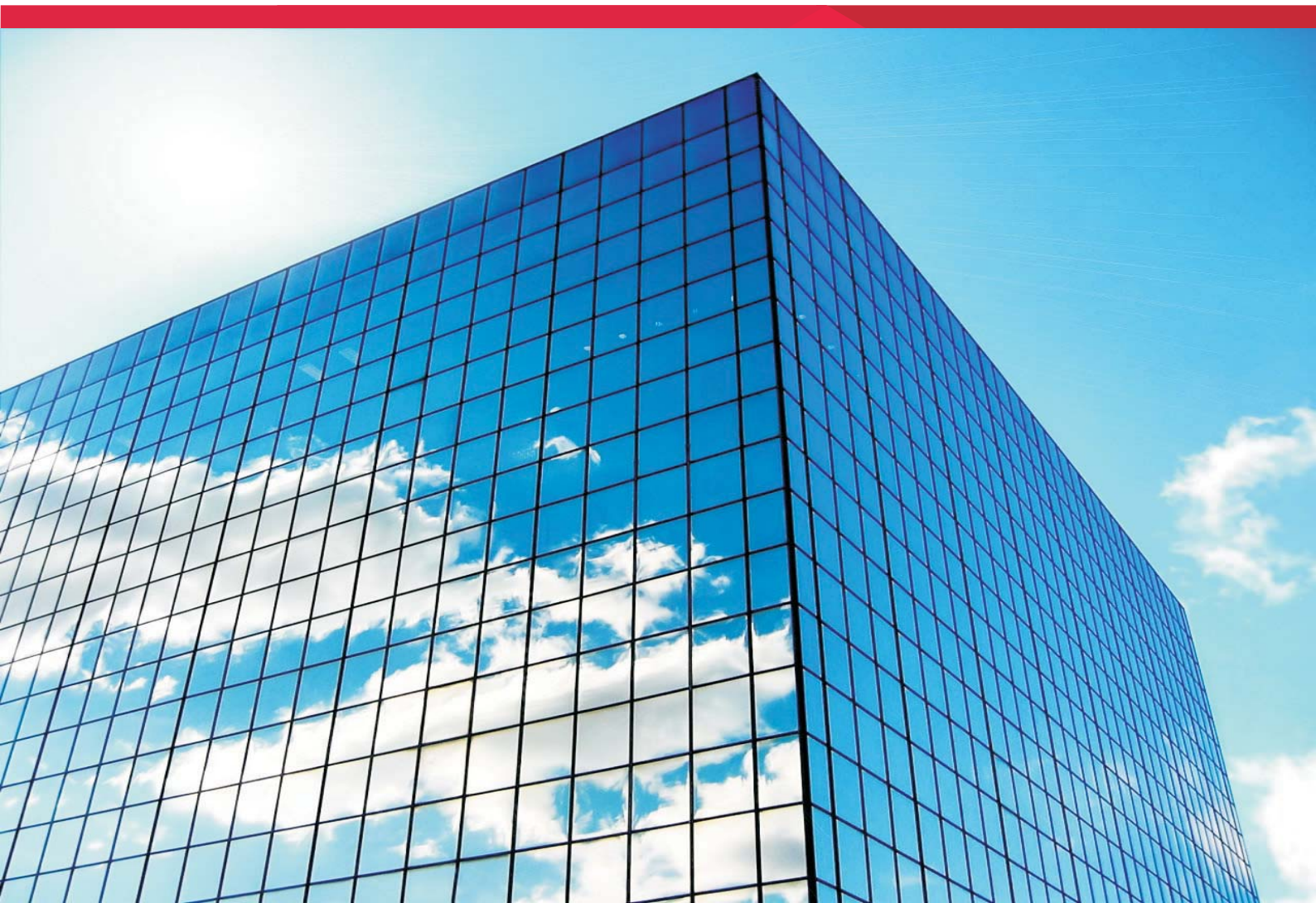




FULL DC INVERTER

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**LS VRF**



## MINI VRF

MINI VRF نسل جدید سیستم های VRF با ظرفیت کم می باشد. این دستگاه کلیه قابلیت های سیستم VRF را داراست، از جمله اینکه با استفاده از تکنولوژی FULL DC INVERTER و توانایی تنظیم دبی سیال مبرد متناسب با بار برودتی مورد نیاز، موجب صرفه جویی قابل توجهی در مصرف انرژی در پروژه های تهویه مطبوع می گردد، به علاوه اینکه این دستگاه قابلیت اتصال به برق تکفاز را داراست.

استفاده از کمپرسورهای FULL DC INVERTER در این دستگاه موجب شده که مصرف برق آن بطور قابل ملاحظه ای کاهش یابد، این دستگاه توانایی اتصال به انواع یونیت های داخلی در ظرفیت های مختلف را دارد که قابلیت مستقل نمودن فضاهای مورد نظر برای مصرف کننده را ایجاد می نماید.

دستگاه LS MINI VRF با قابلیت کنترل هوشمند، به مصرف کننده این امکان را می دهد که اتاق ها و فضاهای مستقل از هم را به بهترین شکل ممکن کنترل نماید.

دیگر مزیت این دستگاه این است که تنها یک یونیت بیرونی می تواند تا ۷ عدد پنل داخلی را تغذیه کند، همین امر موجب می گردد تا فضاهای کمتری از حیاط، بام و با تراس اشغال گردد.



## VRF

بن سیستمهای تهویه مطبوع مدرن هستند که اجازه می دهند

یونیت های داخلی بیشتری به هر یونیت خارجی متصل گردد. ( تا سقف ۶۲ یونیت داخلی برای هر یونیت خارجی )

سیستمهای VRF امکان سرمایه گذاری و گرمایش همزمان را بصورت یکپارچه ، بدون نیاز به موتورخانه و اپراتور دائمی و با ضریب عملکرد (COP) بالا فراهم می کنند . همچنین از دیگر مزایای این سیستمها می توان به امکان لوله کشی در فواصل بالاتر، امکان نصب یونیت های داخلی در انواع مختلف ، کنترل مرکزی سیستم ، بهره گیری از مبرد دوستدار محیط زیست R410a و عدم نیاز به آب اشاره کرد .

به کارگیری تکنولوژی کمپرسور دور متغیر DC INVERTER در این سیستمها موجب بازدهی بالاتر انرژی در ازای مصرف برق تا ۶۰٪

کمتر ( بسته به نیاز و شرایط محیطی ) به نسبت اسپلیت های متداول نسل قبل گردیده و همچنین این مزیت به طور موثری زمان مورد نیاز برای رسیدن به دمای دلخواه را کاهش داده است.



# Main Technologies

Never ending development **LS** technologies will satisfy you're your expectations. Each of this year's new technologies were considered to provide you the most efficient and convenient air conditioners.

## High efficiency full DC inverter compressor

High efficiency and Energy-saving, thanks to the DC inverter compressor and DC fan motor. Inverter systems save energy as continuous operation offers the same capacity with lower power consumption. This benefits all occupants by maintaining even room temperatures, as well as the environment by reducing energy consumption.

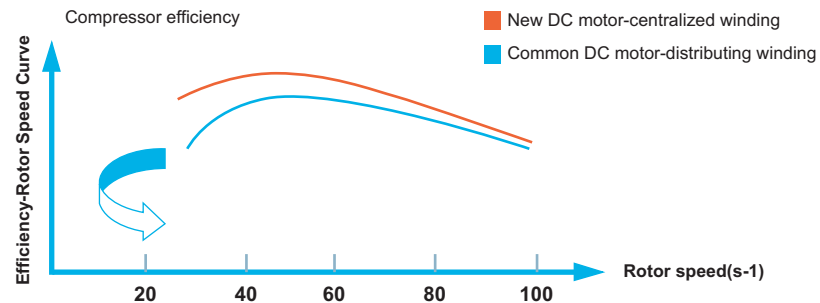
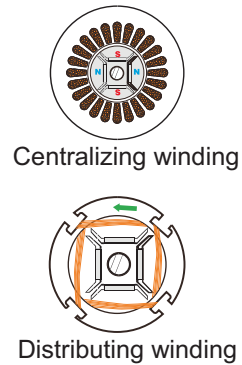


**Compressor (Twin Rotary) structure**

- Highly Efficient DC Motor:**
  - Creative motor core design
  - High density neodymium magnet
  - Concentrated type stator
  - Wider operating frequency range
- Better balance and Extremely Low Vibration:**
  - Twin eccentric cams
  - 2 balance weights
- Highly Stable Moving Parts:**
  - Optimal material matching rollers and vanes
  - Optimize compressor drive technology
  - Highly robust bearings
  - Compact structure



Powerful magnets provide high torque and efficiency and achieve 70% reduction in volume.

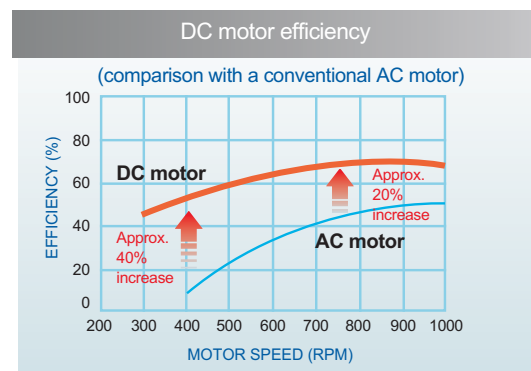


## Low noise full DC fan motor



**Panasonic DC fan motor :**

- Wider fan speed adjustment
- lower noise
- lower power consumption



# Technologies

## Fan grille

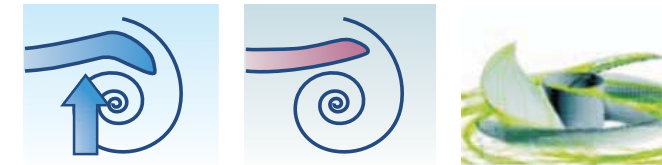
Optimized fan blade shape with new air outlet grille enhanced air flow volume which makes fan performance greatly improved and without increased noise.



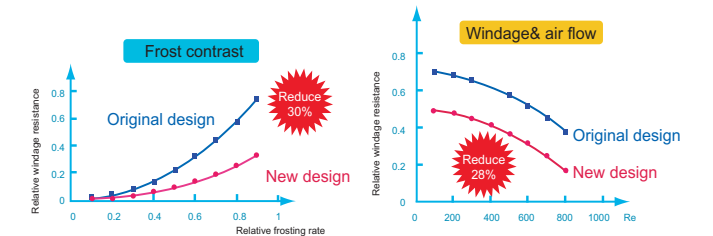
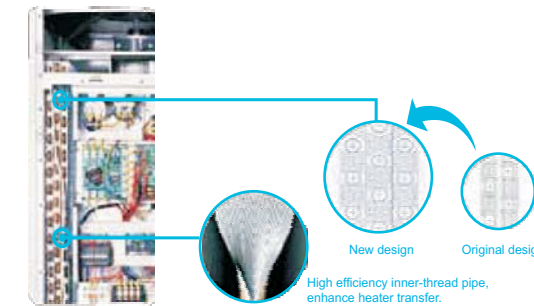
Also, a higher external static pressure has been achieved optionally-from 20 Pa to 81.8 Pa.

## New profile fan blade

New blade with sharp edge and little curve increases the airflow Rate and lowers down vibration and airflow resistance.


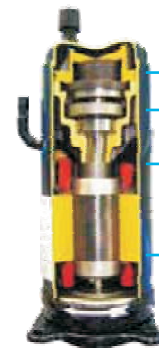


## High performance heat exchanger



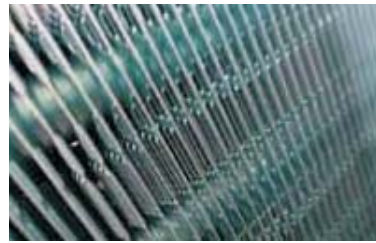
## High efficiency full DC inverter compressor

V4+ series achieves the industry's top class energy efficiency of cooling and heating by utilizing the Brushless Reluctance DC compressor control, DC Fan motor, and improved performance heat exchanger. High efficiency DC inverter compressor saves power consumption by 25%.

