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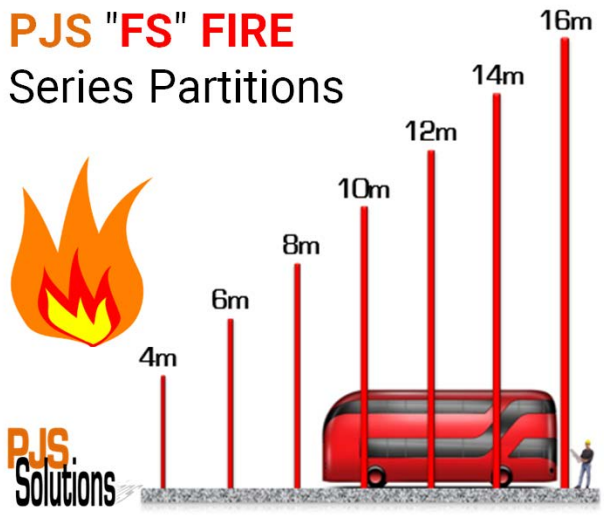
PJS Solutions Partition System F60S Technical Data - 14m High

https://pjssolutions.co.uk/pjs_f60s_fire_rated_series_partitions/

Max Build Height = 15m



F60S Smooth Painted Finish

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PJS Solutions Robust Partition System "F60S" has been designed to acheive 1 hour fire resistance up to heights of 15m using PJS heavy gauge steel sections clad with PJS robust performance boards with mineral wool infill to give excellent acoustic ratings. This system can be upgraded to achieve higher thermal & acoustic values. There are many options for heavy traffic / fork lift protection. PJS Solutions supply and install 1 hour fire rated fixed windows, doors & automated roller shutter doors to compliment the "F60S" system.

The PJS Solutions "F60S" system only uses PJS robust performance boards. PJS robust performance boards are inherently very much stronger than conventional plasterboard and, as well as its strength and acoustic properties, it also provides fire, impact, and moisture resistance. The strength comes from its gypsum matrix, which is reinforced with recycled paper and, because of its higher density, is far more effective in reducing sound transmission.

Robust performance Table:

Wall Height, up to:	<7m	<8m	<9m	<10 m	<11 m	<12 m	<13 m	<14 m	<15 m	
Fire Rating (hours)	1	1	1	1	1	1	1	1	1	
Stud Size (mm)	140	140	140	200	200	230	260	300	350	
Stud Gauge (mm)	1.2	1.6	2.0	1.6	2.0	1.6	2.0	2.0	2.0	
Stud Centres (mm)	600	600	600	600	600	600	600	600	600	
PJS robust performance boards both sides (mm)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
Mineral Wool 45kg/m3 (mm)	75	75	75	75	75	75	75	75	75	
System weight / m2 (approx.)	39	41	46	47	52	54	59	62	69	
Acoustic Sound Rating (dB)	Basic rating = 54dB, can be upgraded to 68dB									
U-values W/m2k	Standard rating = 0.4 W/m2k upgradable to 0.18 W/m2k									

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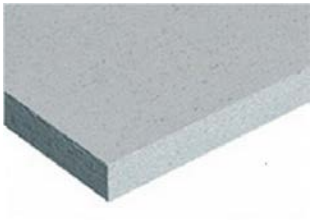
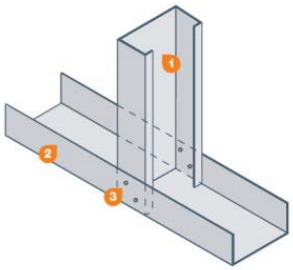
Wall Lay Out & Components:

Partition systems range in height from 2.0m high up to 15m high, The 1 hour fire rating is backed by Warrington Fire Certificate. There is no limit to the length of the wall.

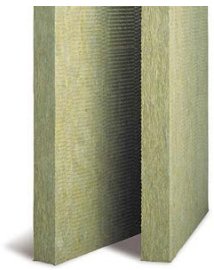
PJS Standard Boards	1 x layer of Square edge PJS robust performance board fixed with PJS screws to steel stud using PJS Joint stick at board edges. Dimension = 2400 x 600 x 12.5mm Weight per m2 = 15 kg



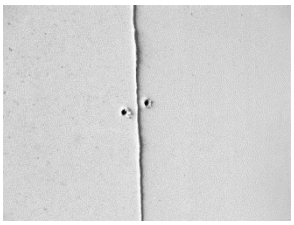
C Studs	From 150mm web / 54mm Flange / >12mm Lip / 1mm gauge Maximum 350mm wide / 90mm Flange / >19mm Lip / 3mm gauge
Channel	From 154mm web / 70mm Flange / 1mm gauge Maximum 354mm web / 90mm Flange / 3mm gauge



Mineral Wool Slab Insulation	Mineral Universal Slab From 75mm thick x 600mm x 600mm Density from 45kg/m3 up to 100kg/m3



