

Finishing Tools

- ▶ Cyclone Industrial Production Class Grinders and Sanders
- ▶ Revolution Light Industrial Class Grinders
- ▶ Routers and Trimmers
- ▶ Random Orbital Sanders
- ▶ Needle, Chisel, and Piston Scalers
- ▶ Automotive/Maintenance Air Hammers

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IR Ingersoll-Rand
www.irtools.com

Finishing Tools



Advancements in manufacturing and production have transformed the world of industrial finishing. While the need for traditional, heavy-duty material removal continues in many segments, increases in precision and reductions in waste have changed overall demands. New materials require different tool speeds and attachments. A greater focus on product quality has tightened the standards of finishing. Parts and components must match surrounding surfaces with impeccable accuracy. With these changes in materials and processes, exactness and finesse in finishing operations have taken on new significance.

Likewise, finishing technicians are a key factor in producing ultimate product quality. These are men and women who depend on resources that encourage and maximize their special set of skills. Today's operators deserve and require tools that contribute to quality of performance...and quality of life.

Ingersoll-Rand has provided tools for industry for more than a century, combining the best engineering talent, top-quality materials, and the strongest support in the business. Our classic designs have set performance standards that endure today. Our latest introductions reflect emerging trends in tool use, changing technology, and new materials. Whatever the application, Ingersoll-Rand industrial tools bring out the best in your operator's skills, and contribute to the ultimate quality of your products and processes.

As a major worldwide supplier of finishing tools, systems, and accessories, Ingersoll-Rand is a valuable technology resource. Ingersoll-Rand offers a variety of finishing tools — from heavy metal grinding to precision sanding — that will match your needs and requirements.

Cyclone Finishing Tools

Cited by the Industrial Design Excellence Award program for their pioneering ergonomic design, Ingersoll-Rand's Cyclone finishing tools were created for a wide variety of tasks. These innovative tools are lighter and easier to maneuver, yet have more power and less vibration than competitive models. There's a complete range of speeds and configurations, plus a full selection of Cyclone accessories.

Sanders / Polishers / Buffers

Reflecting the rapidly changing demands of industrial finishing, sanders, polishers and buffers have emerged as a key segment. Constant process improvement throughout industry now results in less waste on castings and molded parts, shifting emphasis from material removal to surface finishing. The Ingersoll-Rand line of sanders, buffers and polishers includes models based on the popular Cyclone ...and now features a complete range of Cyclone random orbital sanders as well.

These products reflect the IR philosophy of High Performance Ergonomics—user oriented design that provides real-world productivity benefits...based on a systematic, objective measure of ergonomic factors for validation and value.



High Performance Ergonomics

Finishing Tools

Choosing and Using Grinder Accessories

For safety and performance, always select the proper abrasive wheel for your job. Cup wheels remove large amounts of metal and are good for open spaces. Depressed center wheels are ideal for use in rough grinding operations and all-around heavy material removal. In applications where a horizontal grinder is required, choose Type One wheels.

Choose tools with enough horsepower to drive the abrasive wheel you are using, and allow the grinder's speed to work for you. Bearing down on under-powered tools slows the rpm output and reduces overall efficiency.

Grinder Safety Tips

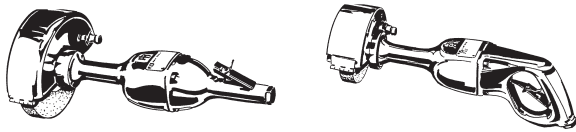
Always use eye protection. Use only recommended equipment and adapters. Inspect grinding wheels closely for any imperfections or damage such as cracks, pitting, or broken edges. Always make sure that the tool speed does not exceed the maximum operating speed marked on the wheel or wheel package. Use correct size guards, flanges, blotters, spindles, and mounting practices to ensure operator safety.

Mounting a Grinding Wheel

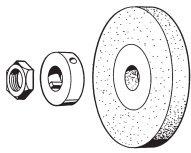
When mounting a grinding wheel on any portable power tool, be sure to:

- Inspect the grinding wheel closely for any imperfections or damage such as cracks, pitting or broken edges.
- Verify that the tool's spindle does not exceed the maximum operating speed marked on the wheel or wheel package.
- Use correct size guards, flanges, blotters, spindles and mounting practice as shown below.

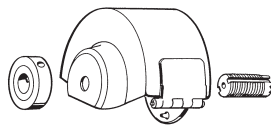
Horizontal Grinders



TYPE 1 Straight Wheels



Wheel Sizes: 6" and 8"



Spindle Sizes: 5/8" (16mm) and 1" (25mm)

Vertical and Angle Grinders

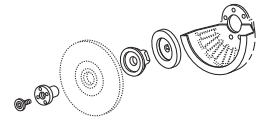


TYPE 27 Depressed Center Flat Wheels



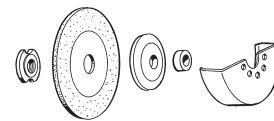
Threaded Wheel Sizes: 7" and 9"

Type: Spindle Sizes: 5/8" and 7/8"



Threaded Wheel Sizes: 7" and 9"

Type: Spindle Sizes: 5/8" and 7/8"

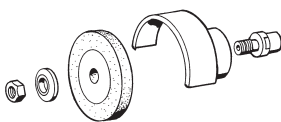


Spindle Size: 3/8"

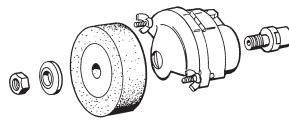
Small Horizontal Grinders



TYPE 1 Straight Wheels

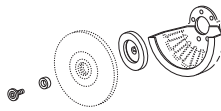


Wheel Sizes: 2", 3" and 4"
Spindle Sizes: 3/8"
(10mm) and 1/2" (12mm)



Wheel Sizes: 2", 3" and 4"
Spindle Sizes: 3/8"
(10mm) and 1/2" (12mm)

TYPE 28 Depressed Center Saucer Wheels



Threaded Wheel Sizes: 7" and 9"

Type: Spindle Sizes: 5/8" and 7/8"



Non-Threaded Wheel Sizes: 7" and 9"

Type: Spindle Sizes: 5/8" and 7/8"

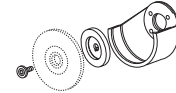
TYPE 6 and 11 Cup Wheels



Wheel Sizes: 5" and 6"

Spindle Sizes: 5/8" and 7/8"

TYPE 13-1" Thick Saucer Wheels



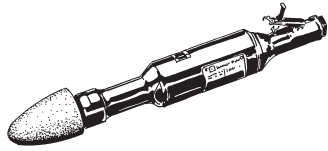
Wheel Size: 7"

Spindle Size: 5/8"

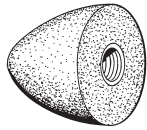
WARNING: Always use eye protection. Use only recommended equipment and adapters. Consult parts bulletin for details. Do not use if actual tool rpm is greater than nameplate rpm. Check rpm each shift or upon changing accessory. For further safety information, consult ANSIB7.1 and ANSIB186.1.

Finishing Tools

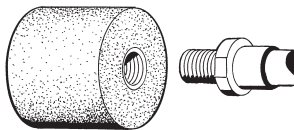
Cone and Plug Wheel Grinders



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



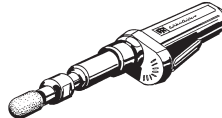
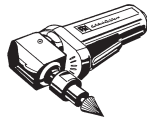
Wheel Sizes: 1/4" and 3" (max. dia.)



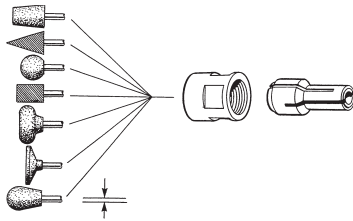
Spindle Sizes: 3/8", 1/2" and 5/8"

There's more to today's finishing process than the tools of the trade. Ingersoll-Rand is an information resource for your business, and can assist in creating more effective and productive workplace configurations, as well as tool recommendations. Your selection and purchase of finishing tools has a direct effect on process and product quality. Your decision can make a difference in finishing efficiency – and in the improved quality and durability of finishes. So before you make your next purchase decision, contact your local IR representative or distributor for assistance and information regarding the latest IR product and technology developments.

Collet Type Grinders



Mounted Wheels and High Speed Steel or Carbide Burs



Collet Sizes: 1/8", 1/4" and 3/8"

(3, 6 and 10mm)

Mandrel Diameters: 1/8", 1/4" and 3/8"

(3, 6 and 10mm)

Finishing Tools**Cyclone Industrial Production Class**

For the best in power, comfort, and versatility, Ingersoll-Rand created the Cyclone Finishing Tools Series to match a wide variety of finishing tasks. With a complete range of models, speeds, and configurations, plus a full selection of accessories, Cyclone tools combine versatility with innovation. Included in the line are three multi-purpose accessory tools — CycloCut, CycloFile, and CycloRout/Trimmer — that offer specialty finishing capabilities for the most challenging situations.

Cited by the Industrial Design Excellence Award Program for their pioneering ergonomic design, Cyclone finishing tools will help your business reduce costs and improve working conditions. These innovative tools are lighter and easier to use than competitive finishing tools, yet have more power and less vibration — you'll feel the difference when you work.



The ergonomic design of Cyclone finishing tools provides a unique combination of performance and proven user satisfaction.

Through pioneering efforts to provide workers with lighter, quieter, more comfortable tools, IR is extending a tradition of excellence in finishing tool design and performance.

Innovative Ergonomics

The unique D-shaped housing makes it easier to grip and operate the tool — it's a natural fit to the human hand. Advanced composites keep the housing from becoming cold to the touch, and reduce vibration so effectively, you can work steadily with less hand fatigue.

Comfort, Safety, and Control

The unique high-profile safety flange not only protects the operator's hand from the work, but also provides a pivot-point for improved control while preventing accidental throttle-starts. If preferred, the standard flange can be replaced with an optional low-profile flange. As the operator varies speed to match the task, the standard low-profile throttle responds smoothly; where required or specified, it can also be replaced with an optional locking lever.

Durability And Reliability

Cyclone housings feature one-piece construction: advanced composites molded over a steel liner. Angle heads and extensions are of steel construction.

Remarkably Simple To Service

You can take apart and reassemble a Cyclone finishing tool in just minutes. Once inside, you'll find fewer parts than any other tool in the industry. The



patented "drop-in" motor and vanes make routine maintenance easy. These features make repairs quick and fast, but Cyclone tools' outstanding durability means service is less likely — less down-time, lower cost.

Three Exhaust Options

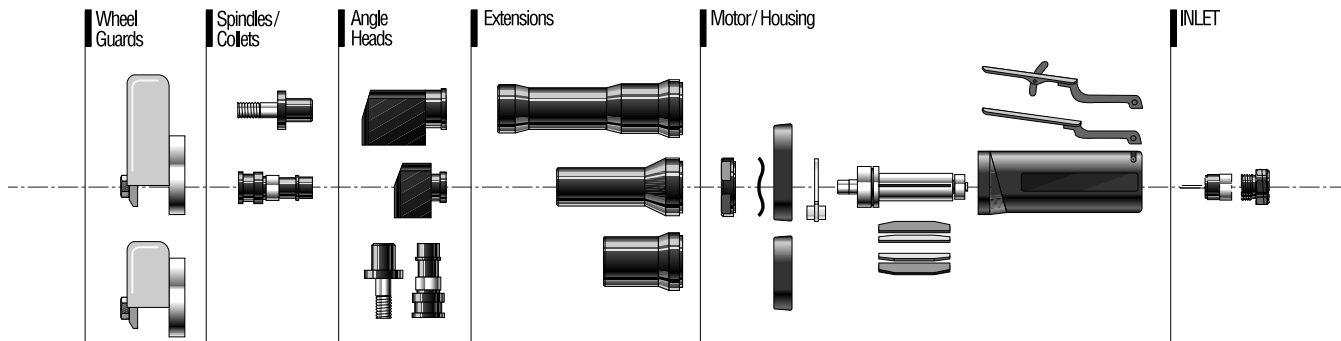
The patented Flow Ring offers the flexibility of front or rear exhaust without additional equipment. Piped-away exhaust is also available.

Finishing Tools

Cyclone Industrial Production Class

Modular Design For Simplicity

The finishing tools within each Cyclone series share most parts in common, reducing your inventory requirements and simplifying maintenance.



Product Identification Guide

**TYPICAL MODEL
CD350RG4L**

Series	Type	rpm	Exhaust	Spindle Type	Accessories
C = .35 Cyclone	D = Die Grinder	X100 = Rated rpm	R = Rear	G4 = 1/4" Collet	L = Locking Lever
T = .70 Cyclone	X = Extended		F = Front	S4 = 1/4" - .20 THD (Angle)	C = Concentric Flange
H = 1.0 Cyclone	A = Angle			H63 + P63 = 3" Guarded	
	XA = Extended Angle			H64 + P64 = 4" Guarded	
	XD = 2" Extended			P1045 = 4 1/2" Guarded	

- NOTES:**
1. Exhaust direction can easily be switched from rear to front with no additional parts.
 2. Low profile concentric flange comes with locking lever and rear exhaust only.
 3. 1/4" Erickson Collet and Collet Wrenches are standard.



C Series

The C Series is a compact, versatile .35 hp tool used for light material removal: cleaning rough castings, deburring parts after machining, weld-cleaning, and other finishing tasks. Offering superior power in a small package, the C Series includes straight, angle, and extended straight versions.

T Series

For general finishing work and heavier material removal, T-Series grinders provide more power, .70 hp, with low vibration. Used for grinding, cutting, cleaning, and polishing, these tools are available in a variety of configurations for comfortable operation in tight spaces and contours. The T-Series includes straight, extended, angle, and extended angle tools.

H Series

When you need the torque and horsepower for heavy material removal with burs, coated abrasives, and grinding wheels, the 1.0 hp H-Series grinders give you the ultimate in power and control. Choose from straight, extended, angle, and extended-angle configurations.

Cyclone Industrial Production Straight Extended Grinders

Carbide Bur and Mounted Wheel



Standard Equipment

- 1/4" Erickson collet
DG110-700-G4 (C)
G160HD-700-1/4 (T and H)
- Collet wrenches
DG20-69A 7/16" x 11/16" (C)
DG10-69 1/2" x 9/16" (T and H)
DG120-69 5/8" x 3/4" (T and H)

Accessories

- DG110-700-G2 1/8" collet (C)
- DG120-700-G6 3/8" collet (T and H)
- LG1-A400 (C) locking lever
- LG2-A400 locking lever
- LG1R-23 (C) concentric flange
- LG3R-23 (T and H) concentric flange
- LG1-A1015 (C) variable-speed regulator
- LG2-K284 exhaust deflector (T and H)

G4 = 1/4" Erickson collet

Model	Rated Power hp	Free Speed rpm	Weight lb.	Length in.	Side to Center Distance in.	cfm
CX200RG4 ●	.35	20,000	13 ¹ / ₁₆	9 ⁹ / ₁₆	3/4	11
CX250RG4 ● ■	.35	25,000	13 ¹ / ₁₆	9 ⁹ / ₁₆	3/4	12
CX300RG4 ● ■	.35	30,000	13 ¹ / ₁₆	9 ⁹ / ₁₆	3/4	14
TX120RG4	.70	12,000	2 ⁵ / ₈	12 ⁷ / ₁₆	3/4	24
TX180RG4 ● ■	.70	18,000	2 ⁵ / ₈	12 ⁷ / ₁₆	3/4	23
TX200RG4 ● ■	.70	20,000	2 ⁵ / ₈	12 ⁷ / ₁₆	3/4	31
TX250RG4 ■	.70	25,000	2 ⁵ / ₈	12 ⁷ / ₁₆	3/4	26
HX120RG4 ● ■	1.00	12,000	2 ⁷ / ₈	13 ⁵ / ₁₆	3 ¹ / ₃₂	43
HX150RG4 ■	1.00	15,000	2 ⁷ / ₈	13 ⁵ / ₁₆	3 ¹ / ₃₂	40
HX180RG4 ●	1.00	18,000	2 ⁷ / ₈	13 ⁵ / ₁₆	3 ¹ / ₃₂	43

Air Inlet: All Models 1/4" NPT.

