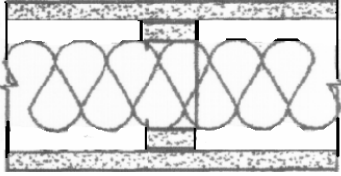


DragonBoard 3 Hour Fire Designs

Interior Wall / Partition with 3-5/8" Steel Stud

DB Design No. WP 1301 (Sound Deadening)

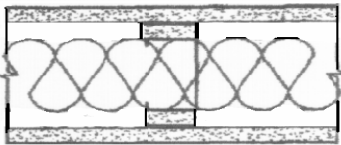


One layer 14 mm (9/16") DragonBoard applied to each side of 3-5/8" 20 GA steel studs 16" o.c. on top of the 2" wide DragonBoard furring strips using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints located over studs. Joints staggered. Joints finished using fiberglass tape.

Screw heads covered. Use 3M CP25WB+ or equal for Caulking. 3-1/2" 8pcf mineral wool insulation for fire. (Under design evaluation)

Interior Wall / Partition with 2-5/8" Steel Stud

DB Design No. WP 1303 (Sound Deadening)

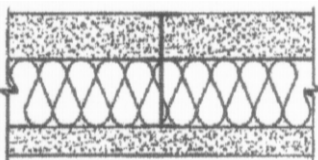


One layer 14 mm (9/16") DragonBoard applied to each side of 2-5/8" 20 GA steel studs 16" o.c. on top of the 2" wide DragonBoard furring strips using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints located

over studs. Joints staggered. Joints finished using fiberglass tape. Screw heads covered. Use 3M CP25WB+ or equal for Caulking. 2-1/2" 8pcf mineral wool insulation for fire. (Under design evaluation)

Shaft Wall with 2-1/2" Steel C-T Stud

DB Design No. WP 2301(Sound Deadening)



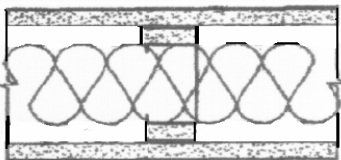
One layer 1" x 24" type X gypsum panels inserted between T sections of 2-1/2" steel C-T studs attached to 2-1/2" floor and ceiling runners.

Opposite side: One layer of 14 mm (9/16") DragonBoard applied parallel to studs using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and

18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints located over studs. Joints staggered. Joints finished using fiberglass tape. Screw heads covered. Use 3M CP25WB+ or equal for Caulking. 2-1/2" 8pcf mineral wool insulation for fire. (Under design evaluation)

Exterior Wall with 3-5/8" Steel Stud

DB Design No. WP 3302 (Non Load Bearing)

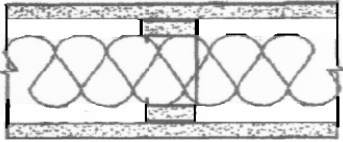


One layer 14 mm (9/16") DragonBoard applied to each side of 3-5/8" 20 GA steel studs 24" o.c. on top of the 2" wide DragonBoard furring strips using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints located

over studs. Joints staggered. Joints caulked with 3M CP25WB+ or equal and or covered with weather exposed cladding or finish system. Use 3-1/2" 8pcf mineral wool insulation for fire. (Under design evaluation)

Exterior Wall with 2-5/8" Steel Stud

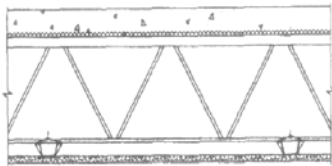
DB Design No. WP 3304 (Non Load Bearing)



One layer 14 mm (9/16") DragonBoard applied to each side of 2-5/8" 20 GA steel studs 24" o.c. on top of the 2" wide DragonBoard furring strips using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints located over studs. Joints staggered. Joints caulked with 3M CP25WB+ or equal and covered with weather exposed cladding or finish system. Use 2-1/2" 8pcf mineral wool insulation for fire. (Under design evaluation)

Floor-Ceiling with Steel Joists & Concrete Slab

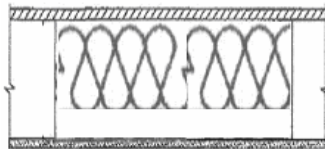
DB Design No. FC 5301



One layer 14 mm (9/16") DragonBoard applied to rigid furring channels 24" o.c. using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints staggered. Joints finished using fiberglass tape. Use 3M CP25WB+ or equal for Caulking. Screw heads covered. DragonBoard end joints located midway between continuous channels and attached to additional pieces of channel 52" long with screws 8" o.c. Furring channels wire tied to open web steel joists 24" o.c. supporting 3/8" rib metal lath or 9/16" deep 25 gage minimum corrugated steel and 2" concrete slab measured from top of flute. (Under design evaluation)

Floor-Ceiling with Steel Channel Joists & Plywood Floor

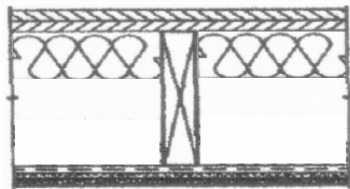
DB Design No. FC 5303



One layer 14 mm (9/16") DragonBoard applied to channel shaped, minimum 6" deep 16 gage (or minimum 7" deep, 18 gage) galvanized steel joists 24" o.c. using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints staggered. Joints finished using fiberglass tape. Screw heads covered. Use 3M CP25WB+ or equal for Caulking. 4" 8pcf mineral wool friction fit between joists pushed to top under flooring. (Under design evaluation)

