



Illustrations and photographs are only representative.
Some product models may vary.

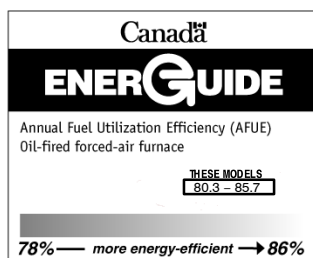
LO-BOY OIL FURNACE

FEATURES

- **Fan Control Switch** – for continuous fan operation
- **Accessory terminals** – prewired for easy add-on electronic air cleaner and power humidifier. Air conditioning ready for easy add-on
- **Large external front clean out** – for easy cleaning
- **Clean out** – sealed from blower compartment (no soot to spread)
- **Easy Access** – control panel
- **Sight Glass/View Port** – (some models only)
- **Furnaces** – are available with your choice of high efficiency Riello or Beckett burners. (Burners ordered and shipped separately)
- **“Easy Access” heat exchanger** – manufactured from heavy gauge steel
- **Multi-Speed Direct Drive Motors** – permanently lubricated for long life performance
- **Heavy-duty insulated cabinet** – for quiet operation
- **Approved for 1” (25mm) clearance to combustibles** – for tight installations
- **Ceramic combustion chamber** – withstands temperature of 2600° F (1427° C) with unique “self aligning” design
- **Precision balanced blower** – ensures quiet, efficient air distribution
- **Raised cabinet base** – allows air to circulate under the cabinet. Eliminates dampness
- **Approved applications** – All Chimney Vent, some Direct Vent with accessories
- **Efficient** – AFUE up to 85.7% Canada, 85.1% US
- **OLR – Rear Flue configuration**
OLF – Front Flue configuration

WARRANTY *

- Lifetime heat exchanger limited warranty with timely registration
- 5 year parts limited warranty
 - With timely registration, an additional 5 year parts limited warranty
- * Applies to original purchaser/homeowner, some limitations may apply. See warranty certificate for complete details.



ONLY applies to applications in Canada where the furnace is installed in the conditioned space, per sections 5.35.1.2 and 4.7.1.1 of CSA standard B212 dated October 2000.

Model Number	Input (BTU/h)	Efficiency AFUE		Cooling capacity @ .5 in. w.c. (125 Pa)	Dimensions in(mm) H x W x D†	Operating Wt. Lbs.(Kg)
		CANADA	US			
OLR105A12	70,000–105,000	80.7–85.7‡	80.3–85.1‡	1.5 – 3 TON	32 x 21 x 43.4 (813 x 533 x 1102)	200 (91)
OLF105A12	70,000–105,000	80.3–83.8	80.3–81.5	1.5 – 3 TON	32 x 21 x 43.4 (813 x 533 x 1102)	207 (94)
OLR160B20	119,000–159,600	80.3–83.5	80.3–82.2	1.5 – 5 TON	40 x 25 x 51.4 (1016 x 635 x 1306)	235 (107)

