IDS Family Quick Start Guide





IDS Light
15 SEER System



IDS Plus
18 SEER System



IDS *Premium* 20 SEER System



IDS Premium Connected
20 SEER System

Bosch IDS Family of Inverter Heat Pumps

The robust Bosch Inverter Ducted Split Air Source Heat Pump system utilizes just the right amount of energy to achieve ultimate comfort at maximum efficiency while keeping sound levels to a minimum.

Designed for easy installation & start-up | Support & spare parts readily available | Easy to maintain & service





Bosch Inverter Ducted Split Family



The Bosch Inverter Ducted Split Family provides supremely-efficient comfort by adjusting compressor capacity rather than a simple on/off control like other units, thereby reducing operating costs and saving you money. With enhanced humidity control and higher efficiency, the performance of the Bosch IDS Family provides you with maximum comfort with minimal energy usage! Our system's intelligent features work in tandem with your thermostat to automatically adjust to your preferences, while integrated sound dampening features keep the equipment quiet for your peace of mind.



- ➤ The first 15-SEER Inverter condenser on the market.
- With IDS Light, you get the comfort of our inverter system at a price point you'll love!
- This system combines the standard efficiency BOVA15 outdoor unit with our BVA15 fixed-speed air handler.



- Our most popular system, the IDS Plus, provides the perfect balance of efficiency and comfort, without breaking the bank.
- ➤ This system combines the efficient and reliable BOVB18 outdoor unit with our exceptional BVA20 two stage constant torque ECM style air handler.



- Qualify for maximum energy rebates and save the most on energy costs with our highest efficiency offering: IDS Premium.⁶
- This system combines our top tier BOVA20 outdoor unit with our exceptional BVA20 two stage constant torque ECM style air handler.



- Provides the same premium 20-plus SEER energy efficiency.
- Features wireless connectivity.
- ➤ The Bosch EasyAir app enables in-app product registration, simplifies installation and troubleshooting, and allows remote monitoring of energy usage as well as critical alerts.
- 1 \lozenge Visit boschheatingandcooling.com to find the available efficiency rebates in your area. \S Please go to boschheatingandcooling.com for full limited warranty details *Product sold separately (1) The connectivity features are only available in the U.S. (2) These features are offered for 2 years. Afterwards, certain fees may apply.

Choose the System That's Right For You

Quality engineering, quiet performance and an unbeatable warranty from Bosch delivers exceptional home comfort. Whether heating or cooling, our reliable inverter heat pumps keep homeowners comfortable by providing precise indoor temperature and humidity control. These high-efficiency, robust and quiet Inverter Ducted Split system heat pumps are available in four sizes ranging from 2 to 5 ton capacity to suit your needs. This system boasts a inverter drive which adjusts the speed of the compressor to optimize comfort, while keeping sound levels to a minimum and utilizing the right amount of energy to achieve maximum comfort.



IDS Light BOVA15 + BVA15 15 SEER System

- The first 15-SEER Inverter condenser solution on the market. With IDS Light, you get the comfort of our inverter system at a price point you'll love!
- ▶ This system combines the robust design & efficiency BOVA15 outdoor unit with our BVA15 fixed-speed air handler

IDS LIGHT BOVA15 + BVA15 AHRI 210/240 PERFORMANCE DATA									
OUTDOOR UNIT INDOOR AIR HANDLER		COOLIN	IG CAPACITY	(BTU/H)	HEATIN	0514			
MODEL	MODEL	TOTAL	EER ⁽³⁾	SEER(4)	HI	HSPF ⁽⁵⁾	LOW	CFM	
BOVA-24HDN1-M15G	BVA-24WN1-M15	24000	11.2	15.5	24000	9.0	20000	830	
BOVA-36HDN1-M15G	BVA-24WN1-M15	24000	11.8	16.0	24000	9.0	20500	830	
BOVA-36HDN1-M15G	BVA-36WN1-M15	34200	10.4	15.0	35000	9.0	25000	1220	
BOVA-60HDN1-M15G	BVA-48WN1-M15	46500	11.2	15.0	48000	9.0	38000	1530	
BOVA-60HDN1-M15G	BVA-60WN1-M15	50000	10.2	15.0	56000	9.0	40500	1810	



IDS Plus BOVB18 + BVA20 18 SEER System

- The IDS Plus provides the perfect balance of efficiency and comfort, without breaking the bank.
- This system combines the BOVB18 outdoor unit with our exceptional BVA20 two stage constant torque ECM style air handler.

IDS PLUS BOVB18 + BVA20 AHRI 210/240 PERFORMANCE DATA									
OUTDOOR UNIT	OUTDOOR UNIT INDOOR AIR HANDLER		COOLING CAPACITY (BTU/H)			HEATING CAPACITY (BTU/H)			
MODEL	MODEL	TOTAL	EER ⁽³⁾	SEER ⁽⁴⁾	HI	HSPF ⁽⁵⁾	LOW	- CFM	
BOVB-36HDN1-M18M	BVA-24WN1-M20	24000	13	18.5	24000	9.5	21600	860/680	
BOVB-36HDN1-M18M	BVA-36WN1-M20	34200	10.8	17.5	34200	9	25000	1150/820	
BOVB-60HDN1-M18M	BVA-36WN1-M20	35200	12.5	18.5	35200	10.5	24000	1150/820	
BOVB-60HDN1-M18M	BVA-48WN1-M20	47000	12.5	18.5	46500	9.5	38000	1530/1150	
BOVB-60HDN1-M18M	BVA-60WN1-M20	56000	10.8	17.5	55000	9.5	40500	1750/1350	



IDS Premium / Premium Connected BOV*20 + BVA20 20 SEER System

- Qualify for maximum energy rebates and save the most on energy costs with our highest efficiency: IDS Premium.
- This system combines our top tier BOV*20 outdoor unit with our exceptional BVA20 two stage constant torque ECM style air handler.

