



# The SMART Alternative.

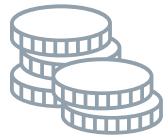
Blue.maxx – the smart fuel filtration  
system.

purifying our planet

01.09.2023

**Hengst**  
FILTRATION

# Hengst Group – A leading filtration company at a glance



**> 650 M€**  
Turnover



**> 3.500**  
Employees



**5**  
Continents



**23**  
Locations



**12**  
Countries



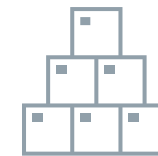
**3**  
Divisions



**> 10**  
Industries



**> 17.000**  
Customers

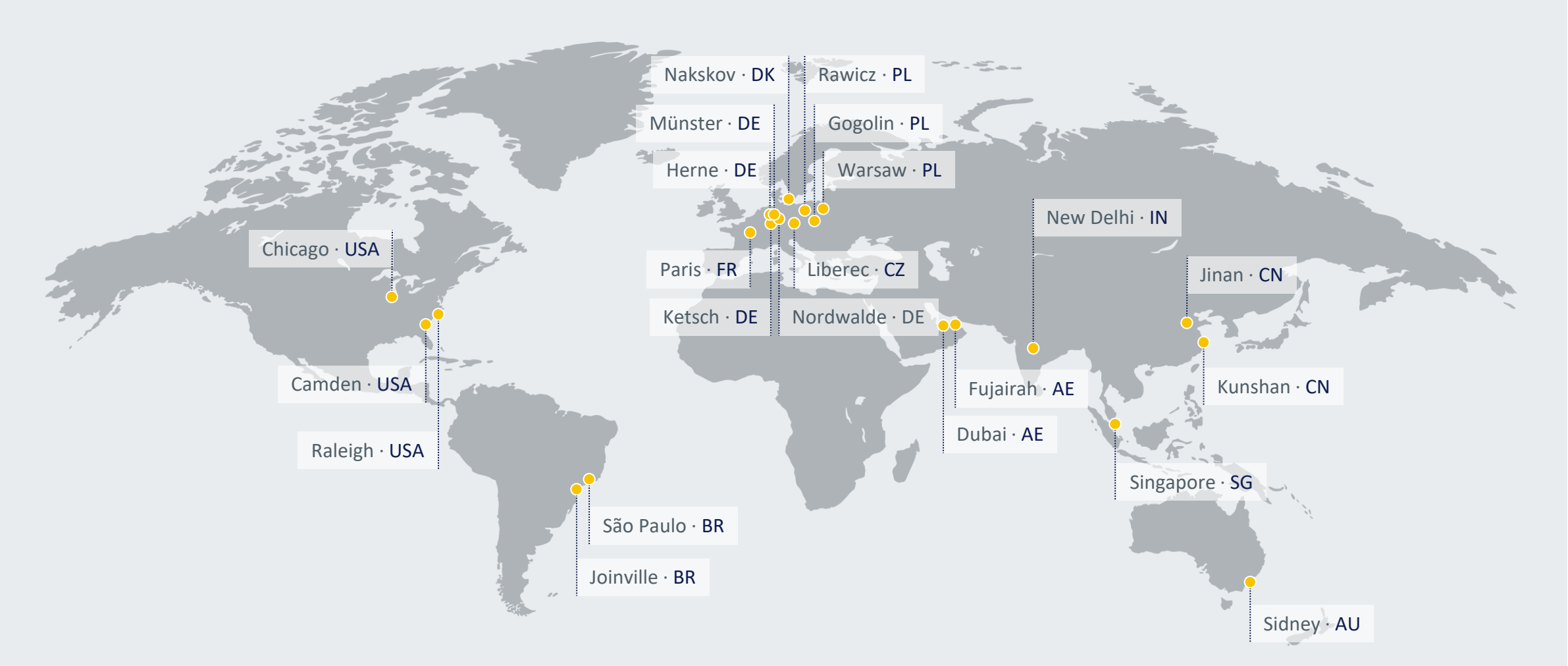


**> 3.000**  
Products



**> 500**  
Patents

# Hengst Group – Worldwide



# Filtration and separation solutions for all applications

## References



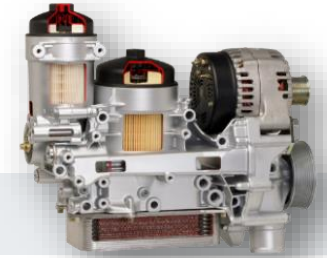
Crankcase ventilation  
BMW



Oil filter module  
Daimler



Fluid management module  
Deutz



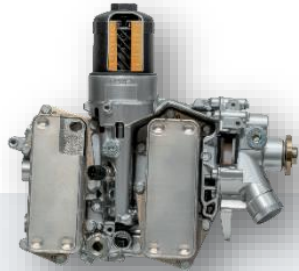
- Hengst is leading in the field of oil, fuel, and air filtration as well as crankcase ventilation
- Hengst develops and manufactures high quality filtration systems and crankcase ventilation for internationally OEM'

