

# **Ducted Split System Air Conditioners**

# Product Review ISD-K Series



#### 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).

Digital Scroll Compressor. 'Digital' systems include a digital scroll compressor, plus a conventional scroll compressor on twin systems. Each digital model/version provides a variable capacity ability that enables closer control of room temperature. This is achieved by avoiding on/off cycling of the compressor. These compressors have proven very reliable because of their design simplicity. Electrical harmonic noise is very low.

**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.

**Economical**. Some ISD/OSA systems (refer table) have two independent refrigeration circuits to provide the flexibility and economy of two stage operation, i.e. utilising one or two circuits as conditions vary, plus the advantage of staggered starting.

**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. The larger indoor units have belt driven fans for even finer tuning.

**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, crankcase heaters and 24 V control (larger systems). An externallly 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 9001:2001. 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 polypropylene net filter (refer table)
- · Pleated fiiters, 50mm thick, on belt drive indoor units
- Indoor unit spring mounting kit (ISDL 55K ISD 460K excluding ISD299K)
- SAT Wall t/stat and safety drain tray on non-digital models up to 27kW
- Electric heater box for boost heat
- Soft starter (OSA 80-140RKS; standard on OSA 160RKS)
- Outdoor unit wall mounting brackets (OSA 55-182RK)
- · Fault indicating auxillary relay board
- TZ-701 Wall thermostat on models with 24V control

# new diGital models!

#### **SECRETS OF THE SCROLL**

Introducing one of the first compressors to deliver a capacity range from 10% to 100% without the use of inverters.

Digital compressors ensure high efficiency through a unique feature termed axial compliance. This allows the fixed scroll to move incrementally in the axial direction to ensure that fixed and orbiting scrolls are always loaded together with optimal force.

With 70% fewer moving parts, digital compressors deliver enhanced performance with reliable and uncomplicated design.

**Extended Capability**. Digitals are particularly suitable for applications requiring full or high proportions of fresh air, VAV, close control and supply air temperature control.

Modulation Chamber

Solenoid Valve

Spring

Piston Assembly



**User Friendly**. Each 'digital' air conditioning system is supplied with a 'set and forget' TZT-701 Controller.

#### **DIGITAL MODELS**

Power Supply: 400 - 415 V a.c. 50Hz					Standard Profile		
Indoor Unit			ISD 175KGD	ISD 210KGD	ISD 298KBGD	ISD 299KBGD	ISD 430KBGD
	Outdo	or Unit	OSA 175RKTHG	OSA 210RKTVG	OSA 298RKTBG	OSA 298RKTBG	OSA 430RKTBG
Cooling Capacity *1		kW	16.6	21.5	31.0 ≥	31.0	43.4 ≥
E.E.R. (cooling)		2.80	3.05	3.05	3.08	3.12	
Heating Capacity *2 (Rev. Cycle versions) kW		16.2	20.1	30.9	31.0	41.2	
Indoor Air Flow (nominal) I/s		1000	1200	1570 =	1620	2440 =	
Sound Pressure Level (Indoor/Outdo	or) *3	dB(A)	59 / 52	59 / 52	74 / 76	85 / 76	65 / 63
Maximum Vertical Separation		m	20	20	20	20	20
Maximum Standard Line Leng	th	m	30	30	30	30	50
Maximum Extended Line Length (with extra	a protection)*4	m	60	60	60	60	60
Running Amps (Total System)		A/ph.	13/8/9	14 / 10 / 9	15 / 15 / 22	22 / 22 / 25	19 / 13 / 13
Dimensions	Width	mm	1305 / 1125	1650 / 1210	1675 / 1460	1510 / 1460	1510 / 2235
Dimensions (Indoor/ Outdoor)	Height	mm	420 / 1120	570 / 1130	565 / 990	905 / 990	1020 / 1330
	Depth	mm	630 / 420	715 / 630	655 / 1180	1200 / 1180	1200 / 825
Recommended Pipe Sizes (Suction/Liquid) mm dia		22 / 13	22 / 13	19 / 13 (x2)	19 / 13	22 / 13 (x2)	
Weight (Indoor/Outdoor) kg		54 / 137	108 / 152	116 / 285	215 / 285	245 / 377	
Features *5			fghpsw	fghpsuw	cfgsuvw	bcguw	bcguvw

