



**TABLES - Result Sheets**

Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
1070 x 100 x 75	1070	100	75	1

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	74.04	Flexural	Failure occurred offset from mid-span below one of the loading points
2	75.44	Flexural	Failure occurred at the mid-span of the lintel
3	65.96	Flexural	Failure occurred offset from mid-span below one of the loading point
<b>Flexural Resistance (kN)</b>	<b>71.81</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	73.04	Shear	Shear failure off set 45 degrees from the loading point
<b>Shear Resistance (kN)</b>	<b>73.04</b>	-	-

**Table 3 - Shear Limitation**

50% Flexural Resistance (kN)	Shear Resistance (kN)	Limitation
35.91	73.04	N

**Table 4 - Flexural Limitation**

90% Flexural Resistance (kN)	Lowest Individual (kN)	Limitation
64.63	65.96	N

**Table 5 - Deflection at 1/3 Flexural Resistance**

Lintel No. 1/3 Flexural Resistance	Deflection (mm) 23.94	kN
1	0.10	
2	1.39	
3	0.64	
<b>Mean</b>	<b>0.71</b>	

**Table 6** - Loads to Cause a Deflection of Effective Span/325

Lintel No. Effective Span/325 (mm) =	Load (kN)
	<b>2.83</b>
1	47.76
2	40.22
3	35.26
<b>Mean</b>	<b>41.08</b>
<b>Mean*2.25</b>	<b>92.43</b>

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Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
2290 x 100 x 75	2290	100	75	1

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	18.00	Flexural	Failure of the Mortar at Perpendicular joint
2	20.98	Flexural	Failure of the Mortar at Perpendicular joint and bedding Mortar
3	19.98	Flexural	Failure of the Mortar at Perpendicular joint
<b>Flexural Resistance (kN)</b>	<b>19.65</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	17.15	Shear	Failure of the Mortar at Perpendicular joint
2	13.33	Shear	Failure of the Mortar at Perpendicular joint
3	23.86	Shear	Failure of the Mortar at Perpendicular joint
<b>Shear Resistance (kN)</b>	<b>18.11</b>	-	-



**Table 3 - Shear Limitation**

50% Flexural Resistance (kN)	Shear Resistance (kN)	Limitation
9.83	13.33	N

**Table 4 - Flexural Limitation**

90% Flexural Resistance (kN)	Lowest Individual (kN)	Limitation
17.69	18.00	N

**Table 5 - Deflection at 1/3 Flexural Resistance**

Lintel No. 1/3 Flexural Resistance	Deflection (mm) 6.55	kN
1	0.32	
2	1.43	
3	1.26	
<b>Mean</b>	<b>1.00</b>	



**Table 6** - Loads to Cause a Deflection of Effective Span/325

Lintel No.	Load (kN)
Effective Span/325 (mm) =	<b>6.58</b>
1	N/A
2	N/A
3	N/A
<b>Mean</b>	<b>N/A</b>
<b>Mean*2.25</b>	<b>N/A</b>

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Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
3970 x 100 x 75	3970	100	75	1

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	18.96	Flexural	Failure of the Mortar at Perpendicular and bedding joint
2	15.58	Flexural	Failure of the Mortar at Perpendicular joint
3	12.94	Flexural	Failure of the Mortar at Perpendicular and bedding joint
<b>Flexural Resistance (kN)</b>	<b>15.83</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	12.59	Shear	Shear failure off set 45 degrees from the loading point
<b>Shear Resistance (kN)</b>	<b>12.59</b>	-	-



**Table 3 - Shear Limitation**

50% Flexural Resistance (kN)	Shear Resistance (kN)	Limitation
7.91	12.59	N

**Table 4 - Flexural Limitation**

90% Flexural Resistance (kN)	Lowest Individual (kN)	Limitation
14.24	12.94	Y

**Table 5 - Deflection at 1/3 Flexural Resistance**

Lintel No. 1/3 Flexural Resistance	Deflection (mm)	
	5.28	kN
1	0.80	
2	0.73	
3	0.85	
<b>Mean</b>	<b>0.79</b>	



**Table 6** - Loads to Cause a Deflection of Effective Span/325

Lintel No.	Load (kN)
Effective Span/325 (mm) =	11.75
1	N/A
2	N/A
3	N/A
Mean	N/A
Mean*2.25	N/A

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Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
1070 x 150 x 75	1070	150	75	1

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	63.06	Flexural	Failure occurred offset from mid-span below one of the loading points
2	76.46	Flexural	Failure occurred offset from mid-span below one of the loading points
3	84.38	Flexural	Failure occurred at the mid-span of the lintel
<b>Flexural Resistance (kN)</b>	<b>74.63</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	28.99	Shear	Shear failure off set 45 degrees from the loading point
<b>Shear Resistance (kN)</b>	<b>28.99</b>	-	-

