

inorax Outdoor Enclosures



inorax Outdoor Enclosures
Protected like a bunker for all harsh environments

inorax Outdoor Enclosures

Outdoor enclosures and climate control components do withstand even the toughest environmental (sunlight, rain, flood, humidity, dust, so on) conditions. From basic requirements such as humidity, temperature fluctuations and sunlight, to extreme conditions such as seawater resistance or vibration-earthquake resistance, through to protection against vandalism, Canovate has the answer. In this way, we ensure that there are no limits to our customers' applications including DSLAM, MSAN, VDSL, 3G and 4G GSM networks, railway, energy and traffic monitoring and transmission applications. Canovate aluminum, stainless steel and galvanized steel based outdoor cabinets offer maximum protection against environmental impacts, vandalism, EMC and extreme thermal conditions. Canovate Outdoor Climate Control solutions provide everything you need to protect your electronic equipment investment. All weather-tested enclosure air conditioners, heat exchangers, fans, and heaters are especially designed for extreme outdoor conditions to ensure constant interior temperature performance.

Double Layer Aluminum



Highlights

- IP 55 protection
- Solid extruded aluminum profile construction- Completely Weld free structure
- Double layer doors and panels with natural ventilation system and integrated isolation material
- Double layer construction (sandwich technology) ensures maximum heat dissipation by low influence of sun irradiation and offers maximum sealing effect
- Special sun reflecting and anti-graffiti outdoor paint ensures up to 6 °C temperature isolation
- Indoor paint ensures humidity absorbance by collecting humidity created by active devices on the surface of the inner roof
- Ventilated roof top ensures maximum ventilation through creating a chimney effect
- Special bumps on all doors and panels disables advertisement material posting on surfaces adversely effecting the appropriate ventilation required for heat exchangers and AC units
- Anti-vandal design
- External access totally impossible provided by hidden hinges
- Robust stainless steel locking system
- Maximum protection against environmental impacts, vandalism, EMC and extreme thermal effects
- 19" mounting rails for active equipment
- Separate battery, 19", MDF and other sections according to customized requirements
- Laptop shelves on doors
- Customer-specific solutions for installation and future expansions
- Fully integrated heat exchangers, air-conditioning and internal heating are available upon request

Double Layer Stainless/Galvanized Steel



Highlights

- IP 55 protection
- Resistant construction against corrosion and harsh conditions
- Double layer doors and panels with isolation material inside
- Double layer construction with special isolation material (sandwich technology) ensures maximum heat dissipation by low influence of sun irradiation and offers maximum sealing effect
- Special outdoor paint resistant to adverse weather conditions
- Separate battery, 19", MDF and other sections according to customized requirements
- Anti-vandal design
- Robust stainless steel locking system
- Maximum protection against environmental impacts, vandalism, EMC and extreme thermal effects
- 19" mounting rails for active equipment
- Customer-specific solutions for installation and future expansions
- Fully integrated heat exchangers, air-conditioning and internal heating are available upon request

inorax Outdoor Enclosures

inorax-09 Outdoor Cabinet

Technical Features

Material

Frame : Extruded aluminum,
Doors and panels: Double layer aluminum/stainless steel/galvanized steel
Material thickness can be up to 4 mm

Protection Level IP55

Finish Antigravity&sun reflecting epoxy polyester outdoor paint, if required
DIN 50939 chromating

Technical Specifications 3 sections: 19" Systems + MDF+ Power, 3 doors Top Mounted Heat Exchanger

Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Related Accessories Rack Monitoring System
Power Distribution Units



