

Horizon Elite™

remote three phase 1400 series Chewblet® ice machine



Features

Horizon Elite

- 1412 series - up to 1372 lb (623 kg) in 24 hours
- automatically transport ice through a tube with RIDE® technology from up to 75' (22.9 m) away
- chewable, compressed nugget ice is preferred over cubes¹
- ice dispenses reliably from ice and beverage dispensers
- available with approximately 1.00" (2.54 cm) long standard Chewblet ice or optional 3/8" (0.95 cm) long Micro Chewblet™ ice
- quiet production without noisy harvest cycles

Revolutionary, scale inhibiting design

- produces ice that has 15% the TDS of the incoming water for optimum dispensing and long life in drinks
- quarantines and regularly expels scale producing dissolved solids to dramatically reduce scale buildup
- increases time between descaling and reduces or eliminates the need for expensive scale treatment
- saves 35% water compared to comparable cubers

Durable, attractive ice machine

- regular bearing inspection or replacement is not required
- upgraded, easy-to-read LED operating status and diagnostic display

Designed with sanitation in mind

- Agion® silver-based antimicrobial product protection of key ice and water contact components²
- floatless, sealed design inhibits formation of biofilms
- semi-automatic cleaning and sanitizing system

Remote monitoring with Open Kitchen™

- provided in partnership with Powerhouse Dynamics (separate subscription required)
- real-time alerts and notifications
- remote diagnostics to maximize equipment uptime
- connects with equipment across other Middleby brands

Warranty

- 3 years parts and labor, 5 years compressor parts³

Certifications



Short form specification:

Ice machine to be a Follett® Horizon Elite ice machine model _____ [Insert size/series, condenser type and installation/mounting, from model number guide] 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, slide-out evaporator with utility docking station, front-mounted unit status display, evaporator water inlet at harvest end with automatic flush while producing ice, and semi-automatic cleaning and sanitizing system, plus all the features listed below and mounting/performance-enhancing accessories checked.

Model configurations				
For use with ¹	Install/mount	Condenser	V/Hz/Ph	Item number 1412 series ²
ice storage bin	top mount	condensing and evaporator unit	115/60/1	HCF1412RBT
		evaporator unit only ³	115/60/1	HCF1412KBT
	RIDE	condensing and evaporator unit	115/60/1	HCF1412RBS
		evaporator unit only ³	115/60/1	HCF1412KBS
Follett Vision™ undercounter ice and beverage dispenser	RIDE	condensing and evaporator unit	115/60/1	HCF1412RVS
		evaporator unit only ³	115/60/1	HCF1412KVS
countertop ice and beverage dispenser (by others)	top mount ⁴	condensing and evaporator unit	115/60/1	HCF1412RHT
		evaporator unit only ³	115/60/1	HCF1412KHT
	RIDE	condensing and evaporator unit	115/60/1	HCF1412RHS
		evaporator unit only ³	115/60/1	HCF1412KHS
drop-in dispenser (by others)	RIDE	condensing and evaporator unit	115/60/1	HCF1412RJS
		evaporator unit only ³	115/60/1	HCF1412KJS
Ice Manager diverter valve system	RIDE	condensing and evaporator unit	115/60/1	HCF1412RMS
		evaporator unit only ³	115/60/1	HCF1412KMS

¹ Ordered separately.

² For Micro Chewblet ice, replace second character (C) with an M, e.g. HMF1412RBT. Not for use with Ice Manager.

³ Not for use with rack system. Only use with Follett 1412 condensing unit, item# F1412CU.

⁴ Requires top kit (see page 5 for part number).

¹ Independent third party studies. Contact Follett for details.

