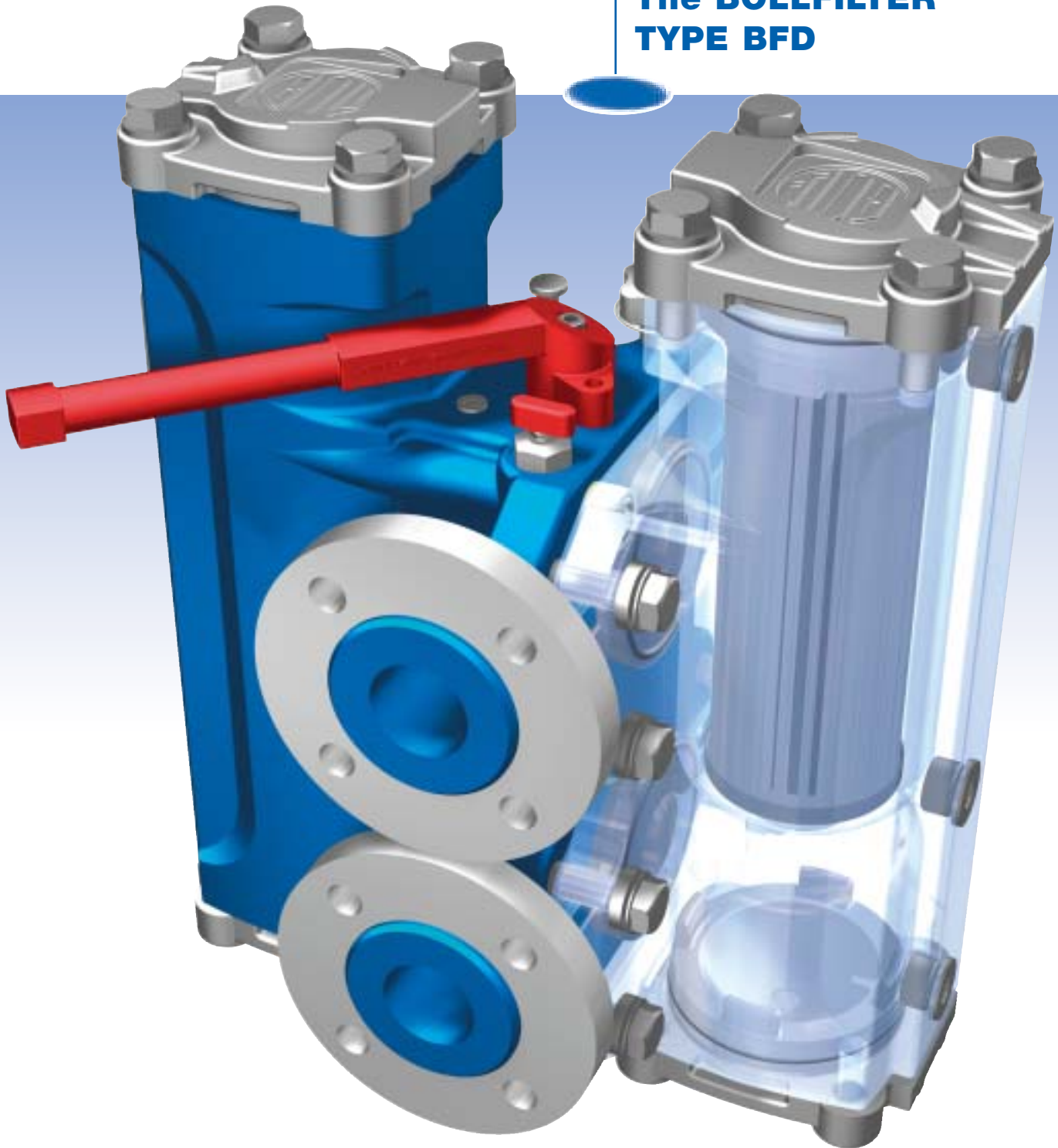




**BOLLFILTER**  
Protection Systems

The **BOLLFILTER**  
**TYPE BFD**



*modern, unique, versatile*

## THE TASK

### Efficiency, profitability and environmental sustainability

Efficiency, profitability and environmental sustainability are increasingly setting the requirements for liquid/solid separation filter technology in all areas of industry. The primary consideration is protecting high-value capital plant from damage caused by system contamination. This requires efficient technical solutions which minimise the capital, operational and maintenance costs. The duplex filter type BFD meets all these requirements optimally by unique flexible concepts for the filtration of



