



R-410A Multi-Position Cased EVAPORATOR COILS

MCHP*NPA MCVP*NPA MCDP*NPA





- Energy Efficient
- Durable Build & Finish
- R-410A Compatible
- Multi-Position Application
- ✓ CoolGuard[™] Corrosion **Resistant Coil**
- ✓ Superior Performance
- Compact Design

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www.mrcool.com



R-410A Multi-Position Cased EVAPORATOR COILS

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Our efficient and durable Cased Evaporator Coils provide the best solution for heat pumps and air conditioners for fast and flexible application. This Signature Series coil, when appropriately paired with a MRCOOL® Signature Series condenser and gas furnace or modular blower, can achieve efficiency ratings of up to 16 SEER.

- Available in 2, 2.5, 3, 3.5, 4, and 5 ton capacities.
- 10-Year Parts Limited Warranty.

[‡]Warranty provides for a total of 10 years of limited warranty coverage (Standard 5-year limited parts warranty plus an additional 5-year limited extended parts warranty; 15-year for heat exchanger where specified). Warranty must be registered online within 60 days of installation to qualify for extended coverage. Unregistered equipment defaults to 5-year coverage.

MODEL NO.	Unit	MCDP0018ANPA	MCDP0024ANPA	MCDP0024BNPA	MCDP3036ANPA	MCDP3036BNPA	MCDP3036CNPA	MCDP0048BNPA	MCDP0048CNPA
Capacity	Btu/h	18000	24000	24000	36000	36000	36000	48000	48000
Indoor Dimension (WxHxD)	inch	26.125 x 14.5 x 14.125	26.125 x 14.5 x 14.125	26.125 x 17.5 x 14.125	26.125 x 17.5 x 16.125	26.125 x 17.5 x 16.125	26.125 x 21 x 16.125	26.125 x 17.5 x 20	26.125 x 21 x 20
Refrigerant Type		R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Liquid Side/ Suction Side	inch	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"

MODEL NO.	Unit	MCDP5060CNPA	MCDP0060DNPA	MCHP24ANPA	MCHP24BNPA	MCHP30ANPA	MCHP30BNPA	MCHP36BNPA	MCHP48BNPA
Capacity	Btu/h	60000	60000	24000	24000	30000	30000	36000	48000
Indoor Dimension (WxHxD)	inch	26.125 x 21 x 23.625	26.125 x 24.5 x 23.625	21.5 x 14.5 x 26.5	21.5 x 17.5 x 26.5	21.5 x 17.5 x 16.125	26.125 x 21 x 26.5	21.5 x 17.5 x 26.5	21.5 x 17.5 x 31.5
Refrigerant Type	- - - - - -	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Liquid Side/ Suction Side	inch	3/8"-7/8"	3/8"-7/8"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-7/8"

MODEL NO.	Unit	MCHP48CNPA	MCHP51CNPA	MCHP60DNPA	MCVP0024ANPA	MCVP0024BNPA	MCVP0030ANPA	MCVP0030BNPA	MCVP0036BNPA
Capacity	Btu/h	48000	51000	60000	24000	24000	30000	30000	36000
Indoor Dimension (WxHxD)	inch	21.5 x 21 x 26.5	21.5 x 21 x 31.5	21.5 x 24.5 x 31.5	14.5 x 18.5 x 21	17.5 x 18.5 x 21	14.5 x 22.5 x 21	17.5 x 22.5 x 21	17.5 x 22.5 x 21
Refrigerant Type	*	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Liquid Side/ Suction Side	inch	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"	3/8"-3/4"

MODEL NO.	Unit	MCVP0048BNPA	MCVP0048CNPA	MCVP0049CNPA	MCVP0060CNPA
Capacity	Btu/h	48000	51000	60000	24000
Indoor Dimension (WxHxD)	inch	17.5 x 27.5 x 21	21.5 x 27.5 x 21	21.5 x 24.5 x 31.5	14.5 x 18.5 x 21
Refrigerant Type		R-410A	R-410A	R-410A	R-410A
Liquid Side/ Suction Side	inch	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"	3/8"-7/8"





SPECIFICATIONS

*Data provided by AHRI

EVAPORATOR COILS PRODUCT SPECIFICATIONS

EVAPORATOR COILS FEATURES

- Total Corrosion Protection* our advanced evaporator coil helps protect against leaks and corrosion for long term performance
- $\operatorname{Microban} \ensuremath{\mathfrak{B}}$ antimicrobial additive in the drain pan to resist mold and mildew growth
- Aluminum tubing, hairpins, distributors and header tubes. Copper refrigerant connections for easy brazing to both liquid and suction lines.
- Preformed flanges in outlet for quick and easy plenum connections
- One of the lowest water retention drain pans in the industry to minimize mold and mildew growth
- Interlocking door assemblies and snug line seal grommets to minimize air leakage
- Foil-face insulation for easy cleaning
- Tubing located at door split for easy coil service or cleaning
- All drain pans are compatible with UV lights
- All piston coils are compatible with R22 or R410a
- 10-year limited parts warranty available when applied with a system. See limited warranty document for details.

Upflow Coils

MCVP*NPA (Cased)

- Dedicated upflow
- External cabinet mounted distributor body designed for easy changing of orifice sizes and fast TXV connections
- Single protruding right side dual drain port for easy installation and service access

Horizontal Coils

MCHP*NPA (Cased)

- Dedicated horizontal
- · Insulated galvanized steel case with durable embossed finish
- Removable panels provide access to coil
- Refrigerant lines extend outside of the cabinet for easy connection

Downflow Coils MCDP*NPA (Cased)

- Dedicated downflow
- Heavy-gauge steel constructed cabinet for optimal support of the furnace, no need for additional bracing or structure
- Inlet openings matched to furnace models for easy installation and no adapters needed*
- Removable Cabinet panels for easy coil service
- Single protruding dual drain port for easy installation and service access

WARRANTY

10 year limited parts warranty available when applied with a system. See limited warranty document for details.

