DRYWALL
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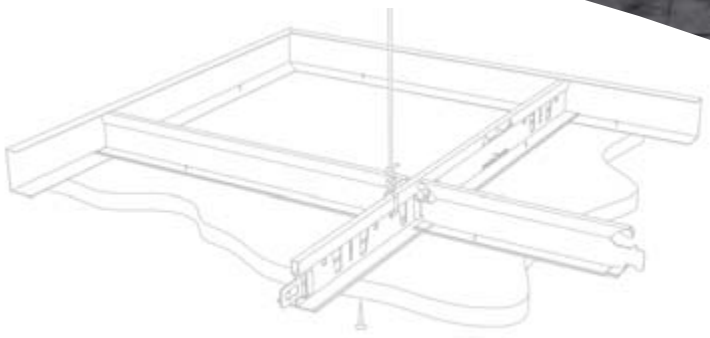
GRID

Drywall Grid Systems

PRODUCT GUIDE



Chicago Metallic®

Drywall

GRID SYSTEMS

Non-Fire Rated and Fire Rated
Double Web
Direct Hung Drywall

Applications

Hospitals, hospitality, retail, lobbies, department stores, galleries, residential high rise.

Grid Systems

Features

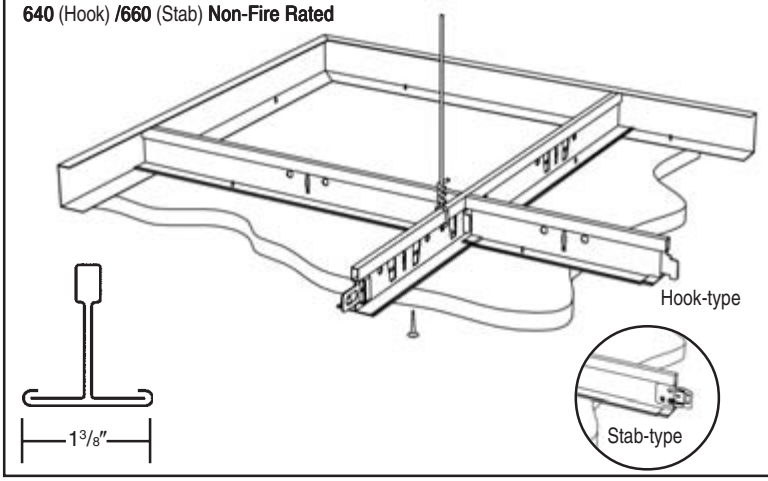
- Heavy duty grid systems for drywall ceiling framing.
- Fire, seismic and flatness control.
- Reduces onsite labor.
- Eliminates black-iron and hat-channel.
- Reliable appearance and cost control.
- Precise transition between acoustical and drywall ceilings.
- Minimum 25% post consumer recycled content, 100% locally recyclable, global/regional manufacture.

Curved Radius Drywall

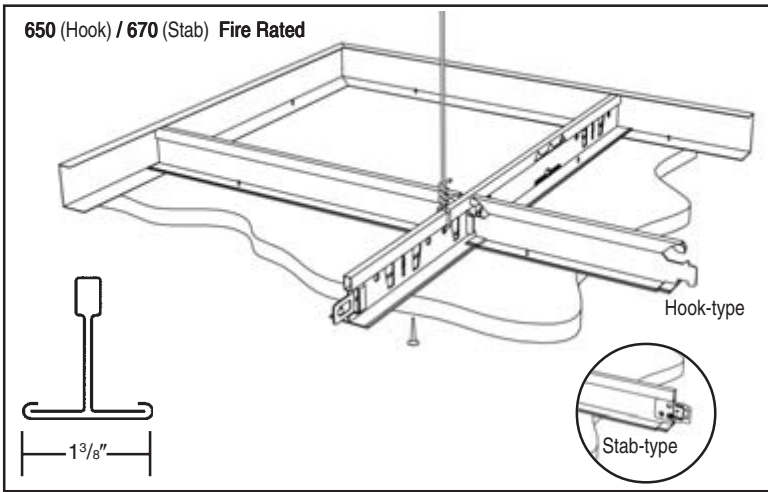
Features

- Radius furring tee comes pre-notched for custom forming.
- Drywall is screwed to the radius furring tee in the same manner as standard drywall applications.
- Minimum 25% post consumer recycled content, 100% locally recyclable, global/regional manufacture.

