Test Report



Report No

289/7574032 issue 2

This Report consists of 7 pages

Client

Cameron Design The Studio 1 Prescott Close Northampton NN₃ 5HZ **United Kingdom**

Authority & date

BSI Quotation BSI 0000277279 dated 23 August 2010

Items tested

Overspeed Governor model: VG Digital Bi-Directional Governor

Issue 2 of this report supersedes all previous issues. The amendments on page 1 causing this raise of issue can be ascertained by application to the authorising signatory

Specification

BS EN81-1 & 2:1998+A3:2009 Safety rules for the construction and installation of lifts

Part 1: Electric lifts. Part 2: Hydraulic lifts

Annex F.4 Overspeed Governors

Results

See text.

Prepared by

Certification Technical Mgr

Authorized by

Certification Technical Mgr

Issue Date

6 April 2011

Conditions of issue

This Test Report is issued subject to the conditions stated in current issue of PS082 'General conditions relating to acceptance of testing'. The results contained herein apply only to the particular sample/s tested and to the specific tests carried out, as detailed in this Test Report. The issuing of this Test Report does not indicate any measure of Approval, Certification, Supervision, Control or Surveillance by BSI of any product. No extract, abridgement or abstraction from a Test Report may be published or used to advertise a product without the written consent of the Director, BSI Healthcare & Testing Services, who reserves the absolute right to agree or reject all or any of the details of any items or publicity for which consent may be sought.

TESTING IN ACCORDANCE WITH BS EN 81-1 AND 2:1998+A3:2009 CLAUSE 9.9 AND ANNEX F.4 OVERSPEED GOVERNORS

Client's Name: Cameron Design

The Studio
1 Prescott Close
Northampton

Northampton NN3 5HZ

United Kingdom

Manufacturer's Name: Atwell International Limited

Ball Mill Top Business Park

Hallow Worcester WR2 6PD United Kingdom

Designation of type: VG Digital Bi-Directional Governor

Rated Speed(s) Max. 7.08m/s (424.8m/min) Min. 0.0833m/s (4.998m/min)

Designated minimum pull through force: 500 Newtons

Minimum tensioning force: Not applicable

Specified diameter and construction of rope: 8mm or 10mmdiameter.

Designated limitations of use: Progressive Safety Gears to be used for Car and

Counterweight where the rated speeds exceed 1.0m/s.

Item(s) for test:

1 off Overspeed Governor Model VG Digital Bi-Directional

Governor with rated speeds of 0.83m/s to 7.08m/s.

Date and venue of test: Testing commenced on 18 January 2011 and 4 April

2011 at Coomber Electronic Equipment Ltd, Brindley Road, Warndon, Worcester, WR4 9FB United Kingdom

TESTING IN ACCORDANCE WITH BS EN 81-1 AND 2:1998+A3:2009 CLAUSE 9.9 AND ANNEX F.4 OVERSPEED GOVERNORS

TEST RESULTS

Rated Speed (V) 7.080 m/s (Set for Car)

Overspeed Limits (Clause 9.9.11.1)

Min - Not specified

Max - Actual tripping speed

Tripping Speed Limits (Clause 9.9.1)

Min - 8.142 m/s

Max - 8.885 m/s

RESULTS - OPERATION

Test No	Overspeed Operation	Tripping Speed	Pass/Fail
	m/s	m/s	
1	8.470	8.850	Pass
2	8.560	8.850	Pass
3	8.560	8.850	Pass
4	8.560	8.850	Pass
5	8.540	8.850	Pass
6	8.520	8.850	Pass
7	8.520	8.850	Pass
8	8.540	8.850	Pass
9	8.580	8.850	Pass
10	8.570	8.850	Pass
11	8.560	8.850	Pass
12	8.540	8.850	Pass
13	8.580	8.850	Pass
14	8.560	8.850	Pass
15	8.570	8.850	Pass
16	8.530	8.850	Pass
17	8.510	8.850	Pass
18	8.520	8.850	Pass
19	8.530	8.850	Pass
20	8.540	8.850	Pass

PULL THROUGH FORCE TEST

Minimum pull through force- see page 7

TESTING IN ACCORDANCE WITH BS EN 81-1 AND 2:1998+A3:2009 CLAUSE 9.9 AND ANNEX F.4 OVERSPEED GOVERNORS

TEST RESULTS

Rated Speed (V) 3.350m/s (Set for Counterweight)

Overspeed Limits (Clause 9.9.11.1)

Min - Not specified

Max - Actual tripping speed

Tripping Speed Limits (Clause 9.9.1)

