# TEST 1

### PEX-A1

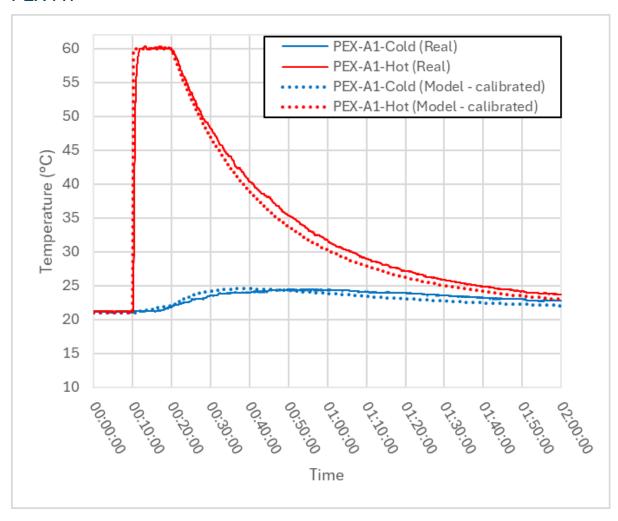


Figure S1. Shower PEX-A1. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

#### PEX-B1

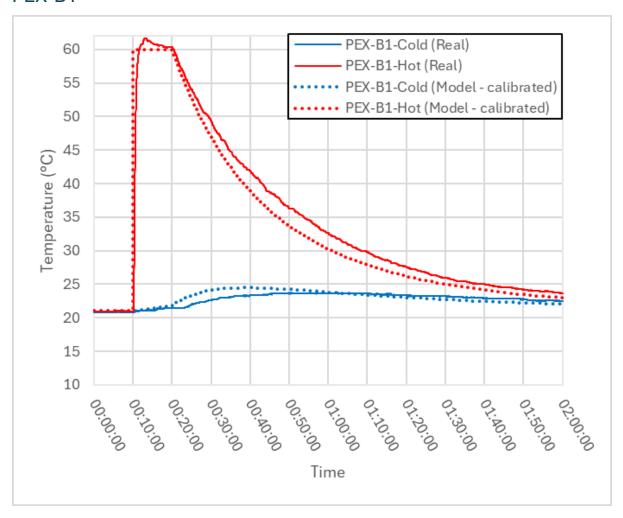


Figure S2. Shower PEX-B1. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

### PEX-C1

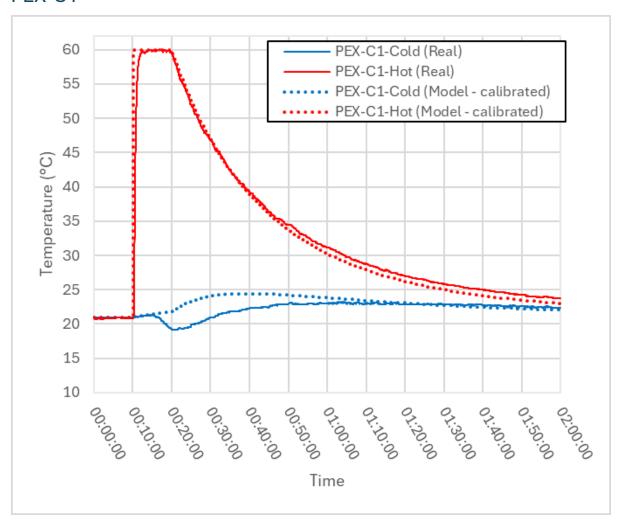


Figure S3. Shower PEX-C1. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

### Cu-A1

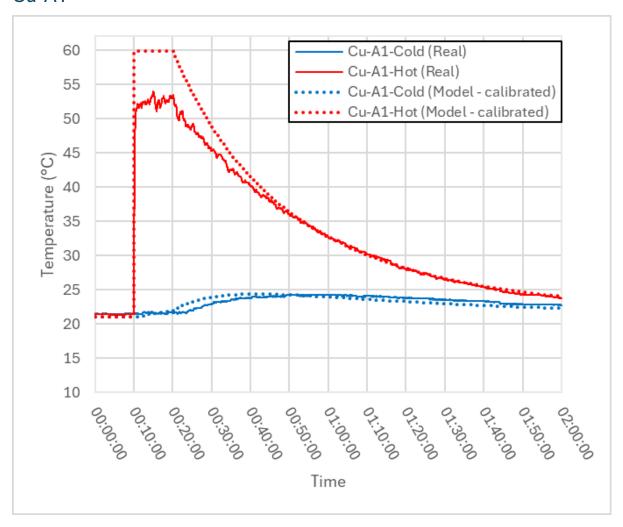


