



Satish Lele

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This is a program for Skill Development and Bridging the Gap between Manual and Computer work. I offer Training of Basic Fundamentals and How to Use my Software to a batch of 5 to 10 people in your office. This can speed up Drawing work using my own Software, compared to conventional methods. This is a package, which can run on any CAD program and is very simple and easy to use.

2D Pipe Routings

Need for 2D Pipe Routings?: To create a 3D Model, first you have to create conceptual 2D Pipe Routing, with pipe center line elevations marked on each horizontal pipe line. This gives idea about layout in plan view. This can be converted in 3D Pipe Routing, by lifting the horizontal pipe lines to the elevations of the pipe center line. In 3D view, the vertical lines can be joined from end points of horizontal pipe lines.

Generally one pipe line is drawn on one layer. This helps in segregating pipe lines. When one line routing in 3D is completed, that layer can be frozen, to avoid confusion.

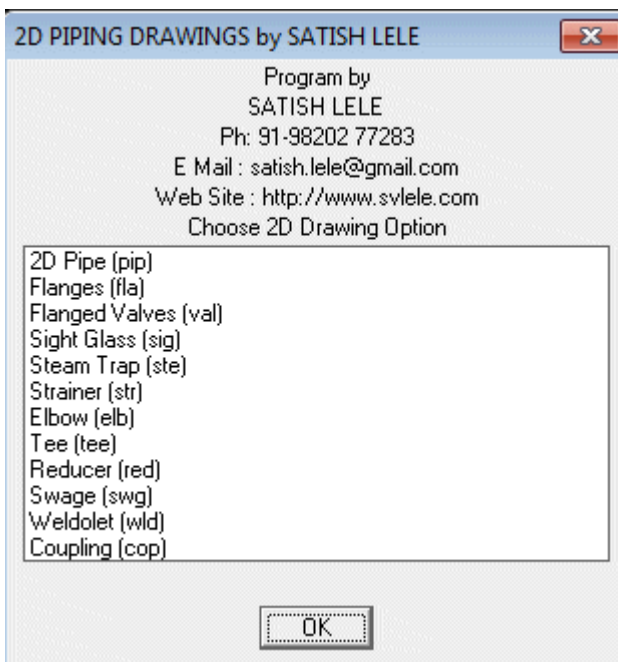
Program for 2D Pipe Routings

Most CAD Packages are prepared in such a manner that these can be easily customized. 4 Programs of **OpenPipe** are such customized programs. The 2D program is based totally on LISP programs and no symbols or blocks are created. Pipe line is cut in the portion where fitting is drawn. Since blocks are not there, there is a lot of saving of Disk space. Since the program is written in LISP, program can be even modify further. The different piping entities can be arranged on different layers. This is a menu driven program. Special Dialogue Boxes are created to make the program more user friendly.

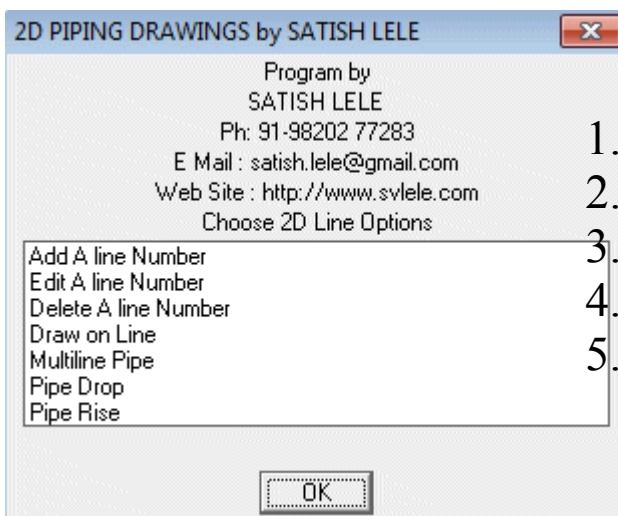
To try the program, send a request for trial package or download from

website. The package is a zip file, openpipe.zip. There is no setup.exe file as in other packages. Download and unzip openpipe.zip and copy files in a folder, say openpipe. While running AutoCAD program, click on tools -> Options (or at command prompt, type `_Preferences`) -> Files -> + of Support File Search Path -> Add -> Browse -> Select the folder. Click on Apply and the click on close. At command prompt, open trial.dwg and type `(load "2p")` and press enter. pipe2d will be loaded, and start program by typing `2p`.

2D Pipe Lines: To draw 2D Pipe routing, first create a Single Line layout. Put each line on a layer having layer name as line number. Then insert pipe fittings.

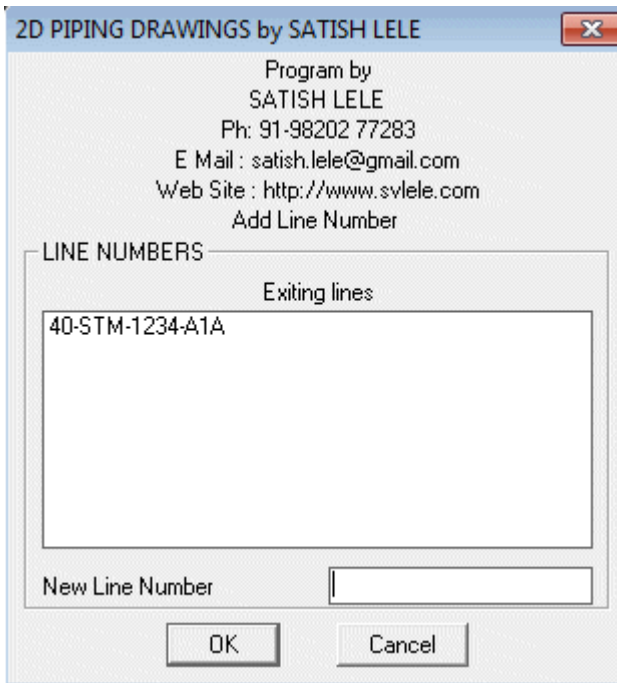


2D Piping Program: This has 12 options. "2D Pipe (pip)" "Flanges (fla)" "Valves (val)" "Sight Glass (sig)" "Steam Trap (ste)" "Strainer (str)" "Elbow (elb)" "Tee (tee)" "Reducer (red)" "Swage (swg)" "Weldolet (wld)" "Coupling (cop)". The short command are shown in bracket.



