



Installation and operating instructions

– Translation –

JUDO FERROCLEAN sludge separator

JFS 2 1/2" – 8"



Please transfer to the operator.
Read before installation and commissioning!
Keep for future use.



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Dear customer,

Thank you for the confidence you have shown in us by purchasing this product. In purchasing this JUDO sludge separator you have procured a state of the art product.

Our aim is that you remain with us as a satisfied customer. Therefore we kindly ask that if you have any questions concerning your JUDO FERROCLEAN sludge separator or if you have any general questions concerning water treatment, then please contact our field service representative or directly contact either our work in Toronto (Canada).

If you have any queries, please specify the model name, order and manufacturing numbers that you can find on the type label of your JUDO sludge separator.

Every JUDO FERROCLEAN sludge separator has been carefully checked prior to supply. Nevertheless, if difficulties occur, please contact your responsible customer service representative.

	JUDO Water Treatment Inc.
Address:	240 Lesmill Road Toronto, ON M3B 2T5 Canada
Phone:	(416) 441-1556
Toll-free (Canada/USA)	(866) 451-5836
Fax:	(416) 391-4273
Toll-free fax (Canada/USA)	(877) 761-3335
Email:	info@judo-online.com judo-online.com



1 Introduction

1.1 About these installation and operating instructions

These installation and operating instructions should simplify getting to know your JUDO FERROCLEAN sludge separator and inform you of its intended applications. The installation and operating instructions contain important information so that you can use the JUDO FERROCLEAN sludge separator safely, professionally and economically. They contain basic information that must be observed during installation, operation and maintenance. Observance of this information will help to avoid dangers, reduce repair costs and increase the reliability and service life of the JUDO FERROCLEAN sludge separator.

Alongside the installation operating instructions and the legal regulations applicable in the country and place of use in respect of accident prevention, the recognised technical regulations for safe and professional work must be observed.

All pictorial, dimensional and implementation information correspond to the date of going to press. We reserve the right to make changes due to technical progress and continuing development. Model and product claims cannot be lodged.



The installation and operating instructions must always be available at the place of use of the JUDO FERROCLEAN sludge separator and must be kept in a good, legible state! All persons involved in installation, commissioning, operation, maintenance, servicing and repair of the JUDO FERROCLEAN sludge separator must be appropriately qualified and trained and must have carefully read and understood these installation and operating instructions and also any separate installation and operating instructions for other devices and systems!

1.2 Validity of these installation and operating instructions

These installation and operating instructions are valid for the following models:

Designation	Model	Order no.
JUDO FERROCLEAN sludge separator	JFS 2 1/2"	8055070
	JFS 3"	8055071
	JFS 4"	8055072
	JFS 5"	8055073
	JFS 6"	8055074
	JFS 8"	8055075

Tab. 1: Model overview

1.3 Application

In closed heating and cooling systems, sludge deposits from magnetite (Fe_3O_4) can lead to faults in individual system components, massive power losses or even complete system failures. With a JUDO FERROCLEAN sludge separator system sludge deposits can be deposited and rinsed out and thus, for example, plate exchangers, tube bundles, air heaters or other system components can be effectively protected.

High oxygen concentrations are also possible in closed heating and cooling systems. Weak points, e.g. non-diffusion-tight plastic pipes, allow permanent penetration of oxygen (O_2). Surface corrosion occurs in connection with water, which leads to a continuous material removal. The intensity of the surface corrosion depends mainly on the oxygen content and time. Silted systems are not only susceptible to faults, but also work with massively reduced efficiencies. The quality of the system water in silted plants is often unstable and moves mostly at the limits of the required values at badly blended points. This leads to local, respectively, selective corrosion (pitting) and the feared breakthroughs. Sludge deposits strongly affect the heat transfer. Although the performance data of e.g. heat exchangers constantly deteriorate, the negative effects are often recognized very late.

1.3.1 New constructions und restorations

New constructions:

For larger new systems, it is useful to use a JUDO FERROCLEAN sludge separator from the outset. Thanks to the simple operation, it is possible to check the system water quality at any time and to determine, with the help of the magnets and the magnesium anode, whether the system corrodes. Continuous corrosion is prevented and no sludge can settle.

Restorations:

In the case of refurbishments, a water analysis and accurate inventory of the hydraulic system should be carried out beforehand. As a result, the correct installation location for the JUDO FERROCLEAN sludge separator can then be determined. Depending on the system, it may be useful to plan several small models decentrally. For large systems with floor heating systems, e.g. residential settlements or residential buildings with central heat generation, JUDO FERROCLEAN sludge separators are installed at the substations, e.g. decentrally. In the case of cooling systems, the installation location is usually selected in the main mass flow in the control center.



1.3.2 System water analysis



To check the system water status in a heating or cooling system, a system water analysis must be carried out!

It should be noted that the oxygen content can be measured in the system water only locally, laboratory evaluations are useless and inconclusive!

In order to obtain a statement about the state of the system water, the following values usually have to be analyzed:

- pH Value
- Conductivity
- Oxygene content
- Percentage of dissolved iron / total iron
- Possible degree of hardness

1.4 Warranty

The warranty is valid in accordance with our general terms of sale and delivery only if

- The JUDO sludge separator is used solely for its intended use and its system components are not opened, tampered with or incorrectly treated in any other way,
- Safety guards are used and these are not manipulated or removed,
- The operating conditions correspond to the technical specifications,
- Inspection and maintenance are performed according to DIN EN 806-5 2012,
- Repairs are only performed with original spare parts by JUDO customer service or authorised technical personnel.

All work must only be performed by qualified and authorised technical personnel.

1.5 Type label

The type label is located on the front side of the steel tank (see Chap. 3.3)

So that we can more quickly process questions or orders, please specify the type label data.



The optional insulation completely encapsulates the steel container. The insulation must be removed to be able to read the type plate!



