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Highly precise air bubble sensor technology at the milk collection truck:

BARTEC BENKE TIGER measurement system sets new standards of efficiency and accuracy in milk collection.



Lutz Reiprich, Manager FOOD Division, Sochi, May 2018



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BARTEC: Who we are?



- BARTEC BENKE (Gotteszell) has 80 years experience in milk measurement technology
- We are located in Southern Germany
- 149 employees generate € 30 Mio in revenues
- 25 engineers dedicated to soft- and hardware development in milk measurement
- The concentration is global



BARTEC, where we are?

Germany

Bad Mergentheim
Gotteszell
Hamburg
Cologne
Leipzig
Menden

Europe

Austria
Azerbaijan
Belgium
Czech Republic
France
Great Britain
Hungary
Italy
Kazakhstan
Netherlands
Norway
Poland
Russia
Sweden
Switzerland
Slovenia
Spain
Turkey
Ukraine

Representatives:
Baltic States
Bulgaria
Finland
Greece
Ireland
Portugal
Romania
Slovakia

Asia-Pacific/Middle East

China
Indonesia
India
Japan
Korea
Malaysia
Singapore
Thailand
United Arab Emirates

Representatives:
Abu Dhabi
Brunei
Hong Kong
Iran
Israel
Kuwait
Macau
Myanmar
Pakistan
Philippines
Qatar
Saudi Arabia
Oman
Taiwan
Vietnam

Australia/New Zealand

Australia
Representatives:
New Zealand

America

Brazil
USA
Representatives:
Argentina
Canada
Chile
Mexico
Venezuela

Africa

South Africa

Representatives:
Nigeria



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BARTEC: examples of some of our customers?



We essentially develop ideas...born in the trenches, from around the world to offer our customers state of the art solutions for their milk logistics chain.

„We adapt our systems worldwide into existing customer logistics scenarios. **That is what we do.**“



BARTEC: so what do we do, generally?



The BARTEC FOOD Division measures the **QUANTITY** and **QUALITY** of milk, as an integral part of the milk procurement logistics chain.



BARTEC: What do we do, precisely?



key message:

- The BARTEC FOOD Division measures the **quantity** and **quality** of milk, as an integral part of the milk procurement logistics chain. KPI = collection cost.
- BARTEC always needs to address three main customer wishes, **measurement**, **sampling** and **data transfer**. That is what we do.



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FOOD Division: the products...





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TIGER – Milk-Measurement & Analysis-System





BARTEC BENKE has built the bridge uniting
the milk logistics triangle.



Farmers



Trucking Companies



Dairies



„BARTEC BENKE has created a milk measurement
which concentrates on the **quality preservation of
the medium** and **efficiency in procurement and
transport.**“





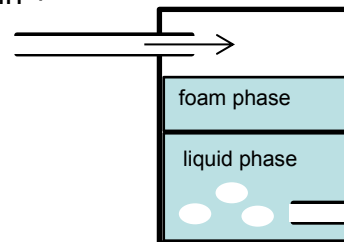
Dairies pay **for milk, not air!**



- MID certified accuracy up to 2000l/min
- no cavitation
- no air separator
- bubble sensor technology

The air separator problem:

Milk ingress @
1,200 l/min +



Milk egress to
the measurement device



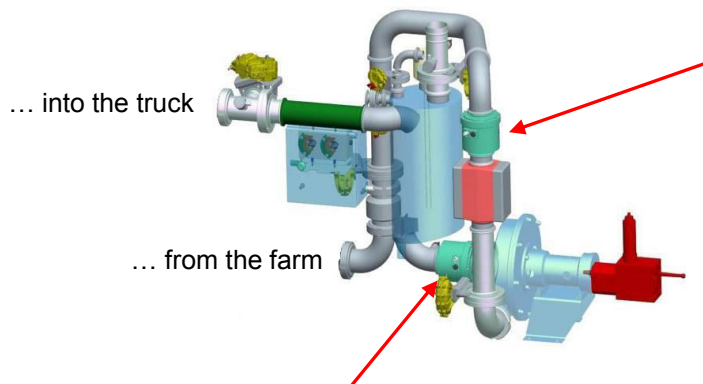


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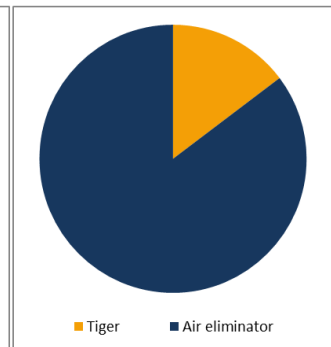
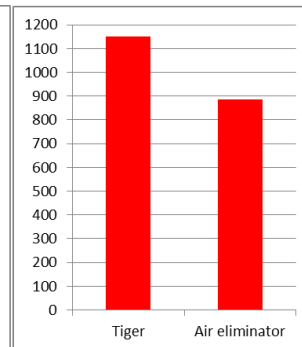
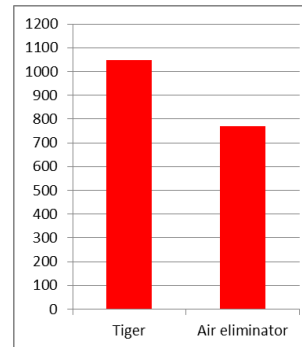
Dairies pay **for milk, not air!**



Why is the BARTEC TIGER System so accurate?
The answer: electronic bubble sensor technology!



