

Kingspan Facades  
UK & Ireland

Protected by



# QuadCore<sup>®</sup> Evolution Recess Wall Panel Product Data Sheet

Panelised Facade System



POWERED BY  
**QuadCore<sup>®</sup>**  
TECHNOLOGY



# Product Data

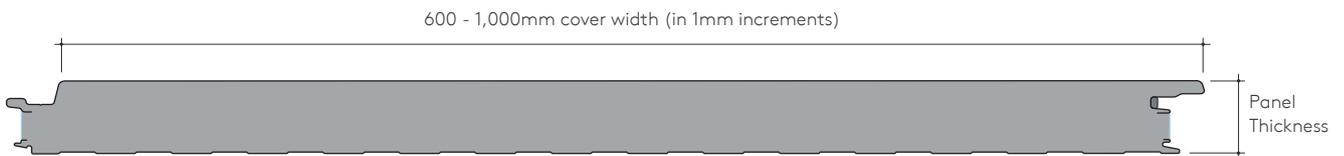
## Applications

QuadCore® Evolution Recess Wall Panel is a secret-fix insulated wall panel delivering a clean, smooth and aesthetically appealing modern solution. The system has a hidden joint detail with a gasket which gives the illusion of a cassette.

## Available Lengths

Standard Lengths (m)	1.8 - 8.0
Shorter Lengths (non-standard) (m)	Below 1.8
PPC Coated Standard Lengths (m)	2.0 - 8.0

**Note:** Additional costs and transport restrictions may apply for non-standard lengths. All lengths may change for export (outside of the UK).



## Dimensions, Weight & Thermal Performance

Core Thickness (mm)	45	54	60	70	74	80	90	100	120	140	150
U-Value (W/m <sup>2</sup> K)	0.46	0.35	0.32	0.27	0.25	0.23	0.20	0.19	0.15	0.13	0.12
Weight (kg/m <sup>2</sup> )	9.9	10.3	10.5	10.9	11.0	11.3	11.6	12.0	12.8	13.5	13.9

The QuadCore® insulation used in QuadCore® Evolution Recess Wall Panels has a Thermal Conductivity ( $\lambda$ ) of 0.018W/m.K

QuadCore® Evolution Recess Wall Panels have a Thermal Transmittance (U-Value), calculated using the method required by the Building Regulations Part L2 (England & Wales), Building Standards Section 6 (Scotland), Part L (Republic of Ireland) and Part F2 (Northern Ireland).

## Insulation Core

QuadCore® Evolution Recess Wall Panels are manufactured with an HCFC, CFC and HFC free QuadCore® insulation core.

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## Certification and Testing

### Reaction to Fire

QuadCore® Evolution Recess Wall Panel is classified B-s1,d0, when tested on the internal face of the product, according to the European Reaction to Fire classification system (Euroclasses) EN 13501-1:2018 under the certified name AWP Product Family when using the following internal liners:

- CLEANsafe 15, CLEANsafe 25, CLEANsafe 55, CLEANsafe 120 and AQUAsafe 55.

Please contact Kingspan Tech-eXchange for information relating to the external face.

### Fire Resistance

Fire resistance classifications are subject to panel thickness, orientation, method of assembly, and steel coating. Please contact Kingspan Tech-eXchange for project specific details.

## Environmental

Kingspan Insulated Panels produced in the UK are certified to BES 6001 (Framework Standard for the Responsible Sourcing of Construction Products) 'Very Good'.

All Kingspan Insulated Panels manufacturing facilities across the UK and Ireland are 100% Net Zero Energy. In addition, facilities located in Kingscourt, Holywell and Sherburn generate renewable energy onsite which contributes to that sites energy mix.

Kingspan Insulated Panels procure steel that is made from 15 – 25% recycled content. Kingspan insulated panels directly contribute to BREEAM® / LEED® credits.

