NORTH SLOPE CHILLERS

WWW.NORTHSLOPECHILLERS.COM

WORLD -CLASS
CUSTOM CAPABILITIES

SHORTEST
INDUSTRY LEAD TIMES

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WHAT IS AN INDUSTRIAL CHILLER?

Industrial chillers are used to cool process fluids, typically water or a water/glycol mix. These process fluids remove heat from machinery, equipment, foods, chemicals, etc. The fluid absorbs the heat from the external source and is then recirculated through the chiller to cool again and again.

INDUSTRIAL COOLING

North Slope Chillers provides several performance levels of industrial cooling equipment with precise temperature control that is compact, yet efficient. Easy to install, remove, and relocate, you will be happy to have a chilling system that is painless and easy to use. Preserve your valuable materials and equipment while avoiding downtime when you use North Slope Chillers and Fluxwrap accessories to maintain and regulate safe temperatures.

- WORLD -CLASS CUSTOM CAPABILITIES
- SHORTEST INDUSTRY LEAD TIMES
- SMART CHILLER TECHNOLOGY
- ETL CERTIFIED
- MADE IN THE USA

PROTECT CRITICAL MATERIALS
Numerous industries need to protect expensive and valuable materials from excessive heat.

MAINTAIN ESSENTIAL TEMPERATURES
Precise temperature control for your processes that only requires an electrical outlet

SAVE TIME & MONEY
Reliable and efficient, North Slope Chillers products will prevent waste and lost time protecting your bottom line.

INCREASE EFFICIENCY
Improve overall efficiency of your operation when temperature control is in your hands.

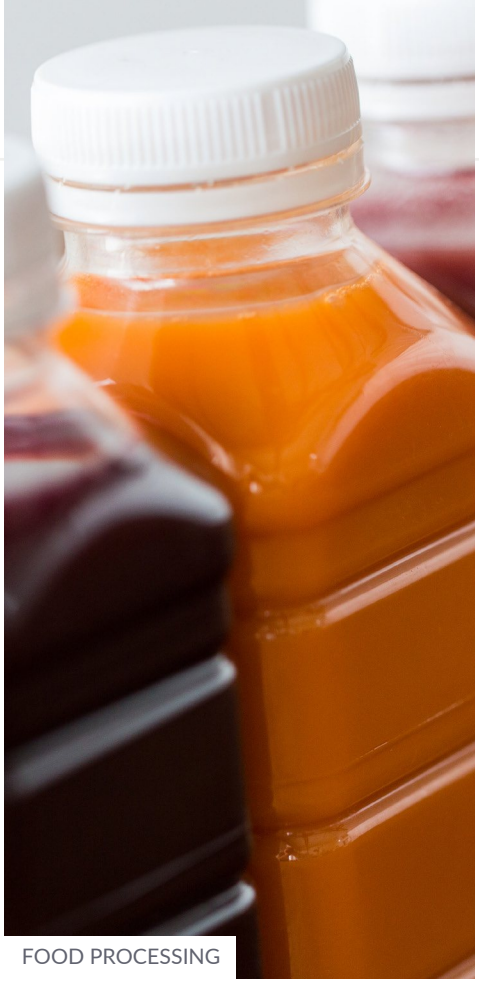
ENJOY PEACE OF MIND
Rest easy, knowing North Slope Chillers will solve your temperature dilemmas.

INDUSTRIES WE SERVE

A wide variety of industries use cooling systems to preserve materials and equipment and to slow and improve processes. North Slope Chillers are an easily portable cooling solution for these industries.

Industrial chilling can improve the performance and efficiency of many different industries. From fermentation cooling to cooling ink, the applications are varied, but all essential to success.

