Comprehensive Healthcare Infrastructure for Critical Preparedness

Rapid deployment medical units, power distribution, IT infrastructure, building HVAC, and services

Life Is On | **Schneider Electric**

Complete solutions for rapid capacity expansion

It often takes years to design and build a typical hospital, but pandemics are anything but typical. In these situations, capacity must be added in weeks, if not days.

Fortunately, there are ways to overcome this challenge. Whether you plan to build out new space or reconfigure existing space, Schneider Electric and our partners offer the full array of healthcare infrastructure solutions.

About Schneider Electric

Schneider Electric,™ a U.S. manufacturer with 18,000 U.S.-based employees, stands ready to help healthcare facilities respond to emergency medical situations. We carry deep domain expertise, and our core products are found in 45% of U.S. hospitals. We also partner with other U.S. technology providers, manufacturers, and contractors to offer rapidly deployable medical units such as tents and ICUs.

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PART 01

All-in-one solutions: Rapid deployment medical units

Together with our partners, Schneider can build new temporary medical spaces quickly, based on the needs of each customer. We offer a range of solutions, including:

- Tent clinics for drive-thru testing, patient check-ins, and overflow

- Prefabricated, rapidly deployable medical units that configure to custom needs

- Stand-alone power distribution, IT networking, and HVAC controls components to support a variety of applications
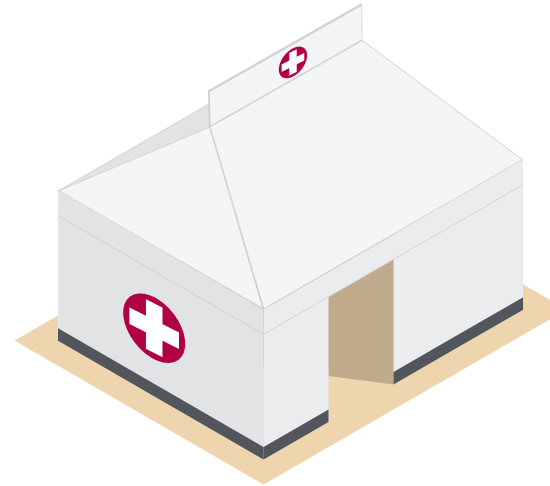
Tent clinics

Comes equipped with networking
and power equipment

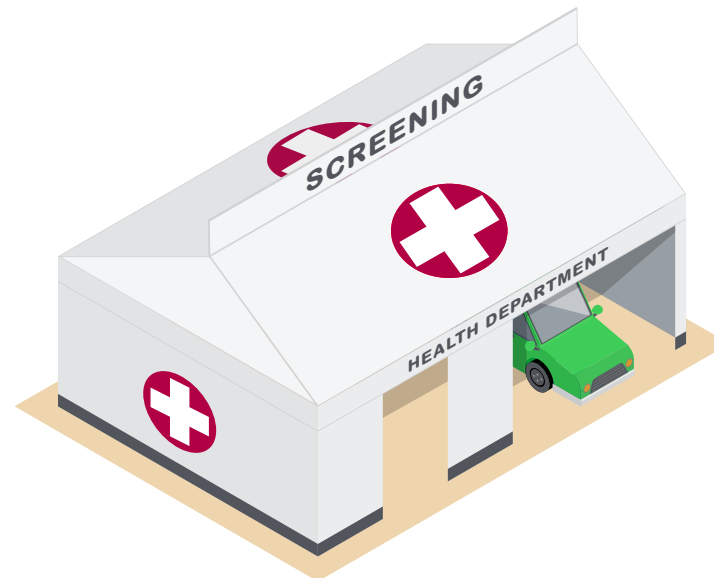## Option 1

Multi-purpose tent

- Designed for patient check-ins, clinical
  procedures, and overflow

- Options include LED lighting, heating,
  and hospital-grade functionality

Option 2

Drive-thru

- Designed for mobile testing or
  administrative gateways

- Equipped with network connectivity
  and a lockable cabinet

Prefabricated medical units

Options for treatment rooms: Shipping containers and prefabricated (stick-built) spaces