#### \*5 Key to Features (also see notes page 6)

- b Belt drive indoor fan
- c 24 volt control
- f Filter box option
- g Digital compressor (single)
- h Heater box option
- p Precharged for 10 m line length
- s Indoor unit spring mounting kit option
- u Upward discharge outdoor air fans
- v Twin compressor system (twin circuit)
- w TZT-701 Controller supplied for digitals

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



<b>Power Supply:</b> 220—240 V a	ı.c. 50 Hz			Low Profile	Indoor Units		
	it ISDL 55K	ISDL 56K	ISDL 80K	ISDL 95K	ISDL 110K	ISDL 110K	
		eo i	900	900	0000	0000	1
	Outdoor Un	OSA 55RKSH	OSA 55RKSH	OSA 80RKSH	OSA 95RKSH	OSA 95RKSH	OSA 110RKSH
Cooling Capacity *1	k۱	V 5.2	5.4	7.7	8.7	9.5	11.2
E.E.R. (cooling)		2.75	2.91	2.99	2.76	2.91	2.98
Heating Capacity *2 (Rev. Cycle versions) kW		V 4.6	4.7	7.6	8.8	8.6	10.0
Indoor Air Flow (nominal)	l,	s 270	280	340	400	500	500
Sound Pressure Level (Indoor/Outdo	or) *3 dB(A	45 / 47	50 / 47	50 / 48	47 / 50	49 / 50	49 / 50
Maximum Vertical Separation	ı	n 12	12	16	16	16	16
Maximum Standard Line Leng	th ı	n 30	30	30	30	30	30
Maximum Extended Line Length (with extr.	a protection)*4	n –	_	40	40	40	40
Running Amps (Total System)	A/pl	n. 8.4	11.5	11.5	13.4	16.4	16.3
Dimensions	Width mi	n 950 / 885	1040 / 885	1040 / 885	1235 / 1035	1430 / 1035	1430 / 1035
Dimensions (Indoor/ Outdoor)	Height mi	n 260 / 665	260 / 665	260 / 665	260 / 665	260 / 665	260 / 765
	Depth mi	n 780 / 380	780 / 380	780 / 380	780 / 400	780 / 400	780 / 400
Recommended Pipe Sizes (Suction/L	iquid) mm dia	13/6	16 / 6	16 / 10	16 / 10	16 / 10	19 / 10
Weight (Indoor/Outdoor)	k	g 28 / 73	30 / 73	30 / 78	33 / 86	42 / 86	42 / 88
Features *5		fhpst	fhpst	afhpst	afhpst	afhpst	afhpst

