Reactor dimensions

Just consider that we have an extension vessel, so I doubled the Hight and volume from company doc.

|  |  |
| --- | --- |
| Recommended working volume [L], max. | 26 |
| Recommended working volume [L], min. | 5.2 |
| Inner diameter [mm | in] | 200 | 7.87 |
| Inner height [mm | in] | 1220 | 48.04 |
| Di/Hi | 1:6.0 |

Volume [m³, l]=0.0383, 38.3L

Internal rack dimensions

The reactor internal consist of bed limiters, liquid redistributors and a liquid distributor disc in the top (note to mention that currently the reactors are running without redistributor discs and a nuzzle of top instead of first distributor disk.

|  |  |
| --- | --- |
| Hight | 41 in |
| diameter | 7.5 in |
| Hight of first bed support the bottom | ~9 in |
| Hight of each zone | ~10 in |

Two types of packing

|  |  |  |
| --- | --- | --- |
| Type | specific surface  area m2/m3 | weight  kg / m3 |
| RFK 25L  RFK Biological Random Packing  Material: PE-recycled | 312 | 71 |

|  |  |  |  |
| --- | --- | --- | --- |
| type size | bulk density  kg/m3 | surface area  m2/m3 | void fraction  in % |
| HF25-7-PP  1" Hiflow Ring Tower Packing  Material: PP | 77 | 313 | 91 |

2.54cm, Demander combien ? masse ? volume ?

The reactor is packed with 23 liter of reach type of packing beds, in 3 separated equal zones.

We work in counter current condition, which gas feeds (combination of N2, CO, H2, CO2) from bottom with the average flow rates of 50 cm³STP/min. and the liquid (growth medium which is 5L in total) circulate with the flow rate of between 4 - 5 L/min).