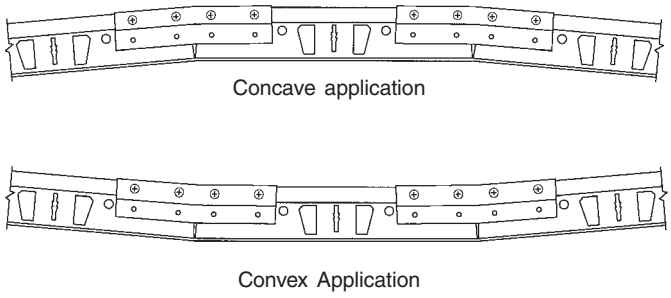
640 (Hook) **/660** (Stab) **Non-Fire Rated**



650 (Hook) **/ 670** (Stab) **Fire Rated**



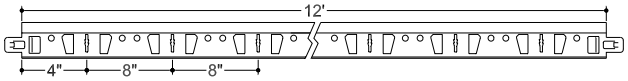
Curved Radius



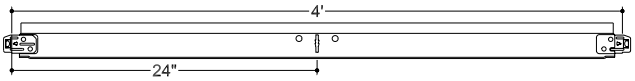
640.00CR pre-notched furring tee with 435.00 clip stabilization

Component Slotting and Hanger Hole Placement

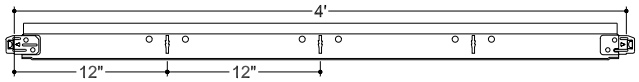
All overall lengths shown are nominal dimensions.
Hanger Holes: FURRING RUNNER – Each side of furring/cross tee slot. FURRING and CROSS TEES: Each side of furring runner slot.



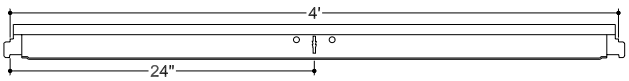
640.00C and 640.00CR Main Tees: 18 slots 8″ O.C.



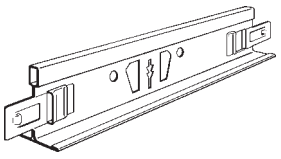
664.01C and 668.00C Furring (Stab-type) Tees: One slot at midpoint.



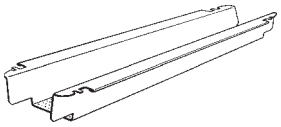
1274.01H Cross (Stab-type) Tee: Three slots, one at midpoint and two spaced 12″ each side of midpoint.



644.00C Cross (Hook-type) Tee: One slot at midpoint.

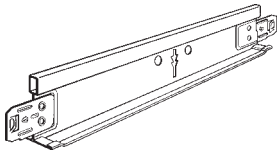


640.00C

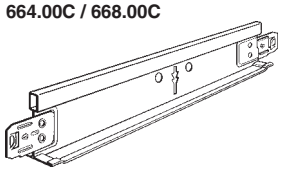


634.00C

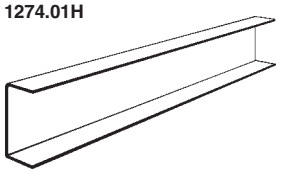
644.00C



664.00C / 668.00C



1274.01H

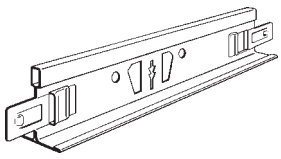


1450.00

Product Number	Dimensions Length	Height	Face	Per Carton Feet	Pieces	Weight
640 (Hook) **/ 660** (Stab) **Non-Fire Rated System**						
Furring Runner						
640.00C	12′	1 1/2″	1 3/8″	240	20	86
Cross Channel						
634.00C	4′	7/8″	1 3/8″	200	50	57
Furring Tee - Hook-type						
644.00C	4′	1 1/2″	1 3/8″	160	40	57
Furring Tees - Stab-type						
664.00C	4′	1 1/2″	1 3/8″	160	40	57
668.00C	4′	1 1/2″	1 3/8″	160	40	38
Cross Tee*						
1274.01H	4′	1 1/2″	15/16″	200	50	61
Wall Track						
1450.00	12′	1 9/16″	1″	120	10	28

