



Configurable, standard enclosures for purge & pressurization

Key points

- Low leakage enclosures, specifically designed for purge & pressurization.
- Superior performance under pressure, low running costs, and enhanced safety.
- 20 standard sizes and a range of standard options.
- Robust stainless steel construction: 2-3 mm thickness, depending on enclosure size.
- IP66 or Type 4X ingress protection.
- Purge system ready installed.
- Certification included for simple and cost-effective project completion (ATEX, IECEx, NFPA compliant)

Overview

With a single point of order for the enclosure, purge system, and certification, PressurEx enclosures offer the fastest and most straightforward route to a fully Ex p certified enclosure.

Specifically designed and constructed for purge & pressurization, each enclosure is fitted with a right-sized purge system, before undergoing full testing and inspection. After fit-out at the client's facility, Expo will inspect the completed enclosure and issue the appropriate hazardous area certification.

Enclosure sizes and options

The PressurEx range comprises 20 standard sizes with heights from 600 mm to 2000 mm, widths from 600 mm to 1200 mm, and depths from 400 mm to 800 mm. All enclosures are supplied with an equipment backplate, and have a fully gasketed gland plate in the base. Smaller enclosures are designed for wall-mount, larger enclosures can be supplied with optional plinth legs.

Other available options are: Glazed window in the door; Sunshade; Door pocket; 19" Rack-mount preparation; lifting eye-bolts.

Purge system

Expo will install and commission a fully certified purge & pressurization system, matched to the hazardous area details and enclosure size. Systems are selected from the SmartPurge or MiniPurge ranges. See page 4 for full details.

Certification

Subject to meeting certain criteria, Expo will issue compliance documents in-line with standards EN/IEC 60079-0 & EN/IEC 60079-2, or NFPA 496, depending on the end-user's requirements.

- For ATEX & IECEx applications, Expo issues a third party equipment certificate.

- For North American applications, Expo issues a Manufacturers Declaration of Conformity to NFPA 496.

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PressurEx enclosure features & options

Expo's enclosures are purpose-built for hazardous area duty utilising purge & pressurization. Unlike most mass-produced, off-the-shelf items that often feature thinner materials and are not pressure tight, PressurEx enclosures are engineered for high performance under demanding conditions.

Each enclosure is built in line with the standard size and options selected. Based on the hazardous area requirements, Expo will install and commission the most suitable purge system. All enclosures are leak tested and inspected before dispatch to you for fit-out.



- On double door enclosures, the centre doorpost is removeable for easy access to the equipment backplate.
- Laminated glass windows (optional) for long-term resistance against scratching and clouding.
- Sunshade (optional) for reduction of direct solar radiation.
- Large, fully gasketed gland plate in enclosure base for power and signal cables.
- 300 mm plinth legs to allow for ground fastening and access to gland plate.
- Dual thermostats to provide over temperature protection.
- Internal & external earthing facilities.

Specifications & options

| Standard | |
|---------------------------|---|
| Material of construction | 316L stainless steel. Double grained finish. Thickness 2-3 mm, depending on enclosure size. |
| Ingress protection | Options: IP66 or UL50E Type 4X |
| Ambient temperature range | -20°C to +55°C (-4°F to +131°F) |
| Door fasteners | Tool operated 1/2 turn compression latch. 316L stainless steel. Full perimeter coverage for maximum leak-tightness. |
| Hinges | 316L stainless steel, floating type to ensure full perimeter sealing. |
| Seals | Door & gland plate seals: Silicone. |
| Equipment backplate | Corrosion resistant zinc coated steel. See page 6/7 for dimensions. |
| Gland plates | Base mounted. Fully gasketed. See page 4 for dimensions. |
| Enclosure mounting | Small enclosures: Wall-mount lugs; Large enclosures: 300 mm (12 in.) plinth legs (Optional). |
| Temperature sensors | 2 thermostats for over temperature alarm and/or to initiate power isolation. |
| Pressurization system | MiniPurge or SmartPurge, dependent on hazardous area requirements. See page 4 for details. |
| Options | |
| Window in door | Laminated glass, thickness 6.4 mm. (0.25 in.) See page 4 for dimensions. |
| Sunshade | 316L stainless steel. |
| Document pocket | Polystyrene, installed inside door. |
| Rack mounting system | Mounting bosses for standard 19" rack. Only available on 600 mm (24 in.) wide enclosures. (Rack components not supplied). |

