

DRYWALL

SYSTEMS

FRAMING SYSTEM

LIGHTWEIGHT AND ECONOMICAL

Lightweight fire and sound-resistant assemblies provide an economical solution for single, double and multi-layer drywall partitions in commercial, residential and institutional applications.



USER'S GUIDE

This brochure explains:

- Where drywall partitions and ceiling systems are used.
 - How to select and specify the appropriate components.
 - The components of drywall partitions and ceiling systems.
-

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WEBSITE: www.usgboral.com www.usg.com	

DRYWALL PARTITION SYSTEMS

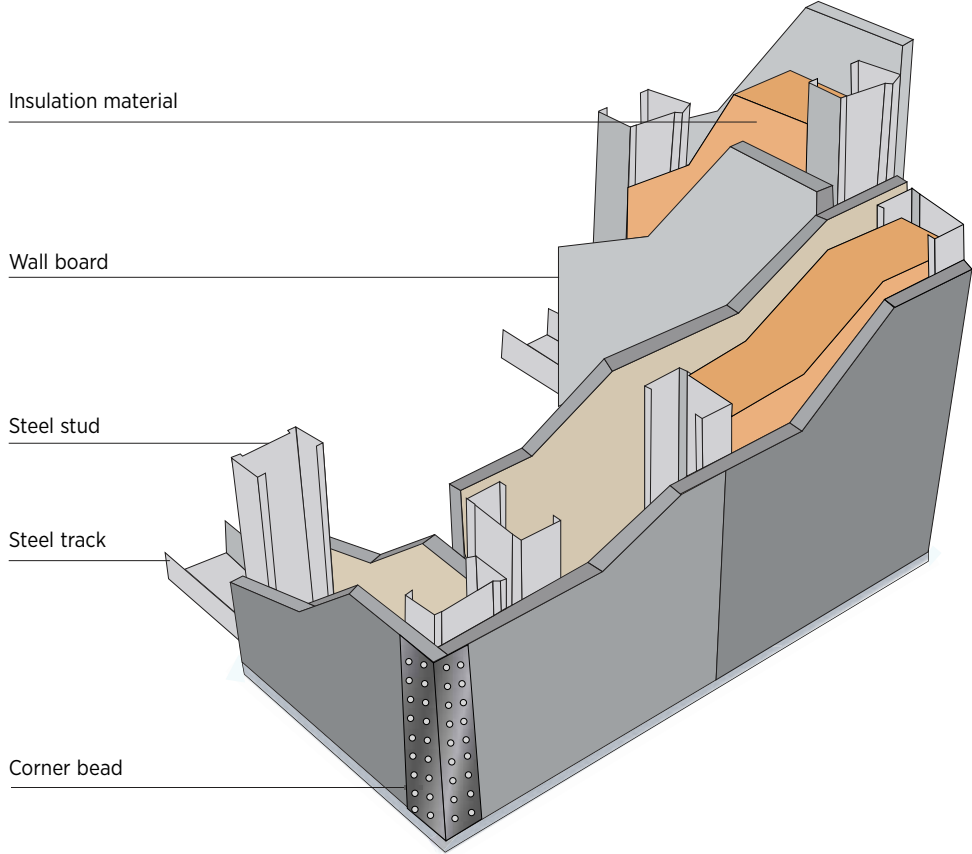
FRAMING SYSTEM

Lightweight fire steel framing systems provide an economical solution for constructing single, double and multi-layer drywall partitions in commercial residential and institutional applications. Drywall stud and track channels are roll-formed in C & U shaped from materials that comply with ASTM C645 and A653, with a minimum G60 coating or equivalent $z180 \text{ g/m}^2$ (conversion factor $z=3 \times 60=180 \text{ g/m}^2$).

PARTITION WALL ASSEMBLY

STUD AND TRACK

Used for drywall partition, drywall studs and tracks are available in variety of widths of 50, 64, 72, 75, 92, 100, 125, 150 and 200 mm.



DRYWALL CEILING SYSTEMS

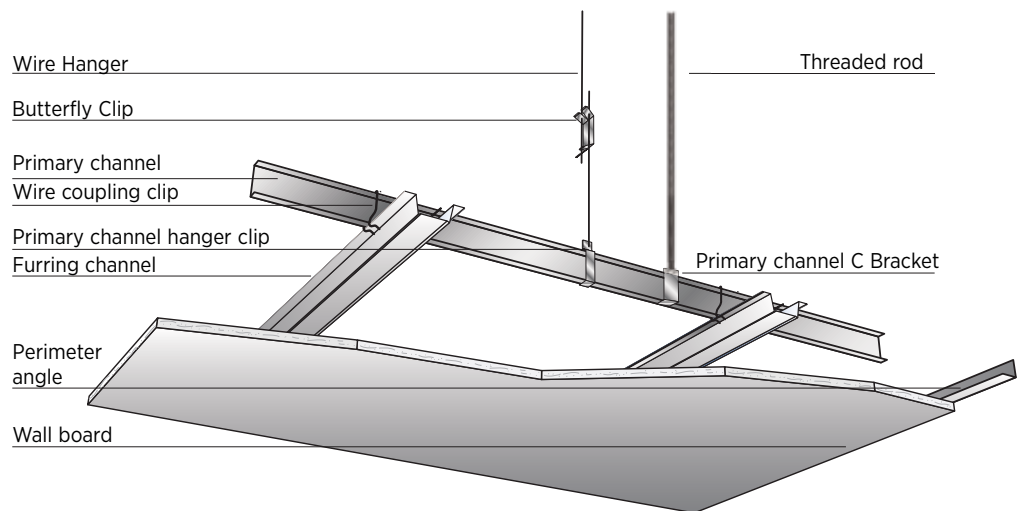
FURRING CHANNEL, PERIMETER ANGLE, PRIMARY CHANNEL

USG BORAL Drywall Suspension System is a concealed framing systems designed to construct regular, fire and acoustic high quality wall board ceilings that offer monolithic appearance and excellent stability. The system is made from materials that comply to ASTM C645 and C527, with a minimum G60 coating or equivalent $\geq 180 \text{ g/m}^2$ (conversion factor $z=3 \times 60=180 \text{ g/m}^2$). All Drywall ceiling channels are produced in 3 meter lengths unless otherwise specified.

DRYWALL CEILING ASSEMBLY

Furring Channel, Perimeter Angle, Primary Channel

Used for ceiling suspension, drywall ceiling framing is available in the following standard sizes: 22x69mm, 25x25mm, 12x38mm and 15x60mm.