**Table 3 - Shear Limitation**

50% Flexural Resistance (kN)	Shear Resistance (kN)	Limitation
37.32	28.99	Y

**Table 4 - Flexural Limitation**

90% Flexural Resistance (kN)	Lowest Individual (kN)	Limitation
67.17	63.06	Y

**Table 5 - Deflection at 1/3 Flexural Resistance**

Lintel No. 1/3 Flexural Resistance	Deflection (mm)	
	24.88	kN
1	3.21	
2	0.91	
3	1.19	
<b>Mean</b>	<b>1.77</b>	

**Table 6** - Loads to Cause a Deflection of Effective Span/325

Lintel No. Effective Span/325 (mm) =	Load (kN)
	<b>2.83</b>
1	53.22
2	71.02
3	59.52
<b>Mean</b>	<b>61.25</b>
<b>Mean*2.25</b>	<b>137.82</b>

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Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
2290 x 150 x 75	2290	150	75	1

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	25.08	Flexural	Failure of the Mortar at Perpendicular joint and bedding joint
2	27.44	Flexural	Failure of the Mortar at Perpendicular joint
3	25.56	Flexural	Failure of the Mortar at Perpendicular joint
<b>Flexural Resistance (kN)</b>	<b>26.03</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	14.01	Shear	Shear failure off set 45 degrees from the loading point
2	18.06	Shear	Shear failure off set 45 degrees from the loading point
3	21.68	Shear	Shear failure off set 45 degrees from the loading point
<b>Shear Resistance (kN)</b>	<b>17.92</b>	-	-



**Table 3 - Shear Limitation**

50% Flexural Resistance (kN)	Shear Resistance (kN)	Limitation
13.01	14.01	N

**Table 4 - Flexural Limitation**

90% Flexural Resistance (kN)	Lowest Individual (kN)	Limitation
23.42	25.08	N

**Table 5 - Deflection at 1/3 Flexural Resistance**

Lintel No. 1/3 Flexural Resistance	Deflection (mm)	
	8.68	kN
1	0.43	
2	0.39	
3	0.62	
<b>Mean</b>	<b>0.48</b>	



**Table 6 - Loads to Cause a Deflection of Effective Span/325**

Lintel No. Effective Span/325 (mm) =	Load (kN)
	<b>6.58</b>
1	N/A
2	N/A
3	N/A
<b>Mean</b>	N/A
<b>Mean*2.25</b>	<b>N/A</b>

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Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
3970 x 150 x 75	3970	150	75	1

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	15.13	Flexural	Failure of the Mortar at Perpendicular and bedding joint
2	15.55	Flexural	Failure of the Mortar at Perpendicular joint and bedding joint
3	13.86	Flexural	Failure of the Mortar at Perpendicular and bedding joint
<b>Flexural Resistance (kN)</b>	<b>14.85</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	10.58	Shear	Shear failure off set 45 degrees from the loading point
<b>Shear Resistance (kN)</b>	<b>10.58</b>	-	-



**Table 3 - Shear Limitation**

50% Flexural Resistance (kN)	Shear Resistance (kN)	Limitation
7.42	10.58	N

**Table 4 - Flexural Limitation**

90% Flexural Resistance (kN)	Lowest Individual (kN)	Limitation
13.36	13.86	N

**Table 5 - Deflection at 1/3 Flexural Resistance**

Lintel No. 1/3 Flexural Resistance	Deflection (mm)	
	4.95	kN
1	2.05	
2	2.64	
3	1.89	
<b>Mean</b>	<b>2.19</b>	

**Table 6** - Loads to Cause a Deflection of Effective Span/325

<b>Lintel No. Effective Span/325 (mm) =</b>	<b>Load (kN)</b>
	<b>11.75</b>
1	N/A
2	N/A
3	N/A
<b>Mean</b>	<b>N/A</b>
<b>Mean*2.25</b>	<b>N/A</b>

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Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
1070 x 215 x 75	1070	215	75	2

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	103.64	Flexural	Failure occurred offset from mid-span below one of the loading points
2	101.44	Flexural	Failure occurred offset from mid-span below one of the loading points
3	97.62	Flexural	Failure occurred offset from mid-span below one of the loading points
<b>Flexural Resistance (kN)</b>	<b>100.90</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	81.79	Shear	Shear failure off set 45 degrees from the loading point
<b>Shear Resistance (kN)</b>	<b>81.79</b>	-	-

**Table 3 - Shear Limitation**

<b>50% Flexural Resistance (kN)</b>	<b>Shear Resistance (kN)</b>	<b>Limitation</b>
50.45	81.79	N

