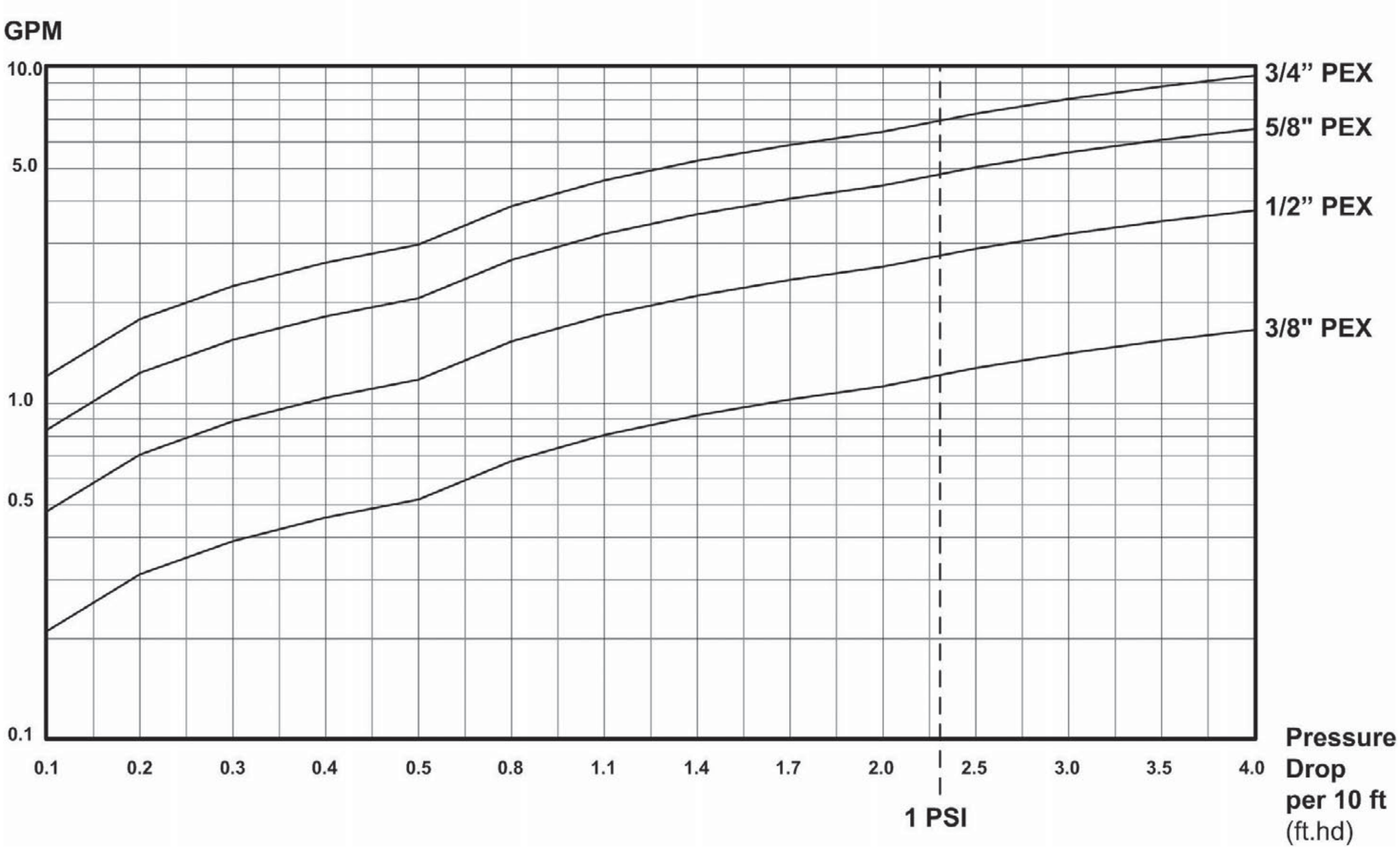
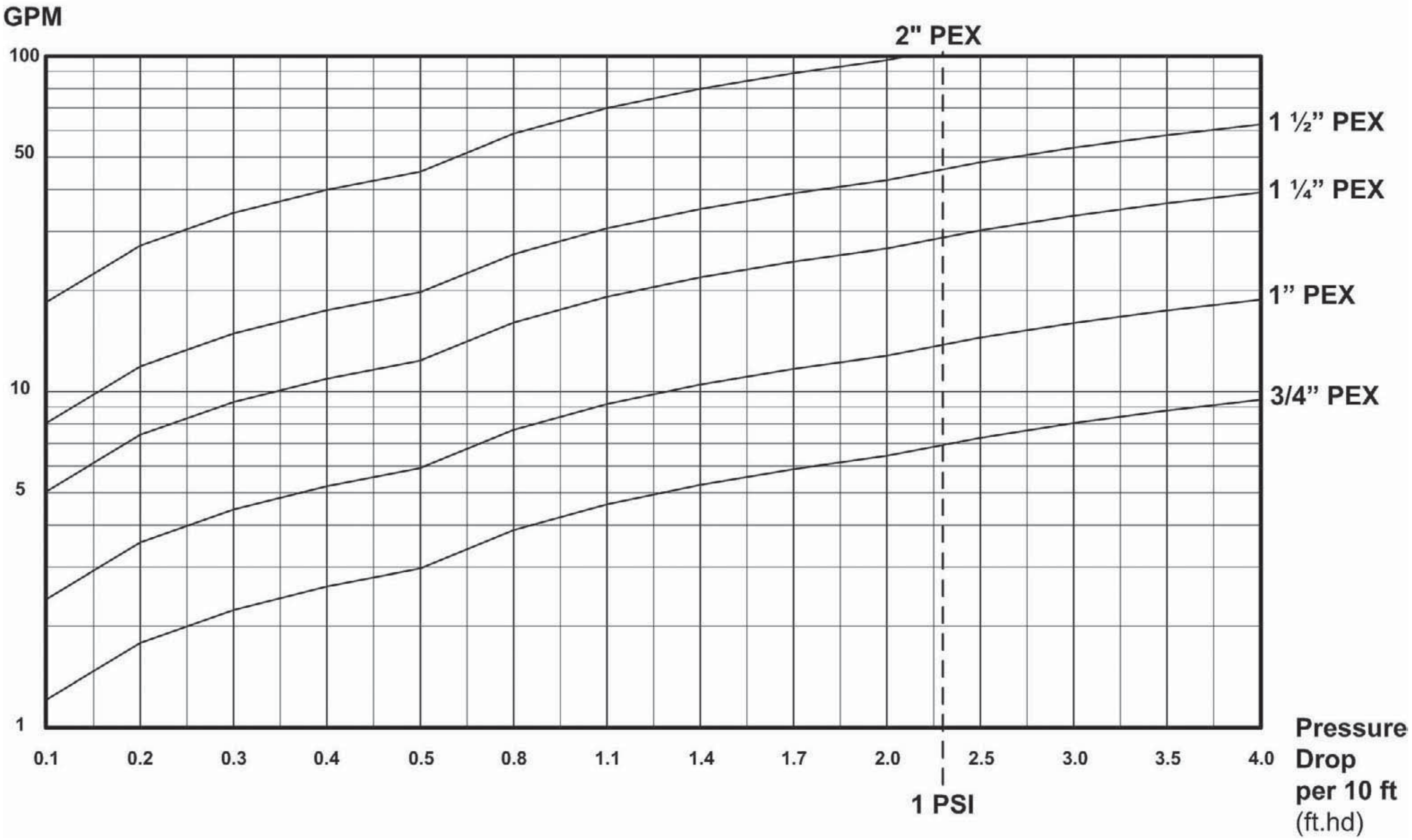
PRESSURE DROP FOR SMALL PEX TUBING AT 100 F



