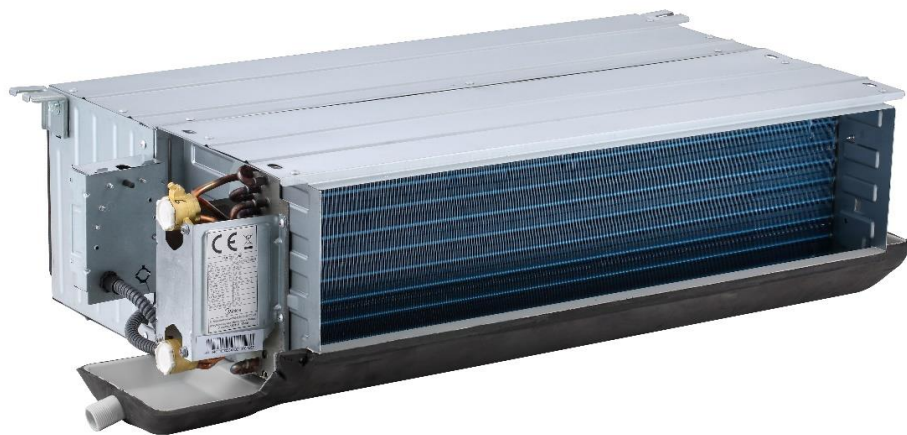




# Technical Manual

## 50Hz AC Fan Coil Unit 2-Pipe Duct MK-CBS Series



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# Part 1

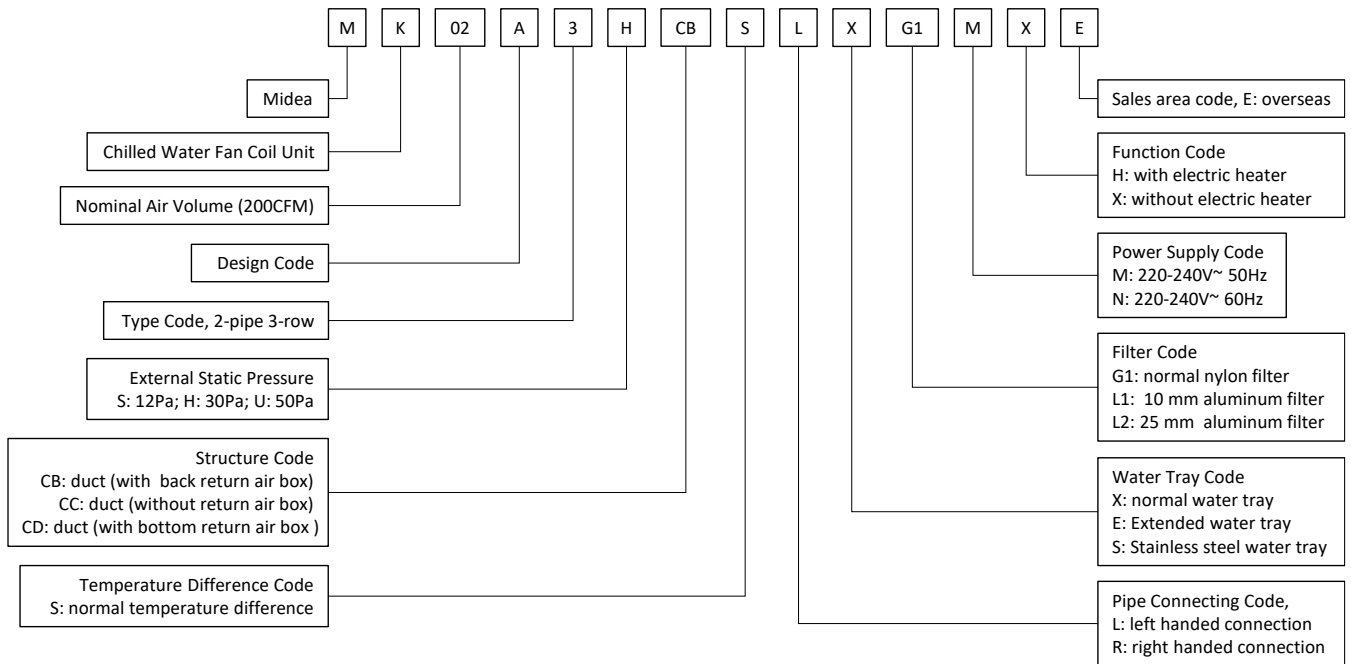
# General Information

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## 1 Product lineup

Model	Power supply	Appearance
MK02A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK02A3HCBSLXG1MXE		
MK02A3UCBSLXG1MXE		
MK03A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK03A3HCBSLXG1MXE		
MK03A3UCBSLXG1MXE		
MK04A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK04A3HCBSLXG1MXE		
MK04A3UCBSLXG1MXE		
MK05A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK05A3HCBSLXG1MXE		
MK05A3UCBSLXG1MXE		
MK06A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK06A3HCBSLXG1MXE		
MK06A3UCBSLXG1MXE		
MK07A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK07A3HCBSLXG1MXE		
MK07A3UCBSLXG1MXE		
MK08A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK08A3HCBSLXG1MXE		
MK08A3UCBSLXG1MXE		
MK10A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK10A3HCBSLXG1MXE		
MK10A3UCBSLXG1MXE		
MK12A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK12A3HCBSLXG1MXE		
MK12A3UCBSLXG1MXE		
MK14A3SCBSLXG1MXE	220-240V~1N~50Hz	
MK14A3HCBSLXG1MXE		
MK14A3UCBSLXG1MXE		

## 2 Nomenclature





# Part 2

# Performance

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## 1 Specifications

Model name		MK02A3SCBSLXG1MXE	MK02A3HCBLSLXG1MXE	MK02A3UCBSLXG1MXE	
Power supply		V/Ph/Hz	220-240/1/50		
Air flow (H/M/L)		m <sup>3</sup> /h	340/257/172		
		CFM	200/151/101		
Standard external static pressure		Pa	12	30	50
Cooling	Capacity (H/M/L)	kW	2.35/2.00/1.50	2.50/2.10/1.56	2.50/2.10/1.56
	Water flow rate (H/M/L)	m <sup>3</sup> /h	0.40/0.40/0.40	0.43/0.43/0.43	0.43/0.43/0.43
	Water pressure (H/M/L)	kPa	24/20/15	27/24/19	27/24/19
Heating	Capacity (H/M/L)	kW	3.90/3.09/2.15	4.10/3.20/2.20	4.10/3.20/2.20
	Water flow rate (H/M/L)	m <sup>3</sup> /h	0.40/0.40/0.40	0.43/0.43/0.43	0.43/0.43/0.43
	Water pressure (H/M/L)	kPa	20/16/12	22/20/16	22/20/16
Power input(H/M/L)		W	36/25/23	42/36/29	48/38/31
Auxiliary electric heater(AEH)		W	500	500	500
Current input(H/M/L)		A	0.16/0.11/0.10	0.19/0.16/0.13	0.22/0.17/0.14
Sound pressure level (H/M/L)		dB(A)	35.0/26.5/23.5	37.0/30.0/23.0	40.0/32.0/24.0
Fan motor	Type	Low noise 3-speed AC capacitor motor			
	Quantity	1			
Fan	Type	Centrifugal, forward-curved blades			
	Quantity	1			
Coil	Row	3			
	MAX. working pressure	MPa	1.6MPa		
	Diameter	mm	7		
Body	Dimensions (W×H×D) (CB)	mm	632×243×482		
	Packing (W×H×D) (CB)	mm	698×270×520		
	Net weight (CB)	kg	12.3		
	Gross weight (CB)	kg	14.4		
Pipe connection	Water inlet/outlet pipe	inch	RC3/4		
	Drain pipe	inch	R3/4		

### NOTES:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply;
10. Auxiliary electric heater (AEH) is optional.

Model name		MK03A3SCBSLXG1MXE	MK03A3HCBSLXG1MXE	MK03A3UCBSLXG1MXE	
Power supply		V/Ph/Hz	220-240/1/50		
Air flow (H/M/L)		m <sup>3</sup> /h	510/384/256	510/384/256	510/385/257
		CFM	300/226/151	300/226/151	300/226/151
Standard external static pressure		Pa	12	30	50
Cooling	Capacity (H/M/L)	kW	3.40/2.90/2.21	3.40/2.90/2.21	3.40/2.90/2.20
	Water flow rate (H/M/L)	m <sup>3</sup> /h	0.58/0.58/0.58		
	Water pressure (H/M/L)	kPa	24/19/14		
Heating	Capacity (H/M/L)	kW	5.67/4.52/3.18	5.67/4.52/3.18	5.67/4.52/3.17
	Water flow rate (H/M/L)	m <sup>3</sup> /h	0.58/0.58/0.58		
	Water pressure (H/M/L)	kPa	20/16/12		
Power input(H/M/L)		W	50/28/23	57/40/32	64/50/38
Auxiliary electric heater(AEH)		W	600	600	600
Current input(H/M/L)		A	0.23/0.13/0.10	0.26/0.18/0.15	0.29/0.23/0.17
Sound pressure level (H/M/L)		dB(A)	39.0/27.5/26.0	40.5/33.0/26.0	42.0/34.0/31.0
Fan motor	Type	Low noise 3-speed AC capacitor motor			
	Quantity	1			
Fan	Type	Centrifugal, forward-curved blades			
	Quantity	2	1	1	
Coil	Row	3			
	MAX. working pressure	MPa	1.6MPa		
	Diameter	mm	7		
Body	Dimensions (W×H×D) (CB)	mm	773×243×482		
	Packing (W×H×D) (CB)	mm	843×270×520		
	Net weight (CB)	kg	14.7		
	Gross weight (CB)	kg	16.9		
Pipe connection	Water inlet/outlet pipe	inch	RC3/4		
	Drain pipe	inch	R3/4		

### NOTES:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply;
10. Auxiliary electric heater (AEH) is optional.

Model name		MK04A3SCBSLXG1MXE	MK04A3HCBSLXG1MXE	MK04A3UCBSLXG1MXE	
Power supply		V/Ph/Hz	220-240/1/50		
Air flow(H/M/L)		m <sup>3</sup> /h	680/516/344		
		CFM	400/303/202		
Standard external static pressure		Pa	12	30	50
Cooling	Capacity (H/M/L)	kW	4.41/3.77/2.90		
	Water flow rate (H/M/L)	m <sup>3</sup> /h	0.76/0.76/0.76		
	Water pressure (H/M/L)	kPa	24/21/16		
Heating	Capacity (H/M/L)	kW	7.35/5.89/4.19		
	Water flow rate (H/M/L)	m <sup>3</sup> /h	0.76/0.76/0.76		
	Water pressure (H/M/L)	kPa	20/17/13		
Power input (H/M/L)		W	60/47/39	70/47/40	81/64/57
Auxiliary electric heater(AEH)		W	1000	1000	1000
Current input (H/M/L)		A	0.27/0.21/0.18	0.32/0.21/0.18	0.37/0.29/0.26
Sound pressure level (H/M/L)		dB(A)	41.0/30.5/24.0	40.5/34.0/26.0	44.0/37.0/33.0
Fan motor	Type		Low noise 3-speed AC capacitor motor		
	Quantity		1		
Fan	Type		Centrifugal, forward-curved blades		
	Quantity		2		
Coil	Row		3		
	MAX. working pressure	MPa	1.6MPa		
	Diameter	mm	7		
Body	Dimensions (W×H×D) (CB)	mm	908×243×482		
	Packing (W×H×D) (CB)	mm	978×270×520		
	Net weight (CB)	kg	17.6		
	Gross weight (CB)	kg	20.2		
Pipe connection	Water inlet/outlet pipe	inch	RC3/4		
	Drain pipe	inch	R3/4		

### NOTES:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply;
10. Auxiliary electric heater (AEH) is optional.

Model name		MK05A3SCBSLXG1MXE	MK05A3HCBSLXG1MXE	MK05A3UCBSLXG1MXE	
Power supply		V/Ph/Hz	220-240/1/50		
Air flow(H/M/L)		m <sup>3</sup> /h	850/643/429		
		CFM	500/379/252		
Standard external static pressure		Pa	12	30	50
Cooling	Capacity (H/M/L)	kW	5.00/4.27/3.36		
	Water flow rate (H/M/L)	m <sup>3</sup> /h	0.86/0.86/0.86		
	Water pressure (H/M/L)	kPa	30/23/18		
Heating	Capacity (H/M/L)	kW	8.60/6.93/5.03		
	Water flow rate (H/M/L)	m <sup>3</sup> /h	0.86/0.86/0.86		
	Water pressure (H/M/L)	kPa	24/19/15		
Power input(H/M/L)		W	74/69/53	83/67/56	97/65/55
Auxiliary electric heater(AEH)		W	1000	1000	1000
Current input(H/M/L)		A	0.34/0.31/0.24	0.38/0.30/0.25	0.44/0.30/0.25
Sound pressure level(H/M/L)		dB(A)	43.0/34.0/28.5	42.0/36.0/27.0	46.0/40.0/33.0
Fan motor	Type		Low noise 3-speed AC capacitor motor		
	Quantity		1		
Fan	Type		Centrifugal, forward-curved blades		
	Quantity		2		
Coil	Row		3		
	MAX. working pressure	MPa	1.6MPa		
	Diameter	mm	7		
Body	Dimensions (W×H×D) (CB)	mm	908×243×482		
	Packing (W×H×D) (CB)	mm	978×270×520		
	Net weight (CB)	kg	17.6		
	Gross weight (CB)	kg	20.2		
Pipe connection	Water inlet/outlet pipe		inch		
	Drain pipe		inch		

### NOTES:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply;
10. Auxiliary electric heater (AEH) is optional.

Model name		MK06A3SCBHLXG1MXE	MK06A3HCBSLXG1MXE	MK06A3UCBSLXG1MXE
Power supply		V/Ph/Hz	220-240/1/50	
Air flow(H/M/L)		m <sup>3</sup> /h	1020/784/523	1020/784/523
		CFM	600/461/308	600/461/308
Standard external static pressure		Pa	12	30
Cooling	Capacity (H/M/L)	kW	6.00/5.16/4.06	6.00/5.16/4.06
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.03/1.03/1.03	
	Water pressure (H/M/L)	kPa	38/28/25	
Heating	Capacity (H/M/L)	kW	9.98/8.14/5.96	9.98/8.14/5.96
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.03/1.03/1.03	
	Water pressure (H/M/L)	kPa	31/23/20	
Power input (H/M/L)		W	93/68/56	102/78/64
Auxiliary electric heater(AEH)		W	1500	1500
Current input (H/M/L)		A	0.42/0.31/0.25	0.46/0.35/0.29
Sound pressure level (H/M/L)		dB(A)	45.0/36.6/31.0	43.0/37.0/27.0
Fan motor	Type	Low noise 3-speed AC capacitor motor		
	Quantity	1		
Fan	Type	Centrifugal, forward-curved blades		
	Quantity	2		
Coil	Row	3		
	MAX. working pressure	MPa	1.6	
	Diameter	mm	7	
Body	Dimensions (W×H×D) (CB)	mm	1003×243×482	
	Packing (W×H×D) (CB)	mm	1073×270×520	
	Net weight (CB)	kg	18.8	
	Gross weight (CB)	kg	21.5	
Pipe connection	Water inlet/outlet pipe	inch	RC3/4	
	Drain pipe	inch	R3/4	

### NOTES:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply;
10. Auxiliary electric heater (AEH) is optional.

Model name		MK07A3SCBSLXG1MXE	MK07A3HCBSLXG1MXE	MK07A3UCBSLXG1MXE
Power supply		V/Ph/Hz	220-240/1/50	
Air flow(H/M/L)		m <sup>3</sup> /h	1150/866/578	1190/896/598
		CFM	677/510/340	700/528/352
Standard external static pressure		Pa	12	30
Cooling	Capacity (H/M/L)	kW	7.05/6.00/4.68	7.20/6.13/4.79
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.21/1.21/1.21	1.24/1.24/1.24
	Water pressure (H/M/L)	kPa	28/22/18	30/23/20
Heating	Capacity (H/M/L)	kW	11.70/9.39/6.81	12.00/9.66/7.01
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.21/1.21/1.21	1.24/1.24/1.24
	Water pressure (H/M/L)	kPa	23/18/15	24/19/16
Power input (H/M/L)		W	112/97/80	121/88/72
Auxiliary electric heater(AEH)		W	1500	1500
Current input (H/M/L)		A	0.51/0.44/0.36	0.55/0.40/0.33
Sound pressure level (H/M/L)		dB(A)	46.0/38.0/30.0	46.0/39.0/31.0
Fan motor	Type		Low noise 3-speed AC capacitor motor	
	Quantity		1	
Fan	Type		Centrifugal, forward-curved blades	
	Quantity		2	
Coil	Row		3	
	MAX. working pressure	MPa	1.6	
	Diameter	mm	7	
Body	Dimensions (W×H×D) (CB)		1178×243×482	
	Packing (W×H×D) (CB)		1248×270×520	
	Net weight (CB)		21.4	
	Gross weight (CB)		24.5	
Pipe connection	Water inlet/outlet pipe		RC3/4	
	Drain pipe		R3/4	

**NOTES:**

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply;
10. Auxiliary electric heater (AEH) is optional.

Model name		MK08A3SCBSLXG1MXE	MK08A3HCBSLXG1MXE	MK08A3UCBSLXG1MXE	
Power supply		V/Ph/Hz	220-240/1/50		
Air flow (H/M/L)		m <sup>3</sup> /h	1360/1031/687		
		CFM	800/607/404		
Standard external static pressure		Pa	12	30	50
Cooling	Capacity (H/M/L)	kW	8.03/6.87/5.40		
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.38/1.38/1.38		
	Water pressure (H/M/L)	kPa	40/31/25		
Heating	Capacity (H/M/L)	kW	13.60/10.98/8.02		
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.38/1.38/1.38		
	Water pressure (H/M/L)	kPa	32/25/20		
Power input (H/M/L)		W	130/114/95	135/100/80	169/122/83
Auxiliary electric heater(AEH)		W	2000	2000	2000
Current input (H/M/L)		A	0.59/0.52/0.43	0.61/0.45/0.36	0.77/0.55/0.38
Sound pressure level (H/M/L)		dB(A)	46.0/39.1/30.0	44.5/40.0/33.0	50.0/39.0/36.0
Fan motor	Type		Low noise 3-speed AC capacitor motor		
	Quantity		1		
Fan	Type		Centrifugal, forward-curved blades		
	Quantity		3		
Coil	Row		3		
	MAX. working pressure	MPa	1.6		
	Diameter	mm	7		
Body	Dimensions (W×H×D) (CB)		mm 1368×243×482		
	Packing (W×H×D) (CB)		mm 1438×270×520		
	Net weight (CB)		kg 25.5		
	Gross weight (CB)		kg 29.1		
Pipe connection	Water inlet/outlet pipe		inch RC3/4		
	Drain pipe		inch R3/4		

### NOTES:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply;
10. Auxiliary electric heater (AEH) is optional.

Model name		MK10A3SCBSLXG1MXE	MK10A3HCBSLXG1MXE	MK10A3UCBSLXG1MXE
Power supply		V/Ph/Hz	220-240/1/50	
Air flow (H/M/L)		m <sup>3</sup> /h	1650/1247/831	1700/1284/856
		CFM	971/734/489	1000/756/504
Standard external static pressure		Pa	12	30
Cooling	Capacity (H/M/L)	kW	9.00/7.84/6.17	9.27/8.08/6.35
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.55/1.55/1.55	1.59/1.59/1.59
	Water pressure (H/M/L)	kPa	38/30/22	40/31/23
Heating	Capacity (H/M/L)	kW	15.60/12.82/9.36	16.00/13.16/9.61
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.55/1.55/1.55	1.59/1.59/1.59
	Water pressure (H/M/L)	kPa	31/24/18	32/25/19
Power input (H/M/L)		W	147/118/94	169/149/133
Auxiliary electric heater(AEH)		W	2000	2000
Current input (H/M/L)		A	0.67/0.54/0.43	0.77/0.68/0.60
Sound pressure level (H/M/L)		dB(A)	48.0/40.7/33.0	47.0/42.0/35.0
Fan motor	Type	Low noise 3-speed AC capacitor motor		
	Quantity	1		
Fan	Type	Centrifugal, forward-curved blades		
	Quantity	3		
Coil	Row	3		
	MAX. working pressure	MPa	1.6	
	Diameter	mm	7	
Body	Dimensions (W×H×D) (CB)	mm	1368×243×482	
	Packing (W×H×D) (CB)	mm	1438×270×520	
	Net weight (CB)	kg	26	
	Gross weight (CB)	kg	29.7	
Pipe connection	Water inlet/outlet pipe	inch	RC3/4	
	Drain pipe	inch	R3/4	

### NOTES:

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply.
10. Auxiliary electric heater (AEH) is optional.



Model name		MK12A3SCBSLXG1MXE	MK12A3HCBSLXG1MXE	MK12A3UCBSLXG1MXE	
Power supply		V/Ph/Hz	220-240/1/50		
Air flow (H/M/L)		m <sup>3</sup> /h	2040/1544/1029		
		CFM	1200/909/606		
Standard external static pressure		Pa	12	30	50
Cooling	Capacity (H/M/L)	kW	11.20/9.75/7.67		
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.93/1.93/1.93		
	Water pressure (H/M/L)	kPa	40/32/24		
Heating	Capacity (H/M/L)	kW	19.20/15.78/11.53		
	Water flow rate (H/M/L)	m <sup>3</sup> /h	1.93/1.93/1.93		
	Water pressure (H/M/L)	kPa	32/26/20		
Power input (H/M/L)		W	183/133/112	206/157/126	243/173/128
Auxiliary electric heater(AEH)		W	2500	2500	2500
Current input (H/M/L)		A	0.83/0.60/0.51	0.94/0.71/0.57	1.10/0.79/0.58
Sound pressure level (H/M/L)		dB(A)	50.0/42.6/33.0	48.0/42.0/35.0	52.0/46.0/40.0
Fan motor	Type		Low noise 3-speed AC capacitor motor		
	Quantity		2		
Fan	Type		Centrifugal, forward-curved blades		
	Quantity		4		
Coil	Row		3		
	MAX. working pressure	MPa	1.6		
	Diameter	mm	7		
Body	Dimensions (W×H×D) (CB)		1658×243×482		
	Packing (W×H×D) (CB)		1728×270×520		
	Net weight (CB)		33.8		
	Gross weight (CB)		39.5		
Pipe connection	Water inlet/outlet pipe		RC3/4		
	Drain pipe		R3/4		

### NOTES:

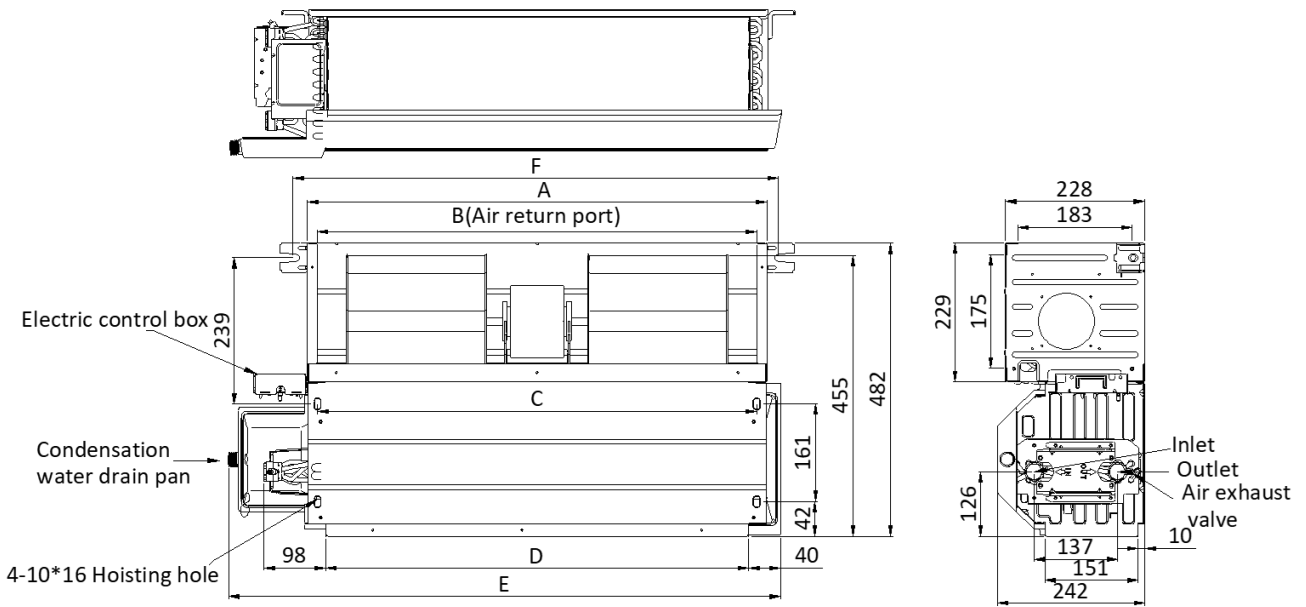
1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply.
10. Auxiliary electric heater (AEH) is optional.

Model name		MK14A3SCBSLXG1MXE	MK14A3HCBSLXG1MXE	MK14A3UCBSLXG1MXE
Power supply		V/Ph/Hz	220-240/1/50	
Air flow (H/M/L)		m <sup>3</sup> /h	2380/1785/1190	2380/1785/1190
		CFM	1400/1051/700	1400/1051/700
Standard external static pressure		Pa	12	30
Cooling	Capacity (H/M/L)	kW	13.00/11.30/8.90	13.00/11.30/8.90
	Water flow rate (H/M/L)	m <sup>3</sup> /h	2.24/2.24/2.24	
	Water pressure (H/M/L)	kPa	50/39/31	
Heating	Capacity (H/M/L)	kW	22.16/18.23/13.37	22.16/18.23/13.37
	Water flow rate (H/M/L)	m <sup>3</sup> /h	2.24/2.24/2.24	
	Water pressure (H/M/L)	kPa	40/32/25	
Power input (H/M/L)		W	221/177/140	245/179/145
Auxiliary electric heater(AEH)		W	2500	2500
Current input (H/M/L)		A	1.00/0.80/0.64	1.11/0.81/0.66
Sound pressure level (H/M/L)		dB(A)	52.0/47.1/34.0	49.5/43.0/36.0
Fan motor	Type		Low noise 3-speed AC capacitor motor	
	Quantity		2	
Fan	Type		Centrifugal, forward-curved blades	
	Quantity		4	
Coil	Row		3	
	MAX. working pressure	MPa	1.6	
	Diameter	mm	7	
Body	Dimensions (W×H×D) (CB)	mm	1898×243×482	
	Packing (W×H×D) (CB)	mm	1968×270×520	
	Net weight (CB)	kg	35.3	
	Gross weight (CB)	kg	39.8	
Pipe connection	Water inlet/outlet pipe	inch	RC3/4	
	Drain pipe	inch	R3/4	

**NOTES:**

1. H: High fan speed; M: Medium fan speed; L: Low fan speed;
2. Cooling conditions (H speed): water inlet 7°C, water outlet 12°C, entering air temperature 27°C DB/19.5°C WB, rated external static pressure;
3. Heating conditions (H speed): water inlet 60°C, entering air temperature 21°C DB/15°C WB, rated external static pressure. Water flow: same with cooling condition;
4. The above sound level is tested in the semi-anechoic room with background level 11.5dB (A) when the unit is without accessories and running in dry condition;
5. Air flow is tested when the unit is under rated external static pressure without return air box and filter screen in dry condition and 20°C DB;
6. For the parameters of Body, "CB" means that the parameter is tested with air return box;
7. 30Pa is standard, 12Pa and 50Pa need to be customized;
8. Left/right pipe connection direction can be changed in the field, but cooling and heating capacity should be multiplied with correction factor 0.9;
9. The performance parameters on above sheet are tested under 220V~50Hz power supply.
10. Auxiliary electric heater (AEH) is optional.

## 2 Dimensions



Model Size	02-model	03-Model	04-Model	06-Model	07-Model	08-Model	12-Model	14-Model
			05-Model			10-Model		
A	475	620	755	850	1025	1215	1505	1745
B	443	588	723	818	993	1183	1473	1713
C	443	588	723	818	993	1183	1473	1713
D	415	560	695	790	965	1155	1445	1685
E	627	772	907	1002	1177	1367	1657	1897
F	513	658	793	888	1063	1253	1543	1783

## 3 Capacity Tables

Cooling Capacity Table

MK02A3SCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
5	3	15	1.85	1.39	0.53	26.11	1.84	1.58	0.53	25.88	1.87	1.77	0.54	26.47	1.97	1.97	0.56	28.76	2.16	2.16	0.62	33.63
		17	2.43	1.40	0.70	41.58	2.42	1.59	0.69	41.12	2.40	1.78	0.69	40.65	2.38	1.96	0.68	40.05	2.38	2.15	0.68	39.83
		19	-	-	-	-	3.03	1.60	0.87	60.68	3.01	1.79	0.86	60.03	3.00	1.97	0.86	59.38	2.98	2.16	0.85	58.74
		20	-	-	-	-	3.36	1.60	0.97	73.60	3.34	1.79	0.97	72.80	3.32	1.98	0.95	71.01	3.30	2.16	0.95	71.44
	4	15	1.65	1.29	0.35	12.90	1.67	1.49	0.36	13.28	1.75	1.70	0.38	14.34	1.90	1.90	0.41	16.64	2.09	2.09	0.45	19.56
		17	2.26	1.31	0.49	22.30	2.24	1.51	0.48	22.05	2.23	1.69	0.48	21.81	2.22	1.88	0.48	21.68	2.25	2.08	0.48	22.11
		19	-	-	-	-	2.87	1.52	0.62	33.41	2.85	1.71	0.61	33.06	2.84	1.90	0.61	32.70	2.82	2.08	0.60	32.36
		20	-	-	-	-	3.20	1.53	0.69	40.35	3.18	1.72	0.68	39.92	3.17	1.91	0.68	39.69	3.15	2.09	0.68	39.29
	5	15	1.44	1.19	0.25	6.18	1.52	1.40	0.26	7.03	1.64	1.62	0.28	8.43	1.82	1.82	0.31	10.43	2.01	2.01	0.35	12.42
		17	2.04	1.22	0.35	12.71	2.03	1.41	0.35	12.56	2.02	1.60	0.35	12.47	2.05	1.80	0.35	12.77	2.11	2.00	0.36	13.48
		19	-	-	-	-	2.69	1.44	0.46	20.45	2.67	1.63	0.46	20.23	2.66	1.81	0.46	20.02	2.64	2.00	0.45	19.80
		20	-	-	-	-	3.02	1.44	0.52	24.82	3.01	1.64	0.52	24.55	2.99	1.82	0.51	24.29	2.97	2.01	0.51	24.04
6	15	1.31	1.12	0.19	2.98	1.42	1.34	0.20	3.62	1.55	1.55	0.22	4.67	1.74	1.74	0.25	6.30	1.93	1.93	0.28	8.14	
	17	1.80	1.11	0.26	6.88	1.79	1.30	0.26	6.79	1.82	1.50	0.26	7.09	1.89	1.71	0.27	7.74	1.99	1.92	0.28	8.70	
	19	-	-	-	-	2.48	1.34	0.36	12.95	2.46	1.53	0.35	12.81	2.44	1.72	0.35	12.67	2.43	1.91	0.35	12.59	
	20	-	-	-	-	2.83	1.36	0.41	16.23	2.81	1.55	0.40	16.06	2.79	1.74	0.40	15.89	2.77	1.92	0.40	15.72	
7	3	15	1.42	1.18	0.41	16.33	1.46	1.39	0.42	17.31	1.59	1.59	0.46	19.90	1.78	1.78	0.51	23.86	1.97	1.97	0.57	28.72
		17	2.00	1.20	0.58	29.64	1.99	1.39	0.58	29.30	1.97	1.57	0.56	28.41	1.97	1.77	0.56	28.41	2.02	1.96	0.58	30.16
		19	-	-	-	-	2.61	1.40	0.75	46.29	2.59	1.59	0.75	45.79	2.58	1.78	0.74	45.28	2.56	1.96	0.74	44.77
		20	-	-	-	-	2.94	1.40	0.85	57.34	2.92	1.59	0.84	56.70	2.90	1.78	0.83	55.67	2.88	1.97	0.83	55.06
	4	15	1.23	1.09	0.26	7.49	1.34	1.31	0.29	8.98	1.51	1.51	0.33	11.11	1.71	1.71	0.37	13.71	1.90	1.90	0.41	16.42
		17	1.80	1.11	0.39	15.01	1.79	1.30	0.39	14.82	1.79	1.49	0.39	14.87	1.84	1.69	0.40	15.51	1.92	1.90	0.41	16.65
		19	-	-	-	-	2.43	1.32	0.52	24.82	2.42	1.51	0.52	24.54	2.40	1.70	0.52	24.27	2.39	1.88	0.51	24.00
		20	-	-	-	-	2.77	1.33	0.60	31.36	2.75	1.52	0.60	31.01	2.74	1.71	0.59	30.67	2.72	1.89	0.59	30.34
	5	15	1.11	1.02	0.19	3.17	1.24	1.23	0.21	4.33	1.43	1.43	0.25	6.26	1.63	1.63	0.28	8.42	1.82	1.82	0.31	10.35
		17	1.54	0.99	0.27	7.54	1.55	1.19	0.27	7.58	1.60	1.40	0.28	8.18	1.70	1.61	0.29	9.15	1.83	1.82	0.32	10.45
		19	-	-	-	-	2.22	1.23	0.38	14.48	2.21	1.42	0.38	14.31	2.19	1.61	0.38	14.13	2.20	1.80	0.38	14.19
		20	-	-	-	-	2.57	1.24	0.44	18.54	2.55	1.43	0.44	18.33	2.54	1.62	0.44	18.13	2.52	1.81	0.43	17.94
6	15	1.01	0.96	0.15	1.80	1.18	1.17	0.17	2.36	1.36	1.36	0.20	3.45	1.55	1.55	0.22	4.84	1.74	1.74	0.25	6.53	
	17	1.33	0.90	0.19	3.23	1.38	1.11	0.20	3.57	1.47	1.33	0.21	4.23	1.59	1.54	0.23	5.15	1.74	1.74	0.25	6.56	
	19	-	-	-	-	1.97	1.12	0.28	8.51	1.95	1.31	0.28	8.38	1.96	1.51	0.28	8.45	2.01	1.71	0.29	8.85	
	20	-	-	-	-	2.34	1.14	0.33	11.51	2.32	1.33	0.33	11.38	2.31	1.52	0.33	11.25	2.29	1.71	0.33	11.16	

# 2-Pipe Duct MK-CBS Series



(Continued)

MK02A3SCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	1.03	0.99	0.29	9.23	1.20	1.20	0.34	11.95	1.39	1.39	0.40	15.57	1.58	1.58	0.45	19.31	1.77	1.77	0.51	23.42	
		17	1.53	0.99	0.44	18.13	1.52	1.18	0.44	17.90	1.54	1.38	0.44	18.38	1.62	1.58	0.46	19.95	1.78	1.78	0.51	23.50	
		19	-	-	-	-	2.15	1.20	0.62	32.73	2.14	1.39	0.62	32.35	2.13	1.58	0.61	32.15	2.12	1.77	0.61	32.14	
		20	-	-	-	-	2.49	1.20	0.72	42.59	2.47	1.39	0.71	41.47	2.45	1.58	0.71	41.01	2.44	1.77	0.70	40.54	
	4	15	0.93	0.92	0.20	3.74	1.11	1.11	0.24	6.02	1.32	1.32	0.28	8.58	1.51	1.51	0.33	10.89	1.71	1.71	0.37	13.49	
		17	1.28	0.88	0.27	8.12	1.31	1.09	0.28	8.52	1.40	1.30	0.30	9.48	1.52	1.51	0.33	11.00	1.71	1.71	0.37	13.53	
		19	-	-	-	-	1.95	1.11	0.42	16.79	1.94	1.30	0.42	16.59	1.93	1.49	0.41	16.42	1.95	1.69	0.42	16.74	
		20	-	-	-	-	2.30	1.12	0.50	22.24	2.28	1.32	0.49	21.98	2.26	1.50	0.49	21.73	2.25	1.69	0.49	21.47	
	5	15	0.85	0.85	0.15	1.78	1.05	1.05	0.18	2.82	1.24	1.24	0.21	4.45	1.43	1.43	0.25	6.46	1.63	1.63	0.28	8.42	
		17	1.06	0.79	0.18	2.96	1.15	1.01	0.20	3.66	1.27	1.23	0.22	4.80	1.43	1.43	0.25	6.48	1.63	1.63	0.28	8.44	
		19	-	-	-	-	1.70	1.01	0.29	9.00	1.69	1.20	0.29	8.91	1.72	1.40	0.30	9.20	1.79	1.61	0.31	9.84	
		20	-	-	-	-	2.06	1.03	0.36	12.56	2.05	1.22	0.35	12.41	2.03	1.41	0.35	12.25	2.04	1.60	0.35	12.29	
	6	15	0.77	0.77	0.11	1.28	0.98	0.98	0.14	1.66	1.17	1.17	0.17	2.39	1.36	1.36	0.20	3.56	1.55	1.55	0.22	5.05	
		17	0.90	0.72	0.13	1.49	1.04	0.95	0.15	1.83	1.19	1.17	0.17	2.47	1.36	1.36	0.20	3.57	1.55	1.55	0.22	5.07	
		19	-	-	-	-	1.41	0.90	0.20	3.96	1.45	1.10	0.21	4.26	1.53	1.32	0.22	4.90	1.64	1.53	0.24	5.82	
		20	-	-	-	-	1.78	0.92	0.25	6.98	1.76	1.11	0.25	6.85	1.77	1.31	0.25	6.95	1.83	1.51	0.26	7.39	
	11	3	15	0.79	0.79	0.23	5.31	1.00	1.00	0.28	8.55	1.20	1.20	0.34	11.64	1.39	1.39	0.40	15.15	1.58	1.58	0.45	18.76
			17	1.00	0.77	0.29	8.61	1.08	0.99	0.31	9.71	1.20	1.20	0.34	11.74	1.39	1.39	0.40	15.20	1.59	1.59	0.45	18.82
			19	-	-	-	-	1.66	0.99	0.47	20.27	1.64	1.18	0.47	20.00	1.65	1.38	0.47	20.04	1.69	1.58	0.48	21.00
			20	-	-	-	-	2.00	1.00	0.57	28.13	1.98	1.19	0.57	27.75	1.97	1.38	0.56	27.37	1.96	1.57	0.56	27.03
4		15	0.73	0.73	0.16	1.98	0.92	0.92	0.20	3.71	1.12	1.12	0.24	6.11	1.32	1.32	0.28	8.41	1.51	1.51	0.32	10.63	
		17	0.82	0.69	0.18	2.71	0.94	0.91	0.20	4.01	1.12	1.12	0.24	6.12	1.32	1.32	0.28	8.43	1.52	1.52	0.32	10.67	
		19	-	-	-	-	1.40	0.89	0.30	9.32	1.41	1.09	0.30	9.43	1.47	1.30	0.32	10.13	1.57	1.51	0.34	11.31	
		20	-	-	-	-	1.77	0.91	0.38	13.83	1.76	1.11	0.38	13.66	1.75	1.30	0.37	13.52	1.77	1.49	0.38	13.87	
5		15	0.65	0.65	0.11	1.24	0.86	0.86	0.15	1.77	1.05	1.05	0.18	2.96	1.24	1.24	0.21	4.65	1.44	1.44	0.25	6.59	
		17	0.70	0.63	0.12	1.33	0.87	0.85	0.15	1.82	1.05	1.05	0.18	2.97	1.24	1.24	0.21	4.67	1.44	1.44	0.25	6.62	
		19	-	-	-	-	1.13	0.79	0.19	3.65	1.21	1.00	0.21	4.35	1.32	1.22	0.23	5.44	1.46	1.44	0.25	6.81	
		20	-	-	-	-	1.48	0.80	0.26	6.99	1.47	1.00	0.25	6.91	1.52	1.20	0.26	7.32	1.60	1.42	0.28	8.02	
6		15	0.57	0.57	0.08	0.89	0.78	0.78	0.11	1.23	0.98	0.98	0.14	1.63	1.17	1.17	0.17	2.48	1.36	1.36	0.20	3.72	
		17	0.58	0.55	0.08	0.90	0.78	0.78	0.11	1.23	0.98	0.98	0.14	1.64	1.18	1.18	0.17	2.49	1.37	1.37	0.20	3.74	
		19	-	-	-	-	0.96	0.72	0.14	1.55	1.08	0.94	0.16	2.00	1.22	1.16	0.17	2.73	1.37	1.37	0.20	3.78	
		20	-	-	-	-	1.19	0.70	0.17	2.60	1.24	0.91	0.18	2.91	1.33	1.12	0.19	3.52	1.45	1.34	0.21	4.40	

(Continued)

MK02A3SCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	TC	SC	WF	WPD	TC	TC	SC	WF	WPD	TC	TC	SC	WF	WPD	TC	
°C	°C	°C	kW	kW	m3/h	kPa	kW	kW	m3/h	kPa	kW	kW	m3/h	kPa	kW	kW	m3/h	kPa	kW	kW	m3/h	kPa	
13	3	15	0.60	0.60	0.17	2.62	0.80	0.80	0.23	5.58	1.00	1.00	0.29	8.54	1.20	1.20	0.34	11.61	1.39	1.39	0.40	14.99	
		17	0.61	0.59	0.17	2.78	0.80	0.80	0.23	5.60	1.00	1.00	0.29	8.57	1.20	1.20	0.34	11.64	1.39	1.39	0.40	15.03	
		19	-	-	-	-	1.09	0.78	0.31	9.93	1.14	0.98	0.33	10.68	1.24	1.20	0.36	12.26	1.39	1.39	0.40	15.05	
		20	-	-	-	-	1.45	0.79	0.42	16.13	1.44	0.99	0.41	15.88	1.45	1.18	0.42	16.03	1.50	1.38	0.43	17.07	
	4	15	0.52	0.52	0.11	1.20	0.73	0.73	0.16	2.07	0.92	0.92	0.20	3.93	1.12	1.12	0.24	6.20	1.32	1.32	0.28	8.28	
		17	0.53	0.53	0.11	1.21	0.73	0.73	0.16	2.08	0.92	0.92	0.20	3.95	1.12	1.12	0.24	6.22	1.32	1.32	0.28	8.31	
		19	-	-	-	-	0.86	0.68	0.18	3.27	0.98	0.90	0.21	4.61	1.13	1.12	0.24	6.31	1.32	1.32	0.28	8.34	
		20	-	-	-	-	1.14	0.68	0.25	6.46	1.17	0.89	0.25	6.76	1.26	1.10	0.27	7.64	1.37	1.31	0.29	8.85	
	5	15	0.44	0.44	0.07	0.78	0.65	0.65	0.11	1.18	0.86	0.86	0.15	1.77	1.05	1.05	0.18	3.03	1.24	1.24	0.21	4.74	
		17	0.44	0.44	0.07	0.78	0.65	0.65	0.11	1.18	0.86	0.86	0.15	1.78	1.05	1.05	0.18	3.04	1.24	1.24	0.21	4.76	
		19	-	-	-	-	0.72	0.62	0.12	1.30	0.88	0.84	0.15	1.90	1.05	1.05	0.18	3.05	1.24	1.24	0.21	4.79	
		20	-	-	-	-	0.88	0.59	0.15	1.94	0.98	0.81	0.17	2.57	1.11	1.02	0.19	3.56	1.26	1.24	0.22	4.93	
	6	15	0.34	0.34	0.05	0.50	0.57	0.57	0.08	0.84	0.78	0.78	0.11	1.16	0.98	0.98	0.14	1.62	1.17	1.17	0.17	2.55	
		17	0.34	0.34	0.05	0.50	0.57	0.57	0.08	0.84	0.78	0.78	0.11	1.16	0.99	0.99	0.14	1.63	1.17	1.17	0.17	2.56	
		19	-	-	-	-	0.59	0.55	0.08	0.87	0.79	0.78	0.11	1.17	0.99	0.98	0.14	1.63	1.18	1.18	0.17	2.57	
		20	-	-	-	-	0.68	0.51	0.10	1.00	0.85	0.75	0.12	1.28	1.02	0.97	0.15	1.75	1.18	1.18	0.17	2.59	
	15	3	15	0.39	0.39	0.11	1.15	0.59	0.59	0.17	2.65	0.80	0.80	0.23	5.56	1.00	1.00	0.28	8.30	1.19	1.19	0.34	11.26
			17	0.39	0.39	0.11	1.15	0.60	0.60	0.17	2.67	0.80	0.80	0.23	5.58	1.00	1.00	0.29	8.32	1.20	1.20	0.34	11.29
			19	-	-	-	-	0.62	0.58	0.18	2.99	0.80	0.79	0.23	5.58	1.00	1.00	0.29	8.35	1.20	1.20	0.34	11.33
			20	-	-	-	-	0.80	0.56	0.23	5.67	0.90	0.78	0.26	6.89	1.02	1.00	0.29	8.65	1.20	1.20	0.34	11.33
4		15	0.31	0.31	0.07	0.66	0.52	0.52	0.11	1.14	0.73	0.73	0.16	2.11	0.92	0.92	0.20	4.00	1.12	1.12	0.24	6.19	
		17	0.31	0.31	0.07	0.66	0.53	0.53	0.11	1.14	0.73	0.73	0.16	2.12	0.92	0.92	0.20	4.02	1.12	1.12	0.24	6.21	
		19	-	-	-	-	0.53	0.52	0.11	1.15	0.73	0.73	0.16	2.12	0.92	0.92	0.20	4.04	1.13	1.13	0.24	6.23	
		20	-	-	-	-	0.61	0.49	0.13	1.41	0.76	0.71	0.16	2.39	0.92	0.92	0.20	4.06	1.13	1.13	0.24	6.24	
5		15	0.20	0.20	0.03	0.34	0.44	0.44	0.08	0.76	0.66	0.66	0.11	1.13	0.86	0.86	0.15	1.85	1.05	1.05	0.18	3.20	
		17	0.20	0.20	0.03	0.34	0.44	0.44	0.08	0.76	0.66	0.66	0.11	1.14	0.86	0.86	0.15	1.86	1.05	1.05	0.18	3.21	
		19	-	-	-	-	0.44	0.44	0.08	0.76	0.66	0.66	0.11	1.14	0.86	0.86	0.15	1.86	1.05	1.05	0.18	3.22	
		20	-	-	-	-	0.47	0.42	0.08	0.80	0.67	0.65	0.12	1.16	0.86	0.86	0.15	1.86	1.05	1.05	0.18	3.23	
6		15	-	-	-	-	0.34	0.34	0.05	0.48	0.57	0.57	0.08	0.81	0.79	0.79	0.11	1.12	0.98	0.98	0.14	1.67	
		17	-	-	-	-	0.34	0.34	0.05	0.48	0.57	0.57	0.08	0.81	0.79	0.79	0.11	1.12	0.99	0.99	0.14	1.68	
		19	-	-	-	-	0.34	0.34	0.05	0.48	0.58	0.58	0.08	0.81	0.79	0.79	0.11	1.12	0.99	0.99	0.14	1.68	
		20	-	-	-	-	0.35	0.34	0.05	0.49	0.58	0.58	0.08	0.81	0.79	0.79	0.11	1.12	0.99	0.99	0.14	1.69	

Abbreviations:

- EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK02A3SCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	2.24	0.24	5.52	2.01	0.22	4.57	1.77	0.19	3.69	1.53	0.16	2.88
	10	2.11	0.18	3.42	1.86	0.16	2.76	1.61	0.14	2.06	1.37	0.12	1.35
	12	1.95	0.14	2.07	1.70	0.12	1.46	1.46	0.11	0.97	1.21	0.09	0.64
	14	1.79	0.11	1.08	1.54	0.09	0.75	1.28	0.08	0.57	0.99	0.06	0.45
	16	1.62	0.09	0.66	1.34	0.07	0.54	1.04	0.06	0.42	0.70	0.04	0.29
45	8	2.82	0.30	7.95	2.58	0.28	6.85	2.35	0.25	5.82	2.12	0.23	4.87
	10	2.71	0.23	5.08	2.47	0.21	4.34	2.23	0.19	3.65	1.99	0.17	3.01
	12	2.57	0.19	3.45	2.33	0.17	2.91	2.08	0.15	2.40	1.83	0.13	1.85
	14	2.42	0.15	2.37	2.16	0.13	1.89	1.91	0.12	1.39	1.67	0.10	0.96
	16	2.25	0.12	1.48	2.00	0.11	1.08	1.75	0.09	0.77	1.49	0.08	0.56
50	8	3.39	0.37	10.65	3.15	0.34	9.40	2.92	0.31	8.24	2.69	0.29	7.14
	10	3.29	0.28	6.94	3.05	0.26	6.10	2.81	0.24	5.31	2.58	0.22	4.58
	12	3.17	0.23	4.78	2.93	0.21	4.18	2.69	0.19	3.61	2.45	0.18	3.08
	14	3.04	0.19	3.45	2.80	0.17	2.99	2.55	0.16	2.55	2.30	0.14	2.14
	16	2.89	0.16	2.55	2.64	0.14	2.16	2.38	0.13	1.77	2.13	0.11	1.36
55	8	3.95	0.43	13.62	3.71	0.40	12.24	3.48	0.37	10.93	3.25	0.35	9.69
	10	3.86	0.33	8.95	3.62	0.31	8.02	3.38	0.29	7.14	3.15	0.27	6.31
	12	3.75	0.27	6.24	3.51	0.25	5.57	3.28	0.24	4.94	3.04	0.22	4.34
	14	3.64	0.22	4.58	3.40	0.21	4.07	3.16	0.19	3.59	2.91	0.18	3.13
	16	3.51	0.19	3.44	3.27	0.18	3.04	3.02	0.16	2.66	2.77	0.15	2.30
60	8	4.51	0.49	16.92	4.27	0.46	15.39	4.04	0.43	13.87	3.80	0.41	12.50
	10	4.42	0.38	11.08	4.18	0.36	10.06	3.95	0.34	9.09	3.71	0.32	8.18
	12	4.33	0.31	7.84	4.09	0.29	7.10	3.85	0.28	6.40	3.61	0.26	5.74
	14	4.23	0.26	5.77	3.98	0.25	5.21	3.74	0.23	4.68	3.50	0.22	4.18
	16	4.11	0.22	4.41	3.87	0.21	3.97	3.63	0.20	3.55	3.38	0.18	3.15

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

## Cooling Capacity Table

MK02A3HCBSLXG1MXE/MK02A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
5	3	15	1.94	1.44	0.55	27.97	1.93	1.64	0.55	27.69	1.95	1.84	0.56	28.27	2.04	2.04	0.58	30.62	2.23	2.23	0.64	35.68
		17	2.54	1.45	0.73	44.49	2.52	1.65	0.72	43.98	2.50	1.84	0.72	43.48	2.49	2.03	0.71	42.99	2.48	2.22	0.71	42.71
		19	-	-	-	-	3.16	1.66	0.91	65.96	3.14	1.86	0.91	65.22	3.12	2.05	0.90	64.50	3.10	2.23	0.89	63.79
		20	-	-	-	-	3.49	1.67	1.00	77.72	3.47	1.86	1.00	77.75	3.45	2.05	1.00	76.94	3.43	2.24	0.99	76.07
	4	15	1.75	1.35	0.38	14.33	1.77	1.56	0.38	14.61	1.84	1.77	0.39	15.57	1.98	1.97	0.43	17.79	2.17	2.17	0.47	20.87
		17	2.37	1.38	0.51	24.06	2.36	1.57	0.51	23.79	2.34	1.76	0.50	23.52	2.33	1.96	0.50	23.34	2.35	2.15	0.50	23.68
		19	-	-	-	-	3.01	1.59	0.64	36.14	2.99	1.78	0.64	35.75	2.97	1.97	0.64	35.35	2.95	2.16	0.63	34.97
		20	-	-	-	-	3.34	1.60	0.72	43.50	3.32	1.79	0.71	43.03	3.30	1.98	0.71	42.56	3.28	2.17	0.70	42.10
	5	15	1.55	1.25	0.27	7.36	1.61	1.47	0.28	8.16	1.73	1.69	0.30	9.43	1.90	1.90	0.33	11.28	2.10	2.10	0.36	13.34
		17	2.18	1.28	0.37	14.14	2.16	1.48	0.37	13.98	2.15	1.68	0.37	13.85	2.17	1.88	0.37	14.08	2.22	2.08	0.38	14.70
		19	-	-	-	-	2.83	1.51	0.49	22.16	2.81	1.70	0.48	21.91	2.79	1.89	0.48	21.67	2.78	2.08	0.48	21.44
		20	-	-	-	-	3.18	1.52	0.55	27.03	3.16	1.71	0.54	26.73	3.14	1.91	0.54	26.45	3.12	2.10	0.54	26.16
	6	15	1.40	1.18	0.20	3.55	1.50	1.40	0.21	4.26	1.64	1.62	0.23	5.37	1.82	1.82	0.26	7.11	2.02	2.02	0.29	9.00
		17	1.94	1.18	0.28	8.23	1.93	1.37	0.28	8.11	1.95	1.58	0.28	8.33	2.01	1.79	0.29	8.89	2.10	2.01	0.30	9.72
		19	-	-	-	-	2.63	1.42	0.38	14.40	2.62	1.61	0.38	14.24	2.60	1.81	0.37	14.08	2.59	2.00	0.37	13.96
		20	-	-	-	-	2.99	1.43	0.43	17.75	2.97	1.63	0.42	17.56	2.95	1.82	0.42	17.37	2.93	2.01	0.42	17.18
7	3	15	1.50	1.23	0.43	17.95	1.54	1.44	0.44	18.80	1.65	1.65	0.47	20.96	1.84	1.84	0.53	25.39	2.04	2.04	0.59	30.51
		17	2.10	1.25	0.61	32.15	2.09	1.44	0.60	31.77	2.07	1.64	0.60	31.38	2.07	1.83	0.60	31.34	2.11	2.03	0.61	32.35
		19	-	-	-	-	2.72	1.46	0.78	49.82	2.71	1.65	0.78	49.25	2.69	1.84	0.77	48.69	2.67	2.03	0.77	48.14
		20	-	-	-	-	3.06	1.46	0.88	61.09	3.04	1.66	0.87	60.40	3.02	1.85	0.87	59.71	3.00	2.04	0.86	59.04
	4	15	1.31	1.14	0.28	8.64	1.42	1.37	0.30	9.92	1.58	1.58	0.34	12.02	1.78	1.78	0.38	14.70	1.97	1.97	0.42	17.37
		17	1.91	1.16	0.41	16.59	1.90	1.36	0.41	16.39	1.90	1.56	0.41	16.37	1.93	1.76	0.41	16.72	2.01	1.97	0.43	17.94
		19	-	-	-	-	2.56	1.38	0.55	27.03	2.54	1.58	0.55	26.73	2.52	1.77	0.54	26.43	2.51	1.96	0.54	26.12
		20	-	-	-	-	2.90	1.39	0.63	33.97	2.88	1.59	0.62	33.60	2.87	1.78	0.62	33.23	2.85	1.97	0.62	32.85
	5	15	1.18	1.07	0.20	3.75	1.31	1.29	0.23	5.01	1.50	1.50	0.26	7.04	1.70	1.70	0.29	9.20	1.90	1.90	0.33	11.14
		17	1.67	1.06	0.29	8.84	1.67	1.26	0.29	8.83	1.71	1.47	0.29	9.29	1.80	1.69	0.31	10.11	1.92	1.90	0.33	11.31
		19	-	-	-	-	2.36	1.30	0.41	16.10	2.35	1.49	0.40	15.92	2.33	1.68	0.40	15.73	2.33	1.88	0.40	15.71
		20	-	-	-	-	2.71	1.31	0.47	20.36	2.70	1.50	0.46	20.14	2.68	1.70	0.46	19.91	2.66	1.89	0.46	19.69
	6	15	1.08	1.01	0.16	1.99	1.24	1.24	0.18	2.69	1.43	1.43	0.21	3.95	1.63	1.63	0.23	5.50	1.83	1.83	0.26	7.29
		17	1.43	0.96	0.21	3.97	1.48	1.17	0.21	4.32	1.56	1.39	0.22	4.94	1.68	1.61	0.24	5.96	1.83	1.83	0.26	7.34
		19	-	-	-	-	2.12	1.19	0.30	9.75	2.10	1.39	0.30	9.63	2.10	1.59	0.30	9.63	2.14	1.79	0.31	9.93
		20	-	-	-	-	2.50	1.21	0.36	12.88	2.48	1.41	0.36	12.73	2.46	1.60	0.35	12.58	2.45	1.80	0.35	12.46



# 2-Pipe Duct MK-CBS Series



(Continued)

MK02A3HCBSLXG1MXE/MK02A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	1.09	1.03	0.31	10.14	1.25	1.25	0.36	12.83	1.45	1.45	0.42	16.67	1.64	1.64	0.47	20.58	1.84	1.84	0.53	24.91	
		17	1.62	1.03	0.46	19.93	1.60	1.23	0.46	19.67	1.62	1.43	0.47	20.04	1.69	1.64	0.48	21.47	1.84	1.84	0.53	24.99	
		19	-	-	-	-	2.26	1.25	0.65	35.46	2.24	1.44	0.64	35.04	2.23	1.64	0.64	34.63	2.21	1.83	0.64	34.24	
		20	-	-	-	-	2.60	1.26	0.75	45.92	2.58	1.45	0.75	45.39	2.57	1.65	0.74	44.86	2.55	1.84	0.74	44.35	
	4	15	0.98	0.96	0.21	4.35	1.17	1.17	0.25	6.76	1.38	1.38	0.30	9.28	1.58	1.58	0.34	11.70	1.78	1.78	0.38	14.29	
		17	1.38	0.94	0.30	9.30	1.40	1.14	0.30	9.58	1.48	1.36	0.32	10.45	1.59	1.58	0.34	11.90	1.78	1.78	0.38	14.33	
		19	-	-	-	-	2.07	1.17	0.45	18.57	2.05	1.36	0.44	18.35	2.04	1.56	0.44	18.14	2.05	1.76	0.44	18.37	
		20	-	-	-	-	2.42	1.18	0.52	24.46	2.40	1.38	0.52	24.18	2.39	1.57	0.52	23.90	2.37	1.76	0.51	23.61	
	5	15	0.90	0.90	0.16	1.98	1.10	1.10	0.19	3.24	1.30	1.30	0.22	5.08	1.50	1.50	0.26	7.19	1.70	1.70	0.29	9.10	
		17	1.14	0.84	0.20	3.62	1.23	1.06	0.21	4.38	1.35	1.29	0.23	5.58	1.51	1.51	0.26	7.23	1.71	1.71	0.29	9.13	
		19	-	-	-	-	1.83	1.07	0.31	10.21	1.81	1.27	0.31	10.08	1.84	1.47	0.32	10.30	1.90	1.68	0.33	10.87	
		20	-	-	-	-	2.20	1.09	0.38	14.12	2.18	1.29	0.38	13.83	2.17	1.48	0.37	13.66	2.17	1.68	0.37	13.64	
	6	15	0.82	0.82	0.12	1.37	1.04	1.04	0.15	1.82	1.24	1.24	0.18	2.73	1.43	1.43	0.21	4.07	1.63	1.63	0.23	5.70	
		17	0.98	0.77	0.14	1.66	1.12	1.00	0.16	2.11	1.26	1.22	0.18	2.88	1.43	1.43	0.21	4.08	1.63	1.63	0.23	5.73	
		19	-	-	-	-	1.53	0.95	0.22	4.94	1.57	1.17	0.22	5.20	1.64	1.38	0.24	5.84	1.75	1.60	0.25	6.72	
		20	-	-	-	-	1.93	0.98	0.28	8.18	1.92	1.18	0.27	8.06	1.92	1.38	0.28	8.08	1.96	1.59	0.28	8.43	
	11	3	15	0.83	0.83	0.24	6.00	1.04	1.04	0.30	9.23	1.25	1.25	0.36	12.50	1.45	1.45	0.41	16.08	1.64	1.64	0.47	19.99
			17	1.08	0.81	0.31	9.73	1.14	1.03	0.33	10.72	1.26	1.25	0.36	12.67	1.45	1.45	0.41	16.14	1.65	1.65	0.47	20.05
			19	-	-	-	-	1.75	1.04	0.50	22.24	1.73	1.23	0.50	21.94	1.73	1.43	0.49	21.90	1.77	1.64	0.51	22.73
			20	-	-	-	-	2.10	1.05	0.60	30.36	2.08	1.24	0.59	29.99	2.07	1.44	0.59	29.63	2.05	1.63	0.59	29.28
		4	15	0.77	0.77	0.16	2.26	0.97	0.97	0.21	4.25	1.17	1.17	0.25	6.79	1.38	1.38	0.30	9.07	1.58	1.58	0.34	11.41
			17	0.88	0.73	0.19	3.28	1.00	0.95	0.21	4.70	1.17	1.17	0.25	6.81	1.38	1.38	0.30	9.10	1.58	1.58	0.34	11.45
			19	-	-	-	-	1.51	0.94	0.32	10.55	1.51	1.15	0.32	10.59	1.56	1.36	0.33	11.22	1.65	1.57	0.35	12.32
			20	-	-	-	-	1.88	0.96	0.40	15.37	1.87	1.16	0.40	15.17	1.85	1.36	0.40	15.00	1.87	1.56	0.40	15.27
5		15	0.69	0.69	0.12	1.33	0.90	0.90	0.16	2.00	1.10	1.10	0.19	3.39	1.30	1.30	0.22	5.27	1.51	1.51	0.26	7.23	
		17	0.75	0.66	0.13	1.44	0.92	0.90	0.16	2.08	1.10	1.10	0.19	3.40	1.30	1.30	0.22	5.29	1.51	1.51	0.26	7.26	
		19	-	-	-	-	1.22	0.84	0.21	4.53	1.30	1.06	0.22	5.24	1.41	1.28	0.24	6.30	1.54	1.50	0.27	7.55	
		20	-	-	-	-	1.61	0.86	0.28	8.12	1.60	1.06	0.28	8.01	1.63	1.27	0.28	8.31	1.70	1.48	0.29	8.94	
6		15	0.61	0.61	0.09	0.95	0.83	0.83	0.12	1.31	1.04	1.04	0.15	1.83	1.24	1.24	0.18	2.85	1.43	1.43	0.21	4.24	
		17	0.63	0.59	0.09	0.98	0.83	0.83	0.12	1.31	1.04	1.04	0.15	1.83	1.24	1.24	0.18	2.86	1.43	1.43	0.21	4.26	
		19	-	-	-	-	1.04	0.76	0.15	1.83	1.16	0.99	0.17	2.39	1.29	1.21	0.19	3.21	1.45	1.43	0.21	4.36	
		20	-	-	-	-	1.30	0.74	0.19	3.28	1.34	0.96	0.19	3.59	1.43	1.18	0.21	4.26	1.54	1.40	0.22	5.11	

(Continued)

MK02A3HCBSLXG1MXE/MK02A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	TC	SC	WF	WPD	TC	TC	SC	WF	WPD	TC	TC	SC	WF	WPD	TC	
°C	°C	°C	kW	kW	m3/h	kPa	kW	kW	m3/h	kPa	kW	kW	m3/h	kPa	kW	kW	m3/h	kPa	kW	kW	m3/h	kPa	
13	3	15	0.63	0.63	0.18	3.02	0.84	0.84	0.24	6.22	1.04	1.04	0.30	9.21	1.25	1.25	0.36	12.44	1.44	1.44	0.42	16.00	
		17	0.65	0.62	0.19	3.27	0.84	0.83	0.24	6.23	1.05	1.05	0.30	9.24	1.25	1.25	0.36	12.48	1.45	1.45	0.42	16.05	
		19	-	-	-	-	1.17	0.82	0.34	11.18	1.21	1.03	0.35	11.83	1.30	1.24	0.37	13.12	1.45	1.44	0.42	16.06	
		20	-	-	-	-	1.54	0.83	0.44	17.84	1.53	1.03	0.44	17.58	1.53	1.23	0.44	17.65	1.58	1.44	0.45	18.57	
	4	15	0.56	0.56	0.12	1.29	0.77	0.77	0.16	2.39	0.97	0.97	0.21	4.48	1.17	1.17	0.25	6.79	1.38	1.38	0.30	8.92	
		17	0.56	0.56	0.12	1.29	0.77	0.77	0.17	2.40	0.97	0.97	0.21	4.50	1.18	1.18	0.25	6.81	1.38	1.38	0.30	8.95	
		19	-	-	-	-	0.93	0.72	0.20	4.01	1.04	0.95	0.22	5.30	1.19	1.17	0.26	6.97	1.38	1.38	0.30	8.98	
		20	-	-	-	-	1.25	0.73	0.27	7.56	1.27	0.93	0.27	7.74	1.34	1.15	0.29	8.53	1.45	1.37	0.31	9.70	
	5	15	0.47	0.47	0.08	0.85	0.69	0.69	0.12	1.26	0.90	0.90	0.15	2.03	1.10	1.10	0.19	3.47	1.30	1.30	0.22	5.33	
		17	0.47	0.47	0.08	0.85	0.70	0.70	0.12	1.26	0.90	0.90	0.15	2.04	1.10	1.10	0.19	3.49	1.30	1.30	0.22	5.35	
		19	-	-	-	-	0.78	0.66	0.13	1.46	0.93	0.89	0.16	2.24	1.10	1.10	0.19	3.51	1.31	1.31	0.22	5.38	
		20	-	-	-	-	0.96	0.62	0.16	2.41	1.06	0.85	0.18	3.13	1.18	1.08	0.20	4.22	1.33	1.30	0.23	5.61	
	6	15	0.37	0.37	0.05	0.54	0.61	0.61	0.09	0.91	0.83	0.83	0.12	1.24	1.04	1.04	0.15	1.84	1.23	1.23	0.18	2.92	
		17	0.37	0.37	0.05	0.54	0.61	0.61	0.09	0.91	0.83	0.83	0.12	1.24	1.04	1.04	0.15	1.85	1.24	1.24	0.18	2.94	
		19	-	-	-	-	0.65	0.59	0.09	0.95	0.84	0.83	0.12	1.26	1.04	1.04	0.15	1.85	1.24	1.24	0.18	2.95	
		20	-	-	-	-	0.75	0.55	0.11	1.11	0.92	0.79	0.13	1.43	1.08	1.02	0.15	2.05	1.25	1.23	0.18	3.01	
	15	3	15	0.42	0.42	0.12	1.23	0.63	0.63	0.18	3.06	0.84	0.84	0.24	6.12	1.04	1.04	0.30	8.93	1.24	1.24	0.35	12.05
			17	0.42	0.42	0.12	1.23	0.63	0.63	0.18	3.07	0.84	0.84	0.24	6.14	1.04	1.04	0.30	8.96	1.25	1.25	0.36	12.09
			19	-	-	-	-	0.66	0.61	0.19	3.56	0.84	0.84	0.24	6.15	1.05	1.05	0.30	8.99	1.25	1.25	0.36	12.13
			20	-	-	-	-	0.88	0.60	0.25	6.66	0.96	0.82	0.27	7.73	1.08	1.04	0.31	9.44	1.25	1.24	0.36	12.12
4		15	0.33	0.33	0.07	0.72	0.56	0.56	0.12	1.22	0.76	0.76	0.16	2.43	0.97	0.97	0.21	4.54	1.17	1.17	0.25	6.71	
		17	0.33	0.33	0.07	0.72	0.56	0.56	0.12	1.22	0.76	0.76	0.16	2.44	0.97	0.97	0.21	4.56	1.18	1.18	0.25	6.73	
		19	-	-	-	-	0.57	0.55	0.12	1.25	0.77	0.76	0.16	2.44	0.97	0.97	0.21	4.58	1.18	1.18	0.25	6.75	
		20	-	-	-	-	0.67	0.52	0.14	1.68	0.81	0.75	0.17	2.84	0.98	0.97	0.21	4.64	1.18	1.18	0.25	6.76	
5		15	0.22	0.22	0.04	0.38	0.48	0.48	0.08	0.82	0.70	0.70	0.12	1.22	0.90	0.90	0.16	2.13	1.10	1.10	0.19	3.65	
		17	0.22	0.22	0.04	0.38	0.48	0.48	0.08	0.82	0.70	0.70	0.12	1.22	0.90	0.90	0.16	2.14	1.10	1.10	0.19	3.67	
		19	-	-	-	-	0.48	0.48	0.08	0.82	0.70	0.70	0.12	1.23	0.91	0.91	0.16	2.15	1.11	1.11	0.19	3.69	
		20	-	-	-	-	0.51	0.45	0.09	0.88	0.72	0.69	0.12	1.27	0.91	0.90	0.16	2.15	1.11	1.11	0.19	3.70	
6		15	-	-	-	-	0.38	0.38	0.05	0.53	0.62	0.62	0.09	0.87	0.83	0.83	0.12	1.21	1.04	1.04	0.15	1.92	
		17	-	-	-	-	0.38	0.38	0.05	0.53	0.62	0.62	0.09	0.87	0.84	0.84	0.12	1.21	1.04	1.04	0.15	1.93	
		19	-	-	-	-	0.38	0.38	0.05	0.53	0.62	0.62	0.09	0.87	0.84	0.84	0.12	1.21	1.04	1.04	0.15	1.94	
		20	-	-	-	-	0.38	0.37	0.06	0.54	0.62	0.62	0.09	0.88	0.84	0.84	0.12	1.21	1.04	1.04	0.15	1.94	

Abbreviations:

- EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK02A3HCBSLXG1MXE/MK02A3UCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	2.40	0.26	6.17	2.15	0.23	5.14	1.91	0.21	4.18	1.66	0.18	3.31
	10	2.28	0.20	3.90	2.03	0.17	3.20	1.77	0.15	2.51	1.51	0.13	1.74
	12	2.14	0.15	2.54	1.87	0.13	1.89	1.61	0.12	1.27	1.35	0.10	0.80
	14	1.97	0.12	1.42	1.71	0.11	0.97	1.44	0.09	0.67	1.14	0.07	0.51
	16	1.81	0.10	0.81	1.52	0.08	0.62	1.21	0.07	0.49	0.84	0.05	0.35
45	8	2.99	0.32	8.78	2.75	0.30	7.59	2.50	0.27	6.48	2.26	0.24	5.45
	10	2.89	0.25	5.68	2.64	0.23	4.88	2.39	0.21	4.13	2.15	0.19	3.43
	12	2.78	0.20	3.92	2.52	0.18	3.34	2.27	0.16	2.78	2.01	0.14	2.25
	14	2.64	0.16	2.78	2.37	0.15	2.29	2.11	0.13	1.78	1.84	0.11	1.26
	16	2.48	0.13	1.89	2.21	0.12	1.42	1.95	0.11	1.01	1.68	0.09	0.69
50	8	3.57	0.38	11.66	3.33	0.36	10.32	3.08	0.33	9.06	2.84	0.31	7.88
	10	3.49	0.30	7.68	3.24	0.28	6.77	3.00	0.26	5.92	2.75	0.24	5.12
	12	3.39	0.24	5.35	3.14	0.23	4.69	2.89	0.21	4.08	2.64	0.19	3.50
	14	3.28	0.20	3.90	3.02	0.19	3.40	2.76	0.17	2.93	2.51	0.15	2.48
	16	3.15	0.17	2.93	2.88	0.16	2.53	2.62	0.14	2.13	2.35	0.13	1.72
55	8	4.15	0.45	14.91	3.91	0.42	13.34	3.66	0.39	11.93	3.42	0.37	10.61
	10	4.07	0.35	9.82	3.83	0.33	8.82	3.58	0.31	7.87	3.34	0.29	6.97
	12	3.99	0.29	6.91	3.74	0.27	6.19	3.49	0.25	5.50	3.24	0.23	4.85
	14	3.89	0.24	5.12	3.64	0.22	4.57	3.39	0.21	4.04	3.14	0.19	3.55
	16	3.78	0.20	3.89	3.52	0.19	3.45	3.27	0.18	3.03	3.01	0.16	2.64
60	8	4.73	0.51	18.26	4.48	0.48	16.70	4.23	0.46	15.14	3.99	0.43	13.60
	10	4.66	0.40	12.10	4.41	0.38	11.00	4.16	0.36	9.95	3.92	0.34	8.96
	12	4.58	0.33	8.62	4.33	0.31	7.82	4.08	0.29	7.07	3.83	0.28	6.35
	14	4.49	0.28	6.39	4.24	0.26	5.79	3.99	0.25	5.21	3.74	0.23	4.67
	16	4.39	0.24	4.93	4.14	0.22	4.45	3.89	0.21	3.99	3.63	0.20	3.56

