

ENCLOSURE CATALOGUE



Industrial and hazardous area enclosures,
junction boxes and special purpose enclosures



PRODUCTS MADE IN THE UK



IP65, 66, 67 and 68

Company Background



Controls and Enclosure Technik Ltd (**CE-TEK**) was established in 1997 by Paul Bennett who's experience in the design, manufacture & supply of Electrical Enclosure equipment stretches back to the mid 1970's.

CE-TEK employs several specialists who have spent many years in the enclosures industry and have vast experience of major projects in the oil and gas industry and major infrastructure projects. By drawing on this wealth of experience CE-TEK has been able to incorporate many new design features into its product range which enable cost savings to be made during manufacture, resulting in highly competitive pricing to our customers.

Since 1998 the Company has continued to expand beyond the UK with offices in North America, the Middle East and South East Asia with distribution networks world wide. CE-TEK's products are made from a wide range of materials including: stainless steel, ABS, polycarbonate, GRP, die-cast aluminium and many more.

Certification is available to the latest ATEX/IEC Ex standards of EN 60079 and by constant development we are now able to manufacture enclosures to withstand fire conditions (950° C for 3 hours) and also for permanent submersion (IP68) to water depths of up to 3000 metres. CE-TEK have also successfully developed and manufactured a variety of bespoke enclosures to meet exacting customer and environmental requirements.

New developments include fully waterproof housings for plasma, LED and LCD screen televisions for outdoor use. They are vandal proof and include a range of climatic solutions for variable weather conditions and can be made to size to suit any type of flat screen display.

For detailed information please visit www.ce-tek.co.uk to download a product-specific catalogue or contact a member of our sales team on 01298872233.



Contents



Industrial Enclosure Group



4/13

CEA IP66/67 Aluminium Enclosures	5
CEM ABS and Polycarbonate Enclosures	6
CEP Glass Reinforced Polyester (GRP) Enclosures	7
CE GR ABS Enclosures	8
CE-FG Fibreglass (GRP) Cabinets	9
APO IP67 Polyester (GRP) Enclosures	10
CE-ST and CE-STX Mild/Stainless Steel Enclosures	11
Other Products	12/13



Hazardous Area Enclosure Group

14/21

CEX Ex e Stainless/Mild Steel Enclosures and Terminal Boxes	15
ACEX Ex e Stainless/Mild Steel Enclosures and Terminal Boxes	16
CEA Ex e Aluminium Enclosures	17
CEP Ex e Glass Reinforced Polyester (GRP) Enclosures	18
Ex Stock Pre-assembled Polyester (GRP) ATEX Enclosures	19
 EJB, EJC and GUB enclosures	20
ATEX / IECEx Air Purge & Pressurised cabinets	21
 CEX HVJB Junction boxes	22/23
Ex Professional Panels	24
ATEX / IECEx Ex nA or Ex nR enclosures	25



Special / Custom Made Enclosures

26/27



IP68 Underwater Enclosures

28/29



Fire rated Enclosures

30/31/32/33



Industrial Cable Glands

34/35/36



Hazardous Area Cable Glands

37/38/39

Custom Made TV Enclosures	40
TV Shield	41
Display Shield	42
Defibrillator Enclosures	43

Machining, Assembly and Customising	44
Certificates of Conformity	44
Technical Drawings	44
Project References	45
Hazardous Area Information	46/47
Agent/Distributor	Back Page
Locations	Back Page

Overview and Key Features

- CE-TEK's industrial enclosures are manufactured from: aluminium, polyester, ABS, polycarbonate, mild and stainless steel.
- Protection levels range from IP55 to IP67 (IP68 and IP69K are options on some products)
- Added value machining services for standard and threaded entries, fitting terminals, cable glands and other components, painting, engraving and screen printing, at additional cost.



CE-TEK launched its industrial electrical enclosure range to the UK market in 1997, since then our range of enclosures has been developed and expanded to meet the exacting needs of our customers. We carry extensive stocks with next day delivery available on our popular sized enclosures.

Applications

CE-TEK enclosures are used in many industrial application areas including: environment monitoring, wind farms, food processing industries, digital displays, defibrillator enclosures, telecommunication repeater stations, road and rail tunnels, building and civil construction, retail, energy industries, high voltage junction boxes, lighting, security, monitoring/tracking applications and major infrastructure projects. With operations in the UK, USA, Singapore and distributors world-wide we have the capacity to meet local and international requirements.

CE-TEK's range of standard size enclosures, junction boxes and cabinets are listed in the following tables.

CE-TEK product Group	Construction Material	Page
CEA	Aluminium	5
CEM	ABS & Polycarbonate	6
CEP	GRP (Polyester)	7
CE-GR	Low Cost ABS	8
CE-FG	Industrial Fibreglass (GRP)	9
APO	GRP (Polyester)	10
CE-ST/STX	Mild or Stainless Steel	11
CE-AR	GRP (Polyester)	12

CE-TEK product Group	Construction Material	Page
CE-SAFE	GRP (Polyester)	12
CE-Multi	ABS & Polycarbonate	12
CE-SLD	ABS & Polycarbonate	12
CE-SDV/SDX	Mild or Stainless Steel	13
CE-SDF/SDP	Mild Steel	13
CE1000/2000/3000	Mild or Stainless Steel	13

Added value

CE-TEK also design and manufacture special/bespoke enclosures constructed from mild/stainless steel, GRP and aluminium (see Specials section on page 26/27)

Accessories

Mounting plates, wall and pole mounting brackets/kits, floor standing plinths for cabinets, ventilation grills and air vents, breather drains, cable glands, gland plates (on certain products), internal component and terminal assembly, machining cut-outs and cable entries.

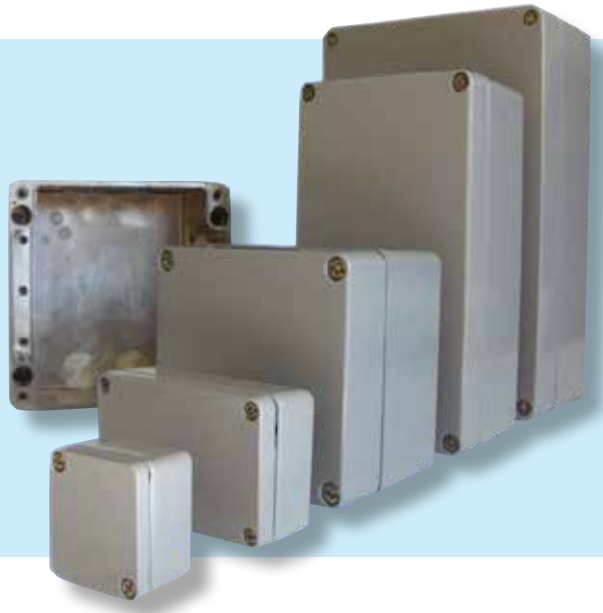
Our industrial Enclosures are listed on pages 5 to 13

CEA

Industrial IP66/67 Aluminium Enclosures

Overview and Key Features

- Die Cast Aluminium Si 12 Alloy, which is a high impact, corrosion resistant and lightweight material
- Protection Class: IP66 as standard with an option of IP67 or IP68
- Finishing options include: unpainted, painted, hard anodised sea water resistant coating and RFI shielding for EMC compliance (2004/108/EC)
- Temperature range -40° C to +80° C as standard or using the optional silicone gaskets -50° C to +120° C



Applications

The 'Shoe Box' design makes the CEA enclosure aesthetically suitable for a wide range of applications including terminal housing/junction box, mounting keypads, electronic displays and housing electrical and electronic equipment of high value. The design affords many opportunities for customising and populating the enclosure. The CEA range meets the highest standards of protection demanded by electrical/electronic designers and specifiers serving both industrial and aerospace markets.



Accessories

Internal hinges, mounting plates, external hinges, external mounting feet and wire lock screws are all available at extra cost. Standard stock colour is RAL7001. Unpainted CEA's are also available from stock.



Product Code	Height mm	Width mm	Depth mm
CEA 504530	50	45	30
CEA 586436	58	64	36
CEA 986436	98	64	36
CEA 156436	150	64	36
CEA 186436	186	64	36
CEA 758057	75	80	57
CEA 128057*	125	80	57
CEA 178057	175	80	57
CEA 258052	250	80	52
CEA 101080	100	100	80
CEA 161080	160	100	80
CEA 201080	200	100	80
CEA 231011	230	100	110
CEA 121280*	122	120	80
CEA 121290	122	120	90
CEA 221280	220	120	80
CEA 221290	220	120	90

Product Code	Height mm	Width mm	Depth mm
CEA 361280	360	120	80
CEA 141490	140	140	90
CEA 201490	200	140	90
CEA 161690	160	160	90
CEA 261690*	260	160	90
CEA 361690*	360	160	90
CEA 561690	560	160	90
CEA 181810	180	180	100
CEA 281810	280	180	100
CEA 202311*	200	230	110
CEA 202318	200	230	180
CEA 332311	330	230	110
CEA 332318	330	230	180
CEA 402311	400	230	110
CEA 403111	400	310	110
CEA 602311	600	230	110

* available as an option to IP68 at up to 5m

CEM Industrial ABS and Polycarbonate Enclosures

Overview and Key Features

- Moulded in either ABS polymer or polycarbonate, the CEM range has high impact strength, are light weight and have a high resistance to corrosion
- Protection Class: IP66 and IP67 (available on request) -40°C to +80°C standard temperature range and -50°C to +120°C with silicone gasket
- Standard colour RAL7035, optional colours and screen printing are available
- RFI shielding for EMC compliance option
- Available with either opaque or polycarbonate lids.



CE-TEK CEM enclosures are constructed from ABS or Polycarbonate. With a wall thickness of 3mm to 4mm, depending on the overall size, CEM's are more rugged than many other plastic enclosures.

CEM's robust and aesthetically pleasing design meet the highest standards of protection demanded by electrical and electronics designers and specifiers for a wide range of industrial applications.

Applications

CEM enclosures are frequently used for housing electrical and electronic equipment within industry and domestic environments. Typical applications include measurement control, housing sensors, tracking and monitoring equipment, terminal junction boxes, lighting/luminary control and many more.

Accessories

Mounting plates, external hinges, external mounting feet, and wire lock screws (stainless steel screws are fitted as standard) are all available at additional cost.



Product Code	Height mm	Width mm	Depth mm
CEM 050504	52	50	35
CEM 060504	65	50	35
CEM 080805	82	80	55
CEM 080808	82	80	85
CEM 128055	120	80	55
CEM 128070	120	80	70
CEM 128085	120	80	85
CEM 168055	160	80	55
CEM 168085	160	80	85
CEM 121255	122	120	55
CEM 121285	122	120	85
CEM 121210	122	120	105
CEM 161290	160	120	90

Product Code	Height mm	Width mm	Depth mm
CEM 201275	200	120	75
CEM 201290	200	120	90
CEM 201575	200	150	75
CEM 241210	240	120	100
CEM 241690	240	160	90
CEM 241612	240	160	120
CEM 251690	250	160	90
CEM 251612	250	160	120
CEM 302385	300	230	85
CEM 302311	300	230	110
CEM361610	360	160	100
CEM 362015	360	200	150
CEM 403615	400	360	150

* add suffix 'A' for ABS, 'P' for polycarbonate and 'T' for transparent lid (up to and including 240x120x100mm CEM241210T)

CEP

Industrial Polyester (GRP Enclosures)

Overview and Key Features

- Constructed from Glass Reinforced Polyester (GRP), which are strong and highly resistant to corrosion
- Protection Class: IP66 and IP67
- -40°C to +80°C standard temperature range with options of -50°C to +120°C and fire resistance types
- Standard colours are RAL7001 and RAL9005, optional colours and screen printing are available
- RFI shielding for EMC compliance option.



Applications

CEP enclosures are designed to meet the highest standards of protection demanded by electrical and electronics designers and specifiers for a wide range of industrial applications.

CE-TEK's CEP 'shoe box' design makes these enclosures aesthetically suitable for applications including terminal/junction boxes and also for mounting pads and electronic displays.



Accessories

Internal hinges, Mounting plates, external hinges, external mounting feet, internal earth continuity plates in brass, galvanised/stainless steel or copper, internal/external earthing studs from M6 to M16 and wire lock screws (stainless steel screws are fitted as standard) are all available at additional cost. A wide range of cable glands and terminals are also available.



