

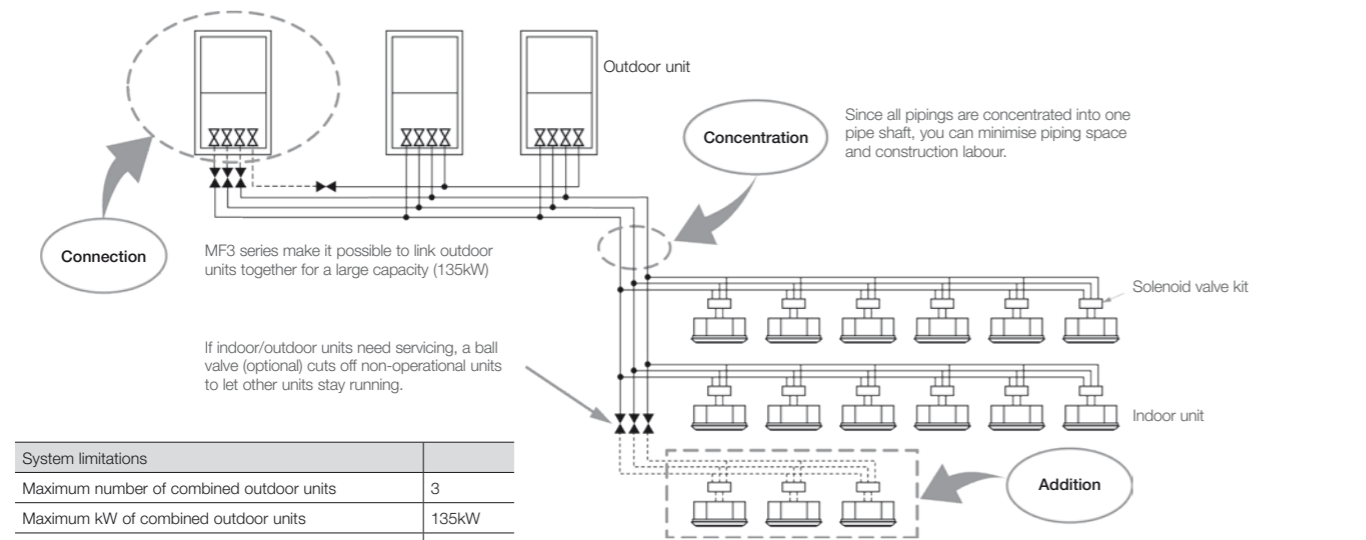
3-PIPE FSV-EX MF3 Series

Appearance													
kW		22.4	28.0	33.5	40.0	45.0	50.0	56.0	61.5	68.0	73.0		
Model name		U-8MF3R7	U-10MF3R7	U-12MF3R7	U-14MF3R7	U-16MF3R7	U-8MF3R7 U-10MF3R7	U-8MF3R7 U-12MF3R7	U-10MF3R7 U-12MF3R7	U-12MF3R7 U-12MF3R7	U-10MF3R7 U-16MF3R7		
Power supply		380/400/415V, 3 phase - 50Hz 380/400V, 3 phase - 60Hz											
Capacity	Cooling	kW	22.4	28.0	33.5	40.0	45.0	50.0	56.0	61.5	68.0	73.0	
		BTU/h	76,500	95,600	114,300	136,500	153,600	170,600	191,100	209,900	232,100	249,100	
	Heating	kW	25.0	31.5	37.5	45.0	50.0	56.0	63.0	69.0	76.5	81.5	
		BTU/h	85,300	107,500	128,000	153,600	170,600	191,100	215,000	235,500	261,100	278,200	
EER / COP	Cooling	W/W	4.87	4.49	3.91	3.70	3.49	4.67	4.24	4.16	3.89	3.82	
	Heating	W/W	5.09	5.02	4.51	4.21	4.17	5.09	4.70	4.73	4.47	4.45	
Dimensions	H x W x D	mm	1,842x1,180 x1,000	1,842x1,180 x1,000	1,842x1,180 x1,000	1,842x1,180 x1,000	1,842x1,180 x1,000	1,842x2,420 x1,000	1,842x2,420 x1,000	1,842x2,420 x1,000	1,842x2,420 x1,000	1,842x2,420 x1,000	
Net weight		kg	264	265	289	337	337	529	553	554	578	602	
Electrical ratings	Cooling	Running current	A	7.52	10.4	13.9	18.2	21.3	17.7	21.3	24.2	28.3	31.5
		Power input	kW	4.60	6.23	8.57	10.8	12.9	10.7	13.2	14.8	17.5	19.1
	Heating	Running current	A	8.02	10.5	13.4	18.1	20.0	18.2	21.7	23.9	27.6	30.6
		Power input	kW	4.91	6.27	8.32	10.7	12.0	11.0	13.4	14.6	17.1	18.3
Air flow rate		m³/h	12,600	13,200	13,920	13,920	13,920	25,800	26,520	27,120	27,840	27,120	
		L/s	3,500	3,667	3,867	3,867	3,867	7,166	7,366	7,533	7,733	7,533	
Refrigerant amount at shipment		kg	9.8	9.8	11.8	11.8	11.8	19.6	21.6	21.6	23.6	21.6	
Piping connections	Suction pipe	mm (inches)	Ø19.05 (Ø3/4)	Ø22.22 (Ø7/8)	Ø25.40 (Ø1)	Ø25.40 (Ø1)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø31.75 (Ø1-1/4)	
	Discharge pipe	mm (inches)	Ø15.88 (Ø5/8)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø22.22 (Ø7/8)	Ø22.22 (Ø7/8)	Ø22.22 (Ø7/8)	Ø22.22 (Ø7/8)	Ø25.40 (Ø1)	Ø25.40 (Ø1)	Ø25.40 (Ø1)	
	Liquid pipe	mm (inches)	Ø9.52 (Ø3/8)	Ø9.52 (Ø3/8)	Ø12.70 (Ø1/2)	Ø12.70 (Ø1/2)	Ø12.70 (Ø1/2)	Ø15.88 (Ø5/8)	Ø15.88 (Ø5/8)	Ø15.88 (Ø5/8)	Ø15.88 (Ø5/8)	Ø19.05 (Ø3/4)	
	Balance pipe	mm (inches)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	
Ambient temperature operating range		Cooling/Dry: -10°C~+52°C (DB). Heating: -20°C~+18°C (WB) Simultaneous operation: -10°C~+24°C (DB)											
Sound pressure level	Normal mode	dB (A)	54.0	57.0	60.0	61.0	62.0	59.0	61.0	62.0	63.0	63.5	
	Silent mode	dB (A)	49.0	52.0	55.0	56.0	57.0	54.0	56.0	57.0	58.0	58.5	

