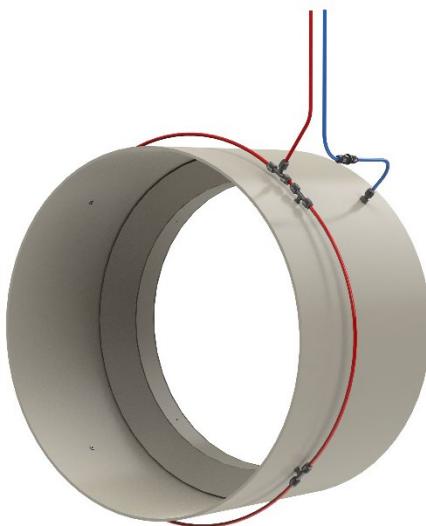


The **integrated volume flow measuring point** for the Colasit plastic fans CMV, CMMV, CHVN enables precise measurement of the current volume flow at the fan inlet. The motor power can be controlled via a frequency inverter based on the actual and setpoint values. This enables the precise setting of process parameters and optimises energy consumption.



The differential pressure Δp is measured upstream and downstream of the measuring point (red = overpressure, blue = negative pressure). The differential pressure correlates with the volume flow. To calculate the volume flow, the calibration factor "k" for the respective fan type is used together with the density of the medium in the formula below:

$$\dot{V} = k \cdot \sqrt{\frac{\Delta p}{\rho}}$$

\dot{V}	Volume flow	$[\text{m}^3/\text{h}]$
k	Calibration factor	$[\text{m}^2\text{s}/\text{h}]$
Δp	Differential pressure measuring point	$[\text{Pa}]$
ρ	Density of the medium	$[\text{kg}/\text{m}^3]$

Example table for determining the volume flow for type CMV 630: **Calibration factor $k = 1265$**

Differential pressure [Pa]	Volume flow [m ³ /h]
50	8166
100	11548
150	14143
200	16331
250	18259
300	20001
350	21604

Differential pressure [Pa]	Volume flow [m ³ /h]
400	23096
450	24497
500	25822
550	27082
600	28286
650	29441
700	30553

Installation of the volume flow measuring point

The pressure and volumetric flow measuring point can be installed in all Colasit fans and sizes CMV 450-1250, CMMV 450-1250 and CHVN 315-1250, regardless of the installation position and without changing the overall dimensions.

Volume flow control accessories (our recommendation)

Differential pressure transmitter



Huba Control Type 699 with differential pressure indication on display

Frequency converter with PID controller
Danfoss VLT® HVAC FC 102

