

# Groundwater lowering

Dewatering | Special civil engineering

Grünin **G+L** oske  
[www.gruelo.de](http://www.gruelo.de)

*Your professional for hoses!*



*Reliable, for sure!*

★ friendly

★ flexible

★ fair

★ competent

★ reliable

5-STAR - SERVICE EVERY DAY!



For more than 60 years, Grünig & Loske GmbH has been standing for a successful combination of services and products in the business-to-business sector. Our declared intention is to turn our customers into delighted fans by our 5-Star-Service: friendly, flexible, fair, competent and reliable – from the first contact to on-time delivery!

As technical trade with own workshops we have decades of experience in the assembly of suction and pressure hoses for irrigation or groundwater lowering. From clamp binding or pressing of hose lines with all conceivable coupling systems to pressure testing of hose lines - we offer you a comprehensive portfolio of products and services with only one goal in mind. To make your everyday work easier.

In case you need more detailed information about a particular product or would like to get a general idea about our extensive assortment, please visit us on [www.gruelo.de](http://www.gruelo.de).

In case you need help to choose the right product for your application area our kind and competent sales team provides assistance under:

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Enjoy our new range of products!

Dirk Loske  
CEO



[www.gruelo.de](http://www.gruelo.de)

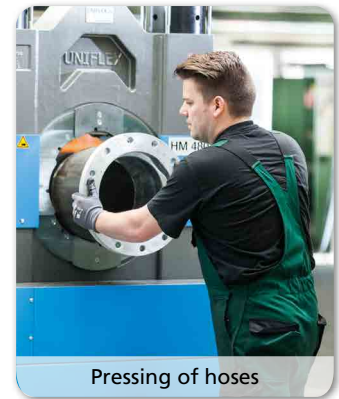
## Hose service

### Consultation and assembly

Assembly is done under strong compliance with regulations applying to the manufacturing of complete hose lines (European Pressure Equipment Directive PED 2014/68/EU).

A safe operation of a hose line is only possible, considering the actual operation conditions. This includes resistance against the conducted media, working pressure, operating temperature, installation situation, bending frequency, duration and frequency of operation, environmental conditions and mechanical load.

All advice and practical support you require for your individual operation purpose will be given by our skilled expert staff. The personnel in hose technology is "Qualified Person pursuant to the Ordinance on Industrial Safety and Health for pressure tanks and piping" and additionally „Certificated Expert Advisers for Hose and Fitting Technology“ (Certification through Trade Association).



Pressing of hoses

### Our services:

- Assembly of hose lines/swaging of hose lines up to DN 300 mm, with clamps, bolted clamps and all customary hose coupling systems: e.g. Storz, Perrot, Bauer, Anfor, Flange, Kamlok, GEKA
- Swaging of composite hoses up to DN 250 mm
- Assembly of hose packs and heatable hose lines
- Detailed advice by phone or personally on-site
- Management of hose lines
- Hose testing in conformity with European Pressure Equipment Directive PED 2014/68/EU as well as German BetrSichV (Occupational Safety Regulations)
- Labelling or marking of hoses
- Hose repair
- On-site mobile hose testing service
- Lasting security through maintenance contracts
- Hose recycling
- Hose winding and unwinding equipment



## We test your hose assemblies!

- according to European Pressure Equipment Directive PED 2014/68/EU

Hose lines are subject to special requirements, as they are partly under severe stress by the predominant operational conditions, transported media, operating pressure, temperature and external influences.

To minimise risks at operating hose lines, a constant inspection of the work capability is essential. A recurrent inspection of hose lines is even regulated by law. Grüning & Loske inspects your hose lines pursuant to the Ordinance on Industrial Safety and Health and Pressure Equipment Directive PED 2014/68/EU.

Following the inspection each hose line gets an identification number which is permanently attached to the line by a marking strip. We hand out a certification report after inspection. Furthermore we keep records of all accomplished inspections. Through the given identification number we can recall your master and test data any time.

Our mobile testing unit enables us to inspect your hose lines on-site without any circumstances.

**Take advantage of this Grüning & Loske service.**

**It saves you time and effort - and thus lowers your costs!**

### Our services:

- Hose line testing according to European Pressure Equipment Directive PED 2014/68/EU:
  - Inspection
  - External and internal testing (visual examination)
  - Electrical conductivity test
  - Pressure test (strength test) up to 2.800 bar
  - Vacuum test
- Individual labeling
- Documentation by itemised report according to EN 10204
- Consultancy on CE-identification marks
- Variant inspections conforming to your works standard specification
- Repair on-site through our mobile testing and installation service
- Supervision of your inspection dates and punctual email reminder



Pressure testing



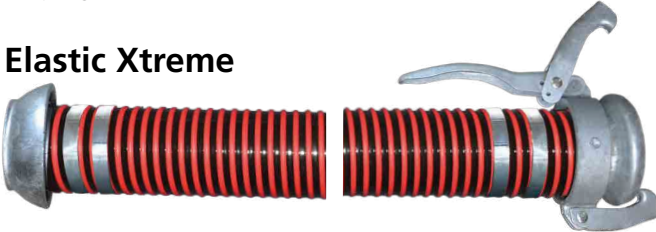
Pressure test with the aid of the Resato-P160-65-1



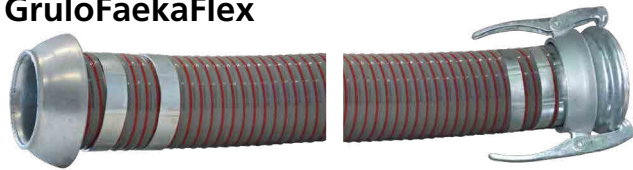
## Assembled hose lines

Assembly is done under strong compliance with regulations applying to the manufacturing of complete hose lines according to European Pressure Equipment Directive PED 2014/68/EU. Our qualified specialist staff compresses your hose lines up to DN 12"/305 mm with all common coupling systems (Bauer, Perrot, Flange, clamping ring coupling, Victaulic).

