



bev✓**chek**
TELEMETRY

Telemetry Installation Guide

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Current as of June, 2024

1053732

EVERY SINGLE DRAFT SYSTEM IS DIFFERENT

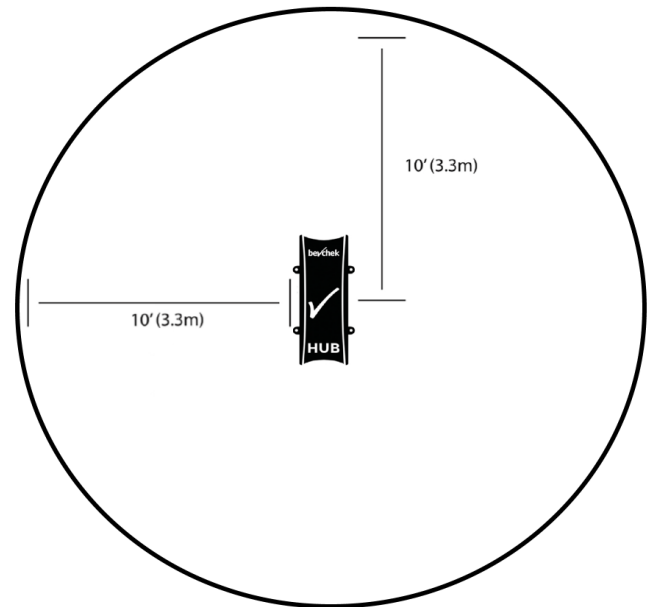
Every single draft system is different from building to building with an infinite number of configurations. Each system contains the following:

- (A)Parts** Barbs, Clamps, Screws, Zipties, extra parts
- (B)Sensors and Meters** Various - Depends on the system configuration
- (C)Hub** Data collection hub with ports for sensors
- (D)Cable** Data Cable, 25ft(6.6) in length (in the box **(C)Hub**)
- (E)Comnode** Communication Node: Cellular and power center

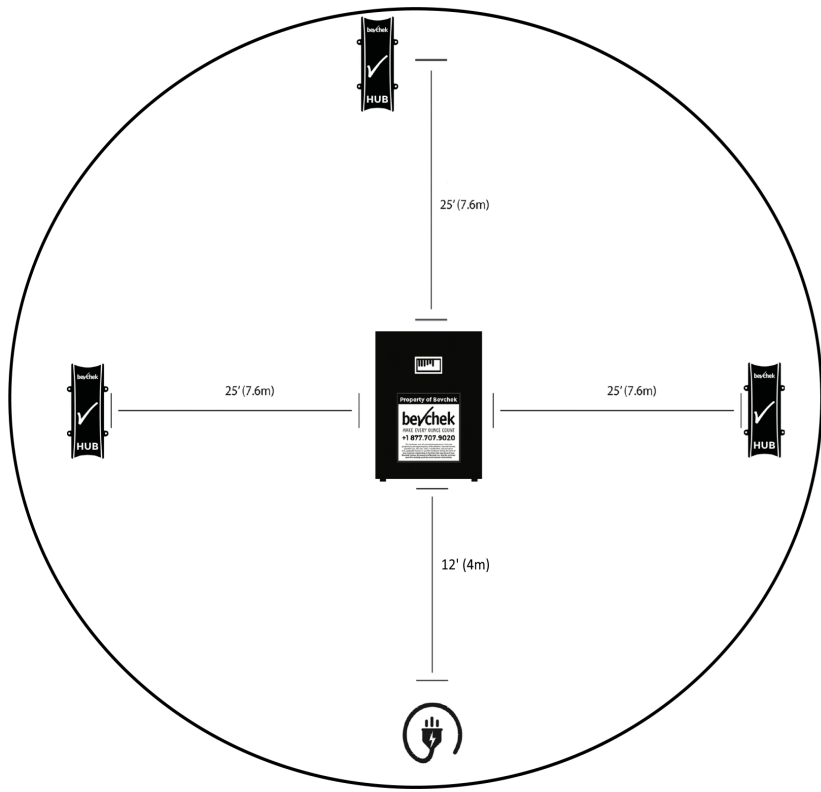
Part #	Description
1053622	Bevchek Kit, For One Power Pak, W/One Pump
1053623	Bevchek Kit, For One Power Pak, W/Two Pumps
1053597	Bevchek Cellular Comnode
1053551	Bevchek Telemetry Hub 16 Port
1053556	Bevchek Cooler Air Temperature Sensor
1053596	Bevchek Cooler Fluid Temperature Sensor
1053595	Bevchek Cooler Glycol Bath Temperature Sensor
1053547	Glycol Flow Sensor- Digmesa Fhku John Guest 3/8" or 1/2"
1053598	Bevchek Sensor Cable Extension, 15 Feet