2 Safety

2.1.1 Intended use

JUDO FERROCLEAN sludge separators are used for the separation and flushing of magnetite sludge (Fe_3O_4) and hydrodynamically optimized air separation in closed heating and cooling systems in non-explosive rooms with a non-condensing and non-aggressive atmosphere within the scope of the possibilities of use stated in these installation and operating instructions.

Intended use also includes the reading of these installation and operating instructions, adherence to all the safety conditions and instructions contained within them and the performance of inspection and maintenance work at the prescribed time intervals.



Attention

Other uses are not compliant with the intended use and not permitted!

JUDO Wasseraufbereitung GmbH will not be responsible for the resulting damage, the operator alone bears the risk!

2.2 Duties of the operator





The operator of the JUDO sludge separator is responsible for the following:

- Only allow qualified and authorised technical personnel to perform inspection, operation, maintenance, service and repair as well as the training of the operating personnel.
- Performance of inspection and instigation of scheduled servicing as part of the regular maintenance of the corresponding heating and / or cooling system at the prescribed intervals (observe DIN EN 806-5: 2012).
- Constant availability of the installation and operating instructions at the place of use of the JUDO FERROCLEAN sludge separator.
- Perform regular visual inspection of the JUDO FERROCLEAN sludge separator according to the conditions of use and the hazard potential to prevent leaks and damage.
- Storage obligation and transfer of the installation and operating instructions to new owners.
- Obligation to insert supplements into the installation and operating instructions.




2.3 Symbols and their meaning

2.3.1 Hazard notes in the installation and operating instructions

Symbol	Meaning	Symbol	Meaning
	Warning Risk of injuries!		Warning Danger due to hot surfaces or danger due to scalding!
	Warning Danger due to magnetic field!		Attention Risk of malfunctions or damage!




Tab. 2: Hazard notes in the installation and operating instructions

2.3.2 Hazard notes on the sludge separator

Symbol	Meaning
	Caution Hot water - Risk of scalding!


Tab. 3: Hazard notes on the sludge separator

2.3.3 General notes

Symbol	Meaning	Symbol	Meaning
	Read and understand the installation and operating instructions		General information and user tips!
	Correct disposal of scrap and operating resources!		

Tab. 4: General notes

2.3.4 Personal protective equipment

Symbol	Meaning
	Wear protective gloves! To protect the hands from damage caused by external effects of a thermal nature.

Tab. 5: Personal protective equipment (PPE)



2.4 General safety instructions



Warning

Any working methods that might endanger safety must be avoided!

Non-observation of these installation and operating instructions and the safety instructions herein may endanger persons as well as the environment and the JUDO FERROCLEAN sludge separator itself.



Warning

Due to the magnetic fields of the high-performance magnets, a sufficient distance to the JUDO FERROCLEAN sludge separator must be ensured for magnetic data storage devices as well as electrical and electronic devices!

Persons with heart pacemakers must keep a safety distance of min. 0.5 m from the JUDO FERROCLEAN sludge separator!



Warning

Danger due to hot surfaces or danger due to scalding!

Wear protective gloves!

The safety instructions do not take into account

- Random happenings and events that may occur during installation, operating and maintenance,
- Location related safety conditions for the observance of which the operator is responsible, even for contract installation personnel.



Attention

Unauthorised conversions and changes to the JUDO sludge separator or tampering with system components are forbidden for safety reasons!

Do not perform any changes, make any additions or carry out any conversions that could impair safety without the manufacturer's written approval!

Never remove safety equipment or deactivate it by making changes to the JUDO sludge separator!

The safety instructions of these installation and operating instructions must be observed without fail, additional industry-wide and in-house safety instructions remain in force!

Only operate the JUDO sludge separator with the caps and covers of all system components correctly closed!

Fault-free operation of the JUDO sludge separator is only ensured if original spare parts and components are used in the combination described in these installation and operating instructions, otherwise there is a risk of malfunctioning or damage!

Only allow authorised technical personnel to carry out repairs!

Loose connections must be tightened immediately and damaged system components immediately replaced!



2.4.1 Safety instructions for mechanical working



Warning

Before cleaning, maintenance or repair work ensure that the JUDO FERROCLEAN sludge separator is hydraulically depressurised!



These activities must only be performed by JUDO customer service or authorised technical personnel, who know and understand the overall system of the JUDO sludge separator and its environment!

2.5 Transport, storage, disposal



Attention

Transport the JUDO sludge separator with care in an upright position, do not knock over, do not transport when there is a risk of frost, also protect against dust and dirt effects!



Attention

Dry, frost-proof storage location with aggressive atmosphere!

Protect the JUDO UV sludge separator against coarse dust and dirt as well as UV radiation and direct sunshine!

Recommended storage temperature: +4 °C to +40 °C!



Scrap and operating resources must be disposed of in accordance with the valid regulations or routed for reuse and recycling (for scrap and operating resources that are subject to particular conditions, observe the corresponding instructions on the packaging or obtain the necessary information from the responsible disposal facilities, specialist companies or from the manufacturer/supplier)!



3 Product information

3.1 Scope of supply

JUDO FERROCLEAN sludge separator comprising

- Steel container welded with flange connection and support legs
- 1 set of high performance magnetic rods (4 pieces)
- Magnesium anode
- Ventilator with shut-off cock
- Shut-off cock input flush water as well as output blow down
- Installation and operating instructions



Using your order, check the supplied parts for completeness and sound condition!

The product is supplied fully assembled!

Damage caused by transport must be reported inside 24 hours, otherwise no damage claims can be settled for insurance reasons!

3.2 Function description

The high-performance magnets of the JUDO FERROCLEAN sludge separator bind the magnetic sludge (magnetite) in the medium, at the same time the oxygen is decomposed via the magnesium anode. The gas bubbles carried by the flow trap and collect in an internal separation device, from there they rise in a calm zone and are removed from the circulation system via the automatic breather.

