

# SHELDONS

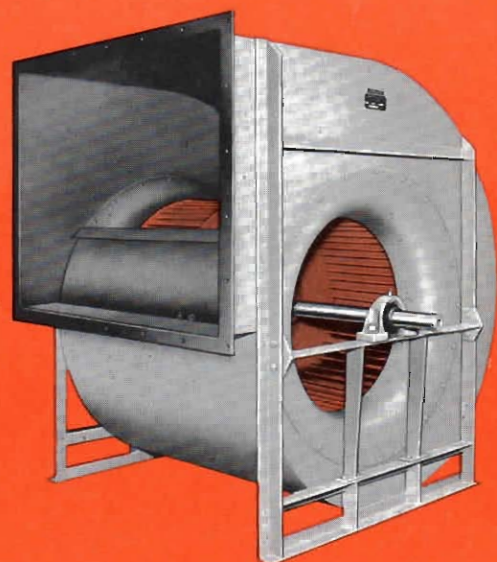


Type

**F**

*FORWARD CURVED*  
**CENTRIFUGAL**  
**FAN**

CATALOG No. 351



**Sheldons**

**SHELDONS ENGINEERING LIMITED**

Galt, Ontario; Montreal, Toronto, Hamilton, London, Ottawa, Vancouver

Representatives in principal cities across Canada

Sheldons Manufacturing Corporation, Bensenville, Illinois

# SHELDONS

## CENTRIFUGAL FAN Type F

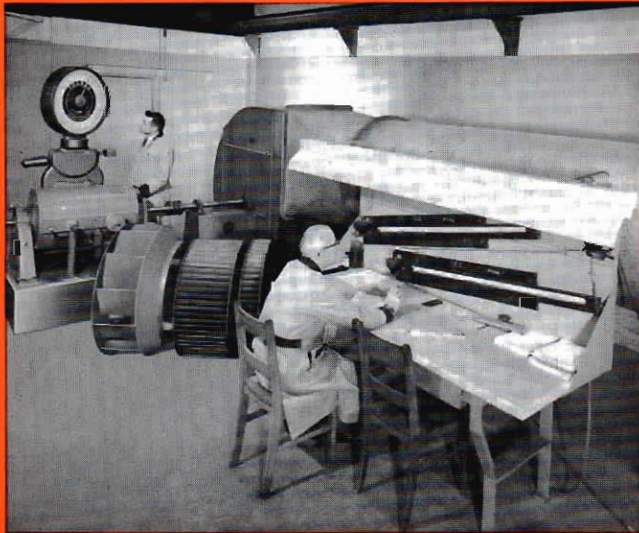
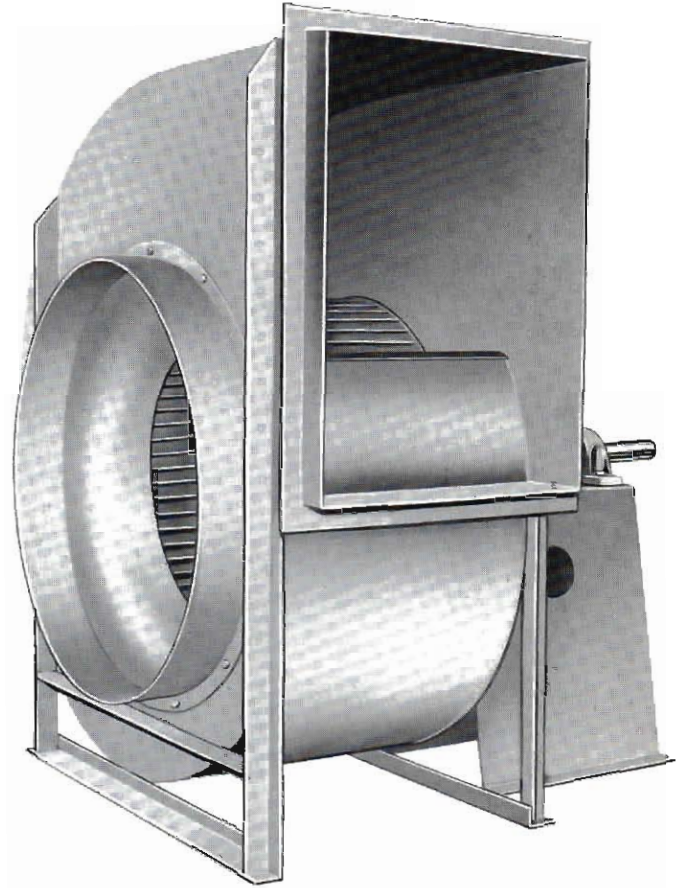
Type "F" Centrifugal Fans have been designed for use in ventilation systems, high-pressure air-conditioning systems, as induced draft fans on power plant applications, or installations where low speed operation is important.

The result is IMPROVED PERFORMANCE with HIGHER EFFICIENCIES, and a slower-running fan for QUIETER OPERATION.

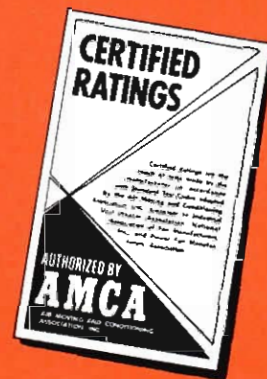
Sheldon Type "F" Fans have large diameter inlet spinnings, smoothly shaped for quiet air flow. Modern production methods have given the Type "F" Fan a pleasing appearance, combined with the rugged construction of a fan of outstanding quality.

The advanced design offered in this new Type "F" Fan is the result of a complete and comprehensive research programme undertaken to ensure that Sheldon products meet the high standard expected of them.

With the introduction of the completely new Type "F" Forward Curved Fan, Sheldons have shown that their constant research into improved fan design and performance has once again resulted in a product with definite advantages to their customers.



This photograph illustrates standard ventilating fan test, Type "F", Arr. 1, Figure 1, AMCA Bulletin 210.



### AMCA CERTIFIED RATINGS

*"Sheldons certifies that the Type "F" Fan as shown herein has been tested, and its performance rated, in accordance with the appropriate AMCA approved test codes and procedures and have been licensed to bear the AMCA Certified Ratings Seal."*

# DESIGN and CONSTRUCTION DETAILS

**CASING** — All welded construction, from the smallest to the largest size. All side plates are braced for rigidity and strength with heavy steel angle. On higher pressure Type "F" Fans, Class 2 and Class 3, extra heavy gauge side plates and reinforcing angles provide the rigidity required for trouble-free operation.

**BEARINGS** — Self-aligning, anti-friction ball bearings are standard on Type "F" Fans. Special applications will have special consideration. Sleeve bearings are available in sizes from  $1\frac{1}{8}$ " and larger, for extremely quiet installations. For further details on bearings, see Page 3.

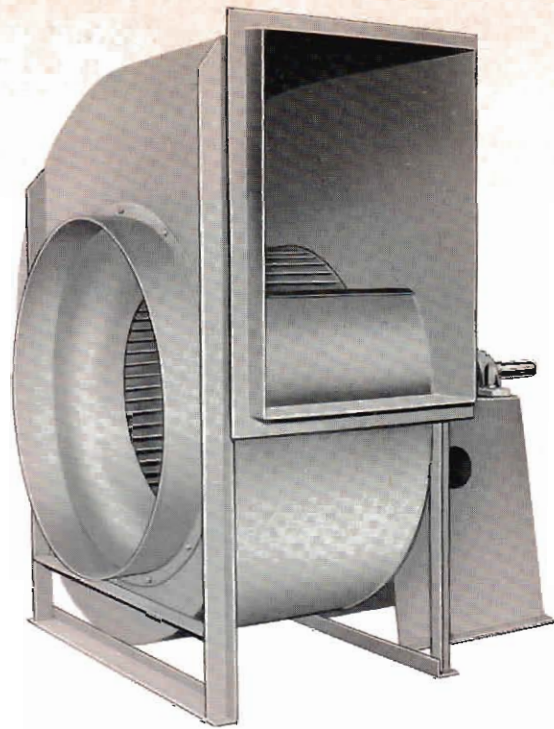
**BEARING SUPPORTS** — Designed for adequate stiffness to prevent vibration, and with minimum obstruction to airflow. Fabricated steelplate independent bearing pedestals are furnished on Class 3, Arr. 3, fans.

**SHAFTS** — Supplied from ground and polished steel, held to close tolerances, with diameters selected for speeds well in excess of the maximum rated speed of each fan size.

**INLET CONE** — This streamlined steel spinning gives a true, uniform flow into the wheel inlet.

**OUTLET AND INLET CONNECTIONS** — Slip joints are supplied as standard on Class 1 fans. Class 2 and 3 fans have flanged outlet as standard with optional flanged inlets.

**ADJUSTABLE DISCHARGE** — This is provided as standard up to size No. 270 only, with eight different discharge positions available. Above size No. 270, all discharges are fixed.



## FEATURES of Sheldons Centrifugal Type F Fan

### RATINGS

Static pressures up to 9" w.g. provided in this catalog cover the range of performance most commonly used in ventilation applications, and in particular make Type "F" Fans very suitable for modern high pressure ventilation needs.