PROCESS COOLING



FOOD PROCESSING

PLASTICS

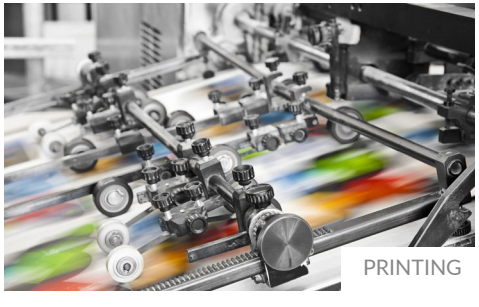
EDM/LASERS

BREWING

WELDING

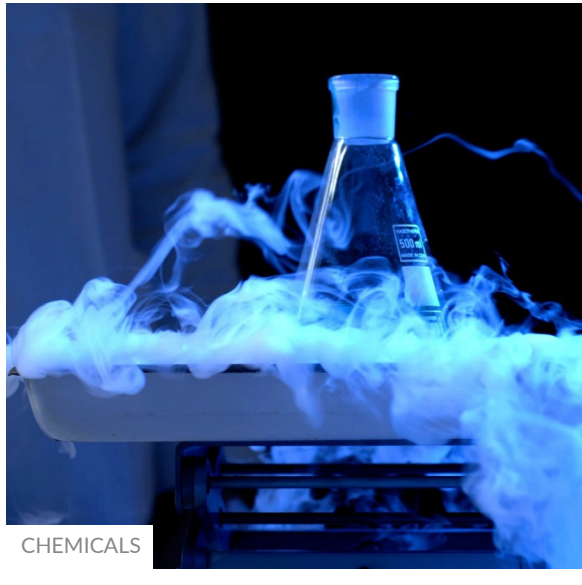
HYDROPONICS

CBD EXTRACTION



PRINTING

CHEMICALS



2 LEVELS OF CHILL TO MEET YOUR NEEDS

North Slope Chillers offers a line of lite-industrial compact chiller units ideal for entry-level applications, standard process cooling systems, and a line of chillers for intense chilling needs. If you find that you require something not found in our Frost, Freeze, and Deep Freeze chiller lines, North Slope can build custom solutions to fit your specific needs with the same quality as our standard units and in a timely manner. Your solutions are a simple phone call away.

FREEZE

THE COLD STANDARD

40°F *COOLNG CAPACITY* **75°F**

Meet the compact chiller that is both dependable and powerful. Freeze is North Slopes' standard industrial chiller that cools fluids between 40°F-75°F* (1/3-2 ton) and 40°F-65°F* (5-20 ton). A small workhorse, Freeze boasts a robust condensing unit and high horsepower. It's a lot of chilling power in a little package.

DEEP FREEZE

THE COLDEST OF THE COLD

0°F *COOLNG CAPACITY* **45°F**

Intended to provide supreme industrial chilling, Deep Freeze shares many of the same hefty qualities of Freeze, along with the capacity to cool from 0°F to45°F* (depending on model) and fully insulated internal parts to ensure no internal temperature loss. Keep your critical materials and equipment cool even in hot conditions.

NEED A CUSTOM SOLUTION?

If North Slope Chillers standard chiller lines do not meet your unique temperature control needs, our world-class custom team will design a custom solution specifically for you.

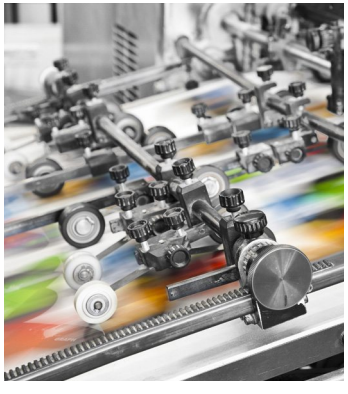
Extended temperature ranges are available on select models. Talk to **North Slope Chillers about your specific requirements.*

THE COLD STANDARD

Meet the compact chiller that is both dependable and powerful. Freeze is North Slopes' standard industrial chiller that cools fluids between 40°F-75°F* (1/3-2 ton) and 40°F-65°F* (5-20 ton). A small workhorse, Freeze boasts a robust condensing unit and high horsepower. It's a lot of chilling power in a little package.

