



BAR & BAH SERIES 14 SEER



Split System Air Conditioner High Efficiency R410a

STANDARD FEATURES:

- R410a system
- High efficiency compressor
- Compact design for easy installation and transportation
- Ultra quiet
- Factory installed liquid line filter drier
- Pre-charged R410a good for 25' of lineset
- Brass liquid and suction service valves with sweat connections
- Contactor with lug connections
- Ground lug connection
- Terminal block provided for low voltage connections
- Copper Tube-Aluminum Fin Coil used on all models
- ARI certified
- ETL listed



CABINET FEATURES:

- Heavy gauge galvanized steel with gray powder paint finish
- Fully louvered removable coil guard to protect condenser surface
- Easy access to service valves and electrical connections
- Easy access to fan motor without disconnecting wires



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ComfortStar®

13 MODELS

BAR18-14	BAH18-14
BAR24-14	BAH24-14
BAR30-14	BAH30-14
BAR36-14	BAH36-14
BAR42-14	BAH42-14
BAR48-14	BAH48-14
BAR60-14	BAH60-14



BAR - COOLING ONLY BAH - HEAT PUMP

14 SEER - High Efficiency - R410a

GENERAL TERMS OF LIMITED WARRANTY

General Terms of Limited Warranty ComfortStar USA warrants that our products conform to the manufacturer specifications and will be free of defects in material and workmanship under normal use and maintenance.

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.

For complete details of the limited warranty, including applicable terms and conditions, see your local distributor or contact the manufacturer for a copy.

Model Number Identification

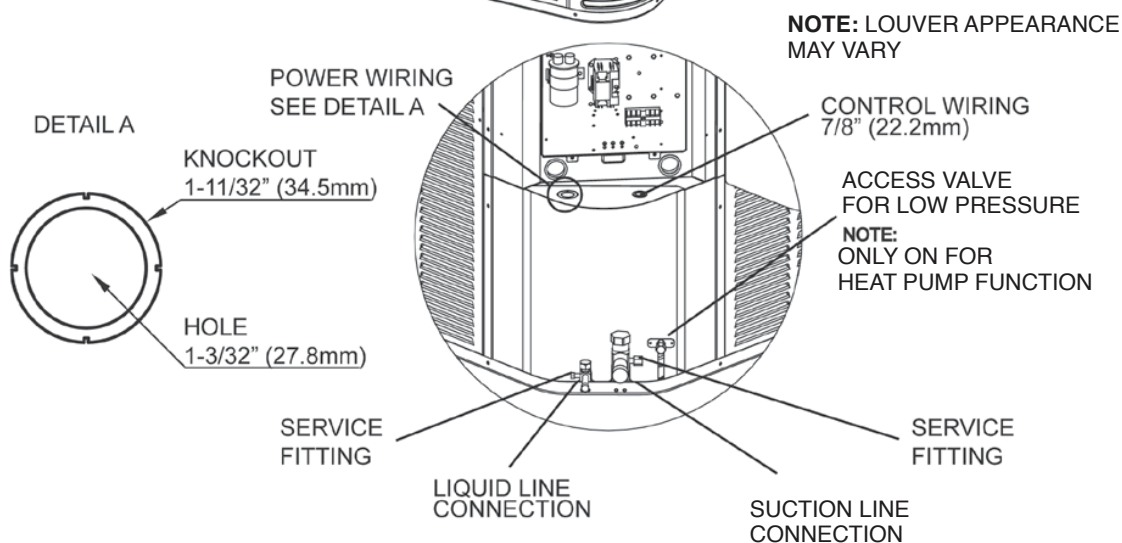
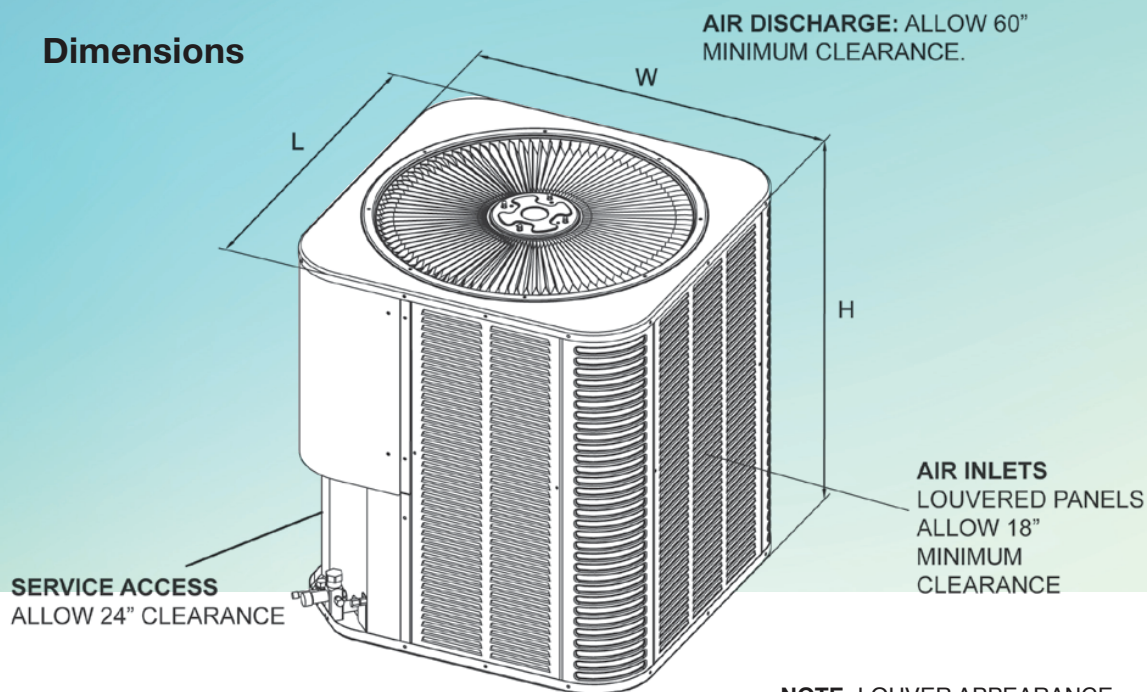
BAR - Cooling Only

