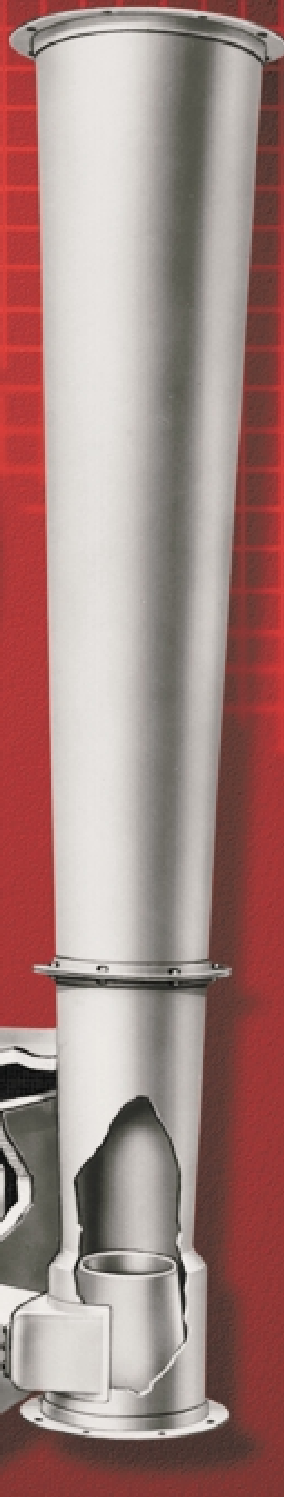
DRAFT INDUCERS

For creating an instant, reliable draft with boilers, furnaces, heaters, ovens, incinerators, kilns and other combustion equipment.

INDUSTRIAL EXHAUSTERS

For venting corrosive, adhesive, moisture and stock laden air, explosive fumes and gasses from all types of environments up to 2000˚F.



quickdraft

Draft Inducers

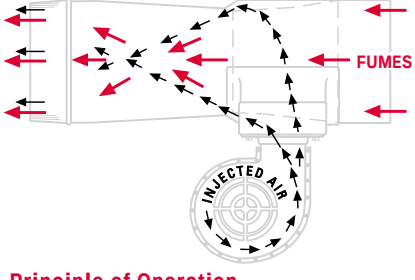
Motors, blades, bearings...in fact, all moving parts...are external to the air/gas/fume stream. Accordingly, they are all unaffected by smoke, abrasive ash, high temperatures or other adverse factors and conditions.

Quickdraft units create an instant draft for any type of heating, incineration or combustion equipment. By establishing the most favorable conditions for combustion, the draft inducers increase efficiency, reduce fuel consumption and enhance clean burning.

Problem Solvers

Where a Quickdraft draft inducer has not been installed initially, the units have been added to correct for these typical problems:

- Chimney flues which are too small, too short, or cold at start up.
- Flues which are too large, causing excessive cooling because of recirculation.
- Blow-backs on startup.
- Smoke pipes which are too long, or have too many elbows.
- Surrounding high hills, trees, or buildings which cause turbulence.
- Excessive smoke leakage around clean-out and inspection doors.
- Excessive soot buildup in passes and breeching.
- The necessity to increase chimney or stack capacity when larger equipment is installed.

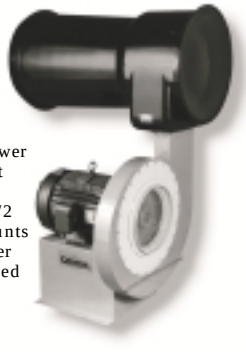


Principle of Operation

As depicted in the illustration, air is injected at high velocity through a plenum chamber controlled by a nozzle into an eductor tube. This action induces the flow of air/gas/fumes/vapors upstream from the tube. Flue gasses, for example, are then entrained with the injected air and exhausted into the chimney or stack. NOTE: There are no obstructions to flow in the Quickdraft eductor tube and all moving parts are external to the flow path.