Product Code	Height mm	Width mm	Depth mm
CEP 807555	80	75	55
CEP 807575	80	75	75
CEP 117555	110	75	55
CEP 117575	110	75	75
CEP 167555	160	75	55
CEP 167575	160	75	75
CEP 197555	190	75	55
CEP 197575	190	75	75
CEP 237555	230	75	55
CEP 237575	230	75	75
CEP 121290*	122	120	90
CEP 221290*	220	120	90

Product Code	Height mm	Width mm	Depth mm
CEP 161690	160	160	90
CEP 261690*	260	160	90
CEP 361690	360	160	90
CEP 561690	560	160	90
CEP 252512	255	250	120
CEP 252516	255	250	160
CEP 402512	400	250	120
CEP 402516	400	250	160
CEP 404012	400	405	120
CEP404016	400	405	160
CEP 602512	600	250	120

* available as an option to IP68 at up to 3m

CE-GR

Low cost ABS Enclosures

Overview and Key Features

- Manufactured from ABS Techno-polymer, which is strong and light weight
- Captive steel or polymer screws with universal cross/cut head
- Protection class: IP65 - dustproof and protection against low pressure jets of water
- -15°C to +60°C operating temperature
- Available with opaque or transparent lids
- Over 40 different sizes and variations in stock
- Halogen Free - no toxic fumes are given off in the event of a fire unlike PVC enclosures.



Applications

The GR range is a fantastic low cost enclosure for housing electronic and electrical equipment of high value. The GR range is popular with Electricians, Hobbyists, OEM's, Computer Network Engineers and Industrial Control Engineers.

Accessories

GR Enclosures are available with fixing brackets, DIN rail and mounting plates. GR17400 and GR17401 screw caps are available to ensure perfect insulation in compliance with IEC 536 Standards. GR17402 fixing brackets are available for perfect insulation and avoiding accumulation of dirt in fixing points. Sealed lids can be equipped with GR17412 hinges and GR17414 spare polymer screws are also available.



Modular Enclosures



Transparent Lids

Product Code	Height mm	Width mm	Depth mm
GR17000	83 Diameter		
GR17001	83 Diameter		
GR17002	130	55	60
GR17003	83	83	43
GR17004	100	100	60
GR17006	130	90	65
GR17008	150	110	75
GR17010	150	140	75
GR17011	190	140	75
GR17012	170	170	75
GR17013	170	170	128
GR17014	240	190	90
GR17015	190	140	140
GR17016	310	240	100
GR17020	250	190	100
GR17240	240	190	120
GR17242	310	240	120
GR17244	380	300	120
GR17246	380	300	180
GR17248	460	380	120
GR17250	460	380	180

Modular enclosures are suitable for 2, 4, 6, 8, 10 and 12 - 24 DIN rail mounted MCB's or devices and are available as IP44 (indoor use) and IP65 (outdoor use).

Product Code	Module
GR15070	2-4
GR15072	8
GR15074	12
GR15076	24

CE-FG

Industrial Fibreglass (GRP) Enclosures

Overview and Key Features

- Constructed from Glass Reinforced Polyester (GRP), which are strong and highly resistant to corrosion
- Protection Class: IP66
- -25°C to +60°C standard temperature range.
- Standard colour RAL7035, optional colours including red RAL3000 and screen printing are available
- Modular and adjustable frames
- Available with either opaque or glazed hinged doors



Applications

CE-FG enclosures are designed to meet the highest standards of protection demanded by electrical and electronics designers and specifiers for a wide range of industrial applications.

Accessories

Standard and insulating mounting plates, inner doors, module frames, blind and double blind panels, DIN rail assembly, vertical frames, wall brackets and an adjustment device for the mounting plate are all available at additional cost. A wide range of cable glands and terminals are also available.



Product Code	Height mm	Width mm	Depth mm
CE-FG04601	303	265	167
CE-FG04602	428	325	183
CE-FG04603	504	434	210
CE-FG04604	654	434	210
CE-FG04605	654	543	265
CE-FG04606	806	616	319
CE-FG04608	1056	810	355

* Available with opaque or glazed door. Please add 'P' or 'G' suffix to the product code, e.g. CE-FG04601P for an opaque door or CEFG04601Gfor a glazed door.

APO Industrial IP67 Polyester (GRP) Enclosures

Overview and Key Features

- 9 enclosures based on 300mm and 185mm modules
Each large enclosure is a multiple of the smaller sizes
- Constructed from glass fibre reinforced polyester (GRP)
- Base enclosure and lids (RAL7035) provides a rating of IP67 and can operate in temperatures of up to 150°C
- Bases with polycarbonate transparent lids provides a rating of IP66 and can operate in temperatures up to 120°C
- Protection Class: IP67 (also available in IP68).



Applications

Typical applications include: industry, steel works, oil refineries, petrochemical plants, breweries, shipyards, public utilities and many more.

Accessories

The CE-TEK APO range offers a wide range of options and accessories, including: solid bases, bases with 2 or 4 opened sides to allow modular connectivity and panel building from different sized enclosures. Other accessories include: mounting plates (steel and pertinax versions), end plates (combi, blind and bushing), cable clamps and sleeves, pole mounting and brackets, depth extension frame, hinges and cover hinges, DIN rails, air vents, cover fixing screws, locks, bridges and load break switches.



IP67 BASE



IP66 TRANSPARENT LID



IP67 OPAQUE LID



IP67 HINGED TRANSPARENT LID

Product Code	Height mm	Width mm	Depth mm
APO1	186	151	140
APO31	302	186	175
APO41	302	302	175
APO71	372	302	175
APO51	488	302	175

Product Code	Height mm	Width mm	Depth mm
APO81	558	302	175
APO61	603	302	175
APO11	603	372	175
APO12	603	603	175

All APO's are available with transparent, opaque hinged or screw down lids.

CE-ST and CE-STX

Industrial Mild/Stainless Steel Enclosures

Overview and Key Features

- 48 sizes with plain door and 18 sizes with glazed door in mild steel with powder coated finish in RAL 7035
- 22 popular sizes in brushed finished 304 or 316 stainless steel
- Mounting plate and gland plate (CE-ST only) as standard
- Protection Class: IP66 rating for single door models and IP55 rating for double door models.



Applications

Suitable for wall mounting in harsh environments or where durability is an important factor. 304L stainless steel is primarily used in food/agricultural processing and manufacturing industries allowing equipment washing without corrosion. The higher grade 316L stainless steel CE-STX and CE-STXP enclosures are suitable for extreme conditions including wall mounted marine and saline environments.

Accessories

CE-ST are available in white (RAL9010) for 9 popular sizes which are suitable for the refrigeration industry. Roof canopy, internal door, modular frame, microperforated mounting plates, door stops and wall brackets. For stainless steel (CE-STX): modular kit, rain canopy, inner doors and wall mounting brackets.

Product Code	Height mm	Width mm	Depth mm
CE-ST2-315*	300	200	150
CE-ST25-315	300	250	150
CE-ST25-415	400	250	150
CE-ST3-315*	300	300	150
CE-ST3-320	300	300	200
CE-ST3-415*	400	300	150
CE-ST3-420*	400	300	200
CE-ST3-515	500	300	150
CE-ST3-520	500	300	200
CE-ST4-315*	300	400	150
CE-ST4-320	300	400	200
CE-ST4-420	400	400	200
CE-ST4-515	500	400	150
CE-ST4-520*	500	400	200
CE-ST4-525	500	400	250
CE-ST4-620*	600	400	200
CE-ST4-625	600	400	250
CE-ST4-640	600	400	400
CE-ST5-520*	500	500	200
CE-ST5-530	500	500	300
CE-ST5-615	600	500	150
CE-ST5-620	600	500	200
CE-ST5-720	700	500	200
CE-ST5-725*	700	500	250

Product Code	Height mm	Width mm	Depth mm
CE-ST6-1025	1000	600	250
CE-ST6-1030*	1000	600	300
CE-ST6-420*	400	600	200
CE-ST6-430	400	600	300
CE-ST6-620*	600	600	200
CE-ST6-625*	600	600	250
CE-ST6-630*	600	600	300
CE-ST6-640	600	600	400
CE-ST6-820*	800	600	200
CE-ST6-825*	800	600	250
CE-ST6-830*	800	600	300
CE-ST6-840	800	600	400
CE-ST6-1040	1000	600	400
CE-ST6-1230*	1200	600	300
CE-ST8-630*	600	800	300
CE-ST8-820	800	800	200
CE-ST8-825	800	800	250
CE-ST8-830*	800	800	300
CE-ST8-840	800	800	400
CE-ST8-1030*	1000	800	300
CE-ST10-820	800	1000	200
CE-ST10-1030*	1000	1000	300
CE-ST10-1230	1200	1000	300
CE-ST12-1230	1200	1200	300

* Available in Stainless Steel. Please add 'X' or 'H' suffix to the product code to order. E.g. CE-STX4-620 for 304 stainless and CE-STX4-620H for 316 stainless.

OTHER INDUSTRIAL PRODUCTS

CE-AR IP66 GRP Cabinets

- Economic monobloc design
- Available in 7 popular sizes from 300x200x170mm up to 1000x800x300mm
- 1, 2 or 3 point locking system
- Wall-mounting/pole fixing
- Operating temperature range -50°C up to + 150°C
- Tested to UL 746 Ultraviolet Light Exposure
- Suitable for aggressive, marine, corrosive and chemical environments.



CE-SAFE IP65 GRP Wall mounted/Floor standing Cabinets

- Manufactured from GRP (Glass Fibre Reinforced Polyester)
- Available in 40 popular sizes from 500x500x320mm up to 1500x1250x420mm
- Operating temperature range -50°C to +130°C
- Extensive range of optional extras including: bases, plinths, floor fixing kits, mounting plates, lockable handles, wall fixing brackets, door switches and coupling kits.

CE-MULTI IP66/67 ABS/Polycarbonate Enclosures

- Available in either ABS polymer or Polycarbonate
- Opaque or smoked grey transparent lid
- Over 240 size/lid combinations
- -40°C to +80°C operating temperature range
- Sizes from 100x100x35mm to 255x180x175mm.



CE-SLD IP66/67 Modular ABS/Polycarbonate Enclosures

- Available in either ABS polymer or Polycarbonate
- Opaque or transparent lid with screw fixed or hinged options
- Sizes available from 190x190x130mm to 560x380x180mm
- -40°C to +80°C operating temperature range.

OTHER INDUSTRIAL PRODUCTS

CE-SDV and SDF IP66 Mild/Stainless Steel Terminal Enclosures

CE-SDV and CE-SDX

- Small terminal box available in 22 sizes with captive lid screws
- Complete with internal mounting rails for DIN rail or mounting plates
- RAL7035 powder finish
- CE-SDX (304L or 316L stainless steel) are available in 6 popular sizes (other sizes available on request).

CE-SDF

- 12 standard sizes with captive lid screws
- Complete with either 2 or 4 gland plates depending on the enclosure dimensions
- RAL7035 powder finish.



CE-SDP IP66 Mild Steel Terminal Enclosures

- 9 standard sizes with hinged lockable lids
- Complete with internal mounting rails for DIN rail or mounting plates
- RAL7035 powder finish.

CE-1000/2000/3000 IP66 Floor standing mild/stainless steel cabinets

- Monobloc cabinets available in 27 popular sizes in mild steel
- (RAL7035) with opaque door, 15 sizes with a glazed door and
- 15 sizes in stainless steel
- Mounting plate with rails for adjustment
- 4 point door hinging and latching as standard
- Protection Class: IP66 rated for single door models and IP55 rated for double door models.



ATEX/IEC Ex Enclosures

Overview and Key Features

- CE-TEK ACEX, CEA, CEP and CEX range meets ATEX 2014/34/EU, IEC Ex and EN 60079 requirements for hazardous areas - Zones 1, 2, 21 and 22. Additionally CU TR / GOST EX
- CE-TEK's designs, manufacturing and quality processes meet the highest rating of Ex e 2 G D and Ex e IIC (gas and dust groups) and T6 (max surface temperature 85°C), certified under SIR A 0518
- CE-TEK's designs also meet Ex i (intrinsic safety) for ATEX 2014/34/EU



Hazardous area enclosures are classed as:

- **Ex e increased safety**
- **Ex d explosion proof and flameproof**
- **Ex i intrinsic safety**
- **Ex p pressurised/air purged**
- **Ex n energy limitation**

CE-TEK's ATEX / IEC Ex enclosures are manufactured from stainless steel and mild steel, aluminium (including marine grade copper free aluminium) and glass reinforced polyester (GRP). The ATEX 2014/34/EU divides hazardous areas into specific zones for dust and gases/vapours.