- Take the total heat load (BTUH) for the area that the loop is covering and divide it by 501.
- Divide the result with the Delta-T to find GPM for the loop.
- Find the closest flow for the loop in the left GPM column of the chart.
- Move to the right to the correct pipe size intersecting line.
- Move down to read to read the pressure drop per 10 feet of pipe.
- Divide the loop length by 10, then multiply the result with the given pressure drop for 10 feet to get the total pressure drop for the loop.

NOTE: This chart is for 100% water, and only includes the pressure drop for the PEX pipe itself. You need to add the drop for other equipment. For the manifold, add about 2 ft/hd. If glycol is used, use the correction charts on pages 92–93.

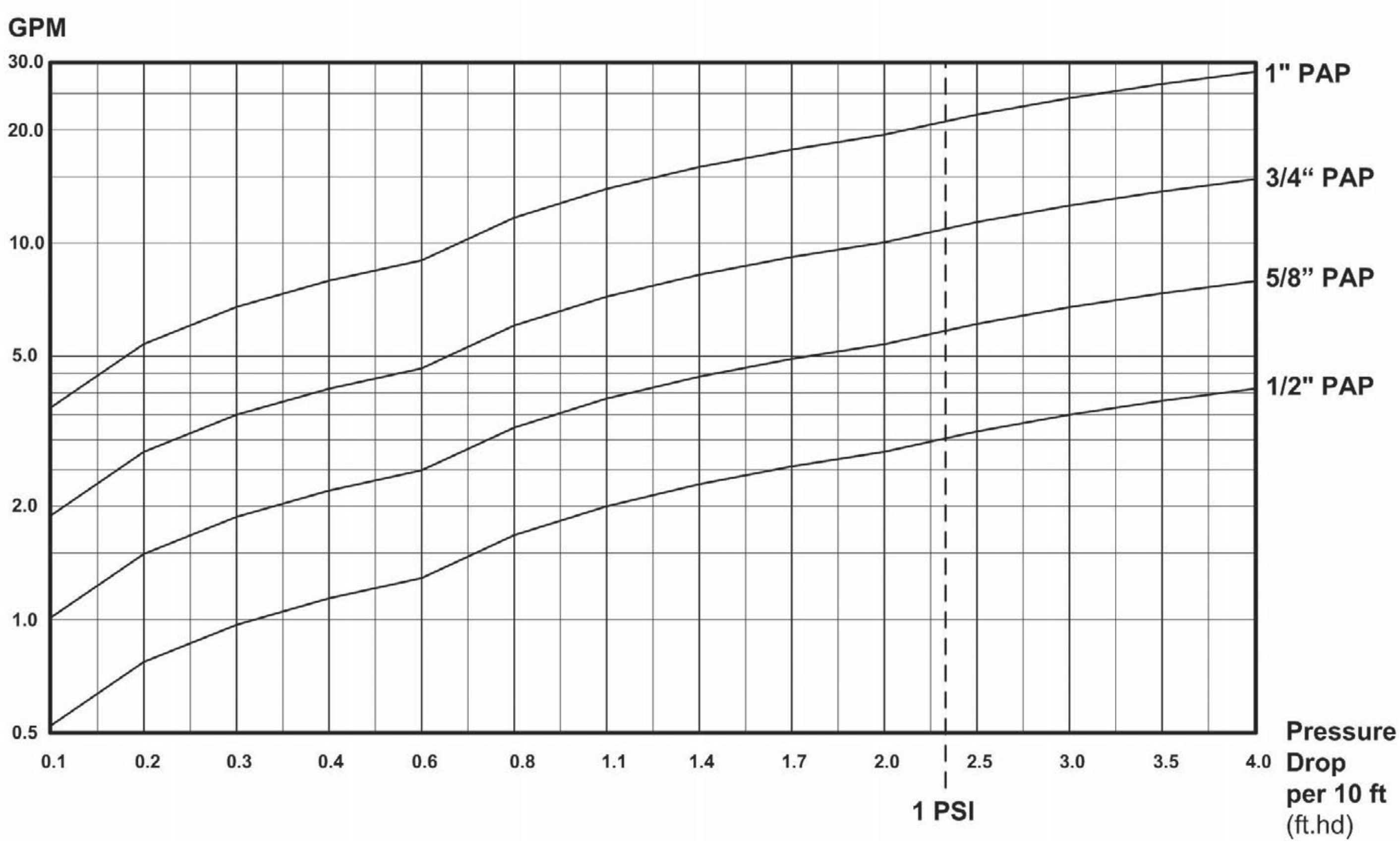
PRESSURE DROP FOR LARGE PEX TUBING AT 100 F



