

# A clean job

## Sewer cleaning pumps



High Pressure Technology

# We are working on the **ideal solution** under maximum pressure

## URACA sewer cleaning pumps are well known in the industry

Our high pressure pumps combine long-standing competency in development and construction, innovative technology and, last but not least, high-quality manufacturing. It is not without reason that URACA high-pressure pumps lie at the core of many pipe and sewer cleaning vehicles. Worldwide. Our plunger pumps have a compact design and are robust, powerful and versatile and have proven themselves to our clients over centuries.

A clean job also comes from experience, and therefore, URACA Technology is used wherever soil and deposit on all kinds of surfaces have to be removed.

Especially in those places, where many others fail – but let us listen to our customers' feedback ...

### Benefits at a glance

- Cost-effective to operate
- Performance without competition
- Robust, long service life and reliable
- Extremely versatile
- Reliable and intelligent technology
- Optimised design for the best balance of weight and performance
- Easy to maintain and service
- Environmental friendly

**“The high reliability of URACA sewer cleaning pumps ensures our quality during everyday operations.”**

“The Onyx Rohr- und Kanal-Service GmbH & Co. KG has over 30 years of experience and is the competent partner for private clients, communities and enterprises. We rely on the experience of URACA for the cleaning and inspection of pipe and sewer systems. The high reliability of URACA sewer cleaning pumps ensures our quality during everyday operations.”



Horst-Peter Stachorski  
Management  
Onyx Rohr- und Kanal-Service GmbH & Co. KG  
Hannover  
– A company of  
Veolia Umweltservice GmbH –





**“Not only the air in Berlin is unique – thanks to URACA sewer cleaning pumps the sewers are too.”**

“For over 160 years, the Berlin water works supply people in Berlin and the surrounding areas with drinking water and treat waste water from 4.2 million people. In order to clean the sewer network of 9,700 km, we have been relying on URACA sewer cleaning pumps and high pressure cleaning technology for years. Through that, we ensure the quality of our waste water and preserve our environment.”



Dipl. Ing. Volker Lengnick  
Technical Service  
Director of Fleet Management  
Berlin Water Works



**“Our customers have to rely on us.  
We rely on the URACA high-pressure cleaning technology.”**

“Kanal Wambach is a family company, which has been standing for quality in sewer and industry cleaning for over 40 years. For over two generations, we ensure safety and operational capability of sewers and pipes with our technical intuition, expertise and high performing vehicles. Therefore, we rely on URACA high-pressure pumps for our sewer cleaning vehicles and high-pressure water jet technology.”



Bruno Wambach  
Management Director  
Kanal Wambach GmbH  
56566 Neuwied-Engers



## Top performance requires a strong heart

### Industry standard

The same URACA plunger pumps run in industrial operation 24 hours a day – over many decades.

### Variety

The right pump from the large URACA range for each unit.

### Energy efficiency

URACA products run on a high-efficiency level. Cost-effective – year after year.

### Quality

High pressure plunger pumps from URACA are manufactured in house with the highest level of quality.

### Know-how

URACA have been building high pressure pumps for over 125 years.

### Performance

Maximum pressure level and maximum flow rate. And not just on paper.



## You don't become market leader by chance

In our case, we have achieved this by applying a great degree of precision and only being satisfied with a solution which is clear in all respects. Which tasks does our client have to fulfil? What are their daily needs? And which special challenges do they have to face during their operations? The sewer cleaning vehicle, for which we don't have a tailored solution, has yet to be built. As a full-service provider for the complete high-pressure technology for sewer cleaning vehicles, URACA always offers the fitting solution – for every kind of sewer cleaning vehicles. Worldwide. Therefore, URACA is the market leader in Europe.

## Build for professionals





















Design intelligence, the best plunger pumps as a basis, vertical integration all the way to crank shafts manufactured in-house, precise machining and careful mounting by qualified employees as well as extensive test programs ensure the reliable functioning of our products.

This guarantees the greatest possible economic efficiency, lasting value – and last but not least enjoyable working. Every day. For many years.