## Air Leakage

An air leakage rate of 3m<sup>3</sup>/hr/m<sup>2</sup> at 50Pa or less can be achieved when using Kingspan insulated roof and wall panels.

For information on detailing required to achieve lower air leakage rates please contact Kingspan Tech-eXchange.

## Acoustic

### Sound Reduction Index (SRI)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
SRI (dB)	20	15	17	23	18	25	40	46

QuadCore® Evolution Recess Wall Panels have a single figure weighted sound reduction  $R_w = 24\text{dB}$ . Results are based on panels of similar profile and core material.

## Materials

### Substrate

Metallic protected steel to BS EN 10346: 2015.

Please contact Kingspan Tech-eXchange for information on other substrates.

### Coatings – External Weather Sheet

- Kingspan Spectrum: Consists of a coated semi-gloss finish with slight granular effect.
- Kingspan Altaris: Technically advanced PVDF multi-layer (up to 4 layers of paint) coating featuring colour purity, strength, resistance and stability.
- Elementa PPC: Full range of Super Durable Class 2 polyester powder coated finishes as outlined in the Kingspan Insulated Panels Powder Coating Colour Book including finishes inspired by patina, oxidised, granite, stone and metallic materials.

For Reaction to Fire performance of external weather sheets please contact Kingspan Tech-eXchange.

### Coatings – Internal Liner Sheet

- Kingspan CLEANsafe 15: The coating has been developed for use as the internal lining of insulated panels. Standard colour is "bright white" with an easily cleaned surface.
- Kingspan CLEANsafe 120: The coating has been developed for use as the internal lining of insulated panels where a high level of cleanliness and hygiene is required, and the panels are to be cleaned down on a regular basis.
- Kingspan AQUAsafe 55: The coating has been developed for use as the internal lining of insulated panels to swimming pool internal environments.

For Reaction to Fire performance of internal liners please see Certification and Testing section.

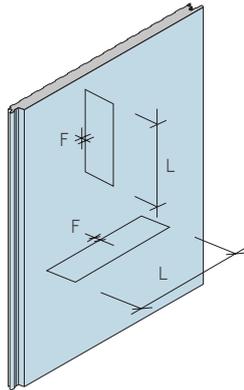
## Product Tolerances

Cut to Length	± 2mm
Cover Width	± 2mm
Thickness (Core ≤ 100mm)	± 2mm
Thickness (Core > 100mm)	± 2%
End Squareness	± 3mm

# Product Data

## Flatness Tolerances

L (mm)	200	400	700
F (mm)	0.6	1.0	1.5



## Seals

Factory applied side joint seals. All side joints have a factory applied seal fitted into the groove to automatically seal the joint between panels.

## Quality & Durability

QuadCore® Evolution Recess Wall Panels are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, complying with BS EN ISO 9001 standard, ensuring long term reliability and service life. The panels are also being manufactured under Environmental Management System Certification BS EN ISO 14001, Energy Management System Certification BS EN ISO 50001 and Occupational Health and Safety Certification BS EN ISO 45001 and Compliance Management Systems BS EN ISO 37301. QuadCore® Evolution Recess Wall Panels are CE marked to BS EN 14509: 2013.



## Warranty

Kingspan Panel Warranty covering the following subject to project specific information:

- 25 years thermal performance warranty
- 25 years structural performance warranty
- Up to 40 years coating performance

## Packing

QuadCore® Evolution Recess Panels are stacked with weather sheet upward. The top and sides are protected by either cardboard or polystyrene and spiral wrap stretch polyfilm. The number of panels in a pack will vary depending on thickness/length of panel.

Core Thickness (mm)	45	54	60	70	74	80	90	100	120	140	150
No. of Panels per Pack	25	20	18	16	14	13	12	11	9	7	5

**Note:** Applies to UK pack sizes. Please contact Kingspan Customer Service for export information.

## Sea Freight

Fully timber crated packs are available on projects requiring delivery by sea freight shipping, at additional costs. Alternatively, steel containers can be used. Special loading charges apply.