- Find the closest flow for the loop in the left GPM column of the chart.
- Step 2, Move to the right to the correct pipe size intersecting line.
- Step 3, Move down to read to read the pressure drop per 10 feet of pipe.
- Step 4, Divide the pipe length by 10, then multiply the result with the given pressure drop for 10 feet to get the total pressure drop for the pipe length.

NOTE: This chart is for 100% water, and only includes the pressure drop for the PEX pipe itself. You need to add the drop for other equipment. If glycol is used, use the correction charts on pages 92–93.

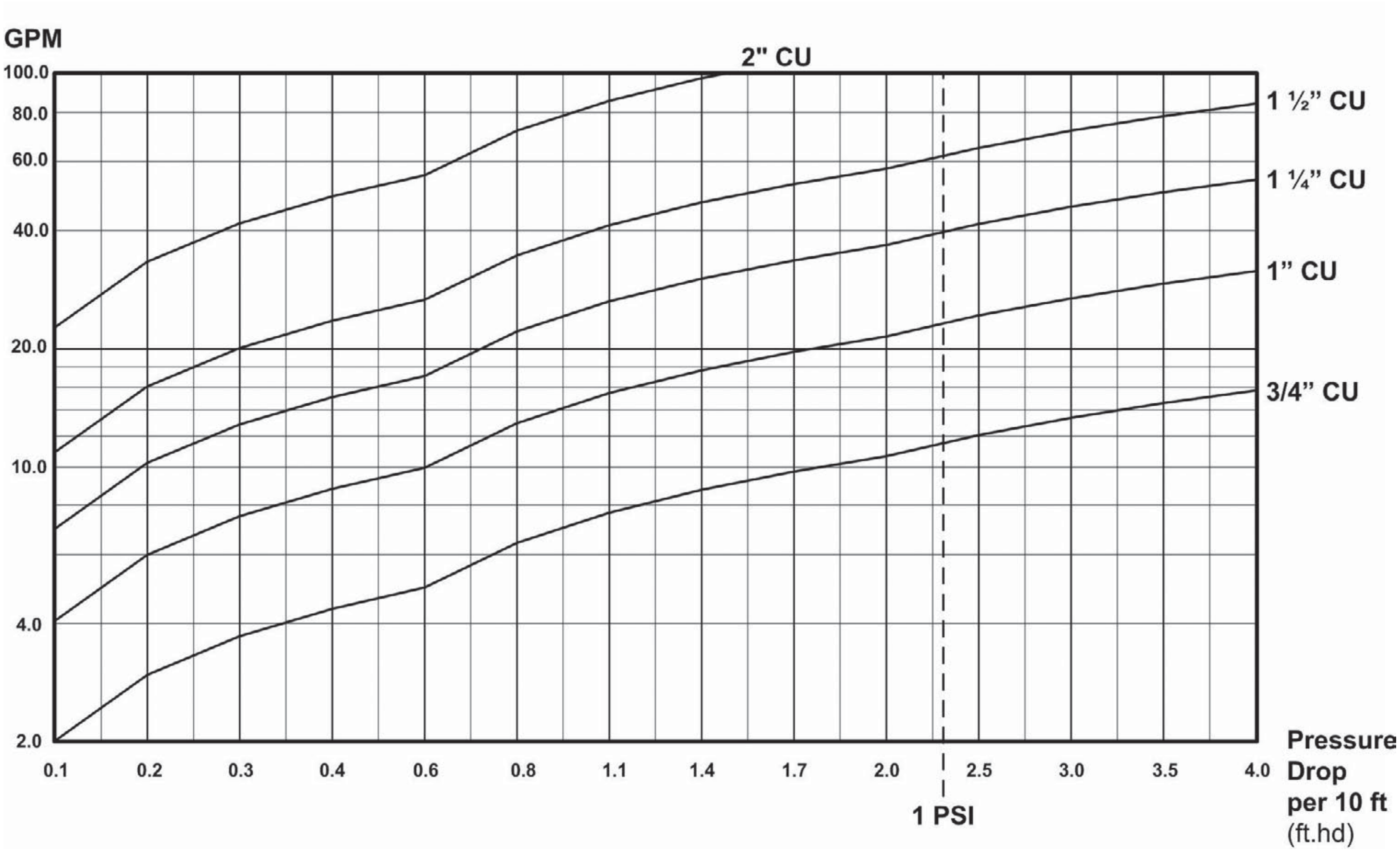
PRESSURE DROP FOR PAP TUBING AT 100 F



- Take the total heat load (BTUH) for the area that the loop is covering and divide it by 501.
- Step 2, Divide the result with the Delta-T to find GPM for the loop.
- Step 3, Find the closest flow for the loop in the left GPM column of the chart.
- Step 4, Move to the right to the correct pipe size intersecting line.
- Step 5, Move down to read to read the pressure drop per 10 feet of pipe.
- Step 5, Divide the loop length by 10, then multiply the result with the given pressure drop for 10 feet to get the total pressure drop for the loop.

NOTE: This chart is for 100% water, and only includes the pressure drop for the PAP pipe itself. You need to add the drop for other equipment. For the manifold, add about 2 ft/hd. If glycol is used, use the correction charts on pages 92–93.