System:	Ptest:	Pmax.:	Deviation:	Conn. diameter:	Hose:
Tiger	1048 l/min	1150 l/min	0,05%	2,5" (63,5mm)	8m/2,5 "
Air eliminator	770 l/min	886 l/min	0,29%	2,5" (63,5mm)	6m/2,5 "



We don't just detect air ingress, we measure it!



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... so what does this mean for you here in Sochi in terms of saving ...



- A large European dairy product processor...
- Processed **12,5 billion liters** liquid milk in 2017
- with a farm gate price of **0,30 €/l**
- resulted in a **3,75 bio € pay-out** to farmers in 2017
- under the assumption, that this dairy paid their farmers 0.15 % too much... for in milk suspended air...**they would have saved 3.7 Mio. € per year.**





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BARTEC: a word on sampling...

TIGER – ULTRASAMPLER®



- From 1 manual hand sample up to 4 samples per farmer
- Barcode and RFID technology for sample identification
- **Best representative** samples for small and big intake volumes
- **NO CARRY OVER** from farmer “A” to farmer “B” milk samples
- Dynamic control of the sampler pump according to the intake speed
- All commonly used bottles can be handled (BC, TAG with automatic or semi-automatic bottle feed)





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BARTEC sealed parcel delivery...



Theft, product tampering, volume loss, acts of terrorism?



The milk collection truck can be „sealed-off“. The system recognizes any location where the access to the measurement system, or to milk containing vessels, does not correspond to the location of a farm, or a dairy drop-off point.

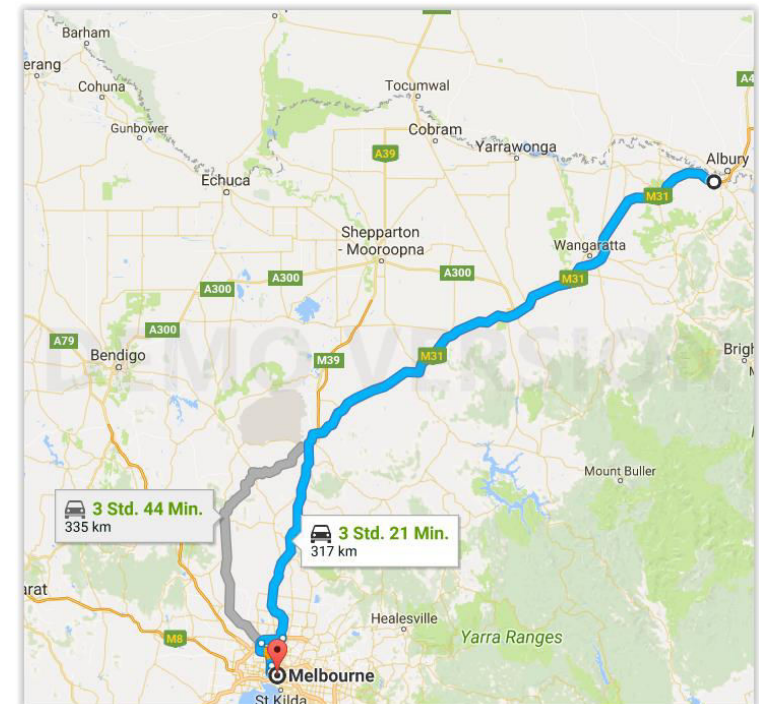
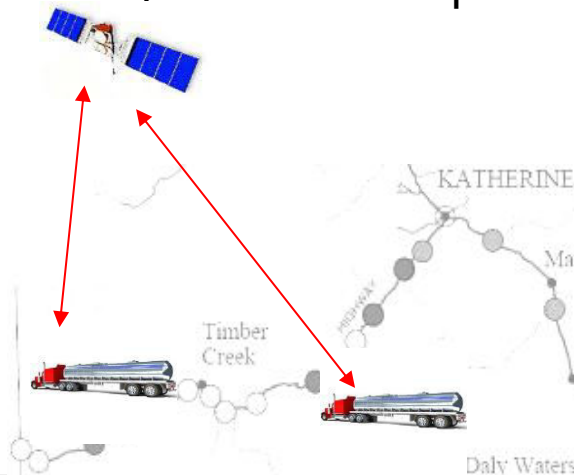


BARTEC **TTT**: Talking Tanker Truck

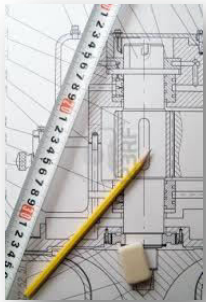


Both the TIGER and the LYNX can transmit, beyond milk collection data, 26 key performance values of the respective truck and transmit them in real-time to either the:

1. Dairy fleet manager
2. Trucking company head office
3. To a designated service partner



It is not what we do, but how openly we do it!



- BARTEC BENKE has selective service partners all over the world, has thus preferred partners that can **and will** assure one-stop-shop.

- BARTEC BENKE **allows maintenance access** to their system

- BARTEC BENKE will **adapt and align** to any existing dairy data management infrastructure

- BARTEC BENKE provides **on-line maintenance** and will **train and support** you on the TIGER-system technology and integration.





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BARTEC: a last word on labs

FOOD Division: milk laboratory equipment...

... cutting edge technology milk sample sorting tables and milk sample washing machines





Спасибо за приглашение...

It is good to be here...

Grüße aus Deutschland...



на здравье

