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Ceiling Radiation Damper Boxes

Crown Nos. 1565-CRD, 1575-CRD, 1292-CRD, 1592-CRD

The above part numbers are UL listed and labeled. These products were UL tested in wood truss floor/ceiling assemblies and assigned UL design numbers. The design numbers are proprietary to the damper assembly manufacturer that submitted the product for UL testing.

Crown Products Ceiling Radiation Damper Boxes are constructed using Lloyd Industries ceiling dampers. Below are UL design numbers assigned to the Crown/Lloyd products:

L-528, L-558, L-562, L-563, L-574, L-585
P-533, P-544, P-545, P-547

Although the design numbers are unique for each manufacturer's product, the various UL floor/ceiling truss assemblies used in conducting fire tests are very similar in design.

Attached is a comparison chart produced by Lloyd Industries showing the design differences between various UL tested wood truss floor/ceiling assemblies.

UL Floor-Ceiling Comparison Chart

10348

L563	L521	L528	L546	L550
FIRE RESISTANCE RATINGS ANSI/UL 263	SAME AS L563	SAME AS L563	SAME AS L563	SAME AS L563
FINISH FLOORING: NOM 1 BY 4 IN. T&G LAID PERPENDICULAR TO TRUSSES OR 15/32 IN. THICK WOOD STRUCTURAL PANELS MIN. GRADE "UNDERLAYMENT" OR "SINGLE FLOOR" LONG DIMENSIONS OF PANEL (STRENGTH AXIS) OR FACE GRAIN OF PLYWOOD TO BE PERPENDICULAR TO TRUSSES WITH JOINTS STAGGERED.	SAME AS L563	SAME AS L563	SAME AS L563	SAME AS L563
NOTE: FLOORING SYSTEMS: FINISH FLOORING MAY CONSIST OF ANY OF THE 16 LISTED SYSTEMS	8 LISTED SYSTEMS	16 LISTED SYSTEMS	6 LISTED SYSTEMS	2 LISTED SYSTEMS
VAPOR BARRIER: (OPTIONAL) COMMERCIAL ASPHALT SATURATED FELT. 0.030 IN THICK	SAME AS L563	SAME AS L563	SAME AS L563	SAME AS L563
SUBFLOORING: 23/32 IN. THICK T&G WOOD STRUCTURAL PANELS. INSTALLED PERPENDICULAR TO TRUSSES WITH END JOINT STAGGERED 4 FT. PLYWOOD OR NON-VENEER APA RATED PANELS SECURED TO TRUSSES WITH AND JOINT STAGGERED 4 FT. PLYWOOD OR NON-VENEER APA RATED PANELS SECURED TO TRUSSES WITH CONSTRUCTION ADHESIVE AND NO.6D RINGED SHANK NAILS. NAILS SPACED 12IN. ON CENTER ALONG EACH TRUSS. STAPLES HAVING EQUAL OR GREATER WITHDRAWAL AND LATERAL RESISTANCE STRENGTH MAY BE SUBSTITUTUED FOR THE 6D NAILS.	SAME AS L563	SAME AS L563	SAME AS L563	SAME AS L563
FLOOR MAT MATERIAL: (OPTIONAL) 15 LISTED SYSTEMS	6 LISTED SYSTEMS	12 LISTED SYSTEMS	4 LISTED SYSTEMS	0 LISTED SYSTEMS
