TECH DATA PAGES

**EXPI-DOOR® SERIES 400™**

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A. INTRODUCTION:
A.1.0__The following information pertains to EXPI-DOOR’s SERIES 400™ Door System. We will discuss the specifics of both Pre-Assembled and Knock-Down Door Systems. We will also discuss all Door Hardware components.

A.1.01__The Series 400 Door System, whether Pre-Assembled or Knock-Down shall contain the same door leaf and frame components. These components shall conform to the Steel Door Institute and the American National Standards Institute. When reviewing specifications requirements prior to supplying the Series 400 Door System, the specification will read approximately as follows: “Doors and Frames to meet specifications requirements provided as follows: ANSI A250.8 / SDI-100 Light-Duty Commercial, Level 1, Model 1-Visible Edge Seams”

A.1.02__The Series 400 Door Series was created specifically to offer a cost-effective product for light-duty commercial applications, where heavy specifications are not provided or required by the Architect or End-User. Therefore, only “standard” stock material is provided for this door system.

B. SUBMITTALS:
B.1.0__For standard orders, where no special, non-stock conditions exist, our clients are encouraged to use the product data included here-in, and in the following pages. This includes door and frame gauges, hardware grades, designs and finishes, and any other associated components that apply to the final design and assembly of the product.

B.1.01__The Series 400 Door System is not available with any non-standard upgrades or changes.

B.1.02__Submittals must be approved by a signature from the Architect or End-User prior to ordering from EXPI-DOOR. EXPI-DOOR reserves the right to hold any order until the Submittal is positively approved by the appropriate entity.

C. QUALITY ASSURANCE:
C.1.01__EXPI-DOOR products pass through a minimum of three (3) stations. One station is a preparation and fabrication station. The second is the assembly station. The third is the final examination and packaging station. After installation of the lockset and closer, each is tested to ensure proper alignment and function. Upon completion, the door is laid on a pallet and inspected by a third-party for final quality appearance.
D. PRODUCTS AND COMPONENTS:
   D.1.01__Hinges
   a. Hinges shall meet ANSI A156.1-2000, 4-1/2” height and width, and shall be fully-mortised.

   b. Hinges are equipped for “standard-weight” operation, for light-weight doors and/or low-usage.

   c. Hinges shall be constructed with five knuckles, and two ball-bearing sections which are oil-impregnated.

   d. Hinges shall have anti-vandal non-removable pins with flat tip button.

   e. Standard finish on our hinges is US26D Satin Chrome Plated (BHMA 652) finish.

   f. Hinges shall be attached with four (8) 12-24 machine screws (four at the Hinge Jamb and four at the Door Leaf Hinge Stile). Screws are provided with the hinges.

D.1.02__Cylindrical Lever Lockset, Grade 2 Keyed Entrance function, thru-bolted
   a. Hager 2553 model, UL rated
   b. ANSI A117.1 for ADA compliance
   c. ANSI F109, Entrance function (Hager “53” function)
   d. Locksets are provided with conventional (non-IC) 6-pin Schlage “C” keyway and (2) cut keys

D.1.03__Door Closer, Surface – Thru-Bolted, Parallel-Arm Type, Grade 2 Standard-Duty
   a. Hager 5400 Series, UL rated, non-hold-open
   b. ANSI A156.4 Grade 2 Standard-Duty
   c. ADA compliant
   d. Adjustable speed and back-check

D.1.04__Door Bottom Dual-Finger “U-Sweep”
   a. NGP 331 – Black, rigid polypropylene top with flexible TPV fins
   b. ASTM Sound-Rated, UL 10C, BHMA
   c. Attached into inverted bottom channel with TEK screws

D.1.05__Perimeter Weather-Seal
   a. NGP 5050C – “Charcoal” (black) color, Silicone
   b. ASTM Sound, Draft and Smoke rated, UL 10C, BHMA
   c. Self-Adhesive backing (alcohol wipes provided to clean jambs prior to attachment of seal for all K-D orders only)

