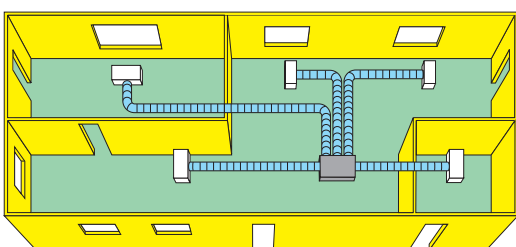




Concealed Ducted Unit

Concealed, ducted, cooling only and reverse cycle heat pump split systems, designed for horizontal ceiling void applications and supplied complete with a discharge plenum and spigots. Ideal for irregular shaped rooms, conference rooms and where low sound levels are essential.

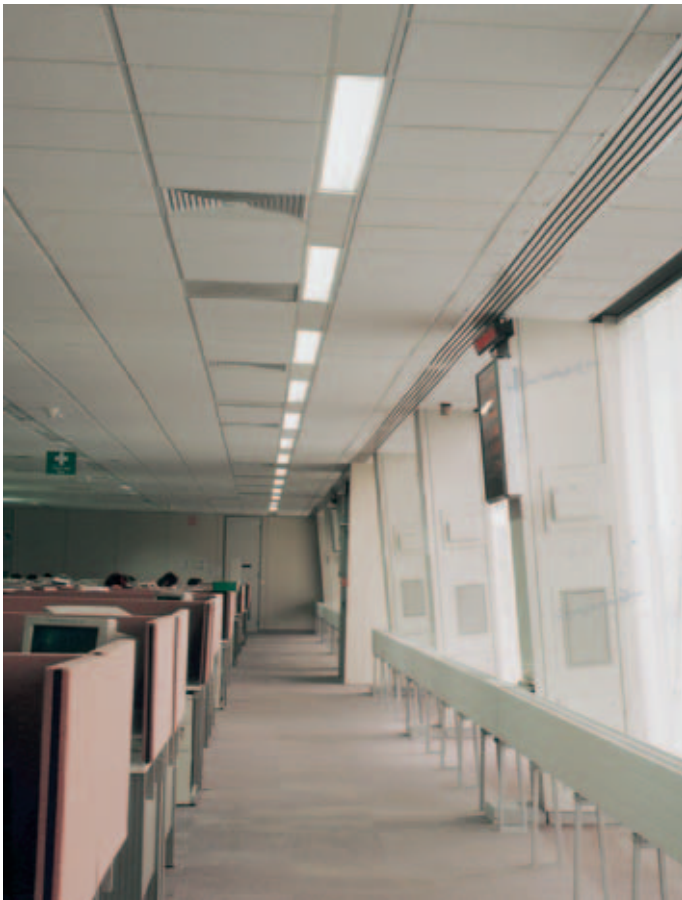
Designed and manufactured in the UK using high quality components, the DXD is available with cooling duties from 2.2 to 13.9 kW.



Multizone application.

KEY BENEFITS

- ◊ Choice of discharge arrangements
- ◊ Condensate pump option
- ◊ Low sound levels
- ◊ Electric heating options
- ◊ LPHW option
- ◊ Mix-matching DXD/H with alternative outdoor units provides systems for comfort, high sensible or heat pump applications
- ◊ Long pipe runs - up to 80m
- ◊ Matching outdoor units are factory charged with R407C refrigerant



For applications where low sound levels are essential.



MCU+ and MHPUE outdoor units.

STANDARD FEATURES

- Cooling and heat pump configurations
- Choice of discharge arrangements
- Long pipe runs – up to 80m
- 200mm discharge spigots
(see table on opposite page)
- Electronic remote controller (for hard wiring)
- Low sound levels
- Low in-ceiling height
- Integral discharge plenum
- Easily removable cleanable filters
- Outdoor units factory charged with R407C refrigerant



Wired control

OPTIONS

- Condensate pump
(5m head with overflow protection)
- Electric heating (DXD), boost heater (DXDH)
- LPHW coil
- Return air plenum (fitted with 200mm spigots)
- Fresh air spigot and additional spigots
- 250mm discharge or return air spigots

SOUND LEVELS

DXD/DXD/H Models	Model	Sound Pressure Levels - Inlet and Breakout	
		dBA	
		Low fan speed	High fan speed
	DXD/H 20	29	40
	DXD/H 30	34	47
	DXD/H 50	31	44
	DXD/H 60	35	46
	DXD/H 80	34	45
	DXD/H 90	38	47
	DXD/H 120	35	48
	DXD/H 130	43	50

Sound pressure levels measured at 3.2m distance at anechoic conditions.

