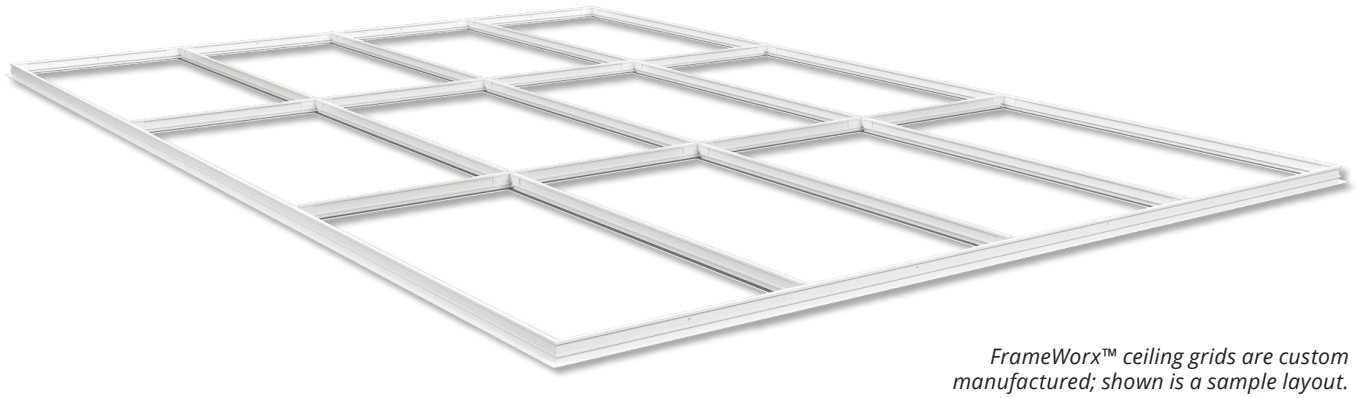
FRAMEWORX™

Ceiling Grid for Critical Environments

KRUEGER



FrameWorx™ ceiling grids are custom manufactured; shown is a sample layout.

INTRODUCTION

The FrameWorx™ ceiling grid system is a factory welded, extruded aluminum ceiling suspension system designed to support diffusers, blank off panels, and light fixtures for a variety of critical environment applications. FrameWorx™ is fully customizable to match the most demanding hospital and cleanroom ceiling plans. FrameWorx™ fully complies with ASHRAE 170 while surpassing standards for ASTC 635C Heavy Duty classification. Field installable closed cell gaskets prevent contaminants from moving between the ceiling plenum and the occupied room space. FrameWorx™ is available with a standard white epoxy powder coat finish that will resist stringent operating room cleaning protocols. Anti-microbial white epoxy powder coat finish is also available for enhanced protection.

MODEL

FrameWorx™ - Ceiling grid for critical room applications

PRODUCT FEATURES

- Heavy duty grid system at half the allowable deflection as classified per ASTM C635
- Factory welded grid system
- Individual sections fabricated up to 5’ x 10’ as standard for ease of transport, handling, and installing (larger sections available as applicable / practical)
- Designed via structural analysis software for rigidity, insuring a tight seal from the contaminated plenum space above
- Supports a minimum of 10 lbs load / ft²
- Factory furnished compression clips hold diffusers tight to frame to prevent leakage (optional - field installed)

BLANK-OFF PANELS

- Solid and perforated metal blank off panels available
- Standard and custom module sizing available
- Hold down clips available to ensure tight secure fit to grid module

SUPPORT METHODS

- Holes die punched at 12" intervals in vertical stack head of full tee beam members for hanger wire support
- Half tee beam clamps are included for support of mating sections and can be positioned anywhere within the grid system
- 24" or 48" support intervals in both directions are typical

