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| **01 - GENERAL** |
| **Customer name:** | **Telephone number:**  |
| **Address:** |
| **Heat Pump make and model:** ICAXSeren 10 |
| **Heat Pump serial number:** |
| **Commissioning engineer’s full name:** |
| **Company name:** | **Telephone number:** |
| **Company email:** | **Company address:** |
| **Commissioning date:** |
| **MCS installer registration Number (if applicable):** |
| **MCS product certification number (if applicable):** |
| **Refrigerant:** R290 (Propane) |
| **ENA database number:** |

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| **02 - CONTROLS – SYSTEM AND HEAT PUMP** |
| **Time and temperature control to heating** |  Room sensor  Dynamic weather compensation curve (auto-adapt) Time scheduler |
| **Time and temperature control to hot water** |  Cylinder sensor and time scheduler  |
| **Heating zone valves (incl. underfloor loops)** |  Fitted [ ]  |  Not required [ ]  |
| **Hot water zone valves** |  Fitted [ ]  |  Not required [ ]  |
| **Thermostatic radiator valves (TRVs)****(all rooms except room with zone sensor)** |  Fitted [ ]  |  Not required [ ]  |
| **Outdoor sensor** |  Built in  |
| **Heat Pump Safety Interlock** |  Built in (high and low limit pressure switches) |
| **Room sensor positioned on a wall away from direct sunlight and other heat sources** |  Yes [ ]  |  No [ ]  |
| **DHW cylinder sensor correctly positioned and secured in place** |  Yes [ ]  |  No [ ]  |

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| **03 - HYDRAULIC INSTALLATION** |
| **Automatic bypass to system** |  Fitted [ ]  |  Not required [ ]  |
| **Buffer Vessel Fitted** |  Yes [ ]   |  No [ ]  |  Volume (L): |
| **ICAX Heat Hub installed** |  Yes [ ]   |  No [ ]  |

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| **If ICAX Heat Hub is installed:** |
| Heat pump circuit expansion vessel air pressure correctly set for the installation?  |  Yes [ ]   | No [ ]  |
| Heating circuit expansion vessel air pressure correctly set for the site?  |  Yes [ ]   | No [ ]  |
| Primary pump (Heat pump system) setting – Constant speed |  Speed 1 [ ]  |  Speed 2 [ ]  |  Speed 3 [ ]  |
| Heat pump circuit flow rate |  Heating mode (m3/h):  |  DHW mode (m3/h): |
| Secondary pump (Central heating) setting – Proportional pressure  |  Curve 1 [ ]  |  Curve 2 [ ]  |  Curve 3 [ ]  |

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| **If no ICAX Heat Hub is installed:** |
| Is a plate heat exchanger fitted to give hydronic separation between the heat pump circuit and the heating circuit? |  Yes [ ]   |  No [ ]  |
| Is a low loss header fitted to give flow separation between the heat pump circuit and the heating circuit? |  Yes [ ]   |  No [ ]  |
| Expansion vessel for heat pump circuit installed and sized according to installation requirements? |  Yes [ ]  |  No [ ]  |
| Expansion vessel for heating circuit installed and sized according to installation requirements? |  Yes [ ]  |  No [ ]  |
| Primary pump (Heat pump system) |  Brand: |  Model: |
| Primary pump setting – Control mode and curve number |  |
| Is a flow meter of a flow switch installed and wired to the heat pump to provide flow confirmation? |  Yes [ ]  |  No [ ]  |
| Flow meter / flow switch |  Brand: |  Model: |
| Secondary pump (Central heating) |  Brand: |  Model: |
| Secondary pump setting – Control mode and curve number |  |

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| **Additional notes:** |

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| **04 - HEAT PUMP SYSTEM** |
| **Has the system been fitted with a filter/strainer on the return pipe?** |  Yes [ ]  |  No [ ]  |
| **Has the filter/strainer got any means of isolation for servicing?** |  Yes [ ]  |  No [ ]  |
| **Has the system been filled and pressure tested?** |  Yes [ ]  |  No [ ]  |
| **Has the system been flushed and cleaned in accordance with BS7593 and manufacturer’s instructions?** |  Yes [ ]  |  No [ ]  |
| What system cleaner was used: |  Brand: |  Product: |
| **Has the system been treated with inhibitors?** |  Yes [ ]  |  No [ ]  |
| What inhibitor product was used: |  Brand: |  Product: |
| **Has the system been treated with biocide?** |  Yes [ ]  |  No [ ]  |
| What biocide product was used: |  Brand: |  Product: |
| **Is the system adequately frost protected?** |  Yes [ ]  |  No [ ]  |
| **What measure of frost protection was used?** |  |
| If antifreeze, what product was used? |  Brand: |  Product: |
| If antifreeze, what concentration and frost protection was achieved? |  Concentration (%): |  Frost protection (°C): |
| If antifreeze valves were used, is there one on the flow pipe and one on the return pipe? |  Yes [ ]  |  No [ ]  |
| **Do all local high points have a mean of venting?** |  Yes [ ]  |  No [ ]  |
| **Has the system been vented?** |  Yes [ ]  |  No [ ]  |
| **What static pressure has it been set at?** |  Static pressure (bar): |  |
| **Has the filter been checked and cleaned?** |  Yes [ ]  |  No [ ]  |
| **Is the pipework insulated?** |  Yes [ ]  |  No [ ]  |
| **Is the external pipework insulation suitable for outdoor installations?** |  Yes [ ]  |  No [ ]  |
| **Additional notes:** |

