

## Information Update

PMP70 Issue 1 Oct 2023

### Span Capability Tables

#### General

It is the wind pressure limitations given for the system that must be considered in all cases in relation to the actual project site conditions.

Derivation of design wind pressures for any given project are subject to several factors specific to individual sites and even to specific locations / arrangements on those sites. These need to take account of not only site basic wind speed, but also site altitude, topography and effect of the surrounding terrain, shape and orientation of the building and height above ground and size of the element being assessed. They are also dependent upon the application of suitable pressure coefficients which are determined in large part by the aerodynamic conditions of the space to which the element serves as the boundary. In particular, the selection of the appropriate coefficients can be a matter of interpretation by the engineer undertaking the specific project calculations.

Obviously, these conditions cannot be accounted for in any set of generic calculations or span guidance tables and hence the span tables shown in this document are based on the system capabilities at the indicated wind pressure rather than simple site basic wind speeds.

Blade deflection for a given span (mullion centres) is limited to not more than the indicated bladepitch i.e. KW75 will not deflect more than 75mm.

Mullion deflection for a given span (mullion fixing centres) is limited to not more than span/50.

Blade	Blade Pitch	Max Allowable blade span (mullion centres) in mm according to indicated net wind pressures						
		0.7 kPa	0.9 kPa	1.1 kPa	1.3 kPa	1.5 kPa	1.7 kPa	1.9 kPa
<b>Ref</b>	mm							
<b>KW30Z</b>	30	1000	940	890	855	825	800	760
<b>KW50Z</b>	50	1440	1355	1280	1180	1095	1030	975
<b>KW75Z</b>	75	1480	1305	1180	1085	1010	950	900
<b>KW75HPG</b>	75	1785	1570	1420	1310	1220	1145	1080
<b>KW75S</b>	75	2235	2100	1995	1915	1845	1790	1740
<b>KW100Z</b>	100	1390	1225	1105	1020	950	890	845
<b>KC120</b>	120	1925	1700	1535	1415	1315	1235	1170

The above blade spans correspond to a deflection limit of blade pitch, or to a permissible bending stress of 160 N/mm<sup>2</sup> for 6063 T6 aluminium (BS 8118-1: 1991), whichever is the more restrictive

*Table 1: Blade Span (Mullion Centres)*

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Mullion	Blade	Blade Pitch	Max Allowable vertical mullion spans in mm according to indicated net wind pressures						
Ref	Ref	mm	0.7 kPa	0.9 kPa	1.1 kPa	1.3 kPa	1.5 kPa	1.7 kPa	1.9 kPa
<b>Mullion M1</b>	<b>KW30Z</b>	<b>30</b>	3450	3240	3085	2955	2855	2765	2710
	<b>KW50Z</b>	<b>50</b>	3055	2870	2735	2660	2595	2540	2485
	<b>KW75Z</b>	<b>75</b>	3025	2905	2810	2730	2665	2610	2565
	<b>KW75HPG</b>	<b>75</b>	2845	2730	2640	2565	2500	2425	2355
	<b>KW75S</b>	<b>75</b>	2640	2460	2280	2140	2030	1935	1860
	<b>KW100Z</b>	<b>100</b>	3095	2965	2870	2790	2725	2670	2620
	<b>KC120</b>	<b>120</b>	2775	2660	2570	2495	2405	2330	2265
<b>Mullion M2</b>	<b>KW30Z</b>	<b>30</b>	1775	1645	1530	1435	1360	1300	1255
	<b>KW50Z</b>	<b>50</b>	1505	1370	1275	1225	1180	1145	1110
	<b>KW75Z</b>	<b>75</b>	1485	1395	1325	1275	1230	1190	1160
	<b>KW75HPG</b>	<b>75</b>	1355	1270	1210	1160	1120	1085	1055
	<b>KW75S</b>	<b>75</b>	1210	1100	1020	960	910	870	830
	<b>KW100Z</b>	<b>100</b>	1535	1440	1370	1315	1270	1230	1195
	<b>KC120</b>	<b>120</b>	1305	1225	1165	1115	1075	1045	1015
<b>Mullion M3</b>	<b>KW30Z</b>	<b>30</b>	480	440	405	380	360	345	335
	<b>KW50Z</b>	<b>50</b>	400	365	340	325	315	305	295
	<b>KW75Z</b>	<b>75</b>	395	370	355	340	325	315	310
	<b>KW75HPG</b>	<b>75</b>	360	340	320	310	300	290	280
	<b>KW75S</b>	<b>75</b>	320	295	270	255	240	230	220
	<b>KW100Z</b>	<b>100</b>	410	385	365	350	340	330	320
	<b>KC120</b>	<b>120</b>	345	325	310	295	285	280	270
<b>Mullion M4</b>	<b>KW30Z</b>	<b>30</b>	3875	3640	3465	3320	3205	3105	3035
	<b>KW50Z</b>	<b>50</b>	3430	3220	3070	2950	2845	2760	2685
	<b>KW75Z</b>	<b>75</b>	3400	3260	3155	3065	2965	2875	2795
	<b>KW75HPG</b>	<b>75</b>	3195	3065	2920	2800	2700	2620	2545
	<b>KW75S</b>	<b>75</b>	2920	2655	2465	2315	2195	2095	2010
	<b>KW100Z</b>	<b>100</b>	3475	3330	3220	3135	3060	2965	2885
	<b>KC120</b>	<b>120</b>	3115	2955	2810	2695	2600	2520	2450

The above mullion spans correspond to a deflection limit of span/50, or to a permissible bending stress of 160 N/mm<sup>2</sup> for 6063 T6 aluminium (BS 8118-1: 1991), whichever is the more restrictive

Table 2: Vertical Mullion Span