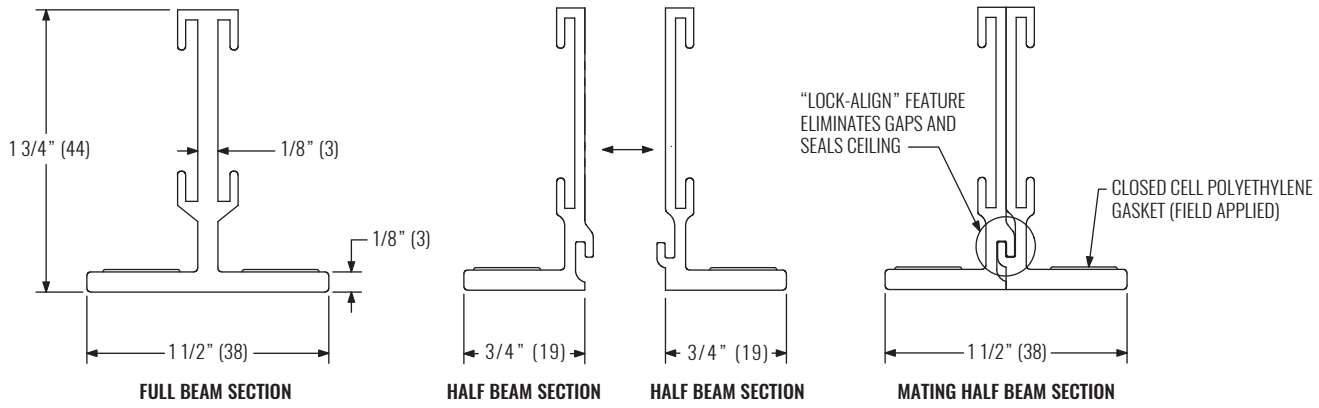
MATERIALS

- 6000 series extruded Aluminum alloy for strength, corrosion resistance, and clean lines
- Closed cell Polyethylene gasket material (PSA) is provided for field installation

FINISHES

- #44 British White (epoxy powder coat)
- #4A British White Anti-Microbial (epoxy powder coat)
- #81 Clear Anodize

DIMENSIONAL DATA



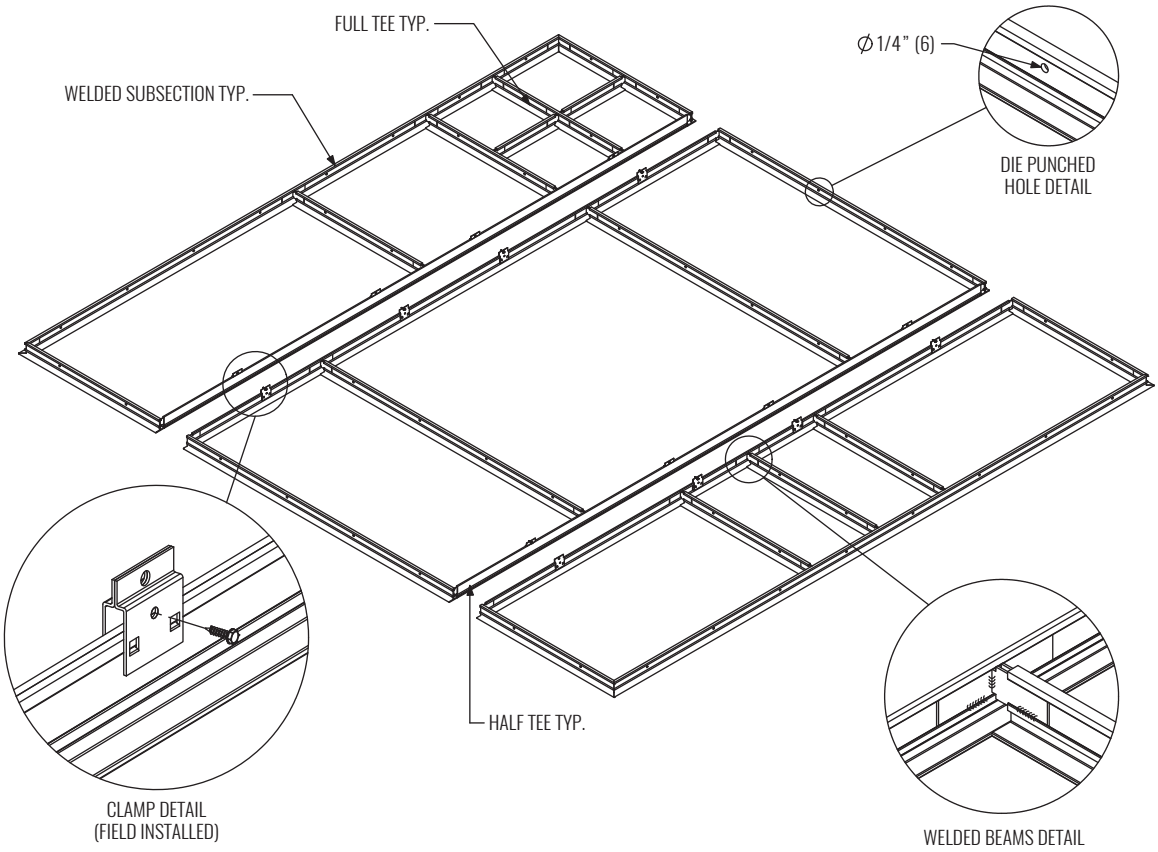
FULL TEE BEAM FEATURES

- 1 1/2" wide full tee beams exceeding .52 lbs/linear ft
- 1 3/4" high vertical stack head minimizes interference with installed ceiling components and hanger wire or threaded rod
- Minimum wall thickness of 1/8"

HALF TEE BEAM FEATURES

- 3/4" half tee beams with "Lock-Align" design for positive alignment between mating sections
- Pairs of half tee beams mate together to form a dimensional equivalent of a full tee beam
- Field attached with half tee beam clamps (included)

EXAMPLE LAYOUT



SUGGESTED SPECIFICATION & CONFIGURATION

SECTION 233713 – INTEGRATED CEILING SYSTEM

2.1 INTEGRATED CEILING SYSTEM

A. Laminar Flow Diffusers
   1. ** NOTE TO SPECIFIER ** Insert specification for laminar flow diffuser model and construction to be used.

