



# *Industrial Surface Preparation*

More power to you

# Contents

## Revolution Series Grinders .....5

Created for non-production industrial applications, the Revolution Series delivers high performance at an affordable price. They're available in straight, extended, or 90-degree angle head configurations, multiple speed capacities, and offer various attachments.



## G-Series Grinders .....8

Our G-Series industrial grinders uphold the Ingersoll Rand tradition of innovation, durability, and reliability. The grinders' ergonomic, innovative designs make them easier and more comfortable to use, as well as simple to service.



## Pro-Series™ Grinders .....15

Pro-Series grinders are designed for heavy material removal. They feature best-in-class vibration dampening technologies, patented integral guards, and self-locking, spring-loaded throttle levers that prevent accidental operation.



## Pro-Series™ Finishing Tools .....21

Ingersoll Rand industrial sanders, polishers, and buffers have been developed for specific use in surface preparation and final finishing applications. They're the perfect multi-purpose accessory tools for a variety of applications.







- Air-powered tools can vibrate in use. Vibration, repetitive motions, or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling, or pain occurs. Seek medical advice before resuming use.
- Always turn off the air supply and disconnect the air supply hose before installing, removing, or adjusting any accessory on a tool, or before performing any maintenance on a tool.
- Keep hands, loose clothing and long hair away from rotating end of tools.
- Anticipate and be alert for sudden changes in motion during start up and operation of any power tool.
- Check for excessive speed and vibration before operating.
- Tool shafts may continue to rotate briefly after throttle is released.

- Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel, or jet fuel.
- Do not remove any labels. Replace any damaged label.
- Use accessories recommended by Ingersoll Rand.

Note: Always read the operators' manual before using any air tool.

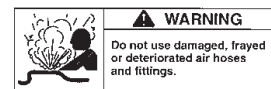
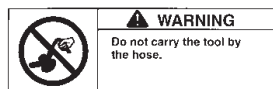
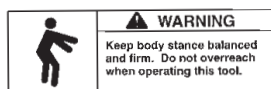
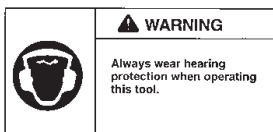
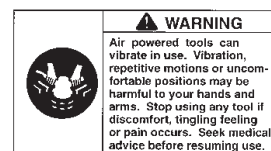
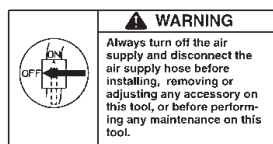
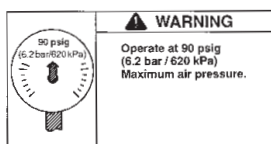
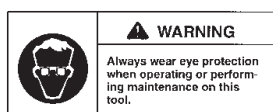
#### When Using Grinders...

- Do not use tools if actual free speed exceeds the nameplate rpm.
- Before mounting a wheel, after all tool repairs and whenever a grinder is issued for use, check the free speed of the grinder with a tachometer to make certain its actual speed at 90 psig (6.2 bar/620 kPa) does not exceed the rpm stamped or printed on the nameplate. Grinders in use on the job must be similarly checked at least once each shift.

- Always use the Ingersoll Rand wheel guard furnished with the grinder. Failure to do so could result in injury.
- Do not use a grinder without the recommended wheel guard. Do not use any wheel for which the operating speed listed on the blotter is lower than the actual free speed of the grinder.
- Inspect all grinding wheels for chips or cracks prior to mounting. Do not use a wheel that is chipped or cracked or otherwise damaged. Do not use a wheel that has been soaked in water or any other liquid.
- Make certain the grinding wheel properly fits the arbor. The wheel should not fit too snugly or too loosely. Plain hole wheels should have about 0.007" (0.17 mm) maximum diametral clearance. Do not use reducing bushings to adapt a wheel to any arbor unless such bushings are supplied by or recommended by the wheel manufacturer.
- After mounting a new wheel, hold the grinder under a steel workbench or inside a casting and run it for at least 60 seconds. Make certain no one is within the operating plane of the grinding wheel. If the wheel is defective, improperly mounted or the wrong size and speed, this is the time it will usually fail.
- When starting a cold wheel, apply it to the work slowly until the wheel gradually warms up. Make smooth contact with the work, and avoid any bumping action or excessive pressure.
- Always replace a damaged, bent, or severely worn wheel guard. Do not use a wheel guard that has been subjected to a wheel failure.
- Make certain the wheel flanges are at least one-third the diameter of the grinding wheel, free of nicks, and burrs, and sharp edges. Always use the wheel flanges furnished by the manufacturer; never use a makeshift flange or a plain washer.
- Guard opening must face away from operator. Bottom of wheel must not project beyond guard.
- Always use a wheel blotter between each wheel flange and the wheel. The blotters must be at least as large in diameter as the wheel flanges.
- Do not attempt to disassemble the controller. The controller is available only as a unit and is guaranteed for the life of the tool if it is not abused.

## Warning Label Identification

Failure to observe the following warnings could result in injury.



## G3 Series



G3A100RP106



G3X180RH63

| Model  | Power<br>hp | Free Speed<br>rpm | Exhaust | Output               | Wheel<br>Type | Weight<br>lb (kg) | Overall<br>Length<br>in (mm) | Height Over<br>Spindle End<br>in (mm) | Airflow<br>cfm |
|--|-------------|-------------------|---------|----------------------|---------------|-------------------|------------------------------|---------------------------------------|----------------|
| <b>G-SERIES ANGLE GRINDERS</b>               |             |                   |         |                      |               |                   |                              |                                       |                |
| G3A120RG4                                    | 1.35        | 12,000            | Rear    | 1/4" collet          | N/A           | 3.7 (1.6)         | 9-1/2" (241)                 | 3-5/16" (84)                          | 55             |
| G3A120RP1045                                 | 1.35        | 12,000            | Rear    | 5/8" – 4- 1/2" guard | 27, 28        | 4.6 (2)           | 9-5/8" (244)                 | 3-5/8" (92)                           | 55             |
| G3A120RP105                                  | 1.35        | 12,000            | Rear    | 5/8" – 5" guard      | 27, 28        | 4.7 (2.1)         | 9-5/8" (244)                 | 3-5/8" (92)                           | 55             |
| G3A100RP106                                  | 1.35        | 10,000            | Rear    | 5/8" – 6" guard      | 27, 28        | 4.9 (2.2)         | 9-5/8" (244)                 | 3-5/8" (92)                           | 33             |
| <b>G-SERIES HORIZONTAL GRINDERS</b>          |             |                   |         |                      |               |                   |                              |                                       |                |
| G3H150RG4                                    | 1.35        | 15,000            | Rear    | 1/4" collet          | N/A           | 2.3 (1)           | 9-1/16" (230)                | N/A                                   | 33             |
| G3H180RG4                                    | 1.35        | 18,000            | Rear    | 1/4" collet          | N/A           | 2.3 (1)           | 9-1/16" (230)                | N/A                                   | 55             |
| <b>G-SERIES EXTENDED HORIZONTAL GRINDERS</b> |             |                   |         |                      |               |                   |                              |                                       |                |
| G3X180RG4                                    | 1.35        | 18,000            | Rear    | 1/4" collet          | N/A           | 3.7 (1.6)         | 14-1/8" (358)                | N/A                                   | 55             |
| G3X150RG4                                    | 1.35        | 15,000            | Rear    | 1/4" collet          | N/A           | 3.7 (1.6)         | 14-1/8" (358)                | N/A                                   | 33             |
| G3X180RH63                                   | 1.35        | 18,000            | Rear    | 3/8" – 3" guard      | 1             | 4.5 (2)           | 14-1/8" (358)                | N/A                                   | 55             |
| G3X150RH64                                   | 1.35        | 15,000            | Rear    | 3/8" – 4" guard      | 1             | 4.5 (2)           | 14-1/8" (358)                | N/A                                   | 33             |
| <b>G-SERIES EXTENDED ANGLE SANDERS</b>       |             |                   |         |                      |               |                   |                              |                                       |                |
| G3L086RS10                                   | 1.35        | 8,600             | Rear    | 5/8" – 11" arbor     | N/A           | 4.25 (1.9)        | 13" (330)                    | 3" (76)                               | 33             |

| Power hp       | Model Configurations  | Free Speed rpm    | Output Type                      | Output Size — Type 27 Tools   | Output Size — Type 1 Tools                            | Guard Sizes            |
|----------------|---|-------------------|----------------------------------|---|---|------------------------|
| <b>G1</b> 0.4  | <b>A</b> Angle grinder  | <b>075</b> 7,500  | <b>P</b> Type 27, 28 wheel tools | <b>6</b> 3/8" arbor with English mounting flanges for 3" or 4" x 5/8" plain hole wheels | <b>6</b> 3/8" arbor for 3" or 4" x 3/8" type 1 wheels | <b>3</b> 3" guard      |
| <b>G2</b> 0.8  | <b>E</b> Extended angle grinder — small (LA1-550) angle housing | <b>086</b> 8,600  | <b>H</b> Type 1 wheel tools      | <b>10</b> 5/8" – 11" arbor with English flanges for 7/8" plain hole wheels              | <b>Output Size — Collet Tools</b>                     | <b>4</b> 4" guard      |
| <b>G3</b> 1.35 | <b>L</b> Extended angle grinder — large (AG2-550) angle housing | <b>090</b> 9,000  | <b>G</b> Collet tools            |   | <b>4</b> 1/4" collet                                  | <b>45</b> 4-1/2" guard |
|                | <b>H</b> Horizontal — no extension                              | <b>100</b> 10,000 | <b>S</b> Sander arbor            |   | <b>Output Size — Sanders</b>                          | <b>5</b> 5" guard      |
|                | <b>X</b> Extended horizontal grinder                            | <b>120</b> 12,000 | <b>Exhaust Direction</b>         |   | <b>4</b> 1/4" x 20" thread                            | <b>6</b> 6" guard      |
|                | <b>S</b> 2" extension   | <b>135</b> 13,500 | <b>R</b> Rear exhaust            |   | <b>418</b> 1/4" x 18" belt                            |                        |
|                |   | <b>150</b> 15,000 | <b>F</b> Front exhaust           |   | <b>812</b> 1/2" x 12" belt                            |                        |
|                |   | <b>180</b> 18,000 | <b>P</b> Piped-away exhaust      |   | <b>818</b> 1/2" x 18" belt                            |                        |
|                |   | <b>200</b> 20,000 |                                  |   |   |                        |
|                |   | <b>250</b> 25,000 |                                  |   |   |                        |
|                |   | <b>350</b> 35,000 |                                  |   |   |                        |



## Finishing Tools .....24

Ingersoll Rand offers a host of finishing tools to accomplish a variety of surface preparation tasks, whether heavy-duty or intricate in nature.



## Random Orbital Sanders .....29

Lightweight sanders offer unsurpassed reliability for the finest in swirl-free finishes. They are available in non-vacuum, vacuum-ready, and venturi-vacuum models.



## Mini Air Tools .....33

Ingersoll Rand mini air tools offer the power, versatility, and durability you can expect from our tools, along with convenient sizes that make them ideal for tight spaces and fine detail finish work.



## Accessories .....36

Maximize the performance and productivity of your air tools by matching them with our comprehensive line of surface prep parts and accessories.

**G1** SERIES

- At 0.4 hp, the G1 Series packs a lot of power in a small package
- Ideal for light material removal, cleaning rough castings, deburring parts, cleaning up welds, and other finishing tasks
- Ergonomic D-shaped handle fits better in your hand
- Low noise and vibration
- One-nut access for all motor servicing
- Available in angle, horizontal, and extended horizontal configurations

**G2** SERIES

- Perfect for bigger jobs, the G2 Series performs at an impressive 0.8 hp
- Ergonomic D-shaped handle fits better in your hand
- One-nut access for all motor servicing
- Suited for heavier-duty grinding, cutting, cleaning, and polishing applications
- Available in angle, horizontal, extended angle, and extended horizontal configurations

**G3** SERIES

- Superior power-to-weight ratio — the G3 Series delivers a mighty 1.35 hp
- The biggest jobs demand the most power
- Internal contamination-free air controller helps maintain tool speed to maximize material removal rate
- Ideal for industrial-duty material removal with burs, grinding wheels, and coated abrasives
- Available in angle, horizontal, extended horizontal, and extended angle configurations
- Vibration-reducing handle allowing end user extended operation



## G1 Series



G1A200RG4



G1A200RH63



G1A200RS812



G1H200FG4



G1H200RH63



G1X350RG4

| Model  | Power<br>hp | Free Speed<br>rpm | Exhaust | Output            | Wheel<br>Type | Weight<br>lb (kg) | Overall<br>Length<br>in (mm) | Height Over<br>Spindle End<br>in (mm) | Airflow<br>cfm |
|--|-------------|-------------------|---------|-------------------|---------------|-------------------|------------------------------|---------------------------------------|----------------|
| <b>G-SERIES ANGLE GRINDERS</b>               |             |                   |         |                   |               |                   |                              |                                       |                |
| G1A120FG4                                    | 0.4         | 12,000            | Front   | 1/4" collet       | N/A           | 1.1 (0.5)         | 6" (152)                     | 3" (76)                               | 19             |
| G1A120RG4                                    | 0.4         | 12,000            | Rear    | 1/4" collet       | N/A           | 1.1 (0.5)         | 6" (152)                     | 3" (76)                               | 19             |
| G1A200FG4                                    | 0.4         | 20,000            | Front   | 1/4" collet       | N/A           | 1.1 (0.5)         | 6" (152)                     | 3" (76)                               | 25             |
| G1A200RG4                                    | 0.4         | 20,000            | Rear    | 1/4" collet       | N/A           | 1.1 (0.5)         | 6" (152)                     | 3" (76)                               | 25             |
| G1A200RH63                                   | 0.4         | 20,000            | Rear    | 3/8" – 3" guard   | 1             | 1.3 (0.6)         | 6" (152)                     | 1-7/8" (47)                           | 25             |
| G1A200RP63                                   | 0.4         | 20,000            | Rear    | 3/8" – 3" guard   | 27, 28        | 1.3 (0.6)         | 6" (152)                     | 1-7/8" (47)                           | 25             |
| <b>G-SERIES ANGLE SANDERS</b>                |             |                   |         |                   |               |                   |                              |                                       |                |
| G1A120RS418                                  | 0.4         | 12,000            | Rear    | 1/4" x 18" belt   | N/A           | 1.2 (0.5)         | 14" (355)                    | N/A                                   | 19             |
| G1A120RS4                                    | 0.4         | 12,000            | Rear    | 1/4" – 20" thread | N/A           | 1.1 (0.5)         | 6" (152)                     | 3" (76)                               | 19             |
| G1A120RS812                                  | 0.4         | 12,000            | Rear    | 1/2" x 12" belt   | N/A           | 1.2 (0.5)         | 10-3/4" (273)                | N/A                                   | 19             |
| G1A120RS818                                  | 0.4         | 12,000            | Rear    | 1/2" x 18" belt   | N/A           | 1.5 (0.7)         | 14" (355)                    | N/A                                   | 19             |
| G1A200RS4                                    | 0.4         | 20,000            | Rear    | 1/4" – 20" thread | N/A           | 1.1 (0.5)         | 6" (152)                     | N/A                                   | 25             |
| G1A200RS812                                  | 0.4         | 20,000            | Rear    | 1/2" x 12" belt   | N/A           | 1.2 (0.5)         | 10-3/4" (273)                | N/A                                   | 25             |
| G1A200RS818                                  | 0.4         | 20,000            | Rear    | 1/2" x 18" belt   | N/A           | 1.5 (0.7)         | 14" (355)                    | N/A                                   | 25             |
| <b>G-SERIES HORIZONTAL GRINDERS</b>          |             |                   |         |                   |               |                   |                              |                                       |                |
| G1H200FG4                                    | 0.4         | 20,000            | Front   | 1/4" collet       | N/A           | 0.9 (0.4)         | 6-1/8" (155)                 | N/A                                   | 19             |
| G1H200RG4                                    | 0.4         | 20,000            | Rear    | 1/4" collet       | N/A           | 0.9 (0.4)         | 6-1/8" (155)                 | N/A                                   | 19             |
| G1H200RH63                                   | 0.4         | 20,000            | Rear    | 3/8" – 3" guard   | 1             | 1.2 (0.5)         | 6-1/8" (155)                 | N/A                                   | 19             |
| G1H250RH63                                   | 0.4         | 25,000            | Rear    | 3/8" – 3" guard   | 1             | 1.2 (0.5)         | 6-1/8" (155)                 | N/A                                   | 20             |
| G1H250FG4                                    | 0.4         | 25,000            | Front   | 1/4" collet       | N/A           | 0.9 (0.4)         | 6-1/8" (155)                 | N/A                                   | 20             |
| G1H250RG4                                    | 0.4         | 25,000            | Rear    | 1/4" collet       | 1             | 0.9 (0.4)         | 6-1/8" (155)                 | N/A                                   | 20             |
| G1H250RH63                                   | 0.4         | 25,000            | Rear    | 3/8" – 3" guard   | N/A           | 0.9 (0.4)         | 6-1/8" (155)                 | N/A                                   | 20             |
| G1H350FG4                                    | 0.4         | 35,000            | Front   | 1/4" collet       | N/A           | 0.9 (0.4)         | 6-1/8" (155)                 | N/A                                   | 25             |
| G1H350RG4                                    | 0.4         | 35,000            | Rear    | 1/4" collet       | N/A           | 0.9 (0.4)         | 6-1/8" (155)                 | N/A                                   | 25             |
| <b>G-SERIES EXTENDED HORIZONTAL GRINDERS</b> |             |                   |         |                   |               |                   |                              |                                       |                |
| G1X200RG4                                    | 0.4         | 20,000            | Rear    | 1/4" collet       | N/A           | 1.3 (0.6)         | 9-1/8" (231)                 | N/A                                   | 25             |
| G1X250RG4                                    | 0.4         | 25,000            | Rear    | 1/4" collet       | N/A           | 1.3 (0.6)         | 9-1/8" (231)                 | N/A                                   | 25             |
| G1X350RG4                                    | 0.4         | 35,000            | Rear    | 1/4" collet       | N/A           | 1.3 (0.6)         | 9-1/8" (231)                 | N/A                                   | 25             |