### Elastic Xtreme



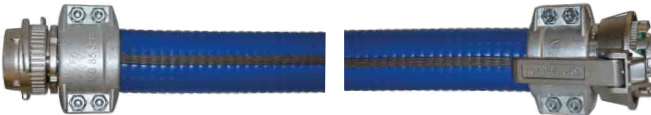
### GrüloFaekaFlex



### Water S/D 10



### GrüloElastic Oil AS



Tested in-house the grouting withstood a tensile force of at least 750 kg!

### Arizona Superelastic



### GrüloTank SP



## Individual labelling

### HOSE MARKINGS

On request we produce your hose line with a transfer tape in your corporate colour and logo.

### LASER ENGRAVING

We mark your assembled hose lines with our in-house laser. Thus, manufacturer name and order number are visible at a glance. Of course customer-specific specifications are possible.



Here your manufacturer name, order number and test date can be applied.



Your company name could also appear here



## Water S/D 10

### Rubber suction and delivery hose

**Water S/D** is ideally suited for construction, agriculture and industry, for irrigation and drainage. The core is resistant to sewage, slurry, drilling mud and slightly abrasive media. The abrasion-resistant cover offers a good resistance to weathering.

Available in lengths of 3 or 5 m and with spiral free cuffs!

#### Technical characteristics

Temperature range: -25 °C to +70 °C  
Standard length: 40 m | further lengths on request  
Colour: Black

#### Construction

Cover: SBR, with fabric impression  
Reinforcement: Synthetic textile, steel wire spiral  
Lining: SBR, black, smooth

Inner mm	Inner Inch	Wall mm	WP bar	BP bar	Vakuum bar	BR mm	Weight kg/m	Article no.
51	2	5,50	10	30	0,9	306	1,738	10056-051
76	3	6,50	10	30	0,9	458	2,845	10056-076
90	3 1/2	6,50	10	30	0,9	542	3,800	10056-090
102	4	6,50	10	30	0,9	610	3,930	10056-102
152	6	8,50	10	30	0,9	915	7,850	10056-152
203	8	11,00	10	30	0,9	1219	13,500	10056-203
254	10	12,50	10	30	0,9	1524	18,240	10056-254
305	12	12,00	10	30	0,9	1829	21,400	10056-305

Highly flexible even at low temperatures

**MERLETT**



## Vacupress® Flex

### Highly flexible suction and delivery hose

Highly flexible universal hose with good weather- and abrasion resistance according to DIN 53516 (mm<sup>3</sup><160) even at temperatures below zero. **Vacupress® Flex** is ideally suited as suction and discharge hose for sewer cleaning vehicles and silo trucks.

#### Technical characteristics

Temperature range: -25 °C to +60 °C  
Standard length: 60 m | from DN 38: 30 m, from DN 127: 20 m  
Colour: Black

#### Construction

Cover: PVC, smooth  
Reinforcement: Embedded steel wire spiral, polyester yarn  
Lining: PVC, black, smooth

Inner mm	Inner Inch	Outer mm	WP bar	BP bar	Vakuum bar	BR mm	Weight kg/m	Article no.
50	2	64	12	36	0,90	150	1,600	10053-050
76	3	92	12	36	0,90	210	2,970	10053-076
80	-	96	10	30	0,90	220	3,020	10053-080
102	4	119	10	30	0,90	300	4,150	10053-102
127	5	145	7	22	0,90	370	5,950	10053-127
152	6	171	5	15	0,90	480	7,050	10053-152



## GrüloLine

## Deltaflex

### Rubber suction hose with spiral-free sleeves on both sides

Very flexible suction and pressure hose for process water, liquid manure, light acids and alkalis.

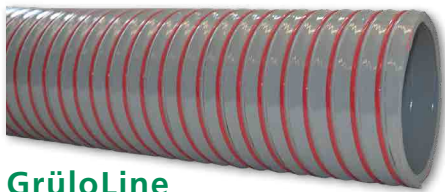
#### Technical characteristics

Temperature range: -30 °C to +80 °C  
Standard length: 3 m  
Colour: Black

#### Construction

Cover: SBR, corrugated, fabric patterned  
Reinforcement: Embedded steel wire spiral  
Lining: SBR, smooth

Inner mm	Inner Inch	Wall mm	WP bar	Vakuum bar	BR mm	Article no.
152	6	9	3	0,9	532	10341-150-3000
203	8	11	3	0,9	711	10341-200-3000



## GrüloLine

### Technical characteristics

Temperature range: -25 °C to +60 °C  
 Standard length: 50 m | DN 127: 30 m, DN 152: 20 m,  
 DN 203: 10 m

## GrüloFaekaFlex

### Flexible PVC suction and discharge hose

Highly flexible suction and delivery hose with rigid PVC spiral for municipal use, irrigation and on the agricultural sector. Very good flexibility, even at low temperatures, high resistance against abrasion and many chemicals.

