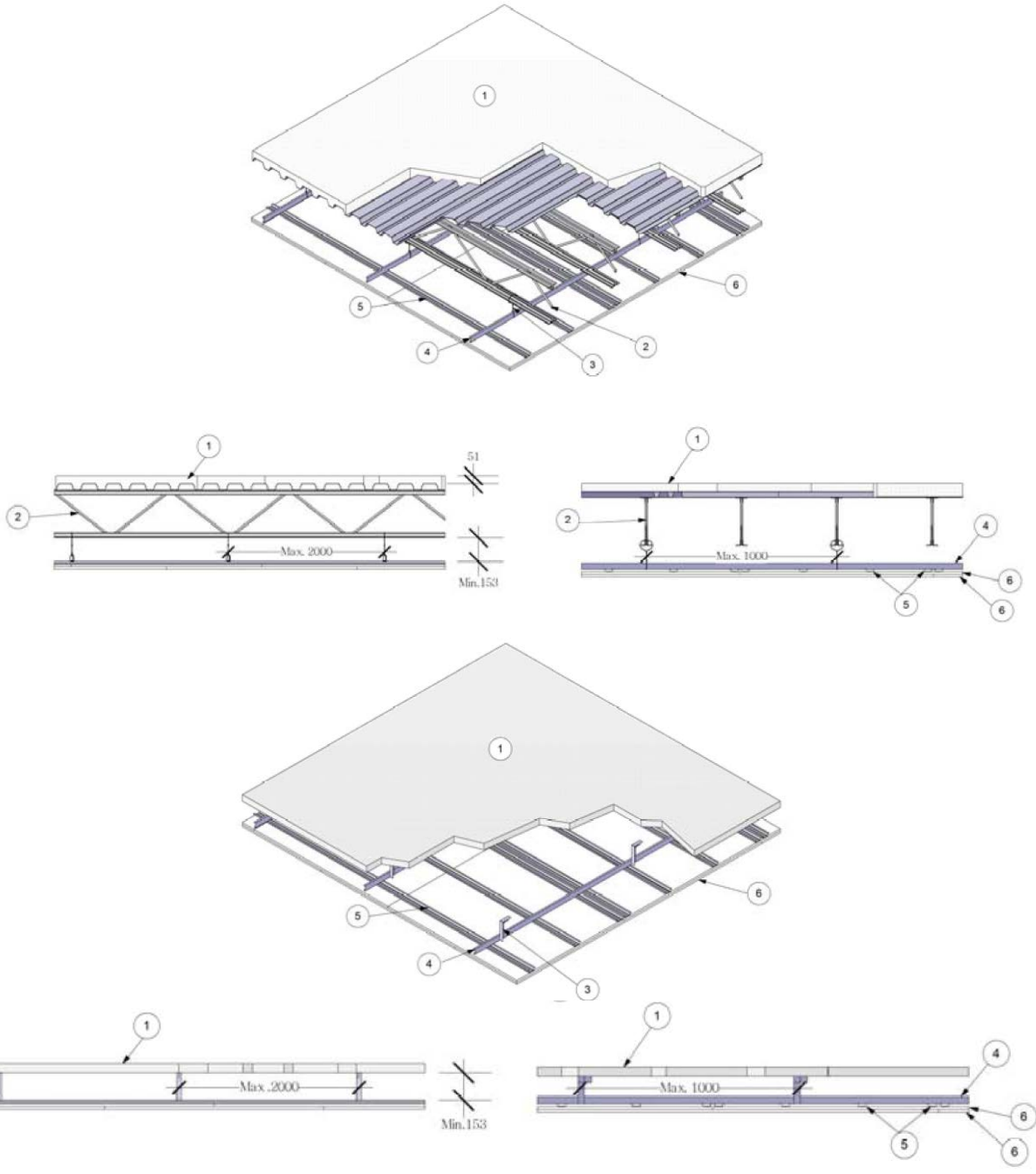
Knauf LLC
Design Number KL/GBF 120-08
Non-Combustible Floor/Ceiling Assembly
Knauf Type X Fire Rated Gypsum Board (GW-TX)
ASTM E119 (2014)
Restrained or Unrestrained Fire Resistance Rating: 2 Hour



1. **CONCRETE FLOOR ASSMEBLY:** Use a floor assembly consisting of a concrete floor assembly with a min. continuous thickness of 51mm (2 in.).

