G&W Electric

Engineered to order. Built to last.®

# Powerful Reliability Meets Design Flexibility

Trident® Solid Dielectric Switchgear

With a century of expertise in engineering durable medium-voltage distribution products, G&W Electric possesses the knowledge of the power industry and the art of attentive listening. Our commitment to understanding your unique requirements through thoughtful listening enables us to develop solutions tailored precisely to your needs. Whether it involves deploying our time-proven switches to ensure uninterrupted power in vital industries or implementing cuttingedge automation systems for the smart grids of tomorrow, we stand ready to tackle your challenges with decades of high-performance engineering experience.

## The Trident® Switchgear Solution

We are dedicated to delivering proven solutions that meet — and exceed — your needs. That's why our engineers ask you questions and listen to find the right solution. Our solid dielectric insulated Trident switchgear does not require preventative maintenance while offering more flexibility, leading to a long lasting solution that can be designed for your unique application.

Trident switchgear provides the total lifecycle cost and operational benefits of fuseless, electronically controlled, resettable overcurrent protection, with the safety and maintenance benefits of an environmentally friendly dead-front design.

Utilizing G&W Electric's time-proven, submersible epoxy insulation, Trident switchgear load and fault interrupting vacuum interrupters are fully encapsulated. This solid dielectric insulation eliminates the degradation of dielectric integrity commonly associated with oil and air insulated switchgear.

## Far-Reaching Capabilities

The Trident switchgear family of products are available for both padmount and vault solutions. Enclosures comply with IEEE C57.12.28 and C57.12.29 and are available in a variety of colors.

Trident switchgear is ideal for harsh environments, such as wet vaults, with its ability to withstand extended periods of submersion, and meets IP68 per IEC 60529 for 20 feet over 20 days.

# Trident® Switchgear*

## Spring Operated

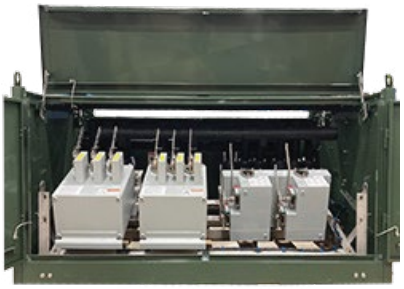
Trident-ST Switchgear

Trident-S Switchgear

Trident-S Switchgear with SafeVu® Visible Break
*Available up to 29.3kV*

Trident-SP Switchgear
*Available up to 27kV*

Trident-SP Switchgear
with SafeVu® Visible Break
*Available up to 15.5kV*



Low-profile Mounting Frame for
Trident-S Switchgear with SafeVu
Visible Break and Trident-ST Switchgear

## Magnetically Actuated

Trident-SR Switchgear

Trident-SR Switchgear with SafeVu Visible Break
*Available up to 15.5kV*

**Trident switchgear is available in various configurations. Contact your G&W Electric sales representative.*

# Key Features

### OVERCURRENT PROTECTION

Our engineers equip fault interrupters with an encapsulated 500:1 or 1000:1 current transformer and a G&W Electric self-powered vacuum interrupter control. Alternately, a wide variety of protective relay packages are available, including relays from SEL and other leading relay suppliers.

### AUTOMATION

Automation begins with adding motor actuators to a manual switch, or with magnetically actuated Trident-SR switchgear. Motors can be factory installed on new equipment or retrofitted to pre-existing switchgear.

We offer motor operated automatic transfer solutions that perform in 10 seconds and magnetically actuated transfer switches that perform in 10 cycles or less.

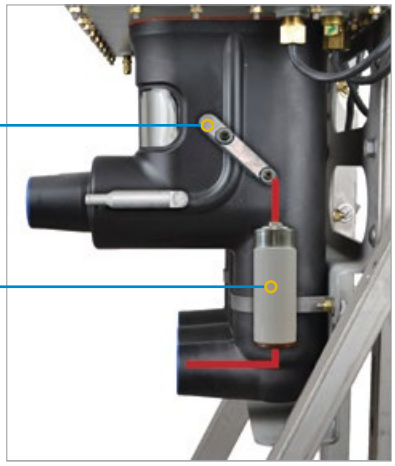
For fast-acting applications, the Trident-SR switchgear series offer speeds of just 3.5 cycles for both load and fault interrupting operations. G&W Electric offers a variety of relay packages that can be enabled with our power grid automation software to improve system reliability and efficiency.