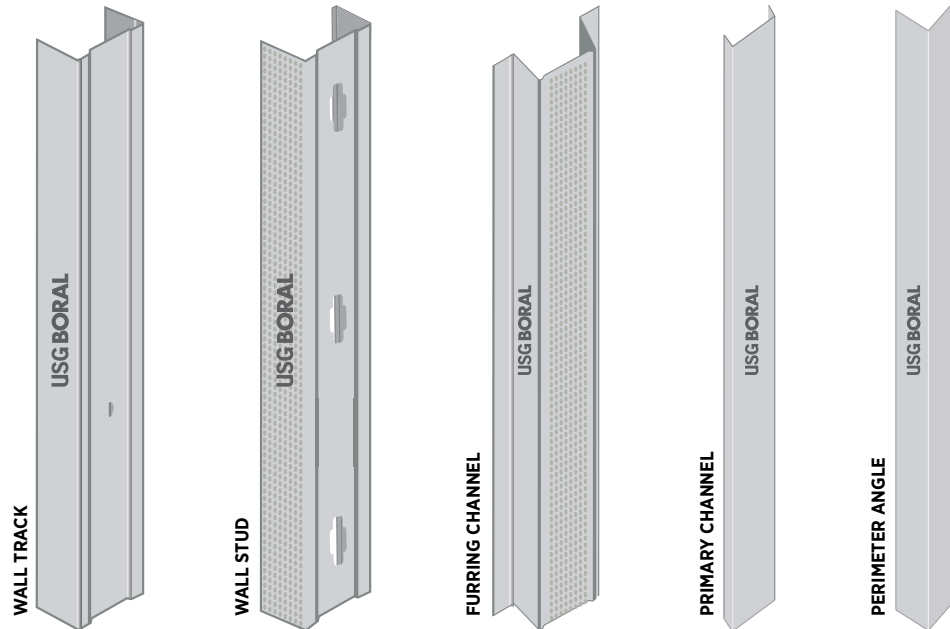
*Hanger can be substituted with a primary or perimeter channels.

DRYWALL APPLICATIONS

These systems are adaptable to virtually any type of new construction, including commercial, residential, institutional and industrial. They are also useful in renovation to provide smooth, durable interior surfaces. Fire-resistant assemblies are also available.

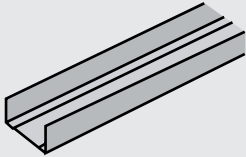
These partitions provide efficient sound isolation at all frequencies.

The multilayer designs provide exceptional isolation at low, middle and high frequencies, making them ideal for isolating loud music, mechanical equipment and amplified speech sound sources. STC ratings are up to 69 for multilayer, 59 for double-layer, and 55 for single-layer resilient partitions, and 54 for single-layer. They are lightweight and thin allowing for the most efficient use of materials and space.



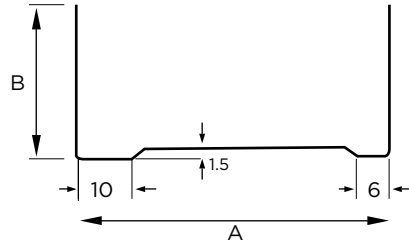
DRYWALL FRAMING COMPONENTS

1A- REGULAR TRACK
(U-SHAPED PROFILE)



CROSS SECTION

For Regular Drywall Partitions



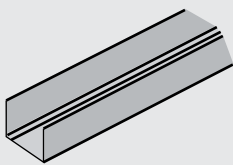
COMPONENTS		DIMENSIONS (MM)				SPECIFICATION
ITEM CODE	DESCRIPTION	A	B	THICKNESS	LENGTH	ZINC COATING
TR350	TRACK AxB	50	*	0.45-1.5	3000	G60-G90
TR364	TRACK AxB	64		0.45-1.5		
TR372/375	TRACK AxB	72/75		0.45-1.5		
TR392	TRACK AxB	92		0.45-1.5		
TR3100	TRACK AxB	100		0.5-1.5		
TR3125	TRACK AxB	125		0.7-1.5		
TR3150	TRACK AxB	150		0.9-1.5		
TR3200	TRACK AxB	200		1.0-1.5		

*Regular Flange track Light Duty when thickness is below 0.70mm and flange length is 30mm ± 1mm.

*Regular Flange track Heavy Duty when thickness is ranging between 0.70mm and 1.50mm and flange length is 28mm ±1mm.

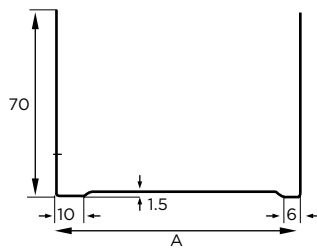
*Flange can be customized upon demand.

1B- DEEP FLANGE
TRACK (U-SHAPED PROFILE)



CROSS SECTION

For Fire Rated System Partitions

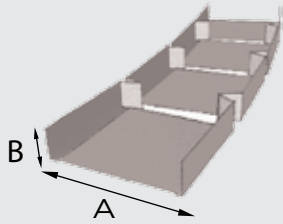


COMPONENTS		DIMENSIONS (MM)				SPECIFICATION
ITEM CODE	DESCRIPTION	A	B*	THICKNESS	LENGTH	ZINC COATING
TR7050	TRACK AxB	50	70	0.6-1.5	3000	G60-G90
TR7064	TRACK AxB	64		0.6-1.5		
TR7072/7075	TRACK AxB	72/75		0.6-1.5		
TR7092	TRACK AxB	92		0.9-1.5		
TR70100	TRACK AxB	100		0.9-1.5		
TR70125	TRACK AxB	125		0.9-1.5		
TR70150	TRACK AxB	150		0.9-1.5		
TR70200	TRACK AxB	200		1.0-1.5		

*Flange can be customized upon demand.

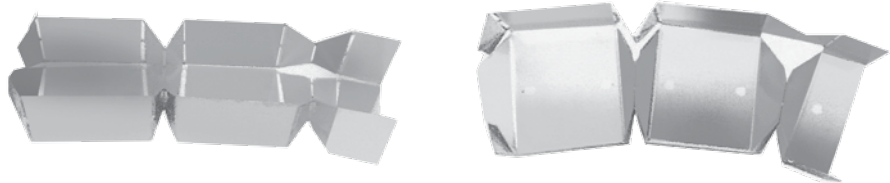
DRYWALL FRAMING COMPONENTS

1c-CURVED TRACK



CROSS SECTION

For curved Drywall Partitions



COMPONENTS		DIMENSIONS (MM)				SPECIFICATION
ITEM CODE	DESCRIPTION	A	B*	THICKNESS	LENGTH	ZINC COATING
CTR3064	CURVED TRACK AxB	64	30	0.6	3000	G60-G90
CTR3075	CURVED TRACK AxB	75				
CTR3092	CURVED TRACK AxB	92				
CTR30100	CURVED TRACK AxB	100				

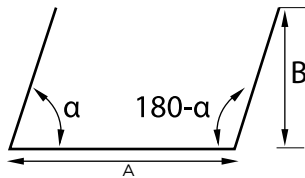
*As per design requirements

1d- INCLINED FLANGE TRACK



CROSS SECTION

For Inclined Drywall Partitions



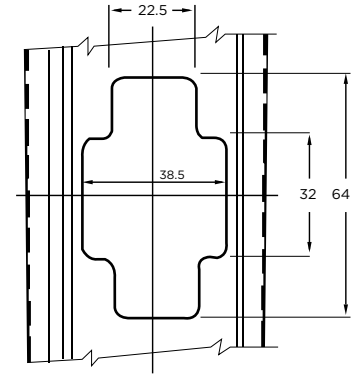
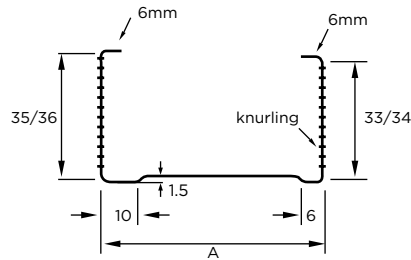
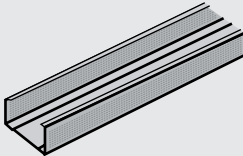
COMPONENTS		DIMENSIONS (MM)					SPECIFICATION
ITEM CODE	DESCRIPTION	A	B	α^*	THICKNESS	LENGTH	ZINC COATING
TRI5050	TRACK AxB	50	30-70	$45 < \alpha < 90$	0.6-1.5	3000	G60-G90
TRI5064	TRACK AxB	64					
TRI5072/5075	TRACK AxB	72/75					
TRI5092	TRACK AxB	92					
TRI50100	TRACK AxB	100					
TRI50125	TRACK AxB	125					
TRI50150	TRACK AxB	150					
TRI50200	TRACK AxB	200					

