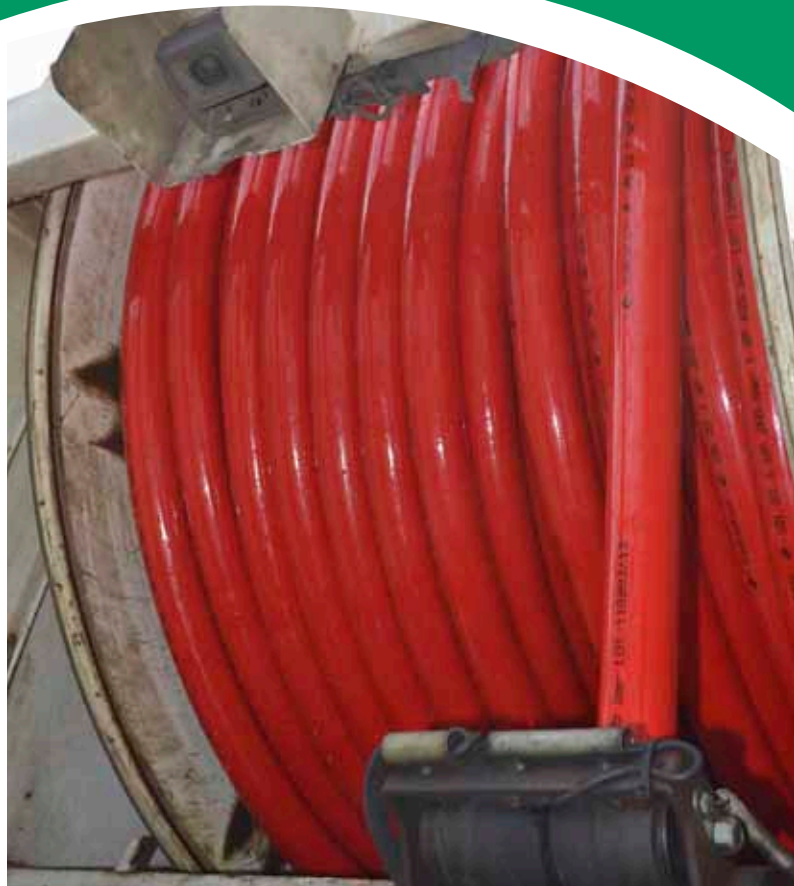


HOSE TECHNOLOGY

Sewer cleaning equipment

Grünig+Loske
TECHNISCHER HANDEL



Welcome to our brochure on sewer cleaning hoses and accessories

Dear Sir or Madam,

it is a pleasure for us to offer you the competence and experience of Grüning & Loske GmbH concerning sewer cleaning technologies.

Standards in modern sewer cleaning increase continuously. For this reason we, as your partner in sewer cleaning technology, adapt our hose assortment permanently to meet current requirements.

Grüning & Loske GmbH has been gaining practical experiences for years and infusing these into cooperation with selected vehicle manufacturers in order to develop new and innovative products. Resulting in a potpourri of various hose models, made of different materials, which all aim to ease your daily work and fulfill all of your requirements.

Please take your time to have a look into our brochure – you won't regret it!



In case you need more detailed information about a particular product, please visit our homepage under **www.gruelo.de**.

If you need help to choose the right product for your application area, please contact our considerate and competent sales team under **+49 - 51 02 - 91 99-01**.

We are looking forward to hearing from you!

Dirk Loske
CEO



www.gruelo.de

GrüloJet 200

200 bar sewer cleaning

New in our product range is the thermoplastic sewer cleaning hose *GrüloJet 200* with its pressure carrier, consisting of double-braided highly tearproof synthetic fibres and an extremely abrasion- and cut resistant polyurethane cover. With its working pressure of 200 bar *GrüloJet 200* is eminently suitable for use on sewer cleaning vehicles. Due to its extremely smooth thermoplastic lining *GrüloJet 200* shows an inferior pressure drop than usual rubber sewer cleaning hoses. Furthermore its lower weight enables you to increase your vehicle payload.



NEW

All hoses are assembled with BSP female/male and ferrules. Delivery takes place with test certificate on each assembled hose.

Technical characteristics

Temperature range: -40 °C to +55 °C

Standard length: 120 m, 160 m, 180 m, 200 m, 240 m | Further lengths on request

Maximum lengths: DN 25 up to 350 m, DN 32 up to 250 m, DN 38 up to 200 m



Colour: Light green

Construction

Cover: Polyurethane, cut- and abrasion resistant

Reinforcement: Highly tear-resistant synthetic fibres

Lining: Thermoplastic elastomer

Marking: -  - GrüloJet 200 -  - DN [...] | WP [...] bar | BP [...] bar

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	BP bar	Bending radius mm	Weight/m kg	Article-no.
13	1/2	4,70	275	690	100	0,277	10063-013
16	5/8	5,25	275	550	100	0,372	10063-016
19	3/4	5,30	220	500	120	0,431	10063-019
25	1	5,85	200	500	150	0,550	10063-025
32	1 1/4	7,00	200	500	235	0,848	10063-032
38	1 1/2	7,00	200	500	300	1,030	10063-038

**WE SWAGE SEWER CLEANING HOSES WITH ALL
KINDS OF COUPLINGS – ACCORDING TO YOUR NEEDS**



GrüloJet 250

P U - s e w e r c l e a n i n g h o s e

GrüloJet 250 is a thermoplastic sewer cleaning hose that has been developed especially for the equipment of sewer cleaning vehicles. Its pressure carrier, consisting of double-braided highly tearproof synthetic fibres, guarantees long endurance and therefore decreases your expenses.

GrüloJet 250 is floatable and extremely abrasion- and cut resistant. Furthermore it stands out due to its excellent flexibility, which simplifies its handling and your daily work. Being one third lighter than common rubber sewer cleaning hoses, it enables you to increase your vehicle payload.

All hoses are assembled with BSP female/male and ferrules. Delivery takes place with test certificate on each assembled hose.

Technical characteristics

Temperature range: -40 °C to +55 °C

Standard length: 80 m, 120 m, 160 m, 180 m, 200 m, 240 m

Further lengths on request

Maximum lengths: DN 25 up to 350 m, DN 32 up to 250 m,
DN 38 up to 200 m



Colour: Red

Construction

Cover: Polyurethane, cut- and abrasion resistant

Reinforcement: Highly tear-resistant synthetic fibres

Lining: Thermoplastic elastomer

Marking: -  - *GrüloJet 250* -  - DN [...] | WP 250 bar | BP 625 bar | [Datum]



Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	BP bar	Bending radius mm	Weight/m kg	Article no.
19	3/4	5,30	250	625	120	0,460	10089-019
25	1	5,85	250	625	150	0,643	10089-025
32	1 1/4	7,00	250	625	235	0,985	10089-032
38	1 1/2	7,00	250	625	300	1,150	10089-038*

*on request

**WE SWAGE SEWER CLEANING HOSES WITH ALL
KINDS OF COUPLINGS – ACCORDING TO YOUR NEEDS**



GrüloKan 250

Rubber sewer cleaning hose

GrüloKan 250 offers you all benefits of a professional rubber sewer cleaning hose. The specially developed rubber compound guarantees a long operating life, high abrasion resistance and an extremely high flexibility. **GrüloKan 250** is characterised by its easy handling, light weight and excellent pressure resistance. Addition **GrüloKan 250** has a very small bending radius. The hose cover is resistant to abrasion, cutting, aging and weather.

