

SUCTION- AND AIR CONVEYING TECHNOLOGY

Grünig **G+L** Oske
www.guelo.de



Reliable, for sure!

★ friendly

★ flexible

★ fair

★ competent

★ reliable

5-STAR - SERVICE EVERY DAY!



For more than 60 years, **Grüning & Loske GmbH** has stood for a successful combination of services and products in the B2B sector. Thereby we are committed to one thing: turning our customers with a 5-star service to enthusiastic fans. Friendly, flexible, fair, competent and reliable - from the first contact to on time delivery!

Decades of experience and close cooperation with vehicle manufacturers and users are always influencing the development of innovative products, in particular in hose and fitting technology. Out of this an extensive product and service portfolio has resulted with only one goal: to relieve your daily work routine.

Are you looking for more detailed information about a particular product or would you like to get an overview of our entire assortment? Then visit us at www.gruelo.de.

If you need any help with the correct selection our friendly and competent sales team provides assistance under:

Fon: +49 (0) 51 02 - 91 99 - 01

Fax: +49 (0) 51 02 - 91 99 - 90

Mail: info@gruelo.de

We look forward to welcoming you!

Dirk Loske
(CEO)



www.gruelo.de



ACCESSIBILITY

- We are personally available from Monday to Thursday, 7:30 am to 4:30 pm, and Friday 7:30 am to 2:00 pm.
- You are welcome to make an appointment with your local sales representative.
- Detailed information can be found on www.gruelo.de around the clock.

SERVICES

- We deliver your goods on your requested date.
- Packaging is done according to your transport specifications.
- We also pack your orders neutrally and send them directly to your customer.
- We take care of customs formalities for your shipments abroad.
- We help you to plan and realise custom-made products and special fabrications.
- Feel free to arrange call or blanket orders with us.
- We assemble and test your hose lines in conformity with PED (Pressure Equipment Directive) and BetrSichV (German Operational Safety Regulations).

DELIVERY OPTIONS

- Delivery throughout Germany within 24 hrs./48 hrs.
- Orders with express shipment can be delivered the next day.
- It is possible to pick up goods directly from our warehouse.

CUSTOMISED LABELS

- Hoses with a specific label or couplings with your embossing can be produced for you.

YOUR SALES DOCUMENTS

- We gladly create our sales documents with your corporate design.

OUR LOCATION

- In addition to the office building, our company headquarters in Laatzen includes two production areas and three warehouses with a total area of approximately 4,000 m². Our storage area is equipped with the latest high-bay ware house technology, to ensure the fastest possible processing of your order.



THE G+L SERVICES PROGRAM

A high quality standard and our wide range of product-oriented services makes **Grüning & Loske** the supplier you trust.

Our workshops offer efficient and high-quality results in short time. Thanks to our broad range of materials, we are always able to provide you with customized results for various applications.

Our aim is to reduce your process costs and thereby increase the productivity.



HOSE SERVICES 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, if the correct operation conditions are considered. 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 the 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).

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



HOSE TESTING

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 the risks at the 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 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 inspections we accomplished. 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



MANUFACTURING COMPONENTS

We produce almost all types of screwing components, cast and welded assemblies as well as outsourced assemblies for you. Thus, you avoid the costly storage of articles, obtain the desired components in a consistent high quality at the desired date and at low costs. As component production specialists we always guarantee optimum project development in terms of quality, scheduling and logistics.



CORROSION AND WEAR PROTECTION

GrüloCoat Systeme - the solution for high-quality surface protection. Use our knowledge advantage and our experience to protect your surfaces against various negative influences such as mechanical abrasion, chemical influences and corrosion in the long term. Successful coatings result from the interaction of many factors. As a specialist company for high-quality wear protection for the most diverse demands, we offer you extremely resistant and high-quality coating systems made of **polyurea, polyurethane, rubber** or **ceramics**.



SANDBLAST AND FINISHING TECHNIC

Before and after coating we directly continue processing your steel parts in our sandblasting and painting unit. Thus, we provide you with a ready-to-install end product.



CONVEYOR TECHNOLOGY

In materials handling technology, we have decades of experience in the design, maintenance composition and assembly of rubber and PVC / PU conveyor belts. In addition, we stock common repair materials and technical accessories in our extensive stock. In case you cannot find what you need in our program, we gladly manufacture or procure it according to your requirements. And if quick solutions are necessary: our team provides a fast response service and is at your disposal around the clock.

- Calculation and optimisation of material handling equipment
- 24-hour maintenance and installation services
- Assembly of rubber and PVC / PU conveyor and processing belts
- Production of corrugated edge belts (applying cleats and corrugated edges)
- Drum and roller rubber coatings
- Preparation and vulcanization of elastomer profiles and customized moulded parts
- Conveyor belt splicing and repairing by hot vulcanization, cold bonding or mechanical processing
- Manufacturing of Para hoses, concrete outlet hoses, rubber sleeves, seals, compensators, as well as inflatable seals for dosing systems



PRESSROOM AND PLOTTING SERVICE

Individual sealing solutions in nearly any rubber or plastic quality and geometry can be manufactured by our stamping press. We plan and implement alike. Whether individual pieces or series production – no problem for us.

As an additional service we offer you your individual seal design.



CONSTRUCTIONAL STEELWORK

In our metal construction and special engineering workshop we manufacture our own machines, winding brackets and turntables for winding and unwinding hoses. Furthermore, we process sheet metal of all kinds and round bars.



C-PARTS MANAGEMENT

C-Parts do not cost a lot themselves, but the sourcing effort is very high. In times of high requirements coordinating stockpile and reorders of these small parts is difficult to cope with. Reduce your costs of replacement by a successful C-Parts management together with the supplier you can rely on.





Fig. courtesy of UMTEC GmbH & Co. KG

SuperSucker Professional

For roof graveling and mobile air conveyor systems

Extremely abrasion-resistant rubber transport hose for high-performance suction units to convey dry or wet media such as sludge, sand or blasting material. Also suitable as head and working hose. Highly abrasion-resistant wear layer in para quality. Electrically conductive 106 Ω/m.

Delivery with spiral-free or peeled sleeves on both sides. On request also available by metre.



Technical characteristics

Temperature range: -30 °C to +70 °C

Standard length: 5 m, 10 m, 20 m

Electrical resistance: Cover $R \leq 10^6 \Omega/m$

Colour: Black

Construction

Cover: NR/BR, corrugated, fabric impressions, electrically conductive

Reinforcement: Textile cord, steel spiral, copper litz wire

Lining: NR/BR, black, smooth, electrically conductive

Wear layer: Para, black, 4 mm

Inner mm	Inner Inch	Wall mm	Outer mm	WP bar	BP bar	BR mm	Weight kg/m	Article no.
51	2	8,50	68	5	15	153	2,400	11132-051
80	3 1/8	8,00	96	5	15	240	3,500	11132-080
102	4	9,00	120	5	15	306	4,400	11132-102
127	5	9,00	145	5	15	381	6,800	11132-127
152	6	9,00	170	5	15	456	8,900	11132-152
203	8	10,0	223	5	15	609	12,000	11132-203



Compatible The hose **lifter**

The handhold for hoses (see page 13)

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



SuperSucker Professional readily assembled!

