



SHELDONS ENGINEERING Inc

Sheldons Engineering Product Index

www.sheldonsengineering.com

RADIAL BLADE PRESSURE BLOWER – 5000

GENERAL

The centrifugal fan shall be designed and manufactured by Sheldons Engineering to ensure smooth operation. Fan wheel shall be radial with tapered shroud and backplate steel or aluminum wheel construction. Unless otherwise directed, fan arrangement, motor location, support base, rotation and discharge are as shown on the layout drawings.

PERFORMANCE

Fan ratings shall be based on tests made in accordance with AMCA Standard 210. Flow shall be actual volumetric flow at the fan inlet. Fan static pressure is defined as static pressure at fan outlet less total pressure at fan inlet. Standard inlet density is to be taken as 0.75 lb/ft^3 with corrections for temperature, elevation, inlet static pressure, gas composition and humidity as defined in the schedule. Fans shall be selected to operate to the right of the peak static pressure at the given speed to ensure stable performance. Fan brake horsepower shall be equal to or less than specified at the given flow and fan static pressure.

SOUND

Fan manufacturers shall provide sound power level ratings for fans tested and rated in accordance with AMCA Standards 300 and 301. Sound power ratings shall be in decibels (reference 10-12 watts) in eight octave bands. Sound power levels will be corrected for installation by the specifying engineer...dBA or sound pressure levels only are not acceptable.

CONSTRUCTION

Fan housings are to be heavy -- min. 10 gauge, 1/4" minimum bearing pedestal, continuously welded construction with flanged and punched outlet. Housings with lock seams or spot welded construction are not acceptable. Outlet dimensions to match standard ANSI flange and bolt pattern sizes.

BEARINGS (belt driven fans)

Bearings are to be heavy duty, grease lubricated, precision anti-friction self-aligning pillow block design. Bearings shall be designed for a minimum L-10 life of 40,000 (series 5900 L-10 is 100,000) when rated at the fan's maximum cataloged operating speed.

SHAFT (belt driven fans)

Shafts are to be ASTM A-108 steel, grade 1040/1045, precision turned, ground and polished. Grade 1018 steel is not acceptable. The shaft's first critical speed shall be at least 143% of the fan's maximum operating speed.



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PAINT

All fan surfaces are to be thoroughly prepared prior to painting using a combination of washing and hand and power tool cleaning as required in SSPC-SP-3. After cleaning, all surfaces (except wheel) are to be coated with industrial grade alkyd enamel. Surfaces of bolted components not accessible after assembly shall be coated and allowed to dry prior to final assembly. Primer only will not be accepted.

BALANCE & INSPECTION

All fans shall be precision balanced to ISO quality grade 2.5, report to be submitted with the maintenance manual. A final inspection by a qualified inspector prior to shipment is required to include: scope of supply confirmation, balance, welding, dimensions, bearings, duct and base connection points, paint finish and overall workmanship.

ACCESSORIES

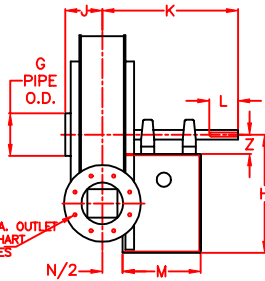
Accessories shall be provided as called for in the plans and specifications. Standard accessories include:

Motor to be NEMA Design B 3/60/460-575V-3600 rpm, high efficiency TEFC 1.15 SF
V-Belt Drives - Variable Speed/Constant Speed with min 1.5 SF
Belt Guard or weather cover required
Extended lubrication lines (nylon, copper or stainless steel) with fittings terminating in an accessible area.

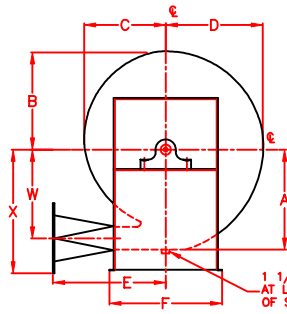
Additional Features that may be required:

Split pillow block bearings
Companion Flange (angle companion flange bolted to the fan inlet or outlet flange)
Inlet or Outlet screen heavy gauge wire on 2" centres
Above 300°F, Shaft cooling wheel required
Above 500°F, high temperature aluminum paint required
Vibration Isolation - Spring - Rubber-In-Shear
Spark Resistant Construction –
 AMCA "A" All parts of the fan in contact with the air stream non-ferrous material
 AMCA "B" Non-ferrous wheel and aluminum rubbing ring where shaft passes through
 Housing with shaft seal
 AMCA "C" Aluminum inlet cone and Aluminum rubbing ring
Manual Cut knife gate

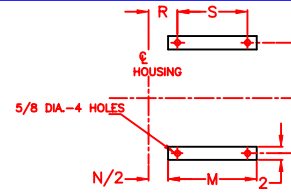
Y SIZE 125 DIA. OUTLET
FLANGE SEE CHART
AT RIGHT. HOLES
STRADDLE ϵ



FRONT ELEVATION



SIDE ELEVATION - DRIVE SIDE



FOUNDATION PLAN

ANSI STD. 125# OUTLET FLANGE DATA					
PIPE SIZE "Y"	4"	6"	8"	10"	12"
B.C.DIA.	7 1/2	9 1/2	11 3/4	14 1/4	17
HOLE DIA.	3/4	7/8	7/8	1"	1"
NO. OF HOLES	8	8	8	12	12
PIPE O.D.	4 1/2	6 5/8	8 5/8	10 3/4	12 3/4
FLANGE O.D.	9	11	13 1/2	16	19

