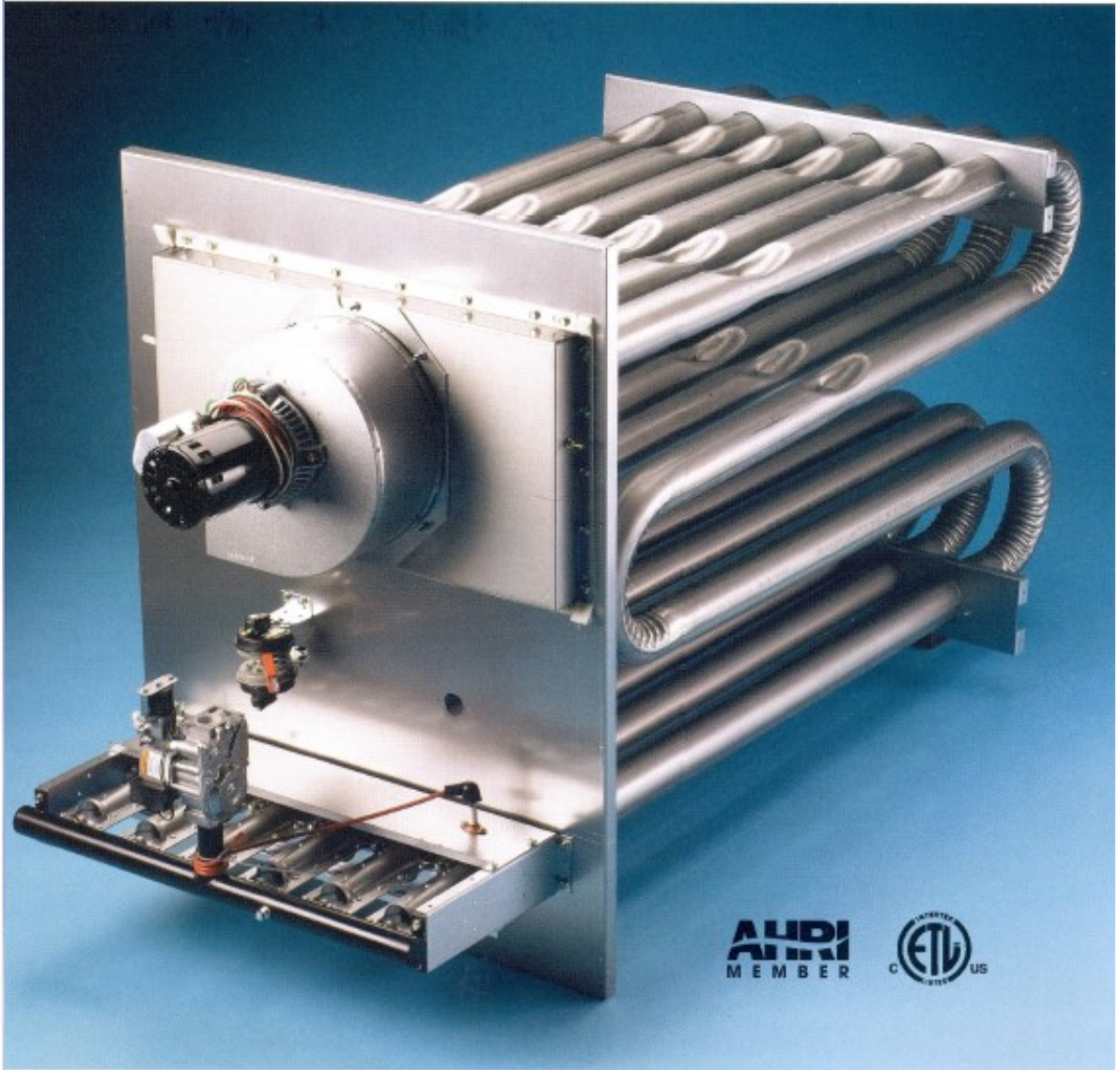


Technical Brochure – Heat Module Series



Beckett Gas, Inc.
Commercial Systems Division

Indirect Gas-Fired Furnace Heat Modules



www.beckettgas.com

Beckett Indirect Gas-Fired Furnace Heat Modules

FEATURES AND BENEFITS

This heat module series provides application flexibility and the latest tubular heat exchanger technology.

•Slide-in design for easy installation

Module configurations allow flexibility for airflow direction and cabinet sizing. Heat exchanger supports are integral to the assembly.

•Installation in series as well as in-line

Multiple modules can be applied in vertical or horizontal airflow configurations for higher Btuh input capacities or better duct coverage.

•Higher efficiency, lower internal static pressure

•Extended operational life

Tubes expand into collector box so welding is eliminated.

•Accommodate wide range of gas inputs

From 75,000 to 400,000 Btuh, natural or propane gases.

•Patented tubular heat exchanger

Featuring integral formed dimple, choice of tube materials- aluminized steel, 409SS, 439SS, 304SS - and a 10 year warranty on stainless-steel-tube designs.

•Direct ignition control system with LED Flash Fault Indicator

Features lockout with auto reset (30-sec. pre-purge) three ignition trials (60-sec. purge between trials), 60-sec. post purge at end of each operating cycle, and auto reset one hour after lockout.

•Additional standard-feature advantages

Modules are standard-equipped with patented inshot gas burners and two-stage gas control.

•Pre-wired control package

Includes draft inducer, ignition control, gas valve, spark igniter, flame sensor, air switch and flame rollout switches - opening provided for disc-type high limit. 115V, 230V, 50Hz or 60Hz.

