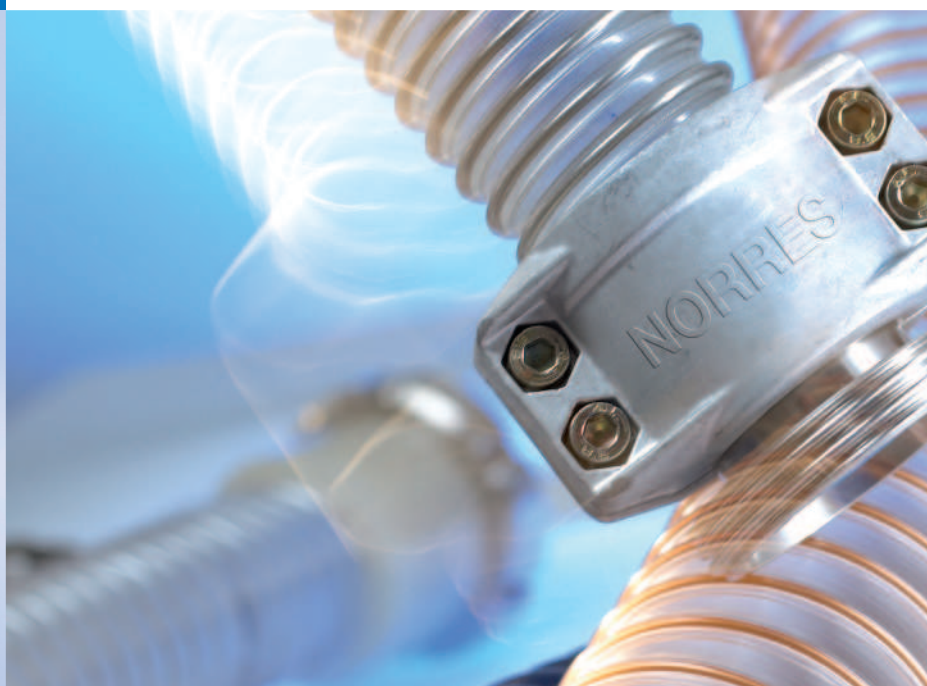




NORRES INDUSTRIAL HOSES

Hoses for the plastics industry



TECHNISCHE SCHLÄUCHE
INDUSTRIAL HOSES



NORRES INDUSTRIAL HOSES

HOSES FOR ALL APPLICATIONS.

Company – simply flexible

NORRES, established in 1889, is a global player and a leading manufacturer of industrial hoses, hose systems and other innovative, high-performance plastic products. By constantly endeavouring to develop new product and system ideas, optimise existing ones and design made-to-measure solutions for a wide range of industries and customer requirements, NORRES supports you in your efforts to secure product advantages and cut costs with innovative solution strategies.

A broad spectrum of complementary services and consulting further relieve the strain on your budget and boost your productivity.

Products – more than flexible

NORRES' certification to ISO 9001:2008 underlies our consistently high standard – from purchasing through product development to production and shipping. Our total quality management concept plays a key part in the comprehensive

fulfilment of our service pledge. NORRES hoses comply with a wide range of standards and specifications in the most diverse industries, including the ATEX Directive, UL approvals, FDA conformity and numerous other food regulations.

Simply good is not good enough for NORRES – total quality is the benchmark by which we measure our performance!

Innovations – simply future

NORRES innovations and standard products are designed to help you solve even the most complex technological challenges. All research and development activities are systematically integrated with our in-house Engineering department, which evolves the optimal solution to meet your technical specification.

Numerous novel and patented ideas have been – and continue to be – brought to market, reflecting our long-term objective of consolidating and extending NORRES' leading position.

Services - simplify your life

Our claim is to deliver the right products in the right quantity more efficiently to you or your customers. To help us fulfil this promise, NORRES offers an impressive service package that includes customer service, consulting, qualification, logistics and marketing support.

Put together your own, customised package from the various service modules available!