<b>Power Supply:</b> 220—240 V a.c. 50 Hz					Standard Pro	file Indoor Uni	ts	
Indoor Unit		ISD 80K	ISD 110K	ISD 110K	ISD 135K	ISD 160K	ISD 160K	
							THE PARTY OF	m m
	Outdo	or Unit	OSA 80RKSH	OSA 95RKSH	OSA 110RKSH	OSA 140RKSH	OSA 155RKSV	OSA 160RKSH
			0	0	9			0
Cooling Capacity *1		kW	7.7	9.3	11.0	13.5	15.5	16.2
E.E.R. (cooling)			2.90	2.92	2.90	3.05	2.92	3.02
Heating Capacity *2 (Rev. Cycle versions) kW		8.0	8.4	10.3	13.1	14.8	14.7	
Indoor Air Flow (nominal) I/s		460	500	560	780	800	800	
Sound Pressure Level (Indoor/Outdoo	or) *3	dB(A)	56 / 48	59 / 50	59 / 50	64 / 51	62 / 52	62 / 54
Maximum Vertical Separation		m	16	16	16	20	20	20
Maximum Standard Line Lengt	th	m	30	30	30	30	30	30
Maximum Extended Line Length (with extra	a protection)*4	m	40	40	40	60	60	60
Running Amps (Total System)		A/ph.	12.0	16.5	16.7	19	25	25
Dimensions	Width	mm	835 / 885	1050 / 1035	1050 / 1035	1140 / 1075	1140 / 1200	1140 / 1125
Dimensions (Indoor/ Outdoor)	Height	mm	420 / 665	420 / 665	420 / 765	420 / 865	420 / 975	420 / 970
	Depth	mm	650 / 380	650 / 400	650 / 400	630 / 420	630 / 630	630 / 420
Recommended Pipe Sizes (Suction/L	iquid) n	nm dia.	16 / 10	16 / 10	19 / 10	19 / 10	22 / 13	22 / 13
Weight (Indoor/Outdoor)		kg	36 / 78	40 / 86	40 / 88	50 / 116	50 / 141	50 / 133
Features *5			afhpst	afhpst	afhpst	afhpst	fhpstu	fhpst

## \*5 Key to Features (also see notes page 6)

- a Soft starter option
- f Filter box option h - Heater box option
- p Precharged for 10 m line length
  - $\ensuremath{\text{s}}$  Indoor unit spring mounting kit option
  - t Wall t/stat & safety drain tray option

u - Upward discharge outdoor air fans

### **ISD-K SERIES - THREE PHASE SYSTEMS** (NON-DIGITAL)



Power Supply: 400 - 415 V a.	Low Profile	Standard Profile						
	ISDL 110K	ISD 110K	ISD 135K	ISD 160K	ISD 160K			
	0000H			MA	M M			
	Outdoor Unit	OSA 110RKTH	OSA 110RKTH	OSA 140RKTH	OSA 155RKTV	OSA 160RKTH		
						0		
Cooling Capacity *1	kW	11.2	11.0	13.5	15.5	16.2		
E.E.R. (cooling)	2.98	2.9	3.05	2.92	3.04			
Heating Capacity *2 (Rev. Cycle	10.0	10.3	13.1	14.8	14.7			
Indoor Air Flow (nominal)	500	560	780	800	800			
Sound Pressure Level (Indoor/Outdoo	or) *3 dB(A)	49 / 50	59 / 50	64 / 51	62 / 52	62 / 54		
Maximum Vertical Separation	m	20	20	20	20	20		
Maximum Standard Line Lengt	h m	30	30	30	30	30		
Maximum Extended Line Length (with extra	a protection)*4 m	40	40	60	60	60		
Running Amps (Total System)	A/ph.	6.7 / 5.3 / 5.1	8.8 / 5.5 / 5.1	12.5 / 7 / 7	11.2 / 7.7 / 7.2	12/8/8		
Dimensions	Width mm	1430 / 1035	1050 / 1035	1140 / 1075	1140 / 1200	1140 / 1125		
Dimensions	Height mm	260 / 765	420 / 765	420 / 865	420 / 975	420 / 970		
(Indoor/ Outdoor)	Depth mm	780 / 400	650 / 400	630 / 420	630 / 630	630 / 420		
Recommended Pipe Sizes (Suction/L	19 / 10	19 / 10	19 / 10	22 / 13	22 / 13			
Weight (Indoor/Outdoor)	kg	42 / 88	40 / 88	50 / 116	50 / 141	50 / 133		
Features *5		fhpst	fhpst	fhpst	fhpstu	fhpst		