SuperSucker Professional with flange system

Swaged on both sides with turned quick-release spigots



DN	Article no. 5 m-length	Article no. 20 m-length
51	91132-051-5000-01	91132-051-20000-01
80	91132-080-5000-01	91132-080-20000-01
102	91132-102-5000-01	91132-102-20000-01
127	91132-127-5000-01	91132-127-20000-01
152	91132-152-5000-01	91132-152-20000-01
203	91132-203-5000-01	91132-203-20000-01

SuperSucker Professional with PERROT-System

On one side swaged with male part, on the other side with female part



DN	Article no. 5 m-length	Article no. 20 m-length
51	91132-051-5000-02	91132-051-20000-02
80	91132-080-5000-02	91132-080-20000-02
102	91132-102-5000-02	91132-102-20000-02
127	91132-127-5000-02	91132-127-20000-02
152	91132-152-5000-02	91132-152-20000-02
203	91132-203-5000-02	91132-203-20000-02

SuperSucker Professional with BAUER-System

On one side swaged with male part, on the other side with female part



DN	Article no. 5 m-length	Article no. 20 m-length
51	91132-051-5000-04	91132-051-20000-04
80	91132-080-5000-04	91132-080-20000-04
102	91132-102-5000-04	91132-102-20000-04
127	91132-127-5000-04	91132-127-20000-04
152	91132-152-5000-04	91132-152-20000-04
203	91132-203-5000-04	91132-203-20000-04

FURTHER COUPLING SYSTEMS ON REQUEST!

Please contact us!

GrüloMix AR

Abrasion resistant suction and pressure hose

Strong and flexible suction and delivery hose with a smooth inside wall and an external spiral which reduces hose wear. Very good resistance to atmospheric conditions and to chemicals. Produced with a special compound for maximum abrasion resistance.

Technical characteristics

Temperature range: -20 °C to +60 °C
 Standard length: 50 m | from DN 110: 30 m, DN 152: 20 m, DN 203: 10 m
 Colour: Translucent with dark grey spiral

Construction

Material: PU-Mixture
 Reinforcement: External shock resistant rigid PVC spiral

Inner mm	Inner Inch	Outer mm	WP bar	Vacuum bar	BR mm	Weight kg/m	Article no.
102	4	118	3	0,90	413	2,700	11216-102
127	5	144	2,5	0,90	576	3,900	11216-127



SuperArizona PU plus

PVC/PU suction and pressure hose

Flexible PVC hose with a rigid PVC spiral and a very smooth Polyurethane lining for conveying abrasive media. Very good abrasion resistance, therefore excellent for industrial cleaning, roof graveling and on grinding and mixing vehicles.

Technical characteristics

Temperature range: -25 °C to +55 °C
 Standard length: DN 102: 30 m, DN 127: 20 m,
 Colour: White with red spiral

Construction

Material: PVC
 Reinforcement: External rigid PVC spiral
 Lining: 1,5 mm polyurethane, red

Inner mm	Inner Inch	Outer mm	WP bar	Vacuum bar	BR mm	Weight kg/m	Article no.
102	4	119,6	3	0,90	500	3,400	11073-102
127	5	147	3	0,90	640	4,800	11073-127



GrüloFlex Total PU

Extremely strong PU hose with a steel spiral

The **GrüloFlex Total PU** is absolutely smooth on the inside and features excellent vacuum resistance. Can be used on vacuum pumps, agricultural machinery, irrigation systems, chemical plants, in the plastics processing industry and for food transport.

Technical characteristics

Temperature range: -40 °C to +90 °C
 Standard length: 30 m, 50 m | from DN 127: 20 m
 Colour: Crystal clear with red inner tube

Construction

Cover: Polyurethane, ransparent
 Reinforcement: Steel spiral
 Lining: Polyurethane, red

Inner mm	Inner Inch	Outer mm	WP bar	Vacuum bar	BR mm	Weight kg/m	Article no.
127	5	143	5	0,90	960	4,700	11217-127
152	6	172	3	0,90	1300	6,600	11217-152



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 for the extension of suction lines on dredgers and sewer cleaning vehicles.

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

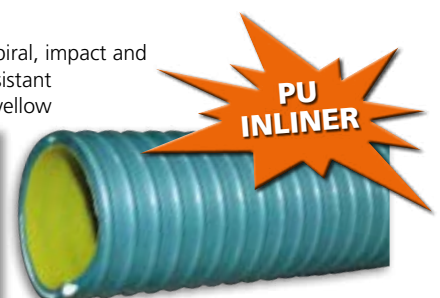
Technical characteristics

Temperature range: -25 °C to +50 °C
 Standard length: 25 m | from DN 127: 20 m
 Colour: Grey

Construction

Cover: PVC, corrugated
 Reinforcement: Hard-PVC spiral, impact and pressure resistant
 Lining: PVC with PU-inliner, yellow

Inner mm	Inner Inch	Outer mm	WP bar	Vacuum bar	BR mm	Weight kg/m	Article no.
102	4	118	3,0	0,85	420	2,700	10126-102
127	5	145	3,0	0,80	520	3,600	10126-127
152	6	173	3,0	0,80	650	5,000	10126-152



GrüloFlex PUR M

For light application

Moderate weight and flexible polyurethane spiral hose for suction and discharging of abrasive granules with a material thickness of 1,4 mm.

GrüloFlex PUR M is resistant to oil and petrols, non toxic and food proved according to FDA and EU-regulations. It is free of halogen and softeners with an excellent abrasion resistance.

All technical information refer to a temperature of 25 °C.

Inner mm	Inner Inch	Material mm	WP bar	Vacuum bar	BR mm	Weight kg/m	Article no.
100	4	1,40	1,10	0,40	150	1,360	11033-100
127	5	1,40	0,80	0,25	188	1,540	11033-127
152	6	1,40	0,70	0,20	225	1,820	11033-152
203	8	1,40	0,50	0,15	300	2,920	11033-203
250	10	1,40	0,30	0,10	375	3,570	11033-250

Technical characteristics

Temperature range: -40 °C to +100 °C
Standard length: 10 m, 15 m

Construction

Material: Polyether-polyurethane with copper plated steel wire helix



GrüloFlex PUR S

For medium application

Heavy weight and flexible polyurethane spiral hose for suction and discharging of abrasive granules with a material thickness of 2 mm.

GrüloFlex PUR S is resistant to oil and petrols, non toxic and food proved according to FDA and EU-regulations. It is free of halogen and softeners with an excellent abrasion resistance.

All technical information refer to a temperature of 25 °C.