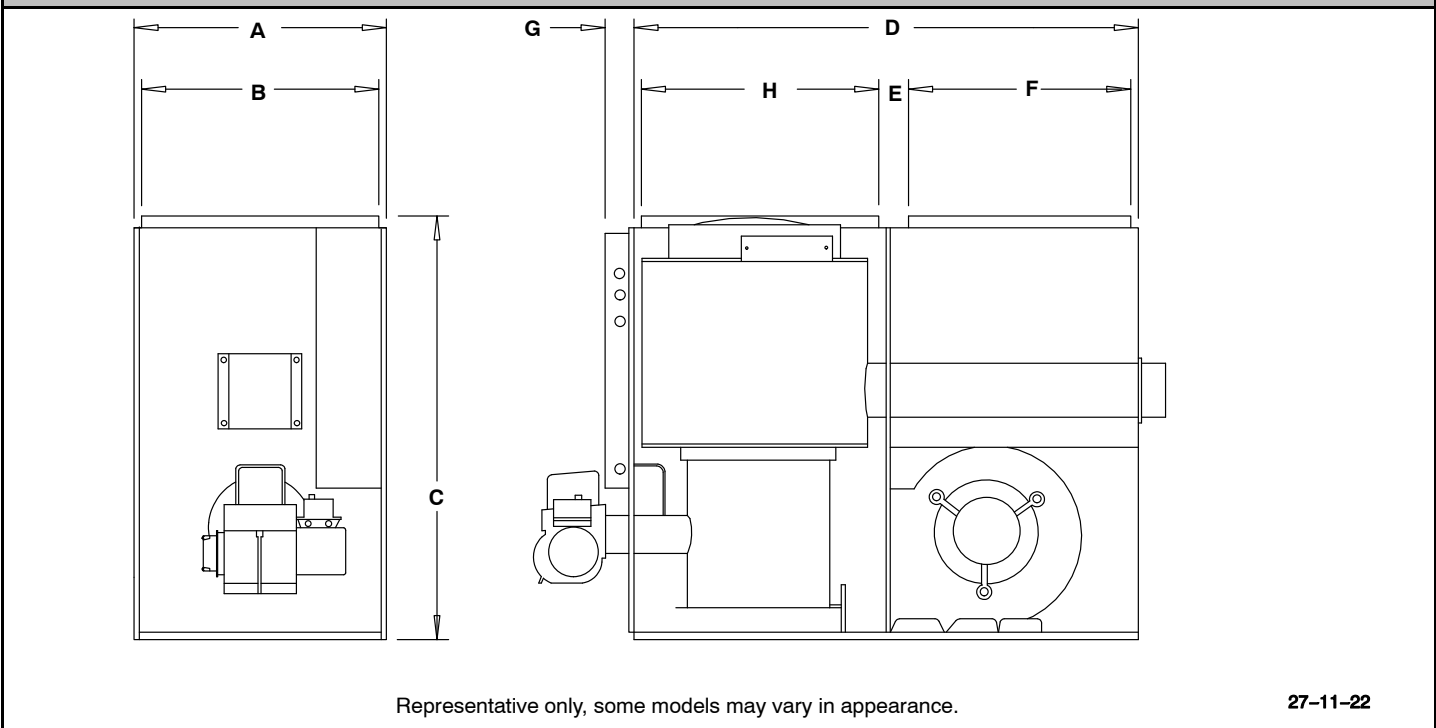
‡ Meets EnergyStar guidelines (Only specific firing rates meet the ENERGY STAR® guidelines).

† Depth without the burner

MODEL NUMBER IDENTIFICATION GUIDE

MODEL NUMBER	O	L	R	105	A	12	D
FUEL O = Oil							REVISION
PRODUCT GROUP U = Upflow H = Horizontal T = Upflow/Horizontal L = Lo-Boy	D = Downflow C = Downflow/Horizontal M = Multiposition						AIR FLOW 08 = 800 CFM 12 = 1200 CFM 18 = 1800 CFM 20 = 2000 CFM
SERIES F = Front Breech R = Rear Breech							SUPPLY PLENUM SIZE A = 20 x 20 B = 24 x 24 C = 21.1 x 21.5
INPUT, MBTUH							

DIMENSIONS AND CLEARANCES



Furnace Dimensions – in(mm)									
Model No.	A	B	C	D	E	F	G	H	FLUE
in									
OLR105A12	21	19-3/4	32	41	2	17-3/4	2.4	19-3/4	5
OLF105A12	21	19-3/4	32	41	2	17-3/4	2.4	19-3/4	5
OLR160B20	25	23-3/4	40	49	2-1/8	21-3/4	2.4	23-3/4	6
mm									
OLR105A12	533	502	813	1041	51	451	61	502	127
OLF105A12	533	502	813	1041	51	451	61	502	127
OLR160B20	635	603	1016	1245	54	552	61	603	152