Floor-Ceiling with Resilient Channels & Wood Joists

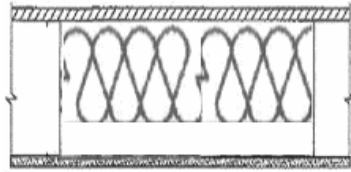
DB Design No. FC 5305 (Sound Deadening)



One layer 14 mm (9/16") DragonBoard applied to resilient furring channels 24" o.c. using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints staggered. Joints finished using fiberglass tape. Use 3M CP25WB+ or equal for Caulking. Screw heads covered. DragonBoard end joints located midway between continuous channels and attached to additional pieces of channel 54" long with screws at 12" o.c. Resilient furring channels applied at right angles to 2 x 10 wood joists 16" o.c. with 1-1/4" Type W screws. Wood joists supporting 5/8" plywood subfloor and finish floor. 6" 8pcf mineral wool friction fit between joists pushed to top under flooring. (Under design evaluation)

Floor-Ceiling with Steel Channel Joists & DragonBoard Floor

DB Design No. FC 5307 (Sound Deadening) 106 lb/sf, L/360

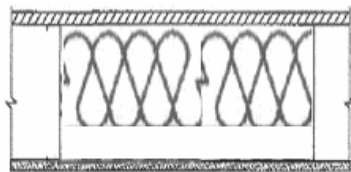


One layer 14 mm (9/16") DragonBoard applied to the bottom of channel shaped, minimum 6" deep 16 gage (or minimum 7" deep, 18 gage) galvanized steel joists 16" o.c. using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints staggered. Joints finished using fiberglass tape. Use

3M CP25WB+ or equal for Caulking. Screw heads covered. Steel channel joists supporting one layer of 14 mm (9/16") DragonBoard subfloor and finish floor over DragonBoard. The screw pattern on the DragonBoard subfloor is the same as on the DragonBoard ceiling. 4" 8pcf mineral wool friction fit between joists pushed to top under flooring. (Under design evaluation)

Floor-Ceiling with Steel Channel Joists & DragonBoard Floor

DB Design No. FC 5308 (Sound Deadening) 200 lb/sf, L/360

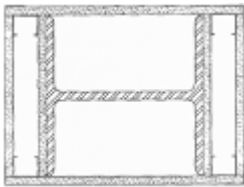


One layer 14 mm (9/16") DragonBoard applied to the bottom of channel shaped, minimum 6" deep 16 gage (or minimum 7" deep, 18 gage) galvanized steel joists 16" o.c. using 1-3/4" self-drilling self-countersinking corrosion protected cement board screws spaced 12" o.c. at edges and 18" o.c. in field. Minimum edge space 3/4" to screw centers. Joints staggered. Joints finished using fiberglass tape. Use

3M CP25WB+ or equal for Caulking. Screw heads covered. Steel channel joists supporting one layer of 18 mm (3/4") DragonBoard subfloor and finish floor over DragonBoard. The screw pattern on the DragonBoard subfloor is the same as on the DragonBoard ceiling. 4" 8pcf mineral wool friction fit between joists pushed to top under flooring. (Under design evaluation)

Column W10x49 with Metal Corner Bead

DB Design No. CM 6301

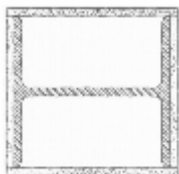


Base layer 14 mm (9/16") DragonBoard applied to flanges of W10x49 and fastened to 1-5/8" steel studs with 1-3/4" self-drilling self-countersinking corrosion protected cement board screws 24" o.c. Face layer 10 mm (7/16") DragonBoard applied to studs over flanges with 1-3/4" cement board screws 12" o.c. to provide a cavity between boards on the flange. Face layer 14 mm (9/16") DragonBoard across the web opening and attached to studs with 1-3/4" cement board screws 12" o.c. Metal corner bead applied with 1-5/8"

cement board screws 12" o.c. (Under design evaluation)

Column W10x49 with Steel Column Cover

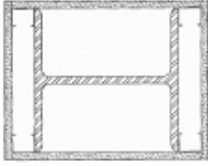
DB Design No. CM 6302



Base layer 14 mm (9/16") DragonBoard applied around W10x49 column and held in place with paper masking tape. Face layer either No. 24 MSG galvanized steel column cover consisting of two L-shaped sections with snap-lock sheet steel joints or No. 22 MSG galvanized steel column covers consisting of two L-shaped sections with lap joints fastened with No. 8x1/2" sheet metal screws 12" o.c. (Under design evaluation)

Column W14x228 with Metal Corner Bead

DB Design No. CM 6303



One layer 14 mm (9/16") DragonBoard applied to 1-5/8" steel studs over flanges of heavy steel W14x228 column with 1-3/4" self-drilling self-countersinking corrosion protected cement board screws 12" o.c. to provide a cavity between DragonBoard and flange. One layer of 14 mm (9/16") DragonBoard applied across the web opening and attached to studs with 1-3/4" cement board screw 12" o.c. Metal corner bead applied with 1-3/4" cement board screw 12" o.c.

(Under design evaluation)