PRESSURE DROP FOR COPPER TUBING AT 100 F



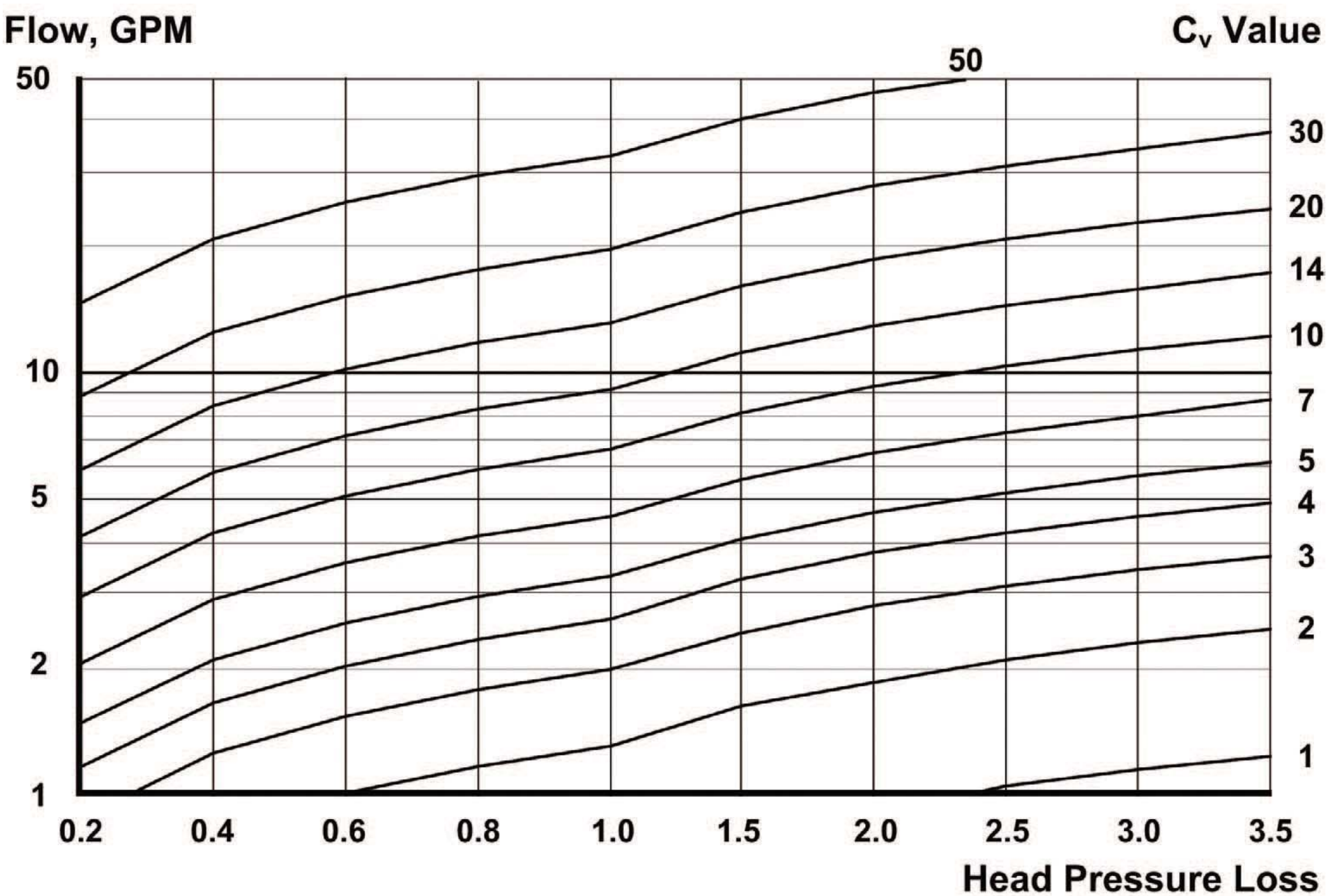
- Find the closest flow for the loop in the left GPM column of the chart.
- Step 2, Move to the right to the correct pipe size intersecting line.
- Step 3, Move down to read to read the pressure drop per 10 feet of pipe.
- Step 4, Divide the pipe length by 10, then multiply the result with the given pressure drop for 10 feet to get the total pressure drop for the pipe length.

NOTE: This chart is for 100% water, and only includes the pressure drop for the copper pipe itself. You need to add the drop for other equipment. If glycol is used, use the correction charts on pages 92–93.