## G2 Series



G2A120RP64



G2A180RH64



G2H180RG4



G2X180RG4

| Model  | Power<br>hp | Free Speed<br>rpm | Exhaust | Output              | Wheel<br>Type | Weight<br>lb (kg) | Overall<br>Length<br>in (mm) | Height Over<br>Spindle End<br>in (mm) | Airflow<br>cfm |
|--|-------------|-------------------|---------|---------------------|---------------|-------------------|------------------------------|---------------------------------------|----------------|
| <b>G-SERIES ANGLE GRINDERS</b>               |             |                   |         |                     |               |                   |                              |                                       |                |
| G2A090RG4                                    | 0.8         | 9,000             | Rear    | 1/4" collet         | N/A           | 2.3 (1)           | 7-3/4" (196)                 | 3" (76)                               | 36             |
| G2A090RP64                                   | 0.8         | 9,000             | Rear    | 3/8" – 4" guard     | 27, 28        | 3 (1.3)           | 7-3/4" (196)                 | 2-1/2" (63)                           | 36             |
| G2A120RG4                                    | 0.8         | 12,000            | Rear    | 1/4" collet         | N/A           | 2.3 (1)           | 7-3/4" (196)                 | 3" (76)                               | 36             |
| G2A120RP1045                                 | 0.8         | 12,000            | Rear    | 5/8" – 4-1/2" guard | 27, 28        | 3.2 (1.4)         | 7-3/4" (196)                 | 2-3/8" (60)                           | 36             |
| G2A120RP105                                  | 0.8         | 12,000            | Rear    | 5/8" – 5" guard     | 27, 28        | 3.6 (1.6)         | 7-3/4" (196)                 | 2-3/8" (60)                           | 36             |
| G2A120RP64                                   | 0.8         | 12,000            | Rear    | 3/8" – 4" guard     | 27, 28        | 3 (1.3)           | 7-3/4" (196)                 | 2-1/2" (63)                           | 36             |
| G2A150RP64                                   | 0.8         | 15,000            | Rear    | 3/8" – 4" guard     | 27, 28        | 3 (1.3)           | 7-3/4" (196)                 | 2-1/2" (63)                           | 36             |
| G2A180RG4                                    | 0.8         | 18,000            | Rear    | 1/4" collet         | N/A           | 2.3 (1)           | 7-3/4" (196)                 | 3" (76)                               | 36             |
| G2A180RH64                                   | 0.8         | 18,000            | Rear    | 3/8" – 4" guard     | 1             | 2.7 (1.2)         | 7-3/4" (196)                 | 2-5/8" (66)                           | 36             |
| G2A180RP63                                   | 0.8         | 18,000            | Rear    | 3/8" – 3" guard     | 27, 28        | 3.1 (1.4)         | 7-3/4" (196)                 | 2-1/2" (63)                           | 36             |
| <b>G-SERIES ANGLE SANDERS</b>                |             |                   |         |                     |               |                   |                              |                                       |                |
| G2A100RS10                                   | 0.8         | 10,000            | Rear    | 5/8" – 11" thread   | N/A           | 2.7 (1.2)         | 7-3/4" (196)                 | 3" (76)                               | 36             |
| G2A120RS10                                   | 0.8         | 12,000            | Rear    | 5/8" – 11" thread   | N/A           | 2.7 (1.2)         | 7-3/4" (196)                 | 3" (76)                               | 36             |
| G2A135RS10                                   | 0.8         | 13,500            | Rear    | 5/8" – 11" thread   | N/A           | 2.7 (1.2)         | 7-3/4" (196)                 | 3" (76)                               | 36             |
| <b>G-SERIES HORIZONTAL GRINDERS</b>          |             |                   |         |                     |               |                   |                              |                                       |                |
| G2H180FG4                                    | 0.8         | 18,000            | Front   | 1/4" collet         | N/A           | 1.6 (0.7)         | 7-3/8" (187)                 | N/A                                   | 36             |
| G2H180RG4                                    | 0.8         | 18,000            | Rear    | 1/4" collet         | N/A           | 1.6 (0.7)         | 7-3/8" (187)                 | N/A                                   | 36             |
| G2H200FG4                                    | 0.8         | 20,000            | Front   | 1/4" collet         | N/A           | 1.6 (0.7)         | 7-3/8" (187)                 | N/A                                   | 36             |
| G2H200RG4                                    | 0.8         | 20,000            | Rear    | 1/4" collet         | N/A           | 1.6 (0.7)         | 7-3/8" (187)                 | N/A                                   | 36             |
| G2H250FG4                                    | 0.8         | 25,000            | Front   | 1/4" collet         | N/A           | 1.6 (0.7)         | 7-3/8" (187)                 | N/A                                   | 36             |
| G2H250RG4                                    | 0.8         | 25,000            | Rear    | 1/4" collet         | N/A           | 1.6 (0.7)         | 7-3/8" (187)                 | N/A                                   | 36             |
| <b>G-SERIES EXTENDED ANGLE GRINDERS</b>      |             |                   |         |                     |               |                   |                              |                                       |                |
| G2E135RG4                                    | 0.8         | 13,500            | Rear    | 1/4" collet         | N/A           | 2.6 (1.1)         | 10-3/8" (263)                | 3" (76)                               | 36             |
| G2E135RH64                                   | 0.8         | 13,500            | Rear    | 3/8" – 4" guard     | 1             | 2 (0.9)           | 10-3/8" (263)                | 2-5/8" (66)                           | 36             |
| G2E135RP64                                   | 0.8         | 13,500            | Rear    | 3/8" – 4" guard     | 27, 28        | 3 (1.3)           | 10-3/8" (263)                | 2-5/8" (66)                           | 36             |
| G2L100RP106                                  | 0.8         | 10,000            | Rear    | 5/8" – 6" guard     | 27, 28        | 4.4 (1.9)         | 12-5/8" (320)                | 2-3/8" (60)                           | 36             |
| G2L120RP1045                                 | 0.8         | 12,000            | Rear    | 5/8" – 4-1/2" guard | 27, 28        | 4.4 (1.9)         | 12-5/8" (320)                | 2-3/8" (60)                           | 36             |
| G2L120RP64                                   | 0.8         | 12,000            | Rear    | 3/8" – 4" guard     | 27, 28        | 4.4 (1.9)         | 12-5/8" (320)                | 2-1/2" (63)                           | 36             |
| <b>G-SERIES EXTENDED ANGLE SANDERS</b>       |             |                   |         |                     |               |                   |                              |                                       |                |
| G2L075FS10                                   | 0.8         | 7,500             | Front   | 5/8" – 11" thread   | N/A           | 2.6 (1.1)         | 10-3/8" (263)                | 3" (76)                               | 36             |
| G2L120RS10                                   | 0.8         | 12,000            | Rear    | 5/8" – 11" thread   | N/A           | 2 (0.9)           | 10-3/8" (263)                | 2-5/8" (66)                           | 36             |
| <b>G-SERIES EXTENDED HORIZONTAL GRINDERS</b> |             |                   |         |                     |               |                   |                              |                                       |                |
| G2S180RH63                                   | 0.8         | 18,000            | Rear    | 3/8" – 3" guard     | 1             | 2.5 (1.1)         | 8-5/8" (219)                 | N/A                                   | 36             |
| G2X180RG4                                    | 0.8         | 18,000            | Rear    | 1/4" collet         | N/A           | 2.7 (1.2)         | 12-1/8" (307)                | N/A                                   | 36             |
| G2X180RH63                                   | 0.8         | 18,000            | Rear    | 3/8" – 3" guard     | 1             | 3.2 (1.4)         | 12-3/8" (314)                | N/A                                   | 36             |
| G2X180RH64                                   | 0.8         | 18,000            | Rear    | 3/8" – 4" guard     | 1             | 3.5 (1.6)         | 12-3/8" (314)                | N/A                                   | 36             |
| G2X200RG4                                    | 0.8         | 20,000            | Rear    | 1/4" collet         | N/A           | 2.7 (1.2)         | 12-1/8" (307)                | N/A                                   | 36             |
| G2X250RG4                                    | 0.8         | 25,000            | Rear    | 1/4" collet         | N/A           | 2.7 (1.2)         | 12-1/8" (307)                | N/A                                   | 36             |



# Pro-Series™ Grinders



With the Pro-Series grinders, Ingersoll Rand offers a complete line of heavy-duty vertical, horizontal, and angle finishing tools that deliver superior performance, as well as outstanding safety and ergonomic features. Available in 1-1/3 to 3 hp motors, Pro-Series grinders are specially designed for heavy-duty production applications.

Pro-Series grinders reduce air consumption by one-third over competitive models, while removing up to 25 percent more material. When it comes to reliability and safety, no other grinders compare to the Pro-Series. They feature best-in-class vibration dampening, patented integral guards, and self-locking throttle levers to prevent accidental operation.

### Motor Controller

Ingersoll Rand Pro-Series finishing tools incorporate a patented motor controller designed to increase productivity while enhancing operator safety. The controller regulates airflow through the endplate and into the motor to control the speed and power of the tool. There is no need for an additional over-speed shut-off device.



### Locking Throttle Lever

The Ingersoll Rand locking throttle lever is a spring-loaded latch that resets each time the lever is released. This unique system prevents accidental throttle operation — even if the tool is dropped.



### Integral Guards

Pro-Series grinders are equipped with patented integral guards that prevent the tool from operating if they are removed. When removed, the tool's motor is not properly supported, and the tool will not operate. Cup-type grinding tools have the exclusive Ingersoll Rand 180° integral guard for better visibility and greater wheel usage. All guards are made of steel for extra protection.



The unique motor controller design of the Pro-Series increases productivity while enhancing operator safety.

## Pro-Series 88 and 99

- Powerful 2 hp and 3 hp motors for high, efficient performance
- Patented stainless-steel motor controller with industry's only lifetime guarantee
- Self-locking throttle lever prevents accidental operation
- Integral steel guard provides extra strength for added operator protection
- Four-position exhaust adds to operator comfort on horizontal models
- Built-in mist lubricator automatically oils motor each time tool is used



## Pro-Series 77

- Powerful 1.5 hp motor produces high, efficient performance
- Patented stainless-steel motor controller with industry's only lifetime guarantee
- Self-locking throttle lever prevents accidental operation
- Integral steel guard provides extra strength for added operator protection
- Low-profile angle head improves close-quarter applications
- Built-in mist lubricator automatically oils motor when tool is started



## Pro-Series 61

- Solid steel motor and arbor housing provide maximum durability
- Powerful 1.33 hp motor produces high, efficient performance
- Patented stainless-steel motor controller is maintenance- and adjustment-free
- Heavy-duty, double-row ball bearings assure long life and smooth operation
- Exclusive grit-rejection system keeps motor and bearings clean for extended life
- Built-in mist lubricator automatically oils motor when throttle is activated



| 88 H L 60 H 10 6 |              |          |                   |                 |                                 |                                |
|------------------|--------------|----------|-------------------|-----------------|---------------------------------|--------------------------------|
| Series           | Type         | Throttle | Free Speed<br>rpm | Type of Wheel   | Diameter and<br>Thread of Arbor | Diameter of<br>Wheel or Collet |
| 61               | A Angle      | L Lever  | 45 4,500          | G Collet        | 6 3/8" – 24 thread              | 4 1/4" collet                  |
| 77               | H Horizontal | G Grip   | 60 6,000          | H Type 1 wheel  | 8 1/2" – 13 thread              | 3 3" wheel                     |
| 88               | V Vertical   |          | 77 7,700          | L Cone wheel    | 10 5/8" – 11 thread             | 4 4" wheel                     |
| 99               |              |          | 90 9,000          | P Type 27 wheel |                                 | 6 6" wheel                     |
|                  |              |          | 120 12,000        | S Type 11 wheel |                                 | 7 7" wheel                     |
|                  |              |          | 150 15,000        |                 |                                 | 8 8" wheel                     |
|                  |              |          |                   |                 |                                 | 9 9" wheel                     |



## Straight Grinders

### Carbide Bur and Mounted Wheel

#### Standard Equipment

- G160HD-700-1/4 1/4" Erickson collet
- DG10-69 collet body wrench
- DG120-69 collet nut wrench

#### Accessories

- DG120-700-G6 3/8" collet



**G4** 1/4" Erickson collet

| Model<br>(side exhaust) | Rated Power<br>hp | Free Speed<br>rpm | Weight<br>lb (kg) | Length<br>in (mm) | Spindle Housing<br>Diameter<br>in (mm) | Airflow<br>cfm |
|-------------------------|-------------------|-------------------|-------------------|-------------------|--|----------------|
| 61H120G4                | 1.25              | 12,000            | 4-1/4 (1.9)       | 15-1/2" (393)     | 1-7/16" (36)                           | 37             |
| 61H150G4                | 1.33              | 15,000            | 4-1/4 (1.9)       | 15-1/2" (393)     | 1-7/16" (36)                           | 40             |

Air inlet for both models is 3/8".

Size hose recommended for both models is 1/2".

Performance figures are at 90 psi air pressure.

### Cone and Plug Wheel

#### Standard Equipment

- Tool wrench



**L6** 3/8" – 24 spindle

**L10** 5/8" – 11 spindle



**88HL90L10**

| Model<br>(side exhaust) | Rated Power<br>hp | Free Speed<br>rpm | Weight<br>lb (kg) | Length<br>in (mm) | Spindle Housing<br>Diameter<br>in (mm) | Airflow<br>cfm |
|-------------------------|-------------------|-------------------|-------------------|-------------------|--|----------------|
| 61H120L6                | 1.25              | 12,000            | 4-1/4 (1.9)       | 14-3/4" (374)     | 1-7/16" (36)                           | 37             |
| 61H150L6                | 1.33              | 15,000            | 4-1/4 (1.9)       | 14-3/4" (374)     | 1-7/16" (36)                           | 40             |
| 77H90L10                | 1.5               | 9,000             | 6 (2.7)           | 16-7/16" (417)    | 1-7/8" (47)                            | 37             |
| 77H120L10               | 1.5               | 12,000            | 6 (2.7)           | 16-7/16" (417)    | 1-7/8" (47)                            | 39             |
| 88HL90L10               | 2.2               | 9,000             | 8-3/8 (3.7)       | 18-1/4" (463)     | 2-1/4" (57)                            | 66             |

Air inlet for Series 88H is 1/2" NPT. All others 3/8" NPT.

Size hose recommended for Series 88H is 3/4". All others 1/2".

Performance figures are at 90 psi air pressure.

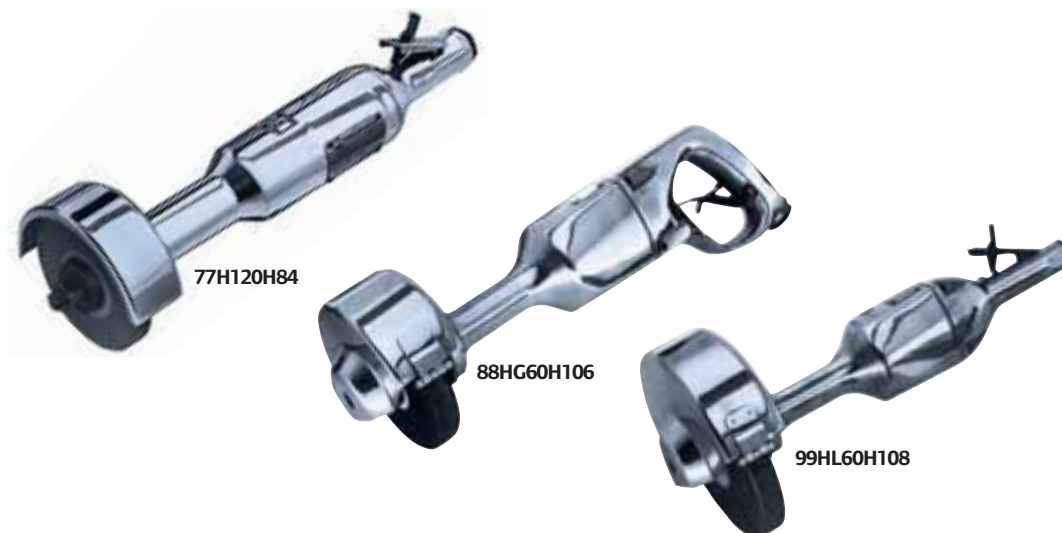
Maximum wheel diameter is 3".



## Type 1 Wheel

### Standard Equipment

- Wheel guard, flanges, and nut



**H63** 3/8" – 24 spindle, 3" guard

**H64** 3/8" – 24 spindle, 4" guard

**H84** 1/2" – 13 spindle, 4" guard

**H106** 5/8" – 11 spindle, 6" guard

**H108** 5/8" – 11 spindle, 8" guard

| Model        | Handle | Rated Power hp | Free Speed rpm | Weight with Guard and Flanges lb (kg) | Length in (mm) | Spindle Housing Diameter in (mm) | Wheel Size in (mm) | Airflow cfm |
|--------------|--------|----------------|----------------|---------------------------------------|----------------|----------------------------------|--------------------|-------------|
| 61H120H63    | Lever  | 1.25           | 12,000         | 4-3/4" (2.1)                          | 15-3/4" (400)  | 1-7/16" (36)                     | 3" x 1/2"          | 37          |
| 61H120H64    | Lever  | 1.25           | 12,000         | 4-3/4" (2.1)                          | 15-3/4" (400)  | 1-7/16" (36)                     | 4" x 1/2"          | 37          |
| 61H150H63    | Lever  | 1.33           | 15,000         | 4-3/4" (2.1)                          | 15-3/4" (400)  | 1-7/16" (36)                     | 3" x 1/2"          | 40          |
| 77H120H63    | Lever  | 1.5            | 12,000         | 6-1/8" (2.7)                          | 16-5/8" (422)  | 2-5/8" (66)                      | 3" x 1/2"          | 39          |
| 77H90H84     | Lever  | 1.5            | 9,000          | 6-1/2" (2.9)                          | 17-1/4" (438)  | 2-5/8" (66)                      | 4" x 1"            | 37          |
| 77H120H84    | Lever  | 1.5            | 12,000         | 6-1/2" (2.9)                          | 17-1/4" (438)  | 2-5/8" (66)                      | 4" x 1"            | 39          |
| 88HL60H106*  | Lever  | 2              | 6,000          | 11-5/16" (5.1)                        | 20" (508)      | 3-3/8" (85)                      | 6" x 1"            | 61          |
| 88HG60H106*  | Grip   | 2              | 6,000          | 11-11/16" (5.2)                       | 19-3/4" (501)  | 3-3/8" (85)                      | 6" x 1"            | 61          |
| 99HL60H106*  | Lever  | 3              | 6,000          | 13-1/2" (6.1)                         | 20-1/2" (520)  | 3-7/8" (98)                      | 6" x 1"            | 84          |
| 99HG60H106*  | Grip   | 3              | 6,000          | 15-5/16" (6.9)                        | 20-3/8" (517)  | 3-7/8" (98)                      | 6" x 1"            | 84          |
| 99HL45H108** | Lever  | 2.35           | 4,500          | 14-7/8" (6.7)                         | 20-1/4" (514)  | 3-7/8" (98)                      | 8" x 1"            | 70          |
| 99HG45H108** | Grip   | 2.35           | 4,500          | 15-5/8" (7)                           | 20-1/8" (511)  | 3-7/8" (98)                      | 8" x 1"            | 70          |
| 99HL60H108** | Lever  | 3              | 6,000          | 14-13/16" (6.7)                       | 20-1/4" (514)  | 3-7/8" (98)                      | 8" x 1"            | 84          |

\*Net weight of guard and flanges is 3.2 lb.

\*\*Net weight of guard and flanges is 4.5 lb.

Air inlet for Series 61H and 77H is 3/8" NPT. For Series 88H and 99H, 1/2" NPT.

Size hose recommended for Series 61H and 77H is 1/2". For Series 88H and 99H, 3/4".

Performance figures are at 90 psi air pressure.



Advancements in manufacturing and production continue to transform the nature of industrial finishing. While traditional, heavy-duty material removal continues in many segments, increases in precision and reductions in waste are changing overall demands. New materials require different tool speeds and attachments; parts and components must match surrounding surfaces with greater accuracy.

For more than 100 years, Ingersoll Rand has helped transform the way industry works. We've combined the best engineering talent, top-quality materials, and superior customer service in delivering tools with unmatched power and durability. Our designs reflect emerging trends in finishing tool use, changing technology, and new materials.

Whatever the application, Ingersoll Rand finishing tools bring out the best in your operators' skills, and contribute to the ultimate quality of your products and processes.

# Pro-Series Finishing Tools



Ingersoll Rand industrial sanders, polishers, and buffers have been developed for specific use in surface preparation and final finishing applications. These models are multi-purpose accessory tools used in aerospace, shipbuilding, utilities, woodworking, furniture production, vehicle and marine assembly, and general maintenance.



## Pro-Series Sanders, Polishers, and Buffers

Designed for applications involving larger areas and heavier-duty materials, Pro-Series sanders, polishers, and buffers range from 0.8 to 2 horsepower, in straight, angle, and vertical configurations. They incorporate many of the same unique features as their counterpart grinder models.

| Series | Type         | Free Speed<br>rpm | Type of Wheel    | Arbor Diameter      | Wheel<br>Diameter |
|--------|--------------|-------------------|------------------|---------------------|-------------------|
| 61     | A Angle      | 24 2,400          | B Wire brush     | 10 5/8" – 11 thread | 6 6" wheel        |
| 77     | H Horizontal | 25 2,500          | F Polishing head |                     | 7 7" wheel        |
| 88     | S Vertical   | 30 3,000          | W Sanding head   |                     | 8 8" wheel        |
| 99     | sander       | 45 4,500          |                  |                     | 9 9" wheel        |
|        |              | 48 4,800          |                  |                     |                   |
|        |              | 50 5,000          |                  |                     |                   |
|        |              | 60 6,000          |                  |                     |                   |

## Angle Tools

### Pro-Series

**F107** 5/8" – 11 spindle, 7" polishing bonnet

**W107** 5/8" – 11 spindle, 7" back-up pad

**W109** 5/8" – 11 spindle, 9" back-up pad

#### Standard Equipment

- Back-up pads with nut  
77A-BM825-7 – 7" firm (F107)  
77A-AM825-9 – 9" medium (W109)
- P500-850 polishing bonnet  
(model 77A25F107 only)

#### Accessories

- 77A-AM825-5 – 5" medium pad
- 77A-AM825-7 – 7" medium pad
- AG230-26M spanner



| Model     | Vibration<br>min/s <sup>2</sup> | Rated Power<br>hp | Free Speed<br>rpm | Weight<br>lb (kg) | Length<br>in (mm) | Height Over End<br>of Spindle<br>in (mm) | Side to Center<br>Distance<br>in (mm) | Airflow<br>cfm |
|-----------|---------------------------------|-------------------|-------------------|-------------------|-------------------|--|---------------------------------------|----------------|
| 77A25F107 | 3.4                             | 1.5               | 2,500             | 8-3/8 (3.7)       | 17-9/16" (446)    | 3-3/34" (95)                             | 1-5/16" (33)                          | 37             |
| 77A45W109 | 1.5                             | 1.5               | 4,500             | 7-13/16 (3.5)     | 17-9/16" (446)    | 3-3/34" (95)                             | 1-5/16" (33)                          | 37             |
| 77A60W107 | 1.2                             | 1.5               | 6,000             | 7-13/16 (3.5)     | 17-9/16" (446)    | 3-3/34" (95)                             | 1-5/16" (33)                          | 39             |

Air inlet for all models is 3/8" NPT.