Inner mm	Inner Inch	Material mm	WP bar	Vacuum bar	BR mm	Weight kg/m	Article no.
100	4	2,00	1,90	0,90	400	2,130	11003-100
127	5	2,00	1,45	0,90	500	2,560	11003-127
150	6	2,00	1,25	0,85	600	4,080	11003-152
203	8	2,00	0,95	0,85	800	5,450	11003-203
250	10	2,00	0,85	0,75	1000	5,900	11003-250

Technical characteristics

Temperature range: -40 °C to +100 °C
Standard length: 10 m, 15 m

Construction

Material: Polyether-polyurethane with copper plated steel wire helix



GrüloFlex PUR H

For heavy duty

Very heavy PU hose for suction and transport of abrasive materials, specially designed for use as a head tube to suction trucks, conveying of roof gravel or substrate.

All technical information refer to a temperature of 25 °C.

Inner mm	Inner Inch	Material mm	WP bar	Vacuum bar	BR mm	Weight kg/m	Article no.
152	6	2,50	1,15	0,55	375	3,720	11007-152
200	8	2,50	0,85	0,41	500	4,400	11007-200

Technical characteristics

Temperature range: -40 °C to +100 °C
Standard length: 10 m

Construction

Material: Polyether-polyurethane with copper plated steel wire helix



GrüloDur 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	2,60	20	60	0,500	10023-052
76	3	2,80	16	50	0,750	10023-076
102	4	3,00	14	42	1,150	10023-102
127	5	3,00	10	30	1,400	10023-127
152	6	3,00	10	30	1,650	10023-152



GrüloFlat PUR Pro

Robust multi-purpose hose

GrüloFlat Pur Pro is a flat hose for heavy applications, especially for abrasive media in construction industry, agriculture, disposal and mining. Because of his superior abrasion resistance and robustness the hose can also be used for suction dredgers for the long way. **GrüloFlat Pur Pro** is durable, oil,- petrol,- and chemical resistant with an extremely high tensile strength.

Technical characteristics

Temperature range: -50 °C to +75 °C (water)

Standard length: 100 m, 200 m

Colour: Orange

Construction

Material: Thermoplastic Polyether Polyurethane, very smooth inside and outside

Reinforcement: High tenacity polyester yarn, circular woven



Inner mm	Inner Inch	Wall mm	WP bar	BP bar	Weight kg/m	Article no.
76	3	3,50	16	50	0,950	11042-076
102	4	3,80	14	42	1,350	11042-102
127	5	3,80	14	42	1,850	11042-127
152	6	4,00	14	42	2,100	11042-152

Grülo TX conveying hose systems

Delivery hoses for positive and negative pressure with reinforcement of fabric inserts and fully embedded steel wire spiral. The smooth, fabric-cushioned cover guarantees high wear resistance and weather resistance. The thick, smooth-walled wear hose lining provides low flow resistance and a long service life.

Grülo TX 40

Conveying hose 40° Shore

The **Grülo TX 40** is particularly suitable for slurries with particle sizes smaller than 10 mm.

Technical characteristics

Temperature range: -30 °C to +70 °C
 Standard length: 20 m, from DN 152: 10 m
 Colour: Black

Construction

Cover: SBR, fabric patterned
 Reinforcement: Steel wire spiral galvanized, textile fabric insert
 Lining: Wear hose 40° Shore



Inner mm	Inner Inch	Wand mm	WP bar	BP bar	Vakuum bar	BR mm	Weight kg/m	Article no.
51	2	9,50	10	30	0,90	150	2,400	10340-051-020
80	-	11,00	10	30	0,90	210	4,400	10340-080-020
102	4	11,00	10	30	0,90	280	5,800	10340-102-020
127	5	13,50	10	30	0,90	400	8,400	10340-127-020
152	6	13,00	10	30	0,90	600	9,500	10340-152-010
204	8	17,00	10	30	0,90	1300	15,200	10340-204-010
254	10	18,50	5	15	0,50	1600	20,800	10340-254-010
355	14	23,00	5	15	0,50	2200	40,800	10340-355-010

Grülo TX 60

Conveying hose 60° Shore

The **Grülo TX 60** is electrically conductive and without sleeves.

Technical characteristics

Temperature range: -30 °C to +70 °C
 Standard length: 20 m
 Colour: Black

Construction

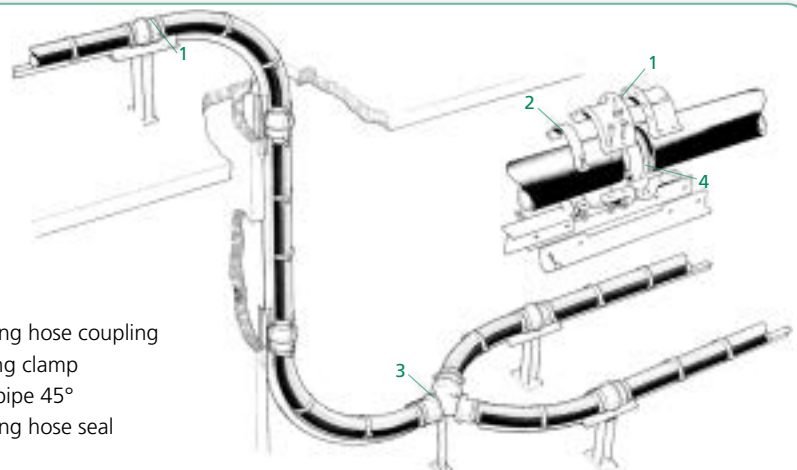
Cover: NR/BR, black, smooth, with fabric imprint and embossing
 Reinforcement: Textile cord inlay, steel wire spiral, with copper strand
 Lining: NR/BR, approx. 65° Shore, black, smooth



Inner mm	Außen mm	Wand mm	WP bar	BP bar	Vakuum bar	BR mm	Weight kg/m	Article no.
51	70	9,5	10	30	0,8	255	2,410	10444-051
80	102	11,0	10	30	0,8	400	4,290	10444-080
102	124	11,0	10	30	0,8	510	5,580	10444-102
152	178	13,0	10	30	0,8	760	9,950	10444-152



- 1 Grülo - Conveying hose coupling
- 2 Grülo - Mounting clamp
- 3 Grülo - Branch pipe 45°
- 4 Grülo - Conveying hose seal



Grülo conveying hose system TX 40 I TX 60

For high-performance use

The **Grülo conveying hose system** is designed for high operational reliability and long service life and meets high requirements for leak proofness and mechanical strength. It is suitable for use in hydraulic and pneumatic high-performance conveyor systems.

Rubber offers excellent wear resistance when conveying abrasive rock and sand. The same applies to the conveying of sludge and other materials. In addition, the **Grülo conveying hose system** is employed in sand and limestone plants, in glass production, in quarries, in coal processing and coal-fired power plants as well as in steel and cement works.



The **Grülo delivery hose system** consists of three easily replaceable, standardised units: Hose, coupling and seal. To complete the system, we offer you a wide range of accessories, including hose bends, tapering pieces, branch pipes, adaptor rings, fastening clamps, etc.

