MAINLINE®
Reliably Comfortable.™

Elite® Series Air Handlers

MLB2CY

Constant Torque Motor (ECM)
Two-Stage Airflow
Efficiencies: 13.4 - 14.3 SEER2
Expansion Device: Thermal Expansion Valve (TXV)
Refrigerant Type: R-454B

Manufactured for
Mainline®
HVACmainline.com

ISO 9001:2015

c UL us LISTED

AHRI CERTIFIED
www.ahridirectory.org
Unitary Small AC
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

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Features and Benefits

- **Quiet Operation[1]:** Provided by a cabinet construction with 1.0 inch foil faced insulation for quieter sound characteristics
- **Rugged Steel Cabinet Construction:** Designed for added strength and versatility
- **Compact Design and 4-Way Field Convertible Design:** Stands at only 35" tall and convertible options include vertical upflow, vertical downflow, horisontal left hand or right hand air supply
- **Less than 2% Cabinet Air Leakage at 1-inch H_2O:** When tested in accordance with ASHRAE Standard 193
- **Designing for Sustainability with Low GWP:** For 2025, the Environmental Protection Agency (EPA) has set a global warming potential (GWP) limit of 700 for refrigerant used in heating and cooling systems. This new requirement will result in a 78%[2] lower GWP than previous-generation refrigerants — with only minimal changes to system installation. For us, this is another step toward our continued sustainability goal of reducing greenhouse gas emissions, while still delivering an exceptional level of energy efficient, dependable comfort
- **Refrigerant Detection System[3]:** An integrated one-box, patented design featuring the A2L sensor and mitigation board, offering easier commissioning with a single component and simplified wiring configuration, compatibility with any 24V thermostat application and system protection by automatically pausing outdoor unit operation — if excess refrigerant is detected

[1]Based on manufacturer's air handler offering, and the product's airflow stages, motor type and cabinet insulation. Sound levels are also dependent on air handler location and installation.

[2]When comparing the GWP of R-454B to R-410A refrigerant

[3]Factory or field installed in the furnace coil or air handler and is applicable to the complete heating and cooling system featuring Low GWP Refrigerant (A2L)

