

# Juniper PW XL

Polywarm® heat pump calorifier



#### MODELS

200

300

400

500

800

1000

#### CAPACITY (litres)

200-1000

# Juniper PW XL

The Juniper XL heat pump calorifier is available in 6 models, with capacities ranging from 200-1000 litres. Each calorifier has a Polywarm® coating with cathode protection.



## key features

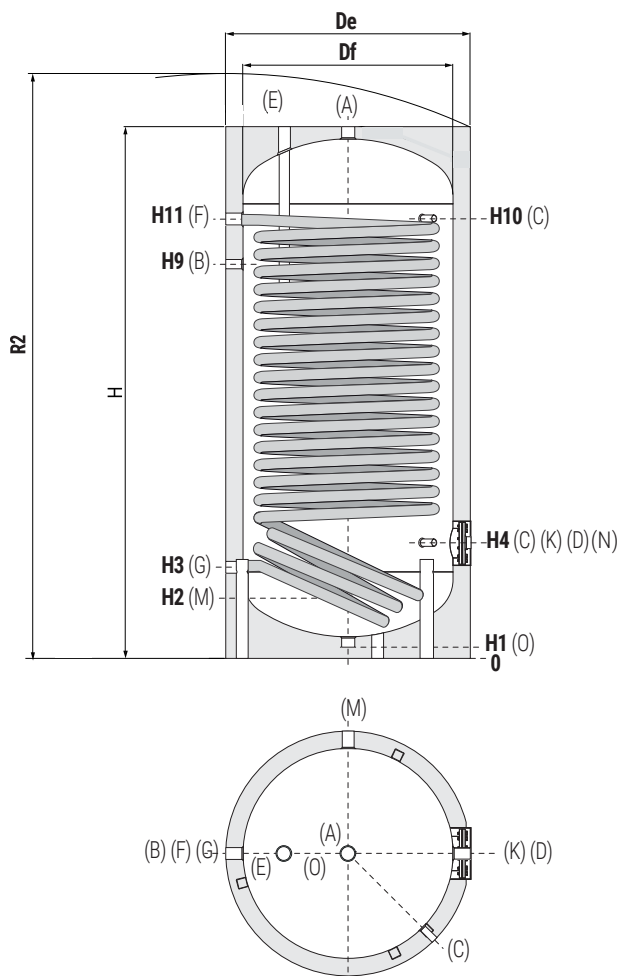
- 200-1000 litre capacity
- Unvented kits
- Cathode protection
- Optional electrical element

## warranty

- 5 year warranty\* on tank body
- 2 year warranty\* on all other components



# DIMENSIONS



- A domestic hot water outlet / T&P connection
- B recirculation
- C connection for thermometer (½" F)
- D connection for electric immersion heater
- E connection for magnesium anode (1¼" F)
- F primary circuit inlet (1¼" F)
- G primary circuit outlet (1¼" F)
- K blind flange for inspection
- M domestic cold water circuit inlet
- N connection for instrumentation (½" F)
- O drain (1¼" F) for models > 800 litre (¾" F)

## dimensions

All dimensions are distances from the floor, except for R2 which is a lateral dimension. All models have hard foam insulation.

| MODEL | Capacity<br>(litres) | De   | H    | R2   | H1  | H2  | H3  | H4  | H9   | H10  | H11  | K         |
|-------|----------------------|------|------|------|-----|-----|-----|-----|------|------|------|-----------|
| 200   | 189                  | 550  | 1440 | 1560 | 71  | 220 | 285 | 325 | 1055 | 1190 | 1190 | Øi20Øe180 |
| 300   | 291                  | 650  | 1500 | 1650 | 71  | 246 | 321 | 381 | 1091 | 1211 | 1211 | Øi20Øe180 |
| 400   | 422                  | 700  | 1766 | 1910 | 71  | 261 | 321 | 396 | 1316 | 1471 | 1471 | Øi20Øe180 |
| 500   | 498                  | 750  | 1800 | 1960 | 71  | 271 | 346 | 411 | 1326 | 1486 | 1486 | Øi20Øe180 |
| 800   | 789                  | 900  | 2180 | 2370 | 107 | 344 | 424 | 489 | 1604 | 1794 | 1814 | Øi70Øe240 |
| 1000  | 1038                 | 1000 | 2230 | 2460 | 95  | 365 | 445 | 505 | 1590 | 1825 | 1536 | Øi70Øe240 |

