

CATALOG C-08

Introducing New Fabrication Tools

TOP
CAT AIR
TOOLS

TOP CAT

AIR TOOLS



tc
service

CE
ALL TOOLS
CONFORM TO
EC DIRECTIVE

QUALITY TOOLS & PARTS
FULL TECHNICAL SUPPORT
CUSTOM TOOL DESIGN & PRODUCTION
FAST DELIVERY
MADE IN THE U.S.A.



TOP CAT AIR TOOLS



Top Cat air tools are designed and built at our facilities in northeast Ohio, U.S.A. We utilize the most modern design and manufacturing techniques and equipment to provide our experienced builders with the parts needed for YOUR top quality tools. Air tools that are built for hard work, long life and safe operation.

We offer our customers a solid commitment of technical support ... before and after the sale. We use our 35 plus years of experience to help you select the proper tool and tool set up to meet your application needs. Our customer/technical service professionals are always ready to answer questions about our tools and share knowledge that may help in your selection of Top Cat Tools.

From our facility... or at yours, we offer tool seminars/demonstrations of proper and safe tool use and repair clinics. Clinics where customers learn the real value of genuine Top Cat replacement parts.



The difference is real... not merely perceived.

Can't find the right tool?

Have a unique application?

Check with us.

For over 35 years we have modified existing tool designs, designed/built "specialty" tools to meet your needs, and in each case provided quality tools that perform, offer versatility and stay in service for a long time.











**Quality tools that perform... and last,
designed and built to meet our Customer's needs.**




























Contents

WORK SAFETY Safe Installation & Working Healthy		Page 2
VERTICAL GRINDERS INFORMATION		Page 4
Vertical Grinders for use with Depressed Center Wheels		520V, 54V & 64V Series 7" (180 mm) – 9" (230 mm) Type 27, 28 or 29 Wheels 2-4 H.P. (1500–3000 W)
Vertical Grinders for use with Cup Wheels		520V, 58C & 68C Series 4" (100 mm) – 6" (150 mm) Type 6 or 11 Wheels 2-4 H.P. (1500–3000 W)
Pile Cutters		56PC & 66PC Series 8" (200 mm) – 14" (350 mm) 3-4 H.P. (2250–3000 W)
Vertical Sanders for use with Sanding Discs & Surface Conditioning Abrasives		510V, 520V & 56S Series 4" (100 mm) – 9" (230 mm) 1.5-3 H.P. (1130–2250 W)
RIGHT ANGLE WHEEL GRINDERS INFORMATION		Page 10
Right Angle Grinders for use with Depressed Center & Type 1 Grinding/Cut-off Wheels		300RA Series 4" (101.6 mm) 0.7 H.P. (525 W)
		300RAE Series 3" (75 mm) – 4" (100 mm) 0.7 H.P. – 1.2 H.P. (900 W)
		320RA & 420RA Series 3" (75 mm) – 4" (100 mm) 0.7 H.P. – 1.2 H.P. (900 W)
		400RA & 410RA Series 3" (75 mm) – 5" (125 mm) 1.2 H.P. (900 W)
		400RAE & 410RAE Series 3" (75 mm) – 6" (150 mm) 1.2 H.P. (900 W)
		520RA Series 7" (18 mm) – 10" (250 mm) 2 H.P. (1500 w)
RIGHT ANGLE DIE GRINDERS INFORMATION		Page 20
Right Angle Collet Grinders <i>(Continued on next page)</i>		250RAD & 300RAD Series 0.4 H.P. – 0.7 H.P. (300 – 525 W)
		250RAED & 300RAED Series 0.4 H.P. – 0.7 H.P. (300 – 525 W)
		280RAD, 290RAD, 330RAD & 340RAD Series 0.4 H.P. – 0.7 H.P. (300 – 525 W)
		270RAD, 320RAD & 420RAD Series 0.4 H.P. – 1.2 H.P. (300 – 900 W)

Right Angle Collet Grinders <i>(Continued)</i>		400RAD & 410RAD Series 1.2 H.P. (900 W)	Page 26
		400RAED & 410RAED Series 1.2 H.P. (900 W)	Page 27
RIGHT ANGLE SANDERS, BUFFERS & POLISHERS INFORMATION			Page 28
Right Angle Sanders for use with Abrasive Discs		250RA, 300RA, 400RA & 407RA Series 1" (25 mm) - 5" (125 mm) 0.4 - 1.2 H.P. (300 - 900 W)	Page 30
		280RA, 290RA, 330RA & 340RA Series 2" (50 mm) 0.4 H.P. - 0.7 H.P. (300 - 900 W)	Page 32
		270RA, 320RA & 420RA Series 2" (50 mm) 0.4 H.P. - 1.2 H.P. (300 - 900 W)	Page 33
		250RAE, 300RAE, 400RAE & 407RAE Series 1" (25 mm) - 5" (125 mm) 0.4 H.P. - 1.2 H.P. (300 - 900 w)	Page 31
		2601RA, 3101RA & 4101RA Series 1" (25 mm) - 2" (50 mm) 0.4 H.P. - 1.2 H.P. (300 - 900 W)	Page 34
		4520RA, 4527RA, 4620RA & 4627RA Series 5" (125 mm) - 9" (230 mm) 1.2 H.P. (900 W)	Page 35
		520RA Series 7" (180 mm) - 9" (230 mm) 2 H.P. (1500 W)	Page 36
Low Speed Right Angle Sanders for use with Abrasive Discs		400RA(X)M & 400RAE(X)M Series 7" (180 mm) 1.2 H.P. (900 w)	Page 37
		4520RA(X)M & 4620RA(X)M Series 7" (180 mm) 1.2 H.P. (900 w)	Page 38
HORIZONTAL SANDERS/POLISHERS INFORMATION			Page 40
Horizontal Sanders & Polishers		400GH(X)M Series 525 R.P.M. to 5500 R.P.M. 1.2 H.P. (900 W)	Page 42
		400HGE(X)M Series 525 R.P.M. to 5500 R.P.M. 1.2 H.P. (900 W)	Page 43
		400GT(X)M Series 525 R.P.M. to 5500 R.P.M. 1.2 H.P. (900 W)	Page 44
		500H(X)M, 507H(X)M & 520H(X)M Series 500 R.P.M. to 4000 R.P.M. 1.5-2 H.P. (1500-2250 W)	Page 45

LARGE HORIZONTAL GRINDERS INFORMATION		Page 46	
Large Horizontal Grinders For Type 1 Wheels, Flap Wheels and Wire Wheels		5201H, 56H & 65H Series 4" (100 mm) – 8" (200 mm) 2-4 H.P. (1500–3000 W)	Page 47
Large Horizontal Grinders For 5/8-11 Cone Wheels		400GH2, 511H, 5201HCW, 56HCW & 65HCW Series 1.2-4 H.P. (900–3000 W)	Page 48
SMALL HORIZONTAL GRINDERS INFORMATION		Page 50	
Grinders For Type 1 Wheels, Flap Wheels And Wire Wheels		400GH, 407GH, 51H & 57H Series 3" (75 mm) – 4" (100 mm) 1.2-1.5 H.P. (900–1125 W)	Page 52
Horizontal Extended Grinders For 3/8-24 Cone Wheels		400GH & 51H Series 1.2 - 1.5 H.P. (900–1130 W)	Page 54
Extended Grinders with Erickson® Style Collets for Carbide Burrs, Mounted Points		250EH, 300EH, 300GHD, 400GH, 51H & 5102H Series 0.4-1.5 H.P. (300–1130 W)	Page 56
EXTENDED GRINDERS INFORMATION		Page 58	
Horizontal Extended Grinders For 3/8-24 Cone Wheels, Burrs, Mounted Stones		400EH Series 1.2 H.P. (900W)	Page 60
Horizontal Extended Grinders For 3/8-24 & 5/8-11 Cone Wheels, Burrs, Mounted Stones		400GEH & 407GEH Series 1.2 H.P. (900W)	Page 61
Horizontal Extended Grinders For 3/8-24 & 5/8-11 Cone Wheels & Inserted Tooling		520GEH/520HGEH Series 2 H.P. (1500W)	Page 62
Horizontal Extended Grinders For 5/8-11 Cone Wheels		65GEH/65HGEH Series 4 H.P. (3000W)	Page 63
DIE GRINDERS INFORMATION		Page 64	
Die Grinders		20G & 20GM Series 0.1 H.P. (75 W) • 60000 R.P.M.	Page 66
Die Grinders for 3/8" Cone Wheels		400GTCW Series 1.2 H.P. (900 W)	Page 67
Die Grinders For Type 1 Wheels, Flap Wheels And Wire Wheels		400GT & 407GT Series 3" (75 mm) – 4" (100mm) • 1.2 H.P. (900 W)	Page 68
Insert Style Die Grinders For Carbide Burrs & Mounted Stones		250GE, 250HGE, 300GE, 300HGE, 400GE, 400HGE, 400SH & 400SH+6 Series Insert Style Collets • 0.4–1.2 H.P. (300–900 W)	Page 70

AIR DRILLS INFORMATION		Page 72
In-Line Drills		400D(X)M Series 3/8" or 1/2" Drill Chucks 1.2 H.P. (900 W) Page 74
		500D2M & 507D2M Series 1/2" or 3/4" Drill Chucks 1.5 H.P. (1130 W) Page 75
Right Angle Drills		400DRA(X)M & 400DRAE(X)M Series 3/8" or 1/2" Drill Chucks 1.2 H.P. (900 W) Page 76
Floor Drills		400FD(X)M Series 3/8" or 1/2" Drill Chuck 1.2 H.P. (900 W) Page 77
		500FD, 507FD & 520FD Series 1/2" or 3/4" Drill Chucks 1.5-2.0 H.P. (1130-1500 W) Page 78
ROUTERS		Page 79
Pin Routers		400PCE & 407PCE Series 1/4" or 3/8" Shank Bits • 1.2 H.P. (900 W) Page 79
BENCH GRINDERS		Page 80
Bench Grinders		66VBG & 662VBG Series 4 H.P. (3000 W) Page 80
ABRASIVE AIR SAWS INFORMATION		Page 81
Abrasive Air Saws		510WG, 65VBW & 662VBW Series 9" (230mm) to 14" (360mm) 1.5-4 H.P. (1300-3000 W) Page 82
SCALERS & NEEDLE SCALERS INFORMATION		Page 84
Scalers/Chisels		TC-1 Series Page 85
		TC-182 Series Page 86
Needle Scalers		TC-1-N Series Page 87
		TC-182-N Series Page 88

CHIPPING HAMMERS INFORMATION		Page 89
Chipping Hammers		80 Series Page 90
		TC-10, TC-20, TC-30 & TC-40 Series Page 91
RAMMERS		Page 92
Rammers		1300, 1320 & 1350 Series Page 92
POWER SUPPLY MOTORS		Page 94
Power Supply Motors		400H(X)M, 500H(X)HM, 520H(X)M & 664H(X)M Series 1.2-4 H.P. (900-3000 W) Page 94
ACCESSORIES		Pages 95-99
Guards		Pages 95-96
Collets		Page 97
Spiralcool® Pads		Page 97
Bearing Drivers & Spindle Holders		Page 97
Butts/Peins		Page 98
Threaded Adapters		Page 98
Cone Wheel Adapters, Bushings & Chisels		Page 98
Type 27 Adapters		Page 99
Polishing Wheel Adapters		Page 99

WARRANTY		Page 100
INDEX		Page 101
CLASSIC LINE TOOLS		Green Insert
Grinders for Depressed Center Wheels, Cut Off Wheels & Flap Wheels		44RA, 44RAE, 46RA & 48RA Series 3" (75 mm) – 6" (150 mm) • 0.9 H.P. (675 W) Page i
Right Angle Collet Grinders		44RA, 46RA & 48RA Series 0.9 H.P. (675 W) Page ii
Right Angle Sanders for use with Abrasive Discs		44RA & 48RA Series 4" (100 mm) - 5" (125 mm) • 0.9 H.P. (675 W) Page ii
Insert Style Die Grinders For Carbide Burrs & Mounted Stones		40G & 4121G Series Insert Style Collets • 0.9 H.P. (675 W) Page iii
Grinders For Type 1 Wheels, Flap Wheels And Wire Wheels		40GH Series 3" (75 mm) – 4" (100 mm) • 0.9 H.P. (675 W) Page iii
Fixed Size Collet Die Grinders for Carbide Burrs & Mounted Stones		40GH Series Built In Collets • 0.9 H.P. (675 W) Page iv
Horizontal Extended Grinders for 3/8-24 Cone Wheels		40GH Series 0.9 H.P. (675 W) Page iv

TOP CAT AIR TOOLS



Work Safety

WORK SAFETY

Work Safe! IMPORTANT:

When care is taken to insure that the right tool is operated properly; and the safety and maintenance procedures are followed, accidents can be avoided. Read and follow all instructions and directions, comply with all rules governing the use of power tools, personal protective equipment and equipment guards.



For more information refer to:

General Industry Safety & Health Regulations 29 CFR, Part 1910 and where applicable Construction Industry Safety & Health Regulations 29 CFR, Part 1929 available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402

Safety Code For Portable Air Tools, ANSI B186.1 and Z87.1, available from American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018

Operators Instructions and Safety Precautions

These pages are meant to highlight sections of safety standards published by the American National Standards Institute and the Occupational Safety and Health Administration. This is not meant to replace those standards but only highlight certain areas.

When care is taken to ensure that the right tool is operated properly, and safety and maintenance procedures are followed, accidents can be avoided. Read and follow all instructions and directions. Comply with all rules governing the use of power tools, personal protective equipment and equipment guards.

Remember— machines, attachments and accessories must be used only for the purpose for which they were designed. Safety reasons and product liability prohibit any modifications to tools. Any attachments or accessories must be agreed to in advance with an authorized technical representative of T.C. Service Co.



The grinding equipment must be approved for the rated speed of the machine. The rated speed, marked on the machine, should not be exceeded. Be sure to learn the proper handling and storage of abrasive wheels and inserted tooling.

Inspect the wheel guard for any signs of wear and that it is properly mounted to the tool. Any guard showing signs of wear such as bends, chips, nicks, or cracks should be replaced.

Always wear eye and hearing protection, and when necessary, other personal protective equipment such as gloves, an apron, and helmet.



Airborne particulate resulting from the grinding process can cause hazards. Wear appropriate protective equipment.

Check hose size and air pressure. The air pressure at the tool shall not exceed 90 psi (6.2 bar). All hoses should be inspected regularly and kept away from heat, oil and sharp edges. Be sure the tool is secured to the air hose.

Measure the speed of grinders every 20 hours of actual use or once per week, whichever comes first.



Measure speed of all types of grinders after maintenance or repair, whenever a grinder is issued from the tool crib and at each wheel change. Several readings should be taken. Tachometers must be checked and calibrated on a regular basis according to the manufacturer's recommendations.

This form of inspection should be made with the grinding wheel or tooling removed.



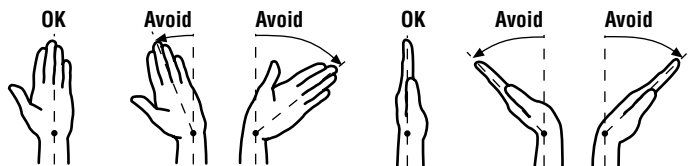
Proper mounting of grinding wheels and inserted tooling is crucial to safe operation and efficient working conditions. Ensure the exhaust air is directed away from bystanders.

Disconnect the tool from the air supply before doing any service. This prevents

accidental start-ups. Do not disassemble or adjust the governor. The governor is guaranteed for the life of the tool, if not abused.



Ergonomics— Work Healthy



The following suggestions will help reduce or moderate the effects of repetitive work motion and/or extended vibration exposure:

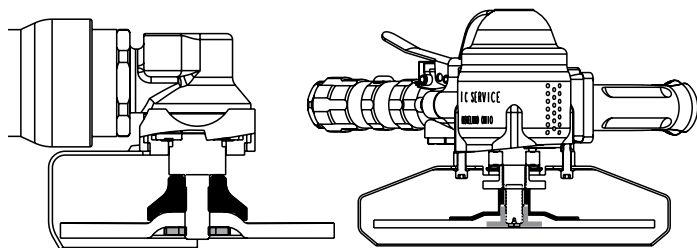
- 1) Do NOT over-grip the machine/tool. Use only the force required to maintain control.
- 2) Keep hands and body dry and warm. (Blood flow is important – exercise hands and arms as often as necessary).
- 3) Keep wrists as straight as possible. (AVOID hand positions that require the wrist to be flexed, hyper extended or turned side-to-side.
- 4) AVOID anything that may inhibit blood circulation such as smoking tobacco or prolonged exposure to cold temperatures.
- 5) Do NOT support body-weight on the tool during operation.
- 6) Maintain a stress-free posture for the entire body.

Prolonged exposure to vibrations created by vibrating sources may cause health hazards. There are gloves, handle wraps and other forms of protective measures available to help reduce the hazard. The fit and condition of any vibration abatement measure must be monitored.

Safety in Operation

The safety procedures for operating air tools are everyone's responsibility. The following lists several aspects of air tool safety that should be considered during operation. Please be aware of these aspects and report any unsafe practice you see to a supervisor or safety officer immediately.

- Start any new wheel under a bench and away from bystanders. (Run for a minimum of one minute.)
- When starting a cold/new wheel, apply to the work slowly, allowing the wheel to warm gradually.
- Support the work piece properly.
- When cutting off, support the work piece so that a jamming of the wheel does not occur. (A slot shall remain constant or become wider during operation.)
- If a jamming of the wheel does occur during a cutting off operation, shut the air supply off to the tool and ease the wheel free. (Inspect the wheel for damage before continuing operation.)
- Ensure that sparks from the process do not create a hazard to the eyes or will ignite the environment.
- Grinders shall not be used in potentially explosive atmospheres.
- Pneumatically driven tools are not generally insulated from coming in contact with electrical sources. Be sure to avoid contact with wires or other possible current carrying sources.
- The operator must check that no bystanders are in the vicinity.
- Remember that the tool will continue to spin after the throttle has been released.
- If a grinder fitted with an abrasive wheel is dropped, the wheel must be thoroughly examined before re-use.
- Disconnect the tool from the air source before servicing and changing wheels.
- Release the control device in case of interruption of air supply.
- Always keep the tool in a clean, dry place when not in use.
- Beware of loose hair and clothing so as not to become tangled or trapped during operation.
- The inserted tool on heavy types of percussive non-rotary tools is exposed to heavy strains and can after long periods of use break due to fatigue.
- Unexpected tool movement or breakage of inserted tooling may cause injuries to lower limbs.
- Unsuitable postures may not allow counteracting of normal or unexpected movement of a power tool. (A working position shall be adopted which remains stable in the event of a break up of inserted tooling.)
- Do not hold the tool near the body when operating.
- Keep a firm grip on the tool body during operation.
- Immediately shut off the tool if unusual vibration or sound is detected. Remove and inspect the wheel or tooling, and check the tool speed (RPM) with an accurate tachometer.
- Use of over-speeding grinder or unbalanced wheels may result in serious injury.



Guarding



Always make sure that the guard provided with the tool/equipment is in place and positioned between the operator and the grinding wheel or other moving part. Flying debris from the workpiece and/or the wheel itself can cause a hazard. The guard should be positioned so as to deflect debris away from the working surface and away from the operator. The diagram above details the proper positioning of the guard to protect any handles the operator might grip and the area where the operator stands.

Special Notice!

Machine Overhauls—At least twice a year at heavy/daily operation and once a year at lighter duty, all machines/tools should be dismantled, cleaned and inspected. Internal parts should be checked for wear or damage. Be particularly careful of the governor assembly. Careless treatment may prevent it from functioning. **Always check the free speed of machine/tool following service.**

Pneumatically driven power tools are not generally insulated from coming into contact with electrical sources. Be sure to AVOID contact with wires or other possible current carrying sources.

Explosive atmospheres must not be ignited. To prevent injury and property loss from fire and explosion use non-sparking process.

STAY ALERT

DO NOT USE THE TOOL WHILE UNDER THE INFLUENCE OF ALCOHOL, DRUGS OR MEDICATION.

Mounting Grinding Wheels and Guards

- Check operating speed marked on wheel—it must equal or exceed rated spindle speed.
- Inspect wheel for cracks or chips—if found, do not use.
- Do not fit a wheel that has been soaked in or exposed to any liquids.
- Wheel fit on spindle shall be free but not loose.
- Attach wheel with flanges conforming to international standards. Be sure all flanges are in good condition. Flanges should have a flat contact with the wheel and be without cracks or burrs.
- Do not use unauthorized bushings or adapters to attach large hole abrasive wheels.
- Use blotters when provided with grinding wheel.
- Do not mismatch wheel and spindle thread.
- Spindle and spindle thread shall be without damage or wear.
- Do not bottom spindle thread ends in cup or plug wheels with threaded insert—use an authorized spacer.
- Tighten properly mounted wheel to prescribed torque.
- **Remember** – test run every new wheel in an area away from other workers (example: under workbench) for at least one minute.

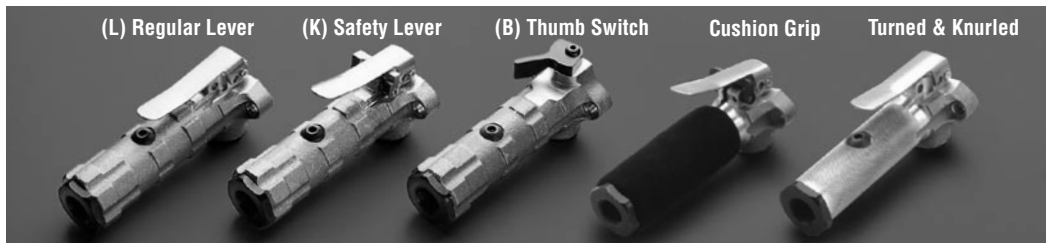
Vertical Grinders

VERTICAL GRINDERS

Page Number	Model Number	Power	Description
5	520V	2.0 H.P.	Vertical Grinders for use with Depressed Center Wheels (Type 27, Type 28 & Type 29)
	54V	3.0 H.P.	
	64V	4.0 H.P.	
6	520V	2.0 H.P.	Vertical Grinders for use with Cup Wheels (Type 6 & Type 11)
	58C	3.0 H.P.	
	68C	4.0 H.P.	
7	56PC	3.0 H.P.	Vertical Pile Cutters for use with Type 1 cut-off (Type 41) or Diamond Wheels
	66PC	4.0 H.P.	
8	510V	1.5 H.P.	Vertical Sanders for use with abrasive sanding discs and surface conditioning abrasives
	520V	2.0 H.P.	
	56S	3.0 H.P.	

Handles

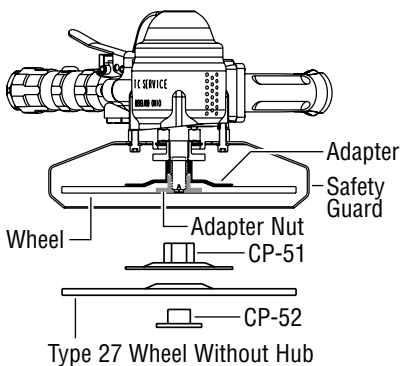
Several different handle styles are offered on our vertical tools. The picture below shows each in detail.



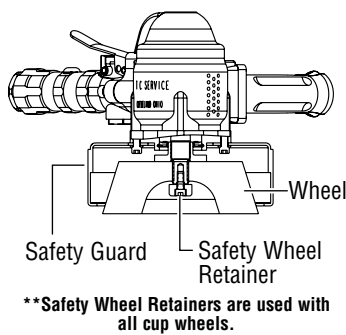
Mounting of Wheels

Each wheel type mounts onto the tool in a specific way. Please consult the diagrams below for details on how your particular wheel mounts onto the tool. More details on the mounting of wheels can be found in ANSI B7.1 and ANSI B186. Mounting wheels in ways other than those shown below are non-compliant and may lead to injury.

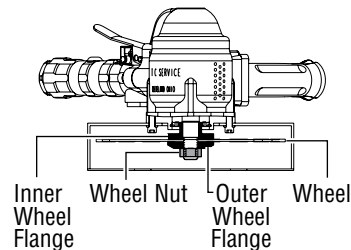
Proper Mounting of Type 27, 28 & 29 Wheels



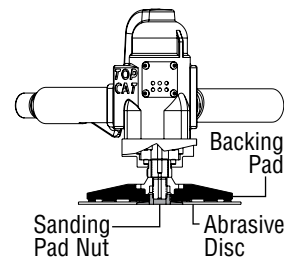
Proper Mounting of Type 6 or 11 Wheels



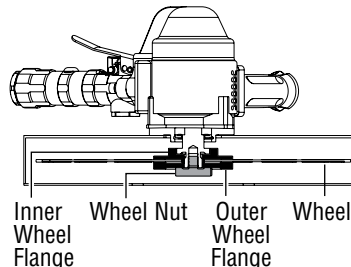
Pile Cutters 8" Size Guards



Sanding Disc Mount



10"-14" Size Guards

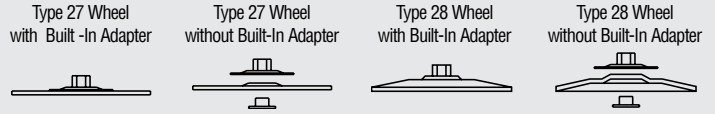


Speed/Guard Size Selection

The operating speed and guard size are closely linked to promote safety and maximize efficiency of the grinding operation. Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed/guard size options to select the one that matches the wheel speed/size you are using.

Vertical Grinders for use with Depressed Center Wheels

7" (180 mm) – 9" (230 mm) Type 27, 28 or 29 Wheels
2-4 H.P. (1500–3000 W)



Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Arbor Size: 5/8 x 11

Extra Charge Accessories

- Depressed Center Wheel Adapter Kits
- Sanding Pads

Standard Equipment

- Tool with Wheel Guard of Choice
- Operating Instructions & Service Manual
- Wrench

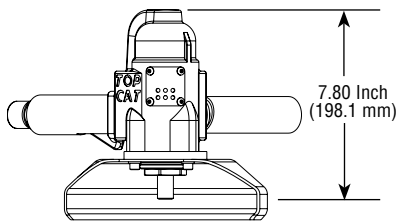
The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

VERTICAL GRINDERS

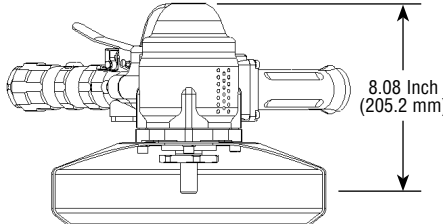
Quick Order Number

Model Number	Guard Size	Maximum Operating Speed	Throttle Handle Type	
			Standard	Safety
520V	7 Inch	8000 RPM	520VXL;727	520VXK;727
			54VL;727	54VK;727
54V	9 Inch	6000 RPM	54VL;927	54VK;927
			64VL;727	64VK;727
64V	9 Inch	6000 RPM	64VL;927	64VK;927

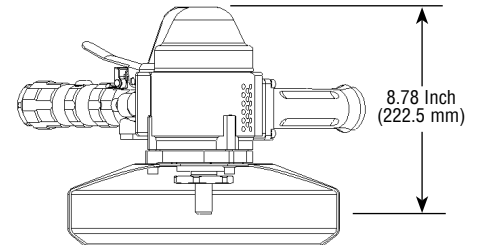
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



520V Series



54V Series



64V Series



2.0 H.P.
(1500 W)



6.7 Lb.
(3.0 Kg)



20 cfm (9.4 L/s) Free Speed
40 cfm (18.9 L/s) Max



3.0 H.P.
(2250 W)



8.8 Lb.
(3.9 Kg)



25 cfm (11.8 L/s) Free Speed
60 cfm (28.3 L/s) Max



4.0 H.P.
(3000 W)



11.0 Lb.
(5.0 Kg)



25 cfm (11.8 L/s) Free Speed
75 cfm (35.4 L/s) Max

Example Model Number: **54V L ; 6000;927**

Model Number	Lever Style	Operating Speed/Guard Size
520V	<p>Please choose one of the following options:</p> <ul style="list-style-type: none"> K - Safety Lever XL - Standard Lever XK - Safety Lever XB - Thumb Switch XLTK - Turned/Knurled Standard Lever XKTK - Turned/Knurled Safety Lever XBTK - Turned/Knurled Thumb Switch XLTKW - Turned/Knurled/Cushioned Standard Lever XKTKW - Turned/Knurled/Cushioned Safety Lever XBTKW - Turned/Knurled/Cushioned Thumb Switch 	<p>Please choose one of the following options:</p> <ul style="list-style-type: none"> 8000;727 - 8000 R.P.M. with 7 Inch T27 Guard 8000;728 - 8000 R.P.M. with 7 Inch T28 Guard
54V	<p>Please choose one of the following options:</p> <ul style="list-style-type: none"> L - Standard Lever K - Safety Lever B - Thumb Switch LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch 	<p>Please choose one of the following options:</p> <ul style="list-style-type: none"> 6000;727 - 6000 R.P.M. with 7 Inch T27 Guard 6000;728 - 6000 R.P.M. with 7 Inch T28 Guard 6000;927 - 6000 R.P.M. with 9 Inch T27 Guard 6000;928 - 6000 R.P.M. with 9 Inch T28 Guard 8000;727 - 8000 R.P.M. with 7 Inch T27 Guard 8000;728 - 8000 R.P.M. with 7 Inch T28 Guard
64V	<p>Please choose one of the following options:</p> <ul style="list-style-type: none"> L - Standard Lever K - Safety Lever B - Thumb Switch LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch 	<p>Please choose one of the following options:</p> <ul style="list-style-type: none"> 6000;727 - 6000 R.P.M. with 7 Inch T27 Guard 6000;728 - 6000 R.P.M. with 7 Inch T28 Guard 6000;927 - 6000 R.P.M. with 9 Inch T27 Guard 6000;928 - 6000 R.P.M. with 9 Inch T28 Guard 8000;727 - 8000 R.P.M. with 7 Inch T27 Guard 8000;728 - 8000 R.P.M. with 7 Inch T28 Guard

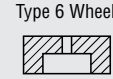
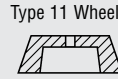


Optional Handle

Vertical Grinders for use with Cup Wheels

4" (100 mm) – 6" (150 mm) Type 6 or 11 Wheels
2-4 H.P. (1500–3000 W)

VERTICAL GRINDERS



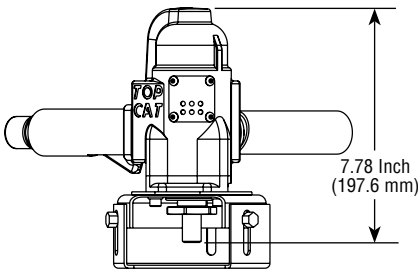
Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Arbor Size: 5/8 x 11
Standard Equipment

- Tool with Wheel Guard of Choice
- Operating Instructions and Service Manual
- Wrench

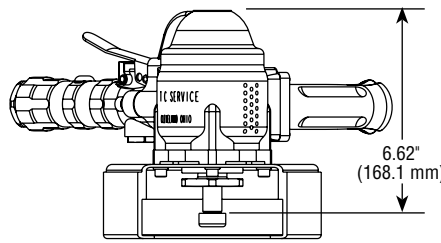
Quick Order Number

Model Number	Guard Size	Maximum Operating Speed	Throttle Handle Type	
			Standard	Safety
520V	4 Inch	8000 RPM	520VXL;411	520VXK;411
58C	6 Inch	6000 RPM	58CL;611	58CK;611
68C	6 Inch		68CL;611	68CK;611

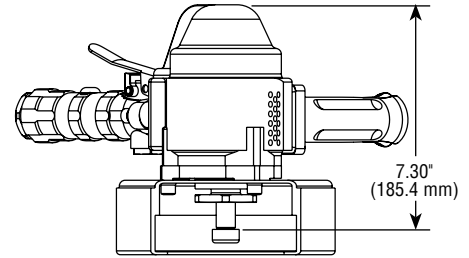
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



520V Series



58C Series



68C Series



2.0 H.P. (1500 W)



6.7 Lb. (3.0 Kg)



20 cfm (9.4 L/s) Free Speed
40 cfm (18.9 L/s) Max



3.0 H.P. (2250 W)



8.8 Lb. (3.9 Kg)



25 cfm (11.8 L/s) Free Speed
60 cfm (28.3 L/s) Max



4.0 H.P. (3000 W)



11.0 Lb. (5.0 Kg)



25 cfm (11.8 L/s) Free Speed
75 cfm (35.4 L/s) Max

Example Model Number: **58C L ; 6000;611**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Operating Speed/Guard Size
520V	Please choose one of the following options: K - Safety Lever XL - Standard Lever XK - Safety Lever XB - Thumb Switch XLTK - Turned/Knurled Standard Lever XKTK - Turned/Knurled Safety Lever XBTK - Turned/Knurled Thumb Switch XLTKW - Turned/Knurled/Cushioned Standard Lever XKTKW - Turned/Knurled/Cushioned Safety Lever XBTKW - Turned/Knurled/Cushioned Thumb Switch	8000;411 - 8000 R.P.M. with 4 Inch T11 Guard
58C	Please choose one of the following options: L - Standard Lever K - Safety Lever B - Thumb Switch LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	Please choose one of the following options: 6000;611 - 6000 R.P.M. with 6 Inch T11 Guard 7000;511 - 7000 R.P.M. with 5 Inch T11 Guard 8000;411 - 8000 R.P.M. with 4 Inch T11 Guard
68C	Please choose one of the following options: LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	Please choose one of the following options: 6000;611 - 6000 R.P.M. with 6 Inch T11 Guard 7000;511 - 7000 R.P.M. with 5 Inch T11 Guard



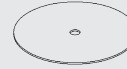
Pile Cutters

8" (200 mm) – 14" (350 mm)
3-4 H.P. (2250–3000 W)



Reinforced Cut-Off Wheels

Diamond Wheels



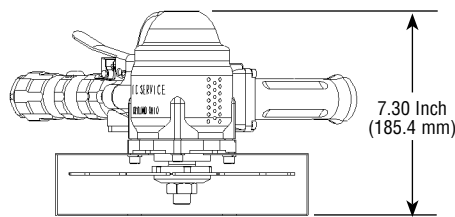
Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Wet Cutting Attachment
- Standard Equipment**
- Tool
- 2 Inch Wrench
- Operating Instructions and Service Manual

VERTICAL GRINDERS

Quick Order Number				
Model Number	Guard Size	Maximum Operating Speed	Throttle Handle Type	
			Standard	Safety
56PC	8 Inch	6000 RPM	56PCL;841	56PCK;841
66PC	12 Inch	5000 RPM	66PCL;1241	66PCK;1241
66PC	14 Inch	4000 RPM	66PCL;1441	66PCK;1441

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



56PCK



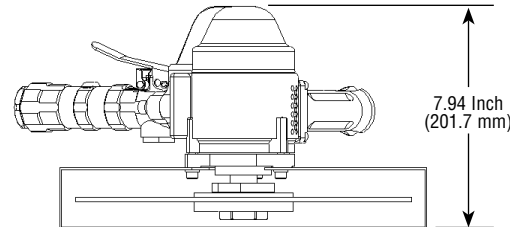
3.0 H.P.
(2250 W)



8.8 Lb.
(3.9 Kg)



25 cfm (11.8 L/s) Free Speed
60 cfm (28.3 L/s) Max



66PCK



4.0 H.P.
(3000 W)



11.0 Lb.
(5.0 Kg)



25 cfm (11.8 L/s) Free Speed
75 cfm (35.4 L/s) Max

Example Model Number: **56PC L ; 6000;841**

Model Number	Lever Style	Operating Speed/Guard Size
56PC	<i>Please choose one of the following options:</i> L - Standard Lever K - Safety Lever B - Thumb Switch	6000;841 - 6000 R.P.M. with 8 Inch T1 Guard
66PC	LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	<i>Please choose one of the following options:</i> 6000;1041 - 6000 R.P.M. with 10 Inch T1 Guard (5/8" ID Mount) 5000;1241 - 5000 R.P.M. with 12 Inch T1 Guard (Bonded Abrasive) 6000;1241 - 6000 R.P.M. with 12 Inch T1 Guard (Segmented Diamond) 4000;1441 - 4000 R.P.M. with 14 Inch T1 Guard (Bonded Abrasive) 5000;1441 - 5000 R.P.M. with 14 Inch T1 Guard (Segmented Diamond)

Governor Controlled Tool

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Vertical Sanders for use with Sanding Discs & Surface Conditioning Abrasives

4" (100 mm) – 9" (230 mm)
1.5-3 H.P. (1130–2250 W)

VERTICAL GRINDERS

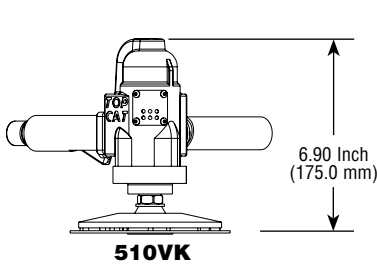


- Air Inlet Size: 1/2" NPT**
Hose Size Recommendations: 1/2" (13 mm)
Arbor Size: 5/8 x 11
Standard Equipment
- Tool with Sanding Pad of Choice
 - Operating Instructions and Service Manual
 - Wrench

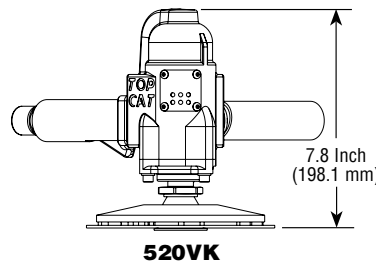
Quick Order Number

Model Number	Sanding Pad Size	Maximum Operating Speed	Throttle Handle Type	
			Standard	Safety
510V	7 Inch	4000 RPM	510VXL;7SP	510VXK;7SP
520V		8000 RPM	520VXL;7SP	520VXK;7SP
56S	9 Inch	6000 RPM	56SL;9SP	56SK;9SP

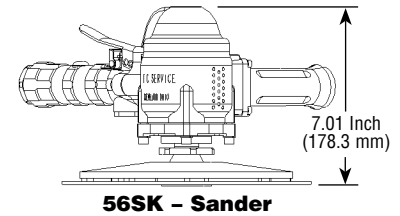
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



- 1.5 H.P. (1125 W)
- 6.0 Lb. (2.7 Kg)
- 35 cfm (16.5 L/s) Max



- 2.0 H.P. (1500 W)
- 6.7 Lb. (3.0 Kg)
- 20 cfm (9.4 L/s) Free Speed
40 cfm (18.9 L/s) Max



- 3.0 H.P. (2250 W)
- 7.9 Lb. (3.6 Kg)
- 25 cfm (11.8 L/s) Free Speed
60 cfm (28.3 L/s) Max

Example Model Number: **520V XL ; 8000;7SP**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Operating Speed/Sanding Pad Size
510V	Please choose one of the following options: K - Safety Lever XL - Standard Lever XK - Safety Lever XB - Thumb Switch XLTK - Turned/Knurled Standard Lever XKTK - Turned/Knurled Safety Lever XBTK - Turned/Knurled Thumb Switch	Please choose one of the following options: 4000;4SP - 4000 R.P.M. with 4 Inch Sanding Pad 4000;5SP - 4000 R.P.M. with 5 Inch Sanding Pad 4000;7SP - 4000 R.P.M. with 7 Inch Sanding Pad 4000;9SP - 4000 R.P.M. with 9 Inch Sanding Pad
520V	Please choose one of the following options: LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	Please choose one of the following options: 12000;4SP - 12000 R.P.M. with 4 Inch Sanding Pad 10000;5SP - 10000 R.P.M. with 5 Inch Sanding Pad 8000;7SP - 8000 R.P.M. with 7 Inch Sanding Pad 6000;9SP - 6000 R.P.M. with 9 Inch Sanding Pad
56S	Please choose one of the following options: L - Standard Lever K - Safety Lever B - Thumb Switch LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	Please choose one of the following options: 8000;7SP - 8000 R.P.M. with 7 Inch Sanding Pad 6000;9SP - 6000 R.P.M. with 9 Inch Sanding Pad





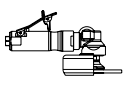

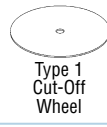
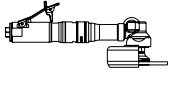

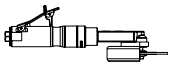


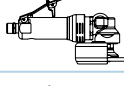


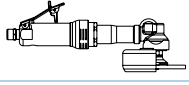
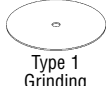
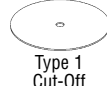
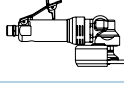
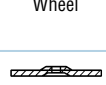
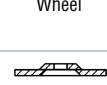
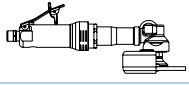



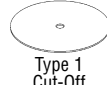
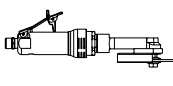




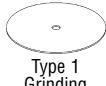
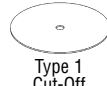
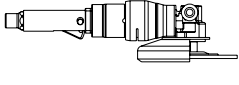
Governor Controlled Tool Geared Tool

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.



Right Angle Wheel Grinders

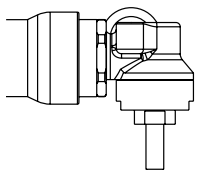
Section Contents

Page Number	Model Number	Power	Wheel Size	Features	
12	300RA	0.7 H.P.	3 Inch - 4 Inch T27, T1 or T1 (cut-off) Wheels  	Durable Head Design with Small Motor	
13	300RAE		 	Durable Head Design & Extended Neck with Small Motor	
14	320RA		3 Inch - 4 Inch T1 (cut-off) Wheels 	Small Head & Extended Neck with Small Motor	
16	400RA	1.2 H.P.	3 Inch - 6 Inch T27, T1 or T1 (cut-off) Wheels  	Durable Head Design with Powerful Motor (Lower Speed)	
17	400RAE		 	Durable Head Design & Extended Neck with Powerful Motor (Lower Speed)	
16	410RA		3 Inch - 4 1/2 Inch T27, T1 or T1 (cut-off) Wheels  	Durable Head Design with Powerful Motor (Higher Speed)	
17	410RAE		 	Durable Head Design & Extended Neck with Powerful Motor (Higher Speed)	
14	420RA		3 Inch - 4 Inch T27, T1 or T1 (cut-off) Wheels    	Small Head & Extended Neck with Powerful Motor	
18	520RA	2.0 H.P.	7 Inch - 10 Inch T27, T1 or T1 (cut-off) Wheels      	Larger Right Angle Grinder for Larger Wheels	

RIGHT ANGLE GRINDERS

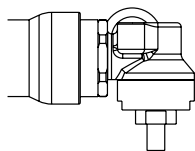
Spindle Options

3/8-24 X 0.980 Inch Spindle (Spindle Size 4)



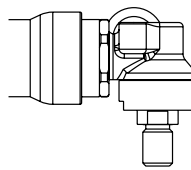
This spindle is the most versatile. Adapters are available which will allow nearly any wheel to mount on this spindle. (See chart)

3/8-24 X 0.563 Inch Spindle (Spindle Size 1)



This spindle is favorable for use with type 1 cut-off (type 41) wheels or type 27 wheels with a 3/8 inch mounting hole. It provides for a smaller head height which can be helpful in tighter applications. Adapters are available. (See chart)

5/8-11 X 0.875 Inch Spindle (Spindle Size 2)

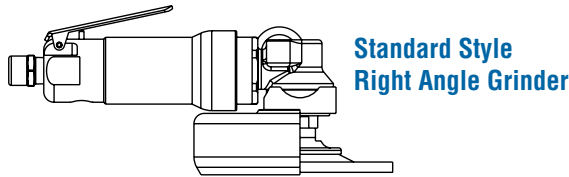


This spindle is commonly used with type 27 (depressed center) wheels with a either a 7/8" mounting hole or built-in flanges with threads. Adapters are available. (See chart)

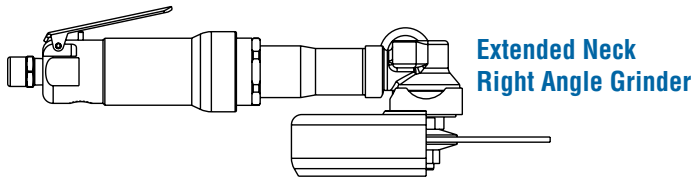
Spindle	Wheel Size				
	3"	4"	4 1/2"	5"	6"
(1) - 3/8-24 X 0.563	X	X			
(4) - 3/8-24 X 0.980	X	X	X	X	X
(2) - 5/8-11 X 0.875			X	X	X

Extend Neck vs Standard

The extended neck option helps in regards to clearance issues when using larger diameter wheels. In these instances, the guard can extend into the area around the motor case normally used by the operator to grip the tool. The extended neck option moves the guard forward which clears the area around the motor case for the operators hand.