Minimum Installation Clearances from Combustible Materials – in(mm)			
Application		OLR105 OLF105	OLR160
Sides	Furnace	1 (25.4)	1 (25.4)
	Supply plenum, warm air duct within 6' (1.8m) of furnace	1 (25.4)	1 (25.4)
Back	Furnace	1 (25.4)	18 (457.2)
Top	Furnace casing or plenum	1 (25.4)	2 (50.8)
Bottom	Furnace - combustible floor	0	0
Front	Furnace	24 (609.6)	24 (609.6)

FURNACE SPECIFICATIONS							
Model:	OLR105A12D				OLR160B20C		
Rating and Performance							
Firing Rate (USPGH)	.50	.63	.75	.72	.85	.97	1.14
Input (BTU/h)	70,000	88,200	105,000	100,800	119,000	135,800	159,600
Heating capacity, chimney installation (BTU/h)	59,200	73,000	87,800	NA	99,000	111,000	129,000
Heating capacity, side-wall installation (BTU/h)	59,400	73,200	88,200	84,200	97,000	110,000	127,000
Minimum-maximum Temperature Rise	29° - 42° C / 52° - 75° F				28° - 44° C / 50° - 80° F		
Stack draft, (Chimney), (Side-wall)	(-0.035" to -0.06") (+0.04" to +0.16")				(-0.035" to -0.06")(+0.04" to +0.22")		
Overfire pressure, (Chimney), (Side-wall)	(0.00" to +0.035") (+0.10" to +0.25")				(0.00" to +0.04")(+0.10" to +0.25")		
Beckett Burner, Chimney Installation	AFG-F0 (tube insertion 5-1/8")				AFG-F3 (tube insertion 6-5/8")		
Low firing rate baffle	Yes	Yes	No	NA	No		
Static disc. model	2 ³ / ₄ #3383				NA	2 ³ / ₄ #3383	
Nozzle (Delavan)	.50-70A	.50-70A	.60-70B	NA	.75-70B	.85-70B	1.00-70B
Pump Pressure (PSIG)	100	156	156	NA	130	130	130
Combustion air adjustment (band/shutter)	0 / 4.5	0 / 8	0 / 7.5	NA	0 / 5	0 / 6.5	0 / 10
CANADIAN regulations and CSA B212 standard** AFUE %	83.9	82.4	80.7	NA	82.2	81.5	80.3
US regulations and ASHRAE 103 standard AFUE %	81.5	81.0	80.3	NA	82.2	81.5	80.3
Riello Burner, Chimney Installation	40-F3 (tube insertion 5-3/16")				40-F5 (tube insertion 7")		
Nozzle (Delavan)	.40-60A	.50-60A	.60-60A	NA	.75-70B	.85-70B	1.00-70B
Pump Pressure (PSIG)	156	156	156	NA	130	130	130
Combustion air adjustment (turbulator/damper)	0 / 2	0 / 3	0 / 4	NA	1 / 2	1 / 2.5	1 / 3
CANADIAN regulations and CSA B212 standard** AFUE %	85.7†	84.8	83.7	NA	83.5	82.4	80.6