Once an automation solution is fully engineered and built, the entire system can be validated with factory acceptance testing, minimizing on-site disruptions. G&W Electric may also offer on-site commissioning and integration services to ensure the entire project executes properly up to the time of energization.

## SafeVu® Visible Break

G&W Electric introduced the first visible break — known as SafeVu visible break— to the market in 2012. This innovative feature is built into the Trident® switchgear, eliminating the need to remove elbows or use externally mounted components to provide a visible open. The SafeVu visible break feature is gas and oil free, without the need for maintenance or monitoring. The SafeVu visible break operating handle is operable via hook stick or rope rigging, making it ideal for subsurface applications where space or safety practices prevent the operator from entering the vault to create a visible break.

**Integral visible break in the open position.**



**Internal components are shown outside the model as reference.**

## EXTERNAL CTs AND EXTERNAL PTs

Metering or relaying accuracy current and potential transformers are available for use with protective relay packages.

## SUBMERSIBLE

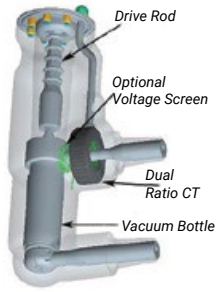
Designed to operate while submerged in up to 20 feet of water for 20 days, making them ideal for flood-prone and harsh environments.

## OPERATING HANDLE

G&W Electric will select the appropriate handle based on the application. Handles are operable via hook stick or rope rigging. This photo demonstrates an example of one type of handle.

## HIGH ACCURACY VOLTAGE SENSORS

Accusense® VS-27-UG voltage sensors provide 0.5% metering class voltage sensing accuracy and enable users to collect critical voltage data for optimizing grid power delivery and reliability. The 27kV sensor is designed to connect to underground switchgear in both new and retrofit applications.




## VOLTAGE SENSING BUSHINGS

G&W Electric's Voltage Sensing (VS) Bushings are 2% to 4% accurate and are available in dead break apparatus or 200A deepwell. The VS is a temperature compensated, built-in voltage measuring system that eliminates the need for PTs in analog phase to ground voltage monitoring.


## KEY INTERLOCKS

Key interlocks may be used to ensure safe coordination of equipment. All Trident® switchgear ways can be factory equipped with key interlocks or provisions for key interlocks.

## AUXILIARY CONTACTS

Auxiliary contacts are available and are mounted internal to the mechanism housing to provide remote indication of switch contact position. One normally open and one normally closed Form C contact is provided.

# Trident® Switchgear

## Trident Switchgear Series Overview

| Trident Switchgear Series | Single or Three-Phase Operation | Automation | SafeVu® Visible Break | Voltage Sensing | Benefits | Applications |
|---|---|---|---|---|---|---|
| **Trident-S Switchgear** | Three-phase | Motor optional | ✓* | ✓** | No maintenance or monitoring<br><br>Dead-front design eliminates exposure to live parts<br><br>Epoxy is inert<br><br>No fuses or fuse links<br><br>Fully encapsulated current transformers; no external power source or PT required | Padmount, dry vault and submersible installations<br><br>System fault protection and curve coordination<br><br>Radial and loop switching<br><br>Automation with communicating and non-communicative schemes |
| **Trident-SR Switchgear** | Three-phase | Magnetic actuator | ✓‡ | ✓ | | |
| **Trident-SP Switchgear** | Single-Phase | Motor optional | ✓‡ | – | | |
| **Trident-ST Switchgear** | Single or three-phase | – | – | – | | |

**Available up to 29.3kV*
*** Not yet available with 27kV / 29.3kV SafeVu visible break*
*‡ Available up to 15.5kV*

## IEEE C37.60 Fault Interrupting Duty for Vault and Automated

| Percent of Maximum Interrupting Rating | Approximate Interrupting Current, Amps | Number of Fault Interruptions |
|---|---|---|
| 15-20% | 2,000 | 44 |
| 45-55% | 6,000 | 56 |
| 90-100% | 12,500 | 16 |
| **Total Number of Fault Interruptions: 116** | | |

## Trident® Switchgear Ratings

Trident switchgear is designed, tested and built per IEEE C37.74 for load break switching, IEEE C37.60 for fault interrupting, IEEE 386 for bushing specification, and IEC 60529 for environmental protection rating. Certified test reports are available.

