



Maximize Beer Production with Advantage Glycol Chillers

- ***Fermentation Tank Cooling***
- ***Brite Tank Cooling***
- ***Cold Liquor Tank Cooling***
- ***Storage Room Cooling***
- ***Wort Cooling***

- ***Air-Cooled : Self Contained Package***
- ***1 - 210 Horsepower Indoor & Outdoor Models***
- ***20°F - 70°F Adjustable Fluid Temperature***
- ***Large Capacity Reservoir***
- ***High Flow Pump***
- ***Fully Factory Tested - Ready to Run***



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***BC Series
Indoor and Outdoor Glycol Chillers***

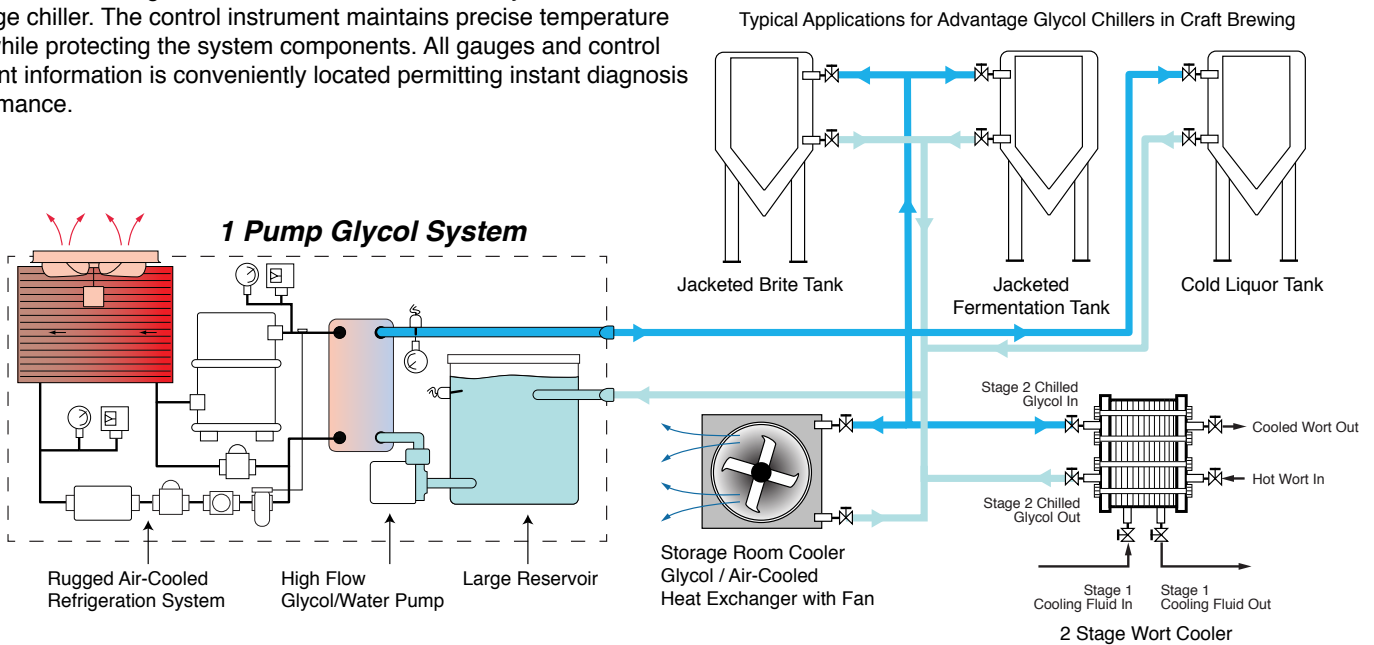
Indoor Glycol Chillers : 1 - 30 Horsepower

Advantage BC Series indoor glycol chillers are designed to provide a glycol fluid temperature of 25°F but have an operating range of 20°F to 70°F.