US regulations and ASHRAE 103 standard AFUE %	85.1†	83.8	82.7	NA	82.2	81.5	80.3
Beckett Burner, Side-wall Installation	AFII-85 (tube insertion 4-15/16")				AFII-150 (tube insertion 6-5/8")		
Nozzle (Delavan)	.50-60W		.60-60W	NA	.75-70B	.85-70B	1.00-70B
Pump Pressure (PSIG)	130	140	160	NA	130	130	130
Combustion air adjustment(screw/dial)	3 / 1.5	3 / 3	3 / 4.5	NA	2.75	4.25	6.75
CANADIAN regulations and CSA B212 standard** AFUE %	83.9	82.4	80.7	NA	82.2	81.5	80.3
US regulations and ASHRAE 103 standard AFUE %	81.5	81.0	80.3	NA	82.2	81.5	80.3
Riello Burner, Side-wall Installation	40-BF3 (tube insertion 5-3/16")				40-BF5 (tube insertion 7")		
Nozzle (Delavan)	.50-60W	.50-60W	NA	.60-60W	.75-70B	.85-70B	1.00-70B
Pump Pressure (PSIG)	135	140	NA	155	130	130	130
Combustion air adjustment (turbulator/damper)	0 / 3	0 / 6	NA	0 / 7.5	1 / 3	1 / 4	2 / 4.5
CANADIAN regulations and CSA B212 standard** AFUE %	85.7†	84.8	NA	83.7	83.5	82.4	80.6
US regulations and ASHRAE 103 standard AFUE %	85.1†	83.8	NA	82.7	82.2	81.5	80.3
Electrical System							
Volts - Hertz - Phase	115-60-1				115-60-1		
Operating voltage range	104 - 132				104 - 132		
Rated voltage Amp	12.2				15.7		
Minimum ampacity for wiring sizing	13.7				18.1		
Max. fuse size (Amps.)	15				20		
Control transformer	40 VA				40 VA		
Ext control power available, cooling & accessories	30 VA				30 VA		
Blower Data							
Blower speed at 0.50 in. w.c. (125 Pa) static pressure	MED-LO	MED-HI	HIGH	HIGH	MED-LO	MED-HI	HIGH
Blower speed at 0.25 in. w.c. (62 Pa) static pressure	LOW	MED-HI	MED-HI	MED-HI	MED-LO	MED	MED-HI
Maximum cooling speed	LOW	MED-LO	MED-HI	HIGH	MED-LO	MED-HI	HIGH
Maximum cooling tons at 0.50 in. w.c. (125 Pa) static pressure	1.5	2	2.5	3	3.5	4	5
Motor (HP) / number of speeds	1/3 HP / 4 speeds				3/4 HP / 4 speeds		
Blower wheel size - in(mm)	10 x 10 (254 x 254)				12 x 10 (305 x 254)		
Filter quantity and size - in(mm)	(1) 20 x 20 (508 x 508)				(2) 16 x 24 (406 x 610)		
Weight - Lbs.(Kg)	200 (91)				235 (107)		