| | | | |
|---|---|---|---|
| **Voltage Class (kV)** | 15 | 25 | 35 |
| **Max. System Voltage (kV)** | 15.5 | 27‡ | 38 |
| **BIL (kV)** | 110Δ | 125 | 150 |
| **Continuous Current (A)** | 630§ | 630§ | 630§ |
| **Load Break Current (A)** | 630§ | 630§ | 630§ |
| **AC Withstand, 1 min. (kV)** | 35 | 60 | 70 |
| **AC Withstand, Productions, 1 min. (kV)** | 34 | 40 | 50 |
| **DC Withstand, 15 min. (kV)** | 53 | 78 | 103 |
| **Momentary Current, RMS, asym (kA)** | 20* | 20 | 20 |
| **Fault Close 3 times, asym (kA)** | 20* | 20 | 20 |
| **1 second Current, sym (kA)** | 12.5* | 12.5 | 12.5 |
| **Fault Interrupting Current, sym (kA)** | 12.5* | 12.5 | 12.5 |
| **Vacuum Interrupter Mechanical Operations for Spring Operated** | 2,000 | 2,000 | 2,000 |
| **Vacuum Interrupter Mechanical Operations for Magnetically Actuated** | 10,000 | 10,000 | 10,000 |

*Note:*
*Δ BIL impulse rating is 95kV when using integrated visible break feature*
*‡ Up to 29.3kV max. system voltage available*
*§ Up to 900A available on In/Out without SafeVu; up to 800A available on multi-way Trident switchgear without SafeVu®*
** 16kA sym. 25.6kA asym. Available with 3 phase ganged Trident-S switchgear and Trident-S switchgear with SafeVu® visible break upon request up to 15.5kV*

## A Reliable Partner

G&W Electric combines unmatched design and manufacturing expertise, as well as extensive research and development, with ISO 9001 certified quality systems across the entire design and manufacturing process. Our suite of products is designed to the latest industry standards and backed by over a century of engineering and manufacturing expertise. The result? Time proven, reliable performance.

With a commitment to listening to our customers and delivering on their needs, G&W Electric has built a long-standing reputation for delivering quality solutions and superior service. This commitment to putting our customers first has kept us ahead of a changing industry, allowing us to continue powering the world.

## Part Number Configuration

| Character | 1 | 2 | 3 | 4 | 5 | | 6 | 7 | 8 | | 9 | | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sample Part Number** | **P** | **L** | **S** | **3** | **2** | **-** | **3** | **7** | **6** | **-** | **12** | **-** | **6** | **FA** | **VU** | **-A** |

### 1. Type of Installation

P = Padmount (enclosure)
V = Vault (no enclosure)

### 2. Type of Load Break Switches

L = Trident-S or Trident-SP (depends on number of phases)
M = Trident-SR*

*Leave blank if no load break switches Consult factory for other options or combinations of options shown here*

### 3. Type of Fault Interrupter

S = Trident-S or Trident-SP (depends on number of phases)
T = Trident-ST (single-phase trip capability)
F = Trident-S and Strident-ST combination
R – Trident-SR**
U= Unswitched bushings directly on bus

*Leave blank if no fault interrupters or no un-- switched bushings directly on bus*

### 4. Number of Ways

Enter a number 2 through 6
*Consult factory for other options or combinations of options shown here*

### 5. Number of Load Break Switches

Enter a number 2 through 6, up to the number of ways.

### 6. Number of Phase

1 = Single phase switch
3 = Three phase switch

### 7. Voltage Class
**(maximum system voltage, Ph-Ph)**

7 = 15.5kV
8 = 27kV*
9 = 38kV

**Consult factory for 29.3kV options*

### 8. Continuous Current

6 = 630A
8 = 800A*
9 = 900A*

**Consult factory for limitations*

### 9. Fault Interrupting or Momentary Rating

12 = 12.5kA sym. For all switches with fault interrupters

16 = 16kA sym. For all switches with fault interrupters***

20 = 20kA asym. For all switches without fault interrupters

25 = 25.6kA asym. For all switches without fault interrupters

**** 16kA sym. / 25.6kA asym. rating available up to 15.5kV with three phase ganged Trident-S and Trident-S with SafeVu*

### 10. Model

3 = Single load break way
4 = Single fault interrupting way
6 = 3 way with 2 load break, 1 fault interrupter
7 = 3 way with 1 load break, 2 fault interrupter
9 = 4 way with 2 load break, 2 fault interrupter 10 = 4 way with 4 load break, 0 fault interrupter
11 = 4 way with 3 load break, 1 fault interrupter
12 = 4 way with 1 load break, 3 fault interrupter
13 = 3 way with 3 load break, 0 fault interrupter

