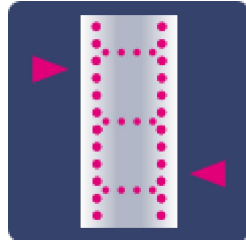


Excel file description for Scage



1 Introduction

Scage allows the import of internal efforts from an Excel file of type **.xls** and **.xlsx**.

The purpose of this document is to detail the structure of the Excel file containing the internal efforts (N, V, M) that can be imported into Scage.

2 Structure of the Excel file to be respected

2.1 Staged construction management

When importing, each sheet of the Excel file will be interpreted as a calculation phase in Scage.

2.2 Sheet structure

The first 2 lines of each tab are reserved for quantities and units and must not have numerical values.

- The first line describes what is in the column.
- The second line describes the unit of the column.

About the system of units

An Excel file can use one unit system per tab :

- Metric unit system
- Imperial unit system

The unit system is detected with the field in A2 of each tab :

- If this field is “ft”, the considered unit system will be the imperial one
- If this field is anything else, the considered unit system will be **metric**

2.2.1 Diaphragm wall (rectangular geometry)

In case of a diaphragm wall with a rectangular geometry, the tab structure is :

The table below details the exact column expected for each quantity.

It is important to note the presence of empty columns between certain sizes.

	A	B	C	D	E	F	G	H
1	Level		Moment	Shear force				Axial force
2	m or ft		m.kN/m or ft.kips/ft	kN/m ou kips/ft				kN/m or kips/ft
3	0		0	0				0
4	...		...	...				...

	A	B	C	D	E	F	G	H	I
1	Level		Moment	Shear force				Axial force	
2	m		m.kN/m	kN/m				kN/m	
3	5		0	0				0	
4	4.625		-0.047616385	-0.38093108				1	
5	4.25		-0.380931079	-1.52372432				2	
6	2.875		-1.285642385	-3.42837954				3	
7	2.5		-3.047448635	-6.09489727				4	
8	2.125		-5.952047825	-9.52327728				5	
9	1.75		-10.28513908	-13.7135191				6	
10	1.375		-16.33242035	-18.6656227				7	
11	1		-24.37958908	-24.3795891				8	
12	1		-24.37958908	-8.98398399				9	
13	0.5		-30.01608086	-17.7877235				10	
14	0		-42.39305115	-27.9458866				11	
15	0		-42.39305115	-27.9458866				12	
16	-0.5		-57.41971588	-29.8355656				13	
17	-1		-70.54888153	-21.6468334				14	
18	-1		-70.54888153	-21.6468334				15	
19	-1.5		-78.71617126	-11.3558426				16	
20	-1.5		-78.71617126	-11.3558426				17	
21	-2		-82.21335602	-2.91665363				18	
22	-2		-82.21335602	-2.91665363				18	
23	-2.5		-81.89058685	3.97597003				18	
24	-3		-78.44322205	9.63355732				18	
25	-3.5		-72.43049622	14.2503662				18	
26	-4		-64.44329071	17.3645802				18	
27	-4		-64.44329071	17.3645802				18	
28	-4.5		-55.35890961	18.7208252				18	
29	-5		-45.93945694	18.7751198				18	
30	-5.5		-36.73645782	17.913393				18	
31	-6		-28.12619019	16.4509144				18	
32	-6.5		-20.34440422	14.6352739				18	
33	-7		-13.51890278	12.651721				18	
34	-7.5		-7.699060917	10.6299067				19	
35	-8		-2.881792068	8.65131283				20	
36	-8		-2.881792068	8.65131283				21	
37	-8.5		0.966279566	6.75688267				22	
38	-9		3.890434265	4.95451498				23	
39	-9.5		5.933149815	3.22627878				24	
40	-10		107.1229219	1.53529537				25	
41	-10.5		7.466453075	-0.16764206				26	
42	-11		6.944113255	-1.9375782				27	
43	-11.5		5.508651257	-3.82885647				28	
44	-12		3.087225914	-5.88832045				29	
45	-12		3.087225914	-5.88832045				30	

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Phase 1
Phase 2
Phase 3
Phase 4
Phase 5
Phase 6
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2.2.2 Pile (circular geometry)

In case of a pile (circular geometry), the tab structure is :

The table below details the exact column expected for each quantity.

