ptc system®

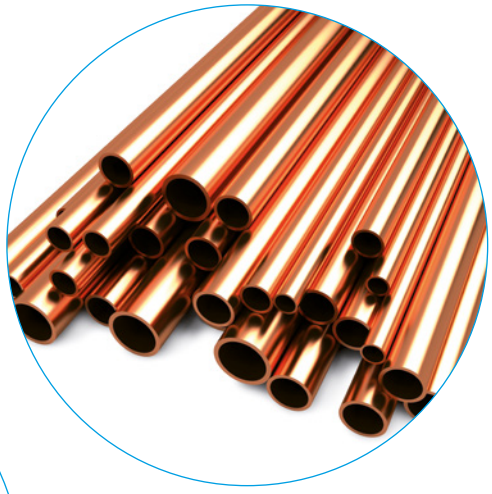
Ensuring technical purity!

Complete catalogue

03-2026

JETCLEAN GMBH
Industrielle Rohrreinigungssysteme

Technical purity for industry



Why clean?

The complexity of hydraulic systems is continually increasing. As a result, the purity of the installed components is becoming more and more significant. This applies not only to pumps and valves, but also to the pressure lines that connect them.

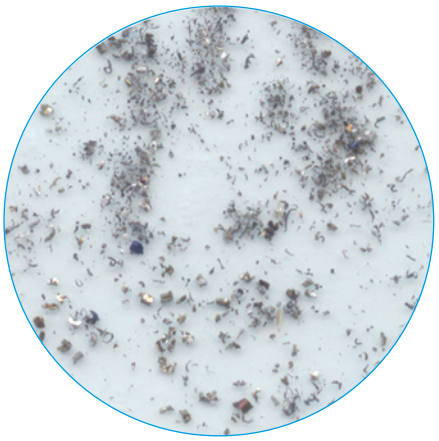
70 to 80 % of all downtimes can be traced back to **contamination in hydraulic fluids**. A particular danger is posed by large particles (> 50 µm) that enter the lines during the production process.These are called **primary contaminations.**

They can lead to initial damage and spontaneous breakdowns immediately following the commissioning process. Primary contamination also encourages the formation of further particles during operation. These are called **secondary particles.**

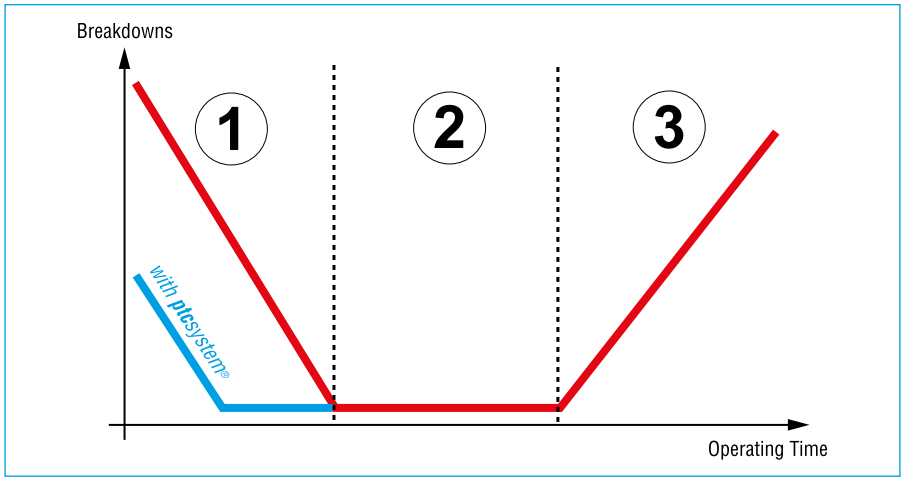
The following figure shows the effect that primary contamination has on the frequency of system breakdowns:

In **phase 1,** the system is still exposed to a high amount of primary contamination. It is highly likely that a breakdown will occur. The exposure is reduced as the operation progresses, for example by means of filtration. This reduces the likelihood of a breakdown. The exposure subsequently plateaus out and then increases once more in **phase 3.**

The initial level of exposure to primary contamination is reduced through the use of the ***ptcsystem***®. The likelihood of a breakdown is considerably lower in **phase 1** and the system enters **phase 2** at an earlier stage.



Metallic particles from a hydraulic pipe cut on both ends

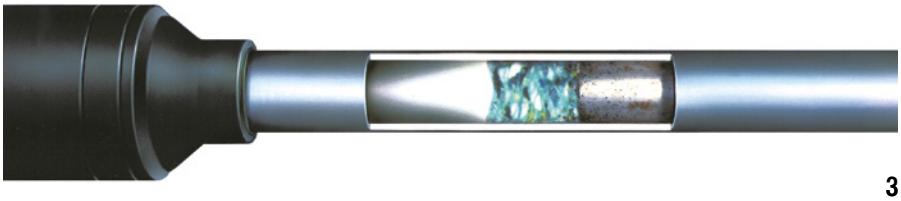


*ptc*system® functionality

The ***ptcsystem***® is easy to handle. It provides **effective protection against initial damage and premature component wear.**

Compressed air at a pressure of 6-8 bar is used to route a cleaning projectile through the lines needing to be cleaned, reaching a speed of up to 15 m/s in the process.