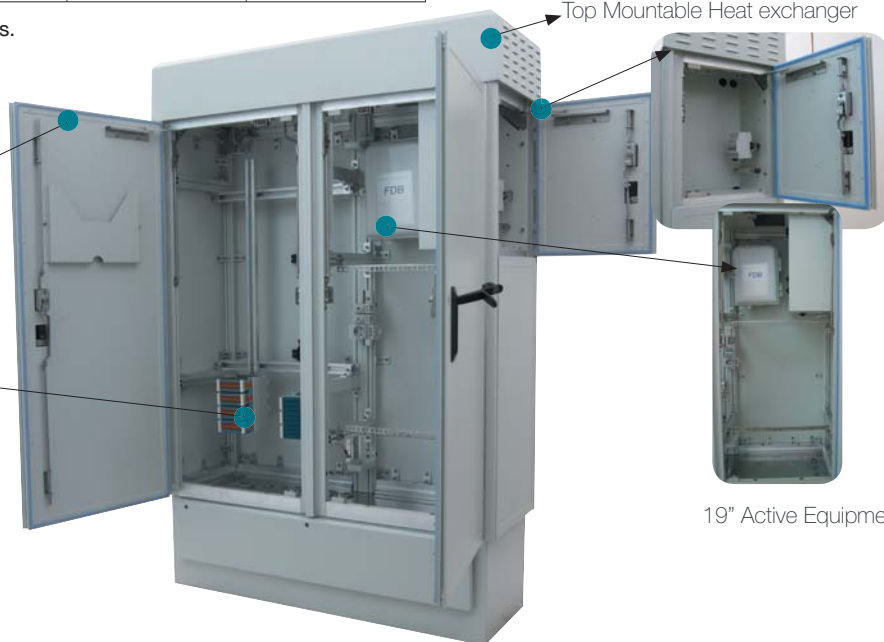
Order Information

Height mm	Width mm	Depth mm	Part No
1700	1155	414	OAD-7-1001

Minimum Order Quantity:50 Pcs.



MDF Section



Top Mountable Heat exchanger

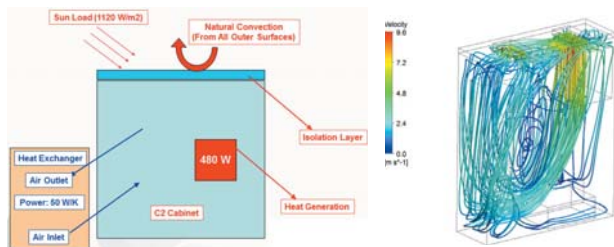
Power Box Section

19" Active Equipment Section

Thermal Test

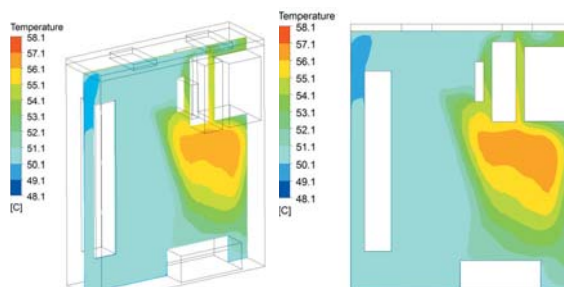
Thermal study for extreme climatic conditions are done in approved laboratories

Boundary Conditions



Streamlines, coloured with flow velocity

Temperature Distributions



inorax Outdoor Enclosures

inorax-10 Outdoor Cabinet

Technical Features

Material

Frame : Extruded aluminum,
Doors and panels: Double layer aluminum/stainless steel/galvanized steel
Material thickness can be up to 4 mm

Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Finish Antigravity&sun reflecting epoxy polyester outdoor paint, if required DIN 50939 chromating **Protection Level** IP55

Technical Specifications 4 sections: 2x 19" Systems + MDF+Battery, 7 doors Heat exchangers & AC units can be mounted on the doors

Order Information

Height mm	Width mm	Depth mm	Part No
1500	1900	900	OAD-7-1002

Minimum Order Quantity:50 Pcs.



inorax-11 Outdoor Cabinet

Technical Features

Material

Frame : Extruded aluminum
Doors and panels: Double layer aluminum/stainless steel/galvanized steel
Material thickness can be up to 4 mm

Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Finish Antigravity&sun reflecting epoxy polyester outdoor paint, if required DIN 50939 chromating **Protection Level** IP55

Technical Specifications 3 sections: 19" Systems + MDF+Battery, 4 doors Heat exchangers & AC units can be mounted on the doors

Related Accessories Rack Monitoring System
Power Distribution Units



Order Information

Height mm	Width mm	Depth mm	Part No
1500	1600	900	OAD-7-1003
1390	1250	805	OAD-7-1004

Minimum Order Quantity:50 Pcs.