### WHEEL SIZES

Wheel sizes from No. 122 ( $12\frac{1}{4}$ " diameter) up to No. 1087 ( $108\frac{3}{4}$ " diameter) in both single and double width, cover all ventilation requirements and capacities up to 612,000 cfm.

### QUIET OPERATION

Slower fan speeds for any given duty than other fan types mean less mechanical noise and less belt-drive noise.

### BALANCING

To ensure silent, vibrationless running, all Sheldon fans are accurately and carefully balanced, dynamically and statically, on one of our three modern electronic balancing machines.

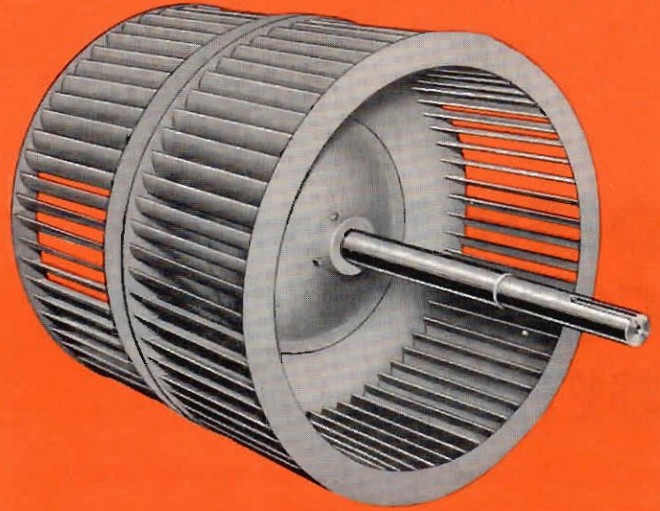
### SPACE LIMITATIONS

Forward curve Type "F" Fans deliver more air for a given speed than any other fan, resulting in a smaller fan to do a given job; hence, less space required for installation.

# WHEELS



TYPE "F"  
SINGLE WIDTH WHEEL



TYPE "F"  
DOUBLE WIDTH WHEEL

Sheldons forward curve wheel designated Type "F", for its forward curved blade, offers an advance in fan design, with more efficient performance, a slower-running fan, with the advantage of quiet operation.

The shallow blade depth ensures a large open inlet for the extremely high capacities handled

by this fan, and with a carefully streamlined hub, assures minimum entry loss.

The design "F" blade has been developed after careful testing and evaluation, to provide a wheel giving the highest performance and highest static pressures available from a forward curved fan wheel.

## FAN BEARINGS

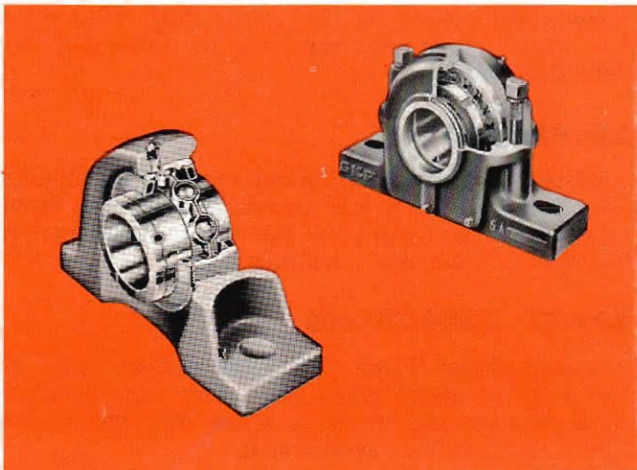
### BALL BEARINGS

Ball bearings made by any of several well-known manufacturers are standard on all arrangements of Type "F" Fans. These are all selected with a load and speed factor to assure long life and re-

liable bearing service. Ball bearings are normally lubricated with a grease best suited for operating through the temperature range encountered by ventilating fans, and, as outlined in AMCA "Schedule of Lubricants", Bulletin No. 101-C.

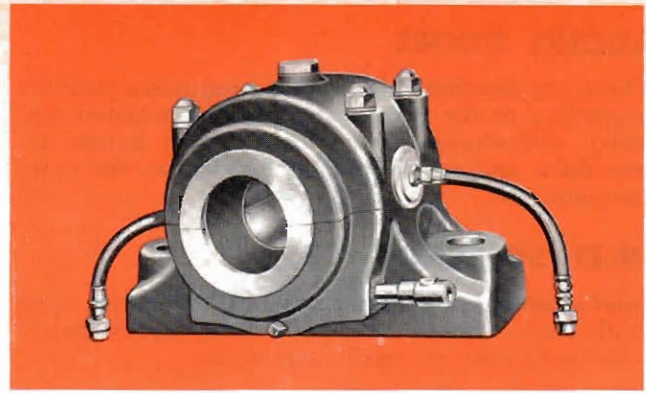
Special greases are available and will be furnished for both low and high temperature applications if such is indicated. For more severe service, such as mechanical draft fans, heavy duty ball or spherical roll bearings may be selected, with either grease or oil lubrication, as determined by the duty.

Where it is necessary to install an oil lubricated bearing in a high velocity air stream, such as may occur on the fan inlet on an Arrangement 3, Class 3 application, it may be necessary to provide an air-balanced bearing housing, to prevent oil being forced from the bearing by the pressure differential across the housing. It is recommended that, where doubt exists as to their use, consult the nearest Sheldons representative, who will be glad to assist in the final selection requirements.



## SLEEVE BEARINGS

Sleeve bearings are provided to meet applications requiring extremely quiet operation. These are available in sizes  $1\frac{7}{16}$ " and larger. Sleeve bearings are oil lubricated, and are equipped with an oil reservoir, oil level gauge and drain plug. These are self-aligning and fitted with high-grade replaceable babbit liners. Special seals assure a leak-proof bearing. Water-cooled sleeve bearings can also be furnished to suit high temperature applications.



## TEMPERATURE LIMITATIONS — AIR HANDLED BY FAN

Table 1 indicates the temperature limitations applicable to the bearing installed on the fan. These figures are intended as a guide only. When high temperature air or gas is being handled, it

is important that the fan be designed accordingly, since high temperatures may require special construction. Consult your nearest Sheldons office for full details.

**TABLE 1**  
**MAXIMUM TEMPERATURE LIMITS FOR AIR HANDLED BY FAN**

FAN ARR.	GREASE OR OIL LUBRICATED		BALL BEARINGS With Radiation Shield and Cooling Disc	SLEEVE BEARINGS	
	Regular	With Cooling Disc Only		Regular	Water-Cooled
1, 8, 9	250°F	350°F	600°F	150°F	800°F Fan construction to suit
2	200°F	300°F	Not available	Not available	Not available
3, 7	150°F	Not available See Note (1)	Not available See Note (1)	130°F	Not available See Note (1)
4	180°F	300°F Not usually practical	400°F, Not usually practical	150°F	Not available

N.B.—With Arrangement 9 fans, it may be necessary to protect the motor from radiant heat from the fan casing on air temperatures above 250°F.

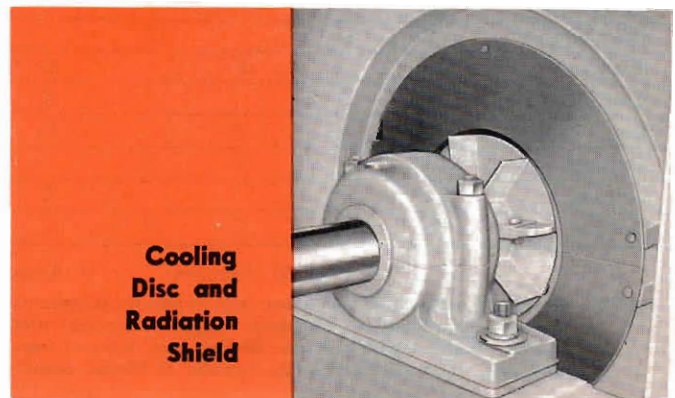
NOTE (1)—Not available except with integral inlet box and externally mounted bearing.

# ACCESSORY FEATURES

Applicable to all classes of construction

## COOLING DISC AND RADIATION SHIELDS

Cooling discs and radiation shields are recommended on fans handling hot gases. The cooling disc is a cast aluminum wheel mounted on the fan shaft between the fan case and the inboard bearing. It circulates room air and keeps the shaft and bearing cool by conduction of heat from the shaft itself, and by forced convection of the room air. The aluminum radiation shields also give protection from radiated heat transmitted from the fan casing. Details on the use of cooling discs with fans handling hot gases is given in Table 1. Illustration shows a typical cooling disc and radiation shield.



## ACCESS DOORS

These are recommended on fans requiring periodic inspection or the cleaning out of accumulated material. Illustration shows both types: bolted access door, and quick-opening access door for more frequent use.

## INLET SCREENS

Inlet screens are a desirable safety feature on open inlet fans. These are made from heavy gauge wire mesh and are easily removable.

## BELT GUARDS

Made from either steel plate or with an open mesh, belt guards are securely attached to fan or base and are recommended for use with all belt-driven Type "F" Fans.

