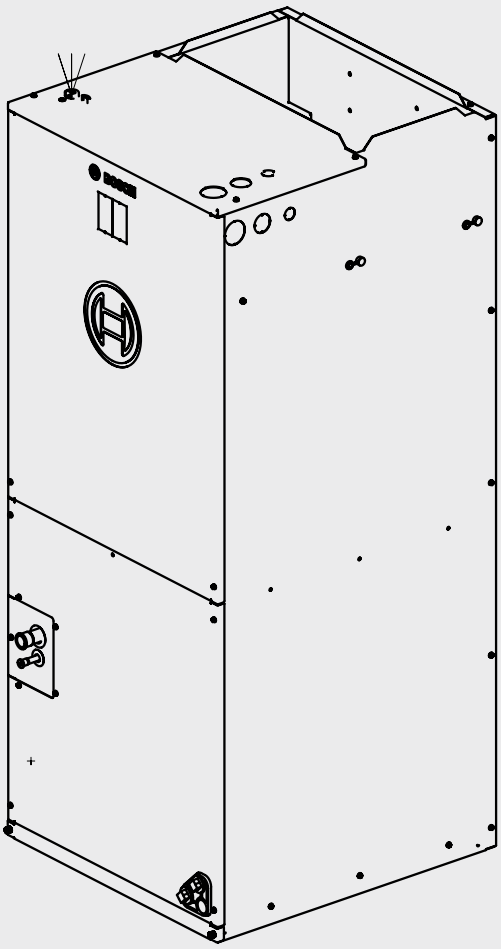
BOSCH

Product Specifications

Bosch IDS Heat Pump
Ultra Series Air Handler

4-5 Ton Capacity | R454B



BTC 762008304 A / 08.2024

ENERGY STAR

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

C ETL LISTED US
Intertek

Table of Contents

1 Product Features

1.1 Features and Benefits

- Premium efficiency – Up to 19SEER2, 10HSPF2 (Region IV) and 8.5 HSPF2 (Region V)
- All aluminum evaporator coil for superior corrosion resistance
- Constant torque multi-speed ECM blower motor - designed for four stage operation
- 5, 8, 10, 15, 20 kW electric heat accessory kits available for supplemental or emergency heating needs
- Easy to install – compatible with most standard 24 VAC heat pump thermostats
- Factory-installed TXV metering
- Multi-position Installation - upflow or horizontal right standard; field convertible to horizontal left or downflow
- Multiple electrical entry locations
- Dual front panel design for ease of maintenance
- Blower and coil easy slide out for ease of maintenance
- Fully-insulated cabinet design
- Horizontal and vertical condensate drain pans standard
- Condensate drain pan is polymer with UVC inhibitor
- Primary and secondary condensate drain fittings
- Factory-sealed cabinet certified to achieve 2% or less air leakage rate at 1.0 inch water column
- Integrated filter rack with tool-less door access
- AHRI and ETL Listed

1.2 Limited Warranty

For Products installed in a one or two family residential dwelling, BTC warrants that all compressors and internal components incorporated into the Product at the time of shipment by BTC shall remain free from defects in workmanship and materials for ten (10) years* from the Commencement Date. If the Warranty Registration process has been completed and BTC determines that the Product or any part of the Product has a defect in workmanship or materials, BTC shall pay labor charges associated with the repair or replacement of the part in accordance with the Warranty Labor Allowance Schedule** for the period of ninety (90) days from the Commencement Date.

