

CASSETTE

DUCT TYPE

FLOOR CEILING



WILLIS

Light Commercial

18K BTU - 48K BTU



1-to-1 COMMERCIAL SERIES

About our products

The Willis 1-to-1 commercial series of Air Conditioners was designed for applications where the requirements are greater and/or more complex than the typical residence. They offer great flexibility as you can mix and match from a variety of indoor unit types (floor-ceiling, cassette, or duct type) to best suit the architectural design.

Installation is easier and less costly than conventional HVAC systems as no brazing is required.

The 1-to-1 Commercial Series is available in sizes ranging from 18k to 48k BTUs (1.5 to 4 tons) which are ideal for cooling, and heating light commercial spaces.

What can I find in this catalog ?

1-to-1 COMMERCIAL INVERTER SERIES 03
Information about controls, functions and systems.

INDOOR UNIT FEATURES 04
Information about our indoor unit products

PRODUCT LINEUP 06
Data / Specs

Want to know more about us and our products ?
Visit our website willisac.com



1-to-1 COMMERCIAL INVERTER SERIES

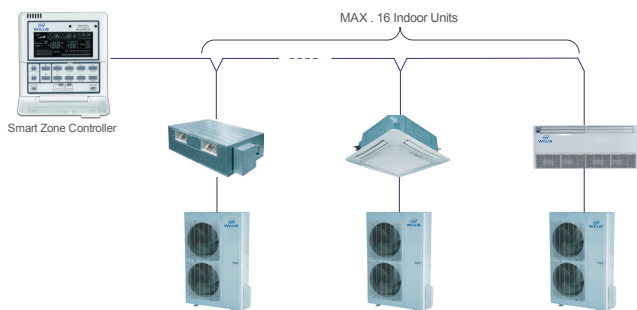
Remote Controller



Optional

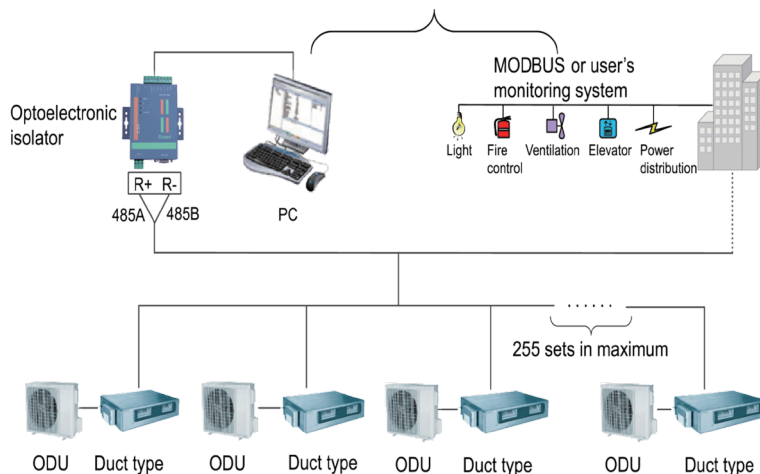
Centralized Control Function

The indoor unit is equipped with an interface that can be managed by the smart zone controller. This wireless device can control a maximum of 16 indoor units and can manage the power on/off, mode, fan speed, temperature setting and timer of one single unit, or a whole group of units.



Interface (MODBUS Protocol) and Long-distance Monitoring

The system comes with a built in MODBUS interface. (If the unit is to be connected with a building management system, please consult your dealer for the development of MODBUS protocol). When activated, the system operation information will be sent to the building management system in order to control and monitor the units.



Non-polar Communication Wire

For the communication between the indoor unit and outdoor unit, and the communication between wired controller and indoor mainboard, you can use non-polar communication wire. General 2-core power cord or telephone wire can be used as the communication wire, instead of the shielded twisted pair wire.

MORE INTELLIGENT CONTROL

INDOOR UNIT FEATURES

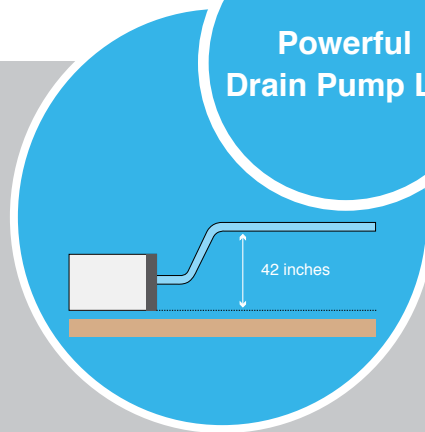
- **Duct Type**
- **Cassette Type**
- **Floor or Ceiling Type**



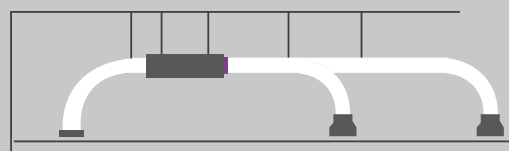
Outdoor Unit

Duct Type

**Powerful
Drain Pump Lift**



The static pressure can be adjusted within a range of 0 to 150Pa depending on various installation requirements.

