

TECHNICAL SPECIFICATION – ARK 300,600 & 900 Series

1 DIMENSIONS

The portable flat pack containers are available in customizable floor plans;

Container Type	External dimensions (mm)			Internal dimensions - <i>without partition walls</i> (mm)		
	Length	Width	Height	Length	Width	Height
1) ARK 300 series	3000	2400	2600	2810	2210	2300
2) ARK 600 series	6000	2400	2600	5810	2210	2300
3) ARK 900 series	9000	2400	2600	8810	2210	2300

The above given dimensions are valid for standard container configurations.

2 DESIGN LOADS AND MATERIALS

2.1 DESIGN LOADS

Description	Design Value
Snow Load	95 kg/m ²
Wind Speed and Load	102 km/h & 50 kg/m ²
Live Load for Floor Frame	200 kg/m ²

2.2 STRUCTURAL FRAME

Floor frame, corner posts and roof frame are made of cold formed steel profiles as below:

Structural Component	Material
1 - FLOOR FRAME	Made of cold rolled, welded steel profiles. Four places of the floor frame at each corner are welded.
a) <i>Longitudinal floor frame</i>	2.0mm thick cold formed steel profile.
b) <i>Short edge floor frame</i>	2.0mm thick cold formed steel profile.
c) <i>Cross beams</i>	1.0 mm thick galvanized cold-formed metal sections
2 - CORNER POSTS	Made of cold-rolled, welded 3.0 mm thick steel profiles and bolted to the floor and roof frames. Bolts : M12
3 - ROOF FRAME	Made of cold rolled, welded steel profiles. Four places of the roof frame at each corner are welded.
a) <i>Longitudinal floor frame</i>	3.0mm thick cold formed steel profile.
b) <i>Short edge floor frame</i>	2.0mm thick cold formed steel profile.
c) <i>Cross beams</i>	1.0 mm thick galvanized cold-formed metal sections.

2.3 FLOOR & ROOF COVERINGS and INSULATIONS

Description	Material
1 - FLOOR	
a) <i>Under sheeting</i>	0.50 mm thick 27/200 formed trapezoidal galvanized steel sheet
b) <i>Decking</i>	18mm thick chipboard / 16mm cement board (dry / wet spaces)
c) <i>Covering</i>	2 mm thick PVC flooring
2 - ROOF	
a) <i>Ceiling</i>	8 mm thick PVC wainscot
b) <i>Thermal insulation</i>	80 mm thick mineral wool, (12-14 kg/m ³ density)
c) <i>Roof cover (top)</i>	0.50 mm thick 27/200 formed trapezoidal galvanized steel sheet

2.4 EXTERNAL / PARTITION WALL PANELS

Description	Material
1 - EXTERNAL WALL PANELS	
a) <i>Panel type, thickness and sizes</i>	Wall sandwich panels, consist of two roll-formed steel sheets and polyurethane filling. 60 mm thick , 1000 x 2350 mm sizes
b) <i>Steel sheet claddings & colour</i>	0.40mm thick galvanized RAL 9002 (grey-white) painted steel sheet (outer and internal surfaces of the panel)
c) <i>Other colours (optional)</i>	RAL 9006 Silver / RAL 7016 Anthracite / RAL 3000 Red / RAL 9007 Aluminium Grey / RAL 5010 Middle blue / RAL 1019 Grey-beige / RAL 1023 Yellow / RAL 2004 Orange / RAL 6017 Yellow-green
d) <i>Thermal insulation values of the Panel</i>	Polyurethane (PU), heat transfer coefficient: 0.37 W/m ² K, Fire Class F
2 - PARTITION WALL PANELS (if any)	
a) <i>Panel type, thickness and sizes</i>	Wall sandwich panels, consist of two roll-formed steel sheets and polyurethane filling. 60 mm thick , 1000 x 2350 mm sizes
b) <i>Steel sheet claddings & colour</i>	0.40mm thick galvanized RAL 9002 (grey-white) painted steel sheet (outer and internal surfaces of the panel)
c) <i>Thermal insulation</i>	Polyurethane (PU), heat transfer coefficient: 0.37 W/m ² K

