

HEATING SYSTEM PROTECTION – THE PRODUCT RANGE

OUR EXPERIENCE IN YOUR HANDS



COMPLIANCE WITH THE STANDARDS AND HIGH REQUIREMENTS.

Manufacturers in the field of heating systems have made enormous progress over the past few years with boilers, pumps and heat exchangers all becoming much more efficient.

All these improvements, however, also mean that they are much more sensitive to incoming water quality.

This means that both the heating systems manufacturer and the installing plumber must also pay much more attention to the incoming water quality by taking the norms and manufacturers' directives more into account.

Creating the right preconditions before installation and commissioning of the system plays a vital role in ensuring a long and efficient working life of the system as a whole and the water quality is the decisive factor here. Adherence to norms and manufacturers' requirements is an essential part in the installation and successful operation of any modern heating system.

For the professional, risk management has never been as important as it is today. The plumber is then legally not just a product user but a systems supplier with all the liabilities involved.

Meeting this responsibility includes ensuring the correct components are supplied, ensuring the finished system is safe for use and making sure the consumer has all operational information at his disposal.

Finally, he must document that his work has been completed with all due diligence and within the regulations and guidelines required. Should this documentation not be available and, in the worst case scenario, that the system malfunctions, then the manufacturer has the right to plead incorrect usage and refuse to honor his warranty on the product provided. The professional is also then exposed to the possibility of civil litigation for damages.

In short: Today it is more important than ever to fill with the correct water quality and to adhere to the manufacturers' requirements when installing heating systems.

What is the best thing to have when filling a heating system? ... A lot of experience!

JUDO offers manufacturers and systems providers a complete range of products covering all aspects of heating systems protection and conforming to the latest standards in norms and requirements.

All products backed up by over 80 years of experience in the heating water treatment field with all the benefits that this offers you.

On its domestic market, JUDO's activities started with a heating systems cleaning service making it one of today's foremost suppliers of modern technologies for water treatment. In this context, there is probably no other company on the market with this level of awareness for the importance of properly treated heating water, nor how to achieve it too.

Our experts are happy to place their knowledge at your disposal. Where required, with a water analysis and advice on the correct steps needed, including the choice of product most suited to the job at hand.

We look forward to hearing from you.



WHAT THE NORMS REQUIRE AND HOW TO GET IT RIGHT!

Firstly, it's important not to lose sight of the relevant norms as, even if they are not legally binding, should it come to a dispute then they often form part of the "generally recognised rules of technology" on which the case is decided.

As a professional, you always follow the manufacturer's guidelines for water quality as this would otherwise reflect on your quality or workmanship.

Norm conformity for water treatment starts at the planning stage and doesn't stop at the fill. The individual steps required are listed in the overview below.



Drinking water is not always, in itself, suitable as fill & top up water

Without further treatment, drinking water is only suitable for use in heating systems to a limited extent.

The working life and efficiency of a closed loop heating system depends heavily of the quality of the water used in it.

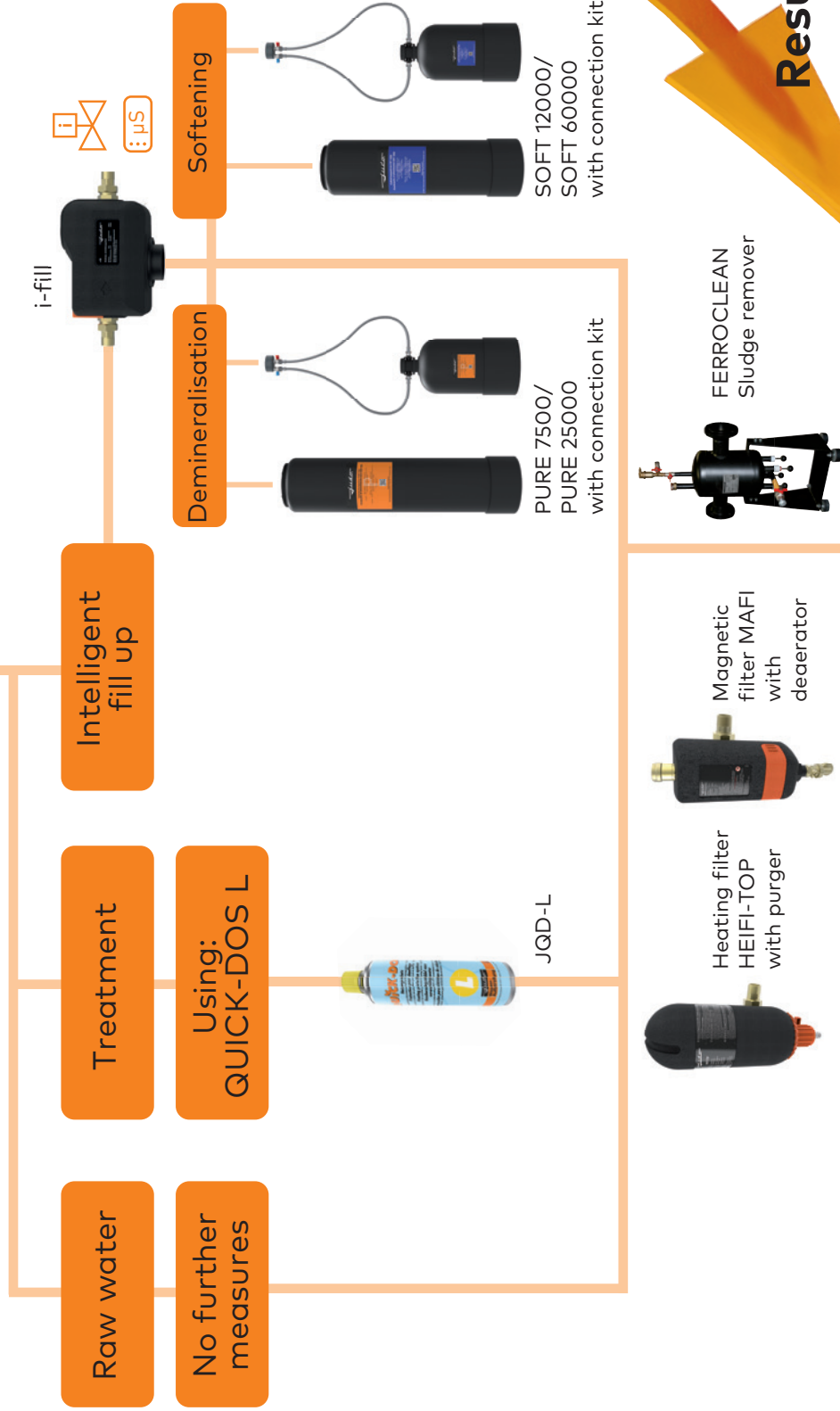
Manufacturers' water quality requirements Compliance to the norms VDI 2035, EN 1717 and DIN 1988 -100:

Filling station HEIFI-FÜL PLUS with BA type pipe separator for heating water fill up.