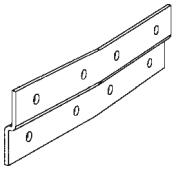
* Used to support NEMA Type G light fixture.

Curved Radius System



640.00C

Product Number	Dimensions			Per Carton		
	Length	Height	Face	Feet	Pieces	Weight
Curved Radius Drywall System						
Curved Furring Runner						
640.00CR	12′	1 1/2″	1 3/8″	240	20	86

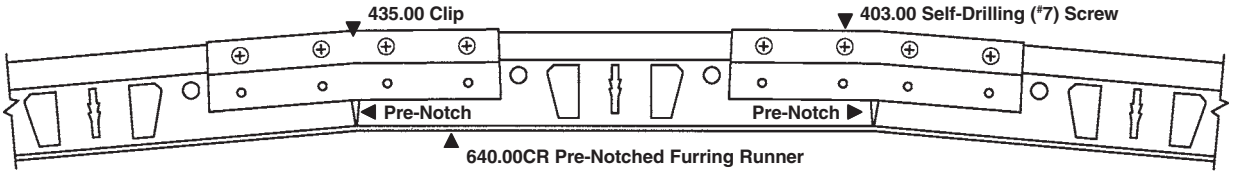


435.00

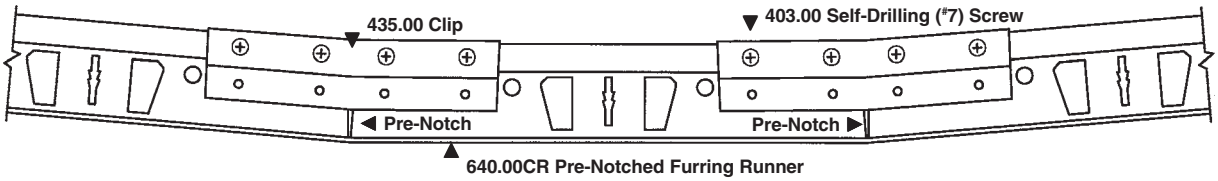
Product Number	Description	Per Order		
		Feet	Pieces	Weight/LF
Radius Accessories				
435.00	Drywall Furring Runner Clip	–	210	1
403.00	Affixes 435 Clip to Furring Runner	–	1000	1

Installing 640.00CR Furring Runner with #435.00 Clip Stabilization

Concave Application



Convex Application



NOTE: Minimum radius for the convex application is 50″. Consult gypsum board mfr. to determine if the minimum allowable panel radius is compatible with the 640.00CR furring runner minimum radius.

Stabilization of the 640.00CR furring runner can be achieved by affixing the 435.00 stabilizing clip to the side of the bulb of the furring runner, creating a strong, durable installation.

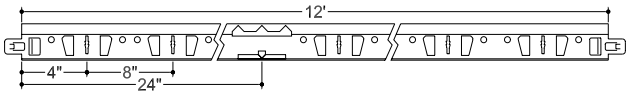
Installation Procedures

1. The installer should create an outline of the required radius on a flat surface using chalk and a stringline and then shape the 640.00CR furring runner to this outline.
2. Shown above are the mountings of the 435.00 clips that are temporarily mounted to span the notched locations along the entire lengh of the 640.00CR furring runner.
3. If the desired means of 640.00CR furring runner stabilization are that as shown above, affix the 435.00 clips to the side of the furring runner bulb using 403.00 self-drilling (#7) screws.