CONTROL OPTIONS

•**NS** - Single-stage operation with single-stage valve and draft inducer.

•**TS** - Two-stage gas valve with two-speed draft inducer operation (high fire 100%, low fire 55%).

•**MD** - Full electronic modulation - 20% to 100%. Controls include modulating controller/amplifier with junction box, modulating gas valve.

•**MV** - Full electric modulation 20% to 100%. Constant efficiency throughout the modulation range using Beckett Gas controls.

•**SP** - Split manifold with 10 to 1 modulation.

These products are intended for installation by original equipment manufacturers of ETL listed heating equipment in duct cabinet Mounted applications.

Beckett Gas, Inc.

Commercial Systems Division

AVAILABLE CONFIGURATIONS



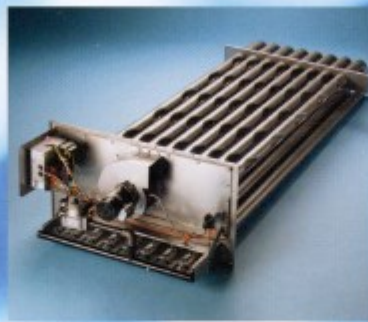
Typical four-pass

MODELS: HMA, HMD

INPUTS: from 75,000 to 500,000 Btuh

HORIZONTAL AIRFLOW:
entering from either side

VERTICAL AIRFLOW: when rotated 90°



Typical two-pass

MODELS: HMB, HMH

INPUTS: from 120,000 to 500,000 Btuh

VERTICAL AIRFLOW:
upflow or downflow

HORIZONTAL AIRFLOW:
when rotated 90°



Low-profile four-pass

MODEL: HMG

INPUTS: from 75,000 to 600,000 Btuh

VERTICAL AIRFLOW:
upflow or counterflow

SERIES SELECTION

Beckett's indirect gas-fired furnace heat module series is ETLIITS recognized, and is certified to ANSI Z83.8 Gas-fired Duct Furnace and z2147 Gas-Fired Central Furnace standards.

Eight series (defined by tube size, bend configuration and maximum Btuh input per tube) provide designer flexibility to optimize even custom applications.

HMA Series

150,000 to 500,000 Btuh

2.25" diameter tube

Four-pass configuration

50,000 Btuh per tube

HMB Series

200,000 to 500,000 Btuh

2.25" diameter tube

Two-pass configuration

50,000 Btuh per tube

HMD Series

75,000 to 200,000 Btuh

2.00" diameter tube

Four-pass configuration

25,000 Btuh per tube

HMG Series

75,000 to 600,000 Btuh

175" diameter tube

Four-pass configuration

25,000 Btuh per tube

HMH Series

120,000 to 240,000 Btuh

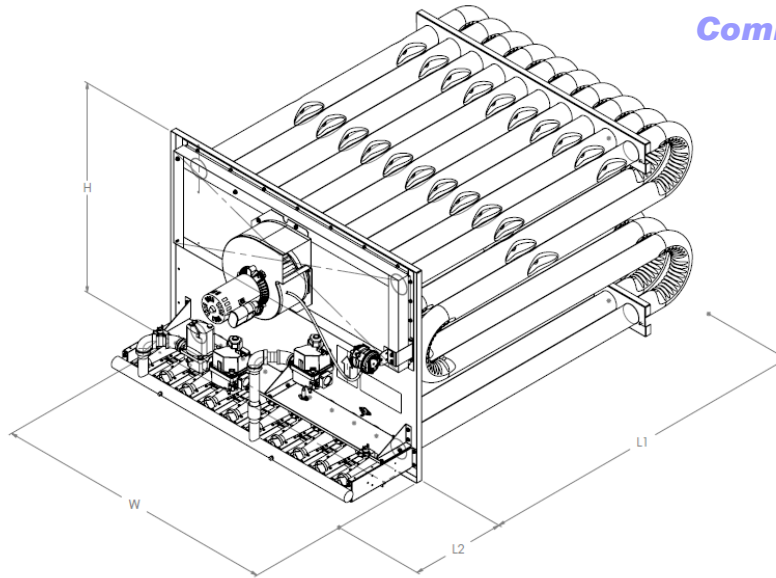
2.25" diameter tube

Two-pass configuration

30,000 Btuh per tube

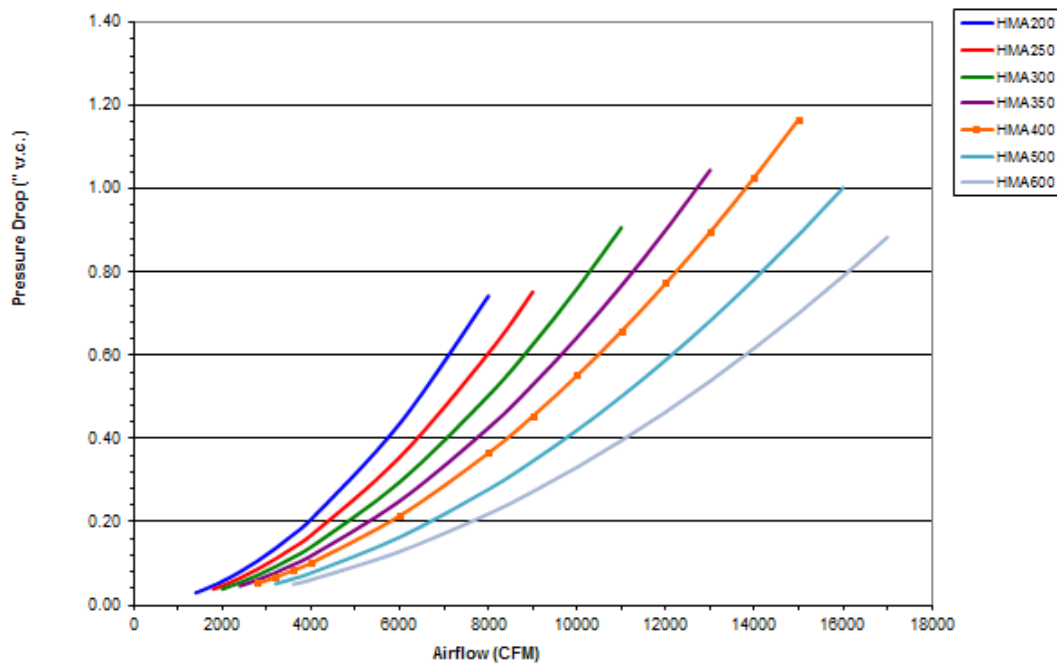
HMA Series Beckett Gas, Inc.

