E-Airtool1 Pneumatic Tool Sales

Jack Hammers • Rock Drills • Chipping Hammers • Clay Diggers • Tampers
Hand Drills • Impact Wrenches • Screwdrivers • Saws • Scalers

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Pavement Breakers / Jack Hammers / Demolition Hammers

When you are determining the right tool for the job you need to ask yourself a few simple questions. What is the material you are working with? What kind of time frame are you looking to do the job in? How often do you plan on using the tool? All of these questions are very helpful. This Guide is not to be considered to be the "bible" and is only meant to be in a generally speaking format. There are plenty of exceptions to the rule but this guide should help you in determining which kind of tool you should be using for your specific job.

Generally speaking all pavement breakers and jack hammers are considered to be a certain weight class tool. The weight class of a hammer is like determining the size of the hammer. As far as hand-held pneumatic hammers go, the weight classes are typically as follows: Jack Hammers: **80-90 lb.**, **60 lb.**, and **35-40 lb.**

Note: 90, 80, 60, 40, 30 class is only a general tool weight term it does not represent the actual weight of the tool.

80-90 lb. class pavement breakers are generally used on highways and streets, busting up hotel foundations, commercial building foundations, and industrial complexes where large construction equipment cannot get into or reach. Concrete or rock is generally **6"** thick or more. This class tool generally takes **1-1/4" hex x 6** or **1-1/8" hex x 6** bits.

60-80 lb. class pavement breakers are generally used for standard residential driveways, sidewalks, streets, and some highway use but mostly where concrete is somewhat **4-6"** thick. This class tool is also used for breaking up some basements in the Midwest and they are also good for post driving dock poles and small sea walls in the marine industry. This class tool generally takes **1-1/8" hex x 6** or **1-1/4" hex x 6** bits

35-40 lb. class pavement breakers are used for small jobs such as removing single **4** x **4 ft.** squares and **3** x **3 ft.** squares of sidewalk that are **2-4"** thick. They are also used for getting into cornered areas and cleaning up edges of broken concrete where a **60** or **80 lb.** class tool has already been. They are also used to get in between rebar and other tight areas. This class tool can also double as pneumatic shovel to dig into hard clay or around small trees there are spade bits that can be purchased for these tools to do the job. This class tool generally takes two size bits, **7/8" hex x 3-1/4"** or **1" hex x 4-1/4"** bits. (some tools will take **7/8" hex x 4-1/4"** bits but seem to be rare)

Bit Sizes for Pavement Breakers

While there are many different sizes and shapes to bits the ones mentioned above are the most common. The measurement of bits are generally taken this way for example; a standard **1-1/4" hex x 6** bit means that the hexagonal end of the bit is **1-1/4"** from one side of the flat to the opposite side of the flat. The "**6**" stands for the **6"** of length from the collar on the bit to the short end of the bit in inches.

Myth: {**1-1/4" hex** bits hit better than **1-1/8" hex** bits or **1" hex** bits hit better than **7/8" hex** bits.} The tool controls the hit. The larger bit may just last a little longer down the road. Most tools can be set up or "bushed" to accept either size if you already own a specific size bit and would like to keep all of your tools using the same size bits.

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Clay Diggers / Demolition Hammers / Horizontal Hammers

These are generally **25-35 lb.** class tools. They are used for demolition work on walls, brick work, cinder blocks, digging clay and hard pan, heavy duty core knock-outs or pin removals on large equipment. They generally built to accept two size bits as well. The industry standard bit for this type too is **7/8" hex x 3-1/4"** or **1" hex x 4-1/4"** and older generation hammers will take a **3/4" Square x 2-3/4"**

Chipping Hammers

These tools are very versatile in what they are used for. They can be used for carving rock, removing grout between brick, removing swimming pool surfaces, removing old or dried concrete from inside cement mixers, roughing up surfaces for new plaster, mortar, or cement. They can be used to knock out pins on equipment and for long reach applications. Chipping hammers are considered a step up from a regular pistol grip air hammer when trying to complete large surfaces of area. They are generally **13-17 lbs.** in weight and are not measured by weight class. They are generally measured by stroke size. A typical chipping hammer will have a **2"**, **3"**, or **4"** stroke. The smaller the stroke the more blows or hits per minute you get but the lighter the hit of each blow. The longer the stroke the more power you will have per hit but you will not get as many blows per minute because of the long travel the piston needs to make before hitting the back of your bit. The difference between them is slight so if you haven't used these types of tools on a regular basis you may not even feel the difference. Chipping hammers typically take a **0.680 round** shank bit or a **0.580 hex** shank bit. Most bits have an oval collar on them but some hammers have a retainer on them that requires a round collar on the bit. Most chipping hammers can be "bushed" to accept either round or hex shank bits and bit lengths can range anywhere from **9"** long to **5** or **6 ft.** long depending on the application.

The difference between the two styles is that round shank bits will rotate or turn in the tool while you are pressed against your work. This allows your bit to move freely and accommodate the surface you are working on such as a curved surface or rock.

