

# EJBX

- Zone 1, 2, 21, 22
- Group IIB+H<sub>2</sub>
- Stainless steel junction boxes
- Choice of 17 sizes
- IP 66 / 67

Quartz sand blasting

AISI 316L stainless steel

Warning labels

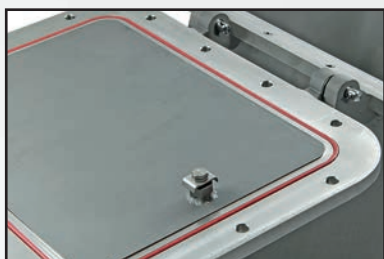
Mounting bracket

Walls free of welds

Silicone gasket between body and lid

Internal earth screw in body

Hinge between body and lid



## EJBX-... series Stainless steel junction boxes gas group IIB+H<sub>2</sub>

EJBX series junction boxes are installed in industrial plants where there is a risk of explosion and fire and where combustible dust is present, classified as Zone 1, 2, 21, 22. These enclosures are made from welded 316L sheet stainless steel and come complete with stainless steel screws and a silicone gasket running around the perimeter between the body and lid to provide the IP66 protection degree. The EJBX units are mostly used as junction boxes with relevant connection terminals, as enclosures for fuses, transformers and reactors, as monitoring and signalling boards, light and power boards or motor starter boxes with various configurations, which are custom made to the requirements of our customers worldwide.

Cortem Group labels its products with a non-removable adhesive label featuring a hologram and an alphanumerical univocal code, as a safety measure against the illegal sale of fakes so that all the products are guaranteed as original. Non-compliance with the International standards entails serious risks for the environment, especially for those working daily on the plants.



### Application sectors:



Mining



Offshore plants



Onshore plants



Oil refineries



Oil loading/  
offloading  
wharfs



Low  
temperatures



Presence of  
hydrogen



100%  
Cortem  
product

### CERTIFICATION DATA FOR EMPTY ENCLOSURES

|                                                                                                    |                                                                                                                                                                                      |                                                                                                                                           |  |  |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Classification:                                                                                    | Group I/II                                                                                                                                                                           | Category 2GD                                                                                                                              |  |  |
| Installation: EN 60079.14                                                                          | zone 1 - zone 2 (Gas)                                                                                                                                                                | zone 21 - zone 22 (Dust)                                                                                                                  |  |  |
| Marking:                                                                                           | CE 0722 Ex II 2 GD - Ex db IIB+H2 Gb - Ex tb IIIC Db - IP66/67                                                                                                                       |                                                                                                                                           |  |  |
|                                                                                                    | CE 0722 Ex I M2 - Ex db I Mb                                                                                                                                                         |                                                                                                                                           |  |  |
| Certification:                                                                                     | ATEX CESI 00 ATEX 036U                                                                                                                                                               |                                                                                                                                           |  |  |
|                                                                                                    | IEC Ex CES 14.0017U                                                                                                                                                                  | All IEC Ex, ECASEx, TR CU, INMETRO certification data can be downloaded from <a href="http://www.cortemgroup.com">www.cortemgroup.com</a> |  |  |
|                                                                                                    | ECASEx AVAILABLE                                                                                                                                                                     |                                                                                                                                           |  |  |
|                                                                                                    | TR CU AVAILABLE                                                                                                                                                                      |                                                                                                                                           |  |  |
|                                                                                                    | INMETRO DNV 16.0099U                                                                                                                                                                 |                                                                                                                                           |  |  |
| Standards:                                                                                         | CENELEC EN 60079-0: 2018, EN 60079-1: 2014, EN 60079-31: 2014, EN 60529: 1991 and EUROPEAN DIRECTIVE 2014/34/UE                                                                      |                                                                                                                                           |  |  |
|  Ambient Temp.: |  -60°C  +70°C  | With boxes complete with polycarbonate indicator on lid Ta -40°C +70°C.                                                                   |  |  |
|                                                                                                    |  -60°C  +100°C | On request only for EJB enclosures without accessories and control and signalling devices.                                                |  |  |
|                                                                                                    |  -60°C (Use indicator light series M-0457AL, M-0457AL/3, M-0457IN or M-0457IN/3)                  |                                                                                                                                           |  |  |
| Degree of protection:                                                                              | IP66/67                                                                                                                                                                              | For enclosures without control and signalling devices                                                                                     |  |  |
|                                                                                                    | IP66                                                                                                                                                                                 | For enclosures with Cortem M-0...-series control and signalling devices                                                                   |  |  |

This equipment can be used in an environment containing explosive atmosphere and with the presence of hydrogen.

# EJBX-... series Stainless steel junction boxes gas group IIB+H<sub>2</sub>

## CERTIFICATION DATA FOR ENCLOSURES WITH TERMINALS

|                                                                                                  |                                                                                                                                                                                        |                                                                                                                   |  |  |
|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--|--|
| Classification:                                                                                  | Group II                                                                                                                                                                               | Category 2GD                                                                                                      |  |  |
| Installation: EN 60079.14                                                                        | zone 1 - zone 2 (Gas)                                                                                                                                                                  | zone 21 - zone 22 (Dust)                                                                                          |  |  |
| Marking:                                                                                         | CE 0722  II 2 GD - Ex d IIB+H2 T... Gb - Ex tb IIIC T...°C Db - IP66/67                               |                                                                                                                   |  |  |
|                                                                                                  | CE 0722  I M2 - Ex d I Mb                                                                             |                                                                                                                   |  |  |
| Certification:                                                                                   | ATEX CESI 01 ATEX 027X                                                                                                                                                                 |                                                                                                                   |  |  |
|                                                                                                  | IEC Ex CES 16.0012X                                                                                                                                                                    | All IEC Ex certification data can be downloaded from <a href="http://www.cortemgroup.com">www.cortemgroup.com</a> |  |  |
| Standards:                                                                                       | CENELEC EN 60079-0: 2012, EN 60079-1: 2014, EN 60079-31: 2014, EN 60529: 1991 and EUROPEAN DIRECTIVE 2014/34/UE                                                                        |                                                                                                                   |  |  |
|  Ambient Temp.: |  -20°C (60°C) +40°C  | With temperature class T6 and maximum surface temperature T85°C.                                                  |  |  |
|                                                                                                  |  -20°C (60°C) +55°C  | With temperature class T5 and maximum surface temperature T100°C.                                                 |  |  |
| Degree of protection:                                                                            | IP66/67                                                                                                                                                                                |                                                                                                                   |  |  |

