



Brandner Design

# Floor Door Hinge System



# The Floor Door Hinge System

The Floor Door Hinge System is designed to facilitate the smooth operation of floor or trap doors in various projects. Engineered to ensure seamless integration, the hinge enables the door to sit flush with the floor, effectively concealing the hinges underneath. By lifting the door up and away from the frame, the hinge prevents binding issues.

The system features integrated mounting plates that can be securely fastened to the door and frame through either screw-fastening or welding methods.

To assist the opening and closing functionality, Gas Struts are incorporated.

Each Floor Door Hinge System is equipped with one (1) Locking Gas Strut, contributing to safety by holding the door open during installation and everyday use.

Key Features of our Floor Door Hinge System:

- Constructed with durable 1/4" stainless steel.
- Integrated mounting plates for both door and frame.
- Gas struts included for improved door operation.

WATCH A  
DEMONSTRATION VIDEO



## A System That Suits Your Door:

We offer four standardized options of Floor Door Hinge Systems, each designed to accommodate a wide range of standard doors in the market. To determine the most suitable option for your door, measure and weigh it, and refer to the following specifications:

- **Doors up to 72" Long:**

2 Hinges + 1 Locking Strut + 1 Non-Lock Strut.

*This system holds a door with a **total weight of up to 180lb.***

- **Doors between 73" and 96" L:**

3 Hinges + 1 Locking Strut + 2 Non-Lock Strut.

*This system holds a door with a **total weight of up to 270lb.***

- **Doors between 97" and 120" L:**

4 Hinges + 1 Locking Strut + 3 Non-Lock Strut.

*This system holds a door with a **total weight of up to 360lb.***

- **Doors longer than 121" L:**

5 Hinges + 1 Locking Strut + 4 Non-Lock Strut.

*This system holds a door with a **total weight of up to 450lb.***

If your door length and weight fall into different product categories, guide your choice by the weight of your door rather than the length.

If your door dimensions and weight do not fit any of these options, please contact our sales team at [sales@brandnerdesign.com](mailto:sales@brandnerdesign.com) or 406 582 0711 and we will make sure to create a Door Hinge System tailored to your needs.

[PURCHASE HERE](#)





## The Gas Struts:

Gas struts play a crucial role in facilitating the opening of a floor door. These struts are equipped with nitrogen gas and a seal lubricant that provides slam-resistant damping at the end of the stroke.

While gas struts assist in the opening and closing of doors, it's important to note that they are not fully automatic and do not bear the entire weight of the door. A minimal effort is still required to operate the door.

Notably, the gas strut is inactive when the door is in a horizontal position (fully closed), requiring the door to open at least 30 degrees for the gas strut to engage in aiding the lifting process.

All our Floor Door Hinge Systems come with a Locking Gas Strut, which automatically locks when fully extended, preventing the door from closing until deemed safe. To unlock, simply pull on the knob of the Locking Strut, allowing the gas spring to compress.

Gas struts feature two ball socket ends. One with a ball stud and a nut cap for easy attachment to the Floor Door Hinge, and the other with a mounting plate for simple attachment to the door. The ball sockets allow rotation in any direction to compensate for misalignment.

Our standard Floor Door Hinge Systems offer two gas strut size options:

- Door Width between 28" and 36" (17 1/8" Strut Length)
- Door Width between 36.1" and 42" (19 6/8" Strut Length)

Should your door width not align with these options, please contact our sales team at [sales@brandnerdesign.com](mailto:sales@brandnerdesign.com) or 406-582-0711, and we will assist in sourcing a specific gas strut tailored to your needs.