Advantages

- 5 to 10 times longer service life than steel or PVC pipes.
- Thicker wearing rubber layer for longer service life than most rubber-lined steel pipes.
- Easy to assemble, i.e. can be assembled without special training using simple tools such as wrenches, knives and metal saws.
- Can be precisely cut on site.
- Reusable couplings result in low spare part costs.
- Low storage costs, as special lengths do not have to be in stock.
- Low maintenance costs, as the corrosion protection does not require renewal.
- Can be used as a pipe bend - when the wear rubber layer on the outer radius is worn, the hose rotates 180°, virtually doubling its life.
- Delivery in lengths from 20 m to NW 127 mm and in lengths of 10 m from NW 140 mm. The delivery length of steel pipes is usually 6 m.

Ask for the assembly instructions!

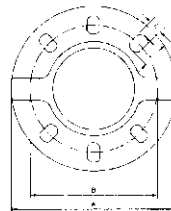
Grülo TX Conveying hose coupling

Flange coupling for Grülo TX system

The **Grülo flange coupling** was developed for use with **Grülo conveying hoses**. The coupling does not come into contact with the material conveyed through the conveying hose and is therefore not subject to wear. It is made of a high-strength aluminium alloy. The coupling consists of two to four identical segments which are mechanically attached to the smooth conveying hose. If a segment is damaged or lost, it can be replaced by another segment of the same size. If a conveying hose has to be replaced, the old coupling can be fitted to the new conveying hose.

The **Grülo flange coupling** does not have to be positioned in any special way on the outside of the conveying hose. It is simply turned onto the conveying hose until it is at the same height as the connecting flange. The conveying hose itself does not have to be turned.

The **Grülo flange coupling** is designed for quick and easy installation. Neither special tools nor specially trained personnel are required. Each coupling is supplied with bolts for the side flanges. Square bolts are used to prevent the bolts from turning. There are no other bolts included in the standard delivery. The separable **Grülo flange coupling** is suitable for all common flange bores



Advantages at one glance:

- Lower costs thanks to modular design and reusable couplings.
- No wear, as the coupling does not have any contact with the conveyed material.
- Made of high-strength aluminium alloy, therefore low weight.
- Simple assembly, special tools are not required.
- Oval holes in the coupling flanges allow one and the same coupling to be connected to most flanges with bores according to international standards, e.g. DIN, SMS, NF, NS, BS, ANSI.

Flange dimensions Grülo Conveying Hose System

Coupling size mm	A mm	B mm	C mm	ExF mm	Matches flange DIN 2501 PN10	ANSI B16.5	Weight kg/piece	Article no.
51	165	124,5	91	18x20	50	2"	1,800	20340-051-01
80	200	158,0	91	18x24	80	3"	2,500	20340-080-01
102	220	184,0	133	18x24	100	4"	3,500	20340-100-01
127	250	213,0	165	23x26	125	5"	4,800	20340-125-01
152	285	238,5	197	23x27	150	6"	6,200	20340-150-01
204	340	295,0	257	23x26	200	8"	10,600	20340-200-01
254	405	353,0	197	25x33	250	10"	11,100	20340-250-01

Grülo TX Conveying Hose Seal

Seals for Grülo TX

Seal made of wear rubber Trellex 60 for mounting coupling to coupling, coupling to pump connection piece, coupling to pipe – with rubber lining or without lining.

The seal is available in two versions:

- **Typ S** for normal operating conditions
- **Typ SS** for operating conditions also requiring acid resistance

Seal types S and SS have a conical back to compensate for irregularities and recesses that may occur when cutting to size at the end of the hose. Since the hose does not have to be cut to such an exact length, valuable time can be saved and assembly is made easier.

When using flat seals, the hose must be cut cleanly and often also ground flat in order to obtain a smooth end face. This is not necessary when using type S and SS seals.

The front side of the seal is grooved, which improves the safety against leaks several times over compared to a flat seal



Advantages at one glance:

- Steel-reinforced design to ensure seal and delivery hose have the same inner diameter when the seal is pushed into the delivery hose.
- Unrestricted material flow, no whirl formation.
- The thick, smooth-walled inner lining offers low flow resistance with an extremely long service life.
- The cone compensates for unevenness at the ends of the conveyor hose.
- The ribbing on the front edge prevents leaks.

Coupling size mm	A mm	B mm	Weight kg/piece	Article no.
51	49	89	0,050	70340-050
80	78	122	0,100	70340-080
102	98	144	0,110	70340-100
127	123	175	0,200	70340-125
152	148	202	0,300	70340-150
204	198	258	0,500	70340-200
254	248	314	0,800	70340-250

When ordering, please specify the inside diameter of the hose.
Flat gaskets are manufactured to order.



Grülo TX 40 and Grülo TX 60

Two versions are available

Grülo TX 40 – Conveying Hose for pressure and suction conveying of abrasive sludges with particles up to a grain size of 20 mm.

Grülo TX 60 – Conveying hose for conveying abrasive powdery particles and chips with a maximum particle size of 30 mm.

Grülo TX-Förderschläuche slurry and mass conveying hoses are well reinforced with polyester fibers and a fully embedded galvanized steel wire spiral. A safety factor corresponding to 3.2 times the operating pressure was selected for the design of the hoses in order to prevent the delivery hose from bursting. A smooth surface with fabric pattern guarantees good resistance to wear and weathering.

The thick and smooth inner lining offers low flow resistance and an extremely long service life. Together with the **Grülo flange coupling** and the **Grülo Seal**, these conveying hoses form an extremely reliable conveying system that ensures good flow characteristics without any turbulence at the transitions. Spots of wear and leaks are eliminated.

The use of the **Grülo conveying hose system** with all its possibilities keeps your system cleaner and reduces operating costs by increasing system availability. If the Grülo conveying hose system is used exclusively in curved areas, the advantages of the system can only be used to a limited extent.

Grülo conveying hoses are ideal for conveying abrasive rock and sand material as well as for use in recirculation systems in residue pipes, where they compensate for heat-induced expansion and contraction of the steel pipes

The **Grülo TX 40** for pumping sludge has an NR inner core of 40° Shore A and is suitable for temperatures up to 60 - 70 °C. The **Grülo TX 40** can be used for the transport of sludge.

The **Grülo TX 60** for bulk handling has an SBR inner core of 60° Shore A and can withstand operating temperatures of up to 70 - 80 °C.

Advantages at one glance:

- Safety factor of 3:1 (ratio of burst pressure to operating pressure).
- Smooth cover guarantees high wear resistance and weather resistance.
- Thick, smooth-walled wear hose core ensures low flow resistance and long service life.
- Simple assembly, no special tools required.
- Easy to adapt to changes in the production process.
- Less vibration.
- Low noise level.

HYDROVATOR™

Special hose for vacuum excavators

Highly flexible special rubber hose for suction excavators with boom arms. Due to the original Goodyear SURVIVOR® special rubber compound, the core is highly abrasion- and notch-resistant. This hose has a very good crown pressure resistance and even at full vacuum there are virtually no length changes.



