



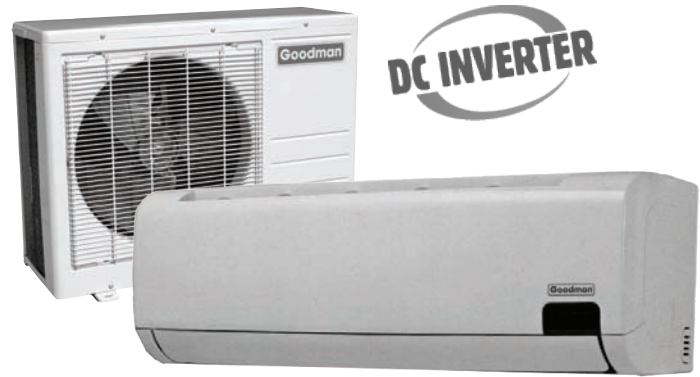
Air Conditioning & Heating

# MS20

## HIGH-EFFICIENCY MINI-SPLIT SYSTEM

### UP TO 20 SEER PERFORMANCE

### R-410A REFRIGERANT



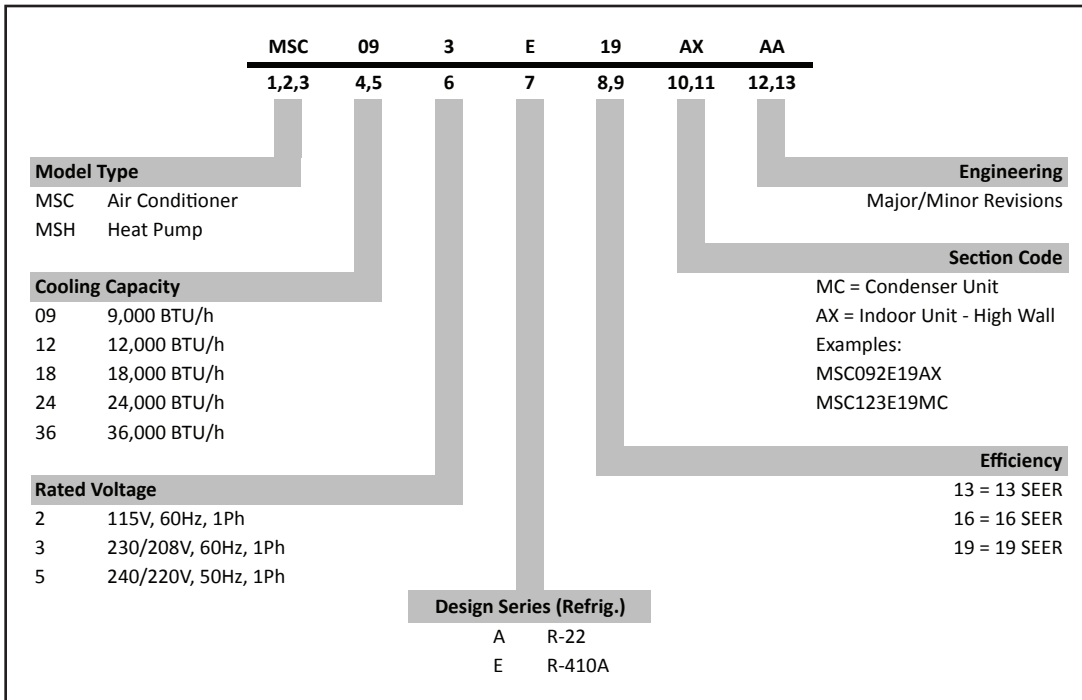
- R-410A chlorine-free refrigerant
- High-efficiency performance — up to 20 SEER
- DC Inverter technology compressor
- Indoor antibacterial fan
- Odor-capture carbon filter
- Easy-to-read LCD display
- Follow-me remote control (Ambient temperature at location of remote control determines actual heating or cooling demand communication.)
- Time-delay safety control
- Sleep mode setting (7-hour off-cycle)
- Easy-clean indoor exterior panels
- Turbo settings for fast heating or cooling
- Auto-restart temperature setting (Remote memory automatically sets thermostat at last stored temperature setting.)
- Bi-directional airflow for optimal air distribution



\* Complete warranty details available from your local dealer or at [www.goodmanmfg.com](http://www.goodmanmfg.com).



