

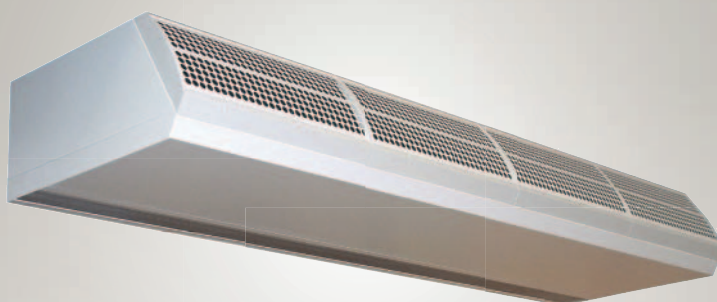


Air conditioners

Commercial and Technical Data

VRV

Biddle air curtain for connection to daikin heat pumps



ECDEN12-202



Daikin Europe N.V.

About Daikin



Daikin has a worldwide reputation based on almost 85 years' experience in the successful manufacture of high quality air conditioning equipment for industrial, commercial and residential use.

Daikin quality

Daikin's much envied quality quite simply stems from the close attention paid to design, production and testing as well as aftersales support. To this end, every component is carefully selected and rigorously tested to verify its contribution to product quality and reliability.

Biddle, the company



Biddle is an internationally renowned company with more than 50 years' experience in the manufacturing and marketing of innovative outdoor/indoor climate separation equipment. Throughout its long history the company has made its name in engineering advanced custom made solutions for retail, industrial and public sector buildings.

Daikin and Biddle

The remarkable synergy between Daikin and Biddle, both leaders in their respective fields, has led to a combined heat pump and air curtain system that represents the ideal solution for retail outlets and office buildings. Co-operation of this order guarantees customers high energy efficiencies, rapid payback on investment and hard to beat in store comfort.

Environmental awareness

Air Conditioning and the Environment

Air conditioning systems provide a significant level of indoor comfort, making **optimum working and living conditions** possible in the most extreme climates.

In recent years, motivated by a global awareness of the need to reduce the burdens on the environment, Daikin has invested enormous efforts in limiting the negative effects associated with the production and the operation of air conditioners. Hence, models with **energy saving** features and improved **eco-production** techniques have seen the light of day, making a significant contribution to limiting the impact on the environment.



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Benefits of Daikin heat pumps

The solution for those with an eye to the future

Heat pumps are used to extract calories (heat) contained in the outside air, even in cold weather. Using a compressor, they are capable of very effectively heating offices, commercial spaces, hotels and any other application. The only input that heat pumps require to make the system work is electricity: the heat they produce is entirely drawn from the outside air. Electricity use is thus minimum and far lower than that of an electric space-heater or air curtain for example. It is a simple equation: using Daikin heat pumps, 75% of the energy consumed to heat your building is found in the outside air: it is thus free of charge and... renewable!

Quiet and discrete, heat pumps are currently the most advanced technology used to equip buildings with low energy consumption.

A renewable resource

Up to 3/4th of the heat produced by a heat pump is free of charge since it is drawn from the outside air. It is thus a no-cost and non-depletable resource!

How does it work?

As its name makes clear, a heat pump is a system designed to extract and transport heat, thus allowing one to maintain a constant indoor temperature all year long.

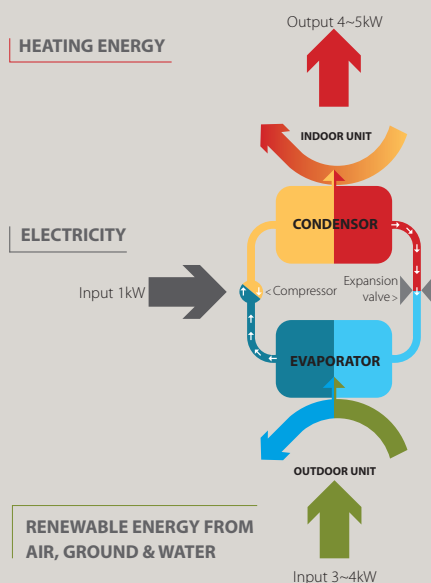
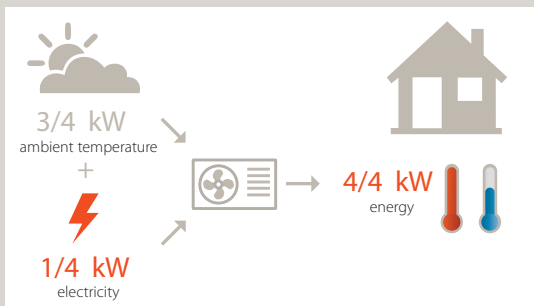
A PERPETUAL CYCLE

A heat transfer fluid, harmless to the ozone layer, circulates in a closed circuit inside the system in order to transfer heat to and from the air outside and inside your home.

- › The evaporator enables the fluid to extract heat from the outside air by changing from a liquid state to a gas.
- › The electric compressor then compresses the gas, which raises its temperature.
- › The condensor then allows the gas to transfer its heat to the heating system as it returns to a liquid state.
- › The expansion valve lowers the pressure of the fluid, which triggers its vaporisation to begin a new cycle.

DID YOU KNOW THAT HI-VRV...

- › Means variable refrigerant volume
- › Is the industry leader with several unique products
- › Is a rapid response system in which up to 64 indoor units can operate on the same refrigerant circuit
- › Integrates air conditioning, ventilation and control



Benefits of Biddle Air Curtains connected to Daikin Heat Pumps

Biddle air curtains provide highly efficient solutions for retailers and consultants to combat the issue of climate separation across their outlet of office doorway.

'Open Door' Trading

Although the customer friendly aspects of open door trading are widely appreciated by retail and commercial outlet managers, open doors can also give rise to massive losses in warm air and hence, energy. Biddle air curtains however, not only preserve indoor warmth and generate significant economies, they also represent an **invitation for customers** to enter a pleasant trading and working environment.

High efficiency and low CO₂ emission

The stable store environment ensuing from efficient outdoor/indoor climate separation limits heat loss through the door opening and enhances the efficiency of the air conditioning system. By combining Biddle air curtains with highly efficient Daikin VRV and ERQ heat pumps, users benefit from substantial energy savings of up to 72% compared to electric air curtains.

Short pay back period

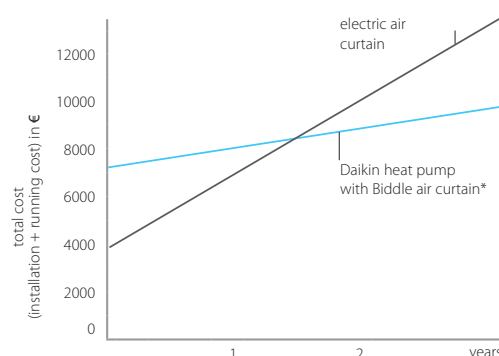
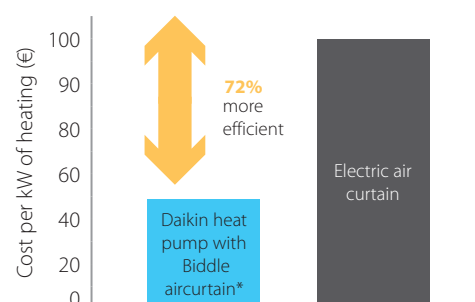
Energy savings accruing from the installation of this advanced equipment give rise to the remarkable payback period of less than **1.5 years** with massive potential extra savings likely to stem from reductions in future energy bills.

Comfort

Customers and staff alike can enjoy maximum indoor comfort all year round, irrespective of external weather conditions resulting from the combined advanced rectifier technology and constant air velocity inherent in Biddle air curtains.

Easy installation

Easy and fast installation of these systems not only reduces costs but makes expensive water systems, boilers and gas connection redundant. Furthermore, integrating a Biddle air curtain with a Daikin VRV also eliminates the need to install multiple outdoor units, thereby reducing installation time and costs still further. This unrivalled combination in fact, enables Daikin to offer its customers the ultimate, environmentally conscious, **'total solution' package**, comprising cooling, heating, outdoor-indoor climate separation and fresh air ventilation.