- New structure-enhanced mid-frequency performance
- Specially designed scroll profile for R410A
- More compact, weight reduced by 50%
- Advanced permanent magnet DC motor improves the low frequency band performance

### High performance heat exchanger



#### Hydrophilic Blue Fin Coil

The coils are special blue coated to enhance its durability. These special coated layers serve as protection against corrosion from air, water and other corrosive agents. Blue fin coil has 3 times higher resistance against corrosion. This special coating assures longer coil life for years of reliable comfort.

### Improved noise reducing design

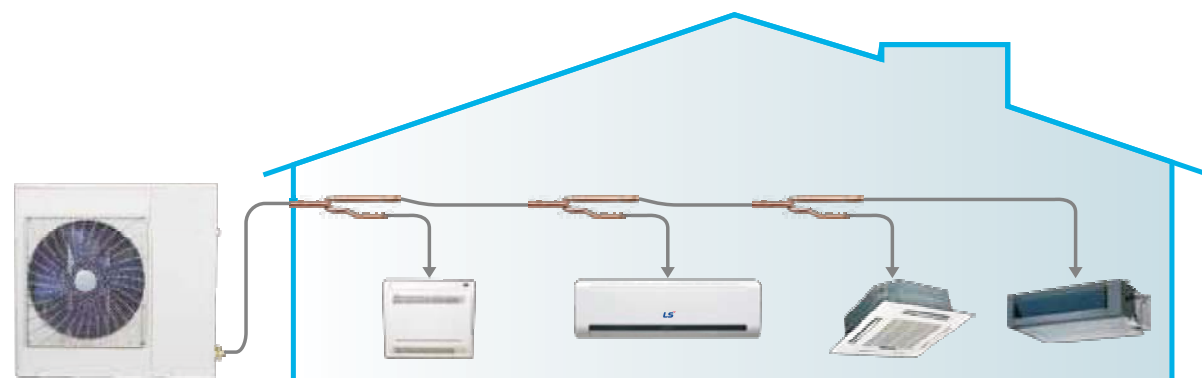
Optimally design the fan shape and Noise-reducing designed discharge air grille increase the air volume and reduce the running noise.



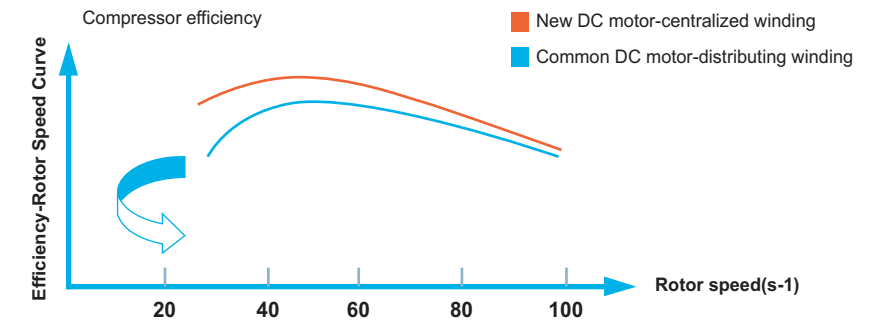
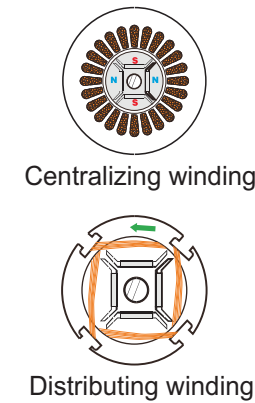
### Application flexibility-various Indoor units

LS Mini VRF with intelligence control that gives you independent zoning control with maximum flexibility. The Advantage of LS Mini VRF is that a single outdoor unit supports up to 7 indoor units. Use your backyard more wisely with much more space available created by less number of outdoor units.

- Max. 6 indoor units for a 12kW outdoor unit installation
- Max. 6 indoor units for a 14kW outdoor unit installation
- Max. 7 indoor units for a 16kW outdoor unit installation

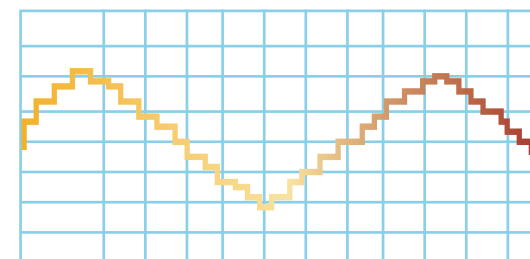


Powerful magnets provide high torque and efficiency and achieve 70% reduction in volume.

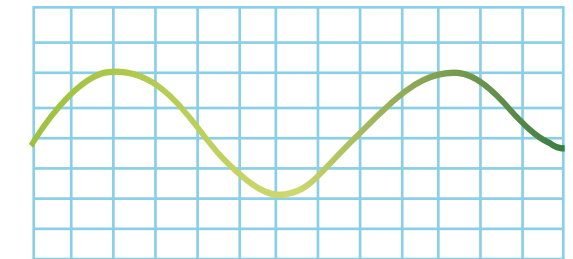


### Smooth 180° sine wave DC Inverter

By adoption of the 180°SineWave Inverter which smooths the rotation of the motor, operation efficiency is improved sharply than traditional sawtooth wave.



Common sawtooth wave



180° Sine Wave DC inverter

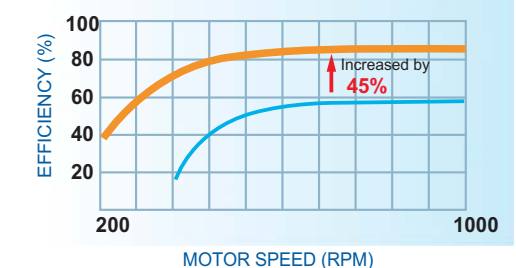
### DC fan motor

According to the running load and pressure, it controls the speed of DC fan to achieve the min. power consumption.

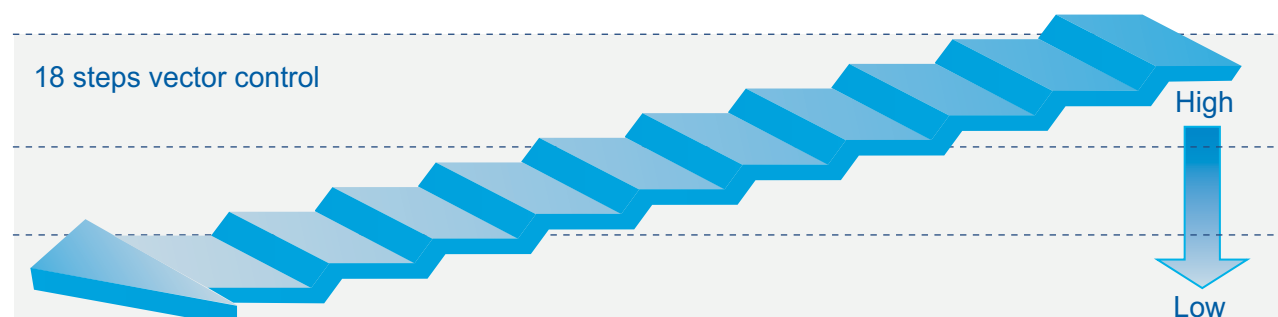
- Used across entire range of models (from 8 to 64 HP).
- Efficiency improvement by up to 45% especially at low speed.



DC motor



18 steps vector control





# LS AIR CONDITIONER

WWW.RADIN-CO.IR

## LS MINI VRF OUTDOOR UNITS LINEUP - Mini VRF Capacity 8kW~16kW(3PH~6PH)

NEW  
Fashion  
Design

R-410A

DC Inverter



Model		LS-V80W/DN1	LS-V100W/DN1	LS-V120W/DN1	LS-V140W/DN1	LS-V160W/DN1
Cooling Capacity	kW	8	10	12	14	15.5
Cooling Input Power	kW	2.05	2.68	3.25	3.95	4.52
Heating Capacity	kW	9	11.5	13.2	15.4	17
Heating Input Power	kW	2.24	2.9	3.47	4.16	4.77
Operating Range-Cooling	°C	(-15~48)	(-15~48)	(-15~48)	(-15~48)	(-15~48)
Operating Range-Heating	°C	(-15~27)	(-15~27)	(-15~27)	(-15~27)	(-15~27)
Power	V-ph-Hz	220~240V-1PH-50Hz	220~240V-1PH-50Hz	220~240V-1PH-50Hz	220~240V-1PH-50Hz	220~240V-1PH-50Hz
Noise Level	dB(A)	57.5	62.1	56.2	56.8	56.8
Airflow	m³/h	3,600	5,100	6,000	6,000	6,000
Vertical Pipe Length	m	20	20	20	20	20
Actual Pipe Length	m	45	45	45	45	45
Equivalent Pipe Length	m	50	50	50	50	50
Total Pipe Length	m	100	100	100	100	100
Max.No.of indoor units		4	5	6	6	7
Connection Ratio	%	45%-130%	45%-130%	45%-130%	45%-130%	45%-130%
Net Weight	kg	62.4	72.4	95	95	95
Gross weight	kg	66.8	81.7	106	106	106
Net Dimension(W×H×D)	mm	975×862×355	1,075×966×396	900×1,327×320	900×1,327×320	900×1,327×320
Packing Dimension(W×H×D)	mm	1,025×910×410	1,105×1,005×435	1,030×1,456×435	1,030×1,456×435	1,030×1,456×435

Model		LS-V120W/DRN1	LS-V140W/DRN1	LS-V160W/DRN1	LS-V120W/DVN1	LS-V140W/DVN1
Cooling Capacity	kW	12	14	16	12	14
Cooling Input Power	kW	3.26	3.98	4.58	3.28	3.95
Heating Capacity	kW	13.2	15.4	17	13.2	15.4
Heating Input Power	kW	3.48	4.20	4.79	3.45	4.18
Operating Range-Cooling	°C	(-15~48)	(-15~48)	(-15~48)	(-15~48)	(-15~48)
Operating Range-Heating	°C	(-15~27)	(-15~27)	(-15~27)	(-15~27)	(-15~27)
Power	V-ph-Hz	380~415V-3PH-50Hz	380~415V-3PH-50Hz	380~415V-3PH-50Hz	208~230V-1PH-60Hz	208~230V-1PH-60Hz
Noise Level	dB(A)	57.5	57	58	58.0	57.3
Airflow	m³/h	6,000	6,000	6,000	6,000	6,000
Vertical Pipe Length	m	20	20	20	20	20
Actual Pipe Length	m	45	45	60	45	45
Equivalent Pipe Length	m	50	50	70	50	50
Total Pipe Length	m	100	100	100	100	100
Max.No.of indoor units		6	6	7	6	6
Connection Ratio	%	45%-130%	45%-130%	45%-130%	45%-130%	45%-130%
Net Weight	kg	95	95	102	95	95
Gross weight	kg	106	106	113	106	106
Net Dimension(W×H×D)	mm	900×1,327×320	900×1,327×320	900×1,327×320	900×1,327×320	900×1,327×320
Packing Dimension(W×H×D)	mm	1,030×1,456×435	1,030×1,456×435	1,030×1,456×435	1,030×1,456×435	1,030×1,456×435

Notes:

- The cooling conditions: indoor temp.: 27 °C DB(80.6 °F), 19 °C WB(66 °F) outdoor temp.: 35 °C DB(95 °F) equivalent pipe length: 5m drop length: 0m.
- The heating conditions: indoor temp.: 20 °C DB(68 °F), 15 °C WB(44.6 °F) outdoor temp.: 7 °C DB(42.8 °F) equivalent pipe length: 5m drop length: 0m.
- Sound level: Anechoic chamber conversion value, measured at a point 3.28ft.(1 m) in front of the unit at a height of \*m (2.95ft.(0.9m) for 80 model, 3.28ft.(1m) for 100 model, 3.94ft.(1.2m) for 120~160 model) above the floor. During actual operation. These values are normally somewhat higher as a result of ambient conditions.
- The above data may be changed without any notice for future improvement on quality and performance.