Commercial Systems Division



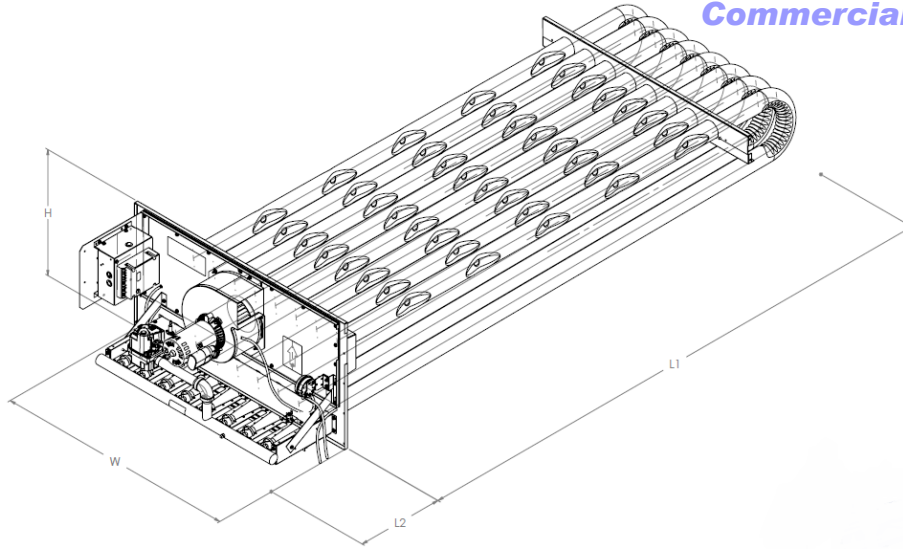
Model No.	L ₁ (in.)	H (in.)	W (in.)	L ₂ (in.)	# Of Tubes	Input (Btuh)	Output (Btuh)	Temp rise min (°F)	Temp rise max (°F)	Air flow min (cfm)	Air flow max (cfm)
HMA500	44	27	38.47	13	10	500,000	400,000	20	90	4115	18518
HMA400	44	27	33.06	13	8	400,000	320,000	20	90	3292	14815
HMA350	44	27	28.44	13	7	350,000	280,000	20	90	2881	12963
HMA300	44	27	26.58	13	6	300,000	240,000	20	90	2469	11111
HMA250	44	27	22.21	13	5	250,000	200,000	20	90	2058	9259
HMA200	44	27	18.97	13	4	200,000	160,000	20	90	1646	7407
HMA150	44	27	15.72	13	3	150,000	120,000	20	90	1235	5556

HMA Series Pressure Drop



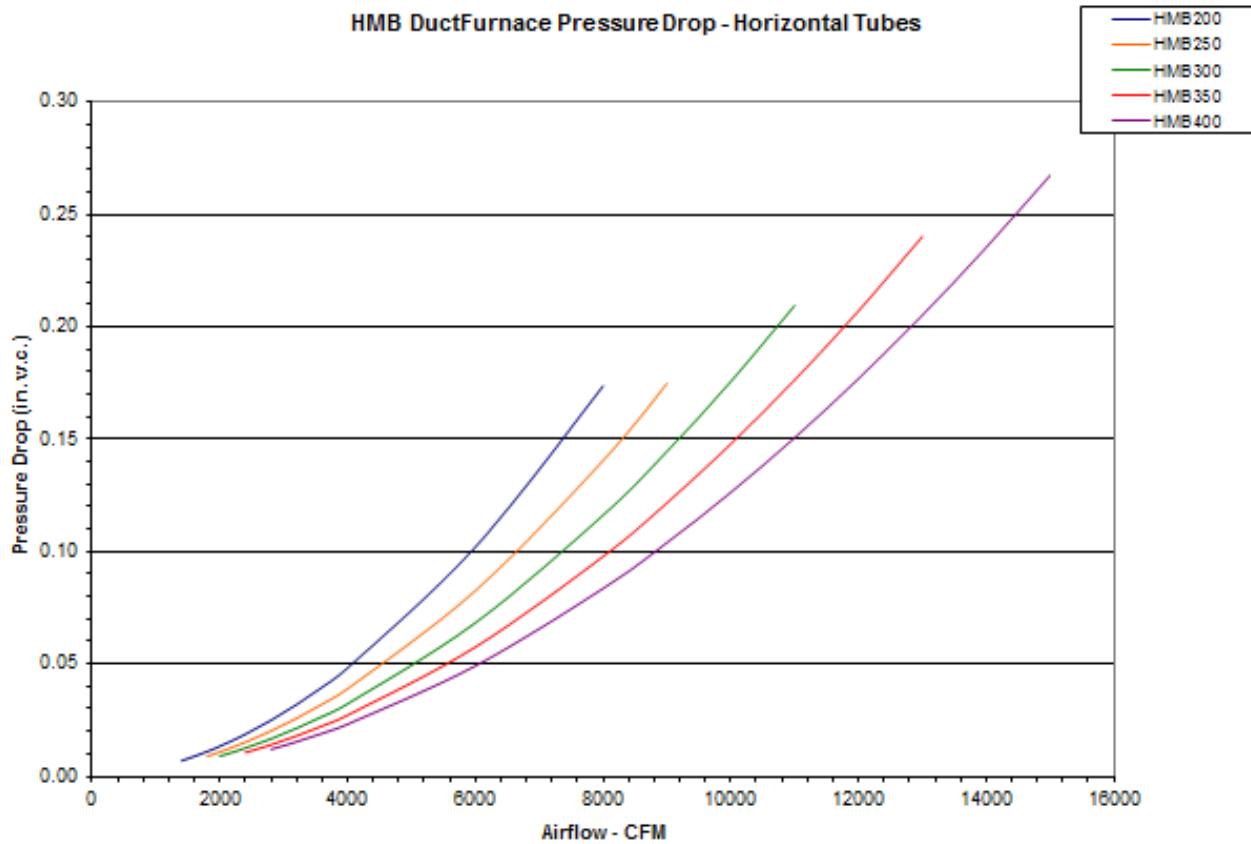
HMB Series Beckett Gas, Inc.