BAH - Heat pump

18 Capacity 18,000 (Btu/h)

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Dimensions



Dimensional Data

Unit Model (Btu/h)	Dimensions (inches)			Refrigerant Connection Service Valve Size	
	"H" in (mm)	"W" in (mm)	"L" in (mm)	Liquid	Suction
1 1/2 Ton	24 15/16	21 7/8"	21 7/8"	3/8	3/4
2 Ton	24 15/16"	21 7/8"	21 7/8"	3/8	3/4
2 1/2 Ton	24 15/16"	29 1/8"	29 1/8"	3/8	3/4
3 Ton	24 15/16"	29 1/8"	29 1/8"	3/8	3/4
3 1/2 Ton	33 3/16"	29 1/8"	29 1/8"	3/8	3/4
4 Ton	33 3/16"	29 1/8"	29 1/8"	3/8	7/8
5 Ton	33 3/16"	29 1/8"	29 1/8"	3/8	7/8

BAR - Cooling Only

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MODEL			BAR18-14	BAR24-14	BAR30-14	BAR36-14	BAR42-14	BAR48-14	BAR60-14
OUTDOOR POWER SUPPLY		V/Ph/Hz	230V/1Ph/60Hz						
Cooling	Capacity	Btu/h	18000	24000	30000	34500	42000	46000	56500
	Input	W	1475	1960	2460	2830	3450	4088	4920
	EER	Btu/h.W	11.70	12.20	11.70	11.70	11.70	11.20	11.20
	SEER (AHRI Certified)	Btu/h.W	14	14	14	14	14	14	14
Max. input consumption		W	1843.75	2450.00	3075.00	3537.50	4312.50	5110.00	6150.00
Max. current		A	8.44	11.21	14.07	16.19	19.74	23.39	28.15
Compressor	Brand		HITACHI	HITACHI	HITACHI	HITACHI	LG	LG	LG
	Model		ASL145DG-C7EU	ASH201DG-C8LU1L	ASH239DG-C8DU	ASH280DG-C8DU	ABG036KAC	ABG042KAC	ABG051KAC
	Type		rotary	rotary	rotary	rotary	scroll	scroll	scroll
	Capacity	W	4240	5970	7055	8260	10551	12309	14974
	Input	W	1390	1950	2290	2700	3429	3962	4722
	Rated current(RLA)	A	6.10	8.70	10.20	11.90	15.2	17.3	21.0
	Locked rotor Amp(LRA)	A	33	44	56	60	112	108	128
	Thermal protector	uf	40	40	55.00	70	45	70	70
Refrigerant oil	ml	480	570	570	570	1280	1280	1280	
Outdoor fan motor	Type		PSC	PSC	PSC	PSC	PSC	PSC	PSC
	Input	W	145.00	178.00	178.00	207.00	207.00	510.00	510.00
		HP	0.19	0.24	0.24	0.28	0.28	0.68	0.68
	Output	W	60(0.08)	85(0.11)	85(0.11)	110(0.15)	110(0.15)	230(0.31)	230(0.31)
		HP	0.08	0.11	0.11	0.15	0.15	0.31	0.31
	Current	A	0.66	0.81	0.81	0.94	0.94	2.32	2.32
	Capacitor	μF	6	6	6	6	6	12	12
	Speed	rpm	870	970	970	850	850	1095	1095
Outdoor air flow		CFM	1500	1700	1900	2800	4000	4000	4000
Outdoor noise level		dB(A)	57	60	60	60	60	63	63
Outdoor dimension	Unit (WxHxD)	in	21-7/8× 24-15/16×21-7/8	21-7/8× 24-15/16×21-7/8	21-7/8× 24-15/16×21-7/8	29-1/8× 24-15/16×29-1/8	29-1/8× 33-3/16×29-1/8	29-1/8× 33-3/16×29-1/8	29-1/8× 33-3/16×29-1/8
		mm	554×633×554	554×633×554	554×633×554	740×633×740	740×843×740	740×843×740	740×843×740
	Packing (WxHxD)	in	22-9/10×2 6-1/4×22-9/10	22-9/10× 26-1/4×22-9/10	22-9/10× 26-1/4×22-9/10	30-1/5× 26-1/4×x30-1/5	30-1/5× 34-1/2×30-1/5	30-1/5× 34-1/2×30-1/5	30-1/5× 34-1/2×30-1/5
		mm	582×667×582	582×667×582	582×667×582	768×667×768	768×877×768	768×877×768	768×877×768
Refrigerant Type			R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant pipe	Liquid side	in	Φ3/8	Φ3/8	Φ3/8	Φ3/8	Φ3/8	Φ3/8	Φ3/8
	Gas side	in	Φ3/4	Φ3/4	Φ3/4	Φ3/4	Φ3/4	Φ7/8	Φ7/8
	Max. refrigerant pipe length	ft	65 39/64	65 39/64	65 39/64	65 39/64	65 39/64	65 39/64	65 39/64
	Max. difference in level	ft	32 13/16	32 13/16	32 13/16	32 13/16	32 13/16	32 13/16	32 13/16
Design pressure		MPa	4.0/1.2	4.0/1.2	4.0/1.2	4.0/1.2	4.0/1.2	4.0/1.2	4.0/1.2
Max pressure		MPa	4.20	4.20	4.20	4.20	4.20	4.20	4.20
Outdoor weight	N.W.	Kg	46	52	58	71	83	84	94
		Lb	101	115	128	157	183	185	207
	G.W.	Kg	48	54	61	74	87	89	98
		Lb	106	119	134	163	192	196	216