Air Handlers

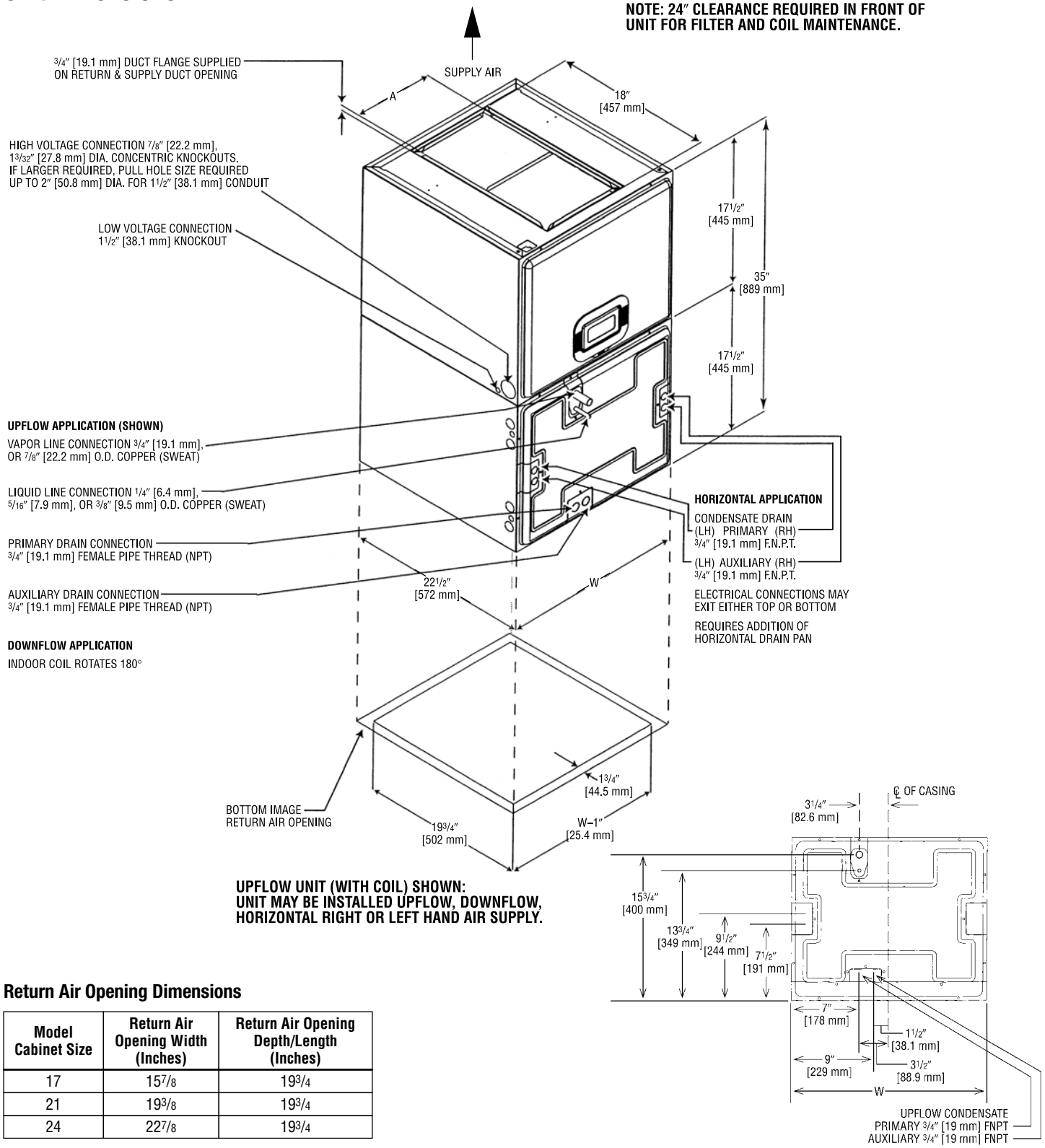
ML	B	2	C	Y	24	17	S	T	A	N	M	A	B	00	BLANK
Brand	**Product Category**	**Stages Of Airflow**	**Motor Type**	**Refrigerant**	**Capacity**	**Width**	**Efficiency**	**Metering**	**Major Series**	**Controls**	**Coil Series**	**Voltage**	**Disconnect**	**Factory Heat**	**Option Code**
ML - Mainline	B - Low Boy 34"	2 - Two-Stage	C - Constant Torque	Y - R-454B	24 - 24,000 [7.03 kW] 36 - 36,000 [10.55 kW] 48 - 48,000 [14.07 kW] 60 - 60,000 [17.58 kW]	17 - 17.5" 21 - 21" 24 - 24.5"	S - Standard	T - TXV	A - 1st Design	N - Non-Communicating	M - Multiflex	A - 115/1/60 J - 208-240/1/60	B - Breaker N - None	00 - No Heat 05 - 5 kW 07 - 7 kW 10 - 10 kW	Blank - Factory-Installed Sensor L - Less A2L Sensor

[ ] Designates Metric Conversions

Available Models
MLB2CY2417STANMAN00
MLB2CY2417STANMJB05
MLB2CY2417STANMJB07
MLB2CY2417STANMAN00L
MLB2CY2417STANMJB05L
MLB2CY2417STANMJB07L
MLB2CY3621STANMAN00
MLB2CY3621STANMJB05
MLB2CY3621STANMJB07
MLB2CY3621STANMJB10
MLB2CY3621STANMAN00L
MLB2CY3621STANMJB05L
MLB2CY3621STANMJB07L
MLB2CY3621STANMJB10L
MLB2CY4824STANMAN00
MLB2CY4824STANMJB05
MLB2CY4824STANMJB07
MLB2CY4824STANMJB10
MLB2CY4824STANMAN00L
MLB2CY4824STANMJB05L
MLB2CY4824STANMJB07L
MLB2CY4824STANMJB10L
MLB2CY6024STANMAN00
MLB2CY6024STANMJB10
MLB2CY6024STANMAN00L
MLB2CY6024STANMJB10L

Standard Equipment
Compact Unit Design
Quiet, efficient ECM Motor provides nominal airflow to 0.58 inch [12 kPa] of external static pressure
Field selectable airflow
Low continuous fan speed
Rugged steel cabinet construction 1" foil faced insulation
Four leg rubber insulated wire motor mount
Circuit breakers are standard on all electric heat models
Provisions for field electrical connections from both sides of cabinet
Slide out blower design for easy service & maintenance
Tab lock blower housing with integrated electric heaters, controls, motor and blower