** Please refer to www.bosch-climate.us for full warranty terms and conditions.*

*** Warranty Labor Allowance Schedule details are available on https://claims.boschhomecomfort.us*

2 Nomenclature

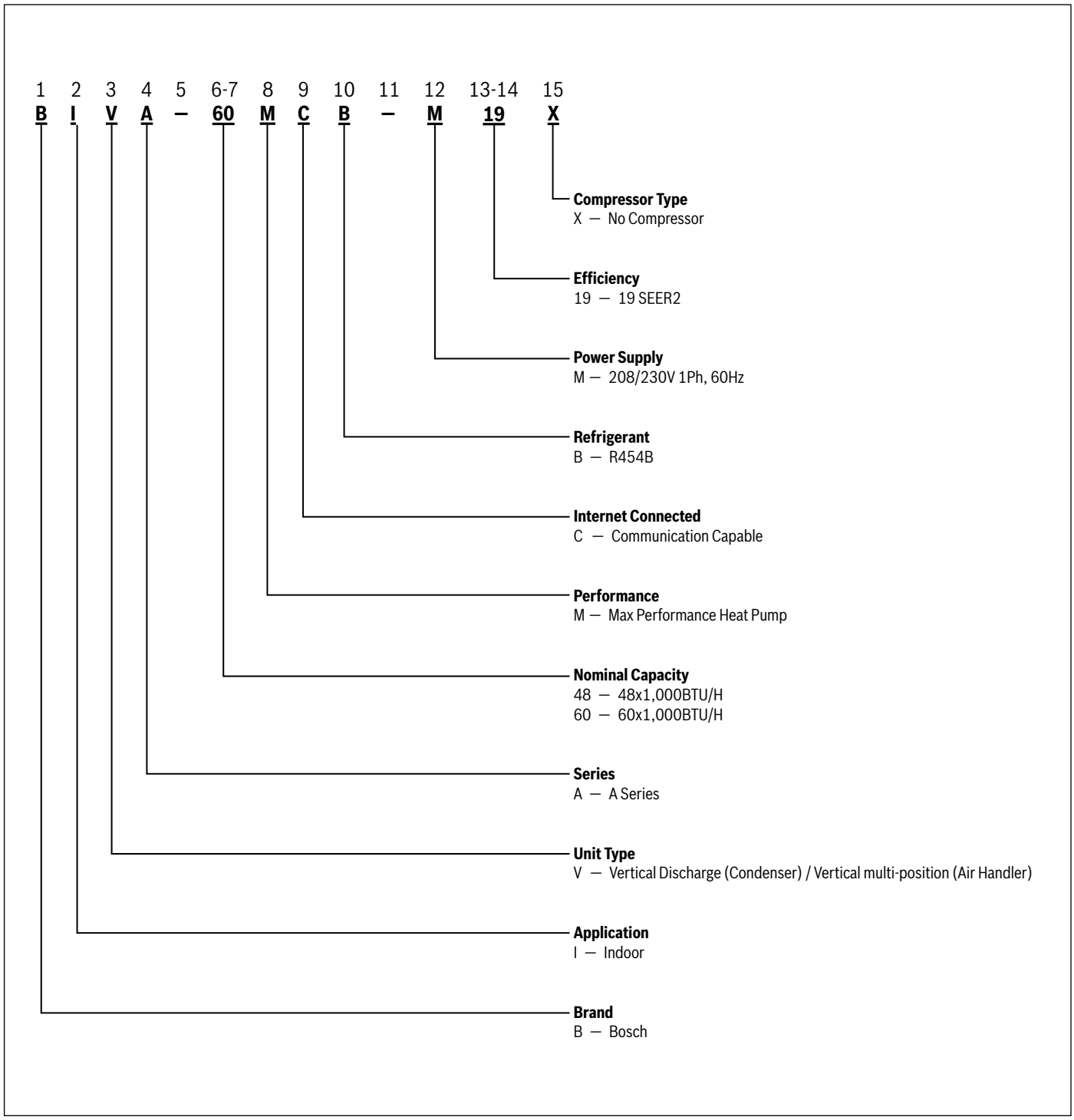


Figure 1

3 Product specifications

	BIVA19-48	BIVA19-60
Cooling Capacity		
Nominal Cooling (BTU/h)	48500	53500
Nominal Heating (BTU/h)	48500	55000
Blower		
Diameter (mm)	10	10
Width (mm)	10	10
Fan Motor		
Horsepower (HP)	3/4	3/4
Full Load Amps	6.2	6.2
Refrigeration System		
Refrigerant Line Size[1]		
Liquid Line Size (O.D.)	3/8"	3/8"
Suction Line Size (O.D.)	7/8"	7/8"
Refrigerant Connection Size		
Liquid Line Size (O.D.)	3/8"	3/8"
Suction Line Size (O.D.)	7/8"	7/8"
Expansion Device [TXV=Thermal Expansion Valve]	TXV	
Decibels dB(A)		
High Speed	78	79
Medium Speed	74	75
Low Speed	71	72
Electrical Data		
Voltage-Phase-Hz	208/230-1-60	208/230-1-60
Minimum Circuit Ampacity [2]	7.8A	7.8A
Max. Overcurrent Protection [3]	15A	15A
Min / Max Volts	187V/253V	
Air Filter		
Air Filter Sizes	20" x 22"	20" x 22"
Weight		
Net Weight (without packaging)(lbs)	154	159
Gross Weight (including packaging)(lbs) [4]	185	189
Dimensions		
Unit D x W x H (in.)	24"×22"×54-1/2"	24"×22"×54-1/2"
Unit D x W x H (in.)(with pallet and packaging)	27-11/16"×24-11/16"×60-5/8"	27-11/16"×24-11/16"×60-5/8"
Indoor Coil		
Net face area-sq.ft.	5.99	5.99
Tube diameter	9/32" (7mm)	9/32" (7mm)
No.of rows	4	5
Fins per inch	17	17