JUDO recommends:

Older systems should be cleaned through and then subject to the same treatment as new ones, JUDO offers here a range of tailor made solutions for all types of heating systems.

Attention: According to EN 1717 and DIN 1988-100 the installation of a pipe separator is required whenever a heating system is being installed.



Solution



Integrated conductivity sensor, membrane keyboard and digital display



Automatic top up and automatic shut off when cartridge capacity is reached

Result

Energy savings, security and a long working life for your heating system thanks to water treated by JUDO equipment.

SCALE BUILD UP AND WATER BASED CORROSION

EN 1717 and DIN 1988-100

The Norm EN 1717 regulates the "protection of drinking water from contamination in drinking water installations" and formulates "general requirements for safety devices to prevent drinking water contamination by backflow". In other words: here, among other things, the requirements for the use of so-called system separators are recorded.

DIN 1988-100 and equivalent standards relate to the protection of drinking water and the maintenance of drinking water quality.

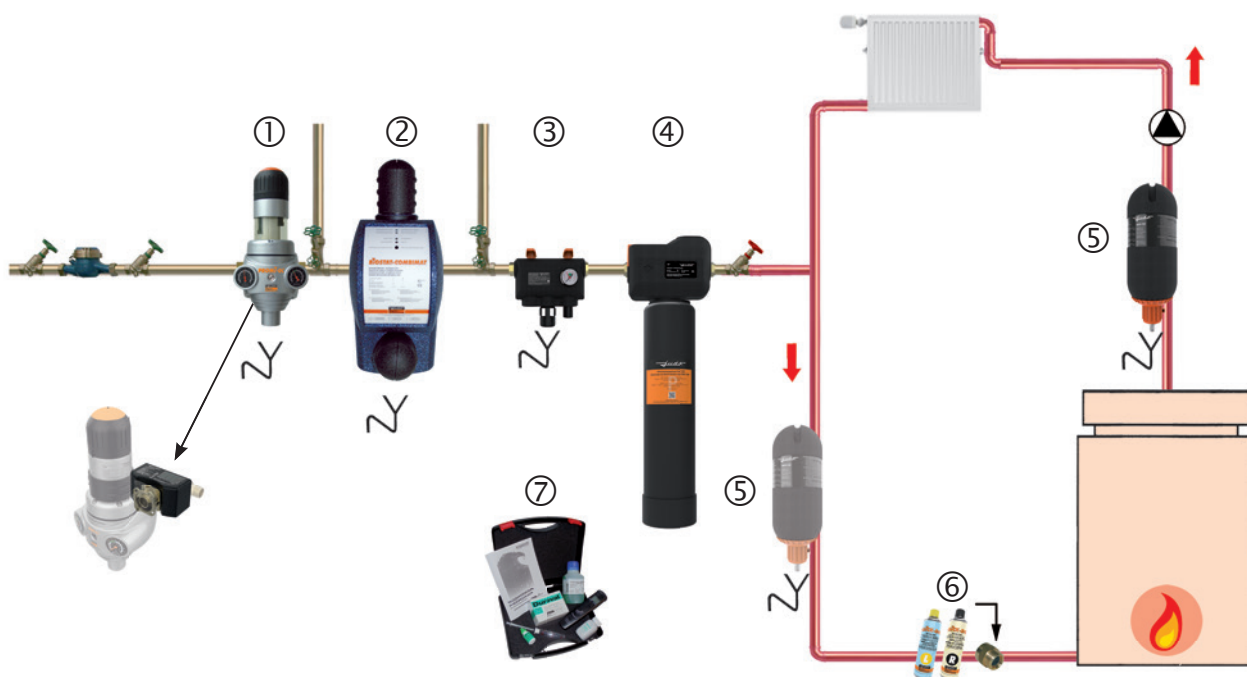
VDI guidelines 2035 and 4708

Technical rule VDI 2035, sheet 1, describes the measures that planners, installers and operators of systems with closed heating circuits must take to avoid corrosion damage and deposits.

Ensuring heating water quality: VDI 4708, sheet 1 + 2, pressure maintenance, ventilation and degassing.

Manufacturers recommendations on scale formation

Heating systems manufacturers recommend practical measures to prevent scale formation specially in regard to the necessary treatments that must be followed.



- ① JUDO PROMI domestic water station with silver coated sieve and integrated non return valve, suitable for use together with JUDO ECO-SAFE leakage protection unit which detects possible leaks and shuts down the water supply to avoid further damage.
- ② JUDO BIOSTAT-COMBIMAT – alternative scale protection with disinfection unit. DVGW approved.
- ③ JUDO HEIFI FÜL PLUS – for connection to the incoming water supply. With type BA pipe separator for heating systems fill according to the current norms, safety regulations, time saving measures and running costs management.
- ④ Fill and top up the system with totally or partially softened using the SOFT cartridge system in combination with i-fill or partially or totally demineralised with the PURE cartridge.
- ⑤ JUDO HEIFI-TOP – backwashable filter for heating loops with integrated deaerator.
- ⑥ Conditioner (QUICK-DOS L) or cleaner (QUICK-DOS R) for heating systems.
- ⑦ Analysis case type E (with tests for TH, pH, conductivity and measurement kit JTH-ML).