The JUDO FERROCLEAN sludge separator operates at a constant flow rate. The entire amount of water is filtered continuously, the magnetite sludge circulating in the system for a long time is being completely covered by the high-performance magnets.

In a second chamber, the water is passed through a magnesium field which settles the existing oxygen concentration.

Depending on the degree of sludge in the system, the deposited magnetite sludge must be rinsed from the JUDO FERROCLEAN sludge separator at regular intervals.



3.3 Product overview

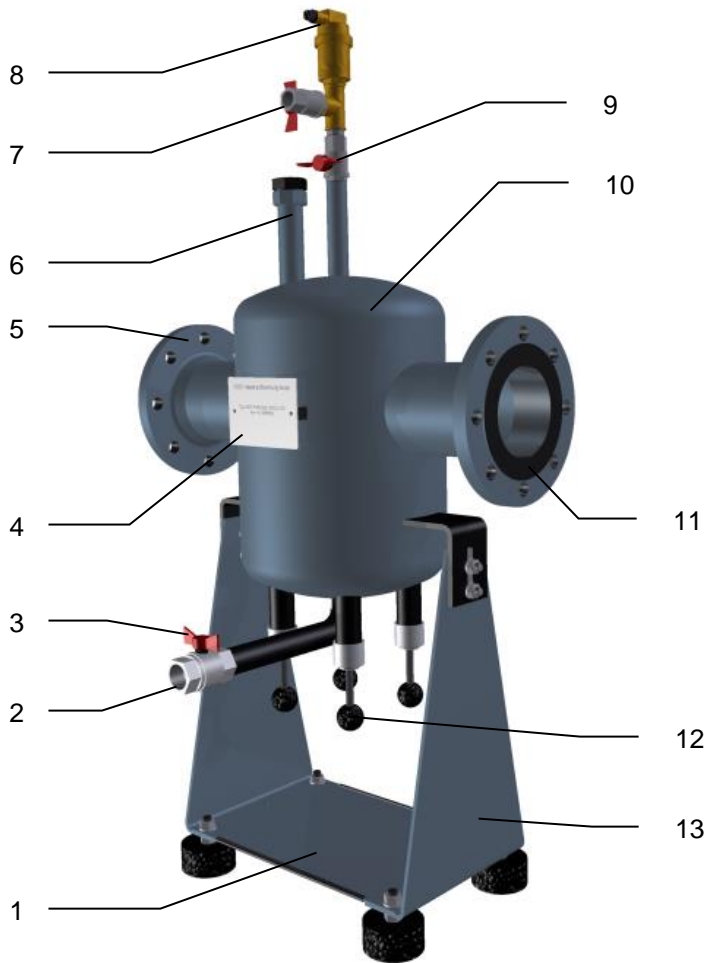


Fig. 1: Overview

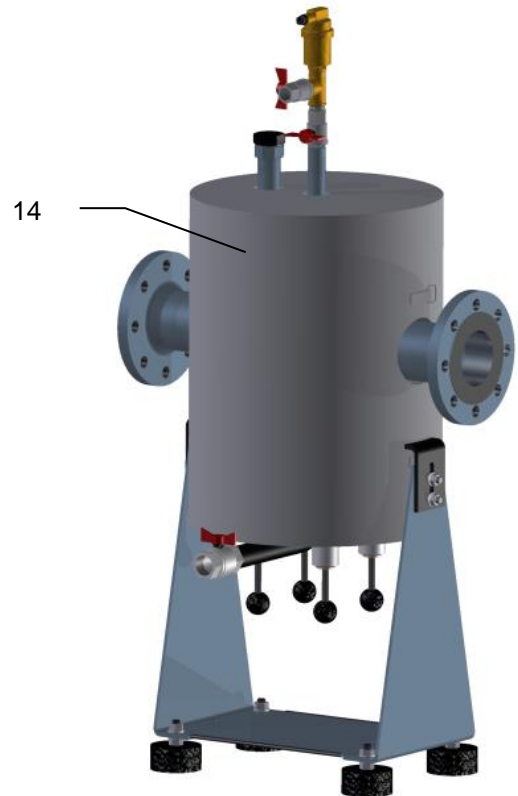


Fig. 2: With insulation

- | | |
|----------------------------------|---------------------------------------|
| 1 Base plate of the support legs | 8 Bleeding device |
| 2 Sludge | 9 Bleeding shut-off valve |
| 3 Sludge shut-off ball valve | 10 Steel container welded |
| 4 Type label | 11 Flange connection |
| 5 Flange connection | 12 High-performance magnetic rods, 4x |
| 6 Magnesium anode | 13 Support legs |
| 7 Flushing water shut-off valve | 14 Insulation (optional accessory) |

Installation and operating instructions: JUDO FERROCLEAN sludge separator JFS 2 1/2" – 8"

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JUDO Wasseraufbereitung GmbH

Postfach 380 • D-71351 Winnenden

Tel. +49 (0)7195-692-0 • Fax +49 (0)7195-692-188

E-Mail: info@judo.eu • judo.eu



3.4 Technical data

Performance data	JFS	2 ½"	3"	4"	5"	6"	8"
Rated flow	[m³/h]	12	17	30	50	80	130
Mechanical, hydraulic data							
Nominal diameter		2 ½"	3"	4"	5"	6"	8"
Flush water connection (inlet)	["]	½ IG					
Sludge connection (to sewer)	["]	1 IG					
Max. permissible operating pressure	[bar]	16					
Ventilation effect up to max.	[bar]	10					
Pressure drop (at rated flow)	[bar]	< 0,01					
Permissible temperature of medium	[°C]	6 - 130					
Weight							
FERROCLEAN sludge separator	[kg]	48	52	58	64	70	76

Tab. 6: Technical data

3.4.1 Accessories

Designation	Order no.
JUDO insulation for model JFS 2 ½"	8057501
JUDO insulation for model JFS 3"	8057502
JUDO insulation for model JFS 4"	8057503
JUDO insulation for model JFS 5"	8057504
JUDO insulation for model JFS 6"	8057505
JUDO insulation for model JFS 8"	8057506

Tab. 7: Accessories



Accessories are not supplied!