* Payback period and gains calculated based upon the following: Air curtain is 9hrs/day – 156 days/year (1,404 hrs/year) in use.
Annual energy consumption for an electric air curtain: 3,137EUR (COP = 0.95).
Typical installation cost: 1,000EUR;
Typical equipment cost: 2,793EUR.
Annual energy consumption for CYQS200DK100FBN and ERQ100AV: 748EUR (COP 4.00).
Typical installation cost: 2,000EUR;
Typical equipment cost: 5,150EUR
Calculation based upon electricity cost: 0,1705EUR /kWh

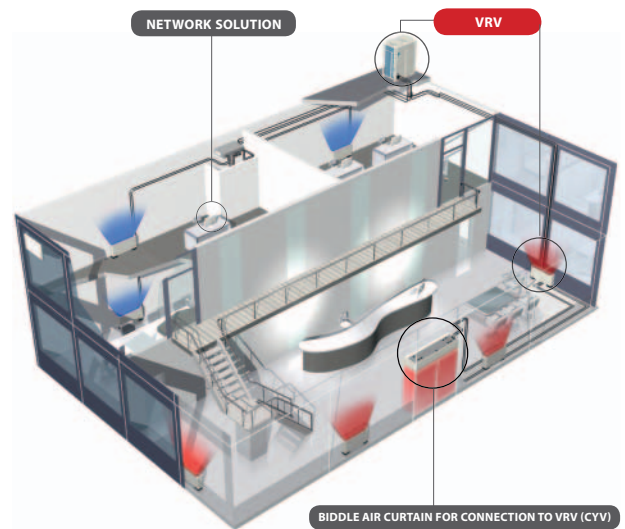
Which system offers me the best solution?

▶ I need an air curtain and heating, and/or cooling, and/or ventilation

Integrate the Biddle air curtain in a total solution for your shop, office building or other commercial space

VRV heat recovery

- › VRV is among the first heat recovery systems suitable for connection to air curtains
- › The most advanced and environmentally conscious method of separating outdoor and indoor climates on the market, offering a payback period of less than 1.5 years
- › Provides virtually free air curtain heating via recovered heat from indoor units in cooling mode
- › Easy and quick to install at reduced costs since no additional water systems, boilers and gas connections are required



* VRV heat recovery in combination with Biddle air curtain

VRV heat pump

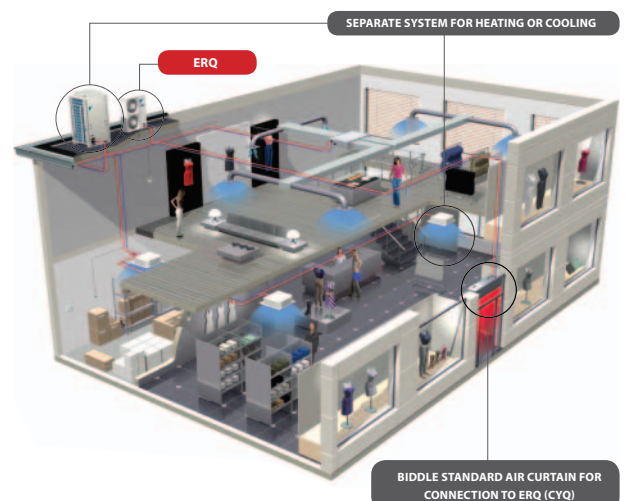
- › VRV is among the first heat pump systems suitable for connection to air curtains
- › An efficient and economical method of separating outdoor and indoor climates, offering the well proven cost saving advantages inherent in VRV heat pump technology and a payback period of less than 1.5 years
- › Easy and quick to install at reduced costs since no additional water systems, boilers and gas connections are required

▶ I only need an air curtain

A solution for your commercial doorway, connectable to ERQ (pair application)

ERQ heat pump

- › A reliable and effective method of separating outdoor and indoor climates, offering a payback period of less than 1.5 years
- › Easy and quick to install at reduced costs since no additional water systems, boilers and gas connections are required



* ERQ in combination with Biddle air curtain

Which air curtain offers me the best solution?

Biddle air curtains come in 2 versions, one to connect to VRV end and one for connection to ERQ. Both of them are available in varying door widths from 1 up to 2.5 meters. Below you can find an overview of the different versions and available door heights.

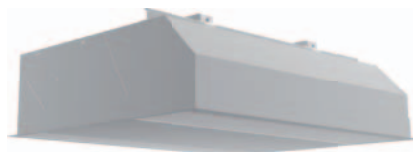


▶ Biddle air curtain for connection to VRV (CYV) or to ERQ (CYQ)



Door height (m)

Free-Hanging (F)*



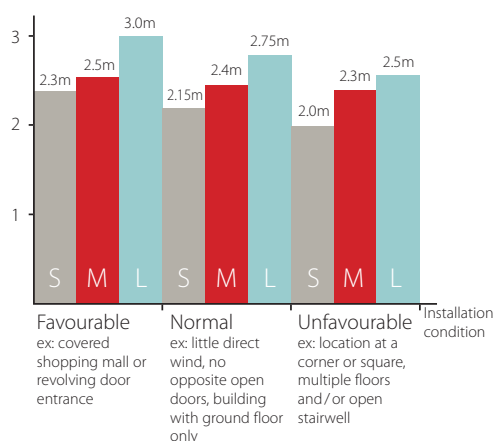
Cassette (C)*



Recessed (C)*

- › Maximum energy efficiency stemming from almost zero down flow turbulence, optimised air flow and the application of advanced discharge rectifier technology
- › Around 85% air separation efficiency, greatly reducing both heat loss and required indoor unit heating capacity

Biddle air curtain



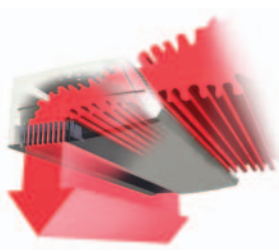
* same outlook for CYV and CYQ version

Advanced biddle air curtain technologies

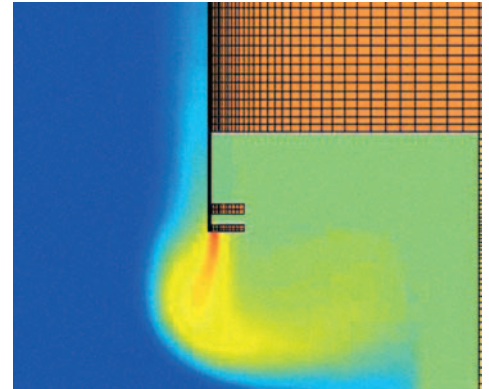
Rectifier technology

By reducing the air turbulence at the discharge of the Biddle air curtain, the induction of the surrounding air is also reduced, providing a deeply penetrating airstream. In addition the design of the rectifier provides a laminar air flow right down to floor level, reducing energy consumption and increasing comfort levels all year round.

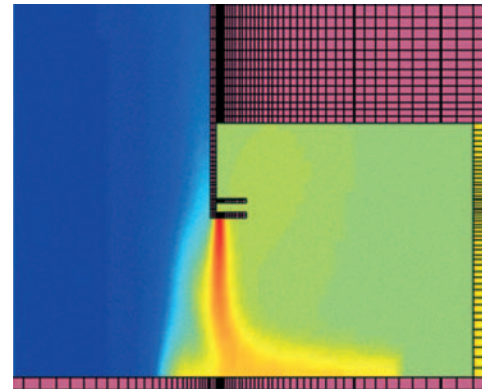
Rectifier technologie



- › Laminar air flow stream – Minimizes air turbulence
- › Top energy efficiency
- › Improved penetration
- › 80-85% separation efficiency