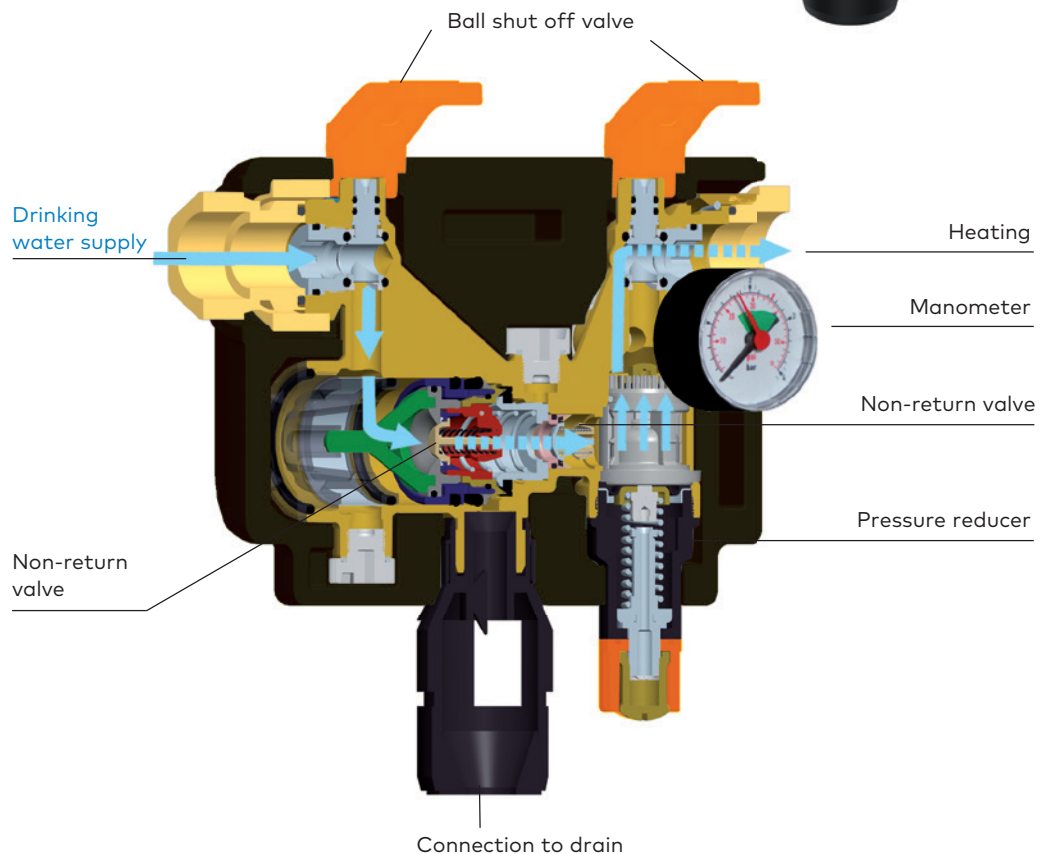
JUDO HEIFI-FÜL PLUS

There should be a lot more between your drinking water and your heating system than just the word 'and'.

The norm EN 1717 in the plumbing regulations stipulate that it is not permitted to connect an unprotected heating water feed line directly to the drinking water supply system. Heating feed lines must be fitted with a non-return valve to avoid treated heating water returning to the potable water supply. With the filling valve JUDO HEIFIFÜL PLUS, filling and refilling is not only safe and standard-compliant, but also particularly convenient.

The Advantages:

- ✓ Initial fill up in accordance with EN norms.
- ✓ Pipe separator type BA for protection up to level liquid category 4 as, for example, treated heating water.
- ✓ With 2 non return valves and a 3-chamber system offering a safe and secure separation of the heating and drinking water supply lines.
- ✓ The integrated pressure regulator allows for a fill or top up at actual operating pressure and thus reducing the risk of pressure surges during fill.



FILL AND TOP UP

When it comes to the filling or top up of heating systems, the first thing that needs to be addressed is the boiler manufacturer's requirements on water quality. Many now specifically require the use of demineralised water.

From that point on, the treatment of heating water is regulated by directive VDI 2035. Consequently operation is possible with mineralised or partially mineralised water each of which has advantages but also drawbacks.

DEMINERALISATION

Demineralisation involves the total removal of mineral salts dissolved in the water supply. Conductivity levels, therefore, sink.

The Advantages:

- ✓ The heating water with low salt content contains little to no hardness causing ions or electrolytes. Thus reducing the performance-hindering lime deposition. At the same time, the probability of corrosion will also decrease as a result of low conductivity of the low-salt heating water.
- ✓ The danger of bacterial colonisation is reduced.

SOFTENING

The sources of scaling, calcium and magnesium are removed from the incoming supply. All other mineral salts present in the supply remain. The conductivity remains unchanged.

The Advantages:

- ✓ A widespread and relatively easy procedure

The disadvantages:

- ✓ Once heated, there is a risk of so called auto-alkalination whereby CO_2 dissolved in the water is freed and forms a strongly alkaline sodium carbonate. The pH levels may also rise sharply and pass the 8.5 mark which can cause enormous problems with aluminium components

VDI guideline 2035, Sheet 1, Standard values for filling and top-up water

Heating capacity	Specific system volume < 20 l/kW	Total hardness max. > 20 l/kW	> 40 l/kW
up to 50 kW	N/A *	8,4 °dH	< 0,3 °dH
50 to 200 kW	11,2 °dH	5,6 °dH	< 0,3 °dH
200 to 600 kW	8,4 °dH	< 0,3 °dH	< 0,3 °dH
over 600 kW	< 0,3 °dH	< 0,3 °dH	< 0,3 °dH

* In systems with circulating water heaters, i.e. most wall-mounted thermal systems, and for systems with electrical heating elements, the value for the permissible hardness is 16.8 °dH.

Limit values for heating water

VDI 2035	Partially mineralised	Mineralised	
Conductivity at 25 °C μS/cm	< 100	100 -1.500	
Note	free of suspended solids		
pH at 25 °C	8,2 * -10,0		
Oxygen mg/l	< 0,1	< 0,02	Source: VDI 2035

Attention: Where aluminium components are in use, regular pH controls of water in the system is required.

* Where aluminium components are in use, the pH level should not exceed 9 as this increases the risk of corrosion.

JUDO i-fill

The filling system that does the thinking for you

The JUDO i-fill makes heating fill and top up easy, comfortable and safe. The system contains sensors for pressure and conductivity which gathers all necessary data to ensure a completely autonomous and automated fill and top up on a regular basis.

Once base details concerning the boiler, cartridge type used and quality of fill water need to be entered using the touch screen and the system is then able to start and effective and explicit fill or top up without further attention.

Once the heating system is operational, the JUDO i-fill monitors the systems pressure and starts an automatic top up where required. In addition it is also possible to program in certain parameters which, when reached, will automatically shut down the top up run. The system, therefore, that water outside the guidelines given enters the system, for example, after boiler damage. It's the system that needs filling, not the entire ground floor.



Delivery excluding Cartridges



This product can be operated from anywhere in the world via a free App *



The internet connection is encrypted via TLS.



This product has a potential-free contact



A LAN connection is available for connection to home network.



Integrated conductivity sensor, membrane keyboard and digital display



Automatic top up and automatic shut off when cartridge capacity is reached

* Optional: JUDO Connectivity Module for connection of i-fill, i-fill plus via LAN cable to Internal-Network or Internet; iOS/Android App and Web interface available, for world-wide access to extensive information, automated notifications and functions via JU-Control App.