2D Pipe (pip) has 5 options:

1. Add A line Number
2. Edit A line Number
3. Delete A line Number
4. Draw on Line
5. Multiline Pipe

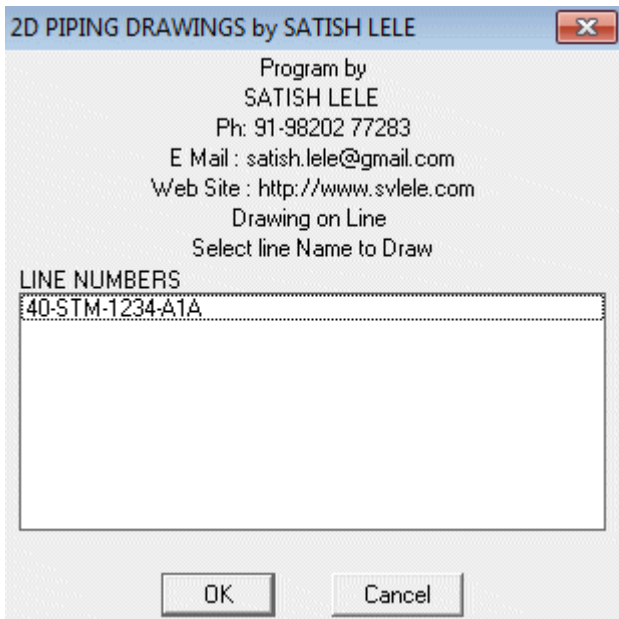
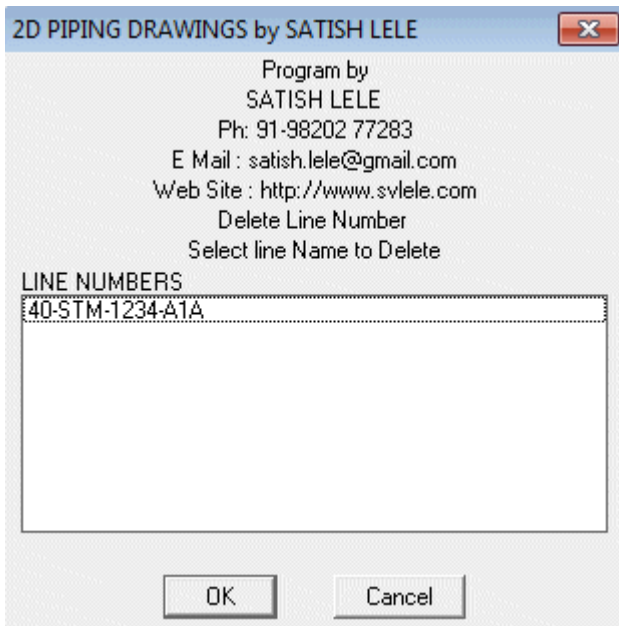


Add A line Number : When you click on this, a dialog box opens and shows the line numbers (names of layers) existing in the drawing, if any. You can add a new line number in the text box below. Program creates a new layer with that name.



Edit A line Number : When you click on this, a dialog box opens and shows the line numbers (names of layers) existing in the drawing, if any. You can select the line number to be edited from the list and type a new line number in the text box below. Program renames that with a new name.

Delete A line Number : When you click on this, a dialog box opens and shows the line numbers (names of layers) existing in the drawing, if any. You can select the line number to be deleted from the list and line number and layer is deleted from the drawing, if line number and layer is not in use.

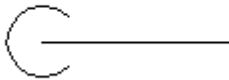


Draw on Line: When you click on this, a dialog box opens and shows the line numbers (names of layers) existing in the drawing, if any. You can select the line number from the list. Program makes the line number (layer) current, so that whatever you draw is put on that layer.

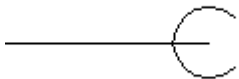
Multiline Pipe : This draws a line to its thickness. Select NB of Pipe and then pick pipe center line. Two lines are drawn along the center line, at a distance exactly equal to half the outside diameter of pipe. The linetype of the line changed to centerx2. Use this option after all fittings are drawn in that line.



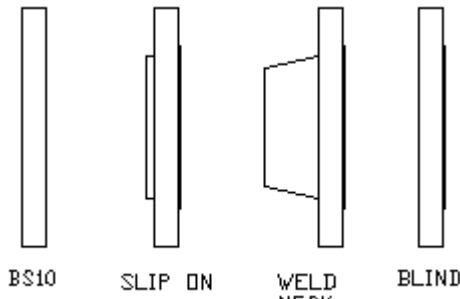
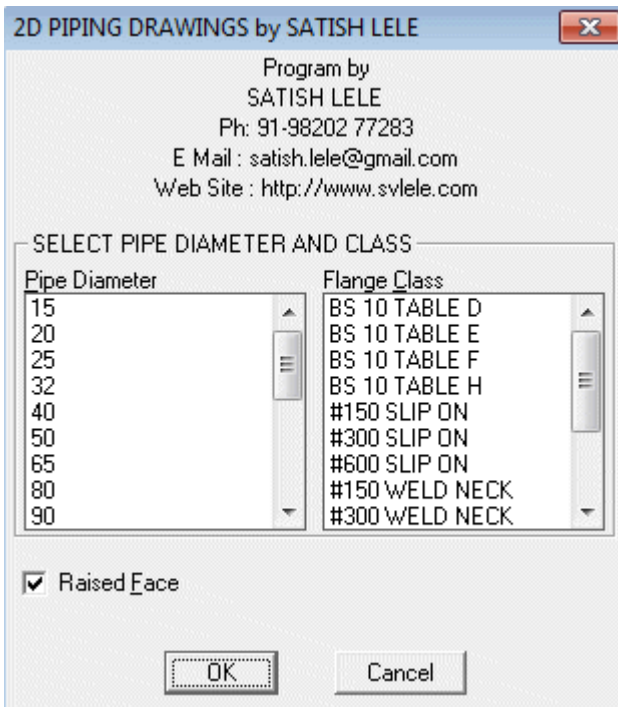
Pipe Drop : When pipe drops at the elbow, an arc is drawn showing direction of pipe going down. Select NB of Pipe in dialog box as above and then the point where drop will be there. Select a point at back of pipe. Arc will be put at the end.



Pipe Rise : When pipe rises at the elbow, an arc is drawn showing direction of pipe coming up. Select NB of Pipe in dialog box as above and then the point where rise will be there. Select a point at back of pipe. Arc will be put at the end.