*For all other configurations, model is same as digit 4 and 5*

### 11. Configuration (access style)

FA = Front access to bushings and operators
FB = Front access to bushings and back access to operators

*Consult factory for additional options*

### 12. SafeVu Included

VU = SafeVu included* (available up to 29.3kV)

*Leave blank if SafeVu not included*

**Advise factory if not all ways include SafeVu*

### 13. Automated

-A = Motor and Control Included

*Leave blank if not automated*

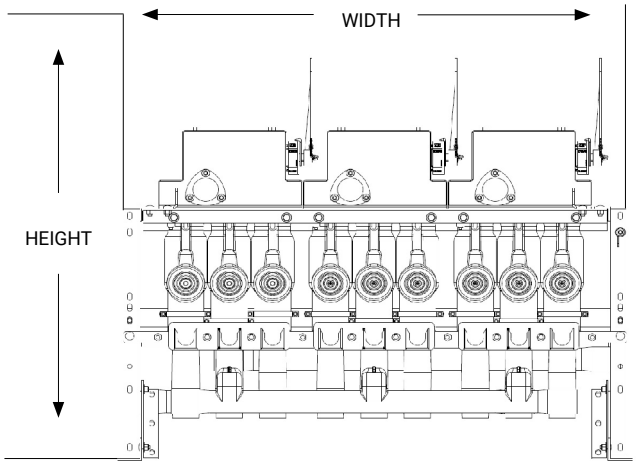
## Trident-S

| | VAULT FRONT ACCESS | | PADMOUNT FRONT ACCESS | | PADMOUNT FRONT/BACK ACCESS | |
|---|---|---|---|---|---|---|
| # Ways | Width inches (mm) | Weight lbs (kg) | Width inches (mm) | Weight lbs (kg) | Depth inches (mm) | Weight lbs (kg) |
| 3 | 63 (1,600) | 850 (400) | 71 (1,800) | 1,750 (800) | 77 (1,960) | 1,900 (900) |
| 4 | 81 (2,060) | 900 (400) | 89 (2,260) | 1,800 (800) | 77 (1,960) | 2,100 (1,000) |
| 5 | 99 (2,510) | 1,250 (600) | 107 (2,720) | 2,150 (1,000) | ***Consult Factory*** | |
| 6 | 117 (2,970) | 1,700 (800) | 125 (3,180) | 2,600 (1,200) | ***Consult Factory*** | |

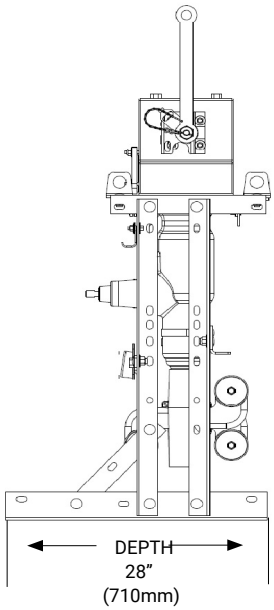
*Consult factory for size and weight of configurations with Trident-ST (single phase trip)*
*Do not use for construction*

## Vault Front Access

**FRONT**




**SIDE**




**Height =**

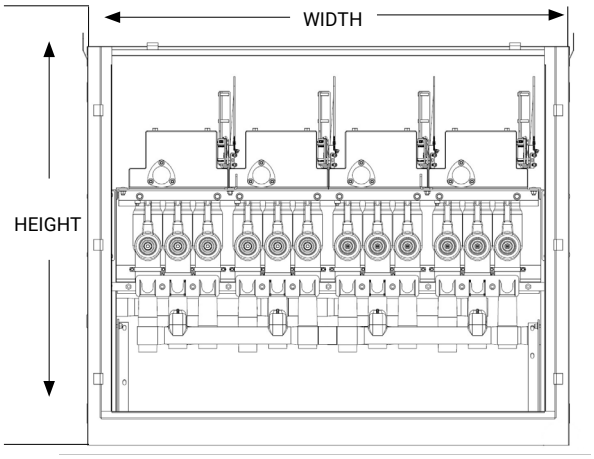
55" (1,400 mm) with standard 24" bushing height.