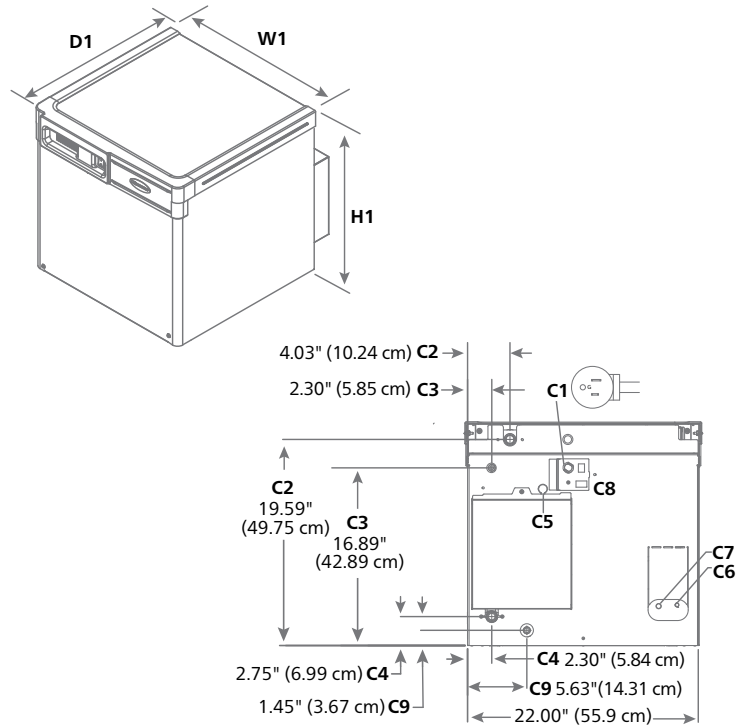
² Disclaimer: Antimicrobial protection is limited to the treated components and does not treat water or ice.

³ Refer to price list for additional warranty information.

Accessories

- Top kit for ice and beverage dispensers (page 5)
- Water filters (refer to form# 9905)
- Wall mount bracket (item# 00997098)
- Ice machine stand, height-adjustable (item# 00997080)
- Timer to control one or two ice machines (item# 00967265)
- Longer ice transport tube (refer to the price list, form# 4025)
NOTE: 10' (3 m) provided as standard for RIDE model.
- Sleep cycle kit for improved energy efficiency and component life. For countertop dispenser applications for models ending in HS and HT (item# 01338276).
- Insulated refrigeration lines (not pre-charged) for 1412
 - 35' (11 m) (item# 00977785)
- SafeCLEAN Plus™ ice machine cleaner
 - 1 x 8 oz (237 ml) bottle (item# 01147826)
 - 6 x 8 oz (237 ml) bottles (item# 01149954)
 - 24 x 8 oz (237 ml) bottles (item# 01149962)
- SaniSponge™, 24 sanitary sponges (item# 01075431)
- Three year remote monitoring subscription and hardware for Open Kitchen (item# MDD-1003)
NOTE: For serial number Q34181 and above.
- For additional accessories, refer to form# 4025

