

Armstrong TECH ZONE

Load capacity for grid components, Field Panels and Technical Elements

The Armstrong TECH ZONE ceiling grid system is primarily intended to support the distributed load from the installed ceiling tiles taking into account the various module layouts. This will ensure a deflection of the grid, between points of support, which is in accordance with the Class 1 requirements of 13964:2004/A1:2006 (table 6).

Technical (service) Elements may in some circumstances be supported directly onto the grid while still maintaining the maximum deflection requirements of EN 13964.

The table below indicates where these cases are applicable and their maximum permitted weights, assuming a maximum hanger spacing along the Main Runners of 1200mm. Any service fittings exceeding these weights should be independently supported or additional local grid hangers provided.

In all cases dynamic fittings, such as ducted air diffusers, etc, should be independently supported to ensure that vibration is not transferred to the ceiling system.

Perimeter trims are not designed to support any significant loads from suspended grid sections. Any grid section (Main Runner or Cross Tee) that bears onto perimeter trim sections require support within 600mm. This dimension should be reduced to 450mm if any service fittings, supported onto the grid, are located within 600mm of any perimeter.

If you have any queries regarding the application of this table of maximum loads, please do not hesitate to contact Armstrong's Internal Technical Sales for further advice.

Maximum	is the maximum load that the system can allow to meet the deflection OR Bending Moment limits	Weight of Field Panels in kg/m² Optima 20 2,3 Nevada 18 2,6 Optima Vector 2,9 Perla OP 3,3 Ultima OP 3,7 Sierra 3,7 Orcal EMP fleece 4,0 - 5,5* Ultima 5,2 Orcal EMP B15 7,0 - 8,5*
Panels kg/m²	is the weight in kg/m² of the Field Panels	
Example 1	shows the maximum weight per unit of a Technical Element when installed in combination with Field Panels of 3 kg/m²	
Example 2	shows the maximum weight per unit of a Technical Element when installed in combination with Field Panels of 5 kg/m², or the maximum weight for Field Panels as determined for the layout if it is less than 5 kg/m².	
Example 3	shows the maximum weight per unit of a Technical Element when installed in combination with Field Panels of 7/8 kg/m², or the maximum weight for Field Panels as determined for the layout if it is less than 7/8 kg/m².	
Fittings kg MR	is the maximum allowable weight of a Technical Element per unit when supported on the top (bulb) of Main Runners. (Typically when Main Runners are parallel to the technical zone).	
Fittings kg Flange	is the maximum allowable weight of a Technical Element when supported on the grid flanges. Load equivalent to balance tile load. NB. The weight of flange supported fittings cannot be increased by the provision of additional local hangers.	
Fittings kg PCT	is the maximum allowable weight of a Technical Element when supported on the top (bulb) of Primary Cross Tees. (Typically when Main Runners are perpendicular to the technical zone).	

* Depends on dimension of Field Panel.