Option 1

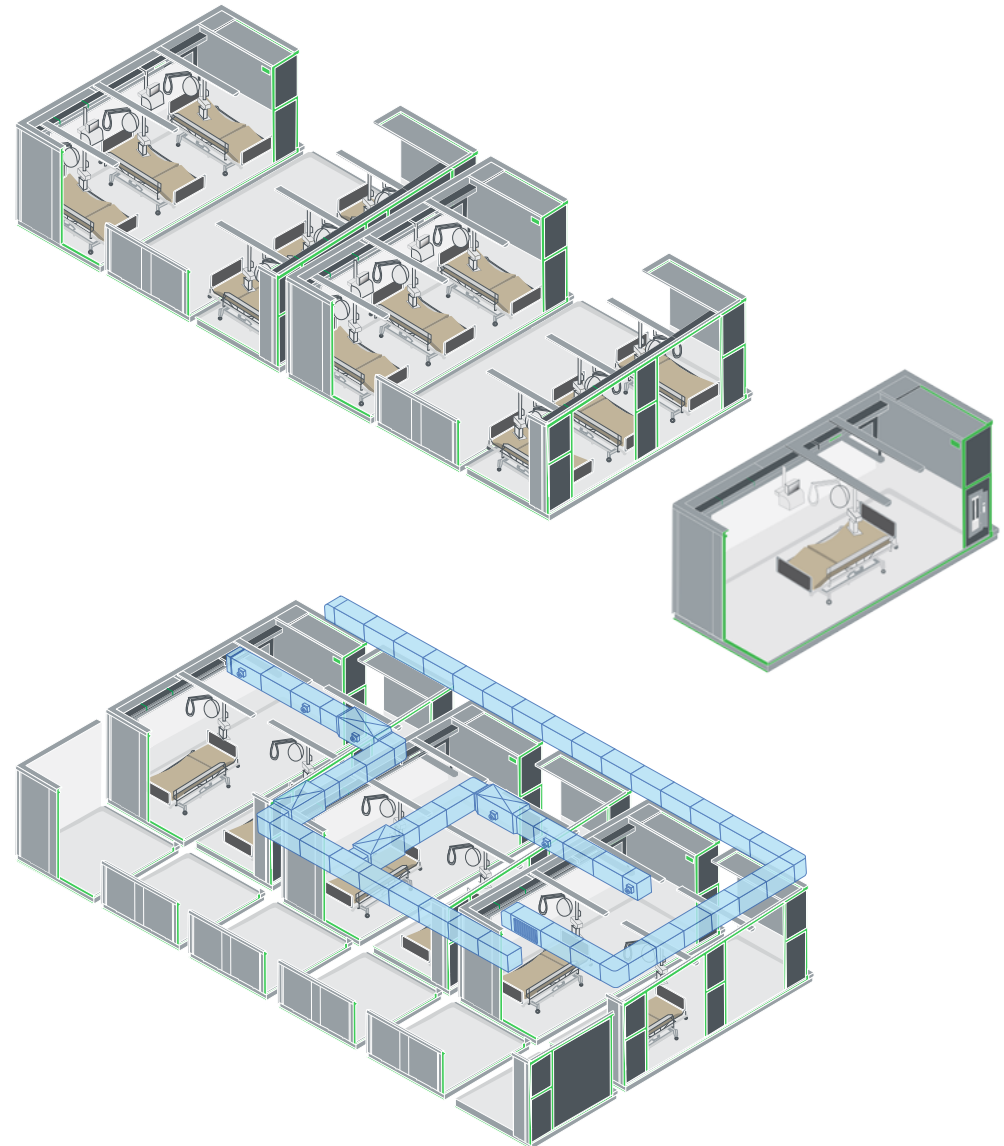### Clinical treatment rooms

• Containerized, modular solutions for clinical treatment that also include power and networking gear

• Pressurization control available as an add-on

Option 2

Prefabricated ICUs

• Similar concept to first option, but with more sophisticated capabilities for pressurization and HVAC control

