

C40



C40 Product Specification

Safe, flexible and solid. With C40 you get functional and pleasant adaptable buildings for schools, daycare centres or offices, which can be built in one, two or three floors.

Adapteo.

C40 is designed with focus on comfort and function, and there are numerous options to change the layout and interior according to wishes and functional requirements. C40 is also an environmentally friendly alternative with waterborne heating system.

General description

Quality

Adapteo AB is quality certified according to ISO 9001. The manufacturing of modular units and accessories takes place indoors in a controlled environment. Manufacturing, setup and service comply with Adapteo's quality system. The draft control plan is drawn up by Adapteo.

Environment

Adapteo AB is quality certified according to ISO 14001.

Conservation of resources

The modular system is designed for low energy consumption with good thermal insulation and impermeability, and a high degree of heat recovery with heat exchangers in the ventilation system. Renewable raw materials are prioritised in the choice of materials. Industrial production minimises the amount of material spillage.

Environmental impact

The high degree of prefabrication and portability means that the quantity of residual products is minimised over the service life of the building. Recyclability is prioritised in the choice of materials with the aim of minimising harmful environmental impact. Residual products in connection with manufacturing and setup are separated.

Working environment

The air treatment system is designed to provide good air quality with low CO₂ levels. The surface layers are hard and easy to clean. The lighting system is designed to create a good light environment. The colour choices aim to create a warm and cosy environment. The architecture creates a light and airy environment with a large inlet of daylight and view to the outside.

Technical specification

Fire protection

The buildings are regarded as single- and two-storey buildings. Modular units are built with prefabricated wooden frames, with roof and ceiling structures in class REI 30 as well as with outer walls of class REI 30. Appropriate surface layers in corridors and escape routes fire-retardant cladding with surfacelayer Class 1 (one).

Evacuation takes place via escape routes on the ground floor and through opening windows. In case of two-storey assembly, evacuation routes via external steel staircases.

Water supply and sewer system description

Cold water service is connected to the water gauge bracket with shut-off valves in technical facilities rooms. From there, water is fed to the various wet parts of the C-module via surface-mounted copper tubing.

The C-module supports connection of accessories such as kitchen or water benches.

Washbasin and toilet of the brand Ifö. Mixers of the brand FMM.

In case of electric heating, hot water comes via VVB Thermia 55 litres placed in a cleaning room or in technical facility rooms.

Waste water pipes are located in floor framework with a common outgoing connection point under the technology room.

Heating

The building is heated with a water-borne system with heat source in the form of heat pump or district

heating. The standard system is an electric boiler with coupled air/water heat pump, but geothermal and district heating (secondary or primary) are also possible options, which are projected and dimensioned according to the needs of each project.

Ventilation system description

Mechanical supply and exhaust air ventilation with rotary heat exchanger for heat recovery. Ventilation unit located in the technical facilities room of the C module. An optional heater can be hung on the exterior façade. Exhaust air is removed via the transfer air unit in the corridor false ceiling/roof screen installed in negative pressure. The exhaust air is sucked out centrally in the C-module and via WC and cleaning room through the heat exchanger of the ventilation unit. Air volumes are designed based on the size and needs of the project.

Cooling

The cooling facility for temperature lowered supply air is installed optionally and according to the size and needs of the project.

Electrical installations

Heavy current rail with automatic secured sockets for lighting and heating of type KB system, (Dynamic Workplace Power). Earthed plug sockets 4 pcs/module gable.

Lighting

General lighting is designed for a mean of 350 – 500 lux.

Rooms are equipped with fluorescent light fixtures with up and down lights and pull-out switches

HF device 3 x 28W /T5 energy pipe suspended from the ceiling 220 cm above floor.

Corridor supplied with recessed electric fittings 1 x 28W/T5.

HWC equipped with motion sensor and energy lamps.

Cleaning rooms and technical facilities rooms are equipped with energy lamps.



Area	27 – 44 m ²
Length	9,002–11,002 mm
Width	2,980–3,980 mm
Height, exterior	3,465 mm
Height, interior	2,700 mm
Weight	4.5–9 tonnes



Load-bearing system

The C40 adaptable building system is statically designed for set-ups with up to three floors.

Roof beams of Glulam girders in the longitudinal direction of the modular units. Completely cantilever between outer walls, does not apply to +module. Between the Glulam girders, secondary beams. Glulam girders rest on Glulam columns in the outer corners of the modular unit. Pressure/load on columns and outer walls are driven down to the ground or the underlying floor.

The floor framework is edged stiffened with a steel frame of UNP profiles on all sides of the lower edge. Floor frame of wooden beams and Glulam girders. The modular units are supplied with top lifts.

Designed for snow load 2.5 kN/m². When positioning any larger point loads, these must be distributed over two or more floor studs, C/C 600 mm

Foundation

The foundation consists of a system of pressure plates and wooden spacers. It can optionally be replaced with concrete slabs and clay pebbles.

Structural parts

Floor framework

Up=0.25 W/m², K
Fire class REI 30

Roof girders

Up = 0.23 W/m², K
Fire class REI 30

Wall structure (modular gable 3/4m)

Up = 0.35 W/m², K
Fire class REI 30

Outer wall set (to be mounted on sectional wall 9/11 m)

Up=0.28 W/m², K.

Other surface layers, interior

Floor mat blue linoleum 2.0 mm
WC, cleaning rooms and apparatus room have plastic mat, beige, or black 1.5 mm with folded base. Splash board behind washbasins in RWC and WC are white tile. White-lacquered mouldings between ceiling-wall, wall-floor and lining around interior doors and glass partitions.