	IDS PREMIUM BOV*20 + BVA20 AHRI 210/240 PERFORMANCE DATA									
OUTDOOR UNIT	INDOOR AIR HANDLER	COOLING CAPACITY (BTU/H)			HEATIN	OFM				
MODEL	MODEL	TOTAL	EER ⁽³⁾	SEER ⁽⁴⁾	HI	HSPF ⁽⁵⁾	LOW	CFM		
BOV*-36HDN1-M20G	BVA-24WN1-M20	24000	14	20.5	24000	10.5	23000	860/680		
BOV*-36HDN1-M20G	BVA-36WN1-M20	34600	12.5	20	34200	10.5	28000	1150/820		
BOV*-60HDN1-M20G	BVA-48WN1-M20	47500	13.5	20	48000	10.5	40000	1530/1150		
BOV*-60HDN1-M20G	BVA-60WN1-M20	54500	12.5	19	56000	10.5	44000	1750/1350		



Bosch Has Developed and Built The Perfect HVAC System For Your Home

Bosch IDS systems utilize just the right amount of energy to achieve ultimate comfort year after year, all while keeping sound levels to a minimum. Choose the Bosch IDS system that is right for you and enjoy our peace of mind 10 Year Bosch warranty!§

Bosch IDS Family

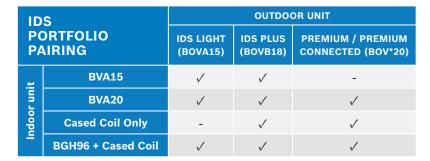
- ▶ IDS Light up to 16.0 SEER | 9 HSPF
- ▶ IDS Plus up to 18.5 SEER | 9.5 HSPF
- ▶ IDS Premium up to 20.5 SEER | 10.5 HSPF
- ▶ IDS Premium Connected up to 20.5 SEER | 10.5 HSPF
- ► Fully-modulating inverter drive
- ► Sound levels as low as 56 dBA⁽¹⁾
- ▶ 8 Air handlers 2, 3, 4, 5 Ton
- ▶ 9 Condensing units 2, 3, 5 Ton
- ▶ Compatible with most 24 VAC thermostats
- Bosch engineering & quality
- Designed and tested to Bosch standards
- ▶ 10-year residential limited warranty§

Installer Friendly

- Designed for easy installation
- ► Intuitive controls
- ► Support readily available
- > Spare parts readily available
- Easy to maintain and service
- On-board diagnostics
- In-app guides to assist installation(3)

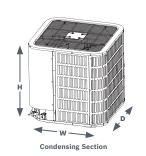
IDS Portfolio Pairing

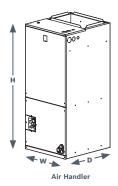
Refer to this chart below for full portfolio combination availability. In addition to the IDS Light, Plus, and Premium, we also offer other matches to maximize system flexibility.



(1) 56 dBA sound level is based on outdoor unit. § Please go to boschheatingandcooling.com for full limited warranty details (3) only available with IDS Premium Connected

System & Technical Information





		BOSCH IDS FAMILY DESC	RIPTION & DIMENSIONS						
MODEL NUMBER	DESCRIPTION	PART NUMBER	WIDTH (W)	HEIGHT (H)	DEPTH (D)				
		BOVA15 OUTDOOR (CONDENSING SECTION						
BOVA-24HDN1-M15G	24 kBTU/hr (2 ton)	8733956368	28	24.9375	28				
NEW BOVA-36HDN1-M15G	36 kBTU/hr (3 ton)	8733955693	28	24.9375	28				
BOVA-60HDN1-M15G	60 kBTU/hr (5 ton)	8733955694	29.125	33.1875	29.125				
		BOVB18 OUTDOOR (CONDENSING SECTION						
BOVB-36HDN1-M18M	36 kBTU/hr (3 ton)	8733955036	29.125	24.9375	29.125				
BOVB-60HDN1-M18M	60 kBTU/hr (5 ton)	8733955037	29.125	33.1875	29.125				
BOVA20 OUTDOOR CONDENSING SECTION									
BOVA-36HDN1-M20G	36 kBTU/hr (3 ton)	8733952437	29.125	24.9375	29.125				
BOVA-60HDN1-M20G	60 kBTU/hr (5 ton)	8733952438	29.125	33.1875	29.125				
	BOVB20 OUTDOOR CONDENSING SECTION								
NEW BOVB-36HDN1-M20G	36 kBTU/hr (3 ton)	8733955689	29.125	24.9375	29.125				
NEW BOVB-60HDN1-M20G	60 kBTU/hr (5 ton)	8733955690	29.125	33.1875	29.125				
		BVA15 INDOO	R AIR HANDLER						
BVA-24WN1-M15	24 kBTU/hr (2 ton)	8733955038	19.625	46.5	21.625				
BVA-36WN1-M15	36 kBTU/hr (3 ton)	8733955039	19.625	46.5	21.625				
BVA-48WN1-M15	48 kBTU/hr (4 ton)	8733955040	22.0	54.5	24.0				
BVA-60WN1-M15	60 kBTU/hr (5 ton)	8733955041	22.0	54.5	24.0				
		BVA20 INDOO	R AIR HANDLER						
BVA-24WN1-M20	24 kBTU/hr (2 ton)	8733952439	19.625	46.5	21.625				
BVA-36WN1-M20	36 kBTU/hr (3 ton)	8733952440	19.625	46.5	21.625				
BVA-48WN1-M20	48 kBTU/hr (4 ton)	8733952441	22.0	54.5	24.0				
BVA-60WN1-M20	60 kBTU/hr (5 ton)	8733952442	22.0	54.5	24.0				

	IDS FAMILY FIELD INSTALLED ELECTRIC HEAT KITS	5
MODEL NUMBER	PART NUMBER	DESCRIPTION
EHK-05B	7739832075	5 kW Electric Strip Heater
EHK-08B	7739832076	7.5 kW Electric Strip Heater
EHK-10B	7739832077	10 kW Electric Strip Heater
EHK-15B	7739832078	15 kW Electric Strip Heater
EHK-20B	7739832079	20 kW Electric Strip Heater



The Complete & Highly Efficient Dual Fuel Heating and Cooling System For Your Home

The ideal solution to maximize comfort & efficiency



A BOVA15, BOVB18, or BOV*20 Outdoor Unit*

The robust Bosch Inverter Ducted Split Air Source Heat Pump system utilizes just the right amount of energy to achieve ultimate comfort and maximum efficiency while keeping sound levels to a minimum. Choose between the BOVA15, BOVB18, or BOV*20 for maximum efficiency.



