



With innovative return filters from ARGO-HYTOS  
avoid air in hydraulic systems  
and reduce tank volume

# AirEX Separation

## Air separation and tank volume reduction

### Increased system efficiency

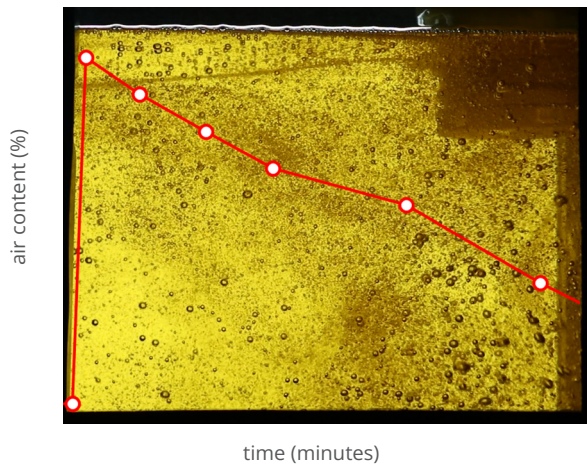
**AirEX filters from ARGO-HYTOS reliably remove unwanted air from your hydraulic system.**

The compressibility of air in the hydraulic medium impairs the operating comfort of working machines and leads to damage, associated downtimes as well as efficiency losses and high repair costs. Oil aging is also accelerated.

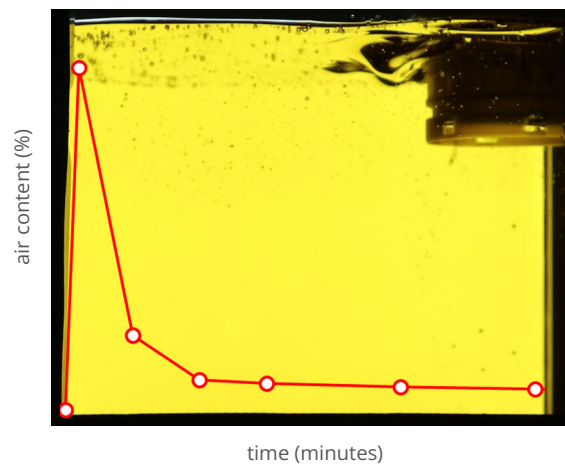
**AirEX** solutions from ARGO-HYTOS provide reliable **air separation - up to 70% faster**. This increases system efficiency and reduces downtime.

#### Consequences of air in the hydraulic system:

- › Noise generation
- › Cavitation damage
- › Efficiency losses in pumps
- › Temperature increase
- › Micro-diesel effect
- › Accelerated oil aging
- › Dynamic operating problems due to the compressibility of the air



Oil in tank with conventional return filter



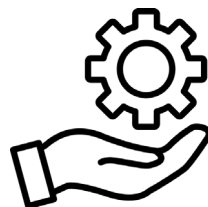
Oil in tank with return filter incl. AirEX air separator

### Air separation with AirEX - your benefits



#### Increased efficiency

Avoiding damage, downtime, loss of efficiency and repairs, increases the efficiency of your machine.



#### Optimized use of resources

Extended oil change and maintenance intervals reduce operating costs and conserve the material.



#### Increased user friendliness

A quiet, homogeneous and low-vibration operation enables a fatigue-free, positive operating experience.

## AirEX Separation

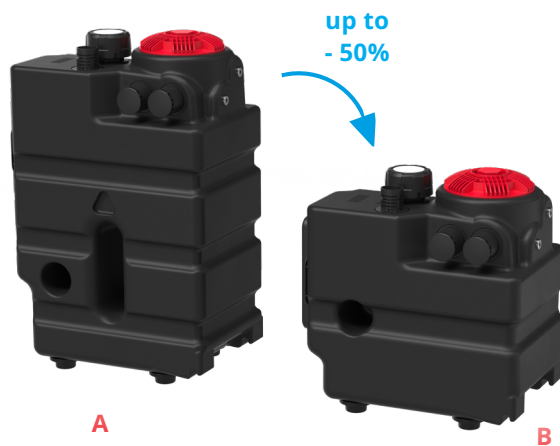
### Air separation and tank volume reduction

Installation space is a limited resource

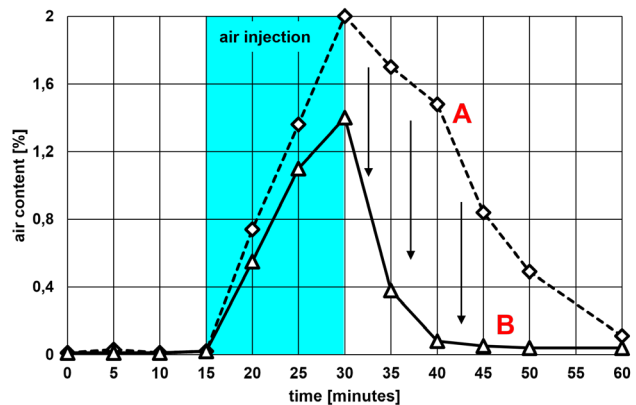
#### AirEX allows to reduce the tank volume - while at the same time increasing the air separation speed.