## Delivery

All deliveries (unless indicated otherwise) are by road transport to project site. Off-loading is the responsibility of the client.

## Site Installation Procedure

Site assembly instructions and construction details are available from Kingspan Tech-eXchange.

# Product Data: Load / Span Tables

Load / span tables to be compared against calculated characteristic (i.e. unfactored) wind load values.

## Single Span

Core Thickness (mm)	Load Type	Uniformly distributed imposed load (kN/m <sup>2</sup> )																																	
		Span (m)																																	
		0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	
45	Pressure	7.89	5.92	4.73	3.94	3.38	2.96	2.63	2.37	2.15	1.97	1.72	1.47	1.26	1.09	0.95	0.83	0.73	0.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Suction	7.89	5.92	4.73	3.94	3.38	2.96	2.56	2.07	1.71	1.44	1.23	1.06	0.92	0.81	0.72	0.60	0.47	0.36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
54	Pressure	9.50	7.13	5.70	4.75	4.07	3.56	3.17	2.85	2.59	2.38	2.19	1.93	1.68	1.48	1.29	1.13	1.00	0.88	0.79	0.70	0.63	0.56	-	-	-	-	-	-	-	-	-	-	-	
	Suction	9.50	7.13	5.70	4.75	4.07	3.56	3.08	2.50	2.06	1.73	1.48	1.27	1.11	0.98	0.86	0.77	0.60	0.62	0.57	0.49	0.40	0.32	-	-	-	-	-	-	-	-	-	-	-	
60	Pressure	10.57	7.93	6.34	5.29	4.53	3.97	3.52	3.17	2.88	2.64	2.44	2.15	1.87	1.65	1.46	1.30	1.17	1.05	0.94	0.84	0.76	0.68	0.62	0.56	-	-	-	-	-	-	-	-	-	
	Suction	10.57	7.93	6.34	5.29	4.53	3.97	3.43	2.78	2.30	1.93	1.64	1.42	1.24	1.09	0.96	0.86	0.77	0.69	0.63	0.57	0.53	0.48	0.41	0.34	-	-	-	-	-	-	-	-	-	
70	Pressure	12.37	9.27	7.42	6.18	5.30	4.64	4.12	3.71	3.37	3.09	2.85	2.51	2.19	1.92	1.70	1.52	1.36	1.23	1.12	1.02	0.93	0.86	0.79	0.73	0.67	0.61	0.56	0.51	-	-	-	-	-	
	Suction	12.37	9.27	7.42	6.18	5.30	4.64	4.01	3.25	2.69	2.26	1.92	1.66	1.44	1.27	1.12	1.00	0.90	0.81	0.74	0.67	0.61	0.56	0.52	0.48	0.45	0.41	0.38	0.32	-	-	-	-	-	
74	Pressure	13.08	9.81	7.85	6.54	5.61	4.91	4.36	3.92	3.57	3.27	3.02	2.66	2.32	2.04	1.80	1.61	1.44	1.30	1.18	1.08	0.98	0.90	0.83	0.77	0.71	0.66	0.62	0.56	0.52	-	-	-	-	-
	Suction	13.08	9.81	7.85	6.54	5.61	4.91	4.24	3.44	2.84	2.39	2.03	1.75	1.53	1.34	1.19	1.06	0.95	0.86	0.78	0.71	0.65	0.60	0.55	0.51	0.47	0.44	0.41	0.38	0.35	-	-	-	-	-