## CERTIFICATION DATA OF ENCLOSURES FOR CONTROL, MONITORING AND SIGNALLING UNITS

|                                                                                                    |                                                                                                                                                                                     |                                                                                                                                           |  |  |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Classification:                                                                                    | Group I/II                                                                                                                                                                          | Category 2GD                                                                                                                              |  |  |
| Installation: EN 60079.14                                                                          | zone 1 - zone 2 (Gas)                                                                                                                                                               | zone 21 - zone 22 (Dust)                                                                                                                  |  |  |
| Marking:                                                                                           | CE 0722  II2GD - Ex db IIB+H2 T... Gb - Ex tb IIIC T...°C Db - IP66/67                           |                                                                                                                                           |  |  |
|                                                                                                    | CE 0722  I M2 - Ex db I Mb                                                                       |                                                                                                                                           |  |  |
| Certification:                                                                                     | ATEX CESI 01 ATEX 027X                                                                                                                                                              |                                                                                                                                           |  |  |
|                                                                                                    | IEC Ex CES 16.0012X                                                                                                                                                                 | All IEC Ex, ECASEx, TR CU, INMETRO certification data can be downloaded from <a href="http://www.cortemgroup.com">www.cortemgroup.com</a> |  |  |
|                                                                                                    | ECASEx AVAILABLE                                                                                                                                                                    |                                                                                                                                           |  |  |
|                                                                                                    | TR CU AVAILABLE                                                                                                                                                                     |                                                                                                                                           |  |  |
|                                                                                                    | INMETRO DNV 14.0153                                                                                                                                                                 |                                                                                                                                           |  |  |
| Standards:                                                                                         | CENELEC EN 60079-0: 2012, EN 60079-1: 2014, EN 60079-31: 2014, EN 60529: 1991 and EUROPEAN DIRECTIVE 2014/34/UE                                                                     |                                                                                                                                           |  |  |
|  Ambient Temp.: |  -20°C +40°C  | With temperature class T6 and maximum surface temperature T85°C.                                                                          |  |  |
|                                                                                                    |  -20°C +55°C  | With temperature class T5 and maximum surface temperature T100°C.                                                                         |  |  |
|                                                                                                    |  -60°C on request. (Use indicator light series M-0457AL, M-0457AL/3, M-0457IN or M-0457IN/3)     |                                                                                                                                           |  |  |
| Degree of protection:                                                                              | IP66/67                                                                                                                                                                             | For enclosures without control and signalling devices                                                                                     |  |  |
|                                                                                                    | IP66                                                                                                                                                                                | For enclosures with Cortem M-0...-series control and signalling devices                                                                   |  |  |

# EJBX-... series Stainless steel junction boxes gas group IIB+H<sub>2</sub>

## CERTIFICATION DATA OF ENCLOSURES SERVING INTERFACE UNIT CONTROL AND MONITORING FUNCTION

|                                                                                                   |                                                                                                                                                                                     |                                                                                                                                |  |  |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--|--|
| Classification:                                                                                   | Group II                                                                                                                                                                            | Category 2GD                                                                                                                   |  |  |
| Installation: EN 60079.14                                                                         | zone 1 - zone 2 (Gas)                                                                                                                                                               | zone 21 - zone 22 (Dust)                                                                                                       |  |  |
| Marking:                                                                                          | CE 0722 Ex IIB(1)GD - Ex db [ia Ga] IIB+H2 T... Gb - Ex tb IIIC T...°C Db - IP66/67                                                                                                 |                                                                                                                                |  |  |
|                                                                                                   | CE 0722 Ex I M2 - Ex db [ia Ma] I Mb                                                                                                                                                |                                                                                                                                |  |  |
| Certification:                                                                                    | ATEX CESI 02 ATEX 073X                                                                                                                                                              |                                                                                                                                |  |  |
|                                                                                                   | IEC Ex CES 16.0014X                                                                                                                                                                 | All IEC Ex, ECASEx, CCC certification data can be downloaded from <a href="http://www.cortemgroup.com">www.cortemgroup.com</a> |  |  |
|                                                                                                   | ECASEx AVAILABLE                                                                                                                                                                    |                                                                                                                                |  |  |
|                                                                                                   | CCC AVAILABLE                                                                                                                                                                       |                                                                                                                                |  |  |
| Standards:                                                                                        | CENELEC EN 60079-0: 2009, EN 60079-1: 2007, EN 60079-11: 2007, EN 60079-26: 2007, EN60079-31: 2009 and EUROPEAN DIRECTIVE 2014/34/UE                                                |                                                                                                                                |  |  |
|  Ambient Temp.: |  -20°C +40°C    | With temperature class T6 and maximum surface temperature T85°C.                                                               |  |  |
|                                                                                                   |  -20°C +55°C  | With temperature class T5 and maximum surface temperature T100°C.                                                              |  |  |
|                                                                                                   |  -60°C on request. (Use indicator light series M-0457AL, M-0457AL/3, M-0457IN or M-0457IN/3)     |                                                                                                                                |  |  |
| Degree of protection:                                                                             | IP66/67                                                                                                                                                                             | For enclosures without control and signalling devices                                                                          |  |  |

**Stainless steel properties:** The stainless steel used by Cortem to produce enclosures and accessories designed for use in cryogenic plants and highly corrosive environments is a very low carbon Iron-Chromium-Nickel-Molybdenum alloy. This alloy is highly resistant to intergranular (or intercrystalline) corrosion and to pitting corrosion. It is classified as an austenitic stainless steel UNI EN 10088-3 X 2 CrNiMo 17-12-2-E or AISI 316L according to the American Iron and Steel Institute. Its main quality is the spontaneous formation of a thin layer of chromium oxide on the surface that protects the metal underneath from corrosion attack. In addition, even if the metal is inadvertently damaged by abrasion or scratches, this film is self-renewing.



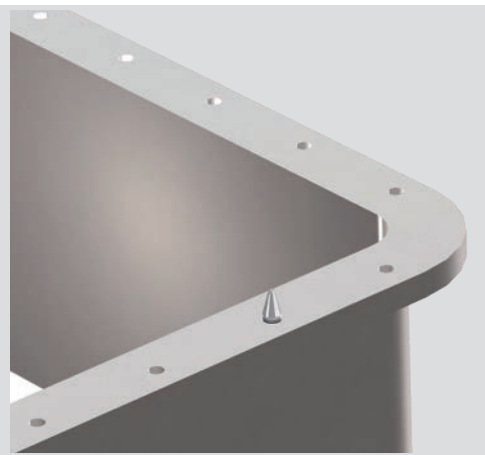
## MECHANICAL FEATURES

|                             |                                                                                                                      |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Body and lid:</b>        | AISI 316L stainless steel                                                                                            |
| <b>Hinges:</b>              | Lost-wax cast and welded onto enclosure                                                                              |
| <b>Lid handle:</b>          | Made of black painted steel for EJBX-55,55B, EJBX-6,6B e EJBX-7, made of black painted plastic for all other models. |
| <b>Treatment:</b>           | Quartz sand blasting                                                                                                 |
| <b>Gasket:</b>              | Acid, hydrocarbon and high temperature-resistant silicone, located between body and lid                              |
| <b>Certification label:</b> | Adhesive label located inside on empty enclosures; stainless steel label riveted onto lid on other versions          |
| <b>Bolts and screws:</b>    | Stainless steel                                                                                                      |
| <b>Earth screws:</b>        | M6 stainless steel. On inside and outside of body and on lid complete with anti-rotation brackets                    |
| <b>Mounting brackets:</b>   | 4 feet welded onto body                                                                                              |

**Lid featuring Cortem easy-close system.**



A locating peg is screwed into the body to make it easier to close the lid on enclosures mounted on a vertical frame. This system is used in enclosures EJBX-4 /4B, EJBX-45 /45B, EJBX-5 /5B, EJBX-6 /6B, EJBX-7.



