

Name of manufacturer  
**Abacus®**  
**Abacus lighting limited**  
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<b>Data sheet reference:</b>	TB060
Revision:	A
Page:	1 of 2
Date:	21st October 2008
Name of contract	Standard columns

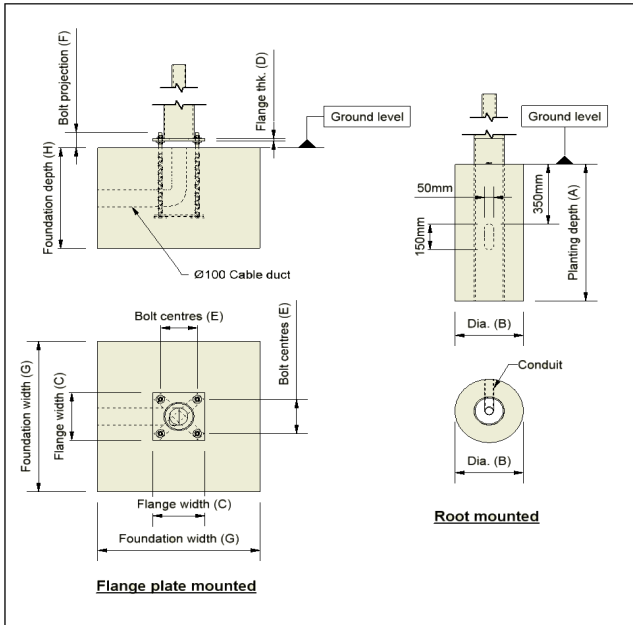
**Part A**  
General

Column reference	TB060
Manufacturers drawing reference	TB060
Column nominal height (m)	6
Terrain category defined in EN40-3-1	III
Column material	Q235, S275 & S355
Material design strength (N/mm <sup>2</sup> )	235, 275 & 355
Number of door openings	1
Door opening size height (mm)	500
Door opening size width (mm)	100
Cross section of base height (mm)	500
Cross section of base width (mm)	95
Cross section of base depth (mm)	90

**Corrosion protection**

Base system type As required

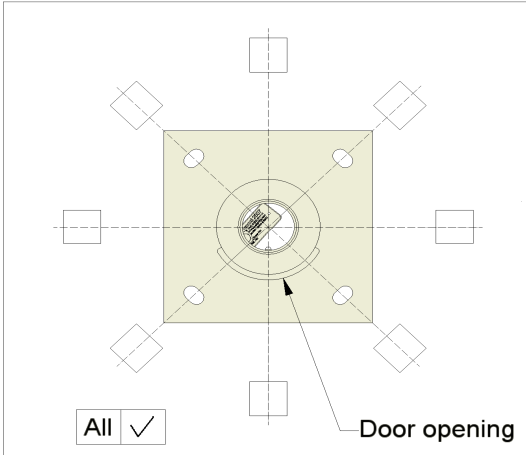
**Part B**  
Foundation data



**Flange plate and bolt details**

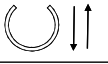
Flange width (mm) Dim. (C)	280
Flange thk. (mm) Dim. (D)	12
Bolt centres (mm) Dim. (E)	200
Hole Dia or slot size (mm)	30x20
Unfactored design bolt load (N)	14,812
Holding down bolts	M16x500 long grade 4.6
Bolt projection (mm) Dim. (F)	125

Acceptable positions of bracket arm(s) relative to door



Additional sacrificial thk. (mm) As required

**Line of action of maximum moment relative to the door opening**



Overtuning moment (kNm)	4.194
Horizontal shear (kN)	1.031
Column weight root / flange (kg)	47 / 49

**Root mounted**

Planting depth (m) Dim. (A)	1
Min'm concrete dia. (m) for standard soil types Dim. (B)	
G=630	0.098
G=390	0.158
G=230	0.268

**Note 1.** Foundation sizes shown above are determined in accordance with PD6547. In some instances the minimum concrete diameter is less than the planted tube of the column. In these circumstances it is permissible to install the column using compacted excavated material or material of better quality. Soil definitions are given in PD6547.  
If in doubt use the size for G=230

**Flange mounted standard Abacus foundation details**

Passive foundation ground bearing pressure 150KN/m <sup>2</sup>	
Foundation width (mm) Dim. (G)	0.75
Foundation depth (mm) Dim. (H)	0.8
Non passive foundation ground bearing pressure 150KN/m <sup>2</sup>	
Foundation width (mm) Dim. (G)	1.05
Foundation depth (mm) Dim. (H)	0.675
Non passive foundation ground bearing pressure 100KN/m <sup>2</sup>	
Foundation width (mm) Dim. (G)	1.05
Foundation depth (mm) Dim. (H)	0.675
Non passive foundation ground bearing pressure 75KN/m <sup>2</sup>	
Foundation width (mm) Dim. (G)	1.05
Foundation depth (mm) Dim. (H)	0.675

**Note 2.** For EN40 columns standard Abacus foundations can be selected from our Web site www.abacuslighting.com  
For Highways Agency specification specialist advise is required

Details of attachments	N/A.		
Area (m <sup>2</sup> )	0	Coefficient	0
Total area (m <sup>2</sup> )	0		
Height (m)	0		
Offset (m)	0		

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**Part C**  
Acceptable lanterns

**Post top mounted**

Lantern lever arm (mm)	
Due to weight of lantern	Due to wind on lantern
400	400

Lantern connection		Lantern	Rationalized wind loading factors (Rwf)			
Diameter (mm)	Length (mm)	Max wt. (kg)	396	429	466	576
FL1			Maximum windage area (m <sup>2</sup> ) for rationalized wind loading factors			
		35	0.43	0.381	0.336	0.238