Commercial Systems Division



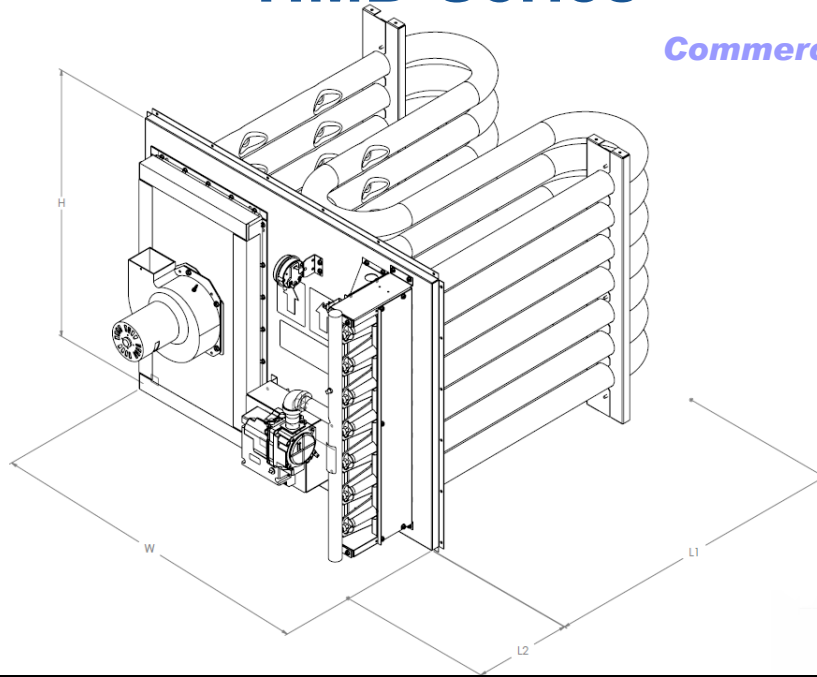
Model No.	L ₁ (in.)	W (in.)	H (in)	L ₂ (in.)	# Of Tubes	Input (Btuh)	Output (Btuh)	Temp rise min (°F)	Temp rise max (°F)	Air flow min (cfm)	Air flow max (cfm)
HMB500	76	39.84	17.5	13	10	500,000	400,000	20	90	4115	18518
HMB400	76	33.35	17.5	13	8	400,000	320,000	20	90	3292	14815
HMB350	76	30.11	17.5	13	7	350,000	280,000	20	90	2881	12963
HMB300	76	26.85	17.5	13	6	300,000	240,000	20	90	2469	11111
HMB250	76	22.85	17.5	13	5	250,000	200,000	20	90	2058	9259
HMB200	76	19.60	17.5	13	4	200,000	160,000	20	90	1646	7407

HMB DuctFurnace Pressure Drop - Horizontal Tubes



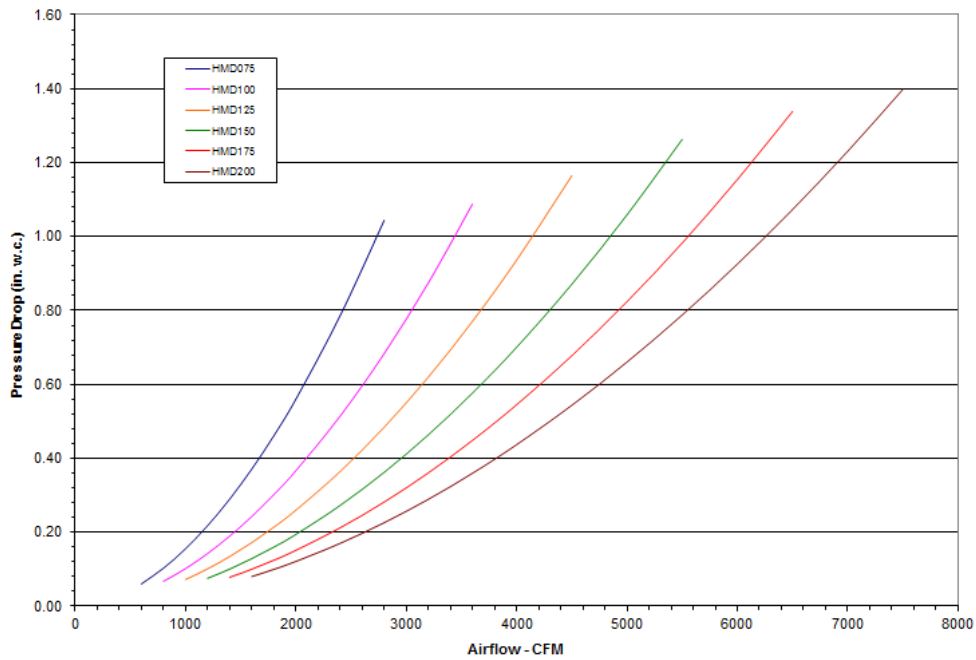
HMD Series Beckett Gas, Inc.