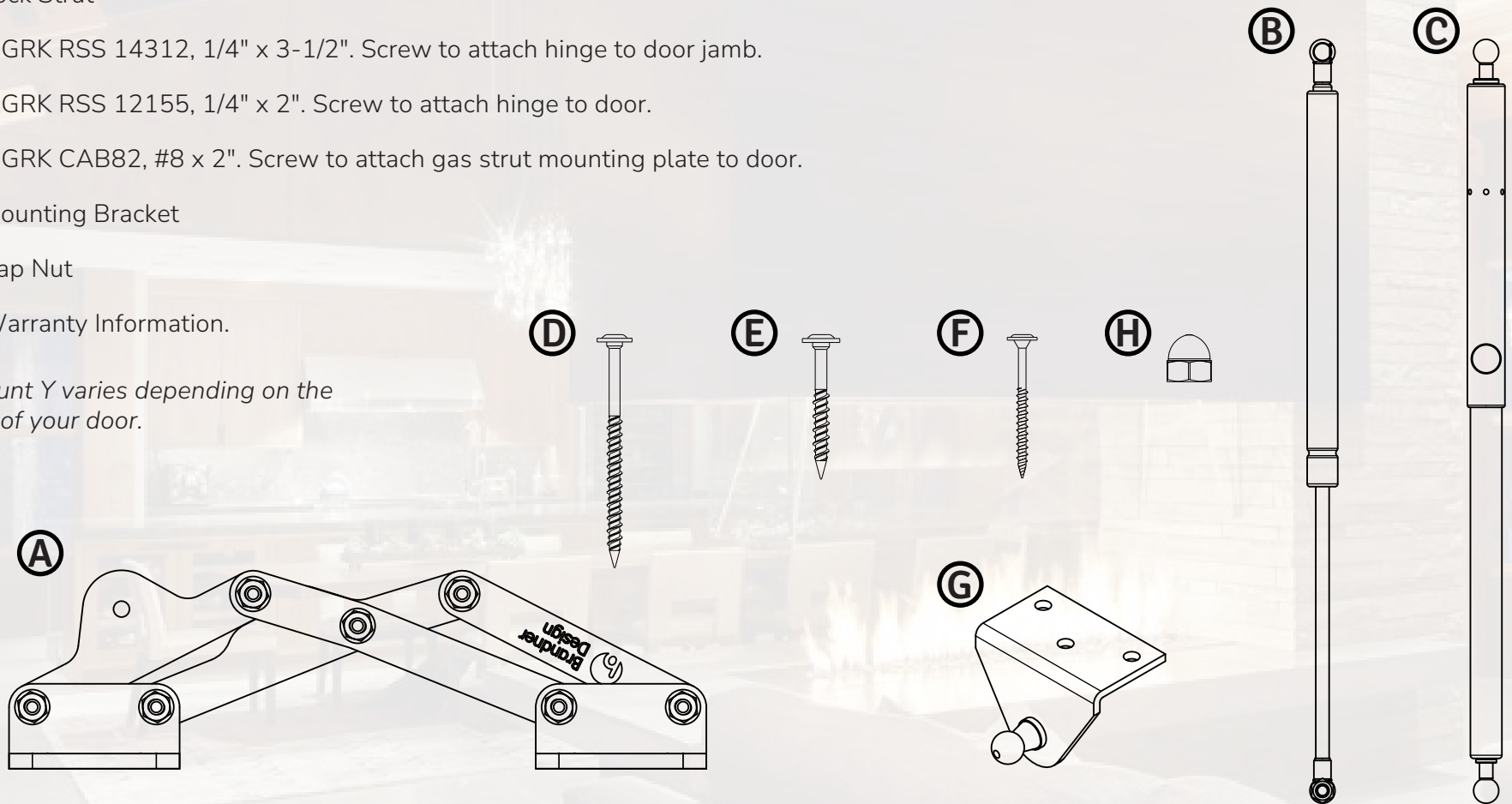


# Parts & Pieces

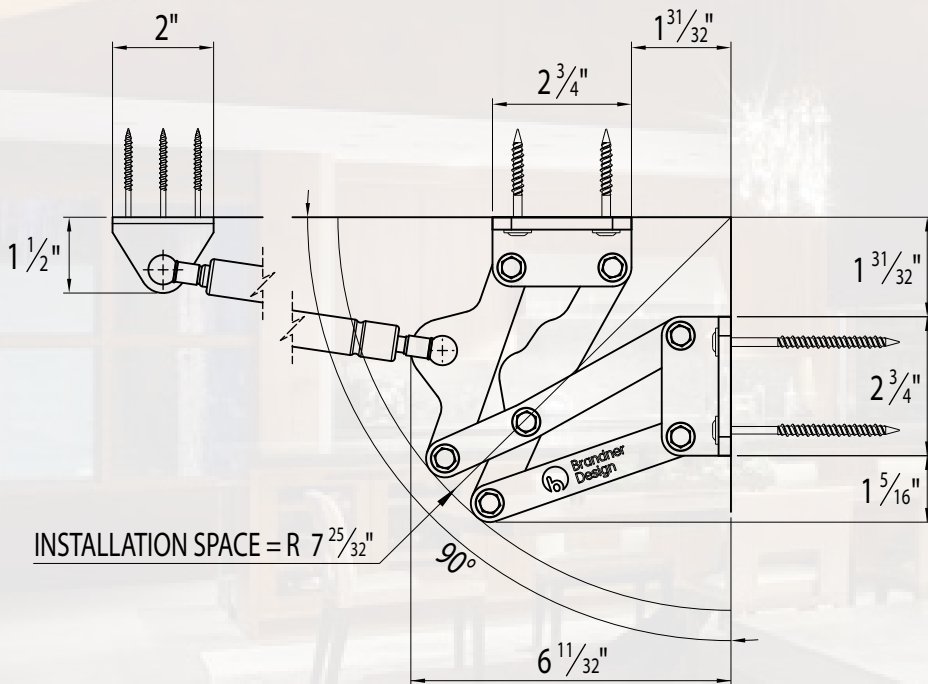
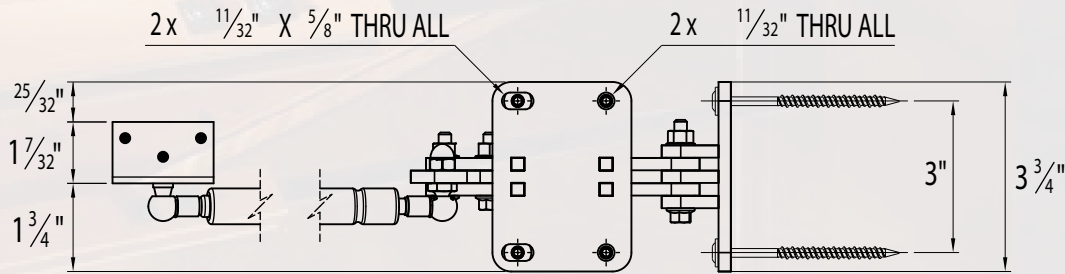
Your Floor Door System Package includes:

- (A)** – (Y\*) Floor Door Hinge
- (B)** – (Y-1) Non-Lock Strut
- (C)** – (1) Lock Strut
- (D)** – (Yx4)GRK RSS 14312, 1/4" x 3-1/2". Screw to attach hinge to door jamb.
- (E)** – (Yx4)GRK RSS 12155, 1/4" x 2". Screw to attach hinge to door.
- (F)** – (Yx3)GRK CAB82, #8 x 2". Screw to attach gas strut mounting plate to door.
- (G)** – (Y) Mounting Bracket
- (H)** – (Y) Cap Nut
- (I)** – (1) Warranty Information.