The degree of extraction is considerably higher than that achieved when blowing the hose out with air. Even complex bending geometries are cleaned reliably. The length of the lines does not influence performance.



*ptc*system® components

Standard launcher: easy to handle thanks to its ergonomic design.

Nozzles: available for all common tube and hose dimensions.
Special nozzles available on request.

Projectiles: available in various qualities and sizes depending on the application.

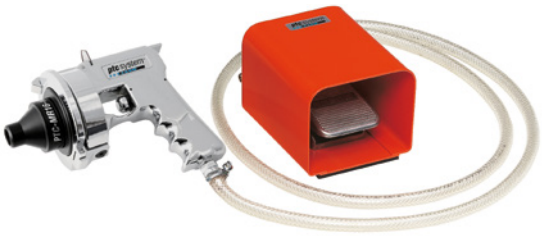
Additional application areas

In addition to hydraulics, the ***ptc**system*® can be used in a number of other applications. Examples:

- Final cleaning during tube manufacture
- Final cleaning of new tube bundle heat exchangers
- Removal of minor debris in tube bundle heat exchangers
- Cleaning product lines, e.g. in chemical systems, powder coating and injection moulding systems
- Performing maintenance on underfloor heating
- Cleaning stainless steel lines in the field of medical technology
- Air conditioning technology

*ptc*system® standard launcher

The chrome-plated launcher made of high-strength aluminium is an extremely durable tool, even under the toughest working conditions. Using a balancer, it can be hung up such that it is always ready to hand. With its ergonomically designed handle and rotatable compressed air connection, the ***ptcsystem***® launcher is also suitable for cleaning small product series. It can alternatively be supplied with a foot switch.



*ptc*system® ECO launcher

They are the economical solution for special cleaning tasks, such as where cleaning is needed only occasionally.

ECO DK6-40

For small quantities of hoses or tubes with constantly changing dimensions. In this case, the cleaning projectiles are first inserted into the lines by hand. Sealing is achieved by a cone for inside diameters up to 40 mm. This is used in hydraulic service vehicles, for example.

ECO IDK6-40

This is another ECO launcher for which the projectiles are inserted into the lines by hand. However, unlike the DK6-40 version, this launcher features an inner cone. This is a sensible option for use with small inner diameters.

ptcsystem® mini benchtop unit

When cleaning small and midsize series of, e.g. hydraulic hoses, the mini benchtop unit helps to obviate fatigue and to improve productivity. A single cleaning plug is inserted by hand. After that, the worker has his hands free, in order to handle both ends of the hose. The cleaning process is started by pressing a foot-pedal.

Features

- Uses proven technology of our semiautomatic benchtop unit
- Adjustable airflow
- Almost no set-up effort, only the nozzle has to be replaced
- Compatible to our standard ***ptcsystem***® nozzles
- Compress air regulator with manometer attached
- Can be combined with projectile verification system PTC-DKS-RL150

Technical details	
Suitable inner diameters	5 – 31 mm
Dimension L x W x H	550 x 220 x 270 mm
Weight	14 kg
Operating pressure	6 – 8 bar
Air consumption	approx. 800 l/min

*ptc*system® nozzles

The ***ptcsystem***® nozzles are made of durable and sturdy plastic. In addition to the standard tube and hose nozzles, we produce special nozzles in accordance with customer requests. These can be made of alternative materials or in special designs, for example.

Tube nozzles

Tube outer diameter	Tube inner diameter	Item
6 mm	3 mm	PTC-MR6-3
6 mm	4 mm	PTC-MR6-4
8 mm	5 – 6 mm	PTC-MR8-5
10 mm	5 – 6 mm	PTC-MR10-5
10 mm	7 – 8 mm	PTC-MR10-7
12 mm	8 – 11 mm	PTC-MR12-8
14 mm	9 – 11 mm	PTC-MR14-9
15 mm	11 – 14 mm	PTC-MR15-11
16 mm	10 – 14 mm	PTC-MR16-10
18 mm	14 – 17 mm	PTC-MR18-14
19 mm	13 – 15 mm	PTC-MR19-13
20 mm	14 – 17 mm	PTC-MR20-14
20 mm	18 mm	PTC-MR20-18
22 mm	16 – 21 mm	PTC-MR22-16
25 mm	15 –18 mm	PTC-MR25-15
25 mm	19 – 21 mm	PTC-MR25-19
25 mm	23 mm	PTC-MR25-23
25,4 mm	22 – 23 mm	PTC-MR25,4-22
28 mm	18 – 21 mm	PTC-MR28-18
28 mm	22 – 25 mm	PTC-MR28-22
28 mm	26 mm	PTC-MR28-26
30 mm	20 – 23 mm	PTC-MR30-20
30 mm	24 – 28 mm	PTC-MR30-24
35 mm	29 – 34 mm	PTC-MR35-29
38 mm	28 – 31 mm	PTC-MR38-28
38 mm	32 – 34 mm	PTC-MR38-32
42 mm	36 – 39 mm	PTC-MR42-36