Commercial Systems Division



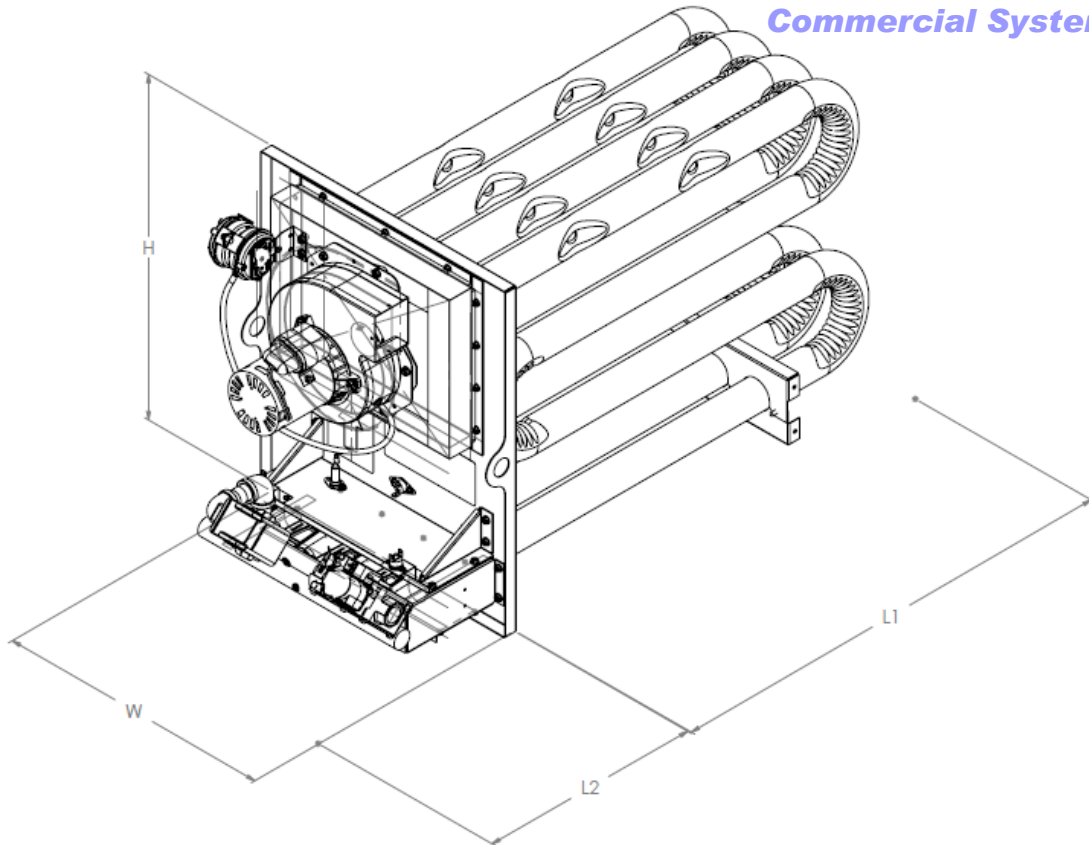
Model No.	L ₁ (in)	W (in)	H (in)	L ₂ (in)	# Of Tubes	Input (Btuh)	Output (Btuh)	Temp rise min (°F)	Temp rise max (°F)	Air flow min (cfm)	Air flow max (cfm)
HMD200	30	31.5	30.91	9	8	200,000	160,000	20	90	1646	7407
HMD175	30	31.5	25.5	9	7	175,000	140,000	20	90	1440	6481
HMD150	30	31.5	22.5	9	6	150,000	120,000	20	90	1235	5556
HMD125	30	31.5	19.5	9	5	125,000	100,000	20	90	1029	4630
HMD100	30	31.5	16.5	9	4	100,000	80,000	20	90	823	3704
HMD075	30	31.5	14	9	3	75,000	60,000	20	90	617	2778

HMD DuctFurnace Pressure Drop



HMG Series Beckett Gas, Inc.

