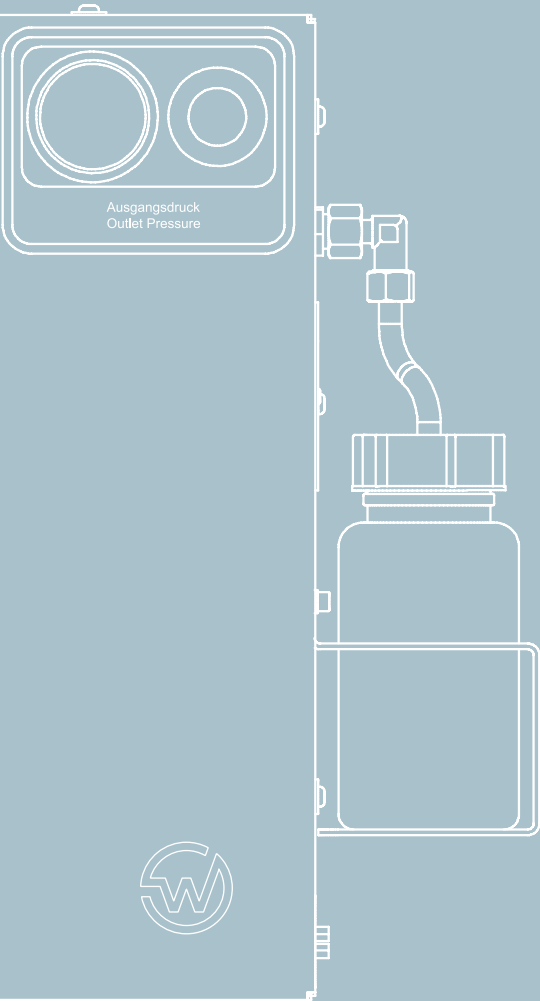
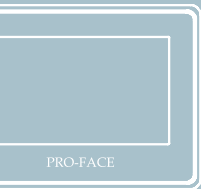


SUPPLYING.
DOSING.
APPLYING.

WALTHER
SYSTEMTECHNIK

WADS-01

D DEGASSING STATION



ADVANCED DEGASSING STATION

WADS-01

INTRODUCTION

Gas inclusions in a lubricant significantly complicate the reproducibility and repeatability of industrial lubrication processes. They will not only cause a reduction in dosing quantity and an incorrect application image; they will also cause a large-scale contamination with medium. The Walther Advanced Degassing Station (short: WADS) reliably detects gas inclusions and outward transfers them efficiently. It ensures a homogenous application image of the lubricant and will thereby increase and stabilize the application quality.



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WALTHER SYSTEMTECHNIK GMBH

DOSING AND DISPENSING SYSTEMS FOR VISCOUS MEDIA
www.walther-systemtechnik.com

The background of the entire page is a grayscale photograph of an industrial facility. It features a complex network of large pipes, valves, and pressure gauges. Some pipes have warning symbols (flames) attached to them. The overall scene is a dense, technical environment.