Hose nozzles

Nominal width	Item
DN 5 – 3/16“	PTC-MS-DN5
DN 6 – 1/4“	PTC-MS-DN6
DN 8 – 5/16“	PTC-MS-DN8
DN10 – 3/8“	PTC-MS-DN10
DN 12/13 – 1/2“	PTC-MS-DN12
DN 16 – 5/8“	PTC-MS-DN16
DN 19 – 3/4“	PTC-MS-DN20
DN 25 – 1“	PTC-MS-DN25
DN 31 – 1.1/4“	PTC-MS-DN32
DN 38 – 1.1/2“	PTC-MS-DN40
DN 51 – 2“	PTC-MS-DN50

Can‘t find a suitable nozzle?
Contact us to discuss a special solution.

*ptc*system® cleaning projectiles – properties and usage

PW projectiles – Made of special homogeneous foam with medium-grade density

- Versatile and proven
- Projectile of choice for our bench-top units
- Also make cleaning in the case of slight cross-section constrictions possible
- Particularly suitable for removing loose particles from tubes and hoses
- PR3-PW up to PR26-28-PW in special antistatic quality

Premium projectiles – Made of special homogeneous high-density foam

- High tolerance for mechanical wear and tear
- Improved resistance against solvents
- To be used when the requirements in terms of cleanliness are particularly high

FLEX projectiles – Made of elastic homogeneous foam that quickly regains its shape after deformation

- Can also be used in the case of tight cross-section constrictions
- Recommended for subsequent cleaning of connected hose assemblies
- Suitable for cleaning tubes and hoses above 80.0 mm

Eco projectiles – Manufactured from recycelt composit foam

- Versatile
- Particularly suitable for removing loose particles from tubes and hoses
- Not suitable for use in our bench-top units
- Available for inside diameters 6,0 to 50,0 mm

Abrasive projectiles – Featuring a rough fibrous material on the front end

- Suitable for removing stubborn deposits and coarse contamination
- Well-suited to cleaning tube bundle heat exchangers

Corundum projectiles – Premium projectiles with a corundum coating

- Used to remove extremely resistant deposits, e.g. surface rust
- Subsequent cleaning with standard projectiles is essential

Acetone projectiles – Solvent resistant projectiles made from special rubber foam

- Usable with many cleaning solvents, e.g. acetone
- Suitable for degreasing pipes and tubes without cross-section reduction

*ptc*system® operation

*Connect the **ptc**system® launcher to the compressed air network or a compressed air cylinder.*

*Select the appropriate nozzle and insert it into the open retaining ring on the **ptc**system® launcher. For assistance with the nozzle selection, see the operating manual and the tables starting on page 17.*

Select a cleaning projectile and insert it into the nozzle. To make selection easier, the designations of the cleaning projectiles are made in accordance with the inner diameter that is to be cleaned.

*Close the **ptc**system® launcher and position the nozzle on the end of the tube or hose. Now press the trigger until the cleaning projectile is discharged from the end of the line.*

Cleaning instructions

Tube

Tubes are cleaned following **cutting, bending** and, where applicable, the **pre-assembly** of the **cutting ring.** Thoroughly deburr the tube. A **single** cleaning process will normally be sufficient. If necessary, the cleaning can be made even more effective through the use of a second cleaning projectile. In order to remove more stubborn deposits or rust, use the abrasive or corundum projectiles. Following the use of corundum projectiles, subsequent cleaning must always be performed using a standard projectile.

Hose

Clean the hose **after cutting** and **prior to integration.** This enables optimum cleaning and prevents dirt from remaining on the cross-section transition between the fitting and the inner wall of the hose. Use a suitable device to cut the hose in order to minimise the amount of dirt. Remove any rubber burrs that may have built up. The hose nozzle is inserted into the hose to a depth of a few millimetres. We therefore recommend performing **cleaning** from both sides.

Hose assembly

In some cases, it is essential to clean the hose assembly after it has already been integrated. This may be the case after damage to a hydraulic pump, for example. To clean the hose assembly, use the **conical hose nozzles** and our FLEX projectiles. Select the nozzle featuring a tip that can be inserted into the fitting. Choose a projectile size that is **at least** equal to the **nominal width** of the hose. Test in advance to see whether the projectile can be shot through the selected nozzle.

Cleaning tube bundle heat exchangers

Use a **conical nozzle** to clean a tube bundle. For a boss featuring set-back displacement, we recommend using an extended special nozzle. This allows the outer tubes of the boss to be reached. If the heat exchanger is already in operation, use **abrasive projectiles** in order to remove instances of biofouling. Heat exchangers that are clogged or contaminated with hard debris cannot be cleaned using the ***ptc*system®**.

