

### SUSTAINABILITY I DEPLOYABILITY I COMPETITIVENESS

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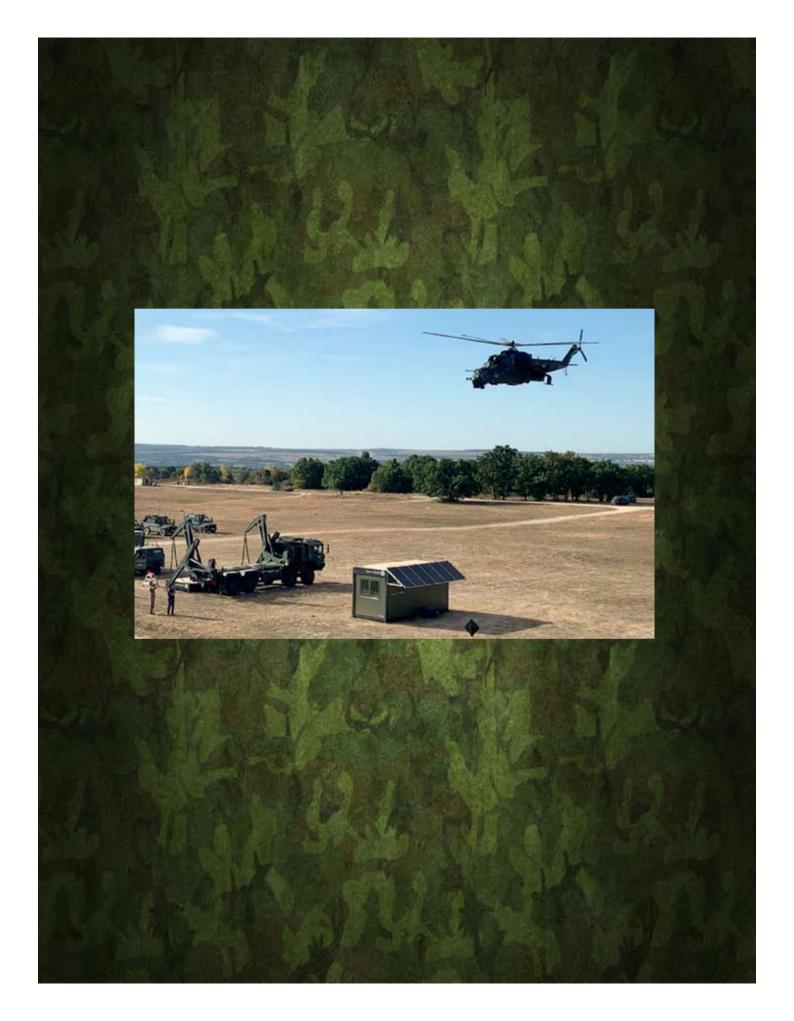
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CATALOG 2020



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### SUSTAINABLE MOBILITY AND INTEROPERABILITY OF DEPLOYABLE INFRASTRUCTURE SOLUTIONS



Continest started its activity at the end of 2016 with buying the IP of the 20' foldable container from Rob van den Berg, Dutch mechanical engineer. The first prototype was built in Q1 2017, followed by serial production. In 2018 we set up our first international branch and serviced international customers around Europe. The same year our CN10 Solar Unit (CN10 SU) prototype was launched at the NATO ENSEC COE Industry Day in Vilnius. In January 2019 the Field Evaluation of the CN10 SU started with the Main Support Logistic Battalion of the Lithuanian Defence Forces. In August 2019 the company received EUR 4 M. VC funding from a Hungarian VC fund (currently minority share holder), the SPV created for this investment is the current operational platform of the company.

Continest is present with local distributors in the UK & Ireland, Germany, Netherlands, Finland, Switzerland and Israel, UAE and KSA. The company is present in Canada, and it prepares its market entry in the USA.

Continest in cooperation with its strategical suppliers and partners started the development of the most advanced mobile temporary infrastructure solution, which can offer efficient and sustainable mobility, safety and autonomous operation for the specialists in the field.