Certification data

| | |
|-----------------------|---|
| Component certificate | ATEX: ExVeritas 19ATEX0454U IECEX: EXV 19.0010U North America: UL50E Type 4X 20151230-E477372 |
| Populated certificate | ATEX Zone 1: ExVeritas 19ATEX0469X ATEX Zone 2: ExVeritas 19ATEX0470X IECEX Zone 1: EXV 19.0024X IECEX Zone 2: EXV 19.0025X North America: Expo MDOC to NFPA496 |

Gland plate and window dimensions mm [in.]

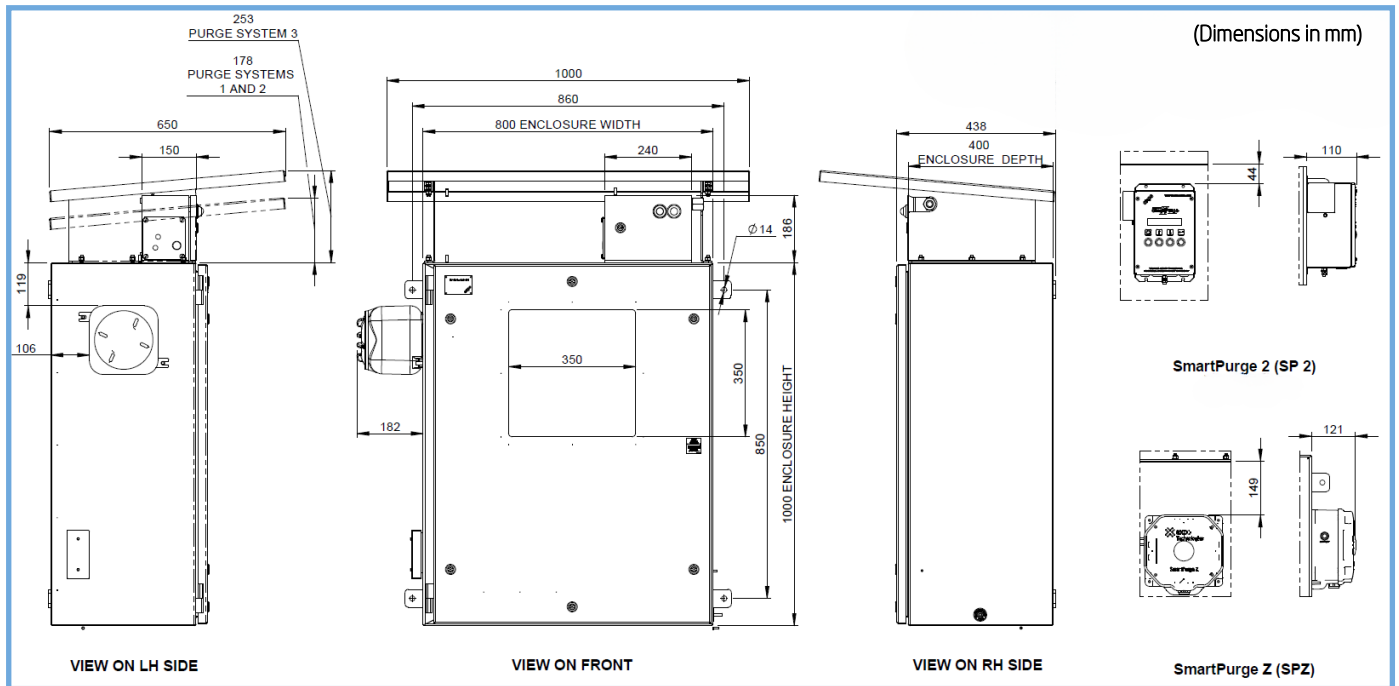
| Gland plate (3 mm thick stainless steel) | |
|---|---------------------------------|
| Enclosure sizes 1 to 13, 16, 17 | 500 (W) x 300 (D) [19.5 x 12] |
| Enclosure sizes 14, 15, 18 to 20 | 800 (W) x 300 (D) [31.5 x 12] |
| Window visible area (6.4 mm / 0.25 in. thick laminated glass) | |
| Enclosure sizes 1 to 8 | 350 (H) x 350 (W) [14 x 14] |
| Enclosure sizes 9 to 13 | 550 (H) x 350 (W) [21.5 x 14] |
| Enclosure size 14 | 550 (H) x 270 (W) [21.5 x 10.5] |
| Enclosure sizes 15 to 17 | 550 (H) x 350 (W) [21.5 x 14] |
| Enclosure sizes 18 to 19 | 550 (H) x 270 (W) [21.5 x 10.5] |
| Enclosure size 20 | 550 (H) x 350 (W) [21.5 x 14] |