Figure S4. Shower Cu-A1. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

### Cu-B1

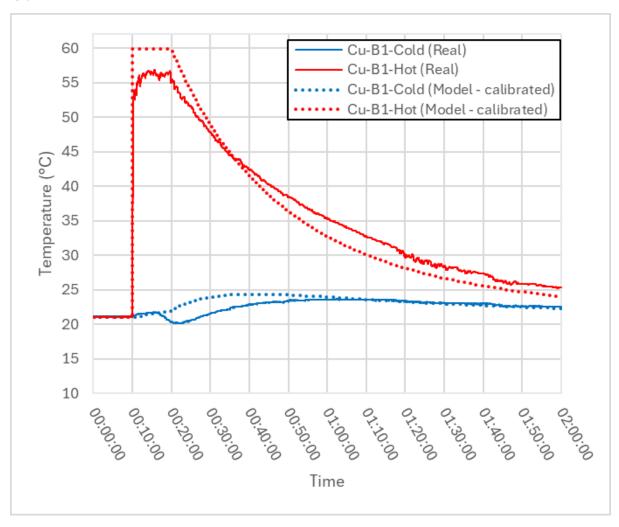


Figure S5. Shower Cu-B1. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

### Cu-C1

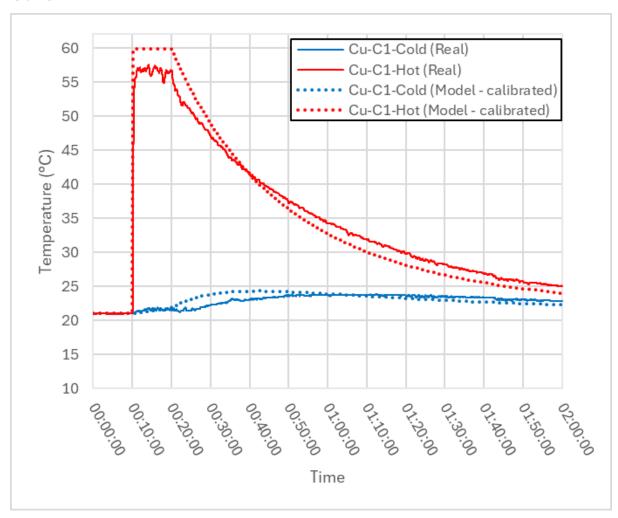


Figure S6. Shower Cu-C1. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

# TEST 2

### PEX-A2

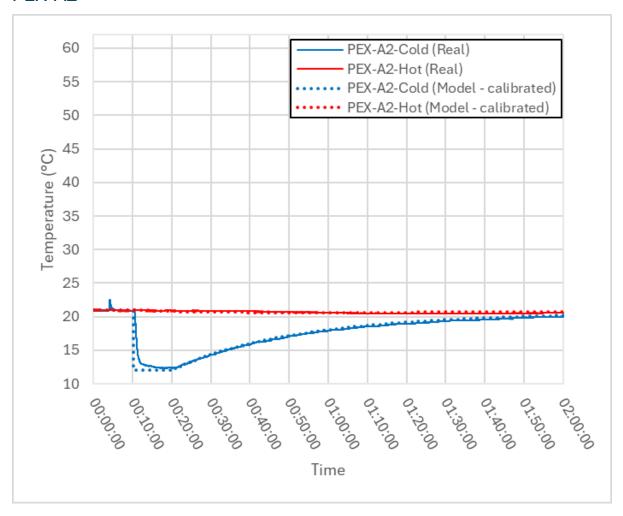


Figure S7. Shower PEX-A2. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

#### PEX-B2

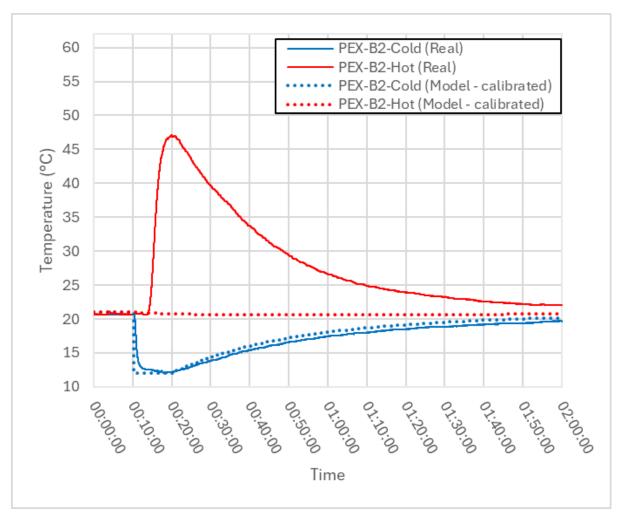


