

GEO
169C West End Lane, NW2 6LH
Planing Application: PP-11767742
Date: 09 August 2023

Air conditioning Model: Mitsubishi Heavy Industries SRK100ZR-W/FDC100VNP-W

COOLING STATEMENT

Background:

The proposed basement café presents a unique architectural situation, characterized by the absence of windows or natural ventilation sources. Given this distinct circumstance, the implementation of an efficient and effective air conditioning system becomes paramount to ensure the comfort and well-being of patrons, clients and staff within the premises.

Justification:

Indoor Air Quality Enhancement: In an enclosed environment without natural ventilation, the concentration of indoor pollutants, humidity, and odors can rapidly increase. An appropriate air conditioning system equipped with air filtration and purification technologies will significantly contribute to maintaining a healthy indoor air quality, creating a welcoming and pleasant atmosphere for visitors.

Temperature Regulation: Without proper ventilation, the basement café may experience temperature extremes that could discourage customers from visiting. The installation of an air conditioning system enables precise temperature control, ensuring a consistent and comfortable indoor climate throughout the year, regardless of external weather conditions.

Staff and Patron Comfort: The well-being of café staff and customers is of utmost importance. The absence of windows and natural ventilation could lead to discomfort due to high humidity levels and stagnant air. An air conditioning system will alleviate these concerns, offering a refreshing environment that encourages extended stays and repeat business.

Condensation Control: Basements are susceptible to humidity accumulation and condensation, which could potentially lead to structural damage, mold growth, and health risks. A well-designed air conditioning system will effectively manage humidity levels, mitigating the risk of such issues and safeguarding the integrity of the building.

Compliance with Accessibility Standards: An air-conditioned environment provides a more inclusive and accessible space for all individuals, regardless of their sensitivities to temperature variations. This aligns with modern accessibility standards, enhancing the café's reputation as a welcoming and accommodating establishment.

Enhanced Business Viability: The installation of an air conditioning system will significantly enhance the overall appeal and comfort of the basement café. This, in turn, will attract a broader customer base, encourage longer stays, and foster positive reviews—essential factors for the café's success in a competitive market.

Conclusion:

In consideration of the unique circumstances presented by the lack of windows or ventilation in the basement café, the installation of an air conditioning system is not only beneficial but also essential. The proposed system aligns seamlessly with Policy CC2 of the Camden Local Plan 2017, which emphasizes the creation of comfortable and sustainable indoor environments.

We are committed to implementing a state-of-the-art air conditioning solution that adheres to all relevant regulations and guidelines. This commitment reflects our dedication to providing an inviting, enjoyable, and compliant space for both patrons and staff.

Should you require any further information or clarification, please do not hesitate to contact us. We appreciate your attention to this matter and look forward to the opportunity to enhance the basement café experience through the installation of an appropriate air conditioning system.

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■ SPECIFICATIONS

Indoor unit			SRK63ZR-W	SRK71ZR-W	SRK80ZR-W	SRK100ZR-W
Outdoor unit			SRC63ZR-W	SRC71ZR-W	SRC80ZR-W	FDC100VNP-W
Power source			1 Phase, 220 - 240V, 50Hz			
Nominal cooling capacity (Min~Max)		kW	6.3 (1.2~7.4)	7.1 (2.3~7.8)	8.0 (2.3~9.7)	9.6 (2.1~9.6)
Nominal heating capacity (Min~Max)		kW	7.1 (0.8~9.3)	8.0 (2.0~10.8)	9.0 (2.1~11.2)	10.0 (1.7~10.4)
Power consumption		Cooling/Heating kW	1.63 / 1.64	1.93 / 1.95	2.09 / 2.27	3.10 / 2.80
EER/COP		Cooling/Heating	3.87 / 4.33	3.68 / 4.10	3.83 / 3.96	3.10 / 3.57
Max. running current		A	14.5	17	17	19
Sound power level	Indoor	Cooling/Heating	56 / 58	57 / 60	60 / 62	59 / 62
	Outdoor	Cooling/Heating	64 / 65	63 / 63	67 / 67	68 / 67
Sound pressure level	Indoor	Cooling (Hi/Me/L0/Ulo)	44 / 39 / 35 / 25	44 / 41 / 37 / 25	47 / 44 / 39 / 26	48 / 45 / 40 / 27
		Heating (Hi/Me/L0/Ulo)	44 / 38 / 34 / 28	46 / 39 / 35 / 28	47 / 41 / 36 / 29	48 / 43 / 38 / 30
	Outdoor	Cooling/Heating	54 / 54	53 / 51	56 / 55	56 / 54
		Air flow	Cooling (Hi/Me/L0/Ulo)	20.5 / 18.1 / 15.7 / 10.4	20.5 / 18.6 / 16.2 / 10.4	23.5 / 20.2 / 17.5 / 10.4
Air flow	Outdoor	Heating (Hi/Me/L0/Ulo)	22.5 / 19.0 / 16.5 / 13.1	25.0 / 19.8 / 17.3 / 13.3	26.5 / 21.3 / 18.4 / 13.5	27.5 / 23.2 / 19.1 / 13.6
		Cooling/Heating	41.5 / 41.5	55 / 43.5	63 / 49.5	63 / 55
Exterior dimensions	Indoor	HeightxWidthxDepth	mm	339 x 1197 x 262		
	Outdoor			640 x 800(+71) x 290	750 x 880(+88) x 340	
Net weight		Indoor / Outdoor	kg	15.5 / 45.0	15.5 / 56.0	16.5 / 57.0
Refrigerant		Type/GWP		R32 / 675		
Charge		kg/TCO ₂ Eq	1.25 / 0.844	1.5 / 1.013	1.6 / 1.080	1.7 / 1.148
Refrigerant piping size		Liquid/Gas	ø mm	6.35(1/4") / 12.7(1/2")		
Refrigerant line (one way) length		m	Max.30			
Vertical height differences		Outdoor is higher/lower	m	Max.20 / Max.20		
Outdoor operating temperature range		Cooling	-15~46			
		Heating	-15~24			
Clean filter		Allergen Clear Filter x 1, Photocatalytic Washable Deodorizing Filter x 1				

• The data are measured under the following conditions (ISO-T1, H1). Cooling: Indoor temp. of 27°CDB, 19°CWB, and outdoor temp. of 35°CDB. Heating: Indoor temp. of 20°CDB, and outdoor temp. of 7°CDB, 6°CWB.
 • Sound level indicates the value in an anechoic chamber. During operation these values are somewhat higher due to ambient conditions.
 • 'tonne(s) of CO₂ equivalent' means a quantity of greenhouse gases- expressed as the product of the weight of the greenhouse gases in metric tonnes and of their global warming potential.