80	Pressure	14.16	10.62	8.49	7.08	6.07	5.31	4.72	4.25	3.86	3.54	3.27	2.88	2.51	2.20	1.95	1.74	1.56	1.41	1.28	1.16	1.07	0.98	0.90	0.83	0.77	0.72	0.67	0.63	0.59	0.55	0.51	0.47	-	-
	Suction	14.16	10.62	8.49	7.08	6.07	5.31	4.59	3.72	3.07	2.58	2.20	1.90	1.65	1.45	1.29	1.15	1.03	0.93	0.84	0.77	0.70	0.65	0.60	0.55	0.51	0.47	0.44	0.41	0.39	0.36	0.34	0.30	-	-
90	Pressure	15.95	11.96	9.57	7.97	6.83	5.98	5.32	4.78	4.35	3.99	3.68	3.24	2.82	2.48	2.20	1.96	1.76	1.59	1.44	1.31	1.20	1.10	1.02	0.94	0.87	0.81	0.76	0.71	0.66	0.62	0.58	0.55	0.52	-
	Suction	15.95	11.96	9.57	7.97	6.83	5.98	5.17	4.19	3.46	2.91	2.48	2.14	1.86	1.64	1.45	1.29	1.16	1.05	0.95	0.87	0.79	0.73	0.67	0.62	0.57	0.53	0.50	0.47	0.44	0.41	0.38	0.36	0.34	-
100	Pressure	16.90	12.67	10.14	8.45	7.24	6.34	5.63	5.07	4.61	4.22	3.90	3.60	3.14	2.76	2.44	2.18	1.96	1.77	1.60	1.46	1.34	1.23	1.13	1.05	0.97	0.90	0.84	0.79	0.74	0.69	0.65	0.61	0.58	-
	Suction	16.90	12.67	10.14	8.45	7.24	6.34	5.63	4.66	3.85	3.24	2.76	2.38	2.07	1.82	1.61	1.44	1.29	1.17	1.06	0.96	0.88	0.81	0.75	0.69	0.64	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38	-
120	Pressure	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	4.24	3.91	3.63	3.39	3.18	2.94	2.62	2.35	2.12	1.93	1.75	1.61	1.47	1.36	1.26	1.16	1.08	1.01	0.94	0.88	0.83	0.78	0.73	0.69	-
	Suction	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	3.89	3.32	2.86	2.49	2.19	1.94	1.73	1.55	1.40	1.27	1.16	1.06	0.97	0.90	0.83	0.77	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.46	-
140	Pressure	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	4.24	3.91	3.63	3.39	3.18	2.99	2.82	2.68	2.48	2.25	2.05	1.87	1.72	1.59	1.47	1.36	1.27	1.18	1.10	1.03	0.97	0.91	0.86	0.81	-
	Suction	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	4.24	3.87	3.34	2.91	2.56	2.26	2.02	1.81	1.64	1.48	1.35	1.24	1.14	1.05	0.97	0.90	0.83	0.78	0.73	0.68	0.64	0.60	0.57	0.53	-
150	Pressure	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	4.24	3.91	3.63	3.39	3.18	2.99	2.82	2.68	2.54	2.41	2.20	2.01	1.85	1.70	1.57	1.46	1.36	1.26	1.18	1.11	1.04	0.98	0.92	0.87	-
	Suction	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	4.24	3.91	3.58	3.12	2.74	2.43	2.17	1.94	1.75	1.59	1.45	1.33	1.22	1.12	1.04	0.96	0.89	0.83	0.78	0.73	0.69	0.64	0.61	0.57	-