ATEX 2014/34/EU and EN 60079-10 identified the following industries as potential hazardous environments:-

Oil and gas drilling/production areas, petrochemical and refining areas, garages and battery charging areas, distilleries/breweries, flour and paper mills, silos, joinery shops, chemical and pharmaceutical manufacturing, paint shops, detergent manufacturers, agriculture/food/bakeries and flavourings industries, glue manufacturers, textile/spinning manufacturing, metalworking shops, waste treatment, perfume production, and petrol/fuel stations.

Our ATEX enclosures are listed on pages 15 to 25



CEX Ex e, Ex ia, Ex ib and Ex nA Stainless /Mild Steel Enclosures

Overview and Key Features

- Flexible certification to EN 60079-0 and EN 60079-7 allows for custom manufacturing Ex e enclosures in special sizes up to 2000x2300x600mm
- Developed with over 40 years experience in enclosures for oil and gas industries
- Over 42 popular and bespoke sizes, designed using latest computerised manufacturing techniques offering significant cost savings
- High grade materials, including electropolished and orbital finished 304L/316L stainless steel and powder coated mild steel
- Protection Class: IP66 as standard with IP67 and IP68 versions available
- Various temperature ratings available with T6 as standard
- Available with Heat Guard fire rated coating
- Fire rated junction boxes to 970°C



Applications

CE-TEK has supplied CEX enclosures to many application areas including the onshore/offshore Oil and Gas industries. With the expansion of wave and wind power generation CEX enclosures can be found on underwater wave hubs and wind farms with connections up to 36kV and 2000 amps.

Our engineers are available to advise on the design and engineering parameters of our CEX enclosures and prepare a bespoke design if a standard size is not available. CEX enclosures are fitted with machined solid block hinges and floating cage nuts that allow screws to locate, which saves on threads stripping and certification becoming invalid. Available with full width, full height gland plates on 1, 2, 3 or 4 sides.

Product Code	Height mm	Width mm	Depth mm
CEX 0	110	110	65**
CEX 1	143	143	93**
CEX 151590*	150	150	90**
CEX 191910	190	190	100**
CEX 2A	193	193	186**
CEX 3	168	218	130
CEX 3A	168	218	210
CEX 3B	218	377	156
CEX 3C	218	377	210
CEX 231513	229	155	130
CEX 262615	260	265	150
CEX 262620	260	265	200
CEX 303015*	306	306	150
CEX 303020	306	306	200
CEX 352615	350	265	150
CEX 352620	350	265	200
CEX 4	377	377	156
CEX 4A	377	377	210
CEX 453815	458	388	150
CEX 453820	458	388	200
CEX 484815	480	480	150

Product Code	Height mm	Width mm	Depth mm
CEX 484820*	480	480	203
CEX 5	527	427	156
CEX 5B	527	527	156
CEX 5C	527	527	210
CEX 553615	550	360	150
CEX 553620	550	360	200
CEX 606020*	600	600	210
CEX 765015	762	508	150
CEX 765020	762	508	200
CEX 6	827	577	210
CEX 6A	827	577	210
CEX 6B	827	577	300
CEX 916120	914	610	203
CEX 976720*	977	677	211
CEX 7	977	677	211
CEX 7A	977	677	156
CEX 7B	977	677	300
CEX 8	1177	777	156
CEX 8A	1177	777	210
CEX 8B	1177	777	300

A full range of bespoke sizes are available on request
* Available as an option to IP68 at up to 30m **without hinges

ACEX Ex e, Ex ia, Ex ib and Ex nA Stainless Steel Enclosures

Overview and Key Features

- Developed with over 40 years experience in supplying enclosures for oil and gas industries
- 27 popular sizes, designed using latest computerised manufacturing techniques offering significant cost savings
- High grade materials, including electropolished and orbital finished 316L stainless steel
- Protection Class: IP66 as standard with IP67 versions available
- Available with Heat Guard fire rated coating



Over the last 15 years CE-TEK's ACEX range has been developed to help our customers reduce project costs whilst still providing a full Ex rating.

ACEX are manufactured to the CEX specification technically but are more affordable for customers requiring a low-cost Ex solution. ACEX are equipped with hinges, hank bushes and a return flange to allow water to drainaway and provide a knife edge high grade seal.

Available with full width, full height gland plates on 1, 2, 3 or 4 sides. As with our CEX range of enclosures, custom sizes are available on request.

ACEX and CEX are available with component approval as empty enclosures and apparatus approval as junction boxes.



Product Code	Height mm	Width mm	Depth mm
ACEX 111165	110	110	65
ACEX 121280	120	120	80
ACEX 151280	150	120	80
ACEX 151590	150	150	90
ACEX 191590	190	150	90
ACEX 191910	190	190	100
ACEX 231513	229	152	130
ACEX 262615	260	260	150
ACEX 262620	260	260	200
ACEX 303015	306	306	150
ACEX 303020	306	306	200
ACEX 382615	380	260	150
ACEX 382620	380	260	200
ACEX 383820	380	380	200

Product Code	Height mm	Width mm	Depth mm
ACEX 453815	458	382	150
ACEX 453820	458	382	200
ACEX 484815	480	480	150
ACEX 484820	480	480	200
ACEX 503515	500	350	150
ACEX 503520	500	350	200
ACEX 624515	620	450	150
ACEX 624520	620	450	200
ACEX 765115	762	508	150
ACEX 765120	762	508	200
ACEX 916120	914	610	200
ACEX 916130	914	610	300
ACEX 1207821	1177	777	210
ACEX 1207830	1177	777	300



CEA Ex e

IP66/67 Aluminium Enclosures

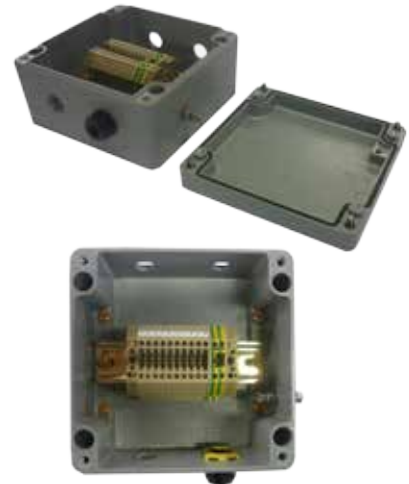
Overview and Key Features

- Die Cast Aluminium Si 12 Alloy, which is a high impact, corrosion resistant and light material
- Protection Class: IP66 as standard with an option of IP67 or IP68
- Finishing options include: unpainted, painted, hard anodised sea water resistant coating and RFI shielding for EMC compliance (2004/108/EC)
- Temperature range -40° C to +80° C as standard or using the optional silicon gaskets -50° C to +120° C
- Available with IEC Ex, ATEX 2014/34/EU, Ex e, Ex ia and Ex ib certification and a temperature class of T5 or T6.



Applications

The 'Shoe Box' design makes the CEA EX e enclosure aesthetically suitable for a wide range of applications including terminal housing/junction box, mounting keypads, electronic displays and housing electrical and electronic equipment of high value. The design affords many opportunities for customising and populating the enclosure. The CEA EX e range meets the highest standards of protection demanded by electrical/electronic designers and specifiers serving both industrial and aerospace markets.



Accessories

Internal hinges, mounting plates, external hinges, external mounting feet and wire lock screws are all available at extra cost. Standard stock colour is RAL7001. Unpainted CEA's are also available from stock.

Product Code	Height mm	Width mm	Depth mm
CEA 504530	50	45	30
CEA 586436	58	64	36
CEA 986436	98	64	36
CEA 156436	150	64	36
CEA 186436	186	64	36
CEA 758057	75	80	57
CEA 128057*	125	80	57
CEA 178057	175	80	57
CEA 258052	250	80	52
CEA 101080	100	100	80
CEA 161080	160	100	80
CEA 201080	200	100	80
CEA 231011	230	100	110
CEA 121280*	122	120	80
CEA 121290	122	120	90
CEA 221280	220	120	80
CEA 221290	220	120	90

Product Code	Height mm	Width mm	Depth mm
CEA 361280	360	120	80
CEA 141490	140	140	90
CEA 201490	200	140	90
CEA 161690	160	160	90
CEA 261690*	260	160	90
CEA 361690*	360	160	90
CEA 561690	560	160	90
CEA 181810	180	180	100
CEA 281810	280	180	100
CEA 202311*	200	230	110
CEA 202318	200	230	180
CEA 332311	330	230	110
CEA 332318	330	230	180
CEA 402311	400	230	110
CEA 602311	600	230	110
CEA 403111	400	310	110

* Available as an option to IP68 at up to 30m **without hinges

CEP Ex e Glass Reinforced Polyester (GRP Enclosures)

Overview and Key Features

- Constructed from Glass Reinforced Polyester (GRP), which is highly resistant to corrosion
- Protection Class: IP66 and IP67
Available with IEC Ex, ATEX 2014/34/EU certification
- Available as Ex e, Ex nA, Ex ia or Ex ib
- -40°C to +80°C standard temperature range with options of -50°C to +120°C and fire resistance types
- Standard colours are RAL7001 and RAL9005, optional colours and screen printing are available
- RFI shielding for EMC compliance option.



Applications

CEP enclosures are designed to meet the highest standards of protection demanded by electrical and electronics designers and specifiers for a wide range of industrial applications.

CE-TEK's CEP 'shoe box' design makes these enclosures aesthetically suitable for applications including terminal/junction boxes and also for mounting pads and electronic displays.

Accessories

Internal hinges, Mounting plates, external hinges, external mounting feet, internal earth continuity plates in brass, galvanised/stainless steel or copper, internal/external earthing studs from M6 to M16 and wire lock screws (stainless steel screws are fitted as standard) are all available at additional cost. A wide range of cable glands and terminals are also available.



Product Code	Height mm	Width mm	Depth mm
CEP 807555	80	75	55
CEP 807575	80	75	75
CEP 117555	110	75	55
CEP 117575	110	75	75
CEP 167555	160	75	55
CEP 167575	160	75	75
CEP 197555	190	75	55
CEP 197575	190	75	75
CEP 237555	230	75	55
CEP 237575	230	75	75
CEP 121290*	122	120	90
CEP 221290*	220	120	90

Product Code	Height mm	Width mm	Depth mm
CEP 161690	160	160	90
CEP 261690*	260	160	90
CEP 361690	360	160	90
CEP 561690	560	160	90
CEP 252512	255	250	120
CEP 252516	255	250	160
CEP 402512	400	250	120
CEP 402516	400	250	160
CEP 404012	400	400	120
CEP 404016	400	400	160
CEP 602512	600	250	120

* available as an option to IP68 at up to 3m



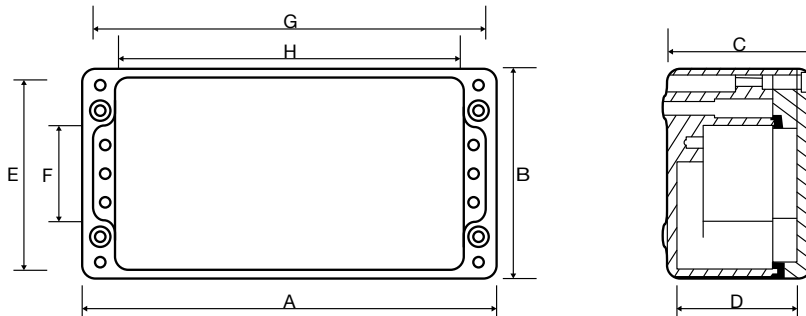
Stock Pre-assembled IP66 Polyester (GRP) ATEX Enclosures

CE-TEK's CEP black polyester (GRP) enclosures are available in 4 popular sizes and terminal configurations to meet our customers' urgent Ex requirements.

