L. J. Wing Mfg. Co.

Branch Offices in Principal Cities

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Factory: NEWARK, N. J.

Manufacturers of Wing Featherweight Unit Heaters, Wing Turbine and Motor Driven Blowers, Wing-Scruplex Fans and Exhausters

WING FEATHERWEIGHT UNIT HEATERS

The **Wing Featherweight Unit Heater**, expressly designed for overhead installation, makes available for any industrial building a heating system that leaves all floor and wall space absolutely unobstructed. The success of this system has been proven by the satisfactory operation of several hundred units in industrial buildings of every kind and description.

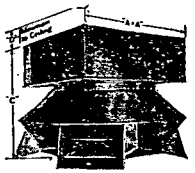
The installation of **Wing Featherweight Unit Heaters** is extremely simple, due to their light weight and small dimensions. For instance, a unit equal in heating effect to 12,000 sq. ft. of direct radiation, weighs only 332 pounds. A few advantages attending the installation of **Wing Featherweight Unit Heaters** may be briefly summarized as follows:

The heated air from the units, located at or near the ceiling or roof, is delivered directly downward toward the floor, heating the working level first. Chilled areas, caused by opening of doors, are almost instantly brought back to normal temperature by this downward method of heating.

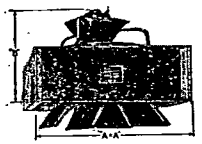
Since the air recirculated by the heaters is taken from the upper spaces and delivered to the lower levels, it is evident that an active circulation of air from the ceiling to the floor is continuously maintained and that, therefore, excessive heat is not allowed to accumulate in the upper spaces, as is the case with any system of heating that allows the heat to rise to the ceiling immediately, as it does in the case of direct radiation.

The steam and return lines are carried entirely overhead, eliminating costly pipe trenches which are necessary when radiation is placed at or near the floor.

All vertical type heaters are furnished with ball bearing motors that do not require attention more than once a heating season.



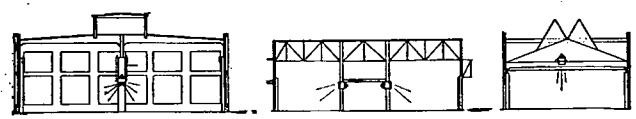
Low Ceiling Type

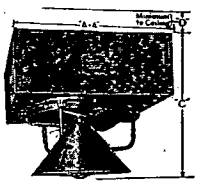


High Ceiling Type

METHODS OF INSTALLATION

The cuts show three different methods of installation, the units in each case being located well above the head line, out of the way. The third illustration shows the high ceiling type heater installed thirty feet from the floor above a traveling crane. The column of heated air leaves the heater with sufficient velocity to strike the floor with considerable force from this point, but by the aid of adjustable diffusers the column is divided and directed so that no objectionable velocity is felt at the head line. The best and most economical installation of **Wing Featherweight Unit Heaters** is when they are placed close to the roof or ceiling.

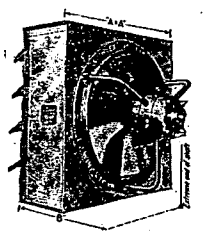




Medium Ceiling Type

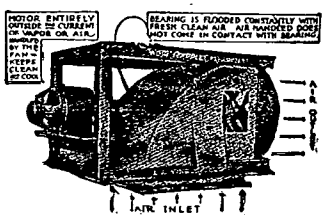
Condensed Table of Engineering Data

Unit Size	"AxA" in.	B in.	C in.	D in.	Air c.f.m.	Motor hp.	Temperature Room	Temperature Leaving	B.t.u. per Hr. Available	Approx. Shipping Weight Lbs.
13-4-12	19¾	25	25	6	1150	⅛	60	110	69,500	185
17-3-12	22¼	27½	27½	6	1950	⅛	60	110	96,900	212
22-3-12	27¾	27¼	27¼	6	3200	⅛	60	112	162,000	270
22-4-12	27¾	27¼	27¼	6	2800	⅛	60	122	169,000	280
22-5-12	27¾	27¼	27¼	6	2600	⅛	60	133	180,000	288
25-4-12	32¾	28¾	28¾	7	4800	½	60	122	289,500	320
25-5-12	32¾	28¾	28¾	7	4500	½	60	133	311,400	332
30-4-85	40⅛	37¼	37¼	8	6900	1	60	122	416,000	360
30-5-85	40⅛	37¼	37¼	8	6500	1	60	133	450,000	365
36-4-85	46⅛	39⅞	39⅞	8	9600	2	60	122	579,000	504
36-5-85	46⅛	39⅞	39⅞	8	9000	2	60	133	623,000	528



Horizontal Type

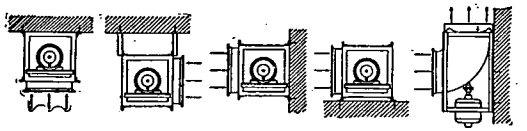
Space does not permit complete table for other room temperatures but this data will be gladly furnished on application.



Wing-Scruplex Exhauster

WING-SCRUPLEX EXHAUSTERS

Wing Scruplex Exhausters consist of the highly efficient "screw propeller" fan and cased in appropriate manner with a motor on the outside where it is clean, cool and easy of access. They are used in duct work where the resistance is low and being designed in the form of an elbow fit snugly in any line. The accompanying diagrams show the methods of installation.