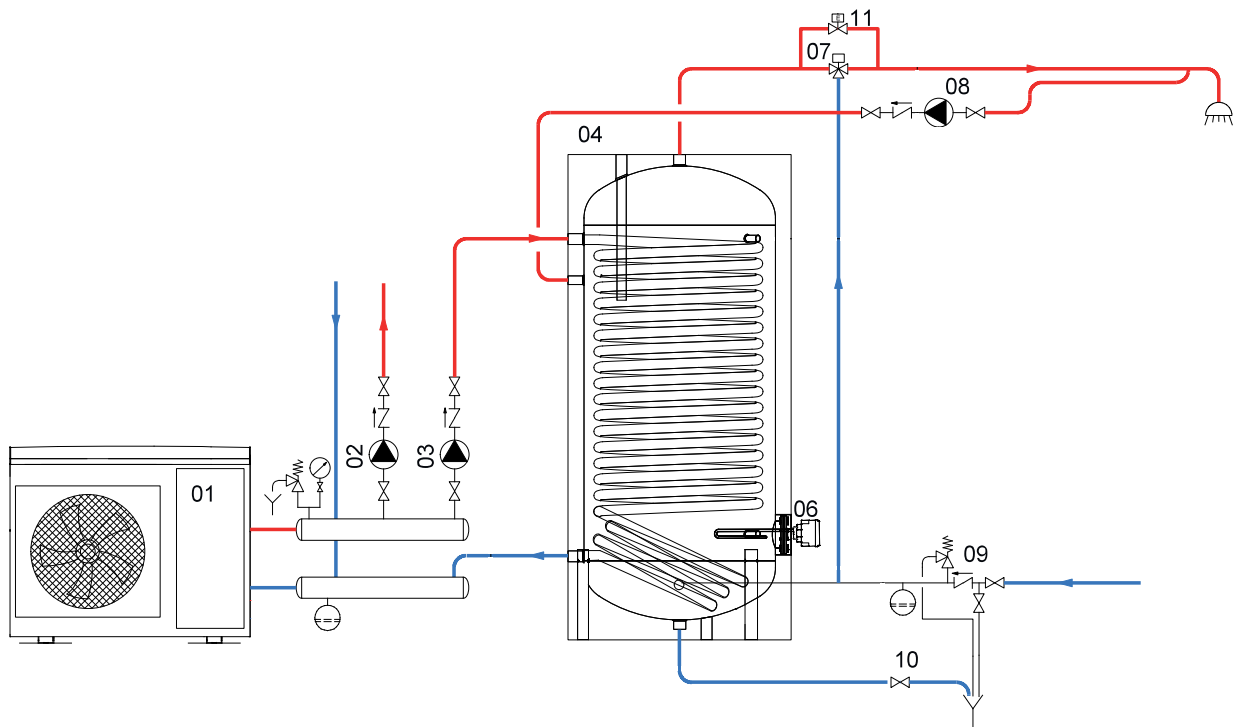
| MODEL         | M   | B  | A   | D   |
|---------------|-----|----|-----|-----|
| F connections |     |    |     |     |
| 200           | ¾"  | ¾" | 1¼" | 1½" |
| 300           | 1"  | 1" | 1¼" | 1½" |
| 400           | 1"  | 1" | 1¼" | 1½" |
| 500           | 1"  | 1" | 1¼" | 1½" |
| 800           | 1"  | 1" | 1¼" | 2"  |
| 1000          | 1¼" | 1" | 1½" | 2"  |