*water,*



*lubricating oil,*



*fuel,*



*machining coolants*

as well as component wash solutions and chemicals

# THE CONCEPT

## An universal series - optimally variable

The requirements laid down for a modern double filter are optimised in the design of the new BFD as a result of the versatile concept. In addition, the BFD series combines the utmost levels of economy with operational safety, thanks to:

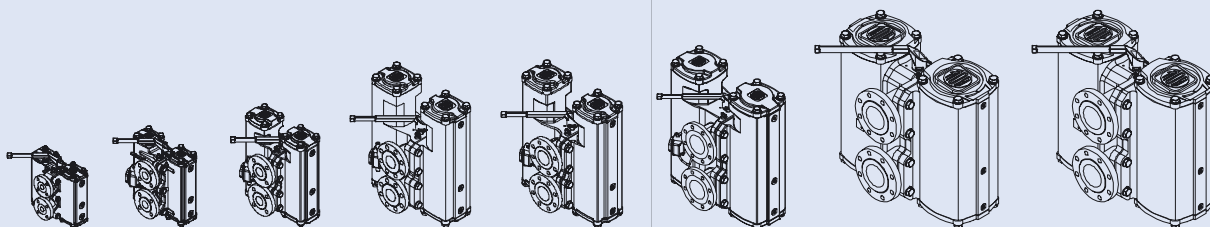
- Innovative detailed solutions
- Flexible, tailor-made modular construction
- Functionality that sets new standards.

With 60 variants and the available housing materials (ductile iron, cast steel or stainless steel), the BFD series provides a flexible filter solution. The flexibility of the BFD series is enhanced by compliance with the requirements of:

- AD 2000
- PED/DGRL 97/23/EG
- ASME SECT. VIII DIV. 1
- API 614 and
- U-stamp.

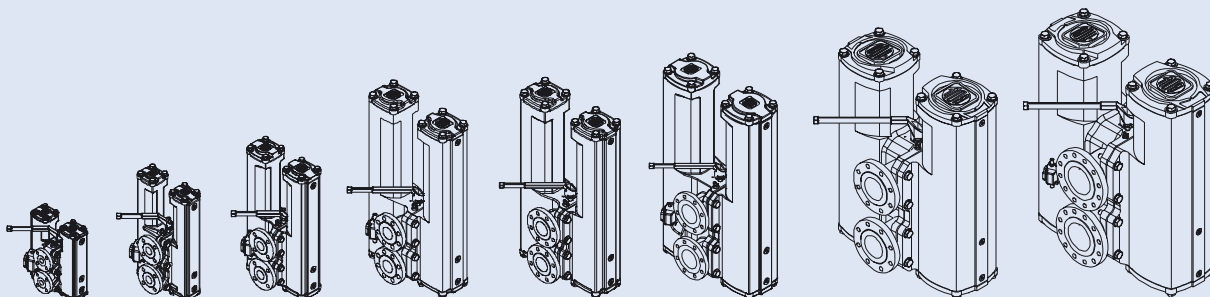


### BFD – Short Construction: NOMINAL WIDTHS AND HOUSING MATERIALS



In/Outlet	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
Ductile iron	PN 40	PN 40	PN 40	PN 40	PN 40	PN 40	PN 16	PN 16
Cast steel	PN 40	PN 40	PN 40	-	PN 40	PN 40	PN 16	PN 16
Cast stainless steel	PN 40	PN 40	PN 40	-	PN 40	PN 40	PN 16	PN 16

### BFD Long Construction: NOMINAL WIDTHS AND HOUSING MATERIALS



In/Outlet	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
Ductile iron	PN 40	PN 40	PN 40	PN 40	PN 40	PN 40	PN 16	PN 16
Cast steel	PN 40	PN 40	PN 40	-	PN 40	PN 40	PN 16	PN 16
Cast stainless steel	PN 40	PN 40	PN 40	-	PN 40	PN 40	PN 16	PN 16

### Approximate design in the case of $\Delta p_{\text{clean}} = 0,35 \text{ bar}/5,1 \text{ psi}$ with glass fibre elements\*