Ideal process cooling solution for Biotech, Dairy, Chemicals, ***Cannabis, EDM, Fermentation,*** Hydroponoics, Lasers, Printing, ***Welding, Food, and Plastics***

Shortest Industry Lead Times
Made in the USA
Award-Winning Manufacturer



World-Class Custom Engineering Team
UL Safety Listed
Smart Chiller™ capabilities available

SMALL FOOTPRINT
34¾"L x 43¼"W x 40"H

POWDER-COATED STEEL CABINET

BRAZED PLATE HEAT EXCHANGER

ENVIRONMENTALLY FRIENDLY R513a OR R448a REFRIGERANT

POLY TANK RESERVOIR

MOUNTED ON FOUR CASTERS FOR EASY MOBILITY

FREEZE

*Extended temperature ranges available, call for more details

HOW LOW CAN YOU GO?

Bring on Deep Freeze for ultimate industrial cooling. Intended to provide supreme industrial chilling, Deep Freeze shares many of the same hefty qualities of Freeze, along with the capacity to cool from 0°F to 45°F (depending on model) and fully insulated internal parts to ensure no internal temperature loss. Keep your critical materials and equipment cool even in hot conditions.

SMALL FOOTPRINT
34"L x 65"W x 62"H

POWDER-COATED STEEL CABINET

BRAZED PLATE HEAT EXCHANGER

ENVIRONMENTALLY FRIENDLY R448A REFRIGERANT

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Ideal process cooling solution for Biotech, Dairy, Chemicals, ***Cannabis, Oil Extraction, EDM,*** Fermentation, Hydroponoics, ***Lasers, Printing, Welding, Food,*** and Plastics

DEEP FREEZE

**Extended temperature ranges available, call for more details*

CHILL AND AND MAINTAIN

Flux wrap can chill materials in drums, totes, tanks and all manner of vessels even when a heat exchanger is not currently present. Fluxwraps allow chilling to be applied to many vessels that were previously not able to be chilled or in situations that previously were not financially feasible. Then simply change the temperature of the fluid, and you have an effective medium for heating. Fluxwrap is a versatile fluid temperature control solution.

FULL COVERAGE COOLING

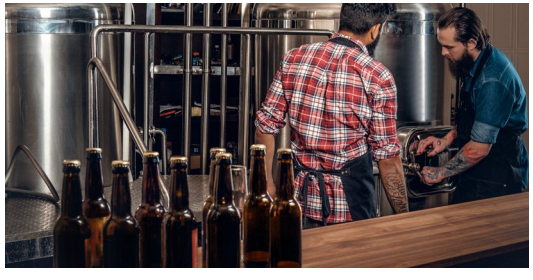
MAXIMUM FLOW WITH MINIMAL PRESSURE

MAINTAINS THERMAL CONDUCTIVITY BETWEEN BLANKET AND DRUM

CONFORMS TO UNEVEN SURFACES

LIGHTWEIGHT COMPACT DESIGN

Shortest Industry Lead Times
Made in the USA
Award-Winning Manufacturer



USING FLUXWRAP WITH NORTH SLOPE CHILLERS IS SIMPLE

WRAP THE CONTAINER → ATTACH HOSES → APPLY INSULATION → TURN IT ON!

WHITE VINYL REFLECTS HEAT

INSULATED TO STAY COOLER LONGER

EASY INSTALL & REMOVAL

DRAW HEAT AWAY FROM CONTAINER

EASILY PORTABLE

icewrap™

KEEP IT COOL ON THE GO

With internal pockets that place ice directly against the surface of your container, North Slope Chillers' Icepack Blanket and Keg Cooler are affordable options for temperature control. This blanket is insulated, ensuring ice packs will last longer than ice alone and longer than other non-insulated options on the market. Freeze your ice packs, wrap your product, and get on the road.

Made in the USA
Award-Winning Manufacturer

CUSTOM:
THE COMPLETE SOLUTION

Often, a cooling solution requires engineering expertise and custom attention. As a premier industrial chiller manufacturer, North Slope Chillers is happy to create the complete cooling solution to quickly meet your needs.

