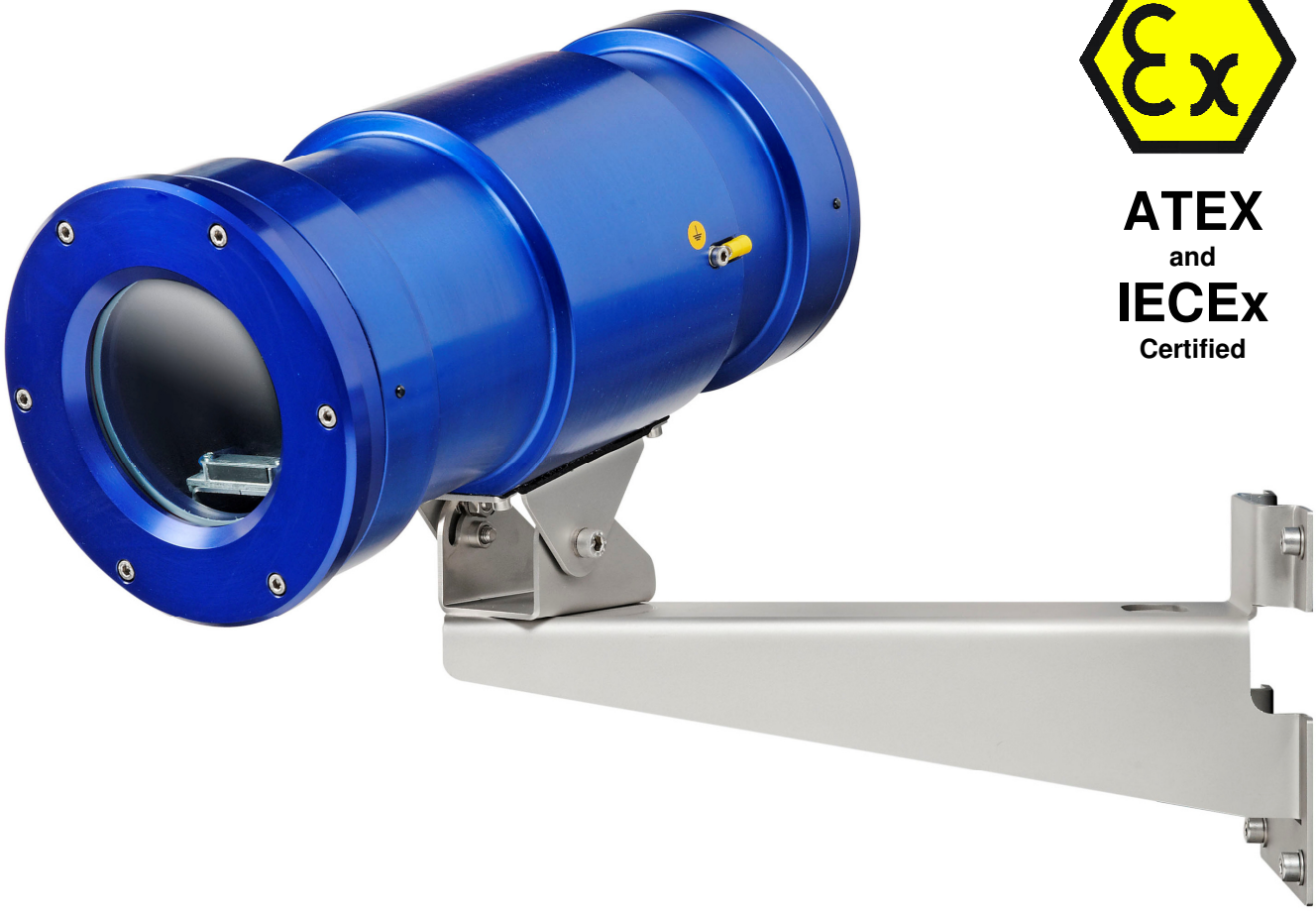
CHEP

Explosion proof Camera Housing



ATEX
and
IECEx
Certified

EXPLOSION PROOF HOUSING

Different versions available to satisfy the different specs required by different hazardous environments.