## ACCESSORIES AVAILABLE ON REQUEST/ SPECIAL REQUESTS

Hinges on the short side (code EJBX-...S)

Breather valve Code ECD-210S

Drain valve Code ECD-210S

2.5mm-thick stainless steel internal mounting plate (code BFE-...SS). See accessories section

Enclosures with windows on lid for instrument viewing / reading

External coating in your choice of paint colour

Thread options:

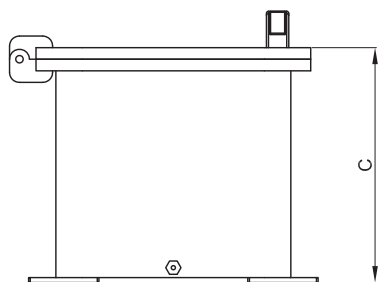
- NPT threads ANSI B1.20.1
- GAS UNI ISO 7-1 thread
- Metric threads ISO 261/965

Cortem manufactures any type of custom-made products according to customer specifications and in compliance with the certification data.

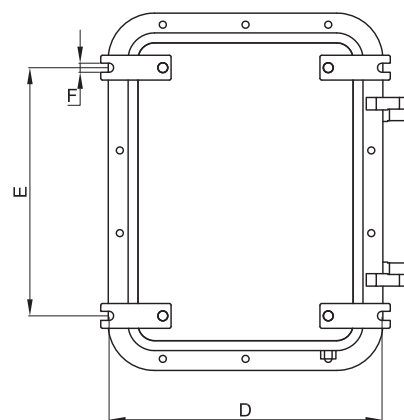
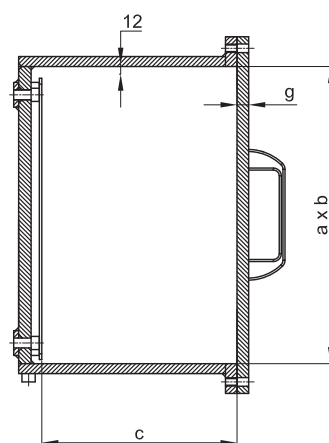
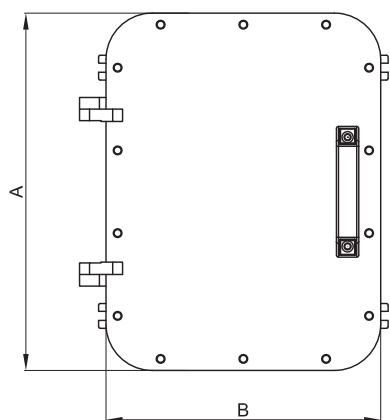
## ENCLOSURE SELECTION CHART

| Code     | Outside dimensions |     |     | Inside dimensions |     |     |    | Mounting |     |    | Weight<br>kg |
|----------|--------------------|-----|-----|-------------------|-----|-----|----|----------|-----|----|--------------|
|          | A                  | B   | C   | a                 | b   | c   | g  | E        | D   | F  |              |
| EJBX-01  | 272                | 212 | 166 | 200               | 140 | 123 | 12 | 140      | 210 | 11 | 20           |
| EJBX-01B | 272                | 212 | 142 | 200               | 140 | 100 | 12 | 140      | 210 | 11 | 18           |
| EJBX-1   | 312                | 212 | 201 | 240               | 140 | 155 | 12 | 180      | 210 | 11 | 25           |
| EJBX-2   | 432                | 232 | 201 | 360               | 160 | 155 | 12 | 300      | 230 | 11 | 37           |
| EJBX-3   | 372                | 292 | 261 | 300               | 220 | 215 | 12 | 240      | 290 | 11 | 45           |
| EJBX-3B  | 372                | 292 | 201 | 300               | 220 | 155 | 12 | 240      | 290 | 11 | 38           |
| EJBX-4   | 432                | 332 | 284 | 360               | 260 | 235 | 15 | 300      | 330 | 11 | 65           |
| EJBX-4B  | 432                | 332 | 214 | 360               | 260 | 165 | 15 | 300      | 330 | 11 | 57           |
| EJBX-45  | 562                | 382 | 284 | 490               | 310 | 232 | 15 | 440      | 390 | 11 | 92           |
| EJBX-45B | 562                | 382 | 234 | 490               | 310 | 188 | 15 | 440      | 390 | 11 | 90           |
| EJBX-5   | 632                | 432 | 324 | 560               | 360 | 275 | 15 | 500      | 430 | 11 | 120          |
| EJBX-5B  | 632                | 432 | 254 | 560               | 360 | 205 | 15 | 500      | 430 | 11 | 107          |
| EJBX-55  | 710                | 510 | 318 | 610               | 410 | 255 | 20 | 540      | 560 | 20 | 170          |
| EJBX-55B | 710                | 510 | 218 | 610               | 410 | 155 | 20 | 540      | 560 | 20 | 150          |
| EJBX-6   | 860                | 640 | 409 | 760               | 540 | 345 | 20 | 680      | 680 | 20 | 268          |
| EJBX-6B  | 860                | 640 | 309 | 760               | 540 | 245 | 20 | 680      | 680 | 20 | 235          |
| EJBX-7   | 1000               | 700 | 338 | 900               | 600 | 275 | 20 | 820      | 740 | 20 | 310          |

## DIMENSIONAL DRAWING

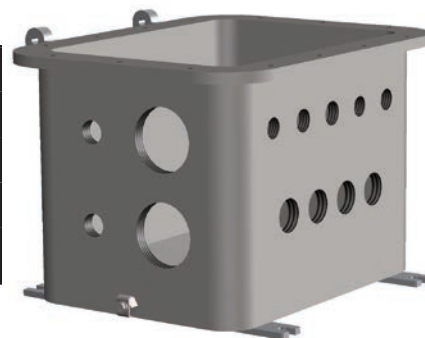


Dimensions in mm



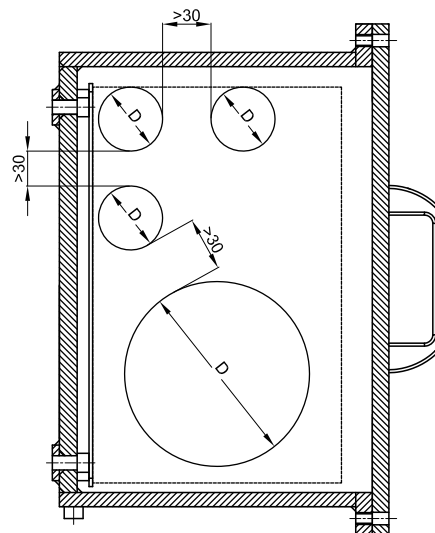
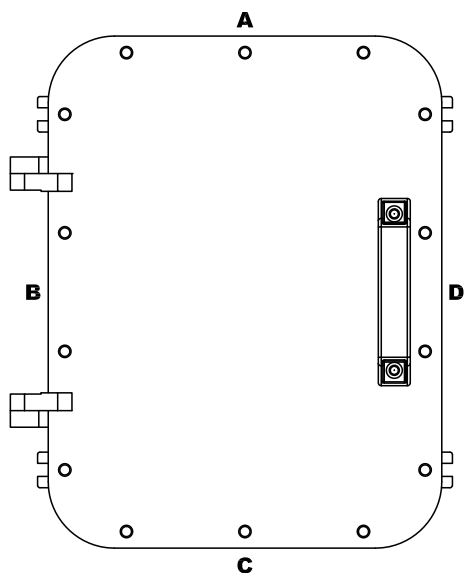
## EJBX-... series Body drilling data

| THREAD COMPARISON CHART     |          |          |          |          |          |          |          |          |           |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| ISO 7-1                     | 1/2"     | 3/4"     | 1"       | 1 1/4"   | 1 1/2"   | 2"       | 2 1/2"   | 3"       | 4"        |
| ANSI B.20.1 NPT             | 1/2"     | 3/4"     | 1"       | 1 1/4"   | 1 1/2"   | 2"       |          |          |           |
| ISO 261/965                 | 20x1.5   | 25x1.5   | 32x1.5   | 40x1.5   | 50x1.5   | 63x1.5   | 75x1.5   | 90x1,5   | 100x1,5   |
| <b>D</b><br>Thread diameter | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>10</b> |