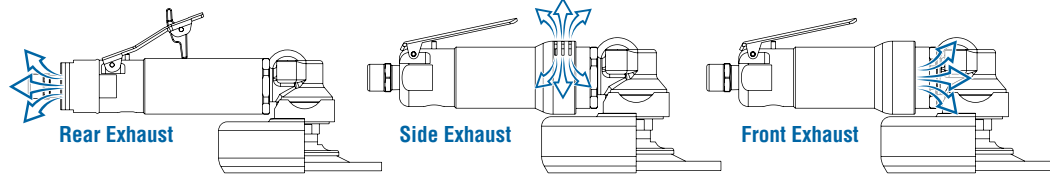


Standard Style Right Angle Grinder



Extended Neck Right Angle Grinder

Exhaust Direction



Rear Exhaust

Side Exhaust

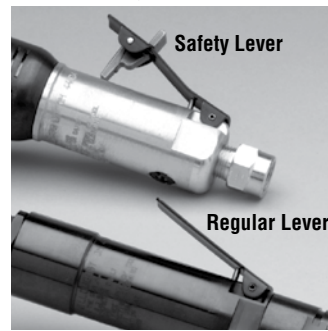
Front Exhaust

Speed/Guard Size Selection

The operating speed and guard size are closely linked to promote safety and maximize efficiency of the grinding operation. Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed/guard size options to select the one that matches the wheel speed/size you are using.



Lever Style



Safety Lever

Regular Lever



Aluminum Case Material

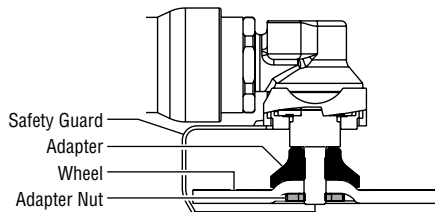
Steel Case Material

Case Material

The choice of case material affects the weight and durability of the tool. By its nature, aluminum is lighter in weight than steel. Steel is more durable in aggressive environments.

Wheel Mounting for Right Angle Grinders—Type 27 (Depressed Center) Wheels

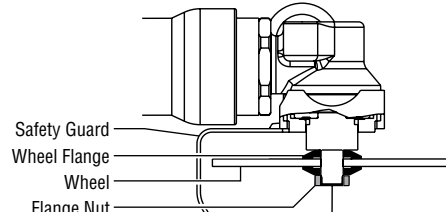
Type 27 Wheels with 3/8" ID Mounting Hole



Safety Guard
Adapter
Wheel
Adapter Nut

Adapter Set Number	Spindle Size
490-K	3/8-24 x 0.980
490-KR	3/8-24 x 0.580

Type 1 Wheels (Type 1 Cut-off)

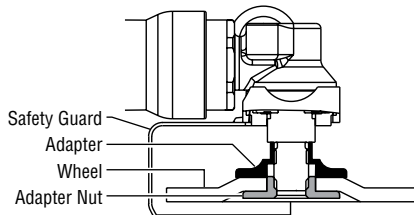


Safety Guard
Wheel Flange
Wheel
Flange Nut

Part Number	Spindle Size	Wheel Mounting Hole
400-G-42	3/8-24 x 0.980	4" or Smaller
1100-680		4-1/2" or Larger
1100-682	5/8-11 x 0.875	

Ordered as individual parts

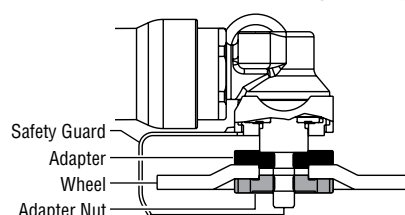
Type 27 Wheels with 5/8" or 7/8" ID Mounting



Safety Guard
Adapter
Wheel
Adapter Nut

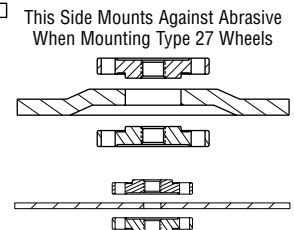
Adapter Set Number	Spindle Size	Wheel Mounting Hole
1100-660	3/8-24 x 0.980	5/8"
1100-668		7/8"
1100-692	5/8-11 x 0.875	

ADT Style Adapters



Safety Guard
Adapter
Wheel
Adapter Nut

Our New Right Angle Adapters Can Be Used To Mount Either Type 27 Or Type 1 Wheels



This Side Mounts Against Abrasive When Mounting Type 1 Wheels

Part Number	Spindle Size	Wheel Mounting Hole
ADT27-354	3/8-24 x 0.980	5/8"
ADT27-375		7/8"
ADT27-575	5/8-11 x 0.875	

Ordered as individual parts

Right Angle Grinders for use with Depressed Center & Type 1 Grinding/Cut-off Wheels

4" (101.6 mm)
0.7 H.P. (525 W)



Type 27 Wheel
With 3/8 Inch
Mount Hole

Type 27 Wheel
With 5/8 Inch
Mount Hole

Type 1
Grinding
Wheel

Type 1
Cut-Off
Wheel

Air Inlet Size: 1/4" NPT

Hose Size Recommendations: 3/8" (10 mm)

Special Features

- Rear Exhaust
- 0.7 H.P. Motor • Dual Position Dead Handle Mount

Extra Charge Accessories

- Type 27 Adapters • Safety Levers

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

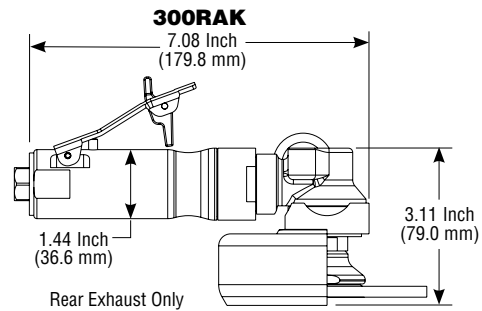
RIGHT ANGLE GRINDERS

Quick Order Number

Model Number	Guard Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
300RA	4 Inch	15000 RPM	300RA4;427	300RA4S;427

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



0.7 H.P.
(525 W)



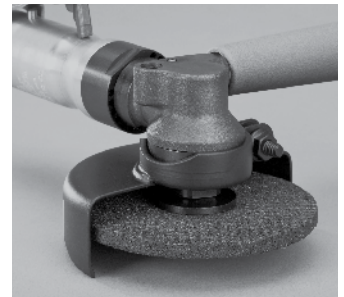
2.4 Lb. (1.1 Kg) Aluminum
3.0 Lb. (1.4 Kg) Steel



25 cfm (11.8 L/s) Max

Wheel Adapters			
Part Number	Description	Spindle on Tool	Wheel
490-K	3/8-24 to 3/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	3-4 Inch T27 Wheels with 3/8 Inch ID Hole
490-KR		Style 1 - 3/8-24 X 0.56 Inch	
1100-660	3/8-24 to 5/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	4 Inch T27 Wheels with 5/8 Inch ID Hole
ADT27-354			

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.



Front view of 300RA Series Tool

Example Model Number: **300RA 1 K S ; 15000;427**

Model Number	Spindle Options	Lever Style	Case Material	Operating Speed/Guard Size
300RA	Please choose one of the following options: 1 - 3/8-24 X 0.56 Inch 4 - 3/8-24 X 0.98 Inch	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: 15000;327 - 15000 R.P.M. with 3 Inch T27 Wheel Guard 15000;427 - 15000 R.P.M. with 4 Inch T27 Wheel Guard

Gearred Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Grinders for use with Depressed Center & Type 1 Grinding/Cut-off Wheels

4" (101.6 mm)
0.7 H.P. (525 W)



Type 27 Wheel With 3/8 Inch Mount Hole

Type 27 Wheel With 5/8 Inch Mount Hole

Type 1 Grinding Wheel

Type 1 Cut-Off Wheel

Air Inlet Size: 1/4" NPT

Hose Size Recommendations: 3/8" (10 mm)

Special Features

- 0.7 H.P. Motor • Dual Position Dead Handle Mount

Extra Charge Accessories

- Type 27 Adapters • Safety Levers

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

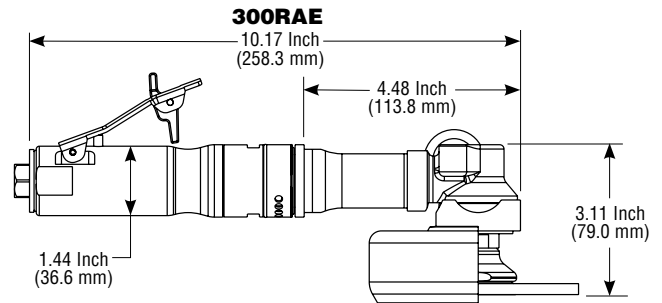
The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

Quick Order Number

Model Number	Guard Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
300RAE	4 Inch	15000 RPM	300RAE4;427	300RAE4S;427

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



0.7 H.P. (525 W)



3.5 Lb. (1.6 Kg) Aluminum
4.0 Lb. (1.8 Kg) Steel



25 cfm (11.8 L/s) Max

RIGHT ANGLE GRINDERS

Wheel Adapters			
Part Number	Description	Spindle on Tool	Wheel
490-K	3/8-24 to 3/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	3-4 Inch T27 Wheels with 3/8 Inch ID Hole
490-KR		Style 1 - 3/8-24 X 0.56 Inch	
1100-660	3/8-24 to 5/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	4 Inch T27 Wheels with 5/8 Inch ID Hole
ADT27-354			

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.



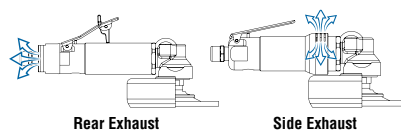
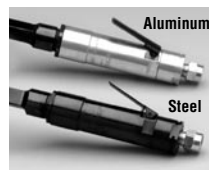
Front view of 300RAE Series Tool

Example Model Number: **300RAE 1 K S R ; 15000;427**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Spindle Options	Lever Style	Case Material	Exhaust Direction	Operating Speed/Guard Size
300RAE	Please choose one of the following options: 1 - 3/8-24 X 0.56 Inch 4 - 3/8-24 X 0.98 Inch	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	Please choose one of the following options: 15000;327 - 15000 R.P.M. with 3 Inch T27 Wheel Guard 15000;427 - 15000 R.P.M. with 4 Inch T27 Wheel Guard

Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Grinders for use with Depressed Center & Type 1 Grinding/Cut-off Wheels 3" (75 mm) – 4" (100 mm) 0.7 H.P. – 1.2 H.P. (900 W)



Type 27 Wheel
With 3/8 Inch
Mount Hole

Type 27 Wheel
With 5/8 Inch
Mount Hole

Type 1
Grinding
Wheel

Type 1
Cut-Off
Wheel

Air Inlet Size:
320RA Series: 1/4" NPT
420RA Series: 3/8" NPT
Hose Size Recommendations:
320RA Series: 3/8" (13mm)
420RA Series: 1/2" (13mm)
Extra Charge Accessories

• Type 27 Adapters • Safety Levers

Standard Equipment

• Tool with Wrench • Operating Instructions and Service Manual

SPECIAL FEATURES

- Side or Rear Exhaust Available
- Small Right Angle Head for Limited Space Grinding
- Extended Neck for Better Reach

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

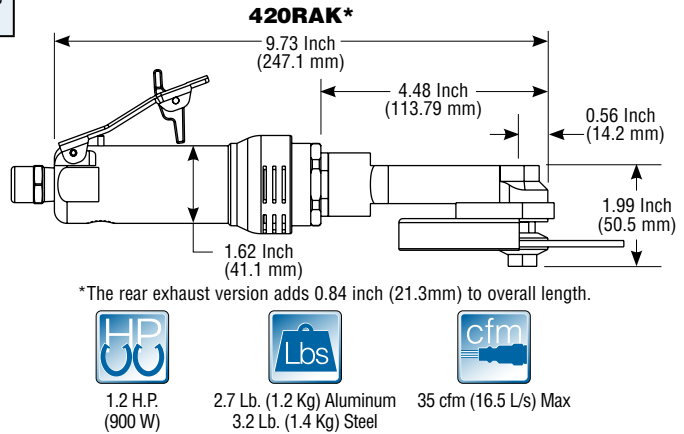
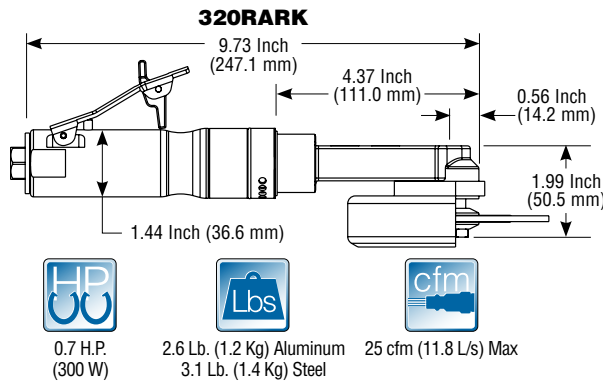
Quick Order Number

Model Number	Guard Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
320RA	4 Inch	15000 RPM	320RA1;427	320RA1S;427
420RA		13000 RPM	420RA1;427	420RA1S;427

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

RIGHT ANGLE GRINDERS

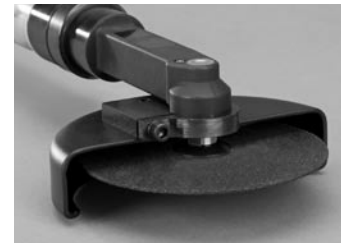


*The rear exhaust version adds 0.84 inch (21.3mm) to overall length.

Wheel Adapters

Part Number	Description	Spindle on Tool	Wheel
490-K	3/8-24 to 3/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	3-4 Inch T27 Wheels with 3/8 Inch ID Hole
490-KR		Style 1 - 3/8-24 X 0.56 Inch	
1100-660	3/8-24 to 5/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	4 Inch T27 Wheels with 5/8 Inch ID Hole
ADT27-354		Style 1 - 3/8-24 X 0.56 Inch	

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

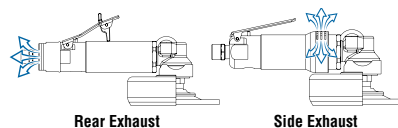


Front view of 320RA/420RA Series Tool

Example Model Number: **420RA 1 K S R ; 13000;427**

Model Number	Spindle Options	The blue highlighted entries are shown in the Quick Reference Box above. Lever Style	Case Material	Exhaust Direction	Operating Speed/Guard Size
320RA	Please choose one of the following options: 1 - 3/8-24 X 0.56 Inch	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	Please choose one of the following options: 15000;327 - 15000 R.P.M. with 3 Inch T27 Wheel Guard 15000;427 - 15000 R.P.M. with 4 Inch T27 Wheel Guard
420RA	4 - 3/8-24 X 0.98 Inch				Please choose one of the following options: 13000;327 - 13000 R.P.M. with 3 Inch T27 Wheel Guard 13000;427 - 13000 R.P.M. with 4 Inch T27 Wheel Guard

Geared Tool



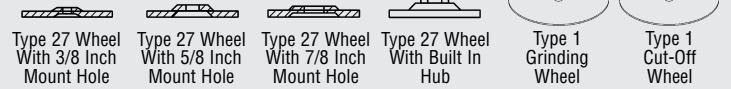
WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.



Right Angle Grinders for use with Depressed Center & Type 1 Grinding/Cut-off Wheels

3" (75 mm) – 5" (125 mm)
1.2 H.P. (900 W)

Powerful 1.2 H.P. Motor



Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)
Special Features

- Extended Neck or Standard Length Available
- 1.2 H.P. Motor • Dual Position Dead Handle Mount

Extra Charge Accessories

- Type 27 Adapters • Safety Levers

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

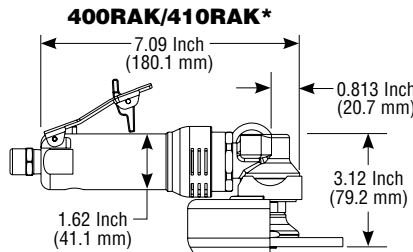
RIGHT ANGLE GRINDERS

Quick Order Number

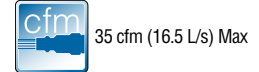
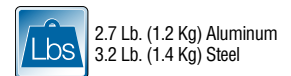
Model Number	Guard Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
400RA	4 Inch	10000 RPM	400RA4;427	400RA4S;427
	4-1/2 Inch		400RA2;4527	400RA2S;4527
410RA	4 Inch	13000 RPM	410RA4;427	410RA4S;427
	4-1/2 Inch		410RA2;4527	410RA2S;4527

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



*The rear exhaust version adds 0.84 inch (21.3mm) to overall length.



Wheel Adapters

Part Number	Description	Spindle on Tool	Wheel
490-K	3/8-24 to 3/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	3-4 Inch T27 Wheels with 3/8 Inch ID Hole
490-KR		Style 1 - 3/8-24 X 0.56 Inch	
1100-660	3/8-24 to 5/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	4 Inch T27 Wheels with 5/8 Inch ID Hole
ADT27-354			
1100-668	3/8-24 to 7/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	4 1/2 Inch T27 Wheels with 7/8 Inch ID Hole
ADT27-375			
1100-692	3/8-24 to 7/8 Inch ID Adapter	Style 2 - 5/8-11 X 0.88 Inch	4 1/2 Inch T27 Wheels with 7/8 Inch ID Hole
ADT27-575			

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

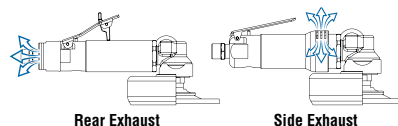
Spindle	Wheel Size			
	3"	4"	4 1/2"	5"
(1) - 3/8-24 X 0.563	X	X		
(4) - 3/8-24 X 0.980	X	X	X	X
(2) - 5/8-11 X 0.875			X	X

Example Model Number: **400RA 1 K S R ; 10000;427**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Spindle Options	Lever Style	Case Material	Exhaust Direction	Operating Speed/Guard Size
400RA	Please choose one of the following options: 1 - 3/8-24 X 0.56 Inch 2 - 5/8-11 X 0.88 Inch 4 - 3/8-24 X 0.98 Inch	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	Please choose one of the following options: 10000;327 - 10000 R.P.M. with 3 Inch T27 Wheel Guard 10000;427 - 10000 R.P.M. with 4 Inch T27 Wheel Guard 10000;4527 - 10000 R.P.M. with 4 1/2 Inch T27 Wheel Guard 10000;527 - 10000 R.P.M. with 5 Inch T27 Wheel Guard Please choose one of the following options: 13000;327 - 13000 R.P.M. with 3 Inch T27 Wheel Guard 13000;427 - 13000 R.P.M. with 4 Inch T27 Wheel Guard 13000;4527 - 13000 R.P.M. with 4 1/2 Inch T27 Wheel Guard

Geared Tool

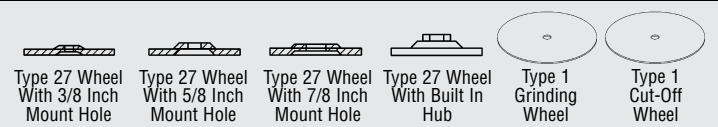


WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Grinders for use with Depressed Center & Type 1 Grinding/Cut-off Wheels 3" (75 mm) – 6" (150 mm) 1.2 H.P. (900 W)



Powerful 1.2 H.P. Motor



Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)

- Special Features**
- Side or Rear Exhaust Available
 - Extended Neck or Standard Length Available
 - 1.2 H.P. Motor • Dual Position Dead Handle Mount

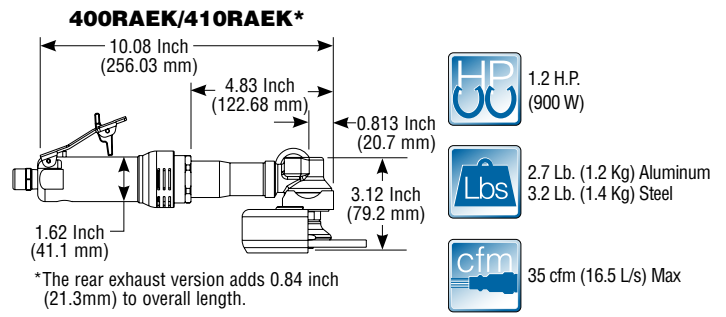
- Extra Charge Accessories**
- Type 27 Adapters • Safety Levers
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
 - 2 Wrenches (sizes based on options)

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

Quick Order Number				
Model Number	Guard Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
400RAE	4 Inch	10000 RPM	400RAE4;427	400RAE4S;427
	4-1/2 Inch		400RAE2;4527	400RAE2S;4527
	6 Inch		400RAE4;641	400RAE4S;641
410RAE	4 Inch	13000 RPM	410RAE4;427	410RAE4S;427
	4-1/2 Inch		410RAE2;4527	410RAE2S;4527

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



RIGHT ANGLE GRINDERS

Wheel Adapters			
Part Number	Description	Spindle on Tool	Wheel
490-K	3/8-24 to 3/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	3-4 Inch T27 Wheels with 3/8 Inch ID Hole
490-KR		Style 1 - 3/8-24 X 0.56 Inch	
1100-660	3/8-24 to 5/8 Inch ID Adapter	Style 4 - 3/8-24 X 0.98 Inch	4 Inch T27 Wheels with 5/8 Inch ID Hole
ADT27-354			
1100-668	3/8-24 to 7/8 Inch ID Adapter	Style 2 - 5/8-11 X 0.88 Inch	4 1/2 Inch T27 Wheels with 7/8 Inch ID Hole
ADT27-375			
1100-692	3/8-24 to 7/8 Inch ID Adapter	Style 2 - 5/8-11 X 0.88 Inch	
ADT27-575			

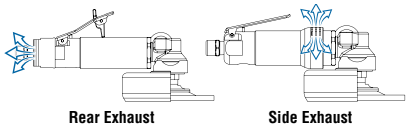
Spindle	Wheel Size			
	3"	4"	4 1/2"	5"
(1) - 3/8-24 X 0.563	X	X		
(4) - 3/8-24 X 0.980	X	X	X	X
(2) - 5/8-11 X 0.875			X	X

The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

Example Model Number: **400RAE 4 K S R ; 10000;427**

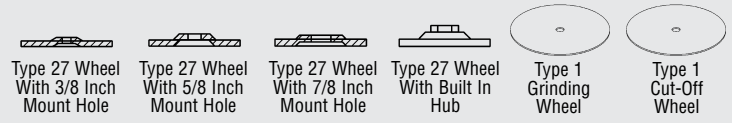
Model Number	Spindle Options	Lever Style	Case Material	Exhaust Direction	Operating Speed/Guard Size
400RAE	Please choose one of the following options: 1 - 3/8-24 X 0.56 Inch 2 - 5/8-11 X 0.88 Inch 4 - 3/8-24 X 0.98 Inch	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	Please choose one of the following options: 10000;327 - 10000 R.P.M. with 3 Inch T27 Wheel Guard 10000;427 - 10000 R.P.M. with 4 Inch T27 Wheel Guard 10000;4527 - 10000 R.P.M. with 4 1/2 Inch T27 Wheel Guard 10000;641 - 10000 R.P.M. with 6 Inch T27 Wheel Guard Please choose one of the following options: 13000;327 - 13000 R.P.M. with 3 Inch T27 Wheel Guard 13000;427 - 13000 R.P.M. with 4 Inch T27 Wheel Guard 13000;4527 - 13000 R.P.M. with 4 1/2 Inch T27 Wheel Guard
410RAE					

Gear Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Grinders for use with Depressed Center & Type 1 Grinding/Cut-off Wheels 7" (18 mm) – 10" (250 mm) 2 H.P. (1500 w)



Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)

Extra Charge Accessories
 • Depressed Center Wheel Kit • Sanding Pads

Standard Equipment
 • Tool • Operating Instructions and Service Manual

Special Features
 • Spindle Lock Mechanism (Standard Equipment)
 • 2.0 H.P. Motor • Dual Position Dead Handle
 • Adjustable Guard Position

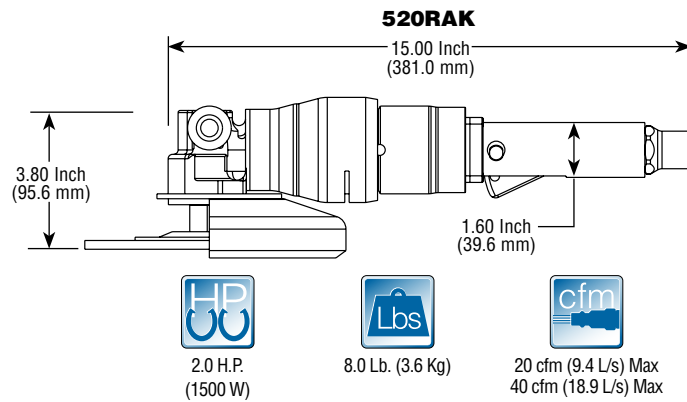
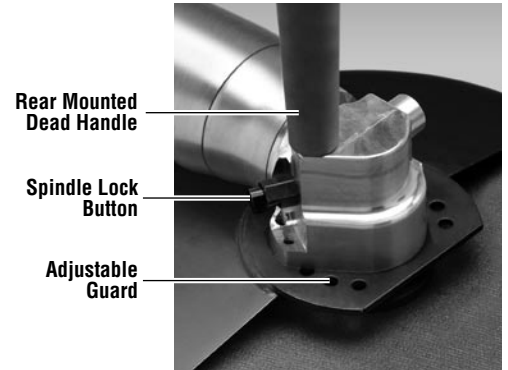
The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

RIGHT ANGLE GRINDERS

Quick Order Number

Model Number	Guard Size	Maximum Operating Speed	Throttle Handle Type	
			Standard	Safety
520RA	7 Inch	8000 RPM	520RAXL;727	520RAXK;727
	9 Inch	6000 RPM	520RAXL;927	520RAXK;927
	10 Inch	6000 RPM	520RA2XL;1041	520RA2XK;1041

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



Example Model Number: **520RA 2 XLTKW ; 8000;727**

Model Number	Spindle Options	Lever Style	Operating Speed/Guard Size
520RA	Please choose one of the following options: 1 - 5/8-11 0.9 Inch 2 - 5/8-11 1.1 Inch	Please choose one of the following options: K - Safety Lever XL - Standard Lever XK - Safety Lever XB - Thumb Switch XLTK - Turned/Knurled Standard Lever XKTK - Turned/Knurled Safety Lever XBTk - Turned/Knurled Thumb Switch XLTKW - Turned/Knurled/Cushioned Standard Lever XKTKW - Turned/Knurled/Cushioned Safety Lever XBTkW - Turned/Knurled/Cushioned Thumb Switch	Please choose one of the following options: 6000;727 - 6000 R.P.M. with 7 Inch Wheel Guard 6000;927 - 6000 R.P.M. with 9 Inch Wheel Guard 8000;727 - 8000 R.P.M. with 7 Inch Wheel Guard 6000;1041 - 6000 R.P.M. with 10 Inch Wheel Guard*



Governor Controlled Tool Geared Tool

*Available only with Type 2 Spindle

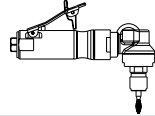
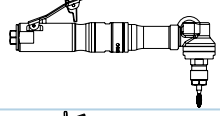
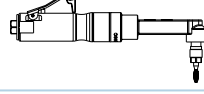
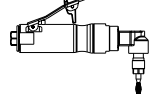


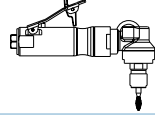
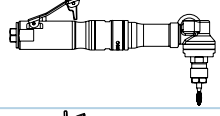
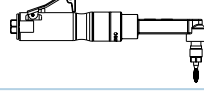
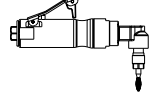

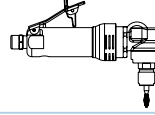
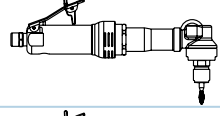
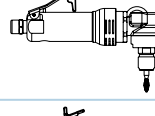
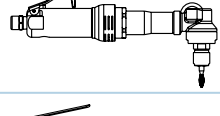
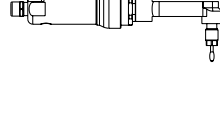



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.



RIGHT ANGLE GRINDERS

Right Angle Die Grinders

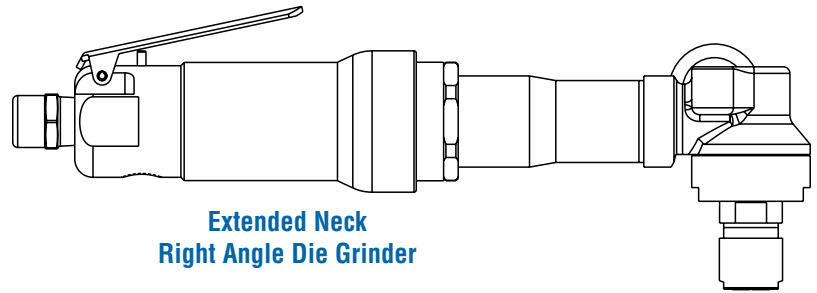
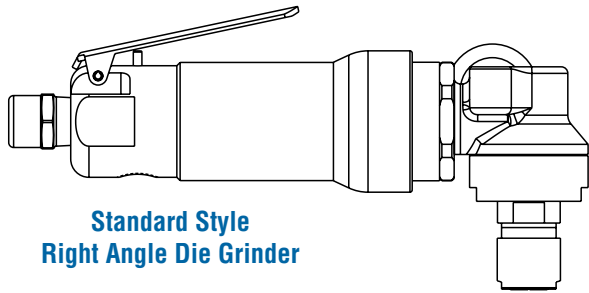
Section Contents

Page Number	Model Number	Power	Inserted Tooling Type/Size	Features	
22	250RAD	0.4 H.P.	Carbide Burrs (3/8" Maximum)	Durable Head Design with Small Motor	
23	250RAED			Durable Head Design & Extended Neck with Small Motor	
25	270RAD			Small Head & Extended Neck with Small Motor	
24	280RAD			Small Head with Small Motor (Lower Speed)	
24	290RAD			Small Head with Small Motor (Higher Speed)	
			 Carbide Burrs		
22	300RAD	0.7 H.P.	Carbide Burrs (3/8" Maximum)	Durable Head Design with Small Motor	
23	300RAED			Durable Head Design & Extended Neck with Small Motor	
25	320RAD			Small Head & Extended Neck with Small Motor	
24	330RAD			Small Head with Small Motor (Lower Speed)	
24	340RAD			Small Head with Small Motor (Higher Speed)	
26	400RAD	1.2 H.P.	Carbide Burrs or Mounted Stones (3/8" Maximum)	Durable Head Design with Powerful Motor (Lower Speed)	
27	400RAED			Durable Head Design & Extended Neck with Powerful Motor (Lower Speed)	
26	410RAD			Durable Head Design with Powerful Motor (Higher Speed)	
27	410RAED			Durable Head Design & Extended Neck with Powerful Motor (Higher Speed)	
25	420RAD			Small Head & Extended Neck with Powerful Motor	
			 Mounted Stones		
			 Carbide Burrs		
			 Flap Wheels		

RIGHT ANGLE GRINDERS

Extend Neck vs Standard

The extended neck option can help in regards to the reach of the tool. The extended neck option moves the right angle head farther from the motor handle which may be preferable in certain “space limited” grinding applications.



Lever Style



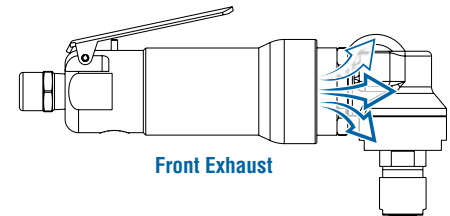
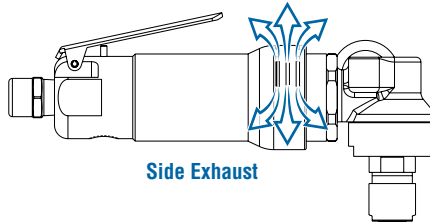
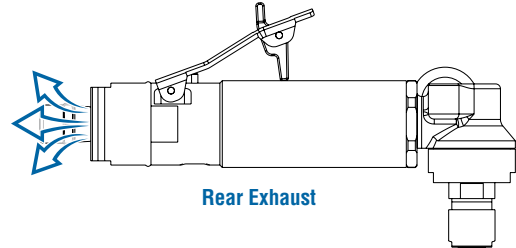
Case Material



The choice of case material affects the weight and durability of the tool. By its nature, aluminum is lighter in weight than steel. Steel is also more durable in aggressive environments.

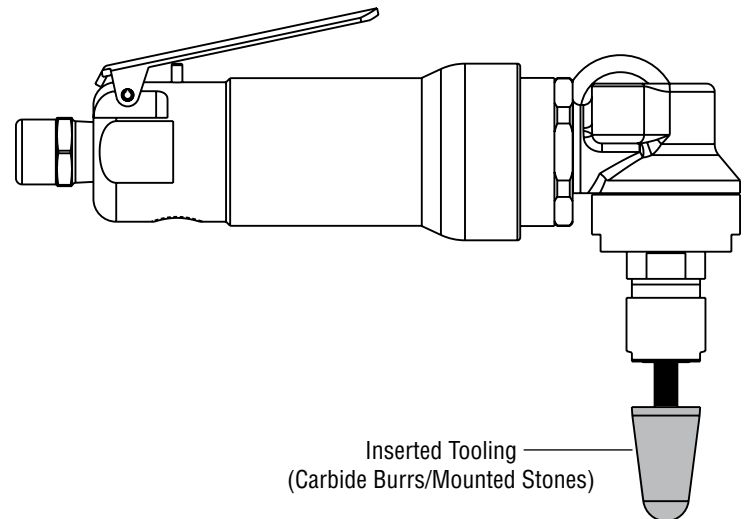
RIGHT ANGLE GRINDERS

Exhaust Direction



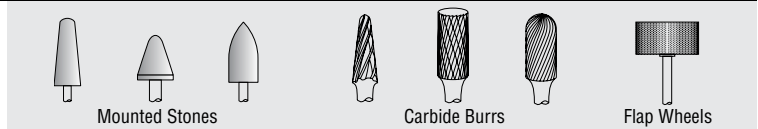
Inserted Tool Mounting

Overhang is the distance between the grinder chuck and the abrasive on the spindle. The larger the overhang, the lower the maximum safe operating speed. Please consult the abrasive manufacturer for proper mounting instructions for the abrasive you are using.



Right Angle Collet Grinders

0.4 H.P. – 0.7 H.P. (300 – 525 W)



Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

RIGHT ANGLE GRINDERS

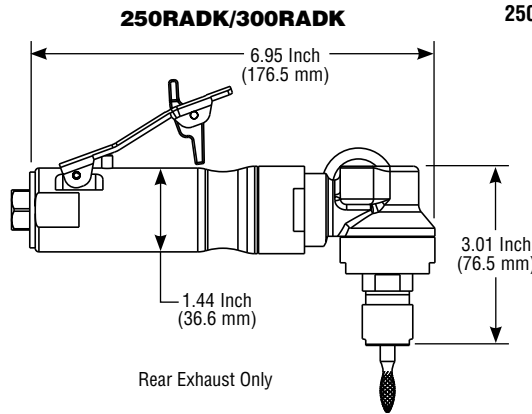
Quick Order Number				
Model Number	Collet Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
250RAD	1/4 Inch	20000 RPM	250RAD;1/4	250RADSK;1/4
300RAD			300RAD;1/4	300RADSK;1/4

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



Front view of 250RAD/300RAD Series Tools

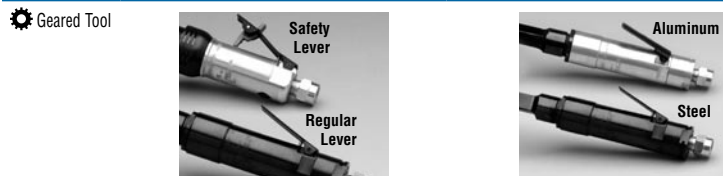


- HP** 250RAD - 0.4 H.P. (300 W)
300RAD - 0.7 H.P. (525 W)
- Lbs** *Aluminum* 250RAD - 2.5 Lbs. (1.1 Kg)
Steel 300RAD - 2.0 Lbs. (0.9 Kg)
- cfm** 250RAD - 18 cfm (8.5 L/s)
300RAD - 25 cfm (11.8 L/s)

Example Model Number: **250RAD K S ; 20000 ; 1/4**

The blue highlighted entries are shown in the Quick Reference Box above.

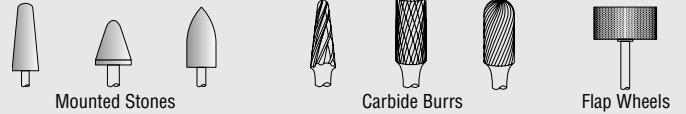
Model Number	Lever Style	Case Material	Operating Speed	Collet Size
250RAD	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	20000 : 20000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet
300RAD			15000 : 15000 R.P.M.	



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Collet Grinders

0.4 H.P. – 0.7 H.P. (300 – 525 W)



Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number				
Model Number	Collet Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
250RAED	1/4 Inch	20000 RPM	250RAED;1/4	250RAEDS;1/4
300RAED		15000 RPM	300RAED;1/4	300RAEDS;1/4

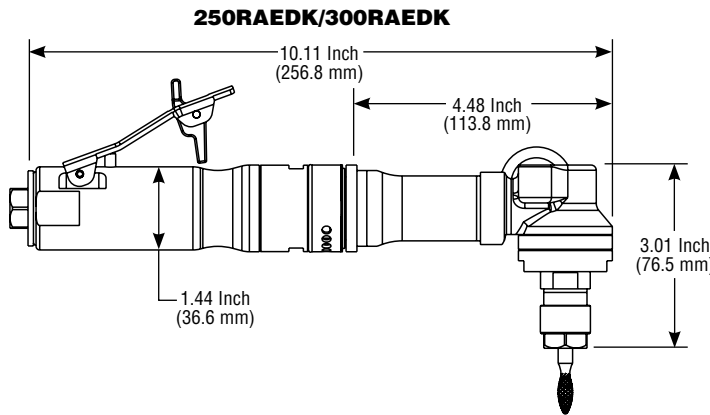
All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



Front view of 250RAED/300RAED Series Tools

RIGHT ANGLE GRINDERS



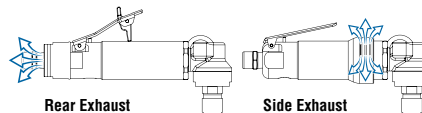
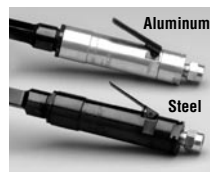
- HP** 250RAED - 0.4 H.P. (300 W)
300RAED - 0.7 H.P. (525 W)
- Lbs** Aluminum: 250RAED - 2.9 Lbs. (1.3 Kg)
300RAED - 3.1 Lbs. (1.4 Kg)
Steel: 250RAED - 3.4 Lbs. (1.5 Kg)
300RAED - 3.5 Lbs. (1.6 Kg)
- cfm** 250RAED - 18 cfm (8.5 L/s)
300RAED - 25 cfm (11.8 L/s)

Example Model Number: **250RAED K S R ; 20000 ; 1/4**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Collet Size
250RAED	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	20000 - 20000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet
300RAED				15000 - 15000 R.P.M.	

Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Collet Grinders

0.4 H.P. – 0.7 H.P. (300 – 525 W)

280RADS/290RADS/
330RADS/340RADS



280RADK/290RADK/
330RADK/340RADK



Air Inlet Size: 1/4" NPT (1/4" BSP Available)
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

RIGHT ANGLE GRINDERS

Quick Order Number

Model Number	Collet Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
280RAD	1/4 Inch	16000 RPM	280RAD;1/4	280RADS;1/4
290RAD		26000 RPM	290RAD;1/4	290RADS;1/4
330RAD		12000 RPM	330RAD;1/4	330RADS;1/4
340RAD		20000 RPM	340RAD;1/4	340RADS;1/4

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

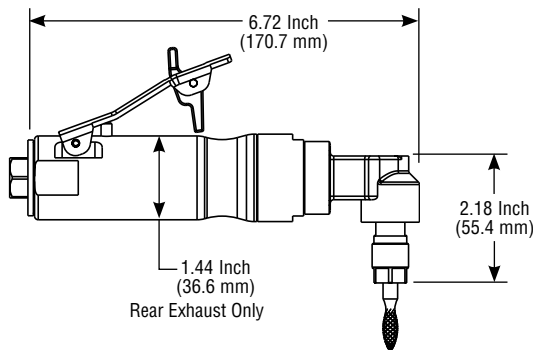
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



The ER Heavy Duty Collet Is Available On 280RAD/290RAD & 330RAD/340RAD Series

Front view of 280RAD/290RAD/330RAD/340RAD Series Tools

280RADK/290RADK/330RADK/340RADK



HP 280RAD/290RAD - 0.4 H.P. (300 W)
330RAD/340RAD - 0.7 H.P. (525 W)

Lbs *Aluminum Steel*
280RAD - 1.3 Lbs. (0.6 Kg) 1.8 Lbs. (0.8 Kg)
290RAD - 1.3 Lbs. (0.6 Kg) 1.8 Lbs. (0.8 Kg)
330RAD - 1.4 Lbs. (0.6 Kg) 2.0 Lbs. (0.9 Kg)
340RAD - 1.4 Lbs. (0.6 Kg) 2.0 Lbs. (0.9 Kg)

cfm 330RAD/340RAD - 18 cfm (8.5 L/s)
330RAD/340RAD - 25 cfm (11.8 L/s)

Example Model Number: **280RAD K S ; 16000 ; 1/4**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Operating Speed	Collet Size
280RAD	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	16000 - 16000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet
290RAD			26000 - 26000 R.P.M.	
330RAD			12000 - 12000 R.P.M.	
340RAD			20000 - 20000 R.P.M.	