BAH - Cooling and Heating

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MODEL			BAH18-14	BAH24-14	BAH30-14	BAH36-14	BAH42-14	BAH48-14	BAH60-14
OUTDOOR POWER SUPPLY		V/Ph/Hz	230V/1Ph/60Hz						
Cooling	Capacity	Btu/h	17600	23600	28600	34000	40500	46000	56000
	Input	W	1500	2020	2450	2910	3480	3950	4900
	EER	Btu/h.W	11.70	12.20	11.70	11.70	11.70	11.20	11.20
	SEER (AHRI Certified)	Btu/h.W	14	14	14	14	14	14	14
Heating	Capacity	Btu/h	17200	22200	28600	33500	40000	46000	55000
	HSPF (AHRI Certified)	Btu/h.W	8.20	8.20	8.30	8.30	8.30	8.30	8.30
Max. input consumption		W	1875.00	2525.00	3062.50	3637.50	4350.00	4937.50	6125.00
Max. current		A	8.58	11.56	14.02	16.65	19.91	22.60	28.03
Compressor	Brand		HITACHI	HITACHI	HITACHI	HITACHI	LG	LG	LG
	Model		ASL145DG-C7EU	ASH201DG-C8LU1L	ASH239DG-C8DU	ASH280DG-C8DU	ABG036KAC	ABG042KAC	ABG051KAC
	Type		rotary	rotary	rotary	rotary	scroll	scroll	scroll
	Capacity	W	4240	5970	7055	8260	10551	12309	14974
	Input	W	1390	1950	2290	2700	3429	3962	4722
	Rated current(RLA)	A	6.10	8.7	10.20	11.9	15.2	17.3	21.0
	Locked rotor Amp(LRA)	A	33	44	56	60	112	108	128
	Thermal protector	uf	40	40	55	70	45	70	70
	Refrigerant oil	ml	480	570	570	570	1280	1280	1280
Outdoor fan motor	Type		PSC	PSC	PSC	PSC	PSC	PSC	PSC
	Input	W	145.00	178.00	178.00	207.00	207.00	510.00	510.00
		HP	0.19	0.24	0.24	0.28	0.28	0.68	0.68
	Output	W	60	85	85	110	110	230	230
		HP	0.08	0.11	0.11	0.15	0.15	0.31	0.31
	Current	A	0.66	0.81	0.81	0.94	0.94	2.32	2.32
	Capacitor	μF	6.00	6.00	6.00	6.00	6.00	12.00	12.00
	Speed	rpm	870	970	970	850	850	1095	1095
Outdoor air flow		CFM	1500	1700	1900	2800	4000	4000	4000
Outdoor noise level		dB(A)	60	60	61	61	63	63	63
Outdoor dimension	Unit (WxHxD)	in	21-7/8× 24-15/16×21-7/8	21-7/8× 24-15/16×21-7/8	21-7/8× 24-15/16×21-7/8	29-1/8× 24-15/16×29-1/8	29-1/8× 33-3/16×29-1/8	29-1/8× 33-3/16×29-1/8	29-1/8× 33-3/16×29-1/8
		mm	554×633×554	554×633×554	554×633×554	740×633×740	740×843×740	740×843×740	740×843×740
	Packing (WxHxD)	in	22-9/10× 26-1/4×22-9/10	22-9/10× 26-1/4×22-9/10	22-9/10× 26-1/4×22-9/10	30-1/5× 26-1/4×x30-1/5	30-1/5× 34-1/2×30-1/5	30-1/5× 34-1/2×30-1/5	30-1/5× 34-1/2×30-1/5
		mm	582×667×582	582×667×582	582×667×582	768×667×768	768×877×768	768×877×768	768×877×768
Refrigerant Type			R410A	R410A	R410A	R410A	R410A	R410A	R410A
Refrigerant pipe	Liquid side	in	Φ3/8	Φ3/8	Φ3/8	Φ3/8	Φ3/8	Φ3/8	Φ3/8
	Gas side	in	Φ3/4	Φ3/4	Φ3/4	Φ3/4	Φ3/4	Φ7/8	Φ7/8
	Max. refrigerant pipe length	ft	65 39/64	65 39/64	65 39/64	65 39/64	65 39/64	65 39/64	65 39/64
	Max. difference in level	ft	32 13/16	32 13/16	32 13/16	32 13/16	32 13/16	32 13/16	32 13/16
	Design pressure	MPa	4.0/1.2	4.0/1.2	4.0/1.2	4.0/1.2	4.0/1.2	4.0/1.2	4.0/1.2
Max pressure		MPa	4.20	4.20	4.20	4.20	4.20	4.20	4.20
Outdoor weight	N.W.	Kg	47	55	62	70	94	80	94
		Lb	104	121	137	154	207	176	207
	G.W.	Kg	49	57	66	74	98	86	98
		Lb	108	126	146	163	216	190	216