SOUND LEVELS

DXD/DXD/H Models	Model	Sound Pressure Levels - Discharge	
		dBA	
		Low fan speed	High fan speed
	DXD/H 20	28	35
	DXD/H 30	26	37
	DXD/H 50	25	35
	DXD/H 60	26	36
	DXD/H 80	26	34
	DXD/H 90	27	36
	DXD/H 120	16	28
	DXD/H 130	23	33

Sound pressure levels measured at 3.2m distance at anechoic conditions.

AIRFLOWS

DXD/DXD/H Models	Model	Airflow m ³ /s		
		Min	Med	Max
		DXD/H 20	0.09	0.11
DXD/H 30	0.17	0.21	0.23	
DXD/H 50	0.20	0.25	0.30	
DXD/H 60	0.29	0.34	0.38	
DXD/H 80	0.28	0.33	0.37	
DXD/H 90	0.32	0.37	0.40	
DXD/H 120	0.25	0.43	0.55	
DXD/H 130	0.35	0.51	0.60	

External resistance 30 Pa

DIMENSIONS

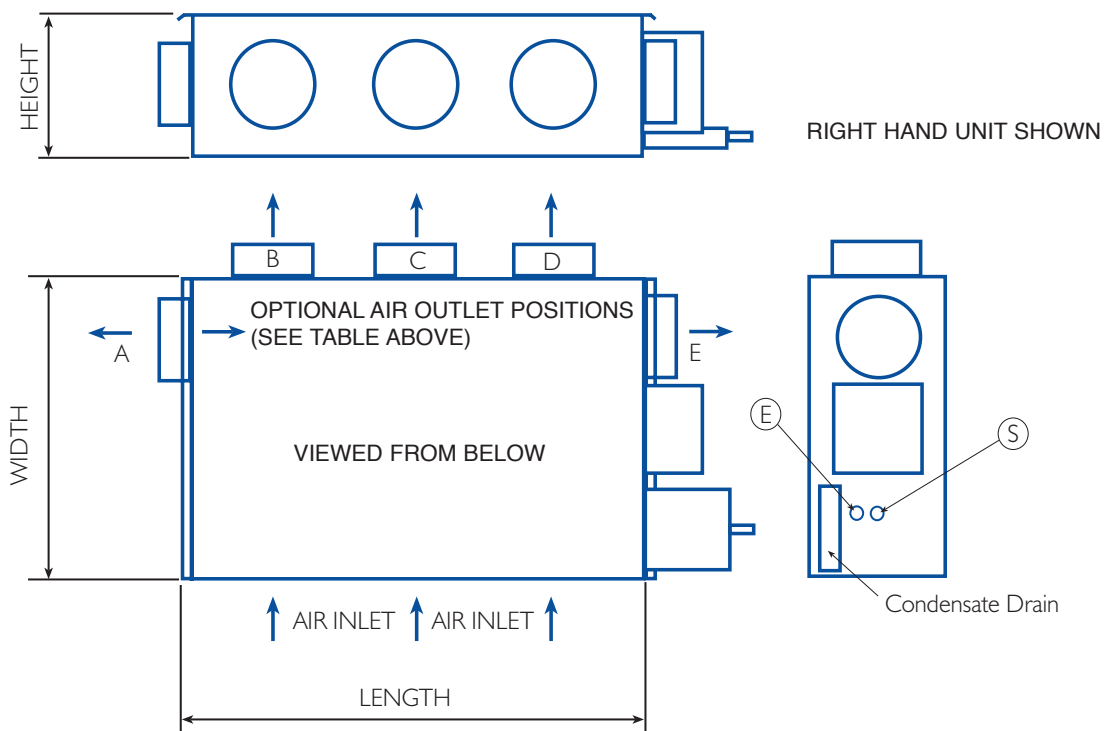
DXD/DXD/H Models	Model	Unpacked Dimensions			
		Height	Width	Length	Weight
		mm	mm	mm	kg
	DXD/H 20	260	785	463	22
	DXD/H 30	260	785	733	32
	DXD/H 50	260	785	1103	42
	DXD/H 60	260	785	1383	53
	DXD/H 80	260	785	1383	55
	DXD/H 90	260	785	1383	56
	DXD/H 120	315	835	1383	81
	DXD/H 130	315	835	1383	81

SPIGOT OPTIONS

DXD/DXD/H Models	Model	Spigots (200mm standard or optional 250mm)	
		No of Outlets available	Minimum number of spigots required
		DXD/H 20	3(A,C,E)
DXD/H 30	4(A,B,C,E)	2(B,C)	
DXD/H 50	4(A,B,C,E)	2(B,C)	
DXD/H 60	5(A,B,C,D,E)	3(B,C,D)	
DXD/H 80	5(A,B,C,D,E)	3(B,C,D)	
DXD/H 90	5(A,B,C,D,E)	3(B,C,D)	
DXD/H 120	5(A,B,C,D,E)	3(B,C,D)	
DXD/H 130	5(A,B,C,D,E)	3(B,C,D)	