* All models feature total corrosion protection on coils except for the MCDP, which utilizes copper tube and aluminum fin technology





MCVP*NPA



MCHP*NPA



MCDP*NPA





MCVP*NPA

SPECIFICATIONS

1.5 TO 2 TON

General Data	Cased	l Model No.	MCVP24ANPA	MCVP24BNPA
Line	Suction /	vapor o.d sweat	3/4	3/4
Connections in.	Liquid	o.d sweat	3/8	3/8
	Condensate	e drain (fpt)	(2) 3/4	(2) 3/4
RFCIV metering device orifice size			0.057	0.057
Shipping Data - Ibs. Cased			38	43

SPECIFICATIONS

2.5 TO 3 TON

General Data	Case	d Model No.	MCVP30ANPA	MCVP30BNPA		
Line Connections in	Suction /	vapor o.d sweat	3/4	3/4		
	Liquid	o.d sweat	3/8	3/8		
	Condensat	e drain (fpt)	(2) 3/4	(2) 3/4		
RFCIV metering device orifice size			0.067	0.067		
Shipping Data - Ibs. Cased			45	50		

SPECIFICATIONS

2.5 TO 4 TON

General	Cased Model No.		MCVP36BNPA	MCVP48BNPA	MCVP48CNPA
Data	Nominal s	ize - Tons	3	3.5 / 4	3.5 / 4
Line	Suction / va	por o.d sweat	3/4	7/8	7/8
Connections	Liquid o.o	d sweat	3/8	3/8	3/8
in.	Condens	sate drain (fpt)	(2) 3/4	(2) 3/4	(2) 3/4
RFCIV metering device orifice size			0.070	0.071	0.071
Shipping Data - lbs. Cased			50	55	60

MCVP*NPA Continued

SPECIFICATIONS

4 TO 5 TON

Conoral Data	Cased M	odel No.	MCVP49CNPA	MCVP60CNPA	MCVP60DNPA
General Data	Nominal si	ze - Tons	4	5	5
Line	Suction / vapor o.d sweat		7/8	7/8	7/8
Connections	Liquid o.d	l sweat	3/8	3/8	3/8
in.	Condens	ate drain (fpt)	(2) 3/4	(2) 3/4	(2) 3/4
RFCIV metering device orifice size			0.076	0.077	0.077
Shipping Data - Ibs. Cased			70	73	72

MCVP*NPA

AIR RESISTANCE

	Air	Total Re	sistance		Air	Total Resistance		
Model	Volume	Dry Coil	Wet Coil	- Model	Volume	Dry Coil	Wet Coil	
	cfm	in. w.g.	in. w.g.	- INU,	cfm	in. w.g.	in. w.g.	
MCVP24ANPA	400	0.05	0.05	MCVP48BNPA	1000	0.13	0.13	
	600	0.09	0.10		1200	0.18	0.18	
	800	0.16	0.18	_	1400	0.23	0.24	
	1000	0.23	0.26		1600	0.30	0.31	
	1200	0.32	0.36	-	1800	0.37	0.40	
MCVP24BNPA	400	0.03	0.04	MCVP48CNPA	1000	0.07	0.09	
	600	0.07	0.09	-	1200	0.10	0.12	
	800	0.11	0.15		1400	0.13	0.16	
	1000	0.17	0.22	-	1600	0.16	0.20	
	1200	0.23	0.31		1800	0.20	0.24	
MCVP30ANPA	600	0.07	0.08	MCVP49CNPA	1200	0.08	0.12	
	800	0.12	0.13		1400	0.13	0.17	
	1000	0.18	0.20	-	1600	0.17	0.22	
	1200	0.26	0.28		1800	0.22	0.28	
	1400	0.34	0.37	-	2000	0.28	0.35	
MCVP30BNPA	600	0.06	0.06	MCVP60DNPA	1400	0.11	0.15	
	800	0.09	0.11	-	1600	0.14	0.18	
	1000	0.13	0.16		1800	0.17	0.21	
	1200	0.19	0.23	-	2000	0.21	0.27	
	1400	0.25	0.31		2200	0.25	0.32	
MCVP36BNPA	800	0.08	0.11	-	2400	0.30	0.37	
	1000	0.13	0.16	MCVP60CNPA	1400	0.15	0.19	
	1200	0.17	0.21	-	1600	0.19	0.23	
	1400	0.22	0.28		1800	0.24	0.28	
	1600	0.29	0.34	-	2000	0.29	0.34	
				-	2200	0.33	0.40	
					2400	0.39	0.46	

MCVP36BNPA Coil



Model Number	A B			C		D		E		F		G		н		
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MCVP36BNPA	17-1/2	445	24-1/2	622	16	406	16-3/8	416	13-3/4	350	4-3/4	121	2-5/8	67	3-7/8	98

MCVP-24(A/B), -30(A/B), -48(B/C), and -60D Coils



Model	Α		В		С		D		E		F		G		н	
Number	in.	mm	in.	mm	in.	mm	in.	mm								
MCVP24ANPA	14-1/2	368	18-1/2	470	13	330	13-3/8	340	10-1/8	257	3-3/8	86	3	76	3-7/8	98
MCVP24BNPA	17-1/2	445	18-1/2	470	16	406	16-3/8	416	10	254	3-1/2	89	3	76	3-7/8	98
MCVP30ANPA	14-1/2	368	22-1/2	572	13	330	13-3/8	340	12	305	3-3/8	86	3	76	3-7/8	98
MCVP30BNPA	17-1/2	445	22-1/2	572	16	406	16-3/8	416	10-1/2	267	3-3/8	86	3	76	3-7/8	98
MCVP48BNPA	17-1/2	445	27-1/2	699	16	406	16-3/8	416	12-7/8	327	3-7/8	98	3	76	4	102
MCVP48CNPA	21	533	27-1/2	699	19-1/2	495	19-7/8	505	12-1/2	318	4-3/4	121	2-3/4	70	3-1/2	89
MCVP60DNPA	24-1/2	622	29-1/2	749	23	584	23-3/8	594	15-1/8	384	4-1/2	121	1-5/8	41	2-5/8	67