CUSTOM CONTROLS

Take full command of your cooling system with advanced custom controls designed for precision, efficiency, and convenience. With Modbus TPU integration, you can seamlessly connect to existing automation platforms for streamlined performance. Gain precise control over pump operation and cooling processes to meet the exact demands of your application. Touchscreen and digital displays provide an intuitive user experience, giving you real-time feedback and effortless access to system settings.

ANTI BACKFLOW

If the chilling fluid is located above the chiller, anti-backflow prevents fluid from flowing back into the system when the process chiller is turned off.

HEATER

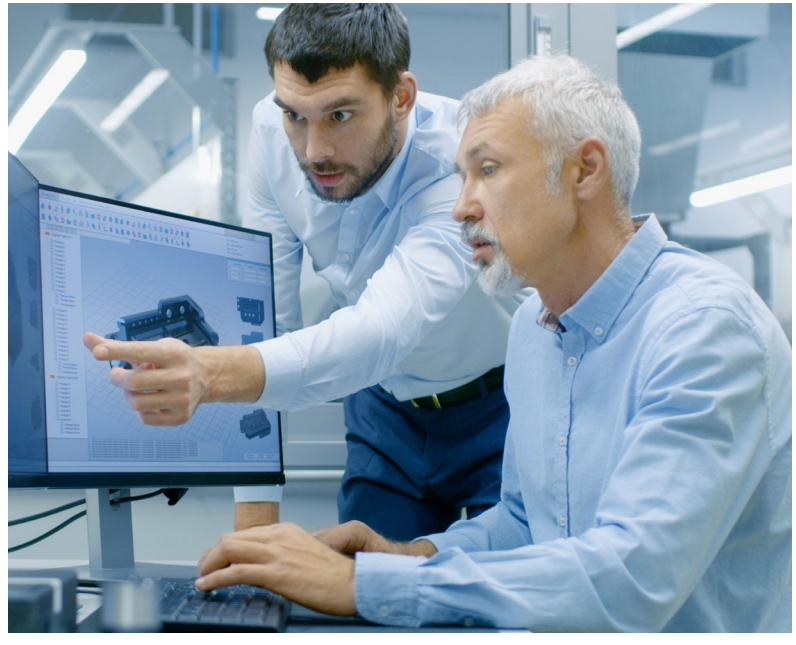
Add a heater to the commercial chiller. Whether you need increased or decreased temperatures, your commercial water chiller will be equipped to do both jobs. Maintain desired temperatures for your critical materials without changing equipment.

DEIONIZED CHILLER

Deionized water is one of the most aggressive solvents known, and corrodes many metals including copper. However, even copper-free cooling systems have purity limits of >0.5 µS/cm to avoid the dissolution of deposits, which may impair functionality. Deionized chillers are an effective application for lasers, medical equipment, semiconductor manufacturing, laboratory instrumentation, pharmaceutics, cosmetics, food processing, plating, and other chemical processing.

UNLIMITED POSSIBILITIES

Purpose built systems for OEMs, Robust Rental Chiller Upgrades, External Temperature Monitoring, Pump Upgrades, Process Fluids, Chiller Manifolds, Extended Process Fluid temperature, Extended Ambient, Indoor/Outdoor, and more.



SHORTEST INDUSTRY LEAD TIMES

WORLD -CLASS CUSTOM CAPABILITIES

HOW TO DETERMINE CHILLER SIZE

STEP 1

Calculate Temperature Differential (ΔT°F)
ΔT°F = Incoming Water Temperature (°F) - Required Chilled Water Temperature
Example: 85°F - 75°F = 10°F

STEP 2

Calculate BTU/HR
BTU/hr = Gallons per hr x 8.33 x ΔT°F
Example: (4 gpm x 60) x 8.33 x 10°F = 19,992 BTU/hr

STEP 3

Calculate Tons of Cooling Capacity
Tons = BTU/hr ÷ 12,000
Example: 19,992 BTU/hr ÷ 12,000 = 1.666 tons

