

### FORMAT OF PIPE DATA TYPE FILES [PDT]

#### Normally FHCDATA and FHCADEDED

The pipe type data file contains information about the number of pipes, pipe sizes (both OD and ID), pipefittings and other information required by the FHC program. You should not modify this file unless you are absolutely sure that you know what you are doing.

Line 1	Time and Date (hh:mm,dd mmm yyyy)
Line 2	Number of pipe types (maximum = 30), number of sizes (max=20), number of fittings and valve types (max=20). Example 17,13,9
Pipe Type	<p>Each pipe type will now have one line with the following information with each entry separated by a comma.</p> <ul style="list-style-type: none"> <li>Code Number (1 to maximum)</li> <li>Hazen Willams 'C' factor</li> <li>Multiplier for fitting equivalent lengths</li> <li>Roughness in mm (Used for water mist systems NFPA 750)</li> <li>Sizing Line for OD of pipes (1, 2, or 3 only)</li> <li>Short Code (2 or 3 characters only)</li> <li>Description of pipe (maximum of 50 characters and no commas)</li> </ul> <p>Example: 1,120,1.000,0.0460,1,MW ,Medium weight steel pipe to BS1387 [ 1]</p>
Next 3 lines	<p>Nominal pipe diameters (OD) in mm separated by commas to correspond to the Sizing Line entered in <b>Pipe Type</b> above. This information is the pipes size, which is displayed in the FHC program.</p> <p>Example: 20 ,25 ,32 ,40 ,50 ,65 ,80 ,100 ,125 ,150 ,200 ,250 ,300</p>
Pipe Type Data	<p>For each <b>Pipe Type</b> list the internal diameters (ID) in mm that must line up with the nominal pipe (OD) above, each entry to be separated by commas.</p> <p>Example: 21.63,27.31,35.97,41.86,52.98,68.67,80.68,105.14,0.00,155.32,208.30,0.00,0.00</p>

### Fittings and Valves

**Fitting Type** Each fitting type will now have one line with the following information with each entry separated by a comma.  
Short Code (2 characters only)  
Description of fitting (maximum of 50 characters and no commas)

Example:

ST,Screwed tee or cross with flow through branch

However the first four lines have significance and must corresponded to the fittings listed bellow:

1. 90 Deg elbow
2. 90 deg welded elbow
3. 45 deg elbow
4. Tee with flow through branch

Even if you do not have one of the fittings list you must included the line. This is necessary as the FHC program automatically allocates the pipe fitting when you draw it on the screen and uses this information to find the equivalent length.

After the four mandatory fittings you can list any other fittings and valves you wish up to a maximum of 20 including the four above.

**Each Fitting** List of equivalent length in m separated by a comma of each Fitting Type of each nominal pipe size used. This data is normal taken from the BS5306 part 2, EN12845 or NFPA 13

Once all the Fitting types have been entered in metric you must then list the equivalent length in feet separated by commas. This set of data is normal taken from NFPA 13 and will be used when you design an installation to NFPA or FM requirements.

**File Name** Once you have entered all the information into the PDT file you should save it into the FHC folder (normally C:\FHC) using a descriptive file name and a three letter file extension PDT.  
Example: mypipe.pdt

