

CHICAGO METALLIC CORPORATION  
SPECIFICATION GUIDE



**730 Stainless Steel**  
**830 Aluminum**  
**Fire Front® 1830**

**E N V I R O N M E N T A L**  
**D E S I G N E R C E I L I N G S Y S T E M S**

# 730 System Stainless Steel

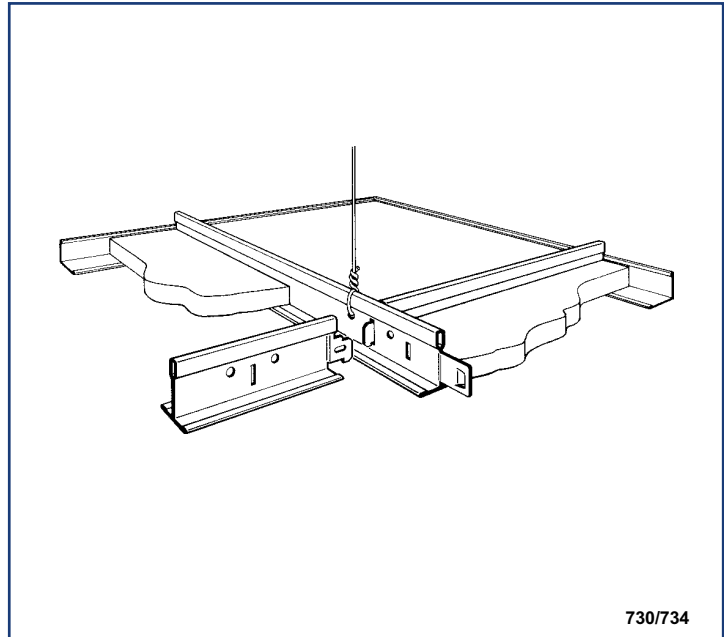
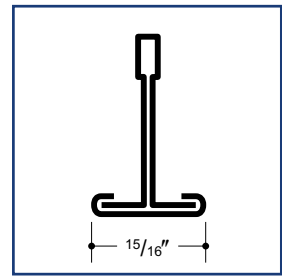
**Non-Fire Rated  
Double Web  
Direct Hung Exposed**

Chicago Metallic's 730 Stainless Steel Ceiling System is manufactured to meet performance criteria of severe environmental conditions. The capping of grid is rollformed with 304 alloy, 2D finish Stainless Steel. There is no application of a clearcoat to the product so slight imperfections, variations, or residue may occur on the exposed surface of this product. These variations will not affect the functional capabilities of the suspension components.

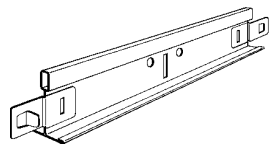
## Features and Benefits:

- Main Runners have non-directional knuckle joint end couplings.
- Cross Tees are offered in 2' and 4' lengths with butt cut ends.
- Cross Tees are equipped with a straight locking end detail.
- U.S.D.A. approved.
- Intermediate Duty ASTM classification.
- Designed for interior environments where high moisture levels and corrosive vapors may exist. For example food, drug, or chemical processors, laboratories, laundries, and environments.
- High sanitary conditions can be maintained because the system can be washed down or chemically cleaned.
- Compatible with NEMA Type-G light fixtures and standard air diffusers.

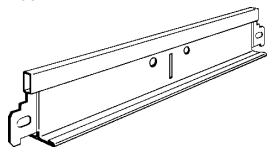
★ A metallurgist should be consulted regarding the suitability of this product for the environmental conditions in which it is being installed and its resistance to chemicals used in each particular application.



730/734

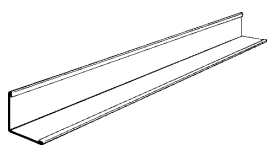


730



734

732 – No slots



1490



416

| Product Number | Nominal Dimensions |        |      | Slots | Per Carton |        |        |
|----------------|--------------------|--------|------|-------|------------|--------|--------|
|                | Length             | Height | Face |       | Feet       | Pieces | Weight |

## LoLuster Stainless Steel – 15

### Main Runner – Stainless Steel

|        |     |        |        |    |     |    |    |
|--------|-----|--------|--------|----|-----|----|----|
| 730-15 | 12' | 1 1/2" | 15/16" | 12 | 300 | 25 | 74 |
|--------|-----|--------|--------|----|-----|----|----|

ASTM CLASSIFICATION: 730 – Intermediate Duty.