NOTE: AFUE value established after minimum 20 hours of continuous operation.

** Applies to applications in Canada where the furnace is installed in the conditioned space, per sections 5.35.1.2 and 4.7.1.1 of CSA standard B212 dated October 2000.

† Meets EnergyStar guidelines in Canada (Only specific firing rates meet the ENERGY STAR® guidelines).

‡ Meets efficiency level with the use of an Oil Vent Damper (OLR160)

FURNACE SPECIFICATIONS				
Model:		OLF105A12C		
Rating and Performance				
Firing Rate (USGPH)	.50	.63	.75	.72
Input (BTU/h)	70,000	88,200	105,000	100,800
Heating capacity, chimney installation (BTU/h)	59,200	73,000	87,800	NA
Heating capacity, side-wall installation (BTU/h)	59,400	73,200	88,200	84,200
Minimum-maximum Temperature Rise	29° - 42° C / 52° - 75° F			
Stack draft, Chimney, (Side-wall)	-0.035" to -0.06" (+0.04" to +0.16")			
Overfire pressure, Chimney, (Side-wall)	0.00" to +0.035" (+0.10" to +0.25")			
Beckett Burner, Chimney Installation		AFG-F0 (tube insertion 5-1/8")		
Low firing rate baffle	Yes	Yes	No	NA
Static disc. model	2 ³ / ₄ #3383			NA
Nozzle (Delavan)	0.50-70A	0.50-70A	0.60-70B	NA
Pump Pressure (PSIG)	100	156	156	NA
Combustion air adjustment (band/shutter)	0 / 4.5	0 / 8	0 / 7.5	NA
CANADIAN regulations and CSA B212 standard** AFUE %	81.9	81.0	80.3	NA
US regulations and ASHRAE 103 standard AFUE %	81.5	81.0	81.0	NA
Riello Burner, Chimney Installation		40-F3 (tube insertion 5-3/16")		
Nozzle (Delavan)	0.40-60A	0.50-60A	0.60-60A	NA
Pump Pressure (PSIG)	156	156	156	NA
Combustion air adjustment (turbulator/damper)	0 / 2	0 / 3	0 / 4	NA
CANADIAN regulations and CSA B212 standard** AFUE %	83.8	83.3	81.8	NA
US regulations and ASHRAE 103 standard AFUE %	81.5	81.0	81.0	NA
Beckett Burner, Side-wall Installation		AFII-85 (tube insertion 4-15/16")		
Nozzle (Delavan)	0.50-60W		0.60-60W	NA
Pump Pressure (PSIG)	130	140	160	NA
Combustion air adjustment (screw/dial)	3 / 1.5	3 / 3	3 / 4.5	NA
CANADIAN regulations and CSA B212 standard** AFUE %	81.9	81.0	80.3	NA
US regulations and ASHRAE 103 standard AFUE %	81.5	81.0	80.3	NA
Riello Burner, Side-wall Installation		40-BF3 with AL1009 post purge control (tube insertion 5-3/16")		
Nozzle (Delavan)	0.50-60W	0.50-60W	NA	0.60-60W
Pump Pressure (PSIG)	135	140	NA	155
Combustion air adjustment (turbulator/damper)	0 / 3	0 / 6	NA	0 / 7.5
CANADIAN regulations and CSA B212 standard** AFUE %	83.8	83.3	NA	81.8
US regulations and ASHRAE 103 standard AFUE %	81.5	81.0	NA	80.3
Electrical System				
Volts - Hertz - Phase	115-60-1			
Operating voltage range	104 - 132			
Rated voltage Amp	12.2			
Minimum ampacity for wiring sizing	13.7			
Max. fuse size (Amps.)	15			
Control transformer	40 VA			
Ext. control power available, cooling and accessories	30 VA			
Blower Data				
Blower speed at 0.50 in. w.c. (125 Pa) static pressure	LOW	MED-HI	HIGH	HIGH
Blower speed at 0.25 in. w.c. (62 Pa) static pressure	LOW	MED-HI	HIGH	HIGH
Maximum cooling speed	LOW	MED-LO	MED-HI	HIGH
Maximum cooling tons at 0.50 in. w.c. (125 Pa) static pressure	1.5	2	2.5	3
Motor (HP) / number of speeds	1/3 HP / 4 speeds			
Blower wheel size - in(mm)	10 x 10 (254 X 254)			
Filter quantity and size - in(mm)	(1) 20 x 20 (508 x 508)			
Weight - Lbs.(Kg.)	207 (94)			

NOTE: AFUE value established after minimum 20 hours of continuous operation.

** Applies to applications in Canada where the furnace is installed in the conditioned space, per sections 5.35.1.2 and 4.7.1.1 of CSA standard B212 dated October 2000.

BLOWER PERFORMANCE DATA (Air delivery - with air filter)

OLR105A12C

EXTERNAL STATIC PRESSURE - in. w.c.							
Speed	0.10	0.20	0.30	0.40	0.50	0.60	0.70
	CFM						
Low	940	880	820	760	700	640	580
Med-Lo	1054	978	902	826	750	674	598
Med-Hi	1144	1108	1072	1036	1000	964	928
High	1444	1408	1372	1336	1300	1264	1228

EXTERNAL STATIC PRESSURE - Pa							
Speed	25	50	75	100	125	149	174
	L/s						
Low	444	415	387	359	330	302	274
Med-Lo	497	462	426	390	354	318	282
Med-Hi	540	523	506	489	472	455	438
High	681	664	647	630	613	597	580