As required by the current standard, holes can be drilled by Cortem or by authorized partners who hold a production notification in accordance with ATEX Directive .

| TYPE OF ENCLOSURE | HOLE DRILLING IN BODY |                                |    |    |    |    |    |    |   |    |               |                  |                                |    |    |    |    |    |    |    |  |  |
|-------------------|-----------------------|--------------------------------|----|----|----|----|----|----|---|----|---------------|------------------|--------------------------------|----|----|----|----|----|----|----|--|--|
|                   | Sides A and C         |                                |    |    |    |    |    |    |   |    | Sides B and D |                  |                                |    |    |    |    |    |    |    |  |  |
|                   | Drilling area mm      | MAXIMUM QUANTITY PER HOLE TYPE |    |    |    |    |    |    |   |    |               | Drilling area mm | MAXIMUM QUANTITY PER HOLE TYPE |    |    |    |    |    |    |    |  |  |
|                   |                       | 1                              | 2  | 3  | 4  | 5  | 6  | 7  | 8 | 10 | 1             |                  | 2                              | 3  | 4  | 5  | 6  | 7  | 8  | 10 |  |  |
| EJBX-01           | 100x95                | 4                              | 3  | 3  | 1  | 1  | -  | -  | - | -  | 160x84        | 6                | 5                              | 3  | 2  | 2  | -  | -  | -  | -  |  |  |
| EJBX-01B          | 100x72                | 2                              | 2  | 1  | 1  | -  | -  | -  | - | -  | 160x63        | 3                | 3                              | 1  | 2  | -  | -  | -  | -  | -  |  |  |
| EJBX-1            | 100x130               | 6                              | 5  | 4  | 2  | 2  | 1  | 1  | 1 | -  | 200x125       | 12               | 11                             | 6  | 6  | 4  | 2  | 2  | 1  | 1  |  |  |
| EJBX-2            | 120x130               | 6                              | 6  | 4  | 2  | 2  | 1  | 1  | 1 | 1  | 320x125       | 18               | 17                             | 10 | 8  | 4  | 3  | 3  | 2  | 2  |  |  |
| EJBX-3            | 180x190               | 16                             | 12 | 9  | 6  | 6  | 4  | 2  | 2 | 1  | 260x180       | 20               | 18                             | 12 | 11 | 9  | 6  | 3  | 3  | 1  |  |  |
| EJBX-3B           | 180x130               | 12                             | 8  | 6  | 4  | 4  | 2  | 1  | 1 | 1  | 260x120       | 15               | 14                             | 8  | 6  | 6  | 3  | 2  | 2  | 2  |  |  |
| EJBX-4            | 220x210               | 20                             | 16 | 12 | 9  | 8  | 4  | 4  | 2 | 1  | 320x195       | 30               | 24                             | 18 | 12 | 11 | 6  | 6  | 2  | 2  |  |  |
| EJBX-4B           | 220x140               | 12                             | 11 | 6  | 6  | 5  | 3  | 2  | 1 | 1  | 320x125       | 18               | 17                             | 10 | 8  | 7  | 5  | 3  | 2  | 2  |  |  |
| EJBX-45           | 270x205               | 25                             | 20 | 16 | 12 | 9  | 6  | 4  | 3 | 1  | 450x195       | 43               | 32                             | 28 | 18 | 17 | 10 | 8  | 4  | 3  |  |  |
| EJBX-45B          | 270x155               | 15                             | 15 | 12 | 8  | 6  | 5  | 2  | 2 | 1  | 450x145       | 26               | 24                             | 21 | 12 | 12 | 9  | 4  | 3  | 2  |  |  |
| EJBX-5            | 320x250               | 36                             | 28 | 20 | 16 | 12 | 9  | 6  | 4 | 3  | 520x235       | 50               | 45                             | 32 | 28 | 21 | 17 | 10 | 8  | 6  |  |  |
| EJBX-5B           | 320x180               | 24                             | 22 | 15 | 12 | 8  | 6  | 5  | 2 | 2  | 520x165       | 40               | 27                             | 24 | 21 | 14 | 11 | 5  | 4  | 3  |  |  |
| EJBX-55           | 370x230               | 35                             | 24 | 24 | 15 | 12 | 8  | 6  | 3 | 3  | 570x215       | 53               | 40                             | 32 | 24 | 20 | 12 | 10 | 4  | 4  |  |  |
| EJBX-55B          | 370x130               | 21                             | 18 | 12 | 10 | 8  | 4  | 3  | 3 | -  | 570x115       | 22               | 19                             | 19 | 15 | 11 | 6  | 5  | 4  | -  |  |  |
| EJBX-6            | 480x315               | 63                             | 54 | 40 | 28 | 24 | 15 | 12 | 8 | 6  | 695x305       | 95               | 72                             | 55 | 40 | 36 | 24 | 18 | 12 | 8  |  |  |
| EJBX-6B           | 480x215               | 45                             | 32 | 30 | 21 | 18 | 10 | 8  | 6 | 3  | 695x205       | 68               | 48                             | 42 | 27 | 18 | 16 | 12 | 11 | 4  |  |  |
| EJBX-7            | 540x250               | 63                             | 48 | 36 | 28 | 21 | 17 | 10 | 8 | 3  | 840x235       | 85               | 70                             | 52 | 35 | 33 | 27 | 16 | 14 | 5  |  |  |