60" (1,525 mm) with standard 24" bushing height with 29.3kV SafeVu feature.

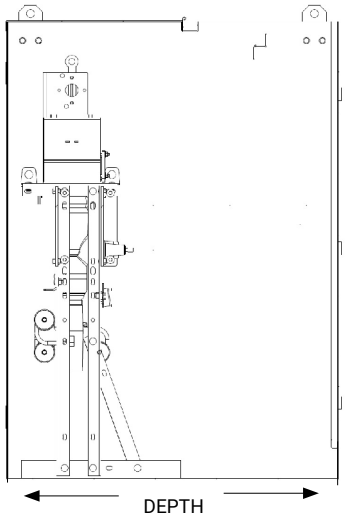
*Dimensions are approximate. Do not use for construction. Consult factory for height with Trident-ST.*

## Padmount Front Access

**FRONT**




**SIDE**




With Standard 24" cable compartment 42" (1,070 mm) without SafeVu 48" (1,220 mm) with SafeVu feature at 15kV 50" (1,270 mm) with SafeVu feature at 29.3kV

**Height** =

57" (1,450 mm) with standard 24" bushing height.

60" (1,525 mm) with standard 24" bushing height with 29.3kV SafeVu feature.

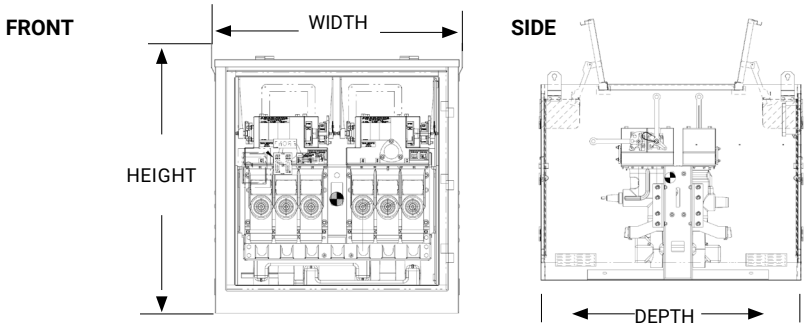
*Dimensions are approximate. Do not use for construction. Consult factory for height with Trident-ST.*

## Trident-S w/ SafeVu

| | | VAULT FRONT ACCESS | | PADMOUNT FRONT ACCESS | | PADMOUNT FRONT/ BACK ACCESS | | | |
|---|---|---|---|---|---|---|---|---|---|
| # Ways | Voltage Class | Width inches (mm) | Weight lbs (kg) | Width inches (mm) | Weight lbs (kg) | Depth inches (mm) | Width inches (mm) | Height Inches (mm) | Weight lbs (kg) |
| 3 | 15kV | 63 (1,600) | 950 (400) | 71 (1,800) | 1,850 (800) | 92 (2,340) | 72 (1,830) | 57 (1,450) | 2,100 (1,000) |
| | 29.3kV | 83 (2,100) | 1,535 (700) | 91 (2,310) | 2,435 (1,100) | 95 (2,410) | 72 (1,830) | 60 (1,525) | 2,840 (1,300) |
| 4 | 15kV | 81 (2,060) | 1,000 (500) | 89 (2,260) | 1,900 (900) | 92 (2,340) | 72 (1,830) | 57 (1,450) | 2,400 (1,100) |
| | 29.3kV | 107 (2,720) | 1,780 (800) | 115 (2,920) | 2,680 (1,220) | 95 (2,410) | 72 (1,830) | 60 (1,525) | 3,260 (1,500) |
| 5 | 15kV | 99 (2,510) | 1,400 (600) | 107 (2,720) | 2,300 (1,000) | *Consult Factory* | | | |
| | 29.3kV | 132 (3,350) | 2,375 (1080) | 140 (3,550) | 3,275 (1,490) | *Consult Factory* | | | |
| 6 | 15kV | 117 (2,970) | 1,900 (900) | 125 (3,180) | 2,800 (1,300) | *Consult Factory* | | | |
| | 29.3kV | 156 (3,960) | 3,070 (1,400) | 164 (4,160) | 3,970 (1,800) | *Consult Factory* | | | |

*Consult factory for size and weight of configurations with Trident-ST (single phase trip). Do not use for construction.*