OLR160B20C

EXTERNAL STATIC PRESSURE - in. w.c.							
Speed	0.10	0.20	0.30	0.40	0.50	0.60	0.70
	CFM						
Low	1148	1116	1084	1052	1020	988	956
Med-Lo	1366	1362	1358	1354	1350	1346	1342
Med-Hi	1676	1642	1608	1574	1540	1506	1472
High	2250	2150	2050	1950	1850	1750	1650

EXTERNAL STATIC PRESSURE - Pa							
Speed	25	50	75	100	125	149	174
	L/s						
Low	542	527	512	496	481	466	451
Med-Lo	645	643	641	639	637	635	633
Med-Hi	791	775	759	743	727	711	695
High	1062	1015	967	920	873	826	779

OLF105A12C

EXTERNAL STATIC PRESSURE - in. w.c.							
Speed	0.10	0.20	0.30	0.40	0.50	0.60	0.70
	CFM						
Low	882	854	826	798	770	742	714
Med-Lo	1056	992	928	864	800	736	672
Med-Hi	1092	1064	1036	1008	980	952	924
High	1360	1320	1280	1240	1200	1160	1120

EXTERNAL STATIC PRESSURE - Pa							
Speed	25	50	75	100	125	149	174
	L/s						
Low	416	403	390	377	363	350	337
Med-Lo	498	468	438	408	378	347	317
Med-Hi	515	502	489	476	462	449	436
High	642	623	604	585	566	547	529

ACCESSORIES

Product Model No.	Burners	Nozzle (not supplied)	Direct Vent Terminal	Direct Vent Pipe	Coil Adapter	Accessories Vestibule Kit
OLF105A12	N01J040 (Beckett-chimney)	(0.50 - 70A) - N03F015	--	--	OCA20	LBVEST1M
		0.60-70B - N03H014	--	--		
	N01F049 (Riello-chimney)	(0.40 - 60A) - N03F027	--	--		
		(0.50 - 60A) - N03F014	--	--		
	N01J038 (Beckett-direct vent)	(0.50 - 60W) - N03G010	VTK1 5"	IFV315 or IFV323		
		0.60 - 60W - N03G011				
	N01F034 (Riello-direct vent)	(0.50 - 60W) - N03G010				
		0.60 - 60W - N03G011				
OLR105A12	N01J040 (Beckett-chimney)	(0.50 - 70A) - N03F015	--	--	OCA20	LBVEST1M
		0.60-70B - N03H014	--	--		
	N01F049 (Riello-chimney)	(0.40 - 60A) - N03F027	--	--		
		(0.50 - 60A) - N03F014	--	--		
	N01J038 (Beckett-direct vent)	(0.50 - 60W) - N03G010	VTK1 5"	IFV315 or IFV323		
		0.60 - 60W - N03G011				
	N01F034 (Riello-direct vent)	(0.50 - 60W) - N03G010				
		0.60 - 60W - N03G011				
OLR160B20	N01J039 (Beckett-chimney)	(0.75 - 70B) - N03F024	--	--	OCA24	LBVEST2M
		1.00-70B - N03H001	--	--		
	N01F050 (Riello-chimney)	(0.75 - 70B) - N03F024	--	--		
		(0.85-70B) - N03H008	--	--		
	N01J041 (Beckett-direct vent)	(0.75 - 70B) - N03F024	VTK2 6"	IFV415 IFV423 or IFV430		
		(0.85 - 70B) - N03H008				
	N01F035 (Riello-direct vent)	1.00 - 70B - N03H001				
		(0.75 - 70B) - N03F024				
	(0.85 - 70B) - N03H008					
	1.00 - 70B - N03H001					