# Filtration and separation solutions for all applications

## References



Oil filter modul  
Deutz



Oil filter module  
MAN



Fuel filter  
Bladon MTG



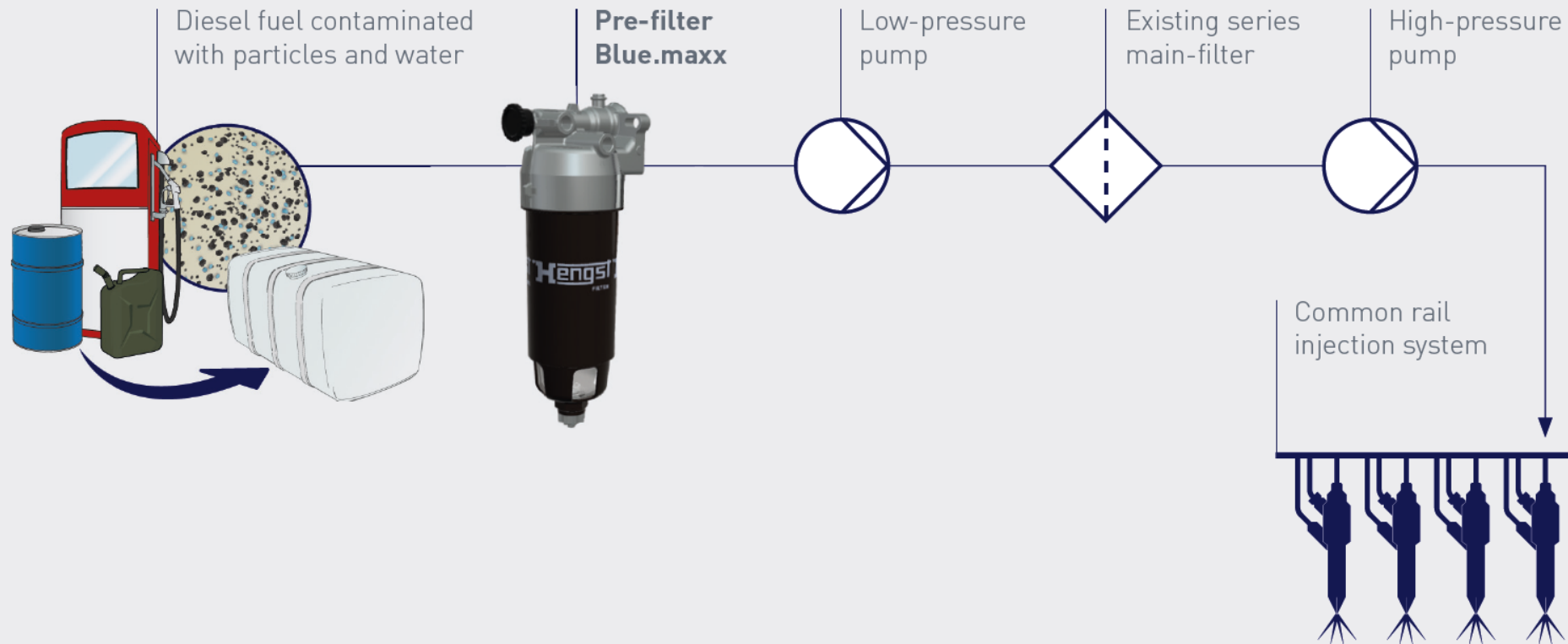
- Small quantities & large-scale production: Hengst combines experience, flexibility and market knowledge
- Hengst offers both the highest quality standards in the area of customized solutions and off the shelf products