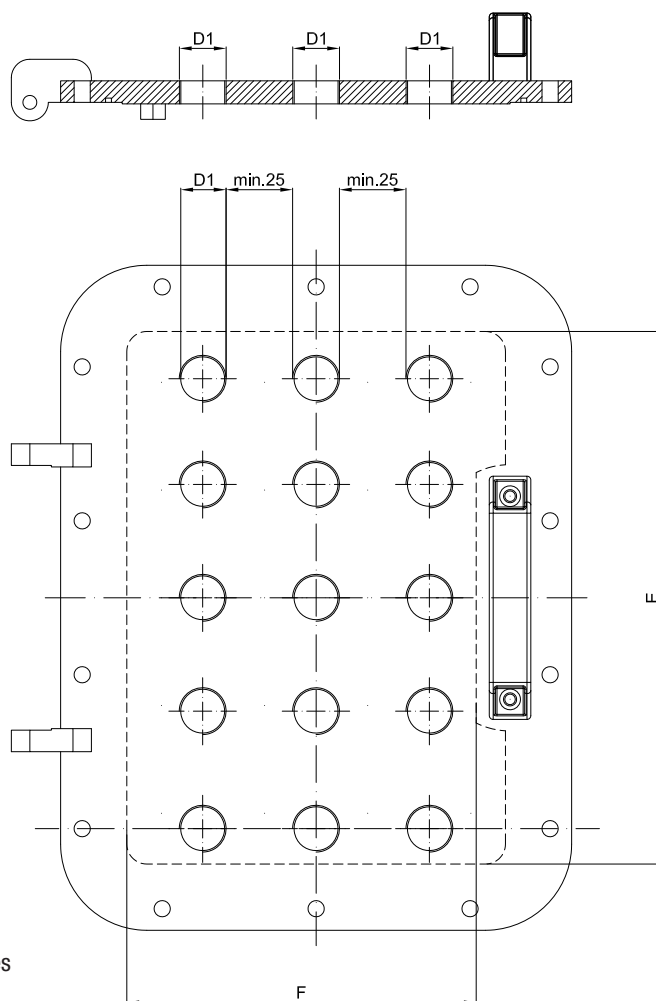


| THREAD COMPARISON CHART |             |         |         |         |         |         |         |         |
|-------------------------|-------------|---------|---------|---------|---------|---------|---------|---------|
| D                       | ISO 228     | G 3/8"  | G 1/2"  | G 3/4"  | -       | -       | -       | -       |
|                         | ISO 261/965 | M16x1.5 | M20x1.5 | M25x1.5 | M32x1.5 | M35x1.5 | M40x1.5 | M42x1.5 |

| TYPE OF ENCLOSURE | HOLE DRILLING IN LID           |                  |     |
|-------------------|--------------------------------|------------------|-----|
|                   | Max. number of permitted holes | Drilling area mm |     |
|                   |                                | E                | F   |
| EJBX-01           | 2                              | 200              | 114 |
| EJBX-1            | 5                              | 225              | 100 |
| EJBX-2            | 9                              | 345              | 125 |
| EJBX-3            | 12                             | 285              | 190 |
| EJBX-4            | 17                             | 345              | 225 |
| EJBX-45           | 28                             | 475              | 275 |
| EJBX-5            | 40                             | 545              | 325 |
| EJBX-55           | 51                             | 624              | 424 |
| EJBX-6            | 70                             | 730              | 495 |
| EJBX-7            | 96                             | 900              | 565 |

## Notes:

- This standard is for illustrative purposes only since it has been designed exclusively for M42 holes.
- Standard holes refer to mounting of Cortem control and signalling devices.
- 3/8" Ø holes for Cortem std. side-mounted handles centre-to-centre distance >70mm.
- 1/2" Ø holes for Cortem std. heavy-duty series side-mounted handles centre-to-centre distance >120mm.





These enclosures are customized based on size, on the number of terminals or cables they are due to accommodate, or taking into account the number of cable entries and cabling requirements inside a system. Hence we can produce tailor-made solutions as long as you provide us with the appropriate parameters required at the quote request stage, such as the number of cable glands, unions or sealing fittings to be installed, so that we can determine the most suitable size of enclosure. All terminals can be fitted with your requested accessories and mounted on special rails that are fastened to the enclosure's internal mounting frames. Terminal strips can be arranged in various ways, as specified by the customer and always within the limits allowed by the certificate. The options are vertical, horizontal, in a number of rows, or on different levels using suitable spacers.

## ELECTRICAL FEATURES

**Rated voltage:** 24 / 800 V

**Rated frequency:** 50 / 60 Hz

## Modular terminals

**Terminal cross-sectional area:** 2.5; 4; 6; 10; 25; 35; 70; 95; 120; 185; 240; 300 [mm<sup>2</sup>]

**Rated current:** 12.5 - 452 [A]

**Max. current density:** 1.5 - 7 [A/mm<sup>2</sup>]

## Multi-pole terminals

**Terminal cross-sectional area:** 3x16; 4x16; 3x25; 4x25; 3x40; 3x40; 4x40; 3x70; 4x125; 4x125; 3x200; 4x200; 3x315 [mm<sup>2</sup>]

**Rated current:** 48 - 252 [A]

**Max. current density:** 0.8 - 3 [A/mm<sup>2</sup>]

### Busbars:

## Dimensions of

**busbars:** 20x5; 30x5; 40x5; 50x5; 60x5; 80x5; 100x4; 80x8; 100x5 [mm<sup>2</sup>]

|                       |     |     |     |     |     |     |     |      |      |     |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| <b>Rated current:</b> | 240 | 350 | 480 | 600 | 690 | 800 | 800 | 1000 | 1000 | [A] |
|-----------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|

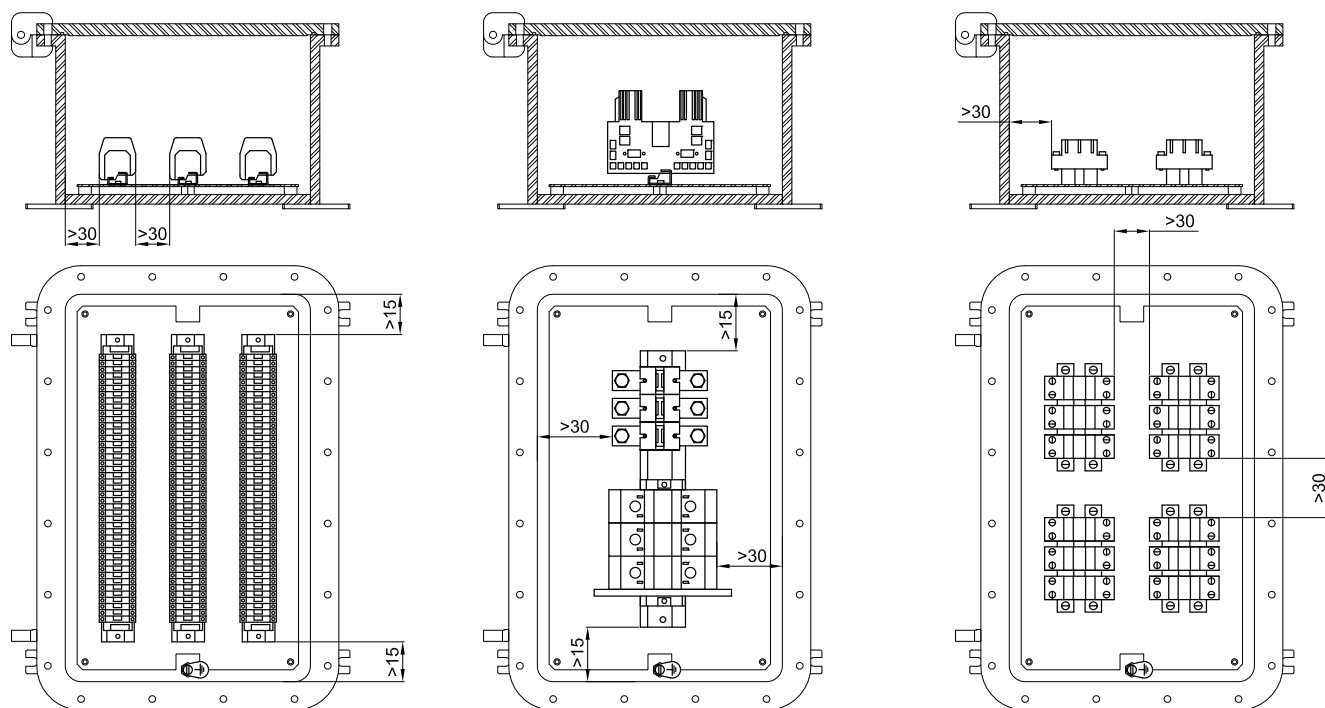
## ATEX - IECEx label for terminal enclosures

