

UTILITY FAN SETS

***Backward and Forward
Curve Models***

SIZES: 12" - 36" Wheel Diameter

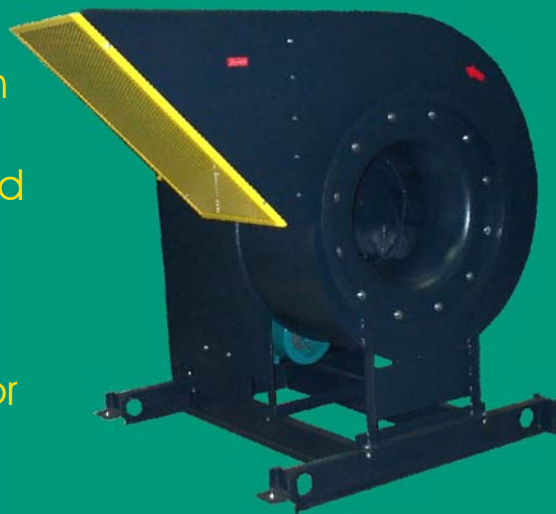
CLASS: I, II

PERFORMANCE: 1,500 to 30,000 cfm
and up to 8" SP.

APPLICATION: Commercial HVAC and
light industrial

ARRANGEMENT: 10

DESIGN: Standard motor and belt
weather cover with sloped surface for
better protection from the elements.
These packaged fan sets are an
economical choice for a variety of air
handling applications. Forward Curve
models are also available.



sales@sheldonsengineering.com
1-800-265-3572

1100 SERIES

 **Sheldons Engineering Inc.**
Leaders in Fan Technology

Brochure # 1100B-03-05



SHELDONS ENGINEERING Inc.

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www.sheldonsengineering.com

TYPICAL UTILITY CENTRIFUGAL FAN –1100

GENERAL

The centrifugal fan shall be designed and manufactured by Sheldons Engineering to ensure smooth operation. Fan wheel shall be Backward Curved Unifoil™ as shown in plans with all steel construction. Unless otherwise directed, fans shall be arrangement 10 with the motor located under the bearing support base, the 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/ft³ 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. gauge per chart below, continuous seam welded construction with flanged and punched outlet. Housings with lock seams or spot welded construction are not acceptable. Fan housings to be constructed so the discharge can be rotated in 45° increments by means of a bolted fan housing to fan bracing connection.

12" Thru 20"	12 gauge (0.1046" or 2.65 mm)
22-1/4" Thru 36-1/2"	10 gauge (0.1345" or 3.42 mm)

BEARINGS

Bearings are to be heavy duty, grease lubricated, precision anti-friction spherical roller, self-aligning design. Bearings shall be designed for a minimum L-10 life of 15,000 when rated at the fan's maximum cataloged operating speed. Higher L-10 life bearings are available on request.

SHAFT

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 125% of the fan's maximum operating speed.



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TYPICAL UTILITY CENTRIFUGAL FAN –1100

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. Sound, performance and vibration test available for an extra charge.

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-1800 rpm, high efficiency TEFC 1.15 SF

V-Belt Drives - Variable Speed/Constant Speed with min 1.5 SF

Weather cover required

Extended lubrication lines (nylon, copper or stainless steel) with fittings terminating in an accessible area.

Additional Features that may be required:

Access Door – bolted/quick opening or plug type with raised door

Companion Flange (angle companion flange bolted to the fan inlet or outlet flange)

Inlet or Outlet screen heavy gauge wire on 2" centres, also available to OSHA standards

Vibration Isolation - Spring - Rubber-In-Shear – Rubber/Cork/Steel pads

Outlet damper

Gravity back draft damper

Rain cowl

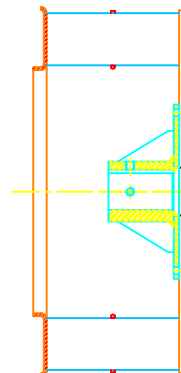
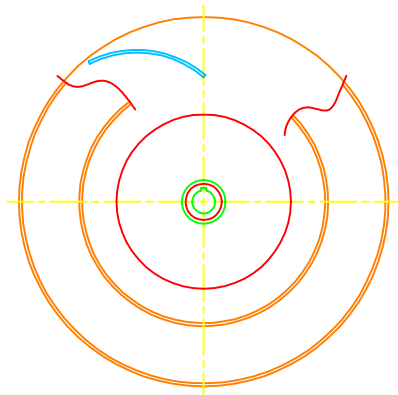
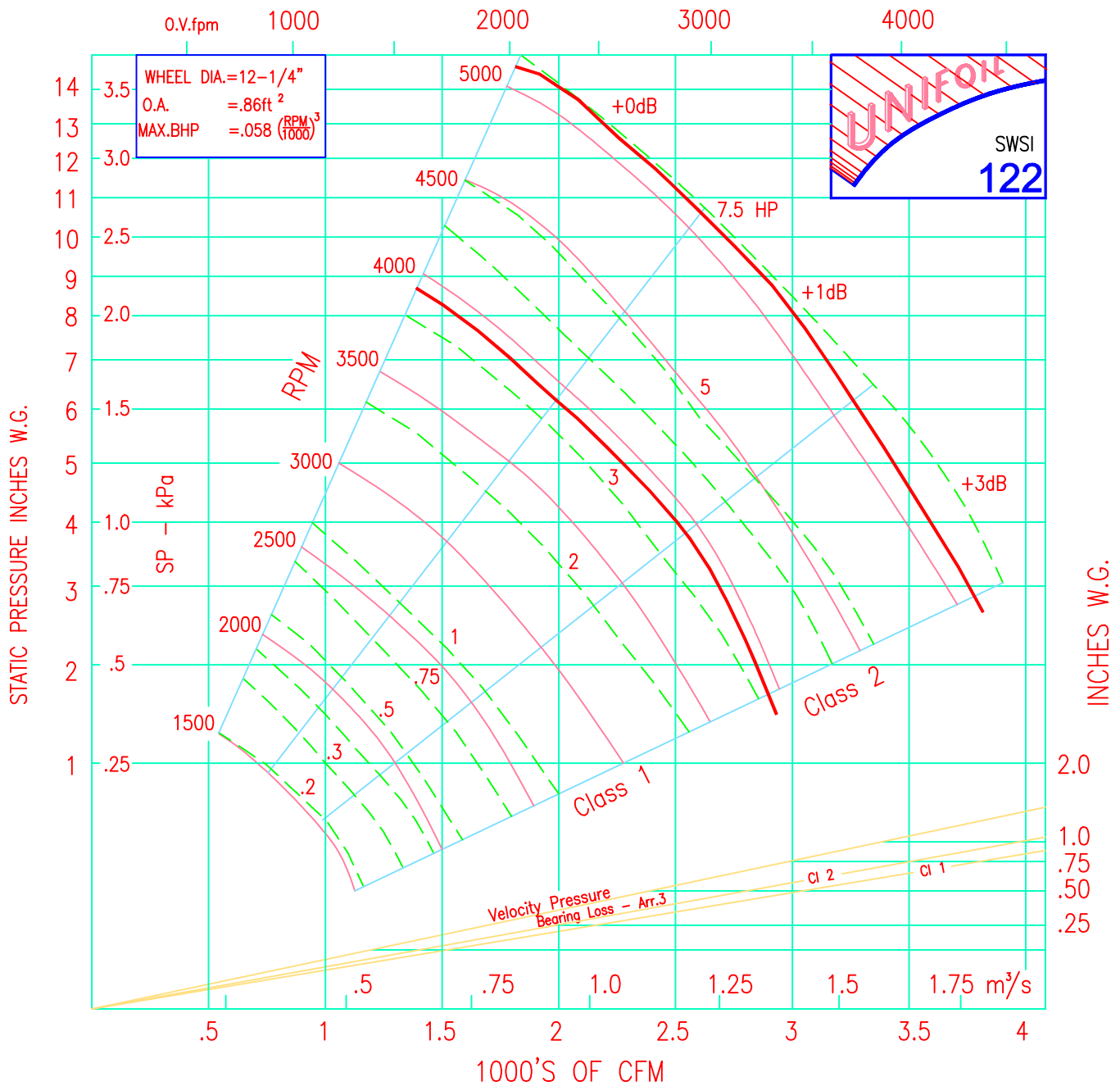
Spark Resistant Construction –

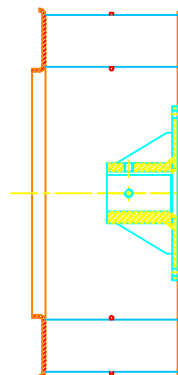
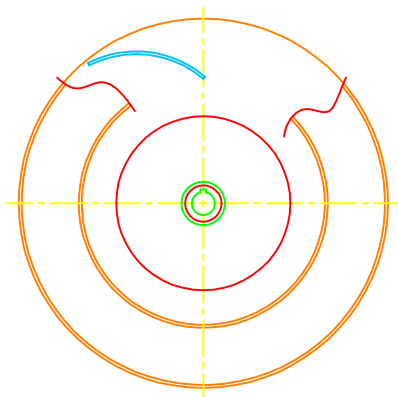
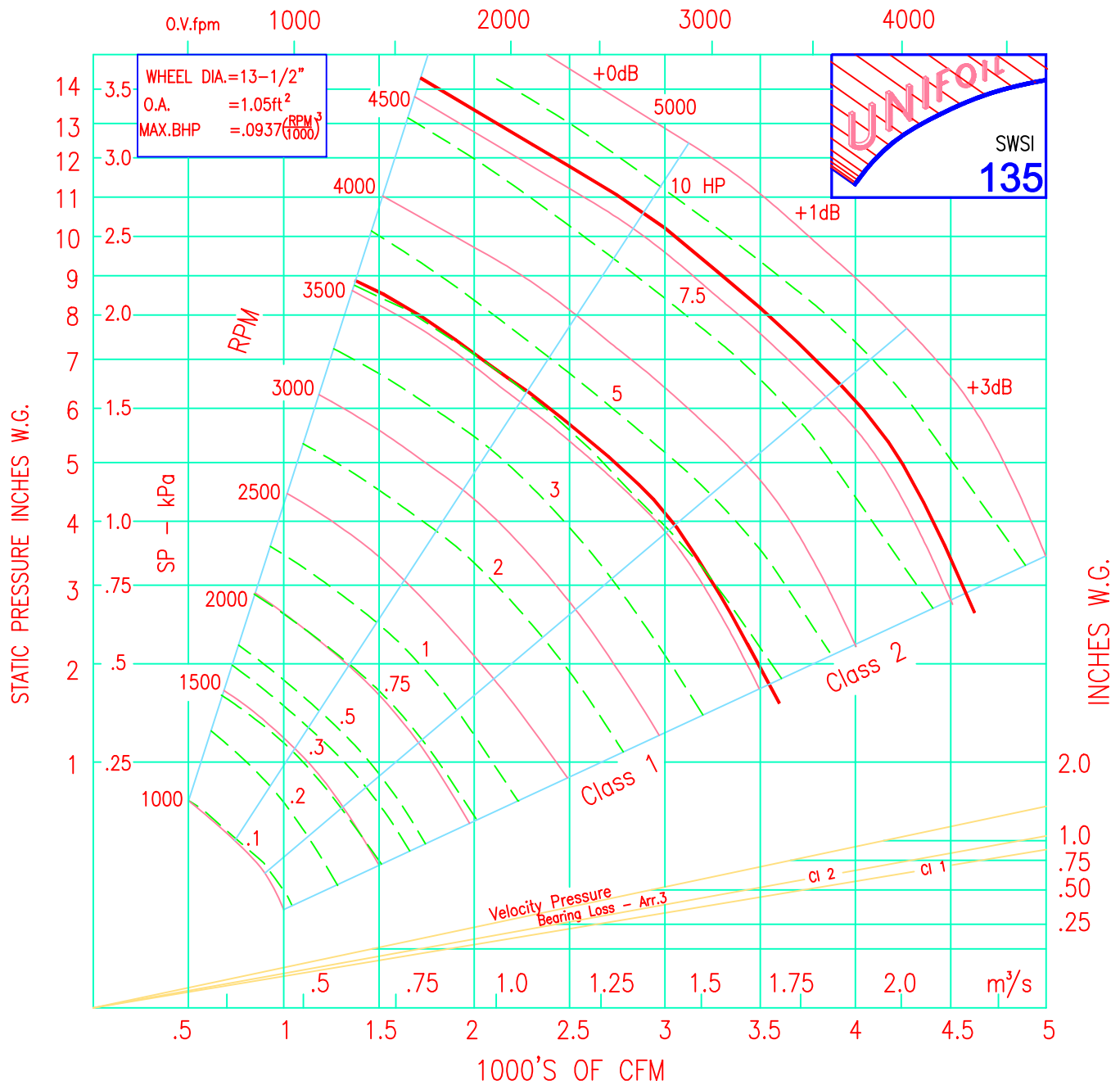
AMCA "A" All parts of the fan in contact with the air stream non-ferrous material