STEP 4

Oversize the Chiller by 20% and Round Up
Ideal Size in Tons = Tons x 1.2
Example: 1.666 tons x 1.2 = 1.9992 tons ; a 2 ton chiller is needed

CHILLER NEEDS WORKSHEET

1. What process or process equipment needs to be cooled?
2. Is there one large machine or several smaller machines that need cooling?
3. What is your desired supply temperature?
4. What is the heat load?
5. What are the lowest and highest possible ambient temperatures?
6. What is the total flow required by the process?
7. Is the flow to the process steady or varied?
8. What is the maximum fluid pressure required by the process?
9. What fluid is being cooled? (water, water/glycol, deionized water)

HOW A CHILLER WORKS

KNOWING HOW A CHILLER WORKS CAN BE HELPFUL IN CHOOSING THE BEST SYSTEM TO MEET YOUR NEEDS

Chiller systems transfer heat from
Machinery • Equipment • Food
into the ambient air

Heat is moved and transferred by process fluids typically consisting of a mix of water and glycol

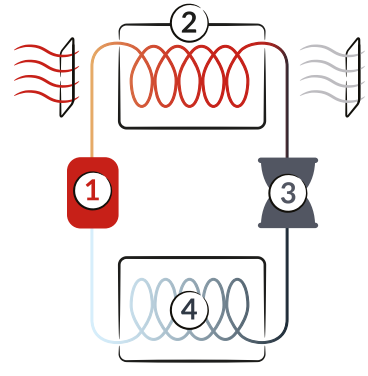
TWO CIRCUITS
Process fluids are moved through two cycles or circuits

REFRIGERATION
MADE UP OF 4 COMPONENTS
Compressor · Evaporator
Condenser · Expansion Valve

FLUID
MADE UP OF 3 COMPONENTS
Pump · Heat Exchanger
Process Fluid Reservoir

REFRIGERATION

The refrigeration circuit removes heat from the process fluid into the ambient air



1 COMPRESSOR
takes low-pressure low-temperature gas
then compresses refrigerant
into high-pressure high-temperature gas

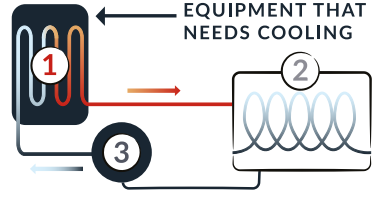
2 CONDENSER
hot gas flows through coils
air flows over coils and gas condenses
refrigerant into cool liquid

3 EXPANSION VALVE
refrigerant flow is restricted and pressure rapidly decreases

4 EVAPORATOR
heat from process fluids moves into refrigerant and cycle restarts
refrigerant evaporates and interacts with process fluids

FLUID

The fluid circuit carries the process fluid around the object being cooled



1 HEAT EXCHANGER
heat is transferred from:
the equipment that needs to be cooled → process fluid → gas refrigerant

2 PROCESS FLUID RESERVOIR
holds cool process fluid

3 PUMP
moves cold process fluid from the reservoir into the heat exchanger
and moves warm process fluid back into the chiller

For more information on chillers and thermodynamics:
en.wikipedia.org/wiki/Chiller
www.thermalcare.com/how-does-a-chiller-work