**Table 4 - Flexural Limitation**

<b>90% Flexural Resistance (kN)</b>	<b>Lowest Individual (kN)</b>	<b>Limitation</b>
90.81	97.62	N

**Table 5 - Deflection at 1/3 Flexural Resistance**

<b>Lintel No. 1/3 Flexural Resistance</b>	<b>Deflection (mm)</b>	
	<b>33.63</b>	<b>kN</b>
1	0.88	
2	0.73	
3	0.52	
<b>Mean</b>	<b>0.71</b>	

**Table 6** - Loads to Cause a Deflection of Effective Span/325

Lintel No. Effective Span/325 (mm) =	Load (kN) <b>2.83</b>
1	99.02
2	N/A
3	N/A
<b>Mean</b>	<b>99.02</b>
<b>Mean*2.25</b>	<b>222.795</b>

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Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
2290 x 215 x 75	2290	215	75	2

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	37.74	Flexural	Failure of the Mortar at Perpendicular joint
2	40.04	Flexural	Failure of the Mortar at Perpendicular joint and bedding joint
3	34.70	Flexural	Failure of the Mortar at Perpendicular and bedding joint
<b>Flexural Resistance (kN)</b>	<b>37.49</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Failure Mode
1	32.94	Shear	Failure of the Mortar at Perpendicular joint
2	22.83	Shear	Failure of the Mortar at Perpendicular joint
3	27.17	Shear	Failure of the Mortar at Perpendicular joint
<b>Shear Resistance (kN)</b>	<b>27.65</b>	-	-



**Table 3 - Shear Limitation**

50% Flexural Resistance (kN)	Shear Resistance (kN)	Limitation
18.75	22.83	N

**Table 4 - Flexural Limitation**

90% Flexural Resistance (kN)	Lowest Individual (kN)	Limitation
33.74	34.70	N

**Table 5 - Deflection at 1/3 Flexural Resistance**

Lintel No. 1/3 Flexural Resistance	Deflection (mm)	
	12.50	kN
1	0.56	
2	0.56	
3	0.39	
<b>Mean</b>	<b>0.50</b>	



**Table 6** - Loads to Cause a Deflection of Effective Span/325

Lintel No. Effective Span/325 (mm) =	Load (kN)
1	N/A
2	N/A
3	N/A
<b>Mean</b>	<b>N/A</b>
<b>Mean*2.25</b>	<b>N/A</b>

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Lintel Designation	Lintel Length (mm)	Lintel Width	Lintel Height (mm)	No. of Pre-Stressing Wires
3970 x 215 x 75	3970	215	75	2

**Table 1 - Failure Loads in Flexure**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	35.56	Flexural	Failure of the Mortar at Perpendicular joint
2	31.66	Flexural	Failure of the Mortar at Perpendicular joint
3	44.40	Flexural	Failure of the Mortar at Perpendicular and bedding joint
<b>Flexural Resistance (kN)</b>	<b>37.21</b>	-	-

**Table 2 - Failure Loads in Shear**

Lintel No.	Failure Load (kN)	Failure Mode	Comments
1	6.02	Shear	Shear failure off set 45 degrees from the loading point
<b>Shear Resistance (kN)</b>	<b>6.02</b>	-	-



**Table 3 - Shear Limitation**

50% Flexural Resistance (kN)	Shear Resistance (kN)	Limitation
18.60	6.02	Y

**Table 4 - Flexural Limitation**

90% Flexural Resistance (kN)	Lowest Individual (kN)	Limitation
33.49	31.66	Y

**Table 5 - Deflection at 1/3 Flexural Resistance**

Lintel No. 1/3 Flexural Resistance	Deflection (mm)	
	12.40	kN
1	2.11	
2	2.95	
3	2.16	
<b>Mean</b>	<b>2.41</b>	



**Table 6 - Loads to Cause a Deflection of Effective Span/325**

Lintel No. Effective Span/325 (mm) =	Load (kN)
	<b>11.75</b>
1	N/A
2	N/A
3	44.40
<b>Mean</b>	<b>44.40</b>
<b>Mean*2.25</b>	<b>99.9</b>

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**TABLES - SWL Tables**

**Table 1 - Load Bearing Capacities and SWLs Based from Tests, and the Quoted SWLs**

Lintel Ref.	Load	Lintel Overall Length (mm)																					
		900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	3150	3300	3450	3600	3750	3900	4050
Effective Length (m)		0.7	0.85	1	1.15	1.3	1.45	1.6	1.75	1.9	2.05	2.2	2.35	2.5	2.65	2.8	2.95	3.1	3.25	3.4	3.55	3.7	3.85
100 x 75	Load Capacity (kN)		71.81	-	-	-	-	-	-	-	19.65	-	-	-	-	-	-	-	-	-	-	15.83	-
	SWL (kN)		31.92	-	-	-	-	-	-	-	8.73	-	-	-	-	-	-	-	-	-	-	-	7.04