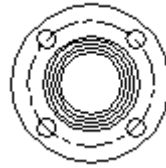
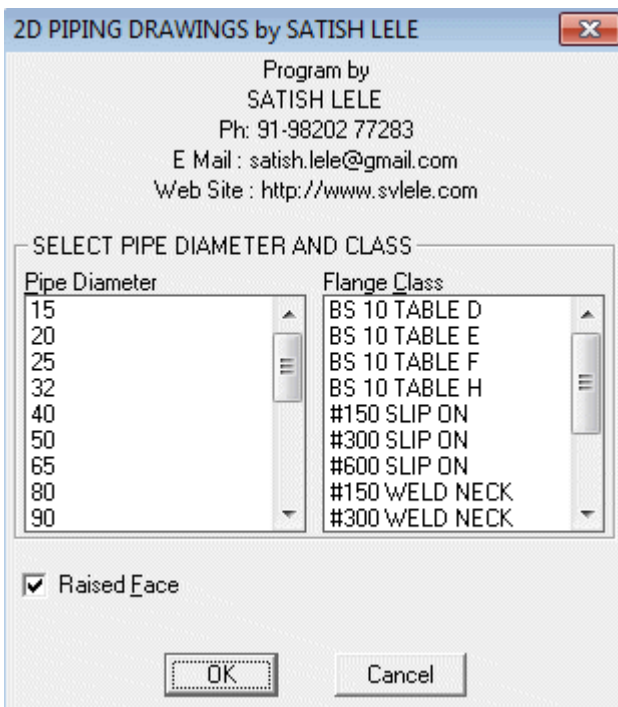


Flanges: You can draw Slip on, Weld Neck, Blind and BS10 Flanges. You can draw Flat or Circular view with this:



Flat View :

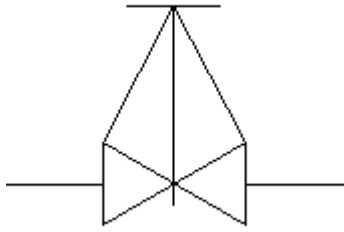
Select the NB of Pipe and type and rating of flange. The raised face option is default. Select the insertion point of flange on pipeline and point at the back side of flange. A flange will be drawn and pipe will be cut.



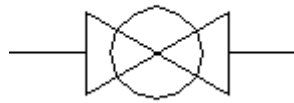
Circular View :

Select the NB of Pipe and type and rating of flange. The raised face option is default. Select the insertion point of flange. A flange will be drawn. Flange will draw to appropriate number and size of bolt holes, at flange PCD.

Valves: You can draw 150#, 300#, 600# and 800# Gate, Globe, Check, Wafer Check, Ball, Butterfly and control valves with this. Select Pipe Dia from dialog box. Select on pipeline, the center point of flange and a point in the direction of the valve. Select whether you want to draw valve as Elevation or Plan. A valve will be drawn and pipe will be cut.



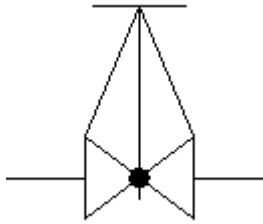
Gate Valve Elevation



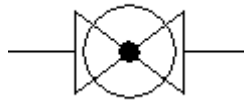
Gate Valve Plan

Gate Valve:

- 150# : From 15 mm NB to 600 mm NB.
- 300# : From 15 mm NB to 600 mm NB.
- 600# : From 15 mm NB to 600 mm NB.
- 800# : From 15 mm NB to 40 mm NB.



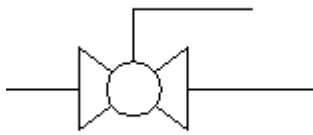
Globe Valve Elevation



Globe Valve Plan

Globe Valve:

- 150# : From 15 mm NB to 400 mm NB.
- 300# : From 15 mm NB to 300 mm NB.
- 600# : From 15 mm NB to 300 mm NB.



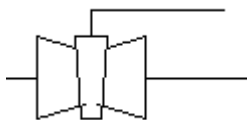
Ball Valve Elevation



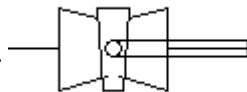
Ball Valve Plan

Ball Valve:

- 150# : From 15 mm NB to 150 mm NB.
- 300# : From 15 mm NB to 150 mm NB.



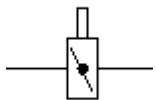
Plug Valve Elevation



Plug Valve Plan

Plug Valve:

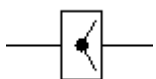
- 150# : From 15 mm NB to 600 mm NB.
- 300# : From 15 mm NB to 600 mm NB.



Wafer Butterfly Valve

Wafer Butterfly Valve:

- 150# : From 50 mm NB to 600 mm NB.



Non-Slam Check Valve:

- 150# : From 50 mm NB to 1500 mm NB.

Non-Slam 300# : From 50 mm NB to 1500 mm NB.

Check Valve 600# : From 50 mm NB to 1200 mm NB.



Swing
Check
Valve

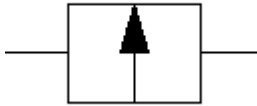
Swing Check Valve:

150# : From 15 mm NB to 350 mm NB.

300# : From 15 mm NB to 300 mm NB.

600# : From 15 mm NB to 300 mm NB.

800# : From 15 mm NB to 40 mm NB.



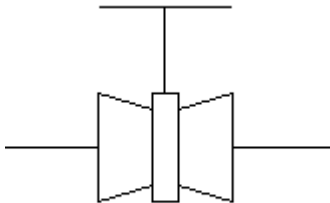
Lift
Check
Valve

Lift Check Valve:

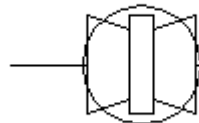
150# : From 15 mm NB to 400 mm NB.

300# : From 15 mm NB to 300 mm NB.

600# : From 15 mm NB to 300 mm NB.



Piston
Valve
Elevation

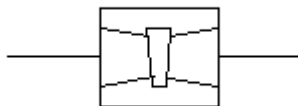


Piston
Valve
Plan

Piston Valve:

150# : From 15 mm NB to 200 mm NB.

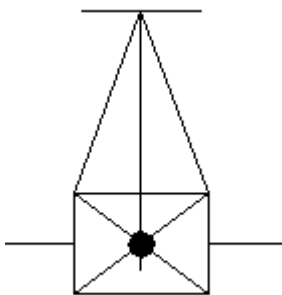
300# : From 15 mm NB to 200 mm NB.



Fully
Jacketed
Plug
Valve

Fully Jacketed Plug Valve:

150# : From 25 mm NB to 250 mm NB.

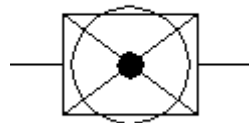


Fully
Jacketed
Globe

Fully Jacketed Globe Valve:

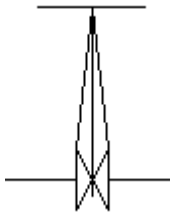
150# : From 25 mm NB to 300 mm NB.

300# : From 25 mm NB to 300 mm NB.

