FORBES MARSHALL

Compressed Air Audits

Enhanced Energy Efficiency
Reduced Energy Consumption

Energy Conservation | Environment | Process Efficiency

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Compressed Air Audits

In manufacturing plants, compressed air is considered the fourth utility. It is one of the most expensive utilities and therefore validation of the entire network is of vital importance.

Compressed air represents around 10% to 40% of the plant's total power consumption. Air Audits and a proper analysis of the system help in identifying the large potential and the opportunities to save energy, with minimum investments and a good ROI.

No matter what your industry, compress your air costs with us

Did You Know?

You may be spending upto **Rs. 31 Lakhs per annum** on operating your 90kW compressor

10% to 30% of your electricity cost may be through compressed air

Cost of off-load running of a 90kW compressor for 4 hours daily is **Rs. 1.3 Lakhs per annum**

Leakages contribute up to 40% of your compressed air costs – costing upto **Rs. 15.48 Lakhs per year**

A single **1/8" leak** at 6.5 Bar drains out **Rs. 150, 000 per annum!!**

Over-pressurisation by even 0.5 bar costs you **Rs. 1.16 lakh per year**

(All calculations made with energy tariff of Rs. 5 per kW-hr and assuming specific power of compressor as 0.18 kW/CFM; working 24X7)

Forbes Marshall Air Audits

We offer a comprehensive bundle of services that help you optimize your compressed air network. Our offerings go beyond just leak detection, the Forbes Marshall Air Audit will help you identify and define your system problems, whether they are in demand, distribution or supply, and recommending solutions, allowing you to meet your return on investment goals

Reduce operating cost

Estimates costly air leaks and artificial air demands

Explore areas to reduce operating costs by 10% or more

Improve productivity

Clear picture of how your system runs over time

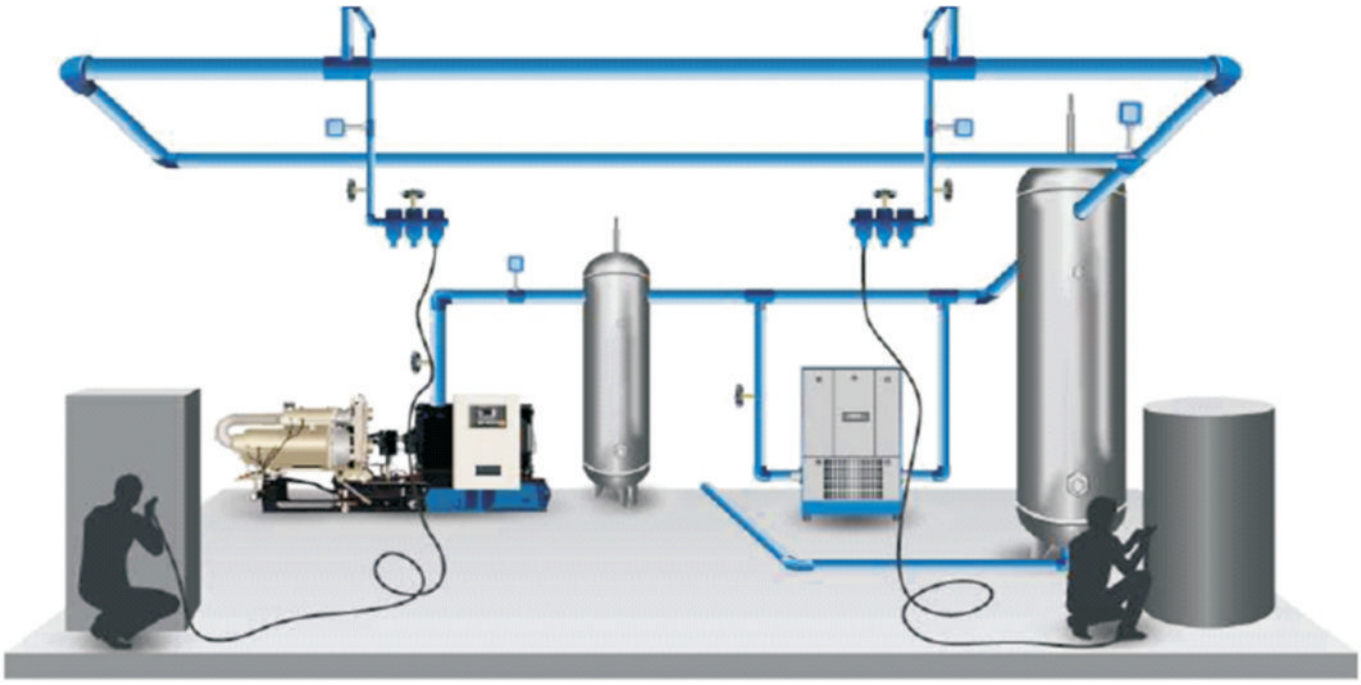
Solutions to production and process problems

Improve quality

Improve quality of air as per process requirement

Stabilize air pressure

Minimize or eliminate future capital costs



Compressed Air – The Most Expensive Utility

How much does each CFM contributes to the cost of your product ($ per unit produced)?