NORRES – your trusted partner and specialist when it comes to industrial hoses and hose systems – **simply flexible!**

Burkhard Mollen

Managing Director



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simply flexible - our motto NORRES services at a glance



NORRES industrial hoses – our standard hose range for almost any application

- Highly abrasion-proof PUR suction and transport hoses
- PVC, EVA and PE suction and transport hoses
- Suction and discharge hoses
- Air conditioning and ventilation hoses
- Compressed air and pneumatic hoses, profiles (with or without inserts)
- Flame retardant polyurethane hoses for the timber industry
- Electrically conductive hoses, antistatic hoses
- Special hoses for the food industry
- Metal hoses
- Exhaust gas hoses
- Hot air hoses, high-temperature hoses (-200 to +1100 °C)
- Hose clamps, connecting elements

NORRES cable protection systems – systematic protection

- Plastic conduits with connectors
- Metal conduits with connectors
- Corrugated plastic protection tubes with connectors
- Tubes with hollow braidings, plastic spiral bands, insulation hoses
- Accessories



NORRES consulting and service package – all services from a single source

- Technical consulting, either by phone or out in the field
- Customised product development
- Technical documentation
- Training on site or at the NORRES technology centre
- Assistance with marketing activities
- Support for promotional campaigns
- Production of samples



NORRES logistics concept – cuts your logistics costs

- 24 h delivery service
- No minimum order value
- High product availability
- Worldwide shipments
- Product batch sizes tailored to customer requirements



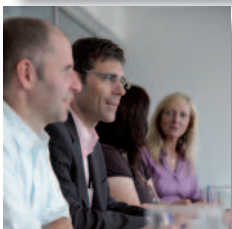
NORRES customised solutions – products made to measure

- Customised system solutions
- Customised hose designs and materials
- Hose systems with customised connectors
- Customised profiles and profile hoses
- Hose-like products
- Special insulation hoses
- Development of technological innovations
- In-house Engineering department for customised solutions



NORRES sustainability – our future in our hands

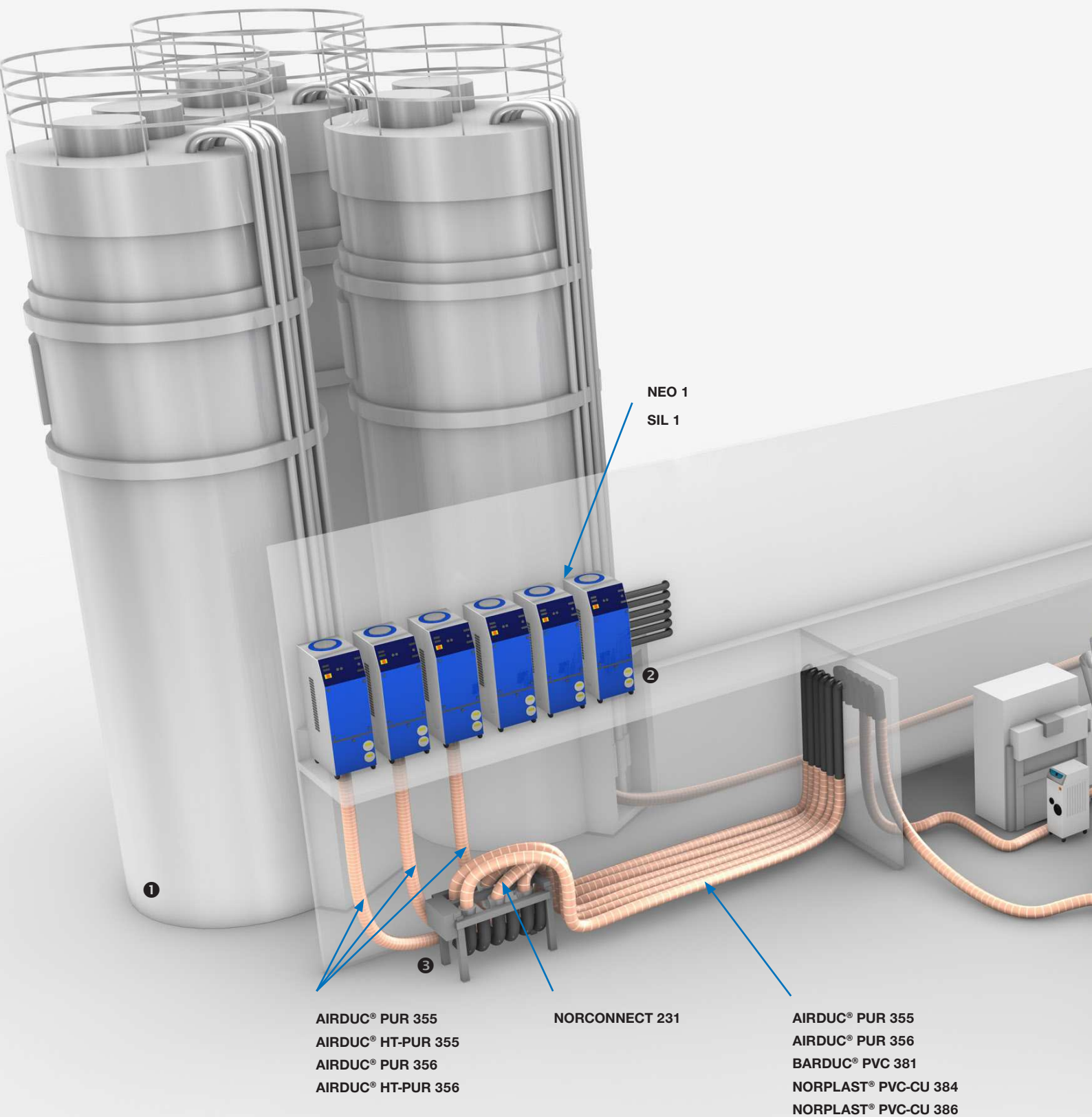
- Durable products to protect our environment and reduce costs
- Products made from bioplastics, i.e. renewable raw materials
- Products with a low environmental impact based on the life cycle assessment (LCA) [= ecobalance]
- Energy saving production and HVAC technologies
- Streamlined production, batch and inventory control



