

MM-DXC STANDARD DX KIT



Built an efficient and reliable ventilation system managed by Toshiba remote controller mixing third party AHU, DX coil and Toshiba VRF system.

CAPACITY



2 HP < 60 HP

AIR FLOW



Up to 30,000m³/h

OUTDOOR UNITS



Side Blow & Mini SMMS-e



SMMS-e



SHRM-e

LOCAL CONTROLS



RBC-AMTU31-E

Features

DX controller unit	MM-	DXC010	DXC012
		VRF DX COIL CONTROLLER (Individual / Header)	VRF DX COIL CONTROLLER (Follower)
Dimensions (HxWxD)	mm	400 x 300 x 150	400 x 300 x 150
Weight	kg	8	7.6
Standard rating	IP	65	65
Operating temperature/Humidity	°C / RH	5-40 / 10-90	5-40 / 10-90
Operating range - Cooling coil «Air on» temp	°C	15°CWB±24°CWB	15°CWB±24°CWB
Operating range - Heating coil «Air on» temp	°C	15°CDB±28°CDB	15°CDB±28°CDB
Power supply	V-ph-Hz	220/240-1-50	220/240-1-50

DX valve kit	MM-	DXV080	DXV140	DXV280
Nominal capacity		5.6kW, 7.1kW, 8.0kW 1.7 - 3.2 HP	11.2kW, 14.0kW, 16.0kW 4 - 6HP	22.4kW, 28.0kW 8 - 10 HP
Dimensions	mm	155 x 155 x 185		
Weight	kg	0.9kg		
Integrated components		TA, TC1, TC & TCJ sensors, PMV, sensor holder 4 & 6 mm, fix plate, strainer and P clamp (For TA)		

Drawings

Unit: mm



STANDARD DX KIT

Capacity table

	Capacity in HP	VRF DX Coil controller (Individual/Header)	VRF DX Coil Controller (Follower)	VRF DX Coil valve kit			Nominal capacity (kW)		DX coil internal volume (cc)			Recommended liquid capillary	Air volume flow rate (m ³ /h)
		MM-DXC010	MM-DXC012	MM-DXV080	MM-DXV140	MM-DXV280	Cool	Heat	Min	Std	Max	mm	Std
All models	2	1		1			5.6	6.3	850	1000	1150	3.2 ~ 3.5	900
	2.5	1					7.1	8	1063	1250	1438	3.5 ~ 4	1320
	3	1		1			8	9	1275	1500	1725	3.5 ~ 4	1320
	3.2	1		1			9	10	1360	1600	1840	3.5 ~ 4	1320
	4	1			1		11.2	12.5	1700	2000	2300	4.5 ~ 5	1600
	5	1			1		14	16	2125	2500	2875	5 ~ 5.5	2100
	6	1			1		16	17	2550	3000	3450	5.5 ~ 6	2800
	8	1				1	24	25	3400	4000	4600	6.5 ~ 7	3600
	10	1				1	28	31.5	4250	5000	5250	7 ~ 8	4200
	12	1	1			2	33.5	37.5	5100	6000	6900		5600
14	1	1		1	1	40	45	5950	7000	8050		6400	
16	1	1	1		2	45	50	6800	800	9200		7200	
18	1	1	1		2	50.4	56	7650	9000	10350		7800	
20	1	1	1		2	56	63	8500	10000	11500		8400	
22	1	1	2		2	61.5	64	9350	11000	12650		10000	
24	1	1	2		3	67	75	10200	12000	13800		10800	
26	1	1	2		3	73.5	82.5	11050	13000	14950		11400	
28	1	1	2		3	78.5	87.5	11900	14000	16100		12000	
30	1	1	2		2	85	95	12750	15000	17250		12600	
32	1	1	3		4	90	100	13600	16000	18400		14400	
34	1	1	3		4	95.4	106.5	14450	17000	19550		15000	
36	1	1	3		4	101	113	15300	18000	20700		15600	
38	1	1	3		4	106.5	114	16150	19000	21850		16200	
40	1	1	3		4	112	126	17000	20000	23000		16800	
42	1	1	4		5	117.5	127	17850	21000	24150		18600	
44	1	1	4		5	123	128	18700	22000	25300		19200	
46	1	1	4		5	130	145	19550	23000	26450		19800	
48	1	1	4		5	135	150	20400	24000	27600		20400	
50	1	1	4		5	140.4	156	21250	25000	28750		21000	
52	1	1	4		6	146	163	22100	26000	29900		22800	
54	1	1	5		6	151.5	164	22950	27000	31050		23400	
56	1	1	5		6	157	176	23800	28000	32200		24000	
58	1	1	5		6	162.5	177	24650	29000	33350		24600	
60	1	1	5		6	168	178	25500	30000	34500		25200	
12	1	1			2	33.5	37.5	5100	6000	6900		5600	
14	1	1		1	1	40	45	5950	7000	8050		6400	
16	1	1			2	45	50	6800	800	9200		7200	
18	1	1			2	50.4	56	7650	9000	10350		7800	
20	1	1			2	56	58	8500	10000	11500		8400	
22	1	1	2		2	61.5	69	9350	11000	12650		10000	
24	1	1	2		3	68	76.5	10200	12000	13800		10800	
26	1	1	2		3	73.5	82.5	11050	13000	14950		11400	
28	1	1	2		3	80	90	11900	14000	16100		12000	
30	1	1	2		2	85	95	12750	15000	17250		12600	
32	1	1	3		4	90.4	101.4	13600	16000	18400		14400	
34	1	1	3		4	95.4	106.5	14450	17000	19550		15000	
36	1	1	3		4	100.8	113	15300	18000	20700		15600	
38	1	1	3		4	106.5	114.5	16150	19000	21850		16200	
40	1	1	3		4	112	126	17000	20000	23000		16800	
42	1	1	4		5	120	135	17850	21000	24150		18600	