Air-cooled BC Series glycol chillers are purpose built for the unique requirements of breweries. Set up for low temperature operation and high flow, BC Series chillers are designed to cool fermentation tanks quickly to maximize production while keeping brite tanks at a steady temperature.

Temperature control is achieved by using a “tailor made” microprocessor control instrument designed and manufactured exclusively for the Advantage chiller. The control instrument maintains precise temperature control while protecting the system components. All gauges and control instrument information is conveniently located permitting instant diagnosis of performance.



Components



HIGHLY EFFICIENT EVAPORATORS... Most models use high efficiency stainless steel brazed plate evaporators. Non-ferrous construction prevents rusting.

HIGH PERFORMANCE COOLANT PUMPS... Brass positive displacement pumps or Centrifugal pumps are used. All pumps are selected to provide turbulent flow to promote efficient heat transfer.



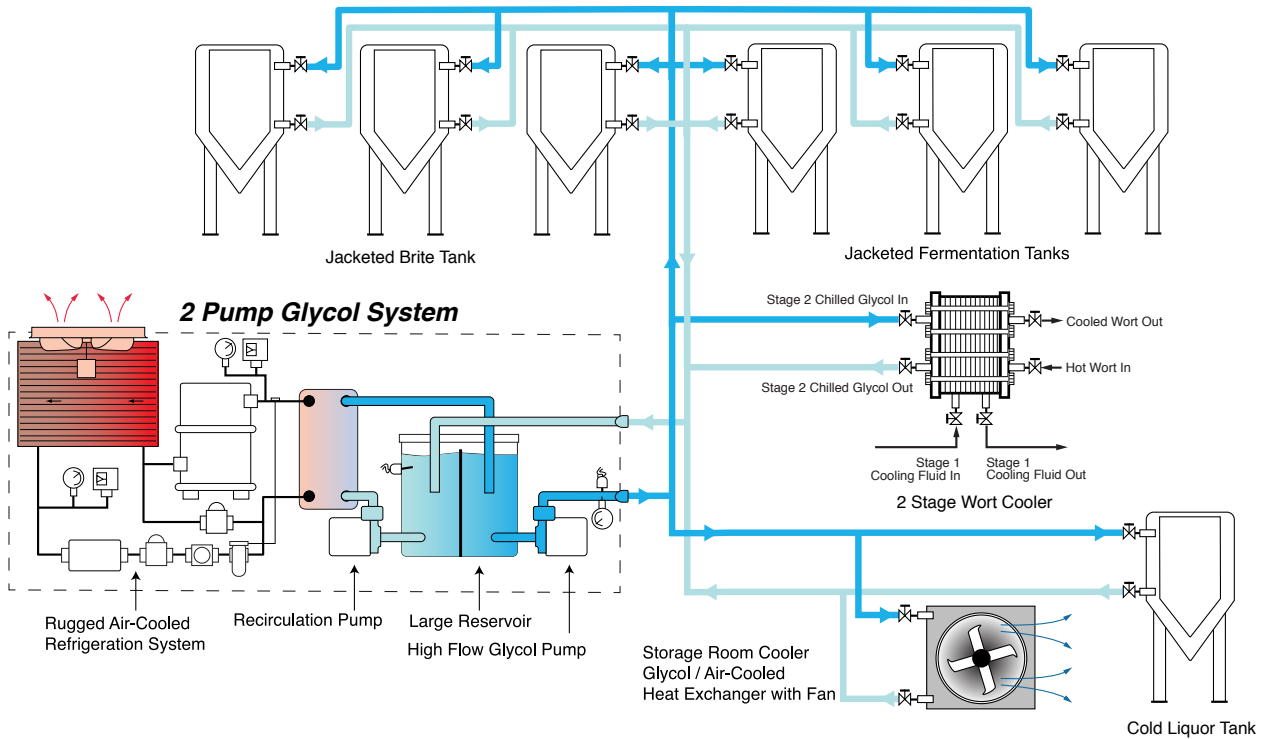
LIFETIME WATER RESERVOIR... All chillers include a non-rusting vented water reservoir sized to support the flow rate of the chillers. The reservoir helps provide a stable water temperature under varying load conditions.

