



Specifications

BG & BC Series Indoor Glycol Chillers 1 - 30 Horsepower

MODEL	BC / BG / BGD ¹	1A	1.5A	2A	3A	3A	4A	5A	7.5A	10A	15AF	15AB	20AF	20AB	25A	30A
CONTROL	TYPE	M1	M1	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG
COMPRESSOR	HP	1	1.5	2	3	3	4	5	7½	10	15	15	20	20	25	30
	Type ²	SC	SC	SC	SC	DSC	SC	DSC	SC	DSC	DSC	DSC	SC	SC	SC	SC
CAPACITY @ 25°F (LFT)	BTU/hr ³	5,288	9,028	14,192	17,992	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	410A
PROCESS PUMP	HP	½	½	¾	¾	¾	¾	2	2	2	3	3	3	3	5	5
	GPM	2.4	3.6	4.8	7.2	7.2	9.6	12	18	24	36	36	48	48	60	72
	PSI	60	60	32	30	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	1	1¼	1¼	1¼	1¼	2	2	2	2	2	2
AIR-COOLED	Type ⁶	F	F	F	F	F	F	F	F	F	F	B	F	B	B	B
CONDENSER	CFM x 1000	.71	1.1	2	3	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	95
FULL LOAD ⁹	230/1/60	16.2	20	24	33	33	45	56 ¹²	94	98	--	--	--	--	--	--
AMPERAGE	230 volt	--	--	17	23	23	24	34	51	56	86.6	87	92	103	148	184
	460 volt	--	--	8.5	11	11	12	18	26	28	43.3	44	46	51.5	74	92
	575 volt	--	--	--	7.5	7.5	9	14 ¹²	19	23	35	31	37	42	60	74
TANK CAPACITY (gallons)	Holding	6	6	7½	7½	7½	25	25	25	25	65	65	65	65	65	65
	Tank Lid ¹⁰	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
DIMENSIONS (inches)	Height	38	38	30	43	43	60	60	60	60	65	96	66	96	96	96
	Width	24	24	37	34	34	34	34	34	34	58	58	59	58	58	58
	Depth	29	29	24	40	40	40	40	56	56	64	70	58	70	70	70
WEIGHTS (pounds)	Shipping ¹¹	345	350	415	600	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 and M1 control instrument. BG = units with fixed displacement scroll compressors and MG control instrument. BDG = Units with digital scroll compressors and MG control instrument.
- 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 BG-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 & BG Glycol Chillers

BGD-10A

BG Series
BC Series
Compressor Type
D: Digital Scroll
Empty: Fixed Displacement

Condenser Type
A: Air-Cooled

Nominal Compressor Horsepower



Standard Features

CONSTRUCTION:

- Stainless steel frame and enclosure panels (1 - 1½ HP models)
- Powder coated and galvanized steel frame, powder coated enclosure panel with lift-off molded front panel
- 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

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:

- MG (2-30 ton models)
- M1 (1-1½ ton models)

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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