*ptc*system® starter set

Contents

- Standard ***ptcsystem***® launcher made of high-strength aluminium and featuring a rotatable compressed air connection for ergonomic handling
- 10 tube and/or hose nozzles as desired
- 10 packing units of cleaning projectiles as desired
- Sturdy transport case

Requirements

- Operating pressure 6-8 bar, flow rate approx. 800 l/min.
- Air hose with minimum inner diameter of 9 mm

Accessories

- ***ptcsystem***® projectile collector PTC-SR-AB
- Projectile verification system PTC-DKS-RL150, consisting of a control unit and a collector
- Balancer PTC-SR-FZ
- Foot switch PTC-SR-FS

*ptc*system® starter set XL

Contents

- For all common hydraulic tubes in accordance with EN 10305-4 or DIN 2391 with an outer diameter of 6.0-42.0 mm
- Standard ***ptcsystem***® launcher made of high-strength aluminium and featuring a rotatable compressed air connection for ergonomic handling
- 21 tube nozzles
- 21 packing units of cleaning projectiles
- Sturdy aluminium transport case

Requirements

- Operating pressure 6-8 bar, flow rate approx. 800 l/min.
- Air hose with minimum inner diameter of 9 mm

Accessories

- ***ptcsystem***® projectile collector PTC-SR-AB
- Projectile verification system PTC-DKS-RL150, consisting of a control unit and a collector
- Balancer PTC-SR-FZ
- Foot switch PTC-SR-FS

*ptc*system® tube set

Contents

- Standard ***ptcsystem***® launcher made of high-strength aluminium and featuring a rotatable compressed air connection for ergonomic handling
- 10 tube nozzles as desired
- Sturdy transport case

Requirements

- Operating pressure 6-8 bar, flow rate approx. 800 l/min.
- Air hose with minimum inner diameter of 9 mm

Accessories

- ***ptcsystem***® projectile collector PTC-SR-AB
- Projectile verification system PTC-DKS-RL150, consisting of a control unit and a collector
- Balancer PTC-SR-FZ
- Foot switch PTC-SR-FS

Additional set combinations and contents on request.

*ptc*system® hose set

Contents

- Cleaning range for hoses with DN6-DN50
- Standard ***ptcsystem***® launcher made of high-strength aluminium and featuring a rotatable compressed air connection for ergonomic handling
- 10 hose nozzles
- Sturdy transport case

Requirements

- Operating pressure 6-8 bar, flow rate approx. 800 l/min.
- Air hose with minimum inner diameter of 9 mm

Accessories

- ***ptcsystem***® projectile collector PTC-SR-AB
- Projectile verification system PTC-DKS-RL150, consisting of a control unit and a collector
- Balancer PTC-SR-FZ
- Foot switch PTC-SR-FS

*ptc*system® accessories

Collector SR-AB

This makes work performed with the ***ptcsystem***® even safer and cleaner. The projectiles are caught in a **sturdy cloth bag** and are easy to dispose of.

Collector SR-AB2

Our optimized and **movable projectile collector.** With stainless steel elbow, deflector plate below projectile inlet, weighted base and clamp ring for refuse bag. Perfectly extendible with a **frame light sensor** in order to use it with our discharge monitor and benchtop unit.

Projectile verification system

Together with our collectors, this represents a perfect addition to the workstation. It can be used with all ***ptcsystem***® launcher that are already available. A **light barrier** detects and indicates the **discharge of the projectile.** The cleaning process ends automatically. ‚Misses' are also detected and indicated visually. The operator can only continue working after **acknowledging the fault.**

Wetting

Suitable solvents increase the effectiveness of cleaning and assist the removal of oil and grease residue. Wet the lines quickly and easily with cleaning fluid. This is followed by cleaning using the ***ptcsystem***®.

Ergonomy

The ***ptcsystem***® benchtop attachment keeps things organised so you have **both hands free.** It provides a stable place for you to put down the ***ptcsystem***® launcher and protects it against damage.

The balancer keeps the ***ptcsystem***® launcher ready to hand and in the correct position.

Solutions for series production

For the internal cleaning of tubes and hoses, the ***ptcsystem***® benchtop units offer short cleaning cycles and re-tooling times, high levels of availability and the option of **integration into a production line.**

There are two benchtop unit models available: With display and user guidance, for maximum process reliability and the proven “analog” variant, for a high degree of flexibility. Both models are fitted with a programmable logic controller and can be operated with a projectile discharge monitor. The cleaning process is started by a foot switch.

Expert engineering

We develop the ***ptcsystem***® benchtop units in close co-operation with our customers. The units are tailored to their **needs,** and **special solutions** are possible at all times.

We assist with integration into existing processes, training of employees and all queries relating to the topic of **technical purity.**

Technical details	
Suitable inner diameters	5 – 31 mm
Cleaning interval	approx. 30 pcs./min
Dimension L x W x H	
Basic unit	490 x 490 x 320 mm
With pneumatic projectile supply	490 x 490 x 700 mm
Weight of basic unit	24,6 kg
Operating pressure	6 – 8 bar
Air consumption	approx. 800 l/min

One device, three options

Depending on the quantities, there are three options available to feed the cleaning projectiles.