The Advantages:

- ✓ A clear and easy to follow menu.
- ✓ Automatic, pressure-dependent top-up and filling selectable
- ✓ Automatic fill shut off when cartridge is exhausted, re-start at the push of a button.
- ✓ Regular self-testing: the system checks functionality of the valve every 30 days.
- ✓ Error report sensor can be connected to an external Smart Home system.
- ✓ Error and maintenance signal via digital screen.
- ✓ Optional: Connectivity-Module for connection via LAN cable to manage the equipment via an App or a web browser from anywhere in the world
- ✓ Integrated extraction point for Ironing water

pH

The pH value indicates the acidity level in a given liquid. The range involved here is from 0 to 14. Water with a value of 7 is classified as neutral. Values of 0 - 7 indicate the water is acidic, the lower the value, the higher the acid level. Values higher than 7 show that the water is alkaline.

A rise or drop of 1 on the pH scale indicates a change of x 10.

Electrical conductivity

Electrical conductivity shows the ability of a substance to transport electricity. The conductivity in water depends on the number of mobile, free ions it contains which is why demineralised water has a low conductivity.

JUDO filling blocks JUDO PURE / SOFT DEMINERALISATION / SOFTENING UNITS HOW, WHAT AND HOW MUCH?

Filling or topping up a heating system in accordance with the manufacturer's requirements and current norms is a task which can be tackled in future in a very innovative way with two new systems setting standards in method and precision of work.

The basis: absolutely precise measurement and calculation of the quality of fill water used.



This product is pre-fitted
for a potential-free contact

JUDO HEIFI filling block PURE

Demineralisation system

The new JUDO HEIFI filling block PURE contains a sensor for conductivity levels of the water produced and a electronic turbine water meter monitors the volume of water flowing through the system. Using this data the unit automatically determines the residual capacity of the cartridge in use.

The type of cartidge used, the incoming water hardness and the residual conductivity required needs to be entered via the touch screen.



Display showing
max. conductivity



Delivery
excluding
Cartridges



Integrated conduc-
tivity sensor,
membrane keyboard
and digital display

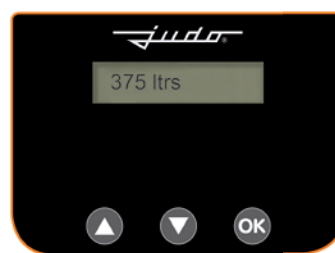
JUDO HEIFI filling block SOFT

Softening system

The JUDO HEIFI filling block SOFT provides softened water with all the information you need for an easy, safe and comfortable systems fill up.

Simply enter the type of cartridge used and the incoming water hardness into the unit. The system then calculates the exact residual capacity and lets you know when this has been reached.

Measurement kit included.



Display indicating residual capacity



Delivery excluding Cartridges

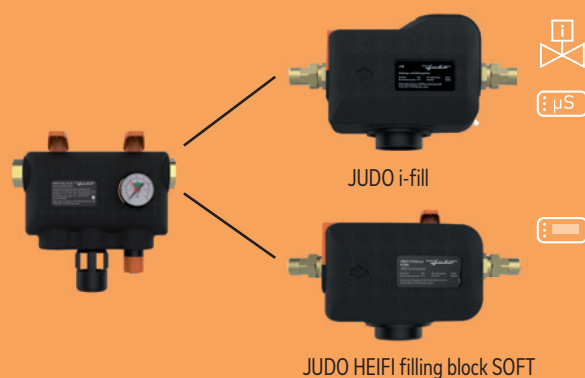
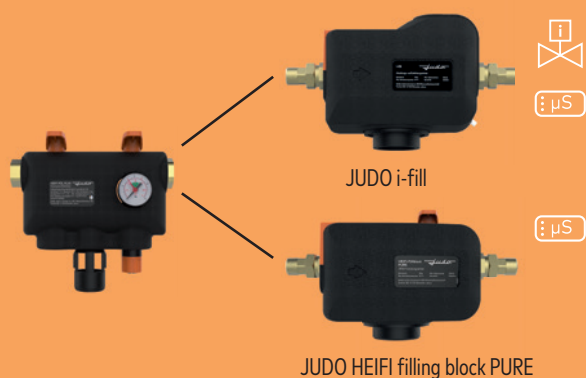
quantity measurement, membrane keyboard with digital display integrated

Integrated supply for your iron

Both the HEIFI-PURE and HEIFI-SOFT systems have an integral removal point so you can fill your iron with demineralised or softened water making your ironing more comfortable too.



JUDO FILLING SYSTEMS AND CARTRIDGE TYPES



CONDITIONING

Under certain circumstances, a further conditioning of the system water may be required. Directive VDI 2035 explicitly states "Where components made of aluminium are in use, further treatment (e.g. dosing with inhibitors) is indispensable in addition to softening and demineralisation to avoid corrosion."

Corrosion protection using inhibitors is, according to this directive, necessary during regular top ups (VDI 2035, para. 8.4.3).



JUDO's range of treatment solutions for heating loop systems is broad: from hardness stabilisation to the build up of protective film coatings, sludge removal and pH balancing thus prolonging the system's working life and avoiding damage and excess energy consumption.

JUDO QUICK-DOS L

Anodic corrosion inhibitor

Long lasting, activates and stabilises water hardness and forms a protective film on the pipe inside walls to protect from corrosion and scale build up. QUICK-DOS L is especially suited for use with aluminium components. Even where oxygen is freely present in the system, the anti-corrosive properties remain active long term. QUICK-DOS L has been tested and approved by a number of reputable boiler manufacturers. QUICK-DOS L is phosphate-free and one can is enough to treat 80 litres of circuit volume.

JUDO QUICK-DOS R

Systems cleaning solutions

For a well needed system clean up.



FOR LARGER INSTALLATIONS:

Dosing solutions THERMODOS L and R with the same content, operating principles and offering all the advantages of QUICK-DOS L and R. The dosing unit is water tight up to 6 bar.



EASY – QUICK – SAFE

Dosing the QUICK-DOS solutions is done using a JUDO QUICK-AN adaptor with screw attachment and non return function, simply:



- ✓ Screw QUICK-AN to a tap
- ✓ Open the tap
- ✓ Press aerosol can and hold for a few seconds
- ✓ Close the tap and you're done!

What used to be a project in itself, now requires just a few seconds.

FILTRATION AND DEGASSING

With new systems it cannot be completely avoided that particles are introduced to the system, e.g. residual particles left over from production or impurities picked up during installation.

But impurities may also be created during normal systems operation.

One of the main causes here is oxygen which has entered the system in the form of minute quantities of air.

Oxygen is highly reactive when in contact with metals used in the system's components and pipework. The best known outcome here is the result of oxydation: rust. Another type of outcome, a pre-stage of corrosion, is the formation of magnetic particles which, although harmless for the pipes, may lead to serious damage within the heating system as a whole.

In order to ensure an ongoing high level of efficiency and safety within the heating system, most importantly the magnetic particles, but also air in the system, need to be removed.



HOW DOES AIR GET INTO A HEATING LOOP... AND HOW IT GETS OUT.