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

## Cooling Capacity Table

MK03A3SCBSLXG1MXE/ MK03A3HCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
5	3	15	2.68	2.01	0.77	29.45	2.66	2.29	0.76	29.16	2.71	2.58	0.77	30.02	2.86	2.86	0.82	33.10	3.13	3.13	0.90	38.67
		17	3.53	2.03	1.02	48.08	3.51	2.31	1.01	47.52	3.48	2.58	1.00	46.95	3.46	2.85	0.99	46.07	3.45	3.12	0.99	45.83
		19	-	-	-	-	4.40	2.32	1.26	69.81	4.37	2.59	1.25	69.01	4.35	2.87	1.25	68.23	4.32	3.14	1.24	67.70
		20	-	-	-	-	4.88	2.32	1.40	83.60	4.85	2.60	1.39	82.64	4.82	2.87	1.38	81.70	4.79	3.14	1.37	80.80
	4	15	2.38	1.87	0.51	14.71	2.42	2.17	0.52	15.13	2.54	2.47	0.55	16.57	2.76	2.76	0.59	19.08	3.03	3.03	0.65	22.42
		17	3.26	1.90	0.70	25.16	3.24	2.18	0.69	24.87	3.22	2.46	0.69	24.58	3.21	2.73	0.69	24.43	3.25	3.01	0.70	24.95
		19	-	-	-	-	4.16	2.20	0.89	38.26	4.13	2.48	0.89	37.82	4.11	2.75	0.88	37.40	4.08	3.02	0.88	36.99
		20	-	-	-	-	4.64	2.21	1.00	46.27	4.61	2.49	0.99	45.75	4.58	2.76	0.98	45.24	4.56	3.03	0.98	44.74
	5	15	2.07	1.72	0.36	7.42	2.19	2.04	0.38	8.42	2.37	2.35	0.41	9.93	2.64	2.64	0.45	11.98	2.92	2.92	0.50	14.21
		17	2.96	1.76	0.51	14.48	2.94	2.04	0.50	14.31	2.92	2.32	0.50	14.19	2.96	2.61	0.51	14.53	3.06	2.91	0.53	15.50
		19	-	-	-	-	3.89	2.08	0.67	23.08	3.86	2.35	0.66	22.82	3.83	2.63	0.66	22.56	3.81	2.90	0.65	22.31
		20	-	-	-	-	4.39	2.09	0.76	28.63	4.35	2.37	0.75	28.03	4.32	2.64	0.74	27.72	4.30	2.91	0.74	27.42
	6	15	1.87	1.62	0.27	3.53	2.03	1.93	0.29	4.38	2.24	2.23	0.32	5.72	2.52	2.52	0.36	7.66	2.80	2.80	0.40	9.63
		17	2.59	1.60	0.37	8.19	2.57	1.88	0.37	8.07	2.62	2.18	0.37	8.40	2.72	2.48	0.39	9.12	2.88	2.79	0.41	10.13
		19	-	-	-	-	3.58	1.94	0.51	14.73	3.55	2.22	0.51	14.55	3.53	2.49	0.51	14.38	3.52	2.77	0.50	14.29
		20	-	-	-	-	4.08	1.96	0.58	18.32	4.06	2.24	0.58	18.12	4.03	2.51	0.58	17.91	4.00	2.78	0.57	17.72
7	3	15	2.05	1.72	0.59	18.63	2.12	2.01	0.61	19.77	2.30	2.30	0.66	22.55	2.58	2.58	0.74	27.42	2.86	2.86	0.83	33.04
		17	2.90	1.74	0.84	33.92	2.88	2.02	0.83	33.50	2.86	2.29	0.83	33.07	2.86	2.57	0.83	33.13	2.93	2.85	0.85	34.57
		19	-	-	-	-	3.79	2.03	1.09	53.13	3.76	2.31	1.08	52.52	3.74	2.58	1.08	52.04	3.71	2.85	1.07	51.70
		20	-	-	-	-	4.27	2.04	1.23	65.92	4.24	2.31	1.22	64.85	4.21	2.59	1.21	63.96	4.18	2.86	1.21	63.39
	4	15	1.78	1.58	0.38	8.81	1.94	1.90	0.42	10.34	2.20	2.20	0.47	12.80	2.48	2.48	0.54	15.71	2.75	2.75	0.59	18.63
		17	2.60	1.60	0.56	16.87	2.58	1.88	0.55	16.64	2.58	2.17	0.56	16.69	2.65	2.46	0.57	17.45	2.79	2.75	0.60	19.04
		19	-	-	-	-	3.52	1.91	0.76	28.34	3.50	2.19	0.75	28.01	3.47	2.46	0.75	27.68	3.45	2.73	0.74	27.35
		20	-	-	-	-	4.01	1.92	0.86	35.55	3.99	2.20	0.86	35.43	3.96	2.48	0.86	35.03	3.93	2.75	0.85	34.64
	5	15	1.58	1.47	0.27	3.81	1.79	1.78	0.31	5.29	2.07	2.07	0.36	7.56	2.36	2.36	0.41	9.77	2.64	2.64	0.45	11.84
		17	2.23	1.44	0.38	8.81	2.23	1.73	0.38	8.84	2.32	2.03	0.40	9.45	2.46	2.34	0.42	10.46	2.66	2.65	0.46	11.93
		19	-	-	-	-	3.22	1.78	0.55	16.54	3.19	2.06	0.55	16.34	3.17	2.33	0.55	16.14	3.17	2.61	0.55	16.18
		20	-	-	-	-	3.72	1.80	0.64	21.12	3.69	2.07	0.64	20.87	3.67	2.35	0.63	20.63	3.64	2.62	0.63	20.40
	6	15	1.45	1.38	0.21	2.00	1.69	1.69	0.24	2.82	1.96	1.96	0.28	4.22	2.24	2.24	0.32	5.92	2.52	2.52	0.36	7.82
		17	1.88	1.30	0.27	3.80	1.96	1.60	0.28	4.25	2.10	1.92	0.30	5.01	2.28	2.23	0.33	6.23	2.53	2.52	0.36	7.84
		19	-	-	-	-	2.84	1.62	0.41	9.74	2.82	1.90	0.40	9.61	2.83	2.19	0.41	9.67	2.90	2.48	0.41	10.08
		20	-	-	-	-	3.38	1.66	0.49	13.20	3.35	1.93	0.48	12.91	3.33	2.21	0.48	12.76	3.31	2.48	0.47	12.65

# 2-Pipe Duct MK-CBS Series



(Continued)

MK03A35CBSLXG1MXE/ MK03A3HCBLSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	1.49	1.44	0.43	10.54	1.74	1.74	0.50	13.70	2.02	2.02	0.58	17.76	2.30	2.30	0.66	22.17	2.58	2.58	0.75	27.29	
		17	2.21	1.43	0.64	20.68	2.19	1.71	0.63	20.39	2.23	2.00	0.64	20.96	2.34	2.30	0.67	22.83	2.58	2.58	0.75	27.37	
		19	-	-	-	-	3.12	1.74	0.90	37.45	3.10	2.02	0.89	36.98	3.08	2.29	0.88	36.52	3.06	2.56	0.88	36.14	
		20	-	-	-	-	3.61	1.75	1.05	48.81	3.58	2.03	1.04	48.22	3.56	2.30	1.03	47.66	3.54	2.57	1.02	47.10	
	4	15	1.33	1.32	0.29	4.48	1.61	1.61	0.35	7.24	1.91	1.91	0.41	9.83	2.20	2.20	0.47	12.46	2.48	2.48	0.53	15.30	
		17	1.85	1.28	0.40	9.28	1.89	1.58	0.41	9.69	2.02	1.89	0.43	10.79	2.21	2.20	0.47	12.58	2.48	2.48	0.53	15.34	
		19	-	-	-	-	2.82	1.61	0.61	19.17	2.80	1.89	0.60	18.93	2.78	2.17	0.60	18.73	2.81	2.45	0.61	19.09	
		20	-	-	-	-	3.32	1.63	0.72	25.51	3.30	1.91	0.71	25.20	3.28	2.18	0.71	24.90	3.25	2.46	0.70	24.60	
	5	15	1.23	1.23	0.21	2.04	1.50	1.50	0.26	3.45	1.79	1.79	0.31	5.45	2.08	2.08	0.36	7.66	2.36	2.36	0.41	9.64	
		17	1.51	1.14	0.26	3.49	1.64	1.46	0.28	4.38	1.83	1.77	0.31	5.80	2.08	2.08	0.36	7.68	2.37	2.37	0.41	9.67	
		19	-	-	-	-	2.45	1.46	0.42	10.22	2.43	1.74	0.42	10.10	2.48	2.04	0.43	10.43	2.58	2.34	0.44	11.17	
		20	-	-	-	-	2.99	1.49	0.52	14.36	2.96	1.77	0.51	14.20	2.93	2.05	0.50	13.87	2.94	2.33	0.51	14.06	
	6	15	1.11	1.11	0.16	1.37	1.41	1.41	0.20	1.87	1.69	1.69	0.24	2.89	1.96	1.96	0.28	4.35	2.24	2.24	0.32	6.12	
		17	1.29	1.04	0.18	1.61	1.49	1.37	0.21	2.10	1.70	1.68	0.24	2.98	1.96	1.96	0.28	4.37	2.25	2.25	0.32	6.14	
		19	-	-	-	-	2.01	1.29	0.29	4.68	2.07	1.59	0.30	5.06	2.20	1.90	0.31	5.84	2.36	2.22	0.34	6.89	
		20	-	-	-	-	2.56	1.33	0.37	8.05	2.54	1.61	0.36	7.92	2.55	1.89	0.37	8.00	2.64	2.20	0.38	8.47	
	11	3	15	1.15	1.15	0.33	6.42	1.45	1.45	0.41	9.79	1.74	1.74	0.50	13.34	2.02	2.02	0.58	17.27	2.30	2.30	0.66	21.55
			17	1.45	1.12	0.41	9.78	1.56	1.43	0.44	11.04	1.74	1.74	0.50	13.43	2.02	2.02	0.58	17.32	2.30	2.30	0.66	21.61
			19	-	-	-	-	2.40	1.44	0.68	23.10	2.38	1.72	0.68	22.77	2.38	2.00	0.68	22.81	2.45	2.29	0.70	23.95
			20	-	-	-	-	2.89	1.45	0.82	31.87	2.87	1.73	0.82	31.46	2.84	2.01	0.81	31.06	2.82	2.28	0.81	30.69
4		15	1.04	1.04	0.22	2.38	1.33	1.33	0.28	4.55	1.62	1.62	0.35	7.22	1.91	1.91	0.41	9.62	2.20	2.20	0.47	12.17	
		17	1.16	0.99	0.25	3.22	1.36	1.31	0.29	4.85	1.62	1.62	0.35	7.23	1.92	1.92	0.41	9.64	2.20	2.20	0.47	12.21	
		19	-	-	-	-	2.02	1.29	0.43	10.56	2.04	1.58	0.44	10.68	2.13	1.89	0.46	11.50	2.27	2.19	0.49	12.88	
		20	-	-	-	-	2.55	1.32	0.55	15.69	2.53	1.60	0.54	15.48	2.52	1.88	0.54	15.31	2.55	2.17	0.55	15.73	
5		15	0.94	0.94	0.16	1.33	1.23	1.23	0.21	2.09	1.51	1.51	0.26	3.61	1.79	1.79	0.31	5.64	2.08	2.08	0.36	7.66	
		17	1.00	0.90	0.17	1.42	1.24	1.23	0.21	2.14	1.51	1.51	0.26	3.62	1.79	1.79	0.31	5.66	2.09	2.09	0.36	7.68	
		19	-	-	-	-	1.61	1.14	0.28	4.31	1.73	1.45	0.30	5.17	1.90	1.77	0.33	6.43	2.11	2.08	0.36	7.85	
		20	-	-	-	-	2.14	1.16	0.37	7.98	2.12	1.45	0.37	7.88	2.19	1.75	0.38	8.30	2.31	2.05	0.40	9.10	
6		15	0.81	0.81	0.12	0.94	1.12	1.12	0.16	1.31	1.41	1.41	0.20	1.89	1.69	1.69	0.24	3.02	1.97	1.97	0.28	4.54	
		17	0.83	0.80	0.12	0.96	1.12	1.12	0.16	1.31	1.42	1.42	0.20	1.90	1.69	1.69	0.24	3.03	1.97	1.97	0.28	4.56	
		19	-	-	-	-	1.36	1.04	0.20	1.74	1.54	1.36	0.22	2.35	1.74	1.67	0.25	3.28	1.97	1.97	0.28	4.60	
		20	-	-	-	-	1.68	1.00	0.24	3.02	1.76	1.31	0.25	3.41	1.90	1.62	0.27	4.19	2.08	1.93	0.30	5.19	

(Continued)

MK03A3SCBSLXG1MXE/ MK03A3HCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	0.86	0.86	0.25	3.20	1.15	1.15	0.33	6.61	1.45	1.45	0.42	9.78	1.74	1.74	0.50	13.11	2.02	2.02	0.58	17.19
		17	0.87	0.85	0.25	3.36	1.16	1.15	0.33	6.62	1.45	1.45	0.42	9.80	1.74	1.74	0.50	13.15	2.02	2.02	0.58	17.24
		19	-	-	-	-	1.58	1.13	0.45	11.23	1.65	1.43	0.47	12.11	1.79	1.73	0.51	13.76	2.02	2.02	0.58	17.27
		20	-	-	-	-	2.10	1.15	0.60	18.32	2.08	1.43	0.60	18.02	2.09	1.72	0.60	18.20	2.17	2.01	0.62	19.44
	4	15	0.75	0.75	0.16	1.29	1.04	1.04	0.22	2.52	1.33	1.33	0.29	4.79	1.62	1.62	0.35	7.17	1.91	1.91	0.41	9.47
		17	0.76	0.75	0.16	1.29	1.05	1.05	0.23	2.53	1.33	1.33	0.29	4.81	1.63	1.63	0.35	7.19	1.92	1.92	0.41	9.50
		19	-	-	-	-	1.22	0.99	0.26	3.88	1.40	1.31	0.30	5.39	1.64	1.63	0.35	7.27	1.92	1.92	0.41	9.53
		20	-	-	-	-	1.65	0.99	0.35	7.36	1.69	1.29	0.36	7.66	1.81	1.60	0.39	8.65	1.98	1.91	0.42	10.07
	5	15	0.63	0.63	0.11	0.84	0.94	0.94	0.16	1.26	1.23	1.23	0.21	2.13	1.51	1.51	0.26	3.70	1.79	1.79	0.31	5.68
		17	0.63	0.62	0.11	0.84	0.94	0.94	0.16	1.27	1.23	1.23	0.21	2.13	1.51	1.51	0.26	3.72	1.80	1.80	0.31	5.70
		19	-	-	-	-	1.03	0.90	0.18	1.43	1.26	1.21	0.22	2.27	1.51	1.51	0.26	3.72	1.80	1.80	0.31	5.72
		20	-	-	-	-	1.25	0.84	0.21	2.24	1.39	1.16	0.24	3.03	1.59	1.48	0.27	4.27	1.82	1.80	0.31	5.85
	6	15	0.48	0.48	0.07	0.52	0.81	0.81	0.12	0.90	1.12	1.12	0.16	1.25	1.41	1.41	0.20	1.92	1.69	1.69	0.24	3.10
		17	0.48	0.48	0.07	0.53	0.82	0.82	0.12	0.90	1.12	1.12	0.16	1.25	1.41	1.41	0.20	1.93	1.69	1.69	0.24	3.12
		19	-	-	-	-	0.85	0.79	0.12	0.93	1.13	1.12	0.16	1.26	1.42	1.41	0.20	1.93	1.69	1.69	0.24	3.13
		20	-	-	-	-	0.97	0.74	0.14	1.06	1.22	1.08	0.17	1.40	1.45	1.39	0.21	2.07	1.69	1.69	0.24	3.15
15	3	15	0.57	0.57	0.16	1.24	0.86	0.86	0.24	3.24	1.15	1.15	0.33	6.46	1.45	1.45	0.41	9.49	1.73	1.73	0.49	12.89
		17	0.57	0.57	0.16	1.24	0.86	0.86	0.24	3.26	1.16	1.16	0.33	6.47	1.45	1.45	0.41	9.52	1.74	1.74	0.50	12.93
		19	-	-	-	-	0.89	0.84	0.25	3.60	1.15	1.15	0.33	6.47	1.45	1.45	0.41	9.55	1.74	1.74	0.50	12.97
		20	-	-	-	-	1.16	0.82	0.33	6.48	1.29	1.13	0.37	7.80	1.48	1.45	0.42	9.85	1.74	1.74	0.50	12.97
	4	15	0.44	0.44	0.09	0.70	0.75	0.75	0.16	1.23	1.04	1.04	0.22	2.56	1.33	1.33	0.28	4.83	1.62	1.62	0.35	7.08
		17	0.44	0.44	0.09	0.70	0.76	0.76	0.16	1.23	1.04	1.04	0.22	2.57	1.33	1.33	0.29	4.85	1.63	1.63	0.35	7.10
		19	-	-	-	-	0.76	0.75	0.16	1.25	1.04	1.04	0.22	2.58	1.33	1.33	0.29	4.87	1.63	1.63	0.35	7.12
		20	-	-	-	-	0.87	0.70	0.19	1.60	1.08	1.02	0.23	2.85	1.33	1.33	0.29	4.89	1.63	1.63	0.35	7.13
	5	15	0.28	0.28	0.05	0.36	0.63	0.63	0.11	0.81	0.94	0.94	0.16	1.23	1.23	1.23	0.21	2.24	1.51	1.51	0.26	3.89
		17	0.28	0.28	0.05	0.36	0.63	0.63	0.11	0.81	0.95	0.95	0.16	1.24	1.23	1.23	0.21	2.25	1.51	1.51	0.26	3.91
		19	-	-	-	-	0.63	0.63	0.11	0.81	0.95	0.95	0.16	1.24	1.23	1.23	0.21	2.26	1.51	1.51	0.26	3.93
		20	-	-	-	-	0.67	0.60	0.12	0.85	0.96	0.94	0.17	1.26	1.23	1.23	0.21	2.25	1.51	1.51	0.26	3.93
	6	15	-	-	-	-	0.49	0.49	0.07	0.51	0.82	0.82	0.12	0.86	1.13	1.13	0.16	1.22	1.41	1.41	0.20	2.01
		17	-	-	-	-	0.49	0.49	0.07	0.51	0.82	0.82	0.12	0.86	1.13	1.13	0.16	1.22	1.41	1.41	0.20	2.02
		19	-	-	-	-	0.49	0.49	0.07	0.51	0.82	0.82	0.12	0.87	1.13	1.13	0.16	1.23	1.42	1.42	0.20	2.03
		20	-	-	-	-	0.49	0.49	0.07	0.51	0.82	0.82	0.12	0.87	1.13	1.13	0.16	1.23	1.42	1.42	0.20	2.03

Abbreviations:

- EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK03A3SCBSLXG1MXE/ MK03A3HCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	3.25	0.35	6.32	2.90	0.31	5.21	2.56	0.28	4.20	2.21	0.24	3.27
	10	3.05	0.26	3.89	2.69	0.23	3.15	2.32	0.20	2.41	1.96	0.17	1.61
	12	2.80	0.20	2.44	2.43	0.18	1.75	2.08	0.15	1.14	1.72	0.12	0.71
	14	2.55	0.16	1.29	2.19	0.14	0.87	1.82	0.11	0.61	1.40	0.09	0.47
	16	2.31	0.12	0.73	1.91	0.10	0.57	1.48	0.08	0.45	0.98	0.05	0.30
45	8	4.10	0.44	9.14	3.75	0.40	7.86	3.41	0.37	6.67	3.07	0.33	5.56
	10	3.92	0.34	5.82	3.57	0.31	4.96	3.22	0.28	4.15	2.87	0.25	3.41
	12	3.72	0.27	3.93	3.36	0.24	3.31	3.00	0.22	2.73	2.63	0.19	2.15
	14	3.49	0.21	2.72	3.11	0.19	2.20	2.73	0.17	1.65	2.37	0.15	1.14
	16	3.22	0.17	1.76	2.85	0.15	1.29	2.49	0.13	0.90	2.12	0.11	0.62
50	8	4.93	0.53	12.29	4.58	0.49	10.84	4.24	0.46	9.47	3.90	0.42	8.20
	10	4.77	0.41	7.97	4.42	0.38	7.00	4.08	0.35	6.08	3.73	0.32	5.23
	12	4.60	0.33	5.47	4.24	0.30	4.77	3.89	0.28	4.11	3.53	0.25	3.50
	14	4.40	0.27	3.93	4.04	0.25	3.39	3.67	0.23	2.89	3.31	0.20	2.42
	16	4.18	0.23	2.89	3.80	0.21	2.47	3.42	0.18	2.04	3.05	0.16	1.60
55	8	5.75	0.62	15.84	5.40	0.58	14.14	5.06	0.55	12.61	4.72	0.51	11.17
	10	5.61	0.48	10.32	5.26	0.45	9.23	4.91	0.42	8.20	4.57	0.39	7.23
	12	5.45	0.39	7.17	5.10	0.37	6.39	4.75	0.34	5.65	4.40	0.32	4.96
	14	5.28	0.33	5.24	4.92	0.30	4.65	4.56	0.28	4.09	4.21	0.26	3.56
	16	5.08	0.27	3.92	4.72	0.25	3.46	4.35	0.23	3.02	3.99	0.22	2.60
60	8	6.58	0.71	19.53	6.22	0.67	17.83	5.88	0.63	16.12	5.53	0.60	14.51
	10	6.43	0.56	12.81	6.08	0.52	11.61	5.74	0.49	10.48	5.39	0.46	9.41
	12	6.30	0.45	9.03	5.94	0.43	8.17	5.59	0.40	7.35	5.24	0.38	6.58
	14	6.13	0.38	6.62	5.78	0.36	5.97	5.42	0.33	5.36	5.07	0.31	4.77
	16	5.96	0.32	5.05	5.60	0.30	4.54	5.24	0.28	4.05	4.88	0.26	3.59

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

## Cooling Capacity Table

MK03A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
5	3	15	2.68	2.01	0.77	29.50	2.66	2.29	0.76	29.21	2.71	2.58	0.77	30.08	2.87	2.86	0.82	33.17	3.14	3.14	0.90	38.75
		17	3.53	2.03	1.02	48.18	3.51	2.31	1.01	47.61	3.49	2.58	1.00	47.04	3.46	2.86	1.00	46.50	3.45	3.13	0.99	45.92
		19	-	-	-	-	4.41	2.32	1.26	69.96	4.38	2.60	1.26	69.16	4.35	2.87	1.25	68.36	4.32	3.14	1.24	67.70
		20	-	-	-	-	4.89	2.33	1.40	83.78	4.85	2.60	1.39	82.81	4.82	2.88	1.38	81.88	4.79	3.15	1.38	80.97
	4	15	2.38	1.88	0.51	14.73	2.42	2.17	0.52	15.15	2.54	2.47	0.55	16.60	2.76	2.76	0.60	19.12	3.04	3.04	0.65	22.42
		17	3.27	1.91	0.70	25.21	3.24	2.18	0.70	24.91	3.22	2.46	0.69	24.63	3.21	2.74	0.69	24.47	3.25	3.02	0.70	24.99
		19	-	-	-	-	4.17	2.21	0.89	38.33	4.14	2.48	0.89	37.90	4.11	2.76	0.88	37.47	4.09	3.03	0.88	37.06
		20	-	-	-	-	4.65	2.22	1.00	46.35	4.62	2.49	0.99	45.83	4.59	2.77	0.99	45.32	4.56	3.04	0.98	44.83
	5	15	2.08	1.73	0.36	7.43	2.19	2.04	0.38	8.44	2.38	2.35	0.41	9.95	2.64	2.64	0.45	12.00	2.92	2.92	0.50	14.24
		17	2.96	1.76	0.51	14.50	2.94	2.04	0.50	14.33	2.92	2.32	0.50	14.21	2.96	2.61	0.51	14.55	3.07	2.91	0.53	15.53
		19	-	-	-	-	3.89	2.08	0.67	23.12	3.86	2.36	0.66	22.85	3.84	2.63	0.66	22.60	3.81	2.90	0.65	22.35
		20	-	-	-	-	4.39	2.10	0.76	28.68	4.36	2.37	0.75	28.08	4.33	2.65	0.74	27.77	4.30	2.92	0.74	27.46
	6	15	1.87	1.62	0.27	3.54	2.03	1.93	0.29	4.39	2.24	2.24	0.32	5.73	2.52	2.52	0.36	7.68	2.80	2.80	0.40	9.65
		17	2.59	1.60	0.37	8.20	2.57	1.88	0.37	8.08	2.62	2.18	0.38	8.41	2.73	2.48	0.39	9.13	2.88	2.79	0.41	10.15
		19	-	-	-	-	3.58	1.94	0.51	14.75	3.56	2.22	0.51	14.58	3.53	2.49	0.51	14.40	3.52	2.77	0.50	14.31
		20	-	-	-	-	4.09	1.96	0.58	18.35	4.06	2.24	0.58	18.14	4.03	2.51	0.58	17.94	4.01	2.79	0.57	17.74
7	3	15	2.05	1.72	0.59	18.66	2.12	2.02	0.61	19.81	2.31	2.30	0.66	22.60	2.59	2.59	0.74	27.48	2.86	2.86	0.83	33.11
		17	2.91	1.74	0.84	33.99	2.88	2.02	0.83	33.56	2.86	2.29	0.83	33.14	2.87	2.57	0.83	33.19	2.94	2.86	0.85	34.64
		19	-	-	-	-	3.79	2.03	1.09	53.24	3.77	2.31	1.08	52.62	3.74	2.58	1.08	52.07	3.72	2.86	1.07	51.80
		20	-	-	-	-	4.27	2.04	1.23	66.05	4.24	2.32	1.22	65.03	4.21	2.59	1.21	64.10	4.19	2.86	1.21	63.39
	4	15	1.78	1.58	0.38	8.83	1.95	1.90	0.42	10.35	2.20	2.20	0.48	12.82	2.48	2.48	0.54	15.75	2.76	2.76	0.59	18.67
		17	2.60	1.60	0.56	16.90	2.58	1.88	0.56	16.67	2.59	2.17	0.56	16.72	2.66	2.46	0.57	17.48	2.79	2.76	0.60	19.07
		19	-	-	-	-	3.52	1.91	0.76	28.39	3.50	2.19	0.75	28.06	3.48	2.47	0.75	27.72	3.45	2.74	0.74	27.39
		20	-	-	-	-	4.01	1.92	0.86	35.54	3.99	2.20	0.86	35.50	3.96	2.48	0.86	35.09	3.94	2.75	0.85	34.70
	5	15	1.59	1.47	0.27	3.81	1.79	1.78	0.31	5.30	2.07	2.07	0.36	7.58	2.36	2.36	0.41	9.79	2.65	2.65	0.46	11.87
		17	2.23	1.44	0.38	8.82	2.24	1.73	0.38	8.85	2.32	2.04	0.40	9.46	2.46	2.35	0.42	10.48	2.66	2.65	0.46	11.96
		19	-	-	-	-	3.22	1.78	0.55	16.57	3.20	2.06	0.55	16.37	3.17	2.34	0.55	16.16	3.18	2.61	0.55	16.20
		20	-	-	-	-	3.72	1.80	0.64	21.15	3.69	2.08	0.64	20.90	3.67	2.35	0.63	20.66	3.65	2.63	0.63	20.43
	6	15	1.45	1.39	0.21	2.00	1.69	1.69	0.24	2.82	1.96	1.96	0.28	4.23	2.24	2.24	0.32	5.93	2.52	2.52	0.36	7.83
		17	1.88	1.30	0.27	3.81	1.96	1.61	0.28	4.25	2.10	1.92	0.30	5.02	2.29	2.23	0.33	6.24	2.53	2.53	0.36	7.86
		19	-	-	-	-	2.84	1.62	0.41	9.76	2.82	1.90	0.40	9.62	2.83	2.19	0.41	9.68	2.90	2.48	0.42	10.10
		20	-	-	-	-	3.39	1.66	0.49	13.22	3.35	1.93	0.48	12.93	3.33	2.21	0.48	12.78	3.31	2.49	0.47	12.66



# 2-Pipe Duct MK-CBS Series



(Continued)

MK03A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
9	3	15	1.49	1.44	0.43	10.56	1.74	1.74	0.50	13.73	2.02	2.02	0.58	17.80	2.30	2.30	0.66	22.22	2.58	2.58	0.75	27.35
		17	2.21	1.43	0.64	20.72	2.20	1.72	0.63	20.43	2.23	2.01	0.64	20.99	2.34	2.30	0.67	22.88	2.59	2.59	0.75	27.43
		19	-	-	-	-	3.12	1.74	0.90	37.52	3.10	2.02	0.89	37.05	3.08	2.29	0.89	36.59	3.06	2.57	0.88	36.20
		20	-	-	-	-	3.61	1.75	1.05	48.90	3.59	2.03	1.04	48.31	3.56	2.30	1.03	47.75	3.54	2.58	1.03	47.19
	4	15	1.33	1.32	0.29	4.49	1.62	1.62	0.35	7.26	1.91	1.91	0.41	9.85	2.20	2.20	0.47	12.49	2.48	2.48	0.53	15.33
		17	1.85	1.28	0.40	9.29	1.90	1.58	0.41	9.70	2.02	1.89	0.43	10.81	2.21	2.20	0.48	12.60	2.48	2.48	0.53	15.38
		19	-	-	-	-	2.82	1.61	0.61	19.21	2.80	1.89	0.61	18.96	2.79	2.17	0.60	18.76	2.82	2.46	0.61	19.12
		20	-	-	-	-	3.33	1.63	0.72	25.56	3.30	1.91	0.71	25.24	3.28	2.19	0.71	24.94	3.26	2.46	0.70	24.64
	5	15	1.23	1.23	0.21	2.04	1.51	1.51	0.26	3.46	1.79	1.79	0.31	5.46	2.08	2.08	0.36	7.68	2.37	2.37	0.41	9.66
		17	1.51	1.14	0.26	3.49	1.64	1.46	0.28	4.39	1.83	1.78	0.32	5.81	2.08	2.08	0.36	7.70	2.37	2.37	0.41	9.69
		19	-	-	-	-	2.45	1.46	0.42	10.23	2.44	1.75	0.42	10.11	2.48	2.04	0.43	10.44	2.58	2.34	0.44	11.19
		20	-	-	-	-	2.99	1.49	0.52	14.38	2.97	1.77	0.51	14.22	2.94	2.05	0.50	13.87	2.95	2.33	0.51	14.08
6	15	1.11	1.11	0.16	1.37	1.41	1.41	0.20	1.87	1.69	1.69	0.24	2.90	1.96	1.96	0.28	4.36	2.24	2.24	0.32	6.13	
	17	1.29	1.04	0.18	1.61	1.49	1.37	0.21	2.10	1.71	1.68	0.24	2.98	1.97	1.97	0.28	4.38	2.25	2.25	0.32	6.16	
	19	-	-	-	-	2.01	1.29	0.29	4.68	2.07	1.59	0.30	5.06	2.20	1.91	0.32	5.85	2.37	2.22	0.34	6.90	
	20	-	-	-	-	2.57	1.33	0.37	8.06	2.54	1.61	0.36	7.92	2.56	1.90	0.37	8.01	2.64	2.20	0.38	8.48	
11	3	15	1.15	1.15	0.33	6.44	1.45	1.45	0.41	9.81	1.74	1.74	0.50	13.37	2.02	2.02	0.58	17.30	2.30	2.30	0.66	21.59
		17	1.45	1.12	0.41	9.79	1.56	1.43	0.44	11.06	1.75	1.74	0.50	13.46	2.03	2.03	0.58	17.35	2.31	2.31	0.66	21.66
		19	-	-	-	-	2.40	1.44	0.68	23.14	2.38	1.72	0.68	22.81	2.38	2.00	0.68	22.85	2.45	2.29	0.70	23.99
		20	-	-	-	-	2.89	1.45	0.83	31.92	2.87	1.73	0.82	31.51	2.85	2.01	0.81	31.11	2.83	2.29	0.81	30.74
	4	15	1.04	1.04	0.22	2.38	1.33	1.33	0.28	4.56	1.62	1.62	0.35	7.24	1.91	1.91	0.41	9.63	2.20	2.20	0.47	12.19
		17	1.17	1.00	0.25	3.23	1.36	1.32	0.29	4.86	1.62	1.62	0.35	7.25	1.92	1.92	0.41	9.66	2.20	2.20	0.47	12.23
		19	-	-	-	-	2.03	1.30	0.43	10.58	2.04	1.59	0.44	10.69	2.13	1.89	0.46	11.52	2.27	2.19	0.49	12.90
		20	-	-	-	-	2.55	1.32	0.55	15.72	2.53	1.60	0.54	15.51	2.52	1.88	0.54	15.33	2.56	2.17	0.55	15.75
	5	15	0.94	0.94	0.16	1.33	1.23	1.23	0.21	2.09	1.51	1.51	0.26	3.62	1.79	1.79	0.31	5.65	2.09	2.09	0.36	7.67
		17	1.00	0.90	0.17	1.42	1.24	1.23	0.21	2.14	1.51	1.51	0.26	3.63	1.80	1.80	0.31	5.67	2.09	2.09	0.36	7.69
		19	-	-	-	-	1.61	1.14	0.28	4.32	1.73	1.45	0.30	5.18	1.90	1.77	0.33	6.44	2.12	2.09	0.36	7.87
		20	-	-	-	-	2.14	1.16	0.37	7.98	2.12	1.45	0.37	7.89	2.19	1.75	0.38	8.31	2.31	2.06	0.40	9.11
6	15	0.81	0.81	0.12	0.94	1.12	1.12	0.16	1.31	1.41	1.41	0.20	1.90	1.69	1.69	0.24	3.03	1.97	1.97	0.28	4.55	
	17	0.83	0.80	0.12	0.96	1.12	1.12	0.16	1.31	1.42	1.42	0.20	1.90	1.69	1.69	0.24	3.04	1.97	1.97	0.28	4.57	
	19	-	-	-	-	1.36	1.04	0.20	1.74	1.54	1.36	0.22	2.35	1.74	1.67	0.25	3.28	1.98	1.97	0.28	4.61	
	20	-	-	-	-	1.68	1.00	0.24	3.02	1.76	1.31	0.25	3.42	1.90	1.62	0.27	4.20	2.08	1.94	0.30	5.20	

(Continued)

MK03A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	0.86	0.86	0.25	3.21	1.16	1.16	0.33	6.62	1.45	1.45	0.42	9.79	1.74	1.74	0.50	13.14	2.02	2.02	0.58	17.23
		17	0.87	0.85	0.25	3.36	1.16	1.16	0.33	6.64	1.45	1.45	0.42	9.82	1.74	1.74	0.50	13.18	2.02	2.02	0.58	17.28
		19	-	-	-	-	1.58	1.13	0.45	11.25	1.65	1.43	0.47	12.13	1.79	1.74	0.51	13.79	2.03	2.02	0.58	17.31
		20	-	-	-	-	2.10	1.15	0.60	18.35	2.08	1.43	0.60	18.05	2.09	1.72	0.60	18.23	2.17	2.01	0.62	19.47
	4	15	0.76	0.76	0.16	1.29	1.04	1.04	0.22	2.52	1.33	1.33	0.29	4.80	1.62	1.62	0.35	7.18	1.91	1.91	0.41	9.49
		17	0.76	0.76	0.16	1.29	1.05	1.05	0.23	2.53	1.33	1.33	0.29	4.82	1.63	1.63	0.35	7.20	1.92	1.92	0.41	9.52
		19	-	-	-	-	1.22	0.99	0.26	3.89	1.40	1.31	0.30	5.40	1.64	1.63	0.35	7.28	1.92	1.92	0.41	9.55
		20	-	-	-	-	1.65	0.99	0.35	7.37	1.69	1.29	0.36	7.67	1.82	1.60	0.39	8.66	1.98	1.91	0.43	10.08
	5	15	0.63	0.63	0.11	0.84	0.94	0.94	0.16	1.26	1.23	1.23	0.21	2.13	1.51	1.51	0.26	3.71	1.80	1.80	0.31	5.69
		17	0.63	0.63	0.11	0.84	0.94	0.94	0.16	1.27	1.23	1.23	0.21	2.14	1.51	1.51	0.26	3.73	1.80	1.80	0.31	5.71
		19	-	-	-	-	1.03	0.90	0.18	1.43	1.26	1.22	0.22	2.27	1.51	1.51	0.26	3.73	1.80	1.80	0.31	5.74
		20	-	-	-	-	1.25	0.84	0.21	2.24	1.40	1.16	0.24	3.03	1.59	1.48	0.27	4.27	1.82	1.80	0.31	5.86
6	15	0.48	0.48	0.07	0.52	0.82	0.82	0.12	0.90	1.12	1.12	0.16	1.25	1.41	1.41	0.20	1.92	1.69	1.69	0.24	3.11	
	17	0.48	0.48	0.07	0.53	0.82	0.82	0.12	0.90	1.13	1.13	0.16	1.25	1.41	1.41	0.20	1.93	1.69	1.69	0.24	3.12	
	19	-	-	-	-	0.85	0.79	0.12	0.93	1.13	1.12	0.16	1.26	1.42	1.41	0.20	1.94	1.69	1.69	0.24	3.14	
	20	-	-	-	-	0.97	0.74	0.14	1.06	1.22	1.08	0.17	1.40	1.45	1.39	0.21	2.07	1.70	1.69	0.24	3.15	
15	3	15	0.57	0.57	0.16	1.24	0.86	0.86	0.24	3.25	1.16	1.16	0.33	6.47	1.45	1.45	0.41	9.51	1.73	1.73	0.50	12.92
		17	0.57	0.57	0.16	1.24	0.86	0.86	0.24	3.27	1.16	1.16	0.33	6.49	1.45	1.45	0.41	9.53	1.74	1.74	0.50	12.96
		19	-	-	-	-	0.89	0.85	0.25	3.61	1.16	1.15	0.33	6.48	1.45	1.45	0.42	9.56	1.74	1.74	0.50	13.00
		20	-	-	-	-	1.16	0.82	0.33	6.48	1.29	1.13	0.37	7.81	1.48	1.45	0.42	9.87	1.74	1.74	0.50	13.00
	4	15	0.44	0.44	0.09	0.70	0.76	0.76	0.16	1.23	1.04	1.04	0.22	2.57	1.33	1.33	0.29	4.85	1.63	1.63	0.35	7.09
		17	0.44	0.44	0.09	0.70	0.76	0.76	0.16	1.24	1.04	1.04	0.22	2.58	1.33	1.33	0.29	4.86	1.63	1.63	0.35	7.11
		19	-	-	-	-	0.76	0.75	0.16	1.25	1.04	1.04	0.22	2.59	1.33	1.33	0.29	4.88	1.63	1.63	0.35	7.13
		20	-	-	-	-	0.87	0.71	0.19	1.60	1.08	1.03	0.23	2.86	1.34	1.34	0.29	4.90	1.63	1.63	0.35	7.15
	5	15	0.28	0.28	0.05	0.36	0.63	0.63	0.11	0.81	0.94	0.94	0.16	1.23	1.23	1.23	0.21	2.24	1.51	1.51	0.26	3.90
		17	0.28	0.28	0.05	0.36	0.63	0.63	0.11	0.81	0.95	0.95	0.16	1.24	1.23	1.23	0.21	2.25	1.51	1.51	0.26	3.92
		19	-	-	-	-	0.63	0.63	0.11	0.81	0.95	0.95	0.16	1.24	1.23	1.23	0.21	2.26	1.51	1.51	0.26	3.93
		20	-	-	-	-	0.67	0.61	0.12	0.85	0.96	0.94	0.17	1.26	1.23	1.23	0.21	2.26	1.52	1.52	0.26	3.94
6	15	-	-	-	-	0.49	0.49	0.07	0.51	0.82	0.82	0.12	0.86	1.13	1.13	0.16	1.22	1.41	1.41	0.20	2.01	
	17	-	-	-	-	0.49	0.49	0.07	0.51	0.82	0.82	0.12	0.86	1.13	1.13	0.16	1.23	1.41	1.41	0.20	2.02	
	19	-	-	-	-	0.49	0.49	0.07	0.51	0.82	0.82	0.12	0.87	1.13	1.13	0.16	1.23	1.42	1.42	0.20	2.03	
	20	-	-	-	-	0.49	0.49	0.07	0.51	0.82	0.82	0.12	0.87	1.13	1.13	0.16	1.23	1.42	1.42	0.20	2.03	

Abbreviations:

- EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK03A3UCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	3.25	0.35	6.31	2.90	0.31	5.20	2.55	0.28	4.18	2.20	0.24	3.26
	10	3.04	0.26	3.88	2.68	0.23	3.13	2.31	0.20	2.40	1.95	0.17	1.60
	12	2.79	0.20	2.42	2.43	0.17	1.74	2.07	0.15	1.13	1.72	0.12	0.71
	14	2.54	0.16	1.28	2.19	0.13	0.86	1.81	0.11	0.61	1.39	0.09	0.47
	16	2.30	0.12	0.73	1.90	0.10	0.57	1.47	0.08	0.44	0.97	0.05	0.30
45	8	4.09	0.44	9.13	3.75	0.40	7.84	3.40	0.37	6.65	3.06	0.33	5.55
	10	3.92	0.34	5.80	3.57	0.31	4.94	3.21	0.28	4.14	2.86	0.25	3.40
	12	3.72	0.27	3.92	3.36	0.24	3.30	2.99	0.22	2.72	2.62	0.19	2.14
	14	3.48	0.21	2.71	3.10	0.19	2.19	2.73	0.17	1.64	2.37	0.15	1.13
	16	3.22	0.17	1.75	2.85	0.15	1.28	2.49	0.13	0.89	2.12	0.11	0.61
50	8	4.92	0.53	12.27	4.58	0.49	10.82	4.23	0.46	9.46	3.89	0.42	8.18
	10	4.77	0.41	7.96	4.42	0.38	6.98	4.07	0.35	6.07	3.72	0.32	5.21
	12	4.59	0.33	5.46	4.24	0.30	4.76	3.88	0.28	4.10	3.53	0.25	3.49
	14	4.39	0.27	3.92	4.03	0.25	3.38	3.67	0.23	2.88	3.30	0.20	2.41
	16	4.17	0.23	2.88	3.79	0.20	2.46	3.42	0.18	2.03	3.04	0.16	1.59
55	8	5.75	0.62	15.83	5.40	0.58	14.12	5.05	0.54	12.59	4.71	0.51	11.15
	10	5.61	0.48	10.30	5.25	0.45	9.21	4.91	0.42	8.19	4.56	0.39	7.22
	12	5.44	0.39	7.15	5.09	0.37	6.37	4.74	0.34	5.64	4.39	0.32	4.95
	14	5.27	0.33	5.23	4.91	0.30	4.64	4.56	0.28	4.08	4.20	0.26	3.55
	16	5.07	0.27	3.91	4.71	0.25	3.45	4.35	0.23	3.01	3.98	0.21	2.59
60	8	6.57	0.71	19.52	6.22	0.67	17.81	5.87	0.63	16.11	5.53	0.60	14.50
	10	6.42	0.55	12.79	6.08	0.52	11.60	5.73	0.49	10.46	5.39	0.46	9.39
	12	6.29	0.45	9.02	5.93	0.43	8.15	5.58	0.40	7.34	5.23	0.38	6.57
	14	6.13	0.38	6.61	5.77	0.36	5.96	5.41	0.33	5.35	5.06	0.31	4.76
	16	5.95	0.32	5.04	5.59	0.30	4.52	5.23	0.28	4.04	4.88	0.26	3.58

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

## Cooling Capacity Table

MK04A3SCBSLXG1MXE/ MK04A3HCBLSLXG1MXE/ MK04A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
5	3	15	3.47	2.63	0.99	28.78	3.46	2.99	0.99	28.52	3.52	3.37	1.01	29.50	3.75	3.74	1.07	32.80	4.10	4.10	1.17	38.34
		17	4.60	2.65	1.33	47.30	4.57	3.01	1.32	46.72	4.53	3.37	1.30	45.81	4.50	3.73	1.29	45.26	4.49	4.09	1.29	45.07
		19	-	-	-	-	5.75	3.03	1.65	68.92	5.71	3.39	1.64	68.11	5.67	3.75	1.63	67.71	5.64	4.10	1.63	67.50
		20	-	-	-	-	6.37	3.04	1.83	82.65	6.33	3.40	1.82	81.67	6.29	3.76	1.80	80.73	6.25	4.11	1.79	79.78
	4	15	3.07	2.44	0.66	14.20	3.13	2.82	0.67	14.69	3.30	3.22	0.71	16.04	3.60	3.60	0.78	18.83	3.96	3.96	0.85	22.17
		17	4.23	2.48	0.91	24.53	4.20	2.84	0.90	24.24	4.17	3.20	0.89	23.94	4.16	3.57	0.89	23.81	4.22	3.94	0.90	24.41
		19	-	-	-	-	5.41	2.87	1.16	37.50	5.37	3.23	1.15	37.06	5.34	3.59	1.15	36.63	5.30	3.95	1.14	36.21
		20	-	-	-	-	6.05	2.88	1.30	45.46	6.01	3.25	1.29	44.92	5.97	3.60	1.28	44.41	5.93	3.96	1.27	43.90
	5	15	2.65	2.23	0.45	7.18	2.82	2.65	0.48	8.24	3.08	3.06	0.53	9.75	3.44	3.44	0.59	11.76	3.81	3.81	0.65	13.98
		17	3.81	2.28	0.65	13.95	3.78	2.65	0.65	13.77	3.76	3.02	0.65	13.67	3.83	3.40	0.66	14.07	3.97	3.79	0.68	15.11
		19	-	-	-	-	5.03	2.70	0.86	22.45	4.99	3.06	0.86	22.18	4.96	3.42	0.85	21.92	4.93	3.78	0.85	21.66
		20	-	-	-	-	5.68	2.71	0.97	27.65	5.64	3.08	0.97	27.32	5.60	3.44	0.96	27.01	5.56	3.79	0.96	26.70
	6	15	2.39	2.09	0.34	3.40	2.60	2.50	0.37	4.30	2.90	2.89	0.41	5.72	3.27	3.27	0.47	7.65	3.64	3.64	0.52	9.49
		17	3.30	2.06	0.47	7.83	3.28	2.43	0.47	7.73	3.35	2.82	0.48	8.11	3.51	3.22	0.50	8.86	3.73	3.63	0.53	9.88
		19	-	-	-	-	4.61	2.51	0.66	14.18	4.57	2.87	0.66	14.01	4.54	3.23	0.65	13.84	4.53	3.59	0.65	13.76
		20	-	-	-	-	5.27	2.53	0.75	17.73	5.23	2.90	0.75	17.52	5.20	3.26	0.74	17.31	5.16	3.61	0.74	17.10
7	3	15	2.65	2.24	0.76	18.09	2.76	2.63	0.80	19.36	3.01	3.01	0.86	22.30	3.38	3.38	0.97	27.15	3.74	3.74	1.08	32.75
		17	3.77	2.26	1.09	33.20	3.74	2.63	1.08	32.78	3.71	2.99	1.07	32.34	3.72	3.36	1.08	32.47	3.83	3.74	1.11	34.06
		19	-	-	-	-	4.93	2.65	1.42	52.30	4.90	3.01	1.41	52.00	4.87	3.37	1.40	51.43	4.83	3.73	1.39	50.37
		20	-	-	-	-	5.57	2.66	1.60	64.67	5.53	3.02	1.59	63.76	5.49	3.38	1.58	63.38	5.45	3.74	1.57	62.70
	4	15	2.29	2.06	0.49	8.53	2.52	2.47	0.54	10.07	2.86	2.86	0.62	12.59	3.24	3.24	0.70	15.48	3.60	3.60	0.77	18.38
		17	3.37	2.08	0.73	16.53	3.34	2.45	0.72	16.30	3.35	2.83	0.72	16.38	3.44	3.21	0.74	17.02	3.63	3.60	0.78	18.70
		19	-	-	-	-	4.57	2.49	0.98	27.64	4.53	2.85	0.98	27.30	4.50	3.21	0.97	26.97	4.47	3.57	0.96	26.64
		20	-	-	-	-	5.21	2.50	1.13	35.08	5.18	2.87	1.12	34.67	5.14	3.23	1.11	34.26	5.11	3.59	1.10	33.86
	5	15	2.03	1.90	0.35	3.71	2.31	2.31	0.40	5.28	2.69	2.69	0.46	7.52	3.07	3.07	0.53	9.58	3.44	3.44	0.59	11.63
		17	2.85	1.86	0.49	8.38	2.86	2.24	0.49	8.45	2.98	2.65	0.51	9.10	3.18	3.05	0.55	10.16	3.45	3.45	0.59	11.69
		19	-	-	-	-	4.15	2.30	0.71	15.97	4.11	2.67	0.71	15.77	4.08	3.03	0.70	15.55	4.09	3.40	0.71	15.64
		20	-	-	-	-	4.80	2.33	0.83	20.48	4.77	2.69	0.82	20.23	4.74	3.06	0.81	19.98	4.70	3.41	0.81	19.74
	6	15	1.86	1.79	0.27	1.91	2.18	2.18	0.31	2.80	2.53	2.53	0.36	4.23	2.90	2.90	0.42	5.93	3.28	3.28	0.47	7.74
		17	2.37	1.67	0.34	3.57	2.49	2.07	0.36	4.07	2.68	2.48	0.38	4.89	2.94	2.89	0.42	6.15	3.28	3.28	0.47	7.76
		19	-	-	-	-	3.63	2.09	0.52	9.27	3.60	2.46	0.52	9.13	3.62	2.83	0.52	9.23	3.72	3.23	0.53	9.69
		20	-	-	-	-	4.34	2.13	0.62	12.54	4.30	2.50	0.62	12.38	4.27	2.86	0.61	12.22	4.25	3.22	0.61	12.12

# 2-Pipe Duct MK-CBS Series



(Continued)

MK04A3SCBSLXG1MXE/ MK04A3HCBSLXG1MXE/ MK04A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	1.93	1.87	0.55	10.26	2.27	2.27	0.65	13.50	2.64	2.64	0.76	17.53	3.01	3.01	0.86	21.93	3.37	3.37	0.98	27.02	
		17	2.86	1.86	0.82	20.06	2.84	2.24	0.81	19.78	2.89	2.62	0.83	20.44	3.05	3.01	0.88	22.46	3.38	3.38	0.98	27.10	
		19	-	-	-	-	4.05	2.26	1.17	36.65	4.02	2.63	1.16	36.19	4.00	2.99	1.15	35.74	3.97	3.35	1.14	35.36	
		20	-	-	-	-	4.70	2.28	1.36	47.96	4.66	2.64	1.35	47.37	4.63	3.01	1.34	46.78	4.60	3.37	1.33	46.20	
	4	15	1.72	1.71	0.37	4.55	2.10	2.10	0.45	7.18	2.49	2.49	0.53	9.65	2.86	2.86	0.62	12.26	3.23	3.23	0.70	15.07	
		17	2.36	1.66	0.51	8.82	2.43	2.06	0.52	9.30	2.61	2.46	0.56	10.48	2.87	2.87	0.62	12.34	3.24	3.24	0.70	15.12	
		19	-	-	-	-	3.64	2.09	0.79	18.56	3.61	2.46	0.78	18.32	3.59	2.83	0.78	18.12	3.64	3.20	0.79	18.55	
		20	-	-	-	-	4.30	2.11	0.93	24.82	4.27	2.48	0.92	24.51	4.24	2.84	0.92	24.20	4.21	3.20	0.91	23.89	
	5	15	1.58	1.58	0.27	1.99	1.94	1.94	0.33	3.45	2.31	2.31	0.40	5.46	2.70	2.70	0.46	7.55	3.08	3.08	0.53	9.45	
		17	1.91	1.47	0.33	3.30	2.10	1.89	0.36	4.25	2.36	2.30	0.41	5.71	2.70	2.70	0.46	7.57	3.08	3.08	0.53	9.48	
		19	-	-	-	-	3.13	1.89	0.54	9.73	3.11	2.26	0.54	9.62	3.18	2.65	0.55	10.01	3.33	3.04	0.57	10.80	
		20	-	-	-	-	3.83	1.92	0.66	13.69	3.80	2.29	0.65	13.51	3.77	2.66	0.65	13.32	3.78	3.03	0.65	13.40	
	6	15	1.43	1.43	0.20	1.29	1.81	1.81	0.26	1.82	2.17	2.17	0.31	2.88	2.53	2.53	0.36	4.36	2.91	2.91	0.42	6.09	
		17	1.63	1.34	0.23	1.49	1.90	1.77	0.27	2.02	2.19	2.17	0.31	2.94	2.54	2.54	0.36	4.38	2.91	2.91	0.42	6.11	
		19	-	-	-	-	2.53	1.66	0.36	4.37	2.63	2.06	0.38	4.81	2.81	2.47	0.40	5.64	3.04	2.88	0.44	6.70	
		20	-	-	-	-	3.26	1.70	0.47	7.60	3.23	2.07	0.46	7.47	3.26	2.45	0.47	7.59	3.38	2.85	0.48	8.10	
	11	3	15	1.49	1.49	0.42	6.38	1.89	1.89	0.54	9.61	2.27	2.27	0.65	13.15	2.64	2.64	0.75	17.05	3.00	3.00	0.86	21.30
			17	1.86	1.46	0.53	9.35	2.01	1.87	0.57	10.70	2.27	2.27	0.65	13.20	2.64	2.64	0.75	17.10	3.01	3.01	0.86	21.37
			19	-	-	-	-	3.10	1.87	0.88	22.42	3.07	2.24	0.88	22.09	3.08	2.61	0.88	22.19	3.18	3.00	0.91	23.45
			20	-	-	-	-	3.74	1.89	1.07	31.10	3.71	2.26	1.06	30.68	3.69	2.62	1.05	30.28	3.66	2.98	1.05	29.92
4		15	1.34	1.34	0.29	2.36	1.71	1.71	0.37	4.55	2.10	2.10	0.45	7.10	2.49	2.49	0.53	9.44	2.86	2.86	0.61	11.97	
		17	1.48	1.28	0.32	3.08	1.75	1.70	0.37	4.78	2.11	2.10	0.45	7.11	2.49	2.49	0.53	9.46	2.87	2.87	0.61	12.01	
		19	-	-	-	-	2.59	1.68	0.55	10.06	2.61	2.06	0.56	10.22	2.74	2.46	0.59	11.11	2.95	2.86	0.63	12.56	
		20	-	-	-	-	3.28	1.71	0.70	15.10	3.26	2.08	0.70	14.89	3.24	2.45	0.69	14.74	3.30	2.83	0.71	15.22	
5		15	1.20	1.20	0.21	1.25	1.58	1.58	0.27	2.06	1.95	1.95	0.33	3.61	2.32	2.32	0.40	5.61	2.71	2.71	0.47	7.50	
		17	1.27	1.17	0.22	1.33	1.59	1.58	0.27	2.09	1.95	1.95	0.34	3.63	2.33	2.33	0.40	5.64	2.71	2.71	0.47	7.52	
		19	-	-	-	-	2.03	1.46	0.35	4.05	2.20	1.88	0.38	4.97	2.44	2.30	0.42	6.24	2.74	2.71	0.47	7.64	
		20	-	-	-	-	2.72	1.50	0.47	7.51	2.70	1.87	0.47	7.44	2.80	2.27	0.48	7.91	2.97	2.67	0.51	8.75	
6		15	1.03	1.03	0.15	0.88	1.44	1.44	0.21	1.23	1.82	1.82	0.26	1.86	2.18	2.18	0.31	3.01	2.54	2.54	0.36	4.54	
		17	1.05	1.02	0.15	0.89	1.44	1.44	0.21	1.24	1.82	1.82	0.26	1.87	2.18	2.18	0.31	3.02	2.55	2.55	0.37	4.55	
		19	-	-	-	-	1.71	1.33	0.25	1.62	1.95	1.75	0.28	2.25	2.23	2.16	0.32	3.21	2.55	2.55	0.37	4.58	
		20	-	-	-	-	2.10	1.28	0.30	2.77	2.22	1.68	0.32	3.21	2.42	2.10	0.35	4.02	2.66	2.51	0.38	5.05	

(Continued)

MK04A3SCBSLXG1MXE/ MK04A3HCBSLXG1MXE/ MK04A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	1.11	1.11	0.32	3.20	1.50	1.50	0.43	6.49	1.89	1.89	0.54	9.61	2.26	2.26	0.65	12.92	2.64	2.64	0.76	16.98
		17	1.12	1.10	0.32	3.31	1.50	1.50	0.43	6.51	1.89	1.89	0.54	9.63	2.27	2.27	0.65	12.96	2.64	2.64	0.76	17.03
		19	-	-	-	-	2.02	1.46	0.58	10.73	2.12	1.86	0.61	11.70	2.32	2.26	0.66	13.45	2.64	2.64	0.76	17.06
		20	-	-	-	-	2.70	1.49	0.78	17.68	2.68	1.86	0.77	17.38	2.70	2.24	0.77	17.62	2.81	2.63	0.81	18.97
	4	15	0.97	0.97	0.21	1.22	1.34	1.34	0.29	2.50	1.72	1.72	0.37	4.78	2.11	2.11	0.45	7.02	2.49	2.49	0.53	9.30
		17	0.97	0.97	0.21	1.22	1.35	1.35	0.29	2.51	1.72	1.72	0.37	4.80	2.11	2.11	0.45	7.04	2.49	2.49	0.53	9.32
		19	-	-	-	-	1.55	1.28	0.33	3.69	1.80	1.70	0.39	5.24	2.12	2.12	0.45	7.09	2.50	2.50	0.54	9.35
		20	-	-	-	-	2.09	1.27	0.45	6.90	2.16	1.67	0.46	7.27	2.33	2.08	0.50	8.32	2.57	2.48	0.55	9.79
	5	15	0.79	0.79	0.14	0.78	1.20	1.20	0.21	1.19	1.58	1.58	0.27	2.11	1.94	1.94	0.33	3.70	2.33	2.33	0.40	5.61
		17	0.80	0.80	0.14	0.78	1.21	1.21	0.21	1.20	1.58	1.58	0.27	2.11	1.95	1.95	0.33	3.71	2.33	2.33	0.40	5.63
		19	-	-	-	-	1.30	1.15	0.22	1.34	1.61	1.57	0.28	2.21	1.95	1.95	0.33	3.72	2.33	2.33	0.40	5.65
		20	-	-	-	-	1.56	1.08	0.27	2.06	1.77	1.50	0.30	2.88	2.03	1.92	0.35	4.15	2.35	2.33	0.40	5.73
6	15	0.60	0.60	0.09	0.48	1.04	1.04	0.15	0.84	1.44	1.44	0.21	1.18	1.81	1.81	0.26	1.90	2.17	2.17	0.31	3.09	
	17	0.60	0.60	0.09	0.48	1.04	1.04	0.15	0.84	1.44	1.44	0.21	1.18	1.82	1.82	0.26	1.90	2.18	2.18	0.31	3.11	
	19	-	-	-	-	1.07	1.01	0.15	0.86	1.45	1.44	0.21	1.19	1.82	1.82	0.26	1.91	2.18	2.18	0.31	3.12	
	20	-	-	-	-	1.21	0.94	0.17	0.97	1.55	1.39	0.22	1.31	1.85	1.80	0.27	2.01	2.18	2.18	0.31	3.13	
15	3	15	0.73	0.73	0.21	1.18	1.10	1.10	0.31	3.24	1.50	1.50	0.43	6.32	1.89	1.89	0.54	9.32	2.26	2.26	0.65	12.70
		17	0.73	0.73	0.21	1.18	1.11	1.11	0.32	3.25	1.50	1.50	0.43	6.33	1.89	1.89	0.54	9.35	2.26	2.26	0.65	12.74
		19	-	-	-	-	1.14	1.09	0.32	3.52	1.50	1.49	0.43	6.33	1.89	1.89	0.54	9.38	2.27	2.27	0.65	12.78
		20	-	-	-	-	1.47	1.06	0.42	6.09	1.66	1.47	0.47	7.49	1.92	1.89	0.55	9.61	2.27	2.27	0.65	12.79
	4	15	0.56	0.56	0.12	0.65	0.97	0.97	0.21	1.17	1.34	1.34	0.29	2.55	1.72	1.72	0.37	4.80	2.11	2.11	0.45	6.93
		17	0.56	0.56	0.12	0.65	0.97	0.97	0.21	1.17	1.34	1.34	0.29	2.56	1.72	1.72	0.37	4.82	2.12	2.12	0.45	6.95
		19	-	-	-	-	0.98	0.97	0.21	1.18	1.34	1.34	0.29	2.57	1.73	1.73	0.37	4.83	2.12	2.12	0.45	6.97
		20	-	-	-	-	1.10	0.91	0.24	1.50	1.38	1.32	0.30	2.78	1.73	1.72	0.37	4.84	2.12	2.12	0.45	6.98
	5	15	0.35	0.35	0.06	0.32	0.81	0.81	0.14	0.75	1.21	1.21	0.21	1.18	1.58	1.58	0.27	2.22	1.95	1.95	0.34	3.88
		17	0.35	0.35	0.06	0.32	0.81	0.81	0.14	0.75	1.21	1.21	0.21	1.18	1.58	1.58	0.27	2.23	1.95	1.95	0.34	3.89
		19	-	-	-	-	0.81	0.80	0.14	0.75	1.22	1.22	0.21	1.18	1.58	1.58	0.27	2.24	1.96	1.96	0.34	3.91
		20	-	-	-	-	0.84	0.78	0.15	0.79	1.23	1.21	0.21	1.20	1.58	1.58	0.27	2.24	1.96	1.96	0.34	3.92
6	15	-	-	-	-	0.61	0.61	0.09	0.47	1.05	1.05	0.15	0.81	1.45	1.45	0.21	1.17	1.81	1.81	0.26	1.99	
	17	-	-	-	-	0.61	0.61	0.09	0.47	1.05	1.05	0.15	0.81	1.45	1.45	0.21	1.17	1.82	1.82	0.26	2.00	
	19	-	-	-	-	0.62	0.62	0.09	0.47	1.05	1.05	0.15	0.81	1.45	1.45	0.21	1.17	1.82	1.82	0.26	2.01	
	20	-	-	-	-	0.62	0.61	0.09	0.47	1.05	1.05	0.15	0.81	1.45	1.45	0.21	1.17	1.82	1.82	0.26	2.01	

Abbreviations:

EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK04A3SCBSLXG1MXE/ MK04A3HCBSLXG1MXE/ MK04A3UCBSLXG1MXE													
EWT	$\Delta T$	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
$^{\circ}C$	$^{\circ}C$	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	4.17	0.45	6.06	3.72	0.40	4.98	3.27	0.35	3.98	2.80	0.30	3.08
	10	3.88	0.34	3.69	3.41	0.29	2.96	2.93	0.25	2.25	2.46	0.21	1.49
	12	3.54	0.25	2.28	3.06	0.22	1.62	2.60	0.19	1.05	2.14	0.15	0.65
	14	3.20	0.20	1.18	2.74	0.17	0.79	2.25	0.14	0.56	1.71	0.11	0.42
	16	2.87	0.15	0.66	2.35	0.13	0.52	1.80	0.10	0.40	1.16	0.06	0.26
45	8	5.28	0.57	8.83	4.83	0.52	7.58	4.38	0.47	6.41	3.93	0.42	5.33
	10	5.03	0.43	5.57	4.57	0.39	4.73	4.11	0.35	3.95	3.65	0.32	3.23
	12	4.75	0.34	3.73	4.28	0.31	3.13	3.80	0.27	2.56	3.31	0.24	2.01
	14	4.42	0.27	2.55	3.92	0.24	2.05	3.43	0.21	1.53	2.97	0.18	1.04
	16	4.05	0.22	1.64	3.58	0.19	1.19	3.11	0.17	0.82	2.64	0.14	0.56
50	8	6.37	0.69	11.94	5.92	0.64	10.51	5.47	0.59	9.17	5.02	0.54	7.92
	10	6.15	0.53	7.70	5.69	0.49	6.74	5.24	0.45	5.84	4.78	0.41	5.01
	12	5.90	0.42	5.25	5.43	0.39	4.56	4.97	0.36	3.92	4.51	0.32	3.32
	14	5.62	0.35	3.73	5.14	0.32	3.22	4.67	0.29	2.73	4.19	0.26	2.27
	16	5.31	0.29	2.73	4.82	0.26	2.31	4.32	0.23	1.91	3.83	0.21	1.48
55	8	7.45	0.81	15.45	7.00	0.75	13.77	6.54	0.71	12.26	6.10	0.66	10.85
	10	7.25	0.63	10.01	6.79	0.59	8.94	6.33	0.55	7.93	5.88	0.51	6.98
	12	7.02	0.50	6.91	6.55	0.47	6.15	6.09	0.44	5.43	5.64	0.41	4.75
	14	6.77	0.42	5.03	6.30	0.39	4.45	5.84	0.36	3.90	5.37	0.33	3.39
	16	6.50	0.35	3.74	6.02	0.32	3.28	5.54	0.30	2.85	5.07	0.27	2.45
60	8	8.53	0.92	19.10	8.07	0.87	17.42	7.62	0.82	15.74	7.17	0.77	14.08
	10	8.33	0.72	12.47	7.87	0.68	11.29	7.41	0.64	10.18	6.96	0.60	9.12
	12	8.13	0.58	8.75	7.66	0.55	7.90	7.20	0.52	7.10	6.74	0.49	6.34
	14	7.89	0.49	6.39	7.43	0.46	5.75	6.96	0.43	5.15	6.50	0.40	4.58
	16	7.65	0.41	4.84	7.18	0.39	4.34	6.71	0.36	3.87	6.24	0.34	3.42

#### Abbreviations:

**$\Delta T$ :** Temperature Difference. ( $^{\circ}C$ )    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

Cooling Capacity Table

MK05A3SCBSLXG1MXE/ MK05A3HCBLSLXG1MXE/ MK05A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temperature (D.B.)																					
		21				23				25				27				29					
		TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD		
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	3.95	3.01	1.13	38.52	3.94	3.45	1.13	38.26	4.04	3.90	1.16	40.12	4.33	4.33	1.24	45.48	4.75	4.75	1.36	53.08	
		17	5.26	3.04	1.52	64.11	5.23	3.47	1.51	63.45	5.20	3.90	1.50	62.79	5.17	4.32	1.49	62.14	5.16	4.74	1.49	62.03	
		19	-	-	-	-	6.61	3.48	1.90	94.36	6.57	3.91	1.89	93.74	6.54	4.34	1.89	93.71	6.50	4.76	1.88	92.88	
		20	-	-	-	-	7.35	3.50	2.13	115.34	7.31	3.92	2.12	114.17	7.26	4.35	2.10	112.97	7.21	4.76	2.07	110.17	
	4	15	3.47	2.79	0.75	18.92	3.56	3.25	0.77	19.73	3.78	3.71	0.81	21.85	4.15	4.15	0.89	25.45	4.58	4.58	0.98	30.11	
		17	4.81	2.83	1.03	32.72	4.78	3.26	1.02	32.37	4.75	3.69	1.02	32.03	4.74	4.12	1.02	31.93	4.83	4.55	1.04	33.02	
		19	-	-	-	-	6.18	3.29	1.33	50.61	6.15	3.72	1.32	50.11	6.11	4.14	1.31	49.61	6.08	4.56	1.31	49.12	
		20	-	-	-	-	6.93	3.30	1.50	62.28	6.89	3.73	1.49	61.68	6.85	4.16	1.48	61.06	6.81	4.58	1.47	60.46	
	5	15	2.97	2.54	0.51	9.72	3.19	3.03	0.55	11.10	3.52	3.51	0.60	13.11	3.96	3.96	0.68	16.10	4.39	4.39	0.76	19.22	
		17	4.30	2.60	0.74	18.54	4.28	3.03	0.74	18.34	4.26	3.47	0.73	18.24	4.35	3.92	0.75	18.91	4.54	4.37	0.78	20.32	
		19	-	-	-	-	5.73	3.08	0.99	30.24	5.69	3.51	0.98	29.93	5.66	3.93	0.98	29.63	5.62	4.36	0.97	29.32	
		20	-	-	-	-	6.48	3.09	1.12	37.40	6.44	3.53	1.11	37.04	6.40	3.95	1.10	36.67	6.37	4.37	1.10	36.31	
6	15	2.60	2.34	0.37	4.63	2.89	2.82	0.41	6.14	3.29	3.29	0.47	8.32	3.74	3.74	0.54	10.66	4.19	4.19	0.60	12.95		
	17	3.69	2.33	0.53	10.35	3.67	2.77	0.53	10.27	3.77	3.23	0.54	10.80	3.98	3.71	0.57	11.87	4.26	4.18	0.61	13.31		
	19	-	-	-	-	5.19	2.84	0.74	18.48	5.16	3.27	0.74	18.29	5.12	3.70	0.73	18.09	5.11	4.13	0.73	18.04		
	20	-	-	-	-	5.96	2.87	0.85	23.46	5.93	3.30	0.85	23.22	5.89	3.73	0.84	22.99	5.86	4.15	0.84	22.75		
7	3	15	2.99	2.56	0.86	23.50	3.14	3.03	0.90	25.58	3.48	3.48	1.01	30.97	3.91	3.91	1.13	37.88	4.33	4.33	1.24	44.65	
		17	4.29	2.59	1.23	43.87	4.26	3.02	1.22	43.38	4.23	3.45	1.22	42.87	4.25	3.88	1.22	43.28	4.40	4.33	1.27	45.99	
		19	-	-	-	-	5.66	3.05	1.64	72.24	5.63	3.48	1.63	71.48	5.60	3.90	1.62	70.73	5.56	4.32	1.61	69.46	
		20	-	-	-	-	6.39	3.05	1.84	88.12	6.35	3.48	1.84	87.63	6.32	3.91	1.84	87.63	6.29	4.33	1.82	86.74	
	4	15	2.58	2.35	0.56	11.21	2.87	2.84	0.62	13.54	3.29	3.29	0.71	16.88	3.72	3.72	0.80	20.89	4.15	4.15	0.89	25.18	
		17	3.79	2.37	0.81	21.47	3.76	2.80	0.81	21.21	3.78	3.25	0.81	21.43	3.92	3.70	0.84	22.81	4.18	4.15	0.90	25.45	
		19	-	-	-	-	5.19	2.84	1.12	36.97	5.16	3.27	1.11	36.58	5.13	3.70	1.10	36.20	5.10	4.12	1.10	35.80	
		20	-	-	-	-	5.95	2.86	1.29	47.23	5.91	3.29	1.28	46.75	5.88	3.72	1.27	46.26	5.84	4.14	1.27	45.79	
	5	15	2.24	2.14	0.38	5.19	2.62	2.62	0.45	7.62	3.08	3.08	0.53	10.30	3.53	3.53	0.61	12.96	3.97	3.97	0.68	15.89	
		17	3.18	2.11	0.55	10.86	3.21	2.56	0.55	11.00	3.37	3.04	0.58	11.98	3.62	3.51	0.62	13.57	3.97	3.97	0.68	15.93	
		19	-	-	-	-	4.67	2.62	0.80	20.93	4.65	3.05	0.80	20.70	4.61	3.48	0.79	20.46	4.64	3.92	0.80	20.66	
		20	-	-	-	-	5.45	2.65	0.94	27.47	5.42	3.08	0.94	27.18	5.39	3.51	0.93	26.90	5.35	3.93	0.93	26.62	
6	15	2.04	2.00	0.29	2.53	2.43	2.43	0.35	4.05	2.86	2.86	0.41	6.14	3.31	3.31	0.47	8.46	3.76	3.76	0.54	10.57		
	17	2.54	1.85	0.36	4.58	2.72	2.33	0.39	5.44	2.99	2.82	0.43	6.86	3.34	3.31	0.48	8.61	3.77	3.77	0.54	10.60		
	19	-	-	-	-	4.07	2.37	0.58	12.03	4.03	2.80	0.58	11.87	4.07	3.25	0.58	12.05	4.21	3.71	0.60	12.78		
	20	-	-	-	-	4.88	2.41	0.70	16.43	4.85	2.84	0.70	16.24	4.81	3.27	0.69	16.06	4.80	3.70	0.69	15.96		



