MANITOWOC ICE
2110 SOUTH 26TH STREET, MANITOWOC, WI 54220

800-545-5720
WWW.MANITOWOCICE.COM

Service Bulletin

Subject: UP0080 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 - 3/8" 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** 39.3 per 100 lbs of ice 148.8 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 - 4.2 Max Fuse Size - 15 amp		**Energy Usage Kwh / 100 lb** 9.3 Kwh
Compressor Nominal Rating	1/4 HP		
Heat of Rejection	**Air Conditioning** 2050 BTU/hr (516 kcal/hr)	**Peak** 2500 BTU/hr (629 kcal/hr)	
Fan Cycle Control	Cut-in - 150 psig (10 bar)	Cut-out - 200 psig (14 bar)	
Dimensions	**Height**	**Width**	**Depth**
Head Section	36 in (914 mm)	20 in (500 mm)	22 in (567 mm)
Clearances	**Top**	**Side**	**Back**
	5 in (127 mm)	5 in (127 mm)	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	
50°F 10°C	9.8-11.3	13.2-14.7	14.4-15.9	1.0-2.5
70°F 21°C	10.6-12.1	15.0-18.5	16.7-18.2	
80°F 27°C	14.5-18.5	14.8-16.1	18.7-20.2	
90°F 32°C	16.1-19.0	19.1-24.7	21.5-23.0	
100°F 38°C	17.1-22.0	21.5-25.2	27.3-32.1	
110°F 43°C	22.0-25.7	26.2-30.0	27.5-34.7	

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	117 lbs 53 kgs	92 lbs 42 kgs	85 lbs 39 kgs
70°F 21°C	110 lbs 50 kgs	95 lbs 43 kgs	75 lbs 34 kgs
80°F 27°C	96 lbs 44 kgs	84 lbs 38 kgs	68 lbs 31 kgs
90°F 32°C	85 lbs 39 kgs	75 lbs 34 kgs	60 lbs 27 kgs
100°F 38°C	79 lbs 36 kgs	68 lbs 31 kgs	52 lbs 24 kgs
110°F 43°C	73 lbs 33 kgs	63 lbs 29 kgs	45 lbs 20 kgs

Ice slab weight of one harvest cycle = 1.2 lbs to 1.4 lbs (0.5 kgs to 0.6 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	140-205 psig 9.7-14.1 bar	46-18 psig 3.2-1.2 bar
70°F 21°C	145-205 psig 10.0-14.1 bar	46-18 psig 3.2-1.2 bar
80°F 27°C	160-210 psig 11.0-14.5 bar	50-20 psig 3.4-1.4 bar
90°F 32°C	165-225 psig 11.4-15.5 bar	50-20 psig 3.4-1.4 bar
100°F 38°C	220-255 psig 15.2-17.6 bar	53-23 psig 3.7-1.6 bar
110°F 43°C	250-300 psig 17.2-20.7 bar	63-25 psig 4.3-1.7 bar

Operating Pressures - Harvest Cycle

Air Temperature Around the Unit	Discharge Pressure	Suction Pressure
50°F 10°C	85-120 psig 5.9-8.3 bar	60-90 psig 4.1-6.2 bar
70°F 21°C	85-120 psig 5.9-8.3 bar	60-90 psig 4.1-6.2 bar
80°F 27°C	95-120 psig 6.6-8.3 bar	80-95 psig 5.5-6.6 bar
90°F 32°C	100-125 psig 6.9-8.6 bar	90-105 psig 6.2-7.2 bar
100°F 38°C	110-140 psig 7.6-9.7 bar	100-110 psig 6.9-7.6 bar
110°F 43°C	125-165 psig 8.6-11.4 bar	110-120 psig 7.6-8.3 bar