THINGS TO KEEP IN MIND WHEN INSTALLING

1. A **(C)Hub** has 16 sensor ports. (and +1 onboard ambient temperature)
1. Each **(B)Sensors and Meters** has a cable of 10ft(3.3m) and requires one(1) port on a **(C)Hub**
2. **THEREFORE**, each **(C)Hub** has a radius of 10' (3.3m) for sensors in that area



3. A **(E)Comnode** has three (3) ports for **(C)Hubs**. Each **(C)Hub** comes with a cable of has a cable of 25ft(7.6m)
4. Each **(E)Comnode** has a 12ft(4m) power cable included
5. **THEREFORE**, each **(E)Comnode** has a radius of 25ft(7.6m)for **(C)Hubs** in that area.



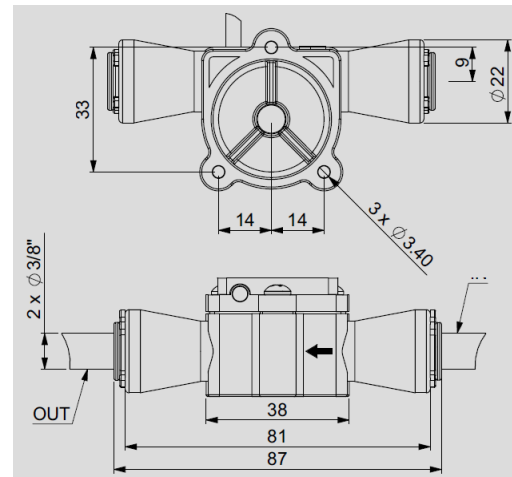
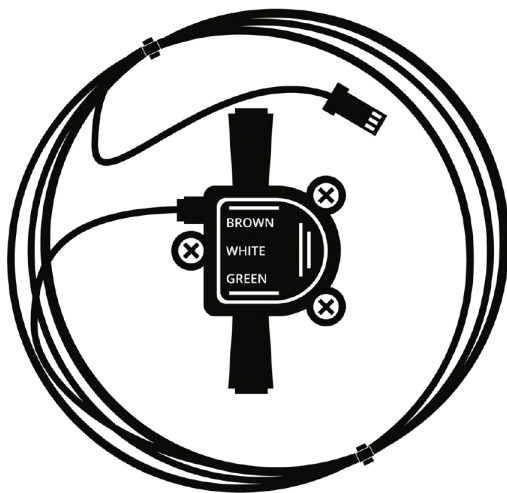
Work from the Sensors → Hub → Comnode. The Comnodes have the most flexibility in positioning and the sensors have the least.

STEP 1: INSTALL THE SENSORS

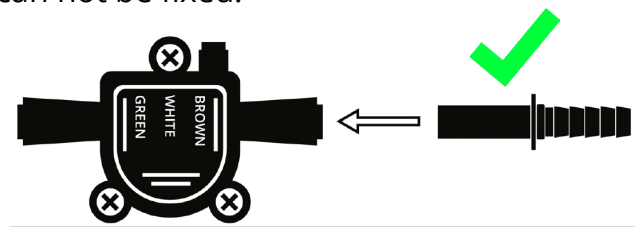
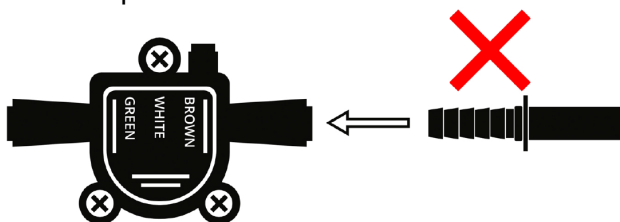
Bevchek Telemetry Systems come with a large variety of sensors and sensor types. You may have multiple of one type, or not have others. Below are the installation instructions for each sensor type

For ALL sensors, use the included Zip Ties to run the wires to **(C)Hub** and note the number on the side of the **(C)Hub**. Bevchek will need to know which sensor is in which port.