D.1.06__ADA Compliant Aluminum Threshold
   a. Saddle-type, attached to jambs on pre-assembled doors
b. Shipped loose for attachment to floor for K-D doors
c. Provided with attachment fasteners for K-D system
d. Provided with concrete sleeve anchors for both door system types

E. DOORS, FRAMES and SUB-FRAME:

E.1.01 Door Leaf, Referred to as Hollow Metal (“HM”):

1. Gauge: 20, standard

2. Door Edge shall be SQUARE, non-beveled

3. Steel: A40 Galvannealed Quality Carbon Steel coating

4. Paint: White or Bronze, baked-on, applied per ANSI A250.10

5. Insulating Foam Core: Polystyrene
   a. U-Factor: 0.48 per ASTM C1363; 0.263 per ASTM C236
   b. R-Value: 2.08 per ASTM C1363; 3.8 per ASTM C236

6. Construction per ANSI A250.8, 1998, hardware reinforcements per ANSI A250.6-1997, and hardware locations per ANSI/DHI A115:
   a. Top reinforcement channel shall be 14 gauge, inverted, and shall be welded to both face sheets approximately every two inches. Top-cap is used to close the channel, but may not provide a positive seal-out against moisture.

   b. Bottom reinforcement channel shall be 14 gauge, inverted, and shall be welded to both face sheets approximately every two inches. The bottom channel shall be left open to accept the provided U-sweep.

   c. Prepared at Lock Stile for Cylindrical Lever, classified as ANSI A115.2 - Government “61L” (GOV 61L). This is a thru-door bore, 2-1/8” diameter with standard Plunger prep on the door edge.

   d. Back-set shall be 2-3/4” and is not adjustable. Door edge prep (plunger/keeper prep) shall be standard 2-1/4” height –by- 1-1/8” width.

   e. Mortise locks and mortise panic devices are not offered for this door system.

   f. **OPTIONAL Offering**. Thru-bolted Rim Panic (Exit Device) Hardware can be used, providing the device covers the cylindrical lock prep. The Rim Panic EXPI-DOOR provides does, of course, meet this criteria. Mortise Exit Devices shall not be permitted.
g. Hinge preparation reinforcement shall be constructed from 10 gauge quality cold-rolled, prime-painted steel. Each door shall receive 1-1/2 pair, 4-1/2" high preparations, for standard-weight hinges.

E.1.02 Door Frames, Referred to as Hollow Metal (“HM”):

1. Gauge: 18, standard
2. Steel: A40 Galvannealed coating
3. Paint: White or Bronze, baked-on, applied per ANSI A250.10
4. Construction per ANSI A250.8, 1998, hardware reinforcements per ANSI A250.6-1997, and hardware locations per ANSI/DHI A115:
   a. Corner Connection:
      i. Pre-Assembled Frames shall have fully-welded (seamless) corners.
      ii. Knock-Down Frames shall have mitered corners with fastener connections on each jamb, at each corner. Once the header is joined to the top of each jamb, a fastener is then driven in from the top of the header into the pre-tapped holes and tabs on the reverse-side of each face, on each corner of the frame. Fasteners provided by EXPI-DOOR.
   b. Strike prep in frame shall be 4-7/8" standard A.S.A. height.
   c. Hinge preparation reinforcement shall be constructed from 10 gauge quality cold-rolled, prime-painted steel. Each hinge jamb shall receive 1-1/2 pair, 4-1/2" high preparations, for standard-weight hinges.

