

# Horizon™ Chewblet® ice machine

□ 1000 series □ 1400 series or □ 1650 series  
with remote air-cooled condensing unit

(See model number guide)

## Short form specification

Ice machine to be a Follett® Horizon Chewblet ice machine model \_\_\_\_\_ [Insert size from model number guide] □ without remote condensing unit (for connection with rack system) or □ with remote air-cooled condensing unit, capable of producing compressed nugget ice using an efficient, sanitary horizontal evaporator/auger system and delivering ice by a flexible wire reinforced, transport tube to □ ice storage bin, □ ice and water dispenser, □ ice and beverage dispenser, □ drop-in dispenser or □ Ice Manager™ diverter valve system and provided with a stainless steel frame and exterior, slide-out evaporator unit with utility docking station, front-mounted unit status display, automatic self-flush, and semi-automatic cleaning & sanitizing system, plus all the features listed below and mounting/performance-enhancing accessories checked:



U.S. Patents  
7,263,844, 7,469,548, and 7,469,552  
HCD1400RBS shown

## Horizon performance features

- Produces popular Chewblet nugget ice and 3/8" (9.5 mm) length Micro Chewblet ice (see Ice production tables on page 8):
  - 1000 series - up to 900 pounds (409 kg) in 24 hours or
  - 1400 series - up to 1333 pounds (605 kg) in 24 hours or
  - 1650 series - up to 1580 pounds (717 kg) in 24 hours
- Optional RIDE™ remote ice delivery equipment transports ice through a flexible tube up to 75 ft (22.9 m) from bin/dispenser (10' (3 m) for Micro Chewblet ice)
- Horizontal evaporator maximizes ice production
- Uses less water than cube ice machines
- Rejects less heat than a typical cube ice machine
- Quiet operation without noisy batch harvest cycles

## Unique Chewblet ice advantages

- Consumer-preferred chewable ice for beverages
- More reliable dispensing compared to other nugget or pellet ice
- Higher liquid displacement than cube ice
- Standard Chewblet ice – approximately 1" (25.4 mm) length, Micro Chewblet ice approximately 3/8" (9.5 mm) length

## Key Horizon design features

- Compact design offers in-cabinet/undercounter, floor stand, wall bracket, on-fountain dispenser, or on-bin mounting
- Standard slide-out docking-station design allows removal of evaporator unit without disconnecting utilities
- Unique auger design reduces loads on gearmotor & bearings
- Easy-to-read LED operating status & diagnostic display
- 10 ft (3 m) flexible ice transport tube and insulation standard with RIDE models

## Sanitation and safety features

- Aluminum-bronze evaporator has antimicrobial properties
- Automatic self-flushing reduces water scale buildup
- Floatless, sealed design inhibits formation of biofilms
- Semi-automatic cleaning & sanitizing system

## Product warranty

- 3 years, parts & labor
- 5 years parts on compressor

## Agency approvals



## Available accessories

- Harmony™ conversion top kit for ice and beverage dispensers
- Water filter kit (Item# 00130286 - see form# 9905 for dimensions)
  - \_\_\_\_ ea. extra primary water filter cartridge
  - \_\_\_\_ ea. extra pre-filter cartridge
- Wall mount bracket (see accessory form# 3311)
- Ice machine stand, height-adjustable (see accessory form# 3311)
- Longer ice transport tube, specify length: \_\_\_\_ ft/m in 5 ft/1.5 m increments (10 ft/3 m is standard)
- 35 ft (10.7 m) refrigeration lines (P/N: 00193227 – not pre-charged) for 1000R and 1400R
- 35 ft (10.7 m) refrigeration lines (P/N: 00977785 – not pre-charged) for 1650R
- Timer to control one or two Horizon ice machines (see accessory form# 3311)

