

19" SmartQube IP55 Air-Conditioned Smart Cabinet



19" SmartQube IP55 Air-Conditioned Smart Cabinet

All of today's companies need servers and network infrastructure in their offices and premises in order to be able to carry out their internet based services and their own needs (e-mail, financial transactions ...etc). Large companies can find solutions to these needs by the system rooms (data centers) that they have installed in their facilities or by the services that they outsource from large data centers. Furthermore, in most of the small and medium sized companies, a suitable, safe, secure and monitoring system room has not been constructed. Under these conditions, there is a need for "smart" products and systems that are compact for simple and small IT solutions and everything is configured as all in one cabinet.

In the past, production and storage sites were using simple technologies where there were needs of structure based on simple data collected from the field. Nowadays, technology is used which has high data flow, on-the-spot process and decision mechanisms due to the developing industrial automation and communication technologies (Industry 4.0, MRP / ERP, Stock, Warehouse and Manufacturing Management Applications...). Now, the technical staff in the plants use advanced technologies such as manufacturing machines, CAD/CAM/CNC devices, Inventory and Storage Tracking Devices, Barcode and Tracking Systems, almost all of which contain a computer. Today, there is a growing need for "smart" cabinet systems that are highly resistant to such conditions as heat, moisture and dust, which will accommodate such technological infrastructures of industrial facilities.

Lande offers integrated air-conditioned solutions in the **IP55** Protection Class (**EN 60529¹**) and **IK10** (**EN 50102²**) Mechanical Impact Resistance standard with the appropriate cooling capacity selected at various thermal load and cabinet ratings.

Lande offers wide range of products for roof type and panel type industrial integrated air-conditioned "smart" cabinets at 24U, 33U, 38U and 42U height, 600 and 800 mm width and 600, 800, 1000 and 1200 mm depth options.

All **Lande** products are compliant and certified to the **EN 61587-1³**, **2002/95/EC⁴**, the RoHS Directive, **EN 60950-1⁵** and **UL 60950-1⁶** (Underwriters Laboratories) standards.

Lande Production Facility has **ISO 9001-2008** Quality Management System and **ISO 14001** Environmental Management System certificates.

TS EN 60529 Degrees of protection provided by enclosures (IP code) (For electrical equipments)

TS EN 50102 Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code).

TS EN 61587-1 Mechanical structures for electronic equipment - Tests for IEC 60917 and IEC 60297 standards - Part 1: Climatic tests for cabinets, shelves, under shelves and chassis, mechanical tests and safety considerations.

EIA/ ECA-310 (D/E) 19" 482,6 mm and U 44,45 mm Height Sizing

2002/95/EC RoHS Directive (Directive on the restriction of certain harmful chemicals).

TS EN 60950-1 Information technology devices - Safety - Part 1: General rules.

UL 60950-1 Information technology devices - Safety - Part 1: General rules.



Why Lande SmartQube?

Lande SmartQube 19" Air-Conditioned Smart Cabinets can meet the information technology and communication infrastructure needs of small and medium sized companies, offices, branch and dealer locations; It is an integrated product which contains all the requirements of cooling, energy and security in the IP55 protection class, taking into account all the bad environment conditions to accommodate automation and communication devices in the production and storage areas of industrial plants. You don't need any special room for **Lande SmartQube**. You can place it anywhere in your facility and at any point in your office.

Lande SmartQube is equipped with Panel Type Industrial Air-Conditioners from 900W to 10,000W to meet the cooling needs. These are designed for heavy industrial needs and harsh ambient conditions; These are the devices that are designed and manufactured for continuous operation in every season, everyday (7/24/365 conditions) with a single major task of continuous cooling function. They do not require any external unit and no external cooling water or gas connection, and have an integral structure where all parts of the product are together. It can be used as an easy fit solution where especially no possibility to accommodate an external unit out of the buildings or such as large industrial areas where the external unit location is too far or too high from the enclosure.

Split type ambient air conditioners used in classical applications of small system room all over the world are designed and manufactured to work for certain hours of the day in quick changing hot and cold ambient temperatures of the seasons and are for the human comfort. Such devices do not have a structure that can work 7/24/365. For this reason, they can not be the ideal solution for both IT and industrial applications. In addition, these devices also require an external unit that is placed in an external atmospheric environment, making it impossible for businesses that do not have such facilities in their premises.