Wherever water is used as a medium to transfer heat, the matter of air will turn up sooner or later. Because even if the system was designed and installed with the utmost of care, no system is 100% airtight. There are several ways for air to enter into a system:

- ✓ Through connection points
- ✓ Through expansion vessels
- ✓ Through fill up with untreated water
- ✓ Drawn in due to defects in the pressure regulation
- ✓ The use of non airtight materials, especially plastic tubing
- ✓ Through hairline cracks

Air must obviously be prevented from circulating in the system and should be removed as soon as possible as the oxygen it contains can lead to a host of other problems:

- ✓ Bad circulation, ratteling radiators
- ✓ Noise emissions from the radiators "coughing"
- ✓ The hydraulic balance within the system is affected

IT'S TIME TO GET CLEANED UP



Air is not just present in the system in a gas form. It is also trapped in solution or as gas bubbles.

Water is perfectly capable of absorbing certain quantities of gas, how much depends on the temperature and pressure.

The capacity of water to absorb gasses drops as the temperature rises. Gas in solution is then liberated. This is, for example, usually the case when the system is filled with untreated water. Free air is the easiest to eliminate, either directly in the boiled or with the assistance of a rapid deaeration.

When it comes to gas bubbles, then a separator is the right choice to make. Here the bubbles are gathered on a brush or a screen surface where they gather and rise for venting which is exactly the way the JUDO HEIFI-TOP works, at the same time trapping rust particles in the filter not in the system.

Eliminating dissolved air requires a little more effort, but that is what the JUDO HEIFI-AIR-FREE is there for!

JUDO HEIFI-TOP

Backwashable filter with integrated deaerator for heating systems

Air, rust, sand and small corrosive particles are all causes of, amongst other things, excessive energy consumption, noisy radiators and damage to heat exchangers and circulating pumps. There is a good reason why VDI 2035 recommends the installation of a filter within the heating loop. The JUDO HEIFI-TOP protective filter for heating systems effectively removes gas and even the smallest particles.

The concept: whereas the efficiency of conventional screen or cartridge filters depends on flow conditions and pressure, in the JUDO HEIFI-TOP the water is forced in a certain flow direction.

Water in circulation flows through the unit from the bottom up into a large filtration chamber containing a round brush which collects rust particles and air bubbles. Bubbles then grow and rise for collection to the top of the unit where they are then automatically vented out.

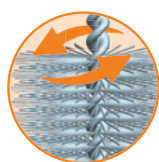
Filter cleaning is carried out by backwashing. When the handwheel is turned the brush inside is swivelled over lips in the inner casing knocking off the particles and air bubbles trapped in it. All particles are retained be they magnetic or not.

The Advantages:

- ✓ Filter chamber with a patented rotating brush for minimal water consumption and no follow-up costs *
- ✓ Large filter chamber and forced flow of heating water
- ✓ Enduring reduced air content cuts back on corrosion and banging in the pipe circuit
- ✓ Automatic venting - no manual venting after filling required
- ✓ Long working life and safe systems operation
- ✓ Installation possible in both horizontally and vertically running pipes thanks to the patented JUDO QUICKSET-E

The JUDO HEIFI-TOP filters and deaerates with a minimum systems pressure loss and no follow-up costs *

Large filter chamber with forced flow direction allows for longer time of exposure



Patented round rotating brush

The patented JUDO QUICKSET-E allows for installation in both horizontally and vertically running pipes.



heating water

Automatic deaeration

Air bubbles hydrodynamically separated and vented.

Protects the boiler from both magnetic and non-magnetic particles

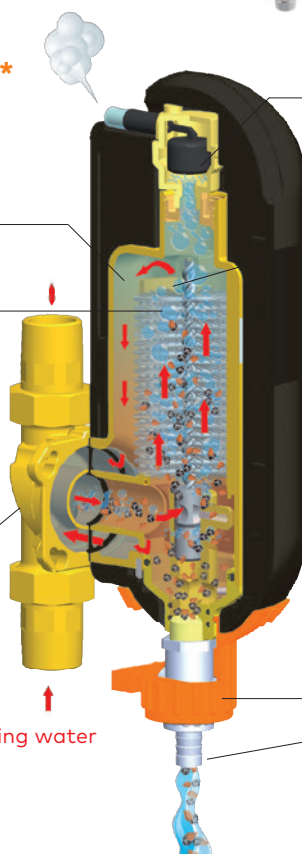
Energy efficient

Long lasting performance

Handwheel

Flush valve

* apart from water costs



JUDO MAFI

The efficient form of protection featuring centrifuge and magnets

The JUDO MAFI combats the dangers of particle with a process of optimal centrifugal separation combined with the strength of three high power magnets. Thus effectively retaining both magnetic and non-magnetic particles as well venting trapped gases.

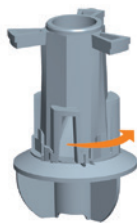
The Advantages:

- ✓ Centrifugal separation with filter insert at optimal flow rate
- ✓ Magnetic collector with three high-power magnets
- ✓ Automatic deaeration
- ✓ Constant pressure differential even at high dirt inflow
- ✓ Maximum of operational safety with no risk of blockage
- ✓ Installation possible in both horizontally and vertically running pipes



Water entering the system is guided in an optimal flow direction

A sophisticated insert within the filter makes the water rotate and flings particles in suspension to the filter walls when they sink to the unit base where they are collected and flushed out. Thanks to the sophisticated construction, the pressure differential within the unit remains constant even with high dirt load levels.



The magnets

The JUDO MAFI is fitted with three high-power magnets positioned directly on the cyclone chamber. Metallic particles are pulled out of the water and retained here. To clean, simply pull the magnet out of the filter body interrupting the magnetic field and allowing the particles to drop to the base to be flushed out.

Flexible installation

The JUDO MAFI can be installed in both horizontally and vertically running pipes which, along with its compact size allows for a very flexible installation.



The touch of detail for a design that's just right

The JUDO MAFI is completely insulated. The draw cove for the magnetic section is colour highlighted and ergonomically designed. In order to cut out all risk of scalding, the flush valve has a safety feature.



JUDO FERROCLEAN

Magnetite removal on a larger scale

JUDO FERROCLEAN (JFS) filters using high performance magnets to hold back metallic particles (magnetite). Trapped particles can be removed simply by flushing the system once the magnets have been deactivated. A magnesium sacrificial anode binds excess oxygen thus preventing further corrosion. The unit can be flushed out using either systems water or an external water supply, here we recommend our HEIFI-FÜL PLUS unit. An insulation cover is also available as an accessory.