### Construction

Cover: PVC, slightly corrugated  
 Reinforcement: Rigid PVC spiral, impact and pressure resistant  
 Lining: PVC, smooth

Inner mm	Inner Inch	Outer mm	WP bar	Vakuum bar	BR mm	Weight kg/m	Article no.
51	2	60,4	6,0	0,85	302	1,030	12072-051
76	3	87,6	5,0	0,85	438	1,750	12072-076
80	-	91,8	4,5	0,85	459	1,845	12072-080
102	4	115,0	4,5	0,80	575	2,650	12072-102
127	5	141,0	3,5	0,80	705	3,540	12072-127
152	6	167,6	3,0	0,80	838	5,000	12072-152
203	8	222,0	2,5	0,80	1.110	8,400	12072-203



## GrüloLine

### Technical characteristics

Temperature range: -15 °C to +65 °C  
 Standard length: 50 m  
 Colour: Transparent

## GrüloVin L

### PVC Suction hose, transparent

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

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

### Construction

Cover: Soft-PVC, smooth  
 Reinforcement: Embedded steel wire spiral  
 Lining: Soft-PVC, smooth

Inner mm	Outer mm	Wall mm	WP bar	Vakuum bar	BR mm	Weight kg/m	Article no.
51	62	5,4	7	0,9	150	1,260	10048-050
75	88	6,7	5	0,9	225	2,230	10048-075
90	103	6,5	4	0,9	270	2,800	10048-090
102	117	7,5	3	0,9	306	3,640	10048-102
125	141	8,0	3	0,9	375	4,460	10048-125
150	172	10,0	2	0,9	456	6,300	10048-152

## The hose lifter®

### Security handle for hoses and pipes from 2" to 6"



#### Advantages:

- Increases safety and efficiency
- Reduces contact with hazardous substances
- Easy to maintain and use
- Solid, safe handle
- Clips easily to hoses and pipes without damage
- Can be used in all climates and locations
- Works in mud, cold, rain or wet snow



See Application video on [www.gruelo.de!](http://www.gruelo.de)



## GrüloVin

### PVC suction hose, transparent

Robust, flexible and abrasion resistant PVC hose, usable as suction hose for water, foodstuff, beverages up to 28 Vol.-% of alcohol, drinking water, for vacuum pumps and groundwater drawdown. Very good chemical resistance.

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

### GrüloLine

#### 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 spiral

Lining: Soft PVC, smooth

Inner mm	Inner Inch	WP bar	BP bar	Vakuum bar	BR mm	Weight kg/m	Article no.
50	2	3	9	0,8	125	1,200	10248-050
75	3	2	6	0,7	195	2,500	10248-075
90	3 1/2	2	6	0,6	260	3,000	10248-090
102	4	2	6	0,6	300	3,400	10248-102
125	5	2	6	0,6	385	4,700	10248-125
152	6	2	6	0,6	460	6,350	10248-152

## GrüloVin ready-made!

### 2x Kardan Female



DN	Length m	Article no.
50	1	90248-050-001-02
50	2	90248-050-002-02
50	3	90248-050-003-02

### Kardan Female / Male



DN	Length m	Article no.
50	1	90248-050-001-01
50	2	90248-050-002-01
50	3	90248-050-003-01



**The classic  
at best prices!**

## GrüloDur Multipurpose layflat hose

Flat hose for the delivery of liquid media - as well as hot water and compressed air. Abrasion resistant, robust and long-lasting. Resistance to oil, petrol and chemicals. Lightweight and very flexible compared to mandrel built hoses.

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

### Technical characteristics

Temperature range: -15 °C to +100 °C

Standard length: 100 m | further lengths on request

Colour: Black

### Construction

Cover: NBR/PVC compound, ribbed

Reinforcement: Polyester, circular woven

Lining: NBR/PVC compound, black, smooth

Inner mm	Inner Inch	Wall mm	WP bar	BP bar	Weight kg/m	Article no.
52	2	2,00	20	60	0,460	10009-052
75	3	2,50	17	50	0,790	10009-075
90	3 1/2	2,35	17	45	0,930	10009-090
102	4	2,50	15	52	1,030	10009-102
125	5	2,70	15	45	1,400	10009-125
152	6	2,60	14	42	1,650	10009-152



## Synthetic building hose Standard Layflat hose with couplings

Efficient layflat hose with Storz suction couplings for water pumping.

Hose binding according to your requirements.

### Technical characteristics

Temperature range: -30 °C to +100 °C | information valid for water

Standard length: 20 m | further lengths on request

Colour: White

### Construction

Material: Polyester yarn, circular woven in twill weave

Lining: EPDM rubber

Inner mm	Inner Inch	Wall mm	WP bar	BP bar	Weight kg/Piece	Article no.
C/52	2	1,70	16	50	8,000	90002-052-020
B/75	3	1,70	16	50	11,500	90002-075-020
A/102	4	2,10	10	30	14,000	90002-102-020
F/152	6	2,10	10	30	27,000	90002-152-020





## GruloDur PU

### Multipurpose layflat hose in PU

Layflat hose for the delivery of liquids under pressure and for transport of abrasive materials, superior abrasion resistance, extremely hardwearing and durable for long service life, resistance to oil, fuel and a wide range of chemicals. Excellent flexibility at low temperature.