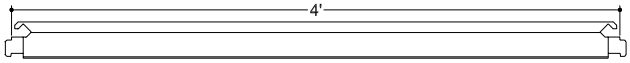
This method of reinforcement offers a neat and easy means of preventing misalignment of the curved radius.

Component Slotting and Hanger Hole Placement

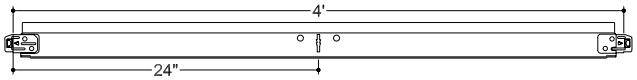
All overall lengths shown are nominal dimensions.
Hanger Holes: FURRING RUNNER – Each side of furring/cross tee slot. FURRING and CROSS TEES: Each side of furring runner slot.



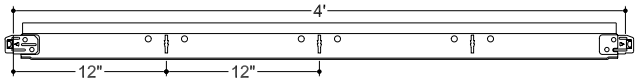
650.00C Furring Runner: 18 slots 8″ O.C.



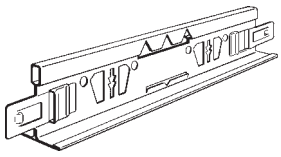
654.00C Furring (Hook-type) Tee: No slots.



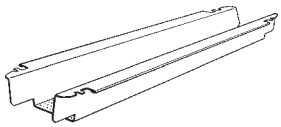
674.00C Furring (Stab-type) Tee: One slot at midpoint.



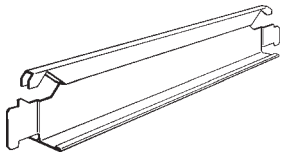
1274.01H Cross Tee: Three slots, one at midpoint and two spaced 12″ each side of midpoint.



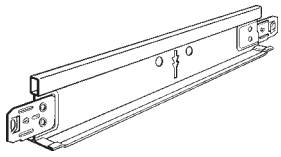
650.00C



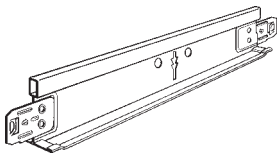
634.00C



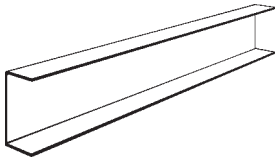
654.00C



674.00C



1274.01H



1450

Product Number	Dimensions Length	Height	Face	Per Carton Feet	Pieces	Weight
650 (Hook) **/670** (Stab) **Fire Rated System**						
Furring Runner						
650.00C	12′	1 1/2″	1 3/8″	240	20	86
Cross Channel						
634.00C	4′	7/8″	1 3/8″	200	50	57
Furring Tee - Hook type End Tab						
654.00C	4′	1 1/2″	1 3/8″	160	40	57
Furring Tee - Stab type End Tab						
674.00C	4′	1 1/2″	1 3/8″	160	40	38
Cross Tee - Stab type End Tab						
*1274.01H	4′	1 1/2″	15/16″	200	50	61
Wall Track						
1450.00	12′	1 9/16″	1″	120	10	28

* Used to support NEMA Type G light fixture.

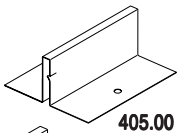
U.L.® Fire Resistant Designs

Floor and Ceiling Designs – Type 650
D501, D502, D503, G523, G524, G525, G526, G527, G528, G529, J502, L211*, L502, L508, L513, L515, L525, L526, L529

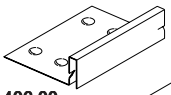
Roof and Ceiling Designs – Type 650
P237*, P239*, P241*, P501, P506, P507, P508, P509, P510, P513, P514

* System used in upper plenum - Consult U.L. Fire Resistance Directory for details.