The Advantages:

- ✓ Protects against magnetic sludge with hydro-dynamically optimized air separation
- ✓ Highly effective – the iron sludge is deposited on large, highly efficient magnets and by magnets deactivation the sludge can easily be flushed out
- ✓ Oxygen binding – via integrated magnesium-protective anode which binds the excess oxygen in place (without deposit effect)
- ✓ Conservation of resources – the cleaning is carried out with process medium or with external medium via an integrated raw water connection
- ✓ Insulation optional

JUDO HEIFI-AIR-FREE

The efficient degassing system for closed loop heating and cooling systems

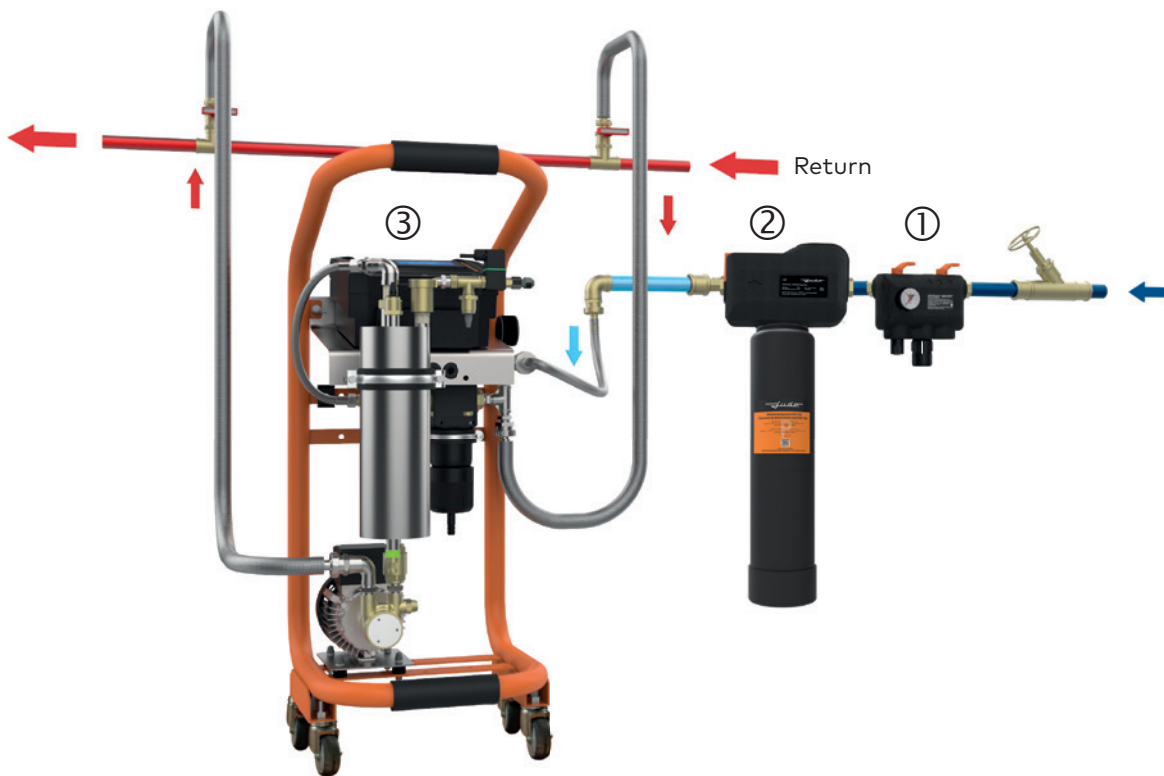
The JUDO HEIFI-AIR-FREE works on the principle of vacuum dynamic degassing. Water is pulverised in a chamber under vacuum, this leads to gases being unable to stay dissolved and being set free. This way the JUDO HEIFI-AIR-FREE reduces the amount of dissolved gases to practically zero.

The Advantages:

- ✓ Reduces energy use, maintenance costs and repairs
- ✓ Simple and fast connection even in limited space
- ✓ Integrated gas meter
- ✓ ECO mode for ongoing savings
- ✓ LCD-Touch screen with intuitive user guidance
- ✓ Graphical process representation
- ✓ Notifications history
- ✓ Safe storage of data on EPROM



INSTALLATION EXAMPLE:



- ① JUDO HEIFI-FÜL PLUS – The comfortable and norm compliant solution for the fill of heating systems with a perfect all round protection. Fixed installation unit with integral type BA pipe separator.
- ② Fill or top up with softened or demineralised water using JUDO i-fill.
- ③ JUDO HEIFI-AIR-FREE – degassing unit for heating water. Reduces levels of free and dissolved gases to almost zero. Combats erosion and corrosion. Economical to run thanks to ECO function.

TREATMENT IN CLOSED LOOP SYSTEMS

There are some instances under which heating water treatment is necessary after filling. This could be, for example, where a boiler has been changed for one with different water quality requirements. In this case you need a reliable inline treatment meaning no interruption to systems operation.

JUDO HEIFI-PURE & CLEAN

The universal treatment system

JUDO HEIFI-PURE & CLEAN treats water in closed loop systems without having to vent, refill or interrupt systems operation. The system filters, demineralises or softens the heating systems or process water with no interruption to systems operation. This is possible due to the integrated circulation which avoids malfunctions and allows high levels of treatment performance.

The Advantages:

- ✓ Standard heating water quality with demineralized or softened water
- ✓ Efficient and quick set up as a complete, mobile system
- ✓ Economical: as it treats water in closed circuits without the need to empty and refill and with no interruption to operation
- ✓ Efficient and versatile: softening or demineralisation of heating or process water in one single step whilst the system is still operational
- ✓ Everything at a glance: conductivity and flow are shown on the LCD display
- ✓ Safe: monitoring based on differential pressure and conductivity
- ✓ Communicative: optional GSM Module for sending status messages *
- ✓ Highly efficient circulation pump

* A separate SIM card from your provider is required to receive operational reports.

NEW
with high efficiency pump



Image with special accessories JHPC AP



optional GSM Module for the transmission of status report as text message.

JUDO ANALYSIS CASE TYPE E

Consisting of type A hardness testing kit, electronic measuring unit for pH and conductivity, calibration solution for pH and conductivity as well as performance record book.