Table 1

[1] *Tested and rated in accordance with AHRI Standard 210/240.*

[2] *Wire size should be determined in accordance with National Electrical Codes; extensive wire runs will require larger wire sizes.*

[3] *Must use time-delay fuses or HACR-type circuit breakers of the same size as noted.*

[4] *Weight shown includes packaging*

4 Dimensions

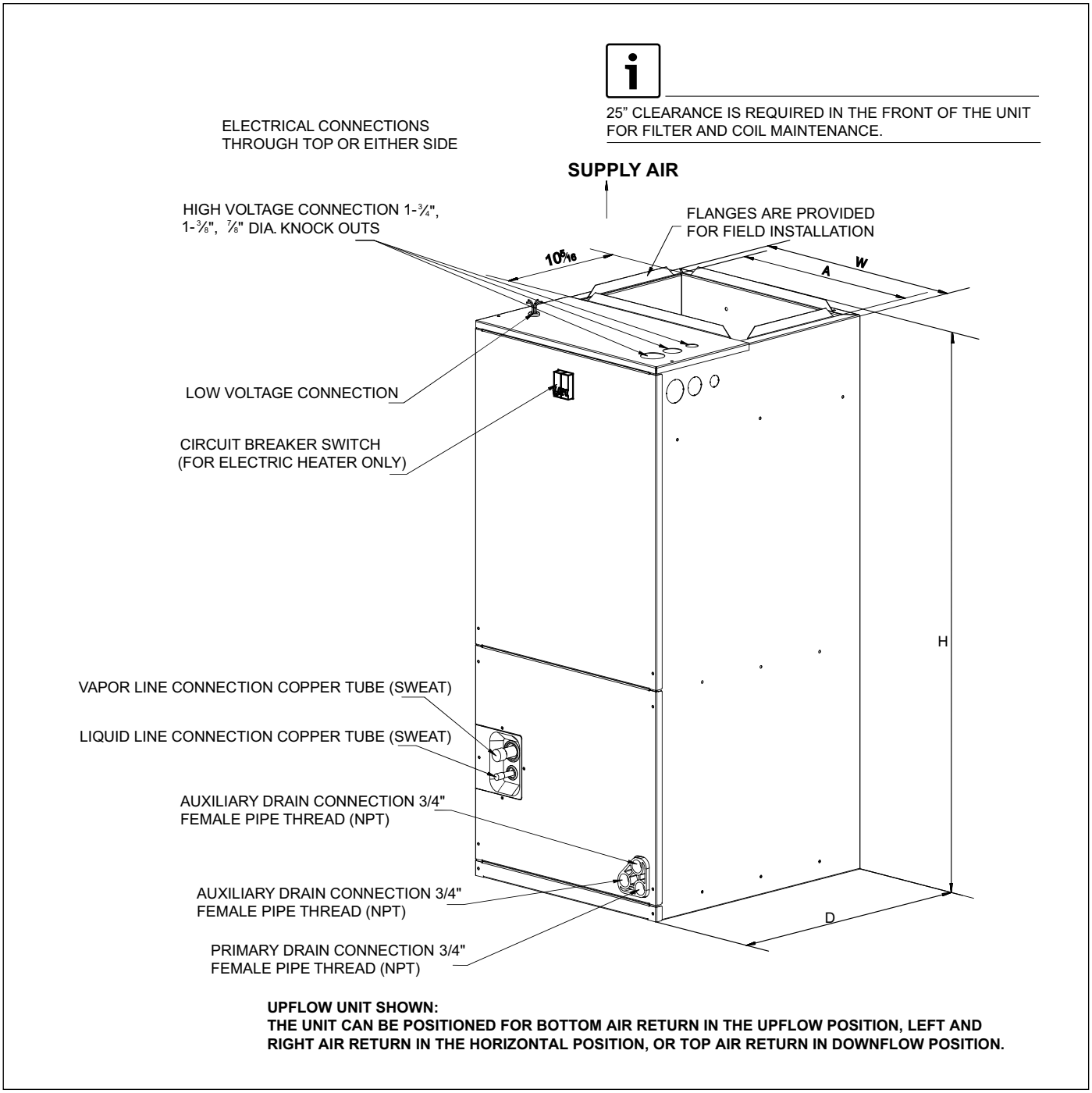


Figure 2

Model Size	Dimensions Inch [mm]				
	Unit Height "H"	Unit Width "W"	Unit Length "D"	Supply Duct "A"	Liquid Line / Vapor Line
48	54-1/2 [1385]	22 [560]	24 [610]	19-1/2 [496]	3/8 / 7/8 [9.5]/[22]
60	54-1/2 [1385]	22 [560]	24 [610]	19-1/2 [496]	3/8 / 7/8 [9.5]/[22]

Table 2

5 Airflow Performance

Airflow performance data is based on cooling performance with a coil and no filter in place. Check the performance table for appropriate unit size selection. External static pressure should stay within the minimum and maximum limits

Air Handler Model Size	Motor Speed		SCFM										
			External Static Pressure-Inches W.C.										
			0	0.1	0.2	0.3	0.4	0.5	0.58	0.6	0.7	0.8	0.9
48	Tap 1	Power (W)	211	220	230	239	247	257	268	269	279	289	298
		CFM	1424	1373	1326	1269	1221	1157	1088	1075	1010	951	893