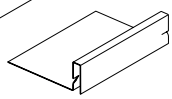
5130.00



405.00



406.00



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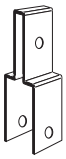
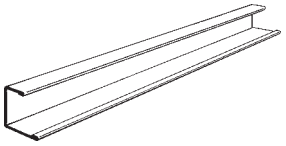
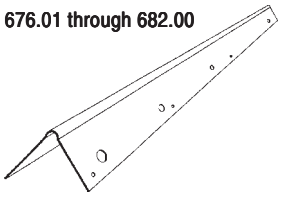


410.00

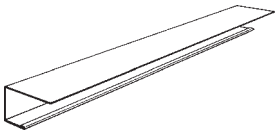
408.00



676.01 through 682.00



5153.00 through 5156.00



5134.00/5135.00

Product Number	Nominal Dimensions Length	Height	Face	Per Carton Feet	Pieces	Weight/LF
Utility Angle						
5130.00	10′	1 1/2″	1 1/2″	300	30	70
Drywall Transition Accessories						
405.00	Drywall Track Clip			–	100	16
406.00	Drywall Transition Clip for 1/2″ drywall			–	200	23
407.00	Drywall Transition Clip for 5/8″ drywall			–	200	23
Direct Hang Clips						
408.00	Strap Clip			–	100	5
*410.00	Transfer Load Clip for use 15/16″ grid			–	500	28

* To suspend decorative ceilings under acoustical ceilings.

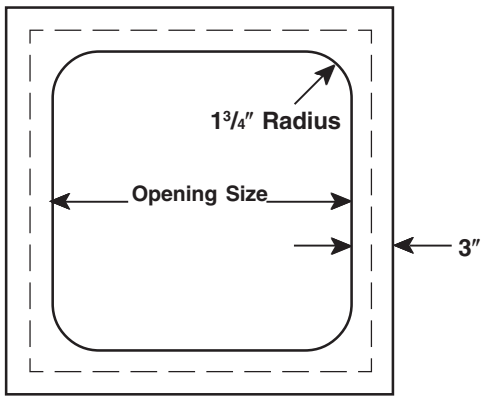
Product Number	Nominal Dimensions Length	Flange	I.D.	Flange	Per Carton Feet	Pieces	Weight/LF
Slip-on "J" Trim Moldings — 01 White Finish, Hemmed Edges							
676.01	10′	1/2″	7/8″	7/8″	504	63	52
678.01	10′	1/2″	5/8″	7/8″	504	56	52
680.01	10′	1/2″	3/4″	7/8″	500	50	51
681.01	10′	1/2″	7/8″	7/8″	504	42	52
682.01	10′	1/2″	1″	7/8″	504	42	52

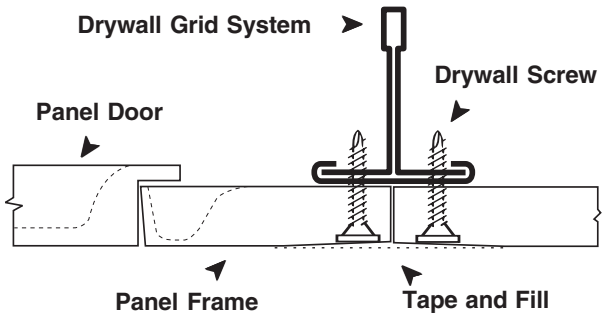
Metal Drywall Trim

Cornerbead							
5153.00	8′	1 1/4″	–	1 1/4″	504	63	52
5155.00	9′	1 1/4″	–	1 1/4″	504	56	52
5154.00	10′	1 1/4″	–	1 1/4″	500	50	51
5156.00	12′	1 1/4″	–	1 1/4″	504	42	52
"J" Trim Channels							
5134.00	10′	–	1/2″	–	500	50	51
5135.00	10′	–	5/8″	–	500	50	51

GRG Access Doors

- Installs and finishes in the same manner as drywall.
- Simply provide framing support for the exterior edges of the panel.
- Attaches with drywall screws.
- Taping and finishing is the same as conventional drywall finishing techniques.





Product Number	Opening	Per Carton Pieces	Per Carton Weight
GRG Drywall Access Door and Frame			
8501.00	9″ x 9″	2*	10
8502.00	12″ x 12″	2*	14
8503.00	18″ x 18″	2*	18
8504.00	24″ x 24″	2*	32
8505.00	30″ x 30″	2*	44

* Includes Door and Frame.

Access Door in place . . .

