



BOLLFILTER
Protection Systems

**Progress
by Innovation**

**Liquid and
gas filtration**



***Filtration systems
for the oil and gas industry***

Diversified and demanding: Filtration tasks in the oil & gas industry

Filtering liquid or gaseous media is essential in various sub-processes of the oil and gas production and processing. Filtration systems used here have to meet highest demands as due to the operating conditions they are exposed to extremely heavy duty:

- They have to filter large flow rates.
- They have to be resistant against aggressive environmental influences and aggressive influences of the media to be filtered
- They have to reliably remove high-grade contaminations of the media to be filtered.
- They have to precisely reach exactly defined grades of filtration.
- They have to operate trouble-free in case of extreme and extremely fluctuating temperatures and pressures
- Due to potential danger of accident they have to comply with highest safety standards
- They have to operate trouble-free over a long period of time.

Therefore, in this branch of industry only filtration systems with maximum material quality and workmanship as well as highest functional reliability may be used.



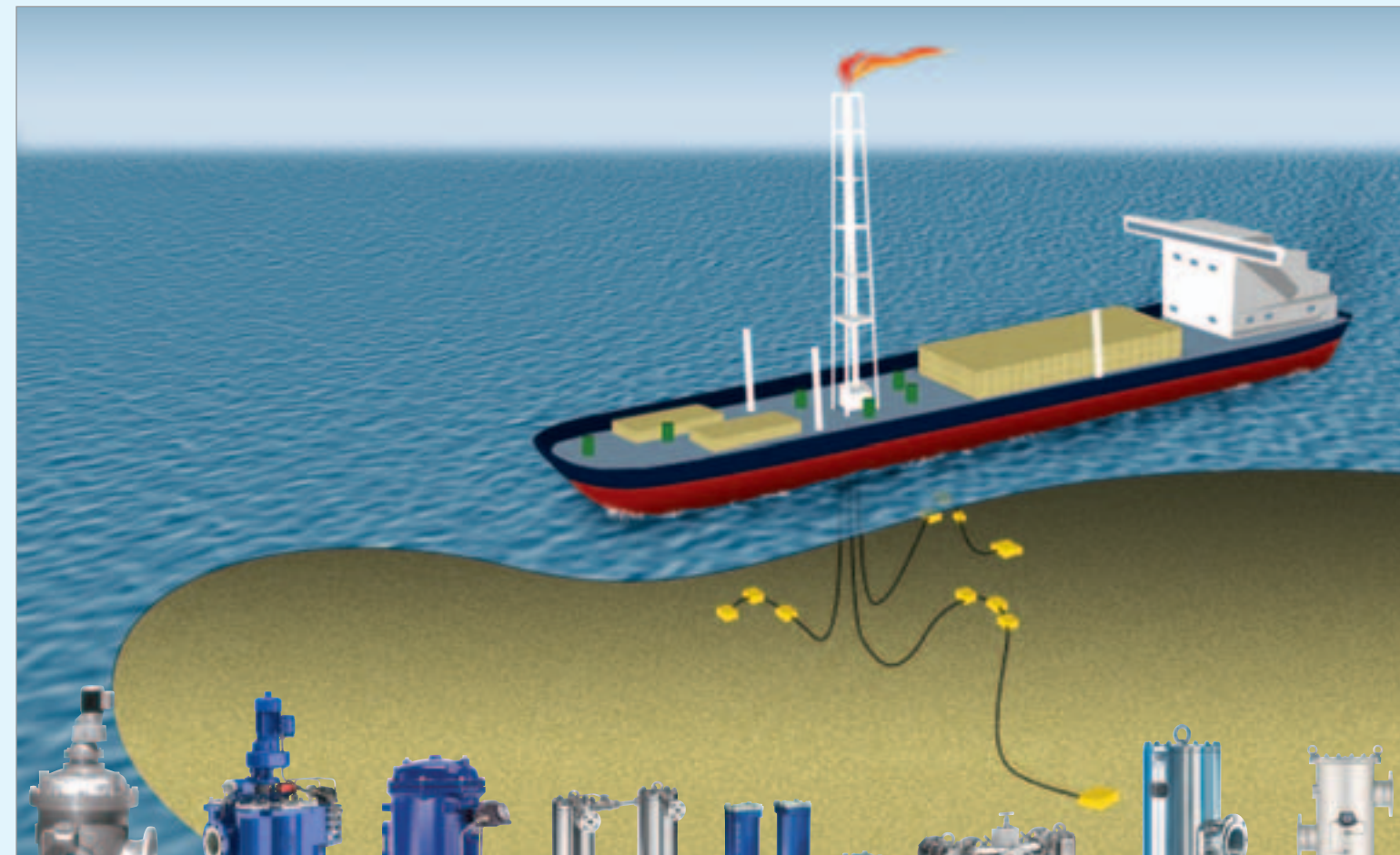
In the oil & gas industry high-performance filtration systems are required for offshore as well as onshore applications.