Bosch BGH96 96% Furnace*

The BGH96 Gas Furnace offers up to 96% efficiency, a two-stage gas valve, and a multi-speed blower. This ENERGY STAR rated furnace offers premium comfort and energy savings, it is the perfect solution to efficiently heat your home.



B Bosch BMAC Cased Coil*

The Inverter Ducted Split Cased Coil, when paired with a Bosch Furnace and IDS outdoor condensing section, delivers some of the best comfort levels and efficiency on the market today. Bosch offers a complete range of cased coils to fit your needs.



Bosch BCC100 Wi-fi Thermostat*

The BCC100 is a sleek, internet-connected thermostat that offers easy all-in-one control for your heating and cooling systems. It can be controlled using the Bosch Connected Control app and is compatible with most 24VAC HVAC equipment on the market.

Bosch IDS Dual Fuel Options

Bosch offers a complete dual fuel heating and cooling system for your home. Dual fuel systems are the ideal solution to maximize comfort and efficiency. In the summer, the Bosch IDS efficiently cools and dehumidifies your home. In the shoulder seasons, the IDS system will provide the exact amount of heating or cooling that your home requires -- no more, no less. In the colder months, the system senses when it is more economical for the heat pump to shut off and the Bosch BGH96 gas furnace to take over. Installing a Bosch matched dual fuel system is the best choice to optimize both savings and comfort.

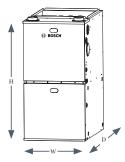
With 96% AFUE heating efficiency, the Bosch BGH96 Furnace is the perfect solution to efficiently heat your home. The multipoise design makes it even easier to replace your existing equipment or install in your new house. You can also integrate the Bosch BGH96 Furnace with Bosch's IDS Outdoor Units and Cased Coils for a complete and highly efficient heating and cooling system. Between ease of installation, integration and troubleshooting, this Bosch Furnace offers convenience and peace of mind.

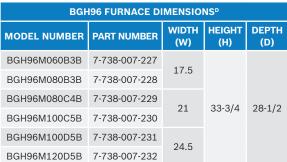


	BOVA15	OUTDOOR UNIT + BN	MAC CASED COIL + B	GH96 FUR	NACE AHRI	210/240 PE	RFORMAN	CE DATA		
SYSTEM	OUTDOOR UNIT	CASED COIL	PAIRING	COOLING	G CAPACITY	(BTU/H)	HEATING	СЕМ		
TONNAGE	MODEL	MODEL	FURNACES	TOTAL	EER ⁽³⁾	SEER ⁽⁴⁾	HI	HSPF ⁽⁵⁾	LOW	CFIVI
	BOVA-24HDN1-M15G	BMAC2430ANTD	BGH96M060B3B	23600	11.5	16.5	24000	9	17600	720/630
2	BOVA-24HDN1-M15G	BMAC2430ANTD	BGH96M080B3B	23600	11.5	16.5	24000	9	17600	700/610
2	BOVA-24HDN1-M15G	BMAC2430BNTD	BGH96M060B3B	24000	11.5	16.5	24000	9	17600	720/630
	BOVA-24HDN1-M15G	BMAC2430BNTD	BGH96M080B3B	24000	11.5	16.5	24000	9	17600	700/610
	BOVA-36HDN1-M15G	BMAC3036ANTD	BGH96M060B3B	33000	10	16.5	34200	8.8	23000	1000/750
	BOVA-36HDN1-M15G	BMAC3036ANTD	BGH96M080B3B	33000	10	16.5	34200	8.8	23000	1000/750
3	BOVA-36HDN1-M15G	BMAC3036BNTD	BGH96M060B3B	33600	10	16.5	34200	8.8	23000	1050/770
3	BOVA-36HDN1-M15G	BMAC3036BNTD	BGH96M080B3B	33600	10	16.5	34200	8.8	23000	1050/770
	BOVA-36HDN1-M15G	BMAC3036CNTD	BGH96M080C4B	33600	10	16.5	34200	8.8	23000	1030/750
	BOVA-36HDN1-M15G	BMAC3036CNTD	BGH96M100C5B	34000	10	16.5	34200	8.8	23000	1150/750
	BOVA-60HDN1-M15G	BMAC4248BNTF	BGH96M080B3B	43000	10	16.5	45000	8.8	31000	1250/1050
	BOVA-60HDN1-M15G	BMAC4248CNTF	BGH96M080C4B	43000	10.5	16.5	45000	8.8	31000	1250/1050
4	BOVA-60HDN1-M15G	BMAC4248CNTF	BGH96M100C5B	45000	10.5	16.5	46500	8.8	32000	1470/1200
	BOVA-60HDN1-M15G	BMAC4248DNTF	BGH96M100D5B	45500	10.5	16.5	47000	8.8	32000	1500/1200
	BOVA-60HDN1-M15G	BMAC4248DNTF	BGH96M120D5B	45500	10.5	16.5	47000	8.8	32000	1500/1200
	BOVA-60HDN1-M15G	BMAC4860CNTF	BGH96M100C5B	53000	9.5	16	53500	9	38000	1660/1150
5	BOVA-60HDN1-M15G	BMAC4860DNTF	BGH96M100D5B	53500	10	16.5	54000	9	38000	1700/1200
	BOVA-60HDN1-M15G	BMAC4860DNTF	BGH96M120D5B	53500	10	16.5	54000	9	38000	1700/1200