All pre-assembled enclosures meet current Ex e, Ex ia and Ex ib requirements to EN 60079:2007

Rated to IP66 and T6 (T85°C) or T5 (100°C) temperature ratings

Ex certified, certificate number SIRA08ATEX3213



Product Code	A	B	C	D	E	F	G	H
CEP 807555PA	80mm	75mm	55mm	46mm	66mm	27mm	71mm	56mm
CEP 121290PA	122mm	120mm	90mm	81.5mm	111mm	66mm	113mm	90mm
CEP 161690PA	160mm	160mm	90mm	80mm	148mm	90mm	148mm	120mm
CEP 261690PA	260mm	160mm	90mm	80mm	148mm	90mm	90mm	220mm



CEP 807555PA

Machined & assembled with:

- 2 x M20 cable entries
- 5 x 2.5mm² terminals, numbered and fitted to DIN rail
- 1 x 4mm² earth terminal
- Earth continuity plate
- M6 earth stud
- 2 certified stopping plugs
- ATEX Certification label

CEP 121290PA

Machined & assembled with:

- 4 x M20 cable entries
- 10 x 2.5mm² terminals, numbered and fitted to DIN rail
- 2 x 4mm² earth terminals
- Earth continuity plate
- M6 earth stud
- 4 certified stopping plugs
- ATEX Certification label

CEP 161690PA

Machined & assembled with:

- 4 x M20 cable entries
- 15 x 2.5mm² terminals, numbered and fitted to DIN rail
- 2 x 4mm² earth terminals
- Earth continuity plate
- M6 earth stud
- 4 certified stopping plugs
- ATEX Certification label

CEP 261690PA

Machined & assembled with:

- 10 x M20 cable entries
- 26 x 2.5mm² terminals, numbered and fitted to DIN rail
- 2 x 4mm² earth terminals
- Earth continuity plate
- M6 earth stud
- 4 certified stopping plugs
- ATEX Certification label

EJB, EJC and GUB enclosures

Ex d ExplosionProof Enclosures

Overview and Key Features

GUB and EJB enclosures meets ATEX 2014/34/EU; IEC Ex; GOST-R (RtR / RtN) and GOST-K for II 2 G Ex d IIB+H2 T6 / II 2 G
 Ex d [ja/ib] IIB+H2 T6 / 1 Ex d IIB+H2 T6 / 1
 Ex d [ja/ib] IIB+H2 T6 UL available in certain sizes
 Suitable for hazardous area installation - Zones 1 / 2 (Gases) and Zones 21 / 22 (Dusts) and Group II
 Constructed from marine grade copper free aluminium light alloy or 316 stainless steel. Also available in cast steel
 Stainless steel screws
 Protection Class: IP65 and IP66.



Applications

All hazardous environments where gas vapours and dust are likely to occur occasionally in normal operation (Zones 1 and 21) or not likely to occur in normal operations, but if it does occur will persist for a short period only (Zones 2 and 22). Typically these applications include petrochemicals, mining – coal and metallic dusts, agricultural and food processing production – flour, sugar and grain dusts. Ex d enclosures are a great option to house uncertified electrical equipment.



Accessories

Enclosures: External epoxy painting, internal anticondensation painting (RAL2004 orange), O-ring gaskets on cover (GUB), Glass windows on cover, drain and breather valves.



Product Code	Height mm	Width mm	Depth mm
GUE - 1	135	135	105
GUB - 0	168	168	145
GUB - 1	198	198	150
GUB - 02	280	235	167
GUB - 03	305	280	238
GUB - 23	270	310	180
GUB - 4	420	420	284
GUB - 5	600	600	335
GUBW - 11*	180	180	150
GUBW - 02*	280	235	167
GUBW - 03*	280	305	235

Product Code	Height mm	Width mm	Depth mm
EJB - 11	175	175	125
EJB - 21	285	245	169
EJB - 22	300	200	220
EJB - 23	285	245	129
EJB - 30	415	315	168
EJB - 31	415	315	250
EJB - 51	565	365	260
EJB - 61	670	470	360
EJB - 63	670	470	235
EJB - 71	742	542	425
EJB - 91	960	660	460

* with viewing window



ATEX / IECEx Specials Air Purge & Pressurised Cabinets

Overview and Key Features

- Ex p certification to IEC EN 60079-0 and IEC 60079-2
Manufactured from 2mm or 3mm gauge 316L stainless steel (orbital or bead-blast finish) or powder coated mild steel
- Dimensions: purpose built to customers design up to 2000mmx2300mmx600mm
- Temperature class: T2 (300°C), T3 (200°C), or T4 (135°C).
- Ambient temperature: -10°C to +35°C.



Using its highly successful CEX designs, CE-TEK has manufactured numerous Ex p (air purged/pressurised) enclosures for hazardous area applications zones 1 and 2 (gases), 21 and 22 (Dusts). This type of enclosure is ideal for floor standing cabinets where even the largest Ex d (explosion/flameproof) enclosure is unable to accommodate key internal components.



Ex p (air purged) Zone 1 large control panels for a munitions manufacturer



Ex Zone 2 kiosk cabinet internal view

Applications

All areas where gases (Zones 1, 2) and or dusts (Zones 21, 22) may be present, including pharmaceutical manufacturing, agricultural industries, brewing, plastics, wood/timber, food processing, chemical, nuclear, military and defence industries.

Accessories/options

Polycarbonate or laminated glass viewing windows, floor plinths and integrated floor standing designs, wall and pole mounting kits, lifting eyes, gland plates, multiple door configurations, 19" rack, chassis/mounting plates, control devices including pilot lights, pushbuttons and isolators and welded cable bosses.

CEX HVJB High Voltage Ex e and Ex nA Junction Boxes

Overview and Key Features

- CE-TEK CEX HVJB range of stainless steel High Voltage Junction Boxes have been designed and developed over 40 years of supplying enclosures to the oil and gas industries
- CEX HVJB are available in various sizes with up to 8 incoming and outgoing cables with a max cable size of 800mm² to accept 800A to 1090A and 11kV to 15kV
- Bespoke sizes and designs including air purge (Ex p) for higher voltage application, and IP68 for permanent or temporary submersion
- Optional extras include, separate enclosures/ compartments for fibre optic cable terminations, heaters, air purging and IP68 underwater versions.

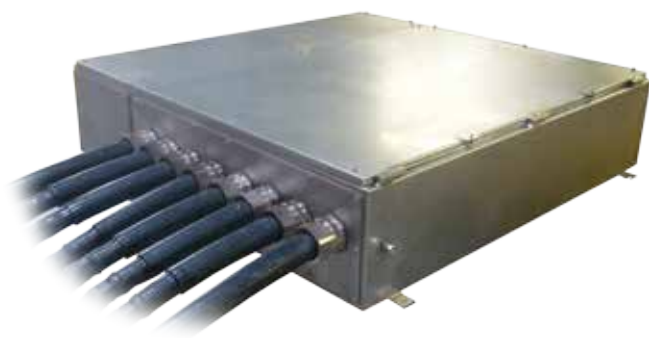


Applications

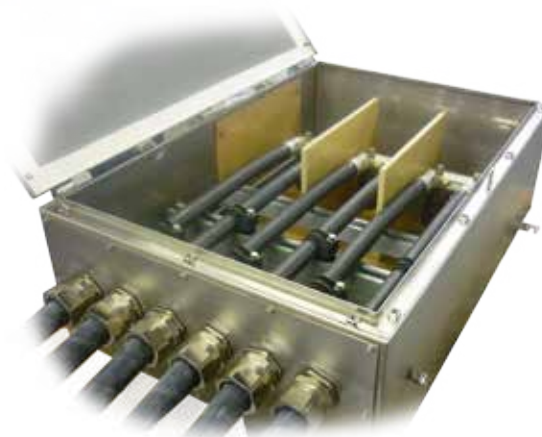
Airports, oil/gas drilling and petrochemical refining, waste water treatment, mining, wind farms and renewable energy sites. Larger CEX HVJB sizes are suitable for terminating offshore umbilical cables with power and data (fibre optic) cable cores. Special versions are available with additional chambers for terminating hydraulic and pneumatic tubes.

Accessories

Punched or threaded entries in either box walls or gland plates, welded cable bosses, component mounting plates and earth bars isolated or wired to earth studs. Anti condensation heaters, earth bars, Ex e breather drains, lifting eye bolts, and various optional finishes including: powder coated paint, bead-blast electro-polished and Heat Guard fire rated coating.



HVJB125125-4-8BT-LH



CEX1258030HVJB-3-6B



Product Code	Height mm	Width mm	Depth mm	Current	Max Cable Size mm ²	Bottom Entry	Top Entry	No. of Ways	No. of Cores
CEX-HVJB956530-3-6B	950	650	300	790A	630	X		3	6
CEX-HVJB956530-3-6T	950	650	300	790A	630		X	3	6
CEX-HVJB976730-3-6B	977	677	300	790A	630	X		3	6
CEX-HVJB976730-3-6T	977	677	300	790A	630		X	3	6
CEX-HVJB976730-3-6BT	977	677	300	790A	630	X	X	3	6
CEX-HVJB976730-4-8B	977	677	300	790A	630	X		4	8
CEX-HVJB976730-4-8T	977	677	300	790A	630		X	4	8
CEX-HVJB976730-4-8BT	977	677	300	790A	630	X	X	4	8
CEX-HVJB1258030-3-6B	1250	800	300	900A	630	X		3	6
CEX-HVJB1258030-3-6T	1250	800	300	900A	630		X	3	6
CEX-HVJB1258030-3-6B	1250	800	300	900A	630	X		3	6
CEX-HVJB1258030-3-6BT	1250	800	300	900A	630	X	X	3	6
CEX-HVJB1258030-4-8T	1250	800	300	900A	630		X	4	8
CEX-HVJB1258030-4-8B	1250	800	300	900A	630	X		4	8
CEX-HVJB1258030-4-8BT	1250	800	300	900A	630	X	X	4	8
CEX-HVJB12512530-3-6T	1250	1250	300	1090A	800		X	3	6
CEX-HVJB12512530-3-6B*	1250	1250	300	1090A	800	X		3	6
CEX-HVJB12512530-3-6BT*	1250	1250	300	1090A	800	X	X	3	6
CEX-HVJB12512530-4-8T*	1250	1250	300	1090A	800		X	4	8
CEX-HVJB12512530-4-8B*	1250	1250	300	1090A	800	X		4	8
CEX-HVJB12512530-4-8BT*	1250	1250	300	1090A	800	X	X	4	8
CEX-HVJB20020060-3-6T*	2000	2000	600	1090A	800		X	3	6
CEX-HVJB20020060-3-6B*	2000	2000	600	1090A	800	X		3	6
CEX-HVJB20020060-3-6BT*	2000	2000	600	1090A	800	X	X	3	6
CEX-HVJB20020060-4-8T*	2000	2000	600	1090A	800		X	4	8
CEX-HVJB20020060-4-8B*	2000	2000	600	1090A	800	X		4	8
CEX-HVJB20020060-4-8BT*	2000	2000	600	1090A	800	X	X	4	8

* For fibre optic compartment, add suffix LH for left hand compartment or RH for right hand compartment

Technical Specification

- **Ingress Protection:**
IP66 (EN 60529) as standard. IP67 and IP68 designs are available at additional cost.
- **Certification:**
Ex e II 2 GD T6 increased safety (IEC 60079-0 and IEC 60079-7) and Ex nA II 3 GD T5 non sparking (IEC 60079-15). Ambient temperature options: 50°C, 55°C and 60°C
- **Construction:**
2mm or 3mm thickness 316L stainless steel (EN 1.4404) fully seam welded body, door, heavy duty hinges, cage nuts, wall mounting lugs, fixing screws and padlockable hasp for additional security. 3mm to 6mm thickness top or bottom gland plates. Orbital finish as standard. Options are electropolished and painted to customer specification
- **Temperature range:**
-20°C to +80°C with neoprene gasket and -55°C to +120°C with silicone gasket. Special versions are available rated to 200C and also 950C for 3 hours

Ex Professional Panels for PC monitors and TVs

Overview and Key Features

- Ex m, Ex p and Ex i certification to IEC60079-18, IEC60079-2 and IEC60079-11.
- Manufactured from 2mm or 3mm gauge 316L stainless steel (orbital, bead-blast or electro-polished finishes).
- Dimensions: 6 standard sizes or purpose built to customer's design.
- Temperature class: T4 (135°C). Ambient temperature: -10°C to +35°C.



Following previous designs for monitor and TV displays, such as those installed at the 2012 London Olympic Park, CE-TEK were contracted to design and manufacture a 70" display unit to be installed in a Zone 1 hazardous environment to EN60079-0. The brief included a seamless welded design with a maximum viewing panel, satin finish, internal swing mounting plate, top mounted internal hinged lid with gas support struts, optically clear non-reflective screen and pole mounting kit.

This project has been successfully completed and CE-TEK is now able to supply similar units to enclose 40" to 70" displays for Zones 1 and 2 applications.



Product Code	Orientation	Panel Size	ATEX Zones
CEX1309035PL	Landscape	40/42"	1 and 2
CEX 15010035PL	Landscape	50"	1 and 2
CEX20014035PL	Landscape	70"	1 and 2
CEX1309035PP	Portrait	40/42"	1 and 2
CEX15010035PP	Portrait	50"	1 and 2
CEX20014035PP	Portrait	70"	1 and 2

CE-TEK can also offer custom designs for TV, display and computer monitor enclosures to client specifications. Material options include: 316 stainless steel in orbital, bead-blast or electro-polished finishes. Other options and accessories include: toughened glass and non-reflective glass, lifting eyes, cable bosses, mounting lugs/brackets and various designs for wall/pole mounting or floor standing plinths. Interface options include Ex e/d/i cable glands, Ex i USB ports for communication and memory devices.