#### MARKET DEVELOPMENT MILESTONES 2020

- ▶ on August 28th Continest received its Defence Technology License
- ▶ on September 25th we signed a R&D agreement with the Hungarian Defence Forces for the development of a mobile, modular container based military grade
- ▶ on October 12th Continest received it's NCAGE code: 2054V
- ▶ the registration of the NCN of the CN10 and CN20 units is in progress
- during the Brave Warrior 2020 excercise we launched the CN20 Hybrid prototype. This new unit was developed together with Axsol GmbH and it complements the foldable container with autonomous energy system (energy storage/production both from renewable as well fuel cell sources)
- Continest, as part of a consortium of Canadian companies is in the second round of a R&D project of the Canadian Armed Forces for the development of Relocatable Temporary Camps that will have a decrease of min. 33% on energy and water consumption, as well waste output
- Continest, in cooperation with Dynasystems (UK) developed the concept of a highly mobile expeditionary camp that is easily relocatable and provide protection against STANAG 2280 Category C4 (roof) and A3 (side) threat.



## MARKET DEVELOPMENT

After the first year on the event market Continest started developing its defence and first responder network both in Europe as well overseas.







- November 2018 NATO ENSEC COE Vilnius, Lithuania Industry Day

   exhibition of the CN10 SU, meetings followed by field evaluation and exercises (with US participation)
- January 2019 Field evaluation of the CN10
   Solar Unit with the Main Support Logistic Battalion of the Lithuania Defence Forces
- June 2019 Cooperation discussions with the management of UNICOR (Federal Prison Industries, DoJ), USACE – ERDC, US Cargo Sysems
- June 2019 75<sup>th</sup> DD Anniversary, UTAH Beach, Normandy

   temporary accomodation for US Air Force staff
- January 2020 Israel

   pilot project with the Israeli Security Agency, procurement discussions with IDF - HFC
- March 2020 Dutch Army & Red Cross excercise in NL (101 MILENG Battalion, Wezep)
- 2019 Continest is registered in the NSPA database,







- April 2020 Canada, DND

   Continest was selected
   for the Pop Up City R&D project
   of the Canadian Armed Forces
- September 2020 R&D project with the HU Defence Forces Modernisation Institute (CN Fold & Shoot) First contract with the HUN ARMY Modernization Institute. Signes an R&D agreement with the Hungarian Defence Forces for a mobile range, modular container based military shooting range.
- September 2020 Brave Warrior multinational excercise, HU (C2)
   Filed testing CN20 Hybrid
   "energy container" and multiple CN20
   MILSPEC units during
   Brave Warrior multinational exercise.
   During the Brave Warrior 2020
   excercise we launched the
   CN20 Hybrid prototype.
   This new unit was developed
   together with Axsol GmbH and it
   complements the foldable container
   with autonomous energy system
   (energy storage/production both from renewable as well fuel cell sources).

## PRODUCT DEVELOPMENT

The base products of Continest are the CN10 (10') and CN20 (20') foldable containers. Driven by both customer demand and market development strategy a range of new products, applications and accesories have been developend and are under development:





#### CN BW (Ballistic Wall)

 a custom made add-on frame & panel system that provides ballistic protection, and can be installed on already operational units (currently up to NIJ 3+ protection level)

- CN20 Hybrid 20' foldable container with integrated energy production and storage features from grid + solar PV + generator. This system (without the foldable container) is currently used by Bundeswehr SOF. By integrating a smart power management system the diesel consumtion of the generator is 50%-70% lower, while its maintennance requirement drops with 80%.
- CN Sanitary (WetCell) plug & play deployable sanitary unit





 CN F&S (Fold & Shoot) – R&D

 a military grade, deployable shooting range that offers mobility and safety at the same time. The shooting range can be used in areas without the need to restrict the usage of its surrounding areas

CN CEC (Continest Expeditionary Camp) (Mobility, safety and energyefficiency that is needed for any military unit that has to perform activities in distant and hostile environment.) developed in cooperation with Dynasystem (UK)



 Contimed – deployable medical infrastructure, developed in cooperation with Tactical Care from Germany, and a panel of specialists from HU and USA. www.contimed.eu



### INNOVATION IN DEPLOYABLE INFRASTRUCTURE SOLUTIONS



Continest foldable containers generate 80% savings on logistical costs, environmetal impact and infrastructure requirements such as trucks, drivers, fuel and other associated requirements 20-24 units of CN10 or 10-12 units of CN20 folded containers can be transported on a standard or mega trailer.

Both base units were developed with the aim to be compatible with the most widely used machines and equipments: forklifts, cranes, wheel loader, telehandlers, side loader and hook lifts. The CN20 unit is also certified by the HUN ARMY being compatible with its HAMMAR sideloader system. Besides its wide compatibility the other priority was operational safety. The system is developed with multiple safety layers, that prevent unintentional collapsing of the units, even when they are partially opened or stacked. The patented hinge mechanism is the key component responsibly for safe and quick set-up and tear down.