All hoses are assembled with BSP female/male and ferrules. Delivery takes place with test certificate on each assembled hose.



Technical characteristics

Temperature range: -40 °C to +70 °C

Standard length: 60 m, 80 m, 120 m, 160 m, 180 m, 200 m, 220 m, 240 m | Further lengths on request

Availability: 10 to 240 m | DN 32 up to 200 m

Colour: Black

Construction

Cover: NR/SBR, highly abrasion resistant, smooth

Reinforcement: Twofold braided synthetic fibres

Lining: NR/SBR, black, smooth

Marking: Transfer tape G+L ellipse GrüloKan 250 bar DN [...]

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	BP bar	Bending radius mm	Weight/m kg	Article no.
13	1/2	6,00	250	625	70	0,450	10066-013
19	3/4	6,00	250	625	90	0,600	10066-019
25	1	7,00	250	625	105	0,810	10066-025
32	1 1/4	7,50	250	625	140	1,080	10066-032
38	1 1/2	8,00	250	625	160	1,250	10066-038

Our advice



THE IDEAL
SEWER LEADER
HOSE

GrüloKan 250 Premium

Outstanding abrasion resistance



GrüloKan 250 Premium offers you much more than all common rubber sewer cleaning hoses. The especially developed composite bi-layer structure of the cover enables a very high abrasion resistance according to EN ISO 6945 (50 N and 2000 cycles max. 1g). This guarantees a long lifetime at equal flexibility in comparison to our GrüloKan 250. Therefore our GrüloKan 250 Premium can

be used in any situation, where all others fail!

All hoses are assembled with BSP female/male and ferrules. Delivery takes place with test certificate on each assembled hose.

Technical characteristics

Norm: EN ISO 6945

Temperature range: -40 °C to + 70 °C

Standard length: 60 m, 80 m, 120 m, 160 m, 180 m, 200 m, 220 m, 240 m

Availability: 10 to 300 m | NW 32 to 240 m

Colour: Black



Construction

Cover: Composite bi-layer structure with outstanding abrasion resistance

Abrasion resistance of cover: EN ISO 6945, at 50 N and 2000 cycle max. 1 gr.

Reinforcement: Twofold braided synthetic fibres

Lining: NR/SBR, black, smooth

Marking: Transfer tape with G+L ellipse GrüloKan Premium 250 bar DN [...]

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	BP bar	Bending radius mm	Weight/m kg	Article no.
13	1/2	6,00	250	625	70	0,430	10866-013
19	3/4	6,50	250	625	90	0,555	10866-019
25	1	7,00	250	625	100	0,775	10866-025
32	1 1/4	8,00	250	625	130	1,095	10866-032

GrüloKan 250 PROtect

For your own safety



GrüloKan 250 Protect offers you all the benefits of our approved rubber sewer cleaning hose **GrüloKan 250**. The yellow protection layer underneath the cover allows you to handle a high pressure hose in accordance with the requirements of working safety. As soon as the cover gets thinner – in

consequence of the rough operating conditions – the yellow protection layer becomes visible and warns you that its time to change the hose. So you and your staff members are always on the safe side.

All hoses are assembled with BSP female/male and ferrules. Delivery takes place with test certificate on each assembled hose.

Technical characteristics

Temperature range: -40 °C to +70 °C

Standard length: 60 m, 80 m, 120 m, 160 m, 180 m, 200 m, 220 m, 240 m

Availability: 10 to 300 m | NW 32 to 240 m

Colour: Black



Construction

Cover: NR/SBR, highly abrasion resistant, smooth

Protection layer: SBR/EPDM, yellow

Reinforcement: Twofold braided synthetic fibres

Lining: NR/SBR, black, smooth

Marking: Transfer tape G+L ellipse GrüloKan PROtect 250 bar DN [...]

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	BP bar	Bending radius mm	Weight/m kg	Article no.
13	1/2	6,50	250	625	65	0,485	10766-013
19	3/4	7,00	250	625	90	0,615	10766-019
25	1	7,50	250	625	100	0,875	10766-025
32	1 1/4	8,50	250	625	130	1,190	10766-032

GrüloKan 250 Inliner

With polyamide inliner



GrüloKan 250 Inliner offers you - besides all the advantages of a common rubber sewer cleaning hose - an extremely smooth polyamide inliner, which guarantees an obviously lower pressure loss. This minimisation of the pressure loss leads to a reduction of the engine speed which means considerable savings in fuel costs. This is an efficiency benefit you should not miss! **GrüloKan 250 Inliner** is

recommended especially for water conditioning and water recycling vehicles.

All hoses are assembled with BSP female/male and ferrules. Delivery takes place with test certificate on each assembled hose.

Technical characteristics

Temperature range: -40 °C to +70 °C

Standard length: 60 m, 80 m, 120 m, 160 m, 180 m, 200 m, 220 m, 240 m

Availability: 10 to 300 m | NW 32 to 240 m

Colour: Black

Construction

Cover: NR/SBR, highly abrasion resistant, smooth

Reinforcement: Twofold braided synthetic fibres

Inliner: Polyamide, white

Lining: NR/SBR, black, smooth

Marking: Transfer tape G+L ellipse GrüloKan Inliner 250 bar DN [...]



Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	BP bar	Bending radius mm	Weight/m kg	Article no.
13	1/2	6,00	250	625	65	0,485	10666-013
19	3/4	6,50	250	625	90	0,580	10666-019
25	1	7,00	250	625	100	0,830	10666-025
32	1 1/4	8,00	250	625	130	1,095	10666-032

GrüloPipe

Pipe cleaning hose



GrüloPipe from the product family **GrüloLine** offers all benefits of a premium high pressure rubber hose. **GrüloPipe** is extremely flexible, abrasion-, pressure- and oil resistant. With its working pressure of 250 bar **GrüloPipe** is suited perfectly for the application on jetting lances, e.g. for the cleaning of manholes.

All hoses are assembled with BSP female/male and ferrules. Delivery takes place with test certificate on each assembled hose. **Technical characteristics**

Norm: DIN EN 853 1 SN (R1 AT)

Temperature range: -40 °C to +100 °C

Standard length: 40 m, 60 m, 80 m, 100 m, 120 m

Colour: Black

Construction

Cover: SBR, smooth

Reinforcement: Highly tear resistant steel wire braid

Lining: SBR, black, smooth



Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	BP bar	Bending radius mm	Weight/m kg	Article no.
10	3/8	4,00	250	640	130	0,340	10550-010
13	1/2	4,00	250	640	180	0,415	10550-013
19	3/4	4,00	250	640	240	0,590	10550-019

GrüloPipe TP

Thermoplastic pipe cleaning hose

GrüloPipe TP is a low-price alternative to rubber hoses and was especially developed for applications in the mid pressure range. It is suited as pipe cleaning hose as well as for applications in house connection sewers. The cover made of a special thermorub-mixture convinces by its good weather resistance. The lining of polyethylene and the high tensile polyester braid guarantee a high flexibility. Delivery takes place with BSP female/ BSP male and ferrules and – on demand – with test certificate.



