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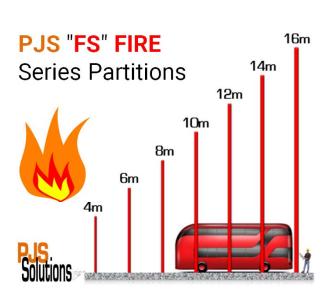
Website: <u>www.pjssolutions.co.uk</u>

# PJS Solutions Partition System F60S Technical Data - 10m High



https://pjssolutions.co.uk/pjs f60s fire rated series partitions/

Max Build Height = 15m



F60S Smooth Painted Finish





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#### Installed by PJS Solutions

PJS Solutions Robust Partition System "F6OS" 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 "F6OS" system.

The PJS Solutions "F6OS" 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	<mark>1.6</mark>	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	<mark>75</mark>	75	75	75	75	75	
System weight / m2 (approx.)	39	41	46	47	52	54	59	62	69	
Acoustic Sound Rating (dB)	Basic rating = <mark>54dB</mark> , can be upgraded to 68dB									
U-values W/m2k	Standard rating = <mark>0.4 W/m2k upgradable to 0.18 W/m2k</mark>									



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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 Mineral Universal Slab

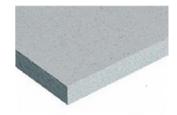
Insulation From 75mm thick x 600mm x 600mm

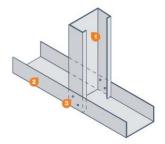
Density from 45kg/m3 up to 100kg/m3

PJS Joint stick For edge gluing PJS boards

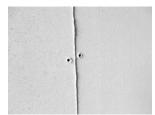
PJS Joint Filler For filling gap between boards and

stopping screw heads











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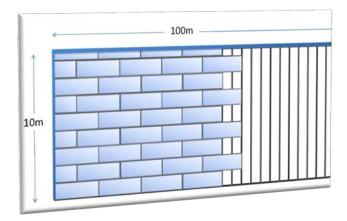
PJS Fine Surface Treatment