Size Hose Recommended: Series C, 5/16". Series T and H, 3/8".

All standard models have dual exhaust capabilities except TX120 and HX120, which are rear exhaust only.

Exhaust direction can easily be switched from front to rear.

Performance figures are at 90 psi air pressure.

To order front exhaust, replace "R" with "F" in model number. To order locking lever, add "L" to end of model number. To order concentric/low profile flange, add "C" to end of model number. Examples: CD200FG4, CD200RG4L, CD200RG4C.

● Not Available with "C"

■ Not Available with "L"

Carbide Bur and Mounted Wheel



Standard Equipment

- 1/4" Erickson collet
G160HD-700-1/4 (T and H)
DG110-700-G4 (C)
- Collet wrenches
DG20-69A 7/16" x 11/16" (C)
DG10-69 1/2" x 9/16" (T and H)
DG120-69 5/8" x 3/4" (T and H)

Accessories

- DG110-700-G2 (C) 1/8" collet
- DG120-700-G6 (T and H) 3/8" collet
- LGI-KI bur kit includes:
DG10-RF case (4 1/4" x 9 3/4")
DG20-RF 20 (9" foam insert)
(7 3/4" molded part)
IRSD-1 Bur (1/4" ball)
IRSF-1 Bur (1/4" tree radius)
IRSA-1 Bur (1/4" cylindrical)
IRSL-1 Bur (1/4" cone)
- LG1-K284 (C) exhaust kit
- LG2-K284 (T and H) exhaust kit
- LG1R-23 (C) concentric flange
- LG3R-23 (T and H) concentric flange
- LG1-A400 (C) locking lever
- LG2-A400 (T and H) locking lever
- LG2K-302 carrying case

G4 = 1/4" Erickson collet

Model	Rated Power hp	Free Speed rpm	Weight lb.	Length in.	Side to Center Distance in.	cfm
CD200RG4	.35	20,000	13/16	63/16	3/4	11
CD250RG4	.35	25,000	13/16	63/16	3/4	12
CD250RG4K	.35	25,000	13/16	63/16	3/4	12
CD300RG4 ●	.35	30,000	13/16	63/16	3/4	14
CD350RG4	.35	32,000	13/16	63/16	3/4	15
TD120RG4 ● ■	.70	12,000	15/8	73/4	3/4	20
TD180RG4 ●	.70	18,000	15/8	73/4	3/4	23
TD200RG4 ●	.70	20,000	15/8	73/4	3/4	24
TD250RG4	.70	25,000	15/8	73/4	3/4	26
TD250RG4K	.70	25,000	15/8	73/4	3/4	26
HD120RG4 ●	1.00	12,000	17/8	89/16	31/32	43
HD150RG4 ● ■	1.00	15,000	17/8	89/16	31/32	40
HD180RG4 ● ■	1.00	18,000	17/8	89/16	31/32	43
HD180RG4K	1.00	18,000	17/8	89/16	31/32	43

Air Inlet: All Models 1/4" NPT.

Size Hose Recommended: Series C, 5/16". Series T and H 3/8".

All standard models have dual exhaust capabilities except TD120 and HD120, which are rear exhaust only.

Exhaust direction on other units can easily be switched from front to rear.

Performance figures are at 90 psi air pressure.

To order front exhaust, replace "R" with "F" in model number. To order locking lever, add "L" to end of model number. To order concentric/low profile flange, add "C" to end of model number. Examples: CD200FG4, CD200RG4L, CD200RG4C.

● Not Available with "C"

■ Not Available with "L"

Finishing Tools

Cyclone Industrial Production Straight Grinders

Type 1 Wheel



CD200RH63



TXD180RH63



HX180RH63

H63 = 3/8" - 24 Spindle, 3" Guard

H64 = 3/8" - 24 Spindle, 4" Guard

Standard Equipment

- Wheel guard, flanges and nut

Accessories

- LG1-A400 (C) locking lever
- LG2-A400 (T and H) locking lever
- LG1R-23 (C) concentric flange
- LG2R-23 (T and H) concentric flange

Model	Rated Power hp	Maximum Wheel Size in.	Free Speed rpm	Weight lb.	Length in.	Side to Center Distance in.	cfm
CD200RH63 ●	.35	3 x 1/4	20,000	17/16	6 1/8	3/4	11
CD250RH63 ●	.35	3 x 1/4	25,000	17/16	6 1/8	3/4	12
TXD180RH63	.70	3 x 1/2	18,000	2 5/8	9 5/16	3/4	23
TX180RH63 ●	.70	3 x 1/2	18,000	3 1/4	12 5/16	3/4	23
HX150RH64 ●	1.0	4 x 1/4	15,000	3 11/16	13 3/16	3 1/32	40
HXD180RH63 ●	1.0	3 x 1/2	18,000	3 11/16	10 3/16	3 1/32	43
HX180RH63 ●	1.0	3 x 1/2	18,000	3 11/16	13 3/16	3 1/32	43
HX180RH64 ●	1.0	4 x 1/4	18,000	3 11/16	13 3/16	3 1/32	43
HX120RH64 ●	1.0	4 x 1/4	12,000	3 11/16	13 3/16	3 1/32	43

To order front exhaust, replace "R" with "F" in model number. To order locking lever, add "L" to end of model number. To order concentric/low profile flange, add "C" to end of model number. Examples: CD200FG4, CD200RG4L, CD200RG4C.

● Not Available with "C"

Air Inlet = 1/4"

Pencil Grinders

Carbide Bur and Mounted Stone

Standard Equipment

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



DG600G2

Accessories

- 3mm Collet – 47568-2
- 3/32" Collet – 47568-3
- DG600G2K grinder kit
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 – ball, tapered, tree and assorted cylindrical.

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 L/s	Sound Level @ Free Speed dB(A)	Std. Collet Insert Part#
DG600G2	60,000	Twist	1/8	Rear	.34 9	5.3 136	7 3.3	77	47568-1
DG600G2K	60,000	Twist	1/8	Rear	.34 9	5.3 136	7 3.3	77	47568-1

Grinders have 1/8" NPT inlet; 7/32" hose is recommended.

Performance figures are at 90 psi air pressure.

Carbide Bur and Mounted Wheel



CA200RG4



TA120RG4

Standard Equipment

- 1/4" Erickson collet
- Collet body wrench
- Collet nut wrench

Accessories

- LG1-K284 (C) exhaust kit
- LG2-K284 (T and H) exhaust kit
- DG110-700-G2 1/8" collet (C)
- DG120-700-G6 3/8" collet (T and H)
- LG1-A400 (C) locking lever
- LG2-A400 (T and H) locking lever
- LG1R-23 (C) concentric flange
- LG3R-23 (T and H) concentric flange
- LG2-A48A dead handle (T and H)

G4 = 1/4" Erickson collet

Model	Rated Power hp	Free Speed rpm	Weight lb.	Length in.	Height Over Spindle in.	Side to Center Distance in.	cfm
CA120RG4	.35	12,000	1 ⁵ / ₁₆	6 ¹ / ₁₆	3	3/4	12
CA200RG4	.35	20,000	1 ⁵ / ₁₆	6 ¹ / ₁₆	3	3/4	14
TA120RG4	.70	12,000	2 ³ / ₈	7 ¹³ / ₁₆	3 ¹ / ₃₂	3/4	26
TA180RG4 ●	.70	18,000	2 ³ / ₈	7 ¹³ / ₁₆	3 ¹ / ₃₂	3/4	26
HA90RG4 ●	1.00	9,000	2 ⁵ / ₈	8 ¹³ / ₁₆	3 ¹ / ₃₂	3/4	43
HA120RG4 ●	1.00	12,000	2 ⁵ / ₈	8 ¹³ / ₁₆	3 ¹ / ₃₂	3/4	43

Extended Angle Grinders

TXA135RG4	.70	13,500	2 ¹ / ₂	10 ³ / ₈	3	3/4	25
TXA140RG4	.70	14,000	2 ¹ / ₂	10 ³ / ₈	3	3/4	25

Air Inlet: All Models 1/4" NPT.

Size Hose Recommended: Series C, 5/16".

Series T and H, 3/8".

All standard models have dual exhaust capabilities.

Exhaust direction can easily be switched from front to rear.

Performance figures are at 90 psi air pressure.

To order front exhaust, replace "R" with "F" in model number.

To order locking lever, add "L" to end of model number. To

order concentric/low profile flange, add "C" to end of model number. Examples: CD200FG4, CD200RG4L, CD200RG4C.

● Not Available with "C"

Finishing Tools

Cyclone Industrial Production Angle Grinders

Type 1 Angle Cutoff Tools



TXA160RH64

H63 = 3/8"- 24 Spindle, 3" Guard

H64 = 3/8"- 24 Spindle, 4" Guard

Model	Rated Power hp	Free Speed rpm	Weight lb.	Length Along Throttle in.	Height Over End of Spindle in.	Side to Center Distance in.	cfm
CA200RH63	.35	20,000	1 ⁹ / ₁₆	6 ¹ / ₈	2 ¹¹ / ₁₆	3/4	14
TXA140RH64 ●	.70	14,000	3 ¹ / ₆	10 ³ / ₆	2 ¹¹ / ₁₆	3 ¹ / ₃₂	25
TXA160RH64	.70	16,000	3 ¹ / ₆	10 ³ / ₆	2 ¹¹ / ₁₆	3 ¹ / ₃₂	25
TA150RH64*	.70	15,000	2 ¹¹ / ₁₆	7 ¹¹ / ₁₆	2 ¹¹ / ₁₆	3 ¹ / ₃₂	26
TA180RH64*	.70	18,000	2 ¹¹ / ₁₆	7 ¹¹ / ₁₆	2 ¹¹ / ₁₆	3 ¹ / ₃₂	26
HXAX125RH64**●	1.00	12,500	3 ¹ / ₆	11	2 ¹¹ / ₁₆	3 ¹ / ₃₂	43

* Optional LG2-A48A Ergo Handle available.

** Model incorporates the small CA Series extended angle head on an H Series motor.

Air Inlet: All models 1/4" NPT.

Size Hose Recommended: Series C, 5/16". Series T and H, 3/8".

● Not Available with "C"

Accessories

- LG1-A400 (C) locking lever
- LG2-A400 (T and H) locking lever
- LG1R-23 (C) concentric flange
- LG2R-23 (T and H) concentric flange

Type 27 & 28 Wheels



CA200RP63



HXA120RP64

P63 = 3/8"-24 Spindle, 3" Guard

P64 = 3/8"-24 Spindle, 4" Guard

P1045 = 5/8"-11 Spindle, 4 1/2" Guard (Plain Hole Wheels Only)

Standard Equipment

- Wheel guard, flanges and nut
- Spindle and wheel nut wrenches

Accessories

- LG1-K284 (C) exhaust kit
- LG2-K284 (T and H) exhaust kit
- LG1-A400 (C) locking lever
- LG2-A400 (T and H) locking lever
- LG1R-23 (C) concentric flange
- LG3R-23 (T and H) concentric flange

Model	Rated Power hp	Free Speed rpm	Weight lb.	Length Along Throttle in.	Height Over End of Spindle in.	Side to Center Distance in.	cfm
Angle Grinders							
CA200RP63 ●	.35	20,000	1 9/16	6 1/16	1 7/8	3/4	14
TA180RP63 ●	.70	18,000	2 9/16	7 11/16	2 17/32	3 1/32	26
TA120RP64	.70	12,000	2 11/16	7 11/16	2 17/32	3 1/32	26
TXA135RP64	.70	13,500	2 15/16	10 9/8	2 11/32	3 1/32	25
TXA140RP64	.70	14,000	2 5/16	10 3/8	2 11/32	3 1/32	25
HA120RP1045*	1.00	12,000	3	8 13/16	2 9/16	3 1/32	43
HA120RP64	1.00	12,000	2 5/8	8 13/16	2 9/16	3 1/32	43
HA90RP64 ●	1.00	9,000	2 5/8	8 13/16	2 9/16	3 1/32	43
Extended Angle Grinders							
HXA120RP64 ●	1.00	12,000	3 13/16	11 13/16	2 1/2	3 1/32	43
HXA120RP1045**	1.00	12,000	3 7/8	11 13/16	2 1/2	3 1/32	43

* Optional LG2-A48A Dead Handle.

** Standard LG2-A48A Dead Handle.

Air Inlet: All Models 1/4" NPT.

Size Hose Recomm.: Series C, 5/16". Series T and H, 3/8".

All standard models have dual exhaust capabilities.

Exhaust direction can easily be switched from front to rear.

Performance figures are at 90 psi air pressure.

To order front exhaust, replace "R" with "F" in model number. To order locking lever, add "L" to end of model number. To order concentric/low profile flange, add "C" to end of model number. Examples: CD200FG4, CD200RG4L, CD200RG4C.

● Not Available with "C"

Accessories

Description	Series CA, CD and CX Part Number	Series TA, TD, HA, HD, HX and HXA Part Number	Series TXA Part Number
1/8 " Erickson Collet	DG110-700-G2	-	DG110-700-G2
1/4 " Erickson Collet	DG110-700-G4	G160HD-700-1/4	DG110-700-G4
3/8 " Erickson Collet	-	DG120-700-G6	-
Spindle Wrench	DG20-69A	DG10-69	DG10-69
Collet Nut Wrench	DG20-69A	DG120-69	DG120-69
Wheel Nut Wrench	D32-26	D32-26	D32-26
Inlet Hose Assembly	RO-130	R1A-130	R1A-130
Exhaust Hose Assembly	LG1-K284	LG2-K284	LG2-K284
Side Handle Kit	-	LG2-A48A*	-
3" & 4" Type 1 Inner Wheel Flange ■	DG120-86 3/8" Hole	DG120-86	DG120-86
3" & 4" Type 1 Outer Wheel Flange ■	DG120-16 3/8-24 Thrd Hole	DG120-16	DG120-16

* Available for angle tools only. ■ To use Cutoff Wheels on Type 27 Arbor

Revolution Light Industrial Grinders



Reshaping The Industry's View of High-Quality Tools.

High performance at an affordable price

Ingersoll-Rand has created a new line of finishing tools designed for non-production industrial applications. The Revolution Series meets the need for high quality tools at an affordable price. Its ergonomic design and light weight makes it comfortable and easy to use for material removal and finishing. Available with straight, extended or 90-degree angle heads, multiple speeds and attachments, the Series has a configuration for any surface preparation job. The quality and durable performance of Ingersoll-Rand is now within reach with the Revolution Series.

Designed in the tradition of quality.

The Revolution Series is the latest example of Ingersoll-Rand's tradition of engineering quality. Recognized for high performance, Ingersoll-Rand has won five Business Week/IDSA product design excellence awards. IR user-oriented features are always based on real-world research and testing to ensure they meet the operators' needs for optimal comfort and productivity.

The proof is in your hands.

Power

Powerful .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

Its 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 .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.

Within reach

The Revolution Series is reshaping the industry's view of finishing tools, with Ingersoll-Rand quality at an affordable price. Contact your Ingersoll-Rand distributor or representative today to check out the new Revolution Series.

Call 1-800-376-TOOL or visit www.irttools.com for more information.



Finishing Tools

Revolution Light Industrial Grinders



These units feature:



Internal wick lubricator extends gear life on angle tools.