Appearance														
kW		78.5	85.0	90.0	96.0	101.0	107.0	113.0	118.0	124.0	130.0	135.0		
Model name		U-12MF3R8 U-16MF3R8	U-14MF3R7 U-16MF3R7	U-16MF3R7 U-16MF3R7	U-8MF3R7 U-10MF2R7 U-16MF3R7	U-8MF3R7 U-12MF3R7 U-16MF3R7	U-10MF3R7 U-12MF3R7 U-16MF3R7	U-8MF3R7 U-16MF3R7 U-16MF3R7	U-10MF3R7 U-16MF3R7 U-16MF3R7	U-12MF3R7 U-16MF3R7 U-16MF3R7	U-14MF3R7 U-16MF3R7 U-16MF3R7	U-16MF3R7 U-16MF3R7 U-16MF3R7		
Power supply		380/400/415V, 3 phase - 50Hz 380/400V, 3 phase - 60Hz												
Capacity	Cooling	kW	78.5	85.0	90.0	96.0	101.0	107.0	113.0	118.0	124.0	130.0	135.0	
		BTU/h	267,900	290,100	307,200	327,600	344,700	365,200	385,700	402,700	423,200	443,700	460,800	
	Heating	kW	87.5	95.0	100.0	108.0	113.0	119.0	127.0	132.0	138.0	145.0	150.0	
		BTU/h	298,600	324,200	341,300	368,600	385,700	406,100	433,400	450,500	471,000	494,900	511,900	
EER / COP	Cooling	W/W	3.65	3.59	3.49	4.00	3.87	3.84	3.69	3.69	3.58	3.55	3.49	
	Heating	W/W	4.31	4.19	4.17	4.56	4.45	4.47	4.29	4.34	4.25	4.18	4.17	
Dimensions	H x W x D	mm	1,842x2,420 x1,000	1,842x2,420 x1,000	1,842x2,420 x1,000	1,842x3,660 x1,000	1,842x3,660 x1,000	1,842x3,660 x1,000	1,842x3,660 x1,000	1,842x3,660 x1,000	1,842x3,660 x1,000	1,842x3,660 x1,000	1,842x3,660 x1,000	
Net weight		kg	626	674	674	866	890	891	938	939	963	1,011	1,011	
Electrical ratings	Cooling	Running current	A	35.1	39.6	42.6	39.6	42.6	46.1	50.5	52.8	56.5	61.1	63.9
		Power input	kW	21.5	23.7	25.8	24.0	26.1	27.9	30.6	32.0	34.6	36.6	38.7
	Heating	Running current	A	33.5	37.9	40.1	39.6	41.9	43.9	49.4	50.8	53.7	57.9	60.1
		Power input	kW	20.3	22.7	24.0	23.7	25.4	26.6	29.6	30.4	32.5	34.7	36.0
Air flow rate		m³/h	27,840	27,840	27,840	39,720	40,440	41,040	40,440	41,040	41,760	41,760	41,760	
		L/s	7,733	7,733	7,733	11,033	11,233	11,400	11,233	11,400	11,600	11,600	11,600	
Refrigerant amount at shipment		kg	23.6	23.6	23.6	31.4	33.4	33.4	33.4	33.4	35.4	35.4	35.4	
Piping connections	Suction pipe	mm (inches)	Ø31.75 (Ø1-1/4)	Ø31.75 (Ø1-1/4)	Ø31.75 (Ø1-1/4)	Ø31.75 (Ø1-1/4)	Ø38.1 (Ø1-1/2)	Ø38.1 (Ø1-1/2)	Ø38.1 (Ø1-1/2)	Ø38.1 (Ø1-1/2)	Ø38.1 (Ø1-1/2)	Ø38.1 (Ø1-1/2)	Ø38.1 (Ø1-1/2)	
	Discharge pipe	mm (inches)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø28.58 (Ø1-1/8)	Ø31.75 (Ø1-1/4)	Ø31.75 (Ø1-1/4)	Ø31.75 (Ø1-1/4)	Ø31.75 (Ø1-1/4)	Ø31.75 (Ø1-1/4)	
	Liquid pipe	mm (inches)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	Ø19.05 (Ø3/4)	
	Balance pipe	mm (inches)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	Ø6.35 (Ø1/4)	
Ambient temperature operating range		Cooling/Dry: -10°C~+52°C (DB). Heating: -20°C~+18°C (WB) Simultaneous operation: -10°C~+24°C (DB)												
Sound pressure level	Normal mode	dB (A)	64.5	64.5	65.0	64.0	64.5	65.0	65.5	66.0	66.5	66.5	67.0	
	Silent mode	dB (A)	59.5	59.5	60.0	59.0	59.5	60.0	60.5	61.0	61.5	61.5	62.0	