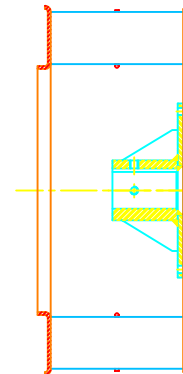
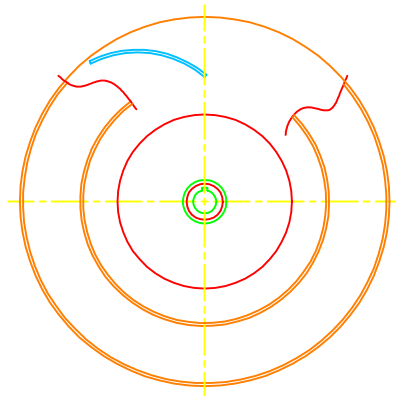
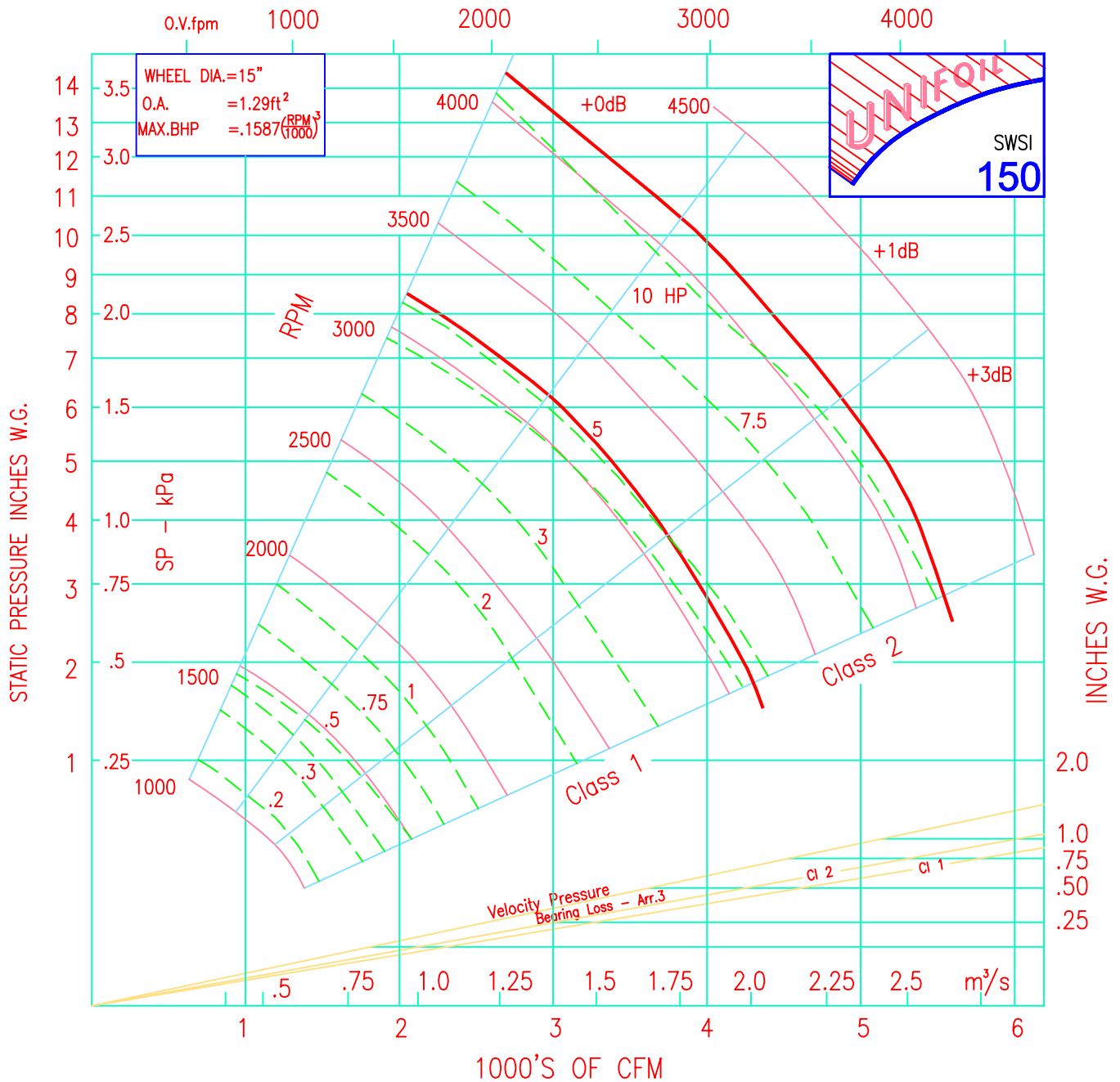
AMCA "B" Non-ferrous wheel and aluminum rubbing ring where shaft passes through

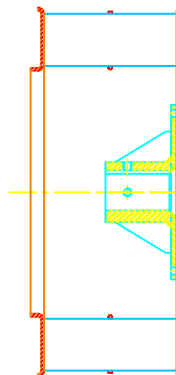
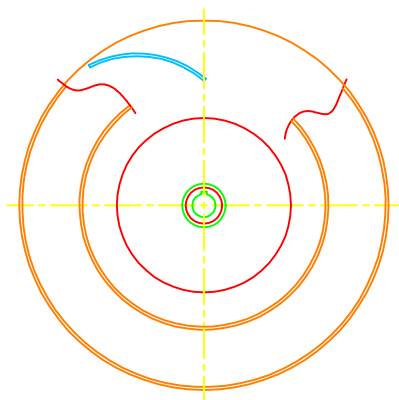
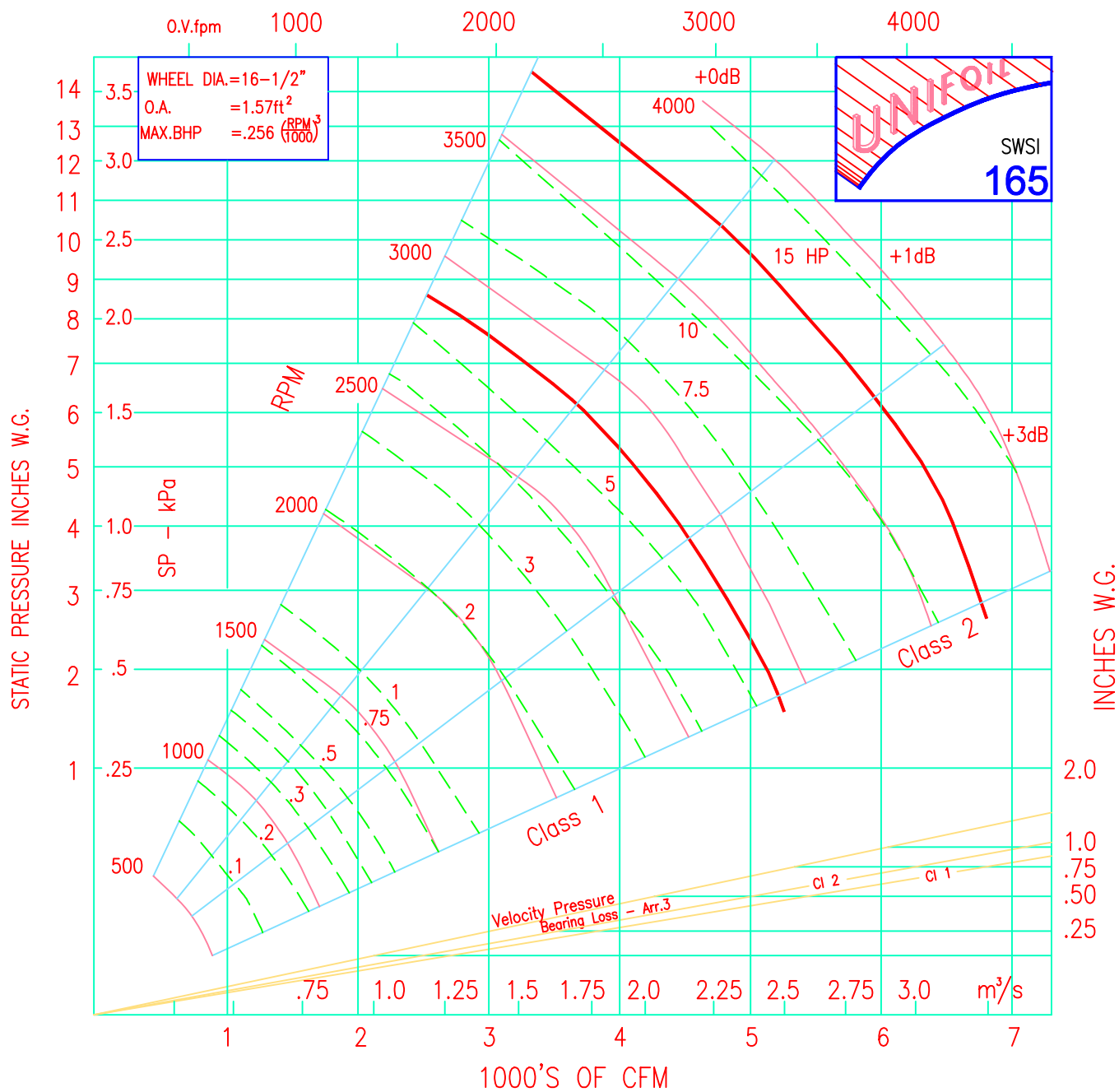
Housing with shaft seal

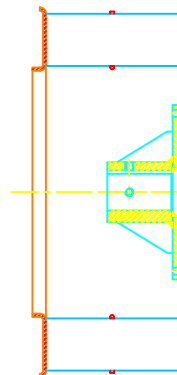
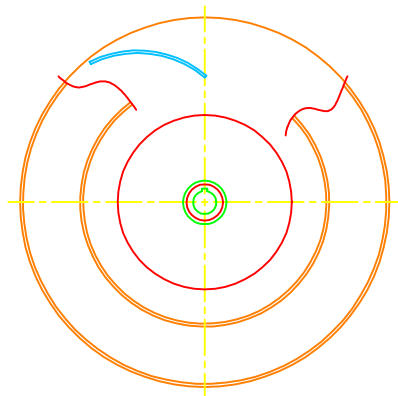
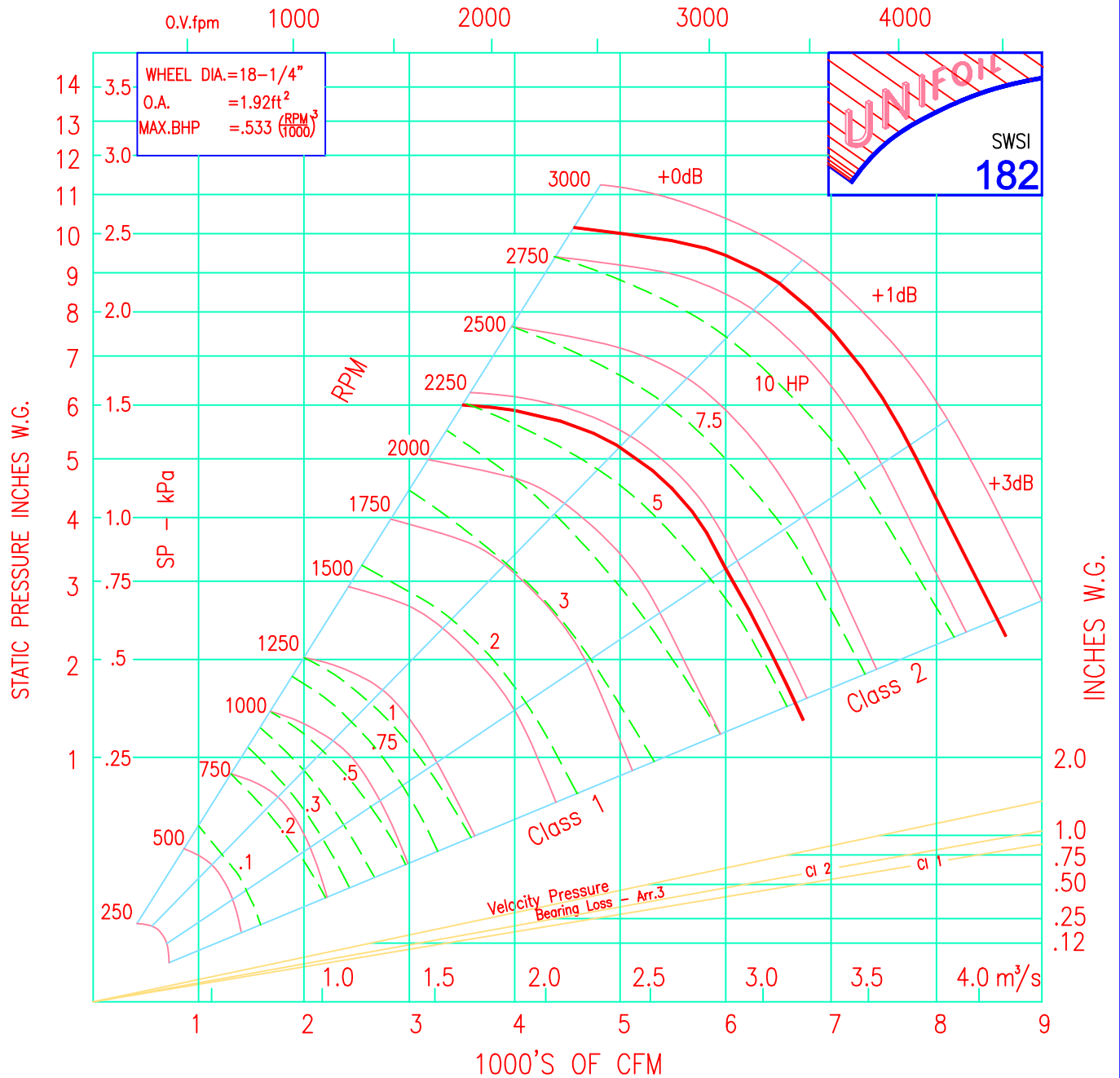
AMCA "C" Aluminum inlet cone and Aluminum rubbing ring

