



Underfloor heating
naturally efficient



Welcome

Chris Ingram

Chairman
UHMA

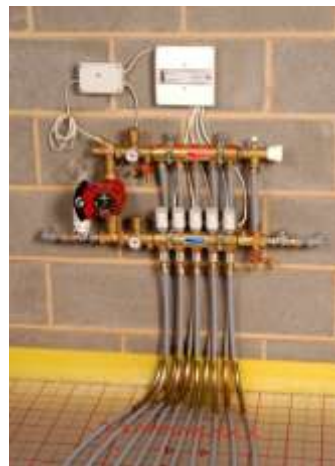
Managing Director
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Seminar Content

- UHMA – who, what, why?
- Why the change from radiators to UFH
- What is, and will, happen
- How it may (will?) affect you
- UHMA's role
 - Trusted suppliers
 - New installer & designer membership
 - Uhma approved training
- Q & A



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- Surface heating and cooling trade association
 - Formerly “Underfloor Heating Manufacturers Association”
- Internationally recognised and affiliated to Eu-Ray
 - European surface heating and cooling association
- 14 years old with over 40 member companies
 - Component manufacture, design, supply, installation
- Stringent membership criteria



UHMA Objectives

- Set & promote technical standards
 - Materials, Design, Installation, Corporate strength
- Increase awareness of products and their efficiency
- Represent industry
 - Local, National & European government
 - British, European & International standards
- Ensure **TRUST**



Why UFH?

Greater proven
efficiency no
matter what the
heat source



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“...floor heating comes out as the
best system in all cases...”



Professor Bjarne W. Olesen

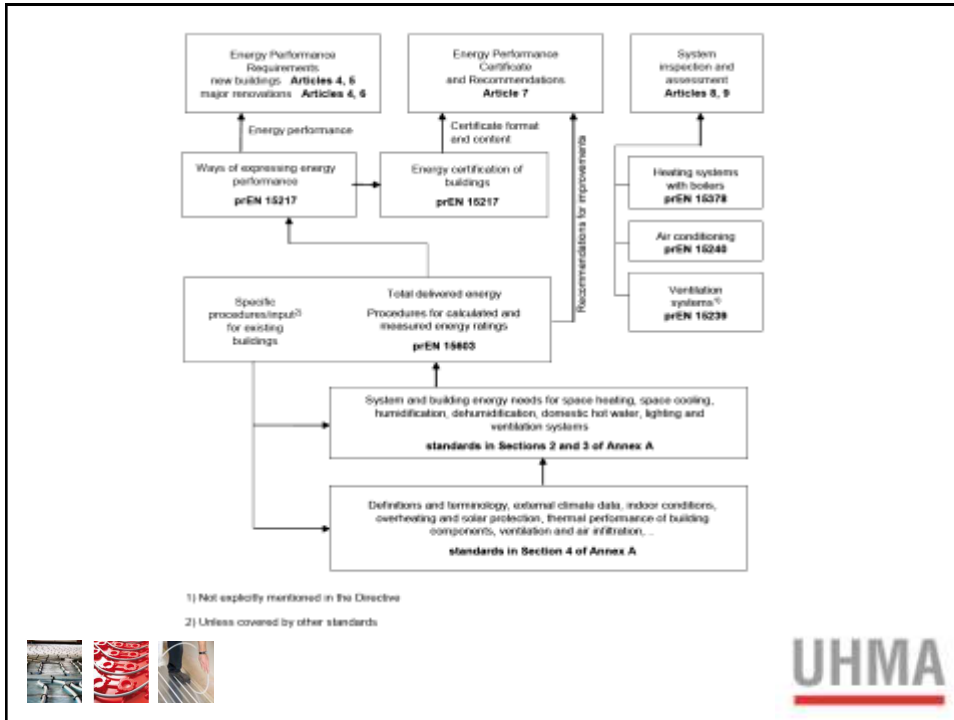
International Centre for Indoor Environment & Energy

Technical University of Denmark

2005 Eu-Ray European Energy Performance in Buildings Directive Study



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Section 1 : Standards concerned with calculation of overall energy use in buildings (based on results from standards in section 2)

EN 15217	Energy performance of buildings – Methods for expressing energy performance and for energy certification of buildings
EN 15603	Energy performance of buildings – Overall energy use and definition of ratings
EN 15429	Data requirements for standard economic evaluation procedures related to energy systems in buildings, including renewable energy sources.