DIMENSIONS - INCHES

FAN SIZE	WHEEL DIA. A&B	SHAFT DIA.	KEYWAY	A	B	C	D	E	F	G	H	J	K*	L	M	N/2	R	S	T	W	X	Y	Z
A	14-18									6 5/8		5 1/4	19 13/16	3		1 15/16	3 11/16				16 1/4	4	
B	19-22	1 3/16	1/4x1/8	14 7/8	13 1/4	12 7/16	14 1/16	18 1/4	18 1/2	8 5/8	19	6 3/8	22 1/2	4 1/2		3 1/8	4 7/8	8 3/8	11 3/4	17 1/4	6	1 13/16	
C	14-18																			18 1/2	8		
D	19-22	1 7/16	3/8x3/16					17 3/4		6 5/8	23 1/2	5 1/4	23 5/16	4 1/2		1 15/16	3 11/16			19 3/8	4	2	
E	23-26			18	16	15	17								15 1/4			11 3/4		20 3/8	6		
F	15-18															3 1/8	4 7/8			21 5/8	8		
G	19-22							21 3/4	23 1/2	8 5/8	24 1/8	6 3/8	23 3/16	5				10 7/8		22 7/8	10	2 5/8	
J	23-26	2 3/16	1/2x1/4					19			28 7/8	5 3/4	22 9/16			2 1/2	4 1/4			23 1/8	6		
K	19-22			21 1/8	18 3/4	17 9/16	19 15/16													24 3/8	8		
L	23-26																			25 5/8	10		
M	23-26							23		10 3/4	29 3/8	6 7/8	25 11/16	7		3 5/8	5 3/8			27 1/8	12	3 1/8	

ITEM NO.	IDENTIFICATION	NO. REQD.	FAN MODEL	D/R FIG. NO.	PERFORMANCE								OPTIONAL ACCESSORIES			
					CFM	O.V. FT./MIN.	SP IN W.G.	R.P.M.	BHP		TEMP. DEG.F.	OPER. DENS.				
									OPR DENS.	.075 LB/FT ³						

ITEM NO.	MOTOR DATA					POSITION OF DISCHARGE & ROTATION FROM DRIVE SIDE												
	HP	RPM	CURRENT	FRAME	TYPE													
						FIG.1	FIG.2	FIG.3	FIG.4	FIG.5	FIG.6	FIG.7	FIG.9					
						FIG.11	FIG.12	FIG.13	FIG.14	FIG.15	FIG.16	FIG.17	FIG.19					

NOTES

REFER TO ORDER ACKNOWLEDGMENT FOR SHIPPING DETAILS.

OPTIONAL ACCESSORIES

- VENTURI INLET:
- FLANGED INLET:
- RUBBER INLET SLEEVE:
- SLIP TUBE OUTLET:
- 45° DISCHARGE ELBOW, REQUIRED FOR ALL MODELS EXCEPT "H" AND "J", WHEN DB DISCHARGE IS REQUIRED.
- RUBBER OUTLET SLEEVE:
- CORK PADS: 1"x 2"x1/4" DIM.
- INTAKE FILTER
- INLET BLAST GATE
- OUTLET BLAST GATE
- BELT GUARD
- SHAFT AND BEARING GUARD
- EXTENDED GREASE LEADS
- SHAFT SEAL
- COOLING WHEEL AND GUARD
- STEEL WHEEL (100°F)
- STEEL WHEEL (650°F)
- INLET SCREEN
- DRAIN
- OUTLET VOLUME DAMPER
 - MANUAL OPERATION.
 - AUTOMATIC WITH LINKAGE
 - PNEUMATIC
 - ELECTRIC.

CUSTOMER _____ P.O.# _____

JOB NAME _____

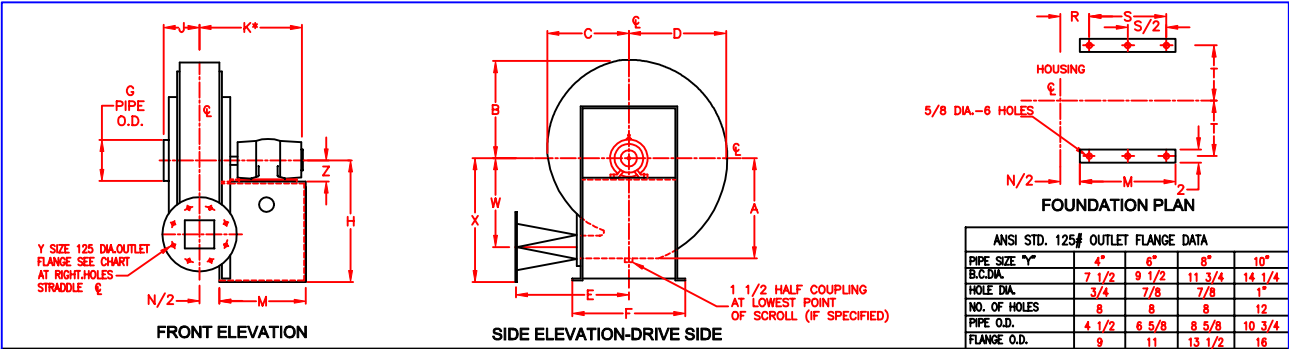
LOCATION _____



SERIES 5000
ARRANGEMENT 1, FIXED HOUSING
SHELDONS ENGINEERING

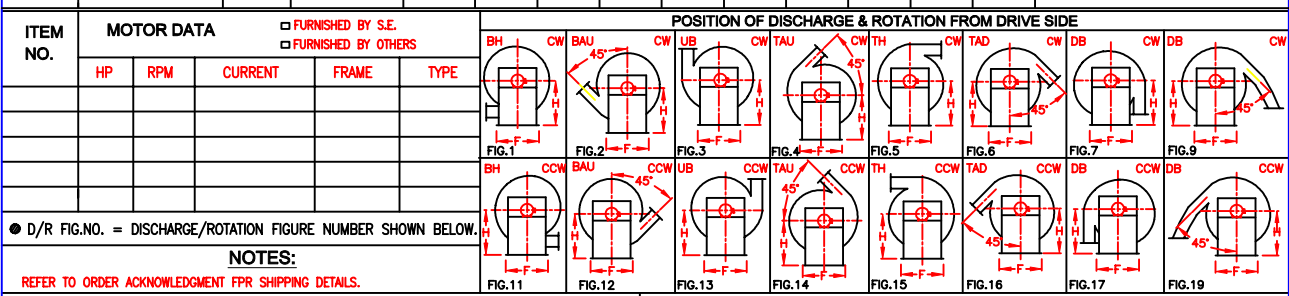
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sales@sheldonsengineering.com