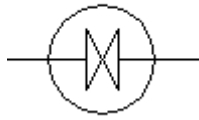


Fully Jacketed Globe Valve Elevation

Valve Plan



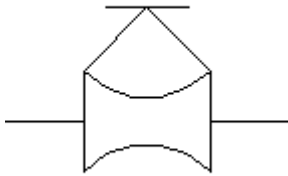
Knife Gate Valve Elevation



Knife Gate Valve Plan

Knife Gate Valve:

150# : From 50 mm NB to 600 mm NB.



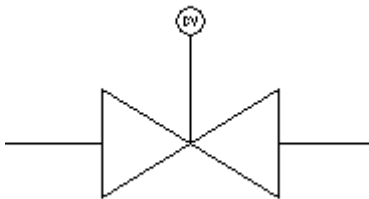
Diaphragm Valve Elevation



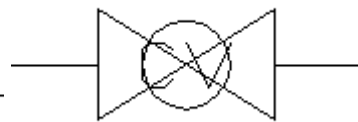
Diaphragm Valve Plan

Diaphragm Valve:

150# : From 15 mm NB to 300 mm NB.



Control Valve Elevation



Control Valve Plan

Control Valve:

300# : From 15 mm NB to 200 mm NB.

600# : From 15 mm NB to 200 mm NB.

2D PIPING DRAWINGS by SATISH LELE

Program by
SATISH LELE
Ph: 91-98202 77283
E Mail : satish.lele@gmail.com
Web Site : http://www.svlele.com
Choose Class of Valves

ANSI 150
ANSI 300
ANSI 600
ANSI 800

OK

2D PIPING DRAWINGS by SATISH LELE

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SELECT PIPE DIAMETER

15
20
25
32
40
50
65
80
100

OK Cancel

2D PIPING DRAWINGS by SATISH LELE

Program by
SATISH LELE
Ph: 91-98202 77283
E Mail : satish.lele@gmail.com
Web Site : http://www.svlele.com
Choose Elevation or Plan Drawing

ELEVATION OR PLAN

Plan
 Elevation

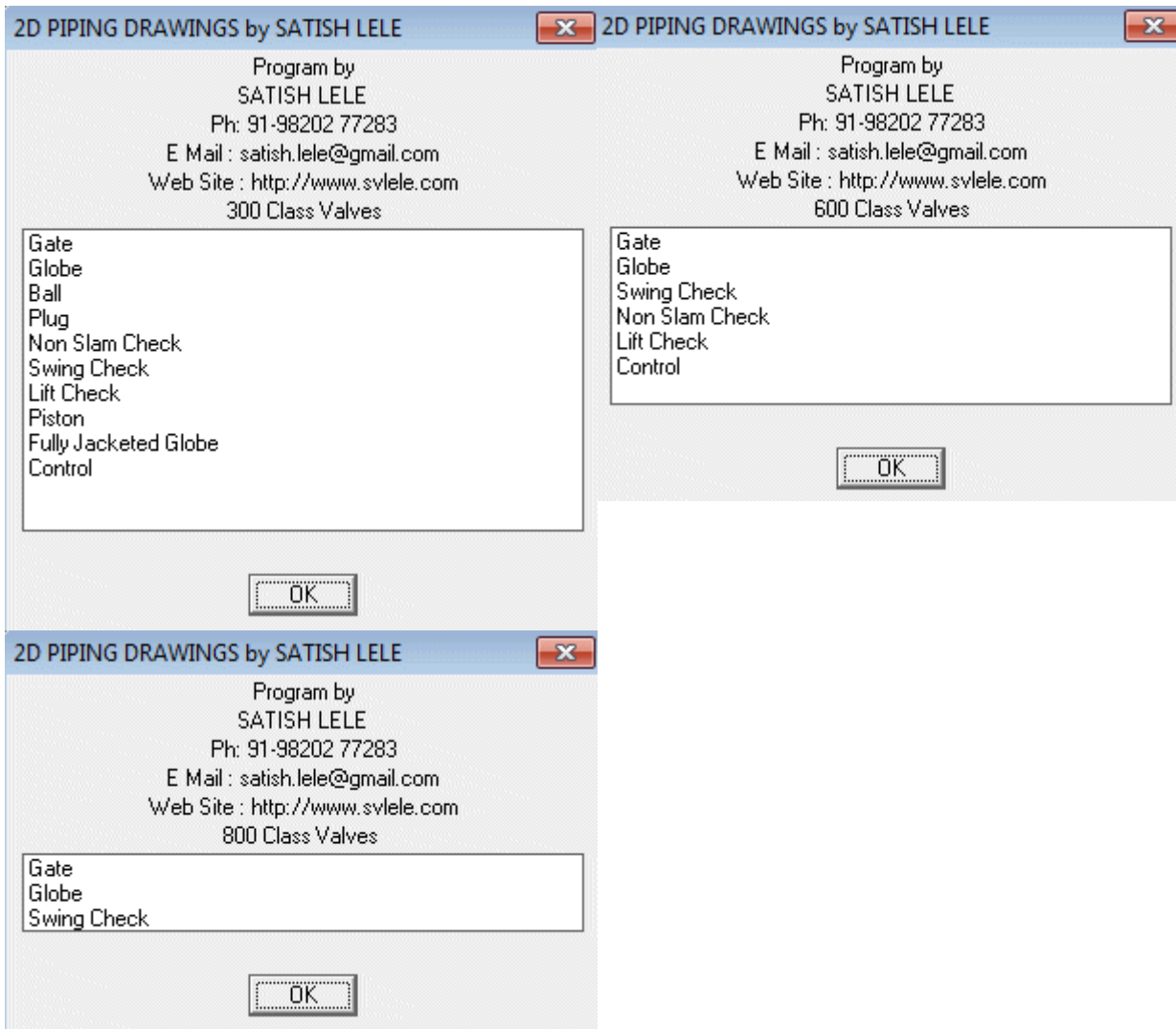
OK

2D PIPING DRAWINGS by SATISH LELE

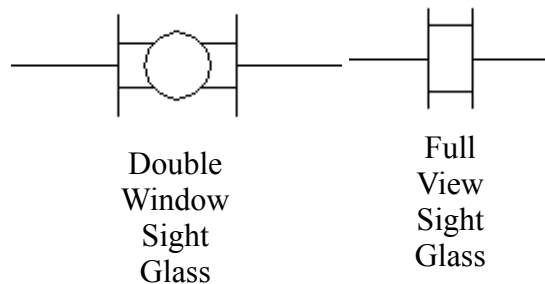
Program by
SATISH LELE
Ph: 91-98202 77283
E Mail : satish.lele@gmail.com
Web Site : http://www.svlele.com
150 Class Valves