Figure S8. Shower PEX-B2. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

### PEX-C2

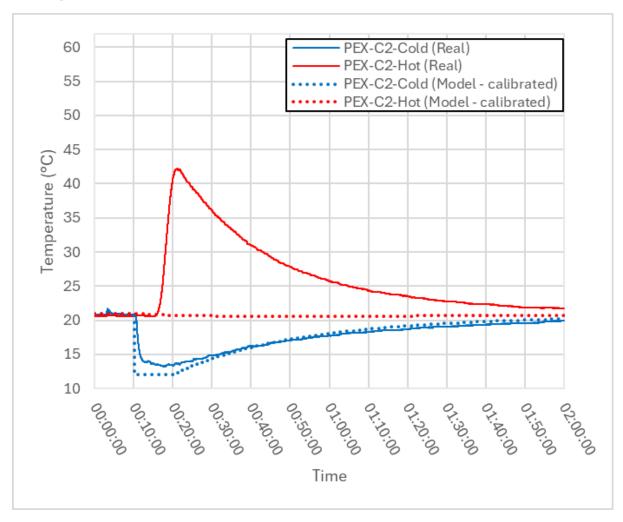


Figure S9. Shower PEX-C2. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

### Cu-A2

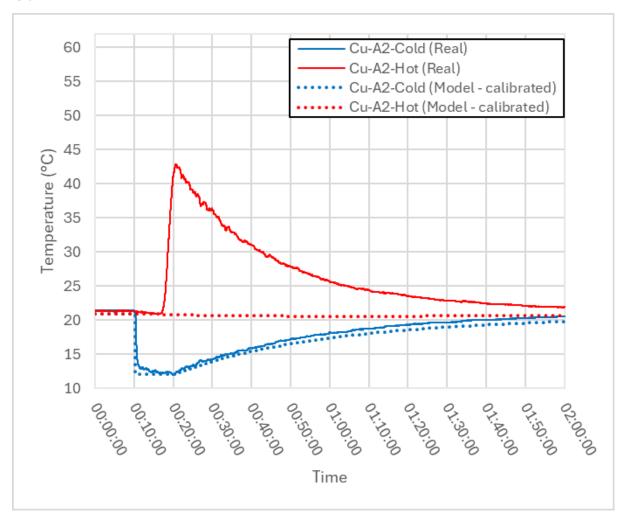


Figure S10. Shower Cu-A2. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

### Cu-B2

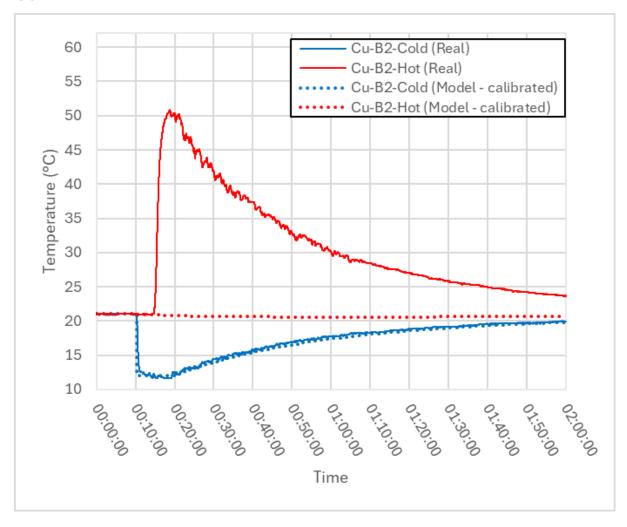


Figure S11. Shower Cu-B2. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