Commercial Systems Division

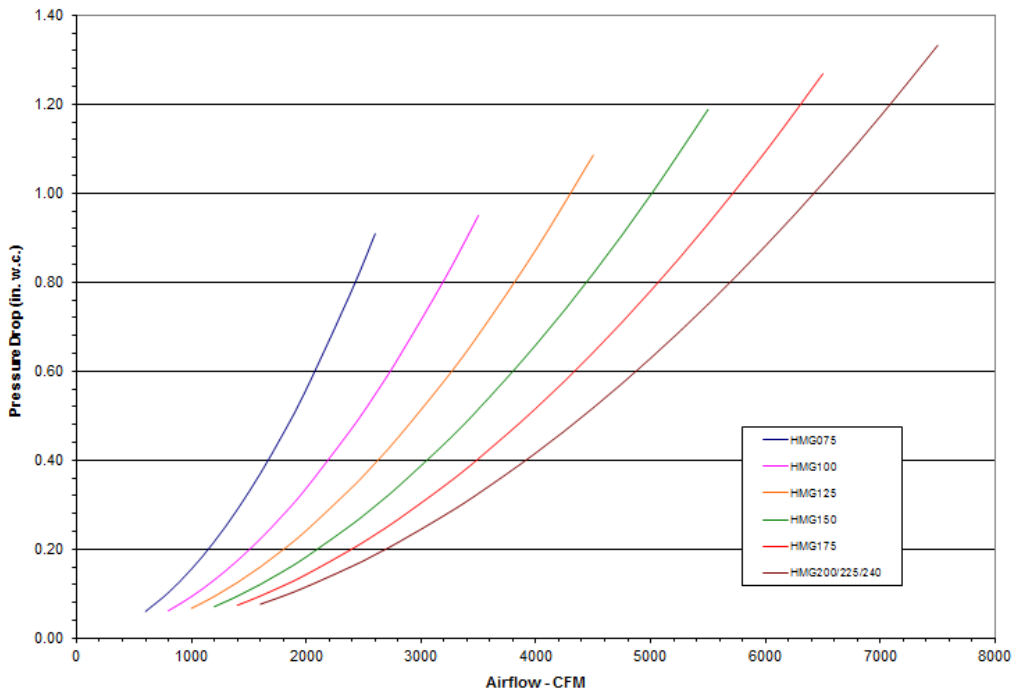


Model No.	L ₁ (in)	W (in)	H (in)	L ₂ (in)	# Of Tubes	Input (Btuh)	Output (Btuh)	Temp rise min (°F)	Temp rise max (°F)	Air flow min (cfm)	Air flow max (cfm)
HMG600	26.5	58.5	19.9	13	22	600,000	480,000	20	100	4444	22222
HMG500	26.5	52	19.9	13	17	500,000	400,000	20	100	3704	18519
HMG400	26.5	46.5	19.9	13	15	400,000	320,000	20	100	3704	14815
HMG375	26.5	46.5	19.9	13	15	375,000	300,000	20	100	3472	13889
HMG350	26.5	43.75	19.9	13	14	350,000	280,000	20	100	3241	12963
HMG325	26.5	41	19.9	13	13	325,000	260,000	20	100	3009	12037
HMG300	26.5	38.25	19.9	13	12	300,000	240,000	20	100	2778	11111
HMG275	26.5	35.5	19.9	13	11	275,000	220,000	20	100	2546	10185
HMG250	26.5	32.75	19.9	13	10	250,000	200,000	20	100	2315	9259
HMG225	26.5	30	19.9	13	9	225,000	180,000	20	100	2083	8333
HMG200	26.5	27.25	19.9	13	8	200,000	160,000	20	100	1852	7407
HMG175	26.5	24.50	19.9	13	7	175,000	140,000	20	100	1620	6481
HMG150	26.5	21.75	19.9	13	6	150,000	120,000	20	100	1389	5556
HMG125	26.5	19	19.9	13	5	125,000	100,000	20	100	1157	4630
HMG100	26.5	16.25	19.9	13	4	100,000	80,000	20	100	926	3704
HMG075	26.5	13.5	19.9	13	3	75,000	60,000	20	100	694	2278

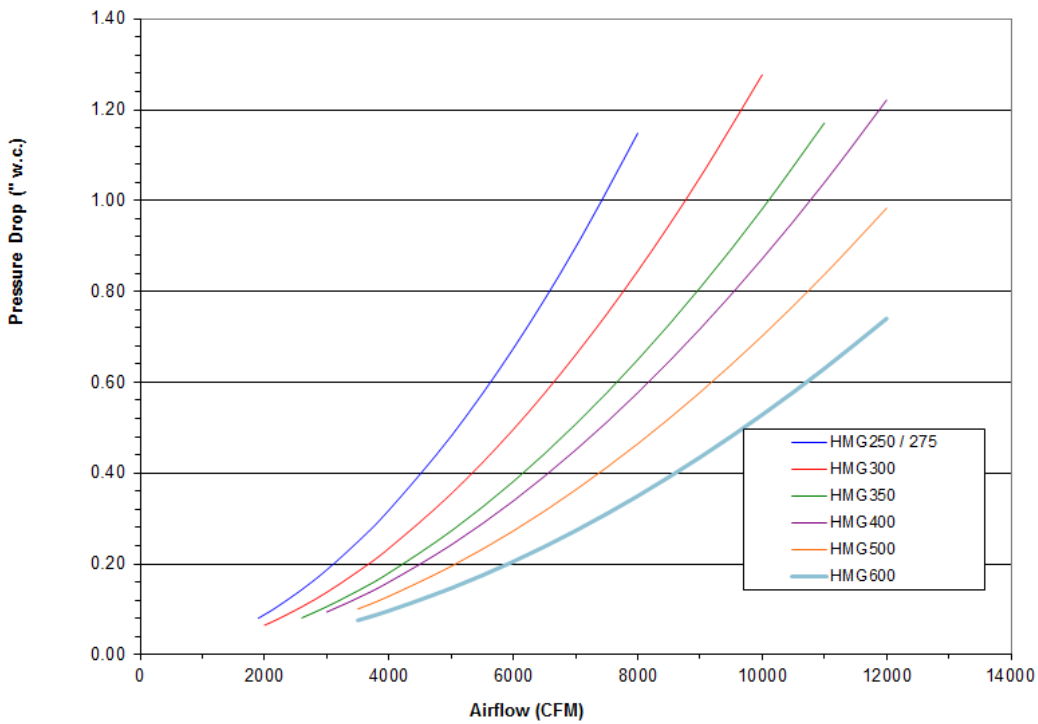
HMG Series Continued Beckett Gas, Inc.