PIPE SIZES

DXD/DXD/H Models	Model	Pipe Connections		
		Expansion (E)	Suction (S)	Condensate Drain mm od
		DXD/H 20	3/8"	3/8"
DXD/H 30	3/8"	1/2"	15	
DXD/H 50	3/8"	5/8"	15	
DXD/H 60	1/2"	5/8"	15	
DXD/H 80	1/2"	5/8"	15	
DXD/H 90	1/2"	5/8"	15	
DXD/H 120	1/2"	3/4"	15	
DXD/H 130	1/2"	3/4"	15	



Comfort Matches	Indoor Unit	Outdoor Unit	Total Cooling	SHR	Optional Electric Heating		System Maximum Starting Current		Full Load Amps 1 Phase		Full Load Amps 3 Phase	
	DXD	MCU+			kW		1 Phase	3 Phase	Cooling	Heating	Cooling	Heating
			kW			Amps	A/Phase	Amps	Amps	A/Phase	A/Phase	A/Phase
			230V	240V								
	DXD 20	15*	2.2	0.79	0.9	1.0	22	-	4.5	4.4	-	-
	DXD 30	30*	3.8	0.83	1.8	2.0	33	19	6.5	8.4	4.5	8.4
	DXD 50	50*	6.0	0.75	2.3	2.5	59	27	9.2	10.7	4.7	10.7
	DXD 60	80*	7.1	0.78	3.7	4.0	77	41	11.8	16.8	5.3	16.8
	DXD 80	90	9.0	0.72	3.7	4.0	116	50	17.0	16.8	7.8	16.8
	DXD 90	100	10.2	0.72	3.7	4.0	-	53	-	-	7.9	16.8
	DXD 130	165	13.9	0.73	3.7	4.0	-	74	-	-	11.6	18.1

* Matching ducted condensing units (DCU+ models) also available.

High Sensible Matches	Indoor Unit	Outdoor Unit	Total Cooling	SHR	Optional Electric Heating		System Maximum Starting Current		Full Load Amps 1 Phase		Full Load Amps 3 Phase	
	DXD	MCU+			kW		1 Phase	3 Phase	Cooling	Heating	Cooling	Heating
			kW			Amps	A/Phase	Amps	Amps	A/Phase	A/Phase	A/Phase
			230V	240V								
	DXD 30	20*	3.1	0.92	1.8	2.0	25	-	5.6	8.4	-	-
	DXD 50	40*	4.2	0.90	2.3	2.5	33	23	7.7	10.7	5.8	10.7
	DXD 60	60*	6.8	0.80	3.7	4.0	62	33	10.7	16.8	4.9	16.8
	DXD 80	80*	7.4	0.79	3.7	4.0	77	41	11.8	16.8	5.3	16.8
	DXD 90	90	9.3	0.75	3.7	4.0	116	50	17.0	16.8	7.8	16.8
	DXD 120	100	11.0	0.79	3.7	4.0	-	54	-	-	9.0	17.9
	DXD 130	130	12.3	0.77	3.7	4.0	-	65	-	-	9.7	18.1

* Matching ducted condensing units (DCU+ models) also available.

Reverse Cycle Heat Pump	Indoor Unit	Outdoor Unit	Total Cooling	SHR	Heating 7°C Outdoor			Heating -1°C Outdoor			System Maximum Starting Current		Full Load Amps		Optional Electric Heating		Full Load Amps + Electric Heating	
	DXDH	MHPUE/L			Output kW	Input kW	COP	Output kW	Input kW	COP	1 Phase	3 Phase	1 Phase	3 Phase	230V	240V	1 Phase	3 Phase
			kW							Amps	A/Phase	Amps	A/Phase	kW		Amps	A/Phase	
	DXDH 20	15*	2.1	0.79	2.0	1.1	1.8	1.7	0.9	1.9	26	-	4.5	-	0.9	1.0	8.5	-
	DXDH 30	30*	3.0	0.86	3.0	1.4	2.1	2.5	1.2	2.1	41	27	6.5	4.5	1.8	2.0	14.3	12.3
	DXDH 50	50*	4.6	0.81	4.6	1.8	2.6	3.9	1.8	2.1	43	33	9.2	4.7	2.3	2.5	19.2	14.7
	DXDH 60	60*	5.9	0.85	5.9	2.2	2.7	4.9	2.1	2.3	93	57	10.7	4.9	3.7	4.0	26.7	20.7
	DXDH 80	80	7.7	0.84	7.7	2.7	2.9	6.4	2.6	2.4	93	57	11.8	5.3	3.7	4.0	27.8	21.3
	DXDH 90	90	9.0	0.80	9.0	3.7	2.4	7.5	3.2	2.3	132	66	17.0	7.8	3.7	4.0	33.0	23.8
	DXDH 120	100	11.3	0.82	11.5	4.4	2.6	9.7	4.0	2.4	-	69	-	9.0	3.7	4.0	-	25.0
	DXDH 130†	130	12.6	0.81	12.8	4.7	2.7	10.9	4.6	2.4	-	81	-	9.7	4.0	-	-	25.7

* Matching ducted heat pumps (DHPUE models) also available. Cooling duties rated at 27°Cdb/19°C wb indoor, 35°C db/24°C wb outdoor at maximum indoor unit fan speed.