### Cu-C2

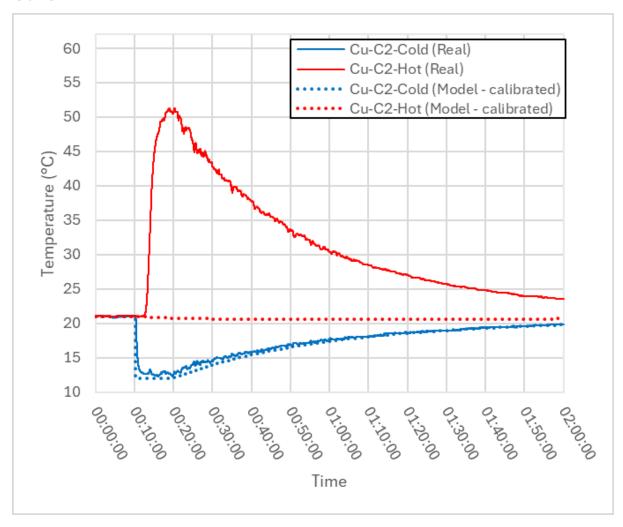


Figure S12. Shower Cu-C2. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold)

## TEST 3

#### PEX-A3

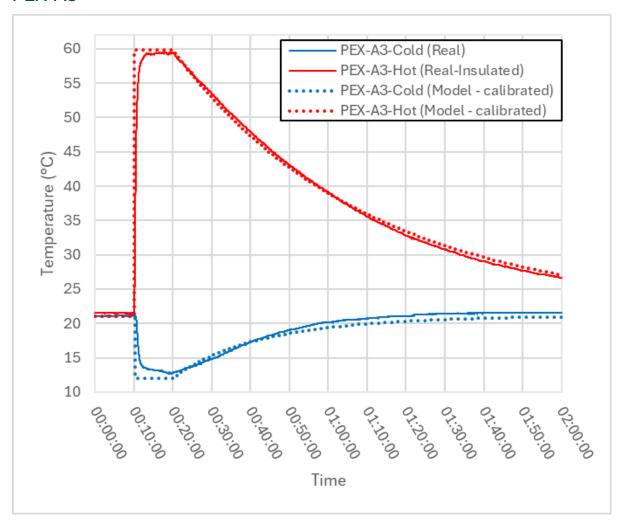


Figure S13. Shower PEX-A3. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold). Hot shower pipe is insulated.

#### PEX-B3

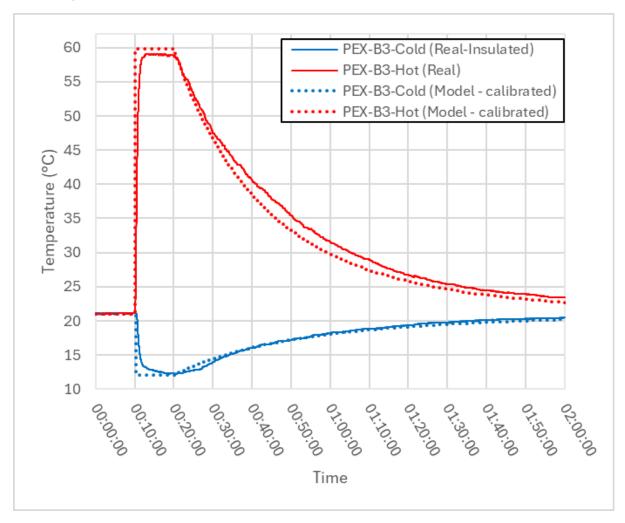


Figure S14. Shower PEX-B3. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold). Cold shower pipe is insulated.