FREEZE

Model Number	Fluid Temp Range (F)	Ambient Temp Range	Inlet/ Outlet	Pump		Reservoir Capacity	Cooling Capacity (BTU/hr)	Dimensions	Weight (Approx)	Available Voltages	Max Amps	Recommended Breaker/Service
NSC0330	40°F(4.5°C) to 65°F(18°C)	35°F (1.6C) - 100°F (38C)	5/8" BARBED	60 Watt Centrifugal Pump	0 GPM @ 17 PSI 3.3 GPM @ 13 PSI 6.6 GPM @ 5 PSI	2.5 Gallon Poly Tank	90°F Ambient 25°F (-3.9°C) - 500 BTU/hr (150 Watts) 45°F (7.2°C) - 2,300 BTU/hr (670 Watts) 65°F (18.3°C) - 4,000 BTU/hr (1,170 Watts)	17-7/16" x 16" x 22-7/16"	112 lbs	120VAC /1P /60Hz (std)	9.4 Amps (std)	15 Amps (std)
NSC0500	40°F(4.5°C) to 75°F(24°C)	40°F (4.4C) - 100°F (38C)	1/2" NPT	1/3 HP Fixed Displacement Pump With Bypass	0 GPM @ 50 PSI 2 GPM @ 25 PSI 4 GPM @ 0 PSI	4 Gallon Poly Tank	70°F Ambient 40°F (4.4°C) - 3,000 BTU/hr (880 Watts) 57.5°F (14.2°C) - 5,800 BTU/hr (1,700 Watts) 75°F (23.9°C) - 7,200 BTU/hr (2,110 Watts)	24 3/8" x 22 5/8" x 32 1/2"	220 lbs	120VAC /1P /60Hz (std) 208-240VAC / 1P / 60Hz	15.1 Amps (std) 9.2 Amps	18 Amps (std) 15 Amps
NSC1000	40°F(4.5°C) to 75°F(24°C)	40°F (4.4C) - 100°F (38C)	1/2" NPT	1/3 HP Fixed Displacement Pump With Bypass	0 GPM @ 50 PSI 2 GPM @ 25 PSI 4 GPM @ 0 PSI	15 Gallon Poly Tank	70°F Ambient 40°F (4.4°C) - 6,500 BTU/hr (1,900 Watts) 57.5°F (14.2°C) - 11,800 BTU/hr (3,460 Watts) 75°F (23.9°C) - 14,700 BTU/hr (4,310 Watts)	34½" x 28¼" x 39"	360 lbs	208-240VAC / 1P / 60Hz (std) 208-240VAC / 3P / 60Hz 480VAC / 3P / 60Hz	15.4 Amps (std) 14 Amps 6 Amps	19.4 Amps (std) 20 Amps 15 Amps
NSC2000	40°F(4.5°C) to 75°F(24°C)	40°F (4.4C) - 100°F (38C)	3/4" NPT	3/4 HP Centrifugal Pump	0 GPM @ 32 PSI 22.5 GPM @ 24 PSI 45 GPM @ 7 PSI	15 Gallon Poly Tank	70°F Ambient 40°F (4.4°C) - 15,100 BTU/hr (4,430 Watts) 57.5°F (14.2°C) - 23,100 BTU/hr (6,770 Watts) 75°F (23.9°C) - 33,700 BTU/hr (9,880 Watts)	34¾" x 43¼" x 40"	550 lbs	208-240VAC / 1P / 60Hz (std) 208-240VAC / 3P / 60Hz 480VAC / 3P / 60Hz	28.7 Amps (std) 20 Amps 9.3 Amps	36.7 Amps (std) 25 Amps 12 Amps
NSC5000	40°F(4.5°C) to 65°F(18°C)	40°F (4.4C) - 100°F (38C)	1-1/4" NPT	2 HP Centrifugal Pump	0 GPM @ 46 PSI 30 GPM @ 37 PSI 60 GPM @ 17 PSI	50 Gallon Poly Tank	70°F Ambient 40°F (4.4°C) - 38,200 BTU/hr (11,200 Watts) 52.5°F (11.4°C) - 46,500 BTU/hr (13,630 Watts) 65°F (18.3°C) - 56,000 BTU/hr (16,410 Watts)	34" x 65" x 62"	1000 lbs	480VAC / 3P / 60Hz (std) 208-240VAC / 3P / 60Hz 208-240VAC / 1P / 60Hz	12.4 Amps (std) 29.3 Amps 48 Amps	16.6 Amps (std) 35 Amps 56 Amps
NSC10000	40°F(4.5°C) to 65°F(18°C)	40°F (4.4C) - 100°F (38C)	1-1/4" NPT	2 HP Centrifugal Pump	0 GPM @ 46 PSI 30 GPM @ 37 PSI 60 GPM @ 17 PSI	50 Gallon Poly Tank	70°F Ambient 40°F (4.4°C) - 77,200 BTU/hr (22,630 Watts) 52.5°F (11.4°C) - 93,800 BTU/hr (27,490 Watts) 65°F (18.3°C) - 112,700 BTU/hr (33,030 Watts)	34" x 65" x 62"	1000 lbs	480VAC / 3P / 60Hz (std) 208-240VAC / 3P / 60Hz	27.1 Amps (std) 57 Amps	32.8 Amps (std) 68 Amps
NSC20000	40°F(4.5°C) to 65°F(18°C)	40°F (4.4C) - 100°F (38C)	2" NPT	5 HP Centrifugal Pump	0 GPM @ 61 PSI 30 GPM @ 58 PSI 60 GPM @ 50 PSI	50 Gallon Poly Tank	70°F Ambient 40°F (4.4°C) - 154,400 BTU/hr (45,250 Watts) 52.5°F (11.4°C) - 187,700 BTU/hr (55,010 Watts) 65°F (18.3°C) - 225,500 BTU/hr (66,090 Watts)	48" x 89" x 88"	2000 lbs	480VAC / 3P / 60Hz (std)	55 Amps (std)	61 Amps (std)