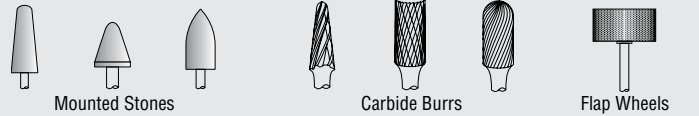
Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Collet Grinders

0.4 H.P. – 1.2 H.P. (300 – 900 W)



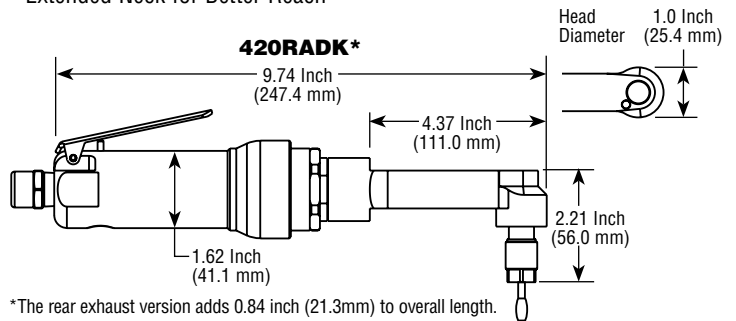
Air Inlet Size:
270RAD/320RAD Series: 1/4" NPT
420RAD Series: 3/8" NPT
Hose Size Recommendations:
270RAD/320RAD Series: 3/8" NPT (10 mm)
420RAD Series: 1/2" NPT (13 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool with Wrench • Operating Instructions and Service Manual
- Special Features**
- Small Right Angle Head for Limited Space Grinding
- Extended Neck for Better Reach

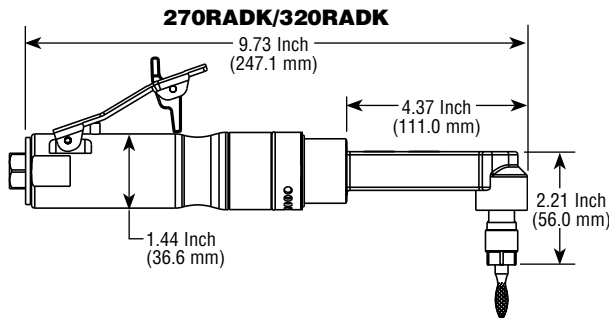
Quick Order Number				
Model Number	Collet Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
270RAD	1/4 Inch	26000 RPM	270RAD;1/4	270RADS;1/4
320RAD		20000 RPM	320RAD;1/4	320RADS;1/4
420RAD		13000 RPM	420RAD;1/4	420RADS;1/4

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



HP 1.2 H.P. (900 W) **Lbs** 2.5 Lb. (1.1 Kg) Aluminum, 3.0 Lb. (1.4 Kg) Steel **cfm** 35 cfm (16.5 L/s) Max



HP 270RAD - 0.4 H.P. (300 W), 320RAD - 0.7 H.P. (525 W)
Lbs 270RAD - 2.0 Lbs. (0.9 Kg), 320RAD - 2.1 Lbs. (1.0 Kg) Aluminum; 2.5 Lbs. (1.1 Kg), 2.6 Lbs. (1.2 Kg) Steel
cfm 270RAD - 18 cfm (8.5 L/s), 320RAD - 25 cfm (11.8 L/s)

Example Model Number: **270RAD K S R ; 26000 ; 1/4**

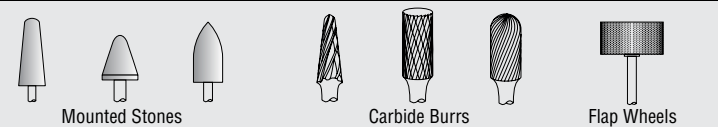
The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Collet Size
270RAD	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	26000 - 26000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet
320RAD				20000 - 20000 R.P.M.	
420RAD				13000 - 13000 R.P.M.	
Geared Tool					

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Collet Grinders

1.2 H.P. (900 W)



Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (12.7 mm)
Extra Charge Accessories

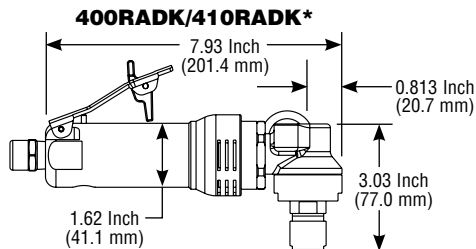
- Safety Lever • Rear Exhaust
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number

Model Number	Collet Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
400RAD	1/4 Inch	10000 RPM	400RAD;1/4	400RAD;1/4
410RAD		13000 RPM	410RAD;1/4	410RAD;1/4

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

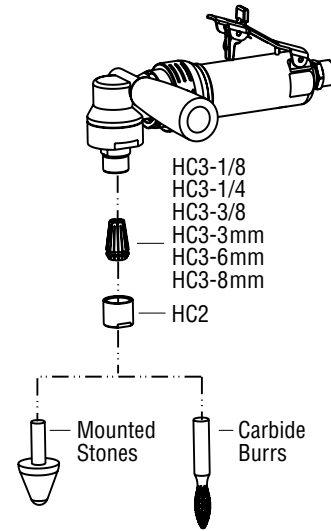


*The rear exhaust version adds 0.84 inch (21.3mm) to overall length.

HP 1.2 H.P. (900 W)

Lbs 2.8 Lb. (1.3 Kg) Aluminum
3.5 Lb. (1.6 Kg) Steel

cfm 35 cfm (16.5 L/s) Max

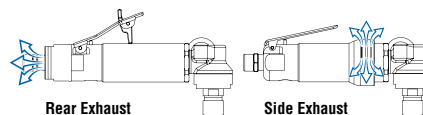
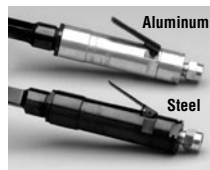


Example Model Number: **400RAD K S R ; 10000 ; 1/4**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Collet Size
400RAD	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	10000 - 10000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet
410RAD				13000 - 13000 R.P.M.	

⚙️ Geared Tool

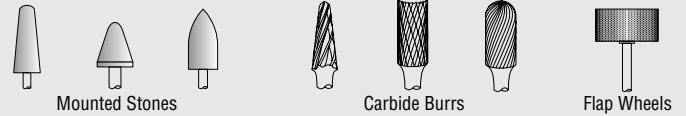


WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

RIGHT ANGLE GRINDERS

Right Angle Collet Grinders

1.2 H.P. (900 W)



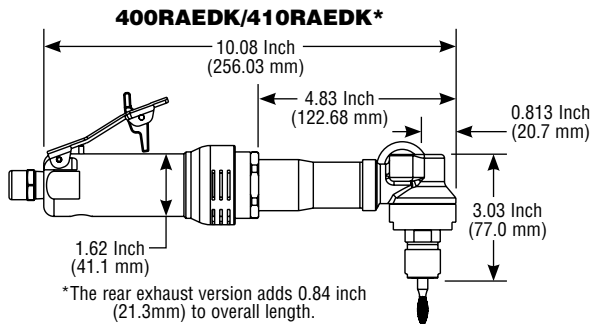
Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (12.7 mm)
Extra Charge Accessories

- Safety Lever • Rear Exhaust
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number				
Model Number	Collet Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
400RAED	1/4 Inch	10000 RPM	400RAED;1/4	400RAEDS;1/4
410RAED		13000 RPM	410RAED;1/4	410RAEDS;1/4

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

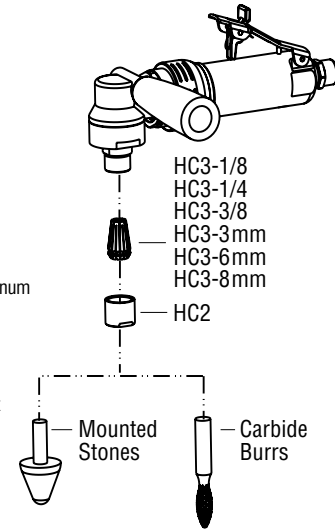
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



HP 1.2 H.P. (900 W)

Lbs 2.8 Lb. (1.3 Kg) Aluminum
3.5 Lb. (1.6 Kg) Steel

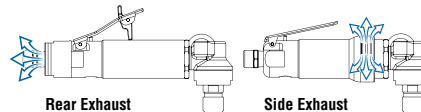
cfm 35 cfm (16.5 L/s) Max



Example Model Number: **400RAED K S R ; 10000 ; 1/4**

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Collet Size
400RAED	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	10000 - 10000 R.P.M. 13000 - 13000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet

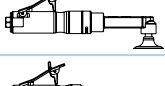
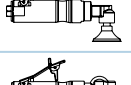
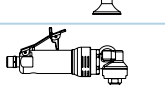
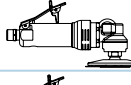
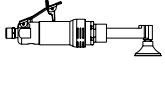

Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Sanders, Buffers & Polishers

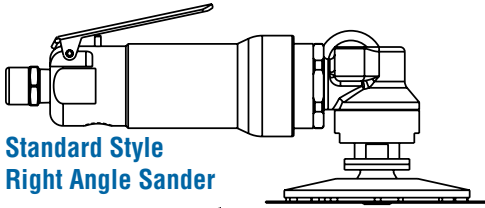
Section Contents

Tool Category	Page Number	Model Number	Power	Sanding Pad Size	Features	
Right Angle Sanders	30	250RA	0.4 H.P.	2 Inch or 3 Inch	Durable Head Design with Small Motor	
	31	250RAE			Durable Head Design & Extended Neck with Small Motor	
	33	270RA			Small Head & Extended Neck with Small Motor	
	32	280RA			Small Head with Small Motor (Lower Speed)	
		290RA	Small Head with Small Motor (Higher Speed)			
	30	300RA	0.7 H.P.		Durable Head Design with Small Motor	
	31	300RAE			Durable Head Design & Extended Neck with Small Motor	
	33	320RA			Small Head & Extended Neck with Small Motor	
	32	330RA		Small Head with Small Motor (Lower Speed)		
		340RA	Small Head with Small Motor (Higher Speed)			
	30	400RA	1.2 H.P.	4 Inch	Durable Head Design with Powerful Motor	
	31	400RAE			Durable Head Design & Extended Neck with Powerful Motor	
	30	407RA	4 Inch or 5 Inch	Durable Head Design with Powerful Governed Motor		
	31	407RAE		Durable Head Design & Extended Neck with Powerful Governed Motor		
	33	420RA	2 Inch or 3 Inch	Small Head & Extended Neck with Powerful Motor		
	36	520RA	2.0 H.P.	7 Inch or 9 Inch	Larger Right Angle Grinder for Larger Applications	
	34	2601RA	0.4 H.P.	2 Inch	Very Small Head & Extended Neck with Small Motor	
		3101RA	0.7 H.P.		Very Small Head & Extended Neck with Powerful Motor	
4101RA			7 Inch or 9 Inch	Large Head with Powerful Motor (Lower Speed)		
4520RA				Large Head with Powerful Governed Motor (Lower Speed)		
35		4527RA				Large Head with Powerful Motor (Higher Speed)
		4620RA				Large Head with Powerful Governed Motor (Higher Speed)
37		400RA(X)M	1.2 H.P.	Medium Polishing Wheels	Durable Head Design with Powerful Motor (Planetary Gears)	
	400RAE(X)M	Durable Head Design & Extended Neck with Powerful Motor (Planetary Gears)				
	38	4520RA(X)M	Larger Polishing Wheels	Large Head with Powerful Motor (Lower Speed - Planetary Gears)		
		4620RA(X)M		Large Head with Powerful Motor (Higher Speed - Planetary Gears)		

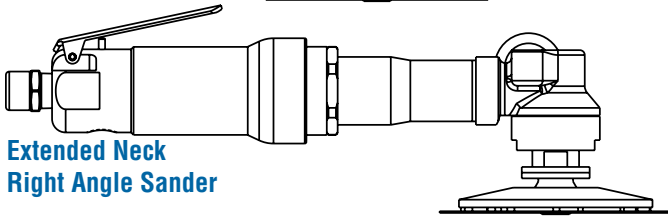
RIGHT ANGLE SANDERS, BUFFERS & POLISHERS

Extend Neck vs Standard

The extended neck option helps in regards to clearance issues when using various types of larger surface finishing abrasives. In these instances, the surface finishing abrasive can interfere with the area around the motor case normally used by the operator to grip the tool. The extended neck option moves the surface finishing abrasive forward which clears the area around the motor case for the operators hand.



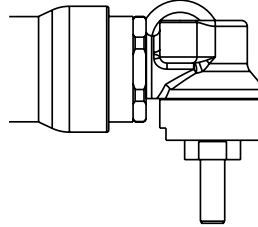
**Standard Style
Right Angle Sander**



**Extended Neck
Right Angle Sander**

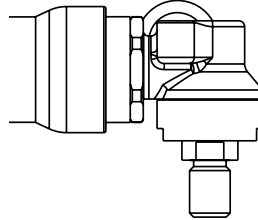
Spindle Options

3/8-24 X 0.980 Inch Spindle (Spindle Size 4)



This spindle is the most versatile. Adapters are available which will allow nearly any wheel to mount on this spindle (See chart below.)

5/8-11 X 0.875 Inch Spindle (Spindle Size 2)



This spindle is commonly used with type 27 (depressed center) wheels with either a 7/8" mounting hole or built-in flanges with threads. Adapters are available. (See chart below.)

Lever Style



Safety Lever

Regular Lever

Case Material

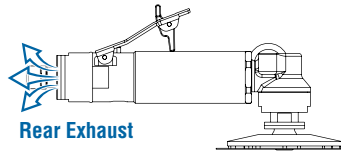


Aluminum Case Material

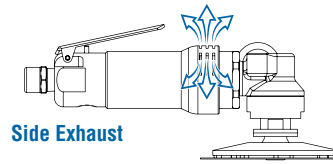
Steel Case Material

The choice of case material affects the weight and durability of the tool. By it's nature, aluminum is lighter in weight than steel. Steel is also more durable in aggressive environments.

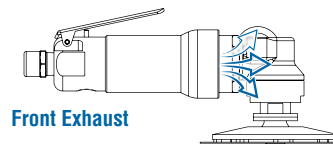
Exhaust Direction



Rear Exhaust



Side Exhaust

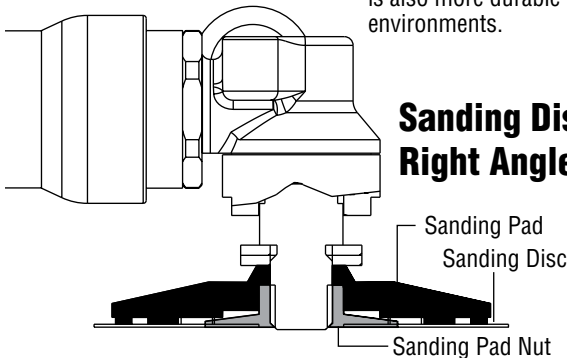


Front Exhaust

Speed/Sanding Pad Selection



The operating speed and sanding pad size are closely linked to promote safety and maximize efficiency of the sanding operation. Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed/sanding pad size options that best matches the application.



**Sanding Disk Mounting for
Right Angle Sanders**



Spiralcool® Pads

Part Number	Threads	Size	Description	Maximum Speed
889271-A	3/8-24	4 Inch (100mm)	Sanding Pad	12000 R.P.M.
849848-A	3/8-24	5 Inch (125mm)	Sanding Pad	10000 R.P.M
889271	5/8-11	4 Inch (100mm)	Sanding Pad	12000 R.P.M
849848	5/8-11	5 Inch (125mm)	Sanding Pad	10000 R.P.M
849913	5/8-11	7 Inch (180mm)	Sanding Pad	8500 R.P.M
849914	5/8-11	9 Inch (230mm)	Sanding Pad	6500 R.P.M
849259-A	3/8-24		Sanding Pad Nut	
849259	5/8-11		Sanding Pad Nut	
102-SPWR			Pad Nut Wrench	

Right Angle Sanders for use with Abrasive Discs

1" (25 mm) - 5" (125 mm)
0.4 - 1.2 H.P. (300 - 900 W)



- Air Inlet Size:**
250RA/300RA: 1/4" NPT
400RA/407RA: 3/8" NPT
- Hose Size Recommendations:**
250RA/300RA: 3/8" (10 mm)
400RA/407RA: 1/2" (13 mm)
- Extra Charge Accessories**
- Type 27 Adapters • Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
 - 2 Wrenches (sizes based on options)
- Special Features**
- Dual Position Dead Handle Mount

Quick Order Number

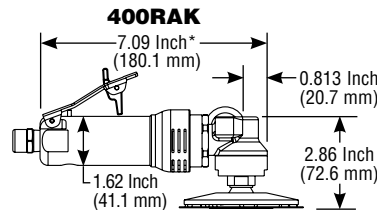
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Spindle Thread	Sanding Pad Size	Maximum Operating Speed	Throttle Type	
				Standard Throttle	Safety Throttle
250RA	1/4-20 External	Maximum 3" (Not Supplied)	20000 RPM	250RA6	250RA6K
300RA			15000 RPM	300RA6	300RA6K
400RA	5/8-11	4"	10000 RPM	400RA2;4SP	400RA2K;4SP
		5"		400RA2;5SP	400RA2K;5SP

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.



Front view of 250RA/300RA/400RA/407RA Series Tool



*The rear exhaust version adds 0.84 inch (21.3mm) to overall length.



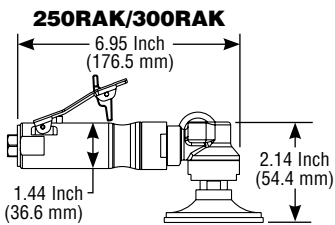
1.2 H.P. (900 W)



2.8 Lb. (1.3 Kg) Aluminum
3.5 Lb. (1.6 Kg) Steel



20 cfm (9.4 L/s) Free Speed
35 cfm (16.5 L/s) Max



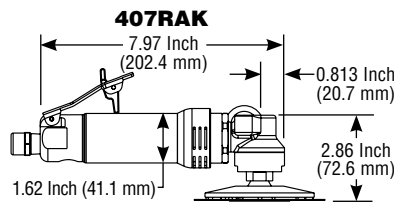
250RA - 0.4 H.P. (300 W)
300RA - 0.7 H.P. (525 W)



Aluminum Steel
250RA - 2.4 Lbs. (1.1 Kg) 2.9 Lbs. (1.3 Kg)
300RA - 2.5 Lbs. (1.1 Kg) 3.0 Lbs. (1.4 Kg)



250RA - 18 cfm (8.5 L/s) Max.
300RA - 25 cfm (11.8 L/s) Max.



1.2 H.P. (900 W)



2.8 Lb. (1.3 Kg) Aluminum
3.5 Lb. (1.6 Kg) Steel

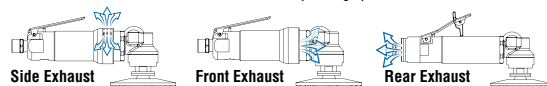


20 cfm (9.4 L/s) Free Speed
35 cfm (16.5 L/s) Max

Example Model Number: **400RA 4 K S R ; 10000;4SP**

Model Number	Spindle Options	Lever Style	Case Material	Exhaust Direction	Operating Speed/Sanding Pad Size
250RA	5 - 1/4-28 Internal	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	No Designation - Rear Exhaust	20000 - 20000 R.P.M.
300RA	6 - 1/4-20 External 7 - 1/2-28 Internal				15000 - 15000 R.P.M.
400RA	2 - 5/8-11 X 0.875 4 - 3/8-24 X 0.980			10000;4SP - 10000 R.P.M. with 4 Inch Sanding Pad 10000;5SP - 10000 R.P.M. with 5 Inch Sanding Pad	
407RA		5000-9000;4SP - 5000-9000 R.P.M. with 4 Inch Sanding Pad** 5000-9000;5SP - 5000-9000 R.P.M. with 5 Inch Sanding Pad**			

- ⚙️ Gearing Tool
- ⚙️ Governor Controlled Tool



**The range offered reflects the minimum to maximum operating speeds that this tool can be set. One must choose a speed within this range that best fits the application. Please examine the abrasive used with the tool for a maximum operating speed. The tool should be set at or below the maximum operating speed listed on the abrasive.

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Sanders for use with Abrasive Discs

1" (25 mm) - 5" (125 mm)
0.4 H.P. - 1.2 H.P. (300 - 900 w)



Air Inlet Size:

250RAE/300RAE: 1/4" NPT
400RAE/407RAE: 3/8" NPT

Hose Size Recommendations:
250RAE/300RAE: 3/8" (10 mm)
400RAE/407RAE: 1/2" (13 mm)

Extra Charge Accessories

• Type 27 Adapters • Safety Lever

Standard Equipment

• Tool • Operating Instructions and Service Manual
• 2 Wrenches (sizes based on options)

Special Features

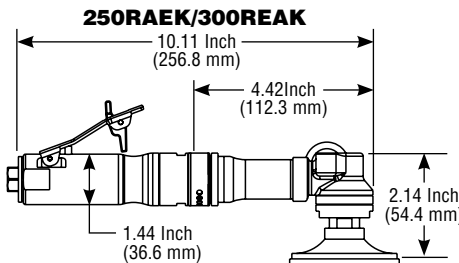
• Dual Position Dead Handle Mount

Quick Order Number

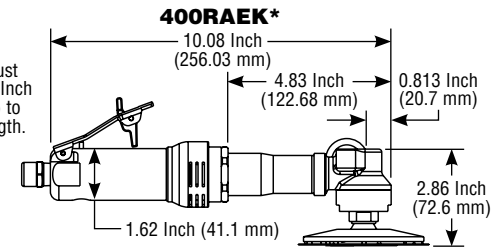
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Spindle Thread	Sanding Pad Size	Maximum Operating Speed	Throttle Type	
				Standard Throttle	Safety Throttle
250RAE	1/4-20 External	(Not Supplied)	20000 RPM	250RAE6	250RAE6K
300RAE			15000 RPM	300RAE6	300RAE6K
400RAE	5/8-11	4"	10000 RPM	400RAE2;4SP	400RAE2K;4SP
		5"		400RAE2;5SP	400RAE2K;5SP

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.

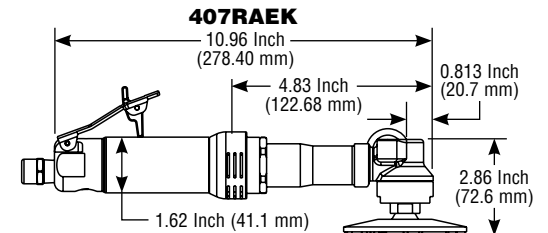


	250RAE - 0.4 H.P. (300 W) 300RAE - 0.7 H.P. (525 W)
	Aluminum Steel 250RAE - 2.9 Lbs. (1.3 Kg) 3.5 Lbs. (1.6 Kg) 300RAE - 3.0 Lbs. (1.4 Kg) 3.6 Lbs. (1.6 Kg)
	250RAE - 18 cfm (8.5 L/s) Max. 300RAE - 25 cfm (11.8 L/s) Max.



*Rear exhaust adds 0.82 Inch (20.8 mm) to overall length.

	0.4 H.P. (300 W)		2.8 Lb. (1.3 Kg) Aluminum 3.5 Lb. (1.6 Kg) Steel		20 cfm (9.4 L/s) Free Speed 35 cfm (16.5 L/s) Max.
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	1.2 H.P. (900 W)		2.8 Lb. (1.3 Kg) Aluminum 3.5 Lb. (1.6 Kg) Steel		20 cfm (9.4 L/s) Free Speed 35 cfm (16.5 L/s) Max.
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Example Model Number: **400RA 4 K S R ; 10000;4SP**

Model Number	Spindle Options	Lever Style	Case Material	Exhaust Direction	Operating Speed/Sanding Pad Size
250RAE	5 - 1/4-28 Internal	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	20000 - 20000 R.P.M.
300RAE	6 - 1/4-20 External 7 - 1/2-28 Internal				15000 - 15000 R.P.M.
400RAE	2 - 5/8-11 X 0.88 4 - 3/8-24 X 0.98				10000;4SP - 10000 R.P.M. with 4 Inch Sanding Pad 10000;5SP - 10000 R.P.M. with 5 Inch Sanding Pad
407RAE				No Designation - Side Exhaust	5000-9000;4SP - 5000-9000 R.P.M. with 4 Inch Sanding Pad** 5000-9000;5SP - 5000-9000 R.P.M. with 5 Inch Sanding Pad**

Geared Tool
 Governor Controlled Tool



**The range offered reflects the minimum to maximum operating speeds that this tool can be set. One must choose a speed within this range that best fits the application. Please examine the abrasive used with the tool for a maximum operating speed. The tool should be set at or below the maximum operating speed listed on the abrasive.

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Sanders for use with Abrasive Discs

2" (50 mm)
0.4 H.P. - 0.7 H.P. (300 - 525 W)



280RAK/290RAK/330RAK/340RAK

Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10mm)
Extra Charge Accessories

- Safety Lever

Standard Equipment

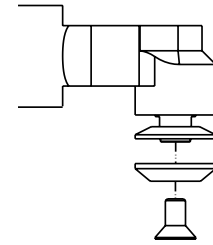
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Special Features

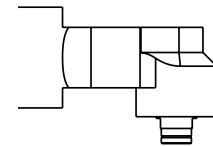
- Small Right Angle Head for Limited Space Sanding



Front view of
280RA/290RA/330RA/340RA
Series Tools



Internal Thread Output w/Flanges to
Mount 1/4" ID Surface Conditioning Discs



Internal Thread Output w/o Flanges to
Mount Cartridge Rolls

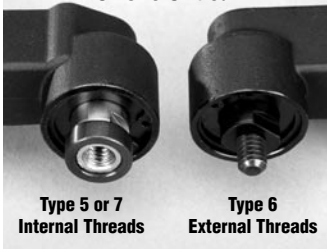
Quick Order Number

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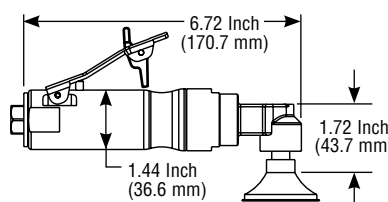
Model Number	Spindle Thread	Rated Speed	Throttle Type	
			Standard Lever	Safety Lever
280RA	1/4-20 External	16000 RPM	280RA6	280RA6K
290RA		26000 RPM	290RA6	290RA6K
330RA		12000 RPM	330RA6	330RA6K
340RA		20000 RPM	340RA6	340RA6K

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.

Very Small RA Head for Applications where Size is Critical



280RAK/290RAK/330RAK/340RAK



280RA/290RA - 0.4 H.P. (300 W)
330RA/340RA - 0.7 H.P. (525 W)



	<i>Aluminum</i>	<i>Steel</i>
280RA - 1.3 Lbs. (0.6 Kg)	1.8 Lbs. (0.8 Kg)	
290RA - 1.3 Lbs. (0.6 Kg)	1.8 Lbs. (0.8 Kg)	
330RA - 1.4 Lbs. (0.6 Kg)	2.0 Lbs. (0.9 Kg)	
340RA - 1.4 Lbs. (0.6 Kg)	2.0 Lbs. (0.9 Kg)	



280RA/290RA - 18 cfm (8.5 L/s) Max.
330RA/340RA - 25 cfm (11.8 L/s) Max.

Example Model Number: **330RA 6 K S ; 12000**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Spindle Options	Lever Style	Case Material	Operating Speed
280RA				16000 - 16000 R.P.M.
290RA	5 - 1/4-28 Internal	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	26000 - 26000 R.P.M.
330RA	6 - 1/4-20 External			12000 - 12000 R.P.M.
340RA	7 - 1/2-28 Internal			20000 - 20000 R.P.M.
Geared Tool				



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Sanders for use with Abrasive Discs

2" (50 mm)
0.4 H.P. - 1.2 H.P. (300 - 900 W)



- Air Inlet Size:**
270RA/320RA: 1/4" NPT
420RA: 3/8" NPT
- Hose Size Recommendations:**
270RA/320RA: 3/8" (10mm)
420RA: 1/2" (13mm)
- Extra Charge Accessories**
- Safety Lever

- Standard Equipment**
- Tool with Wrench • Operating Instructions and Service Manual

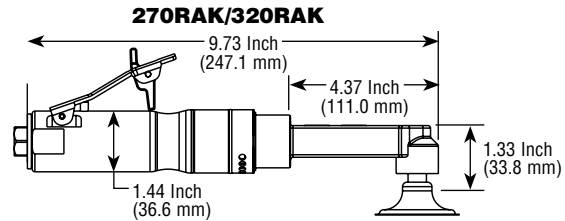
- Special Features**
- Small Right Angle Head for Limited Space Sanding

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

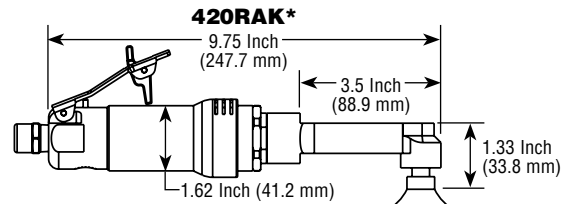
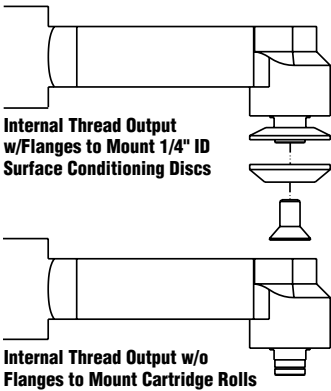
Model Number	Spindle Thread	Rated Speed	Throttle Type	
			Standard Lever	Safety Lever
270RA	1/4-20 External	26000 RPM	270RA6	270RA6K
320RA		20000 RPM	320RA6	320RA6K
420RA		13000 RPM	420RA6	420RA6K

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.



	270RA - 0.4 H.P. (300 W)		Aluminum	Steel
	320RA - 0.7 H.P. (525 W)		270RA - 2.0 Lbs. (0.9 Kg)	2.5 Lbs. (1.1 Kg)
			320RA - 2.1 Lbs. (1.0 Kg)	2.6 Lbs. (1.2 Kg)

	270RA - 18 cfm (8.5 L/s) Max
	320RA - 25 cfm (11.8 L/s) Max



*Rear exhaust adds 0.82 Inch (20.8 mm) to overall length.

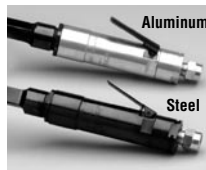
	1.2 H.P. (900 W)		2.7 Lb. Aluminum		35 cfm (16.5 L/s) Max
			3.2 Lb. Steel		

RIGHT ANGLE SANDERS, BUFFERS & POLISHERS

Example Model Number: **320RA 6 K S R ; 20000**

Model Number	Spindle Options	Lever Style	Case Material	Exhaust Direction	Operating Speed
270RA	5 - 1/4-28 Internal	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	26000 - 26000 R.P.M.
320RA	6 - 1/4-20 External				20000 - 20000 R.P.M.
420RA	7 - 1/2-28 Internal				13000 - 13000 R.P.M.

Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Sanders for use with Abrasive Discs

1" (25 mm) - 2" (50 mm)
0.4 H.P. - 1.2 H.P. (300 - 900 W)



Air Inlet Size:
2601RA/3101RA: 1/4" NPT
4101RA: 3/8" NPT
Hose Size Recommendations:
2601/3101RA: 3/8" (10mm)
4101RA: 1/2" (13mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool with Wrench • Operating Instructions and Service Manual

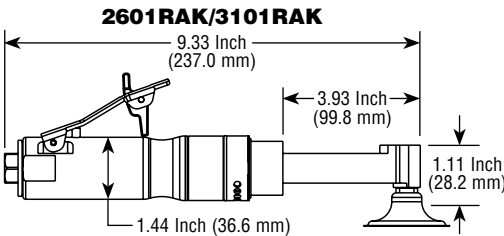
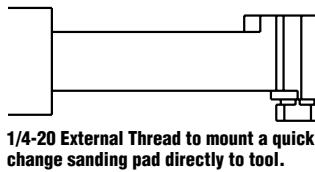
- Special Features**
- Small Right Angle Head for Limited Space Sanding
 - Extended Neck for Better Reach

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Spindle Thread	Rated Speed	Throttle Type	
			Standard Lever	Safety Lever
2601RA	1/4-20 External	30000 RPM	2601RA6	2601RA6K
3101RA		23000 RPM	3101RA6	3101RA6K
4101RA		15000 RPM	4101RA6	4101RA6K

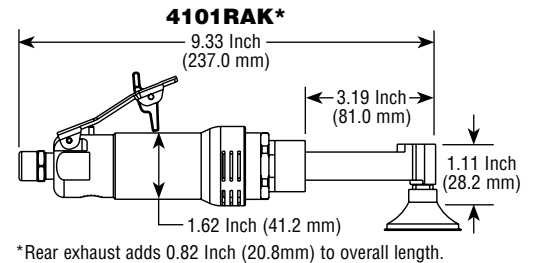
The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.



HP 2601RA - 0.4 H.P. (300 W)
3101RA - 0.7 H.P. (525 W)

Lbs Aluminum Steel
2601RA - 1.8 Lbs. (0.8 Kg) 2.3 Lbs. (1.0 Kg)
3101RA - 1.9 Lbs. (0.9 Kg) 2.4 Lbs. (1.1 Kg)

cfm 2601RA - 18 cfm (8.5 L/s) Max.
3101RA - 25 cfm (11.8 L/s) Max.

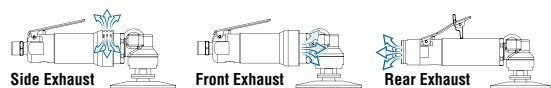


HP 1.2 H.P. (900 W) **Lbs** 2.3 Lb. (1.3 Kg) Aluminum 2.8 Lb. (1.6 Kg) Steel **cfm** 35 cfm (16.5 L/s) Max.

Example Model Number: **4101RA 6 K S R ; 15000**

Model Number	Spindle Options	Lever Style	Case Material	Exhaust Direction	Operating Speed/Sanding Pad Size
2601RA	5 - 1/4-28 Internal	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	30000 - 30000 R.P.M.
3101RA	6 - 1/4-20 External				23000 - 23000 R.P.M.
4101RA	7 - 1/2-28 Internal				15000 - 15000 R.P.M.

⚙️ Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

RIGHT ANGLE SANDERS, BUFFERS & POLISHERS

5" (125 mm) - 9" (230 mm)
1.2 H.P. (900 W)

Right Angle Sanders for use with Abrasive Discs

Powerful 1.2 H.P. Motor w/ Large, Durable RA Head



Air Inlet Size: 3/8" NPT

Hose Size Recommendations: 1/2" (13 mm)

Extra Charge Accessories

- Safety Lever

Standard Equipment

- Tool
- Operating Instructions and Service Manual
- 1 Wrench and 1 Pad Nut Wrench

SPECIAL FEATURES

- 1.2 H.P. Motor
- Dual Position Dead Handle Mount

Quick Order Number

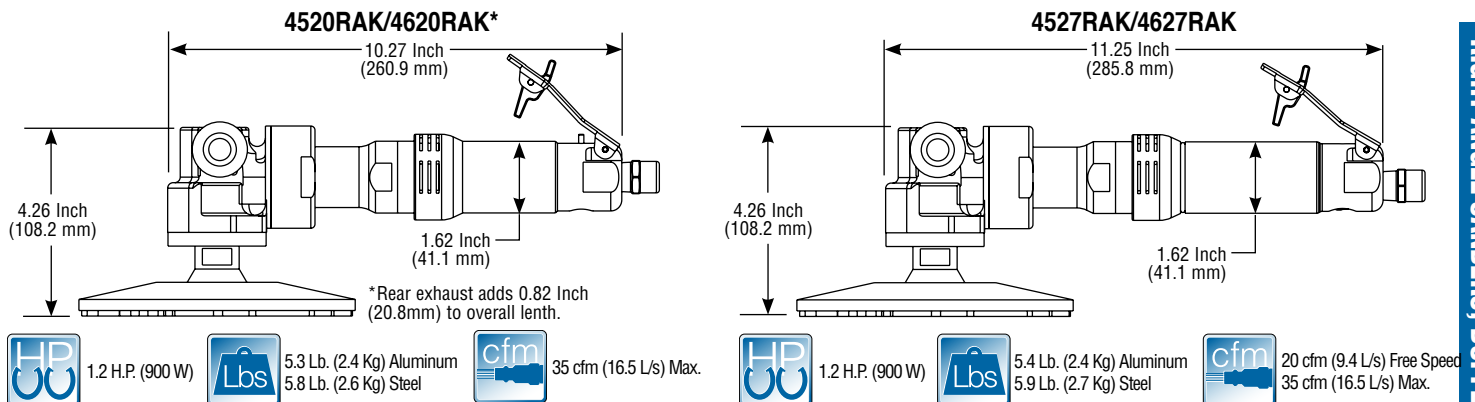
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Spindle Thread	Sanding Pad Size	Maximum Operating Speed	Throttle Type	
				Standard Throttle	Safety Throttle
4520RA	5/8-11	7 Inch	6000 RPM	4520RA;7SP	4520RAK;7SP
4620RA		5 Inch	10000 RPM	4620RA;5SP	4620RAK;5SP

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.



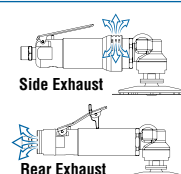
Front view of 4520RA/4527/4620RA/4627RA Series Tools



Example Model Number: **4101RA 2 K S R ; 15000**

Model Number	Spindle Options	Lever Style	Case Material	Exhaust Direction	Operating Speed/Sanding Pad Size
4520RA				Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	6000 - 7SP - 6000 R.P.M.with 7 Inch Sanding Pad 6000 - 9SP - 6000 R.P.M.with 9 Inch Sanding Pad
4527RA	2 - 5/8-11 X 0.875	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	No Designation - Side Exhaust	6000-5000 - 7SP - 3000-5000 R.P.M.with 7 Inch Sanding Pad** 6000-5000 - 9SP - 3000-5000 R.P.M.with 9 Inch Sanding Pad**
4620RA				No Designation - Side Exhaust R - Rear Exhaust	12000 - 5SP - 12000 R.P.M.with 5 Inch Sanding Pad
4627RA				No Designation - Side Exhaust	9000-11000 - 5SP - 9000-11000 R.P.M.with 5 Inch Sanding Pad**

- Geared Tool
- Governor Controlled Tool



**The range offered reflects the minimum to maximum operating speeds that this tool can be set. One must choose a speed within this range that best fits the application. Please examine the abrasive used with the tool for a maximum operating speed. The tool should be set at or below the maximum operating speed listed on the abrasive.

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Right Angle Sanders for use with Abrasive Discs

7" (180 mm) - 9" (230 mm)
2 H.P. (1500 W)



Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Reference

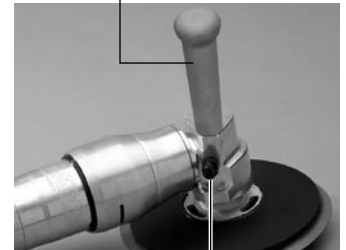
Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

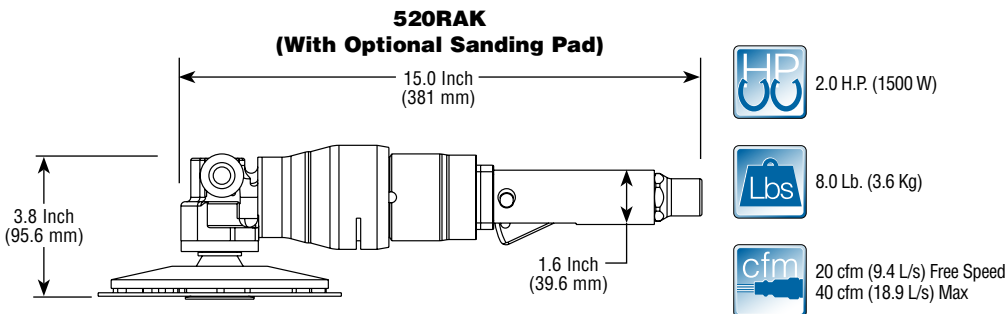
Model Number	Spindle Thread	Sanding Pad Size	Maximum Operating Speed	Throttle Type	
				Standard Throttle	Safety Throttle
520RA	5/8-11 X 0.9 Inch	7 Inch	8000 RPM	520RAXL;7SP	520RAXK;7SP

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.

Back Mountable Dead Handle



Spindle Lock



Example Model Number: **520RA 2 XLTKW ; 8000;7SP**

Model Number	Spindle Options	Lever Style	Operating Speed/Sanding Pad Size
520RA	1 - 5/8-11 0.9 Inch 2 - 5/8-11 1.1 Inch	Please choose one of the following options: K - Safety Lever XL - Standard Lever XK - Safety Lever XB - Thumb Switch XLTK - Turned/Knurled Standard Lever XKTK - Turned/Knurled Safety Lever XBTK - Turned/Knurled Thumb Switch XLTKW - Turned/Knurled/Cushioned Standard Lever XKTKW - Turned/Knurled/Cushioned Safety Lever XBTKW - Turned/Knurled/Cushioned Thumb Switch	6000;7SP - 6000 R.P.M. with 7 Inch Sanding Pad 6000;9SP - 6000 R.P.M. with 9 Inch Sanding Pad 8000;7SP - 8000 R.P.M. with 7 Inch Sanding Pad

Governor Controlled Tool Geared Tool

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

RIGHT ANGLE SANDERS, BUFFERS & POLISHERS

Low Speed Right Angle Sanders for use with Abrasive Discs

7" (180 mm)
1.2 H.P. (900 w)

**Powerful
1.2 H.P. Motor**

400RAE(X)ML*

400RA(X)ML*



**Air Inlet Size:
3/8" NPT (3/8" BSP Available)**

**Hose Size Recommendations:
1/2" (13 mm)**

Extra Charge Accessories

- Type 27 Adapters • Safety Lever

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Special Features

- 1.2 H.P. Motor • Dual Position Dead Handle Mount

*The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

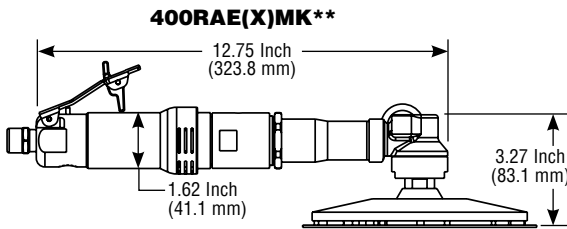
Model Number	Spindle Thread	Sanding Pad Size	Maximum Operating Speed	Throttle Type	
				Standard Throttle	Safety Throttle
400RA3M	5/8-11	7 Inch	2700 RPM	400RA3M;7SP	400RA3MK;7SP
400RA5M			2000 RPM	400RA5M;7SP	400RA5MK;7SP
400RA8M			1200 RPM	400RA8M;7SP	400RA8MK;7SP
400RAE3M			2700 RPM	400RAE3M;7SP	400RAE3MK;7SP
400RAE5M			2000 RPM	400RAE5M;7SP	400RAE5MK;7SP
400RAE8M			1200 RPM	400RAE8M;7SP	400RAE8MK;7SP

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.



Front view of
400RA(X)M Series Tools

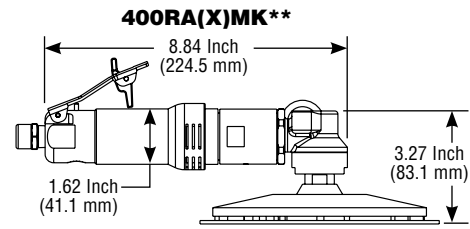
RIGHT ANGLE SANDERS, BUFFERS & POLISHERS



HP 1.2 H.P. (900 W)

Lbs Aluminum 4.7 Lb. (2.1 Kg)
Steel 5.3 Lb. (2.4 Kg)

cfm 35 cfm (16.5 L/s) Max



HP 1.2 H.P. (900W)

Lbs Aluminum 4.2 Lb. (1.9 Kg)
Steel 4.8 Lb. (2.2 Kg)

cfm 35 cfm Max (16.5 L/s)

**Rear exhaust adds 0.82 Inch (20.8mm) to overall length.
The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

Example Model Number: **400RA3M K S R ; 3500-7SP**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed
400RA3M				2700 - 7SP - 2700 R.P.M. with 7 Inch Sanding Pad
400RA5M	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	2000 - 7SP - 2000 R.P.M. with 7 Inch Sanding Pad
400RA8M				1200 - 7SP - 1200 R.P.M. with 7 Inch Sanding Pad
400RAE3M				2700 - 7SP - 2700 R.P.M. with 7 Inch Sanding Pad
400RAE5M				2000 - 7SP - 2000 R.P.M. with 7 Inch Sanding Pad
400RAE8M				1200 - 7SP - 1200 R.P.M. with 7 Inch Sanding Pad

Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Low Speed Right Angle Sanders for use with Abrasive Discs

7" (180 mm)
1.2 H.P. (900 w)



**Powerful
1.2 H.P. Motor**

4520RA(X)MRK/4620RA(X)MRK*

4520RA(X)M/4620RA(X)M*

Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Type 27 Adapters • Safety Lever

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Special Features

- Front, Side or Rear Exhaust Available
- 1.2 H.P. Motor • Dual Position Dead Handle Mount

*The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Spindle Thread	Sanding Pad Size	Maximum Operating Speed	Throttle Type	
				Standard Throttle	Safety Throttle
4520RA3M	5/8-11	7 Inch	2000 RPM	4520RA3M;7SP	4520RA3MK;7SP
4520RA5M			1200 RPM	4520RA5M;7SP	4520RA5MK;7SP
4520RA8M			750 RPM	4520RA8M;7SP	4520RA8MK;7SP
4620RA3M			4000 RPM	4620RA3M;7SP	4620RA3MK;7SP
4620RA5M			2400 RPM	4620RA5M;7SP	4620RA5MK;7SP
4620RA8M			1500 RPM	4620RA8M;7SP	4620RA8MK;7SP



Front view of
4520RA(X)M/4620RA(X)M Series Tools

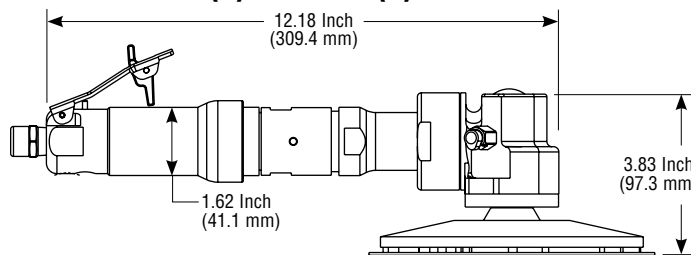
The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.