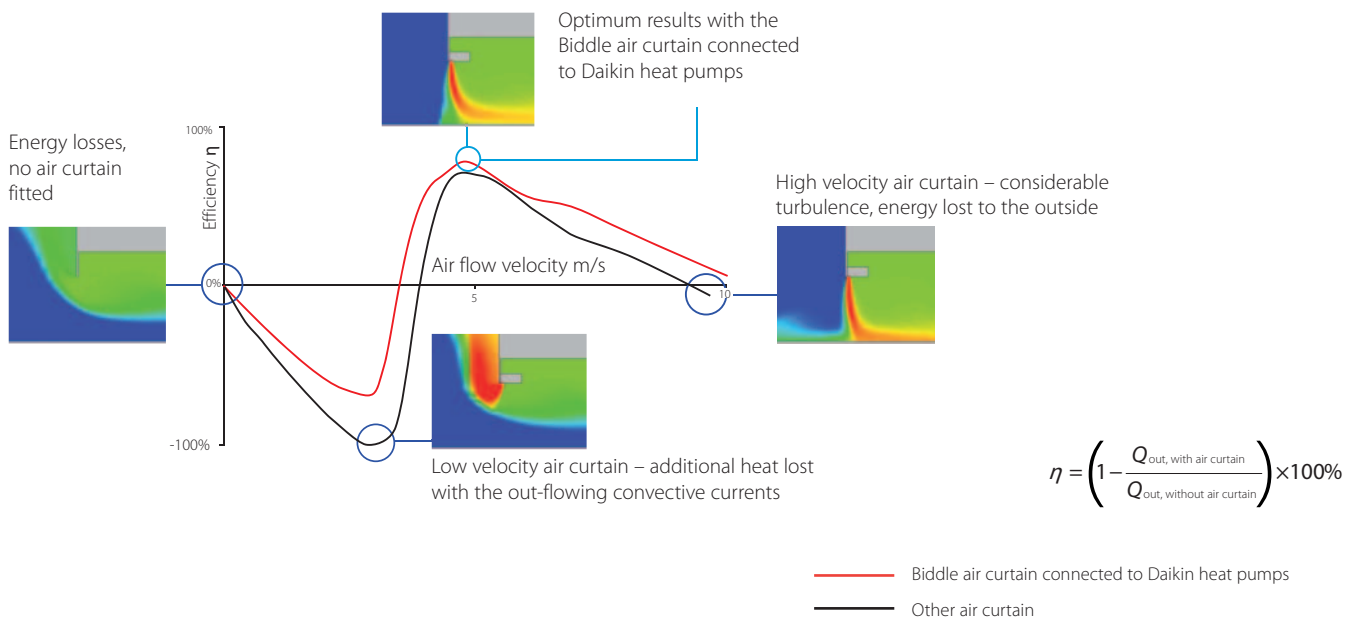
Air curtain, with turbulent air stream and loss of airflow – low separation efficiency



Biddle air curtain connected to Daikin heat pump with patented rectifier grille – separation efficiency up to 80-85%

Optimised air flow velocity

The correct air flow velocity greatly improves the Biddle air curtain efficiency and when combined with the rectifier technology, results in high separation efficiencies. (up to 80-85%)





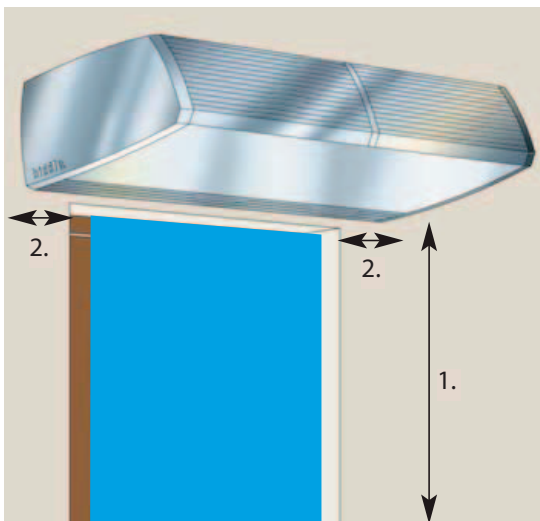
Selection of a Biddle air curtain

An air curtain is selected properly if it has sufficient capacity to heat up entering cold outside air to a comfortable temperature. Additionally, the unit must be able to properly screen off the entire width and height of the door opening. The air curtain type to be selected depends on:

1. The door height (= mounting height, measured from floor to bottom of unit)
2. The door width
3. The volume and temperature of the outside air entering through the open door

1. Door height and 2. door width

It is important for the distance between the air curtain and the door to be as short as possible. In addition, the air curtain must be at least as wide as the door opening, as too narrow an air curtain will lead to air leakages on the sides.



Correct door height and width installation

- › To prevent air leakages on the sides, the air curtain must be at least as wide as the door opening.

3. Entering cold air through natural ventilation

In practice, the volume and temperature of entering outside air are difficult to determine, as conditions near a door vary continuously. Other aspects, such as floors with open connections, multiple open doors in a single room, or the orientation of the building, may also have a large influence on the capacity need. To make selection easy, the following guidelines may be used:

- Favorable conditions: covered shopping mall or revolving-door entrance.
- Normal conditions: little direct wind, no opposite open doors, building with ground floor only.
- Unfavorable conditions: location at a corner or square, multiple floors and/or open stairwell.

* Contact your local dealer for more information

Strength of the air curtain not only determined by air displacement

It is commonly believed that a properly working air curtain should displace much air, but that is a misconception. The screening effect of an air curtain, which we call the air curtain strength, is determined by a proper mix of air velocity, air outlet temperature, and air stream width. The required air velocity is partly determined by the turbulence of the air stream. If the rectifier technology is used, the air stream will be practically laminar, and far less air will have to be displaced than with conventional air curtains. This does not only result in higher comfort but it also means that less capacity will be needed, and that the electrical power consumption will be lower as well. If an air curtain is too strong, however, the efficiency will fall because a part of the heat will escape, over the floor, to outside.

Integrating your Biddle Air Curtain into a Daikin Heat Pump System

▶ For connection to ERQ (CYQ range)

Your ERQ units capacity should be larger or equal to the capacity of the Biddle air curtain.
Ex.: CYQM100DK80FBN → ERQ100A7V1B

▶ For connection to VRV (CYV range)

For selection of the VRV outdoor unit handle the Biddle air curtain as a Daikin indoor unit and add the capacity to the total capacity of the other indoor units.
Then follow the VRV outdoor unit selection.