Manufacturers of mobile machinery are striving to reduce exhaust emissions. The installation of additional components becomes necessary and competes with the hydraulic system for installation space. Reducing the size of the often generously dimensioned hydraulic tank would have a negative effect on air outgassing.

ARGO-HYTOS provides a remedy with the innovative **AirEX** return filters, enables a tank reduction of up to 50% and still increases the air separation speed.



Tank A: original tank size  
Tank B: reduced tank size



Tank A: without air separator, original tank size  
Tank B: with air separator, reduced tank size

#### Tank reduction with AirEX - your benefits



##### Reduced costs

The reduction of the tank volume reduces the oil content, the required installation space and the weight - and thus lowers costs.



##### Increased productivity

Fast air separation provides increased machine availability and boosts efficiency.



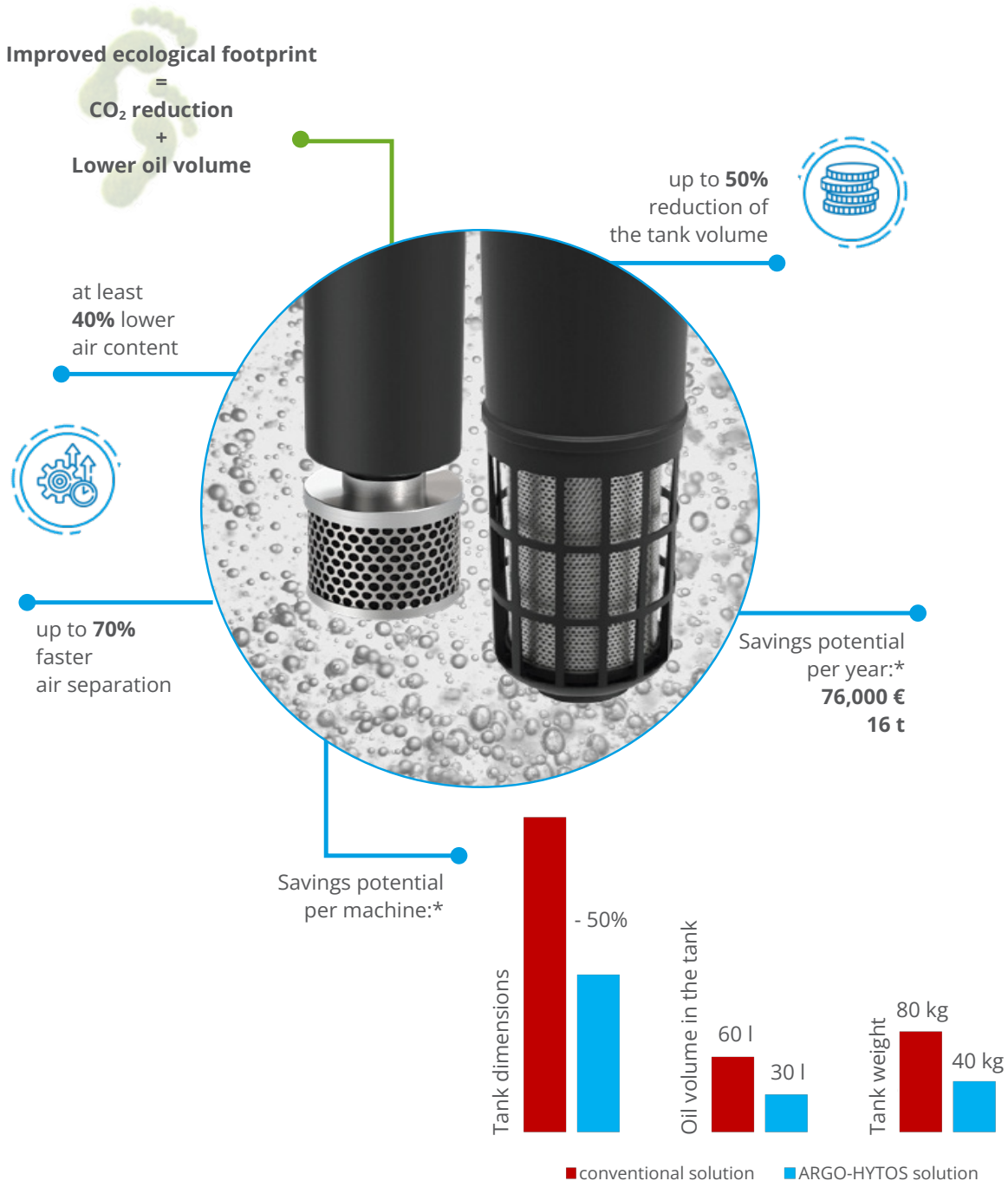
##### Improved sustainability

Reducing the amount of oil on the machines improves their environmental footprint.