Side View



inorax Outdoor Enclosures

inorax-18 Outdoor Cabinet

Technical Features

Material

Frame : Extruded aluminum
 Doors and panels: Double layer aluminum/stainless steel/galvanized steel
 Material thickness can be up to 4 mm

Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Finish Antigravity&sun reflecting epoxy polyester outdoor paint, if required DIN 50939 chromating **Protection Level** IP55

Technical Specifications 7 sections: 19" Systems + MDF+ Power Distribution + Power meter + Fans+ 2 x Battery,
 Access is available from front, side, rear and top

Order Information

Height mm	Width mm	Depth mm	Part No
1620	920	450	OAD-7-1005

Minimum Order Quantity:50 Pcs.



inorax-19 Outdoor Cabinet

Technical Features

Material

Frame : Extruded aluminum,
 Doors and panels: Double layer aluminum/stainless steel/galvanized steel
 Material thickness can be up to 4 mm

Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Finish Antigravity&sun reflecting epoxy polyester outdoor paint, if required DIN 50939 chromating **Protection Level** IP55

Technical Specifications 7 sections: 19" Systems+Battery+ MDF+ Power Distribution + Power meter+ Fan+ Cable Storage
 Access is available from front, side, rear and top, cable storage at the bottom

Order Information

Height mm	Width mm	Depth mm	Part No
830	536	260	OAD-7-1006

Minimum Order Quantity:50 Pcs.



inorax Outdoor Enclosures

inorax-20 Outdoor Cabinet

Technical Features

Material

Frame : Extruded aluminum,
 Doors and panels: Double layer aluminum/stainless steel/galvanized steel
 Material thickness can be up to 4 mm

Protection Level IP55

Finish Antigravity&sun reflecting epoxy polyester outdoor paint, if required
 DIN 50939 chromating

Technical Specifications 3 sections: 19" Systems + MDF+ Power, 4 doors, Door Mounted Heat Exchanger

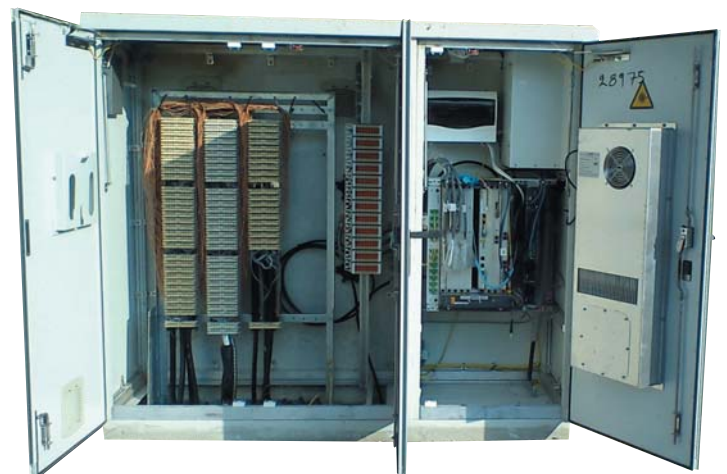
Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Related Accessories Rack Monitoring System
 Power Distribution Units



Order Information

Height mm	Width mm	Depth mm	Part No
1475	1687	566	OAD-7-1007



inorax-13 Outdoor Cabinet

Technical Features

Material

Frame : Aluminum/ Stainless Steel/ Galvanized steel
 Doors and Panels:Double layer aluminum/stainless steel/galvanized steel
 Material thickness can be up to 4 mm

Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Finish Antigravity&sun reflecting epoxy polyester outdoor paint, if required
 DIN 50939 chromating

Protection Level IP55

Technical Specifications 4 sections: 2x 19" Systems + MDF+ Battery, 5 doors Heat exchangers & AC units can be mounted on the doors

Related Accessories Rack Monitoring System
 Power Distribution Units



Order Information

Height mm	Width mm	Depth mm	Part No
1650	1774	790	OGD-7-1001

Minimum Order Quantity:50 Pcs.



inorax Outdoor Enclosures

inorax-14 Outdoor Cabinet

Technical Features

Material

Frame : Aluminum/ Stainless Steel/ Galvanized steel
 Doors and Panels: Double layer aluminum/stainless steel/galvanized steel
 Material thickness can be up to 4 mm

Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Finish Antigravity & sun reflecting epoxy polyester outdoor paint, if required DIN 50939 chromating

Protection Level IP55

Technical Specifications 4 sections: 2x 19" Systems + MDF+ Battery, 5 doors Heat exchangers & AC units can be mounted on the doors

Related Accessories Rack Monitoring System
 Power Distribution Units



Order Information

Height mm	Width mm	Depth mm	Part No
1650	1190	690	OGD-7-1002

Minimum Order Quantity: 50 Pcs.



inorax-21 Outdoor Cabinet

This outdoor cabinet is an ideal solution for Power and Gsm based applications

Technical Features

Material

Frame : Aluminum/ Stainless Steel/ Galvanized steel
 Doors and Panels: Double layer aluminum/stainless steel/galvanized steel
 Material thickness can be up to 4 mm

Tests ETS 300019 and IEC 68-2-57 (Earthquake, shock, vibration, transportation tests), EN 60529 and IEC5291 (IP 55 dust and waterproof tests), EN 60950 (Electrical and mechanical safety tests)

Finish Antigravity & sun reflecting epoxy polyester outdoor paint, if required DIN 50939 chromating

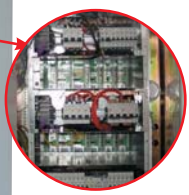
Protection Level IP55

Related Accessories Roxtec Special Cable inlet optional
 Earthing bar
 Depth adjustable 19" mounting rails and 2 sets of vertical organizer
 AC units can be mounted on the doors

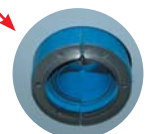
Order Information

Height	Width mm	Depth mm	Part No
39U	600	900	OAD-7-1008

Minimum Order Quantity: 50 Pcs.



Internal Cabling and Assembly



Roxtec Cable Inlet

inorax Outdoor Enclosures

inorax-16 Outdoor Cabinet

This outdoor cabinet is an ideal small size solution for any 19" active equipment installation and a perfect fiber cross connect cabinet for FTTX applications.

Technical Features

Material Single layer galvanized steel - 2 mm **Protection Level** IP65

Plinth 250 mm (H) plinth is included in standard configuration

Finish Epoxy polyester outdoor paint, RAL 7035

Related Accessories Rack Monitoring System
Power Distribution Units



Highlights

- ✓ Weather-proof outdoor cabinet for installation of 19" active equipment and optical distribution modules
- ✓ Assembly of modular optical building blocks like splice, patch and splitter modules
- ✓ Provides a secure anchor for incoming loose tube cables within the cabinet
- ✓ Easy installation and removal
- ✓ Doors are protected from external access through hidden hinges
- ✓ High resistivity against corrosion
- ✓ 1 pair of 19 inch mounting rails (Optional 2 pairs)
- ✓ Single front door
- ✓ CNC controlled polyurethane (PUR) gasketing is available for all of the complete openable surfaces of the outdoor to provide IP65 protection degree, which is complying with the EN60529 standard
- ✓ 1,5 mm mounting plate for cable management on the back side
- ✓ C-rail for fixing cables on the back side

Optional:

- Mounting brackets for wall applications
- Ventilation unit on top (IP55 protection)
- Double front door
- Aluminum/Stainless steel material

Order Information

Height U	Height mm	Width mm	Depth mm	Weight kg	Part No
12U	912	620	450	53.00	OGS-7-1002
16U	1090	620	600	64.00	OGS-7-1003
24U	1200	620	600	82.00	OGS-7-1004

Minimum Order Quantity:10 Pcs.