FOR EXTREMELY HARSH ENVIRONMENTS

Temperature range from –50 °C to +50 °C, protection rate IP66 and IP67, constructed of extruded and anodized anti-corodal aluminium alloy, possibility to install a glass protection grid.

USER FRIENDLY

All the professional installers can easily install on-site the Ex housing and camera.

AVAILABLE WITH Hi-PoE MKII SPLITTER

Video data and feeding power are brought in through one single CAT5e or higher cable. New Punch Down Terminal fast connection

TECHNOLOGY HIGHLIGHTS

General Description

Explosion proof housing to be installed in zones where the forming of potentially explosive atmosphere is possible due to the presence of Group IIB-IIC gases, fumes, smokes and powders even mixed among them. It can be installed in hazardous locations, indoor or outdoor, classified 1-21, 2-22 in which the environment temperature has to be included between –20 and +50 °C or between –50 and +50 °C.
Constructed of anticorodal aluminium for sites with potentially explosive atmosphere where electrical constructions of Group II, category 2, are foreseen.
On request, it can be constructed of Bronze B14 or Stainless Steel and in this case it can be used in mines, where electrical constructions of Group I, category M2, are foreseen.
A special version with Germanium filter and protection grid for thermal cameras is also available.
The anodic oxidation treatment assures an extremely high resistance against corrosion from atmospheres agents, salty fog or polluting elements of the air.
On the back side, two ½" or ¾" cable glands allow to feed the devices inside the housing in high or low voltage.
On request, cable glands of different brands and different kinds can be provided. According to the zone where the housing has to be installed, cable glands with seal rubber (suitable for zone with presence of Group IIB gases) or barrier cable glands with connection cables sealed (suitable for zone with presence of Group IIC gases) will be used. All this in conformity with the electrical plants laws in force.

Internal devices

On its inner, the housing is provided of a heating system with one or three PTC to avoid the condensation on the glass. These heating elements are working with 12 to 24V and with 100 to 240V voltages and are driven by a thermostat positioned on the circuit board which allows the electrical connection of all the fed elements with the main voltage. Depending on the model required, the housing can be equipped also with a factory installed power supply, useful to correctly feed the devices in case that their feeding voltage is different than the mail voltage. The power supply can be supplied with different voltages: 230V~/12VDC, 230V~/24V~, 115V~/24V~, 24Vac/12VDC.

High Power over Ethernet

The Hi-PoE MKII splitter for IP Cameras or the Hi-PoE MKII PLUS for IP PoE cameras are available. Video data and feeding power are brought in through one single CAT5e cable with a Punch Down Terminal for a fast connection of the cable.

Laser devices

It is well known that laser devices, radiation class 1 and 2, do find many applications for civil as well as industrial use.
In particular, they are utilized to monitor industrial processes, to measure levels and distances, to control moving objects, to check the position of objects (i.e. vessels, cars, etc).
In these applications it is often required to the laser device to be explosion proof, being the installation in one of those areas defined as potentially explosives.
The Atex certification covers laser devices radiation class 1 and 2, making the CHEP enclosure the proper answer for these applications.

Installation

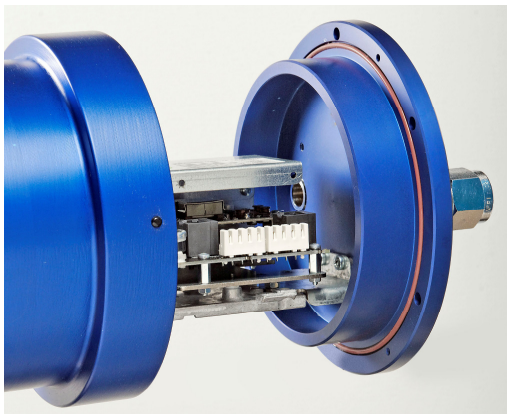
The installer has to open the housing to internally install the devices, excluding those already supplied by the manufacturer. Specifically, for the CCTV there will be the use of analog cameras to reproduce the video image through a coax cable, or digital through Ethernet.
At present, the market of these systems offer a wide range of brands for such devices The installer shall choose the best camera for the particular installation. This operation requires the dismount of the back closing flange which is equipped with cable glands and it is fixed to the housing body by six screws. Three additional screws with a smaller diameter are supplied: these screws, set at 120° one to the other, can make the job even much easier. Actually, screwing these additional screws one turn at the time, after having unscrewed the other six screws, the flange comes out smoothly. For the correct positioning of the devices the housing is equipped with an internal slide on which they can be fixed by means of screws. During the installation it is important to have the right adjustment height of the camera respect to its leaning level, so that the image will be balanced on the frontal window. This operation is possible thanks to the adjusting height kit provided, which works also as insulator from the internal slide. At the end of all the operations it is necessary to close the housing using the six screws that were unscrewed at the beginning of the operation. On demand the housing can be equipped with sunshield, frontal glass protection grid, bracket with swivel for wall or ceiling mounting. The accessories are sold spare and their assembling is done by the installer.