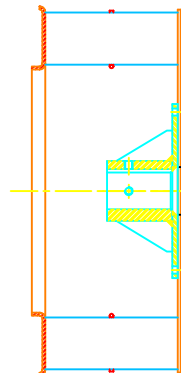
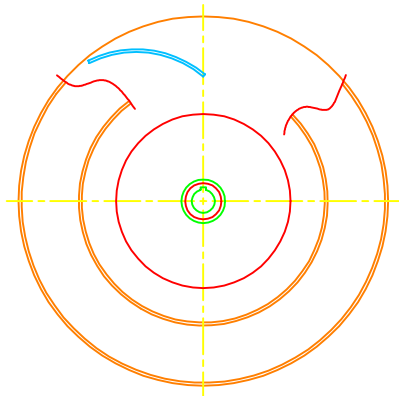
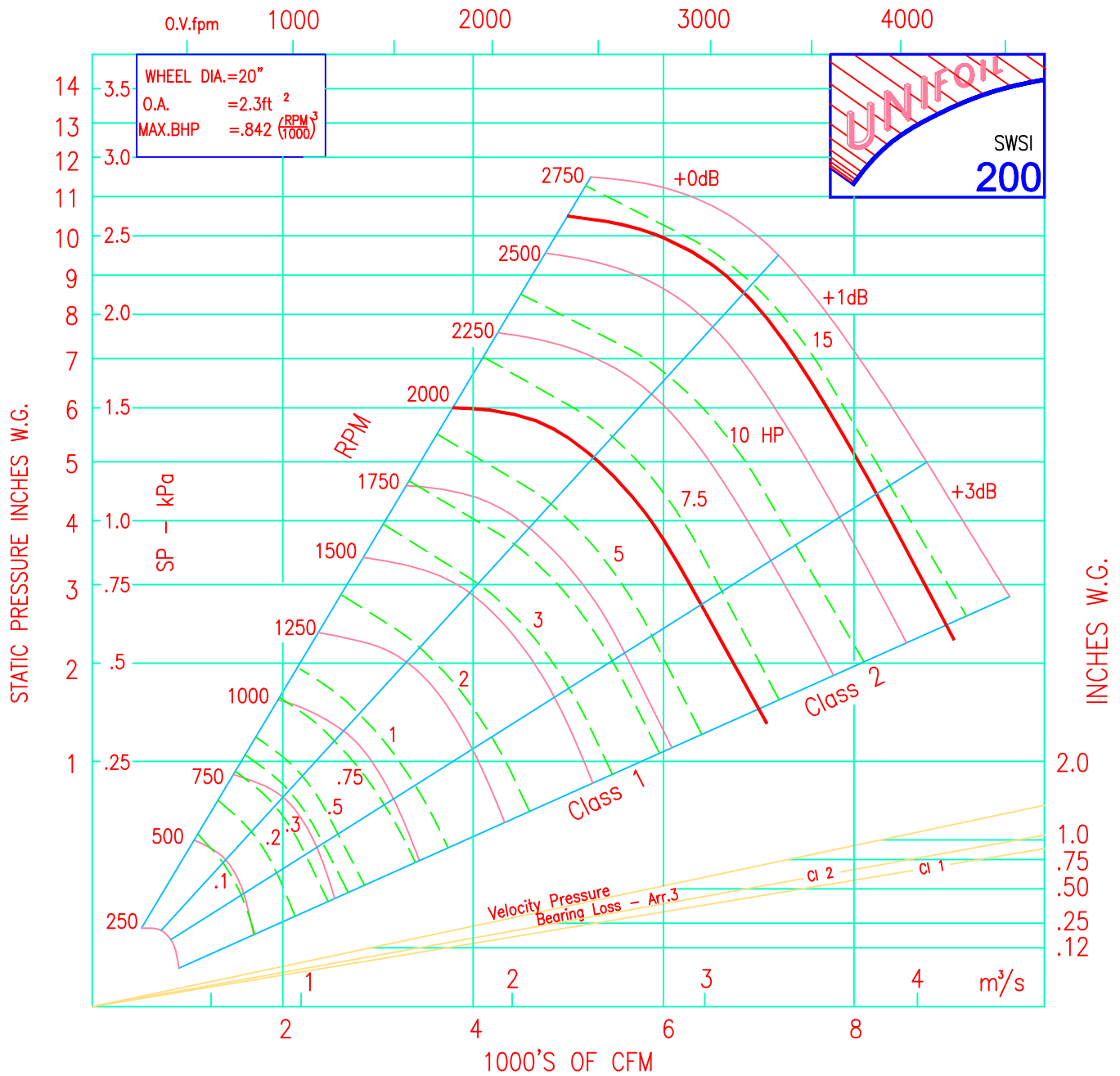


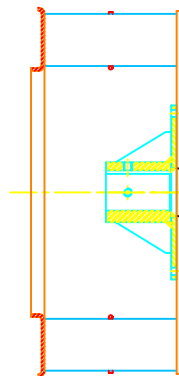
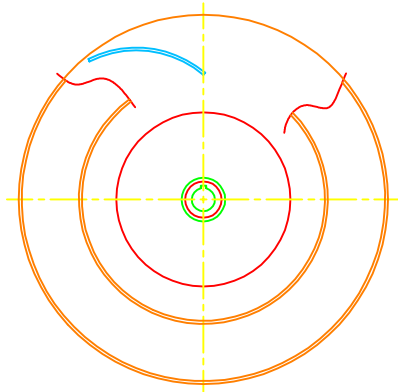
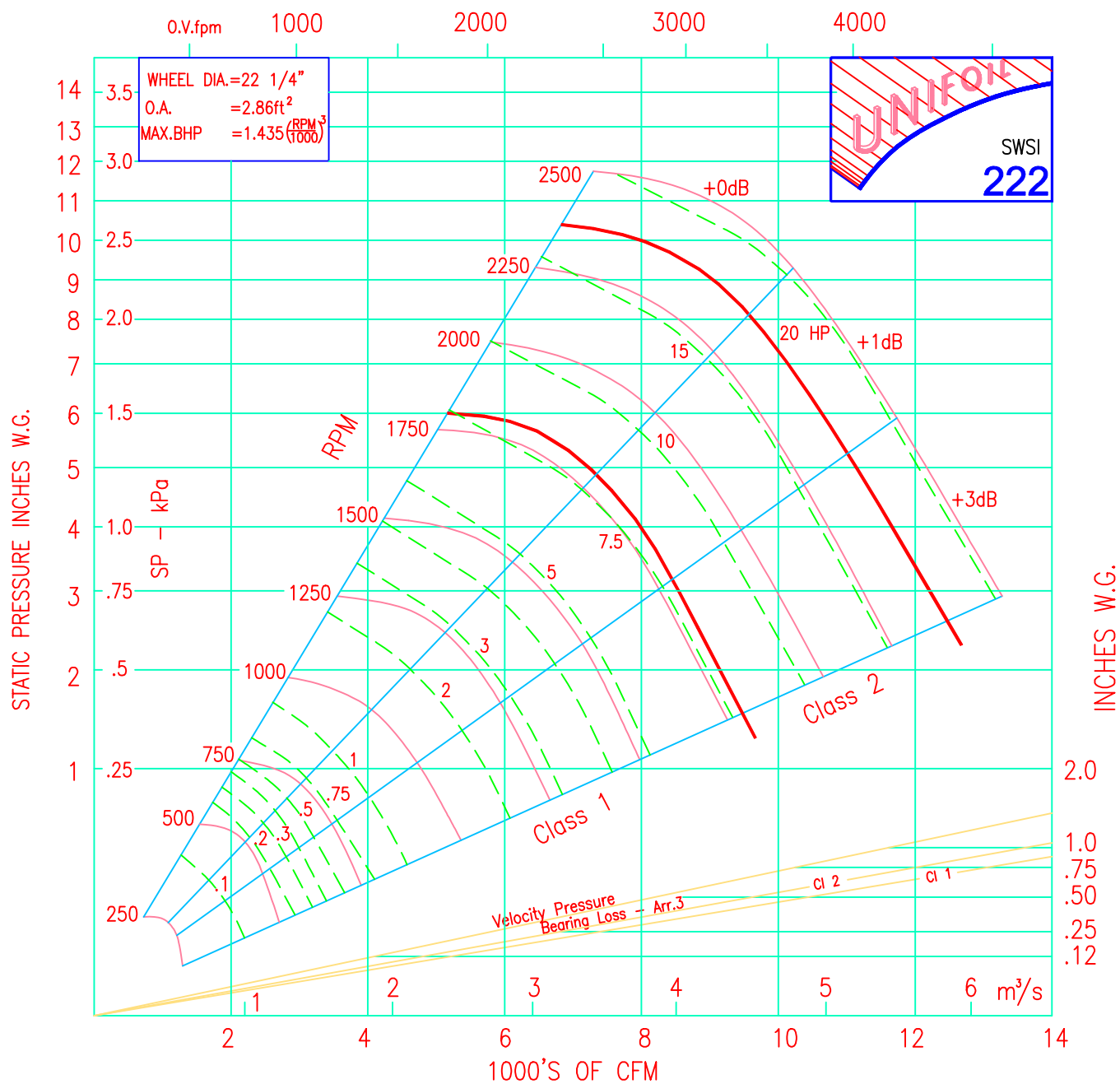


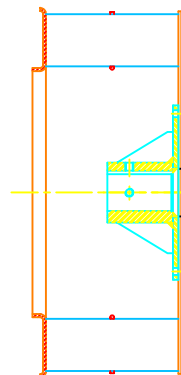
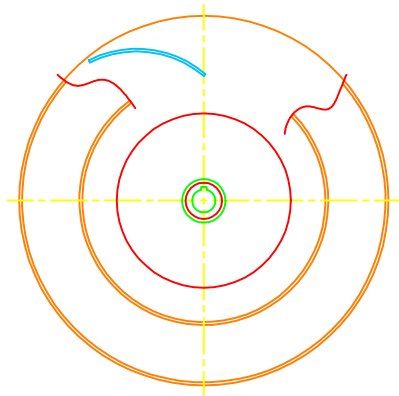
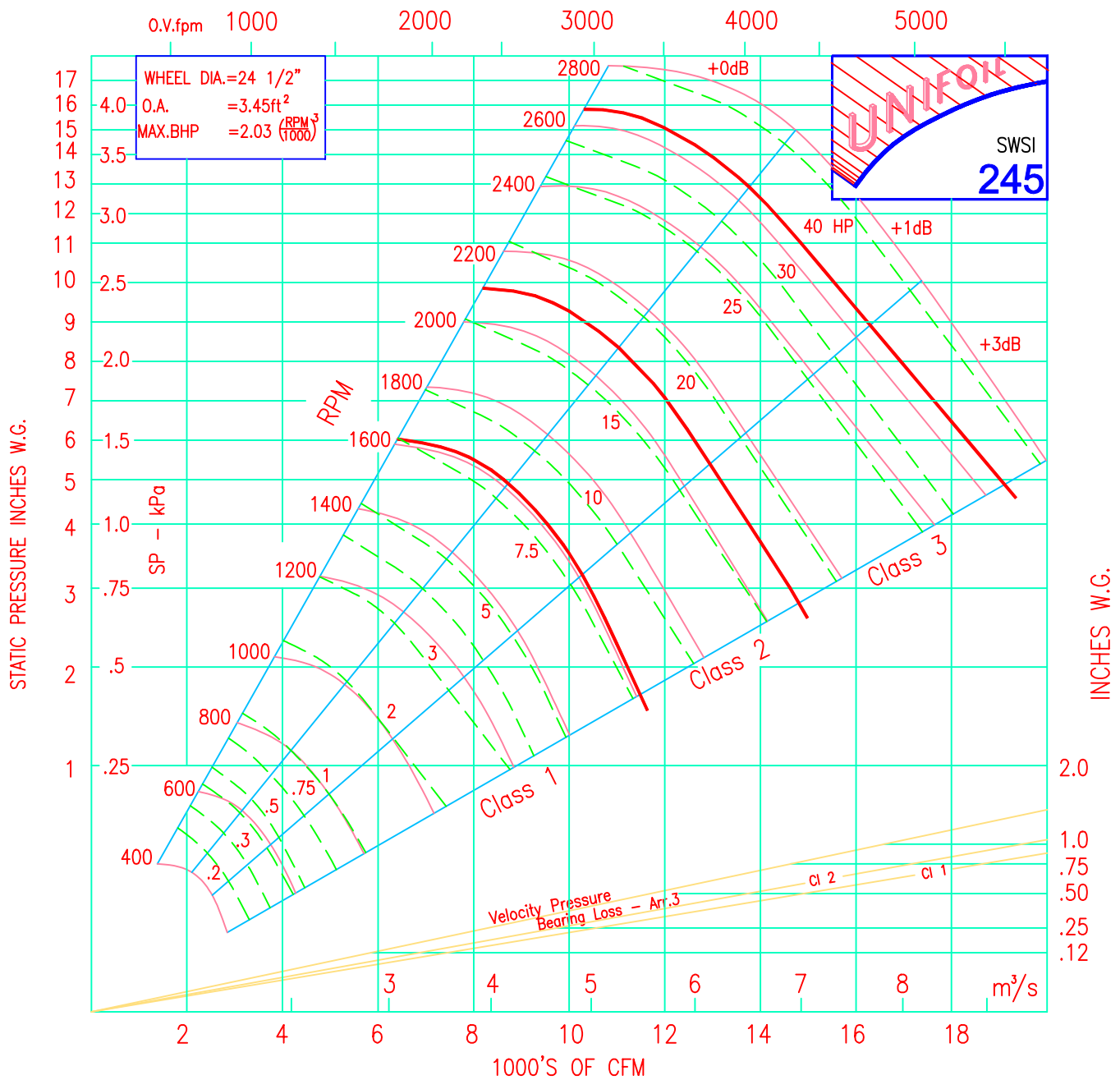