Ventilation Unit Option
Top cover
designed for air circulation



Double front door option

inorax Outdoor Enclosures

inorax-17 Outdoor Cabinet SMC/Polycarbonate Cabinet

An ultimate solution for outdoor copper cable connection and distribution applications. Special glass fiber reinforced polycarbonate structure makes this cabinet an ideal solution for cross-connect applications of Telecom and Cable TV companies. The structure is a blend of low weight and high mechanical strength and its functional design gives extra advantages both for installation and cable management.

Technical Features

Material Glass fiber reinforced polycarbonate **Protection Level** IP55
Related Accessories Rack Monitoring System
 Power Distribution Units 

Highlights

- ✓ Weather-proof outdoor cabinet for cross connect applications
- ✓ Double door access with 2400 pairs capacity (Krone Type)
- ✓ Front and rear door
- ✓ Locking systems: 3 points , 2 vertical bars, 1 lock
- ✓ Easy to install on a pedestal with bottom cable entries
- ✓ Impact resistant
- ✓ 4 Vertical mounting rails
- ✓ RAL7038

Order Information

Height mm	Width mm	Depth mm	Weigth kg	Part No
998	757	310	50	OPS-7-1001

Minimum Order Quantity:50 Pcs.



inorax-23 Outdoor SMC/Polycarbonate Cabinet

An ultimate solution for outdoor fiber cable connection and also distribution applications. Special glass fiber reinforced polycarbonate structure makes this cabinet an ideal solution for cross-connect applications of Telecom and Cable TV companies. The structure is a blend of low weight and high mechanical strength and its functional design gives extra advantages both for installation and cable management.

Technical Features

Material Glass fiber reinforced polycarbonate **Protection Level** IP54
Related Accessories Rack Monitoring System
 Power Distribution Units 

Highlights

- ✓ Weather-proof outdoor cabinet for cross connect applications
- ✓ Double front door
- ✓ Door hinges circular type-stainless steel
- ✓ Locking systems: Latch-Type Cylindrical Lock 3 points, 2 vertical bars, 1 lock
- ✓ Professional cable management with sufficient number of entry holes (Suitable sized grommets or poke-out or punch-through) for incoming feeder cables and distributions cables
- ✓ Plinth with 4 entry panels on the front and back for fixing and management
- ✓ Cable Clamps to secure up to 18 mm diameter FOC.
- ✓ Impact resistant
- ✓ 4 Vertical mounting rails
- ✓ RAL7035

Order Information

Height mm	Width mm	Depth mm	Weigth kg	Part No
1100	1500	320	50	OPS-7-1002

Minimum Order Quantity:50 Pcs.



inorax Outdoor Enclosures

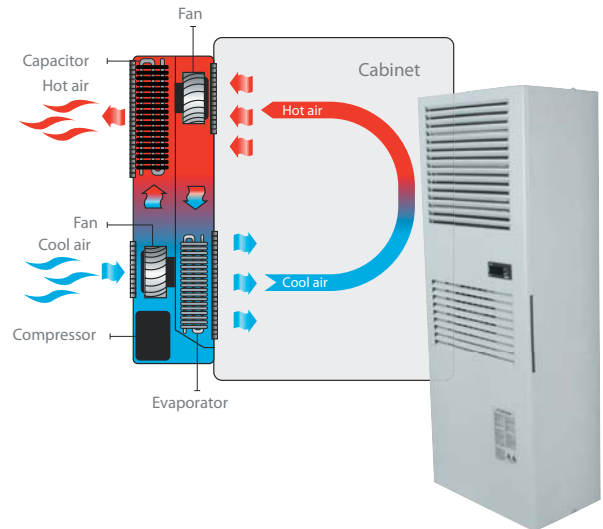
Thermal Management

Air conditioner

Ensures that the proper interior temperature is maintained inside your enclosure. Conveniently mounted on the front or rear door with adjustable internal, mid, or external mounting capability. These reliable products give you the flexibility you need to meet the stringent requirements for your unique outdoor application

