

TECHNICAL CURRICULUM

REFRIGERATION AND AIR CONDITIONING · FULL-TIME

REFRIGERATION & AIR CONDITIONING

A complete, hands-on training programme for refrigeration, air conditioning and heat pump technology.

Real systems, natural refrigerants, market-ready skills.



THE PROGRAMME

Cooling lasts when every step is right. This programme builds the skill for it, from the refrigeration circuit to handover.



Refrigeration & Air Conditioning is a hands-on, full-time programme for refrigeration, air conditioning and heat pump technology.

Across 28 core specialist modules, trainees progress from fundamentals, safety and applied calculation through piping, brazing and refrigeration circuit technology to installation, controls, air conditioning and heat pump systems, Green Cooling and handover to the customer.

The focus is on practice throughout. Learning takes place on real systems, with real tools and real refrigerants, with around 1.500 hours of technical learning and over 100 assessed exercises.

Every module concludes with an assessed practical piece, so competence shows in real work and not on paper. Natural refrigerants and Green Cooling are embedded throughout, not added afterwards.

The programme is offered as a curriculum, as a matching equipment specification or as a turnkey package for the site.

28

SPECIALIST MODULES · CORE

1.500_h

TECHNICAL LEARNING

190₊

HANDS-ON EXERCISES

6

CATEGORIES

2_{years}

FULL-TIME

PRACTICAL CURRICULUM

Twenty-eight modules

From fundamentals, safety and applied calculation through piping, brazing and refrigeration circuit technology to installation, controls, air conditioning and heat pump systems, as well as law, business and the in-company final project.

MODULE

01 – 28 · FIVE PHASES

01 Career orientation & quality
FUNDAMENTALS & SAFETY

02 Occupational & environmental safety
FUNDAMENTALS & SAFETY

03 Technical communication & plans
FUNDAMENTALS & SAFETY

04 Applied calculation & mathematics
FUNDAMENTALS & SAFETY

05 Materials & materials science
FUNDAMENTALS & SAFETY

06 Metal & sheet metal
FUNDAMENTALS & SAFETY

07 Electrical engineering basics
FUNDAMENTALS & SAFETY

08 Piping technology
REFRIGERATION CORE

09 Brazing & joining technology
REFRIGERATION CORE

10 Thermodynamics & refrigeration circuit
REFRIGERATION CORE

11 Refrigerants & Green Cooling
REFRIGERATION CORE

12 Refrigeration circuit components
REFRIGERATION CORE

13 Electrical installation & wiring
INSTALLATION & CONTROLS

14 Measurement, control & regulation
INSTALLATION & CONTROLS

15 Evacuation & charging
INSTALLATION & CONTROLS

16 Commissioning & measurement
INSTALLATION & CONTROLS

17 Refrigeration applications & cold rooms
INSTALLATION & CONTROLS

18 Comfort air conditioning
AC & HEAT PUMP

19 Ventilation & air distribution
AC & HEAT PUMP

20 Heat pumps & chillers
AC & HEAT PUMP

21 Transport & vehicle refrigeration
AC & HEAT PUMP

22 Green Cooling in practice
AC & HEAT PUMP

23 Maintenance & diagnostics
SERVICE, LAW & COMPLETION

24 Recovery & recycling
SERVICE, LAW & COMPLETION

25 Law & certification (F-gas)
SERVICE, LAW & COMPLETION

26 Costing & handover
SERVICE, LAW & COMPLETION

27 Entrepreneurial skills
SERVICE, LAW & COMPLETION

28 Final project (assessment piece)
COMPLETION

EQUIPMENT

Trained on real systems.



01

Pipe-working tools

Pipe cutters, flaring and swaging tools, bending tools and special tools for working copper pipe.

02

Measuring, testing & diagnostics

Manifold gauge, digital pressure gauges, micron vacuum gauge, scale, multimeter, insulation tester and HC-/A2L leak detection.

03

Vacuum, recovery & charging

Two-stage vacuum pump, HC-/A2L-rated recovery unit as well as service and recycling cylinders.

04

Brazing & joining equipment

Brazing set, nitrogen cylinder with two-stage pressure regulator and purging equipment as well as fire protection.

05

Workshop & PPE (A2L)

Workbenches, vices, low-spark tools for flammable refrigerants and personal protective equipment.

06

Training rigs & demonstrators

Cutaway models, appliance trainers, R290 split and CO2 transcritical training rack as well as a fault simulator.

+255 INDIVIDUAL ITEMS · 6 CATEGORIES

BRING THE PROGRAMME TO YOUR SITE

LET'S GET STARTED.

AVAILABLE AS · **Turnkey** (consulting + equipment + delivery + curriculum + setup)