* Contact your local dealer for more information

Biddle air curtain nomenclature

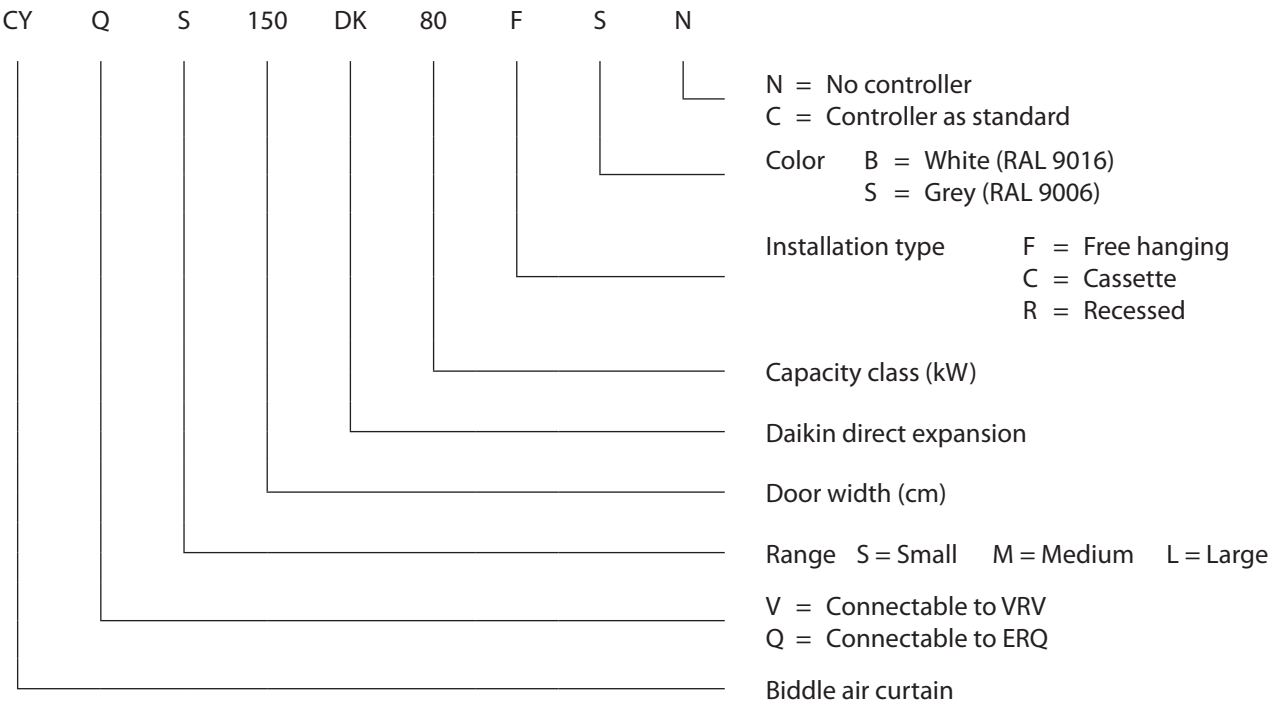


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Biddle Standard Air Curtain

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1 Specifications

1 - 1 CYQS

1-1-1 Technical Specifications				CYQS150DK80*BN/*SN		CYQS200DK100*BN/*SN		CYQS250DK140*BN/*SN	
Heating capacity	Installation level B	speed 2	kW	7.1		9.2		12.7	
		speed 3	kW	9.0		11.6		16.2	
Delta T	inlet = room temperature	speed 2	K	17		17		18	
		speed 3	K	15		15		16	
Power Input (50Hz)	Fan only		kW	0.35		0.46		0.58	
	Heating		kW	0.35		0.46		0.58	
Maximum door width			m	1.5		2.0		2.5	
Maximum door height	Favorable conditions		m	2.3					
	Normal conditions		m	2.15					
	Unfavorable conditions		m	2.0					
Dimensions	Height	Unit F	mm	270					
		Unit C	mm	270					
		Unit R	mm	270					
	Width	Unit F	mm	1,500		2,000		2,500	
		Unit C	mm	1,500		2,000		2,500	
		Unit R	mm	1,548		2,048		2,548	
	Depth	Unit F	mm	590					
		Unit C	mm	821					
		Unit R	mm	561					
	Packed unit	Height	mm	760					
		Width	mm	1,630		2,130		2,630	
		Depth	mm	630		680		680	
Weight	Unit F		kg	66		83		107	
	Unit C		kg	83		102		129	
	Unit R		kg	88		108		137	
	Packed unit F		kg	83		115		145	
	Packed unit C		kg	103		139		182	
	Packed unit R		kg	108		145		190	
Casing	Colour			BN:RAL9010	SN:RAL 9006	BN:RAL9010	SN:RAL 9006	BN:RAL9010	SN:RAL 9006
	Material			Electrogalvanised sheet steel					
Required Ceiling Void			mm	420					
Fan - Air flow rate - Heating	Installation level B	speed 2	m³/h	1,235		1,646		2,058	
		speed 3	m³/h	1,746		2,328		2,910	
Refrigerant	Type			R-410A					
	Control			Electronic expansion valve					
Sound pressure level - Heating	Installation level B	speed 2	dBA	39		40		41	
		speed 3	dBA	49		50		51	
Piping connections	Liquid (OD)	Diameter (OD)	mm	9.52					
	Gas	Diameter (OD)	mm	16.0		16.0		19.0	
Air Filter				Vacuum cleanable filter G1					
Required accessories				Daikin wired remote control (BRC1E51A or BRC1D52)					
Notes				Favorable conditions: covered shopping mall or revolving-door entrance. Normal conditions: little direct wind, no opposite open doors, building with ground floor only. Unfavorable conditions: location at a corner or square, multiple floors and/or open stairway.					
				Pipe work and electrical connections are on top of the unit					
				Sound pressure level (at 3m)					
				Installation level B: standard setting, refer to the databook or installation manual for more information (only one installation level available)					

1-1-2 Electrical Specifications			CYQS150DK80*BN/*SN	CYQS200DK100*BN/*SN	CYQS250DK140*BN/*SN
Power Supply	Frequency	Hz	50		
	Voltage	V	230		
Voltage range	Min.	V	224		
	Max.	V	240		
Current (50Hz)	Maximum fuse amps (MFA)	A	16		
	Full load amps (FLA)	A	1.26	1.68	2.10

1 Specifications

1 - 2 CYQM

1-2-1 Technical Specifications				CYQM100DK80*BN/*SN		CYQM150DK80*BN/*SN		CYQM200DK100*BN/*SN		CYQM250DK140*BN/*SN	
Heating capacity	Installation level B	speed 2	kW	7.7		9.3		12.1		16.8	
		speed 3	kW	9.2		11.0		13.4		19.9	
Delta T	inlet = room temperature	speed 2	K	19		15		14		16	
		speed 3	K	17		14		13		15	
Power Input (50Hz)	Fan only		kW	0.37		0.56		0.75		0.94	
	Heating		kW	0.37		0.56		0.75		0.94	
Maximum door width			m	1.0		1.5		2.0		2.5	
Maximum door height	Favorable conditions		m	2.5							
	Normal conditions		m	2.4							
	Unfavorable conditions		m	2.3							
Dimensions	Height	Unit F	mm	270							
		Unit C	mm	270							
		Unit R	mm	270							
	Width	Unit F	mm	1,000		1,500		2,000		2,500	
		Unit C	mm	1,000		1,500		2,000		2,500	
		Unit R	mm	1,048		1,548		2,048		2,548	
	Depth	Unit F	mm	590							
		Unit C	mm	821							
		Unit R	mm	561							
	Packed unit F/C/R	Height C	mm	760							
		Height F/R	mm	760							
		Width F/C/R	mm	1,630		1,630		2,130		2,630	
Depth F/C/R		mm	630		630		680		680		
Weight	Unit F		kg	57		73		94		108	
	Unit C		kg	68		88		111		136	
	Unit R		kg	66		93		117		144	
	Packed unit F		kg	73		90		126		161	
	Packed unit C		kg	84		108		148		189	
	Packed unit R		kg	81		113		154		197	
Casing	Colour			BN:RAL9010	SN:RAL 9006	BN:RAL9010	SN:RAL 9006	BN:RAL9010	SN:RAL 9006	BN:RAL9010	SN:RAL 9006
	Material			Electrogalvanised sheet steel							
Required Ceiling Void			mm	420							
Fan - Air flow rate - Heating	Installation level B	speed 2	m³/h	1,223		1,835		2,446		3,058	
		speed 3	m³/h	1,605		2,408		3,210		4,013	
Refrigerant	Type			R-410A							
	Control			Electronic expansion valve							
Sound pressure level - Heating	Installation level B	speed 2	dBA	44		46		47		48	
		speed 3	dBA	50		51		53		54	
Piping connections	Liquid (OD)	Diameter (OD)	mm	9.52							
	Gas	Diameter (OD)	mm	16.0		16.0		16.0		19.0	
Air Filter				Vacuum cleanable filter G1							
Required accessories				Daikin wired remote control (BRC1E51A or BRC1D52)							
Notes				Favorable conditions: covered shopping mall or revolving-door entrance. Normal conditions: little direct wind, no opposite open doors, building with ground floor only. Unfavorable conditions: location at a corner or square, multiple floors and/or open stairway.							
				Pipe work and electrical connections are on top of the unit							
				Sound pressure level (at 3m)							
				Installation level B: standard setting, refer to the databook or installation manual for more information (only one installation level available)							

1-2-2 Electrical Specifications			CYQM100DK80*BN/*SN		CYQM150DK80*BN/*SN		CYQM200DK100*BN/*SN		CYQM250DK140*BN/*SN	
Power Supply	Frequency	Hz	50							
	Voltage	V	230							
Voltage range	Min.	V	224							
	Max.	V	240							
Current (50Hz)	Maximum fuse amps (MFA)	A	16							
	Full load amps (FLA)	A	1.64	2.46	3.28	4.10				