GLYCOL PUMP FLOWMETERS:



1. Turn the temperature of the glycol power pack to 34F (1C) or higher; wait at least 10 minutes.
 - a. This is to ensure there is no flash freezing in glycol system if the Glycol mix percentage (strength) is too low.
2. While waiting for the glycol to warm up, open sensor packaging and remove Glycol pump flowmeter and the two(2) barb/clamp bags.
3. Based on system type, choose a barb and clamp combination.
 - a. Glycol Flowmeters come with parts for glycol lines that are half inch (1/2") ID and three-eighth (3/8") ID.
4. Grab the ridged/barb side of the fitting and push the 3/8th **tube** into the flowmeter. DO NOT push the barbed side into the meter, it can not be fixed.



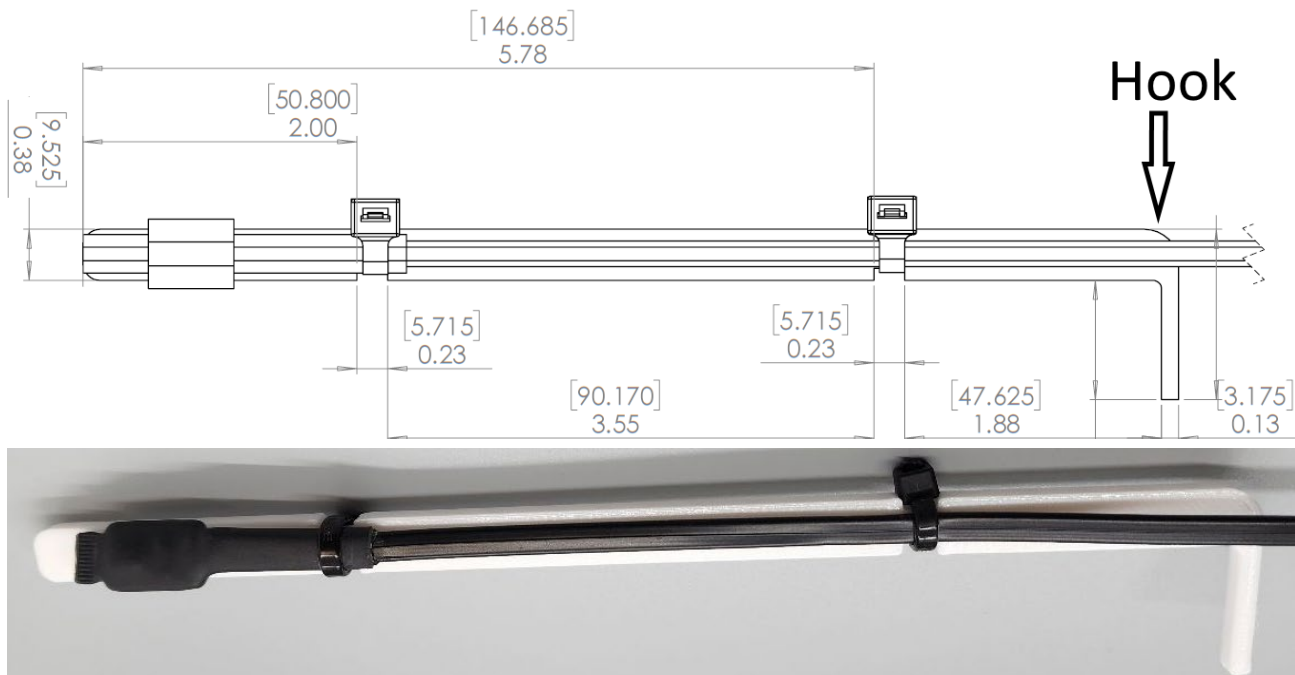
5. When the power pack is above 34F(1C), turn off and unplug the power pack.
6. Find the return line of the power pack and, using **(F)Tools** (or your own), cut at 90 degrees into the glycol tube. Remove 2.5" or 6cm of the glycol line tube. All cuts MUST be within 10ft (3.3m) of the **(C)Hub** location.
7. Place the clamps to match the barb size onto each side of the cut tubes.
8. Push Flowmeter into the glycol line on each side and use the crimper from **(F)Tools** (or your own) to close clamp around each tube with flowmeter barb inside.
9. **NOTE: the flowmeter has an (←) arrow on the side indicating the direction of glycol flow from the return line, into the power pack.**
10. Plug in, and turn on, the glycol power pack.
11. Adjust the temperature of the power pack back down to the preset level for the desired manufacturer. Generally 27F to 31F (-4C to -1C)
12. Use the included zip ties to secure the wires from each sensor to **(C)Hub**.
13. Plug sensors into **(C)Hub**, note the port number from the side of the **(C)Hub**
14. **Notify Bevchek of the sensor type and into which Port number.**