Size hose recommended for all models is 1/2".

Performance figures are at 90 psi air pressure.



## Vertical Tools

### Pro-Series

#### Standard Equipment

- Backer pads  
77A-AM825-7 – 7" medium pad  
77A-AM825-9 – 9" pad

**W107** 5/8" – 11 spindle, 7" back-up pad

**W109** 5/8" – 11 spindle, 9" back-up pad



#### Accessories

- Comfort grips CG-88V, CG99V
- 77A-BM825-7 – 7" firm pad
- AG230-26M spanner
- AG230-26M spanner wrench
- Piped-away exhaust kits 88V60-K184, 99V60-K184

| Model     | Vibration<br>min/s <sup>2</sup> | Rated Power<br>hp | Free Speed<br>rpm | Weight<br>lb (kg) | Height Over<br>End of Arbor<br>in (mm) | Side to Center<br>Distance at Spindle<br>in (mm) | Airflow<br>cfm |
|-----------|---------------------------------|-------------------|-------------------|-------------------|--|--|----------------|
| 88S45W109 | 1                               | 1.8               | 4,500             | 7-1/8 (3.2)       | 6" (152)                               | 2-1/8" (54)                                      | 50             |
| 88S60W107 | 1                               | 2                 | 6,000             | 7-1/8 (3.2)       | 6" (152)                               | 2-1/8" (54)                                      | 61             |
| 99S45W109 | 0.6                             | 2.5               | 4,500             | 9-1/2 (4.3)       | 6-1/4" (158)                           | 2-15/16" (74)                                    | 70             |
| 99S60W107 | 0.9                             | 3                 | 6,000             | 9-1/2 (4.3)       | 6-1/4" (158)                           | 2-15/16" (74)                                    | 84             |

Air inlet for both models is 1/2" NPT.

Size hose recommended for both models is 3/4".

Performance figures are at 90 psi air pressure.

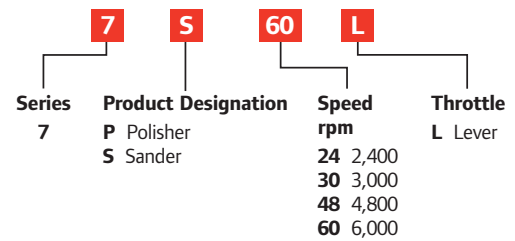
### Pro-Series

#### Standard Equipment

- 77A-8M825-7 backer pad
- P500-850 polishing bonnet (model 7P24L only)

**P** 5/8" – 11 spindle, 7" polishing bonnet

**S** 5/8" – 11 spindle, 7" back-up pad



| Model | Rated Power<br>hp | Free Speed<br>rpm | Weight without<br>Pad<br>lb (kg) | Height Over<br>End of Arbor<br>in (mm) | Side to Center<br>Distance<br>in (mm) | Airflow<br>cfm |
|-------|-------------------|-------------------|----------------------------------|--|---------------------------------------|----------------|
| 7P24L | 0.8               | 2,400             | 3-1/4 (1.4)                      | 6-3/8" (161)                           | 3/8" (9)                              | 22             |
| 7S30L | 0.8               | 3,000             | 3-1/4 (1.4)                      | 6-3/8" (161)                           | 3/8" (9)                              | 22             |
| 7S48L | 0.8               | 4,800             | 3-1/4 (1.4)                      | 6-3/8" (161)                           | 3/8" (9)                              | 22             |
| 7S60L | 0.8               | 6,000             | 3-1/4 (1.4)                      | 6-3/8" (161)                           | 3/8" (9)                              | 22             |

Air inlet for all models is 1/4" NPT.

Size hose recommended for all models is 5/16".

Performance figures are at 90 psi air pressure.

## Straight Tools

### Pro-Series

#### Standard Equipment

- Wheel, flanges, and nut

#### Accessories

- 7RAQT4-254 1" wheel bearing nut wrench
- 7S60-24818 wire brush nut wrench

**B106** 5/8" – 11 x 2" spindle (for flap wheels, wire brushes, etc.)

Spindle is 2-3/4" long.

Threads are 2" long.



| Model     | Rated Power<br>hp | Free Speed<br>rpm | Weight<br>lb (kg) | Length<br>in (mm) | Side to Center<br>Distance at Spindle<br>in (mm) | Airflow<br>cfm |
|-----------|-------------------|-------------------|-------------------|-------------------|--|----------------|
| 77H30B106 | 1.5               | 3,000             | 7-5/16 (3.3)      | 17-11/16" (449)   | 15/16" (23)                                      | 37             |
| 77H50B106 | 1.5               | 5,000             | 7-5/16 (3.3)      | 17-11/16" (449)   | 15/16" (23)                                      | 39             |

Air inlet for both models is 3/8" NPT.

Size hose recommended for both models 1/2".

Performance figures are at 90 psi air pressure.

## Pistol Grip Scalers



| Model     | Description   | Weight lb (kg) | Length in (mm) | Piston Stroke in (mm) | Bore in (mm) | Blows per Minute bpm | Air Inlet in | Chisel Shank in (mm) | No. of 3 mm Needles (flat) | Airflow cfm |
|-----------|---------------|----------------|----------------|-----------------------|--------------|----------------------|--------------|----------------------|----------------------------|-------------|
| 170PG     | Chisel scaler | 6.62 (3.0)     | 12.4" (314)    | 1.4" (35)             | 0.925" (23)  | 3,000                | 1/4" NPT     | N/A                  | 19                         | 5.5         |
| 180PG     | Chisel scaler | 8.88 (4.0)     | 13.5" (342)    | 1.54" (39)            | 1.125" (28)  | 2,200                | 1/4" NPT     | N/A                  | 28                         | 8           |
| 170PG-CS* | Needle scaler | 5.32 (2.4)     | 12.4" (314)    | 1.4" (35)             | .925" (23)   | 3,000                | 1/4" NPT     | 1/2" (12)            | N/A                        | 5.5         |
| 180PG-CS* | Needle scaler | 6.81 (3.1)     | 12.4" (314)    | 1.54" (39)            | 1.125" (28)  | 2,200                | 1/4" NPT     | 1/2" (12)            | N/A                        | 8           |

**170PG-KIT includes:** The 170PG needle scaler, the 1/2" shank chisel holder, 3 needle packs, and 3 chisels. Needles included are one pack each of chisel tip, pointed tip, and flat 3 mm needles. There are 19 needles per pack. The needles are 7" long and made of carbon steel. The chisels included are one each of the following 1/2" square, 7" long chisels: a 3/4" flat, a 1-3/8" offset (weld flux), and a 2" flat chisel.

**180PG-KIT includes:** The 180PG needle scaler, the 1/2" shank chisel holder, 3 needle packs, and 3 chisels. Needles included are one pack each of chisel tip, pointed tip, and flat 3 mm needles. There are 28 needles per pack. The needles are 7" long and made of carbon steel. The chisels included are one each of the following 1/2" square, 7" long chisels: a 3/4" flat, a 1-3/8" offset (weld flux), and a 2" flat chisel.

## Needle Scalers

### Features

- Adjustable bayonet-type needle housing lock allows adjustment without special tools
- Choice of three needle materials permits custom selection for various surfaces
- Rubber-faced throttle valve means positive sealing
- Tested and approved in accordance with MIL-S-23492A (ships)
- Precision heat-treated needles for maximum performance

### Standard Equipment

- Lever throttle
- 19 1/8" (3 mm) diameter steel needles, 5" (127 mm) long, NS11-22-19



| Series | Configuration | Retainer Type       | Nozzle Type             |
|--------|---------------|---------------------|-------------------------|
| 172    | L Lever       | N Needle attachment | A1 Round needle housing |
| 182    | G Grip        |                     |                         |

| Model   | Needle Housing Shape | Weight lb (kg) | Length in (mm) | Piston Stroke in (mm) | Bore in (mm) | Blows per Minute bpm | Hose Connector Pipe/Tap in | Size Hose Recommended in (mm) | Airflow cfm |
|---------|----------------------|----------------|----------------|-----------------------|--------------|----------------------|----------------------------|-------------------------------|-------------|
| 172LNA1 | Round                | 5-1/4 (2.38)   | 13-3/4" (349)  | 5/16" (14)            | 15/16" (24)  | 5,500                | 1/4"                       | 5/16" (8)                     | 12          |
| 182LNA1 | Round                | 5-3/4 (2.61)   | 15" (381)      | 1-1/16" (27)          | 15/16" (24)  | 4,000                | 1/4"                       | 5/16" (8)                     | 13          |

Performance figures are at 90 psi air pressure.

# Revolution Series Grinders



Revolution Series grinders are designed for non-production industrial applications, delivering high performance at an affordable price. These grinders epitomize the Ingersoll Rand tradition of quality engineering — with lightweight, ergonomic designs that make the tools comfortable and easy to use for material removal and finishing. Available with straight, extended, or 90-degree angle heads, multiple speeds, and attachments, there's a Revolution Series configuration for virtually any surface preparation job.



## Power

Powerful 0.3 hp air motors deliver plenty of strength in speeds from 12,000 to 35,000 rpm. The Revolution Series offers the torque and muscle required for a wide range of applications.

- Automotive
- General assembly
- Metal fabrication
- Plant maintenance
- Production prep
- Aerospace
- Shipbuilding
- Utilities
- Tool and die

## Performance

Precision gearing and components contribute to a long and reliable life. Whether removing material, weld cleaning, deburring, cutting, blending, grinding, sanding, or polishing, the Revolution Series offers smooth operation and maximum performance at an affordable price.

## Comfort

Weighing only 0.9 to 1.2 pounds, the Revolution Series requires minimal operator effort. And, its compact, contoured shape fits naturally in the operator's hands for easy maneuverability. A composite surface area covering the polished aluminum housing provides excellent grip and control, while insulating the operator from temperature effects. And, operating at only 77 dBA, these low-vibration tools are very quiet.



Revolution Series tools feature both ergonomic designs and light weight that make them comfortable and easy to use for material removal and finishing.





312AC4



325XC4



320AG3



335SC4

| Model           | Rated Power<br>hp | Max Free Speed<br>rpm | Weight<br>lb (kg) | Length<br>in (mm) | Height Over Spindle<br>in (mm) | Side to Center Distance<br>in (mm) | Configuration               | Airflow<br>cfm |
|-----------------|-------------------|-----------------------|-------------------|-------------------|--------------------------------|------------------------------------|-----------------------------|----------------|
| <b>STRAIGHT</b> |                   |                       |                   |                   |                                |                                    |                             |                |
| 325SC4          | 0.3               | 25,000                | 13/16 (0.3)       | 6" (152)          | N/A                            | 3/4" (19)                          | 1/4" collet                 | 15             |
| 330SC4          | 0.3               | 30,000                | 13/16 (0.3)       | 6" (152)          | N/A                            | 3/4" (19)                          | 1/4" collet                 | 15             |
| 335SC4          | 0.3               | 35,000                | 13/16 (0.3)       | 6" (152)          | N/A                            | 3/4" (19)                          | 1/4" collet                 | 15             |
| 325XC4          | 0.3               | 25,000                | 1-1/4 (0.5)       | 9" (228)          | N/A                            | 3/4" (19)                          | 1/4" collet, 3" extended    | 15             |
| 330XC4          | 0.3               | 30,000                | 1-1/4 (0.5)       | 9" (228)          | N/A                            | 3/4" (19)                          | 1/4" collet, 3" extended    | 15             |
| <b>ANGLE</b>    |                   |                       |                   |                   |                                |                                    |                             |                |
| 312AC4          | 0.3               | 12,000                | 1-1/8 (0.5)       | 6-1/8" (155)      | 2-17/32" (64)                  | 3/4" (19)                          | 1/4" collet                 | 15             |
| 314AC4          | 0.3               | 14,000                | 1-1/8 (0.5)       | 6-1/8" (155)      | 2-17/32" (64)                  | 3/4" (19)                          | 1/4" collet                 | 15             |
| 320AC4          | 0.3               | 20,000                | 1-1/8 (0.5)       | 6-1/8" (155)      | 2-17/32" (64)                  | 3/4" (19)                          | 1/4" collet                 | 15             |
| 312AG3          | 0.3               | 12,000                | 1-3/8 (0.6)       | 6-1/4" (158)      | 2-17/32" (64)                  | 3/4" (19)                          | 3" guard<br>3/8"-24 spindle | 15             |
| 314AG3          | 0.3               | 14,000                | 1-3/8 (0.6)       | 6-1/4" (158)      | 2-17/32" (64)                  | 3/4" (19)                          | 3" guard<br>3/8"-24 spindle | 15             |
| 320AG3          | 0.3               | 20,000                | 1-3/8 (0.6)       | 6-1/4" (158)      | 2-17/32" (64)                  | 3/4" (19)                          | 3" guard<br>3/8"-24 spindle | 15             |

Air inlet for all models is 1/4" NPT.

All models are rear exhaust.

5/16" air hose recommended.

Performance figures are at 90 psi.

Collet wrenches are standard.

# G-Series Grinders



Our G1, G2, and G3 Series grinders easily withstand the rigors of today's most demanding industrial environments and conditions, delivering power and precision for enhanced performance. With a G-Series grinder, you'll get the job done faster and more reliably. You'll have shorter downtimes and need fewer parts in inventory thanks to their easy serviceability.

G-Series grinders are ergonomically designed, which makes them easier and more comfortable to use. Plus, Ingersoll Rand backs them with a two-year extended warranty option — the best in the industry!



## The G-Series grinders — what you see is what you get...times three

Configurable front-ends  
to meet your needs

- Straight die grinders
- Angle die grinders
- Straight grinders (type 1 wheels)
- Angle grinders (type 1 and type 27 wheels)

Improved efficiency  
means big power in a  
small package

Ergonomic low-profile  
locking throttle lever for  
operator safety

Easy attachment  
of pipe exhaust



Six-inch guard  
for greater application  
coverage (G2 Series  
and G3 Series)

Ergonomic D-shaped handle  
for operator comfort

Laser-etched product  
information won't wear off



Industry standard  
Erickson collet

Easily changeable  
front / rear exhaust

Easy-to-service, one-nut removal  
for motor repair

Separate replaceable cylinder  
lowers repair cost



From the compact 0.4 hp G1 Series to the powerful 1.35 hp G3 Series, these grinders are made to order for any grinding, cutting, and material removal needs. Engineered and built with Ingersoll Rand reliability and durability, the G-Series has the features operators want most. With our G-Series industrial grinders, your total cost of ownership is reduced. You get the job done faster with greater power, and the easy serviceability of the G-Series means shorter downtimes and fewer parts in inventory.



Better durability with minimum 500 hours for all components

Composite housing prevents cold feel for operator comfort

Contamination-free air controller helps maintain tool speed to maximize material removal rate (G3 Series)



## Angle Grinders

### Depressed Center Wheel Type 27 and 28 Wheel

#### Standard Equipment

- Wheel guard, flanges, and nut for threaded and plain depressed center wheels

#### Accessories

- Piped-away exhaust kit 88V60-K184 (for 88V)
- Piped-away exhaust kit 99V60-K184 (for 99V)

**P107** 5/8" – 11 spindle, 7" guard

**P109** 5/8" – 11 spindle, 9" guard



| Model                      | Vibration<br>min/s <sup>2</sup> | Type<br>27 and 28<br>Wheels Size<br>in (mm) | Rated<br>Power<br>hp | Free<br>Speed<br>rpm | Weight<br>lb (kg) | Length<br>in (mm) | Height<br>Over End<br>of Spindle<br>in (mm) | Side to Center<br>Distance at<br>Spindle<br>in (mm) | Airflow<br>cfm |
|----------------------------|---------------------------------|---|----------------------|----------------------|-------------------|-------------------|---|---|----------------|
| <b>ANGLE GRINDERS*</b>     |                                 |   |                      |                      |                   |                   |   |   |                |
| 77A60P107                  | 1.9                             | 7" (177)                                    | 1.5                  | 6,000                | 9 (4)             | 17-9/16" (446)    | 3-7/8" (98)                                 | 1-5/16" (33)  | 39             |
| 77A60P109                  | 1.8                             | 9" (228)                                    | 1.5                  | 6,000                | 9-3/16 (4.1)      | 17-9/16" (446)    | 3-7/8" (98)                                 | 1-5/16" (33)  | 39             |
| 77A75P107                  | 2                               | 7" (177)                                    | 1.5                  | 7,500                | 9-3/16 (4.1)      | 17-9/16" (446)    | 3-7/8" (98)                                 | 1-5/16" (33)  | 39             |
| <b>VERTICAL GRINDERS**</b> |                                 |   |                      |                      |                   |                   |   |   |                |
| 88V60P107                  | 1.5                             | 7" (177)                                    | 2.1                  | 6,000                | 8-3/4 (3.9)       | N/A               | 6-3/32" (154)                               | 2-1/8" (54)   | 61             |
| 88V60P109                  | 1                               | 9" (228)                                    | 2.1                  | 6,000                | 9-1/16 (4.1)      | N/A               | 6-3/32" (154)                               | 2-1/8" (54)   | 61             |
| 88V77P107                  | 1.2                             | 7" (177)                                    | 2.2                  | 7,700                | 8-3/4 (3.9)       | N/A               | 6-3/32" (154)                               | 2-1/8" (54)   | 68             |
| 88V85P107                  | 1.5                             | 7" (177)                                    | 2.2                  | 8,500                | 8-3/4 (3.9)       | N/A               | 6-3/32" (154)                               | 2-1/8" (54)   | 66             |
| 99V60P107                  | 1.5                             | 7" (177)                                    | 3                    | 6,000                | 11-1/4 (5.1)      | N/A               | 6-7/8" (174)                                | 2-5/16" (58)  | 84             |
| 99V60P109                  | 0.9                             | 9" (228)                                    | 3                    | 7,700                | 11-1/4 (5.1)      | N/A               | 6-7/8" (174)                                | 2-5/16" (58)  | 84             |
| 99V77P107                  | 0.9                             | 7" (177)                                    | 3                    | 7,700                | 11-1/4 (5.1)      | N/A               | 6-7/8" (174)                                | 2-5/16" (58)  | 84             |
| 99V85P107                  | 1.4                             | 7" (177)                                    | 3                    | 8,500                | 11-1/4 (5.1)      | N/A               | 6-7/8" (174)                                | 2-5/16" (58)  | 88             |

\*Air inlet for all models is 3/8" NPT.

Size hose recommended for all models is 1/2".

\*\*Air inlet for all models is 1/2" NPT.

Size hose recommended for all models is 3/4".

Performance figures are at 90 psi air pressure.

