

INTRODUCTION

One measure in which the European Union has established a single market, allowing free trade and encouraging economic development across all member states, is the introduction of designated testing standards.

This has led to BS 476 Part 24 being superseded and having incorporated corrigendum no.1. "This standard has been superseded by the current BS EN 1366-1, BS EN 1366-8 and BS EN 1366-9, but it has been retained based on legitimate need for the standards within non-EU markets."

The European Norm (EN) does not affect member states building regulations, other than the way the products must be tested, if there is a designated standard in place for that product.

It must be remembered that the Construction Products Regulation (CPR) 2013 is law.

We have set out below, our understanding of the current situation. If you are in doubt as to whether a project should be built to BS or EN standards, advice should be sought from Client, Consultant, Building Control or Developer.

British Standards or European Standards

Since 1999 the European standards have run alongside the British Standard (BS 476: Part 24). The critical date for changeover to European only standards was 1st July 2013, when the CPR (Construction Products Regulation) became a statutory requirement in the United Kingdom thus bringing the United Kingdom in line with the rest of Europe.

This was never going to be a date where British Standards could all be changed over to European standards. The mechanism for changeover is described in Approved Document 7 which supports Building Regulation 7; Materials and workmanship. Approved Document 7 1999 edition will continue to apply to work started before, or to work subject to a building notice, full plans application or initial notice submitted before 1 July 2013.

There is no change to Regulation 7; however the main changes in Approved Document 7- 1 July 13 are that:

The document has been updated to reflect the full implementation of European Regulation 305/2011/EU- CPR covering construction products, referred to as the Construction Products Regulation, from 1 July 2013.

The designated standards are based on the BS EN 1366 series of tests and includes separate fire test methods for Ventilation (to include kitchen extract) ducts and Smoke Extraction ducts, and further differentiates between single and multi-compartment Smoke Extract Systems.

Therefore there are two main points to take into account if the project is BS or EN:

- 1) When was the approval process started?
- 2) Does the specification detail products which are covered by a designated product standard?

In the paragraph which follows we take a closer look at these two points:

1. The approval process

Which approval process will depend on whether the project is using Building Control services of a Local Authority or an Approved Inspector.

The explanation of the three types of notice is as follows:

Initial Notice

If an Approved Inspector is used then the project team should jointly notify the Local Authority that the Approved Inspector is carrying out the building control function for the work. This is called the "Initial Notice".

Building Notice

If project team apply for Building Regulations approval from the local authority Building Control Service, they issue by giving a building notice.

Plans are not required with this process so it's quicker and less detailed than the full plans application. It is designed to enable some types of building work to get under way quickly; although it is perhaps best suited to small work.

Full Plans Application

The project team can apply for Building Regulations approval from the local authority Building Control Service by submitting a full plans application.

An application deposited under this procedure needs to contain plans and other information showing all construction details, preferably well in advance of when work is to start on site.

2. Designated Product Standards

The Construction Products Regulation (305/2011/EU - CPR) lays down designated conditions for the marketing of construction products.

Ventilation & Kitchen Extract

The product standard EN 15871 has not yet been ratified, therefore no designated standard is in place for ventilation or kitchen extract. Therefore one can proceed with BS 476-24 or EN1366 Part 1 tested ducting.

It must be remembered that the Product standards only defines' the tests that should be undertaken, what production control should be achieved, what installation and maintenance information should be given, how to label products and how to CE mark. The test standards provide the method of testing, how to report on the test and a direct field of application of the test results.

Smoke Extract

Smoke control duct sections are intended for use in the following types of systems, including:-

- a) pressurisation
- b) pressure relief
- c) extraction systems
- d) ductwork systems
- e) inerting fire suppression systems

It is realised that all the above systems do not address smoke extraction, but have similar properties as are required of such smoke ducts to limit leakage in a fire and smoke control situation.

Classification document EN 13504-4 details the various levels of fire rating for the products covered by the smoke extract product standard BS EN 12101-7 designated product standard.

A designated standard is available for smoke duct sections, but only up to 1250 x 1000mm size, as there is no EXAP (Extended Field of Application) standard, and it will be some time before one is available.

In Conclusion

The client/consultant etc., needs to know if the specification proposes a duct system which is covered by a designated standard and the dates the approval process was started. Then they can decide if the project is a British or European standard specification project.

The European Standards

In contrast to the BS 476 Part 24, the BS EN 1366 series of tests now includes separate fire test methods for Ventilation ducting and Smoke Extraction ducts, and further differentiates between single and multi- compartment Smoke Extract Systems.

Product Construction Standards

prBS EN 15871 Ventilation for buildings - Fire resisting duct sections (provisional).

BS EN 12101-7 Smoke and heat control systems – Smoke duct systems Requires that the fire duct manufacturer:

- has tested to the EN Standards at a UKAS accredited laboratory.
- has ISO 9001 quality management systems for manufacture
- carries out FPC (Factory Production Control) yearly assessed by a nominated body.
- has third party accreditation for the installation (FIRAS),

The product construction standards require that the duct is tested to at least one of the following:

Test Standards

BS EN 1366-1 Ducts - complete airflow installation in a building, used for heating and/or cooling, in order to maintain the indoor air quality and provide thermal comfort.

BS EN 1366-2 Fire Dampers

BS EN 1366-3 Penetration Seals

BS EN 1366-4 Linear joint seals

BS EN 1366-5 Service Ducts and Shafts

BS EN 1366-6 Raised Access and Hollow Core Floors

BS EN 1366-7 Closures for conveyors and track bound transportation systems

BS EN 1366-8 Smoke extraction ducts (multi compartment) including pressurisation, pressure relief of and extraction systems.

BS EN 1366-9 Fire resistance tests for service installations - single compartment smoke extraction ducts

BS EN 1366-10 Smoke control dampers

BS EN 1366-11 Fire protective systems for cable systems and associated components (in preparation)

BS EN 1366-12 Non-mechanical fire barrier for ventilation ductwork

BS EN 1366-13 1, 2, 3 sided ducts (in preparation)

BS EN 1366-14 Kitchen extract ducts (in preparation)

BS EN 1366-15 Mixed penetrations including pipes, cables, ducts and dampers (in preparation)

