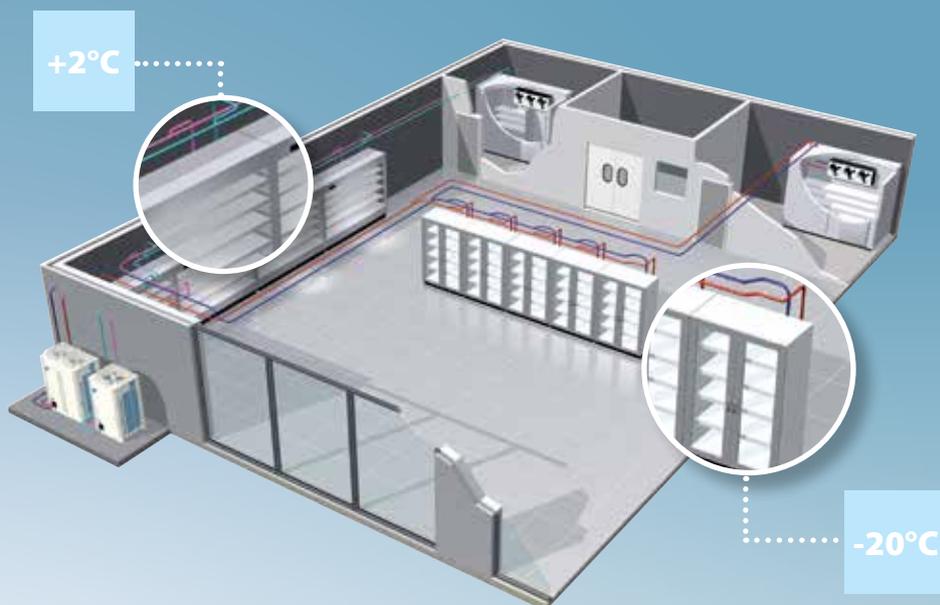


Refrigeration

ZEAS condensing units

- » High-energy efficiency
- » Fully packaged unit
- » Compact solution
- » Low sound level
- » VRV technology for refrigeration



LREQ-BY1



With this new range of inverter-driven condensing units, Daikin expands its range of specified solutions with **unified models for medium and low- temperature refrigeration applications.**

The ZEAS condensing units are the perfect solution for applications with fluctuating loads and **high energy efficiency needs**, including supermarkets, blast coolers and freezers, cold storage, butchers, bakeries, restaurants and petrol station retail outlets.

On top of that their small footprint and low sound emissions allow installation in virtually any available place.

Multi ZEAS: by coupling two 15 HP or 20 HP single units, Daikin can now reach double capacity and thus larger applications using the same pipe work, thus saving on copper piping and installation time.

Installer benefits

- › Local European production allows for smarter order-to-delivery
- › Reduced piping requirements and thus installation time
- › Integrated electrical and control box and a pre-charged unit ensure quick and easy commissioning

Consultant benefits

- › One model enables most refrigeration needs in the market
- › Multi ZEAS enables even bigger applications (up to 75.8 kW)
- › The use of high ESP fans allows for indoor installation

End user benefits

- › Low electricity bills and a reduced environmental footprint
- › Only lightweight roof structures required, so no need for a dedicated technical room
- › Neighbourhood-friendly choice, including a silent night-operation mode

High energy efficiency

Daikin's ZEAS range is based on the company's **proven VRV technology**, which is renowned for its energy efficiency, reliability and controllability, resulting in lower CO₂ emissions and reduced operating costs. The units are equipped with **DC inverter scroll compressors**, which can meet cooling demands, while consuming less power than traditional units. High levels of energy efficiency are achieved, even in partial load conditions.

Fully packaged unit

The ZEAS units are factory-assembled to ensure that all the correct components are installed and work together in an optimal manner, thus reducing the installation time. The units are then subjected to a range of tests to ensure the correct performance and that there are no leaks of the pre-loaded refrigerant. This, together with the advanced, built-in controls and pre-charged refrigerant, mean that the ZEAS is truly a plug-and-play installation.

Low noise levels

ZEAS condensing units are also far quieter than traditional units, because the inverter control allows fan speeds to be kept low while still meeting cooling demands. Sound levels can be adjusted to match environmental requirements or the time of day. At night, for example, maximum fan speeds can be lowered to reduce noise, with only a limited loss of refrigeration capacity. The fans have blades and grills designed specially to reduce turbulence and thus sound level.

Small footprint

The physically small size of the ZEAS condensing units contradict their power. The low overall dimensions of these units, the smallest 5 HP condensing units on the market, means that they can be installed close to where they are required. This eliminates the need for a dedicated technical room, providing enormous savings in terms of space, a critical economic benefit in applications such as supermarkets. All in all, the ZEAS provides the best surface-to-capacity ratio in the market.