1 Specifications

1 - 3 CYQL

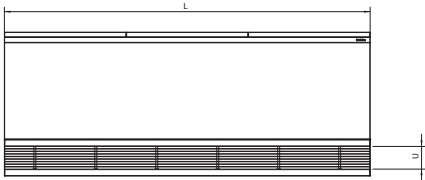
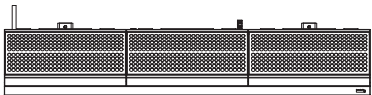
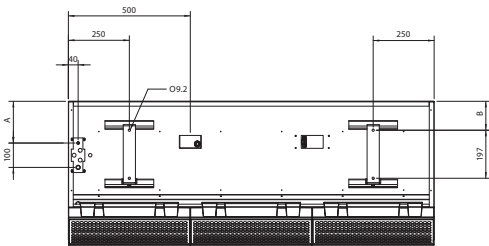
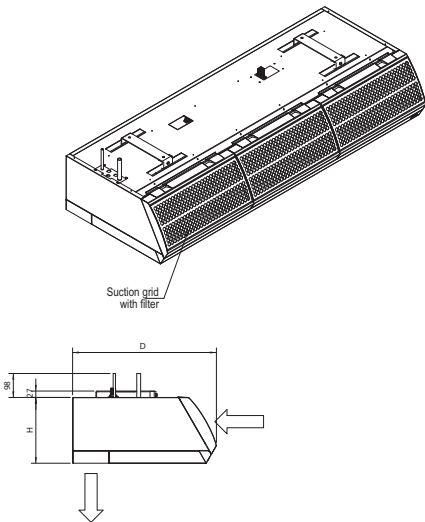
1-3-1 Technical Specifications				CYQL100DK125*BN/*SN		CYQL150DK200*BN/*SN		CYQL200DK250*BN/*SN		CYQL250DK250*BN/*SN	
Heating capacity	Installation level B	speed 2	kW	11.9		17.9		22.8		24.6	
		speed 3	kW	15.6		23.3		29.4		31.1	
Delta T	inlet = room temperature	speed 2	K	17		17		17		14	
		speed 3	K	15		15		14		12	
Power Input (50Hz)	Fan only		kW	0.75		1.13		1.50		1.88	
	Heating		kW	0.75		1.13		1.50		1.88	
Maximum door width			m	1.0		1.5		2.0		2.5	
Maximum door height	Favorable conditions		m	3.0							
	Normal conditions		m	2.75							
	Unfavorable conditions		m	2.5							
Dimensions	Height	Unit F	mm	370							
		Unit C	mm	370							
		Unit R	mm	370							
	Width	Unit F	mm	1,000		1,500		2,000		2,500	
		Unit C	mm	1,000		1,500		2,000		2,500	
		Unit R	mm	1,048		1,548		2,048		2,548	
	Depth	Unit F	mm	774							
		Unit C	mm	1,105							
		Unit R	mm	745							
	Packed unit	Height C	mm	1,410							
		Height F/R	mm	990							
		Width F/C/R	mm	1,630		1,630		2,130		2,630	
		Depth F/C/R	mm	630		630		680		680	
Weight	Unit F		kg	76		100		126		157	
	Unit C		kg	81		118		151		190	
	Unit R		kg	83		141		155		196	
	Packed unit F		kg	92		116		159		195	
	Packed unit C		kg	100		143		195		252	
	Packed unit R		kg	99		162		193		250	
Casing	Colour			BN:RAL9010	SN:RAL 9006	BN:RAL9010	SN:RAL 9006	BN:RAL9010	SN:RAL 9006	BN:RAL9010	SN:RAL 9006
	Material			Electrogalvanised sheet steel							
Required Ceiling Void			mm	520							
Fan - Air flow rate - Heating	Installation level B	speed 2	m³/h	2,056		3,084		4,112		5,140	
		speed 3	m³/h	3,100		4,650		6,200		7,750	
Refrigerant	Type			R-410A							
	Control			Electronic expansion valve							
Sound pressure level - Heating	Installation level B	speed 2	dBA	43		45		46		47	
		speed 3	dBA	53		54		56		57	
Piping connections	Liquid (OD)	Diameter (OD)	mm	9.52		9.52		9.52		9.52	
	Gas	Diameter (OD)	mm	16.0		19.0		22.0		22.0	
Air Filter				Vacuum cleanable filter G1							
Required accessories				Daikin wired remote control (BRC1E51A or BRC1D52)							
Notes				Favorable conditions: covered shopping mall or revolving-door entrance. Normal conditions: little direct wind, no opposite open doors, building with ground floor only. Unfavorable conditions: location at a corner or square, multiple floors and/or open stairway.							
				Pipe work and electrical connections are on top of the unit							
				Sound pressure level (at 3m)							
				Installation level B: standard setting, refer to the databook or installation manual for more information (only one installation level available)							

1-3-2 Electrical Specifications				CYQL100DK125*BN/*SN	CYQL150DK200*BN/*SN	CYQL200DK250*BN/*SN	CYQL250DK250*BN/*SN
Power Supply	Frequency		Hz	50			
	Voltage		V	230			
Voltage range	Min.		V	224			
	Max.		V	240			
Current (50Hz)	Maximum fuse amps (MFA)		A	16			
	Full load amps (FLA)		A	3.30	4.95	6.60	8.25

2 Dimensional drawing & centre of gravity

2 - 1 Free hanging

CYQS-DK-FBN/FSN
CYQM-DK-FBN/FSN
CYQL-DK-FBN/FSN



Type	L	H	D	U	A	B
CYQS-DK-FBN/FSN	1,000 - 1,500	270	590	93	171	119
CYQM-DK-FBN/FSN	2,000 - 2,500	270	590	93	171	119
CYQL-DK-FBN/FSN	1,000 - 1,500	370	774	124.5	245.5	200
	2,000 - 2,500	370	774	124.5	245.5	200

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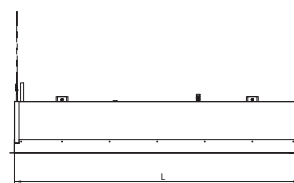
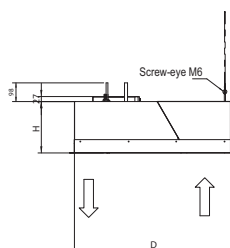
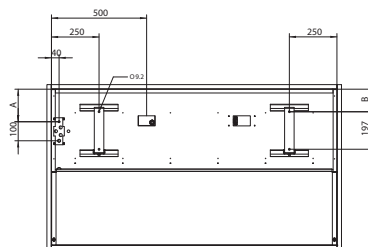
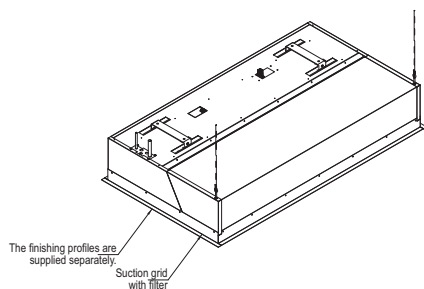
REMARKS

- 1 The 2,500mm large devices have 3 suspension brackets, where the third bracket is mounted at half the length of the device.

2 Dimensional drawing & centre of gravity

2 - 2 Cassette

CYQS-DK-CBN/CSN
CYQM-DK-CBN/CSN
CYQL-DK-CBN/CSN

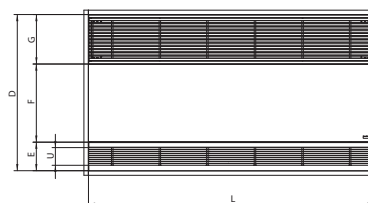


Number of suction grids per device

Device length	Number	Suction grid length
1000 / 1500	1	1,000 / 1,500
2000 / 2500	2	1,000 / 1,250

*1 drain grid per device

Type	L	H	D	U	A	B	E	F	G
CYQS-DK-CBN/CSN	1,000 - 1,500	270	821	93	171	119	250	411	260
CYQM-DK-CBN/CSN	2,000 - 2,500								
CYQL-DK-CBN/CSN	1,000 - 1,500	370	1,105	124.5	245.5	200	181.5	563.5	360
	2,000 - 2,500								



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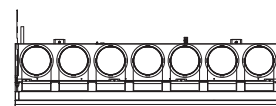
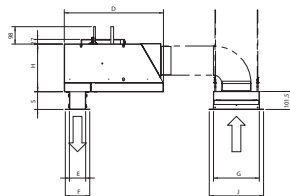
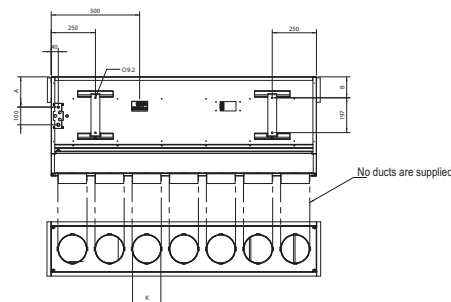
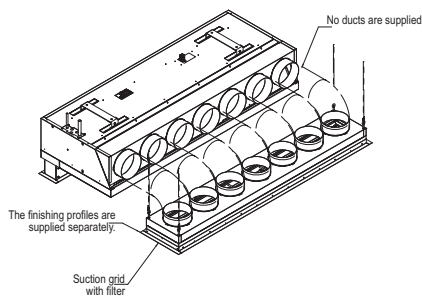
REMARKS