4520RA(X)MK/4620RA(X)MK**

**Rear exhaust adds 0.82 Inch (20.8mm) to overall length.

The (X) is representative of gear train number (3, 5 or 8).

The outer appearance of the tool is the same regardless of the gear train number.



1.2 H.P. (900 W)



	Aluminum	Steel
4520RA(X)MK	- 6.1 Lbs. (2.8 Kg)	6.7 Lbs. (3.0 Kg)
4620RA(X)MK	- 6.2 Lbs. (2.8 Kg)	6.8 Lbs. (3.1 Kg)



35 cfm (16.5 L/s) Max

Example Model Number: **4520RA3M K S R ; 2000;7SP**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed
4520RA3M				2000;7SP - 2000 R.P.M.with 7 Inch Sanding Pad
4520RA5M	Please choose one of the following options:	Please choose one of the following options:	Please choose one of the following options:	1200;7SP - 1200 R.P.M.with 7 Inch Sanding Pad
4520RA8M				750;7SP - 750 R.P.M.with 7 Inch Sanding Pad
4620RA3M	No Designation - Standard Lever	No Designation - Aluminum Case	No Designation - Side Exhaust	4000;7SP - 4000 R.P.M.with 7 Inch Sanding Pad
4620RA5M	K - Safety Lever	S - Steel Case	R - Rear Exhaust	2400;7SP - 2400 R.P.M.with 7 Inch Sanding Pad
4620RA8M				1500;7SP - 1500 R.P.M.with 7 Inch Sanding Pad

⚙️ Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

RIGHT ANGLE SANDERS, BUFFERS & POLISHERS



Horizontal Sanders/Polishers

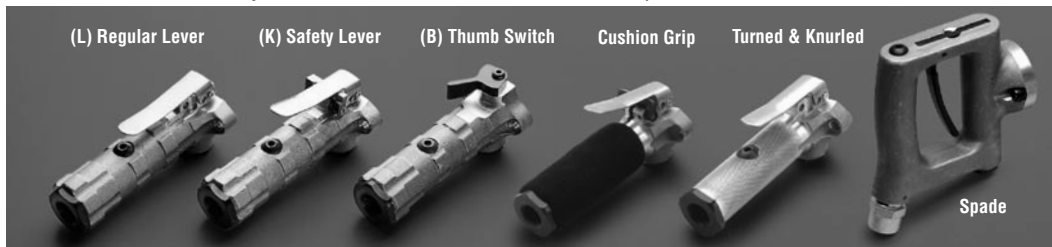
Section Contents

SANDERS (Single Planetary Gear Train)					
Page Number	Model Number	Power	Rated Operating Speed	Description	
43	400HGE3M	1.2 H.P.	5500 R.P.M.	<ul style="list-style-type: none"> • Non-Governed Motor • Collet Output 	
	400HGE5M		4000 R.P.M.		
	400HGE8M		2500 R.P.M.		
44	400GT3M	1.2 H.P.	5500 R.P.M.	<ul style="list-style-type: none"> • Non-Governed Motor • Threaded or Adapter Output 	
	400GT5M		4000 R.P.M.		
	400GT8M		2500 R.P.M.		
42	400GH3M	1.2 H.P.	5500 R.P.M.	<ul style="list-style-type: none"> • Non-Governed Motor • Collet, Threaded or Adapter Output 	
	400GH5M		4000 R.P.M.		
	400GH8M		2500 R.P.M.		
45	500H1M	1.5 H.P.	4000 R.P.M.	<ul style="list-style-type: none"> • Non-Governed Motor • Threaded or Adapter Output 	
	507H1M		1750 - 3600 R.P.M.		
		520H1M	2.0 H.P.	1500 - 3000 R.P.M.	<ul style="list-style-type: none"> • Governed Motor • Threaded or Adapter Output

BUFFERS & POLISHERS (Double Planetary Gear Train)					
Page Number	Model Number	Power	Rated Operating Speed	Description	
43	400HGE21M	1.2 H.P.	900 R.P.M.	<ul style="list-style-type: none"> • Non-Governed Motor • Collet Output 	
	400HGE36M		525 R.P.M.		
44	400GT21M	1.2 H.P.	900 R.P.M.	<ul style="list-style-type: none"> • Non-Governed Motor • Threaded or Adapter Output 	
	400GT36M		525 R.P.M.		
42	400GH21M	1.2 H.P.	900 R.P.M.	<ul style="list-style-type: none"> • Non-Governed Motor • Collet, Threaded or Adapter Output 	
	400GH36M		525 R.P.M.		
45	500H2M	1.5 H.P.	1000 R.P.M.	<ul style="list-style-type: none"> • Non-Governed Motor • Threaded or Adapter Output 	
	507H2M		500 - 900 R.P.M.		
		520H2M	2.0 H.P.	375 - 750 R.P.M.	<ul style="list-style-type: none"> • Governed Motor • Threaded or Adapter Output

Handles

Several different handle styles are offered on our vertical tools. The picture below shows each in detail.



*Only Tools of 1.5 H.P. or Larger can Accept the Spade Style handle. Tools of 1.2 H.P. and Lower have Different Handle Options.

Lever Style



Speed Size Selection

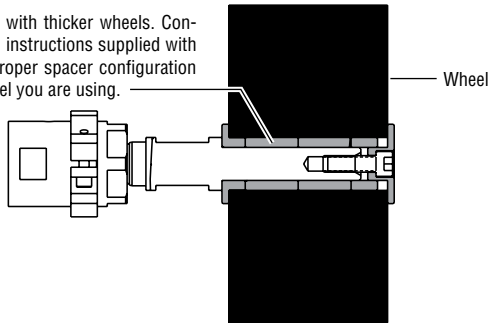
Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed size options to select the one that best matches the wheel size you are using.

Mounting of Wheels

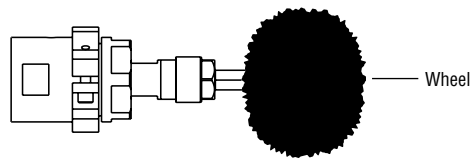
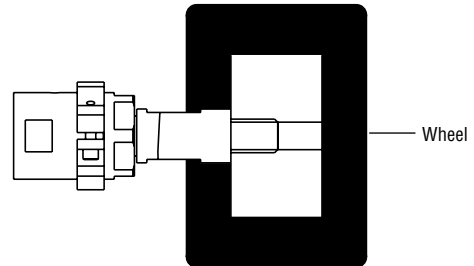
Each wheel type mounts onto the tool in a specific way. Please consult the diagrams below for details on how your particular wheel mounts onto the tool. More details on the mounting of wheels can be found in ANSI B186.1. Mounting wheels in ways other than those shown below are non-compliant and may lead to injury.

Proper Mounting of Flap and Surface Conditioning Wheels with a 1 Inch or 5/8 Inch Mounting Hole

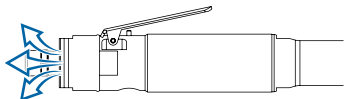
Spacers are used with thicker wheels. Consult the mounting instructions supplied with the tool for the proper spacer configuration based on the wheel you are using.



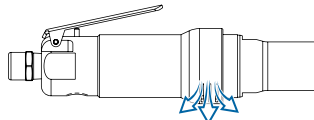
Proper Mounting of Inflatable and Expanding Wheels with a Threaded Mounting (1/2-13 or 5/8-11)



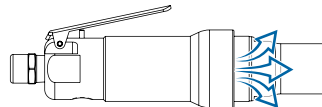
Exhaust Direction



Rear Exhaust
(0.7 HP & 1.2 HP Tools Only)



Side Exhaust



Front Exhaust

Horizontal Sanders & Polishers

525 R.P.M. to 5500 R.P.M.
1.2 H.P. (900 W)



Air Inlet Size: 3/8" NPT (3/8" BSP Available)
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Wheel Flange
- Wheel Nut • Wrench
- Operating Instructions and Service Manual

*The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

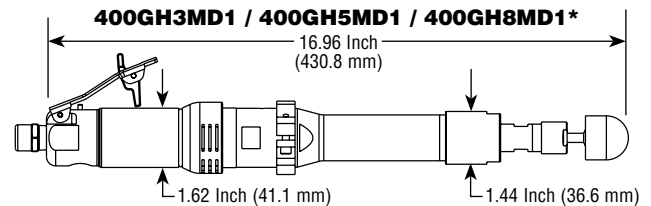
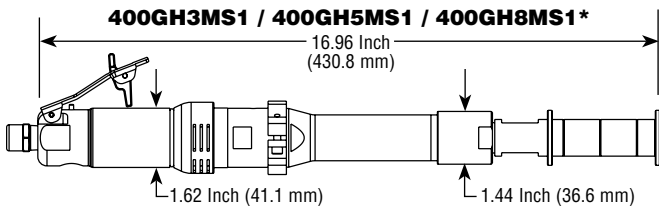
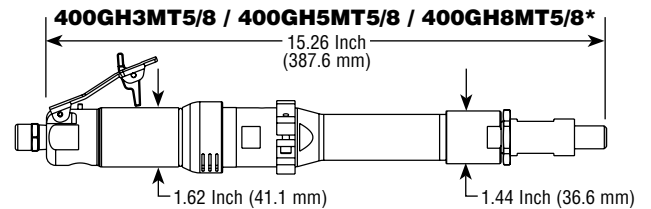


Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Rated Speed	Output Type		
		T5/8 - 5/8-11 Spindle	S1 - 1 or 5/8 Inch Adapter	D - Collet
400GH3M	5500 RPM	400GH3MT5/8	400GH3MS1	400GH3MD;1/4
400GH5M	4000 RPM	400GH5MT5/8	400GH5MS1	400GH5MD;1/4
400GH8M	2500 RPM	400GH8MT5/8	400GH8MS1	400GH8MD;1/4
400GH21M	900 RPM	400GH21MT5/8	400GH21MS1	400GH21MD;1/4
400GH36M	525 RPM	400GH36MT5/8	400GH36MS1	400GH36MD;1/4

All the versions listed in the table will be supplied with a standard lever throttle (class 1).
A safety lever throttle (class 2) is also available.



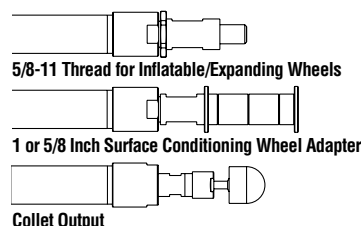
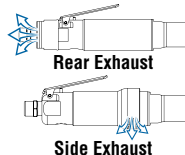
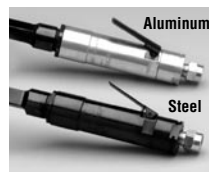
*Versions 400GH21M & 400GH36M add 0.51 Inch (13.0mm) to the overall length.
Rear exhaust adds 0.82 Inch (20.8mm) to overall length.

Example Model Number: **400GH3M K S R D ; 5500 ; 1/4**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Output Type	Operating Speed	Collet Size*
400GH3M					5500 - 5500 R.P.M.	1/8 - 1/8 Inch
400GH5M	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	T5/8 : 5/8-11 Thread for Inflatable/Expanding Wheels S1 : 1 or 5/8 Inch Surface Conditioning Wheel Adapter D : Collet Output	4000 - 4000 R.P.M.	1/4 - 1/4 Inch
400GH8M					2500 - 2500 R.P.M.	3/8 - 3/8 Inch
400GH21M	900 - 900 R.P.M.	6MM - 6 mm				
400GH36M	525 - 525 R.P.M.	8MM - 8 mm				
400GH3M						

⚙️ Geared Tool



*An entry from this column is only necessary when the D (Collet Output) option is chosen.

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

HORIZONTAL SANDERS/POLISHERS

Horizontal Sanders & Polishers



Air Inlet Size: 3/8" NPT (3/8" BSP Available)
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Wheel Flange
- Wheel Nut • Wrench
- Operating Instructions and Service Manual

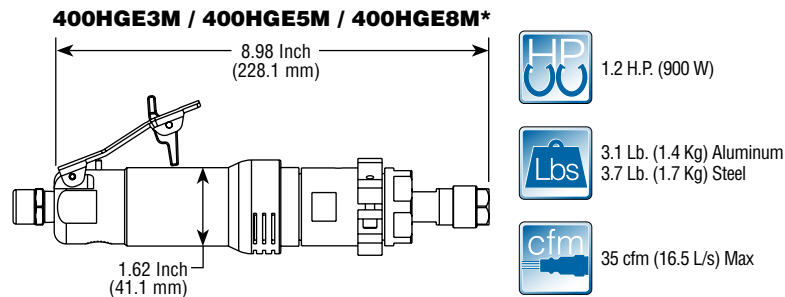
*The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Collet Size	Rated Speed	Throttle Type	
			Standard Throttle	Safety Throttle
400HGE3M	1/4 Inch	5500 RPM	400HGE3M;1/4	400HGE3MK;1/4
400HGE5M		4000 RPM	400HGE5M;1/4	400HGE5MK;1/4
400HGE8M		2500 RPM	400HGE8M;1/4	400HGE8MK;1/4
400HGE21M		900 RPM	400HGE21M;1/4	400HGE21MK;1/4
400HGE36M		525 RPM	400HGE36M;1/4	400HGE36MK;1/4

All the versions listed in the table will be supplied with a standard lever throttle (class 1).
A safety lever throttle (class 2) is also available.



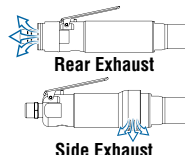
*Versions 400HGE21M & 400HGE36M add 0.51 Inch (13.0mm) to the overall length.
Rear exhaust adds 0.82 Inch (20.8mm) to overall length.

Example Model Number: **400HGE3M K S R ; 5500 ; 1/4**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Collet Size
400HGE3M				5500 - 5500 R.P.M.	1/8 - 1/8 Inch
400HGE5M	Please choose one of the following options:	Please choose one of the following options:	Please choose one of the following options:	4000 - 4000 R.P.M.	1/4 - 1/4 Inch
400HGE8M	No Designation - Standard Lever	No Designation - Aluminum Case	No Designation - Side Exhaust	2500 - 2500 R.P.M.	3/8 - 3/8 Inch
400HGE21M	K - Safety Lever	S - Steel Case	R - Rear Exhaust	900 - 900 R.P.M.	3MM - 3 mm
400HGE36M				525 - 525 R.P.M.	6MM - 6 mm 8MM - 8 mm

Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Horizontal Sanders & Polishers

525 R.P.M. to 5500 R.P.M.
1.2 H.P. (900 W)



*The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

Air Inlet Size: 3/8" NPT (3/8" BSP Available)
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Wheel Flange
- Wheel Nut • Wrench
- Operating Instructions and Service Manual

Quick Order Number

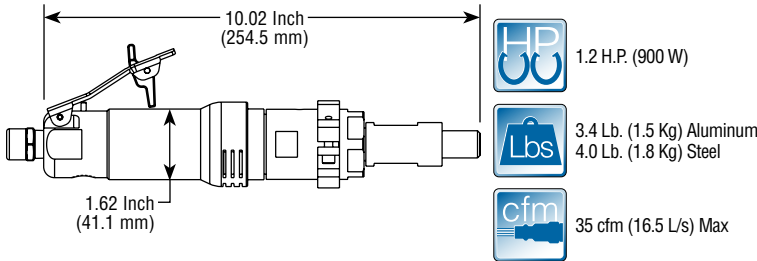
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Rated Speed	Output Type	
		T5/8 - 5/8-11 Spindle	S1 - 1 or 5/8 Inch Adapter
400GT3M	5500 RPM	400GT3MT5/8	400GT3MS1
400GT5M	4000 RPM	400GT5MT5/8	400GT5MS1
400GT8M	2500 RPM	400GT8MT5/8	400GT8MS1
400GT21M	900 RPM	400GT21MT5/8	400GT21MS1
400GT36M	525 RPM	400GT36MT5/8	400GT36MS1

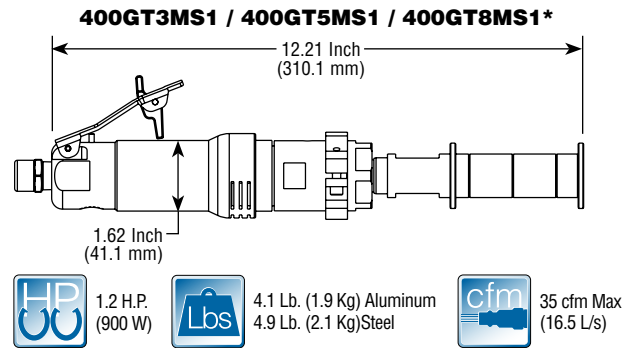
All the versions listed in the table will be supplied with a standard lever throttle (class 1).
A safety lever throttle (class 2) is also available.



400GT3MT5/8 / 400GT5MT5/8 / 400GT8MT5/8*



*Versions 400GT21M & 400GT36M add 0.51 Inch (13.0mm) to the overall length.
Rear exhaust adds 0.82 Inch (20.8mm) to overall length.

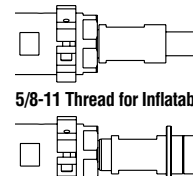
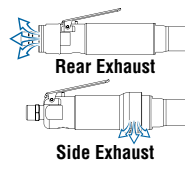


Example Model Number: **400GT3M K S R ; T5/8 ; 5500**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Output Type	Operating Speed
400GT3M					5500 - 5500 R.P.M.
400GT5M	Please choose one of the following options:	Please choose one of the following options:	Please choose one of the following options:	T5/8 - 5/8-11 Thread for Inflatable/Expanding Wheels	4000 - 4000 R.P.M.
400GT8M	No Designation - Standard Lever	No Designation - Aluminum Case	No Designation - Side Exhaust	S1 - 1 or 5/8 Inch Surface Conditioning Wheel Adapter	2500 - 2500 R.P.M.
400GT21M	K - Safety Lever	S - Steel Case	R - Rear Exhaust		900 - 900 R.P.M.
400GT36M					525 - 525 R.P.M.

Geared Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

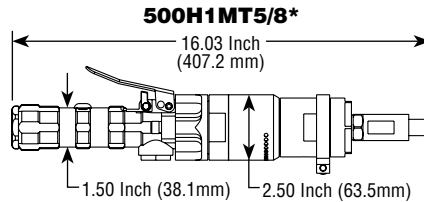
HORIZONTAL SANDERS/POLISHERS

Horizontal Sanders & Polishers

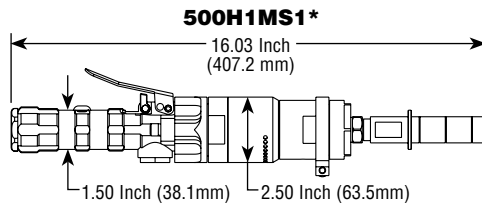


Air Inlet Size: 1/2" NPT (1/2" BSP Available)
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Wheel Flange • Wheel Nut • Wrench
- Operating Instructions and Service Manual
- Side Handle



HP 1.5 H.P. (1500 W)
Lbs 6.5 Lb. (2.9 Kg)
cfm 35 cfm Max (16.5 L/s)



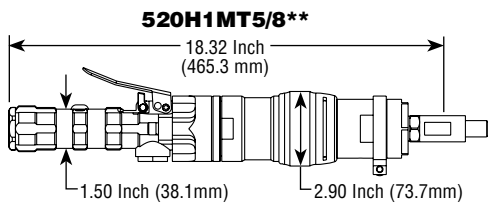
HP 1.5 H.P. (1500 W)
Lbs 6.5 Lb. (2.9 Kg)
cfm 35 cfm Max (16.5 L/s)

*The Spade Handle (G) Adds 1 Lb. (0.45 Kg) To Weight Of Tool

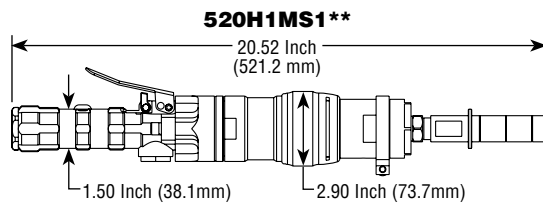
Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Rated Speed	Output Type	
		T5/8 - 5/8-11 Spindle	S1 - 1 or 5/8 Inch Adapter
500H1M	4000 RPM	500H1MT5/8	500H1MS1
500H2M	1000 RPM	500H2MT5/8	500H2MS1



HP 2.0 H.P. (2250 W) **Lbs** 8.5 Lb. (3.8 Kg) **cfm** 20 cfm (9.4 L/s) Free Speed 40 cfm (18.9 L/s) Max



HP 2.0 H.P. (2250 W) **Lbs** 8.5 Lb. (3.8 Kg) **cfm** 20 cfm (9.4 L/s) Free Speed 40 cfm (18.9 L/s) Max

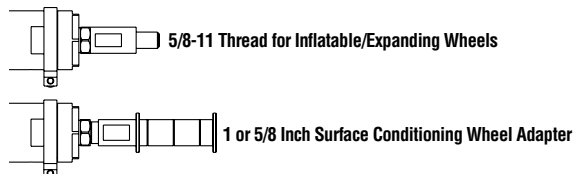
** The 520H2 double planetary geared tools adds 2.15 Inch (54.6mm) to overall length. The Spade Handle (G) Adds 1 Lb. (0.45 Kg) To Weight Of Tool

Example Model Number: **500H1M K S1 ; 4000**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Output Type	Operating Speed
500H1M	Please choose one of the following options: L - Standard Lever	Please choose one of the following options: T5/8 - 5/8-11 Thread for Inflatable/Expanding Wheels S1 - 1 or 5/8 Inch Surface Conditioning Wheel Adapter	4000 - 4000 R.P.M.
500H2M	K - Safety Lever		1000 - 1000 R.P.M.
507H1M	B - Thumb Switch		1750 - 3600 - 1750 - 3600 R.P.M.
507H2M	G - Spade Handle		500 - 900 - 500 - 900 R.P.M.
520H1M	LTK - Turned/Knurled Standard Lever		1500 - 3000 - 1500 - 3000 R.P.M.
520H2M	KTKW - Turned/Knurled/Cushioned Safety Lever		375 - 750 - 375 - 750 R.P.M.
	BTKW - Turned/Knurled/Cushioned Thumb Switch		



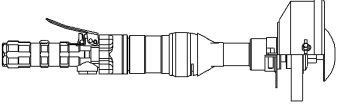
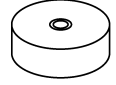

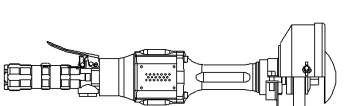
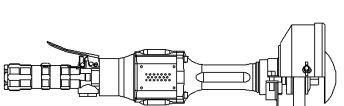


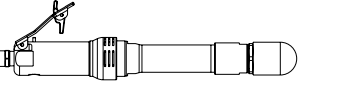
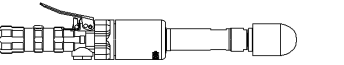


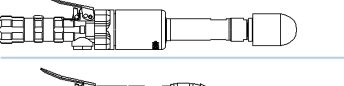


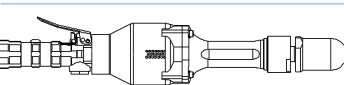
- Geared Tool
- Governor Controlled Tool



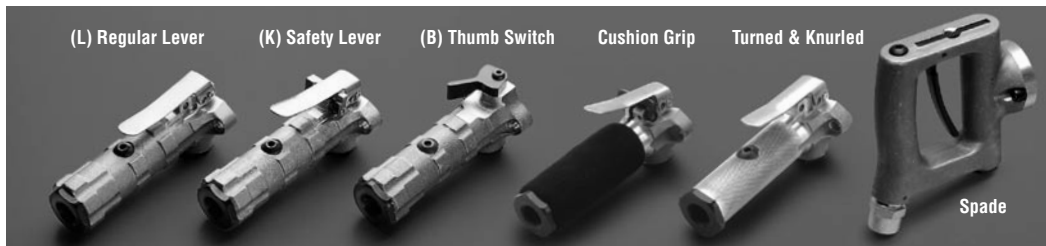
WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Large Horizontal Grinders

Section Contents

Page Number	Model Number	Power	Description	
47	5201H	2.0 H.P.	Horizontal Grinders for use with Larger (6 Inch - 8 Inch) Type 1 Wheels	 Type 1 Wheel  Circular Flap Wheels 
47	56H	3.0 H.P.	Horizontal Grinders for use with Larger (6 Inch - 8 Inch) Type 1 Wheels	 Surface Finishing Wheels  Circular Wire Wheels 
47	65H	4.0 H.P.	Horizontal Grinders for use with Larger (6 Inch - 8 Inch) Type 1 Wheels	
48	400GH	1.2 H.P.	Horizontal Grinders for use with 5/8-11 Cone Wheels	 Type 16 Cone Wheel  Type 17 Cone Wheel 
48	511H	1.5 H.P.	Horizontal Grinders for use with 5/8-11 Cone Wheels	
48	5201H	2.0 H.P.	Horizontal Grinders for use with 5/8-11 Cone Wheels	 Type 17R Cone Wheel  Type 18 Cone Wheel 
48	56H	3.0 H.P.	Horizontal Grinders for use with 5/8-11 Cone Wheels	
48	65H	4.0 H.P.	Horizontal Grinders for use with 5/8-11 Cone Wheels	 Type 18R Cone Wheel 

Handles



Several different handle styles are offered on our horizontal tools. The picture above shows each in detail.

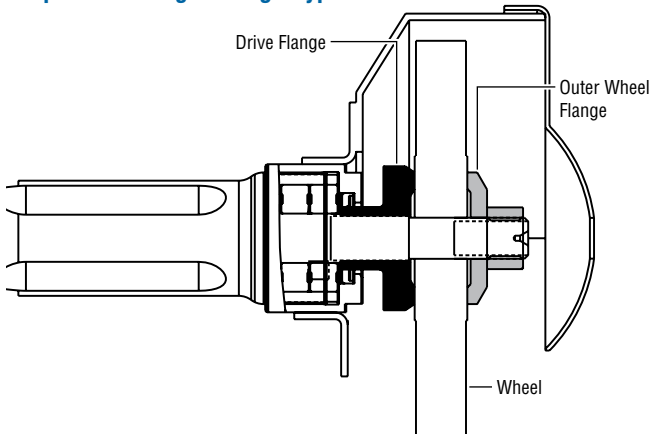
Speed/Guard Size Selection

The operating speed and guard size are closely linked to promote safety and maximize efficiency of the grinding operation. Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed/guard size options to select the one that matches the wheel speed/size you are using.

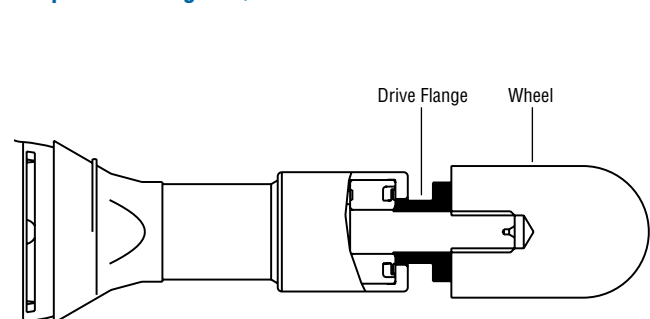
Mounting of Wheels

Each wheel type mounts onto the tool in a specific way. Please consult the diagrams below for details on how your particular wheel mounts onto the tool. More details on the mounting of wheels can be found in ANSI B7.1 and ANSI B186. Mounting wheels in ways other than those shown below are non-compliant and may lead to injury.

Proper Mounting of Large Type 1 Wheels

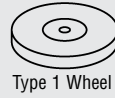


Proper Mounting of 5/8-11 Cone Wheels



Large Horizontal Grinders For Type 1 Wheels, Flap Wheels and Wire Wheels

4" (100 mm) – 8" (200 mm)
2-4 H.P. (1500–3000 W)



Type 1 Wheel



Circular Flap Wheel



Surface Finishing Wheel



Circular Wire Wheel

Air Inlet Size: 1/2" NPT

Hose Size Recommendations: 1/2" (13 mm)

Extra Charge Accessories

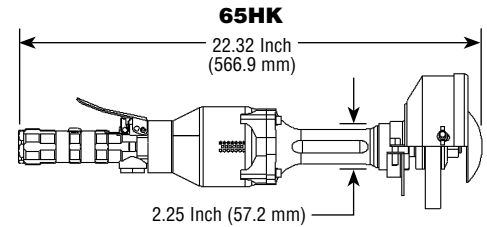
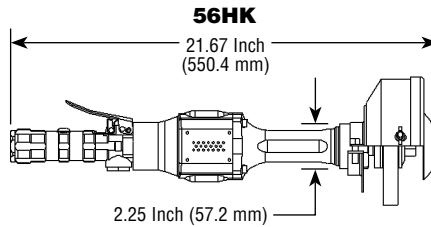
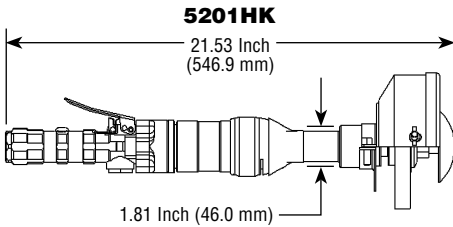
- +2" and +3" spindles for use with wire buffing wheels (56H & 65H Series Only)
- Cone Wheel Adapters • Adapters for Surface Finishing Wheels
- Reinforced Guards (56H & 65H Series Only)

Standard Equipment

- Tool with Wheel Guard of Choice • Wheel Flange • Wheel Nut
- Wrench • Operating Instructions and Service Manual

Quick Order Number					
Model Number	Guard Size	Maximum Operating Speed	Throttle Handle Type		
			Standard	Safety	Spade
5201H	6	8000 RPM	5201HL;601	5201HK;601	5201HG;601
56H	6		56HL;601	56HK;601	56HG;601
	8	6000 RPM	56HL;801	56HK;801	56HG;801
65H	6	8000 RPM	65HL;601	65HK;601	65HG;601
	8	6000 RPM	65HL;801	65HK;801	65HG;801

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



HP 2.0 H.P. (1500 W)

cfm 20 cfm (9.4 L/s) Free Speed
40 cfm (18.9 L/s) Max

HP 3.0 H.P. (2250 W)

cfm 25 cfm (11.8 L/s) Free Speed
60 cfm (28.3 L/s) Max

HP 4.0 H.P. (3000 W)

cfm 25 cfm (11.8 L/s) Free Speed
75 cfm (35.3 L/s) Max

Lbs 11.7 Lb. (5.3 Kg)

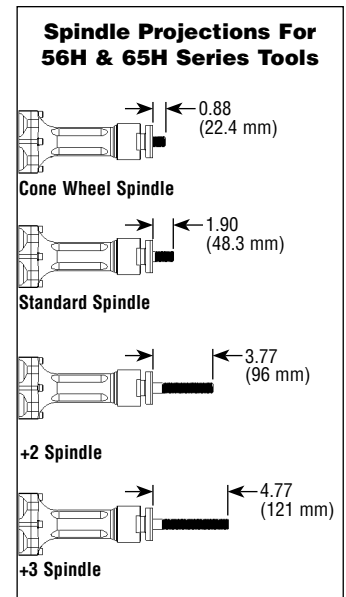
Lbs 12.9 Lb. (5.8 Kg)

Lbs 14.1 Lb. (6.4 Kg)

Example Model Number: **56H G ; 6000;601**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Operating Speed/Guard Size
5201H	L - Standard Lever K - Safety Lever B - Thumb Switch G - Spade Handle	12000;401 - 12000 R.P.M. with 4 Inch T1 Wheel Guard 6000;601 - 6000 R.P.M. with 6 Inch T1 Wheel Guard 8000;601 - 8000 R.P.M. with 6 Inch T1 Wheel Guard
56H	LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch	6000;601 - 6000 R.P.M. with 6 Inch T1 Wheel Guard 8000;601 - 8000 R.P.M. with 6 Inch T1 Wheel Guard 6000;801 - 6000 R.P.M. with 8 Inch T1 Wheel Guard
65H	LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	



Geared Tool Governor Controlled Tool

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Large Horizontal Grinders For 5/8-11 Cone Wheels



Air Inlet Size:
400GH: 3/8" NPT
511H, 5201HCW, 56HCW & 65HCW: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Standard Equipment

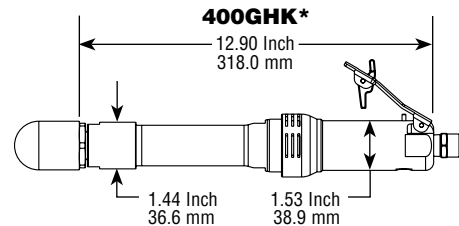
- Tool • Wheel Nut • Wrench
- Operating Instructions and Service Manual

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Maximum Operating Speed	Throttle Handle Type	
		Standard	Safety
400GH2*	20000 RPM	400GH2S	400GH2SK
511H*	18000 RPM	511HLS	511HKS
5201H*	12000 RPM	5201HLCW	5201HCKW
56H	9000 RPM	56HLCW	56HCKW
65H	8000 RPM	65HLCW	65HCKW

*The 400GH2 and 511H tools ordered under the numbers in this chart will be supplied with steel case material. Aluminum case material is available for these models. Please see the chart at the bottom of this page.



1.2 H.P. (900 W)



3.5 Lb. (1.6 Kg) Aluminum
4.6 Lb. (2.1 Kg) Steel



35 cfm (16.5 L/s) Max

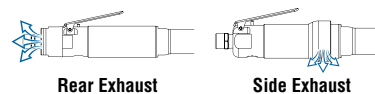
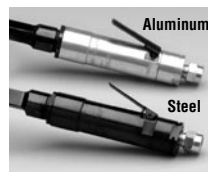
*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.

Example Model Number: **400GH2 K S R ; 20000**

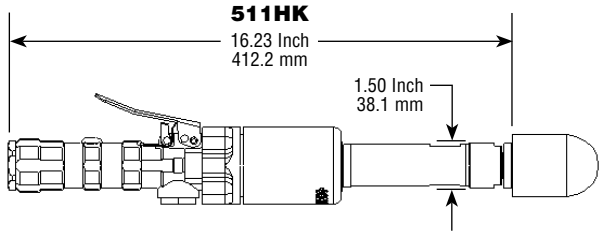
The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	
400GH2	Please choose one of the following options: L - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	20000 - 20000 R.P.M.	
511H	Please choose one of the following options: L - Standard Lever K - Safety Lever	Steel	Side	18000 - 18000 R.P.M.	
5201HCW	B - Thumb Switch G - Spade Handle LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever			Please choose one of the following options: 9000 - 9000 R.P.M. 12000 - 12000 R.P.M.	
56HCW	BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever			Aluminum	9000 - 9000 R.P.M.
65HCW	BTKW - Turned/Knurled/Cushioned Thumb Switch				8000 - 8000 R.P.M.

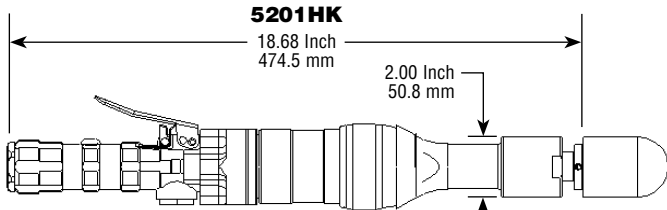
Governor Controlled Tool



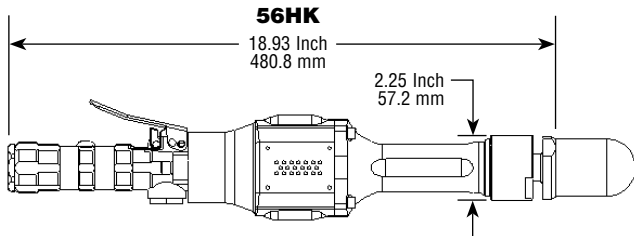
WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.



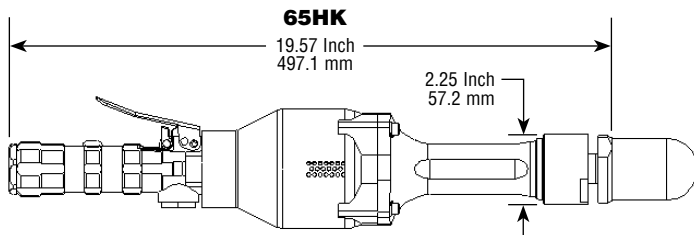
511HK
 1.5 H.P. (1125 W)
 5.9 Lb. (2.7 Kg) Aluminum
 7.2 Lb. (3.3 Kg) Steel
 35 cfm (16.5 L/s) Max



5201HK
 2.0 H.P. (1500 W)
 8.6 Lb. (3.9 Kg)
 20 cfm (9.4 L/s) Free Speed
 35 cfm (18.9 L/s) Max



56HK
 3.0 H.P. (2250 W)
 9.6 Lb. (4.3 Kg)
 25 cfm (11.8 L/s) Free Speed
 60 cfm (28.3 L/s) Max



65HK
 4.0 H.P. (3000 W)
 10.8 Lb. (4.9 Kg)
 25 cfm (11.8 L/s) Free Speed
 75 cfm (35.3 L/s) Max

Small Horizontal Grinders

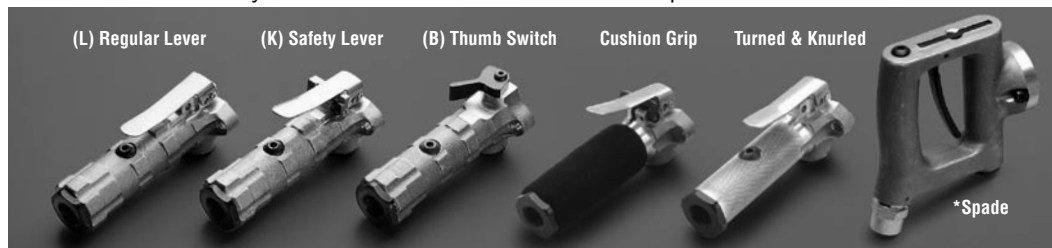
SMALL HORIZONTAL GRINDERS

Section Contents

Page Number	Model Number	Power	Motor Style	Description	
52	400GH4	1.2 H.P.	Non-Governed	Horizontal Grinders for use with Smaller Type 1 Wheels	
52	407GH4		Governed		 Type 1 Wheel Circular Flap Wheel
52	51H	1.5 H.P.	Non-Governed	Horizontal Grinders for use with 3/8" Cone Wheels	
52	57H		Governed		 Surface Finishing Wheel Circular Wire Wheel
54	400GH1	1.2 H.P.	Non-Governed	Horizontal Die Grinders with Fixed Size Collets	
54	51HCW	1.5 H.P.	Non-Governed		 Type 16 Cone Wheel Type 17 Cone Wheel Type 17R Cone Wheel Type 18 Cone Wheel Type 18R Cone Wheel
56	51H		Non-Governed	Horizontal Die Grinders with Narrow Neck	
56	250EH	0.4 H.P.	Non-Governed		 Mounted Stones
56	300EH		Non-Governed	Horizontal Die Grinders with Insert Style Collets	
56	300GHD	0.7 H.P.	Non-Governed		 Carbide Burrs
56	400GHD	1.2 H.P.	Non-Governed	Horizontal Die Grinders with Insert Style Collets	
56	5102H	1.5 H.P.	Non-Governed		

Handles

Several different handle styles are offered on our horizontal tools. The picture below shows each in detail.



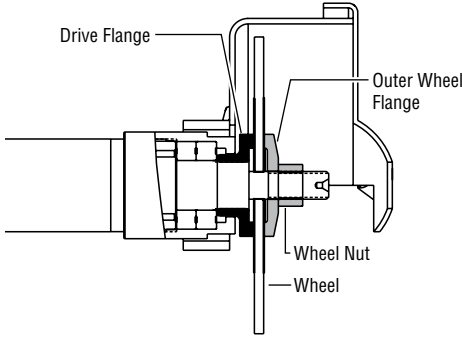
*Only tools of 1.5 H.P. or larger can accept the spade style handle. Tools of 1.2 H.P. and lower have different handle options.

Lever Style

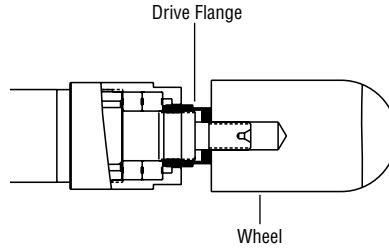


Mounting of Wheels

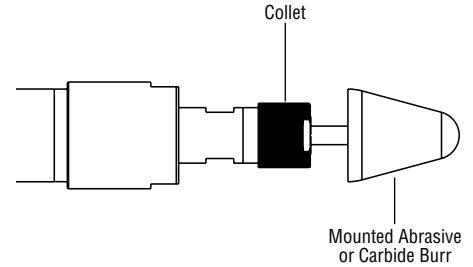
Proper Mounting of Smaller Type 1 Wheels



Proper Mounting of 3/8-24 Cone Wheels



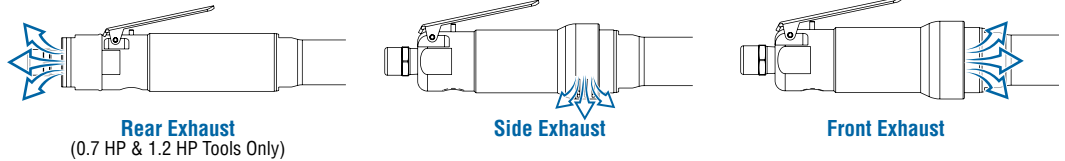
Proper Mounting of Inserted Tooling (Burrs/Mounted Stones)



Case Material

The choice of case material affects the weight and durability of the tool. By its nature, aluminum is lighter in weight than steel. Steel is more durable in aggressive environments.

Exhaust Direction



Speed/Guard Size Selection

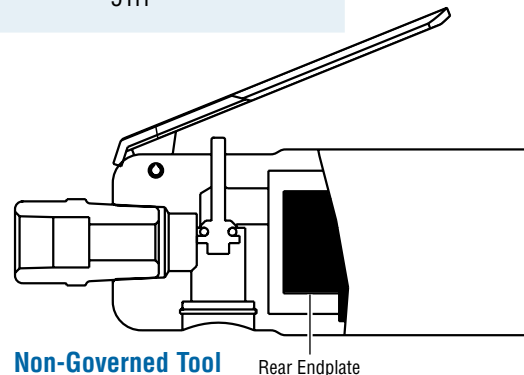
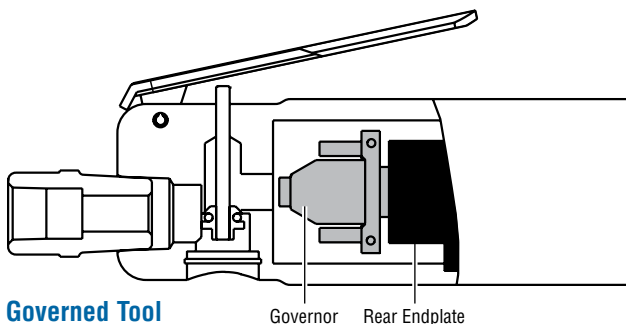
The operating speed and guard size are closely linked to promote safety and maximize efficiency of the grinding operation. Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed/guard size options to select the one that matches the wheel speed/size you are using.