C_v VALUES

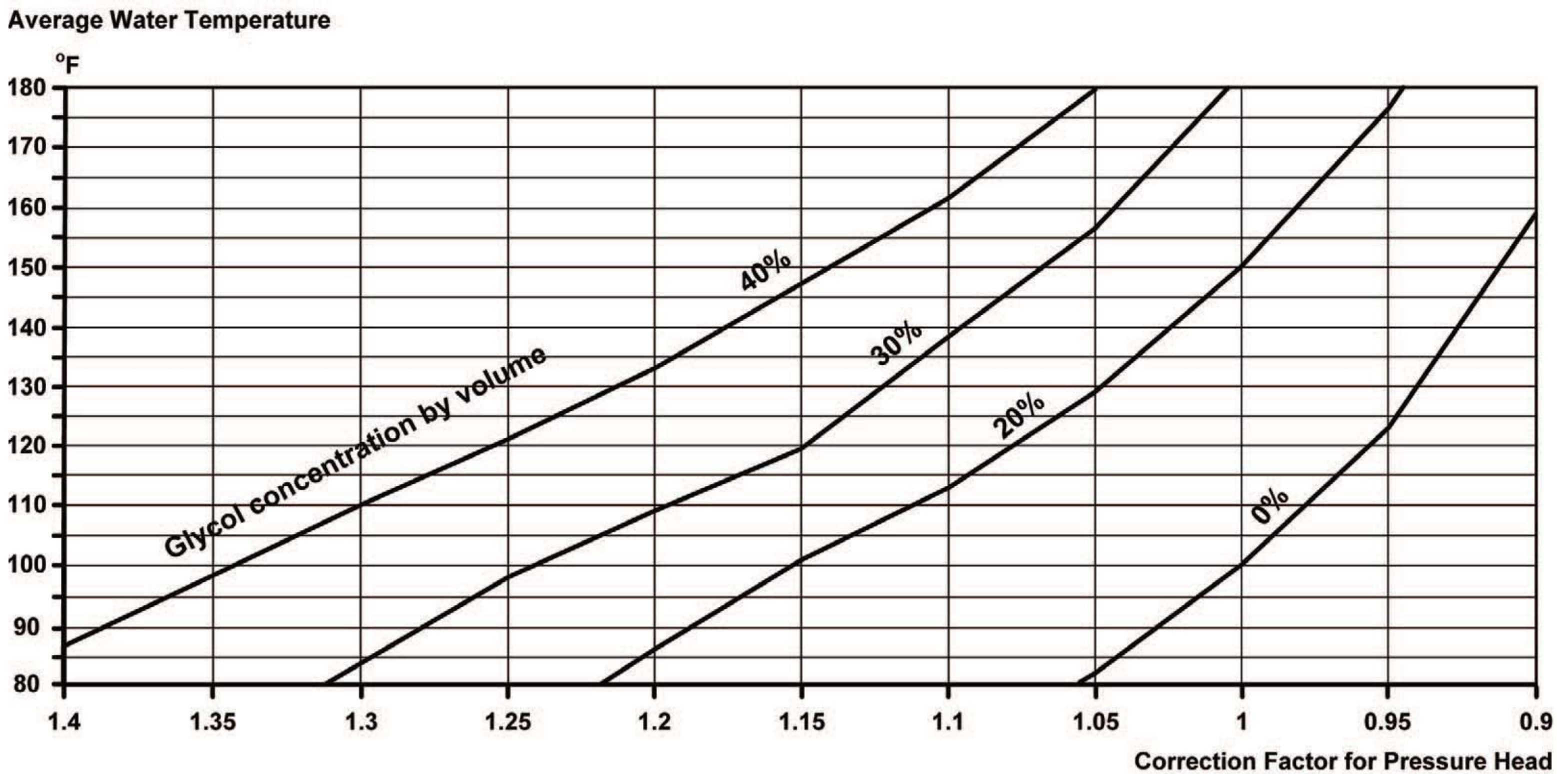
The pressure drop for hydronic heating components are normally described by their C_v value. The C_v value describes at what flow (in gpm) the pressure drop over the component will be 1 psi (equal to 2.31 ft/hd). Check with the manufacturer for the C_v value of the component and then use formula below to establish the head loss (ft/hd).

HEAD LOSS (FT.HD.) OVER VALVES ETC.: (1.52 x GPM / Cv)2 (GPM is the flow, and Cv is the valve parameter)
(Multiply the flow by 1.52 and then divide by the Cv value. Multiply the result by itself)



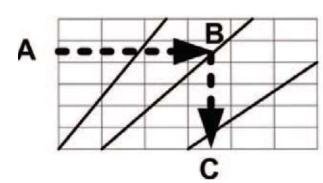
PRESSURE HEAD CORRECTION FACTOR FOR TEMPERATURES AND PROPYLENE GLYCOL

Pressure head correction factor (multiplier) as a function of average fluid temperature (°F) and propylene glycol concentration (Volume %).



