



WFSD-01

FILTER SYSTEM
WITH DIAGNOSTICS
FOR LUBRICANTS



PRODUCT INFORMATION

WALTHER SYSTEMTECHNIK

„Dosing systems are
our specialty.“

We are a medium-sized
business with extensive
experience in producing
custom dosing equipment
and systems. Our expertise
lies in producing turn-key
custom liquid and viscous-
media dispensing systems.

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INTRODUCTION

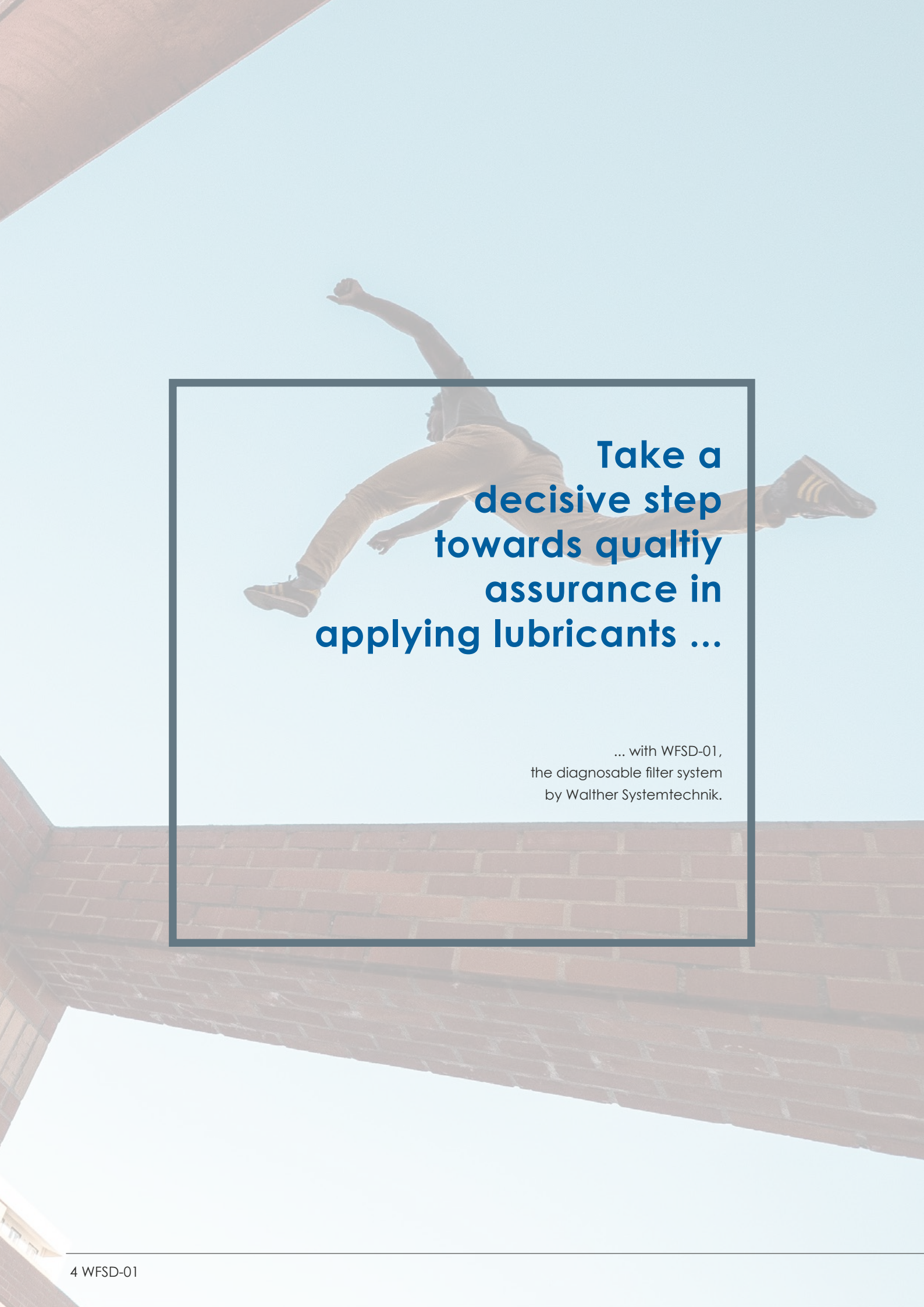
Contaminants within lubricants can hamper and reduce the precision of standard processes. Worst case, contaminants can affect or even damage dispensing and spraying equipment, resulting in costly production disruptions.

