

# Portable Vacuums



## INVINCIBLE high-performance portable vacuums

Since 1905, **INVINCIBLE** portable vacuums have been used around the world for tough material cleaning and conveying applications. With equipment still in use after 50 years of faithful service, they have earned a reputation for being **INVINCIBLE**.

Designed for continuous operation, these units have provided unequalled service in over 150,000 industrial and commercial applications. They are used for maintenance, housekeeping, production, pneumatic conveying, source capture dust control and virtually anywhere there is a need to convey, separate or reclaim difficult-to-handle, wet or dry materials ranging from talc to titanium.



Model 1353P  
Formerly 630



Model 2354P  
Formerly 460



Model 2354AP  
Formerly 415 A



Model 3613P  
Formerly 300

• Models 4524P/4554P/4594P/4654P  
formerly 809/700-7 5/700-10/700-15



Model 6151P & 6121P

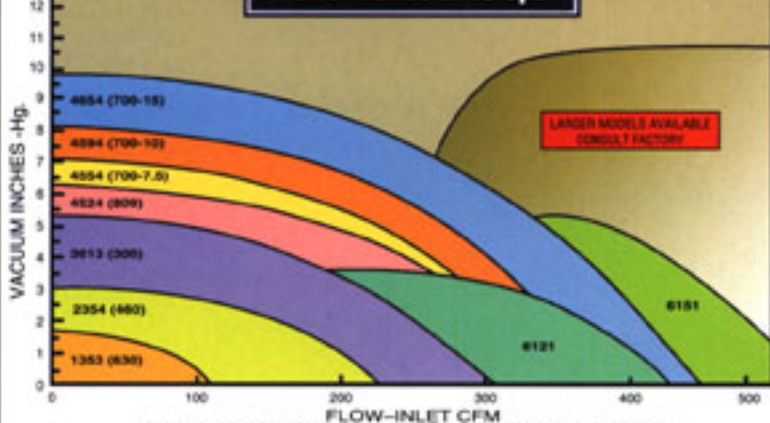
### Portable Vacuum Specification & Selection Chart

Model Number		Specifications				Operator Selection					
Old	New	HP	Filter Area Sq. Ft.	Collector Capacity Cu. Ft.	dBa	1.5" Hose			2" Hose		
						10'	15'	25'	50'	25'	50'
630	1353P	.5	6.5	.5	72	1	*	*	*	*	*
460	2354P	1.5	8	1.5	76	1	1	*	*	*	*
415-A	2354AP	1.5	12	1	76	1	1	*	*	*	*
300	3613P	5	10	1.5	83	2	2	2	*	1	*
809	4524P	5	25	2	88	2	2	2	1	1	*
700-7.5	4554P	7.5	25	2	90	3	2	2	2	1	1
700-10	4594P	10	25	2	92	3	2	2	2	1	1
700-15	4654P	15	25	2	87	3	3	3	1	1	1
6121	6121P	5	40	2	84	3	3	2	*	1	*
6151	6151P	7.5	40	2	85	4	4	4	3	2	2

Note: 1) Estimated sound level based on free field testing at one meter. Consult factory for exact ratings.

2) Operator selection based on floor sweeping of dry dust @ PCF, 8 mesh, 100-110 CFM/1.5" hose or 150-180 CFM/2" hose. An asterisk mark or selection not shown indicate a hose size normally not used with this model. Consult factory on selections not shown.

### Performance Envelope



As an **INVINCIBLE** vacuum user, you will find yourself in excellent company. Here is a partial list of our customers.

- ALCOA
- GENERAL MOTORS
- P&G
- AMTRAK
- GOODYEAR
- REMINGTON ARMS
- AT&T
- W.R. GRACE
- ROCKWELL
- BOEING
- H.J. HEINZ
- RUBBERMAID
- DURACELL
- IBM
- A.O. SMITH
- DU PONT
- JOHN DEERE
- STANLEY TOOLS
- DOW CHEMICAL
- JOHNSON & JOHNSON
- TRW
- EASTMAN KODAK
- LINCOLN ELECTRIC
- U.S. STEEL
- EMERSON ELECTRIC
- MARTIN MARIETTA
- UNION CAMP
- FRITO-LAY
- MEAD PAPER
- WESTINGHOUSE
- GENERAL ELECTRIC
- PPG
- WHIRLPOOL

## Features

1. Continuous-duty TEFC motors (series 1000 TENV)
2. Drive: Series 1000/2000 direct drive, Series 3000/4000 belt drive, Series 6000 gear drive
3. Double-inverted, easy-access filter bag.
4. Rugged, cast-aluminum vacuum producer
5. Durable, compact, portable chassis permits one-person mobility
6. Easy-to-handle, removable dump bucket
7. Tool carrier
8. NEMA 1 manual push-button starter with 25' cable
9. Swivel hose inlet for 1.5" and 2" hose
10. Discharge protection screen



Model 4000

## Other options

Here are some of our more popular options. There are many more — just ask us.