Technical characteristics

Temperature range: -25 °C to +82 °C

Standard length: 6,85 m and 7 m

further lengths on request | Delivery time 12 weeks

Colour: Black

Construction

Cover: SBR/BR

Lining: Special rubber mixture, high abrasion and cut resistant

Inner mm	Inner Inch	Outer mm	Vacuum bar	BR mm	Weight kg/m	Article no.
152,6	6	180,3	0,90	300	9,520	11043-152
203,5	8	231,1	0,90	400	12,500	11043-203
253,9	10	281,9	0,90	500	17,560	11043-253

OptiVrac ABR

For suction excavator systems

OptiVrac ABR is a highly flexible and corrugated hose which is ideally suited for the use on sewer cleaning vehicles. Its abrasion resistant inner lining is specially developed for suction excavators with mechanical arm for high abrasive materials as well as for industrial cleaning purposes.



Technical characteristics

Temperature range: -30 °C to +70 °C

Standard length: 20 m, 25 m, 30 m

Colour: Black

Construction

Cover: Synthetic rubber, corrugated, with fabric impressions, weathering and abrasion resistant

Reinforcement: High strength synthetic cord, embedded steel wire helix

Lining: Synthetic rubber compound, black, smooth, abrasion resistant, antistatic

Marking: Transfer tape orange, [G+L-Ellipse] - OptiVrac ABR

Inner mm	Inner Inch	WP bar	BP bar	Vacuum bar	BR mm	Weight kg/m	Article no.
102	4	3	9	0,90	310	2,630	12514-102
127	5	3	9	0,90	380	3,950	12514-127
152	6	3	9	0,90	460	4,490	12514-152
203	8	3	9	0,90	610	9,980	12514-203
252	10	3	9	0,90	950	18,400	12514-252



SECURITY HANDLE FOR HOSE

HOSES AND PIPES FROM 2" TO 6"

The **HoseLifter** makes working with hoses and pipes safer and more efficient. An easy mechanism enables fixing the hose in a flowing movement without physical effort. The **HoseLifter** is produced from highly durable and wearable Nylon and shows good thermal-insulation properties.

Advantages:

- increased safety and efficiency
- reduced contact with dangerous substances
- maintenance-friendly and easy to handle
- solid, safe grip
- easily to fix to hoses and pipes without damage
- applicable in any climate and anywhere
- to use in mud, cold, rain and snow



Size	Description	Weight/Unit kg	Article no.
2"	For Pipe OD from 1,5" to 2,5"	0,75	14001-20
3"	For Pipe OD from 2,5" to 3,5"	0,80	14001-30
3"	For Pipe OD from 3" to 3,75"	1,15	14000-30
4"	For Pipe OD from 4" to 4,75"	1,25	14000-40
5"	For Pipe OD from 5" to 5,75"	1,40	14000-50
6"	For Pipe OD from 6" to 6,75"	1,50	14000-60

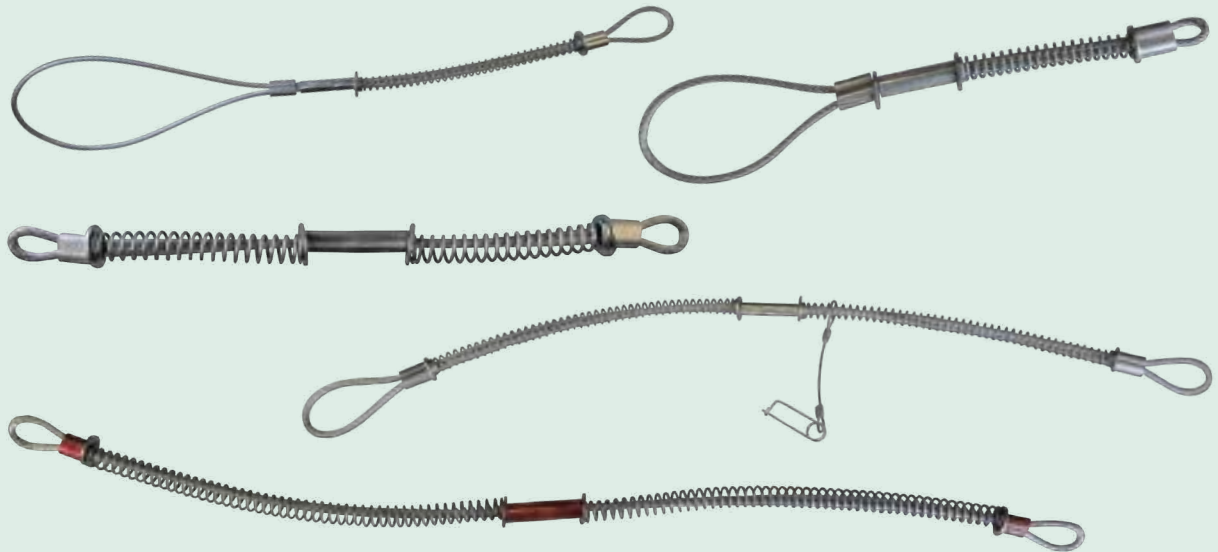


STEEL WIRE SAFETY ROPES *in various designs and sizes*

If a compressed air hose is accidentally disconnected or a hose malfunction occurs, the rapid outflow of air causes a violent blow of the the hose line, creating a potentially hazardous situation.

The steel wire safety rope prevents a hose whipping in case of accidental disconnection of a coupling or clamping device. The steel cables span the hose fittings to ensure the safety of the hose. Spring-loaded loops in the cable ends can be easily opened to bridge the couplings and hold the hose in place.

The cables can be used in hose-to-hose installations as well as to hose-to-rigid outlets or to tools.



WORK SAFELY WITH THE RESTRAINING STRAP

Ideal for intercepting material conveying hoses, with spring, loop on one side, karabiner on the other side.

Total breaking load 1,800 kg



Hose inner Ø mm	Article no.
0 - 50	14002-000-050
50 - 120	14002-050-120
120 - 260	14002-120-260



CLAMPING FLANGE SYSTEM

Quick clamping flange with turned grommet

Inner Ø mm	Size Inch	Article no.
80	3	24500-30-080
102	4	24500-40-102
127	5	24500-50-127
152	6	24500-60-152
200	8	24500-80-200



Quick-release clamping ring

Inner Ø mm	Size Inch	Article no.
102	4	24501-40
127 / 152	5 / 6	24501-60
200	8	24501-80



Safety splint

Size Inch	Article no.
4 / 5 / 6	24502



Weld-on ring

Size mm	Size Inch	Article no.
100	4	24503-40
125	5	24503-50
150	6	24503-60
200	8	24503-80



Welding nipple

Thread Inch	Length	Article no.
R 4	100 mm	29023a-40-100-15
R 5	100 mm	29023a-50-100-15
R 6	100 mm	29023a-60-100-15



Other lengths and nominal widths on request.