SPECIFICATIONS:

Operating Temperature:	-20°C .. 90°C
Operating pressure:	16 bar
Max. pressure:	40 bar
Process connections:	3/8" John Guest Quick Connect with Variable size barb
Output frequency:	30 seconds to 5 minutes
Length cable:	10 feet standard or 3.3m
Maximum Cable Length:	70' (23.3m)
Restriction:	0.2 lbs
Hub Ports required:	1

GLYCOL BATH TEMPERATURE:

NOTE: This sensor is for non-pressurised glycol systems, in case of a sealed pressurised glycol system please contact Bevchek.

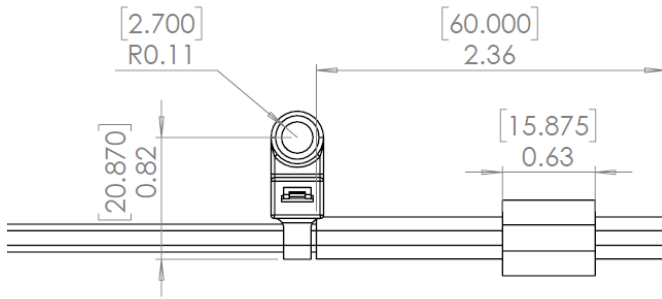


1. Open the glycol bath tank or pull out the rubber plug on the glycol power pack bath.
2. Place the Glycol Bath temperature sensor vertically into the glycol bath and secure into place using a zip tie with the hook holding the edge of the bath or plug.
3. Close the glycol bath. If there is a rubber plug, cut a notch into the bottom of the plug
4. Use the included zip ties to run the wires from each sensor to **(C)Hub**.
5. Plug sensors into **(C)Hub**, note the port number from the side of the **(C)Hub**
6. **Notify Bevchek of the sensor type and into which Port number.**

SPECIFICATIONS:

Range:	-40°C .. 125°C
Accuracy:	±0.2°C
Scan frequency:	30seconds to 5 minutes
Power:	+12 Volt 3,5 mAmp (+5,5 +20 Volt)
Dimensions:	8.92" x 2.25" x 0.45"
Output frequency:	30 seconds to 5 minutes
Length cable:	10 feet standard or 3.3m
Maximum Cable Length:	70' (23.3m)
Hub Ports Required:	1

COOLER AIR TEMPERATURE:



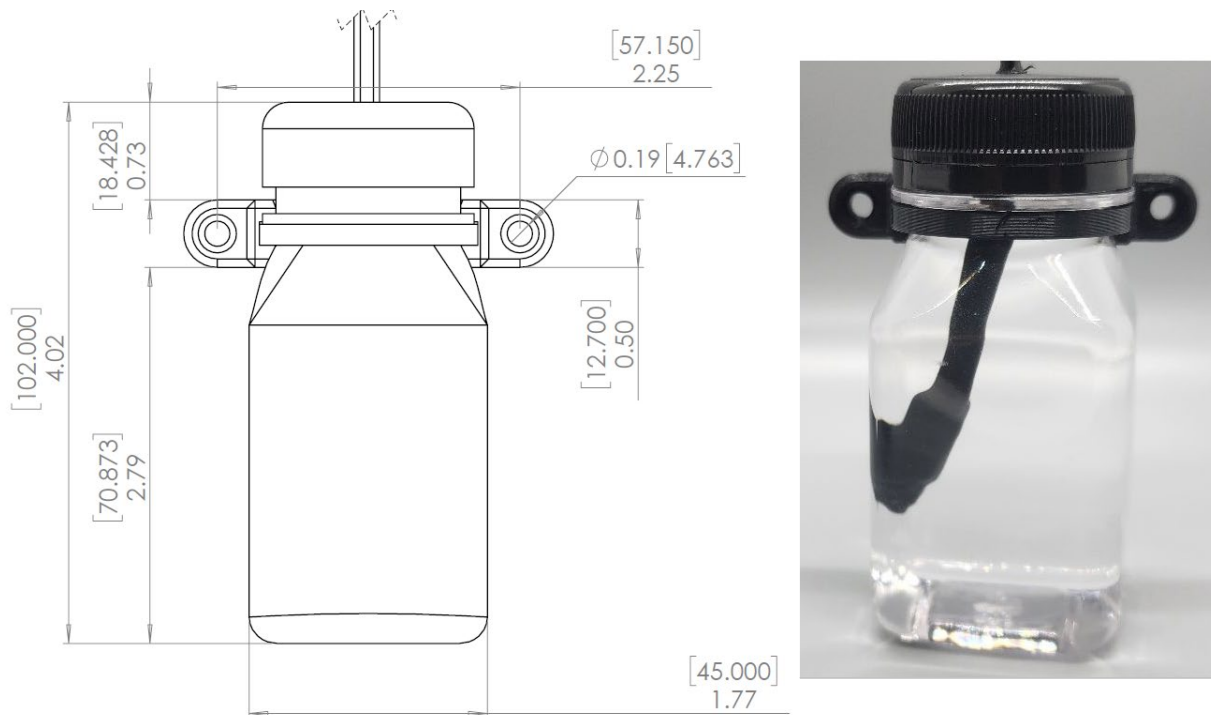
NEED: 3/8th drill bit to go through cooler wall