Lande SmartQube 19" Air Conditioned Smart Cabinets offer a solution that you can put into any other parts and accessories that a system room may need. For this purpose, we offer Rack Type UPS Uninterruptible Power Supply and Battery Group, FM200 or NOVEC Fire Extinguishing System, Rack Type Electricity Distribution Panel, PDU, Environmental Monitoring System.



Roof Type Air-Conditioner and Glass Door Smart Cabinet



Air Routers for Panel Type Air Conditioning Cabinet



Panel Type Air-Conditioner and Metal Door Smart Cabinet

19" SmartQube

IP55 Air-Conditioned Smart Cabinet

Selection Table

LN-SQ14-42U6010-XYLG-Z		
LN	Lande	LN
SQ	SmartQube	SQ
14	Cooling Capacity	6-8-10-14-20-28-34 kBTu Panel Type Air Conditioner / 3-5-7-9-13-17 kBTu Roof Type Air Conditioner
42U	Height of Cabinet	24U (1200 mm) - 33U (1600 mm) - 38U (1800 mm) - 42U (2000 mm)
60	Width of Cabinet	60: 600 mm, 80: 800 mm Width
10	Depth of Cabinet	60: 600 mm, 80: 800 mm, 10: 1000 mm, 12: 1200 mm Depth
X	Front Door	M: Metal, G: Glass
Y	Plinth Height	1: Plinth 100 mm, 2: Plinth 200 mm
LG	Color of Cabinet	LG: Light Grey RAL 7035
Z	Low Noise	0: None, 1: Yes (Only for panel type cooling device)

With Panel Type Air-Conditioner																			
SmartQube (Air-Conditioned IT Cabinet) Cabinet and Cooling Capacity Selection and Size Chart																			
Lande	Smart Qube	Cooling Capacity			H ¹ Height of Cabinet		W ² Width of Cabinet		D Depth of Cabinet		Front Door ³		Plinth		Color		Low Noise of Air Conditioner		Ws ⁴ Total System Width
		Selection Code	Btu	Watt															
LN	SQ	06	5.400	1.600	24U	1200 mm	60	600 mm	60	600 mm	M	Metal	1	100 mm	LG	Light Grey RAL 7035	0	None	848 mm (W600)
		08	7.480	2.200	33U	1600 mm			80	800 mm			2	200 mm					863 mm (W600)
		10	10.750	3.150	38U	1800 mm	60	600 mm	80	800 mm	G	Glass	2	200 mm			1	Yes	948 mm (W600) veya 1148 mm (W800)
					42U	2000 mm			80	800 mm									10
LN	SQ	14	14.000	4.100	38U	1800 mm	80	800 mm	80	800 mm	M	Metal	1	100 mm	LG	Light Grey RAL 7035	0	None	1148 mm (W800)
		20	20.300	5.950	42U	2000 mm			10	1000 mm			2	200 mm					1203 mm (W800)
		28	27.300	8.000	42U	2000 mm	80	800 mm	10	1000 mm	G	Glass	2	200 mm			1	Yes	1184 mm (W800)
		34	34.000	10.000					12	1200 mm									1184 mm (W800)

With Roof Type Air-Conditioner																	
SmartQube (Air-Conditioned IT Cabinet) Cabinet and Cooling Capacity Selection and Size Chart																	
Lande	Smart Qube	Cooling Capacity			H ^{1,5} Height of Cabinet		W Width of Cabinet		D Depth of Cabinet		Front Door ³		Plinth		Color		Hs ⁶ Total System Width
		Selection Code	Btu	Watt													
LN	SQ	03	3.000	900	24U	1200 mm	60	600 mm	60	600 mm	M	Metal	1	100 mm	LG	Light Grey RAL 7035	1535 mm (H1200) 1935 mm (H1600)
		05	4.775	1.400					80	800 mm	G	Glass	2	200 mm			1650 mm (H1200) 2050 mm (H1600)
		07	6.800	2.000	33U	1600 mm											
LN	SQ	09	9.200	2.700	33U	1600 mm	60	600 mm	80	800 mm	M	Metal	1	100 mm	LG	Light Grey RAL 7035	2080 mm (H1600) 2280 mm (H1800) 2480 mm (H2000)
		13	13.000	3.800	38U	1800 mm			80	800 mm	10	1000 mm	G	Glass			2
		17	17.750	5.200	42U ⁷	2000 mm											

19" SmartQube

IP55 Air-Conditioned Smart Cabinet

Selection Table

Descriptions:

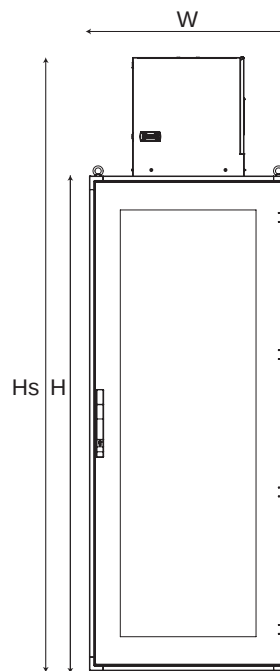
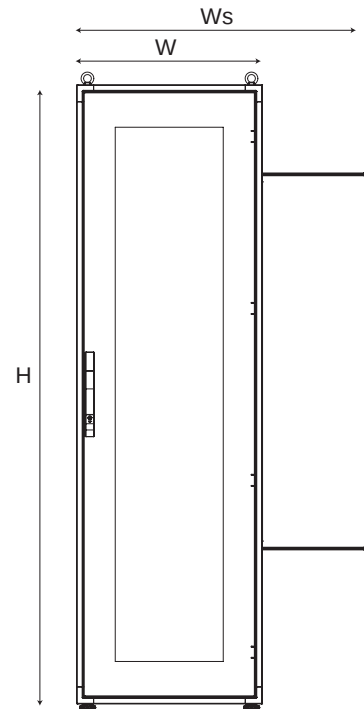
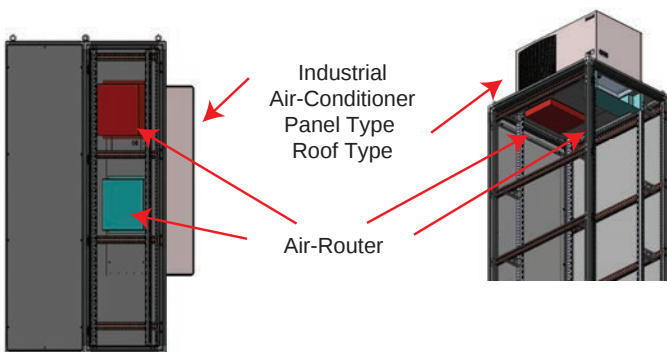
"H¹ Cabinet Height" dimension is only cabinet height. The selected plinth height (H100 mm or H200 mm) should be added to cabinet height.

"W² W2 Cabinet Width" dimension is only the cabinet width. once panel type air-conditioner is integrated refer to the total system width column for the final system width. Consider and control whether in the area where the system will be installed if there is an enough space available, check if walls, closets, wardrobes or other devices...etc that can be very close to the air conditioner. It is recommended that for ideal air circulation the air conditioner needs at least 300 mm fresh air intake space. Standard "Front Door" is metal door. Unless otherwise clearly stated for glass door with the correct part number selection, "the metal door is shipped". Rear doors are shipped as standard metal doors.

"Ws⁴ Total System Width" total system width, the net width of the system after panel type air conditioning installation.

"H⁵ Cabinet Height" is only cabinet height. Refer to total system height column for final system height after roof type air conditioning installation.

"Hs⁶ Total System Height" total system height, the net height of the system after roof type air conditioning installation. With H100 mm or H200 mm base selection, the selected base height is added to the cabinet height, resulting in a net system height of the cabinet. The height of the **"42U"** cabinet will reach 2650/2750 mm when the H100 mm or H200 mm plinth is selected as well the max height (550 mm) roof type air conditioner installed. Specifically pay attention to this height as this can be a critical measure while positioning the enclosure in to intended location. Even consider staircases, goods lift, corridors to be able to carry the enclosure to its location



Specifically pay attention to the cabinet external dimentions and compare the sizes of with its place of installation

H : Cabinet Height
W : Cabinet Width
Hs : Cabinet Final Heighth
Ws: Cabinet Final Width