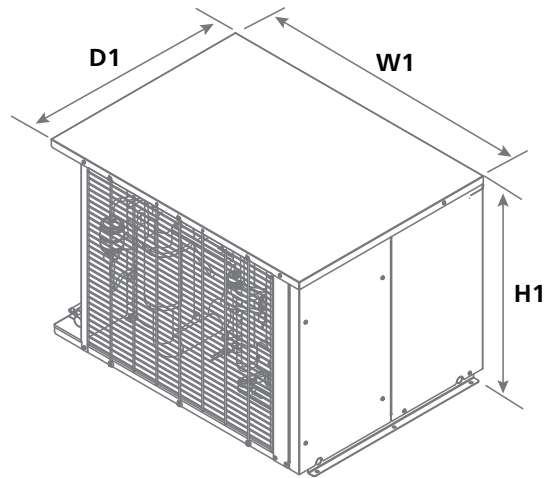
Dimensional drawing



Specification, evaporator unit

W1 Width	22.70" (57.7 cm) Fits on 22.00" wide dispensers
D1 Depth	24.50" (62.2 cm)
H1 Height	21.25" (53.9 cm)
Clearance	top, left and right – 1.00" (2.54 cm)
C1 Electrical	5 amps, requires dedicated 115 V/60/1 15 amp circuit, 6' (1.8 m) cord, NEMA 5-15 plug
Operating power	0.6 kW
C2 Ice transport tube	see page 7 for details
C3 Water inlet	3/8" OD push-in water inlet – internal connection
C4 Drain	3/4" MPT, 1" drain required see page 7 for details
C5 Ice bin signal cord	for Vision applications only
C6 Liquid line	3/8"
C7 Suction line	7/8"
C8 Communication port, 24 VAC	ice machine to outdoor condensing unit (wire not included)
C9 Auxiliary drain (required)	3/8" OD push-in
Air temperature	50 -100 F (10 - 38 C)
Water temperature	45 - 90 F (7 - 32 C)
Potable water pressure	10 - 70 psi (69 - 483 kPa)
Ice production	see ice production chart on page 8
Energy consumption	4.73 kWh per 100 lb (45.4 kg) ice
Water consumption	12.5 gal (47 L) of potable water per 100 lb (45.4 kg) of ice (per AHRI test standards) 12.3 gal (46.5 L) at low TDS flush setting
Refrigerant	R449a
BTU/hr (Kcal/hr) at 0 F (-18 C) evaporator, 90 F (32 C) ambient air	10,000 (2,520)
Approximate ship weight	205 lb (93 kg)
Approximate net weight	167 lb (76 kg)
NOTE: For indoor use only. Outdoor installation of low side is not recommended and will void warranty.	

Dimensional drawing

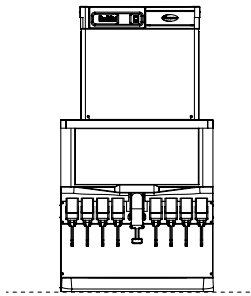
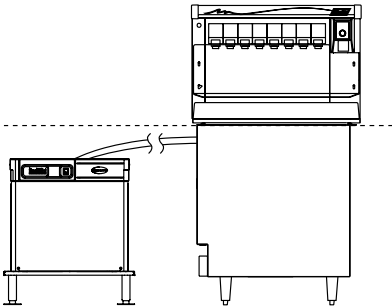
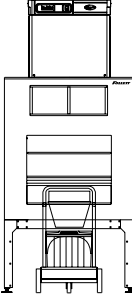
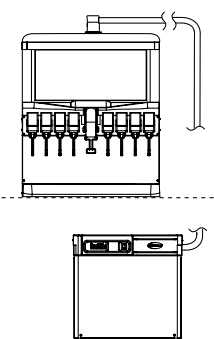
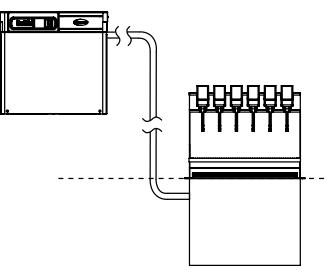
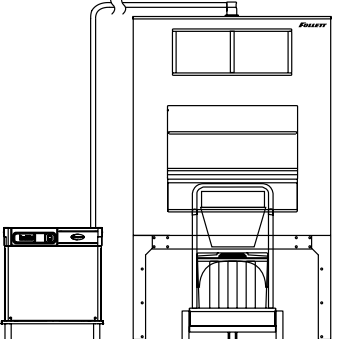


Specification, condenser unit

W1 Width	39.60" (100.6 cm)
D1 Depth	28.20" (71.6 cm)
H1 Height	26.00" (66.0 cm)
Electrical	208-230/60/3
Operating power	3.0 kW
Minimum circuit ampacity	12 A
Maximum overcurrent protection	20 A
Outdoor condensing unit operating limits (air temperature)	min -20 F (-29 C) max 120 F (49 C)
Maximum refrigerant line run length	100' (30.5 m)
Maximum line rise above evaporator	35' (11 m)
Evaporator mounting above condenser	15' (4.6 m)
Maximum refrigeration line drop without oil trap	15' (4.6 m)
Refrigerant charge	8 lb pre-charged
Approximate ship weight	282 lb (128 kg)
Approximate net weight	244 lb (111 kg)

1 – Locating the ice machine

Horizon Elite remote Chewblet ice machines allow top-mounting or mounting in a base cabinet, on a wall or on a floor stand up to 75' (22.9 m) from the dispenser or ice bin with RIDE technology. In-cabinet mounting (RIDE applications) require special attention to service access, unit ventilation and ice tube runs (see pages 6-7).