## Model number guide

Use/ application	Condenser	Installation/mounting	
		top mounted	RIDE
with ice storage bins	with	HCD1000RBT	HCD1000RBS
	without	HCD1000NBT	HCD1000NBS
	with	HCD1400RBT	HCD1400RBS
	without	HCD1400NBT	HCD1400NBS
	with	HCD1650RBT	HCD1650RBS
	without	HCD1650NBT	HCD1650NBS
with Follett Vision™ line dispensers	with		HCD1000RVS
	without		HCD1000NVS
	with		HCD1400RVS
	without		HCD1400NVS
	with		HCD1650RVS
	without		HCD1650NVS
with ice/ beverage dispensers (by others)	with	HCD1000RHT*	HCD1000RHS
	without	HCD1000NHT*	HCD1000NHS
	with	HCD1400RHT*	HCD1400RHS
	without	HCD1400NHT*	HCD1400NHS
	with	HCD1650RHT*	HCD1650RHS
	without	HCD1650NHT*	HCD1650NHS
for drop-in dispensers	with		HCD1000RJS
	without		HCD1000NJS
	with		HCD1400RJS
	without		HCD1400NJS
	with		HCD1650RJS
	without		HCD1650NJS
with Ice Manager diverter valve system	with		HCD1000RMS
	without		HCD1000NMS
	with		HCD1400RMS
	without		HCD1400NMS
	with		HCD1650RMS
	without		HCD1650NMS

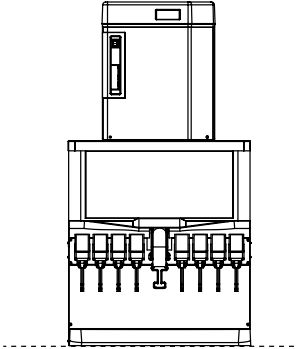
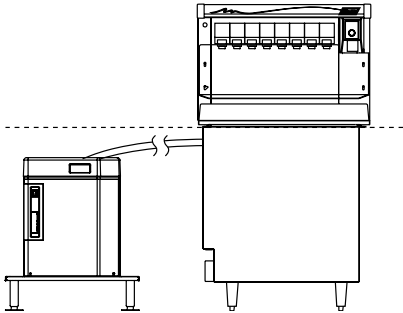
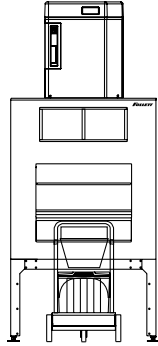
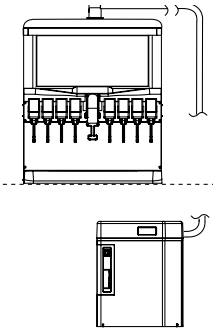
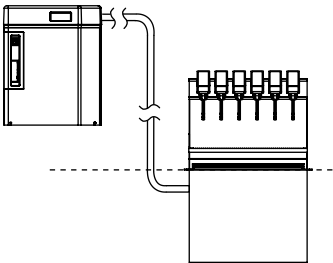
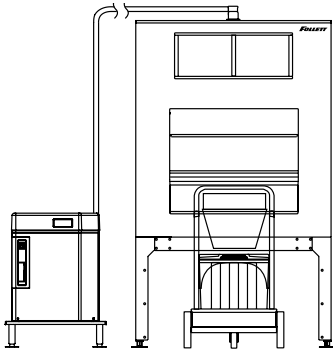
\* Requires Harmony top kit (see page 3 for part number)

Notes: For Micro Chewblet ice, replace second character (C) with an M  
e.g. HMC1000ABT

For three phase remote condensing unit, replace 3rd character (D) with F.

## 1 Locating the ice machine

Horizon remote condensing unit Chewblet ice machines allow top-mounting or mounting in a base cabinet, on a wall or on a floor stand up to 75 ft (22.9 m) from the dispenser or ice bin with RIDE technology (10' (3 m) for Micro Chewblet ice). Evaporator/ice machine must be mounted within 100 feet (30.5 m) of Follett remote condensing unit. RIDE applications require special attention to service access and ice tube runs (see page 3-5).

Top mounting – ice & beverage dispensers (by others)	RIDE model – Follett low-profile Vision ice & beverage dispensers	Top mount on Follett ice storage bins
		
<b>Important specifier notes:</b> <ol style="list-style-type: none"> <li>1. Dispenser must be compatible with nugget ice. See page 3 for compatible ice &amp; beverage dispenser models and top kit numbers.</li> <li>2. Verify ceiling or soffit height to ensure sufficient top clearance.</li> </ol>	<b>Important specifier notes:</b> <ol style="list-style-type: none"> <li>1. See page 3-5 for critical clearance &amp; venting requirements.</li> </ol>	<b>Important specifier notes:</b> <ol style="list-style-type: none"> <li>1. See form# B300 for bin sizing.</li> <li>2. Verify ceiling or soffit height to ensure top clearance.</li> <li>3. Locate floor sink or grate &amp; drains in front of storage bin.</li> <li>4. Do not position bin drain lines to block Ice•Device™ bin cart.</li> </ol>
RIDE model – ice & beverage dispensers (by others)	RIDE model – drop-in beverage dispensers (by others)	RIDE model – Follett ice storage bins
		