GrüloClamp SUPER W1

Hinge bolt clamp with bevelled clamp band edge

Technical characteristics

Band and bridge: Semi-soft steel, yellow zinc plated

Screw: Hexagon head, steel 8.8, yellow zinc-plated

Clamping range mm	Band width mm	Max. torque Nm	WP bar	Thickness band mm	Article no.
86 – 91	25	25	20	1,5	30050-W1-25-091
92 – 97	25	25	20	1,5	30050-W1-25-097
98 – 103	25	25	20	1,5	30050-W1-25-103
104 – 112	25	25	12	1,5	30050-W1-25-112
122 – 130	25	25	12	1,5	30050-W1-25-130
131 – 139	26	50	9	1,7	30050-W1-26-139
140 – 148	26	50	9	1,7	30050-W1-26-148
149 – 161	26	50	9	1,7	30050-W1-26-161
162 – 174	26	50	6	1,7	30050-W1-26-174
175 – 187	26	50	6	1,7	30050-W1-26-187



Round bolt clamp TD

Technical characteristics

Material: Steel, galvanised

For hose outer Ø Inch	For hose outer Ø mm	Article no.
4	113 - 123 mm	34500-123
5	140 - 150 mm	34500-150
6	160 - 170 mm	34500-170
6	169 - 182 mm	34500-182
8	218 - 231 mm	34500-231



Spiral hose clip

For hose outer Ø Inch	For hose outer Ø mm	Article no.
10	max. 290	30053-290
12	max. 330	30053-330



GrüloClamp SK

Type IVa, 2-part | 30 / 1 mm

Technical characteristics

Material: Steel strip yellow galvanized

Screw type: Inbus screw

Thickness steel band: 2 mm

Screw material: Steel 8.8, yellow galvanized

Nominal size	Clamping range mm	Band width mm	Screw size mm	Article no.
SK 135	127 – 139	30	M10	31004-30-135
SK 160	152 – 164	30	M10	31004-30-160
SK 165	157 – 169	30	M10	31004-30-165
SK 169	161 – 173	30	M10	31004-30-169
SK 172	166 – 176	30	M10	31004-30-172
SK 224	216 – 228	30	M10	31004-30-224
SK 230	222 – 234	30	M10	31004-30-230



Reducer

Material: Steel, completely welded on both sides with welding rings

DN mm	Size Inch	Article no.
DN 200 to DN 150	8" to 6"	24600-200-150
DN 150 to DN 125	6" to 5"	24600-150-125
DN 125 to DN 100	5" to 4"	24600-125-100



Y-piece (distributor)

Material: Steel, completely welded with weld-on rings, all sides

DN mm	Size Inch	Article no.
150 to 2 x 150	6" to 2 x 6"	24601-150-150
150 to 2 x 100	6" to 2 x 4"	24601-150-100
200 to 2 x 150	8" to 2 x 6"	24601-200-150
200 to 2 x 200	8" to 2 x 8"	24601-200-200
250 to 2 x 150	10" to 2 x 6"	24601-250-150
250 to 2 x 200	10" to 2 x 8"	24601-250-200



45° Bend

Material: Steel, completely welded, on both sides with welding rings

DN mm	Size Inch	Article no.
125	5	24602-50
150	6	24602-60
200	8	24602-80



90° Bend

Material: Steel, completely welded on both sides with welding rings

DN mm	Size Inch	Article no.
125	5	24603-50
150	6	24603-60
200	8	24603-80



Blind Cover

Inner Ø mm	Size Inch	Article no.
102	4	24504-40
127	5	24504-50
152	6	24504-60



On request also rubberized from the inside!



Please contact us!



PERROT COUPLINGS

Perrot male with beaded hose nozzle | galvanized



Technical characteristics

Material: Steel, galvanized
also available in stainless steel



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

Perrot female with beaded hose nozzle | galvanized



Technical characteristics

Material: Steel, galvanized
also available in stainless steel
Seal: Material according to requirements



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

Perrot male with pipe socket | black



Technical characteristics

Material: Steel, black
Length: ca. 250 mm

DN mm	Pipe socket Outer-Ø x wall thickness mm	Article no.
108	101,6 x 3,6	23300-108-101-14
133	125 x 5,0	23300-133-125-14
159	150 x 5,0	23300-159-150-14

Perrot female with pipe socket | black



Technical characteristics

Material: Steel, black
Length: ca. 250 mm

DN mm	Pipe socket Outer-Ø x wall thickness mm	Article no.
108	101,6 x 3,6	23301-108-101-14
133	125 x 5,0	23301-133-125-14
159	150 x 5,0	23301-159-150-14

BAUER COUPLINGS

Bauer female with pipe socket

Technical characteristics

Length: 300 mm, without lever mechanism

Material: Steel, black

DN mm	Pipe socket Outer-Ø x wall thickness mm	Article no.
133	127 x 4,0	23343-133-127-04-300
133	127 x 6,3	23343-133-127-06-300
159	152 x 4,0	23343-159-152-04-300
194	200 x 4,0	23343-194-200-04-300



Bauer lever ring

Technical characteristics

Material: Steel, black

DN mm	Article no.
133	23342-133-14
159	23342-159-14
194	23342-194-14



Bauer male with pipe socket

Technical characteristics

Length: 200 mm, with rubber ring

Material: Steel, black

DN mm	Pipe socket Outer-Ø x wall thickness mm	Article no.
133	127 x 4,0	23304-133-127-04-200
133	127 x 6,3	23304-133-127-06-200
159	152 x 4,0	23304-159-152-04-200
194	200 x 4,0	23304-200-194-04-200



WE STOCK THE COMPLETE CARDAN COUPLING PROGRAM! *Please contact us!*



ABRASION AND CORROSION



The problem: Abrasion!

During production container, conveyer belts and mixing plants in raw and building material industries are exposed to extreme conditions around the clock. At this increased wear, high abrasion and corrosion or even chemical attack through aggressive media occurs.

The resulting damages lead to high repair costs, considerable machine downtimes and thus to high economic loss.

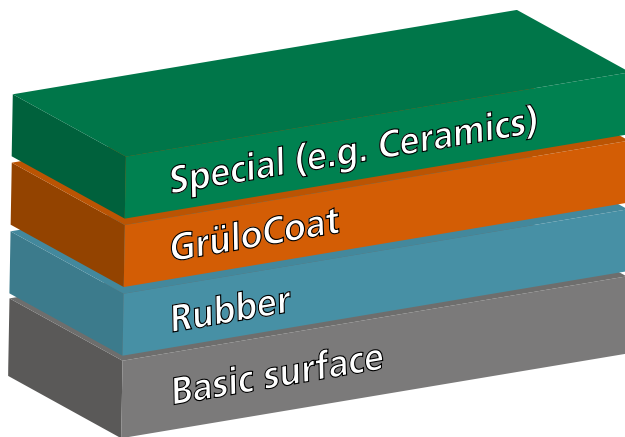
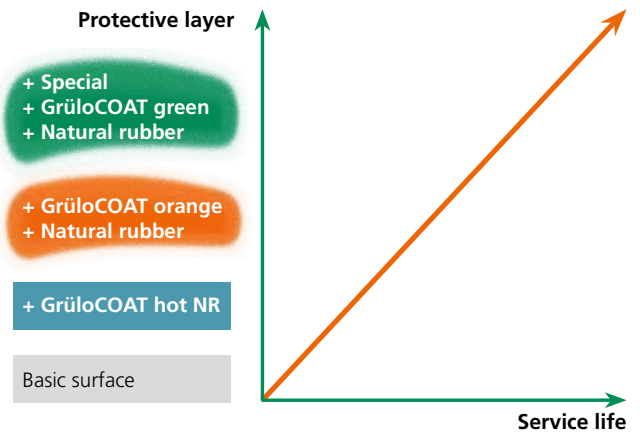


The Solution: GrüloCOAT Systeme!