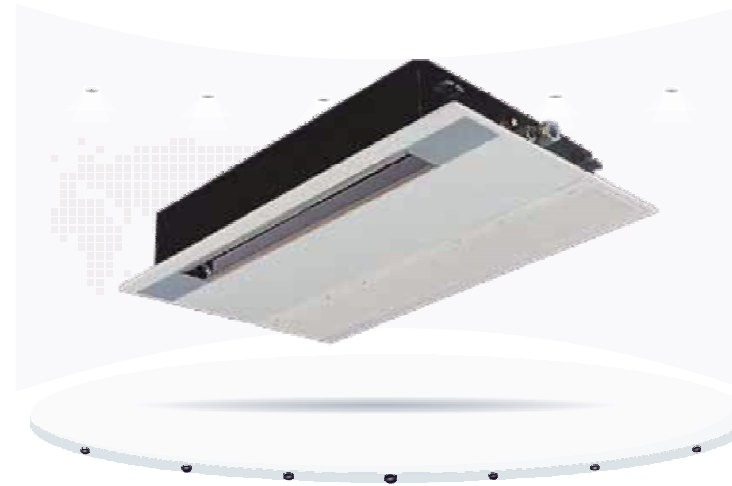
■ Specifications

Model		LS-D28Q1/N1-C	LS-D36Q1/N1-C	LS-D45Q1/N1-C	LS-D56Q1/N1-C	LS-D71Q1/N1-C	
Power supply		1-phase, 220-240V, 50Hz					
Cooling capacity	kW	2.8	3.6	4.5	5.6	7.1	
	kcal/h	2,400	3,100	3,800	4,800	6,100	
	Btu/h	9,500	12,200	15,300	19,100	24,200	
Heating capacity	kW	3.2	4.0	5.0	6.3	8.0	
	kcal/h	2,700	3,400	4,300	5,400	6,800	
	Btu/h	10,900	13,600	17,000	21,500	27,300	
Power input	Cooling	W	53	53	86	86	86
	Heating		53	53	86	86	86
Rated current	Cooling	A	0.4	0.4	0.4	0.4	0.5
	Heating		0.4	0.4	0.4	0.4	0.5
Airflow rate(H/M/L)	m³/h	500/450/410	500/450/410	890/800/750	919/850/760	1,080/980/900	
	CFM	294/265/241	294/265/241	524/470/441	541/500/412	636/577/530	
Sound level	dB(A)	36/34/30	36/34/30	41/38/35	41/38/35	41/38/35	
Refrigerant	Type	R410A					
	Control method	EXV					
Body	Net dim.(WxHxD)	mm	850×235×400	850×235×400	1,200×198×655	1,200×198×655	1,200×198×655
	Gross dim.(WxHxD)		1,080×320×460	1,080×320×460	1,380×265×775	1,380×265×775	1,380×265×775
	Net/gross		kg	23/27	23/27	31/38	31/38
Panel	Net dim.(WxHxD)	mm	1,050×18×470	1,050×18×470	1,420×10×755	1,420×10×755	1,420×10×755
	Gross dim.(WxHxD)		1,100×40×520	1,100×40×520	1,470×50×805	1,470×50×805	1,470×50×805
	Net/gross		kg	4/6	4/6	9/11	9/11
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	ODΦ16	ODΦ16	ODΦ16	ODΦ16	ODΦ16
Drain pump pumphead	mm	750	750	750	750	750	
Standard Controller	-	Wireless remote controller (RM05/BG(T)E-A/E)					

Notes:

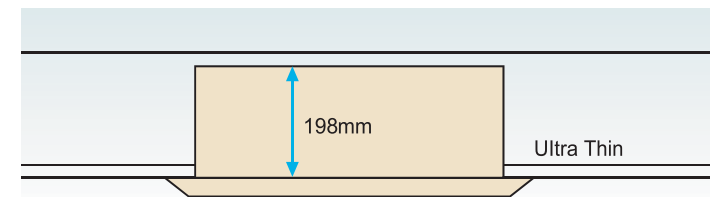
- Nominal cooling capacities are based on the following conditions: return air temp.: 27°cwb, 19°cwb, outdoor temp.: 35°cwb, equivalent ref. Piping: 8m(horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 20°cwb, outdoor temp.: 7°cwb, 6°cwb, equivalent ref. Piping: 8m(horizontal)
- Sound level is measured 1m below the unit.

## One Way Cassette

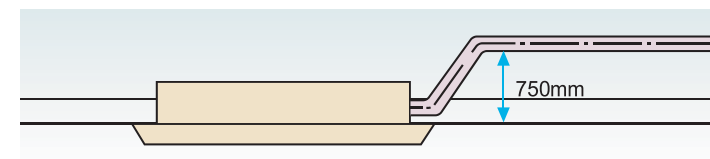


### Thickness 198mm only

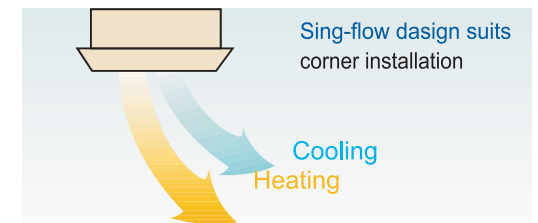
Compact design, ultra slim body with a min. thickness of 198mm only, especially suitable for narrow ceiling places, such as lobby, small-size meeting room, etc.



Standard built-in drain pump with 750mm pumphead and slim body makes the installation free from limitation of story height.



Auto swing mechanism guarantees even distribution of airflow and better balance of room temperature.

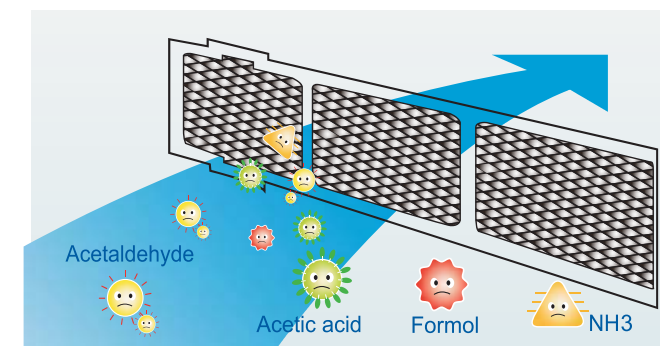


### Fresh air, improved air quality

Reserved fresh air intake port for high quality air supply requirement, create a comfort and healthy environment.



Special enzyme sterilization and filtering technology can filter the bacteria, smog, pollen, etc. Provide plenty clean, healthy and natural air supply.



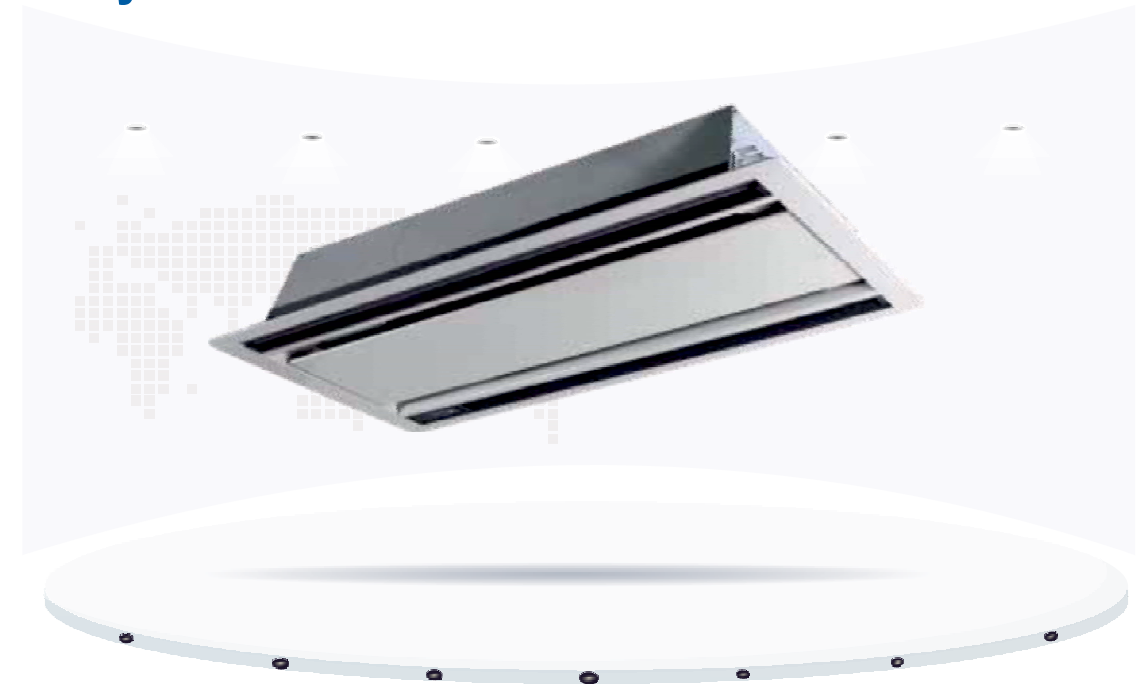
Specifications

Model		LS-D22Q2/N1	LS-D28Q2/N1	LS-D36Q2/N1	LS-D45Q2/N1	LS-D56Q2/N1	LS-D71Q2/N1	
Power supply		1-phase, 220-240V, 50Hz						
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	7.1	
	kcal/h	1,900	2,400	3,100	3,800	4,800	6,100	
	Btu/h	7,500	9,500	12,200	15,300	19,100	24,200	
Heating capacity	kW	2.6	3.2	4.0	5.0	6.3	8.0	
	kcal/h	2,200	2,700	3,400	4,300	5,400	6,800	
	Btu/h	8,900	10,900	13,600	17,000	21,500	27,300	
Power input	Cooling	W	57	57	60	92	108	154
	Heating		57	57	60	92	108	154
Rated current	Cooling	A	0.35	0.45	0.45	0.55	0.55	0.75
	Heating		0.35	0.45	0.45	0.55	0.55	0.75
Airflow rate(H/M/L)	m³/h	654/530/410	654/530/410	725/591/458	850/670/550	980/800/670	1,200/1,000/770	
	CFM	385/312/241	385/312/241	427/348/270	500/394/324	577/471/394	706/589/453	
Sound level	dB(A)	33/29/24	36/32/29	36/32/29	39/35/30	39/35/30	44/40/34	
Refrigerant	Type	R410A						
	Control method	EXV						
Body	Net dim.(WxHxD)	mm	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592	1,172×300×592
	Gross dim.(WxHxD)		1,355×400×675	1,355×400×675	1,355×400×675	1,430×90×680	1,430×90×680	1,430×90×680
	Net/gross		kg	34/42.5	34/42.5	34/42.5	36.5/45	36.5/45
Panel	Net dim.(WxHxD)	mm	1,430×90×680	1,430×90×680	1,430×90×680	1,355×400×675	1,355×400×675	1,355×400×675
	Gross dim.(WxHxD)		1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765	1,525×130×765
	Net/gross		kg	10.5/15	10.5/15	10.5/15	10.5/15	10.5/15
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	ID Φ25, OD Φ32	ID Φ25, OD Φ32	ID Φ25, OD Φ32	ID Φ25, OD Φ32	ID Φ25, OD Φ32	ID Φ25, OD Φ32
Drain pump pumphead	mm	750	750	750	750	750	750	
Standard Controller	-	Wireless remote controller (RM05/BG(T)-A)						

Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, outdoor temp.: 35°CDB, equivalent ref. Piping: 8m(horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, equivalent ref. Piping: 8m(horizontal)
- Sound level is measured 1.4m below the unit.

## Two Way Cassette

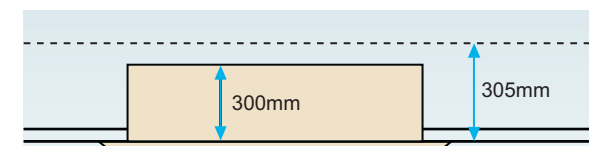


### Quiet operation

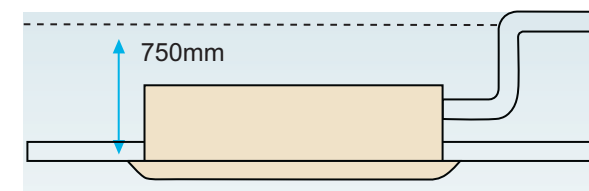
Optimized airflow duct with low resistance makes noise level get reduced greatly, min. 24 dB(A).

