

Large, globally certified product range

Our explosion protection enclosing solutions are comprehensive and widely configurable. Reliable in use and convenient to install, their overall quality provides cost efficiency, and most of all, increased safety of your employees and equipment every day.

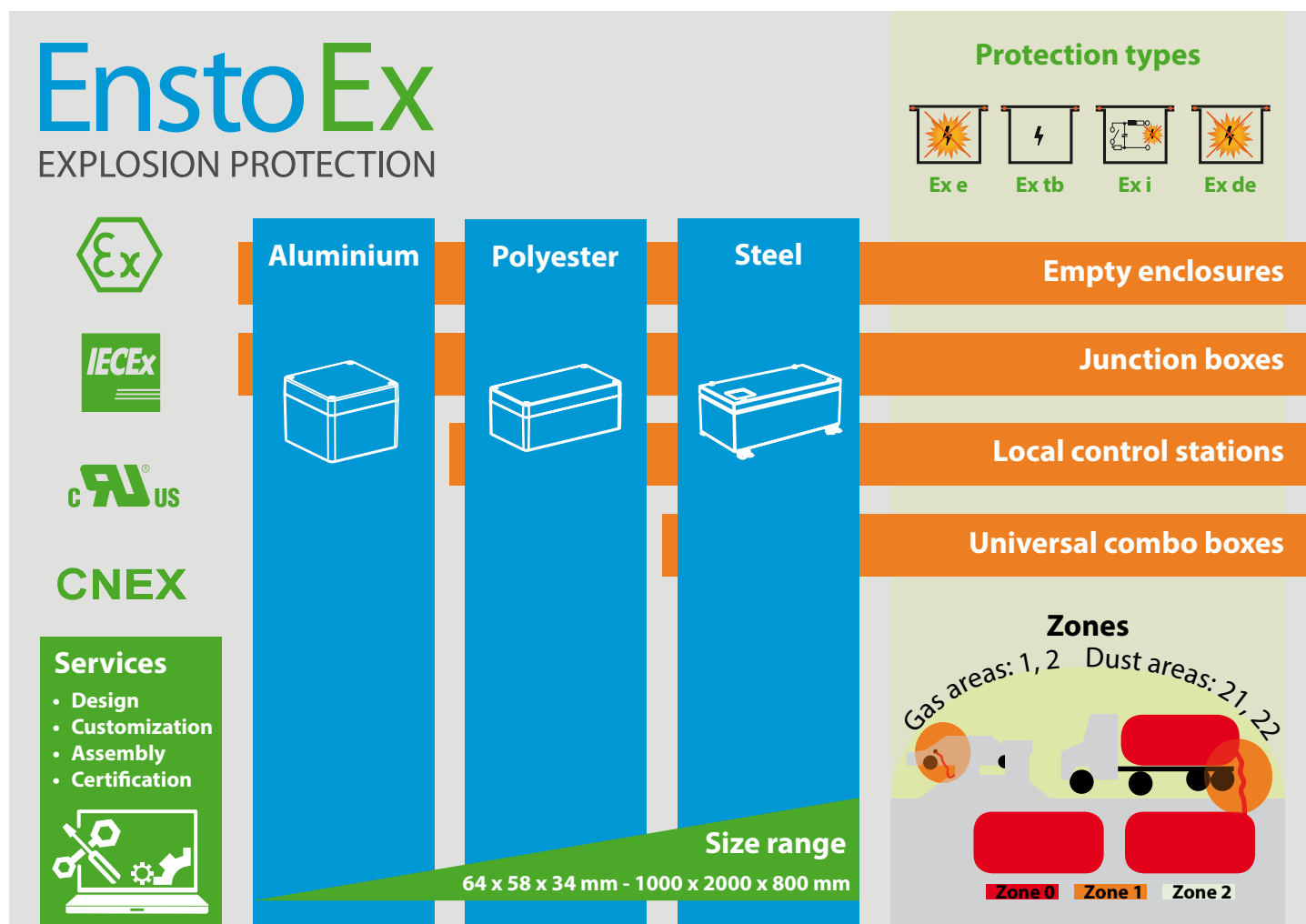
Our explosion protection offering now comprises Ex enclosing solutions and various related industrial components. They are designed and tested to meet the requirements of industries and applications where explosive atmospheres may be present.