<p>Top mounting – ice and beverage dispensers (by others)</p> 	<p>RIDE model – Follett low-profile Vision ice and beverage dispensers</p> 	<p>Top mount on Follett ice storage bins</p> 
<p>Important specifier notes</p> <ol style="list-style-type: none"> 1. Dispenser must be compatible with nugget ice. See page 5 for compatible ice and beverage dispenser models and top kit numbers. 2. Verify ceiling or soffit height to ensure sufficient top clearance. 	<p>Important specifier notes</p> <ol style="list-style-type: none"> 1. See page 6 for critical clearance requirements. 2. Ice transport tube ships with Vision ice and beverage dispenser (Vision applications only). 	<p>Important specifier notes</p> <ol style="list-style-type: none"> 1. See form# 8590 for bin sizing. 2. Verify ceiling or soffit height to ensure top clearance. 3. Locate floor sink or grate and drains in front of storage bin. 4. Do not position bin drain lines to block Ice•Devlce™ bin cart.
<p>RIDE model – ice and beverage dispensers (by others)</p> 	<p>RIDE model – drop-in beverage dispensers (by others)</p> 	<p>RIDE model – Follett ice storage bins</p> 
<p>Important specifier notes</p> <ol style="list-style-type: none"> 1. Dispenser must be compatible with nugget ice. Compatible dispensers include Cornelius DB/ED/DF150/175, Lancer 4500-22N, FS-16N and FS-44N, Servend MD150/175/200/250 SV150/175/200/250 and Follett Symphony Plus™ 110CM, as well as dispensers listed on page 5. 2. Coca-Cola Freestyle 7100 requires top adapter IC Code 46751 and ice kit IC Code 46430 only, and must be ordered from Coca-Cola. Coca-Cola Freestyle 9100 requires top kit HSF26SC. Consult with Coca-Cola and Follett to qualify application prior to ordering. 3. RIDE application is approved only for Pepsi Spire 3.0, 5.0 and 4.1 designed for top mount ice machines and requires MSP24SC for 3.0 and MSP30SC for 5.0 and 4.1, ordered separately. For manual fill versions of Pepsi Spire 3.0, 5.0 and 4.1, contact factory. 4. See page 6 for critical clearance requirements. 	<p>Important specifier notes</p> <ol style="list-style-type: none"> 1. Compatible with the following dispensers: Cornelius 1522, 1722, 2323 and Lancer 2200, 2300, 23300. 2. Requires 12.00" (30.5 cm) of access space for installation on transport tube side. 3. See page 6 for critical clearance requirements. 	<p>Important specifier notes</p> <ol style="list-style-type: none"> 1. See form# 8590 for bin sizing. 2. Locate floor sink or grate and drains in front of storage bin. 3. Do not position bin drain lines to block Ice•Devlce bin cart.

1 – Locating the ice machine (continued)

Top mounting – compatible ice and beverage dispensers ¹					
Manufacturer	Model Number	Width in (cm)	Depth ² in (cm)	Height ³ in (cm)	Top kit
Coca-Cola dispensers	Freestyle 7000	30.10 (76.5)	33.11 (79.0)	47.00 (119.4)	H22F30-F ^{4,5}
	Freestyle 7100	30.00 (76.2)	33.80 (85.8)	47.00 (119.4)	H22F30-F ^{4,6}
	Freestyle 9000	25.50 (64.8)	35.50 (90.2)	73.75 (187.3)	H22F24-F ^{4,7}
	Freestyle 9100	25.50 (64.8)	39.25 (99.7)	77.25 (196.2)	H22F26-F ⁴
Cornelius dispensers	DB/ED/DF 200 series	30.00 (76.2)	30.00 (76.2)	34.38 (87.3)	H22C30-F or H22C30-X ⁸
	DB/ED/DF 250 series	30.00 (76.2)	30.00 (76.2)	38.38 (97.5)	H22C30-F or H22C30-X ⁸
	DB/ED/DF 300 series	44.00 (111.8)	30.00 (76.2)	34.00 (86.4)	H22C44-(F or B) ⁹
	FlavorFusion/Overload	30.00 (76.2)	33.13 (84.2)	39.38 (100.0)	H22C30-F-FF
	IDC215	30.00 (76.2)	33.13 (84.2)	39.38 (100.0)	H22C30-F-IDC
	IDC255 and Pro Fast Gate	30.00 (76.2)	33.13 (84.2)	36.38 (92.4)	H22C30-F-IDC
	IDC Pro	30.00 (76.2)	33.13 (84.2)	40.25 (102.2)	H22C30-X-PRO ¹⁰
Lancer dispensers	4500-30N	30.00 (76.2)	30.50 (77.5)	36.50 (92.7)	H22L30-(F or B) ⁹
	FS-22N	22.00 (55.9)	30.50 (77.5)	42.13 (107.0)	H22L22-F
	FS-30N	30.00 (76.2)	30.50 (77.5)	42.13 (107.0)	H22L30-(F or B) ⁹
	Bevariety	30.00 (76.2)	31.00 (78.7)	37.75 (95.9)	H22L30-F-STP
	Sensation 30"	30.00 (76.2)	31.00 (78.7)	38.25 (97.2)	H22L30-F-STP
	Sensation 44"	44.00 (111.8)	31.00 (78.7)	39.38 (100.0)	H22L44-F-STP
	Touchpoint	32.50 (82.55)	33.70 (85.6)	40.00 (101.6)	H22L30-F-STP
Pepsi dispensers	Spire 3.0	27.00 (68.6)	35.00 (88.9)	38.12 (96.8)	H22P24-F
	Spire 5.0 / 4.1	30.50 (77.5)	36.00 (91.4)	42.75 (108.6)	H22P30-F
Servend dispensers	MDH-302	42.75 (108.6)	31.00 (78.7)	32.38 (82.2)	H22S44-(F or B) ⁹
	MDH-402	60.00 (152.4)	30.50 (77.5)	32.38 (82.2)	H22S60-(F or B) ^{9,11}