MCVP-49C and MCVP-60C



Model	A		В		С		[)	E	
Number	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
MCVP49CNPA	4-3/4	121	12-1/8	308	29-1/2	749	3-3/8	86	2-1/2	64
MCVP60CNPA	4-3/4	121	14-1/2	368	31-1/2	800	3-3/8	86	2-1/2	64

MCHP*NPA

SPECIFICATI		1.5 TO 3 TON				
General Data	Model No.	MCHP24ANPA	MCHP24BNPA	MCHP30ANPA	MCHP30BNPA	MCHP36BNPA
	Nominal size - Tons	2	2	2.5	2.5	3
Line	Suction o.d sweat	7/8	7/8	7/8	7/8	7/8
connections	Liquid o.d sweat	3/8	3/8	3/8	3/8	3/8
in.	Condensate drain (fpt)	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Shipping Data -	lbs.	45	49	55	53	48

SPECIFICATIONS

3 TO 5 TON

General Data	Model No.	MCHP48BNPA	MCHP48CNPA	MCHP51CNPA	MCHP60DNPA
	Nominal size - Tons	3.5/4	3.5/4	4	5
Line connections in.	Suction o.d sweat	7/8	7/8	7/8	7/8
	Liquid o.d sweat	3/8	3/8	3/8	3/8
	Condensate drain (fpt)	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Shipping Data - lbs.		60	59	69	78

MCHP*NPA

AIR RESISTANCE

	Total Air Resistance - in. w.g.										
Air	MCHP24ANPA		MCHP24BNPA		МСНРЗ	MCHP30ANPA		MCHP30BNPA		MCHP36BNPA	
Volume (cfm)	Dry Coil	Wet Coil	Dry Coil	Wet Coil	Dry Coil	Wet Coil	Dry Coil	Wet Coil	Dry Coil	Wet Coil	
200											
400	0.04	0.05	0.03	0.04	0.04	0.05	0.02	0.02			
600	0.09	0.11	0.05	0.07	0.09	0.10	0.05	0.06			
800	0.15	0.19	0.09	0.11	0.15	0.17	0.09	0.11	0.08	0.10	
1000	0.23	0.29	0.15	0.17	0.24	0.27	0.14	0.16	0.11	0.16	
1200	0.32	0.40	0.21	0.23	0.34	0.38	0.19	0.23	0.16	0.21	
1400	0.43	0.50	0.28	0.30	0.45	0.51	0.26	0.30	0.21	0.27	
1600									0.27	0.35	

AIR RESISTANCE

Air	MCHP48BNPA		MCHP4	MCHP48CNPA		MCHP51CNPA		MCHP60DNPA	
Volume (cfm)	Dry Coil	Wet Coil	Dry Coil	Wet Coil	Dry Coil	Wet Coil	Dry Coil	Wet Coil	
800									
1000	0.14	0.16							
1200	0.19	0.23	0.16	0.19	0.15	0.16			
1400	0.25	0.29	0.21	0.26	0.20	0.23	0.12	0.16	
1600	0.30	0.38	0.27	0.30	0.25	0.29	0.16	0.20	
1800	0.38	0.42	0.33	0.39	0.31	0.36	0.20	0.24	
2000			0.39	0.49	0.40	0.44	0.24	0.30	
2200					0.48	0.54	0.29	0.36	
2400							0.34	0.42	

MCHP48BNPA

MCHP48CNPA

MCHP51CNPA

MCHP60DNPA

31-1/2

26-1/2

31-1/2

31-1/2

800

673

800

800

17-1/2

21

21

24-1/2

444

533

533

622

16

19-1/2

19-1/2

23

406

495

495

584

16-3/8

19-7/8

19-7/8

23-3/8

416

505

505

594

3-3/8

3-3/8

3-3/8

3-3/8

86

86

86

86

2-1/8

2-1/8

2 - 1/8

2-1/8

54

54

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3-5/8

3-5/8

3-5/8

3-5/8

4-7/8

4-7/8

4-7/8

4-7/8

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124

MCHP24 Through MCHP60



MCDP*NPA

SPECIFICA	SPECIFICATIONS 1.5 TO 3 TON							
Concerci Data	Model No.	MCDP0018ANPA	MCDP0024ANPA	MCDP0024BNPA	MCDP3036ANPA	MCD3036BNPA		
General Data	Nominal size - Tons	1.5 / 2	2	2	2.5 / 3	2.5 / 3		
Line	Suction / vapor o.d sweat	7/8	7/8	7/8	7/8	7/8		
Connections in.	Liquid o.d sweat	3/8	3/8	3/8	3/8	3/8		
	Condensate drain (fpt)	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4		
Shipping Data	a - Ibs.	44	44	49	58	57		

SPECIFICATIONS

2.5 TO 5 TON

Concernal Data	Model No.	MCDP3036CNPA	MCDP0048BNPA	MCDP0048CNPA	MCDP5060CNPA	MCDP0060DNPA
General Data	Nominal size - Tons	2.5 / 3	4	4	4/5	5
Line	Suction / vapor o.d sweat	7/8	7/8	7/8	7/8	7/8
Connections in.	Liquid o.d sweat	3/8	3/8	3/8	3/8	3/8
	Condensate drain (fpt)	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Shipping Data - lbs.		60	72	71	85	84

MCDP*NPA

AIR RESISTANCE

	Dr	y Coil	We	t Coil		Dr	y Coil	We	t Coil
Model No.	Air Volume	Total Resistance	Air Volume	Total Resistance	Model No.	Air Volume	Total Resistance	Air Volume	Total Resistance
	cfm	in. w.g.	cfm	in. w.g.		cfm	in. w.g.	cfm	in. w.g.
MCDP0018	370	0.05	255	0.05	MCDP0024	315	0.05	335	0.05
ANPA 510 0.08 305 0.07 ANPA 645 0.10 355 0.09	510	0.08	305	0.07	ANPA	465	0.09	490	0.10
		595	0.14	600	0.15				
	815	0.15	395	0.12	725	0.20	705	0.20	
	980	0.20	435	0.15	Ī	825	0.25	790	0.25
	1115	0.25	520	0.18		910	0.30	870	0.30
	1250	0.30	600	0.20		1000	0.35	940	0.35
	1395	0.35	690	0.25		1080	0.40	1020	0.40
	1535	0.40	775	0.30		1225	0.50	1090	0.45
	1645	0.45	845	0.35		1370	0.60	1160	0.51
	1760	0.50	920	0.39					
	1870	0.55	1505	0.50					