Standard purge & pressurization systems*

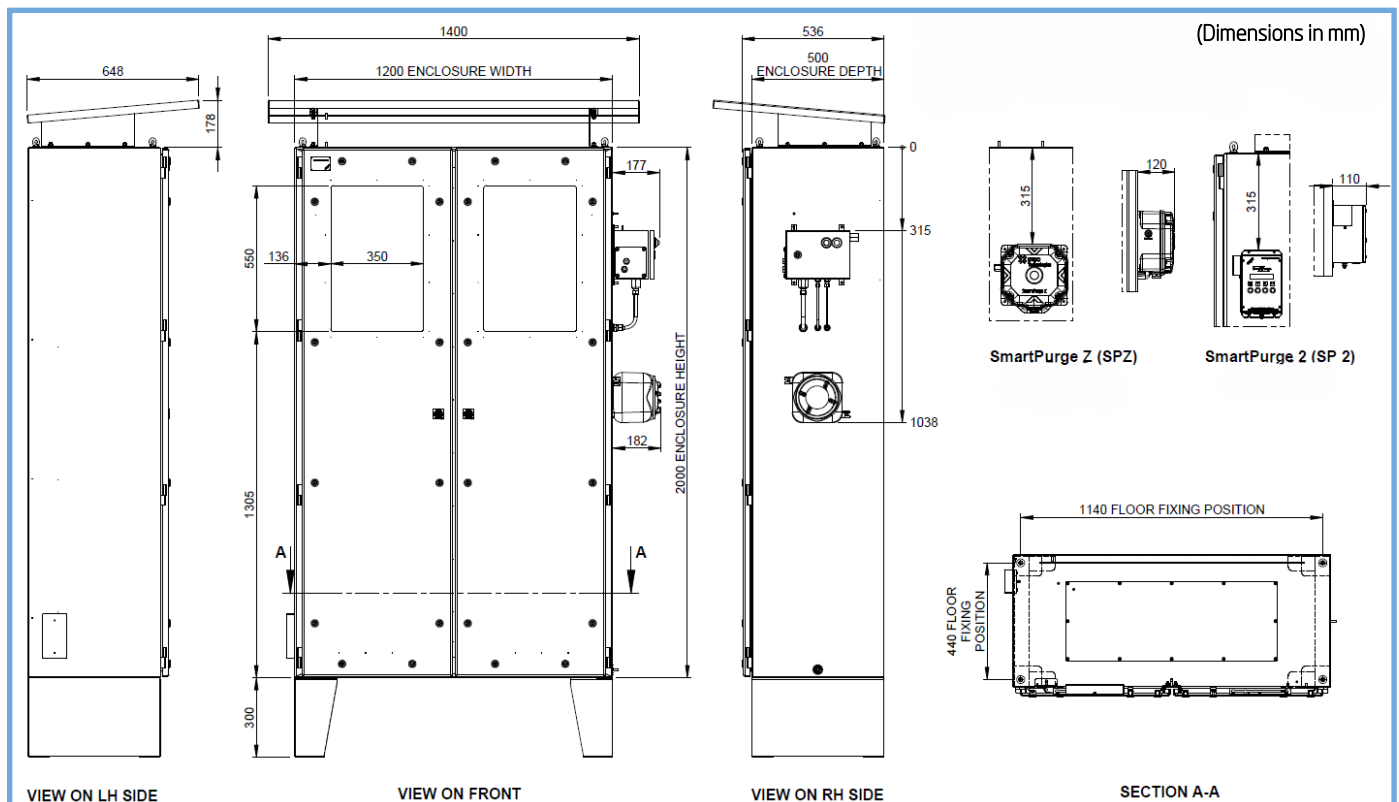
| Purge system ref. no. | Hazardous area | System | Full part number |
|-----------------------|------------------------------|--------------|------------------------|
| 01 | Zone 1 | SmartPurge 2 | SP2-PM-SS + SP2-DV |
| 02 | Zone 2 & Class I, Division 2 | SmartPurge Z | SPZ-1ALG-M111 |
| 03 | Class I, Division 1 | MiniPurge X | 4X 1XLC/SS/ET/PO + MIU |