Small series: the stack magazine

The simple and **cost-effective** solution where only a small number of lines need to be cleaned. The stack magazine is filled with the cleaning projectiles by hand.

Small to medium series: the pneumatic projectile supply

The innovative solution for **larger quantities.** The cylindrical Plexiglas container is filled with the cleaning projectiles. The fill quantity depends on the size of the cleaning projectiles used. The benchtop unit is supplied with the projectiles by swirling with compressed air.

Large series: vibratory spiral conveyor

Our solution for **large series** and integration into **automated production.** The use of the vibratory spiral conveyor ensures that the cleaning projectiles are aligned and supplied in the correct position. Large quantities of projectiles can be stockpiled. The conveyor can be filled during ongoing operation.

Accessories

Pneumatic projectile supply

The pneumatic projectile supply is **available in two sizes.** It consists of a projectile bunker and an interchangeable supply tube.

The small projectile bunker has a **diameter of 180 mm** and is suitable for the projectile sizes PR6 to PR13-14. The fill quantity is between 150 and 1,500 pieces.

The larger design, which features a **diameter of 250 mm,** is used for the projectile sizes PR13-14 to PR24-25. The fill quantity is 60 to 300 cleaning projectiles.

Stack magazines

The stack magazines are available in different lengths and diameters. They are used in the case of **small quantities** or where **large inner diameters up to 34 mm** need to be cleaned.

Customer-specific collection solutions

Our solutions **indicate** the **projectile discharge,** count the processed projectiles, control the cleaning process and keep the workstation clean. This is particularly important for **large series** and when using the benchtop units. These solutions are developed in close co-operation with the customer.

Supply hoses

In the case of complex line geometries, it is sensible to use a supply hose. The cleaning process is started using an **electrical trigger on the handle.** The standard length is 2 m. It is connected to the nozzle intake of the benchtop unit and is available in designs with different dimensions.

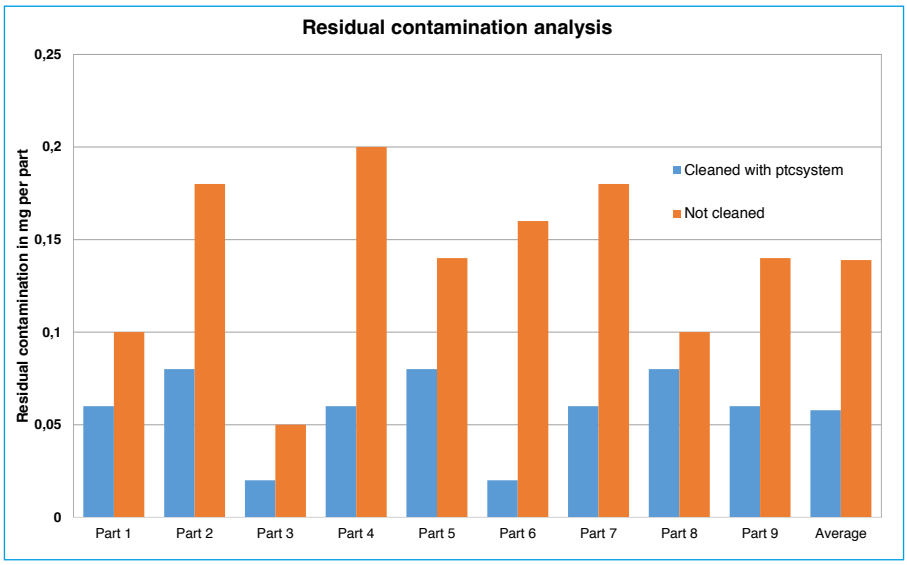
Storage

In terms of storage, up to six stack magazines or three projectile supplies are securely stored at the workstation.

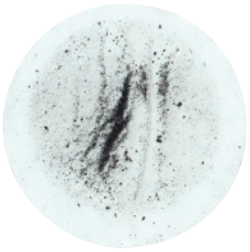
Technical purity in hydraulics

The **purity of technical components** is frequently determined by means of a **gravimetric analysis,** which uses a fluid to extract the **particles that are adhered** to the component. The fluid is filtered and the filter paper is then weighed. The result corresponds to the weight of the residual contamination in mg.

If the analysis is extended by means of a **microscopic inspection,** it is also possible to provide data on the particle size distribution and the particle material. Methods for extraction, analysis and documentation are regulated by guidelines such as **VDA guideline 19,** which is issued by the German Association of the Automotive Industry.



