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Service Bulletin

IT0900 Ice Machines

CYCLE TIMES/24 HOUR ICE PRODUCTION/REFRIGERANT PRESSURES

IDT0900A 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	9.0-10.7	10.2-12.1	11.2-13.2	1-2.5
80°F 27°C	9.5-11.3	10.6-12.5	11.4-13.5	
90°F 32°C	10.3-12.2	11.3-13.4	12.2-14.5	
100°F 38°C	11.6-13.7	12.9-15.2	14.0-16.5	
110°F 43°C	14.3-16.9	15.3-18.1	16.0-18.8	

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
70°F 21°C	850 lbs 385 kg	765 lbs 347 kg	705 lbs 320 kg
80°F 27°C	810 lbs 367 kg	740 lbs 336 kg	690 lbs 313 kg
90°F 32°C	755 lbs 342 kg	695 lbs 315 kg	650 lbs 295 kg
100°F 38°C	680 lbs 308 kg	620 lbs 281 kg	575 lbs 261 kg
110°F 43°C	565 lbs 256 kg	530 lbs 240 kg	510 lbs 231 kg

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

Operating Pressures

Air Temperature Around the Unit	Freeze Cycle		Harvest Cycle	
	Discharge Pressure	Suction Pressure	Discharge Pressure	Suction Pressure
50°F 10°C	280-350 psi 1930-2413 kPa	65-35 psi 448-241 kPa	140-165 psi 965-1138 kPa	85-120 psi 586-827 kPa
70°F 21°C	280-350 psi 1930-2416 kPa	65-36 psi 448-248 kPa	145-170 psi 1000-1172 kPa	90-120 psi 620-827 kPa
80°F 27°C	300-400 psi 2068-2758 kPa	70-37 psi 483-255 kPa	150-190 psi 1034-1310 kPa	100-125 psi 689-862 kPa
90°F 32°C	370-440 psi 2551-3034 kPa	80-38 psi 552-262 kPa	170-220 psi 1172-1517 kPa	110-130 psi 758-896 kPa
100°F 38°C	420-520 psi 2896-3585 kPa	85-39 psi 586-269 kPa	245-290 psi 1689-1999 kPa	135-185 psi 931-1276 kPa
110°F 43°C	470-540 psi 2068-3723 kPa	90-40 psi 620-276 kPa	255-300 psi 1758-2068 kPa	140-190 psi 965-1310 kPa

IDT0900W Self Contained Water-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	9.9-11.8	10.4-12.3	12.0-14.2	1-2.5
80°F 27°C	10.0-11.9	10.6-12.5	12.2-14.5	
90°F 32°C	10.1-12.0	11.9-14.1	12.5-14.7	
100°F 38°C	10.2-12.1	12.2-14.5	12.9-15.2	
110°F 43°C	10.3-12.2	12.8-15.1	13.3-15.6	

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
70°F 21°C	780 lbs 354 kg	750 lbs 340 kg	660 lbs 299 kg
80°F 27°C	775 lbs 352 kg	740 psi 336 kg	650 lbs 295 kg
90°F 32°C	770 psi 349 kg	665 psi 302 kg	640 psi 290 kg
100°F 38°C	760 lbs 345 kg	650 psi 295 kg	620 lbs 281 kg
110°F 43°C	755 lbs 342 kg	625 psi 283 kg	605 lbs 274 kg

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

Operating Pressures

Air Temperature Around the Unit	Freeze Cycle		Harvest Cycle	
	Discharge Pressure	Suction Pressure	Discharge Pressure	Suction Pressure
50°F 10°C	315-320 psi 2172-2206 kPa	67-35 psi 462-241 kPa	140-175 psi 965-1207 kPa	100-120 psi 689-827 kPa
70°F 21°C	315-320 psi 2172-2206 kPa	70-36 psi 483-248 kPa	145-175 psi 1000-1207 kPa	105-120 psi 724-827 kPa
80°F 27°C	315-320 psi 2172-2206 kPa	75-36 psi 517-248 kPa	145-175 1000-1207 kPa	105-120 psi 724-827 kPa
90°F 32°C	315-320 psi 2172-2206 kPa	80-38 psi 552-262 kPa	150-175 psi 1034-1207 kPa	110-120 psi 758-827 kPa
100°F 38°C	315-320 psi 2172-2206 kPa	85-38 psi 586-262 kPa	155-180 psi 1069-1241 kPa	110-125 psi 758-862 kPa
110°F 43°C	315-320 psi 2172-2275 kPa	90-38 psi 651-262 kPa	160-185 psi 1103-1276 kPa	110-125 psi 758-862 kPa