Outdoor Glycol Chillers : 3 - 210 Horsepower

Advantage BC Series outdoor glycol chillers are designed to provide a glycol fluid temperature of 25°F but have an operating range of 20°F to 70°F. Models are available with multiple refrigeration circuits for capacity staging and redundancy.



Typical Applications for Advantage Glycol Chillers in Craft Brewing

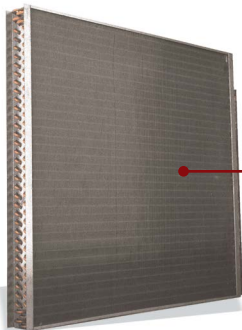


COMPRESSORS ... Reliable scroll, energy efficient digital scroll, and rotary screw compressors provide long life and energy efficient operation.

AIR-COOLED CONDENSER ... High Capacity finned tube condensers are used in all models. Propeller fans are standard in most models.



REFRIGERANT COMPONENTS ... All refrigerant components used in Advantage chillers are selected for historic reliability and performance. Components include high & low pressure limit switches, expansion valve, relief valve, filter dryer and sight glass/moisture indicator.



Control Instruments



For chillers from 1 to 1 ½ horsepower

BC Series glycol are supplied with tailor made microprocessor control instruments that control and monitor all aspects of the chiller operation to assure accurate control and dependable operation. The controls are designed to support the specific and unique requirements of process cooling in an industrial environment. All Advantage tailor made microprocessor control instruments include a 4 year warranty. After the warranty period we'll repair your board for an economical fee should it require repair.

FEATURES:

- Accurate control
- Large & Bright LED temperature display
- Digital Setpoint selection with soft touch keys
- Illuminated Chiller On / Off switch
- Compressor On light
- Basic chiller diagnostics with Refrigeration Fault light
- Capacity control light

For chillers from 1 to 1 ½ Horsepower ... The standard chiller control for 1 to 1 ½ horsepower BC Series chillers provides basic temperature and machine status monitoring.

For chillers from 2 to 30 Horsepower ... The standard chiller control for 2 to 30 BC Series chillers equipped with hot gas bypass capacity control, providing temperature and machine status monitoring.

For Chillers with Digital Scroll Compressors ... The standard chiller control for 5, 10 & 15 horsepower BC Series chillers is the "M1D" Control for chillers using the Copeland Scroll Digital compressor. Also featured is custom control software to operate digital capacity control providing energy efficient capacity modulation from 20 - 100%.

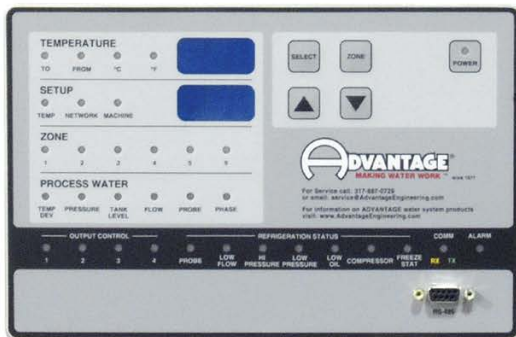
For Multizone Chillers ... The MZC controller operates multiple refrigerant zones providing accurate temperature to process. Using Intelligent Zone Boards for redundancy and individual zone staging, the MZC has over 15 years of field service reliability. Soft key controls select zone displays and setpoint. Two large display windows continuously show To Process and Setpoint temperatures, shown in Fahrenheit or Celsius. From Process temperature is selectable for display. Solid green indicates run condition. Flashing red shows an error condition exists. And solid red shows an error conditional once existed but has been rectified. Pressing the 'select' button changes a solid red indication into a solid green indication. Multi-function control operators start and stop each pump individually and show current status. An emergency stop button is standard. The instrument provides an alarm status light on the display, as well as an audible and visual alarm beacon. A selectable refrigeration zone lead/lag mode is a standard feature of the instrument. Modbus RTU with optional TCP is available. The Multizone Controller stages both conventional compressors with hot gas bypass capacity control and digital compressors with energy efficient capacity modulation.