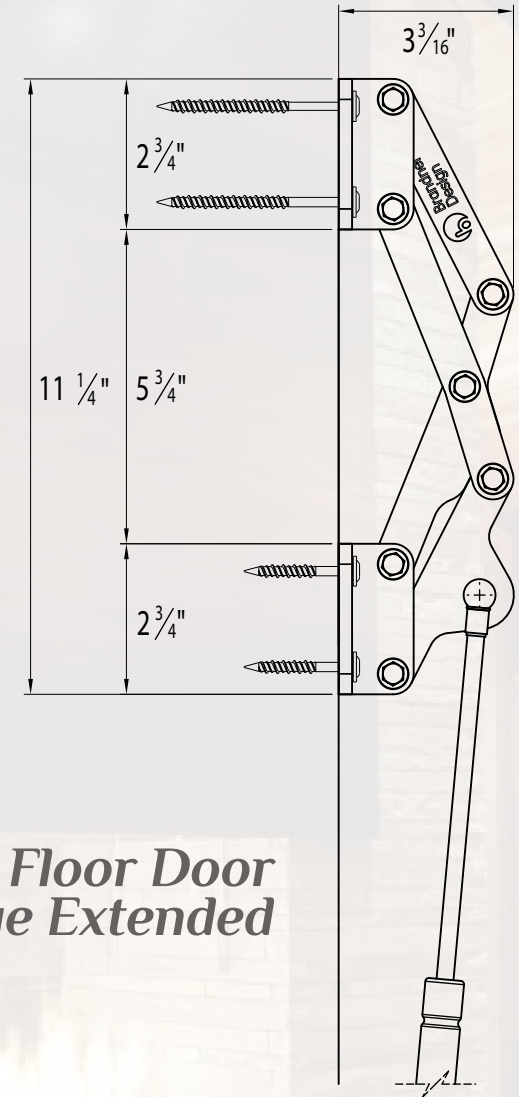
*Y\*: the amount Y varies depending on the dimensions of your door.*



