

# Presentation of AFE Airfilter Engineering and Airfilter Europe GmbH

CLEAN AIR BEGINS WITH US!

# Introduction AFE Airfilter Engineering and AFE Airfilter Europe GmbH

1993

Founding of AFE Airfilter Engineering in Malaysia, Production of Compressed air filters And elements for the local Asian market

1997

First participation Hannover Fair "ComVac"

1998

Start auf the worldwide export of filters and elements, 90% of all products for export customers

2002

Certification according to ISO9001

2007

Founding of AFE Airfilter Europe as Sales and Distribution company for the European markets

2016

Founding of AFE production company in Germany, for the production of bigger compressed air dryers, N2 generators, biogas dryers, etc.

2017

Both German companies certified according to ISO9001, products validated according to PED 2014/68/EU and ISO12500



# Introduction AFE Airfilter Engineering and AFE Airfilter Europe GmbH

## AFE Airfilter Engineering

- Located in Malaysia, near Kuala Lumpur
- Sister companies in Germany and Singapore
- Approx. 200 employees
- Size of the factory approx. 1,4 hectares
- Approx. 90% in-house production depth, incl.
  - - welding
  - - production of end caps (aluminium, plastic)
  - - pleating
  - - painting
  - - etc.



# Introduction AFE Airfilter Engineering and AFE Airfilter Europe GmbH

- 2007 founding of AFE Airfilter Europe in Germany
- 2016 founding of AFE production company in Germany
- Number of employees in Germany: 20
- 85% of all standard orders are shipped within 48 hours after order
- Approx. 15.000 parts available ex stock Germany
- Size of warehouse approx. 750 m<sup>2</sup>
- Daily shipments to customers all over Europe



# Introduction AFE Airfilter Engineering and AFE Airfilter Europe GmbH

Certified according to ISO9001

Approved manufacturer of compressed air vessels

Products certified  
according to PED 2014-  
68-EU

Elements validated  
according to ISO12500

Institut für Energie- und Umwelttechnik e.V. (IUTA)  
Air Quality & Filtration  
Blumenstraße 58 - 60  
47229 Duisburg  
Germany

**- IUTA-CERTIFICATE -**

Validation of compressed air filters  
according to ISO 12500-1:2007  
(Filters for compressed air - Test methods - OI aerosols)

Customer: Airfilter Engineering (M) Sdn. Bhd. No. 20, Jalan Anggerik Mokara 31/47,  
Kota Kemuning, 40460 Shah Alam, Selangor, Malaysia

Tested product: Grade H

IUTA test report: UND-150518-55969.00-032

Tested cartridge: Threshold measurement of three cartridges model Grade H

| Test parameters                | Cartridge 1                             | Cartridge 2                             | Cartridge 3                             | Average                                 |
|--------------------------------|---|---|---|---|
| Inlet pressure                 | 8 bar (a)                               | 8 bar (a)                               | 8 bar (a)                               | 8 bar (a)                               |
| Air flow                       | 50 m³/h (AQR) ± 100 % nominal flow rate | 50 m³/h (AQR) ± 100 % nominal flow rate | 50 m³/h (AQR) ± 100 % nominal flow rate | 50 m³/h (AQR) ± 100 % nominal flow rate |
| Test inlet oil concentration   | 9.6 mg/m³                               | 9.6 mg/m³                               | 9.6 mg/m³                               | 9.6 mg/m³                               |
| Compression oil viscosity      | ISO VG 46                               | ISO VG 46                               | ISO VG 46                               | ISO VG 46                               |
| Dry pressure drop (mbar)       | 110                                     | 102                                     | 92                                      | 101.33                                  |
| Saturated pressure drop (mbar) | 0.00910 008                             | 0.01403 001                             | 0.01403 001                             | 0.008745 004                            |
| Mean outlet oil concentration  |   |   |   |   |
| Uptake (mg/m³)                 |   |   |   |   |

Notes: The product was tested under the designation UND-150518-55969.00-032.

Witness: dry pressure drop and saturation oil flow test results were 100% correct.

\*Mean outlet oil concentration of each of three cartridges is determined by averaging the results of a threshold measurement from the data shown in the report of each cartridge (see measurements in total and finally the test average is shown).

Duisburg, 17<sup>th</sup> August 2015

Managing Director

Department Head

**EU CERTIFICATE OF CONFORMITY**

In accordance with the requirements of the Pressure Equipment Directive 2014/68/EU and the Pressure Equipment Regulations 1999, UK Statutory Instrument 1999 No. 2001 as amended by S.I. 2002 No. 1267 and S.I. 2015 No. 399

This is to certify that the Quality Management System of:

**AIRFILTER ENGINEERING (M) SDN BHD**  
No. 20 Jalan Anggerik Mokara 31/47, Section 31,  
Kota Kemuning, 40460 Shah Alam,  
Selangor, Malaysia.

has been assessed against the requirements of Annex II, Module D1 of the Pressure Equipment Directive 2014/68/EU, and Schedule 4, Module D1 of the Pressure Equipment Regulations 1999 and conforms to the requirements for the products shown below:

**Manufacture of compressed air and gas systems and associated components (see attached schedule)**

Approval is subject to the continued maintenance of the quality system in accordance with the requirements of the above Directive and Regulations for the products listed on the attached schedule.