19" SmartQube

IP55 Air-Conditioned Smart Cabinet

Selection Table

AC Technical Details										
AC Part Number	Cooling Capacity (Watt)		Electirical Values	Max. Power Consumption L35-L50³	Max. Running Current/Starting Current	Air Flow	Dimensions WxDxH	Noise Level	Low Noise Option	Weight
	L35-L35¹	L35-L50²	V-P-Hz	(Watt)	(Amper)	(m³/h)	(mm)	(dBA)		(kgs)
Panel Type Air Conditioners										
06	1600	1200	230-1-50/60	825	3,9 / 28	580	248x410x913	65 dBA	✓	42 kgs
08	2200	1850	230-1-50/60	1240	5,5 / 34	580	263x410x1005	68 dBA	✓	44 kgs
10	3150	2600	230-1-50/60	1510	5,5 / 35	930	348x511x1219	70 dBA	✓	86 kgs
14	4100	3300	230-1-50/60	1950	9,4 / 42	1300	348x511x1219	70 dBA	✓	83 kgs
20	5950	4850	400-3-50/60	3600	5,7 / 53	1600	404x554x1406	73 dBA	✓	95 kgs
28	8000	5900	400-3-50/60	3619	7,0 / 28	3000	384x800x2000	76 dBA	✓	110 kgs
34	10000	7800	400-3-50/60	4500	7,0 / 40	2980	384x800x2000	76 dBA	✓	150 kgs
Roof Type Air Conditioners										
03	900	760	230-1-50/60	630	3,2 / 15	575	325x600x335	67 dBA	-	32 kgs
05	1400	1170	230-1-50/60	950	5,2 / 17	575	400x600x450	58 dBA	-	48 kgs
07	2000	1700	230-1-50/60	1200	5,7 / 22	860	400x600x450	62 dBA	-	52 kgs
09	2700	2300	230-1-50/60	1580	7,0 / 38	860	450x800x480	77 dBA	-	75 kgs
13	3800	2700	230-1-50/60	2000	9,0 / 38	1450	450x800x480	77 dBA	-	77 kgs
17	5200	4100	400-3-50/60	2540	4,6 / 25	2540	600x800x550	77 dBA	-	94 kgs

- 1 L35-L35: Cooling capacity refers to the cooling capacity of the air-conditioner in watts at setted 35°C internal temperature level in cabinet and 35°C ambient temperature outside the cabinet (EN 14511-2). In other words, it is an acceptance criteria of the cooling capacity against the dissipated heat from the active devices installed inside cabinet.
- 2 L35-L50: Cooling capacity refers to the cooling capacity of the air-conditioner in watts at setted 35°C internal temperature level in cabinet and 50°C ambient temperature outside the cabinet. (EN 14511-2). The air-conditioner will loose a portion of its capacity to remove the heat load coming from outside because of transmitted heat because of the 50°C ambient temperature next to the cabinet.
- 3 Maximum power consumption value according to L35-L50 temperature conditions.

All values of air-conditioners in the information table indicate that the temperature inside the cabinet is between 25 and 45°C and the temperature outside the cabinet is between 20 and 55°C.

COOLING CAPACITY

For 19" Smart Cabinets, air-conditioners should be selected 25% larger than the sum of the energy consumption values of all IT and IP devices and the energy loss values of the industrial electronic devices you intend to install. You can find these values in the device's catalogs or you can request them from the manufacturers. If you are not able to reach to the related technical informations, as an acceptance criteria, IT and IP devices can be used for practical and easy calculation, **each 1U** height equals 100 watts energy consumption and cooling capacity. Be sure to compare the wall and ceiling points where your cabinet will be placed with **Hs⁶ - Total System Height** and **Ws⁴ - Total System Width** values, and pay attention to clearance distances. If you want to use your cabinet in a closed room, it is adviced to use a fan exhaust system or window to circulate the air of your room with the external atmospheric environment. Please contact our Lande Sales Representatives for assistance in determining the air-conditioner capacity and cabinet location.

HUMIDITY and WATER CONTROL

Panel Type Industrial Air-Conditioners does not have dehumidification capability based on its technology. In case of excessive humidity conditions, there are two reservoirs inside the device. Due to condensation the water collected in the first reservoir, than once the first reservoir is fully filled, than its starts to flow in to the second reservoir. There is a water discharge pipe as a safety precaution against the case of the second container being fully filled. Due to the heat generated by the devices in the air conditioner, the water that accumulated in these reservoirs evaporated and mixed with the ambient air as a normal cycle. Under normal conditions no dripping water will come from the discharge pipe. This evacuation pipe is strictly for safety purposes. However, in very excessive humidity environments, may some dripping can happen. We provide a heat resistance integrated self sticking Power adapter included external reservoir plastic pocket as accessory incase required by customers.

LOW NOISE OPTION

This is an available option for only Panel Type Air-Conditioners, and it works especially at lower ambient temperatures. This feature is based on reducing the condenser fan speed due to lower ambient temperature conditions. An average of 2-4 dB lower noise level is achievable but based on the air-conditioner capacity, setted temperature limits and ambient temperature conditions. In winter conditions this feature can perform day and night; and in the summer conditions can perform only at night. In high performance requirement levels at full capacity of air-conditioner, this feature will become off.

