What's so good about an Air Hammer?

As blacksmithing skills progress and the scope of projects widens, many people are keen to enlist some form of mechanical assistance to increase their hammering capabilities.

If you are regularly working very heavy bar, you might need the extra "brute force" that can be supplied by a powered hammer. There have been many varieties built over the centuries, and if you are interested in their history, you will find a wealth of information in Douglas Freund's book "Pounding out the Profits" (ISBN 0-9657652-0-2). Terminology relating to the types of hammers has become confused over time. For our purposes in discussing the styles that are around today, we will simplify the issue by referring to a hammer that runs on electricity as a "Power Hammer" and one that runs on compressed air as an "Air Hammer".

Because I am fortunate enough to have both sorts in my workshop, I tend to use each for a different purpose. My 1910 60lb Goliath is typical of the style of power hammer that you are likely to still see working. (Freund would describe it as a "vertically-configured, crank-actuated hammer"). I use it mainly when repetitive heavy hitting is required for roughing down big bar. It is fast but quite noisy and draws a lot of power. If my workshop had other than a compacted dirt floor, I would have needed a reinforced foundation for it. I have it on a wooden sleeper base to provide a bit of cushioning and extra height. As is the case with most of these types of hammers, theanvil is quite low. The bulky cast iron body allows only a small 'throat', limiting the width of the item that can be worked. Length is not an issue as you can work from the sides of the anvil. When these old hammers need new parts, a lot of improvisation is obviously required.

My other hammer and the more versatile of the two is an Air Hammer. I have seen and used several versions of these overseas, and have taken what I considered to be the best features of each in designing the VS Air Hammer.

It allows greater stroke control than the Goliath and similar power hammers, right down to single stroke. Being fabricated from solid steel beam rather than cast iron, the hammer itself is strong and stable with the main weight in the bottom half. No foundation is required at all – just a level surface. It is designed with a deep throat, allowing items up to 800mm wide to be worked. Of course long items can still be worked from either side of the anvil. Dies are designed as bolt-on attachments, making them quickly and easily interchangeable. This system also means that you can make your own dies rather than rely on what has been specifically manufactured for the particular model.

This hammer requires minimal maintenance as only the brass ram slides are subject to punishment during operation of the hammer. They should be lubricated periodically for optimum performance. The self-cleaning filtered air system guards against dirt and water contamination of valving and gauges. All these air fittings are available "off the shelf" should any replacements be needed.

An air compressor has a multitude of uses around a workshop. The air hammer is simply one of many pieces of equipment that can be used with it, giving greater value for your initial investment. The performance of the hammer is related to the quantity of air being supplied by the compressor. I have found 15 cubic feet to be the minimum compressor size for good results with the VS Air Hammer. To ensure that the volume of air available remains constant, it is also best to have the compressor tank close to the hammer.

The high level of control that is achievable with the VS Air Hammer makes it suitable for users with varied levels of experience, and is used by students in some of my classes. It can be seen in action at my workshop, and you are welcome to try it yourself to determine if it will suit your purposes.