CONTENT

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Advantages

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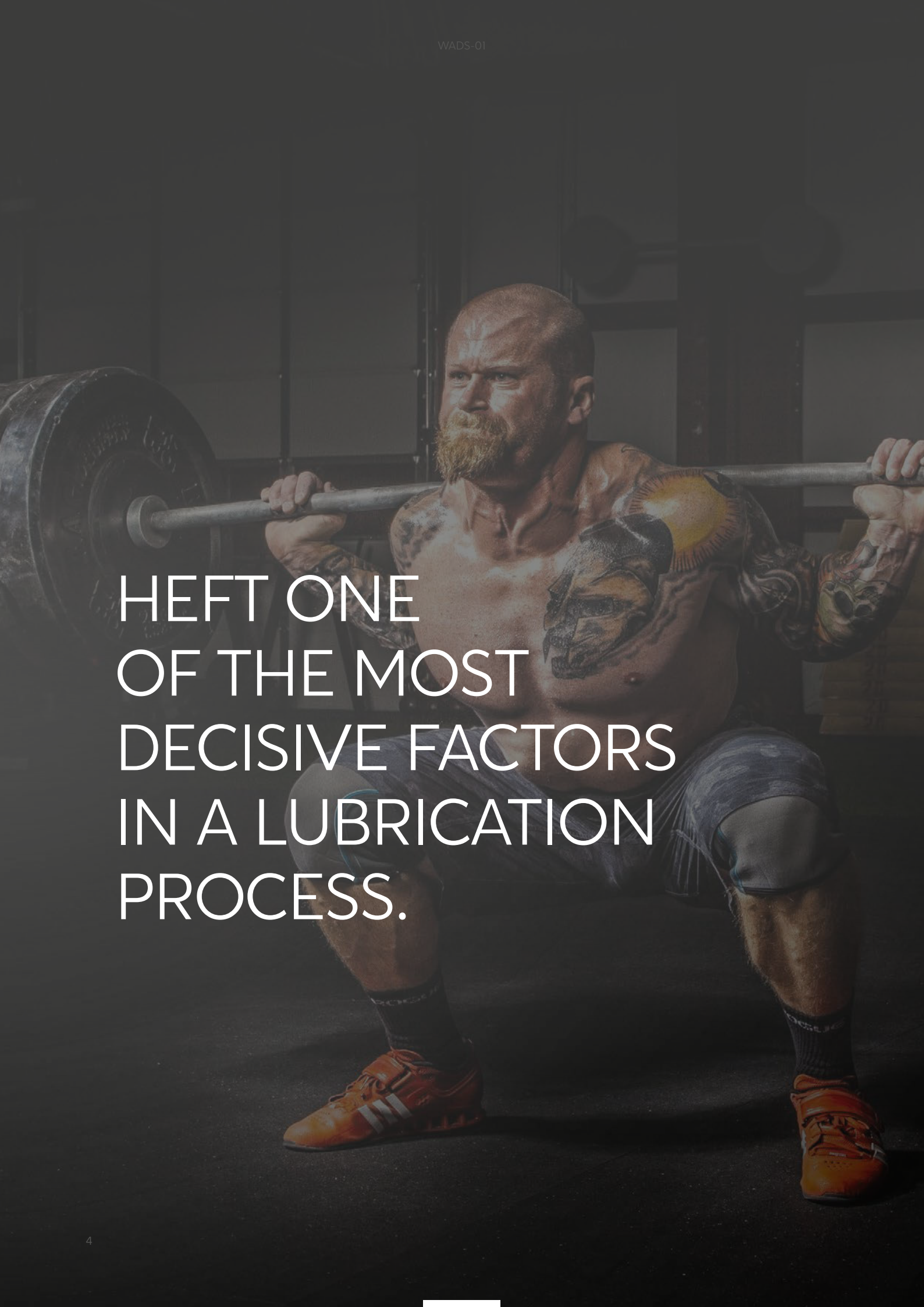
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Technical Data

A full-page background image of a muscular man with a beard and extensive tattoos performing a squat with a heavy barbell in a gym. The man is shirtless, wearing blue patterned shorts, black socks, and orange sneakers. He is holding a barbell with large weights across his shoulders. The text is overlaid on the left side of the image.

HEFT ONE
OF THE MOST
DECISIVE FACTORS
IN A LUBRICATION
PROCESS.

MORE STABILITY AND LESS REJECTS IN LUBRICATION PROCESSES

SIMPLY FREE OF GAS AND AIR BUBBLES: WADS HELPS YOU TO PERFECTLY PREPARE LUBRICANTS FOR APPLICATION.

In general, viscous media have the tendency to bind gases. The following applies: The higher the pressure which is applied to the medium, the more the fluid attracts gases from the surroundings. Quite often, the atmospheric pressure is already sufficient to cause disturbing air inclusions in the medium. Additional factors such as the replacement of a container, insufficient ventilation or installation works will facilitate the introduction of air.

However, bound gases will separate again from the medium. And this can easily cause disturbances during the dosing process. Unbound gas in the form of air bubbles will negatively influence the dosing and falsify the applied quantity; this again, will produce irregular production results and rejects.

Pressure can also cause an abrupt expanding of the gas when leaving the dosing valves; this bears high risks. Not only will you find an uneven application image with splashes and dots, there might also be severe damages to the system from "blasts" at the dosing valves.

Gas inclusions and air bubbles in an application system can also result in a decreasing supply operation of pumps, or wear-and tear

and cracks on sealings, or heavy corrosion in lines, as well as an increased compressibility and a faster degrading of the medium. For lubricants in particular, gas inclusions will influence the material characteristics and can cause a reduced cooling capacity, an increased oxidation or an impaired lubrication effect.