*Residual contamination analysis performed by an automotive manufacturer on nine hydraulic lines cleaned using the **ptc**system®, and nine not subject to cleaning.*



Residual particles from a hydraulic hose, not cleaned

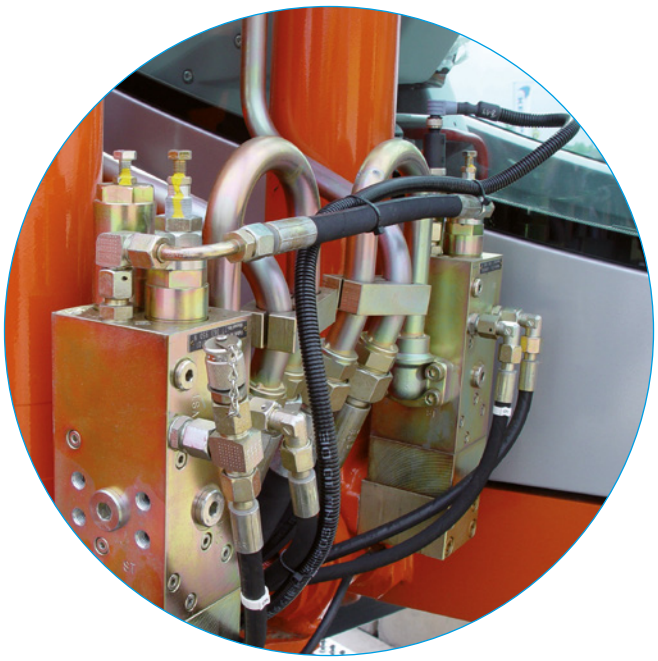
Cleaned with compressed air

*Cleaned with **ptc**system®*

The permissible particle exposure is determined based on the complexity of the hydraulic system and the components used. In addition, there are often **works standards** that define the maximum quantity, size and the permissible particle weight.

The **cleaning performance** depends on a number of factors, such as the size of the lines and the prior level of contamination present. **Residual contamination analysis** can be performed in cases of doubt. It can be said that the following rule applies for requirements regarding technical purity: as clean as necessary, not as clean as possible.

We will be happy to advise you.



Assignment tables

Tube projectiles

Inner diameter	PW	Flex	Eco	Bag Qty	Premium	Bag Qty	Abrasive	Bag Qty	Corundum	Bag Qty
3 mm	PTC-PR3-PW	PTC-PR3-FLEX		300	PTC-PR3-PREM	100				
4 mm	PTC-PR4-PW	PTC-PR4-FLEX		300	PTC-PR4-PREM	100				
5 mm	PTC-PR5-PW	PTC-PR5-FLEX		300	PTC-PR5-PREM	100				
6 mm	PTC-PR6-PW	PTC-PR6-FLEX	PTC-PR6-ECO	300	PTC-PR6-PREM	100			PTC-PR6-K	25
7 mm	PTC-PR7-PW	PTC-PR7-FLEX	PTC-PR7-ECO	300	PTC-PR7-PREM	100			PTC-PR7-K	25
8 mm	PTC-PR8-PW	PTC-PR8-FLEX	PTC-PR8-ECO	300	PTC-PR8-PREM	100			PTC-PR8-K	25
9 mm	PTC-PR9-PW	PTC-PR9-FLEX	PTC-PR9-ECO	300	PTC-PR9-PREM	100	PTC-PA9	100	PTC-PR9-K	25
10 – 11 mm	PTC-PR10-11-PW	PTC-PR10-11-FLEX	PTC-PR10-11-ECO	300	PTC-PR10-11-PREM	100	PTC-PA10-11	100	PTC-PR10-11-K	25
12 mm	PTC-PR12-PW	PTC-PR12-FLEX	PTC-PR12-ECO	300	PTC-PR12-PREM	100	PTC-PA12	100	PTC-PR12-K	25
13 – 14 mm	PTC-PR13-14-PW	PTC-PR13-14-FLEX	PTC-PR13-14-ECO	300	PTC-PR13-14-PREM	100	PTC-PA13-14	100	PTC-PR13-14-K	25
15 mm	PTC-PR15-PW	PTC-PR15-FLEX	PTC-PR15-ECO	300	PTC-PR15-PREM	100	PTC-PA15	100	PTC-PR15-K	25
16 – 17 mm	PTC-PR16-17-PW	PTC-PR16-17-FLEX	PTC-PR16-17-ECO	100	PTC-PR16-17-PREM	100	PTC-PA16-17	100	PTC-PR16-17-K	25
18 mm	PTC-PR18-PW	PTC-PR18-FLEX	PTC-PR18-ECO	100	PTC-PR18-PREM	100	PTC-PA18	100	PTC-PR18-K	25
19 – 21 mm	PTC-PR19-21-PW	PTC-PR19-21-FLEX	PTC-PR19-21-ECO	100	PTC-PR19-21-PREM	100	PTC-PA19-21	100	PTC-PR19-21-K	25
22 – 23 mm	PTC-PR22-23-PW	PTC-PR22-23-FLEX	PTC-PR22-23-ECO	100	PTC-PR22-23-PREM	100	PTC-PA22-23	100	PTC-PR22-23-K	25
24 – 25 mm	PTC-PR24-25-PW	PTC-PR24-25-FLEX	PTC-PR24-25-ECO	100	PTC-PR24-25-PREM	100	PTC-PA24-25	100	PTC-PR24-25-K	25
26 – 28 mm	PTC-PR26-28-PW	PTC-PR26-28-FLEX	PTC-PR26-28-ECO	50	PTC-PR26-28-PREM	50	PTC-PA26-28	50	PTC-PR26-28-K	25
29 – 31 mm	PTC-PR29-31-PW	PTC-PR29-31-FLEX	PTC-PR29-31-ECO	50	PTC-PR29-31-PREM	50			PTC-PR29-31-K	25
32 – 34 mm	PTC-PR32-34-PW	PTC-PR32-34-FLEX	PTC-PR32-34-ECO	50	PTC-PR32-34-PREM	50			PTC-PR32-34-K	25
35 – 36 mm	PTC-PR35-36-PW	PTC-PR35-36-FLEX	PTC-PR35-36-ECO	50	PTC-PR35-36-PREM	50			PTC-PR35-36-K	25
37 – 39 mm	PTC-PR37-39-PW	PTC-PR37-39-FLEX	PTC-PR37-39-ECO	50	PTC-PR37-39-PREM	50			PTC-PR37-39-K	25
40 – 42 mm	PTC-PR40-42-PW	PTC-PR40-42-FLEX	PTC-PR40-42-ECO	50	PTC-PR40-42-PREM	25			PTC-PR40-42-K	25
43 – 45 mm	PTC-PR43-45-PW	PTC-PR43-45-FLEX	PTC-PR43-45-ECO	50	PTC-PR43-45-PREM	25			PTC-PR43-45-K	25
46 – 48 mm	PTC-PR46-48-PW	PTC-PR46-48-FLEX	PTC-PR46-48-ECO	50	PTC-PR46-48-PREM	25			PTC-PR46-48-K	25
49 – 50 mm	PTC-PR49-50-PW	PTC-PR49-50-FLEX	PTC-PR49-50-ECO	50	PTC-PR49-50-PREM	25			PTC-PR49-50-K	25