The enclosures are available in painted mild steel, stainless steel (AISI 304 and AISI 316L), die-cast aluminium and polyester and they

are widely certified to meet the requirements of global markets. They hold ATEX, China Ex, IECEx, Russian and UL certifications.

Our Ex enclosures are suitable for installations in:

- Zones 1 and 2 in gas areas
- Zones 21 and 22 in dust areas.



Material comparison



Our product range comprises Ex enclosures made of steel, aluminium and polyester. Below are some advantages and disadvantages of the different materials.

Steel

Polyester painted mild steel

- + High impact resistance
- + High degree of protection
- + Easy to customize; customer-specific dimensions possible
- Corrosion risk

Stainless steel AISI 304

- + High impact resistance
- + High degree of protection
- + Excellent corrosion resistance
- + Excellent resistance to UV radiation
- + Suitable for outdoor use; a rain shelter is recommended
- + Suitable for industrial environments
- + Excellent suitability e.g. to the food industry
- + Customer-specific dimensions possible
- More expensive than painted mild steel

Stainless steel AISI 316L

- In addition to the advantages of AISI 304
- + Excellent corrosion resistance
 - + Excellent suitability e.g. to offshore industry
 - More expensive than stainless steel AISI 304



Polyester (GRP)

Carbon loaded glass-reinforced polyester (black)

- + Excellent temperature resistance
- + Good corrosion resistance
- + Good resistance against solvents
- + Excellent suitability e.g. to chemical industries
- Unrecyclable material



Die-cast aluminium

Die-cast powder-coated aluminium

- + Lighter than steel
- + High impact resistance
- + Good resistance against solvents
- + Good corrosion resistance
- + Wide temperature resistance range
- Machining may be problematic



Ensto Ex polyester enclosures

In short



Our polyester explosion protection enclosures offering includes a particularly wide range of standard enclosure sizes. This enables quick deliveries and enhanced cost-efficiency. Our solutions are built for the toughest environments and versatile applications and they are widely certified.

The series includes empty enclosures, equipped junction boxes and local control stations. All the solutions are suitable for installations in areas where explosive concentrations of gases, steam and dust can appear (i.e. in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

The enclosures are made of black carbon-loaded glass reinforced polyester containing a graphite additive that prevents static discharge of the housing surface, thanks to its low surface resistance.

Material	Description
Polyester:	Carbon-loaded glass reinforced polyester (black)
Product alternatives	Description
Empty enclosures:	Gas and dust area components
Junction boxes:	Gas and dust area equipment
Local control stations:	Gas and dust area equipment including enclosure with cutouts and specified accessories. See page 37.

EnstoEx

EXPLOSION PROTECTION

Services

- Customization
- Assembly

Aluminium	Polyester	Steel	
			Empty enclosures
			Junction boxes
			Local control stations
			Universal combo boxes

Protection types

Zones

Gas areas: 1, 2 Dust areas: 21, 22

Zone 0
Zone 1
Zone 2

Size range

75 x 80 x 55 mm - 600 x 250 x 160 mm

Empty enclosures, polyester

Ex e and Ex tb components



We have an exceptionally large size range of Ex polyester enclosures in our offering. The enclosures are suitable for installations in areas where explosive concentrations of gases, steam and dust can appear (i.e. in Zones 1 and 2 in gas areas and 21 and 22 in dust areas).

Our empty Ex e and Ex tb enclosures are component certified. This simplifies your approval process as the enclosure does not have to be retested and reapproved when registering a new Ex end product.

Our empty enclosures in brief:

- Certified to meet the demanding ATEX and IECEx requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Large size range of standard models
- Material includes graphite that prevents static discharge of the housing surface.

Content of an enclosure package:

- Enclosure base
- Cover
- Captive stainless steel AISI 316 cover screws
- Special gasket.

Available services:

- Printing
- Threading of holes
- Drilling.

Further information:

- Standard sizes, page 28
- Accessories, page 28 and 42–44.

