MANITOWOC ICE
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Service Bulletin

Subject:Technical Specifications

IBT1020C / CVDT1200

GENERAL SPECIFICATIONS			
Refrigerant Charge (R-410A)	Line Set Length: 0’ to 50’ (0 m to 15 m)	12.25 lbs (5.56 kg)	
	Line Set Length: 51’ to 100’ (15.5 m to 30 m)	Add 2 lbs (0.90 kg) Total: 14.25 lbs (6.46 kg)	
Line Set	RC-21 RC-31 RC-51	Suction Line: 0.625 in (15.9 mm)	Liquid Line: 0.375 in (9.5 mm)
S-Trap Kit required on rises above 20’ (6 m)	K-00172	0.625 in (15.9 mm) Tubing	
Ice Making Water Inlet	Water Inlet Connection - 0.375” FPT (Female Pipe Thread)	Water Temperature - Minimum 40°F (4.4°C) Maximum 90°F (32.2°C)	Water Pressure - Minimum 20 psig (1.38 bar) Maximum 80 psig (5.52 bar)
Ice Making Water Drain	Connection - 0.5” FPT (Female Pipe Thread)		
Potable Water	19.9 gallons per 100 lbs of ice 75.3 liters per 45.5 kg of ice		
Compressor Nominal Rating	1.75 HP		
Heat of Rejection	Air Conditioning 16,200 BTU/hr (4,082 kcal/hr)	Peak 19,100 BTU/hr (4,813 kcal/hr)	
High Pressure Settings	Cut-in - 450 psig (31.0 bar)	Cut-out - 600 psig (41.4 bar)	
Operating Temperatures	**IBT1020C** Minimum 40°F (4.4°C) Maximum 110°F (43°C)	**CVDT1200** Minimum -20°F (-29°C) Maximum 120°F (48.9°C)	
Electrical	**IBT1020C** 115V/60 Hz/1 Ph Max Fuse - 15 amp Total Amps - 1.2	**CVDT1200** 208-230V/60 Hz/1 Ph Max Fuse - 25 amp Min Circuit Amps - 14.8 amp	**CVDT1200** 208-230V/60 Hz/3 Ph Max Fuse - 15 amp Min Circuit Amps - 9.3 amp
Energy Usage Kwh / 100 lbs	Half Dice Models 4.5 Kwh	Dice Models 4.5 Kwh	
Dimensions	**Height**	**Width**	**Depth**
IBT1020C	30.5 in (775 mm)	22.0 in (559 mm)	14.0 in (356 mm)
CVDT1200	25.75 in (654 cm)	34.0 in (864 mm)	24.13 in (613 mm)

Cycle Times

Freeze Time + Harvest Time = Total Cycle Time

Air Temperature Around the Unit	Freeze Time (Minutes)			Harvest Time
	Water Temperature			
	50°F 10°C	70°F 21°C	90°F 32°C	
-20 to 70°F -29 to 21°C	6.2 - 7.2	6.5 - 7.8	7.4 - 8.8	0.75 - 2.5
80°F 27°C	6.4 - 7.7	6.8 - 8.1	7.8 - 9.2	
90°F 32°C	6.7 - 8.1	7.3 - 8.7	7.9 - 9.5	
100°F 38°C	7.1 - 8.5	7.8 - 9.2	8.9 - 10.6	
110°F 43°C	8.2 - 9.7	8.7 - 10.3	10.0 - 11.9	

Cycle times and pressures vary with operating condition.
Production and cycle times are for dice cube - Half dice cube cycle times can be 2 - 3 minutes faster, depending on water and ambient temperature.
Times are in minutes.

24 Hour Ice Production

Air Temperature Around the Unit	Water Temperature		
	50°F 10°C	70°F 21°C	90°F 32°C
-20 to 70°F -29 to 21°C	1165 lbs kgs	1115 lbs kgs	1005 lbs kgs
80°F 27°C	1125 lbs kgs	1075 lbs kgs	965 lbs kgs
90°F 32°C	1085 lbs kgs	1015 lbs kgs	945 lbs kgs
100°F 38°C	1035 lbs kgs	965 lbs kgs	855 lbs kgs
110°F 43°C	925 lbs kgs	875 lbs kgs	775 lbs kgs

Ice slab weight of one harvest cycle = 6.2 lbs to 7.2 lbs (2.8 kgs to 3.3 kgs).
230V/50 Hz/1 Ph is approximately 12% lower than 230V/60 Hz/1 Ph

Operating Pressures - Freeze Cycle

Air Temperature Around the Unit	Discharge Pressure	Suction Pressure
-20 to 50°F -29 to 10°C	240-340 psig 16.5-23.4 bar	70-44 psig 4.8-3.0 bar
70°F 21°C	300-340 psig 20.7-23.4 bar	70-44 psig 4.8-3.0 bar
80°F 27°C	310-350 psig 21.4-24.1 bar	70-44 psig 4.8-3.0 bar
90°F 32°C	315-360 psig 21.7-24.8 bar	75-45 psig 5.2-3.1 bar
100°F 38°C	395-440 psig 27.2-30.3 bar	80-50 psig 5.5-3.5 bar
110°F 43°C	395-460 psig 27.2-31.7 bar	80-50 psig 5.5-3.5 bar

Operating Pressures - Harvest Cycle

Air Temperature Around the Unit	Discharge Pressure	Suction Pressure
-20 to 50°F -29 to 10°C	165-260 psig 11.4-17.9 bar	110-135 psig 7.6-9.3 bar
70°F 21°C	165-280 psig 11.4-19.3 bar	110-130 psig 7.6-9.0 bar
80°F 27°C	170-290 psig 11.7-20.0 bar	110-140 psig 7.6-9.7 bar
90°F 32°C	180-300 psig 12.4-20.7 bar	115-145 psig 7.9-10.0 bar
100°F 38°C	215-360 psig 14.8-24.8 bar	150-175 psig 10.3-12.1 bar
110°F 43°C	220-370 psig 15.2-25.5 bar	155-180 psig 10.7-12.4 bar