**Diagram of the product label for the CORTEM GROUP, showing various technical specifications and safety markings. The label includes the CORTEM logo, company address (VIA AQUILEIA, 10 34070 VILLESSE - GO ITALY), and technical details such as enclosure type (ATEX 026), temperature class (T1), and maximum surface temperature (100°C). It also features safety markings like 'Ex d IIB+H2 T1 Gb' and 'IP66/67'. The label is divided into sections for technical specifications, safety markings, and company information. Numbered callouts (1-7) point to specific fields:**

1. year of manufacture
2. serial number
3. product code
4. temperature class
5. maximum surface temperature
6. ambient temperature
7. electrical specs per certificate

# EJBX-... series Features of junction boxes with terminals

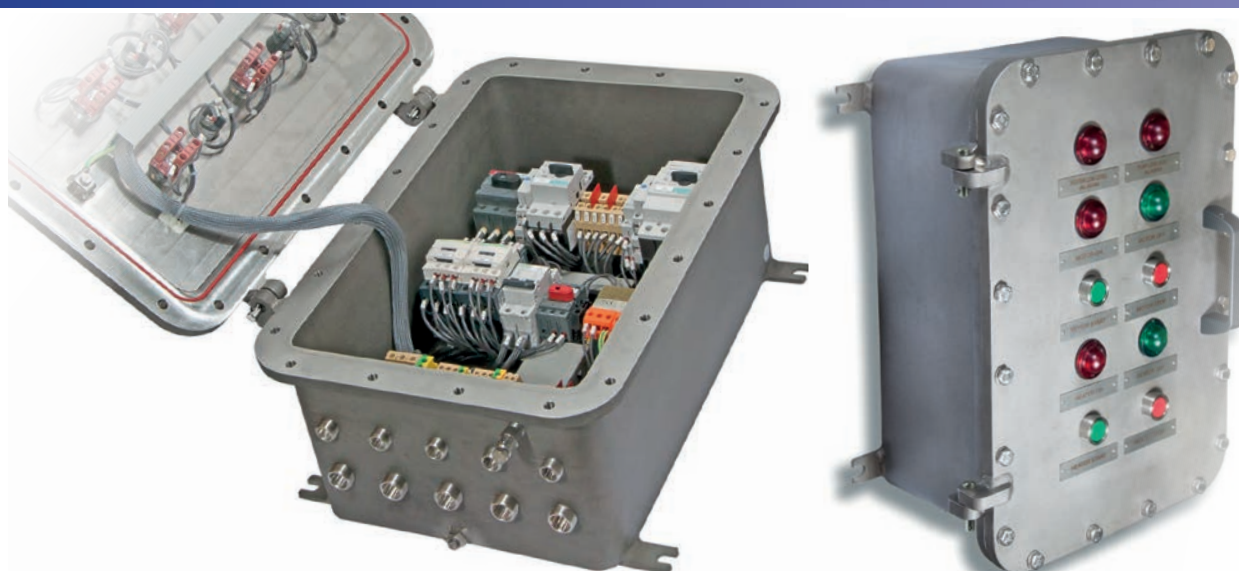
## Examples of terminal strips with minimum installation distances



| TYPE OF ENCLOSURE | MAXIMUM NUMBER OF TERMINALS HOUSED |       |      |      |      |      |      |      |      |     |
|-------------------|------------------------------------|-------|------|------|------|------|------|------|------|-----|
|                   | TERMINAL CROSS-SECTIONAL AREA      |       |      |      |      |      |      |      |      |     |
|                   | 2.5                                | 4     | 6    | 10   | 16   | 35   | 70   | 120  | 185  | 240 |
| EJBX-01           | 22                                 | 17    | 14   | 12   | -    | -    | -    | -    | -    | -   |
| EJBX-1            | 2x28                               | 26    | 21   | 15   | 12   | 10   | 3    | -    | -    | -   |
| EJBX-2            | 2x38                               | 2x28  | 2x22 | 2x15 | 2x12 | 18   | 4    | -    | -    | -   |
| EJBX-3            | 3x38                               | 3x35  | 3x28 | 3x23 | 2x21 | 14   | 6    | 4    | 3    | 3   |
| EJBX-3B           | 3x38                               | 3x35  | 3x28 | 3x23 | 2x21 | 14   | 6    | 4    | 3    | 3   |
| EJBX-4            | 3x48                               | 3x38  | 3x30 | 3x29 | 3x25 | 2x18 | 13   | 6    | 6    | 5   |
| EJBX-4B           | 3x48                               | 3x38  | 3x30 | 3x29 | 3x25 | 2x18 | 13   | 6    | 6    | 5   |
| EJBX-45           | 3x70                               | 3x65  | 3x50 | 3x35 | 3x25 | 2x20 | 20   | 10   | 8    | 8   |
| EJBX-45B          | 3x70                               | 3x65  | 3x50 | 3x35 | 3x25 | 2x20 | 20   | 10   | 8    | 8   |
| EJBX-5            | 3x80                               | 3x70  | 3x60 | 3x50 | 3x40 | 2x28 | 22   | 10   | 10   | 8   |
| EJBX-5B           | 3x80                               | 3x70  | 3x60 | 3x50 | 3x40 | 2x28 | 22   | 10   | 10   | 8   |
| EJBX-6            | 4x120                              | 4x100 | 4x80 | 4x60 | 4x50 | 3x35 | 30   | 15   | 15   | 15  |
| EJBX-6B           | 4x120                              | 4x100 | 4x80 | 4x60 | 4x50 | 3x35 | 30   | 15   | 15   | 15  |
| EJBX-7            | 5x130                              | 5x110 | 5x95 | 5x75 | 5x60 | 5x45 | 4x35 | 3x20 | 2x18 | 15  |

Eg. 2x28= 2 rows of 28 terminals (total 56 terminals). The maximum number of standard terminals refers to the mounting of CABUR terminals

## Features of junction boxes for control, monitoring and signalling units



Control, monitoring and signalling units are used to produce control boards that, when positioned near the electrical equipment being controlled, enable the electrical system to operate correctly and guarantee the safety of personnel when maintenance is being performed on the system. Because they are fitted with a Manual/Automatic selector, they allow operators to select the appropriate conditions to enable work to be performed entirely safely. They offer protection and control for electrical equipment and control circuits located in explosion hazard areas and in particularly aggressive environments. They are used to hold electrical equipment, such as switches, indicators, contactors, transformers, analogue and digital components, etc.... with the option of external control by using lid-mounted Cortem control and signalling devices, such as control levers, pushbuttons, indicator lights, etc.... Cortem designs, develops and supplies full cabling for one or more enclosures tailored to your specific requirements, producing panel boards - including even extremely complex solutions - and providing a full inspection and testing service on request.