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E-Mail: info@judo.eu • judo.eu



3.4.2 Dimensions

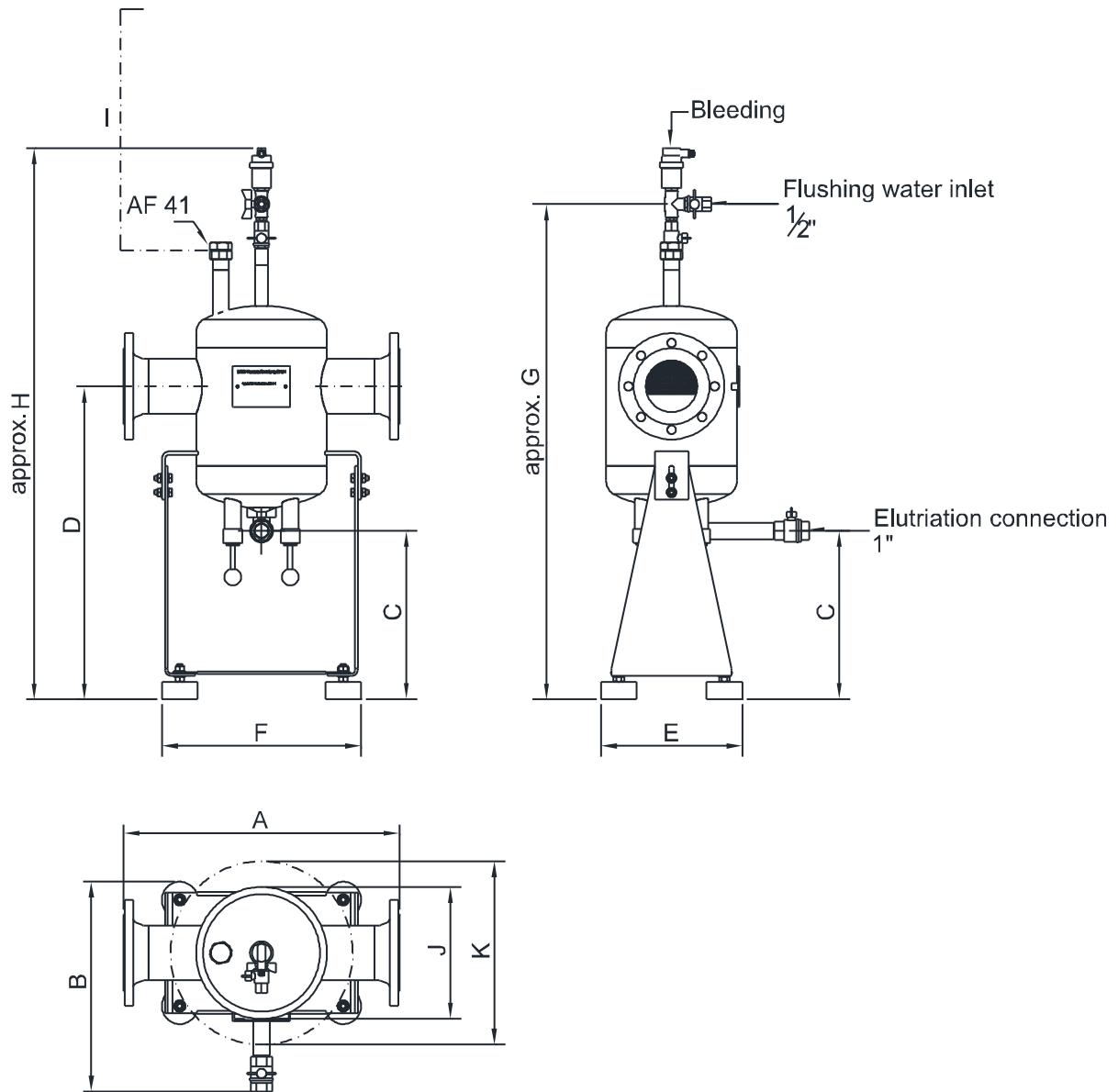


Fig. 3: Dimensions

Model	A	B	C	D	E	F	G	H	I	J	K*
JFS 2 1/2"	575	435	349	655	295	416	1026	1143	500	273	373
JFS 3"	575	435	349	655	295	416	1026	1143	500	273	373
JFS 4"	575	435	349	655	295	416	1026	1143	500	273	373
JFS 5"	575	435	349	655	295	416	1026	1143	500	273	373
JFS 6"	575	435	349	655	295	416	1026	1143	500	273	373
JFS 8"	575	435	349	655	295	416	1026	1143	500	273	373

Tab. 8: Dimensions

* With JUDO insulation (optional accessory)

Installation and operating instructions: JUDO FERROCLEAN sludge separator JFS 2 1/2" – 8"

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E-Mail: info@judo.eu • judo.eu



4 Installation



Attention

A sufficiently sized floor drain (in accordance with DIN EN 12056) must be installed at the place of use for the eventuality that leaking of the JUDO FERROCLEAN sludge separator or its feed pipe could result in extensive damage!

Assure yourself that prior to connection of the pipes no impurities can enter the JUDO FERROCLEAN sludge separator from the pipe system (e.g. residues from installation work)!

Accordingly cleaning of the entire new installation may be necessary!

4.1 Requirements for the place of installation



An on-site bypass (bypass) with on-site shut-off valve is provided in order to avoid interruptions in operation of the system during maintenance and repair work on the JUDO FERROCLEAN sludge separator (see mounting example in the bypass Chap. 4.3, Fig. 6)!