### Cross Tees – Stainless Steel

|        |    |        |        |   |     |    |    |
|--------|----|--------|--------|---|-----|----|----|
| 732-15 | 2' | 1 1/2" | 15/16" | 0 | 150 | 75 | 37 |
| 734-15 | 4' | 1 1/2" | 15/16" | 3 | 200 | 50 | 50 |

### Wall Angle – Stainless Steel

|         |     |      |        |   |     |    |    |
|---------|-----|------|--------|---|-----|----|----|
| 1490-15 | 12' | 3/4" | 15/16" | – | 300 | 25 | 45 |
|---------|-----|------|--------|---|-----|----|----|

## Accessories

|          |  |      |    |
|----------|--|------|----|
| * 416-15 | Intersection Clip to lock cross tees to main runners | 1000 | 16 |
|----------|--|------|----|

\* Recommended for installations in areas requiring seismic restraint.

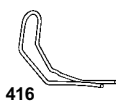
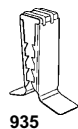
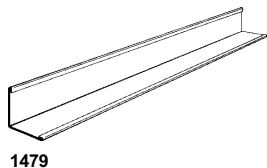
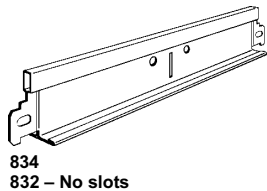
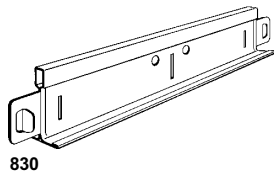
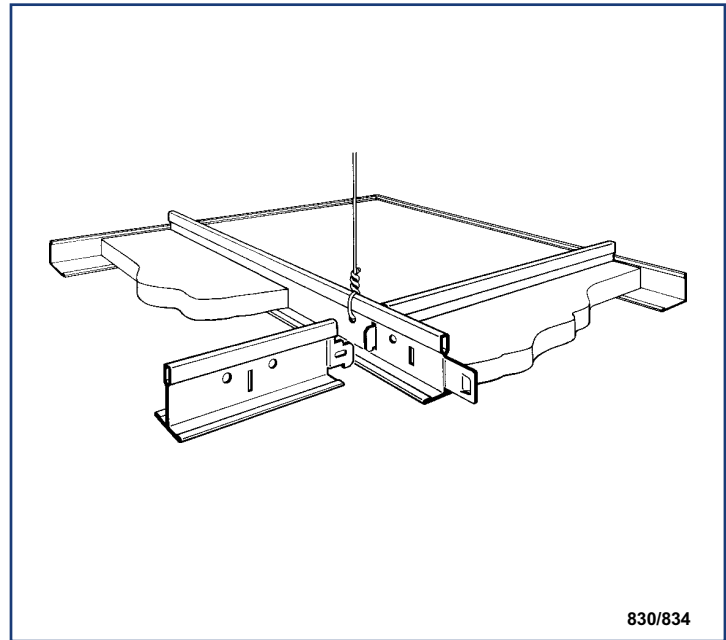
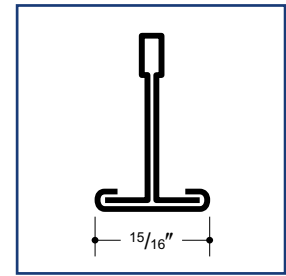
 This product is eligible for distribution through our exclusive **BUILD-A-TRUCK** program. For details contact Customer Service.