PJS Joint stick	For edge gluing PJS boards



PJS Joint Filler	For filling gap between boards and stopping screw heads

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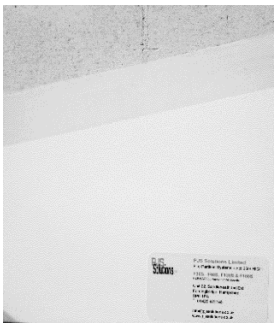
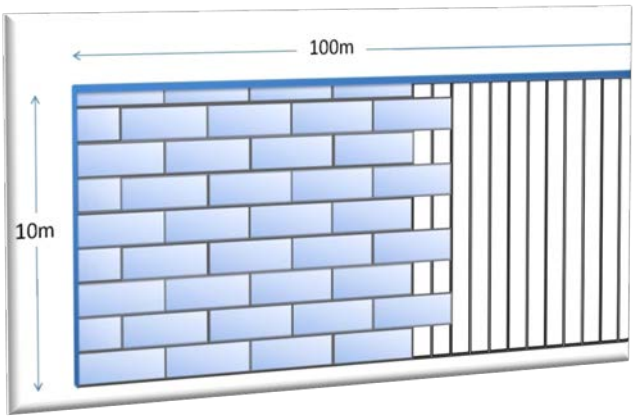
PJS Fine Surface Treatment	For giving PJS boards a smoother finish if required



Advantages of PJS robust performance boards:

- PJS robust performance boards is a class '0' and class '1' Board and provides F60S applications from single layer constructions up to 15m high.



- PJS robust performance boards waterproofing application system to give peace of mind. It can withstand humidity levels of up to 80% Rh. Maybe installed before building envelope is complete
- PJS robust robust performance boards is strong enough to use in schools, sports halls and hospitals, reducing the need for ply-backing. PJS robust performance meets BS 5234:part 2 Severe Duty Rating.
- PJS robust robust performance boards is high load bearing and can carry up to 30kg from a single screw and up to 50kg from 2 wall plug fitting which virtually eliminates the need for noggins
- PJS robust performance boards meets and exceeds Part E B893 and HTM 2045 requirements. It can be used for walls, ceilings or floors where sound proofing is required. A 100 mm wide stud wall with PJS robust performance gives better acoustic reduction than a 275mm block wall.

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Deflection Head Details: Deflection head details are designed for each specific building taking into accoung roof crush factor and extreme wind loadings; please email technical@pjssolutions.co.uk we will be pleased to assist you.

PJS BOARD Dimensional tolerances at constant humidity – Board dimensions	
Length	± 1 mm
Width	± 1 mm
Diagonal difference	<= 2 mm
Thickness: 10 / 12.5 / 15 / 18	± 0.3 mm
Nominal density, strength	
Nominal density (production target)	1150 ± 50 kg/m3
Bending strength (after drying at 40°C), at right angles to the board surface	>= 5.8 N/mm2
Transverse strength	>= 0.3 N/mm2
Certified tensile values according to DIN 1052 (Permit No: Z-9.1-434)	
Bending perpendicular to the board surface	1.2 N/mm2
Bending in board surface	1.1 N/mm2
Tension in board surface	0.5 N/mm2
Pressure in board surface	2.0 N/mm2
Pressure perpendicular to the board surface	2.5 N/mm2
Shearing in board surface	0.3 N/mm2
Shearing perpendicular to the board surface	0.6 N/mm2
Modulus calculations (Permit No. Z-9.1-434)	
E-Modulus perpendicular to the board surface	3800 N/mm2
E-Modulus parallel to the board surface	3800 N/mm2

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E-Modulus tension	3800 N/mm2
E-Modulus compression	3800 N/mm2
Shearing modulus G perpendicular to the board surface	1600 N/mm2
Shearing modulus G bending in the board surface	1600 N/mm2

Additional data	
Vapour Resistance	μ 13
Thermal conductivity	0.32 W/mK
Specific heat capacity c	1.1 kJ/kgK
Brinell hardness	30 N/mm2
Swelling after 24 hrs saturation	< 2%
Thermal co-efficient of expansion	0.001%/K
Expansion/shrinkage on alteration of the relative humidity of 30% (20°C)	0.25 mm/m
Moisture content at 65% relative air humidity and 20°C air temperature	1.3%
Construction material category according to DIN 4102 Part 1 (non-combustible)	A2
pH value	7-8

Characteristic strength and stiffness values of PJS robust performance boards in N/mm2 for design calculation according to DIN 1052 (Test report No: Z-9.1-434/ETA-03/0050)	Thickness of board in mm			
	10	12.5	15	18
Perpendicular to the plane of the board				
Bending fm,k	4.6	4.3	4.0	3.6
Shear fv,k	1.9	1.8	1.7	1.6
In plane of the board				
Bending fm,k	4.3	4.2	4.1	4.0
Tension ft,k	2.5	2.4	2.4	2.3
Compression fc,k	8.5	8.5	8.5	8.5
Shear fv,k	3.7	3.6	3.5	3.4

PJS Boards

Sizes (mm)	10	12.5	15	18
Weight per m2 (kg)	11.5	15	18	21
Square edge Boards				
1500 x 1000 mm	•	•	•	•
600 x 600 mm	•	•	•	•
2400 x 600 mm	•	•	•	•
2700 x 600 mm	•	•	•	•
3000 x 600 mm	•	•	•	•
Tapered edge Boards				
600 x 800 mm (4 s.)		•		

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2400 x 600 mm (4 s.)	•	
2400 x 600 mm (2 s.)	•	•
Specially cut sizes on request		