MANITOWOC ICE
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Service Bulletin

Subject: IP0300 Technical Specifications

AIR-COOLED MODELS

50 HZ ONLY

GENERAL SPECIFICATIONS			
Operating Temperatures	Minimum 2°C Maximum 43°C		
Refrigerant Charge (R-290)	110 g		
Electrical 208-230V/50 Hz/1 Ph	Min Circuit Amps - 4.9 Max Fuse Size - 15 amp		**Energy Use Kwh / 45.5 kgs** Half Dice: 6.23 Kwh Dice: 6.24 Kwh
Ice Making Water Inlet	Connection Size - 10 mm FPT (Female Pipe Thread)	Water Temperature - Minimum 4°C Maximum 32°C	Water Pressure - Minimum 1.3 bar Maximum 5.5 bar
Ice Making Water Drain	Connection Size - 13 mm FPT (Female Pipe Thread)		
Potable Water Use	62.5 liters per 45.5 kg of ice		
Compressor Nominal Rating	0.75 HP		
Heat of Rejection	Air Conditioning 1159 kcal/hr (4600 BTU/hr)	Peak 1373 kcal/hr (5450 BTU/hr)	
Fan Cycle Control Settings	Cut-in - 17.23 bar ±0.34	Cut-out - 15.17 bar ±0.34	
High Pressure Settings	Cut-in - 17.23 bar ±0.69	Cut-out - 24.13 bar ±0.69	
Dimensions	**Height**	**Width**	**Depth**
	419 mm	762 mm	622 mm
Clearances	**Top**	**Sides**	**Back**
	406 mm	406 mm	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			
	10°C	21°C	32°C	
21°C	11.1-11.7	11.8-13.0	13.7-13.2	0.5-1.5
27°C	12.3-13.0	12.7-14.0	13.7-15.0	
32°C	13.2-13.5	14.0-15.4	15.8-16.0	
38°C	15.1-15.3	16.0-17.2	15.9-17.3	
43°C	15.6-16.8	19.1-19.7	18.0-19.4	

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		
	10°C	21°C	32°C
21°C	135 kgs	122 kgs	116 kgs
27°C	125 kgs	114 kgs	108 kgs
32°C	119 kgs	108 kgs	99 kgs
38°C	105 kgs	98 kgs	91 kgs
43°C	97 kgs	85 kgs	85 kgs

Ice slab weight of one harvest cycle = 1.1 kgs to 1.3 kgs

Operating Temperatures - Freeze Cycle

DISCHARGE & SUCTION LINE TEMPERATURE

Air Temperature Around the Unit	Discharge Temperature (°C) T2	Suction Temperature (°C) T4
10°C	41-79	-7-10
21°C	41-70	-8-11
27°C	40-77	-4-13
32°C	42-85	-5-15
43°C	55-104	-4-19

HARVEST VALVE INLET TEMPERATURE

Air Temperature Around the Unit	Harvest Valve Inlet Temperature (°C)
10°C	36-45
21°C	34-44
27°C	36-45
32°C	42-46
43°C	53-57

Operating Temperatures - Harvest Cycle

DISCHARGE & SUCTION LINE TEMPERATURE

Air Temperature Around the Unit	Discharge Temperature (°C) T2	Suction Temperature (°C) T4
10°C	38-80	-2-9
21°C	32-70	-2-10
27°C	33-77	-2-13
32°C	36-86	3-16
43°C	45-92	9-24