. . . and partially removed

Technical Requirements:

1. Size Requirements

Panels are defined by the opening size. Rough opening dimensions are an additional 6″ added onto the opening size. Standard access panels are push-out type.
Custom sizes are available.

2. Fasteners and Attachments

Panels are installed with standard supplies; screws are to be #6 bugleheads and joints use standard tape and joint compound. The panel has an edge thickness to accommodate 5/8″ drywall, so shimming may be required if adjacent material is not 5/8″ drywall.

3. Finishing (by installer)

Use same method as drywall.

4. Framing, Studs or Blocking

Substrate material is determined by job site conditions. The panel does not require regular framing, but can be connected to adjacent drywall using blocks or studs.
The weight of the panel is 2 lbs./sq. ft.

5. Physical Properties

Shell Thickness: 1/8″ to 3/16″

Fuel Contribution (ASTM E 84-80): 0

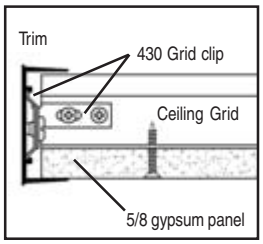
Flame Spread (ASTM E 84-80: 0

Smoke Index (ASTM E 84-80): 0

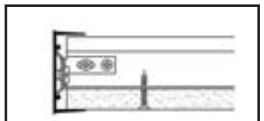
Combustion (ASTM E 84-80): Non-Combustible

System Integration with Infinity Perimeter Trim

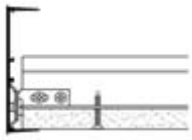
Infinity D (drywall)



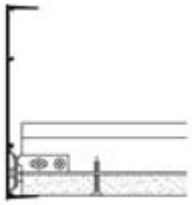
Grid to trim (panel by others)



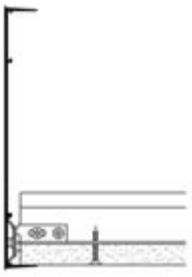
2″ trim with 5/8″ drywall



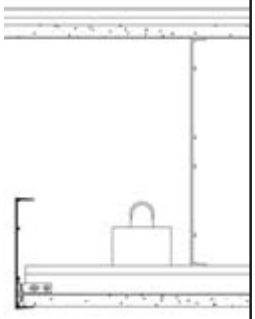
4″ trim with 5/8″ drywall



6″ trim with 5/8″ drywall

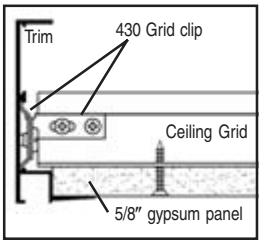


8″ trim with 5/8″ drywall



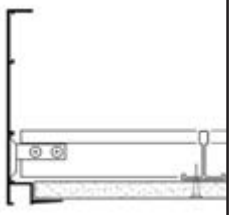
6″ Infinity D and 12″ Infinity as Light Cove

Infinity RD (reveal edge)

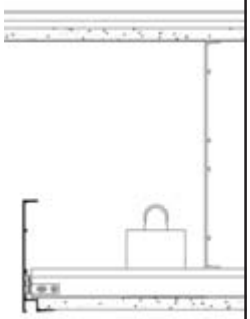


Grid to trim (panel by others)

4″ trim with 5/8″ drywall

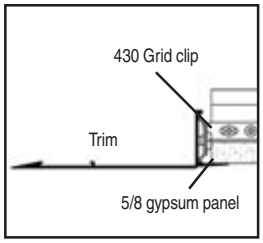


6″ trim with 5/8″ drywall

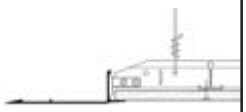


6″ Infinity RD and 12″ Infinity as Light Cove

Infinity ZD (razor edge)



Grid to trim (panel by others)



Grid and 5/8″ gypsum panel

Product Guide, Submittals and Specifications are available for Chicago Metallic's Infinity Perimeter Trim. Contact Chicago Metallic or visit chicagometallic.com/infinity.