## URACA offers you tailored solutions

Liquid end	Design	Power end	Drive System
 Different pressure levels	 Left-hand drive	 With special cross head sealing	 Without gear
 Clear water model	 Right-hand drive	 Pump lubrication (optional)	 With gear
 Recycling water model	 Horizontal design	 Power end cooler subject to field of application	 With reverse gear
 Hot water model	 Vertical design	 Without power end cooling	 For hydraulic drives, with interlocked crank shaft or with fixed flange.
 Valve-lift for drainage			
 Suction valve release for wear-free load-idling switch (optional)			
 Suction and pressure connections alternatively left or right			
 ATEX model			

### No compromises

Water jet cleaning with up to 3,000 bar in daily professional use is a tough challenge for all components. The powerful heart of the system is crucial for performance and endurance and therefore also for economic efficiency: The high pressure plunger pump from URACA.

## Our promise: the **most reliable** pumps on the market

### Developed for the future

As a leading manufacturer in the area of high pressure technology, URACA offers a broad spectrum of ideally coordinated sewer cleaning pumps for professionals.

We develop work machines for practical use rather than inventing superlatives on paper. URACA products are designed for highest possible performance, efficient handling, long service life and flexibility.

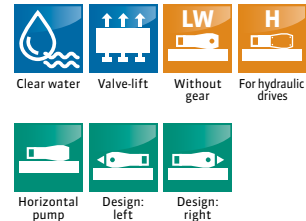
### Our promise

- Our 125 years of experience
- Production in Germany
- Greatest vertical integration
- Comprehensive engineering know-how
- In-house testing operation
- Customised solution
- Excellent price-performance ratio
- High energy efficiency

# Sewer cleaning pump P3-08

Power up to 30 kW

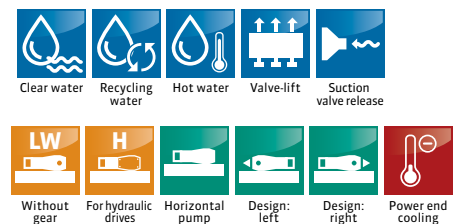
P3-08	
Power max.	30 kW
Pressure max.	200 bar
Flow rate	163 l/min at 100 bar 127 l/min at 125 bar 104 l/min at 160 bar 80 l/min at 200 bar
Weight	83 kg



# Sewer cleaning pump P3-10

Power up to 38 kW

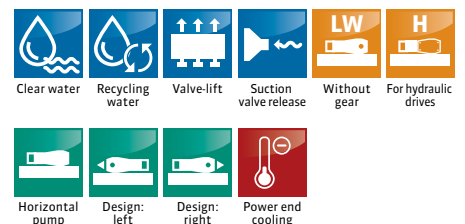
P3-10	Version A1 with single stuffing boxes	Version A2 Stainless steel with single stuffing boxes	Version B Stainless steel with single stuffing boxes
Power max.	37 kW	37 kW	38 kW
Pressure max.	250 bar	530 bar	1,000 bar
Flow rate	163 l/min at 125 bar 127 l/min at 160 bar 104 l/min at 200 bar 80 l/min at 250 bar	82 l/min at 250 bar 60 l/min at 330 bar 47 l/min at 415 bar 34 l/min at 530 bar	40 l/min at 530 bar 33 l/min at 640 bar 26 l/min at 800 bar 20 l/min at 1,000 bar
Weight	83 kg	86 kg	77 kg



# Sewer cleaning pump P3-15

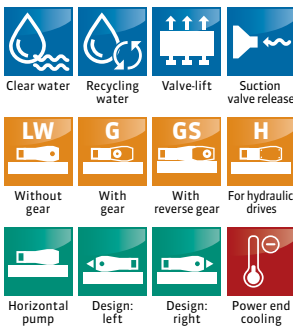
Power up to 56 kW

P3-15	Version A1 with single stuffing boxes	Version B Stainless steel with single stuffing boxes
Power max.	56 kW	50 kW
Pressure max.	250 bar	1,000 bar
Flow rate at $\eta=100\%$	229 l/min at 145 bar 207 l/min at 160 bar 168 l/min at 200 bar 133 l/min at 250 bar	48 l/min at 530 bar 43 l/min at 640 bar 37 l/min at 800 bar 28 l/min at 1,000 bar
Weight	63 kg	60 kg