A hex shank bit will not rotate in the tool. It will remain in the same exact position you place it in the tool. This allows you to chip straight lines out on surfaces.

Note: **0.580 hex bits will work in a 0.680 round bushed tool but 0.680 round shank bits will not work in a 0.580 hex bushed tool. The hex bits will just spin around like round shank bits if you use them in a round bushed tool.**

Bench Rammers / Pole Tampers / Foundry Rammers / Earth Tamper / Pogo Sticks

Tampers can be called many different things depending on what part of the country you live in and depending on what country you are from. There are basically 3 types of pneumatic tampers, a bench rammer, foundry tamper and earth tamper.

Bench rammers are the smallest type of tamper and range anywhere from **14"** length to approximately **30"** in total length. They can be used for a multitude of purposes but are mainly used in the refractory industry or foundries for packing substances that are fine in texture such as powders rather than earth. They can be used in tight areas such as drums or barrels and can be mounted to a bench for specific tasks. They can have various size butts placed on the end that range from **2-5"** in diameter and the butts can be made from rubber, aluminum or steel.

Foundry Tampers are generally used in Foundries as well but are a "stand-up" version and are generally **4 ft.** tall. They look much like a standard Earth Tamper but usually have a rubber butt on the end that is anywhere form **2-4"** in diameter. They are lighter than a standard Earth Tamper because of the material they are used on.

Earth Tampers are a heavier tamper ranging from **35-60 lbs.** and generally have a **6"** diameter butt on them that is made from steel or aluminum. They are used for packing earth, creating earth homes, tamping poles and fence work and are also used of developing sand bunkers on golf courses. Tampers are generally **48"** tall but can be shortened by threading the handle directly into the body of the tool. Earth tampers generally have a standard **3/4"** threaded port in them so the pole can be removed and replaced with a shorter one if it is necessary for what you are working on. Some guys will purchase a standard **3/4"** gas pipe from their local hardware in the length that they want but note that tamper poles are specifically designed with thick walls to handle large air pressure and standard gas pipe does not compare and would be deemed dangerous if used for a long periods of time. They will generally rust over time also making them weak. Typically butts can be changed out and are specific in taper to fit certain models. All butts are not universal and cannot always be switched from one model to another. Some are fastened to the piston rod with screws and some are pressed on.

Note: There are important things to remember when owning a tamper.

1) Never leave your tamp on the ground or leaning against a wall when the air line is hooked up. Accidents occur when they either fall over on the live handle or accidently roll ever on to the live handle.

2) Always unhook the air line or shut-off the air pressure to the tool when taking a lunch break or any break for that matter.

3) If you have the air line unhooked never the lay the tool down in the dirt. Always lean upright preferably in a corner. Any slight amount of debris or even a tiny stone that gets into the end of your air inlet could possible render the tool inoperable. There are valves that have tiny holes in the tool and when those valves get clogged the tool will stop working. I can not stress this piece of advice enough based on repair experience.

Riveters / Rivet Busters

Riveters are used for installing rivets and come in various sizes. The size of the tool is generally based on the stroke of the piston. Common sizes can range from **2"**, **4"**, **5"**, **6"**, **8"**, **9"** and sometimes in between. Sizes are important depending on the material and size of the shank on your rivet you are looking to install. The bit or tooling that is used with this tool is called a Rivet Set. A Rivet Set does not mean there is more than one piece; a rivet set is a single tooled piece that fits into the end of the tool in order to set/install the rivet into the material you are fastening. Your rivet set size you need will depend on the size of the shank on the rivet you are using. (Not the size of the head of the rivet)

Rivet sets come in various styles or design on the end of them. Some are called High Button/ Acorn/ ASME Cupping and some are called Cone head or Steeple Cupping and others are called Liverpool Cupping, Pan Head, Navy Standard, Shallow Cupping, A.A.R. & M.C.B. Button Head Cupping but the most common style used is just called a Standard Button style. Rivet sizes range from **3/8"**, **7/16"**, **1/2"**, all the way up to **1-1/4"**.

Here is a general list of what size riveters will install which size shank rivets.

Note: These are approximations as a general guide. Sizes may vary a little depending on the material of the rivet you are using and the material you are installing the rivet into.