Our expertise builds on over 30 years in the design and manufacture of hazardous area certified enclosures for the Oil and Gas industry.



ATEX / IECEx Specials

Ex nA & Ex nR enclosures & cabinets for ATEX Zone 2 (EN 60079-15)

Overview and Key Features

- Proven CEX design enclosures for use in Zone 2 (gases) and Zone 22 (dusts) applications
- Available as Ex nR (restricted breathing) or Ex nA (non-sparking) enclosures
- CE-TEK flexible in-house certification
- Available as Ex nA HVJBs, and as fire-rated enclosures, and with Heat Guard fire rated coating



For customer applications for Zone 2 (gas) and Zone 22 (dust) there should be no hazardous gas or dust present, but if there is, it is for less than 10 hours a year and in low concentration.

As hazardous area industry specialists CE-TEK are able to offer custom build solutions of control stations, control panels and many other types of enclosures to specific customer requirements all certified by CE-TEK for use in Zone 2 and Zone 22 hazardous areas.

The use of type n designs for Zone 2 and Zone 22 came about because in normal operation there are no hazardous gasses or materials present. Release of such gasses or materials is only in an emergency or for less than 10 hours per year which opens up a wealth of possibilities for end users to use light weight enclosures rather than Ex d cast enclosures which are very heavy and not usually very corrosion resistant.

At CE-TEK we provide a self certification process for Zone 2 and Zone 22 hazardous areas which is fast and very cost effective, saving our customers the time and expense of seeking their own certification through a European test house.

There are several types of "n" protection that CE-TEK can offer as a fully certified solution which are:-

Ex nR Restricted breathing

Typical applications include

- Control panels
- Arcing and sparking components
- Variable speed drives and Inverters
- Windows and cut-outs for HMI
- Computers
- Printers
- Switchgear

Ex nA Non Sparking equipment

Typical applications include

- Resistors
- Batteries
- Transformers
- Shunts
- Diodes
- LCD displays

CE-TEK are able offer certification for Zone 22, which allows for industrial non certified components to be used (within certain parameters). This means we can manufacture and supply control panels and such like to customer specification.

Flexibility is key. As we are able to offer a full in house certification service for Zone 2 and Zone 22 applications we can provide a flexible service to those customers who wish to do thier own internal assembly and wiring build. You send us your technical specifications (including heat dissipation figures) and drawings which allow us to do all the thermal calculations and technical assessment and open your certification dossier. We can supply the enclosure chassis plate for you to do the assembly whilst we manufacture the enclosure. Once you have completed the assembly simply send us photographs and following a site visit, to ensure full compliance, we issue the certification.

Specials

Custom Made Enclosures

Overview and Key Features

- Manufactured from a range of materials, including stainless steel, mild steel (powder coated finish) and GRP
- Protection Class: IP20 to IP68
- OEM labelling
- Range of options for viewing windows, doors, shelving, mounting plates, screen printing and engraving
- Also available with heating, insulation and RFI shielding for EMC compliance options
- Available for wall mounting, floor standing (with optional plinths) and pole mounting applications
- Sizes from 80 x 80 x 30mm to any size.



We are able to manufacture enclosures in mild steel, stainless steel and aluminium in special sizes to customer designs/drawings from 80x80x30mm up to 30x10x10m.

CE-TEK are also able to build special GRP sizes from 100x100x50mm up to 10x5x5m. In addition we can manufacture special sizes/colours in plastic using our 'buildabox' range which are fabricated from flat sheet into a wide range of sizes to customer specification avoiding the use of expensive tooling.

Applications

IP68 versions to customer specifications (see IP68 on pages 28/29). High voltage junction boxes (see CEX HVJB on pages 22/23), telecommunications repeater stations, oil refineries, onshore and offshore applications, military, pollution and environment monitoring, wind farms and renewable energy sites, food, breweries and beverage applications, digital displays, etc.

Accessories

Lifting eyes, wall, pole and floor mounting options including plinths and stands, punched and threaded entries, painting, screen printing, glazed doors, heaters, fans, thermostats and much more.

EXAMPLES OF SPECIALS PRODUCTIONS



Roadside Telecomms Cabinet

Temperature Enclosure

Louvered Enclosure



Bullet Proof Mobile Camera Enclosure

Painted Stainless Steel Floorstanding Enclosure

IP67 Double Seal EMC Enclosure



Windfarm Enclosure

Submarine Electronics enclosure

Cathodic Protection

IP68

Underwater Enclosures

Overview and Key Features

Manufactured from a range of materials including 316L stainless steel, aluminium, GRP and rigid polyurethane

Protection Class: IP68 total water protection from 1m to 300m as standard

Custom designs up to 3000m permanent submersion

AutoCAD® 3D, Pro/Engineer® and AutoCAD Inventor® design/software support

In-house water tank, vacuum, pressure and hydrostatic testing to meet depth requirements.



Applications

Our customer applications for IP68 enclosures are very diverse including: offshore oil and gas, The Thames Flood Barrier, London Olympic Games, weather balloons, river and reservoir beds, special MOD purpose vehicles for underwater use, camera enclosures for counting marine life, underwater lighting enclosures on submersible buoys, lighting junction boxes in swimming pools and fountains and numerous other applications and projects.

Accessories

Available with mounting plates, external mounting feet, hinged doors, earth studs, viewing windows and a variety of finishes and colours. Cable entries, welded bosses and IP68 cable glands to meet your requirements.

Dimensions

CE-TEK can design and manufacture IP68 enclosures to any size. Enclosures manufactured from thicker materials for depths up to 3000m are available to special order. Standard enclosure dimensions for shallow depths are listed in the table overleaf: -



Product Code	Submersion depth (m)	Height mm	Width mm	Depth mm	Horizontal Mounting Centres	Vertical Mounting Centres
CEA12805768	Up to 5m	125	80	57	52	113
CEA12128068	Up to 5m	120	122	80	106	82
CEA22128068	Up to 5m	220	120	80	204	82
CEA26169068	Up to 5m	260	160	90	240	110
CEA36169068	Up to 5m	360	160	90	340	110
CEA20231168	Up to 5m	200	230	110	180	180
CEP12129068	Up to 3m	120	120	90	82	106
CEP22129068	Up to 3m	220	120	90	82	204
CEP26169068	Up to 3m	260	160	90	110	240
CAP0168	Up to 3m	186	151	140	131	166
CAP03168	Up to 3m	302	186	175	166	282
CAP04168	Up to 3m	302	302	175	282	282
CEX15159068	Up to 30m	150	150	90	175	Single strap
CEX30301568	Up to 30m	306	306	150	361	203
CEX48482068	Up to 30m	480	480	203	535	327
CEX60602068	Up to 30m	600	600	210	655	497
CEX97672068	Up to 30m	977	677	211	732	850

Many other sizes are available, please contact our sales team for further information.



Fire Rated Enclosures

Overview and Key Features

- CEP (GRP) tested for fire to IEC60331-2: 2009 at 830°C for 3 hours and BS8434-2: 2003 + A2: 2009 at 970°C for 2 hours
- CEX and ACEX (stainless steel) tested for fire, water and mechanical shock to BS5839-1: 2013 section 26.2e, BS EN 50200: 2006 (840°C for 2 hours) and BS8434-2: 2003 + A2: 2009 (970°C for 2 hours)
- CEX - Stainless steel fire rated enclosures LU Approved
- CEA (aluminium) tested for fire to IEC60331-2: 2009 at 250°C for 2 hours
- ATEX Ex e certified is available as an option.



The CEX/ACEX, CEP and CEA enclosures have been successfully tested to all the latest fire standards for use in buildings and infrastructure projects.

When using fire rated cables on a project, the junction boxes used to connect these cables can often get overlooked as regards the specification required. When fire strikes, it is not selective as to where the junction boxes are located and therefore it is imperative that to maintain system integrity in the case of fire, that the junction boxes are specified to the same fire rating standard as the cable being used.

CE-TEK manufactures four series of junction boxes, which are tested to IEC331 750°C for 3 hours, BS6387 CWZ (950°C for 3 hours), BS5839-1: 2013 section 26.2e, BS EN 50200: 2006 (840°C for 2 hours), BS8434-2: 2003 + A2: 2009 (970°C for 2 hours) and IEC60331-2: 2009 (830°C for 3 hours or 250°C for 2 hours).

We used these temperatures and duration because there are no official test requirements for junction boxes. BS8519-2010 for Life Safety Applications states that junction boxes shall be rated to the maximum temperature of the internal contents. To meet this standard we have tested ACEX, CEX and CEP series of enclosures to match the same fire test standard as cables. For designers and specifiers this means that there is a clear option to maintain the integrity of safety critical circuits in buildings, infrastructure projects, tunnels and, oil and gas projects.

By using materials that are low smoke halogen free the CE-TEK's ACEX, CEX, CEA and CEP enclosures are able to provide additional safety to people who are put in a dangerous situation during a fire.

Applications

CE-TEK have supplied many large projects with fire rated enclosures including the Channel Tunnel, The Thames service tunnels, M25 Motorway tunnels, Channel Tunnel Rail Link project, Dublin Airport, London Underground and Tube lines, Crossrail, Heathrow Airport, Singapore Metro, Hong Kong Metro New York



Fire Rated Enclosures

In a recent independent test CE-TEK's fire-rated enclosures met all the stringent conditions set out in the British Standards: BS5839-1: 2013 Section 26.2e (which states that enclosures should be able to support cables so that circuit integrity is not reduced below that afforded by the cable when exposed to fire and meet PH120 classification for continuity of power supply), BS EN 50200: 2006 (2 hours fire and mechanical shock at 840°C) and BS 8434-2: 2003 + A2 2009 (2 hours at 970°C, the first hour as combined fire and mechanical shock, the second hour as fire, mechanical shock and water combined).

The BS tests replicate a fire scenario, rapid heat build-up (enclosures were tested up to 970°C) and the process of extinguishing with water, and mechanical shock associated with masonry collapse.

CE-TEK's fire-rated enclosures are designed to meet the exacting specifications for building fire safety, over ground and underground rail applications, road tunnels and other public places where electrical power supply, emergency lighting and public address systems are required to be fully operational in the event of a fire.

CEX Fire Test Report



CEP Fire Test Report



CEA Fire Test Report



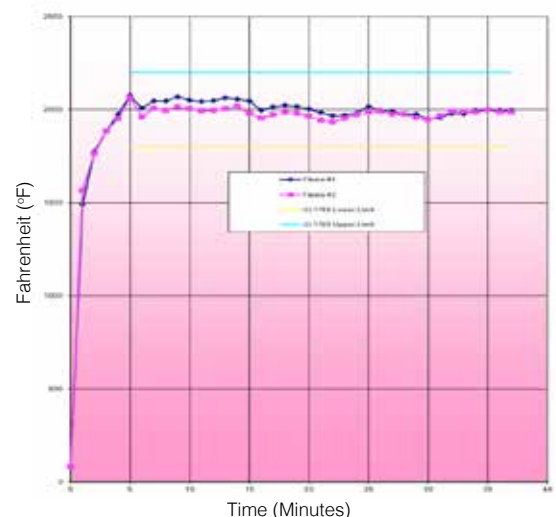
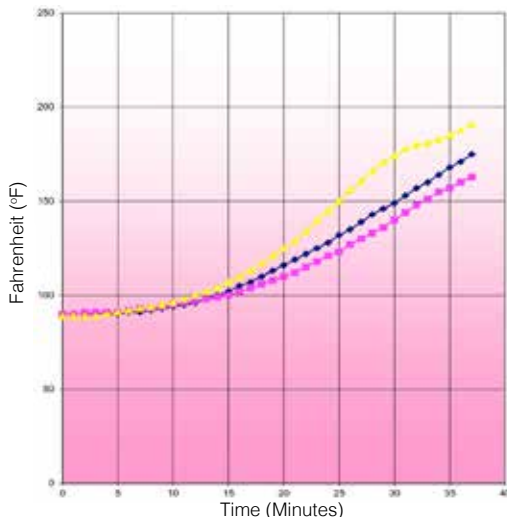
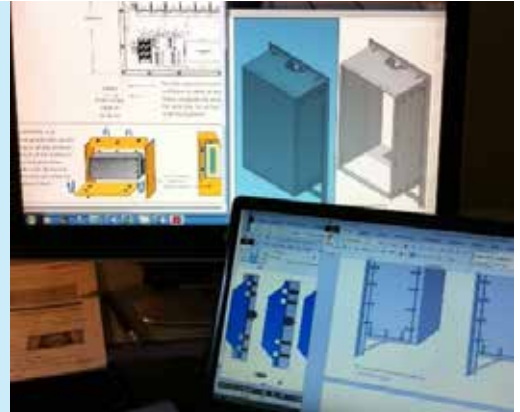
London Underground approved for FR enclosures LU ID 2101