*As per design requirements

DRYWALL FRAMING COMPONENTS

For Drywall Partitions

**2a- Stud (C-Shaped Profile)
REGULAR FLANGE**



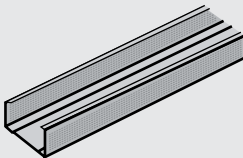
COMPONENTS		DIMENSIONS (MM)			SPECIFICATION
ITEM CODE	DESCRIPTION	A	THICKNESS	LENGTH	ZINC COATING
ST3550	STUD 50X35	48,5	0.45-1.5	MINIMUM 2400, MAXIMUM AS PER DESIGN REQUIREMENTS	G60-G90
ST3564	STUD 64X35	62,5			
ST3572/3575	STUD 72/75X35	70.5/73.5			
ST3592	STUD 92X35	90,5			
ST35100	STUD 100X35	98,5			
ST35125	STUD 125X35	123,5			
ST35150	STUD 150X35	148,5			

Regular Flange stud Light Duty when thickness is below 0.70mm and flange length is 34mm at one side and 36mm on the other side.

Regular Flange stud Heavy Duty when thickness is ranging between 0.70mm and 1.50mm and flange length is 33mm at one side and 35mm on the other side.

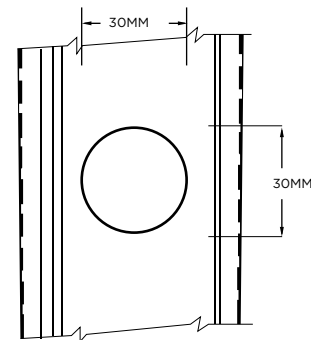
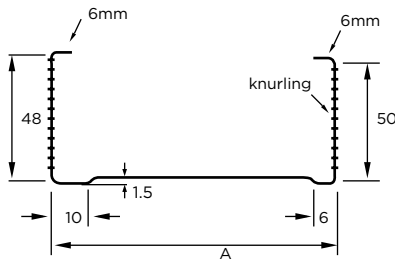
For more details go to the Appendix page 21.

**2b- Deep Stud
(C-Shaped Profile)
FOR HEAVY LOADS**



CROSS SECTION

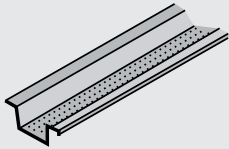
For Drywall Partitions



COMPONENTS		DIMENSIONS (MM)			SPECIFICATION
ITEM CODE	DESCRIPTION	A	THICKNESS	LENGTH	ZINC COATING
ST5050	STUD 50X50	48,5	0.8-1.2	MINIMUM 2400, MAXIMUM AS PER DESIGN REQUIREMENTS	G60-G90
ST5064	STUD 64X50	62,5			
ST5075	STUD 75X50	73,5			
ST5092	STUD 92X50	90,5			
ST50100	STUD 100X50	98,5			
ST50150	STUD 150X50	148,5			
ST50200	STUD 200X50	198,5			

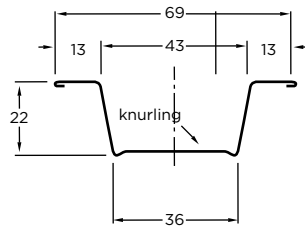
DRYWALL FRAMING COMPONENTS

**3-Furring Channel
(Omega-Shaped Profile)**



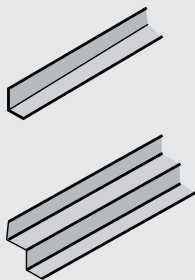
Cross Section

For ceiling Application & Wall Lining



COMPONENTS		DIMENSIONS (MM)		SPECIFICATION
ITEM CODE	DESCRIPTION	THICKNESS	LENGTH	ZINC COATING
FC2269	FURRING CHANNEL	0.45-1.50	3000	G60-G90

4- Perimeter Angle



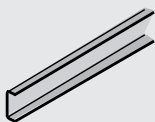
CROSS SECTION

For Ceiling Application



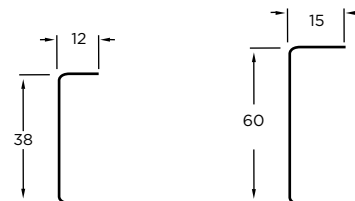
COMPONENTS		DIMENSIONS (MM)		SPECIFICATION
ITEM CODE	DESCRIPTION	THICKNESS	LENGTH	ZINC COATING
PA2525	PERIMETER ANGLE 25X25 L-PROFILE	0.45-1.5	3000	G60-G90
MS164L	PERIMETER ANGLE 20X20X20X20	0.5-1.5	3000	G60-G90

**5- Primary Channel
(U-Shaped Profile)**



CROSS SECTION

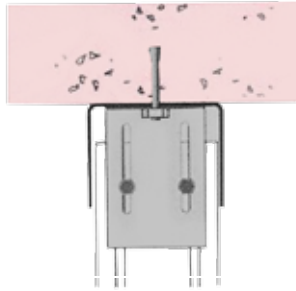
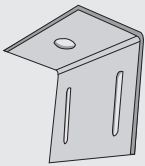
For Ceiling Application



COMPONENTS		DIMENSIONS (MM)		SPECIFICATION
ITEM CODE	DESCRIPTION	THICKNESS	LENGTH	ZINC COATING
PC1238	PRIMARY U CHANNEL 12X38	0.5-1.5	3000	G60-G90
PC1560	PRIMARY U CHANNEL 15X60			

DRYWALL FRAMING COMPONENTS

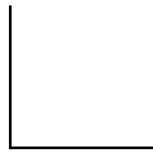
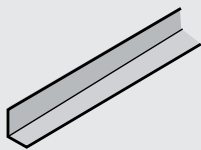
6- DEFLECTION CLIP



Used for vertical deflection & seismic drywall ceiling

COMPONENTS		DIMENSIONS (MM)		SPECIFICATION	APPLICATION
ITEM CODE	DESCRIPTION	THICKNESS			
DC5012565-3	50X125X65	3		G90	USED WITH STUDS 72,75,92
DC5012580-3	50X125X80	3		G90	USED WITH STUDS ≥100MM