Unit Dimensions



Return Air Opening Dimensions

Model Cabinet Size	Return Air Opening Width (Inches)	Return Air Opening Depth/Length (Inches)
17	15 7/8	19 3/4
21	19 3/8	19 3/4
24	22 7/8	19 3/4

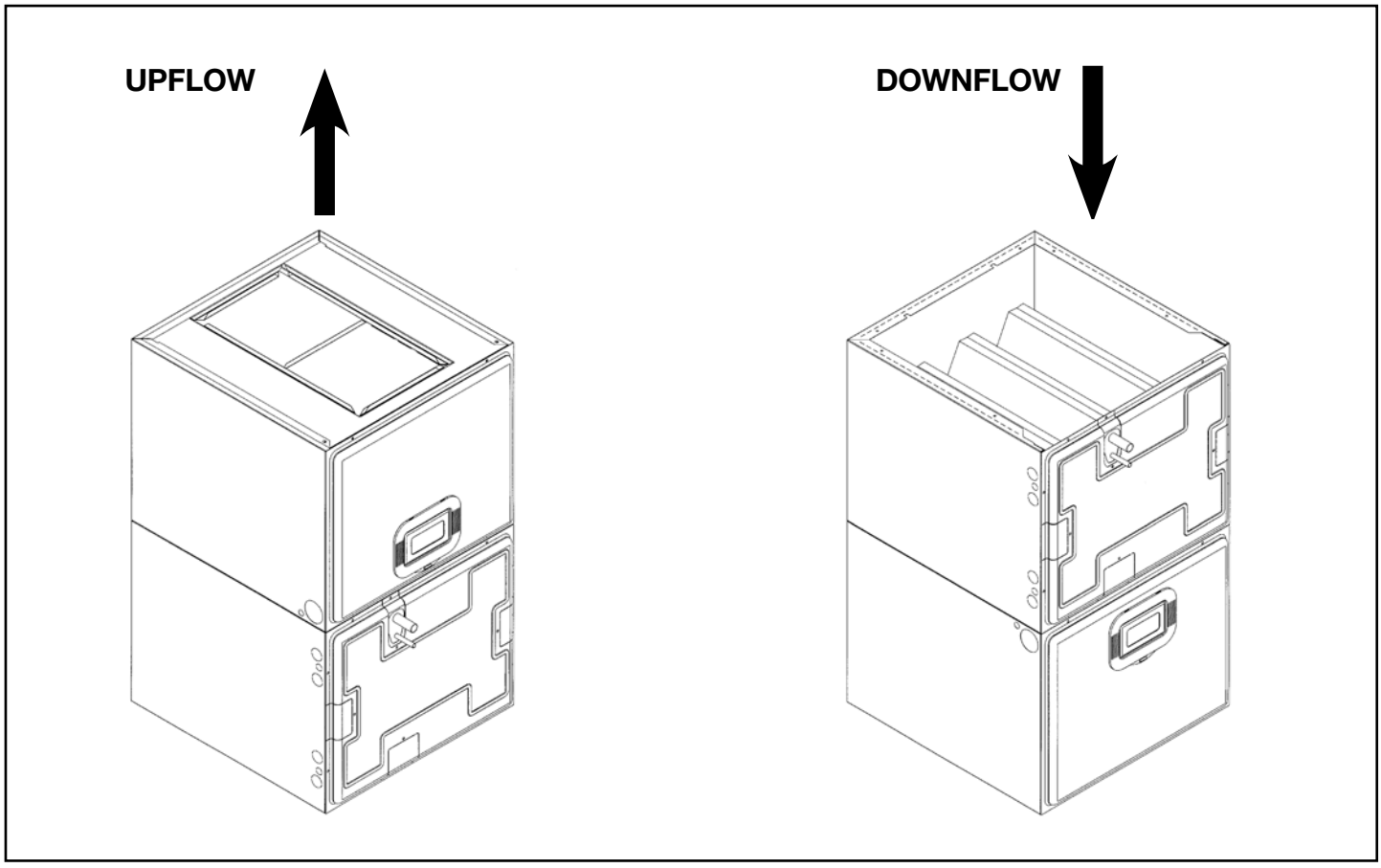
[ ] Designates Metric Conversions

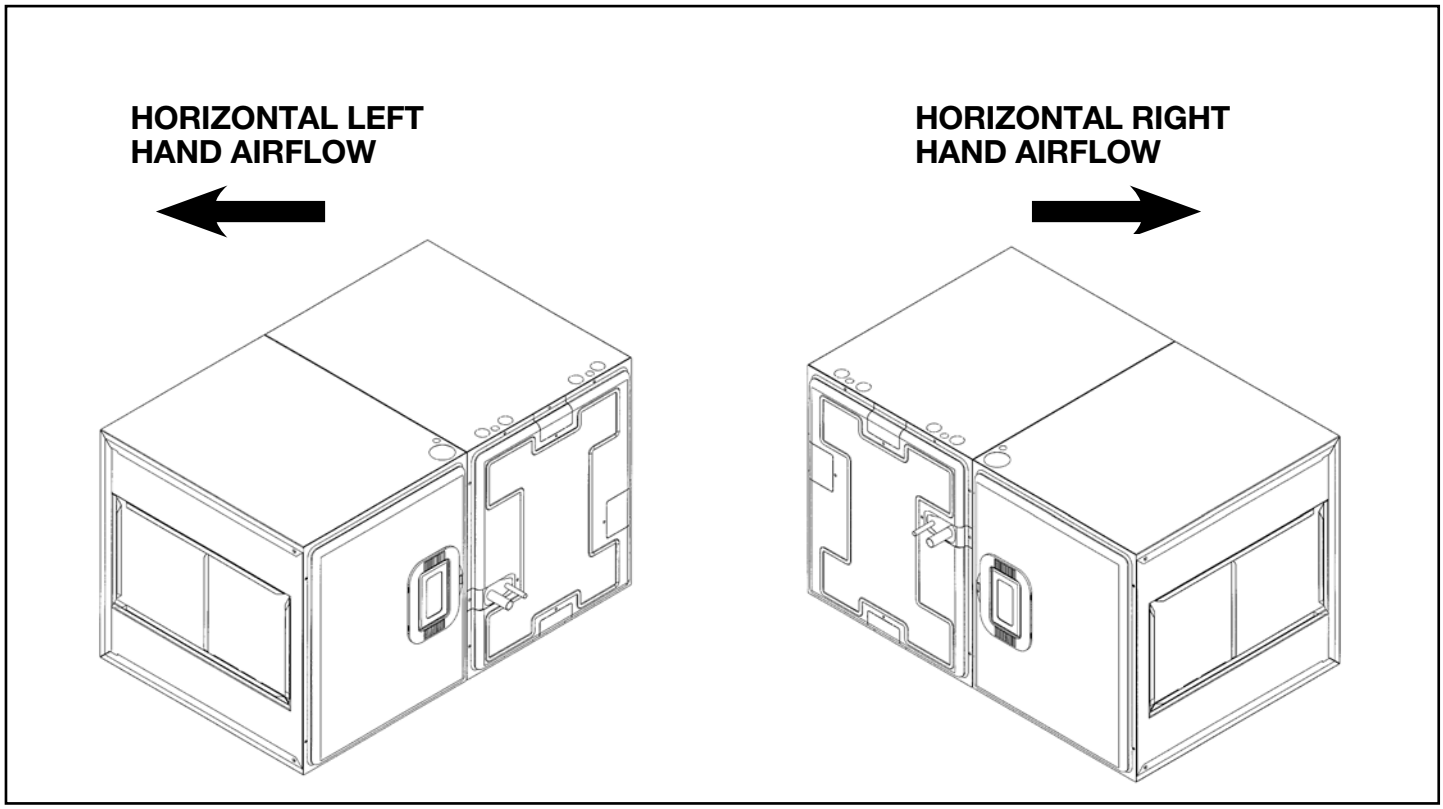
Unit Dimensions & Weights

Model Cabinet Size	Unit Width "W" In. [mm]	Supply Duct "A" In. [mm]	Unit Weight/Shipping Weight (Lbs.) [kg]
17	17 1/2 [445]	7 9/16 [192]	92/99 [42/45]
21	21 [533]	9 7/16 [240]	109/117 [49/53]
24	24 1/2 [622]	11 3/4 [298]	125/134 [57/61]

[ ] Designates Metric Conversions

Airflow Directional Data





NOTE: Coil and blower section are always in a draw through configuration.

Airflow Performance

Airflow performance data is based on cooling performance with a coil and no filter in place. Select performance table for appropriate unit size, voltage and number of electric heaters to be used. Make sure external static applied to unit allows operation within the minimum and maximum limits shown in table below for both cooling and electric heat operation. For optimum blower performance, operate the unit in the .3 [8 mm] to .7 inches [18 mm] W.C. external static range. Units with coils should be applied with a minimum of .1 inch [3 mm] W.C. external static range.