19" SmartQube IP55 Air-Conditioned Smart Cabinet

Options and Accessories

Lande SmartQube the 19" Air Conditioning Smart Cabinet, you need to specify the options and accessories you would like to order with the product code and quantity.

Environmental Monitoring and Management System

A full range of Environmental Management System modules are available, standalone or Networked to allow local or remote monitoring which allows Administrators to effectively manage your valuable assets, options for Camera's, Smoke sensors, Temperature and Humidity sensors, Moisture Sensors, and access sensors.

Advantages, Remote monitoring of multiple sites, High security and internal audit capability, Corrective and preventive actions, Instant and retrospective reporting and analysis.

Access Control Systems

A full of Access Control and Locking systems available for to whole Lande range, from round key locked single point, swing lock three-point locking, combination locks, Keypad locking, RFID Card reader locking, Finger print readers and Retina (Eye) Reader Locking.

If integrated with Lande EMS systems, remote monitor locking can be achieved.

Power Distribution Unit

A complete range of Power Distribution Units are available from Basic economical units or full remote monitoring intelligent Units, IEC320 C13, BS 3pin UK type, DIN 49440 Schuko, 16A Breaker and Surge protection, 19" Horizontal and Vertical units either basic on/off switch to intelligent units with built in network point to allow multiple remote monitoring of various sites are available.

Power Distribution Panels

LN-SQP-PN1R: 3U, Rack Type, 10 kW Electrical Distribution Panel, For 3-6 kVA UPS and up to 10kBtu Air-Conditioners

LN-SQP-PN2R: 3U, Rack Type, 20 kW Power Distribution Panel, For 10 kVA UPS and all type Air-Conditioners

LN-SQP-PN1W: Wall Mount Type, 10 kW Electrical Distribution Panel, For 3-6 kVA UPS and up to 10kBtu Air-Conditioners

LN-SQP-PN2W: Wall Mount Type, 20 kW Power Distribution Panel, For 10 kVA UPS and all type Air-Conditioners

UPS - Uninterruptible Power Supplies

LN-SQP-UPS1: 3 kVA, 1P-1P, 220 V, 50/60 Hz, Rack Type 2U

LN-SQP-UPS2: 6 kVA, 1P-1P, 220 V, 50/60 Hz, Rack Type 2U&3U

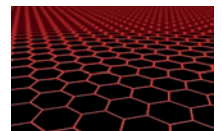
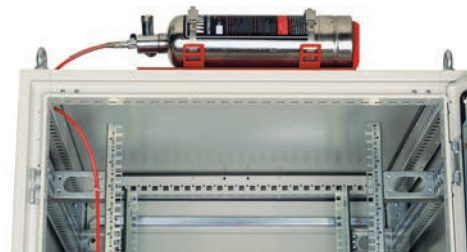
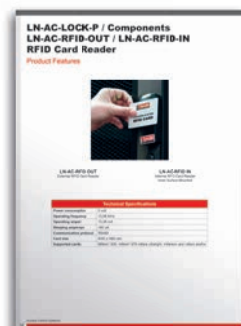
LN-SQP-UPS3: 10 kVA, 3P-1P, 400 V, 1P-1P, 220 V, 50/60 Hz, Rack Type 2U&3U

Fire Extinguishing System

Lande Cabinet Fire Extinguishing System consists of a cylindrical steel tube filled extinguishing gas and intelligent piping made from special honeycomb polymer filled nitrogen under 12 bar pressure. This system performs the extinguishing process by puncturing this pipe at the point where the temperature exceeds 65°C in the cabinet and by shooting the FM200 or NOVEC gas from the cylinder to the point where the heat is raised.

Heater Panel

Self Sticking plastic pocket with resistance inside, which is mounted externally on the side cover of the cabinet, to which the air conditioning drainage pipe can be connected.



Honeycombed Polymer





CONTACT DETAILS

Headquarters

Address:

Merve Mah. Gazi Cad. No: 17 **Phone:** +90 216 312 26 53
Sancaktepe - İstanbul / TURKEY **Fax** : +90 216 312 09 09

Factory

Address:

20. Cadde No: 14 Eskişehir **Phone:** +90 222 236 24 66 pbx
Organize San. Bölge. 26110 **Fax** : +90 222 236 13 53
Eskişehir / TURKEY

www.lande.com.tr | sales@lande.com.tr