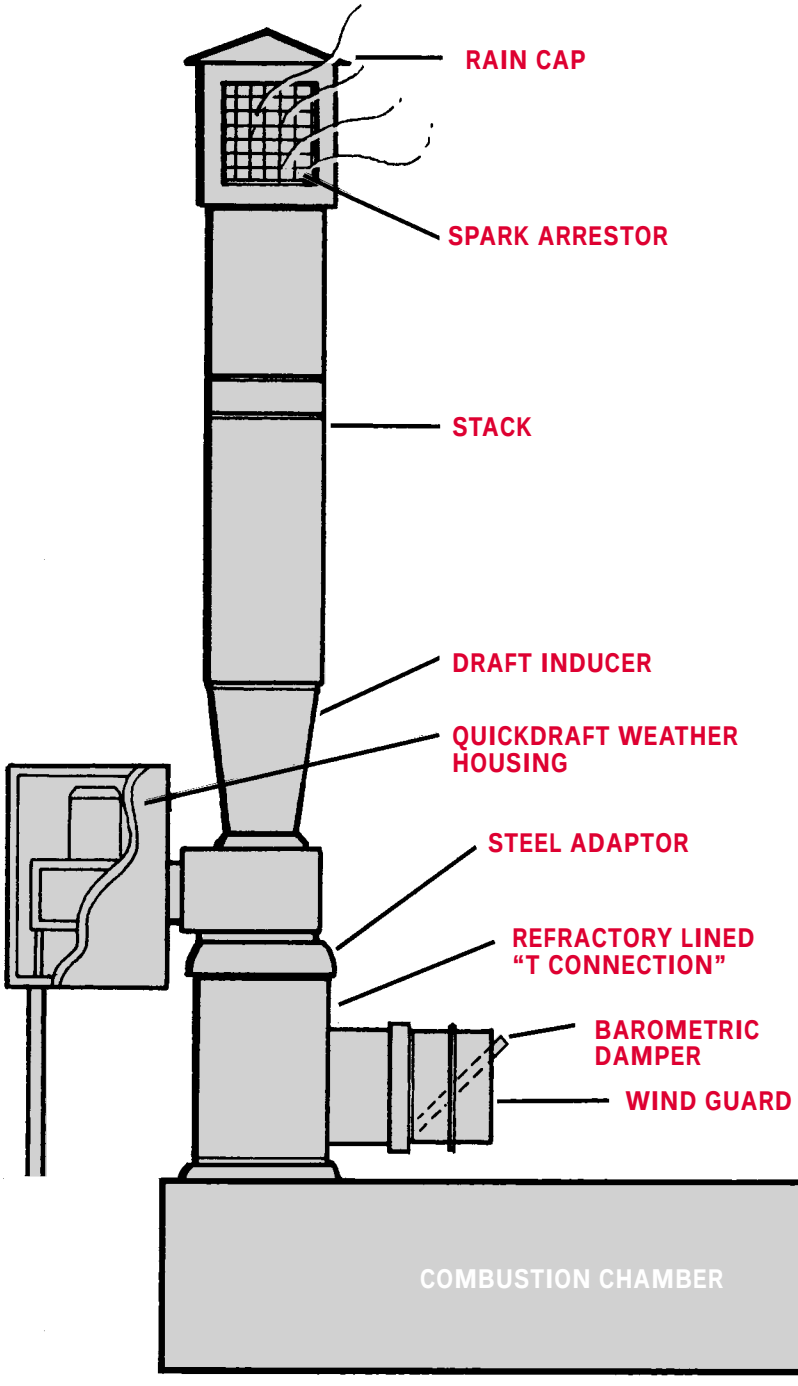
Standard
Models Q4 through Q10 including Q4S and Q8S use fractional horsepower motors with sleeve bearings, 115V, 1-phase, 60Hz.

Commercial
1/4 to 10 horsepower motors operating at 1725 rpm. Face mounted up to 7 1/2 HP. Power requirements adapted to the application.



