

# DETERMINE GLYCOL CHILLER SIZE

## SIZE BY BTU LOAD, NOT LENGTH OF RUN

Select the right glycol chiller for a draft beer system by calculating its total BTU (British Thermal Unit) load. A chiller's BTU rating is how much heat it can pull out of the system as it circulates glycol. Every system puts a different BTU load on the chiller keeping it cold, based on faucet count, trunk line length and tube size. If that load runs the compressor too hard to hold the glycol bath temperature, the compressor wears out faster and the beer runs warm. Sizing the chiller correctly from the start avoids both an overworked compressor and paying for cooling capacity you will never use.

## BTU FORMULA

Calculate using 100 BTU per faucet, plus your trunk line's BTU per foot (see the tables on pages 2 and 3), plus a base load for the system itself. Add these together, then multiply by a safety factor to get the total BTU per hour the chiller must produce.

$$\text{Required BTU/hr} = [(\text{Faucets} \times 100) + (\text{Trunk Length} \times \text{BTU/ft}) + \text{Base Load}] \times \text{Safety Factor}$$

## EXAMPLE

3/8" trunk line, part TRE1461 (USA), 4 faucets, 50 ft run, 500 BTU/hr base load, 1.25x safety factor, 36°F dispense

|                   |               |                 |
|-------------------|---------------|-----------------|
| FAUCETS           | BTUS / FAUCET | FAUCET LOAD (A) |
| 4                 | × 100         | = 400           |
| TRUNK LENGTH (FT) | BTU / FT      | TRUNK LOAD (B)  |
| 50                | × 11.2        | = 560           |
| BASE LOAD (C)     |               |                 |
| 500               |               |                 |
| SUBTOTAL (A+B+C)  | SAFETY FACTOR |                 |
| 1460              | × 1.25        | = 1825          |

Round up to the next chiller size at or above 1,825 BTU/hr.

## YOUR SYSTEM

Fill in your own faucet count, trunk length and BTU/ft from the tables on pages 2 (USA) and 3 (Canada).

|                   |               |                 |
|-------------------|---------------|-----------------|
| FAUCETS           | BTUS / FAUCET | FAUCET LOAD (A) |
|                   | ×             | =               |
| TRUNK LENGTH (FT) | BTU / FT      | TRUNK LOAD (B)  |
|                   | ×             | =               |
| BASE LOAD (C)     |               |                 |
|                   |               |                 |
| SUBTOTAL (A+B+C)  | SAFETY FACTOR |                 |
|                   | ×             | =               |

Match your total to a BeverageCraft glycol chiller at or above it.

## RECOMMENDED TRUNK LINE FOR YOUR RUN LENGTH

Use this as a general starting point before you calculate. Trunk line size should scale with how far the beer travels from chiller to tower. Longer runs and warmer install spaces lose more heat along the way, which is why the exact BTU/ft from the tables on pages 2 and 3 gives a more accurate result than length alone.

| SYSTEM RUN LENGTH | RECOMMENDED TRUNK LINE |
|-------------------|------------------------|
| Up to 50 ft       | 1/4" trunk line        |
| Up to 125 ft      | 5/16" trunk line       |
| Up to 750 ft      | 3/8" trunk line        |

Pages 2 and 3 list every BeverageCraft trunkline by tube size with its exact BTU/ft, at both common dispense temperatures, to use in the formula above - page 2 for USA (Extruded Jacket, TRE series), page 3 for Canada (Taped Jacket & Duoflex Flavourlock, TRT series).

Questions about your system?

(866) 590-9299 • [sales@beveragecraft.com](mailto:sales@beveragecraft.com)



# BEVERAGECRAFT USA

## TRUNK LINE REFERENCE

BTU/ft figures below are sourced from BeverageCraft's manufacturer spec data (Extruded Jacket - TRE series), the same data used by the online BTU calculator at [beveragecraft.com](http://beveragecraft.com), shared across jacket types at a matching tube size and line count.

### 1/4" TRUNK LINE

5 SKUs available from BeverageCraft USA - Lines = product + glycol

| PART NO. | TYPE     | LINES  | BTU/FT @36°F | BTU/FT @44°F |
|----------|----------|--------|--------------|--------------|
| TRE1436  | Extruded | 4 + 2  | 7.4          | 6.3          |
| TRE1437  | Extruded | 6 + 2  | 7.9          | 6.7          |
| TRE1438  | Extruded | 8 + 2  | 8.5          | 7.3          |
| TRE1439  | Extruded | 10 + 4 | 9.0          | 7.7          |
| TRE1491  | Extruded | 12 + 4 | 9.7          | 8.3          |