The units are "plug&play", providing efficient deployment and relocation options to the end user. As the footprint of the units is identical with the 10' and 20' ISO containers the units can be shipped by rail, sea and air as well.





The base products of Continest are the CN10 (10') and CN20 (20') foldable containers. Driven by both customer demand and market development strategy a range of new products, applications and accesories have been developend and are under development:



### **CN10**

#### Size (L x W x H)

- Closed: 3000 mm x 2440 mm x 490 mm
- Open: 3000 mm x 2440 mm x 2610 mm
- ▶ Inner height: 2420 mm
- Inner width: 2260 mm
- Inner length: 2870 mm

#### Weight:

▶ 900 kg (1 truck = 20 units)





### **CN20**

### Size (L x W x H):

- Closed: 6058 mm x 2440 mm x 555 mm
- Open: 6058 mm x 2440 mm x 2776 mm
- Inner height: 2504 mm
- Inner width: 2315 mm
- Inner length: 5791 mm

#### Weight:

1800 kg (1 truck = 10 units)



# SPECIALIZED SOLUTIONS

The CN20 Hybrid unit is the result of the cooperation of two market leaders from two industry sectors: innovative infrastructure solutions by Continest (HU) and power storage and management by Axsol (D).

The concept of the unit is to provide the most efficient energy production and storage mix for deployed infrastructure systems regardless of the geographical and environmental conditions.

Due to the smart energy management system integrated in the CN20 unit, the built-in batteries, the solar PV array and the generator provide permanent and safe power generation while the fuel consumption of the geretor is decreased with 50%-70% and its maintenance cycles with 80%. The fuel and maintenance savings, the autonomous operation combined with the logistical efficiency of the foldable units creates a unique solution for anyone operating in the field no matter where and when.

The key of the systems performance is the possibility of connecting several power sources with the help of a central inverter - "Victron Energy MultiPlus II 48V/5000/70, generating and storing energy the most efficient way.





In addition to the main 3-phase 380V power supply, it is possible to provide the necessary power with four "LiFePO4" batteries with a capacity of 2,4 kWh each which were installed in the under the floor of the container between the forklift pockets in the bottom frame. Based on customer request the battery capacity can be scaled between 20 kWh and 80 kWh.

In addition, it is possible to mount solar panels on the roof and the side of the container, for which a "Victron Energy -" MPPT 150 / 70A MC4 "solar inverter has been used. Solar panels power can be between 1.8 - 5.4 kWp.

The external generator will start generating power automatically when the charge level of the batteries drop bellow a pre-set charge level. Due to the temporary usage of the generator both its fuel consumption as well maintennance are significantly decreased (50%-80%).

#### Four possible Hybrid System configurations:

- 1. 10 kWh battery / 2 kWp solar system / no Genset
- 2. 10 kWh battery / 2 kWp solar system / Genset 3,7 kVA
- 3. 20 kWh battery / 4 kWp solar system / no Genset
- 4. 20 kWh battery / 4 kWp solar system / Genset 3,7 kVA



**AXSOL (D)** – the energy experts who are disrupting the way energy is harvested, stored and managed.

## CN20 SU (SOLAR UNIT)

The CN20 SU model is developed with the aim to provide vital support during the first phase of deployments when reliable, independent energy resources are critical to the success of any mission.



- Solar panel power: 2260W or 2486W
- ▶ Battery voltage: 48 V
- Battery Type: LiFePo4 (Safe, Non Fire & Explosive Like Lilon)
- ▶ Battery life: 1200VA
- Battery capacity: 14.4kWh
- Weight: 1600 kg
- Full load time: 11 hours
- Normal use 2 office workstations (300W) 48 hours = 6 shifts





### Optional systems:

Normal battery pack 48V 300AHA	Quantity	Unit
14400Wh (880x363x305,7) 160 Kg		
Battery cell 300AHA	16	pcs
Battery management	1	pcs
Terminal and Cover	16	pcs

Long life battery pack 48V 400AHA							
19200Wh (1040x461x285) 216 Kg							
Battery cell 400AHA	16	pcs					
Battery management	1	pcs					
Cables	16	pcs					



The BW can be customized to the standard size of both the CN10 and CN20 units. Standard frame height of the BW is 200 cm, which can be adjusted, depending on customer request.



The BW was developed with the aim to provide protection to the on field personnel, while optimizing weight, thickness and cost. The system can be implemented on site, on those sides of the units which are exposed to threat. Connection of the BW to the CN units is quick and simple.