How efficient are your compressors?

Where are your compressed air malpractices?

Which area of your production is causing the maximum losses?

Compressed air finds wide spread and varied utilization in any industrial setup and is considered the fourth utility of any manufacturing setup. Due to its nature, compressed air is taken to be a free utility. On the contrary, according to a US Department of Energy study, generating compressed air takes up an average 10% of electricity in any plant. For industries like automobiles and cement, it may be as high as 30%. Inefficient generation and leakages further add to the generation cost

Compressed air systems are a fairly straight forward network of compressors, filters, piping, reservoir tanks etc.

Some studies suggest that only a small fraction, 15% - 30%, of the consumed energy is ultimately delivered in the form of compressed air. Leakages are a significant contributor to high compressed air costs. They account for not just the direct cost of air lost through leakages, to compensate for lost air and reduced pressure; the compressors have to be run at much higher pressures and loads.

Other factors affecting the efficiency of a compressed air system are

Inefficient compressors

Over pressurization

Unbalanced compressed air requirement

Insufficient storage

Compressed air malpractices

Piping issues and angle connections

Moisture traps, filters etc malfunctions

Scope of the Air Audit

Forbes Marshall identifies and delivers your savings

Compressor performance testing (free air delivery)

Piping and pressure drop measurement

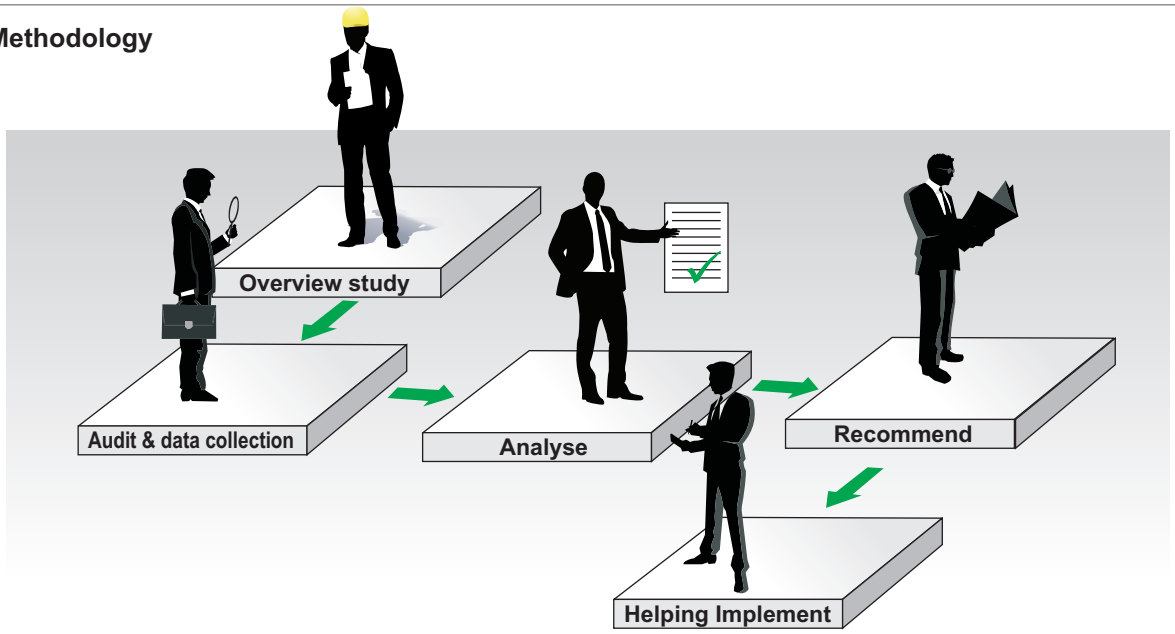
Analysis of compressed air demand and supply

Audit of pressure drops, malpractice and malfunctioning equipment

Air leak detection and leakage quantification

Detailed audit report - quantification of losses and savings potential

The Audit Methodology



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