FLUXWRAP

Model Number	Maximum Pressure Rating	Flow Rate	Connection	Max Temperature	Approx Fluid Volume	Cooling Fluid	Wrap Dimensions	Min/Max Surface Temperature
FLUX05	6 PSI @ inlet	4 GPM @ 5 PSI	¾" Barbed Fitting	120°F (70°F Water/Glycol mix)	1/8 Gallon	"Water (if fluid temp is greater than 45F) -OR- Propylene Glycol / Water (50/50 max concentration) -OR- Ethylene Glycol / Water (50/50 max concentration)"	38" x 8 1/4"	-10°F/150°F -23.3°C/65.5°C
FLUX15					3/4 Gallon		47" x 22 3/4"	
FLUX30					5/8 Gallon		60" x 23 1/4"	
FLUX55					1 ½ Gallon		76" x 30 1/4	
FLUX275					4 Gallons		Panel a - 1x) 44" x 38 1/2" Panel b - 2x) 45 3/4" x 38 1/2" Panel c - 1x) 39" x 30 3/4"	

ICEWRAP

Product	Model	Description	Ice Packets
IceWrap	NSICE05	Ice Wrap-5 Gallon Drum	8 Ice Packs
	NSICE15	Ice Wrap-15 Gallon Drum	12 Ice Packs
	NSICE30	Ice Wrap-30 Gallon Drum	18 Ice Packs
	NSICE55	Ice Wrap-55 Gallon Drum	24 Ice Packs
Keg Cooler	NSICEKEG	Ice Wrap-Keg	12 Ice Packs