# 2-Pipe Duct MK-CBS Series



(Continued)

MK05A3SCBSLXG1MXE/ MK05A3HCBSLXG1MXE/ MK05A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	
9	3	15	2.19	2.15	0.63	13.64	2.60	2.60	0.75	18.31	3.04	3.04	0.87	23.94	3.48	3.48	1.01	30.53	3.90	3.90	1.12	36.76	
		17	3.24	2.14	0.94	27.03	3.22	2.57	0.93	26.46	3.30	3.02	0.95	27.80	3.51	3.48	1.02	31.04	3.91	3.91	1.12	36.86	
		19	-	-	-	-	4.63	2.60	1.34	50.17	4.60	3.03	1.33	49.61	4.58	3.46	1.33	49.06	4.55	3.88	1.32	48.61	
		20	-	-	-	-	5.37	2.61	1.55	64.45	5.33	3.04	1.54	63.30	5.30	3.47	1.53	62.79	5.27	3.89	1.53	62.74	
	4	15	1.93	1.93	0.42	6.44	2.40	2.40	0.52	9.72	2.85	2.85	0.61	13.04	3.29	3.29	0.71	16.71	3.73	3.73	0.80	20.71	
		17	2.63	1.89	0.57	11.38	2.74	2.35	0.59	12.14	2.97	2.83	0.64	14.01	3.30	3.30	0.71	16.76	3.73	3.73	0.81	20.76	
		19	-	-	-	-	4.12	2.39	0.89	24.69	4.09	2.82	0.89	24.41	4.07	3.25	0.88	24.20	4.15	3.70	0.90	24.95	
		20	-	-	-	-	4.87	2.40	1.05	32.64	4.84	2.84	1.04	32.29	4.81	3.27	1.04	31.93	4.78	3.69	1.03	31.56	
	5	15	1.75	1.75	0.30	2.79	2.18	2.18	0.38	5.04	2.64	2.64	0.45	7.75	3.09	3.09	0.53	10.22	3.54	3.54	0.61	12.83	
		17	2.06	1.64	0.35	4.35	2.32	2.13	0.40	5.89	2.67	2.63	0.46	7.94	3.10	3.10	0.53	10.24	3.54	3.54	0.61	12.86	
		19	-	-	-	-	3.51	2.14	0.60	12.61	3.49	2.58	0.60	12.50	3.59	3.04	0.62	13.12	3.78	3.51	0.65	14.44	
		20	-	-	-	-	4.31	2.18	0.74	17.92	4.27	2.61	0.74	17.74	4.25	3.04	0.73	17.49	4.27	3.48	0.74	17.68	
	6	15	1.58	1.58	0.23	1.54	2.01	2.01	0.29	2.52	2.43	2.43	0.35	4.20	2.87	2.87	0.41	6.37	3.33	3.33	0.48	8.47	
		17	1.76	1.50	0.25	1.82	2.07	1.98	0.30	2.73	2.44	2.43	0.35	4.23	2.88	2.88	0.41	6.39	3.34	3.34	0.48	8.49	
		19	-	-	-	-	2.75	1.86	0.39	5.75	2.89	2.33	0.42	6.48	3.15	2.82	0.45	7.65	3.46	3.31	0.50	9.01	
		20	-	-	-	-	3.63	1.92	0.52	9.79	3.60	2.35	0.52	9.64	3.65	2.80	0.52	9.85	3.81	3.27	0.55	10.61	
	11	3	15	1.70	1.70	0.48	8.64	2.16	2.16	0.62	12.97	2.61	2.61	0.74	17.87	3.04	3.04	0.87	23.34	3.47	3.47	0.99	29.29
			17	2.08	1.66	0.59	12.11	2.28	2.15	0.65	14.33	2.61	2.61	0.74	17.90	3.05	3.05	0.87	23.40	3.48	3.48	0.99	29.37
			19	-	-	-	-	3.50	2.14	1.00	29.70	3.48	2.58	0.99	29.31	3.50	3.02	1.00	29.60	3.64	3.46	1.04	31.69
			20	-	-	-	-	4.27	2.16	1.23	42.35	4.24	2.60	1.22	41.85	4.21	3.03	1.21	41.36	4.19	3.45	1.20	40.93
4		15	1.49	1.49	0.32	3.38	1.94	1.94	0.42	6.54	2.41	2.41	0.52	9.56	2.86	2.86	0.61	12.79	3.30	3.30	0.71	16.31	
		17	1.61	1.44	0.35	4.17	1.97	1.94	0.42	6.71	2.41	2.41	0.52	9.58	2.86	2.86	0.61	12.82	3.30	3.30	0.71	16.36	
		19	-	-	-	-	2.89	1.91	0.62	13.03	2.93	2.36	0.63	13.33	3.10	2.83	0.67	14.71	3.37	3.29	0.72	16.91	
		20	-	-	-	-	3.69	1.94	0.79	19.79	3.67	2.38	0.79	19.55	3.65	2.81	0.78	19.39	3.74	3.26	0.80	20.21	
5		15	1.33	1.33	0.23	1.53	1.76	1.76	0.30	2.95	2.19	2.19	0.38	5.28	2.66	2.66	0.46	7.77	3.11	3.11	0.54	10.14	
		17	1.38	1.30	0.24	1.62	1.76	1.76	0.30	2.96	2.20	2.20	0.38	5.30	2.66	2.66	0.46	7.79	3.11	3.11	0.54	10.17	
		19	-	-	-	-	2.20	1.65	0.38	5.34	2.45	2.14	0.42	6.71	2.77	2.64	0.48	8.32	3.13	3.12	0.54	10.27	
		20	-	-	-	-	3.02	1.69	0.52	9.63	3.01	2.13	0.52	9.56	3.14	2.60	0.54	10.30	3.36	3.07	0.58	11.57	
6		15	1.13	1.13	0.16	1.03	1.60	1.60	0.23	1.52	2.02	2.02	0.29	2.64	2.45	2.45	0.35	4.42	2.89	2.89	0.41	6.45	
		17	1.14	1.12	0.16	1.04	1.60	1.60	0.23	1.52	2.02	2.02	0.29	2.65	2.45	2.45	0.35	4.43	2.90	2.90	0.41	6.47	
		19	-	-	-	-	1.83	1.48	0.26	2.05	2.13	1.96	0.31	3.05	2.48	2.44	0.36	4.58	2.90	2.90	0.41	6.48	
		20	-	-	-	-	2.23	1.41	0.32	3.48	2.40	1.89	0.34	4.23	2.67	2.38	0.38	5.44	3.01	2.87	0.43	6.94	

(Continued)

MK05A3SCBSLXG1MXE/ MK05A3HCBSLXG1MXE/ MK05A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	1.24	1.24	0.36	4.65	1.71	1.71	0.49	8.71	2.16	2.16	0.62	12.81	2.61	2.61	0.75	17.88	3.04	3.04	0.88	23.28
		17	1.25	1.24	0.36	4.71	1.72	1.72	0.49	8.73	2.17	2.17	0.62	12.84	2.61	2.61	0.75	17.92	3.05	3.05	0.88	23.35
		19	-	-	-	-	2.24	1.67	0.64	13.59	2.40	2.14	0.69	15.42	2.66	2.61	0.76	18.41	3.05	3.05	0.88	23.41
		20	-	-	-	-	3.04	1.70	0.87	23.24	3.02	2.13	0.87	22.88	3.05	2.58	0.88	23.35	3.21	3.04	0.92	25.52
	4	15	1.07	1.07	0.23	1.53	1.50	1.50	0.32	3.62	1.96	1.96	0.42	6.61	2.42	2.42	0.52	9.47	2.86	2.86	0.61	12.63
		17	1.07	1.07	0.23	1.53	1.50	1.50	0.32	3.63	1.96	1.96	0.42	6.62	2.42	2.42	0.52	9.49	2.87	2.87	0.61	12.66
		19	-	-	-	-	1.70	1.44	0.37	4.97	2.03	1.94	0.44	7.05	2.42	2.42	0.52	9.52	2.87	2.87	0.62	12.70
		20	-	-	-	-	2.32	1.44	0.50	8.79	2.41	1.91	0.52	9.38	2.63	2.39	0.56	10.93	2.93	2.86	0.63	13.12
	5	15	0.87	0.87	0.15	0.91	1.34	1.34	0.23	1.50	1.76	1.76	0.30	3.04	2.20	2.20	0.38	5.37	2.67	2.67	0.46	7.64
		17	0.87	0.87	0.15	0.91	1.34	1.34	0.23	1.51	1.76	1.76	0.30	3.05	2.21	2.21	0.38	5.39	2.67	2.67	0.46	7.66
		19	-	-	-	-	1.41	1.29	0.24	1.70	1.77	1.76	0.30	3.10	2.21	2.21	0.38	5.41	2.67	2.67	0.46	7.68
		20	-	-	-	-	1.66	1.20	0.28	2.59	1.93	1.69	0.33	3.89	2.28	2.19	0.39	5.78	2.68	2.67	0.46	7.73
6	15	0.64	0.64	0.09	0.55	1.14	1.14	0.16	0.98	1.60	1.60	0.23	1.51	2.02	2.02	0.29	2.73	2.45	2.45	0.35	4.54	
	17	0.64	0.64	0.09	0.55	1.14	1.14	0.16	0.98	1.60	1.60	0.23	1.51	2.02	2.02	0.29	2.74	2.46	2.46	0.35	4.56	
	19	-	-	-	-	1.16	1.13	0.17	1.00	1.60	1.60	0.23	1.51	2.02	2.02	0.29	2.75	2.46	2.46	0.35	4.57	
	20	-	-	-	-	1.29	1.05	0.19	1.11	1.68	1.55	0.24	1.68	2.04	2.02	0.29	2.81	2.46	2.46	0.35	4.57	
15	3	15	0.81	0.81	0.23	1.51	1.24	1.24	0.35	4.70	1.71	1.71	0.49	8.49	2.17	2.17	0.62	12.65	2.61	2.61	0.75	17.61
		17	0.81	0.81	0.23	1.52	1.25	1.25	0.36	4.71	1.72	1.72	0.49	8.51	2.17	2.17	0.62	12.68	2.61	2.61	0.75	17.66
		19	-	-	-	-	1.27	1.24	0.36	4.93	1.72	1.71	0.49	8.51	2.17	2.17	0.62	12.72	2.62	2.62	0.75	17.71
		20	-	-	-	-	1.63	1.20	0.46	7.75	1.87	1.69	0.53	9.80	2.19	2.17	0.63	12.91	2.62	2.62	0.75	17.73
	4	15	0.60	0.60	0.13	0.76	1.08	1.08	0.23	1.52	1.50	1.50	0.32	3.71	1.97	1.97	0.42	6.58	2.43	2.43	0.52	9.48
		17	0.60	0.60	0.13	0.76	1.08	1.08	0.23	1.53	1.50	1.50	0.32	3.72	1.97	1.97	0.42	6.60	2.43	2.43	0.52	9.51
		19	-	-	-	-	1.08	1.07	0.23	1.53	1.51	1.51	0.32	3.74	1.97	1.97	0.42	6.62	2.44	2.44	0.52	9.54
		20	-	-	-	-	1.18	1.01	0.25	1.93	1.53	1.49	0.33	3.91	1.97	1.97	0.42	6.61	2.44	2.44	0.53	9.55
	5	15	0.37	0.37	0.06	0.36	0.88	0.88	0.15	0.88	1.34	1.34	0.23	1.55	1.77	1.77	0.30	3.23	2.22	2.22	0.38	5.53
		17	0.37	0.37	0.06	0.36	0.88	0.88	0.15	0.88	1.35	1.35	0.23	1.56	1.77	1.77	0.30	3.24	2.22	2.22	0.38	5.55
		19	-	-	-	-	0.88	0.88	0.15	0.88	1.35	1.35	0.23	1.56	1.77	1.77	0.31	3.25	2.23	2.23	0.38	5.56
		20	-	-	-	-	0.91	0.86	0.16	0.91	1.35	1.35	0.23	1.57	1.77	1.77	0.31	3.26	2.23	2.23	0.38	5.57
6	15	-	-	-	-	0.66	0.66	0.09	0.54	1.15	1.15	0.17	0.95	1.61	1.61	0.23	1.55	2.03	2.03	0.29	2.89	
	17	-	-	-	-	0.66	0.66	0.09	0.54	1.15	1.15	0.17	0.95	1.61	1.61	0.23	1.56	2.03	2.03	0.29	2.90	
	19	-	-	-	-	0.66	0.66	0.09	0.54	1.16	1.16	0.17	0.95	1.61	1.61	0.23	1.56	2.03	2.03	0.29	2.91	
	20	-	-	-	-	0.66	0.66	0.09	0.54	1.16	1.15	0.17	0.95	1.61	1.61	0.23	1.57	2.03	2.03	0.29	2.91	

Abbreviations:

- EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK05A3SCBSLXG1MXE/ MK05A3HCBLSLXG1MXE/ MK05A3UCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	4.86	0.53	8.46	4.32	0.47	6.90	3.79	0.41	5.51	3.25	0.35	4.25
	10	4.50	0.39	5.07	3.95	0.34	4.06	3.39	0.29	3.14	2.81	0.24	2.21
	12	4.08	0.29	3.18	3.49	0.25	2.38	2.93	0.21	1.55	2.40	0.17	0.90
	14	3.61	0.22	1.75	3.07	0.19	1.13	2.52	0.16	0.71	1.91	0.12	0.50
	16	3.21	0.17	0.89	2.63	0.14	0.63	1.99	0.11	0.47	1.26	0.07	0.31
45	8	6.17	0.66	12.38	5.64	0.61	10.61	5.11	0.55	8.96	4.58	0.49	7.44
	10	5.85	0.50	7.74	5.31	0.46	6.56	4.78	0.41	5.47	4.24	0.37	4.46
	12	5.50	0.40	5.14	4.95	0.36	4.30	4.40	0.32	3.51	3.83	0.28	2.79
	14	5.10	0.31	3.49	4.52	0.28	2.85	3.93	0.24	2.21	3.36	0.21	1.54
	16	4.64	0.25	2.35	4.05	0.22	1.75	3.49	0.19	1.19	2.95	0.16	0.76
50	8	7.46	0.80	16.84	6.93	0.75	14.82	6.40	0.69	12.92	5.88	0.63	11.15
	10	7.17	0.62	10.77	6.64	0.57	9.43	6.11	0.53	8.16	5.58	0.48	6.99
	12	6.85	0.49	7.29	6.31	0.45	6.33	5.77	0.42	5.43	5.23	0.38	4.59
	14	6.51	0.40	5.15	5.96	0.37	4.43	5.40	0.33	3.75	4.84	0.30	3.12
	16	6.13	0.33	3.73	5.56	0.30	3.16	4.98	0.27	2.63	4.40	0.24	2.11
55	8	8.75	0.95	21.90	8.22	0.89	19.62	7.69	0.83	17.47	7.16	0.77	15.45
	10	8.47	0.73	14.03	7.94	0.69	12.58	7.41	0.64	11.16	6.88	0.59	9.81
	12	8.18	0.59	9.67	7.64	0.55	8.59	7.11	0.51	7.58	6.57	0.47	6.63
	14	7.87	0.49	6.98	7.33	0.45	6.17	6.78	0.42	5.41	6.24	0.39	4.69
	16	7.53	0.41	5.16	6.97	0.38	4.53	6.42	0.35	3.93	5.86	0.32	3.37
60	8	10.03	1.08	27.19	9.50	1.02	24.68	8.96	0.97	22.31	8.43	0.91	20.06
	10	9.77	0.84	17.71	9.23	0.80	16.04	8.70	0.75	14.46	8.17	0.70	12.90
	12	9.50	0.68	12.30	8.96	0.64	11.11	8.42	0.61	9.98	7.89	0.57	8.91
	14	9.20	0.57	8.93	8.66	0.53	8.03	8.12	0.50	7.19	7.58	0.47	6.39
	16	8.89	0.48	6.73	8.34	0.45	6.03	7.80	0.42	5.37	7.25	0.39	4.74

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

Cooling Capacity Table

MK06A3SCBSLXG1MXE/MK06A3HCBSLXG1MXE																							
EWT	ΔT	Indoor temperature (D.B.)																					
		21				23				25				27				29					
		TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD		
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	4.73	3.59	1.35	55.41	4.70	4.10	1.35	54.92	4.81	4.63	1.38	57.12	5.15	5.15	1.49	65.28	5.65	5.65	1.63	76.75	
		17	6.27	3.62	1.81	92.05	6.24	4.13	1.80	91.12	6.20	4.64	1.79	90.18	6.15	5.13	1.77	87.85	6.15	5.64	1.78	88.62	
		19	-	-	-	-	7.87	4.15	2.29	137.60	7.82	4.65	2.25	134.23	7.78	5.15	2.24	132.94	7.73	5.65	2.23	131.62	
		20	-	-	-	-	8.73	4.15	2.52	162.97	8.68	4.66	2.50	161.35	8.63	5.16	2.49	159.79	8.58	5.66	2.48	158.22	
	4	15	4.18	3.34	0.90	27.15	4.26	3.87	0.91	28.10	4.51	4.42	0.97	30.92	4.94	4.94	1.06	36.30	5.45	5.45	1.17	42.92	
		17	5.76	3.38	1.24	47.21	5.73	3.89	1.23	46.73	5.69	4.40	1.22	46.26	5.67	4.91	1.22	45.98	5.77	5.42	1.24	47.31	
		19	-	-	-	-	7.39	3.92	1.60	73.51	7.34	4.43	1.58	71.89	7.31	4.94	1.58	72.09	7.26	5.43	1.56	70.54	
		20	-	-	-	-	8.26	3.93	1.79	89.39	8.22	4.44	1.78	88.52	8.17	4.95	1.77	87.65	8.13	5.45	1.76	86.82	
	5	15	3.63	3.07	0.62	14.51	3.87	3.64	0.67	16.35	4.23	4.21	0.73	19.03	4.72	4.72	0.81	22.80	5.24	5.24	0.90	27.19	
		17	5.19	3.12	0.89	26.73	5.16	3.63	0.89	26.45	5.13	4.15	0.88	26.23	5.22	4.67	0.90	27.01	5.43	5.22	0.94	29.16	
		19	-	-	-	-	6.86	3.68	1.18	43.21	6.82	4.19	1.17	42.78	6.78	4.70	1.16	42.36	6.74	5.19	1.16	41.94	
		20	-	-	-	-	7.74	3.70	1.33	53.35	7.70	4.21	1.32	52.84	7.66	4.71	1.32	52.33	7.62	5.22	1.31	52.01	
6	15	3.12	2.80	0.45	7.84	3.50	3.39	0.50	9.93	3.97	3.97	0.57	12.44	4.50	4.50	0.65	15.40	5.01	5.01	0.72	18.41		
	17	4.56	2.84	0.65	15.70	4.53	3.36	0.65	15.52	4.61	3.89	0.66	16.01	4.81	4.44	0.69	17.12	5.11	5.00	0.73	19.05		
	19	-	-	-	-	6.28	3.42	0.90	26.98	6.24	3.93	0.89	26.71	6.20	4.44	0.89	26.44	6.18	4.94	0.88	26.25		
	20	-	-	-	-	7.20	3.45	1.03	34.36	7.15	3.97	1.03	34.00	7.11	4.47	1.02	33.68	7.07	4.98	1.02	33.35		
7	3	15	3.59	3.06	1.04	34.40	3.75	3.61	1.08	37.15	4.13	4.13	1.19	43.48	4.64	4.64	1.33	53.21	5.15	5.15	1.48	63.66	
		17	5.12	3.09	1.48	63.38	5.09	3.60	1.47	62.91	5.06	4.11	1.46	62.02	5.07	4.62	1.47	62.49	5.24	5.15	1.51	66.17	
		19	-	-	-	-	6.74	3.62	1.95	102.33	6.70	4.13	1.95	102.39	6.67	4.64	1.94	101.61	6.63	5.14	1.93	100.56	
		20	-	-	-	-	7.61	3.63	2.21	127.66	7.56	4.14	2.19	125.28	7.52	4.65	2.17	124.03	7.48	5.15	2.17	123.83	
	4	15	3.13	2.83	0.68	16.47	3.44	3.39	0.74	19.23	3.92	3.92	0.84	24.08	4.44	4.44	0.96	30.09	4.94	4.94	1.06	35.86	
		17	4.57	2.84	0.99	31.62	4.54	3.36	0.98	31.27	4.55	3.88	0.98	31.34	4.70	4.41	1.02	33.11	4.98	4.95	1.07	36.31	
		19	-	-	-	-	6.22	3.39	1.35	53.89	6.19	3.91	1.34	53.35	6.15	4.41	1.33	52.80	6.11	4.91	1.32	52.23	
		20	-	-	-	-	7.09	3.40	1.53	67.05	7.05	3.92	1.52	66.40	7.01	4.42	1.51	65.72	6.97	4.93	1.50	65.06	
	5	15	2.70	2.57	0.46	8.55	3.16	3.15	0.54	11.33	3.69	3.69	0.64	14.81	4.22	4.22	0.73	18.55	4.73	4.73	0.81	22.59	
		17	3.92	2.56	0.68	16.37	3.92	3.09	0.68	16.38	4.07	3.64	0.70	17.45	4.35	4.20	0.75	19.54	4.74	4.74	0.82	22.67	
		19	-	-	-	-	5.65	3.15	0.98	30.78	5.62	3.66	0.97	30.46	5.58	4.17	0.96	30.13	5.59	4.68	0.97	30.20	
		20	-	-	-	-	6.53	3.16	1.13	39.28	6.50	3.68	1.12	38.89	6.46	4.19	1.11	38.49	6.42	4.69	1.11	38.10	
6	15	2.41	2.36	0.35	4.19	2.89	2.89	0.41	6.67	3.44	3.44	0.49	9.57	3.98	3.98	0.57	12.29	4.51	4.51	0.65	15.18		
	17	3.11	2.23	0.45	7.91	3.32	2.81	0.48	8.97	3.65	3.40	0.52	10.56	4.04	3.97	0.58	12.57	4.52	4.51	0.65	15.21		
	19	-	-	-	-	4.98	2.87	0.72	17.99	4.95	3.39	0.71	17.78	4.96	3.91	0.71	17.84	5.10	4.45	0.73	18.71		
	20	-	-	-	-	5.93	2.91	0.85	24.28	5.89	3.43	0.85	24.03	5.85	3.94	0.84	23.79	5.82	4.44	0.84	23.56		

# 2-Pipe Duct MK-CBS Series



(Continued)

MK06A3SCBSLXG1MXE/MK06A3HCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	2.62	2.56	0.75	19.59	3.10	3.10	0.89	26.09	3.62	3.62	1.04	34.08	4.14	4.14	1.20	43.47	4.64	4.64	1.33	52.37	
		17	3.88	2.55	1.12	38.37	3.85	3.06	1.11	37.87	3.93	3.59	1.13	39.22	4.18	4.14	1.21	44.28	4.64	4.64	1.34	52.50	
		19	-	-	-	-	5.53	3.10	1.61	72.16	5.49	3.61	1.59	71.13	5.45	4.11	1.57	69.45	5.42	4.62	1.56	68.74	
		20	-	-	-	-	6.41	3.11	1.86	93.43	6.37	3.62	1.85	92.47	6.33	4.13	1.84	91.48	6.29	4.63	1.83	90.52	
	4	15	2.33	2.33	0.50	9.77	2.88	2.88	0.62	14.03	3.41	3.41	0.74	18.74	3.93	3.93	0.85	24.04	4.44	4.44	0.96	29.34	
		17	3.23	2.28	0.70	17.00	3.31	2.82	0.71	17.82	3.56	3.38	0.77	20.17	3.94	3.94	0.85	24.14	4.44	4.44	0.96	29.42	
		19	-	-	-	-	4.94	2.85	1.06	35.30	4.91	3.37	1.06	34.91	4.88	3.88	1.05	34.53	4.95	4.40	1.07	35.43	
		20	-	-	-	-	5.84	2.87	1.26	47.08	5.80	3.39	1.25	46.74	5.78	3.90	1.25	46.70	5.74	4.41	1.24	46.18	
	5	15	2.07	2.07	0.36	4.67	2.62	2.62	0.45	8.09	3.17	3.17	0.55	11.24	3.71	3.71	0.64	14.71	4.23	4.23	0.73	18.34	
		17	2.51	1.98	0.43	7.42	2.83	2.58	0.49	9.27	3.23	3.16	0.56	11.58	3.71	3.71	0.64	14.74	4.23	4.23	0.73	18.38	
		19	-	-	-	-	4.28	2.59	0.74	18.68	4.25	3.11	0.73	18.45	4.34	3.64	0.75	19.12	4.54	4.19	0.78	20.72	
		20	-	-	-	-	5.21	2.62	0.90	26.19	5.18	3.14	0.89	25.90	5.14	3.65	0.89	25.60	5.15	4.16	0.89	25.67	
	6	15	1.88	1.88	0.27	2.24	2.38	2.38	0.34	4.20	2.91	2.91	0.42	6.93	3.47	3.47	0.50	9.56	4.00	4.00	0.57	12.19	
		17	2.08	1.77	0.30	2.92	2.46	2.34	0.35	4.56	2.92	2.92	0.42	6.98	3.47	3.47	0.50	9.58	4.01	4.01	0.57	12.22	
		19	-	-	-	-	3.46	2.28	0.50	9.50	3.59	2.83	0.51	10.10	3.85	3.40	0.55	11.38	4.18	3.97	0.60	13.10	
		20	-	-	-	-	4.48	2.34	0.64	14.75	4.45	2.86	0.64	14.56	4.47	3.38	0.64	14.66	4.62	3.93	0.66	15.55	
	11	3	15	2.04	2.04	0.58	12.42	2.58	2.58	0.74	18.52	3.10	3.10	0.89	25.48	3.62	3.62	1.03	33.20	4.13	4.13	1.19	42.30
			17	2.52	1.99	0.72	17.76	2.73	2.56	0.78	20.41	3.11	3.11	0.89	25.54	3.63	3.63	1.04	33.28	4.14	4.14	1.19	42.41
			19	-	-	-	-	4.20	2.55	1.20	42.91	4.18	3.07	1.20	42.86	4.18	3.59	1.20	42.85	4.33	4.12	1.24	45.31
			20	-	-	-	-	5.09	2.57	1.46	59.92	5.05	3.09	1.45	59.26	5.02	3.60	1.44	58.58	4.99	4.10	1.43	57.90
4		15	1.78	1.78	0.38	5.67	2.34	2.34	0.50	9.62	2.89	2.89	0.62	13.71	3.41	3.41	0.73	18.26	3.93	3.93	0.84	23.27	
		17	1.96	1.73	0.42	7.00	2.38	2.33	0.51	9.91	2.89	2.89	0.62	13.73	3.42	3.42	0.73	18.30	3.94	3.94	0.84	23.32	
		19	-	-	-	-	3.53	2.30	0.76	19.26	3.55	2.83	0.76	19.47	3.73	3.38	0.80	21.23	4.02	3.93	0.86	24.22	
		20	-	-	-	-	4.46	2.33	0.96	28.91	4.43	2.85	0.95	28.56	4.40	3.36	0.94	28.22	4.48	3.89	0.96	29.19	
5		15	1.58	1.58	0.27	2.33	2.09	2.09	0.36	4.94	2.65	2.65	0.46	8.14	3.19	3.19	0.55	11.19	3.72	3.72	0.64	14.40	
		17	1.64	1.54	0.28	2.56	2.09	2.09	0.36	4.96	2.65	2.65	0.46	8.16	3.20	3.20	0.55	11.21	3.72	3.72	0.64	14.43	
		19	-	-	-	-	2.75	2.01	0.47	8.67	3.01	2.59	0.52	10.09	3.35	3.16	0.58	12.13	3.75	3.72	0.64	14.62	
		20	-	-	-	-	3.71	2.05	0.64	14.29	3.68	2.57	0.63	14.11	3.82	3.12	0.66	15.13	4.05	3.68	0.70	16.78	
6		15	1.36	1.36	0.20	1.31	1.89	1.89	0.27	2.34	2.40	2.40	0.34	4.43	2.94	2.94	0.42	7.00	3.49	3.49	0.50	9.44	
		17	1.37	1.35	0.20	1.32	1.89	1.89	0.27	2.34	2.40	2.40	0.34	4.44	2.94	2.94	0.42	7.02	3.49	3.49	0.50	9.46	
		19	-	-	-	-	2.16	1.76	0.31	3.39	2.53	2.34	0.36	5.07	2.99	2.93	0.43	7.25	3.50	3.49	0.50	9.48	
		20	-	-	-	-	2.73	1.70	0.39	6.03	2.94	2.28	0.42	7.02	3.28	2.87	0.47	8.49	3.65	3.46	0.52	10.22	

(Continued)

MK06A3SCBSLXG1MXE/MK06A3HCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	1.50	1.50	0.43	7.31	2.05	2.05	0.59	12.49	2.59	2.59	0.74	18.56	3.11	3.11	0.89	25.45	3.62	3.62	1.03	32.72
		17	1.51	1.50	0.43	7.43	2.05	2.05	0.59	12.52	2.59	2.59	0.74	18.60	3.11	3.11	0.90	25.52	3.62	3.62	1.04	32.80
		19	-	-	-	-	2.74	2.00	0.79	20.42	2.88	2.55	0.83	22.25	3.17	3.11	0.91	26.29	3.63	3.63	1.04	32.88
		20	-	-	-	-	3.65	2.02	1.04	33.12	3.61	2.54	1.03	32.62	3.64	3.07	1.04	33.07	3.82	3.61	1.09	36.00
	4	15	1.27	1.27	0.27	2.43	1.79	1.79	0.38	5.87	2.35	2.35	0.50	9.55	2.89	2.89	0.62	13.56	3.42	3.42	0.74	18.23
		17	1.27	1.26	0.27	2.42	1.80	1.80	0.38	5.88	2.36	2.36	0.51	9.57	2.90	2.90	0.62	13.59	3.43	3.43	0.74	18.27
		19	-	-	-	-	2.08	1.74	0.45	7.75	2.46	2.33	0.53	10.31	2.91	2.90	0.62	13.66	3.43	3.43	0.74	18.32
		20	-	-	-	-	2.87	1.75	0.61	13.34	2.93	2.29	0.63	13.85	3.18	2.86	0.69	16.08	3.51	3.42	0.76	19.05
	5	15	1.04	1.04	0.18	1.15	1.58	1.58	0.27	2.39	2.10	2.10	0.36	5.07	2.66	2.66	0.46	8.02	3.20	3.20	0.55	10.98
		17	1.05	1.05	0.18	1.16	1.58	1.58	0.27	2.40	2.10	2.10	0.36	5.09	2.66	2.66	0.46	8.04	3.20	3.20	0.55	11.01
		19	-	-	-	-	1.67	1.52	0.29	2.78	2.12	2.10	0.36	5.20	2.66	2.66	0.46	8.05	3.21	3.21	0.55	11.04
		20	-	-	-	-	1.99	1.43	0.34	4.45	2.35	2.04	0.40	6.48	2.78	2.63	0.48	8.63	3.23	3.21	0.55	11.14
6	15	0.78	0.78	0.11	0.71	1.37	1.37	0.20	1.25	1.89	1.89	0.27	2.41	2.41	2.41	0.34	4.57	2.96	2.96	0.42	7.04	
	17	0.78	0.78	0.11	0.71	1.37	1.37	0.20	1.25	1.89	1.89	0.27	2.42	2.41	2.41	0.34	4.58	2.96	2.96	0.42	7.06	
	19	-	-	-	-	1.40	1.35	0.20	1.28	1.90	1.90	0.27	2.43	2.41	2.41	0.35	4.60	2.97	2.97	0.42	7.07	
	20	-	-	-	-	1.57	1.26	0.23	1.53	1.98	1.83	0.28	2.75	2.44	2.40	0.35	4.72	2.97	2.96	0.42	7.08	
15	3	15	0.95	0.95	0.27	2.45	1.50	1.50	0.43	7.15	2.05	2.05	0.59	12.17	2.59	2.59	0.74	18.30	3.10	3.10	0.89	24.72
		17	0.95	0.95	0.27	2.46	1.50	1.50	0.43	7.17	2.06	2.06	0.59	12.20	2.59	2.59	0.74	18.35	3.11	3.11	0.89	24.78
		19	-	-	-	-	1.55	1.49	0.44	7.51	2.05	2.05	0.59	12.18	2.59	2.59	0.75	18.39	3.11	3.11	0.89	24.85
		20	-	-	-	-	2.00	1.45	0.57	11.63	2.25	2.02	0.64	14.24	2.62	2.59	0.75	18.75	3.11	3.11	0.89	24.87
	4	15	0.73	0.73	0.16	0.97	1.27	1.27	0.27	2.48	1.81	1.81	0.39	5.98	2.37	2.37	0.51	9.59	2.90	2.90	0.63	13.56
		17	0.73	0.73	0.16	0.97	1.27	1.27	0.27	2.49	1.81	1.81	0.39	6.00	2.37	2.37	0.51	9.62	2.91	2.91	0.63	13.60
		19	-	-	-	-	1.27	1.27	0.27	2.49	1.81	1.81	0.39	6.02	2.38	2.38	0.51	9.64	2.91	2.91	0.63	13.63
		20	-	-	-	-	1.39	1.20	0.30	3.22	1.86	1.80	0.40	6.29	2.38	2.37	0.51	9.64	2.91	2.91	0.63	13.65
	5	15	0.45	0.45	0.08	0.47	1.06	1.06	0.18	1.12	1.59	1.59	0.27	2.55	2.12	2.12	0.37	5.31	2.68	2.68	0.46	8.05
		17	0.45	0.45	0.08	0.47	1.06	1.06	0.18	1.12	1.59	1.59	0.27	2.55	2.12	2.12	0.37	5.32	2.68	2.68	0.46	8.07
		19	-	-	-	-	1.06	1.06	0.18	1.12	1.59	1.59	0.27	2.56	2.12	2.12	0.37	5.34	2.68	2.68	0.46	8.09
		20	-	-	-	-	1.10	1.03	0.19	1.16	1.59	1.59	0.27	2.58	2.13	2.13	0.37	5.35	2.69	2.69	0.46	8.10
6	15	-	-	-	-	0.80	0.80	0.11	0.69	1.39	1.39	0.20	1.23	1.90	1.90	0.27	2.55	2.42	2.42	0.35	4.79	
	17	-	-	-	-	0.80	0.80	0.12	0.69	1.39	1.39	0.20	1.23	1.90	1.90	0.27	2.56	2.43	2.43	0.35	4.81	
	19	-	-	-	-	0.80	0.80	0.12	0.69	1.39	1.39	0.20	1.23	1.90	1.90	0.27	2.57	2.43	2.43	0.35	4.82	
	20	-	-	-	-	0.80	0.80	0.12	0.69	1.39	1.38	0.20	1.23	1.90	1.90	0.27	2.58	2.43	2.43	0.35	4.83	

**Abbreviations:**

EWT: Enter Water Temp. (°C)    ΔT: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK06A3SCBSLXG1MXE/MK06A3HCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	5.58	0.60	11.34	4.97	0.54	9.29	4.35	0.47	7.36	3.73	0.40	5.67
	10	5.16	0.45	6.76	4.53	0.39	5.42	3.89	0.34	4.18	3.22	0.28	3.05
	12	4.68	0.34	4.24	4.01	0.29	3.27	3.33	0.24	2.25	2.70	0.19	1.30
	14	4.10	0.25	2.51	3.45	0.21	1.64	2.83	0.17	0.96	2.15	0.13	0.60
	16	3.60	0.19	1.26	2.96	0.16	0.80	2.24	0.12	0.56	1.42	0.08	0.36
45	8	7.09	0.76	16.66	6.49	0.70	14.33	5.88	0.63	12.03	5.27	0.57	9.97
	10	6.72	0.58	10.36	6.10	0.53	8.78	5.48	0.47	7.31	4.86	0.42	5.95
	12	6.31	0.45	6.86	5.68	0.41	5.73	5.04	0.36	4.68	4.40	0.32	3.71
	14	5.84	0.36	4.64	5.19	0.32	3.80	4.52	0.28	3.00	3.83	0.24	2.21
	16	5.32	0.29	3.19	4.62	0.25	2.47	3.95	0.21	1.72	3.31	0.18	1.08
50	8	8.60	0.93	22.86	7.98	0.86	20.00	7.37	0.79	17.42	6.77	0.73	15.02
	10	8.25	0.71	14.48	7.63	0.66	12.66	7.02	0.61	10.95	6.41	0.55	9.36
	12	7.87	0.57	9.75	7.25	0.52	8.46	6.62	0.48	7.26	6.00	0.43	6.13
	14	7.46	0.46	6.87	6.83	0.42	5.90	6.19	0.38	5.00	5.55	0.34	4.15
	16	7.02	0.38	4.95	6.37	0.34	4.19	5.71	0.31	3.50	5.04	0.27	2.83
55	8	10.10	1.09	29.52	9.47	1.02	26.43	8.86	0.95	23.52	8.26	0.89	20.89
	10	9.76	0.84	18.93	9.14	0.79	16.89	8.52	0.74	14.96	7.91	0.68	13.17
	12	9.41	0.68	12.99	8.78	0.63	11.54	8.17	0.59	10.17	7.55	0.54	8.88
	14	9.03	0.56	9.35	8.41	0.52	8.26	7.78	0.48	7.23	7.16	0.44	6.26
	16	8.63	0.47	6.90	8.00	0.43	6.05	7.36	0.40	5.24	6.72	0.36	4.48
60	8	11.58	1.25	37.02	10.96	1.18	33.68	10.34	1.12	30.34	9.73	1.05	27.21
	10	11.27	0.97	23.96	10.64	0.92	21.69	10.03	0.87	19.54	9.41	0.81	17.50
	12	10.93	0.79	16.58	10.31	0.74	14.97	9.69	0.70	13.44	9.07	0.65	11.99
	14	10.57	0.65	11.99	9.94	0.61	10.78	9.32	0.57	9.64	8.70	0.54	8.56
	16	10.21	0.55	9.01	9.57	0.52	8.06	8.94	0.48	7.17	8.32	0.45	6.33

#### Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

Cooling Capacity Table

MK06A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	4.74	3.61	1.36	55.66	4.72	4.12	1.35	55.19	4.83	4.65	1.38	57.49	5.18	5.18	1.50	65.90	5.69	5.69	1.64	77.51	
		17	6.29	3.63	1.82	92.59	6.26	4.15	1.81	91.72	6.22	4.66	1.80	90.79	6.18	5.16	1.77	88.12	6.17	5.67	1.79	89.45	
		19	-	-	-	-	7.90	4.16	2.29	137.72	7.85	4.67	2.26	135.28	7.81	5.18	2.25	133.97	7.77	5.68	2.24	132.68	
		20	-	-	-	-	8.77	4.17	2.53	164.29	8.72	4.68	2.52	162.73	8.67	5.19	2.50	161.13	8.63	5.69	2.49	159.59	
	4	15	4.18	3.35	0.90	27.17	4.27	3.89	0.92	28.17	4.52	4.44	0.97	31.08	4.97	4.97	1.07	36.58	5.47	5.47	1.18	43.28	
		17	5.77	3.39	1.24	47.38	5.74	3.91	1.23	46.91	5.71	4.42	1.23	46.44	5.69	4.93	1.22	46.17	5.78	5.45	1.24	47.58	
		19	-	-	-	-	7.42	3.94	1.60	73.93	7.37	4.45	1.59	73.20	7.32	4.95	1.57	71.63	7.28	5.46	1.57	70.95	
		20	-	-	-	-	8.29	3.95	1.79	89.95	8.25	4.46	1.78	89.09	8.20	4.97	1.77	88.23	8.16	5.47	1.76	87.38	
	5	15	3.62	3.08	0.62	14.47	3.88	3.66	0.67	16.37	4.24	4.22	0.73	19.11	4.74	4.74	0.81	22.94	5.26	5.26	0.90	27.38	
		17	5.19	3.12	0.89	26.74	5.16	3.64	0.89	26.46	5.14	4.16	0.88	26.25	5.23	4.69	0.90	27.07	5.45	5.24	0.94	29.29	
		19	-	-	-	-	6.87	3.69	1.18	43.35	6.83	4.20	1.17	42.91	6.79	4.71	1.17	42.50	6.75	5.22	1.16	42.09	
		20	-	-	-	-	7.76	3.71	1.33	53.57	7.72	4.22	1.33	53.06	7.68	4.73	1.32	52.56	7.64	5.24	1.31	52.06	
6	15	3.11	2.80	0.45	7.78	3.49	3.40	0.50	9.93	3.97	3.97	0.57	12.49	4.51	4.51	0.65	15.48	5.03	5.03	0.72	18.52		
	17	4.55	2.84	0.65	15.64	4.52	3.36	0.65	15.46	4.60	3.90	0.66	15.98	4.81	4.46	0.69	17.14	5.13	5.02	0.73	19.12		
	19	-	-	-	-	6.28	3.43	0.90	26.99	6.24	3.94	0.89	26.72	6.20	4.45	0.89	26.45	6.18	4.96	0.88	26.27		
	20	-	-	-	-	7.20	3.46	1.03	34.41	7.16	3.97	1.03	34.06	7.12	4.49	1.02	33.74	7.08	4.99	1.02	33.42		
7	3	15	3.60	3.08	1.04	34.55	3.76	3.62	1.09	37.34	4.15	4.15	1.19	43.85	4.67	4.67	1.34	53.69	5.17	5.17	1.49	64.35	
		17	5.13	3.10	1.48	63.39	5.11	3.62	1.48	63.21	5.08	4.13	1.47	62.52	5.09	4.65	1.47	62.84	5.27	5.18	1.52	66.70	
		19	-	-	-	-	6.76	3.63	1.95	102.80	6.73	4.15	1.95	102.36	6.69	4.66	1.95	102.29	6.66	5.17	1.93	101.30	
		20	-	-	-	-	7.64	3.65	2.22	128.61	7.59	4.16	2.20	126.26	7.56	4.67	2.20	126.30	7.51	5.18	2.17	124.18	
	4	15	3.13	2.83	0.68	16.47	3.45	3.40	0.74	19.31	3.94	3.94	0.85	24.24	4.46	4.46	0.96	30.32	4.97	4.97	1.07	36.15	
		17	4.58	2.85	0.99	31.66	4.55	3.37	0.98	31.31	4.56	3.89	0.99	31.41	4.71	4.43	1.02	33.25	5.00	4.97	1.08	36.57	
		19	-	-	-	-	6.24	3.41	1.35	54.11	6.20	3.92	1.34	53.57	6.17	4.43	1.34	53.03	6.13	4.94	1.33	52.46	
		20	-	-	-	-	7.11	3.41	1.53	67.39	7.07	3.93	1.53	66.74	7.03	4.44	1.52	66.06	6.99	4.95	1.51	65.41	
	5	15	2.69	2.57	0.46	8.53	3.16	3.16	0.54	11.37	3.70	3.70	0.64	14.89	4.23	4.23	0.73	18.66	4.75	4.75	0.82	22.74	
		17	3.91	2.57	0.67	16.31	3.91	3.10	0.67	16.33	4.07	3.65	0.70	17.45	4.36	4.21	0.75	19.61	4.76	4.76	0.82	22.82	
		19	-	-	-	-	5.65	3.16	0.98	30.81	5.62	3.67	0.97	30.49	5.58	4.18	0.96	30.15	5.59	4.70	0.97	30.26	
		20	-	-	-	-	6.54	3.17	1.13	39.38	6.51	3.69	1.12	38.98	6.47	4.20	1.11	38.58	6.43	4.71	1.11	38.20	
6	15	2.40	2.36	0.35	4.17	2.89	2.89	0.41	6.68	3.45	3.45	0.49	9.60	3.99	3.99	0.57	12.34	4.52	4.52	0.65	15.26		
	17	3.09	2.23	0.44	7.79	3.31	2.81	0.47	8.91	3.64	3.41	0.52	10.54	4.04	3.99	0.58	12.60	4.53	4.53	0.65	15.29		
	19	-	-	-	-	4.97	2.88	0.71	17.93	4.94	3.39	0.71	17.72	4.95	3.92	0.71	17.80	5.10	4.46	0.73	18.71		
	20	-	-	-	-	5.92	2.92	0.85	24.27	5.89	3.43	0.85	24.02	5.85	3.95	0.84	23.77	5.82	4.46	0.84	23.55		



## 2-Pipe Duct MK-CBS Series



(Continued)

MK06A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	2.63	2.57	0.76	19.66	3.12	3.12	0.90	26.67	3.64	3.64	1.05	34.35	4.16	4.16	1.20	43.85	4.66	4.66	1.34	52.85	
		17	3.88	2.55	1.12	38.46	3.86	3.07	1.11	37.96	3.94	3.61	1.13	39.38	4.20	4.16	1.22	44.61	4.67	4.67	1.34	52.99	
		19	-	-	-	-	5.55	3.11	1.61	72.53	5.51	3.62	1.60	71.74	5.48	4.14	1.59	71.01	5.43	4.64	1.57	69.11	
		20	-	-	-	-	6.43	3.12	1.87	94.00	6.39	3.64	1.86	93.03	6.35	4.15	1.85	92.07	6.32	4.66	1.84	91.12	
	4	15	2.33	2.33	0.50	9.79	2.89	2.89	0.62	14.10	3.42	3.42	0.74	18.85	3.95	3.95	0.85	24.20	4.46	4.46	0.96	29.57	
		17	3.22	2.28	0.69	16.94	3.31	2.83	0.71	17.80	3.57	3.40	0.77	20.23	3.96	3.95	0.86	24.30	4.46	4.46	0.96	29.65	
		19	-	-	-	-	4.95	2.86	1.07	35.36	4.92	3.38	1.06	34.97	4.89	3.89	1.05	34.60	4.96	4.42	1.07	35.55	
		20	-	-	-	-	5.85	2.88	1.26	47.23	5.81	3.40	1.25	46.74	5.79	3.92	1.25	46.79	5.75	4.43	1.25	46.34	
	5	15	2.07	2.07	0.36	4.67	2.62	2.62	0.45	8.11	3.18	3.18	0.55	11.29	3.72	3.72	0.64	14.79	4.24	4.24	0.73	18.45	
		17	2.49	1.98	0.43	7.33	2.83	2.58	0.49	9.23	3.23	3.17	0.56	11.60	3.72	3.72	0.64	14.82	4.25	4.25	0.73	18.50	
		19	-	-	-	-	4.27	2.59	0.74	18.62	4.24	3.11	0.73	18.40	4.34	3.65	0.75	19.11	4.55	4.21	0.78	20.76	
		20	-	-	-	-	5.21	2.62	0.90	26.18	5.17	3.14	0.89	25.89	5.14	3.66	0.89	25.59	5.15	4.18	0.89	25.68	
	6	15	1.88	1.88	0.27	2.23	2.38	2.38	0.34	4.19	2.92	2.92	0.42	6.94	3.47	3.47	0.50	9.59	4.01	4.01	0.58	12.25	
		17	2.07	1.77	0.30	2.88	2.45	2.35	0.35	4.53	2.93	2.92	0.42	6.98	3.48	3.48	0.50	9.61	4.02	4.02	0.58	12.28	
		19	-	-	-	-	3.44	2.27	0.49	9.39	3.57	2.84	0.51	10.03	3.84	3.41	0.55	11.35	4.18	3.99	0.60	13.12	
		20	-	-	-	-	4.47	2.34	0.64	14.67	4.44	2.86	0.64	14.48	4.46	3.39	0.64	14.60	4.62	3.94	0.66	15.52	
	11	3	15	2.05	2.05	0.58	12.47	2.59	2.59	0.74	18.64	3.12	3.12	0.89	25.66	3.64	3.64	1.04	33.47	4.15	4.15	1.20	42.67
			17	2.52	2.00	0.72	17.72	2.73	2.57	0.78	20.45	3.12	3.12	0.89	25.71	3.64	3.64	1.04	33.55	4.16	4.16	1.20	42.78
			19	-	-	-	-	4.21	2.56	1.20	43.02	4.18	3.09	1.20	42.85	4.19	3.61	1.20	42.84	4.35	4.14	1.24	45.57
			20	-	-	-	-	5.10	2.58	1.46	60.18	5.07	3.10	1.45	59.49	5.03	3.61	1.44	58.83	5.00	4.12	1.43	58.16
4		15	1.78	1.78	0.38	5.67	2.35	2.35	0.50	9.65	2.90	2.90	0.62	13.78	3.43	3.43	0.73	18.38	3.95	3.95	0.85	23.44	
		17	1.95	1.74	0.42	6.94	2.39	2.34	0.51	9.91	2.90	2.90	0.62	13.80	3.43	3.43	0.74	18.42	3.95	3.95	0.85	23.49	
		19	-	-	-	-	3.52	2.30	0.75	19.20	3.54	2.84	0.76	19.44	3.73	3.39	0.80	21.26	4.04	3.94	0.86	24.33	
		20	-	-	-	-	4.46	2.33	0.96	28.91	4.43	2.85	0.95	28.56	4.40	3.37	0.94	28.23	4.49	3.91	0.96	29.26	
5		15	1.58	1.58	0.27	2.33	2.09	2.09	0.36	4.95	2.65	2.65	0.46	8.16	3.20	3.20	0.55	11.24	3.73	3.73	0.64	14.48	
		17	1.63	1.54	0.28	2.54	2.09	2.09	0.36	4.96	2.65	2.65	0.46	8.18	3.21	3.21	0.55	11.26	3.74	3.74	0.64	14.51	
		19	-	-	-	-	2.74	2.01	0.47	8.59	3.00	2.59	0.52	10.05	3.35	3.17	0.58	12.13	3.76	3.74	0.65	14.68	
		20	-	-	-	-	3.69	2.05	0.63	14.21	3.67	2.57	0.63	14.03	3.81	3.13	0.66	15.09	4.05	3.69	0.70	16.79	
6		15	1.36	1.36	0.19	1.30	1.89	1.89	0.27	2.33	2.40	2.40	0.34	4.43	2.94	2.94	0.42	7.02	3.49	3.49	0.50	9.47	
		17	1.37	1.35	0.20	1.31	1.89	1.89	0.27	2.34	2.40	2.40	0.34	4.44	2.94	2.94	0.42	7.04	3.50	3.50	0.50	9.50	
		19	-	-	-	-	2.15	1.76	0.31	3.34	2.52	2.34	0.36	5.02	2.99	2.93	0.43	7.24	3.50	3.50	0.50	9.52	
		20	-	-	-	-	2.70	1.70	0.39	5.90	2.92	2.28	0.42	6.94	3.27	2.88	0.47	8.44	3.65	3.47	0.52	10.21	

(Continued)

MK06A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	1.50	1.50	0.43	7.32	2.06	2.06	0.59	12.55	2.60	2.60	0.75	18.67	3.12	3.12	0.90	25.65	3.64	3.64	1.04	33.00
		17	1.51	1.50	0.43	7.42	2.06	2.06	0.59	12.58	2.60	2.60	0.75	18.72	3.13	3.13	0.90	25.71	3.64	3.64	1.04	33.08
		19	-	-	-	-	2.73	2.01	0.79	20.37	2.88	2.56	0.83	22.28	3.18	3.12	0.91	26.38	3.65	3.65	1.04	33.16
		20	-	-	-	-	3.65	2.03	1.04	33.14	3.62	2.55	1.03	32.64	3.65	3.08	1.04	33.14	3.83	3.63	1.10	36.18
	4	15	1.27	1.27	0.27	2.42	1.79	1.79	0.38	5.87	2.36	2.36	0.51	9.59	2.90	2.90	0.62	13.63	3.43	3.43	0.74	18.35
		17	1.27	1.26	0.27	2.41	1.80	1.80	0.38	5.89	2.36	2.36	0.51	9.61	2.91	2.91	0.62	13.66	3.44	3.44	0.74	18.39
		19	-	-	-	-	2.07	1.74	0.44	7.69	2.46	2.34	0.53	10.31	2.91	2.91	0.62	13.72	3.44	3.44	0.74	18.44
		20	-	-	-	-	2.86	1.75	0.61	13.24	2.93	2.30	0.63	13.79	3.18	2.87	0.69	16.08	3.52	3.43	0.76	19.13
	5	15	1.04	1.04	0.18	1.15	1.58	1.58	0.27	2.38	2.10	2.10	0.36	5.08	2.66	2.66	0.46	8.04	3.21	3.21	0.55	11.03
		17	1.04	1.04	0.18	1.15	1.58	1.58	0.27	2.39	2.10	2.10	0.36	5.09	2.67	2.67	0.46	8.06	3.21	3.21	0.55	11.06
		19	-	-	-	-	1.66	1.52	0.28	2.75	2.12	2.10	0.36	5.19	2.67	2.67	0.46	8.07	3.22	3.22	0.55	11.09
		20	-	-	-	-	1.97	1.43	0.34	4.36	2.34	2.04	0.40	6.42	2.78	2.64	0.48	8.62	3.23	3.22	0.55	11.18
6	15	0.78	0.78	0.11	0.70	1.37	1.37	0.20	1.25	1.89	1.89	0.27	2.40	2.41	2.41	0.34	4.57	2.96	2.96	0.42	7.06	
	17	0.78	0.78	0.11	0.70	1.37	1.37	0.20	1.25	1.89	1.89	0.27	2.41	2.41	2.41	0.34	4.59	2.97	2.97	0.42	7.07	
	19	-	-	-	-	1.39	1.35	0.20	1.27	1.89	1.89	0.27	2.42	2.41	2.41	0.35	4.60	2.97	2.97	0.43	7.09	
	20	-	-	-	-	1.56	1.26	0.22	1.51	1.98	1.84	0.28	2.72	2.43	2.40	0.35	4.71	2.97	2.97	0.43	7.09	
15	3	15	0.95	0.95	0.27	2.44	1.50	1.50	0.43	7.17	2.06	2.06	0.59	12.23	2.60	2.60	0.75	18.42	3.12	3.12	0.89	24.91
		17	0.95	0.95	0.27	2.45	1.51	1.51	0.43	7.18	2.06	2.06	0.59	12.26	2.60	2.60	0.75	18.47	3.12	3.12	0.89	24.97
		19	-	-	-	-	1.54	1.50	0.44	7.50	2.06	2.05	0.59	12.25	2.60	2.60	0.75	18.52	3.13	3.13	0.89	25.04
		20	-	-	-	-	1.99	1.45	0.57	11.55	2.25	2.03	0.64	14.23	2.63	2.60	0.76	18.84	3.13	3.13	0.89	25.07
	4	15	0.72	0.72	0.16	0.96	1.27	1.27	0.27	2.47	1.81	1.81	0.39	5.99	2.38	2.38	0.51	9.63	2.91	2.91	0.63	13.64
		17	0.72	0.72	0.16	0.96	1.27	1.27	0.27	2.48	1.81	1.81	0.39	6.01	2.38	2.38	0.51	9.66	2.92	2.92	0.63	13.67
		19	-	-	-	-	1.27	1.26	0.27	2.48	1.81	1.81	0.39	6.02	2.38	2.38	0.51	9.68	2.92	2.92	0.63	13.71
		20	-	-	-	-	1.39	1.20	0.30	3.18	1.86	1.80	0.40	6.28	2.38	2.38	0.51	9.68	2.92	2.92	0.63	13.73
	5	15	0.44	0.44	0.08	0.46	1.06	1.06	0.18	1.11	1.58	1.58	0.27	2.54	2.12	2.12	0.37	5.32	2.68	2.68	0.46	8.08
		17	0.44	0.44	0.08	0.46	1.06	1.06	0.18	1.12	1.59	1.59	0.27	2.55	2.12	2.12	0.37	5.33	2.69	2.69	0.46	8.10
		19	-	-	-	-	1.06	1.06	0.18	1.12	1.59	1.59	0.27	2.55	2.13	2.13	0.37	5.35	2.69	2.69	0.46	8.12
		20	-	-	-	-	1.09	1.03	0.19	1.15	1.59	1.59	0.27	2.57	2.13	2.13	0.37	5.36	2.69	2.69	0.46	8.13
6	15	-	-	-	-	0.79	0.79	0.11	0.68	1.38	1.38	0.20	1.22	1.90	1.90	0.27	2.55	2.43	2.43	0.35	4.80	
	17	-	-	-	-	0.79	0.79	0.11	0.68	1.38	1.38	0.20	1.22	1.90	1.90	0.27	2.56	2.43	2.43	0.35	4.81	
	19	-	-	-	-	0.80	0.80	0.11	0.69	1.38	1.38	0.20	1.23	1.90	1.90	0.27	2.56	2.43	2.43	0.35	4.83	
	20	-	-	-	-	0.80	0.79	0.11	0.69	1.38	1.38	0.20	1.23	1.90	1.90	0.27	2.57	2.43	2.43	0.35	4.84	

Abbreviations:

EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK06A3UCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	5.58	0.60	11.31	4.96	0.54	9.26	4.34	0.47	7.33	3.72	0.40	5.63
	10	5.14	0.44	6.73	4.51	0.39	5.38	3.86	0.33	4.14	3.20	0.28	3.01
	12	4.65	0.34	4.20	3.98	0.29	3.23	3.30	0.24	2.21	2.67	0.19	1.26
	14	4.07	0.25	2.46	3.42	0.21	1.59	2.80	0.17	0.94	2.12	0.13	0.59
	16	3.56	0.19	1.22	2.92	0.16	0.78	2.20	0.12	0.56	1.39	0.07	0.36
45	8	7.09	0.76	16.66	6.49	0.70	14.33	5.87	0.63	12.01	5.26	0.57	9.95
	10	6.71	0.58	10.34	6.09	0.53	8.75	5.47	0.47	7.28	4.85	0.42	5.92
	12	6.29	0.45	6.83	5.66	0.41	5.70	5.02	0.36	4.65	4.37	0.31	3.68
	14	5.81	0.36	4.61	5.16	0.32	3.76	4.48	0.28	2.97	3.79	0.23	2.16
	16	5.28	0.28	3.15	4.58	0.25	2.42	3.91	0.21	1.68	3.28	0.18	1.05
50	8	8.61	0.93	22.89	7.99	0.86	20.02	7.38	0.80	17.43	6.77	0.73	15.02
	10	8.25	0.71	14.48	7.63	0.66	12.65	7.01	0.61	10.94	6.40	0.55	9.34
	12	7.86	0.56	9.73	7.23	0.52	8.44	6.61	0.48	7.23	5.98	0.43	6.10
	14	7.44	0.46	6.84	6.81	0.42	5.87	6.17	0.38	4.96	5.53	0.34	4.12
	16	6.99	0.38	4.91	6.33	0.34	4.16	5.68	0.31	3.47	5.01	0.27	2.80
55	8	10.10	1.09	29.59	9.49	1.02	26.50	8.87	0.96	23.57	8.27	0.89	20.93
	10	9.76	0.84	18.95	9.14	0.79	16.90	8.53	0.74	14.97	7.91	0.68	13.17
	12	9.40	0.68	12.98	8.78	0.63	11.52	8.16	0.59	10.15	7.54	0.54	8.86
	14	9.02	0.56	9.32	8.39	0.52	8.23	7.76	0.48	7.20	7.14	0.44	6.23
	16	8.61	0.46	6.87	7.97	0.43	6.02	7.33	0.40	5.21	6.69	0.36	4.45
60	8	11.60	1.25	37.14	10.98	1.19	33.79	10.36	1.12	30.44	9.75	1.05	27.28
	10	11.28	0.97	24.01	10.65	0.92	21.73	10.03	0.87	19.57	9.42	0.81	17.53
	12	10.93	0.79	16.60	10.31	0.74	14.98	9.69	0.70	13.44	9.07	0.65	11.99
	14	10.57	0.65	11.98	9.94	0.61	10.77	9.31	0.57	9.62	8.69	0.54	8.54
	16	10.19	0.55	8.98	9.56	0.52	8.04	8.93	0.48	7.15	8.30	0.45	6.30

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

Cooling Capacity Table

MK07A3SCBSLXG1MXE																							
EWT	ΔT	Indoor temperature (D.B.)																					
		21				23				25				27				29					
		TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD		
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	5.57	4.22	1.59	38.07	5.54	4.82	1.59	37.78	5.67	5.44	1.62	39.29	6.05	6.05	1.73	44.01	6.63	6.63	1.90	51.64	
		17	7.39	4.26	2.13	63.00	7.34	4.86	2.12	62.33	7.28	5.44	2.09	60.70	7.24	6.03	2.07	60.05	7.23	6.61	2.07	59.91	
		19	-	-	-	-	9.26	4.88	2.68	93.71	9.21	5.47	2.66	92.73	9.15	6.06	2.65	91.80	9.10	6.64	2.63	90.84	
		20	-	-	-	-	10.28	4.89	2.98	112.64	10.22	5.49	2.96	111.49	10.15	6.07	2.93	109.65	10.10	6.65	2.93	109.22	
	4	15	4.92	3.92	1.06	18.92	5.03	4.55	1.08	19.61	5.31	5.20	1.14	21.53	5.81	5.81	1.25	24.90	6.40	6.40	1.37	29.40	
		17	6.78	3.97	1.45	32.41	6.73	4.57	1.44	32.07	6.69	5.17	1.44	31.72	6.67	5.76	1.43	31.58	6.79	6.37	1.46	32.52	
		19	-	-	-	-	8.69	4.61	1.87	49.86	8.64	5.21	1.85	49.35	8.59	5.80	1.84	48.84	8.54	6.38	1.83	48.34	
		20	-	-	-	-	9.73	4.63	2.10	61.22	9.66	5.23	2.08	60.24	9.61	5.82	2.08	59.92	9.56	6.40	2.06	59.36	
	5	15	4.23	3.59	0.73	9.87	4.53	4.26	0.78	11.10	4.96	4.93	0.85	12.96	5.55	5.55	0.96	15.82	6.15	6.15	1.06	18.84	
		17	6.11	3.67	1.05	18.56	6.07	4.27	1.05	18.35	6.04	4.87	1.04	18.24	6.15	5.49	1.06	18.80	6.39	6.12	1.10	20.08	
		19	-	-	-	-	8.08	4.33	1.39	29.99	8.03	4.93	1.38	29.69	7.98	5.52	1.38	29.38	7.93	6.10	1.37	29.07	
		20	-	-	-	-	9.12	4.36	1.57	36.99	9.07	4.96	1.56	36.62	9.02	5.55	1.55	36.25	8.96	6.13	1.55	35.88	
	6	15	3.72	3.31	0.53	4.80	4.11	3.98	0.59	6.24	4.64	4.64	0.66	8.27	5.27	5.27	0.75	10.53	5.88	5.88	0.84	12.74	
		17	5.28	3.30	0.76	10.55	5.25	3.91	0.75	10.45	5.38	4.55	0.77	10.89	5.65	5.21	0.81	11.86	6.01	5.86	0.86	13.19	
		19	-	-	-	-	7.36	4.02	1.05	18.50	7.32	4.61	1.05	18.31	7.27	5.20	1.04	18.11	7.25	5.80	1.04	18.03	
		20	-	-	-	-	8.44	4.05	1.21	23.38	8.39	4.65	1.20	23.14	8.33	5.24	1.19	22.89	8.29	5.83	1.19	22.66	
7	3	15	4.22	3.60	1.21	23.38	4.41	4.24	1.27	25.23	4.86	4.86	1.41	30.24	5.46	5.46	1.58	36.93	6.04	6.04	1.74	43.47	
		17	6.03	3.63	1.73	43.30	5.99	4.23	1.72	42.81	5.95	4.82	1.71	42.30	5.97	5.42	1.72	42.60	6.16	6.04	1.77	44.98	
		19	-	-	-	-	7.94	4.27	2.30	70.89	7.89	4.86	2.29	70.13	7.84	5.45	2.26	68.86	7.79	6.03	2.25	68.12	
		20	-	-	-	-	8.96	4.28	2.60	87.67	8.91	4.88	2.59	86.74	8.85	5.47	2.57	85.82	8.80	6.05	2.55	84.91	
	4	15	3.66	3.31	0.79	11.24	4.05	3.99	0.88	13.41	4.61	4.61	0.99	16.57	5.21	5.21	1.12	20.46	5.81	5.81	1.25	24.61	
		17	5.36	3.34	1.15	21.43	5.33	3.94	1.15	21.17	5.35	4.55	1.15	21.33	5.52	5.18	1.19	22.55	5.86	5.81	1.26	24.96	
		19	-	-	-	-	7.32	3.99	1.57	36.58	7.27	4.59	1.56	36.19	7.22	5.18	1.55	35.80	7.18	5.76	1.55	35.54	
		20	-	-	-	-	8.36	4.02	1.81	46.58	8.31	4.61	1.80	46.09	8.26	5.21	1.79	45.62	8.21	5.79	1.78	45.12	
	5	15	3.18	3.02	0.55	5.31	3.70	3.69	0.64	7.60	4.33	4.33	0.75	10.17	4.95	4.95	0.85	12.76	5.56	5.56	0.96	15.59	
		17	4.55	2.99	0.78	11.04	4.58	3.61	0.79	11.13	4.78	4.27	0.82	12.00	5.11	4.93	0.88	13.46	5.57	5.57	0.96	15.66	
		19	-	-	-	-	6.62	3.69	1.14	20.91	6.58	4.29	1.13	20.68	6.54	4.89	1.12	20.43	6.56	5.49	1.13	20.58	
		20	-	-	-	-	7.71	3.73	1.33	27.31	7.66	4.33	1.32	27.02	7.61	4.93	1.32	26.73	7.55	5.51	1.30	26.23	
	6	15	2.91	2.83	0.42	2.60	3.44	3.44	0.49	4.08	4.04	4.04	0.58	6.14	4.66	4.66	0.67	8.38	5.29	5.29	0.76	10.42	
		17	3.67	2.63	0.53	4.85	3.90	3.29	0.56	5.65	4.26	3.97	0.61	6.97	4.73	4.65	0.68	8.58	5.30	5.29	0.76	10.45	
		19	-	-	-	-	5.81	3.36	0.83	12.19	5.76	3.96	0.83	12.03	5.80	4.57	0.83	12.16	5.98	5.21	0.86	12.80	
		20	-	-	-	-	6.94	3.41	0.99	16.51	6.89	4.01	0.99	16.32	6.84	4.61	0.98	16.13	6.82	5.20	0.98	16.01	

# 2-Pipe Duct MK-CBS Series



(Continued)

MK07A3SCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	
9	3	15	3.09	3.01	0.89	13.53	3.65	3.65	1.05	17.96	4.26	4.26	1.22	23.41	4.86	4.86	1.41	29.80	5.45	5.45	1.57	35.82	
		17	4.58	3.00	1.33	26.89	4.54	3.60	1.30	26.08	4.64	4.23	1.34	27.49	4.92	4.86	1.42	30.42	5.46	5.46	1.57	35.92	
		19	-	-	-	-	6.52	3.64	1.89	49.46	6.47	4.24	1.88	48.90	6.43	4.84	1.86	48.35	6.40	5.42	1.85	47.89	
		20	-	-	-	-	7.53	3.65	2.17	62.94	7.49	4.26	2.17	62.76	7.45	4.85	2.16	62.53	7.40	5.44	2.15	61.84	
	4	15	2.73	2.73	0.59	6.45	3.37	3.37	0.73	9.60	4.00	4.00	0.86	12.83	4.61	4.61	0.99	16.38	5.22	5.22	1.13	20.26	
		17	3.77	2.67	0.81	11.55	3.89	3.31	0.84	12.20	4.19	3.98	0.91	13.95	4.63	4.62	1.00	16.46	5.22	5.22	1.13	20.32	
		19	-	-	-	-	5.83	3.36	1.26	24.60	5.79	3.96	1.25	24.31	5.76	4.56	1.25	24.08	5.85	5.17	1.27	24.73	
		20	-	-	-	-	6.87	3.38	1.48	32.38	6.83	3.98	1.47	32.02	6.78	4.58	1.46	31.66	6.74	5.17	1.45	31.29	
	5	15	2.48	2.48	0.43	2.83	3.08	3.08	0.53	5.06	3.72	3.72	0.64	7.69	4.35	4.35	0.75	10.07	4.96	4.96	0.85	12.61	
		17	2.96	2.33	0.51	4.57	3.31	3.01	0.57	6.04	3.78	3.70	0.65	7.92	4.35	4.35	0.75	10.09	4.97	4.97	0.86	12.64	
		19	-	-	-	-	5.01	3.03	0.86	12.77	4.98	3.64	0.86	12.63	5.10	4.27	0.88	13.17	5.35	4.92	0.92	14.38	
		20	-	-	-	-	6.12	3.08	1.05	17.98	6.08	3.68	1.05	17.77	6.03	4.28	1.04	17.55	6.06	4.88	1.04	17.68	
	6	15	2.26	2.26	0.32	1.55	2.86	2.86	0.41	2.56	3.44	3.44	0.49	4.23	4.06	4.06	0.58	6.34	4.69	4.69	0.67	8.37	
		17	2.54	2.12	0.36	1.90	2.96	2.80	0.42	2.82	3.46	3.44	0.50	4.27	4.06	4.06	0.58	6.36	4.70	4.70	0.67	8.39	
		19	-	-	-	-	3.98	2.64	0.57	6.08	4.16	3.30	0.60	6.70	4.49	3.98	0.64	7.75	4.90	4.66	0.70	9.00	
		20	-	-	-	-	5.22	2.73	0.75	10.00	5.17	3.33	0.74	9.85	5.22	3.95	0.75	10.01	5.42	4.60	0.78	10.68	
	11	3	15	2.40	2.40	0.68	8.55	3.03	3.03	0.87	12.76	3.65	3.65	1.04	17.52	4.26	4.26	1.22	22.81	4.85	4.85	1.39	28.58
			17	2.96	2.34	0.84	12.22	3.22	3.01	0.92	14.27	3.66	3.66	1.04	17.57	4.26	4.26	1.22	22.88	4.86	4.86	1.39	28.65
			19	-	-	-	-	4.95	3.01	1.41	29.52	4.91	3.61	1.40	29.13	4.93	4.22	1.41	29.32	5.11	4.84	1.46	31.19
			20	-	-	-	-	6.01	3.03	1.73	41.87	5.97	3.64	1.72	41.37	5.93	4.23	1.71	40.89	5.89	4.83	1.70	40.44
4		15	2.12	2.12	0.45	3.43	2.74	2.74	0.59	6.52	3.39	3.39	0.73	9.43	4.01	4.01	0.86	12.57	4.62	4.62	0.99	15.99	
		17	2.31	2.04	0.49	4.34	2.79	2.73	0.60	6.73	3.39	3.39	0.73	9.45	4.02	4.02	0.86	12.60	4.63	4.63	0.99	16.03	
		19	-	-	-	-	4.13	2.69	0.88	13.18	4.17	3.32	0.89	13.41	4.39	3.96	0.94	14.66	4.74	4.61	1.01	16.69	
		20	-	-	-	-	5.24	2.74	1.12	19.82	5.20	3.34	1.12	19.58	5.18	3.94	1.11	19.40	5.28	4.56	1.13	20.11	
5		15	1.90	1.90	0.33	1.54	2.49	2.49	0.43	2.99	3.10	3.10	0.53	5.28	3.74	3.74	0.64	7.69	4.37	4.37	0.75	9.99	
		17	1.98	1.85	0.34	1.67	2.50	2.49	0.43	3.01	3.11	3.11	0.53	5.30	3.75	3.75	0.65	7.71	4.38	4.38	0.75	10.02	
		19	-	-	-	-	3.18	2.33	0.55	5.62	3.51	3.02	0.60	6.85	3.93	3.71	0.68	8.33	4.41	4.37	0.76	10.15	
		20	-	-	-	-	4.34	2.40	0.75	9.85	4.31	3.01	0.74	9.75	4.48	3.66	0.77	10.40	4.76	4.31	0.82	11.56	
6		15	1.62	1.62	0.23	1.04	2.28	2.28	0.33	1.53	2.87	2.87	0.41	2.68	3.46	3.46	0.50	4.43	4.08	4.08	0.58	6.40	
		17	1.64	1.61	0.24	1.05	2.28	2.27	0.33	1.53	2.87	2.87	0.41	2.69	3.46	3.46	0.50	4.45	4.09	4.09	0.58	6.42	
		19	-	-	-	-	2.64	2.10	0.38	2.17	3.04	2.78	0.44	3.16	3.52	3.44	0.51	4.65	4.09	4.09	0.59	6.44	
		20	-	-	-	-	3.24	2.01	0.46	3.76	3.46	2.67	0.50	4.46	3.82	3.36	0.55	5.59	4.27	4.04	0.61	6.98	