### Stylish design and slim body

Thanks to the stylish appearance and slim body, the unit can be harmonious with the room decoration and ambient. Slim body with only 300 mm height needs small suspended ceiling space. Installation is free of story height limitation which makes the decoration much more flexible.



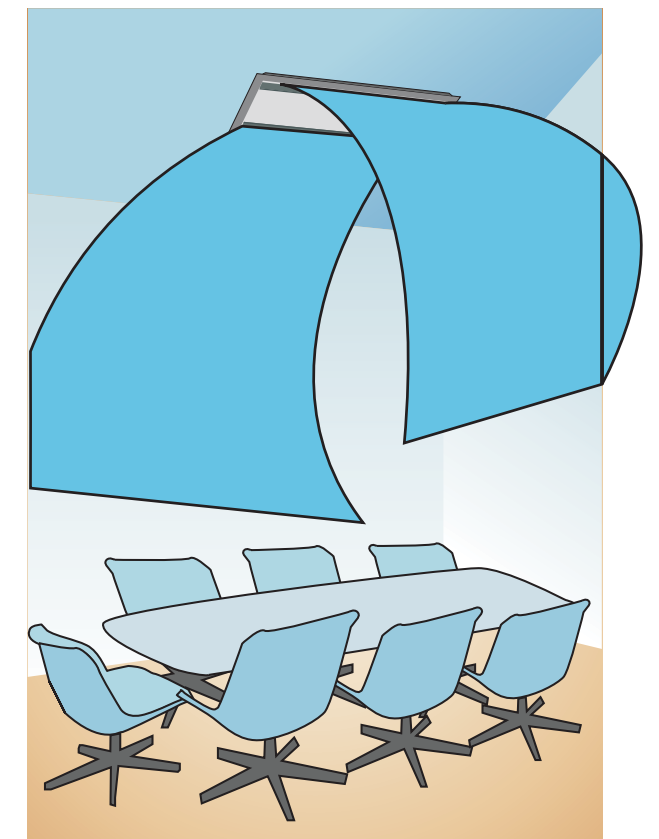
Standard built-in drain pump with 750mm pumphead (higher pumphead can be customized).



Flat-type suction grille design makes maintenance work very easy.

### High airflow

High airflow for high ceiling application guarantees equal comfort of large space. It makes every corner of the room get even distribution of airflow and temperature.





Specifications

Model		LS-D22Q4/N1-A3	LS-D28Q4/N1-A3	LS-D36Q4/N1-A3	LS-D45Q4/N1-A3	
Power supply		1-phase, 220-240V, 50Hz				
Cooling capacity	kW	2.2	2.8	3.6	4.5	
	kcal/h	1,900	2,400	3,100	3,800	
	Btu/h	7,500	9,500	12,200	15,300	
Heating capacity	kW	2.4	3.2	4.0	5.0	
	kcal/h	2,000	2,700	3,400	4,300	
	Btu/h	8,900	10,900	13,600	17,000	
Power input	Cooling	W	51	52	58	58
	Heating		43	44	50	51
Rated current	Cooling	A	0.175	0.175	0.21	0.21
	Heating		0.175	0.175	0.21	0.21
Airflow rate(H/M/L)	m³/h	522/414/313	520/415/320	610/521/409	610/521/409	
	CFM	307/244/184	306/200/188	359/306/241	359/306/241	
Sound level	dB(A)	35.8/33.4/23.4	35.8/33.4/23.4	41.5/35.6/28.8	41.5/35.6/28.8	
Refrigerant	Type	R410A				
	Control method	EXV				
Body	Net dim.(WxHxD)	mm	630×265×575	630×265×575	630×265×575	630×265×575
	Gross dim.(WxHxD)		675×285×675	675×285×675	675×285×675	675×285×675
	Net/gross		kg	17.5/22	17.5/22	19/23.5
Panel	Net dim.(WxHxD)	mm	647×50×647	647×50×647	647×50×647	647×50×647
	Gross dim.(WxHxD)		705×113×705	705×113×705	705×113×705	705×113×705
	Net/gross		kg	3/5	3/5	3/5
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Drain piping	mm	ID Φ20 ODΦ25	ID Φ20 ODΦ25	ID Φ20 ODΦ25	ID Φ20 ODΦ25
Drain pump pumphead	mm	500	500	500	500	
Standard Controller	-	Wireless remote controller (RM05/BG(T)E-A)				

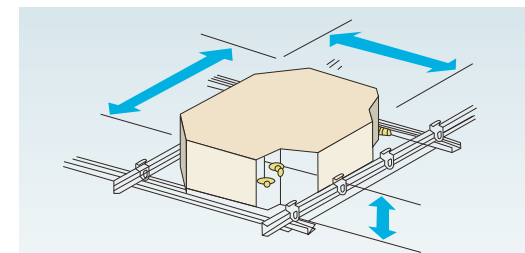
Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, outdoor temp.: 35°CDB, equivalent ref. Piping: 8m(horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, equivalent ref. Piping: 8m(horizontal)
- Sound level is measured 1.4m below the unit.

## Compact Four Way Cassette

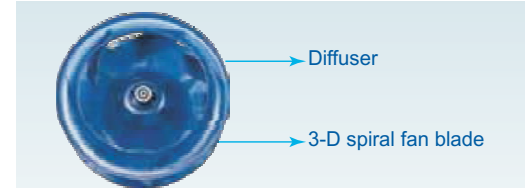


### Compact design, easy installation and maintenance



Extremely compact casing (570mm in width and depth) makes it perfectly match with the ambient decoration. Little space is required for installation into a shallow ceiling. Due to its compact body and light weight, all models can be installed without a hoist.

### Quiet operation, soft air supply



Streamline plate ensures quietness  
Advanced 3-D spiral fan design reduces the air resistance and operation noise.

### Uniform air flow of four ways

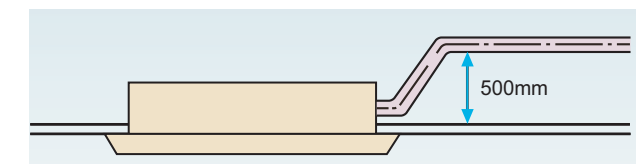


The four air discharge port provides strong circulating air flow to cool or heat every corner of the room and realizes even temperature distribution; by choosing high airflow mode, high ceiling application over 3m can get equal comfort.

### 360° Airflow outlet



360° air outlet provides strong circulating air flow to cool or heat every corner of the room and realizes even temperature distribution



Drain up pump with 500mm pumphead fitted as standard, max. up to 600mm head.

Specifications

Model		LS-D28Q4/N1-D	LS-D36Q4/N1-D	LS-D45Q4/N1-D	LS-D56Q4/N1-D	LS-D71Q4/N1-D
Power supply		1-phase, 220-240V, 50Hz				
Cooling capacity	kW	2.8	3.6	4.5	5.6	7.1
	kcal/h	2,400	3,100	3,800	4,800	6,100
	Btu/h	9,500	12,200	15,300	19,100	24,200
Heating capacity	kW	3.2	4.0	5.0	6.3	8.0
	kcal/h	2,700	3,400	4,300	5,400	6,800
	Btu/h	10,900	13,600	17,000	21,500	27,300
Power input	Cooling	80	80	75	75	82
	Heating	80	80	75	75	82
Rated current	Cooling	0.4	0.4	0.4	0.4	0.5
	Heating	0.4	0.4	0.4	0.4	0.5
Airflow rate(H/M/L)	m³/h	847/766/640	847/766/640	864/755/658	864/755/658	1,157/955/749
	CFM	498/450/376	498/450/376	508/444/387	508/444/387	680/562/440
Sound level	dB(A)	42/38/35	42/38/35	42/38/35	42/38/35	45/42/39
Refrigerant	Type	R410A				
	Control method	EXV				
Body	Net dim.(WxHxD)	840x230x840	840x230x840	840x230x840	840x230x840	840x230x840
	Gross dim.(WxHxD)	955X247X955	955X247X955	955X247X955	955X247X955	955X247X955
	Net/gross	24/28	24/28	26/30	26/30	26/30
Panel	Net dim.(WxHxD)	950x46x950	950x46x950	950x46x950	950x46x950	950x46x950
	Gross dim.(WxHxD)	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000
	Net/gross	6/8	6/8	6/8	6/8	6/8
Piping connections	L(flare)	mm	φ6.35	φ6.35	φ6.35	φ9.52
	G(flare)	mm	φ12.7	φ12.7	φ12.7	φ15.9
	Drain piping	mm	IDφ28.5 ODφ32	IDφ28.5 ODφ32	IDφ28.5 ODφ32	IDφ28.5 ODφ32
Drain pump pumphead	mm	750	750	750	750	750
Standard Controller	-	Wireless remote controller (R05/BG(T)E-A)				

Model		LS-D80Q4/N1-D	LS-D90Q4/N1-D	LS-D100Q4/N1-D	LS-D112Q4/N1-D	LS-D140Q4/N1-D
Power supply		1-phase, 220-240V, 50Hz				
Cooling capacity	kW	8.0	9.0	10.0	11.2	14.0
	kcal/h	6,800	7,700	8,600	9,600	12,000
	Btu/h	27,300	30,700	34,100	38,200	47,800
Heating capacity	kW	9.0	10.0	11.0	12.5	15.0
	kcal/h	7,700	8,600	9,400	10,700	12,900
	Btu/h	30,700	34,100	37,500	42,600	51,200
Power input	Cooling	97	160	160	160	170
	Heating	97	160	160	160	170
Rated current	Cooling	0.5	0.7	0.7	0.7	0.8
	Heating	0.5	0.7	0.7	0.7	0.8
Airflow rate(H/M/L)	m³/h	1,236/973/729	1,540/1,300/1,120	1,540/1,300/1,120	1,540/1,300/1,120	1,800/1,500/1,280
	CFM	727/572/429	906/765/659	906/765/659	906/765/659	1059/883/753
Sound level	dB(A)	45/42/39	48/45/43	48/45/43	48/45/43	50/47/44
Refrigerant	Type	R410A				
	Control method	EXV				
Body	Net dim.(WxHxD)	840x230x840	840x300x840	840x300x840	840x300x840	840x300x840
	Gross dim.(WxHxD)	955X247X955	955X317X955	955X317X955	955X317X955	955X317X955
	Net/gross	26/30	32/37	32/37	32/37	32/37
Panel	Net dim.(WxHxD)	950x46x950	950x46x950	950x46x950	950x46x950	950x46x950
	Gross dim.(WxHxD)	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000	1,000x60x1,000
	Net/gross	6/8	6/8	6/8	6/8	6/8
Piping connections	L(flare)	mm	φ9.52	φ9.52	φ9.52	φ9.52
	G(flare)	mm	φ15.9	φ15.9	φ15.9	φ15.9
	Drain piping	mm	IDφ28.5 ODφ32	IDφ28.5 ODφ32	IDφ28.5 ODφ32	IDφ28.5 ODφ32
Drain pump pumphead	mm	750	750	750	750	750
Standard Controller	-	Wireless remote controller (RM05/BG(T)E-A)				

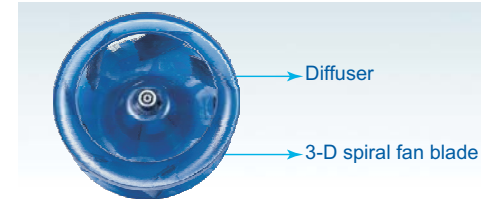
Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, outdoor temp.: 35°CDB, equivalent ref. Piping: 8m(horizontal)
- Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, equivalent ref. Piping: 8m(horizontal)
- Sound level is measured 1.4m below the unit.

## Four Way Cassette

### Quiet operation, soft air supply

- Streamline plate ensures quietness
- Advanced 3-D spiral fan design reduces the air resistance and operation noise.



### Uniform air flow of four ways

The four air discharge port provides strong circulating air flow to cool or heat every corner of the room and realizes even temperature distribution; by choosing high airflow mode, high ceiling application over 3m can get equal comfort.