# PERFORMANCE DATA & SCHEMATIC

## MODEL

|   |                                      | 200   | 300                                | 400                                  | 500                                  | 800                                   | 1000                                 |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
|---|--------------------------------------|---|------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|-------------------|--------------------------------------|---------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|---------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|-----------------------------------|--|-------------|-----|-----|-----|-----|------|-----|------|------|------|------|------|------|---|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|---|---------|----|----|----|----|----|----|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------|-----|------|-----|-----|-----|------|-----|------|-----|------|-----|------|-----|
| <b>nominal storage capacity</b>   | litres                               | 189   | 291                                | 422                                  | 498                                  | 789                                   | 1038                                 |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>energy class</b>   |                                      | B   | B                                  | C                                    | C                                    | B                                     | B                                    |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>coil tube Ø</b>  | mm                                   | 32  | 32                                 | 32                                   | 32                                   | 32                                    | 32                                   |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>coil surface area</b>  | m <sup>2</sup>                       | 2   | 3.4                                | 4.4                                  | 5.4                                  | 6                                     | 6.5                                  |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>coil max operating temperature/pressure</b>  | °C/bar                               | 110/12  | 110/12                             | 110/12                               | 110/12                               | 110/12                                | 110/12                               |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>maximum working temperature/pressure, tank (secondary)</b>                                 | °C/bar                               | 90/10   | 90/10                              | 90/10                                | 90/10                                | 90/10                                 | 90/10                                |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>weight empty/full</b>  | kg                                   | 65/254  | 98/389                             | 150/572                              | 165/663                              | 226/1015                              | 260/1298                             |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>heat up time 45°CΔT 3Kw immersion only</b>   | hr                                   | 2.5   | 3.7                                | 5.3                                  | 6.3                                  | 8.3                                   | 10.6                                 |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>immersion heater option power/phase</b>  | kW/ph                                | 3/1   | 3/1                                | 3/1                                  | 3/1                                  | 3/1                                   | 3/1                                  |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>standby loss at 65°C</b>   | kWh/24hr                             | 1.416   | 1.656                              | 2.352                                | 2.448                                | 2.304                                 | 2.544                                |                                       |                                   |                                      |                                   |                                   |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
|   |                                      | <table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th style="text-align: left;">PRIMARY FLOW RATE</th> <th>0.694 l/s-<br/>2.5(m<sup>3</sup>/h)</th> <th>0.347 l/s-<br/>1.25(m<sup>3</sup>/h)</th> <th>0.833 l/s-<br/>3(m<sup>3</sup>/h)</th> <th>0.417 l/s-<br/>1.5(m<sup>3</sup>/h)</th> <th>0.972 l/s-<br/>3.5(m<sup>3</sup>/h)</th> <th>0.486 l/s-<br/>1.75(m<sup>3</sup>/h)</th> <th>0.972 l/s-<br/>3.5(m<sup>3</sup>/h)</th> <th>0.486 l/s-<br/>1.75(m<sup>3</sup>/h)</th> <th>1.39 l/s-<br/>5(m<sup>3</sup>/h)</th> <th>0.694 l/s-<br/>2.5(m<sup>3</sup>/h)</th> <th>2.22 l/s-<br/>8(m<sup>3</sup>/h)</th> <th>1.11 l/s-<br/>4(m<sup>3</sup>/h)</th> </tr> </thead> <tbody> <tr> <td><b>continuous DHW output @35°CΔT (10/45°C) with primary 55°C</b></td> <td>litres/hour</td> <td>522</td> <td>468</td> <td>751</td> <td>664</td> <td>1033</td> <td>915</td> <td>1198</td> <td>1060</td> <td>1571</td> <td>1412</td> <td>1780</td> <td>1642</td> </tr> <tr> <td><b>10 minute peak DHW draw off @35°CΔT (10/45°C) with primary 55°C and tank warmed @ 50°C</b></td> <td>litres</td> <td>221</td> <td>221</td> <td>340</td> <td>339</td> <td>492</td> <td>491</td> <td>581</td> <td>579</td> <td>918</td> <td>916</td> <td>1203</td> <td>1201</td> </tr> <tr> <td><b>recovery time DHW @40°CΔT (10/50°C) full tank without draw off with primary 55°C</b></td> <td>minutes</td> <td>40</td> <td>49</td> <td>44</td> <td>55</td> <td>47</td> <td>59</td> <td>49</td> <td>62</td> <td>59</td> <td>72</td> <td>65</td> <td>76</td> </tr> <tr> <td><b>nominal heat transferred with primary 55°C and DHW @35°CΔT (10/45°C)</b></td> <td>kW</td> <td>21</td> <td>19</td> <td>31</td> <td>27</td> <td>42</td> <td>37</td> <td>46</td> <td>42</td> <td>64</td> <td>57</td> <td>72</td> <td>66</td> </tr> <tr> <td><b>primary hydraulic