## Vertical Grinders

### Cup Wheel Type 6 and 11 Wheel

#### Standard Equipment

- Wheel guard, flanges, and nut

#### Accessories

- For vertical grinder
- Piped-away exhaust kit 88V60-K184 (for 88V)
- Piped-away exhaust kit 99V60-K184 (for 99V)

**S106** 5/8" – 11 spindle, 6" guard



| Model     | Vibration<br>min/s <sup>2</sup> | Type 6 & 11<br>Wheels Size<br>in (mm) | Rated<br>Power<br>hp | Free<br>Speed<br>rpm | Weight<br>lb (kg) | Height Over<br>End of Spindle<br>in (mm) | Side to Center<br>Distance at Spindle<br>in (mm) | Airflow<br>cfm |
|-----------|---------------------------------|---------------------------------------|----------------------|----------------------|-------------------|--|--|----------------|
| 88V60S106 | 0.8                             | 5" or 6" (127 or 152)                 | 2.1                  | 6,000                | 8-3/8 (3.9)       | 6-3/32" (154)                            | 2-1/8" (54)                                      | 61             |
| 99V45S106 | 1.1                             | 5" or 6" (127 or 152)                 | 2.5                  | 4,500                | 10-3/4 (4.8)      | 6-7/8" (174)                             | 2-15/16" (74)                                    | 70             |
| 99V60S106 | 0.6                             | 5" or 6" (127 or 152)                 | 3                    | 6,000                | 10-3/4 (4.8)      | 6-7/8" (174)                             | 2-15/16" (74)                                    | 84             |

Air inlet for all models is 1/2" NPT.

Size hose recommended for all models is 3/4".

Performance figures are at 90 psi air pressure.

# Finishing Tools



Ingersoll Rand offers a host of finishing tools to accomplish a variety of surface preparation tasks, whether heavy-duty or intricate in nature. We provide an impressive line of scalers, needle scalers, piston scalers, drills, and accessories. For the smaller jobs, our ARO finishing tool line is the perfect solution — excellent for intricate grinding applications, including mold finishing, deburring, cleaning, and polishing.

Consult our Web site, your distributor, or an Ingersoll Rand representative for more details on our complete product line.

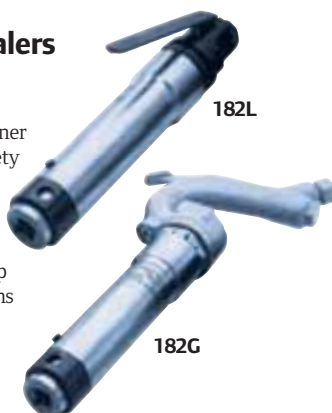
## Scalers and Needle Scalers

### Features

- Long nozzle section extends retainer life and permits the use of a variety of accessories
- Positive chisel retainer is simple to operate
- Strengthened head block holds up under the most extreme conditions

### Standard Equipment

- Positive lock chisel retainer



## Needle Scaler Kit

### 182K1 Scaler Kit

- Model 182L scaler
- Complete NS11A needle attachment with 5" long needles
- One extra set of NS11-22-19 needles 5" long
- One set of NS11-122-19 needles 7" long
- One WF-14A-6 – 1/8" angle chisel
- One WF-14B-6 – 1/8" straight chisel
- One WF-14F – 7" flat chisel
- PKB-1 or vinyl carrying case



| Model | Throttle | Weight Less Chisel lb (kg) | Length in (mm)  | Piston Stroke in (mm) | Bore in (mm) | Blows per Minute bpm | Hose Connector Pipe Tap in | Size Hose Recomm. in (mm) | Airflow cfm |
|-------|----------|----------------------------|-----------------|-----------------------|--------------|----------------------|----------------------------|---------------------------|-------------|
| 172L  | Lever    | 3-11/16 (1.69)             | 7-5/8" (194)    | 9/16" (14)            | 15/16" (24)  | 5,500                | 1/4"                       | 5/16" (8)                 | 12          |
| 182G  | Grip     | 5-5/16 (2.41)              | 12-13/16" (325) | 1-1/16" (27)          | 15/16" (24)  | 4,000                | 1/4"                       | 5/16" (8)                 | 13          |
| 182L  | Lever    | 4-1/16 (1.84)              | 9" (229)        | 1-1/16" (27)          | 15/16" (24)  | 4,000                | 1/4"                       | 5/16" (8)                 | 13          |

Performance figures are at 90 psi air pressure.

## Scaler and Needle Scaler Accessories

### Needle Scaler Attachments

Needle scaler attachments are available for use on Series 172 or Series 182 scalers already in service. Order by one of the symbols shown.

| Attachment Symbol | Description                                      |
|-------------------|--|
| NS11A             | 5" (127 mm) standard steel needles Round         |
| NS11AS            | 5" (127 mm) stainless steel needles Needle       |
| NS11A7            | 7" (178 mm) extended steel needles Housing       |
| NS11BB            | 5" (127 mm) beryllium copper needles Rectangular |
| NS11BS            | 5" (127 mm) stainless steel needles Needle       |
| NS11B7            | 7" (178 mm) extended steel needles Housing       |

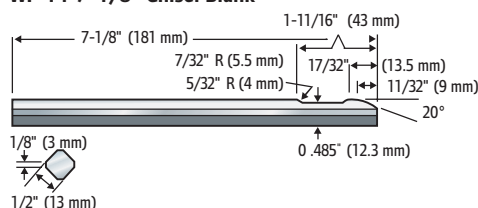
### Replacement Needles

Set of 19 needles.

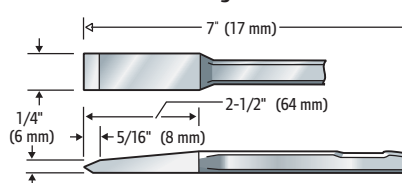
| Part Number | Description                          |
|-------------|--------------------------------------|
| NS11-22-19  | 5" (127 mm) standard steel needles   |
| NS11-B22-19 | 5" (127 mm) beryllium copper needles |
| NS11-S22-19 | 5" (217 mm) stainless steel needles  |
| NS11-122-19 | 7" (178 mm) extended steel needles   |

### Chisels and Star Drills for Series 172 and Series 182 Scalers

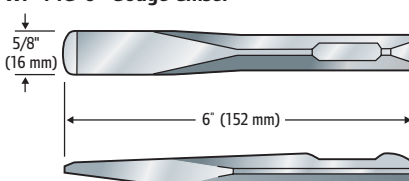
#### WF-14-7-1/8" Chisel Blank



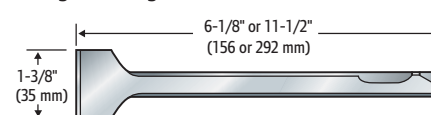
#### WF-14F-7" Flat Scaling Chisel



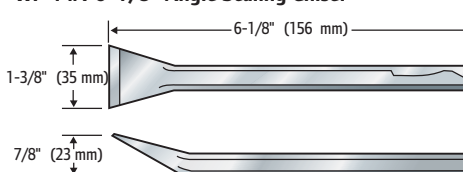
#### WF-14G-6" Gouge Chisel



#### WF-14B-6-1/8" or WF-14B-11-1/2" Straight Scaling Chisel



#### WF-14A-6-1/8" Angle Scaling Chisel





## Finishing Tools

### Classic Line Die Grinders

Rated Power: 20,000 – 85,000 rpm / 0.1 hp (0.08 kW)

#### Standard Equipment

- Collet with insert
- Collet wrenches
- 6' x 7/32" ID (1.8 m x 6 mm) air hose and 18" exhaust overhose on models GH011A-600
- 7' x 3/16" ID (2.1 m x 4.8 mm) air hose on models 7978, 7980, and 7114-E
- 39830 cartridge air filter on models 7980 and 7114-E

### Turbine Grinders

Rated Power: 85,000 rpm / 0.1 hp (0.08 kW)

Capacity: 1/8" carbide bur 3/8" mounted stone

- Ideal high-speed tools for final cleaning and polishing of dies

### Pencil Grinders

Rated Power: 60,000 rpm / 0.1 hp (0.08 kW)

Capacity: 1/4" carbide bur 1/4" mounted stone

- Excellent for intricate grinding applications, including mold finishing
- Trim, comfortable design enables precise control
- Choice of rear exhaust or front exhaust

### Die Grinders

Rated Power: 20,000 rpm / 0.1 hp (0.08 kW)

Capacity: 1/4" carbide bur 1/2" mounted stone

- Ideal for mold finishing, light deburring, and flash removal



| Model        | Free Speed rpm | Throttle Style | Standard Collet Size in (mm) | Exhaust Location | Spindle Offset in (mm) | Tool Length in (mm) | Tool Weight oz (kg) | Air Consumption @ Free Speed cfm | Sound Level @ Free Speed dBA | Standard Collet Insert |
|--------------|----------------|----------------|------------------------------|------------------|------------------------|---------------------|---------------------|----------------------------------|------------------------------|------------------------|
| 7980-2       | 85,000         | Lever          | 1/8" (3)                     | Front            | 0.6" (14)              | 5.6" (143)          | 14 (0.4)            | 9                                | 84                           | 31812-4                |
| 7980-A       | 85,000         | Twist          | 1/8" (3)                     | Front            | 0.6" (14)              | 5.6" (143)          | 14 (0.4)            | 9                                | 84                           | 31812-4                |
| 7978         | 60,000         | Slide          | 1/8" (3)                     | Front            | 0.4" (9)               | 5.6" (143)          | 5.5 (0.15)          | 6                                | 80                           | 46119-2                |
| GH011A-600-1 | 60,000         | Twist          | 1/8" (3)                     | Rear             | 0.34" (9)              | 5.3" (136)          | 2.6 (0.07)          | 7                                | 77                           | 47568-1                |
| 7114-E       | 20,000         | Lever          | 1/8" (3)                     | Front            | 0.5" (12)              | 6" (152)            | 13 (0.37)           | 6                                | 79                           | 31812-4                |

#### Optional Collet Inserts

| For Models      | Part Number | Description   |
|-----------------|-------------|---------------|
| 7980 and 7114-E | 31812       | Collet insert |
| 7978            | 46119       | Collet insert |
| GH011A          | 47568       | Collet insert |

[illegible]

When you've got a demanding surface prep or finishing job to do, you need tools and accessories you can rely on. That's exactly what you get when you turn to Ingersoll Rand. Our complete line of accessories reflects the same high standards of performance that you'd expect from Ingersoll Rand — the global leader for durable and reliable tools and equipment. Whether it's a big job or small, we have the accessories you need to get it done right.

## Type 1 Wheel Accessories

| Description                   | Series 61H      | Series 77H | Series 88H |
|-------------------------------|-----------------|------------|------------|
| 1/4" Erickson collet          | G160-HD-700-1/4 | N/A        | N/A        |
| 1/4" Erickson collet assembly | DG220-A290-G4   | N/A        | N/A        |
| 3/8" Erickson collet          | DG120-700-G6    | N/A        | N/A        |
| 3/8" Erickson collet assembly | DG220-A290-G6   | N/A        | N/A        |
| Collet body wrench            | DG10-69         | N/A        | N/A        |
| Collet nut wrench             | DG120-69        | N/A        | N/A        |
| 3/8"-24 cone wheel spindle    | DG220-104-L6    | N/A        | N/A        |
| Cone wheel spindle wrench     | DG20-69A        | 7RAQT4-254 | 7RAQT4-254 |
| Controller wrench             | R15-169         | 77H-950    | 88V60-950  |

## Type 27 and 28 Wheel Accessories

| Description                     | Series 77A | Series 88V | Series 99V  |
|---------------------------------|------------|------------|-------------|
| 6" type 6 or 11 cup wheel guard | N/A        | 88V60-A216 | 99V60-A216A |
| Piped-away exhaust kit          | N/A        | 88V60-K184 | 99V60-K184  |
| Wheel retaining screw wrench    | 88V-562    | 88V-562    | 88V-562     |
| Controller wrench               | 77H-950    | 88V60-950  | 99V60-950   |
| Comfort grips                   | N/A        | CG-88V     | CG-99V      |

## Type 6 and 11 Wheel Accessories

| Description                          | Series 88V  | Series 99V  |
|--------------------------------------|-------------|-------------|
| 7" type 27 wheel guard               | 88V60-106-7 | 99V77-106-7 |
| 9" type 27 wheel guard               | 88V60-106-9 | 99V60-106-9 |
| 7" and 9" type 27 wheel adapter kit* | R3F-AS337   | R3F-AS337   |
| Piped-away exhaust kit               | 88V60-K184  | 99V60-K184  |
| Wheel retaining screw wrench         | 88V-562     | 88V-562     |
| Controller wrench                    | 88V60-950   | 99V60-950   |
| Comfort grips                        | CG-88V      | CG-99V      |

\*For use with Type 27 plain hole depressed center wheels.

## Finishing Tool Accessories

| Description                       | Series C  | Series 7    | Series T&H  | Series 77A  | Series 88S  | Series 99S  |
|-----------------------------------|-----------|-------------|-------------|-------------|-------------|-------------|
| 5" medium sanding pad assembly    | N/A       | 77A-AM825-5 | 77A-AM825-5 | 77A-AM825-5 | 77A-AM825-5 | 77A-AM825-5 |
| 7" medium sanding pad assembly    | N/A       | 77A-AM825-7 | 77A-AM825-7 | 77A-AM825-7 | 77A-AM825-7 | 77A-AM825-7 |
| 7" firm sanding pad assembly      | N/A       | 77A-BM825-7 | 77A-BM825-7 | 77A-BM825-7 | 77A-BM825-7 | 77A-BM825-7 |
| 9" firm sanding pad assembly      | N/A       | 77A-AM825-9 | N/A         | 77A-AM825-9 | 77A-AM825-9 | 77A-AM825-9 |
| 7" wool polishing bonnet          | N/A       | P500-850    | P500-850    | P500-850    | N/A         | N/A         |
| Pad nut                           | N/A       | D94SK-226   | D94SK-226   | D94SK-226   | D94SK-226   | D94SK-226   |
| Pad nut wrench                    | N/A       | D94SK-26    | D94SK-26    | D94SK-26    | D94SK-26    | D94SK-26    |
| Spindle wrench                    | N/A       | 7S60-24818* | N/A         | DG120-69    | DG120-69    | DG120-69**  |
| 2" abrasive kit                   | LG1-K2    | N/A         | N/A         | N/A         | N/A         | N/A         |
| 3" abrasive kit                   | LG1-K3    | N/A         | N/A         | N/A         | N/A         | N/A         |
| Inlet hose assembly 5/16" x 8'    | RO-130    | N/A         | RO-130      | N/A         | N/A         | N/A         |
| Piped-away exhaust kit            | LG1-K184  | N/A         | LG2-K284    | N/A         | 88V60-K184  | 99V60-K184  |
| Controller wrench                 | N/A       | N/A         | N/A         | 77H-950     | 88V60-950   | 99V60-950   |
| Pad nut kit                       | N/A       | 77A-826     | 77A-826     | 77A-826     | 77A-826     | 77A-826     |
| Pad nut spanner                   | AG230-26M | N/A         | AG230-26M   | N/A         | N/A         | N/A         |
| Combination wrench 1/2" – 9/16"   | DG10-69   | N/A         | N/A         | N/A         | N/A         | N/A         |
| Combination wrench 7/16" – 11/16" | N/A       | N/A         | DG20-69A    | N/A         | N/A         | N/A         |

\*5/16" OE.

\*\*5/8" x 3/4" OE.



# Quick Change Abrasives

Ingersoll Rand offers a complete line of 1-1/2" to 3" surface-conditioning discs designed to maximize the productivity of our air grinders, while ensuring the best possible finishes.

## Quick Change Backer Pads

| Part Number                     | Description                                |
|---------------------------------|--|
| <b>QUICK CHANGE BACKER PADS</b> |  |
| 02A-MEDPD-NM                    | 2" medium pad, no mandrel                  |
| 03A-MEDPD-NM                    | 3" medium pad, no mandrel                  |
| 02A-SFTPD                       | 2" soft holder pad with 1/4" mandrel       |
| 03A-SFTPD                       | 3" soft holder pad with 1/4" mandrel       |
| 15A-MEDPD                       | 1-1/2" medium holder pad with 1/4" mandrel |
| 02A-MEDPD                       | 2" medium holder pad with 1/4" mandrel     |
| 03A-MEDPD                       | 3" medium holder pad with 1/4" mandrel     |
| 02A-FRMPD                       | 2" firm holder pad with 1/4" mandrel       |
| 03A-FRMPD                       | 3" firm holder pad with 1/4" mandrel       |



## AO Series

| FEATURES:                      | BENEFITS:  |
|--------------------------------|--|
| Quick change fastening systems | <ul style="list-style-type: none"> <li>▶ Instant disc changes</li> <li>▶ Disc is centered</li> <li>▶ Smooth-running</li> </ul> |
| Multiple layers of backing     | ▶ Works well on flat and contoured surfaces  |
| Aggressive stock removal       | ▶ Greater productivity   |



Industrial boxes come in 3 sizes

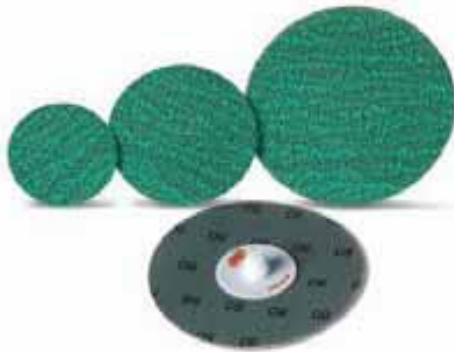
## AO Series Quick Change Sanding Discs

| Part Number   | Description                   | Grit |
|---|-------------------------------|------|
| <b>INDUSTRIAL PACKS (FLAP-TOP BOX)</b>                    |                               |      |
| 15A-036AO-100   | 1-1/2" AO Series sanding disc | 36   |
| 15A-050AO-100   | 1-1/2" AO Series sanding disc | 50   |
| 15A-080AO-100   | 1-1/2" AO Series sanding disc | 80   |
| 15A-120AO-100   | 1-1/2" AO Series sanding disc | 120  |
| 15A-180AO-100   | 1-1/2" AO Series sanding disc | 180  |
| 15A-240AO-100   | 1-1/2" AO Series sanding disc | 240  |
| 02A-036AO-100   | 2" AO Series sanding disc     | 36   |
| 02A-050AO-100   | 2" AO Series sanding disc     | 50   |
| 02A-080AO-100   | 2" AO Series sanding disc     | 80   |
| 02A-120AO-100   | 2" AO Series sanding disc     | 120  |
| 02A-180AO-100   | 2" AO Series sanding disc     | 180  |
| 02A-240AO-100   | 2" AO Series sanding disc     | 240  |
| 03A-036AO-50  | 3" AO Series sanding disc     | 36   |
| 03A-050AO-50  | 3" AO Series sanding disc     | 50   |
| 03A-080AO-50  | 3" AO Series sanding disc     | 80   |
| 03A-120AO-50  | 3" AO Series sanding disc     | 120  |
| 03A-180AO-50  | 3" AO Series sanding disc     | 180  |
| 03A-240AO-50  | 3" AO Series sanding disc     | 240  |
| <b>AUTOMOTIVE PACKS (SMALLER QUANTITY FLIP-TOP BOXES)</b> |                               |      |
| 02A-036AO-25  | 2" AO Series sanding disc     | 36   |
| 02A-050AO-25  | 2" AO Series sanding disc     | 50   |
| 02A-080AO-25  | 2" AO Series sanding disc     | 80   |
| 02A-120AO-25  | 2" AO Series sanding disc     | 120  |
| 02A-180AO-25  | 2" AO Series sanding disc     | 180  |
| 02A-240AO-25  | 2" AO Series sanding disc     | 240  |
| 03A-036AO-25  | 3" AO Series sanding disc     | 36   |
| 03A-050AO-25  | 3" AO Series sanding disc     | 50   |
| 03A-080AO-25  | 3" AO Series sanding disc     | 80   |
| 03A-120AO-25  | 3" AO Series sanding disc     | 120  |
| 03A-180AO-25  | 3" AO Series sanding disc     | 180  |
| 03A-240AO-25  | 3" AO Series sanding disc     | 240  |

