

**Whey separators  
and clarifiers  
for sound performance**

Tetra Centri® AirTight™



# AirTight design for high profitability

We deliver reliable separation solutions that enable you to meet your customers' demands for high food quality and safety.

Our range of flexible separators combines high performance with cost efficiency and low environmental impact.

We call it sound performance.



The Tetra Centri AirTight separator for whey delivers excellent product quality, superior separation efficiency and unmatched production flexibility.

### Excellent product quality

Thanks to AirTight design, Tetra Centri whey separators and clarifiers treat your products very gently. The hermetic seals prevent intake of destructive air. This, combined with a smooth acceleration in the rotating hollow spindle, ensures maintained size of the fat globules and particles. With AirTight design you will, therefore, get a cleaner dairy product with fewer impurities and no increase of free fat and free fatty acid. In short, gentle treatment resulting in excellent product quality.

### Superior separation efficiency

When it comes to efficiency, no centrifugal separator is better than Tetra Centri. In an AirTight separator, the separability of fat (down to 0.03 % fat in skimmed whey) and impurities is outstanding, compared to other designs on the market. This is a result of the gentle product treatment and the fact that the product is extracted from the centre of the bowl.

The AirTight design not only enables superior skimming efficiency, but is also a real energy saver – the separator itself consumes up to 40 %\* less than conventional paring disc separators. That reduces the energy consumption of your overall separation system by up to 20 %\*. The maintained size of fat globules and particles means that a lower rpm can be used to achieve the desired separation efficiency. In addition, the centred outlet enables a higher recovery of rotational energy. You get maximum separation with minimum energy consumption.

### Unmatched production flexibility

Each AirTight separator and clarifier unit handles a wide range of capacities without mechanical modification. Your benefit is that one unit can efficiently handle many capacities and recipes. The key to this unmatched production flexibility is the use of efficient product discharge pumps, a completely filled bowl and variable rpm control. You can easily achieve fat content of 30 % or higher, even at as low a temperature as 35 °C.

### Environmental advantages

Tetra Centri AirTight separators not only save you money, they also reduce environmental load. The design reduces energy and water consumption, while minimizing food product loss.

- Power consumption is reduced by up to 20 %\* in your overall separation system.
- There is no make-up water consumption – cooling water is reused as seal water
- The accurate discharge results in the lowest possible losses.
- The noise level is very low, approximately 78 dB(A)\*, measured according to ISO 3744.

### Reliable performance

A Tetra Centri AirTight separator delivers sound performance year after year thanks to easy operation and service. Our skilled service engineers are available whenever you need them, wherever you are.

\* Data for Tetra Centri AirTight Eco is presented in a separate brochure

# Built for performance

Our continuous research and development, both in machinery and in processing, enables you to meet your toughest demands for quality, efficiency and flexibility. Here's the hardware that gets the job done.

There are two types of whey separators: the W type and the WD type. The WD type has a clarification section in the bowl that makes it possible to utilize pre-filtered whey, which has a higher fines content. This enables longer run times with a slightly lower efficiency.

The separator is hermetically sealed, both at the inlet and the outlet. This prevents intake of destructive air. From the inlet, the product is gently fed into the separator bowl through the hollow spindle. As the spindle rotates with the bowl, the product enters the bowl smoothly. This assures that the sizes of fat globules and particles are maintained.

In the bowl, the cream is led all the way to the centre of the bowl, while the skimmed whey leaves the bowl over the top disc. Any unwanted particles are collected at the sediment space, at the periphery of the bowl. The sediment space is emptied accurately and hydraulically at preset intervals. At the outlets, co-rotating pumps efficiently discharge the separated products from the centre.

All in all, the AirTight design enables gentle and efficient separation.