### ELECTRICAL FEATURES

|                                            |                    |                    |
|--------------------------------------------|--------------------|--------------------|
| <b>Rated voltage:</b>                      | 24 / 1000 Vac      | 12 / 250 Vdc       |
| <b>Max. current on contacts and fuses:</b> | 650 A              |                    |
| <b>Rated frequency:</b>                    | 50 / 60Hz          |                    |
| <b>Max. wattage for lamps:</b>             | 5 W (for Ta +40°C) | 3 W (for Ta +55°C) |

### Features of equipment that can be installed in enclosures to produce control and monitoring units.

Table of electrical features of components that can be installed in enclosures to produce control, monitoring and signalling units. (The values refer to the catalogues of the leading manufacturers of electrical/electronic components available on the market)

| COMPONENT TYPE                   | Max. V (Volts) | Max. I (Amperes) | Max. power (Watts) |
|----------------------------------|----------------|------------------|--------------------|
| Analogue and digital instruments | 660            | 5                | 10                 |
| Electronic inverters/reactors    | 400            | -                | 10                 |
| PLCs Multiplexers and amplifiers | 240            | -                | 80                 |
| Testing and measuring devices    | 240            | -                | 100                |
| Circuit breakers                 | 660            | 650              | -                  |
| Fuses                            | 660            | 400              | -                  |
| Relays                           | 500            | 10               | 12                 |
| Electronic control devices       | 660            | -                | 100                |
| Contactors                       | 660            | 650              | 30                 |
| Timers                           | 240            | 10               | 5                  |
| Twilight relays                  | 240            | -                | 2                  |
| Capacitors                       | 660            | -                | -                  |
| Transformers                     | 660            | -                | 200                |
| Resistors                        | 240            | -                | 300                |
| Terminals                        | 660            | -                | -                  |
| Reactors                         | 277            | 7.5              | 40                 |

### Minimum air gap between components

| Component voltage (V ac) | Min. air gap (mm) |
|--------------------------|-------------------|
| 60 - 250                 | 6                 |
| 250 - 380                | 8                 |
| 380 - 500                | 10                |
| 500 - 660                | 12                |
| 660 - 1000               | 20                |
| Component voltage (V dc) | Min. air gap (mm) |
| 12 - 250                 | 6                 |

## Features of junction boxes for control, monitoring and signalling units

### Table with maximum power dissipation values for EJBX series enclosures.

The temperature classes and maximum surface temperatures of control and monitoring unit enclosures depend on the size of the enclosure, ambient temperature and power dissipation inside the enclosure.

| Enclosure type | Maximum power dissipation (Watts) with ambient temperature of +40°C |                                            |                                                                    |                                               |
|----------------|---------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------|
|                | T6 class without indicator lights. Only indicator LEDs are allowed  | T5 class with indicator lights and/or LEDs | T5 class without indicator lights. Only indicator LEDs are allowed | T4 class without indicator lights and/or LEDs |
| EJBX-1         | 45                                                                  | 45                                         | 65                                                                 | 140                                           |
| EJBX-2         | 60                                                                  | 60                                         | 85                                                                 | 190                                           |
| EJBX-3         | 75                                                                  | 75                                         | 110                                                                | 245                                           |
| EJBX-3B        | 55                                                                  | 55                                         | 80                                                                 | 180                                           |
| EJBX-4         | 100                                                                 | 100                                        | 175                                                                | 350                                           |
| EJBX-4B        | 75                                                                  | 75                                         | 130                                                                | 260                                           |
| EJBX-45        | 140                                                                 | 140                                        | 240                                                                | 480                                           |
| EJBX-45B       | 120                                                                 | 120                                        | 210                                                                | 430                                           |
| EJBX-5         | 210                                                                 | 210                                        | 315                                                                | 600                                           |
| EJBX-5B        | 170                                                                 | 170                                        | 250                                                                | 480                                           |
| EJBX-6         | 600                                                                 | 600                                        | 910                                                                | 1740                                          |
| EJBX-6B        | 490                                                                 | 490                                        | 720                                                                | 1390                                          |
| EJBX-7         | 610                                                                 | 610                                        | 930                                                                | 1780                                          |

| Enclosure type | Maximum power dissipation (Watts) with ambient temperature of +55°C |                                            |                                                                    |                                               |
|----------------|---------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------|
|                | T6 class without indicator lights. Only indicator LEDs are allowed  | T5 class with indicator lights and/or LEDs | T5 class without indicator lights. Only indicator LEDs are allowed | T4 class without indicator lights and/or LEDs |
| EJBX-1         | 34                                                                  | 34                                         | 50                                                                 | 105                                           |
| EJBX-2         | 45                                                                  | 45                                         | 65                                                                 | 142                                           |
| EJBX-3         | 56                                                                  | 56                                         | 82                                                                 | 184                                           |
| EJBX-3B        | 40                                                                  | 40                                         | 60                                                                 | 135                                           |
| EJBX-4         | 75                                                                  | 75                                         | 130                                                                | 262                                           |
| EJBX-4B        | 56                                                                  | 56                                         | 100                                                                | 195                                           |
| EJBX-45        | 105                                                                 | 105                                        | 180                                                                | 360                                           |
| EJBX-45B       | 90                                                                  | 90                                         | 160                                                                | 320                                           |
| EJBX-5         | 160                                                                 | 160                                        | 235                                                                | 450                                           |
| EJBX-5B        | 130                                                                 | 130                                        | 190                                                                | 360                                           |
| EJBX-6         | 460                                                                 | 460                                        | 680                                                                | 1300                                          |
| EJBX-6B        | 370                                                                 | 370                                        | 550                                                                | 1040                                          |
| EJBX-7         | 470                                                                 | 470                                        | 690                                                                | 1310                                          |

### DON'T FORGET TO ORDER THE ACCESSORIES

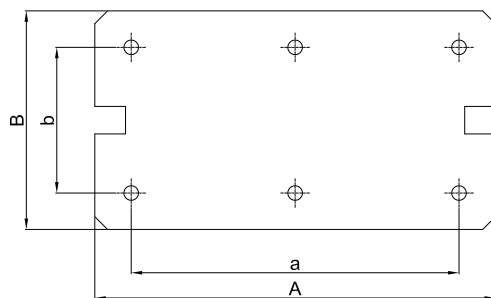
Example: Enclosure type EJBX-5 + Internal mounting plate BFE-5SS + Cable glands, unions + other...see key