These specifications are subject to change without notice.
 * For mixed heating and cooling operation with an outdoor temperature in excess of 24°C DB, please use 50% or more of the horsepower of the outdoor unit for cooling operation.

System example

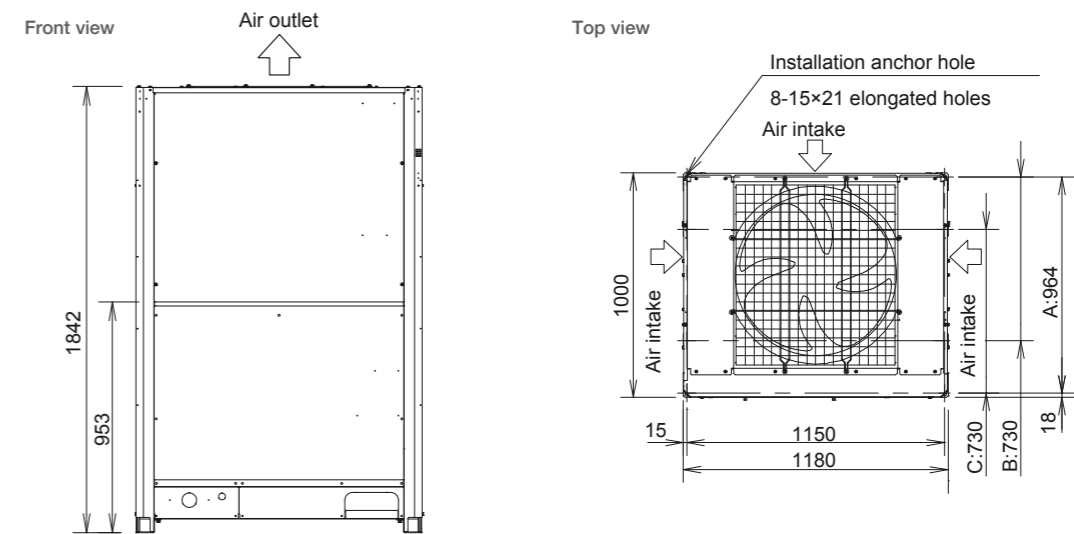


System limitations	
Maximum number of combined outdoor units	3
Maximum kW of combined outdoor units	135kW
Maximum number of connectable indoor units	52
Indoor/outdoor unit capacity ratio	50-150%
Maximum actual piping length	200 m
Maximum level difference (when outdoor unit is lower)	50 (40) m
Maximum total piping length in one direction	500 m

If your indoor capacity load changes in the future, it's easy to add on both indoor and outdoor units using the same pipings.

If the additional installment of outdoor and indoor units is expected, the size of refrigerant piping should be decided according to the total capacity after the addition.

Dimensions



unit: mm