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

#### Technical characteristics

Temperature range: -50 °C to +75 °C | information valid for water  
 Standard length: 100 m | further lengths on request  
 Colour: Black

#### Construction

Cover: Polyether polyurethane, smooth  
 Reinforcement: High-strength polyester yarn, round woven  
 Lining: Polyether polyurethane, smooth

Inner mm	Inner Inch	Wall mm	WP bar	BP bar	Weight kg/m	Article no.
52	2	2,40	16	50	0,430	10023-052
76	3	2,80	16	50	0,700	10023-076
90	3 1/2	2,90	14	42	0,950	10023-090
102	4	3,30	14	42	1,150	10023-102
127	5	3,40	14	42	1,500	10023-127
152	6	3,70	14	42	1,900	10023-152



## GruloFlat M

### PVC layflat hose, medium duty

Medium duty layflat hose for conveying liquid media. Flat rollable. For the use in irrigation systems, construction industry, agriculture and mining.

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

#### Technical characteristics

Temperature range: -10 °C to +60 °C | information valid for water  
 Standard length: 100 m | further lengths on request  
 Colour: Blue

#### Construction

Cover: PVC  
 Reinforcement: Polyester yarn  
 Lining: PVC, blue

Inner mm	Inner Inch	WP bar	BP bar	Weight kg/m	Article no.
51	2	6	18	0,300	10005-050
76	3	6	18	0,550	10005-076
102	4	6	18	0,900	10005-102
153	6	6	18	1,800	10005-150
203	8	6	18	2,800	10005-203



## GruloFlat PUR Pro

### Robust multi-purpose hose

Suitable for conveying abrasive media, e.g. as suction dredging hose for long distances or for roof graveling. Outstanding abrasion resistance, very robust, wear-resistant and durable, extremely high tensile strength, resistant to oil, petrol and chemicals. Furthermore it is much easier to handle compared to rubber hoses.

#### Technical characteristics

Temperature range: -50 °C to +75 °C | information valid for water  
 Standard length: 100 m, 200 m  
 Colour: Orange

#### Construction

Cover: TPU, smooth  
 Reinforcement: High-strength polyester yarn, round woven  
 Lining: TPU, smooth

Inner mm	Inner Inch	Wall mm	WP bar	BP bar	Weight kg/m	Article no.
75	3	3,10	20	50	0,870	11042-076
90	3 1/2	3,50	14	42	1,200	11042-090
102	4	3,30	14	42	1,300	11042-102
127	5	3,30	14	42	1,500	11042-127
152	6	3,50	12	36	2,000	11042-152

# STORZ COUPLINGS

## Aluminium

### Technical characteristics

Material: Aluminium | also available in brass

Seal: Nitrile rubber, black / white

Thread: DIN ISO 228

WP: 16 bar / 10 bar

## Stainless steel

### Technical characteristics

Material: Stainless steel

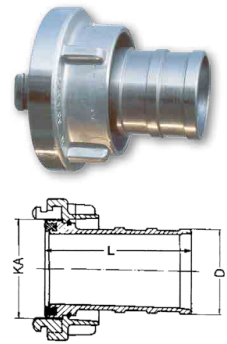
Seal: Fluoro rupper

Thread: DIN ISO 228

WP: 16 bar

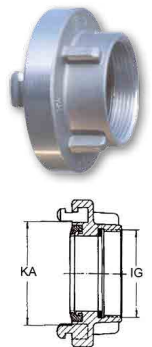
## Suction hose coupling

Storz	Lug mm	D mm	Aluminium				Stainless steel			
			Remark	L mm	Weight/piece kg	Article no.	L mm	Weight/piece kg	Article no.	
52-C	66	52	DIN 14 321	90	0,370	21015-052-052-01	90	0,950	21015-052-052-13	
75-B	89	75	DIN 14 322	125	0,710	21015-075-075-01	105	1,790	21015-075-075-13	
90	105	90	-	160	1,090	21015-090-090-01	-	-	-	
110-A	133	110	DIN 14 323	170	1,660	21015-110-110-01	170	4,250	21015-110-110-13	
125	148	125	-	200	2,270	21015-125-125-01	180	5,550	21015-125-125-13	
150	160	150	-	180	2,900	21015-150-150-01	180	9,460	21015-150-150-13	
205	220	205	max. PN 10 bar	375	7,200	21015-205-205-01	-	-	-	



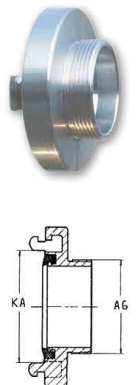
## Adapter with female thread

Storz	Lug mm	Female thread Inch	Aluminium			Stainless steel	
			Remark	Weight/piece kg	Article no.	Weight/piece kg	Article no.
52-C	66	2	DIN 14 307	0,280	21020-052-20-01	0,770	21020-052-20-13
75-B	89	2 1/2	DIN 14 308	0,420	21020-075-24-01	1,510	21020-075-24-13
75-B	89	3	-	0,420	21020-075-30-01	1,260	21020-075-30-13
90	105	3	-	0,600	21020-090-30-01	-	-
110-A	133	4 1/2	DIN 14 309	1,120	21020-110-44-01	3,200	21020-110-44-13
125	148	5	-	1,380	21020-125-50-01	3,550	21020-125-50-13
150	160	6	-	1,820	21020-150-60-01	5,300	21020-150-60-13
205	220	8	max. PN 10 bar	3,480	21020-205-80-01	-	-