**Table 2 - Estimated Load Bearing Capacities and SWLs Based on Measured Results Together with Interpolated Results**

Lintel Ref.	Load	Lintel Overall Length (mm)																					
		900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	3150	3300	3450	3600	3750	3900	4050
Effective Length (m)		0.7	0.85	1	1.15	1.3	1.45	1.6	1.75	1.9	2.05	2.2	2.35	2.5	2.65	2.8	2.95	3.1	3.25	3.4	3.55	3.7	3.85
100 x 75	Load Capacity (kN)	78.33	71.81	65.29	58.77	52.25	45.73	39.21	32.69	26.17	19.65	19.30	18.96	18.61	18.26	17.91	17.57	17.22	16.87	16.52	16.18	15.83	15.48
	SWL (kN)	34.81	31.92	29.02	26.12	23.22	20.33	17.43	14.53	11.63	8.73	8.58	8.42	8.27	8.12	7.96	7.81	7.65	7.50	7.34	7.19	7.04	6.88

**Table 3 - Load Bearing Capacities and SWLs Based from Tests, and the Quoted SWLs**

Lintel Ref.	Load	Lintel Overall Length (mm)																					
		900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	3150	3300	3450	3600	3750	3900	4050
Effective Length (m)		0.7	0.85	1	1.15	1.3	1.45	1.6	1.75	1.9	2.05	2.2	2.35	2.5	2.65	2.8	2.95	3.1	3.25	3.4	3.55	3.7	3.85
150 x 75	Load Capacity (kN)	-	57.98	-	-	-	-	-	-	-	26.03	-	-	-	-	-	-	-	-	-	-	14.85	-
	SWL (kN)	-	25.77	-	-	-	-	-	-	-	11.57	-	-	-	-	-	-	-	-	-	-	-	6.60



**Table 4 - Estimated Load Bearing Capacities and SWLs Based on Measured Results Together with Interpolated Results**

Lintel Ref.	Load	Lintel Overall Length (mm)																					
		900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	3150	3300	3450	3600	3750	3900	4050
Effective Length (m)		0.7	0.85	1	1.15	1.3	1.45	1.6	1.75	1.9	2.05	2.2	2.35	2.5	2.65	2.8	2.95	3.1	3.25	3.4	3.55	3.7	3.85
150 x 75	Load Capacity (kN)	61.45	57.98	54.51	51.04	47.57	44.10	40.63	37.16	33.69	26.03	25.01	24.00	22.98	21.96	20.95	19.93	18.92	17.90	16.88	15.87	14.85	13.83
	SWL (kN)	27.31	25.77	24.23	22.68	21.14	19.60	18.06	16.52	14.97	11.57	11.12	10.67	10.21	9.76	9.31	8.86	8.41	7.95	7.50	7.05	6.60	6.15

**Table 5 - Load Bearing Capacities and SWLs Based from Tests, and the Quoted SWLs**

Lintel Ref.	Load	Lintel Overall Length (mm)																					
		900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	3150	3300	3450	3600	3750	3900	4050
Effective Length (m)		0.7	0.85	1	1.15	1.3	1.45	1.6	1.75	1.9	2.05	2.2	2.35	2.5	2.65	2.8	2.95	3.1	3.25	3.4	3.55	3.7	3.85
215 x 75	Load Capacity (kN)	-	100.90	-	-	-	-	-	-	-	37.49	-	-	-	-	-	-	-	-	-	-	12.04	-
	SWL (kN)	-	44.84	-	-	-	-	-	-	-	16.66	-	-	-	-	-	-	-	-	-	-	-	5.35

**Table 6 - Estimated Load Bearing Capacities and SWLs Based on Measured Results Together with Interpolated Results**

Lintel Ref.	Load	Lintel Overall Length (mm)																					
		900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	3150	3300	3450	3600	3750	3900	4050
Effective Length (m)		0.7	0.85	1	1.15	1.3	1.45	1.6	1.75	1.9	2.05	2.2	2.35	2.5	2.65	2.8	2.95	3.1	3.25	3.4	3.55	3.7	3.85
215 x 75	Load Capacity (kN)	108.80	100.90	87.09	77.91	69.71	62.36	55.80	49.92	44.66	37.49	35.75	31.98	28.61	25.60	22.90	20.49	18.33	16.40	14.67	13.13	12.04	10.51
	SWL (kN)	48.35	44.84	38.70	34.63	30.98	27.72	24.80	22.19	19.85	16.66	15.89	14.21	12.72	11.38	10.18	9.11	8.15	7.29	6.52	5.83	5.35	4.67