

# Service Bulletin

Date: 3<sup>rd</sup> July 2002 (amended 27/10/06)

Model: All Hamilton Seeder Models

Subject: Compressor Sizes & Specifications

We are frequently asked about compressor specifications by customers and distributors, so have produced the following notes which we hope will clarify the requirements. We hope that it will assist in the selection of the right compressor for the job.

The Natural and Drum Seeder consume approximately 3-4 cubic feet per minute (75-100 litres/min), depending on the model and accessories fitted. The supply pressure from the compressor should be regulated to about 80 psi (5.5 bar). It is always best to use a compressor with a higher output than this. If the compressor is larger than required it will work less hard, run cooler, and last longer. It is a false economy to buy a compressor which is only just big enough to do the job

Therefore, we would suggest using a compressor with an output of 8-10 cfm (200-250 l/m). The compressor should have an air receiver (storage tank) of at least 25 litres, and should be fitted with a pressure regulator and air filter. These are fitted as standard to most compressors. That is all you need under most conditions.

There are several types of 'portable' compressors commonly available, including:

- Direct Drive – These have the motor coupled directly to the pump unit. They tend to be very noisy, but are usually the cheapest.
- Belt Drive – These are a little bit more expensive, but are quieter because the motor drives the pump with a 'V' belt, and the pump is running much slower. These are the most popular choice.
- Vane Compressor – These are the 'Rolls Royce' of portable compressors, and run quietly and efficiently. However, they are much more expensive.

Some form of air filtration is essential. A filter with an element of around 50 microns is normally fitted to most compressors. This filter will also collect the majority of water from the compressor under normal circumstances. If the ambient conditions are very humid, it may be necessary to fit an additional water separator/air dryer. These can be expensive, and we can provide a suitable product at a reasonable cost. Water will also collect in the air receiver of the compressor, so it is essential to drain it (and the filter bowl) at least once a day.

Oil in the air is not normally an issue. If the compressor is in good condition it will not cause a problem. Any small amounts of oil mist will condense in the air tank, and the filter will keep the air clean enough for the seeder. When a standard oil lubricated compressor gets very old (and the piston rings wear) more oil tends to get into the air. Most of this will stay in the air tank, but some will get into the airline. Some pneumatic equipment requires an oil mist in the air for lubrication. However, all our equipment needs to have relatively dry air, so an oil lubricator should never be fitted. If oil in the airline becomes a problem, then it is time to consider replacing the compressor, or possibly fitting an oil separator. Oil-free compressors are available, for applications such as the medical industry, but are prohibitively expensive and unnecessary for our 'industrial' application.

The UK Pressure Systems Safety Regulations 2000 states that a Written Scheme of Examination is required for air compressors. An exception to this is systems where the product of the pressure in bars multiplied by the internal capacity in litres of the receiver is equal to, or less than, 250 bar litres. For example, a compressor with a pressure of 9 bars and a tank capacity of 25 litres would have an output of 225 bar litres, and would not be subject to examination.