NORRES quality management – safety first

- Certification to DIN EN ISO 9001:2008
- Compliance with industry standards and regulations
- All products undergo comprehensive quality assurance





Legend

- ❶ Silos
- ❷ Dehydrator
- ❸ Hose Concentration Point
- ❹ Silo-Filling
- ❺ Batcher
- ❻ Shredder

NORCONNECT 230
AIRDUC® PUR 356
AIRDUC® PUR 356 MHF REINFORCED



AIRDUC® PUR 353
AIRDUC® PUR 355
AIRDUC® HT-PUR 355
AIRDUC® PUR 356
AIRDUC® HT-PUR 356

AIRDUC® PUR 353
AIRDUC® PUR 355
AIRDUC® PUR 356
BARDUC® PVC 381
NORPLAST® PVC-CU 384
NORPLAST® PVC-CU 386



Pre-PUR®: NORRES uses a special polyurethane mixture for several of its hoses that sets them apart from the majority of commercially available products as follows:

- Higher mechanical strength
- Less abrasion
- Improved chemical resistance
- Higher softening points
- Better hot air ageing properties
- Better fl exibility at low temperatures



Abrasion-resistant: These NORRES hoses were specially developed to transport highly abrasive media throughout a long service life. They offer the following advantages:

- Selective reinforcement of the wall geometry
- Raw materials with particularly high mechanical strength and special additives



Crush-proof: NORRES hoses with this symbol are able to resist crushing either partially or completely when driven over or stepped on.



Smooth interior: NORRES hoses bearing this icon have optimal fl ow properties and offer the following advantages:

- Very high delivery rate
- Low pressure loss (reduced blower power and lower operating costs)
- Gentler material transport
- Low wear and therefore longer service life



High flexibility: This symbol is only used for NORRES hoses that have minimal counterforce and restoring force when bent.



Ether-PUR: NORRES uses a special, highquality ether-polyurethane for several of its hoses instead of the ester-polyurethane frequently employed for commercial applications. It offers the following advantages:

- Resistance to microbial attack
- Resistance to hydrolysis
- Improved chemical resistance and better fl exibility at low temperatures than comparable ester-polyurethanes



Approvals for use with foodstuffs: NORRES hoses with this symbol have one or more national and/ or international approvals and certificates of conformity that allow them to be used in food applications.



Flame Retard: NORRES hoses with the flame retardant icon have one or more national and/ or international approvals classifying them as flame retardant or selfextinguishing.



Partially coloured: Thanks to a patented production method, transparent hoses can be coloured in the bead area according to your specifications, so that you can continue to observe the process directly. Strengthen your market position by consistently utilising your corporate design colours.



PVC-free: NORRES hoses with this symbol are 100% PVC-free.



Capable of electrostatic discharge: These hoses, the spiral of which can be earthed according to the new German technical rule TRBS 2153 (formerly BGR 132), are identified by the icon shown here.



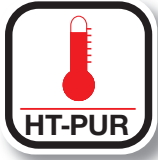
Antistatic and electrically conductive hoses: According to the new ATEX Directive and the German TRBS 2153 regulation, hoses with a dischargecapable (antistatic $<10^9 \Omega$) or electrically conductive ($<10^3 \Omega$ - $<10^6 \Omega$) wall should be used for combustible bulk materials as well as in hazardous areas. Please comply with all relevant regulations and standards and refer to the Technical Appendix for more details.



Special wire adhesion: Hoses manufactured using our special, highly advanced, multi-stage adhesion process are marked with this symbol. The exceptionally long service life realised with these products – even when subjected to severe combined loads – would otherwise remain unattainable.