TRUSSES: PARALLEL CORD TRUSSES A MAX OF 24 IN. OC FABRICATED FROM NOMINAL 2 X 4 LUMBER, WITH LUMBER ORIENTED VERTICALLY OR HORIZONTALLY. MIN TRUSS DEPTH IS 18 IN. TRUSS MEMBERS SECURED TOGETHER WITH MIN. 0.0356 IN. THICK GALV. STEEL PLATES. PLATES HAVE 5/16 IN. LONG TEETH PROJECTING PERPENDICULAR TO THE PLANE OF THE PLATE. THE TEETH ARE IN PAIRS FACING EACH OTHER (MADE BY THE SAME PUNCH) FORMING A SPLIT TOOTH TYPE PLATE. EACH TOOTH HAS A CHISEL POINT ON IT'S OUTSIDE EDGE. THESE POINTS ARE DIAGONALLY OPPOSITE EACH OTHER FOR EACH PAIR. THE TOP HALF OF EACH TOOTH HAS A TWIST FOR STIFFNESS. THE PAIRS ARE REPEATED ON APPROX. 7/8 IN. CENTERS WITH FOUR ROWS OF TEETH PER INCH OF PLATE WIDTH.	SAME AS L563	SAME AS L563	SAME AS L563	SAME AS L563
BATTS AND BLANKETS: (OPTIONAL) GLASS FIBER INSULATION 3-1/2 IN. MAX.	SAME AS L563	(NOT SHOWN)	SAME AS L563	SAME AS L563
AIR DUCT: ANY UL CLASS 0 OR CLASS 1 FLEXIBLE AIR DUCT INSTALLED IN ACCORDANCE WITH THE INSTRUCTIONS PROVIDED BY THE DAMPER MANUFACTURER.	SAME AS L563	(NOT SHOWN)	SAME AS L563	SAME AS L563
RESILIENT CHANNELS: NOM. 1/2 IN. DEEP BY 2 IN. WIDE AT BASE AND 1-1/4 IN. WIDE AT THE FACE, FORMED FROM 1/4 IN THICK GALVANIZED STEEL SPACED 16 IN. OC	1/2 IN. DEEP X 2-3/8 IN. X 0.020 IN. THICK GALVANIZED STEEL SPACED 16 IN. OC	0.022 IN. THICK GALVANIZED STEEL SPACED 16 IN. OC	3/8 IN. DEEP X 2-3/8 IN. X 1-3/8 IN. 0.020 IN. THICK GALVANIZED STEEL SPACED 16 IN. OC	1/2 IN. DEEP X 2-3/8 IN. X 0.020 IN. THICK GALVANIZED STEEL SPACED 16 IN. OC
GYPSUM BOARD: NOMINAL 5/8 IN. THICK X 48 IN WIDE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO RESILIENT CHANNEL WITH 1-1/4 IN. LONG TYPE "S" SCREWS SPACED 12 IN. ON CENTER	GYPSUM BOARD: NOMINAL 5/8 IN. THICK X 48 IN WIDE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO RESILIENT CHANNEL WITH 1 IN. LONG TYPE "S" SCREWS SPACED 12 IN. ON CENTER	GYPSUM BOARD: NOMINAL 5/8 IN. THICK X 48 IN WIDE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO RESILIENT CHANNEL WITH 1 IN. LONG TYPE "S" SCREWS SPACED 12 IN. ON CENTER	GYPSUM BOARD: NOMINAL 5/8 IN. THICK X 48 IN WIDE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO RESILIENT CHANNEL WITH 1-1/8 IN. LONG TYPE "S" SCREWS SPACED 12 IN. ON CENTER	GYPSUM BOARD: NOMINAL 5/8 IN. THICK X 48 IN WIDE INSTALLED WITH LONG DIMENSION PERPENDICULAR TO RESILIENT CHANNEL WITH 1 IN. LONG TYPE "S" SCREWS SPACED 12 IN. ON CENTER
UNRESTRAINED ASSEMBLY RATING: 1 HR. FINISH RATING: 25 MIN.	UNRESTRAINED ASSEMBLY RATING: 1 HR. FINISH RATING: 25 MIN.	UNRESTRAINED ASSEMBLY RATING: 1 HR. FINISH RATING: 25 MIN.	UNRESTRAINED ASSEMBLY RATING: 1 HR. FINISH RATING: 25 MIN.	UNRESTRAINED ASSEMBLY RATING: 1 HR. FINISH RATING: 25 MIN.