- The 2,500mm large devices have 3 suspension brackets, where the third bracket is mounted at half the length of the device.
- The mounting holes for finishing profiles in a lowered ceiling (L+8) x (D+8) mm

2 Dimensional drawing & centre of gravity

2 - 3 Recessed

CYQS-DK-RBN/RSN
CYQM-DK-RBN/RSN
CYQL-DK-RBN/RSN



Number of ducts per device

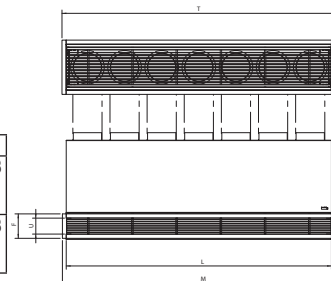
Type	1000	1500	2000	2500
CYQS-DK-RBN/RSN	5	7	10	12
CYQM-DK-RBN/RSN	5	7	10	12
CYQL-DK-RBN/RSN	3	5	6	8

Number of suction grids per device

Device length	Number	Suction grid length
1000 / 1500	1	1,000 / 1,500
2000 / 2500	2	1,000 / 1,250

*1 drain grid per device

Type	L	H	D	S	U	A	B	E	F	G	J	K	M	T
CYQS-DK-RBN/RSN	1,000 - 1,500	270	561	80-125	90	171	119	92	139	260	308	Ø160	1044-1544 2044-2544	1048-1548 2048-2548
CYQM-DK-RBN/RSN	1,000 - 1,500 2,000 - 2,500	270	561	80-125	90	171	119	92	139	260	308	Ø160	1044-1544 2044-2544	1048-1548 2048-2548
CYQL-DK-RBN/RSN	1,000 - 1,500 2,000 - 2,500	370	745	80-125	121.5	245.5	200	123.5	170	360	408	Ø250	1044-1544 2044-2544	1048-1548 2048-2548



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REMARKS

- The 2,500mm large devices have 3 suspension brackets, where the third bracket is mounted at half the length of the device.
- Holes (for finishing profiles) - drain (L+8) x (E+8) mm - suction (L+8) x (G+8) mm.

TABLE OF CONTENTS

CYVS/M/L-DK-F/C/R

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Specifications

1 - 1 CYVS

2
1

1-1-1 Technical Specifications					CYVS100 DK80*BC	CYVS100 DK80*SC	CYVS150 DK80*BC	CYVS150 DK80*SC	CYVS200 DK100*BC	CYVS200 DK100*SC	CYVS250 DK140*BC	CYVS250 DK140*SC
Heating capacity	Speed 1			kW	4.9		6.2		8.0		10.9	
	Speed 2			kW	5.70		7.1		9.2		12.7	
	Speed 3			kW	7.40		9.0		11.6		16.2	
Power input	Fan only	Nom.	kW	0.23		0.35		0.46		0.58		
	Heating	Nom.	kW	0.23		0.35		0.46		0.58		
Delta T	Speed 1			K	22		18				20	
	Speed 2			K	21		17				18	
	Speed 3			K	19		15				16	
Casing	Colour				RAL9016	RAL9006	RAL9016	RAL9006	RAL9016	RAL9006	RAL9016	RAL9006
	Material				Electro-galvanised sheet steel							
Dimensions Casette (F)	Unit	Height	mm	270								
		Width	mm	1,000		1,500		2,000		2,500		
		Depth	mm	590								
	Packed unit	Height	mm	760								
		Width	mm	1,130		1,630		2,130		2,630		
		Depth	mm	630				680				
Dimensions Casette (C)	Unit	Height	mm	270								
		Width	mm	1,000		1,500		2,000		2,500		
		Depth	mm	821								
	Packed unit	Height	mm	760								
		Width	mm	1,130		1,630		2,130		2,630		
		Depth	mm	630				680				
Dimensions Casette (R)	Unit	Height	mm	270								
		Width	mm	1,048		1,548		2,048		2,548		
		Depth	mm	561								
	Packed unit	Height	mm	760								
		Width	mm	1,130		1,630		2,130		2,630		
		Depth	mm	630				680				
Required ceiling void >			mm	420								
Door height	Max.			m	2.3 (2) / 2.15 (3) / 2.0 (4)	2.3 (2) / 2.15 (3) / 2.0 (4)	2.3 (2) / 2.15 (3) / 2.0 (4)	2.3 (2) / 2.15 (3) / 2.0 (4)	2.3 (2) / 2.15 (3) / 2.0 (4)	2.3 (2) / 2.15 (3) / 2.0 (4)	2.3 (2) / 2.15 (3) / 2.0 (4)	
Door width	Max.			m	1.0		1.5		2.0		2.5	
Weight Casette (F)	Unit			kg	56		66		83		107	
	Packed unit			kg	72		83		115		145	
Weight Casette (C)	Unit			kg	59		83		102		129	
	Packed unit			kg	74		103		139		182	
Weight Casette (R)	Unit			kg	61		88		108		137	
	Packed unit			kg	76		108		145		190	
Fan	Air flow rate	Heating	Speed 1	m³/h	671 (1)		1,007 (1)		1,342 (1)		1,678 (1)	
			Speed 2	m³/h	823 (1)		1,235 (1)		1,646 (1)		2,058 (1)	
			Speed 3	m³/h	1,164 (1)		1,746 (1)		2,328 (1)		2,910 (1)	
Sound pressure level	Heating	Speed 1		dBA	34 (1)		36 (1)		37 (1)		38 (1)	
		Speed 2		dBA	37 (1)		39 (1)		40 (1)		41 (1)	
		Speed 3		dBA	47 (1)		49 (1)		50 (1)		51 (1)	
Refrigerant	Type				R-410A							
	Control				Electronic expansion valve							
Piping connections	Liquid	OD	mm	9.52								
	Gas	OD	mm	16.0						19.0		
	Drain	OD	mm	-								
Required accessories (should be ordered separately)					Daikin wired remote control (BRC1E52A/B or BRC1D52)							
Air filter					Vacuum cleanable filter G1							

Standard Accessories : Low voltage cable 1x25m + 2x5m;

1 Specifications

1 - 1 CYVS

1-1-2Electrical Specifications				CYVS100 DK80*BC	CYVS100 DK80*SC	CYVS150 DK80*BC	CYVS150 DK80*SC	CYVS200 DK100*BC	CYVS200 DK100*SC	CYVS250 DK140*BC	CYVS250 DK140*SC
Power supply	Frequency	Hz	50								
	Voltage	V	230								
Voltage range	Min.	%	224								
	Max.	%	240								
Current	Maximum fuse amps (MFA)	A	16								
	Full load amps (FLA)	Fan motor	A	0.84	1.27	1.69	2.11				

Notes

- (1) Installation level B: standard setting, refer to the databook of installation manual for more information (only one installation level available)
- (2) Favorable conditions: covered shopping mall or revolving door entrance
- (3) Normal conditions: little direct wind, no opposite open doors, building with ground floor only
- (4) Unfavorable conditions: location at a corner or square, multiple floors and/or open stairway
- (5) Sound pressure level (at 3m)
- (6) Pipe work and electrical connections are on top of the unit