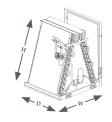
17200 17200	CFM
17200 17200	
17200	
	820/630
	800/580
17200	860/680
17200	840/630
22600	1050/800
22600	1020/800
23000	1100/850
23000	1070/850
23000	1050/820
23000	1150/750
31000	1250/1050
31000	1250/1050
31400	1450/1150
32000	1500/1200
32000	1500/1200
37000	1450/1150
38000	1500/1200
38000	1500/1200
18000	
	820/630
18000	820/630 800/580
18000 19000	
	800/580
19000	800/580
19000 19000	800/580 860/680 840/630
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19000 19000 25000 25000 25000	800/580 860/680 840/630 1050/800 1020/800 1100/850
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19000 19000 25000 25000 25000 25000 25000 26000 26000 34000	800/580 860/680 840/630 1050/800 1020/800 1100/850 1070/850 1050/820 1150/750 1000/850 1100/800 1250/1050
19000 19000 25000 25000 25000 25000 25000 25000 26000 26000 34000 35000	800/580 860/680 840/630 1050/800 1020/800 1100/850 1070/850 1050/820 1150/750 1000/850 1100/800 1250/1050
19000 19000 25000 25000 25000 25000 25000 25000 26000 34000 35000	800/580 860/680 840/630 1050/800 1020/800 1100/850 1070/850 1050/820 1150/750 1000/850 1100/800 1250/1050 1450/1150
19000 19000 25000 25000 25000 25000 25000 25000 26000 34000 35000 35000	800/580 860/680 840/630 1050/800 1020/800 1100/850 1070/850 1050/820 1150/750 1000/850 1250/1050 1250/1050 1450/1150
19000 19000 25000 25000 25000 25000 25000 25000 26000 34000 35000 35000 35000	800/580 860/680 840/630 1050/800 1020/800 1100/850 1070/850 1050/820 1150/750 1000/850 1100/800 1250/1050 1250/1050 1450/1150 1500/1200
	23000 23000 23000 31000 31000 31400 32000 37000 38000 38000

System & Technical Information









BMAC CASED COI		CASED		UNCASED			
MODEL NUMBER	PART NUMBER	WIDTH (W)	HEIGHT (H)	DEPTH (D)	WIDTH (W)	HEIGHT (H)	DEPTH (D)
BMAC2430ANTD	8733947947	14.5	20.0	21.0	13.375	15.625	20.5
BMAC2430BNTD	8733947948	17.5	20.0	21.0	16.375	15.375	20.5
BMAC3036ANTD	8733947950	14.5	20.0	21.0	13.375	15.625	20.5
BMAC3036BNTD	8733947951	17.5	20.0	21.0	16.375	15.375	20.5
BMAC3036CNTD	8733947952	21.0	20.0	21.0	19.875	15.25	20.5
BMAC4248BNTF	8733947953	17.5	30.0	21.0	16.375	26.88	21.0
BMAC4248CNTF	8733947954	21.0	30.0	21.0	19.875	26.8	21.0
BMAC4248DNTF	8733947955	24.5	30.0	21.0	23.625	26.6	21.0
BMAC4860CNTF	8733947956	21.0	30.0	21.0	19.875	27.0	21.0
BMAC4860DNTF	8733947957	24.5	30.0	21.0	23.625	26.8	21.0

*Uncased Coil Dimensions are shown for reference should the casing be removed in the field.

	CASED COIL	COOLING CAPACITY (BTU/H)			HEATING CAPACITY (BTU/H)			
OUTDOOR UNIT MODEL	MODEL	TOTAL	EER ⁽³⁾	SEER(4)	HI	HSPF ⁽⁵⁾	LOW	CFM
BOVB-36HDN1-M18M	BMAC2430ANTD	23400	11.5	15	24000	9	17200	700
BOVB-36HDN1-M18M	BMAC2430BNTD	23400	11.5	15	24000	9	17200	700
BOVB-36HDN1-M18M	BMAC3036ANTD	32000	10	14.5	35000	9	22000	900
BOVB-36HDN1-M18M	BMAC3036BNTD	32400	10	14.5	35000	9	23000	1000
BOVB-36HDN1-M18M	BMAC3036CNTD	32400	10	14.5	35000	9	23000	1000
BOVB-36HDN1-M18M	BMAC4248BNTF	32400	10	15	35000	9	23000	1000
BOVB-36HDN1-M18M	BMAC4248CNTF	32400	10	15	35000	9	23000	1000
BOVB-60HDN1-M18M	BMAC4248BNTF	44500	11	16	45500	9.5	31000	1150
BOVB-60HDN1-M18M	BMAC4248CNTF	46000	11	16	47000	9.5	32000	1300
BOVB-60HDN1-M18M	BMAC4248DNTF	46000	11	16	48000	9.5	32000	1400
BOVB-60HDN1-M18M	BMAC4860CNTF	54000	10.5	16	55500	9.5	32000	1300
BOVB-60HDN1-M18M	BMAC4860DNTF	55000	10.5	16	56000	9.5	39000	1500
	BOV*20 OUTDOO	R UNIT + BMAC	CASED COIL C	NLY AHRI 210/2	40 PERFORMA	NCE DATA		
BOV*-36HDN1-M20G	BMAC2430ANTD	23400	11.8	16	23400	9.5	18000	750
BOV*-36HDN1-M20G	BMAC2430BNTD	23600	11.8	16	23800	9.5	18000	800
BOV*-36HDN1-M20G	BMAC3036ANTD	32000	10.8	16	33600	9.5	22000	900
BOV*-36HDN1-M20G	BMAC3036BNTD	32400	11.2	16	33800	9.5	23000	1000
BOV*-36HDN1-M20G	BMAC3036CNTD	32600	11.4	16	34000	9.5	23000	1050
BOV*-36HDN1-M20G	BMAC4248BNTF	33000	11.2	16	33800	9.5	24000	1000
BOV*-36HDN1-M20G	BMAC4248CNTF	33200	11.2	16	34200	9.5	24000	1050
BOV*-36HDN1-M20G	BMAC4248DNTF	33400	11.2	16	34200	9.5	24000	1100
BOV*-60HDN1-M20G	BMAC4248BNTF	43000	11.2	16	45500	9.5	31400	1200
BOV*-60HDN1-M20G	BMAC4248CNTF	44000	11.8	16	46500	9.5	32000	1350
BOV*-60HDN1-M20G	BMAC4248DNTF	45000	11.8	16	47500	9.5	32000	1450
BOV*-60HDN1-M20G	BMAC4860CNTF	55000	10.5	16	55500	9.5	38000	1350
BOV*-60HDN1-M20G	BMAC4860DNTF	56000	10.5	16	56000	9.5	39000	1500

⁽³⁾ Energy Efficiency Ratio; Certified per AHRI 210/240. (4) Seasonal Energy Efficiency Ratio; Certified per AHRI 210/240. (5) HSPF = Heating Seasonal Performance Factor; Certified per AHRI 210/240. (D)Dimensions in inches

Line Sets and Charging

The Bosch BOVA15, BOVB18, OR BOV*20 condensers come factory precharged (410a) for 15' of standard size line set. For the BOV*20, up to 150' of line set is allowed with a maximum of 25' lift (refer to Figure 2.1). For the BOVA15 and BOVB18, up to 100' of line set is allowed with a maximum of 50' lift (refer to figure 2.2). Any Application with line set length of more than 15' would require an additional 0.6 oz/ft for each additional foot of line set (refer to Figure 2.2), this can be done by one of two methods: (1) Charge by Weight, (2) Charge by Subcooling.