Aluminum motor cap resists abrasion and removes easily for service access.



Composite grip over rugged aluminum housing reduces vibration and noise.



Integral trigger safety lock adds convenience and control while protecting against accidental starts.



Wrap around exhaust ports direct air away from work and operator. A threaded fitting allows for optional piped-away exhaust.



Angle models feature a compact, infinitely rotatable head with a removable cover.

Revolution Finishing Tools



312AC4 & 314AC4



320AC4



325XC4 & 330XC4



312AG3 & 314AG3



320AG3



325SC4



330SC4



335SC4

Product Identification Guide

Model#	3	2 5	S	C	4
	Horsepower	rpm	S = Straight	C = Collet	4 = 1/4" collet
	.3	12,000-35,000	A = Angle	G = Guard	3 = 3" guard
			X = Extended		

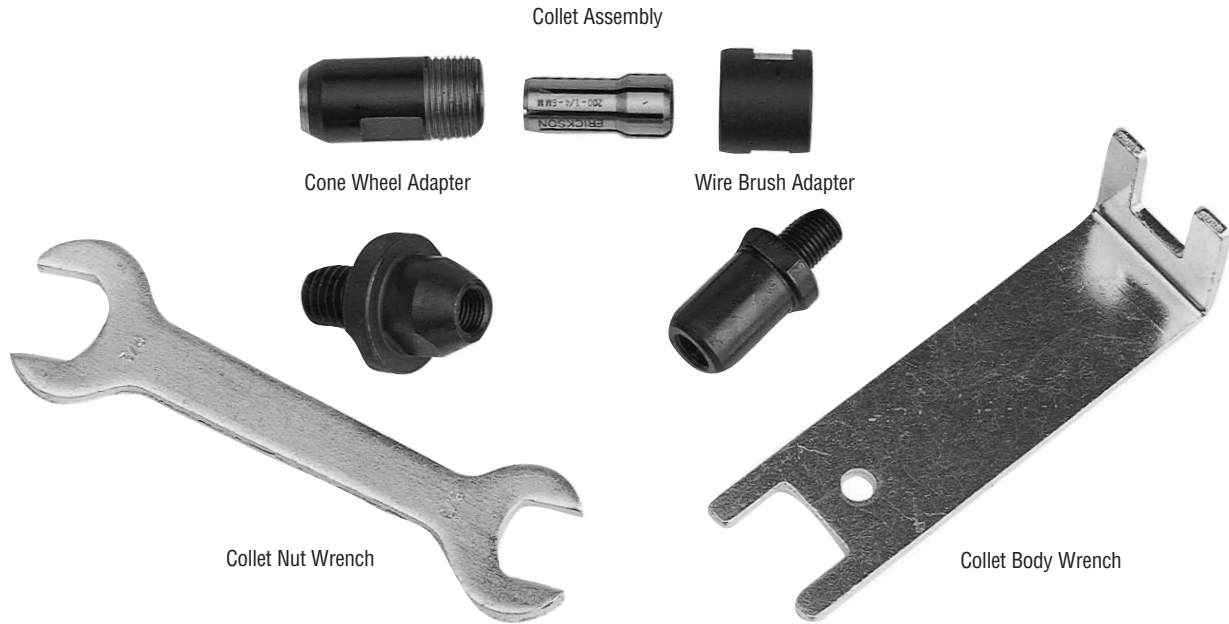
	Model Number	Power (hp)	Max. Free Speed (rpm)	Wt. (lbs.)	Length (inches)	Height Over Spindle (inches)	Side to Center Distance (inches)	Configuration	Air Consumption (cfm)
Straight	325SC4	.3	25,000	13/16	6	N/A	3/4	1/4" collet	15
	330SC4	.3	30,000	13/16	6	N/A	3/4	1/4" collet	15
	335SC4	.3	35,000	13/16	6	N/A	3/4	1/4" collet	15
	325XC4	.3	25,000	1 1/4	9	N/A	3/4	1/4" collet, 3" extended	15
	330XC4	.3	30,000	1 1/4	9	N/A	3/4	1/4" collet, 3" extended	15
Angle	312AC4	.3	12,000	1 1/8	6 1/8	2 17/32	3/4	1/4" collet angle	15
	314AC4	.3	14,000	1 1/8	6 1/8	2 17/32	3/4	1/4" collet angle	15
	320AC4	.3	20,000	1 1/8	6 1/8	2 17/32	3/4	1/4" collet angle	15
	312AG3	.3	12,000	1 3/8	6 1/4	2 17/32	3/4	3" angle guarded 3/8"-24 spindle	15
	314AG3	.3	14,000	1 3/8	6 1/4	2 17/32	3/4	3" angle guarded 3/8"-24 spindle	15
	320AG3	.3	20,000	1 3/8	6 1/4	2 17/32	3/4	3" angle guarded 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 included.



For continuous-duty production applications, ask your distributor or IR representative about our full line of Cyclone™ finishing tools.

**Type 1 Wheel
Grinder Accessories**



Description	Series TX and HX Part Number	Series 61H Part Number
1/4" Erickson Collet	G160HD-700-1/4	RO-A390-1/4*
3/8" Erickson Collet	DG120-700-G6	-
Collet Body Wrench	DG10-69	DG120-69
Collet Nut Wrench	DG120-69	DG20-69A
3/8"-24 Cone Wheel Adapter	LE2-104-L6 (3/8-24 F x 3/8-24 Male)	
Type 1 Wheel Flange Nut Wrench	-	DG10-69
Inlet Hose Assembly	R1A-130	-
Wire Brush Adapter	LS2-A4-B10 (3/8-24 F x 5/8-11 Male)	
Controller Wrench		R15-169

*When ordering this two-piece Collet Assembly, Wheel End Bearing Cap No. 61H-K-19 and Dust Washer No. 61H-35 must also be ordered.



Carbide Grinding Burs

Ingersoll-Rand now offers a perfect complement to its innovative grinders and finishing tools – a complete range of versatile, durable, high-precision burs. IR carbide burs reflect unrivaled quality of manufacture, as well as superior quality of service...in types, styles, and sizes; easy and quick ordering and delivery, and extended product life.

Consider the cutting edge differences:

Hand-ground construction eliminates the harmonic frequencies that cause “bur bounce”. This means less operator effort to hold the bur on the work piece, resulting in longer grinder and bur life and less operator fatigue.

Flexible shanks for hard-to-reach places are an integral part of our product offering. You can choose from diameters of 1/8", 3/16", 1/4" and 3/8" ...in lengths up to 50", with any shape bur.

Extended length shanks provide still more versatility, whether you need a 10" long steel shank, a 9" flexible shank, or a 6" long solid carbide bur.

Quick turnaround for all of our bur products means improved efficiency for your operation. Our manufacturing flexibility makes possible a five day order-to-shipment cycle, in most cases.

The Ingersoll-Rand Carbide Bur Refurbishing Program offers another option, extending the life of used burs. Our refurbishing center will sharpen, recondition or salvage your used carbide grinding burs as appropriate, at a fraction of new replacement cost.

Carbide grinding burs can be found in the Air System Accessories section of this catalog.

Finishing Tools 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 down-time
- 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)

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		Length		Side to Center Distance		Blows per Minute	Hose Conn. Pipe Tap in.	Size Hose Recomm.	
	oz.	kg	in.	mm	in.	mm			in.	mm
EP50	5	.14	5 ⁵ / ₈	137	5 ⁵ / ₁₆	.8	18,750	1/8	5 ⁵ / ₁₆	5

Sound level of EP50 is 75.5 dBA.

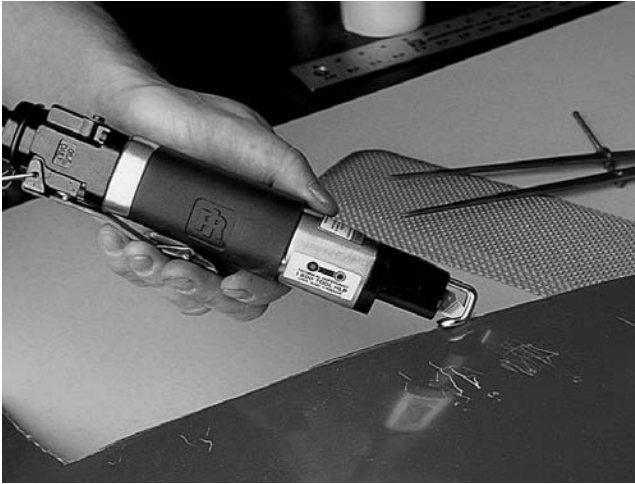
Medium point stylus included with EP50 tool.

With high-strength steels, advanced plastics, and new composite materials in today's cars and trucks, you need versatile tools for precise, controlled cutting. Ingersoll-Rand cutting tools are the reliable choice of auto body and repair shops, used for everything from muffler and exhaust work to sun roof installations and body repairs.

**Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.*



Maintenance/Automotive* Air Cutting Tools & Grinders



The Ingersoll-Rand air shear, air nibbler, and air reciprocating saw give you speed and power plus tight accuracy for intricate shapes and details. For example, the IR4429 reciprocating saw features increased durability and a composite handle surface for greater comfort and control. It also includes an easy-to-use exhaust hose attachment for a cleaner working environment.

All three of these high quality heavy duty cutting tools make clean cuts in materials including cold rolled steel, most plastics, aluminum, tin, and other materials of up to 18-20 gauge thicknesses. The IR326 air cut-off tool cuts off mufflers and tail pipes quickly, efficiently, and quietly. It also cuts sheet metal, nuts and bolts.

Our air die grinders are economical, long-life tools with throttle levers designed to prevent accidental starting and to give you excellent speed control. All IR air grinders are compact, lightweight, easy to handle, and include all bearing construction for the utmost durability. Our two brand new grinders, the IR3102 and IR3108 feature a strong and ergonomic composite housing, keeping your hands warm even after running the grinder for hours!

Model Number	Performance Rating	Strokes Per Min.	Free Speed (rpm)	Weight lb. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)	Rated Power hp (kW)	Collet Size in.
IR301	Standard Duty	N/A	20,000	.99 (.45)	5 (127)	3 (85)	14 (390)	90/103	1/4	3/8 (10)	.25 (.19)	1/4
IR302	Heavy Duty	N/A	18,000	.97 (.44)	2.9 (74)*	3 (85)	12 (340)	98.4/111.4	1/4	3/8 (10)	.33 (.25)	1/4
IR307A	Standard Duty	N/A	27,000	.69 (.31)	4.75 (121)	3 (85)	14 (390)	84.7/97.7	1/4	3/8 (10)	.25 (.19)	1/4
IR308	Heavy Duty	N/A	25,000	1.16 (.53)	5.63 (143)	3 (85)	20 (566)	95.1/108.1	1/4	3/8 (10)	.33 (.25)	1/4
IR3102	Super Duty	N/A	20,000	1.27 (.58)	6.75 (171)	3 (85)	18 (510)	90/101	1/4	3/8 (10)	.33 (.25)	1/4
IR3108	Super Duty	N/A	25,000	1.27 (.58)	6.75 (171)	3 (85)	18 (510)	92/103	1/4	3/8 (10)	.33 (.25)	1/4
IR325	Heavy Duty	3,200	N/A	2.1 (.95)	7.3 (185)	4 (113)	17 (481)	90.2/103.2	1/4	3/8 (10)	N/A	N/A
IR326	Heavy Duty	N/A	18,000	2.3 (1.04)	8.88 (226)	10 (283)	25 (708)	94.3/107.3	1/4	3/8 (10)	N/A	N/A
IR3445	Super Duty	N/A	12,000	3.7 (1.7)	9.25 (235)	9 (252)	26.5 (742)	82.7/95.6	1/4	3/8 (10)	.8 (.6)	5/8-11
IR7802S	Heavy Duty	4,200	N/A	2.8 (1.27)	9.4 (239)	4 (113)	21 (595)	N/A	1/4	3/8 (10)	N/A	N/A
IR429	Heavy Duty	10,000	N/A	1.32 (0.60)	8.25 (210)	8 (226)	7 (198)	87.3/100.3	1/4	3/8 (10)	N/A	N/A
IR4429	Super Duty	5,750	N/A	1.63 (0.74)	9.25 (235)	7 (196)	7 (196)	69.2/82.2	1/4	3/8 (10)	N/A	N/A

*Height

**Spindle Size

* Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.

IR301 

Standard Duty

Multi-Purpose Air Angle Die Grinder

Part of an expanded line of economical, standard duty grinders, the IR301 packs valuable features into a compact package. Use it for grinding, edge-breaking, deburring, porting, and polishing. Wherever space is tight, its right-angle configuration provides easy access.

- Compact, lightweight, easy to handle
- Self-locking throttle
- Ball bearing construction for durability
- Precision machined gearing delivers maximum power transfer



Also available in kit options.
See page 31 for details.

IR302 

Heavy Duty

Air Angle Die Grinder

When a straight tool isn't practical for working in confined areas, this is the economical die grinder with a right angle head to use. It's compact and well-designed for grinding, porting, polishing, deburring, and breaking sharp edges.

- Durable and long-lasting
- All ball bearing construction
- Precision-machined steel gears
- Positive grip 1/4" capacity collet chuck
- Self-locking throttle lever



IR307A 

Standard Duty

Mini Air Die Grinder

Part of an expanded line of economical, standard duty grinders, the IR307A combines performance and versatility in a lightweight, compact package. It can be used with all types of accessories for porting, weld breaking, and smoothing sharp edges... as well as deburring, polishing, and grinding.

- Superior maneuverability
- Standard 1/4" collet for all types of accessories
- Safety lever prevents accidental starts
- Front exhaust helps keep work surface clean
- Versatile and reliable



Also available in kit options.
See page 31 for details.

IR308 

Heavy Duty

Air Die Grinder

A durable yet economical choice offering longer life and higher free speed at 25,000 rpm. A general purpose tool designed for porting, light weld grinding, and breaking sharp edges.

- Ball bearing construction for longer tool life
- Comes with two collet wrenches
- Self-locking throttle lever
- Positive grip 1/4" capacity collet chuck



Model Number	Performance Rating	Free Speed (rpm)	Weight lb. (kg)	Length in. (mm)	Avg. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)	Rated Power hp (kW)	Collet Size in.
IR301	Standard Duty	20,000	.99 (.45)	5 (127)	3 (85)	14 (390)	90/103	1/4	3/8 (10)	.25 (.19)	1/4
IR302	Heavy Duty	18,000	.97 (.44)	2.9 (74)*	3 (85)	12 (340)	98.4/111.4	1/4	3/8 (10)	.33 (.25)	1/4
IR307A	Standard Duty	27,000	.69 (.31)	4.75 (121)	3 (85)	14 (390)	84.7/97.7	1/4	3/8 (10)	.25 (.19)	1/4
IR308	Heavy Duty	25,000	1.16 (.53)	5.63 (143)	3 (85)	20 (566)	95.1/108.1	1/4	3/8 (10)	.33 (.25)	1/4

*Height

Finishing Tools

Air Cutting Tools & Grinders

IR301 Kits

Surface Conditioning & Die Grinder Kits

Ingersoll-Rand has packed the IR301 in a strong, blowmolded plastic case for the various kits shown below:

Model #	Kit Description
IR301-2MK	Includes the IR301 along with four coarse and four medium grit 2" 3M Roloc™ surface conditioning pads and a disc holder
IR301-3MK	Includes the IR301 along with four coarse and four medium grit 3" 3M Roloc™ surface conditioning pads and a disc holder
IR301-32MK	Includes the IR301 along with two coarse and two medium grit 2" & two coarse and two medium grit 3" 3M Roloc™ surface conditioning pads and a disc holder
IR301-K	Die Grinder Kit including the IR301 with 10 mounted grinding tips

IR307-K Kit

Die Grinder Kit

Ingersoll-Rand has packed the IR307A in a strong, blowmolded plastic case complete with 10 mounted grinding tips.