MODELS

ORDER CODE	II 2GD Ex d IIB T6 Ex tD A21 IP66 T85°C with Cable Glands for gas group IIA (Propane) and IIB (ethylene)	II 2GD Ex d IIC T6 Ex tD A21 IP66 T85°C only with Cable Glands for gas group IIC (acetylene, hydrogen)	I M2 Ex d I for Mines Only made of AISI 316L Stainless Steel or B14 Bronze	Cable Glands Size ½"and on demand ¾''	Temperature -20°C/+50°C (with single Heater HT)	Temperature -50°C/+50°C (only with triple heater HTTT)	IP RATE	Germanium Window	Grid
CHEP IIB	•			•	•		IP66/67		
CHEP IIB G	•			•	•		IP66/67	•	•
CHEP IIC		•		•	•		IP66/67		
CHEP IIC G		•		•	•		IP66/67	•	•
CHEP IIB (-50°C)	•	•		•		•	IP66/67	n.a.	n.a.
CHEP IIC (-50°C)		•		•		•	IP66/67	n.a.	n.a.
CHEP M			•	•	•		IP66/67	n.a.	n.a.
CHEP M (-50°C)			•	•		•	IP66/67	n.a.	n.a.

CHEP + Sunshield

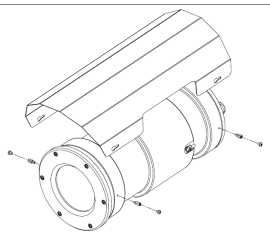
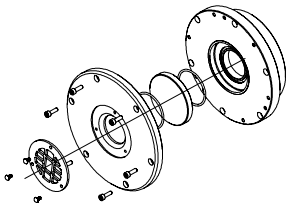
CHEP + Germanium filter



CHEP HiPoE MK II

Marking Data

ACCESSORIES

HT	Heater with thermostat*	
HTTT	Triple heater with thermostat*	
AL/12 **AL/24**	Power Supply Unit: 400mA, 230Vac/12Vdc or 230Vac/24Vac*	
EL	Camera adjusting height kit	
BWX	Stainless Steel AISI 316L wall bracket with swivel	
SSXEP	Stainless Steel AISI 316L sunshield	
G	Germanium window with protection grid*	