## Example of fhcddata.txt file

10:09,19 Dec 2003

17,13,9

```

1,120,1.000,0.0460,1,MW ,Medium weight steel pipe to BS1387 [ 1]
2,120,1.000,0.0460,1,HW ,Heavy weight steel pipe to BS1387 [ 2]
3,120,1.000,0.0150,1,GMW,Galvanised medium weight steel pipe to BS1387 [ 3]
4,120,1.000,0.0150,1,GHW,Galvanised heavy weight steel pipe to BS1387 [ 4]
5,120,1.000,0.0460,1,HWS,Heavy weight steel pipe to BS3600 [ 5]
6,100,0.714,0.0200,1,CIF,Cast iron flanged pipe to BS2035 Class C [ 6]
7,100,0.714,0.0200,1,CGI,Cast grey iron flanged pipe to BS4622 [ 7]
8,110,0.850,0.0200,1,CDI,Centrifugally cast ductile iron pipe to BS4772 [ 8]
9,100,0.714,0.0200,1,CCI,Centrifugally cast iron pipe to BS1211 Class C [ 9]
10,140,1.330,0.0015,1,PVC,UPVC pipe to BS3506 Class E [10]
11,150,1.490,0.0015,2,CUN,90/10 Cu Ni pipework [11]
12,140,1.330,0.1500,1,CEM,Cement lined pipework [12]
13,120,1.000,0.0460,1,S40,A.P.I. 5L Schedule 40 pipe [13]
14,120,1.000,0.0460,1,S80,A.P.I. 5L Schedule 80 pipe [14]
15,150,1.490,0.0015,1,BM ,Blazemaster PVC pipe [15]
16,150,1.490,0.0015,3,HPE,Polyethylene SDR 11 [16]
17,150,1.490,0.0015,3,HPE,Polyethylene SDR 17.6 [17]
20 ,25 ,32 ,40 ,50 ,65 ,80 ,100 ,125 ,150 ,200 ,250 ,300
25 ,30 ,38 ,44 ,57 ,76 ,89 ,108 ,000 ,000 ,000 ,000 ,000
000 ,000 ,000 ,000 ,000 ,90 ,110 ,125 ,180 ,225 ,250 ,315 ,355
21.63,27.31,35.97,41.86,52.98,68.67,80.68,105.14, 0.00,155.32,208.30, 0.00, 0.00
20.41,25.68,34.34,40.23,51.36,67.04,79.06,103.31, 0.00,154.30,208.30, 0.00, 0.00
21.46,27.14,35.80,41.69,52.81,68.50,80.51,104.97, 0.00,155.15,206.10, 0.00, 0.00
20.24,25.51,34.17,40.16,51.19,66.87,78.89,103.14, 0.00,154.13,204.00, 0.00, 0.00
0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,158.30,208.30,258.80, 0.00
0.00, 0.00, 0.00, 0.00, 0.00,51.95, 0.00,77.41,102.87, 0.00,153.96,205.01,256.00, 0.00
0.00, 0.00, 0.00, 0.00, 0.00, 0.00,81.23,100.45, 0.00,150.50,200.55,250.60, 0.00
0.00, 0.00, 0.00, 0.00, 0.00, 0.00,83.31,103.91, 0.00,154.68,205.23,256.03,311.60
0.00, 0.00, 0.00, 0.00, 0.00, 0.00,81.90,107.33, 0.00,159.73,211.62,263.49, 0.00
0.00,28.60,36.30,41.40,51.90, 0.00,76.60, 98.60, 0.00,144.90,192.00,239.20,283.50
21.00,26.00,34.00,40.50,53.00,71.10,82.90,102.00, 0.00, 0.00, 0.00, 0.00, 0.00
0.00, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00,100.00, 0.00,150.00,200.00,250.00,300.00
0.00,26.64,35.08,40.94,52.48,62.68,77.92,102.26, 0.00,154.08,202.74,254.56, 0.00
0.00,24.30,32.50,38.14,49.22,58.98,73.66, 97.18, 0.00,146.36, 0.00, 0.00, 0.00
0.00,27.97,35.41,40.59,50.88,61.54,74.93, 0.00, 0.00, 0.00, 0.00, 0.00, 0.00
0.00, 0.00, 0.00, 0.00, 0.00,73.60,90.00,101.20,145.90,182.40,202.75,255.55,288.10
0.00, 0.00, 0.00, 0.00, 0.00,79.80,97.40,110.80,159.60,199.40,221.60,279.20,314.80
SE,90 deg screwed elbow
WE,90 deg welded elbow
45,45 deg screwed elbow
ST,Screwed tee or cross with flow through branch
GV,Gate valve - Straightway
SV,Alarm or non-return valve (Swinging)
MV,Alarm or non-return valve (Mushroom)
BV,Butterfly valve
GL,Globe valve - Straightway
0.63, 0.77, 1.04, 1.22, 1.46, 1.89, 2.37, 3.04, 0.00, 4.30, 5.67, 7.42, 0.00
0.30, 0.36, 0.49, 0.56, 0.69, 0.88, 1.10, 1.43, 0.00, 2.00, 2.64, 3.35, 0.00
0.34, 0.40, 0.55, 0.66, 0.76, 1.02, 1.27, 1.61, 0.00, 2.30, 3.05, 3.89, 0.00
1.25, 1.54, 2.13, 2.44, 2.91, 3.81, 4.75, 6.10, 0.00, 8.61, 11.34, 14.85, 0.00
0.00, 0.00, 0.00, 0.00, 0.38, 0.51, 0.63, 0.81, 0.00, 1.13, 1.50, 1.97, 0.00
0.00, 0.00, 0.00, 0.00, 2.42, 3.18, 3.94, 5.07, 0.00, 7.17, 9.40, 12.30, 0.00
0.00, 0.00, 0.00, 0.00,12.08,18.91,19.71, 25.36, 0.00, 35.88, 47.27, 61.85, 0.00
0.00, 0.00, 0.00, 0.00, 2.19, 2.86, 3.55, 4.56, 0.00, 6.38, 8.62, 9.90, 0.00
0.00, 0.00, 0.00, 0.00,16.43,21.64,26.80, 34.48, 0.00, 48.79, 64.29, 84.11, 0.00
2, 2, 3, 4, 5, 6, 7, 10, 12, 14, 18, 22, 27
1, 2, 2, 2, 3, 4, 5, 6, 8, 9, 13, 16, 18
1, 1, 1, 2, 2, 3, 3, 4, 5, 7, 9, 11, 13
4, 5, 6, 8, 10, 12, 15, 20, 25, 30, 35, 50, 60
0, 0, 0, 0, 1, 1, 1, 2, 2, 3, 4, 5, 6
0, 5, 7, 9, 11, 14, 16, 22, 27, 32, 45, 55, 65
0, 5, 7, 9, 11, 14, 16, 22, 27, 32, 45, 55, 65
0, 0, 0, 0, 6, 7, 10, 12, 9, 10, 12, 19, 21
0, 5, 7, 9, 11, 14, 16, 22, 27, 32, 45, 55, 65

```

Pipe data provided by Canute LLP