LLOYD INDUSTRIES INC.

Truss Assembly Characteristics	Applicable UL Rated Roof/Ceiling Listings						
	P544	P531	P538	P522			
UL Fire Resistance Rating Standard ANSI/UL 263	ANSI/UL 263	Same as P544	Same as P544	Same as P544			
UL Un-restrained Rating	1 Hour	Same as P544	Same as P544	Same as P544			
UL Finish Rating	25 Minutes	25 Minutes	21 Minutes	25 Minutes			
Roofing System	Any UL Class "A", "B", or "C" Roofing Sstem (TGfU) Prepared roofing covering (TFWZ) acceptable for use over nom. 15/32" thick wood structure panels, Minimum Grade "C-D" or sheathing. Nominal 15/32" thick wood structure panels secured to trusses with construction adhesive and #6d ringed shank nails. Nails spaced 12" OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.	Same as P544	Same as P544	Same as P544			
Truss Construction	Trusses: Pitch or Parallel cord trusses a maximum of 24" "OC" fabricated from nominal 2" x 4" lumber, with lumber oriented vertically or horizontally. Truss members secured together with a minimum .0356" thick galvanized steel plates. Plates have 5/16" long teeth projecting perpendicular teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other. (made by the same punch) forming a split tooth type plate. Each tooth has a chisel point on it's outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx. 7/8" centers with (4) rows of teeth per inch of plate width. Where the truss intersects with the interior face of exterior walls, the minimum truss depth shall be 5-1/4" with a minimum roof slop of 3/12 and a minimum area in the plane of the truss of 21 sq/ft. where the truss intersects with the interior face of the exterior walls, the truss depth may be reduced to 3" if the batts and blankets (item #3) in specification (Alternate Insulation Placement) are firmly packed against the intersection of the bottom chords and and the plywood sheathing.	Same as P544	Same as P544	Same as P544			
Insulation Options: Batts and Blankets	Glass fiber insulation, secured to the wood structure panels with staples spaced 12" OC or to the trusses with .090" diameter galvanized steel wires spaced 12" OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Cahracteristics and or Fire Resistance, having a minimum density of 0.5 PCF. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum wallboard ceiling membrane when resilient channels and gypsum wallboard attachment is modified as specified. The finished rating has only been determined when when the insulation has been secured to the decking.	Same as P544 (Optional: Loose fill alternative)	Same as P544	Same as P544 (plus optional cellulose insulation)			
Air Duct	Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.	Same as P544	Same as P544	Same as P544			
Resilient Channels	.025" thick x 1/2" deep x 2" wide at the base and 1-1/4" wide at the face galvanized steel, Spaced 16" OC.	1/2" Deep .020" x 1/2" deep x 2-3/8" wide galvanized steel Spaced 16" OC.	1/2" Deep " x 1/2" deep x 2-3/8" galvanized steel Spaced 16" OC.	7/8" Deep 7/8" deep x 2-3/8" x 25 ga thick galvanized steel. Spaced 16" OC.			
Gypsum Board	Type "C", "IP", "IPC" Nominal 5/8" thick x 48" wide. Installed with long dimension perpendicular to resilient channel with 1" long type "S" screws spaced 12" OC. (Bearing the UL Classification Mark)	5/8" Thick Same as P544	5/8" Thick Same as P544	5/8" Thick Same as P544			
Finishing System	Vinyl, dry or premixed joint compound, applied in (2) coats to joints and screw heads; paper tape, 2" wide, embedded in first layer of compound over all joints. As an alternate, nominal 3/32" thick veneer plaster may be applied to the entire surface of gypsum wallboard.	Same as P544	Same as P544	Same as P544			
Top of Truss Cord to Plaster Flange "X"	2-5/8" (1-1/2" Truss Cord Horizontal Position) 4-5/8" (3-1/2" Truss Cord Vertical Position)	2-5/8" 4-5/8"	2-5/8" 4-5/8"	2-7/8" 5"			