MCDP*NVA

AIR RESISTANCE

	Dr	y Coil	We	t Coil		Dry Coil		Wet Coil	
Model	Air	Total	Air	Total	Model	Air	Total	Air	Total
No.	Volume	Resistance	Volume	Resistance	No.	Volume	Resistance	Volume	Resistance
	Cfm 400	In. w.g.	cfm 400	In. w.g.		ctm 1200	In. w.g.	cfm 1200	In. w.g.
MCDP0024 BNPA	400	0.06	400	0.07	BNPA	1200	0.14	1200	0.17
	500	0.09	500	0.10		1300	0.16	1300	0.20
	600	0.13	600	0.15		1400	0.19	1400	0.23
	700	0.17	700	0.20		1500	0.22	1500	0.26
	800	0.23	800	0.26		1600	0.25	1600	0.29
	900	0.27	900	0.32		1/00	0.28	1700	0.32
	1000	0.33	1000	0.39		1800	0.30	1800	0.36
	1100	0.39	1100	0.46		1900	0.34	1900	0.42
	1200	0.47	1200	0.54		2000	0.37	2000	0.45
MCDP3036	600	0.10	600	0.10	MCDP0048	595	0.05	575	0.05
	700	0.13	700	0.14	CITA	860	0.10	820	0.10
	800	0.16	800	0.18		1060	0.15	995	0.15
	900	0.20	900	0.23		1235	0.20	1170	0.20
	1000	0.24	1000	0.27		1395	0.25	1320	0.25
	1100	0.28	1100	0.32		1545	0.30	1445	0.30
	1200	0.33	1200	0.38		1675	0.35	1575	0.35
-	1300	0.38	1300	0.43		1805	0.40	1710	0.40
	1400	0.43	1400	0.49		1925	0.45	1825	0.45
MCDP3036	525	0.05	410	0.05		2030	0.50	1915	0.50
DINFA	660	0.08	495	0.08	MCDP5060 CNPA	1395	0.17	1400	0.19
	795	0.10	580	0.10		1500	0.19	1500	0.22
	980	0.15	785	0.15		1605	0.21	1600	0.24
	1165	0.20	995	0.20		1700	0.24	1710	0.27
	1320	0.25	1155	0.25		1805	0.27	1800	0.31
	1475	0.30	1320	0.30		1905	0.29	1890	0.33
	1605	0.35	1465	0.35		2000	0.32	2000	0.36
	1735	0.40	1610	0.40		2105	0.35	2105	0.40
	1805	0.43	1730	0.45		2200	0.39	2190	0.45
	1875	0.46	1850	0.50	MCDP0060	1395	0.17	1400	0.19
MCDP3036	600	0.06	600	0.07	DNPA	1500	0.19	1500	0.22
CNPA	700	0.08	700	0.10		1605	0.21	1600	0.24
	800	0.10	800	0.13		1700	0.24	1710	0.27
	900	0.13	900	0.17		1805	0.27	1800	0.31
	1000	0.16	1000	0.21		1905	0.29	1890	0.33
	1100	0.19	1100	0.25		2000	0.32	2000	0.36
	1200	0.22	1200	0.29		2105	0.35	2105	0.40
	1300	0.26	1300	0.34		2200	0.39	2190	0.45
	1400	0.29	1400	0.38					

MCDP*NPA



NOTE - Liquid and Suction Line locations are reversed on MCDP24 and MCDP60 models.

Model	Α	В	С	D	E	F	G	н	J	к
Number	in.	in.	in.	in.	in.	in.	in.	in.	in.	in.
MCDP0018ANPA	17-1/2	14-1/8	13-1/2	15-1/2	22-5/8	23-3/16	26-1/8	6 1/4	3	8 3/4
MCDP0024ANPA	17-1/2	14-1/8	13-1/2	15-1/2	22-5/8	23-3/16	26-1/8	5	5	8 3/4
MCDP0024BNPA	17-1/2	14-1/8	16-1/2	15-1/2	22-5/8	23-3/16	26-1/8	5	5	8 3/4
MCDP3036ANPA	17-1/2	16-1/8	13-1/2	15-1/2	22-5/8	23-3/16	26-1/8	6 1/8	3	8 3/4
MCDP3036BNPA	17-1/2	16-1/8	16-1/2	15-1/2	22-5/8	23-3/16	26-1/8	6 1/8	3	8 3/4
MCDP3036CNPA	21	16-1/8	20	19	22-5/8	23-3/16	26-1/8	6 1/8	3	10 1/2
MCDP0048BNPA	21	20	16-1/2	19	22-5/8	23-3/16	26-1/8	8 1/8	4	10 1/2
MCDP0048CNPA	21	20	20	19	22-5/8	23-3/16	26-1/8	8 1/8	4	10 1/2
MCDP5060CNPA	24-1/2	23-5/8	20	22-1/2	22-5/8	23-3/16	26-1/8	3 1/2	17-3/16	12 1/4
MCDP0060DNPA	24-1/2	23-5/8	23-1/2	22-1/2	22-5/8	23-3/16	26-1/8	3 1/2	17-3/16	12 1/4



All specifications and illustrations subject to change without notice and without incurring obligations.

Please read this manual carefully before installation and keep it for future reference.

Installation Manual



RCCC

COMFORT MADE SIMPLE

Signature Series MCVP* & MCHP* Series Coils

Due to updates and constantly improving performance, the information and instructions within this manual are subject to change without notice. Please visit www.mrcool.com/documentation to ensure you have the latest version of this manual.