- Explosion-resistant motor and starters NEMA 7/9
- Stainless steel contact points
- Separators for conveying explosives
- Stationary frames for central vacuum systems
- Charcoal-absorbing discharge filters for toxics
- Crane-hook lift assembly
- Premium efficiency filtration—99.9% @ .5 or .3 micron
- Special electrical panels for process applications
- Inlets for multiple operators



Model 4554 equipped with sound enclosure to meet 80 dBA at 1 meter provides increased material storage via a 7.5 cu. ft. capacity chip collector used to collect steel, cast iron, brass and other types of metal chips. The compact, easy-to-manuever, extended-frame, easy-emptying chip container and drain valve help eliminate double handling of material.



**Automatic Bag Shaker**  
Saves man-hours and insures proper filter cleaning. Pre wired and fully automatic, the unit can be programmed to shake from 0 to 15 minutes during shutdown.



**Manual Bag Shaker**  
Provides operator ease in disposing dust build-up, reduces cleaning time and helps insure proper filter cleaning.



**HEPA Filter**  
High Efficiency Particulate Air (HEPA) filter purifies worker environment during removal of fine and hazardous materials such as pigments, uranium, fiberglass, asbestos, PCB, lead, etc. Provides particle filtration down to 0.3 micron.



**Plastic Bag**  
Minimizes operator exposure to airborne dust while emptying dump bucket. This option along with a high efficiency, Teflon-coated filter and a bag shaker is often provided on units requiring HEPA filtration.

**Custom-  
designed  
equipment  
to fit  
your needs**



Model 4594 equipped with HEPA filter, magnetic gauge, pneumatic tires, manual bag shaker, integral auxiliary collector mounted on a common base, and automatic gravity dump discharge valve. Equipment used to recover tungsten carbide from pits.



Model 3613 equipped with an LPG engine and pneumatic tires (gasoline powered also available). Used for cleaning remote areas where electric power is not available.



Model 4654 on a skid-mounted frame is transported via trailer or fork-lift truck. Unit equipped with auxiliary collector and continuous air lock rotary feeder discharge. It is used to convey activated carbon pellets and load bulk bags.



Model 4654 equipped with a modified portable frame to support a 4 cu. ft. capacity auxiliary collector. Equipment used to reclaim abrasive metal powders and chips, and load material into hoppers or drums.

Providing innovative solutions to air and material handling problems is nothing new at **INVINCIBLE**. We've been doing it for over 90 years and have earned a strong reputation as creative problem solvers.

The technical expertise found in our engineering department and among our field sales engineers will insure that your **INVINCIBLE** system is designed to meet your specific requirements. We are committed to being flexible and providing a more efficient and cost-effective solution to your problem whether it be vacuum cleaning, batch processing, source capture dust control, spill pick-up, product reclaim, etc.

**We convey it all!**

Typical materials conveyed by **INVINCIBLE** systems.

- Fly Ash
- Carbon Black
- Soap Powder
- Cast Iron Chips
- Silica Sand
- Softballs
- Steel Shot
- Glass Cullet
- Fiberglass
- Plastic Pellets
- Alumina
- Gun Powder
- Metal Powders
- Dry Lube
- Food Products
- Grain Products



Fork truck moveable vacuum system equipped with a TurboFlow™ exhaustor, TurboClean continuous cleaning filter, HEPA filter, air compressor for pulse cleaning filters, 1.5 cu. yd. capacity fork lift moveable collector, and compact self-contained mobile framework to support all components during transport.



High-performance, trailer-mounted vacuum system equipped with TurboFlow exhaustor, TurboClean continuous cleaning filter, air compressor, highway approved trailer, toolbox and hose storage tubes. Unit transports to various locations and is used for numerous applications.

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# Typical Applications

*INVINCIBLE* systems are installed worldwide in industries ranging from textile mills to refractories to shipyards. They are used wherever there is a requirement to recover, convey, capture, reclaim, separate or clean up materials.

Typical applications include:

- Housekeeping
- Central Cleaning System
- Boiler Cleaning
- Sump Cleaning
- Source Capture Dust Control
- Liquid Spill Clean-up
- Trim Collection
- Fume Extraction
- Hazardous Substance Collection
- Chip Recovery
- Rail Car Cleaning
- Pneumatic Conveying



Machining center runs two operators for cleaning floors and machinery areas. Valuable resalable metals are reclaimed. A safer, more productive work environment is in place as brooms and air nozzles are replaced by a vacuum system.



Brick manufacturer uses *INVINCIBLE* unit for conveying heavy abrasive sands. Applications include cleaning out kilns (shown above), central housekeeping, spill pick-up and product reclaim.



Saving shavings. A manufacturer of stainless steel products uses one system to solve two problems. Shown above is one of three stainless steel strip deburring processes all powered by a single model 4594. This system is designed to source capture and reclaim valuable shavings and provide a safer work environment.



Model 4524 serves dual purpose in paint booth. Cleaning filters extends filter life. Cleaning the floors, walls and surrounding area leads to improved finishing quality.



Still going strong. This lathe generates large amounts of chips and airborne dust while machining rubber rolls. An older *INVINCIBLE* machine purchased in 1984 and formerly used for housekeeping was connected to a custom-fit source capture collection hood. Results — a cleaner, healthier work environment and improved working conditions.