IR301-2MK & IR301-3MK



IR301-K



IR301-32MK



IR307-K

IR3102 

Super Duty

Air Die Grinder

For the ultimate performance and versatility in a lightweight package with superior maneuverability, the IR3102 is the perfect choice. With all ball bearing constructions, you get longer lasting life and advanced durability, along with a composite grip for superior ergonomics and comfort. Use this powerful die grinder in various applications including porting, weld braking, deburring, polishing, and grinding, just to name a few.

- Powerful 1/3 horsepower motor
- Lightweight yet durable design
- All ball bearing construction
- Safety release throttle
- Positive grip 1/4" capacity collet chuck
- Ergonomic and durable composite housing
- Multi-positional head



IR3108 

Super Duty

Air Die Grinder

For the ultimate performance and versatility in a lightweight package with superior maneuverability, the IR3108 is the perfect choice. With all ball bearing constructions, you get longer lasting life and advanced durability, along with a composite grip for superior ergonomics and comfort. Use this powerful die grinder in various applications including porting, weld braking, deburring, polishing, and grinding, just to name a few.

- Powerful 1/3 horsepower motor
- Lightweight yet durable design
- All ball bearing construction
- Safety release throttle
- Positive grip 1/4" capacity collet chuck
- Ergonomic and durable composite housing



Model Number	Performance Rating	Strokes Per Min.	Free Speed (rpm)	Weight lb. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)	Rated Power hp (kW)	Collet Size in.
IR3102	Super Duty	N/A	20,000	1.27 (.58)	6.75 (171)	3 (85)	18 (510)	90/101	1/4	3/8 (10)	.33 (.25)	1/4
IR3108	Super Duty	N/A	25,000	1.27 (.58)	6.75 (171)	3 (85)	18 (510)	92/103	1/4	3/8 (10)	.33 (.25)	1/4

IR325 

Heavy Duty

Air Nibbler

Get a bigger bite and better angle cuts with our air nibbler. Instead of shearing or sawing, the tool actually “nibbles” cold rolled steel, plastic, tin, aluminum, and other metals, up to 18 gauge thicknesses at a rate of more than 6 ft. per minute. It’s ideal for paint and auto body shops, tinsmiths, and sheet metal shops.

- Cuts out quarter panels without distorting the edges of the material
- Starts cuts in the center of a panel
- Holds a tight 1/4” radius with great accuracy
- Easy to operate and control
- Balanced, lightweight tool



IR326 

Heavy Duty

Air Cut-Off Tool

Exhaust replacement is this powerful tool’s specialty. Now you can cut off mufflers and tail pipes quickly, efficiently, and quietly. It has an 18,000 rpm motor that can handle the toughest exhaust replacements and cut sheet metal, nuts and bolts.

- 3/8” arbor x 2 7/8” wheel size.
- Fast, quiet operation
- Contoured lever throttle with positive self-locking action
- Built-in speed regulator
- 360 degree rotatable chrome-plated spark guard



IR3445 

Super Duty

Air Angle Grinder

The IR3445 is the perfect choice for high performance finishing. This 4” Air Angle Grinder combines a unique motor controller that virtually eliminates overspeeding...with a powerful .8hp motor to provide plenty of power for rust and material removal.

- Rear exhaust with piped-away option
- Composite grip for improved comfort
- Locking lever with tease throttle
- Lightweight design



IR7802S 

Heavy Duty

Air Shear

The versatile cutting shear that makes clean cuts in cold rolled steel up to 20 gauge without chips. Ideal for body shops, sheet metal shops, air conditioning fabricators, plastic fabricators, heating contractors, and machine shops.

- Cuts squares, angles, and circles
- Long-life tool with heavy duty cutting blades
- Shears most types of plastics and all types of aluminum, tin, and steel



Model Number	Performance Rating	Strokes Per Min.	Free Speed (rpm)	Weight lb. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)	Rated Power hp (kW)	Collet Size in.
IR325	Heavy Duty	3,200	N/A	2.1 (.95)	7.3 (185)	4 (113)	17 (481)	90.2/103.2	1/4	3/8 (10)	N/A	N/A
IR326	Heavy Duty	N/A	18,000	2.3 (1.04)	8.88 (226)	10 (283)	25 (708)	94.3/107.3	1/4	3/8 (10)	N/A	N/A
IR3445	Super Duty	N/A	12,000	3.7 (1.7)	9.25 (235)	9 (252)	26.5 (742)	82.7/95.6	1/4	3/8 (10)	.8 (.6)	5/8-11
IR7802S	Heavy Duty	4,200	N/A	2.8 (1.27)	9.4 (239)	4 (113)	21 (595)	N/A	1/4	3/8 (10)	N/A	N/A

Finishing Tools

Air Cutting Tools & Grinders

IR814

Super Cut

Eight Piece Bur Kit – Wood Case

Contains eight of the most popular types of carbide grinding burs.

- IRSA-3 IRSD-1
- IRSA-5 IRSD-3
- IRSC-1 IRSF-3
- IRSC-3 IRSF-5



IR429

Heavy Duty

Air Reciprocating Saw

The IR429 is a versatile air saw for cutting intricate shapes and light radius curves in all types of plastics, fiberglass, and composite materials, as well as aluminum and sheet metal. This reduced vibration tool is excellent for body shop repair, muffler and exhaust work, and sun roof installations.

- Comes with six high-speed steel cutting blades and two hex wrenches
- Cuts flat and curved surfaces
- Durable, long-life tool



IR4429

Super Duty

Air Reciprocating Saw

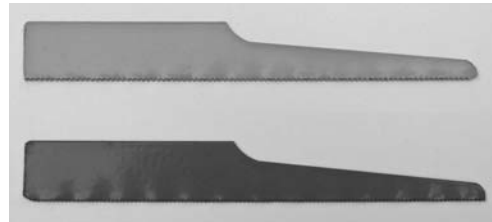
With increased comfort, performance, and durability, the IR4429 is a premium tool designed for all types of cutting tasks. It offers a wealth of features for body, exhaust, and muffler work.

- Composite grip area for increased comfort and control
- Piped-away exhaust for a cleaner work area
- Tease trigger with lock-off for smooth operation and protection against accidental starts
- Adjustable guard, integral power regulator, low vibration



IR429/4429 Blades Accessories

- 329-500 Package of 6 blades, 3 each fine (32 teeth) and 3 each coarse (24 teeth)
- 329-F500 Package of 6 blades, fine 32 teeth per inch
- 329-C500 Package of 6 blades, coarse 24 teeth per inch



Model Number	Performance Rating	Strokes Per Min.	Free Speed (rpm)	Weight lb. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)	Rated Power hp (kW)	Collet Size in.
IR429	Heavy Duty	10,000	N/A	1.32 (.60)	8.25 (210)	9 (252)	7 (198)	87.3 (100.3)	1/4	3/8 (10)	N/A	N/A
IIR4429	Super Duty	5,750	N/A	1.63 (0.74)	9.25 (235)	7 (196)	7 (196)	69.2/82.2	1/4	3/8 (10)	N/A	N/A

18,000-32,000 rpm

CycloRout/Trimmer

Created as part of the complete Cyclone line of finishing tools, the CycloRout/Trimmer is a multi-purpose accessory tool. The attachment's adjustable nosepiece assures positive depth-of-cut for precision channel and bevel cuts. Ideal for cleaning up edges, cutting out panels, and trimming metal, composites, plastics, and wood. Take off the router/trimmer attachment and you're ready for general deburring and material-removal tasks. CycloRout/Trimmer is an essential finishing tool for aerospace and automotive industries, as well as metal work, woodworking, and general maintenance.



HD180RT4

Features

- Pioneering design combines outstanding durability and comfort via advanced composites over solid steel structure
- Rear exhaust directs air, dust and cuttings away from the operator and the workpiece
- Rugged all-steel Erickson collet assures smooth accurate cuts and minimum runout
- Sturdy steel nosepiece with double-shielded bearing provides minimum vibration and better work quality
- Adjustable nosepiece for positive depth-of-cut and quick accessory changes

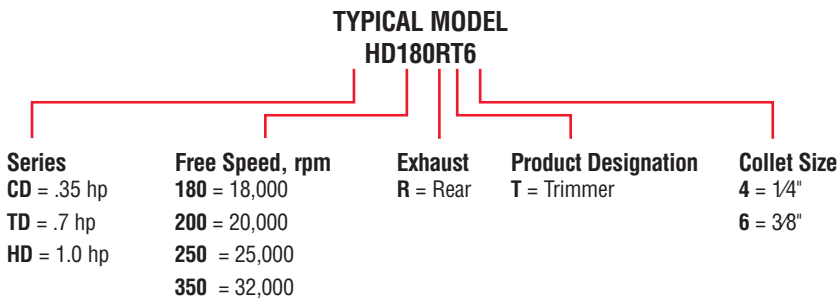
Standard Equipment

- Erickson collet
- Collet body wrench
- Collet nut wrench
- Coupling nut wrench

Accessories

- CD-RK4 1/4" (1/2"-20)
- TD-RK4 1/4" (1/2"-20)
- TD-RK6 3/8" (5/8"-11)
- LG3R-23 concentric flange
- LG2-A400 locking throttle lever

Product Identification Guide



Model	Bit Shank in.	Free Speed rpm	Weight lb.	Length without Bit Guide in.	Side to Center Distance in.
CD250RT4	1/4	25,000	1 5/8	6 7/8	3/4
CD350RT4	1/4	32,000	1 5/8	6 7/8	3/4
TD200RT4	1/4	20,000	2 3/8	8 3/8	3/4
TD200RT6	3/8	20,000	2 3/8	8 3/8	3/4
TD250RT4	1/4	25,000	2 3/8	8 3/8	3/4
TD250RT6	3/8	25,000	2 3/8	8 3/8	3/4
HD180RT4	1/4	18,000	2 1/2	9 3/16	31/32
HD180RT6	3/8	18,000	2 1/2	9 3/16	31/32

All standard models have dual exhaust capabilities. Exhaust direction can be easily switched from front to rear.

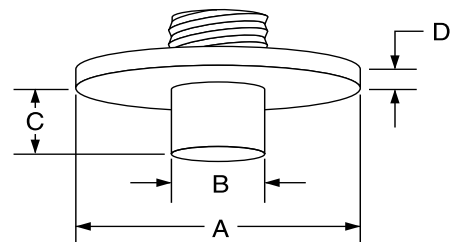
Performance figures are at 90 psi air pressure.

Trimmer Guides (see drawing at right).

Part Number	For Bits with Shank Size in.	Thread	A in.	B in.	C in.	D in.
R120-128-2	1/4	1/2 - 20	1 1/2	3/8	3/8	1/8
R120-128-7	1/4	1/2 - 20	2 1/2	1/2	1/2	3/16
LG2-129-1	3/8	5/8 - 18	2 1/2	1/2	3/8	1/8

Guides for 1/4" models have 1/2" - 20 UNF thread.

Guides for 3/8" models have 5/8" - 18 UNF thread.





Reflecting the rapidly changing demands of industrial finishing, sanders, polishers and buffers have emerged as key segments. Constant process improvements throughout industry now result in less waste on castings and molded parts, shifting emphasis from material removal to surface finishing. The Ingersoll-Rand line of sanders, buffers and polishers includes models based on the popular Cyclone tools. All give you the ability to match capacity and attachments precisely to the workpiece and material, for finessing a high-quality finish.

The design of Ingersoll-Rand's Sanders/Polishers/Buffers reflects the industry-wide changes in both processes and materials.

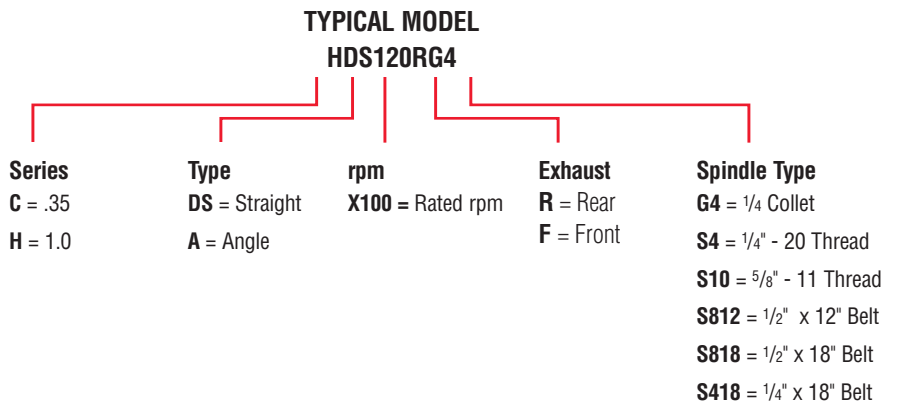
CycloFinish Sanders / Polishers / Buffers

CycloFinish Sanders, Polishers, and Buffers have been developed as part of the Cyclone finishing tool line for specific use in surface preparation and final finishing applications. The CycloFinish tools — offered in both angle and straight configurations — are lower-speed versions of the highly successful Cyclone Series. They are

based on the .70 and 1.0 horsepower T and H series, with a variety of speed offerings and accessories for sanding, polishing, blending and smoothing operations. The CycloFinish models are multi-purpose accessory tools used in aerospace, shipbuilding, utilities, woodworking and furniture production, vehicle and marine assembly, and general maintenance.

Like all Cyclone Series finishing tools, the CycloFinish line has fewer internal parts than other competitive products in the category. The patented “drop-in” motor requires no alignment or shims. Vanes can be removed or replaced quickly. This innovative design reduces the expense of down-time, repair, and replacement parts.

Product Identification Guide





HA60RS10



HDS30RG4*



HXA120RS10

Standard Equipment

Collet Models

- Erickson collet
- Collet wrenches H models
- Ergo handle

Accessories

C Series

- Rear exhaust kit LG1-K284
- Low-profile concentric flange LG1-23R
- Safety locking lever LG1-A400
- Variable-speed regulator LG1-A1015
- Color-coded abrasive kits
- 2" Pad LG1-K2
- 3" Pad LG1-K3

H Series

- Wire brush adapter LS2-A4-B10 straight
- Rear exhaust kit LG2-K284
- Safety locking lever LG2-A400
- Low-profile concentric flange LG3R-23
- 77A-AM825-5 5" medium pad
- 77A-AM825-7 7" medium pad
- 77A-BM825-7 7" firm pad

G4 = 1/4" Collet
S10 = 5/8" Arbor

Model (Rear Exhaust)	Maximum Free Speed rpm	Standard Spindle	Overall Length in.	Weight lb.	Side to Center Distance in.	cfm
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Straight Tools

HDS90RG4	9,000	1/4" collet	13 ³ / ₄	4 ¹ / ₈	1 ³ / ₁₆	43
HDS60RG4	6,000	1/4" collet	13 ³ / ₄	4 ¹ / ₈	1 ³ / ₁₆	43
HDS45RG4	4,500	1/4" collet	12 ⁷ / ₈	3 ³ / ₁₆	1 ³ / ₁₆	43
HDS30RG4	3,000	1/4" collet	12 ⁷ / ₈	3 ³ / ₁₆	1 ³ / ₁₆	43
HDS10RG4	1,000	1/4" collet	13 ³ / ₄	4 ¹ / ₈	1 ³ / ₁₆	43

Angle Tools

CA120RS4	12,000	1/4" - 20	6 ¹ / ₁₆	1 ⁵ / ₁₆	3/4	12
CA200RS4	20,000	1/4" - 20	6 ¹ / ₁₆	1 ⁵ / ₁₆	3/4	14

Sanders

HXA19RS10	1,900	5/8" - 11	13 ³ / ₈	4 ⁹ / ₁₆	1 ³ / ₁₆	43
HXA27RS10	2,700	5/8" - 11	13 ³ / ₈	4 ⁹ / ₁₆	1 ³ / ₁₆	43
HA40RSG4	4,000	1/4" collet	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43
HA40RS10	4,000	5/8" - 11	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43
HA50RS10	5,000	5/8" - 11	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43
HA60RSG4	6,000	1/4" collet	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43
HA60RS10	6,000	5/8" - 11	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43
HXA60RS10	6,000	5/8" - 11	11 ³ / ₁₆	3 ⁵ / ₁₆	1 ³ / ₁₆	43
HA80RS10	8,000	5/8" - 11	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43
HXA80RS10	8,000	5/8" - 11	11 ³ / ₁₆	3 ⁵ / ₁₆	1 ³ / ₁₆	43
HA100RS10	10,000	5/8" - 11	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43
HXA100RS10	10,000	5/8" - 11	11 ³ / ₁₆	3 ⁵ / ₁₆	1 ³ / ₁₆	43
HA120RS10	12,000	5/8" - 11	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43
HXA120RS10	12,000	5/8" - 11	11 ³ / ₁₆	3 ⁵ / ₁₆	1 ³ / ₁₆	43
HA140RS10	14,000	5/8" - 11	8 ³ / ₁₆	2 ⁵ / ₈	1 ³ / ₁₆	43

Air Inlet: 1/4" NPT.
Size Hose Recommended: 3/8".