- The JUDO sludge separator must be installed in a dry, frost-proof location with a condensation-free and non-aggressive atmosphere.
- Ensure there is enough space available for installation, maintenance and repair work and also for ready accessibility.
- An adequately sized sewer connection in compliance with DIN EN 12056 must be fitted to drain away any permeate without backing up occurring.
- The permeate line must be fixed to the permeate connection to prevent scalding by hot water. It must be in the same dimension as the permeate connection and must be laid steadily downwards to the sewer, with a free outlet above the sewer connection.
- If a retention pond (pump sump) is installed for the waste water, it must be ensured that the pump used there can drain the waste water off and/or that an alarm is triggered upon “overflow” of the retention pond.



4.2 Important installation notes



Attention

Loads occurring, e.g. due to temperature fluctuations, may have to be compensated for by fitting of suitable on-site compensators!

Alternating loads, e.g. pressure surges, abrupt pressure changes and strong vibrations have to be avoided!



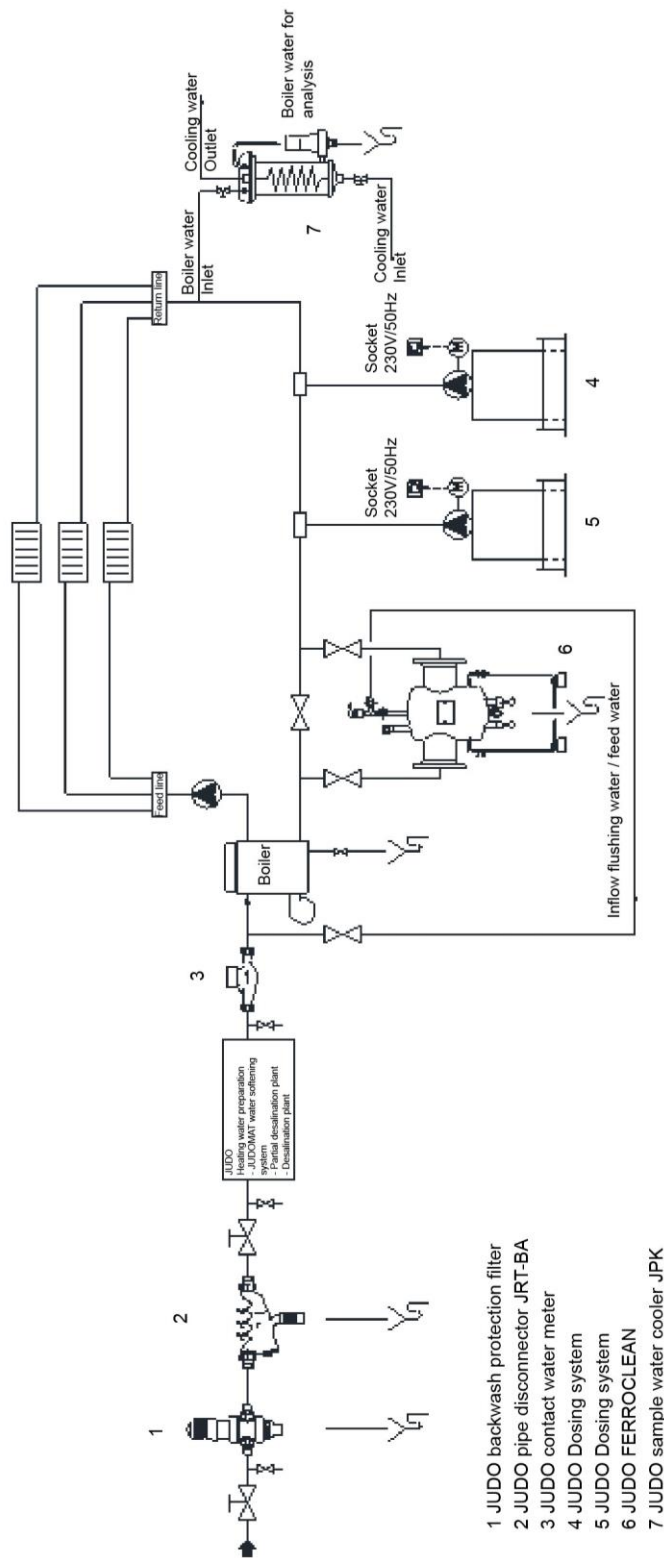
We recommend the use of a JUDO insulation (see Chap. 3.3 and 3.4.1) to prevent the formation of condensed water!

- Install the JUDO sludge separator on a level surface in a stable manner.
- The JUDO FERROCLEAN sludge separator can be installed in the flow or return of the system, the flow direction is freely selectable.
- The JUDO FERROCLEAN sludge separator can be integrated into the installation using commercially available valves and fittings. The pipelines on the customer's site must be mechanically stress-free and the connections must be mechanically stress-free and sealed.
- Shut-off valves must be installed on-site at the inlet and outlet side.
- In order to flush the JUDO FERROCLEAN sludge separator with fresh water, it must be mechanically stress-free sealed connected to the connection of the flushing water by means of a safety device provided by the customer. Alternatively, the JUDO FERROCLEAN sludge separator can be flushed with system water.
- For simple operation and maintenance ensure the specified space requirement is available.
- The system-specific operating data must be complied with.
- If the JUDO FERROCLEAN sludge separator is connected to the public water mains, installation upstream of the water meter is only permitted with the permission of the water company.
- Adhere to DIN EN 806, DIN EN 12056, DIN 1988-200, DIN EN 1591-4 and DIN EN 1092-2.
- Observe the separate installation and operating instructions of other devices and systems.
- Observe technical information, local installation regulations and general guidelines (e.g. EVU, VDE, WVU, DIN, DVGW, ÖVGW, SVGW).

Problem solutions and other installation options can be clarified by a JUDO technical consultation.