For chillers from 2 to 30 horsepower



For Chillers with Digital Scroll Compressors



For Multizone Chillers

Support

- Equipment selection assistance - standard
- Facility pipe sizing & routing drawings - standard
- Quick online selection tool (www.advantageengineering.com/BC)
- Quick online pricing available 24 - 7 (www.advantageengineering.com)
- System start up assistance and training - optional

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Specifications

BC Series Indoor Glycol Chillers 1 - 30 Horsepower

MODEL	BC / BCD ¹	1A	1.5A	2A	3A	4A	5A	7.5A	10A	15AF	15AB	20AF	20AB	25A	30A	
COMPRESSOR	HP	1	1.5	2	3	4	5	7½	10	15	15	20	20	25	30	
	Type ²	SC	SC	SC	SC	SC	DSC	SC	DSC	DSC	DSC	SC	SC	SC	SC	
CAPACITY @ 25°F (LFT)	BTH ³	5,288	9,028	14,192	17,992	27,068	30,512	45,512	62,412	95,368	95,368	117,274	117,274	149,456	197,456	
REFRIGERANT	Type	134A	134A	410A	410A	410A	410A	410A	410A	410A	410A	410A	410A	410A	410A	
PROCESS PUMP	HP	½	½	¾	¾	¾	2	2	2	3	3	3	3	5	5	
	GPM	2.4	3.6	4.8	7.2	9.6	12	18	24	36	36	48	48	60	72	
	PSI	60	60	32	30	30	52	50	48	55	55	50	50	59	57	
	Type ⁴	P	P	C	C	C	C	C	C	C	C	C	C	C	C	C
	Construction ⁵	B	B	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS	SS
CONNECTION SIZES (Inches NPT)	Process (To/From)	½	½	¾	1	1¼	1¼	1¼	1¼	2	2	2	2	2	2	
AIR-COOLED	Type ⁶	F	F	F	F	F	F	F	F	F	B	F	B	B	B	
CONDENSER	CFM x 1000	.71	1.1	2	3	5	5	10	10	15	15	20	20	20	30	
	S.P. ⁷	--	--	--	--	--	--	--	--	--	1.35	--	1.35	1.35	1.35	
	Ambient ⁸	90	90	95	95	95	95	95	95	95	95	95	95	95	95	
FULL LOAD ⁹	115/1/60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
AMPERAGE	230/1/60	15	20	25	35	45	50 ¹²	--	--	--	--	--	--	--	--	
	230 volt	--	--	17	20	24	34	48	56	86.6	87	92	103	148	184	
	460 volt	--	--	8.5	10	12	17	24	28	43.3	44	46	51.5	74	92	
	575 volt	--	--	--	7.5	9	14 ¹²	19	23	35	31	37	42	60	74	
	TANK CAPACITY (gallons)	Holding	4	4	7½	7½	25	25	25	25	65	65	65	65	65	65
	Tank Lid ¹⁰	S	S	O	O	S	S	S	S	S	S	S	S	S	S	
DIMENSIONS (inches)	Height	38	38	30	43	60	60	60	60	65	96	66	96	96	96	
	Width	24	24	37	34	34	34	34	34	58	58	59	58	58	58	
	Depth	29	29	24	40	40	40	56	56	64	70	58	70	70	70	
WEIGHTS (pounds)	Shipping ¹¹	345	350	415	600	800	800	1,100	1,100	1,600	2,300	2,000	2,600	3,200	3,400	