## ZR Series Quick Change Sanding Discs

| FEATURES:                                 | BENEFITS:  |
|---|--|
| Variety of quick change fastening systems | <ul style="list-style-type: none"> <li>▶ Instant disc changes</li> <li>▶ Disc is centered</li> <li>▶ Smooth-running</li> </ul> |
| Zirconia alumina grain                    | <ul style="list-style-type: none"> <li>▶ Durable</li> <li>▶ Rapid stock removal</li> </ul>                                     |
| Cooler-running                            | <ul style="list-style-type: none"> <li>▶ Reduces risk of loading</li> <li>▶ Longer-lasting</li> </ul>                          |
| 2-ply construction                        | <ul style="list-style-type: none"> <li>▶ Works well on flat or contoured surfaces</li> </ul>                                   |

| Part Number   | Description                   | Grit |
|---|-------------------------------|------|
| <b>ZR SERIES — QUICK CHANGE SANDING DISCS</b>             |                               |      |
| 15A-036ZR-100   | 1-1/2" ZR Series sanding disc | 36   |
| 15A-050ZR-100   | 1-1/2" ZR Series sanding disc | 50   |
| 15A-080ZR-100   | 1-1/2" ZR Series sanding disc | 80   |
| 15A-120ZR-100   | 1-1/2" ZR Series sanding disc | 120  |
| 02A-036ZR-100   | 2" ZR Series sanding disc     | 36   |
| 02A-050ZR-100   | 2" ZR Series sanding disc     | 50   |
| 02A-080ZR-100   | 2" ZR Series sanding disc     | 80   |
| 02A-120ZR-100   | 2" ZR Series sanding disc     | 120  |
| 03A-036ZR-50  | 3" ZR Series sanding disc     | 36   |
| 03A-050ZR-50  | 3" ZR Series sanding disc     | 50   |
| 03A-080ZR-50  | 3" ZR Series sanding disc     | 80   |
| 03A-120ZR-50  | 3" ZR Series sanding disc     | 120  |
| <b>AUTOMOTIVE PACKS (SMALLER QUANTITY FLIP-TOP BOXES)</b> |                               |      |
| 02A-036ZR-25  | 2" ZR Series sanding disc     | 36   |
| 02A-050ZR-25  | 2" ZR Series sanding disc     | 50   |
| 02A-080ZR-25  | 2" ZR Series sanding disc     | 80   |
| 02A-120ZR-25  | 2" ZR Series sanding disc     | 120  |
| 03A-036ZR-25  | 3" ZR Series sanding disc     | 36   |
| 03A-050ZR-25  | 3" ZR Series sanding disc     | 50   |
| 03A-080ZR-25  | 3" ZR Series sanding disc     | 80   |
| 03A-120ZR-25  | 3" ZR Series sanding disc     | 120  |



## CO Series Quick Change Sanding Discs

| FEATURES:              | BENEFITS:  |
|------------------------|--|
| Ceramic grain          | <ul style="list-style-type: none"> <li>▶ Durable</li> <li>▶ Rapid stock removal</li> </ul>                               |
| Stiff, durable backing | <ul style="list-style-type: none"> <li>▶ Maintains high cut rate on edges without grain shredding and tearing</li> </ul> |
| Cooler-running         | <ul style="list-style-type: none"> <li>▶ Reduces risk of loading</li> </ul>  |

| Part Number   | Description                   | Grit |
|---|-------------------------------|------|
| <b>CO SERIES — QUICK CHANGE SANDING DISCS</b>             |                               |      |
| 15A-036CO-100   | 1-1/2" CO Series sanding disc | 36   |
| 15A-050CO-100   | 1-1/2" CO Series sanding disc | 50   |
| 15A-080CO-100   | 1-1/2" CO Series sanding disc | 80   |
| 15A-120CO-100   | 1-1/2" CO Series sanding disc | 120  |
| 02A-036CO-100   | 2" CO Series sanding disc     | 36   |
| 02A-050CO-100   | 2" CO Series sanding disc     | 50   |
| 02A-080CO-100   | 2" CO Series sanding disc     | 80   |
| 02A-120CO-100   | 2" CO Series sanding disc     | 120  |
| 03A-036CO-50  | 3" CO Series sanding disc     | 36   |
| 03A-050CO-50  | 3" CO Series sanding disc     | 50   |
| 03A-080CO-50  | 3" CO Series sanding disc     | 80   |
| 03A-120CO-50  | 3" CO Series sanding disc     | 120  |
| <b>AUTOMOTIVE PACKS (SMALLER QUANTITY FLIP-TOP BOXES)</b> |                               |      |
| 02A-036CO-25  | 2" CO Series sanding disc     | 36   |
| 02A-050CO-25  | 2" CO Series sanding disc     | 50   |
| 02A-080CO-25  | 2" CO Series sanding disc     | 80   |
| 02A-120CO-25  | 2" CO Series sanding disc     | 120  |
| 03A-036CO-25  | 3" CO Series sanding disc     | 36   |
| 03A-050CO-25  | 3" CO Series sanding disc     | 50   |
| 03A-080CO-25  | 3" CO Series sanding disc     | 80   |
| 03A-120CO-25  | 3" CO Series sanding disc     | 120  |



## Quick Change Surface Prep Discs

| Part Number   | Description                                |
|---|--|
| <b>INDUSTRIAL PACKS (FLAP-TOP BOX)</b>                    |  |
| 15A-CRSBR-50  | 1-1/2" surface prep disc — coarse, brown   |
| 15A-MEDBR-50  | 1-1/2" surface prep disc — medium, maroon  |
| 15A-VFNBR-50  | 1-1/2" surface prep disc — very fine, blue |
| 02A-CRSBR-50  | 2" surface prep disc — coarse, brown       |
| 02A-MEDBR-50  | 2" surface prep disc — medium, maroon      |
| 02A-VFNBR-50  | 2" surface prep disc — very fine, blue     |
| 03A-CRSBR-25  | 3" surface prep disc — coarse, brown       |
| 03A-MEDBR-25  | 3" surface prep disc — medium, maroon      |
| 03A-VFNBR-25  | 3" surface prep disc — very fine, blue     |
| <b>AUTOMOTIVE PACKS (SMALLER QUANTITY FLIP-TOP BOXES)</b> |  |
| 02A-CRSBR-25  | 2" surface prep disc — coarse, brown       |
| 02A-MEDBR-25  | 2" surface prep disc — medium, maroon      |
| 02A-VFNBR-25  | 2" surface prep disc — very fine, blue     |
| 03A-CRSBR-10  | 3" surface prep disc — coarse, brown       |
| 03A-MEDBR-10  | 3" surface prep disc — medium, maroon      |
| 03A-VFNBR-10  | 3" surface prep disc — very fine, blue     |



## Quick Change Quick Strip Discs

| Part Number   | Description                                  |
|---|--|
| 02A-CRSBS-25  | 2" surface prep coating removal disc — black |
| 03A-CRSBS-10  | 3" surface prep coating removal disc — black |
| 02A-CRSBB-25  | 2" surface prep coating removal disc — blue  |
| 03A-CRSBB-10  | 3" surface prep coating removal disc — blue  |
| <b>AUTOMOTIVE PACKS (SMALLER QUANTITY FLIP-TOP BOXES)</b> |  |
| 02A-CRSBS-10  | 2" surface prep coating removal disc — black |
| 03A-CRSBS-5   | 3" surface prep coating removal disc — black |
| 02A-CRSBB-10  | 2" surface prep coating removal disc — blue  |
| 03A-CRSBB-5   | 3" surface prep coating removal disc — blue  |
| <b>TEST KIT</b>   |  |
| 50-piece starter / test kit                               |  |



## High Strength Buffing Discs

| Part Number   | Description                           |
|---|---------------------------------------|
| <b>INDUSTRIAL PACKS (FLAP-TOP BOX)</b>                    |                                       |
| 02A-MEDBB-50  | 2" quick change buffing disc — medium |
| 03A-MEDBB-25  | 3" quick change buffing disc — medium |
| <b>AUTOMOTIVE PACKS (SMALLER QUANTITY FLIP-TOP BOXES)</b> |                                       |
| 02A-MEDBB-25  | 2" quick change buffing disc — medium |
| 03A-MEDBB-10  | 3" quick change buffing disc — medium |





# Carbide Burs

Ingersoll Rand carbide burs set the industry standard for quality and are the perfect complement to our innovative grinders and finishing tools. You'll find a complete range of versatile, durable, high-precision burs, in a variety of types and sizes.

## Cylindrical-shaped Burs



| Part Number                                       | Type of Cut   | Shank | Length of Cut |
|---|---------------|-------|---------------|
| <b>1/8" CYLINDRICAL-SHAPED BUR*</b>               |               |       |               |
| IRSA-11   | Super cut     | 1/4"  | 1/2"          |
| <b>1/4" CYLINDRICAL-SHAPED BURS*</b>              |               |       |               |
| IRSA-1  | Super cut     | 1/4"  | 5/8"          |
| IRSA-1L   | Super cut     | 1/4"  | 1"            |
| <b>5/16" CYLINDRICAL-SHAPED BURS**</b>            |               |       |               |
| IRSA-2  | Super cut     | 1/4"  | 3/4"          |
| IRSA-2F   | Fine cut      | 1/4"  | 3/4"          |
| <b>3/8" CYLINDRICAL-SHAPED BURS**</b>             |               |       |               |
| IRSA-3  | Super cut     | 1/4"  | 3/4"          |
| IRSA-3F   | Fine cut      | 1/4"  | 3/4"          |
| <b>1/2" CYLINDRICAL-SHAPED BURS**</b>             |               |       |               |
| IRSA-5  | Super cut     | 1/4"  | 1"            |
| IRSA-5EC  | Super end cut | 1/4"  | 1"            |
| IRSA-5F   | Fine cut      | 1/4"  | 1"            |
| <b>1/4" CYLINDRICAL-SHAPED BUR (RADIUS NOSE)*</b> |               |       |               |
| IRSC-1  | Super cut     | 1/4"  | 1"            |

\*Solid carbide bur.

\*\*Solid carbide bur with steel shank.

## Cone-shaped Burs (radius nose)



| Part Number                                  | Type of Cut | Shank | Length of Cut |
|--|-------------|-------|---------------|
| <b>5/16" CONE-SHAPED BURS (RADIUS NOSE)*</b> |             |       |               |
| IRSL-2                                       | Super cut   | 1/4"  | 3/4"          |
| <b>3/8" CONE-SHAPED BURS (RADIUS NOSE)</b>   |             |       |               |
| IRSL-3                                       | Super cut   | 1/4"  | 3/8"          |

\*Solid carbide bur with steel shank.

## Ball-shaped Burs



| Part Number                   | Type of Cut | Shank | Length of Cut |
|-------------------------------|-------------|-------|---------------|
| <b>1/4" BALL-SHAPED BURS*</b> |             |       |               |
| IRSD-1                        | Super cut   | 1/4"  | 1/4"          |
| IRSD-3                        | Super cut   | 1/4"  | 3/8"          |

\*Solid carbide bur with steel shank.

## Tree-shaped Burs



| Part Number                              | Type of Cut | Shank | Length of Cut |
|--|-------------|-------|---------------|
| <b>1/4" TREE-SHAPED (POINTED NOSE)*</b>  |             |       |               |
| IRSF-1                                   | Super cut   | 1/4"  | 5/8"          |
| <b>3/8" TREE-SHAPED (POINTED NOSE)**</b> |             |       |               |
| IRSF-3                                   | Super cut   | 1/4"  | 3/4"          |
| <b>1/2" TREE-SHAPED (POINTED NOSE)**</b> |             |       |               |
| IRSF-5                                   | Super cut   | 1/4"  | 1"            |
| <b>5/16" TREE-SHAPED (RADIUS NOSE)**</b> |             |       |               |
| IRSG-2                                   | Fine cut    | 1/4"  | 3/4"          |

\*Solid carbide bur.

\*\*Solid carbide bur with steel shank.

## 8-piece Bur Kit

Eight of the most popular Ingersoll Rand burs, packaged in a wood case.

| Part Number             | Type of Bur                               | Includes | Shank |
|-------------------------|---|----------|-------|
| <b>8-PIECE BUR KIT*</b> |   |          |       |
| 814                     | 3/8" cylindrical-shaped bur               | IRSA-3   | 1/4"  |
|                         | 1/2" cylindrical-shaped bur               | IRSA-5   | 1/4"  |
|                         | 1/4" cylindrical-shaped bur (radius nose) | IRSC-1   | 1/4"  |
|                         | 3/8" cylindrical-shaped bur (radius nose) | IRSC-3   | 1/4"  |
|                         | 1/4" ball-shaped bur                      | IRSD-1   | 1/4"  |
|                         | 3/8" ball-shaped bur                      | IRSD-3   | 1/4"  |
|                         | 3/8" tree-shaped bur                      | IRSF-3   | 1/4"  |
|                         | 1/2" tree-shaped bur                      | IRSF-5   | 1/4"  |



# Sanding and Polishing Pads

Whatever your surface preparation needs happen to be, we offer a full range of sanding, backing, and polishing pads. Genuine Ingersoll Rand pads are specifically engineered to work at the tolerances of our powerful tools, ensuring you get the best finishes possible.

## Sanding and Polishing Pads

| Part Number               | Description   | For Use With                           |
|---------------------------|---|--|
| <b>FIRM PAD</b>           |   |  |
| 310-825-6                 | 6" firm pad for medium to heavy stock removal, cloth-backed, dual-action backing pad, standard-duty | 310, 311A                              |
| <b>VINYL PAD</b>          |   |  |
| 9860                      | 6" vinyl pad, dual-action backing pad — blister pack  | 311, 311A                              |
| <b>STRAIGHT LINE PADS</b> |   |  |
| 312-225                   | 3-2/3" x 6-3/4" straight line pad   | 312, 312A                              |
| 315-39                    | straight line pad   | 315                                    |
| <b>BACKING PADS</b>       |   |  |
| 313A-825-7                | 7" rigid backing pad,   | 313, 313A, 314, standard-duty          |
| 314A, 318, 318A,          |   | 319, 319A                              |
| 317A-825                  | 3" and 5" backing pads  | 317, 317A                              |
| <b>PAD NUTS</b>           |   |  |
| 313-226                   | Pad nut   | Cyclone T and H and G2 Series grinders |
| 313A-226                  | Pad nut   | Cyclone T and H and G2 Series grinders |



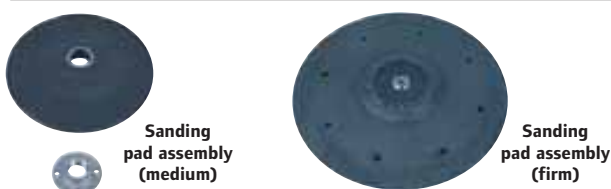
## Sanding and Polishing Pads

| Part Number                       | Description   | For Use With                               |
|-----------------------------------|---|--|
| <b>SANDING AND POLISHING PADS</b> |   |  |
| D94SK-228A                        | 6-1/2" pad  | 328B                                       |
| 6135A                             | 8" polishing pad, 2" thick polyester foam                       | 313, 313A, 314, 314A, 318, 318A, 319, 319A |
| <b>WOOL POLISHING BONNET</b>      |   |  |
| P500-850                          | 7" wool polishing bonnet  | 313, 313A, 314, 314A, 318, 318A, 319, 319A |
| <b>FLEXIBLE BACKING PAD</b>       |   |  |
| 6130A                             | 7" flexible backing pad, heavy-duty                             | 313, 313A, 314, 314A, 318, 318A, 319, 319A |
| <b>SANDING PAD ASSEMBLY</b>       |   |  |
| 328A-826                          | 8" sanding pad assembly, dual-action backing pad, standard-duty | 328B                                       |



## Sanding Pad Assemblies

| Part Number                            | Description             | For Use With                                    |
|--|-------------------------|---|
| <b>SANDING PAD ASSEMBLIES (MEDIUM)</b> |                         |   |
| 77A-AM825-5                            | 5" sanding pad assembly | H Series, G2 Series, ErgoPro Series, Pro-Series |
| 77A-AM825-7                            | 7" sanding pad assembly | H Series, G2 Series, ErgoPro Series, Pro-Series |
| <b>SANDING PAD ASSEMBLY (FIRM)</b>     |                         |   |
| 77A-AM825-9                            | 9" sanding pad assembly | H Series, G2 Series, ErgoPro Series, Pro-Series |



## Sanding Backer Pads

| Part Number            | Description                         | For Use With   |
|------------------------|-------------------------------------|--|
| <b>NON-VACUUM PADS</b> |                                     |  |
| 49094-1                | 5" non-vacuum vinyl pad             | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| 49879-1                | 6" non-vacuum vinyl pad             | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| 49880-1                | 6" non-vacuum duck pad              | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| <b>VACUUM PADS</b>     |                                     |  |
| 49096-1                | 5" vacuum petal pattern pad         | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| 49099-1                | 6" vacuum petal pattern pad         | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| 49694                  | 6" vacuum hook-and-loop pattern pad | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| <b>SANDING PADS</b>    |                                     |  |
| 49095                  | 5" sanding pad                      | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| 49097                  | 6" sanding pad                      | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| 49097-1                | 6" sanding pad                      | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |
| <b>DUCK FACE PAD</b>   |                                     |  |
| 49095-1                | 5" duck face pad                    | 4151 and 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC |

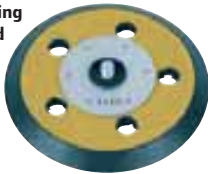
Non-vacuum pad



Vacuum pad



Sanding pad



Duck face pad



## Sanding Belts

| Part Number                     | Description              | Grit | For Use With           |
|---------------------------------|--------------------------|------|------------------------|
| <b>1/4" x 18" SANDING BELTS</b> |                          |      |                        |
| LG1-SB418-60-10                 | Pack of 10 sanding belts | 60   | CA120RS418, CA200RS418 |
| LG1-SB418-80-10                 | Pack of 10 sanding belts | 80   | CA120RS418, CA200RS418 |
| LG1-SB418-100-10                | Pack of 10 sanding belts | 100  | CA120RS418, CA200RS418 |
| <b>1/2" x 12" SANDING BELTS</b> |                          |      |                        |
| LG1-SB812-60-10                 | Pack of 10 sanding belts | 60   | CA120RS812, CA200RS812 |
| LG1-SB812-80-10                 | Pack of 10 sanding belts | 80   | CA120RS812, CA200RS812 |
| LG1-SB812-100-10                | Pack of 10 sanding belts | 100  | CA120RS812, CA200RS812 |
| <b>1/2" x 18" SANDING BELTS</b> |                          |      |                        |
| LG1-SB818-60-10                 | Pack of 10 sanding belts | 60   | CA120RS818, CA200RS818 |
| LG1-SB818-80-10                 | Pack of 10 sanding belts | 80   | CA120RS818, CA200RS818 |
| LG1-SB818-100-10                | Pack of 10 sanding belts | 100  | CA120RS818, CA200RS818 |



1/4" x 18" sanding belts



1/2" x 12" sanding belts



1/2" x 18" sanding belts



## Cyclone Series Accessories

| Part Number  | Description                                      |
|--|--|
| <b>PREMIUM QUALITY LOW-PROFILE PADS</b>                    |  |
| <b>Non-vacuum — 3/8" (Select and CycloVac Series only)</b> |  |
| 49877-1  | 5" duck face                                     |
| 49878-1  | 5" vinyl face                                    |
| 49879-1  | 6" vinyl face                                    |
| 49880-1  | 6" duck face                                     |
| <b>Non-vacuum — 3/8" (Standard only)</b>                   |  |
| 49094-1  | 5" (127 mm) diameter, vinyl face diamond pattern |
| 49095-1  | 5" (127 mm) diameter, duck face                  |
| 351-825-6A   | 6" (152 mm) diameter, vinyl face diamond pattern |
| 49098-1  | 6" (152 mm) diameter, duck face                  |



|                       |  |
|-----------------------|--|
| <b>Vacuum* — 3/8"</b> |  |
| 49096-1               | 5" (127 mm) diameter, vinyl face petal pattern |
| 49099-1               | 6" (152 mm) diameter, vinyl face petal pattern |



*\*For use with PSA coated sanding discs with industry-standard pre-punched holes.*

|                      |                                       |
|----------------------|---------------------------------------|
| <b>PAD WRENCHES*</b> |                                       |
| 351-69               | For Standard Series non-vacuum models |
| 354-69               | For all Standard Series vacuum models |

*\*Use to remove sanding pad. Included with every tool.*



|                          |                                |
|--------------------------|--------------------------------|
| <b>SPANNER WRENCHES*</b> |                                |
| 48869                    | For all CycloVac models        |
| 44548                    | For all Standard Series models |