FURNISHED FOR SALES PURPOSE DIMENSIONS NOT CERTIFIED	DATE	SUBMITTED BY	SALES OFFICE
DRAWING CERTIFIED BY S.E. FURNISHED FOR APPROVAL-NOT RELEASED FOR PRODUCTION	DATE	ENGINEER	SO#
DRAWING CERTIFIED BY S.E. APPROVAL-NOT REQUIRED-RELEASED FOR PRODUCTION	DATE	ENGINEER	DWG#



DIMENSIONS - INCHES																								
FAN SIZE	WHEEL DIA.	MOTOR FRAME	A	B	C	D	E	F	G	H	J	K*	M	N/2	R	S	T	W	X	Y	Z	BARE FAN WEIGHT		
A	14-18	1431, 1451 1821, 1841	14 7/8	13 1/4	12 7/16	14 1/16	18 1/4	19 1/2	6 5/8	17 3/4	5 1/4	13 3/8	11 1/2	1 15/16	3 3/8	8 5/8	8 7/8	11 3/4	16 1/4	4	3 5/8	145		
B	14-18	1431, 1451 1821, 1841 2131, 2151								17 3/4		14 5/8	17 1/2			14 1/8								
										19 3/4		15 7/8	19			8 5/8								
C	15-18	1821, 1841 2131, 2151	18	16	15	17	17 3/4	23 1/2	6 5/8	24 3/4	5 1/4	13 3/8	11 1/2	1 15/16	3 3/8	14 1/8	10 7/8	14 7/8	19 3/8	4	3 5/8	230		
D	19-22	1431, 1451 1821, 1841																			23 1/2	13 3/8	17	14 1/8
E	19-22	1431, 1451 1821, 1841 2131, 2151																			24 3/4	16 3/8	17 1/2	15 7/8
F	19-22	2541	18	16	15	17	17 3/4	23 1/2	6 5/8	24 3/4	5 1/4	13 3/8	11 1/2	1 15/16	3 3/8	14 1/8	10 7/8	14 7/8	19 3/8	4	3 5/8	230		
G	19-22	1821, 1841 2131, 2151								25 1/8		16 3/8				17 1/2					15 7/8			
										26 3/4		17 7/8				19					8 5/8			
J	23-26	1821, 1841 2131, 2151	21 1/8	18 3/4	17 9/16	19 15/16	19	21 3/4	6 5/8	24 3/4	5 3/4	18 3/8	17	2 1/2	3 15/16	14 1/8	17 5/8	23 1/8	6	4 5/8	290			
K	23-26	1821, 1841 2131, 2151								26 3/4		23 1/4				22 1/4				19 1/2				
										28 1/4		25 3/8				22 1/4				19 1/2				
L	23-26	2841S, 2861S	21 1/8	18 3/4	17 9/16	19 15/16	19	21 3/4	6 5/8	26 3/4	5 3/4	25 3/8	22 1/4	3 5/8	5	19 1/2	17 5/8	25 5/8	10	7 1/8	350			
M	23-26	3241S, 3261S								28 1/4		26 1/2				26 1/2				23 1/2				
										30 1/4		28 3/4				30 3/8				23 1/2				

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					CFM	O.V. FT/MIN.	SP IN W.G.	R.P.M.	BHP		TEMP. DEG.F.	OPER. DENS.	ALT. FT.		
									● OPER DENS.	● .075 LB/FT ³					



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- STEEL WHEEL (100°F)
- STEEL WHEEL (650°F)
- INLET SCREEN
- DRAIN
- OUTLET VOLUME DAMPER
- MANUAL OPERATION.
- AUTOMATIC WITH LINKAGE.
- PNEUMATIC WITH LINKAGE.
- ELECTRIC.
- MOUNTING OF MOTOR