DX-Coils > 10HP must be designed with multiple sections each 10HP or less. These sections must have dedicated headers and liquid capillary distributors. Therefore recommended office sizes only 2 - 10 HP

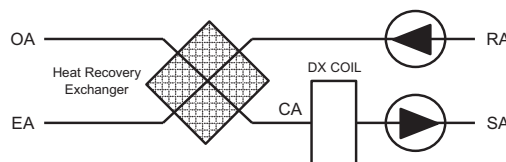


Cooling Capacity Conditions (Indoor 27 °Cdb / 19 °Cwb & Outdoor 35 °Cdb) at Standard Air Flow rate
 Heating Capacity Conditions (Indoor 20 °Cdb & Outdoor 7 °Cdb / 6 °Cwb) at Standard Air Flow rate
 DX-Coils > 10HP must be designed with multiple pathways each 10HP or less. These pathways must have dedicated Headers and Liquid Capillary distributors. Therefore recommended sizes only needed for 2 - 10HP.

SHRMe Capacity quoted as nominal cooling and maximum heating.
 The standard Air volume flow rate is a guideline. The required capacity should determine DX-Interface size selection.
 Single Port Flow Selectors (3-Series) MUST be used with the DX-Interface. It is not compatible with Multi Port Flow Selector (This limits the maximum SHRMe DX-Interface size to 42HP).

Other information

- The DX Coil **MUST** be operated within the following limits to ensure reliability:
 - Cooling mode DX coil "air on" temp: Min: 15°C WB (18°CDB) ~ Max: 24°C WB (32°CDB)
 - Heating mode DX coil "air on" temp: Min: 15°C DB ~ Max: 28°C DB
- When used for ventilation, the DX-Coil **MUST** be combined with other equipment such as heat recovery exchanger or heaters / coolers to ensure that the CA limits are not exceeded:



OA	Outdoor Air
SA	Supply Air
CA	Coil Air (After Heat Recovery Exchanger)
RA	Return Air
EA	Exhaust Air

DX-Coil design

- The DX Coil must be suitable for R410A.
- The design should allow operation as both an evaporator and a condenser (Features: Multiple circuits / Liquid Capillary Distributor / Gas Header).
- The counter flow principle must be observed.
- Design target evaporation temperature: 6.5°C.
- Design target condensation temperature: 52°C.
- A drain pan must be fitted (even if only used in heat mode) due to defrost cycles.
- It is recommended to fit droplet eliminator plates in the discharge air stream if used in cool mode.
- The sensor holders must be brazed on to DX-Coil to ensure accurate temperature sensing.
- DX Coils (>10HP) must be designed with multiple pathways each 10HP or less. These pathways must have dedicated headers and liquid capillary distributors each with the appropriate DX valve kit. These DX-Coils can be Interlaced or split face:-
- Where grouped the header controller (MM-DXC010) must be connected to the largest DX-Coil valve kit.
- AHU fan motor must be interlocked to fan control output.
- Maximum DXCoil U-pipe outer diameter: 12.7 mm (1/2")
- Recommended DX-Coil U-pipe outer diameter: 9.52 mm (3/8")