1. The Cooler Air sensor should be placed out of the direct path of the HVAC Fans and away from the door if possible.
2. Inside the cooler, mount the Cooler Air Sensor using the R11 screw hole onto the cooler wall using the provided screw
3. On the path from the Cooler Air Sensor to the **(C)Hub**, Drill a hole through the cooler wall with a 3/8th drill bit. The “plug end” of the sensor is designed to fit through a 3/8th hole through the cooler to connect with the Hub.
4. Run the cable from the Cooler Air Sensor, through the 3/8th hole to the **(C)Hub**
5. Plug sensors into **(C)Hub**, note the port number from the side of the **(C)Hub**
6. **Notify Bevchek of the sensor type and into which Port number.**

SPECIFICATIONS:

Range:	-40°C .. 125°C
Accuracy:	±0.2°C
Scan frequency:	30 seconds to 5 minutes
Power:	+12 Volt 3,5 mAmp (+5,5 +20 Volt)
Dimensions:	8.92" x 2.25" x 0.45"
Output frequency:	30 seconds to 5 minutes
Length cable:	10 feet standard or 3.3m
Maximum Cable Length:	70' (23.3m)
Hub Ports Required:	1

COOLER FLUID TEMPERATURE:

**NEED:** 3/8th drill bit to go through cooler wall

1. The Cooler Fluid Sensor should be placed out of the direct path of the HVAC Fans and away from the door if possible.
2. Inside the cooler, mount the Cooler Fluid Sensor using the two(2) R11 screw holes onto the cooler wall using the provided screws
3. On the path from the Cooler Fluid Sensor to the **(C)Hub**, Drill a hole through the cooler wall with a 3/8th drill bit. The "plug end" of the sensor is designed to fit through a 3/8th hole through the cooler to connect with the Hub.
4. Run the cable from the Cooler Fluid Sensor, through the 3/8th hole to the **(C)Hub**
5. Plug sensors into **(C)Hub**, note the port number from the side of the **(C)Hub**
6. **Notify Bevchek of the sensor type and into which Port number.**

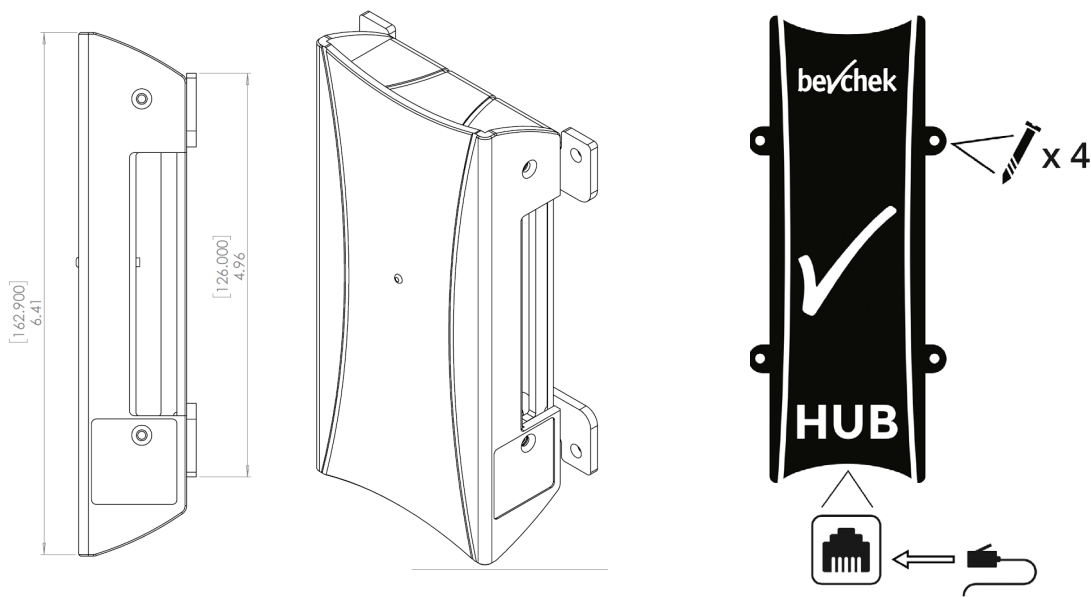
SPECIFICATIONS:

Range:	-40°C .. 125°C
Accuracy:	±0.2°C
Scan frequency:	30seconds to 5 minutes
Power:	+12 Volt 3,5 mAmp (+5,5 +20 Volt)
Dimensions:	8.92" x 2.25" x 0.45"
Output frequency:	30 seconds to 5 minutes
Length cable:	10 feet standard or 3.3m

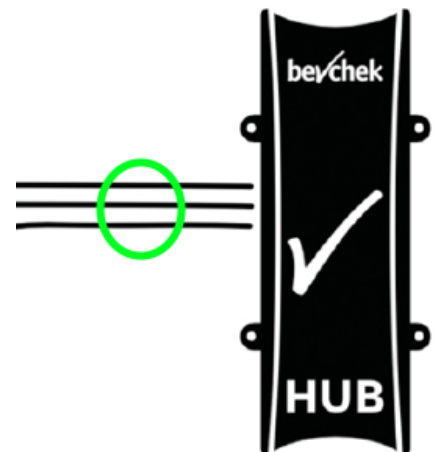
Maximum Cable Length:	70' (23.3m)
Hub Ports Required:	1
Chassis Volume:	4oz Glycol Mix
Mounting:	2x 3/8 th Mounting points
Hub Ports required:	1

STEP 2: THE HUB

(The following instructions are also included inside the Comnode)



1. Find a location as near to the Glycol Power pack as possible and within 10ft (3.3m) of all **(B)Sensors and Meters**. Avoid placement in front of fans and around water and dripping condensation.
2. Using the included screws, mount **(C)Hub**
3. Finish running the cable from the Various Sensors to the **(C)Hub**
4. Plug sensors into **(C)Hub** and note the port number from the side of the **(C)Hub**
5. Use Eye-Zip ties included with **(C)Hub** to lift cables and screw into place to relieve tension on ports
6. **Notify Bevchek of the sensor type into which Port number.**



SPECIFICATIONS:

Chassis footprint:	6.42" x 4.01" x 1.42"
Communication protocol:	Ethernet
MAC address:	Serial Number
Sensor ports:	16
Hardware connectivity:	Dynamic IP allocation
Data connection:	RJ45
Supply source:	POE IEEE 802.3af
Chassis label:	Yes, "Bevchek", "ID", "IN"
Chassis material:	ABS Plastic
Chassis external ports:	1
External Notifications:	Blinking color light = Bad. Solid color light = Good.

STEP 5: MOUNT COMNODE

(The following instructions are also included inside the Comnode)

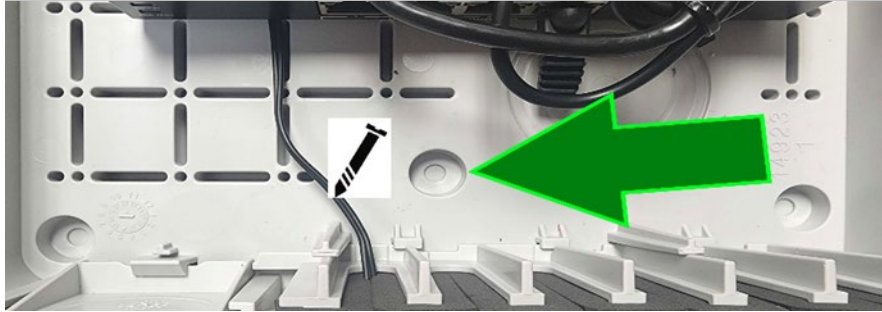
NOTES:

1. The **(E)Comnode** contains a cellular connection and must be outside of the cooler.
2. There is a latch to open on the right side.
3. **DO NOT TOUCH THE RED/BLACK VELCRO STRAP** (Please)



1. Find a location within 12ft (4.3m) of a power source, AND within 25' of the **(C)Hub**, next to the cooler door if possible.