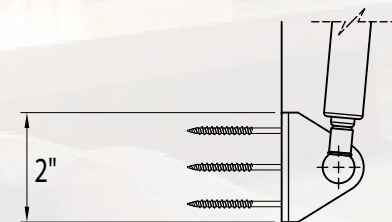
# Floor Door Hinge Dimensions



*Floor Door Hinge Flexed*



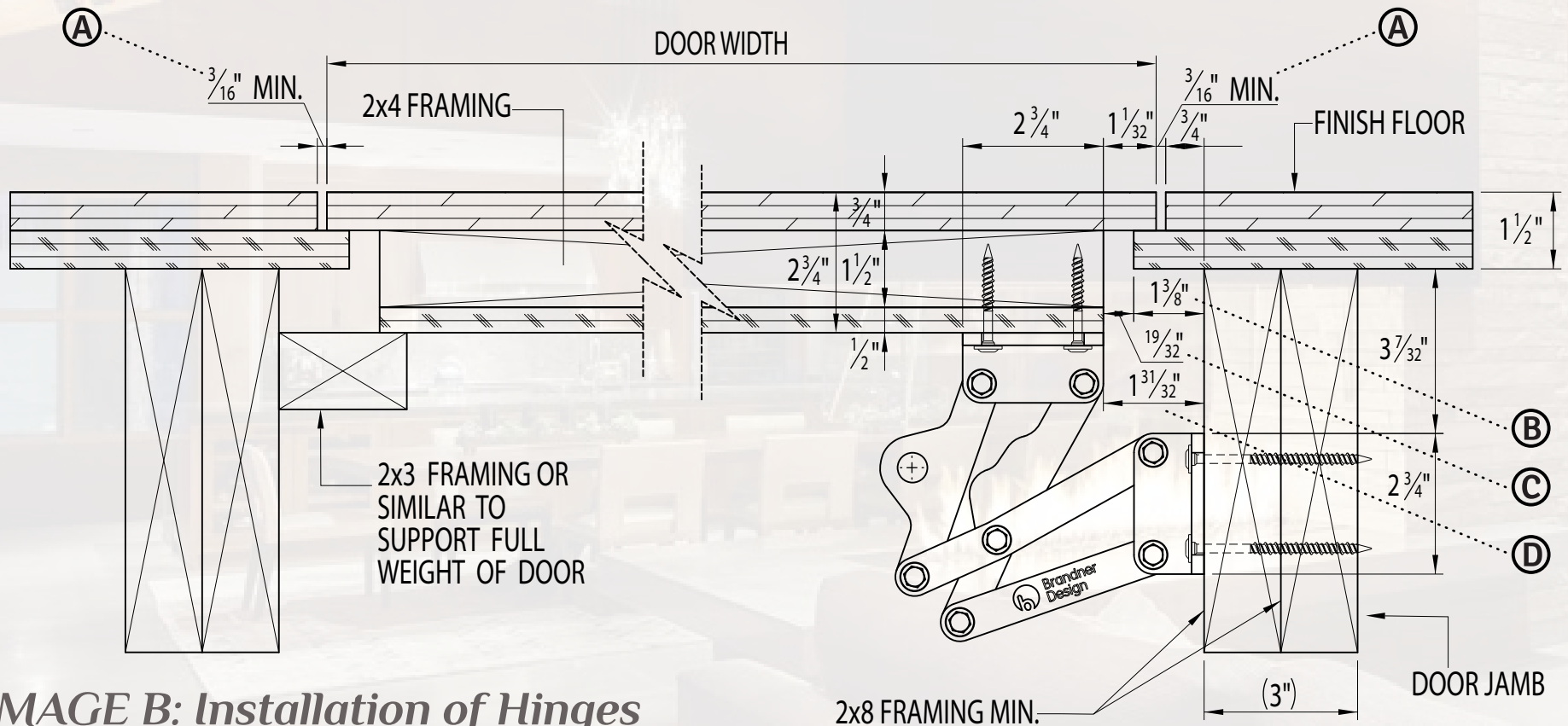
*Floor Door Hinge Extended*





# Installation Instructions (1)

- 1 - Place the door into the floor door cavity so that it sits in its closed position. The Floor Door Hinge must be attached to the door while the door is in the closed position.
- 2 - Align the Floor Door Hinge base plates to the door and jamb respecting distances **(A)**, **(B)**, **(C)**, and **(D)**. (refer to Image B "Installation of Hinges with Closed Door").
