

AIR SOURCE HEAT PUMP INSTALLATION

ACTIVITY RAMS — ADAPT TO SITE BEFORE USE

External unit · refrigerant circuit · the heating interface

KD-RAMS-ME-012 Rev A0

Statutory basis: HSWA 1974 s.2(2)(a) and MHSWR 1999 regs 3 and 5 (this document is the recorded safe system of work); PUWER 1998; Manual Handling Operations Regulations 1992; Work at Height Regulations 2005; COSHH 2002; CDM 2015 regs 13 and 15. Activity-specific law is cited on the documents it applies to: Gas Safety (Installation and Use) Regulations 1998, the Fluorinated Greenhouse Gases Regulations 2015 for refrigerant handling, and ACOP L8 (4th edition, 2013) for water systems.

1 DOCUMENT AND PROJECT IDENTIFICATION

RAMS REFERENCE	PROJECT / SITE REF	SITE NAME AND ADDRESS	DATE PREPARED	NEXT REVIEW DATE
CLIENT / PRINCIPAL CONTRACTOR	PLANNED START	DURATION	OPERATIVES	SUPERVISING THE WORK

2 SCOPE OF WORKS

Installation of air source heat pumps to dwellings and small commercial buildings: external unit siting and mounting, refrigerant pipework and connections, cylinder and heating interface, up to commissioning.

This document does not cover: refrigerant handling by anyone not certificated under the Fluorinated Greenhouse Gases Regulations 2015, the heating design, and electrical final connection where notifiable.

SITE-SPECIFIC SCOPE, LOCATIONS AND LIMITATIONS

3 RISK ASSESSMENT — SCORE EACH RISK FOR THIS SITE, THEN ADD WHAT IS MISSING

The hazards and controls below are the starting point for this activity, written by a working main contractor. They are not complete for your site until a competent person has scored each risk, added the site-specific hazards, and struck out anything that does not apply. Rate risks High / Medium / Low before and after controls.

1. Refrigerant release, cold burns and asphyxiation in an enclosed space

At risk: Operatives, occupants

Controls: Refrigerant handling, evacuation and charging is carried out ONLY by a person certificated under the Fluorinated Greenhouse Gases Regulations 2015 — it is not a task this document authorises for anyone else. Systems are recovered, never vented. Work in plant rooms and cupboards is ventilated, because refrigerant displaces air at low level. Cryogenic-rated gloves and eye protection for any connection work.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

2. Manual handling of boards, materials and components

At risk: Operatives

Controls: Mechanical aids first — trolleys, board lifters, hoists. Two-person lifts for boards and long components; order materials in manageable sizes; plan storage close to the workplace; keep carrying routes clear and lit.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

3. Work at height from steps, podiums, towers or MEWPs

At risk: Operatives, and anyone below

Controls: Select access by the Work at Height hierarchy — podium or tower before steps; MEWPs by trained (IPAF) operators only. Inspect access equipment before use, establish an exclusion below overhead work, and secure tools and materials against dropping.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

4. Striking hidden services when drilling, cutting or fixing

At risk: Operatives

Controls: Check drawings and the services register, scan with a CAT before drilling or chasing into existing fabric, respect safe zones, and stop and reassess if an unrecorded service is found.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

5. Interface with occupants, other trades and the public

At risk: Occupants, other trades, the public

Controls: Segregate the work area — barriers, signage, sheeting; agree access routes and working hours with the occupier; never obstruct escape routes; deliveries and waste runs outside peak movement times where agreed.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

6. Slips, trips and housekeeping

At risk: Everyone in the work area

Controls: Keep the workplace clear, remove waste and offcuts as they are created, route leads at high level or under mats, and maintain task lighting.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

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7. The external unit sited where it will fail, or fall

At risk: Occupants, the public

Controls: The mounting is to the manufacturer's detail into a substrate that will carry the unit's weight plus its running load — a heat pump vibrates and it works loose. Wall brackets are fixed into structure, never into render or an insulation layer. The unit is lifted into position by the stated number of people or with mechanical aid, and it is never rested on a temporary support while brackets are adjusted.