The Advanced Degassing Station WADS-01 from Walther helps you to counteract all these problems: The station was explicitly designed for conditioning low and highly viscous media and can detect even the smallest gas bubbles in a medium volume flow, and will efficiently outward transfer these.

In short: With Walther Advanced Degassing Station you will reliably evacuate disturbing gas inclusions from your medium, stabilize the quality of the medium and the application as well as the production, and will protect your system against damages.

On the following pages, we will show you which features of the Walther Advanced Degassing Station are the most convincing, and how you can save time, effort, medium and of course, a lot of money.

ECONOMICAL, PRECISE, POWERFUL: THE ADVANCED DEGASSING STATION WADS-01

WADS-01 COMES WITH QUALITIES WHICH COMMON SYSTEMS SIMPLY DO NOT HAVE.

One does not have to reinvent the wheel in order to make progress. In most cases more power and a new direction will do. This is how we approached the development of our Advanced Degassing Station, and we are herewith presenting a smart solution which comes with significant advantages compared to common systems.

First things first: The Walther Advanced Degassing Station or WADS was explicitly designed for detecting and outward transferring gas inclusions in liquid media – in particular highly viscous media such as greases. This is the first distinct feature of the WADS-01.

CONTINUOUS MEDIUM FLOW WITH CONTINUOUS DETECTION

The WADS-01 will also provide a continuing medium flow, not only during the outward transfer, but also when the material flow is interrupted, e.g. during the replacement of a container. It has an integrated storage unit which will guarantee a constant supply for your application system, together with a continuous production.

The WADS-01 also helps you to reduce the consumption and save money: our innovative technology operates with extreme precision and will only separate that portion of the medium which is actually contaminated with gas inclusions.

Thereby, rejects which came in loads of full cartridges are a thing of the past. Another distinct feature and advantage with regards to expensive lubricants!

WADS-01 DETECTS EVENT THE SMALLEST INCLUSIONS IN THE MEDIUM

Talking about precision: In contrast to other existing systems, the WADS-01 does not only detect small, but tiniest inclusions with a size of 10 [mm^3] (0,01 [ml]). This is possible because the internal medium pressure is kept very low.

What applies to internal pressure values does not affect the outer ones: The WADS-01 easily integrates completely into supply systems with inlet pressures of up to 150 bar which you usually need for supplying highly viscous media. ... >

Thanks to an internal high-pressure pump (ratio 25:1), the outlet pressure can be increased up to 250 bar. Our WADS-01 does really have a lot of power.

Besides that: Standard market systems for detecting and outward transferring of gas inclusions are usually quite large. Despite the extensive technology which guarantees a reliable and proper function of the Advance Degassing Station, the WADS-01 has a com-

pact size and can still be well integrated in limited production areas. An additional plus: For an optimum discharge quality of the medium, air inclusions will already be automatically outward transferred with each container replacement. This will speed up the workflow furthermore. With this and other smart functions, the WADS-01 is a highly efficient, continuous supply system and can be well compared with other competitors. Find out yourself!

**YOUR
STABILIZER
IN QUALITY
FOR MEDIUM,
APPLICATION
AND PRODUCTION:
WADS-01**



WADS-01: EXCEPTIONALLY FLEXIBLE, ...

As an independent and autonomous component, the WADS-01 can be included in layouts for new systems and also easily integrated into existing process chains. You decide how flexible the integration will be.

... EASY CONTROLLING ...

Would you prefer a self-sufficient degassing unit? Then integrate the WADS-01 with only very few steps, so to say with "Plug & Play" into your system: As the WADS-01 is a stationary device, it can be easily and intuitively controlled with its integrated operating screen (HMI).

Or do you prefer to control the Advanced Degassing Station via remote control through your SPS/PLC and include it smoothly into your system? The Ethernet Bus interface (Modbus TCP protocol) provides a complete system integration.

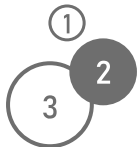
... AND ALSO MONITORING.

Whichever is your favorite, both options will provide extensive setting options and parameters. And if anything goes wrong, the WADS-01 will immediately give you a warning: Based upon defined limit values, the station monitors different process values (please see following page) and it can signal exceeding or falling below via three freely configured digital outlets.