System		Prelude 15 Loads			Prelude 24 Loads			Interlude Loads			Silhouette Loads			Fittings kg Flange
		Panels kg/m ²	Fittings kg MR	Fittings kg PCT	Panels kg/m ²	Fittings kg MR	Fittings kg PCT	Panels kg/m ²	Fittings kg MR	Fittings kg PCT	Panels kg/m ²	Fittings kg MR	Fittings kg PCT	
TZ1	Example 1	3,0	16	9	3,0	16	7	3,0	18	8	3,0	12	9	2
	Example 2	5,0	11	6	5,0	12	4	5,0	14	14	5,0	8	6	3
	Example 3	7,0	7	2	7,0	7	-	7,0	9	9	7,0	4	2	4
	Maximum	8,9	-	-	8,0	-	-	11,6	-	-	8,9	-	-	-
TZ2	Example 1	3,0	16	14	3,0	17	12	3,0	19	19	3,0	13	13	2
	Example 2	5,0	13	10	5,0	13	9	5,0	15	15	5,0	9	9	3
	Example 3	7,0	9	7	7,0	9	5	7,0	11	11	7,0	6	6	4
	Maximum	12,0	-	-	10,8	-	-	13,2	-	-	10,2	-	-	-
TZ3	Example 1	3,0	16	8	3,0	16	7	3,0	18	18	3,0	12	8	2
	Example 2	5,0	11	4	5,0	12	3	5,0	14	14	5,0	8	4	4
	Example 3	7,0	7	-	6,9	7	-	7,0	9	9	7,0	4	-	5
	Maximum	7,7	-	-	6,9	-	-	11,6	-	-	7,7	-	-	-
TZ4	Example 1	3,0	16	8	3,0	16	7	3,0	18	18	3,0	12	8	2
	Example 2	5,0	11	4	5,0	12	3	5,0	14	14	5,0	8	4	4
	Example 3	7,0	7	-	6,9	7	-	7,0	9	9	7,0	4	-	5
	Maximum	7,7	-	-	6,9	-	-	11,6	-	-	7,7	-	-	-
TZ5	Example 1	-	-	-	3,0	16	6	3,0	18	17	-	-	-	2
	Example 2	-	-	-	5,0	12	2	5,0	14	12	-	-	-	4
	Example 3	-	-	-	6,1	9	-	7,0	9	8	-	-	-	6
	Maximum	-	-	-	6,1	-	-	10,3	-	-	-	-	-	-
TZ6	Example 1	-	-	-	3,0	15	13	3,0	17	17	-	-	-	2
	Example 2	-	-	-	5,0	10	10	5,0	12	12	-	-	-	4
	Example 3	-	-	-	7,0	5	5	7,0	8	8	-	-	-	6
	Maximum	-	-	-	9,4	-	-	10,3	-	-	-	-	-	-
TZ7	Example 1	-	-	-	3,0	16	4	3,0	18	16	-	-	-	3
	Example 2	-	-	-	4,9	12	-	5,0	14	10	-	-	-	5
	Example 3	-	-	-	-	-	-	7,0	9	4	-	-	-	7
	Maximum	-	-	-	4,9	-	-	8,4	-	-	-	-	-	-