resistance</b></td> <td>kPa</td> <td>10.6</td> <td>3.1</td> <td>8.3</td> <td>2.4</td> <td>12.6</td> <td>3.7</td> <td>12.6</td> <td>3.7</td> <td>29.8</td> <td>8.7</td> <td>73.6</td> <td>2.2</td> </tr> </tbody> </table> |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   | PRIMARY FLOW RATE | 0.694 l/s-<br>2.5(m <sup>3</sup> /h) | 0.347 l/s-<br>1.25(m <sup>3</sup> /h) | 0.833 l/s-<br>3(m <sup>3</sup> /h) | 0.417 l/s-<br>1.5(m <sup>3</sup> /h) | 0.972 l/s-<br>3.5(m <sup>3</sup> /h) | 0.486 l/s-<br>1.75(m <sup>3</sup> /h) | 0.972 l/s-<br>3.5(m <sup>3</sup> /h) | 0.486 l/s-<br>1.75(m <sup>3</sup> /h) | 1.39 l/s-<br>5(m <sup>3</sup> /h) | 0.694 l/s-<br>2.5(m <sup>3</sup> /h) | 2.22 l/s-<br>8(m <sup>3</sup> /h) | 1.11 l/s-<br>4(m <sup>3</sup> /h) | <b>continuous DHW output @35°CΔT (10/45°C) with primary 55°C</b> | litres/hour | 522 | 468 | 751 | 664 | 1033 | 915 | 1198 | 1060 | 1571 | 1412 | 1780 | 1642 | <b>10 minute peak DHW draw off @35°CΔT (10/45°C) with primary 55°C and tank warmed @ 50°C</b> | litres | 221 | 221 | 340 | 339 | 492 | 491 | 581 | 579 | 918 | 916 | 1203 | 1201 | <b>recovery time DHW @40°CΔT (10/50°C) full tank without draw off with primary 55°C</b> | minutes | 40 | 49 | 44 | 55 | 47 | 59 | 49 | 62 | 59 | 72 | 65 | 76 | <b>nominal heat transferred with primary 55°C and DHW @35°CΔT (10/45°C)</b> | kW | 21 | 19 | 31 | 27 | 42 | 37 | 46 | 42 | 64 | 57 | 72 | 66 | <b>primary hydraulic resistance</b> | kPa | 10.6 | 3.1 | 8.3 | 2.4 | 12.6 | 3.7 | 12.6 | 3.7 | 29.8 | 8.7 | 73.6 | 2.2 |
| PRIMARY FLOW RATE   | 0.694 l/s-<br>2.5(m <sup>3</sup> /h) | 0.347 l/s-<br>1.25(m <sup>3</sup> /h)   | 0.833 l/s-<br>3(m <sup>3</sup> /h) | 0.417 l/s-<br>1.5(m <sup>3</sup> /h) | 0.972 l/s-<br>3.5(m <sup>3</sup> /h) | 0.486 l/s-<br>1.75(m <sup>3</sup> /h) | 0.972 l/s-<br>3.5(m <sup>3</sup> /h) | 0.486 l/s-<br>1.75(m <sup>3</sup> /h) | 1.39 l/s-<br>5(m <sup>3</sup> /h) | 0.694 l/s-<br>2.5(m <sup>3</sup> /h) | 2.22 l/s-<br>8(m <sup>3</sup> /h) | 1.11 l/s-<br>4(m <sup>3</sup> /h) |                   |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>continuous DHW output @35°CΔT (10/45°C) with primary 55°C</b>                              | litres/hour                          | 522   | 468                                | 751                                  | 664                                  | 1033                                  | 915                                  | 1198                                  | 1060                              | 1571                                 | 1412                              | 1780                              | 1642              |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>10 minute peak DHW draw off @35°CΔT (10/45°C) with primary 55°C and tank warmed @ 50°C</b> | litres                               | 221   | 221                                | 340                                  | 339                                  | 492                                   | 491                                  | 581                                   | 579                               | 918                                  | 916                               | 1203                              | 1201              |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>recovery time DHW @40°CΔT (10/50°C) full tank without draw off with primary 55°C</b>       | minutes                              | 40  | 49                                 | 44                                   | 55                                   | 47                                    | 59                                   | 49                                    | 62                                | 59                                   | 72                                | 65                                | 76                |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>nominal heat transferred with primary 55°C and DHW @35°CΔT (10/45°C)</b>                   | kW                                   | 21  | 19                                 | 31                                   | 27                                   | 42                                    | 37                                   | 46                                    | 42                                | 64                                   | 57                                | 72                                | 66                |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |
| <b>primary hydraulic resistance</b>   | kPa                                  | 10.6  | 3.1                                | 8.3                                  | 2.4                                  | 12.6                                  | 3.7                                  | 12.6                                  | 3.7                               | 29.8                                 | 8.7                               | 73.6                              | 2.2               |                                      |                                       |                                    |                                      |                                      |                                       |                                      |                                       |                                   |                                      |                                   |                                   |  |             |     |     |     |     |      |     |      |      |      |      |      |      |   |        |     |     |     |     |     |     |     |     |     |     |      |      |   |         |    |    |    |    |    |    |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                     |     |      |     |     |     |      |     |      |     |      |     |      |     |

# SCHEMATIC



|    |                                  |    |  |    |                        |
|----|----------------------------------|----|--|----|------------------------|
| 01 | Alira (Heat Pump)                | 05 | Easy Control electronic display/<br>thermostat | 09 | Hydraulic safety group |
| 02 | Heating system circulation group | 06 | Electric immersion heater (optional)           | 10 | Blowdown valve         |
| 03 | D.H.W. circulation group         | 07 | Thermostatic mixing valve                      | 11 | By-pass solenoid valve |
| 04 | Juniper PW XL                    | 08 | D.H.W. recirculation group                     |    |                        |



**Modutherm Limited,  
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*A member of the Modular Heating Group.*