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Section 2 : Standards concerned with calculation of <u>delivered energy</u> (based where relevant on results from standards in section 3)	
EN 15316-1	Heating systems in buildings – Method for calculation of system energy requirements and system efficiencies – Part 1: General
EN 15316-2-1	Heating systems in buildings – Method for calculation of system energy requirements and system efficiencies – Part 2-1: Space heating emission systems
EN 15316-4	Heating systems in buildings – Method for calculation of system energy requirements and system efficiencies: Part 4-1: Space heating generation – Combustion systems Part 4-2: Space heating generation – Heat pump systems Part 4-3: Thermal solar systems Part 4-4: Performance and quality of CHP electricity and heat Part 4-5: Performance and quality of district heating and large volume systems Part 4-6: Performance of other renewables (heat and electricity) Part 4-7: Space heating generation – Biomass combustion systems
EN 15316-2-3	Heating systems in buildings – Method for calculation of system energy requirements and system efficiencies – Part 2-3: Space heating distribution systems
EN 15316-3	Heating systems in buildings – Method for calculation of system energy requirements and system efficiencies – Part 3-1: Domestic hot water systems, characterisation of needs (tapping patterns) Part 3-2: Domestic hot water systems, distribution Part 3-3: Domestic hot water systems, generation





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EN 15243	Calculation of room temperatures and of load and energy for buildings with room conditioning systems
EN 15377	Design of embedded water based surface heating and cooling systems Part 1: Determination of the design heating and cooling capacity Part 2: Design, dimensioning and installation Part 3: Optimising for use of renewable energy sources
EN 15241	Ventilation for buildings – Calculation methods for energy losses due to ventilation and infiltration in commercial buildings
EN 15232	Calculation methods for energy efficiency improvements by the application of integrated building automation systems
EN 15193	Energy performance of buildings – Energy requirements for lighting



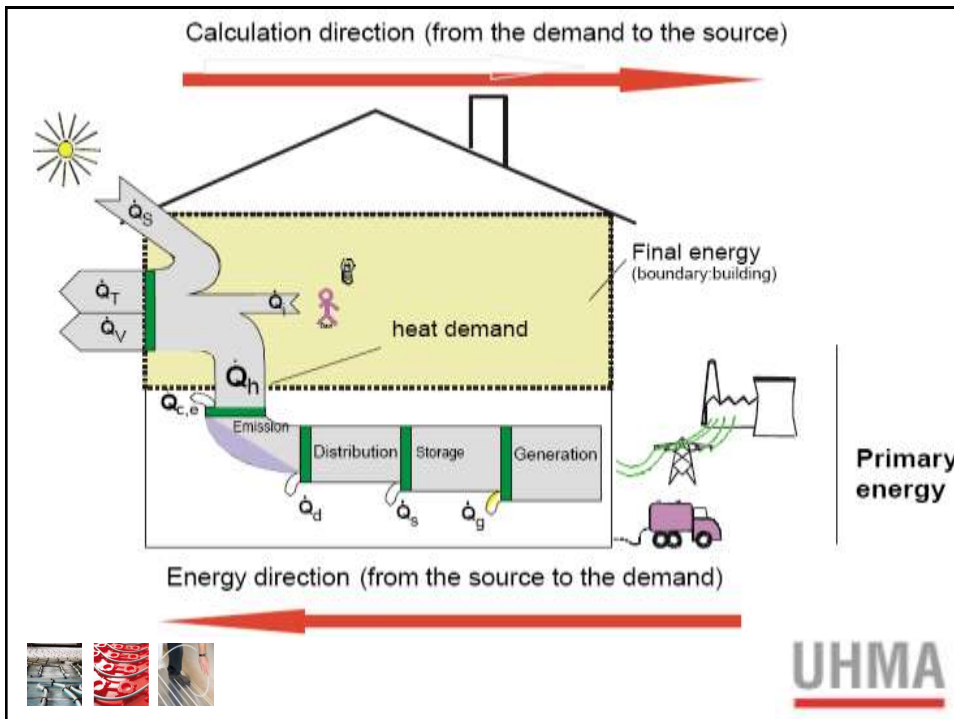
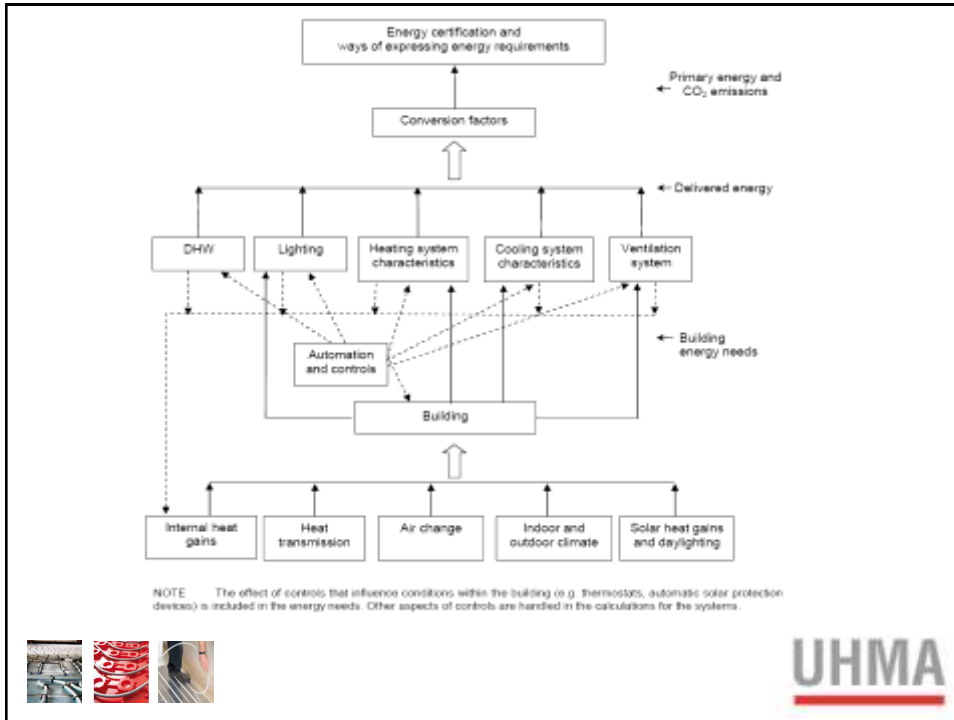
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Section 3 : Standards concerned with calculation of <u>energy need for heating and cooling</u>	
EN ISO 13790	Energy performance of buildings – Calculation of energy use for space heating and cooling
EN 15255	Thermal performance of buildings – Sensible room cooling load calculation – General criteria and validation procedures
EN 15265	Energy performance of buildings – Calculation of energy use for space heating and cooling – General criteria and validation procedures

