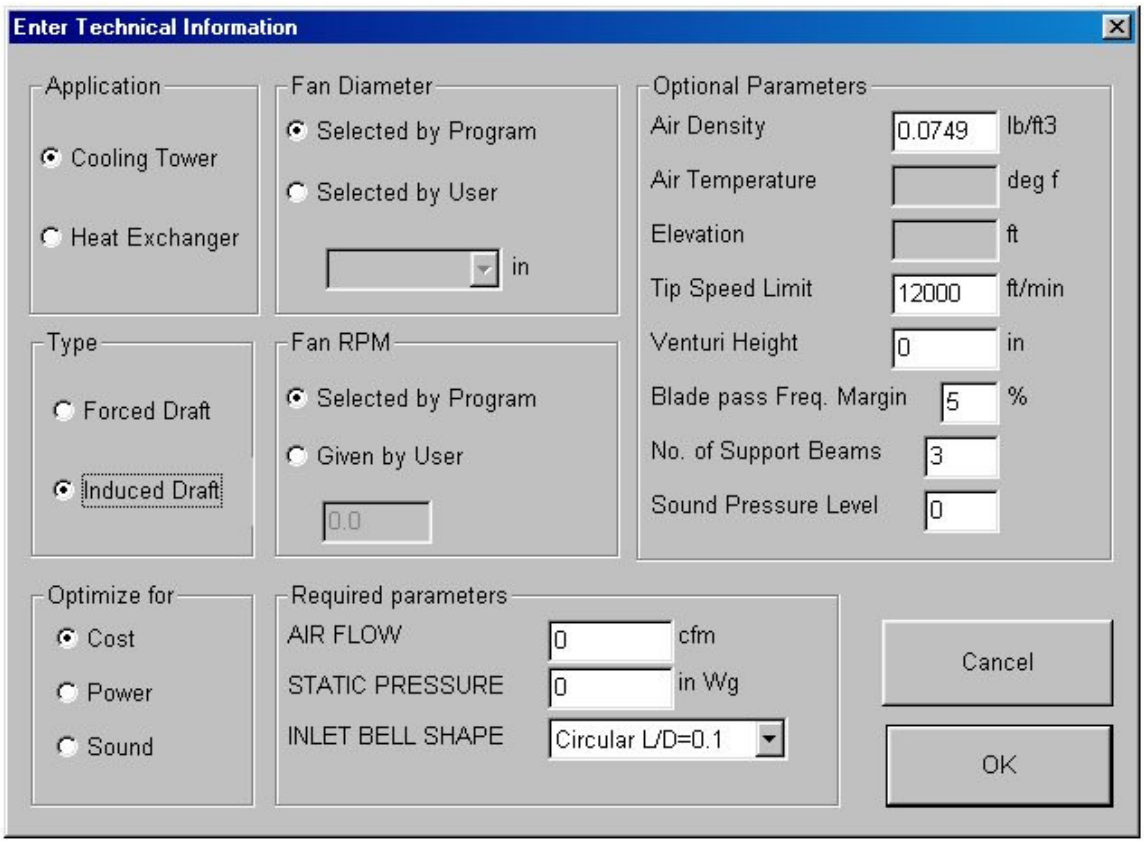
Dear Sir,
We would like to introduce ourselves as company working in CAD/CAM from last thirteen years. Our activities include Technical Software Development, Finite Element Analysis, Three Dimensional Modeling, Two Dimensional Drawing Creation. Details of our fan selection software are as under.

The fan selection software is the result of our dedicated efforts of last four years. The program basically works upon a database maintained by the fan manufacturing company. This database contains all the technical details of the fan models like model name, fan diameter, hub diameter, number of blades, fan speed, materials of construction, fan weight, natural frequencies of blades, etc. along with curve information. Curve information includes curve data for different tip angles i.e. flow, pressure, power, efficiency data for all tip angles. Using fan laws the program can convert design curves to different fan speeds and / or different air densities.