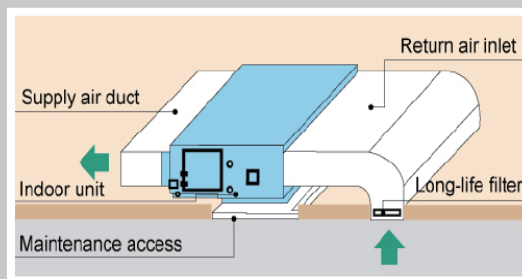


Adjustable Fan Speed

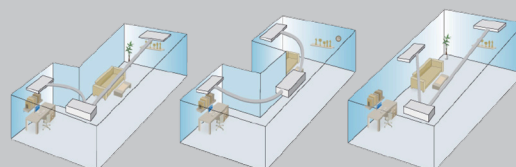
There are three fan speeds available (high, medium and low) on the indoor units to meet different requirements.

Highly Flexible Installation

Highly flexible installation is possible to satisfy various needs.

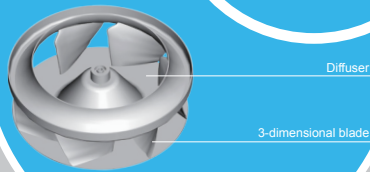


Flexible and easy to install in L shape, U shape and large rooms.



Cassette

**3-dimensional
Blade for quiet
operation**

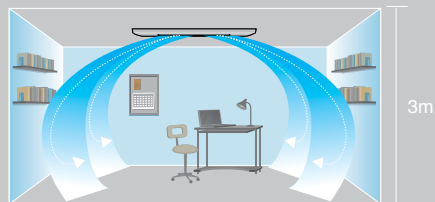


High Ceiling Applications

The 24K to 48K units are applicable for ceiling heights of up to 15 feet

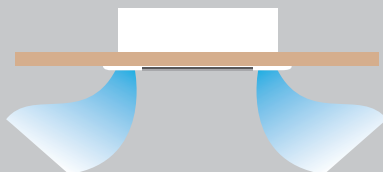


Units below 24K are applicable for ceiling heights below 10 feet.



Comfortable Airflow

Air can be blown in different directions with 30 to 60 degrees of swing angle for even temperature distribution.



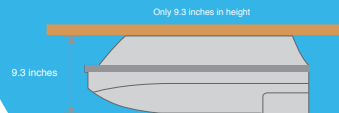
Water Drainage Pump

The standard drain pump has an increased lift of 42 inches.



Floor or Ceiling

**Compact
Design**



Wide Discharge Range

The air supply range is efficiently wider due to the cross directional sweep motion.



Easy Maintenance

Convenient disassembly and maintenance are possible thanks to the unique design.

Microcomputer Control

All of the control functions are controlled by a microcomputer which not only shows all running modes and temperatures but also has a malfunction diagnosis and data search function.

Flexible Installation

These indoor units can be installed on either the ceiling or the floor.