*\*Use to remove the lock ring securing the motor assembly.*



| Part Number        | Description              |
|--------------------|--------------------------|
| <b>GRIP RINGS*</b> |                          |
| 49801              | Small, grey (optional)   |
| 49798              | Medium, black (standard) |
| 49799              | Large, blue (optional)   |

*\*Alternate grip rings for Select Series models.*



|                        |                              |
|------------------------|------------------------------|
| <b>VACUUM ADAPTERS</b> |                              |
| 49802                  | For all Select Series models |

|                      |                 |
|----------------------|-----------------|
| <b>VACUUM HOSES*</b> |                 |
| 49600                | 6' (1.8 m) hose |

*\*Equipped with molded 1" I.D. cuffs at each end.*



|  |                     |
|--|---------------------|
| <b>DUST COLLECTION BAG (SELECT SERIES)</b> |                     |
| 355-402                                    | Dust collection bag |



|   |                       |
|---|-----------------------|
| <b>CYCLOVAC SERIES DISPOSABLE VACUUM BAGS</b> |                       |
| 49988   | Vacuum bag (20 pack)  |
| 49987   | Vacuum bag (250 pack) |
| 49973   | Vacuum bag (single)   |

|   |                   |
|---|-------------------|
| <b>CYCLOVAC SERIES CONVERSION KITS*</b> |                   |
| 49977                                   | 5" conversion kit |
| 49978                                   | 6" conversion kit |

*\*To convert non-vac tools to vacuum*

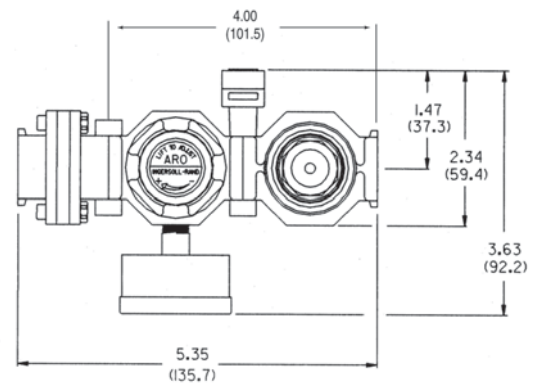
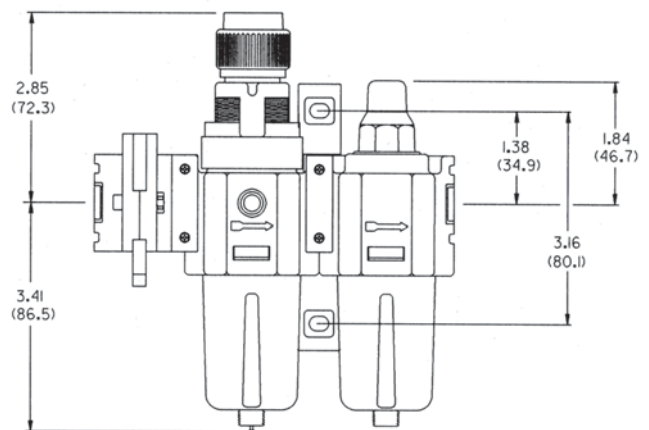
|                     |                 |
|---------------------|-----------------|
| <b>SERVICE KITS</b> |                 |
| 49837               | Select Series   |
| 49846               | Standard Series |

# Filters, Regulators, and Lubricators (FRLs)

## ARO Mini Series Combination Units



**Dimensional Data**  
Dimensions – in (mm)



## PiggyBack Lubricator

| Performance                 | Specifications               |
|-----------------------------|------------------------------|
| Max Inlet Pressure          | 150 psig (10.4 bar)          |
| Temp Range                  | 0° – 125° F (-18° – 52° C)   |
| Filter Element              | 20 micron                    |
| Pressure Range in Regulator | 5 – 125 psig (0.4 – 8.6 bar) |
| Gauge                       | 0 – 150 psi                  |
| Gauge Port                  | 1/8" NPT                     |

| Port Size NPT  | Models        |                  | Weight lb (kg) | Components         |            |
|--|---------------|------------------|----------------|--------------------|------------|
|  | with T-Mounts | without T-Mounts |                | Filter / Regulator | Lubricator |
| <b>PUSH DRAIN — POLYCARBONATE BOWL WITH BOWL GUARD</b> |               |                  |                |                    |            |
| 1/8"   | C28111-600    | C28112-600       | 4.14 (1.88)    | P29112-600         | L26111-100 |

**Note:** Order lock-out valve separately and attach to filter inlet with clamp kit (104263). To order modular model with pipe nipples, place a "3" in the sixth position of the model number. Example: C28XX3-XXX.

## ARO Compact Series Piggyback Lubricators

| Port Size<br>NPT                                | Models     |            | Weight<br>lb (kg) | Components |            |
|---|------------|------------|-------------------|------------|------------|
|   | Modular    | Nippled    |                   | Piggyback  | Lubricator |
| PUSH DRAIN — METAL BOWL WITH SIGHT GLASS        |            |            |                   |            |            |
| 1/4"  | C28221-610 | C28223-610 | 4.1 (1.9)         | P29221-610 | L26221-110 |
| 3/8"  | C28231-610 | C28233-610 | 4 (1.8)           | P29231-610 | L26231-110 |
| 1/2"  | C28241-610 | C28243-610 | 3.9 (1.8)         | P29241-610 | L26241-110 |
| PUSH DRAIN — POLYCARBONATE BOWL WITH BOWL GUARD |            |            |                   |            |            |
| 1/4"  | C28221-600 | C28223-600 | 4.1 (1.9)         | P29221-600 | L26221-100 |
| 3/8"  | C28231-600 | C28233-600 | 4 (1.8)           | P29231-600 | L26231-100 |
| 1/2"  | C28241-600 | C28243-600 | 3.9 (1.8)         | P29241-600 | L26241-100 |

**Note:** Two-piece modular models include one 104171 "T" bracket and one 100067 gauge.

Pipe-nippled models include one 100067 gauge and one appropriate-sized pipe nipple.

For pipe-nippled FRL combo units with automatic drain, order individual filter, regulator, lubricator components, and pipe nipples.

To order modular models without "T" brackets, place a "2" in the sixth position of the model number. Example: CXXXX2-XXX.

Not all menu combinations are valid. See price book to verify.



**C28241-610  
Piggyback / Lubricator**

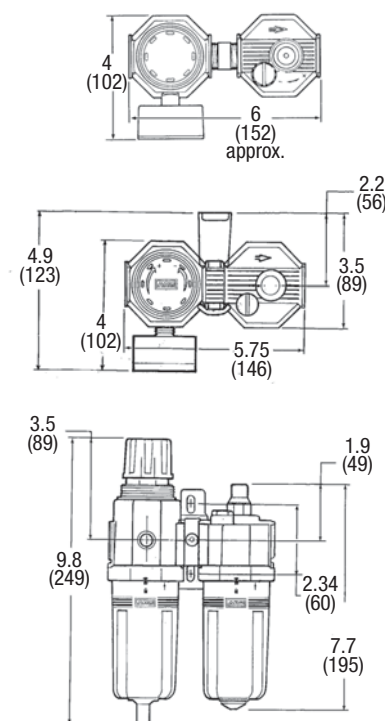
## 1/4", 3/8", and 1/2" Ports

### Ordering

Select the basic model number that represents the port size and bowl option required. Modular models listed include gauges and "T" brackets, and are shipped assembled. Pipe-nippled models include gauge and nipple, and are shipped unassembled. If other options are required, order each unit separately.

For BSP threads, add -B to the end of the model number.

| Performance                 | Specifications   |
|-----------------------------|--|
| Max Inlet Pressure          | Polycarbonate bowl — 150 psig (10.4 bar)<br>Metal bowl — 175 psig (12 bar)                 |
| Operating Temp Range        | Polycarbonate bowl — 0° – 125° F (-18° – 52° C)<br>Metal bowl — 0° – 175° F (-18° – 79° C) |
| Filter Element              | 40 micron  |
| Pressure Range In Regulator | 5 – 125 psig (0.3 – 8.6 bar)   |
| Gauge                       | 0 – 160 psi  |
| Gauge Port                  | 1/4" NPT   |
| Filter Drain                | Manual (standard); automatic (optional)  |



**Dimensional Data**  
Dimensions – in (mm)





8440



8451-1



8451-3 &amp; -6



7444-K

## Blow Guns

| Part Number        | Description                                    |
|--------------------|--|
| <b>8440 SERIES</b> |  |
| 8440               | Safety yellow, lightweight, polyester blow gun |

|                    |   |
|--------------------|---|
| <b>8451 SERIES</b> |   |
| 8451-1             | Standard tip gun; generates concentrated stream of air    |
| 8451-2             | Shield tip gun; generates cone of air for chip deflection |

|                         |                           |
|-------------------------|---------------------------|
| <b>8451 ACCESSORIES</b> |                           |
| 8451-3                  | 3" (76 mm) extension tip  |
| 8451-6                  | 6" (152 mm) extension tip |

| Part Number        | Description     | Max Inlet Pressure |
|--------------------|-----------------|--------------------|
| <b>7444 SERIES</b> |                 |                    |
| 7444-J             | Safety blow gun | 100 psi            |
| 7444-K             | Safety blow gun | 180 psi            |



- Permanently coiled hoses automatically return to their original position, keeping them off the floor and out of your way as you work
- Made from abrasive-resistant and memory-resilient Nylon II
- For use with air, gases, water, and liquids compatible with Nylon II
- Certified to a maximum pressure of 200 psi
- Fittings and hose ends are protected by spring guards
- Available with diameters of 1/4", 3/8", 1/2", and 1-1/2"
- Available in bulk lengths of 12', 25', 50', and 100'

## Nylon Recoil Hoses

| Part Number      | Hose Inside Diameter | Hose Length |                | Compact Size | Outside Coil Diameter | Male NPT Fitting |
|------------------|----------------------|-------------|----------------|--------------|-----------------------|------------------|
|                  |                      | Max         | Working Length |              |                       |                  |
| SWIVEL BOTH ENDS |                      |             |                |              |                       |                  |
| N14-12B          | 1/4"                 | 12'         | 10'            | 6"           | 3-1/2"                | 1/4"             |
| N14-25B          | 1/4"                 | 25'         | 22'            | 10-1/2"      | 3-1/2"                | 1/4"             |
| N14-50B          | 1/4"                 | 50'         | 45'            | 21"          | 3-1/2"                | 1/4"             |
| N38-124B         | 3/8"                 | 12'         | 10'            | 5"           | 5-5/8"                | 1/4"             |
| N38-254B         | 3/8"                 | 25'         | 21'            | 10-1/4"      | 5-5/8"                | 1/4"             |
| N38-504B         | 3/8"                 | 50'         | 44'            | 21"          | 5-5/8"                | 1/4"             |
| N38-12B          | 3/8"                 | 12'         | 10'            | 5"           | 5-5/8"                | 3/8"             |
| N38-25B          | 3/8"                 | 25'         | 21'            | 10-1/4"      | 5-5/8"                | 3/8"             |
| N38-50B          | 3/8"                 | 50'         | 44'            | 21"          | 5-5/8"                | 3/8"             |
| N12-12B          | 1/2"                 | 12'         | 9'             | 5"           | 9"                    | 1/2"             |
| N12-25B          | 1/2"                 | 25'         | 18'            | 9"           | 9"                    | 1/2"             |
| N12-50B          | 1/2"                 | 50'         | 41'            | 18"          | 9"                    | 1/2"             |
| N34-12B          | 3/4"                 | 12'         | 10'            | 4-1/2"       | 12-1/2"               | 3/4"             |
| N34-25B          | 3/4"                 | 25'         | 17'            | 9"           | 12-1/2"               | 3/4"             |
| N34-50B          | 3/4"                 | 50'         | 35'            | 16"          | 12-1/2"               | 3/4"             |

## Safety Information for Finishing Tools

### General Safety Tips

Ingersoll Rand grinders are built to reflect a host of governmental and industry safety codes, regulations, and standards. Others may apply as well, depending upon your specific location. Familiarize yourself with all of them before using any finishing tool.

Keep hands, loose clothing, and long hair away from the rotating ends of tools.

### Personal Protective Equipment (PPE)

PPE is not intended as a substitute for safe workplace practices or well-engineered tools.

In general, PPE should be appropriate to the tool used and the type of work performed. Be sure to inspect, clean, repair, and properly store PPE.

### Eye and Face Protection

Protective eyewear must be worn by everyone in or around the area where the tool is being operated. Types of protection include approved safety glasses with side protection, goggles, and face shields. The best protection is provided when safety glasses or goggles are worn with face shields. Eye protective devices should allow for air to circulate between the eye and the lens.

### Head Protection

There are a variety of situations in which hard hats must be worn, such as wherever there is danger of falling or flying objects, or electrical hazards.

### Hearing protection

Grinders generate considerable noise when operated. Appropriate ear muffs or ear plugs should be worn.

### Safety Shoes / Boots

Safety shoes with impact, compression, and/or puncture protection must be worn in work areas where those types of hazards exist.

### Gloves

Make sure the gloves being used are the right type for the job, since insufficient gloves may provide no protection. Gloves should fit properly and shouldn't increase the grip force required to control the tool. When wearing gloves, always be sure that they won't prevent the throttle mechanism from being released.

### Breathing Apparatus

Respiratory protection suited to particular dust or particle hazards may be required. Appropriate respirators must be worn if it is not possible to ventilate the work area properly.

### Body Protection

Under certain circumstances, body protection may also be needed. This could include coveralls, aprons, arm guards, etc.

### Air Delivery System

There are a number of precautions you should take to ensure that your air delivery system is operating safely and efficiently.

### Air Pressure

Use clean, dry air at 90 psi (6.2 bar / 620 kPa) maximum air pressure at the inlet. Higher pressure can cause hazardous situations such as excessive



grinder speed, line rupture, and incorrect torque output. Pressure below 90 psi isn't unsafe, but will limit the tool's power.

### Air Hose

Periodically check air hoses for any defects, such as kinks, leaks, fraying, etc., which can cause line ruptures and injuries. Correct any defects before connecting hoses to any tools.

Protect air supply lines and hoses from traffic damage or other equipment — preferably by suspending them overhead.

### Air Breaker

Use properly sized air breakers (safety air fuses) at the source of the air supply or branch lines if working with hoses with inside diameters larger than one-half inch. If a hose fails, an air breaker limits hose whipping. Never approach a whipping hose since it can cause serious injury. Turn off the air supply before approaching the hose.

### Couplings and Connections

Use correctly sized quick-disconnect couplings on grinders with abrasive wheels smaller than four inches in diameter. These help maintain maximum air pressure along the length of an air line.

Make sure all connections are secure, especially threaded tool connections, which can work loose if not properly tightened.

A safety cable should also be used when using hoses with inside diameters larger than one-half inch.

### Connecting the Tool

Before connecting an air line to a tool, safely blow out the line to remove any moisture or dirt.

Always have the air supply turned off when attaching or detaching any air tool. If you're using a grinder with an abrasive wheel four or more inches in diameter, be sure to have a hose whip threaded into the air inlet. Before connecting the air line to the whip, be sure to clean off any dirt or grit that may have accumulated on the fittings.

### Abrasive Wheel Handling and Mounting

If an abrasive wheel is carelessly handled, mounted, stored, or used, it can disintegrate and cause serious injury. It's vital that you follow important safety precautions.

### Wheel Selection and Speed Ratings

Choose and mount abrasive wheels with a minimum amount of handling. Take extra care to avoid dropping a wheel.

Always select the right wheel for the job and the tool being used — make sure the wheel has a speed rating equal to or greater than the grinder itself. Refer to the manufacturer's plate on the grinder, which indicates the tool's rated speed and maximum wheel size. Check the wheel's label for the manufacturer's maximum rated safe operating speed. Never exceed this speed. Don't use a wheel if it doesn't show a rated speed.

Don't use a grinder without first checking its speed with a calibrated tachometer.

### Wheel Inspection

Inspect all grinding wheels for chips or cracks prior to mounting. Do not use a wheel that is chipped, cracked, or otherwise damaged.

### Abrasive Wheel Mounting (through-hole design)

When mounting these types of wheels, always use the flanges that were supplied with the grinder. Make sure they're the same diameter, aren't accidentally reversed, and have matched recesses. Mismatched or reversed flanges can stress the wheel and cause it to fail. Never use washers in place of flanges.

The wheel and the flanges must be wiped clean to ensure even contact, with no pressure points. Clamp the wheel flanges correctly against the blotter with adequate pressure against the wheel.

The grinder's arbor shank should extend through the wheel, with threads showing both in and through the outside flange. Wheels with through-hole designs should have about 0.007" (0.17 mm) maximum diametral clearance around the arbor shank. Do not use reducing bushings to adapt a wheel to any arbor shank unless such bushings are supplied, or recommended, by the wheel manufacturer.

Tighten the end nut carefully with a hand wrench — just tight enough to hold the wheel firmly in place. Over-tightening the end nut can stress the wheel and cause it to break.

### Blotters

A blotter is a compressible washer that cushions the flanges, distributes their pressure evenly, and protects them from the abrasive surface of the wheel. Be sure to use a new blotter if mounting a wheel that requires one, but doesn't already have one affixed by the wheel manufacturer. Don't use loose, scuffed, or damaged blotters.

### Abrasive Wheel Mounting (threaded wheel design)

Threaded abrasive wheels have threaded steel bushings molded into the wheel so they can be threaded onto the end of the grinder spindle. When mounting a threaded wheel, the back flange should be flat, without a recess. If a flange with recesses is used, the bushing can be pulled out of the wheel when it's tightened into place. Use a wheel retaining screw if one is provided with your grinder.

### Speed Test

After an abrasive wheel is mounted, a full speed test should be run. Hold the grinder under a steel bench or inside a casting, making sure everyone is out of the way and that the open part of the guard is not facing anyone. Turn the tool on and hold it at full throttle for one minute. If the wheel is damaged or weakened, this is usually when it will fail. If the wheel does fail and you need to mount a replacement wheel, be sure to turn off the air, disconnect the hose, and follow the mounting steps closely.

If the grinder's guard was struck by a disintegrating wheel, install a new guard before replacing the wheel.

### Protective Grinder Features

Ingersoll Rand puts considerable effort and resources into designing the safest, most ergonomic air grinders possible. Safety features built into our grinders should never be overridden or compromised.



### Wheel Guards

The wheel guard is one of the most important safety features on a grinder. There are two types of guards — adjustable and integral (i.e., non-adjustable). All wheels guards should be mounted between the wheel and the operator, and be tightened securely.

Never use a grinder without the manufacturer's furnished wheel guard installed. Do not use an unguarded grinder except for internal work where the work provides protection. Always replace a damaged or severely worn wheel guard.

### Automatic Shut-off Lever

Some grinder models feature an automatic throttle shut-off lever design.

### Integral Spring-loaded Throttle Latch

Most pneumatic tools shut off when the trigger lever is released. Some grinder models feature an integral spring-loaded latch that also prevents the tool from running if it's accidentally dropped or laid on the lever.

### Safe Grinding Techniques

Even properly handled, mounted, and guarded grinder wheels can fail and cause injury if they're used incorrectly or carelessly.

The work area must be uncluttered and ventilated. Make sure all co-workers are a safe distance away.

Never carry or drag a tool by the air hose. Avoid accidental starting by keeping your hand away from the trigger until you're ready to use the tool.

Be sure you have good footing and a balanced posture. Secure the work in place using clamps or a vice. Never clamp a hand-held grinder in place or grind above anyone else, or above your head. Avoid sending sparks upward.

Begin grinding by slowly applying pressure to the work surface until the grinder wheel gradually warms up. Make smooth contact with the surface and avoid excessive pressure, which can overload the wheel and cause catastrophic failure.

Never grind using the flat side of cut-off wheels. Use a wheel and/or grinder designed for that specific application.

Never put a running grinder down on your bench, work surface, or floor. When finished grinding, let the wheel come to a halt while it's still in contact with the work surface.

Keep the grinder wheel away from any contact with fluids, such as water or oil. A wheel can quickly absorb enough liquid to cause it to become dangerously imbalanced.

### Other Resources

Every new Ingersoll Rand tool comes with an accompanying Product Safety Information manual. These manuals cover important safety topics, as well as other user information. You should take the time to review this information before using the tool. You can print copies of any Ingersoll Rand Product Safety Information manual, or other product information manuals from our Web site, [irtools.com](http://irtools.com).