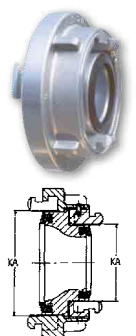
## Adapter with male thread

Storz	Lug mm	Male thread Inch	Aluminium			Stainless steel	
			Remark	Weight/piece kg	Article no.	Weight/piece kg	Article no.
52-C	66	1 1/2	-	0,250	21021-052-14-01	0,720	21021-052-14-13
52-C	66	2	-	0,210	21021-052-20-01	0,710	21021-052-20-13
75-B	89	2 1/2	-	0,360	21021-075-24-01	1,110	21021-075-24-13
75-B	89	3	-	0,390	21021-075-30-01	1,320	21021-075-30-13
90	105	3	with nipple	0,800	21021-090-30-01	-	-
110-A	133	4	-	1,010	21021-110-40-01	2,920	21021-110-40-13
125	148	5	with nipple	1,810	21021-125-50-01	-	-
150	160	6	with nipple	2,340	21021-150-60-01	-	-



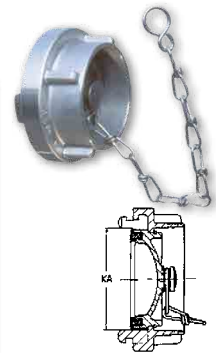
## Reducer Storz to Storz

Storz	Lug mm	Aluminium			Stainless steel	
		Remark	Weight/piece kg	Article no.	Weight/piece kg	Article no.
52-C / 25-D	66 / 31	DIN 14 341 rotatable	0,310	21040-052-025-01	1,280	21040-052-025-13
75-B / 52-C	89 / 66	DIN 14 342 rotatable	0,600	21040-075-052-01	2,710	21040-075-052-13
110-A / 75-B	133 / 89	DIN 14 343 rotatable	1,570	21040-110-075-01	4,460	21040-110-075-13
125 / 100	148 / 115	-	2,630	21040-125-100-01	-	-
150 / 110-A	160 / 133	-	3,730	21040-150-110-01	-	-
150 / 125	160 / 148	-	3,960	21040-150-125-01	-	-



## Blank cap with chain

Storz	Lug mm	Aluminium			Stainless steel	
		Remark	Weight/piece kg	Article no.	Weight/piece kg	Article no.
52-C	66	DIN 14 311	0,380	21030-052-01	0,880	21030-052-13
75-B	89	DIN 14 312	0,560	21030-075-01	1,340	21030-075-13
110-A	133	DIN 14 313	1,340	21030-110-01	3,650	21030-110-13
125	148	-	1,700	21030-125-01	4,610	21030-125-13
150	160	-	2,140	21030-150-01	7,130	21030-150-13



## Hose Couplings for segmented bindings without segmented binding

Storz	Lug mm	D mm	L mm	Aluminium	
				Weight/piece kg	Article no.
52-C	66	52	81	0,370	21014-052-052-01
75-B	89	75	85	0,580	21014-075-075-01
90	105	90	80	0,830	21014-090-090-01
110-A	133	110	88	0,370	21014-110-110-01
125	148	127	90	1,660	21014-125-127-01
150	160	150	101	2,320	21014-150-150-01



## Segmented bindings for above couplings

### 3 segments with bolts and nuts

Size mm	Size Inch	Hose wall thickness mm	Aluminium	
			Weight/piece kg	Article no.
52	2	2	0,410	21114-052-01
75	3	2,8 - 3,2	0,550	21114-075-01
90	3 1/2	2,8 - 3,2	0,630	21114-090-300-01
110	4 1/2	2,8 - 3,2	0,730	21114-110-01
127	5	2,8 - 3,2	0,860	21114-127-01
150	6	2,8 - 3,2	1,520	21114-150-01



# CARDAN COUPLINGS SYSTEM PERROT

**Technical characteristics**

Material: Steel, galvanised | also available in stainless steel

Seal: Material according to requirements

## Male part with beaded hose shank

Also available with smooth, turned or serrated hose shank.

DN mm	Hose shank mm	Weight/unit kg	Article no.
50	50	0,420	23300-050-050-04
89	75	1,040	23300-089-075-04
108	100	1,620	23300-108-100-04
133	125	2,040	23300-133-125-04
159	150	2,700	23300-159-150-04
216	200	8,550	23300-216-200-04



## Female part with beaded hose shank

Also available with smooth, turned or serrated hose shank.

DN mm	Hose shank mm	Weight/unit kg	Article no.
50	50	0,980	23301-050-050-04
89	75	1,600	23301-089-075-04
108	100	2,820	23301-108-100-04
133	125	4,020	23301-133-125-04
159	150	8,080	23301-159-150-04
216	200	20,750	23301-216-200-04



## Bow

Also available as 30° or 60° bow.

Bow	DN mm	Weight/unit kg	Article no.
45°	50	1,340	23335-45-050-04
	89	3,900	23335-45-089-04
	108	5,800	23335-45-108-04
	133	8,480	23335-45-133-04
	159	13,130	23335-45-159-04
	200	21,000	23335-45-200-04
90°	216	23,000	23335-45-216-04
	50	1,610	23335-90-050-04
	89	4,560	23335-90-089-04
	108	6,640	23335-90-108-04
	133	9,480	23335-90-133-04
	159	16,620	23335-90-159-04
216	24,600	23335-90-216-04	



**We assemble your hose lines with all common coupling systems!**



### Male part with male thread

DN mm	Thread Inch	Article no.
50	2	23310-050-20-04
89	3	23310-089-30-04
108	4	23310-108-40-04
133	5	23310-133-50-04
159	6	23310-159-60-04



### Female part with female thread

DN mm	Thread Inch	Article no.
50	2	23311-050-20-04
89	3	23311-089-30-04
108	4	23311-108-40-04
133	5	23311-133-50-04
159	6	23311-159-60-04