PRODUCT LINEUP

- Duct Type
- Cassette Type
- Floor or Ceiling Type



DUCT

MODEL				Ductable unit LCD-KCH16S with outdoor unit LCO-KCH16S					
				18	24	30	36	42	48
Capacity	Cooling	BTU/h		17,100	23,800	28,200	34,000	39,500	48,000
	Heating	BTU/h		18,800	27,200	31,200	41,000	44,000	54,500
SEER/HSPF				16.00/9.50	16.00/9.00	16.00/9.00	16.00/9.00	16.00/9.00	16.00/9.00
Power supply			V/ph/hz	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60
Power input	Cooling	kW		1.55	2.23	3.3	3.28	4.15	5.15
	Heating	kW		1.65	2.36	3.1	3.75	3.9	5.15
current input	Cooling	A		7.93	11.41	16.88	16.78	21.23	26.34
	Heating	A		8.44	12.07	15.86	19.18	19.95	26.34
Refrigerant charge			Kg/Oz	1.4/49.4	2.2/77.6	2.4/84.7	3.5/123.5	3.7/130.5	4.0/141.1
Indoor Unit	Airflow		CFM	585	820	820	1,175	1,175	1,470
			m3/h	1,000	1,400	1,400	2,000	2,000	2,500
	ESP	Rated	INWC	0.1	0.1	0.15	0.15	0.15	0.2
		Range	INWC	0.12	0.3	0.3	0.4	0.4	0.5
	Sound pressure level	H / M / L	dB(a)	39/36/28	46/44/40	46/44/40	52/48/44	52/48/44	53/49/45
	dimensions (wxdxh)	outline	inch	40.8x28.4x10.5	50.4x22.0x10.6	50.4x22.0x10.6	48.3x30.5x11.4	48.3x30.5x11.4	52.8x29.5x13.8
		package	inch	44.2x31.4x12.7	53.1x23.5x11.1	53.1x23.5x11.1	52.7x34.5x12.0	52.7x34.5x12.0	56.0x33.0x17.9
	Weight	Net/gross	Lbs	72.8/83.8	75.0/86.0	77.2/86.0	101.4/116.9	101.4/116.9	123.5/143.3
Outdoor unit	Sound Pressure level		dB(a)	56	57	58	63	61	59
	dimensions (wxdxh)	outline	inch	37.6x15.6x27.6	38.6x16.8x31.1	38.6x16.8x31.1	43.6x17.3x43.3	37.7x16.2x53.1	37.7x16.2x53.1
		package	inch	40.5x18.0x29.5	42.6x19.2x33.7	42.6x19.2x33.7	45.6x19.4x48.6	41.1x17.8x59.1	41.1x17.8x59.1
	Weight	Net/Gross	Lbs	105.8/114.7	152.1/163.2	158.8/168.8	205.1/222.7	209.5/231.5	231.5/253.6
Connection pipe diameter			liquid	inch	1/4	3/8	3/8	3/8	3/8
			gas	inch	1/2	5/8	5/8	5/8	5/8
Maximum pipe length			ft	65.6	98.4	98.4	98.4	164	164
Maximum elevation			ft	49.2	49.2	49.2	49.2	98.4	98.4

CASSETTE

MODEL			Cassette LCC--KCH16Swith outdoor unit LCO--KCH16S						
			18	24	30	36	42	48	
Capacity	Cooling	BTU/h	17,100	23,800	28,200	34,000	39,500	48,000	
	Heating	BTU/h	18,400	27,200	31,200	41,000	44,000	54,500	
SEER/HSPF			16.00/9.00	16.00/9.00	17.00/9.00	16.00/9.00	16.00/9.00	16.00/9.00	
Power supply		V/ph/hz	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	208-230/1/60	
Power input	Cooling	kW	1.7	2.23	2.7	3.28	4.4	5.5	
	Heating	kW	1.8	2.36	2.5	3.75	4.45	4.8	
current input	Cooling	A	8.7	11.41	13.81	16.78	22.51	28.13	
	Heating	A	9.21	12.07	12.79	19.18	22.76	24.55	
Refrigerant charge		Kg/Oz	1.4/49.4	2.2/77.6	2.4/84.7	3.5/123.5	3.7/130.5	4.0/141.1	
Indoor Unit	Airflow		CFM	445	765	880	1,095	1,095	1,350
			m3/h	760	1,300	1,500	1,860	1,860	2,300
	Sound pressure level	H / M / L	dB(a)	46/44/37	46/42/38	48/45/40	49/46/43	49/46/43	52/47/41
	Body dimensions (wxdxh)	Outline	inch	26.2×23.5×9.4	36.1×33.1×9.4	36.1×33.1×12.6	36.1×33.1×12.6	36.1×33.1×12.6	35.8×35.8×11.4
		Package	inch	30.4×28.9×11.8	45.2×37.7×13.4	45.2×37.7×16.5	45.2×37.7×16.5	45.2×37.7×16.5	40.3×39.1×14.8
	Body Weight	Net/gross	Lbs	44.1/52.9	59.5/83.8	70.6/97.0	70.6/97.0	70.6/97.0	94.8/110.3
	Panel dimensions (wxdxh)	Outline	Inch	26.4×26.4×2.0	37.5×37.5×2.4	37.5×37.5×2.4	37.5×37.5×2.4	37.5×37.5×2.4	40.9×40.9×2.6
		Package	Inch	30.0×30.0×4.1	40.7×40.9×5.2	40.7×40.9×5.2	40.7×40.9×5.2	40.7×40.9×5.2	44.8×44.8×5.5
	Panel Weight	Net/gross	Lbs	7.7/11.0	15.4/24.3	15.4/24.3	15.4/24.3	15.4/24.3	17.6/26.5
Outdoor unit	Sound Pressure level		dB(a)	56	57	58	63	61	59
	dimensions (wxdxh)	outline	inch	37.6×15.6×27.6	38.6×16.8×31.1	38.6×16.8×31.1	43.6×17.3×43.3	37.7×16.2×53.1	37.7×16.2×53.1
		package	inch	40.5×18.0×29.5	42.6×19.2×33.7	42.6×19.2×33.7	45.6×19.4×48.6	41.1×17.8×59.1	41.1×17.8×59.1
	Weight	Net/Gross	Lbs	105.8/114.7	152.1/163.2	158.8/168.8	205.1/222.7	209.5/231.5	231.5/253.6
Connection pipe diameter		liquid	inch	1/4	3/8	3/8	3/8	3/8	3/8
		gas	inch	1/2	5/8	5/8	5/8	5/8	5/8
Maximum pipe length		ft	65.6	98.4	98.4	98.4	164	164	
Maximum elevation		ft	49.2	49.2	49.2	49.2	98.4	98.4	