*Accessories available only factory installed

Hi-PoE MKII ACCESSORIES

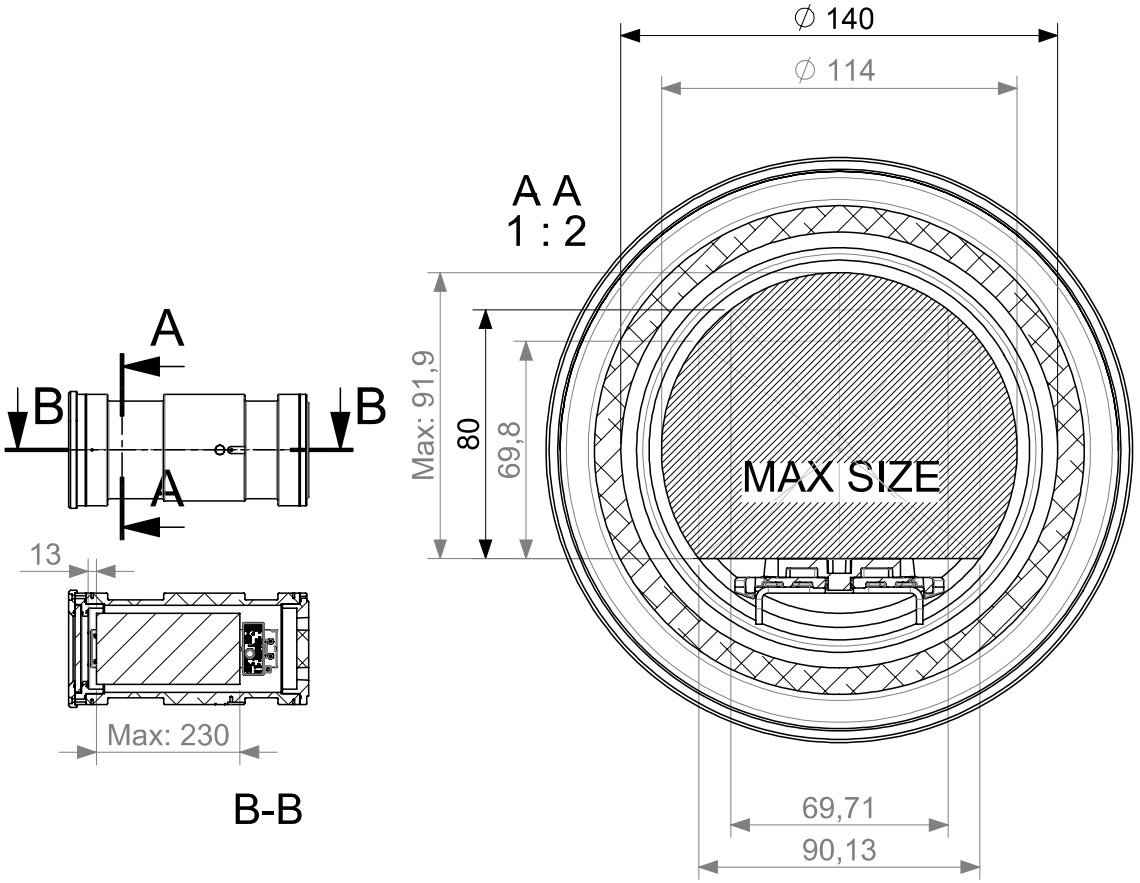
PLUS	Dedicated PoE camera module for digital cameras that only allow PoE feed. (HiPoE MKII PLUS)*	
INJECTOR	Single Channel Hi-PoE Injector	

