

AIREDALE

air conditioning for every environment

I and O Series Gas-Fired Indoor and Outdoor Duct Furnaces

75,000 – 1,200,000 BTU/h

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Airedale offers a complete line of both indoor and outdoor heating and ventilating equipment including gas-fired gravity vented, power vented, and separated combustion duct furnace/make-up air units. Depending on the requirements of the application, the duct furnace can be ordered either by itself, or with a blower section. If ordered with a blower section, a cooling coil section and/or a downturn can also be added to the configuration. With these configurations, the units can satisfy a building's heating, make-up air, cooling, or ventilating requirements.

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Efficient and Cost Effective Solution for Make-Up Air

Airedale duct furnace/make-up air units were designed for use as a building's heating, ventilating, cooling and/or make-up air system.

Available in 17 gravity, separated combustion, or power vented model sizes, the units cover a wide variety of applications. They have input ranges from 75,000 to 1,200,000 Btu/Hr and can operate on either natural or propane gas. The airflow ranges from 556 to 14,500 CFM and the airflow direction can be specified when ordering the unit. The unit can be provided with a cooling coil section with either a factory installed DX or chilled water cooling coil or the coil can be provided by others.



Standard Features Duct Furnaces

- > CSA certification for use in the US and Canada
- > ETL certification
- > 80% thermally efficient
- > 115V control step down transformer with 24V gas controls
- > Aluminized steel heat exchanger
- > Aluminized steel burner with stainless steel separator strip
- > Certified to 3.0" W.C. external static pressure
- > Right side access to burner and gas controls (when looking into the discharge) with slide-out burner drawer
- > High limit safety control
- > Blocked vent safety switch (Gravity Vented Indoor)
- > Power exhaust motor (Power Vented Models)
- > 20 gauge aluminized steel cabinet (Indoor)
- > 18 gauge aluminized steel cabinet with a baked-on polyester powder paint finish on exterior casing parts (Outdoor)
- > Separate electrical, venting, and gas control access with fully gasketed doors (Except Gravity Vented Indoor)
- > Single stage standing pilot control system for operation on natural gas (Gravity Vented Indoor)
- > Single stage intermittent pilot with continuous retry control system for operation on natural gas (Except Gravity Vented Indoor)
- > Control terminal board (Gravity Vented Indoor)
- > Separate line voltage and low voltage terminal strips (Except Gravity Vented Indoor)
- > Side or bottom gas and electrical connection access
- > Combination combustion air/exhaust vent cap (Separated Combustion)
- > Rail type mounting base for slab installation (Except Gravity Vented Indoor)

Standard Features System Unit

- > All items listed under Duct Furnaces
- > ETL certification of the entire system unit
- > 18 gauge aluminized steel blower cabinet with a baked-on polyester powder paint finish on blower and cooling cabinet exterior casing parts
- > 115V step down transformer
- > Adjustable belt drive
- > Blower performance up to 3.0" W.C. external static pressure
- > 1" insulation for blower, cooling cabinet, and downturn plenum sections (Outdoor)

Duct Furnace Optional Features – Factory Installed

- > 409 stainless steel heat exchanger, burner drip pan
- > Intermittent pilot control system with single-stage, two-stage, mechanical modulation, and electronic modulation controls for either natural or propane gas
- > Building management compatible gas controls
- > Multiple furnace electronic amplifier for controlling up to 4 duct furnaces with one discharge air sensor
- > Step down transformers
- > Left side access to burner and gas controls
- > Adjustable differential air flow proving system
- > Fan delay timer
- > High and/or low gas pressure switches
- > Manual reset high limit switch
- > Timed freeze protection
- > Fire stat
- > Control relay - double pole, double throw
- > Installed thermostats
- > Separate line voltage and low voltage terminal strips (Gravity Vented Indoor)