Performance figures are at 90 psi air pressure.
Sound levels range 76-82 dBA.
All models are easily switched to rear or front exhaust.

* Shown with LS2-A4-B10 adapter and pump wheel.
* Pump wheel sold separately.

Finishing Tools

Industrial Production Sanders / Polishers / Buffers

CycloFinish Tools

Standard Equipment

- One 60 grit belt
- One 80 grit belt
- One 100 grit belt



CA120RS812
(Shown without standard shield)

Accessories

- LG1-K284
Rear Exhaust Kit
- DG110-700-G2 (C)
Erickson Collet 1/8"
- LG1-A350-812
1/2" x 12" Belt sander attachment
- LG1-A350-818
1/2" x 18" Belt sander attachment
- LG1-A350-418
1/4" x 18" Belt sander attachment

Attachments may be mounted on either a CA120RG4 or CA200RG4 Cyclone tool.

Sanding Belts/10 pack

- LG1-SB418-60-10, 60 grit 1/4" x 18" belt
- LG1-SB418-80-10, 80 grit 1/4" x 18" belt
- LG1-SB418-100-10, 100 grit 1/4" x 18" belt
- LG1-SB818-60-10, 60 grit 1/2" x 18" belt
- LG1-SB818-80-10, 80 grit 1/2" x 18" belt
- LG1-SB818-100-10, 100 grit 1/2" x 18" belt
- LG1-SB812-60-10, 60 grit 1/2" x 12" belt
- LG1-SB812-80-10, 80 grit 1/2" x 12" belt
- LG1-SB812-100-10, 100 grit 1/2" x 12" belt

Note - Surface feet per minute at 12,000 rpm = 2700
Surface feet per minute at 20,000 rpm = 4500

Model	Rated Power hp	Maximum Free Speed rpm	Standard Spindle	Length with Belt Attachment	Weight lb.	Belt Size	cfm
CA120RS812	.35	12,000	1/4" collet	10 3/4"	1 1/2	1/2 x 12"	12
CA120RS418	.35	12,000	1/4" collet	14"	1 5/8	1/4 x 18"	12
CA120RS818	.35	12,000	1/4" collet	14"	1 3/4	1/2 x 18"	12
CA200RS812	.35	20,000	1/4" collet	10 3/4"	1 1/2	1/2 x 12"	14
CA200RS418	.35	20,000	1/4" collet	14"	1 5/8	1/4 x 18"	14
CA200RS818	.35	20,000	1/4" collet	14"	1 3/4	1/2 x 18"	14

Air Inlet: All Models 1/4" NPT.
Size Hose Recommended: All Models 5/16".
Performance figures are at 90 psi air pressure.

Sound levels range 76-82 dBA.
To order your CycloFinish tool preset for front exhaust, refer to model numbers above and substitute F for R.



Cyclone Sanders – Another Performance Standard from Ingersoll-Rand

Cyclone grinders and finishing tools have established new standards for ergonomic design, power, and speed in material removal applications. Ingersoll-Rand has extended the same innovative philosophy to random orbital sanders, establishing another performance standard – with the Cyclone Series.

Cyclone Select Series

The ultimate in lightweight, efficient design, with comfort and performance to match. One-piece precision-molded composite housing, with color-keyed grip rings that meet operator hand sizes. Available in non-vac and vac-ready models.

VenturiVac System

This version of the Select Series features unique new self-generated vacuum system – the most powerful and effective available!

Cyclone Standard Series

These models incorporate traditional aluminum housings with textured comfort grips. Available in non-vac, vac-ready, and venturi-vac models.

All Cyclone sanders deliver unsurpassed reliability, with moisture-resistant composite rotors, fully machined counterweights, and large counterweight bearings. All 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.

Finishing Tools

Cyclone Industrial Production Random Orbital Sanders

Cyclone Select Series

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

- High efficiency air motors deliver true 12,000 rpm performance.
- 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



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

Another unique feature:

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

Choose from four non-vac models, with 5-inch or 6-inch pads, and duck or vinyl pad faces, four vacuum-ready models, for use with central or portable vacuum systems, Or... 2 CycloVac models, self-generated vacuum models. Select short shrouds for maximum workpiece visibility, or long shrouds for maximum dust evacuation.



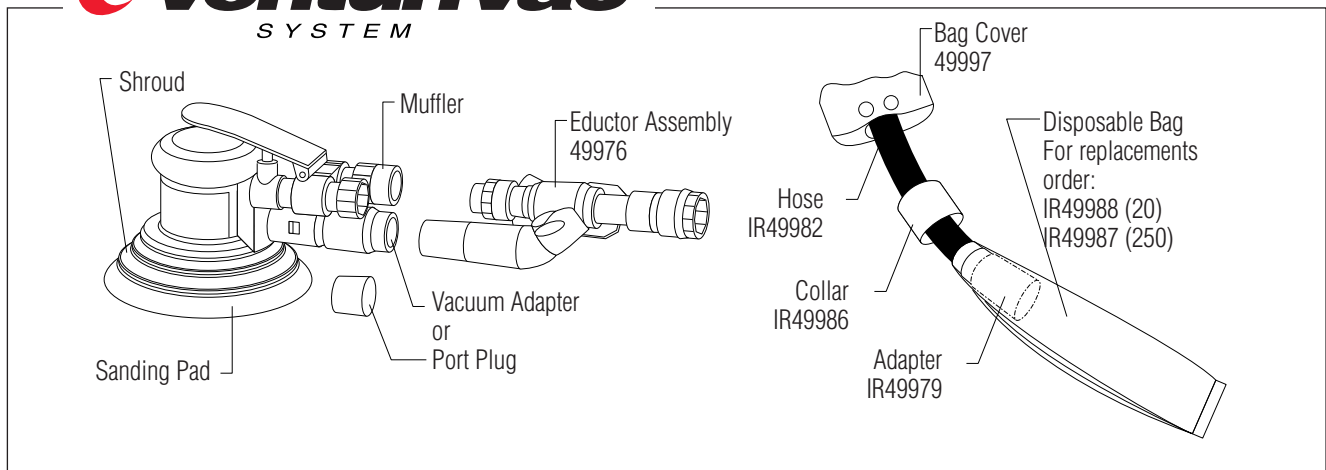
**Cyclone Random Orbital Sanders
VenturiVac System**

- Unique “double bagging” integral vacuum system that provides a cleaner work environment. This arrangement also promotes the proper disposal of collected particulates for maximum total effect
- Delivers twice the vacuum power of the nearest competitor, and uses a disposable dust bag enclosed in a protective cover
- The sander’s eductor assembly employs a nozzle to produce a high velocity “vac” of tool exhaust air that entrains the air and dust from the sanding area. The diffuser then channels both streams of air through the hose and into the collection bag
- The result: A truly effective, self-contained, self-generated vacuum sanding system in one compact, convenient package



- Available in 5" and 6" pad models, with disposable vacuum bags prepackaged in quantities of 20 or 250. Other Select Series models can be converted to the VenturiVac System with an available kit

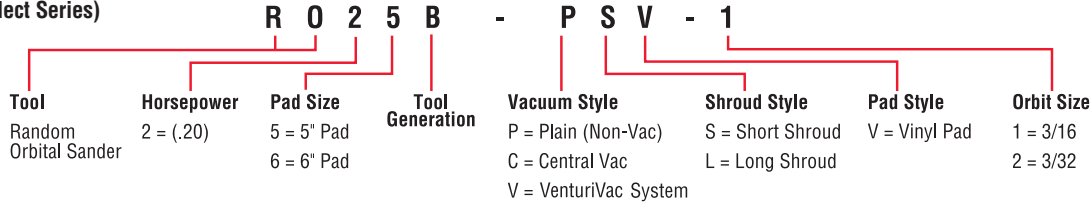
VenturiVac™
SYSTEM



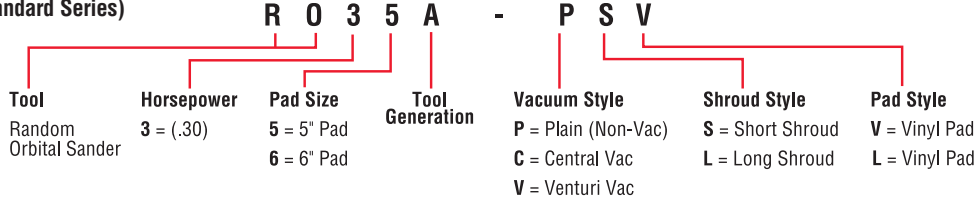
Finishing Tools

Cyclone Industrial Production Random Orbital Sanders

Composite Housing (Select Series)



Aluminum Housing (Standard Series)



IR Model Selection Chart

Pad Type	Shroud	Composite .2 hp 3/16" Diameter Orbit	Composite .2 hp 3/32" Diameter Orbit	Aluminum .3 hp 3/16" Diameter Orbit
5" Diameter				
		Cyclone Select	Cyclone Select	Standard
Non-Vac	Vinyl	Short	R025B-PSV-1	R025B-PSV-2
Non-Vac - Long Handle	Vinyl	Short	NA	NA
Central Vac	Vinyl	Short	R025B-CSV-1	R025B-CSV-2
	Vinyl	Long	R025B-CLV-1	R025B-CLV-2
VenturiVac	Vinyl	Long	R025B-VLV-1	R025B-VLV-2
				R035A-PSV
				R035A-PSV-L
				R035A-CSV
				NA
				R035A-VLV
6" Diameter				
Non-Vac - Short Shroud	Vinyl	Short	R026B-PSV-1	R026B-PSV-2
Non-Vac - Short Shroud / Long Handle	Vinyl	Short	NA	NA
Central Vac	Vinyl	Short	R026B-CSV-1	R026B-CSV-2
	Vinyl	Long	R026B-CLV-1	R026B-CLV-2
VenturiVac - Long Shroud	Vinyl	Long	R026B-VLV-1	R026B-VLV-2
				R036A-PSV
				R036A-PSV-L
				R036A-CSV
				NA
				R036A-VLV

*Most popular model

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: 1/4" NPT Female Recommended air pressure: 90psi (6.2 bar) Recommended hose size: 5/16" (8mm) I.D.

Std Equipment: 3 49973

- 1 49997 Bag
- 1 IR49979 Bag Cover
- 1 IR49982 Adapter
- 1 IR49986 Hose
- Collar

Specifications

Model Number	Pad Size in. mm	Rated Max Free Speed rpm	Power hp	Air Consumption @ Free Speed scfm	Spindle Thread (female)	Weight Palm Style Long Handle
Non-Vacuum						
R025A-PSV	5 127	12,000	0.20	15.8	5/16" - 24	1.83 0.83 NA
R026A-PSV	6 152	12,000	0.20	15.8	5/16" - 24	1.92 0.87 NA
R035A-PSV	5 127	10,000	0.30	18.5	5/16" - 24	2.3 1.0 2.6 1.2
R036A-PSV	6 152	10,000	0.30	18.5	5/16" - 24	2.3 1.0 2.6 1.2
Vacuum-Ready						
R025A-CSV	5 127	12,000	0.20	15.8	5/16" - 24	1.83 0.83 NA
R025A-CLV	5 127	12,000	0.20	15.8	5/16" - 24	1.92 0.87 NA
R026A-CSV	6 152	12,000	0.20	15.8	5/16" - 24	1.92 0.87 NA
R026A-CLV	6 152	12,000	0.20	15.8	5/16" - 24	1.92 0.87 NA
R035A-CSV	5 127	10,000	0.30	18.5	5/16" - 24	2.4 1.1 NA
R036A-CLV	5 127	10,000	0.30	18.5	5/16" - 24	2.4 1.1 NA
VenturiVac						
R025A-VLV	5 127	12,000	0.20	15.8	5/16" - 24	1.92 0.87 NA
R026A-VLV	6 152	12,000	0.20	15.8	5/16" - 24	1.92 0.87 NA
R035A-VLV	5 127	10,000	0.30	18.5	5/16" - 24	2.4 1.1 NA
R036A-VLV	6 152	10,000	0.30	18.5	5/16" - 24	2.4 1.1 NA

Finishing Tools

Cyclone Industrial Production Random Orbital Sanders

Standard Series

- Select from non-vac models, vac-ready models for use with central or portable vacuum systems, or venturi-vac models with a self-contained hose and dust collection bag in the Cyclone Standard Series
- Non-vac models can be converted to vac-ready status with an available conversion kit (Part# 04331302)
- Comfortable cushion grip provides excellent feel and control



IR Sanding Pad Selection

	Low Profile 3/8" Premium Pads				High Profile 5/8" Premium Pads			
	Pad #	Description	Pad #	Description	Pad #	Description	Pad #	Description
5" Pads								
Vacuum (Elite Composite Series)	49096-1	Vinyl; Petal Pattern Face	4330916	Hook & Loop	NA		NA	
Non-Vacuum (Elite Composite Series)	49878-1	Vinyl; Flat Face	49877-1	Duck; Canvas Face	46860	Vinyl; Flat Face	46866	Duck; Canvas Face
Non-Vacuum (Standard Aluminum Series)	49094-1	Vinyl; Diamond Face	4095-1	Duck; Canvas Face				
			351-825-6A	Vinyl; Diamond Face				
6" Pads								
Vacuum (Cyc. Select Composite Series) Standard 5 Hole	49099-1	Vinyl; Petal Pattern Face	49694	Hook & Loop	NA		NA	
Non-Vacuum (Cyc. Select Composite Series)	46879-1	Vinyl; Flat Face	49880-1	Duck; Canvas Face	46861	Vinyl; Canvas Face	46867	Duck; Canvas Face
Non-Vacuum (Standard Aluminum Series)	49097-1	Vinyl; Diamond Face	49098-1	Duck; Canvas Face	NA		NA	

*Most popular model

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: 1/4" NPT Female

Recommended air pressure: 90psi (6.2 bar)

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

Accessories

Pad Wrenches

Use to remove sanding pad.
Included with every tool.



351-69 for Standard non-vacuum models.
354-69 for all Standard vacuum models.

Use to remove the lock ring
securing the motor assembly.



48869 for all Select models.
44548 for all Standard Series models.

Alternate grip rings for Select models.