Specifications

1 - 2 CYVM

2
1

1-2-1 Technical Specifications				CYVM100 DK80*BC	CYVM100 DK80*SC	CYVM150 DK80*BC	CYVM150 DK80*SC	CYVM200 DK100*BC	CYVM200 DK100*SC	CYVM250 DK140*BC	CYVM250 DK140*SC	
Heating capacity	Speed 1		kW	6.0		7.5		9.7		13.3		
	Speed 2		kW	7.7		9.3		12.1		16.8		
	Speed 3		kW	9.2		11.0		13.4		19.9		
Power input	Fan only	Nom.	kW	0.37		0.56		0.75		0.94		
	Heating	Nom.	kW	0.37		0.56		0.75		0.94		
Delta T	Speed 1		K	20		17		16		18		
	Speed 2		K	19		15		14		16		
	Speed 3		K	17		14		13		15		
Casing	Colour			RAL9016	RAL9006	RAL9016	RAL9006	RAL9016	RAL9006	RAL9016	RAL9006	
	Material			Electro-galvanised sheet steel								
Dimensions Cassette (F)	Unit	Height	mm	270								
		Width	mm	1,000		1,500		2,000		2,500		
		Depth	mm	590								
	Packed unit	Height	mm	760								
		Width	mm	1,630				2,130		2,630		
		Depth	mm	630				680				
Dimensions Cassette (C)	Unit	Height	mm	270								
		Width	mm	1,000		1,500		2,000		2,500		
		Depth	mm	821								
	Packed unit	Height	mm	760								
		Width	mm	1,630				2,130		2,630		
		Depth	mm	630				680				
Dimensions Cassette (R)	Unit	Height	mm	270								
		Width	mm	1,048		1,548		2,048		2,548		
		Depth	mm	561								
	Packed unit	Height	mm	760								
		Width	mm	1,630				2,130		2,630		
		Depth	mm	630				680				
Required ceiling void >			mm	420								
Door height	Max.		m	2.5 (2) / 2.4 (3) / 2.3 (4)	2.5 (2) / 2.4 (3) / 2.3 (4)	2.5 (2) / 2.4 (3) / 2.3 (4)	2.5 (2) / 2.4 (3) / 2.3 (4)	2.5 (2) / 2.4 (3) / 2.3 (4)	2.5 (2) / 2.4 (3) / 2.3 (4)	2.5 (2) / 2.4 (3) / 2.3 (4)	2.5 (2) / 2.4 (3) / 2.3 (4)	
Door width	Max.		m	1.0		1.5		2.0		2.5		
Weight Cassette (F)	Unit		kg	57		73		94		108		
	Packed unit		kg	73		90		126		161		
Weight Cassette (C)	Unit		kg	68		88		111		136		
	Packed unit		kg	84		108		148		189		
Weight Cassette (R)	Unit		kg	66		93		117		144		
	Packed unit		kg	81		113		154		197		
Fan	Air flow rate	Heating	Speed 1	m³/h	875 (1)		1,313 (1)		1,750 (1)		2,188 (1)	
			Speed 2	m³/h	1,223 (1)		1,835 (1)		2,446 (1)		3,058 (1)	
			Speed 3	m³/h	1,605 (1)		2,408 (1)		3,210 (1)		4,013 (1)	
Sound pressure level	Heating	Speed 1		dBA	35 (1)		36 (1)		38 (1)		39 (1)	
		Speed 2		dBA	44 (1)		46 (1)		47 (1)		48 (1)	
		Speed 3		dBA	50 (1)		51 (1)		53 (1)		54 (1)	
Refrigerant	Type			R-410A								
	Control			Electronic expansion valve								
Piping connections	Liquid	OD	mm	9.52								
	Gas	OD	mm	16.0						19.0		
	Drain	OD	mm	-								
Required accessories (should be ordered separately)				Daikin wired remote control (BRC1E52A/B or BRC1D52)								
Air filter				Vacuum cleanable filter G1								

Standard Accessories : Low voltage cable 1x25m + 2x5m;

1 Specifications

1 - 2 CYVM

1-2-2Electrical Specifications				CYVM100 DK80*BC	CYVM100 DK80*SC	CYVM150 DK80*BC	CYVM150 DK80*SC	CYVM200 DK100*BC	CYVM200 DK100*SC	CYVM250 DK140*BC	CYVM250 DK140*SC
Power supply	Frequency	Hz	50								
	Voltage	V	230								
Voltage range	Min.	%	224								
	Max.	%	240								
Current	Maximum fuse amps (MFA)	A	16								
	Full load amps (FLA)	Fan motor	A	1.24	1.86	2.48	3.10				

Notes

- (1) Installation level B: standard setting, refer to the databook of installation manual for more information (only one installation level available)
- (2) Favorable conditions: covered shopping mall or revolving door entrance
- (3) Normal conditions: little direct wind, no opposite open doors, building with ground floor only
- (4) Unfavorable conditions: location at a corner or square, multiple floors and/or open stairway
- (5) Sound pressure level (at 3m)
- (6) Pipe work and electrical connections are on top of the unit

Specifications

1 - 3 CYVL

2
1

1-3-1 Technical Specifications				CYVL100 DK125*BC	CYVL100 DK125*SC	CYVL150 DK200*BC	CYVL150 DK200*SC	CYVL200 DK250*BC	CYVL200 DK250*SC	CYVL250 DK250*BC	CYVL250 DK250*SC	
Heating capacity	Speed 1		kW	9.9		14.9		19.1		20.9		
	Speed 2		kW	11.9		17.9		22.8		24.6		
	Speed 3		kW	15.6		23.3		29.4		31.1		
Power input	Fan only	Nom.	kW	0.75		1.13		1.50		1.88		
	Heating	Nom.	kW	0.75		1.13		1.50		1.88		
Delta T	Speed 1		K	19				18		16		
	Speed 2		K	17						14		
	Speed 3		K	15				14		12		
Casing	Colour			RAL9016	RAL9006	RAL9016	RAL9006	RAL9016	RAL9006	RAL9016	RAL9006	
	Material			Electro-galvanised sheet steel								
Dimensions Cassette (F)	Unit	Height	mm	370								
		Width	mm	1,000		1,500		2,000		2,500		
		Depth	mm	774								
	Packed unit	Height	mm	990								
		Width	mm	1,630				2,130		2,630		
		Depth	mm	630				680				
Dimensions Cassette (C)	Unit	Height	mm	370								
		Width	mm	1,000		1,500		2,000		2,500		
		Depth	mm	1,105								
	Packed unit	Height	mm	1,410								
		Width	mm	1,630				2,130		2,630		
		Depth	mm	630				680				
Dimensions Cassette (R)	Unit	Height	mm	370								
		Width	mm	1,048		1,548		2,048		2,548		
		Depth	mm	745								
	Packed unit	Height	mm	990								
		Width	mm	1,630				2,130		2,630		
		Depth	mm	630				680				
Required ceiling void \>			mm	520								
Door height	Max.		m	3.0 (2) / 2.75 (3) / 2.5 (4)	3.0 (2) / 2.75 (3) / 2.5 (4)	3.0 (2) / 2.75 (3) / 2.5 (4)	3.0 (2) / 2.75 (3) / 2.5 (4)	3.0 (2) / 2.75 (3) / 2.5 (4)	3.0 (2) / 2.75 (3) / 2.5 (4)	3.0 (2) / 2.75 (3) / 2.5 (4)	3.0 (2) / 2.75 (3) / 2.5 (4)	
Door width	Max.		m	1.0		1.5		2.0		2.5		
Weight Cassette (F)	Unit		kg	76		100		126		157		
	Packed unit		kg	92		116		159		195		
Weight Cassette (C)	Unit		kg	81		118		151		190		
	Packed unit		kg	100		143		195		252		
Weight Cassette (R)	Unit		kg	83		141		155		196		
	Packed unit		kg	99		162		193		250		
Fan	Air flow rate	Heating	Speed 1	m³/h	1,591 (1)		2,387 (1)		3,182 (1)		3,978 (1)	
			Speed 2	m³/h	2,056 (1)		3,084 (1)		4,112 (1)		5,140 (1)	
			Speed 3	m³/h	3,100 (1)		4,650 (1)		6,200 (1)		7,750 (1)	
Sound pressure level	Heating	Speed 1		dBA	36 (1)		38 (1)		39 (1)		40 (1)	
		Speed 2		dBA	43 (1)		45 (1)		46 (1)		47 (1)	
		Speed 3		dBA	53 (1)		54 (1)		56 (1)		57 (1)	
Refrigerant	Type			R-410A								
	Control			Electronic expansion valve								
Piping connections	Liquid	OD	mm	9.52								
	Gas	OD	mm	16.0		19.0		22.0				
	Drain	OD	mm	-								
Required accessories (should be ordered separately)				Daikin wired remote control (BRC1E52A/B or BRC1D52)								
Air filter				Vacuum cleanable filter G1								

Standard Accessories : Low voltage cable 1x25m + 2x5m;

1 Specifications

1 - 3 CYVL

1-3-2Electrical Specifications				CYVL100 DK125*BC	CYVL100 DK125*SC	CYVL150 DK200*BC	CYVL150 DK200*SC	CYVL200 DK250*BC	CYVL200 DK250*SC	CYVL250 DK250*BC	CYVL250 DK250*SC
Power supply	Frequency	Hz	50								
	Voltage	V	230								
Voltage range	Min.	%	224								
	Max.	%	240								
Current	Maximum fuse amps (MFA)	A	16								
	Full load amps (FLA)	Fan motor	A	3.03	4.55	6.07	7.58				

