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Industrial Air compressors in NI are employed in a number of applications. Regardless of where they are used, the basic principle remains constant. When air is confined in a small space, its pressure increases and this helps drive various tools and equipment. In Belfast, air compressors are available in a wide range depending on the application. Choosing the appropriate machine for the work involved can help minimize costs while optimizing efficiency.

Industrial air compressors in NI can be broadly divided into reciprocating, rotary screw and variable speed. Here is a quick overview of each type:

1. Reciprocating air compressors are portable and used by tradesmen. They work by using a piston driven pump that compressed air in a cylinder. This can be direct drive or belt drive type, depending on their pressure capacity. The motor that drives the equipment can be single phase or three phases where the three phase motor is more efficient, resulting in lower power consumption. The choice of the motor depends on the power inlet and output required.
2. Rotary screw models are more complex where air compression is achieved through interlocking rotors. These are used in factories, large organizations such as hospital complexes and universities. This equipment is capable of producing more than 1000 cfm at 13 bar pressure and is not portable.
3. Variable speed compressors are rotary models that offer different speeds to control the pressure and flow of air. They are similar to the rotary screw operation, yet operate with greater efficiency and control. This means higher energy savings in the machine shop floor and factories where they are used.

While deciding on the right type of air compression equipment, several features must be assessed, the first of which is the power rating. Depending on the output you expect you can go ahead and choose the right model. This means determining the pressure and air flow rating of the tools and devices you plan to power with the compressed air.

1. Pressure rating is mentioned as "psi" or pounds per square inch or bar, which indicates the recommended pressure at which the air is fed to the tool to ensure its efficient operation.
2. The air flow rating is expressed as cfm or ltr per minute, indicating the cubic feet per minute or liters per minute. This is a measure of the speed at which the compressed air must be fed to the tool to keep it operating as required.

After adding up the total power rating required, decide the number of tools that will be operating at the same time, since the compressed air needed to power all these tools will be taken as the minimum airflow capacity the air compressor must deliver in Belfast.

Air leakage is an important consideration and the choice of industrial air compressors in NI must be made keeping spare capacity in mind. This will ensure that there are no future problems, especially when additional equipment is added.

Quality of air is another important consideration depending on what the compressed air is used for. The oil used to lubricate the equipment plays a critical role here. For pneumatic tools, traces of oil in the air may not be a problem. But for medical applications this is unacceptable. Good quality air filters take care of this. There are oil free models that cater to 100% clean air applications.

Compressors are sturdy equipment that last at least a decade when maintained well. Getting in touch with a reputable Belfast air compressor supplier can help you understand and choose the right equipment for your application.

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