BW3A (NIJ 0108.01-IIIA) - significantly lighter, thinner and more affordable solution:



Aramid test plate at different velocity. No penetration at 444 m/s

### All plates and panels are EU & USA manufactured

Туре	Weight [Kg/m²]	Thickness [mm]	Max Dimension [mm]	Material	Protection Level	V <sub>50</sub> FSP 17 gr [m/s] (STANAG 2920)	Final Use
LARS 80/F6	8,3	7	2200 x 1300	Aramid + Thermoplastic	NIJ 0108.01-IIIA	580	Spall Liner
LARS HPPE/20	20,0	22	1600 x 1000	UHMWPE	NIJ 0101.04-III+	900	Armouring Vehicles





Designed and produced by MSS International, in close cooperation with Continest. A WETCELL is equipped with a regular flush toilet, a sink and a shower. Furthermore, the WETCELL comes with a heater for a nice and warm unit as well as with a tankless water heater to make sure that there is 24/7 warm and comfortable water available for the shower (and the sink).

The WETCELL can be connected to a foldable container from Continest, both the CN10 and CN20. Especially when CN10 or CN20 containers are interconnected the WETCELL is a perfect supplement to the CN10 and/or CN20. The WETCELL can be applied also as a stand-alone unit.

#### Measurements:

- Outside dimensions: 2440 x 1503 mm
- Inside dimensions: 2340 x 1403 mm, depending on the panels to be applied by customer wishes
- Weight: depending on the use of material: 1040 kg

Can be transported on a truck with 9 units and therefore suitable for approx.

500 – 800 people depending on circumstances and customers wishes.

#### Each WETCELL needs the following connections to operate:

- ▶ Water connection: ¾ GK connection, 3.5Bar;
- Power connection: 12kVa/380V/32Amp This is due to the tankless water heater. A heater with a boiler can be applied and will use less power but does not perform as good as a tankless water heater. Depending on the customer wishes, this can be adjusted.
- ▶ Waste connection: 110 mm Ø (Camlock as an option).All connections are fitted inside the unit.

#### Water consumption:

Toilet, sink and shower use water but all are equipped with water-saving material. Depending on customer wishes, units can be equipped with vacuum systems, saving more water and preventing the production of wastewater.





CONTINEST WETCELL2IN1

## CONTINEST<sup>®</sup> SPACE TO GO



### CN20 RW

### THE NEXT INFRASTRUCTURE SOLUTION OF CONTINEST

The CN20 RW is based on the CN20 model.



#### Most important upgredes are:

- usage of rockwool panels (RW) with an A2-S1 D0 (non-combustible material, European Standard EN 13501-1)
- placement of the fuse board at 200 cm height, in line with the Israeli electrical code
- usage of energy efficient, dimmable LED panels
- two-pole sockets with protective contact (AC 16 A 250 V 50Hz) for unrestricted use secondary safety for the end user)

#### Size (L x W x H) ISO Standard:

- Closed: 6060 mm x 2440 mm x 540 mm
- Open: 6060 mm x 2440 mm x 2750 mm
- Inner length: 5830 mm
- Inner width: 2310 mm
- Inner height: 2470 mm

#### Weight:

> 2250 kg



#### **Electrical connection:**

- S x double socket (NN) type F (CEE 7/3 two-pole sockets with protective contact AC 16 A 250 V 50Hz) for unrestricted use.
- General lighting, switchable ON/OFF with an illuminance of 200 lux (reference height of illuminance: 0.75 m above ground) energy efficiency class: A++ in accordance with "Ecodesign Directive 2009/125/EC" (Regulation 874/2012/EU Annex VI). Dimmable LED panels of 300 X 1200mm
- Electrical switch box on a foldable panel at 2m above the floor level of the container
   In case of the "IDF" version.
- Grounding.
- Durable rubber electrical cables.
- ▶ 32A 3 phase incoming and outgoing connection for further container electrical supply.

## CN CP – CHECKPOINT Deployable multifunctional & modular solution.

Can be easily deployed and and set up in any climate and risk environment.

The system can generate its own power need and provide the suitable protection level to different threat levels.

The fit out can be medical, civilian or any other function.

The units can be delivered fully equipped with surveillance systems on the checkpoint as well with perimeter protection systems.ting the production of wastewater.







### **CN20 UT (URBAN TRAINER)** Quick deployable multi floor training buildings.

The system that allows you to rearrange buildings, so your soldiers won't train in the same city over and over again. Also possible to arrange buildings to mimic your future operational urban environment.

