

DECLARATION OF PERFORMANCE

No. JJI-DOP-004



**James Jones
& SONS LIMITED**
Timber Systems Division

1.- Product type

JJI-Joist

2.-Intended Uses

JJI-Joists are intended for use in floors or flat roof in building constructions. They are also suitable for applications with axial loading such as stud and rafters.

3.-Name and contact address of the manufacturer

James Jones & Sons Ltd
Timber Systems Division
Greshop Industrial Estate
Forres
IV36 2GW
Scotland (UK)

5.-System of assessment and verification of constancy of performance

AVCP System 1

6.- European assessment document

EAD 130367-00-0304- "Composite Wood-Based Beams and Columns"

European Technical Assessment ETA 20/1175 issued by Element Materials Technology Rotterdam B.V on 15/12/2020.

Notified Body:

Materials Testing Institute University of Stuttgart
Pfaffenwaldring 32
70569 Stuttgart
Germany
No: 0672

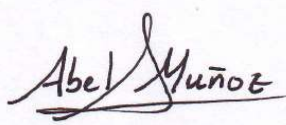
Certificate of constancy of performance :
0672-CPR-0971

7.- Declared performance

Essential characteristics	Performance
Mechanical properties and stability	
Mechanical Resistance and Stiffness	See Appendix 1
Creep and Duration of load	See Appendix 2
Dimensional stability	See Appendix 3
Seismic Actions	JJI-Joists are for use in non-dissipative or low dissipative structures.
Safety in case of fire	
Reaction to fire	D-s2, d0 for timber flange and D-s2,d2 for OSB web
Resistance to Fire	Performance should be determined for the complete structural element including associated finishes.
Hygiene, Health & the Environment	
Content and Release of dangerous substances	The product does not contain harmful or dangerous substances as defined in EU database.
Wood Preservatives	On request, for use Class 2, timber flanges may be treated with an organic based preservation system for wood at low pressure. Treated wood is suitable without an additional coating for internal applications without release of dangerous substances
Sustainable use of natural resources	
Durability	JJI-Joists can be used in service class 1 and 2 according to Eurocode 5 and use classes 1 and 2 as specified in EN 335. The product may be exposed to the weather for short time during installation. Product with treated flanges is available on request for use class 2

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Name : Abel Munoz Title: Technical Manager Date: 15/06/2022 Location: Forres	
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Appendix 1: Strength and Stiffness Properties for JJI-Joists

Joist Designation	Depth (mm)	Bending moment capacity M (kNm)	Bending stiffness EI (10 ⁹ Nmm ²)	Shear strength capacity V (kN)	Shear stiffness GA (10 ⁶ N)	Intermediate bearing capacity -minimum 89mm bearing length		End bearing capacity -minimum 45mm bearing length		End bearing capacity -minimum 89mm bearing length	
						N/S (kN)	W/S (kN)	N/S (kN)	W/S (kN)	N/S (kN)	W/S (kN)
JJI-145A+	145	3.89	139.6	9.54	0.748	16.37	16.37	8.50	8.50	10.33	10.76
JJI-195A+	195	5.67	305.1	10.64	1.234	16.37	16.37	8.50	8.50	10.33	10.76
JJI-195B+		7.20	424.7	11.82	1.234	21.94	21.94	11.39	11.39	13.18	14.42
JJI-195C		8.03	505.6	12.44	1.234	25.07	25.07	12.90	13.02	13.18	16.48
JJI-195D		10.22	740.5	14.06	1.234	26.66	30.00	12.90	17.54	13.18	22.20
JJI-220A+		220	6.60	407.4	11.33	1.477	16.37	16.37	8.50	8.50	10.33
JJI-220B+	8.37		588.5	12.48	1.477	21.94	21.94	11.39	11.39	13.18	14.42
JJI-220C	9.32		667.3	13.09	1.477	25.07	25.07	12.90	13.02	13.18	16.48
JJI-220D	11.86		941.3	14.71	1.477	26.66	30.00	12.90	17.54	13.18	22.20
JJI-235A+	235		7.17	472.4	11.77	1.623	16.37	16.37	8.50	8.50	10.33
JJI-235B+		9.08	678.1	12.90	1.623	21.94	21.94	11.39	11.39	13.18	14.42
JJI-235C		10.11	771.3	13.51	1.623	25.07	25.07	12.90	13.02	13.18	16.48
JJI-235D		12.85	1088.0	15.12	1.623	26.66	30.00	12.90	17.54	13.18	22.20
JJI-240A+		240	7.35	495.0	11.92	1.671	16.37	16.37	8.50	8.50	10.33
JJI-240B+	9.32		707.6	13.05	1.671	21.94	21.94	11.39	11.39	13.18	14.42
JJI-240C	10.37		807.4	13.65	1.671	25.07	25.07	12.90	13.02	13.18	16.48
JJI-240D	13.18		1140.8	15.26	1.671	26.66	30.00	12.90	17.54	13.18	22.20
JJI-245A+	245		7.54	518.0	12.08	1.720	16.37	16.37	8.50	8.50	10.33
JJI-245B+		9.55	737.2	13.19	1.720	21.94	21.94	11.39	11.39	13.18	14.42
JJI-245C		10.64	844.4	13.80	1.720	25.07	25.07	12.90	13.02	13.18	16.48
JJI-245D		13.52	1195.4	15.40	1.720	26.66	30.00	12.90	17.54	13.18	22.20
						N/S: no web stiffeners		W/S: web stiffeners required			