Technical characteristics

Temperature range: -20 °C to +60 °C

Standard length: 40 m, 60 m, 80 m, 100 m, 120 m
Further lengths on request

Colour: Black

Construction

Cover: Thermorub mixture, weatherproof

Reinforcement: High-tensile braid of polyester yarn

Lining: Polyethylene

Marking: Transfer tape G+L ellipse GrüloPipe TP 160 bar DN [...]

Inner-Ø mm	Inner-Ø Inch	WP bar	BP bar	Bending radius mm	Weight kg	Article no.
6,50	1/4	160	640	40	0,095	10650-006
8,00	5/16	160	640	50	0,120	10650-008

VACUMASTER

For cassette applications

From our **GrüloLine** product family we would like to present you **VACUMASTER NR** and its oil resistant variation **VACUMASTER OIL**, both especially designed for cassette applications on sewer cleaning vehicles. In cooperation with the producer we developed a hose you will not find again. **VACUMASTER** convinces by its excellent operation properties on all established sewer cleaning vehicles. The construction allows a maximum amount of flexibility and prevents the hose line from kinking.



VACUMASTER NR

Highly abrasion resistant

VACUMASTER NR is characterised by its excellent flexibility even at low temperatures. Due to its high abrasion resistant lining and cover, **VACUMASTER NR** guarantees a long operating life. Furthermore **VACUMASTER NR** is dimensionally stable and has an excellent bending radius.

With extended cuff on one side.

Technical characteristics

Temperature range: -35 °C to +80 °C

Standard length: 20 m | Further lengths on request

Colour: Black

Construction

Cover: NR/SBR, black

Reinforcement: Highly tear-resistant, synthetic fibres, especially braided, with twin steel wire helix

Lining: NR, black



Inner-Ø mm	Inner-Ø Inch	Cuff width mm	Vacuum bar	Bending radius mm	Weight kg	Article no.
102	4	110	0,9	300	4,200	10513-102
127	5	133	0,9	480	5,920	10513-127
152	6	160	0,9	520	7,800	10513-152

VACUMASTER OIL

Oil resistant

VACUMASTER OIL is characterised by its excellent flexibility even at low temperatures. Due to its high abrasion resistant lining and cover, **VACUMASTER OIL** guarantees a long operating life. Furthermore **VACUMASTER OIL** is electrically conductive, dimensionally stable, has an excellent bending radius and oil resistance.

With extended cuff on one side.

Technical characteristics

Temperature range: -35 °C to +100 °C

Standard length: 20 m | Further lengths on request

Colour: Black

Construction

Cover: CR, black

Reinforcement: Highly tear-resistant, synthetic fibres, especially braided, with twin steel wire helix

Lining: NBR, black, electrically conductive ($R \leq 10^6 \Omega$)



Inner-Ø mm	Inner-Ø Inch	Cuff width mm	Vacuum bar	Bending radius mm	Weight kg	Article no.
102	4	110	0,9	300	4,200	10524-102
127	5	133	0,9	480	5,920	10524-127
152	6	160	0,9	520	7,800	10524-152

GrüloElastic SE

PVC-suction and discharge hose

GrüloElastic SE is a suction and discharge hose for irrigation, sink- and canal cleaning as well as for agricultural purposes as a slurry hose.

It is weatherproof, dimensionally stable and smooth inside. Due to its special synthetic formula, **GrüloElastic SE** stays flexible even at temperatures below zero.

All technical data refer to a temperature of 20 °C.



Technical characteristics

Temperature range: -40 °C to +60 °C

Standard length: 30 m

Colour: Grey

Construction

Cover: PVC BUNA

Reinforcement: Rigid PVC helix

Lining: PVC BUNA, smooth

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	4,80	5*	0,9	175	0,978	10201-051
76	3	5,90	4*	0,9	245	1,700	10201-076
102	4	6,30	3*	0,9	325	2,670	10201-102
127	5	7,80	2*	0,8	625	3,560	10201-127
152	6	8,20	2*	0,7	685	4,460	10201-152

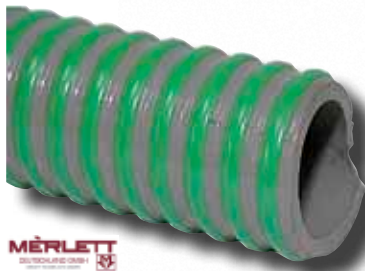
Arizona Superelastic

Highly flexible PVC hose

The high quality PVC-helix hose **Arizona Superelastic** is abrasion- and cold resistant. It is highly flexible and suitable for tank cars, irrigation plants and sludge tankers.

Only recommended as a suction hose.

All technical data refer to a temperature of 20 °C.



Technical characteristics

Temperature range: -25 °C to +55 °C

Standard length: 50 m, from ND 75 30 m, from ND 110 20 m

Colour: Grey with green PVC helix

Construction

Cover: PVC

Reinforcement: Rigid PVC helix

Lining: PVC, smooth

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	5,50	5	0,9	200	1,050	10073-050
76	3	6,50	4	0,9	300	1,700	10073-076
80	-	6,50	3	0,9	320	1,850	10073-080
102	4	7,30	3	0,9	400	2,700	10073-102
127	5	8,30	2,5	0,9	510	3,900	10073-127
152	6	9,00	2	0,9	600	5,000	10073-150

Super Heliflex

PVC-BUNA suction and discharge hose

This suction and discharge hose can be used for sprinkling, cesspool- and canal cleaning purposes as well as for liquid manure hoses in agriculture. **Super Heliflex** is ozone- and UV resistant, dimensionally stable, interiorly smooth and highly flexible due to its special plastic recipe.

All technical data refer to a temperature of 20 °C.



Technical characteristics

Temperature range: -40 °C to +60 °C

Standard length: 50 m, from ND 127 25 m, from ND 152 20 m

Colour: Silver-grey with white helix

Construction

Cover: PVC BUNA

Reinforcement: Rigid PVC helix

Lining: PVC BUNA, smooth

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	4,80	5*	0,9	170	1,050	10072-051
76	3	5,90	4*	0,9	240	1,750	10072-076
80	-	6,20	3*	0,9	250	1,950	10072-080
102	4	6,30	3*	0,9	320	2,700	10072-100
127	5	7,80	2*	0,9	620	3,600	10072-127
152	6	8,20	2*	0,9	680	4,500	10072-152

* Temporary resilient.

Technical characteristics

Temperature range: -25 °C to +60 °C

Standard length: 50 m | from ND 80 mm 30 m

Colour: Blue

Construction

Cover: PVC/NBR, corrugated, outer copper wire

Reinforcement: Shock and pressure resistant PVC spiral

Lining: PVC/NBR, smooth

Inner-Ø mm	Inner-Ø Inch	BP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	20	0,9	200	1,150	10571-051
76	3	17	0,9	250	1,910	10571-076
80	-	15	0,9	280	2,100	10571-080
102	4	13	0,9	350	3,250	10571-102

GrüloElastic Oil AS

Tank truck hose

Highly flexible, antistatic and cold resistant tank truck hose, with shock and pressure resistant PVC-spiral.