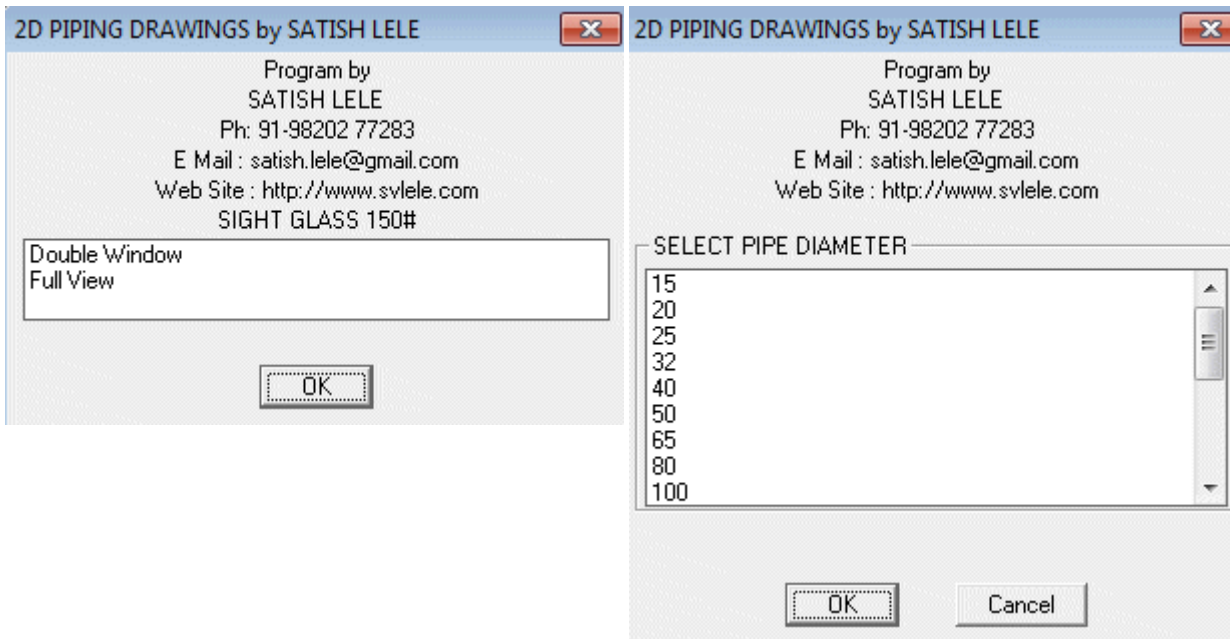
Gate
Globe
Ball
Plug
Wafer Butterfly
Non Slam Check
Swing Check
Lift Check
Piston
Fully Jacketed Plug
Fully Jacketed Globe
Knife Gate
Diaphragm

OK

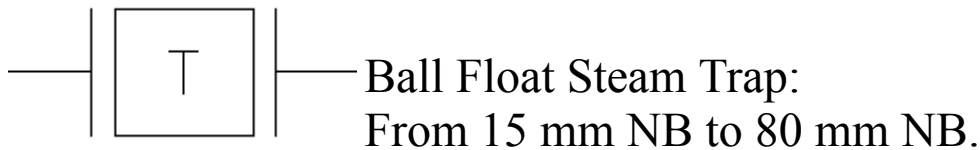


Sight Glass: You can draw sight glass with Double Window or Full View with this. Select Pipe Dia from dialog box. Select on pipeline, the center point of flange and a point in the direction of the sight glass. A Sight Glass will be drawn and pipe will be cut.

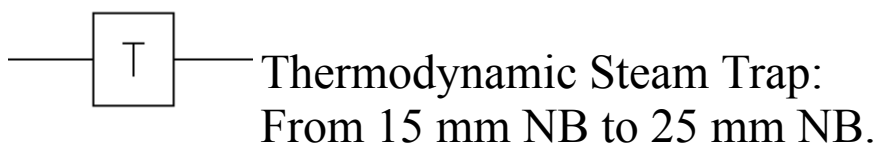




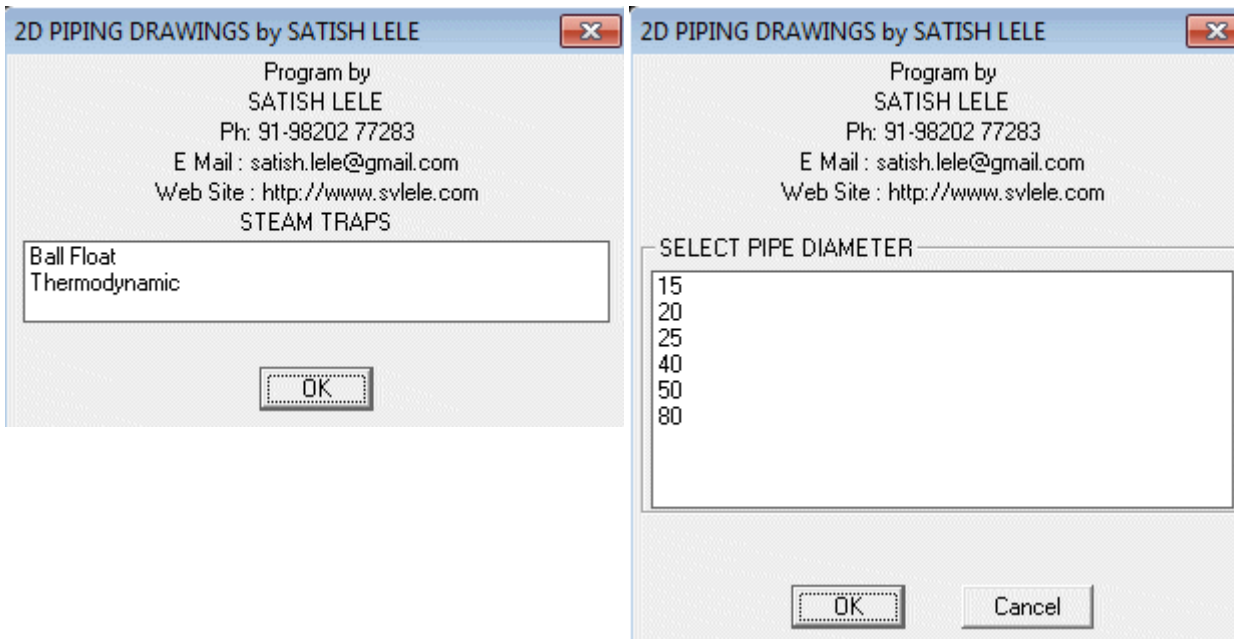
Steam Trap: You can draw Steam Trap of Ball Float or Thermodynamic type with this. Select Pipe Dia from dialog box. Select on pipeline, the center point of flange and a point in the direction of the Steam Trap. A Steam Trap will be drawn and pipe will be cut.