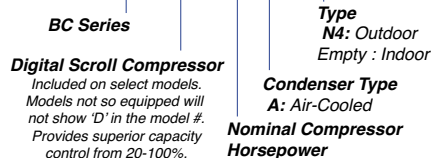
Notes

- BC = units with fixed displacement scroll compressors. BCD = models with digital scroll compressors.
- SC = hermetic scroll. DSC = Copeland Digital Scroll™.
- Capacity @ 25°F LFT, 95°F ambient and 115°F condensing. The minimum recommended operating temperature when no glycol is used is 48°F.
- P = positive displacement. C = centrifugal.
- B = brass. SS = stainless steel. C = cast iron.
- F = fan. B = blower.
- Static pressure in inches of water.
- Design ambient conditions. Loss of capacity and/or difficulty operating will occur at higher ambient.
- Full load amps are higher than run load amps and must be used for sizing disconnects and supply wiring.
- S = standard. O = optional.
- Approximate unit weight crated for shipment.
- Single phase, 5 HP. Not available with digital compressor. Change model to BC-5A.
Consult factory for single phase 7.5 & 10 HP models.

Since product innovation and improvement is our constant goal, all features and specifications are subject to change without notice or liability. Selection of certain optional features may change listed specifications.

Model Designator for BC Series Glycol Chillers

BCD-10A-N4



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Standard Features

CONSTRUCTION:

- Stainless steel frame and enclosure panels (1 - 1½ HP models)
- Powder coated and galvanized steel frame with lift-off molded front panel (25 - 30 HP models)
- Casters for portability (all models)

REFRIGERANT CIRCUIT:

- Hermetic scroll compressor
- Finned tube air-cooled condensers with fan generated air flow (1 - 20 HP) or blower generated air flow (standard on 25 - 30 HP & optional on 15 & 20 HP)
- Refrigerant sight glass with moisture indicator
- Thermostatic expansion valve
- Microprocessor controlled 50% hot gas by-pass capacity control system
- Microprocessor controlled 20-100% energy saving capacity modulation with Digital Scroll compressor on 5, 10 & 15 HP models.
- Stainless Steel Brazed Plate evaporator
- Filter-drier
- Liquid line solenoid valve

PRESSURE GAUGES:

- Refrigerant high pressure
- Refrigerant low pressure
- Coolant pressure gauge

COOLANT CIRCUIT:

- Brass positive displacement pump (1 - 1½ HP models)
- High flow centrifugal pump (2 - 30 HP models)
- Large capacity insulated non-ferrous reservoir
- Reservoir level sight tube
- Standard NPT process fittings
- Automatic low flow bypass circuit

LIMIT DEVICES:

- High refrigerant pressure
- Low refrigerant pressure
- Refrigerant pressure relief valve
- Process pump motor overload
- Instrument control circuit fuse

ELECTRICAL:

- Process pump motor starter
- Compressor contactor
- Fused transformer

- Power entry terminal block
- 5 kA RMS SSCR

CHILLER CONTROLS:

- M1
- M1D (units with digital scroll compressor)

SUPPORT:

- Equipment selection assistance - standard
- Facility pipe sizing & routing drawings - standard
- Quick online selection tool (www.advantageengineering.com/BC)
- Quick online pricing available 24 - 7 (www.advantageengineering.com)
- System start up assistance and training - optional

WARRANTY:

- 1 Year covering parts and labor
- Free preventative maintenance check in the 2nd year
- 4 Years covering the control instrument



Options

REFRIGERANT CIRCUIT • Centrifugal blower generated air flow for air-cooled condensers (5 to 10 HP) • Tandem scroll compressors • Outdoor units

COOLANT CIRCUIT • Overhead piping kit - prevents tank overflow when overhead piping is used • Process line shut-off valves • Larger process pump

ALARMS • Audible alarm • Visual / audible alarm beacon

WARRANTY • Extended compressor warranty

ELECTRICAL • UL508A enclosed electrical panel • Fused or non-fused power disconnect

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