2. **NON-COMBUSTIBLE JOIST OR STRUCTURAL SUPPORT:** Use any steel joist, structural steel support, or concrete beam. Bottom of structural supporting elements shall be spaced a min. of 152mm (6 in.) from the bottom of the main channels (Item 4).

3. **HANGERS:** Use one of the following hanger systems. All hangers shall be cut long enough to allow a min. of 152mm (6 in.) from the lowest protected structural member or floor section, as applicable, to the top of the hat furring channel (Item 4). Hangers must be installed with a max. spacing of 1200mm along the length of the main channel (Item 4):

   A. L-Angle – Install L-angle to concrete floor assembly or to non-combustible joist using the appropriate method as follows.

      i. Attach L-angle to structural member with min. two Knauf LN 4.2 x 13 wafer-head screws or equivalent, or other appropriately sized screw of greater size when required.
      ii. Attach two L-angles with a min. of two Knauf LN screws to create a 90 degree angle at the ends of the two L-angles. Attach one leg of the 90 degree angle to the floor assembly or structural member.

   B. Steel Wire (Optional) – Install min. 12 GA steel wire with a min. of one wrap around the bottom chord of structural member as applicable.

4. **MAIN CHANNEL:** Install min. 1.37mm thick, 38mm wide, and 12.5mm deep main channels spaced max. 1000mm on center (oc). Joints in main channel shall overlap min. 660mm to L-angle or steel wire using the appropriate attachment methods as follows:

   A. Attach L-angle (Item 3A) using two Knauf LN screws or equivalent. L-angle shall be positioned to be flush with the bottom of the main channel.

   B. Wrap the steel wire (Item 3B) around the main channel using a min. of one wrap.

5. **CERTIFIED MANUFACTURER:** Knauf LLC

   CERTIFIED PRODUCT: Steel Framing Members

   MODEL: Hat Furring Channel 67/22/0.5/3000

   HAT FURRING CHANNEL: Attach Knauf hat furring channel (0.5mm thick, 57mm wide, 22mm deep) hat-shaped channel perpendicular to main channel (Item 4), spaced max. 406mm oc (16 in.) using two Knauf LN 4.2 x 13 wafer-head screws or equivalent. At locations of butt joints in the gypsum board, install two hat furring channels side by side. Joints in hat furring channel shall overlap a min. of 407mm (16 in.).

6. **CERTIFIED MANUFACTURER:** Knauf LLC

   CERTIFIED PRODUCT: Type X Gypsum Board

   MODEL: Knauf Type X (GW-TX)

   GYPSUM BOARD: Install two layers of 12.7mm (1/2 in.) Knauf GW-TX Type X gypsum board. Attach base layer of gypsum board to the hat furring channel (Item 5) using 22mm (7/8 in.) fine-thread Type S screws spaced 203mm (8 in.) oc. Perimeter screws shall be spaced nominal 1 in. from the gypsum board edges. Attach face layer of gypsum board perpendicular to hat furring channels using 41mm (1-5/8 in.) fine-thread Type S screws spaced 203mm (8 in.) oc. Install face layer with long edge joints offset 610mm from the long edge joints of the base layer. Perimeter screws shall be spaced nominal 1 in. from the gypsum board edges.

7. **CERTIFIED MANUFACTURER:** Knauf LLC

   CERTIFIED PRODUCT: Joint Tape and Joint Compound

   MODEL: Knauf Type X (GW-TX) Readygips Multi-Purpose Joint Compound

   JOINT TAPE AND COMPOUND – (Not Shown) Exposed gypsum board joints are taped and floated using 51mm (2 in.) wide, self-adhering Knauf joint tape. Apply a Level 2 finish of self-adhering Knauf joint tape and Knauf Readygips multi-purpose joint compound. Apply tape to face layer of gypsum board (Item 6) at all gypsum board joints. Apply joint compound in two coats to all exposed fastener heads and gypsum board joints.