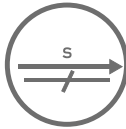
**THE EASY
INTEGRATION
INTO EXISTING
SUPPLY SYSTEMS
AND THE INTUITIVE
OPERATION WILL
SURPRISE YOU.**



MONITORING PRODUCTION-RELEVANT, SPECIFIC PROCESS VALUES



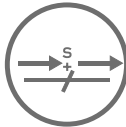
Bubble Counter:
Number of individual,
detected air bubbles



LDT [s]: (Last Discharge Time)
Duration of the last discharge
process



R10 [%]: Detected, summarized
air bubble time in relation the
past 10 minutes



TDT [s]: (Total Discharge Time)
Total duration of all discharge
processes



R60 [%]: Detected, summarized
air bubble time in relation to
the past 60 minutes



Storage unit filling level [%]:
Percentage portion of the
defined maximum filling level

WADS-01:

ALWAYS
KEEPING
AN „EYE“ ON
IMPORTANT DETAILS.



INTEGRATED: INTERFACES FOR DATA EXCHANGE AND COMMUNICATION



3 X 24 [VDC] DIGITAL ALARM OUTPUTS

The digital outputs can be freely configured and allow you window and individual comparisons of the following process values ...

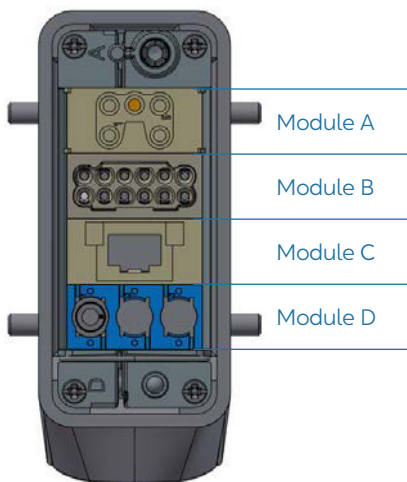
- Number of air bubbles
- Total air bubble time in 10 min. [%]
- Total air bubble time in 60 min. [%]
- Duration of last discharge [s]
- Total duration of discharge [s]
- Percentage of storage unit filling level [%]



RJ45 INTERFACE WITH MODBUS/TCP PROTOCOL

With the integrated Ethernet interface, you can access all available process data and set the configuration parameters through the SPS/PLC.

- Reading and writing of the system parameters
- Reading the status of the alarm outlets
- Reading the actual values of the process values



The Walther Advanced Degassing Station is equipped with a Harting plug which is responsible for the pneumatic energy supply as well as the communication connection. The plug-in connector contains the following individual connection modules:

Module A – Line for supply voltage

Module B – Digital I/O's

Module C – BUS connection (network connection RJ 45)

Module D – Pneumatic connection

ADDITIONAL FUNCTIONAL CHARACTERISTICS

WHETHER IN AUTOMATIC MODE OR IN MANUAL OPERATION: YOU HAVE EVERYTHING UNDER CONTROL.

You can select between automatic mode or manual operation. In automatic mode, the system operates autonomously. It will use the pre-set specific values as a basis. Whereas in manual operation you have the "direct control" and an immediate influence on all processes, such as pressure relief, storage unit draining or outward transfer.

You determine the sensitivity of the air bubble detection, the discharge time or the filling volume of the medium storage unit. There are extensive options for settings which will give you the full control so that you can process the medium according to your individual requirements.

SOLUTION MAKES SENSE

With the filling level hysteresis, you determine how often the medium will be automatically exchanged in the storage unit. This will help you avoid quality-degrading storage effects.