Industrial
1/2 to 40 horsepower motors operating at 3450 rpm. Face mounted up to 7 1/2 HP. Motor base mounts over 7 1/2 HP. Power requirements adapted to the application.

Draft Inducer



Quickdraft units provide the means for promoting complete burning in virtually any combustion application. The capability of the draft inducer is engineered to overcome the resistance created by wet scrubbers, spray washers, afterburners or other devices added to the combustion process.

Range of Sizes

Quickdraft units are available in sizes ranging from 4" to 42" inlet diameter.

Custom Engineered Units

In addition to the Quickdraft Standard, Commercial and Industrial models, custom engineered units are available with motors from 1/30 HP to 500 HP.

Eductor Materials

Standard materials for the Quickdraft eductor include vitreous enameled steel and 304, 309 or 316 stainless steel. Other materials are available to meet application requirements.

Versatility

All models can be installed either horizontally or vertically. Quickdraft units can be installed either in-line with the flue, or on top of the stack.

Application Engineering

Quickdraft engineers provide expert assistance in determining the most effective solution to any draft inducing application.

Exhausters

Quickdraft Exhausters are used extensively to vent corrosive, adhesive or explosive fumes and gasses in all type of environments. The units are frequently employed in applications where temperatures may reach 2000 degrees F. To assure optimum performance and minimum cost, Quickdraft application engineers are available to select the equipment best suited to any specific project.

This cutaway illustration depicts a motor and blower assembly inside a weather-resistant housing. The assembly is connected to a Quickdraft eductor unit. The cutaway view of the eductor shows the nozzle around which air is injected. Note, the solid construction and simplicity of installation.

Installation

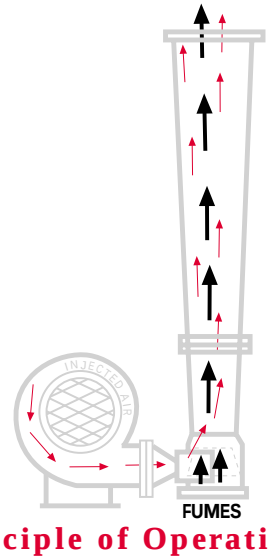
Quickdraft Exhausters are typically mounted on a roof and discharge to the atmosphere. A wide variety of weather-resistant housings are available to shelter the motor and blower unit.

Clear-through Flow Path

The Quickdraft Exhauster provides a clear-through flow path for dust/smoke/gasses/fumes which are to be exhausted. There are no moving parts in the exhaust stream. This allows for the safe handling of explosive and/or hazardous elements carried by the air stream. It assures long life for the equipment and it simplifies service since all moving parts are separated from the eductor unit.

Materials

In many applications, the eductor is constructed of mild steel and may be coated with a variety of corrosion resistant materials. Frequently the units are furnished in varities of stainless steel such as 304, 309 and 316. Other materials are available to meet application requirements.

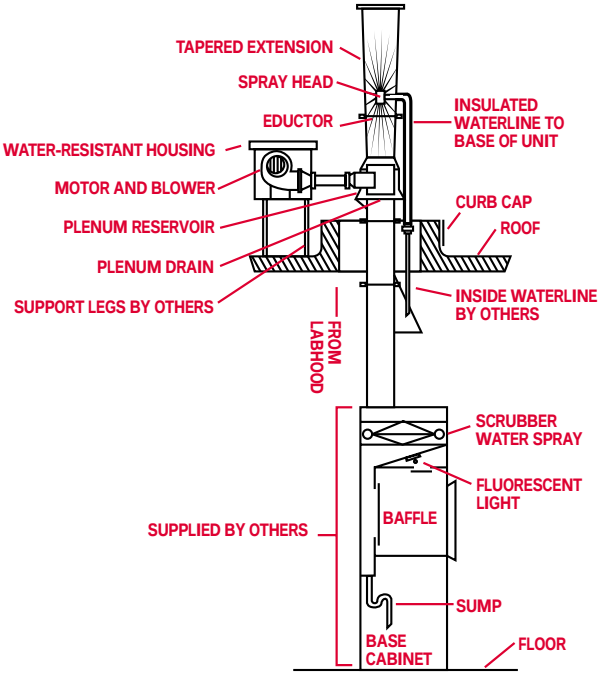


Principle of Operation

Air is injected at high velocity through a plenum chamber controlled by a nozzle into an eductor tube where it entrains the gasses/fumes/vapors which are then exhausted, usually to atmosphere.