FLOOR OR CEILING

MODEL			Floor/Ceiling unit LCF--KCH16S with outdoor unit LCO--KCH16S						
			18	24	30	36	42	48	
Capacity	Cooling	BTU/h	17,100	23,800	28,200	34,000	39,500	48,000	
	Heating	BTU/h	19,100	27,200	31,200	41,000	44,000	54,500	
SEER/HSPF			17.00/9.50	16.00/9.00	17.00/9.00	16.00/9.00	16.00/9.00	16.00/9.00	
Power supply		V/ph/hz	208/230/601	208/230/601	208/230/601	208/230/601	208/230/601	208/230/601	
Power input	Cooling	kW	1.55	2.23	2.4	3.28	4.05	4.95	
	Heating	kW	1.55	2.36	2.6	3.75	4.05	4.6	
current input	Cooling	A	7.93	11.41	12.28	16.78	20.72	25.32	
	Heating	A	7.93	12.07	13.3	19.18	20.72	23.53	
Refrigerant charge		Kg/Oz	1.4/49.4	2.2/77.6	2.4/84.7	3.5/123.5	3.7/130.5	4.0/141.1	
Indoor Unit	Airflow		CFM	585	705	880	1,115	1,115	1,350
			m3/h	1,000	1,200	1,500	1,900	1,900	2,300
	Sound pressure level	H / M / L	dB(a)	42/38/32	48/46/40	46/44/38	53/51/46	54/52/47	55/50/46
	dimensions (wxdxh)	outline	inch	48.0×27.6×8.9	48.0×27.6×8.9	55.9×27.6×9.6	55.9×27.6×9.6	55.9×27.6×9.6	66.9×27.6×9.6
		package	inch	52.9×32.4×12.4	52.9×32.4×12.4	60.9×32.6×13.6	60.9×32.6×13.6	60.9×32.6×13.6	72.0×32.6×13.6
	Weight	Net/gross	Lbs	86.0/105.8	88.2/110.3	105.8/123.5	105.8/123.5	110.3/127.9	130.1/149.9
Outdoor unit	Sound Pressure level		dB(a)	56	57	58	63	61	59
	dimensions (wxdxh)	outline	inch	37.6×15.6×27.6	38.6×16.8×31.1	38.6×16.8×31.1	43.6×17.3×43.3	37.7×16.2×53.1	37.7×16.2×53.1
		package	inch	40.5×18.0×29.5	42.6×19.2×33.7	42.6×19.2×33.7	45.6×19.4×48.6	41.1×17.8×59.1	41.1×17.8×59.1
	Weight	Net/Gross	Lbs	105.8/114.7	152.1/163.2	158.8/168.8	205.1/222.7	209.5/231.5	231.5/253.6
Connection pipe diameter		liquid	inch	1/4	3/8	3/8	3/8	3/8	3/8
		gas	inch	1/2	5/8	5/8	5/8	5/8	5/8
Maximum pipe length			ft	65.6	98.4	98.4	98.4	164	164
Maximum elevation			ft	49.2	49.2	49.2	49.2	98.4	98.4



5965 Chemin de la Côte de Liesse
Saint-Laurent, QC, Canada H4T 1C3

Contact: +1 (438) 792-1956

willisac.com