Condensing Unit Refrigerant Line Set Information

Suction line Sizing

Unit Size		1 1/2 Ton	2 Ton	2 1/2 Ton	3 Ton	3 1/2 Ton	4 Ton	5 Ton
Suction Line Connection Size	standard	3/4" I.D.	3/4" I.D.	3/4" I.D.	3/4" I.D.	3/4" I.D.	7/8" I.D.	7/8" I.D.
Suction Line Run - Feet	optional	5/8"	5/8"	5/8"	5/8"	5/8"	3/4"	1 1/8"
		Capacity Factor						
25'	standard	1.00	1.00	1.00	1.00	1.00	1.00	0.99
	optional	1.00	1.00	1.00	1.00	1.00	1.00	1.00
50'	standard	0.98	0.98	0.98	0.99	0.98	0.98	0.98
	optional	0.97	0.97	0.97	0.97	0.98	0.98	0.99
100'	standard	0.95	0.95	0.96	0.97	0.97	0.97	0.94
	optional	0.94	0.94	0.94	0.94	0.95	0.95	0.98
150'	standard	0.92	0.92	0.93	0.96	0.96	0.96	0.90
	optional	0.90	0.90	0.90	0.90	0.91	0.92	0.97

Notes: * Standard size
Using suction line larger than shown in chart will result in poor oil return and is not recommended.

Liquid line Sizing

System Capacity	Liquid Line Connection Size (inch I.D.)	Compressor Type	Line Size Connection and Line Size (inch I.D.)	Liquid Line Size Outdoor Unit above or below indoor coil					
				Total Equivalent Length - Feet					
				25	50	75	100	125	150
				Maximum Vertical Separation - Feet					
1 1/2 Ton	3/8"	Rotary	3/8*	25	30	30	27	24	20
2 Ton	3/8"	Rotary	3/8*	25	30	30	24	20	15
2 1/2 Ton	3/8"	Rotary	3/8*	25	30	30	22	17	10
3 Ton	3/8"	Rotary	5/16	25	50	37	22	7	N/a
			3/8*	25	50	68	63	58	53
3 1/2 Ton	3/8"	Scroll	5/16	25	23	4	N/A	N/A	N/A
			3/8*	25	50	43	36	30	24
4 Ton	3/8"	Scroll	3/8*	25	46	38	30	22	15
			1/2	25	50	56	55	53	52
5 Ton	3/8"	Scroll	3/8*	25	50	56	44	32	20
			1/2	25	50	75	81	79	76

Notes: * Standard size
N/A Application not recommended