Product Code	Specification	Height mm	Width mm	Depth mm
CEX 151590FR	5 X 4mm ² terminals, linked with separator plate	150	150	90
CEX 191910FR	5 X 4mm ² terminals, linked with separator plate	190	190	100
CEX 151590FRF	5 X 4mm ² terminals, linked with separator plate and fuse	150	150	90
CEX 191910FRF	5 X 4mm ² terminals, linked with separator plate and fuse	190	190	100

CEX PFP and FS Fire Protection

Overview and Key Features

- Manufactured from 316L or 304L stainless steel using CEX or ACEX designs
- Passive protection fire-rated to 1093°C for 30 mins to UL 1709 or Passive protection fire-rated to 950°C for up to 120 mins to ISO 22899-1 Jet Fire Test.
- Passive Fire Suppressive Enclosures
- Bespoke designs and ATEX/IECEX versions available



Passive Fire Protection (PFP) and Fire Suppressive (FS) Enclosures are designed to protect essential electrical equipment in the event of a fire, the principle works in the same way as building compartmentalisation under building fire regulations, which use fire resistant doors and floors in order to provide life safety. In the case of CE-TEK’s PFP enclosures, we have two different types which provide equipment protection for between 30 minutes and up to 2 hours (120 minutes). Our passive FS enclosures are designed to be fully sealed in a similar way to ATEX explosion proof enclosures so that any internal fire, caused by overheating equipment, can only draw upon the relatively small volume of oxygen trapped inside the enclosure when the door is closed. CE-TEK’s efficient door and cable entry seals prevent the ingress of additional oxygen to “feed” the fire and thus combustion is rapidly extinguished, allowing the exterior of the box to remain cool enough to prevent distortion, or damage the high temperature seals, whilst also containing within the enclosure any toxic fumes caused by the initial conflagration.

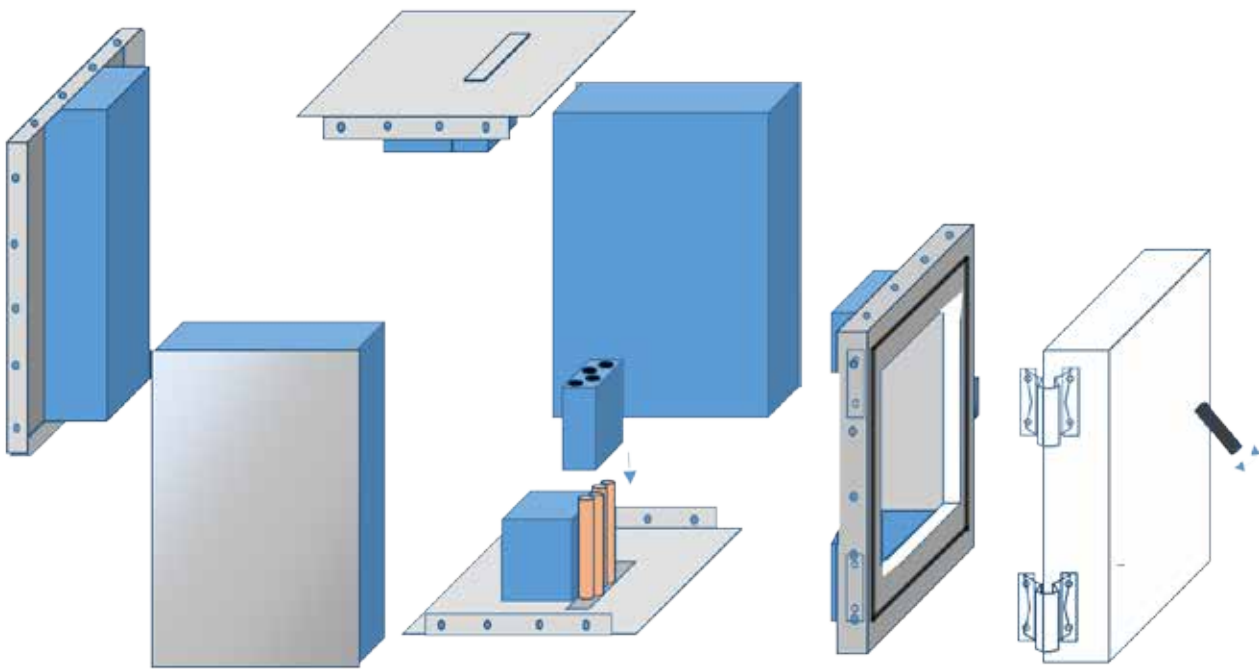
Fire damper systems work in a similar way to shut off any available oxygen source which, if present, would accelerate or prolong the fire.

All our fire protection enclosures are based on CE-TEK’s highly successful CEX/ACEX design 316L or 304L stainless steel enclosures which are available as industrial or ATEX/IECEX versions (see pages 15 & 16).

CE-TEK’s standard PFP design uses Heat Guard, an intumescent coating, which is applied to the outer enclosure walls.

Heat Guard typically affords equipment protection for 30 minutes in hydrocarbon fires reaching 1093°C (2000°F) and has been tested to meet the UL 1709 rapid heat test used for testing structural steel. As there is no external bandaging/cladding or joint taping etc., to the external surfaces the physical appearance of PFP enclosures is also aesthetically pleasing as well as functional, as the enclosure operates in exactly the same as if were uncoated; this allows ease of maintenance and initial installation.

CE-TEK's other fire protection enclosure designs are reserved for bespoke applications or where a higher degree of passive fire protection is required. Firstly, CEX Passive Fire Protection enclosures feature an internal endothermic or silicate insulation layer, which is designed to be easily removable for maintenance without the need to remove existing cables, use specialist tools or require personnel training. Typical protection levels are for up to 2 hours (120 minutes) with internal temperature not exceeding 60°C and jet fire tested to 1250°C. CE-TEK are also able to provide PFP enclosures with ventilation.



CE-TEK can also provide reverse purge systems for larger cabinets using CO₂ or Halogen in place of compressed air.

Applications

Protection of emergency shutdown equipment in all critical areas such as railway and underground station, tunnels, oil and gas extraction and production, nuclear energy production and processing, military sectors.

Accessories

Cable bosses, separate spreader boxes to house incoming cables, ventilation systems for PFP enclosures, reverse purge systems for FS enclosures.

Cable Glands v Connectors

Choosing Cable Glands

Advantages

low cost
popular sizes are generally available from stock
available with ATEX certification (mainly for Ex e and some Ex d)
available in a wide range of materials, sizes and temperature ratings
available with a wide range of (IP) protection ratings
connection options: clearance hole (requires a locknut) or threaded
suitable for 'fit once' applications

Disadvantages

lack ease of connection afforded by connectors
electrical knowledge/competency required to install and carry out connections
limited IP rating for subsea (IP68) and complex applications
bespoke solutions and 316 stainless steel are made to order with long lead times

The table outlines some of the merits and constraints when using conventional cable glands and cable connectors.

CE-TEK has extensive knowledge in using and recommending cable glands and connectors and through its business partnerships we can offer the best cable connection solutions to meet your individual or project needs.

Choosing Connectors

Advantages

excellent protection levels (IP rating)
popular types are available within a 2 day lead time
available with ATEX certification (both Ex e and Ex d) including Ex d to Ex e line bushings.
various bulk head fitting options allowing for secure male connector fixing
portability/ease of connection/disconnection
internal wiring is left permanently in place
bespoke wiring options are unlimited and often with much shorter lead times over bespoke sized cable glands
suitable for high specification projects and applications including subsea (IP68, tested to high bar pressures), steam pressure (IP69K), military (DEF STAN), transport, aerospace and aviation
fully plug and play, excellent longevity with ease of maintenance
no electrical expertise is required to make external cable connections
potting option to eliminate gases and water passage through connecting cables

Disadvantages

more expensive than some cable glands
electrical knowledge/competency required for the initial internal wiring

Our connector solutions are available for the following application areas:



Industrial Cable Glands

Euro-Top/Dome top Glands

Materials: Polyamide, nickel plated brass and 303/316 stainless steel

Temperatures: -40°C to +100°C

Usage: Suitable for non-armoured cables and for industrial and underwater applications

Protection Class: IP68: Underwater tested to 5 bar
IP69K: steam pressure tested Integrated strain relief to meet EN 50262

Options: Short and long thread lengths. ISO, PG and NPT sizes. EMC/EMV options available. Gland accessories including, fibre sealing washers and lock nuts.

Dimensions: From M12 x 1.5 to M63 x 1.5 (all materials) and PG 7 to PG 48 (nickel plated brass and stainless steel only)



EMV/EMC Euro-Top cable glands

Materials: Nickel plated brass

Temperatures: -40°C to +100°C

Usage: Also suitable for industrial and underwater applications

Protection Class: Electro Magnetic Compatibility protection to EMC Directive 2004/108/EC and Vibration tested as standard. IP68 Underwater tested

Options: Gland accessories including, fibre sealing washers and lock nuts. ISO sizes

Dimensions: From M12 x 1.5 to M63 x 1.5



Euro-Top Hygienic cable

Materials: 304 stainless steel gland and locknut

Temperatures: -20°C to +100°C

Usage: Suitable for non-armoured cables
Also suitable for hygienic and underwater applications

Protection Class: IP68: Underwater tested
IP69K: Steam pressure washing

Options: Gland accessories including, tightening tool, which is necessary on some applications, earth tags, fibre and sealing washers. EMC/EMV versions are also available

Dimensions: From M12 x 1.5 to M63 x 1.5



Industrial Cable Glands

Euro-Top Connect sealing

Materials: Neoprene sealing insert

Temperatures: -20°C to +100°C and intermittent -30°C up to +150°C

Usage: Suitable for non-armoured cables with fixed connectors. Also suitable for industrial and underwater applications

Protection Class: IP66: Dust and waterproof
IP68: Underwater tested

Dimensions: M20 x 1.5 and M25 x 1.5 for polyamide Euro-Top cable glands. M32 x 1.5 for nickel plated brass and stainless steel Euro-Top cable glands



Pressure Balance Cable Glands

Materials: Polyamide and Nickel plated brass

Temperatures: Temperature rating -40°C to +100°C

Usage: Suitable for industrial area applications

Protection Class: IP66 and IP67 ISO (M12 to M20)

Options: Fibre sealing washers and lock nuts.

Dimensions: From M12 x 1.5 to M40 x 1.5 and PG 7.

Plug-in vent pressure balance element

Materials: Polyamide with PTFE membrane

Temperatures: Temperature rating -30°C to +100°C

Usage: Suitable for industrial area applications and also: food/beverage/pharmaceutical manufacturing and preparation. Suitable for cable glands that can clamp to 12mm diameter.

Protection Class: IP66 (Dustproof and protection from water jets) and IP69K (steam pressure water jets)

Options: Gland accessories including, fibre sealing washers and lock nuts

Dimensions: From M12 x 1.5 to M40 x 1.5 and PG 7





ATEX Cable Glands

Pressure Balance Elements glands

Materials: Polyamide and 304/316 stainless steel construction

Temperatures: -40°C to +105°C (-40°C to +100°C for ATEX applications).

Usage: Suitable for industrial and hazardous area applications (where certified)

Protection Class: IP66, IP67 and IP69K

Options: Gland accessories including, fibre sealing washers and lock nuts.

Dimensions: ISO (M12 to M40) and PG 7 sizes



ADE 1F Ex non-armoured and ADE 4F armoured cable glands

Materials: Nickel plated brass and stainless steel for Ex and industrial applications.

Temperatures: -30°C to +100°C with neoprene gasket and -60°C to +200°C with silicone gasket

Usage: Suitable for industrial and underwater applications. ATEX certified: Ex II 2 GD / Ex d IIC Gb / Ex e IIC Gb / Ex tb IIIC Db / Ex I M2 / Ex d I Mb/ Ex e I Mb / Ex tb IIIC Db

Protection Class: IP66: Dustproof and resistant to powerful water jets. IP68: Underwater tested

Options: Fibre sealing washers and lock nuts.

