



It's hot out there!



110° F / 43° C! That's hot!

Every $\sim 2^{\circ}$ F increase above room temperature results in a 2% decrease in worker productivity. It is expected that the largest expected economic losses in the US due to climate change will come from lost labor productivity.

Hot temperatures not only cause health risks to workers and productivity loss to employers; it also has a very real financial cost to businesses. According to statistics - a single instance of a heat-related injury can cost a business **at least** \$28,000. Imagine multiple heat-related injuries in a single day!

As the climate changes, we will see warmer temperatures and more heat waves. Companies will need to take measures to protect their workers such as more/longer breaks, adjusted working hours, and protective gear. Take those steps now! Partner with SolarX|Works to improve your bottom line and protect your work force.

Meet the xCOLD

The SolarX|Works xCOLD platform provides a solution to reduce and potentially eliminate these injuries from occurring.

The xCOLD is a 100% solar-powered cooling and refrigeration system that is designed to be modular and mobile so that it can go wherever the work needs to be done without the need of a fossil fuel energy source.

The xCOLD design allows it to be attached to any cooling space to produce a cold environment. Do you want a temporary tent-like structure for your workers to cool off during break? Just attach the solar-powered xCOLD to the tent and begin producing cold air almost instantly.

The xCOLD provides an environmentally friendly solution to create an air conditioned environment for your workers to get away from the heat of their job and can help reduce the risk that they will have a heat-related injury.

The **xCOLD** Modular Industrial Refrigeration Unit



www.solarxworks.com



Our Heartbeat is the Sun!

We harvest energy from the sun in the form of direct current (DC) power, apply a little proprietary technology and use that to support several use cases including: people cooling, disaster relief, and cold storage.

The xCOLD can also be used to create a cooling closet or portable walk-in cooler. Attach the xCOLD to an enclosed trailer (or other insulated space) and it produces a space that can keep items such as water bottles or ice packs cold or freezing. One particularly interesting application of this setup would be to cool body cooling vests. Body cooling vests are wearables with cooling packs (like the ice packs you place in your cooler) that can be inserted to help keep your body temperature down.

FUNCTION	UNIT	SPEC	UNIT	SPEC2
Ambient Dry Bulb temperature	(*F)	95	("C)	35
Ambient Wet Bulb Temperature	(*F)	65	(°C)	18.3
Functional Lowest Temperature Achieved	("f)	31	(°C)	0.6
Nominal Cooling Capacity	BTU/h	24,000	BTU/h	24,000
Refrigerant	(-)	R-134a	(-)	R-134a
Evaporator airflow	(CEM)	800	(CM/HR)	1359
Evaporator air inlet DB temperature	(*F)	80	(°C)	26.6
Evaporator air discharge DB_temperature	(*F)	63	(°C)	17.2
Evaporator refrigerant inlet temperature	(*F)	30	(°C)	3.9
Evaporator refrigerant discharge temperature	(*F)	73.4	(°C)	23
Evaporating pressure	(PSIA)	49	(PSIA)	49
Evaporator refrigerant mass flow rate	(ibm/hr)	294	(lbm/hr)	294
Condenser airflow	(CFM)	1400	(CM/HR)	2378
Condenser air inlet temperature	(*F)	95	(°C)	35
Condenser alr discharge temperature	("F)	113	(°C)	45
Condenser inlet temperature	(*F)	216	(°C)	102
Condenser discharge temperature	(*F)	102	(°C)	38.9
Evaporator flex line length	(Ft)	20	(M)	6,1
Max height , depth, width	(n)	60 X 18 X 42	(CM)	152.4 X 45.7 X 106.7

SolarX

The xCOLD could provide a cold space for these cooling packs to be re-chilled throughout the day for easy swapping...

By having a system like this in place, outdoor workers would have a nearly unlimited supply of cooling to shield them from heat related illnesses. Keeping the body temperature of workers down not only allows them to be more effective at doing their job in hot weather but also reduces the risk of the business having to pay when an injury does occur.

Call 509-398-5141 for pricing and availability.

Our unit only needs six 300 watt solar panels to run.

The **SolarX|Works** control system is designed to prioritize the source and distribution of power. We understand that night falls, clouds roll in, and you still need to maintain temperature.

One solution to control the "what-ifs" is a **SolarX|Works** Battery Array. 12-hour available energy consumption assumes running the unit at 100% throughout the night.

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