Governed vs. Non-Governed Tools

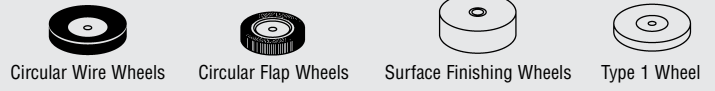
A governor on a tool will help to maintain a high level of torque at lower operating speeds. If your application requires a lower operating speed, then a governor may be to your benefit. Tools set to higher rated speeds will not benefit from the use of a governor. The following chart will act as a guide based on the operating speed required by your application.

R.P.M.	Speeds Normally Deemed for Surface Finishing Abrasives			4 Inch Type 1 Wheels	Speeds Normally Deemed for Burrs/Mounted Stones & Small Cut-off Wheels				
	12000	13000	14000	15000	16000	17000	18000	19000	20000
1.2 H.P.		407GH					400GH		
1.5 H.P.		57H				51H			



Grinders For 3/8" I.D. Type 1 Wheels, Flap Wheels And Wire Wheels

SMALL HORIZONTAL GRINDERS



Air Inlet Size:
400GH4 & 407GH4: 3/8" NPT
51H & 57H: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)

Extra Charge Accessories

- Cone Wheel Adapters • Heavy-Duty 2-pc. Collets
- Erickson Style Collets • Safety Lever

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number

Model Number	Guard Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
400GH4	3 Inch	18000 RPM	400GH4;301	400GH4S;301
407GH4	4 Inch	15000 RPM	407GH4;401	407GH4S;401
51H	3 Inch	18000 RPM	51HL;301	51HLS;301
57H	4 Inch	15000 RPM	57HL;401	57HLS;401

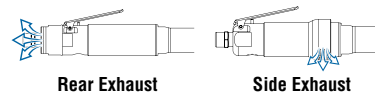
All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

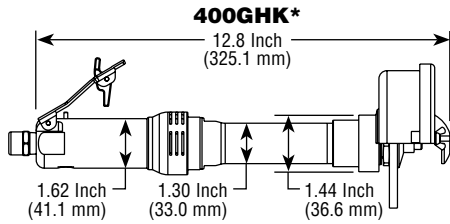
Example Model Number: **400GH4 K S R ; 18000**

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed
400GH4	Please choose one of the following options: L - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	18000 - 18000 R.P.M. with 3 Inch T1 Guard
407GH4				15000 - 15000 R.P.M. with 4 Inch T1 Guard
51H	Please choose one of the following options: L - Standard Lever K - Safety Lever B - Thumb Switch G - Spade Handle LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch		No Designation - Side Exhaust	18000 - 18000 R.P.M. with 3 Inch T1 Guard
57H				15000 - 15000 R.P.M. with 4 Inch T1 Guard

Governor Controlled Tool



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.



1.2 H.P.
(900 W)

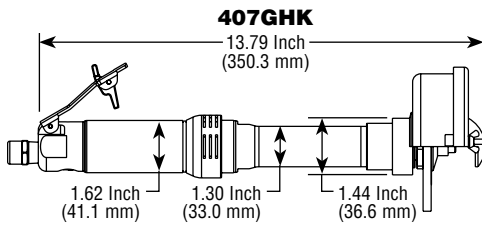


3.5 Lb. (1.6 Kg) Aluminum
4.7 Lb. (2.1 Kg) Steel



35 cfm (16.5 L/s) Max

*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.



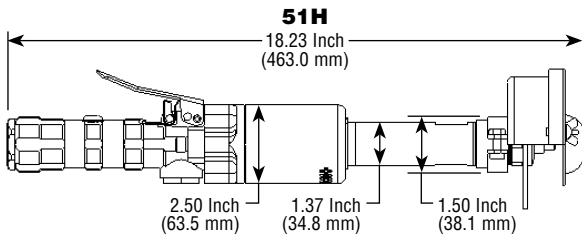
1.2 H.P.
(900 W)



3.6 Lb. (1.6 Kg) Aluminum
4.9 Lb. (2.2 Kg) Steel



20 cfm (9.4 L/s) Free Speed
35 cfm (16.5 L/s) Max



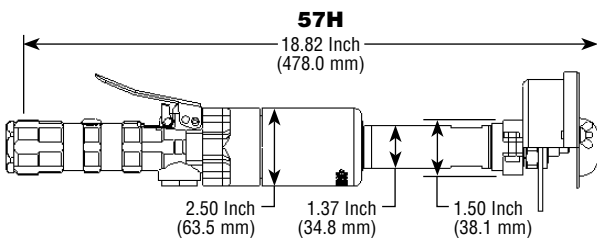
1.5 H.P.
(1125 W)



6.0 Lb. (2.7 Kg) Aluminum
7.6 Lb. (3.4 Kg) Steel



35 cfm (16.5 L/s) Max



1.5 H.P.
(1125 W)



6.1 Lb. (2.8 Kg) Aluminum
7.7 Lb. (3.5 Kg) Steel



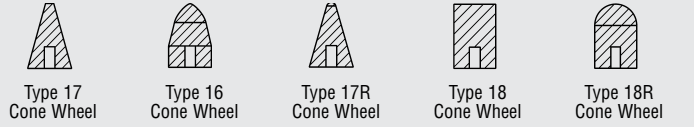
20 cfm (9.4 L/s) Free Speed
35 cfm (16.5 L/s) Max



Horizontal Extended Grinders For 3/8-24 Cone Wheels

1.2 - 1.5 H.P. (900-1130 W)

SMALL HORIZONTAL GRINDERS

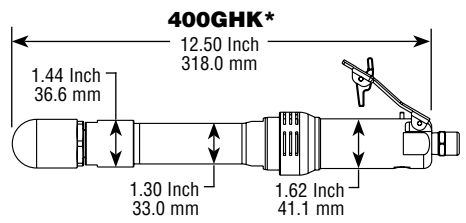


Air Inlet Size:
400GH1: 3/8" NPT
51HCW: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

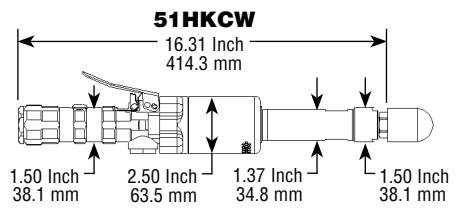
- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number				
Model Number	Spindle Size	Maximum Operating Speed	Throttle Type	
			Standard	Safety
400GH1	3/8-24 X 0.580	20000 RPM	400GH1	400GH1K
51H		18000 RPM	51HLCW	51HLKCW

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



1.2 H.P. (900 W)
 2.8 Lb. (1.3 Kg) Aluminum / 3.9 Lb. (1.8 Kg) Steel
 35 cfm (16.5 L/s) Max



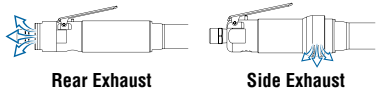
1.5 H.P. (1125 W)
 5.0 Lb. (2.3 Kg) Aluminum / 6.6 Lb. (3.0 Kg) Steel
 35 cfm (16.5 L/s) Max

*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.

Example Model Number: **400GH1 K S R ; 20000**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed
400GH1	Please choose one of the following options: L - Standard Lever K - Safety Lever		Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	20000 - 20000 R.P.M.
51HCW	Please choose one of the following options: L - Standard Lever K - Safety Lever B - Thumb Switch G - Spade Handle LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	No Designation - Side Exhaust	18000 - 18000 R.P.M.



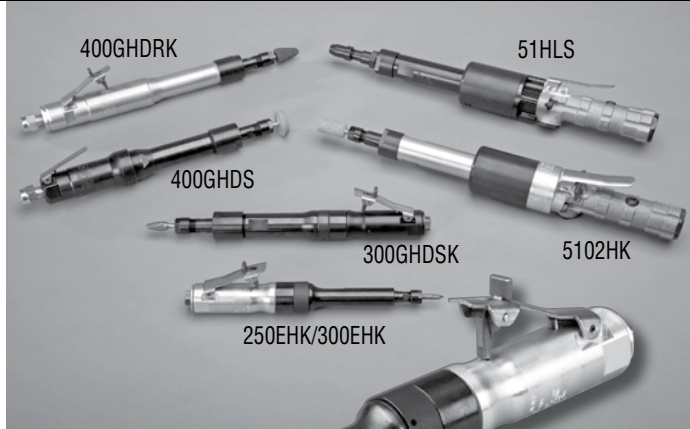
WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.



SMALL HORIZONTAL GRINDERS

Extended Grinders with Erickson® Style Collets for Carbide Burrs, Mounted Points

SMALL HORIZONTAL GRINDERS



Detail of 250EHK/300EHK

Air Inlet Size:
 250EH, 300EH & 300GHD: 1/4" NPT
 400GHD: 3/8" NPT
 5102H: 1/2" NPT

Hose Size Recommendations:
 250EH, 300EH & 300GHD: 3/8" (10 mm)
 400GHD & 5102H: 1/2" (13 mm)

Extra Charge Accessories

- Safety Lever

Standard Equipment

- Tool
- Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number

Model Number	Collet Size	Maximum Operating Speed	Case Material	
			Aluminum	Steel
250EH	1/4 Inch	40000 RPM	250EH;1/4	250EHS;1/4
300EH		30000 RPM	300EH;1/4	300EHS;1/4
300GHD		30000 RPM	300GHD;1/4	300GHDS;1/4
400GHD		20000 RPM	400GHD;1/4	400GHDS;1/4
5102H		18000 RPM	5102HL;1/4	5102HLS;1/4

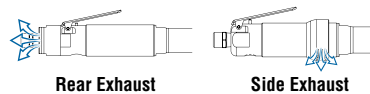
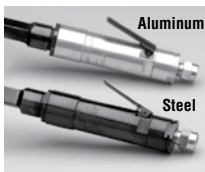
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

All the versions listed in the table will be supplied with a standard lever throttle (class 1). A safety lever throttle (class 2) is also available.

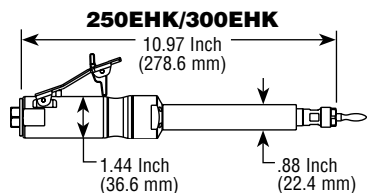
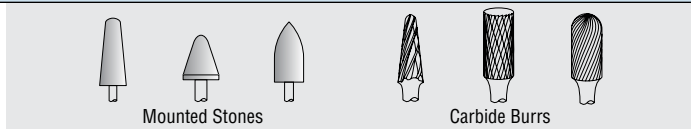
Example Model Number: **300GHD K S R ; 30000 ; 1/4**

The blue highlighted entries are shown in the Quick Reference Box above.

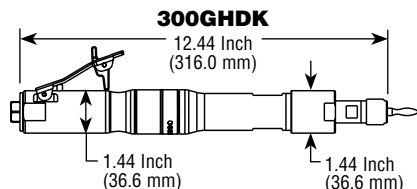
Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Collet Size
250EH				4000 - 40000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet
300EH	Please choose one of the following options: L - Standard Lever K - Safety Lever		Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	30000 - 30000 R.P.M.	
300GHD				20000 - 20000 R.P.M.	
400GHD					
51H	Please choose one of the following options: L - Standard Lever K - Safety Lever B - Thumb Switch G - Spade Handle LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case			Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet
5102H	BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch		No Designation - Side Exhaust	18000 - 18000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet



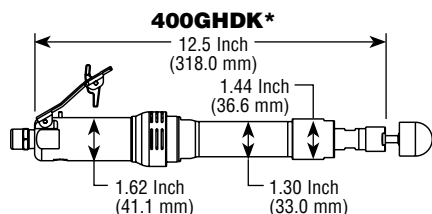
WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.



- HP** 250EH - 0.4 H.P. (300 W)
300EH - 0.7 H.P. (525 W)
- Lbs** 250EH - 2.0 Lb. (0.9 Kg) *Aluminum*
300EH - 2.1 Lb. (1.0 Kg) *Steel*
- cfm** 250EH - 18 cfm (8.5 L/s) Max
300EH - 25 cfm (11.8 L/s) Max

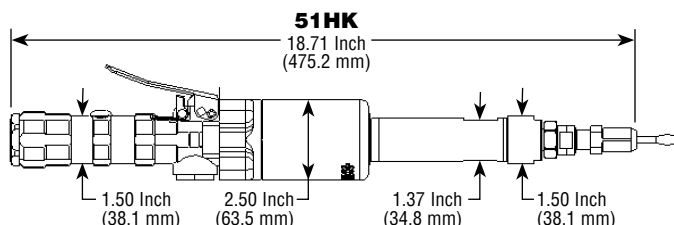


- HP** 0.7 H.P. (525 W)
- Lbs** 2.4 Lb. (1.1 Kg) *Aluminum*
3.4 Lb. (1.5 Kg) *Steel*
- cfm** 25 cfm (11.8 L/s) Max

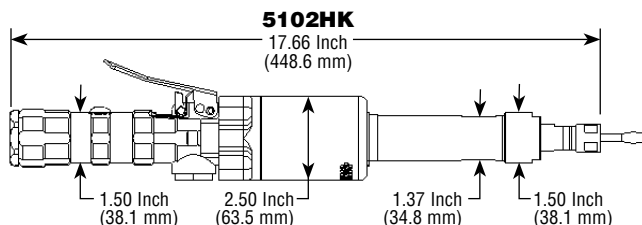


*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.

- HP** 1.2 H.P. (900 W)
- Lbs** 3.5 Lb. (1.6 Kg) *Aluminum*
4.6 Lb. (2.1 Kg) *Steel*
- cfm** 35 cfm (16.5 L/s) Max



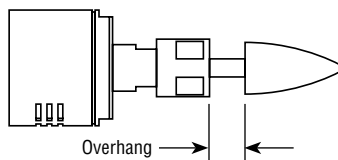
- HP** 1.5 H.P. (1125 W)
- Lbs** 5.9 Lb. (2.7 Kg) *Aluminum*
7.2 Lb. (3.3 Kg) *Steel*
- cfm** 35 cfm (16.5 L/s) Max



- HP** 1.5 H.P. (1125 W)
- Lbs** 5.9 Lb. (2.7 Kg) *Aluminum*
7.2 Lb. 3.3 Kg) *Steel*
- cfm** 35 cfm (16.5 L/s) Max



Overhang is the distance between the grinder chuck and the abrasive on the spindle. The larger the overhang, the lower the maximum safe operation speed.



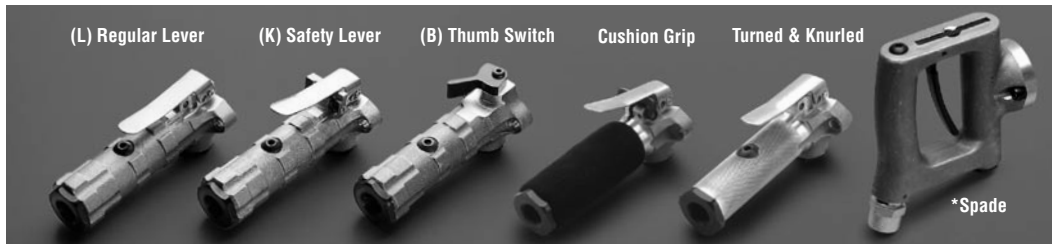
Extended Grinders

Section Contents

Page Number	Model Number	Power	Description	
60	400EH		Small Diameter Neck for Space Conscious Applications	
61	400GEH	1.2 H.P.	Rugged Extension and Front End Design	
61	407GEH			
62	520GEH	2.0 H.P.	Smaller Front End-Design	
62	520HGEH		Large Heavy Duty Front-End Design	
63	65GEH	4.0 H.P.	Smaller Front End-Design	
63	65HGEH		Large Heavy Duty Front-End Design	

Handles

Several different handle styles are offered on our horizontal tools. The picture below shows each in detail.



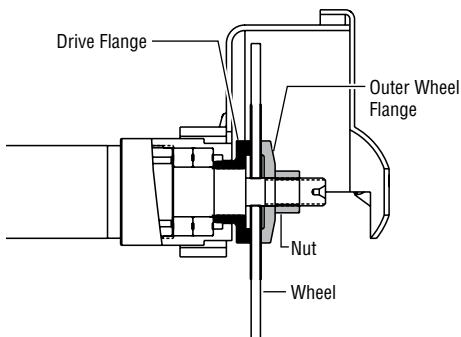
*Only tools of 1.5 H.P. or larger can accept the spade style handle. Tools of 1.2 H.P. and lower have different handle options.

Lever Style

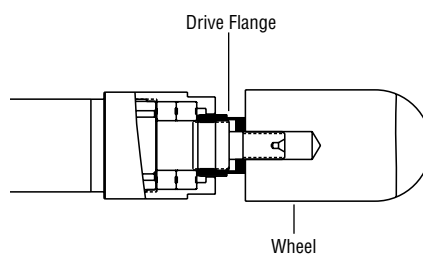


Mounting of Wheels

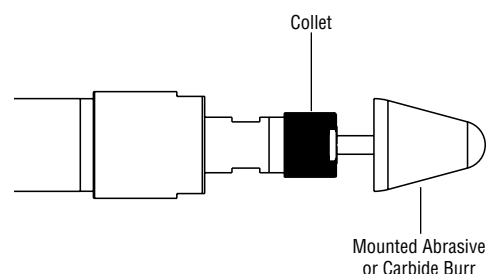
Proper Mounting of Smaller Type 1 Wheels



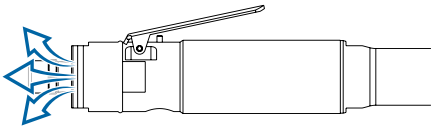
Proper Mounting of Cone Wheels



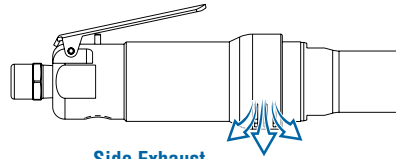
Proper Mounting of Inserted Tooling (Burrs/Mounted Stones)



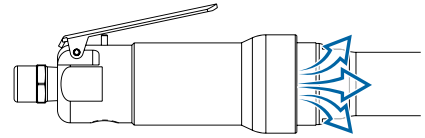
Exhaust Direction



Rear Exhaust
(0.7 H.P. & 1.2 H.P. tools only)



Side Exhaust



Front Exhaust

Case Material

The choice of case material affects the weight and durability of the tool. By its nature, aluminum is lighter in weight than steel. Steel is more durable in aggressive environments.



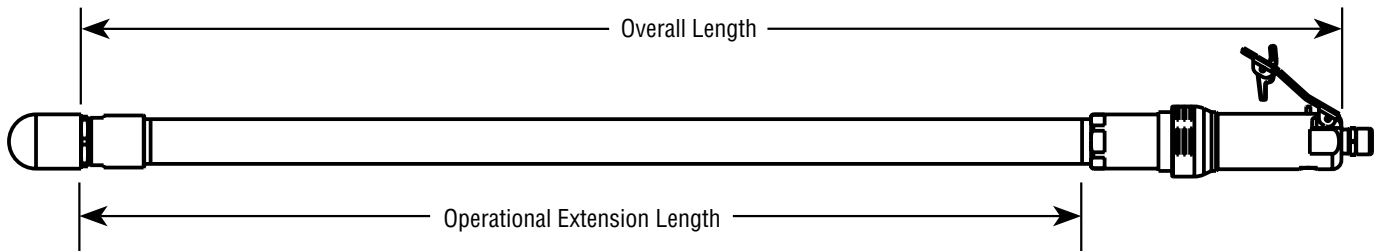
Speed/Guard Size Selection

The operating speed and guard size are closely linked to promote safety and maximize efficiency of the grinding operation. Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed/guard size options to select the one that matches the wheel speed/size you are using.



Extension Length

The "+XX" dimension that is designated in the model number is considered the "Operational Extension Length". This dimension is the actual length of the extended housing from the front of the motor forward. The operator should use this dimension as a means to judge the length of necessary extension based on the application. This should not be confused with the "Overall Length" which includes the actual length of the motor and handle.



Horizontal Extended Grinders For 3/8-24 Cone Wheels, Burrs, Mounted Stones

1.2 H.P. (900W)

Powerful 1.2 H.P. Motor



Air Inlet Size: 3/8" NPT

Hose Size Recommendations: 1/2" (13 mm)

Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool with Wrench/Wrenches (# and size of wrenches based upon output type)
- Operating Instructions and Service Manual

Special Features

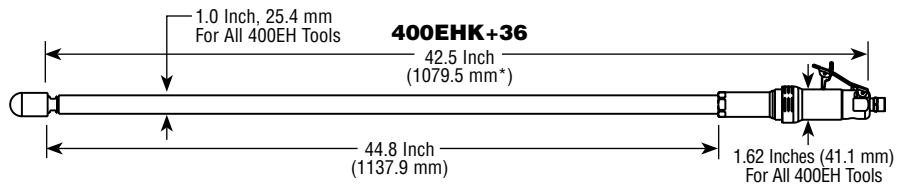
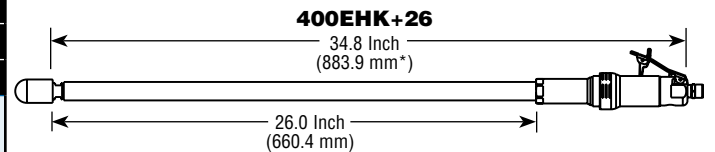
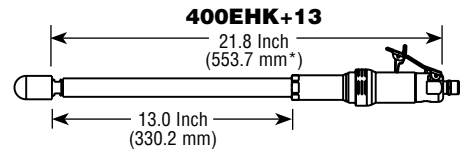
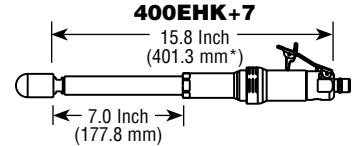
- 1.2 H.P. Motor

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

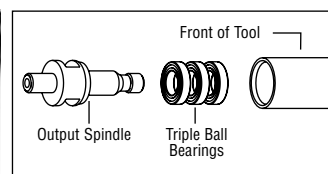
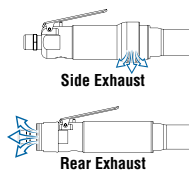
Model Number	Extension Length	Output	Maximum Operating Speed	Throttle Handle Type	
				Standard Lever	Safety Lever
400EH	+7	3/8-24 CW	20000 RPM	400EHS1+7	400EHKS1+7
		Collet		400EHS1+7	400EHKS1+7
	+13	3/8-24 CW		400EHS1+13	400EHKS1+13
		Collet		400EHS1+13	400EHKS1+13
	+26	3/8-24 CW		400EHS1+26	400EHKS1+26
		Collet		400EHS1+26	400EHKS1+26
	+36	3/8-24 CW		400EHS1+36	400EHKS1+36
		Collet		400EHS1+36	400EHKS1+36

The tools ordered under the numbers in this chart will be supplied with steel case material. Aluminum case material is available for these models. Please see the chart at the bottom of this page.



Example Model Number: **400EH K S R D +36 ; 20000 ; 1/4**

Model Number	Lever Style	Case Material	Exhaust Direction	Output Options	Extension Length	Operating Speed	Collet Size*
400EH	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	Please choose one of the following options: 1 - 3/8-24 X 0.580 Cone Wheel Spindle D - Insert Style Collet	Please choose one of the following options: +7 - 7 Inch Extension +13 - 13 Inch Extension +26 - 26 Inch Extension +36 - 36 Inch Extension	Please choose one of the following options: 18000 - 18000 R.P.M. 20000 - 20000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet



*An entry from this column is only necessary when the D (Collet Output) option is chosen.

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

Horizontal Extended Grinders For 3/8-24 & 5/8-11 Cone Wheels, Burrs, Mounted Stones 1.2 H.P. (900W)

Powerful 1.2 H.P. Motor



Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

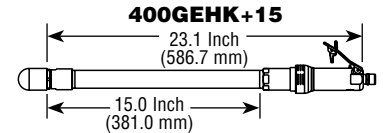
- Safety Lever
- Standard Equipment**
- Tool with Wrench/Wrenches (# and size of wrenches based upon output type)
- Operating Instructions and Service Manual

Quick Order Number

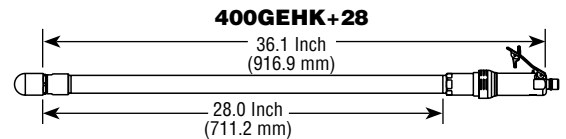
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Extension Length	Output	Maximum Operating Speed	Throttle Handle Type	
				Standard Lever	Safety Lever
400GEH	+15	3/8-24 CW	20000 RPM	400GEHS1+15	400GEHSK1+15
		5/8-11CW		400GEHS2+15	400GEHSK2+15
		Collet		400GEHSD+15;1/4	400GEHSDK+15;1/4
	+28	3/8-24 CW		400GEHS1+28	400GEHSK1+28
		5/8-11CW		400GEHS2+28	400GEHSK2+28
		Collet		400GEHSD+28;1/4	400GEHSDK+28;1/4
	+38	3/8-24 CW		400GEHS1+38	400GEHSK1+38
		5/8-11CW		400GEHS2+38	400GEHSK2+38
		Collet		400GEHSD+38;1/4	400GEHSDK+38;1/4
407GEH	+15	3/8-24 (Type 1)	15000 RPM	407GEHS4+15;401	407GEHSK4+15;401
	+28			407GEHS4+28;401	407GEHSK4+28;401
	+38			407GEHS4+38;401	407GEHSK4+38;401

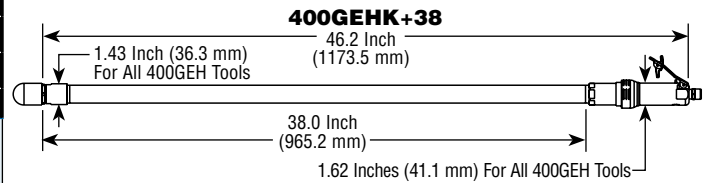
The tools ordered under the numbers in this chart will be supplied with steel case material. Aluminum case material is available for these models. Please see the chart at the bottom of this page.



1.2 H.P. (900 W) | 7.2 Lb. (3.3 Kg) Aluminum / 7.5 Lb. (3.4 Kg) Steel | 35 cfm (16.5 L/s) Max



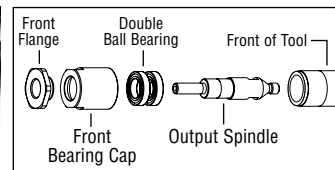
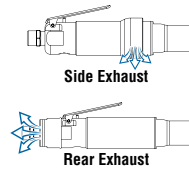
1.2 H.P. (900 W) | 9.2 Lb. (4.2 Kg) Aluminum / 9.5 Lb. (4.3 Kg) Steel | 35 cfm (16.5 L/s) Max



1.2 H.P. (900 W) | 11.4 Lb. (5.2 Kg) Aluminum / 11.7 Lb. (5.3 Kg) Steel | 35 cfm (16.5 L/s) Max

Example Model Number: **400GEH K S R D +38 ; 20000 ; 1/4**

Model Number	Lever Style	Case Material	Exhaust Direction	Output Options	Extension Length	Operating Speed	Collet Size*
400GEH	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	Please choose one of the following options: 1 - 3/8-24 X 0.580 Cone Wheel Spindle 2 - 5/8-11 X 0.580 Cone Wheel Spindle D - Insert Style Collet	Please choose one of the following options: +7 - 7 Inch Extension +15 - 15 Inch Extension +28 - 28 Inch Extension +38 - 38 Inch Extension	Please choose one of the following options: 18000 - 18000 R.P.M. 20000 - 20000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet
407GEH			No Designation - Side Exhaust	4 - 3/8-24 X 1.1 T1 Wheel Spindle		Operating Speed/Guard Size Please choose one of the following options: 15000;401 - 15000 R.P.M. with 4 Inch T1 Guard 18000;301 - 18000 R.P.M. with 3 Inch T1 Guard	



*An entry from this column is only necessary when the D (Collet Output) option is chosen.

Governor Controlled Tool

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

EXTENDED GRINDERS

Horizontal Extended Grinders For 3/8-24 & 5/8-11 Cone Wheels & Inserted Tooling 2 H.P. (1500W)



Powerful 2.0 H.P. Motor

520GEH2+38

520GEHD+15



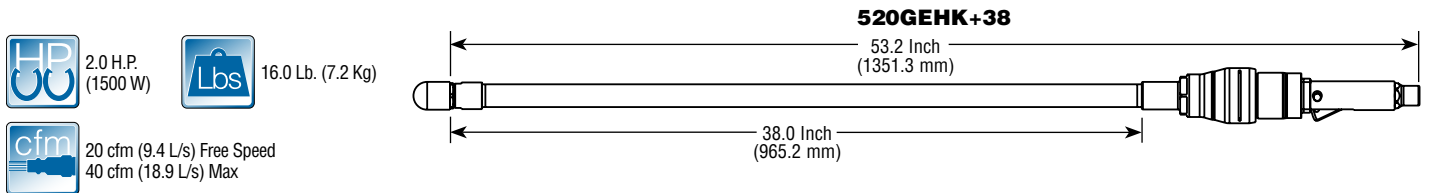
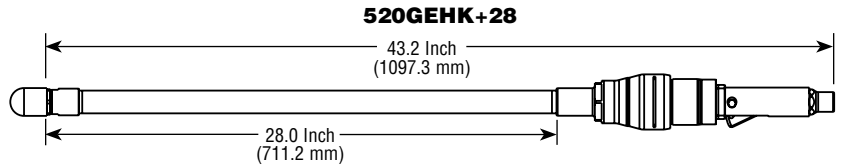
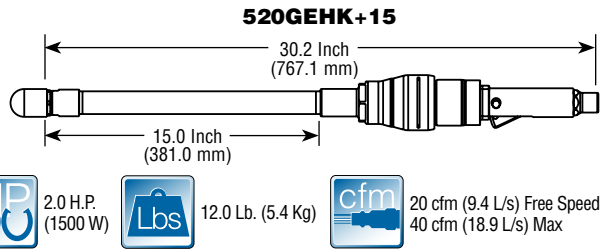
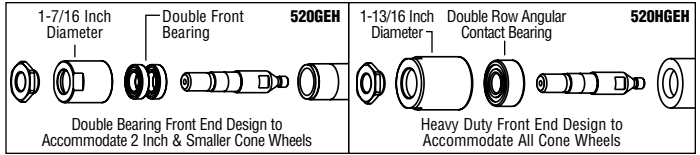
Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Standard Equipment

- Tool • Wrench(es) (Amount and size based upon options)
- Operating Instructions and Service Manual

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Extension Length	Output	Maximum Operating Speed	Throttle Handle Type	
				Regular Lever	Safety Lever
520GEH	+15	5/8-11CW	12000 RPM	520GEHXL2+15	520GEHXK2+15
	+28			520GEHXL2+28	520GEHXK2+28
	+38			520GEHXL2+38	520GEHXK2+38
520HGEH	+15			520HGEHXL2+15	520HGEHXLK2+15
	+28			520HGEHXL2+28	520HGEHXLK2+28
	+38			520HGEHXL2+38	520HGEHXLK2+38



Example Model Number: **520GEH XK D +15 ; 9000 ; 1/4**

Model Number	Lever Style	Output Options	Extension Length	Operating Speed	Collet Size*
520GEH	Please choose one of the following options: K - Safety Lever XL - Standard Lever XK - Safety Lever XB - Thumb Switch XG - Spade Handle XLTK - Turned/Knurled Standard Lever XKTK - Turned/Knurled Safety Lever XBTK - Turned/Knurled Thumb Switch	Please choose one of the following options: 1 - 3/8-24 X 0.580 Cone Wheel Spindle 2 - 5/8-11 X 0.580 Cone Wheel Spindle D - Insert Style Collet	Please choose one of the following options: +15 - 15 Inch Extension +28 - 28 Inch Extension +38 - 38 Inch Extension	Please choose one of the following options: 9000 - 9000 R.P.M. 12000 - 12000 R.P.M.	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet
520HGEH	XLTKW - Turned/Knurled/Cushioned Standard Lever XKTKW - Turned/Knurled/Cushioned Safety Lever XBTKW - Turned/Knurled/Cushioned Thumb Switch	2 - 5/8-11 X 0.580 Cone Wheel Spindle			



*An entry from this column is only necessary when the D (Collet Output) option is chosen.

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

EXTENDED GRINDERS

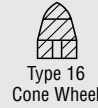
Horizontal Extended Grinders For Cone Wheels

4 H.P. (3000W)

Powerful 4.0 H.P. Motor

65HGEHG+38

65HGEHL+15



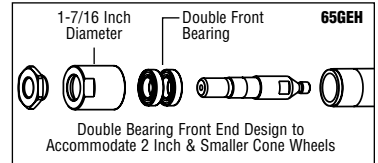
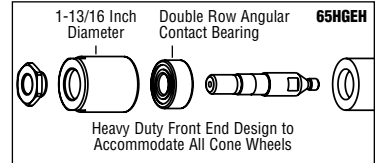
Air Inlet Size: 1/2" NPT

Hose Size Recommendations: 1/2" (13 mm)

Arbor Size: 5/8 x 11

Standard Equipment

- Tool • 1 Wrench
- Operating Instructions and Service Manual



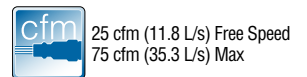
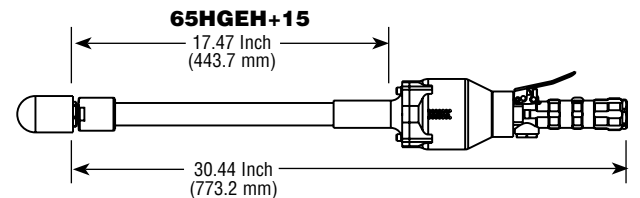
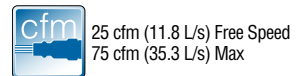
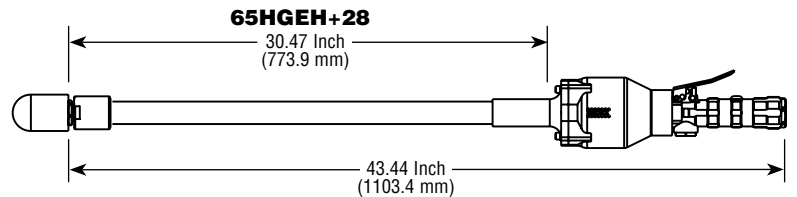
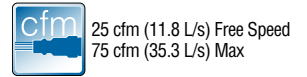
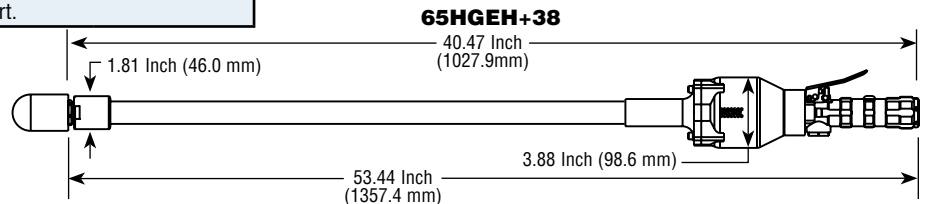
Quick Order Number					
Model Number	Extension Length	Output	Maximum Operating Speed	Throttle Handle Type	
				Standard	Safety
65GEH	+15	5/8-11CW	8000 RPM	65GEHL2+15	65GEHK2+15
	+28			65GEHL2+28	65GEHK2+28
	+38			65GEHL2+38	65GEHK2+38
65HGEH	+15			65HGEHL2+15	65HGEHK2+15
	+28			65HGEHL2+28	65HGEHK2+28
	+38			65HGEHL2+38	65HGEHK2+38

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



Special Note:
Versions of this tool can be made with additional extensions. This allows for tools with a variety of extremely long extension lengths. Contact us for details.

Example Model Number:
65GEH K +15 ; 9000



Model Number	The blue highlighted entries are shown in the Quick Reference Box above.	Lever Style	Extension Length
65GEH		Please choose one of the following options: L - Standard Lever K - Safety Lever B - Thumb Switch G - Spade Handle	
65HGEH		LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch	Please choose one of the following options: +15 - 15 Inch Extension +28 - 28 Inch Extension +38 - 38 Inch Extension
65HGEH		LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	

Governor Controlled Tool


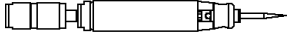
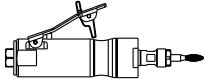

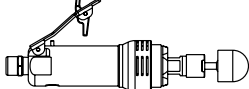

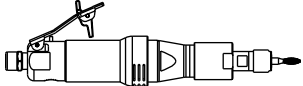
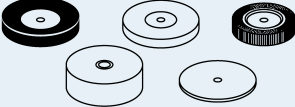
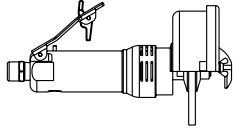

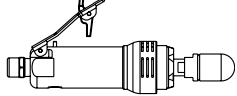


EXTENDED GRINDERS

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

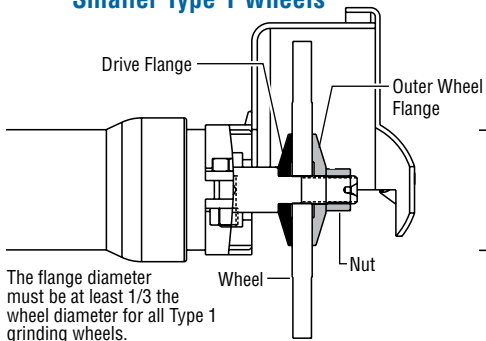
Die Grinders

DIE GRINDERS

Page Number	Model Number	Power	Motor Style	Description
66	20G	0.1 H.P.	Non-Governed	<p>Die Grinders with Fixed Size Collet Output</p>  
70	250GE/250HGE	0.4 H.P.	Non-Governed	<p>Die Grinders with Insert Style Collet Output</p> 
70	300GE/300HGE	0.7 H.P.		
70	400GE/400HGE	1.2 H.P.	Non-Governed	 
70	400SH/400SH+6		Governed	 
68	400GT	1.2 H.P.	Non-Governed	<p>Type 1 Wheel Grinders for Material Removal or Surface Conditioning</p>  
68	407GT		Governed	
67	400GTCW	1.2 H.P.	Non-Governed	<p>Cone Wheel Grinders for Material Removal</p>  

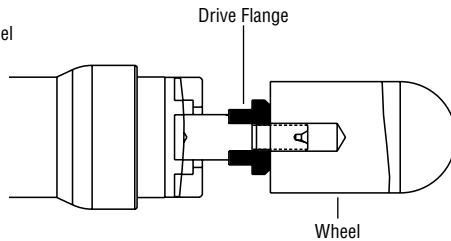
Mounting of Wheels

Proper Mounting of Smaller Type 1 Wheels



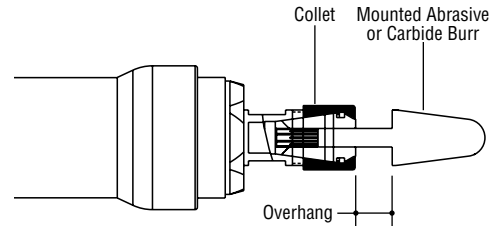
The flange diameter must be at least 1/3 the wheel diameter for all Type 1 grinding wheels.
The flange diameter must be at least 1/4 the wheel diameter for all Type 1 cut-off (Type 41) wheels.

Proper Mounting of 3/8-24 Cone Wheels



The drive flange diameter must be at least 1/3 the wheel diameter for all cone wheels.

Proper Mounting of Inserted Tooling (Burrs/Mounted Stones)



Overhang is the distance between the grinder chuck and the abrasive on the spindle. The larger the overhang, the lower the maximum safe operating speed.

For more information regarding the use of tool and abrasive wheels please consult the Safety Code For Portable Air Tools, ANSI B186.1, B7.1 and Z87.1, available from American National Standards Institute, Inc. 1430 Broadway, New York, NY 10018

Lever Style



Case Material

The choice of case material affects the weight and durability of the tool. By its nature, aluminum is lighter in weight than steel. Steel is more durable in aggressive environments.



Speed/Guard Size Selection

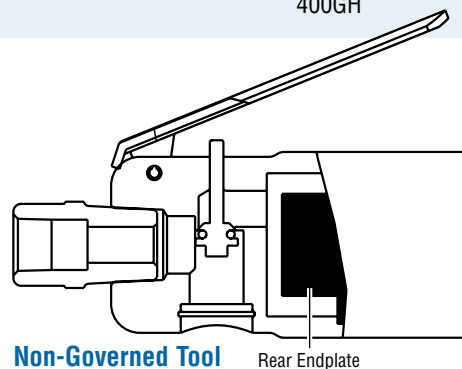
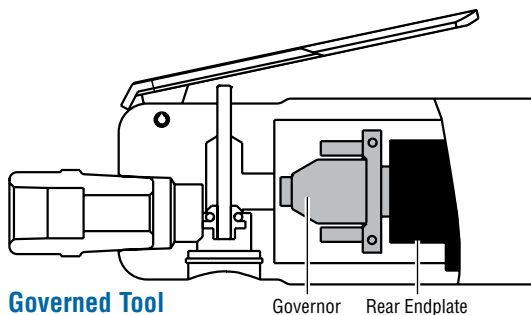
The operating speed and guard size are closely linked to promote safety and maximize efficiency of the grinding operation. Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed/guard size options to select the one that matches the wheel speed/size you are using.



Governed vs. Non-Governed Tools

A governor on a tool will help to maintain a high level of torque at lower operating speeds. If your application requires a lower operating speed, then a governor may be to your benefit. Tools set to higher rated speeds will not benefit from the use of a governor. The following chart will act as a guide based on the operating speed required by your application.

	Speeds Normally Deemed for Surface Finishing Abrasives			4 Inch Type 1 Wheels	Speeds Normally Deemed for Burrs/Mounted Stones & Small Cut-off Wheels				
R.P.M.	12000	13000	14000	15000	16000	17000	18000	19000	20000
1.2 H.P.	407GH				400GH				



Die Grinders

0.1 H.P. (75 W) • 60000 R.P.M.

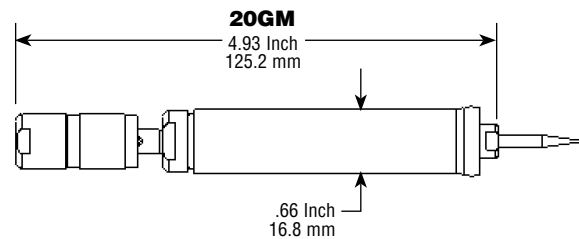
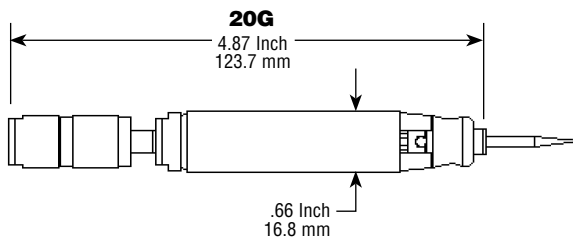
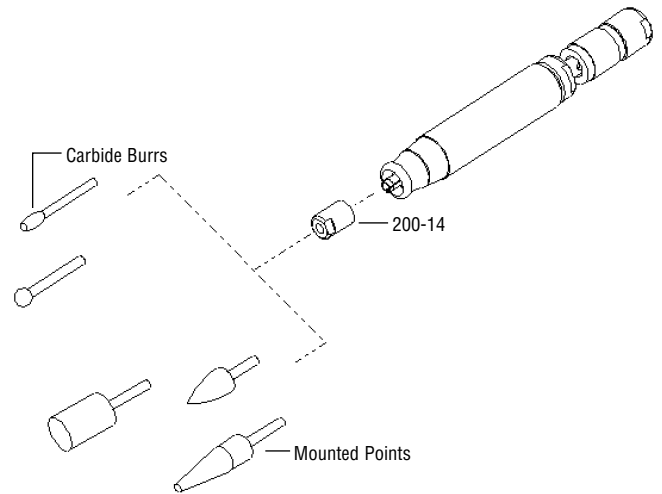


Air Inlet Size: 1/8" NPT
Hose Size Recommendations: 1/4" (6 mm)
Extra Charge Accessories

- Accessory Kit
- Standard Equipment**
- Tool
- Operating Instructions and Service Manual
- 9/32" Wrench
- Lock Pin
- 3 Foot Length of Hose

Quick Order Number				
Model Number	Exhaust Direction	Collet Size	Maximum Operating Speed	Ordering Number
20G	Side	1/8	60000 RPM	20G
20GM	Front			20GM

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



0.1 H.P.
(75 W)



0.3 Lb.
(0.1 Kg)



8.0 cfm (3.8 L/s) Max

Example Model Number: **20G M ; 60000 ; 1/8**

Model Number	Exhaust Direction	Operating Speed	Collet Size
20G	<i>Please choose one of the following options:</i> No Designation - Side Exhaust M - Front Exhaust	60000 : 60000 R.P.M.	<i>Please choose one of the following options:</i> 1/8 - 1/8 Inch Collet 3MM - 3mm Collet



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

DIE GRINDERS

Die Grinders for 3/8" Cone Wheels

1.2 H.P. (900 W)



Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2"
Extra Charge Accessories

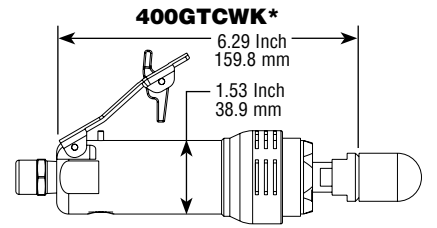
- Safety Lever
- Standard Equipment**
- Tool • Wrench • Operating Instructions and Service Manual

Quick Order Number

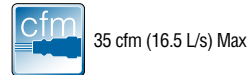
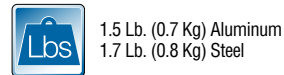
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Power	Spindle Size	Maximum Operating Speed	Throttle Handle Type	
				Standard	Safety
400GTCW	1.2 H.P.	3/8-24 X 0.58 Inch	20000 RPM	400GTSCW	400GTSKCW

The tools listed in the above chart are designated with steel case material and side exhaust. Please consult the Model Breakdown section below if alternative options are desired.