Commercial Systems Division

HMG075-200 DuctFurnace Pressure Drop

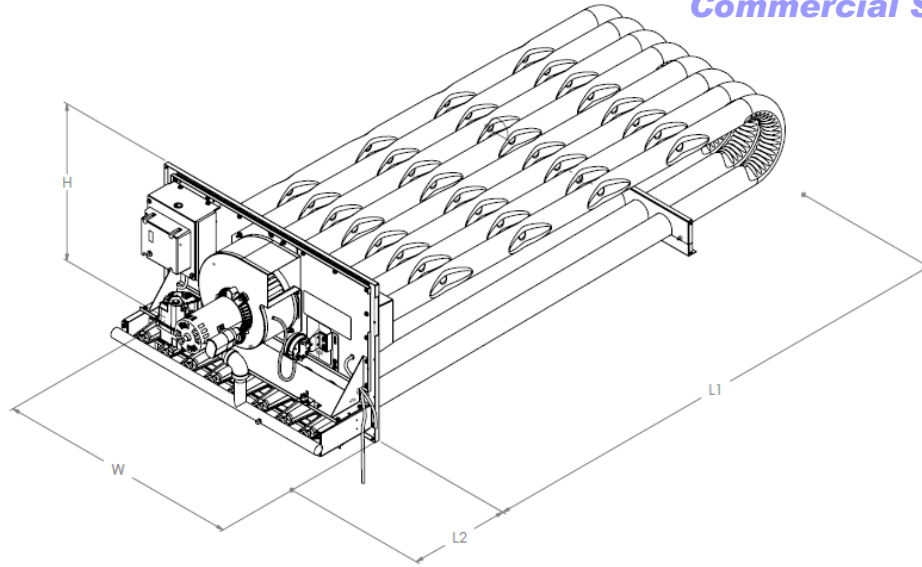


HMG 250 - 600 Series Pressure Drop



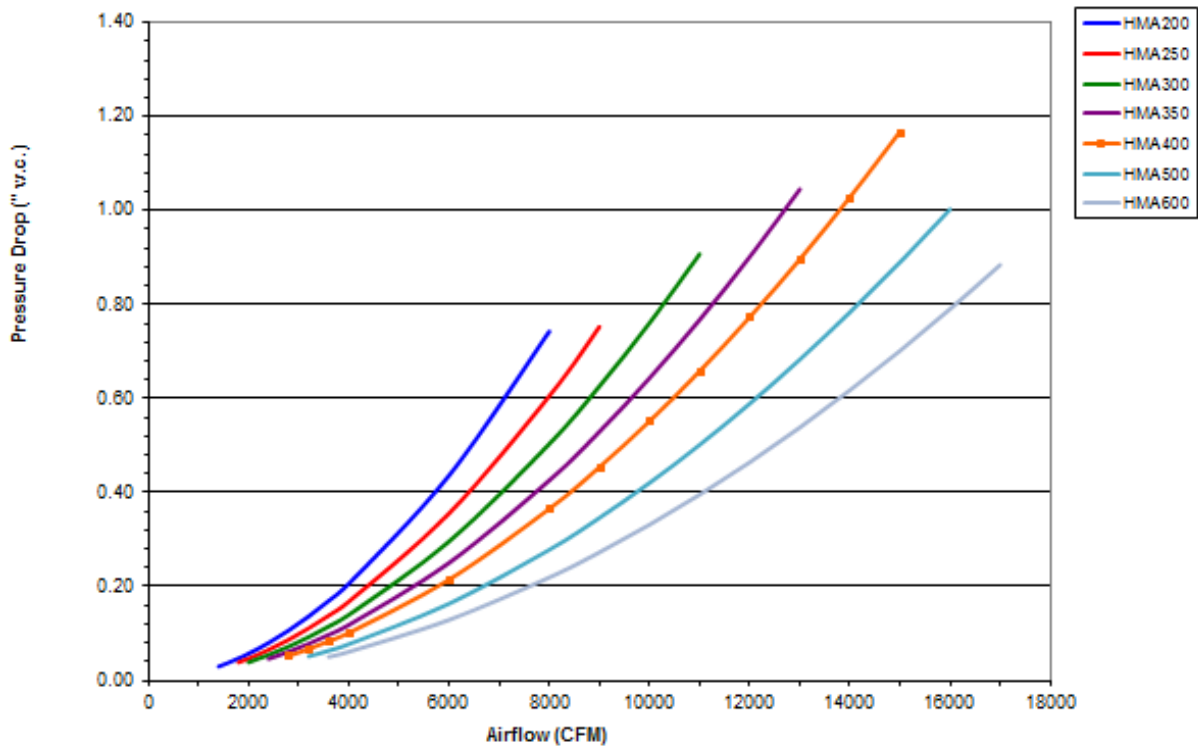
HMH Series

Beckett Gas, Inc.
Commercial Systems Division



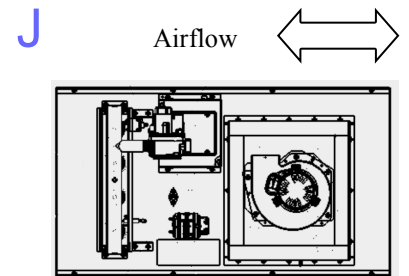
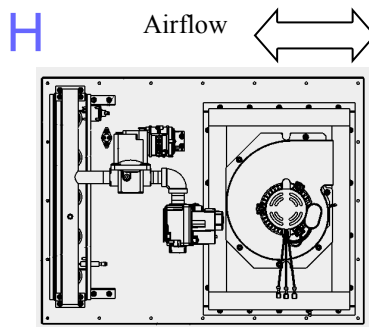
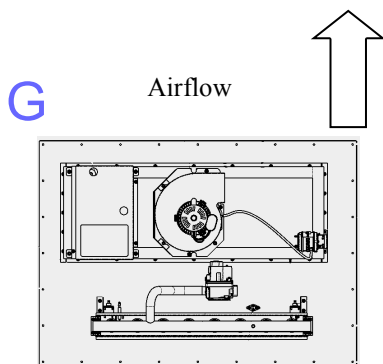
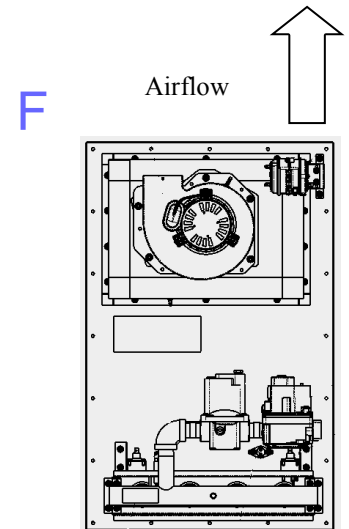
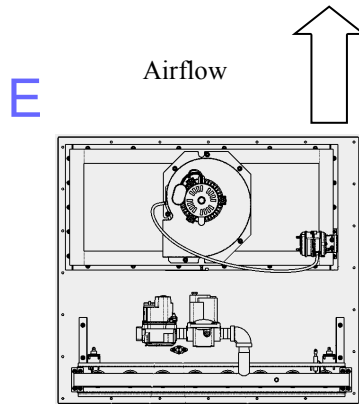
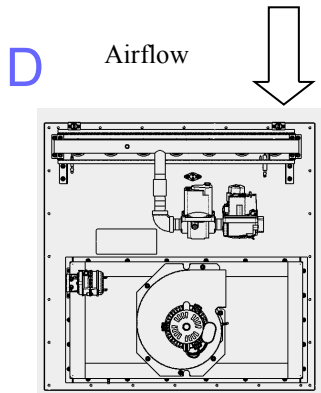
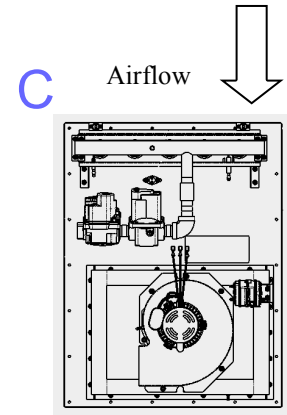
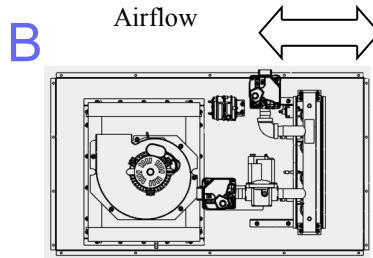
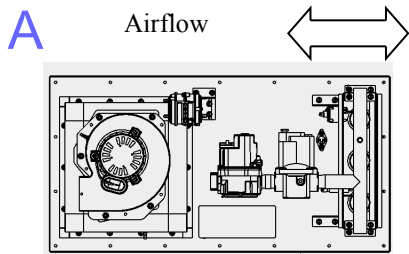
Model No.	L ₁ (in)	W (in)	H (in)	L ₂ (in)	# Of Tubes	Input (Btuh)	Output (Btuh)	Temp rise min (°F)	Temp rise max (°F)	Air flow min (cfm)	Air flow max (cfm)
HMH240	54.89	26.84	17.5	13	8	240,000	192,000	20	90	1975	8889
HMH210	54.89	23.59	17.5	13	7	210,000	168,000	20	90	1728	7778
HMH180	54.89	20.34	17.5	13	6	180,000	144,000	20	90	1481	6667
HMH150	54.89	17.09	17.5	13	5	150,000	120,000	20	90	1235	5556
HMH120	54.89	13.84	17.5	13	4	120,000	96,000	20	90	988	4444

HMA Series Pressure Drop



Flue Outlet Orientation

All configurations shown facing burner and draft inducer assemblies. Vertical configurations shown may have air flow to provide the lowest tube temperatures. This is shown in the figures below.





**A dedication to great work leads to great growth.
Our history is proof of that.**

Beckett Gas, Inc. was formed in 1988 as part of a family of Beckett companies serving the HVAC market. Initially, our company was created to service the furnace and boiler markets with ported linear style gas burners. Today, through strategic acquisitions and aggressive research and development, we continue to grow - both expanding our product portfolio and the markets we serve. All the while, we continue to provide our customers the utmost in quality products and unsurpassed customer service. Beyond the customer relationships we maintain, our state-of-the-art manufacturing facility is another strong testament to our growth. Our commitment to you is to keep developing products that raise the industry bar for innovation and quality.

Looking for design input? Engineering support? Let us know how we can help with your next project. Contact your Beckett Gas representative at bgimain@beckettcorp.com or call 440.327.3141/800.332.4244.



**Commercial Systems Division
21819 Royalton Road
Strongsville, OH 44149
www.beckettgas.com**