Min - 3.853 m/s

Max - 4.688 m/s

RESULTS - OPERATION

Test No	Overspeed Operation	Tripping Speed	Pass/Fail
	m/s	m/s	
1	4.020	4.188	Pass
2	3.990	4.188	Pass
3	4.000	4.188	Pass
4	4.040	4.188	Pass
5	4.020	4.188	Pass
6	4.010	4.188	Pass
7	4.020	4.188	Pass
8	3.990	4.188	Pass
9	4.020	4.188	Pass
10	4.020	4.188	Pass
11	4.020	4.188	Pass
12	4.000	4.188	Pass
13	4.030	4.188	Pass
14	4.010	4.188	Pass
15	4.020	4.188	Pass
16	3.990	4.188	Pass
17	3.980	4.188	Pass
18	3.990	4.188	Pass
19	4.010	4.188	Pass
20	3.980	4.188	Pass

PULL THROUGH FORCE TEST

Minimum pull through force- see page 7

TESTING IN ACCORDANCE WITH BS EN 81-1 AND 2:1998+A3:2009 CLAUSE 9.9 AND ANNEX F.4 OVERSPEED GOVERNORS

TEST RESULTS

Rated Speed (V) 0.833 m/s (Set for Car)

Overspeed Limits (Clause 9.9.11.1)

Min - Not specified

Max - Actual tripping speed

Tripping Speed Limits (Clause 9.9.1)

Min - 0.958 m/s

Max - 1.500 m/s

RESULTS - OPERATION

Test No	Overspeed Operation	Tripping Speed	Pass/Fail
	m/s	m/s	
1	0.997	1.042	Pass
2	1.001	1.042	Pass
3	0.999	1.042	Pass
4	1.003	1.042	Pass
5	0.992	1.042	Pass
6	1.004	1.042	Pass
7	1.015	1.042	Pass
8	1.005	1.042	Pass
9	1.004	1.042	Pass
10	1.002	1.042	Pass
11	1.007	1.042	Pass
12	1.004	1.042	Pass
13	1.002	1.042	Pass
14	1.008	1.042	Pass
15	1.002	1.042	Pass
16	0.994	1.042	Pass
17	0.992	1.042	Pass
18	0.993	1.042	Pass
19	1.002	1.042	Pass
20	0.999	1.042	Pass

PULL THROUGH FORCE TEST

Minimum pull through force- see page 7

TESTING IN ACCORDANCE WITH BS EN 81-1 AND 2:1998+A3:2009 CLAUSE 9.9 AND ANNEX F.4 OVERSPEED GOVERNORS

TEST RESULTS

Rated Speed (V) 0.333 m/s (Set for Car)

Overspeed Limits (Clause 9.9.11.1)

Min - Not specified

Max - Actual tripping speed

Tripping Speed Limits (Clause 9.9.1)

Min - 0.383 m/s

Max - 1.500 m/s

RESULTS - OPERATION

Test No	Overspeed Operation	Tripping Speed	Pass/Fail
	m/s	m/s	
1	0.396	0.4163	Pass
2	0.396	0.4163	Pass
3	0.401	0.4163	Pass
4	0.401	0.4163	Pass
5	0.391	0.4163	Pass
6	0.396	0.4163	Pass
7	0.396	0.4163	Pass
8	0.391	0.4163	Pass
9	0.391	0.4163	Pass
10	0.396	0.4163	Pass
11	0.396	0.4163	Pass
12	0.401	0.4163	Pass
13	0.391	0.4163	Pass
14	0.401	0.4163	Pass
15	0.396	0.4163	Pass
16	0.400	0.4163	Pass
17	0.395	0.4163	Pass
18	0.400	0.4163	Pass
19	0.405	0.4163	Pass
20	0.395	0.4163	Pass

PULL THROUGH FORCE TEST

Minimum pull through force- see page 7

TESTING IN ACCORDANCE WITH BS EN 81-1 AND 2:1998+A3:2009 CLAUSE 9.9 AND ANNEX F.4 OVERSPEED GOVERNORS

TEST RESULTS

Rated Speed (V) 0.0833 m/s (Set for Car)

Overspeed Limits (Clause 9.9.11.1)

Min - Not specified

Max - Actual tripping speed

Tripping Speed Limits (Clause 9.9.1)

Min - 0.096 m/s

Max - 1.500 m/s

RESULTS - OPERATION

Test No	Overspeed Operation	Tripping Speed	Pass/Fail
	m/s	m/s	
1	0.104	0.104	Pass
2	0.104	0.104	Pass
3	0.099	0.104	Pass
4	0.099	0.104	Pass
5	0.104	0.104	Pass
6	0.108	0.104	Pass
7	0.099	0.104	Pass
8	0.104	0.104	Pass
9	0.104	0.104	Pass
10	0.099	0.104	Pass
11	0.104	0.104	Pass
12	0.104	0.104	Pass
13	0.108	0.104	Pass
14	0.104	0.104	Pass
15	0.104	0.104	Pass
16	0.103	0.104	Pass
17	0.103	0.104	Pass
18	0.103	0.104	Pass
19	0.103	0.104	Pass
20	0.103	0.104	Pass

PULL THROUGH FORCE TEST

Minimum pull through force over 1.0 m of rope was 539 Newton.