

Ducted Split System Air Conditioners

Product Review ISD-K Series



Extra Long Life
Epoxy Coated Outdoor Coil

Nominal Cooling Capacity
5.4 – 23 kW



MEPS
APRIL 2013
COMPLIANT

Legacy Range

ISD-K SERIES - DUCTED SPLIT SYSTEM AIR CONDITIONERS

GENERAL

The ISD-K Indoor Units, together with their associated OSA-RK Outdoor Units, have been conceived from the start as reverse cycle (heat pump) split systems – designed to be efficient both when heating and cooling.

TEMPERZONE LIMITED

temperzone is one of Australasia's largest manufacturers of reverse cycle split system air conditioners. The company has been supplying units to the residential, commercial and industrial markets for over 40 years. Manufacturing facilities are located in New Zealand and Australia.

temperzone's mission is to provide the most competitively priced, reliable and efficient air conditioning equipment available to the international market.

APPLICATIONS

Ducted split systems are unobtrusive, quiet, and designed to provide year round comfort – warming in Winter and cooling in Summer. **temperzone**'s wide product range offers a unit of performance capacity to suit small to large split system air conditioner applications, e.g. homes, apartments, offices, shops, restaurants, motels, hotels, open plan office and work spaces, supermarkets, shopping malls and auditoriums.

temperzone ducted systems are particularly suitable for rooms with suspended tile ceilings. Not only is valuable wall space preserved, but also the conditioned air can be ducted to the parts of the room where it is most needed.

ISD units are suited to applications where large volume spaces are to be air conditioned. Medium to long pipe and duct runs are possible enabling greater installation flexibility.

A low profile version of the ISD, named ISDL, is available for applications where ceiling space is limited and only short duct lengths are required, e.g. apartments, hotel rooms. These units are small, lightweight, very quiet and easy to install.

This range of units have been developed to meet the needs of typical applications. Should you have special requirements, such as higher air flows, heating in low/high ambients, or greater sensible duty units contact your nearest **temperzone** representative. **temperzone** engineers have extensive experience in designing air conditioning equipment for specific applications.

FEATURES

Refrigerant R410A. Each complete system uses refrigerant R410A which is deemed to have zero ozone depletion potential, and is supplied precharged for a 10 m line length (systems up to 27 kW).

Efficient. These reverse cycle (heat pump) air conditioners provide one of the most efficient forms of heating you can invest in. For every 1 kW of power consumed, up to 3 kW of heat is generated. Each outdoor unit incorporates high efficiency scroll or rotary compressor/s. Heat exchange coils use inner grooved (rifled) tube for better heat transfer.

Performance. These systems have been designed and tested to perform in ambient conditions as low as -5°C and as high as 46°C . Multi-speed fan motors are used to match the supply air requirements.

Quiet. Most models have their compressor/s isolated in built-in, insulated compartments to minimise noise. The indoor units are insulated for noise attenuation.

Slimline. The compact upright design of most of the smaller outdoor units requires only a 100 mm gap on the coil side where installation is against a wall. Their slimline cabinet is particularly practical where there is restricted space, e.g. side access pathways, balconies, narrow ledges, etc.

Durable. **temperzone** split systems are built tough to withstand all weathers. Their durable construction ensures a long life and excellent return on your investment.

The outdoor coil's aluminium fins are epoxy coated for extra protection in corrosive environments, e.g. salt laden sea air. Outdoor unit cabinets are constructed from high grade galvanised steel (not plastic) - polyester powder coated (grey) for all weather protection. External fasteners are stainless steel. Indoor unit cabinets are constructed from high grade galvanised steel and also include corrosion resistant drain trays.

Service Access. Most indoor units have built-in drain trays that can be removed for ease of cleaning and service accessibility.

Insulation. Indoor unit cabinets are generously insulated to reduce condensation and contain noise.

