



SENTINEL XT Injury Case Study



Sentinel XT Clear System Can Help Avoid Costly Injuries

UNREALIZED INJURY COSTS

Our Sentinel XT Clear system with a panoramic view hood can help avoid costly injuries. Virtually every customer that tries on the system is amazed by the vast difference between Sentinel and other competitive systems.

Although each situation is different the following summarizes some data on work injury costs.



SPECIFIC INJURY AVERAGE COSTS

Per OSHA “Safety Pays” calculator (<https://www.osha.gov/safetypays/estimator>) Table 1 shows the average costs associated with some injuries that could result from a poor field of vision in the workplace.

Table 1 - Injury Costs Potentially Resulting from Inadequate Field of View

Injury	Direct Cost	Indirect Cost	Total Cost
Concussion	\$54,571	\$60,028	\$114,599
Fracture	\$54,856	\$60,341	\$115,197
Laceration	\$21,872	\$24,059	\$45,931
Sprain	\$30,487	\$33,535	\$64,022



The CBIZ (employee benefits specialists) website provides examples of direct costs (typically covered by workers' compensation insurance) and indirect costs which are not covered. By reviewing the indirect costs you can see the organizational resources required to support injuries.

DIRECT COSTS - Typically covered by your workers' compensation insurance

- **Employee wage benefits** may be paid to an eligible employee who is unable to work or return to work at full capacity. Wage benefits vary by state and may include temporary total, temporary partial, permanent partial and permanent total disability.
- **Medical payments** refer to any eligible medical expense required for treatment of an employee's work-related injury.
- **Vocational rehabilitation costs** are expenses associated with an employee's rehabilitation (e.g., training and career counseling).
- **Death/dependent benefits** compensate a spouse and/or dependents of an employee who died directly from a work-related injury. These benefits can vary by state.
- **Legal fees** include expenses associated with a workers' compensation claim, civil liability expenses and settlement costs.
- **Claim investigation costs** involve costs associated with the investigation of a workers' compensation claim if there is a concern of fraud.

INDIRECT COSTS - Some examples of costs not covered by worker's compensation insurance

- **Wage and hour costs** accumulate from compensation to perform the injured employee's duties during their leave. This includes hiring temporary workers or providing overtime to current employees.
- **HR support expenses** include specialized training and increased workload for HR staff who handle workers' compensation claims and related paperwork.
- **In-house claim investigation costs** involve costs associated with the investigation of a workers' compensation claim if there is a concern of fraud.
- **Hazard mitigation costs** include expenses associated with mitigating the hazard(s) that influenced an employee's injury.
- **Production deadline extensions** occur when an injured employee's absence causes production delays which influence rising production costs and negative business contracts.

Sentinel Clear Potential Injury/Cost Avoidance

A typical PAPR capital and operating cost profile is highlighted below.

Assuming a 25 unit installation the average price of a PAPR system is around \$1,200. Some discounts may be available, or in the case of replacing an existing PAPR a full trade in program may be available from ILC Dover – reducing your capital cost significantly or eliminating it all together. For this case we're assuming both ILC Dover and the competitor's system are being considered for purchase at an average selling price. That means the initial capital cost is around \$31K.

Depending on the API's being processes and the specific unit operations being performed the frequency of hood replacement varies considerably. For this case we've assumed 2 hood change outs per week per installed blower – resulting in 2,500 hoods per year.

Adding in the cost of the initial systems the total capital and operating costs in year 1 are equivalent. However, that may not be the full cost picture. Since operators feel significantly safer in the ILC Dover panoramic view hoods, EHS managers and Production supervisors expect on-site injuries to be reduced. Assuming the increased field of view provided by the Sentinel Clear Hood results in the elimination of just a single concussion, not only is a significant injury avoided, but an indirect cost of \$60,000 is eliminated. Putting that in terms of hood unit cost it equates to \$24.00 saved on each hood.

	Competitor	ILC Dover
Number of PAPR Systems	25	25
System Cost	\$1,250	\$1,250
System Extended Cost	\$30,000	\$30,000
Annual Hoods Consumed	2,500	2,500
Unit Cost/Hood	equivalent	equivalent
Annual Hood Cost	equivalent	equivalent
PAPR System Cost - Year 1	\$30K + hoods	\$30K + hoods
Injury Cost - Indirect (concussion)	~\$60,000	\$0
Total Year 1 Cost	\$90K + hoods	\$30K + hoods
Sentinel Clear Savings		~\$60,000
\$ per Hood Equivalent Savings		~\$24.00 per hood



For more information on the Panoramic view afforded by the Sentinel Clear system see our latest video.

Savings in year 1 by using ILC Dover Sentinel Clear Panoramic Hoods:
\$60,000



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Innovators at our core, we develop engineered flexible protective solutions that improve efficiency while safeguarding people, product, and infrastructure in hazardous conditions.

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Our customers will attest to our relentless dedication to high value products, advanced technology, and responsive service, as our visionary solutions have improved efficiency while safeguarding people, product, and infrastructure in hazardous conditions through flexible protective solutions since 1947.



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