Maintaining a contaminant-free medium ensures optimal quality assurance in dispensing and applying lubricants.

Our WFSD-01 Filter system with diagnostics captures contaminants, thoroughly filtering the medium to be dispensed, effectively fulfilling this production requirement.

The extensive features of WFSD-01 support its use as control unit within dispensing process, supporting the production process. The WFSD-01 filter system introduces predictability to filter replacement and structures the scheduling of maintenance.

WFSD-01



**Take a
decisive step
towards quality
assurance in
applying lubricants ...**

... with WFSD-01,
the diagnosable filter system
by Walther Systemtechnik.

Reproducibility and consistency

in the applying lubricants is not a matter of luck...

... rather merely one advantage of using the WFSD-01 filter system.



Improve quality assurance of production

Lubricant contaminants can result from numerous sources, such as damaged feeds or manufacturing equipment.

Lubricants are also subject to physical changes leading to a thickening of or sedimentation within the medium.

Walther Systemtechnik's WFSD-01 filter system with diagnostics retains undesirable particulates, purifying the lubricant, and enabling consistent medium working conditions.

01

Prevent unplanned line stoppages

In the past filter capacity was judged application performance of the equipment.

Enhance your process with WFSD-01, which continuously monitors and displays actual filter capacity.

Filter change becomes predictable and can be scheduled within normal maintenance.

02

Maintain complete visibility of process parameters

WFSD-01 enables an overview of main production parameters.

The parameters for input and output pressure, temperature of medium, and flow rate can be defined and alarms set for values outside of the range, communicable via configurable digital outputs.

Parameters are displayed and communicated via 4 x 24 [VDC] Digital Alarm-Outputs or via the RS-485 bus to the main PLC control unit.

These assist in creating optimal conditions for operating dispensing equipment.

03



WFSD-01

WELL-THOUGHT-
OUT FUNCTIONS,
AMPLE FEATURES,
AND EASE-OF-USE
DISTINGUISH THE
WFSD-01,
RENDERING IT A
VERY USEFUL TOOL
FOR IMPROVING
EFFICIENCY.

WFSD-01: a top performing filter system for diverse lubricants.

WFSD-01 is more than just a filter, capturing contaminants within lubricants, thereby protecting the dispensing equipment and ensuring consistent performance. Versatility characterises the WFSD-1, offering multiple languages, variable units (bar/psi), sensor failure detection, and tool-free filter change, more information available on page 11.

The filter system displays at every point in time the actual filter capacity, assuring calculable filter changes, increasing efficiency.

WFSD's diagnostics monitor important process parameters. Is the medium pressure correct? Is the medium temperature appropriate? The process parameters indicate possible problems and optimization potentialities.

The WFSD-01 presents at a glance relevant and decisive factors. Programmable parameter ranges produce alarms for out-of-range values and be sent digitally to the primary control unit. Password protection secures configuration settings.

The following page lists process variables measured, displayed, and digitally distributed by WFSD-01.

Filter reliably, monitor effectively: WFSD-01

MONITOR IMPORTANT PROCESS DATA



FILTER CAPACITY

pollution of the
filter cartridge



MEDIUM FEED PRESSURE

medium pressure
at the filter input



FILTER LIFE

running time of filter
cartridge after change



MEDIUM FLOW PRESSURE

medium pressure
at the filter output



MEDIUM TEMPERATURE

temperature of the
flowing through medium




FLOW RATE/ PUMP CYCLES*

frequency of
feeding pump

INTERFACES

FOR DATA
EXCHANGE



WFSD-01 connection
with the programmable
logic controller (PLC)



4 x 24 [VDC] Digital Alarm Outputs

Freely configurable digital outputs allows for comparison of single or group readings, providing values for ...

- filter capacity [%]
- medium feed / medium output pressure [bar]
- medium temperature [°C]
- filter life [h]
- pump cycles / flow rate [Hz]



RS-485 Bus with MODBUS Protocol

RS-485 Bus communicates with the PLC ...