Version Date: 05-24-21

Signature Series Indoor Coils

This manual must be left with the homeowner for future reference.

This is a safety alert symbol and should never be ignored. When you see this symbol on labels or in manuals, be alert to the potential for personal injury or death.



A IMPORTANT

The Clean Air Act of 1990 bans the intentional venting of refrigerant (CFCs, HCFCs and HFCs) as of July 1, 1992. Approved methods of recovery, recycling or reclaiming must be followed. Fines and/or incarceration may be levied for noncompliance.

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and make sure to wear gloves and protective clothing.

Manufactured By:

MRCOOL[®], LLC 48 Remington Way Hickory, KY 42051

Table of Contents

Model Number Identification	2
General	3
Shipping and Packing List	3
Releasing Air Charge	3
Installation	3
Refrigerant Line Connections	4
Leak Testing, Evacuating and Charging	5
Sealing Ducts	6
Condensate Drain Connections	6
Blower Speed Selection	7
Maintenance	8

Improper installation, adjustment, alteration, service or maintenance can cause personal injury, loss of life, or damage to property.

Installation and service must be performed by a licensed professional installer (or equivalent) or a service agency.



NOTE: Special procedures are required for cleaning the aluminum coil in this unit. See Page 8 in this instruction for information.

General

The MCV* & MCH* coils are only available cased and include a factory-installed HFC-410A fixed orifice (RFC) metering device that must be replaced if the system match with the coil requires a field-installed check/expansion valve.

The coil drain pan has a maximum service temperature of 500°F. The drain pan must be at least 2" away from a standard gas-fired furnace heat exchanger and at least 4"-6" away from any drum-type or oil-fired furnace heat exchanger, depending on furnace model. Closer spacing may damage the drain pan and cause a leak.

Refer to the Product Specification for the proper use of these coils with specific furnaces, air handlers, condensers and line sets.

These instructions are intended as a general guide and do not supersede local or national codes in any way. Authorities who have jurisdiction should be consulted before installation.

Shipping and Packing List

Package 1 of 1 contains:

1 - Evaporator coil

Check the components for shipping damage; if found, immediately contact the last carrier.

Releasing Air Charge

The coil is shipped from the factory pressurized with dry air. Pierce a hole in the rubber plug that seals the vapor line to relieve the pressure before removing the plugs.

NOTE: If there is no pressure released when the vapor line rubber plug is pierced, check the coil for leaks before continuing with the installation.

The MCVP* and MCHP* coils are shipped with a 10 psi dry air holding charge. Puncture the suction line rubber plug to release the charge. Remove the rubber plug. Ensure that the coil is void of pressure.

Installation

Risk of explosion or fire.

Can cause injury or death.

Recover all refrigerant to relieve pressure before opening the system.

Install the furnace or air handler and condensing unit according to the installation instructions provided with the unit.

Position the cased coil on top of the furnace or air handler cabinet and secure it using field-provided screws.

NOTE: If the coil is to be installed on an oil furnace, it may be necessary to install a field-installed transition between the furnace and the coil to prevent airflow restriction and possible damage to the coil drain pan. See the oil furnace installation instructions for details.

NOTE: The coil cabinet has six screw clearance holes which should be aligned with the furnace engagement holes. Secure the coil cabinet to the furnace or air handler using six field-provided #8 X 1" screws.

Air Leakage

All indoor cabinets **MUST** be taped after installation to seal against any air leaks. System performance and efficiency will be reduced if air leakage exists.

Refrigerant Line Connections

Line Sizes

The refrigerant line sets should be sized according to the recommendations given in the condensing unit installation instructions. Use Table 1 to determine correct braze connection sizes. A field-provided adapter may be required to match line set connections.

Model Number	Suction	Liquid
18/24 24 30 30/36 36	3/4 Inch	3/8 Inch
48 49 50/60 60	7/8 Inch	



Replacement Parts

If replacement parts are necessary, order kit 69J46. The kit includes:

- 10 Brass nuts for liquid line assemblies
- 20 Teflon rings
- 10 Liquid line orifice housings
- 10 Liquid line assemblies





Brazing Guidelines

Use a silver alloy brazing rod (5 or 6 percent silver alloy for copper-to-copper connections or 45 percent silver alloy for copper-to-brass or copper-to-steel connections).

Before making brazed connections, place a field-provided heat shield, such as a wet rag, against the unit cabinet and around the piping stubs, expansion valve and sensing bulb. The heat shield must be in place to prevent heat damage during brazing. See Figure 2.



Figure 2. Braze Refrigerant Lines

Suction Line Connection

Use the following procedure to connect the suction line to the indoor coil:

- 1. Remove rubber plug from the stubbed connection.
- Position the properly sized refrigerant piping and make the brazed connection following the brazing guidelines.
- 3. Do not remove the water-saturated rags from the cabinet and piping until the piping has cooled completely.

Suction Line Equalizer Fitting

Remove the copper flare seat bonnet if present from the male equalizer line fitting (Figure 3).

A IMPORTANT

When removing the flare nut, ensure that the copper flare seal bonnet is removed as illustrated in Figure 3.



Figure 3. Suction Line Male Equalizer Line Fitting Modifications

Liquid Line Connection

NOTE: The coils are shipped with a factory-installed HFC-410A fixed orifice (RFC) metering device. Some system matches with this coil require use of a check/ expansion valve.

NOTE: If the system match requires an HFC-410A check/ expansion valve on the liquid line connection, **the fixed** orifice device must be removed BEFORE a check/ expansion valve is installed.

Fixed Orifice Removal (if necessary)

- 1. Remove the coil access and plumbing panels.
- 2. Remove any shipping clamps that secure the liquid line and distributor assembly.
- 3. Using two wrenches, disconnect the liquid line stub from the orifice housing. Take care not to twist or damage the distributor tubes during this process.
- 4. Remove and discard the existing orifice, valve stem assembly (if present) and Teflon ring as illustrated in Figure 4.
- 5. Retain brass nut to be used later with the liquid line assembly.



