

Knowles Mushroom Ventilator Co.

Established 1906 All Patents Protected

Main Office and Factory
Upper Montclair, New Jersey*Nu-Notch*

NU-NOTCH Specifications

Furnish and install where indicated on drawings or as hereinafter specified (5 in.) (6 in.) (7 in.) (8 in.) (10 in.) (Dome Top) (Flat Top) Nu-Notch Cast Iron Mushroom Air Diffusers with recessed notches for the permanent adjustment of mushroom caps at any desired opening, together with center locking screw feature.

Cast iron mushroom, successfully serving in over 5,000 buildings in U. S. and abroad. Provides correct draft-free distribution of air to each individual in any size auditorium, orchestra or balcony. Close regulation of air—10 different adjustments for all possible conditions. Easily regulated by part turn of cap, and locked in position by tightening head screw with special key—new feature to prevent tampering. Supplied with dome or flat tops, 5 diameter sizes. Easy, permanent anchorage to wood, concrete or monolithic floors.

PROPER auditorium ventilation is now recognized to be a combination of temperature, air motion and distribution, humidity, dust, bacteria, odors, and carbon dioxide. Air motion and distribution is second only to temperature in importance. The Synthetic Air Chart adopted by the ASHAE takes into account all of these factors and makes it possible to arrive at an average which will show the percentage of ventilation obtained in any given installation.

For nearly a half century KNOWLES has devoted itself to one specialized field—the manufacture of air diffusers for auditoriums.

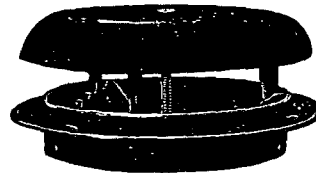
Write for free Guide to Distribution of Air in Auditoriums.

Adaptability of the KNOWLES Mushroom Air Diffuser. In an auditorium seating 2000, requiring 40,000 cfm, it is desired to use 6 in. diam NU-NOTCH Mushrooms with air velocity of 600 fpm. By referring to the table below, it will be seen that a 6 in. mushroom will exhaust 120 cfm. Dividing 40,000 cfm by 120 indicates 333 units are required.

Size	Dimensions in Inches						Net Wgt. Lbs.	Area Sq Ft	Cfm at Velocity of									
	A	B	C	D	E	F			200	250	300	350	400	450	500	550	600	
5	6	3 1/4	1 3/4	1 3/4	5	6	4	.1384	27.3	34.2	41.0	47.7	54.6	61.2	68.0	74.8	81.6	
6	7 1/4	1 3/4	1 3/4	1 3/4	6	7 1/4	4 1/4	.1804	39.3	49.1	59.0	68.7	78.6	88.2	98.0	107.8	117.6	
7	8 1/4	1 3/4	2 3/4	1 3/4	7	8 1/4	6 1/4	.2672	53.5	66.3	80.2	95.5	107.0	120.6	134.0	147.4	160.8	
8	9 1/4	1 3/4	2	2	8	10 1/4	9	.3491	69.8	87.3	105.0	122.0	140.0	157.0	174.5	192.5	209.4	
10	11 1/4	1 3/4	3	2 1/4	10	11 1/4	14 1/4	.5454	109.0	138.3	163.6	191.0	218.0	245.2	272.5	300.0	327.0	

* The 10" diam. Nu-Notch is the most economically priced Mushroom to use also affording the greatest exhaust area and least duct connections.

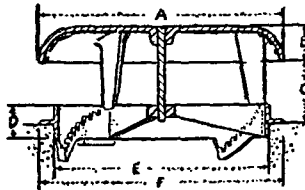
KNOWLES NU-NOTCH MUSHROOM AIR DIFFUSER



For Auditoriums

MODERN practice shows that 8 cu ft of fresh air per minute per person is ample to keep the air in an auditorium free of odors; and to maintain body heat and to balance the outdoor heat of a warm summer's day, about 20 cu ft per minute per person must be introduced. The accurate amount becomes an engineering problem too extended for this outline.

Of the 20 cu ft per minute per person introduced, 12 cu ft may be recirculated, economizing heat in winter and cooling in summer. If too much air is recirculated, odors will result; and when smoking is to be allowed, much more new air must be introduced.

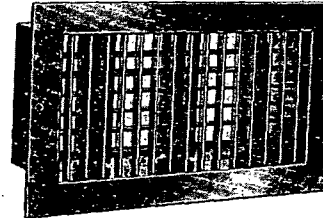


KRUEGER

KRUEGER
AIR CONDITIONING
CORPORATION

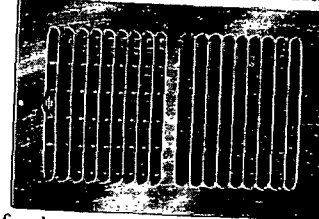
19 E. Rillito • Tucson, Arizona

SUPPLY REGISTERS AND GRILLES

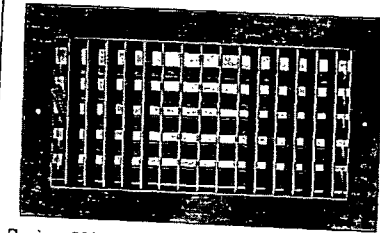


Series 880 O.B.D. Registers combine double deflection grilles and opposed blade damper units to give complete control of air in both planes plus equal distribution over entire face of register. Volume control valve is easily adjusted from face.

MULTI-SHUTTER REGISTERS

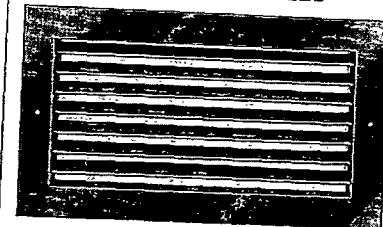


A fine low-cost register for combination heating and cooling. Vertical fins diffuse air in two directions. Adjustable multi-louvre has positive shut-off control. Front fins are spaced 1/2 in. for greater free area.

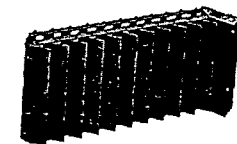
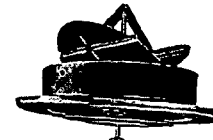


Series 800 Multi-Shutter Registers provide adjustable front fins for any desired deflection and rear louvers are gang operated. Models have either vertical or horizontal streamlined fins 3/8 in. deep set on 3/4 in. centers.

RETURN AIR GRILLES



Series 80 Return Air Grilles, matching units for air supply registers, combine rugged construction and fine appearance. Fins spaced on 3/4 in. centers are set at 35 deg angles. Available in horizontal and vertical models.



ROUND CEILING DIFFUSER (left) Features friction-controlled butterfly damper with full 90 deg control operated by central shaft. Available in 6 in. to 14 in. diam with 360 deg air diffusion pattern.

PERIMETER REGISTER (center) Series 900 Baseboard Registers feature easy installation, a new lever operated damper and attractive appearance. Available in 18 in., 24 in., and 30 in. lengths.

AIR & VOLUME CONTROLS (right) Extractor EX-8 has full adjustable curved blades. Designed to balance air volume and distribute air equally over grille face.

KRUEGER—a complete line for every installation