Indoor Unit   ISD 200K   ISD 230K   ISD 230K   ISD 270K	Power Supply: 400 - 415 V a.c. 50	Hz	Standard Profile					
Cooling Capacity *1 kW 19.3 19.3 23.3 26.8  E.E.R. (cooling) 2.94 2.94 3.06 3.12  Heating Capacity *2 (Rev. Cycle versions) kW 17.3 17.3 22.4 25.3  Indoor Air Flow (nominal) I/s 1100 1100 1200 1440  Sound Pressure Level (Indoor/Outdoor) *3 dB(A) 66 / 52 66 / 54 66 / 54 66 / 54 64 / 54  Maximum Vertical Separation m 20 20 20 20  Maximum Standard Line Length m 30 30 30 30  Maximum Extended Line Length m 60 60 60 90  Running Amps (Total System) A/ph. 14 / 8 / 8 17 / 11 / 11 18.5 / 13 / 13  Dimensions Width mm 1495 / 1125 1495 / 1210 1655 / 1250 1665 / 1250  Dimensions (Indoor/ Outdoor) Depth mm 630 / 420 630 / 630 630 / 450 650 / 450  Recommended Pipe Sizes (Suction/Liquid) mm dia. 22 / 13 22 / 13 28 / 13		ISD 200K	ISD 200K	ISD 230K	ISD 270K			
Cooling Capacity *1 kW 19.3 19.3 23.3 26.8  E.E.R. (cooling) 2.94 2.94 3.06 3.12  Heating Capacity *2 (Rev. Cycle versions) kW 17.3 17.3 22.4 25.3  Indoor Air Flow (nominal) I/s 1100 1100 1200 1440  Sound Pressure Level (Indoor/Outdoor) *3 dB(A) 66 / 52 66 / 54 66 / 54 66 / 54 64 / 54  Maximum Vertical Separation m 20 20 20 20  Maximum Standard Line Length m 30 30 30 30  Maximum Extended Line Length m 60 60 60 90  Running Amps (Total System) A/ph. 14 / 8 / 8 17 / 11 / 11 18.5 / 13 / 13  Dimensions Width mm 1495 / 1125 1495 / 1210 1655 / 1250 1665 / 1250  Dimensions (Indoor/ Outdoor) Depth mm 630 / 420 630 / 630 630 / 450 650 / 450  Recommended Pipe Sizes (Suction/Liquid) mm dia. 22 / 13 22 / 13 28 / 13								
E.E.R. (cooling)  2.94  2.94  3.06  3.12  Heating Capacity *2 (Rev. Cycle versions) kW 17.3  17.3  22.4  25.3  Indoor Air Flow (nominal)  I/s 1100  1100  1200  1440  Sound Pressure Level (Indoor/Outdoor) *3 dB(A) 66 / 52  66 / 54  66 / 54  66 / 54  66 / 54  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 60  60  60  90  Running Amps (Total System)  A/ph. 14 / 8 / 8  14 / 8 / 8  17 / 11 / 11  18.5 / 13 / 13  Dimensions  (Indoor/ Outdoor)  Height mm  420 / 1125  420 / 980  420 / 1380  555 / 1380  Recommended Pipe Sizes (Suction/Liquid) mm dia.  22 / 13  22 / 13  22 / 13  28 / 13	O	utdoor Unit	OSA 200RKTH	OSA 200RKTV	OSA 230RKTH	OSA 270RKTH		
Heating Capacity *2 (Rev. Cycle versions)       kW       17.3       17.3       22.4       25.3         Indoor Air Flow (nominal)       I/s       1100       1100       1200       1440         Sound Pressure Level (Indoor/Outdoor) *3       dB(A)       66 / 52       66 / 54       66 / 54       64 / 54         Maximum Vertical Separation       m       20       20       20       20         Maximum Standard Line Length       m       30       30       30       30         Maximum Extended Line Length (with extra protection)*4       m       60       60       90         Running Amps (Total System)       A/ph.       14 / 8 / 8       14 / 8 / 8       17 / 11 / 11       18.5 / 13 / 13         Dimensions (Indoor/ Outdoor)       Height mm (420 / 1125)       420 / 980       420 / 1380       555 / 1380         Recommended Pipe Sizes (Suction/Liquid)       mm dia.       22 / 13       22 / 13       22 / 13       28 / 13	Cooling Capacity *1	kW	19.3	19.3	23.3	26.8		
