

## Cost Saving Calculation by Trident Level sensing Automatic Drain Valve (LDV Series)

If you purchase Time based automatic drain valve the Orifice size is 12.5mm and also if it operates at a frequency of 288 times a day (I.e. Every 5 minutes for a fixed period of four seconds. The compressed air receiver pressure is 100Psi(7Kg/ Cm<sup>2</sup>).

From Standard Tables we find that the air flow through an Orifice of 12.5mm at 100 Psi is 415 Cfm. The flow per second is 6.9 cubic feet. Valve opening time is 4 secs. The Air loss is  $6.9 \times 4 = 27.66$  Cubic feet.



Therefore for every discharge the wastage is	= 27.66 Cubic Feet.
For one day. The wastage is	= $288 \times 27.66 = 7966.08$ .

### Power required to produce 7966.08 Cubic Feet of Compressed Air.

1 H.P. Compressor will discharge maximum of 4 Cfm of the compressed Air.

For producing 7966.08 cubic feet of compressed Air,  
1 H.P Compressor has to run for 33.192 hours.

1 H.P	= 0.784KW.
Power Required to produce 7966.08 Cubic Feet	= $33.192 \times 0.74 = 24.56KW$ .

### Electrical Charge is Rs.4.50 per Unit

Cost saving for one day	= $24.56 \times 4.50 = Rs.110.52$
Cost saving for one month	= $30 \times 110.00 = Rs.3,300.00$
Cost saving for one year	= $3300 \times 12 = Rs.39,600.00$

**So as final Conclusion by using Trident Level sensing Drain valve,**

**You can save Rs.39,600/- per Annum.**