## SHAFT SEALS

On applications involving dirty, odorous, or corrosive gases or on high pressure applications, a shaft seal is recommended. Sheldons provide a red fibre, asbestos or Teflon seal, suitable for many such applications. Special seals for extreme requirements are available on request.

SEAL TYPE	APPLICATION
Red Fibre	Up to 250°F—Clean Air
Asbestos	Above 250°F—Flue Gases and non-corrosive Gases
Teflon	Corrosive Gases up to 150°F

## INLET SCREENS

Inlet screens can be used to prevent the introduction of foreign material into the fan inlet. They are also a safety measure on open inlet fans. Where a bearing is in the inlet, the inlet screen allows access for bearing inspection.

## VIBRATION ISOLATION BASES

These are recommended to isolate the fan from the building structure to reduce the transmission of noise and vibration. Resilient isolators are calculated to produce a low transmissibility of vibration and are made in three types:

- (1) Integral steel framework with rubber-in-shear isolation.
- (2) Integral steel framework with spring isolators.
- (3) Floating concrete pad supported by spring isolators.

## CORROSION RESISTANT FANS

When a fan is required to handle acid fumes, alkali vapors or some organic compounds, it is desirable to use a metal or coating which will successfully inhibit chemical reaction.

Where conditions are only mildly corrosive, a protective paint may be sufficient. For more severe conditions, a coating of rubber, neoprene or one of several available plastics may be used. Rubber and neoprene are excellent up to a fan tip speed of 12,000 feet per minute and will therefore be satisfactory for the great majority of exhaust fan installations.

The table below gives metals and linings suitable for fans and ducts where corrosion may be a problem. It is recommended that specific inquiries be referred to the nearest Sheldons representative who will assist in selection of a suitable material.

TABLE 2. CORROSION RESISTANT MATERIALS and LININGS

	Temp. Limit °F	Acetic Acid	Alkaline Cleaning (De-greasing)	Anodizing (Oxalic Acid)	Chromic Acid	De-carbonizing Agents	Hydrochloric Acid	Hydrofluoric Acid	Nitric Acid	Phosphoric Acid	Sulphurous Acid	Sulphuric Acid
Aluminum	350	G	F	G	F							
Galv. Steel	200		E			E						
Cast Iron	750		E				G		G			G
Monel	600	F		E			F	F			G	
Lead	250				G						G	G
Everdur	600	E	E			E	G	G		G	G	G
Stainless	1100	G	G		G				G	F	G	F
Silicon Iron	750						F		G	G		G
Hard Rubber	150			E			E					E
Neoprene	250		E		G		E		E			E
Natural Rubber	150	G			G		E	E			G	
Saran Rubber	150	G	G		G		E	G	F	E	G	G
Koroseal	150		G	E			E	G	G	G	G	G
Lithcote	150	E			E		F			F	G	G
Heresite	150	E	G	E	E		E		E	E	G	E

E: Excellent G: Good F: Fair

NOTE: Chemical resistance decreases with a rise in temperature. For high temperatures and high acidic content, please ask for recommendations. Polyester resins, reinforced with glass cloth make an excellent protective coating against acid fumes. When applied to fan blades they have a very strong bond, and can be run at higher tip speeds than rubber coatings. For shipboard use, wheels of Monel metal or hot galvanized with zinc chromate paint are recommended.

# CONTROL OF FAN CAPACITY

## OUTLET DAMPERS

The standard type of outlet damper is either built as an integral part of the fan outlet or in a separate frame attached to the fan outlet. This damper is low in cost and, for many applications gives very satisfactory control of air volume. This type of outlet damper must be partially closed before it enters a range of effective volume control.

## PROPORTIONING OUTLET DAMPERS

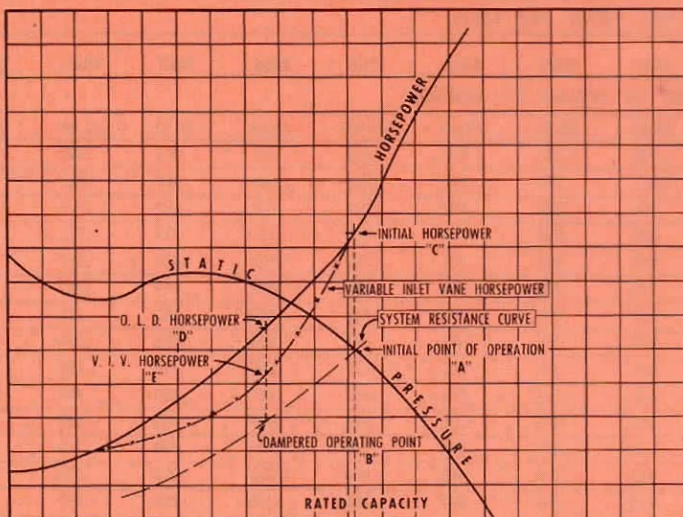
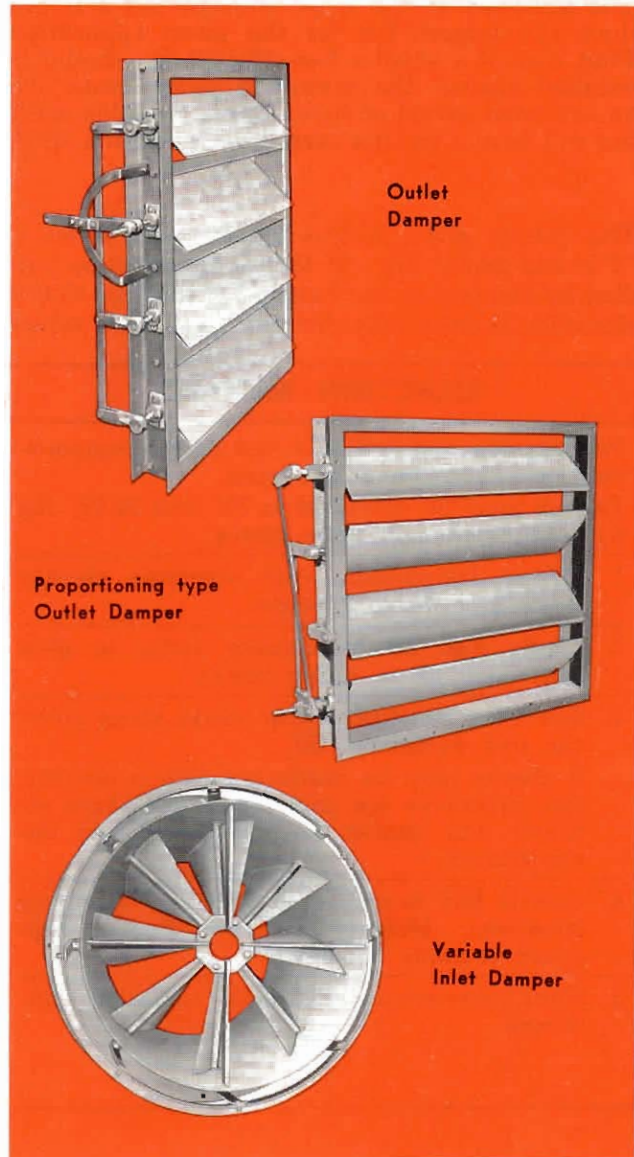
This damper is fabricated in the same manner as the Parallel Blade Type above, but has a linkage arrangement that provides for each blade to rotate in the opposite direction to its neighbor. In this way, the reduction in area is kept nearly proportional to the angle moved, thus giving a more linear capacity control. This is recommended where accurate control is required close to wide open conditions.

## VARIABLE INLET VANES

Variable inlet vanes have the advantage that a substantial power saving results at reduced volumes. They may be manually adjusted or automatically controlled. This type of damper finds application on ventilating fans, and on forced draft fans in power plants where the power saving may be an important factor.

The operating mechanism of this damper is around the periphery of the inlet and outside the casing. It does not interfere with the air flow either at entrance to the fan or inside the fan casing.

A curve indicating the saving that can be anticipated using this damper is illustrated below.



When the fan is dampered from a given point "A" of operation by means of OUTLET DAMPERS to a reduced volume point "B" on a system curve, the initial fan horsepower "C" is reduced along the original horsepower curve to point "D".

When INLET LOUVRE DAMPERS are used, it is reduced along a variable inlet vane horsepower curve to point "E".

The difference between these curves at a given capacity indicates the horsepower saving.

# FAN SELECTION

The selection of the most efficient fan will produce the largest fan for the given application. First cost of a smaller less-efficient fan should be weighed against the saving in power costs over an extended period of time. Again, a double width fan will have a smaller overall height than a single

width fan of the same capacity and this may be a decided advantage in a low head-room pent-house. Also if clean dry air is being handled, then an Arrangement 3 fan offers the lowest initial cost.

## SELECTION PROCEDURE

The ratings given in this catalog are for air at 70°F and 29.92" Hg. If the air temperature handled by the fan, or the barometric pressure due to elevation, is essentially different from these values,

then a correction must be applied to enable the fan to be selected correctly. The example below shows how to select a fan operating at a condition different from the values above.