Figure 2.1

System	Liquid	Suction	ВО	V*20 To	tal Equi	valent L	.ength-F	eet	BOVA15 &	BOVA18 Tota	l Equivalent L	ength-Feet
Capacity	Line	Line	25	50	75	100	125	150	25	50	75	100
Model	Inc	ch O.D.	D. Maximum Vertical Separation - Feet				Maximum Vertical Separation - Feet					
2 Top	3/8 *	3/4 Std.	25	50	45	40	30	25	25	50	45	40
2 Ton	3/0	5/8 Opt.	25	50	45	40	30	25	25	50	45	40
2 Tan	3/8*	3/4 Std.	25	50	50	50	35	25	25	50	50	50
3 Ton	3/8	5/8 Opt.	25	50	50	50	35	25	25	50	50	50
4 Top	3/8*	7/8 Std.	25	50	50	40	30	25	25	50	50	40
4 Ton	3/8	3/4 Opt.	25	50	50	40	30	25	25	50	50	40
		7/8 Std.	25	50	50	40	30	25	25	50	50	40
5 Ton	3/8*	3/4 Opt.	25	50	50	40	30	25	25	50	50	40
		1 1/8 Opt.	25	40	N/A	N/A	N/A	N/A	25	40	N/A	N/A

Figure 2.2

1.	Total Line Length (ft)	=(a)
2.	Standard Lineset (ft)	= <u>15</u> (b)
3.	(a) minus (b)	=(c)
4.	Refrigerant Multiplier	= <u>0.6 oz/ft</u> (d)
5.	Refrigerant Adder (c*d)	=(e)*

^{*}If lineset is less than 15 ft, (e) = 0

(1) Charge by Weight

Can be used at any time and is the recommended way to charge an IDS system (especially for initial installs). This method can be used when power is not available to the equipment site or when operating conditions are not in range to verify the charge based on subcooling. It is recommend to verify charge and adjust as necessary by subcooling. (Refer to Figure 2.4 for subcooling and superheat requirements.)

(2) Charge Based on Subcooling (AC Mode)

Outside temperature must be between 55° and 120°F and indoor temperature must be between 70° and 80°F to charge by subcooling. After starting the system in cooling mode, short press "FORCE" button (see Figure 2.3), "\(\begin{align*}'\)" symbol Appears, and operate the system for a minimum of 20 minutes. (Refer to Figure 2.4 for subcooling and superheat requirements.)

Figure 2.3

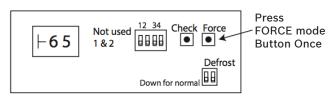


Figure 2.4

		Design Subcoolin	g
Model	Subcooling/°F	Superheat/°F	Note
241/261	10±2	10-18	Specification applicable for indoor units with adjustable or non-adjustable TXV
24K/36K	8±2	7-10	Specification applicable for indoor units with non-adjustable TXV
	8±2	9-18	Specification applicable for indoor units with adjustable or non-adjustable TXV
48K	6±2	7-9	Specification applicable for indoor units with non-adjustable TXV
60K	8±2	8-18	Specification applicable for indoor units with adjustable or non-adjustable TXV
OUK	6±2	6-8	Specification applicable for indoor units with non-adjustable TXV

	Design Subcooling	
Model	Subcooling/°F	Superheat/°F
2 Ton	6-12	6-18
3 Ton	8 - 15	6-18
4 Ton & 5 Ton	6-12	6-18

^{*}Standard line size is recommended, N/A: Application not recommended

Figure 2.4 (Continued)

Liquid				Final Subo	ooling (°F)			
Temp	6	7	8	9	10	11	12	13
(°F)			Liqu	id Gauge	Pressure (PSI)		
55	173	176	179	182	185	188	191	195
60	188	191	195	198	201	204	208	211
65	204	208	211	215	218	221	225	229
70	221	225	229	232	236	239	243	247
75	239	243	247	251	255	259	262	266
80	259	262	266	270	275	279	283	287
85	279	283	287	291	295	300	304	309
90	300	304	309	313	318	322	327	331
95	322	327	331	336	341	346	351	355
100	346	351	355	360	365	370	376	381
105	370	376	381	386	391	397	402	407
110	397	402	407	413	418	424	430	435
115	424	430	435	441	447	453	459	465
120	453	459	465	471	477	483	489	496
125	483	489	469	502	508	515	521	528

Suction	Final Superheat (°F)								
Temp	6	8	10	12	14	16	18	20	22
(°F)				Sucti	on Gauge	Pressure	(PSI)		
40	105	101	97	93	89	86	82	78	75
42	109	105	101	97	93	89	86	82	78
44	114	109	105	101	97	93	89	86	82
46	118	114	109	105	101	97	93	89	86
48	123	118	114	109	105	101	97	93	89
50	128	123	118	114	109	105	101	97	93
52	133	128	123	118	114	109	105	101	97
54	138	133	128	123	118	114	109	105	101
56	143	138	133	128	123	118	114	109	105
58	148	143	138	133	128	123	118	114	109
60	153	148	143	138	133	128	123	118	114
62	159	153	148	143	138	133	128	123	118
64	164	159	153	148	143	138	133	128	123
66	170	164	159	153	148	143	138	133	128
68	176	170	164	159	153	148	143	138	133
70	182	176	170	164	159	153	148	143	138
72	188	182	176	170	164	159	153	148	143

Control Board & Dip Switch Adjustments

In most scenarios, it is recommended to keep all outdoor unit board dip switch positions in their manufacturer default positions. There are some specific scenarios when it makes sense to change dip switch settings.



Dip Switch SW4

SW4-1 and SW4-2 are not used and should remain in the factory default position at all times. SW4-3 and SW4-4 give you coil temperature and modulation control.