¹ All approved dispensers can be filled with a RIDE model Horizon Elite ice machine without a top kit except Pepsi Spire 3.0, 5.0 and 4.1, see page 4 for details.

² Requires minimum 0.50" (1.27 cm) clearance between back of dispenser and wall.

³ Net height after installation of top kit (excluding height of ice machine).

⁴ Consult with Coca-Cola and Follett to qualify application prior to ordering.

⁵ Top adapter IC Code 46412 and ice kit IC Code 46430 must also be ordered from Coca-Cola.

⁶ Top adapter IC Code 46753 and ice kit IC Code 46430 must also be ordered from Coca-Cola.

⁷ Adapter must also be ordered from Coca-Cola. KO IC Code: 46010 (Silver), 46011 (Red) or 46012 (Black).

⁸ Top designed with flexibility to accommodate front or back mounting.

⁹ Specify "F" for front facing, or "B" for backward facing units.

¹⁰ Top designed with flexibility to accommodate front or back mounting.

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

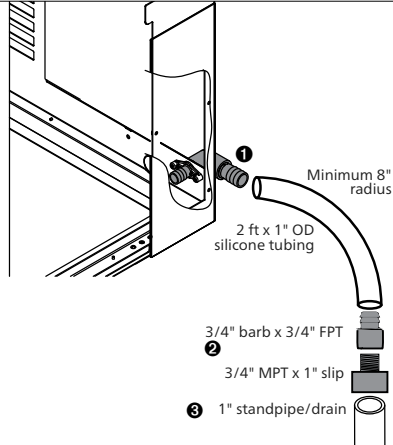
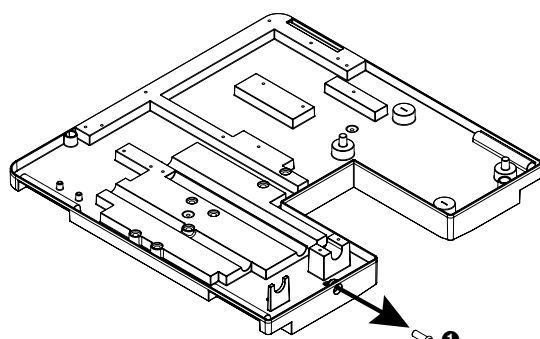
2 – Undercounter/in-cabinet mounting

Cabinet details	
<p>Important specifier notes</p> <ol style="list-style-type: none"> 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). 2. Cabinet base must be capable of supporting ice machine and allow ice machine to rest flat on cabinet bottom. 3. No counter supports, electric or plumbing can run in front of the ice machine. 	<p>Ice transport tube minimum 1/4" per foot (2 cm per meter) pitch toward ice machine secure to prevent dips and traps from forming</p> <p>Cabinet door opening 24.00"W x 23.5"H (60.9 cm x 59.7 cm) minimum</p> <p>slides out</p> <p>Cabinet base must be flat and free of obstructions (no lip or utilities to block removal)</p> <p>12.00" (30.5 cm) minimum between ice machine and dispenser</p>