For giving PJS boards a smoother finish if required



#### Advantages of PJS robust performance boards:

- PJS robust performance boards is a class 'O' and class '1' Board and provides F6OS 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 <a href="technical@pjssolutions.co.uk">technical@pjssolutions.co.uk</a> 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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EModulus 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           Shearing modulus G bending in the board surface         y 1 store of 1600 N/mm2           To represent the selectance         y 1 store of 1600 N/mm2           Thermal conductability         30 N/mm2           Specific heat capacity c         1.1 kJ/kgk           Specific heat capacity c         1.1 kJ/kgk           Specific heat capacity conductability         20 N/mm2           Specific heat capacity of the staturation         20 N/mm2           Specific heat capacity 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%           Therefore of the status of the relative air humidity and 20°C air temperature         1.38           Therefore of the status of the relative air humidity and 20°C air temperature         1.38           Therefore of the status of the design of t	E-Modulus tension				38	800 N/	mm2	
Shearing modulus G bending in the board surface   1600 N   1700	E-Modulus compression				38	800 N/	mm2	
National details   National Conductivity	Shearing modulus G perpendicular to the board surface				1600 N/mm2			
Page	Shearing modulus G bending in the board surface				1600 N/mm2			
Thermal conductivity   Specific heat capacity c   1.1 kJ/kgk   Specific heat capacity c   1.2 kJ/kgk   Specific heat capacity c   1.2 kJ/kgk   Specific heat capacity c   1.2 kJ/kgk   Specific network of expansion   1.2 kJ/kgk   Specific network of expansion   1.2 kJ/kgk   Specific network of expansion   1.2 kJ/kgk   Specific network of expansion of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of expansion of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of expansion of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of expansion of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of expansion of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of expansion of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of expansion of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of expansion of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of the plane of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of the plane of the relative humidity of 30% (20°C)   1.2 kJ/kgk   Specific network of the plane of the section of the plane of the section of the plane of the section of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane of the board   1.2 kJ/kgk   Specific network of the plane		Additional data						
Specific heat capacity c   1.1 kJ/kg K-  Finnell hardness   30 kJ/km K-  Finnell hardness   30 kJ/km K-  Finnell hardness   30 kJ/km K-  Finnell caefficient of expansion   2 kJ/km K-  Finnell caefficient of expansion of the relative humidity and 20°C air temperature   1.3 kJ-km K-  Finnell caefgory according to DIN 4102 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4102 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4102 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Finnell caefgory according to DIN 4012 Part 1 (non-combustiol)   7 kJ-km K-  Fi	Vapour Resistance				μ 13	3		
Similar   Hardiness   Size	Thermal conductivity				0.3	2 W/m	ηΚ	
Sewelling after 24 hrs saturation	Specific heat capacity c				1.1	kJ/kgŀ	<	
Thermal coefficient of expansion	Brinell hardness			30 N/mm2				
Expansion/shrinkage on alteration of the relative humidity of 30% (20°C)   1.3%   1.3%    Moisture content at 65% relative air humidity and 20°C air temperature   1.3%    Tournation material category according to DIN 4102 Part 1 (non-combustible)   7.8%    PH value   7.8%   7.8%    Characteristic strength and stiffness values of PJS robust performance boards in N/mm2 for design   10	Swelling after 24 hrs saturation			< 2%				
Moisture content at 65% relative air humidity and 20°C air temperature	Thermal co-efficient of expansion			0.001%/K				
A2         Tolsward (non-combustible)       A2         Tolsward (non-combust) (non-co	Expansion/shrinkage on alteration of the relative	e humidity of 30% (20°C	]	0.25 mm/m				
Ph value	Moisture content at 65% relative air humidity ai	nd 20°C air temperature	)					
Characteristic strength and stiffness values of PJS robust performance boards in N/mm2 for design         Thickness of board           calculation according to DIN 1052 (Test report No: Z-9.1-434/ETA-03/0050)           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         4.3         4.2         4.1         4.0           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         3.7         3.6           VB Sboards         11.5         15         18         1           Weight per m2 (kg)         11.5         15         1         1           Square edge Boards         1         1         1         1           400 x 600 mm         1         1         1         1           2700 x 600 mm         1	Construction material category according to DIN	N 4102 Part 1 (non-com	bustible)	A2				
N/mm2 for design   Calculation according to DIN 1052 [Test report No: Z-9.1-434/ETA-U3/0050]	pH value				7-8			
Perpendicular to the plane of the board	Characteristic strength and stiffness values	of PJS robust performa	ance boards in	Thi	ckness	of boar	d in	
Perpendicular to the plane of the board	N/mm2 for	design			m	m		
Rerpendicular 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       Use 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       8.5         Shear fv,k       3.7       3.6       3.5       3.4       2.4       2.4       2.3         Shear fv,k       1.0       1.5       1	calculation according to DIN 1052 (Test re	eport No: Z-9.1-434/ET	A-03/0050)					
Bending fm,k				10	12.5	15	18	
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         System fv,k       1.5	Perpendicular to the plane of the board							
In plane of the board	Bending fm,k			4.6	4.3	4.0	3.6	
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	Shear fv,k			1.9	1.8	1.7	1.6	
Tension ft,k	In plane of the board							
Compression fc,k       8.5	Bending fm,k			4.3	4.2	4.1	4.0	
Shear fv,k   3.7   3.6   3.5   3.4   3.5   3.5   3.4   3.5   3.5   3.4   3.5	Tension ft,k			2.5	2.4	2.4	2.3	
PUS Boards         Sizes (mm)         10         12.5         15         18           Weight per m2 (kg)         11.5         15         18         21           Square edge Boards         ************************************	Compression fc,k			8.5	8.5	8.5	8.5	
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       •       •       •       •       •       •	Shear fv,k			3.7	3.6	3.5	3.4	
Weight per m2 (kg)       11.5       15       18       21         Square edge Boards             1500 x 1000 mm              600 x 600 mm              2400 x 600 mm              3000 x 600 mm               Tapered edge Boards	PJS Boards							
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	Sizes (mm)	10	12.5	15	5	18		
1500 x 1000 mm  • • • • • • • • • • • • • • • • • •	Weight per m2 (kg)	11.5	15	18	3	21		
600 x 600 mm	Square edge Boards							
2400 x 600 mm       •       •       •       •         2700 x 600 mm       •       •       •       •         3000 x 600 mm       •       •       •       •         Tapered edge Boards	1500 x 1000 mm	•	•	•		•		
2700 x 600 mm       •       •       •       •         3000 x 600 mm       •       •       •       •         Tapered edge Boards	600 x 600 mm	•	•	•		•		
3000 x 600 mm • • • • • Tapered edge Boards	2400 x 600 mm	•	•	•		•		
Tapered edge Boards	2700 x 600 mm	•	•	•		•		
	3000 x 600 mm	•	•	•		•		
600 x 800 mm (4 s.)	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		