# Sewer cleaning pump **P3-19**

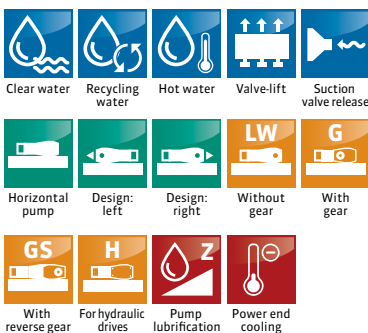
**Power up to 83 kW**



P3-19	Version A1 with single stuffing boxes
Power max.	83 kW
Pressure max.	250 bar
Flow rate	324 l/min at 140 bar 273 l/min at 165 bar 223 l/min at 200 bar 176 l/min at 250 bar
Weight	175 kg

# Sewer cleaning pump **KD718**

**Power up to 110 kW**



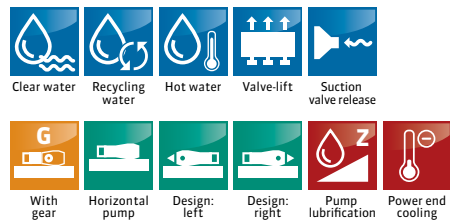
KD718	Version A1 with integrated stuffing boxes	Version A2 with integrated stuffing boxes
Power max.	104 kW	100 kW
Pressure max.	200 bar	530 bar
Flow rate	432 l/min at 125 bar 392 l/min at 145 bar 333 l/min at 170 bar 275 l/min at 200 bar	275 l/min at 200 bar 179 l/min at 300 bar 140 l/min at 340 bar 84 l/min at 530 bar
Weight	299 kg	326 kg

# Sewer cleaning pump P3-45

Power up to 135 kW

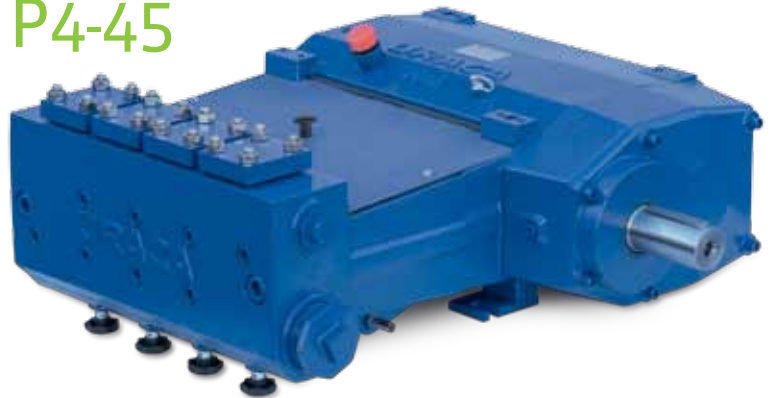


P3-45	
Power max.	133 kW
Pressure max.	250 bar
Flow rate	483 l/min at 150 bar 414 l/min at 175 bar 351 l/min at 205 bar 292 l/min at 250 bar
Weight	345 kg

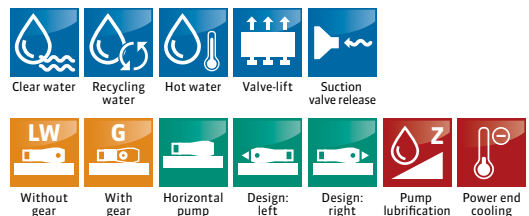


# Sewer cleaning pump P4-45

Power up to 180 kW



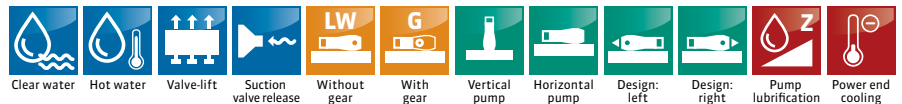
P4-45	
Power max.	177 kW
Pressure max.	250 bar
Flow rate	645 l/min at 150 bar 550 l/min at 175 bar 468 l/min at 205 bar 389 l/min at 250 bar
Weight	420 kg