### Four kinds of colors panel available



(White) Standard

(Black) Optional



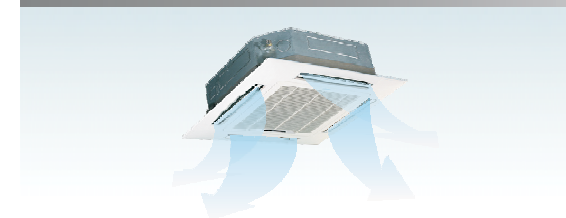
(Gray) Optional



(Blue) Optional

\*The optional can be customized if it is more than 500 units.

### Four-way Airflow(4-stage fan speed)

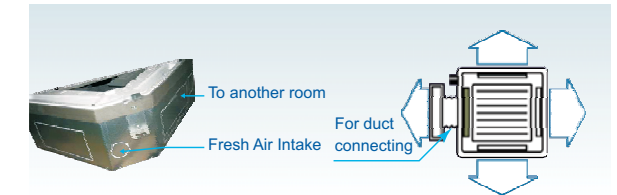


### Easy trouble shooting

By adding digital tube displayer on the display board, the Error Codes can be displayed directly on it which helps to find and shoot the trouble.

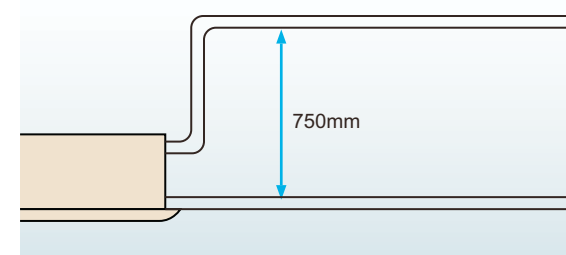


### Reserved multi-function ports

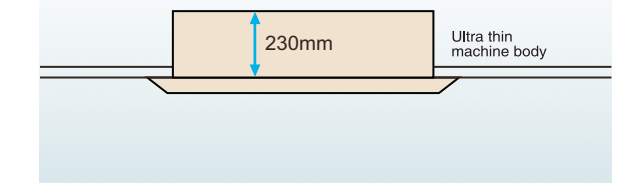


### High lift pump

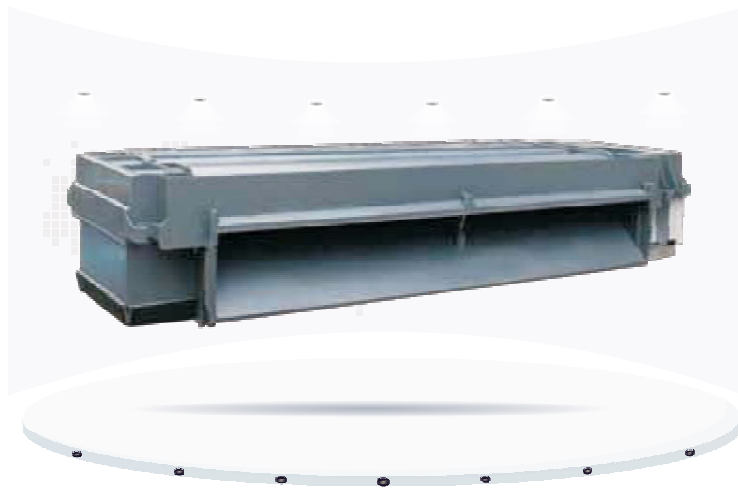
Drain pump can take up the condenser water to 750mm which helps to make easier installation of the drain piping system.



Ultra-thin machine body for easy installation and maintenance, min. 230mm in height.



## Low Static Pressure Duct



### Wide capacity range

The capacity range from 1.8KW to 5.6KW, six model.



### Low sound level



Utilize the cross blow fan, the lowest noise is 21dB (A).  
Excellent choice for hotels and other sound sensitive places.

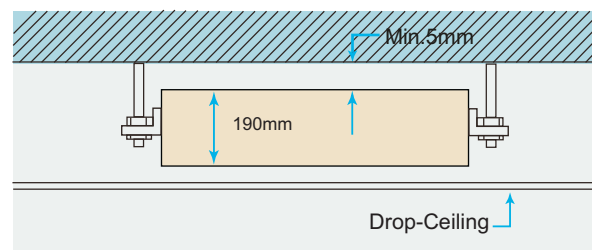
### More Smooth airflow with less turbulence

Thanks to the multiple-blade fan rotor and the air guide design, the airflow is getting smoother and more comfortable

### Convenient installation

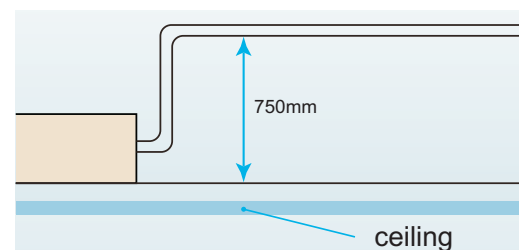
The EXV is fixed beside of the indoor unit  
Suction chamber is included as stand.ard equipment

### Slim, lightweight and compact design



Uniform 190mm in height, compact design for easy locate where space over ceiling is limited,  
The whole body adopts fireproof plastic material ,  
the minimum weight is 11.5kg

### Options



With a drain-up pump as an optional accessory (750 mm pumphead).

Model		LS-D18T3/N1-B	LS-D22T3/N1-B	LS-D28T3/N1-B	LS-D36T3/N1-B	LS-D45T3/N1-B	LS-D56T3/N1-B	
Power Supply		220~240V-1Ph-50Hz						
Capacity	Cooling	kW	1.8	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,547	1,891	2,407	3,095	3,869	4,815
		btu/h	6,100	7,500	9,500	12,200	15,300	19,100
	Heating	kW	2.2	2.6	3.2	4.0	5.0	6.3
kcal/h		1,891	2,235	2,751	3,439	4,299	5,416	
btu/h		7,500	8,900	10,900	13,600	17,000	21,500	
Power (Cooling)	Input	W	40	40	40	40	40	56
	Rated Current	A	0.17	0.17	0.17	0.17	0.17	0.24
Power (Heating)	Input	W	40	40	40	40	40	56
	Rated Current	A	0.17	0.17	0.17	0.17	0.24	0.24
Indoor air flow (H/M/L)	m³/h	446/323/250	446/323/250	527/359/267	527/359/267	767/634/512	767/634/512	
	cfm	263/190/147	263/190/147	310/211/157	310/211/157	451/373/301	451/373/301	
ESP (external static pressure)	Pa	5	5	5	5	5	5	
Sound Pressure (Hi/Mid/Lo)	dB(A)	33/27/21	34/29/21	36/34/30	36/34/30	37/35/31	37/35/31	
Refrigerant	Type	R410A						
	Control Method	EXV						
Net dimension	W×H×D	mm	850×190×405	850×190×405	850×190×405	850×190×405	1,030×190×430	1,030×190×430
Packing dimension	W×H×D	mm	903×277×445	903×277×445	903×277×445	903×277×445	1,084×277×472	1,084×277×472
Net/Gross Weight		kg	11.5/14.5	11.5/14.5	11.5/14.5	11.5/14.5	14 /17.5	14/17.5
Piping Connections	Liquid (Flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52
	Gas (Flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Drain piping	mm	IDΦ15 ODΦ20	IDΦ15 ODΦ20	IDΦ15 ODΦ20	IDΦ15 ODΦ20	IDΦ15 ODΦ20	IDΦ15 ODΦ20
Drain pump pumphead	mm	750						
Standard Controller		Wireless remote controller (RM05/BG(T)E-A)						

**Notes:**

- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
  - Sound level is measured 1.4m below the air out-let.
- \* external static pressure are based on high speed indoor air flow.  
\* Specifications are subject to change without prior notice for product improvement.



Model			LS-D22T2/N1-BA5	LS-D28T2/N1-BA5	LS-D36T2/N1-BA5	LS-D45T2/N1-BA5	LS-D56T2/N1-BA5
Power Supply			220 ~ 240V-1Ph-50Hz				
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6
		kcal/h	1,891	2,407	3,095	3,869	4,815
		btu/h	7,500	9,500	12,200	15,300	19,100
	Heating	kW	2.6	3.2	4	5	6.3
		kcal/h	2,235	2,751	3,439	4,299	5,416
		btu/h	8,900	10,900	13,600	17,000	21,500
Power (Cooling)	Input	W	59	57	61	92	92
	Rated Current	A	0.28	0.28	0.28	0.5	0.5
Power (Heating)	Input	W	59	57	61	92	92
	Rated Current	A	0.28	0.28	0.28	0.5	0.5
Indoor air flow (H/M/L)	m³/h		570/530/410/320	570/530/410/320	570/530/410/320	958/850/667/583	958/850/667/583
	cfm		335/312/241/188	335/312/241/188	335/312/241/188	563/500/392/343	563/500/392/343
ESP (external static pressure)	Pa		10(10~30)	10(10~30)	10(10~30)	10(10~30)	10(10~30)
Sound Pressure (Hi/Mid/Lo)	dB(A)		38/35/32	38/35/32	40/38/36	41/38.9/36	41/38.9/36
Refrigerant	Type		R410A				
	Control Method		EXV				
Net dimension	W×H×D	mm	700x210x570	700x210x570	700x210x570	920x210x570	920x210x570
Packing dimension	W×H×D	mm	915x290x655	915x290x655	915x290x655	1,135x290x655	1,135x290x655
Net/Gross Weight		kg	21.5/26	21.5/26	22/27	27/32	27/32
Piping Connections	Liquid (Flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
	Gas (Flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ16
	Drain piping	mm	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32
Drain pump pumphead	mm		750				
Standard Controller			Wired controller KJR-12B/DP(T)-E/KJR-10B/DP(T)-E(6 meters connection wire)				

Model			LS-D71T2/N1-BA5	LS-D80T2/N1-BA5	LS-D90T2/N1-BA5	LS-D112T2/N1-BA5	LS-D140T2/N1-BA5
Power Supply			220 ~ 240V-1Ph-50Hz				
Capacity	Cooling	kW	7.1	8	9	11.2	14
		kcal/h	6,105	6,879	7,739	9,630	12,037
		btu/h	24,200	27,300	30,700	38,200	47,800
	Heating	kW	8	9	10	12.5	15.5
		kcal/h	6,879	7,739	8,598	10,748	13,327
		btu/h	27,300	30,700	34,100	42,600	52,900
Power (Cooling)	Input	W	149	198	200	313	274
	Rated Current	A	0.7	1	1	1.8	1.55
Power (Heating)	Input	W	149	198	200	313	274
	Rated Current	A	0.7	1	1	1.8	1.55
Indoor air flow (H/M/L)	m³/h		1,207/1,050/905/821	(1,400)1,226/1,018/861	1,400/1,230/1,019/859	(1,750)1,752/1,552/1,388	1,789/1,918/1,539/1,250
	cfm		710/618/532/483	917/795/687/608	917/795/687/608	1,214/1,059/921/824	1,258/1,118/967/827
ESP (external static pressure)	Pa		10(10~30)	20(10~50)	20(10~50)	40(10~80)	40(10~100)
Sound Pressure (Hi/Mid/Lo)	dB(A)		43.4/40/36	45.4/39.8/37	45.4/39.8/37	48.0/41.9/38	47.7/43.2/39.0
Refrigerant	Type		R410A				
	Control Method		EXV				
Net dimension	W×H×D	mm	920X210X570	1,140X270X710	1,140X270X710	1,140X270X710	1,200X300X800
Packing dimension	W×H×D	mm	1,135X350X655	1,355X350X795	1,355X350X795	1,355X350X795	1,385X375X920
Net/Gross Weight		kg	30/34	38/46.5	40/48	40/48	49/58
Piping Connections	Liquid (Flare)	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas (Flare)	mm	Φ16	Φ16	Φ16	Φ16	Φ16
	Drain piping	mm	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32
Drain pump pumphead	mm		750				
Standard Controller			Wired controller KJR-12B/DP(T)-E/KJR-10B/DP(T)-E(6 meters connection wire)				

Notes:

