

Comparison of a standard cyclon and symmetrical double cyclon ZT

Conventional standard cyclon :

Gap width at the apex cone : $h_{ac} = 10 \text{ mm}$

Apex cone angle : $\alpha_{ac} = 140^\circ$

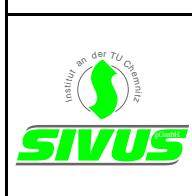
| gas volume flow rate [m^3/h] | particle concentration [g/m^3] | cut-off particle diameter [μm] |
|-------------------------------------|---------------------------------------|--|
| 184.33 | 0.1 | 1.05 |
| | 0.45 | 0.86 |
| | 0.8 | 0.86 |
| 253.45 | 0.1 | 0.85 |
| | 0.45 | 0.86 |
| | 0.8 | 0.87 |

Symmetrical double cyclon ZT :

Gap width at the apex cone : $h_{ac} = 10 \text{ mm}$ and 30 mm

Apex cone angle : $\alpha_{ac} = 140^\circ$

| gas volume flow rate [m^3/h] | particle concentration [g/m^3] | cut-off particle diameter [μm] |
|-------------------------------------|---------------------------------------|--|
| 184.33 | 0.1 | 0.75 / 0.64 |
| | 0.45 | 0.80 / 0.63 |
| | 0.8 | 0.78 / 0.65 |
| 253.45 | 0.1 | 0.64 / 0.65 |
| | 0.45 | 0.60 / 0.50 |
| | 0.8 | 0.56 / 0.49 |



Investigation of Particle Separation in Symmetrical Double Cyclone Separators

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