- read and write of alarm readings
- read alarm status
- read actual process data

ADDITIONAL FEATURES

WFSD-01

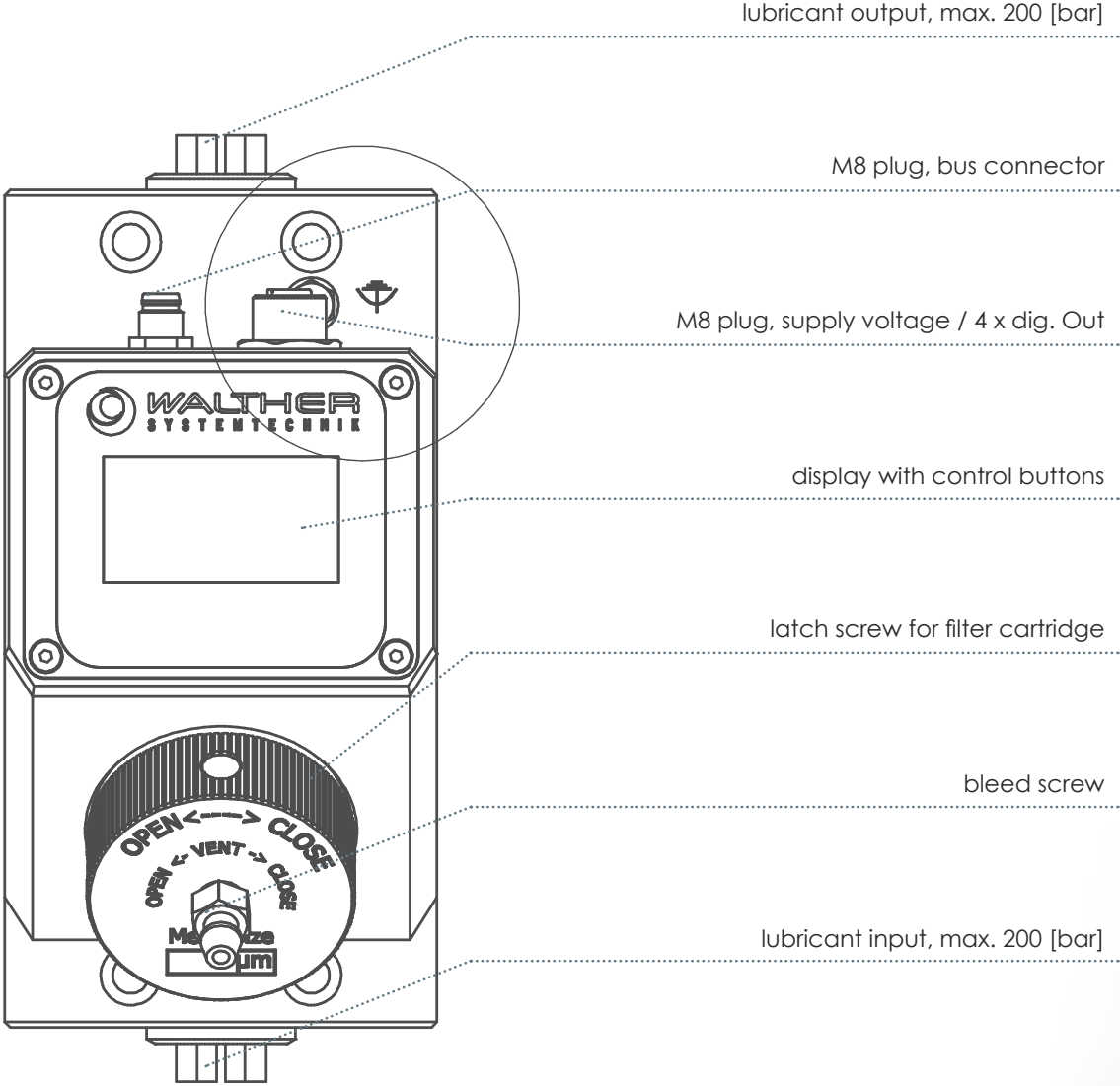
More functionality with a purpose.