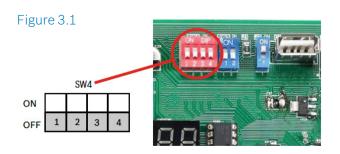


Figure 3.2

Switch	Description			
SW4-1	ON	Unused		
3W4-1	OFF*	Must be set at "OFF" position		
SW4-2	ON	Unused		
	OFF*	Must be set at "OFF" position		
SW4-3	ON	Adaptive capacity output disabled		
	OFF*	Adaptive capacity output enabled		
SW4-4	ON	Accelerated cooling/heating		
	OFF*	Normally cooling/heating		

SW4-3 Function

Default is OFF position (enabled), allows for coil/condenser target temperature to drift +/- 4°F based on previous hour of operation in an attempt to optimize run time. If dip switch is changed to ON, software requires a "hard" target for coil temperature and does not drift to optimize runtime. **Reason to change from default:** In zoning Applications but only as needed as a result of customer expectations and/or performance.

SW4-4 Function

Default is OFF position, system uses the default target coil temperatures. If dip switch is changed to ON, reduces target coil temperature by 4°F in cooling and increases target coil temperature by 4°F in heating. **Reason to change from default:** Recommended to be used only as-needed as a result of customer expectations and/or performance (i.e. not getting enough capacity, or not dehumidifying well enough).

Dip Switch SW5

Demand Defrost Adjustments

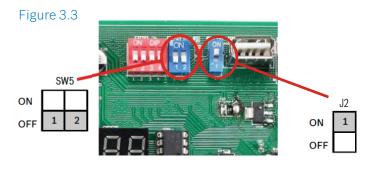


Figure 3.4

Defrosting Choice	SW5-1	SW5-2	Remarks
ON	Operating time is reduced by 10%	Defrosting extended for 60 seconds	
OFF	Normal	Normal	Default
Remarks	Enter defrost	Quit defrost	

SW5-1 Function

Default is OFF position, uses default defrost operating time (maximum of 8 minutes). If dip switch is changed to ON, default defrost time is reduced by 10%. **Reason to change from default:** Can be used in mild/warm climates, where it may take less time than usual to defrost the outdoor coil.

SW5-2 Function

Default is OFF position, uses default defrost operating time (maximum of 8 minutes). If change dip switch to ON, default defrost time is increased by 1 minute. **Reason to change from default:** Can be used in colder climates, where it make take more time than usual to defrost the outdoor coil.

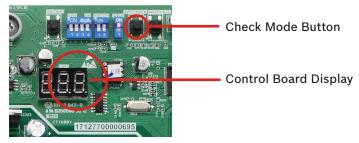
J2 Function

Default is ON, which leaves the compressor capacity at default (3 or 5 ton depending on the model). Regardless of if the matching air handler is 2 ton or 3 ton (when paired with the 3 ton condenser), or matching air handler is 4 ton or 5 ton (when paired with 5 ton condenser), the J2 jumper can be left at default position. The compressor will ramp to required coil temperature regardless of paired air handler size. **Reason to change from default:** If you want (or need) to minimize maximum condenser capacity from 3 to 2 tons (3 ton condenser model) OR 5 to 4 tons (5 ton condenser model).

Onboard Parameter Check & Diagnostics

- 1. Press "Check" button to index through parameters.
- 2. After first pressing on the "Check" button, it will display the sequence, and after 1 second it will display the value of the parameter.
- 3. After 20 seconds on same parameter, display will revert back to normal status.
- 4. If a system protection is active, first digit will display "status code."

Figure 4.1



BOVA15 & BOVB18 System parameters Figure 4.2

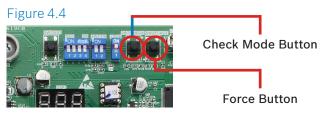
No.	Point check content
0	Outdoor unit capacity
1	Outdoor unit mode
2	Outdoor unit mode Outdoor unit set compressor speed (Hz)
3	T3 (outdoor coil temp.) (°F)
4	T4 (outdoor ambient temp.) (°F)
5	T5 (compressor discharge temp.) (°F)
6	Reserve
7	BOVA15: T3L (liquid line temp.) (°F) BOVB18: Reserve
8	Tf (module temp.) (°F)
9	Pe (evaporating pressure) (PSI)
10	Pc (condensing pressure) (PSI)
11	Tes target of the evaporating temp. (only use for cooling mode) (°F)
12	Te (evaporating temp.) (°F)
13	Tcs target of the condensing temp. (only use for heatling mode) (°F)
14	Tc (condensing temp.) (°F)
15	Target of compressor discharge superheat (only use for heating mode) (°F)
16	Compressor discharge superheat (°F)
17	Openings of EEV
18	Fan speed
19	Compressor current (A)
20	Power AC voltage Input (V)
21	Compressor input dc voltage (V)
22	Continuous running time of the compressor (min)
23	Last fault code
24	Software version
25	Remark""

BOV*20 System parameters Figure 4.3

BUV.	20 System parameters Tigule 4.5
No.	Point check content
0	Outdoor unit capacity
1	Outdoor unit mode
2	Outdoor unit set compressor speed (Hz)
3	T3 (outdoor coil temp.) (°F)
4	T4 (outdoor ambient temp.) (°F)
5	T5 (compressor discharge temp.) (°F)
6	Th (compressor suction temp.) (°F)
7	T3L (liquid line temp.) (°F)
8	Tf (module temp.) (°F)
9	Pe (evaporating pressure) (PSI)
10	Pc (condensing pressure) (PSI)
11	Tes target of the evaporating temp. (only use for cooling mode) (°F)
12	Te (evaporating temp.) (°F)
13	Tcs target of the condensing temp. (only use for heating mode) (°F)
14	Tc (condensing temp.) (°F)
15	Target of the compressor discharge superheat (only use for heating mode) (°F)
16	Compressor discharge superheat (°F)
17	Openings of EEV
18	Fan speed
19	Compressor current (A)
20	Power AC voltage Input (V)
21	Compressor input dc voltage (V)
22	Continuous running time of the compressor (min)
23	Last fault code
24	Software version
25	Remark""

Manual/Force Defrost

- 1. System must have a call for heat and have been operating for a minimum of 8 minutes.
- 2. Press "FORCE" button on inverter board for 6 seconds to begin forced defrost.
- 3. Wait Approximately 40 seconds for defrost to initiate.
- 4. Once defrost initiates the display will indicate "dF".
- 5. Defrost test will terminate automatically after which the display will indicate running speed.
- 6. Repeat steps after 5 minutes if second test is required.