* Systems will purge all sizes of enclosures within 30 minutes or less, and maintain the enclosure's IP66 or 4X integrity. Systems are installed and fully tested prior to enclosure dispatch.

Example general arrangement drawings



Small single door enclosure (Size 6)



Large double door enclosure (Size 20)

Part number selection matrix (Metric units)

| Pressurized Enclosure (Example part number) | | | | | | PE | ZE | 16 | LH | PL | WL | LE | DP | SU | XX | 01 |
|--|----------------------------------|-----------------------|---------------------|-----------------------------|-------------------------------------|------|----|----|----|----|----|----|----|----|----|----|
| ATEX & IECEx Zone 1 Ingress Protection IP66 | | | | | | | 2E | | | | | | | | | |
| A TEX & IECEx Zone 2 Ingress Protection IP66 | | | | | | | 3E | | | | | | | | | |
| Class I Div.1&2 Ingress Protection UL50E Type 4X | | | | | | | 4E | | | | | | | | | |
| Dimensions HxWxD (mm) | Configuration: Doors/Mounting | Material thickness | Backplate HxW mm | Weight (kg) ¹ | Heat dissipated (W) ² | Size | | | | | | | | | | |
| 600 x 600 x 400 | Single / Wall | 2mm | | 32 | 105 | 01 | | XX | | | XX | | XX | | | |
| 800 x 600 x 400 | Single / Wall | 2mm | | 39 | 128 | 02 | | XX | | | XX | | XX | | | |
| 800 x 800 x 400 | Single / Wall | 2mm | | 47 | 154 | 03 | | XX | | | XX | | XX | | | XX |
| 1000 x 600 x 400 | Single / Wall | 2.5mm | | 57 | 150 | 04 | | XX | | | XX | | | | | |
| 1000 x 600 x 500 | Single / Wall | 2.5mm | | 63 | 176 | 05 | | XX | | | XX | | | | | |
| 1000 x 800 x 400 | Single / Wall | 2.5mm | | 69 | 179 | 06 | | XX | | | XX | | | | | XX |
| 1000 x 800 x 500 | Single / Wall | 2.5mm | | 76 | 208 | 07 | | XX | | | XX | | | | | XX |
| 1000 x 900 x 500 | Single / Wall | 2.5mm | | 83 | 224 | 08 | | XX | | | XX | | | | | XX |
| 1300 x 600 x 500 | Single / Wall | 2.5mm | | 78 | 214 | 09 | | XX | | | XX | | | | | XX |
| 1300 x 800, 400 | Single / Wall | 2.5mm | | 84 | 218 | 10 | | XX | | | XX | | | | | XX |
| 1300 x 800 x 500 | Single / Wall | 2.5mm | | 93 | 251 | 11 | | XX | | | XX | | | | | XX |
| 1500 x 800 x 400 | Single / Wall | 2.5mm | | 94 | 243 | 12 | | XX | | | XX | | | | | XX |
| 1500 x 800 x 500 | Single / Wall | 2.5mm | | 104 | 280 | 13 | | XX | | | XX | | | | | XX |
| 1500 x 1000 x 400 | Double / Plinth bosses | 2.5mm | | 110 | 400 | 14 | | DD | | | | | | | | XX |
| 1800 x 1200 x 500 | Double / Plinth bosses | 2.5mm | | 158 | 586 | 15 | | DD | | | | | | | | XX |
| 2000 x 800 x 500 | Single / Plinth bosses | 3mm | | 157 | 480 | 16 | | | | | | | | | | XX |
| 2000 x 800 x 800 | Single / Plinth bosses | 3mm | | 198 | 614 | 17 | | | | | | | | | | XX |
| 2000 x 1000 x 400 | Double / Plinth bosses | 3mm | | 168 | 512 | 18 | | DD | | | | | | | | XX |
| 2000 x 1000 x 600 | Double / Plinth bosses | 3mm | | 197 | 704 | 19 | | DD | | | | | | | | XX |
| 2000 x 1200 x 500 | Double / Plinth bosses | 3mm | | 207 | 640 | 20 | | DD | | | | | | | | XX |
| Single door enclosure hinge position | | | | LH/RH | | | | | | | | | | | | |
| Double Doors (no choice of hinge position) | | | | DD | | | | | | | | | | | | |
| ³ 300mm tall Plinth Legs/No legs | | | | PL/XX | | | | | | | | | | | | |
| Window for Single Door Enclosure | | | | WS | | | | | | | | | | | | |
| Window for Double Door Enclosure—left/right/both doors | | | | WL/WR/W2 | | | | | | | | | | | | |
| No windows | | | | XX | | | | | | | | | | | | |
| ⁴ Lifting Eyebolts/No eyebolt | | | | LE/XX | | | | | | | | | | | | |
| ⁵ Document Pocket/No pocket | | | | DP/XX | | | | | | | | | | | | |
| Sunshade / No sunshade | | | | SU/XX | | | | | | | | | | | | |
| ⁶ Bosses for 19" Rack Mounting System/No bosses | | | | RM/XX | | | | | | | | | | | | |
| ⁷ Purge system | | | | 01/02/03 | | | | | | | | | | | | |