7- REINFORCEMENT ANGLE



Used at wall intersection as reinforcement for corner

COMPONENTS		DIMENSIONS (MM)		SPECIFICATION	APPLICATION
ITEM CODE	DESCRIPTION	THICKNESS	LENGTH		
PA5050	REINFORCEMENT ANGLE 50X50	1.2	3000	G90	USED AS REINFORCEMENT FOR CORNER

8- Clip Connectors

Used for drywall ceiling application to fasten primary channel to Furring Channel



COMPONENTS		DIMENSION (MM)		SPECIFICATION
ITEM CODE	DESCRIPTION	THICKNESS		ZINC COATING
WCC-38mm	WIRE CONNECTING CLIP	2.5		G90
SWCC-38mm	SMART WIRE CONNECTING CLIP	2.9		

DRYWALL FRAMING COMPONENTS

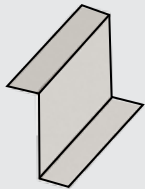
9- Hangers

Wire Hangers Threaded Rod Wall Angle Adjustable Hanger

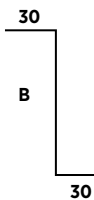


COMPONENTS		DIMENSION (MM)		SPECIFICATION
ITEM CODE	DESCRIPTION	THICKNESS	LENGTH	
26RH1830	WIRE HANGER	2.6	1830	G90
TR63	THREADED ROD	6	3000	ZINC PLATED
PA2525	WALL ANGLE 25X25	0.6-1.5	3000	G90
PC12385	PRIMARY CHANNEL	0.5-1.5	3000	G60-G90
RH-UK	ADJUSTABLE HANGER BUTTERFLY CLIP	0.5	-	ZINC PLATED
35RH1000	ADJUSTABLE WIRE HANGERS	3.5-3.75	250 - 6000	G90

10- Z FURRING



CROSS SECTION For Wall and Ceiling Applications



COMPONENTS		DIMENSION (MM)			SPECIFICATION
ITEM CODE	DESCRIPTION	B*	THICKNESS	LENGTH	ZINC COATING
ZC3030	Z-FURRING	50	0.5-1.5	3000	G90

*Depths can be customized upon demand

11-Corner Beads

L-Trim and J-Trim, Control Joint

Used for vertical deflection & seismic drywall ceiling



COMPONENTS		DIMENSION (MM)		SPECIFICATION
ITEM CODE	DESCRIPTION	DIMENSIONS	THICKNESS	
CB32324	L - TRIM	32 X 32	0.4	G60 - G90
CB28284	L - TRIM	28 X 28	0.4	G60 - G90
JT13134	J - TRIM	25 X 14 X 13	0.4	G60 - G90
JT13164	J - TRIM	25 X 17.3 X 13	0.4	G60 - G90
093CJ	CONTROL JOINT	-	-	-

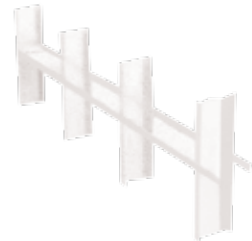
DRYWALL FRAMING COMPONENTS

12- Resilient Channel



COMPONENTS		DIMENSION (MM)		SPECIFICATION
ITEM CODE	DESCRIPTION	THICKNESS	LENGTH	ZINC COATING
RC1	RESILIENT CHANNEL	0.45	3000	G90

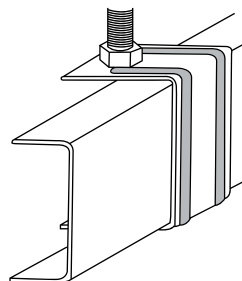
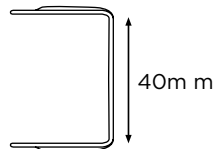
13-Bridging, Strapping



COMPONENTS		DIMENSION (MM)		SPECIFICATION
ITEM CODE	DESCRIPTION	THICKNESS	WIDTH	ZINC COATING
FS58-09	FLAT STRAP	0.6 - 1.5	58	G60 - G90

14- Primary channel C Bracket

Used to fasten the primary channel to the threaded rod hanger

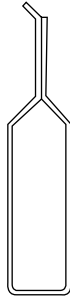


COMPONENTS				
ITEM CODE	DESCRIPTION	WEIGHT (KG) PER 100	STANDARD FINISH*	PACKED PER BOX
PCHB202	GALVANIZED MILD STEEL, 0,81 MM THICK	1,56	SELF COLOUR	500

DRYWALL FRAMING COMPONENTS

15- Primary channel Bracket

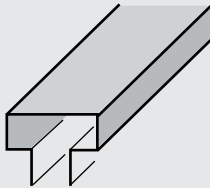
Used to hook the primary channel into the adjustable wire hanger



CHANNEL SIZE	WEIGHT(KG) PER 100
12 X 38MM	1.83

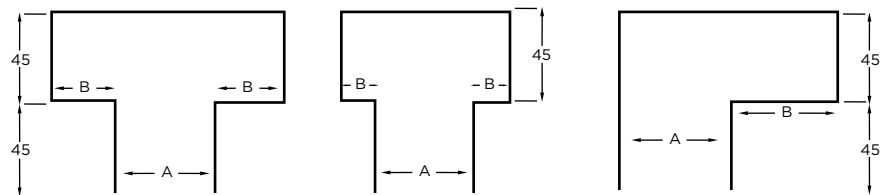
ITEM CODE CBD2 (GALVANIZED MILD STEEL)

16- Fire Track



CROSS SECTION

Used in wall partitions where 1hr. or 2hr. Fire rating is required



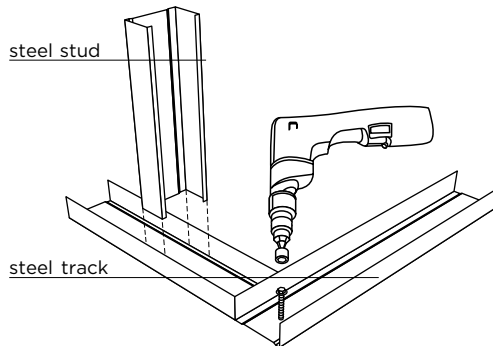
used for corners & wall intersection

DESCRIPTION	DIMENSION (MM)				SPECIFICATION
	A	B	THICKNESS	LENGTH	ZINC COATING
FIRE TRACK	50	16, 32	0.6 -1.5	3000	G60 - G90
FIRE TRACK	64				
FIRE TRACK	72/75				
FIRE TRACK	92				
FIRE TRACK	100				
FIRE TRACK	125				
FIRE TRACK	150				
FIRE TRACK	200				

DRYWALL INSTALLATION

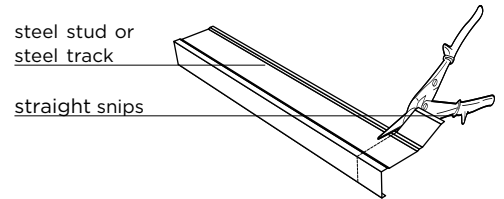
1- How to Build with Steel Stud and Track

Attach track to floor and ceiling



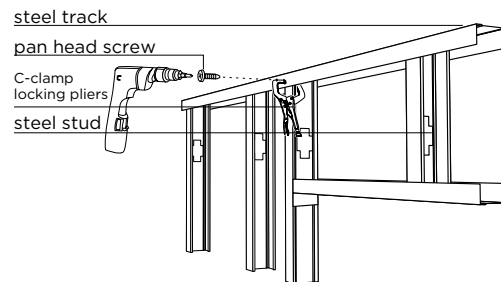
Screw lengths of track to the floor and ceiling. Tracks are slightly wider than studs, so studs snap right in.