Indoor Air Flow (nominal)         I/s         1100         1100         1200         1440           Sound Pressure Level (Indoor/Outdoor) *3         dB(A)         66 / 52         66 / 54         66 / 54         64 / 54           Maximum Vertical Separation         m         20         20         20         20           Maximum Standard Line Length         m         30         30         30         30           Maximum Extended Line Length (with extra protection)*4         m         60         60         90           Running Amps (Total System)         A/ph.         14 / 8 / 8         14 / 8 / 8         17 / 11 / 11         18.5 / 13 / 13           Dimensions         Width mm         1495 / 1125         1495 / 1210         1655 / 1250         1665 / 1250           Dimensions         Height mm         420 / 1125         420 / 980         420 / 1380         555 / 1380           (Indoor/ Outdoor)         Depth mm         630 / 420         630 / 630         630 / 450         650 / 450           Recommended Pipe Sizes (Suction/Liquid)         mm dia.         22 / 13         22 / 13         22 / 13         28 / 13	E.E.R. (cooling)	2.94	2.94	3.06	3.12			
Sound Pressure Level (Indoor/Outdoor) *3         dB(A)         66 / 52         66 / 54         66 / 54         64 / 54           Maximum Vertical Separation         m         20         20         20         20           Maximum Standard Line Length         m         30         30         30         30           Maximum Extended Line Length (with extra protection)*4         m         60         60         60         90           Running Amps (Total System)         A/ph.         14 / 8 / 8         14 / 8 / 8         17 / 11 / 11         18.5 / 13 / 13           Dimensions         Width mm         1495 / 1125         1495 / 1210         1655 / 1250         1665 / 1250           Undoor/ Outdoor)         Height mm         420 / 1125         420 / 980         420 / 1380         555 / 1380           Recommended Pipe Sizes (Suction/Liquid)         mm dia.         22 / 13         22 / 13         22 / 13         28 / 13	Heating Capacity *2 (Rev. Cycle versio	17.3	17.3	22.4	25.3			
Maximum Vertical Separation         m         20         20         20         20           Maximum Standard Line Length         m         30         30         30         30           Maximum Extended Line Length (with extra protection)*4         m         60         60         90           Running Amps (Total System)         A/ph.         14 / 8 / 8         14 / 8 / 8         17 / 11 / 11         18.5 / 13 / 13           Dimensions         Width mm         1495 / 1125         1495 / 1210         1655 / 1250         1665 / 1250           (Indoor/ Outdoor)         Height mm         420 / 1125         420 / 980         420 / 1380         555 / 1380           Recommended Pipe Sizes (Suction/Liquid)         mm dia.         22 / 13         22 / 13         22 / 13         28 / 13	Indoor Air Flow (nominal)	1100	1100	1200	1440			