Volume flow	Viscosity	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
lpm/gpm (US)	30 cSt	65/17	190/50	245/65	480/127	715/189	1045/276	1870/494	2710/716
lpm/gpm (US)	40 cSt	60/16	175/46	225/59	430/114	650/172	935/247	1710/452	2450/647
lpm/gpm (US)	50 cSt	55/14	160/42	200/53	395/104	595/157	850/225	1580/417	2270/600

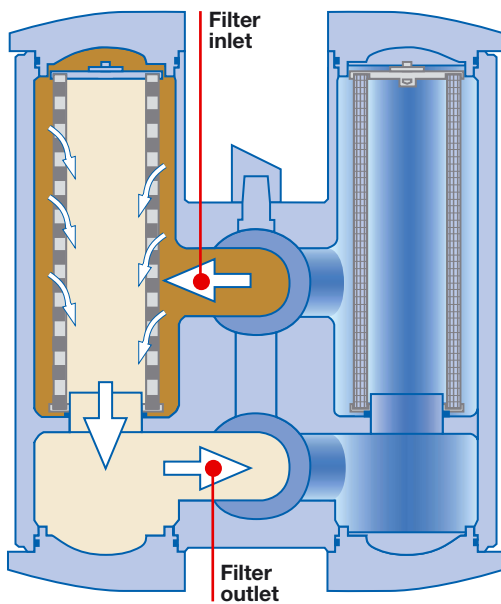
\* in the case of star pleated elements with stainless steel mesh, approx. 30 % higher volume flow

# THE SOLUTION

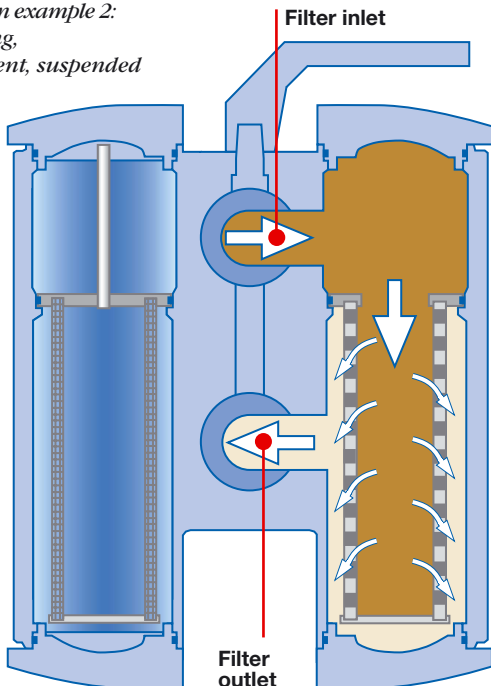
## Unique construction - perfect function

Process safety by means of filtration is absolutely fundamental to filtration technology. On the other hand, the aim is also to achieve optimum economy of the process. For this purpose, in addition to a constant flow cross-section in the housing, which avoids unnecessary pressure losses, the new High Flow (HF) generation of filter elements has been developed. This is characterised by low pressure

