

# AF/AFG OIL AND BIOFUEL BURNER

## PRODUCT SHEET

### Description

The Beckett models AF & AFG burner are designed to meet the increased demands of modern equipment and changing fuels to meet both performance and carbon reduction challenges. Beckett burners utilize the most technologically advanced components available today and are UL Listed for use with up to 100% biodiesel (B100) and traditional fuel oil. Beckett has rigorously tested 100% renewable diesel (R100), and 100% biodiesel and traditional fuels.

The AF and AFG burners have been supplied on original equipment boilers, furnaces, and water heaters for many years. As technology improved, so have our burners and components. If a burner is more than 10 years old, a new AF/AFG chassis is a simple way to upgrade the system. Installation by your service company is uncomplicated and a new burner comes with a 5-year factory warranty.



### Advanced Components



#### Beckett GeniSys Burner Control

- Last 50 cycles and last 15 faults history
- C-terminal for compatibility with smart thermostats
- Auto-configures valve-on delay timing for a solenoid valve upon detection
- Enhanced diagnostics and programming through:



#### CleanCut Pump

- Integrated solenoid valve.
- Higher capacity design delivers up to 3 GPH at 100-200psi on the AFG burner.
- The CleanCut has fewer moving parts and reduces motor load.



#### Beckett Igniter

- Electrodes last approx. 50% longer.
- Higher output voltage for reliable ignition.
- Approximately 75% lower input amps.



#### PSC Motor

- Lower amp draw & cooler operation.
- Delivers more power with the PSC design (permanent split capacitor).
- Proven durability after 20+ years of high reliability in the field.
- Ball bearings for longer life.



Beckett, the trusted name in oil heat since 1937.

# Beckett®



## Technical Specifications

<b>Capacity</b>	<ul style="list-style-type: none"> <li>0.40 - 3.00 GPH</li> <li>56,000 - 420,000 btu / hr input</li> </ul>
<b>Fuel Unit</b>	Beckett CleanCut® - Single or Two-stage
<b>Motor</b>	1/7 HP 3450 rpm PSC type
<b>Igniter</b>	<ul style="list-style-type: none"> <li>Beckett PowerLight® Solid state</li> <li>Rated for continuous duty</li> </ul>
<b>Electrical Characteristics</b>	<ul style="list-style-type: none"> <li>Power Supply: 120 VAC, 60 Hz, single phase</li> <li>Operating Load: 5.8 Amps maximum @ 120 VAC</li> <li>240 VAC - Available (Contact factory)</li> </ul>
<b>Control</b>	<ul style="list-style-type: none"> <li>Beckett GeniSys® Model 7565</li> <li>myTechnician™ app for programming and diagnostics</li> </ul>
<b>Dimensions (Standard)</b>	<ul style="list-style-type: none"> <li>Height: 11-1/2"</li> <li>Width: 12-7/8"</li> <li>Depth: 6-9/16"</li> </ul>
<b>Dimensions (with cover)</b>	<ul style="list-style-type: none"> <li>Height: 12-1/2"</li> <li>Width: 15"</li> <li>Depth: 9-1/4"</li> </ul>

## Fuel Compatibility

Fuel Type	Specification
Heating Oil - No. 1 & No. 2	Per ASTM D396
Biodiesel Blends up to B20 with Heating Oil	Per ASTM D396
Biodiesel Blends B20+ up to B100 with Heating Oil	B100 Per ASTM D6751
Renewable Diesel blends up to R100 with Heating Oil	Per ASTM D396
Heating Oil Types 0, 1, 2	Per CAN/CGSB-3.2

## AF/AFG Burner Chassis Models

Part Number	Description	Fuel Unit	Bio Fuel Compatibility	GPH
BR100	AFG Chassis Only (Replaces B2007 & B2008)	PF20323 - Single Stage	≤B100/R100	0.40 - 3.00
B2005	AFG Chassis Only (2-Stage pump)	PF20422 - 2-Stage	≤B20	0.40 - 3.00
BR200	AF Chassis Only (Replaces B3001)	PF20323 - Single Stage	≤B100/R100	0.40 - 3.00

## AFG Universal Burner Models

Part Number	Description	Fuel Unit	Bio Fuel Compatibility	GPH	Air Tube Length	Head Types
BR1001	AFG Burner, adjustable flange (Only use on wet-based appliances)	PF20323 - Single Stage	≤B100/R100	0.50 - 1.00	7 1/8"	F3, F6
BR1002	AFG Burner, adjustable flange	PF20323 - Single Stage	≤B100/R100	0.75 - 1.50	7"	L2
BR1004	AFG Burner, adjustable flange, adjustable head for various rates (Only use on wet-based appliances)	PF20323 - Single Stage	≤B100/R100	1.00 - 2.50	7"	V1

## AF/AFG Accessories

Part Number	Description
5432	Adjustable Flange and Gasket
5850	Split Flange and Gasket
5685	Pedestal mounting kit
5606	Pedestal mounting kit - Extended
5207301U	Burner Cover Kit with split mounting plate
5207304U	Burner Cover Kit with air inlet fitting
51621	Start Helper - Smoother light-off for cold fuel conditions

## AF/AFG Standard Air Tube Combinations

Firing Rate Range - GPH	Burner Head	Usable Length - Tube									
		4-1/2"	5"	5-3/8"	6-5/8"	7"	7-1/4"	9"	10-1/2"	13"	16"
Less Head	-	AF44	-	AF53	AF65	-	AF72	AF90	AF104	AF130	AF160
0.40 - 0.75	F0	AF44XR	-	AF53XR	AF65XR	-	AF72XR	AF90XR	AF104XR	AF130XR	AF160XR
0.75 - 1.25	F3	AF44XN	-	AF53XN	AF65XN	-	AF72XN	AF90XN	AF104XN	AF130XN	AF160XN
0.85 - 1.35	F4	AF44WH	-	AF53WH	AF65WH	-	AF72WH	AF90WH	AF104WH	AF130WH	AF160WH
0.85 - 1.65	F6	AF44YB	-	AF53YB	AF65YB	-	AF72YB	AF90YB	AF104YB	AF130YB	AF160YB
1.10 - 2.00	F12	AF44XO	-	AF53XO	AF65XO	-	AF72XO	AF90XO	AF104XO	AF130XO	AF160XO
1.65 - 2.50	F22	AF44XP	-	AF53XP	AF65XP	-	AF72XP	AF90XP	AF104XP	AF130XP	AF160XP
2.50 - 3.00	F31	AF44XS	-	AF53XS	AF65XS	-	AF72XS	AF90XS	AF104XS	AF130XS	AF160XS
AFG Burner Only											
0.40 - 1.00	L1	-	AFG50MBSS	-	-	AFG70MBSS	-	AFG90MBSS	-	-	-
0.50 - 1.10	L2	-	AFG50MPSS	-	-	AFG70MPSS	-	AFG90MPSS	-	-	-
0.75 - 2.75	V1	-	AFG50MDSS	-	-	AFG70MDSS	-	AFG90MDSS	-	-	-

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