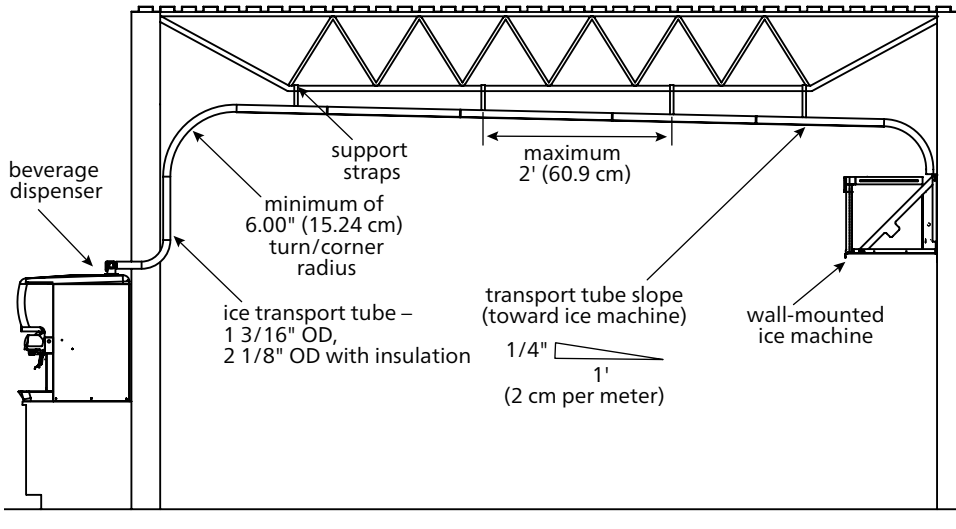
3 – Horizon Elite ice machine mounting accessories

Optional wall mount bracket	Optional machine stand	Important specifier notes
<p>23.00" (58.4 cm)</p> <p>25.50" (64.8 cm)</p> <p>22.00" (55.9 cm)</p>	<p>6.88" (17.5 cm)</p> <p>A - 15.875" (40.3 cm) C - 13.00" (33.0 cm) B - 19.375" (49.2 cm) D - 21.00" (53.3 cm)</p>	<ol style="list-style-type: none"> 1. For secure wall mounting, specify optional wall mount bracket. 2. Wall and fasteners must support the weight of the ice machine, bracket, supply water and ice. Use of a backing board may be required with hollow wall construction. 3. Machine stand mounting adds 6.88" (17.5 cm) to height of ice machine. 4. No dips in tube routing allowed. 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.

4 – Horizon Elite drains - specifier guidelines

<p>Ice machine drain plumbing</p>  <p>Minimum 8" radius 2 ft x 1" OD silicone tubing</p> <p>3/4" barb x 3/4" FPT 3/4" MPT x 1" slip 1" standpipe/drain</p>	<p>Important specifier notes: Where code allows, follow recommendation below.</p> <ol style="list-style-type: none"> 1. Apply Teflon tape to 3/4" male outlet ice machine fitting. Thread on either the provided straight 3/4" barb adaptor or a 90 degree adaptor. Connect the supplied 2' (0.61 m) silicone hose to the 3/4" drain barb ❶. 2. It is recommended that the silicone hose be routed down into a 1.5" or 2" standpipe/drain. The minimum drain size for the ice machine is 1". <p>Note: 3/4" to 1" PVC adapter fittings are provided if a larger drain size is not possible ❷ ❸.</p> <p>Note: Minimum 8" radius on silicone drain line. Drain line from the ice machine must have at least 1/4" per foot pitch (6.4 mm/0.3 m).</p> <p>Note: Standpipe/drain provided by others. All other components provided with ice machine.</p>
<p>Chassis drain plumbing – Required</p> 	<ol style="list-style-type: none"> 1. Remove white 3/8" plug from rear push-in fitting ❶. 2. Route 3/8" OD drain tubing (preferably copper) through rear of docking station and fully insert into chassis base push-in fitting. Route into drain standpipe. 3. Gravity drain. Ensure 3/8" OD tubing slopes down into drain standpipe without forming a trap.

