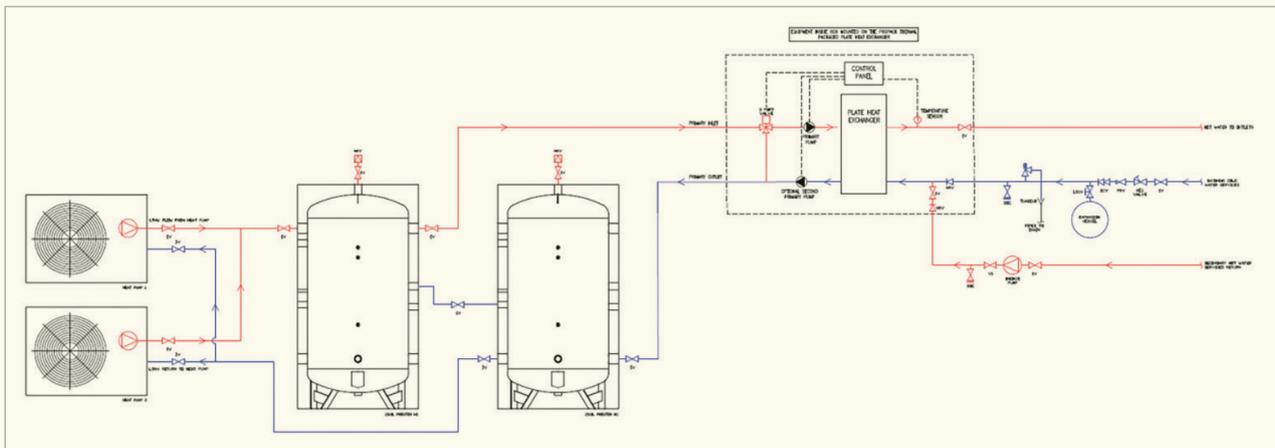


## Domestic Hot Water Generation with Heat Pumps

### Learning Objectives:

- General overview of sizing domestic hot water projects
- Understanding of the different methods which can be used when heating domestic hot water with heat pumps
- Learning of the advantages and disadvantages of each method.



### Contents

#### Introduction to Sizing DHW Projects

- CIBSE Guide G
- Peak Demand
- Instantaneous Demand

#### DHW Generation with Standard Heat Pumps

- Indirect Cylinders & Pressure Drop
- DHW with Low Temperature Primary Flow & Returns
- Efficient use of an Electric Booster
- Potential Use of Approved Biocides
- Standard Heat Pumps with Higher Flow & Return Temperatures & a Wider Delta T

#### Presentation Length: 1 Hour

*Presentations can be given at customers office face-to-face, in person at CHWS offices or via Teams.*

#### DHW Generation with CO<sub>2</sub> Heat Pumps

- Primary Side Storage & Instantaneous DHW Generation
- Plate Heat Exchanger Interface & Secondary Side Storage

#### Cascade Systems with Water-to-Water Heat Pump Booster

#### Standard Heat Pumps with Preheat and Electric Boiler Booster