### In General...

- Always operate, inspect, and maintain tools in accordance with American National Standards Institute Safety Code for Portable Air Tools (ANSI B186.1).
- For safety, top performance, and maximum durability of parts, operate tools at 90 psi (6.2 bar / 620 kPa) maximum air pressure at the inlet.



## Cyclone Select Series

The Cyclone Select Series composite housing keeps overall weight at just 1.83 lb, with reduced vibration and quiet operation at just 78 dBA.

- High-efficiency air motors deliver true 12,000 rpm
- One sander fits all hand sizes, with interchangeable soft rubber grip rings that fit securely around the top of the housing



Black for  
medium hands  
(standard)



Grey for  
small hands

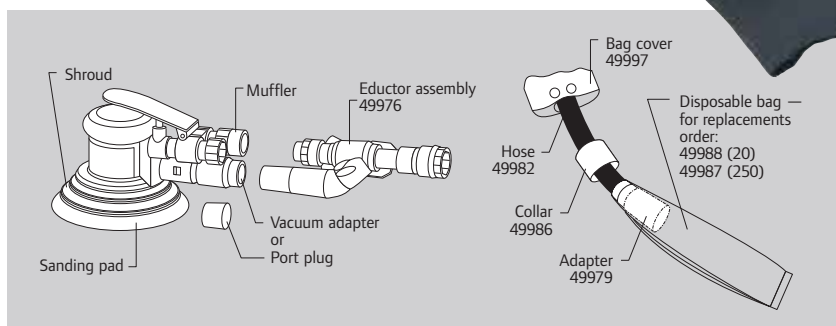


Blue for  
large hands



## CycloVac System

- Unique double bagging integral vacuum system provides a cleaner work environment
- Delivers twice the vacuum power of the nearest competitor, and uses a disposable dust bag enclosed in a protective cover

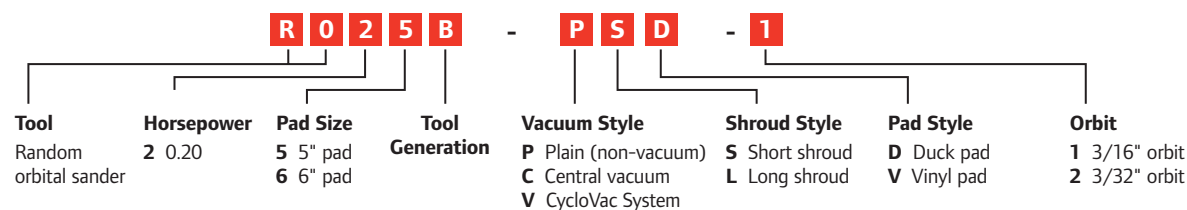


## Cyclone Standard Series

- Select from non-vacuum models, vacuum-ready models for use with central or portable vacuum systems, or venturi-vac models with a self-contained hose and dust collection bag
- Non-vacuum models can be converted to vacuum-ready status with an available conversion kit
- Comfortable cushion grip provides excellent feel and control

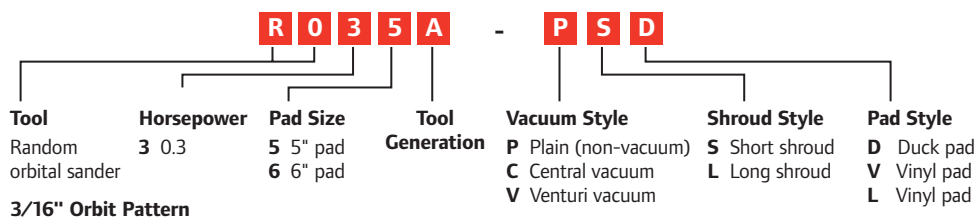


## Cyclone Select Series and CycloVac System



| Model               | Shroud Style | Pad Size in (mm) | Pad Face | Rated Max Free Speed rpm | Power hp | Air Consumption @ Free Speed scfm | Spindle Thread Female | Weight lb (kg) |
|---------------------|--------------|------------------|----------|--------------------------|----------|-----------------------------------|-----------------------|----------------|
| <b>NON-VACUUM</b>   |              |                  |          |                          |          |                                   |                       |                |
| RO25B-PSV-1*        | Short        | 5" (127)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.83 (0.83)    |
| RO26B-PSV-1         | Short        | 5" (152)         | Duck     | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| <b>VACUUM-READY</b> |              |                  |          |                          |          |                                   |                       |                |
| RO25B-CSL-1         | Long         | 5" (127)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.83 (0.83)    |
| RO25B-CSV-1*        | Short        | 5" (127)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| RO26B-CSV-1         | Short        | 6" (152)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| RO26B-CSL-1         | Long         | 6" (152)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| <b>CYCLOVAC</b>     |              |                  |          |                          |          |                                   |                       |                |
| RO25B-VSV-1         | Short        | 5" (127)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| RO26B-VLV-1         | Long         | 6" (152)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |

## Cyclone Standard Series



### 3/16" Orbit Pattern

| Model               | Long Handle | Pad Size in (mm) | Pad Face | Free Speed rpm | Power hp | Air Consumption @ Free Speed scfm | Spindle Thread Female | Weight lb (kg) Palm style | Long handle |
|---------------------|-------------|------------------|----------|----------------|----------|-----------------------------------|-----------------------|---------------------------|-------------|
| <b>NON-VACUUM</b>   |             |                  |          |                |          |                                   |                       |                           |             |
| RO35A-PSD           | RO35A-PSD-L | 5" (127)         | Duck     | 10,000         | 0.3      | 18.5                              | 5/16"-24              | 2.3 (1.0)                 | 2.6 (1.2)   |
| RO35A-PSV*          | RO35A-PSV-L | 5" (127)         | Vinyl    | 10,000         | 0.3      | 18.5                              | 5/16"-24              | 2.3 (1.0)                 | 2.6 (1.2)   |
| RO36A-PSD           | RO36A-PSD-L | 6" (152)         | Duck     | 10,000         | 0.3      | 18.5                              | 5/16"-24              | 2.3 (1.0)                 | 2.6 (1.2)   |
| RO36A-PSV*          | RO36A-PSV-L | 6" (152)         | Vinyl    | 10,000         | 0.3      | 18.5                              | 5/16"-24              | 2.3 (1.0)                 | 2.6 (1.2)   |
| <b>VACUUM-READY</b> |             |                  |          |                |          |                                   |                       |                           |             |
| RO35A-CSV*          |             | 5" (127)         | Vinyl    | 10,000         | 0.3      | 18.5                              | 5/16"-24              | 2.4                       | 1.2         |
| RO36A-CSV           |             | 6" (152)         | Vinyl    | 10,000         | 0.3      | 18.5                              | 5/16"-24              | 2.4                       | 1.2         |
| <b>VENTURI-VAC</b>  |             |                  |          |                |          |                                   |                       |                           |             |
| RO35A-VLV           |             | 5" (127)         | Vinyl    | 10,000         | 0.3      | 18.5                              | 5/16"-24              | 2.4                       | 1.1         |
| RO36A-VLV           |             | 6" (152)         | Vinyl    | 10,000         | 0.3      | 18.5                              | 5/16"-24              | 2.4                       | 1.1         |

\*Most popular models.

Sanding pads have industry-standard hole pattern for "thru-the-pad" vacuum pickup.

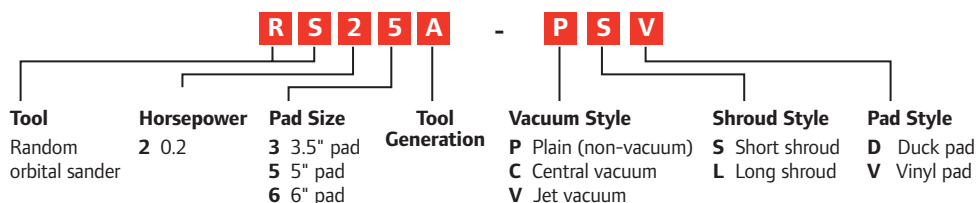
For use with coated sanding discs with pre-punched holes.

Air inlet is 1/4" NPT female; recommended air pressure is 90 psi.

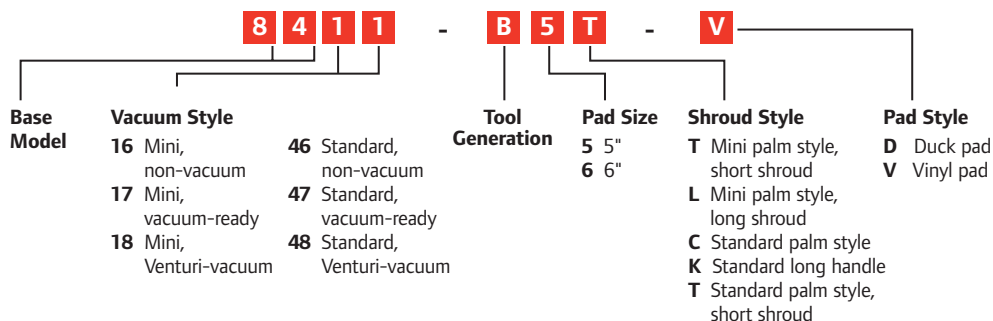
Recommended hose size is 5/16" (8 mm) I.D.

Standard Equipment: (3) 49973 Bag  
 (1) 49997 Bag cover  
 1 IR49979 Adapter  
 1 IR49982 Hose  
 1 IR49986 Collar

## ARO Sanders



| Model               | Shroud Style | Pad Size in (mm) | Pad Face | Rated Max Free Speed rpm | Power hp | Air Consumption @ Free Speed scfm | Spindle Thread Female | Weight lb (kg) |
|---------------------|--------------|------------------|----------|--------------------------|----------|-----------------------------------|-----------------------|----------------|
| <b>NON-VACUUM</b>   |              |                  |          |                          |          |                                   |                       |                |
| RS25B-PSV-1         | Short        | 5" (127)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.83 (0.83)    |
| RS26B-PSV-1         | Short        | 6" (152)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| <b>VACUUM-READY</b> |              |                  |          |                          |          |                                   |                       |                |
| RS25B-CSV-1         | Short        | 5" (127)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.83 (0.83)    |
| RS25B-CLV-1         | Long         | 5" (127)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| RS26B-CSV-1         | Short        | 6" (152)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| RS26B-C LV-1        | Long         | 6" (152)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| <b>CYCLOVAC</b>     |              |                  |          |                          |          |                                   |                       |                |
| RS25B-VSV-1         | Short        | 5" (127)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |
| RS26B-VLV-1         | Long         | 6" (152)         | Vinyl    | 12,000                   | 0.2      | 15.8                              | 5/16"-24              | 1.92 (0.87)    |



| Model               | Shroud Style | Pad Size in (mm) | Pad Face | Rated Max Free Speed rpm | Power hp | Air Consumption @ Free Speed scfm | Spindle Thread Female | Weight lb (kg) |
|---------------------|--------------|------------------|----------|--------------------------|----------|-----------------------------------|-----------------------|----------------|
| <b>CLASSIC LINE</b> |              |                  |          |                          |          |                                   |                       |                |
| 8446-B5C-V          | N/A          | 5" (127)         | Vinyl    | 10,000                   | 0.3      | 18.5                              | 5/16"-24              | 2.3 (1)        |
| 8446-B6C-V          | N/A          | 6" (152)         | Vinyl    | 10,000                   | 0.3      | 18.5                              | 5/16"-24              | 2.3 (1)        |
| 8447-E5T-V          | N/A          | 5" (127)         | Vinyl    | 10,000                   | 0.3      | 18.5                              | 5/16"-24              | 2.4 (1)        |
| 8447-E6T-V          | N/A          | 6" (152)         | Vinyl    | 10,000                   | 0.3      | 18.5                              | 5/16"-24              | 2.4 (1)        |
| 8457-B5T-V          | N/A          | 5" (127)         | Vinyl    | 10,000                   | 0.3      | 18.5                              | 5/16"-24              | 2.4 (1)        |
| 8457-B6T-V          | N/A          | 6" (152)         | Vinyl    | 10,000                   | 0.3      | 18.5                              | 5/16"-24              | 2.4 (1)        |



# Mini Air Tools



Ingersoll Rand offers a full line of mini air tools — the 2101K 1/4" mini impact kit, the 3103K mini surface prep grinder kit, the 3128K mini random orbital sander kit, the 3129K mini polisher kit, and the 7804K mini 1/4" drill / driver kit.

Our mini tools range in size between 5" and 7-1/4" in length, making them small enough to easily fit in the palm of almost anyone's hand, and ideal for tight spaces and fine detail finish work. They perfectly complement our existing lineup of full-size automotive maintenance and repair tools — delivering the power, versatility, and durability that you have come to expect from Ingersoll Rand.

The mini tools feature composite housings with ergonomic textured grips to provide comfort and exceptional resistance to grease, chemicals, and extreme temperatures. They also feature lightweight, pistol grip designs with thumb-actuated switches engineered for balance and one-handed operation, variable speed triggers, and a complete accessory package.

**Specifications**

|                          |                               |
|--------------------------|-------------------------------|
| Drive                    | 1/4"                          |
| Torque Range             | 25 – 40 ft-lb<br>(34 – 54 Nm) |
| Max Torque (reverse)     | 50 ft-lb (68 Nm)              |
| Free Speed               | 11,000 rpm                    |
| Blows Per Minute         | 1,250 bpm                     |
| Standard Bolt Capacity   | 5/16"                         |
| Net Weight               | 1.37 lb (0.62 kg)             |
| Kit Weight               | 3 lb (1.36 kg)                |
| Overall Length           | 6-1/4"                        |
| Average Air Consumption  | 1.76 cfm                      |
| @ Load                   | 18.17 cfm                     |
| Sound (pressure / power) | 83.6 dBA / 94.6 dBA           |
| Air Inlet                | 1/4"                          |
| Min Hose Size            | 3/8"                          |



**Fastens conveniently  
in hard-to-reach  
places**

**2101K Mini 1/4" Impact Kit**

- Powerful impact mechanism engineered to deliver 50 ft-lb of torque where you need it most
- Hard-hitting 5-vane motor delivers smooth and robust performance
- Easily accessible forward / reverse switch for one-handed operation
- Kit includes 10-piece 1/4" socket set

**Specifications**

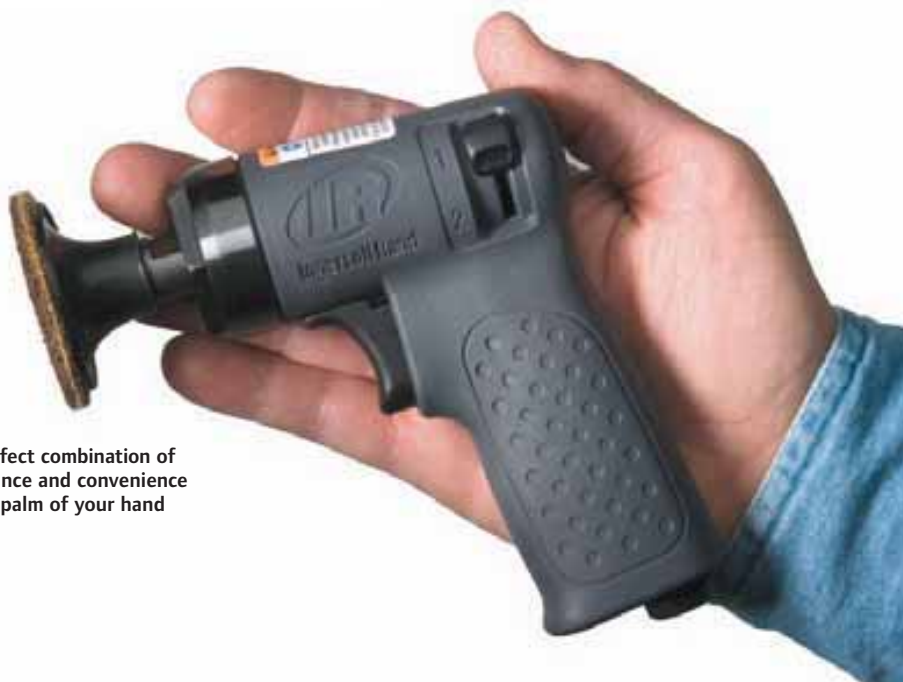
|                          |                      |
|--------------------------|----------------------|
| Drive                    | 1/4"                 |
| Torque                   | 22.5 ft-lb (30.5 Nm) |
| Free Speed               | 1,800 rpm            |
| Net Weight               | 1.71 lb (0.78 kg)    |
| Kit Weight               | 2.7 lb (1.22 kg)     |
| Overall Length           | 7-1/4"               |
| Average Air Consumption  | 1.92 cfm             |
| @ Load                   | 17.5 cfm             |
| Sound (pressure / power) | 83.6 dBA / 94.6 dBA  |
| Air Inlet                | 1/4"                 |
| Min Hose Size            | 3/8"                 |



**Drills and drives in  
tight spots**

**7804K Mini 1/4" Drill / Driver Kit**

- Hard-hitting 5-vane motor delivers smooth and robust performance
- Double-sided, adjustable speed settings provide variability for a broader range of applications
- Double-bearing construction for longer life, impressive balance, and reduced vibration
- Kit includes 22-piece drill bit and driver set



**The perfect combination of  
performance and convenience  
in the palm of your hand**

### 3103K Mini Surface Prep Grinder Kit

- Ideal for the removal of rust, surface deposits, and welds in hard-to-reach areas
- Ball-bearing construction enhances durability and smooth power delivery
- Double-sided, adjustable speed settings provide variability for a broader range of applications
- Kit includes 14-piece 2" and 3" sanding discs



**Remove  
rough spots quickly  
and easily**

#### Specifications

|                          |                                 |
|--------------------------|---------------------------------|
| Pad Size                 | 2" and 3"<br>(50.8 and 76.2 mm) |
| Free Speed               | 15,000 rpm                      |
| Rated Power              | 0.2 hp                          |
| Net Weight               | 0.99 lb (0.45 kg)               |
| Kit Weight               | 2.7 lb (1.22 kg)                |
| Overall Length           | 5"                              |
| Average Air Consumption  | 2.07 cfm                        |
| @ Load                   | 19.4 cfm                        |
| Sound (pressure / power) | 84.9 dBA / 95.9 dBA             |
| Air Inlet                | 1/4"                            |
| Min Hose Size            | 3/8"                            |

### 3128K Mini Random Orbital Sander Kit

- Engineered for the most aggressive sanding applications
- Delivers swirl-free finishes when feather edging, removing rust, preparing metal surfaces, or smoothing welds
- Durable ball-bearing construction ensures smooth power delivery
- Kit includes 71-piece hook-and-loop discs



**Sand smoothly,  
leaving no swirl  
marks behind**

#### Specifications

|                          |                     |
|--------------------------|---------------------|
| Pad Size                 | 3" (76.2 mm)        |
| Free Speed               | 15,000 rpm          |
| Rated Power              | 0.2 hp              |
| Net Weight               | 1.1 lb (0.5 kg)     |
| Kit Weight               | 2.81 lb (1.28 kg)   |
| Overall Length           | 5-1/2"              |
| Average Air Consumption  | 2.06 cfm            |
| @ Load                   | 14.7 cfm            |
| Sound (pressure / power) | 84.2 dBA / 96.9 dBA |
| Air Inlet                | 1/4"                |
| Min Hose Size            | 3/8"                |

### 3129K Mini Polisher Kit

- Ideal for buffing and polishing paint, metal, and plastic surfaces to a high-gloss finish
- Free speed of 6,000 rpm delivers the same performance of polishers twice the size
- Double-sided, adjustable speed settings provide variability for a broader range of applications
- Kit includes 4-piece hook-and-loop pads



**Complete for a smooth,  
professional finish**

#### Specifications

|                          |                     |
|--------------------------|---------------------|
| Pad Size                 | 3" (76.2 mm)        |
| Pad Size                 | 3" (76.2 mm)        |
| Free Speed               | 6,000 rpm           |
| Rated Power              | 0.3 hp              |
| Net Weight               | 1.33 lb (0.6 kg)    |
| Kit Weight               | 2.88 lb (1.31 kg)   |
| Overall Length           | 6"                  |
| Average Air Consumption  | 2.21 cfm            |
| @ Load                   | 19.85 cfm           |
| Sound (pressure / power) | 83.5 dBA / 94.5 dBA |
| Air Inlet                | 1/4"                |
| Min Hose Size            | 3/8"                |



## Pencil Grinders

### Carbide Bur and Mounted Stone

#### Standard Equipment

- Collet with 1/8" insert
- Collet wrenches 47579, 47580
- 6' x 7/32" ID (1.8 m x 6 mm) air hose and 18" exhaust overhose

#### Accessories

- 3 mm collet 47568-2
- 3/32" collet 47568-3
- DG600G2K grinder kit contains model DG600G2 die grinder plus a molded carrying case, collet wrenches, exhaust hose assembly, inlet hose assembly and six 1/8" shank carbide burs, including ball, tapered, tree, and assorted cylindrical burs



DG600G2

| Model    | Free Speed rpm | Throttle Style | Standard Collet Size in | Exhaust Location | Spindle Offset in (mm) | Tool Length in (mm) | Air Consumption @ Free Speed cfm | Sound Level @ Free Speed dBA | Standard Collet Insert |
|----------|----------------|----------------|-------------------------|------------------|------------------------|---------------------|----------------------------------|------------------------------|------------------------|
| DG600G2  | 60,000         | Twist          | 1/8"                    | Rear             | 0.34" (9)              | 5.3" (136)          | 7                                | 77                           | 47568-1                |
| DG600G2K | 60,000         | Twist          | 1/8"                    | Rear             | 0.34" (9)              | 5.3" (136)          | 7                                | 77                           | 47568-1                |

Grinders have 1/8" NPT inlet; 7/32" hose is recommended. Performance figures are at 90 psi air pressure.