- Values have been calculated using the method described in BS EN 14509: 2013, for dark coloured panels.
- The following deflection limits have been used:
  - Short term pressure loading  $l/100$ .
  - Short term suction loading  $l/100$ .
- All panel thicknesses have been calculated with a minimum end support width of 50mm and intermediate support width of 50mm. Larger support widths are possible.

- The actual wind suction resisted by the panel is dependent upon the number of fasteners and the material of the supporting element.
- The fastener calculation should be carried out in accordance with the appropriate standards.
- For intermediate values linear interpolation may be used.
- The allowable steelwork tolerance between bearing planes of adjacent supports is  $\pm 5$ mm.

# Product Data: Load / Span Tables

Load / span tables to be compared against calculated characteristic (i.e. unfactored) wind load values.

## Double Span

Core Thickness (mm)	Load Type	Uniformly distributed imposed load (kN/m <sup>2</sup> )																																
		Span (m)																																
		0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0
45	Pressure	7.89	5.92	4.73	3.94	3.38	2.96	2.63	2.36	2.13	1.94	1.78	1.59	1.39	1.20	1.04	0.91	0.80	0.71	0.64	0.58	0.52	0.47	0.43	0.40	-	-	-	-	-	-	-	-	-
	Suction	7.89	5.92	4.73	3.94	3.38	2.96	2.56	2.07	1.71	1.44	1.23	1.06	0.92	0.81	0.72	0.64	0.57	0.52	0.47	0.43	0.39	0.36	0.33	0.31	-	-	-	-	-	-	-	-	-
54	Pressure	9.50	7.13	5.70	4.75	4.07	3.56	3.17	2.85	2.58	2.35	2.16	1.93	1.68	1.48	1.28	1.12	0.98	0.87	0.78	0.70	0.63	0.58	0.53	0.48	0.44	0.41	-	-	-	-	-	-	-
	Suction	9.50	7.13	5.70	4.75	4.07	3.56	3.08	2.50	2.06	1.73	1.48	1.27	1.11	0.98	0.86	0.77	0.69	0.62	0.57	0.52	0.47	0.43	0.40	0.37	0.34	0.32	-	-	-	-	-	-	-
60	Pressure	10.57	7.93	6.34	5.29	4.53	3.97	3.52	3.17	2.88	2.63	2.41	2.15	1.87	1.65	1.45	1.26	1.11	0.98	0.87	0.78	0.71	0.64	0.59	0.54	0.49	0.46	0.42	0.39	-	-	-	-	-
	Suction	10.57	7.93	6.34	5.29	4.53	3.97	3.43	2.78	2.30	1.93	1.64	1.42	1.24	1.09	0.96	0.86	0.77	0.69	0.63	0.57	0.53	0.48	0.44	0.41	0.38	0.35	0.33	0.31	-	-	-	-	-
70	Pressure	12.37	9.27	7.42	6.18	5.30	4.64	4.12	3.71	3.37	3.09	2.84	2.51	2.19	1.92	1.70	1.51	1.32	1.16	1.04	0.93	0.84	0.76	0.69	0.63	0.58	0.53	0.49	0.46	0.43	0.40	-	-	-
	Suction	12.37	9.27	7.42	6.18	5.30	4.64	4.01	3.25	2.69	2.26	1.92	1.66	1.44	1.27	1.12	1.00	0.90	0.81	0.74	0.67	0.61	0.56	0.52	0.48	0.45	0.41	0.39	0.36	0.34	0.32	-	-	-
