

Case Study – 6 **Avoid Compressed air usage for cleaning purposes from direct open hose pipe**

Before CP During the visit of all the industries, it was observed that compressed air was used for cleaning purposes at all workstations to clean the components with an open hose of 5 mm diameter and at 6 kg/cm²g pressure.

After CP Usually, cleaning can be done at lower pressure (around 2-3 kg/cm²g). So, the first step would be to reduce the pressure and energy saving would be around 8% at drop of each bar for that hose if generated separately. From our past experience the company can save Rs. 21,000 per year (from one workplace) by installing compressed air saving gun.



The compressed air is a costly utility and the less critical purposes like cleaning can be achieved by installing air saver nozzles at the tip of these cleaning devices or shall be replaced with new one.

The special design of these improved cleaning nozzles allows ambient air to get entrained in the path due to vacuum created by compressed air and delivers the air with similar velocity and thrust giving to desired cleaning effect.

However, the amount of compressed air uses is only 20-25% which reduces the compressed air requirement and thus resulting in energy savings. In addition, these nozzles also reduce the noise level.

Strong Recommendations for Efficient Working of Compressor:

- The Compressor must be located in a cool and dry area.

	<ul style="list-style-type: none"> • Avoid moist air near the compressor area, as Hot and Moist air cannot be compressed efficiently and the equipment starts using more electricity day by day. • The heat generated from the compressor motor must be removed from the surrounding of the compressor in case of a closed room; however, it is NOT advised to install air cooler to cool the area, as cooled will aid the moisture in the air, which is not recommended.
Environmental	Reduction in the electricity consumption to generate the compressed air, with that, also reducing Noise Pollution of the surrounding, making the site easy to work
Economical	<p style="text-align: center;">Investment: 3,000/- per gun Annual Savings: Rs. 21,000/- per station Payback Period: 3 months</p>