GrüloElastic Oil AS is especially suitable as suction and discharge hose for tank trucks.



Technical characteristics

Temperature range: -20 °C to +80 °C

Standard length: 40 m | further lengths available

Colour: Black

Construction

Cover: SBR, corrugated, electrically conductive

Reinforcement: Highly tear-resistant textile fibres, steel wire helix, copper litz wire

Lining: NBR, black, electrically conductive



Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
35	1 1/4	4,00	9	0,9	60	0,650	10419-032
38	1 1/2	4,00	9	0,9	80	0,850	10419-038
52	2	5,00	9	0,9	100	1,375	10419-052
76	3	7,50	9	0,9	150	1,900	10419-076

Ölflex

Antistatic tank truck hose

Tank truck hose suitable for hydrocarbons with max. 55% aromatic contents. Lining and cover are electrically conductive ($R \leq 10^6 \Omega$).



Technical characteristics

Norm: EN 12115

Temperature range: -30 °C to +80 °C

Standard length: 40 m

Colour: Black

Construction

Cover: CR

Reinforcement: Synthetic fibres with steel wire helix and two copper litz wire

Lining: NBR, black, smooth

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	7,00	16	0,9	300	1,690	10191-051
76	3	7,50	16	0,9	450	2,830	10191-076
102	4	8,00	16	0,9	610	3,950	10191-102

GrüloTank SP

Tank truck hose with helix

Tank truck hose with helix according to EN 12115. Suitable for hydrocarbons with max. 55% aromatic contents. Oil, weather and ozone resistant cover. Electrically conductive ($R \leq 10^6 \Omega$).



Synthetic building hose Standard

Synthetic flat hose with couplings

Efficient flat hose – german quality – with Storz coupling for water discharge.



Technical characteristics

Standard length: 20 m, further lengths available

Colour: White

Construction

Cover: Polyester thread, round woven, chain double twisted

Lining: Synthetic rubber

Inner-Ø mm	Inner-Ø Inch	WP bar	BP bar	Weight kg	Article no.
52	2	13	40	8,000	90002-052-020
75	3	13	40	11,500	90002-075-020
102	4	8	20	14,000	90002-102-020
152	6	6	15	27,000	90002-152-020

GrüloDur BUNA

Multipurpose lay-flat hose

Lay-flat hose with PVC/NBR lining, suitable for medium duty discharge of water, light chemicals and other liquids in agriculture and industries. Abrasion and weather resistant. Very light and flexible, especially suitable for use in cold climates.



Technical characteristics

Temperature range: -25 °C to +60 °C

Standard length: 50 m, 100 m | from ND 127 mm 50 m

Colour: Black

Construction

Cover: NBR/PVC, ribbed

Reinforcement: High tensile synthetic textile

Lining: NBR/PVC, black, smooth

Inner-Ø mm	Inner-Ø Inch	WP bar	BP bar	Weight kg	Article no.
52	2	8	24	0,410	10710-052
76	3	7	21	0,685	10710-076
102	4	7	21	1,000	10710-102
152	6	6	18	1,350	10710-127

GrüloVin

PVC suction hose, transparent

Robust, flexible and abrasion resistant PVC hose, usable as a suction hose for water, foodstuff, beverages to 28 Vol.-% of alcohol or potable water. Furthermore suitable for vacuum pumps and for drawdown. Very good chemical resistance.

All technical data refer to a temperature of 20 °C.



Technical characteristics

Temperature range: -5 °C to +60 °C

Standard length: 30 m

Colour: Green transparent

Construction

Cover: Soft PVC, smooth

Reinforcement: Embedded steel wire helix

Lining: Soft PVC, smooth

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	7,00	5	0,8	125	1,600	10248-050
76	3	8,00	4	0,7	200	2,850	10248-075
80	-	8,00	3	0,7	220	3,150	10248-080
102	4	9,00	3	0,6	300	4,400	10248-100
127	5	9,50	2	0,6	350	5,400	10248-125
152	6	9,50	2	0,6	450	7,200	10248-150

Technical characteristics

Norm: EN 12115

Temperature range: -20 °C to +100 °C

Standard length: 40 m

Colour: Black

Construction

Cover: CR, black, fabric patterned

Reinforcement: Synthetic cord fibres with two steel helices and twin copper litz wire

Lining: EPDM, black

Marking: GruloChem SP EPDM EN 12115

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	7,00	16	0,9	275	2,150	10164-050
76	3	8,00	16	0,9	350	3,160	10164-075
102	4	8,00	16	0,9	450	4,175	10164-102

GruloChem SP EPDM

EPDM chemical hose

Suitable as suction and discharge hose in the chemical industry as well as for sea water and industrial waste water. Cover and lining are electrically conductive ($R \leq 10^6 \Omega$).



GruloLine

Technical characteristics

Norm: EN 12115

Temperature range: -20 °C to +80 °C
depending on medium

Standard length: 40 m

Construction

Cover: EPDM, black, electrically conductive

Reinforcement: Synthetic cord fibres with steel helix and copper litz wire

Lining: UPE transparent

Marking: GruloChem SP UPE EN 12115

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	7,00	16	0,9	275	2,121	10163-050
76	3	7,50	16	0,9	350	3,176	10163-075
102	4	8,00	16	0,9	450	4,244	10163-102

GruloChem SP UPE

UPE chemical hose

Chemical hose with helix, suitable for 98% of all present chemicals according to resistance chart. The cover is electrically conductive ($R \leq 10^6 \Omega$).



GruloLine

For each application the right connection!

We swage hoses with all kinds of couplings – according to your needs



Vacupress® Flex

TPE suction and discharge hose

Even at temperatures below 0 °C highly flexible all-purpose hose for discharge and suction of liquids and lightly abrasive media like cement. Good weather- and abrasion resistance. Due to its outstanding flexibility **Vacupress® Flex** is ideally suited as suction and discharge hose for canal cleaning vehicles and silo trucks.

All technical data refer to a temperature of 20 °C.



Technical characteristics

Temperature range: -25 °C to +60 °C

Standard length: 60 m, from ND 38 30 m, from ND 127 20 m

Colour: Black

Construction

Cover: TPE, smooth

Reinforcement: Embedded steel wire helix, polyester yarn reinforcement

Lining: TPE, black, smooth

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	6,50	12	0,9	150	1,600	10053-050
76	3	8,00	12	0,9	210	2,900	10053-076
102	4	8,50	10	0,9	300	4,000	10053-102
127	5	9,00	7	0,9	370	5,800	10053-127
152	6	9,50	5	0,9	480	6,850	10053-152

GrüloFlex PUR DIN 4102

PVC suction hose

Flame-resistant, flexible polyurethane suction hose with high abrasion resistance. **GrüloFlex PUR DIN 4102** offers a good resistance to microbes, oil and petrol, diluted alkaline solutions and acids, UV and weather.

All technical data refer to a temperature of 20 °C.



