MANITOWOC ICE
2110 SOUTH 26TH STREET, MANITOWOC, WI 54220
+1.920.682.0161
WWW.MANITOWOCICE.COM

Service Bulletin

Subject: IP0320 Technical Specifications

AIR-COOLED MODELS

50 HZ ONLY

GENERAL SPECIFICATIONS			
Operating Temperatures	Minimum 2°C Maximum 43°C		
Refrigerant Charge (R-290)	130 g		
Electrical 208-230V/50 Hz/1 Ph	Min Circuit Amps - 6.0 Max Fuse Size - 15 amp		**Energy Use Kwh / 45.5 kgs** Half Dice: 5.63 Kwh Dice: 5.63 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	76 liters per 45.5 kg of ice		
Compressor Nominal Rating	0.4 HP		
Heat of Rejection	Air Conditioning 958 kcal/hr (3800 BTU/hr)	Peak 1512 kcal/hr (6000 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**
	546 mm	559 mm	622 mm
Clearances	**Top**	**Side**	**Back**
	305 mm	305 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	13.1-15.2	15.7-18.2	16.6-19.3	1.0-2.5
27°C	15.7-18.2	17.3-20.1	18.9-21.9	
32°C	18.1-21.0	20.3-23.5	21.3-24.6	
38°C	21.3-24.6	23.0-26.6	24.3-28.1	
43°C	24.3-28.1	26.5-30.6	28.2-32.5	

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	152 kgs	129 kgs	122 kgs
27°C	129 kgs	118 kgs	109 kgs
32°C	122 kgs	118 kgs	98 kgs
38°C	97 kgs	91 kgs	79 kgs
43°C	86 kgs	79 kgs	75 kgs

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

Operating Temperatures - Freeze Cycle

Air Temperature Around the Unit	Discharge Temperature °C T2	Suction Temperature °C T4
10°C	60-68	7-3
21°C	63-71	10-6
27°C	66-82	16-7
32°C	71-88	18-8
38°C	82-99	24-12
43°C	88-104	26-13

Operating Temperatures - Harvest Cycle

Air Temperature Around the Unit	Discharge Temperature °C T2	Suction Temperature °C T4
10°C	38-54	11-6
21°C	41-63	11-7
27°C	49-66	13-8
32°C	60-66	16-9
38°C	63-82	20-12
43°C	66-85	22-13