1. Filter change has never been so easy: open the latch screw, replace the filter, close the latch screw, with no tools necessary.
2. Venting the cartridge also requires little effort, a mere turn of the screw suffices.
3. Process readings are displayed directly on the integrated screen and transmitted to the PLC.
4. A choice of English, French, or German languages assists in communication.
5. A fail-safe for sensor failure has been added to ensure reliability and a seamless addition to the production flow.



CONSTRUCTION

Compact, robust, and universal describe the WFSD-01's construction. It is distinguished by ease of installation and stand-alone operation, applicable to a broad-range of systems and adaptable up to a pressure limit of 200 [bar].



FILTER CARTRIDGES

WFSD-01

FILTER CARTRIDGES WITH DIFFERENT MESH SIZES, SUCH AS 150, 300 AND 500 [μm], ALLOW FLEXIBLE USE OF THE WFSD-01.



150 [μm]

MESH SIZE

filter cartridge,
replaceable without tools,
differential pressure ≤ 75 [bar]

Part Number WZF-150-01



300 [μm]

MESH SIZE

filter cartridge,
replaceable without tools,
differential pressure ≤ 75 [bar]

Part Number WZF-300-01



500 [μm]

MESH SIZE

filter cartridge,
replaceable without tools,
differential pressure ≤ 75 [bar]

Part Number WZF-500-01



The range of filter porosities can accommodate a variety of lubricants. Filtering is accomplished in flow direction, utilizing the filtrate as an added filter layer. The filtrate can be recovered from the cartridge, maintaining complete visibility of process inputs.

FEATURES

WFSD-01

INDUSTRIAL REQUIREMENTS WITH
HIGH-VISCOSITY LUBRICANTS ARE MET BY WFSD-01
PERFORMANCE THRESHOLD OF 200 [bar].

MAIN FEATURES

- retention of contaminants in lubricants
- actual cartridge capacity displayed
- monitoring of additional process parameters: medium feed pressure, medium output pressure, pump speed, volume flow rate, medium temperature, filter life
- parameter ranges and alarms for out-of-range readings
- open configuration of digital data
- 4 x 24 [VDC] Digital Alarm Outputs: Group and individual comparison
- RS-485 Bus with MODBUS protocol: read and write of alarm readings, read alarm status, read actual process data

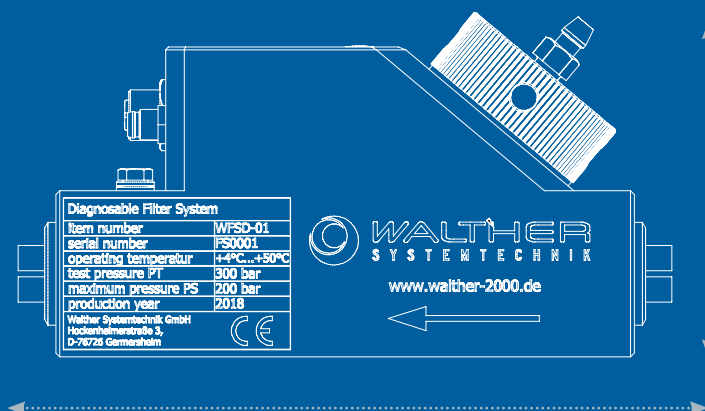
ADDITIONAL FEATURES

- 3 languages available (German, French, English)
- password protection
- display in bar or psi
- screen display 180° adaptable
- sensor failure fail-safe
- simple cartridge replacement
- easy venting of system
- compact construction, straight-forward installation, stand-alone usage

TECHNICAL DATA

WFSD-01

Part Number	WFSD-01		
Operating voltage	24 [VDC]		
Dimensions	152 x 80 x 82 [mm]		
Weight	2200 [g]		
Medium flow pressure [bar]	min. 10	max. 200	
Digital output	4 x 24 [VDC]		
Fieldbus	RS485 MODBUS-RTU		
Filter porosity	150 [µm]	300 [µm]	500 [µm]



Filter Cartridges:

- nominal pressure up to 200 [bar]
- differential pressure up to ≤ 75 [bar]
- different mesh sizes available

DOSIEREN MIT SYSTEM.

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