# NOMENCLATURE



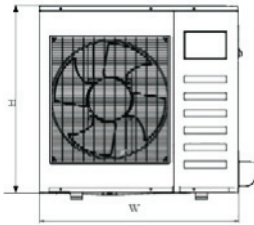
## SPECIFICATIONS FOR AIR CONDITIONERS

MODELS						
Indoor model		MSC092E19AX	MSC122E19AX	MSC123E19AX	MSC183E19AX	MSC243E19AX
Outdoor model		MSC092E19MC	MSC122E19MC	MSC123E19MC	MSC183E19MC	MSC243E19MC
AHRI #s		4865909	4865910	4865911	4865912	4865913
CAPACITY						
Cooling Capacity (BTU/h)		9,000	12,000	12,200	18,000	24,000
ELECTRICAL DATA						
Power Supply	V~,Hz,Ph	115V, 60Hz, 1Ph	115V, 60Hz, 1Ph	230V, 60Hz, 1Ph	230V, 60Hz, 1Ph	230V, 60Hz, 1Ph
Power Input (W)		650	950	980	1,460	2,100
Operating Current (A)		7.2	9.6	4.7	6.7	9.1
MCA		15	15	9	14	16
MOC		25	25	15	20	25
PERFORMANCE						
SEER		19	19	19	20.3	18.5
EnergyStar		YES	YES	YES	YES	YES
Airflow Volume	Indoor(m3/h)	750	800	850	1,150	1,600
Noise Level ( dB(A))	Indoor(Hi/Med/Lo)	39 / 35 / 32	40 / 38 / 35	41 / 37 / 34	48 / 40 / 36	50 / 48 / 46
	Outdoor	53	53	54	54	59
FEATURES						
Follow Me		YES	YES	YES	YES	YES
Turbo Mode		YES	YES	YES	YES	YES
Auto-Restart		YES	YES	YES	YES	YES
LCD Display		YES	YES	YES	YES	YES
Auto-Level Swing		YES	YES	YES	YES	YES
Active Carbon		YES	YES	YES	YES	YES
Timer (Sleep)		24	24	24	24	24
STUFFING QUANTITY						
Stuffing Quantity (Set)20'/40'/40'HQ		89 / 182 / 215	89 / 182 / 215	88 / 180 / 214	68 / 138 / 165	40 / 88 / 95

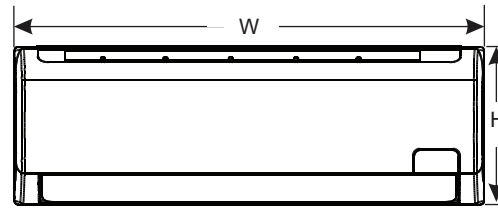
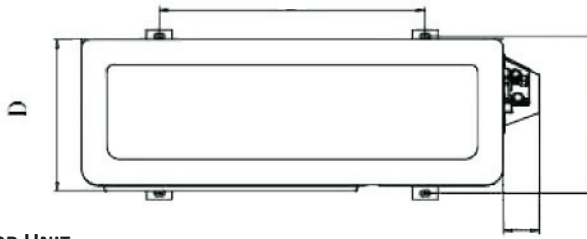
## SPECIFICATIONS FOR HEAT PUMPS