CUSTOMER _____

JOB NAME _____

LOCATION _____

SERIES 5000
ARRANGEMENT 4, FIXED HOUSING
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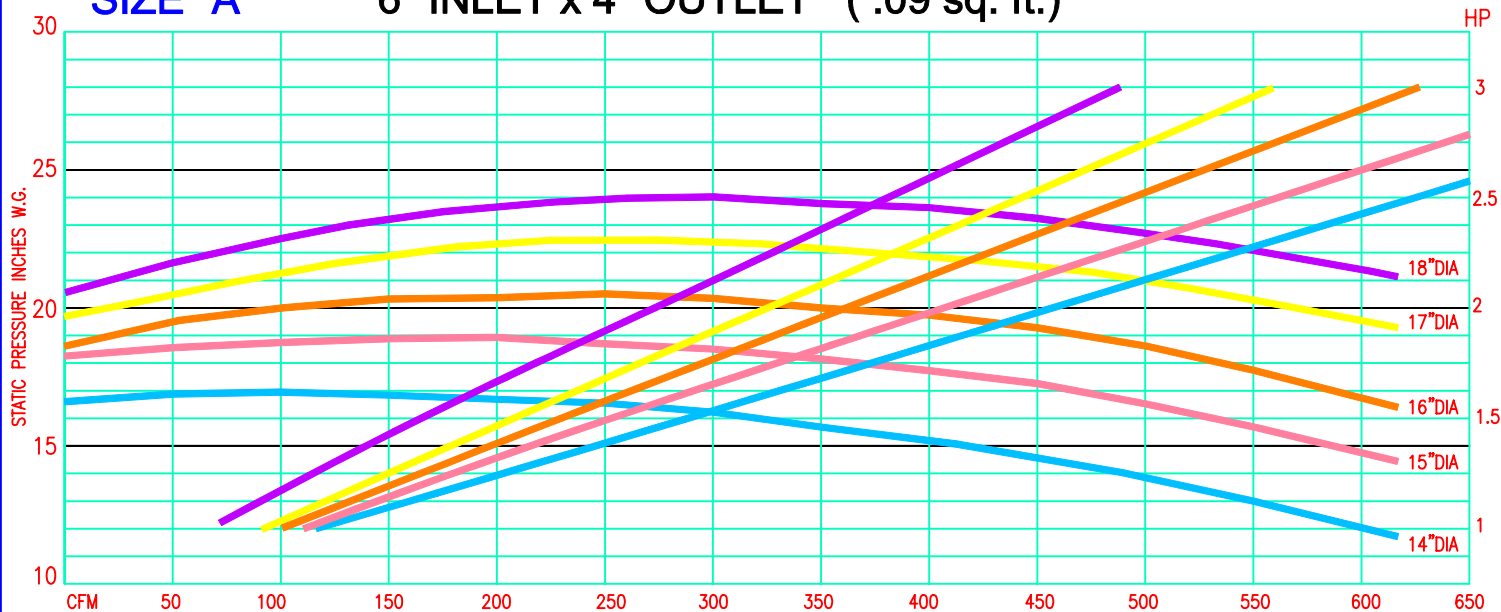






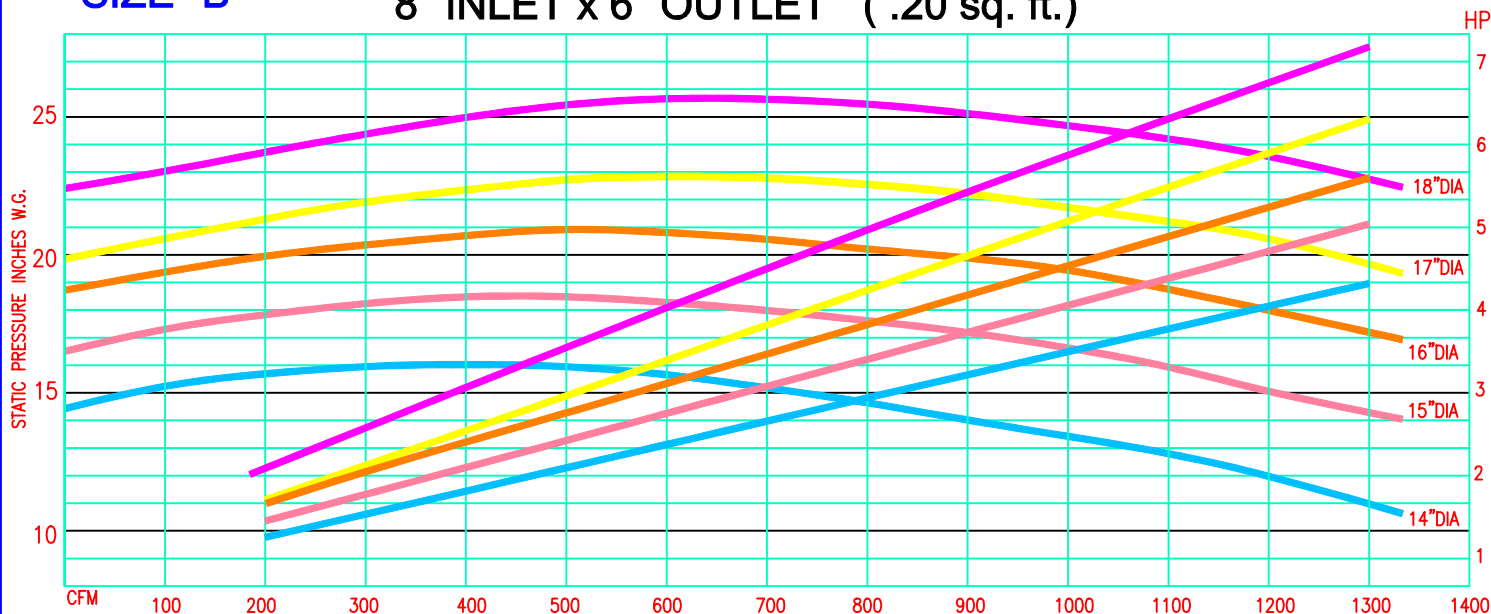
SIZE "A"

6" INLET x 4" OUTLET (.09 sq. ft.)