# Sewer cleaning pump **KD724**

**Power up to 170 kW**



KD 724	Version A1 Casting design with single stuffing boxes	Version A2 Stainless steel with single stuffing boxes	Version B Stainless steel with single stuffing boxes	Version C Stainless steel with single stuffing boxes	Version D Stainless steel with single stuffing boxes	Version E Stainless steel with single stuffing boxes
Power max.	170 kW	170 kW	163 kW	153 kW	143 kW	101 kW
Pressure max.	275 bar	400 bar	1,000 bar	1,200 bar	2,800 bar	3,000 bar
Flow rate	548 l/min at 170 bar 470 l/min at 200 bar 397 l/min at 230 bar 330 l/min at 275 bar	548 l/min at 170 bar 330 l/min at 275 bar 265 l/min at 330 bar 213 l/min at 400 bar	195 l/min at 400 bar 173 l/min at 520 bar 106 l/min at 800 bar 78 l/min at 1,000 bar	93 l/min at 800 bar 81 l/min at 1,050 bar 64 l/min at 1,200 bar	50 l/min at 1,600 bar 40 l/min at 2,000 bar 28 l/min at 2,500 bar 23 l/min at 2,800 bar	20 l/min at 3,000 bar
Weight	730 kg	770 kg	800 kg	780 kg	770 kg	770 kg

# Pressure transducer **UD200**



UD200	
Power max.	190 kW
Pressure max.	200 bar
Flow rate	550 l/min at 200 bar
Total weight inclusive lubrication pump (without oil)	980 kg
Oil filling	140 l

## Power up to 190 kW

The oil hydraulically driven pressure transducer is an alternative to conventional plunger pumps to be used on sewer cleaning vehicles. It is driven by a variable displacement axial piston pump in closed circuit. The oil tank has an integral oil cooler passed by the medium. For cleaning purpose its covers can easily be removed.

# Valves for high-pressure plunger pumps

A broad portfolio of high-pressure valves ensures the reliable and safe operation of sewer cleaning pumps.

Type of valve	Safety function (Pressure control)	Overflow function	Pump switch-over function	Holding function	Operating pressure (max.)	Recommended flow rate	Operation mode
VS 200/180	■				180 bar	0–200 l/min	mechanical
HHV 5/800	■				800 bar	5–550 l/min	mechanical
VSV 10/300	■				150–300 bar	100–500 l/min	mechanical
VSV 12/300	■				150–300 bar	250–650 l/min	mechanical
MSSV 13/100	■		■	■	100 bar	0–100 l/min	pneumatic
MSSV 32/151	■		■	optional	150 bar	0–1,000 l/min	pneumatic
MSSV 11/250	■		■	optional	250 bar	0–100 l/min	pneumatic
MSSV 24/301	■		■	optional	300 bar	0–500 l/min	pneumatic
MSSV 16/400	■		■	optional	400 bar	0–250 l/min	pneumatic
MSÜV 20/150	■	■	■		150 bar	0–650 l/min	pneumatic
MSÜV 29/300	■	■	■		300 bar	0–1,000 l/min	pneumatic
MSÜV 29/450	■	■	■		450 bar	0–1,000 l/min	pneumatic
DRV 150	■	■	■		150 bar	20–100 l/min	mechanical
DRV 250	■	■	■		40–250 bar	20–100 l/min	mechanical
ZV 29/300				■	300 bar	0–1,000 l/min	mechanical
VZV 25/400				■	400 bar	0–650 l/min	mechanical
PZV 23/800				■	800 bar	0–800 l/min	pneumatic

The essential functions of the valves:

- Safety valve
- Overflow valve
- Pump switch-over valve
- On/Off valve



Foto: seidenrauxel / pixelio

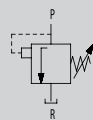
**Type VS**  
Mechanical safety valves

For securing of high-pressure pumps against pressure overload



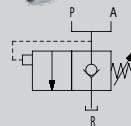
**Type HHV**  
Mechanical safety valves

Reliable mechanical safety valve for different pressure/volume levels



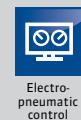
**Type VSV**  
Mechanical safety valves

Robust, reliable and durable. Designed for frequent responses.