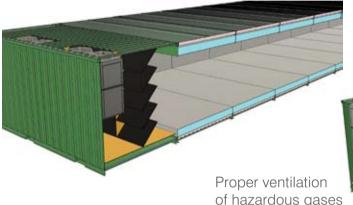
The system has unmatched portability and modularity. Contains features like multi floor buildings, modular elements, magnetically attached plastic windows that can be breached over and over again with no additional costs.





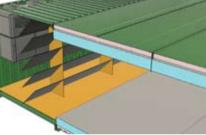
### **CN F&S – FOLD AND SHOOT**

#### R&D project based on the proven foldable technology of CONTINEST Technologies Plc.



Superior noise reduction in an armoured foldable package





#### Purpose of the project:

To develop a unique shooting range that supports all rifle and pistol training sessions up to 7,62x39 steel core and 5,56x45 NATO rounds. Consists of rigid containers as "firing lane container" and "bullet trap container" and linked with armoured, foldable, noise insulated Continest containers. The project is running upon request of the Hungarian Defence Forces.

#### **Design criteria:**

- ▶ minimum 20 m long training space for 4-5 shooters.
- ▶ fully enclosed armour shell prevents bullets leaving the range.
- ▶ conditioned air is continuously ventilated to prevent lead poisoning, provides 20-24 °C, within the range of +50 °C and -15 °C outside temperature,
- ▶ fully deployable within 12 hours,
- the intermediate portions are interchangeable. The length of the range is expandable,
- the range provides an outstanding noise insulation, the maximum environmental noise 10 meters from the range is 50dB.
- ▶ all electrical systems are according to IP54,
- ▶ all side walls, ceiling and floor capture rounds of negligent discharges, without ricochet and fragmentation leaving the surfaces,
- ▶ LED lighting with 500 lux illumination on the range and 1500 lux on targets,
- the full shooting range fits two semi trucks,
- ▶ all systems are inside the containers, including the HVAC, bullet traps, heating elements, LED lights, etc.

## CONTINEST<sup>®</sup> SPACE TO GO



## **CN CEC – CONTINEST EXPEDITIONARY CAMP**

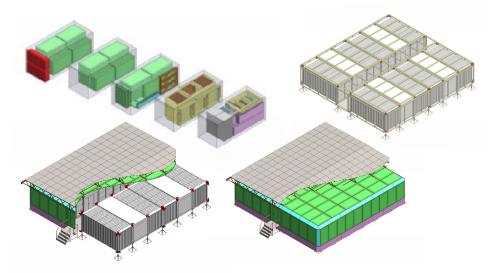
This concept was developed with the aim to provide the necessary mobility, safety and energy efficiency that is needed for any military unit that has to perform activities in distant and hostile environment. One of the main focuses of the CEC was to develop a system that can be efficiently relocated, as well brought back to its initial base once missions are over. By achieving reputriation of the CEC systems repatriation the high infrastructure costs as well the security issues of foreign missions can be significantly optimized.

#### The main characteristics of the CEC:

- **1.** Build from the optimal mix of foldable and fixed frame containers, reducing the overall logistics train.
- 2. Multipurpose units: accomodation, office, sanitary, kitchen.
- **3.** All systems necesarry for on site operation (energy, water, protection sysmtes) are integrated in ISO 20' containers.
- 4. Transportable by road, air and sea.
- **5.** Protection against STANAG 2280 Category C4 Blast and Fragmentation protection (roof) and C3 (side) with category A3 (all over) Ballistic protection with further upgrades possible.
- 6. A mix of fuel cell and renevable energy sources for the safe and efficient operation of the CEC.

The adaptive protection system of the CEC is Dynacell, produced by Dynasystems UK (www.dynasystems.co.uk) and designed and certified Explora Security Ltd (www.explorasecurity.com).

The energy system is developed in cooperation with Axsol GmbH. (www.axsol.de).





- Developing the space saving container that provides 100% privacy against optical, acoustic and radio-electronic eavesdropping, in a compact foldable package. Leaves you to focus on command and control.
- > The system utilises active and passive solutions, maximising both physical and data security.
- The 80 dB sound absorption, the active wallstructure and blackbox system prevents laser beam eavesdropping while the integrated jammer suppresses all transmittion in the range of 100khz- 5,1 Ghz.
- ► The fully closed loupe breathing air system, recirculates air with actively supplied Oxygen while CO2 is chemically absorbed.
- No unintended data leaves the container.





PARTNERS



Space to go

ISO 9001 🗸

ISO 14001 V



## MOBILEINNOVATIVEISAFE



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