Examples of available accessories:






Mounting plates

DIN rails for base, DIN 15 and DIN 35



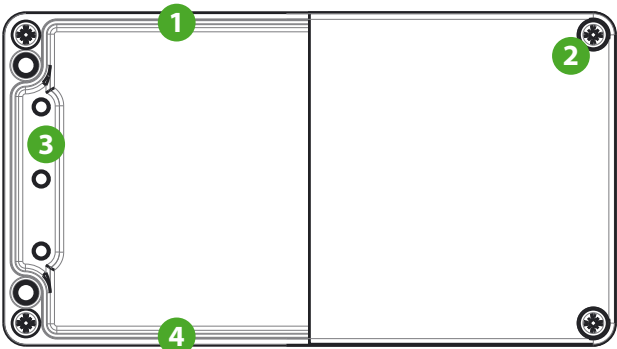
Fastening lug sets

Hinge pairs

Variations	
Cover fastening:	Captive stainless steel AISI 316 cover screws
Material:	Carbon loaded glass-reinforced polyester (black)
Dimensions:	Width: 75–600 mm Height: 80–250 mm Depth: 55–160 mm
Technical information	
Degree of protection:	IP66
Service temperature:	-55 °C to +100 °C
Conformity	
Approvals/certificates:	 IBExU 14 ATEX 1126U IECEx IBE14.0042U
Standards:	EN/IEC 60079-0, -7, -31
Marking, gas:	 II 2G Ex e IIC Gb
Marking, dust:	 II 2D Ex tb IIIC Db

Special features guaranteeing the maximum strength and durability of our solutions:

1. Thick wall structure
2. Captive stainless steel AISI 316 cover screws
3. Stainless steel inserts for DIN rails
4. Special gasket.



Junction boxes, polyester

Ex e, Ex tb and Ex i equipment



We provide complete junction boxes certified as Ex e, Ex tb and Ex i equipment to our customers. These junction boxes are designed to enclose Ex e and Ex i terminals. The maximum number of terminals used in each solution is determined by the conductor cross-section, enclosure operating temperature and required temperature class. Our boxes are suitable for temperature classes T6 up to T5.

Our junction boxes in brief:

- Certified to meet the demanding ATEX and IECEx requirements
- Suitable for Zones 1 and 2 in gas group IIC
- Suitable for Zones 21 and 22 in dust group IIIC
- Large size range of standard models
- Material included graphite that prevents static discharge of the housing surface.

Content of an enclosure package:

- Empty enclosure
- DIN rail or mounting plate
- Terminals
- Optional:
 - Cable glands
 - Breather.

Available services:

- Printing
- Threading of holes
- Drilling
- Description plates made of plastic or stainless steel.

Further information:

- Standard sizes, page 28
- Accessories, page 28 and 42–44.








Variations

Cover fastening:	Captive stainless steel AISI 316 cover screws
Material:	Carbon loaded glass-reinforced polyester (black)
Dimensions:	Width: 75–600 mm Height: 80–250 mm Depth: 55–160 mm

Technical information

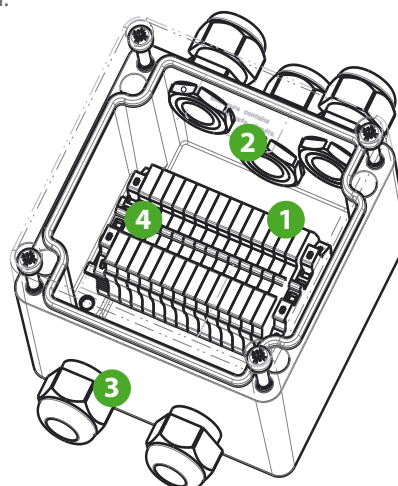
Degree of protection:	IP66
Temperature class:	T6 / T5
Ambient temperature:	-55 °C / -20 °C to +40 °C / +55 °C
Surface temperature (dust areas):	T85 °C / T100 °C

Conformity

Approvals/certificates:	  IBExU 14 ATEX 1128X IECEx IBE14.0043X
Standards:	EN/IEC 60079-0, -7, -31, - 11
Marking, gas:	 II 2 G Ex e IIC T_ Gb  II 2G Ex ia IIC T6/T5 Gb
Marking, dust:	 II 2D Ex tb IIIC T85°C/T100°C Db

Special features guaranteeing the maximum strength and durability of our solutions:

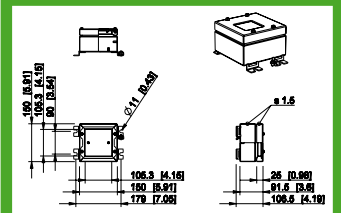
1. DIN rail installed terminals
2. Customized openings
3. Cable glands chosen to meet equipment specifications
4. Clearance and creepage distances taken into account in design.



