MANITOWOC ICE
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Service Bulletin

Subject: UP0065 Technical Specifications

AIR-COOLED MODELS

GENERAL SPECIFICATIONS			
Operating Temperatures	Minimum 50°F (10°C)	Maximum 100°F (38°C)	
Refrigerant Charge (R-290)	3.8 oz (0.11 kg)		
Ice Making Water Inlet	Connection Size - 3/4" MPT (Male Pipe Thread)	Water Temperature - Minimum 50°F (10°C) Maximum 90°F (32°C)	Water Pressure - Minimum 20 psig (2.4 bar) Maximum 90 psig (6.2 bar)
Ice Making/Bin Water Drain Outlet (vented)	Ice Machine Fitting - 5/8" inside diameter flexible hose		**Potable Water Usage** 39.2 per 100 lbs of ice 148.4 liters per 45.5 kg of ice
Bin Drain Outlet	Drain Connection - 1/2" FPT (Female Pipe Thread)		
Electrical	**115V/60 Hz/1 Ph** Min Circuit Amps - 2.65 Max Fuse Size - 15 amp		**Energy Usage** **Kwh / 100 lbs** 19.1 Kwh
Compressor Nominal Rating	1/5 HP		
Heat of Rejection	**Air Conditioning** 1600 BTU/hr (403 kcal/hr)	**Peak** 2350 BTU/hr (592 kcal/hr)	
Dimensions	**Height**	**Width**	**Depth**
Head Section	36 in (914 mm)	20 in (500 mm)	22 in (567 mm)
Clearances	**Top** 5 in (127 mm)	**Side** 5 in (127 mm)	**Back** 5 in (127 mm)

Self Contained Air-cooled Ice Machines

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	
70°F 21°C	9.5-12.5	10.7-14.1	11.7-15.5	1.25-3.25
80°F 27°C	10.7-12.7	12.5-16.7	12.3-16.5	
90°F 32°C	12.0-16.0	14.0-18.5	15.5-21.0	
100°F 38°C	15.2-20.2	16.5-22.2	18.5-24.5	
110°F 43°C	19.5-27.0	21.0-28.5	22.5-30.0	

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

24 Hour Ice Production

Air Temperature Around the Unit	Water Temperature		
	50°F 10°C	70°F 21°C	90°F 32°C
50°F 10°C	58 lbs 26 kgs	52 lbs 23 kgs	48 lbs 22 kgs
70°F 21°C	57 lbs 26 kgs	50 lbs 23 kgs	46 lbs 21 kgs
80°F 27°C	56 lbs 25 kgs	45 lbs 20 kgs	41 lbs 19 kgs
90°F 32°C	53 lbs 24 kgs	47 lbs 21 kgs	37 lbs 17 kgs
100°F 38°C	47 lbs 21 kgs	40 lbs 18 kgs	34 lbs 15 kgs
110°F 43°C	38 lbs 17 kgs	34 lbs 15 kgs	31 lbs 14 kgs

Ice slab weight of one harvest cycle = 0.44 lbs to 0.60 lbs (0.20 kgs to 0.27 kgs).
230/50/1 is approximately 12% lower than 230/60/1

Operating Pressures - Freeze Cycle

Air Temperature Around the Unit	Discharge Pressure	Suction Pressure
50°F 10°C	150-220 psig 10.3-15.2 bar	40-21 psig 2.8-1.4 bar
70°F 21°C	150-220 psig 10.3-15.2 bar	46-21 psig 3.2-1.4 bar
80°F 27°C	150-230 psig 10.3-15.9 bar	53-23 psig 3.7-1.6 bar
90°F 32°C	175-245 psig 12.1-16.9 bar	58-23 psig 4.0-1.6 bar
100°F 38°C	220-270 psig 15.2-18.6 bar	60-23 psig 4.1-1.6 bar
110°F 43°C	250-300 psig 17.2-20.7 bar	62-25 psig 4.3-1.7 bar

Operating Pressures - Harvest Cycle

Air Temperature Around the Unit	Discharge Pressure	Suction Pressure
50°F 10°C	100-115 psig 6.9-7.9 bar	55-70 psig 3.8-4.8 bar
70°F 21°C	100-120 psig 6.9-8.3 bar	55-75 psig 3.8-5.2 bar
80°F 27°C	115-130 psig 7.9-9.0 bar	55-85 psig 3.8-5.9 bar
90°F 32°C	130-150 psig 9.0-10.3 bar	55-95 psig 3.8-6.6 bar
100°F 38°C	150-170 psig 10.3-11.7 bar	60-110 psig 4.1-7.6 bar
110°F 43°C	170-185 psig 11.7-12.8 bar	85-125 psig 5.9-8.6 bar