

Counterflow Cooler

Process

The Van Aarsen counterflow cooling system is designed for cooling pellets after pelletizing back to $\pm 5^{\circ}\text{C}$ above ambient air temperature. This is to achieve a good PDI, flow ability, protect against decay and minimize chemical and biochemical reactions.

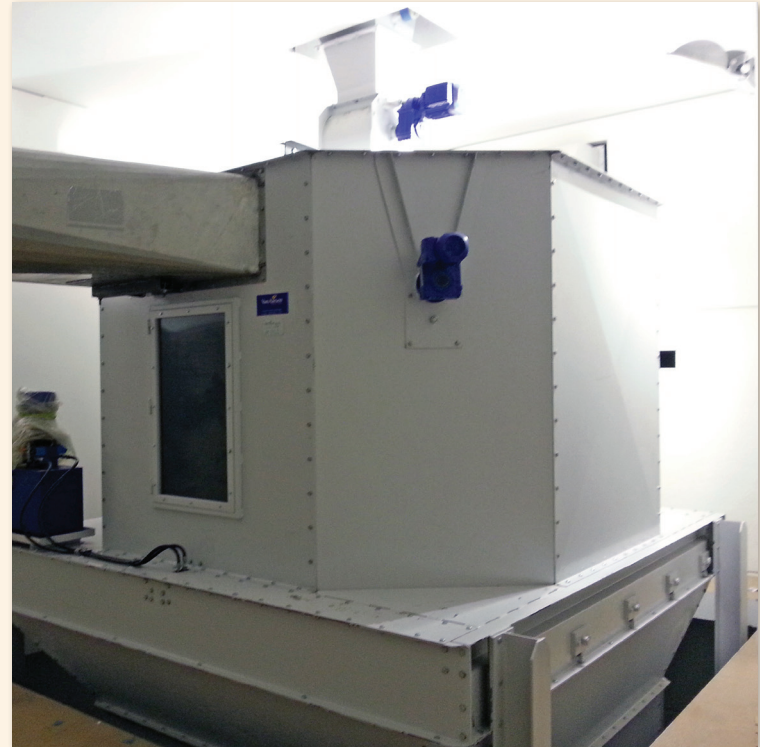
The counterflow cooling principle was invented by Van Aarsen and has become a standard blue print, copied all over the world within the compound feed industry.

Benefits

- ▶ Small foot print
- ▶ Low energy consumption because of low air volume
- ▶ Minimum service down time
- ▶ Continuous pellet discharge for optimal cooling process
- ▶ Limited damaging of the product due to discharge mechanism
- ▶ Complete emptying of the cooler, to minimize cross contamination and maximize hygienic operation
- ▶ Optimal pellet moisture content
- ▶ Optimal process control
- ▶ Available and upgradable as double deck cooler, for quick product change-over
- ▶ Robust design of discharge mechanism