GrüloCoat System is the newly developed and therefore unique technology in surface coating.

Use our lead in knowledge and experience to protect your surfaces long-term against numerous negative influences as mechanical abrasion, chemical destruction and corrosion. Successful coatings result from an interaction of many factors. Experienced staff out of our application technology as well as research and development ensure constant alignment of critical parameters. So the best solution for your wear problem can be achieved.

As a specialist company in high-quality wear protection for various loads we offer you high resistant and high-quality coating systems in **rubber, ceramics** and **liquid plastic**.



APPLICATION AREAS:

- bends, suction pipes and -funnels, deflector plates/metal sheets, troughs, case linings
- interior tank coating
- inner/outer pipe lining
- conveyer and transport systems
- hose couplings, Storz and Perrot
- cylinder friction lining
- working- and storage area
- sewage cleaning plant
- and many other possible applications



GrüloCOAT Systeme Casting and Spraying Procedure

Applied in low or high pressure/grouting procedure the coating with liquid plastic is to be processed within 5 sec to 45 min. It is short-term accessible and loadable and offers a number of advantages over traditionally cold applied coatings. The adhesion to the respective basic surface – no matter whether it is metal, concrete, stone, wood, rubber, etc. – always is excellent. Therefore no weak points are present, from which delaminating of material could reveal.

Caused by the extremely short potlife of such as seven seconds geometrics can be layered where conventional methods fail: vertical surfaces, merging radii, complex shapes: the coating follows the surface and covers it with the required thickness. Inner lining of pipelines and bends or conveying hose couplings are possible as well. Furthermore a lasting solution is provided for media container such as tanks, ponds and basins.

You need a certain colour? Following the RAL colours we can use the desired shade for your coating project.



Numerous applications

CHARACTERISTICS

- quick reaction times
- resistant against mechanical load
- resistant against chemical exposure
- authorised for a range of applications
- combinable with different primer
- thermally stable
- waterproof and resistant to roots
- crack-bridging

ADVANTAGES

- short downtimes
- excellent wear resistance
- corrosion protection
- applicable on nearly any surface

YOUR BENEFIT

- permits a rapid start-up
- protection of base against wear
- saves costs and time
- longer lifetimes and less maintenance intervals
- for every application an appropriate system



On any base



Mobile coating on-site



Immediately walkable and loadable



Any shape possible to coat



Thermal stability from -50°C to 120°C



From ANTI-stick to ANTI-slip



High chemical and microbiological resistance



Competence in Rubber Coating

Soft Rubber Coating - Wear Protection

Rubber as protection against wear is an optimal cover for machines and plants. It is most suitable for coating of transport- and storage containers, chutes, gutters or funnels due to high tensile strength and elasticity.

We process natural rubber (NR) of 2, 5, 7 and 10 mm thickness in soft rubber coating. On demand we offer to choose between highly wear resistant 40° Shore A in blue or highly abrasion resistant 60° Shore A in black.

ADVANTAGES OF RUBBER COATING

- wear protection
- noise protection
- vibration protection
- higher lifetime
- lower caking

APPLICATION AREAS

- road sweeper parts
- suction dredge wear parts
- engine pumps
- crushing plants
- lining for sandblast cabins
- gutters and chutes
- spiral pump shafts
- truck mixer gutters/-chutes
- gravel excavator pumps
- deflection plates and deflector metal sheets
- pipe coating for sand- and gravel industry
- ventilation cases

Hard Rubber Coating - Protection against corrosion (acc. to EN 14879-1)

The material characteristics of synthetic rubber – high ageing and weather resistance as well as an outstanding chemical resistance – offer optimal protection against aggressive media inside industrial plants.

Mostly a hard rubber coating with the materials Butyl rubber or Hypalon® is used, furthermore IR, BR, SBR, IIR, CR and NBR .

APPLICATION AREAS

- flue gas desulfurisation plants
- pipe coating
- basins/tanks for chemicals
- basins for electroplating and much more



From shore A 40
to hard rubberlining



From individual item
to large-scale production



Freehanded rubber coating
on nearly every surface

After coating we gladly varnish your parts with a 2-component finish in our in-house paint shop.

Storz-, Perrot- and Cardan couplings rubberized inside on request!

Please contact us!

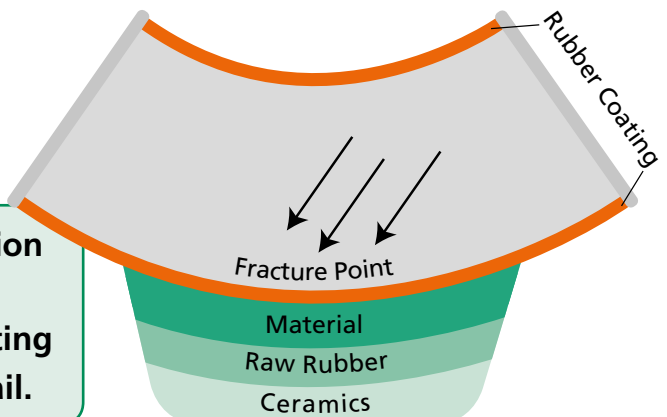


THE BIGGEST WEAR: MATERIAL ON MATERIAL!

Not our's!



Pipe bend with wear protection box



As coating professionals, we find a solution for corrosion and wear. Whether rubber coating or hot spray coating – we will be happy to advise you in detail.

PERSONAL PROTECTION EQUIPMENT

Safety first!

Grüning & Loske GmbH cares about your safety at work - we provide personal protection equipment (PPE) from head to toe. A wide delivery range of products ensures the availability of high-quality trade-marked articles from different manufacturers. As system partners of industry (MRO) we offer out-sourcing concepts in occupational safety including scheduling and logistics in cooperation with your management for occupational safety and purchase.

In addition we advise you on the application of our products considering latest knowledge of occupational medicine as well as safety requirements. If required we carry out safety-related analysis followed by a sound consultancy service. Our range of personal protection equipment covers everything: from gloves to chest wader, safety boots and helmets up to high visibility clothing.

We find the appropriate equipment for your safety!