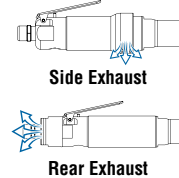
*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.



Example Model Number: **400GT K S R ; 20000**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed
400GTCW	No Designation - Standard Lever K - Safety Lever	No Designation - Aluminum Case S - Steel Case	No Designation - Side Exhaust R - Rear Exhaust	18000 - 18000 R.P.M. 20000 - 20000 R.P.M.



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

DIE GRINDERS

Die Grinders For Type 1 Wheels, Flap Wheels And Wire Wheels



*For surface conditioning abrasives or internal use only.



Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

• Cone Wheel Adapters • Heavy-Duty 2-pc. Collets • Safety Lever

Standard Equipment

• Tool • Operating Instructions and Service Manual
 • 2 Wrenches (sizes based on options)

DIE GRINDERS

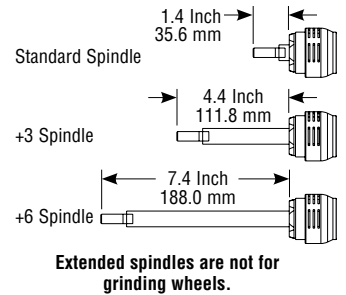
Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Power	Guard Size	Maximum Operating Speed	Throttle Handle Type	
				Standard	Safety
400GT	1.2 H.P.	3 Inch	18000 RPM	400GTS4;301	400GTS4K;301
407GT		4 Inch		15000 RPM	407GTS4;401

The tools listed in the chart to the left are designated with steel case material and side exhaust. Please consult the Model Breakdown section below if alternative options are desired.

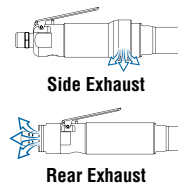
Spindle Comparison For 400GT & 407GT



Example Model Number: **407GT K S R ; 15000;401**

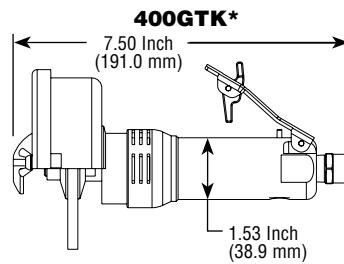
The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed
400GT	Please choose one of the following options: No Designation - Standard Lever	Please choose one of the following options: No Designation - Aluminum Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust	Please choose one of the following options: 18000;301 - 18000 R.P.M. with 3 Inch T1 Guard +3;18000 - 18000 R.P.M. with +3 Extended Spindle +6;18000 - 18000 R.P.M. with +6 Extended Spindle
407GT	K - Safety Lever	S - Steel Case	Side Exhaust	Please choose one of the following options: 15000;401 : 15000 R.P.M. with 4 Inch T1 Guard +3;15000 - 15000 R.P.M. with +3 Extended Spindle +6;15000 - 15000 R.P.M. with +6 Extended Spindle



Governor Controlled Tool

400GT(+3)(+6) for use with flap wheel or internal use only.
*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.



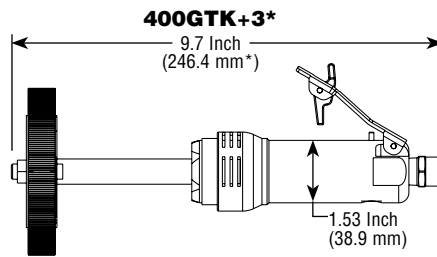
1.2 H.P.
(900 W)



2.6 Lb. (1.2 Kg) Aluminum
3.3 Lb. (1.5 Kg) Steel



35 cfm (16.5 L/s) Max



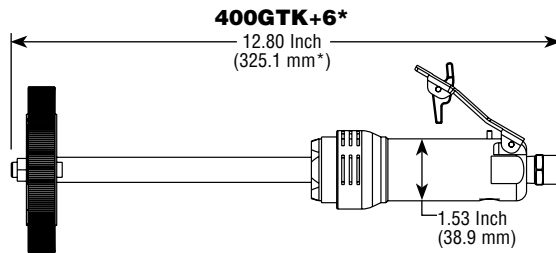
1.2 H.P.
(900 W)



2.6 Lb. (1.2 Kg) Aluminum
3.3 Lb. (1.5 Kg) Steel



35 cfm (16.5 L/s) Max



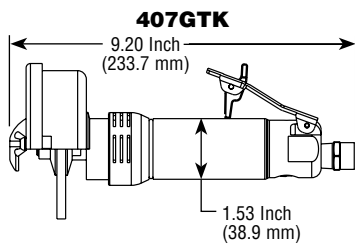
1.2 H.P.
(900 W)



2.8 Lb. (1.3 Kg) Aluminum
3.5 Lb. (1.6 Kg) Steel



35 cfm (16.5 L/s) Max



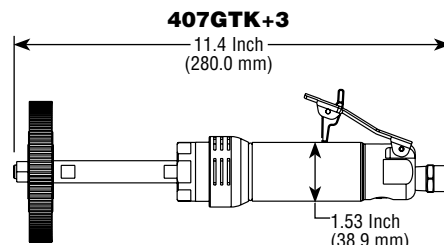
1.2 H.P.
(900 W)



2.8 Lb. (1.3 Kg) Aluminum
3.5 Lb. (1.6 Kg) Steel



20 cfm (9.4 L/s) Free Speed
35 cfm (16.5 L/s) Max



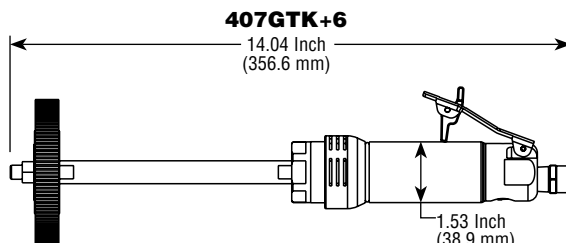
1.2 H.P.
(900 W)



2.8 Lb. (1.3 Kg) Aluminum
3.5 Lb. (1.6 Kg) Steel



20 cfm (9.4 L/s) Free Speed
35 cfm (16.5 L/s) Max



1.2 H.P.
(900 W)



2.9 Lb. (1.3 Kg) Aluminum
3.6 Lb. (1.6 Kg) Steel



20 cfm (9.4 L/s) Free Speed
35 cfm (16.5 L/s) Max

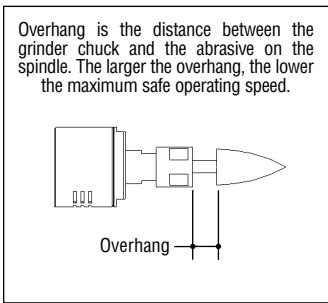
Insert Style Die Grinders For Carbide Burrs & Mounted Stones

DIE GRINDERS



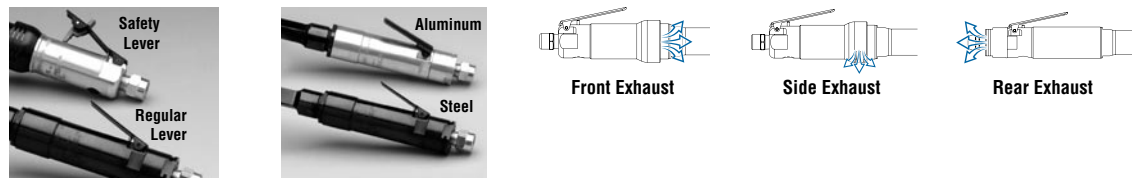
- Air Inlet Size:**
250GE/250HGE/300GE/300HGE: 1/4" NPT
400GE/400HGE: 3/8" NPT
- Hose Size Recommendations:**
250GE/250HGE/300GE/300HGE: 3/8" (10mm)
400GE/400HGE: 1/2" (13mm)
- Extra Charge Accessories**
- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
 - 2 Wrenches (sizes based on options)

Quick Order Number					
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.					
Model Number	Power	Collet Size	Maximum Operating Speed	Throttle Handle Type	
				Standard	Safety
The tools listed below are designated with aluminum case material and rear exhaust. Please consult the Model Breakdown section below if alternative options are desired.					
250GE	0.4 H.P.	1/4	40000 RPM	250GE;1/4	250GEK;1/4
250HGE				250HGE;1/4	250HGEK;1/4
300GE	0.7 H.P.		30000 RPM	300GE;1/4	300GEK;1/4
300HGE				300HGE;1/4	300HGEK;1/4
The tools listed below are designated with steel case material and side exhaust. Please consult the Model Breakdown section below if alternative options are desired.					
400GE	1.2 H.P.	1/4	20000 RPM	400GES;1/4	400GESK;1/4
400HGE				400HGES;1/4	400HGESK;1/4



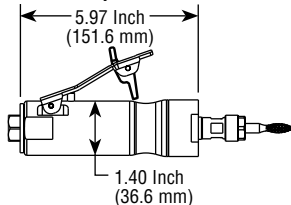
Example Model Number: **300GE K S F ; 28000 ; 1/4**

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Collet Size
250GE	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Rear Exhaust F - Front Exhaust	40000 : 40000 R.P.M	Please choose one of the following options: 1/8 - 1/8 Inch Collet 1/4 - 1/4 Inch Collet 3/8 - 3/8 Inch Collet 3MM - 3mm Collet 6MM - 6mm Collet 8MM - 8mm Collet
250HGE				30000 : 30000 R.P.M	
300GE			Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust F - Front Exhaust	18000 : 18000 R.P.M	
300HGE				20000 : 20000 R.P.M	
400GE					
400HGE					
400SH					
400SH+6					



WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

250GEK/300GEK



250GE: 0.4 H.P. (300 W)
300GE: 0.7 H.P. (525 W)

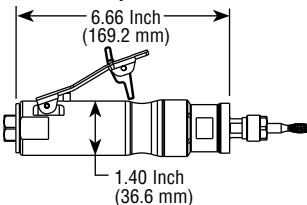


Aluminum Steel
250GE - 1.1 Lb. (0.5 Kg) 1.6 Lb. (0.7 Kg)
300GE - 1.2 Lb. (0.5 Kg) 1.7 Lb. (0.8 Kg)



250GE: 18 cfm (8.5 L/s) Max.
300GE: 25 cfm (11.8 L/s) Max.

250HGEK/300HGEK



250HGE: 0.4 H.P. (300 W)
300HGE: 0.7 H.P. (525 W)

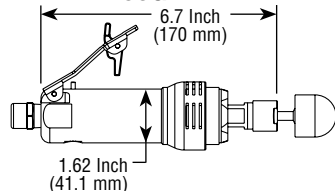


Aluminum Steel
250HGE - 1.2 Lb. (0.7 Kg) 1.7 Lb. (0.8 Kg)
300HGE - 1.3 Lb. (0.6 Kg) 1.9 Lb. (0.9 Kg)



250HGE: 18 cfm (8.5 L/s) Max.
300HGE: 25 cfm (11.8 L/s) Max.

400GEK*



*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.



1.2 H.P. (900 W)

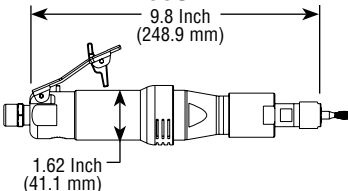


1.7 Lb. (0.8 Kg) Aluminum
2.5 Lb. (1.1 Kg) Steel



35 cfm (16.5 L/s) Max.

400SH*



*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.



1.2 H.P. (900 W)

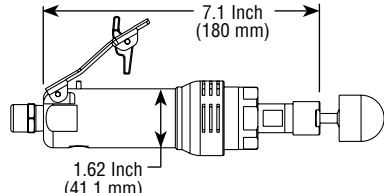


2.4 Lb. (1.1 Kg) Aluminum
3.3 Lb. (1.5 Kg) Steel



35 cfm (16.5 L/s) Max.

400HGEK*



*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.



1.2 H.P. (900 W)

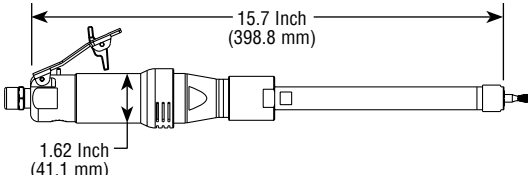


1.8 Lb. (0.8 Kg) Aluminum
2.5 Lb. (1.1 Kg) Steel



35 cfm (16.5 L/s) Max.

400SH+6*



*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.



1.2 H.P. (900 W)



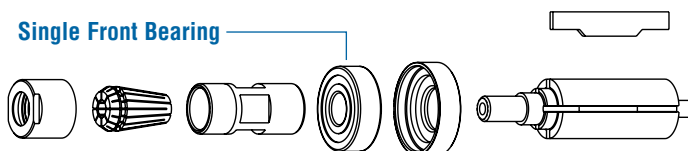
3.2 Lb. (1.4 Kg) Aluminum
4.1 Lb. (1.9 Kg) Steel



35 cfm (16.5 L/s) Max.

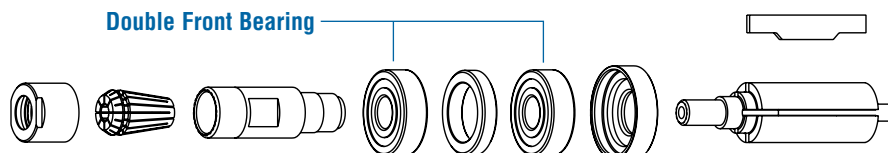
**250GE
300GE
400GE**

Single Front Bearing



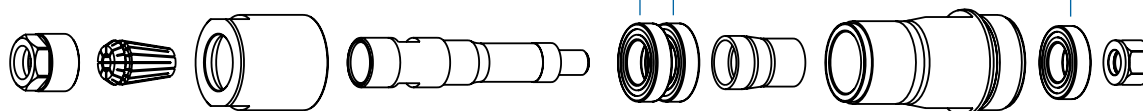
**250HGE
300HGE
400HGE**

Double Front Bearing



**400SHD
400SHD+6**

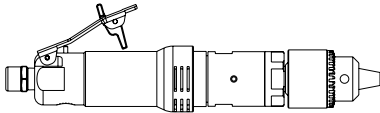
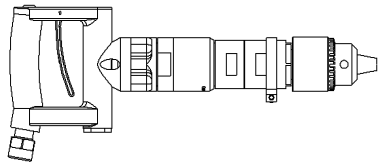
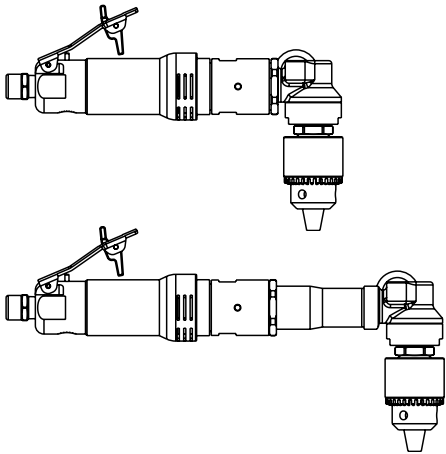
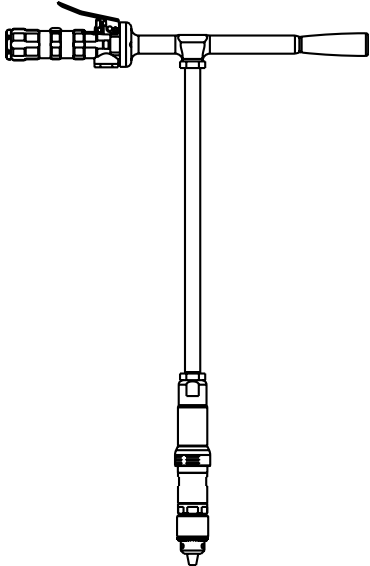
3 Front Bearings



Extreme Duty

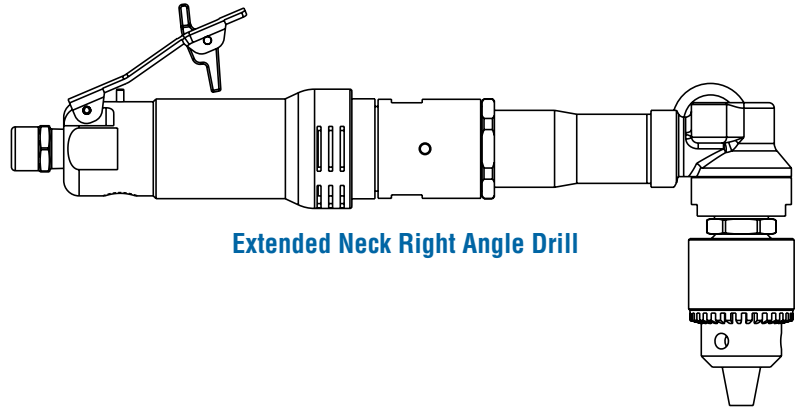
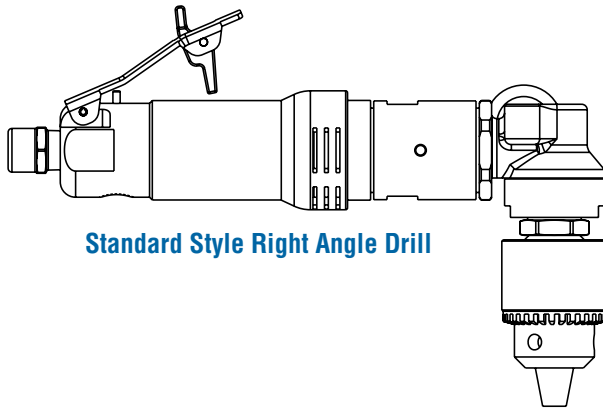
Air Drills

Section Contents

Page Number	Model Number	Power	Maximum Operating Speed	Description	
74	400D3M	1.2 H.P.	5500 R.P.M.	Inline Drills	
74	400D5M		4200 R.P.M.		
74	400D8M		2500 R.P.M.		
74	400D21M		900 R.P.M.		
74	400D36M		550 R.P.M.		
75	500D2M	1.5 H.P.	1000 R.P.M.		
	507D2M		400-900 R.P.M.		
76	400DRA3M	1.2 H.P.	2700 R.P.M.	Right Angle Drills	
76	400DRA5M		2000 R.P.M.		
76	400DRA8M		1200 R.P.M.		
76	400DRA21M		440 R.P.M.		
76	400DRA36M		260 R.P.M.		
77	400FD3M	1.2 H.P.	5500 R.P.M.	Floor Drills	
77	400FD5M		4200 R.P.M.		
77	400FD8M		2500 R.P.M.		
77	400FD21M		900 R.P.M.		
77	400FD36M		550 R.P.M.		
78	500FD1M	1.5 H.P.	1000 R.P.M.		
78	507FD1M		1750-3000 R.P.M.		
78	520FD1M	2.0 H.P.	1500-3000 R.P.M.		

AIR DRILLS

Extend Neck vs Standard



Case Material

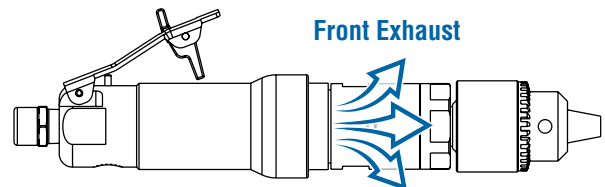
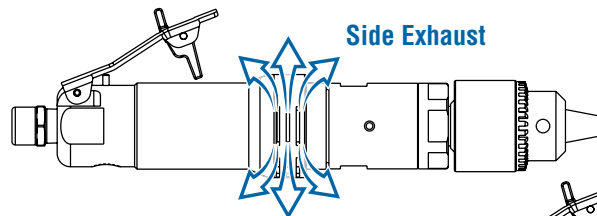
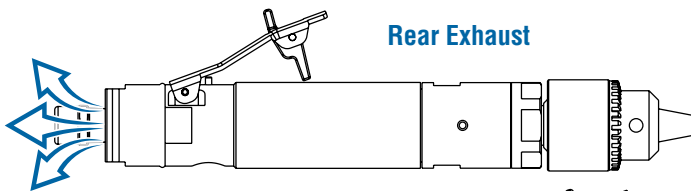


The choice of case material affects the weight and durability of the tool. By its nature, aluminum is lighter in weight than steel. Steel is more durable in aggressive environments.

Lever Style



Exhaust Direction



AIR DRILLS

In-Line Drills

3/8" or 1/2" Drill Chucks
1.2 H.P. (900 W)



*The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

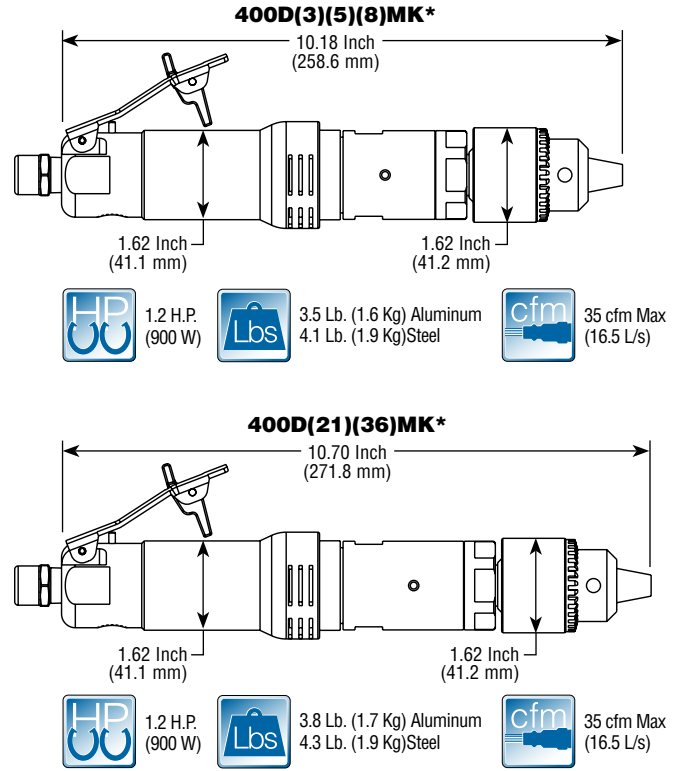
- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual • Chuck Key

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Chuck Size	Maximum Operating Speed	Throttle Handle Type	
			Standard Lever	Safety Lever
400D	3/8"	5500 RPM	400D3M;3/8	400D3MK;3/8
		4200 RPM	400D5M;3/8	400D5MK;3/8
		2500 RPM	400D8M;3/8	400D8MK;3/8
		900 RPM	400D21M;3/8	400D21MK;3/8
		550 RPM	400D36M;3/8	400D36MK;3/8
	1/2"	5500 RPM	400D3M;1/2	400D3MK;1/2
		4200 RPM	400D5M;1/2	400D5MK;1/2
		2500 RPM	400D8M;1/2	400D8MK;1/2
		900 RPM	400D21M;1/2	400D21MK;1/2
		550 RPM	400D36M;1/2	400D36MK;1/2

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.

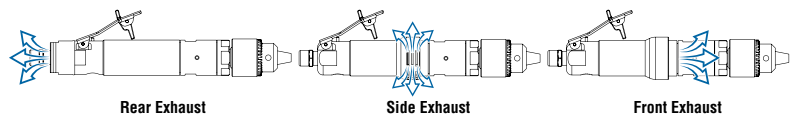


*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.

Example Model Number: **400D3M K S R ; 5500 ; 1/2**

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Drill Chuck Size
400D3M	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust F - Front Exhaust	5500 - 5500 R.P.M.	Please choose one of the following options: 3/8 - 3/8 Inch 1/2 - 1/2 Inch
400D5M				4200 - 4200 R.P.M.	
400D8M				2500 - 2500 R.P.M.	
400D21M				900 - 900 R.P.M.	
400D36M				550 - 550 R.P.M.	

Geared Tool



WARNING: Comply with the speed recommendation of component and bit manufacturers.

IN-LINE DRILLS

In-Line Drills

1/2" or 3/4" Drill Chucks
1.5 H.P. (1130 W)



500D2M

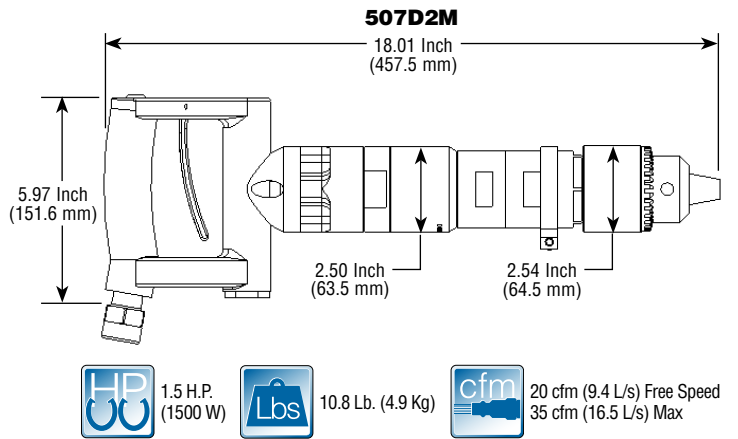
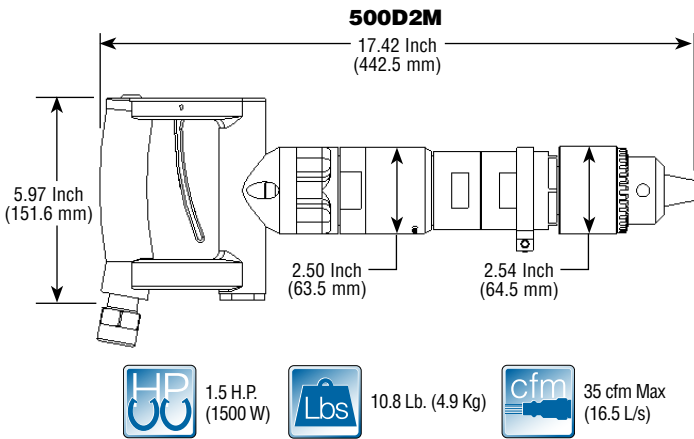
Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Standard Equipment

- Tool
- Operating Instructions and Service Manual
- Chuck Key

Quick Order Number

Model Number	Chuck Size	Maximum Operating Speed	Ordering Number
500D2M	1/2"	1000 R.P.M	500D2M;D1/2
	3/4"		500D2M;D3/4

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



IN-LINE DRILLS

Example Model Number: **500D2M ; 5500 ; 1/2**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Operating Speed	Drill Chuck Size
500D2M	1000 - 1000 R.P.M.	Please choose one of the following options: 1/2 - 1/2 Inch 3/4 - 3/4 Inch
507D2M	400-900 - 400-900 R.P.M.**	

Governor Controlled Tool

**The range offered reflects the minimum to maximum operating speeds that this tool can be set. One must choose a speed within this range that best fits the application. Please examine the abrasive used with the tool for a maximum operating speed. The tool should be set at or below the maximum operating speed listed on the abrasive.

WARNING: Comply with the speed recommendation of component and bit manufacturers.

3/8" or 1/2" Drill Chucks
1.2 H.P. (900 W)

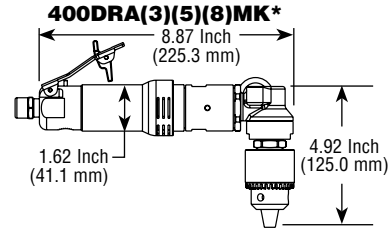
Right Angle Drills



*The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual • Chuck Key



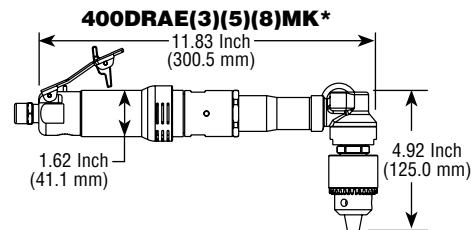
1.2 H.P.
(900 W)



4.9 Lb. (2.2 Kg) Aluminum
5.5 Lb. (2.5 Kg) Steel



35 cfm (16.5 L/s) Max



1.2 H.P.
(900 W)



5.4 Lb. (2.4 Kg) Aluminum
6.0 Lb. (2.7 Kg) Steel



35 cfm (16.5 L/s) Max

Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Chuck Size	Maximum Operating Speed	Throttle Handle Type	
			Standard Lever	Safety Lever
400DRA	3/8"	2700 RPM	400DRA3M;3/8	400DRA3MK;3/8
		2000 RPM	400DRA5M;3/8	400DRA5MK;3/8
		1200 RPM	400DRA8M;3/8	400DRA8MK;3/8
		440 RPM	400DRA21M;3/8	400DRA21MK;3/8
		260 RPM	400DRA36M;3/8	400DRA36MK;3/8
	1/2"	2700 RPM	400DRA3M;1/2	400DRA3MK;1/2
		2000 RPM	400DRA5M;1/2	400DRA5MK;1/2
		1200 RPM	400DRA8M;1/2	400DRA8MK;1/2
		440 RPM	400DRA21M;1/2	400DRA21MK;1/2
		260 RPM	400DRA36M;1/2	400DRA36MK;1/2

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.

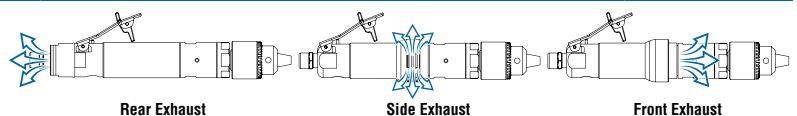
*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.
Versions with 2 planetary gear systems (21) & (36) add 0.52 Inch (13.2 mm) to overall length.

Example Model Number: **400DRA3M K S R ; 2700 ; 1/2**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Drill Chuck Size
400DRA3M				2700 - 2700 R.P.M.	Please choose one of the following options: 3/8 - 3/8 Inch 1/2 - 1/2 Inch
400DRA5M				2000 - 2000 R.P.M.	
400DRA8M				1200 - 1200 R.P.M.	
400DRA21M	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust F - Front Exhaust	440 - 440 R.P.M.	
400DRA36M				260 - 260 R.P.M.	
400DRAE3M				2700 - 2700 R.P.M.	
400DRAE5M				2000 - 2000 R.P.M.	
400DRAE8M				1200 - 1200 R.P.M.	
400DRAE21M				440 - 440 R.P.M.	
400DRAE36M				260 - 260 R.P.M.	

Geared Tool



WARNING: Comply with the speed recommendation of component and bit manufacturers.

Floor Drills

3/8" or 1/2" Drill Chuck
1.2 H.P. (900 W)



400FD(X)M;D1/2*

*The (X) is representative of gear train number (3, 5 or 8).
The outer appearance of the tool is the same regardless of the gear train number.

Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Standard Equipment

- Tool • Drill Chuck Key • Operating Instructions and Service Manual



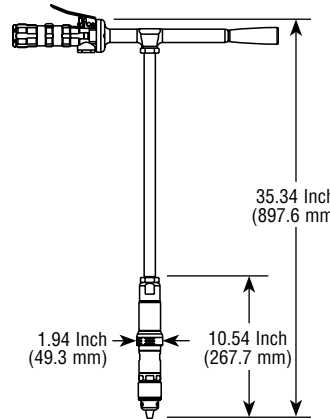
Quick Order Number

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Chuck Size	Maximum Operating Speed	Throttle Handle Type	
			Standard Lever	Safety Lever
400FD	3/8"	5500 RPM	400FD3ML;3/8	400FD3MK;3/8
		4200 RPM	400FD5ML;3/8	400FD5MK;3/8
		2500 RPM	400FD8ML;3/8	400FD8MK;3/8
		900 RPM	400FD21ML;3/8	400FD21MK;3/8
		550 RPM	400FD36ML;3/8	400FD36MK;3/8
	1/2"	5500 RPM	400FD3ML;1/2	400FD3MK;1/2
		4200 RPM	400FD5ML;1/2	400FD5MK;1/2
		2500 RPM	400FD8ML;1/2	400FD8MK;1/2
		900 RPM	400FD21ML;1/2	400FD21MK;1/2
		550 RPM	400FD36ML;1/2	400FD36MK;1/2

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.

400FD(3)(5)(8)MK*



HP 1.2 H.P. (900 W)

Lbs 7.5 Lb. (3.4 Kg) Aluminum
8.0 Lb. (3.6 Kg) Steel

cfm 35 cfm (16.5L/s) Max

* Versions with 2 planetary gear systems (21) & (36) add 0.52 Inch (13.2 mm) to overall length

Example Model Number: **400FD3M K ; 5500 ; 1/2 ; P15**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Operating Speed	Drill Chuck Size	Pipe Extension Length
400FD3M	Please choose one of the following options: L - Standard Lever K - Safety Lever B - Thumb Switch LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	5500 : 5500 R.P.M.	Please choose one of the following options: 3/8 : 3/8 Inch 1/2 : 1/2 Inch	P15 - 15" Extension Length (15 inch is standard equipment other sizes are available)
400FD5M		4200 : 4200 R.P.M.		
400FD8M		2500 : 2500 R.P.M.		
400FD21M		900 : 900 R.P.M.		
400FD36M		550 : 550 R.P.M.		

⚙️ Geared Tool

WARNING: Comply with the speed recommendation of component and bit manufacturers.

Floor Drills

1/2" or 3/4" Drill Chucks
1.5-2.0 H.P. (1130-1500 W)



Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13mm)
Chuck Size: 1/2" (13mm) or 3/4" (19mm)
Standard Equipment

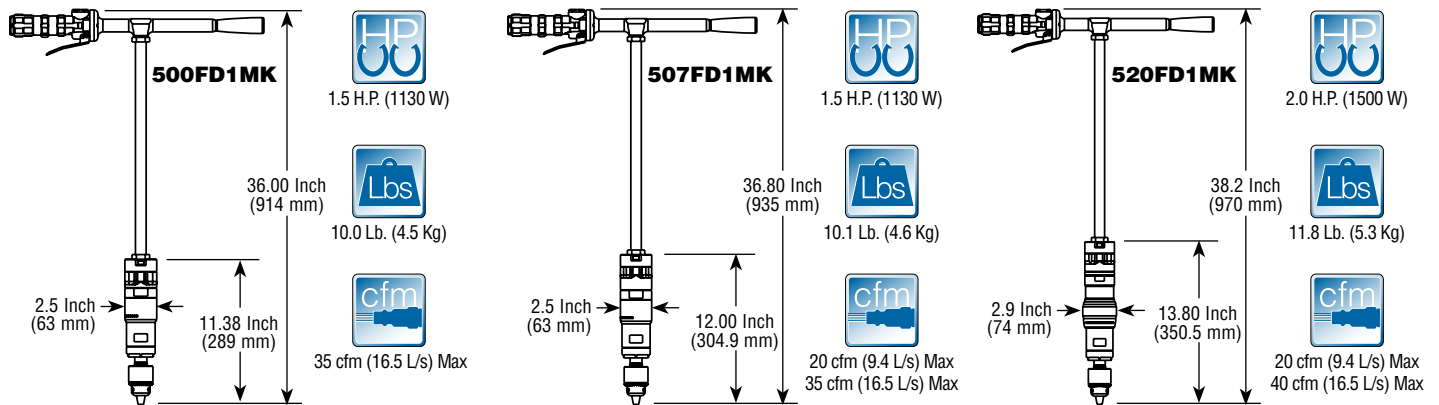
- Tool • Drill Chuck Key • Operating Instructions and Service Manual



Quick Order Number

Model Number	Chuck Size	Maximum Operating Speed	Throttle Type	
			Standard Lever	Safety Lever
500FD1M	1/2"	4000 RPM	500FD1M;D1/2	500FD1MK;D1/2
	3/4"		500FD1M;D3/4	500FD1MK;D3/4

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.



Example Model Number: **500FD1M K ; 4000 ; 1/2 ; P15**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Operating Speed	Drill Chuck Size	Pipe Extension Length
500FD1M	<i>Please choose one of the following options:</i> L - Standard Lever K - Safety Lever	4000 : 4000 R.P.M.*	<i>Please choose one of the following options:</i> 3/4 - 3/4 Inch 1/2 - 1/2 Inch	P15 - 15" Extension Length (15 inch is standard equipment other sizes are available)
507FD1M	LTK - Turned/Knurled Standard Lever KTK - Turned/Knurled Safety Lever	1750-3600 : 1750-3600 R.P.M.*		
520FD1M	BTK - Turned/Knurled Thumb Switch LTKW - Turned/Knurled/Cushioned Standard Lever KTKW - Turned/Knurled/Cushioned Safety Lever BTKW - Turned/Knurled/Cushioned Thumb Switch	1500-3000 : 1500-3000 R.P.M.*		

⚙️ Geared Tool

*The range offered reflects the minimum to maximum operating speeds that this tool can be set. One must choose a speed within this range that best fits the application. Please examine the abrasive used with the tool for a maximum operating speed. The tool should be set at or below the maximum operating speed listed on the abrasive.

WARNING: Comply with the speed recommendation of component and bit manufacturers.

Pin Routers

1/4" or 3/8" Shank Bits
1.2 H.P. (900 W)



400PCEK

Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Router Guides • Safety Lever

Standard Equipment

- Tool • Operating Instructions and Service Manual • Wrenches

Quick Order Number

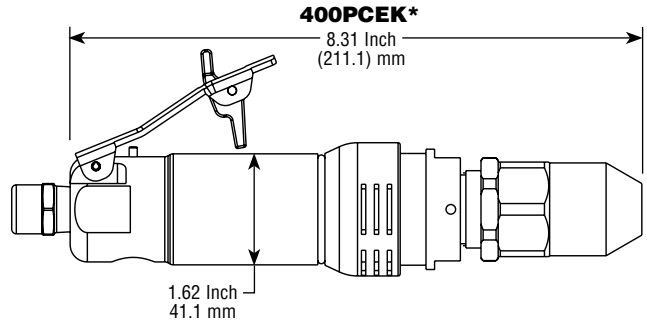
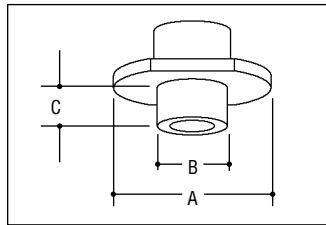
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Router Bit Shank Size	Maximum Operating Speed	Throttle Lever Type	
			Standard Lever	Safety Lever
400PCE	1/4"	20000 RPM	400PCE;1/4	400PCEK;1/4
	3/8"		400PCE;3/8	400PCEK;3/8

The tools listed in this chart will be provided with an aluminum housing. Steel housing material is available. See information below for the entire spectrum of options available.

Trimmer Guides

Model Number	For Bits With Shank Size	A	B	C
4031-50-1368	1/4"	0.75	0.375	0.500
4031-50-1461	1/4"	1.00	0.375	0.125
4031-50-1471	3/8"	1.00	0.438	0.125
4031-50-1472	3/8"	1.00	0.438	0.250



*Rear exhaust adds 0.82 Inch (20.8mm) to overall length.



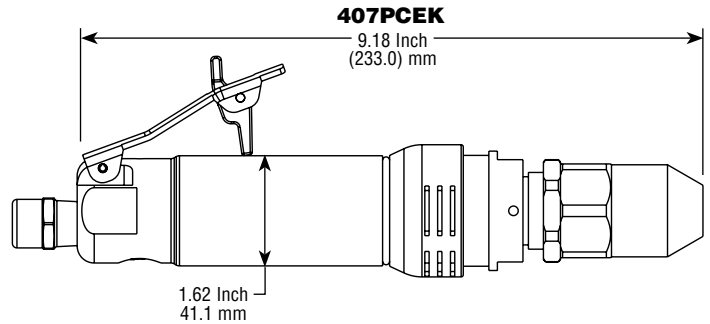
1.2 H.P. (900 W)



2.5 Lb. (1.1 Kg) Aluminum
3.1 Lb. (1.4 Kg) Steel



35 cfm (16.5 L/s) Max



1.2 H.P. (900 W)



2.6 Lb. (1.2 Kg) Aluminum
3.2 Lb. (1.4 Kg) Steel



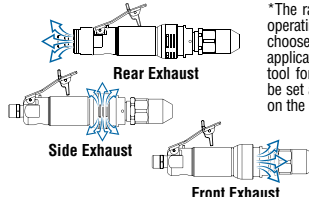
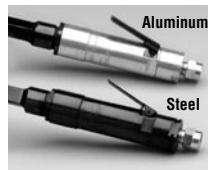
20 cfm (9.4 L/s) Free Speed
35 cfm (16.5 L/s) Max

Example Model Number: **400PCE K S R ; 18000 ; 1/4**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Lever Style	Case Material	Exhaust Direction	Operating Speed	Shank Size
400PCE	Please choose one of the following options: No Designation - Standard Lever K - Safety Lever	Please choose one of the following options: No Designation - Aluminum Case S - Steel Case	Please choose one of the following options: No Designation - Side Exhaust R - Rear Exhaust F - Front Exhaust	Please choose one of the following options: 20000 - 20000 R.P.M. 18000 - 18000 R.P.M.	Please choose one of the following options: 1/4 - 1/4 Inch 3/8 - 3/8 Inch
407PCE			No Designation - Side Exhaust	12000-15000 - 12000-15000 R.P.M.*	

Governor Controlled Tool



*The range offered reflects the minimum to maximum operating speeds that this tool can be set. One must choose a speed within this range that best fits the application. Please examine the abrasive used with the tool for a maximum operating speed. The tool should be set at or below the maximum operating speed listed on the abrasive.

WARNING: Comply with the speed recommendation of component and bit manufacturers.

Bench Grinder

4 H.P. (3000 W)



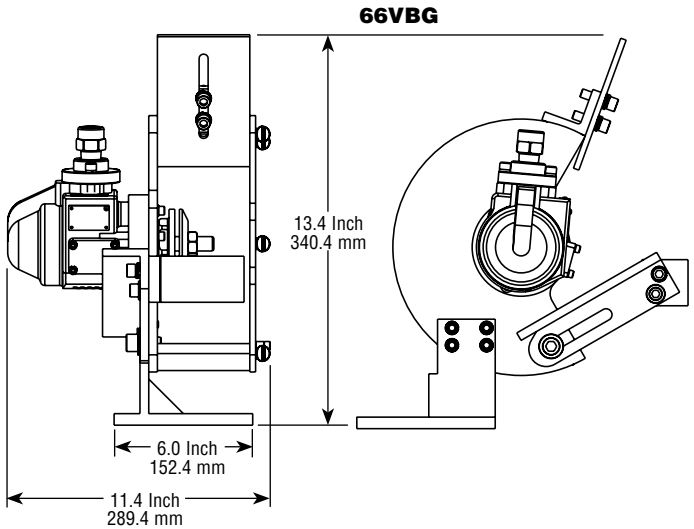
66VBG

- Adjustable Spark Arrestor
- Adjustable Work Rest

Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Standard Equipment

- Tool
- Drive Flange Wrench
- Operating Instructions and Service Manual

This tool employs the higher speed production abrasive wheels normally used with pneumatic hand tools.