Empty enclosures, polyester

Standard sizes

We have created some standard sizes that are readily available in our stock for fast and efficient delivery.



Product cards with dimensional drawings can be found at www.ensto.com/products/ex.

Ensto Ex enclosures, stocked items

Product code	Description	Service temperature	Dimensions (mm)			GTIN-13
			Width	Height	Depth	
MGRPEX080808	Plain sides	-55 °C to +100 °C	75	80	75	6438100170875
MGRPEX081108	Plain sides	-55 °C to +100 °C	75	110	75	6438100170899
MGRPEX121209	Plain sides	-55 °C to +100 °C	120	122	90	6438100170967
MGRPEX122209	Plain sides	-55 °C to +100 °C	120	220	90	6438100170974
MGRPEX161609	Plain sides	-55 °C to +100 °C	160	160	90	6438100170981
MGRPEX162609	Plain sides	-55 °C to +100 °C	160	260	90	6438100170998
MGRPEX252512	Plain sides	-55 °C to +100 °C	250	255	120	6438100171025
MGRPEX254012	Plain sides	-55 °C to +100 °C	250	400	120	6438100171049
MGRPEX256012	Plain sides	-55 °C to +100 °C	250	600	120	6438100171063
MGRPEX404012	Plain sides	-55 °C to +100 °C	400	400	120	6438100171070

Stocked items available with shorter delivery times!

Ensto Ex enclosures, non-stockable items

Product code	Description	Service temperature	Dimensions (mm)			GTIN-13
			Width	Height	Depth	
MGRPEX080806	Plain sides	-55 °C to +100 °C	75	80	55	6438100170141
MGRPEX081106	Plain sides	-55 °C to +100 °C	75	110	55	6438100170882
MGRPEX081606	Plain sides	-55 °C to +100 °C	75	160	55	6438100170905
MGRPEX081608	Plain sides	-55 °C to +100 °C	75	160	75	6438100170912
MGRPEX081906	Plain sides	-55 °C to +100 °C	75	190	55	6438100170929
MGRPEX081908	Plain sides	-55 °C to +100 °C	75	190	75	6438100170936
MGRPEX082305	Plain sides	-55 °C to +100 °C	75	230	50	6438100170943
MGRPEX082308	Plain sides	-55 °C to +100 °C	75	230	75	6438100170950
MGRPEX163609	Plain sides	-55 °C to +100 °C	160	360	90	6438100171001
MGRPEX165609	Plain sides	-55 °C to +100 °C	160	560	90	6438100171018
MGRPEX252516	Plain sides	-55 °C to +100 °C	250	255	160	6438100171032
MGRPEX254016	Plain sides	-55 °C to +100 °C	250	400	160	6438100171056
MGRPEX256012	Plain sides	-55 °C to +100 °C	600	250	120	6438100171063



Accessories

Enclosure	Mounting plate	DIN rails for base, DIN 15	DIN rails for base, DIN 35	Hinge pair	PE busbar	Fastening lug set	Continuity plate
MGRPEX080806	MMP0808B	DR15.0808M	N/A	N/A	*	HMFL4	N/A
MGRPEX080808	MMP0808B	DR15.0808M	N/A	N/A	*	HMFL4	N/A
MGRPEX081106	MMP0811B	DR15.0811	N/A	N/A	*	HMFL4	N/A
MGRPEX081108	MMP0811B	DR15.0811	N/A	N/A	*	HMFL4	N/A
MGRPEX081606	MMP0816B	DR15.0816	N/A	N/A	*	HMFL4	N/A
MGRPEX081608	MMP0816B	DR15.0816	N/A	N/A	*	HMFL4	N/A
MGRPEX081906	MMP0819B	DR15.0819	N/A	N/A	*	HMFL4	N/A
MGRPEX081908	MMP0819B	DR15.0819	N/A	N/A	*	HMFL4	N/A
MGRPEX082305	MMP0823B	DR15.0823	N/A	N/A	*	HMFL4	N/A
MGRPEX082308	MMP0823B	DR15.0823	N/A	N/A	*	HMFL4	N/A
MGRPEX121209	MMP1212B	N/A	DR35.1212	HMH12	EGX02	HMFL4	*
MGRPEX122209	MMP1222B	N/A	DR35.1220	HMH12	EGX02	HMFL4	*
MGRPEX161609	MMP1616B	N/A	DR35.1616	HMH12	EGX03	HMFL4	*
MGRPEX162609	MMP1626B	N/A	DR35.1626	HMH12	*	HMFL4	*
MGRPEX163609	MMP1636B	N/A	DR35.12/1636	HMH12	*	HMFL4	*
MGRPEX165609	MMP1656B	N/A	DR35.1656	HMH12	*	HMFL4	*
MGRPEX252512	MMP2526B	N/A	DR35.2526	HMH12	*	HMFL4	*
MGRPEX254012	MMP2540B	N/A	DR35.2540.41	HMH12	EGX05	HMFL4	*
MGRPEX256012	MMP2560B	N/A	DR35.23/3160	HMH12	*	HMFL4	*
MGRPEX404012	MMP4041B	N/A	DR35.2540.41	HMH12	EGX05	HMFL4	*
MGRPEX252516	MMP2526B	N/A	DR35.2526	HMH12	EGX04	HMFL4	*
MGRPEX254016	MMP2540B	N/A	DR35.2540.41	HMH12	EGX05	HMFL4	*