<b>Important specifier notes:</b> <ol style="list-style-type: none"> <li>1. Dispenser must be compatible with nugget ice. Compatible dispensers include Cornelius DB/ID/DF150/175, Lancer 4500-22N &amp; FS-16N, Servend MD150/175/200/250, SV175/200/250 and Coca-Cola Freestyle. As well as dispensers listed on page 3.</li> </ol>	<b>Important specifier notes:</b> <ol style="list-style-type: none"> <li>1. See form# 3425 for qualified applications.</li> </ol>	<b>Important specifier notes:</b> <ol style="list-style-type: none"> <li>1. See form# B300 for bin sizing.</li> <li>3. Locate floor sink or grate &amp; drains in front of storage bin.</li> <li>4. Do not position bin drain lines to block Ice•Device bin cart.</li> </ol>

### 1 Locating the ice machine (continued)

Top mounting – compatible ice & beverage dispensers*					
Manufacturer	Model Number	Width in (cm)	Depth in (cm)	Height** in (cm)	Harmony top kit – specify “F” for front facing, or “B” for backward facing units
Lancer dispensers	4500-30N / IBD Chewable ice dispenser	30.0 ( 76)	30.5 (78)	36.50 ( 93)	HTL30RC-F
	FS-22N	22.0 ( 56)	30.5 (78)	42.13 (107)	HTL22RC-F
	FS-30N	30.0 ( 76)	30.5 (78)	42.13 (107)	HTL30RC- (F or B)
	FS-44N #	44.0 (119)	30.5 (78)	42.13 (107)	(2) HTL22RC-F
Cornelius dispensers	DB/ED/DF 200 series	30.0 ( 76)	30.0 (76)	34.38 ( 87)	HTC30RC-F
	DB/ED/DF 250 series	30.0 ( 76)	30.0 (76)	38.38 ( 98)	HTC30RC-F
	DB/ED/DF 300 series	44.0 (119)	30.0 (76)	34.00 ( 86)	HTC44RC- (F or B)
	FlavorFusion/Overload	30.0 ( 76)	30.7 (78)	39.38 (100)	HTC30RC-10F-FF
	IDC215	30.0 ( 76)	30.7 (78)	39.38 (100)	HTC30RC-10F-IDC
	IDC255	30.0 ( 76)	30.7 (78)	36.38 ( 92)	HTC30RC-10F-IDC
Servend dispensers	MDH-302	42.8 (109)	31.0 (79)	32.38 ( 82)	HTS44RC- (F or B)†
	MDH-402	60.0 (152)	30.5 (78)	32.38 ( 82)	HTS60RC- \$(F or B)†

\*All approved dispensers can be filled with a RIDE model Horizon ice machine model without a top kit.

§ 60-inch models: Please specify number of Horizon ice machines and location. D = 2; R = 1 on right side; L = 1 on left side

† Requires minimum 0.5" (12.7 mm) clearance between back of dispenser and wall.

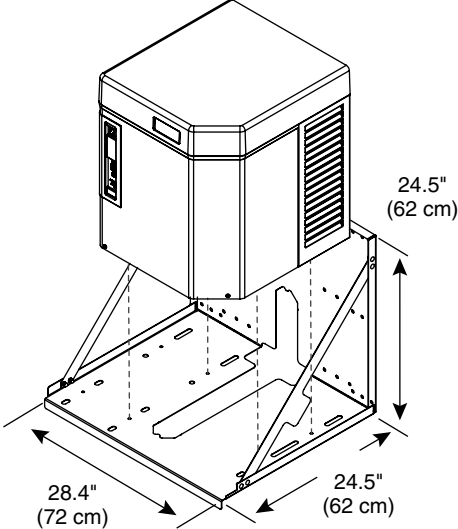
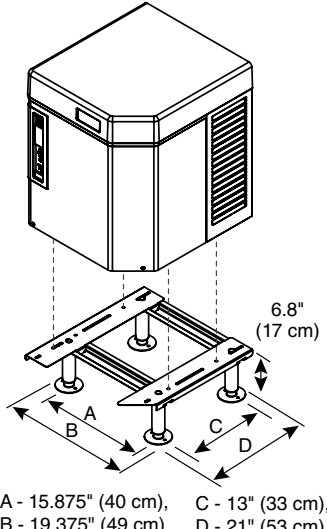
\*\* Net height after installation of top kit (excluding height of ice machine).