	A	C	D	E	F	H
1	Level	Moment X	Moment Y	Shear force X	Shear force Y	Axial force
2	m or ft	m.kN/m or ft.kips/ft	m.kN/m or ft.kips/ft	kN/m or kips/ft	kN/m or kips/ft	kN/m or kips/ft
3	0	0	0	0	0	0
4	...	...	...	...	...	...

	A	B	C	D	E	F	G	H
1	Level		Moment X	Moment X	Shear force X	Shear force Y		Axial force
2	m		m.kN/m	m.kN/m	kN/m	kN/m		kN/m
3	5		0	0	0	0		0
4	4.625		-0.047616385	-0.047616385	-0.380931079	-0.380931079		1
5	4.25		-0.380931079	-0.380931079	-1.523724318	-1.523724318		2
6	2.875		-1.285642385	-1.285642385	-3.428379536	-3.428379536		3
7	2.5		-3.047448635	-3.047448635	-6.09489727	-6.09489727		4
8	2.125		-5.952047825	-5.952047825	-9.523277283	-9.523277283		5
9	1.75		-10.28513908	-10.28513908	-13.7135191	-13.7135191		6
10	1.375		-16.33242035	-16.33242035	-18.66562271	-18.66562271		7
11	1		-24.37958908	-24.37958908	-24.37958908	-24.37958908		8
12	1		-24.37958908	-24.37958908	-8.983983994	-8.983983994		9
13	0.5		-30.01608086	-30.01608086	-17.78772354	-17.78772354		10
14	0		-42.39305115	-42.39305115	-27.94588661	-27.94588661		11
15	0		-42.39305115	-42.39305115	-27.94588661	-27.94588661		12
16	-0.5		-57.41971588	-57.41971588	-29.83556557	-29.83556557		13
17	-1		-70.54888153	-70.54888153	-21.64683342	-21.64683342		14
18	-1		-70.54888153	-70.54888153	-21.64683342	-21.64683342		15
19	-1.5		-78.71617126	-78.71617126	-11.35584259	-11.35584259		16
20	-1.5		-78.71617126	-78.71617126	-11.35584259	-11.35584259		17
21	-2		-82.21335602	-82.21335602	-2.916653633	-2.916653633		18
22	-2		-82.21335602	-82.21335602	-2.916653633	-2.916653633		18
23	-2.5		-81.89058685	-81.89058685	3.97597003	3.97597003		18
24	-3		-78.44322205	-78.44322205	9.63355732	9.63355732		18
25	-3.5		-72.43049622	-72.43049622	14.25036621	14.25036621		18
26	-4		-64.44329071	-64.44329071	17.36458015	17.36458015		18
27	-4		-64.44329071	-64.44329071	17.36458015	17.36458015		18
28	-4.5		-55.35890961	-55.35890961	18.7208252	18.7208252		18
29	-5		-45.93945694	-45.93945694	18.77511978	18.77511978		18
30	-5.5		-36.73645782	-36.73645782	17.91339302	17.91339302		18
31	-6		-28.12619019	-28.12619019	16.45091438	16.45091438		18
32	-6.5		-20.34440422	-20.34440422	14.63527393	14.63527393		18
33	-7		-13.51890278	-13.51890278	12.651721	12.651721		18
34	-7.5		-7.699060917	-7.699060917	10.62990665	10.62990665		19
35	-8		-2.881792068	-2.881792068	8.651312828	8.651312828		20
36	-8		-2.881792068	-2.881792068	8.651312828	8.651312828		21
37	-8.5		0.966279566	0.966279566	6.756882668	6.756882668		22
38	-9		3.890434265	3.890434265	4.95451498	4.95451498		23
39	-9.5		5.933149815	5.933149815	3.226278782	3.226278782		24
40	-10		107.1229219	107.1229219	1.535295367	1.535295367		25
41	-10.5		7.466453075	7.466453075	-0.167642057	-0.167642057		26
42	-11		6.944113255	6.944113255	-1.937578201	-1.937578201		27
43	-11.5		5.508651257	5.508651257	-3.828856468	-3.828856468		28
44	-12		3.087225914	3.087225914	-5.888320446	-5.888320446		29
Phase 1		Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	⊕	



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