6. Attachment of A.D.A. Threshold:
   a. EXPI-DOOR pre-fastens our Threshold on pre-assembled units. Fasteners are run through pre-punched “slots” at the bottom of the jambs. Fasteners mate-up with “flutes” milled into the base of the Thresholds. Concrete sleeve anchors are provided for attachment to concrete floor once door is installed on-site.
   b. For the Knock-Down system, the assembler/installer has the choice to either pre-attach the Threshold once the Frame Header is assembled, or they can set the Threshold down on the concrete after the entire door system is installed. After aligning the Threshold by mating-up the U-notches on each end of the
Threshold with the Frame Profile. The Threshold is then locked-down with the provided sleeve anchors. Anchors shall measure \( \frac{1}{4} \)" diameter x 2" length, made from quality zinc plated steel.

E.1.03 Door System (Frame) Anchorage Options:

1. Sub-Frame system for Girt-Wall Installation:
   a. Sub-Frame gauge shall be 16 gauge
   b. Builder/Customer must indicate the Sub-Frame width (depth) required for each door. This dimension should match the girt depth. Sizes available: 8” or 8-1/2”
   c. Steel: A40 Galvannealed Quality Carbon Steel coating
   d. Sub-Frames shall be bare A40 steel; they are not prime or finish painted

2. Actual anchor points components:
   a. Top Clips, called GIRT clips, shall be manufactured from 12 gauge galvanized (unpainted) steel, and shall include all necessary fasteners both to attach to sub-frames and attachment to girts
   b. Bottom Clips, called BASE clips, shall be manufactured from 12 gauge galvanized (unpainted) steel, and shall include all necessary fasteners both to attach to sub-frames and attachment to the concrete floor. Concrete Sleeve Anchors are also provided

3. Direct-to-Frame (omit sub-frames) Girt Wall Installation:
   a. Jambs are pierced and dimpled on the Soffit, three times per jamb.
   b. “Hat-Spacer” reinforcements are welded-in to the throat of each jamb, behind each dimple.
   c. This installation is typically used for knock-down door system applications where sub-frames (framed openings) are not necessary, or the metal building manufacturer is supplying the C-channel framed openings.
   d. EXPI-DOOR will provide the appropriate anchor or fastener for installation with this method.

4. Universal Stud Application:
   a. Three anchors per jamb, welded-in at equal pre-determined increments by EXPI-DOOR
b. Flanges of anchor wrap around then fasten to wood stud, wood post or steel stud

c. In cases where cee-channel framed opening is provided “by others”, this anchor can still be used. The installer runs self-tapper/self-drillers in thru back of cee-channel framed opening directly into downward return leg of the Universal Stud Anchor (see Tech-Data page pertaining to optional anchors. All fasteners in this application “provided by others”.

F. DOOR SWING [HANDING] DESIGNATIONS:

F.1.01__EXPI-DOOR Swing [Hanging] Chart:

a. Standard Out-Swing and In-Ward Swinging Door Identification:
EXPI-DOOR® Series 400™ Door System

WARRANTY

The Series 400™ door system by EXPI-DOOR® Systems, Inc. carries a two year warranty for defective product or workmanship, provided it is not a result of negligence, caused by damage while in transit, improper installation, or other damage caused by second parties. This warranty covers every component of the door system. No extended warranties from other manufactures are offered for this door system.

The two years will commence from the date of original shipment from EXPI-DOOR. Defective or damaged products must be returned to EXPI-DOOR to receive credit or replacement unless otherwise instructed. If a product is not returned as required, no credit or replacement will be issued, except when special instructions given for disposition or defective products or material.

When returning product, documentation is required to identify the returned product with customer name, order number, purchase order number, job number or invoice number, etc. A copy of the original packing slip is the best document to send or refer to. No credit or replacement can be issued if proper documentation cannot be completed.

EXPI-DOOR will issue an invoice for the price of the replacement component(s) or will replace the component(s) at no charge, depending upon the agreement between EXPI-DOOR and the purchaser of the product. It is imperative that an EXPI-DOOR representative and the purchaser together agree on the best course of action before this determination has been made. DO NOT replace the product with another from a different provider as this will void any warranty or possibility of warranty from EXPI-DOOR.