SELECTION METHOD	EXAMPLE
Performance required is stated at the temperature and elevation of operation. Fan SP must be corrected to 70° and 29.92" Hg by using factors in table above.	Required 15,119 cfm at 3" SP and 250°F at an elevation of 3000 ft.
1. Obtain temperature and elevation density factor from Table 2 below.	1. From Table 3 density correction factor is 0.67.
2. Divide Fan SP by density factor to give equivalent SP in rating tables.	2. Equivalent SP is $\frac{3''}{.67} = 4.53''$ .
3. Select fan size from rating tables, using given cfm and equipment SP. A choice may be made between a smaller, less expensive fan and the larger, more efficient and quieter fan by considering the application.	3. From Tables, Page 15, a SWSI Size No. 270 fan is selected. Perf: 15,119 cfm, 4.53" SP, 831 RPM, 20.39 BHP.
4. Correct BHP to actual HP at actual operating conditions. Multiply by Density Factor. Fan speed remains the same.	4. Actual HP taken by fan is $20.39 \times .67 = 13.66$ HP.
5. Final performance of fan at operating conditions.	5. Performance now is 15,119 cfm, 3" SP, 250°F, 3000 ft. elevation, 831 RPM, 13.66 HP, using a No. 270 SWSI arrangement 1 fan.

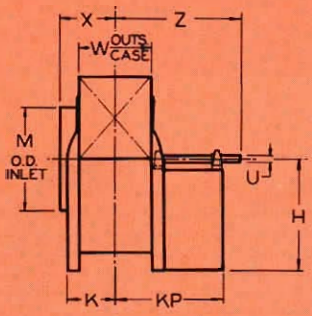
**TABLE 3  
DENSITY CORRECTION FACTORS FOR TEMPERATURE AND ELEVATION**

ELEVATION IN FEET ABOVE SEA LEVEL													
AIR TEMP.	SEA LEVEL	1000	1500	2000	2500	3000	4000	5000	6000	7000	8000	9000	10000
BAROMETRIC PRESSURE IN INCHES OF MERCURY													
°F	29.92	28.85	28.33	27.82	27.31	26.81	25.84	24.89	23.98	23.09	22.12	21.38	20.54
-30	1.234	1.191	1.170	1.15	1.128	1.105	1.066	1.028	.987	.956	.914	.883	.847
0	1.152	1.11	1.092	1.072	1.052	1.033	.994	.957	.922	.894	.852	.823	.791
30	1.082	1.043	1.024	1.005	.990	.970	.934	.900	.865	.838	.800	.774	.742
70	1.000	.964	.947	.930	.913	.896	.864	.832	.799	.774	.739	.715	.687
100	.946	.912	.895	.878	.863	.847	.816	.785	.755	.732	.698	.675	.649
150	.869	.838	.824	.807	.793	.779	.750	.722	.695	.672	.642	.622	.596
200	.803	.775	.760	.747	.733	.720	.693	.667	.642	.622	.593	.574	.552
250	.747	.720	.707	.695	.682	.670	.645	.622	.597	.578	.552	.535	.512
300	.697	.672	.660	.647	.636	.625	.602	.579	.557	.540	.515	.498	.478
350	.654	.630	.620	.608	.597	.586	.564	.543	.522	.507	.483	.467	.449
400	.616	.594	.583	.572	.562	.552	.532	.512	.482	.477	.455	.440	.423
500	.553	.534	.524	.514	.505	.496	.478	.460	.442	.428	.409	.396	.380
600	.500	.482	.474	.465	.456	.448	.432	.416	.400	.387	.370	.358	.344
700	.457	.441	.433	.425	.417	.410	.395	.380	.366	.354	.338	.327	.314

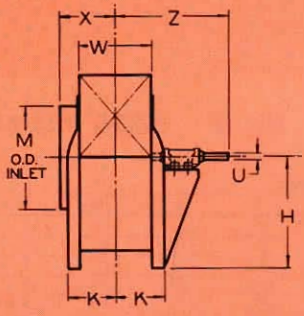




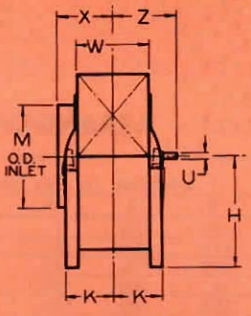
# DIMENSIONS OF SHELDONS CENTRIFUGAL Type **F** FANS



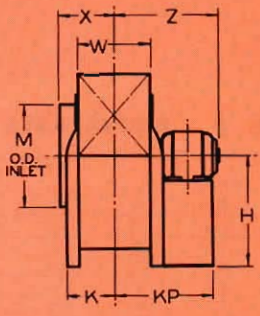
ARR. 1-A



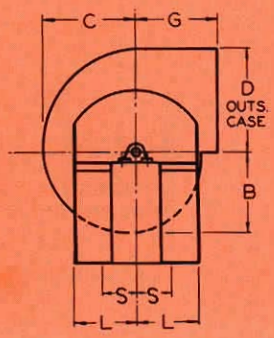
ARR. 2



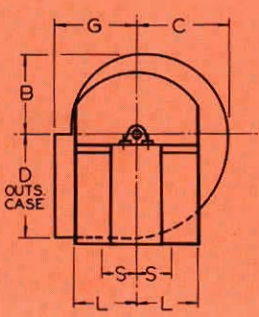
ARR. 3



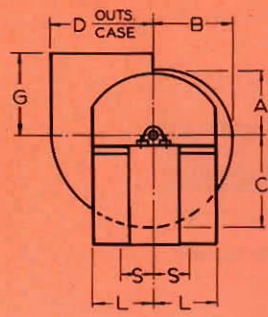
ARR. 4



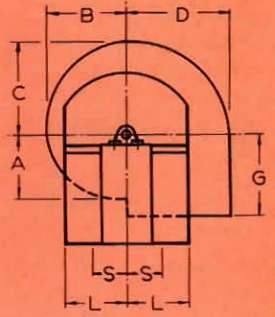
TOP DISCHARGE



BOTTOM DISCHARGE



UP DISCHARGE



DOWN DISCHARGE

## TYPE F ADJUSTABLE S.W.S.I. ARRANGEMENT No. 1-A, 2, 3 and 4., SIZES 122-270.

SIZE	WHL DIA.	COMMON TO ALL ARRANGEMENTS AND DISCHARGES											ARR. 1		ARR. 2		ARRANGEMENT				ARR. 1-A & 2		ARR. 3		SHAFT KEYWAYS						
		A	B	C	D	G	H	K	L	M	W	X	1	4	1	4	1	2	3	4	CL1	CL2	CL1	CL2	U	Kwy					
122	12 1/4	8 3/8	10 3/8	12	13 3/8	11 1/2	15	6 3/8	8 1/2	14	9 3/8	9 3/8	15 1/2	15	5 1/2	6 3/8	18 3/8	17 3/8	10 3/8	16	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	3/16 x 3/8		
135	13 1/2	9 3/8	11 3/8	13 1/4	14 3/8	12 1/2	16	6 3/8	9 1/2	15 1/2	10 3/8	9 3/8	16 3/8	16 3/8	5 1/2	7 3/8	20	18 3/8	11 3/8	18	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1/4 x 3/8		
150	15	10 3/8	12 3/8	14 3/8	16 3/8	13 3/8	17 1/2	7 3/8	10 3/8	17	11 3/8	10 3/8	17 3/8	18 3/8	6	8	21 3/8	21 3/8	12	20 3/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	3/8 x 1/2		
165	16 1/2	11 3/8	13 3/8	16 3/8	18	14 3/8	19 1/2	8 3/8	11 3/8	18 3/8	12 3/8	10 3/8	19 3/8	21 3/8	6 1/2	9	23	22	12 3/8	23 3/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	3/8 x 1/2		
182	18 1/4	12 3/8	15 3/8	17 3/8	19 3/8	15 3/8	21 1/2	9 3/8	12 3/8	20 3/8	14 3/8	11 3/8	21 3/8	23 3/8	7	9 3/8	24 3/8	22 3/8	13	25 3/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1/2 x 1/4		
200	20	13 3/8	16 3/8	19 3/8	21 3/8	16 3/8	23 1/2	9 3/8	13 3/8	22 3/8	15 3/8	12 3/8	22 3/8	24 3/8	7 1/2	10	26 3/8	24 3/8	14	26 3/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1/2 x 1/4	
222	22 1/4	15	18 3/8	21 3/8	24 3/8	17 3/8	25 1/2	11 3/8	14 3/8	25 3/8	17 3/8	13 3/8	25 3/8	27 3/8	8 1/2	10 3/8	29 3/8	25 3/8	15 3/8	29 3/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
245	24 1/2	16 1/2	20 3/8	23 3/8	26 3/8	19	28 1/2	12 3/8	16	28	19 3/8	14 3/8	28	29 3/8	9	12 3/8	32 3/8	29 3/8	16 3/8	31 3/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
270	27	18 1/4	22 3/8	26 3/8	29 3/8	20 3/8	31	13 3/8	17 3/8	30 3/8	21	15 3/8	30	31 3/8	9 1/2	13	34 3/8	30 3/8	18	33 3/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8