## Air Engraving Pen Kit

#### Features

- Knurled zoom throttle provides positive control
- Steel housing dampens vibration, improves operator control
- Variable speed permits tool to be used on a wide selection of materials
- Carbide tipped stylus holds percussive point
- Easy to repair, reducing downtime
- Three sets of tool flats eliminate need for special repair tools

#### EP50K Engraving Pen Kit

- Model EP50 engraving pen, medium stylus standard
- Flexible hose (DG100-130: 6' x 3/16")
- Three assorted styluses (fine, medium, coarse)
- Molded plastic carrying case DG10-RF

EP50K



#### Optional Equipment

- Fine-point stylus EP50-515 (black)
- Medium-point stylus EP50-516 (steel color)
- Coarse-point stylus EP50-517 (green)
- Hose assembly (includes 1/8" NPT fittings) DG100-130
- Stylus grinding collet EP50-514

The Ingersoll Rand EP50 engraving pen is designed to meet your industrial engraving needs. Variable zoom throttle permits a wide range of engraving possibilities from hard alloys to brittle ceramics. The engraving pen can be easily disassembled with standard mechanic's tools. Comfort, quietness, and power have been ergonomically designed into this versatile tool. The engraving pen, including a standard stylus, can be purchased separately as model EP50.

| Model       | Weight oz (kg) | Length in (mm) | Side to Center Distance in (mm) | Blows per Minute bpm | Sound Level dBA | Hose Pipe Tap in (mm) | Size Hose Recomm. in (mm) |
|-------------|----------------|----------------|---------------------------------|----------------------|-----------------|-----------------------|---------------------------|
| EP50        | 5 (0.14)       | 5-5/8" (137)   | 5/16" (0.8)                     | 18,750               | 75.5            | 1/8" (3)              | 5" (165)                  |
| EP50K (kit) | 5 (0.14)       | 5-5/8" (137)   | 5/16" (0.8)                     | 18,750               | 75.5            | 1/8" (3)              | 5" (165)                  |

Medium point stylus included.

# Random Orbital Sanders



Cyclone random orbital sanders deliver unsurpassed reliability, with moisture-resistant composite rotors, fully machined counterweights, and large counterweight bearings. They are lube-free when used with conventional air systems. Their high performance air motors ensure high speed under load, and the finest in swirl-free finishes.

## **Cyclone Select Series**

They are the ultimate in lightweight, efficient design, with comfort and performance to match. The Select Series' composite housing keeps overall weight at a mere 1.83 lb, with reduced vibration and quiet operation at just 78 dBA. High-efficiency air motors deliver 12,000 rpm performance.

Vacuum-ready models extract dust and particulates through and around the pad, then out a dedicated port, keeping foreign matter away from the motor. Special shroud material prevents surface-marring, and lightweight, flexible hoses provide

excellent maneuverability. Non-vacuum models can easily be converted to vacuum-ready with the simple addition of a vacuum adapter, petal pad, and different shroud.

## **CycloVac System**

This version of the Select Series features a unique self-generated vacuum system, with twice the power of the closest competitor. An eductor assembly produces a high-velocity vacuum of tool exhaust air that draws air and dust from the sanding area. A diffuser then channels both streams of air through the hose and into a double-bagged collection system. The result is a truly effective, self-contained, self-generating vacuum system in one compact, convenient package.

## **Cyclone Standard Series**

These models incorporate traditional aluminum housings with textured comfort grips, and are available in non-vacuum, vacuum-ready, and venturi-vacuum models.

## Maintenance Kits

| Part Number                 | For Use With               |
|-----------------------------|----------------------------|
| <b>GRINDER TUNE-UP KITS</b> |                            |
| 61H-TK1                     | 61H Series                 |
| 66H-TK3                     | 66H Series                 |
| 77H/77A-TK3                 | 77H and 77A Series         |
| 7S60-TK2                    | 7S60L (Pro-Series grinder) |
| 88V/88H-TK3                 | 88V and 88H Series         |
| 99V/99H-TK3                 | 99V and 99H Series         |
| AG1-TK1                     | G1 Series                  |
| AG2-TK1                     | G2 Series                  |
| AG3-TK1                     | G3 Series                  |



| Part Number                                      | Description   | For Use With |
|--|---|--------------|
| <b>G-SERIES GRINDERS EXTENDED WARRANTY KITS*</b> |   |              |
| AG1-XW1  | Kit includes FRL, oil, grease, tune-up kit; extends standard 1-year warranty to 2-year coverage | G1 Series    |
| AG2-XW1  | Kit includes FRL, oil, grease, tune-up kit; extends standard 1-year warranty to 2-year coverage | G2 Series    |
| AG3-XW1  | Kit includes FRL, oil, grease, tune-up kit; extends standard 1-year warranty to 2-year coverage | G3 Series    |

\*Purchase a warranty kit with a G-Series grinder and receive a full 2-year extended warranty.



| Part Number                      | For Use With       |
|----------------------------------|--------------------|
| <b>ENGRAVING PEN TUNE-UP KIT</b> |                    |
| EP50-TK1                         | EP50 engraving pen |



| Part Number              | For Use With         |
|--------------------------|----------------------|
| <b>REAR EXHAUST KITS</b> |                      |
| LG1-K284                 | C, G1, and G2 Series |
| LG2-K284                 | T, H, and G2 Series  |
| AG3-K284                 | G3 Series            |



## Collets

| Part Number           | Size | Description |
|-----------------------|------|-------------|
| <b>TAPPER COLLETS</b> |      |             |
| 2U-103-1/4            | 1/4" | Tappers     |
| 4U-103-1/2            | 1/2" | Tappers     |



| <b>DIE GRINDER COLLETS</b> |      |                             |
|----------------------------|------|-----------------------------|
| DG110-700-6MM              | 6 mm | Metric die grinder          |
| DG110-700-G2               | 1/8" | Die grinder                 |
| DG110-700-G4               | 1/4" | Die grinder                 |
| DG120-700-G6               | 3/8" | Die grinder                 |
| G160HD-700-1/4             | 1/4" | Die and horizontal grinders |



DG110-700-6MM



DG110-700-G2



DG120-700-G6



G160HD-700-1/4

| <b>HORIZONTAL GRINDER COLLET BODY ASSEMBLIES</b> |      |   |
|--|------|---|
| RO-A390-1/4                                      | 1/4" | Collet adapter for wheel grinder models ending in H63 and H64                                   |
| DG220-A290-G4                                    | 1/4" | Replacement collet body assembly for grinder models ending in G4, except C Series and G1 Series |
| DG220-A290-G6                                    | 3/8" | Replacement collet body assembly for grinder models ending in G6                                |



RO-A390-1/4



DG220-A290-G6

| <b>COLLET WRENCHES</b> |                |
|------------------------|----------------|
| DG20-69A               | 11/16" x 7/16" |
| DG120-69               | 5/8" x 3/4"    |





## Vacuum Kits and Accessories

| Part Number                    | Description  | For Use With  |
|--------------------------------|--|---|
| <b>JET-VAC CONVERSION KITS</b> |  |   |
| 4151JV                         | Jet-Vac conversion kit                                       | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| RSVK-5                         | 5" Jet-Vac conversion kit                                    | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 49978                          | 6" Jet-Vac conversion kit                                    | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| <b>JET-VAC ACCESSORIES</b>     |  |   |
| 49600                          | 6' (1.8 m) hose equipped with molded 1" ID cuffs at each end | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 49973                          | Disposable vacuum bag (single)                               | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 49997                          | Bag cover  | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 48275-1                        | Dust collection bag  | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 49979                          | Vacuum adapter   | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 49982                          | Vacuum hose  | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 49986                          | Vacuum hose collar   | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 49987                          | Disposable vacuum bags (250 pack)                            | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |
| 49988                          | Disposable vacuum bags (20 pack)                             | 4151, 4152 Series, Cyclone Standard, Cyclone Select, CycloVAC sanders |



4151JV



49973



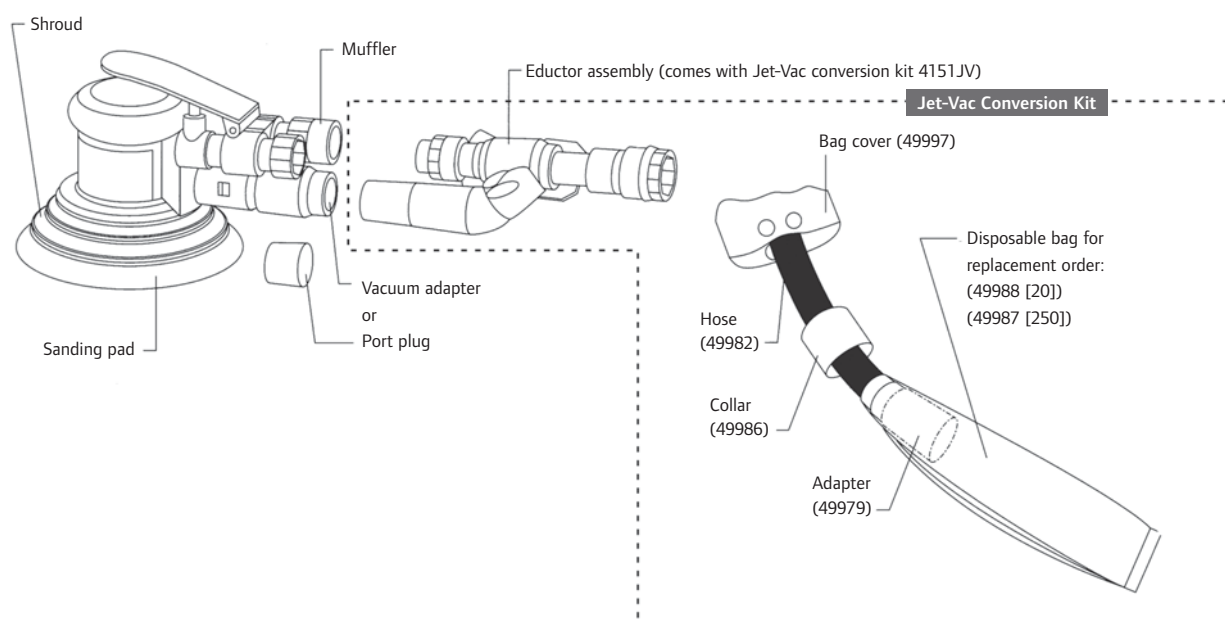
49997



49979



49982



## MS Series Industrial Interchange

- Economical automatic-type, one-way shutoff coupler
- Easy, push-to-connect use

| Body Size              | NPT Or Hose Stem ID | Average Airflow cfm* | Automatic NPT Part Number | Hose Stem ID Part Number |
|------------------------|---------------------|----------------------|---------------------------|--------------------------|
| <b>FEMALE COUPLERS</b> |                     |                      |                           |                          |
| 1/4"                   | 1/4"                | 36                   | N/A                       | MSCF22                   |
| 1/4"                   | 3/8"                | 36                   | N/A                       | MSCF23                   |
| 3/8"                   | 3/8"                | 67                   | 420ATH                    | MSCF33                   |
| 3/8"                   | 1/2"                | 67                   | 440ATH                    | N/A                      |
| 1/2"                   | 1/2"                | 126                  | N/A                       | MSCF44                   |

| Body Size           | NPT Or Hose Stem ID | Average Airflow cfm* | Female NPT Part Number | Hose Stem ID Part Number |
|---------------------|---------------------|----------------------|------------------------|--------------------------|
| <b>FEMALE PLUGS</b> |                     |                      |                        |                          |
| 1/4"                | 1/8"                | 36                   | MSPF21                 | N/A                      |
| 1/4"                | 1/4"                | 36                   | MSPF22                 | MSPH22                   |
| 1/4"                | 3/8"                | 36                   | MSPF23                 | MSPH23                   |
| 3/8"                | 1/4"                | 67                   | MSPF32                 | N/A                      |
| 3/8"                | 3/8"                | 67                   | MSPF33                 | MSPH33                   |
| 3/8"                | 1/2"                | 67                   | 45ATH                  | MSPH34                   |
| 1/2"                | 3/8"                | 126                  | MSPF43                 | N/A                      |
| 1/2"                | 1/2"                | 126                  | MSPF44                 | MSPH44                   |
| 1/2"                | 3/4"                | 126                  | MSPF46                 | N/A                      |

| Body Size            | NPT Or Hose Stem ID | Average Airflow cfm* | Automatic NPT Part Number | Hose Stem ID Part Number |
|----------------------|---------------------|----------------------|---------------------------|--------------------------|
| <b>MALE COUPLERS</b> |                     |                      |                           |                          |
| 1/4"                 | 1/4"                | 36                   | N/A                       | MSCM22                   |
| 1/4"                 | 3/8"                | 36                   | N/A                       | MSCM23                   |
| 3/8"                 | 1/4"                | 67                   | N/A                       | 4100ATH                  |
| 3/8"                 | 3/8"                | 67                   | 430ATH                    | MSCM33                   |
| 1/2"                 | 1/2"                | 126                  | N/A                       | MSCM44                   |

| Body Size         | NPT Or Hose Stem ID | Average Airflow cfm* | Male NPT Part Number | Hose Stem ID Part Number |
|-------------------|---------------------|----------------------|----------------------|--------------------------|
| <b>MALE PLUGS</b> |                     |                      |                      |                          |
| 1/4"              | 1/8"                | 36                   | MSPM21               | N/A                      |
| 1/4"              | 1/4"                | 36                   | MSPM22               | MSPH22                   |
| 1/4"              | 3/8"                | 36                   | MSPM23               | MSPH23                   |
| 3/8"              | 1/4"                | 67                   | MSPM32               | N/A                      |
| 3/8"              | 3/8"                | 67                   | PRPM33               | MSPH33                   |
| 3/8"              | 1/2"                | 67                   | MSPM34               | MSPH34                   |
| 1/2"              | 3/8"                | 126                  | MSPM43               | N/A                      |
| 1/2"              | 1/2"                | 126                  | MSPM44               | MSPH44                   |

\*At 90 psig inlet and 10 psig pressure drop.



Automatic NPT



Hose Stem ID



Manual NPT



Female NPT



Hose Stem ID



45ATH



Automatic NPT



Hose Stem ID



4100ATH



430ATH



Male NPT



Hose Stem ID

## Wheel Types and Collets

### STRAIGHT GRINDERS



Type 1 Wheels



Ø 3" (75 mm)  
Ø 4" (100 mm)

3/8" (10 mm)  
1/2" (12 mm)



Ø 6" (150 mm)  
Ø 8" (200 mm)

5/8" (16 mm)  
1" (25 mm)

### VERTICAL AND ANGLE GRINDERS



Type 27 Depressed Center Flat Wheels



Ø 3" (75 mm)  
Ø 4" (100 mm)  
Ø 4.5" (115 mm)  
Ø 5" (125 mm)  
Ø 6" (150 mm)  
Ø 8" (200 mm)

5/8" (16 mm)  
M14



Ø 7" (175 mm)  
Ø 9" (230 mm)

5/8" (16 mm)  
7/8" (22 mm)



Ø 7" (175 mm)  
Ø 9" (230 mm)

5/8" (16 mm)  
7/8" (22 mm)

### CONE AND PLUG WHEEL GRINDERS



Type 16, 17, 18, 18R, and 19  
Cone and Plug Wheels



Ø 1.25" (32 mm)  
Ø 3" (75 mm)

Ø 3/8" (10 mm)  
Ø 1/2" (12 mm)  
Ø 5/8" (16 mm)

### COLLET TYPE GRINDERS



Mounted Wheels and High  
Speed Steel or Carbide Burs



Ø 1/8" (3 mm)  
Ø 1/4" (6 mm)  
Ø 5/16" (8 mm)  
Ø 3/8" (10 mm)

### Type 28 Depressed Center Saucer Wheels



Ø 7" (175 mm)  
Ø 9" (230 mm)

5/8" (16 mm)  
7/8" (22 mm)

Ø 7" (175 mm)  
Ø 9" (230 mm)

5/8" (16 mm)  
7/8" (22 mm)

Type 6 and 11  
Cup Wheels



Ø 5" (125 mm)  
Ø 6" (150 mm)

5/8" (16 mm)  
7/8" (22 mm)



Ø 7" (175 mm)

5/8" (16 mm)

Type 13 1"  
Saucer Wheels



Protection



Protection, comfort



Protection, comfort, performance

## Gloves

| Part Number        | Description                    | Quantity | Size        |
|--------------------|--------------------------------|----------|-------------|
| <b>IR-G SERIES</b> |                                |          |             |
| IR-GM              | Ingersoll Rand mechanic gloves | 10       | Medium      |
| IR-GL              | Ingersoll Rand mechanic gloves | 10       | Large       |
| IR-GXL             | Ingersoll Rand mechanic gloves | 10       | Extra large |

### IR-G Series

- Provide protection during day-to-day jobs
- Machine washable Clarino® synthetic palm construction allows full finger dexterity and enhanced tool handling
- Spandex top ensures comfortable fit

| Part Number          | Description              | Quantity | Size        |
|----------------------|--------------------------|----------|-------------|
| <b>TGSL-G SERIES</b> |                          |          |             |
| TGSL-GM              | ThunderGun impact gloves | 10       | Medium      |
| TGSL-GL              | ThunderGun impact gloves | 10       | Large       |
| TGSL-GXL             | ThunderGun impact gloves | 10       | Extra large |

### TGSL-G Series

- Silicon gel palm padding reduces tool vibrations and minimizes fatigue
- Machine washable Clarino® synthetic palm construction allows full finger dexterity and enhanced tool handling
- Airprene knuckle panel provides greater protection, ventilation, and comfort
- Looks great with the ThunderGun impact wrench

| Part Number         | Description            | Quantity | Size        |
|---------------------|------------------------|----------|-------------|
| <b>TNT-G SERIES</b> |                        |          |             |
| TNT-GM              | Titanium impact gloves | 10       | Medium      |
| TNT-GL              | Titanium impact gloves | 10       | Large       |
| TNT-GXL             | Titanium impact gloves | 10       | Extra large |

### TNT-G Series

- Silicon finger and thumb grippers enhance tool control
- Neoprene top offers impact protection while allowing increased comfort and dexterity
- 3 mm gel palm pads reduce hand fatigue
- Ideal for Ingersoll Rand titanium tools



Distributed by:



Ingersoll Rand Industrial Technologies provides products, services, and solutions to enhance the efficiency and productivity of our commercial, industrial, and process customers. Our innovative products include air compressors, air systems components, tools, pumps, material and fluid handling systems, and microturbines.

(800) 376-TOOL • [irtools.com](http://irtools.com)