# 830 System Aluminum

**Non-Fire Rated  
Double Web  
Direct Hung Exposed**

**Features and Benefits:**

- Aluminum, direct hung, double web components.
- Light Duty ASTM classification.
- Main Runners have knuckle joint end couplings.
- Cross Tees are equipped with a straight locking end detail.
- Cross Tees are offered in 2' and 4' lengths with butt cut ends.
- U.S.D.A. approved.
- Compatible with NEMA Type-G light fixtures and standard air diffusers.
- Available in either white, black, or satin silver.



| Product Number | Nominal Dimensions |        |      | Slots | Per Carton |        |        |
|----------------|--------------------|--------|------|-------|------------|--------|--------|
|                | Length             | Height | Face |       | Feet       | Pieces | Weight |

## Aluminum Cap White Finish – 41, Satin Silver – 44, Black Finish – 78

### Main Runner – Aluminum

|         |     |        |        |    |     |    |    |
|---------|-----|--------|--------|----|-----|----|----|
| 830-( ) | 12' | 1 1/2" | 15/16" | 12 | 300 | 25 | 41 |
|---------|-----|--------|--------|----|-----|----|----|

ASTM CLASSIFICATION: 830 – Light Duty.

### Cross Tees – Aluminum

|         |    |        |        |   |     |    |    |
|---------|----|--------|--------|---|-----|----|----|
| 832-( ) | 2' | 1 1/2" | 15/16" | 0 | 150 | 75 | 20 |
| 834-( ) | 4' | 1 1/2" | 15/16" | 1 | 200 | 50 | 27 |

### Wall Angle – Aluminum

|          |     |      |        |   |     |    |    |
|----------|-----|------|--------|---|-----|----|----|
| 1479-( ) | 12' | 3/4" | 15/16" | – | 300 | 25 | 24 |
|----------|-----|------|--------|---|-----|----|----|

## Accessories

|          |   |      |    |
|----------|---|------|----|
| * 416-15 | Intersection Clip to lock cross tees to main runners      | 1000 | 16 |
| 935      | Hold Down Clip adjusts to different height ceiling boards | 1000 | 16 |

\* Recommended for installations in areas requiring seismic restraint.



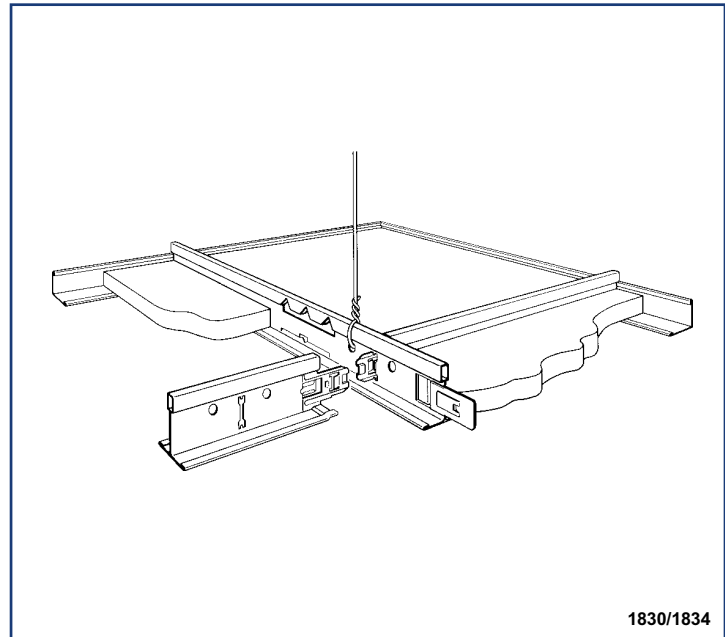
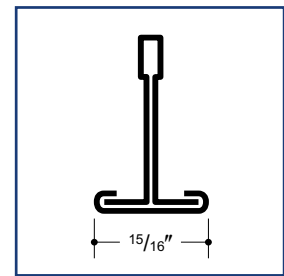
This product is eligible for distribution through our exclusive **BUILD-A-TRUCK** program. For details contact Customer Service.

# Fire Front™ 1830 System Hot Dipped Galvanized Steel

**Fire Rated  
Double Web  
Direct Hung Exposed**

## Features and Benefits:

- Components are manufactured with hot dipped galvanized steel and an aluminum cap.
- Fire Rated system.
- Intermediate Duty ASTM classification.
- Main runners have non-directional bayonet end couplings.
- Cross Tees come in 2' and 4' lengths and have a stab-in end tab that protects against lateral pull out.
- Designed to meet seismic requirements of all building codes.
- Available in either white, black or satin silver.
- U.S.D.A. approved.
- Compatible with NEMA Type-G light fixtures and standard air diffusers.
- Galvanized coating weight of G-60 minimum.