Windows

3-pane sealed glazing unit with tempered outer glass.

Frame and arc of wood, exterior frame and arc with maintenance-free lacquered aluminium profiles in blue. Each modular gable has one fixed and one sliding/openable window.

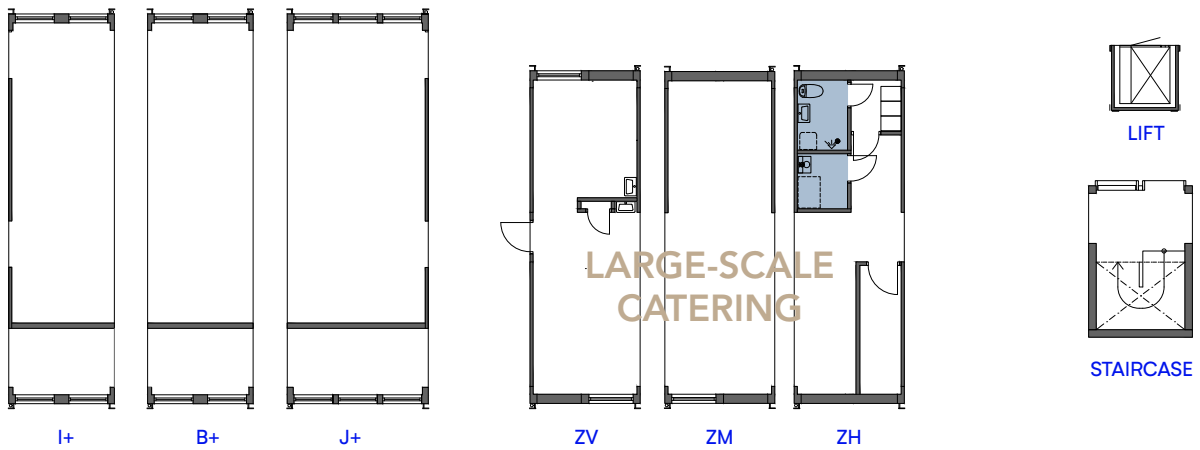
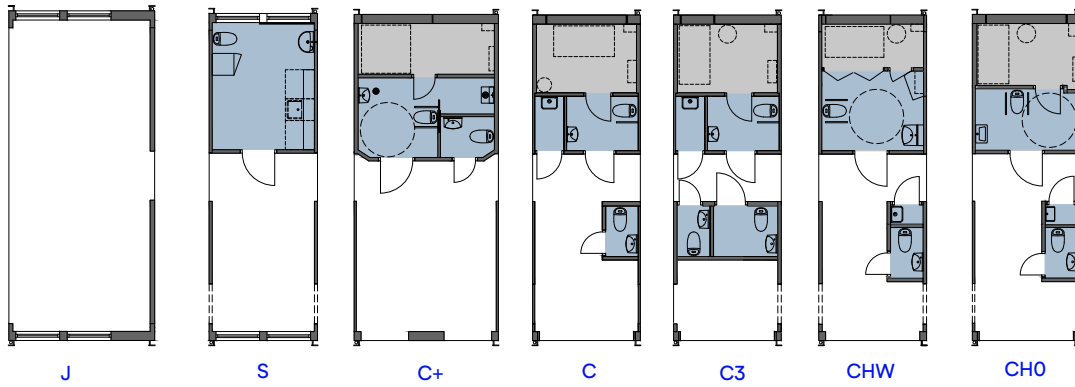
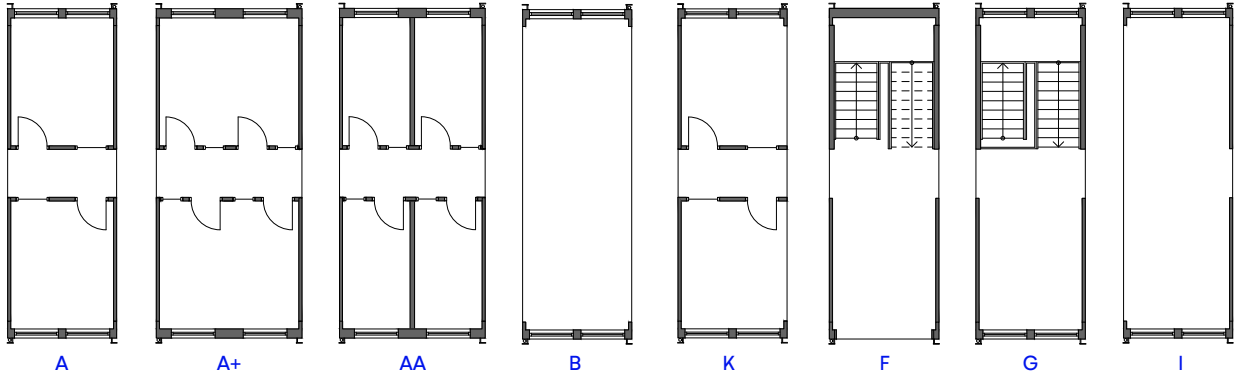
Exterior doors

Aluminium door 11 x 21 DM, blue. Alternative entrance doors Corall wooden door, white. Steel door smooth, grey. Fire class A60.

Surface layer, outside

Façades, light grey NCS 1500
Roof edging och pilasters/modular joints medium grey NCS 3502-B. Sheet iron moulding with hot-dip galvanised plastic coated sheet in blue and grey. Modular joint plates on the roof is black.

Modular unit types



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