▼ Configuration example 1:  
Short housing,  
Star pleated element, standing



▼ Configuration example 2:  
Short housing,  
Basket element, suspended

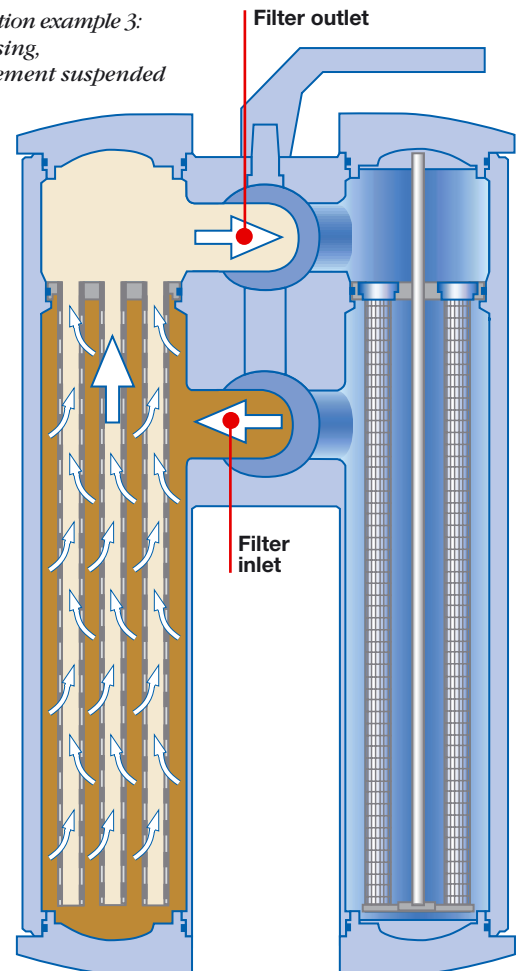


loss, high dirt-absorbing capacity and high throughput. The standing or suspended design of the filter elements underlines the flexibility of the BFD Double Filter series. Depending upon the process requirement, disposable elements or filter media, which can be regenerated, are used.

In practical use, the following features of the BFD Double Filter series are especially convincing

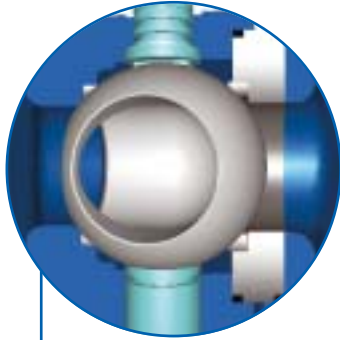
- The compact construction allows for installation in confined spaces
- Minimal pressure losses occur, thanks to filtration areas being optimised for the application and the constant cross-section from inlet to outlet
- The lower housing cover facilitates maintenance, also on the clean side of the filter element
- Thanks to its good accessibility, the filter remains fixed in the pipe when the seal on the ball valve is changed

▼ Configuration example 3:  
Long housing,  
Candle element suspended

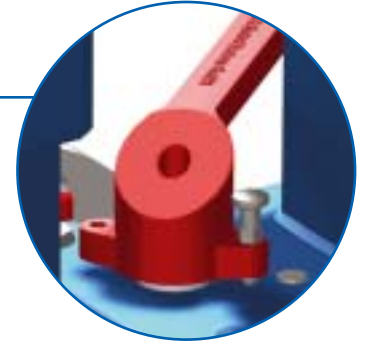


# THE DETAILS

Trend setting innovations as a standard equipment



Smooth running and leakage-free switch-over ball valve for surge-free switch over. Ball from 1.4571 with L-bore



Switch-over safety device locks the switch lever in the end/final position and prevents uncontrolled switching

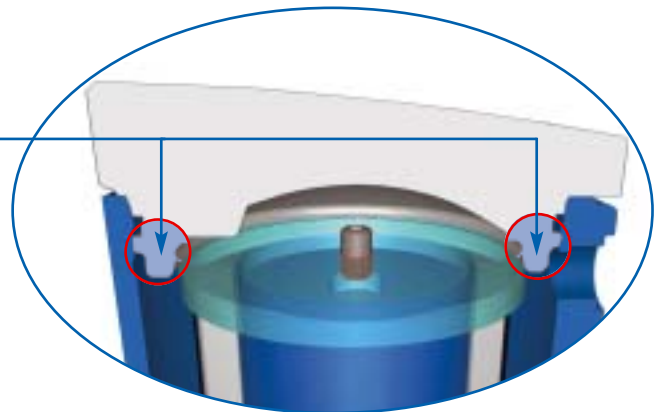


Available with a range of filter elements: basket element, disposable element, candle element, star pleated element (from left to right)

Integrated pressure balance prevents both leakage and damage



The utmost process safety is assured by the shape and self centring design of the cover.



## Data and Facts at a glance

BOLLFILTER TYPE BFD	
Operational area	Filtration of water, lubricating oil, coolants, alkaline washing solutions, chemicals
Nominal coupling flange	25 – 150 mm, ANSI 1"-6"
Operating temperature	max. 120 °C / 248 °F
Housing material	Ductile iron, cast steel, cast stainless steel, water filters additionally nickel-plated lining
Maximum flow rate	3000 lpm / 925 gal/m (US)
Filter element types	basket element, disposable element, candle element, star pleated element
Maximum filter fineness	1 Micron
Element collapse pressure	10 bar / 145 psi

# THE ADVANTAGES

## Efficient operation - reduced costs

Efficiency in the process and functionality in operation and maintenance add up to a number of advantages for the user, which overall lead to a clear **reduction in operating costs**:

- The 60 variants of the series allow for the most economic design in each case
- The two-part housing reduces expenditure on maintenance
- The innovative construction **minimises wear on parts and the risk of faults** and thus increases the availability of the whole plant

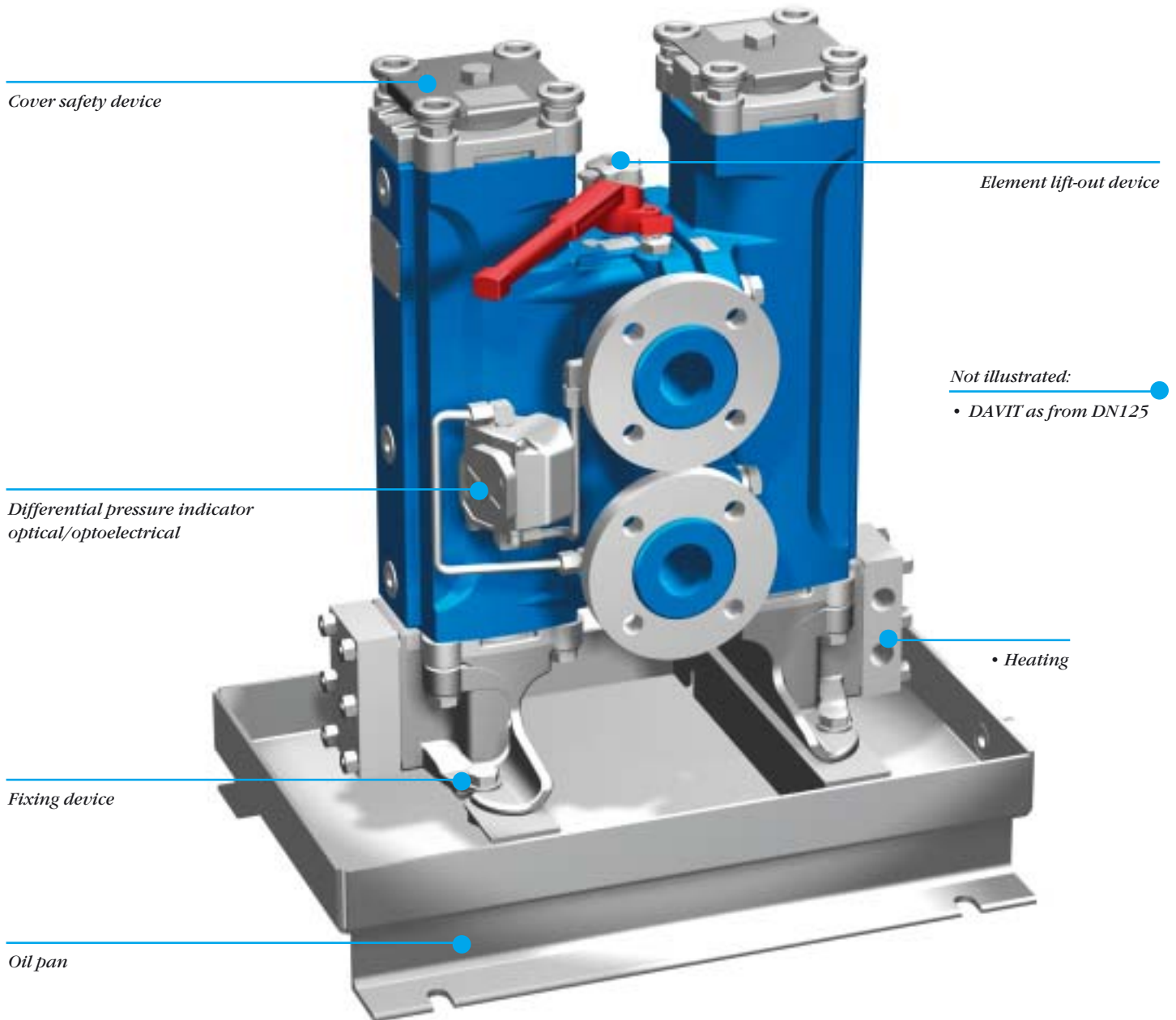


*The BOLLFILTER TYPE BFD  
unites modern industrial design  
with standard-setting technology*

## THE ACCESSORIES

### Effective and useful

With the optional accessory parts, users can supplement their chosen configuration of the BOLLFILTER TYPE BFD



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