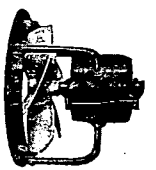
Bolted directly to Ceiling | *Hung from Ceiling* | *Bolted directly to Side Wall* | *Bolted to Floor or Foundation* | *Vertical Bolted to Side Wall*

"WING-SCRUPLEX" EXHAUSTERS

Proper Selection of Exhausters—Where particularly quiet operation is desired, as in offices, residences, hospital wards, churches theatres, etc., use lowest speeds in all sizes. For toilet rooms, laboratories, motion picture booths, stock-rooms, etc., use any speed in sizes 1 and 2; low and medium speeds in all other sizes. In industrial plants, hotel and restaurant kitchens, engine-rooms, workshops, etc., use any speeds.

The accompanying table gives performances at static pressures up to ½ in. Complete table up to 1 in. static on request.

Size	Inlet Sq. In.	Outlet Round. In.	Speed R. p. m.	Free Air Cu. f. m.	Free Air Hp.	.15 in. Cu. f. m.	.15 in. Hp.	.25 in. Cu. f. m.	.25 in. Hp.	.40 in. Cu. f. m.	.40 in. Hp.	.50 in. Cu. f. m.	.50 in. Hp.
1-A	10	10½	1750	850	0.052	630	0.054	330	0.060	.....	.....	.....	.....
2-A	13½	14⅛	1150	1440	0.060	950	0.069	395	0.090	.....	.....	.....	.....
2-B	13½	14⅛	1750	2050	0.195	1895	0.208	1695	0.216	1155	0.248	750	0.285
3-S	16¾	17⅜	850	2130	0.090	1250	0.110	.....	.....	.....	.....	.....	.....
3-A	16¾	17⅜	1150	2700	0.180	2150	0.195	1550	0.221	.....	.....	.....	.....
3-C	16¾	17⅜	1750	4000	0.600	3720	0.635	3510	0.655	3150	0.700	2810	0.720
4-S	21	21¾	850	2850	0.100	2200	0.125	1610	0.150	.....	.....	.....	.....
4-A	21	21¾	1150	3575	0.170	3150	0.200	2775	0.220	1950	0.245	1550	0.280
4-C	21	21¾	1750	5400	0.540	5160	0.600	4990	0.650	4670	0.710	4440	0.750
5-A	25	25	1150	5200	0.330	4720	0.380	4250	0.440	3300	0.530	2610	0.600
5-B	25	25	1750	8000	1.330	7740	1.360	7540	1.400	7175	1.480	6900	1.540
6-A	30	30	600	5500	0.210	3725	0.250	2375	0.330	.....	.....	.....	.....
6-B	30	30	850	7400	0.550	6280	0.600	5450	0.740	4000	0.830	3400	0.960
6-C	30	30	1150	10250	1.500	9520	1.550	8950	1.570	8000	1.620	7340	1.760



Wing-Scruplex Fan

WING-SCRUPLEX FANS

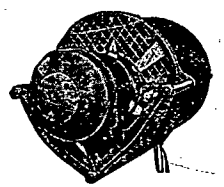
Wing Scruplex Fans are built in the following sizes: 10 in., 13 in., 17 in., 22 in., 25 in., 30 in., 36 in., 42 in., 54 in., and 60 in. Capacities from 950 C. F. M. to 33,000 C. F. M. Up to 25 in. diameter, propellers are made of cast aluminum alloy while the larger sizes are of pressed steel.

WING TYPE E M MOTOR DRIVEN BLOWER

Wing motor-driven Blowers are installed in heating boilers so that low cost Buckwheat coal can be burned with great savings in fuel bills and with better heating results. They are also used in industrial plants where motor drive is preferred to turbine drive.

The Wing E M Blower is a simple compact unit of motor, fan, and casing, of the same general design as the Wing Turbine Blower, the first individual forced draft fan blower ever built. Where Wing units cannot be set directly into the brick base of the boiler, they are equipped with feet or base and mounted to the floor with the discharge connected to the ashpit by a short sheet metal duct.

Ask for Bulletin 36

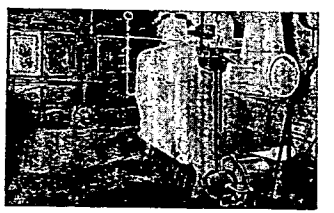


Type E M Blower

Motors are fully enclosed and dustproof. Because of this feature they stand up for years in the dusty atmosphere of boiler rooms without repair. Another feature of prime importance is variable speed control; this permits of regulation without the use of dampers and saves power.

Wing Blowers are cutting down fuel bills in hundreds of schools, apartment houses, lofts, hotels, churches and institutions throughout the country. Booklet 36 describes Wing motor-driven units.

Information on Wing turbine-driven units in Bulletin 77.



Typical installation in a New York apartment house where the use of Buckwheat coal in place of domestic sizes is saving the owner a large part of his previous fuel bill. In the right foreground is shown an E M Blower connecting directly into the rear end of a cast-iron hot water boiler; the E M Blower in the background serves the two steam heating boilers. Note how compact this installation is—a characteristic of Wing E M Blower layouts.