*Accessories available only factory installed

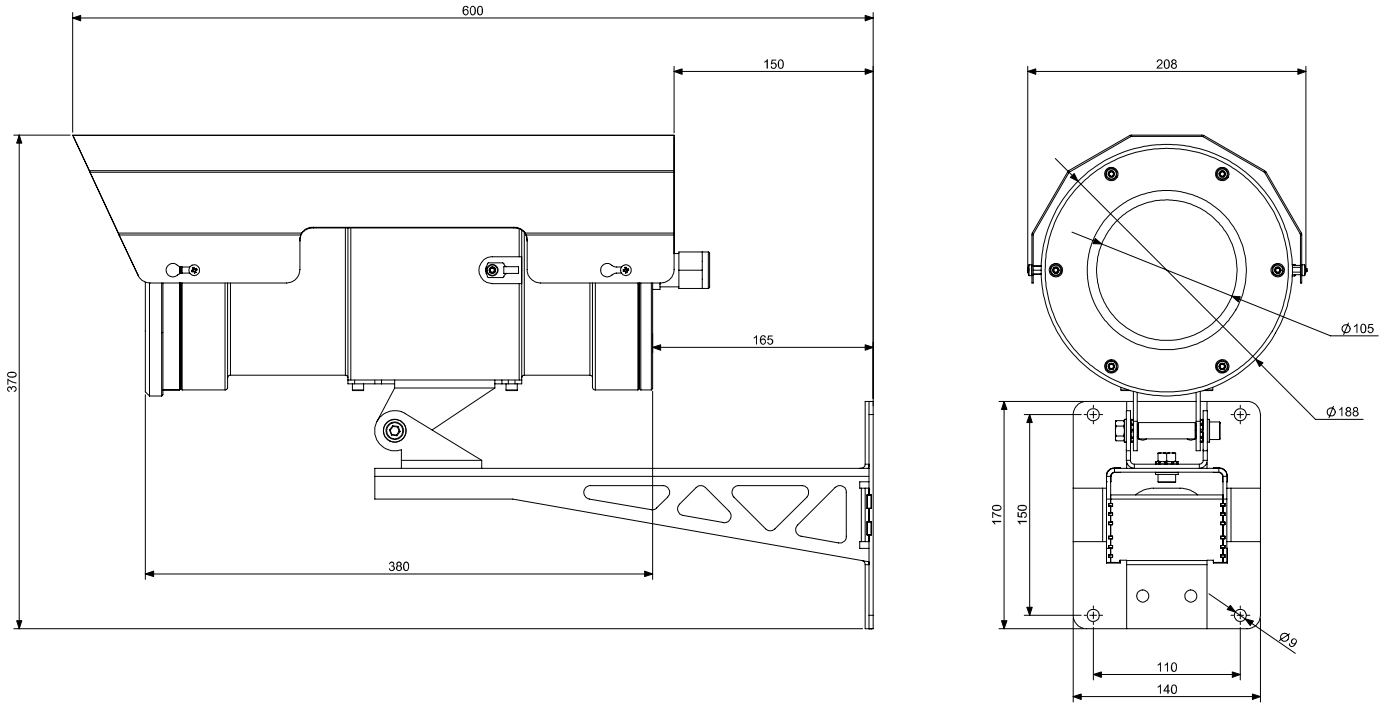
RELATED PRODUCTS

PAX	Stainless Steel Pole Mount adapter	
CMX	Stainless Steel corner adapter	
CBX	Stainless Steel ceiling adapter	

DIMENSIONS



Max Size CHEP/380: Ø114xh 91.9x230mm



TECHNICAL DATA

General

Construction: made of Anticorodal aluminium

Internal useful volume WxHxL:
Please refer to drawings

External dimensions:
Please refer to drawings

Protection rate IP66 and IP67

ATEX marking:
II 2GD Ex d IIB/IIC T6 Ex tD A21 IP 66/67 T85°C
I M2 Ex d I

IECEx marking:
Ex d IIC T6 or Ex d IIB T6
Ex tD A21 IP66 T85°C or Ex tD A21 IP67 T85°C
Ex d I

Marking rating plate laser incision

Accessories
- *Sunshield*
- *Front glass protection grid*
- *Bracket with swivel for wall or ceiling mount.*

Special versions
- *Housing with germanium filter for thermal cameras*
- *Housing for mines*

Laser devices
- *ATEX/IECEx certification covers laser devices radiation class 1 and 2*

Electrical

Thermostat: Ton 15°C (59°F) ± 5°C Toff 22°C (71.6°F) ± 4°C

Heater:
- *Single with thermostat for temperatures from – 20°C to + 50°C (12-24Vac/Vdc or 100-240Vac)*
- *Triple with thermostat for temperatures from – 50°C to + 50°C (12-24Vac/Vdc or 100-240Vac)*

Heater PTC (HT12-24) 12-24V~ 20W
Heater PTC (HT230): 100-240V~ 40W

Camera power supply (AL):
- *Vin 230V~ 50Hz Vout 12VDC 400mA;*
- *Vin 230V~ 50Hz Vout 24V~ 400mA;*

IMPORTANT: TOTAL POWER ABSORBED BY VIDEO SURVEILLANCE EQUIPMENT INSTALLED IN THE CHEP EXPLOSIONPROOF CAMERA HOUSING MUST NOT EXCEED 20 W.
IF THE CAMERA HOUSING IS INCLUDING ANY POWER SUPPLY INSTALLED BY MANUFACTURER, THE VIDEO SURVEILLANCE EQUIPMENT INSTALLED BY THE END USER MUST NOT EXCEED 10 W.

