**1. Zone model**

a. 102

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **n train** | **NN** | **Smooth NN** | **Maximin** | **SINDy** | **Lattice** | **GP** | **PI-GP\_1** | **PI-GP\_2** |
| 16 | - | 0.6762 | 0.8562 | - | 0.8819 | - | 0.8346 | 0.8237 |
| 32 | - | 0.8829 | 0.9642 | - | 0.9978 | 0.8975 | 0.9972 | 0.9974 |
| 64 | 0.9983 | 0.9983 | 0.9982 | 0.9980 | 0.9982 | 0.9984 | 0.9982 | 0.9981 |
| 128 | 0.9897 | 0.9904 | 0.9982 | 0.9981 | 0.9985 | 0.9982 | 0.9983 | 0.9980 |

b. 106

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **n train** | **NN** | **Smooth NN** | **Maximin** | **SINDy** | **Lattice** | **GP** | **PI-GP\_1** | **PI-GP\_2** |
| 32 | - | - | - | - | 0.3642 | - | - | - |
| 64 | 0.7642 | 0.7644 | 0.9961 | 0.9852 | 0.8370 | - | 0.8511 | 0.6551 |
| 128 | 0.9241 | 0.9243 | 0.9967 | 0.9861 | 0.9804 | 0.7798 | 0.9835 | 0.9912 |

**2. Supplied air model**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **n train** | **NN** | **Smooth NN** | **Maximin** | **SINDy** | **Lattice** | **GP** | **PI-GP\_1** | **PI-GP\_2** |
| 32 | 0.9100 | 0.9338 | 0.9529 | - | 0.9498 | 0.9389 | 0.8216 | 0.7547 |
| 64 | 0.9302 | 0.9427 | 0.9826 | 0.9856 | 0.9799 | 0.9881 | 0.9831 | 0.9887 |
| 128 | 0.9241 | 0.9278 | 0.9816 | 0.9865 | 0.9809 | 0.9888 | 0.9819 | 0.9897 |

**3. Thermostat model**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **n train** | **NN** | | **Soft constraint NN** | | **Hard constraint NN** | | **GP** | | **PI-GP\_1** | | **PI-GP\_2** | |
| **qrh** | **msa** | **qrh** | **msa** | **qrh** | **qrh** | **qrh** | **msa** | **qrh** | **msa** | **qrh** | **msa** |
| 32 | 0.8418 | 0.8543 | 0.8498 | 0.8572 | 0.8395 | - | 0.9031 | 0.9087 | - | - | - | - |
| 64 | 0.9721 | 0.9828 | 0.9732 | 0.9839 | 0.9703 | 0.9695 | 0.9765 | 0.9863 | 0.9784 | 0.9852 | 0.9695 | 0.9713 |
| 128 | 0.9563 | 0.9815 | 0.9699 | 0.9820 | 0.9736 | 0.9517 | 0.9748 | 0.9881 | 0.9796 | 0.9818 | 0.9517 | 0.9611 |