

BILCO Type NB-50TB thermally broken roof hatches, 30" x 54" (762mm x 1372mm) provide roof top access by means of a ship stair, making them ideal for installations where frequent use is expected. Roof hatches feature a frame and cover design that minimizes heat transfer between interior and exterior metal surfaces. The result is a product that resists harmful condensation and provides superior energy efficiency. Product features aluminum construction, counter-balanced cover design for easy one-hand operation, and fully gasketed and insulated construction for weather resistance. For more information, please

## SECTION 077233

### ROOF HATCHES

(BILCO TYPE NB-50TB)

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Work Included: Provide factory-fabricated roof hatches for ladder access.

##### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data.
- B. Shop Drawings: Submit shop drawings including profiles, accessories, location, adjacent construction interface, and dimensions.
- C. Warranty: Submit executed copy of manufacturer's standard warranty.

##### 1.3 QUALITY ASSURANCE

- A. Manufacturer: A minimum of 5 years experience manufacturing similar products.
- B. Installer: A minimum of 2 years experience installing similar products.
- C. Manufacturer's Quality System: Registered to ISO 9001:2008 Quality Standards including in-house engineering for product design activities.

##### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's original packaging. Store materials in a dry, protected, well-ventilated area. Inspect product upon receipt and report damaged material immediately to delivering carrier and note such damage on the carrier's freight bill of lading.

##### 1.5 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard warranty. Materials shall be free of defects in material and workmanship for a period of five years from the date of purchase. Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

- A. Basis-of-Design Manufacturer: Type NB-50TB Roof Hatch by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-933-8478, Web: www.bilco.com.

### 2.2 ROOF HATCH

- A. Furnish and install where indicated on plans metal roof hatch Type NB-50TB, size width: 30" (762mm) x length: 54" (1372mm). Length denotes hinge side. The roof hatch shall be single leaf. The roof hatch shall be pre-assembled from the manufacturer.
- B. Performance characteristics:
1. Cover and curb shall be thermally broken to prevent heat transfer between interior and exterior surfaces.
  2. Cover shall be reinforced to support a minimum live load of 40 psf (195kg/m<sup>2</sup>) with a maximum deflection of 1/150th of the span or 20 psf (97kg/m<sup>2</sup>) wind uplift.
  3. Operation of the cover shall be smooth and easy with controlled operation throughout the entire arc of opening and closing.
  4. Operation of the cover shall not be affected by temperature.
  5. Entire hatch shall be weather tight with fully welded corner joints on cover and curb.
- C. Cover: Shall be 11 gauge (2.3mm) aluminum with a 5" (127mm) beaded flange with formed reinforcing members. Interior and exterior surfaces shall be thermally broken to minimize heat transfer and to resist condensation. Cover shall have a heavy extruded EPDM rubber gasket bonded to the cover interior to assure a continuous seal when compressed to the top surface of the curb.
- D. Cover insulation: Shall be 3" (75mm) thick polyisocyanurate with an R-value = 18 (U=0.315 W/m<sup>2</sup>K), fully covered and protected by an 18 gauge (1mm) aluminum liner.
- E. Curb: Shall be 12" (305mm) in height and of 11 gauge (2.3mm) aluminum. Interior and exterior surfaces shall be thermally broken to minimize heat transfer and to resist condensation. The curb shall be formed with a 5-1/2" (140mm) flange with 7/16" (11mm) holes provided for securing to the roof deck. The curb shall be equipped with an integral metal capflashing of the same gauge and material as the curb, fully welded at the corners, that features the Bil-Clip<sup>®</sup> flashing system, including stamped tabs, 6" (153mm) on center, to be bent inward to hold single ply roofing membrane securely in place.
- F. Curb insulation: Shall be 3" (75mm) thick polyisocyanurate with an R-value = 18 (U=0.315 W/m<sup>2</sup>K).
- G. Lifting mechanisms: Manufacturer shall provide compression spring operators enclosed in telescopic tubes to provide, smooth, easy, and controlled cover operation throughout the entire arc of opening and closing. The upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside the lower tube assembly. The lower tube shall interlock with a flanged support shoe welded to the curb assembly.
- H. Hardware
1. Heavy stainless steel pintle hinges shall be provided
  2. Cover shall be equipped with a spring latch with interior and exterior turn handles
  3. Roof hatch shall be equipped with interior and exterior padlock hasps.

4. The latch strike shall be a stamped component bolted to the curb assembly.
  5. Cover shall automatically lock in the open position with a rigid hold open arm equipped with a 1" (25mm) diameter red vinyl grip handle to permit easy release for closing.
  6. Compression spring tubes shall be an anti-corrosive composite material and all other hardware shall be zinc plated and chromate sealed. [For installation in highly corrosive environments or when prolonged exposure to hot water or steam is anticipated, specify Type 316 stainless steel hardware].
  7. Cover hardware shall be bolted into heavy gauge channel reinforcing welded to the underside of the cover and concealed within the insulation space.
- I. Finishes: Factory finish shall be mill finish aluminum.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.
1. Test units for proper function and adjust until proper operation is achieved.
  2. Repair finishes damaged during installation.
  3. Restore finishes so no evidence remains of corrective work.

#### 3.3 ADJUSTING AND CLEANING

- A. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

END OF SECTION