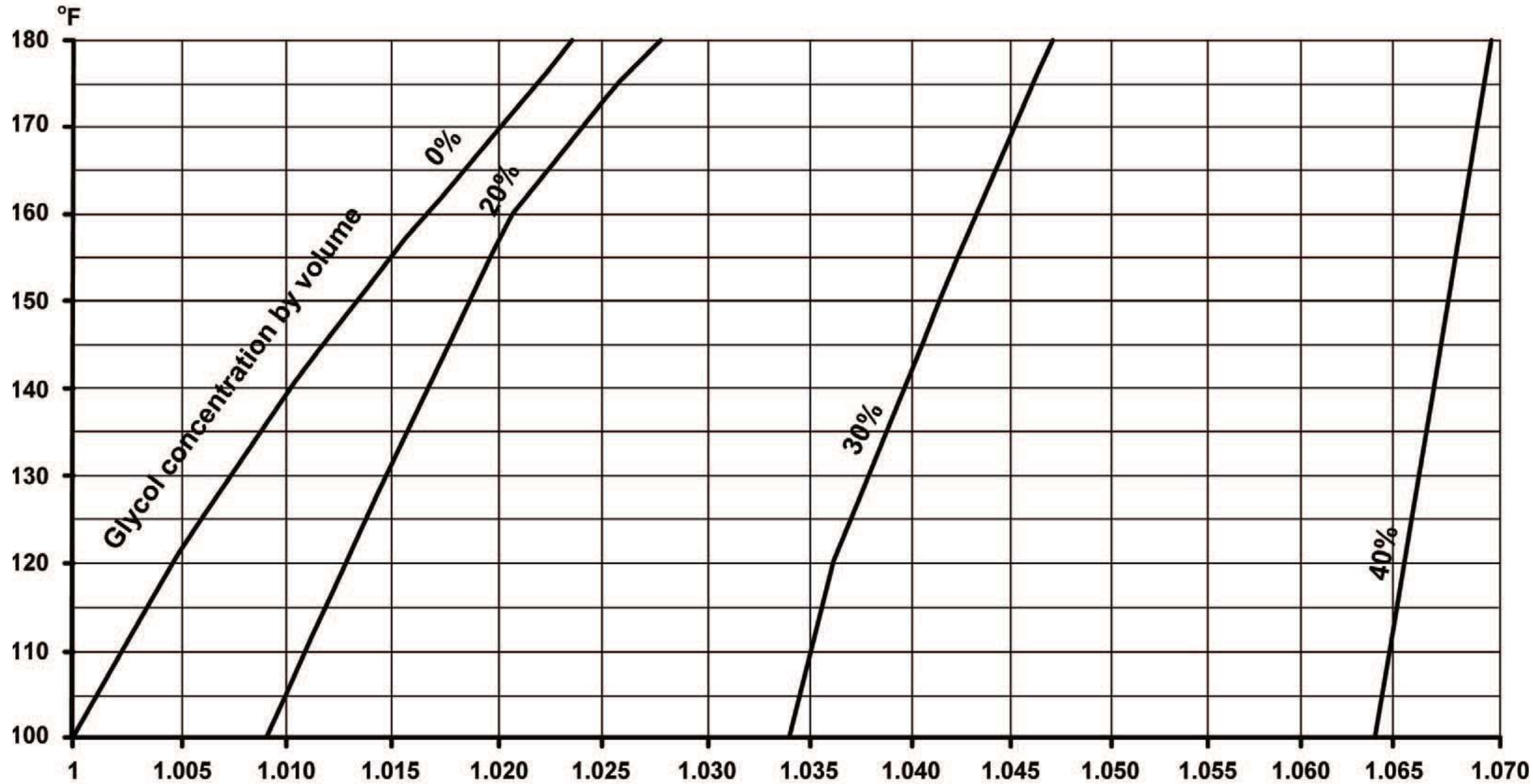
Using the Chart:

- Find the average water temperature to the left
- Move horizontally to the right until the intersection with actual glycol concentration
- Go down vertically and read the flow correction factor
- Multiply the head loss (ft/hd) with the correction factor for correct result



FLOW CORRECTION FACTOR FOR TEMPERATURES AND PROPYLENE GLYCOL

Flow correction factor (multiplier) as a function of average fluid temperature (°F) and propylene glycol concentration (Volume %).



Using the Chart:

- Find the average water temperature to the left
- Move horizontally to the right until the intersection with actual glycol concentration
- Go down vertically and read the flow correction factor
- Multiply the flow (GPM) with the correction factor for correct result