# F-44N consists of 2 separate 22" (55.9 cm) dispensers. A top kit is needed for each Horizon ice machine ordered.

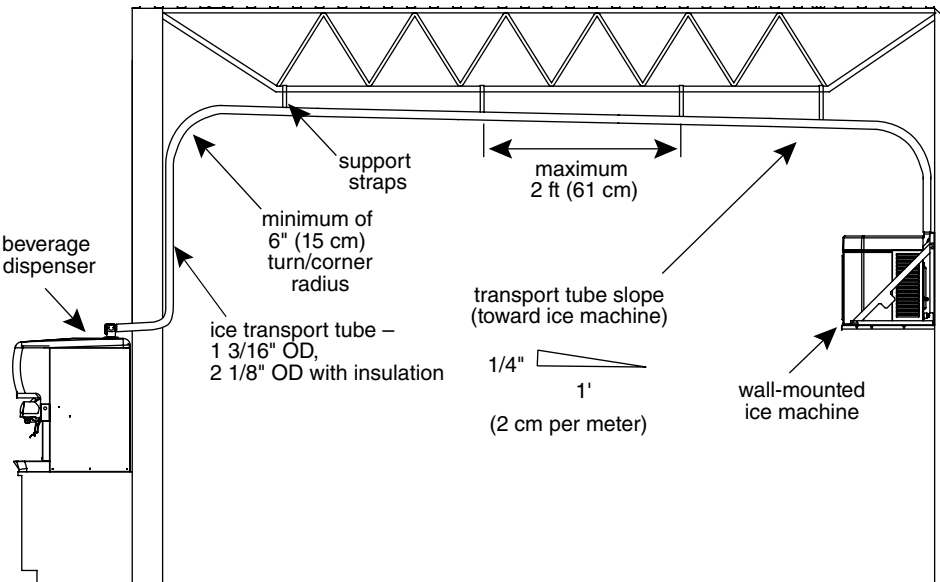
### 2 Undercounter/in-cabinet mounting

Cabinet details	
<p><b>Important specifier notes</b></p> <ol style="list-style-type: none"> <li>1. Cabinet door opening must meet minimum size requirements shown and be free of obstructions to allow ice machine to slide out (no lip or utilities to block removal).</li> <li>2. Cabinet base must be capable of supporting ice machine and allow ice machine to rest flat on cabinet bottom.</li> <li>3. No counter supports, electric or plumbing can run in front of the ice machine.</li> <li>4. Ice transport tube needs minimum 1/4" per foot (2 cm per meter) pitch toward ice machine and should be secured to prevent dips and traps from forming. See page 4.</li> </ol>	

### 3 Horizon ice machine mounting accessories

Optional wall mount bracket	Optional machine stand	Important specifier notes:
	 <p>A - 15.875" (40 cm), C - 13" (33 cm), B - 19.375" (49 cm) D - 21" (53 cm)</p>	<ol style="list-style-type: none"> <li>1. For secure wall mounting, specify optional wall mount bracket.</li> <li>2. Wall and fasteners must support the weight of the ice machine, bracket, supply water and ice. <b>Use of a backing board may be required with hollow wall construction.</b></li> <li>3. Machine stand mounting adds 6.8" (17 cm) to height of ice machine.</li> <li>4. No dips in tube routing allowed.</li> <li>5. Ice transport tube needs minimum 1/4" per foot (2 cm per meter) pitch toward ice machine and should be secured to prevent dips and traps from forming.</li> </ol>