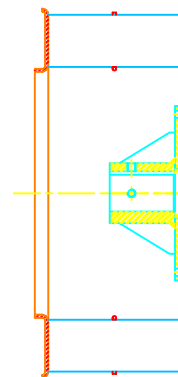
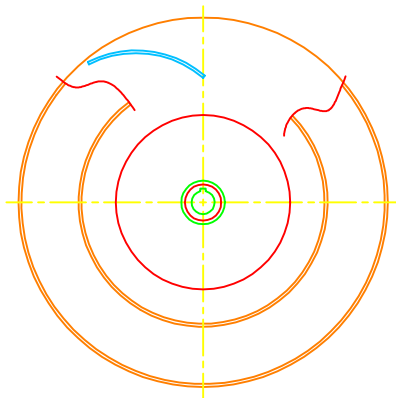
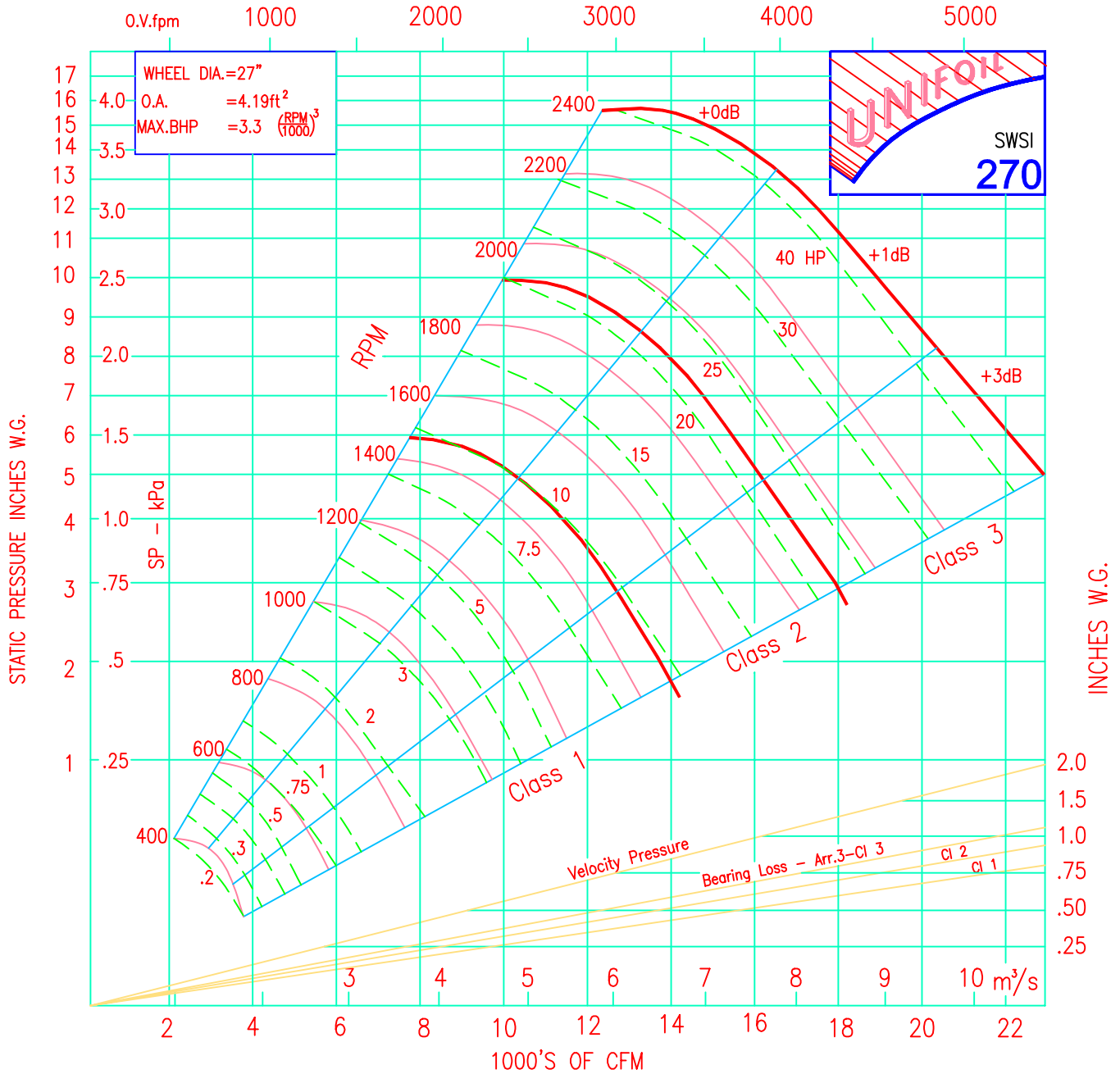


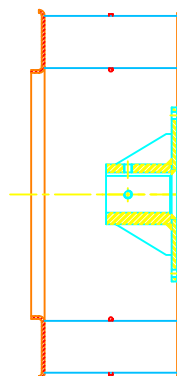
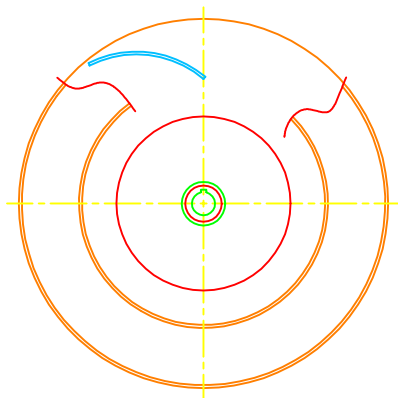
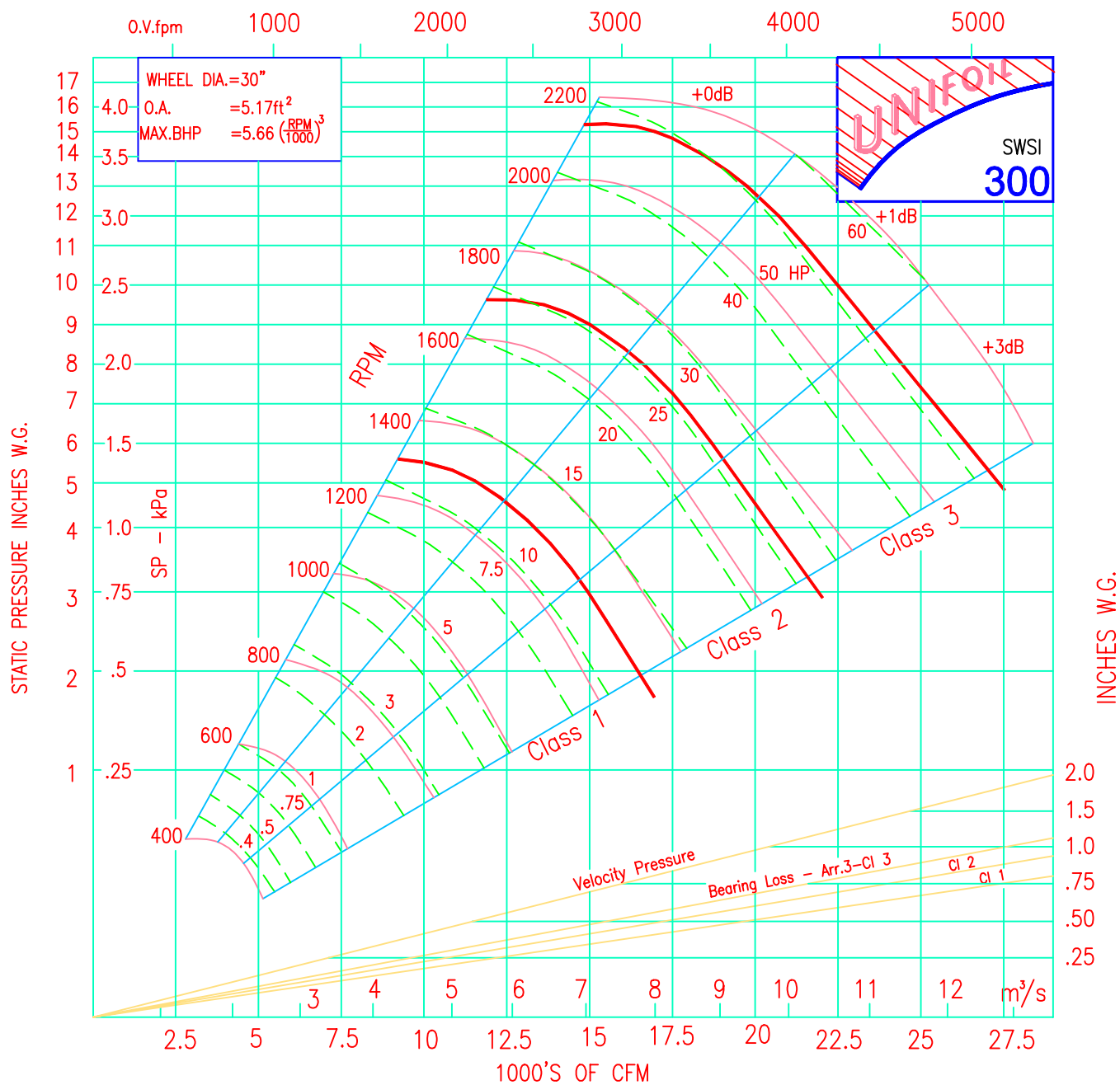


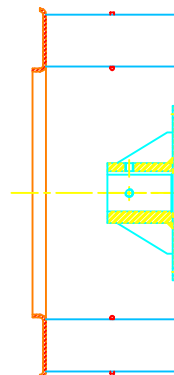
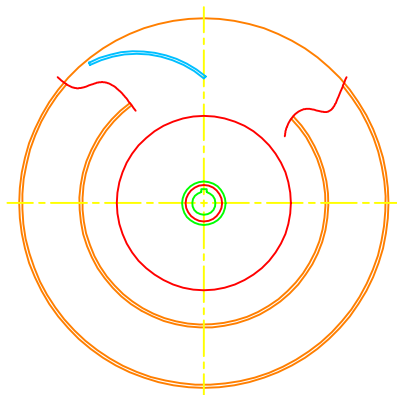
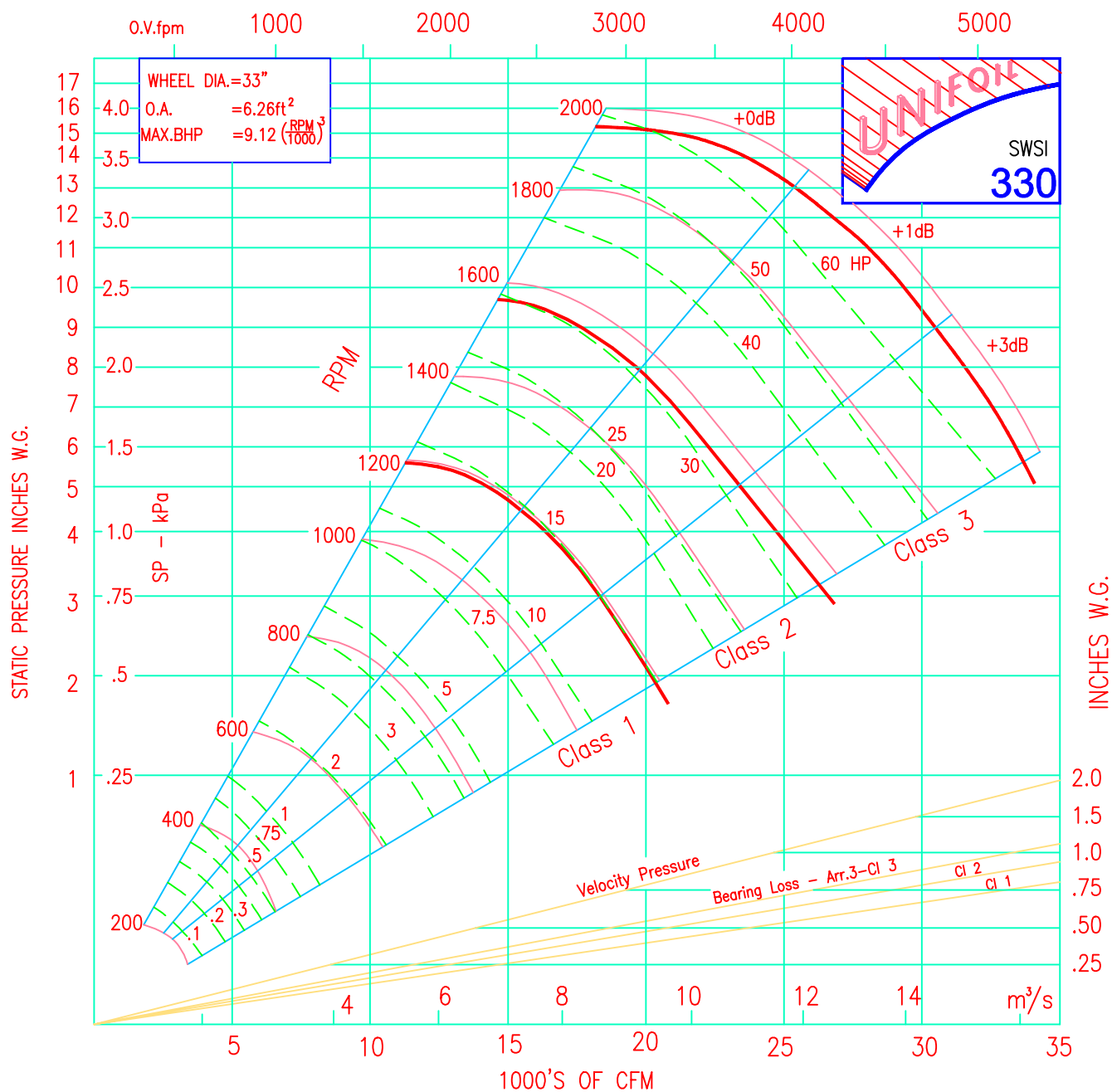