IR49801 Small, Grey (optional)
49798 Medium, Black (standard)
IR49799 Large, Blue (optional)

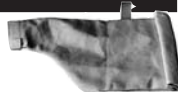


49802 (Select)
04331302 (Standard)

IR49600 6' (1.8m) Hose
Equipped with molded
1" I.D. cuffs at each end.



48275-1
Dust Collection Bag



IR49988 Vacuum Bag (20 Pack)
IR49987 Vacuum Bag (250 Pack)
49973 Vacuum Bag (single)

RSVK-5 Conversion Kit 5"
RSVK-6 Conversion Kit 6"
(To convert non-vac tools to
Vac-ready or VenturiVac
vacuum)

Contains all the necessary genuine I-R
replacement parts for proper preventa-
tive maintenance.

IR49837 (Select) IR49846 (Standard)

With all the changes in automotive materials like clear coat finishes, composites, and plastics, you need sanders to match the different jobs. Ingersoll-Rand has the most complete line of sanders and polisher/buffers, from traditional styles for heavy material removal to the newest models for excellent control and brilliant surfaces.

The newest IR4100 Series sanders are also specially designed to keep the air around you and your work surface clean. There are Jet-Vac™ and vacuum-assist models that help maintain a clean, dust-free environment.

These sanders feature internal components designed to run on totally dry air. This also means no oil on the work surface or in the workplace.

**Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.*

Finishing Tools

Maintenance/Automotive* Air Sanders & Buffers



All the latest advances have been designed into Ingersoll-Rand's random orbital and orbital sanders. Every detail is shaped to fit your hand perfectly, with a choice of standard and "mini" grips and a wide finger ridge for better feel and control. The IR4100 series even offers a choice of three interchangeable grip rings. The lever throttle takes the pressure off your palm. Vibration and sound are reduced to a minimum. You get the power and precision you need so you can do your best, most sophisticated work.

You can choose from a variety of air sanders, including orbital and air geared sanders, straight line, angle, or vertical sanders. For buffing and polishing paint, metal, or plastic to a high gloss, professional finish, you have a choice of two polisher/ buffers with variable speed control lever throttles to help eliminate paint burning.

All Ingersoll-Rand sanders are designed for long-life service and swirl-free finishes.

Model Number	Performance Rating	Free Speed (rpm)	Rated Power hp (kW)	Pad Diameter in. (mm)	Vacuum Ready	Weight lbs. (kg)	Average Air Consumption cfm (l/min.)	@ Load cfm (l/min.)	Sound dBA (Pressure/Power)	Air Inlet in.	Min. Hose Size in. (mm)	Spindle in.
IR311A	Heavy Duty	10,000	.25	6 (150)	No	4.2 (1.91)	4 (113)	17 (481)	85.6/98.6	1/4	3/8 (10)	5/16 -24
IR312	Heavy Duty	8,000	.30 (.22)	3 3/8 x 6 3/4 (92 x 171) ^b	No	4.6 (2.09)	6 (170)	12 (340)	94.1/107.1	1/4	3/8 (10)	N/A
IR313	Heavy Duty	5,000	N/A	7 (175)	No	4.2 (1.91)	8 (226)	23 (651)	99.3/112.3	1/4	3/8 (10)	5/8-11
IR314	Heavy Duty	2,500	N/A	7 (175)	No	4.2 (1.91)	8 (226)	22 (623)	97.3/110.3	1/4	3/8 (10)	5/8-11
IR315	Heavy Duty	3,000 ^a	N/A	2 3/4 x 17 1/2 (70 x 455) ^b	No	6.6 (2.99)	8 (226)	9 (255)	93.3/106.3	1/4	3/8 (10)	N/A
IR317	Heavy Duty	18,000	N/A	5 (125)	No	2.3 (1.04)	12 (340)	25 (708)	96.5/109.5	1/4	3/8 (10)	N/A
IR318	Heavy Duty	2,800	N/A	7 (175)	No	4.5 (2.04)	6 (170)	21 (595)	90.5/103.5	1/4	3/8 (10)	5/8-11
IR319	Heavy Duty	5,000	N/A	7 (175)	No	4.5 (2.09)	6 (170)	20 (566)	90.8/103.8	1/4	3/8 (10)	5/8-11
IR327	Heavy Duty	22,000	.5 (.38)	3/8 (10) ^c	No	1.6 (.73)	15 (425)	28 (793)	90.9/103.9	1/4	3/8 (10)	3/8 (10) ^c
IR327LS	Heavy Duty	3,000	.5 (.37)	3/8 (10) ^c	No	1.13 (.51)	14 (396)	27 (756)	95/108	1/4	3/8 (10)	3/8 (10) ^c
IR328B	Heavy Duty	900	.25	8 (203)	No	4.7 (2.13)	4 (113)	16 (453)	90.45/93.7	1/4	3/8 (10)	N/A
IR4151	Ultra Duty	12,000	.20 (.15)	6 (152)	Yes	1.92(.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)	N/A
IR4151-5	Ultra Duty	12,000	.20 (.15)	5 (127)	Yes	1.92(.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)	N/A
IR4151-HL	Ultra Duty	12,000	.20 (.15)	6 (152)	Yes	1.92(.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)	N/A
IR4151-2	Ultra Duty	12,000	.20 (.15)	6 (152)	Yes	1.92(.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)	N/A
IR4152	Ultra Duty	12,000	.20 (.15)	6 (152)	Yes	1.92(.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)	N/A
IR4152-HL	Ultra Duty	12,000	.20 (.15)	6 (152)	Yes	1.92(.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)	N/A

a 1" Length Strokes (per min) b Rectangular Pad Size c Chuck Size

*Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.

IR311A 

Heavy Duty

Air Dual Action Quiet Sander – 6" Pad

A built-in silencer muffles noise as you work with this economical dual action sander. It's a quality sander used for feather edging, metal preparation and finish work on body filler. And its dual action pad motion produces swirl-free finishes.

- Low Vibration
- Dependable performance
- Balanced ball bearing construction
- Adjustable built-in regulator for positive speed control



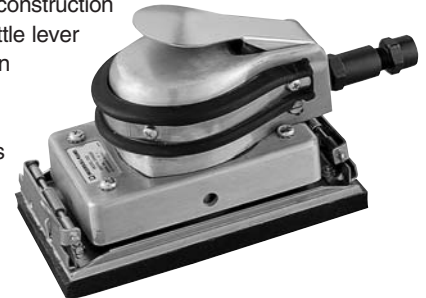
IR312 

Heavy Duty

Air Orbital Sander – 3-2/3" x 6-3/4" Pad

The IR312 air orbital sander has a free speed up to 8,000 rpm to make fast work of smoothing fiberglass, wood, and body filler and to take care of any sanding job on paint, metal, and fiberglass. And you can run the IR312 with one hand, using the compact, contoured palm-grip.

- Low vibration plus longer-life
- Balanced ball bearing construction
- Automatic release throttle lever with positive stop action
- Built-in regulator for positive speed control
- Positive locking clamps



IR313 

Heavy Duty

Air Angle Sander – 7" Pad

With up to 5,000 rpm free speed, you can work faster on light and heavy sanding jobs, including roughing body filler, removing rust, and smoothing welds.

- Heavy duty motor handles tough jobs
- Lightweight, only 4.2 lbs.
- Ball bearing construction for long life



IR314 

Heavy Duty

Air Angle Polisher/Buffer – 7" Pad

A versatile tool with a high free speed range of 1,500-2,500 for buffing and polishing a wide range of surfaces – paint, metal, and plastic – to a high-gloss, professional finish. With its heavy duty motor, this polisher can handle the toughest jobs.

- Long-life, ball bearing construction
- Dead handle and spindle for easy handling
- Built-in regulator
- Up to 2,500 rpm in free speed



Model Number	Performance Rating	Free Speed (rpm)	Rated Power hp (kW)	Pad Diameter in. (mm)	Vacuum Ready	Weight lbs. (kg)	Average Air Consumption cfm (l/min.)	@ Load cfm (l/min.)	Sound dBA (Pressure/Power)	Air Inlet in.	Min. Hose Size in. (mm)	Spindle in.
IR311A	Heavy Duty	10,000	.25	6 (150)	No	4.2 (1.91)	4 (113)	17 (481)	85.6/98.6	1/4	3/8 (10)	5/16 -24
IR312	Heavy Duty	8,000	.30 (.22)	3 2/3 x 6 3/4 (92 x 171) ^b	No	4.6 (2.09)	6 (170)	12 (340)	94.1/107.1	1/4	3/8 (10)	N/A
IR313	Heavy Duty	5,000	N/A	7 (175)	No	4.2 (1.91)	8 (226)	23 (651)	99.3/112.3	1/4	3/8 (10)	5/8-11
IR314	Heavy Duty	2,500	N/A	7 (175)	No	4.2 (1.91)	8 (226)	22 (623)	97.3/110.3	1/4	3/8 (10)	5/8-11

^b Rectangular Pad Size

*Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.

Finishing Tools

Maintenance/Automotive* Air Sanders & Buffers

IR315 

Heavy Duty

Air Twin Piston Straight Line Sander – 2-3/4" x 17-1/2" Pad

The twin piston design keeps extra power in reserve to prevent stalling and tackle sanding jobs like smoothing down body filler or shaping and leveling large flat surfaces.

- 3,000 reciprocating strokes per minute
- Quick action paper clamps
- Smooth, reliable power



IR317 

Heavy Duty

Air High-Speed Sander – 5" Pad

For small jobs and hard-to-reach places, the IR317 is an economical high-speed sander ideal for light sanding, feather edging, and rust removal.

- Easy to handle, compact and lightweight
- Built-in power regulator
- Comes with three backing pads, 317-825 1 each 3", 1 each 4", and 1 each 5" (stackable)



IR318 

Heavy Duty

Air Vertical Polisher/Buffer – 7" Pad

Buff and polish all painted surfaces easily. This compact, lightweight vertical polisher/buffer gives you the results you want, even on the tough jobs. The variable speed control lever throttle helps eliminate paint burning. Comes complete with a 7" backing pad.

- Long tool life from the planetary gear reduction feature
- Plenty of power from the 1 hp motor
- Handle exhaust directs air away from work area



IR319 

Heavy Duty

Air Vertical Sander – 7" Pad

A high quality sander made to handle demanding jobs like rust removal and sanding metal and body filler, the IR319 comes complete with one 7" backing pad.

- Longer gear life plus better gearing for better power
- Planetary gear reduction feature
- Lever throttle for speed control
- Handle exhaust directs air away from work area



Model Number	Performance Rating	Free Speed (rpm)	Rated Power hp (kW)	Pad Diameter in. (mm)	Vacuum Ready	Weight lbs. (kg)	Average Air Consumption cfm (l/min.)	@ Load cfm (l/min.)	Sound dBA (Pressure/Power)	Air Inlet in.	Min. Hose Size in. (mm)	Spindle in.
IR315	Heavy Duty	3,000 ^a	N/A	2 ³ / ₄ x17 ¹ / ₂ (70x455) ^b	No	6.6 (2.99)	8 (226)	9 (255)	93.3/106.3	1/4	3/8 (10)	N/A
IR317	Heavy Duty	18,000	N/A	5 (125)	No	2.3 (1.04)	12 (340)	25 (708)	96.5/109.5	1/4	3/8 (10)	N/A
IR318	Heavy Duty	2,800	N/A	7 (175)	No	4.5 (2.04)	6 (170)	21 (595)	90.5/103.5	1/4	3/8 (10)	5/8-11
IR319	Heavy Duty	5,000	N/A	7 (175)	No	4.5 (2.04)	6 (170)	20 (566)	90.8/103.8	1/4	3/8 (10)	5/8-11

^a 1" Length Strokes (per min)

^b Rectangular Pad Size

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IR328B 

Heavy Duty

Air Geared Orbital Sander – 8" Pad

The smooth strength and power of this air geared orbital sander lets you remove heavy material and body filler on large, flat surfaces leaving a clean, swirl-free finish.

- Dual action pad motion (5/32" orbit)
- A long-life, vibration-free performance
- Balanced ball bearing construction



6135A

Polishing Pad

8" diameter, 2" thick polyester foam. For use with IR314, IR318 or any polisher with a 5/8"-11 spindle.



IR327 

Heavy Duty

Air High-Speed Tire Grinder

With a free speed up to 22,000 rpm and powerful 1/2- hp motor, the IR327 will make quick work of patchwork and roughing up low areas for recapping, tire scuffing and cleaning tire moldings.

- Lever throttle for easy operation
- Rear exhaust keeps air away from you and your work



IR327LS 

Heavy Duty

Air Low-Speed Tire Buffer

Designed for conveniences, the many features of the IR327LS make it the ideal tool for every tire shop. The quick change chuck, built-in regulator and lever-style throttle make patchwork, roughing areas for recapping and cleaning tire moldings a breeze.

- Lever-style tease trigger with lock-off for easy operation and protection against accidental start-up
- Quick change chuck for easy buffing wheel change
- Piped-away exhaust (included) directs air away from work area and operator
- Convenient hanger-keeps tool within easy reach



Model Number	Performance Rating	Free Speed (rpm)	Rated Power hp (kW)	Pad Diameter in. (mm)	Vacuum Ready	Weight lbs. (kg)	Average Air Consumption cfm (l/min.)	@ Load cfm (l/min.)	Sound dBA (Pressure/Power)	Air Inlet in.	Min. Hose Size in. (mm)	Spindle in.
IR327	Heavy Duty	22,000	.5 (.38)	3/8 (10) ^C	No	1.6 (.73)	15 (425)	28 (793)	90.9/103.9	1/4	3/8 (10)	3/8 (10) ^C
IR327LS	Heavy Duty	3,000	.5 (.37)	3/8 (10) ^C	No	1.13 (.51)	14 (396)	27 (756)	95/108	1/4	3/8 (10)	3/8 (10) ^C
IR328B	Heavy Duty	825	.25	8 (203)	No	4.7 (2.13)	4 (113)	16 (453)	90.45/93.7	1/4	3/8 (10)	N/A

^C Chuck Size

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Finishing Tools

Maintenance/Automotive* Air Sanders & Buffers

IR4151  

Ultra Duty

Vacuum-Ready Air Random Orbital Sander



This vacuum-ready, low vibration model produces an ultra-high quality finish and connects easily to central or portable vacuum systems. The IR4151 extracts dust and particles through and around the pad keeping foreign matter away from the motor. The vacuum sanding pad features a unique design and large 1/2" diameter holes for efficient operation. Virtually all dust is instantly channeled away from the work.

- 12,000 rpm free speed for swirl-free finishes
- Durable, lightweight composite design weighs less than 2 lbs

IR4151-5 & IR4151-HL

Same specifications as the IR4151 model, but with a 5" pad size (IR4151-5) or hook & loop style pad (IR4151-HL).



IR4151-2  

Ultra Duty

Vacuum-Ready Two-Handed Random Orbital Sander

The extra long handle and high speed/low vibration performance of the IR4151-2 combine to provide superior control and flawless finishes for technicians who prefer two-handed sanding. It converts easily to vacuum operation, and incorporates all of the other features that make the 4151 Series one of the most advanced range of tools available for quality-critical paint and body work.



IR4152  

Ultra Duty

Vacuum-Ready Air Random Orbital Sander

The IR4152 sets a new standard in elite automotive finish work. This fine 3/32" orbit sander helps set the standard for high quality paint finishes. The IR4152 utilizes a precision ground counterbalance to reduce vibration. The lubrication-free motor package eliminates worry of exhaust contaminants harming the work surface.