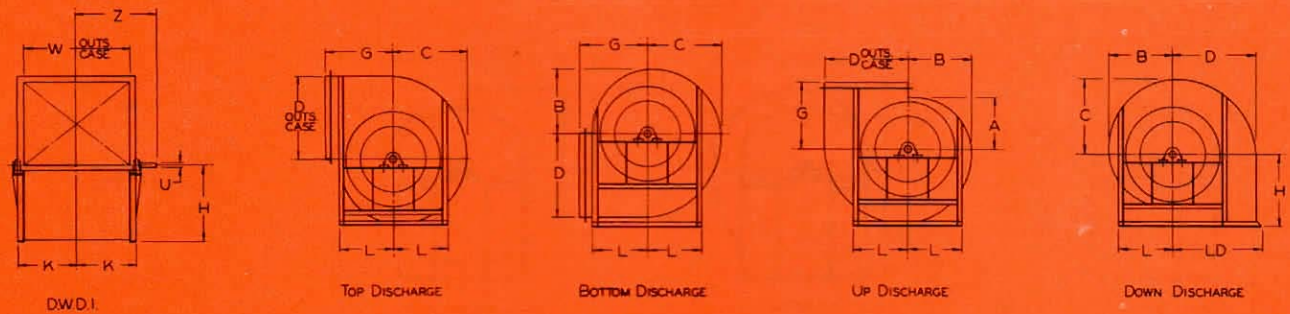
NOTE: Arrangement No. 4 dimensions are based on motors of the HP most frequently used on each particular fan size.





**TYPE F ADJUSTABLE D.W.D.I. ARRANGEMENT No. 3 SIZES 122-270**

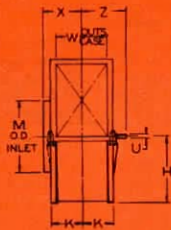
SIZE	WHEEL DIA.	COMMON TO ALL DISCHARGES											CL1	CL2	SHAFT KEYWAYS			
		A	B	C	D	G	H	K	L	M	W	Z			U	U	Kwy	
122	12 1/4	8 3/8	10 3/8	12	13 3/8	11 1/2	15	10 3/16	8 1/2	14	17 1/4	15	1 1/8	1 1/8	1 1/8	1 1/8	1/4 x 1/4	
135	13 1/2	9 1/8	11 3/8	13 1/4	14 3/8	12 1/2	16	11 3/16	9 1/2	15 1/2	19	16	1 1/8	1 1/8	1 1/8	1 1/8	1/4 x 1/2	
150	15	10 1/8	12 3/8	14 3/8	16 3/8	13 1/4	17 1/2	12 3/16	10 1/4	17	21	18	1 1/8	1 1/8	1 1/8	1 1/8	3/8 x 3/8	
165	16 1/2	11 1/8	13 3/8	16 1/8	18	14 1/4	19 1/2	13 3/16	11 1/4	18 1/4	23 1/4	19 1/4	1 1/8	1 1/8	1 1/8	1 1/8	3/8 x 1/2	
182	18 1/4	12 3/8	15 3/8	17 3/8	19 3/8	15 1/2	21 1/2	14 3/16	12 1/2	20 1/4	25 1/4	20 3/4	1 1/8	1 1/8	1 1/8	1 1/8	1/2 x 1/4	
200	20	13 1/2	16 3/4	19 1/2	21 1/4	16 1/2	23 1/2	16 3/16	13 1/4	22 3/4	28	22	1 1/8	1 1/8	1 1/8	1 1/8	2 1/8	1/2 x 1/4
222	22 1/4	15	18 3/4	21 3/4	24 1/4	17 3/4	25 1/2	18 3/16	14 3/4	25 3/4	31	24 1/2	1 1/8	1 1/8				
245	24 1/2	16 1/2	20 3/4	23 3/4	26 3/4	19	28 1/2	19 1/16	16	28	34 3/4	26	1 1/8	1 1/8				
270	27	18 1/4	22 3/4	26 1/4	29 3/4	20 1/2	31	21 1/4	17 1/4	30 3/4	37 1/4	28	1 1/8	2 1/8				



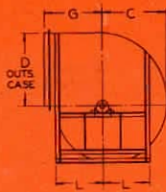
**TYPE F NON-ADJUSTABLE D.W.D.I. ARRANGEMENT No. 3 SIZES 122-1087**

SIZE	WHL. DIA.	COMMON TO SW & DW & ALL DISCHARGES											H		D.W. K	DN. DIS. LD	D.W. W	D.W. CL1 Z	D.W. CL2 U	SHAFT KEYWAYS				
		A	B	C	D	G	L	M	X	UP	TOP	DN.	BOT	U						KWY.				
122	12 1/4	8 3/8	10 3/8	12	13 3/8	11 1/2	10	14	9 1/8	13 3/4	12	12 1/2	16	10 1/8	15 3/8	17 1/4	15	1 1/8	1 1/8	1 1/8	1 1/8	1/4 x 1/4		
135	13 1/2	9 1/8	11 3/8	13 1/4	14 3/8	12 1/2	11	15 1/2	9 3/16	15	13 3/4	13 3/4	17 1/4	11	16 3/4	19	16	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1/4 x 1/2	
150	15	10 1/8	12 3/8	14 3/8	16 3/8	13 1/4	11 1/4	17	10 3/16	16 1/2	14 3/4	15	19	12	18 3/4	21	18	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	3/8 x 3/8	
165	16 1/2	11 1/8	13 3/8	16 1/8	18	14 1/4	12 3/4	18 3/4	10 3/16	18	15 3/4	16 3/4	20 1/2	13 1/16	20	23 3/8	19 3/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	3/8 x 1/2	
182	18 1/4	12 3/8	15 3/8	17 3/8	19 3/8	15 1/2	14	20 3/4	11 3/16	19 1/2	17 3/4	17 1/4	22 1/2	14 1/4	21 3/8	25 1/2	20 1/2	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1/2 x 1/4	
200	20	13 1/2	16 3/4	19 1/2	21 1/4	16 1/2	15	22 3/4	12 3/16	21 1/4	18 3/4	19	24 1/2	15 1/2	23 3/4	28	22	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	2 1/8	1/2 x 1/4
222	22 1/4	15	18 3/4	21 3/4	24 1/4	17 3/4	16 1/4	25 3/4	13 3/16	23 1/2	20 3/4	21	26 3/4	17	26 3/8	31	24 1/2	1 1/8	1 1/8					
245	24 1/2	16 1/2	20 3/4	23 3/4	26 3/4	19	17 1/2	28	14 3/16	25 3/4	22 1/2	23	29 3/4	18 1/8	28 3/8	34 3/8	26	1 1/8	1 1/8					
270	27	18 1/4	22 3/4	26 1/4	29 3/4	20 1/2	19	30 3/4	15 3/16	29	24 1/2	25 1/4	32 1/4	20 3/8	31 3/8	37 3/8	28	1 1/8	2 1/8					
300	30	20 1/4	25 3/8	29 1/4	32 3/8	22 3/4	21 1/4	34 1/4	17	31 3/4	27 3/4	28 1/2	35 3/4	23	35 3/8	42	31	1 1/8	2 1/8					
330	33	22 1/4	27 3/8	32 1/8	35 3/8	25	23 1/2	37 3/4	18 1/8	34 1/2	30	31	39	25 3/8	38 3/8	46 1/8	33 1/4	2 1/8	2 1/8					
365	36 1/2	24 3/4	30 3/8	35 1/4	39 3/8	27	25 1/2	42	19 3/8	38	33	34	42 3/4	27 1/4	42 3/8	51	36	2 1/8	2 1/8					
402	40 1/4	27 3/8	33 3/4	39 3/8	43 3/4	29 1/4	27 3/4	46 3/8	21	41 1/2	36 3/4	37 1/2	46 3/4	30 3/8	46 3/4	56 3/4	39	2 1/8	2 1/8					
445	44 1/2	29 3/8	37 3/4	43 3/8	48 3/8	32 1/4	30 3/4	51 1/4	23 3/16	45 3/4	39 3/4	41	52	33 3/8	51 3/8	62 1/8	43	2 1/8	3 1/8					
490	49	33	41	47 3/8	53 3/8	37 1/4	32 3/4	56 3/4	25 3/16	50	43 1/4	45	56 3/4	36 3/8	56 3/8	68 1/2	47	2 1/8	3 1/8					
542	54 1/4	36 1/2	45 3/8	52 3/4	58 3/8	41	35 3/4	62 1/4	27 3/16	55 1/2	48 3/4	50 1/4	62 1/2	40 3/8	61 3/8	75 3/4	51	3 1/8	3 1/8					
600	60	40 1/2	50 1/4	58 3/8	65	45	39 3/4	68 1/2	30 3/16	61 1/4	53	55 1/4	68 3/4	44 3/8	68	83 3/4	56	3 1/8	4 1/8					
660	66	44 3/4	55 1/4	64 1/8	71 1/2	49 1/2	44 1/2	75 1/4	33 3/16	67 1/4	58 1/2	61	75 3/4	49	75 3/8	92	61	3 1/8	4 1/8					
730	73	49 3/8	61 1/8	71	79 3/8	54 1/4	48 1/2	83 1/2	36 1/2	74 1/4	64 1/2	67 1/4	84	54	83 3/8	102	67 1/2	4 1/8	5 1/8					
807	80 3/4	54 3/8	67 3/8	78 1/2	87 1/2	59 1/2	53	92	40 3/16	81 3/4	71	74	92	59 3/8	91 1/2	112 1/2	74	4 1/8	5 1/8					
890	89	59 3/8	74 3/8	86 1/2	96 1/2	65	57 1/4	101	44 3/16	89 3/4	77 3/4	81 1/4	101	65	100 1/2	124	80	4 1/8	5 1/8					
982	98 1/4	66	82 3/4	95 1/2	106 1/2	73	62 1/2	111	48 3/16	99 3/4	86	90	112	72 1/2	111 1/2	137	87	5 1/8	6 1/8					
1087	108 3/4	73 3/8	91 1/8	105 3/8	118	80 1/4	68 1/2	123	52 3/16	109 3/4	95	99 1/4	123 1/2	79 3/8	123	151 3/4	95	6 1/8	6 1/8					

NOTE: For Class 3, dimensions L, H, K, LD and Z will increase approximately 2%.



