CONNOR ENGINEERING CORP.

Danbury, Conn.

CONNOR ENGINEERING CORPORATION

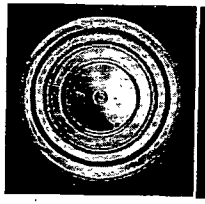
kno·draft®

adjustable air diffusers

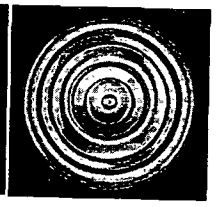
In Canada: Douglas Engineering Co., Ltd., Montreal, P. Q.

Representatives in All Principal Cities

CONTROLLED AIR DIFFUSION



Type KDA for supply air. Aluminum, sizes 4 to 36 in. neck dia. Capacities 50 to 15,000 cfm per unit.



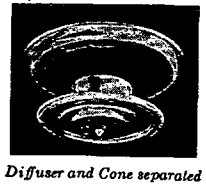
Type SRD for combination supply and return air. Sizes 6 to 24 in. supply neck dia. Capacities 50 to 2,500 cfm per unit, return neck area 75% of supply.

Kno-Draft Adjustable Air Diffusers are designed to give accurate control of air distribution, plus installation and operation economies. With air direction and air volume adjustments on each diffuser, "custom-made" air patterns can be created which will insure draftless diffusion and equalized temperatures for comfort conditioning or specific patterns for industrial processes.

Installation, balancing and inspection are fast because of features like the Type HD quick-opening set-lock assembly, the self-contained inner unit and the sleeve-type damper.

System design problems are eased because Kno-Draft Diffusers are adjustable *after installation*. The often difficult and hazardous job of figuring everything about the air movement in advance is eliminated. And the air pattern in an area can be changed with the seasons or when processes, people or partitions are relocated. Kno-Draft Diffusers are geometrically proportional, size for size, insuring like resistance at like neck velocity for any size—a considerable advantage when selecting various size diffusers for a common system.

Designed for high or low ceilings or attachments to exposed ducts, these diffusers will effectively distribute large volumes of air and pre-mix room and supply air. They permit the use of high duct velocities—resulting in smaller ducts and lower costs. Duct designs are simplified.



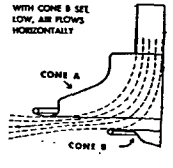
Diffuser and Cone separated

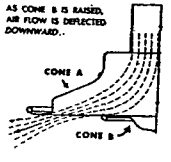


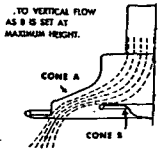
Diffuser and Cone assembled

The simple, attractive design of the Kno-Draft Diffusers enables them to blend with either period or modern interiors. In their original aluminum, they create an interesting and unobtrusive decorative accent. Painted to match the ceiling, they become self-effacing.

Anti-Smudge Cone: Where exceptionally sooty or dusty air conditions are expected or where rough-textured ceilings are employed, the use of this accessory cone is recommended. It furnishes the additional control needed to provide the precise air separation which inhibits smudging.







Kno-Draft Diffusers are covered by U.S. Patents Nos. 2,365,867; 2,369,119; 2,432,239 and others pending; Canadian Patents Nos. 429,206; 443,235.

Any angle of air discharge needed to suit ceiling heights and heating, ventilating or cooling air patterns can be obtained by raising or lowering bottom Cone B.

TypeD Air Volume Control operates independently of the air directional adjustment. It varies only the quantity, not the characteristic of the air distribution. It consists of a cylindrical, sliding, sleeve-type damper connected by a specially designed spider

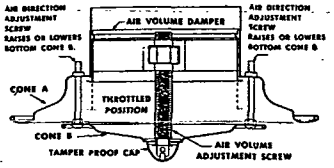


Fig. 1 Self-Contained Inner Unit

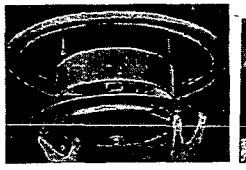


Fig. 2 Type HD Set-Lock Assembly



to a centrally operated screw. The shank of the screw extends through the lower cone of the diffuser and is concealed by a tamper-proof cap. With this damper on each unit, a series of diffusers can be quickly balanced.

Kno-Draft Features Speed Installation

The development of the self-contained, removable inner assembly alone (see Fig. 1) reduced installation time as much as 50 per cent. The addition of the Type HD set-lock assembly (see Fig. 2) reduced the time for that part of the installation to a matter of minutes. No tools are required. The B cone or inner element of the diffuser is secured to the combined suspension and adjustment screws by a springloaded catch

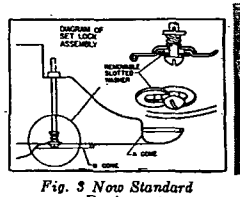


Fig. 3 Now Standard Equipment

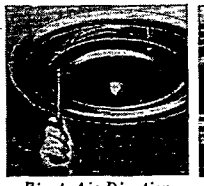


Fig. 4 Air Direction Adjustment



Fig. 5 Balancing



Fig. 6 Air Volume Adjustment

which is kept in compression by a slotted washer. The holes in B cone pass over the bolt heads. All that is necessary is to press up on B cone and insert or remove the slotted washers. (See Fig. 3.) Even where ceilings already exist, the outer cone is easily attached to a duct or collar.

The air direction adjustment is also accomplished quickly. All that is needed is a screwdriver to adjust the suspension screws for any angle of air discharge from horizontal to vertical. (See Fig. 4.)

System balancing is fast and simple. The single annular air stream permits immediate and accurate velometer reading. (See Fig. 5.) Desired air supply ratios may be rapidly obtained by adjusting the volume control dampers. A twist of the wrist regulates the volume instantly. (See Fig. 6.)



Nation-wide Sales and Engineering Service

Connor Engineering Corp. maintains a research laboratory with a staff of trained specialists and district representatives in leading cities. Their services are at the disposal of consulting engineers, architects, air conditioning dealers and plant engineers. They can assist you in getting the best possible performance from your air conditioning system by creating custom-made air patterns which will thoroughly mix room and supply air, eliminate drafts and maintain uniform temperature throughout an area.

Free Handbook on Air Diffusion

It contains the latest engineering data on air diffusion and is profusely illustrated with charts, photographs, sketches and dimension prints that simplify the selection, application, location, assembly, erection, testing and adjusting of Kno-Draft Adjustable Air Diffusers. It is designed to help you get top efficiency from an air conditioning system by creating "custom-made" air distribution patterns.

For your FREE copy, please write Dept. Y-29.

(See pages 1228 and 1229 for data on Dorex Air Recovery and Air Purification Equipment.)