Hose projectiles and nozzles

Nominal width	Inch	mm	PW	Flex	Eco	Bag Qty	Premium	Bag Qty	Nozzles
DN 5	3/16	4,8	PTC-PR5-PW	PTC-PR5-FLEX		300	PTC-PR5-PREM	100	PTC-MS-DN5
DN 6	1/4	6,4	PTC-PR6-PW	PTC-PR6-FLEX	PTC-PR6-ECO	300	PTC-PR6-PREM	100	PTC-MS-DN6
DN 8	5/16	7,9	PTC-PR8-PW	PTC-PR8-FLEX	PTC-PR8-ECO	300	PTC-PR8-PREM	100	PTC-MS-DN8
DN 10	3/8	9,5	PTC-PR10-11-PW	PTC-PR10-11-FLEX	PTC-PR10-11-ECO	300	PTC-PR10-11-PREM	100	PTC-MS-DN10
DN 12/13	1/2	12,7	PTC-PR13-14-PW	PTC-PR13-14-FLEX	PTC-PR13-14-ECO	300	PTC-PR13-14-PREM	100	PTC-MS-DN12
DN 16	5/8	15,9	PTC-PR16-17-PW	PTC-PR16-17-FLEX	PTC-PR16-17-ECO	100	PTC-PR16-17-PREM	100	PTC-MS-DN16
DN 19	3/4	19,1	PTC-PR19-21-PW	PTC-PR19-21-FLEX	PTC-PR19-21-ECO	100	PTC-PR19-21-PREM	100	PTC-MS-DN20
DN 25	1	25,4	PTC-PR24-25-PW	PTC-PR24-25-FLEX	PTC-PR24-25-ECO	100	PTC-PR24-25-PREM	100	PTC-MS-DN25
DN 31	1 1/4	31,8	PTC-PR29-31-PW	PTC-PR29-31-FLEX	PTC-PR29-31-ECO	50	PTC-PR29-31-PREM	50	PTC-MS-DN32
DN 38	1 1/2	38,1	PTC-PR37-39-PW	PTC-PR37-39-FLEX	PTC-PR37-39-ECO	50	PTC-PR37-39-PREM	50	PTC-MS-DN40
DN 51	2	50,8	PTC-PR49-50-PW	PTC-PR49-50-FLEX	PTC-PR49-50-ECO	50	PTC-PR49-50-PREM	25	PTC-MS-DN50

We manufacture cleaning projectiles for lines with an inner diameter of up to 150 mm on request.