System Protection Codes Figure 4.5

ŀ	Forced operation mode
L	Running indication under T3 limited condition
d	Running indication under T5 limited condition
P	Running indication under compressor ratio limited condition
F	Running indication under TF limited condition
С	Running indication under current limited condition
U	Running indication under low voltage limited condition
Α	Running indication under return oil mode
dF	Running indication under defrost mode

BOVA15 & BOV*20 System Fault Codes Figure 4.6

Code	Fault Description (Sensor)
C3	The coil sensor is seated fault in cooling (T3)
E4	Temperature sensor fault (T3, T4, T3L, T5, TF)
E5	High/low voltage protection
E6	DC fan motor fault
E7	Compressor discharge sensor is seated fault (T5)
E 9	EEPROM fault
HO	Communication fault in main control chip
H5*	5 times (P2) protection in 100 minutes, system lockout
Н8	Pressure transducer fault (PT)
P0	Control board temperature protection (TF)
P1	High pressure switch protection (HPS)
P2	Low pressure protection in cooling or heating (PT)
P3	Compressor over current protection
P4	High compressor discharge temperature protection (T5)
P5	Condensor coil temperature protection in cooling (T3)
P8	DC fan motor hurricane/typhoon protection
PH	Low discharge superheat protection
F1	High pressure switch protection (HPS)
LO-L9	The IPM module protection
AtL	Ambient temperature Limited

^{*}Fault requires hard restart

BOVB18 System Fault Codes Figure 4.7

•	
Code	Fault Description (Sensor)
C3	The coil sensor is seated fault in cooling (T3)
E4	Temperature sensor fault (T3, T4, T5)
E5	High/low voltage protection
E6	DC fan motor fault (only for 48/60K model)
E7	Compressor discharge sensor is seated fault (T5)
E9	EEPROM fault
НО	Communication fault in main control chip
H5*	5 times (P2) protection in 100 minutes, system lockout
Н8	Pressure transducer fault (PT)
P0	High module radiator temperature protection (TF)
P1	High pressure switch protection (HPS)
P2	Low pressure protection in cooling or heating (PT)
P3	Compressor over current protection
P4	High compressor discharge temperature protection (T5)
P5	Condensor coil temperature protection in cooling (T3)
P8	DC fan motor hurricane/typhoon protection
PH	Low discharge superheat protection
F1	High pressure switch protection (HPS)
LO-L9	The IPM module protection
AtL	Ambient Temperature Limited

Troubleshooting Made Easy!

The Bosch EasyAir App is your one-stop shop for troubleshooting the IDS Premium Connected. With just a few swipes on your phone, you can easily access information about installation, warranty registration, and how to monitor the unit remotely.





Remote Monitoring & Troubleshooting

Monitor the heat pump's health and visualize real time alerts remotely. View fault codes, live check point values and calculate superheat and subcool values that will help in troubleshooting faults quickly.



Get Notified on System Faults

Receive alerts on your phone right away about unit errors, warnings, and other important updates.



Manage Your Technicians

As the owner of the company or an office admin that dispatches technicians, you can add installers/technicians to your company profile and manage which homeowner units they can access.



Warranty Registration

Quickly and efficiently register products for warranty at the click of a button in the EasyAir App.

Connected Features - Bosch EasyAir Mobile App



The Bosch BOVB20 condenser features wireless connectivity and allows the contractor to access information about warranty registration, installation, and troubleshooting via the Bosch EasyAir App.

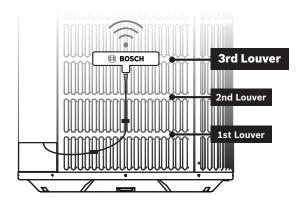
To utilize all the connected features of the Bosch BOVB20, ensure the following:

- 1. The antenna has been mounted as instructed.
- 2. The Bosch EasyAir App has been downloaded on your smartphone.
- 3. The BOVB20 condenser has been added to the Bosch EasyAir App.
- **4.** The condenser is linked to the homeowner and access to monitor the condenser remotely has been granted.

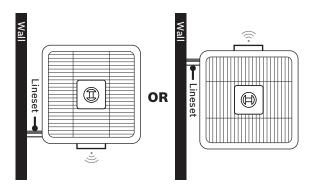


Mounting Antenna

The antenna is used to transmit data to the cloud and will have the strongest signal strength mounted furthest away from a wall or building.



Mount the antenna on the 3rd Louver from the bottom of the unit.



For the strongest signal mount the antenna on the side furthest from a wall on the left or right side of the unit.

Downloading the Bosch EasyAir App

- Download the Bosch EasyAir App on your smartphone by searching for it in Google Play Store (for Android devices) or App Store (for iPhone). Alternatively, you can scan this QR code with your phone's camera.
- 2. Open the Bosch EasyAir App and create a profile.





Scan QR with Smartphone to Download App

Adding the Condenser to the Bosch EasyAir App

Open the Bosch EasyAir App, From the 'Home' Screen click on the "Add New Unit" button and follow instructions on the App.



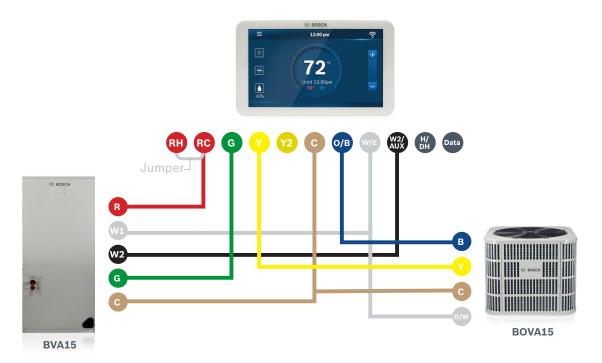
Connecting to the Bosch Premium Connected (BOVB20) Condenser

- 1. Ensure the unit is powered on.
- 2. Once the unit is powered on, wait until the gateway has a solid green and amber LED.
- 3. Launch the Bosch EasyAir App and connect to the unit via Bluetooth.
- Access the Unit Dashboard to install, troubleshoot and register warranty more efficiently.