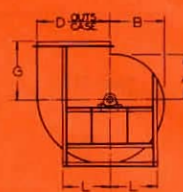
S.W.S.I.



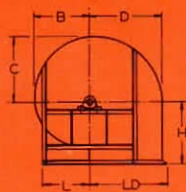
TOP DISCHARGE



BOTTOM DISCHARGE



UP DISCHARGE

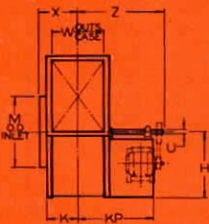


DOWN DISCHARGE

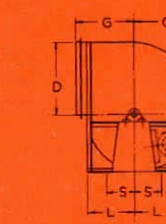
**TYPE F NON-ADJUSTABLE S.W.S.I. ARRANGEMENT No. 3 SIZES 122-1087**

SIZE	WHL. DIA.	COMMON TO SW & DW & ALL DISCHARGES								H				S.W. K	DN. DIS. LD	S.W. W	S.W. Z	S.W. CL1 U	S.W. CL2 U	SHAFT KEYWAYS		
		A	B	C	D	G	L	M	X	UP	TOP	DN.	BOT.							U	CL2	U
122	12 1/4	8 3/8	10 1/8	12	13 3/8	11 1/2	10	14	9 3/8	13 3/4	12	12 1/2	16	6 1/8	15 3/8	9 3/8	10 3/4	1 1/8	1 1/8	1 1/8	1/4 x 1/8	
135	13 1/2	9 1/8	11 1/8	13 1/4	14 3/8	12 1/2	11	15 1/2	9 3/8	15	13 1/4	13 1/4	17 1/4	6 3/8	16 3/8	10 1/8	11 1/4	1 1/8	1 1/8	1 1/8	1/4 x 1/8	
150	15	10 1/8	12 1/8	14 1/8	16 1/8	13 1/4	11 3/4	17	10 1/8	16 1/2	14 1/2	15	19	7 1/8	18 1/8	11 1/8	12	1 1/8	1 1/8	1 1/8	1/4 x 1/8	
165	16 1/2	11 1/8	13 1/8	16 1/8	18	14 1/4	12 3/4	19 3/4	10 3/8	18	15 3/4	16 1/4	20 1/2	7 1/8	20	12 1/8	12 3/4	1 1/8	1 1/8	1 1/8	3/8 x 3/16	
182	18 1/4	12 3/8	15 3/8	17 3/8	19 3/8	15 1/4	14	20 3/4	11 3/8	19 1/2	17 1/4	17 1/4	22 1/4	8 1/8	21 3/8	14 1/4	13	1 1/8	1 1/8	1 1/8	1/2 x 1/4	
200	20	13 1/2	16 1/4	19 1/4	21 3/4	16 1/2	15	22 3/4	12 3/8	21 1/4	18 1/2	19	24 1/2	9 3/8	23 3/8	15 3/4	14	1 1/8	1 1/8	1 1/8	1/2 x 1/4	
222	22 1/4	15	18 1/8	21 3/8	24 1/8	17 1/4	16 1/4	25 3/4	13 3/8	23 1/4	20 1/2	21	26 1/4	10 3/8	26 1/8	17 1/4	15 1/4	1 1/8	1 1/8	1 1/8	2 1/8	3/8 x 3/16
245	24 1/2	16 1/2	20 1/8	23 3/8	26 3/8	19	17 1/2	28	14 3/8	25 3/4	22 1/4	23	29 1/4	11 3/8	28 3/8	19 3/8	16 1/2	1 1/8	1 1/8	1 1/8	2 1/8	3/8 x 3/16
270	27	18 1/4	22 3/8	26 3/8	29 3/8	20 1/2	19	30 3/4	15 3/8	28	24 1/2	25 1/4	32 1/4	12 3/8	31 3/8	21	18	1 1/8	1 1/8	1 1/8	2 1/8	3/4 x 3/8
300	30	20 1/4	25 1/4	29 1/4	32 1/4	22 3/4	21 1/4	34 1/4	17	31 3/4	27 1/4	28 1/2	35 1/4	13 1/8	35 1/8	23 3/8	20	1 1/8	1 1/8	1 1/8	3 1/8	7/8 x 1/2
330	33	22 1/4	27 1/4	32 1/4	35 1/4	25	23 1/2	37 1/4	18 1/4	34 1/4	30	31	39	14 1/8	38 1/8	25 1/4	21 1/4	1 1/8	1 1/8	1 1/8	3 1/8	1 x 1/2
365	36 1/2	24 1/4	30 1/4	35 1/4	39 1/4	27	25 1/2	42	19 1/4	38	33	34	42 1/4	16 1/8	42 1/8	28 3/8	23 1/4	1 1/8	2 1/8	2 1/8	4 1/8	1 x 3/4
402	40 1/4	27 1/8	33 1/8	39 1/8	43 1/8	29 1/4	27 3/4	46 3/4	21	41 1/2	36 1/4	37 1/2	46 1/4	17 1/8	46 1/8	31 1/4	25 1/4	1 1/8	2 1/8	2 1/8	4 1/8	1 1/4 x 3/8
445	44 1/4	29 3/8	37 3/8	43 3/8	48 3/8	32 1/4	30 1/4	51 1/4	23 1/8	45 3/8	39 3/4	41	52	19 1/8	51 1/8	34 3/8	27 1/4	2 1/8	2 1/8	2 1/8	5 1/8	1 1/4 x 3/8
490	49	33	41	47 1/4	53 1/4	37 1/4	32 3/4	56 3/4	25 1/8	50	43 1/4	45	56 3/4	21 1/8	56 1/8	38	30	2 1/8	2 1/8	2 1/8	5 1/8	1 1/2 x 3/4
542	54 1/4	36 1/2	45 1/2	52 1/2	58 1/2	41	35 3/4	62 1/2	27 1/4	55 1/2	48 1/4	50 1/4	62 1/4	23 1/8	61 1/8	42 1/4	32 1/4	2 1/8	2 1/8	2 1/8	6 1/8	1 1/2 x 3/4
600	60	40 1/2	50 1/4	58 1/4	65	45	39 3/4	68 1/2	30 3/8	61 1/4	53	55 1/4	68 1/4	25 1/8	68	46 1/4	36 1/4	2 1/8	3 1/8	3 1/8	6 1/8	1 1/2 x 3/4
660	66	44 1/4	55 1/4	64 1/4	71 1/4	49 1/2	44 1/2	75 1/4	33 1/2	67 1/2	58 1/2	61	75 1/4	28 1/8	75 1/2	51 1/4	39 1/4	2 1/8	3 1/8	3 1/8	7 1/8	1 3/4 x 3/4
730	73	49 1/8	61 1/8	71	79 1/8	54 1/4	48 1/2	83 1/2	36 1/2	74 1/4	64 1/4	67 1/4	84	31 1/8	83 1/8	56 1/4	42 3/4	3 1/8	4 1/8	4 1/8	8 1/8	1 3/4 x 3/4
807	80 3/4	54 1/8	67 1/8	78 1/2	87 1/2	59 1/2	53	92	40 1/2	81 1/4	71	74	92	34 1/8	91 1/2	62 1/4	46 1/4	3 1/8	4 1/8	4 1/8	9 1/8	1 3/4 x 3/4
890	89	59 1/8	74 1/8	86 1/2	96 1/2	65	57 1/4	101	44 1/2	89 1/4	77 1/4	81 1/4	101	37 1/8	100 1/2	68 1/4	50 1/4	4 1/8	5 1/8	5 1/8	10 1/8	1 3/4 x 3/4
982	98 1/4	66	82 1/4	95 1/2	106 1/2	73	62 1/2	111	48 1/2	99 1/4	86	90	112	42 1/8	111 1/2	76	55	4 1/8	5 1/8	5 1/8	11 1/8	1 3/4 x 3/4
1087	108 3/4	73 1/4	91 1/4	105 3/4	118	80 1/4	68 1/2	123	52 1/2	109 3/4	95	99 1/4	123 1/4	46 1/8	123	84 1/4	59 1/4	5 1/8	6 1/8	6 1/8	12 1/8	1 3/4 x 3/4

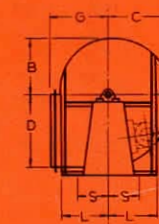
NOTE: For Class 3, dimensions L, H, K, LD and Z will increase approximately 2%.