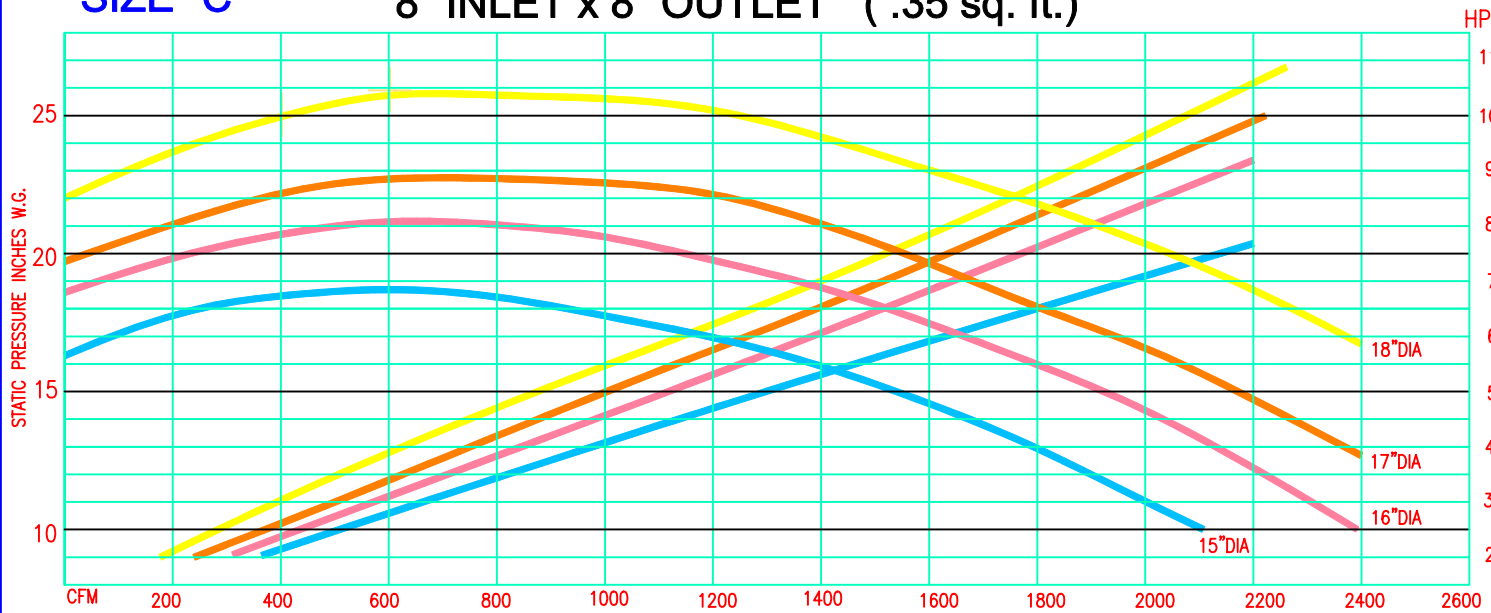
SIZE "B"

8" INLET x 6" OUTLET (.20 sq. ft.)



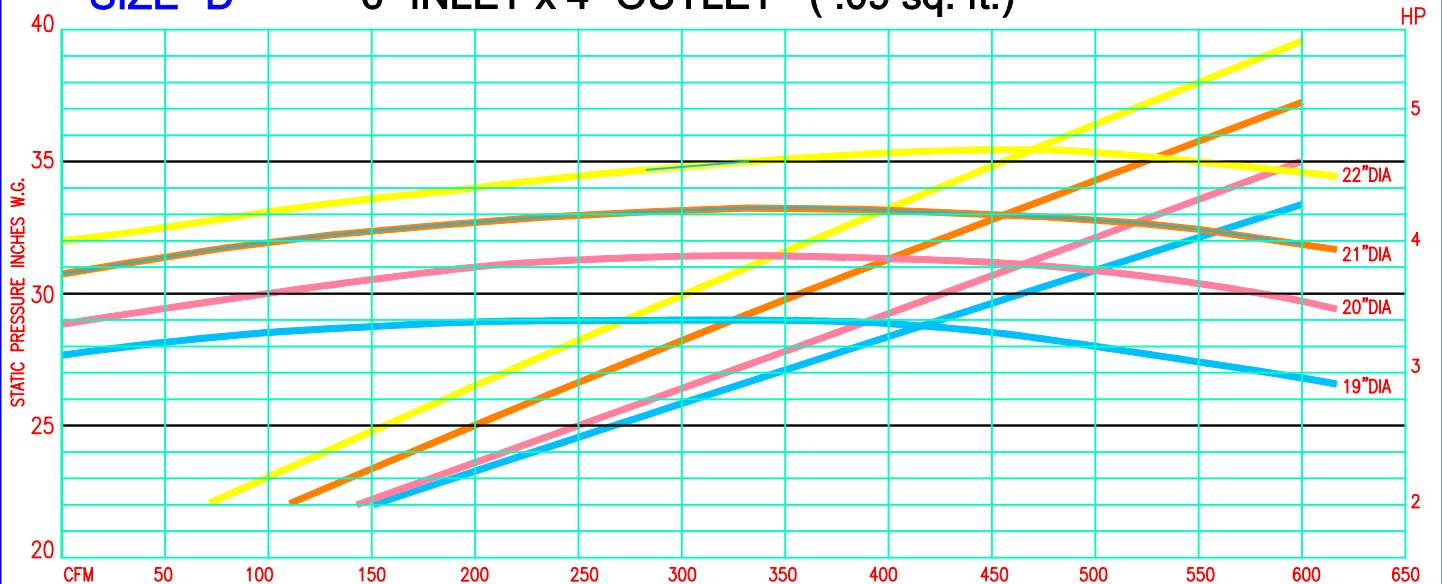
SIZE "C"

8" INLET x 8" OUTLET (.35 sq. ft.)

