	3-1/2" (89)	7-3/4" (197 mm)	69335

OPTIONAL ACCESSORIES



96620 Tune-Up Kit

- Tune-Up Kit contains high wear and medium wear parts.



Drop-in Motor Assemblies

Orbit	3"	3-1/2"	5"	6"
3/8"	69450	69453	69456	69459
3/16"	69451	69454	69457	69460
3/32"	69452	69455	69458	69461

Note: 59058 Lock Ring ONLY included with 3/8" Orbit Drop-in Motors.

Non-Vacuum to Vacuum Conversion Kits

Pad Diameter Inch (mm)	Converts Tool To	Kit Part Number
3-1/2" (89)	Self-Generated Vacuum	57118
3-1/2" (89)	Central Vacuum	57119
5" (127)	Self-Generated Vacuum	57120
5" (127)	Central Vacuum	57121
6" (152)	Self-Generated Vacuum	57122
6" (152)	Central Vacuum	57122