Tool Size	Rivet (shank diameter) Sizes to install
2X or 3X	**1/4"** to **7/16"**
4X	**3/8"** to **5/8"**
5X a.k.a. 50	**1/2"** to **3/4"**
6X a.k.a. 60	**5/8"** to **7/8"**
8X a.k.a. 80	**3/4"** to **1-1/8"**
9X a.k.a. 90	**1"** to **1-1/4"**
80-X	**1-1/8"** to **1-1/2"**
11	**1-1/2"** and up

Rivet Busters are used for removing rivets by cutting the rivet heads off and for the most part used to be used in the bridge and structural industry. They are commonly used now for busting up concrete and horizontal work in tight areas because they typically hit slower than a jack hammer or pavement breaker and are more controllable in small areas. They are also considered alternatives for pole driving and fence work because there handles can sometimes be switched out from "D" style handles to "T" style handles. Busters can be used with a special bit sold separately upon request for posts and ground rod driving. Rivet busters have been proven to outlast some breakers, clay diggers, or demolition hammers doing the same job. There are generally 2 common sizes of this type of tool **9"** and **11"** size. They typically take one of two sizes of bits which can vary in style depending on what you are using the tool for. The two sizes are called 1500 series and Jumbo a.k.a. 2000 series. Both size tools can use both size bits by using adapter sleeves in the end of the tool but typically adapter sleeves that convert a tool using 1500 series bits into a tool that uses 2000 series bits will wear out faster since the sleeves are generally thinner to accommodate a larger bit in them. Common bits purchased with this type of tool are flat chisels and moil point bits but blanks and core knock-out punch bits are also a style that can be used with these tools to know out rivets and large pins from structures or large equipment. Common "wearable" parts with these tools are Upper and Lower sleeves Retainers and Side Springs. They can usually be purchased separately.

Air Tools in General

Air tools in general are stronger tools than electric tools and consist of fewer parts allowing them to last longer with less "break downs" and less parts to go wrong with them. They are less mess when repairing them compared to hydraulic tools. Cfm ratings are important to know of each tool since they will depend on the right size compressor to run them properly at their peak performance. Almost all air tools should be consistently run at **90 psi** and your compressor should have enough cfm output at **90 psi** to run your tool. Typically a "two stage compressor" should be used to keep you from having to wait for the compressor to fill back up after using your tool for only a few minutes. Common air compressors used to run construction tools especially multiple ones at the same time should be "pull-behind" compressors which can be hooked up to the hitch of a vehicle and pulled near the job site you will be working at. The farther your tool operates from your compressor the less efficient it will become. Too much air pressure can cause your tool to freeze up and quit working also so be sure to regulate your air pressure.

Air Tool Lubrication

All air tools should be used with "air tool oil" and not motor oil. Some manuals for older generation tools say that kerosene can be used as a substitute but mostly today air tool oil is used. Air tool oil is similar to very thin oil and has the feel of almost watered down oil. All air tools should have their air inlets protected from debris. Debris that gets into the air inlet of a tool is the most common reason for a tool breaking down or parts wearing out faster than their normal life span. The second most common reason an air tool will break down or quit working is lack of oil.

In-Line Oilers or Lubricators are an excellent choice for keeping your air tools lubricated properly. An in-line oiler looks like a small football generally cast out of aluminum. They come in various sizes for different size tools. Each one has a threaded port on each end. Some are **1/2"** and others are **3/4"** or **1"** threaded ports to allow you to place this on your air line approximately **6-10 ft.** from your tool. **1/2"** ported lubricators are used with pneumatic hand tools, chipping hammers, air hammers, and scalers. **3/4"** ported or larger are used for Jack Hammers, Tampers, Clay Diggers, and other larger size pneumatic tools. They have a site glass on the side and a fill cap to fill them with oil. They are factory set from the manufacturer to automatically disperse oil with the air traveling through your line to consistently lubricate your tool during operation although they generally have a small flat head adjustment screw inside underneath the fill cap if it needs adjusted. If you do not have an in-line oiler you should at least put a few drops in the air inlet before running any hand tool and a small squirt in the air inlet of larger tools periodically when running your tool for long periods of time. Do not "fill" the air tool with oil as too much oil will cause problems with your air tool running.

Popular Parts and Accessories to think about when purchasing an Air Tool

As I have said earlier in this review, some air tools have "wearable" parts. These are parts that consistently wear out or break on a tool and can generally be purchased separately and replaced easily.

PAVEMENT BREAKERS

It is generally retainer latches that hold the bit in the tool.

CLAY DIGGERS

It can be the same thing or packing material which is used in some clay digger models.

CHIPPING HAMMERS

It is retainers and side springs.

RIVET BUSTERS

It is retainers, upper and lower sleeves, bumpers and side springs.

RIVETERS

It is Retainer Clips.

TAMPERS

It can be packing material or rod wipers. (Butts are considered an accessory)

Accessories to think about when purchasing a construction tool are as follows:

PAVEMENT BREAKERS OR JACK HAMMERS

Bits, hose, CP fittings (a.k.a. twist lock fittings) air tool oil, in line oiler.

CLAY DIGGERS

Whip hose, bits, CP fittings, air tool oil, in line oiler.

CHIPPING HAMMERS

Whip hose, bits, CP fittings, air tool oil, spare side springs, in-line oiler.

TAMPERS

Hose, CP fittings, swivel fittings, air tool oil, in line oiler.

RIVET BUSTERS

Whip hose, bits, swivel fittings, CP fittings, air tool oil, in-line oiler, side springs.

RIVETERS

Whip hose, swivel fittings, CP fittings, rivet sets, in-line oiler, air tool oil.