Features

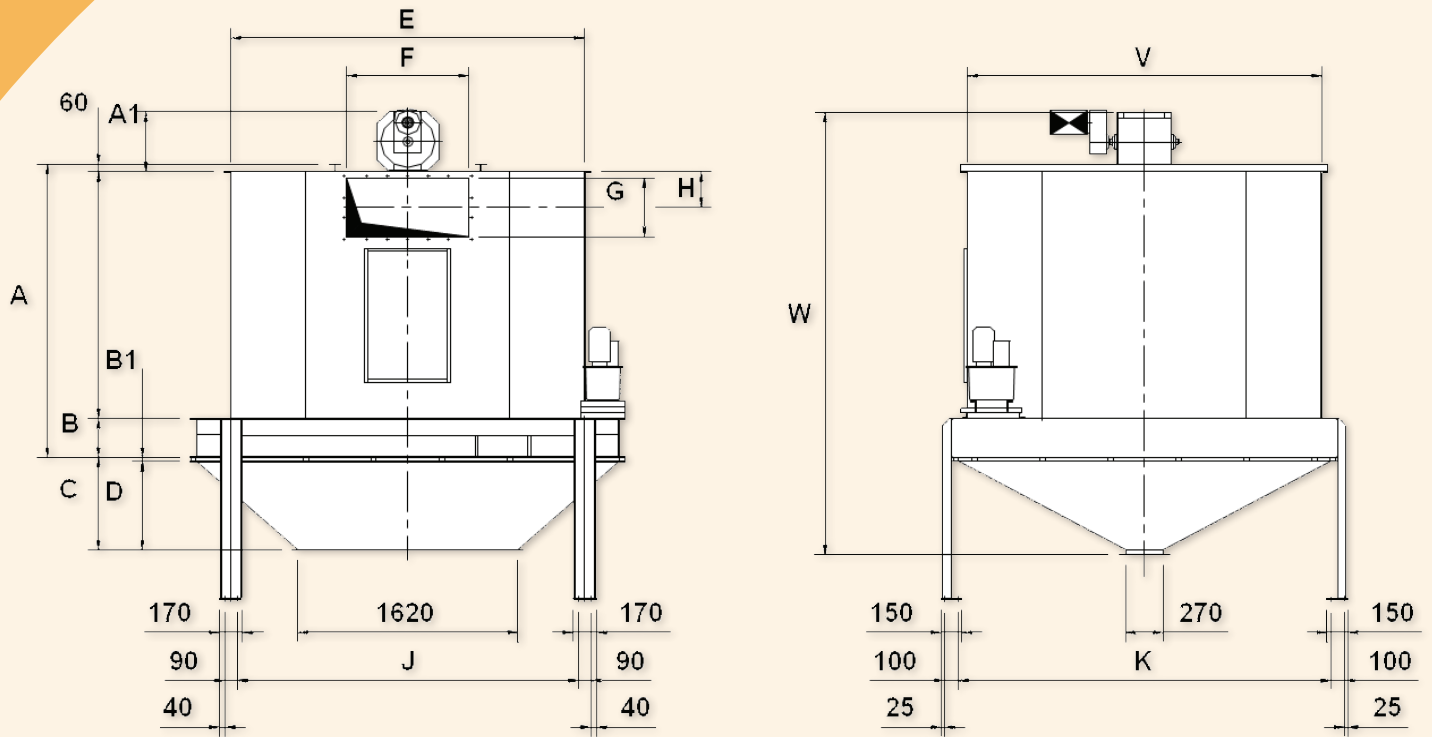
- ▶ Inlet valve for continuous product flow and air lock
- ▶ Ultrasonic continuous layer thickness measurement to ensure and/or control retention time in cooler
- ▶ Automatic air flow control by motor-operated air valve to regulate air speed in cooler
- ▶ Cooler bin walls and hood in stainless steel to avoid corrosion
- ▶ Hydraulically operated discharge mechanism
- ▶ Frequency controller for adjusting speed discharge mechanism
- ▶ Octagonal construction for optimal filling of the cooler
- ▶ Bin height configured for optimal (build in) height
- ▶ Designed and constructed according to CE and ATEX safety regulations.



Options

- ▶ Double deck cooler for quick product change-over
- ▶ Rotating pellet distributor for even product layer in cooler
- ▶ Clam shell valve at the cooler inlet, to improve fat absorption
- ▶ Outlet hopper with connecting flange on crumbler or discharging transport
- ▶ Outdoor air intake for taking cooling air from outside the building
- ▶ Filter for inlet air to ensure clean cooling air
- ▶ Heater for inlet air in case of cold air ($<5^{\circ}\text{C}$)
- ▶ Fire protection valve to prevent fire inside the cooler
- ▶ Dust explosion membrane to prevent dust explosions inside cooler





Type	Dimensions for sketch in mm													
	A	A1	B	B1	C	D	E	F	G	H	J	K	V	W
TK 1400	* + 360	-	300	30	430	400	1400	600	300	225	1310	1536	1400	* + 730
TK 1800	* + 360	300	300	30	675	645	1800	700	350	225	1710	1936	1800	* + 1275
TK 2200	* + 360	460	300	30	720	690	2200	900	450	275	2110	2336	2200	* + 1480
TK 2600	* + 360	750	300	30	750	720	2600	900	450	275	2510	2736	2600	* + 1510 +290
TK 3000	* + 410	750	350	50	1000	950	3000	900	450	275	2880	3322	3000	* + 1810 +290
TK 3600	* + 450	750	350	100	1650	1550	3600	900	450	275	4032	2340	3600	* + 2460 +290