COAST INDUSTRIAL SYSTEMS, INC.
2223 Verus Street • San Diego, California 92154

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In This Issue

A Breath Of Fresh Air

Choosing The Right Air Compressor

Today's air compressor pumps are based on the same principles as those first used hundreds of years ago. They have evolved significantly over the years and have become the heart of many durable, high performance machines.

Choosing the right air compressor to pair with your powder coating gun is crucial to effective time management and accurate application of product. Air compressors can also be for surface preparation. Purchasing the right one is an investment in saving time and money for your powder coating business..

Consider these specs when choosing your air compressor:

CFM (cubic feet of air per minute)

This is the most important factor in determining which air compressor to buy. The higher the CFM, the faster the tank will fill with air, and the less time the engine spends trying to fill the tank as you use it. If you are using a gas engine, this means less gas spent. If your engine is electric, you need less energy. To be truly cost efficient, figure out the highest CFM of the tool you will be using, and add 3 to be safe. The greater the difference between the tool CFM and the air compressor's, the greater the efficiency.

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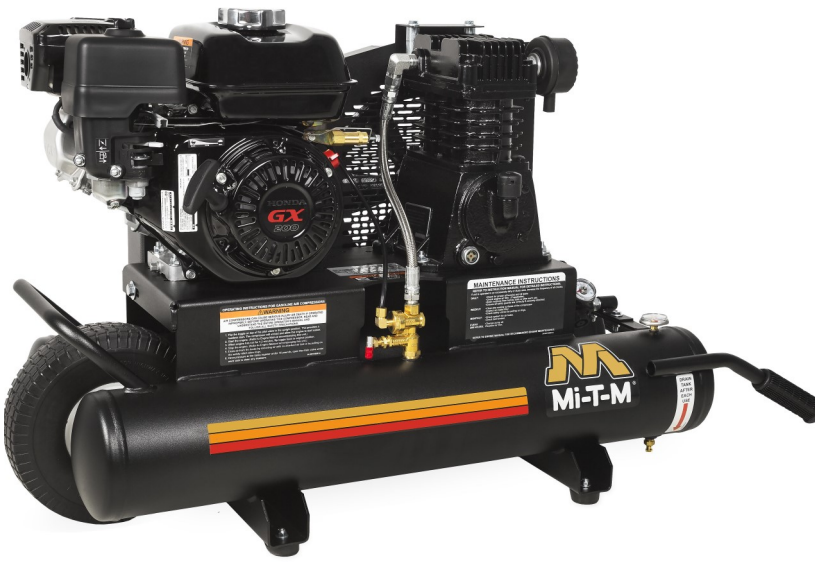
DUTY CYCLES

An air compressor duty cycle is the amount of time a compressor will deliver pressurized air within a total cycle time. If listed as a percentage, you can simply take the number of seconds or minutes that the figure represents and subtract that from the total cycle time.



Mi-T-M's AM1-PH65-08M

If an air compressor is listed as having a 25% duty cycle, it means that the run time is one-fourth of the total cycle time. Therefore, if the compressor has a cycle time of 120 seconds, the run time would last for 30 seconds. During operations, the compressor would need one minute and 30 seconds of rest between every 30 seconds of pressurization activity. An air compressor with a run time this low would mostly be suitable for small applications that require only intermittent air power, such as domestic, portable compressors used by independent craftspeople.

If an air compressor is listed as having a 50% duty cycle, the compressor will be capable of providing air power for half of its total cycle time. Therefore, if the compressor cycles for a total of two minutes, you will be able to draw pressurized air from the machine for durations of 60 seconds, then you will have to wait another 60 seconds before drawing air power again. Air compressors that offer 50% duty cycles are generally used for medium-scale operations that only necessitate intermittent air power. In some cases, facilities that do not want to invest in larger compressors will make do with 50%-capacity machines.

If an air compressor is listed as having a duty cycle of 100%, the compressor will deliver pressurized air for the entirety of its cycle time. As such, the compressor can be used for processes that require non-stop air flow for minutes or hours on end, such as pneumatic sanders and spray painters. A 100% duty cycle will generally be one of the requirements for any air compressor used in a factory setting.

PSI (pressure of stored air in pounds per square inch)

Most powder coating applicators work at a maximum 35 PSI, and sandblasting tools operate at a maximum 100 PSI. You can set the desired maximum PSI using a regulator, so any PSI above 100 should not really be a determining factor in your purchase.

TANK SIZE

The bigger the tank, the more air is stored, and the less frequently the motor needs to run to resupply the tank. The size of the tank is measured in psi (pounds per square inch) units. Consider the size of the job you will be completing, but also the amount of space available to you. Larger tanks are preferred for their convenience, but might be harder to store or move around.

HORSEPOWER (HP)

Often, manufacturers refer to the max HP of the motor, not the actual air compressor. An easy equation to find the true horsepower output as it translates through the air compressor is:

(AMPS) X (VOLTS) = WATTS
(WATTS) X 0.00134 = HP

For example, if you wanted to know the max HP for Mi-T-M's AM1-HE15-03M:

Mi-T-M's AM1-HE15-03M

(15A) X (120V) = 1,800W
(1,800W) X 0.00134 = 2.4HP

This equation assumes perfect operation, so to make the numbers more true, we decrease the output by 10%:

2.4/1.1 = 2.2 HP

This is the *maximum* HP of the air compressor that should be used with the motor. You are looking for values slightly below this to allow for maximum efficiency of the air compressor's output. If the HP of the air compressor is higher than the motor, the motor will burn out trying to catch up. Mi-T-M's AM1-HE15-03M operates at 1.5 HP, allowing the motor to operate at full power.

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CAST IRON OR ALUMINUM CYLINDERS

Cylinders are made from machined castings that can be solid cast iron, die cast aluminum (with or without an iron or steel bore liner), or from solid aluminum. Solid cast iron is considered the most durable. For small oil-less compressors, cylinders formed from aluminum tubing are often used.

SINGLE OR DUAL-STAGE

Most pumps are either single-stage or dual-stage. The difference refers to the number of times intake air is compressed in a pump. Most single-stage air compressors operate at a maximum capacity of 125 psi. Dual-stage air compressors produce a larger volume of air at higher pressures than smaller single-stage compressors. Dual-stage air compressors usually have a maximum capacity of 175 psi.

Mi-T-M's ACD-23105-120H

If it is in your price range, a dual-stage air compressor is ideal to ensure you have plenty of air. Keep in mind that just because an air compressor has 2 cylinders does not mean that it is a dual-stage air compressor. There are many single-stage twin cylinder air compressors.

Ready to find the right air compressor for you?

This month we feature Mi-T-M's line of air compressors with models that range from home use to commercial grade models.

Ask your Coast representative today to help you find the right compressor to fit your needs!

***For more information:* Mi-T-M Air Compressors**
***Click here for Mi-T-M's* Informational Brochure**
Instructional videos for* Gas *or* Electric *powered air compressors

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COMPANY OVERVIEW

Coast Industrial Systems, Inc. is the #1 supplier of painting and coating application equipment to the marine and manufacturing industries, and is proud to serve both San Diego and Mexico since 1986.

Coast Industrial Systems, Inc. has always placed the customer first, and strives for business excellence in all ways. Our friendly sales and customer service staff are knowledgeable, experienced and qualified to help meet your painting and coating application requirements, and to exceed your expectations.

Graco Top 20 High-Protective Coatings & Foam Distributor Award Winner 2010-2018

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