General Airflow Operating Limits

Model Cabinet Size	17		21		24		24	
Cooling BTUH Cooling Tons Nominal	18,000 1.5	24,000 2	30,000 2.5	36,000 3	42,000 3.5	48,000 4	60,000 5	60000 5
Heat Pump or Air Conditioning Maximum Heat/Cool CFM (37.5 CFM/1,000 BTUH) (450 CFM/'Ton Nominal)	675	900	1125	1350	1575	1800	2025	2250
Heat Pump or Air Conditioning Nominal Heat/Cool CFM (33.3 CFM/1,000 BTUH) (400 CFM/Ton Nominal)	600	800	1000	1200	1400	1600	1800	2000
Heat Pump or Air Conditioning Minimum Heat/Cool CFM (30.0 CFM/1,000 BTUH) (360 CFM/Ton Nominal)	540	720	900	1080	1260	1440	1620	1800
Maximum kW Electric Heating & Minimum Electric Heat CFM	11 560	11 560	11 900	11 1220	18 1220	18 1220	18 1460	18 1460
Maximum Electric Heat Rise °F	85	85	35	35	65	65	43	43

115V/208V/240V Airflow Performance Data—MLB2CY (Constant Torque (ECM) Motor)

Model			Blower Motor			External Static Pressure—Inches W.C. [kPa] with filter & indoor coil									
Cabinet Size	Tonnage	Heaters	Electric Nominal Speed Tap	Voltage		0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.23]	1.0 [.25]
-17	1.5 Ton	none	2	208/240	CFM	—	519	476	433	391	348	301	257	181	120
					WATTS	—	52.8	57.1	61.5	66.3	71.7	76.7	80.1	84.0	86.4
		none	3	208/240	CFM	—	720	689	656	623	591	559	526	495	463
					WATTS	—	99.3	104.5	109.8	115.4	120.8	126.2	132.1	138.5	145.1
		3 (max)	2	208/240	CFM	—	509	466	423	381	338	291	247	171	110
					WATTS	—	47.8	52.1	56.5	61.3	66.7	71.7	75.1	79.0	81.4
		3 (max)	3	208/240	CFM	—	710	679	646	613	581	549	516	485	453
					WATTS	—	94.3	99.5	104.8	110.4	115.8	121.2	127.1	133.5	140.1
		none	2	115	CFM	—	550	509	468	429	390	347	255	303	183
					WATTS	—	49.1	54.2	59.1	63.8	68.8	74.5	84.4	80.4	88.3
		none	3	115	CFM	745	712	678	645	613	581	548	517	488	451
					WATTS	92.9	98.8	105.6	111.6	117.6	123.3	129.1	135.5	141.3	149.3
	2.0 Ton	none	4	208/240	CFM	—	602	563	525	490	452	414	374	334	292
					WATTS	—	68.6	73.3	78.0	82.4	87.4	93.3	99.4	105.1	108.6
		none	5	208/240	CFM	—	—	845	818	792	764	735	707	680	654
					WATTS	—	—	158.4	164.5	170.7	176.9	183.9	190.7	197.0	203.6
		3 (max)	4	208/240	CFM	—	592	553	515	480	442	404	364	324	282
					WATTS	—	63.6	68.3	73.0	77.4	82.4	88.3	94.4	100.1	103.6
		3 (max)	5	208/240	CFM	—	—	835	808	782	754	725	697	670	644
					WATTS	—	—	153.4	159.5	165.7	171.9	178.9	185.7	192.0	198.6
		none	4	115	CFM	641	605	567	530	496	460	427	387	349	305
					WATTS	67.1	72.7	78.5	83.8	88.8	94.6	99.8	106.6	113.2	118.1
		none	5	115	CFM	896	870	840	810	782	754	727	699	674	648
					WATTS	147.5	154.0	161.9	169.5	176.9	183.9	191.1	197.9	205.2	212.4

[ ] Designates Metric Conversions

115V/208V/240V Airflow Performance Data—MLB2CY (Constant Torque (ECM) Motor) (Con't.)