MODELS						
Indoor Model		MSH092E19AX	MSH122E19AX	MSH123E19AX	MSH183E19AX	MSH243E19AX
Outdoor Model		MSH092E19MC	MSH122E19MC	MSH123E19MC	MSH183E19MC	MSH243E19MC
AHRI #s		4865914	4865915	4865916	4865917	4865918
CAPACITY						
Cooling Capacity (BTU/h)		9,000	12,000	12,300	18,300	24,000
Heating Capacity (BTU/h)		10,000	13,000	13,000	19,200	25,400
ELECTRICAL DATA						
Power Supply	V~,Hz,Ph	115V, 60Hz, 1Ph	115V, 60Hz, 1Ph	230V, 60Hz, 1Ph	230V, 60Hz, 1Ph	230V, 60Hz, 1Ph
Power Input (W)	Cooling	650	950	980	1,460	2,100
	Heating	760	1,330	1,060	1,480	2,050
Operating Current (A)	Cooling	7.2	9.6	4.7	6.7	9.1
	Heating	8	13.5	5.7	6.6	8.9
MCA		15	17	8	13	15
MOC		25	25	15	20	25
PERFORMANCE						
SEER		19	19	18.8	19.2	18
EnergyStar		YES	YES	YES	YES	YES
Airflow Volume	Indoor(m3/h)	750	800	850	1,150	1,600
Noise Level ( dB(A))	Indoor(Hi/Med/Lo)	39 / 35 / 32	40 / 38 / 35	41 / 37 / 34	48 / 40 / 36	50 / 48 / 46
	Outdoor	53	53	54	54	59
FEATURES						
Follow Me		YES	YES	YES	YES	YES
Turbo Mode		YES	YES	YES	YES	YES
Auto-Restart		YES	YES	YES	YES	YES
LCD Display		YES	YES	YES	YES	YES
Auto-Level Swing		YES	YES	YES	YES	YES
Active Carbon		YES	YES	YES	YES	YES
Timer (Sleep)		24	24	24	24	24
STUFFING QUANTITY						
Stuffing Quantity (Set)	20'/40'/40'HQ	89 / 182 / 215	89 / 182 / 215	88 / 180 / 214	68 / 138 / 165	40 / 88 / 95

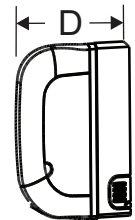
## AIR CONDITIONING DIMENSIONS & SHIPPING WEIGHTS



OUTDOOR UNIT

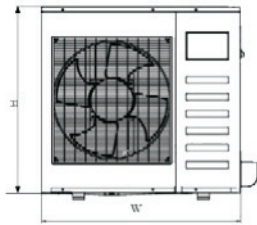


INDOOR UNIT

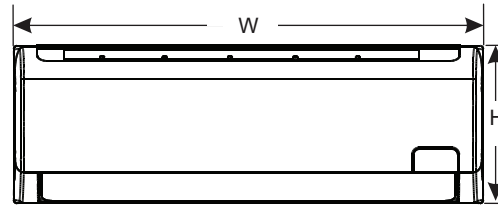
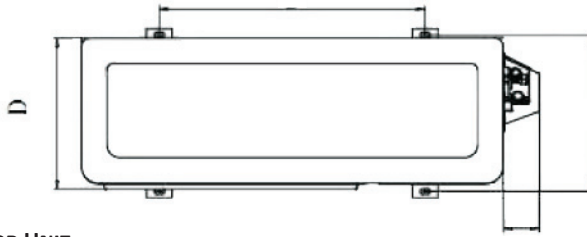