### 4 Horizon ice tube runs - specifier guidelines

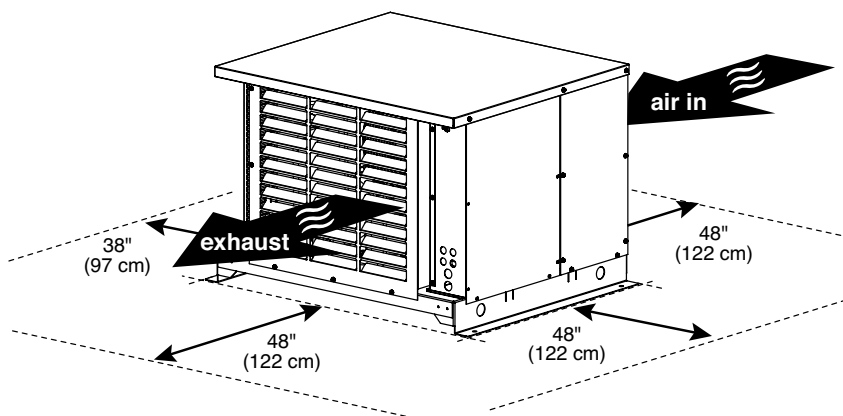
Long tube runs for RIDE remote ice delivery equipment	
 <p>beverage dispenser</p> <p>support straps</p> <p>minimum of 6" (15 cm) turn/corner radius</p> <p>ice transport tube – 1 3/16" OD, 2 1/8" OD with insulation</p> <p>maximum 2 ft (61 cm)</p> <p>transport tube slope (toward ice machine)</p> <p>1/4" 1' (2 cm per meter)</p> <p>wall-mounted ice machine</p>	<b>Important specifier notes:</b> <ol style="list-style-type: none"> <li>1. 75 ft (23 m) maximum ice transport tube run (10' (3 m) for Micro Chewblet ice).</li> <li>2. Tubing routing bends must have a 6" (15 cm) radius or larger.</li> <li>3. If not supported from underneath, secure insulated ice transport tube at least every 2 ft (61 cm) to prevent dips or traps.</li> <li>4. Relative humidity levels above 80% in areas where the ice machine or ice transport tube are located may produce excessive condensation that will cause water damage.</li> <li>5. Contact factory for recommendations on running tubing through a decorative soffit or chase.</li> </ol>

### 5 Remote condensing unit

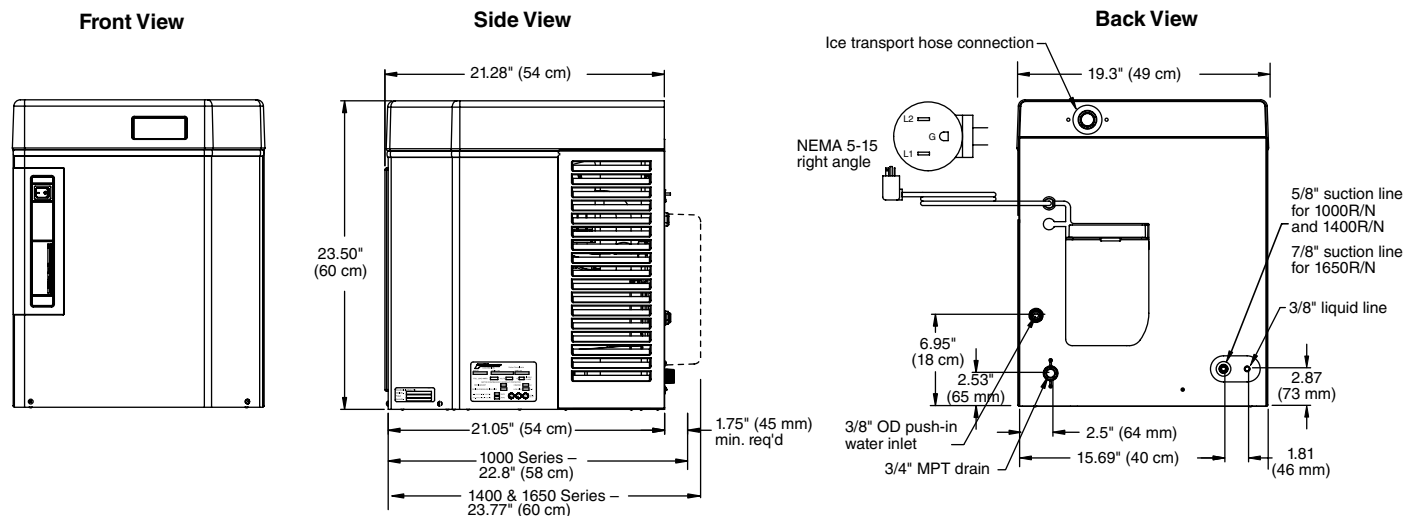
#### Condensing unit installation specifications