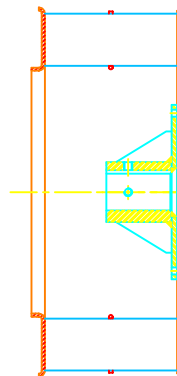
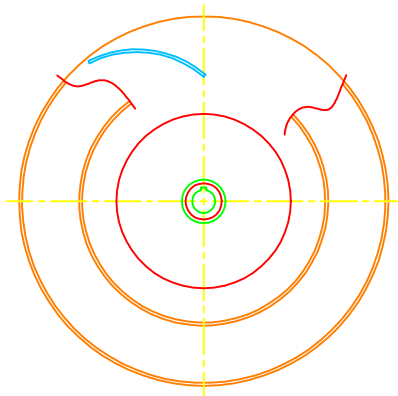
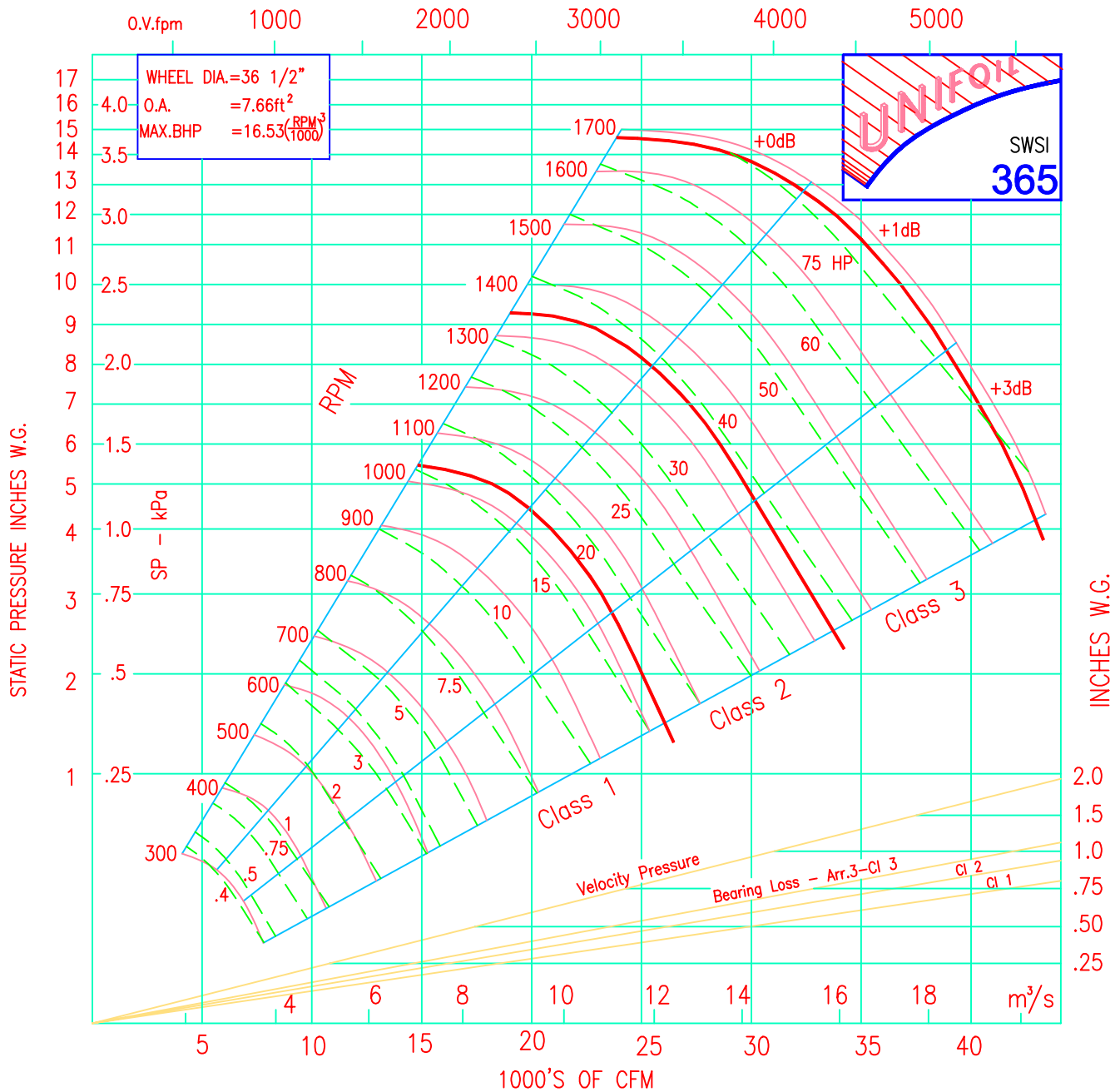


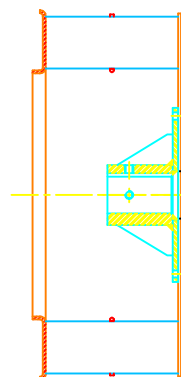
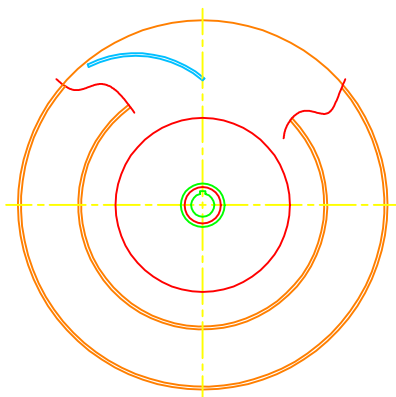
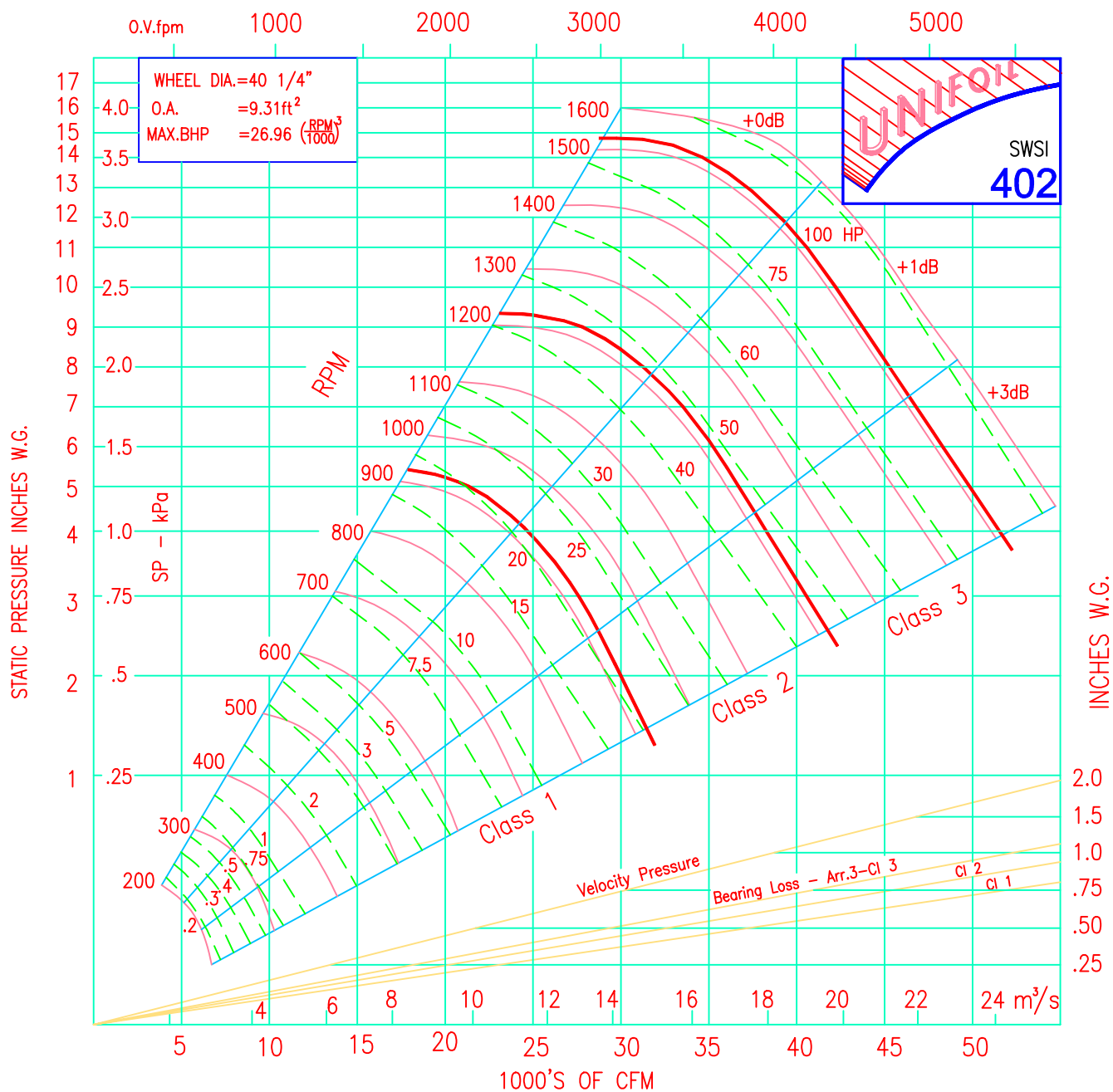


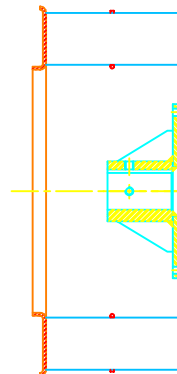
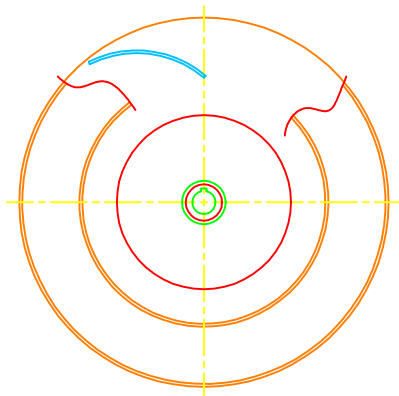
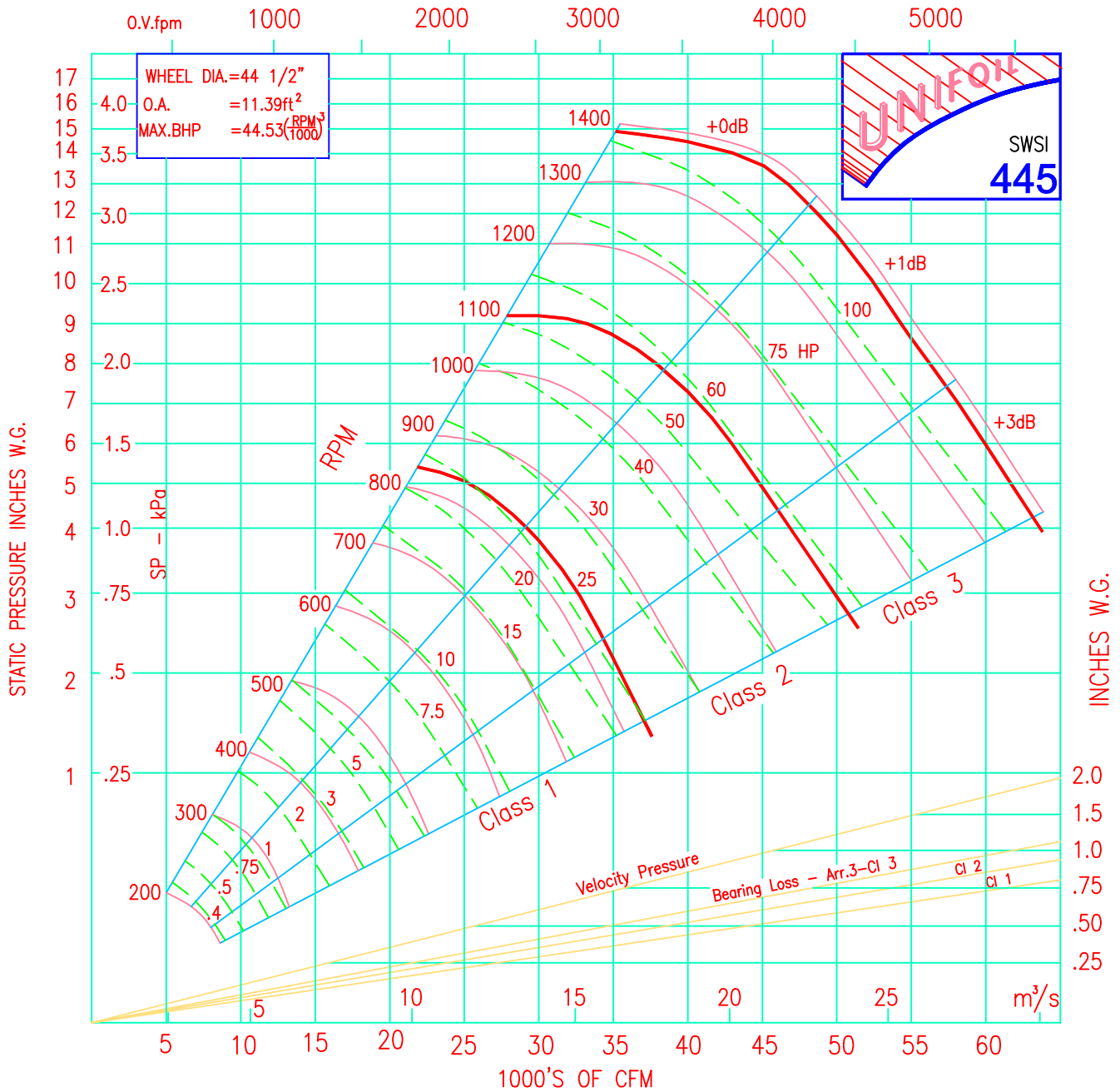