B. Heavy Duty Welded Ceiling Grid
   1. Manufacturers: Subject to compliance with requirements and performance, products by one of following manufacturer is acceptable:
      a. Krueger (Basis of Design)
   2. Integrated Ceiling System shall meet requirements for Heavy-Duty Systems as specified by ASTM C635.
   3. Integrated Ceiling System shall be designed to support a minimum weight of 10 lbs/ft2 when installed per ASTM C636.

C. Construction
   1. Heavy Duty Welded Ceiling Grid
      i. Laminar flow diffuser manufacturer shall furnish extruded aluminum tee and angle frame assembly suspension system to support SPD's, fill-in panels and light fixtures. The face of the tee shall be 1-1/2" x 1-3/4" high. Minimum wall thickness of the tees and angles shall be 1/8" with a minimum weight of 0.52 lbs. per linear ft. Centerline to centerline dimension of each framing section shall be 1/8" per linear foot added to the nominal size of the SPD.
      ii. Verify exact locations of diffusers, lights, fill-in panels & framing with architectural reflected ceiling plans.
      iii. The suspension system shall be factory heliarc welded in sub-assemblies not larger than 5' x 10'.
      iv. Where framing sub-assemblies butt together for field assembly, the butting angles shall be half tees mechanically-fastened with "U" shaped binder clips.
      v. All tees and angles shall be pre-punched on 12" centers for attachment to suspending hanger wires or ¼" threaded rod attached on 2'-0" centers at minimum in two directions to structural support members. Systems shall be designed for minimum weight of 10 lbs. per square ft.
      vi. Manufacturer shall furnish 1/8" thick closed cell polyethylene gasket tape to be field installed on the frame assembly to provide an airtight seal between diffuser/tee grid or blank-off panel/tee grid interface. Gasket tape shall be field installed by contractor after framing surfaced have been wiped clean, free from any construction dust.
      vii. The ceiling framing system shall be finished to match laminar flow diffusers and blank-off panels.
      viii. Grid shall be coated with a white Polyester Powder coat finish, or with a white Polyester Powder coat finish with Antimicrobial inhibitors.
   2. Solid Blank-Off Panels
      i. Diffuser manufacturer shall furnish solid face blank-off panels where indicated on the drawings and where columns may penetrate the ceiling or where interstitial access is required. Panel to be solid sheet metal providing a seal between the room and interstitial space. The installing contractor shall cut all fill-in panel(s) for the surgical light column(s), medical gas column(s), and other ceiling mounted apparatus as required on the drawings after this equipment located.
      ii. Solid Blank-off panel shall be coated with a white Polyester Powder coat finish, or with a white Polyester Powder coat finish with Antimicrobial inhibitors.
   3. Perforated Blank-Off Panels
      i. Diffuser manufacturer shall furnish perforated face blank-off panels where indicated on the drawings and where columns may penetrate the ceiling or where interstitial access is required. Panel to be perforated sheet metal providing a seal between the room and interstitial space. The installing contractor shall cut all fill-in panel(s) for the surgical light column(s), medical gas column(s), and other ceiling mounted apparatus as required on the drawings after this equipment located.
      ii. Perforated Panel shall be coated with a white Polyester Powder coat finish, or with a white Polyester Powder coat finish with Antimicrobial inhibitors.

3.1 EXAMINATION

A. The installing contractor shall examine all openings, mechanical and electrical work, and adjoining and adjacent construction to receive Integrated Ceiling System prior to commencing this Work.

B. The installing contractor shall field verify rough hard ceiling opening dimensions are as required in submittals and hard ceiling conditions to be plumb and level with square corners to receive Integrated Ceiling Systems.

SUGGESTED SPECIFICATION & CONFIGURATION (Continued)

C. Openings not acceptable for Integrated Ceiling System installations shall be corrected by the appropriate contractor until conditions are satisfactory to installing contractor

D. The General Contractor shall coordinate corrective/ remedial work promptly.

E. Proceeding with the installation of the Ceiling System indicates the installing contractor accepts the openings and conditions.

F. Verify exact diffuser, blank panel and accessory locations as shown on the Contract Drawings.

1. SERIES: (XXXXXXXXX)
FRAMEWORX - Ceiling grid for critical environments

2. WIDTH: (XXX) *
96" to 288" in whole inch increments

3. HEIGHT: (XXX) *
96" to 288" in whole inch increments

4. FINISH: (XX)
44 - British White
4A - British White (Antimicrobial)
81 - Clear Anodize

* *Minimum unit size is 96"x96".*
Maximum unit size is 288"x288".
Unit size refers to overall exterior grid dimension.
Internal grid dimension and layout is fully customizable and detailed in engineering approval drawings.

SAMPLE CONFIGURATION: FRAMEWORX - 144 - 144 - 44