Use straight snips for cutting



To trim to correct length, cut both side flanges of a steel stud, using straight-cut aviation snips. Then bend one flange up and cut across the stud's web.

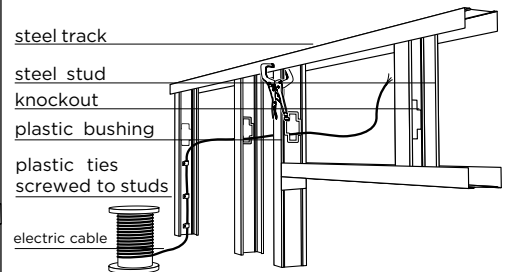
Screw stud to track



Join studs to tracks by clamping the two members tightly with a C-clamp locking pliers and driving a pan-head screw in the middle where they meet.

- Drive the screws at medium speed.
- Choose a clutch setting strong enough to drive the screw home, but not so strong that it strips the screw hole and weakens the joint.

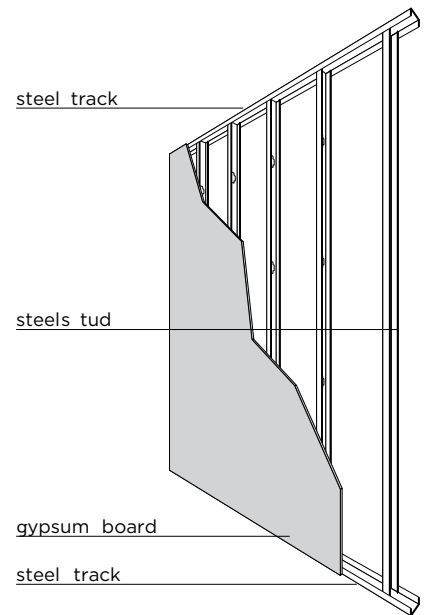
Use bushings for electric cable



Secure electrical cable along the center line of each stud with plastic ties screwed to the studs. Pop a plastic bushing into each knockout to keep the cable from rubbing against the sharp edges.

DRYWALL INSTALLATION

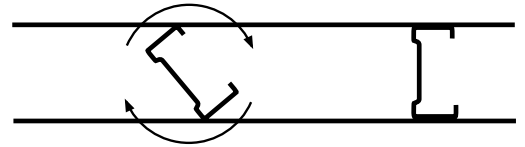
- Add wood nailers as needed for doors, windows and cabinets.
- Hang drywall or sheathing using 3.1 cm self-tapping drywall screws spaced every 20.3 cm along edges (where two sheets meet on a stud) and 30.5 cm on center elsewhere.
- Check local building codes. They may require screws placed closer together, and having too many screws is preferable to having to add more after the inspector comes.



2- Installation- Stud

For standard installation insert the studs into the top and floor tracks and twist to lock as shown. The friction will hold the stud in place.

- Non-fire rated partitions-allow a 10mm gap between the top of the stud and inside face of the track, as illustrated.



3- Safety First

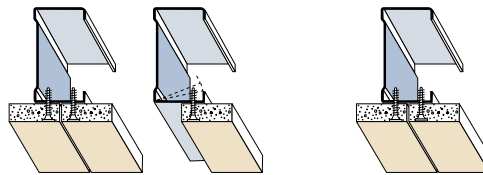
- Don't try nailing trim into steel studs. It will not hold. Instead, use specially designed trim screws for the job.
- Cut steel is sharp—wear gloves.
- Always wear eye protection when cutting steel and when driving screws. A screw may jump off the power screwdriver and can cause eye injuries.
- Make sure that architect's or designer's plans aren't drawn for wood dimensions.

DRYWALL INSTALLATION

4- Installation Plasterboard to Stud

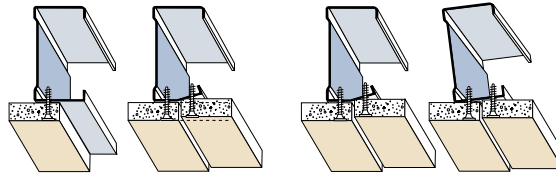
To attach plasterboard to light gauge steel studs, a slightly different technique is required compared to conventional timber studs. Use the following instructions to ensure correct installation.

Correct Method



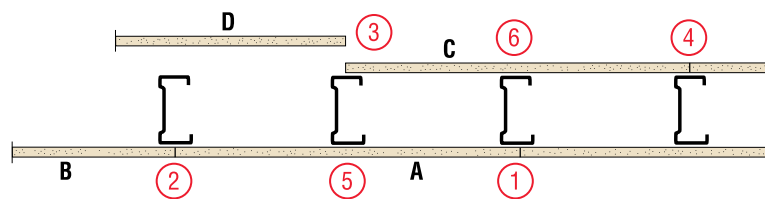
As the face of a steel stud can deflect initially, using the correct sequence to attach the board is important. Attach the first board to the open side of the stud. The face will deflect slightly, then will pull tight against the board. Support the stud to avoid twisting and fully screw the board to this stud before continuing. The next sheet can now be screwed to the closed side of the stud. Deflection will be minimal as the first sheet helps keep a rigid assembly and the result is a correct at joint.

Incorrect Method



If a board is screwed to the closed side first, then the face is able to deflect when the next board is screwed to the open side. This can permanently bend the face, resulting in a lipped joint.

Plasterboard Fixing Sequence



The boards shall be fixed in the sequence shown A B C D. When installing the first side (A and B), fasten the board at the edges only (1 & 2). The centre must not be fastened until the second side (C & D) have been installed. Locate board joints on each side of the wall on alternate studs.

Screws shall be fastened in sequence 1-6. Correct sequence will minimize any misalignment problems and result in a higher quality finish.

DRYWALL INSTALLATION

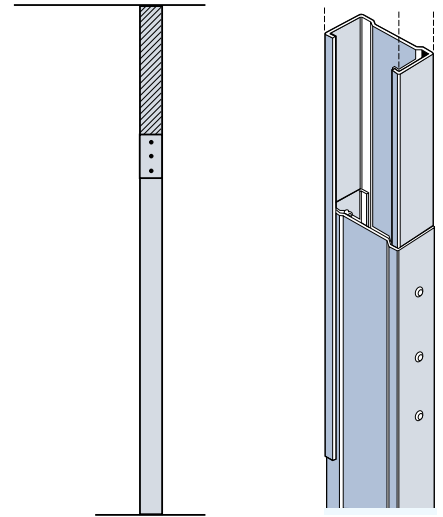
5- Installation Details

Spliced Studs

When heights greater than standard pre-cut lengths are required, using the 'boxing' feature single studs can be spliced together to extend to the required height. Minimum overlap: 3 x depth of stud, for example,

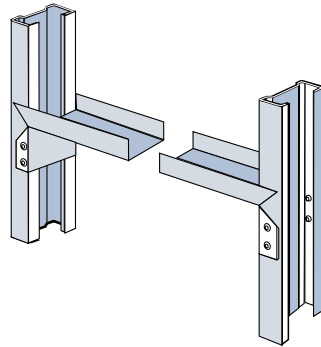
- 98.8mm stud = 300 mm overlap
- 63.8mm stud = 200 mm overlap
- Rivets: 4mm dia. mild steel, 3 per face (total 6)
- Splice must be within 25% of wall height, and splices should be alternated top and bottom.