Technical characteristics

Norm: DIN 4102

Temperature range: -40 °C to +90 °C | temporary to 125 °C

Standard length: 30 m, from ND 250 15 m

Colour: Transparent

Construction

Material: PU with copper clad steel helix

Inner-Ø mm	Vacuum bar	Bending radius mm	Weight kg	Article no.
90	0,20	90	0,520	10238-090
110	0,15	110	0,720	10238-110
130	0,15	130	0,840	10238-130
160	0,10	160	1,160	10238-160
200	0,10	200	1,440	10238-200

GrüloLine

GrüloElastic PU

PVC/PU suction and discharge hose

Due to its PVC-lining reinforced with PU **GrüloElastic PU** has a much better abrasion resistance as common PVC hoses. Furthermore this hose is highly flexible and has a good weather resistance. **GrüloElastic PU** is very suitable as suction and discharge hose for heavy applications: for abrasive media, water and wastewater as well as an extension of suction lines on dredgers and sewer cleaning vehicles.

All technical data refer to a temperature of 20 °C.



Technical characteristics

Temperature range: -5 °C to +60 °C

Standard length: Up to ND 76 30 m, 50 m | from ND 80 20 m, 30 m

Colour: Grey

Construction

Cover: PVC

Reinforcement: Rigid PVC helix

Lining: PVC with PU-inliner, yellow

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	6,00	7	0,9	330	1,150	10126-051
76	3	7,00	6	0,9	495	1,950	10126-076
102	4	7,50	5	0,9	700	3,250	10126-102
127	5	9,00	5	0,9	970	4,150	10126-127
152	6	10,00	4	0,9	1210	6,200	10126-152

GrüloLine

Technical characteristics

Norm: ISO 1307

Temperature range: -10 °C to +60 °C

Standard length: 40 m

Colour: Black with orange

Construction

Cover: TPE, abrasion-, ozone- and weather resistant

Reinforcement: Two high-strength synthetic textile fabric

Lining: TPE, partly oil resistant, black



GrüloFlex TPE20

TPE compression air hose 20 bar

GrüloFlex TPE20 shows similar properties like a rubber hose due to its special Thermorub® composite material. It is oil resistant and very flexible even at low temperatures. Due to the high-strength textile fabric **GrüloFlex TPE20** is especially suitable as a compression air or water hose.

Ideal for filling stop-off bags!

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Bending radius mm	Weight kg	Article no.
13	1/2	4,00	20	180	0,335	12228-013
19	3/4	5,00	20	240	0,565	12228-019
25	1	5,00	20	300	0,790	12228-025



GrüloLine

Technical characteristics

Temperature range: -40 °C to +100 °C

Standard length: 40 m

Colour: Black

Construction

Cover: EPDM

Reinforcement: Synthetic textile fibres

Lining: EPDM, black

GrüloFlex EPDM 20

The water hose for professionals!

EPDM hose in extruded design for the dosing, filling and emptying of watery lyes and solutions. Especially suitable for heavy purposes. Ideal for outdoor use, due to its good ozone resistance.

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Bending radius mm	Weight kg	Article no.
13	1/2	4,00	20	130	0,325	10030-013
19	3/4	4,50	20	190	0,500	10030-019
25	1	5,00	20	250	0,710	10030-025



GrüloLine

Technical characteristics

Temperature range: -25 °C to +70 °C

Standard length: 40 m | Further lengths available

Colour: Black

Construction

Cover: SBR, smooth, fabric patterned

Reinforcement: Synthetic textile fibres, steel wire helix

Lining: SBR, black, smooth

Water S/D 10

Rubber Spiralhose

Suction and discharge hose for industrial and construction services. The tube is suited for water, sewage, liquid manure, drilling mud, solid suspension and low abrasive materials. The cover is abrasion- and weather resistant.

Also available in 3- and 5 m lengths with spiral free cuffs!

Inner-Ø mm	Inner-Ø Inch	Wall thickness mm	WP bar	Vacuum bar	Bending radius mm	Weight kg	Article no.
51	2	5,00	10	0,9	306	1,500	10056-051
76	3	7,00	10	0,9	458	2,600	10056-075
102	4	6,00	10	0,9	610	4,025	10056-102
152	6	8,00	10	0,9	915	8,205	10056-152



GrüloLine

Sewer cleaning hose duct

for a longer lifetime!



Polyethylene disposal hoses ToiVrac and Hy-Vac

Heavy weight and flexible polyethylene ducting hose in two different versions. Suitable for suction of liquids in sanitary and sewer applications or airport services. **Upon request delivery takes place with tight welded or screwed synthetic cuffs.** Our recommendation: Use ToiVrac or Hy-Vac as a protection hose for the sewer cleaning during the insertion into the sewer tunnel to prevent from abrasion and premature wear. The protection set consists of one length of polyethylene disposal hose with black synthetic cuffs on both sides, a 5m or 10m betalone line, fixed with shrinkdown plastic tubing out of polyolefins.

Technical characteristics

Temperatur range: -40 °C to +60 °C

Standard length: 100 cm, 120 cm

Colour: Red | Black and yellow

Inner-Ø mm	Vacuum bar	Length cm	Article no. ToiVrac	Article no. Hy-Vac
51	0,95	100	92300-051	92200-051
76	0,95	100	92300-076	92200-076
102	0,95	120	92300-102	92200-102

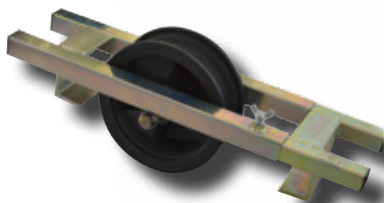
All technical data refer to a temperature of 20 °C.



Return pulley, bottom edge

Essential for the fight against abrasion and wear of the sewer jetting hose. The return pulley, bottom edge is suitable for hoses with ND 19 to 32 mm. With three rollers (Ø 73 mm), snap hook and 6m-line with wrist strap.

Material: Galvanised steel
Artikel no. 80001-019-032



Return polley, upper edge

Return polley, upper edge, galvanised steel.

The roller has a diameter of 225 mm.

Material: Galvanised steel
Artikel no. 80002



Return slide, bottom edge

Available for hoses in 3/4", 1" and 1 1/4", with snap hook on one side, Frame in stainless steel, plastic slide in black.

Material: Stainless steel / plastic

Artikel no. 80010



Press couplings for sewer jetting hoses

High pressure press couplings for use in case of repair of thermoplastic or rubber sewer cleaning hoses up to a working pressure of 250 bar.

Consisting of one piece press coupling BSP female, BSP male and ferrule, steel plated finish.

Important:

The press diameters only apply to *new* hoses. For used hoses or in case of repair the correct press diameters have to be determined individually again!