4.2.1 Installation example



- 1 JUDO backwash protection filter
- 2 JUDO pipe disconnecter JRT-BA
- 3 JUDO contact water meter
- 4 JUDO Dosing system
- 5 JUDO Dosing system
- 6 JUDO FERROCLEAN
- 7 JUDO sample water cooler JPK

Fig. 4: Installation example in the system return flow

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 E-Mail: info@judo.eu • judo.eu



4.3 Installation



Attention
Perform installation acc. to DIN-EN 1591-4



The JUDO FERROCLEAN sludge separator can be installed in the flow or return of the system, the flow direction is freely selectable!
Mounting means are not included in the scope of supply!

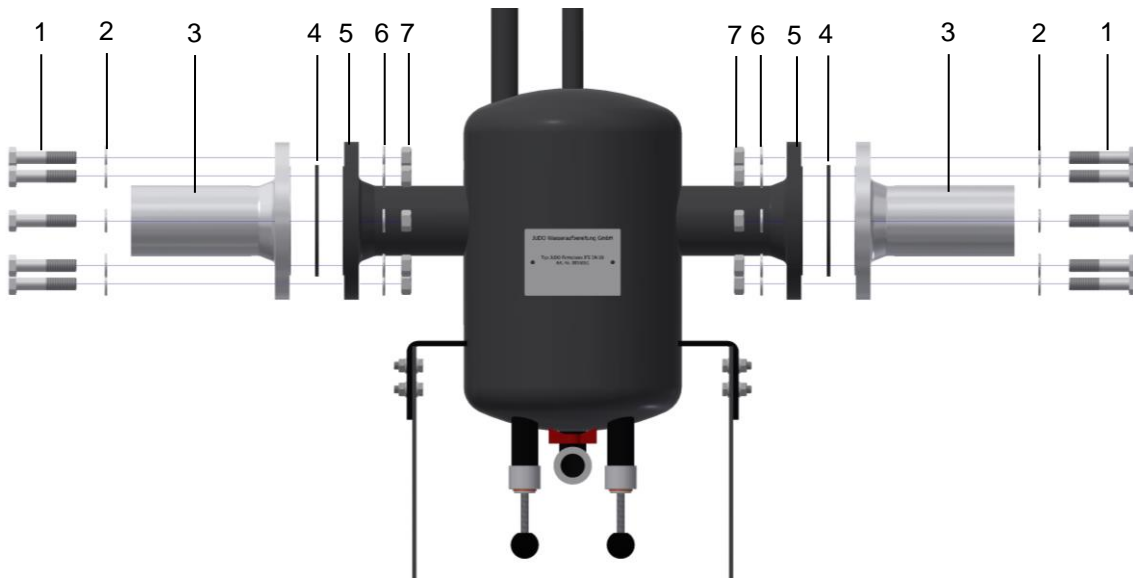
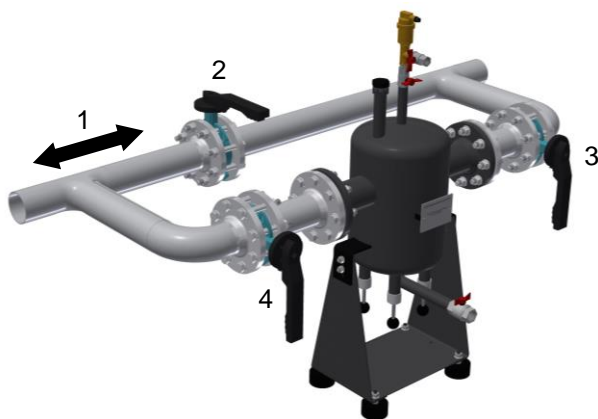


Fig. 5: Installation

- | | |
|--------------------------------|-------------------------------------|
| 1 Hexagon screw* | 5 Flange connection JUDO FERROCLEAN |
| 2 Washer* | 6 Washer* |
| 3 On-site flange connection | 7 Nut* |
| 4 Sealing of the fabric insert | |
- * Amount depending on model and amount of screw holes



- | |
|---|
| 1 Inflow or return flow of the system
(flow direction is fully selectable) |
| 2 Shut-off valve in the bypass |
| 3 Shut-off valve: |
| 4 Shut-off valve: |

Fig. 6: Example of installation with bypass



5 Commissioning



Attention

Prerequisite for commissioning is the correct installation of the JUDO FERROCLEAN sludge separator!



The commissioning must only be performed by JUDO customer service or authorised technical personnel!

The transfer confirmation (see Chap. 6.4) must be carefully filled out upon commissioning!

5.1 Initial commissioning

During initial commissioning, it must be ensured that

- no visible damage to the JUDO FERROCLEAN sludge separator as well as its system components is present,
- the JUDO FERROCLEAN sludge separator is properly integrated in the installation,
- all connections are checked for leak-tightness,
- the drainage system is ready,
- all magnetic rods are properly inserted in the JUDO FERROCLEAN sludge separator,
- the on-site shut-off valve is closed in the bypass,
- the onsite shut-off valves on the inlet side and outlet side (1+2) of the JUDO FERROCLEAN sludge separator are opened,
- the bleed valve (5) and shut-off cock of the ventilation (4) is opened,
- the shut-off cock of the flushing water (3) and the sludge shut-off valve (7).

5.2 Flushing interval



Depending on the degree of sludge in the system, the deposited magnetite sludge must be rinsed from the JUDO FERROCLEAN sludge separator at regular intervals.

For heavy sludging, a monthly rinse interval is recommended, in extreme cases, an even shorter rinse interval may be required at the beginning!

Normal sludge can be reduced to a half-year rinsing interval!



