

Technical Information

1. Forms of technical info

- Drawings
- Specifications & Technical Standards
- Data sheets
- Manuals
- Manufacturers' instructions

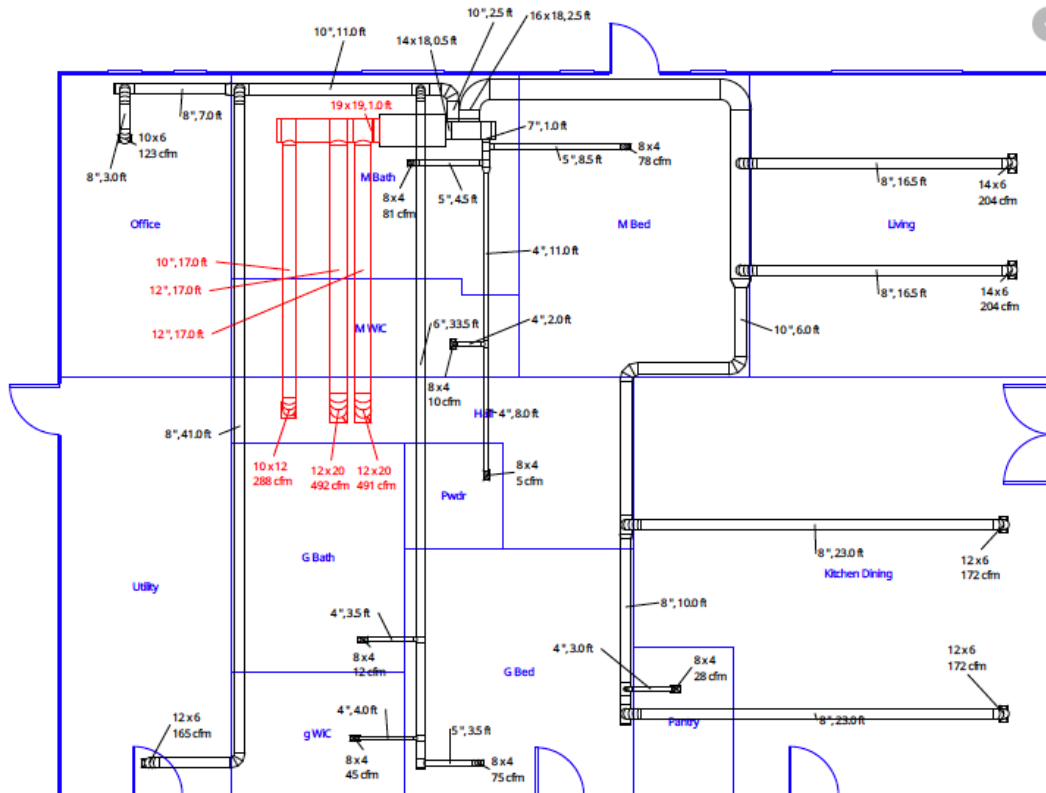
2. Drawings

Engineering Drawings

Engineering Drawings	
View Type	Characteristics
Scaled views	<ol style="list-style-type: none"> 1. scale models of objects 2. different views of the object 3. e.g. a building would have views of the front (elevation), top (plan) and the sides 4. third angle projection - the front view is in the centre
Sectional views	<ol style="list-style-type: none"> 1. Drawn as though the component has been sawn/cut through 2. Shows hidden detail inside that would otherwise not be seen 3. Notes will show the direction of the view to aid understanding
Three-dimensional views	<ol style="list-style-type: none"> 1. Drawn using isometric projection, pictorial views or oblique views. I.e. it shows how the object would look to the naked eye 2. Isometric view - drawn at an angle with one corner 'closest' to the viewer. Vertical lines are vertical, horizontal lines are at 30°
Exploded views	<ol style="list-style-type: none"> 1. Show detailed components inside an object and how they are assembled. 2. Found in most service manuals 3. Individual components are usually labelled

MES (Mechanical Engineering Services) Drawings

These drawings can simply be plans of buildings with additional views added somewhere convenient on the same sheet. They do not necessarily need to adopt the same conventions or lay out as other engineering drawings. Some may be similar to street maps.