**Single arm bracket projection**

Lantern lever arm (mm)	
Due to weight of lantern	Due to wind on lantern
400	400

Bracket projection (m)	Bracket reference	Material grade	Design strength (N/mm <sup>2</sup> )	Fixing angle (deg.)	Diameter (mm)	Length (mm)	Lantern	Rationalized wind loading factors (Rwf)			
							Max wt. (kg)	396	429	466	576
								Maximum windage area (m <sup>2</sup> ) for rationalized wind loading factors			
0.1	PR2-01/S/42	S275	275		As required		10	0.49	0.437	0.387	0.28
0.25	PR2-025/S/42	S275	275		As required		10	0.465	0.414	0.366	0.263
0.5	PR2-05/S/42	S275	275		As required		10	0.422	0.375	0.33	0.233
0.75	PR2-075/S/42	S275	275		As required		10	0.385	0.341	0.298	0.207
1	PR2-10/S/42	S275	275		As required		10	0.351	0.309	0.269	0.183
1.25	PR2-125/S/42	S275	275		As required		10	0.32	0.28	0.243	0.161
1.5	PR2-15/S/42	S275	275		As required		10	0.291	0.253	0.218	0.141
0.1	PR2-01/S/48	S275	275		As required		10	0.489	0.437	0.387	0.279
0.25	PR2-025/S/48	S275	275		As required		10	0.463	0.412	0.364	0.261
0.5	PR2-05/S/48	S275	275		As required		10	0.418	0.371	0.326	0.23
0.75	PR2-075/S/48	S275	275		As required		10	0.379	0.335	0.293	0.202
1	PR2-10/S/48	S275	275		As required		10	0.344	0.302	0.262	0.177
1.25	PR2-125/S/48	S275	275		As required		10	0.311	0.271	0.234	0.153
1.5	PR2-15/S/48	S275	275		As required		10	0.28	0.243	0.207	0.131
0.1	PR2-01/S/60	S275	275		As required		10	0.488	0.436	0.386	0.278
0.25	PR2-025/S/60	S275	275		As required		10	0.46	0.409	0.361	0.258
0.5	PR2-05/S/60	S275	275		As required		10	0.411	0.364	0.319	0.223
0.75	PR2-075/S/60	S275	275		As required		10	0.369	0.325	0.283	0.192
1	PR2-10/S/60	S275	275		As required		10	0.33	0.289	0.249	0.164
1.25	PR2-125/S/60	S275	275		As required		10	0.294	0.255	0.218	0.137
1.5	PR2-15/S/60	S275	275		As required		10	0.261	0.224	0.188	0.112

**Double arm bracket projection**

Lantern lever arm (mm)	
Due to weight of lantern	Due to wind on lantern
400	400

Bracket projection (m)	Bracket reference	Material grade	Design strength (N/mm <sup>2</sup> )	Fixing angle (deg.)	Diameter (mm)	Length (mm)	Lantern	Rationalized wind loading factors (Rwf)			
							Max wt. (kg)	396	429	466	576
								Maximum windage area (m <sup>2</sup> ) for rationalized wind loading factors			
0.1	PR2-01/D/42	S275	275		As required		10	0.26	0.231	0.204	0.146
0.25	PR2-025/D/42	S275	275		As required		10	0.251	0.223	0.196	0.138
0.5	PR2-05/D/42	S275	275		As required		10	0.234	0.206	0.179	0.122
0.75	PR2-075/D/42	S275	275		As required		10	0.218	0.191	0.164	0.107
1	PR2-10/D/42	S275	275		As required		10	0.203	0.175	0.149	0.093
1.25	PR2-125/D/42	S275	275		As required		10	0.187	0.16	0.134	0.078
1.5	PR2-15/D/42	S275	275		As required		10	0.172	0.145	0.119	0.064
0.1	PR2-01/D/48	S275	275		As required		10	0.26	0.231	0.204	0.145
0.25	PR2-025/D/48	S275	275		As required		10	0.249	0.221	0.194	0.136
0.5	PR2-05/D/48	S275	275		As required		10	0.23	0.202	0.175	0.118
0.75	PR2-075/D/48	S275	275		As required		10	0.212	0.184	0.158	0.101
1	PR2-10/D/48	S275	275		As required		10	0.194	0.167	0.141	0.085
1.25	PR2-125/D/48	S275	275		As required		10	0.177	0.15	0.124	0.069
1.5	PR2-15/D/48	S275	275		As required		10	0.159	0.132	0.107	0.052
0.1	PR2-01/D/60	S275	275		As required		10	0.258	0.23	0.203	0.144
0.25	PR2-025/D/60	S275	275		As required		10	0.246	0.218	0.19	0.132
0.5	PR2-05/D/60	S275	275		As required		10	0.222	0.194	0.168	0.111
0.75	PR2-075/D/60	S275	275		As required		10	0.2	0.173	0.147	0.09
1	PR2-10/D/60	S275	275		As required		10	0.179	0.151	0.125	0.07
1.25	PR2-125/D/60	S275	275		As required		10	0.157	0.13	0.105	0.05
1.5	PR2-15/D/60	S275	275		As required		10	0.136	0.109	0.084	0.03

**Part D**  
Certification

It is certified that the information given in this data sheet has been obtained in accordance with the requirements of BS EN 40 as implemented by Departmental Standard BD 94 and the specification. (Delete if not applicable.)

Signed on behalf of the Contractor: *Philip Nichols*

Date: 21st October 2008