Steps to take in the event of a Warranty claim:

1. Contact EXPI-DOOR. Provide a brief description of the problem and have documentation of product purchase available.
2. Agree on a course of action with a representative of EXPI-DOOR. Must either be product replacement or credit issued.
3. Return defective or damaged product to EXPI-DOOR per their instructions.
4. After receiving the product and undergoing a thorough review to confirm defect, EXPI-DOOR will issue credit.
5. In the event that a replacement product is required prior to being able to return the defective product, EXPI-DOOR will send out a replacement and bill the customer. Once the old product has been confirmed defective, EXPI-DOOR will credit the full amount for the new replacement product.
6. In the event the product is not considered defective, customer will be contacted and a course of remedy will be agreed upon.
** Doors w/ subframes are loaded on to a 4'x8' pallet, and fastened down through the 1-3/4" subframe leg.
** Each door is then stacked in the same manner, and fastened to the door below in the same manner.
** A lid is created from 2x4’s and OSB, and set on top of top door.
** End caps are then fastened to each girt & base clip, and in to the ends of the 2x4’s of the lid.
** Side panels are attached to pallet runners at the bottom and to the runners of the "lid".

** Doors that do not receive subframes, such as Masonry Anchor Doors, or Stud Wall Anchor Doors, shall be set on 2x4 "sticks" between each door to create appropriate space between lockset and door leaf of the door above.
** Sides, ends, and top are all covered with OSB or Plywood for a completely boxed product.
Packaging Details - Knock-Down Doors - Series 400

- Frame Box(es) (includes all necessary accessories for assembly)
- Door Leaf(s) Wrapped in Corrugated
- Banding w/ Corner Protectors
- PALLET
Nominal Door Height: 7’-0”
Actual Door Height: 83 1/8”

No Bevel 
(Square)

POLYSTYRENE CORE

R Value: 7.03
U Value: 0.14

**Closers shall be thru-bolted only**

Nominal Door Width: 3’-0”
Actual Door Width: 35-3/4”

1-3/4” Thick

Lock Prep:
Cylindrical Lock
“GOV 161”
2-1/8” Bore
2-3/4” Backset

Hinges:
1-1/2 pair (3 total)
10 gauge reinf.
4-1/2” high
Includes Closure Plates
Fully-mortised

Cylindrical Lock
“GOV 161”
2-1/8” Bore
2-3/4” Backset

10 gauge reinf.
4-1/2” high
Includes Closure Plates
Fully-mortised

Top Closure
Brief Parts Description:

- Vertical cee-channel sub-frame piece, Qty 2
- Header cee-channel sub-frame piece, Qty 1

Standard Door Frame Details and Sub-Frame Attachment - Series 400

**Dimensions:**

- Door Opening Height from Floor: 7'-0"
- Top of Header: 7'-2"

**Sub-Frame Width:**

- 8" or 8.5"

**Header Subframe Details:**

- Fastened through returns
- 1 3/4" Wide Face
- 1/2" High Threshold

**Typical H.M. Frame:**

- 16 Gauge Galvanized (A40)

**Notes:**

- 3/0 x 7/0 = 3'-4"
- 1 3/4" Wide Face (Sub-Frame Vertical)
Additional Anchoring Options - Series 400 Door System

**Existing Opening Application (EOA)**
- "Hat Spacer" welded-in to Throat (figure 1)
- Pierce & Dimple Jamb Soffit face (figure 2)

**“Hanger Bolt”**
(for new or existing steel framed opening install)

**Wood Anchor Screw**
(for new or existing wood post or stud framed opening install)

**Self-Drilling/Tapping Anchor Screw**
(for new or existing steel cee-channel or steel stud framed opening install)

**Expandable Concrete Sleeve Anchor**
(for new or existing poured or block concrete opening install)

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**Stud Wall Application**
(unfinished wall)