1830/1834

| Product Number | Nominal Dimensions |        |      | Slots | Per Carton |        |        |
|----------------|--------------------|--------|------|-------|------------|--------|--------|
|                | Length             | Height | Face |       | Feet       | Pieces | Weight |

## Hot Dipped Galvanized with Aluminum Cap White Finish – 41, Satin Silver – 44, Black Finish – 78

### Main Runner

|          |     |        |        |    |     |    |    |
|----------|-----|--------|--------|----|-----|----|----|
| 1830-( ) | 12' | 1 1/2" | 15/16" | 24 | 300 | 25 | 66 |
|----------|-----|--------|--------|----|-----|----|----|

ASTM CLASSIFICATION: 1830 – Intermediate Duty.

### Cross Tees – Stepped End

|          |    |        |        |   |     |    |    |
|----------|----|--------|--------|---|-----|----|----|
| 1832-( ) | 2' | 1 1/2" | 15/16" | 0 | 150 | 75 | 33 |
| 1834-( ) | 4' | 1 1/2" | 15/16" | 3 | 200 | 50 | 44 |

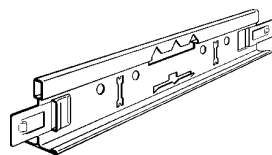
### Wall Angle – HDG Steel with Aluminum Cap

|          |     |        |        |   |     |    |    |
|----------|-----|--------|--------|---|-----|----|----|
| 1478-( ) | 12' | 1 1/2" | 15/16" | – | 300 | 25 | 43 |
|----------|-----|--------|--------|---|-----|----|----|

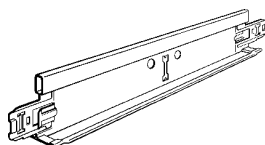
## Accessories

### Hold Down Clip

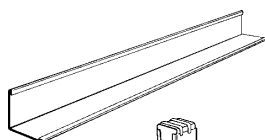
|     |  |   |      |    |
|-----|--|---|------|----|
| 935 | Adjusts to different height ceiling boards | – | 1000 | 16 |
|-----|--|---|------|----|



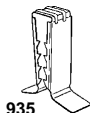
1830



1832-1834



1478



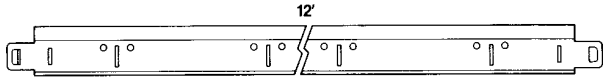
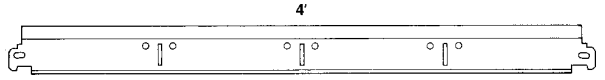
935

 This product is eligible for distribution through our exclusive **BUILD-A-TRUCK** program. For details contact Customer Service.

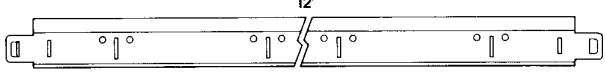
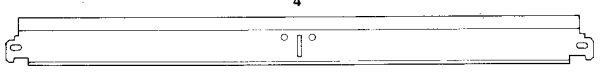
# Component Slotting and Hanger Hole Placement

All overall lengths shown are nominal dimensions

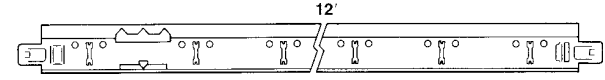
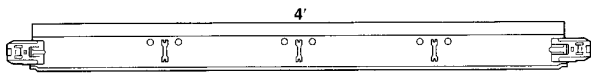
## 730 Stainless Steel System Components

|  |   |
|--|---|
|  <p><b>730 Main Runner:</b> 12 cross tee slots 12" O.C.</p> |  <p><b>734 Cross Tee:</b> 3 cross tee slots, 1 at midpoint, one 12" each side of midpoint.</p> <p><b>732 Cross Tee:</b> No cross tee slots.</p> |
|--|---|

## 830 Aluminum System Components

|  |  |
|--|--|
|  <p><b>830 Main Runner:</b> 12 cross tee slots 12" O.C.</p> |  <p><b>834 Cross Tee:</b> 1 cross tee slot at midpoint.</p> <p><b>832 Cross Tee:</b> No cross tee slots.</p> |
|--|--|