IR4152-HL

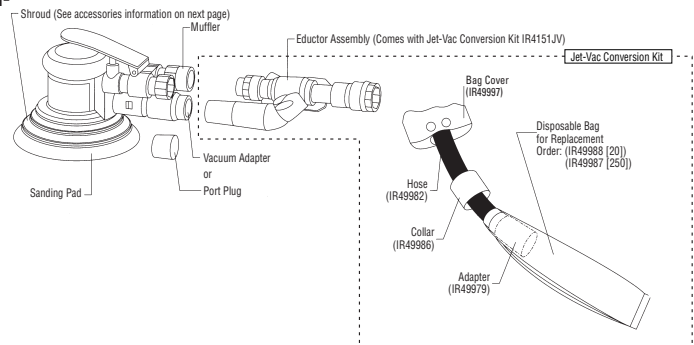
Same specifications as the IR4152 sander, but with a hook & loop style pad.



IR4151JV

Jet-Vac Dust Extraction

Combine any IR4151 or IR4152 sander with the powerful Jet-Vac dust extraction system. Influenced by jet engine technology, the Jet-Vac tool sucks up more air than it takes to actually run the tool!



Model Number	Performance Rating	Free Speed (rpm)	Rated Power hp (kW)	Pad Diameter in. (mm)	Orbit Diameter in. (mm)	Weight lbs. (kg)	Average Air Consumption cfm (l/min.)	@ Load cfm (l/min.)	Sound dBA (Pressure/Power)	Air Inlet in.	Min. Hose Size in. (mm)
IR4151	Ultra Duty	12,000	.20 (.15)	6 (152)	3/16 (5.0)	1.92 (.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)
IR4151-5	Ultra Duty	12,000	.20 (.15)	5 (127)	3/16 (5.0)	1.92 (.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)
IR4151-HL	Ultra Duty	12,000	.20 (.15)	6 (152)	3/16 (5.0)	1.92 (.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)
IR4151-2	Ultra Duty	12,000	.20 (.15)	6 (152)	3/16 (5.0)	1.92 (.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)
IR4152	Ultra Duty	12,000	.20 (.15)	6 (152)	3/32 (2.5)	1.92 (.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)
IR4152-HL	Ultra Duty	12,000	.20 (.15)	6 (152)	3/32 (2.5)	1.92 (.87)	8 (226)	15.5 (440)	78/91	1/4	5/16 (8)

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IR4100 Series Major Components and Accessories

Premium Quality Low-Profile Pads

Non-Vac, 3/8" (9.5mm) thick

6" Vinyl	IR49879-1
6" Duck	IR49880-1
5" Vinyl	49094-1
5" Duck	IR49877-1

**Vacuum, 3/8" (9.5mm) thick
(6" petal pattern provided with every sander)**

6" Petal Pattern	49099-1
6" Hook and Loop	49694
5" Petal Pattern	IR49096-1

Vacuum Adapters – 3154

Port Adapter	49802
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Shrouds

Short (Standard on 4151)	IR48266-1
Long	48878

Jet-Vac Vacuum Bags

Jet-Vac Dust Collection Bag (External)	49997
20 Quantity Pack (Disposable)	IR49988
250 Quantity Pack (Disposable)	IR49987

Jet-Vac Conversion Kit

6" Pad	4151JV
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Includes:

Part No.	Description	Quantity
48878	6" shroud	1
49973	Disposable bag	3
49997	Cloth bag cover	1
49976	Eductor assembly	1
49979	Bag adapter	1
49982	Hose	1
49986	Collar	1

Service Kit

(for preventative maintenance)

IR49837 Pad Wrench (included with every tool)	354-69
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Spanner Wrenches

Use to remove the lock ring securing the motor assembly	44548
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The full range of Ingersoll-Rand sanding, backing, and polishing pads will help you do every sanding, polishing, and grinding job to your satisfaction.

315-39 Straight Line Sanding Pad

For use with IR315. Non-metallic material reduces side strap wear caused by metallic sanding pads. Fits other similar brands of straight-line sanders.



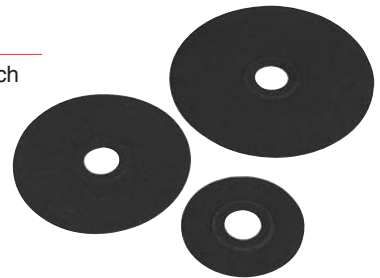
6135A Polishing Pad

8" diameter, 2" thick polyester foam. For use with IR314, IR318 or any polisher with a 5/8"-11 spindle.



317-825 Backing Pads

For use with IR317, one each 3", 4", 5" backing pads.



For IR313, IR314, IR318, and IR319

Cat. No.	Dia.	Description
Standard Duty		
313-825-7	7"	Rigid backing pad
Heavy Duty		
6130A	7"	Flexible backing pad



Dual Action Backing Pad for IR310 and IR311

Standard Duty		
310-825-6	6"	Firm pad for medium to heavy stock removal, cloth backed
311A-825-6	6"	Vinyl pad
Heavy Duty		
6120A	6"	Firm edge for firm support, cloth backed
6121A	6"	Soft edge for medium support, cloth backed
6122A	5"	Firm edge for firm support, cloth backed
6123A	5"	Soft edge for medium support, cloth backed

Dual Action Backing Pad for IR328

Standard Duty		
328A-826	8"	Pad assembly

*Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.

Industrial Production Needle & Chisel Scalers



Needle and Chisel

Comfort, Performance and Reliability

When it is time to get serious about removing materials, grip into IR's new pistol grip scalers. These heavy duty needle scalers and weld flux scalers have a constant duty rating and are ideally suited for multiple applications on any surface.

- Rust removal
- Weld splatter and slag removal
- Paint removal
- Chipping and cutting concrete block
- Peening
- Cleaning sand castings
- Marine repairs and maintenance
- Removing other unwanted surface deposits



Model Specifications	WT w/ Accessories	Length w/o Accessories	BPM	Piston Stroke	Air Consumption	Air Inlet	Bore	Chisel Shank	No. of 3mm Needles (Flat)	Description
170PG	6.62 lbs.	12.4	3,000	1.4	5.5 cfm	1/4" NPT	.925	N/A	19	Needle Scaler
180PG	8.88 lbs.	13.5	2,200	1.54	8 cfm	1/4" NPT	1.125	N/A	28	Needle Scaler
170PG-CS*	5.32 lbs.	12.4	3,000	1.4	5.5 cfm	1/4" NPT	.925	1/2"	N/A	Chisel Scaler
180PG-CS*	6.81 lbs.	12.4	2,200	1.54	8 cfm	1/4" NPT	1.125	1/2"	N/A	Chisel Scaler

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 tip 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 tip 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.

*1/2" square shank is standard on both units (5/8" hex is optional for the 180PG-CS).



Industrial Production Needle & Chisel Scalers

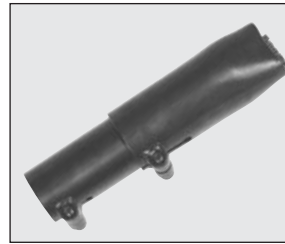
These units feature:

- Lever throttle control
- Heavy duty ergonomic rubber grip
- All hardened steel parts for long life
- Easy convertability from needle scaler to chisel scaler
- ½" square shank for chisels
- Adjustable bayonet type oval front tube
- Built-in chisel and needle retainer

Variable control throttle lever for precise control



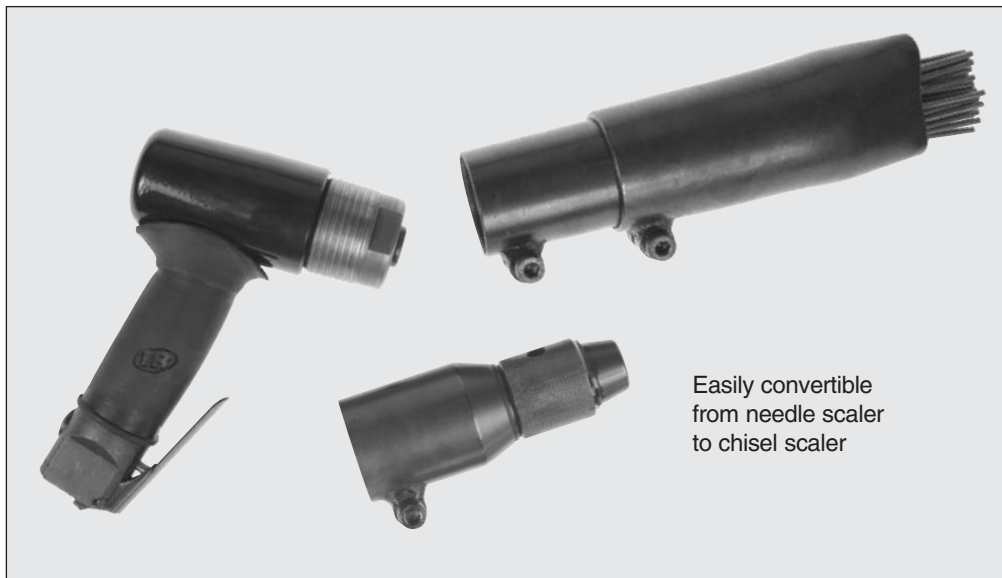
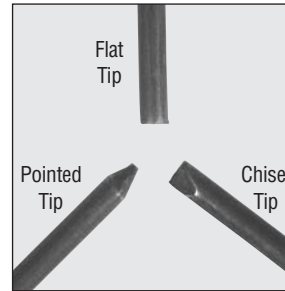
Easily adjustable bayonet oval front tube



Heavy duty ergonomic rubber grip improves comfort and productivity



Multiple needle tips available for all your applications



Easily convertible from needle scaler to chisel scaler



WARNING

Always wear eye protection when operating or performing maintenance on this tool.

Optional Needles & Needle Scaler Accessories	Part No. For Ordering
Needle Holder (2 mm)	
for 170PG	22038194
for 180PG	22038202
Needle Holder (4 mm)	
for 180PG	22038210
Front Tube - Round	
for 170PG	22038228
for 180PG	22038236
Needles (2 mm)	
flat tip, 7" long, carbon steel (qty: 100)	22038525
Needles (3 mm)	
flat tip, 5" long, carbon steel (qty: 19)	NS11-22-19
flat tip, 5" long, carbon steel (qty: 100)	22038533
flat tip, 5" long, beryllium copper (qty: 19)	NS11-B22-19
flat tip, 5" long, stainless steel (qty: 19)	NS11-S22-19
flat tip, 7" long, carbon steel (qty: 19)	NS11-122-19
flat tip, 7" long, carbon steel (qty: 100)	89940597
flat tip, 7" long, carbon steel (qty: 1000)	22038541
flat tip, 7" long, beryllium copper (qty: 100)	22038558
flat tip, 7" long, beryllium copper (qty: 500)	22038566
chisel tip, 7" long, carbon steel (qty: 100)	22038574
chisel tip, 7" long, carbon steel (qty: 1000)	22038582
pointed tip, 7" long, carbon steel (qty: 100)	22038590
pointed tip, 7" long, carbon steel (qty: 1000)	22038608
Needles (4 mm)	
flat tip, 7" long, carbon steel (qty: 100)	22038616
flat tip, 7" long, carbon steel (qty: 500)	22038624
chisel tip, 7" long, carbon steel (qty: 100)	22038632
chisel tip, 7" long, carbon steel (qty: 500)	22038640
pointed tip, 7" long, carbon steel (qty: 100)	22038657
pointed tip, 7" long, carbon steel (qty: 500)	22038665
Optional Chisels & Chisel Scaler Accessories	Part No. For Ordering
Chisel Holder Assembly (5/8" Hex Shank)	
for 180PG	22039705
Chisels (5/8" Hex Shank)	
Straight Scaling, 2" wide blade, 7" overall, spark resistant	22038699
Straight Scaling, 1" wide blade, 7" overall	22038707
Straight Scaling, 2" wide blade, 7" overall	22038715
Straight Scaling, 4" wide blade, 7" overall	22038723
Angle Scaling, 1" wide blade, 7" overall	22038731
Chisels (1/2" Square Shank)	
Blank, 7/8" overall, steel	WF-14-7-1/8
Flat Scaling, 3/4" wide blade, 7" overall, steel	WF-14-7-1/8
Gouge, 5/8" wide blade, 6" overall, steel	WF-14G-6
Straight Scaling, 1 1/8" wide blade, 6 1/8" overall, steel	WF-14B-6-1/8
Straight Scaling, 1 1/8" wide blade, 11 1/2" overall, steel	WF-14B-11-1/2
Straight Scaling, 2" wide blade, 7" overall, steel	89940613
Straight Scaling, 3" wide blade, 7" overall, steel	22038749
Straight Scaling, 2" wide blade, 7" overall, spark resistant	22038756
Angle Scaling, 1 1/8" wide blade, 6 1/8" overall	WF-14A-6-1/8
Scrapers (5/8" Hex Shank)	
Straight, 4" wide flex blade, 11" overall	22038772
Straight, 8" wide steel blade, 11" overall	22038780
Straight, 12" wide steel blade, 11" overall	22038798
Straight, 4" wide beveled blade, 11" overall	22038806
Straight, 8" wide beveled blade, 11" overall	22038814
Straight, 12" wide beveled blade, 11" overall	22038822
Scrapers Blades	
4" wide flex blade (qty: 5)	22038830
8" wide steel blade (qty: 5)	22038848
12" wide steel blade (qty: 5)	22038855
4" wide beveled blade (qty: 5)	22038863
8" wide beveled blade (qty: 5)	22038871
12" wide beveled blade (qty: 5)	22038889
Scraper Blade Holder	22038897
Locknuts for Scraper Blade Holder (qty: 10)	22038913

Finishing Tools

Industrial Production Needle & Chisel Scalers

For applications requiring specialized, heavy-duty finishing tools. Check out our scalers, needle scalers, piston scalers, chipping hammers, and accessories on the next few pages.

Scalers/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



Model	Throttle	Weight less Chisel		Length		Piston Stroke		Bore		Blows per Minute	Hose Connector Pipe Tap in.	Size Hose Recomm.		cfm
		lb.	kg	in.	mm	in.	mm	in.	mm			in.	mm	
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 (620 kPa) air pressure.

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–6³/₈ angle chisel
- One WF–14B–6³/₈ straight chisel
- One WF–14F–7 flat chisel
- PKB-1 or vinyl carrying case



Features

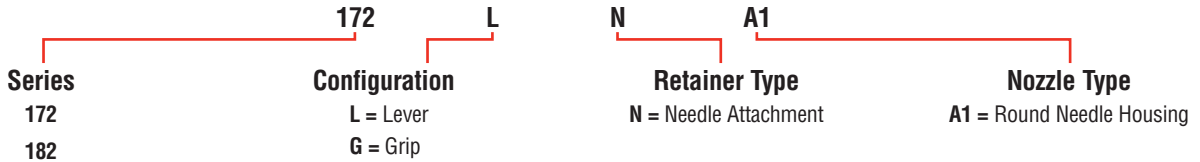
- Adjustable bayonet-type needle housing lock allows adjustment without special tools
- Choice of three needle materials permits custom selection for various surfaces
- Rubber-faced throttle valve means positive sealing
- Tested and approved in accordance with MIL-S-23492A (Ships)
- Precision heat-treated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



Standard Equipment

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

Product Identification



Model	Needle Housing Shape	Weight		Length		Piston Stroke		Bore		Blows per Minute	Hose Connector Pipe Tap in.	Size Hose Recomm. cfm	
		lb.	kg	in.	mm	in.	mm	in.	mm			in.	mm
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 (620 kPa) air pressure.

IR125

Standard Duty Needle Scaler

For surface preparation work involving the cleaning or removal of paint, rust, dirt, or weld slag, the IR125 is a durable, dependable, economical solution.