**UNIVERSAL STUD ANCHOR**
Welded-in, 3-per jamb

For use in NEW Stud Wall with Sheet-Rock application.
- Anchors provided welded-in; three anchors per jamb.
- Flanges wrap stud, then fasten to studs (wood or steel)
- SHEETROCK slips in behind jamb, between stud and back-bends of jambs.
(consult SDI Installation Details or inquire with EXPI-DOOR)
Series 400 Door System  Grade 2  Standard Cylindrical Lever-Lock Details

Grade 2 Entry Lever
*Included in Standard EXPI-DOOR Package*

Description:
- ANSI/BHMA US26D Satin Chromium finish
- 1/2" throw, stainless steel deadlocking latchbolt
- Thru-bolted
- Non-clutching Levers
- "53" Entry function standard (other functions available, special-order)

Certifications:
- BHMA A156.2 Standard-Duty Commercial, Grade 2
- Life-Safety rated for quick egress in emergency
- UL10B & UL10C fire-rated
- ADA Compliant, ANSI A117.1 Accessibility Code

One Year Limited Warranty
"** DOOR HARDWARE OPTION **

Series 400 Door System  Grade 1  Cylindrical Lever-Lock Details

** OPTIONAL UP-GRADE **
Grade 1 Entry Lever

Description:
- Extra Heavy-Duty Lock Chassis of zinc dichromated for corrosion resistance
- ANSI/BHMA US26D Satin Chromium finish
- 1/2" throw, stainless steel deadlocking latchbolt
- Thru-bolted
- Free-Wheeling Levers
- "53" Entry function standard (other functions available, special-order)

Certifications:
- BHMA A156.2, Series 4000, Grade 1 Heavy-Duty
- Life-Safety rated for quick egress in emergency
- UL10B & UL10C fire-rated
- ADA Compliant, ANSI A117.1 Accessibility Code
- ANSI A250.13 Severe Windstorm Resistant

LIFETIME Warranty
** DOOR HARDWARE OPTION **

Series 400 Door System - Exit Device (Panic Hardware) Details

**Grade 1 Exit Device (Panic Hardware) with Key-In-Lever Trim**

**Description:**
- Standard-duty commercial application, Grade 1
- Push-Bar and Lever both required to be thru-bolted
- 5/8” pullman type latchbolt, automatic dead-latching, stainless steel
- Stainless steel roller-strike, surface-applied to jamb soffit - adjustable
- Hex key dogging standard
- “ALM” (Aluminum) powder-coat finish

**Lever Description:**
- Standard-duty commercial application, Grade 1
- US26D Brushed Chromium finish (BHMA 626)
- 6-Pin Schlage “C” Keyway Standard with (2) brass cut keys
- Meets ADA, Life-Safety, Fire and Windstorm requirements

**Certifications:**
- Meets ANSI A156.3 Grade 1 Requirements
- UL10B and UL10C listed
- Complies with ADA ANSI 117.1 for accessibility
- Complies with ANSI A250.13 Windstorm resistance

Five Year Warranty from Manufacturer
** DOOR HARDWARE OPTION **

Latchguard Details - Series 400

Stainless Steel Latchguard 3" x 11"
Installed on Lock Stile - Butts up to Lever Lock rose - Covers Plunger at Exterior Face

Latchguard for Cylindrical (Bored) Locksets

Specialty Carriage Sex Nut/Bolt w/ Allen Driver
**DOOR HARDWARE OPTION**

Series 400 Door System - Grade 2 Door Control - CLOSER

Standard Closer Body
with Standard Arm

Description:
- ANSI/BHMA US26D Satin Chromium finish
- Ideal for light-duty commercial applications
- Thru-bolted to Door Leaf
- Adjustable Latching and Sweep speeds
- Staked valves (prevents closer from leaking fluid)
- Aluminum alloy construction
- Precision machined, heat treated steel piston