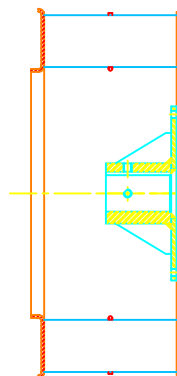
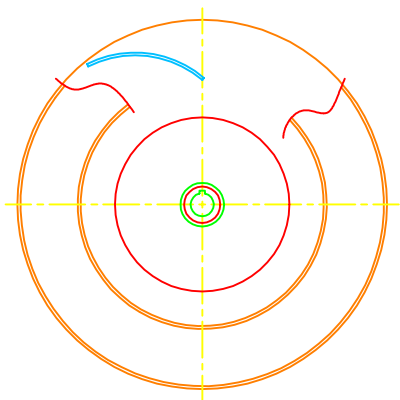
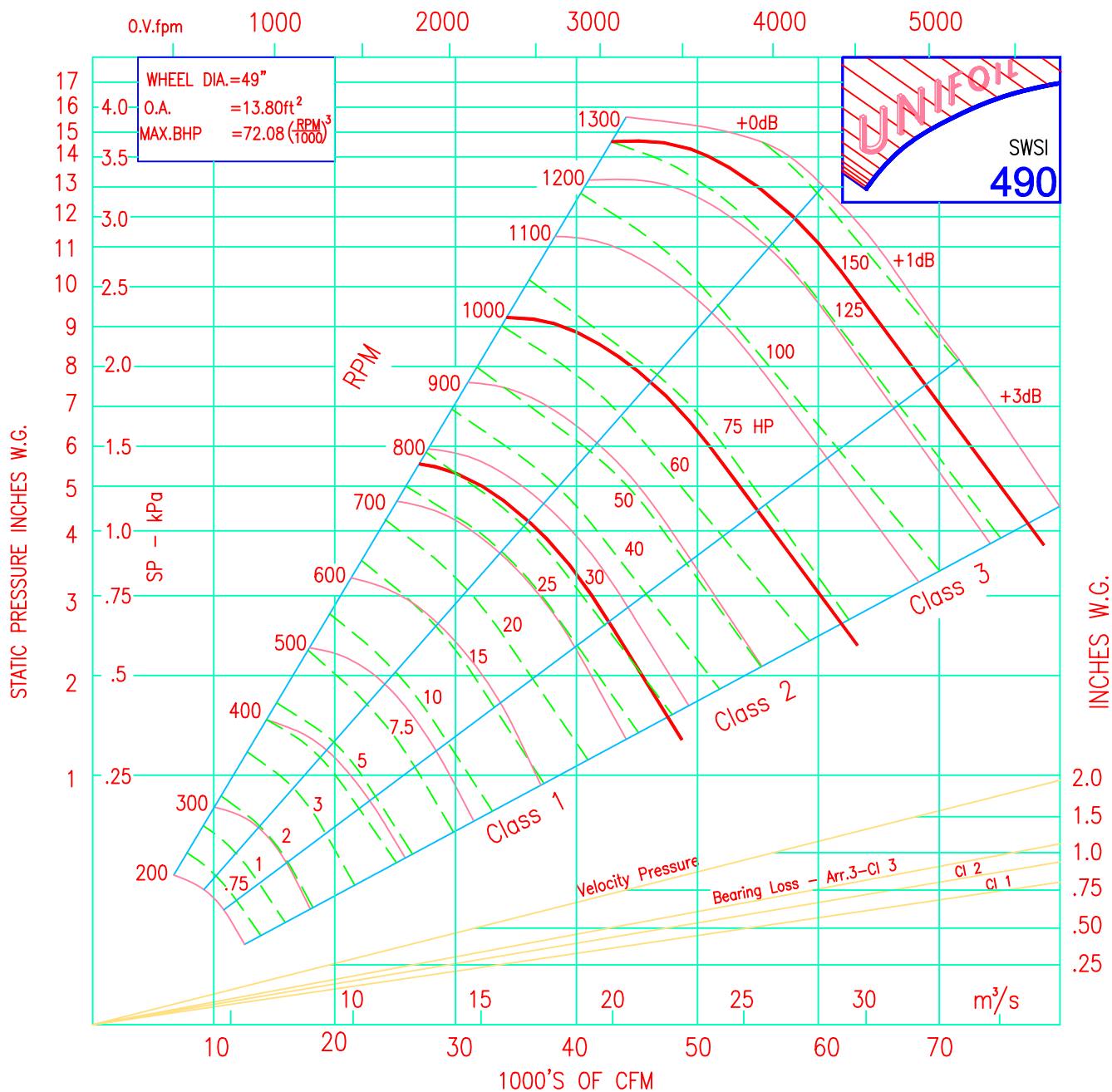


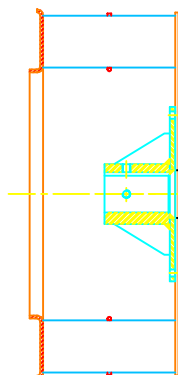
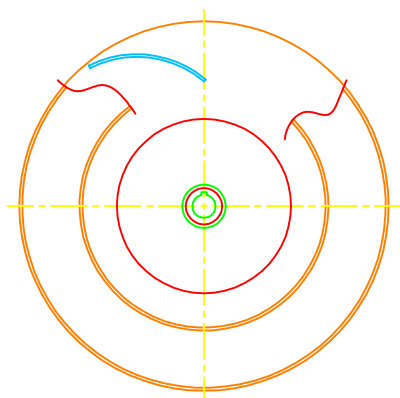
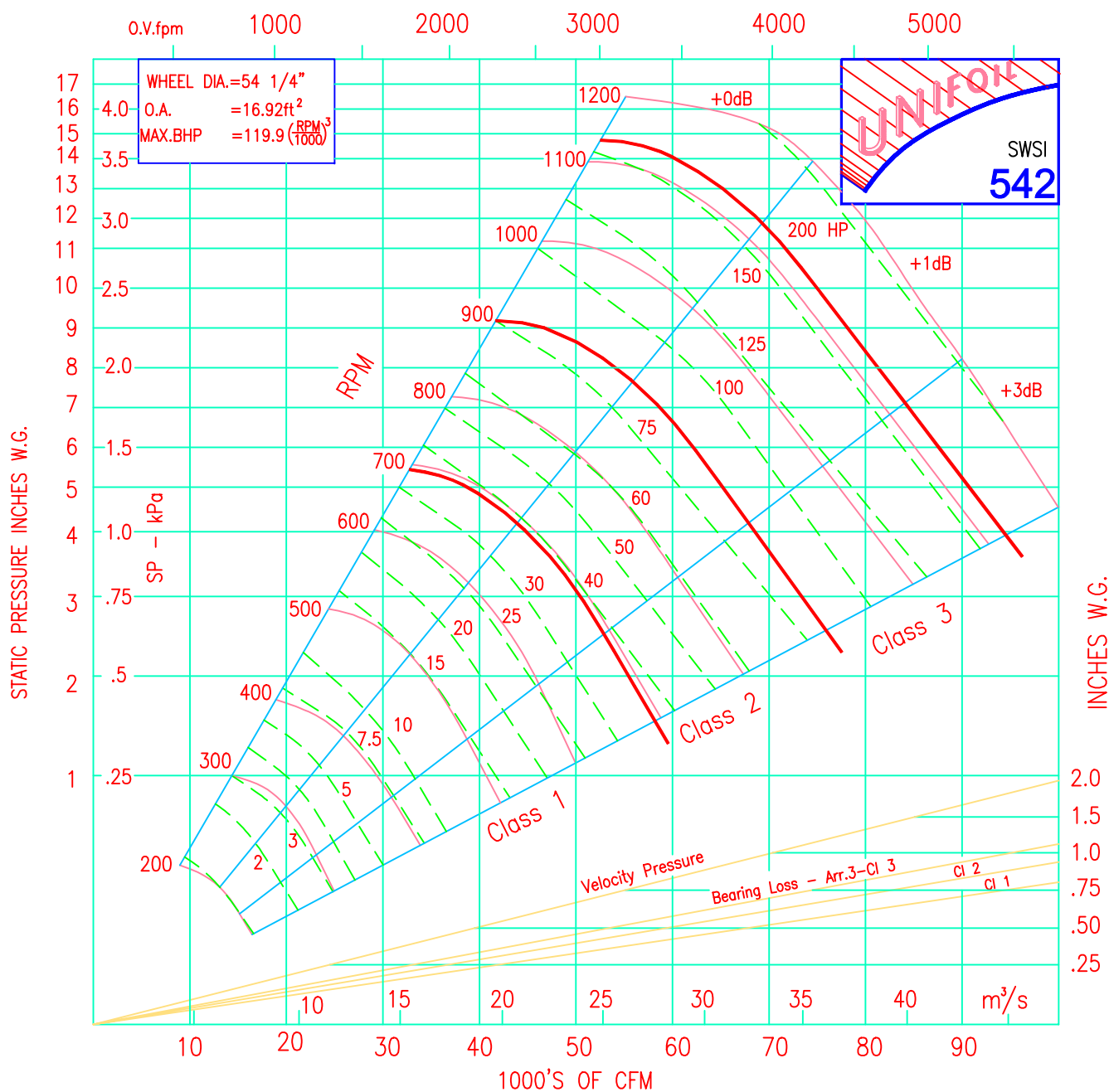


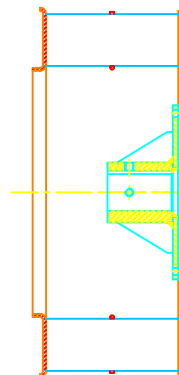
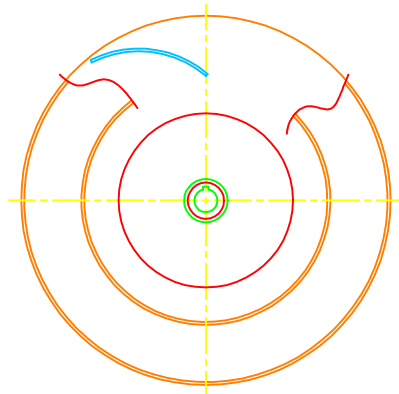
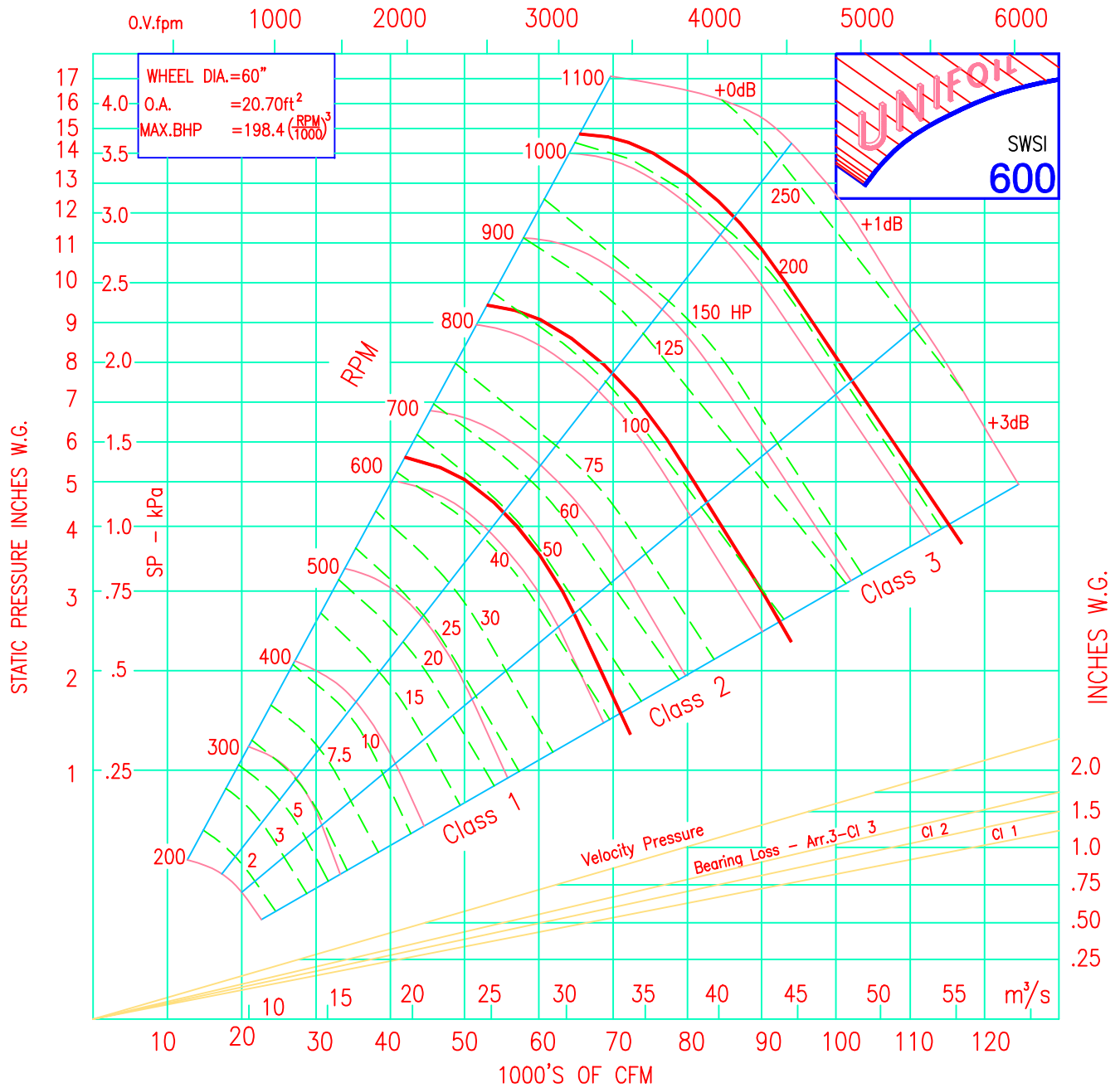