74	Pressure	13.08	9.81	7.85	6.54	5.61	4.91	4.36	3.92	3.57	3.27	3.01	2.66	2.32	2.04	1.80	1.61	1.40	1.24	1.10	0.99	0.89	0.80	0.73	0.67	0.61	0.57	0.52	0.48	0.45	0.42	0.39	-	-
	Suction	13.08	9.81	7.85	6.54	5.61	4.91	4.24	3.44	2.84	2.39	2.03	1.75	1.53	1.34	1.19	1.06	0.95	0.86	0.78	0.71	0.65	0.60	0.55	0.51	0.47	0.44	0.41	0.38	0.36	0.34	0.32	-	-
80	Pressure	14.16	10.62	8.49	7.08	6.07	5.31	4.72	4.25	3.86	3.52	3.23	2.88	2.51	2.20	1.95	1.74	1.53	1.35	1.20	1.07	0.96	0.87	0.79	0.73	0.67	0.61	0.57	0.52	0.49	0.45	0.42	0.40	0.37
	Suction	14.16	10.62	8.49	7.08	6.07	5.26	4.59	3.72	3.07	2.58	2.20	1.90	1.65	1.45	1.29	1.15	1.03	0.93	0.84	0.77	0.70	0.65	0.60	0.55	0.51	0.47	0.44	0.41	0.39	0.36	0.34	0.32	0.30
90	Pressure	15.95	11.96	9.57	7.97	6.81	5.86	5.14	4.57	4.11	3.74	3.43	3.16	2.82	2.48	2.20	1.96	1.76	1.54	1.37	1.22	1.10	0.99	0.90	0.82	0.75	0.69	0.64	0.59	0.55	0.51	0.48	0.45	0.42
	Suction	15.95	11.96	9.53	7.75	6.51	5.59	4.90	4.19	3.46	2.91	2.48	2.14	1.86	1.64	1.45	1.29	1.16	1.05	0.95	0.87	0.79	0.73	0.67	0.62	0.57	0.53	0.50	0.47	0.44	0.41	0.38	0.36	0.34
100	Pressure	16.90	12.67	10.14	8.45	7.21	6.21	5.44	4.84	4.35	3.96	3.63	3.35	3.11	2.76	2.44	2.18	1.96	1.74	1.54	1.37	1.23	1.11	1.00	0.91	0.84	0.77	0.71	0.66	0.61	0.57	0.53	0.49	0.46
	Suction	16.90	12.67	10.10	8.22	6.90	5.93	5.19	4.62	3.85	3.24	2.76	2.38	2.07	1.82	1.61	1.44	1.29	1.17	1.06	0.96	0.88	0.81	0.75	0.69	0.64	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38
120	Pressure	16.95	12.71	10.17	8.47	7.26	6.28	5.50	4.89	4.40	3.99	3.65	3.37	3.13	2.92	2.73	2.57	2.32	2.03	1.79	1.58	1.42	1.27	1.15	1.05	0.95	0.88	0.81	0.74	0.69	0.64	0.60	0.56	0.52
	Suction	16.95	12.71	10.17	8.29	6.96	5.98	5.23	4.64	4.17	3.79	3.32	2.86	2.49	2.19	1.94	1.73	1.55	1.40	1.27	1.16	1.06	0.97	0.90	0.83	0.77	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.46
140	Pressure	16.95	12.71	10.17	8.47	7.26	6.31	5.52	4.91	4.41	4.00	3.67	3.38	3.13	2.92	2.74	2.57	2.43	2.28	2.00	1.77	1.58	1.41	1.27	1.15	1.05	0.96	0.88	0.81	0.75	0.70	0.65	0.61	0.57
	Suction	16.95	12.71	10.17	8.32	6.97	5.99	5.23	4.64	4.17	3.78	3.46	3.20	2.91	2.56	2.26	2.02	1.81	1.64	1.48	1.35	1.24	1.14	1.05	0.97	0.90	0.83	0.78	0.73	0.68	0.64	0.60	0.57	0.53
150	Pressure	16.95	12.71	10.17	8.47	7.26	6.32	5.54	4.92	4.42	4.01	3.67	3.38	3.14	2.92	2.74	2.57	2.43	2.30	2.10	1.85	1.64	1.47	1.32	1.20	1.09	1.00	0.91	0.84	0.78	0.72	0.67	0.62	0.58
	Suction	16.95	12.71	10.17	8.33	6.98	5.99	5.24	4.64	4.17	3.78	3.46	3.19	2.96	2.74	2.43	2.17	1.94	1.75	1.59	1.45	1.33	1.22	1.12	1.04	0.96	0.89	0.83	0.78	0.73	0.69	0.64	0.61	0.57