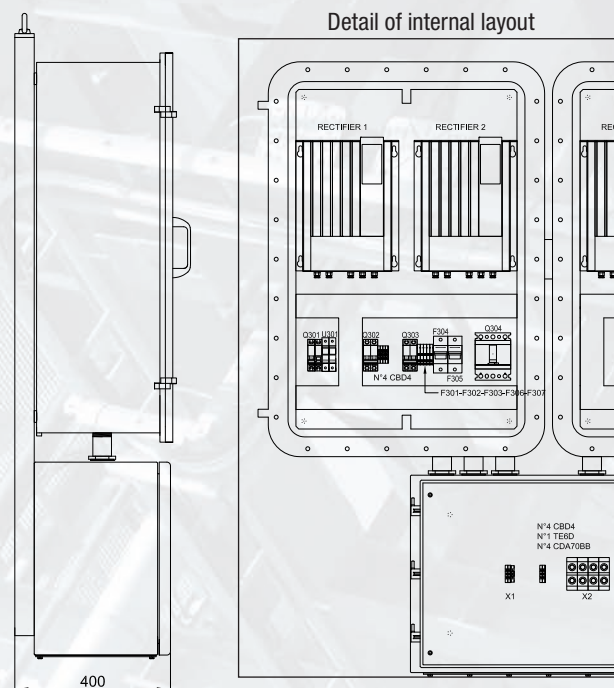
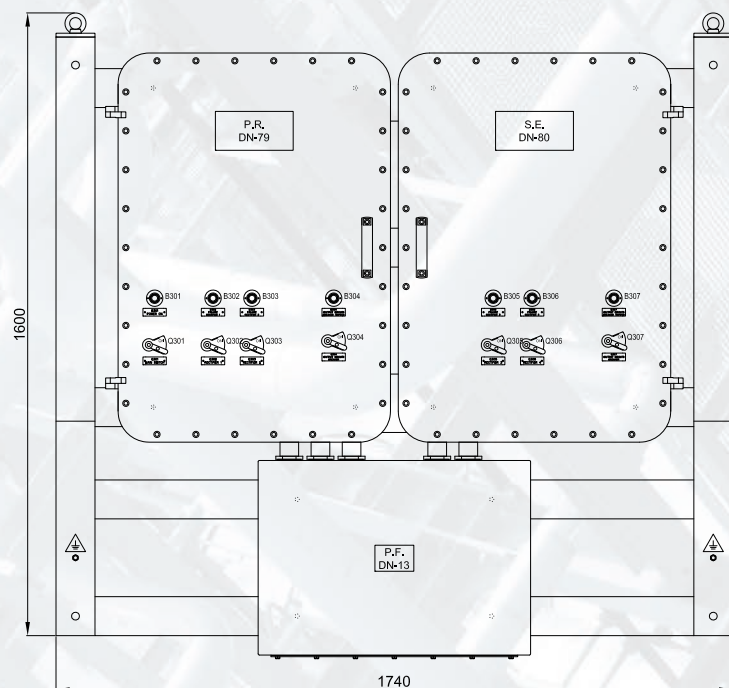
## EJBX...series Accessories available on request and spare parts

| ILLUSTRATION                                                                        | DESCRIPTION                                | MODEL                           | FEATURES                                                                                       | CODE       | KEY                                                                                                                                                                         |
|-------------------------------------------------------------------------------------|--------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Internal mounting plates                   | EJBX-01                         | Thickness 2.5mm<br>Stainless steel (BFE-...SS)                                                 | BFE-01SS   |       |
|                                                                                     |                                            | EJBX-1                          |                                                                                                | BFE-1SS    |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-2                          |                                                                                                | BFE-2SS    |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-3/3B                       |                                                                                                | BFE-3SS    |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-4/4B                       |                                                                                                | BFE-4SS    |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-45/45B                     |                                                                                                | BFE-45SS   |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-5/5B                       |                                                                                                | BFE-5SS    |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-55/55B                     |                                                                                                | BFE-55SS   |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-6/6B                       |                                                                                                | BFE-6SS    |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-7                          |                                                                                                | BFE-7SS    |                                                                                                                                                                             |
|    | Breather and drain valve                   | Thread diameter<br>ISO 7-R 3/8" | Material:<br>stainless steel                                                                   | ECD-210S   |       |
|    | Cable glands and unions                    |                                 | For models and codes,<br>visit<br><a href="http://www.cortemgroup.com">www.cortemgroup.com</a> |            |       |
|   | Sealed bushings                            |                                 | For models and codes,<br>visit<br><a href="http://www.cortemgroup.com">www.cortemgroup.com</a> |            |     |
|  | Lid-mounted control and signalling devices |                                 | For control and signalling device models and codes, see control and monitoring device chapter  |            |   |
|  | O-ring between body and lid                | EJBX-01                         | Material:<br>red-coloured silicone                                                             | K01-131/1S |                                                                                        |
|                                                                                     |                                            | EJBX-1                          |                                                                                                | K1-131/1S  |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-2                          |                                                                                                | K2-131/1S  |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-3/3B                       |                                                                                                | K3-131/1S  |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-4/4B                       |                                                                                                | K4-131/1S  |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-45/45B                     |                                                                                                | K45-131/1S |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-5/5B                       |                                                                                                | K5-131/1S  |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-6/6B                       |                                                                                                | K6-131/1S  |                                                                                                                                                                             |
|                                                                                     |                                            | EJBX-7                          |                                                                                                | K61-131/S  |                                                                                                                                                                             |

| Envolventes  | Internal mounting plates |     |     |     |          |
|--------------|--------------------------|-----|-----|-----|----------|
|              | A                        | B   | a   | b   | Cod.     |
| EJBX-01      | 180                      | 120 | 140 | 80  | BFE-01SS |
| EJBX-1       | 220                      | 120 | 180 | 80  | BFE-1SS  |
| EJBX-2       | 340                      | 140 | 300 | 100 | BFE-2SS  |
| EJBX-3 /3B   | 280                      | 200 | 240 | 160 | BFE-3SS  |
| EJBX-4 /4B   | 340                      | 240 | 300 | 200 | BFE-4SS  |
| EJBX-45 /45B | 460                      | 280 | 440 | 260 | BFE-45SS |
| EJBX-5 /5B   | 540                      | 340 | 500 | 300 | BFE-5SS  |
| EJBX-55 /55B | 570                      | 370 | 540 | 340 | BFE-55SS |
| EJBX-6 /6B   | 720                      | 500 | 680 | 460 | BFE-6SS  |
| EJBX-7       | 850                      | 550 | 820 | 520 | BFE-7SS  |

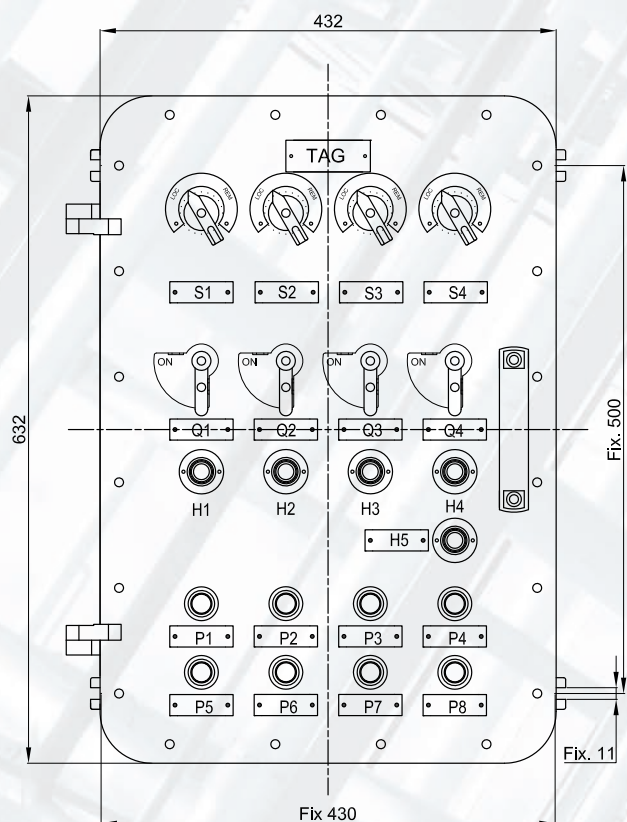


Example of control panel with wall-mounting system.



Example of control panel

External layout



Internal layout