Splices may be used in fire rated walls, provided steel rivets are used (not aluminium).



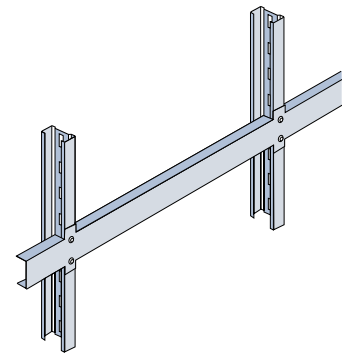
6-Nogging

Single Nogging



Where specific load requirements or fixtures are needed, an individual nog can be formed from the track profile to fit between the studs. Cut and trim as shown and fix with 3mm diameter rivets. The maximum height tables do not allow for heavy loads to be attached to the walls such as TV's, cantilevered benches / bookcases/ toilets etc. Where such equipment must be hung off a wall, specifically designed supports are required. Please contact USG Boral Interiors for this assistance.

Continuous Nogging



For certain applications such as towel rails, pictures and suspended ceiling perimeter fixing etc, continuous nogging may be required. Use the track, cut, notch and fix as shown. This will normally link 5-6 studs at 600mm centres. Double sided can also be achieved if required by repeating on the other stud face.

USG BORAL PRODUCTS ADVANTAGES

What are the Advantages of USG Boral Products?

USG Boral products offer several advantages:

- Meet or exceed all international code requirements (ISO - EN -ASTM).
- Fully compatible with all standard gypsum boards.
- Installation - knurled flanges for easier attachment of facing materials.
- Flexural tensile strength.
- Easy to cut using tin snips.
- Mineral wool can be easily installed to upgrade sound insulation.
- Durability of flexural tensile strength and load bearing capacity against moisture.
- Resistance and reaction to fire.
- Improved safety by reducing sharp edges and lips.
- Sound absorption (less noise transmission through walls and ceiling).
- A better, quieter building.
- Large range of sizes available.

WALL STUDS - C SHAPE

TECHNICAL DATA SHEET

Product Category: Wall Studs

Used in framing applications for Wall and Ceilings

Material Properties

Yield stress, Fy 33 ksi Ultimate, with G90 Zinc coating)

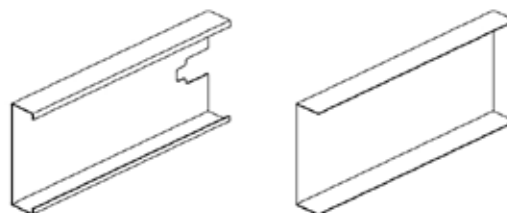
ASTM & Code Standards

Wall Studs are produced to meet or exceed ASTM C645 and C955. Galvanized sheet steel meets or exceeds requirements of ASTM A-653. For installation & storage information refer to ASTM C1007 & C754

Green Benefits and Recycled Content:

LEED Credit MR 2 – USG products are manufactured from cold-formed steel. Steel is 100% recyclable, which helps divert debris from the waste stream.

LEED Credit MR 4 – USG’s steel products have a minimum of 25.5% post-consumer recycled content, and 6.8% pre-consumer.



Section & Material Properties Table Notes

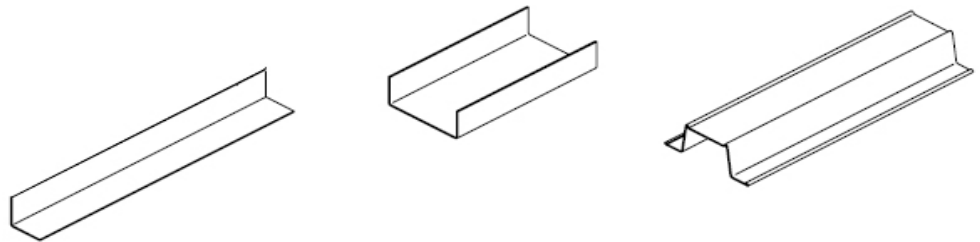
Studs Type	Thickness (MM)	Studs Flange (MM)	Studs Depth (MM)	Section Area (MM ²)	Centroid (MM)	Moment of inertia (I _{xx})(MM ⁴)	Section Modulus (S _x)(MM ³)	Radius of Gyration (MM)	Steel Mechanical Properties		
									Yield strength N/mm ²	Tensile strength N/mm ²	Elongation (%)
DEEP FLANGE STUDS	0.80	48 / 50	50	123.20	24.693	60,431.0	2,387.9	22.1	297-308	366-372	30-31
	0.90			138.60	24.693	67,769.5	2,677.9	22.1	297-308	366-372	30-31
	1.20			184.80	24.695	89,502.7	3,537.0	22.0	297-308	366-372	30-31
	0.80	48 / 50	64	134.40	31.636	103,837.4	3,208.5	27.8	297-308	366-372	30-31
	0.90			151.20	31.637	116,540.0	3,601.1	27.8	297-308	366-372	30-31
	1.20			201.60	31.639	154,283.1	4,767.6	27.7	297-308	366-372	30-31
	0.80	48 / 50	75	143.20	37.098	147,457.0	3,890.6	32.1	297-308	366-372	30-31
	0.90			161.10	37.099	165,563.5	4,368.4	32.1	297-308	366-372	30-31
	1.20			214.80	37.101	219,453.680	5,790.5	32.0	297-308	366-372	30-31
	0.80	48 / 50	92	156.80	45.548	232,670.7	5,008.9	38.5	297-308	366-372	30-31
	0.90			176.40	45.549	261,353.9	5,626.4	38.5	297-308	366-372	30-31
	1.20			235.20	45.550	346,874.4	7,467.8	38.4	297-308	366-372	30-31
	0.80	48 / 50	100	163.20	49.527	280,730.960	5,562.1	41.5	297-308	366-372	30-31
	0.90			183.60	49.528	315,386.5	6,248.8	41.4	297-308	366-372	30-31
	1.20			244.80	49.529	418,776.7	8,297.5	41.4	297-308	366-372	30-31
	0.80	48 / 50	150	203.20	74.426	711,025.3	9,408.4	59.2	297-308	366-372	30-31
	0.90			228.60	74.426	799,247.1	10,575.8	59.1	297-308	366-372	30-31
	1.20			304.80	74.427	1,063,042.0	14,066.6	59.1	297-308	366-372	30-31
	0.80	48 / 50	200	243.20	99.357	1,401,316.7	13,923.7	75.9	297-308	366-372	30-31
	0.90			273.60	99.357	1,575,604.5	15,655.5	75.9	297-308	366-372	30-31
	1.20			364.80	99.359	2,097,303.5	20,839.4	75.8	297-308	366-372	30-31