5 – Horizon Elite ice tube runs - specifier guidelines

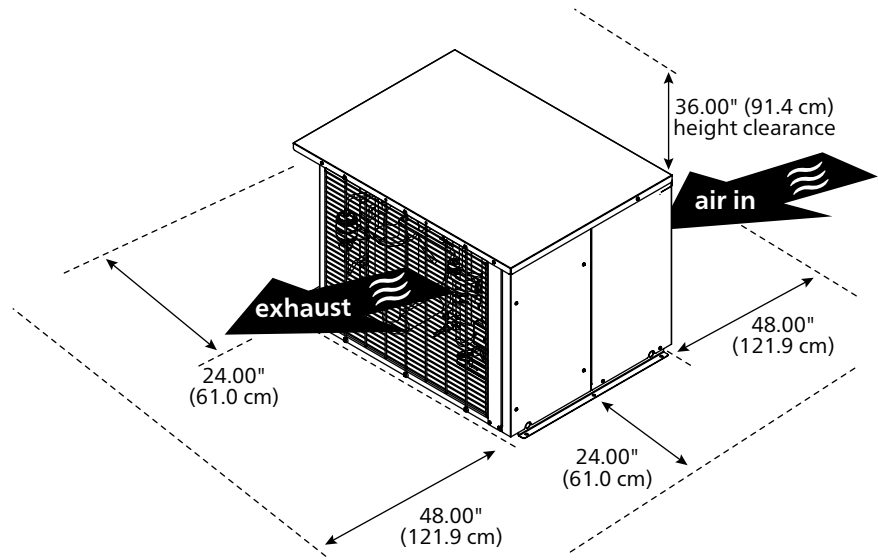
<p>Long tube runs for RIDE remote ice delivery equipment</p>  <p>beverage dispenser</p> <p>support straps</p> <p>minimum of 6.00" (15.24 cm) turn/corner radius</p> <p>ice transport tube – 1 3/16" OD, 2 1/8" OD with insulation</p> <p>maximum 2' (60.9 cm)</p> <p>transport tube slope (toward ice machine) 1/4" (2 cm per meter)</p> <p>wall-mounted ice machine</p>	<p>Important specifier notes</p> <ol style="list-style-type: none"> 1. 75' (22.9 m) maximum ice transport tube run. 2. Tubing routing bends must have a 6.00" (15.24 cm) radius or larger. 3. Dips and traps are not allowed. A 3" (7.62 cm) or larger PVC pipe chase is suggested to support the tubing run. If not supported, secure insulated ice transport tube at least every 2' (0.61 m) to prevent drips and traps. 4. Relative humidity levels above 80% in areas where the ice machine or ice transport tube is located may produce excessive condensation that will cause water damage. 5. Contact factory for recommendations on running tubing through a decorative soffit or chase.
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Remote condensing unit

Condensing unit installation specifications

Important specifier notes

1. Provide front, back, top and side clearances as shown.
2. The maximum refrigerant line run length is 100' (30.5 m).
3. The maximum line rise above the evaporator is 35' (10.7 m). Condensing unit above evaporator unit – 35' (10.7 m) (installations with rise over 20' (6.1 m) require additional suction line s-trap at midpoint rise) and p-trap at top of riser.
4. The evaporator can only be mounted a maximum of 15' (4.6 m) above the condensing unit.
5. P-trap required at bottom of suction riser.



Ice production – Horizon Elite 1412 series

Inlet water temperature F (C)	Ambient air temperature F (C)						lb (kg) production in 24 hr
	60 (16)	70 (21)	80 (27)	90 (32)	100 (38)	110 (43)	
50 F (10 C)	1391 (755)	1371 (744)	1339 (726)	1306 (701)	1235 (668)	1165 (629)	
60 F (16 C)	1301 (705)	1280 (693)	1251 (677)	1222 (661)	1156 (624)	1090 (588)	
70 F (21 C)	1224 (662)	1215 (657)	1176 (636)	1138 (614)	1077 (581)	1016 (547)	
80 F (27 C)	1156 (624)	1149 (621)	1113 (601)	1077 (581)	1020 (549)	962 (517)	
90 F (32 C)	1075 (580)	1055 (568)	1036 (558)	1016 (547)	962 (517)	908 (487)	

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Remote 1412 series ice machine