Type JHF-F PLUS

Type i-fill
(Cartridge
not included)Type JHFB-P
(Cartridge
not included)Type JHFB-S
(Cartridge
not included)

JUDO HEIFI-FÜL PLUS filling station with type BA pipe separator and 2 shut off valves

Type	JHF-F PLUS
Pipe connection	¾"
Max. capacity l/h	approx. 800
Max. operating pressure, bar	10
Max. operating temperature exit °C	65
Max. temp. circuit water °C	90
Installation length, mm	202
Order No.	8060080

JUDO i-fill & i-fill plus *, the intelligent filling system

Type	i-fill	i-fill plus
Pipe connection (male threading) inch	¾"	¾"
Max. capacity l/h	300	300
Max. operating temperature °C	6	6
Max. operating temp. °C	30	30
Installation length mm	351	497
Installation depth (center pipe), mm	75	75
Total height (without cartridge), mm	191	228
Order No.	8068026	8068025

* i-fill combined with JUDO HEIFI-FÜL PLUS

Accessory	Order No.
JUDO Connectivity-Modul	8235010

JUDO HEIFI filling block PURE: demineralisation unit / JUDO HEIFI filling block SOFT: softening unit

Type	JHFB-P	JHFB-S
Pipe connection (male threading) inch	¾"	¾"
Max. capacity l/h	300	300
Max. operating pressure, bar	6	6
Max. operating temperature °C	30	30
Installation length mm	351	351
Installation depth (center pipe), mm	75	75
Total height (without cartridge), mm	191	191
Order No.	8068536	8068535

Analysis	Order No.
JUDO Hardness measuring device JGHP for determination of total hardness	8742120



Type PURE 7500


Type PURE 25000
with connection kit


Type SOFT 12000


Type SOFT 60000
with connection kit

JUDO PURE 7500 demineralisation cartridge

Disposable demineralisation unit PURE 7500 adapted for JUDO i-fill, JUDO HEIFI filling block PURE and JUDO HEIFI-REPURE	Order No.
Disposable demineralisation cartridge PURE 7500 Disposable replacement cartridge in reinforced synthetic material filled with high grade ion exchange resin, capacity 7.500 l x °dH, Capacity at 20 °dH * approx. 375 liters.	8068019

JUDO PURE 25000 demineralisation cartridge

Demineralisation unit PURE 25000 adapted for JUDO i-fill, JUDO HEIFI filling block PURE and JUDO HEIFI-REPURE	Order No.
JUDO connection kit consisting of adaptor, pressure resistant tubing and shut off valves.	8068532
JUDO demineralisation cartridge PURE 25000 Replacement cartridge made of reinforced synthetic material filled with layers of high grade mixed ion exchange resin, capacity 25.000 l x °dH, Capacity at 20 °dH * approx. 1.250 liters.	8068531
JUDO mixed bed ion exchange resin for the immediate refill of demineralisation cartridges, packaged in 25 liter sacs.	8545016

* Basis for calculation is raw water's total hardness. Capacities to 100 µS/cm.

JUDO SOFT 12000 softening cartridge

Disposable softening unit SOFT 12000 adapted for JUDO i-fill, JUDO HEIFI filling block SOFT and JUDO HEIFI-RESOFT	Order No.
Disposable softening cartridge SOFT 12000 Replacement cartridge in reinforced synthetic material filled with high grade cationic exchange resin, capacity 12.000 l x °dH, Capacity at 20 °dH to <0,5 °dH approx. 600 liters.	8068018

JUDO SOFT 60000 softening cartridge

Softening unit SOFT 60000 adapted for JUDO i-fill, JUDO HEIFI filling block SOFT and HEIFI-RESOFT	Order No.
JUDO connection kit consisting of adaptor, pressure resistant tubing and shut off valves.	8068532
JUDO SOFT 60000 softening cartridge Replacement cartridge in reinforced synthetic material filled with high grade cationic exchange resin, capacity 60.000 l x °dH, Capacity at 20 °dH to <0,5 °dH approx. 3.000 liters.	8068530
JUDO high capacity cation exchange resin for refilling of softening cartridges, packaged in 25 liter sacs.	8731020



Type JQD-L

Type JTH-L,
25 liters

Type JTH-D



Type JQD-R

Type JTH-R,
25 liters

Type JTH-D

JUDO QUICK-DOS L: Corrosion inhibitor

Type	JQD-L
400 ml content for a system containing, liters.	approx. 80
Packaging units	9 x 400 ml
Order No.	8838185

Type	JTH-L	JTH-L	JTH-L
Container content, liters.	1	5	25
Packaging units	6 x 1 l	1 x 5 l	1 x 25 l
Order No.	8650011	8838180	8838175

Accessories	Order No.
JUDO QUICK-AN adaptor with 3/4" connection type JQD-AN for connection to a tap for the injection of QUICK-DOS aerosol into a closed loop heating system (sold in packs of 5)	8838188
JUDO THERMODOS manual dosing pump JTH-D for easy and efficient dosing of JTH-L / JTH-R	8125501

Analysis	Order No.
JUDO measuring kit JTH-ML for use with JQD-L and JTH-L, recommended min. molybdenum level 150 mg/l, for approx. 30 measurements.	8742170

Documentation	Order No.
JUDO control journal for the recording of measured values.	8690063

JUDO QUICK-DOS R: Sludge removal solution

Type	JQD-R
400 ml content for a system containing, liters.	approx. 80
Packaging unit	9 x 400 ml
Order No.	8838186

Type	JTH-R	JTH-R	JTH-R
Container content, ltrs.	1	5	25
Packaging units	6 x 1 l	1 x 5 l	1 x 25 l
Order No.	8650010	8838178	8838176

Accessories	Order No.
JUDO QUICK-AN adaptor with 3/4" connection type JQD-AN for connection to a tap for the injection of QUICK-DOS aerosol into a closed loop heating system (sold in packs of 5)	8838188
JUDO THERMODOS manual dosing pump JTH-D for easy and efficient dosing of JTH-L / JTH-R	8125501

Documentation	Order No.
JUDO control journal for the recording of measured values	8690063



Type JHF-T 3/4" - 1 1/4"

JUDO HEIFI-TOP 3/4" - 2": Backwashable filter with integrated aeator for heating systems

Type	JHF-T	JHF-T	JHF-T	JHF-T *	JHF-T *
Pipe connection	3/4"	1"	1 1/4"	1 1/2"	2"
Flow rate m³/h	2	3	4	6	8
Nominal pressure loss (at 80 °C), bar	0.06	0.10	0.18	0.10	0.18
For systems up to, kW	approx. 40	approx. 60	approx. 100	approx. 150	approx. 200
Max. temperature of heating water, °C	90	90	90	90	90
Max. operating pressure, bar	10	10	10	10	10
Installation length, mm	180	195	230	252	280
Order No.	8060030	8060031	8060032	8060033	8060034

* 2 JHF-T 1" or 1 1/4" when using parallel connector.



Type JMFI 3/4" - 1 1/4"

JUDO MAFI 3/4" - 1 1/2": Magnetic filter with integrated deaerator

Type	JMFI	JMFI	JMFI	JMFI *
Pipe connection	3/4"	1"	1 1/4"	1 1/2"
Flow rate m³/h	1.0	1.5	2.0	4.0
Nominal pressure loss, bar	0.04	0.07	0.15	0.15
For systems up to kW	approx. 22	approx. 34	approx. 46	approx. 100
Max. temperature of heating water, °C	90	90	90	90
Max. operating pressure, bar	6	6	6	6
Installation length, mm	180	195	230	252
Order No.	8060083	8060084	8060085	8060086

* 2 JMFI 1" when using parallel connector.