Model Number	Fluid Temp Range (F)	Ambient Temp Range	Inlet/ Outlet	Pump		Reservoir Capacity	Cooling Capacity (BTU/hr)	Dimensions	Weight (Approx)	Available Voltages	Max Amps	Recommended Breaker/Service
NSC0500-LT	10°F(-12°C) to 45°F(7°C)	40°F (4.4C) - 100°F (38C)	1/2" NPT	1/3 HP Fixed Displacement Pump With Bypass	0 GPM @ 50 PSI 2 GPM @ 25 PSI 4 GPM @ 0 PSI	4 Gallon Poly Tank	70°F Ambient 10°F (-12.2°C) - 2,500 BTU/hr (730 Watts) 27.5°F (-2.5°C) - 3,700 BTU/hr (1,080 Watts) 45°F (7.2°C) - 5,000 BTU/hr (1,470 Watts)	24 3/8" x 22 5/8" x 32 1/2"	220 lbs	120VAC /1P /60Hz (std)	16.1 Amps (std)	19.3 Amps (std)
NSC1000-LT	10°F(-12°C) to 45°F(7°C)	40°F (4.4C) - 100°F (38C)	1/2" NPT	1/3 HP Fixed Displacement Pump With Bypass	0 GPM @ 50 PSI 2 GPM @ 25 PSI 4 GPM @ 0 PSI	15 Gallon Poly Tank	70°F Ambient 10°F (-12.2°C) - 5,700 BTU/hr (1,670 Watts) 27.5°F (-2.5°C) - 8,000 BTU/hr (2,340 Watts) 45°F (7.2°C) - 10,600 BTU/hr (3,110 Watts)	34½" x 28¼" x 39"	360 lbs	208-240VAC / 1P / 60Hz (std) 208-240VAC / 3P / 60Hz 480VAC / 3P / 60Hz	15.4 Amps (std) 14 Amps 6 Amps	19.4 Amps (std) 20 Amps 15 Amps
NSC2000-LT	10°F(-12°C) to 45°F(7°C)	40°F (4.4C) - 100°F (38C)	3/4" NPT	3/4 HP Centrifugal Pump	0 GPM @ 32 PSI 22.5 GPM @ 24 PSI 45 GPM @ 7 PSI	15 Gallon Poly Tank	70°F Ambient 10°F (-12.2°C) - 12,200 BTU/hr (3,580 Watts) 27.5°F (-2.5°C) - 17,300 BTU/hr (5,070 Watts) 45°F (7.2°C) - 23,300 BTU/hr (6,830 Watts)	34¾" x 43¼" x 40"	550 lbs	208-240VAC / 1P / 60Hz (std) 208-240VAC / 3P / 60Hz 480VAC / 3P / 60Hz	28.7 Amps (std) 20 Amps 9.3 Amps	36.7 Amps (std) 25 Amps 12 Amps
NSC5000-LT	10°F(-12°C) to 45°F(7°C)	40°F (4.4C) - 100°F (38C)	1-1/4" NPT	2 HP Centrifugal Pump	0 GPM @ 46 PSI 30 GPM @ 37 PSI 60 GPM @ 17 PSI	50 Gallon Poly Tank	70°F Ambient 10°F (-12.2°C) - 21,800 BTU/hr (6,390 Watts) 27.5°F (-2.5°C) - 30,700 BTU/hr (9,000 Watts) 45°F (7.2°C) - 41,600 BTU/hr (12,190 Watts)	34" x 65"x 62"	1000 lbs	480VAC / 3P / 60Hz (std) 208-240VAC / 3P / 60Hz 208-240VAC / 1P / 60Hz	12.4 Amps (std) 29.3 Amps 48 Amps	16.6 Amps (std) 35 Amps 56 Amps
NSC10000-LT	10°F(-12°C) to 45°F(7°C)	40°F (4.4C) - 100°F (38C)	1-1/4" NPT	2 HP Centrifugal Pump	0 GPM @ 46 PSI 30 GPM @ 37 PSI 60 GPM @ 17 PSI	50 Gallon Poly Tank	70°F Ambient 10°F (-12.2°C) - 43,600 BTU/hr (12,780 Watts) 27.5°F (-2.5°C) - 61,900 BTU/hr (18,140 Watts) 45°F (7.2°C) - 84,000 BTU/hr (24,620 Watts)	34" x 65" x 62"	1000 lbs	480VAC / 3P / 60Hz (std)	27.1 Amps (std)	32.8 Amps (std)
NSC20000-LT	10°F(-12°C) to 45°F(7°C)	40°F (4.4C) - 100°F (38C)	2" NPT	5 HP Centrifugal Pump	0 GPM @ 61 PSI 30 GPM @ 58 PSI 60 GPM @ 50 PSI	50 Gallon Poly Tank	70°F Ambient 10°F (-12.2°C) - 87,200 BTU/hr (25,560 Watts) 27.5°F (-2.5°C) - 123,800 BTU/hr (36,280 Watts) 45°F (7.2°C) - 168,000 BTU/hr (49,240 Watts)	48" x 89" x 88"	2000 lbs	480VAC / 3P / 60Hz (std)	55 Amps (std)	61 Amps (std)

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