- Values have been calculated using the method described in BS EN 14509: 2013, for dark coloured panels.
- The following deflection limits have been used:
  - Short term pressure loading  $l/100$ .
  - Short term suction loading  $l/100$ .
- All panel thicknesses have been calculated with a minimum end support width of 50mm and intermediate support width of 50mm. Larger support widths are possible.

- The actual wind suction resisted by the panel is dependent upon the number of fasteners and the material of the supporting element.
- The fastener calculation should be carried out in accordance with the appropriate standards.
- For intermediate values linear interpolation may be used.
- The allowable steelwork tolerance between bearing planes of adjacent supports is  $\pm 5$ mm.

# Product Data: Load / Span Tables

Load / span tables to be compared against calculated characteristic (i.e. unfactored) wind load values.

## Triple Span

Core Thickness (mm)	Load Type	Uniformly distributed imposed load (kN/m <sup>2</sup> )																																
		Span (m)																																
		0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0
45	Pressure	7.89	5.92	4.73	3.94	3.38	2.96	2.63	2.37	2.15	1.97	1.82	1.59	1.39	1.22	1.08	0.96	0.87	0.78	0.71	0.65	0.59	0.54	0.50	0.46	-	-	-	-	-	-	-	-	-
	Suction	7.89	5.92	4.73	3.94	3.38	2.96	2.56	2.07	1.71	1.44	1.23	1.06	0.92	0.81	0.72	0.64	0.57	0.52	0.47	0.43	0.39	0.36	0.33	0.31	-	-	-	-	-	-	-	-	-
54	Pressure	9.50	7.13	5.70	4.75	4.07	3.56	3.17	2.85	2.59	2.38	2.19	1.93	1.68	1.48	1.31	1.17	1.05	0.95	0.86	0.78	0.72	0.66	0.61	0.56	0.52	0.48	-	-	-	-	-	-	-
	Suction	9.50	7.13	5.70	4.75	4.07	3.56	3.08	2.50	2.06	1.73	1.48	1.27	1.11	0.98	0.86	0.77	0.69	0.62	0.57	0.52	0.47	0.43	0.40	0.37	0.34	0.32	-	-	-	-	-	-	-
60	Pressure	10.57	7.93	6.34	5.29	4.53	3.97	3.52	3.17	2.88	2.64	2.44	2.15	1.87	1.65	1.46	1.30	1.17	1.05	0.96	0.87	0.80	0.73	0.67	0.62	0.58	0.54	0.50	0.47	-	-	-	-	-
	Suction	10.57	7.93	6.34	5.29	4.53	3.97	3.43	2.78	2.30	1.93	1.64	1.42	1.24	1.09	0.96	0.86	0.77	0.69	0.63	0.57	0.53	0.48	0.44	0.41	0.38	0.35	0.33	0.31	-	-	-	-	-
70	Pressure	12.37	9.27	7.42	6.18	5.30	4.64	4.12	3.71	3.37	3.09	2.85	2.51	2.19	1.92	1.70	1.52	1.36	1.23	1.12	1.02	0.93	0.86	0.79	0.73	0.68	0.63	0.59	0.55	0.51	0.48	-	-	-
	Suction	12.37	9.27	7.42	6.18	5.30	4.64	4.01	3.25	2.69	2.26	1.92	1.66	1.44	1.27	1.12	1.00	0.90	0.81	0.74	0.67	0.61	0.56	0.52	0.48	0.45	0.41	0.39	0.36	0.34	0.32	-	-	-
74	Pressure	13.08	9.81	7.85	6.54	5.61	4.91	4.36	3.92	3.57	3.27	3.02	2.66	2.32	2.04	1.80	1.61	1.44	1.30	1.18	1.08	0.98	0.90	0.83	0.77	0.71	0.66	0.62	0.58	0.54	0.51	0.48	-	-