(Continued)

MK07A3SCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
°C	°C	°C	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
			kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	1.76	1.76	0.50	4.67	2.41	2.41	0.69	8.61	3.04	3.04	0.87	12.59	3.66	3.66	1.05	17.51	4.26	4.26	1.22	22.74
		17	1.77	1.76	0.51	4.77	2.42	2.42	0.69	8.63	3.04	3.04	0.87	12.62	3.66	3.66	1.05	17.55	4.26	4.26	1.23	22.81
		19	-	-	-	-	3.20	2.35	0.91	13.72	3.39	3.00	0.97	15.39	3.73	3.66	1.07	18.14	4.27	4.27	1.23	22.86
		20	-	-	-	-	4.31	2.39	1.24	23.21	4.27	2.99	1.23	22.86	4.31	3.61	1.24	23.24	4.52	4.24	1.30	25.19
	4	15	1.53	1.53	0.33	1.55	2.13	2.13	0.46	3.66	2.76	2.76	0.59	6.55	3.40	3.40	0.73	9.33	4.02	4.02	0.86	12.40
		17	1.53	1.52	0.33	1.55	2.13	2.13	0.46	3.67	2.76	2.76	0.59	6.57	3.40	3.40	0.73	9.36	4.02	4.02	0.86	12.43
		19	-	-	-	-	2.42	2.03	0.52	5.04	2.89	2.74	0.62	7.08	3.41	3.41	0.73	9.41	4.03	4.03	0.86	12.47
		20	-	-	-	-	3.34	2.04	0.71	9.02	3.44	2.68	0.74	9.52	3.73	3.35	0.80	10.95	4.13	4.01	0.88	12.98
	5	15	1.25	1.25	0.21	0.91	1.90	1.90	0.33	1.52	2.49	2.49	0.43	3.07	3.11	3.11	0.53	5.36	3.75	3.75	0.64	7.55
		17	1.25	1.25	0.21	0.92	1.91	1.91	0.33	1.53	2.50	2.50	0.43	3.08	3.12	3.12	0.53	5.38	3.76	3.76	0.64	7.57
		19	-	-	-	-	2.03	1.83	0.35	1.77	2.52	2.48	0.43	3.17	3.12	3.12	0.54	5.39	3.76	3.76	0.65	7.59
		20	-	-	-	-	2.40	1.71	0.41	2.78	2.77	2.39	0.47	4.06	3.24	3.08	0.56	5.84	3.79	3.76	0.65	7.66
	6	15	0.94	0.94	0.13	0.56	1.64	1.64	0.23	0.99	2.28	2.28	0.33	1.53	2.86	2.86	0.41	2.76	3.47	3.47	0.50	4.55
		17	0.94	0.94	0.13	0.56	1.64	1.64	0.23	0.99	2.28	2.28	0.33	1.53	2.87	2.87	0.41	2.77	3.47	3.47	0.50	4.56
		19	-	-	-	-	1.67	1.61	0.24	1.01	2.29	2.28	0.33	1.54	2.87	2.87	0.41	2.78	3.48	3.48	0.50	4.58
		20	-	-	-	-	1.89	1.50	0.27	1.13	2.41	2.20	0.35	1.75	2.91	2.85	0.42	2.88	3.48	3.47	0.50	4.58
15	3	15	1.15	1.15	0.33	1.54	1.76	1.76	0.50	4.71	2.41	2.41	0.69	8.38	3.04	3.04	0.87	12.42	3.65	3.65	1.05	17.23
		17	1.15	1.15	0.33	1.54	1.76	1.76	0.50	4.72	2.42	2.42	0.69	8.40	3.04	3.04	0.87	12.45	3.66	3.66	1.05	17.28
		19	-	-	-	-	1.81	1.75	0.52	5.00	2.41	2.41	0.69	8.39	3.05	3.05	0.87	12.49	3.67	3.67	1.05	17.33
		20	-	-	-	-	2.34	1.70	0.67	7.95	2.65	2.38	0.76	9.83	3.09	3.04	0.88	12.75	3.67	3.67	1.05	17.35
	4	15	0.87	0.87	0.19	0.77	1.53	1.53	0.33	1.55	2.13	2.13	0.46	3.74	2.77	2.77	0.59	6.52	3.41	3.41	0.73	9.30
		17	0.87	0.87	0.19	0.77	1.53	1.53	0.33	1.55	2.13	2.13	0.46	3.75	2.78	2.78	0.60	6.53	3.41	3.41	0.74	9.34
		19	-	-	-	-	1.54	1.53	0.33	1.56	2.13	2.13	0.46	3.77	2.78	2.78	0.60	6.55	3.42	3.42	0.74	9.38
		20	-	-	-	-	1.70	1.43	0.36	2.04	2.18	2.11	0.47	3.99	2.78	2.78	0.60	6.55	3.42	3.42	0.74	9.40
	5	15	0.54	0.54	0.09	0.37	1.27	1.27	0.22	0.89	1.91	1.91	0.33	1.58	2.50	2.50	0.43	3.26	3.13	3.13	0.54	5.49
		17	0.54	0.54	0.09	0.37	1.27	1.27	0.22	0.89	1.92	1.92	0.33	1.59	2.51	2.51	0.43	3.27	3.14	3.14	0.54	5.51
		19	-	-	-	-	1.27	1.27	0.22	0.89	1.92	1.92	0.33	1.59	2.51	2.51	0.43	3.28	3.14	3.14	0.54	5.53
		20	-	-	-	-	1.32	1.23	0.23	0.92	1.93	1.91	0.33	1.61	2.51	2.51	0.43	3.29	3.15	3.15	0.54	5.54
	6	15	-	-	-	-	0.96	0.96	0.14	0.55	1.65	1.65	0.24	0.95	2.29	2.29	0.33	1.58	2.87	2.87	0.41	2.92
		17	-	-	-	-	0.96	0.96	0.14	0.55	1.66	1.66	0.24	0.95	2.29	2.29	0.33	1.59	2.88	2.88	0.41	2.93
		19	-	-	-	-	0.96	0.96	0.14	0.55	1.66	1.66	0.24	0.95	2.29	2.29	0.33	1.59	2.88	2.88	0.41	2.94
		20	-	-	-	-	0.96	0.96	0.14	0.55	1.66	1.65	0.24	0.95	2.30	2.30	0.33	1.59	2.88	2.88	0.41	2.94

Abbreviations:

EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK07A3SCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	6.58	0.71	7.78	5.85	0.63	6.38	5.13	0.55	5.09	4.40	0.47	3.92
	10	6.09	0.53	4.68	5.34	0.46	3.75	4.58	0.39	2.89	3.80	0.33	2.00
	12	5.51	0.40	2.93	4.72	0.34	2.16	3.98	0.29	1.40	3.27	0.24	0.82
	14	4.89	0.30	1.57	4.17	0.26	1.02	3.42	0.21	0.66	2.59	0.16	0.48
	16	4.36	0.24	0.82	3.57	0.19	0.59	2.70	0.15	0.45	1.71	0.09	0.29
45	8	8.35	0.90	11.45	7.64	0.82	9.80	6.92	0.75	8.28	6.21	0.67	6.87
	10	7.92	0.68	7.15	7.19	0.62	6.07	6.47	0.56	5.06	5.74	0.49	4.12
	12	7.45	0.54	4.75	6.70	0.48	3.97	5.95	0.43	3.24	5.18	0.37	2.57
	14	6.89	0.42	3.22	6.11	0.38	2.63	5.32	0.33	2.02	4.55	0.28	1.39
	16	6.27	0.34	2.14	5.49	0.30	1.58	4.75	0.26	1.07	4.01	0.22	0.70
50	8	10.11	1.09	15.57	9.39	1.01	13.69	8.67	0.94	11.94	7.96	0.86	10.30
	10	9.72	0.84	9.96	8.99	0.78	8.71	8.27	0.72	7.55	7.55	0.65	6.46
	12	9.28	0.67	6.74	8.55	0.61	5.85	7.82	0.56	5.02	7.08	0.51	4.24
	14	8.81	0.54	4.76	8.07	0.50	4.09	7.31	0.45	3.46	6.55	0.40	2.88
	16	8.29	0.45	3.45	7.52	0.41	2.92	6.74	0.36	2.43	5.94	0.32	1.93
55	8	11.85	1.28	20.24	11.13	1.20	18.13	10.41	1.13	16.14	9.70	1.05	14.27
	10	11.48	0.99	13.02	10.76	0.93	11.63	10.04	0.87	10.31	9.32	0.81	9.07
	12	11.09	0.80	8.94	10.35	0.74	7.94	9.63	0.69	7.01	8.90	0.64	6.12
	14	10.66	0.66	6.45	9.92	0.61	5.71	9.19	0.57	5.00	8.45	0.52	4.33
	16	10.19	0.55	4.77	9.44	0.51	4.18	8.69	0.47	3.63	7.94	0.43	3.11
60	8	13.59	1.46	25.12	12.86	1.39	22.80	12.14	1.31	20.61	11.42	1.23	18.53
	10	13.24	1.14	16.37	12.51	1.08	14.82	11.78	1.02	13.31	11.06	0.95	11.93
	12	12.87	0.93	11.37	12.13	0.87	10.27	11.41	0.82	9.23	10.68	0.77	8.24
	14	12.47	0.77	8.25	11.73	0.72	7.43	11.00	0.68	6.64	10.27	0.63	5.90
	16	12.05	0.65	6.22	11.30	0.61	5.57	10.56	0.57	4.96	9.82	0.53	4.38

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

## Cooling Capacity Table

MK07A3HCBSLXG1MXE/ MK07A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	
5	3	15	5.68	4.31	1.62	39.42	5.65	4.93	1.62	39.09	5.79	5.56	1.66	40.96	6.19	6.18	1.78	46.33	6.78	6.78	1.94	53.66	
		17	7.54	4.35	2.18	65.26	7.49	4.96	2.16	64.56	7.45	5.57	2.15	63.89	7.40	6.17	2.14	63.21	7.39	6.76	2.13	63.04	
		19	-	-	-	-	9.45	4.98	2.71	95.80	9.39	5.59	2.70	94.83	9.33	6.19	2.68	93.81	9.29	6.78	2.68	93.72	
		20	-	-	-	-	10.50	5.00	3.04	117.03	10.44	5.60	3.03	115.82	10.38	6.21	3.01	114.61	10.32	6.80	2.99	113.37	
	4	15	5.01	4.00	1.08	19.51	5.12	4.65	1.10	20.24	5.41	5.31	1.17	22.28	5.93	5.93	1.27	25.82	6.54	6.54	1.40	30.51	
		17	6.91	4.05	1.48	33.50	6.86	4.67	1.47	33.14	6.82	5.27	1.46	32.79	6.80	5.88	1.46	32.65	6.92	6.51	1.49	33.66	
		19	-	-	-	-	8.86	4.71	1.90	51.66	8.81	5.32	1.89	51.07	8.76	5.92	1.88	50.55	8.71	6.51	1.87	50.04	
		20	-	-	-	-	9.93	4.73	2.14	63.41	9.87	5.34	2.13	62.76	9.81	5.94	2.12	62.14	9.75	6.54	2.11	61.52	
	5	15	4.31	3.66	0.74	10.17	4.61	4.35	0.79	11.45	5.06	5.03	0.87	13.40	5.67	5.67	0.98	16.39	6.28	6.28	1.08	19.53	
		17	6.22	3.74	1.07	19.13	6.18	4.35	1.06	18.92	6.15	4.97	1.06	18.81	6.27	5.60	1.08	19.41	6.51	6.25	1.12	20.76	
		19	-	-	-	-	8.23	4.42	1.42	30.97	8.18	5.03	1.41	30.66	8.13	5.63	1.40	30.35	8.08	6.23	1.39	30.04	
		20	-	-	-	-	9.30	4.44	1.60	38.24	9.25	5.06	1.59	37.86	9.19	5.66	1.58	37.48	9.14	6.26	1.58	37.10	
	6	15	3.77	3.37	0.54	4.98	4.18	4.06	0.60	6.50	4.73	4.73	0.68	8.62	5.37	5.37	0.77	10.90	6.00	6.00	0.86	13.19	
		17	5.37	3.37	0.77	10.85	5.34	3.99	0.76	10.75	5.47	4.64	0.78	11.22	5.75	5.32	0.83	12.24	6.12	5.99	0.88	13.63	
		19	-	-	-	-	7.49	4.09	1.07	19.07	7.45	4.70	1.07	18.87	7.40	5.31	1.06	18.67	7.38	5.92	1.06	18.59	
		20	-	-	-	-	8.59	4.13	1.23	24.12	8.54	4.74	1.22	23.87	8.49	5.35	1.21	23.63	8.44	5.95	1.21	23.39	
	7	3	15	4.30	3.67	1.23	24.13	4.50	4.33	1.29	26.09	4.97	4.97	1.44	31.37	5.58	5.58	1.61	38.33	6.18	6.18	1.77	45.15
			17	6.15	3.70	1.77	44.78	6.11	4.32	1.76	44.29	6.07	4.93	1.74	43.77	6.09	5.54	1.75	44.10	6.29	6.17	1.81	46.66
			19	-	-	-	-	8.10	4.35	2.34	72.95	8.06	4.97	2.34	72.69	8.01	5.57	2.32	71.92	7.96	6.17	2.31	71.15
			20	-	-	-	-	9.14	4.36	2.63	89.58	9.08	4.98	2.62	88.62	9.03	5.58	2.60	87.66	8.98	6.18	2.60	87.67
4		15	3.73	3.38	0.81	11.67	4.13	4.07	0.89	13.86	4.71	4.71	1.01	17.16	5.32	5.32	1.15	21.20	5.93	5.93	1.28	25.53	
		17	5.46	3.40	1.17	22.11	5.42	4.02	1.17	21.84	5.45	4.64	1.17	22.01	5.63	5.29	1.21	23.32	5.98	5.94	1.29	25.86	
		19	-	-	-	-	7.46	4.07	1.61	37.81	7.41	4.68	1.60	37.41	7.37	5.29	1.59	37.01	7.32	5.89	1.58	36.60	
		20	-	-	-	-	8.53	4.09	1.85	48.19	8.48	4.71	1.84	47.69	8.43	5.32	1.82	47.19	8.38	5.92	1.81	46.70	
5		15	3.23	3.08	0.56	5.53	3.77	3.77	0.65	7.90	4.42	4.42	0.76	10.52	5.06	5.06	0.87	13.21	5.68	5.68	0.98	16.16	
		17	4.63	3.05	0.80	11.35	4.65	3.68	0.80	11.45	4.87	4.35	0.84	12.37	5.21	5.03	0.90	13.90	5.69	5.69	0.98	16.22	
		19	-	-	-	-	6.74	3.77	1.16	21.56	6.70	4.38	1.15	21.32	6.65	4.99	1.14	21.07	6.68	5.60	1.15	21.23	
		20	-	-	-	-	7.85	3.80	1.36	28.19	7.80	4.42	1.35	27.90	7.75	5.03	1.34	27.60	7.71	5.63	1.33	27.31	
6		15	2.95	2.87	0.42	2.69	3.50	3.49	0.50	4.27	4.11	4.11	0.59	6.42	4.76	4.76	0.68	8.69	5.40	5.40	0.77	10.79	
		17	3.71	2.67	0.53	5.00	3.95	3.35	0.57	5.85	4.33	4.05	0.62	7.23	4.82	4.75	0.69	8.88	5.40	5.40	0.77	10.81	
		19	-	-	-	-	5.91	3.42	0.85	12.54	5.86	4.03	0.84	12.38	5.90	4.66	0.85	12.52	6.10	5.32	0.88	13.32	
		20	-	-	-	-	7.06	3.48	1.01	17.01	7.01	4.09	1.01	16.82	6.97	4.70	1.00	16.63	6.94	5.31	1.00	16.52	



# 2-Pipe Duct MK-CBS Series



(Continued)

MK07A3HCBSLXG1MXE/ MK07A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	3.15	3.07	0.90	13.97	3.72	3.72	1.07	18.61	4.35	4.35	1.25	24.28	4.97	4.97	1.44	30.92	5.57	5.57	1.60	37.19	
		17	4.67	3.06	1.35	27.76	4.63	3.68	1.34	27.40	4.73	4.32	1.37	28.41	5.02	4.97	1.45	31.53	5.58	5.58	1.60	37.30	
		19	-	-	-	-	6.64	3.72	1.93	51.15	6.60	4.33	1.91	50.62	6.56	4.94	1.90	50.04	6.52	5.54	1.89	49.56	
		20	-	-	-	-	7.68	3.73	2.21	65.17	7.64	4.34	2.20	64.49	7.60	4.96	2.20	64.43	7.55	5.56	2.19	64.04	
	4	15	2.78	2.78	0.60	6.72	3.44	3.44	0.74	9.93	4.09	4.09	0.88	13.43	4.71	4.71	1.02	16.99	5.33	5.33	1.15	21.01	
		17	3.83	2.72	0.82	11.87	3.96	3.38	0.85	12.56	4.26	4.06	0.92	14.28	4.72	4.72	1.02	17.06	5.34	5.34	1.15	21.07	
		19	-	-	-	-	5.94	3.43	1.29	25.38	5.90	4.04	1.28	25.09	5.87	4.66	1.27	24.86	5.96	5.28	1.29	25.55	
		20	-	-	-	-	7.00	3.45	1.51	33.45	6.96	4.07	1.50	33.07	6.91	4.67	1.49	32.71	6.87	5.28	1.48	32.33	
	5	15	2.52	2.52	0.43	2.96	3.14	3.14	0.54	5.30	3.79	3.79	0.65	7.97	4.44	4.44	0.76	10.42	5.07	5.07	0.87	13.06	
		17	2.99	2.37	0.52	4.72	3.36	3.07	0.58	6.26	3.85	3.78	0.66	8.19	4.44	4.44	0.76	10.44	5.08	5.08	0.87	13.09	
		19	-	-	-	-	5.09	3.09	0.88	13.12	5.06	3.71	0.87	12.99	5.19	4.36	0.89	13.56	5.45	5.02	0.94	14.82	
		20	-	-	-	-	6.23	3.14	1.07	18.52	6.18	3.76	1.06	18.31	6.14	4.37	1.06	18.08	6.17	4.99	1.06	18.22	
	6	15	2.29	2.29	0.33	1.58	2.90	2.90	0.42	2.66	3.50	3.50	0.50	4.43	4.14	4.14	0.59	6.61	4.78	4.78	0.69	8.66	
		17	2.56	2.16	0.37	1.95	3.00	2.85	0.43	2.92	3.51	3.50	0.50	4.47	4.14	4.14	0.59	6.63	4.79	4.79	0.69	8.68	
		19	-	-	-	-	4.03	2.68	0.58	6.27	4.22	3.36	0.61	6.91	4.57	4.06	0.66	7.99	4.99	4.75	0.72	9.28	
		20	-	-	-	-	5.30	2.78	0.76	10.27	5.26	3.40	0.75	10.12	5.31	4.04	0.76	10.28	5.52	4.70	0.79	11.00	
	11	3	15	2.44	2.44	0.70	8.84	3.10	3.10	0.88	13.21	3.73	3.73	1.06	18.16	4.35	4.35	1.24	23.66	4.96	4.96	1.42	29.65
			17	3.01	2.39	0.86	12.57	3.28	3.07	0.94	14.67	3.73	3.73	1.07	18.20	4.36	4.36	1.24	23.72	4.97	4.97	1.42	29.73
			19	-	-	-	-	5.04	3.07	1.44	30.47	5.00	3.68	1.43	30.06	5.02	4.31	1.43	30.29	5.21	4.95	1.49	32.28
			20	-	-	-	-	6.12	3.09	1.75	42.85	6.08	3.71	1.75	42.77	6.04	4.32	1.74	42.28	6.01	4.93	1.73	41.83
4		15	2.15	2.15	0.46	3.58	2.80	2.80	0.60	6.77	3.46	3.46	0.74	9.76	4.10	4.10	0.88	13.02	4.72	4.72	1.01	16.57	
		17	2.34	2.08	0.50	4.49	2.84	2.79	0.61	6.97	3.46	3.46	0.74	9.78	4.10	4.10	0.88	13.05	4.72	4.72	1.01	16.61	
		19	-	-	-	-	4.20	2.74	0.90	13.55	4.24	3.38	0.91	13.81	4.47	4.05	0.96	15.11	4.83	4.71	1.04	17.26	
		20	-	-	-	-	5.33	2.79	1.14	20.43	5.30	3.41	1.13	20.17	5.27	4.03	1.13	19.99	5.38	4.66	1.15	20.76	
5		15	1.93	1.93	0.33	1.58	2.53	2.53	0.44	3.12	3.16	3.16	0.54	5.52	3.82	3.82	0.66	7.95	4.46	4.46	0.77	10.34	
		17	2.01	1.88	0.35	1.71	2.54	2.54	0.44	3.14	3.16	3.16	0.54	5.54	3.82	3.82	0.66	7.97	4.47	4.47	0.77	10.37	
		19	-	-	-	-	3.22	2.38	0.56	5.79	3.57	3.08	0.61	7.05	4.00	3.79	0.69	8.59	4.50	4.47	0.77	10.50	
		20	-	-	-	-	4.41	2.44	0.76	10.11	4.38	3.07	0.75	10.02	4.55	3.73	0.78	10.70	4.85	4.40	0.84	11.92	
6		15	1.65	1.65	0.24	1.05	2.31	2.31	0.33	1.58	2.91	2.91	0.42	2.80	3.52	3.52	0.51	4.64	4.16	4.16	0.60	6.65	
		17	1.66	1.63	0.24	1.06	2.31	2.31	0.33	1.58	2.91	2.91	0.42	2.81	3.53	3.53	0.51	4.66	4.17	4.17	0.60	6.67	
		19	-	-	-	-	2.67	2.14	0.38	2.22	3.08	2.82	0.44	3.27	3.58	3.51	0.51	4.84	4.17	4.17	0.60	6.68	
		20	-	-	-	-	3.26	2.04	0.47	3.85	3.50	2.72	0.50	4.60	3.88	3.42	0.55	5.78	4.35	4.13	0.62	7.20	

(Continued)

MK07A3HCBSLXG1MXE/ MK07A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
13	3	15	1.79	1.79	0.51	4.88	2.46	2.46	0.71	8.90	3.10	3.10	0.88	13.03	3.73	3.73	1.07	18.15	4.35	4.35	1.25	23.59	
		17	1.80	1.79	0.52	4.97	2.46	2.46	0.71	8.92	3.10	3.10	0.89	13.07	3.74	3.74	1.07	18.19	4.36	4.36	1.25	23.66	
		19	-	-	-	-	3.25	2.39	0.93	14.11	3.45	3.06	0.99	15.86	3.81	3.73	1.09	18.77	4.36	4.36	1.25	23.72	
		20	-	-	-	-	4.39	2.43	1.26	23.93	4.35	3.05	1.25	23.56	4.39	3.69	1.26	23.98	4.61	4.33	1.32	26.05	
	4	15	1.55	1.55	0.33	1.60	2.16	2.16	0.47	3.82	2.81	2.81	0.60	6.78	3.47	3.47	0.74	9.66	4.10	4.10	0.88	12.84	
		17	1.55	1.55	0.33	1.60	2.16	2.16	0.47	3.84	2.82	2.82	0.60	6.80	3.47	3.47	0.74	9.68	4.11	4.11	0.88	12.88	
		19	-	-	-	-	2.46	2.07	0.53	5.20	2.94	2.79	0.63	7.29	3.48	3.48	0.75	9.73	4.11	4.11	0.88	12.91	
		20	-	-	-	-	3.39	2.08	0.73	9.26	3.50	2.74	0.75	9.78	3.80	3.42	0.81	11.28	4.21	4.09	0.90	13.42	
	5	15	1.26	1.26	0.22	0.93	1.93	1.93	0.33	1.57	2.53	2.53	0.43	3.21	3.17	3.17	0.54	5.58	3.83	3.83	0.66	7.81	
		17	1.27	1.27	0.22	0.93	1.94	1.94	0.33	1.58	2.54	2.54	0.44	3.22	3.18	3.18	0.54	5.60	3.83	3.83	0.66	7.83	
		19	-	-	-	-	2.05	1.86	0.35	1.82	2.56	2.53	0.44	3.30	3.18	3.18	0.55	5.61	3.84	3.84	0.66	7.85	
		20	-	-	-	-	2.42	1.73	0.41	2.84	2.80	2.43	0.48	4.20	3.30	3.15	0.57	6.04	3.86	3.84	0.66	7.92	
	6	15	0.95	0.95	0.14	0.57	1.66	1.66	0.24	1.00	2.31	2.31	0.33	1.58	2.91	2.91	0.42	2.88	3.53	3.53	0.51	4.75	
		17	0.95	0.95	0.14	0.57	1.66	1.66	0.24	1.00	2.32	2.32	0.33	1.58	2.91	2.91	0.42	2.89	3.54	3.54	0.51	4.77	
		19	-	-	-	-	1.69	1.63	0.24	1.02	2.32	2.32	0.33	1.59	2.92	2.92	0.42	2.91	3.54	3.54	0.51	4.78	
		20	-	-	-	-	1.91	1.52	0.27	1.15	2.44	2.24	0.35	1.80	2.95	2.90	0.42	2.99	3.54	3.54	0.51	4.78	
	15	3	15	1.17	1.17	0.33	1.59	1.79	1.79	0.51	4.91	2.46	2.46	0.70	8.67	3.10	3.10	0.89	12.86	3.73	3.73	1.07	17.87
			17	1.17	1.17	0.33	1.60	1.79	1.79	0.51	4.93	2.46	2.46	0.70	8.69	3.11	3.11	0.89	12.90	3.74	3.74	1.07	17.92
			19	-	-	-	-	1.84	1.78	0.52	5.19	2.46	2.45	0.70	8.68	3.11	3.11	0.89	12.93	3.74	3.74	1.08	17.97
			20	-	-	-	-	2.38	1.73	0.68	8.15	2.70	2.42	0.77	10.12	3.15	3.11	0.90	13.18	3.75	3.74	1.08	17.99
4		15	0.88	0.88	0.19	0.78	1.55	1.55	0.33	1.60	2.16	2.16	0.46	3.91	2.83	2.83	0.61	6.74	3.48	3.48	0.75	9.67	
		17	0.88	0.88	0.19	0.78	1.55	1.55	0.33	1.61	2.17	2.17	0.46	3.92	2.83	2.83	0.61	6.75	3.49	3.49	0.75	9.69	
		19	-	-	-	-	1.56	1.56	0.33	1.62	2.17	2.17	0.47	3.94	2.84	2.84	0.61	6.77	3.49	3.49	0.75	9.72	
		20	-	-	-	-	1.71	1.46	0.37	2.10	2.22	2.15	0.48	4.15	2.84	2.83	0.61	6.77	3.49	3.49	0.75	9.73	
5		15	0.54	0.54	0.09	0.38	1.28	1.28	0.22	0.90	1.94	1.94	0.33	1.64	2.55	2.55	0.44	3.41	3.20	3.20	0.55	5.70	
		17	0.54	0.54	0.09	0.38	1.29	1.29	0.22	0.90	1.94	1.94	0.33	1.65	2.55	2.55	0.44	3.42	3.20	3.20	0.55	5.71	
		19	-	-	-	-	1.29	1.28	0.22	0.90	1.95	1.95	0.34	1.65	2.55	2.55	0.44	3.43	3.21	3.21	0.55	5.73	
		20	-	-	-	-	1.33	1.25	0.23	0.93	1.95	1.94	0.34	1.67	2.55	2.55	0.44	3.44	3.21	3.21	0.55	5.74	
6		15	-	-	-	-	0.97	0.97	0.14	0.55	1.68	1.68	0.24	0.97	2.32	2.32	0.33	1.64	2.92	2.92	0.42	3.05	
		17	-	-	-	-	0.97	0.97	0.14	0.55	1.68	1.68	0.24	0.97	2.32	2.32	0.33	1.65	2.92	2.92	0.42	3.06	
		19	-	-	-	-	0.97	0.97	0.14	0.55	1.68	1.68	0.24	0.97	2.33	2.33	0.33	1.65	2.93	2.93	0.42	3.07	
		20	-	-	-	-	0.97	0.97	0.14	0.55	1.68	1.67	0.24	0.97	2.33	2.33	0.33	1.66	2.93	2.93	0.42	3.08	

Abbreviations:

EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK07A3HCBSLXG1MXE/ MK07A3UCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	6.74	0.73	8.12	6.00	0.65	6.65	5.25	0.57	5.31	4.51	0.49	4.09
	10	6.23	0.54	4.88	5.47	0.47	3.91	4.69	0.40	3.01	3.89	0.34	2.11
	12	5.64	0.41	3.05	4.83	0.35	2.27	4.06	0.29	1.48	3.33	0.24	0.86
	14	4.99	0.31	1.66	4.25	0.26	1.08	3.49	0.22	0.68	2.64	0.16	0.49
	16	4.44	0.24	0.85	3.64	0.20	0.61	2.75	0.15	0.46	1.74	0.09	0.30
45	8	8.56	0.92	11.95	7.83	0.84	10.24	7.10	0.77	8.64	6.36	0.69	7.17
	10	8.12	0.70	7.46	7.37	0.64	6.33	6.63	0.57	5.27	5.88	0.51	4.29
	12	7.63	0.55	4.95	6.86	0.49	4.14	6.09	0.44	3.38	5.30	0.38	2.68
	14	7.06	0.44	3.35	6.26	0.39	2.74	5.44	0.34	2.11	4.65	0.29	1.47
	16	6.41	0.35	2.24	5.61	0.30	1.66	4.84	0.26	1.13	4.09	0.22	0.73
50	8	10.37	1.12	16.27	9.63	1.04	14.31	8.90	0.96	12.48	8.17	0.88	10.76
	10	9.96	0.86	10.40	9.22	0.80	9.10	8.48	0.73	7.88	7.74	0.67	6.74
	12	9.51	0.68	7.03	8.76	0.63	6.10	8.01	0.58	5.23	7.26	0.52	4.42
	14	9.03	0.56	4.96	8.26	0.51	4.26	7.49	0.46	3.61	6.71	0.41	3.00
	16	8.50	0.46	3.59	7.70	0.42	3.04	6.90	0.37	2.53	6.08	0.33	2.02
55	8	12.16	1.31	21.17	11.42	1.23	18.96	10.68	1.15	16.88	9.95	1.08	14.92
	10	11.77	1.02	13.55	11.03	0.95	12.15	10.29	0.89	10.77	9.56	0.83	9.47
	12	11.36	0.82	9.33	10.61	0.76	8.29	9.87	0.71	7.31	9.12	0.66	6.39
	14	10.93	0.67	6.73	10.17	0.63	5.95	9.41	0.58	5.21	8.66	0.53	4.52
	16	10.44	0.56	4.97	9.67	0.52	4.36	8.90	0.48	3.78	8.13	0.44	3.24
60	8	13.94	1.50	26.28	13.21	1.42	23.86	12.45	1.34	21.56	11.72	1.26	19.38
	10	13.58	1.17	17.11	12.83	1.11	15.50	12.09	1.04	13.97	11.35	0.98	12.46
	12	13.20	0.95	11.88	12.44	0.90	10.73	11.70	0.84	9.64	10.95	0.79	8.60
	14	12.78	0.79	8.62	12.02	0.74	7.75	11.27	0.69	6.93	10.52	0.65	6.16
	16	12.35	0.67	6.49	11.58	0.63	5.81	10.82	0.58	5.17	10.06	0.54	4.57

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

## Cooling Capacity Table

MK08A3SCBSLXG1MXE/ MK08A3HCBSLXG1MXE/ MK08A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temperature (D.B.)																					
		21				23				25				27				29					
		TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD		
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	6.32	4.80	1.81	52.77	6.29	5.48	1.80	52.30	6.43	6.18	1.84	54.32	6.88	6.88	1.99	61.90	7.54	7.54	2.18	72.74	
		17	8.37	4.83	2.40	86.14	8.32	5.51	2.39	85.22	8.27	6.18	2.37	84.34	8.22	6.85	2.36	83.48	8.20	7.52	2.36	83.16	
		19	-	-	-	-	10.50	5.53	3.03	128.66	10.45	6.21	3.02	128.48	10.40	6.88	3.02	127.97	10.34	7.55	3.00	126.64	
		20	-	-	-	-	11.66	5.54	3.36	154.67	11.59	6.22	3.34	153.19	11.53	6.89	3.33	151.62	11.46	7.55	3.31	150.14	
	4	15	5.60	4.46	1.20	25.95	5.71	5.17	1.22	26.80	6.02	5.90	1.29	29.43	6.60	6.60	1.42	34.48	7.27	7.27	1.56	40.74	
		17	7.71	4.52	1.66	45.01	7.66	5.20	1.65	44.55	7.62	5.88	1.64	44.09	7.59	6.55	1.63	43.81	7.71	7.24	1.65	45.02	
		19	-	-	-	-	9.87	5.24	2.12	69.13	9.81	5.91	2.11	68.43	9.76	6.58	2.10	67.73	9.70	7.25	2.08	67.06	
		20	-	-	-	-	11.04	5.25	2.37	84.02	10.97	5.93	2.36	83.20	10.91	6.60	2.35	82.36	10.85	7.27	2.33	81.55	
	5	15	4.86	4.10	0.83	13.88	5.19	4.87	0.89	15.61	5.66	5.62	0.97	18.13	6.31	6.31	1.08	21.68	6.99	6.99	1.20	25.84	
		17	6.95	4.17	1.19	25.55	6.91	4.86	1.19	25.28	6.88	5.54	1.18	25.06	6.99	6.24	1.20	25.77	7.25	6.96	1.24	27.51	
		19	-	-	-	-	9.18	4.92	1.58	41.21	9.13	5.60	1.57	40.84	9.09	6.28	1.57	40.80	9.03	6.95	1.56	40.40	
		20	-	-	-	-	10.37	4.95	1.79	51.21	10.30	5.63	1.77	50.33	10.26	6.31	1.77	50.34	10.19	6.97	1.75	49.35	
	6	15	4.20	3.75	0.60	7.35	4.68	4.53	0.67	9.36	5.30	5.30	0.76	11.85	6.01	6.01	0.86	14.66	6.70	6.70	0.96	17.52	
		17	6.11	3.80	0.88	15.03	6.06	4.49	0.87	14.85	6.17	5.20	0.89	15.31	6.44	5.94	0.92	16.49	6.84	6.67	0.98	18.15	
		19	-	-	-	-	8.41	4.58	1.20	25.78	8.36	5.26	1.20	25.52	8.31	5.94	1.19	25.26	8.27	6.61	1.18	25.07	
		20	-	-	-	-	9.63	4.62	1.38	32.78	9.58	5.31	1.38	32.46	9.52	5.98	1.37	32.14	9.47	6.65	1.36	31.82	
	7	3	15	4.81	4.09	1.39	32.91	5.01	4.82	1.45	35.39	5.52	5.51	1.58	41.27	6.20	6.20	1.79	51.11	6.87	6.87	1.98	60.36
			17	6.85	4.12	1.97	60.06	6.81	4.81	1.96	59.41	6.77	5.48	1.95	58.84	6.78	6.17	1.95	59.00	7.00	6.87	2.02	62.82
			19	-	-	-	-	9.02	4.84	2.62	98.55	8.96	5.52	2.61	97.53	8.91	6.19	2.59	96.53	8.86	6.86	2.57	95.52
			20	-	-	-	-	10.19	4.86	2.96	122.07	10.12	5.54	2.95	120.85	10.06	6.21	2.93	119.62	9.98	6.87	2.89	116.53
4		15	4.19	3.78	0.90	15.74	4.60	4.53	0.99	18.33	5.24	5.24	1.13	22.91	5.93	5.93	1.27	28.29	6.61	6.61	1.43	34.43	
		17	6.13	3.80	1.33	30.21	6.09	4.49	1.32	29.86	6.09	5.18	1.32	29.91	6.28	5.89	1.36	31.56	6.66	6.61	1.44	34.90	
		19	-	-	-	-	8.33	4.54	1.80	51.35	8.28	5.22	1.79	50.81	8.23	5.89	1.78	50.29	8.18	6.56	1.77	49.74	
		20	-	-	-	-	9.50	4.56	2.05	64.23	9.44	5.24	2.04	63.67	9.39	5.92	2.04	63.30	9.34	6.58	2.02	62.65	
5		15	3.61	3.43	0.62	8.04	4.22	4.21	0.73	10.80	4.94	4.94	0.85	14.08	5.64	5.64	0.97	17.65	6.32	6.32	1.09	21.48	
		17	5.25	3.43	0.91	15.67	5.25	4.13	0.91	15.67	5.46	4.87	0.94	16.77	5.82	5.61	1.00	18.64	6.34	6.33	1.09	21.57	
		19	-	-	-	-	7.57	4.21	1.31	29.40	7.52	4.90	1.30	29.08	7.47	5.57	1.29	28.76	7.48	6.25	1.29	28.82	
		20	-	-	-	-	8.75	4.24	1.51	37.49	8.70	4.92	1.50	37.10	8.65	5.60	1.49	36.72	8.59	6.27	1.48	36.34	
6		15	3.26	3.18	0.47	3.92	3.88	3.88	0.56	6.18	4.60	4.60	0.66	9.06	5.32	5.32	0.76	11.70	6.03	6.03	0.86	14.44	
		17	4.19	2.99	0.60	7.46	4.45	3.76	0.64	8.50	4.88	4.54	0.70	10.08	5.40	5.31	0.77	11.99	6.03	6.03	0.86	14.47	
		19	-	-	-	-	6.68	3.85	0.96	17.19	6.63	4.53	0.95	16.98	6.64	5.22	0.95	17.04	6.82	5.94	0.98	17.86	
		20	-	-	-	-	7.94	3.90	1.14	23.22	7.89	4.59	1.14	22.98	7.83	5.26	1.13	22.62	7.79	5.93	1.12	22.41	

## 2-Pipe Duct MK-CBS Series



(Continued)

MK08A3SCBSLXG1MXE/ MK08A3HCBSLXG1MXE/ MK08A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	3.51	3.42	1.01	18.69	4.14	4.14	1.19	24.82	4.83	4.83	1.39	32.38	5.52	5.52	1.59	40.68	6.19	6.19	1.80	50.37	
		17	5.20	3.40	1.49	36.64	5.16	4.09	1.48	36.14	5.26	4.80	1.51	37.37	5.59	5.52	1.62	42.09	6.20	6.20	1.80	50.50	
		19	-	-	-	-	7.38	4.13	2.13	67.55	7.34	4.81	2.11	66.81	7.29	5.49	2.10	66.09	7.25	6.16	2.09	65.38	
		20	-	-	-	-	8.57	4.15	2.49	88.81	8.51	4.83	2.47	87.47	8.46	5.51	2.46	86.92	8.41	6.18	2.44	86.00	
	4	15	3.12	3.11	0.67	9.31	3.85	3.85	0.83	13.45	4.55	4.55	0.98	17.81	5.25	5.25	1.13	22.73	5.93	5.93	1.28	27.90	
		17	4.33	3.05	0.93	16.25	4.44	3.77	0.96	17.01	4.76	4.52	1.03	19.25	5.27	5.26	1.14	22.97	5.93	5.93	1.28	27.95	
		19	-	-	-	-	6.62	3.82	1.43	33.71	6.58	4.50	1.42	33.33	6.54	5.18	1.41	32.97	6.63	5.88	1.43	33.78	
		20	-	-	-	-	7.83	3.85	1.70	45.49	7.78	4.53	1.69	45.00	7.73	5.21	1.68	44.53	7.68	5.88	1.66	44.01	
	5	15	2.79	2.79	0.48	4.34	3.50	3.50	0.60	7.61	4.24	4.24	0.73	10.71	4.96	4.96	0.86	14.06	5.65	5.65	0.97	17.44	
		17	3.37	2.65	0.58	7.01	3.79	3.44	0.65	8.84	4.32	4.22	0.74	11.05	4.96	4.96	0.86	14.08	5.66	5.66	0.97	17.49	
		19	-	-	-	-	5.74	3.46	0.99	17.89	5.70	4.15	0.98	17.67	5.81	4.86	1.00	18.28	6.08	5.59	1.05	19.77	
		20	-	-	-	-	6.98	3.51	1.20	25.04	6.94	4.20	1.19	24.77	6.89	4.88	1.19	24.47	6.90	5.56	1.19	24.53	
	6	15	2.55	2.55	0.37	2.13	3.21	3.21	0.46	3.90	3.90	3.90	0.56	6.45	4.63	4.63	0.66	9.10	5.35	5.35	0.77	11.61	
		17	2.84	2.39	0.41	2.80	3.32	3.15	0.48	4.27	3.92	3.90	0.56	6.51	4.64	4.64	0.67	9.12	5.36	5.36	0.77	11.64	
		19	-	-	-	-	4.64	3.04	0.67	9.09	4.81	3.78	0.69	9.67	5.15	4.55	0.74	10.88	5.59	5.31	0.80	12.51	
		20	-	-	-	-	6.02	3.14	0.86	14.14	5.97	3.82	0.86	13.95	5.99	4.52	0.86	14.04	6.19	5.25	0.89	14.87	
	11	3	15	2.73	2.73	0.78	11.83	3.45	3.45	0.98	17.63	4.15	4.15	1.18	24.22	4.83	4.83	1.38	31.53	5.52	5.52	1.59	40.14
			17	3.38	2.67	0.96	17.00	3.66	3.42	1.04	19.49	4.15	4.15	1.19	24.29	4.84	4.84	1.38	31.61	5.53	5.53	1.59	40.24
			19	-	-	-	-	5.64	3.42	1.62	41.68	5.60	4.11	1.61	41.14	5.61	4.80	1.61	41.22	5.79	5.50	1.66	43.12
			20	-	-	-	-	6.81	3.44	1.95	57.09	6.76	4.12	1.93	56.45	6.72	4.80	1.92	55.80	6.67	5.48	1.91	55.16
4		15	2.39	2.39	0.51	5.26	3.13	3.13	0.67	9.17	3.86	3.86	0.83	13.05	4.56	4.56	0.98	17.37	5.25	5.25	1.13	22.12	
		17	2.62	2.32	0.56	6.59	3.19	3.12	0.68	9.46	3.86	3.86	0.83	13.07	4.57	4.57	0.98	17.42	5.26	5.26	1.13	22.17	
		19	-	-	-	-	4.73	3.07	1.01	18.44	4.76	3.78	1.02	18.63	4.99	4.51	1.07	20.27	5.38	5.24	1.15	23.07	
		20	-	-	-	-	5.97	3.12	1.28	27.59	5.93	3.80	1.27	27.26	5.89	4.49	1.26	26.94	6.00	5.19	1.29	27.82	
5		15	2.14	2.14	0.37	2.20	2.81	2.81	0.48	4.58	3.54	3.54	0.61	7.73	4.27	4.27	0.73	10.66	4.97	4.97	0.85	13.70	
		17	2.22	2.08	0.38	2.43	2.82	2.81	0.48	4.61	3.54	3.54	0.61	7.75	4.27	4.27	0.74	10.68	4.97	4.97	0.85	13.73	
		19	-	-	-	-	3.69	2.68	0.64	8.31	4.03	3.46	0.69	9.66	4.48	4.23	0.77	11.58	5.01	4.97	0.86	13.93	
		20	-	-	-	-	4.98	2.74	0.85	13.70	4.94	3.44	0.85	13.53	5.10	4.16	0.87	14.31	5.43	4.91	0.93	16.03	
6		15	1.84	1.84	0.26	1.30	2.56	2.56	0.37	2.20	3.22	3.22	0.46	4.11	3.93	3.93	0.56	6.58	4.66	4.66	0.67	8.99	
		17	1.86	1.82	0.27	1.32	2.56	2.56	0.37	2.21	3.23	3.23	0.46	4.12	3.93	3.93	0.56	6.60	4.66	4.66	0.67	9.01	
		19	-	-	-	-	2.95	2.37	0.42	3.24	3.43	3.14	0.49	4.82	4.00	3.91	0.57	6.85	4.67	4.67	0.67	9.03	
		20	-	-	-	-	3.68	2.28	0.53	5.71	3.95	3.05	0.56	6.66	4.39	3.84	0.63	8.11	4.89	4.62	0.70	9.76	

(Continued)

MK08A3SCBSLXG1MXE/ MK08A3HCBSLXG1MXE/ MK08A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa
13	3	15	2.00	2.00	0.57	6.93	2.74	2.74	0.79	11.90	3.46	3.46	0.99	17.66	4.15	4.15	1.19	24.19	4.83	4.83	1.38	31.06
		17	2.02	2.00	0.58	7.06	2.75	2.75	0.79	11.93	3.46	3.46	0.99	17.70	4.16	4.16	1.20	24.26	4.84	4.84	1.38	31.14
		19	-	-	-	-	3.67	2.68	1.06	19.55	3.86	3.41	1.11	21.27	4.24	4.15	1.22	25.05	4.84	4.84	1.38	31.21
		20	-	-	-	-	4.89	2.71	1.40	31.64	4.84	3.40	1.38	31.16	4.88	4.10	1.39	31.56	5.12	4.82	1.46	34.29
	4	15	1.72	1.72	0.37	2.28	2.40	2.40	0.51	5.47	3.15	3.15	0.67	9.10	3.87	3.87	0.83	12.91	4.57	4.57	0.98	17.33
		17	1.72	1.71	0.37	2.27	2.40	2.40	0.52	5.48	3.15	3.15	0.68	9.12	3.87	3.87	0.83	12.94	4.58	4.58	0.99	17.38
		19	-	-	-	-	2.79	2.33	0.60	7.42	3.30	3.12	0.71	9.85	3.88	3.88	0.83	13.01	4.58	4.58	0.99	17.43
		20	-	-	-	-	3.85	2.34	0.83	12.80	3.93	3.06	0.84	13.28	4.26	3.82	0.92	15.38	4.70	4.56	1.01	18.16
	5	15	1.41	1.41	0.24	1.15	2.14	2.14	0.37	2.24	2.82	2.82	0.48	4.71	3.55	3.55	0.61	7.64	4.28	4.28	0.73	10.46
		17	1.42	1.42	0.24	1.15	2.14	2.14	0.37	2.25	2.82	2.82	0.48	4.73	3.56	3.56	0.61	7.66	4.28	4.28	0.73	10.48
		19	-	-	-	-	2.26	2.05	0.39	2.64	2.85	2.81	0.49	4.85	3.56	3.56	0.61	7.67	4.29	4.29	0.74	10.51
		20	-	-	-	-	2.69	1.93	0.46	4.23	3.15	2.72	0.54	6.13	3.72	3.52	0.64	8.24	4.32	4.28	0.74	10.62
6	15	1.07	1.07	0.15	0.71	1.85	1.85	0.27	1.24	2.56	2.56	0.37	2.26	3.23	3.23	0.46	4.24	3.95	3.95	0.57	6.67	
	17	1.07	1.07	0.15	0.71	1.85	1.85	0.27	1.24	2.56	2.56	0.37	2.27	3.23	3.23	0.46	4.25	3.96	3.96	0.57	6.69	
	19	-	-	-	-	1.90	1.82	0.27	1.27	2.57	2.56	0.37	2.28	3.24	3.24	0.46	4.27	3.97	3.97	0.57	6.71	
	20	-	-	-	-	2.15	1.70	0.31	1.50	2.70	2.47	0.39	2.61	3.28	3.22	0.47	4.40	3.97	3.96	0.57	6.71	
15	3	15	1.29	1.29	0.37	2.30	2.01	2.01	0.57	6.82	2.74	2.74	0.78	11.59	3.46	3.46	0.99	17.41	4.14	4.14	1.18	23.48
		17	1.29	1.29	0.37	2.30	2.01	2.01	0.57	6.83	2.75	2.75	0.78	11.61	3.46	3.46	1.00	17.46	4.15	4.15	1.18	23.54
		19	-	-	-	-	2.07	2.00	0.59	7.17	2.75	2.74	0.78	11.60	3.47	3.47	1.00	17.51	4.16	4.16	1.19	23.61
		20	-	-	-	-	2.69	1.94	0.77	11.17	3.02	2.70	0.86	13.62	3.51	3.46	1.01	17.87	4.16	4.16	1.19	23.63
	4	15	0.99	0.99	0.21	0.96	1.71	1.71	0.37	2.32	2.42	2.42	0.52	5.63	3.16	3.16	0.68	9.03	3.88	3.88	0.84	12.91
		17	0.99	0.99	0.21	0.97	1.72	1.72	0.37	2.33	2.42	2.42	0.52	5.64	3.17	3.17	0.68	9.05	3.88	3.88	0.84	12.94
		19	-	-	-	-	1.72	1.72	0.37	2.34	2.42	2.42	0.52	5.66	3.17	3.17	0.68	9.09	3.89	3.89	0.84	12.98
		20	-	-	-	-	1.89	1.62	0.41	3.06	2.49	2.40	0.53	5.96	3.17	3.17	0.68	9.09	3.89	3.89	0.84	12.99
	5	15	0.62	0.62	0.11	0.47	1.44	1.44	0.25	1.12	2.14	2.14	0.37	2.38	2.84	2.84	0.49	4.96	3.58	3.58	0.62	7.67
		17	0.62	0.62	0.11	0.47	1.44	1.44	0.25	1.12	2.15	2.15	0.37	2.39	2.84	2.84	0.49	4.97	3.58	3.58	0.62	7.69
		19	-	-	-	-	1.44	1.43	0.25	1.12	2.15	2.15	0.37	2.39	2.84	2.84	0.49	4.99	3.59	3.59	0.62	7.71
		20	-	-	-	-	1.49	1.39	0.26	1.16	2.16	2.14	0.37	2.42	2.85	2.85	0.49	5.00	3.59	3.59	0.62	7.72
	6	15	-	-	-	-	1.09	1.09	0.16	0.69	1.87	1.87	0.27	1.21	2.56	2.56	0.37	2.39	3.25	3.25	0.47	4.46
		17	-	-	-	-	1.09	1.09	0.16	0.69	1.87	1.87	0.27	1.21	2.57	2.57	0.37	2.39	3.25	3.25	0.47	4.48
		19	-	-	-	-	1.09	1.09	0.16	0.69	1.88	1.88	0.27	1.21	2.57	2.57	0.37	2.40	3.26	3.26	0.47	4.49
		20	-	-	-	-	1.09	1.09	0.16	0.69	1.88	1.87	0.27	1.21	2.57	2.57	0.37	2.41	3.26	3.26	0.47	4.50

Abbreviations:

EWT: Enter Water Temp. (°C)     Δt: Temperature Difference. (°C)     DB: Dry Bulb Temp. (°C)     WF: Water Flow. (m³/h)  
 WB: Wet Bulb Temp. (°C)     TC: Total Cooling Capacity. (kW)     SC: Sensible Cooling Capacity. (kW)     WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK08A3SCBSLXG1MXE/ MK08A3HCBLSLXG1MXE/ MK08A3UCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	7.69	0.83	11.35	6.84	0.74	9.32	6.01	0.65	7.41	5.17	0.56	5.73
	10	7.14	0.62	6.82	6.27	0.54	5.48	5.40	0.47	4.25	4.50	0.39	3.12
	12	6.51	0.47	4.32	5.60	0.40	3.35	4.67	0.34	2.34	3.80	0.27	1.37
	14	5.76	0.36	2.62	4.86	0.30	1.72	4.01	0.25	1.02	3.08	0.19	0.64
	16	5.09	0.27	1.33	4.21	0.23	0.84	3.22	0.17	0.60	2.08	0.11	0.39
45	8	9.74	1.05	16.58	8.91	0.96	14.29	8.08	0.87	12.01	7.25	0.78	9.97
	10	9.25	0.80	10.38	8.41	0.73	8.81	7.57	0.65	7.35	6.72	0.58	6.00
	12	8.72	0.63	6.91	7.86	0.57	5.79	6.99	0.50	4.75	6.11	0.44	3.78
	14	8.11	0.50	4.71	7.22	0.44	3.87	6.30	0.39	3.08	5.37	0.33	2.28
	16	7.42	0.40	3.26	6.48	0.35	2.54	5.55	0.30	1.80	4.68	0.25	1.14
50	8	11.78	1.27	22.67	10.94	1.18	19.85	10.11	1.09	17.31	9.29	1.00	14.94
	10	11.33	0.98	14.43	10.49	0.91	12.63	9.65	0.83	10.94	8.82	0.76	9.37
	12	10.84	0.78	9.77	9.99	0.72	8.49	9.14	0.66	7.29	8.27	0.60	6.17
	14	10.31	0.64	6.91	9.44	0.58	5.95	8.58	0.53	5.05	7.70	0.47	4.21
	16	9.73	0.52	5.01	8.84	0.48	4.26	7.95	0.43	3.57	7.03	0.38	2.90
55	8	13.80	1.49	29.20	12.96	1.40	26.16	12.13	1.31	23.29	11.31	1.22	20.70
	10	13.38	1.15	18.80	12.53	1.08	16.78	11.69	1.01	14.88	10.87	0.94	13.13
	12	12.92	0.93	12.95	12.07	0.87	11.51	11.23	0.81	10.16	10.39	0.75	8.88
	14	12.44	0.77	9.36	11.59	0.71	8.28	10.73	0.66	7.26	9.88	0.61	6.30
	16	11.92	0.64	6.94	11.05	0.60	6.10	10.18	0.55	5.28	9.31	0.50	4.54
60	8	15.82	1.71	36.54	14.98	1.62	33.26	14.14	1.52	29.97	13.30	1.43	26.88
	10	15.42	1.33	23.73	14.57	1.26	21.49	13.73	1.19	19.37	12.90	1.11	17.36
	12	14.99	1.08	16.48	14.14	1.02	14.89	13.29	0.96	13.37	12.46	0.90	11.94
	14	14.53	0.90	11.96	13.67	0.84	10.76	12.83	0.79	9.63	11.98	0.74	8.56
	16	14.05	0.76	9.01	13.19	0.71	8.08	12.33	0.67	7.20	11.46	0.62	6.36

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

Cooling Capacity Table

MK10A3SCBSLXG1MXE																							
EWT	ΔT	Indoor		Indoor temperature (D.B.)																			
		temp (W.B.)	21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	7.16	5.49	2.07	49.29	7.13	6.28	2.06	48.94	7.33	7.10	2.10	50.87	7.90	7.90	2.26	57.73	8.67	8.67	2.49	67.98	
		17	9.52	5.51	2.73	79.97	9.47	6.30	2.72	79.18	9.41	7.09	2.70	78.39	9.36	7.87	2.69	77.74	9.36	8.64	2.69	77.84	
		19	-	-	-	-	12.01	6.33	3.47	121.27	11.93	7.12	3.44	119.17	11.87	7.90	3.42	118.00	11.81	8.67	3.41	117.90	
		20	-	-	-	-	13.34	6.34	3.85	145.39	13.28	7.13	3.84	144.63	13.21	7.92	3.84	144.65	13.13	8.69	3.80	142.12	
	4	15	6.24	5.06	1.34	23.26	6.41	5.89	1.37	24.39	6.83	6.74	1.47	27.24	7.55	7.55	1.62	32.35	8.33	8.33	1.79	38.34	
		17	8.68	5.12	1.86	41.11	8.63	5.92	1.85	40.70	8.58	6.70	1.84	40.29	8.57	7.49	1.84	40.18	8.75	8.30	1.88	41.70	
		19	-	-	-	-	11.21	5.96	2.42	64.67	11.15	6.75	2.41	64.04	11.09	7.53	2.40	63.43	11.03	8.31	2.38	62.83	
		20	-	-	-	-	12.54	5.97	2.70	77.97	12.48	6.76	2.68	77.23	12.41	7.55	2.67	76.76	12.36	8.33	2.67	76.68	
	5	15	5.34	4.62	0.92	12.18	5.77	5.50	0.99	13.89	6.40	6.38	1.10	16.68	7.19	7.19	1.24	20.37	7.98	7.98	1.37	24.14	
		17	7.73	4.69	1.33	22.82	7.68	5.49	1.32	22.59	7.66	6.28	1.31	22.48	7.84	7.11	1.34	23.40	8.20	7.95	1.41	25.33	
		19	-	-	-	-	10.34	5.57	1.78	37.92	10.28	6.36	1.77	37.56	10.22	7.14	1.76	37.20	10.16	7.92	1.75	36.84	
		20	-	-	-	-	11.69	5.59	2.01	46.59	11.63	6.38	2.00	46.15	11.56	7.17	1.99	45.71	11.50	7.94	1.98	45.28	
6	15	4.60	4.20	0.66	6.16	5.19	5.09	0.74	8.24	5.97	5.96	0.85	10.78	6.80	6.80	0.98	13.52	7.61	7.61	1.09	16.37		
	17	6.65	4.22	0.95	12.98	6.62	5.02	0.95	12.87	6.81	5.87	0.98	13.52	7.19	6.74	1.03	14.83	7.71	7.59	1.10	16.62		
	19	-	-	-	-	9.35	5.14	1.34	23.05	9.29	5.93	1.33	22.82	9.24	6.71	1.32	22.59	9.22	7.50	1.32	22.51		
	20	-	-	-	-	10.77	5.18	1.55	29.59	10.71	5.98	1.54	29.31	10.65	6.77	1.53	29.03	10.57	7.54	1.51	28.48		
7	3	15	5.40	4.67	1.56	29.90	5.68	5.51	1.64	32.71	6.33	6.33	1.83	39.42	7.11	7.11	2.04	47.66	7.90	7.90	2.28	57.52	
		17	7.75	4.69	2.23	55.28	7.70	5.49	2.22	54.71	7.65	6.28	2.20	54.08	7.70	7.08	2.21	54.69	8.00	7.89	2.31	58.66	
		19	-	-	-	-	10.25	5.52	2.96	90.27	10.19	6.31	2.94	89.35	10.13	7.10	2.92	88.45	10.08	7.87	2.91	87.60	
		20	-	-	-	-	11.60	5.54	3.35	112.23	11.53	6.33	3.33	111.40	11.48	7.12	3.34	111.44	11.40	7.89	3.29	108.96	
	4	15	4.65	4.27	1.01	14.07	5.19	5.15	1.12	16.82	5.97	5.97	1.28	21.36	6.77	6.77	1.46	26.49	7.56	7.56	1.64	32.36	
		17	6.82	4.29	1.47	26.79	6.77	5.09	1.46	26.48	6.82	5.90	1.47	26.77	7.10	6.74	1.54	29.02	7.60	7.57	1.64	32.62	
		19	-	-	-	-	9.40	5.15	2.04	47.08	9.34	5.94	2.02	46.60	9.29	6.73	2.01	46.13	9.23	7.51	2.00	45.63	
		20	-	-	-	-	10.76	5.17	2.33	59.56	10.68	5.96	2.30	58.26	10.62	6.75	2.29	57.69	10.56	7.52	2.28	57.12	
	5	15	3.99	3.85	0.69	6.96	4.74	4.74	0.82	9.84	5.59	5.59	0.96	12.98	6.41	6.41	1.10	16.45	7.21	7.21	1.24	20.03	
		17	5.72	3.83	0.98	13.49	5.76	4.65	0.99	13.66	6.07	5.52	1.05	14.97	6.56	6.38	1.13	17.11	7.21	7.21	1.24	20.07	
		19	-	-	-	-	8.42	4.74	1.45	26.12	8.37	5.53	1.44	25.83	8.31	6.32	1.43	25.54	8.36	7.12	1.44	25.82	
		20	-	-	-	-	9.81	4.77	1.69	34.00	9.75	5.57	1.68	33.64	9.70	6.36	1.67	33.31	9.64	7.14	1.66	32.98	
6	15	3.60	3.55	0.52	3.35	4.33	4.33	0.62	5.48	5.16	5.16	0.74	8.20	6.01	6.01	0.86	10.74	6.84	6.84	0.98	13.46		
	17	4.47	3.31	0.64	5.94	4.83	4.20	0.69	7.14	5.39	5.11	0.77	8.89	6.06	6.00	0.87	10.88	6.85	6.85	0.99	13.49		
	19	-	-	-	-	7.30	4.28	1.05	14.92	7.25	5.08	1.04	14.74	7.32	5.89	1.05	14.98	7.59	6.74	1.09	15.95		
	20	-	-	-	-	8.78	4.35	1.26	20.49	8.73	5.15	1.25	20.28	8.67	5.94	1.25	20.07	8.64	6.73	1.24	19.95		



# 2-Pipe Duct MK-CBS Series



(Continued)

MK10A3SCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa
9	3	15	3.96	3.90	1.14	17.24	4.73	4.73	1.36	23.18	5.54	5.54	1.60	30.84	6.32	6.32	1.82	38.32	7.12	7.12	2.06	47.62
		17	5.82	3.86	1.67	33.17	5.78	4.67	1.66	32.76	5.94	5.49	1.71	34.34	6.37	6.33	1.83	38.79	7.13	7.13	2.06	47.74
		19	-	-	-	-	8.37	4.71	2.42	62.77	8.33	5.51	2.42	62.67	8.28	6.30	2.40	62.02	8.22	7.07	2.37	60.45
		20	-	-	-	-	9.72	4.72	2.80	81.05	9.66	5.52	2.79	80.22	9.60	6.31	2.77	79.41	9.54	7.09	2.75	78.56
	4	15	3.49	3.49	0.75	8.43	4.35	4.35	0.94	12.24	5.17	5.17	1.11	16.50	5.98	5.98	1.29	21.22	6.78	6.78	1.47	26.44
		17	4.73	3.42	1.02	14.12	4.92	4.27	1.06	15.08	5.35	5.15	1.15	17.51	5.99	5.99	1.29	21.27	6.79	6.79	1.47	26.51
		19	-	-	-	-	7.40	4.31	1.59	30.41	7.36	5.11	1.58	30.08	7.32	5.91	1.58	29.83	7.47	6.72	1.61	30.90
		20	-	-	-	-	8.81	4.35	1.91	41.48	8.76	5.15	1.90	41.05	8.70	5.94	1.89	40.61	8.62	6.71	1.86	39.62
	5	15	3.11	3.11	0.54	3.79	3.92	3.92	0.68	6.82	4.78	4.78	0.82	9.82	5.61	5.61	0.97	12.89	6.42	6.42	1.11	16.22
		17	3.62	2.95	0.62	5.67	4.16	3.87	0.72	7.68	4.83	4.78	0.83	9.99	5.62	5.62	0.97	12.91	6.43	6.43	1.11	16.26
		19	-	-	-	-	6.29	3.88	1.08	15.62	6.26	4.68	1.08	15.48	6.45	5.52	1.11	16.31	6.82	6.37	1.17	17.95
		20	-	-	-	-	7.74	3.93	1.33	22.29	7.69	4.73	1.33	22.05	7.64	5.52	1.32	21.78	7.69	6.33	1.32	22.03
	6	15	2.82	2.82	0.40	1.86	3.57	3.57	0.51	3.40	4.36	4.36	0.63	5.74	5.21	5.21	0.75	8.29	6.05	6.05	0.87	10.69
		17	3.07	2.67	0.44	2.28	3.65	3.53	0.52	3.61	4.37	4.37	0.63	5.76	5.22	5.22	0.75	8.31	6.06	6.06	0.87	10.71
		19	-	-	-	-	4.90	3.35	0.70	7.40	5.19	4.23	0.75	8.23	5.67	5.13	0.81	9.57	6.24	6.02	0.90	11.27
		20	-	-	-	-	6.52	3.46	0.94	12.12	6.47	4.26	0.93	11.95	6.55	5.09	0.94	12.20	6.85	5.95	0.98	13.18
11	3	15	3.08	3.08	0.88	10.87	3.92	3.92	1.12	16.37	4.74	4.74	1.35	22.66	5.54	5.54	1.58	29.64	6.33	6.33	1.81	37.60
		17	3.73	3.02	1.07	15.14	4.10	3.89	1.17	17.70	4.74	4.73	1.35	22.67	5.54	5.54	1.58	29.71	6.34	6.34	1.82	37.96
		19	-	-	-	-	6.32	3.88	1.81	37.51	6.28	4.68	1.80	37.03	6.31	5.49	1.81	37.41	6.59	6.32	1.90	40.63
		20	-	-	-	-	7.70	3.91	2.22	53.24	7.66	4.71	2.21	52.66	7.61	5.50	2.19	52.08	7.56	6.29	2.18	51.53
	4	15	2.66	2.66	0.57	4.63	3.52	3.52	0.75	8.36	4.37	4.37	0.94	12.05	5.19	5.19	1.11	16.16	5.99	5.99	1.28	20.68
		17	2.85	2.59	0.61	5.51	3.56	3.52	0.76	8.50	4.37	4.37	0.94	12.08	5.20	5.20	1.11	16.20	6.00	6.00	1.29	20.73
		19	-	-	-	-	5.19	3.45	1.11	16.12	5.26	4.28	1.13	16.52	5.59	5.14	1.20	18.35	6.10	5.99	1.31	21.30
		20	-	-	-	-	6.64	3.50	1.42	24.63	6.59	4.31	1.41	24.34	6.56	5.11	1.41	24.13	6.73	5.93	1.44	25.25
	5	15	2.37	2.37	0.41	1.91	3.13	3.13	0.54	4.02	3.97	3.97	0.68	7.00	4.82	4.82	0.83	9.79	5.64	5.64	0.97	12.69
		17	2.43	2.32	0.42	2.04	3.13	3.13	0.54	4.02	3.97	3.97	0.68	7.02	4.83	4.83	0.83	9.81	5.64	5.64	0.97	12.72
		19	-	-	-	-	3.93	2.97	0.68	6.86	4.41	3.89	0.76	8.40	4.99	4.79	0.86	10.40	5.66	5.65	0.97	12.80
		20	-	-	-	-	5.41	3.05	0.93	11.90	5.39	3.86	0.93	11.81	5.62	4.71	0.96	12.59	6.04	5.58	1.04	14.26
	6	15	2.01	2.01	0.29	1.16	2.84	2.84	0.41	1.91	3.59	3.59	0.52	3.59	4.39	4.39	0.63	5.90	5.25	5.25	0.75	8.22
		17	2.01	2.00	0.29	1.17	2.84	2.84	0.41	1.92	3.60	3.60	0.52	3.61	4.40	4.40	0.63	5.92	5.26	5.26	0.75	8.24
		19	-	-	-	-	3.18	2.64	0.46	2.60	3.75	3.52	0.54	4.03	4.44	4.39	0.63	6.03	5.26	5.26	0.75	8.26
		20	-	-	-	-	3.87	2.51	0.56	4.42	4.22	3.39	0.60	5.40	4.79	4.31	0.68	7.00	5.43	5.22	0.78	8.71

(Continued)