Certifications:
- BHMA A156.4 Standard-Duty Commercial, Grade 2
- UL10B & UL10C fire-rated
- ADA Compliant, ANSI A117.1 Accessibility Code

Five Year Manufacturer Warranty
Standard Hinge Details - Series 400

Standard Hinges
Hager ECBB1100
1-1/2 pair (3 total) per door

Description:
- ANSI A8112
- ANSI/BHMA US26D (626)
- Steel with steel pin
- (4) matching fasteners for frame, (4) for door leaf
- Complies with NFPA80 fire-rating for doors
- 4-1/2" x 4-1/2" (114mm x 114mm)
- 5 Knuckle
- Gauge: 0.134, standard-weight
- Non-rising removable pin with button tip and plug
- Two ball bearings
**Description:**
- DUAL-FINGER Door Shoe, NGP #331 (or equal)
- Rigid polypropylene top with flexible TPV fins
- Pre-punched oval "slots" for attachment with self-drillers
- Installs at center-line of door leaf (as pictured)

**Certifications:**
- ANSI/UL 10C, ANSI/UL 1784 Category 'H': Smoke & Draft Control
- ASTM E283: Air Infiltration/Leakage
- NFPA 80 & 252 positive pressure
- CAN/ULC-S104 and ANSI/UL10B: 90 minute fire resistant
- ANSI/BHMA A156.22 Gasketing and Edge Seal Systems
Perimeter Weather-Stripping - Series 400 Door System

Silicone Bulb, Smoke and Weather Gasketing Seal

Description:
- Self-adhesive silicone gasketing, full perimeter (17’ for 3'x7' door)
- “C” Charcoal (Black) material
- Tear-drop (bulb) profile

Certifications:
- ANSI/UL 10C, ANSI/UL 1784 Category ’H’: Smoke & Draft Control
- ASTM E283: Air Infiltration/Leakage
- NFPA 80 & 252 positive pressure
- CAN/ULC-S104 and ANSI/UL10B: 90 minute fire resistant
- ANSI/BHMA A156.22 Gasketing and Edge Seal Systems

Adhesive Specifications:
- Best-in-industry long-term exposure resistance range:
  - from -30° F up to 250° F
- Modified acrylic pressure sensitive.
- Resistant to aging, weathering, UV radiation, moisture, detergent,
EXPI-DOOR Standard A.D.A. Compliant Threshold

All Thresholds shall be fastened to the base of each jamb, on the interior door side Rabbet and the exterior door side Rabbet, from the reverse-side of the jamb (Jamb Throat). Fasteners are run through the Jamb Throat area directly into "Flutes" (round Screw-Boss channels) located on the under-side of the Threshold. These Flutes run the entire length of each Threshold. Thresholds shall be manufactured from Mill Aluminum Alloy. Thresholds shall be 5-3/4" wide, and U-Notched on each end to fit jamb profile.

For anchorage to the concrete floor, Thresholds shall be produced with pre-punched, countersunk holes to accept 1/4" diameter concrete Sleeve Anchors (provided by EXPI-DOOR). Three-foot single door system Thresholds shall consist of four (4) countersunk bores, and shall be "staggered" across the length of the Threshold.

Fastening the Threshold to the frame, in the factory, is a bonus advantage for several reasons.

1. EXPI-DOOR's Threshold is pre-notched at each end to fit around the door jamb's Soffit portion of the frame.
2. EXPI-DOOR's Threshold is pre-attached to each jamb, thus ensuring proper alignment of door w/in frame.
3. EXPI-DOOR's Threshold, because it is attached at the factory, assures strong reinforcement at the base of the frame, as opposed to older methods of securing the frame at the base, temporarily.

Our pre-attachment process is far superior to the common process in place for some of our competitors, as well as being the standard for many years for "Knock-Down" door systems.

**Floor Anchors**

1/4" Hole Size x 1-1/2" Embedment / Actual Anchor: 1/4" x 2"