2. Mount **(E)Comnode** onto the wall using the included screws



3. Pull out the power supply and Power supply cord.
4. Plug the Power supply into a 110V power outlet.
5. Using included screws, screw down both sides to the power adapter.



SPECIFICATIONS:

Chassis footprint:	9.4" x 9.1" x 3.6"
Communication protocol:	Ethernet and Cellular(AT&T)
Ports:	3
Hardware connectivity:	Dynamic IP allocation
Data connection:	RJ45
Supply source:	NZ 120V type B
Supply Output:	Power Over Ethernet(POE)
POE Standard:	IEEE 802.3af
Chassis labels:	Yes, "Bevchek"
Chassis material:	ABS Plastic

External notification:

White Modem Lights:

- Top Right = Power
- Middle = Data Transfer
- Far Left = Cellular Signal
 - Green = 100%
 - Yellow = 50%
 - Red = 25%
 - Grey = 0%

STEP 6: RUN DATA CABLE

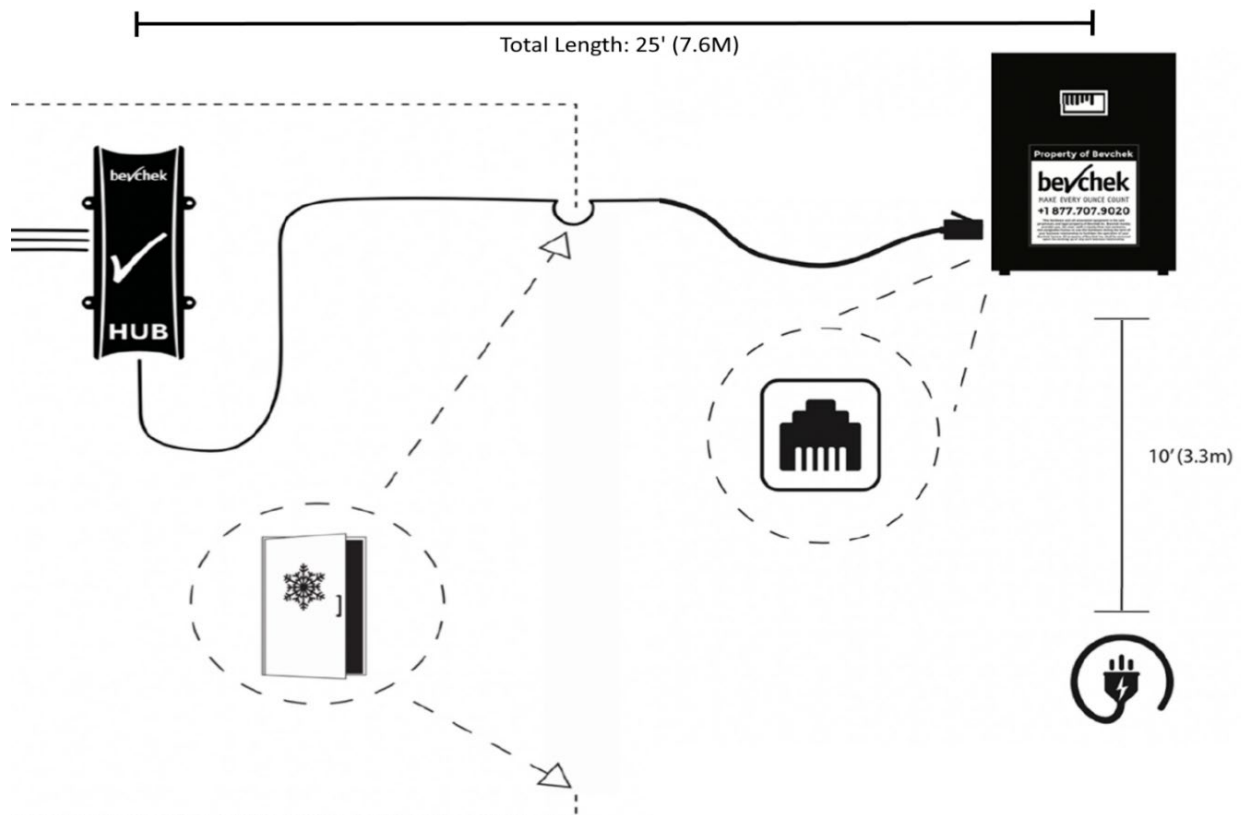
NOTES: IF the **(C)Hub** is inside the cooler, follow the directions below. Otherwise, run the cable direct as needed