Tubes

Outer diameter	Inner diameter	Nozzles
6 mm	3 mm	PTC-MR6-3
6 mm	4 mm	PTC-MR6-4
8 mm	5 – 6 mm	PTC-MR8-5
10 mm	5 – 6 mm	PTC-MR10-5
10 mm	7 – 8 mm	PTC-MR10-7
12 mm	8 – 11 mm	PTC-MR12-8
14 mm	9 – 11 mm	PTC-MR14-9
15 mm	11 – 14 mm	PTC-MR15-11
16 mm	10 – 14 mm	PTC-MR16-10
18 mm	14 – 17 mm	PTC-MR18-14
19 mm	13 – 15 mm	PTC-MR19-13
20 mm	14 – 17 mm	PTC-MR20-14
20 mm	18 mm	PTC-MR20-18
22 mm	16 – 21 mm	PTC-MR22-16
25 mm	15 –18 mm	PTC-MR25-15
25 mm	19 – 21 mm	PTC-MR25-19
25 mm	23 mm	PTC-MR25-23
25,4 mm	22 – 23 mm	PTC-MR25,4-22
28 mm	18 – 21 mm	PTC-MR28-18
28 mm	22 – 25 mm	PTC-MR28-22
28 mm	26 mm	PTC-MR28-26
30 mm	20 – 23 mm	PTC-MR30-20
30 mm	24 – 28 mm	PTC-MR30-24
35 mm	29 – 34 mm	PTC-MR35-29
38 mm	28 – 31 mm	PTC-MR38-28
38 mm	32 – 34 mm	PTC-MR38-32
42 mm	36 – 39 mm	PTC-MR42-36

Tubes according to EN 10305-4 (DIN 2391)

Series	Tube	Diameter	Nozzles	Projectiles
Light range	6L	6 x 1	PTC-MR6-4	PTC-PR4-...
	8L	8 x 1	PTC-MR8-5	PTC-PR6-...
	8L	8 x 1,5	PTC-MR8-5	PTC-PR5-...
	10L	10 x 1	PTC-MR10-7	PTC-PR8-...
	10L	10 x 1,5	PTC-MR10-7	PTC-PR7-...
	12L	12 x 1,5	PTC-MR12-8	PTC-PR9-...
	15L	15 x 1,5	PTC-MR15-11	PTC-PR12-...
	15L	15 x 2	PTC-MR15-11	PTC-PR10-11-...
	18L	18 x 1,5	PTC-MR-18-14	PTC-PR15-...
	18L	18 x 2,5	on enquiry	PTC-PR13-14-...
	22L	22 x 2	PTC-MR22-16	PTC-PR18-...
	22L	22 x 2,5	PTC-MR22-16	PTC-PR16-17-...
	28L	28 x 2	PTC-MR28-22	PTC-PR24-25-...
	28L	28 x 3	PTC-MR28-22	PTC-PR22-23-...
	35L	35 x 3	PTC-MR35-29	PTC-PR29-31-...
	42L	42 x 3	PTC-MR42-36	PTC-PR35-36-...
Heavy range	6S	6 x 1,5	PTC-MR6-3	PTC-PR3-PW-...
	6S	6 x 2	on enquiry	on enquiry
	8S	8 x 1,5	PTC-MR8-5	PTC-PR5-PW-...
	8S	8 x 2,5	on enquiry	PTC-PR3-PW-...
	10S	10 x 1,5	PTC-MR10-7	PTC-PR7-...
	10S	10 x 3	on enquiry	PTC-PR4-PW-...
	12S	12 x 2	PTC-MR12-8	PTC-PR8-...
	12S	12 x 3,5	on enquiry	PTC-PR5-PW-...
	14S	14 x 2	PTC-MR14-9	PTC-PR10-11-...
	14S	14 x 4	on enquiry	PTC-PR6-...
	16S	16 x 2	PTC-MR16-10	PTC-PR12-...
	16S	16 x 3	PTC-MR16-10	PTC-PR10-11-...
	20S	20 x 2,5	PTC-MR20-14	PTC-PR15-...
	20S	20 x 3,5	on enquiry	PTC-PR13-14-...
	25S	25 x 3	PTC-MR25-19	PTC-PR19-21-...
	25S	25 x 4,5	PTC-MR25-15	PTC-PR16-17-...
	30S	30 x 3,5	PTC-MR30-20	PTC-PR22-23-...
	30S	30 x 4	PTC-MR30-20	PTC-PR22-23-...
	38S	38 x 4	PTC-MR38-28	PTC-PR29-31-...
	38S	38 x 5	PTC-MR38-28	PTC-PR26-28-...

You can find our available projectile qualities on page 17.

Notes

Visit our web page

The right solution for any application

ptc system®

*ptc*system®

Guarantees the technical cleanliness of tubes and hoses in hydraulic systems

- reliably removes particles from the production process
- is quick and easy to operate
- does not need cleaning fluids

FERRET

Ferret boiler cleaning

Flue gas tube cleaning – quick, ergonomic and thorough

- user-friendly and easy to handle
- highly effective cleaning thanks to oscillating brushes
- no rotating parts
- space-saving – 0.5 m work area in front of the boiler is sufficient

Dustcontrol

Dustcontrol industrial vacuum cleaner

For any use: From asbestos to cement dust

- high-quality and long-lasting technology
- 3-stage filtration system for a separation efficiency of 99.995%
- longer filter service life though cyclone principle

Please contact us.

JETCLEAN GMBH
Industrielle Rohrreinigungssysteme

Keniastr. 12
D-47269 Duisburg

Phone ++49 / (0) 203 / 7 12 06 20
Fax ++49 / (0) 203 / 7 12 06 30

info@jetclean-gmbh.de
www.jetclean-gmbh.de