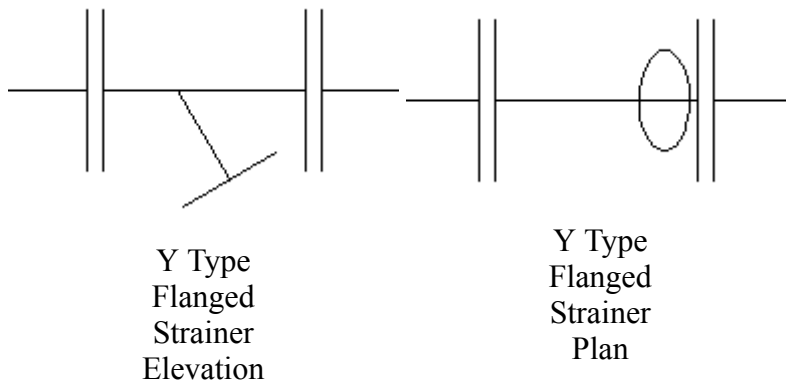
Ball Float
Steam Trap



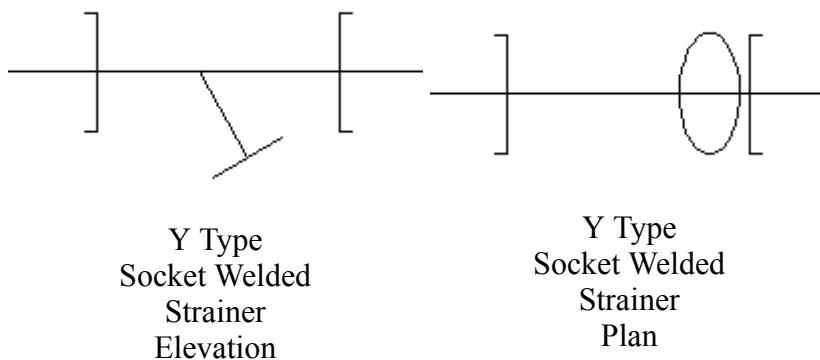
Thermodynamic
Steam Trap



Strainer: You can draw Line Strainer of Y type (flanged), Y type (socket welded), Y type (screwed) or Basket type with this. Select Pipe Dia from dialog box. Select on pipeline, the center point of flange and a point in the direction of the Strainer. A Strainer will be drawn and pipe will be cut.



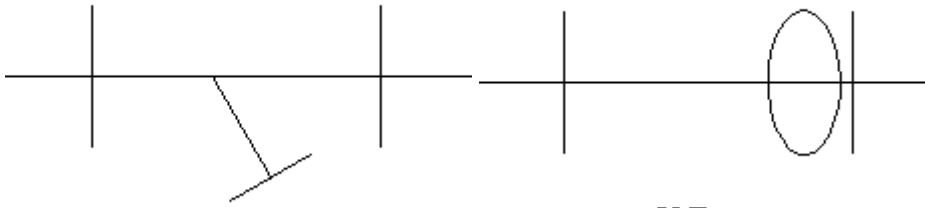
Y Type Flanged Strainer:
: From 50 mm NB to 600 mm NB.



Y Type Socket Welded Strainer:
: From 8 mm NB to 100 mm NB.

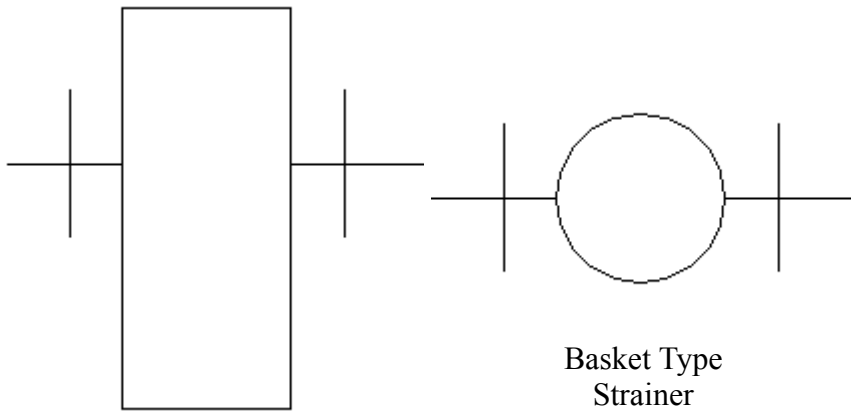
Y Type Screwed Strainer:

: From 8 mm NB to 100 mm NB.



Y Type
Screwed
Strainer
Elevation

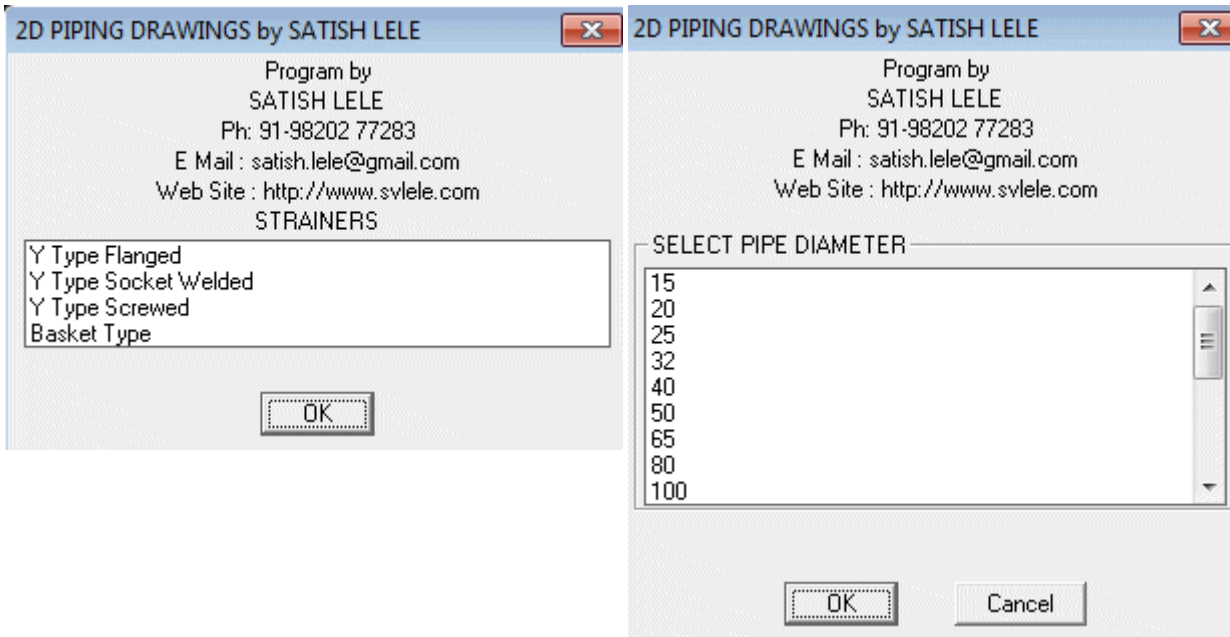
Y Type
Screwed
Strainer
Plan



Basket Type
Strainer
Elevation

Basket Type
Strainer
Plan

Basket Type Strainer:
: From 50 mm NB to 600 mm NB.