	Tap 2	Power (W)	295	307	316	325	334	342	350	352	364	380	391
		CFM	1605	1556	1512	1468	1422	1380	1337	1325	1272	1195	1141
	Tap 3	Power (W)	400	413	423	434	442	453	461	463	472	485	497
		CFM	1789	1748	1707	1665	1622	1578	1542	1534	1493	1447	1387
	Tap 4	Power (W)	510	522	534	545	558	569	577	578	589	599	614
		CFM	1953	1923	1881	1843	1791	1742	1717	1717	1675	1643	1604
	Tap 5	Power (W)	624	638	653	665	677	690	700	701	711	711	709
		CFM	2137	2096	2044	2013	1967	1918	1885	1875	1825	1783	1729
60	Tap 1	Power (W)	206	215	224	232	240	250	264	266	275	284	294
		CFM	1419	1365	1311	1262	1213	1156	1060	1043	975	913	860
	Tap 2	Power (W)	285	297	307	317	326	335	342	345	363	376	388
		CFM	1603	1554	1510	1463	1419	1374	1343	1327	1233	1154	1095
	Tap 3	Power (W)	390	400	411	421	432	443	450	452	462	474	495
		CFM	1788	1746	1705	1664	1619	1577	1544	1534	1493	1444	1343
	Tap 4	Power (W)	493	507	532	532	545	555	565	568	579	588	600
		CFM	1951	1911	1834	1833	1795	1761	1728	1719	1678	1649	1604
	Tap 5	Power (W)	619	629	640	653	666	677	687	689	699	708	706
		CFM	2087	2055	2023	1982	1941	1909	1879	1873	1837	1807	1755

Table 3

Bold outlined areas represent airflow outside of the required 300-450 cfm/ton range.