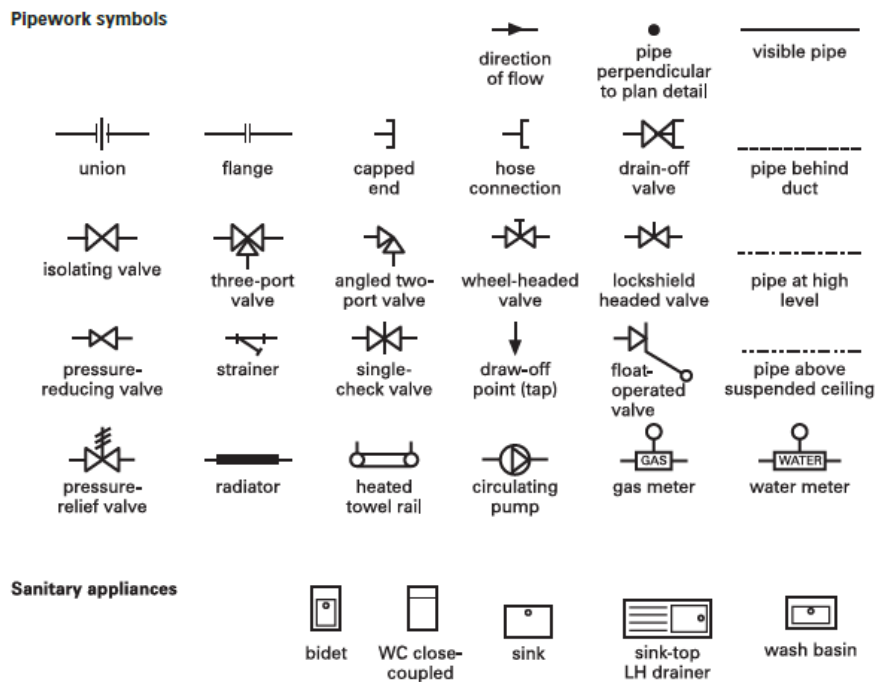


Symbols and abbreviations are often used in order to reduce the amount of writing and information on the drawing itself. Again, similar to symbols on a map. They are usually understood by trade professionals but nevertheless a key is often provided.

The symbols are usually based upon British International Standards, most commonly:

- BS 1553 'Graphical symbols for general engineering. Part 1 Piping symbols and plant'
- BS 1192 part 3 'Construction drawing practice – Recommendations for symbols and other graphic conventions'.

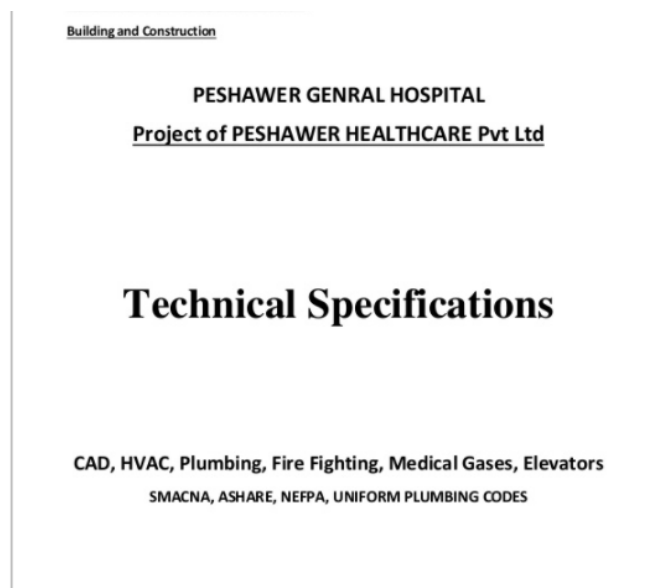
Examples include:



3. Specifications & Technical Standards

Characteristics of a specification:

- A job will have a specification, in addition to graphical information (drawings).
- Describes the scope of the job/contract, detailing all work to be undertaken.
- Think of it as a reference book, covering every aspect of the job.
- It will reference national/international standards, codes of practice and maybe statutes. These will protect future users of the building/items in question.



4. Coding

Modern buildings are packed full of complex mechanical services so it's vital that things like piping systems, electrical cabling and gas cylinders are correctly identified. Therefore, a colour coding system is used, according to agreed standards.

Pipelines – BS 1710

Item	Colour Code
Potable (drinking) water	green/blue/green
Cooling water	green/white/green
Chilled water	white/green/white
LPHW heating	blue/crimson/blue
HTHW heating	crimson/blue/crimson
Cistern fed cold water	white/blue/white
Hot water supply	white/crimson/white
Fire fighting	red no brand
Natural gas	canary yellow

Electrical Cabling – BS 7671

Alternating current single-phase power supply

Item	Colour Code
Live	brown
Neutral	blue
Protective earth	green/yellow

Alternating current three-phase power supply

Item	Colour Code
Protective earth	green/yellow
Phase 1	brown
Phase 2	black
Phase 3	grey
Neutral	blue

5. Data Sheets

Many hazardous substances that you use at work will have a COSHH (Control of Substances Hazardous to Health) data sheet, especially if they are 'dangerous for supply'. In these cases, the supplier must legally provide a safety data sheet. Much of the information on safety data sheets can be difficult to understand, however, the important information can be found in sections 2 and 16 (what the dangers are) and sections 4-8 (emergencies, storage and handling).

Functional Information

Functional information provides the reader with information on how something works or 'functions'. It can come in a number of different formats, for example:

- Pressure testing of a ductwork system and subsequently passing the test sheet to the client.
- Demonstration of fire damper drop testing and subsequently passing on the sign-off sheets to the client.
- Manufacturer's instructions on the use of components or access equipment, such as fire dampers, smoke dampers, fan coil units bracketing and replacement filters.
- Demonstration of filter on AHUs or FCUs.
- Demonstration of isolation on AHUs.
- Position and removal of access doors.
- Potential isolation of VCDs.

You have certain responsibilities when supplying others with information. First and foremost, you must ensure the information you are providing is correct and easy to understand. Therefore, try to deliver it in a clear and concise manner. Also ensure that the information is valid, current, and sufficient and make sure you are legally compliant to offer this information.

Should you pass on incorrect technical or functional information, there could be safety consequences which could lead to a hazard. This could result in the job not meeting the correct specifications, that in turn could lead to a contractual obligation not being met and ultimately legal ramifications.