## Fire Front™ 1830 Hot Dipped Galvanized Steel System Components

|  |   |
|--|---|
|  <p><b>1830 Main Runner:</b> 24 cross tee slots 6" O.C.</p> |  <p><b>1834 Cross Tee:</b> 3 cross tee slots, 1 at midpoint, one 12" each side of midpoint.</p> <p><b>1832 Cross Tee:</b> No cross tee slots.</p> |
|--|---|

### Hanger Holes:

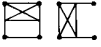
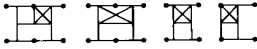
MAIN RUNNERS –  $\frac{3}{4}$ " each side of cross tee slot.

CROSS TEES –  $\frac{3}{4}$ " each side of cross tee slot in all cross tees having slots.

Chicago Metallic's Standard, Drywall Furring, and Designer Ceiling Systems are available in metric lengths with corresponding metric slotting. Contact your nearest Chicago Metallic representative or office for further information or assistance.

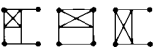
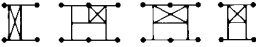
# Component Data

## 730 System Hanger Positions for Non-Fire Rated Situations



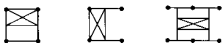
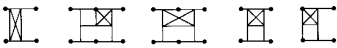
This illustrates hanger positions for single fixtures in a field. Provide extra hangers for tandem fixtures.

## 830 System Hanger Positions for Non-Fire Rated Situations



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

## 1830 System Hanger Positions for Non-Fire Rated Situations



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

## 1830 System Hanger Positions for Fire Rated Situations



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

**Additional load test data is available upon request.**

## 730 Stainless Steel System

Main Runner Load Test Data Based on  $1/360$  Span Deflection  
**RUNNER DIMENSIONS** **ALLOWABLE LOAD ■ SIMPLE SPAN-lb/ft**

| Main Runner | Length | Height | Metal | ASTM C635-4'      | Hanger Spacing | 6'  |
|-------------|--------|--------|-------|-------------------|----------------|-----|
| 730         | 12'    | 1 1/2" | .015  | Intermediate Duty | 5'             | 6'  |
|             |        |        |       |                   | 6.0            | 4.0 |

Cross Tee Load Test Data Based on  $1/360$  Span Deflection

| Cross Tee | Length | Height | Metal | 2'     | 4'   |
|-----------|--------|--------|-------|--------|------|
| 732       | 2'     | 1 1/2" | .015  | 75.0 ▲ |      |
| 734       | 4'     | 1 1/2" | .015  |        | 13.3 |

## 830 Aluminum System

Main Runner Load Test Data Based on  $1/360$  Span Deflection  
**RUNNER DIMENSIONS** **ALLOWABLE LOAD ■ SIMPLE SPAN-lb/ft**

| Main Runner | Length | Height | Metal | ASTM C635-4' | Hanger Spacing | 6'  |
|-------------|--------|--------|-------|--------------|----------------|-----|
| 830         | 12'    | 1 1/2" | .024  | Light Duty   | 5'             | 6'  |
|             |        |        |       |              | 3.9            | 2.4 |

Cross Tee Load Test Data Based on  $1/360$  Span Deflection

| Cross Tee | Length | Height | Metal | 2'   | 4'  |
|-----------|--------|--------|-------|------|-----|
| 832       | 2'     | 1 1/2" | .024  | 47.8 |     |
| 834       | 4'     | 1 1/2" | .024  |      | 7.5 |

## Fire Front™ 1830 Hot Dipped Galvanized Steel

Main Runner Load Test Data Based on  $1/360$  Span Deflection  
**RUNNER DIMENSIONS** **ALLOWABLE LOAD ■ SIMPLE SPAN-lb/ft**

| Main Runner | Length | Height | Metal | ASTM C635-4'      | Hanger Spacing | 6'  |
|-------------|--------|--------|-------|-------------------|----------------|-----|
| 1830        | 12'    | 1 1/2" | .015  | Intermediate Duty | 5'             | 6'  |
|             |        |        |       |                   | 5.8            | 3.3 |

Cross Tee Load Test Data Based on  $1/360$  Span Deflection

| Cross Tee | Length | Height | Metal | 2'     | 4'   |
|-----------|--------|--------|-------|--------|------|
| 1832      | 2'     | 1 1/2" | .015  | 65.0 ▲ |      |
| 1834      | 4'     | 1 1/2" | .015  |        | 13.1 |

■ To convert data into lb/ft<sup>2</sup>, divide on center spacing of component into lb/ft.