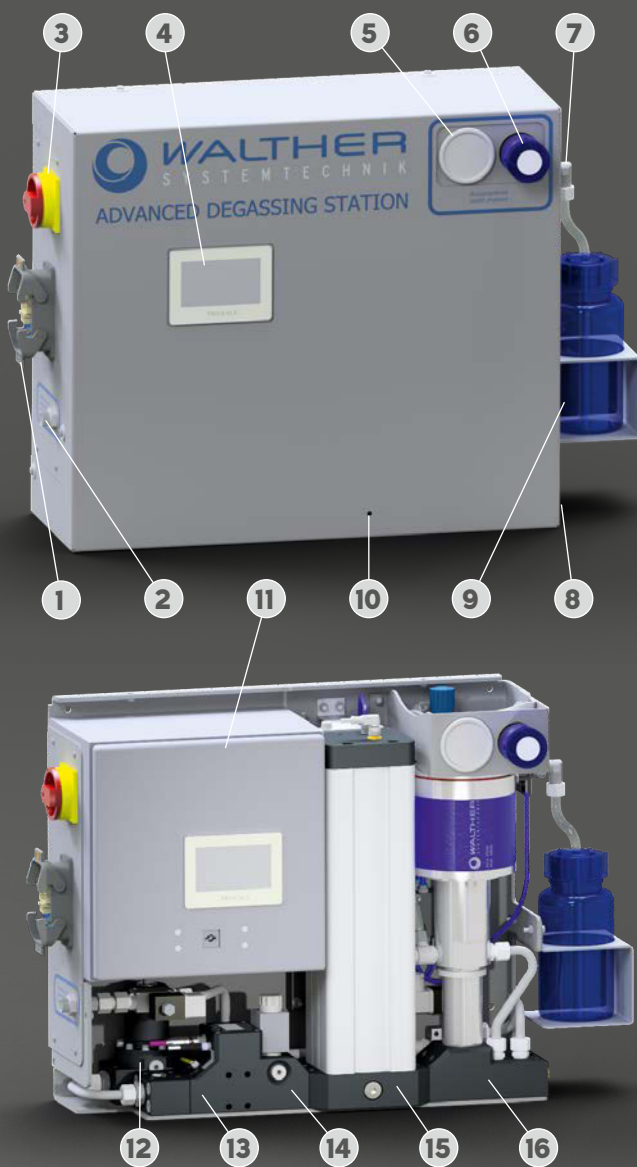
The WADS-01 is smart and "learns": The „Teaching" function is used to precisely adjust the station to the employed medium. Also, the viscosity is registered. The Teach process will take between 2 to 5 seconds and should be carried out for each exchange of the medium type.

Of course, there are additional setting options – for network, date or time; however, quite important and worth mentioning are the easy configuration of the alarm values as well as the available languages (German, English, French).



THE CONSTRUCTION OF THE ADVANCED DEGASSING STATION

Compact, robust, universal: The WADS-01 is characterized by a compact construction; it works independent of any system, and can be integrated in any dosing and application environment via "Plug & Play". With its inlet pressure of 150 [bar], the WADS-01 is also suitable for high-performance surroundings.

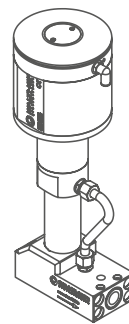
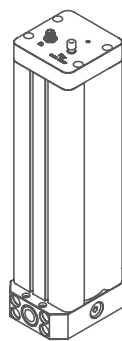
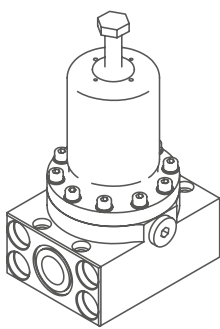


1. Harting plug
(electr. / pneum. interface)
2. Pipe connection with cutting ring
12L 24° (medium inlet)
3. Main switch (ON/OFF)
4. Operating panel (HMI)
5. Manometer
6. Pressure regulator –
outlet pressure
7. Outlet – pressure relief
(pressure / contaminated medium)
8. Medium outlet G1/2"
9. Collecting container
10. Leakage boring
for Medium discharge
11. Switch cabinet

