

# **Agitator Design Spreadsheet**

Version 1.2

December 20, 2017

**For more Info Visit - [pvtools.weebly.com](http://pvtools.weebly.com)**

## Inputs

Vessel MOC **SS304**  
 Liquid Density  $\rho$  **1498** kg/m<sup>3</sup>  
 Liquid Viscosity  $\mu$  **12** CP  
 0.012 N.s/m<sup>2</sup>  
 Required Rotation **90** RPM  
 1.5 RPS  
 Power Number  $N_p$  **5** (as per graph)  
 Reynolds Number  $N_{re}$  **69675.73**

Motor Position **Vertical**  
 Motor HP **5**  
 Motor HP Req. **4.2**  
 Shaft Seal **Single Mechanical**  
 Shaft Support **Required**  
 Baffle **Yes**

**SHAFT DIA**  
**MOTOR HP**  
**COMMON** } .CALC. INPUTS

### Inputs

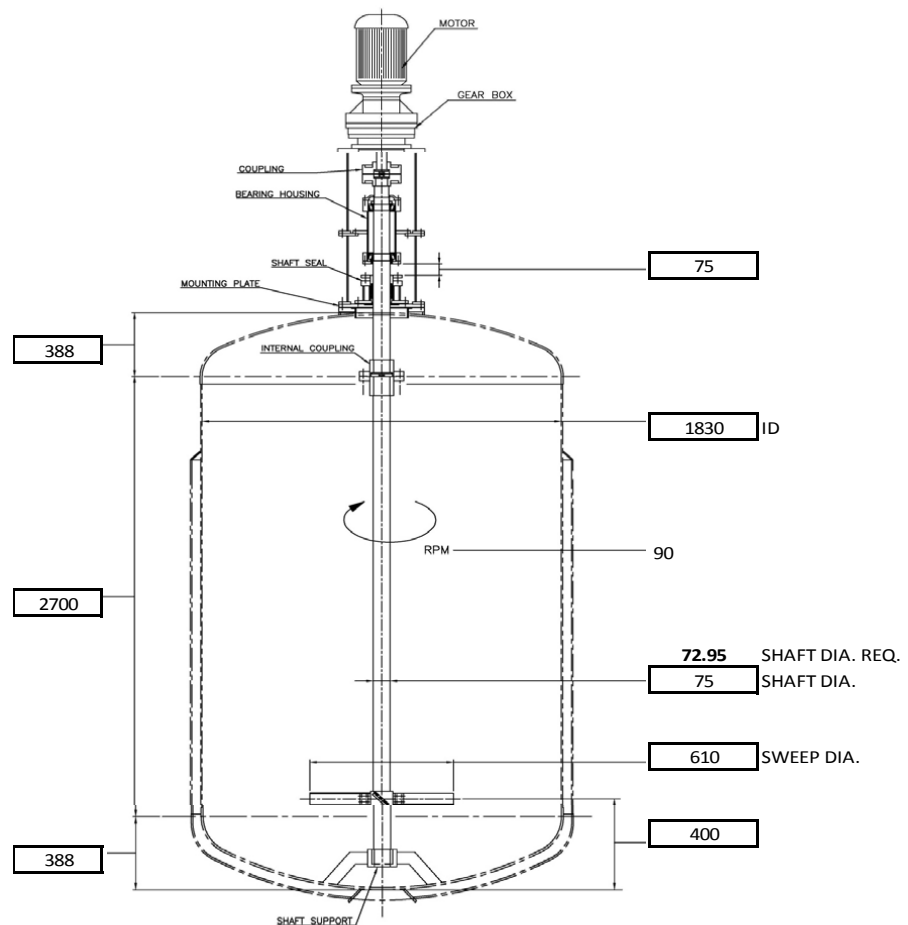
MOC of Vessel / Shaft  
 Type of Impeller  
 Motor HP (cal. available)  
 Sweep Dia. of Impeller  
 Shaft Dia. (cal. available)  
 Vessel Dimension

#### For Shaft Dia. Cal.

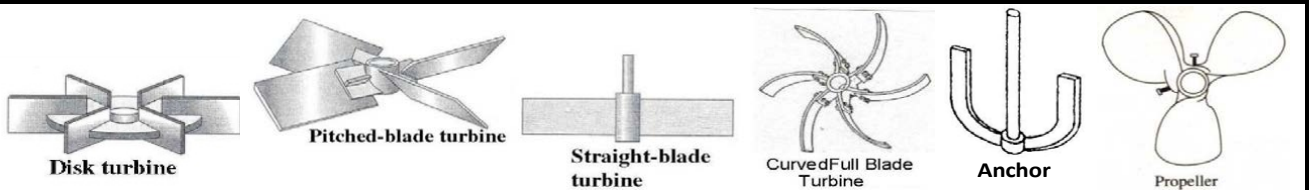
Vessel MOC  
 Output RPM  
 Motor HP  
 Vessel Dimension  
 Sweep Dia. of Impeller

#### For Motor HP Cal.

Liquid Density  
 Liquid Viscosity  
 Output RPM  
 Baffle/Unbaffle vessel  
 Type of Impeller ( $N_p$ )  
 Vessel Diameter  
 Sweep Dia. of Impeller



## Impellers $N_p$ Graph available for design cal.

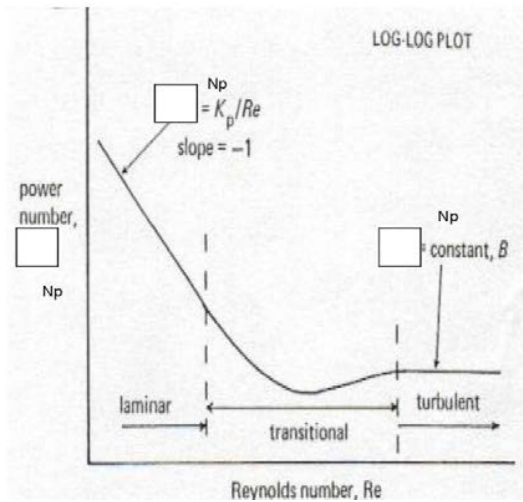


## Output - Sample Drawing (A2 Size)

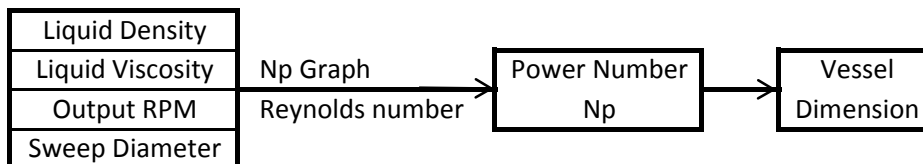
[illegible]

## Miscellaneous Points

1 Typical power curve (Np graph) for agitator impellers



2 Input steps for motor HP cal.



3 All dimensions can be change as per requirement.

4 Spreadsheet is available in full version only

5 The updated version will be provided without any extra charges.

6 Tutorial Video link - <https://goo.gl/i73UDk>

## Contact Us

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