INITIAL (H/M/L)	RESIDUAL (H/M/L)	SITE-SPECIFIC ADDITIONAL CONTROLS, OR N/A	ACTION OWNER	BY WHEN

Site-specific hazards not listed above — every site has at least one:

HAZARD	WHO IS AT RISK	CONTROLS	INITIAL H/...	RESIDUAL...	ACTION OWNER	BY WHEN

4 METHOD — SEQUENCE OF WORK

- Confirm the design, the unit position, the mounting detail and the electrical supply arrangement.
- Check the substrate will carry the unit — never fix a bracket into render or external insulation.
- Set out and fix the mounting with anti-vibration; lift the unit with the stated crew or mechanical aid.
- Run refrigerant pipework with the specified bend radii and insulation; braze under a purge where the design requires it.
- Refrigerant connection, evacuation and charging ONLY by a person certificated under the F-Gas regime; record the charge.
- Complete the cylinder and heating interface; fill, vent and pressure test the water side.
- Hand over for commissioning with the refrigerant record and the electrical isolation position stated.

SITE-SPECIFIC AMENDMENTS TO THE SEQUENCE

5 PLANT, EQUIPMENT AND MATERIALS

- Wall brackets or ground stand to the design
- Brazing equipment with purge
- Vacuum pump and gauges (certificated operative)
- Lifting aid for the external unit

INSPECTION / THOROUGH EXAMINATION REFS

COSHH ASSESSMENT REFS

6 PPE — THE LAST LINE OF CONTROL, NOT THE FIRST

- Head protection
- Gloves — task-rated
- Cryogenic-rated gloves for refrigerant work
- Safety footwear
- Eye protection
- Eye protection for brazing
- High visibility
- Hearing protection

RPE TYPE, FACE-FIT STATUS, AND ANY OTHER PPE REQUIRED

7 PERMITS REQUIRED BEFORE THIS WORK STARTS

A permit authorises this work in that place, on that day. It extends the safe system of work in this document — it does not replace it (HSE HSG250). The site issues the permit; record its number before work starts.

KD-PTW-HW-001 — Hot Works Permit

For brazing refrigerant pipework.

PERMIT NUMBER

KD-PTW-PE-009 — Permit to Enter

For occupied dwellings.

PERMIT NUMBER

8 EMERGENCY ARRANGEMENTS — COMPLETE FOR THIS SITE

FIRST AIDER AND LOCATION	NEAREST A&E	ASSEMBLY POINT
HOW THE ALARM IS RAISED	EMERGENCY ACCESS FOR THIS WORK AREA	SPILL / ENVIRONMENTAL RESPONSE

9 BRIEFING RECORD — EVERYONE WORKING UNDER THIS RAMS SIGNS BEFORE STARTING

By signing you confirm the contents of this RAMS have been explained to you, you understand the hazards and controls, and you will work to the sequence stated. Tell the supervisor if the work or the site does not match this document — work stops until it does.

NAME	COMPANY	SIGNATURE	DATE

10 PREPARED AND ACCEPTED

Prepared / adapted for this site by — I confirm I have adapted this document to the site, scored the risks, and that it describes how the work will actually be done.

PRINTED NAME	ROLE / COMPETENCE	COMPANY	SIGNATURE	DATE	TIME

Accepted for the site by — principal contractor or site manager review.

PRINTED NAME	ROLE	COMPANY	SIGNATURE	DATE	TIME

Review this RAMS if the work, the site or the law changes, and at least before each new phase of the works. Flatten the completed PDF before filing so the record cannot be silently edited.

R REVISION HISTORY

Every revision of this document, and every review that found nothing to change. The revision on the front of this sheet is the one you are holding — check kubitdocs.com for the current one before use.

Rev	Date	Class	What changed	Authorised by
D0	2026-08-11	first-issue	First issue.	— not yet approved —
A0	2026-08-27	review	Approved for issue by the author. Content unchanged from D0; the draft status strip is removed. No independent third-party review has been carried out.	Author — director, UK principal contractor, SMSTS. Not an independent review.

Class: first-issue · material (the law, a control, a field or the scope changed — past buyers are notified) · editorial (wording or layout only) · review (checked, nothing changed) · withdrawal. Revision prefix D = draft, not approved and not for sale; A = approved for issue by the person named, on the date shown.