Diversified and specialised: BOLLFILTER Protection Systems for Offshore Applications

On platforms and vessels for the Offshore oil production, the range of media to be filtered comprises e.g. fuel oil, lubricating oil, injection water, produced water, utility water and cooling gas. Filtering these media is not least essential to protect water treatment facilities, engines, generators, turbines, pumps and compressors from wear and da-

mage. The BOLLFILTER product range covers each of these tasks and fields of application offering a filter specially-designed to the customer's requirements. BOLL-FILTERs show their technical and functional advantages as well as their highly valued reliability on FPSO-vessels under topside, propulsion and sub-sea operating conditions.



BOLL-Automatfilter TYPE 6.18	BOLL-Automatfilter TYPE 6.64	BOLL-Automatfilter TYPE 6.46	BOLL-Duplexfilter TYPE BFD-P	BOLL-Duplexfilter TYPE BFD	BOLL-Duplexfilter TYPE BFD-C DBB*	BOLL-Simplexfilter TYPE BFB-P/-C*	BOLL-Simplexfilter TYPE 1.65.1
Injection water, produced water, utility water, ballast water, potable water	Lube oil, fuel oil (HFO, LFO)	Lube oil	Gas, lube oil, fuel oil (HFO, LFO), water	Lube oil, fuel oil (HFO, LFO), water	Gas	Gas, lube oil, fuel oil (HFO, LFO), water	Lube oil, fuel oil (HFO, LFO), water, other liquids (e.g. methanol, glycol)
DN 50 – DN 1000	DN 100 – DN 400	DN 50 – DN 150	DN 20 – DN 150	DN 25 – DN 150	DN 20 – DN 150	DN 25 – DN 200	DN 65 – DN 350
25 µm – 5 mm	6 µm – 200 µm	25 µm	0,5 µm – 250 µm	1 µm – 5 mm	0,5 µm – 250 µm	0,5 µm – 250 µm	10 µm – 5 mm

* Gas filtration with coalescing separation optional with demister

Competent and qualified: BOLL & KIRCH Filterbau GmbH

BOLL & KIRCH is a world-leading specialist for the filtration of liquids and gases on a large scale and has been successfully developing, designing, producing and supplying filtration systems for decades.

In close cooperation with the filter users, teams of experts from various fields of competence with detailed knowledge of the typical, important and crucial demands, develop solutions and systems optimally fitted to the particular task.

The company is world market leader for filtration technology in the ship and engine construction sector and supplies leading manufacturers with systems used for treatment, processing, cleaning, conveying and compressing of water, fuels, lubricants, chemicals and gases.



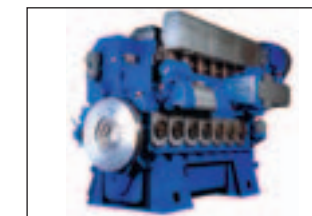
Filtration unit for injection water with three BOLL automatic filters type 6.18, DN 400



Produced water unit with BOLL automatic filter type 6.18, grade of filtration 50 micron



Lubricating oil unit for compressor station with BOLL Duplex filter type BFD-P



Wärtsilä diesel engine with BOLL automatic filter type 6.46 for the filtration of lubricating oil

Approved and certified: BOLLFILTERs meet highest quality requirements

BOLL & KIRCH has been approved and certified for the construction of pressure tanks by all classification societies. The products have been accredited by:

- TÜV - German Technical Inspection Authority
- DNV Det Norske Veritas
- CCS China Classification Society
- ABS American Bureau of Shipping
- LR Lloyd's Register
- GL
- NKK Nippon Kaiji Kyokai
- MRS Maritime Register of Shipping
- BV Bureau Veritas

Filter housings for offshore applications are made from rubber-lined carbon steel, SMO Steel, Duplex and Superduplex Steel. All fittings and internal parts are produced from Monel, SMO and Duplex-/ Superduplex Steel as well as Uranus B6 and Hastelloy.

The filter design complies with the following standards:

- PED 97/23/EG / AD 2000
- ASME VIII div. 1
- ASME VIII div. 1 with U-stamp
- PD 5500
- EN 13445
- CODAP
- AS 1210



Global presentation and worldwide presence: BOLL & KIRCH branch network and service stations

BOLL & KIRCH is worldwide present and operates a tight network of agencies and subsidiaries around the globe. Our entire service pledge - cooperation for project deve-

lopment, punctual delivery, product-related services and fast, reliable supply of Genuine Parts applies worldwide:

 <p>Europe</p> <ul style="list-style-type: none"> Austria Belarus Belgium Bulgaria Croatia Cyprus Czech Republic Denmark Estonia Finland 	<p>Germany</p> <ul style="list-style-type: none"> Great Britain Greece Iceland Ireland Italy Latvia Liechtenstein Lithuania Luxembourg Norway 	<ul style="list-style-type: none"> Poland Portugal Russia Schwitzerland Slovakia Slovenia Spain Sweden The Netherlands Turkey Ukraine 	 <p>America</p> <ul style="list-style-type: none"> Brazil Canada USA 	<ul style="list-style-type: none"> South Korea UAE People's Republic of China incl. Hong Kong, Macao 	 <p>Asia</p> <ul style="list-style-type: none"> India Indonesia Japan Malaysia Singapore 	 <p>Australia</p> <ul style="list-style-type: none"> Australia <p>Africa</p> <ul style="list-style-type: none"> South Africa
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