## Padmount Front/Back Access *(Optional Compact Trident Padmount-Front Back Access available)*

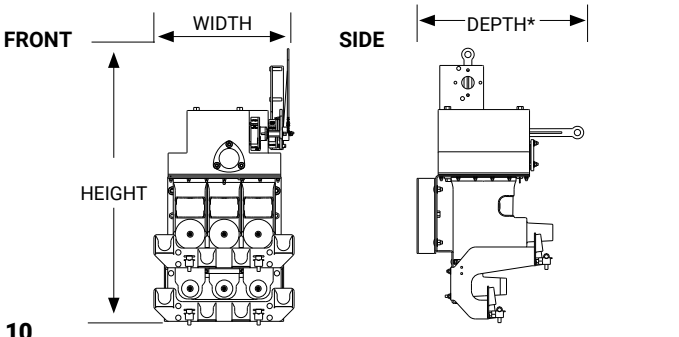



*Height:*
*57" (1,450 mm) with standard 24" bushing height. 60" (1,525 mm) with standard 24" bushing height with 29.3kV SafeVu feature.*

## Two-way Trident-S and Trident-S w/ SafeVu

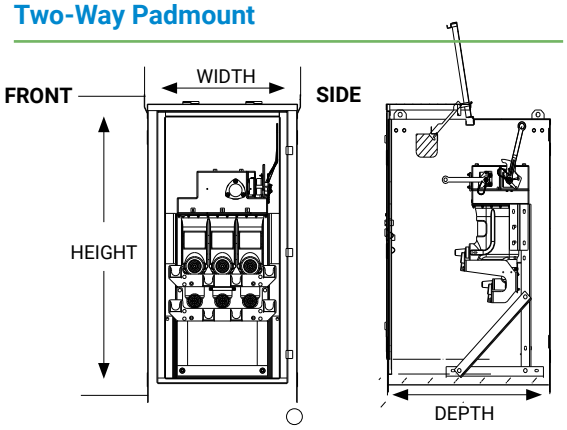
| TWO-WAY VAULT | | | | | |
|---|---|---|---|---|---|
| SafeVu | Voltage Class | Depth inches (mm) | Width inches (mm) | Height inches (mm) | Weight lbs (kg) |
| Non SafeVu | 15-38kV | 21 (530) | 20 (510) | 44 (1,118) | 200 (90) |
| SafeVu | 15kV | 24 (610) | 22 (560) | 44 (1,118) | 275 (125) |
| SafeVu | 29.3kV | 27 (690) | 27 (690) | 50 (1,256) | 420 (190) |
| **TWO-WAY PADMOUNT** | | | | | |
| SafeVu | Voltage Class | Depth inches (mm) | Width inches (mm) | Height inches (mm) | Weight lbs (kg) |
| Non SafeVu | 15-38kV | 36 (910) | 28 (710) | 58 (1,458) | 800 (365) |
| SafeVu | 15kV | 40 (1,010) | 28 (710) | 58 (1,458) | 875 (400) |
| Safevu | 29.3kV | 50 (1270) | 38 (960) | 61 (1,550) | 1070 (480) |

## Two-Way Vault




**Depth includes full length of handle travel*

## Two-Way Padmount



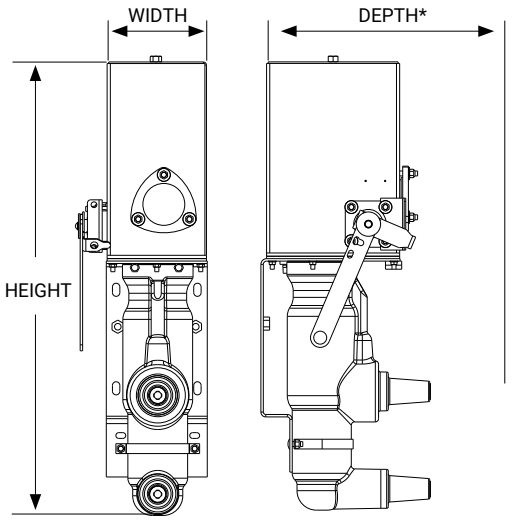
## Trident-SP

| TWO-WAY VAULT | | | | | |
|---|---|---|---|---|---|
| SafeVu | Voltage Class | Depth inches (mm) | Width inches (mm) | Height inches (mm) | Weight lbs (kg) |
| Non SafeVu | 15-38kV | 13 (305) | 10 (245) | 35 (889) | 75 (34) |
| SafeVu | 15kV | 25 (614) | 15 (381) | 36 (909) | 150 (68) |
| **TWO-WAY PADMOUNT** | | | | | |
| SafeVu | Voltage Class | Depth inches (mm) | Width inches (mm) | Height inches (mm) | Weight lbs (kg) |
| Non SafeVu | 15-38kV | 31 (787) | 38 (965) | 24 (610) | 75 (34) |
| SafeVu | 15kV | 31 (787) | 38 (965) | 24 (610) | 150 (68) |