MK10A3SCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	2.24	2.24	0.64	6.22	3.10	3.10	0.89	10.97	3.93	3.93	1.13	16.43	4.74	4.74	1.36	22.67	5.53	5.53	1.58	29.21
		17	2.24	2.24	0.64	6.26	3.11	3.11	0.89	10.99	3.94	3.94	1.13	16.47	4.75	4.75	1.37	22.72	5.54	5.54	1.58	29.29
		19	-	-	-	-	4.04	3.03	1.16	17.21	4.31	3.89	1.24	19.21	4.81	4.75	1.38	23.20	5.55	5.55	1.59	29.37
		20	-	-	-	-	5.44	3.06	1.55	28.35	5.39	3.86	1.54	27.91	5.47	4.68	1.56	28.62	5.79	5.52	1.66	31.64
	4	15	1.90	1.90	0.41	1.97	2.69	2.69	0.58	4.93	3.55	3.55	0.76	8.33	4.38	4.38	0.94	11.94	5.21	5.21	1.12	16.16
		17	1.90	1.90	0.41	1.97	2.69	2.69	0.58	4.95	3.55	3.55	0.76	8.34	4.39	4.39	0.94	11.97	5.21	5.21	1.12	16.20
		19	-	-	-	-	3.01	2.60	0.65	6.27	3.66	3.53	0.79	8.80	4.40	4.39	0.94	11.99	5.22	5.22	1.12	16.24
		20	-	-	-	-	4.15	2.60	0.89	10.84	4.31	3.46	0.92	11.57	4.73	4.33	1.01	13.60	5.30	5.21	1.14	16.68
	5	15	1.54	1.54	0.26	1.02	2.37	2.37	0.41	1.94	3.14	3.14	0.54	4.15	3.99	3.99	0.68	6.95	4.84	4.84	0.83	9.63
		17	1.54	1.54	0.26	1.03	2.37	2.37	0.41	1.95	3.14	3.14	0.54	4.16	4.00	4.00	0.69	6.97	4.84	4.84	0.83	9.65
		19	-	-	-	-	2.47	2.30	0.42	2.18	3.15	3.14	0.54	4.20	4.00	4.00	0.69	6.99	4.85	4.85	0.83	9.68
		20	-	-	-	-	2.87	2.14	0.49	3.28	3.41	3.05	0.59	5.11	4.11	3.97	0.71	7.32	4.86	4.85	0.83	9.71
	6	15	1.13	1.13	0.16	0.61	2.02	2.02	0.29	1.11	2.84	2.84	0.41	1.96	3.60	3.60	0.52	3.72	4.43	4.43	0.63	6.03
		17	1.13	1.13	0.16	0.61	2.02	2.02	0.29	1.11	2.84	2.84	0.41	1.96	3.60	3.60	0.52	3.73	4.44	4.44	0.64	6.05
		19	-	-	-	-	2.05	2.01	0.29	1.12	2.84	2.84	0.41	1.96	3.61	3.61	0.52	3.75	4.44	4.44	0.64	6.07
		20	-	-	-	-	2.27	1.88	0.32	1.25	2.94	2.77	0.42	2.16	3.63	3.60	0.52	3.79	4.45	4.45	0.64	6.07
15	3	15	1.43	1.43	0.41	1.98	2.25	2.25	0.64	6.17	3.11	3.11	0.89	10.70	3.94	3.94	1.13	16.24	4.74	4.74	1.35	22.02
		17	1.43	1.43	0.41	1.98	2.25	2.25	0.64	6.18	3.11	3.11	0.89	10.72	3.94	3.94	1.13	16.28	4.74	4.74	1.35	22.08
		19	-	-	-	-	2.29	2.24	0.65	6.36	3.11	3.10	0.89	10.72	3.95	3.95	1.14	16.31	4.75	4.75	1.36	22.14
		20	-	-	-	-	2.90	2.18	0.83	9.52	3.35	3.07	0.96	12.17	3.98	3.95	1.14	16.50	4.75	4.75	1.36	22.17
	4	15	1.06	1.06	0.23	0.85	1.90	1.90	0.41	2.01	2.70	2.70	0.58	5.02	3.57	3.57	0.76	8.28	4.40	4.40	0.95	11.97
		17	1.07	1.07	0.23	0.85	1.90	1.90	0.41	2.01	2.70	2.70	0.58	5.03	3.57	3.57	0.77	8.30	4.41	4.41	0.95	12.00
		19	-	-	-	-	1.90	1.89	0.41	2.01	2.71	2.71	0.58	5.05	3.58	3.58	0.77	8.32	4.42	4.42	0.95	12.03
		20	-	-	-	-	2.05	1.81	0.44	2.48	2.74	2.70	0.59	5.20	3.57	3.57	0.77	8.31	4.42	4.42	0.95	12.05
	5	15	0.63	0.63	0.11	0.40	1.56	1.56	0.27	0.99	2.38	2.38	0.41	2.06	3.16	3.16	0.55	4.39	4.03	4.03	0.69	7.01
		17	0.64	0.64	0.11	0.40	1.56	1.56	0.27	1.00	2.38	2.38	0.41	2.07	3.17	3.17	0.55	4.41	4.03	4.03	0.70	7.02
		19	-	-	-	-	1.57	1.57	0.27	1.00	2.38	2.38	0.41	2.07	3.17	3.17	0.55	4.42	4.04	4.04	0.70	7.04
		20	-	-	-	-	1.60	1.53	0.28	1.02	2.38	2.38	0.41	2.07	3.17	3.17	0.55	4.43	4.04	4.04	0.70	7.05
	6	15	-	-	-	-	1.15	1.15	0.17	0.60	2.05	2.05	0.29	1.08	2.85	2.85	0.41	2.07	3.62	3.62	0.52	3.94
		17	-	-	-	-	1.16	1.16	0.17	0.60	2.05	2.05	0.29	1.08	2.85	2.85	0.41	2.07	3.63	3.63	0.52	3.95
		19	-	-	-	-	1.16	1.16	0.17	0.60	2.05	2.05	0.29	1.08	2.85	2.85	0.41	2.08	3.63	3.63	0.52	3.97
		20	-	-	-	-	1.16	1.15	0.17	0.60	2.05	2.05	0.29	1.08	2.85	2.85	0.41	2.08	3.64	3.64	0.52	3.97

Abbreviations:

- EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK10A3SCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	8.75	0.95	10.57	7.78	0.84	8.64	6.80	0.73	6.84	5.81	0.63	5.25
	10	8.06	0.70	6.27	7.06	0.61	5.01	6.04	0.52	3.85	4.99	0.43	2.78
	12	7.28	0.52	3.91	6.21	0.45	2.98	5.15	0.37	2.01	4.18	0.30	1.15
	14	6.35	0.39	2.25	5.35	0.33	1.45	4.39	0.27	0.86	3.31	0.20	0.56
	16	5.58	0.30	1.12	4.57	0.25	0.72	3.44	0.19	0.52	2.15	0.12	0.33
45	8	11.14	1.20	15.58	10.18	1.10	13.32	9.22	0.99	11.23	8.26	0.89	9.30
	10	10.53	0.91	9.66	9.55	0.82	8.18	8.58	0.74	6.80	7.65	0.65	5.52
	12	9.86	0.71	6.37	8.86	0.64	5.31	7.86	0.57	4.33	6.83	0.49	3.42
	14	9.10	0.56	4.29	8.06	0.50	3.49	7.00	0.43	2.75	5.92	0.36	1.98
	16	8.24	0.45	2.91	7.15	0.39	2.22	6.11	0.33	1.53	5.13	0.28	0.96
50	8	13.52	1.46	21.43	12.55	1.35	18.73	11.59	1.25	16.31	10.63	1.15	14.05
	10	12.95	1.12	13.54	11.98	1.04	11.83	11.01	0.95	10.23	10.04	0.87	8.73
	12	12.33	0.89	9.10	11.35	0.82	7.88	10.37	0.75	6.75	9.38	0.67	5.69
	14	11.67	0.72	6.38	10.67	0.66	5.48	9.67	0.60	4.63	8.65	0.53	3.83
	16	10.95	0.59	4.58	9.93	0.54	3.89	8.88	0.48	3.22	7.82	0.42	2.60
55	8	15.87	1.71	27.70	14.90	1.61	24.80	13.94	1.51	22.17	12.99	1.40	19.58
	10	15.34	1.32	17.73	14.36	1.24	15.81	13.39	1.15	14.00	12.43	1.07	12.35
	12	14.77	1.06	12.14	13.78	0.99	10.78	12.81	0.92	9.49	11.83	0.85	8.28
	14	14.16	0.87	8.72	13.17	0.81	7.69	12.18	0.75	6.73	11.20	0.69	5.82
	16	13.51	0.73	6.42	12.51	0.68	5.62	11.49	0.62	4.86	10.48	0.57	4.15
60	8	18.24	1.97	34.77	17.26	1.86	31.62	16.28	1.75	28.42	15.31	1.65	25.54
	10	17.72	1.53	22.47	16.74	1.45	20.34	15.76	1.36	18.31	14.80	1.28	16.40
	12	17.18	1.24	15.53	16.19	1.17	14.01	15.21	1.09	12.57	14.24	1.02	11.21
	14	16.60	1.02	11.20	15.61	0.96	10.07	14.62	0.90	9.00	13.64	0.84	7.98
	16	16.00	0.86	8.40	15.00	0.81	7.52	14.01	0.76	6.68	13.02	0.70	5.89

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

**Cooling Capacity Table**

MK10A3HCBSLXG1MXE/ MK10A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temperature (D.B.)																					
		21				23				25				27				29					
		TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD		
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	7.37	5.64	2.11	51.14	7.34	6.46	2.10	50.86	7.54	7.31	2.16	53.28	8.14	8.14	2.35	61.62	8.94	8.94	2.58	72.55	
		17	9.81	5.67	2.82	84.31	9.76	6.49	2.80	83.49	9.70	7.30	2.78	82.66	9.64	8.10	2.77	81.82	9.64	8.90	2.77	81.78	
		19	-	-	-	-	12.37	6.52	3.58	128.34	12.31	7.34	3.57	127.55	12.24	8.14	3.55	126.33	12.18	8.94	3.53	125.07	
		20	-	-	-	-	13.74	6.53	3.96	153.03	13.67	7.34	3.94	151.57	13.59	8.15	3.92	150.10	13.53	8.95	3.91	149.14	
	4	15	6.45	5.22	1.38	24.62	6.62	6.08	1.42	25.74	7.05	6.95	1.51	28.71	7.78	7.78	1.67	34.06	8.59	8.59	1.84	40.37	
		17	8.96	5.28	1.92	43.41	8.91	6.10	1.91	42.97	8.86	6.91	1.90	42.54	8.84	7.72	1.90	42.41	9.02	8.55	1.94	43.97	
		19	-	-	-	-	11.54	6.14	2.48	67.38	11.48	6.95	2.47	66.73	11.41	7.76	2.45	66.10	11.35	8.55	2.44	65.47	
		20	-	-	-	-	12.93	6.16	2.78	82.23	12.86	6.97	2.77	81.44	12.79	7.78	2.75	80.68	12.72	8.57	2.74	79.91	
	5	15	5.53	4.77	0.95	12.92	5.98	5.69	1.03	14.86	6.60	6.58	1.14	17.60	7.41	7.41	1.27	21.27	8.22	8.22	1.41	25.43	
		17	7.99	4.84	1.37	24.15	7.94	5.66	1.36	23.91	7.91	6.48	1.36	23.78	8.09	7.33	1.39	24.71	8.46	8.19	1.45	26.71	
		19	-	-	-	-	10.67	5.74	1.84	40.05	10.61	6.56	1.83	39.66	10.55	7.37	1.82	39.28	10.49	8.16	1.81	38.89	
		20	-	-	-	-	12.06	5.76	2.07	49.17	12.00	6.58	2.06	48.71	11.93	7.39	2.05	48.25	11.87	8.19	2.04	47.80	
6	15	4.75	4.33	0.68	6.69	5.37	5.26	0.77	8.85	6.16	6.16	0.88	11.40	7.02	7.02	1.01	14.26	7.84	7.84	1.12	17.12		
	17	6.90	4.37	0.99	13.82	6.86	5.19	0.98	13.69	7.05	6.06	1.01	14.34	7.43	6.95	1.07	15.70	7.96	7.83	1.14	17.54		
	19	-	-	-	-	9.66	5.30	1.38	24.39	9.60	6.12	1.37	24.15	9.55	6.93	1.37	23.91	9.53	7.74	1.36	23.81		
	20	-	-	-	-	11.12	5.35	1.60	31.28	11.06	6.17	1.59	30.98	11.00	6.98	1.58	30.68	10.94	7.78	1.57	30.39		
7	3	15	5.57	4.81	1.61	31.55	5.86	5.68	1.69	34.43	6.51	6.51	1.87	40.91	7.33	7.33	2.12	50.87	8.13	8.13	2.34	60.12	
		17	8.00	4.84	2.30	58.57	7.95	5.66	2.30	58.20	7.90	6.47	2.28	57.56	7.94	7.29	2.29	58.11	8.25	8.13	2.38	61.83	
		19	-	-	-	-	10.58	5.70	3.08	96.72	10.52	6.51	3.06	95.75	10.45	7.31	3.01	93.31	10.39	8.11	3.00	92.39	
		20	-	-	-	-	11.97	5.71	3.48	120.28	11.90	6.53	3.46	119.07	11.81	7.33	3.41	116.01	11.75	8.13	3.39	114.87	
	4	15	4.81	4.41	1.04	14.89	5.36	5.31	1.15	17.74	6.15	6.15	1.32	22.49	6.98	6.98	1.50	27.90	7.79	7.79	1.69	34.07	
		17	7.04	4.42	1.52	28.33	7.00	5.25	1.51	28.00	7.04	6.08	1.51	28.27	7.33	6.95	1.58	30.61	7.83	7.80	1.69	34.35	
		19	-	-	-	-	9.69	5.31	2.10	49.67	9.64	6.13	2.09	49.17	9.58	6.94	2.07	48.68	9.52	7.73	2.06	48.16	
		20	-	-	-	-	11.09	5.33	2.40	62.81	11.03	6.15	2.39	62.20	10.97	6.96	2.38	61.61	10.91	7.76	2.36	61.01	
	5	15	4.12	3.98	0.71	7.51	4.90	4.90	0.84	10.40	5.76	5.76	0.99	13.69	6.61	6.61	1.14	17.34	7.43	7.43	1.28	21.11	
		17	5.94	3.96	1.02	14.36	5.97	4.80	1.03	14.51	6.28	5.69	1.08	15.88	6.76	6.58	1.16	17.97	7.44	7.44	1.28	21.15	
		19	-	-	-	-	8.72	4.90	1.51	27.93	8.66	5.72	1.50	27.64	8.61	6.53	1.49	27.34	8.65	7.35	1.50	27.57	
		20	-	-	-	-	10.13	4.92	1.74	35.90	10.07	5.74	1.73	35.55	10.01	6.55	1.72	35.20	9.95	7.36	1.71	34.85	
6	15	3.70	3.66	0.53	3.63	4.47	4.47	0.64	5.92	5.33	5.33	0.76	8.73	6.20	6.20	0.89	11.34	7.05	7.05	1.01	14.11		
	17	4.63	3.42	0.66	6.47	5.01	4.34	0.72	7.71	5.58	5.28	0.80	9.46	6.26	6.20	0.90	11.50	7.06	7.06	1.01	14.12		
	19	-	-	-	-	7.57	4.43	1.09	15.87	7.52	5.25	1.08	15.67	7.58	6.09	1.09	15.89	7.84	6.95	1.13	16.89		
	20	-	-	-	-	9.08	4.49	1.30	21.71	9.02	5.31	1.30	21.49	8.97	6.13	1.29	21.27	8.93	6.94	1.28	21.12		

# 2-Pipe Duct MK-CBS Series



(Continued)

MK10A3HCBSLXG1MXE/ MK10A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	4.08	4.01	1.17	18.03	4.87	4.87	1.40	24.41	5.70	5.70	1.64	32.17	6.52	6.52	1.87	40.35	7.33	7.33	2.12	50.12	
		17	6.01	3.98	1.73	35.04	5.97	4.81	1.71	34.61	6.12	5.66	1.76	36.22	6.57	6.53	1.90	41.47	7.34	7.34	2.13	50.24	
		19	-	-	-	-	8.62	4.85	2.48	65.71	8.57	5.67	2.47	65.01	8.51	6.48	2.45	64.19	8.48	7.29	2.46	64.42	
		20	-	-	-	-	10.03	4.88	2.92	86.88	9.97	5.69	2.89	85.43	9.90	6.50	2.86	83.74	9.84	7.30	2.84	82.86	
	4	15	3.61	3.61	0.78	8.93	4.49	4.49	0.97	12.91	5.34	5.34	1.15	17.42	6.17	6.17	1.33	22.35	6.99	6.99	1.51	27.84	
		17	4.90	3.53	1.06	14.99	5.08	4.41	1.09	15.98	5.53	5.31	1.19	18.52	6.18	6.17	1.33	22.40	7.00	7.00	1.52	27.91	
		19	-	-	-	-	7.64	4.45	1.65	32.15	7.59	5.27	1.64	31.78	7.56	6.09	1.63	31.51	7.70	6.93	1.66	32.60	
		20	-	-	-	-	9.09	4.49	1.97	43.78	9.03	5.31	1.96	43.32	8.98	6.12	1.95	42.87	8.92	6.93	1.93	42.40	
	5	15	3.20	3.20	0.55	4.11	4.05	4.05	0.70	7.31	4.94	4.94	0.85	10.36	5.79	5.79	1.00	13.59	6.62	6.62	1.14	17.09	
		17	3.75	3.04	0.65	6.17	4.31	4.00	0.74	8.21	4.99	4.93	0.86	10.56	5.80	5.80	1.00	13.62	6.63	6.63	1.14	17.13	
		19	-	-	-	-	6.52	4.01	1.12	16.59	6.48	4.83	1.12	16.42	6.67	5.69	1.15	17.25	7.04	6.57	1.21	18.95	
		20	-	-	-	-	8.01	4.06	1.38	23.60	7.95	4.88	1.37	23.34	7.90	5.70	1.36	23.06	7.94	6.53	1.37	23.29	
	6	15	2.90	2.90	0.42	1.98	3.68	3.68	0.53	3.69	4.50	4.50	0.65	6.19	5.38	5.38	0.77	8.77	6.24	6.24	0.90	11.28	
		17	3.16	2.75	0.45	2.45	3.76	3.63	0.54	3.91	4.51	4.51	0.65	6.21	5.39	5.39	0.77	8.79	6.25	6.25	0.90	11.30	
		19	-	-	-	-	5.11	3.47	0.73	8.00	5.40	4.38	0.77	8.79	5.88	5.30	0.84	10.16	6.45	6.21	0.93	11.92	
		20	-	-	-	-	6.77	3.59	0.97	12.90	6.71	4.41	0.96	12.72	6.79	5.26	0.97	12.96	7.08	6.14	1.02	13.96	
	11	3	15	3.18	3.18	0.91	11.47	4.04	4.04	1.15	17.25	4.88	4.88	1.39	23.86	5.70	5.70	1.63	31.20	6.52	6.52	1.88	39.86
			17	3.85	3.11	1.10	15.87	4.24	4.01	1.21	18.69	4.88	4.88	1.39	23.88	5.71	5.71	1.63	31.27	6.53	6.53	1.88	39.96
			19	-	-	-	-	6.54	4.01	1.88	39.97	6.49	4.83	1.87	39.47	6.52	5.66	1.88	39.80	6.80	6.51	1.96	42.82
			20	-	-	-	-	7.92	4.02	2.27	55.24	7.88	4.85	2.26	55.03	7.84	5.67	2.26	54.95	7.80	6.48	2.25	54.37
4		15	2.75	2.75	0.59	5.01	3.64	3.64	0.78	8.84	4.51	4.51	0.97	12.71	5.35	5.35	1.15	17.03	6.18	6.18	1.32	21.78	
		17	2.95	2.68	0.63	5.97	3.68	3.63	0.79	9.00	4.51	4.51	0.97	12.73	5.36	5.36	1.15	17.07	6.19	6.19	1.33	21.84	
		19	-	-	-	-	5.37	3.56	1.15	17.10	5.44	4.42	1.17	17.49	5.77	5.30	1.24	19.38	6.29	6.17	1.35	22.45	
		20	-	-	-	-	6.86	3.62	1.47	26.06	6.81	4.44	1.46	25.75	6.78	5.26	1.45	25.52	6.95	6.11	1.49	26.65	
5		15	2.44	2.44	0.42	2.05	3.23	3.23	0.56	4.35	4.10	4.10	0.71	7.43	4.97	4.97	0.86	10.33	5.81	5.81	1.00	13.38	
		17	2.50	2.39	0.43	2.19	3.23	3.22	0.56	4.36	4.10	4.10	0.71	7.45	4.98	4.98	0.86	10.36	5.82	5.82	1.00	13.41	
		19	-	-	-	-	4.09	3.08	0.70	7.39	4.57	4.02	0.79	8.93	5.16	4.94	0.89	11.00	5.85	5.83	1.00	13.50	
		20	-	-	-	-	5.62	3.16	0.97	12.66	5.59	3.99	0.96	12.56	5.81	4.86	1.00	13.35	6.25	5.76	1.08	15.24	
6		15	2.07	2.07	0.30	1.20	2.92	2.92	0.42	2.06	3.70	3.70	0.53	3.90	4.54	4.54	0.65	6.33	5.42	5.42	0.78	8.69	
		17	2.08	2.07	0.30	1.21	2.92	2.92	0.42	2.06	3.70	3.70	0.53	3.91	4.55	4.55	0.65	6.34	5.43	5.43	0.78	8.71	
		19	-	-	-	-	3.27	2.72	0.47	2.81	3.87	3.63	0.55	4.38	4.59	4.54	0.66	6.47	5.43	5.43	0.78	8.72	
		20	-	-	-	-	4.01	2.59	0.58	4.84	4.38	3.51	0.63	5.86	4.97	4.46	0.71	7.47	5.62	5.39	0.80	9.23	

(Continued)

MK10A3HCBSLXG1MXE/ MK10A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	2.31	2.31	0.66	6.64	3.20	3.20	0.92	11.56	4.06	4.06	1.17	17.31	4.89	4.89	1.41	23.87	5.70	5.70	1.63	30.76
		17	2.32	2.32	0.67	6.69	3.21	3.21	0.92	11.59	4.06	4.06	1.17	17.36	4.89	4.89	1.41	23.92	5.71	5.71	1.63	30.84
		19	-	-	-	-	4.18	3.13	1.20	18.21	4.45	4.01	1.28	20.29	4.96	4.89	1.43	24.45	5.72	5.72	1.63	30.92
		20	-	-	-	-	5.62	3.16	1.61	29.99	5.57	3.98	1.59	29.52	5.65	4.83	1.61	30.23	5.97	5.69	1.71	33.37
	4	15	1.96	1.96	0.42	2.12	2.77	2.77	0.59	5.22	3.66	3.66	0.78	8.79	4.52	4.52	0.97	12.59	5.37	5.37	1.16	17.02
		17	1.96	1.95	0.42	2.12	2.77	2.77	0.59	5.24	3.67	3.67	0.79	8.81	4.53	4.53	0.97	12.62	5.37	5.37	1.16	17.06
		19	-	-	-	-	3.13	2.69	0.67	6.72	3.79	3.64	0.81	9.31	4.53	4.53	0.97	12.64	5.38	5.38	1.16	17.10
		20	-	-	-	-	4.31	2.69	0.92	11.57	4.46	3.57	0.96	12.28	4.91	4.48	1.06	14.58	5.47	5.37	1.18	17.59
	5	15	1.59	1.59	0.27	1.06	2.44	2.44	0.42	2.09	3.24	3.24	0.56	4.49	4.12	4.12	0.71	7.35	4.99	4.99	0.86	10.16
		17	1.59	1.59	0.27	1.06	2.44	2.44	0.42	2.10	3.24	3.24	0.56	4.50	4.13	4.13	0.71	7.37	5.00	5.00	0.86	10.18
		19	-	-	-	-	2.54	2.36	0.44	2.35	3.25	3.24	0.56	4.55	4.13	4.13	0.71	7.38	5.00	5.00	0.86	10.21
		20	-	-	-	-	2.96	2.21	0.51	3.57	3.54	3.15	0.61	5.53	4.26	4.10	0.73	7.76	5.02	5.01	0.86	10.25
	6	15	1.17	1.17	0.17	0.64	2.09	2.09	0.30	1.15	2.92	2.92	0.42	2.11	3.71	3.71	0.53	4.03	4.58	4.58	0.66	6.42
		17	1.17	1.17	0.17	0.64	2.09	2.09	0.30	1.15	2.92	2.92	0.42	2.12	3.72	3.72	0.53	4.04	4.59	4.59	0.66	6.43
		19	-	-	-	-	2.12	2.07	0.30	1.16	2.92	2.92	0.42	2.12	3.72	3.72	0.53	4.06	4.59	4.59	0.66	6.45
		20	-	-	-	-	2.35	1.94	0.34	1.31	3.03	2.85	0.43	2.34	3.74	3.71	0.54	4.11	4.60	4.59	0.66	6.45
15	3	15	1.47	1.47	0.42	2.14	2.32	2.32	0.66	6.53	3.21	3.21	0.91	11.28	4.06	4.06	1.17	17.10	4.88	4.88	1.39	23.19
		17	1.47	1.47	0.42	2.14	2.33	2.33	0.66	6.55	3.21	3.21	0.92	11.30	4.06	4.06	1.17	17.14	4.89	4.89	1.40	23.24
		19	-	-	-	-	2.37	2.32	0.68	6.74	3.21	3.20	0.92	11.30	4.07	4.07	1.17	17.18	4.89	4.89	1.40	23.31
		20	-	-	-	-	3.01	2.25	0.86	10.14	3.46	3.17	0.99	12.87	4.10	4.07	1.18	17.38	4.90	4.90	1.40	23.34
	4	15	1.10	1.10	0.24	0.88	1.96	1.96	0.42	2.17	2.79	2.79	0.60	5.39	3.68	3.68	0.79	8.74	4.54	4.54	0.98	12.62
		17	1.10	1.10	0.24	0.88	1.96	1.96	0.42	2.17	2.79	2.79	0.60	5.40	3.69	3.69	0.79	8.76	4.55	4.55	0.98	12.65
		19	-	-	-	-	1.96	1.95	0.42	2.17	2.80	2.80	0.60	5.42	3.69	3.69	0.79	8.78	4.56	4.56	0.98	12.68
		20	-	-	-	-	2.11	1.86	0.45	2.68	2.84	2.79	0.61	5.58	3.69	3.68	0.79	8.77	4.56	4.56	0.98	12.69
	5	15	0.66	0.66	0.11	0.42	1.61	1.61	0.28	1.03	2.45	2.45	0.42	2.23	3.27	3.27	0.56	4.74	4.16	4.16	0.72	7.40
		17	0.66	0.66	0.11	0.42	1.62	1.62	0.28	1.03	2.45	2.45	0.42	2.23	3.27	3.27	0.56	4.75	4.17	4.17	0.72	7.42
		19	-	-	-	-	1.62	1.62	0.28	1.03	2.45	2.45	0.42	2.24	3.28	3.28	0.56	4.76	4.17	4.17	0.72	7.44
		20	-	-	-	-	1.66	1.58	0.29	1.05	2.45	2.45	0.42	2.24	3.28	3.28	0.57	4.77	4.17	4.17	0.72	7.45
	6	15	-	-	-	-	1.20	1.20	0.17	0.62	2.12	2.12	0.30	1.12	2.93	2.93	0.42	2.23	3.74	3.74	0.54	4.26
		17	-	-	-	-	1.20	1.20	0.17	0.62	2.12	2.12	0.30	1.12	2.93	2.93	0.42	2.24	3.75	3.75	0.54	4.27
		19	-	-	-	-	1.20	1.20	0.17	0.62	2.12	2.12	0.30	1.12	2.93	2.93	0.42	2.25	3.75	3.75	0.54	4.28
		20	-	-	-	-	1.20	1.19	0.17	0.62	2.12	2.12	0.30	1.12	2.94	2.94	0.42	2.25	3.75	3.75	0.54	4.29

Abbreviations:

EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK10A3HCBSLXG1MXE/ MK10A3UCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	8.97	0.97	11.04	7.98	0.86	9.02	6.98	0.75	7.14	5.97	0.64	5.48
	10	8.26	0.71	6.55	7.24	0.62	5.23	6.20	0.54	4.02	5.13	0.44	2.91
	12	7.46	0.54	4.08	6.38	0.46	3.13	5.28	0.38	2.13	4.27	0.31	1.22
	14	6.51	0.40	2.38	5.47	0.34	1.54	4.49	0.28	0.91	3.39	0.21	0.57
	16	5.70	0.31	1.18	4.68	0.25	0.75	3.52	0.19	0.54	2.20	0.12	0.34
45	8	11.43	1.23	16.27	10.44	1.13	13.95	9.45	1.02	11.73	8.47	0.91	9.71
	10	10.79	0.93	10.09	9.80	0.85	8.53	8.80	0.76	7.09	7.79	0.67	5.76
	12	10.11	0.73	6.65	9.09	0.65	5.54	8.06	0.58	4.52	7.01	0.51	3.57
	14	9.34	0.58	4.48	8.27	0.51	3.65	7.19	0.44	2.88	6.07	0.37	2.09
	16	8.46	0.46	3.05	7.34	0.40	2.34	6.25	0.34	1.62	5.24	0.28	1.01
50	8	13.86	1.50	22.38	12.87	1.39	19.57	11.88	1.28	17.04	10.90	1.18	14.68
	10	13.28	1.15	14.14	12.28	1.06	12.35	11.29	0.98	10.68	10.30	0.89	9.12
	12	12.64	0.91	9.50	11.64	0.84	8.23	10.63	0.76	7.05	9.62	0.69	5.94
	14	11.94	0.74	6.66	10.94	0.67	5.72	9.91	0.61	4.83	8.88	0.55	4.00
	16	11.23	0.61	4.78	10.18	0.55	4.06	9.12	0.49	3.37	8.03	0.43	2.72
55	8	16.28	1.75	28.94	15.28	1.65	25.91	14.29	1.54	23.05	13.31	1.44	20.46
	10	15.72	1.36	18.52	14.73	1.27	16.51	13.73	1.18	14.63	12.75	1.10	12.90
	12	15.14	1.09	12.68	14.13	1.02	11.25	13.13	0.94	9.91	12.13	0.87	8.65
	14	14.52	0.90	9.10	13.50	0.83	8.03	12.49	0.77	7.02	11.51	0.71	6.07
	16	13.85	0.75	6.70	12.82	0.69	5.87	11.79	0.64	5.07	10.75	0.58	4.33
60	8	18.70	2.02	36.33	17.70	1.91	33.05	16.70	1.80	29.78	15.70	1.69	26.69
	10	18.17	1.57	23.47	17.16	1.48	21.25	16.16	1.40	19.13	15.17	1.31	17.13
	12	17.61	1.27	16.22	16.60	1.19	14.63	15.60	1.12	13.13	14.60	1.05	11.71
	14	17.02	1.05	11.70	16.00	0.99	10.52	14.99	0.92	9.40	13.99	0.86	8.33
	16	16.40	0.89	8.77	15.38	0.83	7.85	14.36	0.78	6.97	13.34	0.72	6.15

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

**Cooling Capacity Table**

MK12A3SCBSLXG1MXE/ MK12A3HCBLSLXG1MXE/ MK12A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temperature (D.B.)																					
		21				23				25				27				29					
		TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD		
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	8.92	6.83	2.57	48.68	8.88	7.82	2.56	48.34	9.12	8.83	2.63	50.67	9.82	9.82	2.81	56.96	10.79	10.79	3.11	67.72	
		17	11.85	6.85	3.40	78.95	11.78	7.84	3.38	78.16	11.72	8.82	3.37	77.73	11.66	9.79	3.37	77.75	11.66	10.76	3.37	77.74	
		19	-	-	-	-	14.93	7.87	4.30	118.73	14.85	8.85	4.28	117.87	14.78	9.83	4.28	117.91	14.71	10.79	4.26	117.13	
		20	-	-	-	-	16.61	7.90	4.81	144.64	16.53	8.88	4.81	144.32	16.43	9.85	4.75	141.63	16.34	10.81	4.72	140.04	
	4	15	7.76	6.29	1.66	22.98	7.98	7.33	1.71	24.09	8.50	8.39	1.82	26.89	9.39	9.39	2.02	31.93	10.37	10.37	2.22	37.84	
		17	10.81	6.37	2.32	40.60	10.74	7.36	2.31	40.19	10.68	8.34	2.29	39.78	10.67	9.32	2.29	39.75	10.89	10.33	2.34	41.17	
		19	-	-	-	-	13.95	7.42	3.01	63.84	13.87	8.40	3.00	63.23	13.80	9.37	2.98	62.63	13.72	10.34	2.96	62.03	
		20	-	-	-	-	15.61	7.43	3.36	76.96	15.54	8.42	3.35	76.77	15.46	9.40	3.34	76.41	15.38	10.36	3.32	75.68	
	5	15	6.65	5.74	1.14	12.03	7.18	6.85	1.23	13.72	7.96	7.94	1.37	16.47	8.95	8.95	1.54	20.11	9.92	9.92	1.70	23.83	
		17	9.62	5.84	1.65	22.55	9.56	6.83	1.64	22.32	9.54	7.82	1.64	22.21	9.76	8.85	1.67	23.11	10.21	9.89	1.75	25.01	
		19	-	-	-	-	12.87	6.93	2.22	37.45	12.79	7.91	2.21	37.09	12.72	8.89	2.19	36.74	12.65	9.85	2.18	36.38	
		20	-	-	-	-	14.55	6.95	2.50	46.00	14.47	7.94	2.49	45.56	14.39	8.92	2.47	45.13	14.31	9.88	2.46	44.70	
	6	15	5.73	5.23	0.82	6.09	6.46	6.34	0.93	8.13	7.42	7.42	1.06	10.65	8.46	8.46	1.21	13.34	9.47	9.47	1.36	16.16	
		17	8.28	5.25	1.19	12.82	8.24	6.25	1.18	12.71	8.48	7.31	1.22	13.36	8.95	8.38	1.28	14.66	9.61	9.45	1.38	16.55	
		19	-	-	-	-	11.63	6.39	1.66	22.77	11.56	7.38	1.65	22.54	11.50	8.35	1.64	22.31	11.48	9.34	1.64	22.24	
		20	-	-	-	-	13.41	6.45	1.93	29.23	13.33	7.44	1.91	28.95	13.23	8.41	1.89	28.40	13.16	9.38	1.88	28.12	
	7	3	15	6.72	5.81	1.94	29.54	7.07	6.86	2.05	32.30	7.88	7.87	2.28	38.90	8.85	8.85	2.54	47.03	9.82	9.82	2.83	56.75
			17	9.65	5.84	2.77	54.60	9.59	6.83	2.76	54.00	9.52	7.81	2.74	53.41	9.58	8.81	2.76	53.99	9.96	9.82	2.88	58.17
			19	-	-	-	-	12.76	6.87	3.68	89.09	12.68	7.86	3.66	88.18	12.61	8.83	3.64	87.62	12.56	9.80	3.64	87.70
			20	-	-	-	-	14.44	6.89	4.18	111.42	14.37	7.88	4.18	111.40	14.29	8.86	4.16	110.31	14.18	9.82	4.10	107.50
		4	15	5.79	5.32	1.25	13.90	6.46	6.41	1.39	16.61	7.43	7.43	1.60	21.09	8.42	8.42	1.81	26.15	9.41	9.41	2.04	31.94
			17	8.49	5.34	1.83	26.47	8.43	6.33	1.81	26.16	8.48	7.34	1.83	26.45	8.82	8.38	1.90	28.32	9.45	9.42	2.05	32.20
			19	-	-	-	-	11.70	6.41	2.53	46.49	11.63	7.40	2.52	46.01	11.56	8.37	2.50	45.55	11.49	9.34	2.49	45.06
			20	-	-	-	-	13.37	6.43	2.88	58.09	13.29	7.41	2.86	57.52	13.22	8.39	2.85	56.96	13.14	9.36	2.83	56.39
5		15	4.97	4.80	0.85	6.86	5.90	5.90	1.02	9.71	6.95	6.95	1.20	12.82	7.97	7.97	1.37	16.24	8.96	8.96	1.54	19.78	
		17	7.12	4.76	1.23	13.33	7.17	5.79	1.23	13.50	7.56	6.86	1.30	14.78	8.16	7.94	1.41	16.90	8.98	8.97	1.54	19.82	
		19	-	-	-	-	10.48	5.89	1.80	25.79	10.41	6.88	1.79	25.51	10.34	7.86	1.78	25.23	10.41	8.86	1.79	25.50	
		20	-	-	-	-	12.21	5.94	2.10	33.57	12.14	6.93	2.09	33.23	12.07	7.91	2.08	32.90	12.00	8.88	2.07	32.57	
6		15	4.49	4.43	0.65	3.32	5.40	5.40	0.77	5.40	6.43	6.43	0.92	8.09	7.48	7.48	1.07	10.60	8.51	8.51	1.22	13.29	
		17	5.57	4.12	0.80	5.87	6.02	5.23	0.86	7.05	6.71	6.36	0.96	8.77	7.54	7.47	1.08	10.74	8.52	8.52	1.23	13.32	
		19	-	-	-	-	9.09	5.33	1.30	14.75	9.03	6.32	1.29	14.56	9.11	7.33	1.31	14.80	9.44	8.39	1.35	15.75	
		20	-	-	-	-	10.93	5.41	1.57	20.25	10.86	6.40	1.56	20.04	10.80	7.39	1.55	19.83	10.76	8.37	1.55	19.71	



# 2-Pipe Duct MK-CBS Series



(Continued)

MK12A3SCBSLXG1MXE/ MK12A3HCBSLXG1MXE/ MK12A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa	kW	kW	m³/h	kPa
9	3	15	4.93	4.85	1.42	17.03	5.88	5.88	1.69	22.88	6.89	6.89	1.99	30.44	7.87	7.87	2.26	37.82	8.85	8.85	2.56	46.99
		17	7.25	4.81	2.08	32.76	7.20	5.81	2.07	32.37	7.39	6.83	2.12	33.92	7.92	7.87	2.28	38.28	8.86	8.86	2.57	47.11
		19	-	-	-	-	10.43	5.87	3.03	62.54	10.37	6.86	3.01	61.89	10.31	7.84	2.99	61.23	10.23	8.80	2.95	59.68
		20	-	-	-	-	12.09	5.88	3.49	80.02	12.02	6.87	3.47	79.19	11.95	7.85	3.45	78.35	11.88	8.82	3.43	77.55
	4	15	4.35	4.34	0.93	8.32	5.41	5.41	1.16	12.09	6.44	6.44	1.39	16.29	7.45	7.45	1.61	20.95	8.44	8.44	1.83	26.10
		17	5.90	4.26	1.27	14.06	6.12	5.32	1.32	14.90	6.66	6.40	1.44	17.29	7.46	7.45	1.61	21.00	8.45	8.45	1.83	26.16
		19	-	-	-	-	9.21	5.37	1.98	30.05	9.16	6.36	1.97	29.72	9.11	7.35	1.96	29.47	9.30	8.36	2.00	30.52
		20	-	-	-	-	10.96	5.42	2.38	40.96	10.87	6.40	2.34	39.99	10.80	7.38	2.33	39.57	10.73	8.35	2.31	39.13
	5	15	3.88	3.88	0.67	3.75	4.88	4.88	0.84	6.73	5.95	5.95	1.02	9.69	6.99	6.99	1.20	12.72	7.99	7.99	1.38	16.01
		17	4.51	3.67	0.78	5.61	5.18	4.81	0.89	7.59	6.01	5.94	1.04	9.86	6.99	6.99	1.20	12.75	8.00	8.00	1.38	16.05
		19	-	-	-	-	7.83	4.82	1.35	15.44	7.80	5.83	1.34	15.36	8.03	6.87	1.38	16.11	8.49	7.93	1.46	17.73
		20	-	-	-	-	9.64	4.89	1.66	22.02	9.58	5.89	1.65	21.78	9.51	6.87	1.64	21.52	9.57	7.87	1.65	21.76
6	15	3.51	3.51	0.50	1.85	4.46	4.46	0.64	3.36	5.43	5.43	0.78	5.66	6.48	6.48	0.93	8.19	7.53	7.53	1.08	10.55	
	17	3.84	3.33	0.55	2.26	4.55	4.40	0.65	3.57	5.44	5.44	0.78	5.68	6.49	6.49	0.93	8.21	7.54	7.54	1.08	10.58	
	19	-	-	-	-	6.10	4.17	0.88	7.31	6.47	5.27	0.93	8.13	7.06	6.39	1.01	9.46	7.77	7.49	1.11	11.13	
	20	-	-	-	-	8.12	4.31	1.17	11.98	8.05	5.31	1.16	11.81	8.16	6.33	1.17	12.06	8.53	7.40	1.22	13.03	
11	3	15	3.84	3.84	1.09	10.74	4.88	4.88	1.39	16.16	5.89	5.89	1.68	22.36	6.89	6.89	1.97	29.25	7.87	7.87	2.26	37.10
		17	4.65	3.76	1.33	14.97	5.11	4.84	1.46	17.48	5.89	5.89	1.68	22.38	6.90	6.90	1.97	29.32	7.88	7.88	2.26	37.20
		19	-	-	-	-	7.87	4.83	2.26	37.06	7.81	5.83	2.24	36.57	7.86	6.83	2.25	36.95	8.21	7.86	2.36	40.11
		20	-	-	-	-	9.59	4.87	2.76	52.60	9.53	5.86	2.74	52.00	9.47	6.85	2.73	51.41	9.39	7.82	2.68	50.04
	4	15	3.32	3.32	0.71	4.56	4.38	4.38	0.94	8.26	5.44	5.44	1.16	11.90	6.46	6.46	1.38	15.96	7.46	7.46	1.60	20.42
		17	3.56	3.23	0.76	5.44	4.43	4.38	0.95	8.40	5.44	5.44	1.17	11.93	6.47	6.47	1.39	15.99	7.47	7.47	1.60	20.47
		19	-	-	-	-	6.46	4.30	1.38	15.94	6.55	5.33	1.40	16.33	6.96	6.39	1.49	18.13	7.59	7.46	1.63	21.03
		20	-	-	-	-	8.27	4.36	1.77	24.33	8.21	5.36	1.76	24.05	8.17	6.35	1.75	23.85	8.38	7.38	1.80	24.94
	5	15	2.96	2.96	0.51	1.89	3.90	3.90	0.67	3.96	4.94	4.94	0.85	6.90	6.00	6.00	1.03	9.67	7.02	7.02	1.21	12.65
		17	3.04	2.90	0.52	2.02	3.90	3.90	0.67	3.97	4.94	4.94	0.85	6.92	6.01	6.01	1.03	9.69	7.02	7.02	1.20	12.55
		19	-	-	-	-	4.89	3.70	0.84	6.78	5.49	4.84	0.94	8.30	6.22	5.96	1.07	10.27	7.05	7.03	1.21	12.64
		20	-	-	-	-	6.74	3.80	1.16	11.76	6.71	4.81	1.16	11.67	7.02	5.87	1.21	12.61	7.52	6.94	1.29	14.09
6	15	2.50	2.50	0.36	1.16	3.54	3.54	0.51	1.89	4.48	4.48	0.64	3.55	5.47	5.47	0.78	5.82	6.53	6.53	0.93	8.12	
	17	2.52	2.50	0.36	1.16	3.54	3.54	0.51	1.90	4.48	4.48	0.64	3.56	5.48	5.48	0.78	5.84	6.54	6.54	0.94	8.14	
	19	-	-	-	-	3.97	3.29	0.57	2.58	4.67	4.38	0.67	3.99	5.53	5.47	0.79	5.95	6.55	6.54	0.94	8.15	
	20	-	-	-	-	4.83	3.13	0.69	4.38	5.26	4.22	0.75	5.33	5.96	5.37	0.85	6.91	6.76	6.49	0.97	8.61	

(Continued)

MK12A3SCBSLXG1MXE/ MK12A3HCBSLXG1MXE/ MK12A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	2.79	2.79	0.80	6.14	3.86	3.86	1.11	10.83	4.90	4.90	1.41	16.23	5.90	5.90	1.70	22.38	6.88	6.88	1.97	28.83
		17	2.79	2.79	0.80	6.18	3.87	3.87	1.11	10.85	4.90	4.90	1.41	16.26	5.91	5.91	1.70	22.43	6.89	6.89	1.97	28.90
		19	-	-	-	-	5.03	3.77	1.45	17.00	5.37	4.84	1.54	18.98	5.98	5.91	1.72	22.91	6.90	6.90	1.97	28.98
		20	-	-	-	-	6.78	3.81	1.94	28.01	6.71	4.80	1.92	27.57	6.81	5.83	1.95	28.27	7.21	6.87	2.06	31.25
	4	15	2.38	2.38	0.51	1.95	3.35	3.35	0.72	4.86	4.41	4.41	0.95	8.22	5.46	5.46	1.17	11.79	6.48	6.48	1.40	15.95
		17	2.37	2.37	0.51	1.94	3.35	3.35	0.72	4.88	4.42	4.42	0.95	8.24	5.46	5.46	1.17	11.82	6.49	6.49	1.40	15.99
		19	-	-	-	-	3.75	3.24	0.80	6.19	4.56	4.39	0.98	8.69	5.47	5.47	1.17	11.84	6.50	6.50	1.40	16.03
		20	-	-	-	-	5.17	3.24	1.11	10.72	5.37	4.30	1.15	11.44	5.89	5.39	1.26	13.44	6.60	6.48	1.42	16.47
	5	15	1.92	1.92	0.33	1.02	2.96	2.96	0.51	1.92	3.91	3.91	0.67	4.09	4.97	4.97	0.85	6.87	6.02	6.02	1.03	9.51
		17	1.92	1.92	0.33	1.02	2.96	2.96	0.51	1.93	3.91	3.91	0.67	4.10	4.97	4.97	0.85	6.88	6.03	6.03	1.03	9.53
		19	-	-	-	-	3.08	2.87	0.53	2.16	3.93	3.91	0.67	4.14	4.98	4.98	0.85	6.90	6.04	6.04	1.04	9.56
		20	-	-	-	-	3.58	2.67	0.61	3.25	4.26	3.79	0.73	5.05	5.12	4.94	0.88	7.23	6.05	6.04	1.04	9.59
6	15	1.41	1.41	0.20	0.61	2.52	2.52	0.36	1.10	3.53	3.53	0.51	1.94	4.49	4.49	0.64	3.67	5.52	5.52	0.79	5.95	
	17	1.41	1.41	0.20	0.61	2.53	2.53	0.36	1.10	3.54	3.54	0.51	1.94	4.49	4.49	0.64	3.68	5.52	5.52	0.79	5.97	
	19	-	-	-	-	2.56	2.50	0.37	1.12	3.54	3.54	0.51	1.94	4.50	4.50	0.64	3.69	5.53	5.53	0.79	5.99	
	20	-	-	-	-	2.84	2.34	0.41	1.25	3.68	3.45	0.53	2.15	4.52	4.49	0.65	3.74	5.53	5.53	0.79	5.99	
15	3	15	1.78	1.78	0.51	1.96	2.80	2.80	0.80	6.09	3.87	3.87	1.10	10.56	4.90	4.90	1.41	16.03	5.89	5.89	1.68	21.74
		17	1.78	1.78	0.51	1.96	2.80	2.80	0.80	6.11	3.87	3.87	1.11	10.59	4.91	4.91	1.41	16.07	5.90	5.90	1.69	21.79
		19	-	-	-	-	2.85	2.79	0.81	6.28	3.87	3.86	1.11	10.59	4.92	4.92	1.41	16.11	5.91	5.91	1.69	21.85
		20	-	-	-	-	3.62	2.71	1.03	9.42	4.17	3.82	1.19	12.02	4.95	4.91	1.42	16.29	5.91	5.91	1.69	21.88
	4	15	1.33	1.33	0.28	0.85	2.37	2.37	0.51	1.98	3.36	3.36	0.72	4.95	4.44	4.44	0.95	8.18	5.48	5.48	1.18	11.82
		17	1.33	1.33	0.29	0.85	2.37	2.37	0.51	1.99	3.36	3.36	0.72	4.96	4.44	4.44	0.95	8.20	5.49	5.49	1.18	11.85
		19	-	-	-	-	2.37	2.36	0.51	1.99	3.37	3.37	0.72	4.98	4.45	4.45	0.95	8.22	5.50	5.50	1.18	11.88
		20	-	-	-	-	2.56	2.25	0.55	2.46	3.42	3.35	0.73	5.13	4.45	4.44	0.95	8.21	5.50	5.50	1.19	11.89
	5	15	0.79	0.79	0.14	0.40	1.95	1.95	0.34	0.99	2.97	2.97	0.51	2.04	3.94	3.94	0.68	4.33	5.01	5.01	0.86	6.92
		17	0.80	0.80	0.14	0.40	1.95	1.95	0.34	0.99	2.97	2.97	0.51	2.04	3.95	3.95	0.68	4.34	5.02	5.02	0.87	6.94
		19	-	-	-	-	1.95	1.95	0.34	0.99	2.97	2.97	0.51	2.05	3.95	3.95	0.68	4.36	5.03	5.03	0.87	6.95
		20	-	-	-	-	2.00	1.91	0.34	1.01	2.97	2.97	0.51	2.05	3.95	3.95	0.68	4.37	5.03	5.03	0.87	6.96
6	15	-	-	-	-	1.44	1.44	0.21	0.60	2.56	2.56	0.37	1.07	3.55	3.55	0.51	2.04	4.51	4.51	0.65	3.88	
	17	-	-	-	-	1.45	1.45	0.21	0.60	2.56	2.56	0.37	1.07	3.55	3.55	0.51	2.05	4.52	4.52	0.65	3.90	
	19	-	-	-	-	1.45	1.45	0.21	0.60	2.56	2.56	0.37	1.07	3.56	3.56	0.51	2.06	4.53	4.53	0.65	3.91	
	20	-	-	-	-	1.44	1.44	0.21	0.60	2.56	2.56	0.37	1.07	3.56	3.56	0.51	2.06	4.53	4.53	0.65	3.92	

Abbreviations:

EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK12A3SCBSLXG1MXE/ MK12A3HCBLSLXG1MXE/ MK12A3UCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	10.73	1.16	10.17	9.54	1.03	8.31	8.33	0.90	6.57	7.12	0.77	5.03
	10	9.86	0.85	6.02	8.63	0.74	4.80	7.38	0.64	3.68	6.08	0.53	2.64
	12	8.88	0.64	3.73	7.57	0.55	2.83	6.28	0.45	1.88	5.11	0.37	1.08
	14	7.74	0.48	2.11	6.53	0.40	1.36	5.35	0.33	0.81	4.02	0.25	0.54
	16	6.81	0.37	1.05	5.57	0.30	0.69	4.17	0.23	0.51	2.59	0.14	0.32
45	8	13.68	1.48	15.09	12.48	1.35	12.83	11.30	1.22	10.81	10.13	1.09	8.95
	10	12.91	1.11	9.29	11.70	1.01	7.86	10.50	0.91	6.53	9.30	0.80	5.30
	12	12.07	0.87	6.12	10.84	0.78	5.09	9.60	0.69	4.14	8.34	0.60	3.27
	14	11.12	0.69	4.11	9.84	0.61	3.34	8.53	0.53	2.61	7.21	0.44	1.86
	16	10.04	0.54	2.77	8.72	0.47	2.09	7.45	0.40	1.43	6.27	0.34	0.89
50	8	16.59	1.79	20.55	15.40	1.66	18.06	14.22	1.53	15.72	13.05	1.41	13.54
	10	15.89	1.37	13.05	14.69	1.27	11.39	13.50	1.17	9.84	12.31	1.06	8.40
	12	15.12	1.09	8.75	13.91	1.00	7.58	12.70	0.91	6.49	11.49	0.83	5.46
	14	14.29	0.88	6.13	13.06	0.80	5.26	11.82	0.73	4.44	10.58	0.65	3.67
	16	13.38	0.72	4.39	12.13	0.65	3.72	10.85	0.59	3.08	9.53	0.51	2.48
55	8	19.50	2.10	26.73	18.30	1.97	23.92	17.12	1.85	21.39	15.95	1.72	18.88
	10	18.83	1.62	17.09	17.63	1.52	15.24	16.43	1.42	13.49	15.25	1.32	11.90
	12	18.11	1.30	11.69	16.90	1.21	10.38	15.70	1.13	9.14	14.51	1.04	7.97
	14	17.36	1.07	8.39	16.14	1.00	7.40	14.93	0.92	6.47	13.71	0.85	5.59
	16	16.55	0.89	6.17	15.30	0.83	5.38	14.07	0.76	4.66	12.82	0.69	3.98
60	8	22.41	2.42	33.64	21.20	2.29	30.45	20.00	2.15	27.43	18.80	2.03	24.64
	10	21.77	1.88	21.67	20.55	1.78	19.62	19.35	1.67	17.66	18.16	1.57	15.81
	12	21.08	1.52	14.97	19.87	1.43	13.50	18.67	1.34	12.11	17.47	1.26	10.80
	14	20.36	1.25	10.79	19.14	1.18	9.70	17.93	1.10	8.66	16.73	1.03	7.68
	16	19.61	1.06	8.08	18.39	0.99	7.23	17.16	0.93	6.42	15.94	0.86	5.66

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

Cooling Capacity Table

MK14A3SCBSLXG1MXE/ MK14A3HCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	10.27	7.82	2.97	67.58	10.22	8.94	2.95	66.96	10.44	10.08	2.99	68.69	11.21	11.21	3.22	77.88	12.32	12.32	3.56	93.03	
		17	13.59	7.85	3.92	109.65	13.54	8.98	3.92	109.54	13.46	10.09	3.90	108.74	13.39	11.19	3.88	107.72	13.36	12.28	3.87	107.29	
		19	-	-	-	-	17.09	9.00	4.93	163.67	17.00	10.12	4.90	162.10	16.90	11.22	4.88	160.53	16.81	12.31	4.85	159.00	
		20	-	-	-	-	18.97	9.02	5.47	196.54	18.87	10.13	5.44	194.65	18.77	11.23	5.41	192.82	18.67	12.33	5.39	191.07	
	4	15	9.05	7.25	1.94	32.41	9.23	8.42	1.98	33.56	9.78	9.61	2.10	37.09	10.75	10.75	2.31	43.75	11.86	11.86	2.55	51.86	
		17	12.49	7.33	2.70	57.17	12.42	8.46	2.68	56.61	12.34	9.57	2.66	55.70	12.30	10.67	2.65	55.37	12.52	11.82	2.70	57.41	
		19	-	-	-	-	16.03	8.51	3.47	88.38	15.95	9.63	3.45	87.53	15.83	10.72	3.40	85.42	15.76	11.82	3.40	85.42	
		20	-	-	-	-	17.91	8.52	3.86	106.38	17.83	9.65	3.86	106.31	17.75	10.76	3.84	105.67	17.65	11.85	3.82	104.66	
	5	15	7.87	6.68	1.36	17.48	8.38	7.92	1.44	19.49	9.17	9.12	1.57	22.57	10.27	10.27	1.76	27.40	11.39	11.39	1.96	33.01	
		17	11.25	6.77	1.94	32.26	11.19	7.90	1.93	31.94	11.13	9.02	1.92	31.67	11.32	10.17	1.95	32.59	11.78	11.35	2.03	34.93	
		19	-	-	-	-	14.86	7.98	2.56	51.96	14.78	9.10	2.55	51.49	14.71	10.21	2.54	51.17	14.61	11.30	2.51	50.26	
		20	-	-	-	-	16.78	8.01	2.88	63.91	16.69	9.13	2.87	63.39	16.61	10.24	2.86	63.03	16.52	11.34	2.85	62.46	
	6	15	6.74	6.07	0.96	9.63	7.59	7.38	1.09	12.01	8.61	8.61	1.24	14.90	9.76	9.76	1.40	18.33	10.89	10.89	1.56	22.11	
		17	9.82	6.14	1.40	18.46	9.75	7.27	1.39	18.25	9.94	8.45	1.42	18.86	10.41	9.66	1.49	20.43	11.09	10.86	1.59	22.80	
		19	-	-	-	-	13.60	7.42	1.95	32.49	13.52	8.55	1.94	32.18	13.45	9.66	1.93	31.87	13.39	10.76	1.92	31.63	
		20	-	-	-	-	15.57	7.47	2.24	41.02	15.48	8.60	2.22	40.63	15.40	9.71	2.21	40.25	15.29	10.80	2.19	39.50	
	7	3	15	7.75	6.65	2.24	40.86	8.11	7.83	2.33	43.87	8.99	8.99	2.58	52.47	10.11	10.11	2.91	64.41	11.21	11.21	3.23	77.06
			17	11.10	6.69	3.20	75.70	11.03	7.82	3.18	74.89	10.96	8.94	3.16	74.10	11.00	10.06	3.17	74.51	11.39	11.20	3.28	79.28
			19	-	-	-	-	14.63	7.86	4.24	123.82	14.56	8.99	4.24	123.86	14.48	10.10	4.22	122.70	14.40	11.19	4.19	121.52
			20	-	-	-	-	16.54	7.89	4.83	155.35	16.45	9.01	4.80	153.91	16.36	10.12	4.77	152.41	16.27	11.22	4.75	150.91
4		15	6.74	6.13	1.45	19.33	7.46	7.36	1.60	23.01	8.53	8.53	1.85	29.27	9.64	9.64	2.08	35.82	10.76	10.76	2.33	43.71	
		17	9.86	6.15	2.12	37.17	9.80	7.28	2.11	36.77	9.82	8.42	2.11	36.89	10.16	9.59	2.19	39.14	10.83	10.77	2.34	44.17	
		19	-	-	-	-	13.47	7.36	2.91	64.21	13.40	8.48	2.90	63.66	13.33	9.60	2.89	63.33	13.25	10.69	2.87	62.65	
		20	-	-	-	-	15.40	7.39	3.33	81.08	15.31	8.51	3.31	80.29	15.22	9.62	3.29	79.49	15.14	10.72	3.27	78.67	
5		15	5.84	5.58	1.00	10.33	6.85	6.85	1.18	13.56	8.02	8.02	1.38	17.72	9.16	9.16	1.58	22.27	10.30	10.30	1.78	27.41	
		17	8.45	5.55	1.45	19.34	8.45	6.70	1.45	19.34	8.81	7.91	1.52	20.78	9.43	9.12	1.62	23.37	10.32	10.31	1.78	27.49	
		19	-	-	-	-	12.18	6.81	2.10	36.28	12.11	7.93	2.09	35.91	12.04	9.05	2.07	35.53	12.06	10.17	2.08	35.65	
		20	-	-	-	-	14.16	6.86	2.45	47.43	14.08	7.99	2.44	46.96	14.00	9.10	2.42	46.51	13.92	10.20	2.41	46.06	
6		15	5.15	5.07	0.74	5.18	6.26	6.26	0.90	8.32	7.47	7.47	1.07	11.49	8.65	8.65	1.24	14.73	9.80	9.80	1.41	18.28	
		17	6.73	4.85	0.96	9.56	7.19	6.11	1.03	10.72	7.89	7.39	1.13	12.59	8.76	8.63	1.26	15.03	9.81	9.81	1.41	18.32	
		19	-	-	-	-	10.76	6.23	1.55	21.39	10.69	7.35	1.54	21.15	10.71	8.49	1.54	21.22	11.02	9.67	1.58	22.28	
		20	-	-	-	-	12.78	6.29	1.83	28.62	12.70	7.42	1.82	28.33	12.62	8.53	1.81	28.04	12.57	9.65	1.81	27.93	

# 2-Pipe Duct MK-CBS Series



(Continued)

MK14A3SCBSLXG1MXE/ MK14A3HCBLSLXG1MXE																							
EWT	ΔT	Indoor temperature (D.B.)																					
		21				23				25				27				29					
		TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD		
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	5.69	5.56	1.63	23.42	6.75	6.75	1.95	31.84	7.87	7.87	2.26	41.06	8.99	8.99	2.59	51.72	10.10	10.10	2.91	63.34	
		17	8.42	5.53	2.44	46.68	8.35	6.66	2.42	46.06	8.52	7.83	2.47	47.70	9.07	8.99	2.61	52.53	10.11	10.11	2.91	63.49	
		19	-	-	-	-	11.99	6.72	3.49	86.71	11.92	7.84	3.46	85.79	11.82	8.95	3.41	83.49	11.75	10.05	3.39	82.60	
		20	-	-	-	-	13.90	6.74	4.05	112.50	13.82	7.87	4.02	111.38	13.71	8.97	3.96	108.50	13.63	10.07	3.94	107.40	
	4	15	5.05	5.05	1.09	11.68	6.24	6.24	1.34	16.76	7.40	7.40	1.60	22.49	8.53	8.53	1.84	28.58	9.65	9.65	2.08	35.35	
		17	6.98	4.95	1.51	20.28	7.15	6.13	1.54	21.19	7.71	7.36	1.67	24.23	8.55	8.54	1.84	28.67	9.66	9.66	2.08	35.44	
		19	-	-	-	-	10.72	6.20	2.32	42.72	10.65	7.32	2.31	42.27	10.58	8.44	2.29	41.79	10.74	9.58	2.33	42.88	
		20	-	-	-	-	12.66	6.23	2.75	57.06	12.58	7.36	2.73	56.49	12.51	8.48	2.71	55.90	12.43	9.58	2.70	55.30	
	5	15	4.47	4.47	0.77	5.92	5.69	5.69	0.98	9.74	6.89	6.89	1.19	13.46	8.05	8.05	1.39	17.56	9.18	9.18	1.58	22.03	
		17	5.42	4.30	0.93	8.95	6.12	5.60	1.05	11.02	7.01	6.88	1.21	13.96	8.06	8.05	1.39	17.60	9.20	9.20	1.58	22.08	
		19	-	-	-	-	9.24	5.61	1.59	22.19	9.17	6.74	1.58	21.92	9.36	7.91	1.61	22.74	9.83	9.11	1.69	24.72	
		20	-	-	-	-	11.25	5.67	1.94	31.15	11.18	6.80	1.93	30.82	11.11	7.92	1.91	30.47	11.12	9.05	1.92	30.55	
	6	15	4.04	4.04	0.58	2.79	5.12	5.12	0.73	5.31	6.32	6.32	0.91	8.48	7.53	7.53	1.08	11.44	8.69	8.69	1.25	14.62	
		17	4.42	3.81	0.63	3.59	5.27	5.06	0.76	5.71	6.34	6.33	0.91	8.52	7.54	7.54	1.08	11.47	8.70	8.70	1.25	14.65	
		19	-	-	-	-	7.48	4.94	1.07	11.29	7.74	6.15	1.11	11.98	8.31	7.40	1.19	13.52	9.04	8.64	1.30	15.62	
		20	-	-	-	-	9.67	5.07	1.39	17.50	9.60	6.20	1.38	17.28	9.63	7.34	1.38	17.38	9.98	8.54	1.43	18.47	
	11	3	15	4.43	4.43	1.27	14.98	5.60	5.60	1.60	22.24	6.74	6.74	1.93	30.61	7.88	7.88	2.27	40.60	9.00	9.00	2.59	51.09
			17	5.43	4.33	1.55	21.07	5.90	5.55	1.69	24.34	6.75	6.74	1.93	30.65	7.89	7.89	2.27	40.70	9.01	9.01	2.59	51.22
			19	-	-	-	-	9.11	5.56	2.62	52.21	9.05	6.68	2.61	51.56	9.06	7.82	2.61	51.71	9.41	8.98	2.71	55.04
			20	-	-	-	-	11.04	5.58	3.19	73.10	10.97	6.71	3.17	72.30	10.91	7.83	3.15	71.50	10.83	8.94	3.12	70.65
		4	15	3.85	3.85	0.82	7.06	5.08	5.08	1.09	11.51	6.26	6.26	1.34	16.43	7.41	7.41	1.59	21.93	8.55	8.55	1.83	28.02
			17	4.23	3.77	0.91	8.41	5.16	5.07	1.11	11.82	6.27	6.27	1.34	16.45	7.42	7.42	1.59	21.99	8.56	8.56	1.84	28.09
			19	-	-	-	-	7.61	4.98	1.63	22.89	7.65	6.14	1.64	23.12	8.06	7.34	1.73	25.30	8.73	8.54	1.87	29.08
			20	-	-	-	-	9.65	5.05	2.08	34.83	9.59	6.18	2.07	34.43	9.52	7.31	2.05	34.03	9.71	8.46	2.09	35.18
5		15	3.38	3.38	0.58	2.93	4.51	4.51	0.78	6.21	5.74	5.74	0.99	9.74	6.92	6.92	1.19	13.27	8.08	8.08	1.39	17.44	
		17	3.48	3.31	0.60	3.17	4.52	4.51	0.78	6.22	5.75	5.75	0.99	9.76	6.93	6.93	1.19	13.30	8.09	8.09	1.39	17.48	
		19	-	-	-	-	5.93	4.35	1.02	10.27	6.49	5.62	1.12	11.98	7.23	6.86	1.24	14.29	8.15	8.09	1.40	17.67	
		20	-	-	-	-	8.04	4.45	1.38	17.22	7.97	5.59	1.37	16.99	8.23	6.78	1.42	17.96	8.76	7.99	1.51	19.97	
6		15	2.93	2.93	0.42	1.48	4.05	4.05	0.58	2.94	5.16	5.16	0.74	5.51	6.37	6.37	0.91	8.45	7.57	7.57	1.08	11.31	
		17	2.95	2.91	0.42	1.49	4.05	4.05	0.58	2.94	5.16	5.16	0.74	5.53	6.38	6.38	0.91	8.47	7.58	7.58	1.08	11.33	
		19	-	-	-	-	4.60	3.78	0.66	4.17	5.45	5.06	0.78	6.26	6.48	6.36	0.93	8.69	7.59	7.58	1.09	11.35	
		20	-	-	-	-	5.89	3.69	0.84	7.32	6.36	4.96	0.91	8.38	7.08	6.24	1.01	10.08	7.91	7.51	1.13	12.17	

(Continued)

MK14A3SCBSLXG1MXE/ MK14A3HCBSLXG1MXE																						
EWT	$\Delta T$	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
$^{\circ}C$	$^{\circ}C$	$^{\circ}C$	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	3.25	3.25	0.93	8.74	4.45	4.45	1.28	14.96	5.62	5.62	1.61	22.28	6.75	6.75	1.93	30.21	7.87	7.87	2.25	39.54
		17	3.27	3.24	0.94	8.86	4.46	4.46	1.28	14.99	5.62	5.62	1.62	22.33	6.76	6.76	1.93	30.28	7.88	7.88	2.26	39.65
		19	-	-	-	-	5.90	4.35	1.70	24.21	6.21	5.55	1.78	26.38	6.86	6.75	1.96	31.08	7.89	7.89	2.26	39.76
		20	-	-	-	-	7.88	4.39	2.25	39.55	7.81	5.52	2.23	38.92	7.87	6.67	2.25	39.53	8.29	7.85	2.38	43.44
	4	15	2.72	2.72	0.59	3.05	3.89	3.89	0.83	7.17	5.11	5.11	1.09	11.43	6.29	6.29	1.36	16.45	7.43	7.43	1.60	21.90
		17	2.72	2.71	0.58	3.04	3.89	3.89	0.83	7.19	5.11	5.11	1.10	11.45	6.30	6.30	1.36	16.48	7.44	7.44	1.60	21.95
		19	-	-	-	-	4.49	3.78	0.96	9.18	5.33	5.07	1.14	12.27	6.31	6.31	1.36	16.55	7.45	7.45	1.61	22.01
		20	-	-	-	-	6.22	3.80	1.34	16.10	6.35	4.98	1.37	16.67	6.87	6.21	1.48	19.12	7.60	7.43	1.64	22.79
	5	15	2.25	2.25	0.39	1.29	3.38	3.38	0.58	3.01	4.54	4.54	0.78	6.30	5.77	5.77	0.99	9.59	6.94	6.94	1.19	13.16
		17	2.25	2.25	0.39	1.30	3.39	3.39	0.58	3.02	4.55	4.55	0.78	6.32	5.77	5.77	0.99	9.62	6.95	6.95	1.19	13.19
		19	-	-	-	-	3.55	3.28	0.61	3.44	4.58	4.54	0.79	6.42	5.78	5.78	0.99	9.63	6.96	6.96	1.19	13.22
		20	-	-	-	-	4.24	3.10	0.73	5.43	5.08	4.43	0.87	7.74	6.01	5.72	1.03	10.27	6.99	6.96	1.20	13.32
	6	15	1.68	1.68	0.24	0.79	2.95	2.95	0.42	1.43	4.05	4.05	0.58	3.04	5.20	5.20	0.74	5.72	6.42	6.42	0.92	8.43
		17	1.68	1.68	0.24	0.79	2.95	2.95	0.42	1.43	4.06	4.06	0.58	3.04	5.20	5.20	0.74	5.73	6.43	6.43	0.92	8.45
		19	-	-	-	-	3.01	2.91	0.43	1.47	4.06	4.05	0.58	3.05	5.21	5.21	0.75	5.75	6.44	6.44	0.92	8.47
		20	-	-	-	-	3.35	2.71	0.48	1.83	4.23	3.95	0.61	3.41	5.26	5.20	0.75	5.86	6.44	6.43	0.92	8.47
15	3	15	2.04	2.04	0.58	3.08	3.26	3.26	0.93	8.55	4.46	4.46	1.28	14.81	5.61	5.61	1.60	21.65	6.74	6.74	1.93	29.76
		17	2.04	2.04	0.58	3.09	3.26	3.26	0.93	8.57	4.47	4.47	1.28	14.84	5.62	5.62	1.60	21.70	6.75	6.75	1.93	29.84
		19	-	-	-	-	3.34	3.24	0.95	8.94	4.47	4.45	1.28	14.83	5.62	5.62	1.61	21.76	6.76	6.76	1.93	29.91
		20	-	-	-	-	4.31	3.15	1.23	13.74	4.88	4.40	1.40	17.23	5.67	5.62	1.62	22.10	6.77	6.77	1.93	29.95
	4	15	1.56	1.56	0.33	1.08	2.72	2.72	0.58	3.12	3.92	3.92	0.84	7.19	5.14	5.14	1.11	11.48	6.30	6.30	1.36	16.27
		17	1.56	1.56	0.34	1.08	2.72	2.72	0.58	3.13	3.93	3.93	0.84	7.20	5.15	5.15	1.11	11.51	6.31	6.31	1.36	16.30
		19	-	-	-	-	2.72	2.71	0.58	3.13	3.93	3.93	0.84	7.22	5.15	5.15	1.11	11.54	6.32	6.32	1.36	16.35
		20	-	-	-	-	2.97	2.59	0.64	3.98	4.02	3.90	0.86	7.50	5.15	5.14	1.11	11.53	6.32	6.32	1.36	16.35
	5	15	0.96	0.96	0.17	0.52	2.28	2.28	0.39	1.27	3.40	3.40	0.59	3.21	4.59	4.59	0.79	6.47	5.81	5.81	1.00	9.63
		17	0.96	0.96	0.17	0.52	2.28	2.28	0.39	1.27	3.40	3.40	0.59	3.22	4.60	4.60	0.79	6.48	5.81	5.81	1.00	9.65
		19	-	-	-	-	2.28	2.28	0.39	1.27	3.41	3.41	0.59	3.23	4.61	4.61	0.79	6.50	5.82	5.82	1.00	9.68
		20	-	-	-	-	2.36	2.22	0.41	1.33	3.41	3.41	0.59	3.24	4.61	4.61	0.79	6.51	5.83	5.83	1.00	9.69
	6	15	-	-	-	-	1.72	1.72	0.25	0.77	2.98	2.98	0.43	1.44	4.07	4.07	0.58	3.22	5.25	5.25	0.75	5.90
		17	-	-	-	-	1.72	1.72	0.25	0.77	2.98	2.98	0.43	1.45	4.08	4.08	0.59	3.23	5.26	5.26	0.76	5.92
		19	-	-	-	-	1.72	1.72	0.25	0.77	2.99	2.99	0.43	1.45	4.08	4.08	0.59	3.24	5.27	5.27	0.76	5.93
		20	-	-	-	-	1.72	1.72	0.25	0.77	2.98	2.98	0.43	1.45	4.08	4.08	0.59	3.25	5.27	5.27	0.76	5.94

Abbreviations:

EWT: Enter Water Temp. ( $^{\circ}C$ )     $\Delta T$ : Temperature Difference. ( $^{\circ}C$ )    DB: Dry Bulb Temp. ( $^{\circ}C$ )    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. ( $^{\circ}C$ )    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

MK14A3SCBSLXG1MXE/ MK14A3HCBSLXG1MXE													
EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	12.44	1.35	14.26	11.09	1.20	11.68	9.72	1.05	9.32	8.33	0.90	7.13
	10	11.49	0.99	8.51	10.11	0.87	6.82	8.69	0.75	5.27	7.23	0.62	3.86
	12	10.46	0.75	5.35	8.99	0.65	4.14	7.47	0.54	2.99	5.98	0.43	1.79
	14	9.22	0.57	3.32	7.68	0.47	2.24	6.27	0.39	1.31	4.83	0.30	0.73
	16	7.98	0.43	1.73	6.59	0.36	1.04	5.04	0.27	0.67	3.21	0.17	0.43
45	8	15.81	1.70	20.96	14.45	1.56	17.94	13.11	1.42	15.21	11.75	1.27	12.54
	10	14.97	1.29	13.03	13.60	1.17	11.04	12.23	1.05	9.19	10.85	0.94	7.49
	12	14.07	1.01	8.63	12.67	0.91	7.21	11.26	0.81	5.89	9.83	0.71	4.68
	14	13.05	0.80	5.84	11.60	0.71	4.78	10.12	0.62	3.80	8.59	0.53	2.88
	16	11.91	0.64	4.03	10.38	0.56	3.19	8.82	0.48	2.33	7.34	0.40	1.48
50	8	19.15	2.06	28.65	17.80	1.92	25.32	16.44	1.78	22.06	15.09	1.63	18.91
	10	18.38	1.59	18.23	17.01	1.47	15.93	15.64	1.35	13.78	14.28	1.23	11.77
	12	17.54	1.26	12.26	16.15	1.16	10.64	14.77	1.06	9.12	13.38	0.96	7.70
	14	16.63	1.03	8.63	15.23	0.94	7.42	13.82	0.85	6.28	12.40	0.76	5.22
	16	15.65	0.84	6.22	14.21	0.77	5.28	12.76	0.69	4.39	11.29	0.61	3.58
55	8	22.49	2.43	37.31	21.12	2.28	33.42	19.77	2.13	29.66	18.40	1.98	26.20
	10	21.74	1.87	23.84	20.37	1.76	21.27	19.00	1.64	18.84	17.64	1.52	16.56
	12	20.97	1.51	16.40	19.58	1.41	14.57	18.19	1.31	12.79	16.82	1.21	11.17
	14	20.13	1.24	11.75	18.74	1.16	10.38	17.34	1.07	9.08	15.95	0.98	7.87
	16	19.24	1.04	8.67	17.82	0.96	7.60	16.41	0.89	6.60	15.00	0.81	5.66
60	8	25.82	2.79	46.82	24.44	2.63	42.30	23.06	2.49	38.31	21.70	2.34	34.42
	10	25.10	2.16	30.08	23.72	2.05	27.34	22.35	1.93	24.63	20.98	1.81	22.06
	12	24.35	1.75	20.81	22.97	1.65	18.78	21.59	1.55	16.92	20.21	1.45	15.09
	14	23.56	1.45	15.08	22.16	1.36	13.56	20.77	1.28	12.12	19.39	1.19	10.76
	16	22.73	1.23	11.32	21.33	1.15	10.14	19.93	1.08	9.01	18.51	1.00	7.95