Judo Analysis Case Type E

Accessories
Order No.
JUDO Analysis Case Type E

8690067

consisting of a stable polypropylene case, black, dim. 280 x 230 x 80 mm and the following units and accessories:
Total hardness measurement unit type A, 0 - 30 °dH, watertight combi-unit for the determination of pH values (0 - 14),
conductivity (0 - 3.999 µS/cm) and temperature (0 - 30 °C), pH calibration solution 7.0, 100 ml, conductivity calibration
solution and a treatment log book. Note: for sample temperatures up to 30 °C.



Type JFS

JUDO FERROCLEAN DN 65 - 200: Sludge remover with integrated deaeration

Type	JFS DN 65	JFS DN 80	JFS DN 100	JFS DN 125	JFS DN 150	JFS DN 200
Pipe connection	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200
Water flow rate m³/h	12	17	30	50	80	130
Pressure loss, bar	0.0012	0.0018	0.0022	0.0032	0.0040	0.0050
Rinse water entry inch	½"	½"	½"	½"	½"	½"
Flush connection inch	1"	1"	1"	1"	1"	1"
Installation length, mm	575	575	575	575	575	575
Order No.	8055050	8055051	8055052	8055053	8055054	8055055

Consumables	Order No.
JUDO magnesium anode	2050315

Accessories	Order No.
JUDO insulation for type JFS DN 65	8057501
JUDO insulation for type JFS DN 80	8057502
JUDO insulation for type JFS DN 100	8057503
JUDO insulation for type JFS DN 125	8057504
JUDO insulation for type JFS DN 150	8057505
JUDO insulation for type JFS DN 200	8057506



Type JHAF 400

JUDO HEIFI-AIR-FREE: Degassing system

Type	JHAF 60	JHAF 400
Pipe connection	¾"	¾"
Max. circulation volume (at 2 bar) l/h	60	400
For system volume, m³	up to 2	2 - 30
For systems up to, kW	up to 40	40 - 600
Min. / max. system pressure bar	1.5 / 5.0	1.5 / 5.0
Max. water temperature at system entry °C	60	60
Power supply, V/Hz	230/50	230/50
Height x width x depth mm	924 x 356 x 389	924 x 356 x 389
Weight, kg	approx. 25	approx. 25
Order No.	8060088	8060087

Accessories	Order No.
JUDO connection set for JUDO-AIR-FREE Consisting of: fl exible armoured tubing, nut connections: Operating pressure up to 10 bar; length 200 cm, for water temperatures up to 110°C.	8581010
JUDO top up kit for JUDO HEIFI-AIR-FREE Consisting of: control unit and magnetic valve, as the unit detects a pressure drop, the system automatically moves to "top up" mode. Top up water is then passed through the degassing system until optimal system's pressure levels are again reached and system returns to "loop degassing" mode.	8581011



Type JHPC 1
(Image with special
accessories JHPC AP)

JUDO HEIFI-PURE & CLEAN: Flexible system for water treatment by filtration and demineralisation / softening in closed loop heating systems

Type	JHPC 1
Infeed connection	1"
Outlet connection	¾"
Top up connection (to EN 1717)	¾"
Max. flow volume, l/h	700
Capacity of demineralisation, °dH x m³	40
Capacity for softening, °dH x m³	100
Resin volume, ltrs.	25
Min./max. operating pressure	2.5 / 6
Max. media temperature, °C	60
Max. ambient temperature, °C	40
Power supply V/Hz	230/50
Motor performance kW	0.37
Length x height x width, mm	605 x 1.016 x 595
Approx. weight, kg (incl. resin)	68
Order No.	8068030

Consumables	Order No.
JUDO cationic exchange resin Polystyrene / sulfonic acid based ion exchange resin, high levels of chemical resistance and mechanical stability and used for Ca and Mg removal in soft eners and for all cations removal in desalination, density 0,85 - 0,9 kg/l. Sold in 25 l sacks.	8731020
JUDO exchange resin for use in mixed bed cartridges, sold in 25 l sacks	8545016
JUDO GSM module For the transmission of status reports via text messaging *	2050293

* A separate SIM card from your provider is required to receive operational reports.

Quality MADE IN GERMANY and approved internationally!



The last word in German approvals for the German Gas and Water industries, the DVGW has been setting and controlling the highest levels of product efficiency, health and safety standards enjoyed by the German market for over 150 years and is accepted world wide as one of the best standard levels.



The CE-sign demonstrates that the manufacturer confirms that his product conforms with the requirements as set out in directive 765/2008 of the harmonized regulations law within the community. CE was set up to ensure the end user access to safe products within the 30 signatory states within the common European economic area.



ACS stands for "attestation of sanitary conformity" and is the standard used by the French authorities for materials used in direct contact with drinking water. The ACS symbol is an assurance of the highest standards in performance conformity.



The WaterMark is the certificate of approval for products used with drinking water in Australia and New Zealand. It confirms that this product conforms with the requirements of the ABCB and is allowed for use accordingly. The Australian Building Codes Board (ABCB) is the norming institute responsible for the development and care of regulations for building and sanitary installation.



The CSA, Canadian Standards Association, is an independent NPO with offices in 14 countries developing and controlling over 3000 norms governing safety, design and performance in the water industry. CSA is recognised as an equivalent standard by such renowned organisations as UL in the USA.



The BELGAQUA certificate from the Belgian Association of the water industry is awarded to products and materials conform to the requirements for contact with drinking water.



PZH is an institute certifying that products pose no danger to health or the environment when used in accordance with manufacturer's instructions. The PZH hygiene certificate is very important in the water treatment industry.



The GOST certificate is the official confirmation that these products comply with the national requirements for quality and safety in the Russian Federation.



The swiss water and gas association tests and certifies products ensuring these are in line with the highest current levels of quality, safety and technical suitability for use in gas and water installations.



The ZVSHK quality mark provides orientation and security for the plumbing and HVAC trade. With the title "Certified Manufacturer - Quality, Safety, Service", the ZVSHK uses a transparent procedure to honor manufacturers who provide the best possible support for the operational processes of the plumbing and HVAC specialist; through high product quality, extensive service offers and investment in research and development.



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Quality management standard ISO 9001 is one of the most widely accepted quality management approvals both on a national and international level. Our ISO 9001 certification goes to prove how seriously we take our high levels of quality management, and keep developing them further.



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