### Male part with female thread

DN mm	Thread Inch	Article no.
50	2	23355-050-20-04
89	3	23355-089-30-04
108	4	23355-108-40-04
159	6	23355-159-60-04



### Female part with female thread

DN mm	Thread Inch	Article no.
50	2	23357-050-20-04
89	3	23357-089-30-04
108	4	23357-108-40-04
159	6	23357-159-60-04



### Reducer male to female part

DN female part mm	DN male part mm	Article no.
89	50	23336-050-089-04
108	89	23336-089-108-04
159	108	23336-108-159-04



### Expansion male to female part

DN female part mm	DN male part mm	Article no.
50	89	23337-089-050-04
89	108	23337-108-089-04
108	159	23337-159-108-04



## Reversing piece male to male

DN mm	Article no.
50	23338-050-050-04
89	23338-089-089-04
108	23338-108-108-04
133	23338-133-133-04
159	23338-159-159-04



## Reversing piece female to female

DN mm	Article no.
50	23339-050-050-04
89	23339-089-089-04
108	23339-108-108-04
133	23339-133-133-04
159	23339-159-159-04

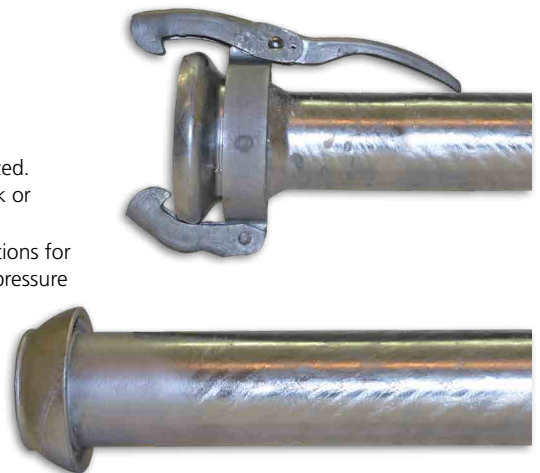


# QUICK-COUPLING PIPES

## Quick-coupling pipes made of steel

### Technical characteristics

- Material:** Pipes made of steel strip, longitudinally welded and hot-dip galvanized. Coupling body and lever mechanism made of sheet steel, both black or hot-dip galvanized.
- Norm:** Hot-dip galvanizing according to DIN 2444. Technical delivery conditions for quick coupling pipes (diameter, wall thickness, corrosion resistance pressure etc.) according to DIN 19651.
- WP:** WP up to 10 bar, higher pressures on request.
- Angulation:** 15° in any direction.
- Standard length:** 1 to 6 m
- Diameter:** 50 / 70 / 89 / 108 / 133 / 159 / 216 mm



## PE pipes with cardan quick couplings

### Technical characteristics

- Application:** For ground water lowering
- Press-in rings:** Stainless steel, 2 pieces per coupling
- Max. WP:** 10 bar
- Standard length:** 5 m and 6 m
- Diameter:** 108 mm and 159 mm

### Attention:

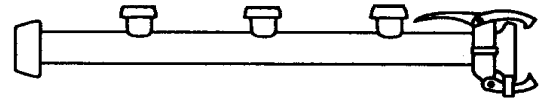
Pipe length and expansion are subject to changes due to temperature fluctuations.

From DN 250 system Anfor (ital. system)



## Collecting pipes with outlet

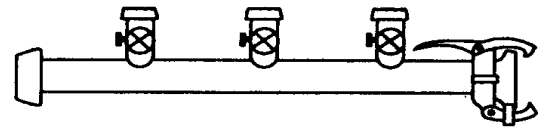
one side female, other male  
one outlet per metre



DN mm	Length m	Weight/unit kg	Article no.
108	2	20,000	23368-108-2-04
	3	24,000	23368-108-3-04
	4	28,000	23368-108-4-04
	5	30,000	23368-108-5-04
159	2	32,000	23368-159-2-04
	3	40,000	23368-159-3-04
	4	50,000	23368-159-4-04
	5	54,000	23368-159-5-04

## Collecting pipes with shut-off valve

one side female, other male  
one shut-off valve (1 1/2") per metre



DN mm	Length m	Weight/unit kg	Article no.
108	2	19,800	23369-108-2-04
	3	23,500	23369-108-3-04
	4	27,500	23369-108-4-04
	5	29,600	23369-108-5-04



# DEEP SUCTION FILTER

self-flushing with plastic jacket  
cast iron flushing tip with ball and plate valve