12. Pressure Regulator
13. Plug-in Board
14. Air Bubble Protection Module
15. Grease Container Module
16. Booster Pump

FUNCTIONAL PRINCIPLES

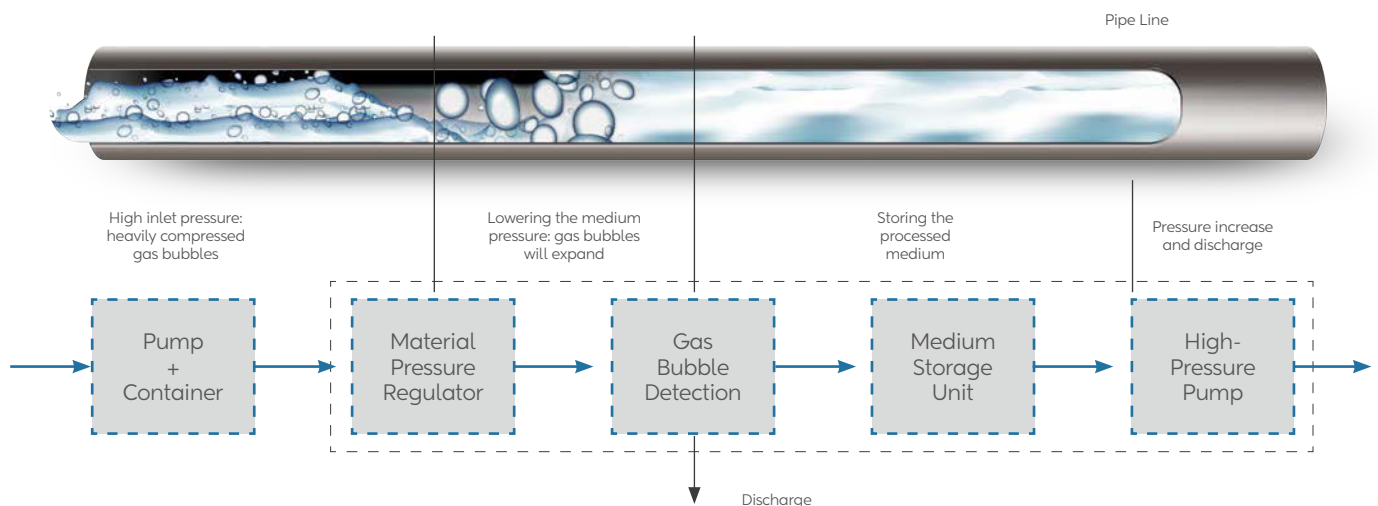
THE MODULAR CONCEPT AND THE SMART TECHNOLOGY MAKE THE WADS-01 A HIGHLY EFFICIENT, CONTINUOUS SUPPLY SYSTEM.



The internal pressure controller lowers the inlet pressure of the medium so that existing gas bubbles can expand; this allows a precise detecting and outward transfer of the inclusions.

After the outward transfer, the processed medium will be interim stored in an attached, pressure-controlled container. This guarantees a continuous supply with the medium.

The controllable high-pressure pump is located at the end of the line system; it will increase the outlet pressure of the medium back to the original level or also higher (max. 250 [bar]).



TECHNICAL DATA

Article Description	WADS-01
Medium inlet pressure	20 – 150 [bar]
Medium outlet pressure	0 – 250 [bar], Ratio 25:1
Filling volume medium storage	40 – 2000 [ccm]
Max. average volume flow	100 [ccm/min]
Max. volume flow (short-term)	1500 [ccm/min]
User interfaces	DIO 24 [VDC] / HMI 4,3" / Modbus TCP
Freely defined alarm outlets	3 x 24 [VDC]
Operating modes	manual, automatic / local & remote
Minimum size detected air bubbles	Ø 1,3 [mm]
Allowed lubricant characteristics	Non-abrasive, particle size < 150 [µm], up to NLGI 3 *
Operating voltage	230 [VAC], 5 [A]
Dimensions (L x B x H)	758,6 x 267,7 x 514 [mm]
Weight	18 [kg]

— AT ONE GLANCE

The WADS-01 reduces gas inclusions in low and highly viscous media and stabilizes also the material characteristics and the quality of the application process.

- Continuous monitoring of the medium for air inclusions
- Detects even the smallest air bubbles, with $\varnothing 1,3$ [mm] and outward transfers these
- Least medium loss because only the portion of the medium which is contaminated with air bubbles will be outward transferred
- Integrated medium storage unit for an uninterrupted supply
- 4,3" Touch display
- Easy and intuitive operation
- Monitoring of process values with limit value definition and indication of limit value breaks
- 3 freely configured 24 [VDC] digital alarm outputs for window & individual comparison of different process values
- Ethernet Bus with MODBUS/TCP protocol: Reading / writing alarm values, reading the status of the alarm outlets, reading the actual values of the process values
- 3 languages (German, English, French)
- Password protected
- Compact design
- Easy installation
- Can be used independent of a system

Walther Systemtechnik GmbH is a medium-sized business with a long-term experience in special machine construction which has specialized in dosing applications and application processes: we are your competent partner for all kinds of dosing and applying of liquid and pasty media.

SUPPLYING. DOSING. APPLYING.
www.walther-systemtechnik.com

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