Wiring Diagrams

IDS Light with Electric Heat Back-up + BCC100

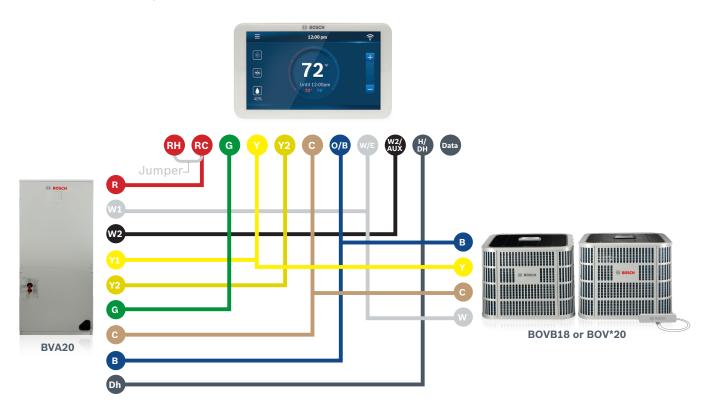


IDS Light with Electric Heat Back-up + BCC50

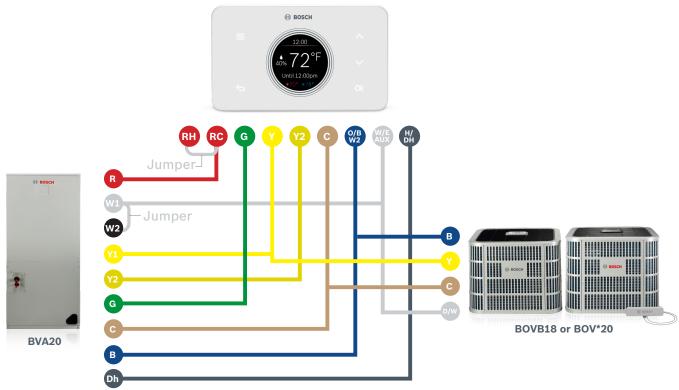


Wiring Diagrams

IDS Plus, **IDS** *Premium*, **IDS** *Premium Connected* with Electric Heat Back-up + BCC100

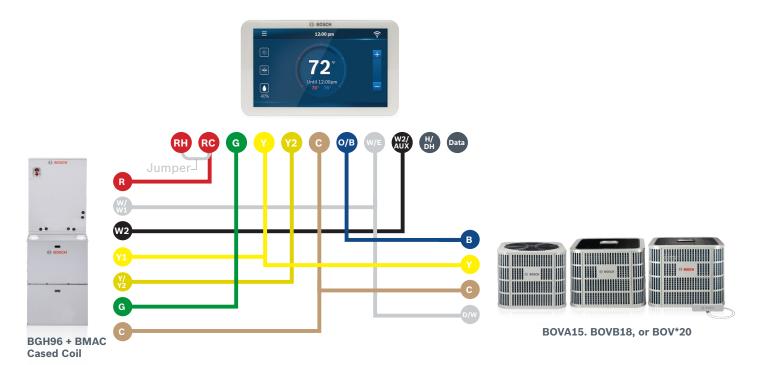


IDS Plus, **IDS** *Premium*, **IDS** *Premium Connected* with Electric Heat Back-up + BCC50



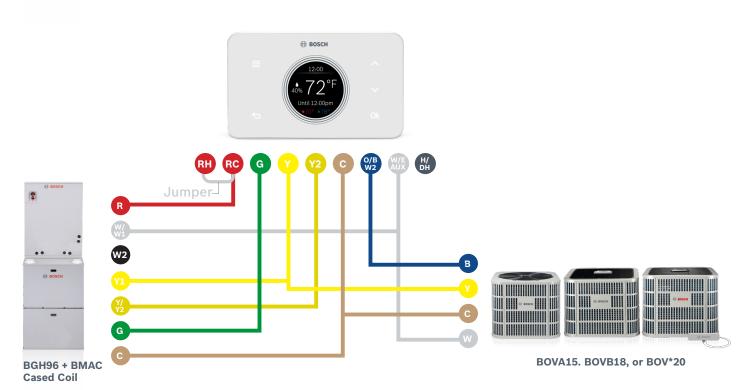
Wiring Diagrams

IDS Light, IDS Plus, IDS Premium & IDS Premium Connected with BGH96 + BCC100



Adjust dip switch S1-1 and S1-2 to achieve second stage gas heat

IDS Light, **IDS** Plus, **IDS** *Premium* & **IDS** *Premium* Connected with BGH96 + BCC50







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- **6.** Complete your short training qualification at Training.BoschProhvac.us, using the same email address as you did on Bosch-ABCpartner.com

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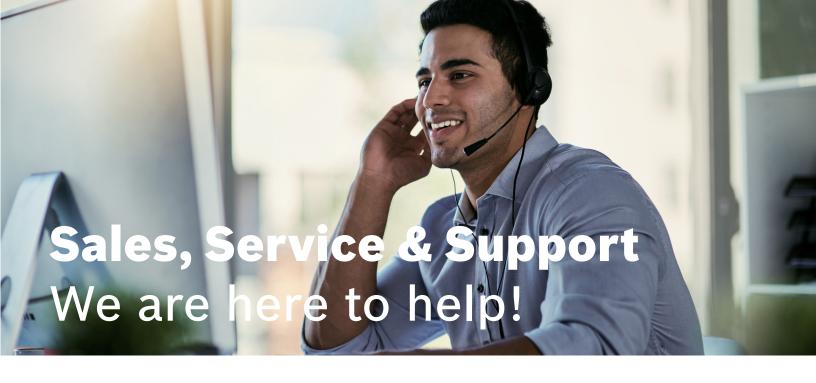
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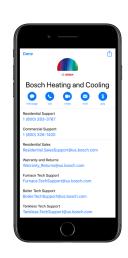
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Customer Support Contact Card

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Scan QR With Mobile Device



Notes

Notes

Notes

About Bosch

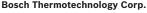
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