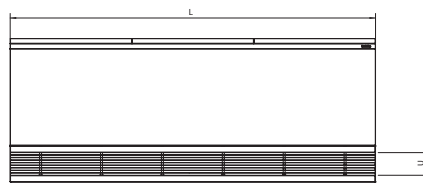
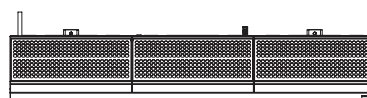
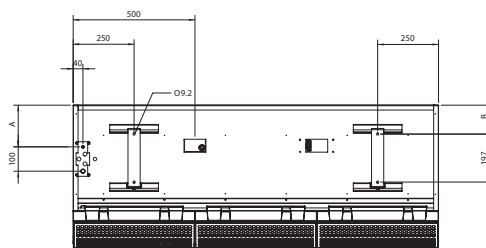
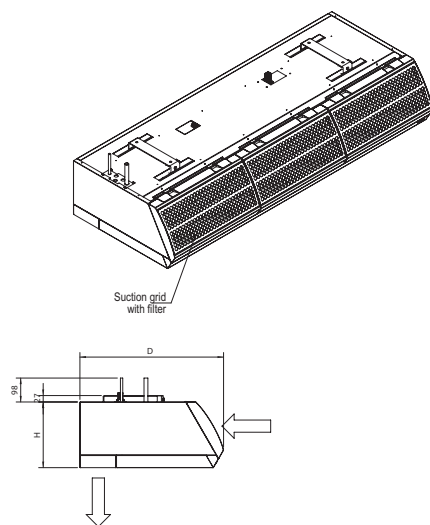
Notes

- (1) Installation level B: standard setting, refer to the databook of installation manual for more information (only one installation level available)
- (2) Favorable conditions: covered shopping mall or revolving door entrance
- (3) Normal conditions: little direct wind, no opposite open doors, building with ground floor only
- (4) Unfavorable conditions: location at a corner or square, multiple floors and/or open stairway
- (5) Sound pressure level (at 3m)
- (6) Pipe work and electrical connections are on top of the unit

2 Dimensional drawings

2 - 1 Free hanging

CYVS_DK_FBN/FSN
CYVM_DK_FBN/FSN
CYVL_DK_FBN/FSN



Type	L	H	D	U	A	B
CYVS-DK-FBN/FSN	1,000 - 1,500	270	590	93	171	119
CYVM-DK-FBN/FSN	2,000 - 2,500					
CYVL-DK-FBN/FSN	1,000 - 1,500	370	774	124.5	245.5	200
	2,000 - 2,500					

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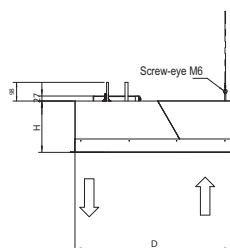
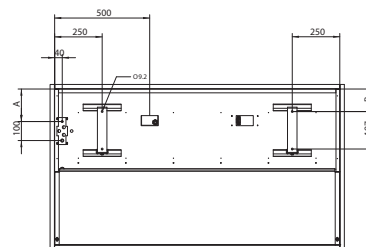
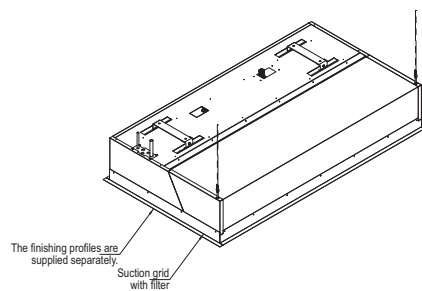
REMARKS

- The 2,500mm large devices have 3 suspension brackets, where the third bracket is mounted at half the length of the device.

2 Dimensional drawings

2 - 2 Cassette

CYVS_DK_CBN/CSN
CYVM_DK_CBN/CSN
CYVL_DK_CBN/CSN

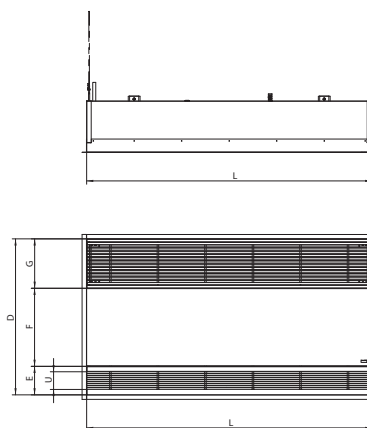


Number of suction grids per device

Device length	Number	Suction grid length
1000 / 1500	1	1,000 / 1,500
2000 / 2500	2	1,000 / 1,250

*1 drain grid per device

Type	L	H	D	U	A	B	E	F	G
CYVS-DK-CBN/CSN CYVM-DK-CBN/CSN	1,000 - 1,500 2,000 - 2,500	270	821	93	171	119	250	411	260
CYVL-DK-CBN/CSN	1,000 - 1,500 2,000 - 2,500	370	1,105	124.5	245.5	200	181.5	563.5	360



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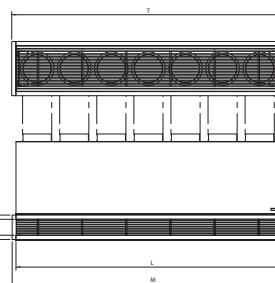
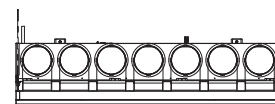
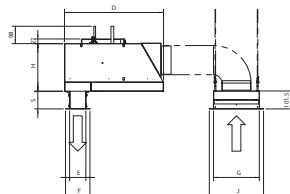
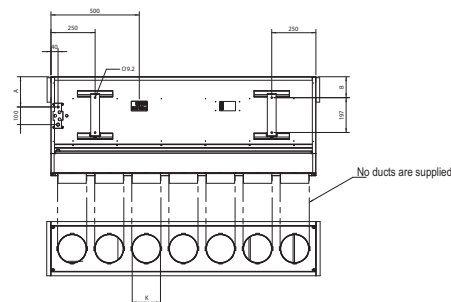
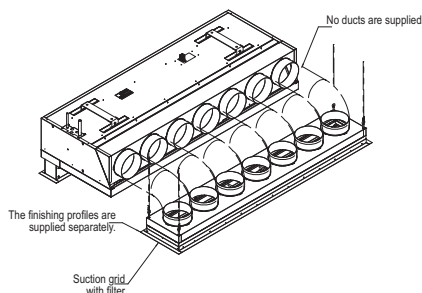
REMARKS

- 1 The 2,500mm large devices have 3 suspension brackets, where the third bracket is mounted at half the length of the device.
2 The mounting holes for finishing profiles in a lowered ceiling (L+8) x (D+8) mm

2 Dimensional drawings

2 - 3 Recessed

CYVS_DK_RBN/RSN
CYVM_DK_RBN/RSN
CYVL_DK_RBN/RSN



Number of ducts per device

Type	1000	1500	2000	2500
CYVS-DK-RBN/RSN	5	7	10	12
CYVM-DK-RBN/RSN	5	7	10	12
CYVL-DK-RBN/RSN	3	5	6	8

Number of suction grids per device

Device length	Number	Suction grid length
1000 / 1500	1	1,000 / 1,500
2000 / 2500	2	1,000 / 1,250

*1 drain grid per device

Type	L	H	D	S	U	A	B	E	F	G	J	K	M	T
CYVS-DK-RBN/RSN	1,000 - 1,500	270	561	80-125	90	171	119	92	139	260	308	Ø160	1044-1544 2044-2544	1048-1548 2048-2548
CYVM-DK-RBN/RSN	1,000 - 1,500 2,000 - 2,500	270	561	80-125	90	171	119	92	139	260	308	Ø160	1044-1544 2044-2544	1048-1548 2048-2548
CYVL-DK-RBN/RSN	1,000 - 1,500 2,000 - 2,500	370	745	80-125	121.5	245.5	200	123.5	170	360	408	Ø250	1044-1544 2044-2544	1048-1548 2048-2548

REMARKS

- The 2,500mm large devices have 3 suspension brackets, where the third bracket is mounted at half the length of the device.
- Holes (for finishing profiles) - drain (L+8) x (E+8) mm - suction (L+8) x (G+8) mm.

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