For selecting a fan the user is asked to provide information like air flow rate, static pressure and inlet bell shape. Optionally the user can also provide air density / temperature and altitude, allowable tip speed, number of support beams, venturi height, etc., otherwise the program uses default values of these parameters. The user also needs to specify fan diameter and fan speed, if they are available with the user, else the program will decide the fan diameter and fan speed. A screen like the one shown below is displayed to accept data from user. Before this the user is also asked to select system of units, Metric or I-P. The following screen is for I-P units.

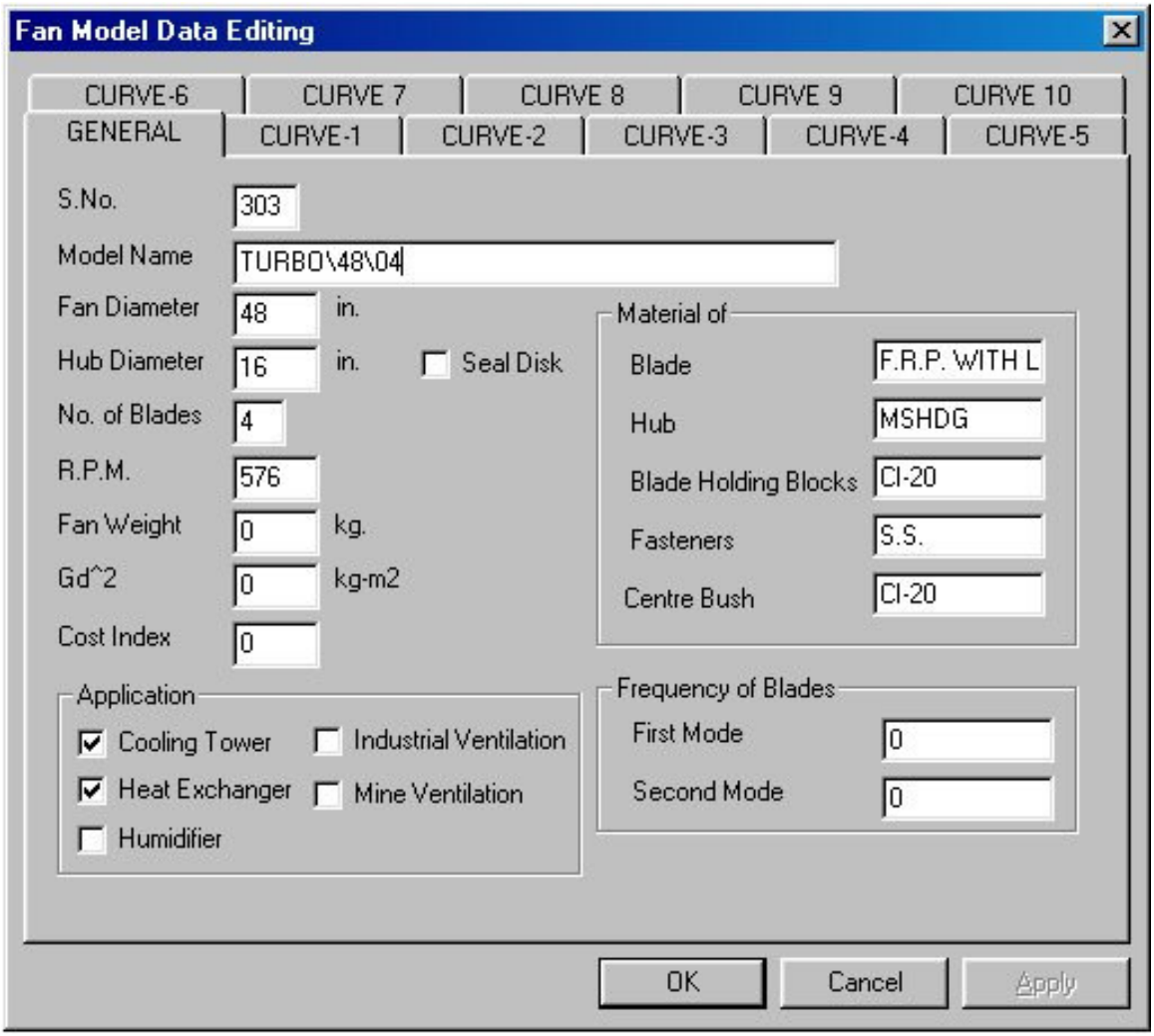


Depending upon the data supplied by the user, the fan database is searched for fans performing required duty. The best suited fan model depending on the criteria for optimization is shown to the user. The performance curves, specification sheet and speed-torque curve of the selected fan can be viewed and printed. Appropriate error messages are shown when the required duty is not met. A specification sheet like the one shown below is displayed by the program after fan selection. The following screen is for Metric units.

User : Turbo Computer Professionals P. Ltd.						Prepared by : Sanjay Jain		
Customer : Customer_1						Inquiry no. : 2002/01/05		
Job no. : 2002/01						Item no. : 125		
Run Date :	09/05/02							
Selected Fan Specifications As Follows:								
Parag Fan Model :	PARAG-MAP-5486-8HV-P18							
Fan Diameter :	5486	mm						
Hub Diameter :	762	mm						
Number of Blades :	8							
Fan Speed :	220.0	rpm						
Pitch Angle :	14.0	deg.						
Air Flow :	200.0	m3/sec						
Static Pressure :	200.0	Pascal						
Velocity Pressure :	50.4	Pascal						
Velocity Pressure Recovery :	0.0	Pascal						
Inlet Loss :	0.0	Pascal						
Total Pressure :	250.4	Pascal						
Air Density At Exit :	1.200	kg/m3						
Fan Shaft Power :	62.7	kW						