Tyvek 800J



Standard: PSA category 3,
TYPE 3-B/4-B/ 5-B/6-B

Material: 100% polyethylene,
antistatic equipped

Colour: white with orange hot
taped seams

- liquid-, particle- and limited splash-proof
- contamination protection against radioactive particles according to EN 1073-2
- antistatic acc. to EN 1149-5
- hood with elastic band
- tight mask closure
- striking orange taped seams for added visibility
- zipper with self-adhesive cover for optimum protection
- elasticated arm and leg cuffs
- thumb loops

Available sizes	Article no.
M-XXXL	66-2928

PP/PE-Overall COVERALL BLUE



Material: Front: white
PP/PE microporous, 63 g/m²
Back: blue, Textile
nonwoven SMS, 55 g/m²

Colour: white and blue

- hood with elastic band
- zipper with self-adhesive cover for optimum protection
- elasticated arm and leg cuffs
- front side liquid-tight
- breathable reverse side
- protection against light splash water acc. to EN 13034 Type 6
- protection against solid particles in the air according to EN 982-1 Type 5
- contamination protection EN 1073-2
- protection against infectious agents acc. to EN 14126:2003
- antistatic acc. to EN 1149-5

Available sizes	Article no.
S-XXXL	60605

Fine dust mask P3 with exhalation valve



Standard: EN 149:2001 + A1:2009

- with exhalation valve
- adjustable noseband for better fit
- low exhalation resistance for high wearing comfort
- with sealing lip
- with adjustable straps
- protection level FF P3
- protects up to 30 times the MAK value

Available sizes	Article no.
universal	66-4236

Hearing protection earplugs



Standard: EN 352-2

Colour: yellow

SNR value: 36 dB

- soft foam
- conically shaped
- non-toxic
- good insulating effect

Available sizes	Article no.
universal	66-41281

Safety goggles, clear



Standard: EN 166

Material: frame/bracket: polycarbonate
Colour: frame/bracket: blue
clear viewing glas

- bracket length and height adjustable
- anti-scratch coated
- classic safety glasses with integrated side protection
- weight: approx. 30 g

Available sizes	Article no.
universal	66-41931

Safety goggles MAXIM, clear



Standard: EN 166 / EN 170 / EN 172

Colour: frame/bracket: black
clear viewing glas

- non-slip plastic sports temples
- bracket length and height adjustable
- discs with DX™ anti-fog hard coating
- dual aspheric lens for distortion-free vision
- soft, universal fitting nose bridge
- eyebrow protection with elastomer pads
- lightweight frame
- weight: 29 g

Available sizes	Article no.
universal	66-41960

Cattle full leather gloves



Standard: EN 388 DIN EN 12477
Version A

Material: cowhide, natural colour
Coating: nitrile, yellow

- TÜV/GS tested premium quality
- palm and back of the hand made of cattle full leather
- split leather gauntlet
- piped seams
- pulse protection



Available sizes	Length	Article no.
10,5	ca. 35 cm	66-0264

Jet Gloves



Standard: EN 388
Material: Cattle full leather

- professional quality
- double seam
- rubberized cuff
- palm lined



Available sizes	Article no.
8, 9, 10,5, 11, 12	66-0157

Nitrile gloves blue partially coated



Standard: EN 388
Strap: 90% polyester, 10% Elasthan (Lycra®), blue
Coating: Micro-Nitrile foam with water-based polyurethane

- premium quality
- fine knit, seamless/15 G
- stretch liner for optimum fit, flexibility, wearing comfort and sensitivity
- breathable
- very good tactile sensitivity
- secure grip even on smooth objects
- liquid-repellent
- good resistance to oils and greases



Available sizes	Article no.
6, 7, 8, 9, 10, 11	66-0668

Nitrile gloves blue completely coated



Standard: EN 388
Strap: 100% polyamide (nylon), grey

Coating: 1. coating: nitrile, fully coated, smooth
2. coating: nitrile, hand inner surface, sanded

- premium quality
- fine knit, seamless/13 G
- double protection through double coating
- optimum grip even in oily environments due to sanded nitrile coating
- dark colours for optimal use in oily environments
- good resistance to oils and greases
- excellent abrasion resistance
- very good tactile sensitivity



Available sizes	Article no.
8, 9, 10, 11	66-0634

Nitrile gloves partially coated



Standard: EN 388
Strap: 100% cotton, Jersey, natural colour
Coating: nitrile, yellow

- professional quality
- good abrasion resistance
- extremely flexible
- back of the hand partly coated
- good resistance to oils and greases
- knitted wristband



Available sizes	Article no.
6, 7, 8, 9, 10, 11	66-0550

Nitrile gloves completely coated



Standard: EN 388
Strap: 100% cotton, Jersey, natural colour
Coating: nitrile, yellow

- professional quality
- good abrasion resistance
- extremely flexible
- fully coated
- good resistance to oils and greases
- knitted wristband



Available sizes	Article no.
8, 9, 10, 11	66-0551

LED portable spotlight



Material: Plastic
Colour: matt black

- with 8 superbright LED's
- very long lifetime of the LED's
- low power consumption guarantees long operating times
- with hand strap
- without battery
- suitable for battery order no. 66-8104

Article no.
66-8101

Compound Battery 4R25



Weight: approx 490g

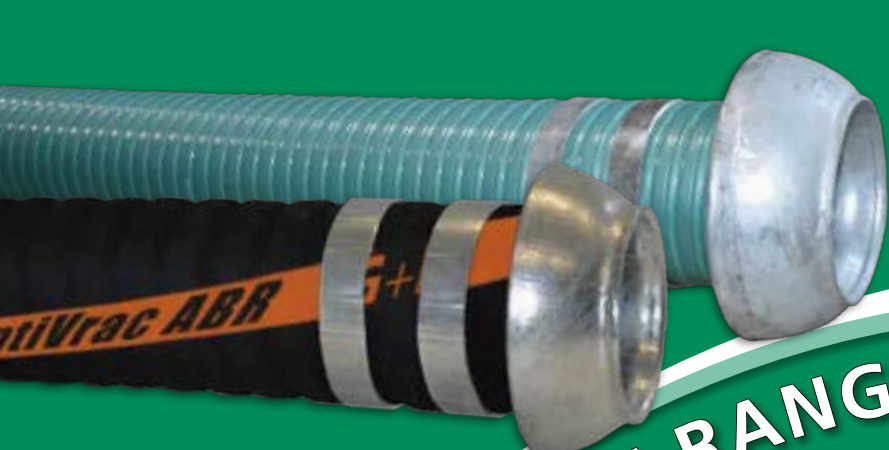
Voltage: 6 Volt

Colour: blue

Characteristic: particularly durable

- Zinc/carbon dry battery
- 7 Ah
- without mercury, without cadmium
- for portable spotlight order no. 66-8101

Article no.
66-8104



OUR PRODUCT RANGE AT A GLANCE



HOSE TECHNOLOGY

technical advice, pressure testing,
hose line assembly



HOSE CONNECTION SYSTEMS

couplings, fittings



FASTENING TECHNOLOGY

hose clamps



WEAR PROTECTION AND CONVEYOR BELT ENGINEERING



RUBBER- AND SEALING TECHNOLOGY



PPE - PERSONAL PROTECTIVE EQUIPMENT



MRO GOODS



CHEMICAL PRODUCTS

adhesive and sealing material

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