AIR CONDITIONING MODELS						
Indoor model		MSC092E19AX	MSC122E19AX	MSC123E19AX	MSC183E19AX	MSC243E19AX
Outdoor model		MSC092E19MC	MSC122E19MC	MSC123E19MC	MSC183E19MC	MSC243E19MC
NET WEIGHT & DIMENSION						
Indoor (W*H*D)	mm.	920 x 292 x 223	920 x 292 x 223	920 x 292 x 223	998 x 322 x 240	1445 x 340 x 277
	in.	36¼ x 11½ x 8¾	36¼ x 11½ x 8¾	36¼ x 11½ x 8¾	39 <sup>5</sup> / <sub>16</sub> x 12 <sup>11</sup> / <sub>16</sub> x 9 <sup>7</sup> / <sub>16</sub>	56¾ x 13¾ x 10 <sup>7</sup> / <sub>16</sub>
Outdoor (W*H*D)	mm.	760 x 590 x 285	760 x 590 x 285	760 x 590 x 285	845 x 695 x 335	895 x 860 x 330
	in.	29 <sup>15</sup> / <sub>16</sub> x 23¾ x 11¼	29 <sup>15</sup> / <sub>16</sub> x 23¾ x 11¼	29 <sup>15</sup> / <sub>16</sub> x 23¾ x 11¼	33¾ x 27 <sup>6</sup> / <sub>16</sub> x 13 <sup>3</sup> / <sub>16</sub>	35¼ x 33 <sup>14</sup> / <sub>16</sub> x 13
Net Weight	Indoor/Outdoor (kg)	11.5 / 37.5	11.5 / 37.5	11.5 / 39.5	13 / 47.5	26 / 72
	lbs.	26 / 83	26 / 83	26 / 88	29 / 105	58 / 159
SHIP WEIGHT & DIMENSION						
Indoor (W*H*D)	mm.	1015 x 368 x 295	1015 x 368 x 295	1015 x 368 x 295	1080 x 320 x 400	1530 x 365 x 420
Indoor (W*H*D)	in.	39 <sup>15</sup> / <sub>16</sub> x 14½ x 11 <sup>5</sup> / <sub>16</sub>	39 <sup>15</sup> / <sub>16</sub> x 14½ x 11 <sup>5</sup> / <sub>16</sub>	39 <sup>15</sup> / <sub>16</sub> x 14½ x 11 <sup>5</sup> / <sub>16</sub>	42½ x 12 <sup>5</sup> / <sub>16</sub> x 15¾	60¾ x 14¾ x 16 <sup>9</sup> / <sub>16</sub>
Outdoor (W*H*D)	mm.	887 x 655 x 355	887 x 655 x 355	887 x 655 x 355	965 x 755 x 395	1043 x 915 x 395
Outdoor (W*H*D)	in.	34 <sup>15</sup> / <sub>16</sub> x 25 <sup>13</sup> / <sub>16</sub> x 14	34 <sup>15</sup> / <sub>16</sub> x 25 <sup>13</sup> / <sub>16</sub> x 14	34 <sup>15</sup> / <sub>16</sub> x 25 <sup>13</sup> / <sub>16</sub> x 14	38 x 29¾ x 15 <sup>9</sup> / <sub>16</sub>	41 <sup>1</sup> / <sub>16</sub> x 36 x 15 <sup>9</sup> / <sub>16</sub>
Gross Weight (kg)	Indoor/Outdoor	14.5 / 39.5	14.5 / 40	14.5 / 42	17 / 51	32 / 76
Gross Weight (lb)	Indoor/Outdoor	32 / 88	32 / 88	32 / 93	64 / 113	71 / 168
Piping Size (mm)	Liquid	1/4" (Φ6.35)	1/4" (Φ6.35)	1/4" (Φ6.35)	3/8" (Φ9.53)	3/8" (Φ9.53)
	Gas	3/8" (Φ9.53)	1/2" (Φ12.7)	1/2" (Φ12.7)	5/8" (Φ16)	5/8" (Φ16)

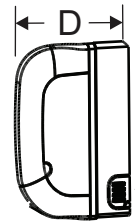
## HEAT PUMP DIMENSIONS & SHIPPING WEIGHTS