• Multiple options available, with reference architectures available on request
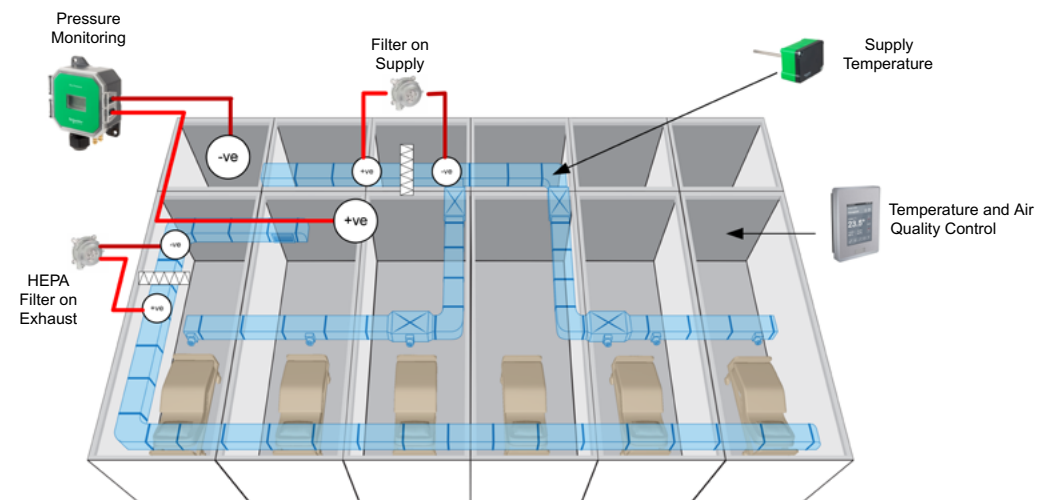
Stand-alone solutions

Power and networking options for temporary treatment spaces

• Pre-engineered power solutions, including power distribution and microgrids, keep tents connected to secure, reliable power.

• Prefabricated Data Center Modules keep tents online with a ready-to-deploy solution including a networking closet, server, switches, and power distribution units enclosed in a rack.

• Multiple reference architectures utilizing stock equipment available for supporting all kinds of power distribution and network requirements, including secure power needs for critical and essential loads.

• Possibility to adapt solution as a panel design or as a stand-alone unit.

• Locating the transformer, breaker, and distribution panel in a separate area from treatment rooms allows circuits to be wired quickly.

HVAC control solution for portable pressurization

• Solutions available are pre-programmed and ready to be wired.

• Sensors, controllers, and alarms offer visual notification of negative pressurization.

• Designs can include separate "lobby" areas for putting on and removing PPE.

Pressure Monitoring

Filter on Supply

Supply Temperature

Temperature and Air Quality Control

HEPA Filter on Exhaust

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PART 02

Specific solutions:
HVAC, electrical distribution,
IT infrastructure, and services

With our family of industry-leading associated brands, including APC,™ ASCO,™ and Square D,™ we are uniquely positioned to offer a comprehensive set of components for healthcare infrastructure. These include HVAC controls, electrical distribution and secure power, IT infrastructure, and services.

Our solutions can be supplied in three levels, allowing you to:

1. Build a stand-alone solution.

2. Add on to an existing system.

3. Deploy individual units on an as-needed basis.

Solutions for HVAC controls

Our solutions enhance safety and comfort in healthcare facilities. We have a complete suite of environment controls and software for maintaining temperature, humidity, air exchanges, pressurization, and alarms. Our network of partners helps to support our next generation of BMS as well as many of the legacy systems in your hospital, such as Invensys,™ Barber Coleman, CSI, TAC, and Andover Controls.

What we can do:

- Monitor environmental conditions, occupancy, and safety systems via interoperable building operations software

- Maintain positive or negative pressure via controls, pressure sensors, and airflow-measuring devices

- Modify your BMS system with our service engineers, who can:

    - Write the code and controllers that change room settings

    - Custom design based on each hospital's mechanical system

    - Modify each room's sequence of operations for temperature and pressure controls

Our comprehensive HVAC control solution

- Building management systems and devices and controllers

- Stand-alone room controllers

- Networkable room controllers

- Field-level devices, such as:

    - Valves

    - Actuators

    - Sensors

    - WAGES (water, air, gas, electrical, steam) metering

Solutions for electrical distribution and secure power

Schneider offers a full suite of solutions for facility-wide power distribution and monitoring from some of the most trusted brands, like Square D, APC, and ASCO. Our power systems help keep lights on, reduce unplanned outages, and optimize power quality for critical medical equipment.