### PEX-C3

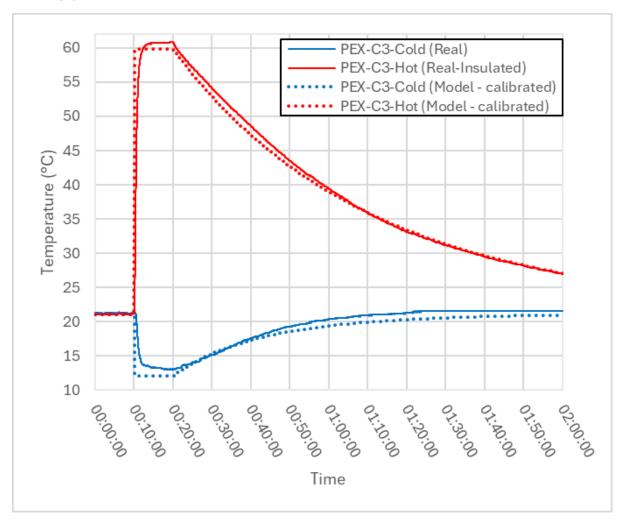


Figure S15. Shower PEX-C3. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold). Hot shower pipe is insulated.

### Cu-A3

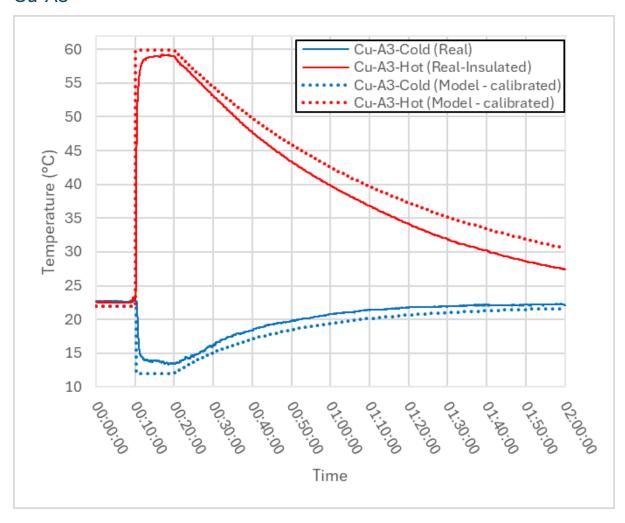


Figure S16. Shower Cu-A3. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold). Hot shower pipe is insulated.

### Cu-B3

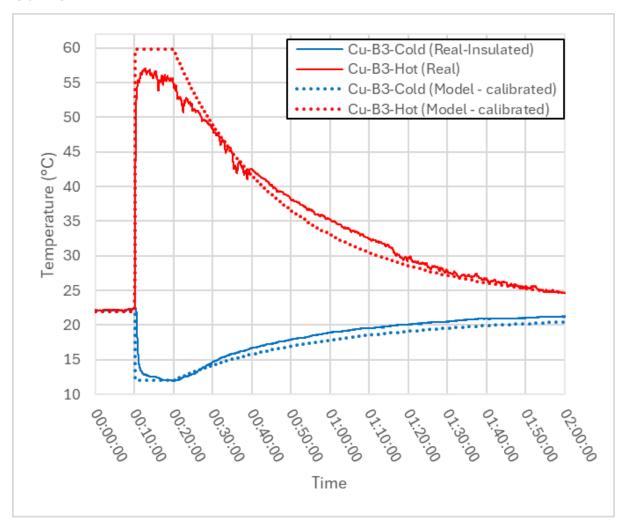


Figure S17. Shower Cu-B3. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold). Cold shower pipe is insulated.