## Light Fixture Load Test Data for 730, 830 & 1830 Systems

Light Fixture Load Test Data Based on  $1/360$  Span Deflection

| LIGHT FIXTURES | ALLOWABLE FIXTURE WT. – LBS. |            |              |  |
|----------------|------------------------------|------------|--------------|--|
|                | MAIN RUNNERS & CROSS TEES    |            |              |  |
| Dimensions     | 730<br>734                   | 830<br>834 | 1830<br>1834 |  |
| 1' x 4'        | 55.6                         | 33.6       | 55.6         |  |
| 2' x 2'        | 49.6                         | 20.0 ▲     | 49.6         |  |
| 2' x 4'        | 64.0 ▲                       | 32.0 ▲     | 64.0 ▲       |  |

Consult specific U. L. design for allowable lighting configurations.

▲ Limited by safety factor of 2.

## U.L.® Fire Resistant Designs

### Floor and Ceiling Designs – Type 1830

A202, A203, A204, A210, D203, D205, D208, D209, D215, D216, G022, G201, G208, G209, G210, G211, G213, G214, G215, G216, G217, G218, G222, G228, G234, G241, G242, G244, G248, G250, G255, G256, G258, G259, J201, L201, L206, L208, L209, L210, L211, L212

### Roof and Ceiling Designs – Type 1830

P201, P202, P203, P204, P206, P207, P210, P211, P214, P215, P216, P217, P219, P225, P227, P228, P229, P230, P231, P235, P237, P238, P239, P241, P244, P245, P246, P251, P253, P255, P257, P259, P260, P261, P262, P264

# Specification Guidelines

## Section 09500 - Acoustical Treatment

### 730 Stainless Steel and 830 Aluminum Systems

#### PART 1 - GENERAL

##### 1.01 Section Includes

Provide metal suspension system for lay-in acoustical panel ceiling.

##### 1.02 Related Sections

- A. Section 09120 - Ceiling Suspension Systems
- B. Section 09545 - Special Ceiling Surfaces
- C. Section 13020 - Integrated Ceilings
- D. Section 13080 - Sound, Vibration, and Seismic Control
- E. Section 15500 - Heating, Ventilating, and Air Conditioning
- F. Section 16500 - 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.

##### 1.04 Submittals

- A. Product data sheets listing dimensions, load carrying capacity and standard compliance.
- B. Samples: 12 inch long samples of main runner and 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 suspension system 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 (730 Stainless Steel), (830 Aluminum), (Intermediate), (Light), Duty Double Web Suspension System.

##### 2.02 Suspension System Components

###### A. Main Runners:

- 1. Manufactured from (0.015)(0.024) inch thick (Stainless Steel alloy) (Aluminum) 15/16 inch wide by 1-1/2 inches high by 144 inches long with factory punched cross tee slots, hanger holes, and integral knuckle-joint end couplings.
- 2. Capped with (304 alloy, 2D finish Stainless Steel) (White Aluminum) (Satin Silver Aluminum) (Black Aluminum) capping affixed to 15/16 inch flange.

###### B. Cross Tees:

- 1. Manufactured from (0.015)(0.024) inch thick (Stainless Steel alloy) (Aluminum) 15/16 inch wide by 1-1/2 inches high by (24)(48) inches long with integral snap-grid end couplings, factory punched cross tee slots, and hanger holes.
- 2. Capped identical to main runners.

###### C. Perimeter Treatment Components:

- 1. Angle Moldings: Manufactured from (0.018)(0.024) inch thick (Stainless Steel alloy) (Aluminum) 15/16 inch wide by 3/4 inch high by 144 inches long with hemmed edges finished identical to main runners and cross tees.