WALL STUDS - C SHAPE

TECHNICAL DATA SHEET

Studs Type	Thickness (MM)	Studs Flange (MM)	Studs Depth (MM)	Section Area (MM ²)	Centroid (MM)	Moment of inertia (I _{xx})(MM ⁴)	Section Modulus (S _x)(MM ³)	Radius of Gyration (MM)	Steel Mechanical Properties			
									Yield strength N/mm ²	Tensile strength N/mm ²	Elongation (%)	
REGULAR FLANGE STUDS	0.45	34 / 36	50	56.25	24.624	26,636.0	1,049.7	21.8	297-308	366-372	28-29	
	0.50	34 / 36		62.50	24.625	29,552.0	1,164.6	21.7	297-308	366-372	29-30	
	0.55	34 / 36		68.75	24.625	32,460.0	1,279.3	21.7	297-308	366-372	29-30	
	0.60	34 / 36		75.00	24.626	35,359.7	1,393.5	21.7	297-308	366-372	29-30	
	0.70	33 / 35		87.50	24.626	41,132.7	1,621.0	21.7	297-308	366-372	30-31	
	0.80	33 / 35		94.40	24.627	46,871.7	1,847.3	22.3	297-308	366-372	30-31	
	0.90	33 / 35		106.20	24.616	50,813.5	2,001.8	21.9	297-308	366-372	30-31	
	1.00	33 / 35		118.00	24.617	56,293.9	2,217.8	21.8	297-308	366-372	30-31	
	1.20	33 / 35		141.60	24.618	67,157.0	2,645.9	21.8	297-308	366-372	30-31	
	1.50	33 / 35		177.00	24.621	83,209.7	3,278.7	21.7	297-308	366-372	31-32	
	0.45	34 / 36		64	63.00	31.564	46,172.0	1,423.5	27.1	297-308	366-372	28-29
	0.50	34 / 36			70.00	31.565	51,246.8	1,579.9	27.1	297-308	366-372	29-30
	0.55	34 / 36			77.00	31.565	56,310.6	1,736.2	27.0	297-308	366-372	29-30
	0.60	34 / 36			84.00	31.566	61,363.4	1,891.9	27.0	297-308	366-372	29-30
	0.70	33 / 35			92.40	31.566	71,436.0	2,202.5	27.8	297-308	366-372	30-31
	0.80	33 / 35	105.60		31.555	78,748.9	2,427.2	27.3	297-308	366-372	30-31	
	0.90	33 / 35	118.80		31.555	88,400.3	2,724.7	27.3	297-308	366-372	30-31	
	1.00	33 / 35	132.00		31.556	98,009.4	3,020.9	27.2	297-308	366-372	30-31	
	1.20	33 / 35	158.40		31.558	117,101.4	3,609.5	27.2	297-308	366-372	30-31	
	1.50	33 / 35	198.00		31.559	145,426.0	4,482.9	27.1	297-308	366-372	31-32	
	0.45	34 / 36	72		67.05	35.535	60,186.0	1,650.5	30.0	297-308	366-372	28-29
	0.50	34 / 36			74.50	35.535	66,811.4	1,832.3	29.9	297-308	366-372	29-30
	0.55	34 / 36			81.95	35.536	73,423.9	2,013.6	29.9	297-308	366-372	29-30
	0.60	34 / 36			89.40	35.536	80,024.0	2,194.6	29.9	297-308	366-372	29-30
	0.70	33 / 35			99.40	35.525	90,110.1	2,470.4	30.1	297-308	366-372	30-31
	0.80	33 / 35		113.60	35.525	102,790.0	2,818.1	30.1	297-308	366-372	30-31	
	0.90	33 / 35		127.80	35.526	115,422.0	3,164.5	30.1	297-308	366-372	30-31	
	1.00	33 / 35		142.00	35.527	128,006.4	3,509.6	30.0	297-308	366-372	30-31	
	1.20	33 / 35		170.40	35.528	153,032.6	4,195.9	30.0	297-308	366-372	30-31	
	1.50	33 / 35		213.00	35.530	190,217.6	5,215.7	29.9	297-308	366-372	31-32	
	0.45	34 / 36		75	67.50	37.025	66,007.3	1,738.2	31.3	297-308	366-372	28-29
	0.50	34 / 36			75.00	37.025	73,276.5	1,929.6	31.3	297-308	366-372	29-30
	0.55	34 / 36			82.50	37.025	80,532.6	2,120.7	31.2	297-308	366-372	29-30
	0.60	34 / 36			90.00	37.027	87,775.8	2,311.5	31.2	297-308	366-372	29-30
	0.70	33 / 35			100.10	37.026	102,223.6	2,692.0	32.0	297-308	366-372	30-31
	0.80	33 / 35	114.40		37.015	112,784.4	2,969.2	31.4	297-308	366-372	30-31	
	0.90	33 / 35	128.70		37.015	126,656.0	3,334.5	31.4	297-308	366-372	30-31	
	1.00	33 / 35	143.00		37.016	140,478.9	3,698.4	31.3	297-308	366-372	30-31	
	1.20	33 / 35	171.60		37.017	167,975.0	4,422.5	31.3	297-308	366-372	30-31	
	1.50	33 / 35	214.50		37.020	208,849.9	5,498.9	31.2	297-308	366-372	31-32	
	0.45	34 / 36	92		75.60	45.474	105,176.0	2,260.6	37.3	297-308	366-372	28-29
	0.50	34 / 36			84.00	45.474	116,782.3	2,510.0	37.3	297-308	366-372	29-30
	0.55	34 / 36			92.40	45.475	128,372.7	2,759.2	37.3	297-308	366-372	29-30
	0.60	34 / 36			100.80	45.475	139,947.2	3,008.0	37.3	297-308	366-372	29-30
	0.70	33 / 35			112.00	45.475	163,048.5	3,504.6	38.2	297-308	366-372	30-31
	0.80	33 / 35		128.00	45.363	180,140.0	3,870.9	37.5	297-308	366-372	30-31	
	0.90	33 / 35		144.00	45.464	202,379.6	4,348.9	37.5	297-308	366-372	30-31	
	1.00	33 / 35		160.00	45.464	224,558.9	4,825.5	37.5	297-308	366-372	30-31	
	1.20	33 / 35		192.00	45.465	268,731.3	5,774.9	37.4	297-308	366-372	30-31	
	1.50	33 / 35		240.00	45.467	334,535.0	7,189.3	37.3	297-308	366-372	31-32	
0.45	34 / 36	100		79.20	49.453	127,455.6	2,521.5	40.1	297-308	366-372	28-29	
0.50	34 / 36			88.00	49.453	141,530.5	2,800.0	40.1	297-308	366-372	29-30	
0.55	34 / 36			96.80	49.453	155,588.0	3,078.1	40.1	297-308	366-372	29-30	
0.60	34 / 36			105.60	49.454	169,628.2	3,355.9	40.1	297-308	366-372	29-30	
0.70	33 / 35			117.60	49.454	197,656.8	3,910.5	41.0	297-308	366-372	30-31	
0.80	33 / 35		134.40	49.442	218,516.6	4,322.2	40.3	297-308	366-372	30-31		
0.90	33 / 35		151.20	49.443	245,528.8	4,856.5	40.3	297-308	366-372	30-31		
1.00	33 / 35		168.00	49.444	272,474.3	5,389.5	40.3	297-308	366-372	30-31		
1.20	33 / 35		201.60	49.445	326,165.6	6,451.7	40.2	297-308	366-372	30-31		
1.50	33 / 35		252.00	49.446	406,205.0	8,035.2	40.1	297-308	366-372	31-32		
0.55	33 / 35		125	154.40	61.898	261,923.8	4,150.9	41.2	297-308	366-372	29-30	
0.60	33 / 35			173.70	61.899	285,604.6	4,526.2	40.5	297-308	366-372	29-30	
0.70	33 / 35			193.00	61.899	332,901.4	5,275.7	41.5	297-308	366-372	30-31	
0.80	33 / 35			154.40	61.888	368,747.7	5,842.8	48.9	297-308	366-372	30-31	
0.90	33 / 35			173.70	61.888	414,462.3	6,567.2	48.8	297-308	366-372	30-31	
1.00	33 / 35	193.00		61.889	460,093.2	7,290.2	48.8	297-308	366-372	30-31		
1.20	33 / 35	231.60		61.890	551,104.3	8,732.5	48.8	297-308	366-372	30-31		
1.50	33 / 35	289.50		61.892	686,996.5	10,886.0	48.7	297-308	366-372	31-32		
0.55	33 / 35	150		174.40	74.344	392,384.8	5,186.5	47.4	297-308	366-372	29-30	
0.60	33 / 35			196.20	74.345	427,904.0	5,656.0	46.7	297-308	366-372	29-30	
0.70	33 / 35			218.00	74.356	513,426.6	6,787.4	48.5	297-308	366-372	30-31	
0.80	33 / 35			174.40	74.345	569,728.0	7,530.7	57.2	297-308	366-372	30-31	
0.90	33 / 35			196.20	74.346	640,488.7	8,466.0	57.1	297-308	366-372	30-31	
1.00	33 / 35			218.00	74.346	711,148.6	9,400.1	57.1	297-308	366-372	30-31	
1.20	33 / 35			261.60	74.347	852,166.9	11,264.2	57.1	297-308	366-372	30-31	
1.50	33 / 35		327.00	74.348	1,062,942.2	14,050.5	57.0	297-308	366-372	31-32		