Model			Blower Motor			External Static Pressure—Inches W.C. [kPa] with filter & indoor coil									
Cabinet Size	Tonnage	Heaters	Electric Nominal Speed Tap	Voltage		0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.23]	1.0 [.25]
-21	2.5 Ton	none	2	208/240	CFM	789	743	699	605	557	497	451	391	322	254
					WATTS	57.9	63.2	68.4	79.0	85.3	91.8	96.8	105.1	110.0	113.2
		none	3	208/240	CFM	1060	1027	994	963	927	894	859	826	793	760
					WATTS	145.7	152.4	160.0	167.5	175.3	182.0	189.5	197.0	204.7	212.4
		3 (max)	2	208/240	CFM	819	773	729	635	587	527	481	421	352	284
					WATTS	67.9	73.2	78.4	89.0	95.3	101.8	106.8	115.1	120.0	123.2
		3 (max)	3	208/240	CFM	1090	1057	1024	993	957	924	889	856	823	790
					WATTS	155.7	162.4	170.0	177.5	185.3	192.0	199.5	207.0	214.7	222.4
		none	2	115	CFM	737	693	650	602	554	492	450	391	325	239
					WATTS	67.4	73.5	79.4	85.5	91.9	99.4	105.2	113.6	120.0	123.7
		none	3	115	CFM	1076	1042	1010	977	944	911	877	841	805	768
					WATTS	158.3	166.3	174.2	182.3	190.2	198.5	206.5	215.0	223.4	232.3
	3.0 Ton	none	4	208/240	CFM	790	749	706	661	617	572	511	474	417	357
					WATTS	72.3	77.9	83.5	88.9	94.7	101.1	108.3	113.0	122.0	127.4
		none	5	208/240	CFM	1197	1171	1143	1114	1086	1057	1025	994	964	934
					WATTS	202.2	209.9	218.3	227.1	235.3	243.8	252.1	260.1	269.1	278.4
		3 (max)	4	208/240	CFM	820	779	736	691	647	602	541	504	447	387
					WATTS	85.3	90.9	96.5	101.9	107.7	114.1	121.3	126.0	135.0	140.4
		3 (max)	5	208/240	CFM	1227	1201	1173	1144	1116	1087	1055	1024	994	964
					WATTS	215.2	222.9	231.3	240.1	248.3	256.8	265.1	273.1	282.1	291.4
		none	4	115	CFM	808	767	738	726	684	640	594	532	493	453
					WATTS	81.6	88.0	92.4	94.3	100.7	107.3	114.1	122.5	128.6	135.9
		none	5	115	CFM	1201	1172	1141	1113	1083	1060	1055	1026	995	963
					WATTS	216.4	224.5	233.9	242.5	251.7	258.9	260.5	269.3	278.6	288.4

[ ] Designates Metric Conversions

115V/208V/240V Airflow Performance Data—MLB2CY (Constant Torque (ECM) Motor) (Con't.)

Model			Blower Motor			External Static Pressure—Inches W.C. [kPa] with filter & indoor coil									
Cabinet Size	Tonnage	Heaters	Electric Nominal Speed Tap	Voltage		0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.23]	1.0 [.25]
-24	3.5 Ton	none	2	208/240	CFM	901	835	782	731	681	620	565	515	472	420
					WATTS	72.1	80.6	87.7	94.3	100.7	108.1	115.2	121.2	127.0	133.4
		none	3	208/240	CFM	1531	1494	1444	1404	1370	1338	1306	1275	1245	1217
					WATTS	255.3	267.6	284.5	298.6	310.5	322.3	333.7	344.7	354.9	365.2
		3 (max)	2	208/240	CFM	926	860	807	756	706	645	590	540	497	445
					WATTS	92.1	100.6	107.7	114.3	120.7	128.1	135.2	141.2	147.0	153.4
		3 (max)	3	208/240	CFM	1556	1519	1469	1429	1395	1363	1331	1300	1270	1242
					WATTS	275.3	287.6	304.5	318.6	330.5	342.3	353.7	364.7	374.9	385.2
		none	2	115	CFM	896	835	783	733	678	632	579	519	481	438
					WATTS	76.3	85.7	93.6	100.9	108.7	115.6	124.1	132.7	138.9	145.7
		none	3	115	CFM	1504	1473	1433	1383	1350	1317	1286	1256	1227	1195
					WATTS	260.9	271.6	286.6	305.5	317.2	329.3	341.9	352.7	363.4	373.6
	4.0 Ton	none	4	208/240	CFM	1105	1043	998	957	915	875	824	780	737	693
					WATTS	113.0	124.8	133.0	141.1	148.6	155.8	165.4	173.9	181.8	189.6
		none	5	208/240	CFM	1656	1629	1589	1544	1508	1482	1454	1424	1394	1365
					WATTS	322.7	334.3	350.6	369.5	384.9	397.1	409.1	421.8	435.2	447.7
		3 (max)	4	208/240	CFM	1135	1073	1028	987	945	905	854	810	767	723
					WATTS	133.0	144.8	153.0	161.1	168.6	175.8	185.4	193.9	201.8	209.6
		3 (max)	5	208/240	CFM	1686	1659	1619	1574	1538	1512	1484	1454	1424	1395
					WATTS	342.7	354.3	370.6	389.5	404.9	417.1	429.1	441.8	455.2	467.7
		none	4	115	CFM	1119	1061	1016	974	934	884	842	798	756	711
					WATTS	121.8	134.1	143.6	152.5	161.0	169.9	178.3	187.7	198.0	207.0
		none	5	115	CFM	1655	1625	1593	1544	1512	1479	1451	1423	1396	1369
					WATTS	342.7	355.7	370.3	392.6	407.4	423.0	436.1	449.5	462.4	475.5