- 3 - Secure the Floor Door Hinge to the Door Jamb using four (4) GRK RSS 14312, 1/4" x 3-1/2" screws for each hinge (Image B).
- 4 - Ensure the door has 3/16" gap (distance **(A)**) to the portal opening on all sides (Image B).
- 5 - Securely screw the Floor Door Hinge to the Door using four (4) GRK RSS 12155, 1/4" x 2" screws for each hinge, ensuring that the screws penetrate into the structural frame of the door rather than just the surface panel (Image B).



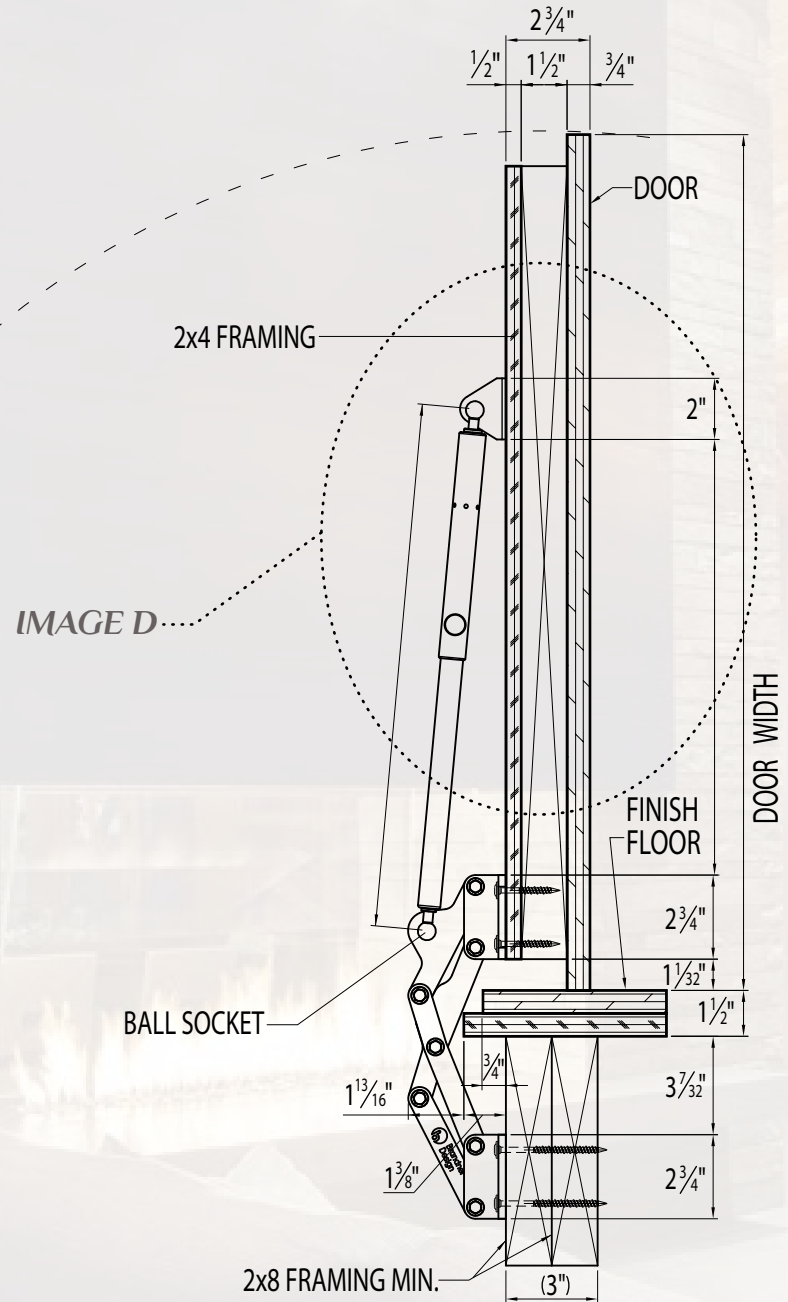
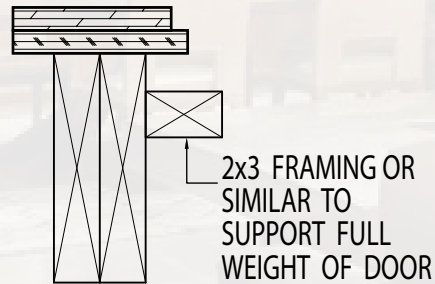
**IMAGE B: Installation of Hinges with Closed Door**