Self Diagnostics. Outdoor Units include a controller (OUC) that has a display of LEDs to indicate faults and running conditions. A general fault indicator is included for interface to external systems.

Safety. The refrigeration systems includes a number of protection facilities, including: HP and loss of refrigerant indication, anti rapid cycle timers, frost protection, circuit breaker control circuits, electronic de-ice switch, and crankcase heaters. An externally attached safety drain tray is available for clients who require added peace of mind re condensate drainage.

User Friendly. ISD/L non-digital models up to 27 kW can be supplied with a **temperzone** SAT Controller. This controller has been designed to maintain a high level of comfort for room occupants. Emphasis has been placed on providing controls that are easy to use — despite the sophisticated microprocessor system that runs it. Use of the Auto and Timer function settings allows you to "set it and forget it".

Peace of Mind. The manufacturer operates a quality management system that conforms to AS/NZS ISO 9001:2008. **temperzone** products have been chosen, against worldwide competition, for use in some of the most exclusive projects — chosen because of their proven efficiency, durability, performance, reliability and value.

OPTIONS

- Filter box c/w washable filter rated EU2 (refer table)
- Indoor unit spring mounting kit (ISDL 56K - ISD 230K)
- SAT Wall t/stat and safety drain tray on non-digital models up to 27kW
- Electric heater box for boost heat
- Soft starter (OSA 83–110RKS)
- Outdoor unit wall mounting brackets (OSA 55-110RK)
- SAT Controller kit (230V) for retrofit to all models



Optional SAT Wall Thermostat
for non-digital systems up to 27kW

ISD-K SERIES - SINGLE PHASE SYSTEMS (NON-DIGITAL)



Power Supply: 220—240 V a.c. 50 Hz					
Indoor Unit		ISDL 56K	ISDL 83K	ISDL 96K	ISDL 110K
Outdoor Unit		OSA 55RKSH	OSA 83RKSH	OSA 95RKSH	OSA 110RKSH
Nominal Cooling Capacity *1	kW	5.4	7.7	9.5	11.2
Net Cooling Capacity	kW	5.38	8.04	9.26	10.90
E.E.R. (cooling)		2.91	2.99	2.91	2.98
Heating Capacity *2 (Rev. Cycle versions)	kW	4.7	7.6	8.6	10.0
Indoor Air Flow (nominal)	l/s	280	340	500	500
Sound Pressure Level (Indoor/Outdoor) *3	dB(A)	50 / 47	50 / 48	49 / 50	49 / 50
Maximum Vertical Separation	m	12	16	16	16
Maximum Standard Line Length	m	30	30	30	30
Maximum Extended Line Length (with extra protection)*4	m	—	40	40	40
Running Amps (Total System)	A/ph.	11.5	11.5	16.4	16.3
Dimensions (Indoor/ Outdoor)	Width	mm	1040 / 890	1040 / 1040	1430 / 1040
	Height	mm	260 / 660	260 / 660	260 / 660
	Depth	mm	780 / 375	780 / 395	780 / 395
Recommended Pipe Sizes (Suction/Liquid)	mm dia.	16 / 6	16 / 10	16 / 10	19 / 10
Weight (Indoor/Outdoor)	kg	30 / 57	30 / 85	42 / 86	42 / 91
Features *5		f h p s t	a f h p s t	a f h p s t	a f h p s t