Allowable Power / Blade :	10.4	kW						
Total Fan Efficiency :	80.0	%						
Static Fan Efficiency :	63.9	%						
Fan Assembly Weight :	295.0	kg						
Fan GD**2 Value :	1231.0	kg-M2						
Total Thrust :	8813.2	N						
Blade Construction & Material :	Hollow FRP with leading edge & UV protection							
Hub Centre Bush Material :	CI-20							
Hub Support Plates Material :	MSHDG							
Blade Holding Block Material :	AL.- LM6							
Fastening Hardware Material :	S.S.							
Seal Disc	F.R.P.							
Blade Natural Frequency :	6.8	Hz						
Blade Pass Frequency :	29.3	Hz						
Beam Pass Frequency :	11.0	Hz						
Octave Bands (Hz)	63	125	250	500	1k	2k	4k	8k
Lw	110.1	109.1	106.1	100.6	100.1	095.1	092.6	085.1
Lp (Inlet)	098.6	097.6	094.6	089.1	088.6	083.6	081.1	073.6
Lp (Side)	091.6	097.6	094.6	089.1	088.6	083.6	081.1	073.6
LwA	**105.1**	dbA						
LpA (Inlet)	**093.6**	dbA						
LpA (Side)	**086.6**	dbA						

The parameters in specification sheet can be customized to match fan manufacturing company's requirements.

Following screen shows one of the forms used to feed fan data in fan database.



The software is developed in Visual C++ programming language. It is supported on Windows 95 and higher operating systems. The complete software can be copied on a single floppy disk. Also, Link can be given on website to download software.

We are also attaching demo version of the fan selection program. It contains three files, namely ‘fanselect.exe’, ‘models.tcp’ and ‘curves.tcp’. Copy these files in a separate folder and use ‘RUN’ command of windows to run ‘fanselect.exe’. The demo program contains fictitious values and is meant for just demonstrating the way fan can be selected through program. The program can be tried out with flow values between 10 to 60 cu. m/sec and static pressure between 100 to 10 pascal.

Should you require any further information please do not hesitate to contact us.

Sincerely,

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