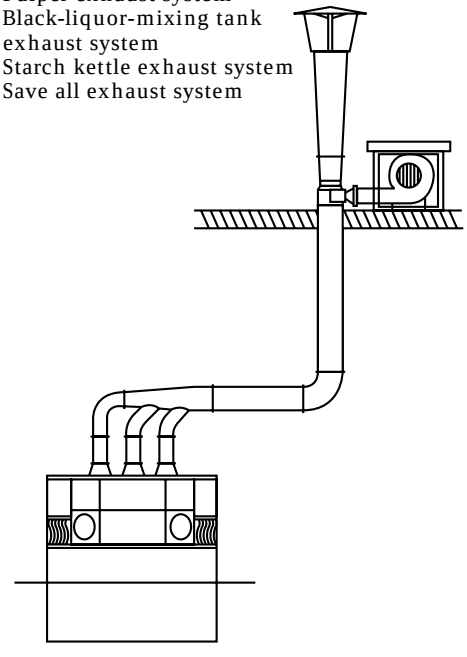
Typical Exhauster Applications

Perchloric Acid Hood Exhaust



Paper Mill Exhaust Systems

- Pulper exhaust system
- Black-liquor-mixing tank exhaust system
- Starch kettle exhaust system
- Save all exhaust system



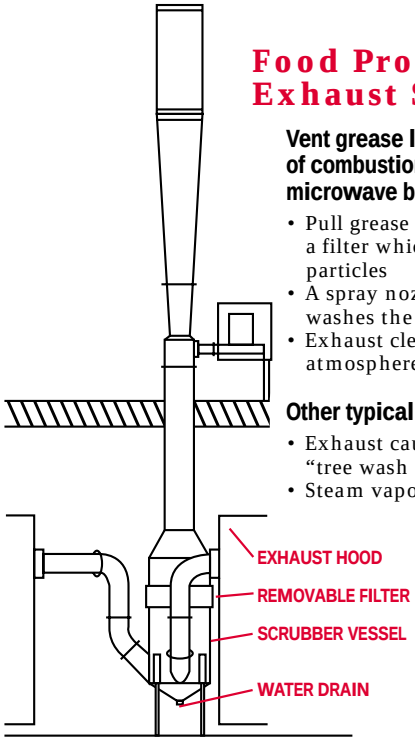
Food Processing Exhaust Systems

Vent grease laden products of combustion from two microwave bacon hoods.

- Pull grease laden air through a filter which traps the solid particles
- A spray nozzle assembly washes the filter
- Exhaust clean filtered air to atmosphere.

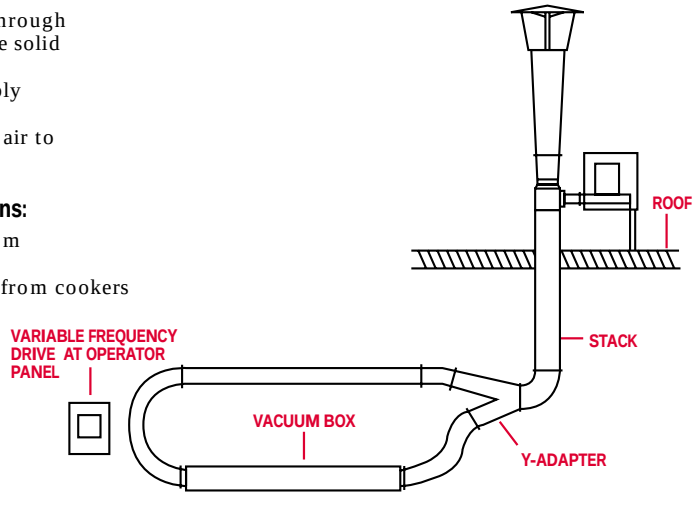
Other typical applications:

- Exhaust caustic air from "tree wash cabinet"
- Steam vapor exhaust from cookers

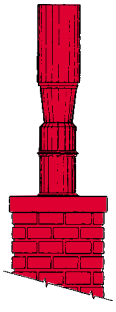


Film Extrusion Exhaust System

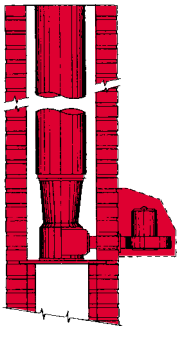
- Exhaust air with sticky particulate off vacuum box



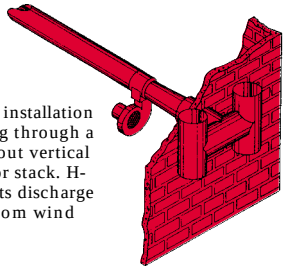
Arrangements & Applications for Draft Inducers



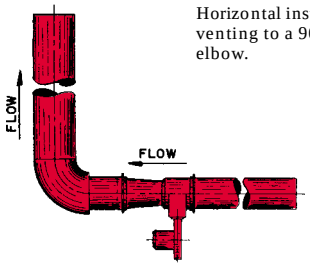
Quickdraft system installed vertically on top of a chimney, discharging to atmosphere.



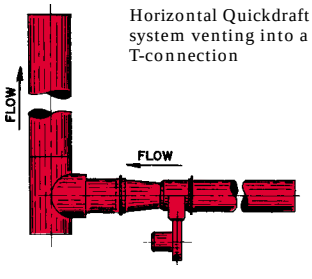
Quickdraft equipment installed in a chimney as part of the flue to preserve architectural design. Motor and blower may be seperately located and protected from the weather.



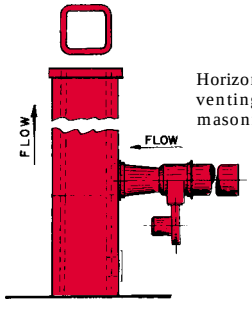
Horizontal installation discharging through a wall, without vertical chimney or stack. H-cap protects discharge opening from wind effect.



Horizontal installation venting to a 90-degree elbow.



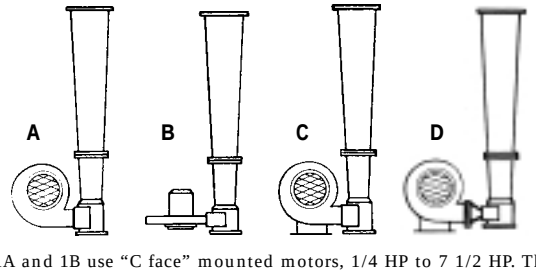
Horizontal Quickdraft system venting into a T-connection



Horizontal Installation venting into a masonry chimney.

Arrangements & Applications for Exhausters

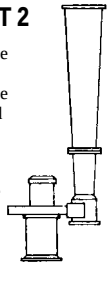
ARRANGEMENT 1



1A and 1B use “C face” mounted motors, 1/4 HP to 7 1/2 HP. The motor shaft is horizontal in 1A and vertical in 1B. 1C and 1D use foot mounted motors, 10HP and above, motor shafts are horizontal. Plenum openings are either horizontal or vertical as shown.

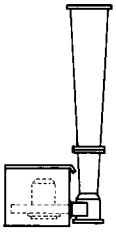
ARRANGEMENT 2

This adds a rainsleeve to the blower inlet and a drip cover to the motor. It is intended for use with horizontal plenum openings on the eductor unit and for 1/4 HP to 7 1/2 HP motors.