Section 5 : Standards concerned with monitoring and verification of energy performance	
EN 12599:2000	Ventilation for buildings – Test procedures and measuring methods for handling over installed ventilation and air conditioning systems
EN 13829:2001	Thermal performance of buildings – Determination of air permeability of buildings – Fan pressurization method
EN ISO 12569:2001	Thermal performance of buildings – Determination of air change in buildings – Tracer gas dilution method
EN 13187:1999	Thermal performance of buildings – Qualitative detection of thermal irregularities in building envelopes – Infrared method
EN 15378	Heating systems in buildings – Inspection of boilers and heating systems
EN 15239	Ventilation for buildings – Energy performance of buildings – Guidelines for the inspection of ventilation systems
EN 15240	Ventilation for buildings – Energy performance of buildings – Guidelines for the inspection of air-conditioning systems



“...floor heating comes out as the best system in **all** cases...”

- Condensing Boilers – the main market
 - 20% vs “normal” radiators**
 - 90% condensing with UFH**
 - 75% condensing with rads**
 - 5% vs low-temperature radiators*

- Heat pumps
 - 30% vs LT rads with GSHP*
 - 20% vs LT rads with ASHP*



* Source: Eury EPBD Study, ** Source: Wavin.

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What this means

- Higher rate of specification
- Impact on working methods

- Take stock of your skills

- Beware cowboys

- Seize the opportunity sooner rather than later



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Ensuring trust - UHMA

- Targeted increase in membership
 - The future movers and shakers
- Extensive training
 - Designers and installers
 - Recognised and accredited,
 - e.g. BPEC, Logic, CUFH
 - Look for UHMA approved courses
- Pre and post-sale advice
- New membership categories
 - Recognised Installer
 - Recognised Designer
 - People who can be trusted



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Summary

- UFH market will grow rapidly
- UFH efficiency with *any* heat source
- Legislation will follow, eventually
- UHMA Members can be trusted
- If designer / specifier
 - Insist on UHMA qualified installer
 - Insist on UHMA member to supply
- If installer / potential installer
 - Get trained on a UHMA recognised course
 - Join UHMA as a Recognised Installer / Designer



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Questions