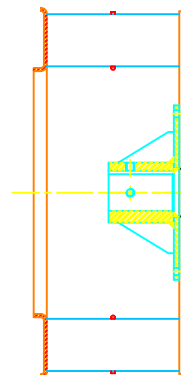
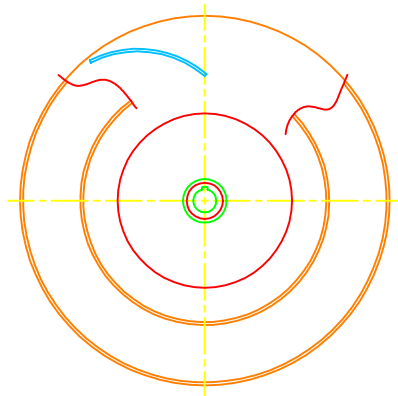
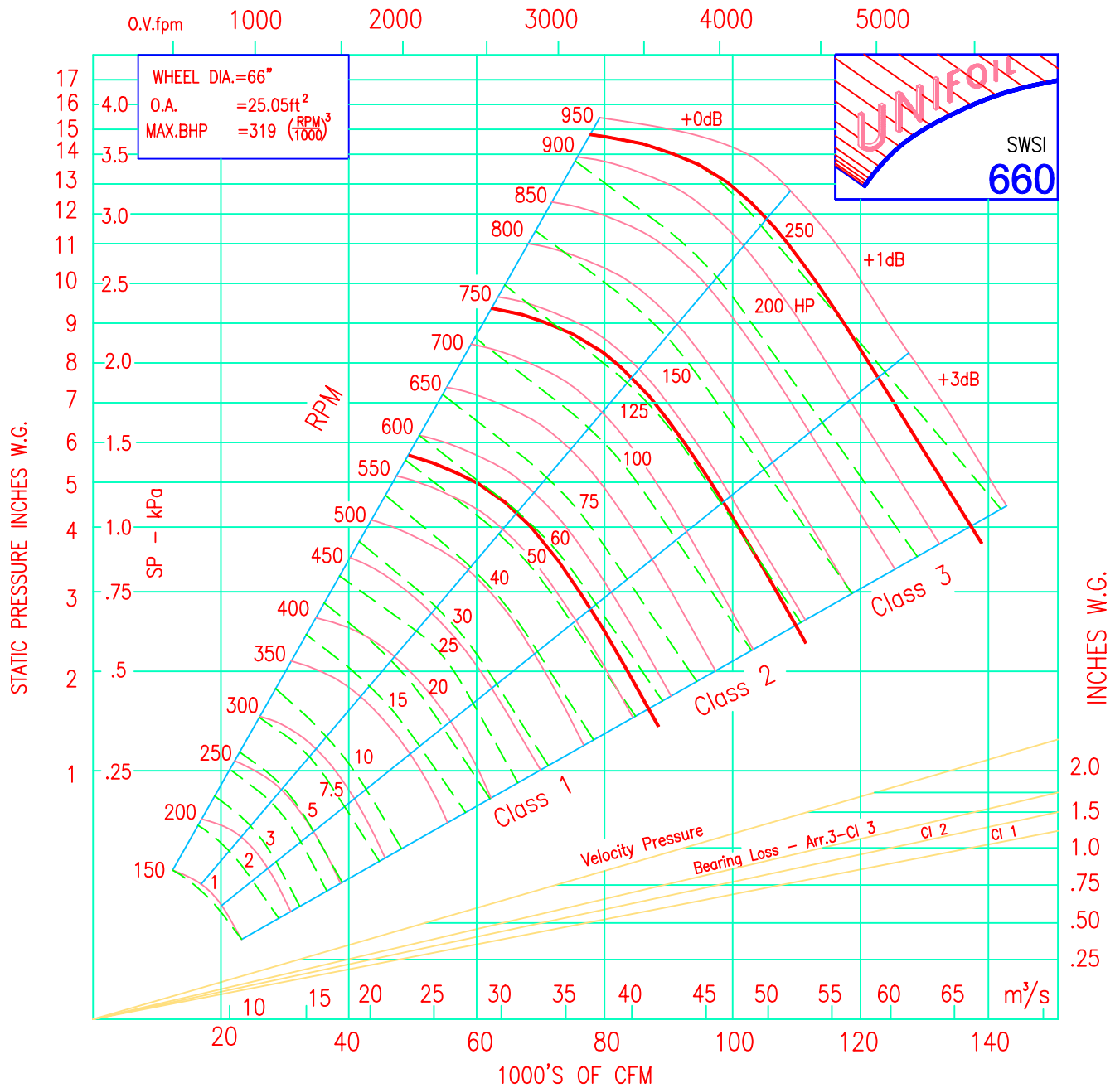


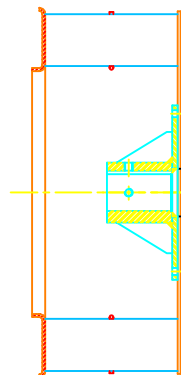
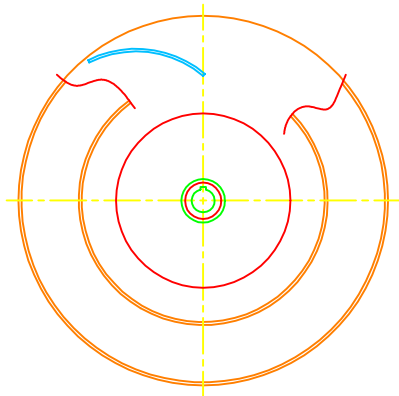
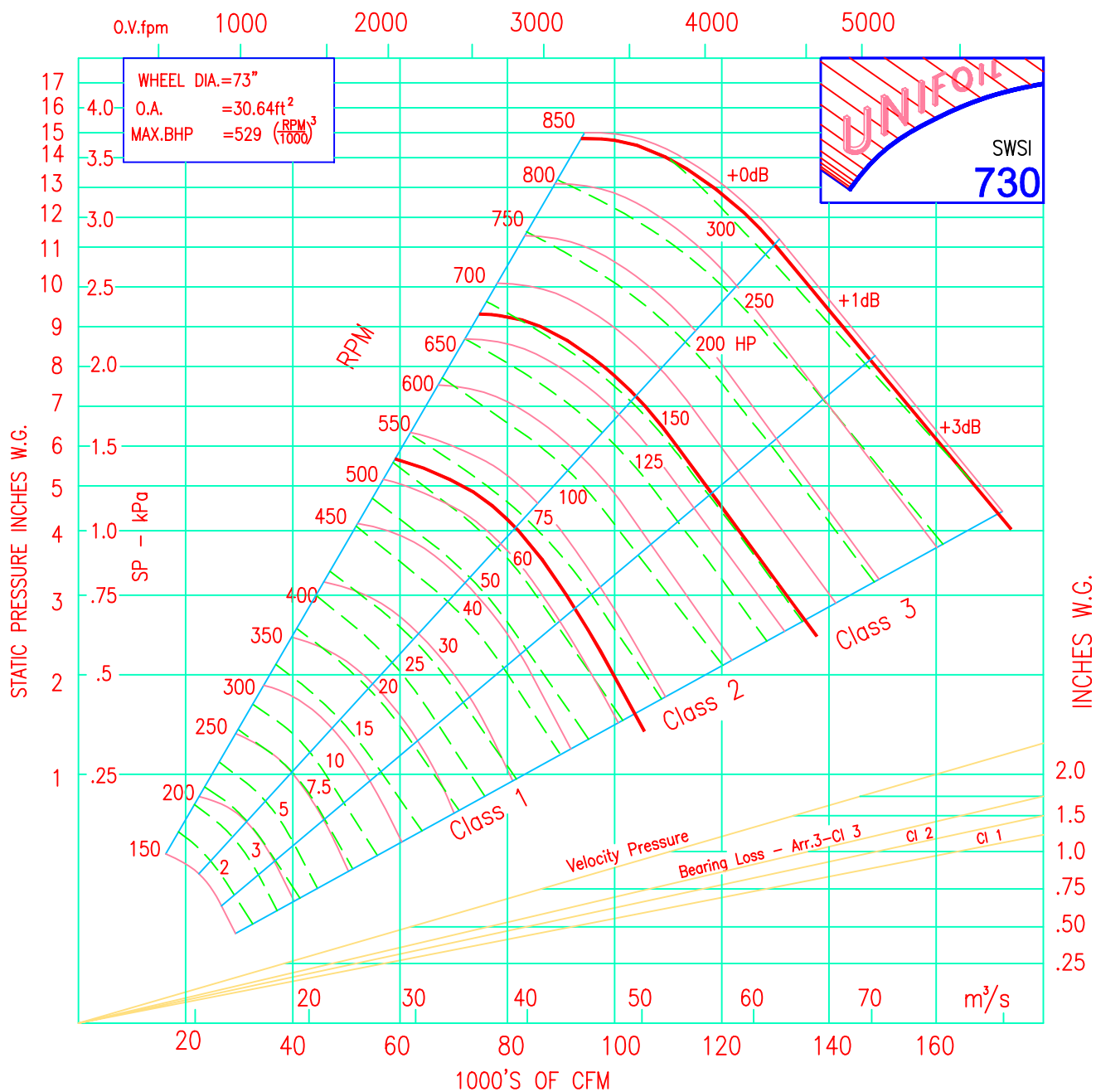


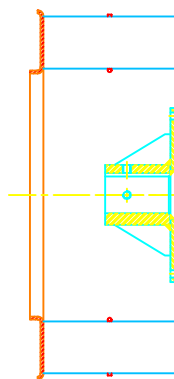
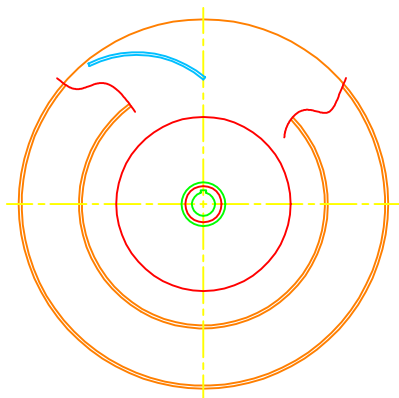
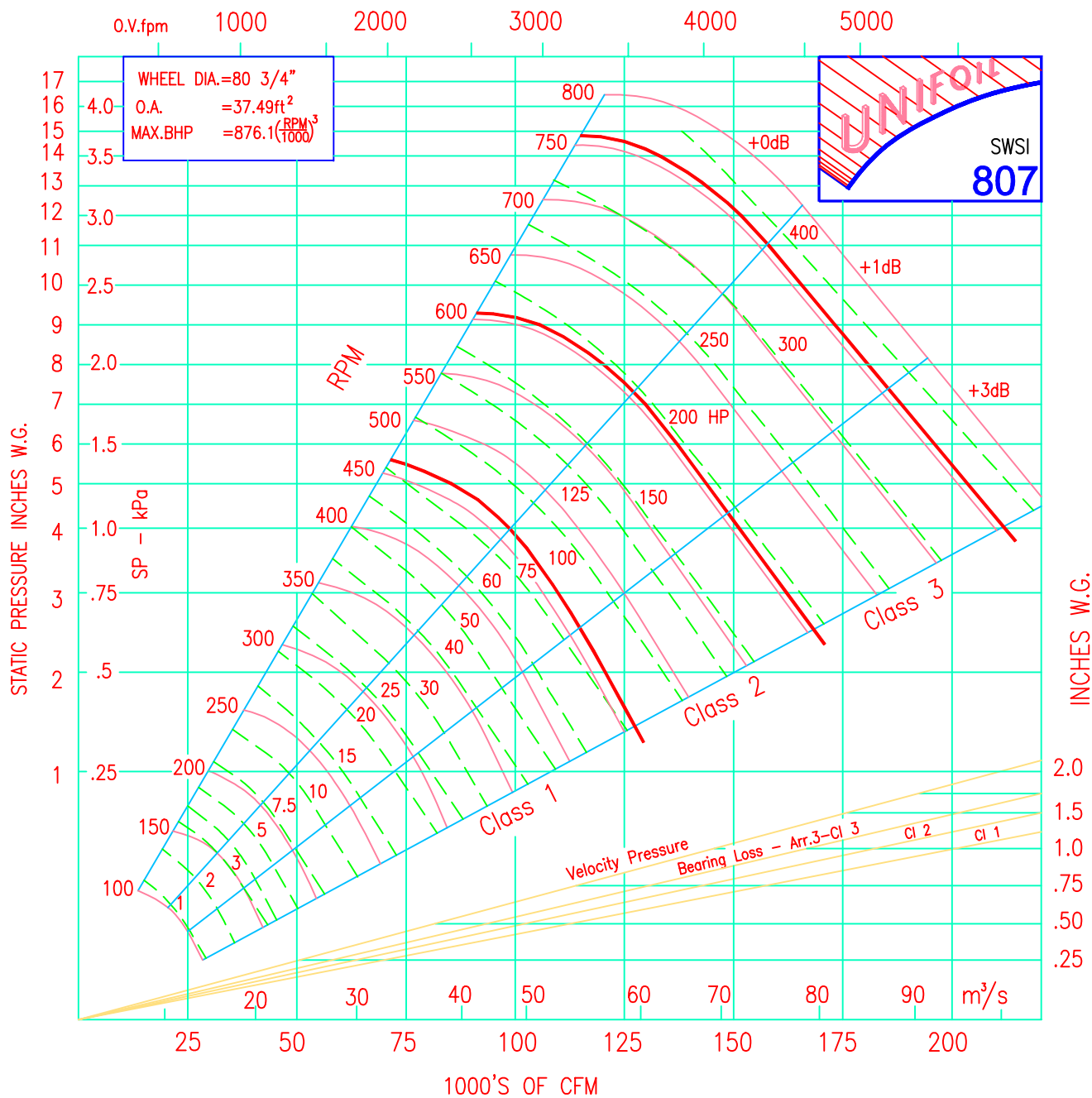