### Cu-C3

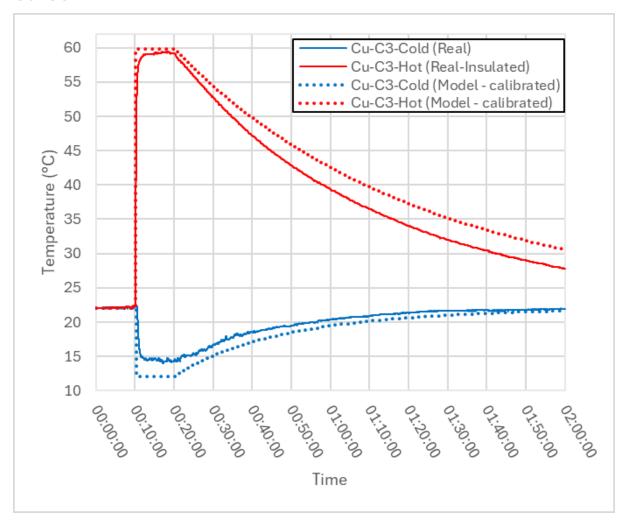


Figure S18. Shower Cu-C3. Temperature vs Time measured, modelled with radial and axial conduction and convection (calibrated for pipe PEX-A1-Cold). Hot shower pipe is insulated.

## **COMPARISON**

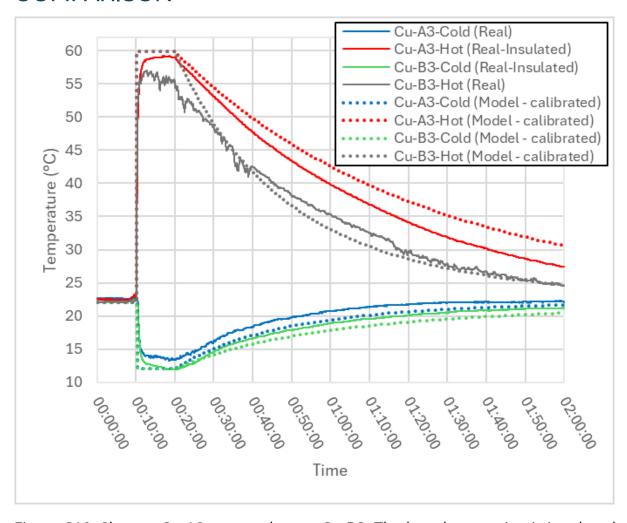


Figure S19. Shower Cu-A3 versus shower Cu-B3. The hot shower pipe is insulated for Cu-A3, while the cold shower pipe is insulated for Cu-B3.

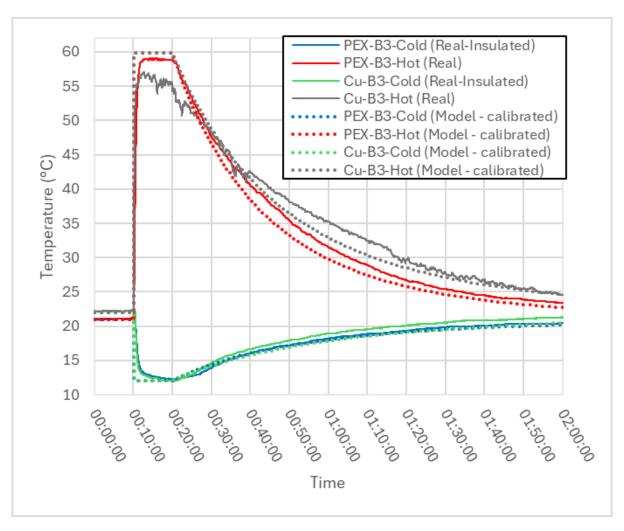


Figure S20. Shower PEX-B3 versus shower Cu-B3. The cold shower pipe is insulated for both showers.