DN mm	DN Inch	Length m	Article no.
50	2	1	22075-20
100	4	2	22075-40



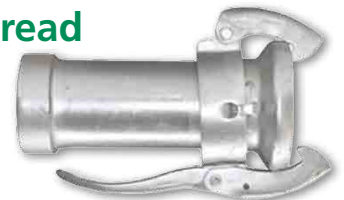
## Attachment tube

one side Male, the other side cuff  
Material: Steel, galvanised

DN mm	DN Inch	Length m
50	2	1
		2
		3
		4
		5
		6
100	4	2
		3
		4
		5



## Cardan attachment Female part DN 50 / 2" internal thread



## Cardan attachment Male part DN 50 / 2" internal thread



### Assemble your own deep suction filter!

*Precisely tailored to your requirements!*



Deep suction filter

+



Attachment tube

+



Attachment piece



# BALL VALVES

**Technical characteristics**

Norm Thread: ISO 228

Material: Pressed brass 58, nickelplated

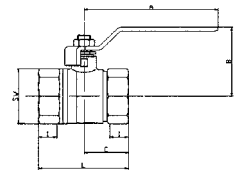
Material seal: PTFE / Teflon

Temperature: -20 °C - +150 °C | according to working pressure

Also available in stainless steel and with cast iron lever

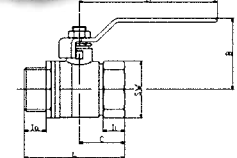
## female / female

DN Inch	DN mm	WP bar	L mm	I mm	A mm	B mm	C mm	SW mm	Weight/unit kg	Article no.
3/8	10	40	42	10	73	40	21	20	0,290	25001-03-02
1/2	15	40	52	12	84	48	25	25	0,174	25001-04-02-40
3/4	20	40	55	12	98	52	28	31	0,251	25001-06-02
1	24	32	68	15	102	59	34	40	0,433	25001-10-02
1 1/4	32	25	76	15	122	71	38	48	0,628	25001-12-02
2	50	20	106	19	173	92	53	67	1,556	25001-20-02
2 1/2	63	16	130	22	226	115	65	80	2,443	25001-24-02
3	75	16	146	26	226	125	73	98	3,876	25001-30-02
4	100	16	212	43	335	143	105	124	8,640	25001-40-02



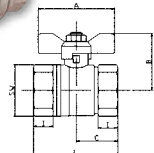
## female / male

DN Inch	DN mm	WP bar	L mm	li mm	la mm	A mm	B mm	C mm	SW mm	Weight/unit kg	Article no.
3/8	10	40	50	10	10	73	40	25	20	0,131	25002-03-02
1/2	15	40	59	12	12	84	48	30	26	0,193	25002-04-02
3/4	20	40	62	12	12	84	52	32	31	0,277	25002-06-02
1 1/4	32	25	91	15	19	122	71	46	48	0,672	25002-12-02
1 1/2	40	20	103	15	19	153	87	51	55	0,999	25002-14-02
2	50	16	123	19	24	173	92	64	67	1,732	25002-20-02



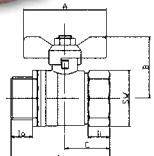
## Wing handle, female / female

DN Inch	DN mm	WP bar	L mm	I mm	A mm	B mm	C mm	SW mm	Weight/unit kg	Article no.
1/4	10	40	42	10	52	37	21	20	0,116	25004-02-02
3/8	10	40	42	10	52	37	21	20	0,105	25004-03-02
1/2	15	40	50	12	52	39	25	26	0,159	25004-04-02
3/4	20	40	55	12	52	45	28	32	0,236	25004-06-02
1	25	32	68	15	62	50	34	39	0,405	25004-10-02



## Wing handle, female / male

DN Inch	DN mm	WP bar	L mm	li mm	la mm	A mm	B mm	C mm	SW mm	Weight/unit kg	Article no.
3/8	10	40	47	10	10	52	36	25	20	0,109	25005-03-02
1/2	15	40	59	12	12	52	41	30	26	0,160	25005-04-02
3/4	20	40	64	12	12	52	45	32	32	0,256	25005-06-02
1	25	32	79	15	15	62	51	40	40	0,417	25005-10-02


**Key shut-off valves**

 DN = Nominal diameter  
 SW = Width across flats

 L = Length  
 I = Length/thread

 li = Length/thread female  
 la = Length/thread male

 A = Length lever  
 C = 1/2 L

 B = lever upper edge to  
 middle of passage

## Wedge gate valve with flanges

With handwheel and non-rising stem, flange PN 10 on both sides

### Technical characteristics

Working pressure: 16 bar

Material housing: Ductile cast iron GGG50

Material coating: Epoxy, blue

Material spindle: Stainless steel

Seal: NBR

DN mm	DN Inch	Construction length mm	Weight/unit kg	Article no.
40	1 1/2	140	10,00	29602-040
50	2	150	13,00	29602-050
65	2 1/2	170	16,00	29602-065
80	3	180	19,00	29602-080
100	4	190	24,00	29602-100
125	5	200	38,00	29602-125
150	6	210	53,00	29602-150
200	8	230	79,00	29602-200
250	10	250	122,00	29602-250
300	12	270	181,00	29602-300



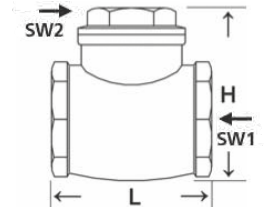
## Check valve

Swing check valve with locking cap  
female thread / female thread, metallic sealing

### Technical characteristics

Material: Brass, bright

DN Inch	WP bar	L mm	H mm	SW1 mm	SW2 mm	Article no.
1/2	16	47	48,5	25,0	20,0	25009-04-02
3/4	16	53	56,5	30,0	24,0	25009-06-02
1	16	68	65,0	38,0	27,0	25009-10-02
1 1/4	10	74	78,0	48,0	30,0	25009-12-02
1 1/2	10	86	88,0	54,0	38,0	25009-14-02
2	10	100	103,0	68,5	40,0	25009-20-02
2 1/2	10	104	124,0	83,0	51,5	25009-24-02
3	10	125	137,0	95,5	62,5	25009-30-02
4	10	162	171,0	123,0	81,5	25009-40-02



## Gate valve female threaded

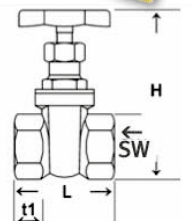
With enamelled handwheel  
Stuffing box  
Hot pressed up to 2"