640 (Hook) / 660 (Stab) Non-Fire Rated Drywall Furring System

Test Data Based on 1/360 Span Deflection
ALLOWABLE LOAD per ASTM C635 ■

Furring Runner	Component Dimensions Length	Face	Height	Metal	Hanger Spacing 4′
640.00C	12′	1 3/8″	1 1/2″	.020	Heavy Duty
Furring Channel					
634.00C	4′	1 3/8″	7/8″	.020	8.2
Furring Tees					
644.00C	4′	1 3/8″	1 1/2″	.020	18.6
664.00C	4′	1 3/8″	1 1/2″	.020	18.6
668.00C	4′	1 3/8″	1 1/2″	.012	12.3
Cross Tee					
1274.01H	4′	15/16″	1 1/2″	.020	16.7

■ To convert data into lb/ft², divide on center spacing of component into lb/ft.

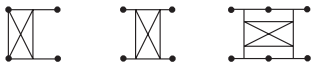
650 (Hook) / 670 (Stab) Fire Rated Drywall Furring System

Test Data Based on 1/360 Span Deflection
ALLOWABLE LOAD per ASTM C635 ■

Furring Runner	Component Dimensions Length	Face	Height	Metal	Hanger Spacing 4′
650.00C	12′	1 3/8″	1 1/2″	.020	Heavy Duty
Furring Channel					
634.00C	4′	1 3/8″	7/8″	.020	8.2
Furring Tees					
654.00C	4′	1 3/8″	1 1/2″	.020	18.6
674.00C	4′	1 3/8″	1 1/2″	.020	18.6
Cross Tee					
1274.01H	4′	15/16″	1 1/2″	.020	16.7

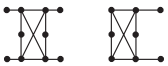
■ To convert data into lb/ft², divide on center spacing of component into lb/ft.

Hanger Positions for Non-Fire Rated Situations



This illustrates hanger positions for single fixtures in a field. Provide extra hangers for tandem fixtures.

Hanger Positions for Fire Rated Situations



This illustrates hanger positions for single fixtures in a field. Refer to specific design numbers for allowable number of fixtures per square footage of ceiling area.

Membrane Loading

Data is Pounds Per Square Foot (PSF)

COMPONENT COMBINATION FR/FT	HANGER WIRE / FURRING TEE SPACING 48″/24″	32″/16″
640.00C / 644.00C	4.7	9.2
640.00C / 644.00C / 1274.01H	4.7	6.2
650.00C / 654.00C	4.1▾	9.0▾
650.00C / 654.00C / 1274.01H	4.1▾	6.2▾
650.00C / 674.00C	4.1▾	9.0▾
650.00C / 674.00C / 1274.01H	4.1▾	6.2▾
640.00C / 664.00C	4.7	9.2
640.00C / 664.00C / 1274.01H	4.7	6.2
640.00C / 668.00C	4.7	9.2
640.00C / 668.00C / 1274.01H	4.7	6.2

▾ Membrane loading is not applicable when these components are used in a fire rated assembly. Consult U.L. Fire Resistance Directory for installation details. 48″/24″ data is based on hanger wires installed within 4″ of each furring runner fire expansion.

Specification Data

Product information for integration into ceiling specification

suspension type		640 / 660 Non-Fire Rated	650 / 670 Fire Rated
material	body HD Galvanized	•	•
	cap HD Galvanized	•	•
size	width	1 3/8″, 15/16″	1 3/8″, 15/16″
	height	1 1/2″	1 1/2″
fire	flame spread class-A per ASTM E 84	•	•
performance	heavy duty per ASTM C 635	•	•
	exterior environment	•	•
warranty	40 year limited	•	•
sustainability	Minimum 25% post consumer recycled content, 100% locally recyclable, global/regional manufacture	•	•

PART 1 - GENERAL

1.01 Section Includes

Metal systems for supporting gypsum drywall in typical ceiling and soffit areas.