##### Important specifier notes:

1. Provide front, back and side clearances as shown.
2. The maximum refrigerant line run length is 100 ft (30.5 m). Installations with up to 50 ft (15.2 m) line run require:  
1000 Series – 8 lbs (4 kg) of refrigerant  
1400 Series – 11 lbs (5 kg) of refrigerant  
1650 Series – 11 lbs (5 kg) of refrigerant  
(consult installation manual for correct refrigerant charge if line run exceeds 50 ft (15.2 m)).
3. The maximum line rise above the evaporator is 35 ft (10.7 m).  
Condensing unit above evaporator unit – 35 ft (10.7 m) (installations with rise over 20 ft (6.1 m) require additional suction line s-trap at midpoint rise).
4. The evaporator can only be mounted a maximum of 15 ft (4.6 m) above the condensing unit.  
Note: The service loop is not included when calculating length, rise or drop in the tubing run.



Note: To connect evaporator/ice machine to rack systems, see page 7.



### Evaporator utility requirements/unit specifications

Models	1000	1400/1650
Shipping weight	180 lbs (68 kg)	190 lbs (86 kg)
<b>Standard electrical</b>		
Voltage	115	115
Phase	1-phase	1-phase
Hertz	60 cycles	60 cycles
Amps	6 (max.)	6 (max.)
Circuit	15 Amps	15 Amps
Cord	7 ft (2 m)	7 ft (2 m)
Plug	NEMA 5-15	NEMA 5-15

### Evaporator unit operating limits

All models	Minimum	Maximum
Air temperature	50 F (10 C)	100 F (38 C)
Water temperature	45 F (7 C)	90 F (32 C)
Potable water pressure	10 psi (69 kpa)	70 psi (483 kpa)

### Energy & water consumption\*

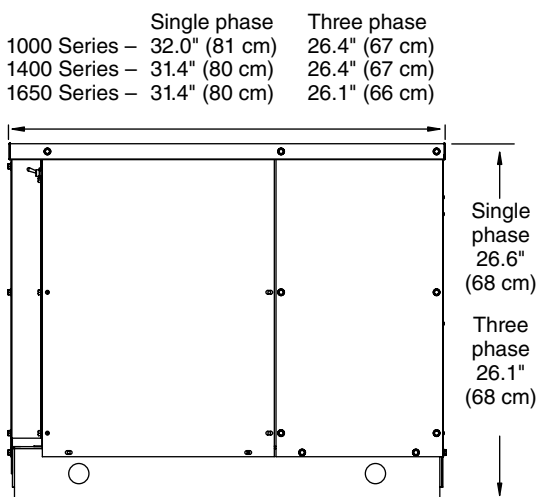
Models	Phase	1000	1400	1650
Electricity per 100 lbs (46 kg) of ice	Single	5.1 kWh	4.8 kWh	4.8 kWh
	Three	3.9 kWh	3.5 kWh	3.7 kWh
Water per 100 lbs (46 kg) of ice		13.6 gal (52 L)	13.2 gal (50 L)	13.2 gal (50 L)
* 90 F (32 C) air temp & 70 F (21 C) water temp				

### Important specification/installation notes:

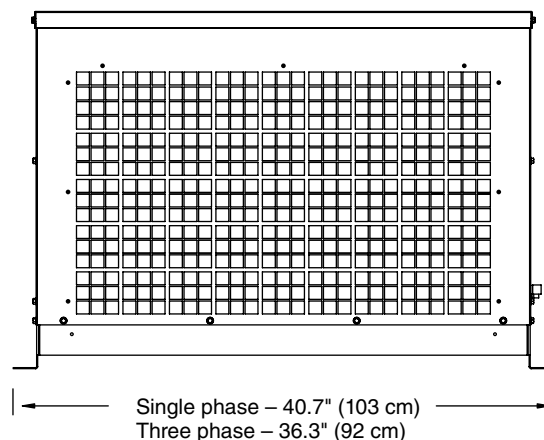
- 10 ft (3 m) of ice transport tube and insulation are provided with RIDE models only. Longer tubes available as an accessory, at extra cost.
- In RIDE applications, ice enters through top of ice storage bin or countertop ice and beverage dispenser. For side entry, contact factory.
- Separate ice machine and condensing unit drain lines required for water-cooled models.
- Drains should be hard piped and insulated. Maintain at least a 1/4" per foot (2 cm per meter) slope away from ice machine.
- Follett recommends installation of an in-line water filtration system. See available accessories on page 1.