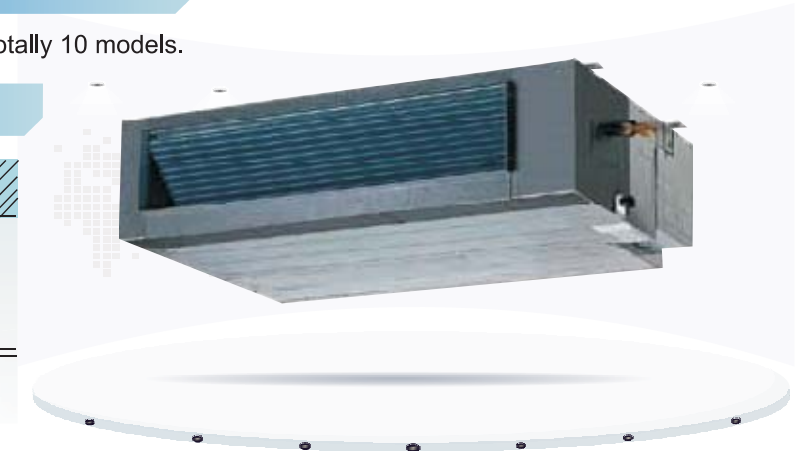
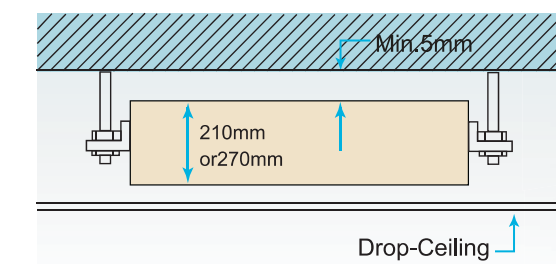
- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.:35°CDB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
  - Sound level is measured 1.4m below the air out-let.
- \* external static pressure are based on high speed indoor air flow.  
 \* Specifications are subject to change without prior notice for product improvement.

## Concealed Duct Unit (A5 Type)

### Wide capacity range

The capacity ranges from 2.2KW to 14.0KW, totally 10 models.

### Compact size



Only 210 mm (56~22 models) or 270mm (71 to 140 model) in height.

The EXV is built-in design of the indoor unit, main body without an extra throttle kit box.

### Two external static pressure settings for added flexibility

Four speed fan motor (Super high speed as an optional)

Change the wiring connection from 'SH' to 'Hi' to change the ESP.

### Convenient installation

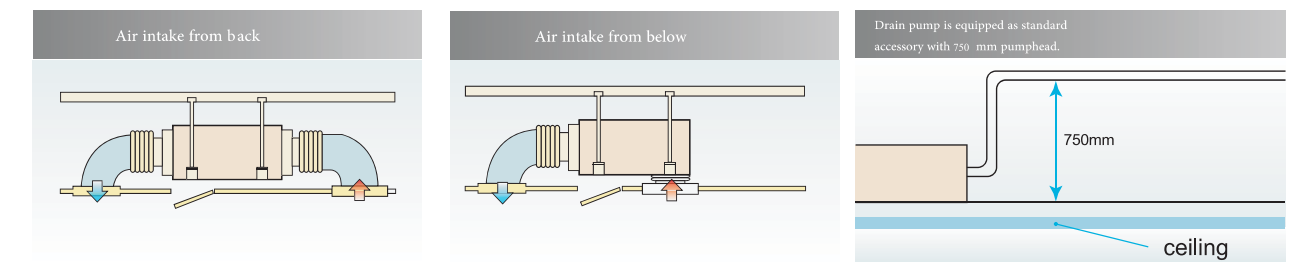
The EXV is fixed inside of the indoor unit

Standard filter placed in an aluminum frame, which is removable downward from bottom.

Suction chamber is included as standard equipment

Fresh air hole, air inlet/outlet flange are standard for easy duct connection.

Air inlet from back is standard and from bottom as optional with the same connectable duct.



### Flexible control and convenient for maintenance

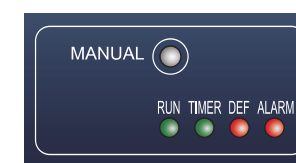
Standard Wired remote controller KJR12-B(FOLLOW ME)/KJR10-B.

The display board is connected with the E-box in factory, easier trouble-shooting by LED display.

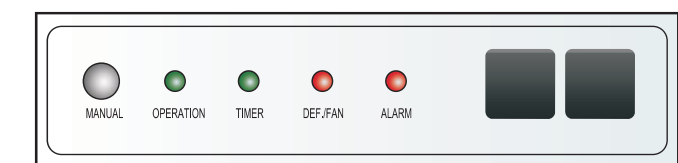
The Electrical control box can be removed 1m away from the unit, easy to access when needs maintenance.

(Should be required by client in advance and done by Midea CAC in factory).

Standard functional port such as Remote On/Off Dry contact switch and Alarm signal output (220V).



56~22 model



140~71 model

Model		LS-D71T1/N1-B	LS-D80T1/N1-B	LS-D90T1/N1-B	LS-D112T1/N1-B	LS-D140T1/N1-B	LS-D160T1/N1-B	
Power Supply		220 ~ 240V-1Ph-50Hz						
Capacity	Cooling	kW	7.1	8	9	11.2	14	16
		kcal/h	6,105	6,879	7,739	9,630	12,037	13,757
		btu/h	24,200	27,300	30,700	38,200	47,800	54,600
	Heating	kW	8	9	10	12.5	16	18
		kcal/h	6,879	7,739	8,598	10,748	13,757	15,477
		btu/h	27,300	30,700	34,100	42,600	54,600	61,400
Power (Cooling)	Input	W	263	263	423	524	627	832
	Rated Current	A	1.1	1.1	1.8	2.3	2.7	3.6
Power (Heating)	Input	W	263	263	423	524	627	832
	Rated Current	A	1.1	1.1	1.8	2.3	2.7	3.6
Indoor air flow (H/M/L)		m <sup>3</sup> /h	1,510/1,399/1,236	1,500/1,396/1,221	1,936/1,721/1,511	2,117/1,950/1,644	2,988/2,670/2,229	3,890/3,200/2,700
		cfm	889/823/727	883/822/719	1,139/748/889	1,246/1,147/968	1,758/1,572/1312	2,290/1,883/1,589
ESP (external static pressure)		Pa	40(30~ 196)	40(30~ 196)	40(30~ 196)	50(30~ 196)	50(30~ 196)	50(30~ 196)
Sound Pressure (Hi/Mid/Lo)		dB(A)	48/46/44	48/46/44.5	52/49/47	52/49/47	53/50/48	54/52/50
Refrigerant	Type	R410A						
	Control Method	EXV						
Net dimension	W×H×D	mm	952×420×690	952×420×690	952×420×690	952×420×690	1,200×400×600	1,200×400×600
Packing dimension	W×H×D	mm	1,102×450×768	1,102×450×768	1,102×450×768	1,102×450×768	1,430×450×768	1,430×450×768
Net/Gross Weight		kg	45/50	45/50	46.5/52.4	50.6/56	68/70	70/77.5
Piping Connections	Liquid (Flare)	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas (Flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32
Drain pump pumphead		mm	750					
Standard Controller			Wire controller KJR-10B/DP(T)-E (6m wire is standard)			Wire controller KJR-12B/DP(T)-E (6m wire is standard)		

Model		LS-D200T1/N1-B	LS-D250T1/N1-B	LS-D280T1/N1-B	
Power Supply		220 ~ 240V-1Ph-50Hz			
Capacity	Cooling	kW	20	25	28
		kcal/h	17,197	21,496	24,075
		btu/h	68,200	85,300	95,500
	Heating	kW	22.5	26	31.5
		kcal/h	19,346	22,355	27,084
		btu/h	76,800	88,700	107,500
Power (Cooling)	Input	W	1516	1516	1516
	Rated Current	A	6.6	6.6	6.6
Power (Heating)	Input	W	1516	1516	1516
	Rated Current	A	6.6	6.6	6.6
Indoor air flow (H/M/L)		m <sup>3</sup> /h	4,268/3,780/3,200	4,280/3,820/3,200	4,400/3,708/3,200
		cfm	2,512/2,225/1,883	2,519/2,248/1,833	2,590/2,182/1,883
ESP (external static pressure)		Pa	140(50~250)	140(50~250)	160(50~250)
Sound Pressure (Hi/Mid/Lo)		dB(A)	59/55/52	59/55/52	59/55/52
Refrigerant	Type	R410A			
	Control Method	EXV			
Net dimension	W×H×D	mm	1,425×500×928	1,425×500×928	1,425×500×928
Packing dimension	W×H×D	mm	1,509×522×964	1,509×522×964	1,509×522×964
Net/Gross Weight		kg	115/129	115/129	115/129
Piping Connections	Liquid (Flare)	mm	Φ9.52 2	Φ9.52 2	Φ9.52 2
	Gas (Flare)	mm	Φ15.9 2	Φ15.9 2	Φ15.9 2
	Drain piping	mm	IDΦ25 ODΦ32	IDΦ25 ODΦ32	IDΦ25 ODΦ32
Drain pump pumphead		mm	750		
Standard Controller			Wire controller KJR-12B/DP(T)-E (6m wire is standard)		

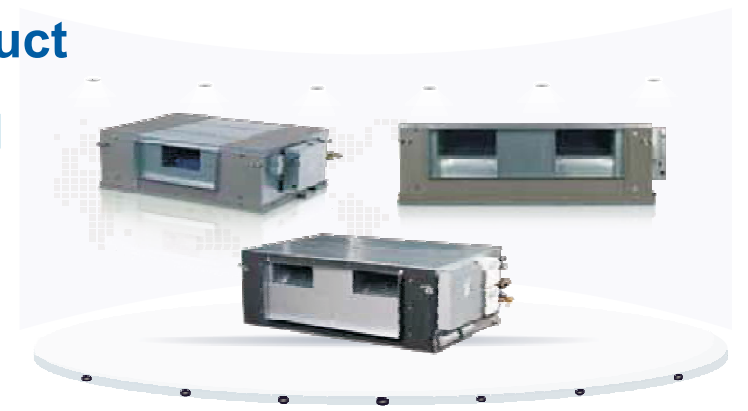
Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.: 35°CDB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
  - Sound level is measured 1.4m below the air out-let.
- \* External static pressure are based on high speed indoor air flow.  
 \* Specifications are subject to change without prior notice for product improvement.

## High Static Pressure Duct

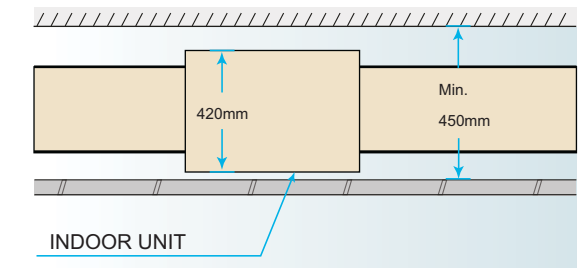
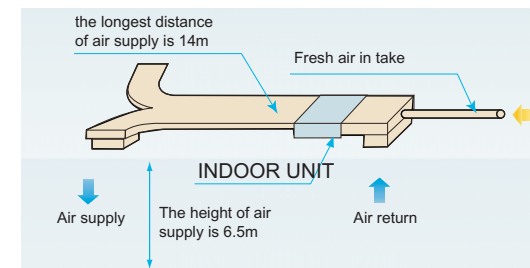
### Wide capacity range

The capacity ranges from 7.1KW to 28.0KW, totally nine models.



### Flexible duct design

Four speed fan motor (medium high speed as an option only for 71~160 model)  
 External static pressure can be up to 196Pa (71~160 models) or 250Pa (200~280 models).



The max distance of air supply is about 14m while the height of air supply is about 6.5m.  
 With 420mm (71~160 model) thickness body, the minimum distance above the ceiling is 450mm.