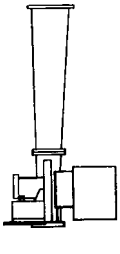
ARRANGEMENT 3

Includes a weather-resistant housing for the motor and blower assembly. It may be used for horizontal or vertical plenum openings on the eductor unit. Motors may be from 1/4 HP to 7 1/2 HP.



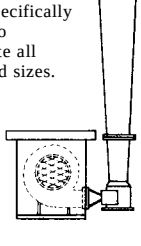
ARRANGEMENT 4

Includes blower inlet protection in the form of a screened hood. Used with vertical plenum opening on the eductor unit for 1/4HP to 7 1/2HP motors, and vertical or horizontal plenum openings for motors 10HP and above A motor base is required for 10HP and above motors.



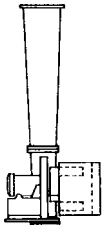
ARRANGEMENT 5

Provides a weather housing specifically designed to accomodate all models and sizes.



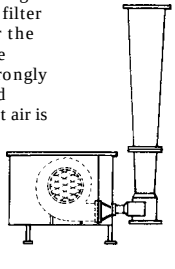
ARRANGEMENT 6

This configuration adds noise abatement to weather protection. May be used indoors or outdoors.



ARRANGEMENT 7

The weather resistant housing here includes filter protection for the inlet air to the blower. It is strongly recommended where ambient air is dust-laden.



Typical Exhauster Applications

Provide a mechanical, high velocity, induction type (draft inducer)(exhauster) as manufactured by Quickdraft. The complete unit shall be sized and installed in accordance with specific recommendations from the manufacturer to insure the flow of (combustion gasses)(exhaust fumes) is not impeded and that there are no moving parts in the flow path.

The draft system must have a capacity of cfm at inches water column negative static pressure. The exhaust system must be able to continuously operate with a flue gas temperature of up to degrees F, and shall be provided with the following design and components:

The eductor section shall be constructed of (mild steel)(mild steel with two coats of acid resisting vitreous enamel)(304 stainless steel)(309 stainless steel)(316 stainless steel), and be provided (with unflanged ends)(with carbon steel flanges) (with stainless steel flanges).

The blower and motor shall be completely separate from the air stream of induced gasses. Ambient air from the blower is injected into a distributing plenum chamber and discharged through an annular orifice around the periphery of the eductor nozzle. This action shall induce the flow of (combustion gasses)(exhaust fumes) through the (stack) (flue)(exhaust piping).

The motor shall be phase volts hz, (totally enclosed fan cooled)(explosion proof). The blower assembly shall be constructed of standard materials.

Optional accessories and services:
Provide the exhaust system with the following items/services of size and design by Quickdraft:

- Draft Control System with variable frequency drive, with inverter drive motor
- Indoor mounted variable frequency drive controller with (premium efficiency)(inverter drive) motor
- Manual adjustment damper located on blower discharge
- Weather cover for blower assembly
- Rain cap on outlet of stack
- Storm shield on outlet of stack
- Flip top damper on outlet of stack (counter balanced)(pneumatically actuated)(electrically actuated)
- Blower discharge silencer
- Blower intake silencer
- Blower intake filter
- Sound enclosure in place of weather cover
- Shock connector in blower discharge
- Vibration isolators
- General arrangement/installation drawing (a unit specification sheet is provided if the general arrangement drawing is not specified)
- Airflow vs. static pressure curve, with horsepower usage detailed
- Motor and blower shall be remotely located from the Quickdraft eductor, with the injected air ducted to the eductor through feet of straight duct and (90)(45) degree elbows
- Supply air for the blower to be ducted from another location through feet of straight duct and (90)(45) degree elbows

Perchloric Acid Hood Exhaust System

Provide an eductor type exhauster as manufactured by Quickdraft. The complete unit shall be sized and installed in accordance with specific recommendations from the manufacturer to insure that the flow of fumes and gasses is not impeded and that there are no moving parts in the flow path. Provide Quickdraft Model Industrial Exhauster.