Appendix 1: Strength and Stiffness Properties for JJI-Joists (continued)

Joist Designation	Depth (mm)	Bending moment capacity M (kNm)	Bending stiffness EI (10 ⁹ Nmm ²)	Shear strength capacity V (kN)	Shear stiffness GA (10 ⁶ N)	Intermediate bearing capacity -minimum 89mm bearing length		End bearing capacity -minimum 45mm bearing length		End bearing capacity -minimum 89mm bearing length	
						N/S (kN)	W/S (kN)	N/S (kN)	W/S (kN)	N/S (kN)	W/S (kN)
JJI-300A+	300	9.67	816.3	13.86	2.255	16.37	16.37	8.50	8.50	10.33	10.76
JJI-300B+		12.21	1121.9	14.91	2.255	21.94	21.94	11.39	11.39	12.66	14.42
JJI-300C		13.58	1319.5	15.49	2.255	25.07	25.07	12.08	13.02	12.66	16.48
JJI-300D		17.22	1899.0	17.07	2.255	26.66	30.00	12.08	17.54	12.66	22.20
JJI-350A+	350	11.66	1113.5	15.61	2.741	16.37	16.37	8.50	8.50	9.72	10.76
JJI-350B+		14.68	1484.6	16.60	2.741	21.94	21.94	10.22	11.39	9.72	14.42
JJI-350C		16.31	1899.6	17.16	2.741	25.07	25.07	10.22	13.02	10.93	16.48
JJI-350D		20.65	2647.6	18.70	2.741	26.66	30.00	10.22	17.54	10.93	22.20
JJI-360A+	360	12.06	1189.7	15.97	2.838	16.37	16.37	8.50	8.50	9.24	10.76
JJI-360B+		15.18	1585.3	16.95	2.838	21.94	21.94	9.76	11.39	9.24	14.42
JJI-360C		16.86	2037.2	17.50	2.838	25.07	25.07	9.76	13.02	10.75	16.48
JJI-360D		21.34	2803.4	19.03	2.838	26.66	30.00	9.76	17.54	10.75	22.20
JJI-400A+	400	13.70	1521.6	17.43	3.227	16.37	16.37	8.20	8.50	9.23	10.76
JJI-400B+		17.20	2023.3	18.37	3.227	21.94	21.94	8.20	11.39	9.23	14.42
JJI-400C		19.09	2673.0	18.91	3.227	25.07	25.07	8.20	13.02	10.17	16.48
JJI-400D		24.12	3428.0	20.41	3.227	25.79	30.00	8.20	17.54	10.17	22.20
JJI-450A+	450	15.79	1999.3	19.31	3.713	16.37	16.37	6.79	8.50	9.23	10.76
JJI-450B+		19.77	2651.5	20.20	3.713	21.50	21.50	6.79	11.39	9.23	14.42
JJI-450C		21.92	3018.4	20.72	3.713	21.50	22.27	6.79	13.02	9.23	16.48
JJI-450D		27.64	4170.4	22.18	3.713	21.50	30.00	6.79	17.54	9.23	22.20
						N/S: no web stiffeners		W/S: web stiffeners required			

Appendix 2: Creep and Duration of Load

Table A3.1 Values of k_{mod} for JJI-Joists in Service Class 1 Conditions

Duration of load	Bending and axial resistance	Shear resistance	Bearing resistance	
			N/S	W/S
Permanent	0.60	0.40	0.40	0.60
Long Term	0.70	0.50	0.50	0.70
Medium Term	0.80	0.70	0.70	0.80
Short Term	0.90	0.90	0.90	0.90
Instantaneous	1.10	1.10	1.10	1.10

N/S = No Web Stiffeners used. W/S = Web Stiffeners required

Table A3.2 Values of k_{mod} for JJI-Joists in Service Class 2 Conditions

Duration of Load	Bending and Axial Resistance	Shear Resistance	Bearing Resistance	
			N/S	W/S
Permanent	0.60	0.30	0.30	0.60
Long Term	0.70	0.40	0.40	0.70
Medium Term	0.80	0.55	0.55	0.80
Short Term	0.90	0.70	0.70	0.90
Instantaneous	1.10	0.90	0.90	1.10

N/S = No Web Stiffeners used. W/S = Web Stiffeners required

Table A3.3 Values of k_{def} for JJI-Joists

Bending and Axial Deformation		Shear Deformation	
Service Class 1	Service Class 2	Service Class 1	Service Class 2
0.60	0.80	1.50	2.25

Appendix 3: Manufacturing Tolerances

Member Dimension	Tolerance (mm)
Overall Joist Length	- 0, + 30
Overall Joist Depth	± 2.0
Flange Thickness/Depth	± 2.0
Web Thickness	± 0.8