System Unit Optional Features – Factory Installed

- > All optional duct furnace features
- > Downturn plenum section (Outdoor)
- > DX or chilled water section w/ or w/o cooling coil
- > Open drip proof, totally-enclosed, high efficiency, and two speed motors
- > Variable frequency drive with building pressure sensing or two speed
- > Low voltage motor starters and contactors
- > 1" or 2" permanent, 2" disposable, and 2" FARR® 30/30 filters
- > Double wall construction (Model dependent)
- > Dead-front disconnect switches
- > Two position, modulating, building pressure sensing, three position, building management actuators
- > Economizer warm-up packages
- > Discharge air dampers (Downturn plenum units only)
- > Left side access to blower, burner, and gas controls
- > Mild temperature thermostat
- > Blower door interlock switch
- > Convenience outlet
- > Evaporative cooling section (Outdoor)
- > Blower and motor vibration isolation
- > Pillow block bearings
- > Extended grease lines
- > Burner/blower/damper service switches
- > 6, 10, or 14 point circuit analyzer
- > Electronic temperature control for 2, 3, 4 or 6 stage

Typical Applications



Performance Data - I and O Series Gas-Fired Indoor and Outdoor Duct Furnaces

Model Size	Btu/Hr Input ^①	Btu/Hr Output ^①	Blower Style (Digit Letter)	Max. Temp. Rise (°F)	Min. Rise (°F)	Max. CFM ^②	Min. CFM ^{②,③}
75	75,000	60,000	A or B	100	28	1980	556
	75,000	60,000	C or D	100	20	2778	556
100	100,000	80,000	C or D	100	21	3450	741
	100,000	80,000	E or F	85	20	3704	875
125	125,000	100,000	C or D	100	27	3450	926
	125,000	100,000	E or F	100	20	4630	926
150	150,000	120,000	C or D	100	33	3350	1111
	150,000	120,000	E or F	100	20	5556	1111
175	175,000	140,000	C or D	100	39	3350	1296
	175,000	140,000	E or F	100	23	5556	1296
200	200,000	160,000	C or D	100	44	3400	1481
	200,000	160,000	E or F	85	28	5250	1750
	200,000	160,000	G or H	85	23	6500	1750
225	225,000	180,000	C or D	100	49	3400	1667
	225,000	180,000	E or F	95	32	5250	1750
	225,000	180,000	G or H	95	26	6500	1750
250	250,000	200,000	E or F	100	31	6000	1852
	250,000	200,000	G or H	100	26	7250	1852
	250,000	200,000	I, J, or K	96	20	9259	1925
300	300,000	240,000	E or F	100	37	6000	2222
	300,000	240,000	G or H	100	31	7250	2222
	300,000	240,000	I, J, or K	100	20	11111	2222
350	350,000	280,000	E or F	100	45	5700	2593
	350,000	280,000	G or H	100	37	7000	2593
	350,000	280,000	I, J, or K	100	22	12000	2593
400	400,000	320,000	E or F	100	52	5700	2963
	400,000	320,000	G or H	100	42	7000	2963
	400,000	320,000	I, J, or K	100	25	12000	2963
500	500,000	400,000	G or H	120	53	7000	3086
	500,000	400,000	I, J, or K	120	40	9259	3086
	500,000	400,000	L	120	40	9259	3086
600	600,000	480,000	G or H	120	63	7000	3704
	600,000	480,000	I, J, or K	120	40	11111	3704
	600,000	480,000	L	120	40	11111	3704
700	700,000	560,000	G or H	120	76	6850	4321
	700,000	560,000	I, J, or K	120	40	12963	4321
	700,000	560,000	L	120	40	12963	4321
800	800,000	640,000	G or H	120	87	6850	4938
	800,000	640,000	I, J, or K	120	46	13000	4938
	800,000	640,000	L	120	41	14500	4938
1050	1,050,000	840,000	I, J, or K	120	60	12963	6481
	1,050,000	840,000	L	120	60	12963	6481
1200	1,200,000	960,000	I, J, or K	120	68	13000	7407
	1,200,000	960,000	L	120	63	14500	7407

① Ratings are shown for elevations up to 2000 ft. For higher elevations the input rating should be reduced at the rate of 4% for each 1000 feet above sea level. For Canada, in elevations between 2000 and 4500 feet, the unit must be derated to 90% of the rating listed above.

② For Cooling capacities refer to AIR 5-173.

③ For Variable Air Movement Applications, refer to AIR 5-173.



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