2.5 DOORS & WINDOWS

Description	Material
1 - EXTERIOR DOOR	
a) <i>Door Frame</i>	60 mm width, 1.20mm steel sheet, electrostatic powder coated RAL 9002.
b) <i>Dimensions</i>	850 x 1900 mm
c) <i>Door leaf</i>	1mm thick, RAL 9002 electrostatic powder coated steel sheet cladded on both faces, total door leaf thickness 50 mm
d) <i>Thermal insulation</i>	EPS / Rockwool / PU infilled
e) <i>Door accessories</i>	Barrel lock, 3 nos hinges, weather-strip gasket. Metal door handle.

2 - INTERIOR DOORS (if any)	
a) Door Frame	60 mm width, 1.20mm thick steel sheet, electrostatic powder coated RAL 9002.
b) Dimensions	800 x 2000 mm (WC doors 740 x 2000 mm)
c) Door leaf	44 mm thick, honeycomb kraft infilled
d) Door accessories	Barrel lock, 3 nos hinges with metal handle
3 - WINDOWS	
a) Frame	CRP reinforced uPVC window frame
b) Glazing	Double glazed insulating glasses, [4mm glass + 9mm Air Space + 4 mm glass] combination) (Frosted glazing for wc)
c) Dimensions	1000 x 1000 mm (WC windows 600 x 400 mm)

2.6 ELECTRICAL INSTALLATIONS

The electrical installations are surface mounted on the walls. All cables running above the ceiling are hidden. Cables from the ceiling down to the switches and socket outlets will be installed within the PVC cable channel mounted on the sandwich panel wall surface.

Description	Material
a) Cables	<i>NYM cables – (300 V/500 V) will be used in power outlets, lighting fixtures and A/C cabling. 3x2.5 mm² NYM cables (300 V/500 V) for power outlets, 3x1.5 mm² NYM cables for lighting fixtures wiring.</i>
b) Lighting Fixtures	<i>Surface mounted circular 24W / IP20 LED fixtures for interior lighting. 9W LED / IP 44 wall mounted exterior lighting fixture.</i>
c) Switches and power outlets	<i>Power outlets (1x16 A)</i>
d) Distribution board	<i>Wall-mounted type electrical distribution board - 230 V / 400 V & 50 Hz. All boards will have 4 pole 300 mA earth current leakage relays for protection.</i>
e) Circuit Breakers (MCB)	<i>Lighting outputs: 1x10 A- B type, Socket outputs : 1x16 A- B type</i>
f) Low Current Systems	<i>Data cable, tv cable, smoke detector and motion detectors as per customer requirements (optional)</i>

2.7 HVAC and PLUMBING INSTALLATIONS

The plumbing pipes are surface mounted.

Description	Material
a) Wastewater pipes	<i>PVC (Containers with wet spaces & kitchens)</i>
b) Potable water pipes	<i>PPRC (Containers with wet spaces & kitchens)</i>
c) Sanitary fixtures	<i>Lavatory, WC, electric water boiler and acrylic shower tray as per customer requirements and container model (optional)</i>
d) AC	<i>9000 btu as per customer requirements (optional)</i>
e) Heating	<i>2000 W electric heat convactor (optional)</i>

3 SAMPLE PHOTOS

All photos below shown are for illustration purposes only. Actual products may vary as per model and customer preferences.



Photo 1- ARK 601



Photo 2- ARK 610



Photo 3- Interior photos of ARK 610



Photo 4- Colour Options for PU Wall Panels



Photo 5- Custom made 6m sales office container



Photo 6- Custom made technical equipment container with handrails on the roof



Photo 7- ARK 910 container



ARK 101 Sanitary Container

Photo 8 - Sanitary containers



Photo 9- Modular Labor Accommodation Camps from containers



Photo 10- Modular Labor Accommodation Camps from containers