# AirEX Separation

## Air separation and tank volume reduction

### Advantages at a glance



\*Assumptions for calculation:  
Original tank:  
Tank dimensions: 500 x 500 x 500 mm, approx. 300 €  
Oil volume in the tank: 60 l  
Oil price: 3 € / l  
Machines / year: 400

## AirEX Separation

Air separation and tank volume reduction

### Bottom Entry & Top Entry

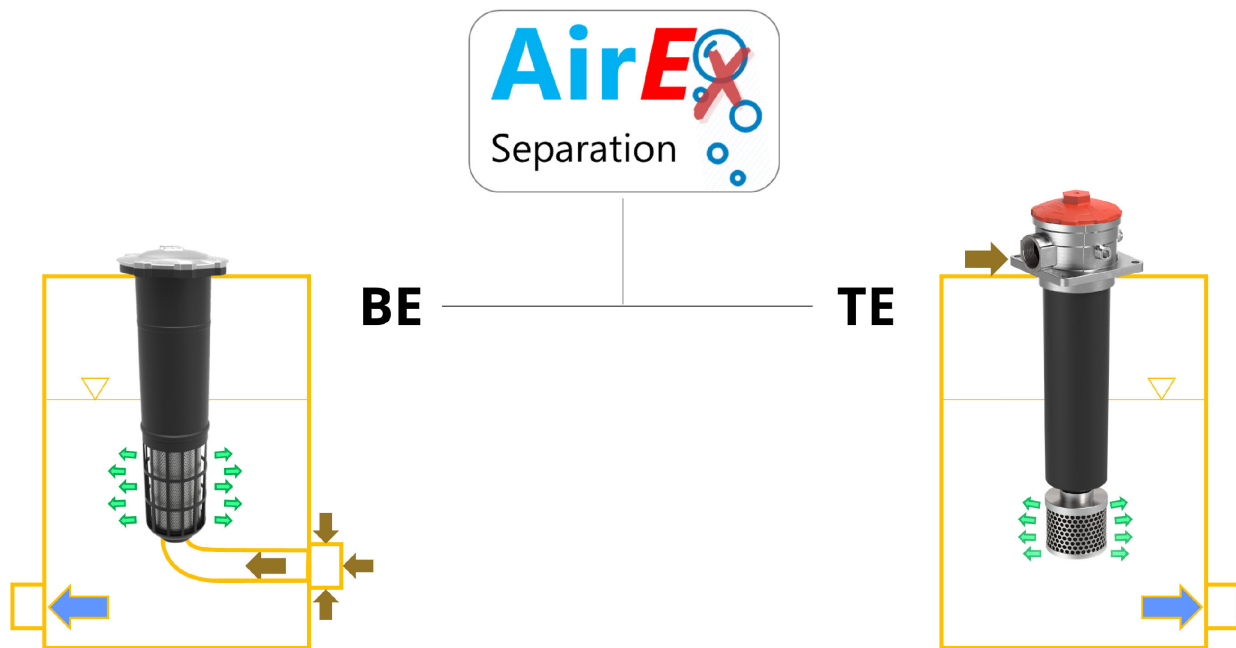
In order to optimally meet your requirements and find the best possible solution for you, ARGO-HYTOS offers two different return filter designs with **AirEX**:

#### BE (Bottom Entry)

Inlet at the bottom of the filter bowl

#### TE (Top Entry)

Inlet at the top of the filter head



### Both types have proven themselves in practice

#### BE (Bottom Entry) Variant

- Inlet at the bottom of the filter bowl -

Particularly suitable for machines with a high-positioned or walk-on hydraulic tank.

Offers advantages in terms of line routing and is very robust. Suitable for the most demanding applications.

#### TE (Top Entry) Variant

- Inlet at the top of the filter head -

Can be retrofitted to all tank-mounted ("tank top") ARGO-HYTOS return filters if required and is therefore very popular.

Unique, high-efficiency air separation.

The following effects are used for air separation:

- › Coalescence (small air bubbles meet and merge into larger air bubbles) - TE
- › Strongly reduced outflow velocity - BE and TE

## AirEX Separation

### Air separation and tank volume reduction

#### From the initial idea to series production

ARGO-HYTOS offers you a development partnership with individual service. This results in the most efficient solution for your system.

Tests in the laboratory and on site are part of our service and allow parallel validation during the solution finding process. This ensures a risk-free introduction of the system update.

- › Careful analysis at the start of the project with regard to the installation space and the integration of the tank/filter system into the machine
- › Engineering in the project implementation phase with simulation as well as test bench and field tests
- › Series introduction through to reliable supply and service - worldwide

**Benefit from the know-how and innovative solutions of ARGO-HYTOS to improve your products!**

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