Spindle Output: 5/8-11



4.0 H.P.
(3000 W)



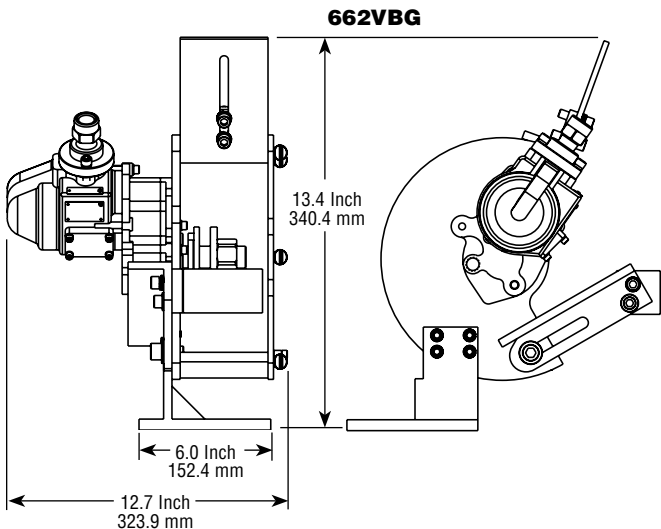
52.5 Lb.
(23.5 Kg)



25 cfm (11.8 L/s) Free Speed
75 cfm (35.4 L/s) Max

Quick Order Number			
Model Number	Operating Speed	Guard Size	Ordering Number
66VBG	6000 R.P.M.	9 Inch	66VBG;9
662VBG	3300 R.P.M.		662VBG;9
Other speeds are available. Please contact us for details.			
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools.			

Geared Tool Governor Controlled Tool



Spindle Output: 1.0-12



4.0 H.P.
(3000 W)



57.5 Lb.
(26.0 Kg)



25 cfm (11.8 L/s) Free Speed
75 cfm (35.4 L/s) Max

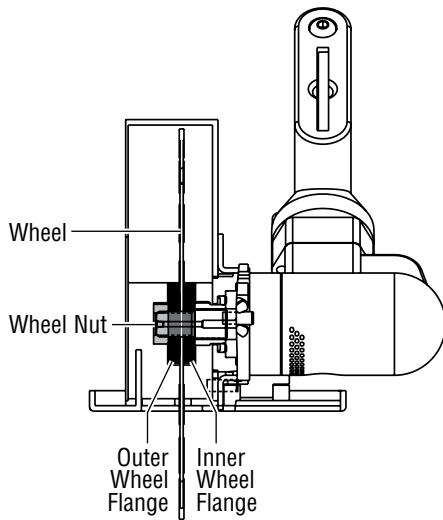
Abrasive Air Saws

Section Contents

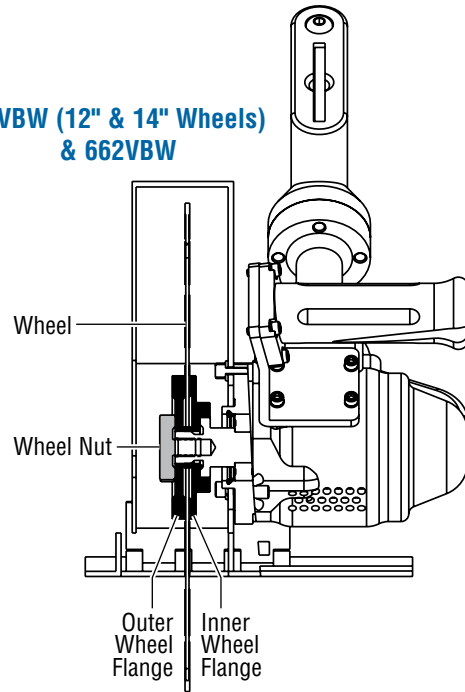
Page Number	Model Number	Power	Wheel Size	Description	
82	510WG	1.5 H.P.	9 Inch	Medium-Saw Sized Tool w/ Planetary Gear Train	
82	65VBW	4.0 H.P.	9, 12 or 14 Inch	Larger Construction Saw	
82	662VBW		12 or 14 Inch	Gear Driven, Large Construction Saw	

Proper Mounting of Type 1 Cut-off Wheels

510WG & 65VBW (9" Wheel)



65VBW (12" & 14" Wheels) & 662VBW



Speed/Guard Size Selection

The operating speed and guard size are closely linked to promote safety and maximize efficiency of the grinding operation. Each model offers various options listed in the Model Number Breakdown and in the chart with each product spread. The choices are based on the characteristics of each model. Please examine the speed/guard size options to select the one that matches the wheel speed/size you are using.

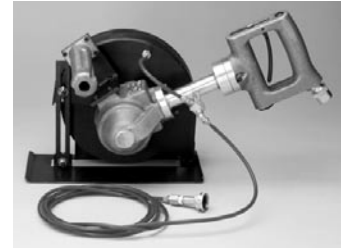
Abrasive Air Saws

9" (230mm) to 14" (360mm)
1.5-4 H.P. (1300-3000 W)



Air Inlet Size: 1/2" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

- Wet Cutting Attachment
- Standard Equipment**
- Tool
- Operating Instructions and Service Manual
- 2 Inch Wrench



Wet Cutting Attachment

Quick Order Number

Model Number	Spindle Type	Operating Speed	Guard Size	Ordering Number
510WG	5/8-11	4000 RPM	9 Inch	510WG
65VBW		6000 RPM	12 Inch	65VBW;9
	1" Spline	5000 RPM	14 Inch	65VBW;14
		662VBW	3300 RPM	12 Inch
14 Inch	662VBW;14			

This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Model Number	Depth of Cut		
	Guard Size		
	9 Inch (230mm)	12 Inch (300mm)	14 inch (360mm)
510WG	2.5 Inch (64mm)	N/A	N/A
65VBW		3.3 Inch (84mm)	4.3 Inch (109mm)
662VBW	N/A		

510WG

7.33 Inch (186.2 mm)
12.95 Inch (328.9 mm)
8.79 Inch (223.3 mm)

HP 1.5 H.P. (1130 W)
Lbs 14.0 Lb. (6.3 Kg)
cfm 35 cfm (16.5 L/s) Max

65VBW
12 Inch (300 mm) Guard

9.65 Inch (245.1 mm)
17.37 Inch (441.2 mm)
13.92 Inch (353.6 mm)

HP 4.0 H.P. (3000 W)
Lbs 23.9 Lb. (10.8 Kg)
cfm 25 cfm (11.8 L/s) Free Speed
75 cfm (35.4 L/s) Max

662VBW
12 Inch (300 mm) Guard

9.65 Inch (245.1 mm)
17.34 Inch (440.4 mm)
17.61 Inch (447.3 mm)

HP 4.0 H.P. (3000 W)
Lbs 28.3 Lb. (12.8 Kg)
cfm 25 cfm (11.8 L/s) Free Speed
75 cfm (35.4 L/s) Max

Example Model Number: **65VBW ; 6000;1241 ; CFA**

The blue highlighted entries are shown in the Quick Reference Box above.

Model Number	Operating Speed/Guard Size	Water Feed Attachment
510WG	4000;941 - 4000 R.P.M. with 9 Inch Guard	CFA - Controlled Flow Water Attachment (optional)
65VBW	Please choose one of the following options: 6000;941 - 6000 R.P.M with 9 Inch Guard 6000;1241 - 6000 R.P.M with 12 Inch Guard 5000;1441 - 5000 R.P.M with 14 Inch Guard	
662VBW	Please choose one of the following options: 3300;1241 - 3300 R.P.M with 12 Inch Guard 3300;1441 - 3300 R.P.M with 14 Inch Guard	


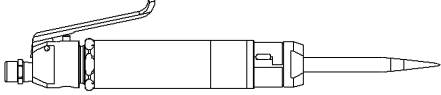


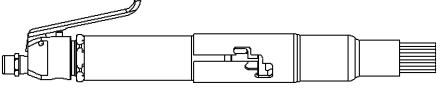

Governor Controlled Tool Geared Tool

WARNING: Follow all recommendations from component and abrasive manufacturers for speeds and proper usage.

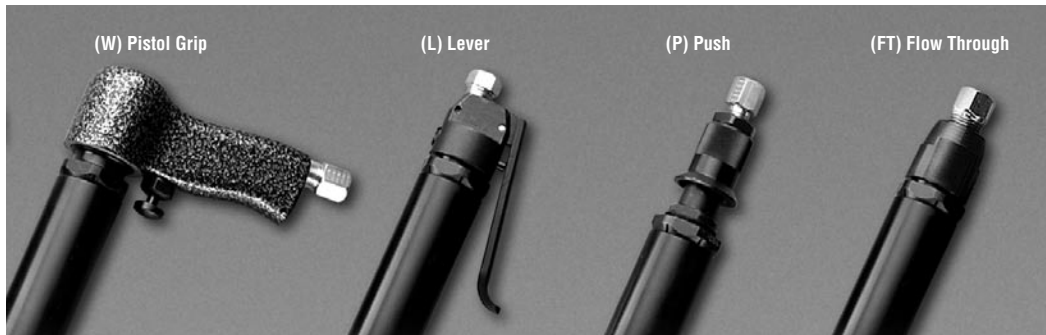


Scalers & Needle Scalers

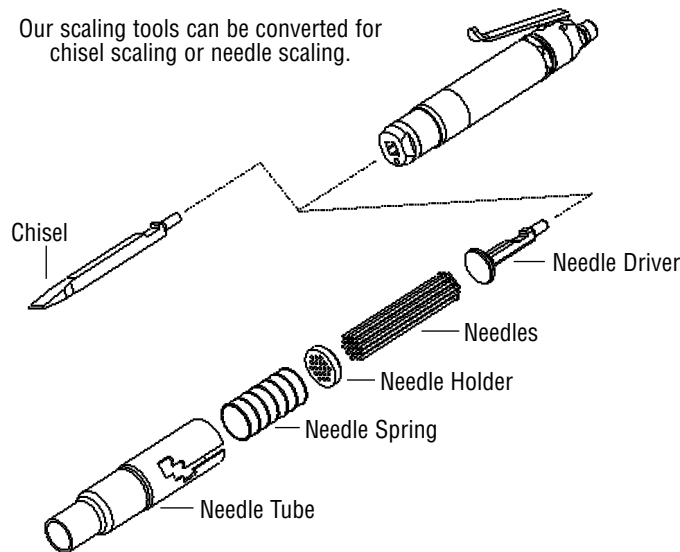
Section Contents

SCALERS					
Page Number	Model Number	Bore x Stroke	Chisel Style	Description	
85	TC-1	1.0" X 1.1"	1/2 Square 	 Scalers	
86	TC-182	0.98" x 1.1"	1/4 Octagon 		
NEEDLE SCALERS					
Page Number	Model Number	Bore x Stroke	Chisel Style	Description	
87	TC-1-N	1.0" X 1.1"	1/2 Square 	 Needle Scalers	
88	TC-182-N	0.98" x 1.1"	1/4 Octagon 		

Handles



Our scaling tools can be converted for chisel scaling or needle scaling.



Scalers/Chisels

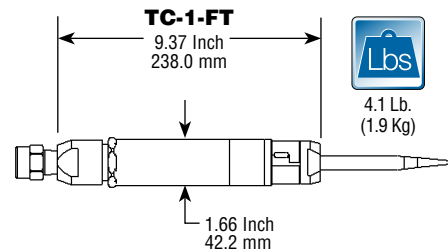
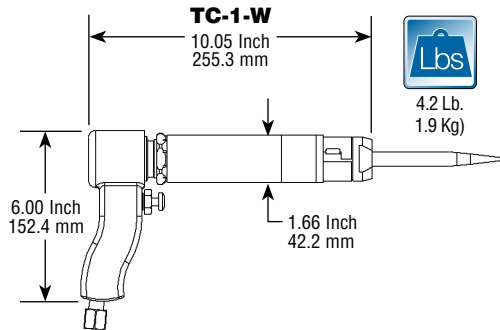
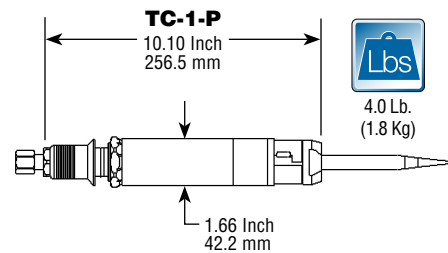
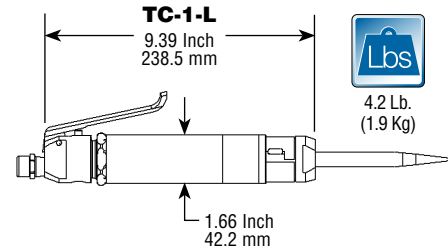


Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

- Needle Scaler Attachments • Extended Reach Handle • Safety Lever

Standard Equipment

- Tool • Operating Instructions and Service Manual



Quick Order Number		
Model Number	Handle Style	Ordering Number
TC1	Lever	TC1L
	Safety Lever	TC1K
	Push	TC1P
	Offset (Pistol)	TC1W
	Flow Through	TC1FT
TC1 Floor Scraper	Lever	TC1L;PL48
	Safety Lever	TC1K;PL48

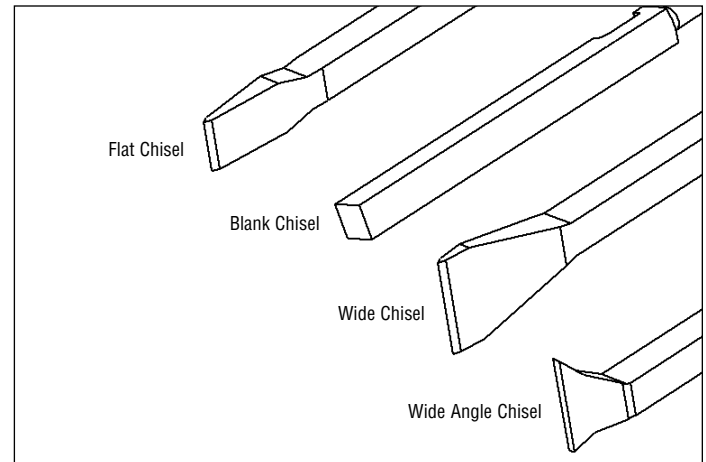
1 Inch x 1.13 Inches (25.4 mm x 29.0 mm)

4650

20 cfm (9.4 L/s) Max

Chisels – 1/2 Inch Square Shank			
Description	Cutting Edge	Overall Length	Part Number
Narrow Flat Chisel	3/4" (19mm)	7" (178mm)	839051
Narrow Flat Chisel	3/4" (19mm)	12" (305mm)	839341
Narrow Flat Chisel	3/4" (19mm)	18" (457mm)	839335
Wide Angle Chisel	1 3/8" (34.9mm)	7" (178mm)	839050
Wide Angle Chisel	1 3/8" (34.9mm)	12" (305mm)	839299
Wide Angle Chisel	1 3/8" (34.9mm)	18" (457mm)	839334
Blank Chisel		7" (178mm)	839052
Blank Chisel		12" (305mm)	839053
Blank Chisel		18" (457mm)	839054
Wide Chisel	1 3/8" (34.9mm)	7" (178mm)	839467
Wide Chisel	1 3/8" (34.9mm)	12" (305mm)	839469
2 Inch Wide Scraper	2" (50.8mm)	7" (178mm)	839468

Other Sizes And Styles Available



SCALERS

Scalers/Chisels



Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

- Needle Scaler Attachments • Extended Reach Handle • Safety Lever

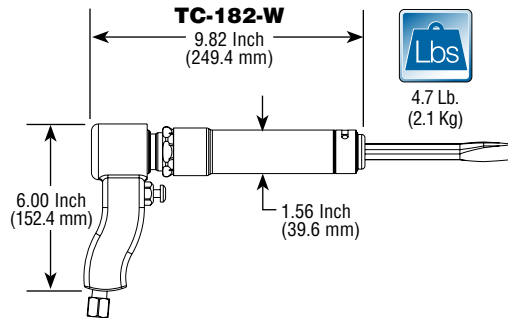
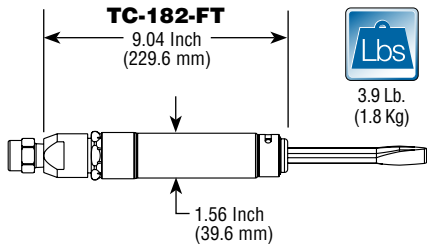
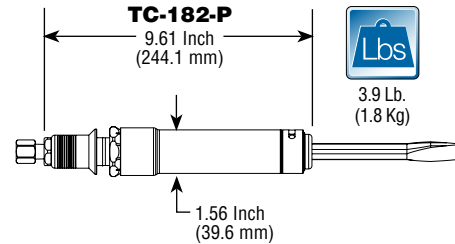
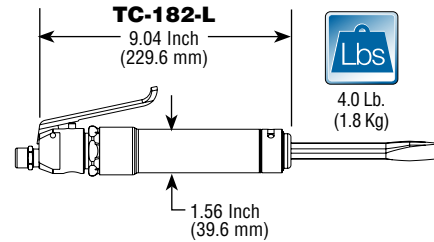
Standard Equipment

- Tool • Operating Instructions and Service Manual

Quick Order Number

Model Number	Handle Style	Ordering Number
TC-182	Lever	TC-182-L
	Safety Lever	TC-182-K
	Push	TC-182-P
	Offset (Pistol)	TC-182-W

0.98 Inch x 1.06 Inches (25.0 mm x 27.0 mm)
 4000
 20 cfm (9.4 L/s) Max

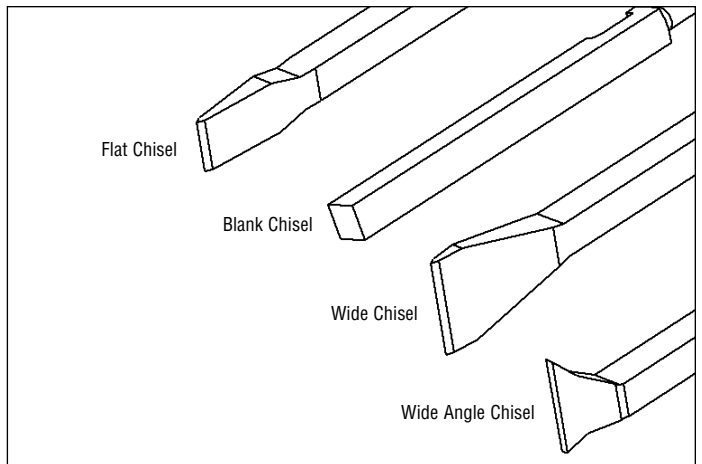


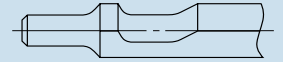
Chisels - 1/4 Inch Octagon



Description	Cutting Edge	Overall Length	Part Number
Narrow Flat Chisel	3/4" (19mm)	7" (17.8cm)	839601
Narrow Flat Chisel	3/4" (19mm)	12" (30.5cm)	839601-12
Blank Chisel		7" (17.8cm)	839605
Blank Chisel		12" (30.5cm)	839605-12
Wide Chisel	1 3/8" (34.9mm)	7" (17.8cm)	839602
Wide Angle Chisel	1 3/8" (34.9mm)	7" (17.8cm)	839604
Wide Angle Chisel	1 3/8" (34.9mm)	12" (30.5cm)	839604-12

Other Sizes And Styles Available



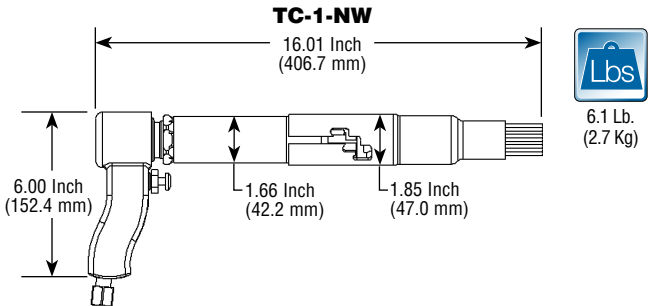
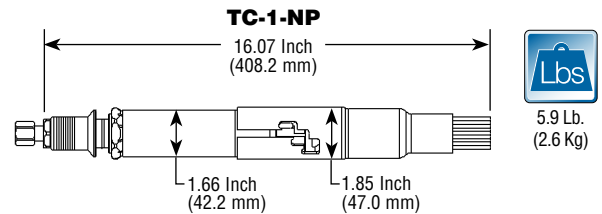
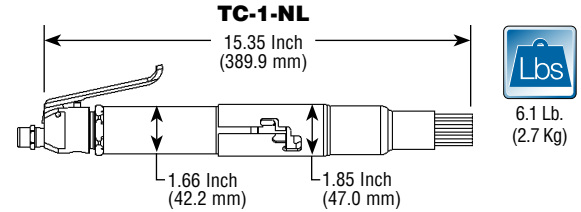


Needle Scalers



Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Standard Equipment

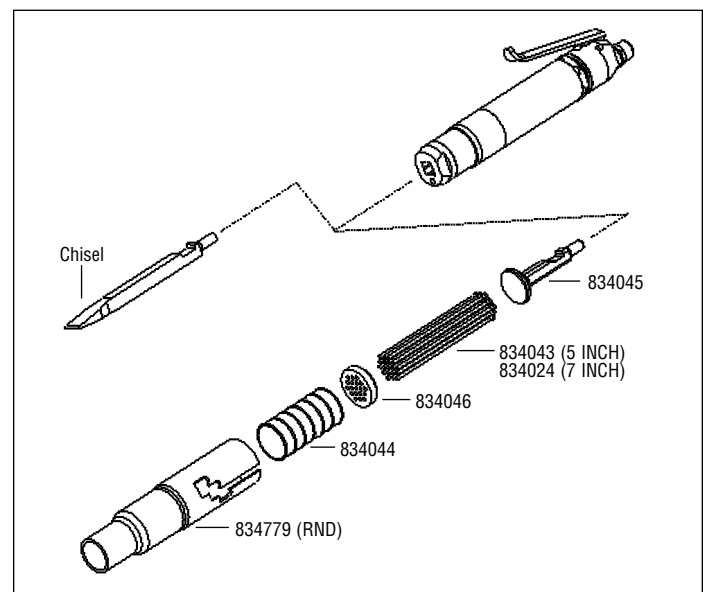
- Tool • Operating Instructions and Service Manual



Quick Order Number			
Model Number	Handle Style	Needle Length	Ordering Number
TC-1-N	Lever	5 Inch	TC-1-NL;5
		7 Inch	TC-1-NL;7
	Safety Lever	5 Inch	TC-1-NK;5
		7 Inch	TC-1-NK;7
	Push	5 Inch	TC-1-NP;5
		7 Inch	TC-1-NP;7
	Offset (Pistol)	5 Inch	TC-1-NW;5
		7 Inch	TC-1-NW;7

Top Cat® needle scalers are used to remove weld flux and peen strengthen welds. They can be easily converted to chisel scaler applications. Hardened alloy steel needles come as original equipment.

- 1 Inch x 1.13 Inches (25.4 mm x 29.0 mm)
- 4650
- 20 cfm (9.4 L/s) Max



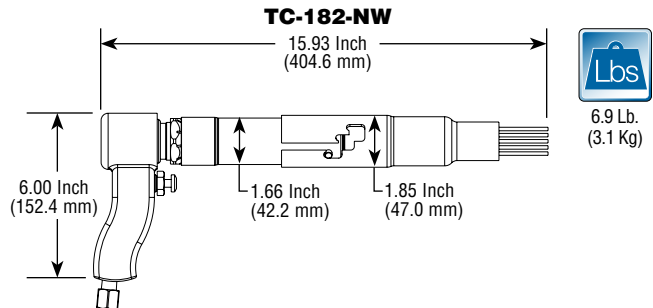
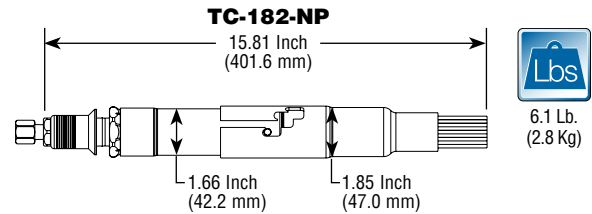
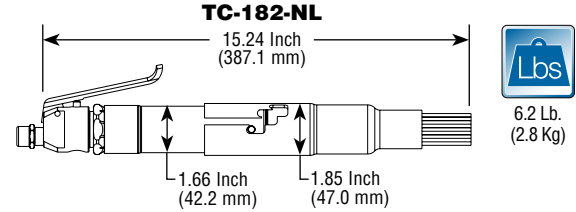
SCALERS

Needle Scalars



Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Standard Equipment

- Tool • Operating Instructions and Service Manual



Quick Order Number

Model Number	Handle Style	Needle Length	Ordering Number
TC-182-N	Lever	5 Inch	TC-182-NL;5
		7 Inch	TC-182-NL;7
	Safety Lever	5 Inch	TC-182-NK;5
		7 Inch	TC-182-NK;7
	Push	5 Inch	TC-182-NP;5
		7 Inch	TC-182-NP;7
	Offset (Pistol)	5 Inch	TC-182-NW;5
		7 Inch	TC-182-NW;7

Top Cat® needle scalars are used to remove weld flux and peen strengthen welds. They can be easily converted to chisel scalar applications. Hardened alloy steel needles come as original equipment.



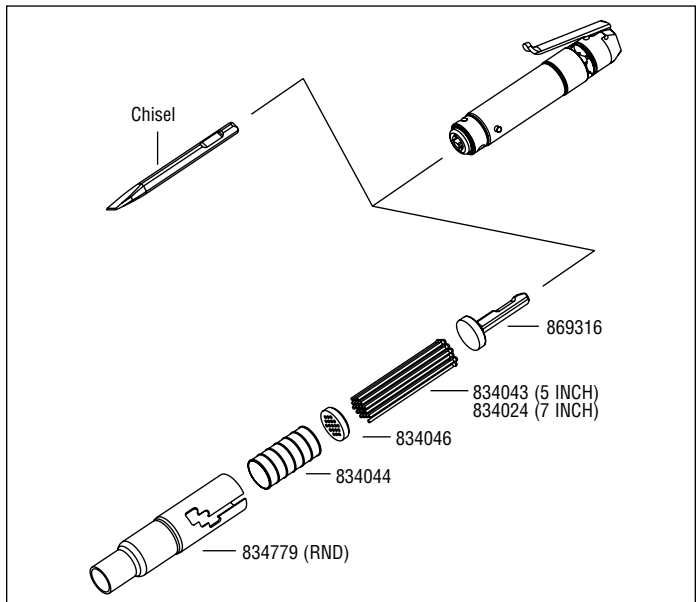
0.98 Inch x 1.06 Inches
(25.0 mm x 27.0 mm)



4000

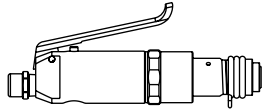
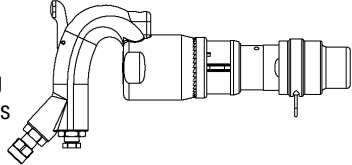


20 cfm (9.4 L/s) Max

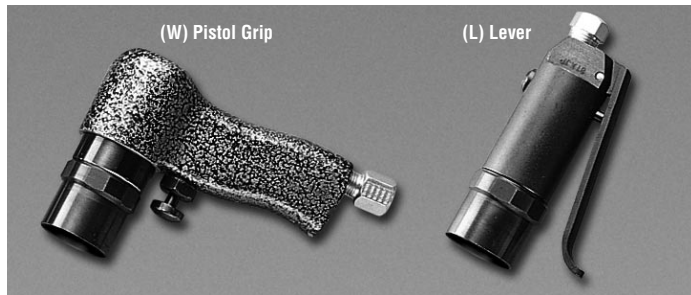


Chipping Hammers

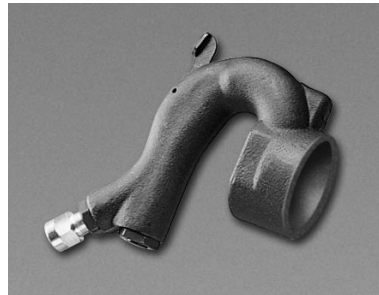
Section Contents

Page Number	Model Number	Bore X Stroke	Chisel Retainer	Chisel Style		Description	
90	80-Series	0.6" X 1.4"	Spring/Beehive	0.371 Hex	0.401 Round	Small Chipping Hammers	
91	TC-10	1.1" X 1.0"	Solid with Lock Spring	0.580 Hex	0.680 Round	Large Chipping Hammers	
91	TC-20	1.1" X 2.0"					
91	TC-30	1.1" X 3.0"					
91	TC-40	1.1" X 4.0"					

Handles: 80 Series

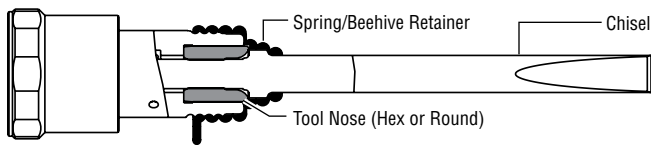


TC-10 through TC-40 Series



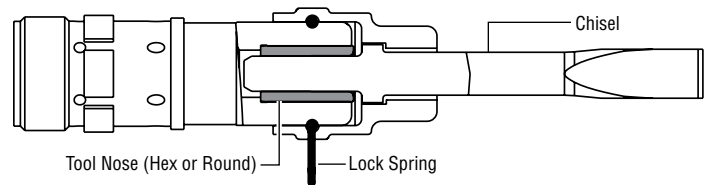
Methods of Chisel Retention: 80 Series

Beehive Retainer

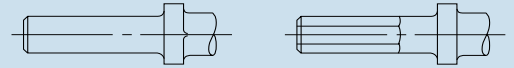


TC-10 through TC-40 Series

Chisel Retainer



Chipping Hammers



CHIPPING HAMMERS

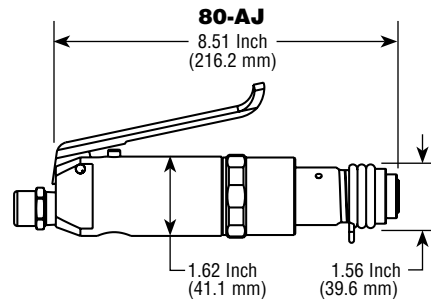


Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual

Quick Order Number

Model Number	Handle Type	Tool Nose	Ordering Number
80-Series (Spring/Beehive Chisel Retainer)	Standard Lever	Hex	80L;HEX
	Safety Lever		80K;HEX
	Offset Backhead (Pistol)		80W;HEX
	Standard Lever	Round	80L;RND
	Safety Lever		80K;RND
	Offset Backhead (Pistol)		80W;RND



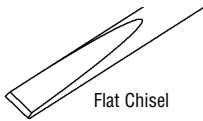
0.63 Inch x 1.44 Inches
(16 mm x 36.6 mm)



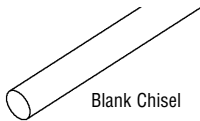
5200



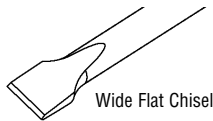
15 cfm (7.1 L/s) Max



Flat Chisel



Blank Chisel



Wide Flat Chisel

Chisels – 0.401 Round



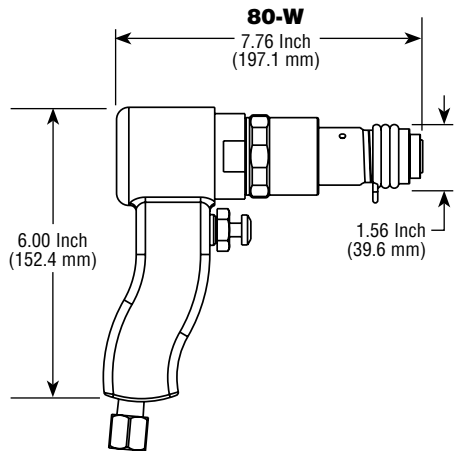
Description	Cutting Edge	Overall Length	Part Number
Wide Flat Chisel	3/4" (19mm)	11" (279mm)	595003
Flat Chisel	1/2" (12.7mm)	7" (178mm)	595002
Wide Flat Chisel	3/4" (19mm)	7" (178mm)	595001
Wide Flat Chisel	3/4" (19mm)	18" (457mm)	595004
Blank Chisel		7" (178mm)	595005

Other Sizes And Styles Available

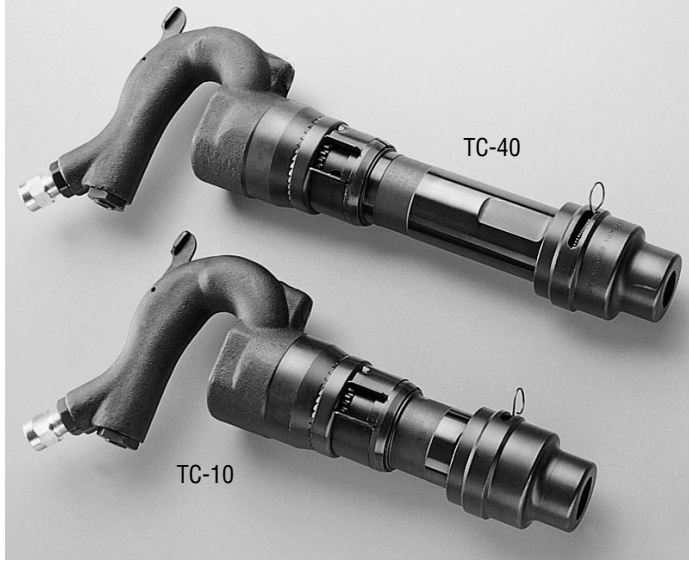
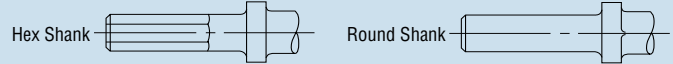
Chisels – 0.371 Hexagon



Description	Cutting Edge	Overall Length	Part Number
Flat Chisel	1/2" (12.7mm)	12" (305mm)	595016



Chipping Hammers



Air Inlet Size: 3/8" NPT
Hose Size Recommendations: 1/2" (13 mm)
Extra Charge Accessories

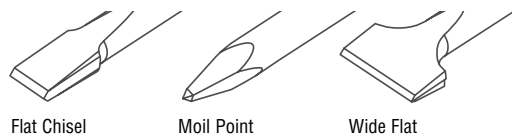
- Round Collar Retainer • Quick Change Retainer
 - Forged Inlet Swivel • Hose Whip
- Standard Equipment**
- Tool • Operating Instructions and Service Manual

The tool for tough working conditions, Top Cat's® chipping hammers are heavy hitters for cleaning castings and light concrete demolition work. (Always use chisel retainer.)

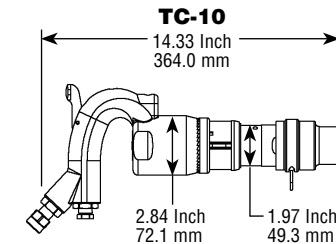
CHIPPING HAMMERS

Quick Order Number		
Model Number	Tool Nose	Ordering Number
TC10	Hex	TC10;HEX
	Round	TC10;RND
TC20	Hex	TC20;HEX
	Round	TC20;RND
TC30	Hex	TC30;HEX
	Round	TC30;RND
TC40	Hex	TC40;HEX
	Round	TC40;RND

The standard tools come with an oval collar chisel retainer. Round collar chisel retainers are available upon request.



25 cfm (11.8 L/s) Max

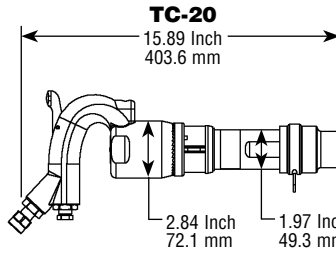


TC-10

1.13 Inch x 1.0 Inches (29.0 mm x 25.4 mm)

2800

14.8 Lb. (6.6 Kg)

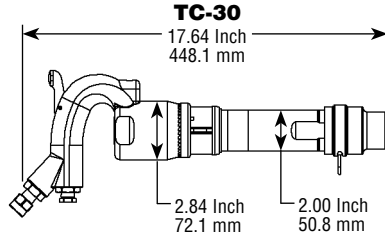


TC-20

1.13 Inch x 3.0 Inches (29.0 mm x 76.0 mm)

1900

16.7 Lb. (7.0 Kg)

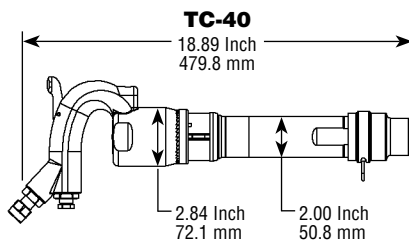


TC-30

1.13 Inch x 2.0 Inches (29 cm x 51 cm)

2400

15.4 Lb. (6.7 Kg)



TC-40

1.13 Inch x 4.0 Inches (29.0 mm x 102.0 mm)

1500

17.2 Lb. (7.8 Kg)

Chisels – 0.580 Hexagon			
Description	Cutting Edge	Overall Length	Part Number
Flat Chisel	1" (25.4mm)	9" (229mm)	839008
Flat Chisel	1" (25.4mm)	12" (305mm)	839009
Flat Chisel	1" (25.4mm)	18" (457mm)	839010
Moil Point		9" (229mm)	839018
Wide Flat	2" (50.8mm)	12" (305mm)	839016

Other Sizes And Styles Available

Chisels – 0.680 Round			
Description	Cutting Edge	Overall Length	Part Number
Flat Chisel	1" (25.4mm)	9" (229mm)	839014
Flat Chisel	1" (25.4mm)	12" (305mm)	839083
Flat Chisel	1" (25.4mm)	18" (457mm)	839045
Moil Point		9" (229mm)	839023
Wide Flat	1.5" (38.1mm)	9" (229mm)	839019
Wide Flat	2" (50.8mm)	9" (229mm)	839017

Other Sizes And Styles Available

Rammers

RAMMERS



Extra Charge Accessories

- Safety Lever • Extended Reach / Floor Rammers

Standard Equipment

- Tool • Operating Instructions and Service Manual • 1 Butt or Pein of Choice

Top Cat® rammers, made of heat treated steel, are ideal for compressing molds, peining operations and even light construction compaction. A built-in piston wiper protects against dirt and scale.

Quick Order Number

Model Number	Butt Size	Handle Type	
		Regular Lever	Safety Lever
1300-OB	2 3/8" RND Alum/Rubber	1300-OBL;AR 2 3/8	1300-OBK;AR 2 3/8
	2 3/8" RND Rubber	1300-OBL;R 2 3/8	1300-OBK;R 2 3/8
	2 3/8" RND Steel	1300-OBL;S 2 3/8	1300-OBK;S 2 3/8
1320-2BA	3" RND Alum/Rubber	1320-2BAL;AR 3	1320-2BAK;AR 3
	3" RND Rubber	1320-2BAL;R 3	1320-2BAK;R 3
	3" RND Steel	1320-2BAL;S 3	1320-2BAK;S 3
1320-2BF	3" RND Alum/Rubber	1320-2BFL;AR 3	1320-2BFK;AR 3
	3" RND Rubber	1320-2BFL;R 3	1320-2BFK;R 3
	3" RND Steel	1320-2BFL;S 3	1320-2BFK;S 3
1350-2BA	3" RND Alum/Rubber	1350-2BAL;AR 3	1350-2BAK;AR 3
	3" RND Rubber	1350-2BAL;R 3	1350-2BAK;R 3
	3" RND Steel	1350-2BAL;S 3	1350-2BAK;S 3
1350-2BF	3" RND Alum/Rubber	1350-2BFL;AR 3	1350-2BFK;AR 3
	3" RND Rubber	1350-2BFL;R 3	1350-2BFK;R 3
	3" RND Steel	1350-2BFL;S 3	1350-2BFK;S 3

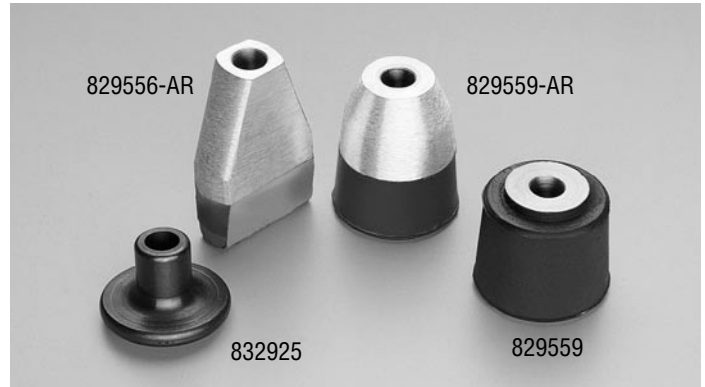
This chart has been provided as a means to quickly identify a particular tool. The ordering numbers listed represent the most common versions of our tools. If more specialized versions are required, please build your model number per the following model number flow chart.

Example Model Number:

1320-2BA ; K ; R-3

Model Number	Lever Style	Butt/Pein Size
1300-OB		AR-2 3/8 - 2 3/8 Inch Round Aluminum/Rubber Butt R-2 3/8 - 2 3/8 Inch Round Rubber Butt S-2 1/2 - 2 1/2 Inch Round Steel Butt
1320-2BA	Please choose one of the following options: L - Standard Lever K - Safety Lever	AR-3 - 3 Inch Round Aluminum/Rubber Butt R-3 - 3 Inch Round Rubber Butt S-3 - 3 Inch Round Steel Butt
1320-2BF		
1350-2BA		
1350-2BF		P-1 - 1 X 2 7/8 Inch Aluminum/Rubber Pein P-2 - 3/4 X 2 3/8 Inch Aluminum/Rubber Pein

The blue highlighted entries are shown in the Quick Reference Box above.



Butts & Peins

Part Number	Size	Type
829558-AR	2 3/8" (60 mm) Diameter	Aluminum/Rubber Butt
829559-AR	3" (75 mm) Diameter	Aluminum/Rubber Butt
829558	2 3/8" (60 mm) Diameter	Rubber Butt
829559	3" (75 mm) Diameter	Rubber Butt
832925	2 1/2" (64 mm) Diameter	Steel Butt
832924	3" (75 mm) Diameter	Steel Butt
829556-AR	1" X 2 7/8" (25 mm x 73 mm)	Aluminum/Rubber Pein
829557-AR	3/4" X 2 3/8" (19 mm x 60 mm)	Aluminum/Rubber Pein



20 cfm (11.8 L/s) Max

1300-OBL

16.23 Inch
412.2 mm

1.62 Inch
41.1 mm

1.75 Inch
44.5 mm

1.0 Inch x 2.0 Inches
(25.4 mm x 51.0 mm)

2500

6.4 Lb.
(2.9 Kg)

1320-2BAL

17.13 Inch
435.1 mm

2.31 Inch
58.7 mm

1.88 Inch
47.8 mm

1.81 Inch
46.0 mm

1.0 Inch x 2.5 Inches
(25.4 mm x 64.0 mm)

1600

7.6 Lb.
(3.4 Kg)

1350-2BAL

22.19 Inch
563.6 mm

2.31 Inch
58.7 mm

1.88 Inch
47.8 mm

1.81 Inch
46.0 mm

1.0 Inch x 4.0 Inches
(25.4 mm x 102.0 mm)

1240

11.3 Lb.
(5.1 Kg)

1320-2BFK

30.68 Inch
779.3 mm

1.50 Inch
38.1 mm

2.31 Inch
58.7 mm

1.81 Inch
46.0 mm

1.0 Inch x 2.5 Inches
(25.4 mm x 64.0 mm)

1600

10.7 Lb.
(4.8 Kg)

1350-2BFK

36.24 Inch
920.5 mm

1.50 Inch
38.1 mm

2.31 Inch
58.7 mm

1.81 Inch
46.0 mm

1.0 Inch x 4.0 Inches
(25.4 mm x 102.0 mm)

1240

14.3 Lb.
(6.5 Kg)



RAMMERS

Power Supply Motors

1.2-4 H.P. (900-3000 W)

Power Supply Motors



T.C. Service Co. manufactures a wide range of power supply motors to meet a variety of applications. Power outputs and other variables can be considered to find just the right supply unit to meet your needs.