Modbus communication box and diagnostic tool



Specifications

OUTDOOR UNIT				LREQ5BY1	LREQ6BY1	LREQ8BY1	LREQ10BY1	LREQ12BY1	LREQ15BY1	LREQ20BY1	
Refrigerating capacity	Medium temperature	Nom.	kW	12.5	15.2	19.8	23.8	26.5	33.9	37.9	
	Low temperature	Nom.	kW	5.51	6.51	8.33	10.0	10.7	13.9	15.4	
Power input	Medium temperature	Nom.	kW	5.10	6.56	8.76	10.6	12.0	15.2	17.0	
	Low temperature	Nom.	kW	4.65	5.88	7.72	9.27	9.89	12.8	14.1	
Dimensions	Unit	HeightxWidthxDepth	mm	1,680x635x765			1,680x930x765		1,680x1,240x765		
Weight	Unit		kg	166			242		331		
Heat exchanger	Type	Cross fin coil									
Compressor	Type	Hermetically sealed scroll compressor									
	Piston displacement		m ³ /h	11.18	13.85	19.68	23.36	25.27	32.24	35.8	
	Speed		rpm	5,280	6,540	4,320 + 2,900	6,060 + 2,900	6,960 + 2,900	5,280 + 2,900 + 2,900	6,960 + 2,900 + 2,900	
	Output		W	2,600	3,200	2,100 + 3,600	3,000 + 3,600	3,400 + 3,600	2,600 + 3,600 + 3,600	3,400 + 3,600 + 3,600	
	Starting method	Direct on line (inverter driven)									
Fan	Type	Propeller fan									
	Quantity	1									
Air flow rate	Cooling	Nom.	m ³ /min	95	102	171	179	191	230	240	
	Output		W	350			750		350 x 2		750 x 2
Drive	Direct drive										
Sound pressure level	Nom.		dBA	55.0	56.0	57.0	59.0	61.0	62.0	63.0	
Operation range	Evaporator	Cooling	Min.~Max.	°CDB							
	Ambient temperature	Min.~Max.	°C								
Refrigerant	Type	R-410A									
	Charge		kg	5.2			7.9		11.5		
	Control	Electronic expansion valve									
Refrigerant oil	Type	Daphne FVC68D									
	Charged volume		l	1.7 / 2.5			1.7 / 2.1 / 3.0		1.7 / 2.1 / 4.0		
Piping connections	Liquid	50m or less	ø 9.5 C1220T (Brazing connection)						ø 12.7 C1220T (Brazing connection)		
		50~130m	ø 9.5 C1220T (Brazing connection)			ø 12.7 C1220T (Brazing connection)					
	Gas	50m or less	ø 22.2 C1220T (Brazing connection)			ø 28.6 C1220T (Brazing connection)					
		50~130m	ø 22.2 C1220T (Brazing connection)			ø 28.6 C1220T (Brazing connection)			ø 34.9 C1220T (Brazing connection)		
Power supply	Phase/Frequency/Voltage		Hz/V	3~/50/380-415							
Current	Nominal running current (RLA) - 50Hz		A	7.1/-/-	9.2/-/-	5.3/7.5/-	7.4/7.9/-	9.8/8.3/-	7.0/8.2/8.2	9.5/8.4/8.4	
Current - 50Hz	Starting current (MSC)		A	-			74		75		84

OUTDOOR UNIT				LREQ30BY1				LREQ40BY1			
System				LREQ15BY1R x 2				LREQ20BY1R x 2			
Refrigerating capacity	Medium temperature	Nom.	kW	67.8				75.8			
	Low temperature	Nom.	kW	27.8				29.6			
Power input	Medium temperature	Nom.	kW	30.4				34.0			
	Low temperature	Nom.	kW	25.6				27.6			
Dimensions	Unit	HeightxWidthxDepth	mm	(1,680x1,240x765) x 2				(1,680x1,240x765) x 2			
Weight	Unit		kg	331 x 2				337 x 2			
Heat exchanger	Type	Cross fin coil									
Compressor	Type	Hermetically sealed scroll compressor									
	Piston displacement		m ³ /h	32.24 x 2				35.80 x 2			
	Speed		rpm	(5,280+2,900+2,900) x 2				(6,960+2,900+2,900) x 2			
	Output		W	(2.6+3.6+3.6) x 2				-			
	Starting method	Direct online (inverter driven)									
Fan	Type	Propeller fan									
	Quantity	2 x 2									
Air flow rate	Cooling	Nom.	m ³ /min	230 x 2				240 x 2			
	Output		W	(350 x 2) x 2				(750 x 2) x 2			
Drive	Direct drive										
Sound pressure level	Nom.		dBA	65.0				66.0			
Operation range	Evaporator	Cooling	Min.~Max.	°CDB							
	Ambient temperature	Min.~Max.	°C								
Refrigerant	Type	R-410A									
	Charge		kg	11.5 x 2			11.5 x 2				
	Control	Electronic expansion valve									
Refrigerant oil	Type	Daphne FVC68D									
	Charged volume		l	(1.7+ 2.1+2.1+ 4.0) x 2							
Piping connections	Liquid	50m or less	ø 19.05 C1220T (Brazing connection)								
		50~130m	ø 19.05 C1220T (Brazing connection)								
	Gas	50m or less	ø 41.28 C1220T (Brazing connection)								
		50~130m	ø 41.28 C1220T (Brazing connection)								
Power supply	Phase/Frequency/Voltage		Hz/V	3~/50/380~415							
Current	Nominal running current (RLA) - 50Hz		A	(7.0/8.2/8.2) x 2				(9.5/8.4/8.4) x 2			
Current - 50Hz	Starting current (MSC)		A	109				115			

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