OUTDOOR UNIT

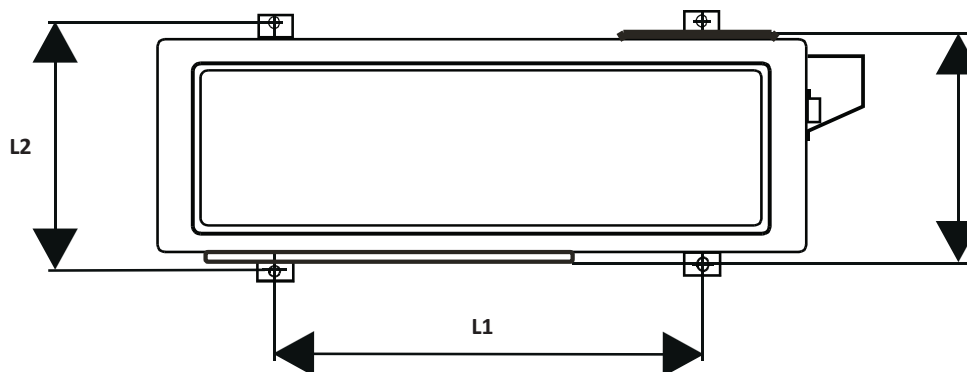


INDOOR UNIT



HEAT PUMP MODELS						
Indoor Model		MSH092E19AX	MSH122E19AX	MSH123E19AX	MSH183E19AX	MSH243E19AX
Outdoor Model		MSH092E19MC	MSH122E19MC	MSH123E19MC	MSH183E19MC	MSH243E19MC
NET WEIGHT & DIMENSION						
Indoor (W*H*D)	mm.	920 x 292 x 223	920 x 292 x 223	920 x 292 x 223	998 x 322 x 240	1445 x 340 x 277
	in.	36 $\frac{3}{4}$ x 11 $\frac{1}{2}$ x 8 $\frac{7}{8}$	36 $\frac{3}{4}$ x 11 $\frac{1}{2}$ x 8 $\frac{7}{8}$	36 $\frac{3}{4}$ x 11 $\frac{1}{2}$ x 8 $\frac{7}{8}$	39 $\frac{5}{16}$ x 12 $\frac{11}{16}$ x 9 $\frac{7}{16}$	56 $\frac{7}{8}$ x 13 $\frac{3}{4}$ x 10 $\frac{7}{8}$
Outdoor (W*H*D)	mm.	760 x 590 x 285	760 x 590 x 285	760 x 590 x 285	845 x 695 x 335	895 x 860 x 330
	in.	29 $\frac{15}{16}$ x 23 $\frac{3}{4}$ x 11 $\frac{1}{4}$	29 $\frac{15}{16}$ x 23 $\frac{3}{4}$ x 11 $\frac{1}{4}$	29 $\frac{15}{16}$ x 23 $\frac{3}{4}$ x 11 $\frac{1}{4}$	33 $\frac{3}{4}$ x 27 $\frac{6}{16}$ x 13 $\frac{3}{16}$	35 $\frac{1}{4}$ x 33 $\frac{14}{16}$ x 13
Net Weight	Indoor/Outdoor (kg)	11.5 / 37.5	11.5 / 37.5	11.5 / 39.5	13 / 47.5	26 / 72
	lbs.	26 / 83	26 / 83	26 / 88	29 / 105	58 / 159
SHIP WEIGHT & DIMENSION						
Indoor (W*H*D)	mm.	1015 x 368 x 295	1015 x 368 x 295	1015 x 368 x 295	1080 x 320 x 400	1530 x 365 x 420
Indoor (W*H*D)	in.	39 $\frac{15}{16}$ x 14 $\frac{1}{2}$ x 11 $\frac{5}{8}$	39 $\frac{15}{16}$ x 14 $\frac{1}{2}$ x 11 $\frac{5}{8}$	39 $\frac{15}{16}$ x 14 $\frac{1}{2}$ x 11 $\frac{5}{8}$	42 $\frac{1}{2}$ x 12 $\frac{3}{4}$ x 15 $\frac{3}{4}$	60 $\frac{3}{4}$ x 14 $\frac{3}{8}$ x 16 $\frac{9}{16}$
Outdoor (W*H*D)	mm.	887 x 655 x 355	887 x 655 x 355	887 x 655 x 355	965 x 755 x 395	1043 x 915 x 395
Outdoor (W*H*D)	in.	34 $\frac{15}{16}$ x 25 $\frac{13}{16}$ x 14	34 $\frac{15}{16}$ x 25 $\frac{13}{16}$ x 14	34 $\frac{15}{16}$ x 25 $\frac{13}{16}$ x 14	38 x 29 $\frac{3}{4}$ x 15 $\frac{9}{16}$	41 $\frac{1}{16}$ x 36 x 15 $\frac{9}{16}$
Gross Weight (kg)	Indoor/Outdoor	14.5 / 39.5	14.5/40	14.5 / 42	17 / 51	32 / 76
Gross Weight (lb)	Indoor/Outdoor	32 / 88	32 / 88	32 / 93	64 / 113	71 / 168
Piping Size (mm)	Liquid	1/4" (Φ6.35)	1/4" (Φ6.35)	1/4" (Φ6.35)	3/8" (Φ9.53)	3/8" (Φ9.53)
	Gas	3/8" (Φ9.53)	1/2" (Φ12.7)	1/2" (Φ12.7)	5/8" (Φ16)	5/8" (Φ16)