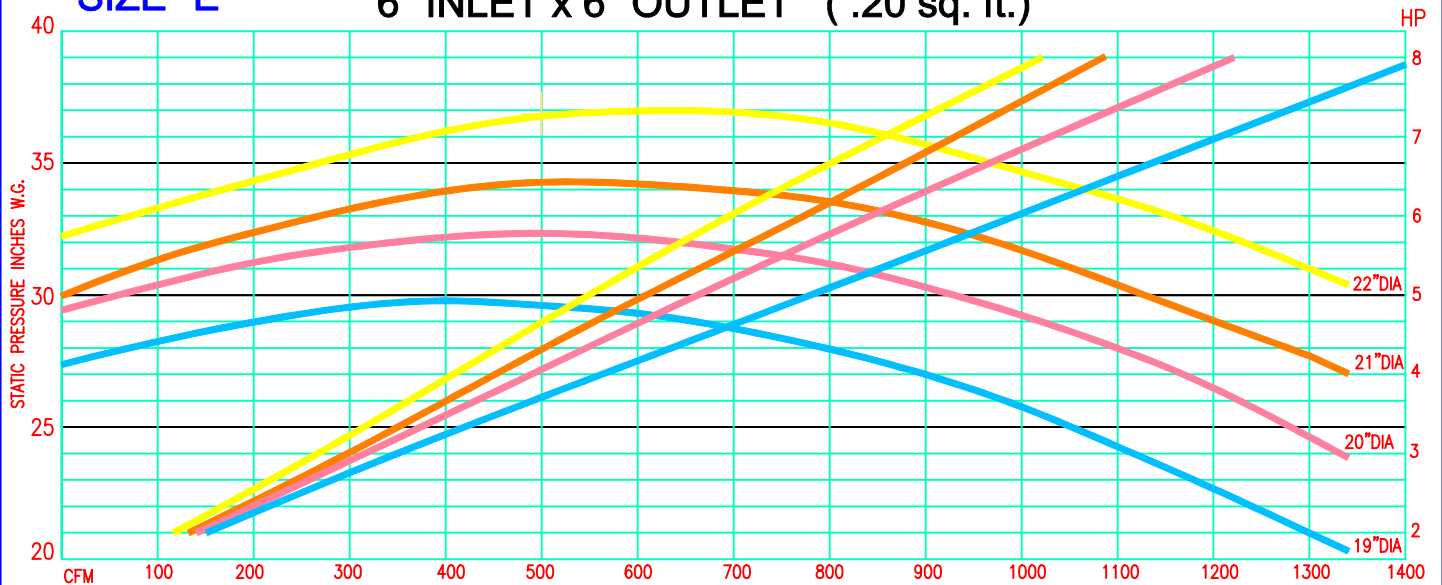




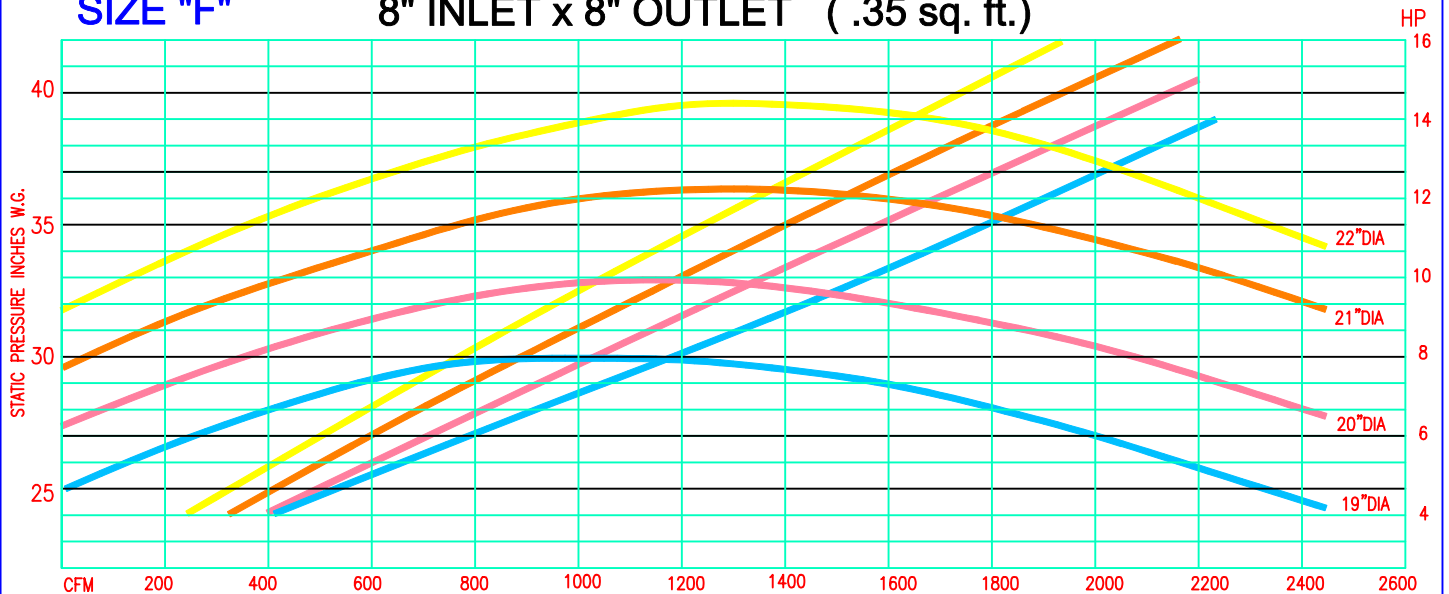
SIZE "D" 6" INLET x 4" OUTLET (.09 sq. ft.)



SIZE "E" 6" INLET x 6" OUTLET (.20 sq. ft.)