### Added flexibility with four speed fan

Just exchange the wiring connection of 'MH' and 'Me'. (for 71~160 model)

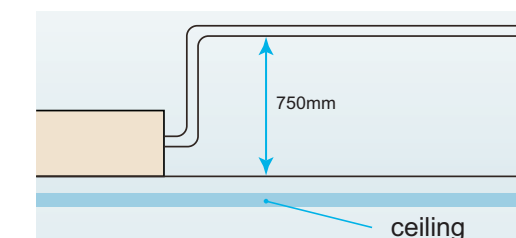
### Convenient installation

The EXV is fixed inside the indoor unit (for 71~160 model), no need extra connection.  
 Standard filter placed in an aluminum frame, which is removable downward from bottom.  
 Flange for air in/outlet duct connection is standard.

### Flexible control and convenient for maintenance

Standard Wired remote controller KJR-10B/KJR-12B, and wireless remote controller R05 is as an option.  
 The display board is connected with the E-box in factory, easier trouble-shooting by LED display.  
 Easy access filters both in rear & bottom  
 Standard functional port such as remote on/off dry contact.

### Option:



Optional drain pumps with 750 mm pumphead.  
 \* (for 71~160 model)

Model		LS-D22G/N1-S	LS-D28G/N1-S	LS-D36G/N1-S	LS-D45G/N1-S	LS-D56G/N1-S	
Power supply		1-phase, 220-240V, 50Hz					
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	
	kcal/h	1,900	2,400	3,100	3,900	4,800	
	Btu/h	7,500	9,500	12,200	15,300	19,100	
Heating capacity	kW	2.4	3.2	4	5	6.3	
	kcal/h	2,100	2,700	3,400	4,300	5,400	
	Btu/h	8,200	10,900	13,600	17,000	21,500	
Power input	Cooling	28	28	28	45	45	
	Heating	28	28	28	45	45	
Rated current	Cooling	0.14	0.14	0.14	0.2	0.2	
	Heating	0.14	0.14	0.14	0.2	0.2	
Airflow rate(H/M/L)	m³/h	525/480/430	525/480/430	590/520/480	860/755/630	925/860/755	
	CFM	309/283/253	309/283/253	309/283/253	506/444/371	544/506/444	
Sound level	dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34	
Refrigerant	Type	R410A					
	Control method	EXV					
Net dimension(W×H×D)	mm	915×290×230	915×290×230	915 ×290×230	1,072×315×230	1,072×315×230	
Packing dimension(W×H×D)	mm	1,020×390×315	1,020×390×315	1,020×390×315	1,180×415×315	1,180×415×315	
Net weight	kg	13	13	13	15.1	15.1	
Gross weight	kg	16.5	16.5	16.5	18.8	18.8	
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller	-	Wireless remote controller (RM05/BG(T)E-A)					

Model		LS-D22G/DN1-S	LS-D28G/DN1-S	LS-D36G/DN1-S	LS-D45G/DN1-S	LS-D56G/DN1-S	
Power supply		1-phase, 220-240V, 50Hz					
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	
	kcal/h	1,900	2,400	3,100	3,900	4,800	
	Btu/h	7,500	9,500	12,200	15,300	19,100	
Heating capacity	kW	2.4+0.75	3.2+0.75	4+0.75	5+0.9	6.3+0.9	
	kcal/h	2,100+600	2,700+600	3,400+600	4,300+800	5,400+800	
	Btu/h	8,200+2,600	10,900+2,600	13,600+2,600	17,000+3,100	21,500+3,100	
Power input	Cooling	28	28	28	45	45	
	Heating	28	28	28	45	45	
Rated current	Cooling	0.14	0.14	0.14	0.2	0.2	
	Heating	0.14+3.38	0.14+3.38	0.14+3.38	0.20+4.05	0.20+4.05	
Airflow rate(H/M/L)	m³/h	525/480/430	525/480/430	590/520/480	860/755/630	925/860/755	
	CFM	309/283/253	309/283/253	347/306/283	506/444/371	544/506/444	
Sound level	dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34	
Refrigerant	Type	R410A					
	Control method	EXV					
Net dimension(W×H×D)	mm	915×290×230	915×290×230	915 ×290×230	1,072×315×230	1,072×315×230	
Packing dimension(W×H×D)	mm	1,020×390×315	1,020×390×315	1,020×390×315	1,180×415×315	1,180×415×315	
Net weight	kg	13	13	13	15.1	15.1	
Gross weight	kg	16.5	16.5	16.5	18.8	18.8	
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller	-	Wireless remote controller (RM05/BG(T)E-A)					

Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.: 35°CDB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
  - Sound level is measured 1m below the air out-let both in horizontal and vertical distance.
- \* Specifications are subject to change without prior notice for product improvement.

## Wall mounted

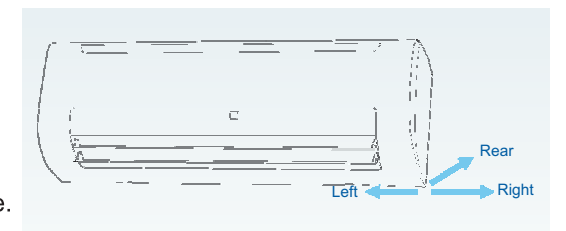


### Panel with LED display

The front panel and display panel have different colors for choose: white and brown for big panel, blue and brown for small panel, and the other colors can be customized according to the customers' demands.

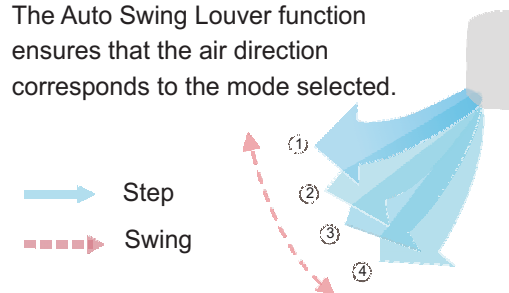
### Convenient for installation

- Multi-refrigerant outlet pipe method: left/right/rear, more flexible for installation.
- The EXV is built-in the indoor unit, compact size, Longer the connection pipe, Gas pipe: 468mm/Liquid pipe: 550mm, more flexible for the installation
- Adopts new type fixing plate, easy for installation and stable.



### Auto swing louver

The Auto Swing Louver function ensures that the air direction corresponds to the mode selected.



### Easy maintenance

Easy maintenance has been realized as the front panel can be removed for easy access.



Model		LS-D22G/N1YB	LS-D28G/N1YB	LS-D36G/N1YB	LS-D45G/N1YB	LS-D56G/N1YB	
Power supply		1-phase, 220-240V, 50Hz					
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	
	kcal/h	1,900	2,400	3,100	3,900	4,800	
	Btu/h	7,500	9,500	12,300	15,400	19,100	
Heating capacity	kW	2.4	3.2	4	5	6.3	
	kcal/h	2,200	2,700	3,400	4,300	5,400	
	Btu/h	8,900	10,900	13,600	17,000	21,500	
Power input	Cooling	28	28	28	45	45	
	Heating	28	28	28	45	45	
Rated current	Cooling	0.14	0.14	0.14	0.2	0.2	
	Heating	0.14	0.14	0.14	0.2	0.2	
Airflow rate(H/M/L)	m³/h	525/480/430	525/480/430	525/480/430	860/755/630	925/860/755	
	CFM	309/283/253	309/283/253	309/283/253	506/444/371	544/506/444	
Sound level	dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34	
Refrigerant	Type	R410A					
	Control method	EXV					
Net dimension(W×H×D)	mm	915×290×210	915×290×210	915×290×210	1,070×315×210	1,070×315×210	
Packing dimension(W×H×D)	mm	1,020×385×300	1,020×385×300	1,020×385×300	1,165×395×285	1,165×395×285	
Net weight	kg	12	12	12	16	16	
Gross weight	kg	16	16	16	19	19	
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller	-	Wireless remote controller (RM05/BG(T)E-A)					

Model		LS-D22G/DN1YB	LS-D28G/DN1YB	LS-D36G/DN1YB	LS-D45G/DN1YB	LS-D56G/DN1YB	
Power supply		1-phase, 220-240V, 50Hz					
Cooling capacity	kW	2.2	2.8	3.6	4.5	5.6	
	kcal/h	1,900	2,400	3,100	3,900	4,800	
	Btu/h	7,500	9,500	12,300	15,400	19,100	
Heating capacity	kW	2.4+0.75	3.2+0.75	4+0.75	5+0.9	6.3+0.9	
	kcal/h	2,200+600	2,700+600	3,400+600	4,300+800	5,400+800	
	Btu/h	8,900+2,500	10,900+2,500	13,600+2,500	17,000+3,100	21,500+3,100	
Power input	Cooling	28	28	28	45	45	
	Heating	28	28	28	45	45	
Rated current	Cooling	0.14	0.14	0.14	0.2	0.2	
	Heating	0.14+3.38	0.14+3.38	0.14+3.38	0.2+4.05	0.2+4.25	
Airflow rate(H/M/L)	m³/h	525/480/430	525/480/430	525/480/430	860/755/630	925/860/755	
	CFM	309/283/253	309/283/253	309/283/253	506/444/371	544/506/444	
Sound level	dB(A)	35/32/29	35/32/29	35/32/29	40/38/34	40/38/34	
Refrigerant	Type	R410A					
	Control method	EXV					
Net dimension(W×H×D)	mm	915×290×210	915×290×210	915×290×210	1,070×315×210	1,070×315×210	
Packing dimension(W×H×D)	mm	1,020×385×300	1,020×385×300	1,020×385×300	1,165×395×285	1,165×395×285	
Net weight	kg	12	12	12	16	16	
Gross weight	kg	16	16	16	19	19	
Piping connections	L(flare)	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52
	G(flare)	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9
	Drain piping	mm	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5	ODΦ16.5
Standard Controller	-	Wireless remote controller (RM05/BG(T)E-A)					

Notes:

- Nominal cooling capacities are based on the following conditions: return air temp.: 27°CDB, 19°CWB, and outdoor temp.: 35°CDB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: return air temp.: 20°CDB, outdoor temp.: 7°CDB, 6°CWB, and equivalent ref. Piping: 8m (horizontal)
  - Sound level is measured 1m below the air out-let both in horizontal and vertical distance.
- \* Specifications are subject to change without prior notice for product improvement.

## Wall mounted

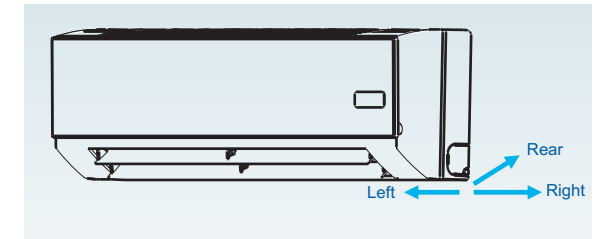


### Panel with LED display

The front panel and display panel have different colors for choose: white and brown for big panel, blue and brown for small panel, and the other colors can be customized according to the customers' demands.

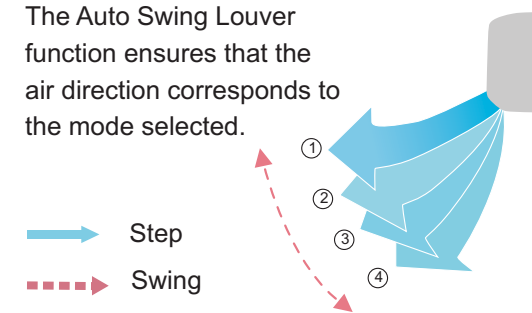
### Convenient for installation

- Multi-refrigerant outlet pipe method: left/right/rear, more flexible for installation.
- The EXV is built-in the indoor unit, compact size, Longer the connection pipe, Gas pipe: 468mm/Liquid pipe: 550mm, more flexible for the installation
- Adopts new type fixing plate, easy for installation and stable.



### Auto swing louver

The Auto Swing Louver function ensures that the air direction corresponds to the mode selected.



### Easy maintenance

Easy maintenance has been realized as the front panel can be removed for easy access.



### Low noise and improved flow control make more comfortable

Adoption of the mechanical expansion valve which has 2000 stages element positioning, ensure precise flow control, as well lower modulation noise when EXV operating. Creates quiet and comfortable environment. Three air flow speed: high/middle/low, double air guides. Smoother airflow with less turbulence. Owing to the multiple-blade fan and the air guide design, the airflow is getting smoother and more comfortable.