*Do not use for construction*

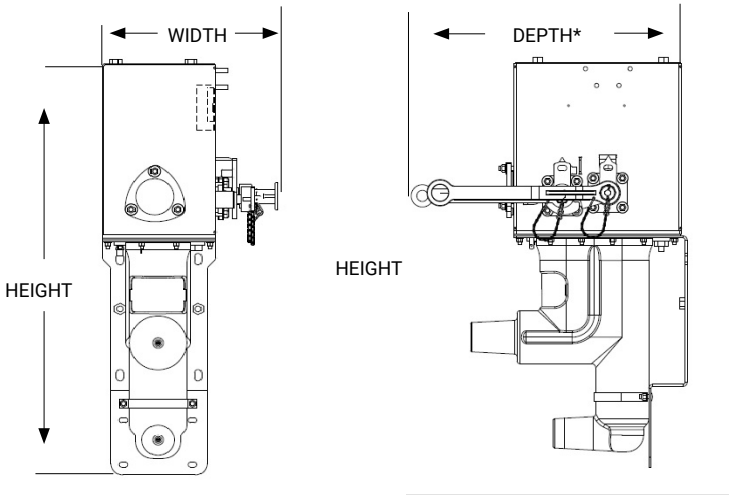
## Two-Way Vault

**FRONT** **SIDE**




** Depth includes full length of handle travel*

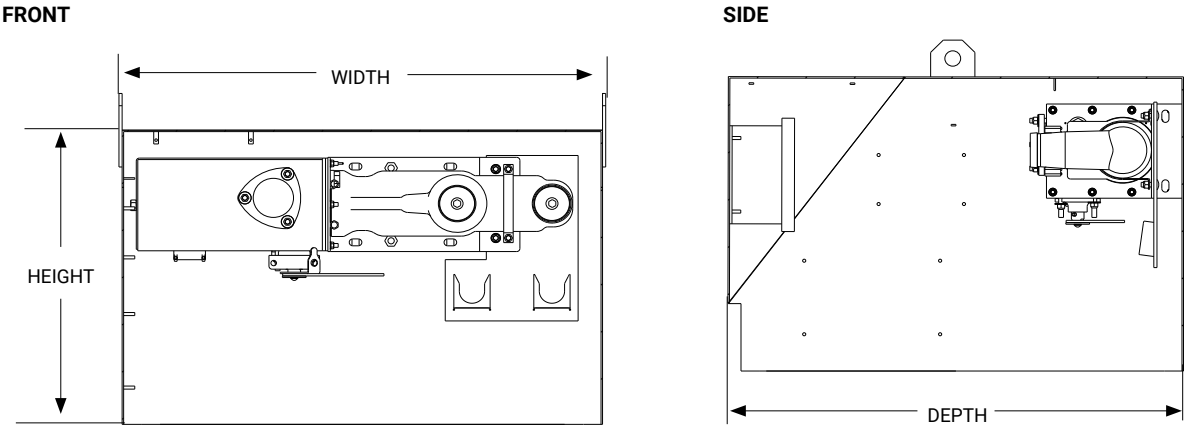
**FRONT** **SIDE**




** Depth includes full length of handle travel*

## Two-Way Padmount

**FRONT** **SIDE**



## Contact us today

708.388.5010 or info@gwelec.com

G&W Electric

Engineered to order. Built to last.®

Since 1905, G&W Electric has been a leading provider of innovative power grid solutions including the latest in load and fault interrupting switches; reclosers; sensors; system protection equipment; power grid automation; and cable accessories. G&W Electric is headquartered in Bolingbrook, Illinois, with manufacturing facilities in the United States, Canada, Italy, China, and Mexico. We help our customers meet their challenges and gain a competitive edge through a suite of advanced solutions and technical services.



GW13 Rev.1 2026
2026.05/GF

gwelectric.com