NOTES:

1. *The high stage airflow must be used as the rated airflow for the full load operation of machine.*
2. *The rated airflow of systems without electric heater kits requires between 300 and 450 cubic feet of air per minute (CFM).*
3. *The rated airflow of systems with electric heater kits requires between 350 and 450 cubic feet of air per minute (CFM).*
4. *The air distribution system has the greatest effect on airflow. Therefore, the contractor should use only industry-recognized procedures.*
5. *Duct design and construction should be carefully done. System performance can be lowered dramatically through poor design or workmanship.*
6. *Air supplier ducts should be located along the perimeter of the conditioned space and properly sized. Improper location or insufficient air flow may cause drafts or noise in the ductwork.*
7. *Installers should balance the air distribution system to ensure proper quiet airflow to all rooms in the home. An air velocity meter or airflow hood can be used to balance and verify branch and system airflow (CFM).*

6 Heater Kit Data

Heat Kit Model	Air Handler Model	Heat Kit Power (kW)	Min. Circuit Ampacity		Max. Fuse or Breaker (HACR) Ampacity		Fan speed				
			240V	208V	240V	208V	1	2	3	4	5
EHK-05B	48	5	32.8	29.5	35	30	●	●	●	●	●
EHK-08B		7.5	46.9	41.7	50	45	●	●	●	●	●
EHK-10B		10	57.8	51.1	60	60	●	●	●	●	●
EHK-15B		15	57.8/25*	51.1/21.7*	60/30*	60/30*	X	X	●	●	●
EHK-15I		15	89.5**	75.5**	90**	80**	X	X	●	●	●
EHK-20B		20	57.8/50*	51.1/43.3*	60/50*	60/45*	X	X	X	●	●
EHK-20I		20	112**	98.1**	125**	100**	X	X	X	●	●
EHK-05B	60	5	32.8	29.5	35	30	X	X	●	●	●
EHK-08B		7.5	46.9	41.7	50	45	X	X	●	●	●
EHK-10B		10	57.8	51.1	60	60	X	X	●	●	●
EHK-15B		15	57.8/25*	51.1/21.7*	60/30*	60/30*	X	X	●	●	●
EHK-15I		15	89.5**	75.5**	90**	80**	X	X	●	●	●
EHK-20B		20	57.8/50*	51.1/43.3*	60/50*	60/45*	X	X	X	●	●
EHK-20I		20	112**	98.1**	125**	100**	X	X	X	●	●

Table 4 Suitable heat kits for AHU multi position installation

** only applies to 2 stage (15/20kW) EHK*
*** only applies to 3 stage (15/20kW) EHK*

- Heat kit suitable for AHU 4-way position installation.
- Ampacities for MCA and Fuse/breaker including the blower motor
- Heat pump systems require a specified airflow. Each ton of cooling requires between 350 and 450 cubic feet of air per minute (CFM), or 400 CFM nominally.

Heater Kit Accessories

Model	Stage	Description	48	60
EHK-05B	1	5 kW Heat Kit, Double Pole Breaker	●	●
EHK-08B	1	7.5 kW Heat Kit, Double Pole Breaker	●	●
EHK-10B	1	10 kW Heat Kit, Double Pole Breaker	●	●
EHK-15B	2	15 kW Heat Kit, Double Pole Breaker	●	●
EHK-15I	3	15 kW Heat Kit, Double Pole Breaker	●	●
EHK-20B	2	20 kW Heat Kit, Double Pole Breaker	●	●
EHK-20I	3	20 kW Heat Kit, Double Pole Breaker	●	●

Table 5

[● means available, X means not available]

Online Help Resources

Alternatively, please visit our Service & Support webpage to find FAQs, videos, service bulletins, and more; www.boschheatingcooling.com/service or use your cellphone to scan the code below.

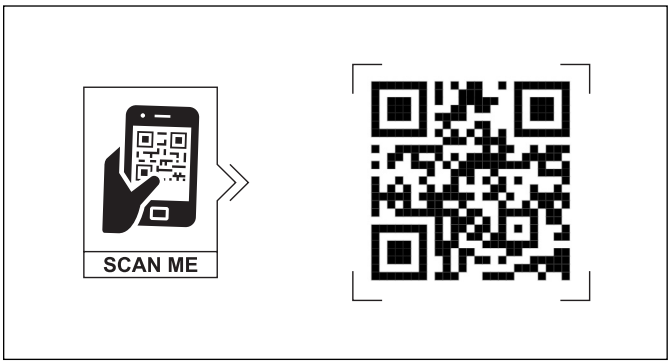


Figure 3

NOTES:

United States and Canada
Bosch Thermotechnology Corp.
65 Grove St.
Watertown, MA 02472

Tel: 800-283-3787
www.bosch-homecomfort.us

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