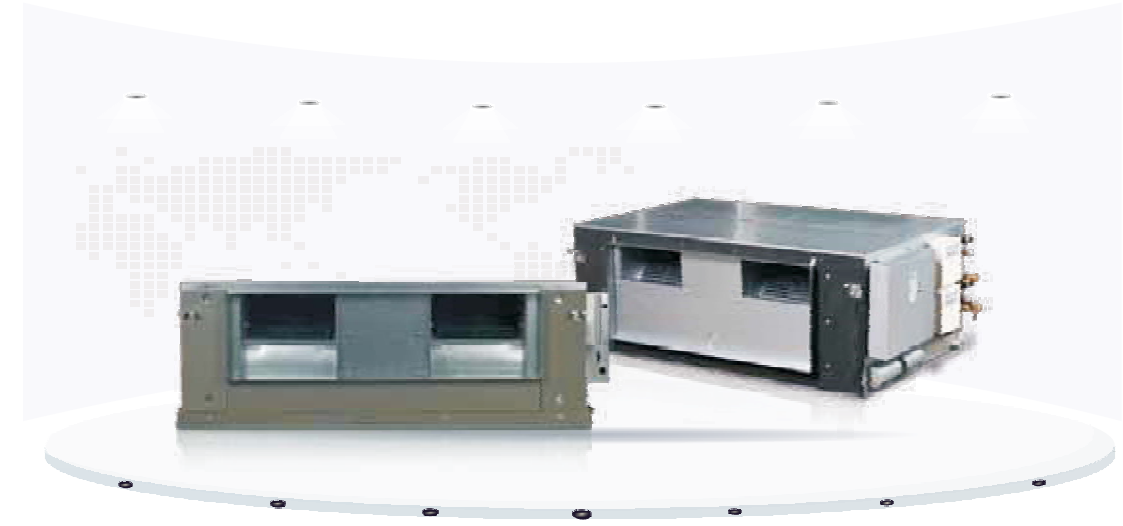
Model		LS-D125T1/N1-FA	LS-D140T1/N1-FA	LS-D200T1/N1-FA	LS-D250T1/N1-FA	LS-D280T1/N1-FA	
Power Supply		1-phase, 220-240V, 50Hz					
Capacity	Cooling	kW	12.5	14	20	25	28
		kcal/h	10,766	12,057	17,225	21,531	24,115
	btu/h	42,600	47,800	68,200	85,300	95,500	
	Heating	kW	10.5	12	18	20	22
kcal/h		9,043	10,335	15,502	17,225	18,947	
btu/h	35,800	41,000	61,400	68,200	75,000		
Power (Cooling)	Input	W	461	461	1063	1,063	1063
	Rated Current	A	2.3	2.3	5.3	5.3	5.3
Power (Heating)	Input	W	461	461	1063	1,063	1,063
	Rated Current	A	2.3	2.3	5.3	5.3	5.3
Air flow (H/M/L)	m <sup>3</sup> /h	1,700/1,350/1,050	1,700/1,350/1,050	3,150/2,650/2,300	3,300/2,850/2,500	3,300/2,850/2,500	
	cfm	1,000/795/618	1,000/795/618	1,854/1,560/1,354	1,942/1,677/1,471	1,942/1,677/1,471	
ESP (external static pressure)	Pa	50(30~220)	50(30~220)	140(50~260)	140(50~260)	140(50~260)	
Sound Pressure (Hi/Mid/Lo)	dB(A)	54/52/50	54/52/50	54/53/51	55/54/52	55/54/52	
Refrigerant	Type	R410A					
	Control Method	EXV					
Net dimension	W×H×D	mm	1,200×400×600	1,200×400×600	1,425×500×928	1,425×500×928	1,425×500×928
Packing dimension	W×H×D	mm	1,430×450×768	1,430×450×768	1,509×522×964	1,509×522×964	1,509×522×964
Net/Gross Weight		kg	69.5/76	69.5/76	115/125	115/125	115/125
Piping Connections	Liquid (Flare)	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas (Flare)	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain piping	mm	OD Φ25	OD Φ25	OD Φ32	OD Φ32	OD Φ32
Drain pump pumphead	mm	750					
Standard Controller		Wire controller KJR-12B/DP(T)-E (6m wire is standard)					

Notes:

- Nominal cooling capacities are based on the following conditions: outdoor air temp.: 33°C DB, 24°C WB, equivalent ref. piping: 8m (horizontal)
  - Nominal heating capacities are based on the following conditions: outdoor air temp.: 0°CDB, -1°CWB, equivalent ref. Piping: 8m (horizontal)
  - Sound level is measured 1.4m from the air out-let.
- \* external static pressure are based on high speed indoor air flow.
  - \* Specifications are subject to change without prior notice for product improvement.
- Connection Conditions:
- The following restrictions must be observed in order to maintain the indoor units connected to the same system.
- \* When outdoor-air processing units are connected, the total connection capacity must be within 50% to 100% of that of the outdoor units.
  - \* When outdoor-air processing units and standard indoor units are connected, the total connection capacity of the outdoor-air processing units must not exceed 30% of that of the outdoor units.
  - \* Outdoor-air processing units can be used without indoor units.



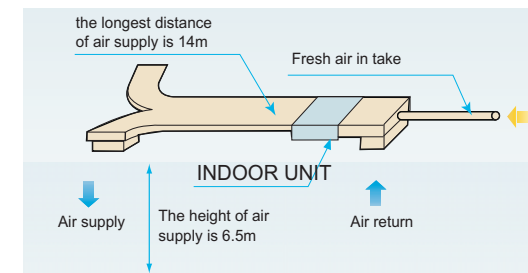
## Fresh Air Processing unit



### Creating comfortable and healthier climate

Fresh air are introduced into the environment, improved air quality Create comfortable and healthier climate

### 100% Fresh Air Processing Unit.

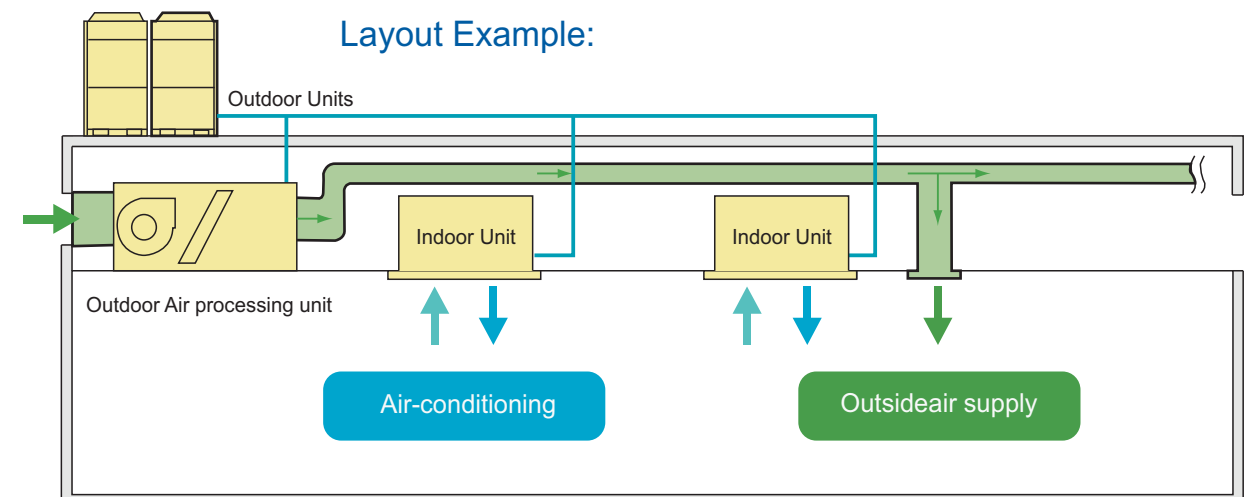


Both fresh air filtration and heating/cooling can be achieved in a single system. Indoor units and fresh air processing unit can be connected to the same refrigerant system, resulting in enhanced design flexibility and a significant reduction in total system costs.

### High External Static Pressure

External static pressure can be up to 220Pa(125~140 models) and 260Pa(200~280 models) for more flexible duct applications. The maximal distance of air supply is about 14m and the maximum height of air supply is about 6.5m.

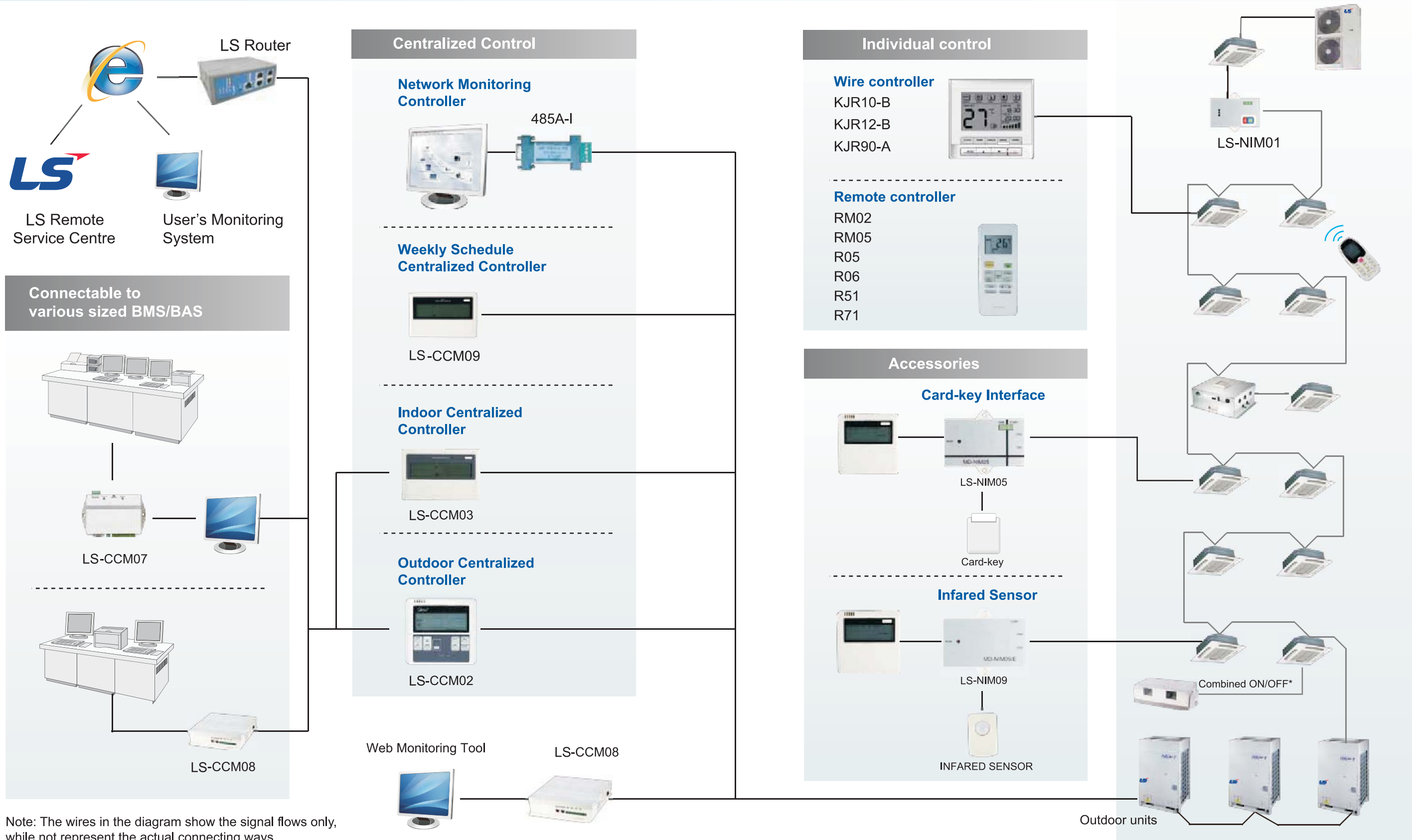
### Innovative air supply technology for excellent room temperature control.





# Control Systems

## Building Management System



Note: The wires in the diagram show the signal flows only, while not represent the actual connecting ways.  
\*Combined ON/OFF function can be customized from us.