Authorization is hereby given to use the URV Notified Body Identification Number in accordance with the requirements of the specified Directive and Regulations in relation to the products as identified above:

Certificate No: 0036/PED/MAM/07106385

Original Approval: 31 August 2009

Current Certificate: 27 July 2016

Certificate Expiry: 30 August 2018

URV Notified Body Number 0038

Raj Kumar on behalf of Lloyd's Register Verification

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# Introduction AFE Airfilter Engineering and AFE Airfilter Europe GmbH

## What do we do?

Airfilter Engineering is a manufacturer of a comprehensive range of products for the treatment of compressed air and other process gases.

Our product range contains

Dryers | Filters | Elements | Waterseparators | N2 Generators  
| condensate drains | replacement elements | Process filtration



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## Product range AFE

### Compressed air dryers (Refrigeration Dryers)

Removal of moisture from compressed air

#### Technical details

- 3/8" – 2 1/2" connection available ex-stock Germany
- volume flow 36-2340 m³/h as standard
- higher flow rates available on request
- including timer-drain
- max. working pressure 16 bar



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## Product range AFE

### Compressed air dryers (heatless desiccant dryer, HDD, C-HDD-N, C-HDAD-N)

Removal of moisture from compressed air



**HDD SERIES**



**C-HDD-N SERIES**



**C-HDAD-N SERIE  
(INCL. ACTIVATED CARBON STAGE)**

#### Technical details

- Twin Tower design
- with activated carbon stage as option
- Low dew points (down to  $-70^{\circ}\text{C}$ )
- Oil removal down  $0,003 \text{ mg / m}^3$  (CHDADN)
- max. working pressure 16 bar
- Design according to PED or ASME
- Energy saving mode as option available

#### Features and Advantages:

- reliable and proven design
- easy to maintain
- energy saving modus
- including per- and after Filter
- can be customised

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## Product range AFE

Zero Purge

### **Compressed Air dryers (heat regenerated desiccant dryer, VEHDD, zero Purge)**

Removal of moisture from compressed air

#### **Technical details:**

- Volume flow: 13,3 m<sup>3</sup> / min to 170,0 m<sup>3</sup> / min
- Siemens based touch-display controller
- Low dew points down to -70°C
- Max working pressure 16 bar
- Design according to PED or ASME
- Energy Saving modus by dew point control
- Incl. Temperature sensors and flow meter



# Product range

## Compressed air filters

Removal of moisture and particles from compressed air

- Design and approval according to PED
- Available for volume flows up to 600 m<sup>3</sup>/min
- Five filtration grades available
- Filter elements with pleated filter medium for low differential pressure
- 10 year guarantee time for filter housings
- Tested and validated according to ISO12500 by a German institute



## AFE Filter elements

- high filter media capacity
- high dirt holding capacity
- long life time
- low differential pressure



Chromatised for surface protection



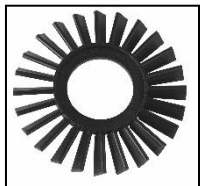
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## Product range

### Water separators

Removal of bulk water from compressed air

- Removal of bulk water down to 99%
- easy and proven design
- no wear and tear parts
- maintenance free



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## Product range

### NITROPURE – Nitrogen Generator



#### Features and Advantages

- Nitrogen is available 24/7
- Independent source of Nitrogen.
- Twin-Tower-Design, easy to maintain.
- Touchscreen controller.
- Use of high efficiency CMS deisccant.
- Low production cost, quick ROI
- Purity from 95% bis 99,99%.
- Complete skid solutions available.
- Capacity from 5 m3 / h bis 150 m3 / h.

## Product range

### Activated carbon adsorber

Removal of oil vapour from compressed air

- Simple design, easy to maintain
- Oil removal down to 0,003 mg / m<sup>3</sup>



### Point of use dryer

Removal of moisture from compressed air

- Simple design, easy to maintain
- Dew point down to -40 ° C



## Product range

### Condensate drains

Removal of condensate out of the compressed air system

#### Timer drains

- Available with different connections
- Available for different working pressures



#### Zero loss condensate drains

- Energy saving, no loss of compressed air
- with volt free contact
- different connections available
- max. working pressure 50 bar



#### Float drains

- Simple design, easy to maintain
- no electricity needed
- max. working pressure 16 bar



## Product range

### Compatible filter elements

Available for many different original manufacturers

All elements coming with pleated filter media

Validated according to ISO12500

- |             |             |            |                  |
|-------------|-------------|------------|------------------|
| • Abac      | • Compair   | • Kaeser   | • Technolab      |
| • Almig     | • Donaldson | • Mikropor | • Ultrafilter    |
| • Alup      | • Deltech   | • MTA      | • Van Air        |
| • Beko      | • Friulair  | • Omega    | • Walker         |
| • Boge      | • Hankinson | • OMI      | • Worthington    |
| • Bottarini | • Hydrovane | • Sullair  | • Parker/Zander  |
| • Compair   | • Jemaco    | • SMC      | • und weitere... |



## Product range AFE

### Process Filtration Products

For sterile air and steam application

#### Technical details



- Stainless Steel filter housings available ex stock Germany
- different element types for different applications and gases
- elements with FDA approval

#### •Typical applications:

- Food industry
- Beverage industry
- Breweries
- Chemical industry
- Pharmaceutical industry
- Packaging industry
- Dairies
- Biogas applications

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## Our markets

More than 90% of our products are exported worldwide via OEMs or distributors



Key markets:

Germany, France, UK, Spain, Italy, Sweden,  
Switzerland, Poland, Denmark, Russia, India,  
China, Singapore



# Thank you for your attention!

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