Heat pump heating duties rated at 20°C db/12°C wb indoor, at maximum indoor unit fan speed. Electrical characteristics: DXD,DXDH indoor units and 1 phase outdoor units: 230 volts 50Hz. 3 phase outdoor units: 400 volts 50Hz.

Condensing Units & Heat Pumps	Features/Accessories	Outdoor Units	MCU+	MHPUE	MHPUE	DCU+	DHPUE
		Fan speed head pressure control		✓	✓	✓	✓
	HP switch (auto)		✓	✓†	✓	✓	✓†
	HP switch (manual)		* X	† X	* X	* X	† X
	LP switch (auto)		✓	✓	✓	✓	✓
	Low ambient start		✓	✓	✓	✓	✓
	Three minute start delay timer		✓	✓	✓	✓	✓
	Random start		✓	✓	✓	✓	✓
	CSR (models 15-40) 1 ph		*	*	*	*	*
	PTC (models 15-40) 1 ph		*	*	*	*	*
	Phase sequence kit ♦		*	*	*	X	X
	Volt free relay (for remote alarm)		*	*	*	*	*
	Overload 1 ph (standard on 3 ph)		*	*	*	*	*
	Isolator mounted on unit		X	X	X	*	*
	Isolator (for remote mounting)		*	*	*	*	*
	Wall mounting brackets		*	*	*	*	*
	Contactors		✓	✓	✓	✓	✓
	Condensate tray		X	X	X	X	✓
	Condensate pump (DHPUE only)		X	X	X	*	*
	Ducting kits		X	X	X	*	*
	Compressor jacket		*	*	*	X	X

✓ Standard * Optional † Not Applicable

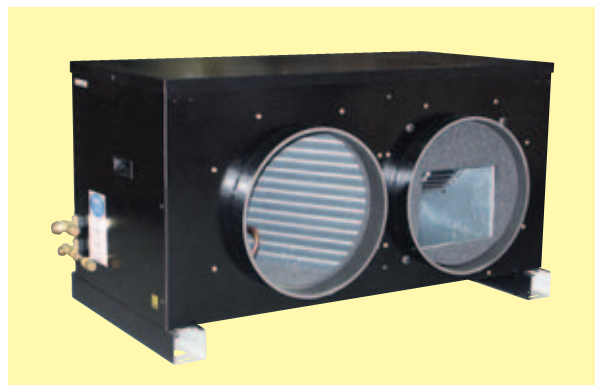
† Auto only for nuisance trips with manual back up ♦ MCU+ 50-165 and MHPUE (L) 50-130 with scroll compressors 3 ph only CSR for starting under difficult conditions, PTC for starting under marginal conditions (reciprocating compressors only)

Condensing Units & Heat Pumps	Sound Pressure Levels			
	Model		Low fan speed	High fan speed
	MCU+	MHPUE/L	dB(A)	dB(A)
	15	15	44	49
	20	20	44	49
	30	30	44	50
	40	-	44	49
	50	50	47	49
	60	-	49	50
	80	-	47	49
	-	80	47	52
	90	-	47	52
	100	-	50	53
	-	100	46	51
	130	130	50	52
	165	-	53	57

Sound pressure levels measured at 3m distance in anechoic conditions.

Condensing Units & Heat Pumps	Outdoor Unit		Unpacked dimensions								
	MCU+	MHPUE/L	Height mm	Width mm	Depth† mm	Weight kg					
						MCU+		MHPUE/L			
			1Ph		3Ph		1Ph		3Ph		
	15	15	620	904	304	45	n/a	47	n/a		
	20	-	620	904	304	46	n/a	-	-		
	30	30	620	904	304	48	48	50	50		
	40	-	620	904	304	53	53	-	-		
	50	50	720	1004	304	64	62	64	62		
	60	60	720	1004	304	65	63	68	66		
	80	-	720	1004	304	66	64	-	-		
	90	80	820	1004	354	76	73	75	72		
	100	90	820	1004	354	n/a	81	77	75		
	130	100	1080	1004	429	n/a	101	n/a	101		
	165	130	1080	1004	429	n/a	103	n/a	102		

† Excludes 25mm for feet protrusion.



DCU+/DHPUE Ducted Unit

29.04.04

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