1.02 Related Sections

A. Section 09 22 26 - Suspension Systems
B. Section 09 54 00 - Specialty Ceilings
C. Section 09 58 00 - Integrated Ceiling Assemblies
D. Section 13 48 00 - Sound, Vibration, and Seismic Control
E. Section 23 50 00 - Central Heating Equipment
F. Section 26 50 00 - Lighting

1.03 Reference

A. American Society for Testing and Materials (ASTM)
   1. C635 - Standard specification for the manufacture, performance, and testing of metal suspension systems for acoustical tile and lay-in panel ceilings.
   2. C636 - Standard practice for installation of metal ceiling suspension systems for acoustical tile and lay-in panels.
   3. C645 - Standard specifications for non-load (AXIAL) bearing steel studs, tees (TRACK), and furring channels for screw application of Gypsum Board.
   4. C841 - Standard specification for installation of interior lathing and furring.
   5. E119 - Standard methods of fire tests of building construction and materials.
B. Underwriters Laboratories (U.L.) Fire Resistance Directory (latest edition).

1.04 Submittals

A. Product data sheets: listing dimensions, load carrying capacity and standard compliance.
B. Samples: 12 inch long samples of main tee and furring cross tee with couplings.

1.05 Project Conditions

A. Environmental Requirements:
1. Verify weather tightness of area to receive suspension system prior to installation.
2. Wet trades work to be thoroughly dry and complete prior to installation.
3. Installation to begin only when temperature and humidity conditions closely approximate interior conditions which will exist when area is complete and occupied.
4. Heating and air conditioning systems to be operating prior to, during, and after installation.

1.06 Maintenance

Furnish additional material equal to _____ percent of ceiling area.

PART 2 - PRODUCTS

2.01 Manufacturers

Chicago Metallic (640-C) (660-C) heavy duty, (650-C)(670-C) heavy duty double web suspension system.

2.02 Suspension System Components

A. Furring Runners: Manufactured from 0.020 inch thick steel 1-3/8 inch wide with knurled face by 1-1/2 inches high by 144 inches long with factory punched cross tee slots, hanger holes, and non-directional bayonet end tab couplings.
B. Furring Tees: Manufactured from (0.020) (0.012) inch thick 1-3/8 inch wide with knurled face by 1-1/2 inches high by 48 inches long with (stab-type end tab) (hook-type end tab) couplings, factory punched cross tee slots, and hanger holes.
C. Furring Cross Channel:
   1. Manufactured from 0.020 inch thick steel 1-3/8 inch wide with knurled face by 7/8 inches high by 48 inches long with straight locking end tabs.
D. Cross Tees:
   1. Manufactured from 0.020 inch thick steel 15/16 inch wide by 1-1/2 inches high by 48 inches long with (stab-type end tab) (hook-type end tab) couplings, factory punched cross tee slots, and hanger holes.
   2. Coated with factory applied white baked-on enamel paint finish.
E. Wall Track:
   1. Manufactured from 0.020 inch thick steel 1-9/16 inches high by 120 inches long with a 1 inch top and bottom flange.

PART 3 - EXECUTION

3.01 Examination

Examine area receiving suspension system to identify conditions which will adversely affect installation. Do not begin installation until adverse conditions have been remedied.

3.02 Installation - Non Fire Rated System

A. Furring Runners: Installed 48 inches on center, by direct suspension from existing structure, with not less than 12 gage hanger wires spaced 48 inches on center along main runner length. Wrap hanger wires tightly 3 full turns at each end.
B. Furring Tees: Installed perpendicular to main runners (16)(24) inches on center to form _____ by _____ modules.
C. Cross Tees: Installed adjacent to each unsupported side of recessed fixtures.
D. Wall Track: Installed on vertical surfaces, intersecting suspension components, by appropriate method in accordance with industry accepted practice.
E. Additional Hanger Wires: Wrapped tightly 3 full turns to structure and component at locations where imposed loads could cause deflection exceeding 1/360 span.

3.03 Installation - **Fire Rated System**

A. Installed in accordance with U.L. design number _____ guidelines.

3.03 REPAIR

Remove damaged components, replace with undamaged components.

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