# Installation Instructions (2)

6 - Open the door to its fully extended position at 90 degrees from the floor. (refer to *Image C "Installation of Gas Struts with Open Door"*).

7 - Locate the Floor Door Hinge nearest to the top of the stairs and fasten the Lock Strut to this specific hinge by inserting the LOCK STRUT through the hole on the hinge arm connected to the door (not the arm affixed to the wall). After threading, secure the exposed end with one (1) of the provided CAP NUTS. (*Image C*).

## IMAGE C: Installation Of Gas Struts With Open Door





## Installation Instructions (3)

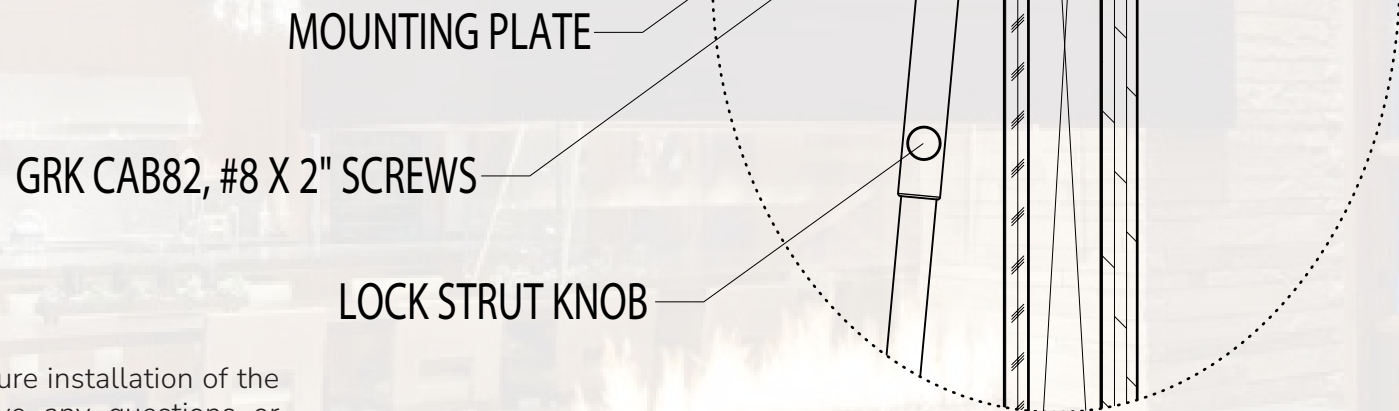
8 - Place the mounting plate attached to the opposite end of the strut on the door frame. Secure it in place with three (3) GRK CAB82, #8 x 2" screws for each plate. (refer to image D "Mounting Plate on Door & Unlocking Strut").

