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Management & Maintenance Staff,

We would like to take this opportunity to introduce ourselves - our company - our services.

About Us

Ultrasonic Leak Detection Services Ltd consists of 3 principals who between them have many years experience in marine, aviation, food processing and electro-mechanical engineering. The company covers a range of leak detecting options--- Compressed Air---Vacuum---Plate Heat Exchangers---Tube Heat Exchangers---Steam Valves---Underground Water. Principally we specialize in Compressed Air Leak Detection and Vacuum Leak Detection.

We have established ourselves firmly at the forefront of the business of **Ultrasonic Leak Detection** work throughout NZ. We pride ourselves on delivering a high quality, cost effective service to our extensive and varied client base which includes some of NZ's largest companies using "state of the art" Ultrasonic Leak Detection equipment.

"About 10% of industrial electricity consumption is used in powering compressed air systems which are safe, reliable and versatile. They are often taken for granted workhorses that plod through the day without much worry, for a cost that generally you don't think about. However, taking a good look at your systems performance can produce surprising economies. A compressed air system that has minimal leaks and is energy efficient could save your company thousands of dollars per year". - Australian Energy Commission Report.

What We Do

Currently we service several of NZ's largest companies and a number of other large businesses generally in the food manufacturing and packaging industries.

For a number of years these companies have enjoyed the savings that a Compressed Air Survey has given them. Our role is to identify any air leaks in your company's air system using an **Ultrasonic Scanner**, document them and then place an identifying tag on the faulty equipment so that you can repair these leaks as time and manpower allows. Using the Ultrasonic Scanner we have the ability to locate leaks quickly, even in a noisy environment. Without this equipment leak detection for maintenance engineers would be very difficult and time consuming.

Savings will obviously vary from company to company and site to site within companies but you can expect a saving of approximately **20 – 25%** on your **current** compressed air electricity consumption.

An example from a recent survey of a 24/7 operation using the "Find, Fix, Recheck" method at a Food Manufacturing Company is outlined below...

Full Capacity (CFM)	Loss Assessment	Estimate of Air Loss (CFM)	Annual Loss (kWhrs)	Cost per kWhr	Annual Cost of Loss	Fix Rate	Estimated Immediate Savings
850	23.1%	196.6	218,707	\$0.150	\$32,806	25.6%	\$8,398

The service we provide has shown that for every \$1000 spent, \$4000-\$8000 p.a. of electricity cost alone is saved at most sites.

Due to the sometimes hostile environment the air lines and air dependent equipment is exposed to the deterioration of this equipment is ongoing. However after the repairs from the initial survey are carried out it is expected the cost of future surveys will be reduced.



We have several options available with regard to our surveys which I will outline briefly:

- **YEARLY SURVEY**

A once a year comprehensive survey of leaks in your compressed air system. This survey gives you a complete picture of your air system, you can then use the data we collect to budget for leak repair starting with urgent repairs and progressing to leaks of lesser urgency although you must remember that a lot of smaller leaks repaired can still result in significant savings.

- **SIX OR THREE MONTHLY SURVEY**

On larger sites we can spread the survey over 3 or 6 monthly visits to reduce downtime if surveys need to be done during shutdowns for maintenance or other seasonal highs and lows in production. If different parts of a plant shutdown at different times this can also be accommodated.

- **FIND, FIX, RECHECK**

Our largest customer has recognized the value in this type of survey and it typically involves providing an engineer equipped with some basic fittings and a few tools e.g.; push lock fittings, joiners, thread seal and air pipe. The engineer works with us and any leaks that he can repair easily on the spot he does so. We then recheck the faulty fitting or pipe and the savings to your company begin immediately.

On a recent survey 24% of leaks found were fixed there and then. This % has been higher on some sites and more often than not the immediate savings more than covers the cost of the entire survey.

- **90 DAY RECHECK**

If within a 90 Day period after a survey you repair as many leaks as possible and get us back for a recheck, the recheck is done at a discounted rate. This helps you to maximise benefits at an early stage.

- **MULTI-SITE DISCOUNT**

Where a company has several sites and contracts us to do a survey on all sites we will do this at a discounted rate.

Benefits To You

1. Reduced wear and operating costs for compressors
2. Reduced risk of plant failure due to early fault detection
3. Leak survey able to be carried out with plant operating
4. Ability to quickly locate costly leaks reducing waste and downtime
5. Significant financial savings

Reporting

Our reporting system gives you simple effective data that pin-points the location of each leak as detailed on a spreadsheet which you can then duplicate and give to your maintenance engineer/s for various parts of your site so that repairs can be implemented as time allows.

Each leak has a decibel reading and all leaks 80+dB (approx. 7cfm) is marked as urgent.

We tally all leaks and give you a total energy wastage and approximate dollar savings based on your cost per kWhr. You can also receive your report in hardcopy form and electronically.

On Larger sites we require the accompaniment of someone who has a working knowledge of the site and plant to assist in identifying where we are and what equipment we are surveying. This makes our reporting to you more beneficial.

We believe that your company can make significant savings by having us survey your compressed air system. A survey can be carried out with minimal disruption to your production schedule and we are happy to work in with you to establish the best possible way of achieving this whether it is during a scheduled shutdown, weekend shutdowns, overnight surveying or during production.

Should you wish to discuss costs, availability or any other queries please do not hesitate to contact the writer or any of the other company principals listed below.

We will be in touch shortly to see if our services can be of benefit to your company and we look forward to working with you and starting you on the road to some significant energy savings.

Yours sincerely,

Kevin Cunliffe - (*Airborne Ultrasound Certified, NZCS - Applied Physics, NZCE - Mechanical Engineering*)

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