Elbows: You can draw:

90 Degree Elbow : You can draw an elbow of 15 mm NB to 600 mm NB



by selecting a Point on First Pipeline, then a point on Second Pipeline and the Point of Intersection of two Lines. If two lines are not on same layer, program give error message and exits. Otherwise, Elbow is drawn at the intersection of two lines and pipe will be cut.



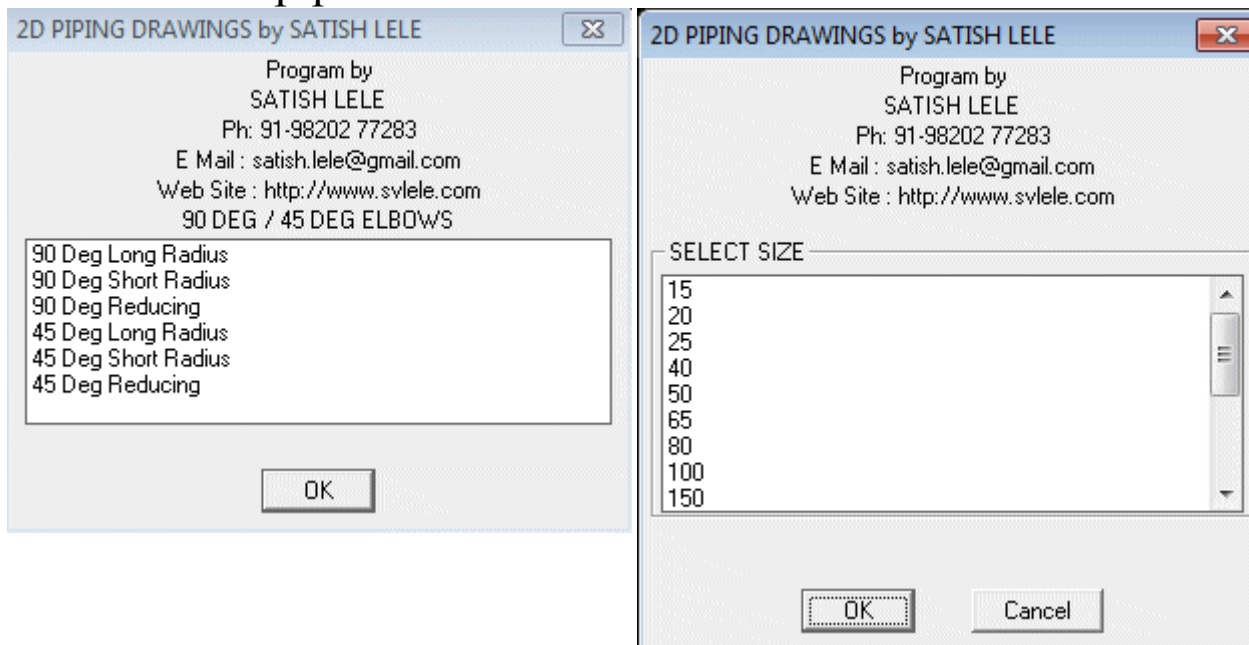
45 Degree Elbow : You can draw an elbow of 15 mm NB to 600 mm NB by selecting a Point on First Pipeline, then a point on Second Pipeline and the Point of Intersection of two Lines. If two lines are not on same layer, program give error message and exits. Otherwise, Elbow is drawn at the intersection of two lines and pipe will be cut.

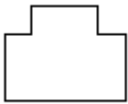


90 Degree Reducing Elbow : You can draw a Reducing Elbow of 15 mm NB to 600 mm NB by selecting a Point on First Pipeline (Bigger dia), then a point on Second Pipeline (Smaller dia) and the Point of Intersection of two Lines. Elbow is drawn at the intersection of two lines and pipe will be cut.



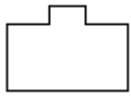
45 Degree Reducing Elbow : You can draw a Reducing Elbow of 15 mm NB to 600 mm NB by selecting a Point on First Pipeline (Bigger dia), then a point on Second Pipeline (Smaller dia) and the Point of Intersection of two Lines. Elbow is drawn at the intersection of two lines and pipe will be cut.



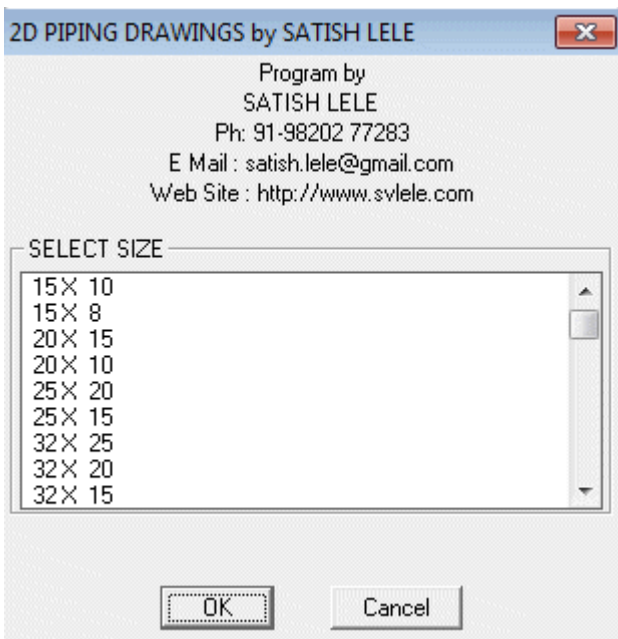
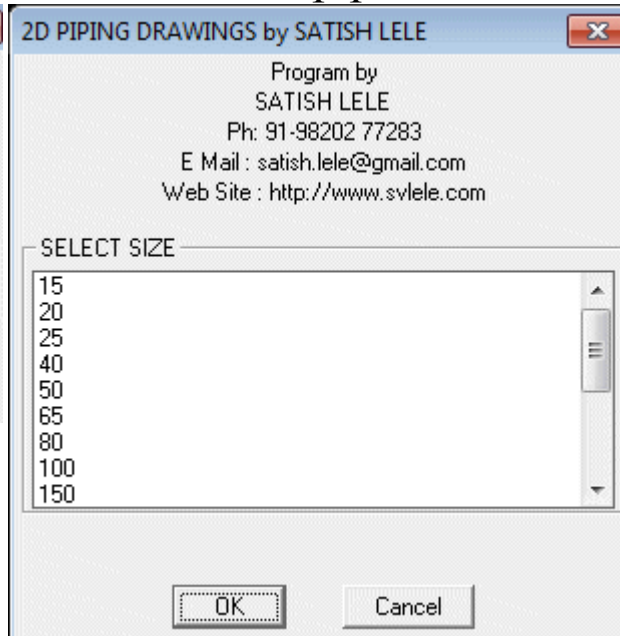


Tees: You can draw:

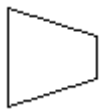
Equal Tee : You can draw a Equal Tee of 25 mm NB to 600 mm NB by selecting a Point on Main Pipeline, then a point on Side Pipeline and the Point of Intersection of two Lines. Equal Tee is drawn at the intersection of two lines and pipe will be cut.