DRYWALL SUSPENSION SYSTEM MEMBERS - TECHNICAL DATA SHEET



Product Category

Furring Channels:

-Used in framing application for Drywall Ceilings and lining application for Walls.

Primary Channels:

-Used in the interior ceiling suspension assemblies where it is suspended from the overhead structure using different types of hangers.

-Used in Drywall Steel Framing partitions to provide horizontal bridging to resist rotation and axial loads.

Perimeter Channels:

-Used together with Primary Channels and screws in Drywall Steel Framing partitions to provide horizontal bridging to resist rotation and axial loads.

-Used in framing application for Drywall Ceiling Framing and hanging

Material Properties

Yield stress, Fy 33 ksi Ultimate, with G90 Zinc coating)

ASTM & Code Standards

Furring, Primary and Perimeter Channels are produced to meet or exceed ASTM C645 and C955

Galvanized sheet steel meets or exceeds requirements of ASTM A-653

For installation & storage information refer to ASTM C1007 & C754

Green Benefits and Recycled Content

LEED Credit MR 2 – USG Boral products are manufactured from cold-formed steel. Steel is 100% recyclable, which helps divert debris from the waste stream.

LEED Credit MR 4 – USG Boral's steel products have a minimum of 25.5% post-consumer recycled content, and 6.8% pre-consumer.

DRYWALL SUSPENSION SYSTEM MEMBERS - TECHNICAL DATA SHEET

Section & Material Properties Table Notes

Channel Type	Thickness (MM)	Studs Flange (MM)	Studs Depth (MM)	Section Area (MM ²)	Centroid (MM)	Moment of inertia (I _{xx})(MM ⁴)	Section Modulus (S _x)(MM ³)	Steel Mechanical Properties		
								Yield strength N/mm ²	Tensile strength N/mm ²	Elongation (%)
Furring Channels	0.45	22 / 22	69	48.6	11.06	3,695.37	337.89	297-308	366-372	28-29
	0.50	22 / 22		54.0	11.07	4,084.92	373.81	297-308	366-372	29-30
	0.55	22 / 22		59.4	11.08	4,470.50	409.42	297-308	366-372	29-30
	0.60	22 / 22		64.8	11.09	4,852.17	444.73	297-308	366-372	29-30
	0.70	22 / 22		75.6	11.11	5,604.00	514.46	297-308	366-372	30-31
	0.80	22 / 22		88.0	11.12	6,340.92	583.03	297-308	366-372	30-31
	0.90	22 / 22		99.0	11.14	7,063.00	650.49	297-308	366-372	30-31
	1.00	22 / 22		110.0	11.16	7,771.94	716.88	297-308	366-372	30-31
	1.20	22 / 22		132.0	11.19	9,149.05	846.58	297-308	366-372	30-31
	1.50	22 / 22		165.0	11.24	11,121.00	1,033.98	297-308	366-372	31-32

Channel Type	Thickness (MM)	Studs Flange (MM)	Studs Depth (MM)	Section Area (MM ²)	Centroid (MM)	Moment of inertia (I _{xx})(MM ⁴)	Section Modulus (S _x)(MM ³)	Steel Mechanical Properties		
								Yield strength N/mm ²	Tensile strength N/mm ²	Elongation (%)
Primary Or Carrying Channels	0.50	12 / 12	38	29.0	19	6,505.33	342.39	297-308	366-372	29-30
	0.55	12 / 12		31.9	19	7,143.56	375.97	297-308	366-372	29-30
	0.60	12 / 12		34.8	19	7,779.57	409.45	297-308	366-372	29-30
	0.70	12 / 12		40.6	19	9,044.97	476.05	297-308	366-372	30-31
	0.80	12 / 12		46.4	19	10,301.60	542.19	297-308	366-372	30-31
	0.90	12 / 12		52.2	19	11,549.50	607.87	297-308	366-372	30-31
	1.00	12 / 12		58.0	19	12,788.67	673.08	297-308	366-372	30-31
	1.20	12 / 12		69.6	19	15,241.18	802.16	297-308	366-372	30-31
	1.50	12 / 12		87.0	19	18,856.00	992.42	297-308	366-372	31-32
	0.50	15 / 15	60	45.0	30	22,276.25	742.54	297-308	366-372	29-30
	0.55	15 / 15		49.5	30	24,479.40	815.98	297-308	366-372	29-30
	0.60	15 / 15		54.0	30	26,678.16	889.27	297-308	366-372	29-30
	0.70	15 / 15		63.0	30	31,062.00	1,035.41	297-308	366-372	30-31
	0.80	15 / 15		72.0	30	35,429.12	1,180.97	297-308	366-372	30-31
	0.90	15 / 15		81.0	30	39,778.30	1,325.95	297-308	366-372	30-31
	1.00	15 / 15		90.0	30	44,110.00	1,470.35	297-308	366-372	30-31
	1.20	15 / 15		108.0	30	52,721.30	1,757.38	297-308	366-372	30-31
	1.50	15 / 15		135.0	30	65,508.75	2,183.63	297-308	366-372	31-32

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