Figure 4. Typical Fixed Orifice Removal

Expansion Valve / Liquid Line Installation

Some system matches for the MCVP* and MCHP* coil require a check/expansion valve. The expansion valve must be installed external to the indoor coil cabinet. Refer to the instructions provided with the expansion valve kit for proper installation of the valve and sensing bulb.

See the MCVP* and MCHP* product specifications for approved expansion valve match-ups and application information.

- After the expansion valve, equalizer line and sensing bulb have been installed per the kit instructions, braze the properly sized refrigerant piping into place. Carefully follow brazing guidelines and use wet rags to prevent heat damage.
- 2. Do not remove the water-saturated rags from the cabinet and piping until the piping has cooled completely.

NOTE: To prevent any possibility of water damage, properly insulate all parts of the expansion valve assembly that may sweat due to temperature differences between the valve and its surrounding ambient temperatures.

Leak Testing, Evacuating and Charging

Refer to the outdoor unit instruction for leak testing, evacuating and charging procedures. Always leak check entire system before charging.

Sealing Ducts

There must be an airtight seal between the bottom of the furnace and the return air plenum. Use fiberglass sealing strips, caulking, or equivalent sealing method between the plenum and the air handler cabinet to ensure a tight seal. Return air must not be drawn from a room where the air handler or any gas-fueled appliance (i.e., water heater), or carbon monoxide-producing device (i.e., wood fireplace) is installed.

Ensure that the duct is secured and all joints are properly sealed to the coil cabinet flanges.

Condensate Drain Connections

Main Drain

Connect the main drain and route drain tubing downward to drain line or sump. Do not connect drain to a closed waste system. See Figure 6 for typical drain trap configuration.

Overflow Drain

It is recommended that the overflow drain stub be connected to an overflow drain line for all units. If the overflow drain is not connected to a drain line, it must be plugged with the provided cap.

A IMPORTANT

After removal of drain pan plug(s), check drain hole(s) to verify that drain opening is fully open and free of any debris. Also check to make sure that no debris has fallen into the drain pan during installation that may plug up the drain opening.

Condensate Drain Recommendations

The following practices are recommended to ensure better condensate removal:

- Main and overflow drain lines should **NOT** be smaller than both drain connections at drain pan.
- Overflow drain line should run to an area where homeowner will notice drainage.
- It is recommended that the overflow drain line be vented and a trap installed. Refer to local codes.



Figure 6. Typical Main and Overflow Drain Installations

Blower Speed Selection



Figure 7. Static Pressure Test

Cab	inet		Drop: i	in. w.g.
Model	Width in.		Dry	Wet
	14.5	600	.11	.17
10/24AINPA	14.5	800	.18	.25
	17.5	600	.11	.17
10/24DINFA	17.5	800	.18	.25
24ANPA	14.5	800	.16	.18
24BNPA	17.5	800	.16	.18
30ANPA	14.5	1000	.18	.20
30BNPA	17.5	1000	.18	.20
20/264 NIDA	14.5	1000	.19	.21
30/36ANPA	14.5	1200	.27	.30
	17.5	1000	.13	.16
30/30DINPA	17.5	1200	.17	.21
	21	1000	.13	.16
30/30CINFA	21	1200	.17	.21
36ANPA	14.5	1200	.27	.30
36BNPA	17.5	1200	.17	.21
	17.5	1400	.23	.24
40DINEA	17.5	1600	.30	.31
	21	1400	.13	.16
40CINFA	21	1600	.16	.20
49CNPA	21	1600	.17	.22
50/60CNPA	21	1600	.23	.29
60CNPA	21	2000	.29	.34
60DNPA	24.5	2000	.21	.27

Table 2. Air Volume / Static Pressure Drop Across Coil

Take care when drilling test holes into the furnace flange and the duct. Drill holes away from refrigerant piping. Test holes should be drilled where specified in order to avoid unit damage.

Proper air volume must be provided over the evaporator coil. Select a blower motor speed tap that will provide 400 \pm 50 CFM per 12,000 Btu/h of cooling capacity (wet coil). A static pressure reading must be taken to see if the pressure drop falls within the proper range. See Table 2.

To ensure accuracy, air must be read from below the coil and above the coil. See Figure 7 for an example to obtain an accurate reading.

- 1. Drill one 5/16" air test hole into the delta plate between the coil slabs.
- 2. Drill one 5/16" air test hole into the duct above the top of the coil.
- 3. Connect the **instrument for static pressure measurement hoses** to the air entering side of coil. Insert the hoses so that 1/4" extends inside the duct or end seal. Seal around holes with sealant.
- 4. Turn on electrical power to the furnace and set the thermostat to initiate a cooling demand.
- 5. Table 2 lists air volumes and equivalent static pressure readings for these units. Observe the static pressure reading. If the reading is below the required air volume, increase the blower speed; if the reading is above the required air volume, decrease the blower speed. Refer to the furnace wiring diagram for blower speed settings.
- 6. When the required static pressure readings are obtained, remove the test hose lines and insert snap hole plugs into test holes.

Maintenance

NOTE

Failure to follow instructions will cause damage to the unit.

This unit is equipped with an aluminum coil. Aluminum coils may be damaged by exposure to solutions with a pH below 5 or above 9. The aluminum coil should be cleaned using potable water at a moderate pressure (less than 50 psi). If the coil cannot be cleaned using water alone, AAE recommends use of a coil cleaner with a pH in the range of 5 to 9. The coil must be rinsed thoroughly after cleaning.

In coastal areas, the coil should be cleaned with potable water several times per year to avoid corrosive buildup (salt).

A trained technician or service agency must perform maintenance and service on equipment. At the beginning of each heating or cooling season, indoor coils should be cleaned.

Do not use hydrofluoric acid, alkaline, or similar chemicals on coils. These chemicals are not necessary to dissolve salt, and may damage the fin coating. Acid washes are used to dissolve oils and greases, which generally are not present on most installations.