Reducing Tee : You can draw a Reducing Tee of 80 mm NB to 600 mm NB by selecting a Point on Main Pipeline, then a point on Side Pipeline and the Point of Intersection of two Lines. Reducing Tee is drawn at the intersection of two lines and pipe will be cut.



Reducers: You can draw:



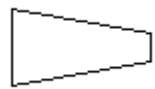
Concentric Reducer : You can draw a Concentric Reducer of 50 mm NB to 600 mm NB by selecting a Point on Main Pipeline where bigger end of reducer will be drawn, then a point on Pipeline towards lower side end. Reducer will be drawn and pipe will be cut.



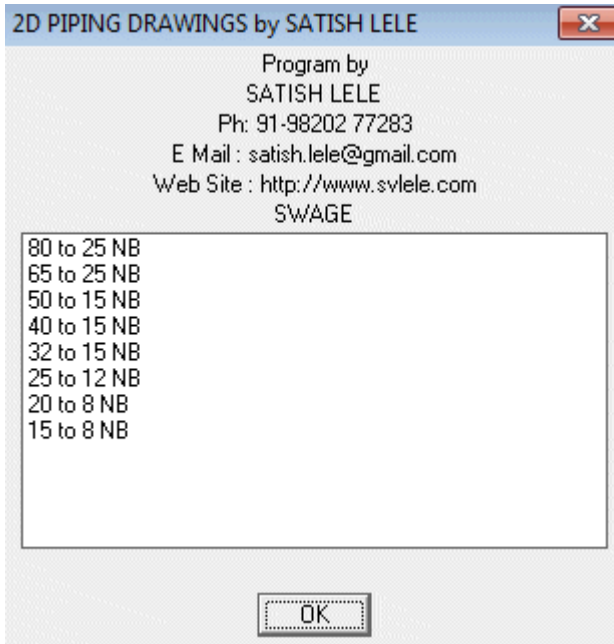
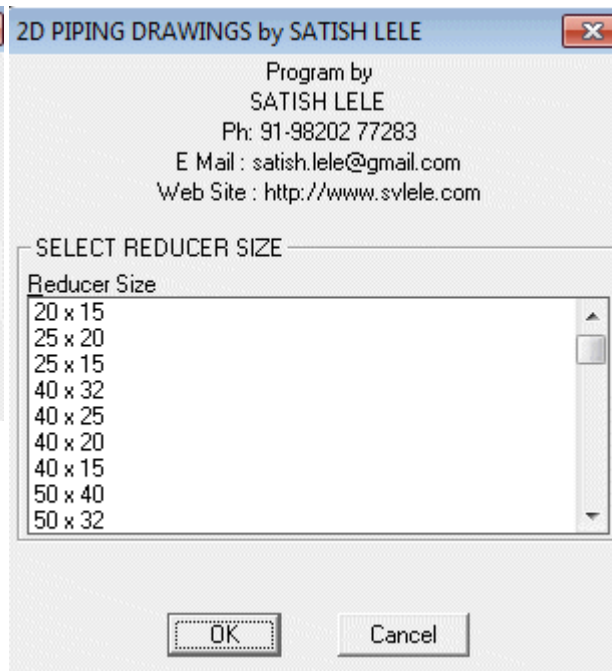
Eccentric Reducer Flat Up : You can draw a Eccentric Reducer Flat Up of 50 mm NB to 600 mm NB by selecting a Point on Main Pipeline where bigger end of reducer will be drawn, then a point on Pipeline towards lower side end. Reducer will be drawn and pipe will be cut.



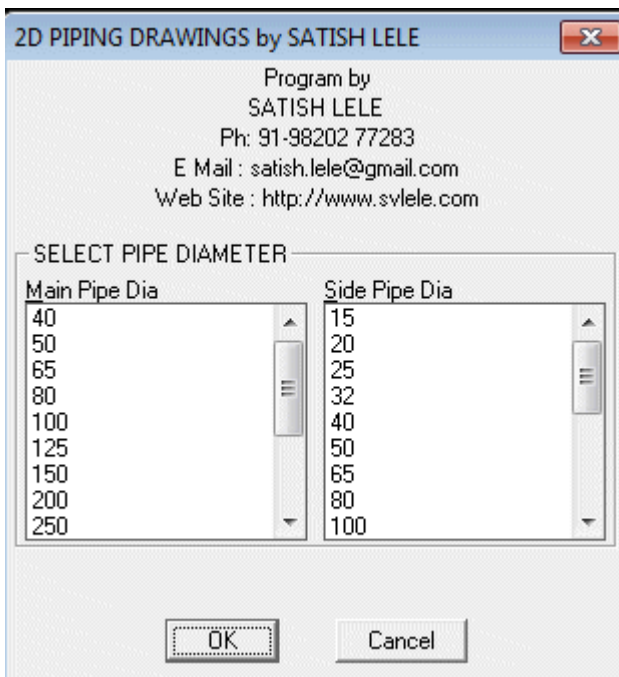
Eccentric Reducer Flat Down : You can draw a Eccentric Reducer Flat Down of 50 mm NB to 600 mm NB by selecting a Point on Main Pipeline where bigger end of reducer will be drawn, then a point on Pipeline towards lower side end. Reducer will be drawn and pipe will be cut.



Swage : You can draw a Swage of 80 mm NB to 15 mm NB by selecting a Point on Main Pipeline where bigger end of Swage will be drawn, then a point on Pipeline towards lower side end. Swage will be drawn and pipe will be cut.



Weldolet : You can draw a Weldolet with this. Select NB of main pipe and side pipe. Select a Point on Main Pipeline, then a point on Side Pipeline and the Point of Intersection of two Lines. Weldolet is drawn at the intersection of two lines and pipe will be cut.



□ **Coupling** : You can draw a Coupling by selecting a Point on Main Pipeline, then a point on Side Pipeline and the Point of Intersection of two Lines. Coupling is drawn at the intersection of two lines and pipe will be cut.