THE PREVENTIVE MAINTENANCE SERIES

Home Air Compressors

I do not profess to be an expert at discussing air compressors but I will share some ideas and tips concerning air compressors I have owned. Compressors are wonderful additions to a home garage; blowing off garage floors, cleaning computer cabinets, airing up tires, house painting, etc., but mainly there are a myriad of air tools available. With extra hoses I have used air drills in my sheds, cut-off wheels on upstairs plumbing and have even gone next door and across the street to help neighbors.

There are a wide range of compressor styles and brands; the first that I owned at home was a Sears roll around single stage 125 psi, 110 V with a 20 gallon tank. This type is great for being mobile, plug in anywhere and will run many air tools that do not have a high consumption rate. Not suitable for major body work, blast cabinets, heavy duty air hammers etc., as the duty cycle is limited and recovery time long.

The current compressor I own is an Ingersoll Rand two stage 15.3 CFM @175 psi, 220 V with a 60 gallon vertical tank. It is also rated at 19.1 CFM @ 125 psi (normal top operating pressure). I wanted an 80 gallon tank but our previous garage space would not let it squeeze in. Fortunately this compressor does everything I currently want to do, including running a blast cabinet or a front yard sand blaster for extended periods. Since the compressor is located next to a blast cabinet (which leaks a little dust even with a vacuum) I added a Corvair late model air cleaner to supplement the tiny original filter that costs 4 times that of the Corvair filter. (pictured below). The compressor has a sight glass oil level which is nice.

Things to consider with a stationery compressor:

- Picking a style and size may be limited by your garage, but I would recommend as large as possible, your future activities may dictate that you wished that you had spent the additional money. My manual calls for 18" of clearance on the fan side for cooling, and you need that for belt maintenance. For a base I added plywood with some heavy duty rubber attached for sound insulation against the concrete. Some of the new high tech designs may fit your needs, such as screw compressors, but I do not know of anybody to consult with that currently owns one in their home. Check this site for information on compressor types and brands: www.cagi.org Go to Data Sheets and they also have a handbook from which you can download chapters.
- A two stage compressor has an inter-cooler between stages and will provide 175 psi. It is nice to have that available for the occasional heavy duty blowing or a tough Snap-On air hammer job but most tools should be regulated between 80-110 psi. A two-stage runs at a speed well below the normal 1800 rpm of single stage compressors and should last longer.

- Check before purchase on warranty, how and where the warranty work would be done, and the availability of parts. Checking parts availability on-line ahead of purchase might be a good idea, as well as "reviews". I'm not sure how accurate reviews are anymore, so you might be better off just asking everybody who has a compressor what they experience.
- Check the tank drain access. The drain will obviously be at the lowest point of the tank and you will have to do some plumbing to make it easy to do periodic drains due to our humidity.
- Check the electrical requirements, most 110V compressors just plug in. The 220V motors will wire direct so you will have to connect to your panel or if you are close to your electric dryer you can make a short extension cord with the correct adapter. Use the correct gauge of wire for the distance involved or you will have motor problems. It's a good idea to check the voltage at the motor after installation, there is a drop at start up and then a running voltage.
- I used an air line installation kit from Eastwood that was easy to use and was so much better than the iron pipe I used at our previous house. Just my experience, but I found that running the air line straight up to the ceiling from the tank, then across the garage ceiling to a dryer kept moisture in the line to a minimum. The dryer seldom needs to be emptied except for prolonged running in really humid weather.
- A final touch was a hose reel mounted on the ceiling after the dryer.

These are some typical air consumption rates for tools:

Impact Wrench & Hammer	8-10
Air Wrench	8-10
Air Drills (HD)	10
Cut Off Wheels	4-6
Air Saws, Nibblers	5
Dual Action Sander	15
Blast Cabinet	15 +
Paint Guns	8-20