#### 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. To assure a clean installation and save time in the cleaning process, manufacturer recommends the use of clean, protective hand coverings to eliminate any excessive residue appearing on the surface of the product during the installation procedure.

##### 3.02 Installation

A. Main Runners: Installed 48 inches on center, by direct suspension from existing structure, with not less than 12 gage electro-galvanized hanger wires spaced (48)(36) inches on center along main runner length. Wrap hanger wires tightly 3 full turns at each end.

###### B. Cross Tees:

- 1. Installed perpendicular to main runners 24 inches on center to form 24 inch by 48 inch modules.
- 2. Installed perpendicular to module forming cross tees to form \_\_\_\_\_ by \_\_\_\_\_ modules.
- 3. Installed adjacent to each unsupported side of recessed fixtures.

C. Angle Moldings: Installed on vertical surfaces, intersecting suspension components, by appropriate method in accordance with industry accepted practice.

D. 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 Repair

A. Remove damaged components, replace with undamaged components. Clean with mild soap and water.

# Specification Guidelines

## Section 09500 - Acoustical Treatment

### Fire Front™ 1830 Hot Dipped Galvanized Steel System

#### PART 1 - GENERAL

##### 1.01 Section Includes

Provide Metal Suspension System for Lay-in Acoustical Panel Ceiling.

##### 1.02 Related Sections

- A. Section 09120 - Ceiling Suspension Systems
- B. Section 09545 - Special Ceiling Surfaces
- C. Section 13020 - Integrated Ceilings
- D. Section 13080 - Sound, Vibration, and Seismic Control
- E. Section 15500 - Heating, Ventilating, and Air Conditioning
- F. Section 16500 - 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.
- B. Underwriters Laboratories (U.L.) Fire Resistance Directory (latest edition).

##### 1.04 Submittals

- A. Product Data Sheets listing dimensions, load carrying capacity and standards compliance.
- B. Samples: 12 inch long samples of main runner and 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 suspension system 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 Fire Front 1830 Intermediate Duty Fire Rated Double Web Suspension System.

##### 2.02 Suspension System Components

###### A. Main Runners:

- 1. Manufactured from 0.015 inch thick hot dipped galvanized steel 15/16 inch wide by 1-1/2 inches high by 144 inches long with factory punched cross tee slots, hanger holes, and integral bayonet-style end couplings.
- 2. Capped with (white aluminum) (satin silver aluminum) (black aluminum) capping affixed to 15/16 inch flange.
- 3. Manufactured with fire expansion reliefs on fire rated components in accordance with Chicago Metallic illustrated details.

###### B. Cross Tee:

- 1. Manufactured from 0.015 inch thick hot dipped galvanized steel 15/16 inch wide by 1-1/2 inches high by (24) (48) inches long with factory punched cross tee slots, hanger holes, and integral stab-in end couplings.
- 2. Capped identical to main runners.
- 3. Manufactured with fire expansion reliefs on fire rated components.

###### C. Perimeter Treatment Components:

- 1. Angle Moldings: Manufactured from 0.020 inch thick hot dipped galvanized steel 15/16 inch wide by 3/4 inch high by 144 inches long with hemmed edges finished identical to main runners and cross tees.

#### 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. Main Runners: Installed 48 inches on center, by direct suspension from existing structure, with not less than 12 gage electro-galvanized hanger wires 48 inches on center along main runner length. Wrap hanger wires tightly 3 full turns at each end.
- B. Cross Tees:

- 1. Installed perpendicular to main runners 24 inches on center to form 24 inch by 48 inch module.
- 2. Installed perpendicular to module forming cross tees to form by modules.
- 3. Installed adjacent to each unsupported side of recessed fixtures.

- C. Angle Moldings: Installed on vertical surfaces, intersecting suspension components, by appropriate method in accordance with industry accepted practice.

- D. Additional Hanger Wires: Wrapped tightly 3 full turns to structure and component at locations where imposed loads could cause deflection exceeding 1/360 span.

#### FIRE RATED SYSTEM

##### A. Suspension System Components:

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

##### 3.03 Repair

Remove damaged components, replace with undamaged components. Clean with non-solvent based non-abrasive commercial cleaning solution.



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