CHEP HiPoE
Working temperature range from -20°C to +50°C°

HiPoE MKII *12VDC 24W splitter with integrated heater and blower thermostats:*
- *Punch Down Terminal fast connection*
- *Gigabit compatible*
- *Compliant with IEEE802.3at*
- *Warning:*
  - *The camera housing is compatible only with camera with output selectable 12Vdc or 14,5Vdc voltage feeding*
  - *The splitter Ethernet Output is not PoE*

HiPoE MKII PLUS
- *Dedicated PoE injector IEEE 802.3af compliant built in for digital cameras that only allow PoE feed.*
- *The two terminal blocks marked +POWER- will be not used*

Mechanical

Dimensions : please refer to the drawings

Cable glands : n. 2 cable glands ½" or ¾"
On request are available different brand and model of cable glands.

Housing weight : 11,00 Kg

Accessories weight : 2,90 Kg (BWXHX bracket)

Environment

Indoor and outdoor application

IP rate (EN60529) : IP66 and IP67

Temperature range : -20°C / +50°C or -50°C / +50°C

ATEX, IECEx,
CE
RoHS compliant

Date _____ **Company Name** _____ **Required Quantity** _____

If you know the CHEP product code please write it here, and skip the rest of the questionnaire: _ _ _ _ _ _ _ _ _ _ _ _

ATEX products Questionnaire
This questionnaire should help the customer to identify the suitable equipment to install.
The type of zone to be controlled is very important to define the characteristics of the product to be used. This is why a careful compilation is required. If the end user installs the product in a different area from the one indicated on the marking data plate, **the manufacturer is not responsible for the installation.**

- PLANT GROUP / CONSTRUCTION

❑ I (mines) Stainless Steel AISI 316L construction
❑ II (surface plants) Anticorodal Aluminium construction
❑ II (surface plants) Stainless Steel AISI 316L construction

- HEATER VOLTAGE

❑ 100/240 VAC
❑ 12/24 VAC/VDC

- POWER SUPPLY UNIT

❑ NO
❑ 400mA, 230Vac/12Vdc
❑ 400mA, 230Vac/24Vac
❑ Hi-PoE Splitter (IEEE 802.3at draft)

- WINDOW

❑ TEMPERED GLASS
❑ GERMANIUM FILTER + GRID

Camera _____ Lens _____

- PRODUCT GROUP FOR GAS PROTECTION (*)
  (Please answer this question only in case of surface plants application)

❑ IIA Presence of Gas Propane
❑ IIB Presence of Gas Ethylene
❑ IIC Presence of Gas Acetylene or Hydrogen

* The above gases are only examples for each group of product.
(Note that products of group IIC are protective also against gases of group IIA and/or IIB or different gases of these groups mixed together)

- CABLE TYPE

It is recommended to indicate the type of cable (armored or not armored) that will be used for installation and, if possible, to give the diameter of the cable in order to provide the proper sealing of the cable glands (the cable glands contain an interchangeable rubber gasket that, on request, can be given of the right size depending on the type of cable used).

❑ NOT ARMORED CABLE
❑ ARMORED CABLE

Cable Diameter [mm] _____

- CABLE GLANDS OPTIONS

❑ No.2 1/2" CABLE GLANDS (cable Ø 5,5÷13 mm)
❑ No.2 3/4" CABLE GLANDS (cable Ø 8÷18 mm)
❑ No.1 1/2 " CABLE GLANDS + No.1 1/2" CAP
❑ No.1 3/4 " CABLE GLANDS + No.1 3/4 " CAP

- ENVIRONMENTAL TEMPERATURE

❑ -20°C / +50°C
❑ -50°C / +50°C (NOT AVAILABLE WITH GERMANIUM FILTER OR HIPOE SPLITTER)

- SUNSHIELD

❑ YES
❑ NO

IMPORTANT: THE TOTAL POWER ABSORBED BY THE VIDEO SURVEILLANCE EQUIPMENT INSTALLED IN THE CHEP EXPLOSIONPROOF CAMERA HOUSING MUST NOT EXCEED 20 W.
IF THE CAMERA HOUSING IS INCLUDING ANY POWER SUPPLY INSTALLED BY MANUFACTURER, THE VIDEO SURVEILLANCE EQUIPMENT INSTALLED BY THE END USER MUST NOT EXCEED 10 W.