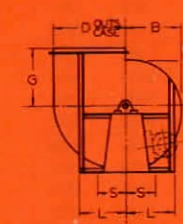
ARR. 1-A



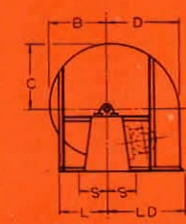
TOP DISCHARGE



BOTTOM DISCHARGE



UP DISCHARGE

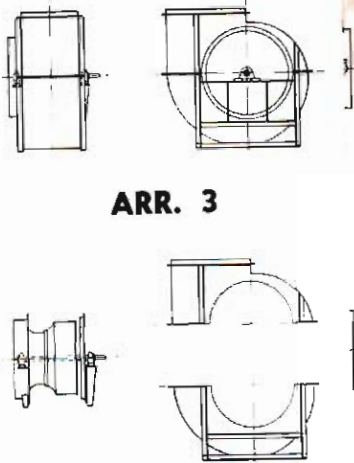


DOWN DISCHARGE

**TYPE F NON-ADJUSTABLE S.W.S.I. ARRANGEMENT No. 1-A and 9**

SIZE	WHL. DIA.	COMMON TO ALL DISCHARGES														H				S				U		SHAFT KEYWAYS		
		A	B	C	D	G	K	KP	L	LD	M	W	X	Z	UP	TOP	DN.	BOT.	UP	TOP	DN.	BOT.	CL1	CL2	U	KWY.		
122	12 1/4	8 3/8	10 1/8	12	13 3/8	11 1/2	6 3/8	15 1/2	10	15 1/4	14	9 3/8	9 3/8	18 1/4	13 3/4	12	12 1/2	16	6	6	6	6	1 1/8	1 1/8	1 1/8	1 1/8	1/4 x 1/8	
135	13 1/2	9 1/8	11 1/8	13 1/4	14 3/8	12 1/2	6 3/8	16 1/4	11	16 1/4	15 1/2	10 1/8	9 3/8	19 1/4	15	13 1/4	13 1/4	17 1/4	6 1/2	6 1/2	6 1/2	6 1/2	1 1/8	1 1/8	1 1/8	1 1/8	1/4 x 1/8	
150	15	10 1/8	12 1/8	14 1/8	16 1/8	13 1/4	7 3/8	17 1/4	11 3/4	18 1/4	17	11 1/4	10 1/8	21 1/4	16 1/4	14 1/2	15	19	7	7	7	7	1 1/8	1 1/8	1 1/8	1 1/8	1/4 x 1/8	
165	16 1/2	11 1/8	13 1/8	16 1/8	18	14 1/4	7 3/8	19 1/4	12 3/4	20	18 1/4	12 1/8	10 3/8	22 1/4	18	15 3/4	16 1/4	20 1/2	7 1/2	7 1/2	7 1/2	7 1/2	1 1/8	1 1/8	1 1/8	1 1/8	3/8 x 3/16	
182	18 1/4	12 3/8	15 3/8	17 3/8	19 3/8	15 1/4	8 3/8	21 1/4	14	21 3/4	20 1/4	14 3/8	11 3/8	24 1/4	19 1/4	17 1/4	17 1/2	22 1/4	8 1/2	8 1/2	8 1/2	8 1/2	1 1/8	1 1/8	1 1/8	1 1/8	1/2 x 1/4	
200	20	13 1/2	16 1/4	19 1/4	21 3/4	16 1/2	9 3/8	22 3/4	15	23 3/4	22 1/4	15 1/4	12 1/8	26 1/4	21 1/4	18 1/2	19	24 1/2	10	9 1/2	9 1/2	9 1/2	1 1/8	1 1/8	1 1/8	1 1/8	1/2 x 1/4	
222	22 1/4	15	18 1/8	21 3/8	24 1/8	17 1/4	10 3/8	25 1/4	16 1/4	26 1/4	25 1/4	17 1/4	13 3/8	29 1/4	23 1/4	20 1/4	21	26 1/4	10 1/2	10	10 1/2	10 1/2	1 1/8	1 1/8	1 1/8	1 1/8	2 1/8	3/8 x 3/16
245	24 1/2	16 1/2	20 1/8	23 3/8	26 3/8	19	11 3/8	28	17 1/4	28 1/4	28	19 1/4	14 3/8	32 1/4	25 3/4	22 1/4	23	29 1/4	11	10 1/2	10 1/2	11	1 1/8	1 1/8	1 1/8	1 1/8	2 1/8	3/8 x 3/16
270	27	18 1/4	22 3/8	26 3/8	29 3/8	20 1/2	12	30	19	31 1/4	30 1/4	21	15 3/8	34 1/4	28	24 1/4	25 1/4	32 1/4	11 1/2	11	11	12 1/2	1 1/8	1 1/8	1 1/8	1 1/8	2 1/8	3/8 x 3/16
300	30	20 1/4	25 1/4	29 1/4	32 1/4	22 3/4	13 1/2	32 1/4	21 1/4	35 1/4	34 1/4	23 1/4	17 3/8	36 1/4	31 1/4	27 1/4	28 1/4	35 1/4	12 1/2	12	12 1/2	13 1/4	1 1/8	1 1/8	1 1/8	1 1/8	3 1/8	7/8 x 1/2
330	33	22 1/4	27 1/4	32 1/4	35 1/4	25	14 1/2	35 1/4	23 1/2	38 1/4	37 1/4	25 1/4	18 1/4	40	34 1/4	30	31	39	13	12 1/2	13	14	1 1/8	2 1/8	2 1/8	2 1/8	4 1/8	1 x 1/2
365	36 1/2	24 1/4	30 1/4	35 1/4	39 1/4	27	16 1/2	39	25 1/4	42 1/4	42	28 1/8	19 1/4	43 1/4	38	33	34	42 1/4	14	13 1/4	14	15 1/4	1 1/8	2 1/8	2 1/8	2 1/8	4 1/8	1 x 3/4
402	40 1/4	27 1/8	33 1/8	39 1/8	43 1/8	29 1/4	17 3/8	42 1/8	27 3/4	46 1/8	46 1/8	31 1/4	21	47 1/8	41 1/2	36 1/4	37 1/2	46 1/4	15 1/2	15	15	17	2 1/8	2 1/8	2 1/8	2 1/8	4 1/8	1 1/4 x 3/8
445	44 1/4	29 3/8	37 3/8	43 3/8	48 3/8	32 1/4	19 1/8	46 3/8	30 1/4	51 1/4	51 1/4	34 1/4	23 1/8	51 3/8	45 3/8	39 3/4	41	52	17	16	16	18 1/2	2 1/8	2 1/8	2 1/8	2 1/8	5 1/8	1 1/4 x 3/8
490	49	33	41	47 1/4	53 1/4	37 1/4	21 1/4	50 1/4	32 3/4	56 1/4	56 1/4	38	25 1/8	56 3/8	50	43 1/4	45	56 3/4	18 1/2	17 1/2	18	20	2 1/8	3 1/8	3 1/8	3 1/8	5 1/8	1 1/2 x 3/4
542	54 1/4	36 1/2	45 1/2	52 1/2	58 1/2	41	23 3/8	55 3/4	35 1/4	61 3/4	62 1/4	42 1/2	27 1/4	61 3/8	55 1/2	48 1/4	50 1/4	62 1/4	19 1/2	18 1/2	19	21	2 1/8	3 1/8	3 1/8	3 1/8	6 1/8	1 1/2 x 3/4
600	60	40 1/2	50 1/4	58 1/4	65	45	25 1/4	61 3/4	39 1/4	68 1/2	68 1/2	46 1/4	30 1/4	67 1/4	61 1/4	53	55 1/4	68 1/4	21	20	20	23	2 1/8	3 1/8	3 1/8	3 1/8	7 1/8	1 1/2 x 3/4
660	66	44 1/4	55 1/4	64 1/4	71 1/4	49 1/2	28 1																					

# BUILDING OPENINGS REQUIRED FOR ARR. 3 FANS HAVING SPLIT HOUSINGS



**ARR. 3**

FAN SIZE	SINGLE WIDTH			DOUBLE WIDTH		
	Completely Assembled	With Upper Casing Only Removed	With Upper Casing and Wheel Assembly Removed	Completely Assembled	With Upper Casing Only Removed	With Upper Casing and Wheel Assembly Removed
490	102 x 58	84 x 58	65 x 47	102 x 81	84 x 81	65 x 78
542	113 x 63	93 x 63	71 x 51	113 x 99	93 x 99	71 x 85
600	124 x 70	102 x 70	77 x 56	124 x 109	102 x 109	77 x 93
660	137 x 77	113 x 77	85 x 63	137 x 119	113 x 119	85 x 104
730	150 x 83	124 x 83	93 x 69	150 x 130	124 x 130	93 x 114
807	166 x 91	137 x 91	102 x 75	166 x 143	137 x 143	102 x 125
890	182 x 99	150 x 99	111 x 81	182 x 156	150 x 156	111 x 135
982	201 x 108	165 x 108	122 x 91	201 x 169	165 x 169	122 x 151
1087	222 x 118	182 x 118	134 x 99	222 x 185	182 x 185	134 x 167

Openings specified above are those required to pass the largest portion of a Top or Bottom Horizontal Discharge Fan.