	Suction	13.08	9.81	7.85	6.54	5.61	4.91	4.24	3.44	2.84	2.39	2.03	1.75	1.53	1.34	1.19	1.06	0.95	0.86	0.78	0.71	0.65	0.60	0.55	0.51	0.47	0.44	0.41	0.38	0.36	0.34	0.32	-	-
80	Pressure	14.16	10.62	8.49	7.08	6.07	5.31	4.72	4.25	3.86	3.54	3.27	2.88	2.51	2.20	1.95	1.74	1.56	1.41	1.28	1.16	1.07	0.98	0.90	0.83	0.77	0.72	0.67	0.63	0.59	0.55	0.52	0.49	0.46
	Suction	14.16	10.62	8.49	7.08	6.07	5.31	4.59	3.72	3.07	2.58	2.20	1.90	1.65	1.45	1.29	1.15	1.03	0.93	0.84	0.77	0.70	0.65	0.60	0.55	0.51	0.47	0.44	0.41	0.39	0.36	0.34	0.32	0.30
90	Pressure	15.95	11.96	9.57	7.97	6.83	5.98	5.32	4.78	4.35	3.99	3.68	3.24	2.82	2.48	2.20	1.96	1.76	1.59	1.44	1.31	1.20	1.10	1.02	0.94	0.87	0.81	0.76	0.71	0.66	0.62	0.58	0.55	0.52
	Suction	15.95	11.96	9.57	7.97	6.83	5.98	5.17	4.19	3.46	2.91	2.48	2.14	1.86	1.64	1.45	1.29	1.16	1.05	0.95	0.87	0.79	0.73	0.67	0.62	0.57	0.53	0.50	0.47	0.44	0.41	0.38	0.36	0.34
100	Pressure	16.90	12.67	10.14	8.45	7.24	6.34	5.63	5.07	4.61	4.22	3.90	3.60	3.14	2.76	2.44	2.18	1.96	1.77	1.60	1.46	1.34	1.23	1.13	1.05	0.97	0.90	0.84	0.79	0.74	0.69	0.65	0.61	0.58
	Suction	16.90	12.67	10.14	8.45	7.24	6.34	5.63	4.66	3.85	3.24	2.76	2.38	2.07	1.82	1.61	1.44	1.29	1.17	1.06	0.96	0.88	0.81	0.75	0.69	0.64	0.59	0.55	0.52	0.49	0.46	0.43	0.40	0.38
120	Pressure	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	4.24	3.91	3.63	3.39	3.18	2.94	2.62	2.35	2.12	1.93	1.75	1.61	1.47	1.36	1.25	1.15	1.06	0.98	0.92	0.85	0.80	0.75	0.70	0.66
	Suction	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.07	4.60	3.89	3.32	2.86	2.49	2.19	1.94	1.73	1.55	1.40	1.27	1.16	1.06	0.97	0.90	0.83	0.77	0.71	0.67	0.62	0.58	0.55	0.51	0.48	0.46
140	Pressure	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	4.24	3.91	3.63	3.39	3.18	2.99	2.82	2.68	2.45	2.19	1.97	1.78	1.62	1.48	1.35	1.25	1.15	1.07	0.99	0.92	0.86	0.81	0.76	0.71
	Suction	16.95	12.71	10.17	8.47	7.26	6.36	5.63	5.05	4.58	4.20	3.87	3.34	2.91	2.56	2.26	2.02	1.81	1.64	1.48	1.35	1.24	1.14	1.05	0.97	0.90	0.83	0.78	0.73	0.68	0.64	0.60	0.57	0.53
150	Pressure	16.95	12.71	10.17	8.47	7.26	6.36	5.65	5.08	4.62	4.24	3.91	3.63	3.39	3.18	2.99	2.82	2.68	2.54	2.27	2.03	1.84	1.67	1.52	1.39	1.28	1.18	1.10	1.02	0.95	0.88	0.83	0.78	0.73
	Suction	16.95	12.71	10.17	8.47	7.26	6.35	5.62	5.04	4.57	4.19	3.86	3.58	3.12	2.74	2.43	2.17	1.94	1.75	1.59	1.45	1.33	1.22	1.12	1.04	0.96	0.89	0.83	0.78	0.73	0.69	0.64	0.61	0.57

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- The fastener calculation should be carried out in accordance with the appropriate standards.
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- The allowable steelwork tolerance between bearing planes of adjacent supports is  $\pm 5$ mm.

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