[ ] Designates Metric Conversions

115V/208V/240V Airflow Performance Data—MLB2CY (Constant Torque (ECM) Motor) (Con't.)

Model			Blower Motor			External Static Pressure—Inches W.C. [kPa] with filter & indoor coil									
Cabinet Size	Tonnage	Heaters	Electric Nominal Speed Tap	Voltage		0.1 [.02]	0.2 [.05]	0.3 [.07]	0.4 [.10]	0.5 [.12]	0.6 [.15]	0.7 [.17]	0.8 [.20]	0.9 [.23]	1.0 [.25]
-24	5 Ton	none	2	208/240	CFM	1121	1062	1007	950	877	799	693	637	580	514
					WATTS	100.7	110.1	118.7	127.9	138.8	149.5	161.4	168.3	174.8	182.2
		none	3	208/240	CFM	1657	1618	1582	1548	1516	1481	1437	1398	1343	1294
					WATTS	274.5	287.4	300.0	311.9	324.4	336.7	350.7	364.8	382.7	398.4
		3 (max)	2	208/240	CFM	1079	1020	965	908	835	757	651	595	538	472
					WATTS	121	130	139	148	159	169	181	188	195	202
		3 (max)	3	208/240	CFM	1615	1576	1540	1506	1474	1439	1395	1356	1301	1252
					WATTS	295	307	320	332	344	357	371	385	403	418
		none	2	115	CFM	1111	1058	1004	938	874	791	692	626	573	501
					WATTS	104.3	113.1	122.5	134.1	144.3	157.1	168.0	176.0	183.6	191.3
		none	3	115	CFM	1658	1620	1580	1546	1514	1478	1435	1393	1347	1299
					WATTS	283.2	296.8	311.0	323.3	336.4	350.0	365.0	379.8	396.0	412.9
		none	4	208/240	CFM	1226	1179	1131	1080	1022	957	884	778	728	674
					WATTS	125.6	134.5	144.2	153.9	164.7	176.4	188.1	201.9	208.9	217.7
		none	5	208/240	CFM	2010	1977	1944	1917	1887	1860	1838	1809	1787	1760
					WATTS	470.4	485.6	504.6	520.4	537.8	554.0	569.8	587.5	603.5	621.0
		3 (max)	4	208/240	CFM	1184	1137	1089	1038	980	915	842	736	686	632
					WATTS	145.6	154.5	164.2	173.9	184.7	196.4	208.1	221.9	228.9	237.7
		3 (max)	5	208/240	CFM	1968	1935	1902	1875	1845	1818	1796	1767	1745	1718
					WATTS	490.4	505.6	524.6	540.4	557.8	574.0	589.8	607.5	623.5	641.0
		none	4	115	CFM	1213	1161	1110	1060	998	938	848	757	697	653
					WATTS	126.0	136.1	146.3	156.3	168.3	179.3	194.2	206.3	215.6	222.8
		none	5	115	CFM	2014	1985	1953	1920	1887	1856	1829	1801	1774	1739
					WATTS	489.5	505.8	524.3	542.5	560.6	578.9	594.6	611.9	629.1	649.3