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| **05 - CENTRAL HEATING SYSTEM** |
| **Has the system been fitted with a magnetic filter on the return pipe?** |  Yes [ ]  |  No [ ]  |
| **Has the filter got any means of isolation for servicing?** |  Yes [ ]  |  No [ ]  |
| **Has the system been filled and pressure tested?** |  Yes [ ]  |  No [ ]  |
| **Has the system been flushed and cleaned in accordance with BS7593 and manufacturer’s instructions?** |  Yes [ ]  |  No [ ]  |
| What system cleaner was used: |  Brand: |  Product: |
| **Has the system been treated with inhibitors?** |  Yes [ ]  |  No [ ]  |
| What inhibitor product was used: |  Brand: |  Product: |
| **Has the system been treated with biocide?** |  Yes [ ]  |  No [ ]  |
| What biocide product was used: |  Brand: |  Product: |
| **Do all local high points have a mean of venting?** |  Yes [ ]  |  No [ ]  |
| **Has the system been vented? (including radiators)** |  Yes [ ]  |  No [ ]  |
| **What static pressure has the system been set at?** |  Static pressure (bar): |
| **Has the filter been checked and cleaned?** |  Yes [ ]  |  No [ ]  |
| **Is the pipework located in non-heated spaces insulated?** |  Yes [ ]  |  No [ ]  |
| **Is the radiator system correctly balanced?** |  Yes [ ]  |  No [ ]  |  N/A [ ]  |
| **Is the underfloor system correctly balanced?** |  Yes [ ]  |  No [ ]  |  N/A [ ]  |
| **Additional notes:** |

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| **06 - HEAT PUMP OUTDOOR UNIT** |
| **Is the unit fitted on a solid/stable surface capable of taking its weight?** |  Yes [ ]  |  No [ ]  |
| **Is the unit mounted on anti-vibration mounts?** |  Yes [ ]  |  No [ ]  |
| **Have the minimum clearances specified by the manufacturer’s been respected?** |  Yes [ ]  |  No [ ]  |
| **Is the condensate drain installed to manufacturer’s instructions?** |  Yes [ ]  |  No [ ]  |
| **Is the pressure relief valve installed on the flow pipe near the heat pump outlet?** |  Yes [ ]  |  No [ ]  |
| **Is the fan free from obstacles and operational?** |  Yes [ ]  |  No [ ]  |
| **Has suitable consideration been made for condensate discharge?** |  Yes [ ]  |  No [ ]  |
|  **Outdoor unit fuse / MCB type & rating** |  Fuse / MCB type: |  Rating (A): |

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| **07 - SYSTEM DESIGN PARAMETERS** |
| **Design heating flow / return temperatures:** |  Flow (°C): |  Return (°C): |
|  **Peak heat loss / Reference outdoor temperature** |  Load (kW): |  Outdoor temp (°C): |

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| **08 - DOMESTIC HOT WATER MODE** |
| **Is the heat pump connected to a hot water cylinder?** |  Yes [ ]   |  No [ ]  |  Volume (L): |
| **Is the hot water cylinder vented or unvented?** |  Vented [ ]  |  Unvented [ ]  |
| **Hot water temperature setpoint** |  Setpoint (°C): |
| **Is the water heated via an internal coil of an external plate heat exchanger?** |  Coil [ ]  |  PHE [ ]  |
| **Cylinder coil area (m2)** |  Area (m2): |
| **For unvented cylinders, is the T/P safety valve correctly installed?** |  Yes [ ]  |  No [ ]  |
| **Is the discharge of the T/P safety valve routed to drain via a tundish and according to Part G of building regulations?** |  Yes [ ]  |  No [ ]  |
| **Legionella pasteurisation routine enabled?** |  Yes [ ]   |  No [ ]  |  Interval (days): |
| **Hot water has been checked at all outlets?** |  Yes [ ]  |  No [ ]  |
| **Is there a solar thermal source connected a dedicated solar coil?** |  Yes [ ]  |  No [ ]  |
| **Is there an immersion heater connected as backup?** |  Yes [ ]  |  No [ ]  |
| **Has a mains pressure reducing valve been fitted?** |  Yes [ ]  |  No [ ]  |
| **What is the pressure reducing valve setting?** |  Pressure setting (bar): |

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| **09 - ALL INSTALLATIONS** |
| **Heating and hot water system complies with the appropriate Building Regulations?**  |  Yes [ ]  |  No [ ]  |
| **Do all electrical work comply with the appropriate Regulations?** |  Yes [ ]  |  No [ ]  |
| **Does the heat pump and associated products have been installed and commissioned in accordance with the manufacturer’s instructions?** |  Yes [ ]  |  No [ ]  |
| **Has the operation of the heat pump and system controls been demonstrated to and understood by the customer?** |  Yes [ ]  |  No [ ]  |
| **Has the manufacturer’s literature, including the commissioning checklist and service record log book, been explained and left with the customer?** |  Yes [ ]  |  No [ ]  |
| **Commissioning engineer’s signature:** |  |
| **Customer’s signature:** **(to confirm satisfactory demonstration and receipt of manufacturer’s literature)** |   |