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

Cooling Capacity Table

MK14A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																				
			21				23				25				27				29				
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
5	3	15	10.28	7.82	2.97	67.63	10.22	8.95	2.95	67.01	10.45	10.09	2.99	68.76	11.22	11.22	3.22	78.00	12.33	12.33	3.57	93.18	
		17	13.60	7.85	3.92	109.64	13.54	8.98	3.92	109.54	13.47	10.10	3.90	108.85	13.40	11.20	3.88	107.83	13.37	12.30	3.87	107.41	
		19	-	-	-	-	17.10	9.01	4.93	163.86	17.01	10.12	4.91	162.29	16.91	11.23	4.88	160.71	16.82	12.32	4.85	159.20	
		20	-	-	-	-	18.99	9.02	5.48	196.79	18.88	10.14	5.45	194.92	18.78	11.24	5.42	193.07	18.68	12.34	5.39	191.32	
	4	15	9.05	7.25	1.94	32.41	9.23	8.42	1.98	33.57	9.78	9.62	2.10	37.12	10.76	10.76	2.31	43.80	11.87	11.87	2.55	51.94	
		17	12.50	7.34	2.70	57.20	12.43	8.46	2.68	56.64	12.34	9.57	2.66	55.74	12.30	10.68	2.65	55.40	12.53	11.82	2.71	57.46	
		19	-	-	-	-	16.04	8.52	3.47	88.46	15.96	9.63	3.45	87.62	15.87	10.74	3.43	86.80	15.78	11.84	3.41	85.98	
		20	-	-	-	-	17.92	8.53	3.86	106.48	17.84	9.65	3.86	106.30	17.76	10.77	3.85	105.77	17.66	11.86	3.83	104.77	
	5	15	7.86	6.68	1.35	17.47	8.38	7.92	1.44	19.49	9.17	9.13	1.57	22.58	10.27	10.27	1.76	27.43	11.40	11.40	1.97	33.04	
		17	11.26	6.78	1.94	32.26	11.19	7.90	1.93	31.94	11.13	9.03	1.92	31.67	11.32	10.18	1.95	32.60	11.78	11.36	2.03	34.96	
		19	-	-	-	-	14.87	7.98	2.56	51.97	14.79	9.11	2.55	51.51	14.71	10.22	2.54	51.18	14.61	11.31	2.51	50.29	
		20	-	-	-	-	16.78	8.01	2.89	63.96	16.69	9.13	2.87	63.39	16.61	10.25	2.86	63.07	16.53	11.35	2.85	62.50	
	6	15	6.73	6.07	0.96	9.62	7.58	7.38	1.09	12.01	8.61	8.61	1.24	14.91	9.76	9.76	1.40	18.34	10.90	10.90	1.56	22.13	
		17	9.81	6.14	1.40	18.45	9.75	7.27	1.39	18.24	9.93	8.45	1.42	18.85	10.41	9.66	1.49	20.43	11.09	10.87	1.59	22.81	
		19	-	-	-	-	13.60	7.43	1.95	32.49	13.52	8.55	1.94	32.18	13.45	9.66	1.93	31.87	13.39	10.77	1.92	31.63	
		20	-	-	-	-	15.57	7.48	2.24	41.03	15.49	8.60	2.22	40.64	15.40	9.71	2.21	40.26	15.29	10.80	2.19	39.51	
	7	3	15	7.76	6.66	2.24	40.85	8.12	7.84	2.33	43.90	9.00	9.00	2.59	52.54	10.12	10.12	2.91	64.53	11.22	11.22	3.23	77.18
			17	11.10	6.70	3.20	75.75	11.03	7.83	3.18	74.95	10.97	8.94	3.16	74.15	11.00	10.07	3.17	74.57	11.40	11.21	3.28	79.38
			19	-	-	-	-	14.64	7.87	4.24	123.82	14.57	9.00	4.24	123.85	14.49	10.11	4.22	122.83	14.41	11.20	4.20	121.63
			20	-	-	-	-	16.55	7.90	4.83	155.56	16.46	9.02	4.80	154.07	16.37	10.13	4.78	152.59	16.28	11.23	4.75	151.09
4		15	6.74	6.13	1.45	19.33	7.46	7.36	1.60	23.02	8.54	8.54	1.85	29.30	9.65	9.65	2.08	35.86	10.77	10.77	2.33	43.77	
		17	9.86	6.16	2.12	37.18	9.80	7.29	2.11	36.77	9.82	8.42	2.11	36.91	10.16	9.60	2.19	39.17	10.84	10.78	2.35	44.22	
		19	-	-	-	-	13.48	7.36	2.91	64.25	13.40	8.49	2.90	63.69	13.34	9.60	2.89	63.38	13.26	10.70	2.87	62.68	
		20	-	-	-	-	15.40	7.39	3.33	81.14	15.32	8.52	3.31	80.36	15.23	9.63	3.30	79.56	15.14	10.73	3.28	78.76	
5		15	5.84	5.58	1.00	10.32	6.85	6.85	1.18	13.57	8.02	8.02	1.38	17.74	9.17	9.17	1.58	22.29	10.31	10.31	1.78	27.44	
		17	8.45	5.56	1.45	19.32	8.45	6.71	1.45	19.33	8.81	7.91	1.52	20.78	9.43	9.13	1.62	23.38	10.32	10.32	1.78	27.52	
		19	-	-	-	-	12.19	6.81	2.10	36.28	12.11	7.94	2.09	35.91	12.04	9.05	2.07	35.54	12.06	10.18	2.08	35.66	
		20	-	-	-	-	14.17	6.87	2.45	47.44	14.09	7.99	2.44	46.98	14.01	9.11	2.42	46.52	13.93	10.21	2.41	46.08	
6		15	5.15	5.07	0.74	5.18	6.26	6.26	0.90	8.32	7.48	7.48	1.07	11.49	8.65	8.65	1.24	14.73	9.81	9.81	1.41	18.30	
		17	6.72	4.85	0.96	9.54	7.18	6.11	1.03	10.71	7.89	7.39	1.13	12.58	8.76	8.64	1.26	15.04	9.82	9.82	1.41	18.33	
		19	-	-	-	-	10.76	6.23	1.55	21.37	10.69	7.35	1.54	21.14	10.71	8.49	1.54	21.21	11.01	9.67	1.58	22.28	
		20	-	-	-	-	12.77	6.29	1.83	28.62	12.70	7.42	1.82	28.32	12.62	8.54	1.81	28.04	12.57	9.66	1.81	27.94	



# 2-Pipe Duct MK-CBS Series



(Continued)

MK14A3UCBSLXG1MXE																							
EWT	ΔT	Indoor temperature (D.B.)																					
		21				23				25				27				29					
		TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD		
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	
9	3	15	5.69	5.57	1.63	23.43	6.75	6.75	1.95	31.88	7.88	7.88	2.27	41.11	9.00	9.00	2.59	51.79	10.10	10.10	2.91	63.42	
		17	8.42	5.54	2.44	46.69	8.36	6.67	2.42	46.07	8.53	7.83	2.47	47.73	9.08	9.00	2.61	52.59	10.12	10.12	2.91	63.58	
		19	-	-	-	-	12.00	6.73	3.49	86.78	11.93	7.85	3.47	85.86	11.83	8.95	3.41	83.55	11.76	10.06	3.39	82.67	
		20	-	-	-	-	13.90	6.74	4.05	112.60	13.82	7.87	4.03	111.49	13.72	8.98	3.97	108.95	13.64	10.08	3.94	107.51	
	4	15	5.06	5.05	1.09	11.68	6.24	6.24	1.35	16.77	7.41	7.41	1.60	22.51	8.54	8.54	1.84	28.61	9.66	9.66	2.08	35.40	
		17	6.97	4.95	1.50	20.27	7.15	6.14	1.54	21.18	7.71	7.36	1.67	24.24	8.55	8.55	1.84	28.70	9.67	9.67	2.08	35.48	
		19	-	-	-	-	10.72	6.20	2.32	42.72	10.65	7.33	2.31	42.28	10.58	8.45	2.29	41.80	10.74	9.59	2.33	42.91	
		20	-	-	-	-	12.66	6.23	2.75	57.09	12.59	7.36	2.73	56.51	12.51	8.48	2.71	55.93	12.43	9.59	2.70	55.33	
	5	15	4.47	4.47	0.77	5.92	5.69	5.69	0.98	9.74	6.89	6.89	1.19	13.47	8.05	8.05	1.39	17.58	9.19	9.19	1.58	22.05	
		17	5.42	4.30	0.93	8.93	6.12	5.60	1.05	11.02	7.01	6.88	1.21	13.97	8.06	8.06	1.39	17.61	9.20	9.20	1.58	22.10	
		19	-	-	-	-	9.23	5.61	1.59	22.18	9.17	6.74	1.58	21.91	9.36	7.91	1.61	22.73	9.83	9.11	1.69	24.72	
		20	-	-	-	-	11.25	5.67	1.94	31.15	11.18	6.80	1.93	30.81	11.10	7.92	1.91	30.46	11.12	9.05	1.92	30.55	
	6	15	4.04	4.04	0.58	2.79	5.12	5.12	0.73	5.31	6.32	6.32	0.91	8.48	7.53	7.53	1.08	11.45	8.69	8.69	1.25	14.63	
		17	4.41	3.81	0.63	3.58	5.27	5.06	0.76	5.70	6.34	6.33	0.91	8.52	7.54	7.54	1.08	11.48	8.71	8.71	1.25	14.66	
		19	-	-	-	-	7.47	4.94	1.07	11.27	7.74	6.15	1.11	11.96	8.31	7.40	1.19	13.51	9.04	8.64	1.30	15.62	
		20	-	-	-	-	9.67	5.06	1.39	17.48	9.60	6.20	1.38	17.26	9.63	7.35	1.38	17.37	9.98	8.54	1.43	18.46	
	11	3	15	4.43	4.43	1.27	14.99	5.60	5.60	1.60	22.26	6.75	6.75	1.93	30.64	7.89	7.89	2.27	40.65	9.00	9.00	2.59	51.16
			17	5.43	4.33	1.55	21.06	5.91	5.56	1.69	24.35	6.75	6.75	1.93	30.69	7.90	7.90	2.27	40.75	9.02	9.02	2.60	51.29
			19	-	-	-	-	9.12	5.56	2.63	52.23	9.05	6.69	2.61	51.57	9.07	7.82	2.61	51.74	9.41	8.98	2.70	55.03
			20	-	-	-	-	11.05	5.59	3.19	73.15	10.98	6.72	3.17	72.33	10.91	7.84	3.15	71.55	10.84	8.95	3.13	70.69
		4	15	3.85	3.85	0.82	7.06	5.09	5.09	1.09	11.52	6.27	6.27	1.34	16.44	7.42	7.42	1.59	21.96	8.55	8.55	1.83	28.05
			17	4.23	3.77	0.90	8.40	5.17	5.07	1.11	11.82	6.27	6.27	1.34	16.47	7.43	7.43	1.59	22.01	8.56	8.56	1.84	28.12
			19	-	-	-	-	7.61	4.98	1.63	22.88	7.65	6.14	1.64	23.11	8.06	7.34	1.73	25.30	8.73	8.55	1.87	29.10
			20	-	-	-	-	9.65	5.05	2.08	34.83	9.59	6.19	2.07	34.43	9.52	7.31	2.05	34.03	9.71	8.47	2.09	35.19
5		15	3.38	3.38	0.58	2.92	4.51	4.51	0.78	6.21	5.74	5.74	0.99	9.74	6.92	6.92	1.19	13.28	8.09	8.09	1.39	17.45	
		17	3.48	3.31	0.60	3.17	4.52	4.51	0.78	6.22	5.75	5.75	0.99	9.76	6.93	6.93	1.19	13.31	8.10	8.10	1.40	17.49	
		19	-	-	-	-	5.93	4.35	1.02	10.25	6.49	5.62	1.12	11.97	7.23	6.87	1.24	14.29	8.15	8.10	1.40	17.68	
		20	-	-	-	-	8.03	4.45	1.38	17.20	7.97	5.59	1.37	16.97	8.23	6.78	1.42	17.95	8.76	8.00	1.51	19.97	
6		15	2.93	2.93	0.42	1.48	4.05	4.05	0.58	2.94	5.16	5.16	0.74	5.51	6.37	6.37	0.91	8.45	7.57	7.57	1.08	11.31	
		17	2.95	2.91	0.42	1.49	4.05	4.05	0.58	2.94	5.16	5.16	0.74	5.53	6.38	6.38	0.91	8.47	7.58	7.58	1.08	11.34	
		19	-	-	-	-	4.60	3.78	0.66	4.16	5.44	5.06	0.78	6.25	6.48	6.36	0.93	8.69	7.59	7.58	1.09	11.36	
		20	-	-	-	-	5.88	3.69	0.84	7.30	6.35	4.96	0.91	8.37	7.08	6.24	1.01	10.07	7.91	7.51	1.13	12.17	

(Continued)

MK14A3UCBSLXG1MXE																						
EWT	ΔT	Indoor temp (W.B.)	Indoor temperature (D.B.)																			
			21				23				25				27				29			
			TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD	TC	SC	WF	WPD
°C	°C	°C	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa	kW	kW	m <sup>3</sup> /h	kPa
13	3	15	3.25	3.25	0.93	8.74	4.45	4.45	1.28	14.97	5.62	5.62	1.62	22.30	6.75	6.75	1.93	30.25	7.88	7.88	2.25	39.60
		17	3.27	3.24	0.94	8.86	4.46	4.46	1.28	15.00	5.63	5.63	1.62	22.35	6.76	6.76	1.93	30.32	7.89	7.89	2.26	39.71
		19	-	-	-	-	5.90	4.35	1.70	24.20	6.21	5.55	1.78	26.39	6.86	6.75	1.96	31.10	7.90	7.90	2.26	39.83
		20	-	-	-	-	7.88	4.39	2.25	39.55	7.81	5.52	2.23	38.92	7.88	6.68	2.25	39.54	8.29	7.86	2.38	43.47
	4	15	2.72	2.72	0.58	3.04	3.89	3.89	0.83	7.18	5.11	5.11	1.09	11.43	6.29	6.29	1.36	16.46	7.44	7.44	1.60	21.92
		17	2.72	2.71	0.58	3.04	3.89	3.89	0.83	7.19	5.12	5.12	1.10	11.46	6.30	6.30	1.36	16.50	7.45	7.45	1.60	21.98
		19	-	-	-	-	4.49	3.78	0.96	9.17	5.33	5.07	1.14	12.27	6.31	6.31	1.36	16.56	7.46	7.46	1.61	22.03
		20	-	-	-	-	6.21	3.80	1.34	16.08	6.34	4.98	1.37	16.66	6.87	6.21	1.48	19.12	7.61	7.43	1.64	22.80
	5	15	2.25	2.25	0.39	1.29	3.38	3.38	0.58	3.01	4.54	4.54	0.78	6.30	5.77	5.77	0.99	9.60	6.95	6.95	1.19	13.17
		17	2.25	2.25	0.39	1.29	3.38	3.38	0.58	3.01	4.55	4.55	0.78	6.32	5.78	5.78	0.99	9.62	6.96	6.96	1.19	13.20
		19	-	-	-	-	3.55	3.28	0.61	3.43	4.58	4.54	0.79	6.41	5.78	5.78	0.99	9.63	6.97	6.97	1.20	13.23
		20	-	-	-	-	4.23	3.10	0.73	5.42	5.08	4.43	0.87	7.73	6.01	5.72	1.03	10.27	7.00	6.96	1.20	13.33
6	15	1.68	1.68	0.24	0.79	2.95	2.95	0.42	1.43	4.05	4.05	0.58	3.03	5.20	5.20	0.74	5.71	6.42	6.42	0.92	8.43	
	17	1.68	1.68	0.24	0.79	2.95	2.95	0.42	1.43	4.06	4.06	0.58	3.04	5.20	5.20	0.74	5.73	6.43	6.43	0.92	8.45	
	19	-	-	-	-	3.00	2.91	0.43	1.47	4.06	4.05	0.58	3.05	5.21	5.21	0.75	5.75	6.44	6.44	0.92	8.47	
	20	-	-	-	-	3.34	2.71	0.48	1.83	4.23	3.95	0.60	3.41	5.26	5.20	0.75	5.86	6.44	6.43	0.92	8.47	
15	3	15	2.04	2.04	0.58	3.08	3.26	3.26	0.93	8.55	4.47	4.47	1.28	14.82	5.61	5.61	1.60	21.67	6.75	6.75	1.93	29.80
		17	2.04	2.04	0.58	3.08	3.26	3.26	0.93	8.57	4.47	4.47	1.29	14.85	5.62	5.62	1.60	21.72	6.76	6.76	1.93	29.87
		19	-	-	-	-	3.34	3.24	0.95	8.94	4.47	4.46	1.28	14.84	5.63	5.63	1.61	21.78	6.77	6.77	1.93	29.95
		20	-	-	-	-	4.30	3.15	1.23	13.73	4.88	4.40	1.40	17.23	5.68	5.62	1.62	22.11	6.77	6.77	1.94	29.99
	4	15	1.56	1.56	0.33	1.08	2.72	2.72	0.58	3.12	3.92	3.92	0.84	7.19	5.14	5.14	1.11	11.49	6.30	6.30	1.36	16.28
		17	1.56	1.56	0.33	1.08	2.72	2.72	0.58	3.13	3.93	3.93	0.84	7.21	5.15	5.15	1.11	11.52	6.31	6.31	1.36	16.32
		19	-	-	-	-	2.72	2.71	0.58	3.13	3.93	3.93	0.84	7.22	5.16	5.16	1.11	11.55	6.32	6.32	1.36	16.35
		20	-	-	-	-	2.97	2.59	0.64	3.97	4.02	3.90	0.86	7.50	5.15	5.14	1.11	11.54	6.32	6.32	1.36	16.35
	5	15	0.96	0.96	0.17	0.52	2.28	2.28	0.39	1.27	3.40	3.40	0.59	3.21	4.59	4.59	0.79	6.47	5.81	5.81	1.00	9.64
		17	0.96	0.96	0.17	0.52	2.28	2.28	0.39	1.27	3.40	3.40	0.59	3.22	4.60	4.60	0.79	6.48	5.81	5.81	1.00	9.66
		19	-	-	-	-	2.28	2.28	0.39	1.27	3.41	3.41	0.59	3.23	4.61	4.61	0.79	6.50	5.82	5.82	1.00	9.68
		20	-	-	-	-	2.36	2.22	0.41	1.32	3.41	3.41	0.59	3.23	4.61	4.61	0.79	6.51	5.83	5.83	1.00	9.70
6	15	-	-	-	-	1.71	1.71	0.25	0.77	2.98	2.98	0.43	1.44	4.07	4.07	0.58	3.22	5.25	5.25	0.75	5.90	
	17	-	-	-	-	1.71	1.71	0.25	0.77	2.98	2.98	0.43	1.45	4.08	4.08	0.59	3.23	5.26	5.26	0.76	5.92	
	19	-	-	-	-	1.72	1.72	0.25	0.77	2.98	2.98	0.43	1.45	4.08	4.08	0.59	3.24	5.27	5.27	0.76	5.93	
	20	-	-	-	-	1.72	1.72	0.25	0.77	2.98	2.98	0.43	1.45	4.08	4.08	0.59	3.25	5.27	5.27	0.76	5.94	

Abbreviations:

- EWT: Enter Water Temp. (°C)    Δt: Temperature Difference. (°C)    DB: Dry Bulb Temp. (°C)    WF: Water Flow. (m<sup>3</sup>/h)  
 WB: Wet Bulb Temp. (°C)    TC: Total Cooling Capacity. (kW)    SC: Sensible Cooling Capacity. (kW)    WPD: Water Pressure Drop. (kPa)

## 2-Pipe Duct MK-CBS Series



### Heating Capacity Table

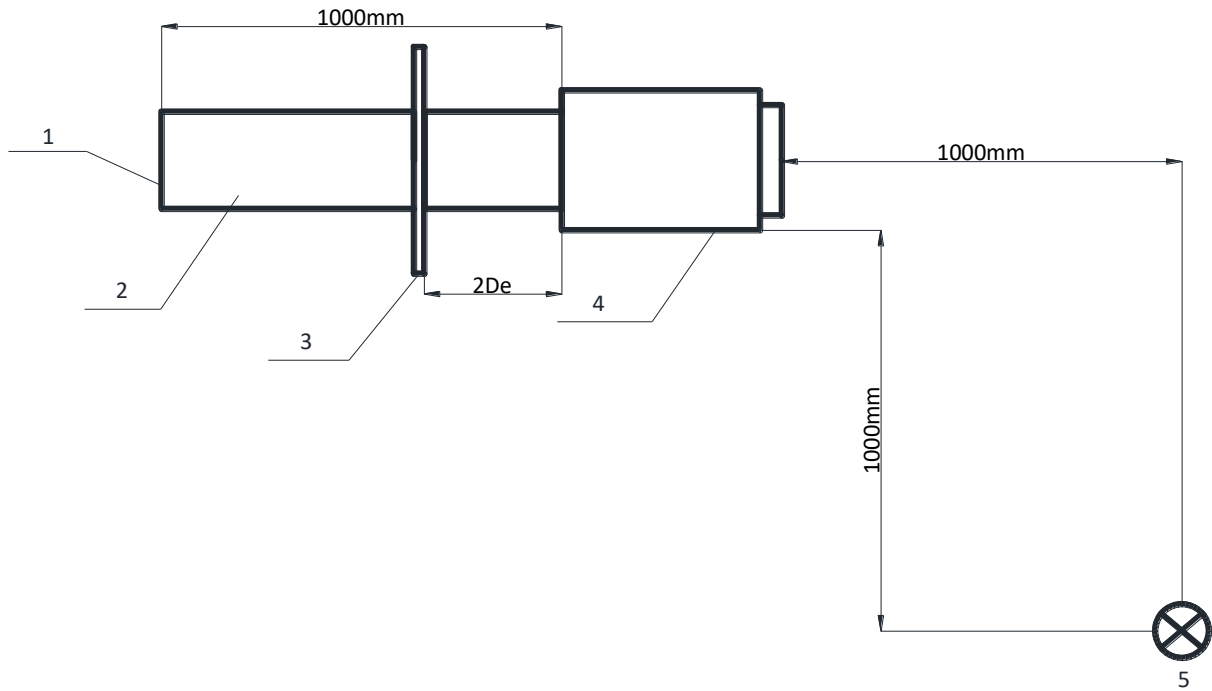
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EWT	ΔT	Indoor temperature (W.B.)											
		16			18			20			22		
		TH	WF	WPD	TH	WF	WPD	TH	WF	WPD	TH	WF	WPD
°C	°C	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa	kW	m <sup>3</sup> /h	kPa
40	8	12.45	1.35	14.25	11.08	1.20	11.67	9.72	1.05	9.31	8.33	0.90	7.12
	10	11.51	0.99	8.50	10.10	0.87	6.81	8.68	0.75	5.26	7.23	0.62	3.86
	12	10.46	0.75	5.34	8.98	0.65	4.13	7.46	0.54	2.98	5.97	0.43	1.78
	14	9.20	0.57	3.32	7.67	0.47	2.23	6.26	0.39	1.31	4.81	0.30	0.72
	16	7.96	0.43	1.72	6.58	0.36	1.04	5.02	0.27	0.66	3.19	0.17	0.43
45	8	15.81	1.70	20.96	14.45	1.56	17.94	13.11	1.42	15.21	11.75	1.27	12.54
	10	14.97	1.29	13.02	13.60	1.17	11.03	12.21	1.05	9.19	10.84	0.94	7.48
	12	14.06	1.01	8.62	12.64	0.91	7.20	11.25	0.81	5.88	9.82	0.71	4.67
	14	13.04	0.80	5.84	11.59	0.71	4.78	10.11	0.62	3.79	8.58	0.53	2.87
	16	11.90	0.64	4.02	10.36	0.56	3.18	8.80	0.48	2.32	7.33	0.40	1.48
50	8	19.16	2.06	28.66	17.80	1.92	25.33	16.45	1.78	22.06	15.09	1.63	18.91
	10	18.38	1.59	18.22	17.01	1.47	15.93	15.64	1.35	13.78	14.28	1.23	11.77
	12	17.53	1.26	12.26	16.15	1.16	10.64	14.76	1.06	9.12	13.38	0.96	7.70
	14	16.62	1.02	8.62	15.22	0.94	7.41	13.81	0.85	6.27	12.39	0.76	5.21
	16	15.64	0.84	6.21	14.20	0.77	5.27	12.74	0.69	4.39	11.28	0.61	3.57
55	8	22.50	2.43	37.33	21.13	2.28	33.43	19.76	2.13	29.67	18.40	1.98	26.21
	10	21.75	1.87	23.84	20.37	1.76	21.27	19.00	1.64	18.84	17.64	1.52	16.56
	12	20.96	1.51	16.40	19.58	1.41	14.57	18.19	1.31	12.79	16.82	1.21	11.16
	14	20.13	1.24	11.74	18.73	1.16	10.37	17.34	1.07	9.08	15.95	0.98	7.86
	16	19.23	1.04	8.66	17.82	0.96	7.60	16.40	0.89	6.59	14.99	0.81	5.65
60	8	25.82	2.78	46.66	24.46	2.63	42.32	23.07	2.49	38.33	21.71	2.34	34.44
	10	25.11	2.16	30.09	23.74	2.05	27.35	22.35	1.93	24.64	20.98	1.81	22.06
	12	24.35	1.75	20.81	22.97	1.65	18.78	21.59	1.55	16.92	20.21	1.45	15.09
	14	23.56	1.45	15.08	22.16	1.36	13.56	20.77	1.28	12.12	19.39	1.19	10.76
	16	22.73	1.23	11.32	21.32	1.15	10.13	19.92	1.08	9.01	18.52	1.00	7.95

Abbreviations:

**Δt:** Temperature Difference. (°C)    **TH:** Total Heating Capacity. (kW)    **WF:** Water Flow. (m<sup>3</sup>/h)    **WPD:** Water Pressure Drop. (kPa)

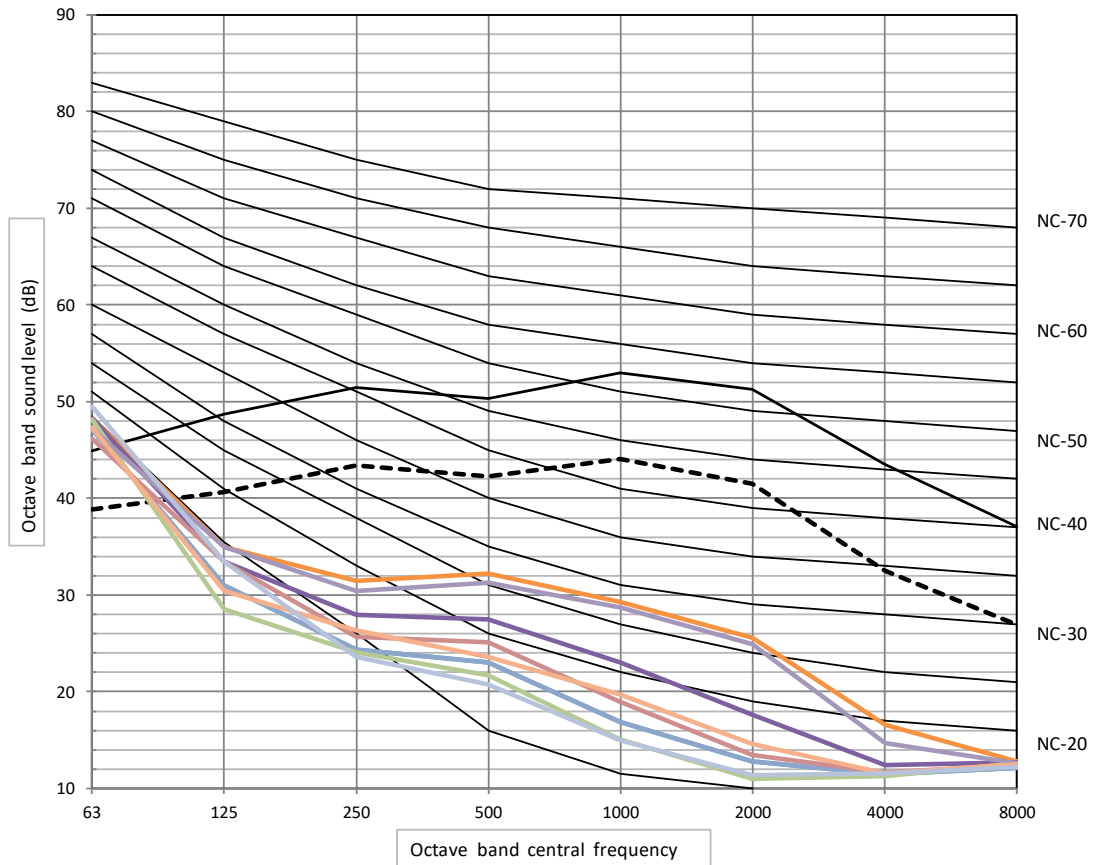
### 4 Octave Band Levels

Test condition

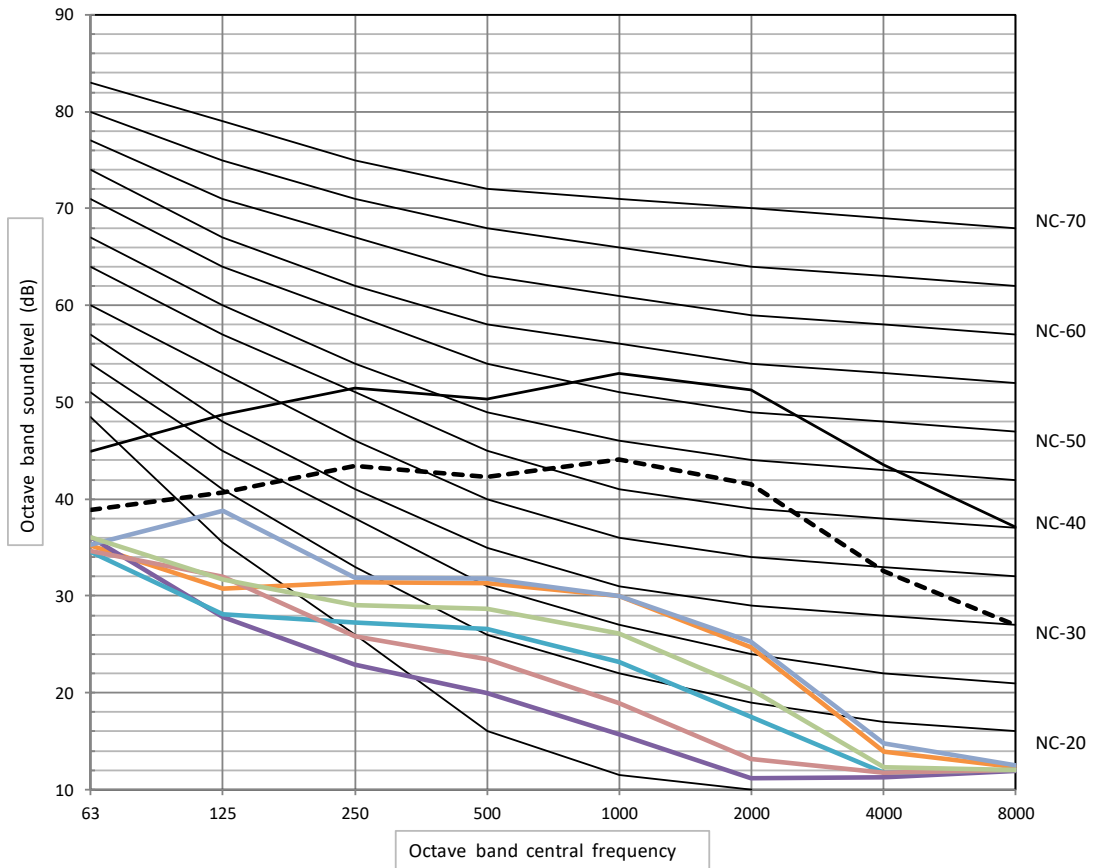


1-Damping net 2-Duct 3-Static pressure loop 4-Test unit  $D_e$ -Equivalent diameter of air return of the unit

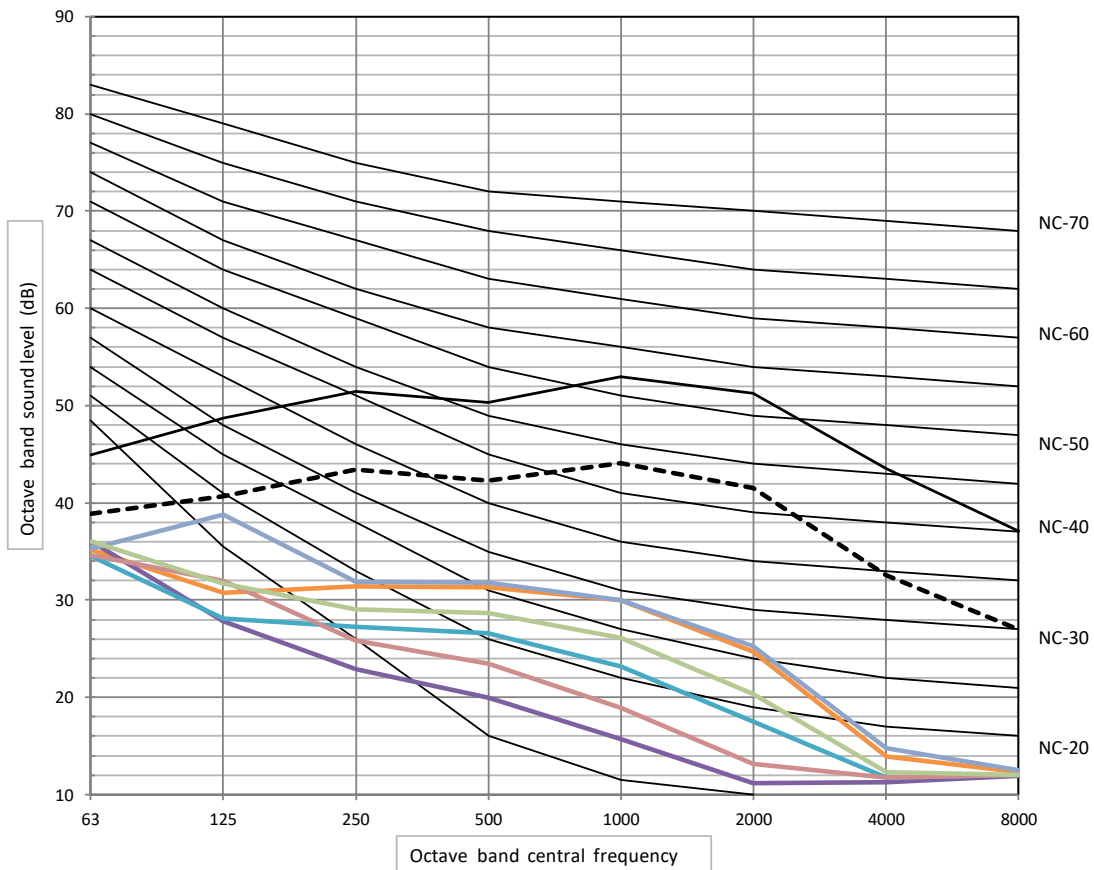
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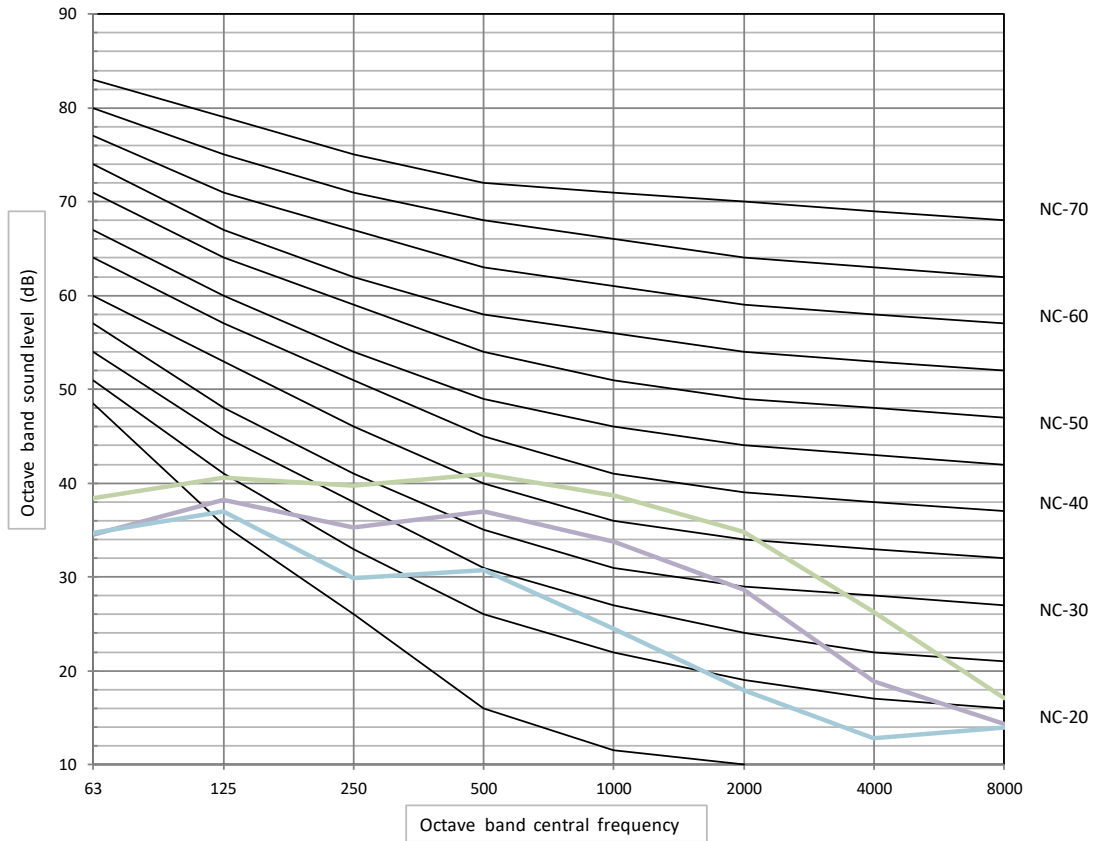
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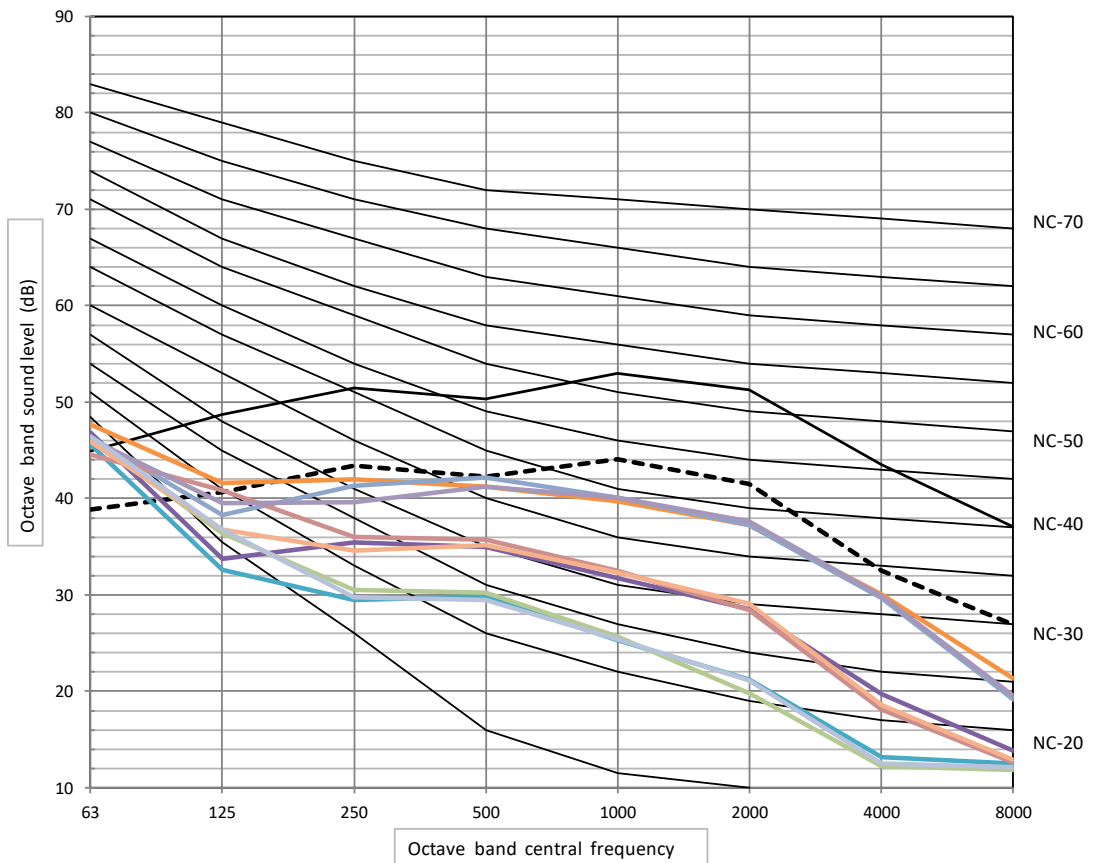
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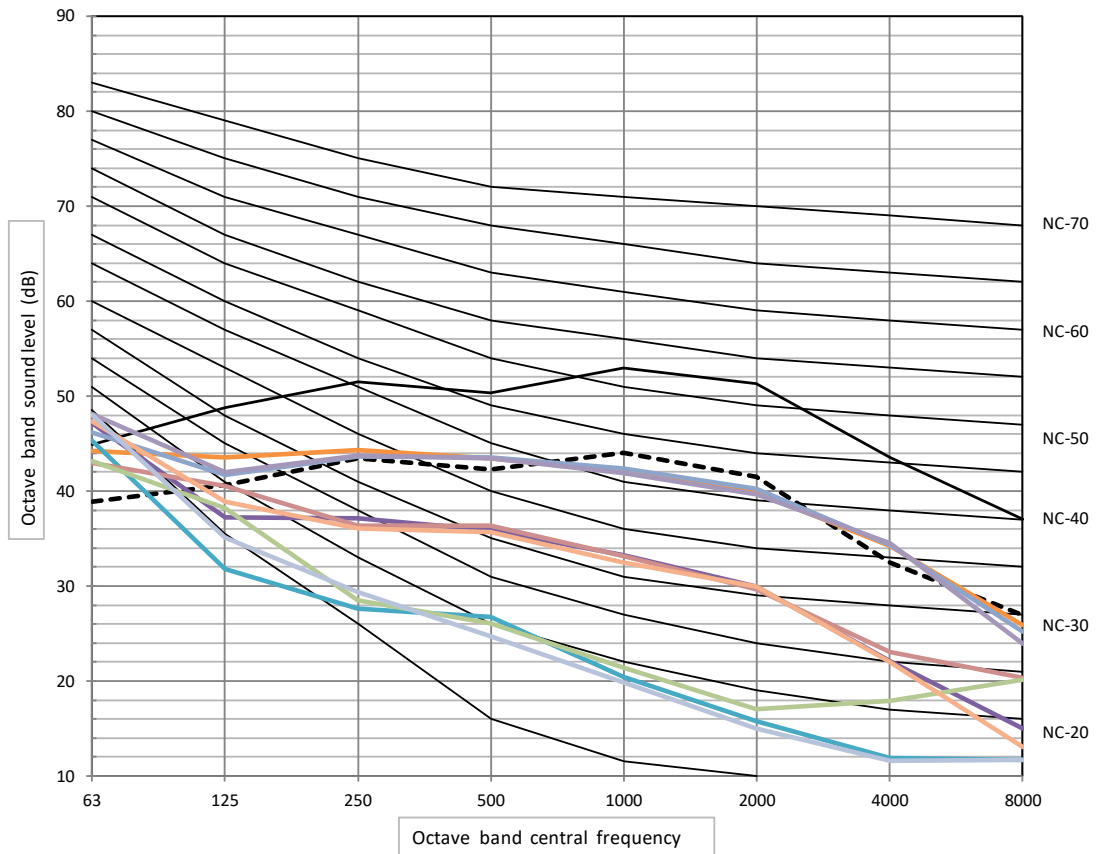
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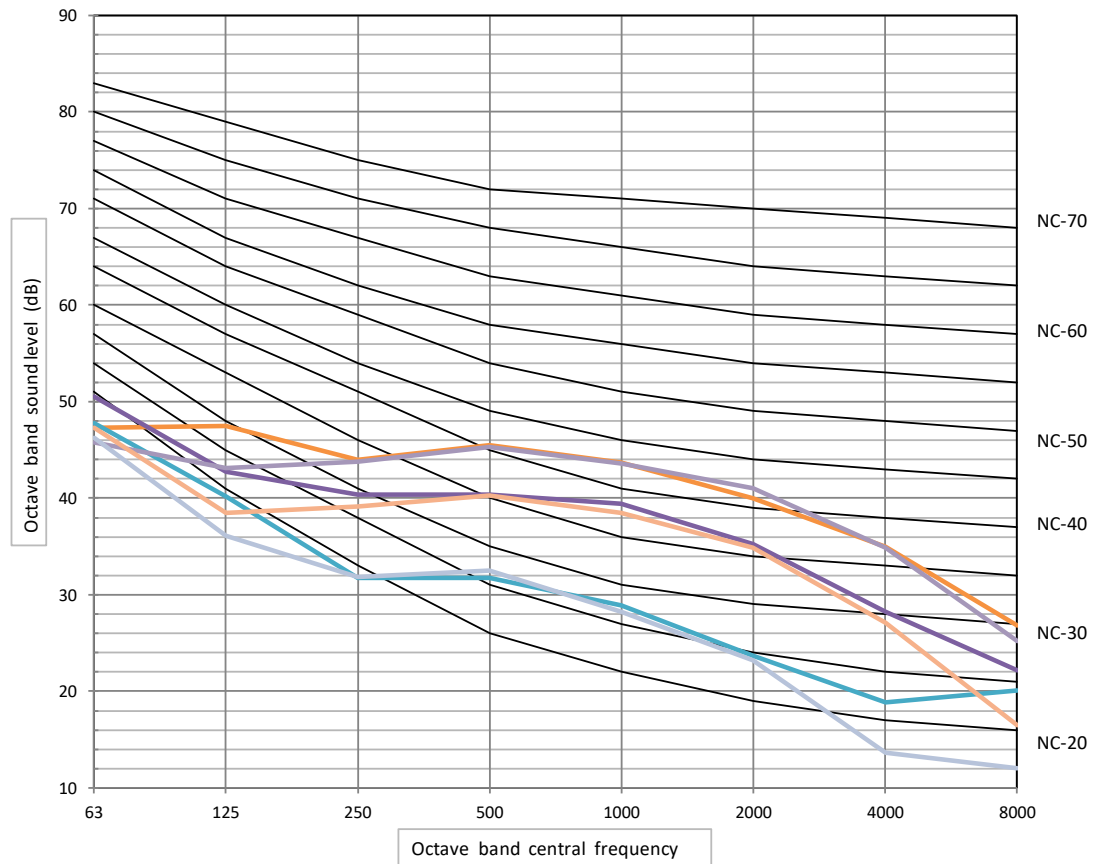
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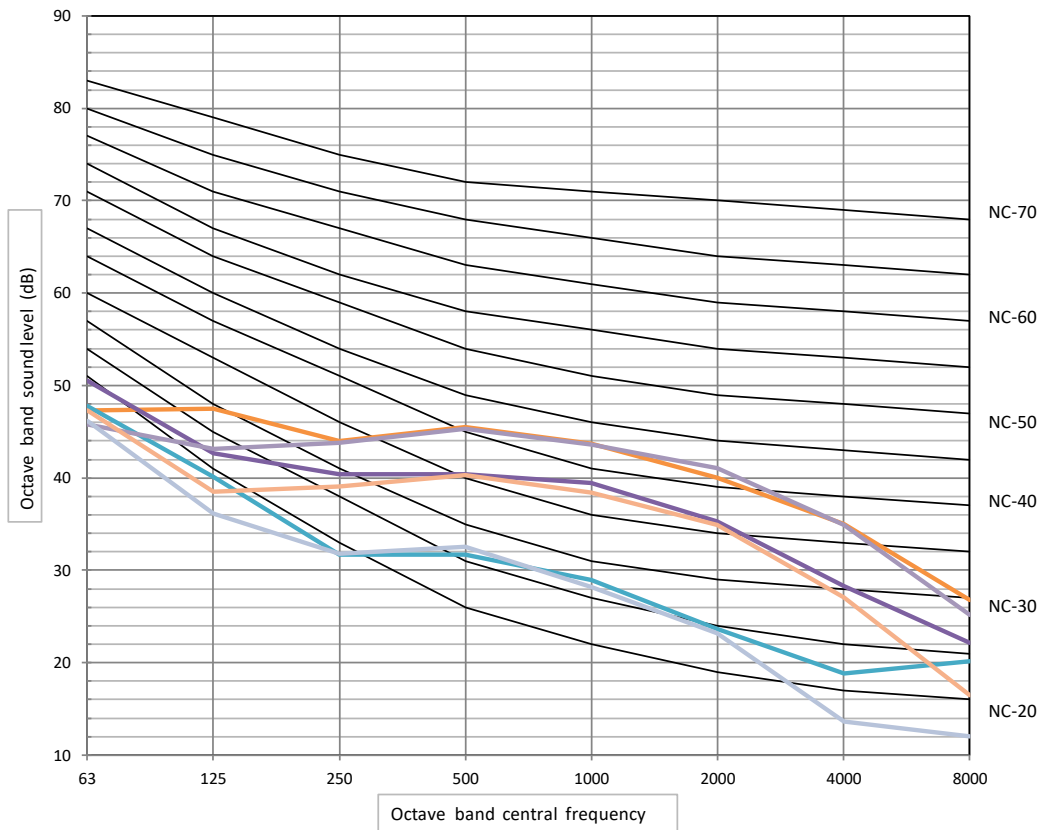
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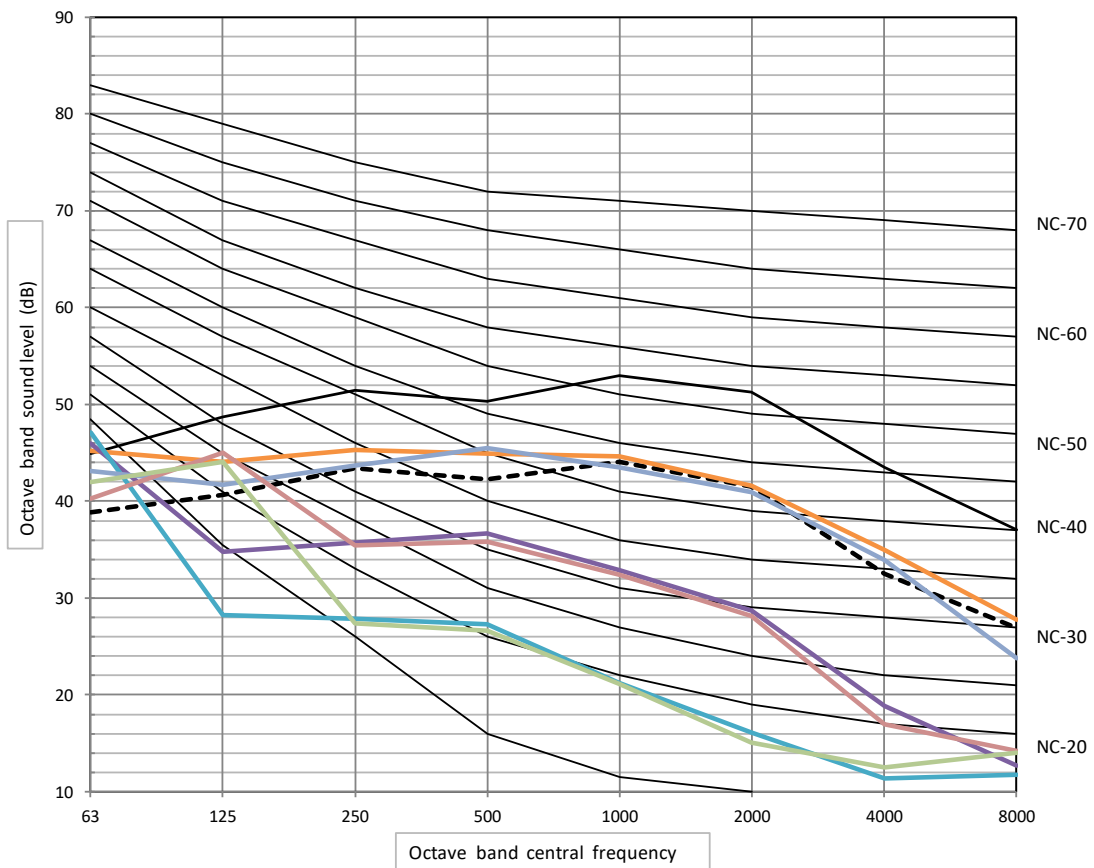
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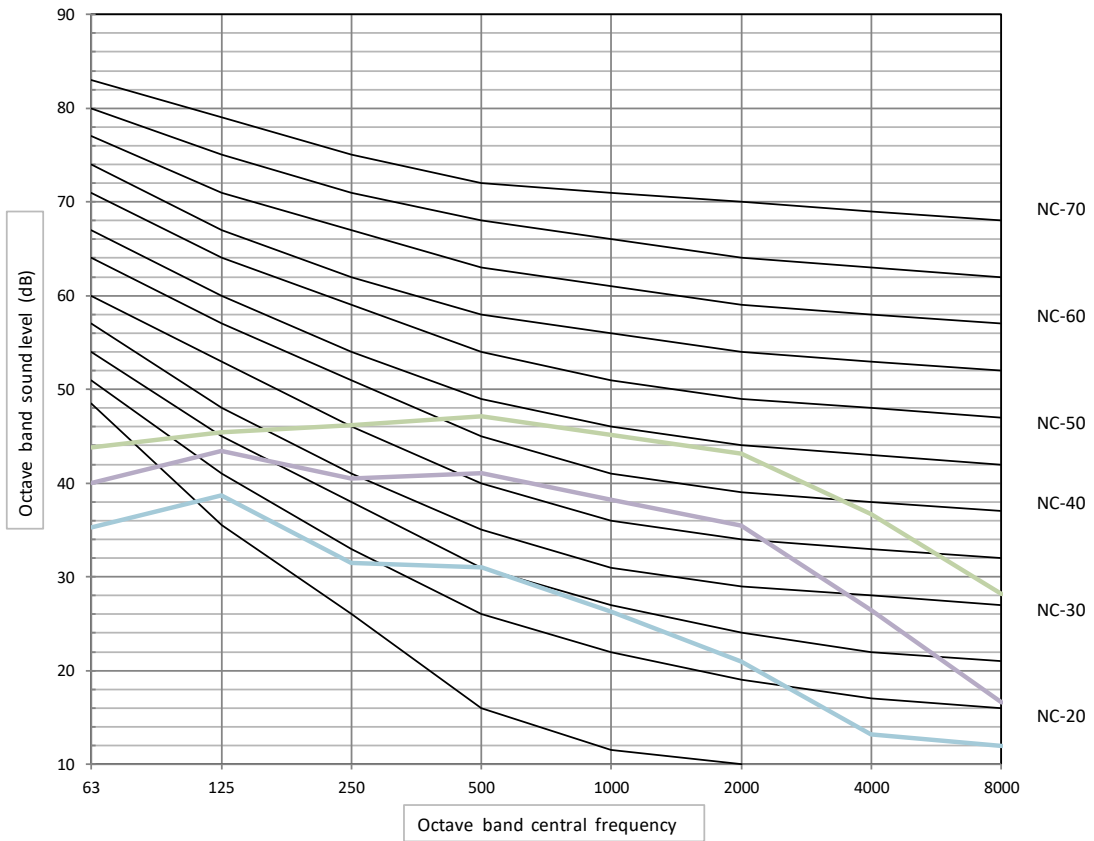


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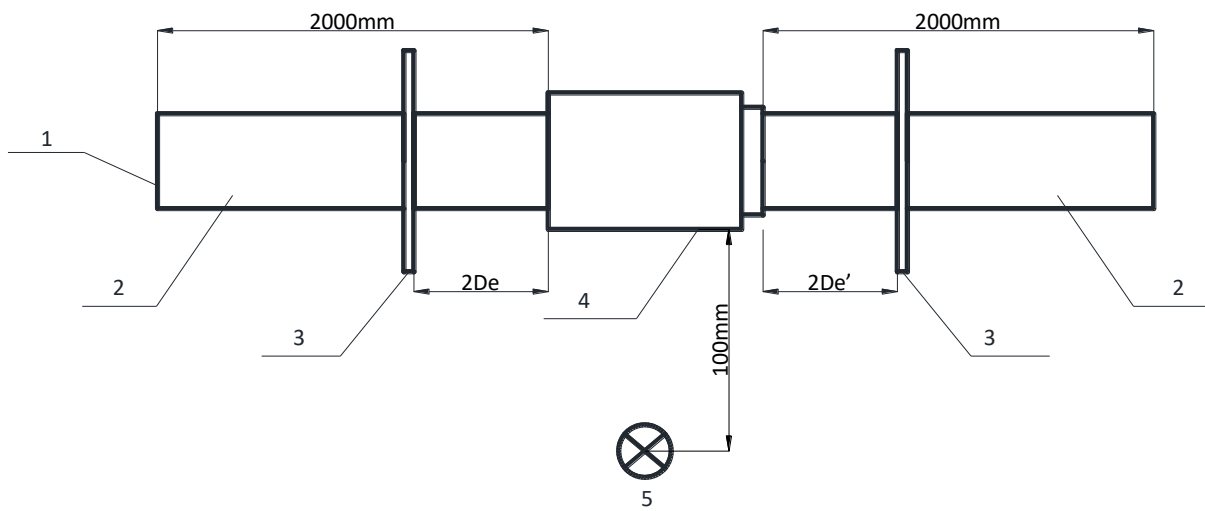




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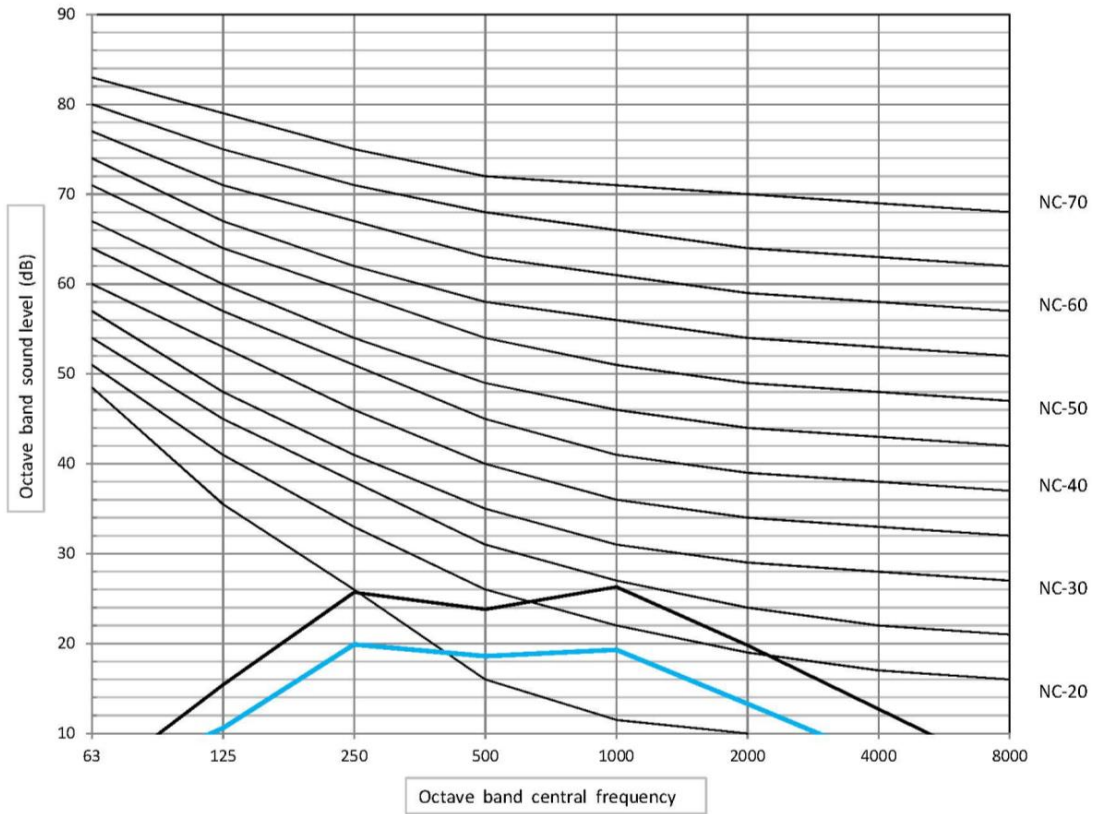


Test condition

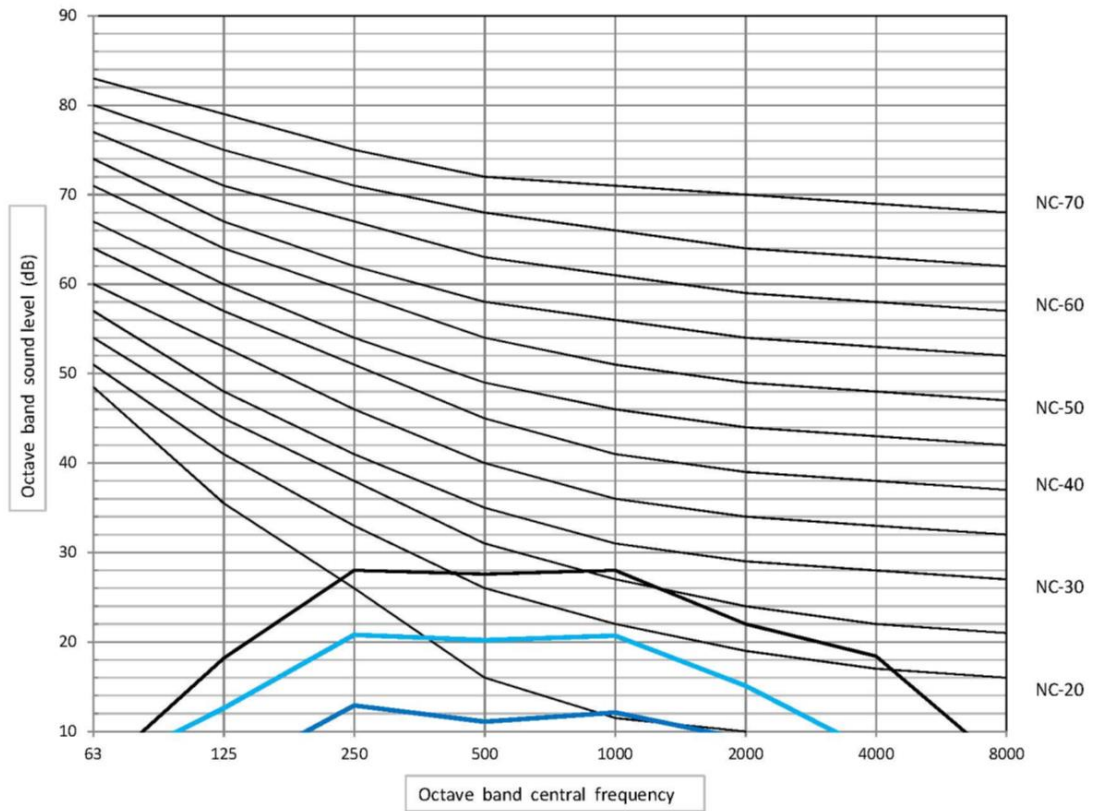


1-Damping net    2-Duct    3-Static pressure loop    4-Test unit     $D_e$ -Equivalent diameter of air return of the unit  
 $D_e'$ -Equivalent diameter of air outlet of the unit