Dimensions: ISO to ISO, ISO to NPT, NPT to ISO and NPT to NPT. Sizes From M16 x 1.5 to M90 x 2.0 and NPT1/2" to NPT 3 1/2"



E1EX Ex cable glands for armoured cables

Materials: Brass, nickel plated brass and stainless steel

Temperatures: -20°C to +80°C

Usage: Suitable for industrial and underwater applications

Protection Class: E1EX glands are suitable for armoured cables. Ex de II 2GD. Explosion proof Ex d IIC. Increased safety Ex e IIC DIP A21. IP66: Dust tight and water jet proof IP68: underwater tested

Options: Gland kit includes: earth tag, sealing washer, cable shroud and lock nut for each gland

Dimensions: From M16 x 1.5 to M90 x 2.0



ATEX Cable Glands

ALPHA X Ex cable glands for non-armoured cable and, GAMMA X and DELTA X Ex cable glands for armoured cable

Materials: Nickel plated brass, 304 and 316 stainless steel

Temperatures: -40°C to +100°C (Neoprene seal) and -60°C to + 180°C (silicone seal)

Usage: Alpha X glands are suitable for non-armoured cables Gamma X and Delta X glands are suitable for armoured cables Alpha X Ex II 2GD Increased safety Ex e IIC Gb and Ex tb IIIC Db Explosion proof Ex d IIC Gb Gamma X and Delta X EX 1 M2 / Ex II 2GD Increased safety Ex e I Mb, Ex e IIC Gb and Ex tb IIIC Db Explosion proof Ex d I Mb, Ex d IIC Gb Also suitable for industrial and underwater applications

Protection Class: IP66: Dust tight and water jet proof IP68: underwater tested

Options: earth tags, fibre and sealing washers, cable shrouds and lock nuts.

Dimensions: Alpha X and Delta X from M16 x 1.5 to M110 x 2.0 and NPT 3/8" to 4" Gamma X from M16 x 1.5 to M75 x 1.5 and NPT 3/8" to 2 1/2"



A2F Ex cable glands for non-armoured cables

Materials: Brass, nickel plated brass and stainless steel

Temperatures: -20°C to +80°C

Usage: A2F glands are suitable for non-armoured cables Ex de II 2GD. Explosion proof Ex d IIC. Increased safety Ex e IIC DIP A21. Also suitable for industrial and underwater applications

Protection Class: IP66: Dust tight and water jet proof IP68: underwater tested

Options: Gland kit includes: earth tag, sealing washer, cable shroud and lock nut for each gland.

Dimensions: ISO sizes. From M16 x 1.5 to M75 x 1.5

Ex e / Ex d breather drains

Materials: Brass, Nickel plated brass and Stainless steel.

Temperatures: -20°C to +80°C

Usage: Certified to Ex II 2GD / Ex IIC / Ex tb IIIC Db / Ex I M2 / Ex e I Mb / Ex d I Mb

Protection Class: IP66 (Dustproof and protection from water jets)

Options: Special lock nut is also supplied with these breather drains.

Dimensions: From M20 x 1.5 to M25 x 1.5 and NPT 1/2" to 3/4" sizes.





ATEX Cable Glands

Ex e breather drains

Materials: Polyamide, Brass, Nickel plated brass, Aluminium and Stainless steel.

Temperatures: -30°C to +85°C for polyamide and -30°C to +100°C for metal

Usage: Certified to Ex II 2GD / Ex IIC / Ex tb IIIC Db / Ex I M2 / Ex e I Mb

Protection Class: IP66 (Dustproof and protection from water jets)

Options: Special lock nut is supplied with the metal breather drains.

Dimensions: From M20 x 1.5 to M25 x 1.5 and NPT ½" to ¾" sizes.



Conduit cable glands

Materials: Plain brass, nickel plated brass and stainless steel

Temperatures: -40°C to +100°C with neoprene gasket and -65°C to +220°C with silicone gasket

Usage: ATEX certified: Ex II 2 GD / Ex d IIC Gb / Ex e IIC Gb / Ex tb IIIC Db / Ex1 M2 / Ex d 1 Mb/ Exe 1 Mb

Protection Class: IP66: Dustproof and resistant to powerful water jets. IP68: Underwater tested

Options: Gland accessories including, fibre sealing washers and lock nuts.

Dimensions: From M16 x 1.5 to M90 x 2.0 and 3/8" to 3"



Ex Gland Enlargers and Reducers



Materials: Nickel plated brass and stainless steel

Temperatures: -30°C to +80°C with neoprene gasket and -60°C to +140°C with silicone gasket

Usage: Suitable for non-armoured cables

Also suitable for industrial and underwater applications
ATEX certified: Ex II 2 GD / Ex d b/Ex e b IIC / Ex I M2 / Ex d b I / Ex e b I / Ex tb IIIC

Protection Class: IP66: Dustproof and resistant to powerful water jets. IP68: Underwater tested to 5 bar

Options: Gland accessories including, fibre sealing washers and lock nuts.

Dimensions: From M12 x 1.5 to M110 x 2.0 and NPT ¼" ISO and NPT sizes to NPT 4"

Custom Made TV Enclosures

Overview and Key Features

Custom made TV and Information Centre enclosures are waterproof, vandal proof and theft proof

Powder coated mild steel or stainless steel finish.
Screen sizes from 20" up to 108"

Multi-array versions are also available

Typical applications include:

Outdoor areas in pubs and clubs

Train stations

Shopping malls

Sports stadiums

Bus stations

Pedestrianised areas

Indoor/outdoor advertising

Museums, galleries and theme parks

Protection Class: IP66.



LONDON OLYMPICS 2012

CE-TEK's TV enclosures are manufactured from mild and stainless steel to accommodate standard TV sizes up to and including 108". Custom designs for other sizes and multi-array versions are also available.

Applications

Our TV enclosures are used in many industrial and domestic environments where a waterproof, vandalproof and theftproof solution is required to protect valuable TVs and display monitors. Typical application areas include: pubs, clubs, shopping/retail centres, prisons and detention centres, garden centres, education facilities, digital signage and for travel information.

Accessories

Antiglare screens, screen canopies, plinths, pedestals, mounting brackets, thermostatically controlled heaters and fans to meet standard and extreme weather/environmental conditions.



Pedestal Monitor

The Ultimate Indoor and Outdoor TV Protection

Overview and Key Features

- The TV Shield is manufactured from lightweight heavy duty HMWPE plastic and the TV Shield Pro is manufactured from steel and aluminium
- 4 popular model sizes for The TV Shield and TV Shield Pro with optically clear Lexan polycarbonate screen
- Accepts standard VESA brackets to afford various mounting options
- Anti-glare screens are available as an option on the TV Shield and standard on the TV Shield Pro
- Fully waterproof, with secure locks, and suitable for outdoor or indoor use.



The TV Shield™ & TV Shield™ Pro

The TV Shield is a weather resistant and secure enclosure designed to house standard TVs in residential and commercial properties. The TV Shield is available in 4 model sizes and can be situated in outdoor or indoor areas and features a lightweight universal design, which provides easy installation using a standard VESA mount.

The TV Shield offers built in security features and is engineered to prevent theft, vandalism and tampering. The TV Shield’s optically clear plastic LEXAN polycarbonate screen is impact and shatter resistant, and is the same material used in bullet-proof glass and police riot shields. The TV Shield is fully weather proof and protects TVs against external elements such as dust, dirt, snow, rain and moisture. For higher levels of protection all models of the TV Shield are available rated to IP65 for an additional cost. The TV Shield Pro is a new design, its base is constructed from steel and aluminium with anti-glare screen and gas filled struts to allow easy opening, as standard and offers a professional product aimed at commercial and residential users wanting to protect 42” to 80” and bespoke size TVs.

Product Code	TV Size	Hight mm	width mm	Depth mm	Weight
TVS001*	19" / 30"	603	819	158	8.6kg
TV001.5*	30" / 40"	688	1073	177	10.9kg
TVS002*	30" / 50"	806	1250	193	15.4kg
TVS003*	50" / 66"	1000	1503	170	26.3kg
TVS004 (PRO)	42" / 50"	785	1250	197	40.0kg
TVS005 (PRO)	55" / 60"	942	1500	197	49.0kg
TVS006 (PRO)	65" / 70"	1070	1705	197	58.2kg
TVS007 (PRO)	75" / 80"	1221	1904	197	69.0kg

* For anti-glare screens add suffix AG eg. TVS001AG



Security

The TV Shield cabinets have two chambered (barrel) locks, supplied with keys and a riveted top mounted piano hinge, this provides excellent resistance to unauthorised access and theft.

Applications

Home gardens, pool areas, gymnasiums, restaurants, stadiums, games rooms, conference rooms, education facilities, hospitals and health centres and many more.

Accessories

Moisture gel case, cleaning kit, energy film, spacer kits, thermostatically controlled heaters and fans, anti-glare screens. Polycarbonate cleaning and polishing products which contain no abrasives or harsh chemicals.

Display Shield

Overview and Key Features

The Display Shield is manufactured from lightweight heavy duty HMWPE plastic

3 popular model sizes each with landscape or portrait options

Optically clear Lexan polycarbonate screen

Built-in thermostatically controlled fan to prevent monitor/TV overheating

Accepts standard VESA brackets to afford various mounting options.

Anti-glare screens are available as an option on all Display Shield models.

Fully waterproof, with secure locks, and suitable for outdoor or indoor use.



The Ultimate Indoor & Outdoor Display Protection

The Display Shield is a tamper-resistant protective enclosure, designed and built to secure most digital displays and signage in any commercial environment. The Display Shield also offers protection against weather, theft, tampering and vandalism, and are available as both vertical and horizontal models. The Display Shield units are made of lightweight yet durable and long lasting HMWPE outdoor plastics. Also, Display Shields are actively ventilated by a thermostatically controlled 220V filtered fan and two vents located on the upper side corners; these features provide sufficient ventilation and helps to prevent build-up of heat.



Product Code	TV Size	Hight mm	width mm	Depth mm	Weight
TVS2001*	19" / 30" Horizontal	603	819	158	8.6kg
TVS2002*	30" / 50" Horizontal	688	1073	177	15.4kg
TVS2003*	50" / 65" Horizontal	806	1250	193	26.3kg
TVS2004*	19" / 30" Vertical	819	603	158	8.6kg
TVS2005*	30" / 50" Vertical	1073	688	177	15.4kg
TVS2006*	50" / 65" Vertical	1250	806	193	26.3kg

* For anti-glare screens add suffix AG eg. TVS2001AG

Security

The Display Shield has a security screw system and this helps to keep the enclosure tightly sealed and to provide protection against theft, and or vandalism, making the enclosure a versatile solution to guard your display investment.

Applications

Restaurant menu boards, airport flight boards, factories, offices, hospitals, retail shops and shopping malls, stadiums and many more.

Durability

The Display Shield's ultra-clear Lexan cover is manufactured using shatter resistant polycarbonate, the same material used to produce bulletproof glass, for the ultimate durability and screen protection.

Accessories

Thermostatically controlled heaters, energy film, anti-glare screens, cleaning kit and moisture control gel case.

Indoor & Outdoor Defibrillator Enclosures (Defib Stores™)

Overview and Key Features

- Defib Stores are available in powder coated mild steel and 316L stainless steel and finished in high visibility yellow.
- Permanently illuminated with viewing window allows AED to be checked without opening the Defib Store
- Available for indoor or outdoor use with IP66 ingress protection.
- Fitted with marine grade stainless steel keypad lock or optional wing handle for easy opening.
- Fitted with thermostatically controlled heater for outdoor use.



CE-TEK have produced a range of Defib Stores to safely house defibrillators indoors and outdoors, to meet the ever growing demand for AED's (Automated External Defibrillators) which need to be accessible around the clock in a wide variety of locations, including remote villages, sports stadiums, public areas and even mountainous regions.

Defib Stores have been specifically designed and manufactured, and incorporate the following key features:

- Our entire range of outdoor Defib Stores come with an ingress protection of IP66 to protect the AED from the harshest of weather conditions. They are made from high grade Mild Steel or Stainless Steel and powder coated in high visibility yellow.
- Thermostatically controlled heating system to keep the AED within its working temperature
- LED lighting to ensure the AED is made visible at all times
- Equipped with a Marine grade stainless steel keypad lock which has been tested (salt spray test for 10,000 hours) to ensure the lock will remain fully functional in all weather conditions whilst protecting the AED from theft and vandalism
- Defib Stores for indoor use are equipped with a key lock, glazed door and finished in white or yellow as standard

Accessories

Optional colours are available at additional cost, customised vinyl with own logo and benefactor information, leading manufacturer AEDs and replacement consumables.