## OUTDOOR UNIT INSTALLATION DIMENSIONS



OUTDOOR UNIT	L1	L2
MSC092E19MC	20 <sup>7</sup> / <sub>8</sub> (530)	11 <sup>13</sup> / <sub>32</sub> (290)
MSC122E19MC	20 <sup>7</sup> / <sub>8</sub> (530)	11 <sup>13</sup> / <sub>32</sub> (290)
MSC123E19MC	20 <sup>7</sup> / <sub>8</sub> (530)	11 <sup>13</sup> / <sub>32</sub> (290)
MSC183E19MC	22 <sup>3</sup> / <sub>64</sub> (560)	13 <sup>3</sup> / <sub>16</sub> (335)
MSC243E19MC	23 <sup>15</sup> / <sub>64</sub> (590)	13 <sup>3</sup> / <sub>16</sub> (335)

OUTDOOR UNIT	L1	L2
MSH092E19MC	20 <sup>7</sup> / <sub>8</sub> (530)	11 <sup>13</sup> / <sub>32</sub> (290)
MSH122E19MC	20 <sup>7</sup> / <sub>8</sub> (530)	11 <sup>13</sup> / <sub>32</sub> (290)
MSH123E19MC	20 <sup>7</sup> / <sub>8</sub> (530)	11 <sup>13</sup> / <sub>32</sub> (290)
MSH183E19MC	22 <sup>3</sup> / <sub>64</sub> (560)	13 <sup>3</sup> / <sub>16</sub> (335)
MSH243E19MC	23 <sup>15</sup> / <sub>64</sub> (590)	13 <sup>3</sup> / <sub>16</sub> (335)

## REFRIGERANT LINE & CHARGE CHART

MODEL	PIPE SIZE		LINE SET LENGTH PROVIDED W/ UNIT	MAX ELEVATION	MAX LENGTH OVERALL	ADD. REFRIGERANT PER FT. OF ADD. LINE
	VAPOR	LIQUID				
	INCHES (M)	INCHES (M)	FEET (M)	B FEET (M)	A FEET (M)	OZ. (G/M)
MSH092E19MC	3/8" (φ9.53)	1/4" (φ6.35)	16 (5)	16 (5)	33 (10)	0.7 oz. (20g)
MSH122E19MC	1/2" (φ12.7)	1/4" (φ6.35)	16 (5)	16 (5)	33 (10)	0.7 oz. (20g)
MSH123E19MC	1/2" (φ12.7)	1/4" (φ6.35)	16 (5)	16 (5)	33 (10)	0.7 oz. (20g)
MSH183E19MC	5/8" (φ12.7)	3/8" (φ9.53)	16 (5)	26 (8)	49 (15)	1.4 oz. (40g)
MSH243E19MC	5/8" (φ12.7)	3/8" (φ9.53)	16 (5)	33 (10)	66 (20)	1.4 oz. (40g)
MSC092E19MC	3/8" (φ9.53)	1/4" (φ6.35)	16 (5)	16 (5)	33 (10)	0.7 oz. (20g)
MSC122E19MC	1/2" (φ12.7)	1/4" (φ6.35)	16 (5)	16 (5)	33 (10)	0.7 oz. (20g)
MSC123E19MC	1/2" (φ12.7)	1/4" (φ6.35)	16 (5)	16 (5)	33 (10)	0.7 oz. (20g)
MSC183E19MC	5/8" (φ12.7)	3/8" (φ9.53)	16 (5)	26 (8)	49 (15)	1.4 oz. (40g)
MSC243E19MC	5/8" (φ12.7)	3/8" (φ9.53)	16 (5)	33 (10)	66 (20)	1.4 oz. (40g)

**POWER SUPPLY DATA**

MODEL	POWER SUPPLY	MCA	MOC	AWG (MIN) CONNECTING CABLE
MSC092E19MC	115V,60Hz,1Ph	15.0	25.0	14#
MSC122E19MC	115V,60Hz,1Ph	15.0	25.0	14#
MSC123E19MC	230V,60Hz,1Ph	9.0	15.0	16#
MSC183E19MC	230V,60Hz,1Ph	14.0	20.0	14#
MSC243E19MC	230V,60Hz,1Ph	16.0	25.0	14#
MSH092E19MC	115V,60Hz,1Ph	15.0	25.0	14#
MSH122E19MC	115V,60Hz,1Ph	17.0	25.0	14#
MSH123E19MC	230V,60Hz,1Ph	8.0	15.0	16#
MSH183E19MC	230V,60Hz,1Ph	13.0	20.0	16#
MSH243E19MC	230V,60Hz,1Ph	15.0	25.0	14#

**NOTES**



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