Maximum Standard Line Length         m         30         30         30         30           Maximum Extended Line Length (with extra protection)*4         m         60         60         60         90           Running Amps (Total System)         A/ph.         14 / 8 / 8         14 / 8 / 8         17 / 11 / 11         18.5 / 13 / 13           Dimensions         Width mm         1495 / 1125         1495 / 1210         1655 / 1250         1665 / 1250           (Indoor/ Outdoor)         Height mm         420 / 1125         420 / 980         420 / 1380         555 / 1380           Recommended Pipe Sizes (Suction/Liquid)         mm dia.         22 / 13         22 / 13         22 / 13         28 / 13	Sound Pressure Level (Indoor/Outdoor) *3	dB(A)	66 / 52	66 / 54	66 / 54	64 / 54		
Maximum Extended Line Length (with extra protection)*4         m         60         60         60         90           Running Amps (Total System)         A/ph.         14 / 8 / 8         14 / 8 / 8         17 / 11 / 11         18.5 / 13 / 13           Dimensions (Indoor/ Outdoor)         Width mm 420 / 1125         1495 / 1210         1655 / 1250         1665 / 1250           Depth mm 630 / 420         420 / 980         420 / 1380         555 / 1380           Recommended Pipe Sizes (Suction/Liquid)         mm dia.         22 / 13         22 / 13         22 / 13         28 / 13	Maximum Vertical Separation	m	20	20	20	20		
Running Amps (Total System)       A/ph.       14 / 8 / 8       14 / 8 / 8       17 / 11 / 11       18.5 / 13 / 13         Dimensions         (Indoor/ Outdoor)       Height mm       420 / 1125       420 / 980       420 / 1380       555 / 1380         Recommended Pipe Sizes (Suction/Liquid)       mm dia.       22 / 13       22 / 13       22 / 13       22 / 13	Maximum Standard Line Length	m	30	30	30	30		
Dimensions   Width   mm   1495 / 1125   1495 / 1210   1655 / 1250   1665 / 1250	Maximum Extended Line Length (with extra protection	on)*4 <b>m</b>	60	60	60	90		
Dimensions         Height (Indoor/ Outdoor)         Height mm         420 / 1125         420 / 980         420 / 1380         555 / 1380           Recommended Pipe Sizes (Suction/Liquid)         mm dia.         22 / 13         22 / 13         22 / 13         22 / 13         28 / 13	Running Amps (Total System)	A/ph.	14/8/8	14 / 8 / 8	17 / 11 / 11	18.5 / 13 / 13		
Height (Indoor/ Outdoor)         Height (Indoor/ Outdoor)         mm         420 / 1125         420 / 980         420 / 1380         555 / 1380           Recommended Pipe Sizes (Suction/Liquid)         mm dia.         630 / 420         630 / 630         630 / 450         650 / 450           Recommended Pipe Sizes (Suction/Liquid)         mm dia.         22 / 13         22 / 13         22 / 13         28 / 13		dth mm	1495 / 1125	1495 / 1210	1655 / 1250	1665 / 1250		
Depth mm 630 / 420 630 / 630 630 / 450 650 / 450  Recommended Pipe Sizes (Suction/Liquid) mm dia. 22 / 13 22 / 13 22 / 13 28 / 13	Hei	ght mm	420 / 1125	420 / 980	420 / 1380	555 / 1380		
	(indoor/ Outdoor) Dej	oth mm	630 / 420	630 / 630	630 / 450	650 / 450		
Weight (Indoor/Outdoor) kg 61 / 155 61 / 137 65 / 195 93 / 198	Recommended Pipe Sizes (Suction/Liquid)	mm dia.	22 / 13	22 / 13	22 / 13	28 / 13		
	Weight (Indoor/Outdoor)	kg	61 / 155	61 / 137	65 / 195	93 / 198		
Features *5 fhpst fhpst fpst	Features *5		fhpst	fhpst	fhpst	fpst		