Defib Store Product Code	Material	Hight mm	width mm	Depth mm	Keypad Lock	Outdoor	Indoor	Wing Handle	Heating
DFS5425LLE-SS	Stainless Steel	500	400	250	Yes	Yes	Yes		Yes
DFS5425ULE-SS	Stainless Steel	500	400	250		Yes	Yes	Yes	Yes
DFS5425LLE	Mild Steel	500	400	250	Yes	Yes	Yes		Yes
DFS5425ULE	Mild Steel	500	400	250		Yes	Yes	Yes	Yes
DFS1K442LLE	Mild Steel	400	400	200	Yes	Yes	Yes		Yes
DFS1K442ULE	Mild Steel	400	400	200		Yes	Yes	Yes	Yes
IND - YELLOW	Mild Steel	450	450	200	Key lock		Yes		
IND - WHITE	Mild Steel	450	450	200	Key Lock		Yes		

Secondary Operations

Machining, Assembly and Customising

A full range of secondary operations are available at very competitive prices including drilling, punching and tapping, milling and machining, painting (all RAL colours), printing and engraving, fitting of mounting plates, DIN rails, cable glands, plugs and sockets and a full range of standard to high voltage terminals and other fittings. By taking advantage of this service you can save money on our service and also on all your goods inwards inspection costs. It is a true one stop shop for all your enclosure modifications.

Certificates of Conformity

All CE-TEK products can be certified and certificates of conformity are available on request.

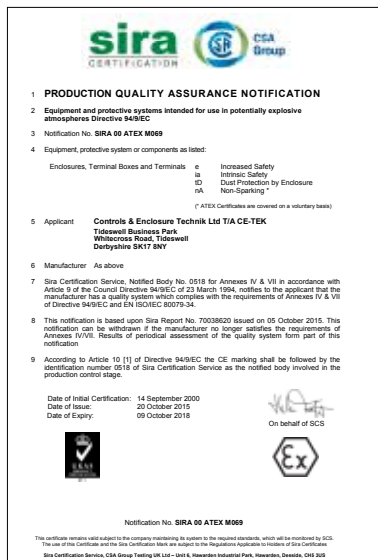
Technical drawings

CE-TEK provides technical drawings for all its standard products. We also offer a drawing service at competitive costs to all our customers.



Quality

CE-TEK's manufacturing and business processes operate within an EN ISO 9001-2008 quality framework.



Project References



ADNOC

Stainless steel instrument enclosures and GRP lighting junction boxes for various onshore and offshore installations

BECHTEL Karachaganak Refinery Project

Complete supply of all instrument and electrical junction boxes in stainless steel and GRP

British Gas Storage and Distribution

Stainless steel instrument junction boxes for plant upgrades and sealed diecast enclosures

BT

Repeater station enclosures

ESSO Fawley Refinery

Upgrade stainless steel and GRP junction boxes

Exon Mobil Kizomba B Project

Stainless steel high voltage and all electrical junction boxes

Kawasaki Industries

Major project for Aramco all enclosures complete with IS safety barriers

Ministry of Defence

Diecast enclosures for all NATO countries. Stainless steel IP68 for battery enclosures and enclosures to 70metres for Type 23 Frigates

Qatar

New airport development

REPSOL

GRP lighting junction boxes for EL SHARARA

Saudi Aramco

Abu Safah and Safaniya project

Tengizchevroil

Stainless steel, cathodic protection and GRP Ex e certified instrument enclosures

Thames Water

Data logger housings in GRP and stainless steel IP68

Total Lindsey Oil Refinery

Upgrade stainless steel junction boxes

Transport Agency

Enclosures for pollution monitoring within Tunnels

UAE Dolphin Project

GRP Ex e Junction Boxes

Hazardous Area Information

PROTECTION CONCEPTS				
ELECTRICAL	SYMBOL	TYPICAL ZONE(S)	IEC STANDARD (STATUS AT AUGUST 2009)	BASIC CONCEPT OF PROTECTION
Increased safety Type 'n' (non-parking)	e nA	1,2 2	IEC 60079-7 IEC 60079-15	No arcs, sparks or hot surfaces. Enclosure IP54 or better
Flameproof Type 'n' (enclosed break) Quartz/sand filled	d nC q	1,2 2 1,2	IEC 60079-1 IEC 60079-15 IEC 60079-5	Contain the explosion, quench the flame
Intrinsic safety Intrinsic safety Intrinsic safety Type 'n' (energy limitation)	ia ib ic nL	0,1,2 1,2 2 2	IEC 60079-11 IEC 60079-11 IEC 60079-11 IEC 60079-15	Limit the energy of sparks and surface temperatures
Pressurised Type 'n' (restricted breathing) Type 'n' (simple pressurised) Encapsulation Encapsulation Oil immersion	p nR nZ ma mb o	1,2 2 2 0,1,2 1,2 1,2	IEC 60079-2 IEC 60079-15 IEC 60079-15 IEC 60079-18 IEC 60079-18 IEC 60079-6	Keep the flammable gas out
Dust Protection (Electrical)	SYMBOL	TYPICAL ZONE(S)	IEC STANDARD (STATUS AT AUGUST 2009)	BASIC CONCEPT OF PROTECTION
Enclosure	tD	20,21,22	EN IEC 61241-1	Standard protection for dusts, rugged tight enclosure
Intrinsic Safety	iaD ibD	20,21,22 21,22	EN IEC 61241-11	Similar to tD, but with some relaxations if circuit inside is intrinsically safe
Pressurised	pD	21,22	EN IEC 61241-2	Protection by pressurisation of enclosure
Encapsulation	maD mbD	20,21,22 21,22	EN IEC 61241-18	Protection by encapsulation if incandive parts

NORTH AMERICAN APPROVAL MARKETING

NORTH AMERICAN / EUROPEAN AREA CLASSIFICATION EQUIVALENTS - GAS			
	Flammable Material Present Continuously	Flammable Material Present Intermittently	Flammable Material Present Abnormally
IEC / EU	ZONE 0	ZONE 1	ZONE 2
US NEC 506	ZONE 0	ZONE 1	ZONE 2
US NEC 500	DIVISION 1		DIVISION 2
CA CEC SECTION 18	ZONE 0	ZONE 1	ZONE 2
CEC Annexe	DIVISION 1		DIVISION 2
IEC classification per IEC 60079-10 US classification per ANSI / NFPA 70 National Electrical Code® (NEC®) Article 505 CA classification per CSA C22.1 Canadian Electrical Code (CEC) Section 18 or Annex J			

NORTH AMERICAN / EUROPEAN EQUIPMENT GROUPING EQUIVALENTS - GAS		
TYPICAL GAS	US (NEC® 505) CA (CEC Section 18) EU IEC	US (NEC® 500) CA (CEC Annex J)
Acetylene	Group IIC	Class 1 / Group A
Hydrogen	(Group IIB + H ₂)	Class 1 / Group A
Ethylene	Group IIB	Class 1 / Group A
Propane	Group IIA	Class 1 / Group A
Methane	Group I*	Mining*
* Not within scope of NEC®. Under jurisdiction of MSHA. Not within scope of CEC.		

NORTH AMERICAN / EUROPEAN AREA CLASSIFICATION EQUIVALENTS - DUST			
	Combustible Dust Present Continuously	Combustible Dust Present Intermittently	Combustible Dust Present Intermittently
IEC / EU	ZONE 20	ZONE 21	ZONE 22
US NEC 506	ZONE 20	ZONE 21	ZONE 22
US NEC 500	DIVISION 1		DIVISION 2
CA CEC SECTION 18	DIVISION 1		DIVISION 2
US area classification per ANSI / NFPA 70 National Electrical Code® (NEC®) Article 500 or 506 CA area classification per CSA C22.1 Canadian Electrical Code (CEC) Section 18 EU area classification per EN 61241-10 IEC area classification per IEC 61241-10			

NORTH AMERICAN / EUROPEAN EQUIPMENT GROUPING EQUIVALENTS - DUST				
Typical Material	EU (60079-0) IEC (60079-0)	US (NEC 506)	IEC (61241-0) EU (61241-0)	US (NEC 500) CA (CEC Section 18)
Metal dusts	IIIC	N/A	D	Class II, Group E
Carbonaceous dusts	IIIB	D	D	Class II, Group F
Non-conductive dusts	IIIB	D	D	Class II, Group G
Fibres & flying	IIIA	D	D	Class III

Hazardous Area Information

COMPLIANCE ROUTES AND EQUIPMENT SELECTION

ZONE		EQUIPMENT CATEGORY	RELEVANT ATEX ANNEXES FOR COMPLIANCE	GROUP	HAZARDOUS AREA CHARACTERISTICS
GAS	DUST				
0	20	1	III and IV or V	II	Explosive atmosphere present continuously or long periods or frequently (>1000 hours/year)
1	21	2*	III and VII or VI		Explosive atmosphere is likely to occur in normal operation occasionally (>10 < 1000 hours/year)
1	21	2**	VIII#		
2	22	3	VIII		Explosive atmosphere is not likely to occur in normal operation or infrequently and for short periods (<10 hours/year)
Mining		M1	III and IV or V	I	If explosive atmosphere present - equipment remains energised
		M2*	III and VII or VI		If explosive atmosphere present - equipment de-energised
		M2**	VIII#		If explosive atmosphere present - equipment de-energised
Any	Any	Any	IX#	Any	

* Electrical equipment and internal combustion engines only ** Non-electrical equipment only
 # and communicate the technical file to a notified body # Alternative Route for any project

TYPICAL EQUIPMENT MARKING (ELECTRICAL EQUIPMENT)

The diagram shows a typical piece of electrical equipment with the following markings and their explanations:

- Name and address of manufacturer:** CE-TEK
- CE mark and number of notified body responsible for quality audit (ATEX only – CAT 1 & 2 electrical):** CE 0518
- Series or type designation:** CONTROLS & ENCLOSURES TECHNIK LTD TIDESWELL, DERBYSHIRE UK SK17 8NY
- Certificate number (ATEX only):** TYPE CEP404012 SERIAL/BATCH No 120321
- Apparatus Group and T Class:** RATING 21.71 WATTS RATED VOLTAGE 690
- Specific marking of explosion protection (ATEX only):** SIRA 08ATEX3213
- Equipment Group and Category:** II 2 G D
- Type of explosive atmosphere:** G- gases, vapours or mists D- dust
- Ex e IIC T6 Ex tb -20°C to +40°C:** Gb denotes suitable for Zones 1 and 2 (Gases); Ta denotes ambient temperature; Db denotes suitable for Zones 21 and 22
- Equipment protection level:** EX tb IIIC T85°C Db IP66
- Warning:** WARNING SHOCK HAZARD DO NOT OPEN WHEN ENERGIZED

INGRESS PROTECTION (IP) CODE BS EN 60529 (IEC 60529)		NEMA TESTING APPROXIMATE EQUIVALENT TO IPXX	TEMPERATURE CLASS GROUP II	
FIRST NUMERAL	SECOND NUMERAL	NEMA TYPE → IP	MAXIMUM SURFACE TEMPERATURE	T CLASS
Protection against solid objects	Protection against water	NEMA 1 → IP10		
0 - No special protection	0 - No special protection	NEMA 2 → IP11		
1 - Objects > 50mm diameter (e.g. part of a hand)	1 - Vertically dripping water	NEMA 3 → IP54	450°C	T1
2 - Objects > 12.5mm diameter (e.g. finger)	2 - Vertically dripping water, when enclosure tilted by 15°	NEMA 3R → IP14	300°C	T2
3 - Objects > 2.5mm diameter (e.g. tool)	3 - Sprayed water up to 60° from the vertical	NEMA 3S → IP54	200°C	T3
4 - Objects > 1.00mm diameter (e.g. wire)	4 - Sprayed water from all directions	NEMA 4 & 4X → IP52	135°C	T4
5 - Dust protected	5 - Water jets	NEMA 5 → IP52	100°C	T5
6 - Dust tight	6 - Powerful water jets	NEMA 6 & 6P → IP67/68	85°C	T6
	7 - Temporary submersion to a depth of 1m	NEMA 12 & 12K → IP52		
	8 - Extended submersion to a depth > 1m	NEMA 13 → IP54		
		This table cannot be used to convert IP code to NEMA ratings		
NB For group 1 applications, apparatus has rigid 150°C (coal dust) and 450°C (metane) limits rather than T classes				

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Agent/Distributor

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