The eductor section shall be constructed of 316 stainless steel with 316 stainless steel flanges, provided with a plenum reservoir and drain, with all seams welded air tight and ground smooth to deter material build-up.

The tapered extension shall be constructed of 316 stainless steel with 316 stainless steel flanges, with all seams welded air tight and ground smooth, provided with a 316 stainless steel spray head assembly mounted inside the tapered extension, provided with a *" diameter pipe coupling waterline connection terminating on the outside of the tapered extension.

The blower and motor shall be completely separate from the air stream of the exhaust fumes. Ambient air from the blower shall be injected into a distributing plenum chamber at the eductor and discharged through an annular orifice around the periphery of the eductor nozzle. This action shall entrain the fumes and vent them through the exhaust piping.

The motor shall be phase, volts, hz, (totally enclosed fan cooled)(explosion proof). The blower assembly shall be constructed of standard materials. A weather cover shall be provided over the motor and blower assembly, constructed of standard materials. The blower and weather cover shall be protected with a polyurethane coating.

Optional accessories and services:
Provide the exhaust system with the following items/services of size and design by Quickdraft:

- Manual adjustment damper located on blower discharge
- Indoor mounted variable frequency drive controller with (premium efficiency)(inverter drive) motor
- Blower discharge silencer
- Blower intake filter
- Sound enclosure in place of weather cover
- Shock connector on blower discharge
- Vibration isolators
- General arrangement/installation drawing (a unit specification sheet is provided if the general arrangement drawing is not specified)
- Airflow vs. static pressure curve, with horsepower usage detailed
- Motor and blower shall be remotely located from the Quickdraft eductor, with the injected air ducted to the eductor through feet of straight duct and (90)(45) degree elbows
- Supply air for the blower to be ducted from another location through feet of straight duct and (90)(45) degree elbows

Typical schedule as follows:

Project Item #	Quickdraft Model #	Induced airflow (cfm)	Induced static pressure* (inches water column)	Injected air flow (cfm)	Total discharge airflow (cfm)	Minimum exit velocity (fpm)

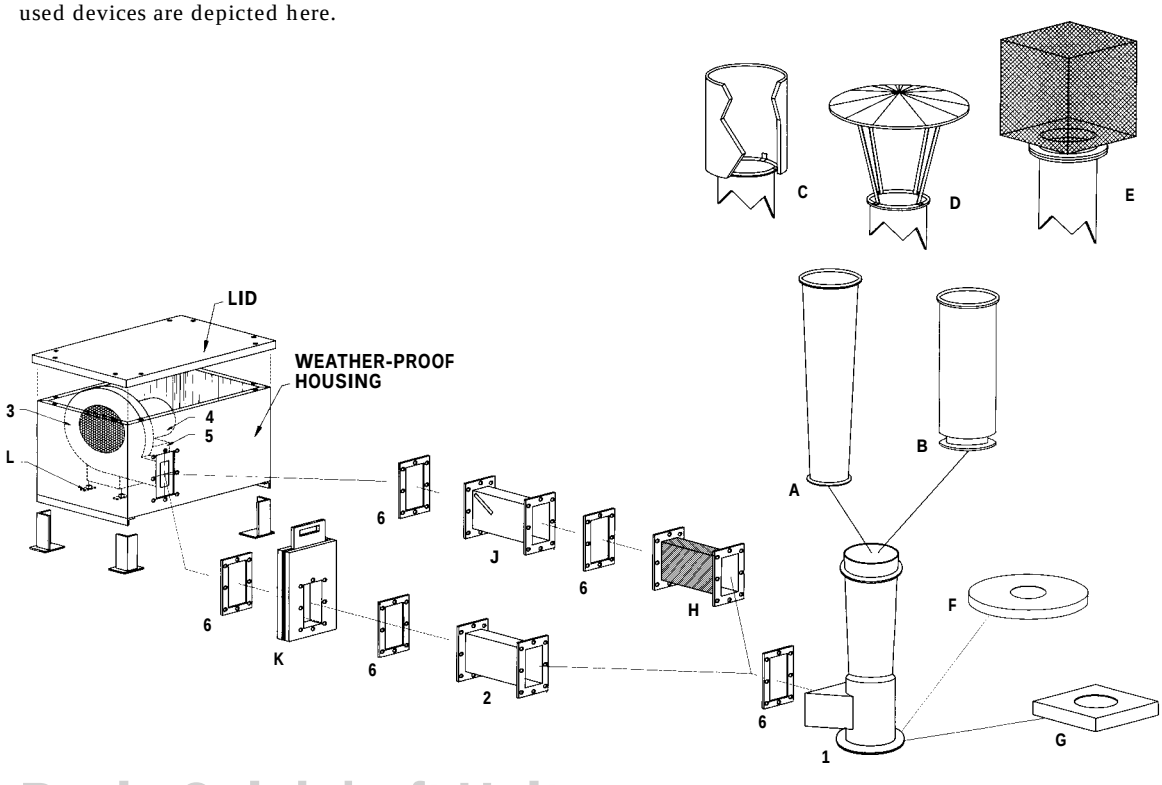
Schedules continued:

Hp	rpm	phase/voltage/Hz

*Required static pressure at eductor inlet flange

System Accessories

Quickdraft provides a full range of accessory products to support its complete line of draft inducing and exhausting systems. Some of the most frequently used devices are depicted here.



Basic Quickdraft Unit

1. Eductor Tube
2. Coupling, if required
3. Blower Assembly
4. Motor
5. Motor Base- 10 HP and up
6. Gasket

Accessories

A. Tapered Extension- Diameter + 4”
B. Straight Extension- Diameter + 2”
C. Storm Shield- Cylindrical Type
D. Rain Cap- Conical Type
E. Spark Arrestor
F. Curb Cap- Round Type
G. Curb Cap- Square Type
H. Shock Connector
J. Fabricated Volume Damper
K. Machined Blast Gate Damper
L. Vibration Isolators

Underwriters Laboratories

Where appropriate Quickdraft products are listed by UL under the Draft Equipment (MCQX) category. The listing is published in the UL Gas and Oil Equipment Directory.

Quickdraft inducers and exhausters have proved their performance capabilities with many general and specialized testing facilities. The most extensive are the test and conformance requirements at the Quickdraft plant. Test data is available on request for most applications. Testing for special projects is available on request at Quickdraft or, if necessary, at the client’s location.

THE QUICKDRAFT GUARANTEE

The Quickdraft guarantee is backed by a tradition of quality which began in 1953 and has served a myriad of satisfied customers across a broad spectrum of industries. It has established Quickdraft as the premier source for draft inducing and exhausting equipment.

PNEUMATIC CONVEYING

In addition to its pre-eminent position with draft inducers and industrial exhausters, Quickdraft provides a wide range of pneumatic conveying systems. The leading supplier of pneumatic trim and waste handling systems in industries such as paper, plastic, non-wovens and metal, Quickdraft systems are also used extensively in transporting specialized materials ranging from marshmallows to packaging peanuts.

ENGINEERING SERVICES

Quickdraft application engineers work with customers and customer representatives to determine the optimum approach for any specific project. They size and select equipment based on sound engineering principles as well as experience gathered in thousands of applications. Extensive test facilities are maintained which allow Quickdraft technicians to simulate job site conditions and prove performance capabilities. Design and project engineers are on call to coordinate all elements of the complete system while manufacturing engineers detail product fabrication. Where desired, Quickdraft engineers and technicians provide on-site consulting and construction services related to inducer and exhauster applications.

VISIT OUR WEB SITE AT...

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