## \*5 Key to Features (also see notes page 6)

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
- u Upward discharge outdoor air fans

### ISD-K SERIES - THREE PHASE SYSTEMS (NON-DIGITAL)



Power Supply: 400 - 415 V a.c. 50Hz			Direct Drive		■ Mid Range	ge Models 🕨	Belt	Drive
Indoor Unit		ISD 298KB	ISD 330K	ISD 405K	ISD 460K	ISD 299KB	ISD 331K	ISD 406K
				BEEL	BEEL	P	2)	
	Outdoor Unit	OSA 298RKTE	OSA 330RKTV	OSA 405RKTV	OSA 460RKTV	OSA 298RKTB	OSA 330RKTV	OSA 405RKTV
Cooling Capacity *1	kW	31.0 ≥	33.2	41.5	45.6	31.0	32.9	42.6
E.E.R. (cooling)		3.05	3.14	2.90	2.80	3.06	3.07	3.08
Heating Capacity *2 (Rev. Cycle versions) kW		30.9	33.4	39.5	43.3	31.0	31.9	40.4
Indoor Air Flow (nominal)	Indoor Air Flow (nominal) //s		1800	2350	2600	1620	1900	2350
Sound Pressure Level (Indoor/Outdoor)	*3 dB(A)	74 / 76	65 / 56	67 / 56	66 / 64	85 / 76	77 / 75	81 / 79
Maximum Vertical Separation	m	20	20	20	20	20	20	20
Maximum Standard Line Length	m	30	50	50	50	30	50	50
Maximum Extended Line Length (with extra pro	otection)*4 m	60	90	90	90	60	90	90
Running Amps (Total System)	A/ph.	22 / 15 / 15	18 / 18 / 17	23 / 23 / 23	28 / 24 / 25	22 / 22 / 25	17 / 17 / 20	19 / 19 / 24
	Width mm	1675 / 1460	1540 / 1680	2000 / 1825	2000 / 2235	1510 / 1460	1510 / 1680	1510 / 2010
	Height mm	565 / 990	700 / 1195	700 / 1320	700 / 1330	905 / 990	905 / 1195	905 / 1320
(Indoor/ Outdoor)	Depth mm	655 / 1180	715 / 825	745 / 765	745 / 825	1200 / 1180	1200 / 825	1200 / 765
Recommended Pipe Sizes (Suction/Liqu	uid) mm dia.	19 / 13 (x2)	28 / 13	35 / 16	35 / 16	19 / 13 (x2)	28 / 13	35 / 16
Weight (Indoor/Outdoor)	kg	116 / 285	131 / 256	181 / 301	190 / 375	215 / 285	220 / 260	225 / 301
Features *5		cfsuv	cfsu	cfsu	cfsu	bcuv	bcu	bcu

Power Supply: 400 - 415 V a.c. 50Hz				High Ca <sub>l</sub>	pacity Models	c/w Belt Drive I	ndoor Fan	
Indoor Unit		ISD 430	КВ	ISD 461K	ISD 520KB	ISD 630KB	ISD 840KB	ISD 950KB
		THE STATE OF			H	B		
	Outdoor Unit	OSA 430F	RKTB	OSA 460RKTV	OSA 520RKTV	B OSA 630RKTVB	OSA 840RKTVB	OSA 950RKTVB
Cooling Capacity *1	kW	43.4	Σ	45.9	52.5 ≥	62.7 ≦	84.7 ≥	94.9 ≥
E.E.R. (cooling)		3.12	STE	2.85	2.96	2.75	2.7	2.7
Heating Capacity *2 (Rev. Cycle version	ons) kW	41.2	SY	44.1	52.2 ×	61.9	79.8 ×	90.1
Indoor Air Flow (nominal)	l/s	2440	z	2600	2800 =	3250 =	4500 =	5000 =
Sound Pressure Level (Indoor/Outdoor) *3	dB(A)	65 / 63	<b>X</b>	81 / 79	68 / 63	70 / 64	73 / 66	73 / 66
Maximum Vertical Separation	m	20		20	20	20	20	20
Maximum Standard Line Length	m	50		50	50	50	50	50
Maximum Extended Line Length (with extra protect	tion)*4 m	60		90	90	90	90	90
Running Amps (Total System)	A/ph.	19 / 13 /	13	26 / 27 / 30	37 / 37 / 37	43 / 43 / 43	59 / 50 / 50	58 / 59 / 59
W Dimensions	idth mm	1510/2	235	1510 / 2235	1670 / 1755	1670 / 1755	2220 / 2300	2220 / 2300
He	ight mm	1020 / 1	330	1020 / 1330	1005 / 1200	1005 / 1200	1210 / 1070	1210 / 1280
(Indoor/ Outdoor) De	epth mm	1200 / 8	25	1200 / 825	1200 / 1510	1200 / 1510	1320 / 1680	1320 / 1680
Recommended Pipe Sizes (Suction/Liquid	) mm dia.	22 / 13	(x2)	35 / 16	28 / 13 (x2)	28 / 13 (x2)	35 / 16 (x2)	35 / 16 (x2)
Weight (Indoor/Outdoor)	kg	245 / 37	7	245 / 375	250 / 438	274 / 446	372 / 546	383 / 560
Features *5		bcuv		bcu	bcuv	bcuv	bcuv	bcuv