Technical characteristics

BSP straight female, 60° cone

BSP male parallel, 60° cone seat

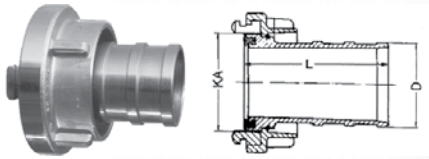
GrüloJet				Press couplings		
ND mm	ND Inch	Part	Thread Inch	Press Ø mm	Weight kg	Artikel no.
13	1/2	Male AGR	R 1/2	-	0,090	20464-04-013
		Female DKR		-	0,090	20463-04-013
		Ferrule		25,3	0,060	20465-04-012
16	5/8	Male AGR	R 5/8	-	0,100	20464-05-016
		Female DKR		-	0,100	20463-05-016
		Ferrule		29,0	0,070	20465-05-016
19	3/4	Male AGR	R 3/4	-	0,170	20464-06-019
		Female DKR		-	0,140	20463-06-019
		Ferrule		33,5	0,090	20465-06-020
25	1	Male AGR	R 1	-	0,300	20464-10-025
		Female DKR		-	0,300	20480-10-025
		Ferrule		41,0	0,150	20465-10-025
32	1 1/4	Male AGR	R 1 1/4	-	0,500	20464-12-032
		Female DKR		-	0,400	20480-12-032
		Ferrule		51,0	0,270	20465-12-032

MT (IG) = Female BSP with inner thread | VT (AG) = Male thread with outside thread

GrüloKan 250				Press couplings		
ND mm	ND Inch	Part	Thread Inch	Press Ø mm	Weight kg	Artikel no.
13	1/2	Male AGR	R 1/2	-	0,090	20481-04-013
		Female DKR		-	0,090	20480-04-013
		Ferrule		27,5	0,070	20482-04-013
19	3/4	Male AGR	R 3/4	-	0,170	20481-06-019
		Female DKR		-	0,140	20480-06-019
		Ferrule		33,8	0,100	20482-06-019
25	1	Male AGR	R 1	-	0,300	20481-10-025
		Female DKR		-	0,300	20480-10-025
		Ferrule		41,2	0,170	20482-10-025
32	1 1/4	Male AGR	R 1 1/4	-	0,500	20481-12-032
		Female DKR		-	0,400	20480-12-032
		Ferrule		51,8	0,290	20482-12-032

MT (IG) = Female BSP with inner thread | VT (AG) = Male thread with outside thread

Suction hose coupling



Technical characteristics

Material: Alloy I also available: stainless steel or brass

Seal: Nitrile rubber, black or white

WP: 16 bar

MADE IN GERMANY

Storz Size	Lug mm	Diameter mm	Length mm	Remark	Weight/piece kg	Article no.
25-D	31	25	53	DIN 14301	0,090	21015-025-025-01
52-C	66	52	90	DIN 14321	0,370	21015-052-052-01
75-B	89	75	125	DIN 14322	0,710	21015-075-075-01
110-A	133	110	170	DIN 14323	1,660	21015-110-110-01
125	148	125	200	-	2,020	21015-125-125-01
150	160	150	180	-	2,900	21015-150-150-01

Adapter with female thread



Technical characteristics

Material: Alloy I also available: stainless steel or brass

Seal: Nitrile rubber, black or white

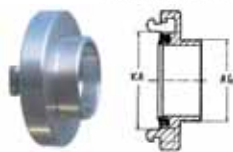
Thread: DIN ISO 228

WP: 16 bar

MADE IN GERMANY

Storz Size	Lug mm	Female thread Inch	Remark	Weight/piece kg	Article no.
25-D	31	1	DIN 14306	0,080	21020-025-10-01
52-C	66	2	DIN 14307	0,280	21020-052-20-01
75-B	89	2 1/2	DIN 14308	0,420	21020-075-24-01
75-B	89	3	-	0,420	21020-075-30-01
110-A	133	4 1/2	DIN 14309	1,090	21020-110-44-01
125	148	5	-	1,380	21020-125-50-01
150	160	6	-	1,820	21020-150-60-01

Adapter with male thread



Technical characteristics

Material: Alloy I also available: stainless steel or brass

Seal: Nitrile rubber, black or white

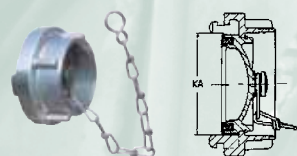
Thread: DIN ISO 228

WP: 16 bar

MADE IN GERMANY

Storz Size	Lug mm	Male thread Inch	Remark	Weight/piece kg	Article no.
52-C	66	1 1/2	-	0,250	21021-052-14-01
52-C	66	2	-	0,210	21021-052-20-01
75-B	89	2 1/2	-	0,360	21021-075-24-01
75-B	89	3	-	0,390	21021-075-30-01
110-A	133	4	-	1,010	21021-110-40-01
125	148	5	With nipple	1,810	21021-125-50-01
150	160	6	With nipple	2,340	21021-150-60-01

Blank caps with chain



Technical characteristics

Material: Alloy | also available: stainless steel or brass

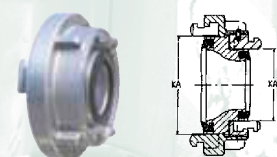
Seal: Nitrile rubber, black or white

WP: 16 bar



Storz Size	Lug mm	Remark	Weight/piece kg	Article no.
52-C	66	DIN 14311	0,380	21030-052-01
75-B	89	DIN 14312	0,560	21030-075-01
110-A	133	DIN 14313	1,340	21030-110-01
125	148	-	1,700	21030-125-01
150	160	-	2,140	21030-150-01

Reducer Storz to Storz



Technical characteristics

Material: Alloy | also available: stainless steel or brass

Seal: Nitrile rubber, black or white

WP: 16 bar



Storz to Storz	Lug mm	Remark	Weight/piece kg	Article no.
75-B / 52-C	89 / 66	DIN 14342	0,600	21040-075-052-01
110-A / 75-B	133 / 89	DIN 14343	1,570	21040-110-075-01
125 / 110-A	148 / 133	-	3,960	21040-125-110-01
150 / 125	160 / 148	-	3,960	21040-150-125-01

Cardan-male coupling with rolled hose tail | galvanised



Technical characteristics

Material: Steel, galvanised | also available: stainless steel



DN mm	Hose stump mm	Length mm	Weight/piece kg	Article no.
50	50	140	0,420	23300-050-050-04
89	75	188	1,040	23300-089-075-04
108	100	207	1,620	23300-108-100-04
133	125	238	2,040	23300-133-125-04
159	150	238	2,700	23300-159-150-04

Cardan-female coupling with rolled hose tail | galvanised



Technical characteristics

Material: Steel, galvanised | also available: stainless steel

Seal: Material according to requirements



DN mm	Hose stump mm	Length mm	Weight/Stück kg	Article no.
50	50	146	0,980	23301-050-050-04
89	75	157	1,600	23301-089-075-04
108	100	196	2,820	23301-108-100-04
133	125	250	4,020	23301-133-125-04
159	150	250	8,080	23301-159-150-04

Male threaded with serrated hose shank



Technical characteristics

Thread: EN ISO 228-1

Assembly: Worm drive clamps

Material: Brass | also available: stainless steel

WP: 16 bar

ND Inch	ND mm	For hose mm	Thread Inch	Weight/piece kg	Article no.
2	50	51	G 2	0,500	24424-050-20-02
3	75	76	G 3	1,000	24424-075-30-02
4	100	102	G 4	1,890	24424-100-40-02

Male threaded with smooth hose shank



Technical characteristics

Material: Brass | also available: stainless steel

Assembly: Safety clamps

WP: 16 bar

ND Inch	ND mm	For hose mm	Thread Inch	SW min. size mm	Weight/piece kg	Article no.
2	50	71	G 2	65	0,460	24421-050-20-02
3	75	76	G 3	100	0,910	24421-075-30-02
4	100	102	G 4	125	1,930	24421-100-40-02