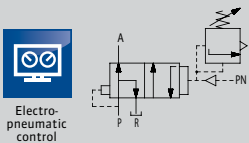
**Type MSSV**  
Diaphragm-controlled switch/safety valves

Pneumatic activation valve for soft switching  
Electro-pneumatic control



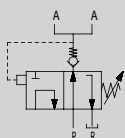
**Typ MSÜV**  
Diaphragm-controlled switch/relief/safety valves

Pneumatic activated valve with relief function



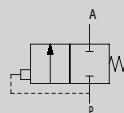
**Typ DRV**  
Hydraulic discharge valves

Mechanical unloader valve – always there if there's no power



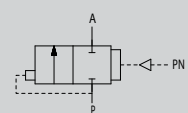
**Typ ZV / VZV**  
Mechanical holding valve

Spring-loaded valve with closing function



**Typ PZV**  
Pneumatic holding valve

Pneumatic operating valve with closing function



# Spray guns up to 1,200 bar

Washing, cleaning, blasting – URACA spray guns and lances handle this with ease! High quality material and expert craftsmanship

ensures our high pressure products are robust, durable and will provide many years of reliable service. The ATEX version of the SP 1203 is also available upon request.



Spray gun SP 250-Vario with adjustable flow rate

Spray guns	SP 250	SP 250-Vario
Operating pressure (max.)	250 bar	250 bar
Weight without spray tube	1.5 kg	1.5 kg
Length standard spray tube	390/800 mm	390/800 mm
Nozzle assembly (standard)	Typ N	Typ N
Connection thread at inlet	G 3/4	G 3/4
Hose connection with standard connecting studs	M24x1.5 DKO-S	M24x1.5 DKO-S

### Spray gun SP 250 – light and robust

Cleaning power at an extremely low weight of only 1.5 kg. The adjustable flow rate enables the user to practically dose the large volume flow of the SP 250-Vario making the SP 250 extremely versatile. Its attractive price performance ratio is outstanding. Optional with flexible hose connection for easy handling.



ATEX version of the SP 1203 is also available

Spray gun SP 1203

Spray guns	SP 503*	SP 802	SP 1203
Operating pressure (max.)	500 bar	800 bar	1,200 bar
Weight without spray tube	1.2 kg	1.6 kg	1.7 kg
Length standard spray tube	800 mm	800 mm	800 mm
Nozzle assembly (standard)	Typ N or P	Typ P	Typ P
Connection thread at inlet	G 1/2	G 1/2	G 1/2
Hose connection with standard connecting studs	M24x1.5 DKO-S	M24x1.5 DKO-S	M24x1.5 DKO-S

\*A hot water version (95°C) of the SP503 is also available

### Spray guns – modern design

URACA spray guns maximize user efficiency due to their low weight, easy handling, and minimize retention forces. The technical optimization of these tools makes them robust, simple to use, virtually fatigue free and they can be used with any pump system.

# Accessories

Whether it's tools, additional pumping equipment or just equipment for your work – We offer you the full portfolio:

- Suction pulsation damper
- Suction pressure monitor and switch
- Pressure sensors
- Pressure gauges
- Temperature switches and sensors
- High-pressure hoses for sewer cleaning and spray gun operation
- Deflexion roller
- Tools, special tools and assembling aids



Suction pulsation damper



Suction pressure monitor and switch



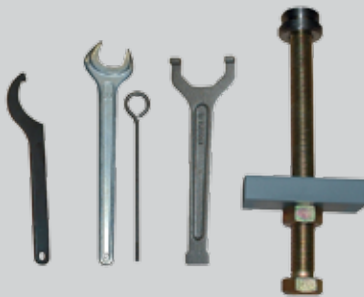
Pressure sensors



Pressure gauges



Temperature switches and sensors



Tools, special tools and assembling aids



High-pressure hoses for sewer cleaning and spray gun operation



Deflexion roller

# Pipe and sewer cleaning nozzles – The full portfolio

All nozzles can be supplied with various nozzle heads, nozzle extensions as well as adjustable slides, with and without propulsive nozzles available. This allows for thorough cleaning of pipes and sewers with different diameters.