Cleaning The Coil

- 1. Remove the coil from the cabinet or plenum, and take the coil to an appropriate place to clean it.
- 2. Vacuum or brush the coil to remove matted and surface debris from the fins. Use vacuum attachments and /or brushes that are non-destructive to fins.
- If oil deposits are present, spray the coil with a mild household liquid detergent to soften deposits. Do not leave the detergent on the coil for more than 10 minutes. Flush the coil thoroughly with potable water.

NOTE: For units in coastal regions, fresh water will dissolve away any salt deposits. (Wash coils with fresh water at least every six months.)

- Spray the coil at a vertical angle of 30 to 45 degrees with a constant stream of water at moderate pressure. A pressure washer with a fan nozzle will work best. Do not spray the coil from a horizontal direction.
- 5. Direct the spray so that any debris is washed out of the coil and base pan. For most residential units, hot water is not necessary.

NOTE: Attempting to back flush from the inside of the coil will require removing parts from the unit, and it may be very difficult to flush the whole coil surface. Attempting to blow water through a coil will slow the water stream and reduce the flushing action of the outer fin surface.

6. Replace the coil into the cabinet or plenum. Ensure that you have followed the proper procedure for routing and securing the refrigerant tubing.

A IMPORTANT

Ensure that the distributor lines are not rubbing together or kinked. All tubes must have enough clearance from other metal parts. Use wire ties to secure tubes to prevent movement that could cause the refrigerant tubing to fail. Please read this manual carefully before installation and keep it for future reference.



The design and specifications of this product and/or manual are subject to change without prior notice. Consult with the sales agency or manufacturer for details.

MRCOOL EQUIPMENT LIMITED WARRANTY APPLIES IN U.S.A. AND CANADA ONLY FAILURE TO MAINTAIN YOUR EQUIPMENT WILL VOID THIS WARRANTY

PARTS and COMPRESSOR COVERAGE

The covered equipment and covered parts and compressor are warranted by MRCOOL for a period of five (5) years from the date of the original installation, when installed in a residential application (which includes homes, duplexes, apartments and condominiums). The covered equipment and covered parts are warranted for a period of one (1) year and compressor is warranted for five (5) years by MRCOOL from the date of the original installation, when installed in non-residential applications. If, during this period, a covered component fails because of a manufacturing defect, MRCOOL will provide a free replacement part to the owner through a licensed service contractor utilizing an MRCOOL distributor. You must pay shipping charges and all other costs of warranty service. MRCOOL will not pay labor involved in diagnostic calls or in removing, repairing, servicing or replacing parts. Such cost may be covered by a separate warranty provided by the installer.

HEAT EXCHANGER COVERAGE

All covered heat exchangers are warranted by MRCOOL for a period of twenty (20) years from the date of original installation in a residential application. Heat exchangers in all non-residential applications are warranted for a period of ten (10) years.

NOTE: In the event that a component covered by this warranty is no longer available, MRCOOL, at its option, through a established MRCOOL distributor, will provide a free suitable substitute component or will allow a credit toward the purchase of an equivalent new MRCOOL product (at the current suggested distributor's cost).

If the date of original installation cannot be verified, the warranty period will be deemed to begin six (6) months after the date of manufacture.

EXCLUDED COMPONENTS

The following components are not covered by this warranty: cabinets, cabinet pieces, air filters, driers, refrigerant, refrigerant, ins sets, belts, wiring, fuses, oil nozzles, unit accessories and any parts not affecting unit operation.

CARE OF EQUIPMENT

Your new MRCOOL unit must be properly installed, operated and maintained in accordance with the unit installation, operation and maintenance instructions provided with each MRCOOL unit. Failure to provide maintenance per MRCOOL instructions will void this warranty.

WARRANTY PROCEDURE

- When service or warranty parts are required:
- Call your local licensed service dealer or contractor 1.
- 2. If the installing dealer is unable to provide warranty service, check online at https://mrcool.com/warranty. 3.
 - Be prepared to furnish the following information:
 - а Complete model and serial number
 - b. Proof of required periodic maintenance, installation date and location.
 - An accurate description of the problem c.

WARRANTY LIMITATIONS

3.

- All installation must be in compliance with applicable laws, regulations, codes, and ordinances. 2.
 - Products purchased over the internet or through other electronic means must be installed by a qualified installer and the installation must adhere to the Quality Installation protocols of the Air Conditioning Contractors of America (ACCA), and these products must be registered with the manufacturer within 60 days of installation for the warranty to be in place.
 - This warranty is void if the covered equipment is removed from the original installation site.
- 4. This warranty does not cover damage or defect resulting from:
 - Flood, wind, fire, lightning, mold, or installation and operation in a corrosive atmosphere, or otherwise in contact with corrosive materials (chlorine, fluorine, salt, recycled waste water, urine, fertilizers, or а. other damaging substances or chemicals). Accident, or neglect or unreasonable use or operation of the equipment including operation of electrical equipment at voltages other than the range specified on the unit nameplate (includes damages caused by brownouts).
 - b. Modification, change or alteration of the equipment, except as directed in writing by MRCOOL.
 - Operation with system components (indoor unit, outdoor unit and refrigerant control devices) which are not an AHRI match or meet the specifications recommended by MRCOOL. C.
 - Operation of furnaces with return air temperatures of less than 60°F (16°C) or operation of a furnace field installed downstream from a cooling coil. d.
 - Use of contaminated or refrigerant not compatible with the unit. e.

The installation of replacement parts under the terms of this warranty does not extend the original warranty period.

MRCOOL makes no express warranties other than the warranty specified above. All implied warranties, including the implied warranties of merchantability and fitness for a particular purpose, are excluded to the extent to a period legally permissible. Should such exclusion or limitation of the warranty be unenforceable, such implied warranties are in any event limited to a period of one (1) year. Liability for incidental and consequential damages is excluded. Some states do not allow limitation of incidental damages, so the limitations or exclusions may not apply to you. MRCOOL will not pay electricity or fuel costs, or increases in electricity or fuel costs, for any reason whatsoever, including additional or unusual use of supplemental electric heat. This warranty does not cover lodging expenses or labor charges.