N/A Not available

* Available on request

More accessories on page 42–44.

Junction boxes, polyester

Standard sizes

We have created some standard sizes that are readily available in our stock for fast and efficient delivery.

Instructions for ordering junction boxes

1.

Select the suitable empty enclosure

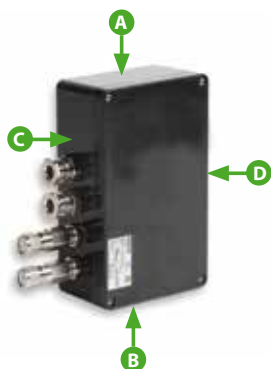


Empty enclosures

Enclosure type	Description	Dimensions (mm)			GTIN-13
		Width	Height	Depth	
MGRPEX080808JB	Empty MGRPEX080808 enclosure	75	80	75	-
MGRPEX081108JB	Empty MGRPEX081108 enclosure	75	110	75	-
MGRPEX121209JB	Empty MGRPEX121209 enclosure	120	122	90	-
MGRPEX122209JB	Empty MGRPEX122209 enclosure	120	220	90	-
MGRPEX161609JB	Empty MGRPEX161609 enclosure	160	160	90	-
MGRPEX162609JB	Empty MGRPEX162609 enclosure	160	260	90	-
MGRPEX252512JB	Empty MGRPEX252512 enclosure	250	255	120	-
MGRPEX254012JB	Empty MGRPEX254012 enclosure	250	400	120	-
MGRPEX256012JB	Empty MGRPEX256012 enclosure	250	600	120	-
MGRPEX404012JB	Empty MGRPEX404012 enclosure	400	400	120	-

2.

Define number/type of required cable glands per side



Maximum number of cable glands allowed

Enclosure type	Cable glands per side (A and B, C and D), see picture on the left									
	Size: M16		Size: M20		Size: M25		Size: M32		Size: M40	
	A and B	C and D	A and B	C and D	A and B	C and D	A and B	C and D	A and B	C and D
MGRPEX080808	1	2	1	2	N/A	2	N/A	N/A	N/A	N/A
MGRPEX081108	1	4	1	3	N/A	2	N/A	N/A	N/A	N/A
MGRPEX121209	4	9	2	5	1	3	1	2	1	1
MGRPEX122209	4	18	2	11	1	5	1	3	1	3
MGRPEX161609	8	14	4	8	2	4	2	2	1	2
MGRPEX162609	8	26	4	14	2	7	2	4	1	3
MGRPEX252512	10	34	8	20	4	9	3	7	2	4
MGRPEX254012	12	58	8	35	4	17	3	13	2	6
MGRPEX256012	12	84	8	52	4	24	3	18	2	10
MGRPEX404012	20	58	14	35	6	17	4	13	2	6

3.

Define the required terminals



Maximum amount of terminals allowed

Define the required terminals by using the tables related to the relevant product card located on our web pages. To find the information do as follows:

1. Go to our website and select Products and Explosion protection (website: www.ensto.com/products/ex)
2. Select the relevant enclosure material
3. Select *Junction boxes*
4. Select relevant enclosure type
5. On the product card open the product data sheet document.

4.

Inform our sales personnel of your needs



Contact information

Local contact information can be found on our web pages (www.ensto.com/contacts).