What we can do:

- Deliver surge protection, line conditioning, and back-up power to PCs, essential medical equipment, and temporary medical spaces

- Connect new circuits to existing electrical distribution for smooth installations

- Increase power resiliency with microgrid solutions and automatic transfer sequences that connect and control distributed energy resources

- Provide monitoring tools, secure interoperability, and integration between existing and new electrical infrastructure via EcoStruxure™ Power software

Our comprehensive electrical distribution and secure power solution

- Uninterruptible power supplies (UPSs)

- Automatic transfer switches

- Power distribution unit equipment, such as:

  - Panelboards

  - Transformers

  - Breakers

- Racks and cabling

- Engineered microgrid solutions

- Prefabricated energy control centers

- Digital monitoring and advisory services via the EcoStruxure system architecture

Solutions for IT infrastructure

We can deliver a full array of solutions for IT deployments, including reliable power, efficient cooling, physical security, and cloud-based digital services. From individual units to stand-alone solutions such as prefabricated and micro data centers, we can support your unique network infrastructure for medical software applications in screening, triage, lab, and ICU areas.

What we can do:

- Rapidly scale IT networks and compute in temporary spaces through pre-integrated micro data center solutions

- Predict downtime and manage cybersecurity threats via monitoring software

- Deliver precise cooling and clean power via surge suppression and line conditioning

Our comprehensive IT infrastructure solution

- Environmental monitoring

- Cable management

- Fire alarms

- IT closets

- Uninterruptible power supplies (UPSs)

- Rack systems

- Precision cooling systems

- Security and environmental systems (i.e., video, access control, temperature, humidity, smoke)

- Digital monitoring and advisory services via the EcoStruxure system architecture

Solutions for remote and on-site services

Our nationwide team of ~300 field service engineers can start up new systems and keep them running reliably and efficiently. We service a wide range of systems, 24/7. During pandemic situations, we can monitor both critical and non-critical areas, allowing hospital managers to focus attention where it's needed most.

What we can do:

- Provide a single contact for key infrastructure across healthcare facilities, including building automation systems, electrical network health, IT, and equipment condition analysis

- Deliver any level of support, from basic preventive maintenance to performance assessments

- Work onsite in facilities with staffing shortages

Our comprehensive remote and on-site services solution

With remote services, we can do the following, and much more:

- Monitor asset health and overall environmental conditions for downtime threats

- Deliver IT capabilities over 3G and 4G without need for on-premise equipment

- Perform analytics and real-time analysis of asset performance

- Enhance preventive fault detection with remote validation by engineers

With on-site services, we can do the following, and much more:

- Offer full preventive maintenance of building automation, HVAC, power, and IT systems

- Test, exercise, and validate a wide range of equipment to minimize arc flashes, hotspots, and other hazards

- Respond to faults and alarms

Our full healthcare solution at a glance

Our integrated healthcare solution is built on three layers. The first layer involves the apps, analytics, and services that analyze your healthcare facility across the building management, power, and IT systems. The second layer, the edge control layer, is where users can remotely adjust temperature setpoints, resolve a hotspot in a data center, or power down an extra UPS. The third layer consists of the devices that make all this management possible: sensors, valves, cooling units, UPSs, and so on. Together, these three layers allow hospital managers to foresee and prevent downtime, drive efficiency, and keep patients and staff comfortable.

EcoStruxure™
Innovation At Every Level
for Healthcare

EcoStruxure Architecture

	Energy Management	Power Management	Security Management	Clinical Environment Optimization	Patient and Asset Location Management
Apps, Analytics & Services	EcoStruxure Building Advisor	EcoStruxure Resource Advisor	EcoStruxure IT Advisor	EcoStruxure Power Advisor	EcoStruxure Asset Advisor
Edge Control	EcoStruxure Building Operation	EcoStruxure Security Expert	EcoStruxure Fire Expert / EcoStruxure Access Expert / EcoStruxure Energy Expert / EcoStruxure Cabling Expert	SpaceLogic — Tap into your facility's potential through smart devices	EcoStruxure IT Expert	EcoStruxure Microgrid Operation	EcoStruxure Power Monitoring Expert
Connected Products	SpaceLogic — Tap into your facility's potential through smart devices	ESMI — Fire security system	EcoStruxure — Data Center Solutions	ASCO — Automatic Transfer Switch	Uniflair — Cooling systems to control and manage temperature and humidity for critical IT and process environments	APC Smart-UPS — The most trusted UPS in the world for business applications	PowerLogic — Power quality, uptime, and efficiency	Pact Series — World-class breakers and switches	Set Series — Comprehensive, robust portfolio of power distribution and motor control centers

End-to-end Cybersecurity

Cloud and/or On Premise

To explore these solutions in more detail,
contact your local sales representative.

se.com

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