Up and Down Discharge Fans require building openings somewhat smaller in size.

Arr. 1-A Fan Openings required will be larger than for Arr. 3 Fans in the case of an assembled or partially assembled fan.

## WEIGHTS OF TYPE "F" FANS

SIZE	SINGLE WIDTH								DOUBLE WIDTH								
	Arr. 1 Class		Arr. 2 Class	Arr. 3 Class		Arr. 4 Class		Arr. 7 Class		Arr. 8 Class		Arr. 9 Class		Arr. 3 Class		Arr. 7 Class	
	1	2	1	1	2	1	2	1	2	1	2	1	2	1	2	1	2
122	160	170	140	130	150	160	180	200	230	230	270	200	230	160	220	230	290
135	180	220	160	150	180	190	220	240	270	270	350	230	270	200	250	270	330
165	220	270	200	190	220	210	260	290	340	320	420	280	320	230	270	290	370
182	260	320	220	230	270	240	290	340	400	380	470	320	370	260	320	380	450
150	310	380	260	270	320	290	370	380	400	470	530	400	440	330	390	440	510
200	390	430	370	340	370	360	430	460	540	540	660	450	520	400	470	520	620
222	490	570	430	420	460	460	530	500	650	640	780	540	650	520	650	640	780
245	620	730	550	510	570	500	630	660	770	780	880	660	760	670	790	810	920
270	740	880	610	600	680	670	790	780	930	930	1020	780	910	780	980	980	1180
300	950	1080		780	870	820	970	960	1100	1180	1310	950	1090	1100	1260	1310	1500
330	1160	1290		970	1070	1040	1150	1160	1330	1410	1570	1160	1300	1260	1580	1500	1860
365	1340	1550		1090	1270	1210	1340	1350	1580	1640	1900	1350	1580	1500	1900	1800	2100
402	1630	1950		1300	1580			1720	2060	2190	2400	1650	2000	2000	2500	2500	3000
445	2030	2440		1650	1960			2240	2580	2500	3000	2040	2500	2550	3250	2950	3880
490	2550	3030		2090	2450			2690	3190	3150	3800	2570	3050	3200	4100	3850	4700
542	3330	3650		2500	3070			3200	4000	3950	4600	3340	3700	3900	4800	4750	5850
600	4010	4660		3150	3800			4000	4900	4860	5600	4000	4700	4900	6000	5900	7300
660	4810	5810		3950	4800			5150	6150	6110	6800	4850	5900	6500	7700	7450	8800
730	6160	7260		5000	5850			6160	7360	7850	8800	6250	7300	8100	9650	9000	10800
807	8270	9520		6510	8060			8560	10100	10700	12000	8350	9600	10500	15000	12800	16500
890	11100	12150		8570	10700			11700	13750	13000	16000	11500	12500	13500	18500	15800	19800
982	14200	15600		11800	13700			15000	17600	16600	20500	14700	16000	17300	24000	20400	25600
1087	18300	19900		15100	17600			19200	22500	21200	26200	18800	20400	22000	31000	25200	32000

\*—These weights are approximately correct and may be used to calculate vibration isolators and shipping weights.

## SPARK - RESISTANT CONSTRUCTION

The "Standards for Spark-Resistant Fans", as adopted by AMCA are quoted below, together with a description of Sheldon spark-resistant construction.

**TYPE A:** "All parts of the fan in contact with air or gas being handled shall be made of non-ferrous metal."

Construction consists of aluminum wheel, housing and inlet, with monel shaft. All other parts of standard steel construction.

**TYPE B:** "Fan shall have an entirely non-ferrous

Wheel and a non-ferrous ring around the opening through which the shaft passes."

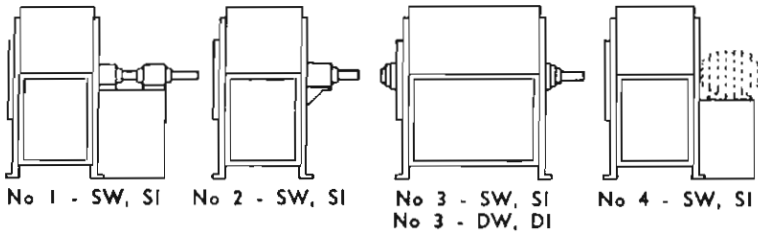
Construction consists of aluminum wheel and aluminum shield where shaft passes into fan casing. All other parts of standard steel construction.

**TYPE C:** "Fan shall be so constructed that a shift of the wheel or shaft will not permit two ferrous parts to rub or strike."

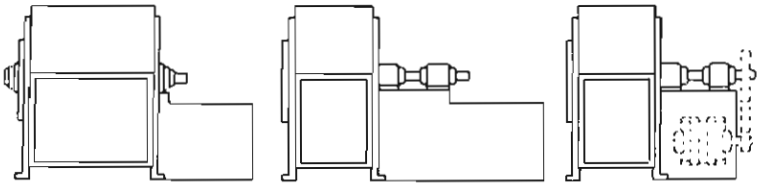
Construction consists of aluminum inlet and aluminum saucer or ring around shaft. All other parts to be of standard steel construction.

NOTE: Fan bearings must NOT be placed in the air stream; all fan parts shall be electrically grounded when installed.

## FAN ARRANGEMENTS

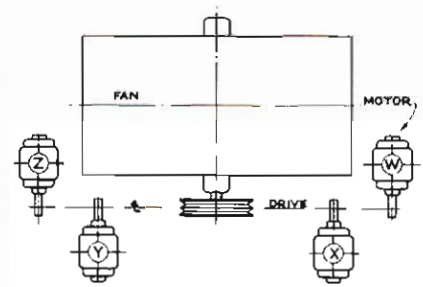


No 1 - SW, SI    No 2 - SW, SI    No 3 - SW, SI  
No 3 - DW, DI    No 4 - SW, SI



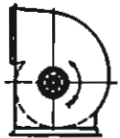
No 7 - SW, SI    No 8 - SW, SI    No 9 - SW, SI  
No 7 - DW, DI

## MOTOR POSITION - BELT DRIVE

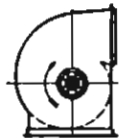


Location of motor is determined by facing the drive side of fan and designating the motor position by letters W, X, Y or Z, as the case may be.

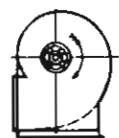
## ROTATION AND DISCHARGE



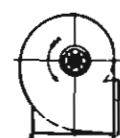
Counter-Clockwise  
Top Horizontal



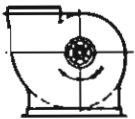
Clockwise  
Top Horizontal



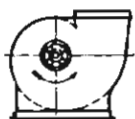
Clockwise  
Bottom Horizontal



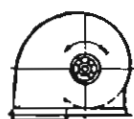
Counter-Clockwise  
Bottom Horizontal



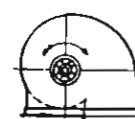
Clockwise  
Up Blast



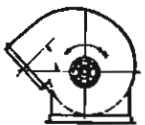
Counter-Clockwise  
Up Blast



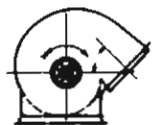
Counter-Clockwise  
Down Blast



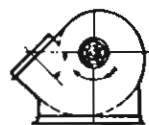
Clockwise  
Down Blast



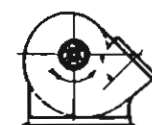
Counter Clockwise  
Top Angular Down



Clockwise  
Top Angular Down



Clockwise  
Bottom Angular Up



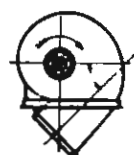
Counter-Clockwise  
Bottom Angular Up



Counter-Clockwise  
Top Angular Up



Clockwise  
Top Angular Up



Clockwise  
Bottom Angular Down



Counter-Clockwise  
Bottom Angular Down

# SHELDONS

## CENTRIFUGAL FANS



**TYPE "F"**  
Forward Curved  
Wheel



**TYPE "A"**  
Airfoil Wheel



**TYPE "B"**  
Backward  
Inclined Wheel

Illustrated are the three types of wheels available with Sheldon Centrifugal Fans. For complete information on Sheldons Type "A" and Type "B" Fans, contact the nearest Sheldons representative.

**Sheldons**

**SHELDONS ENGINEERING LIMITED**

Galt, Ontario; Montreal, Toronto, Hamilton, London, Ottawa, Vancouver

Representatives in principal cities across Canada

Sheldons Manufacturing Corporation, Bensenville, Illinois