**Hermetic outlet seals**  
No air entrainment

**Corrosion resistant stainless steel bowl**

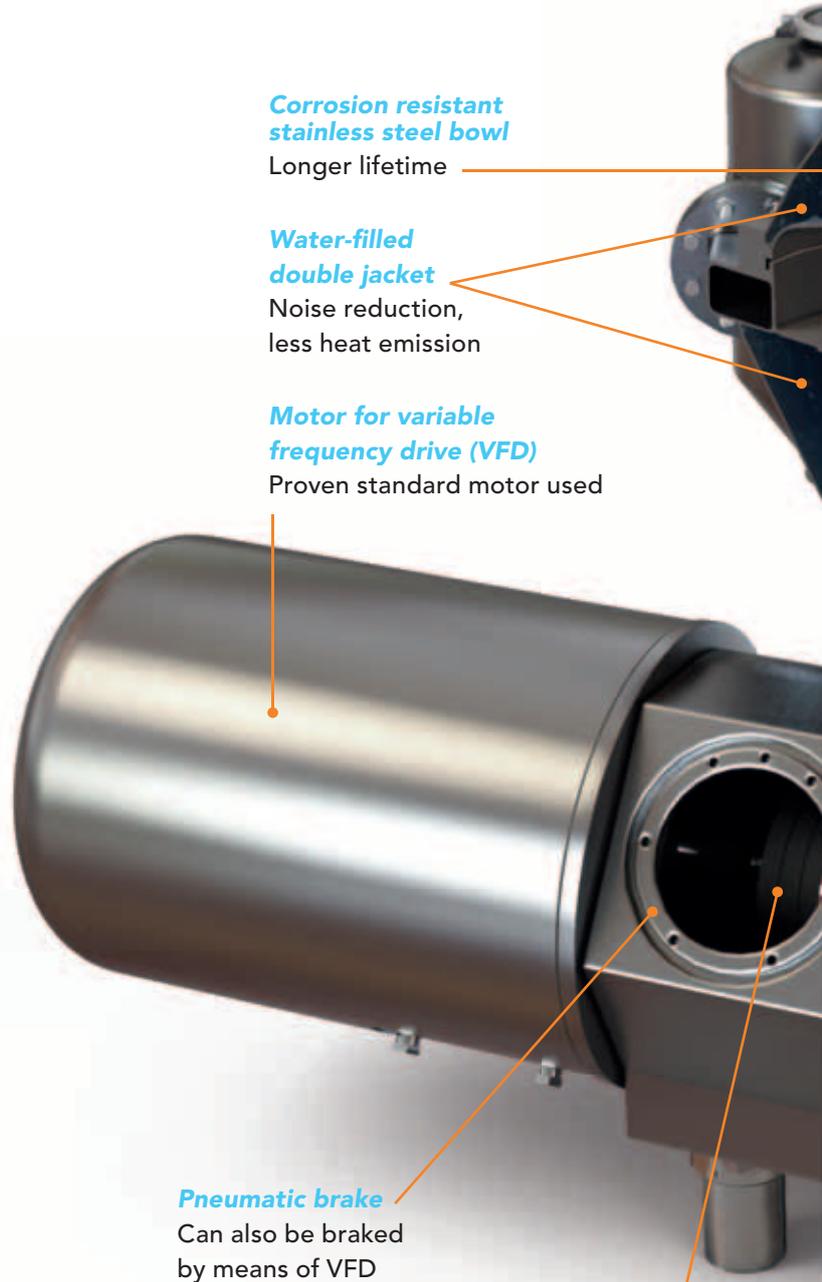
Longer lifetime

**Water-filled double jacket**

Noise reduction,  
less heat emission

**Motor for variable frequency drive (VFD)**

Proven standard motor used



**Pneumatic brake**

Can also be braked  
by means of VFD

**Direct drive**

Lower service cost



**Clarifier**

**Product discharge pumps**  
Flexible capacity,  
low energy consumption

**Completely filled bowl**  
No air, gentle product treatment

**Hollow spindle**  
Smooth acceleration,  
gentle product treatment

**OWMC**  
Accurate discharges,  
lower product losses

**Hermetic inlet seal**  
No air entrainment,  
gentle product treatment

**Gear drive**  
No slipping,  
long lifetime

**Integrated cooling and seal water**  
Reduced total water consumption



*“Tetra Centri separators produce the cleanest whey and the best quality whey cream at high and consistent fat levels.”*

# Tetra Centri AirTight facts

## CLARIFIERS

Technical data	D20	D25	D714	D45	D60	D70
Flow rate, l/h	20,000	25,000	35,000	45,000	60,000	70,000
Motor rating, kW	18.5	18.5	22	37	37	42
Connections, inlet	63.5	63.5	63.5	63.5	63.5	63.5
Connections, outlet	63.5	63.5	63.5	63.5	63.5	63.5
Sediment space, l	5	5	12	35	35	35
Air pressure, kPa	600	600	600	600	600	600
Overhead hoist, kN	10	10	10	15	15	15
Inlet pressure, max kPa	600	600	600	600	600	600
Outlet pressure, max kPa	600	600	600	600	600	600

## SEPARATORS

Technical data	W10	W15	W/WD614	W/WD714	W25	W35	W40	W50	W60
Flow rate, pre-filtered whey, l/h	7,000	10,000	15,000	20,000	25,000	30,000	n.a.	n.a.	n.a.
Flow rate, pre-clarified, l/h	7,000	11,500	16,500/*	22,000/*	27,500	33,000	38,000	50,000	60,000
Motor rating, kW	15	15	18.5	22	22	25	25	37	42
Connections, inlet	63.5	63.5	63.5	63.5	63.5	63.5	63.5	63.5	63.5
Connections, light phase	38	38	38	38	63.5	63.5	63.5	63.5	63.5
Connections, heavy phase	63.5	63.5	63.5	63.5	63.5	63.5	63.5	63.5	63.5
Sediment space, l	5	5	9.8	9.8	17	17	17	17	17
Air pressure, kPa	600	600	600	600	600	600	600	600	600
Overhead hoist, kN	10	10	10	10	15	15	15	15	15
Inlet pressure, max kPa	600	600	600	600	600	600	600	600	600
Outlet pressure, max kPa	600	600	600	600	600	600	600	600	600

n.a. = not applicable

\* not recommended

## Dimensions

- Height (overhead hoist), mm 2,800 (614, 714: 2,600)
- Length (service area), mm 2,800
- Width (service area), mm 2,800

## Auxiliary equipment

- Set of tools
- Inlet pipe, complete
- Flushing arrangement for axial seals
- Constant pressure unit on outlet
- Light phase control (separator only)
- Connection set
- Tetra Centri Control (separator control)
- Tetra Centri Drive (motor control)