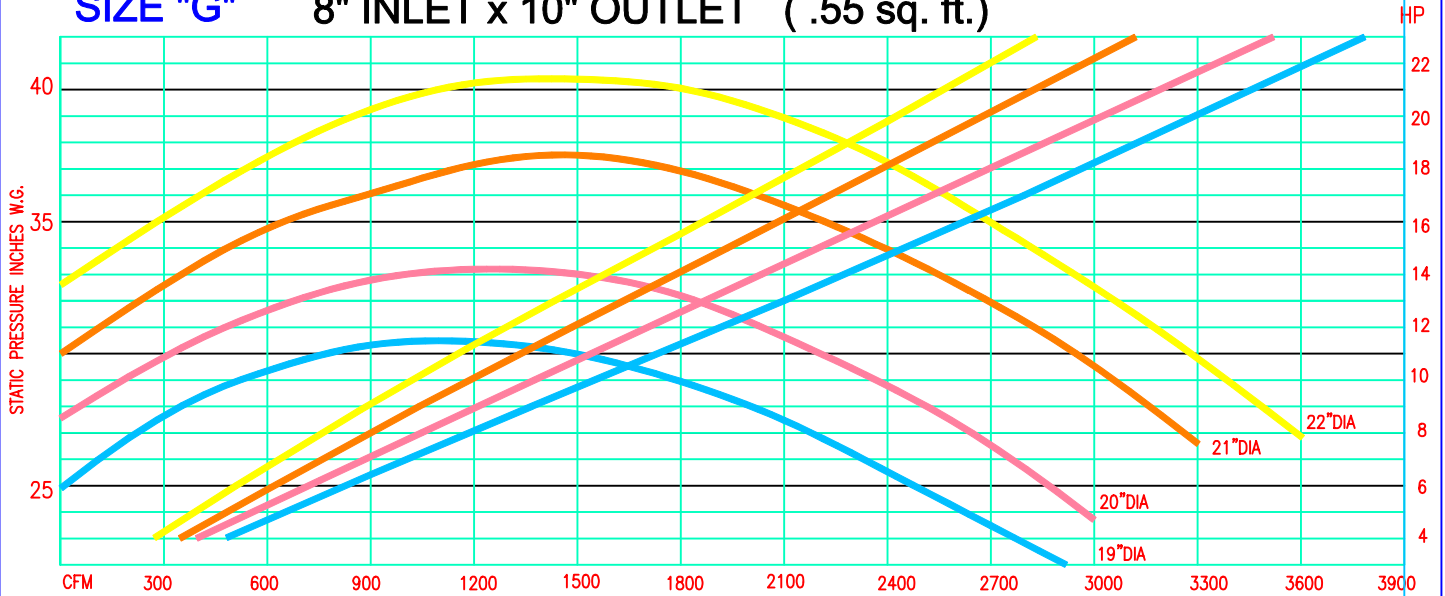


SIZE "F" 8" INLET x 8" OUTLET (.35 sq. ft.)