TW couplings | Male part – female threaded with thread seal



Technical characteristics

Thread: EN ISO 228-1

Material: Brass | also available: stainless steel

Seal coupling: NBR

Seal thread: PU

WP: 25 bar

ND Inch	ND mm	Thread	Weight/piece kg	Article no.
2	VK 50	G 2	0,300	24454-050-20-02
3	VK 80	G 3	0,780	24454-080-30-02
4	VK 100	G 4	1,220	24454-100-40-02

TW couplings | Female part – female threaded with locking lever



Technical characteristics

Thread: EN ISO 228-1

Material: Brass | also available: stainless steel

Seal Kupplung: NBR

Seal Thread: PU

WP: 25 bar

ND Inch	ND mm	Thread	Weight/piece kg	Article no.
2	MK 50	G 2	1,460	24455-050-20-02
3	MK 80	G 3	2,710	24455-080-30-02
4	MK 100	G 4	0,740	24455-100-40-02

TW couplings I Crown part female threaded



Technical characteristics

Thread: EN ISO 228-1

Material: Brass I also available: stainless steel

Seal coupling: NBR

Seal thread: PU

WP: 25 bar

ND Inch	ND mm	Thread	Weight/piece kg	Article no.
2	50	G 2	0,230	24456-20-02
3	80	G 3	0,550	24456-30-02

Other dimensions on request.

TW couplings I Locking ring with lever



Technical characteristics

Material: Brass I also available: stainless steel

WP: 25 bar

ND Inch	ND mm	Weight/piece kg	Article no.
2	50	0,510	24457-20-02
3	80	0,930	24457-30-02

Other dimensions on request.

TW couplings I Dust cap



Technical characteristics

Material: Alloy I also available: brass or stainless steel

Seal: NBR

ND Inch	ND mm	Weight/piece kg	Article no.
2	50	0,300	24458-050-01
3	80	0,350	24458-080-01
4	100	0,450	24458-100-01

TW couplings I Dust plug



Technical characteristics

Material: Alloy I also available: brass, stainless steel, PP (not pressure resistant)

ND Inch	ND mm	Weight/piece kg	Article no.
2	50	0,400	24459-050-01
3	80	0,450	24459-080-01
4	100	0,600	24459-100-01

TV Camera System

Sewer cleaning and inspection carried out simultaneously

Wireless camera system consisting of a TV camera and a sewer cleaning nozzle. Sewer cleaning and TV inspection are carried out simultaneously. A TV camera is mounted on the base part of a sewer cleaning nozzle. Image transmission from the transmitter to the receiver is effected by radio. Hence, a camera cable is not necessary. The camera is self-lightning, self-focussing and has an internal power supply.

Technical characteristics

Range of application: from DN 250 mm

Range of Transmitter: >300 m

Readiness for use: unlimited

Monitor: Black/white or colour

Weight: 20 to 28 kg

Flow capacity: From 160 l/min/120 bar

Image transmission: Per Radio



Typ	Article no.
TV Camera System, colour	80850-c
TV Camera System, b/w	80850-s/w

Royal Nozzle

All-round cleaning

The royal nozzle is one of the most efficient tools for extremely dirty sewers. It adds a new dimension to cost reduction and increase in efficiency. The royal nozzle is specially designed for the all-round cleaning of sewers of 300 mm and more in diameter. Due to the patented fluid mechanics (patent no.: DE 19533654) its efficiency is unequalled. Two different jet angles ensure optimum cleaning performance in lines up to 1200 mm in diameter.

Patented fluid mechanics.



Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
3/4	300 – 1000	12	190	109	7,500	80805-06
1	300 – 1200	12	190	109	7,500	80805-10
1 1/4	300 – 1200	12	190	109	7,500	80805-12
1 1/2	300 – 1200	12	190	109	7,500	80805-14

Torpedo Nozzle

Top quality nozzle for everyday use

The torpedo nozzle is the ideal tool in all cases where high demands are placed on cleaning and pulling properties. Due to the patented fluid mechanics and the highly wear-resistant material used, it sets new standards on cost reduction and increase in efficiency. The torpedo nozzle, belonging to the most efficient sewer cleaning tools, was designed for cleaning lines up to 400 mm in diameter. Two different jet angles contribute to an effective transport of dirt and silt. The torpedo nozzle can cope with difficult tasks in round as well as in egg-shaped pipes.

Patented fluid mechanics.



Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
3/4	150 – 400	8	180	98	5,600	80806-06
1	150 – 400	8	180	98	5,600	80806-10
1 1/4	150 – 400	8	180	98	5,600	80806-12
1 1/2	150 – 400	8	180	98	5,600	80806-14



Sewer Nozzle

The solid nozzle for everyday use

With its 10 to 12 nozzle inserts and two different jet angles it is primarily used for the all-round cleaning of pipes up to 800 mm in diameter. The sewer nozzle is made of highly wear-resistant special steel. It is an efficient and low-cost alternative to conventional standard products.

Patented fluid mechanics.

Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
3/4	150 – 400	10	180	99	6,500	80807-06
1	150 – 500	10	180	99	6,500	80807-10
1 1/4	150 – 600	12	208	109	8,700	80807-12
1 1/2	150 – 600	12	208	109	8,700	80807-14



Cleaning Nozzle

The ideal tool for all-round cleaning smaller lines

The cleaning nozzle is used for all-round cleaning operations in smaller lines up to 400 mm in diameter. This light nozzle has two different jet angles. With its eight nozzle inserts it slides in the pipe. The cleaning nozzle follows bends and is successfully used in difficult pipes.

Patented fluid mechanics.

Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
3/8	75 – 200	8	45	44	0,300	80808-03
1/2	75 – 200	8	45	44	0,300	80808-04
3/4	100 – 300	8	105	64	1,700	80808-06
1	100 – 400	8	125	74	2,700	80808-10



Traction Nozzle

Designed for smaller lines

In case of the traction nozzle the patented fluid mechanics and two different jet angles ensure a very high pulling efficiency, which leads to an efficient dirt transport. This small maneuverable nozzle is ideal for cleaning smaller lines, where good pulling properties are required. The traction nozzle is also available with front jet. It is successfully used in difficult pipes (set-off joints, bends etc.).

Patented fluid mechanics.

Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
3/8	50 – 150	7	47	40	0,300	80809-03* 80810-03+
1/2	50 – 150	7	47	40	0,300	80809-04* 80810-04+
3/4	75 – 200	7	98	60	1,100	80809-06* 80810-06+
1	100 – 250	7	110	68	1,600	80809-10* 80810-10+
1 1/4	100 – 300	7	125	80	2,700	80809-12* 80810-12+

* Nozzle without front jet | + Nozzle with front jet

Rotor Nozzle

Perfect cleaning of the pipe wall

The field of application of the rotor nozzle ranges from the removal of grease, small roots, crust and scale to cleaning operations before using a TV camera. It is equipped with special bearings instead of the usually applied brass bushings, what makes them absolutely maintenance-free. The constant rotary motion of the middle part of the nozzle ensures a continuous cleaning of the interior wall of the pipe, with the rotational speed being adjusted to the particular conditions.