### Technical characteristics

Pressure level: PN10

Material Seal: PTFE

DN Inch	Thread length mm	L mm	H mm	SW mm	Article no.
1/2	7,0	37,0	74	24	25008-04-02-10
3/4	10,0	40,0	81	30	25008-06-02-10
1	10,0	44,5	93	36	25008-10-02-10
1 1/4	11,5	50,5	114	46	25008-12-02-10
1 1/2	11,5	53,0	130	53	25008-14-02-10
2	14,0	60,0	152	65	25008-20-02-10
2 1/2	14,0	66,0	188	82	25008-24-02-10
3	21,0	83,0	240	94	25008-30-02-10
4	16,0	80,0	290	123	25008-40-02-10



## HINGE BOLT CLAMPS – GrüloClamp W2

**Technical characteristics**
**Material:** Bolt 8.8

 band stainless steel X8Cr17 zinc-coated (DIN 1.4016/AISI 430)  
 other parts steel, zinc-coated

**Also available in W1 and W4**

Clamping range mm	Band width mm	Article no.
86 - 91	25	30050-W2-24-091-71436
92 - 97	25	30050-W2-24-097-71436
98 - 103	25	30050-W2-24-103-71436
104 - 112	25	30050-W2-24-112-71436
122 - 130	25	30050-W2-24-130-71436
131 - 139	26	30050-W2-26-139-71436
140 - 148	26	30050-W2-26-148-71436
149 - 161	26	30050-W2-26-161-71436
162 - 174	26	30050-W2-26-174-71436



## PA-RI® HOSE CLAMPS

**Technical characteristics**
**Material:** Steel band galvanised, blue chromated, CR6+ free  
**Material thickness:** 1 mm

**Type of screw:** Allen screw

**Screw material:** Steel 8.8, yellow galvanised

**Also available in Type 1 and 4**

### PA-RI®-Schellen - Type 2, 1-part | 25 / 1 mm

Nominal size	Clamping range mm	Band width mm	Screw size	Article no.
SK 90	86 – 92	25	M8	31002-25-090
SK 120	116 – 122	25	M8	31002-25-120
SK 144	140 – 146	25	M8	31002-25-144
SK 170	166 – 172	25	M8	31002-25-170



### PA-RI®-Schellen - Type 2a, 2-part | 25 / 1 mm

Nominal size	Clamping range mm	Band width mm	Screw size	Article no.
SK 95	91 – 97	25	M8	31003-25-095
SK 120	116 – 122	25	M8	31003-25-120
SK 170	166 – 172	25	M8	31003-25-170



## WORM DRIVE HOSE CLAMP – Type S/12mm | W2

**Technical characteristics**
**Material:** Band and housing stainless steel 1.4016,  
 screw steel, zinc-coated

**Screw:** Hexagon screw 7 mm

**Also available in variety W1, W4 and W5**

Clamping range mm	Band width mm	Article no.
32 - 50	12	30001-W2-12-050-71436
40 - 60	12	30001-W2-12-060-71436
60 - 80	12	30001-W2-12-080-71436
80 - 100	12	30001-W2-12-100-71436
90 - 110	12	30001-W2-12-110-71436
110 - 130	12	30001-W2-12-130-71436
120 - 140	12	30001-W2-12-140-71436
140 - 160	12	30001-W2-12-160-71436





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## HOSE TECHNOLOGY

Technical advice, pressure testing, hose line assembly



## HOSE CONNECTION SYSTEMS

Couplings, fittings



## FASTENING TECHNOLOGY

Hose clamps



## SEALING TECHNOLOGY

Sealing plates



## PRODUCT DEVELOPMENT

Prototyping, 3D-Scan, 3D-Druck



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Transport racks, component construction



## CORROSION AND WEAR PROTECTION

Sandblasting, painting



## SURFACE COATING

PUA spray coating,  
Rubber coating

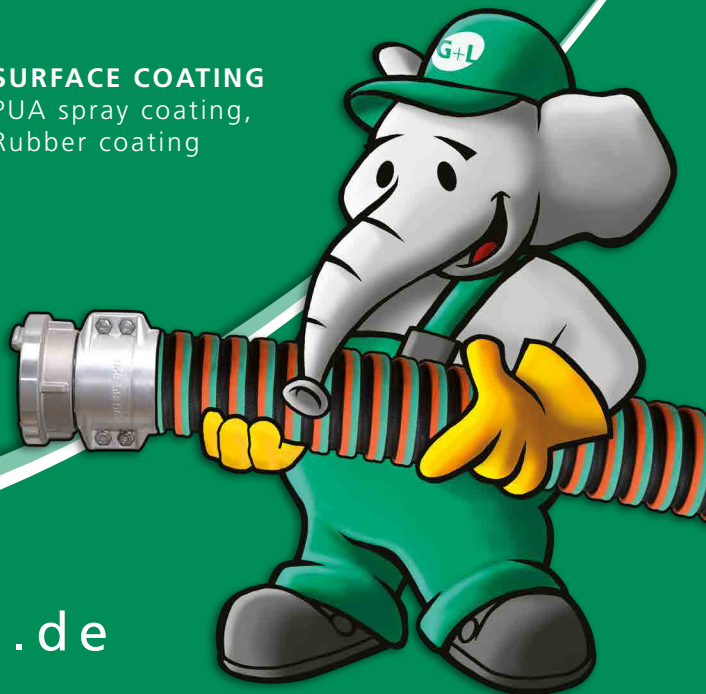
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