# Filtration and separation solutions for all applications

## Construction Kit



# Fuel filtration redefined



- Fuel filters are indispensable in protecting the injection system and engine against contamination.
- Water and the tiniest of particles have to be removed effectively and reliably – from fuels of grades that can vary widely around the world. The Blue.maxx fuel pre-filter from Hengst is the smart solution to this challenge

# Pure fuel for your engine

## Latest requirements for fuel filter systems

### Fuel Filtration

- Requirements on the purity level of fuel to run modern diesel engines are constantly increasing
- Hengst Filtration understands the latest engine technology trends
- And is therefore well prepared to meet requirements of leading engine and vehicle manufacturers





# Pure fuel for your engine

## Blue.maxx fuel filtration construction kit



- Presenting Blue.maxx fuel filters to meet all market requirements
- Blue.maxx is a construction kit consists of three different off-the-shelf fuel filter basis variants
- Complement by innovative add-ons
- Ready to meet complex requirements at short notice
  - Existing ECE type-approval for relevant parts
  - Certificate according ISO 10088

# Blue.maxx fuel filtration construction kit

## Customer benefits



- Guaranteed aftermarket business - due to patent protected filter elements
- High degree of customization - available at short notice
- Leading quality standards in filtration - directly visible compared to conventional Spin-on filters
- High degree of water separation over lifetime - guaranteed through innovative filter design

# References

## Medium Duty



### PRODUCT

**Blue.maxx 300 (w/ or w/o heater)**

### APPLICATION

**Volvo Mack – Medium Duty Truck application**

### FEATURES

- Integrated hand feed pump
- High water separation over full service lifetime
- With optional 12 V electric heater for low temperature environment operation

# References

## Turbines



### PRODUCT

## Blue.maxx 300

### APPLICATION

## Bladon – Micro Turbine – off-grid power supply



### FEATURES

- Integrated hand feed pump
- Filter lifetime > 8000 h
- Optimized for low fuel volume flow
- Operational with various kinds of diesel fuels, kerosene, FAME, etc.

### RELEASE

- Legal approval done by users

# References

## Marine



### PRODUCT

**Blue.maxx 200**

### APPLICATION

**Yanmar 4LV – marine  
application 150mhp – 250mhp**



### FEATURES

- Typical customer branded filter cap painting design

### RELEASE

- Fire retardancy tested acc. to EN ISO 10088 (release for the privat shipping)

# Design of the filter concept



# Blue.maxx construction kit



Blue.maxx  
200



Blue.maxx  
300



Blue.maxx  
450

volume flow range [l/h]

200

250

300

350

400

450

750

Blue.maxx 200

Blue.maxx 300

Blue.maxx 450

base sizes

add-ons



Pumps

Heaters

WIF sensors

Connectors

Filter elements



# Blue.maxx construction kit

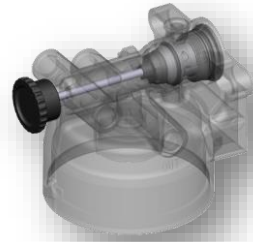
## Pumps

### Short description

#### Manual hand feed pump

- Robust piston hand feed pump
- Large delivery rate up to 20 ml per stroke (more than 3 time more than membrane pumps) and handling of large suction heights with low operating forces
- Piston principle for maximum functional reliability
- Flow-optimized design minimizes power losses

### Available variants



### Technical details

Operating temperature range

- 40°C ... + 120°C

Pump volume per stroke

13 ... 20 ml / stroke

Suction height

5m



# Blue.maxx construction kit

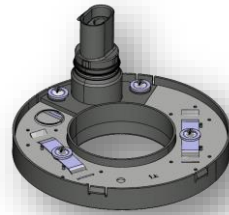
## Heater

### Short description

#### Ring heater - Blue.maxx 300 & 450

- Heater with four PTCs between two plates
- Integrated thermostwitch to control on/off state
- 2-pin connector (24V - Tyco AMP 282104-1)
- Electrical voltage 24V

### Available variants



### Technical details

Operating voltage	18 ... 32V AC/DC
Operating temp. range	- 40°C ... + 120°C
Working pressure range	0 ... 1500 kPa
Nominal power	260W

✓ Existing ECE type-approval for relevant parts

# Blue.maxx construction kit

## WIF-Sensor

### Short description

#### Passive water-in-fuel sensor

- Sensors work without electronics
- External evaluation electronics required
- Interface to ECU required
- 2-pin contacts used (Tyco HDSCS)