## \*5 Key to Features (also see notes page 6)

b - Belt drive indoor fan

c - 24 volt control

f - Filter box option

s – Indoor unit spring mounting kit option

u - Upward discharge outdoor air fans

v - Twin compressor system (twin circuit)

#### ISD-K SERIES - DUCTED SPLIT SYSTEM AIR CONDITIONERS



#### **Notes**

Capacities are for close coupled systems. Allowance must be made for 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.

\*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.

#### \*5 Key to Features:

a - Soft starter option

b - Belt drive indoor fan

c - 24 volt control

f - Filter box option

g - Digital compressor (single)

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

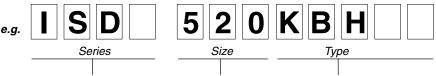
u – Upward discharge outdoor air fans

v - Twin compressor system (twin circuit)

w - TZT-701 Controller supplied for digitals

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

#### **NOMENCLATURE**



I - Indoor

S - Split

**D** - Ducted

L - Low Profile

Divide by 10 to get approx. nominal

Capacity in kilowatts K - R410A refrigerant compatible

B - Twin circuit system

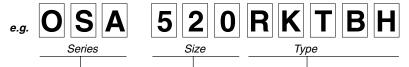
G - Digital scroll compressor

 $\boldsymbol{\mathsf{H}}$  - Horizontal discharge supply air fan

 ${f V}$  - Vertical discharge supply air fan

 $\boldsymbol{\mathsf{D}}$  - Room Thermostat supplied

N - Safety drain tray supplied



O - Outdoor

S - Split

A - Air Cooled

Divide by 10 to get approx. nominal Capacity in

kilowatts

R - Reverse cycle

K - Refrigerant R410A

S - Single phase power supply

T - Three phase power supply

B - Twin compressor system (twin circuit)

G - Digital scroll compressor

H - Horizontal discharge fan

V - Vertical discharge fan



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



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

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



visit our website www.temperzone.biz

#### **AUCKLAND**

temperzone Ltd

38 Tidal Road, Mangere South,

Manukau 2022.

Private Bag 93303, Otahuhu,

Manukau 1640, N.Z.

Phone 0-9-279 5250

Fax 0-9-275 5637

Email sales@temperzone.co.nz

#### **WELLINGTON**

Phone 0-4-569 3262

Fax 0-4-566 6249

#### **CHRISTCHURCH**

Phone 0-3-379 3216

Fax 0-3-379 5956

#### **SYDNEY**

temperzone australia pty ltd

7A Bessemer Street,

PO Box 6448, Delivery Centre

Blacktown, NSW 2148

Phone (02) 8822 - 5700

Fax (02) 8822 - 5711

Email sales@temperzone.com.au

#### **MELBOURNE**

Phone (03) 9551 - 7422

Fax (03) 9551 - 8550

#### **ADELAIDE**

Phone (08) 8376 - 1505

Fax (08) 8376 - 1449

#### PERTH

Phone (08) 9314 - 3844

Fax (08) 9314 - 3855

#### TOWNSVILLE

Phone (07) 4773 - 9566

Fax (07) 4773 - 9166

#### **BRISBANE**

Phone (07) 3399 - 2544

Fax (07) 3399 - 2577

#### **NEWCASTLE**

Phone (02) 4962 - 1155

Fax (02) 4961 - 5101

#### **HOBART**

Phone (03) 6272 - 0066

Fax (03) 6272 - 0506

#### **SINGAPORE**

temperzone Ltd

1 Claymore Drive, #08-13

Rear Block, Orchard Towers

Singapore 229594

Phone SNG 6733 - 4292

Fax SNG 6235 - 7180

Email sales@temperzone.com.sg