Contact us if you have a special need or application.

Power Supply Motors

Model Number	Throttle Type	Power Output	Operating Speed	Maximum Body Diameter	Working Air Consumption	Clamp Diameter for Mounting
400H3M*	(L) Lever, (K) Safety Lever or (FT) Flow Through Inlet	1.2 H.P. (900 W)	5500 R.P.M.	1.94 Inch (50 mm)	35 cfm (16.6 l/s)	1.61 Inch (41 mm)
400H5M*			4200 R.P.M.			
400H8M*			2500 R.P.M.			
400H16M*			1200 R.P.M.			
400H21M*			900 R.P.M.			
400H36M*			550 R.P.M.			
400H74M*			260 R.P.M.			
400H98M*			200 R.P.M.			
400H164M*			120 R.P.M.			
500H1M*	(L) Lever, (K) Safety Lever, (B) Thumb Switch, (G) Spade Handle or (FT) Flow Through Inlet	1.5 H.P. (1125 W)	4000 R.P.M.	2.5 Inch (42 mm)	45 cfm (21.3 l/s)	2.25 Inch (58 mm)
500H2M*			1000 R.P.M.			
500H3M*			250 R.P.M.			
520H1M	2.0 H.P. (1500 W)	2.0 H.P. (1500 W)	3000 R.P.M.	3.0 Inch (64 mm)	80 cfm (37.8 l/s)	4 Bolt Front Mount Only
520H2M			750 R.P.M.			
520H3M			190 R.P.M.			
664H1M	4.0 H.P. (3000 W)	4.0 H.P. (3000 W)	1200 R.P.M.	4.63 Inch (77 mm)	80 cfm (37.8 l/s)	4 Bolt Front Mount Only
664H2M			180 R.P.M.			

*Governed versions are available. Contact us for details.



T.C. Service Co. has a variety of standard threaded outputs in stock. We can manufacture custom threaded outputs to meet your requirements.



A selection of drill chucks and keyed shafts are shown. Custom designs can be fabricated to adapt to your needs.

Other Motor Options Available

Accessories – Guards



Type 1 Cut-off Wheels

Reinforced Type 1 Cut-Off Wheel (Type 41)





Diamond Wheel

Model Number	Description	3 Inch (75mm)	4 Inch (100mm)	5 Inch (125mm)	6 Inch (150mm)	8 Inch (200mm)	9 Inch (230mm)	10 Inch (250mm)	12 Inch (300mm)	14 Inch (350mm)
40GH	0.9 H.P. Horizontal Grinder	501-3A-41	501-4A-41							
41G	0.9 H.P. Die Grinder	4503-01	4504-01							
44BW	0.9 H.P. Saw		404-SV-4							
44BWE	0.9 H.P. Saw		404-SV-4		404-SV-6					
44RA	0.9 H.P. Right Angle Grinder	4503-41	4504-41	4505-41						
44RAE	0.9 H.P. Right Angle Grinder	4503-41	4504-41	4505-41	4506-41					
45RA	0.9 H.P. Right Angle Grinder	4503-41	4504-41							
45RAE	0.9 H.P. Right Angle Grinder	4503-41	4504-41							
46RA	0.9 H.P. Right Angle Grinder	4603A-41	4604A-41							
47G	0.9 H.P. Die Grinder	4503-01	4504-01							
47GH	0.9 H.P. Horizontal Grinder	501-3A-41	501-4A-41							
48RA	0.9 H.P. Right Angle Grinder	4503-41	4504-41	4505-41	4506-41					
51H	1.5 H.P. Horizontal Grinder	501-3A-41	501-4A-41							
56H	3 H.P. Horizontal Grinder				650-HS-56A	650-HS-58A				
56PC	3 H.P. Pile Cutter					650-155				
57H	1.5 H.P. Horizontal Grinder	501-3A-41	501-4A-41							
65H	4 H.P. Horizontal Grinder				650-HS-56A	650-HS-58A				
65VBW	4.0 H.P. Saw						650-SV-9		650-SV-12	650-SV-14
66PC	4 H.P. Pile Cutter							650-165	650-175	650-185
66VBG	4 H.P. Bench Grinder						650-FG-9			
300RA/ 300RAE	0.7 H.P. Right Angle Grinder	HRGD-341	HRGD-441							
320RA	0.7 H.P. Right Angle Grinder		ERGD-441							
400GEH	1.2 H.P. Extended Grinder	HG-341								
400GH	1.2 H.P. Horizontal Grinder	HG-341								
400GT	1.2 H.P. Die Grinder	H341								
400RA	1.2 H.P. Right Angle Grinder	HRGD-341	HRGD-441	HRGD-541						
400RAE	1.2 H.P. Right Angle Grinder	HRGD-341	HRGD-441	HRGD-541	HRGD-641					
407GEH	1.2 H.P. Extended Grinder	HG-341	HG-441							
407GH	1.2 H.P. Horizontal Grinder	HG-341	HG-441							
407GT	1.2 H.P. Die Grinder	H301	H401							
410RA/ 410RAE	1.2 H.P. Right Angle Grinder	HRGD-341	HRGD-441							
420RA	1.2 H.P. Right Angle Grinder		ERGD-441							
510WG	1.5 H.P. Saw						540792			
520GEH	2.0 H.P. Extended Grinder	HG-341	HG-441							
520HGEH	2.0 H.P. Extended Grinder		5204		5206					
520RA	2.0 H.P. Right Angle Grinder							NRA-1041		
662VBW	4 H.P. Saw						650-SV-9		650-SV-12	650-SV-14
4111G	0.9 H.P. Die Grinder	4503-01	4504-01							
4117G	0.9 H.P. Die Grinder	4503-01	4504-01							
5201H	2 H.P. Horizontal Grinder		5204		5206					



Tools in bold print have been discontinued from our product line. They are represented here for the convenience of those customers still using them.





Accessories – Guards

Accessories

Type 1 Grinding Wheels						
 Circular Wire Wheels  Circular Flap Wheels  Surface Finishing Wheel  Type 1 Wheel						
Model Number	Description	3 Inch (75mm)	4 Inch (100mm)	6 Inch (150mm)	8 Inch (200mm)	9 Inch (230mm)
40GH	0.9 H.P. Horizontal Grinder	501-3A-01	501-4A-01			
41G	0.9 H.P. Die Grinder	4503-01	4504-01			
47G	0.9 H.P. Die Grinder	4503-01	4504-01			
47GH	0.9 H.P. Horizontal Grinder	501-3A-01	501-4A-01			
51H	1.5 H.P. Horizontal Grinder	501-3A-01	501-4A-01			
56H	3.0 H.P. Horizontal Grinder			650-HS-56A	650-HS-58A	
57H	1.5 H.P. Horizontal Grinder	501-3A-01	501-4A-01			
65H	4.0 H.P. Horizontal Grinder			650-HS-56A	650-HS-58A	
66VBG	4.0 H.P. Bench Grinder					650-FG-9
5201H	2.0 H.P. Horizontal Grinder		5204	5206		
400GEH	1.2 H.P. Extended Grinder	HG-301				
400GH	1.2 H.P. Horizontal Grinder	HG-301				
400GT	1.2 H.P. Die Grinder	H301				
407GEH	1.2 H.P. Extended Grinder	HG-301	HG-401			
407GH	1.2 H.P. Horizontal Grinder	HG-301	HG-401			
407GT	1.2 H.P. Die Grinder	H301	H401			
520GEH	2.0 H.P. Extended Grinder	HG-301	HG-401			
520HGEH	2.0 H.P. Extended Grinder		5204	5206		
4111G	0.9 H.P. Die Grinder	4503-01	4504-01			
4117G	0.9 H.P. Die Grinder	4503-01	4504-01			

Tools in bold print have been discontinued from our product line. They are represented here for the convenience of those customers still using them.

Type 6 /11 Cup Wheels				
 Type 6 Wheel  Type 11 Wheel				
Model Number	Description	4 Inch (100mm)	5 Inch (125mm)	6 Inch (150mm)
520V	2 H.P. Vertical Grinder	NVG-411		
58C	3 H.P. Vertical Grinder	560-46	560-45	412988
68C	4 H.P. Vertical Grinder		560-45	412988

Type 27/28 Depressed Center Wheels										
 Type 27 Wheel  Type 27 Wheel with Built-In Hub  Type 28 Wheel  Type 28 Wheel with Built-In Hub										
Model Number	Description	3 Inch (75mm)	4 Inch (100mm)	4 ½ Inch (115mm)	5 Inch (125mm)	6 Inch (150mm)	7 Inch (180mm)	9 Inch (230mm)		
41GP	0.9 H.P. Pistol Grip Vertical Grinder		4504-27							
44RA	0.9 H.P. Right Angle Grinder	4503-27	4504-27	45045-27	4505-27					
44RAE	0.9 H.P. Right Angle Grinder	4503-27	4504-27	45045-27	4505-27	4506-27				
45RA/45RAE	0.9 H.P. Right Angle Grinder	4503-27	4504-27							
46RA	0.9 H.P. Right Angle Grinder	4603A-27	4604A-27							
48RA	0.9 H.P. Right Angle Grinder	4503-27	4504-27	45045-27	4505-27	4506-27				
54V	3 H.P. Vertical Grinder						700-200	700-201		
64V	4 H.P. Vertical Grinder						700-200	700-201		
300RA	0.7 H.P. Right Angle Grinder	HRGD-327	HRGD-427							
400RA	1.2 H.P. Right Angle Grinder	HRGD-327	HRGD-427	HRGD-4527	HRGD-527					
400RAE	1.2 H.P. Right Angle Grinder	HRGD-327	HRGD-427	HRGD-4527	HRGD-527	HRGD-627				
410RA/410RAE	1.2 H.P. Right Angle Grinder	HRGD-327	HRGD-427	HRGD-4527						
420RA	1.2 H.P. Right Angle Grinder		ERGD-427							
520RA	2.0 H.P. Right Angle Grinder						NRA-727	NRA-927		
520V	2 H.P. Vertical Grinder						NV-727	NV-927		

Tools in bold print have been discontinued from our product line. They are represented here for the convenience of those customers still using them.

Accessories - Collets, Spiralcool® Pads, Bearing Drivers, Spindle Holders

Collets

Part Number	Internal Threads	Capacity	Description
TC-1010	3/8 - 24	1/4"	2-Piece Split Collet
TC-1010-3/8	3/8 - 24	3/8"	2-Piece Split Collet
TC-1024	1/2 - 13	1/4"	2-Piece Split Collet
TC-1104	5/8 - 11	1/4"	2-Piece Split Collet
AA-209-XX*	3/8 - 24	1/8", 1/4", 3/8", 3mm, 6mm or 8mm	3-Piece Dual Angle Collet Assembly
AA-310-XX*	5/16 - 24	1/8", 1/4", 3mm, or 6mm	4-Piece Dual Angle Collet Assembly
AA-310-12*	5/16 - 24	1/4"	3-Piece Split Collet Assembly
AA-H209-XX*	3/8 - 24	1/8", 1/4", 3/8", 3mm, 6mm or 8mm	3-Piece Single Angle Collet Assembly

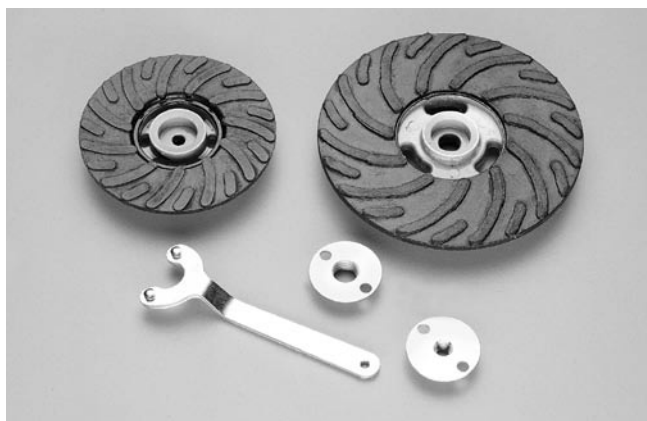
*Please specify the size of the collet insert to be supplied with the assembly.



Other Sizes Available

Spiralcool® Pads

Part Number	Threads	Size	Description	Maximum Speed
889271-A	3/8 - 24	4 Inch (100mm)	Sanding Pad	12000 R.P.M.
849848-A	3/8 - 24	5 Inch (125mm)	Sanding Pad	10000 R.P.M.
889271	5/8 - 11	4 Inch (100mm)	Sanding Pad	12000 R.P.M.
849848	5/8 - 11	5 Inch (125mm)	Sanding Pad	10000 R.P.M.
849913	5/8 - 11	7 Inch (180mm)	Sanding Pad	8500 R.P.M.
849914	5/8 - 11	9 Inch (230mm)	Sanding Pad	6500 R.P.M.
849259-A	3/8 - 24		Sanding Pad Nut	
849259	5/8 - 11		Sanding Pad Nut	
102-SPWR			Pad Nut Wrench	



Accessories

Bearing Drivers

Part Number	Description	For Tool Model/Series
1100-800	200-8 Bearing Driver	20G
1100-802	400-9 Bearing Driver	40-Series
1100-802	404-9 & H9 Bearing Driver	40 Series, 400 Series & Small Right Angle Grinders
1100-808	700-9 Bearing Driver	Vertical & Horizontal Grinders
1100-814	400-G-11 & H11 Bearing Driver	40GH, 40EH, 41EH, 47GH, 51H, 57H, 400GH, 400GEH, 511H or 517H
1100-816	300-G-29 Bearing Driver	51H, 510V, 57H, 511H or 517H; 500H and 507H
1100-822	550-10H Bearing Driver	56H or 65H

Spindle Holders

Part Number	Description	For Tool Model/Series
1100-638	40 Series Spindle Holder	40-Series & Right Angle Grinders
1100-650	Vertical and Horizontal Spindle Holder	Vertical & Horizontal Grinders
1100-810	5201 Motor Holder	5201H
1100-818	46RA Head Holder	46RA
1100-820	500 Series Spindle Holder	51H, 57H, 500D, 500H, 511H or 517H



Accessories - Butts/Peins, Bushings, Threaded/Cone Wheel Adapters, Chisels

Butts & Peins

Part Number	Size	Type
829558-AR	2 3/8" (60 mm) Diameter	Aluminum/Rubber Butt
829559-AR	3" (75 mm) Diameter	Aluminum/Rubber Butt
829558	2 3/8" (60 mm) Diameter	Rubber Butt
829559	3" (75 mm) Diameter	Rubber Butt
832925	2 1/2" (64 mm) Diameter	Steel Butt
832924	3" (75 mm) Diameter	Steel Butt
829556-AR	1" X 2 7/8" (25 mm x 73 mm)	Aluminum/Rubber Butt
829557-AR	3/4" X 2 3/8" (19 mm x 60 mm)	Aluminum/Rubber Butt



Other Sizes Available

TC-100 Chisels - 1/4 Inch Octagon

Description	Cutting Edge	Overall Length	Part Number
Narrow Flat Chisel	3/4" (19mm)	7" (17.8cm)	829150
Narrow Flat Chisel	3/4" (19mm)	12" (30.5cm)	829150-12
Blank Chisel		7" (17.8cm)	829172
Blank Chisel		12" (30.5cm)	829172-12
Wide Chisel	1 3/8" (34.9mm)	7" (17.8cm)	829165
Wide Angle Chisel	1 3/8" (34.9mm)	7" (17.8cm)	829310
Wide Angle Chisel	1 3/8" (34.9mm)	12" (30.5cm)	829310-12

TC-182 Chisels - 1/4 Inch Octagon

Description	Cutting Edge	Overall Length	Part Number
Narrow Flat Chisel	3/4" (19mm)	7" (17.8cm)	839601
Narrow Flat Chisel	3/4" (19mm)	12" (30.5cm)	839601-12
Blank Chisel		7" (17.8cm)	839605
Blank Chisel		12" (30.5cm)	839605-12
Wide Chisel	1 3/8" (34.9mm)	7" (17.8cm)	839602
Wide Angle Chisel	1 3/8" (34.9mm)	7" (17.8cm)	839604
Wide Angle Chisel	1 3/8" (34.9mm)	12" (30.5cm)	839604-12

Chisels - 1/2 Inch Square Shank

Description	Cutting Edge	Overall Length	Part Number
Narrow Flat Chisel	3/4" (19mm)	7" (178mm)	839051
Narrow Flat Chisel	3/4" (19mm)	12" (305mm)	839341
Narrow Flat Chisel	3/4" (19mm)	18" (457mm)	839335
Wide Angle Chisel	1 3/8" (34.9mm)	7" (178mm)	839050
Wide Angle Chisel	1 3/8" (34.9mm)	12" (305mm)	839299
Wide Angle Chisel	1 3/8" (34.9mm)	18" (457mm)	839334
Blank Chisel		7" (178mm)	839052
Blank Chisel		12" (305mm)	839053
Blank Chisel		18" (457mm)	839054
Wide Chisel	1 3/8" (34.9mm)	7" (178mm)	839467
Wide Chisel	1 3/8" (34.9mm)	12" (305mm)	839469
2 Inch Wide Scraper	2" (50.8mm)	7" (178mm)	839468

Accessories



Threaded Adaptors

Part Number	Description	For Tool Model
400-78	3/8 - 24 TO 5/8 - 11 Adapter	41G, 40GH, 47G, 47GH, 51H, 57H, 400GH, 400GT OR 4111G
400-79	3/8 - 24 TO 1/2 - 13 Adapter	41G, 40GH, 47G, 47GH, 51H, 57H OR 4111G



Cone Wheel Adaptors

Part Number	Description	Tool Type
400-77	3/8-24 Cone Wheel Adapter	All Horizontal Tools with 3/8-24 Spindle
500-56A	1/2-13 Cone Wheel Adapter	All Horizontal Tools with 1/2-13 Spindle
700-4-CWC	5/8 - 11 Cone Wheel Adapter	Model 56H & 65H Horizontal Tools
700-4-CWB	5/8 - 11 Cone Wheel Adapter	Model 5201H Horizontal Tools

Screen Handle Bushings

Part Number	Size
650-33	1/2" NPT Male X 3/8" NPT Female
841552	3/8" NPT Male X 3/8" NPT Female
841553	3/8" NPT Male X 1/4" NPT Female
400-27	1/4" NPT Male X 1/4" NPT Female
841555	1/2" NPT Male X 1/2" NPT Female
400-27M	1/4"H NPT Male X 1/4" BSP Female
841553M	3/8" NPT Male X 3/8" BSP Female
841555M	1/2" NPT Male X 1/2" BSP Female

Accessories - Type 27 Adapters, Polishing Wheel Adapters

Type 27 Adapters

Part Number	Description	Tool Type/Wheel Type
490-K	3/8 - 24 Type 27 Adapter	Right Angle w/ 3/8-24 Long (4) Spindle Running up to 4" T27 Wheel
490-KR	3/8 - 24 Type 27 Adapter	Right Angle w/ 3/8-24 Short (1) Spindle Running up to 4" T27 Wheel
1100-660	3/8 - 24 TO 5/8 I.D. Type 27 Adapter	Right Angle w/ 3/8-24 Long (4) Spindle Running T27 Wheels w/ 5/8" Mounting Hole
1100-668	3/8 - 24 TO 7/8 I.D. Type 27 Adapter	Right Angle w/ 3/8-24 Long (4) Spindle Running T27 Wheels w/ 7/8" Mounting Hole
1100-692	5/8 - 11 TO 7/8 I.D. Type 27 Adapter	Right Angle w/ 5/8-11 (2) Spindle Running T27 Wheels w/ 7/8" Mounting Hole
849269	5/8 - 11 TO 7/8 I.D. Type 27 Adapter	Vertical Grinders Running T27 Wheels w/ 7/8" Mounting Hole
ADT27-354	3/8 - 24 TO 5/8 I.D. Adapter (4" and smaller wheels)	Right Angle w/ 3/8-24 Long (4) Spindle Running T27 Wheels w/ 5/8" Mounting Hole
ADT27-375	3/8 - 24 TO 7/8 I.D. Adapter (4-1/2" and larger wheels)	Right Angle w/ 3/8-24 Long (4) Spindle Running T27 Wheels w/ 7/8" Mounting Hole
ADT27-575	5/8 - 11 TO 7/8 I.D. Adapter	Right Angle w/ 3/8-24 Long (4) Spindle Running T27 Wheels w/ 7/8" Mounting Hole



Polishing Wheel Adapters

Part Number	Description	Tool Type	Type Of Wheel
1100-345	1 Inch Wide Wheel Adapter (5/8-11 Thread)	All Horizontal Tools with 5/8-11 Spindle	1 Inch Thick Surface Conditioning Wheel with 1" Mounting Hole
1100-348	2 Inch Wide Wheel Adapter (5/8-11 Thread)		2 Inch Thick Surface Conditioning Wheel with 1" Mounting Hole
1100-349	3 Inch Wide Wheel Adapter (5/8-11 Thread)		3 Inch Thick Surface Conditioning Wheel with 1" Mounting Hole
1100-347	4 Inch Wide Wheel Adapter (5/8-11 Thread)		4 Inch Thick Surface Conditioning Wheel with 1" Mounting Hole
1100-346	1 Inch Wide Wheel Adapter (3/8-24 Thread)	All Horizontal Tools with 3/8-24 Spindle	1 Inch Thick Surface Conditioning Wheel with 5/8" Mounting Hole
ADTS-17MM	Adapter Assembly	400GH(X)M Tools	1-3 Inch Thick Surface Conditioning Wheel with 1" or 5/8" Mounting Hole
ADTS-520		400GT(X)M Tools	



Warranty

T.C. Service Co. has a growing worldwide network of quality Authorized Agents that provide the total package...sales, service and repair.

Our joint goal is to provide you with the best American-made pneumatic tools for your application. TOP CAT® is proud to deliver quality tools at a competitive price. Our knowledgeable Authorized Agents can offer the kind of customer service you deserve.

We strive to keep our Authorized Agents aware of our continued "Low Vibration" advancements, so they can offer tool selection recommendations. Technical assistance is always available. Our Authorized Agents work with us to address any "custom" tool needs you may encounter.

For over 30 years, air tools with the TOP CAT® trademark have represented the highest quality in design, performance and durability. Thank you for choosing TOP CAT®. We appreciate your business.

WARRANTY

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Index

Model	Page	Model	Page	Model	Page
1300-OB Series Rammers.....	92	400RA Series Right Angle Grinders.....	16, 26, 30	520HGEH+XX Series Extended Horizontal Grinders.....	62
1320-2B Series Rammers.....	92	400RA(X)M Series Right Angle Grinders.....	37	520RA Series Right Angle Grinders.....	18, 36
1350-2B Series Rammers.....	92	400RAE Series Right Angle Grinders.....	31	520V Series Vertical Grinders.....	5, 6, 8
20-G/20-GM Series Die Grinders.....	66	400RAE(X)M Series Right Angle Grinders.....	37	5201H Series Extended Die Grinders.....	47, 48, 56
250EH Series Horizontal Grinders.....	56	400SH Series Die Grinders.....	70	54V Series Vertical Grinders.....	5
250GE Series Die Grinders.....	70	407GEH+XX Series Extended Horizontal Grinders.....	61	56H Series Horizontal Grinders.....	47, 48
250HGE Series Die Grinders.....	70	407GH Series Horizontal Grinders.....	52	56PC Series Pile Cutting Saws.....	7
250RA Series Right Angle Grinders.....	22, 30	407GT Series Die Grinders.....	68	56S Series Vertical Sanders.....	8
250RAE Series Right Angle Grinders.....	23, 31	407PCE Series Routers.....	79	57H Series Horizontal Grinders.....	52
2601RA Series Right Angle Grinders.....	34	407RA Series Right Angle Grinders.....	30	58C Series Vertical Grinders.....	6
270RA Series Right Angle Grinders.....	25, 33	407RAE Series Right Angle Grinders.....	31	64V Series Vertical Grinders.....	5
280RA Series Right Angle Grinders.....	24, 32	410RA Series Right Angle Grinders.....	16, 26	65GEH+XX Series Extended Horizontal Grinders.....	63
290RA Series Right Angle Grinders.....	24, 32	410RAE Series Right Angle Grinders.....	17, 27	65H Series Horizontal Grinders.....	47, 48
300EH Series Horizontal Grinders.....	56	4101RA Series Right Angle Sanders & Polishers.....	34	65HGEH+XX Series Horizontal Grinders.....	63
300GE Series Die Grinders.....	70	420RA Series Right Angle Grinders.....	14, 25, 33	65VBW Series Saws.....	82
300GHD Series Die Grinders.....	56	4520RA Series Right Angle Grinders.....	35	66PC Series Pile Cutting Saws.....	7
300HGE Series Die Grinders.....	70	4520RA(X)M Series Right Angle Grinders.....	38	66VBG Series Bench Grinders.....	80
300RA Series Right Angle Grinders.....	12, 22, 30	4527RA Series Right Angle Grinders.....	35	662VBG Series Bench Grinders.....	80
300RAE Series Right Angle Grinders.....	13, 31	4620RA Series Right Angle Grinders.....	35	662VBW Series Saws.....	82
3101RA Series Right Angle Grinders.....	34	4620RA(X)M Series Right Angle Grinders.....	38	68C Series Vertical Grinders.....	6
320RA Series Right Angle Grinders.....	14, 25, 33	4627RA Series Right Angle Grinders.....	35	80 SERIES Series Chipping Hammers.....	90
330RA Series Right Angle Grinders.....	24, 32	500D2M Series Air Drills.....	75	TC-1 Series Scalers.....	78, 85
340RA Series Right Angle Grinders.....	24, 32	500FD1M Series Floor Drills.....	78	TC-10 Series Chipping Hammers.....	91
400DRA(X)M Series Air Drills.....	76	500H1M Series Horizontal Sanders & Polishers.....	45	TC-182 Series Scalers.....	86, 88
400DRE(X)M Series Right Angle Grinders.....	76	500H2M Series Horizontal Sanders & Polishers.....	45	TC-20 Series Chipping Hammers.....	91
400D(X)M Series Air Drills.....	74	507D2M Series In-Line Drills.....	75	TC-30 Series Chipping Hammers.....	91
400EH+XX Series Extended Horizontal Grinders.....	60	507FD1M Series Floor Drills.....	78	TC-40 Series Chipping Hammers.....	91
400FD(X)M Series Floor Drills.....	77	507H1M Series Horizontal Sanders & Polishers.....	45	Power Supply Motors.....	94
400GE Series Die Grinders.....	70	507H2M Series Horizontal Sanders & Polishers.....	45		
400GEH+XX Series Extended Horizontal Grinders.....	61	51H Series Horizontal Grinders.....	52, 54	Classic Tools.....	Green Insert
400GH Series Horizontal Grinders.....	48, 52, 54	510V Series Vertical Sanders.....	8	40G Series Die Grinders.....	iii
400GH(X)M Series Horizontal Sanders & Polishers.....	42	510WG Series Air Saws.....	82	40GH Series Horizontal Grinders.....	iii, iv
400GT Series Die Grinders.....	68	5102H Series Extended Die Grinders.....	56	4121G Series Die Grinders.....	iii
400GTCW Series Die Grinders.....	67	511H Series Horizontal grinders.....	48	44RA Series Right Angle Grinders.....	i, ii, iii
400GT(X)M Series Horizontal Sanders & Polishers.....	44	520FD1M Series Floor Drills.....	78	44RAE Series Right Angle Grinders.....	i
400HGE Series Die Grinders.....	70	520GEH+XX Series Extended Horizontal Grinders.....	62	46RA Series Right Angle Grinders.....	i, ii
400HGE(X)M Series Horizontal Sanders & Polishers.....	43	520H1M Series Horizontal Sanders & Polishers.....	45	48RA Series Right Angle Grinders.....	i, ii
400PCE Series Routers.....	79	520H2M Series Horizontal Sanders & Polishers.....	45		

Custom tool design...

new tool or modifying an existing tool.

design



Piped Away Exhaust

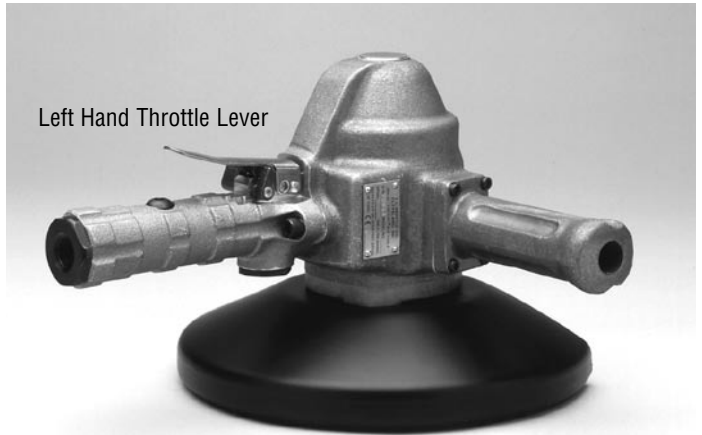
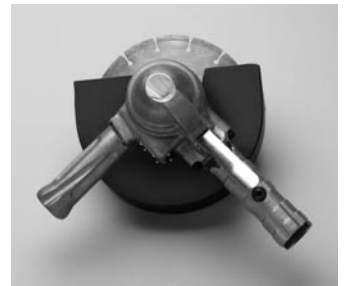


Piped Away Exhaust Through Dead Handle

Unlike most tool producers that provide a group of tools... take-it-or-leave-it, we welcome the opportunity to discuss your special tool needs and hopefully offer options. Providing our customers with the tools they really need is a point of pride and accomplishment at TC Service. Many of the tools that we regularly produce today started out as someone's special. Listed here are just a few of the adaptations we have made to get our customers the tools they needed:

- Custom threads on air inlets and output spindles.
- Fixed bench attachments.
- Specially designed motors for custom applications & wheels.
- Extra-heavy-duty parts and equipment.

If you have a need and do not see what you're looking for — ASK US!



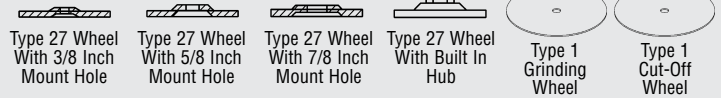
Left Hand Throttle Lever



Cushion Grip Handles

Grinders for Depressed Center Wheels, Cut Off Wheels & Flap Wheels

3" (75 mm) – 6" (150 mm)
.9 H.P. (675 W)



Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)

Extra Charge Accessories

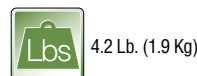
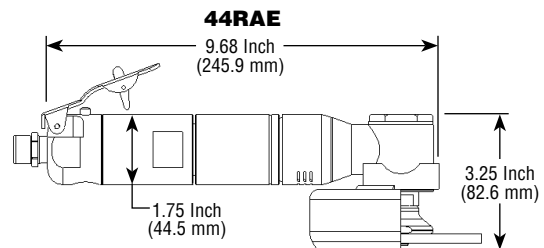
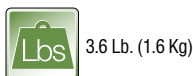
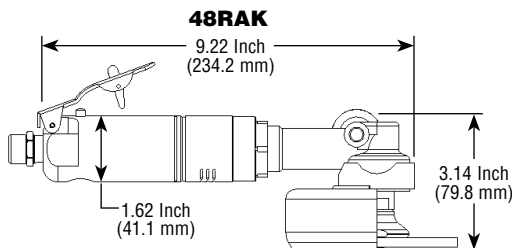
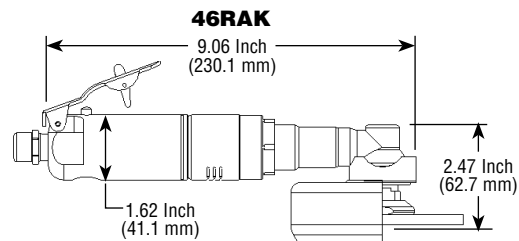
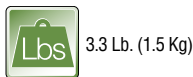
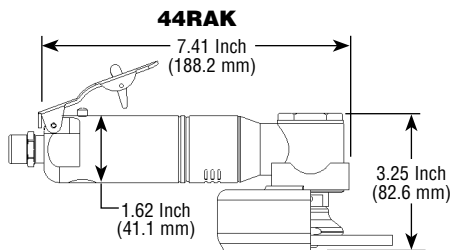
- Type 27 Adapters
- Sanding Pads

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

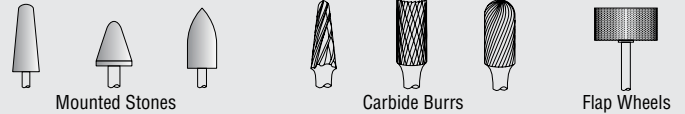
The depressed center wheel adapters are not supplied as standard equipment with the tools. If you are using a wheel that requires the adapters, they must be purchased separately.

Model Number	Spindle Thread	Guard Size	Rated Speed	Throttle Type	
				Standard Lever	Safety Lever
44RA	3/8-24	4 Inch (100mm)	11000 R.P.M.	44RA4;427	44RA4K;427
	5/8-11	4 1/2 (115mm)		44RA2;4527	44RA2K;4527
44RAE	3/8-24	4 Inch (100mm)	11000 R.P.M.	44RAE4;427	44RAE4K;427
	5/8-11	4 1/2 (115mm)		44RAE2;4527	44RAE2K;4527
	3/8-24	6 Inch (150mm)	10000 R.P.M.	44RAE4;641	44RAE4K;641
	5/8-11		44RAE2;641	44RAE2K;641	
46RA	3/8-24	4 Inch (100mm)	15000 R.P.M.	46RA1;427	46RA1K;427
48RA	3/8-24	4 Inch (100mm)	11000 R.P.M.	48RA4;427	48RA4K;427
	5/8-11	4 1/2 (115mm)		48RA2;4527	48RA2K;4527
	3/8-24	6 Inch (150mm)	10000 R.P.M.	48RA4;641	48RA4K;641
	5/8-11		48RA2;641	48RA2K;641	



Right Angle Collet Grinders

.9 H.P. (675 W)

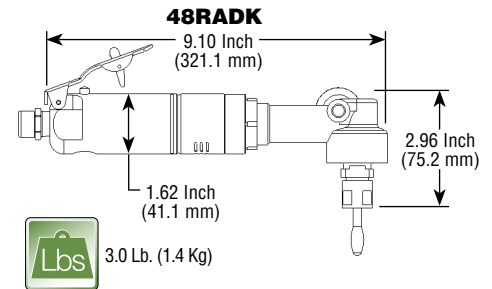
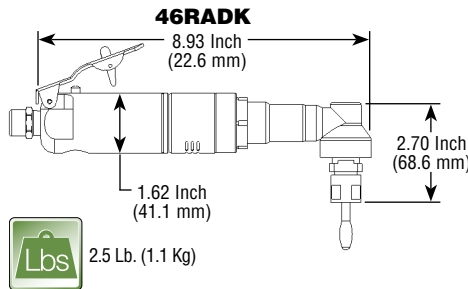
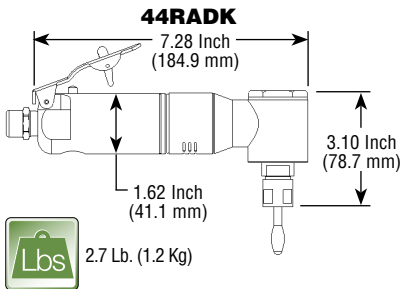


Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number

Model Number	Collet Size	Rated Speed	Throttle Type	
			Standard Lever	Safety Lever
44RA	1/4 Inch	11000 R.P.M.	44RAD;1/4	44RADK;1/4
46RA		15000 R.P.M.	46RAD;1/4	46RADK;1/4
48RA		11000 R.P.M.	48RAD;1/4	48RADK;1/4



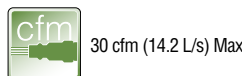
Right Angle Sanders for use with Abrasive Discs

4" (100 mm) - 5" (125 mm)
 0.9 H.P. (675 W)



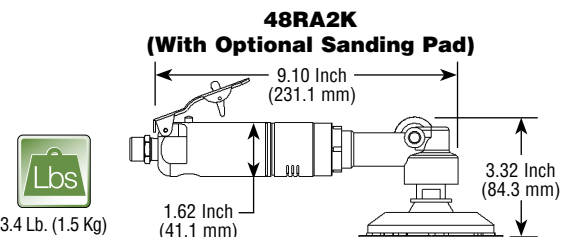
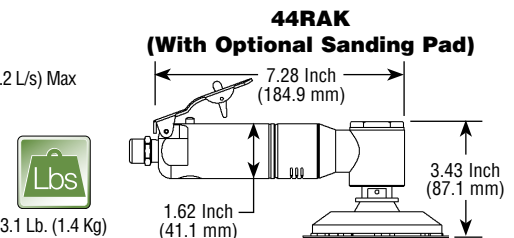
Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

- Extended Case
- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)



Quick Order Number

Model Number	Spindle Thread	Sanding Pad Size	Rated Speed	Throttle Type	
				Standard Lever	Safety Lever
44RA	3/8-24	4 Inch (100mm)	11000 R.P.M.	44RA4;4SP	44RA4K;4SP
		5 Inch (125mm)	10000 R.P.M.	44RA4;5SP	44RA4K;5SP
	5/8-11	4 Inch (100mm)	11000 R.P.M.	44RA2;4SP	44RA2K;4SP
		5 Inch (125mm)	10000 R.P.M.	44RA2;5SP	44RA2K;5SP
48RA	3/8-24	4 Inch (100mm)	11000 R.P.M.	48RA4;4SP	48RA4K;4SP
		5 Inch (125mm)	10000 R.P.M.	48RA4;5SP	48RA4K;5SP
	5/8-11	4 Inch (100mm)	11000 R.P.M.	48RA2;4SP	48RA2K;4SP
		5 Inch (125mm)	10000 R.P.M.	48RA2;5SP	48RA2K;5SP



Insert Style Die Grinders For Carbide Burrs & Mounted Stones

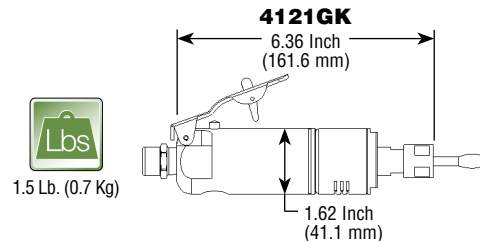
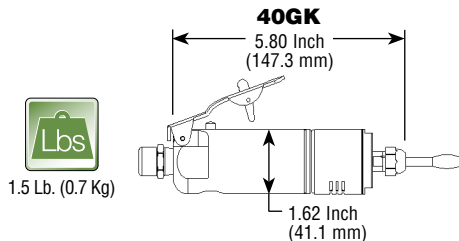
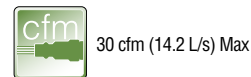
Insert Style Collets
0.9 H.P. (675 W)



Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (10 mm)
Extra Charge Accessories

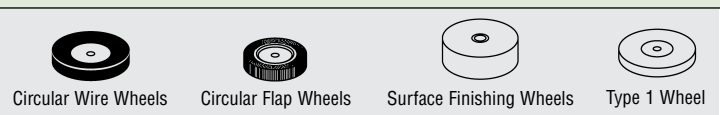
- Safety Lever
- Standard Equipment**
- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number Die Grinders				
Model Number	Collet Size	Rated Speed	Throttle Type	
			Standard Lever	Safety Lever
40G	1/4 Inch	18000 R.P.M.	40G;18	40GK;18
		22000 R.P.M.	40G;22	40GK;22
4121G		18000 R.P.M.	4121G;18	4121GK;18
		22000 R.P.M.	4121G;22	4121GK;22



Grinders For Type 1 Wheels, Flap Wheels And Wire Wheels

3" (75 mm) – 4" (100 mm)
0.9 H.P. (675 W)

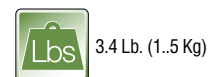
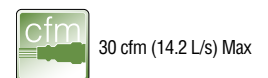
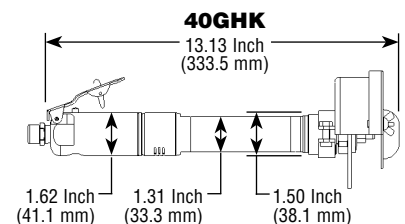


Air Inlet Size: 1/4" NPT
Hose Size Recommendations: 3/8" (9.5 mm)
Extra Charge Accessories

- Cone Wheel Adapters • Heavy-Duty 2-pc. Collets
- Erickson Style Collets • Safety Lever • Extended Length Spindle
- +2 and +3 spindles for use with buffing wheels (40GH & 47GH only)

- Standard Equipment**
- Tool • Operating Instructions and Service Manual
 - 2 Wrenches (sizes based on options)

Quick Order Number Horizontal T1 Wheel Grinders				
Model Number	Guard Size	Rated Speed	Throttle Type	
			Standard Lever	Safety Lever
40GH	3 Inch (75mm)	18000 R.P.M.	40GH;301	40GHK;301
	4 Inch (100mm)	15000 R.P.M.	40GH;401	40GHK;401



Fixed Size Collet Die Grinders for Carbide Burrs & Mounted Stones

Built In Collets
0.9 H.P. (675 W)



40GHK

Air Inlet Size: 1/4" NPT

Hose Size Recommendations: 3/8" (10 mm)

Extra Charge Accessories

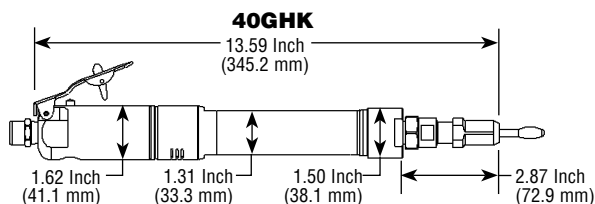
- Safety Lever

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)

Quick Order Number Die Grinders

Model Number	Collet Size	Rated Speed	Throttle Type	
			Standard Lever	Safety Lever
40GH	1/4 Inch	18000 R.P.M.	40GH;18;1/4	40GHK;18;1/4
		22000 R.P.M.	40GH;22;1/4	40GHK;22;1/4



0.9 H.P.
(675 W)



30 cfm (14.2 L/s) Max



2.8 Lb. (1.3 Kg)

Horizontal Extended Grinders For 3/8-24 Cone Wheels

0.9 H.P. (675 W)



40GHKCW



Type 17
Cone Wheel



Type 16
Cone Wheel



Type 17R
Cone Wheel



Type 18
Cone Wheel



Type 18R
Cone Wheel

Air Inlet Size: 1/4" NPT

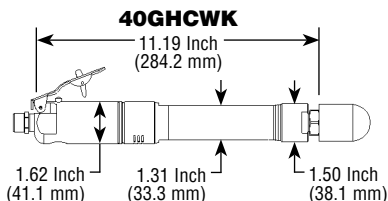
Hose Size Recommendations: 3/8" (9.5 mm)

Extra Charge Accessories

- Safety Lever

Standard Equipment

- Tool • Operating Instructions and Service Manual
- 2 Wrenches (sizes based on options)



0.9 H.P.
(675 W)



30 cfm (14.2 L/s) Max



2.6 Lb. (1.2 Kg)

Quick Order Number Horizontal Cone Wheel Grinders

Model Number	Rated Speed	Throttle Type	
		Standard Lever	Safety Lever
40GH	22000 R.P.M.	40GHCW	40GHKCW

history

A history of quality and service...

A future offering technically advanced and more productive tools.

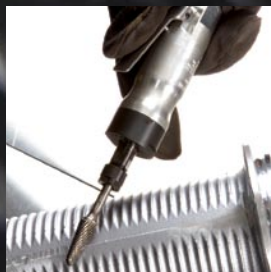
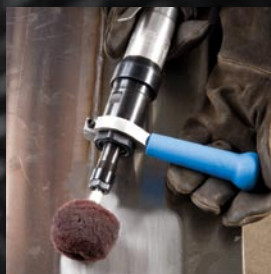


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