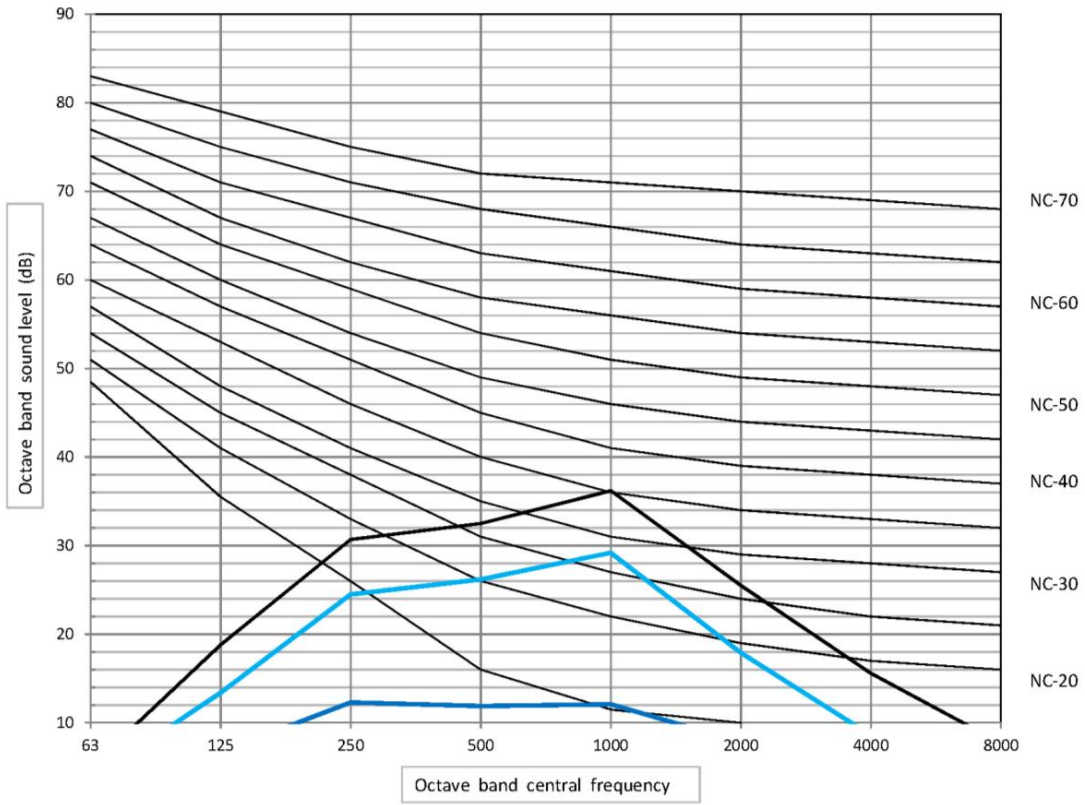
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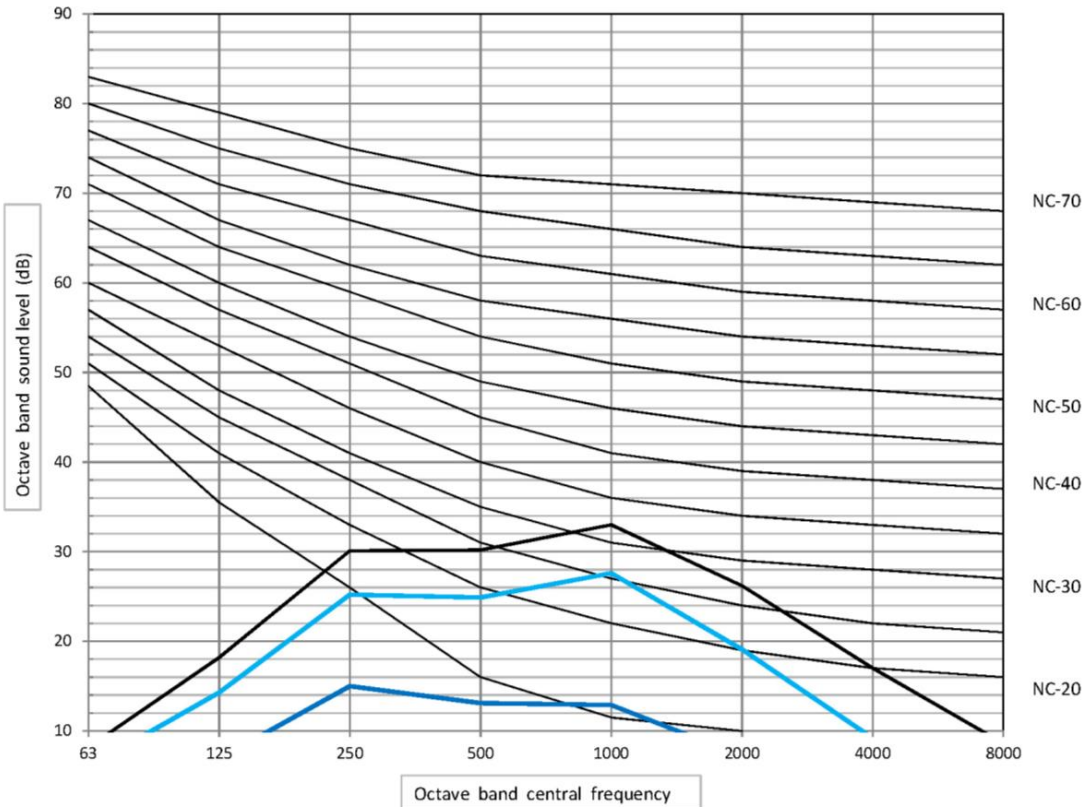
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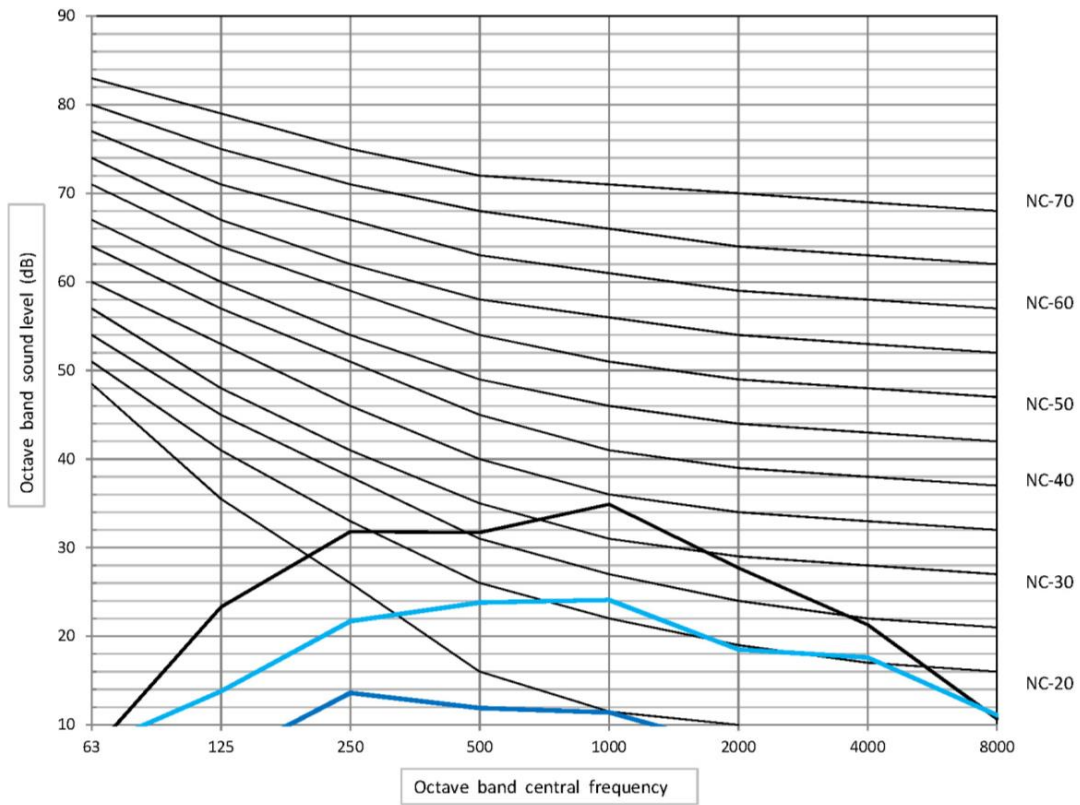
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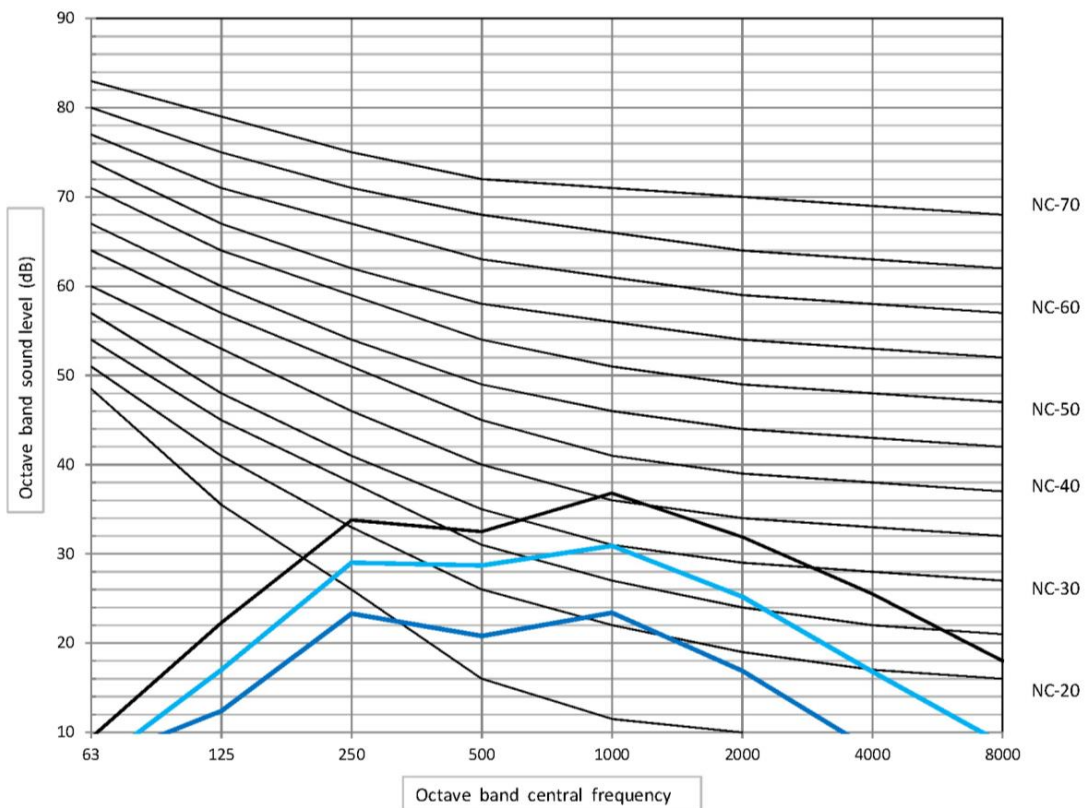
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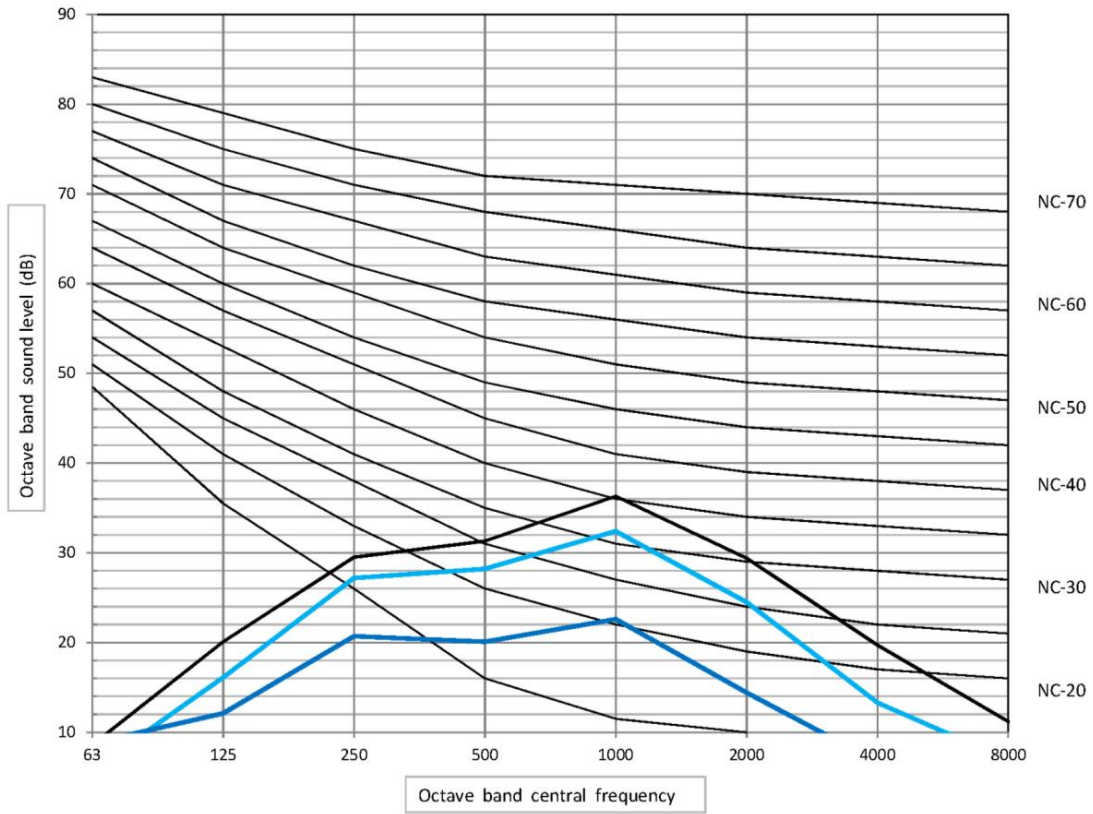
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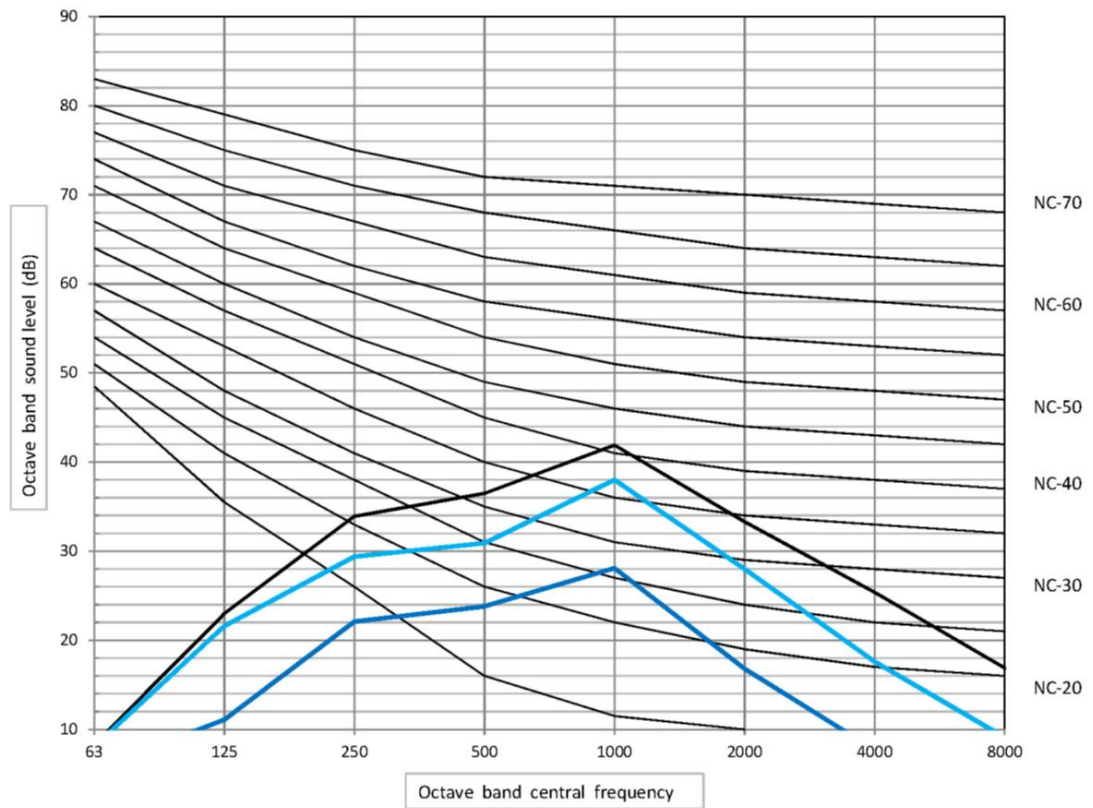
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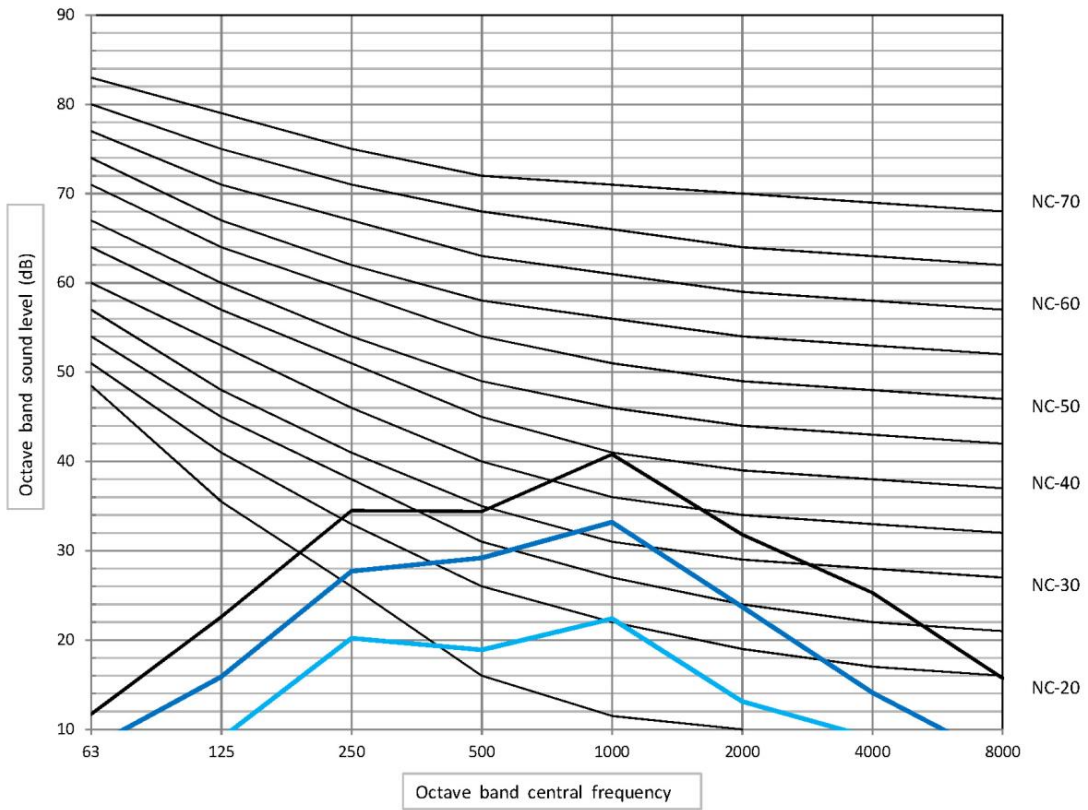
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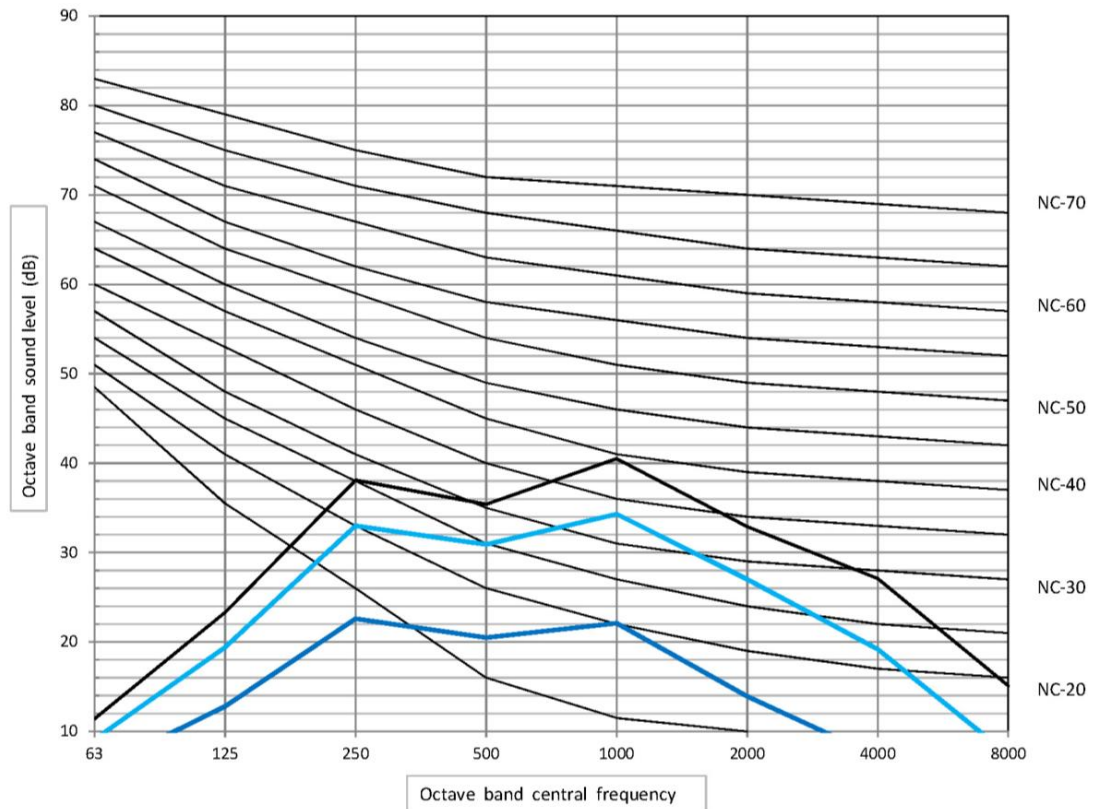
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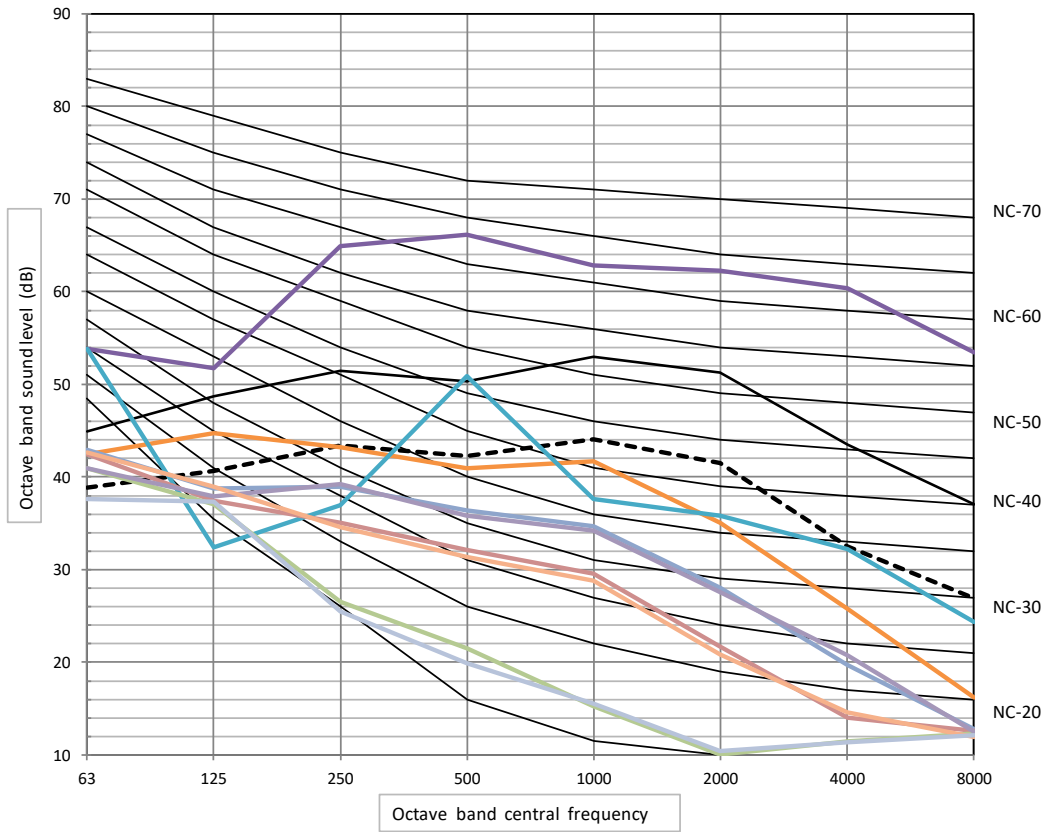
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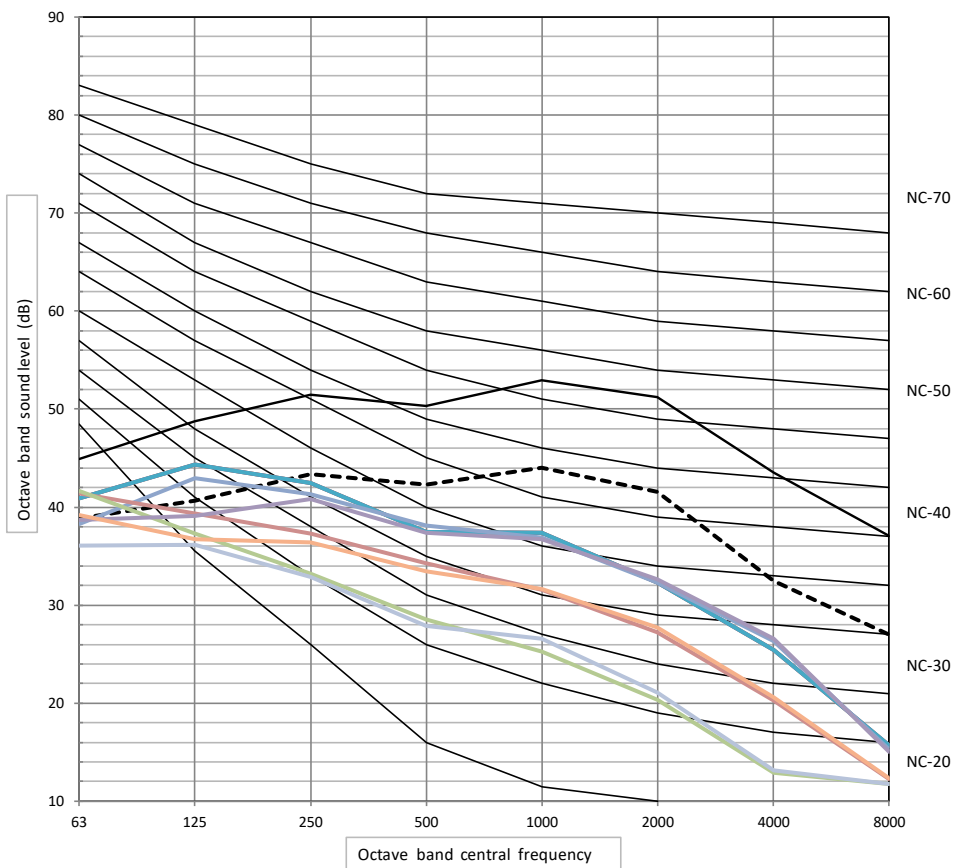
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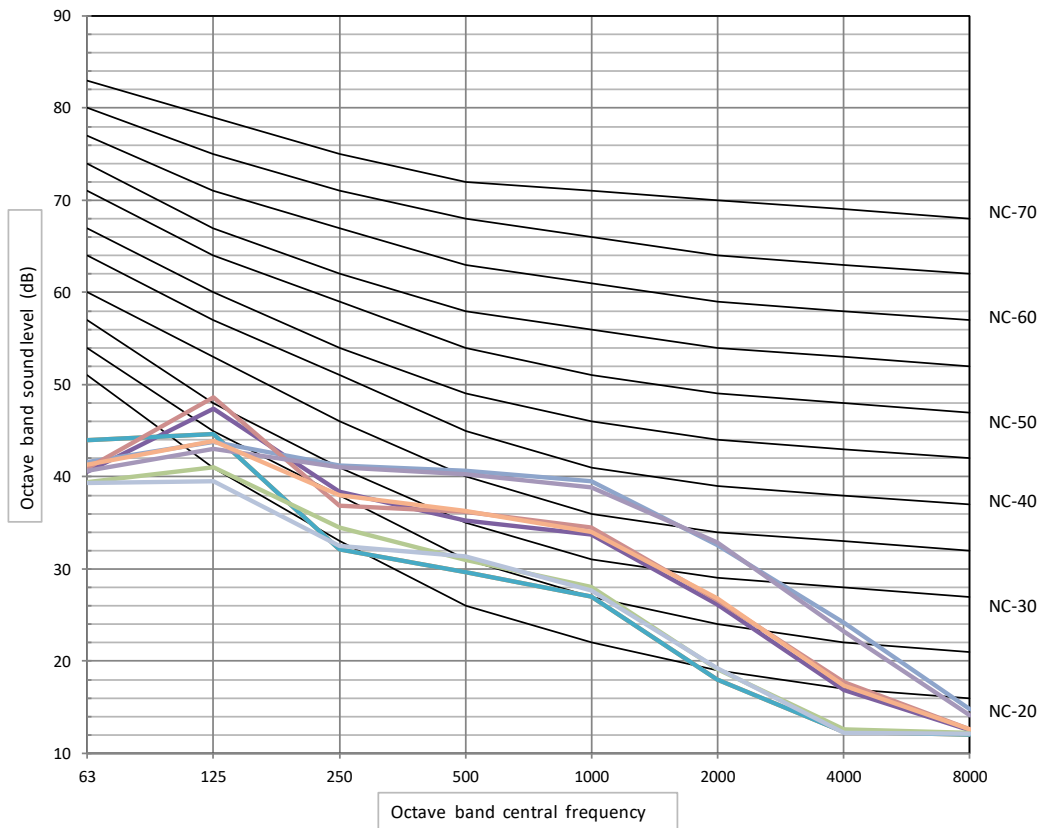
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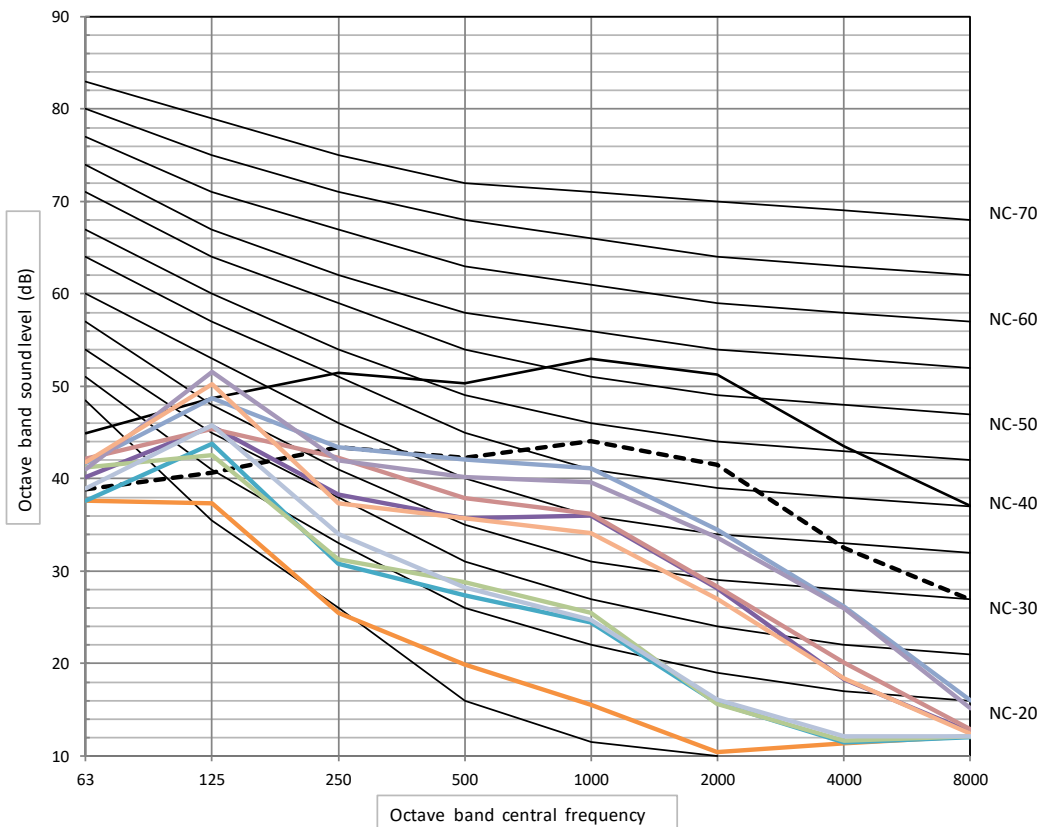
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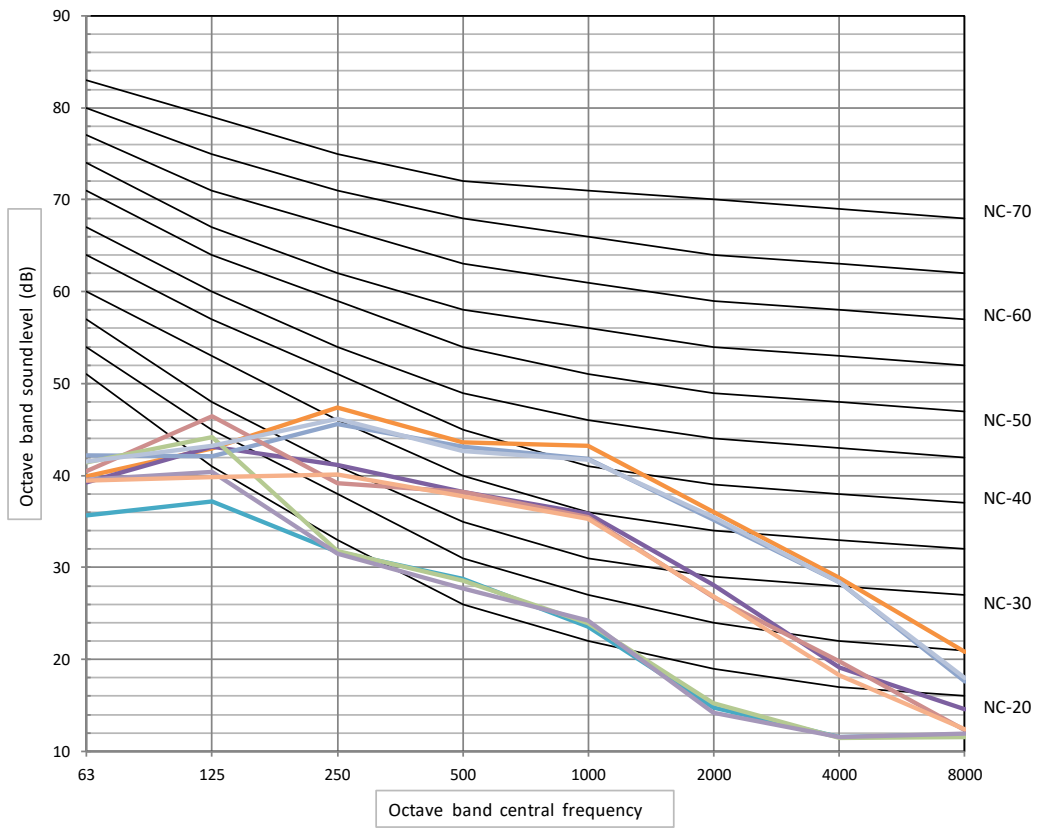


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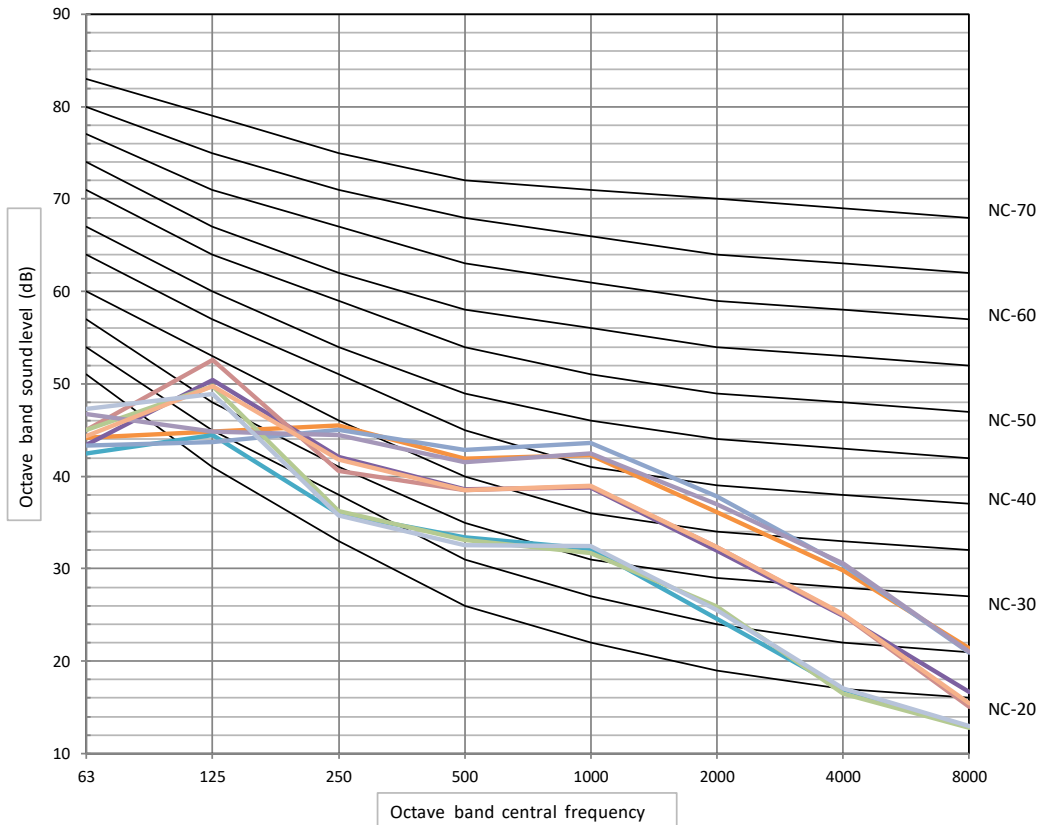




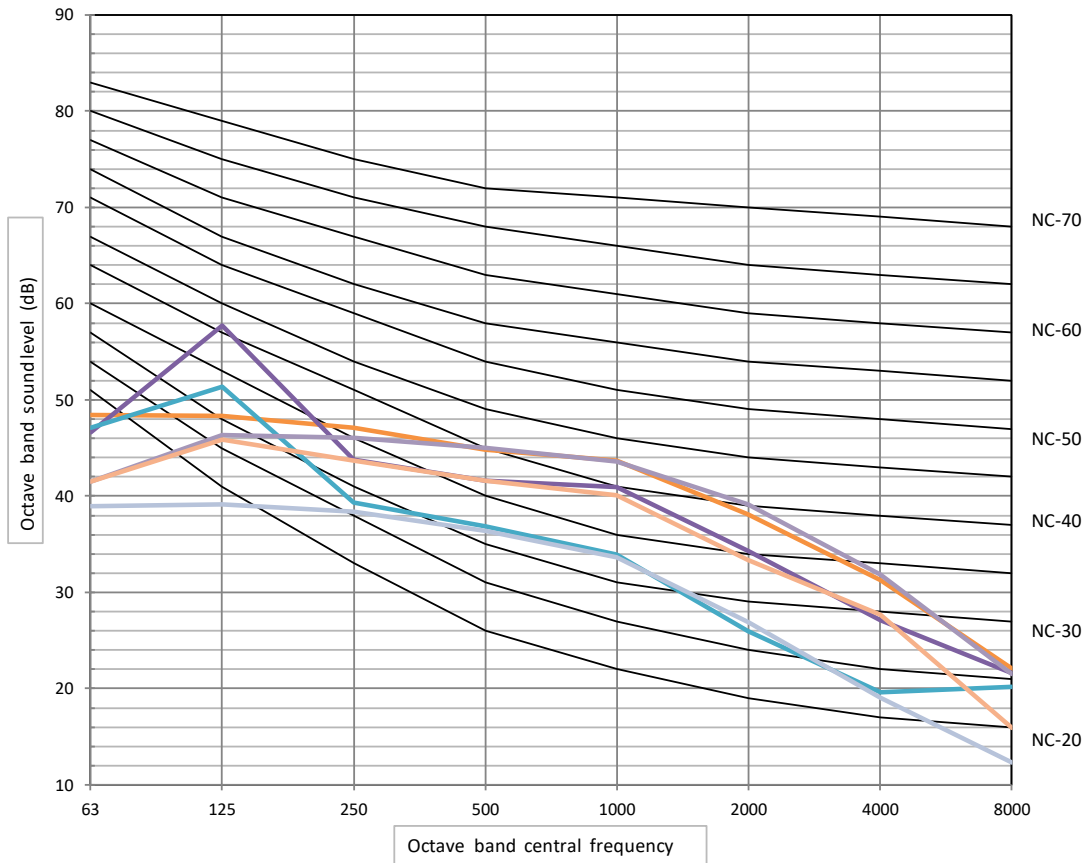
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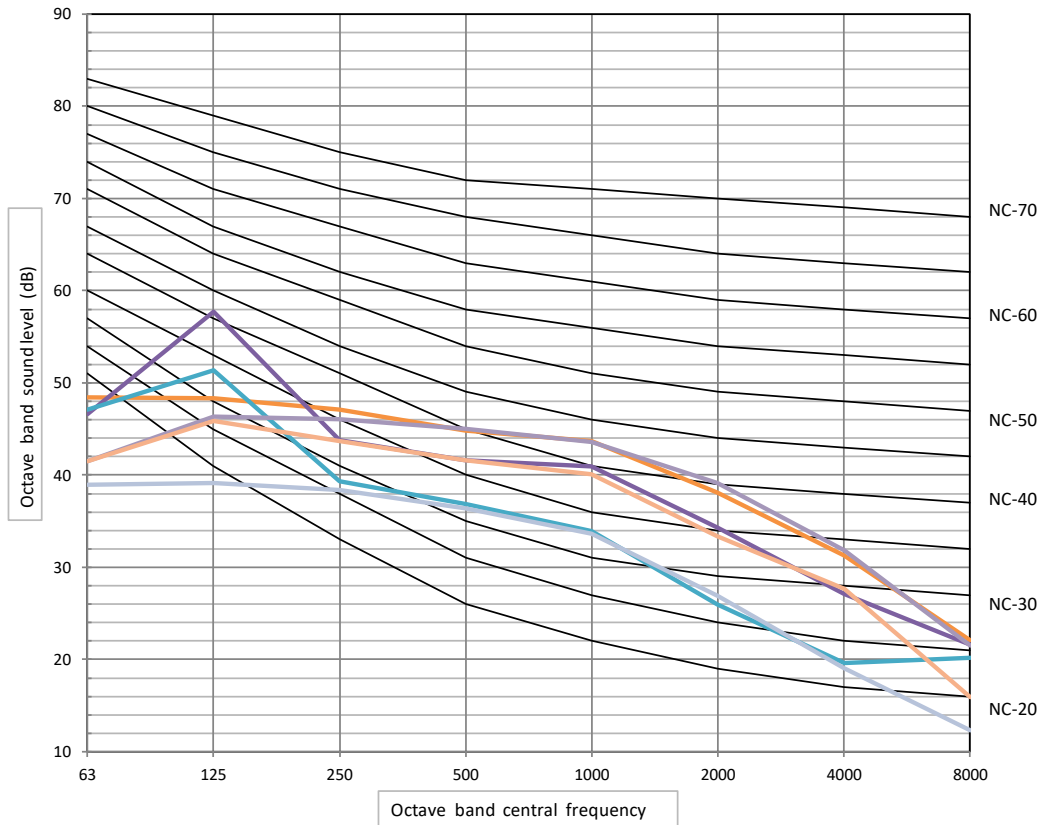
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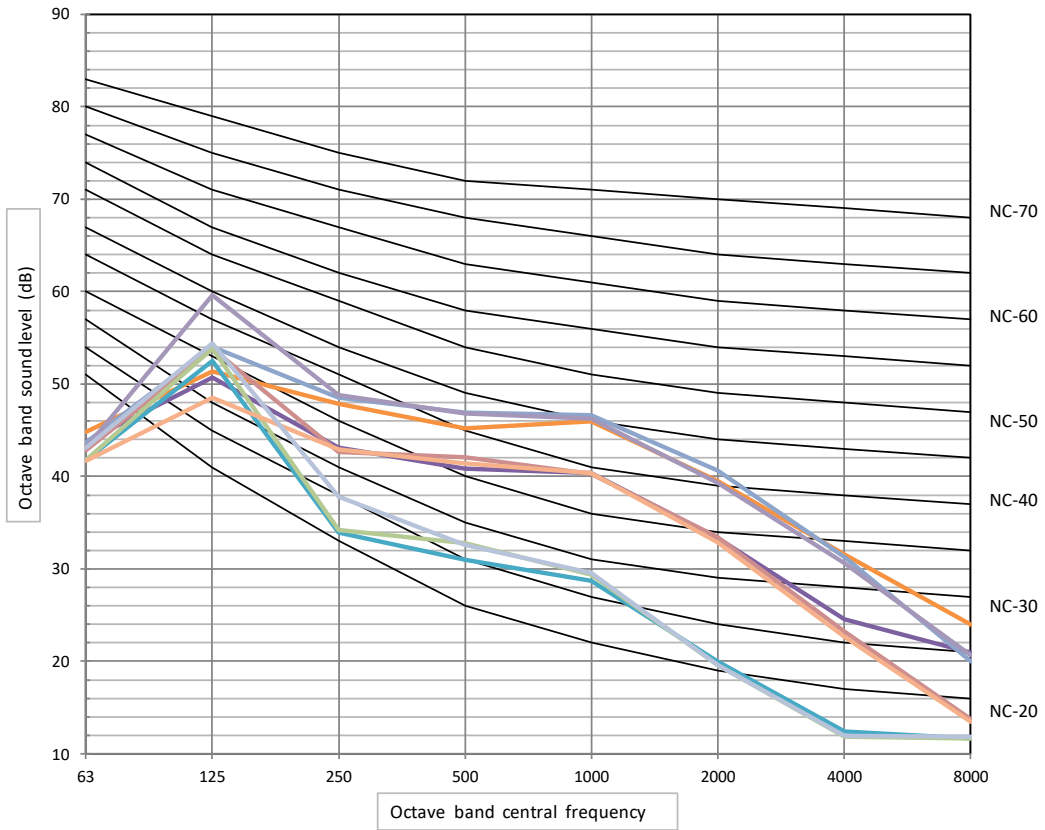
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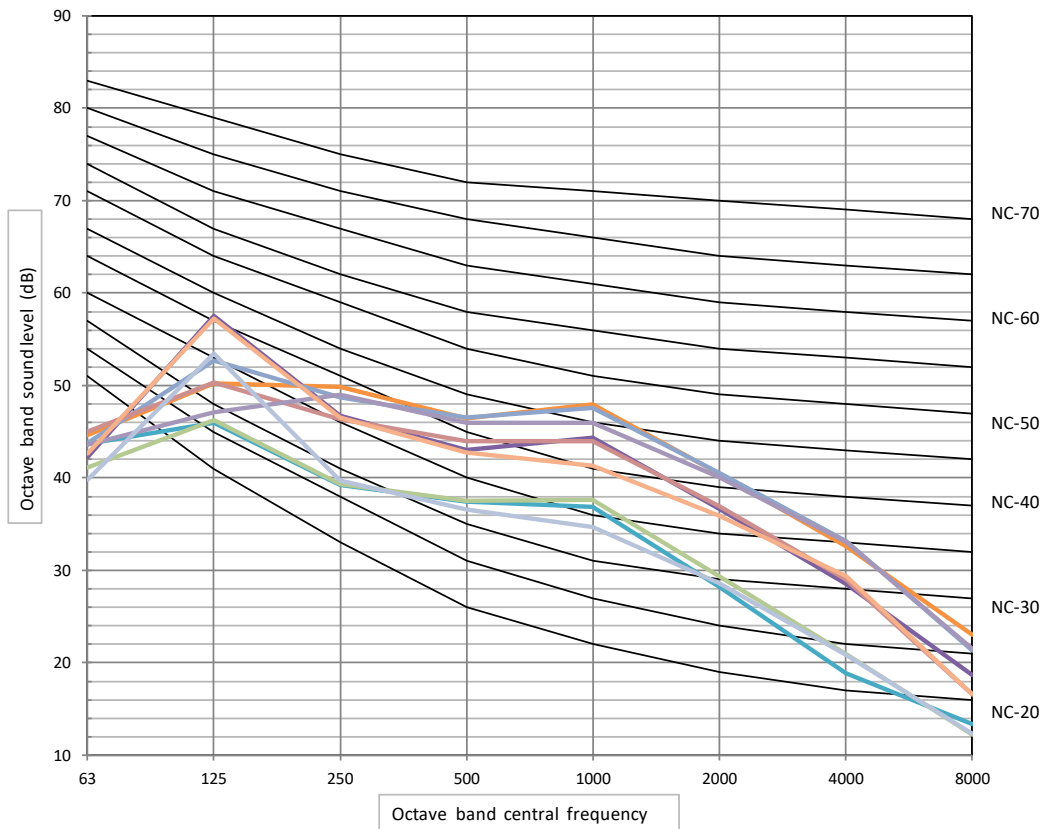
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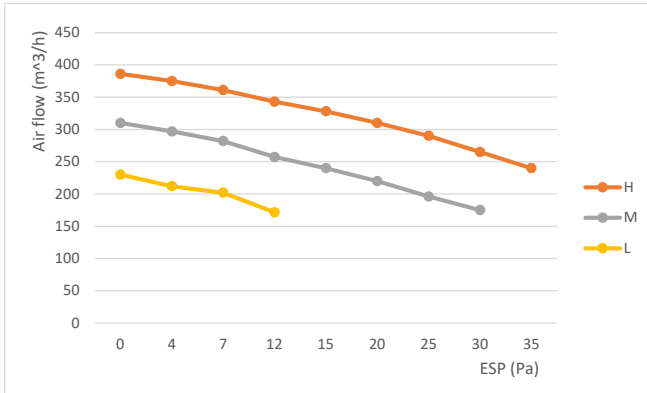
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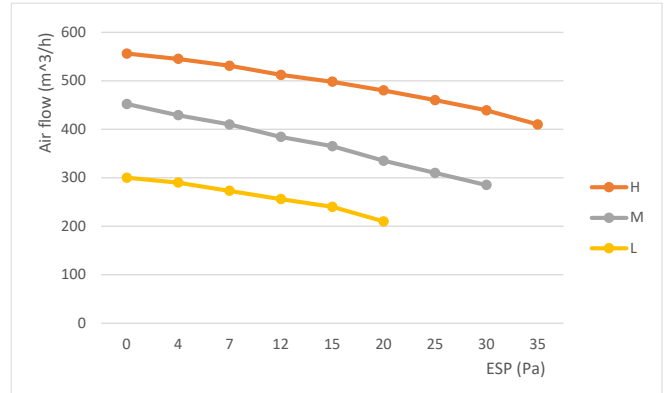
## 5 Static Pressure Graphs

Models of 12Pa standard external static pressure

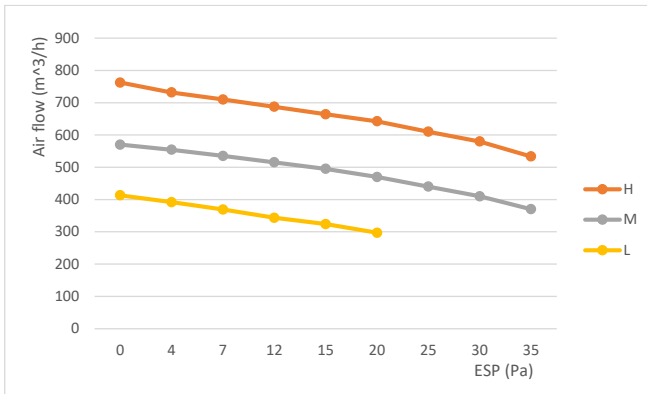
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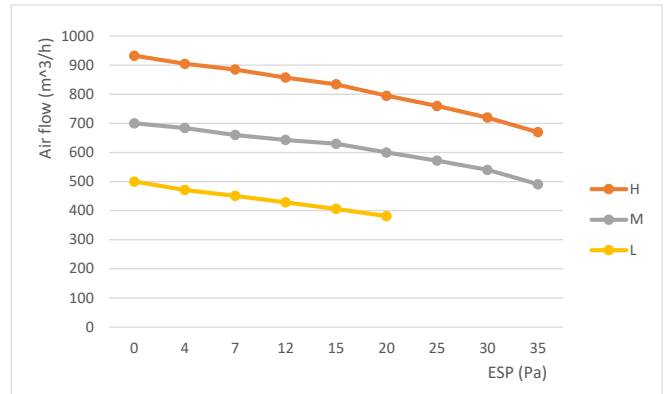
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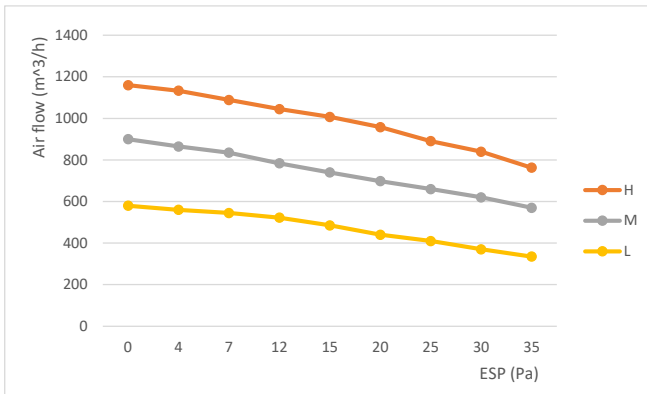
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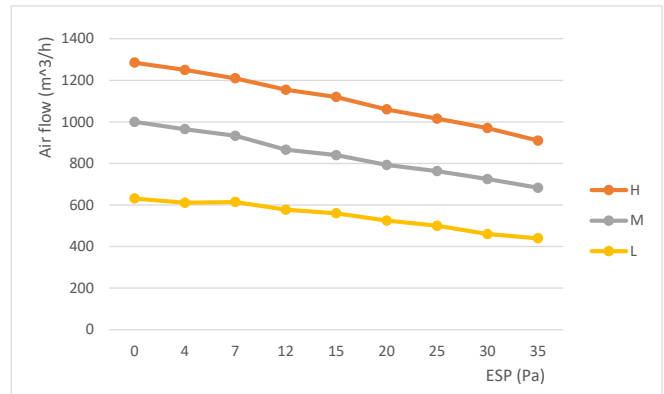
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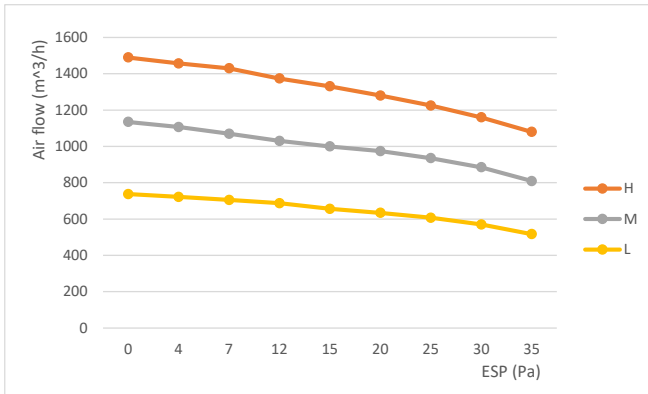
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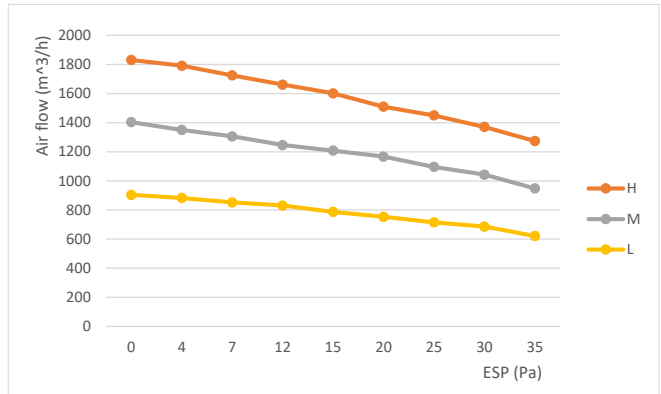
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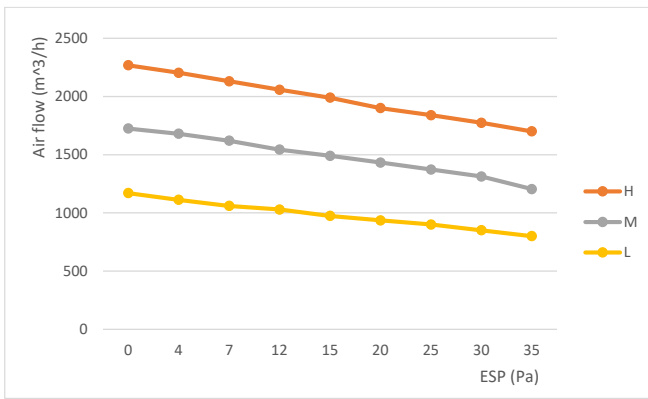
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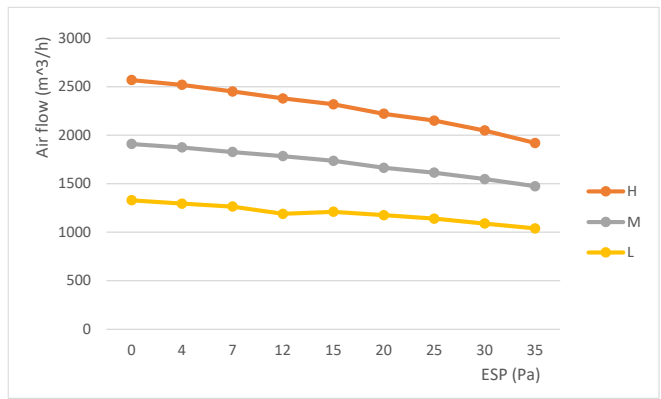
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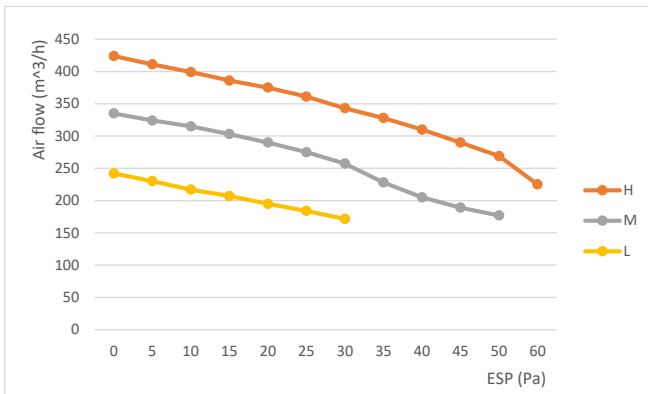


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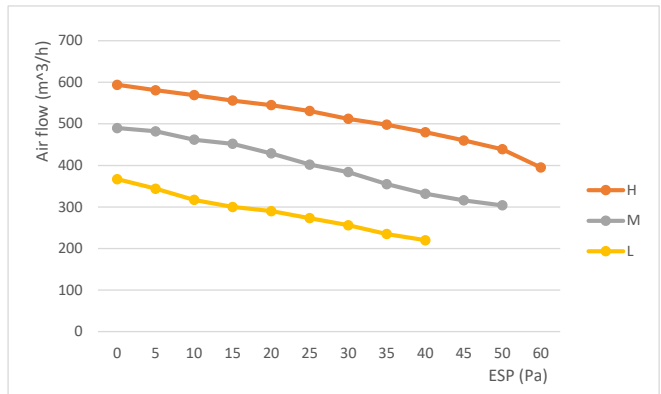


Models of 30Pa standard external static pressure

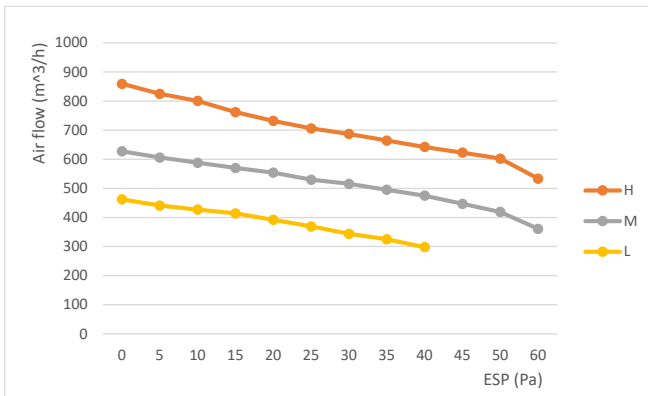
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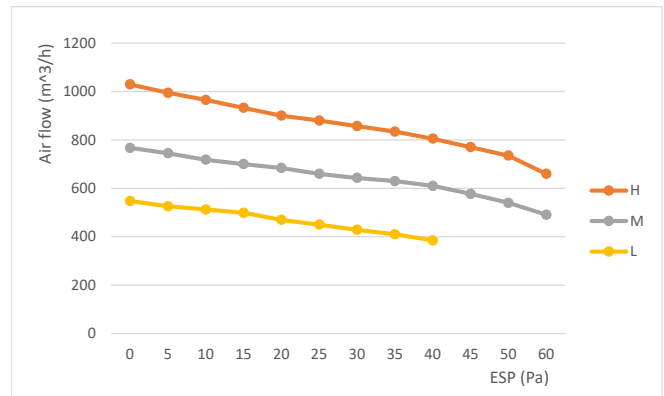
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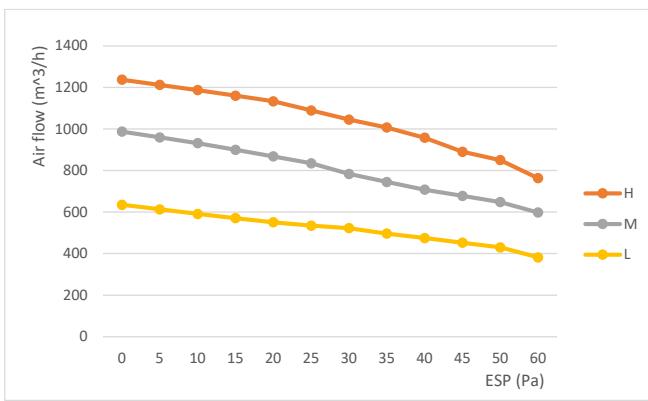
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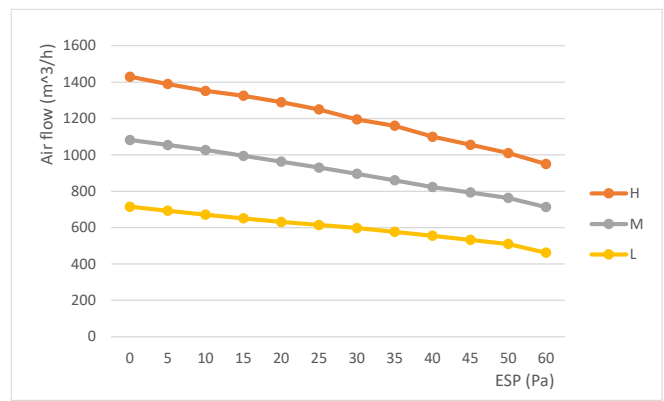
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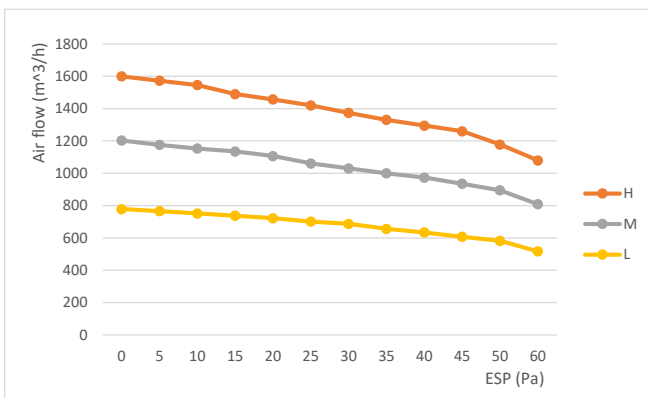
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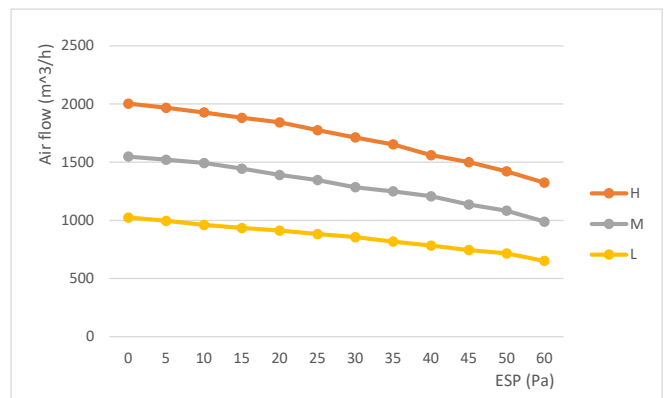
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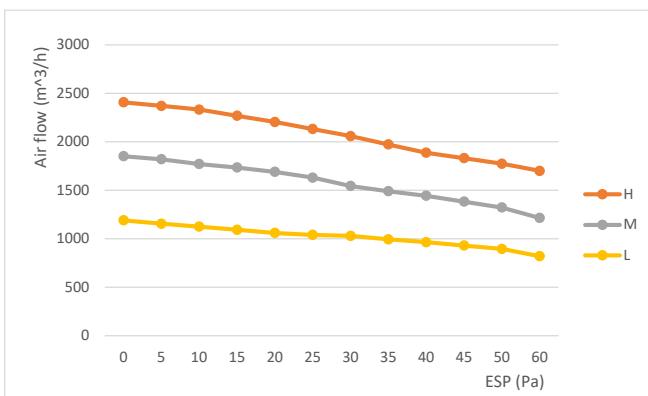
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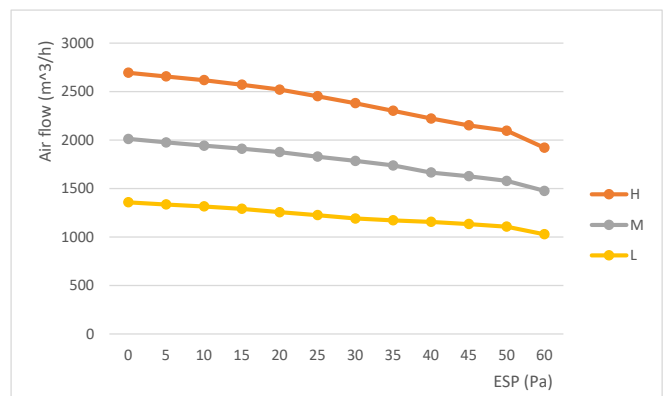
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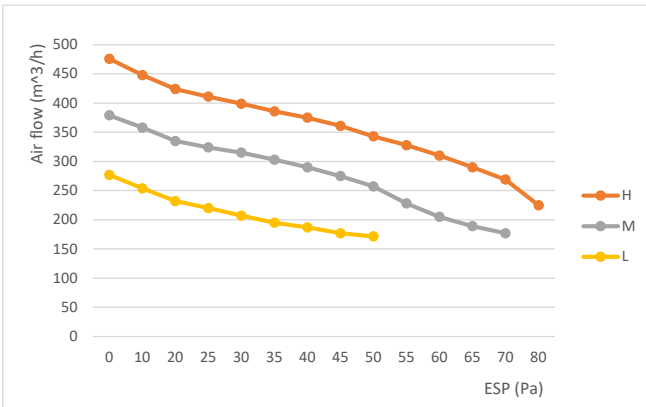


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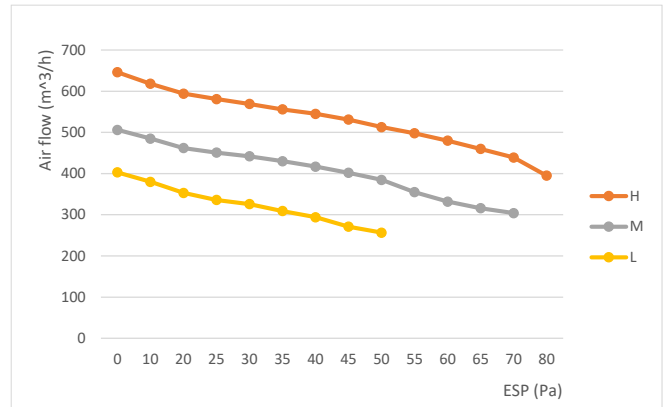


Models of 50Pa standard external static pressure

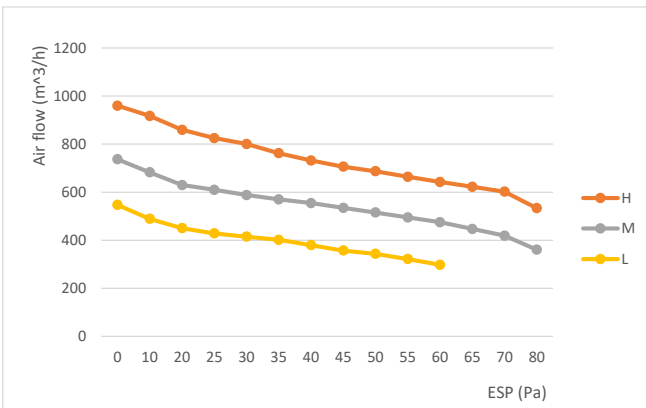
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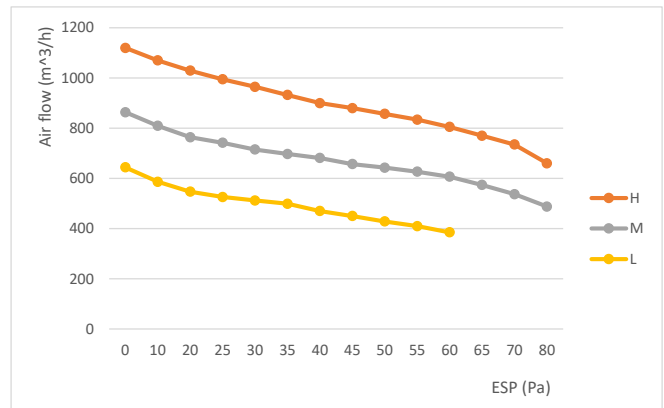
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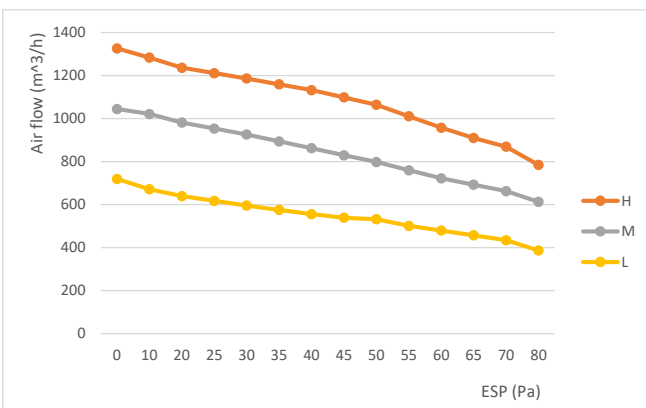
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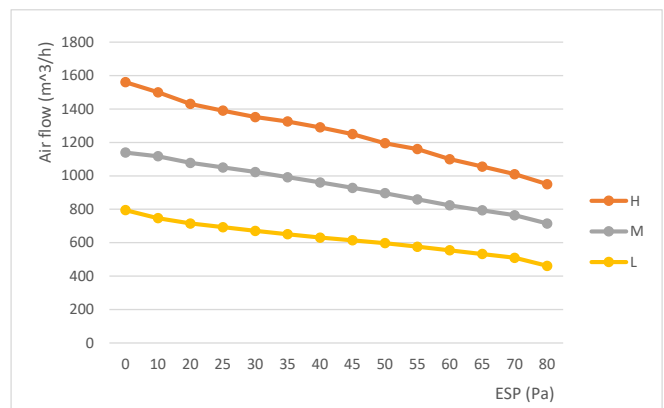
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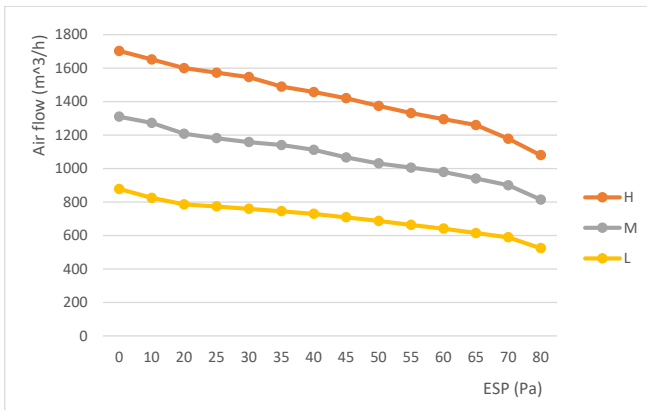
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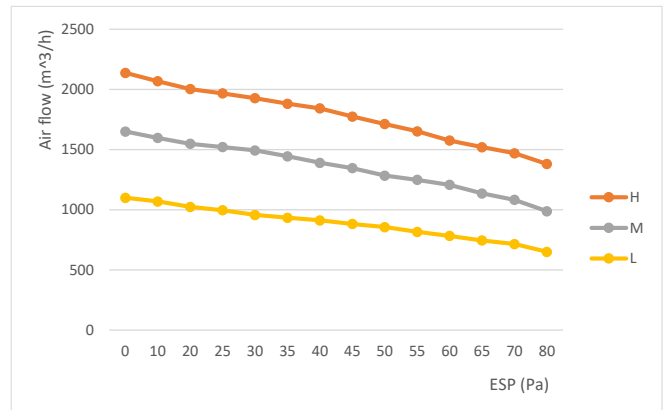
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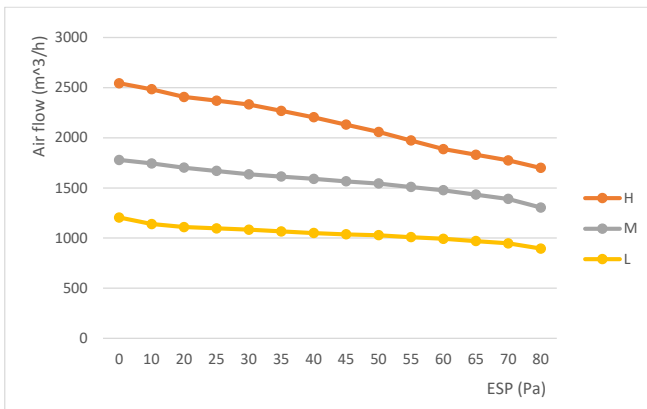
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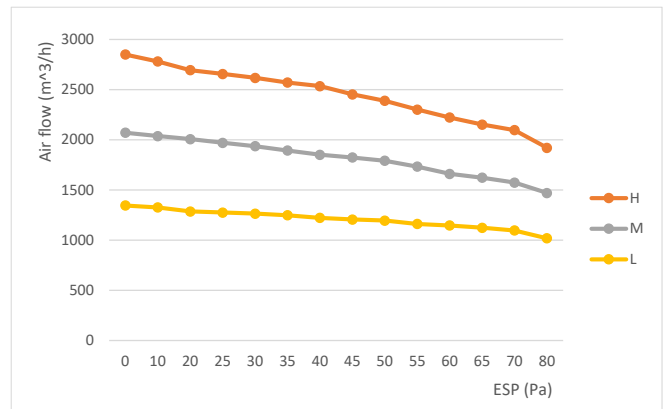
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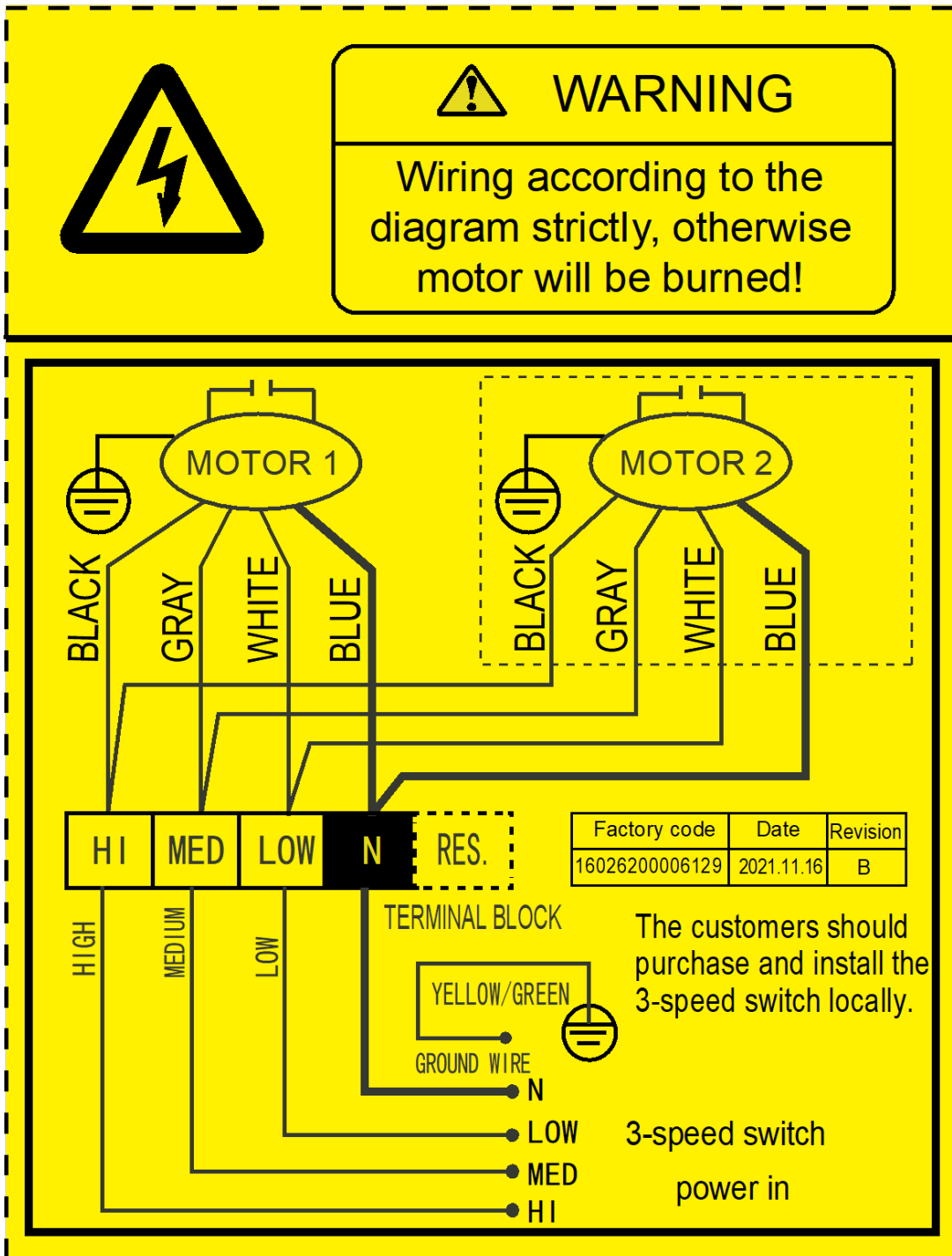


MK14A3UCBSLXG1MXE





6 Wiring Diagrams



Notes:

- Black: high fan speed; Gray: medium fan speed; White: low fan speed; Blue: Neutral wire.
- Terminal 5 connects with reserved speed.
- Please connect wires properly, or the motor would be burned-out.