- 19 needles
- Each needle 1/8" (3.2mm)
- 4,600 blows per minute at free speed

Chisels available for the IR125

Type	Width/Length 7"	Part No.
Blank		PF2200-391
Chisel	3/4" (19mm)	PF2200-392
Wide Chisel	1 3/8" (35mm)	PF2200-393
Angle Chisel	1 3/8" (35mm)	PF2200-394
Scraper	2" (50mm)	PF2200-390
Scraper	3" (75mm)	PF2200-390-3
Diamond Point	1/4" (6mm)	PF2200-3230
Round Nose	1/4" (6mm)	PF2200-3231
Cape Chisel	1/4" (6mm)	PF2200-3232

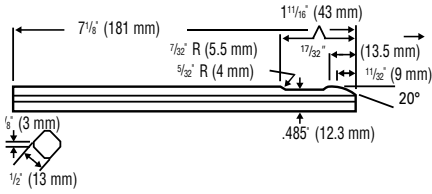


Model Number	Performance Rating	Needle Type	Needle Qty.	Needle Size in. (mm)	Free Speed (rpm)	Bore Diameter in. (mm)	Stroke Length in. (mm)	Weight lbs. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)
IR125	Standard Duty	Needle Scaler	19	1/8 (3.2)	4,600	1 (25)	1 1/8 (28.6)	6.22 (2.82)	18.3 (465)	8 (226)	15 (425)	99.6/112.6	1/4	5/16 (8)

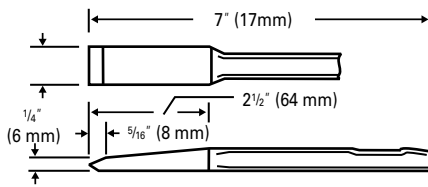
*MRO Tools are designed for maintenance and automotive applications involving intermittent use.

Chisels and Star Drills for Series 172 and 182 Scalers

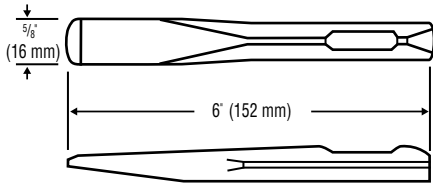
WF-14-7 1/8 Chisel Blank



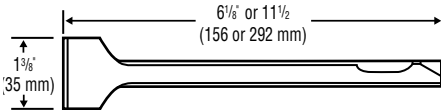
WF-14F-7 Flat Scaling Chisel



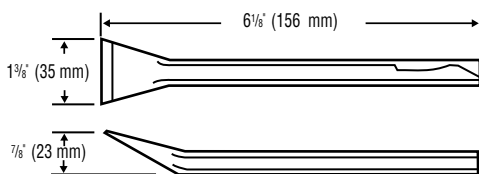
WF-14G-6 Gouge Chisel



WF-14B-6 3/8 or WF-14B-11 1/2
Straight Scaling Chisel



WF-14A-6 3/8 Angle Scaling Chisel



Needle Scaler Attachments

Needle Scaler Attachments are available for use on Series 172 or 182 Scalers already in service. Order by one of the symbols shown.

Attachment Symbol	Description	
NS11A	5" (127 mm) Steel Needles Std.	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) Steel Needles-Standard
NS11-B22-19	5" (127 mm) Beryllium Copper Needles-Optional
NS11-S22-19	5" (217 mm) Stainless Steel Needles-Optional
NS11-122-19	7" (178 mm) Extended Steel Needles-Optional

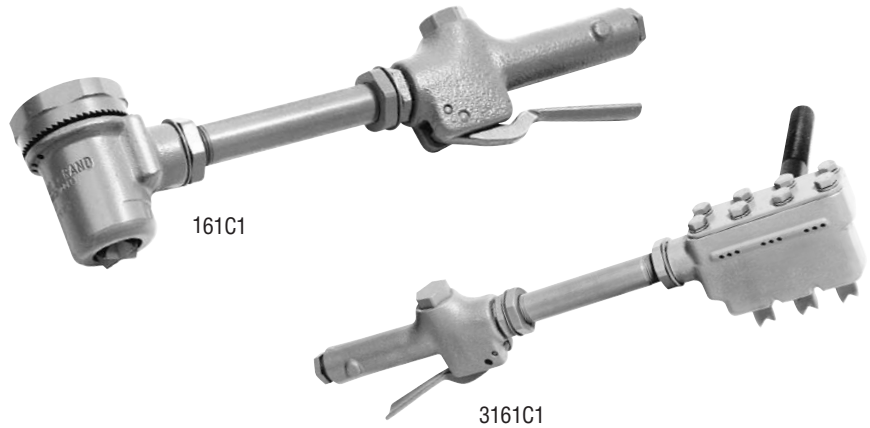
Industrial Production Piston Scalers

Features

- The handle containing the lever throttle on Model 3161C1 is interchangeable with the dead handle — thus it may be used parallel to, or at 90° to the three pistons
- The vibration and rotation of the piston does the scaling. A chisel is not used with this tool

Standard Equipment

- 2 3/4" (70 mm) short steel piston (one for Model 161C1, three for Model 3161C1)



Model	Piston Description	Blows per Minute	Operating Height		Length		Side to Center Distance		Weight		Throttle	cfm
			in.	mm	in.	mm	in.	mm	lb.	kg		
161C1	One Short Steel	3300	4 1/8	105	13 1/4	337	1 3/16	30	6 1/2	2.94	Lever	9
3161C1	Three Short Steel	3800	4	102	*15 3/8	*391	7/8	22	9 3/8	4.25	Lever	15

*With Lever Throttle attached to narrow end of Barrel.

Both of the above Scalers have 1/4" NPT air inlet, 5/16" (8 mm) size hose is recommended.

Performance figures are at 90 psi (620 kPa) air pressure.

Pistons for Models 161C1 and 3161C1 Scalers

For Model 161C1 one required	Description
N16-5A	Short Steel 2 3/4" (70 mm)-Standard

For Model 3161C1 three required	Description
316-5	Short Steel 2 5/8" (67 mm)-Standard
316-C5	Short Carbide-Tipped 2 5/8" (67 mm)
316-L5	Long Steel 3 5/8" (92 mm)
316-CL5	Long Carbide-Tipped 3 5/8" (92 mm)

Air Hammers

Maintenance/Automotive* Air Hammers

Hit harder with less effort and more accuracy as you do general repairs, exhaust system and front end work, bushing driving, and tough cutting jobs, using Ingersoll-Rand air hammers. The IR132 gives you added accuracy and control at 1,725 blows per minute with its "tease throttle" and built-in power regulator. The IR121 has a professional touch trigger for excellent control at 3,000 blows per minute and a tough one-piece alloy barrel for long life.



** Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.*



Ingersoll-Rand air hammers are designed so you can let the tool do the work, whether it's cutting, punching, chipping, or scraping. Each air hammer comes with a coil spring retainer for fast and easy chisel changes. You can also get the Ingersoll-Rand air hammer kit, which includes the five piece chisel kit, or buy them separately.

Model Number	Performance Rating	Shank Opening in. (mm)	Blows Per Minute @90psi	Bore Diameter in. (mm)	Stroke Length in. (mm)	Weight lbs. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)
IR115	Standard Duty	.401 (10.1)	5,000	3/4 (19)	1 5/8 (41)	2.6 (1.18)	6.1 (155)	2 (57)	14 (396)	101.3/114.3	1/4	3/8 (10)
IR116	Standard Duty	.401 (10.1)	3,500	1 1/16 (17.5)	2 5/8 (67)	3.4 (1.54)	7.8 (198)	3 (85)	15 (425)	104.4/117.4	1/4	3/8 (10)
IR117	Standard Duty	.401 (10.1)	2,000	1 1/16 (17.5)	3 1/2 (89)	4.1 (1.86)	9.9 (251)	3 (85)	14 (396)	103.5/116.5	1/4	3/8 (10)
IR121	Super Duty	.401 (10.1)	3,000	3/4 (19)	2 9/32 (58)	3.5 (1.59)	7.63 (194)	3 (85)	15 (425)	98.3/111.3	1/4	3/8 (10)
IR132	Super Duty	.401 (10.1)	1,725	9/16 (14)	4 (102)	3.4 (1.54)	8.5 (216)	3 (85)	11 (311)	N/A	1/4	5/16 (8)

Model Number	Performance Rating	Needle Type	Needle Qty.	Needle Size in. (mm)	Free Speed (rpm)	Bore Diameter in. (mm)	Stroke Length in. (mm)	Weight lbs. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)
IR125	Standard Duty	Needle Scaler	19	1/8 (3.2)	4,600	1 (25)	1 1/8 (28.6)	6.22 (2.82)	18.3 (465)	8 (226)	15 (425)	99.6/112.6	1/4	5/16 (8)

*Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.

Air Hammers

Maintenance/Automotive* Air Hammers

IR115 

Standard Duty Air Hammer

This powerful, yet economical high-speed air hammer, is designed for light exhaust system work and general cutting, chipping and scraping.

- Up to 5,000 blows per minute
- Alloyed steel barrel and heat-treated piston for longer life
- Built-in power regulator and trigger control



Replacement Retainer

Spring Retainer 115-183

IR116 

Standard Duty Air Hammer

The economical air hammer for fast cutting action, especially for medium exhaust system, panel cutting, and general repair work.

- Up to 3,500 blows per minute
- Handles a range of cutting applications
- Longer life alloyed steel barrel and heat-treated piston



Replacement Retainer

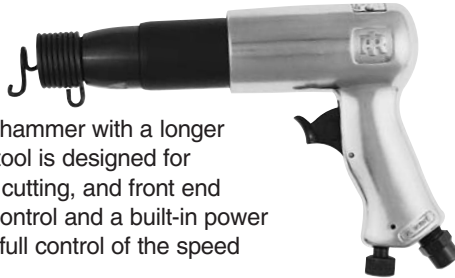
Spring Retainer 115-183

IR117 

Standard Duty Air Hammer

An economical air hammer with a longer piston stroke, this tool is designed for exhaust work, bolt cutting, and front end work. The trigger control and a built-in power regulator give you full control of the speed and power.

- Longer stroke piston
- Alloyed steel barrel and heat-treated piston for longer life
- Up to 2,000 blows per minute



Replacement Retainer

Spring Retainer 115-183

IR121 

Super Duty Air Hammer

Make fast work of body panel crimping and cutting, bushing driving, shearing and general front end work with this air hammer, a super duty tool that produces up to 3,000 blows per minute.

- Professional touch trigger for total control
- Long-life tool with a tough one piece alloy barrel
- Easy to maintain, with an “easy out” throttle valve assembly



Replacement Retainers

Spring Retainer (as shown) AVC10-183A
Bee-hive AVC1-83

IR121K6/121K6

Air Hammer Kit

The IR121 is available in kit form with a blowmolded plastic case with a removable lid. To order the complete kit (which includes 6 chisels) use model number IR121K6.

Model Number	Performance Rating	Shank Opening in. (mm)	Blows Per Minute @90psi	Bore Diameter in. (mm)	Stroke Length in. (mm)	Weight lbs. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)
IR115	Standard Duty	.401 (10.1)	5,000	3/4 (19)	15/8 (41)	2.6 (1.18)	6.1 (155)	2 (57)	14 (396)	101.3/114.3	1/4	3/8 (10)
IR116	Standard Duty	.401 (10.1)	3,500	11/16 (17.5)	25/8 (67)	3.4 (1.54)	7.8 (198)	3 (85)	15 (425)	104.4/117.4	1/4	3/8 (10)
IR117	Standard Duty	.401 (10.1)	2,000	11/16 (17.5)	31/2 (89)	4.1 (1.86)	9.9 (251)	3 (85)	14 (396)	103.5/116.5	1/4	3/8 (10)
IR121	Super Duty	.401 (10.1)	3,000	3/4 (19)	29/32 (58)	3.5 (1.59)	7.63 (194)	3 (85)	15 (425)	98.3/111.3	1/4	3/8 (10)

* Maintenance/Automotive class tools are designed for maintenance and automotive applications involving intermittent use.

IR132 

**Super Duty
Air Hammer**

Professionals who want the best choose this tool for front end work, heavy exhaust work, riveting, king pin removal, bushing driving, and bolt shearing.

- Extra-sensitive tease throttle controls starting strokes
- Up to 1,725 blows per minute
- Longer stroke piston



Replacement Retainers

Bee-hive (as shown) AVC1-83
Spring Retainer AVC10-183A

IR116K, IR117K

Air Hammer Kits

Ingersoll-Rand Air Hammer Kits include air hammer and the matching five-piece chisel kit. Or you can buy the Chisel Kit separately.

IR116-K5

Chisel Kit

Five-piece chisel set in a plastic pouch with .401" shank diameters to match your Ingersoll-Rand Air Hammer.

Kit includes:

- Edging Tool
- Tail Pipe Cutter
- Straight Chisel
- Cutting Chisel
- Punch



Model Number	Performance Rating	Shank Opening in. (mm)	Blows Per Minute @90psi	Bore Diameter in. (mm)	Stroke Length in. (mm)	Weight lbs. (kg)	Length in. (mm)	Av. Air Consumption cfm (l/min)	@ Load cfm (l/min)	Sound dBA (Pressure/Power)	Air Inlet NPTF in.	Min. Hose Size in. (mm)
IR132	Super Duty	.401 (10.1)	1,725	9/16 (14)	4 (102)	3.4 (1.54)	8.5 (216)	3 (85)	11 (311)	N/A	1/4	5/16 (8)

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Safety Information for Finishing Tools

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.
- 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.

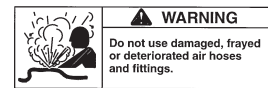
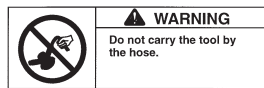
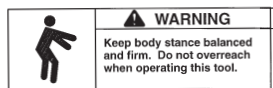
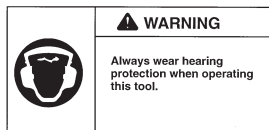
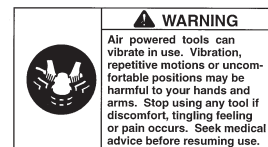
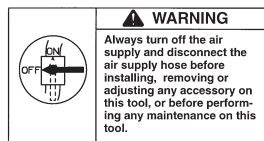
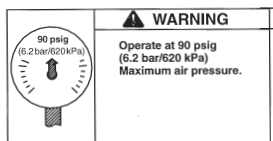
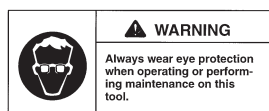
When Using Grinders...

- 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" (0.17mm) 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 1/3 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.



WARRANTY

FINISHING TOOLS

Ingersoll-Rand warrants to the original user its finishing tool products to be free of defects in material and workmanship for a period of one year from the date of purchase. IR will repair, without cost, any Product found to be defective, including parts and labor charges, or at its option, will replace such Products or refund the purchase price less a reasonable allowance for depreciation, in exchange for the Product. Repairs or replacements are warranted for the remainder of the original warranty period.

If any product proves defective within its original one year warranty period, it should be returned to an appropriate Ingersoll-Rand Service Distributor, transportation prepaid with proof of purchase or warranty card.

This warranty does not apply to Products which IR has determined to have been misused or abused, improperly maintained by the purchaser: or where the malfunction or defect can be attributed to the use of non-genuine IR parts.

IR makes no other warranty, and all implied warranties including any warranty of merchantability or fitness for a particular purpose are limited to the duration of the expressed warranty period as set for the above. IR's maximum liability is limited to the purchase price of the Product and in no event shall IR be liable for any consequential, indirect, incidental, or special damages of any nature arising from the sale or use of the Product, whether based on contract, tort, or otherwise.

Questions? Parts? Service?



**Ontario's Largest
Pneumatic & Hydraulic Tool Distributor**

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