5.3 Flushing process

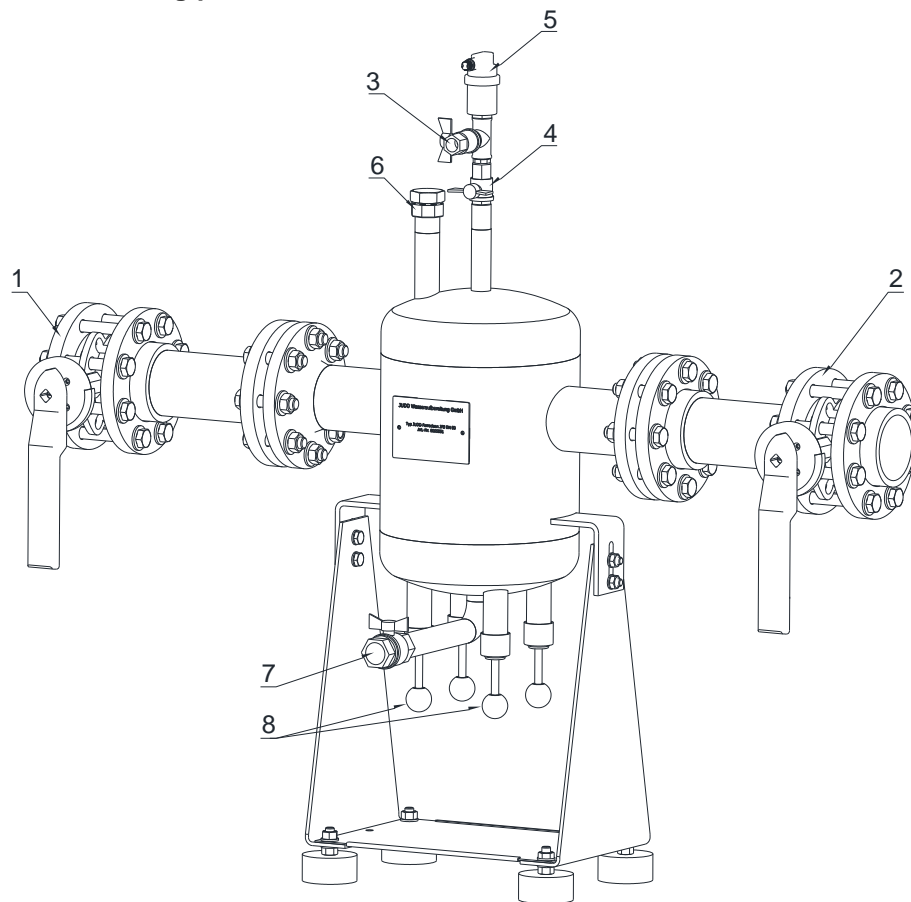


Fig. 7: Flushing process

- | | | | |
|---|-------------------------------|---|----------------------------|
| 1 | Shut-off valve onsite | 5 | Bleeding device |
| 2 | Shut-off valve onsite | 6 | Magnesium anode |
| 3 | Flushing water shut-off valve | 7 | Sludge shut-off ball valve |
| 4 | Bleeding shut-off valve | 8 | Magnetic rods |

5.3.1 Flushing process with fresh water

- ➔ Switch off the on-site circulation pump or open the on-site shut-off valve in the bypass.
- ➔ Close the shut-off valve (1+2) on the inlet and outlet side of the JUDO FERROCLEAN sludge separator.
- ➔ Pull all magnetic rods (8) out, up to the base plate of the support legs.
- ➔ Open the sludge shut-off valve (7).
- ➔ Open the flushing water shut-off valve (3).
- ➔ Open the on-site shut-off valve and flush out the sludge until clear water emerges from the channel, then close the shut-off valve on the customer's site.
- ➔ Close the flushing water shut-off valve (3).

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JUDO Wasseraufbereitung GmbH

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Tel. +49 (0)7195-692-0 • Fax +49 (0)7195-692-188

E-Mail: info@judo.eu • judo.eu



- ➔ Close the sludge shut-off valve (7).
- ➔ Insert all magnetic rods (8) properly again up to the stop.
- ➔ Open the shut-off valve (1+2) on the inlet and outlet side of the JUDO FERROCLEAN sludge separator.
- ➔ Switch on the onsite circulation pump or close the onsite shut-off valve in the bypass.

5.3.2 Flushing process with system water

- ➔ Switch off the on-site circulation pump or open the on-site shut-off valve in the bypass.
- ➔ Close the onsite shut-off valve (1 or 2, depending on direction of flow) on the outlet side of the JUDO FERROCLEAN sludge separator.
- ➔ Pull all magnetic rods (8) out, up to the base plate of the support legs.
- ➔ Open the sludge shut-off valve (7).
- ➔ Switch on the onsite circulation pump or close the onsite shut-off valve in the bypass.
- ➔ Flush out sludge until clear water exits the channel.
- ➔ Switch off the on-site circulation pump or open the on-site shut-off valve in the bypass.
- ➔ Close the sludge shut-off valve (7).
- ➔ Insert all magnetic rods (8) properly again up to the stop.
- ➔ Open the onsite shut-off valve (1 or 2, depending on direction of flow) on the outlet side of the JUDO FERROCLEAN sludge separator.
- ➔ Switch on the onsite circulation pump or close the onsite shut-off valve in the bypass.

5.4 Faults

Fault	Cause	Remedy
System components silted or defective	Insufficient flushing or too large of a flush interval	Perform sufficient flushing or shorten the flushing interval
	Changed system water parameter	System water analysis onsite as well as technical advice necessary
Increased oxygen content in the system water	Magnesium anode used up	Replace the magnesium anode

Tab. 9: Faults

If a fault cannot be rectified based on the information in Table 6, contact your JUDO customer service representative or an authorised specialist company.



Address: **JUDO Water Treatment Inc.**
240 Lesmill Road
Toronto, ON M3B 2T5
Canada

Phone: (416) 441-1556
Toll-free (Canada/USA) (866) 451-5836
Fax: (416) 391-4273
Toll-free fax (Canada/USA) (877) 761-3335
Email: info@judo-online.com
judo-online.com

Installation company:

5.5 Removal from service

- ➔ The JUDO FERROCLEAN sludge separator must be properly flushed (see Chap. 5.3.1 or 5.3.2).
- ➔ Close the sludge shut-off valve (7) after flushing.
- ➔ Close the onsite shut-off valve (1+2) on the inlet and outlet side of the JUDO FERROCLEAN sludge separator.
- ➔ Open the on-site shut-off valve in the bypass and switch on the onsite circulation pump.