**7 Electrical Characteristic**

Model name	Units				Power Supply		IFM (Indoor Fan Motor)	
	Hz	Volts (V)	Min. (V)	Max. (V)	MCA (A)	MFA (A)	KW (W)	FLA (A)
MK02A3SCBSLXG1MXE	50	220-240	198	264	0.20	15	34	0.16
MK02A3HCBSLXG1MXE	50	220-240	198	264	0.25	15	43	0.20
MK02A3UCBSLXG1MXE	50	220-240	198	264	0.28	15	47	0.22
MK03A3SCBSLXG1MXE	50	220-240	198	264	0.21	15	37	0.17
MK03A3HCBSLXG1MXE	50	220-240	198	264	0.36	15	63	0.29
MK03A3UCBSLXG1MXE	50	220-240	198	264	0.40	15	70	0.32
MK04A3SCBSLXG1MXE	50	220-240	198	264	0.38	15	63	0.30
MK04A3HCBSLXG1MXE	50	220-240	198	264	0.41	15	72	0.33
MK04A3UCBSLXG1MXE	50	220-240	198	264	0.55	15	94	0.44
MK05A3SCBSLXG1MXE	50	220-240	198	264	0.45	15	78	0.36
MK05A3HCBSLXG1MXE	50	220-240	198	264	0.51	15	91	0.41
MK05A3UCBSLXG1MXE	50	220-240	198	264	0.65	15	112	0.52
MK06A3SCBSLXG1MXE	50	220-240	198	264	0.53	15	91	0.42
MK06A3HCBSLXG1MXE	50	220-240	198	264	0.63	15	110	0.50
MK06A3UCBSLXG1MXE	50	220-240	198	264	0.75	15	130	0.60
MK07A3SCBSLXG1MXE	50	220-240	198	264	0.66	15	116	0.53
MK07A3HCBSLXG1MXE	50	220-240	198	264	0.69	15	120	0.55
MK07A3UCBSLXG1MXE	50	220-240	198	264	0.88	15	154	0.70
MK08A3SCBSLXG1MXE	50	220-240	198	264	0.70	15	123	0.56
MK08A3HCBSLXG1MXE	50	220-240	198	264	0.83	15	146	0.67
MK08A3UCBSLXG1MXE	50	220-240	198	264	0.98	15	169	0.78
MK10A3SCBSLXG1MXE	50	220-240	198	264	0.88	15	155	0.70
MK10A3HCBSLXG1MXE	50	220-240	198	264	1.05	15	184	0.84
MK10A3UCBSLXG1MXE	50	220-240	198	264	1.19	15	215	0.95
MK12A3SCBSLXG1MXE	50	220-240	198	264	1.10	15	96×2	0.44×2
MK12A3HCBSLXG1MXE	50	220-240	198	264	1.31	15	115×2	1.05
MK12A3UCBSLXG1MXE	50	220-240	198	264	1.60	15	137×2	0.64×2
MK14A3SCBSLXG1MXE	50	220-240	198	264	1.35	15	110×2	0.54×2
MK14A3HCBSLXG1MXE	50	220-240	198	264	1.40	15	123×2	1.12
MK14A3UCBSLXG1MXE	50	220-240	198	264	1.88	15	180×2	0.75×2

**Abbreviations:**

MCA: Min. Current Amps. (A)

MFA: Max. Fuse Amps. (A)

IFM: Indoor Fan Motor

FLA: Full Load Amps. (A)

KW: Rated Motor Output (W)




# Part 3

# Accessories

1 Standard Accessories ..... 108

2 Optional Accessories..... 108

### 1 Standard Accessories

Accessory name	Qty.	Shape	Usage
Owner's & installation manual	1	/	Installation guide
Extended drain pan	1		Connect drain water from valve kit

### 2 Optional Accessories

Accessory name	Qty.	Shape	Usage
PCB control kit CE-FCUKZ-03	1		Electric control
Remote controller RM05/BGE	1		Remote control
Remote controller R51/E	1		Remote control
Wired controller KJR-18B/E	1		Wired control
Wired controller KJRP-86A/I	1		Wired control
Centralized controller CCM30	1		Centralized control

Note: the remote controllers and centralized controllers above can only be used under the premise of adding PCB control kit.

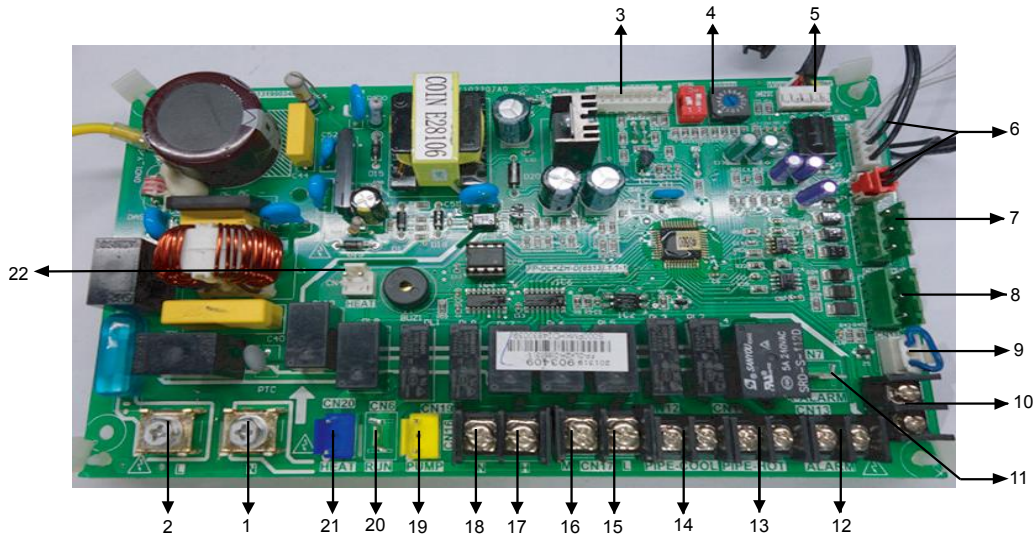
#### 2.1 PCB control kit for FCU



## 2.1.1 Specifications

Model		CE-FCUKZ-03
Power supply		220-240V-1Ph-50Hz
Operation range	Room temperature	17°C~30°C
	Inlet water temperature	3°C~75°C
Temperature controlling precision		±1°C
Dimension (W×H×D)		296mm×66mm×212mm
Packing Size (W×H×D)		410mm×115mm×262mm

## 2.1.2 Internal View



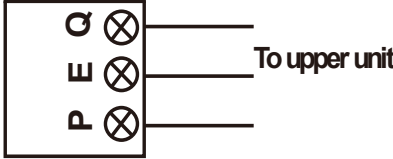
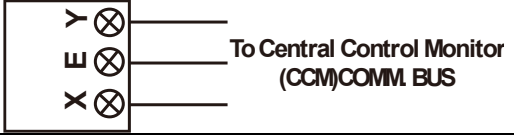
**Note:** CE-FCUKZ-03 adopts one valve switch.

- T1 is indoor temperature sensor, install to the air inlet of the indoor unit.
- T2-COOL,T2-HEAT is pipe temperature sensor.

No.	Detail information																	
1, 2	*L: Live wire *N: Netrual wire Power in: 220V-240V~, 50Hz/60Hz																	
3	CN300: DEBUG PORT																	
4	SW2, ENC1: Network address set, every air-conditioner in network has only one network address to distinguish each other, the set range is 0-63, please see the table blow. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Toggle switch set</th> <th rowspan="2">Network address code</th> </tr> <tr> <th>SW2</th> <th>ENC1</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>00~15</td> </tr> <tr> <td></td> <td></td> <td>16~31</td> </tr> <tr> <td></td> <td></td> <td>32~47</td> </tr> <tr> <td></td> <td></td> <td>48~63</td> </tr> </tbody> </table>	Toggle switch set		Network address code	SW2	ENC1			00~15			16~31			32~47			48~63
Toggle switch set		Network address code																
SW2	ENC1																	
		00~15																
		16~31																
		32~47																
		48~63																
5	CN9: Connect to wire controller.																	
6	CN5: T1, room temperature sensor (if fault, the wire controller light will flashes two times at 2Hz, stop 2s);																	

## 2-Pipe Duct MK-CBS Series



	CN5: T2-COOL, pipe temperature sensor of condenser (if fault, the wire controller light will flashes three times at 2Hz, stop 2s); *CN8: Reserved
7	<p>CN10: MOBUS RTU port: Connect to BMS control. 3-core shielded cable should be used. Interconnected P, Q, E wires and the shielding layer of the communication wires should be grounded.</p> 
8	<p>CN14: Centralized control port: Connect to centralized controller. 3-core shielded cable should be used. Interconnected X, Y, E wires and the shielding layer of the communication wires should be grounded.</p> 
9	CN18: water-level switch. (If fault, the wired controller light will flashes four times at 2Hz, stop 2s.)
10	CN3: ON/OFF port, disconnect, the long-distance control function is invalid; when connect, the wire controller and centralized controller are invalid and system is equivalent of shutdown.
11	CN7: I-ALARM port, high voltage signal output, when system run normal. (strong AC signal output)
12	CN13: ALARM port, high voltage signal when a alarm output. (strong AC signal output).
13	Reserved
14	CN12: PIPE-COOL port, cool water valve
15	CN17: L, connect to indoor fan unit, low fan speed (strong AC signal output)
16	CN17: M, connect to indoor fan unit, medium fan speed (strong AC signal output)
17	CN16: H, connect to indoor fan unit, high fan speed (strong AC signal output)
18	CN16: N, connect to nutral wire.
19	<p>CN19: PUMP (strong AC signal output).</p> <ol style="list-style-type: none"> <li>After receiving start-up instruction and set in COOL, DRY mode, the pump will be started up instantly, and will maintain start-up state always in the process of operation.</li> <li>To turn it off or transferred to other mode, the pump will be shut down 3 minutes after all modules stop operating.</li> </ol>
20	CN6: RUN, high voltage signal output when the system run normal. (strong AC signal output).
21	<p>CN20: HEAT (strong AC signal output).</p> <p>Attention: the control port value of the CN20(HEAT) is STRONG AC signal output but can not drive electric heating directly. So special attention should be paid when installing this heat. Electric heating needs to be connected with 220V-240V~ power supply externally.</p>
22	<p>CN4: HEAT (DC +12V output).</p> <p>Attention: the control port value of the CN4(HEAT) actually detected is DC 12V signal output and can not drive electric heating directly, so special attention should be paid when installing this heat.</p> <p>DC +12V control signal output by PCB can start/stop the external relay, thereby to start/stop e-heating pipe.</p> <p>Electric heating needs to be connected with 220V-240V~ power supply externally.</p>

\* CE-FCUKZ-03: Condenser Temp. sensor number is 1;

\* L, N Port: Strongly recommend using Ring Terminal or Spade Terminal to connect.

### 2.1.3 Main features

- Suitable for 2-pipe FCU.
- Installation flexible, it can be installed attaching on the unit, mounting on the wall or hanging under the ceiling.
- Maintenance convenient for its external installation.
- Three fan speeds adjustment: high/medium/low.
- Operating status can be displayed form lamp indicator.
- Network Interface Module standard, compatible with the CCM control and PC based software control.

### 2.1.4 Compatible control type

Model	Remote control	Wired control	Central control	PC based network control
-------	----------------	---------------	-----------------	--------------------------

CE-FCUKZ-03	√	√	√	√
-------------	---	---	---	---

**2.1.5 Application control**
**2.1.5.1 Fan speed adjustment function 3 files**

Available wire controller to select high, medium and low three operation modes.

**2.1.5.2 Long-distance control and alarm functions**

- Refer wiring diagram connected CN13 port to achieve fault alarm function.
- Through regulating CN3 port status to realize long-distance control function.
- When CN3 disconnect, the long-distance control function is invalid;
- When CN3 connect, the wire controller and Centralized Controller is invalid and the system is equivalent of shutdown.

**2.1.5.3 Centralized control**

Centralized control through the CCM03, please refer to the "Centralized control over's & Installation Manual"

**2.1.6 Trouble shooting**

Before asking for serving or repairing, check the following points.

Symptoms	Causes	Solution
Unit does not start	Power failure; Power switch is off; Fuse of power switch may have burned; Batteries of remote controller exhausted or other problem of controller.	Wait for the comeback of power; Switch on the power; Replace the fuse; Replace the batteries or check the controller.
The fan speed cannot be changed.	Check whether the MODE indicated on the wire controller monitor is "DRY".	When dry operation is selected, the air conditioner changes the fan speed automatically. The fan speed can only be selected during "COOL", "FAN" and "HEAT".
Air flowing normally but completely can't cooling	Temperature is not set correctly.	Set the temperature properly.
Low cooling effect	Indoor unit heat exchanger is dirty; The air filter is dirty; Inlet of indoor unit is blocked; Doors and windows are open; Sunlight shine directly; Too many heat resources.	Clean the heat exchanger; Clean the air filter; Eliminate all dirties and make air smooth; Close doors and windows; Make curtains in order to shelter from sunshine; Reduce heat resource.
Low heating effect	Doors and windows are not completely closed.	Use heating device; Close doors and windows.

**2.1.7 Malfunctions and malfunction code**

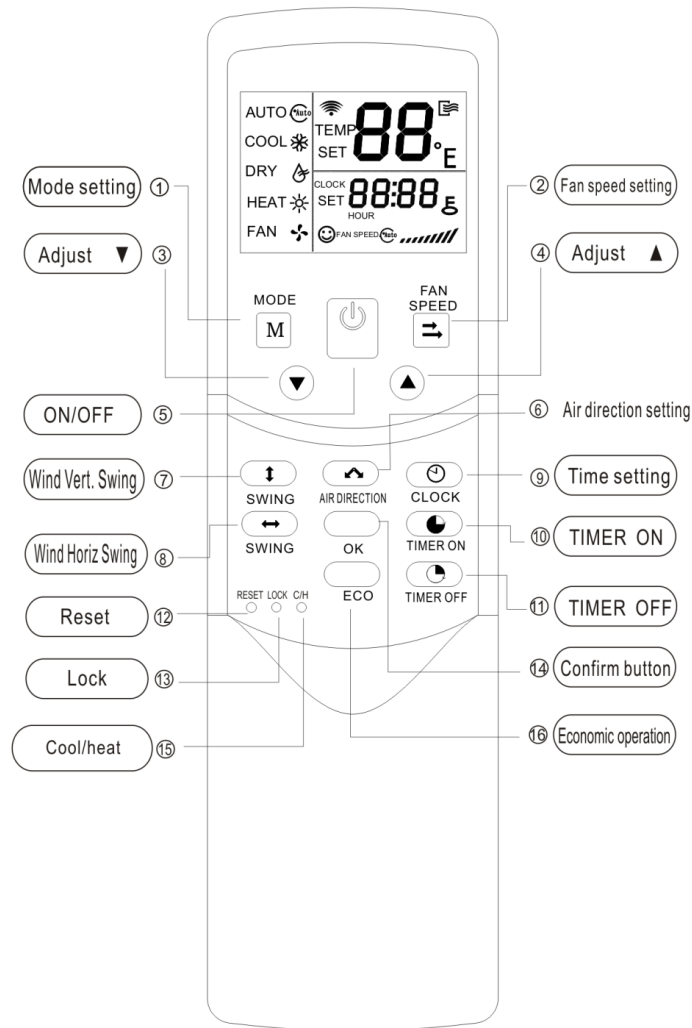
If anything happens like the situation described below, please shut off the power supply of the unit and contact the customer service center immediately.

NO.	Malfunction	The wire controller light
0	Normal	On
1	Eeprom malfunction	Flashes one times at 2Hz, stop 2s
2	Roomtemperature sensor checking channel is abnormal.	Flashes two times at 2Hz, stop 2s
3	Evaporator temperature sensor checking channel is abnormal. (four-pipe water system COOL MODE: T2-COOL ; HEAT MODE: T2-HEAT)	Flashes three times at 2Hz, stop 2s
4	Water-level switch malfunction	Flashes four times at 2Hz, stop 2s

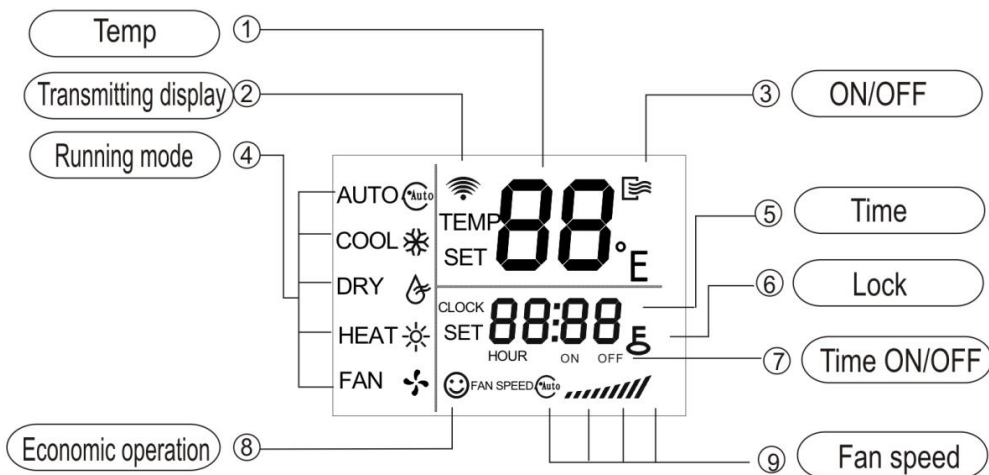


## 2.2 Optional remote controller: RM05/BGE

### 2.2.1 Operation section



### 2.2.2 Display section



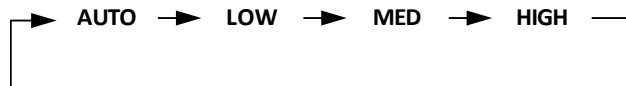
### 2.2.2.1 How to operate

- **MODE:** Once pressing, running mode will be selected in the following sequence:



**NOTE:** No heating mode for cool only type unit.

- **FAN SPEED:** Fan speed will be selected in following sequence once pressing this button:

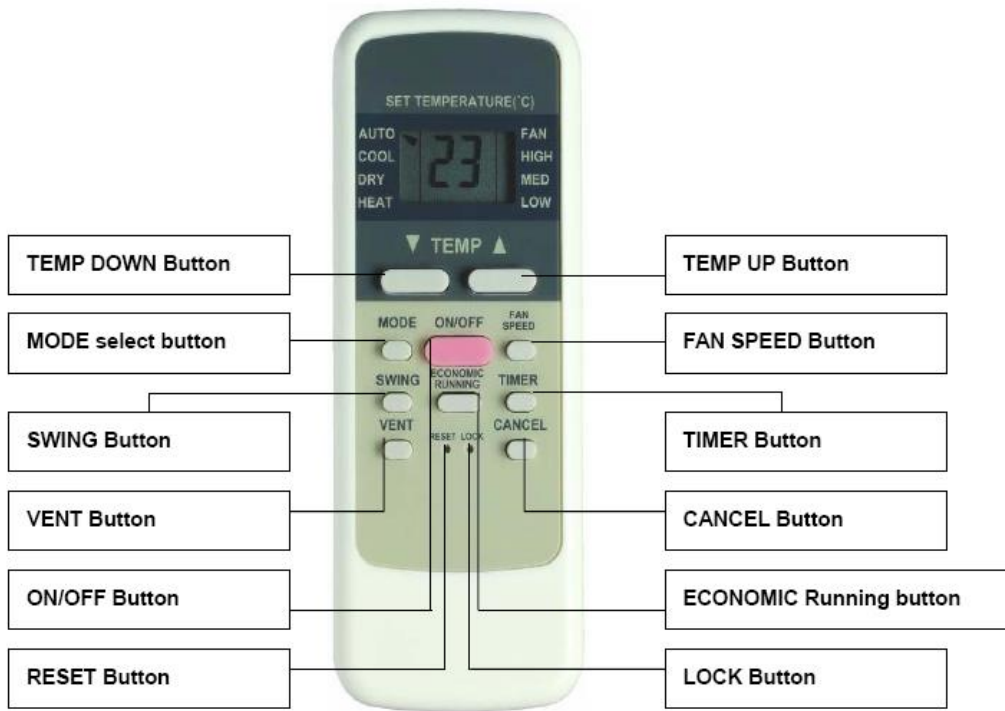


- **Adjust:** Decrease the set temp. Keeping pressing will decrease the temp with 1°C per 0.5s.
- **Adjust:** Increase the set temp. Keeping pressing will increase the temp with 1°C per 0.5s.
- **ON/OFF:** For turning on or turning off the air conditioner.
- **AIR DIRECTION:** Activate swing function of air deflector. Once pressing, air deflector will turn 6°. For normal operation and better cooling and heating effect, deflector will not turn to the degree which is the state of deflector when the unit is turned off. (Only available when remote controller is used with corresponding unit.)
- **HORIZ SWING:** Activate or turn off horizontal swing function. (Only available when remote controller is used with corresponding unit.)
- **VERT SWING:** Activate or turn off vertical swing function. (Only available when remote controller is used with corresponding unit.)
- **CLOCK:** Display the current time. (12:00 is displayed when resetting or electrifying for the first time.) Press CLOCK for 5s, icon indicating hour will flash with 0.5s. Press it again, ▼ and ▲ are used to adjust the figure. Setting or modification is effective only by pressing OK button to make confirmation.
- **TIME ON:** For time ON setting. Once pressing this button, the time will increase by 0.5 hour. When the set time exceeds 10 hours, pressing the button will increase the time by 1 hour. Adjusting the figure to 0.00 will cancel time ON setting.
- **TIME OFF:** For time OFF setting. Once pressing this button, the time will increase by 0.5 hour. When the set time exceeds 10 hours, pressing the button will increase the time by 1 hour. Adjust the figure to 0.00 will cancel time ON setting.
- **RESET (inner located):** Press this button with a needle of 1mm to cancel the current setting and reset remote controller.
- **LOCK (inner located):** Press this button with a needle of 1 mm to lock or unlock the current setting.
- **OK:** Used to confirm the time setting and modification.
- **COOL/HEAT (inner located):** Press this button with a needle of 1 mm to shift mode between COOL only and COOL&HEAT. During setting, back light will be lightened. Factory default mode is COOL & HEAT.
- **ECO:** Activate or turn off economic operation mode. It is suggested to turn on this function when sleeping. (Only available when remote controller is used with corresponding unit.)

### 2.2.2.2 Specifications

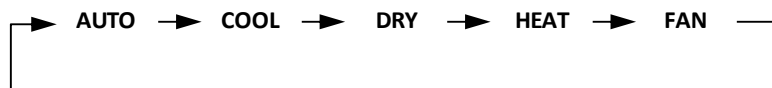
Model	RM05/BGE
Rated Voltage	3.0V
Lowest Voltage of CPU Emitting Signal	2.4V
Reaching Distance	8m (when using 3.0 voltage, it can get 11m)
Environment Temperature Range	-5°C~60°C

### 2.3 Optional remote controller: R51/E



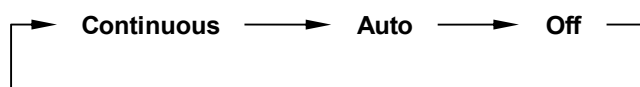
#### 2.3.1 How to operate

- **TEMP DOWN Button:** Push the TEMP DOWN button to decrease the indoor temperature setting or to adjust the timer in a counter-clockwise direction.
- **MODLE SELECT Button:** Each time you push the button, a mode is selected in a sequence that goes from AUTO, COOL, DRY, HEAT and FAN as the following figure indicates:



**NOTE:** HEAT only for Heat Pump.

- **SWING Button:** Push this switch button to change the louver angle.
- **RESET Button:** When the RESET button is pushed, all of the current settings are cancelled and the control will return to the initial settings.
- **ECONOMIC RUNNING Button:** Push this button to go into the Energy-Saving operation mode.
- **LOCK Button:** Push this button to lock in all the current settings. To release settings, push again.
- **CANCEL Button:** Push this button to cancel the TIMER settings.
- **TIMER Button:** This button is used to preset the time ON (start to operate) and the time OFF (turn off the operation)
- **ON/OFF Button:** Push this button to start the unit operation. Push the button again to stop the unit operation.
- **FAN SPEED Button:** This button is used for setting fan speed in the sequence that goes from AUTO, LOW, MED to HIGH, and then back to Auto.
- **TEMP UP Button:** Push this button to increase the indoor temperature setting or to adjust the timer in a counter-clockwise direction.
- **VENT Button:** Push this button to set the ventilating mode. The ventilating mode will operate in the following sequence:



**NOTE:** Ventilation Function is available for the Fresh Star Series.

**2.3.2 specifications**

Model	R51/E
Rated Voltage	3.0V
Lowest Voltage of CPU Emitting Signal	2.0V
Reaching Distance	8m (when using 3.0 voltage, it can get 11m)
Environment Temperature Range	-5°C~60°C

**2.4 Optional wired controller for ducted units without electric heater: KJR-18B/E**
**2.4.1 Models**

KJR-18B/E is a thermostat that has developed into 4 types. Each type has its own features to suit different environment.

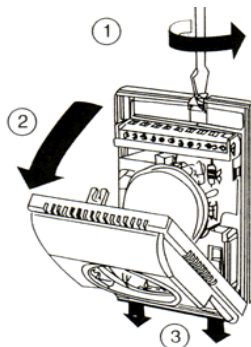
Models	Features
KJR-18B/E-A	Only control 3-speed fan, when the temperature reaches the set-point, it will close the Fan.
KJR-18B/E-B	Control motorized valve and 3-speed fan, when the temperature reaches the set-point, it will close the motorized valve and fan both
KJR-18B/E-C	Control motorized valve and 3-speed fan, when the temperature reaches the set-point, it will close the motorized valve with the fan still running
KJR-18B/E-D	Control 4 pipe fan coil units, control two motorized valves and 3-speed fan, when the temperature reaches the set-point, it will close the motorized valves with the fan still running.

**2.4.2 Specifications**

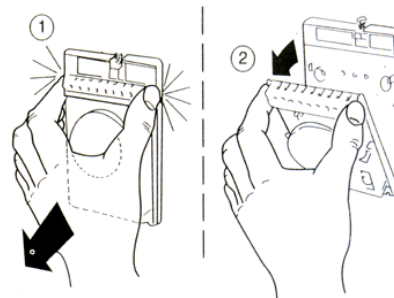
Model	KJR-18B/E
Available appliance	Ducted FCU without electrical heater
Power supply	AC 220V±10%-1Ph-50/60Hz
Operating temperature	0~45°C
Operating Humidity	5~90%RH
Temperature controlling range	10~30°C
Temperature controlling precision	±1°C
Dimension (H×W×D)	130×85×43mm

**2.4.3 Installation**

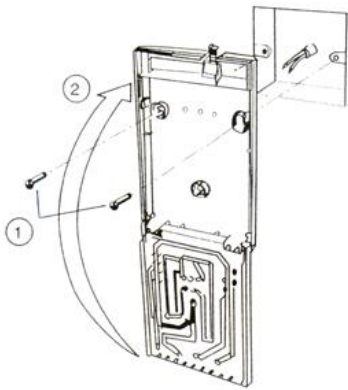
1) Dismantle the front panel



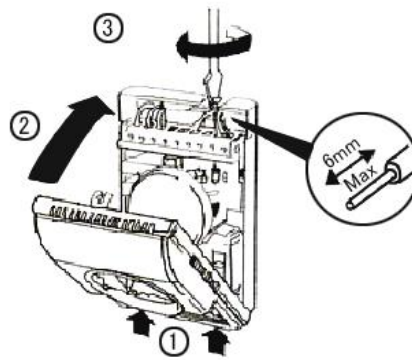
2) Dismantle the middle part



3) Install the back base



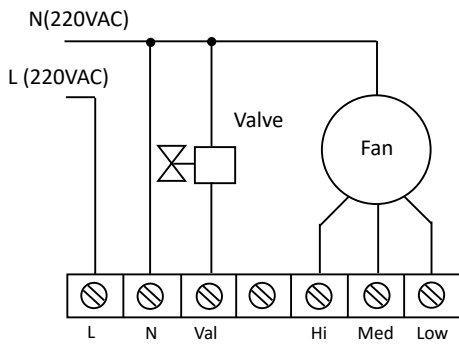
4) Wire Connection



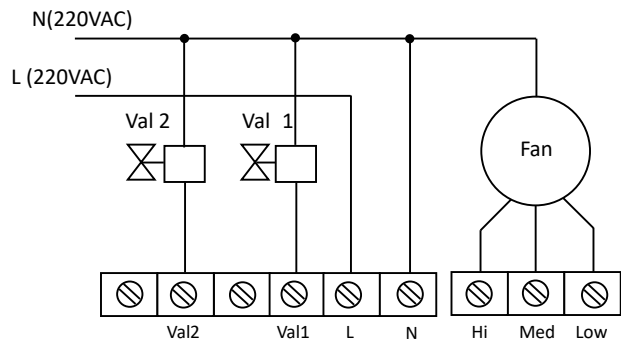
### 2.4.4 Wiring diagrams

KJR-18B/E-A KJR-18B/E-B KJR-18B/E-C

KJR-18B/E-D



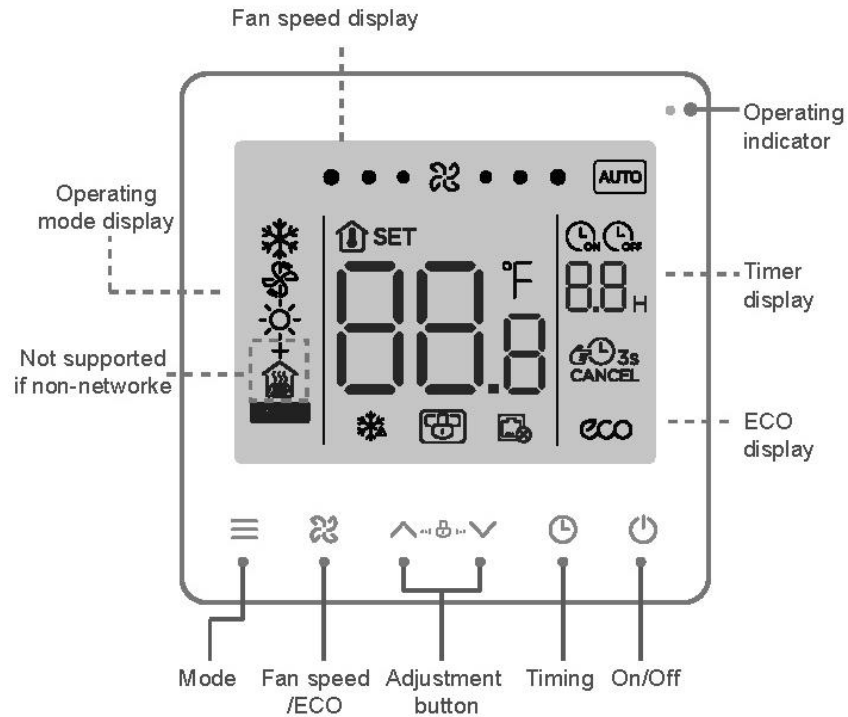
2-wire NC valve system  
(KJR-18B/E-A without Motorized Valve)



Val1: For heating Val2: For cooling  
2-wire NC valve system

**Note:** Please confirm the model and use corresponding wiring diagram above when you wire.

### 2.5 Optional wired controller for ducted units with electric heater: KJRP-86I/A



### 2.5.1 Functions

Function	Available model
Available for ducted FCU with electric heater	All
Blue backlight	KJRP-86A/BMFNKD-E
Clock display	All
Temperature setting	All
Mode setting : cool/heat/fan/electric heating on/off	All
Fan speed setting: auto/high/medium/low	All
Motorized valve control	All
Electric heating control	KJRP-86A/BMFNKD-E KJRP-86I/MFKS-E
Remote control (optional)	KJRP-86A/BMFNKD-E

### 2.5.1 Specifications

Model	Non-networked: KJRP-86I/MFK-E Non-networked: KJRP-86I/MFKS-E Networked: KJRP-86A/BMFNKD-E
Power supply	AC 220-240V~, 50/60Hz
Power consumption	< 2W
Temperature limit	-15°C to 43°C
Humidity	≤ RH90 %
Degree of pollution	2
Action Type	1B.U
Temperature controlling precision	± 1°C

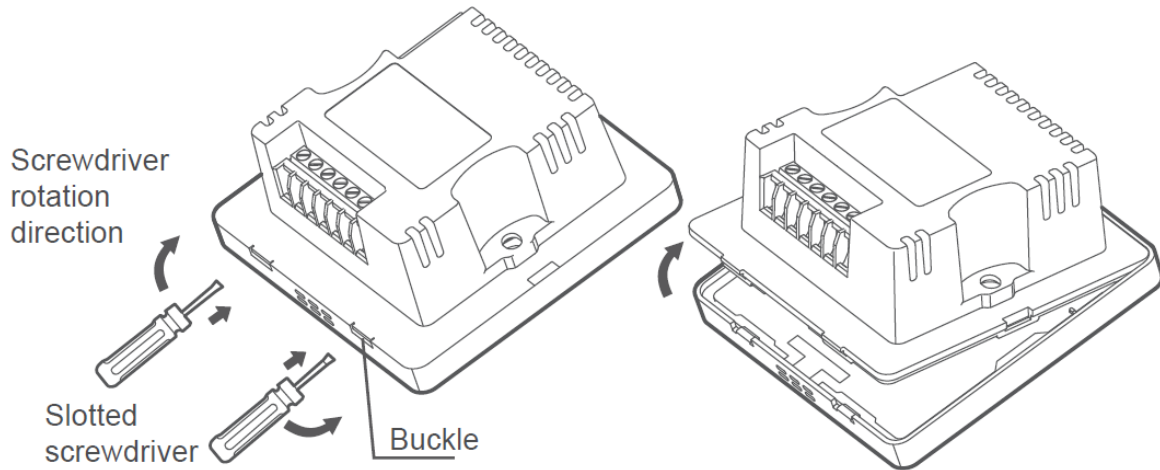
## 2-Pipe Duct MK-CBS Series



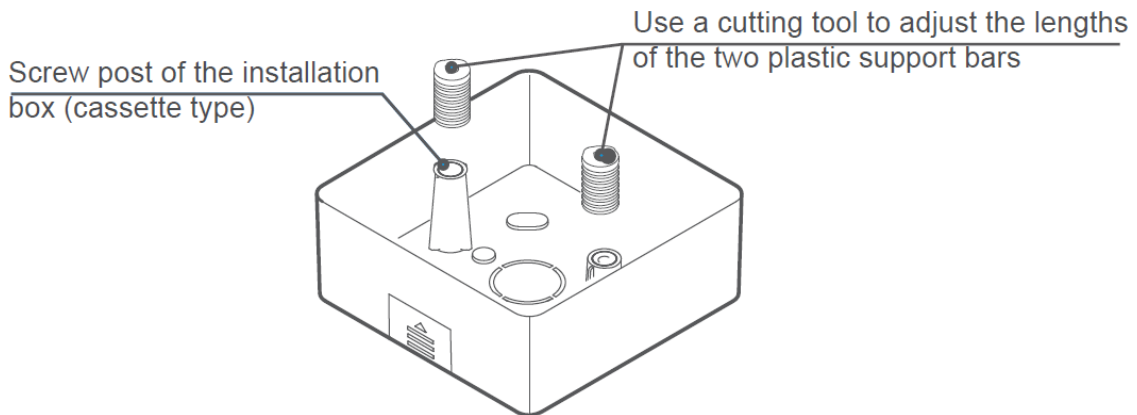
External dimension(W×H×D)	86×86×9 mm
Mounting hole	60mm (standard)

### 2.5.2 Installation

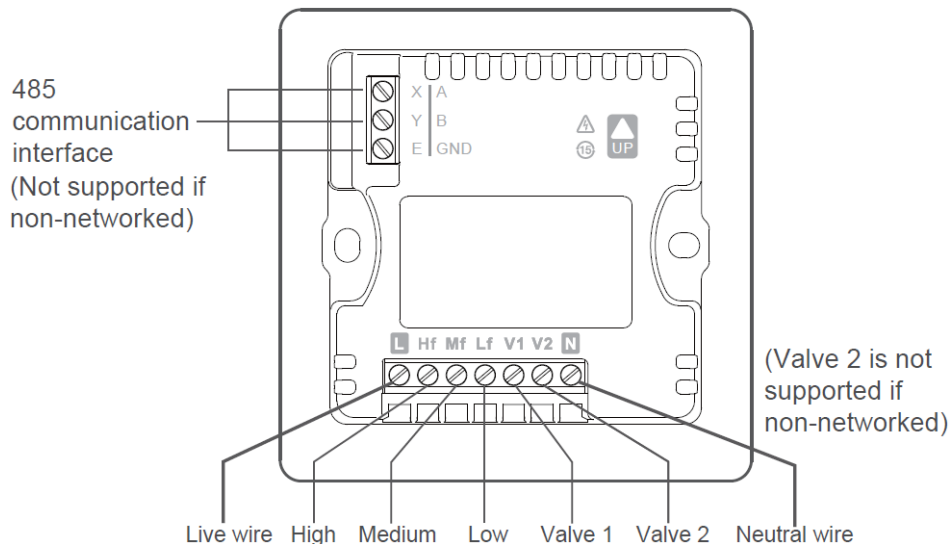
1. Remove rear cover of the wired controller: insert a slotted-head screwdriver into the bottom buckle of the wired controller, and rotate in the direction indicated to remove the rear cover. Remove the flat cable connecting the front and rear PCBs and remove the front cover of the wired controller.



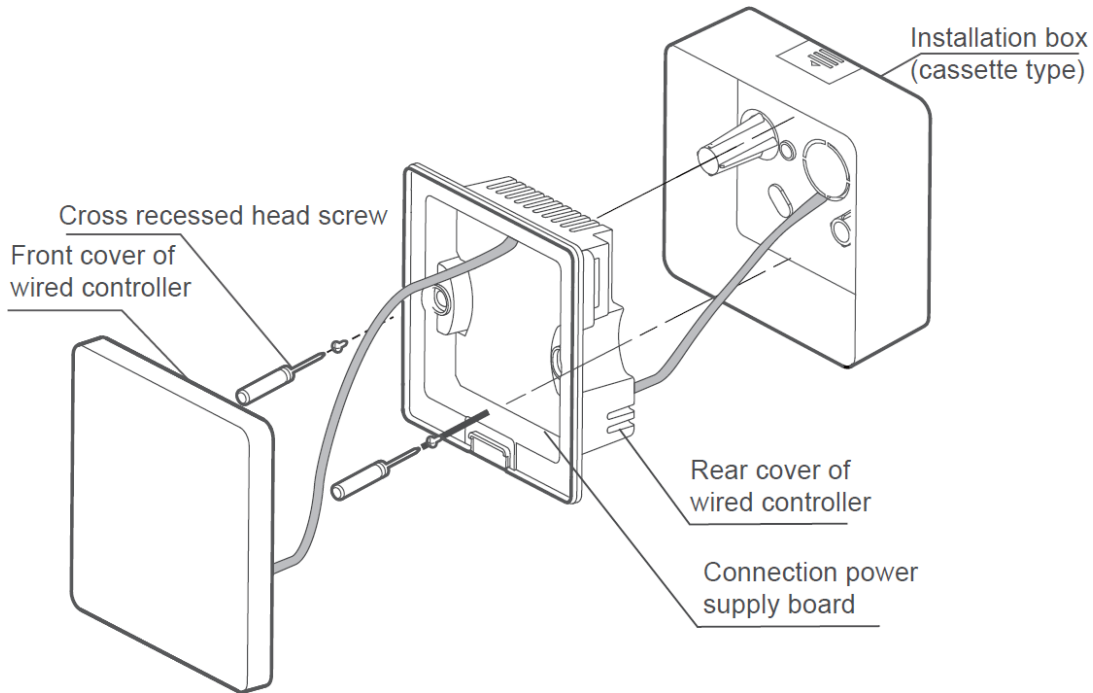
2. Install support bars: Adjust the lengths of the two plastic support bars in the accessories. Ensure that the rear cover of the wired controller stays level with the wall when installed on the screw post of installation box (cassette type).



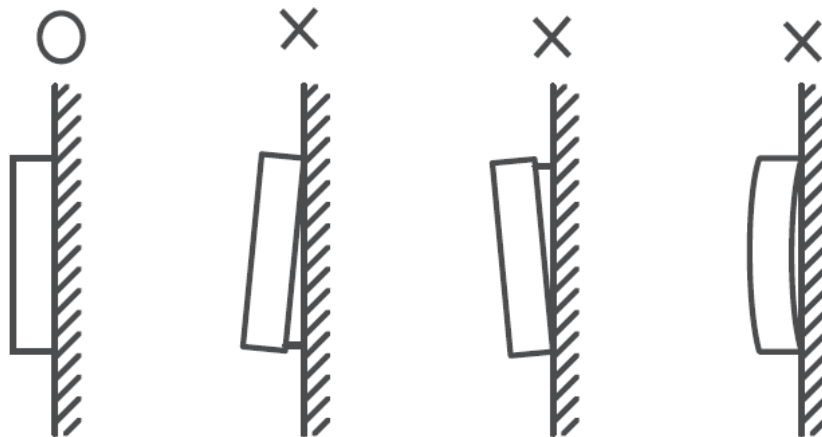
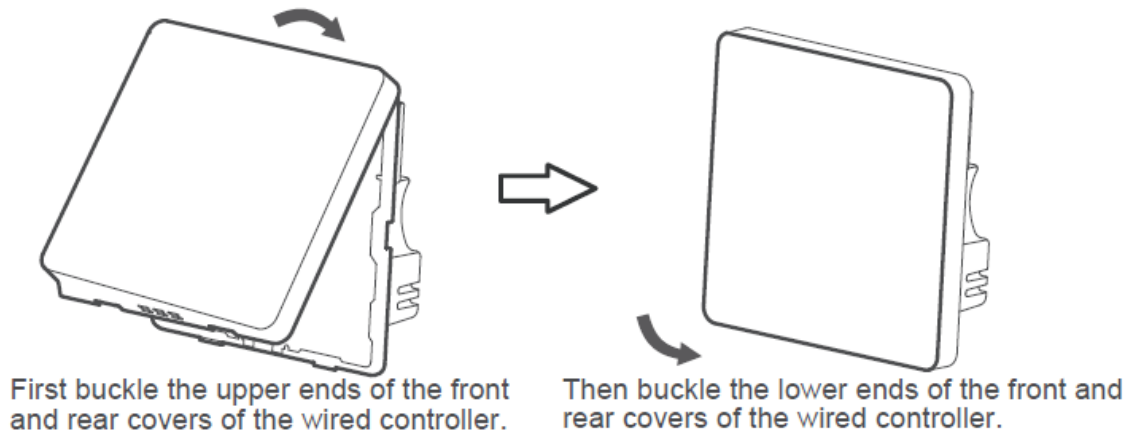
3. Wiring: Connect the cables according to the following wiring drawing.



4. Insert the cable of the rear cover into the installation box (cassette type). Use pan head screws to fix the rear cover of the wired controller on the installation box (cassette type); connect the flat cable that connects the front and rear PCBs.

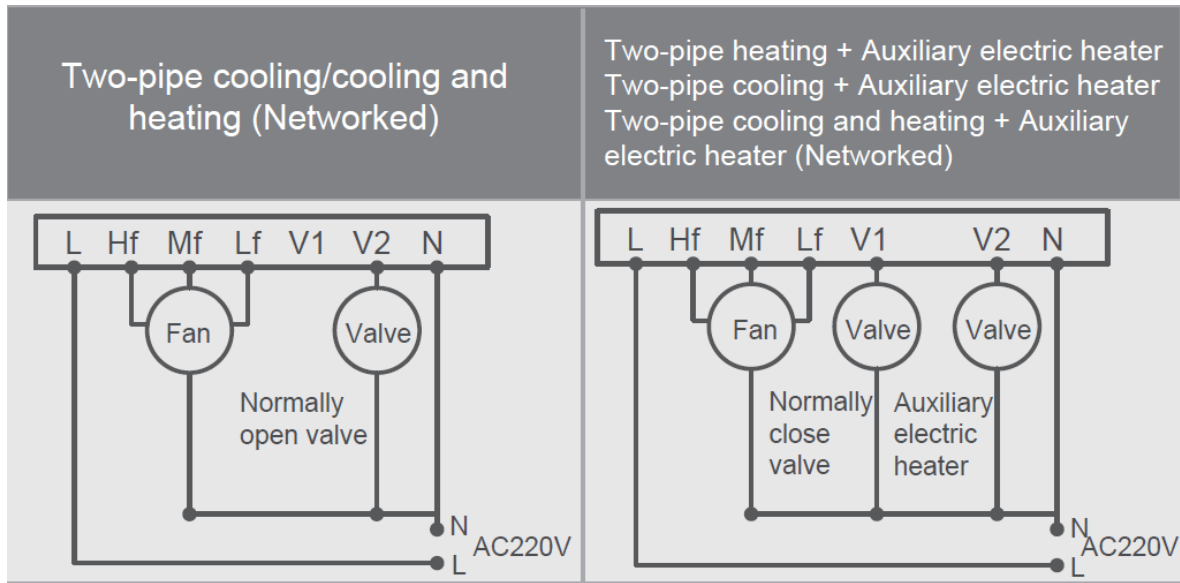


5. Buckle the front cover of the wired controller on the rear cover as shown in the following figure.



### 2.5.3 Wiring diagram





### 2.5.4 Operation

Basic setting

1 On/Off

Press . The operating status LED turns on and the air conditioner starts operating;

Press again. The operating status LED turns off and the air conditioner stops operating

2 Mode Selection

The icon is displayed when the air conditioner is off.

Press to change the operating mode according to the order shown below:

Two-pipe cooling and heating scenario is set before delivery from factory by default. The scenario can be changed based on the parameter settings according to the actual need.

Only two-pipe cooling and two-pipe cooling and heating modes are supported if non-networked

3 Temperature Setting

Except in the Fan mode, press or to adjust the set temperature indoors. Press and hold the button to increase or decrease the set temperature continuously.

4 ECO setting

Press and hold bottom for 2s to enable ECO mode.

Cooling ECO: 26°C, low fan speed; Fan ECO: low fan speed;

Heating ECO: 18°C, low fan speed; Auxiliary electric heater ECO: 18°C, low fan speed;

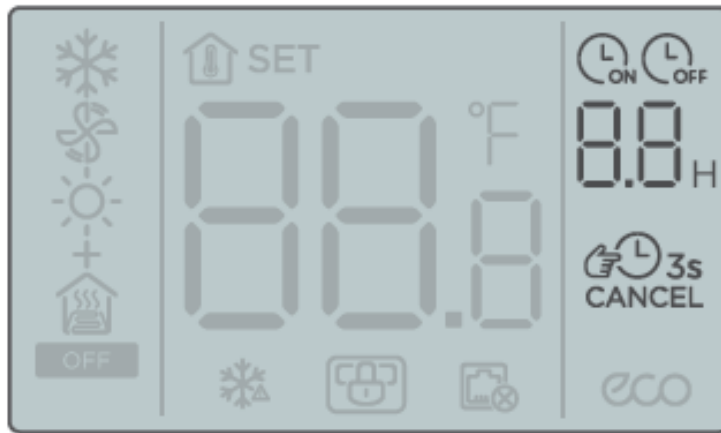
Heating + Auxiliary electric heater ECO: 18°C, low fan speed.

5 Fan speed setting

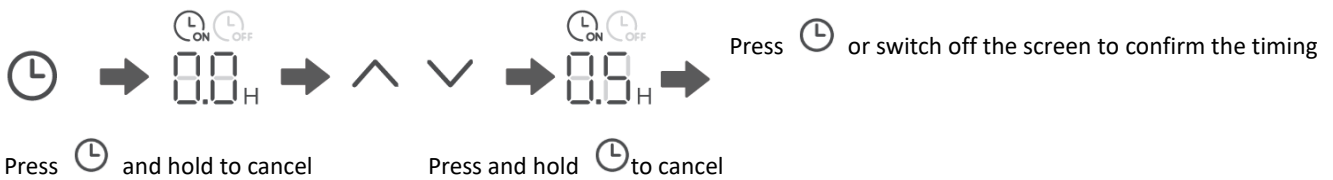
Press to adjust the fan speed, which can be set to High, Normal, Low and Auto.



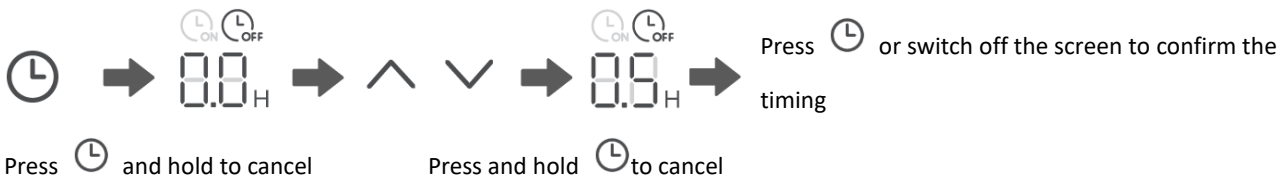
6 Timer setting



● Timed On setting



● Timed Off setting



7 Child lock setting

Enable child lock:



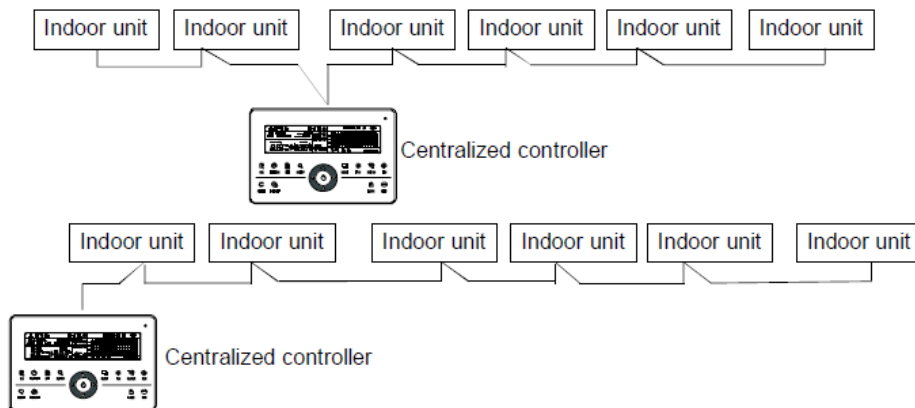
Press and hold the two buttons for 1.5s



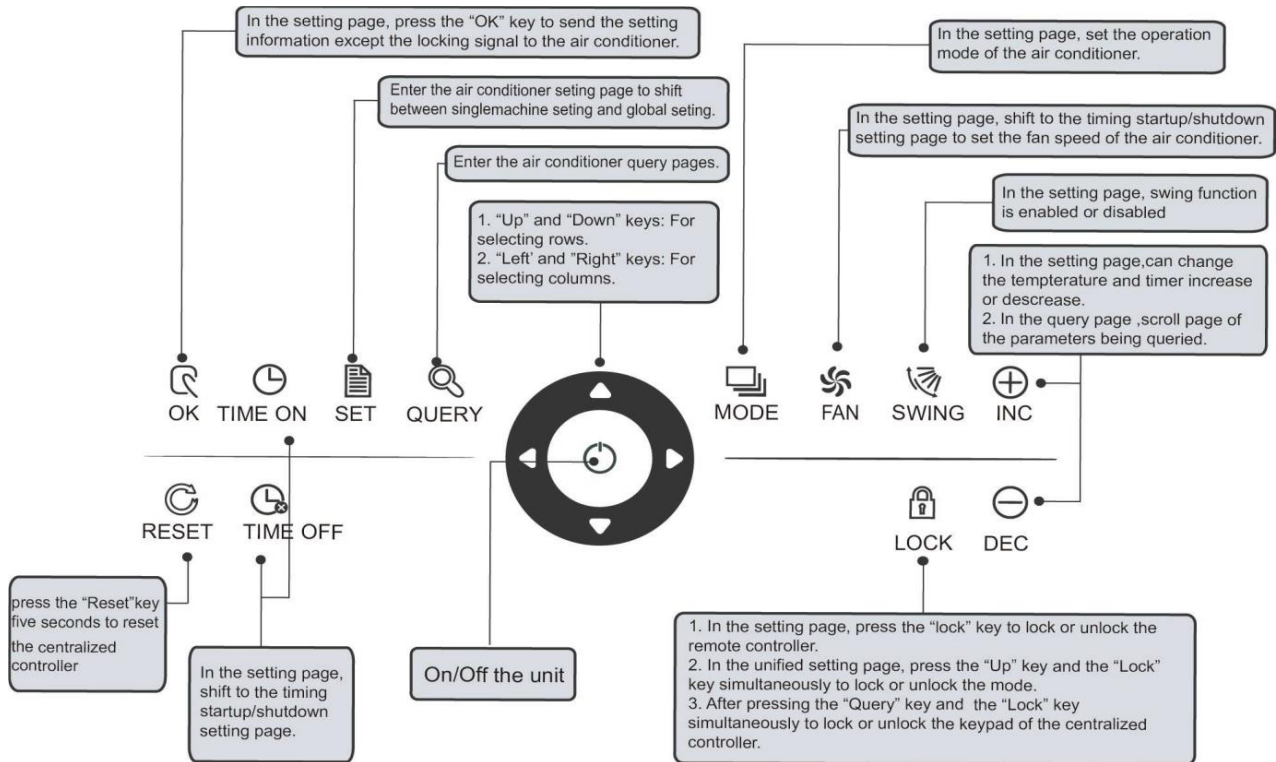
2.6 Optional centralized controller: CCM30



CCM30 is new designed and is a touch key centralized controller. It can be connected up to 64 indoor units, and the connection length can be up to 1200m. The CCM30 centralized controller has the air filter cleaning reminding function and it is convenient to remind users to clean the air filter. Both of the following wiring modes centralized controller and indoor units are applicable.



### 2.6.1 General functions and description



(1) Query key

Any time when you press the key, the selected operation mode is to query the operational state of the air conditioner. By default, the first in-service air conditioner will be queried.

(3) Setting key

In other display modes, press this key can enter the setting mode. By default, it is a single setting, and the first in-service air conditioner is displayed. In setting the operation mode, press this key again, and the operation will be performed for all air conditioners in the network. Press the key repeatedly to shift between a single setting and global setting.

(4) Mode key

Under the setting operation mode, press this key to set the operation.

(5) Fan key

Under the setting operation mode, press this key to set the fan of the indoor unit to run in the automatic, high, medium or low level of air.

(6) Time on key

Under the setting operation mode, press this key can set the timing to turn on the air conditioner; press this key again can exit the timing setting, and restore the normal temperature regulation operation mode

(7) Time off key

Under the setting operation mode, press this key can set the timing shutdown of air conditioner, press this key again will exit the timing setting, and restore the normal temperature regulation operation mode.

(8) Swing key

## 2-Pipe Duct MK-CBS Series

Under the setting operation mode, press this key can enable or disable the swing function. If all currently selected air conditioners have no swing function, no effect will result after pressing the key.



(9) Leftward key

In the query mode, if this key is pressed, the operation state data of the previous air conditioner will be displayed. If it is currently on the first machine, the data of the last machine will be displayed, when the key is pressed. If you hold down this key, the address will decrease one by one. In the setting mode, if it is in single operation mode, the air conditioner of the previous in-service address number will be selected, when this key is pressed, if it is in the global operation mode, no effect will result when this key is pressed. In the main page, press the key to enter the query mode. By default, it is the first in-service air conditioner.



(10) Rightward key

In the query mode, when the key is pressed, the next in-service air conditioner is selected, and its operational state data will be displayed. If it is currently on the last air conditioner, the first one is selected and its data displays, when the key is pressed. If this key is long pressed, the address will increase one by one.

In the setting mode, if it is in the single operation mode, when the key is pressed, the next in-service air conditioner will be selected. If it is in the global operation mode, no effect will result when the key is pressed.

In the main page, press the key to enter the query mode. By default, it is the first in-service air conditioner.



(11) Downward key

In the main page, press this key can enter the query mode. By default, it is the first in-service air conditioner. In any other time, press this key will select the next row corresponding position air conditioner.

In the setting mode, if the global operation mode is selected, this key is invalid. If it is on the last row, press this key again to shift to the first row air conditioner. If this key is long pressed, the row will increase one by one.



(12) Upward key

In the main page, press this key can enter the query mode. By default, it is the first in-service air conditioner. In any other time, press this key will select the previous corresponding position air conditioner.

In the setting mode, if selected all the air conditioners to operate, this key is invalid.

If it is on the first row, press this key again, and shift to the last row corresponding air conditioner.



(13) Add key **INC**

1) Query mode:

Press this key, display the data of the last page. If it is now in the last page, press this key again and the first page will be displayed.

2) Setting operation mode

① Temperature adjusting method

Press this key; the setting temperature will increase 1°C. If you hold down the key "**+**<sub>INC</sub>", the setting temperature will increase one by one.

When reached the highest allowed to set temperature, it cannot increase.


② Timing on or timing off setting method

Press this key "**+**<sub>INC</sub>", it will select the next setting time. If you hold down this key, the next data will be selected one by one. When reached the max. Allowed setting time, it cannot increase.




(14) Reduce key **DEC**

## 1) Query mode



Press this key , display the data of the previous page. If it is now in the first page, press is key again and the last page will be displayed.


## 2) Setting operation mode

## ① Temperature adjusting method


Press this key , the setting temperature will decrease 1°C. If you hold down this key, the setting temperature will decrease one by one. When reached the lowest allowed set temperature, it cannot decrease.

## ② Timing on or timing off setting method

Press this key , it will select the next setting time. If you hold down the key , the next data will be selected one by one. When reached the min allowed setting time, it cannot decrease.

(15) ON/OFF key 

Any time when you press the key, the centralized startup/shutdown operation is performed for all current in-service air conditioners in the centralized controller network.

(16) Confirmation key 

In the setting mode, press this key can send the currently selected mode state and the auxiliary function state to the selected air conditioner.

(17) Reset key  RESET

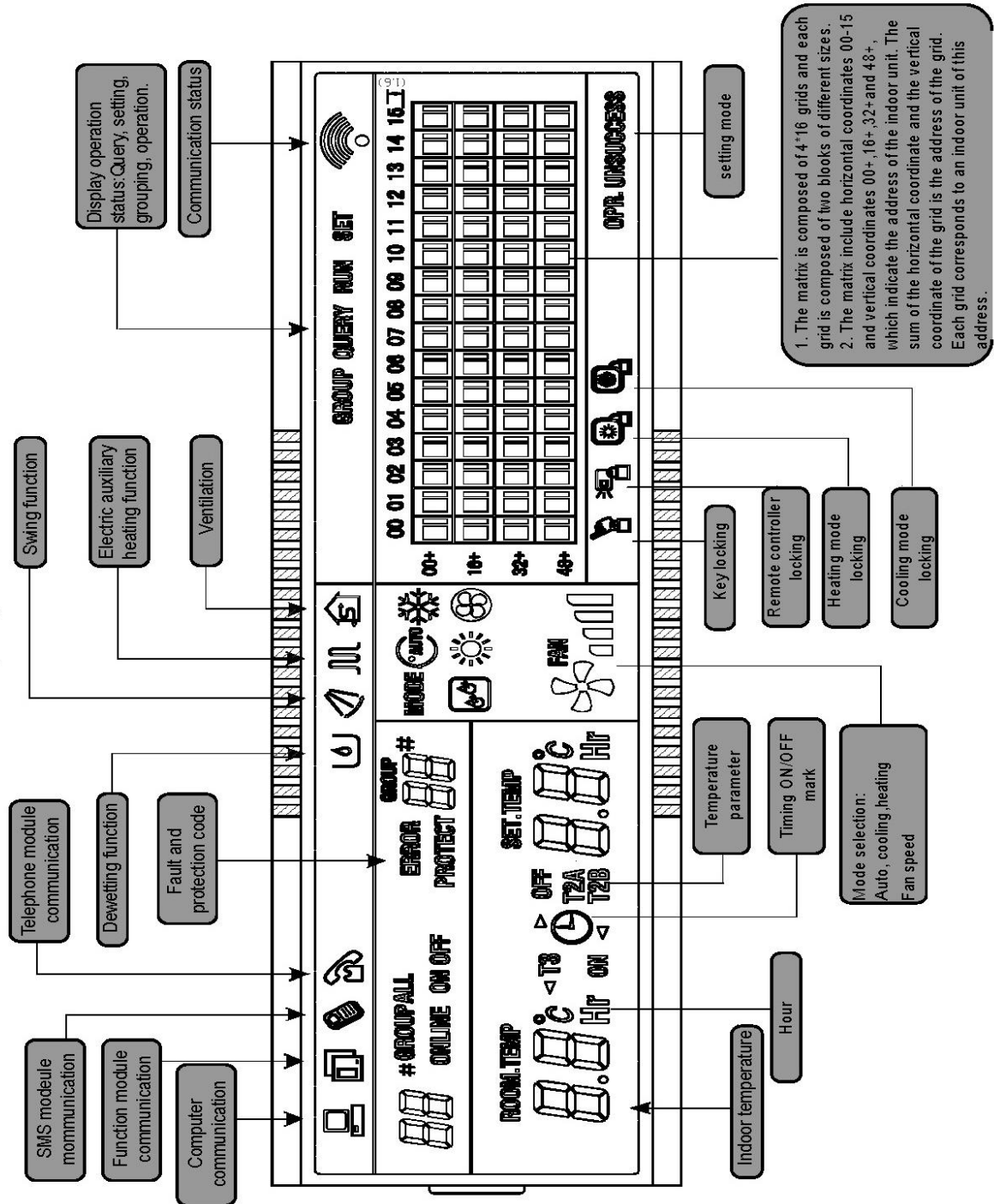
Any time when the reset key is pressed, the centralized controller will reset. The result is the same as the result of restoring power-on after power failure.

(18) Lock key  LOCK

Any time when this key is pressed, the selected air conditioner can be locked or unlocked.

## 2.6.2 LCD display

### Full display of LCD



### 2.6.3 Liquid crystal matrix display description

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
00+	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
16+	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
32+	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
48+	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

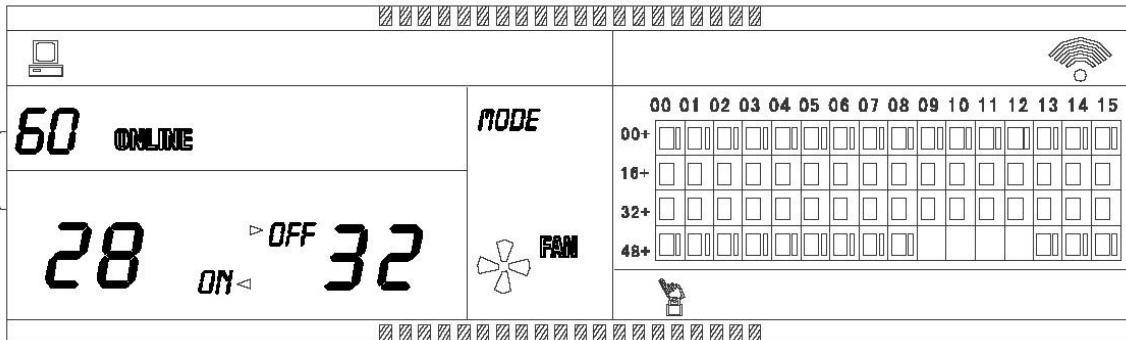
The liquid crystal matrix is composed of 4x16 grids, and each grid is composed of two blocks of different sizes. The matrix includes horizontal coordinates 00~15 on the upper side and vertical coordinates 00+, 16+, 32+ and 48+ on the left side, which indicate the address of the indoor unit. The sum of the horizontal coordinate and the vertical coordinate of the grid is the address of the grid. Each grid corresponds to an indoor unit of this address. One grid is composed of two blocks of different sizes. The state indication table is as follows;

Object \ Status	Constantly on	Slow blink		Fast blink
Big black block	In-service	Selected		Out of service
Small black block	Power on		Fault of indoor or outdoor unit	Power off

### 2.6.4 LCD display description

#### Description of the standby page

The LCD displays the main page, 60 air conditioners are in service, of which 28 are powered on and 32 off.

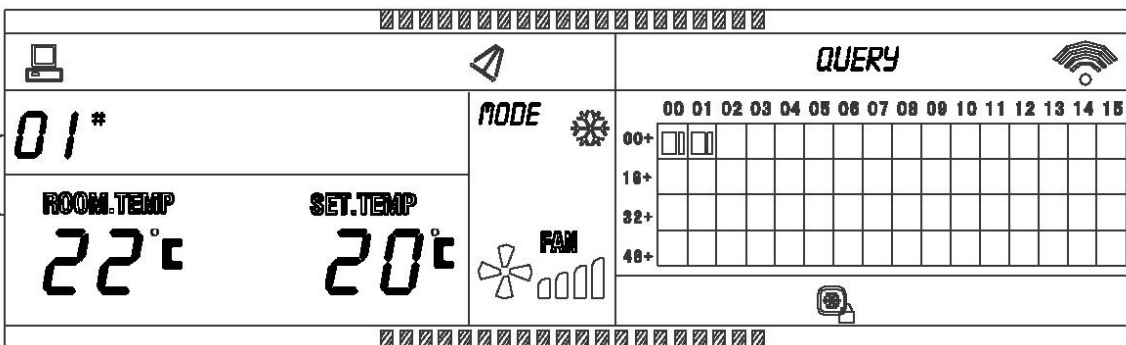


In the matrix, the big dots from (16+, 00) to (32+, 15) are luminous, and the small dots are not luminous. It indicates the 32 air conditioners with the addresses from 16 to 47 are powered off.

In the matrix, the big and small dots from (48+, 09) to (48+, 12) are not luminous. It indicates the four air conditioners with the address from 57 to 60 are outside the network.

All other big and small dots in the matrix are luminous. It indicates all other air conditioners are in the network and powered on. The address of the air conditioner is sum of the coordinates. For example, the address of (48+, 09) is 09+48=57.

#### Description of the query page

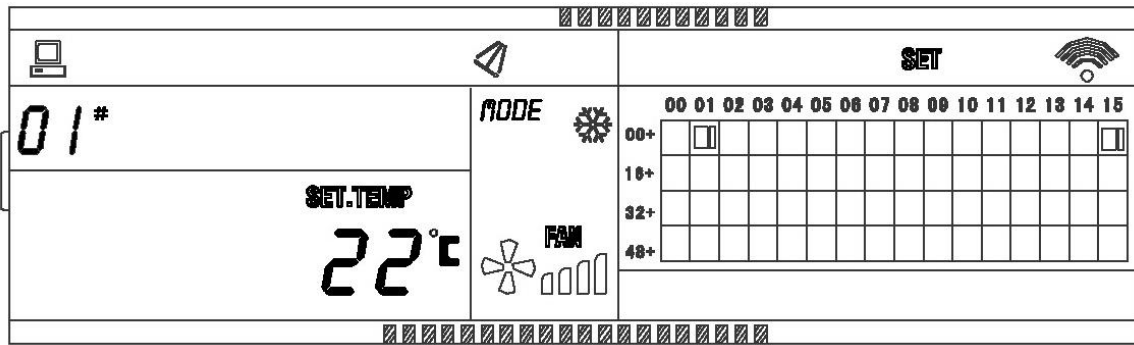


The LCD displays the query page, and the air conditioner with the address of 01 is being queried. Mode of the air conditioner with the address 01 is cooling, high speed air supply, swing on, indoor temperature 22°C, setting temperature 20°C and cooling mode locked.

In the matrix, only the big and small black dots at (00+, 00) and (00+, 01) are luminous. It indicates the in-service and power-on state of the air conditioners with the addresses of 00 and 01.

#### Description of the setting page

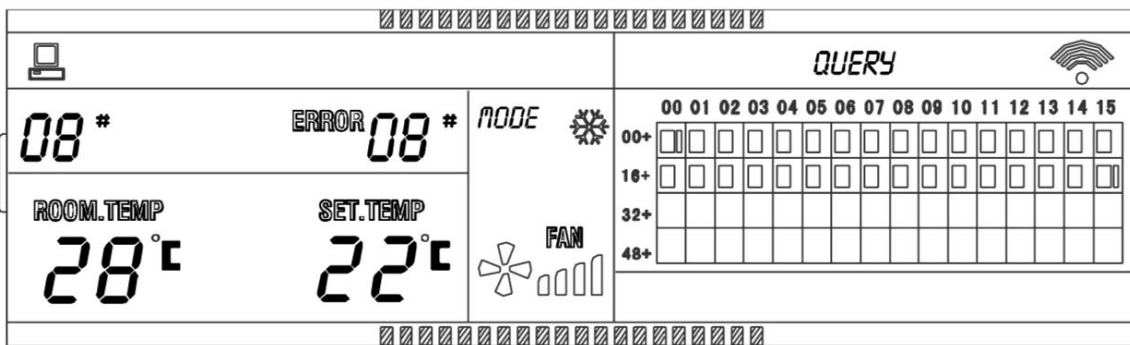




The LCD display displays the setting page, and queries the air conditioner with the address of 01.

The mode of the air conditioner with the address 01 is: Cooling, high fan speed, swing on, setting temperature 22°C and cooling. In the matrix, only the big black dots at (00+, 01) to (00+, 15) are luminous. It indicates the air conditioners with the addresses 01 and 15 are in service.

**Fault page display description**



Query the air conditioner with the address of 08 in the query page.

The air conditioner with the address of 08 is faulty, and fault code is 08. The big black dot below (00+, 08) blinks.

In the matrix, only the big and small black dots at (00+, 00) and (16+, 15) illuminate. It indicates the in-service state of the air conditioner power on, with the addresses 00 and 31.

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Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this document.