Notes:

- Estimated weight includes back plate, but excludes options and purge system.
- Estimated heat dissipation with 15°C differential : Wall-mount - excludes heat dissipation from back side. Plinth-mount - includes dissipation from all 6 sides.
- Plinth leg preparation / plinth legs not available on sizes 1-13.
- Lifting eyebolts not available on sizes 1-13.
- Document pocket is not available on sizes 1-3
- 19" rack mount bosses only available on 600mm wide enclosures (Sizes 1,2,4,5,9).
- See page 4 for purge system details.

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Part number selection matrix (Imperial units)

| Pressurized Enclosure (Example part number) | | | | | | PE | 2E | 16 | LH | PL | WL | LE | DP | SU | XX | 01 | |
|--|----------------------------------|------------------------------------|----------------------|-----------------------------|---------------------------------------|------|----|----|----|----|----|----|----|----|----|----|----|
| ATEX & IECEx Zone 1 Ingress Protection IP66 | | | | | | 2E | | | | | | | | | | | |
| ATEX & IECEx Zone 2 Ingress Protection IP66 | | | | | | 3E | | | | | | | | | | | |
| Class I Div.1&2 Ingress Protection UL50E Type 4X | | | | | | 4E | | | | | | | | | | | |
| Dimensions HxWxD (in) ⁸ | Configuration: Doors/Mounting | Material thickness ⁸ | Backplate HxW in. | Weight (lb) ¹ | Heat dissipated (Btu) ² | Size | | | | | | | | | | | |
| 23.5 x 23.5 x 15.75 | Single / Wall | 0.08 in. | | 70.5 | 358 | 01 | | | XX | | XX | | XX | | | | |
| 31.5 x 23.5 x 15.75 | Single / Wall | 0.08 in. | | 86 | 437 | 02 | | | XX | | XX | | XX | | | | |
| 31.5 x 31.5 x 15.75 | Single / Wall | 0.08 in. | | 103.6 | 525 | 03 | | | XX | | XX | | XX | | | | XX |
| 39.5 x 23.5 x 15.75 | Single / Wall | 0.1 in. | | 125.6 | 512 | 04 | | | XX | | XX | | XX | | | | |
| 39.5 x 23.5 x 19.75 | Single / Wall | 0.1 in. | | 139 | 600 | 05 | | | XX | | XX | | XX | | | | |
| 39.5 x 31.5 x 15.75 | Single / Wall | 0.1 in. | | 152 | 611 | 06 | | | XX | | XX | | XX | | | | XX |
| 39.5 x 31.5 x 19.75 | Single / Wall | 0.1 in. | | 167.5 | 710 | 07 | | | XX | | XX | | XX | | | | XX |
| 39.5 x 35.5 x 19.75 | Single / Wall | 0.1 in. | | 183 | 764 | 08 | | | XX | | XX | | XX | | | | XX |
| 51 x 23.5 x 19.75 | Single / Wall | 0.1 in. | | 172 | 730 | 09 | | | XX | | XX | | XX | | | | |
| 51 x 31.5 x 15.75 | Single / Wall | 0.1 in. | | 185 | 744 | 10 | | | XX | | XX | | XX | | | | XX |
| 51 x 31.5 x 19.75 | Single / Wall | 0.1 in. | | 205 | 856 | 11 | | | XX | | XX | | XX | | | | XX |