Power Supply: 220—240 V a.c. 50 Hz				Standard Profile Indoor Units		
Indoor Unit		ISD 83K	ISD 96K	ISD 110K		
Outdoor Unit		OSA 83RKSH	OSA 95RKSH	OSA 110RKSH		
Nominal Cooling Capacity *1	kW	7.7	9.3	11.0		
Net Cooling Capacity	kW	8.46	9.35	10.60		
E.E.R. (cooling)		2.90	2.92	2.90		
Heating Capacity *2 (Rev. Cycle versions)	kW	8.0	8.4	10.3		
Indoor Air Flow (nominal)	l/s	460	500	560		
Sound Pressure Level (Indoor/Outdoor) *3	dB(A)	56 / 48	59 / 50	59 / 50		
Maximum Vertical Separation	m	16	16	16		
Maximum Standard Line Length	m	30	30	30		
Maximum Extended Line Length (with extra protection)*4	m	40	40	40		
Running Amps (Total System)	A/ph.	12.0	16.5	16.7		
Dimensions (Indoor/ Outdoor)	Width	mm	835 / 1040	1050 / 1040		
	Height	mm	420 / 660	420 / 660		
	Depth	mm	650 / 395	650 / 395		
Recommended Pipe Sizes (Suction/Liquid)	mm dia.	16 / 10	16 / 10	19 / 10		
Weight (Indoor/Outdoor)	kg	36 / 85	40 / 85	40 / 91		
Features *5		a f h p s t	a f h p s t	a f h p s t		

*See page 4 for Notes and Key to Features.

Power Supply: 400 - 415 V a.c. 50Hz		Low Profile	Standard Profile		
Indoor Unit	ISDL 110K		ISD 110K	ISD 230K	
	OSA 110RKTH		OSA 110RKTH	OSA 230RKTH	
Nominal Cooling Capacity * ¹	kW	11.2	11.0	23.0	
Net Cooling Capacity	kW	10.90	10.60	22.26	
E.E.R. (cooling)		2.98	2.9	3.31	
Heating Capacity * ² (Rev. Cycle versions)	kW	10.0	10.3	22.2	
Indoor Air Flow (nominal)	l/s	500	560	1200	
Sound Pressure Level (Indoor/Outdoor) * ³	dB(A)	49 / 50	59 / 50	66 / 54	
Maximum Vertical Separation	m	20	20	20	
Maximum Standard Line Length	m	30	30	30	
Maximum Extended Line Length (with extra protection) * ⁴	m	40	40	60	
Running Amps (Total System)	A/ph.	6.7 / 5.3 / 5.1	8.8 / 5.5 / 5.1	16 / 11 / 11	
Dimensions (Indoor/ Outdoor)	Width	mm	1430 / 1035	1050 / 1035	1655 / 1250
	Height	mm	260 / 765	420 / 765	420 / 1380
	Depth	mm	780 / 400	650 / 400	630 / 450
Recommended Pipe Sizes (Suction/Liquid)	mm dia	19 / 10	19 / 10	22 / 13	
Weight (Indoor/Outdoor)	kg	42 / 88	40 / 91	74 / 179	
Features * ⁵		f h p s t	f h p s t	f h p s t	

Notes

Capacities are for close coupled systems. Allowance must be made for pipe length, pipe size and bends. Refer to separate Technical Data pamphlets for performance data under a range of conditions.

*¹ Nominal Cooling Capacity at AS/NZS 3823 conditions: Indoor Entering Air Temperature 27°C D.B., 19°C W.B.; Outdoor Entering Air Temperature 35°C D.B.

Net Cooling Capacity figures at AS/NZS 3823 include an allowance for fan motor heat loss.

*² Nominal Heating Capacity at AS/NZS 3823 conditions: Indoor Entering Air Temperature 21°C D.B.; Outdoor Entering Air Temperature 7°C D.B., 6°C W.B.

*³ Indoor unit at 1 m from outlet of 1 m insulated duct (to JIS 8616); Outdoor unit at 3 m.

*⁴ Refer to the *Split Systems Installation Guide* published at www.temperzone.biz, or consult your nearest temperzone representative for extended line length requirements.

*⁵ Key to Features:

a – Soft starter option
 d – Single phase version available
 f – Filter box option
 h – Heater box option

p – Precharged for 10 m line length
 s – Indoor unit spring mounting kit option
 t – Wall t/stat & safety drain tray option

Materials and specifications subject to change without notice due to the manufacturer's ongoing research and development programme.

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