[ ] Designates Metric Conversions

Electrical Data—Blower Motor Only Without Electric Heat

Model Size/Elec. Designation	Voltage	Phase	Hertz	HP [W]	RPM	Speeds	Motor Amps.	Minimum Circuit Ampacity	Maximum Circuit Protector
MLB2CY2417STANMAN00	115	1	60	1/3 [249]	300-1100	5	3.2	5.0	15
MLB2CY3621STANMAN00	115	1	60	1/2 [373]	300-1100	5	4.2	6.0	15
MLB2CY4824STANMAN00	115	1	60	3/4 [559]	300-1100	5	6.4	8.0	15
MLB2CY6024STANMAN00	115	1	60	3/4 [559]	300-1100	5	8.5	11.0	15

Model Size/Elec. Designation	Voltage	Phase	Hertz	HP [W]	RPM	Speeds	Motor Amps.	Minimum Circuit Ampacity	Maximum Circuit Protector
MLB2CY2417STANMJ***	208-240	1	60	1/3 [249]	300-1100	5	1.8	3.0	15
MLB2CY3621STANMJ***	208-240	1	60	1/2 [373]	300-1100	5	2.4	3.0	15
MLB2CY4824STANMJ***	208-240	1	60	3/4 [559]	300-1100	5	3.8	5.0	15
MLB2CY6024STANMJ***	208-240	1	60	3/4 [559]	300-1100	5	5.0	7.0	15

Electrical Data—With Electric Heat

Model Size/Elec. Designation	Heater KW-Volts 208/240	Voltage	Phase	Hertz	HP [W]	RPM	Speeds	Total Amps.	Minimum Circuit Ampacity	Maximum Circuit Protector
MLB2CY2417STANMJB05	3.7/4.9	208-240	1	60	1/3 [249]	300-1100	5	19.6/22.2	25/28	25/30
MLB2CY2417STANMJB07	5.3/7.0	208-240	1	60	1/3 [249]	300-1100	5	27.3/30.8	35/39	35/40
MLB2CY3621STANMJB05	3.7/4.9	208-240	1	60	1/2 [373]	300-1100	5	20.2/22.8	26/29	30/30
MLB2CY3621STANMJB07	5.3/7.0	208-240	1	60	1/2 [373]	300-1100	5	27.9/31.6	35/40	35/40
MLB2CY3621STANMJB10	7.5/10.0	208-240	1	60	1/2 [373]	300-1100	5	38.5/44.1	49/56	50/60
MLB2CY4824STANMJB05	3.7/4.9	208-240	1	60	3/4 [559]	300-1100	5	21.6/24.2	27/31	30/35
MLB2CY4824STANMJB07	5.3/7.0	208-240	1	60	3/4 [559]	300-1100	5	29.3/33.0	37/42	40/45
MLB2CY4824STANMJB10	7.5/10.0	208-240	1	60	3/4 [559]	300-1100	5	39.9/45.5	50/57	50/60
MLB2CY6024STANMJB10	7.5/10.0	208-240	1	60	3/4 [559]	300-1100	5	41.1/46.7	52/59	60/60

[ ] Designates Metric Conversions

Electrical Wiring

Power Wiring

- Field wiring must comply with the National Electrical Code (C.E.C. in Canada) and any applicable local ordinance.
- Supply wiring must be 75°C minimum copper conductors only.
- See electrical data for product Ampacity rating and Circuit Protector requirement.

Grounding

- This product must be sufficiently grounded in accordance with National Electrical Code (C.E.C. in Canada) and any applicable local ordinance.
- A grounding lug is provided.

ACCESSORIES

- **A2L Sensor Kits**

  RXHT-5 Alt. Orientation Brackets
  RXHY-6 A2L Sensor and Brackets

- **External Auxiliary Horizontal Drain Pan. RXBM-AA06**—Fits all models.
- **Replacement Filters**

Model Cabinet Size	Filter Size In. [mm]	Part Number
17	16.25 x 21 [413 x 533]	54-23217-02
21	19.75 x 21 [502 x 533]	54-23217-03
24	23.25 x 21 [591 x 533]	54-23217-04

[ ] Designates Metric Conversions

MAINLINE®
Reliably Comfortable.™

GENERAL TERMS OF LIMITED WARRANTY*

Mainline® will furnish a replacement for any part of this product which fails in normal use and service within the applicable periods stated, in accordance with the terms of the limited warranty.

Conditional Parts
(Registration Required).....Ten (10) Years

***For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.**

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

"In keeping with its policy of continuous progress and product improvement, Mainline reserves the right to make changes without notice."

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