



Lets Talk About Compressed Air Leakage

Did you know that leakage in compressed air distribution systems is common? In fact, in most compressed air systems, losses due to leakage exceed 30%. Very few users realize how costly this leakage can be.

What is the real cost of compressed air leakage?

Take for example a plant which is losing 40% of its useful system capacity or 1,600 SCFM at 100 psig.

After the leaks have been repaired, the leakage rate is reduced to 600 SCFM or 15% of the useful system capacity, producing savings of more then one million kWh, or \$43,000 annually.

Where does leakage generally occur?

Leakage can occur at a number of points in a compressed air distribution system. Some of these are listed below:

1. Branch line connection
2. Automatic drain trap
3. Desiccant filter
4. Filter/regulator/lubricator assembly
5. Filter/regulator/coalescent filter assembly
6. Regulator
7. Rubber hose
8. Quick coupler
9. Isolating valve
10. Control valve
11. Coil hose
12. Pneumatic cylinder

Leakage in a compressed air system can be found and fixed fast and easy

A leakage detection test closely examined the air distribution systems to locate leaks and familiarize plant personnel responsible for compressed air systems operation and maintenance with leakage detection techniques. This test is easily carried out by your staff using an ultrasonic leak detector. An ultrasonic leak detector is the quickest easiest and most cost-efficient tool for finding compressed air leaks.

Where can I get more information about compressed air leak detection?

SDT North America Inc is dedicated to providing energy and cost saving solutions to North American Industry. Call today to request free information on compressed air leak surveys and energy saving ideas for maintenance. **1-800-667-LEAK (5325)**



Compute Your Energy Savings Potential

How much money can you save by detecting - and correcting - air leaks? Use the chart below to determine the leak potential. The charts show the amount of air you can expect to lose through leaks of various sizes at known plant operating pressures. Calculate how much energy would be loose on a weekly, monthly, or annual basis. Multiply that by the cost of electricity to determine the cost savings.

Free air (scfm) flow through orifices										
PSI	Orifice Diameter									
	1/64	1/32	1/16	1/8	1/4	3/8	1/2	5/8	3/4	7/8
5	.062	.249	.99	3.97	15.9	35.7	63.5	99	143	195
6	.068	.272	1.09	4.34	17.4	39.1	69.5	109	156	278
7	.073	.293	1.17	4.68	18.7	42.2	75.0	117	168	230
9	.083	.331	1.32	5.30	21.2	47.7	84.7	132	191	260
12	.095	.379	1.52	6.07	24.3	54.6	97.0	152	218	297
15	.105	.420	1.68	6.72	26.9	60.5	108	168	242	329
20	.123	.491	1.96	7.86	31.4	70.7	126	196	283	385
25	.140	.562	2.5	8.98	35.9	80.9	144	225	323	385
30	.158	.633	2.53	10.1	40.5	91.1	162	253	365	496
35	.176	.703	2.81	11.3	45.0	101	180	281	405	551
40	.194	.774	3.10	12.4	49.6	112	198	310	446	607
45	.211	.845	3.38	13.5	54.1	122	216	338	487	662
50	.229	.916	3.66	14.7	58.6	132	235	366	528	718
60	.264	1.06	4.23	16.9	67.9	152	271	423	609	828
70	.300	1.20	4.79	19.2	76.7	173	307	479	609	939
80	.335	1.34	5.36	21.4	85.7	193	343	536	771	1050
90	.370	1.48	5.92	23.7	94.8	213	379	592	853	1161
100	.406	1.62	6.49	26.0	104	234	415	649	394	1272
120	.476	1.19	7.62	30.5	122	274	488	762	1097	1494
130	.494	1.98	7.90	31.6	126	284	506	790	1138	1549

Situation: Hole of 1/16 inch in diameter in a compressed air line, pressure of 90 PSIG. The air escapes at the rate of 5.9 CFM

Cost of a Leak: The resultant leak loss can be viewed as the equivalent of 1.2 HP. If a facility is on line all year, the cost of the leak can be tabulated, based on the electrical costs of:

5 cents KW/Hour, at .745 KW/Hour x 1.2 HP=

.89 KW x 8,760 Hour/Year=

7,839 KW Yr x 5 cents =

Raw power cost of \$391.95 per year