ACCESSORY DESCRIPTION	
Model No	Description
N01F034	Riello 40-BF3 Oil Burner for 5" (127mm) Breech Models (Direct Vent) for OLR105 & OLF105
N01F035	Riello 40-BF5 Oil Burner for 6" (152mm) Breech Models (Direct Vent) for OLR160
N01F049	Riello 40-F3 Oil Burner for 5" (127mm) Breech Models (Chimney Vent) for OLR105 & OLF105
N01F050	Riello 40-F5 Oil Burner for 6" (152mm) Breech Models (Chimney Vent) for OLR160
N01J038	Beckett AFII-85 Oil Burner for 5" (127mm) Breech Models (Direct Vent) for OLR105 & OLF105
N01J039	Beckett AFG-F3 Oil Burner for 6" (152mm) Breech Models (Chimney Vent) for OLR160
N01J040	Beckett AFG-F0 Oil Burner for 5" (127mm) Breech Models (Chimney Vent) for OLR105 & OLF105
N01J041	Beckett AFII-150 Oil Burner for 6" (152mm) Breech Models (Direct Vent) for OLR160
N03F014	Nozzle, Oil Burner, Delavan, 0.5 GPH/60°A for OLR105 & OLF105
N03F015	Nozzle, Oil Burner, Delavan, 0.5 GPH/70° A for OLR105 & OLF105
N03F017	Nozzle, Oil Burner, Delavan, 0.6 GPH/60°A for OLR105 & OLF105
N03F024	Nozzle, Oil Burner, Delavan, 0.75 GPH/70° A for OLR160
N03F027	Nozzle, Oil Burner, Delavan, 0.4 GPH/60°A for OLR105 & OLF105
N03G010	Nozzle, Oil Burner, Delavan, 0.5 GPH/60° W for OLR105 & OLF105
N03G011	Nozzle, Oil Burner, Delavan, 0.6 GPH/60° W for OLR105 & OLF105
N03H001	Nozzle, Oil Burner, Delavan, 1.0 GPH/70° B for OLR160
N03H008	Nozzle, Oil Burner, Delavan, 0.85 GPH/70° B for OLR160
N03H014	Nozzle, Oil Burner, Delavan, 0.6 GPH/70° B for OLR105 & OLF105
CAD1	Flexible Air Duct - 25' (7.6m) Class 1 for CAS2B for OLR105 & OLF105
CAS2B	Outside Air Intake Kit, Beckett Direct Vent Burners for OLR105 & OLF105
C7001025	Riello Two-pipe Change over Kit for OLR105 & OLF105
IFV315	3" Ø x 15' (76mm x 4.6m) Insulated Flex Vent for 5" (127mm) Breech Models for OLR105 & OLF105
IFV323	3" Ø x 23' (76mm x 7m) Insulated Flex Vent for 5" (127mm) Breech Models for OLR105 & OLF105
IFV415	4" Ø x 15' (102mm x 4.6m) Insulated Flex Vent for 6" Breech Models for OLR160
IFV423	4" Ø x 23' (102mm x 7m) Insulated Flex Vent for 6" (152mm) Breech Models for OLR160
IFV430	4" Ø x 30' (102mm x 9m) Insulated Flex Vent for 5" (127mm) Breech Models for OLR160
LBVEST1M	Vestibule Kit for 5" (127mm) Breech Lo-Boy Models for OLR105 & OLF105
LBVEST2M	Vestibule Kit for 6" (152mm) Breech Lo-Boy Models for OLR160
OCA20	Cased Coil Adapter 20" x 20" (508 x 508mm) for OLR105 & OLF105
OCA24	Cased Coil Adapter 20" x 24" (508 x 610mm) for OLR160
VTK1	Vent Terminal Kit for 5" (127mm) Breech Models for OLR105 & OLF105
VTK2	Vent Terminal Kit for 6" (152mm) Breech Models for OLR160
Z08F001 +	7 Micron Media Filter and Head
Z08F004 +	7 Micron Media Filter Replacement

+ Must be ordered from Service Parts