## Cleaning nozzle **DFK 55**

The robust nozzle for sewer cleaning – also suited for narrow pipes.

DFK 55	
Allowed operating pressure	50–1,600 bar
Recommended flow rate	25–150 l/min
Rotational speed range	100–1,500 min <sup>-1</sup>
Minimum diameter (with smallest slide)	67 mm
Minimum diameter (without slide)	55 mm



## Cleaning nozzle **DFK 61**

The leakage-free pipe cleaning nozzle with adjustable rotational speed for maximum pressure.

DFK 61	
Allowed operating pressure	1,600–3,000 bar
Recommended flow rate	10–40 l/min
Rotational speed range	500–2,000 min <sup>-1</sup>
Minimum diameter (with smallest slide)	75 mm
Minimum diameter (without slide)	61 mm



## Cleaning nozzle **DFK 90**

The all-rounder amongst the rotating sewer cleaning nozzles for high flow rate capacity.

DFK 90	
Allowed operating pressure	50–800 bar
Recommended flow rate	30–400 l/min
Rotational speed range	200–1,200 min <sup>-1</sup>
Minimum diameter (with smallest slide)	145 mm
Minimum diameter (without slide)	90 mm



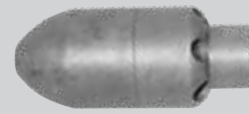
# All-purpose pipe and sewer cleaning nozzles



Individually drilled, reversible

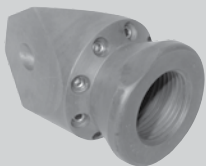


Individually drilled, reversible

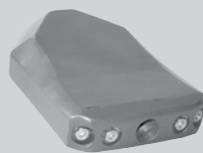


Bombs and grenades

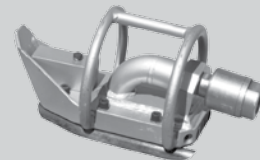
## Extra and special nozzles



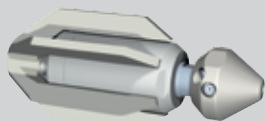
Rod Nozzles



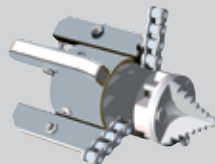
Flounder



Bulldozer



Bulldog



Root cutter, cutting chain



Rotation nozzle

## Nozzle inserts

All nozzles are available in various diameters and for different pressure levels. Nozzle inserts for various pressure levels and flow rates are also available.



Type R



Type E



Type L



Type P



Type N

# URACA – professional high pressure system supplier

## Products and services

### — Pump units

Unit assembly and drives at your convenience in stationary or mobile design. Whether in container, on skid or on trailer.

- Electrically driven units
- Engine driven units
- Hydraulically driven units
- Tailor made pump control systems

### — Pumps

The core of the URACA technology: Superior quality, powerful high pressure positive displacement pumps, also for high-demanding continuous use. URACA pumps are designed acc. to API 674 on demand.

- Process and industrial pumps – reciprocating plunger pump or diaphragm design
- Test pumps
- High pressure water jetting pumps
- Sewer cleaning pumps



### — High pressure water jetting systems

URACA gathered a lot of experience and engineering competence in the field of water jetting. URACA designs and manufactures complete systems, from simple cleaning head positioning devices up to semi-automatic and automatic operated systems for

- Reactor and vessel cleaning
- Pipe and tube cleaning
- Surface conditioning
- And others – just give us your request!



### — Tools

URACA manufactures a wide range of cleaning tools for any application.

- Spray guns
- Tank cleaning heads
- Sewer cleaning nozzles
- Rotating nozzles
- Floor cleaners



### — Accessories and components

URACA's pump range is completed with a wide range of high pressure accessories and components, like

- Nozzles
- Remote controls
- Hoses
- High pressure valves
- 90 degree rotary joint
- Multi-consumer systems
- Resonators and pulsation dampers



### — Service

After sales service is URACA's top priority. The qualified and specially trained personnel and technicians are prepared to support you at any time, whether for

- Spare parts
  - Revamps
  - Upgrades in case of changed process conditions
  - Training
  - Supervising
  - Or answers to any questions you may have in terms of URACA equipment
- Please do not hesitate to contact us!