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System		Prelude 15 Loads			Prelude 24 Loads			Interlude Loads			Silhouette Loads			Fittings kg Flange
		Panels kg/m ²	Fittings kg MR	Fittings kg PCT	Panels kg/m ²	Fittings kg MR	Fittings kg PCT	Panels kg/m ²	Fittings kg MR	Fittings kg PCT	Panels kg/m ²	Fittings kg MR	Fittings kg PCT	
TZ8	Example 1	-	-	-	3,0	13	7	3,0	16	10	-	-	-	3
	Example 2	-	-	-	5,0	7	4	5,0	10	7	-	-	-	5
	Example 3	-	-	-	7,0	-	-	7,0	4	4	-	-	-	7
	Maximum	-	-	-	7,7	-	-	8,4	-	-	-	-	-	-
TZ9	Example 1	-	-	-	3,0	15	9	3,0	17	14	-	-	-	2
	Example 2	-	-	-	5,0	10	4	5,0	12	9	-	-	-	4
	Example 3	-	-	-	6,9	6	-	7,0	8	5	-	-	-	6
	Maximum	-	-	-	6,9	-	-	9,1	-	-	-	-	-	-
TZ10	Example 1	3,0	16	8	3,0	16	6	3,0	18	17	3,0	12	8	2
	Example 2	5,0	11	4	5,0	12	2	5,0	14	12	5,0	8	4	4
	Example 3	7,0	7	-	6,1	9	-	7,0	9	8	7,0	4	-	6
	Maximum	-	-	-	6,1	-	-	10,3	-	-	7,1	-	-	-
TZ11	Example 1	-	-	-	3,0	14	6	3,0	16	9	-	-	-	3
	Example 2	-	-	-	5,0	9	-	5,0	11	5	-	-	-	5
	Example 3	-	-	-	5,5	8	-	7,0	6	-	-	-	-	6
	Maximum	-	-	-	5,5	-	-	7,3	-	-	-	-	-	-
TZ12	Example 1	3,0	16	10	3,0	16	5	3,0	18	16	3,0	12	10	3
	Example 2	5,0	11	8	5,0	12	-	5,0	14	11	5,0	8	8	5
	Example 3	7,0	7	6	5,5	11	-	7,0	9	6	7,0	4	4	6
	Maximum	10,5	-	-	5,5	-	-	9,3	-	-	8,9	-	-	-
TZ13	Example 1	3,0	16	11	3,0	16	4	3,0	18	15	3,0	12	6	3
	Example 2	5,0	11	9	4,5	13	-	5,0	14	8	5,0	8	-	5
	Example 3	7,0	7	7	-	-	-	7,7	9	-	5,3	7	-	6
	Maximum	10,5	-	-	4,5	-	-	7,7	-	-	5,3	-	-	-
TZ14	Example 1	-	-	-	3,0	14	5	3,0	16	8	-	-	-	3
	Example 2	-	-	-	4,9	9	-	5,0	11	3	-	-	-	5
	Example 3	-	-	-	-	-	-	6,5	7	-	-	-	-	7
	Maximum	-	-	-	4,9	-	-	6,5	-	-	-	-	-	-
TZ15	Example 1	-	-	-	3,0	15	12	3,0	17	17	-	-	-	3
	Example 2	-	-	-	5,0	10	9	5,0	12	12	-	-	-	5
	Example 3	-	-	-	7,0	5	5	7,0	8	8	-	-	-	7
	Maximum	-	-	-	9,4	-	-	10,3	-	-	-	-	-	-
TZ16	Example 1	-	-	-	3,0	15	12	3,0	17	17	-	-	-	3
	Example 2	-	-	-	5,0	10	9	5,0	12	12	-	-	-	5
	Example 3	-	-	-	7,0	5	5	7,0	8	8	-	-	-	7
	Maximum	-	-	-	9,4	-	-	10,3	-	-	-	-	-	-
TZ17	Example 1	3,0	16	8	3,0	16	7	3,0	18	18	3,0	12	8	2
	Example 2	5,0	11	4	5,0	12	3	5,0	14	14	5,0	8	4	4
	Example 3	7,0	7	-	6,9	7	-	7,0	9	9	7,0	4	-	5
	Maximum	7,7	-	-	6,9	-	-	11,6	-	-	7,7	-	-	-
TZ18	Example 1	-	-	-	3,0	14	6	3,0	16	9	-	-	-	3
	Example 2	-	-	-	5,0	9	-	5,0	11	5	-	-	-	5
	Example 3	-	-	-	5,5	7	-	7,0	6	-	-	-	-	6
	Maximum	-	-	-	5,5	-	-	7,3	-	-	-	-	-	-
TZ19	Example 1	3,0	16	10	3,0	16	5	3,0	18	16	3,0	12	10	3
	Example 2	5,0	11	8	5,0	12	-	5,0	14	11	5,0	8	8	5
	Example 3	7,0	7	6	5,5	11	-	7,0	9	6	7,0	4	4	7
	Maximum	10,5	-	-	5,5	-	-	9,3	-	-	8,9	-	-	-
TZ20	Example 1	-	-	-	3,0	13	4	3,0	15	7	-	-	-	3
	Example 2	-	-	-	5,0	6	2	5,0	8	4	-	-	-	5
	Example 3	-	-	-	6,6	-	-	7,0	-	-	-	-	-	8
	Maximum	-	-	-	6,6	-	-	7,7	-	-	-	-	-	-
TZ21	Example 1	16	11	3,0	16	10	3,0	18	18	3,0	12	11	3	-
	Example 2	11	9	5,0	12	8	5,0	14	14	5,0	8	8	5	-
	Example 3	7	7	7,0	7	6	7,0	9	9	7,0	4	4	8	-
	Maximum	-	-	10,6	-	-	11,6	-	-	8,9	-	-	-	-
TZ22	Example 1	-	-	-	3,0	13	4	3,0	15	7	-	-	-	3
	Example 2	-	-	-	5,0	6	2	5,0	8	4	-	-	-	5
	Example 3	-	-	-	6,6	-	-	7,7	-	-	-	-	-	8
	Maximum	-	-	-	6,6	-	-	7,7	-	-	-	-	-	-