MRCOOL shall not be liable for any default or delay in performance under this warranty caused by any contingency beyond its control. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

NOTE TO CUSTOMER

Please complete information below and retain this warranty for your records and future reference.

Outside Unit Model Number:	Serial Number:	Installed Date:
Furnace / Air Handler:	Serial Number:	Installed Date:
Indoor Coil Model Number:	Serial Number:	Installed Date:
Installing Company Name:	Phone:	
Installing Company Address:	_ State/Province:	Zip/Postal Code:

Part Number 507972-01



LIMITED EXTENDED PARTS WARRANTY

MRCOOL LLC ("MRCOOL") provides its air conditioning and heating products with a standard five-year parts warranty. This limited extended parts warranty is in addition to and is intended to supplement MRCOOL's standard 5-year parts warranty. As such, this limited extended warranty provides for a total of 10 years of limited warranty coverage (Standard 5-Year Limited Parts Warranty plus Additional 5-Year Limited Extended Parts warranty).

EXTENDED COVERAGE -

PARTS/COMPRESSORS

The covered equipment and parts are warranted by MRCOOL for a total of 10 YEARS (standard 5 Year Limited Parts Warranty) from installation, except as provided below.

HEAT EXCHANGERS

The covered residential heating equipment's heat exchanger is warranted by MRCOOL for a Limited Lifetime (standard 20 Year Limited Warranty) from date of original installation, except as provided below.

This warranty applies only to the original purchaser of the unit and cannot be transferred. If during this period, a covered part fails because of a defect in materials or workmanship under normal use and maintenance, MRCOOL will provide a free replacement part to the purchaser through a MRCOOL dealer or other licensed service contractor through an authorized MRCOOL distributor. The purchaser must pay shipping costs, including labor, of the warranty service.

EXCLUDED COMPONENTS -

The following components are expressly not covered by this limited warranty: cabinets, cabinet pieces, air filters, driers, refrigerant, refrigerant line sets, belts, wiring, fuses, oil nozzles, and unit accessories, R-22 compressors, and any parts not affecting unit operation.

COVERAGE REQUIREMENTS -

- 1. The unit is a MRCOOL branded unit;
- 2. The unit is installed in a residential application, which is an owner-occupied single-family residence. No commercial applications are allowed;
- The unit is properly registered at https://mrcool.com/warranty with MRCOOL within 60-days after the original date of installation or occupancy. To register, follow the directions and complete the online warranty registration at https://mrcool.com/warranty. For customer inquiries, contact MRCOOL at 270-366-0457 ext. 301 or https://mrcool.com/contact.
- 4. The unit is part of a complete AHRI matched system and installed by a state certified or licensed contractor in accordance with the unit installation, operation, and maintenance instructions provided with the unit.
- Coils and air handlers are covered only when they are branded MRCOOL and are purchased and installed as a system along with a qualifying unit. (Third party coils are not covered).
- 6. Installation takes place on or after October 3, 2008.
- 7. Installation is in compliance with applicable laws, regulations, codes, and ordinances.

If this extended warranty does not apply, then parts are warranted for the standard warranty period of 5 YEARS and all heat exchangers for 20 YEARS. If the standard warranty periods differ from the original warranty certificate, the periods stated on the original warranty certificate apply.

This limited extended warranty does not apply to, and no warranty is offered by MRCOOL, on any unit ordered over the internet. Proof of purchase may be required.

Any part replaced pursuant to this limited extended warranty is warranted only for the unexpired portion of the limited extended warranty term applying to the original part. The installation of replacement parts under the terms of this limited extended warranty does not extend the warranty period.

This limited extended warranty is an extension of MRCOOL's standard warranty. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE TERM OF THIS LIMITED EXTENDED WARRANTY. Some states and provinces do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

MRCOOL SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO EXTRA UTILITY EXPENSES OR DAMAGES TO PROPERTY. Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

MRCOOL is not responsible for:

- 1. Damage or repairs required as a result of flood, fire, wind, lightening strike (to the home or unit), corrosive atmosphere, contact with corrosive material (chlorine, fluorine, salt, recycled waste water, fertilizers or other damaging substances) or other conditions beyond the control of MRCOOL;
- 2. Use of parts, accessories, or refrigerant not compatible with the unit;
- 3. Modification, change or alteration of the unit, except as expressly directed in writing by MRCOOL;
- 4. Improper use, accident, neglect or unreasonable use or operation of the unit, including operation of electrical equipment at voltages other than the range specified on the unit nameplate;
- Operation with system parts (indoor unit, outdoor unit and refrigerant control devices) which are not AHRI matched or do not meet the specifications recommended by MRCOOL;
- 6. Damage or repairs required as a consequence of faulty or installation or application;
- 7. Normal maintenance as described in the installation and operating manual, such as cleaning of coils, filter cleaning and/or replacement and lubrication; and
- 8. Changes in the appearance or sound of the unit that do not affect its performance.

The parties intend this writing as a final expression of their agreement with respect to warranties. MRCOOL makes no other warranty beyond that which is expressly contained in this writing.

MRCOOL shall not be liable for any default or delay in performance under this warranty caused by any contingency beyond its control, including the unavailability of replacement parts.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state or province to province.

Steps for getting replacement parts under this limited extended warranty:

If you suspect a defect in your equipment, please contact the installer of the unit to obtain assistance. If unsuccessful, please contact a MRCOOL dealer or distributor in your area. If unable to obtain local assistance, refer to MRCOOL's website (https://mrcool.com/warranty) or contact MRCOOL at 270-366-0457 ext. 301 or https://mrcool.com/contact.

1 Excludes residents of states or provinces where registration requirements are prohibited, such as California and Quebec. Residents of these states or provinces may either register as noted above or provide proof of when the unit was purchased and installed, such as an original invoice from the contractor with the Owner's name, address, purchase date, serial and model number.