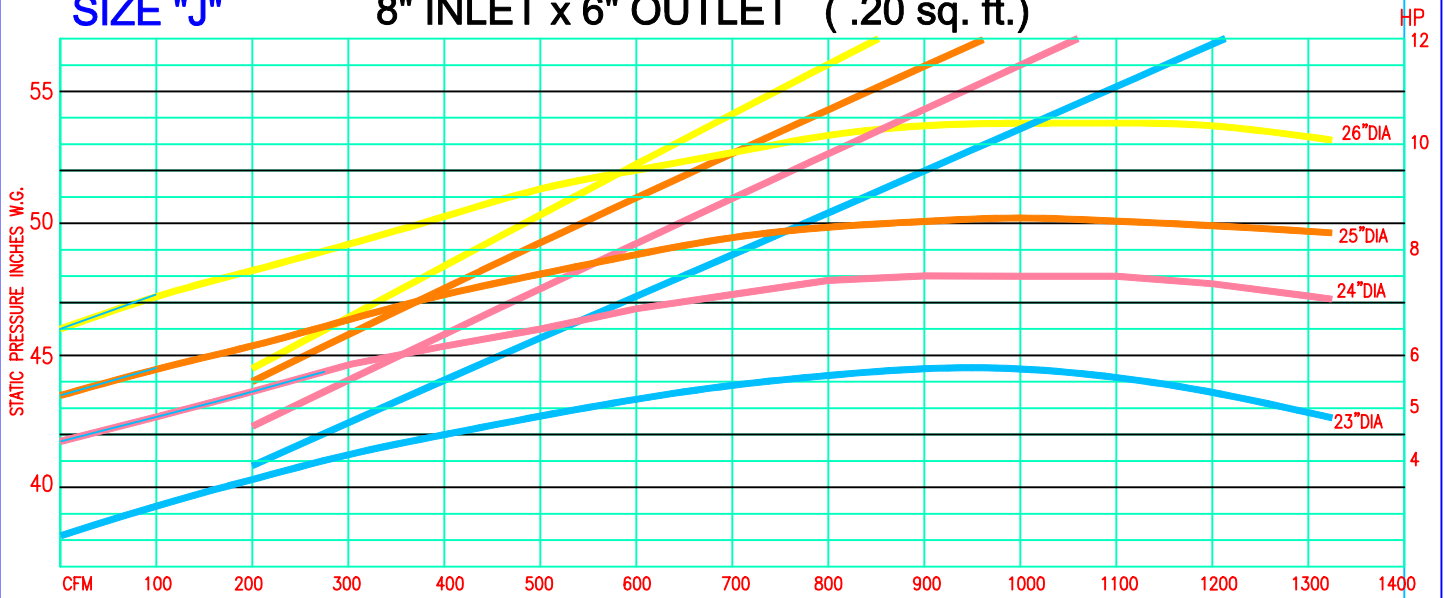




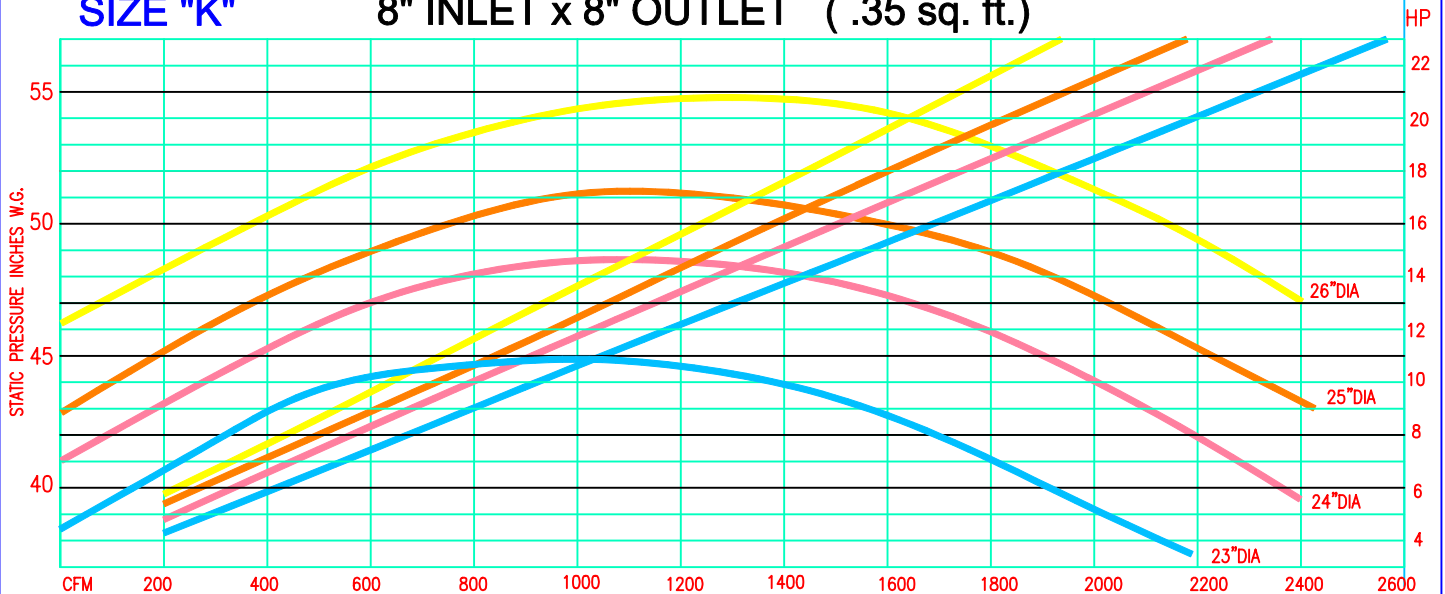
SIZE "G" 8" INLET x 10" OUTLET (.55 sq. ft.)



SIZE "J" 8" INLET x 6" OUTLET (.20 sq. ft.)

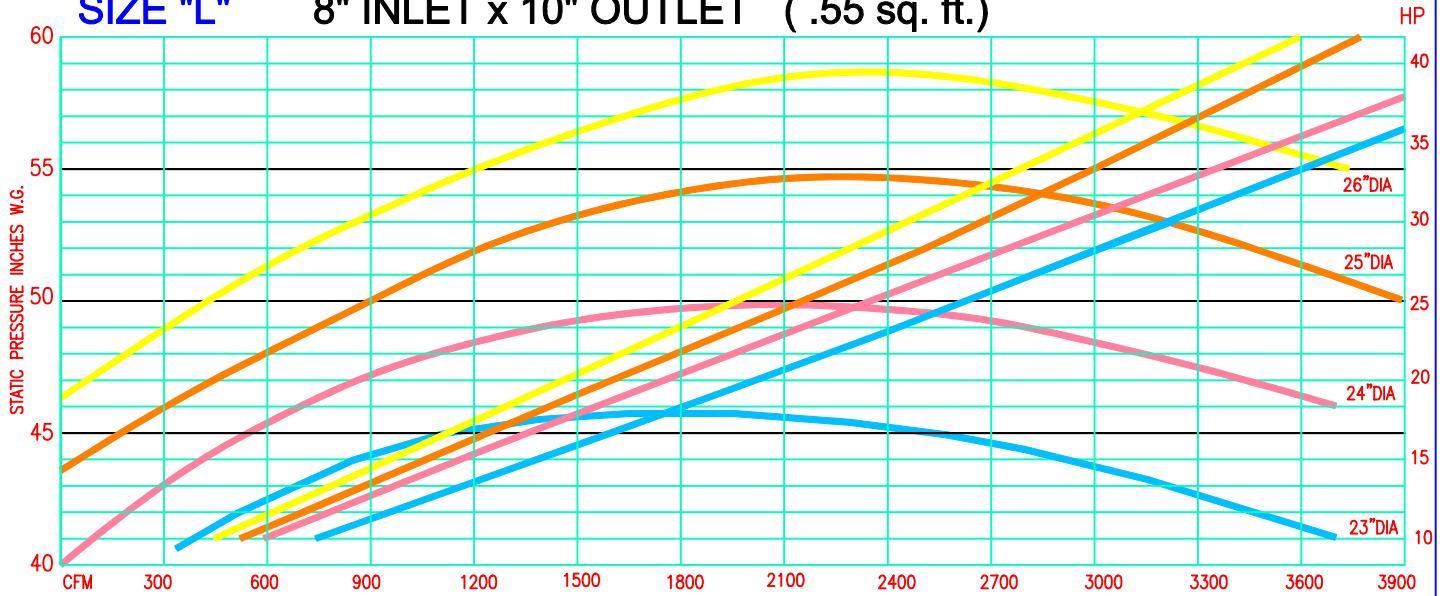


SIZE "K" 8" INLET x 8" OUTLET (.35 sq. ft.)





SIZE "L" 8" INLET x 10" OUTLET (.55 sq. ft.)



SIZE "M" 10" INLET x 12" OUTLET (.79 sq. ft.)