**Side View**



**Front View**



## Condensing unit requirements/unit specifications

Single phase models	HCD1000	HCD1400	HCD1650
Shipping weight	225 lbs (102 kg)	330 lbs (150 kg)	385 lbs (175 kg)
<b>Standard electrical</b>			
Voltage	208-230	208-230	208-230
Phase	1-phase	1-phase	1-phase
Hertz	60 cycles	60 cycles	60 cycles
Min. Circuit Amp	10.7	20.0	29.9
Maximum circuit HVACR breaker size	15 Amps	30 Amps	50 Amps
Three phase models	HCF1000	HCF1400	HCF1650
Shipping weight	320 lbs (145 kg)	320 lbs (145 kg)	340 lbs (154 kg)
<b>Standard electrical</b>			
Voltage	208-230	208-230	208-230
Phase	3-phase	3-phase	3-phase
Hertz	60 cycles	60 cycles	60 cycles
Min. Circuit Amp	9.9	14.0	21.2
Maximum circuit HVACR breaker size	15 Amps	25 Amps	35 Amps

## Condensing unit operating limits

All models	Minimum	Maximum
Air temperature	-20 F (29 C)	120 F (49 C)

## Condensing unit location/installation limits

All Models	
Maximum refrigerant line run length:	100 ft (30.5 m)
Maximum line rise above evaporator:	35 ft (10.7 m)
Evaporator mounting above condenser:	15 ft (4.6 m)
or maximum refrigeration line drop:	15 ft (4.6 m)

## Cooling capacity for ice machines connected to rack systems

Models	HCD1000	HCD1400	HCD1650
BTU/hr (Kcal/hr) at 0 F (-18 C) evaporator, 90 F (32 C) ambient air (1000N, 1400N, 1650N units only)	7,700 (1940)	10,000 (2520)	13,000 (3275)
Rack Systems* EPR Value – set to	0 F (-18 C)		

## Condensing unit specification/installation notes:

- 1400 and 1650 model condensing units have a liquid suction line heat exchanger. The entire liquid line should be insulated separately from the suction line.
- Outdoor installation of low side is not recommended and will void warranty.

\* EPR valve to be supplied by installer

## Ice production – 1000 series

Inlet water temperature	Ambient air temperature F (C)					24 hour ice production lbs/kg
	60 (16)	70 (21)	80 (27)	90 (32)	100 (38)	
50 F (10 C)	944 (429)	900 (409)	853 (387)	819 (372)	791 (359)	
60 F (16 C)	887 (493)	866 (393)	837 (380)	800 (363)	756 (343)	
70 F (21 C)	833 (378)	824 (374)	804 (365)	765 (347)	710 (322)	
80 F (27 C)	784 (356)	774 (351)	752 (342)	714 (324)	656 (298)	
90 F (32 C)	740 (336)	714 (324)	680 (309)	640 (291)	594 (270)	

## Ice production – 1400 series

Inlet water temperature	Ambient air temperature F (C)					24 hour ice production lbs/kg
	60 (16)	70 (21)	80 (27)	90 (32)	100 (38)	
50 F (10 C)	1354 (614)	1333 (605)	1260 (571)	1243 (564)	1227 (556)	
60 F (16 C)	1293 (586)	1272 (577)	1225 (556)	1208 (548)	1192 (541)	
70 F (21 C)	1229 (557)	1208 (548)	1190 (540)	1172 (532)	1157 (525)	
80 F (27 C)	1167 (529)	1146 (520)	1102 (500)	1084 (492)	1069 (485)	
90 F (32 C)	1107 (502)	1060 (481)	1013 (460)	995 (451)	980 (445)	

## Ice production – 1650 series

Inlet water temperature	Ambient air temperature F (C)					24 hour ice production lbs/kg
	60 (16)	70 (21)	80 (27)	90 (32)	100 (38)	
50 F (10 C)	1669 (757)	1580 (717)	1479 (671)	1422 (645)	1366 (620)	
60 F (16 C)	1596 (724)	1528 (693)	1451 (658)	1387 (629)	1310 (594)	
70 F (21 C)	1523 (691)	1474 (669)	1424 (646)	1350 (612)	1254 (569)	
80 F (27 C)	1440 (653)	1387 (629)	1332 (604)	1267 (575)	1191 (540)	
90 F (32 C)	1356 (615)	1298 (589)	1240 (562)	1183 (537)	1127 (511)	



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