

# COST SAVINGS WITH COHO

COHO is designed to reduce production costs by making vacuum bagging of composite parts a robust, reliable and repeatable process. COHO reduces bagging time, minimizes part rework and reduces scrapping of parts. COHO can identify leaks earlier than traditional methods and even provides real-time leak localization to guide operators to problem areas. As a result, vacuum bags get sealed more efficiently, increasing throughput and part quality.

See how much COHO could save you:

## Savings from Faster Leak Correction

How often you bag/manufacture a part

Labour Rate:	How often you bag/manufacture a part						
	5/ Day	Daily	3 Days per Week	Weekly	Monthly	Yearly	
at \$20/hr at \$100/hr at \$250/hr  Typical time spent hunting for leaks	5 Minutes	\$3,042	\$608	\$261	\$87	\$20	\$2
		\$15,208	\$3,042	\$1,304	\$435	\$100	\$8
		\$38,021	\$7,604	\$3,259	\$1,086	\$250	\$21
	30 Minutes	\$18,250	\$3,650	\$1,564	\$521	\$120	\$10
		\$91,250	\$18,250	\$7,821	\$2,607	\$600	\$50
		\$228,125	\$45,625	\$19,554	\$6,518	\$1,500	\$125
	1 Hour	\$36,500	\$7,300	\$3,129	\$1,043	\$240	\$20
		\$182,500	\$36,500	\$15,643	\$5,214	\$1,200	\$100
		\$456,250	\$91,250	\$39,107	\$13,036	\$3,000	\$250
	6 Hours		\$43,800	\$18,771	\$6,257	\$1,440	\$120
			\$219,000	\$93,857	\$31,286	\$7,200	\$600
			\$547,500	\$234,643	\$78,214	\$18,000	\$1,500
	1 Day			\$75,086	\$25,029	\$5,760	\$480
				\$375,429	\$125,143	\$28,800	\$2,400
				\$938,571	\$312,857	\$72,000	\$6,000

## Savings from Reduced Part Rework

How often you bag/manufacture a part

Labour Rate:	How often you bag/manufacture a part						
	5/ Day	Daily	3 Days per Week	Weekly	Monthly	Yearly	
at \$20/hr at \$100/hr at \$250/hr  Percentage of time a part requires re-work due to vacuum related issues (multiply values by hours of re-work)	5%	\$1,825	\$365	\$157	\$52	\$12	\$1
		\$9,125	\$1,825	\$782	\$261	\$60	\$5
		\$22,813	\$4,563	\$1,955	\$652	\$150	\$13
	10%	\$3,650	\$730	\$313	\$104	\$24	\$2
		\$18,250	\$3,650	\$1,564	\$522	\$120	\$10
		\$45,625	\$9,125	\$3,911	\$1,304	\$300	\$25
	15%	\$5,475	\$1,095	\$469	\$157	\$36	\$3
		\$27,375	\$5,475	\$2,347	\$782	\$180	\$15
		\$68,438	\$13,688	\$5,866	\$1,955	\$450	\$38
	25%	\$9,125	\$1,825	\$782	\$261	\$60	\$5
		\$45,625	\$9,125	\$3,911	\$1,304	\$300	\$25
		\$114,063	\$22,813	\$9,777	\$3,259	\$750	\$63
	50%	\$18,250	\$3,650	\$1,564	\$522	\$120	\$10
		\$91,250	\$18,250	\$7,822	\$2,607	\$600	\$50
		\$228,125	\$45,625	\$19,554	\$6,518	\$1,500	\$125

Result from this table is the annual savings per hour of rework labour required multiply this number by the average rework time per part

Figures in the tables above express yearly savings on labour.

Additional savings may be realized due to reduction in consumables waste and repair materials.

# HOW DOES COHO COMPARE

		COHO	Vacuum Gauge & Timer	Ultrasound Sniffer	Mass Spectrometer Helium Leak Detector
<b>Overview</b>					
Developed specifically for composites processing		✓	✗	✗	✗
Type of solution		Process integrated system	Point measurement	Troubleshooting	Troubleshooting
Workflow Integrated		✓	✗	✗	✗
<b>Measurement</b>					
Measurement Type	Vacuum Decay	✓	✓	✗	✗
	Flow Rate	✓	✗	✗	✗
	Sound Level	✗	✗	✓	✗
	Detection of Tracer Gas	In Development	✗	✗	✓
Quantitative		✓	✓	✗	✗
Response time		seconds	minutes	seconds	minutes
Number of measurement locations		1, 6, 12, 18, 24+	1	1	1
Real time monitoring		✓	✗	✓	✓
Suitable for passive monitoring		✓	✗	✗	✗
Result is independent of part size		✓	✗	✓	✓
Insensitive to background noise		✓	✓	✗	✓
<b>Display, Tests &amp; Results</b>					
Tests	Hose / Part Leak Check	✓	✓	✓	✓
	Blockage Check	✓	✗	✗	✗
	Vacuum Decay Test	✓	✓	✗	✗
	Semi-automatic Vacuum Decay Test	✓	✗	✗	✗
Displays	Gauge	✓	✓	✗	✗
	Bar Graph	✓	✗	✓	✓
	Line Graph	✓	✗	✗	✗
	Digital Readout	✓	✓	✗	✗
	Alarm / Warning	✓	✓	✓	✓
	Part view with predicted leak location	✓	✗	✗	✗
	Pass / Caution / Fail Indicators	✓	✗	✓	✓
Results	Pass / Fail Thresholds	✓	✓	✗	✗
	Leak Localization Algorithms	✓	✗	✗	✗
	Historical Data Recovery	✓	✗	✗	✗
	Remote Viewing	✓	✗	✗	✗
<b>Recording, Record Keeping &amp; Data Mining</b>					
Configurable Information Collection		✓	✗	✗	✗
Supports Digital Commenting		✓	✗	✗	✗
Automatic Report Generation		✓	✗	✗	✗
Supports Data Mining		✓	✗	✗	✗

*Disclaimer:*

*Information in this table is Convergent's evaluation of leak detection methods based on publicly available information only. No guarantee is given for the validity or completeness of the information presented here.*