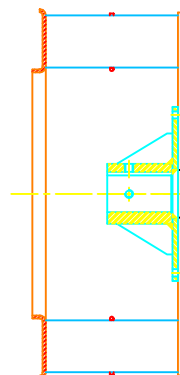
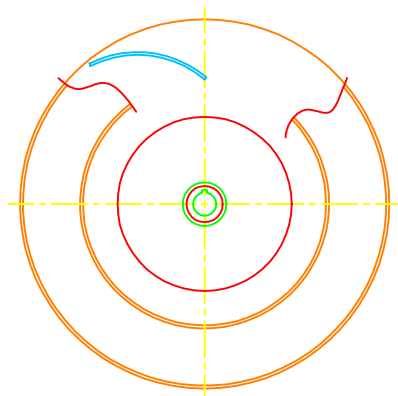
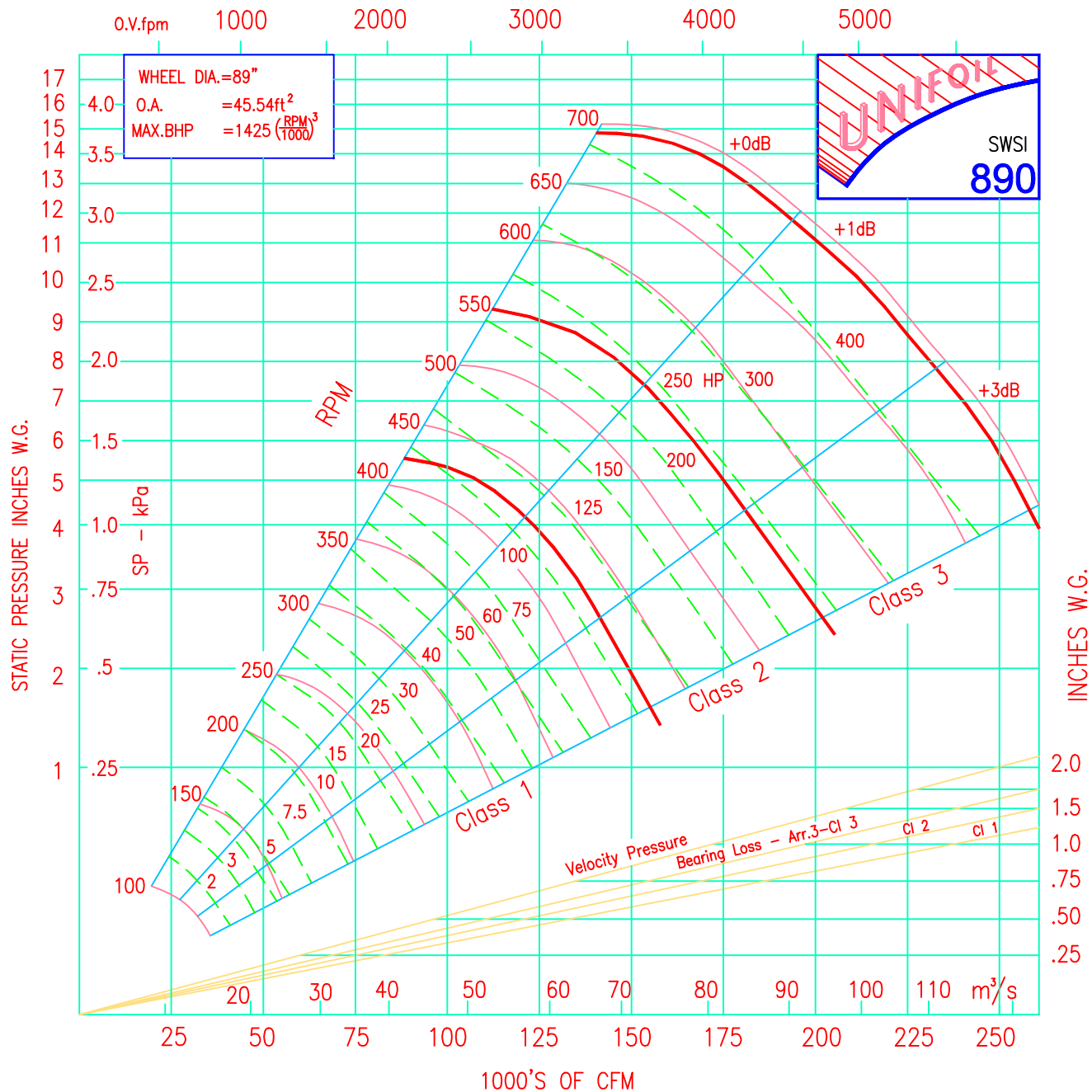


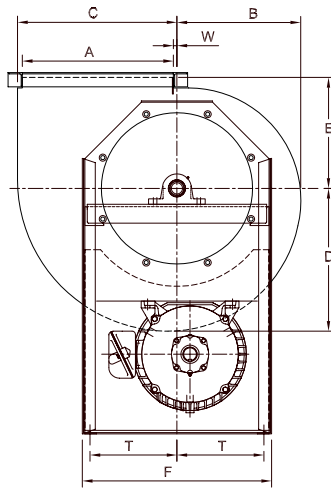




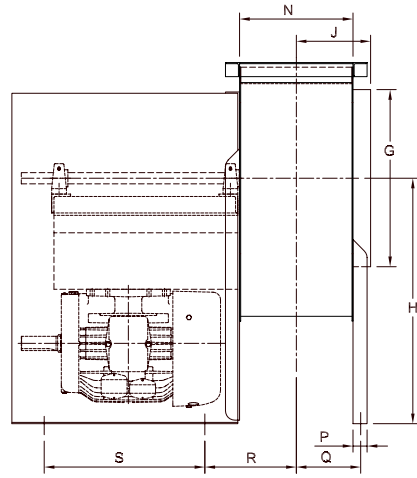








DRIVE SIDE

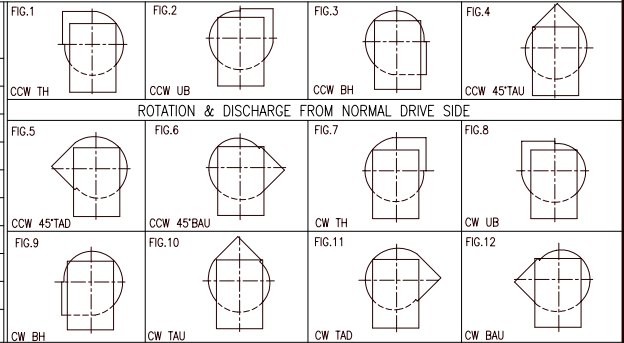


FRONT VIEW

DIMENSION - INCHES

FAN SIZE	WHEEL DIA.	SHAFT DIA.		KEYWAY SIZE		A	B	C	D	E	F	G	H	J	N	P
		CL I	CL II	CL I	CL II											
12 1/4	12 1/4	1 3/16	1 7/16	1/4x1/8	3/8x3/16	13 1/8	10 7/8	13 7/8	12 1/2	10 1/8	20 1/16	16	26	6 15/16	9 7/8	1 1/2
13 1/2	13 1/2	1 3/16	1 7/16	1/4x1/8	3/8x3/16	14 3/8	11 7/8	15 1/4	13 3/4	11 5/8	20	17 1/4	26	7 3/8	10 3/4	1 1/2
15	15	1 3/16	1 7/16	1/4x1/8	3/8x3/16	16	13 1/8	16 7/8	15 1/8	11 3/4	20	18 3/4	26	8	12	1 1/2
16 1/2	16 1/2	1 3/16	1 7/16	1/4x1/8	3/8x3/16	17 5/8	14 3/8	18 1/2	16 5/8	12 3/4	22 3/8	20 1/4	29	8 9/16	13 1/8	1 1/2
18 1/4	18 1/4	1 3/16	1 7/16	1/4x1/8	3/8x3/16	21 1/4	17 1/4	22 1/4	20	15	24 1/4	23 1/4	29	9 5/16	14 9/16	1 1/2
20	20	1 7/16	1 11/16	3/8x3/16	3/8x3/16	21 1/4	17 1/4	22 1/4	20	15	24 1/4	25 1/4	29	9 5/16	15 3/4	2
22 1/4	22 1/4	1 7/16	1 11/16	3/8x3/16	3/8x3/16	23 5/8	19 1/8	24 5/8	22 1/8	16 1/2	27 5/16	27 1/4	29	10 13/16	17 5/8	2
24 1/2	24 1/2	1 7/16	1 11/16	3/8x3/16	3/8x3/16	26	21 1/8	27 5/8	24 3/8	18	29 9/16	29 3/4	33	11 11/16	19 3/8	2
27	27	1 11/16	1 15/16	3/8x3/16	3/8x3/16	28 5/8	23 1/8	29 7/8	26 3/4	20 1/8	32 9/16	33 1/4	33	12 5/8	21 1/4	2

FAN SIZE	Q	R	S	T	W	MAX. MTR FR
12 1/4	5 3/4	8 5/8	17	9 3/16	1/4	215
13 1/2	6 3/16	9 1/16	17	9 3/16	3/8	215
15	6 13/16	9 11/16	17	9 3/16	3/8	215
16 1/2	7 3/8	10 1/4	20 1/2	10 3/8	3/8	256
18 1/4	8 1/8	11	20 1/2	11 5/16	1/2	256
20	9	11 9/16	20 1/2	11 1/4	1/2	256
22 1/4	9 15/16	12 1/2	20 1/2	12 1/2	1/2	286
24 1/2	10 13/16	13 3/8	23	13 5/8	5/8	326
27	11 3/4	14 5/16	23	15 1/8	3/4	365



ITEM NO.	IDENTIFICATION	NO. REQD.	FAN SIZE	CLASS	ARRGT.	FIG. NO.	PERFORMANCE					DRIVE DATA			
							CFM	O.V.	SP	R.P.M.	TEMP.	BHP	MTR. SHV.	FAN SHV.	BELTS

ITEM NO.	MOTOR DATA						SPECIAL FEATURES
	HP	RPM	CURRENT	FRAME	TYPE	MTR.POS.	

NOTES:

SPECIAL FEATURES

1. AUTO. SHUTTER
2. 45° COWL
3. INLET SCREEN
4. OUTLET SCREEN
5. 3/4" DIA. DRAIN
6. R.I.S.
7. CEILING SUSPENDED
8. FLOOR MOUNTED
9. EXTENDED GREASE LINES
10. ACCESS PANEL AT 0'CLOCK
11. SHAFT SEAL
12. FLANGED OUTLET
13. ALUMINIUM WHEEL
14. SPECIAL PAINT.
15. MOUNTING MOTOR & DRIVE.
16. WEATHERHOOD
17. INLET SUPPORT LEG
18. FLAT BLUE PRIMER
19. SLIP FIT INLET
20. UNITARY BASE & SPRING ISOLATORS

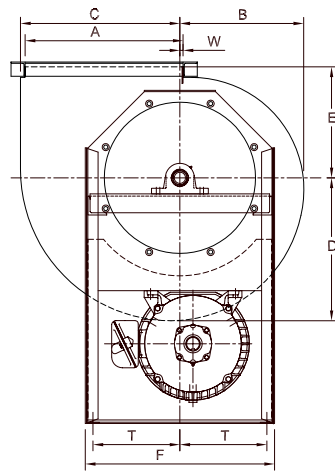
CUSTOMER _____
 JOB NAME _____ P.O.# _____
 LOCATION _____



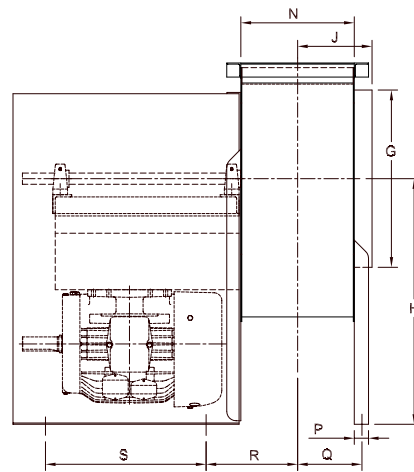
SERIES 1100
 ARRANGEMENT 10 SIZES 12 1/4 TO 27
 CLASS I & II
SHELDONS ENGINEERING

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



DRIVE SIDE



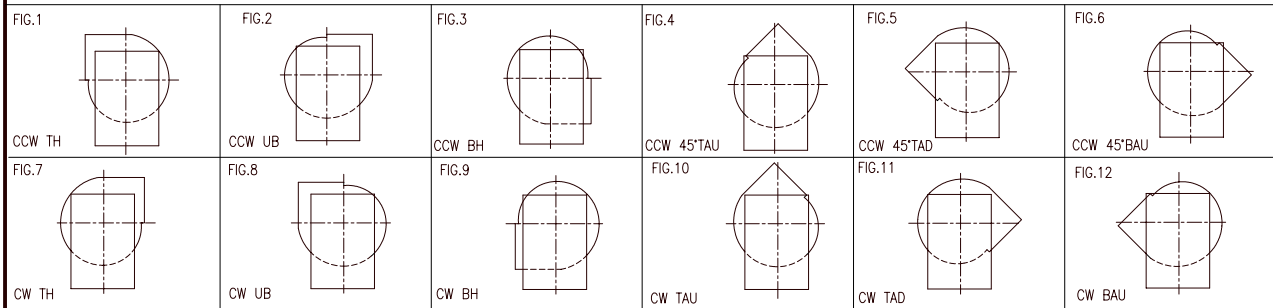
FRONT VIEW

DIMENSION - INCHES

FAN SIZE	WHEEL DIA.	SHAFT DIA.		KEYWAY SIZE		A	B	C	D	E	F	G	H	J	N	P
		CL I	CL II	CL I	CL II											
30	30	1 15/16	2 3/16	1/2x1/4	1/2x1/4	32 3/4	25 5/8	33 1/8	29 3/4	23 1/8	35 9/16	36 1/4	36	13 5/8	23 1/4	2 1/2
33	33	1 15/16	2 3/16	1/2x1/4	1/2x1/4	36	28 1/8	36 3/8	32 5/8	25 1/8	38 9/16	39 1/4	40	14 3/4	25 1/2	2 1/2
36 1/2	36 1/2	1 15/16	2 3/16	1/2x1/4	1/2x1/4	39 3/4	31 1/8	40 1/8	36	27 5/8	42 1/16	42 3/4	44	16 1/8	28 1/4	2 1/2

FAN SIZE	Q	R	S	T	W	MAX. MTR FR
30	13	15 5/16	25	16 5/8	1/8	405
33	14 1/8	16 7/16	29	18 1/8	1/8	405
36 1/2	15 7/16	17 7/8	29	19 7/8	1/8	445

ROTATION & DISCHARGE FROM NORMAL DRIVE SIDE



ITEM NO.	IDENTIFICATION	NO. REQD.	FAN SIZE	CLASS	ARRGT.	FIG. NO.	PERFORMANCE				DRIVE DATA			
							CFM	O.V.	SP	R.P.M.	TEMP.	BHP	MTR. SHV.	FAN SHV.

ITEM NO.	MOTOR DATA						SPECIAL FEATURES
	HP	RPM	CURRENT	FRAME	TYPE	MTR.POS.	

NOTES:

SPECIAL FEATURES

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16. WEATHERHOOD
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18. FLAT BLUE PRIMER
19. SLIP FIT INLET
20. UNITARY BASE & SPRING ISOLATORS

CUSTOMER _____
 JOB NAME _____ P.O.# _____
 LOCATION _____



SERIES 1100
 ARRANGEMENT 10 SIZES 30 TO 36 1/2
 CLASS I & II

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DRAWING CERTIFIED BY S.E. APPROVAL-NOT REQUIRED-RELEASED FOR PRODUCTION	DATE	ENGINEER	DWG#