### 5/16" TRUNK LINE

10 SKUs available from BeverageCraft USA - Lines = product + glycol

| PART NO. | TYPE     | LINES  | BTU/FT @36°F | BTU/FT @44°F |
|----------|----------|--------|--------------|--------------|
| TRE1440  | Extruded | 2 + 2  | 6.89         | 5.9          |
| TRE1441  | Extruded | 4 + 2  | 7.92         | 6.8          |
| TRE1442  | Extruded | 6 + 2  | 8.56         | 7.3          |
| TRE1443  | Extruded | 8 + 2  | 9.08         | 7.7          |
| TRE1495  | Extruded | 10 + 2 | 9.38         | 8.0          |
| TRE1444  | Extruded | 10 + 4 | 9.72         | 8.3          |
| TRE1489  | Extruded | 12 + 4 | 10.2         | 8.7          |
| TRE1490  | Extruded | 14 + 4 | 11.19        | 9.6          |
| TRE1820  | Extruded | 16 + 4 | 11.67        | 10.0         |
| TRE3143  | Extruded | 20 + 4 | 12.66        | 10.8         |

### 3/8" TRUNK LINE

10 SKUs available from BeverageCraft USA - Lines = product + glycol

| PART NO.  | TYPE        | LINES       | BTU/FT @36°F | BTU/FT @44°F |
|-----------|-------------|-------------|--------------|--------------|
| TRT16917Q | Glycol-Only | Glycol only | 7.2          | 6.3          |
| TRE1445   | Extruded    | 2 + 2       | 8.5          | 7.3          |
| TRE1446   | Extruded    | 4 + 2       | 9.0          | 7.7          |
| TRE1447   | Extruded    | 6 + 2       | 9.4          | 8.0          |
| TRE1448   | Extruded    | 8 + 2       | 9.7          | 8.3          |
| TRE1449   | Extruded    | 10 + 4      | 10.2         | 8.7          |
| TRE1461   | Extruded    | 12 + 4      | 11.2         | 9.5          |
| TRE1462   | Extruded    | 14 + 4      | 11.6         | 9.9          |
| TRE1819   | Extruded    | 16 + 4      | 12.1         | 10.3         |
| TRE3142   | Extruded    | 20 + 4      | 13.1         | 11.0         |

Shipping to Canada? See page 3 for BeverageCraft's Canadian trunkline catalog (Taped Jacket & Duoflex Flavourlock, TRT series).

Questions about your system?

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# BEVERAGECRAFT CANADA

## TRUNK LINE REFERENCE

BTU/ft figures below are sourced from BeverageCraft's manufacturer spec data (Taped Jacket & Duoflex Flavourlock - TRT series), the same data used by the online BTU calculator at [beveragecraft.com](http://beveragecraft.com), shared across jacket types at a matching tube size and line count.

### 1/4" TRUNK LINE

1 SKU available from BeverageCraft Canada - Lines = product + glycol

| PART NO. | TYPE    | LINES | BTU/FT @36°F | BTU/FT @44°F |
|----------|---------|-------|--------------|--------------|
| TRT1671  | Duoflex | 2 + 2 | 6.89         | 5.9          |

### 5/16" TRUNK LINE

4 SKUs available from BeverageCraft Canada - Lines = product + glycol

| PART NO. | TYPE         | LINES  | BTU/FT @36°F | BTU/FT @44°F |
|----------|--------------|--------|--------------|--------------|
| TRT1441  | Taped Jacket | 4 + 2  | 7.92         | 6.8          |
| TRT1333  | Duoflex      | 4 + 2  | 7.92         | 6.8          |
| TRT1820  | Taped Jacket | 16 + 4 | 11.67        | 10.0         |
| TRT1232  | Duoflex      | 16 + 4 | 11.67        | 10.0         |

### 3/8" TRUNK LINE

10 SKUs available from BeverageCraft Canada - Lines = product + glycol

| PART NO. | TYPE          | LINES       | BTU/FT @36°F | BTU/FT @44°F |
|----------|---------------|-------------|--------------|--------------|
| TRT3/8-2 | Recirculation | Glycol only | 7.2          | 6.3          |
| TRT1447  | Taped Jacket  | 6 + 2       | 9.4          | 8.0          |
| TRT1448  | Taped Jacket  | 8 + 2       | 9.7          | 8.3          |
| TRT1228  | Duoflex       | 8 + 2       | 9.7          | 8.3          |
| TRT1449  | Taped Jacket  | 10 + 4      | 10.2         | 8.7          |
| TRT1461  | Taped Jacket  | 12 + 4      | 11.2         | 9.5          |
| TRT1222  | Duoflex       | 12 + 4      | 11.2         | 9.5          |
| TRT1819  | Taped Jacket  | 16 + 4      | 12.1         | 10.3         |
| TRT1446  | Taped Jacket  | 4 + 2       | 7.92         | 6.8          |
| TRT1233  | Duoflex       | 16 + 4      | 11.67        | 10.0         |

Prefer to skip the math? The same formula and full trunkline catalog are built into the BTU calculator at [beveragecraft.com](http://beveragecraft.com) - enter your system details and it returns your exact BTU/hr instantly.

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