### Available variants



### Technical details

Operating voltage

3V ... 36V AC/DC

Operating temp. range

- 40°C ... + 120°C

Working pressure range

up to 1500 kPa

# Blue.maxx construction kit

## Connectors

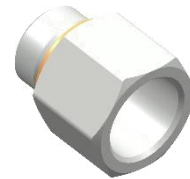
### Short description

### Available variants

### Technical details

#### Adapter M16x1,5 to M18x1,5

- Material: steel with zinc coating
- Type: thread outside M16x1,5 / inside M18x1,5
- Sealing: with gasket DIN7603



M16x1,5 / M18x1,5

Operating temp. range  
Working pressure range

- 40°C ... + 120°C  
up to 1500 kPa

#### Ball-type connector

- Material: steel with zinc coating
- Type: DIN 7601 Form Q / thread M16x1,5
- Sealing: with gasket DIN7603



OD12

Operating temp. range  
Working pressure range

- 40°C ... + 120°C  
up to 1500 kPa

# Blue.maxx construction kit

## Filter elements

### Short description

### Available variants

### Technical details

#### Premium 10 filter elements

- High efficiency filter element mainly for suction side
- Designed for pre filter application
- Available in four sizes depending on volume flow



Efficiency	>97 % @10 µm
Volume flow	100 l/h ... 450 l/h
Lifetime	>1500 h   >90.000 km

#### Premium 30 filter elements

- Efficient filter element with extended lifetime
- Designed for pre filter application, mainly for suction side
- Available in four sizes depending on volume flow



Efficiency	>97 % @30 µm
Volume flow	100 l/h ... 450 l/h
Lifetime	>2000 h   >120.000 km

- ✓ What you see is what you get – Optimal quality control due to visible filter insert
- ✓ Environmentally friendly service due to metal-free and fully recyclable Energetic® filter insert
- ✓ Shoring protection prevents incorrect use and the installation of inferior knock-offs

# Blue.maxx construction kit

## Housing

### Short description

### Available variants

### Technical details

#### Housing

- Clever design with integrated water collection area
- Accumulation of water outside the filter element and drainage to water bowl
- Checking the fill level of the Blue.maxx 450 at all times possible via viewing window
- User-friendly maintenance requiring no special tools
- Different connection options for flexible installation



Blue.maxx 450  
Blue.maxx 300  
Blue.maxx 200

235 ml water reservoir  
250 ml water reservoir  
175 ml water reservoir

# Modular System

## Blue.maxx construction kit – Basic equipment



**Blue.maxx**  
**200**

Flow rate up to 200 l/h and displacement up to 6 l



**Blue.maxx**  
**300**

Flow rate up to 300 l/h and displacement from 6 l to 12 l



**Blue.maxx**  
**450**

Flow rate up to 750 l/h and displacement from 12 l to 16 l

### Module variants

#### Basic equipment

Manual feed pump	
Fuel heater 24V	
Filter insert 10 µm	
Filter insert 30 µm	

	H1201K01	H1201K03	H1301K01	H1301K03	H1302K01	H1302K03	H1451K01	H1451K03	H1452K01	H1452K03
Manual feed pump	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fuel heater 24V					✓	✓			✓	✓
Filter insert 10 µm	✓		✓		✓		✓		✓	
Filter insert 30 µm		✓		✓		✓		✓		✓

# Modular System

## Blue.maxx construction kit – Optional accessories & service parts

	 <b>Blue.maxx 200</b> Flow rate up to 200 l/h and displacement up to 6 l	 <b>Blue.maxx 300</b> Flow rate up to 300 l/h and displacement from 6 l to 12 l	 <b>Blue.maxx 450</b> Flow rate up to 750 l/h and displacement from 12 l to 16 l
<b>Optional accessories</b>			
Adapter set 1 for first mounting 	S1450K	S1450K	S1450K
Adapter set 2 M14 to M16 	S1450K01	S1450K01	S1450K01
Water level sensor 	S1451K	S1451K	S1451K
<b>Service parts</b>			
Filter insert 10 µm 	E1200KP01 D385	E1300KP01 D381	E1450KP01 D381
Filter insert 30 µm 	E1200KP03 D385	E1300KP03 D381	E1450KP03 D381
Filter housing * 	H1201K02	H1301K02	H1451K02

✓ = Included in the module variant

\* = In preparation

**Blue.maxx**

**The SMART Alternative**

Ansprechpartner

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FILTRATION

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purifying our planet