TOSHIBA

Leading Innovation

TOSHIBA CPD Courses Approved by CIBSE for Consulting Engineers & Designers

A guide to fundamental legislation and energy topics

Toshiba CPD Courses approved by CIBSE

Toshiba are pleased to offer a range of Continual Personal Development (CPD) courses approved by the Chartered Institution of Building Services Engineers (CIBSE). On completion a one hour credit certificate is issued toward the annual CPD learning schedule.

Each CPD is delivered by an industry experienced presenter and currently cover the following areas:

CPD 1.0

A Basic Guide to Air Conditioning

In this CPD we discuss the basic requirements to air condition a building including looking at heat gains and losses to a building, the requirement for fresh air & how this impacts on the design of air conditioning solutions. We also look at the different types of heating and cooling solutions and in particular the use of VRF systems. The CPD includes a demonstration of Toshiba Design Airs VRF selection software to show how to select the correct equipment for a project. The CPD would benefit new apprentices, Young Graduate Engineers and those engineers that do not have an understanding of systems utilising a refrigeration cycle.

Key Learning Outcomes

- ✓ Building needs with regards to air conditioning solutions.
- ✓ Understanding of the Main Mechanical Items involved with Air Conditioning systems.
- ✓ Basic understanding of Heat gains, losses and ventilation calculations.
- ✓ Basic understanding of heat pump technology.
- ✓ Awareness of selection software to aid VRF system design.

CPD 2.0

Legislation

In this CPD we discuss the key parts of legislation that effect the selection and use of air conditioning systems, including Part L of the building regulations, SEER, SCOP & SBEM Calculations, EN378 and BREEAM/LEED building accreditation. We also look at the impact of the F-GAS regulation on the use of air conditioning systems, the future of refrigerants and the different means of identifying the energy efficiency of air conditioning system types such as ECA, RHI and ECO Design.

The content is aimed at all levels of the design chain including Consultants, End-Users, M&E Designers and installing contractors.

Key Learning Outcomes

- ✓ Impact of legislation on our industry.
- ✓ Methods for reducing global warming.
- ✓ Understanding the future of refrigerants within air conditioning systems.
- ✓ The key reasons for having robust legislation in place to help the industry promote good practice.

CPD 3.0

A Guide to Tackling a Project Using Air Cooled VRF

In this CPD the discussion topic revolves around understanding the key client requirements for the installation of air conditioning systems within their buildings. Consideration is given to the different routes to establish a design package either through the specification or D&B routes. We provide an understanding of the basic refrigeration cycle, the types of compressor technology that are used and how these relate to achieving SEER & SCOP energy efficiency levels. To demonstrate the different elements of the design and key system components we focus on hotel and office type applications for air conditioning utilising Toshiba's Design Airs VRF selection software.

The content is aimed at all levels of the design chain including Consultants, End-Users, M&E Designers and installing contractors.

Key Learning Outcomes

- ✓ Design criteria to be considered.
- ✓ Types of equipment available.
- ✓ The application of VRF systems.
- ✓ Understanding the basics of heat pump technology.
- ✓ Awareness of the different support tools that is available to aid the correct equipment selections to be made for a project.

CPD

CPD 4.0

Mechanical & Natural Cooling Systems

In this CPD we discuss the need for cooling systems the types of systems that are available including, natural vent, air systems, chilled water systems and VRF. We focus on the different types of compressors, how they operate and the differing energy efficiency they provide at part load operating conditions. In addition to the operation of the different systems we also provide some analysis on the comparison of installation and running costs against different mechanical cooling systems.

The content is aimed at all levels of the design chain including Consultants, End-Users, M&E Designers and installing contractors.

Key Learning Outcomes

✓ The key advantages and disadvantages of different cooling systems.

✓ The key problems that can arise from selecting the incorrect choice of system.

✓ Understanding different compressor types and how they operate.

✓ Installation and running cost comparisons across different system types.

✓ Awareness of the different support tools that is available to aid the correct equipment selections to be made for a project.

CPD 5.0

A Guide to Heat Pump Technology

In this CPD we provide and introduction to heat pump technology and the different types of systems that exist. The focus of the presentation is to look at the application of heat pumps and how you can get the best out of the energy efficiencies they can provide, we also discuss the legislation that governs the use and installation of heat pumps and highlight the key benefits that such technology can provide the end operating user.

The content is aimed at all levels of the design chain including Consultants, End-Users, M&E Designers and installing contractors.

Key Learning Outcomes

✓ Understanding of heat pump technology and how it works.

✓ The legislation that exists around the application and use of heat pumps.

✓ Understanding the energy efficiencies that can be gained from selected the correct heat pump system.

✓ The application and limits of using Air Source Heat Pumps (ASHP).

CPD 6.0

Controls

In this CPD we focus on what is a controls system, how can it benefit the operation of an air conditioning system and the implications of the incorrect selection of a controls system. We discuss the different types of control systems and where they can be applied including, open control, wired & WiFi network control and closed systems. Consideration is also given to the use of BMS within buildings to control not only the air conditioning but other systems such as lighting, ventilation, building security and the different types of BMS controls platforms that exist.

The content is aimed at all levels of the design chain including Consultants, End-Users, M&E Designers and installing contractors.

Key Learning Outcomes

✓ Understanding controls terminology.

✓ Different methods of control systems.

✓ Integrating control systems and its benefits.

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CIBSE CPD

BREEAM Refrigerant Pump Down Credit & BSEN378 (leakage into occupied space)

CPD 7.0

This CPD looks at how leak detection pump down systems work and how such a system can comply with current legislation regarding leak detection for occupied area's such as hotels.

The key enforces being on how you can demonstrate compliance for BREEAM credits and compliance with the British Standard of EN378 when applied to the safety of occupied spaces.

We also look at some of Toshiba's support tools that can support compliance as well as demonstrating some real life application case studies.

Key Learning Outcomes

✓ Understanding of how a leak detection pump down system works.

✓ The requirements to demonstrate compliance with both BREEAM and BSEN378.

The Application of SEER and COP for VRF Systems

CPD 8.0

The CPD looks at the information provided by the Part L 2nd tier document.

Non-domestic building services compliance guide, with particular emphasis given to those sections that apply to the application of VRF systems.

Key Learning Outcomes

✓ EER/SEER and COP/SCOP calculation methodology.

✓ Practical application of SEER and SCOP values.

✓ Understanding of the Simplified Building Energy Model (SBEM).

✓ Demonstration of Toshiba's SEER and SCOP calculation software.

✓ The key components of a VRF.

Toshiba are recognised as an officially approved CPD provider by CIBSE. All CPD's are delivered by trained presenters and upon completion a one CPD Credit Certificate is issued to all attendees.

To arrange your FREE of charge CPD either at your offices or another convenient location please contact the Toshiba CPD team, marketing.uk@toshiba-ac.com or arrange through your local Toshiba Distributor http://toshiba-aircon.co.uk/distributors

Target Audience:
Building Services Engineers, CIBSE Members

Duration of Courses:
1 Hour

Course Formats:
Seminars

Course attendance fee range (if applicable)
Free

Accredited from 20th March 2014 until 20th March 2016
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Toshiba Carrier UK Limited,
United Technologies House, Guildford Road, Leatherhead, Surrey, KT22 9UT
Tel: **01372 220240** or Email: **marketing.uk@toshiba-ac.com**