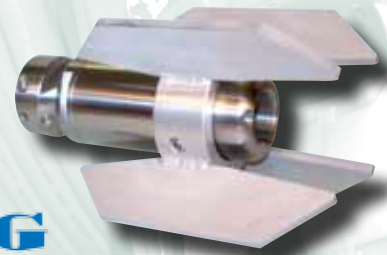


Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
1/4	50 – 150	4	62	30	0,300	80811-02
3/8	50 – 200	4	62	30	0,300	80811-03
1/2	75 – 250	7	77	42	0,700	80811-04
3/4	100 – 300	8	110	60	1,800	80811-06
1	150 – 500	9	140	78	4,100	80811-10
1 1/4	150 – 500	9	140	78	4,100	80811-12

POWER CLEAN

Controllable speed nozzle

Rotor nozzle utilising automatic rotation speed limitation is suitable for use with vehicles featuring water recycling system. It provides perfect all around pipe cleaning and is primarily intended for grease removal. It will also remove scale, crusts and deposits of all kinds. With front and rear jet. Ideal for vehicles with water recycling system. Highly wear-resistant stainless material of the nozzle body. Replacable nozzle inserts, maintenance-free.



Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
3/4" to 1/2" light design	from 75	10	154	49	1,600	80813-06-04
1" to 3/4" medium design	from 100	12	232	86	6,500	80813-10-06
1 1/4" to 1" tough design	from 150	12	245	135	12,000	80813-12-10

Quattro nozzle with front Jets

Special nozzle for blocked pipes and sewers

The triple-edge quattro nozzle with front jets made of special steel is used in pipes and sewers for the fast removing of blockages. The front water jets loosen blockages, whereas the sharp edges provide additional assistance in clearing off drainpipe obstructions.



Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
1/4	from 50	1	30	22	0,100	80814-02
3/8	from 50	1	30	22	0,100	80814-03
1/2	from 75	4	55	30	0,150	80814-04
3/4	from 75	10	70	45	0,400	80814-06
1	from 100	10	95	57	0,900	80814-10
1 1/4	from 100	11	170	75	2,700	80814-12



Quattro nozzle with penetrator

In case of total blockages and compressed material

The Quattro Nozzle with penetrator is excellently suitable for application in case of total blockages and compressed material in lines. The replaceable tip deeply penetrates the blockage, the deposits being immediately washed to the rear. A high pulling performance is characteristic of this light nozzle. It is capable of maneuvering around bends and is applicable in pipes with severe set-off joints.

Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
1/4	from 50	-	30	22	0,100	80815-02
3/8	from 50	-	30	22	0,100	80815-03
1/2	from 75	-	55	30	0,150	80815-04
3/4	from 75	6	70	45	0,400	80815-06
1	from 100	6	95	57	0,900	80815-10
1 1/4	from 100	10	170	75	2,700	80815-12



Rambo nozzle with penetrator and front jets

For any kind of severe blockage

The four-edged Rambo nozzle with penetrator and front jets is used for removing blockages and compressed material in pipes and sewers. It combines the advantages of both the quattro nozzle with front jet and the quattro nozzle with penetrator. It is capable of removing any kind of severe blockage within shortest time. The replaceable tip deeply penetrates the blockage and the water jets will loosen the blocking material and wash it away to the rear.

Hose connection Inch	Range of application mm	Number of Nozzle Inserts	Length mm	Ø mm	Weight kg	Article no.
1/4	from 50	7	40	22	0,100	80816-02
3/8	from 50	7	75	30	0,150	80816-03
1/2	from 75	9	120	52	0,950	80816-04
3/4	from 75	9	120	52	0,950	80816-06
1	from 100	10	170	75	2,700	80816-10
1 1/4	from 100	10	170	75	2,700	80816-12



Ball nozzle

Standardised sewer cleaning nozzle

The ball nozzle is made of wear-resistant stainless material. This small nozzle is extremely maneuverable and is suitable for cleaning drain lines. With or without front jet.

Hose connection Inch	Length mm	Ø mm	Weight kg	Article no.
1/8	15	15	0,020	80817-01* 80818-01+
1/4	24	20	0,050	80817-02* 80818-02+
3/8	24	24	0,080	80817-03* 80818-03+
1/2	30	30	0,100	80817-04* 80818-04+

* Nozzle without front jet | + Nozzle with front jet

Standard nozzle

Standardised sewer cleaning nozzle

The standard nozzle is made of wear-resistant stainless material and used in pipes and sewers from 25 mm to 400 mm in diameter. It is a light and movable nozzle available with or without front jet.



Hose connection Inch	Length mm	Ø mm	Weight kg	Article no.
1/8	15	15	0,020	80819-01* 80820-01+
1/4	24	20	0,030	80819-02* 80820-02+
3/8	24	24	0,080	80819-03* 80820-03+
1/2	50	30	0,200	80819-04* 80820-04+
3/4	60	40	0,300	80819-06* 80820-06+
1	80	50	0,600	80819-10* 80820-10+
1 1/4	93	60	1,000	80819-12* 80820-12+

* Nozzle without front jet | + Nozzle with front jet

Sewer Flush Nozzle

Standardised sewer cleaning nozzle

The sewer flush nozzle is a solid and reliable tool for the all-round cleaning of pipes and sewers up to 600 mm in diameter. This nozzle which is made of a wear-resistant stainless material is equipped with replaceable nozzle inserts (except for 1/4" hose connection).



Hose connection Inch	Length mm	Ø mm	Weight kg	Article no.
1/4	50	30	0,250	80821-02* 80822-02+
3/8	60	38	0,500	80821-03* 80822-03+
1/2	60	38	0,500	80821-04*
3/4	98	65	1,500	80821-06*
1	148	88	4,600	80821-10*
1 1/4	178	98	6,200	80821-12*

* Nozzle without front jet | + Nozzle with front jet

Things to know about KEG – Nozzles

• Recycling water

KEG nozzles are basically suitable for the operation with recycled water. Don't hesitate to ask for expert consultation.

• Quality guarantee

A 3-year warranty* is provided on each of the ordered nozzle sets equipped with new titanium-ceramic inserts. Please note the recommendations on the sets (*according to KEG warranty conditions).

• Material/nozzle inserts

All KEG nozzles are made of highly wear-resistant special steel. The replaceable nozzle inserts are adjustable to any pumping capacity. Nozzles with patented fluid mechanics can be equipped with titanium-ceramic inserts.

• Advantages of the patented fluid mechanics

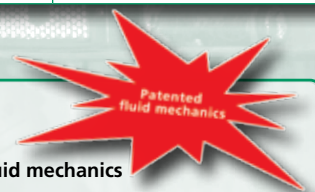
• Low water and energy consumption due to:

- fluidic optimisation of the interior of the nozzle.
- no water turbulence inside the nozzle.
- Efficiency of about 90 %.

• Higher cleaning efficiency

• Additional cost reduction:

- Replaceable nozzle inserts adjustable to any pumping capacity / pressure capacity.
- Highly wear-resistant special steel allows a longer service life, no maintenance required.



**Please feel free to ask for expert consultation!
We are happy to help you.**



OUR PRODUCT RANGE AT ONE GLANCE

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