9 - Repeat the process for all remaining struts.

10 - Pull the knob out on the Lock Strut to unlock the door (image D).

11 - Close the door.

### IMAGE D: Mounting Plate On Door & Unlocking Strut



These steps ensure the proper and secure installation of the Floor Door Hinge System. If you have any questions or concerns during the installation process, please refer to the provided images for guidance or contact our customer support for assistance at:

[sales@brandnerdesign.com](mailto:sales@brandnerdesign.com) | 406 582 0711  
[brandnerdesign.com](http://brandnerdesign.com)

## *Floor Door Package:*

Additionally, Brandner Design offers a comprehensive Floor Door Package that includes an aluminum frame with a flush plywood covering, specifically designed for the seamless installation of your chosen flooring.

It also features a custom door jamb specifically crafted to accommodate our Floor Door Hinge System. For more detailed information on this product, please get in touch with our sales team at [sales@brandnerdesign.com](mailto:sales@brandnerdesign.com).





## FAQ

- **How Many Hinges Do I Need?**

We recommend there be a hinge every 24" with the outside hinges be mounted 6" from the edge of the door. A minimum of two (2) hinges are required for any door size.

- **Does The Hinge Come With Struts And Why Do I Need Struts?**

Yes, all our Floor Door Hinge Systems include Gas Struts. It is our recommendation that each hinge be accompanied by a strut, with at least one of the struts being locking. Having one locking strut is a safety measure to help prevent the door from accidentally falling.

Gas struts play a crucial role in facilitating the opening of a floor door. These struts are equipped with nitrogen gas and a seal lubricant that provides slam-resistant damping at the end of the stroke.

- **Will The Struts Hold The Whole Weight Of The Door?**

While gas struts assist in the opening and closing of doors, it's important to note that they are not fully automatic and do not bear the entire weight of the door. A minimal effort is still required to operate the door. Notably, the gas strut is inactive when the door is in a horizontal position (fully closed), requiring the door to open at least 30 degrees for the gas strut to engage in aiding the lifting process.

- **Can The Hinge Be Used Vertically?**

No, the hinge is designed to be used in a horizontal position lifting away from the floor which in turn also means it cannot be used on an attic door/be pushed in.

- **Does My Door Need Framing?**

Ideally the hole in the floor has a recessed frame to help assist with holding the weight of the door so the finished floor is not solely holding the weight.

- **What Should My Door Be Made Out Of?**

Your door can be a simple 2" x 4" wooden beam construction. It doesn't need to be metal.



## *Disclaimer & Return Policy*

Floor Door Hinges are solely designed to articulate a floor door up and away from a basement/crawl space cavity opening. To ensure effective operation gas struts are required for all hinges to assist with opening. Additionally, one strut should have a locking mechanism securing the door in the open position.

When used and installed per Brandner Design specifications Floor Door Hinges have a warranty against dysfunction for 10,000 opening cycles. This system is not intended to be used on a vertical door.

Floor Door Hinge warranty is void if there is deviation from the floor door hinge spec sheet and/or installation guide. Warranty pertains to hinges only. Gas struts sold by Brandner Design do not carry a warranty through Brandner Design. Brandner Design is not liable for injuries related to door operation.

Floor Door Hinges should not be loaded more than 100lbs/hinge for any given door. One hinge per 24" door length is required.



Brandner Design accepts returns on all merchandise excluding custom orders. Returns must be postmarked or received within 30 days from time of purchase. Items must be returned in the same condition in which they were received. Used or damaged merchandise returned may be subject to partial or no refund. Buyer is responsible for the cost to ship items back to Brandner Design.

Returned items must be received before any refunds or exchanges are granted. Refunds will be processed via the original payment method at time of purchase.

Please contact Brandner Design prior to returning any merchandise.