| 59 x 31.5 x 15.75 | Single / Wall | 0.1 in. | | 207 | 829 | 12 | | | XX | | XX | | XX | | | | XX |
| 59 x 31.5 x 19.75 | Single / Wall | 0.1 in. | | 229 | 955 | 13 | | | XX | | XX | | XX | | | | XX |
| 59 x 39.5 x 15.75 | Double / Plinth bosses | 0.1 in. | | 242.5 | 1365 | 14 | | DD | | | | | | | | | XX |
| 71 x 47 x 19.75 | Double / Plinth bosses | 0.1 in. | | 348 | 2000 | 15 | | DD | | | | | | | | | XX |
| 78.75 x 31.5 x 19.75 | Single / Plinth bosses | 0.12 in. | | 346 | 1638 | 16 | | | | | | | | | | | XX |
| 78.75 x 31.5 x 31.5 | Single / Plinth bosses | 0.12 in. | | 436 | 2095 | 17 | | | | | | | | | | | XX |
| 78.75 x 39.5 x 15.75 | Double / Plinth bosses | 0.12 in. | | 370 | 1747 | 18 | | DD | | | | | | | | | XX |
| 78.75 x 39.5 x 23.5 | Double / Plinth bosses | 0.12 in. | | 433 | 2402 | 19 | | DD | | | | | | | | | XX |
| 78.75 x 47 x 19.75 | Double / Plinth bosses | 0.12 in. | | 456 | 2184 | 20 | | DD | | | | | | | | | XX |
| Single door enclosure hinge position | | | | LH/RH | | | | | | | | | | | | | |
| Double Doors (no choice of hinge position) | | | | DD | | | | | | | | | | | | | |
| ³ 12 in. tall Plinth Legs/No legs | | | | PL/XX | | | | | | | | | | | | | |
| Window for Single Door Enclosure | | | | WS | | | | | | | | | | | | | |
| Window for Double Door Enclosure—left/right/both doors | | | | WL/WR/WZ | | | | | | | | | | | | | |
| No windows | | | | XX | | | | | | | | | | | | | |
| ⁴ Lifting Eyebolts/No eyebolt | | | | LE/XX | | | | | | | | | | | | | |
| ⁵ Document Pocket/No pocket | | | | DP/XX | | | | | | | | | | | | | |
| Sunshade / No sunshade | | | | SU/XX | | | | | | | | | | | | | |
| ⁶ Bosses for 19" Rack Mounting System/No bosses | | | | RM/XX | | | | | | | | | | | | | |
| ⁷ Purge system | | | | 01/02/03 | | | | | | | | | | | | | |

Notes:

- Estimated weight includes back plate, but excludes options and purge system.
- Estimated heat dissipation with 27°F differential : Wall-mount - excludes heat dissipation from back side. Plinth-mount - includes dissipation from all 6 sides.
- Plinth leg preparation / plinth legs not available on sizes 1-13.
- Lifting eyebolts not available on sizes 1-13.
- Document pocket is not available on sizes 1-3
- 19" rack mount bosses only available on 23.5 in. wide enclosures (Sizes 1,2,4,5,9).
- See page 4 for purge system details.
- Overall dimensions & material thickness originate in mm, and are converted to inches.

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