6 Inspection, maintenance, service



Warning

Before cleaning, maintenance or repair work ensure that the JUDO FERROCLEAN sludge separator is hydraulically depressurised!



Warning

**Danger due to hot surfaces or danger due to scalding!
Use protective gloves!**



Servicing and maintenance must only be performed by JUDO customer service or authorised technical personnel and while adhering to the applicable safety conditions! Orderly and systematically performed servicing is the underlying requirement for a fault-free long service life of the JUDO FERROCLEAN sludge separator!

The attached maintenance protocol (see Chap. 6.4) serves as a copy template for the creation and proper management of an ongoing maintenance book!



According to DIN EN 806-5:2012, every technical plant requires regular servicing and inspection. The inspection must be carried out every six months by trained personnel, the maintenance at an annual interval, in the course of the maintenance of the relevant heating and / or cooling system. This is done by the JUDO Customer Service or an authorized specialist company, which will also take care of the replacement of defective parts or wearing parts.

We recommend that you set up a customer service contract, so that your JUDO sludge separator can be regularly tested for fault free operation.

- The magnesium anode has to be inspected during operation every six months, and must be replaced depending on the degree of consumption.
- The magnetic rods should be checked at regular intervals for correct insertion.

6.1 Replacing the magnesium anode

- ➔ Switch off the on-site circulation pump or open the on-site shut-off valve in the bypass.
- ➔ Connect the onsite shut-off valve (1+2) on the inlet and outlet side of the JUDO FERROCLEAN sludge separator.
- ➔ Unscrew the holder (SW 41) of the magnesium anode.
- ➔ Remove the used up magnesium anode from the holder and install the new magnesium anode properly on the holder.
- ➔ Screw in the holder properly and tightly, ensure that the flat gasket is correctly seated.
- ➔ Open the shut-off valve (1+2) on the inlet and outlet side of the JUDO FERROCLEAN sludge separator.
- ➔ Switch on the onsite circulation pump or close the onsite shut-off valve in the bypass.

6.2 Replacing the magnetic rods

- ➔ The JUDO FERROCLEAN sludge separator must be properly flushed (see Chap. 5.3.1 or 5.3.2).
- ➔ Close the sludge shut-off valve (7) after flushing.
- ➔ Remove the base plate of the support legs.
- ➔ Pull out the magnetic rods (8) and insert new magnetic rods properly up to the stop.
- ➔ Mount the base plate of the support legs properly again.
- ➔ Restore proper circulation (see Chap. 5.3.1 or 5.3.2).

6.3 Spare parts

Designation	Order no.
JUDO magnesium anode *	8430229
Complete magnetic rod	2050178

Tab. 10: Spare parts

* Wear part



6.4 Transfer confirmation and maintenance log



**The attached transfer confirmation must be carefully filled out upon commissioning!
The attached maintenance log must be carefully filled out during maintenance work and serves as a template for the creation and orderly keeping of an on-going maintenance book!**



Transfer confirmation

General data:

Building project: _____

Road: _____ No.: _____

Town: _____ Postcode: _____

 Contact: Ms Mr _____ Mobile: _____

Phone: _____ Mobile: _____

 Stand-in: Ms Mr _____ Mobile: _____

Phone: _____ Mobile: _____

JUDO FERROCLEAN sludge separator:

Order number: _____ Manufacturing number: _____

 Model: JFS 2 ½" JFS 3" JFS 4"

 JFS 5" JFS 6" JFS 8"

 Accessories: JUDO insulation

Local circumstances:

 Application area: Cooling system Heating system

 Installation situation: Supply line Return line

 Shut-off valve: Input side Output side

 Flushing with: Fresh water Fr water is secured via safety device

 System water

 Bypass: Bypass with shut-off valve

 Pipe material: Stainless Steel Copper Galvanized pipe Plastic

steel

Pressure conditions: Rated pressure: _____ [bar] Flow pressure: _____ [bar]

System water values: Conductivity: _____ [μS/cm] Total hardness: _____ [°dH]

Iron content: _____ [mg/l] Total iron content: _____ [mg/l]

Oxygen content: _____ [mg/l] pH value: _____

Remarks and notes:

--	--	--

Town and date

Signature customer / operator

Signature customer service

Installation and operating instructions: JUDO FERROCLEAN sludge separator JFS 2 ½" – 8"

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JUDO Wasseraufbereitung GmbH

Postfach 380 • D-71351 Winnenden

Tel. +49 (0)7195-692-0 • Fax +49 (0)7195-692-188

E-Mail: info@judo.eu • judo.eu



Maintenance log

General data:

Company: _____
 Road: _____ No.: _____
 Town: _____ Postcode: _____
 Contact: Ms Mr _____
 Phone: _____ Mobile: _____
 Stand-in: Ms Mr _____
 Phone: _____ Mobile: _____

JUDO FERROCLEAN sludge separator:

Order number: _____ Manufacturing number: _____
 Model: JFS 2 1/2" JFS 3" JFS 4"
 JFS 5" JFS 6" JFS 8"

Activities performed:

Leak check: Bleeding shut-off valve Bleeding device
 Flushing water shut-off valve Sludge shut-off ball valve
 State and function checked: Magnesium anode OK Bleeding device OK
 Magnetic rods OK Insulation OK
 Miscellaneous: Sludge flushed Magnesium anode replaced

Local circumstances:

Pressure conditions: Rated pressure: _____ [bar] Flow pressure: _____ [bar]
 System water values: Conductivity: _____ [µS/cm] Total hardness: _____ [°dH]
 Iron content: _____ [mg/l] Total iron content: _____ [mg/l]
 Oxygene content: _____ [mg/l] pH value: _____

Remarks and notes: (e.g. Repairs etc.)

Town and date	Signature customer / operator	Signature customer service