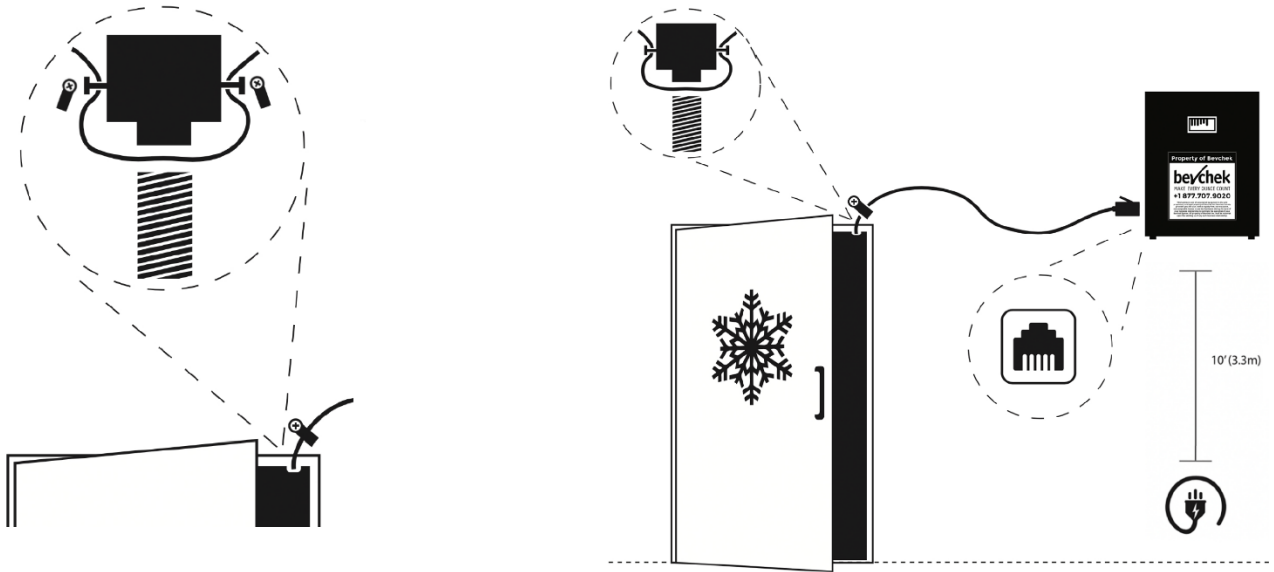
1. The system comes with a 25'(7.6m) cable standard but can be increased up to 300' using standard network hardware.
2. Open **(D)Cable** and plug into bottom of **(C)Hub**.
3. Using provided zip ties, run the cable to the **(E)Comnode** and plug into the black switch on any port as marked. Using Use Eye-Zip ties included with **(D)Cable**, run cable through the cooler door. (see below)



NOTE: LEAVE LOOSE AND FLAT THROUGH THE DOOR.

(IF Hub outside Cooler, run directly to Comnode next to cooler door. If Hub inside cooler, see below.)





Hardware Notes

FLOWMETER PLACEMENT	<ul style="list-style-type: none">• Flowmeters must be placed 48 inches (120cm) from the shank.• On a long draw, it is recommended they are placed after the FOB before the trunk line.• Each flowmeter has a cable length of 10ft (3.3m) and must reach a hub. Extensions are available for purchase if necessary.
HUB LIGHTS	<ul style="list-style-type: none">• Bottom lights: [Green=power, Yellow=Data]• Top/Front Light:<ul style="list-style-type: none">○ BLUE = Booting up○ Green = Connected and reporting○ Blinking Red/Green = On, can not see servers
COMNODE LIGHTS	<ul style="list-style-type: none">• Black Switch Lights: [Green=power, Yellow=Data]• Modem Lights:<ul style="list-style-type: none">○ Top Right = Power○ Middle = Data Transfer○ Far Left = Cellular Signal<ul style="list-style-type: none">▪ Green = 100%▪ Yellow = 50%▪ Red = 25%▪ Grey = 0%



Thank you.

We appreciate your taking the time and effort to make this installation go as smoothly as possible. When in doubt, we're here for you; call us anytime.



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