Technical specifications

- ✓ Refrigeration capacity: 300W - 3500W
- ✓ Noise level: 65 dB, according to ETS300753 Class 4.1
- ✓ IP54 protection
- ✓ Feeding: AC
- ✓ Designed to ease regular maintenance
- ✓ Quick-removable front casing
- ✓ Components designed for quick cleaning and maintenance
- ✓ Easy filter replacement
- ✓ Lower maintenance costs
- ✓ CE approved

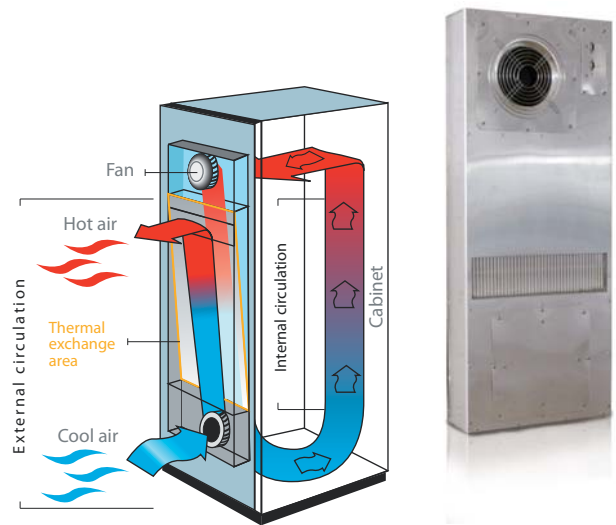


Air to Air heat exchangers

Outdoor Air to Air heat exchangers ensure that the proper interior temperature is maintained inside your enclosure. Conveniently mounted on the front or rear door with adjustable internal, mid, or external mounting capability. These reliable products give you the flexibility you need to meet the stringent requirements for your unique outdoor application. Closed-loop cooling maintains a clean, sealed internal environment to insure optimum performance and maximum life of the enclosed electronics, while protecting against the intrusion of airborne contaminants and humidity.

Technical specifications

- ✓ Capacity: 30W/K to 120W/K
- ✓ IP54 protection
- ✓ Noise level: 75 dB according ETS300753 Class 4.1 E
- ✓ Feeding: 48V DC ,
- ✓ Closed Loop Cooling for Controlled Environments
- ✓ Efficiently Coated Aluminum Heat-Transfer Core- Cross Flow Type
- ✓ Speed controlled fans
- ✓ CE approved



Direct Air Cooling-Membrane Filter & Fan system

Unlike bulky heat exchangers and air-conditioning systems, Direct Air Cooling (DAC) systems with Membrane Cooling Filters have fewer mechanical parts. They are also easier to incorporate into cabinet designs, and require less maintenance. These cooling filters reduce ongoing operating costs, because they use less energy than mechanical systems; and reduce overall cabinet size to save space. Reliable protection of system electronics requires highly efficient filtering of ambient air to remove submicron particles and aerosols while also preventing water ingress into the cabinet. This is best achieved by using membrane filter, which provides 99% particle filtration efficiency at the 0.3um level yet still allows high airflows. Not only do membrane filters eliminate costly failures caused by corrosion and other pollutants, but they are also maintenance free and have longer lifetimes than non-membrane alternatives. Membrane filters have been specifically developed for outdoor cooling and protection under extreme environmental and climatic conditions.

Highlights

- ✓ Nominal dimension: 500 x 500 x 40mm
- ✓ Humidity resistance
- ✓ Classification EN779-F9
- ✓ Initial charge loss 15MMca