Permanently antistatic: Thanks to a novel, innovative material from NORRES, all hoses marked with this symbol are permanently antistatic ($<10^9 \Omega$).



HT-PUR: Pre-PUR® is additionally cross linked by NORRES in an innovative, patented process that makes the hoses more resistant to heat and less susceptible to ageing.



Glass/ fork symbol: NORRES hoses bearing this symbol have been issued with an official approval from an independent testing institute for use in food applications in accordance with the EU Directive.



Phthalate-free: NORRES hoses with this symbol are 100% free of phthalate softener.



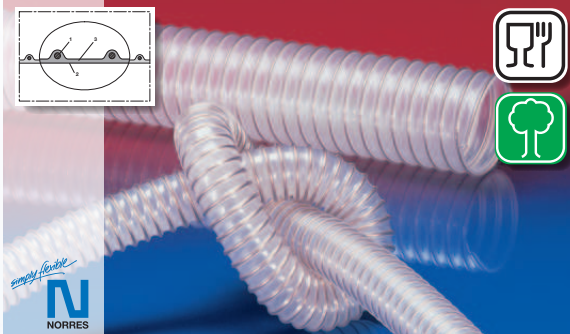
GREEN icon: NORRES pursues a successful sustainability strategy which, amongst other things, specifies the following basic principles for product development:

- Bio-based sources of raw materials that are not in competition with food production
- „bioplastic“ derived from renewable raw materials boasting comparable properties to conventional plastics
- Raw materials with a low environmental impact based on the life cycle assessment (LCA) [= ecobalance]
- Focus on „bioplastic“ monomers derived from renewable raw materials for polyesters, polyamides, polyurethanes and vinyl polymers

These specifications have firstly resulted in the development of bioplastics based, for example, on derivatives of castor oil. Their share is usually in the region of 50 to 20%, depending on the hardness and the nature of the synthetic material. The mechanical properties and chemical resistances of bioplastic raw materials are not significantly different from those of our standard types. The approvals for the „bioplastic“ products which are available as an option may deviate from those of the standard types. Secondly, plastics and products with a relatively low environmental impact according to the life cycle assessment (LCA) [= ecobalance] have meanwhile been developed and released for productive use.

All NORRES products identified with this icon are either manufactured from a bioplastic raw material as standard, or available in a bioplastic version as an option, or they have a comparatively good ecobalance.

1.3.0 AIRDUC® PUR 351 MHF



Abrasion-proof suction and transport hose; Medium-heavy, smooth interior

Applications: for abrasive solids such as dust, powder, fibres, chips and granulates; for gaseous and liquid media; for de-dusting and suction plants, industrial vacuum cleaners, suction of paper and textile fibres

Properties: highly abrasion-proof; optimized flow properties; food grade wall, complies with: FDA 21 CFR 177.2600 and 178.2010, EU Directive 2002/72/EC, incl. amending Directives 2008/39/EC and 975/2009, German guideline XXXIX BfR polyurethane; microbe and hydrolysis resistant; good resistance to chemicals; flame-retardant according to: UL94-HB; according to the German TRBS 2153 (formerly BGR 132), the spiral can be earthed

Temperature Range: -40 °C approx. to +90 °C approx.; short time to +125 °C approx.

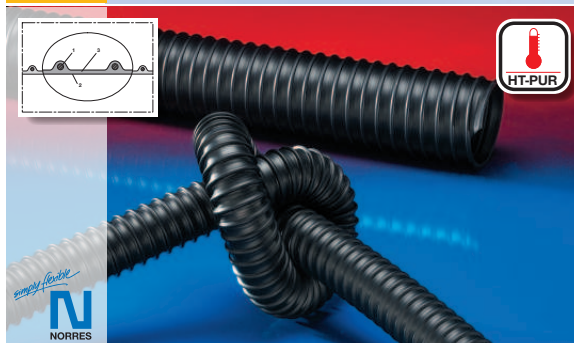
Design, material: AIRDUC® profile hose; spring steel wire firmly embedded in wall; wall: special premium ether-polyurethane (Pre-PUR®); wall thickness 1.0 mm approx.

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
25	32	2,690	0,495	35	0,200	10 15	351-0025-0000
30	38	2,260	0,475	42	0,260	10	351-0030-0000
32	40	2,120	0,460	44	0,280	10	351-0032-0000
35	43	1,940	0,440	47	0,300	10	351-0035-0000
38	46	1,795	0,430	51	0,320	10 15	351-0038-0000
40	48	1,710	0,420	53	0,340	10 15	351-0040-0000
45	53	1,525	0,385	58	0,380	10	351-0045-0000
50	58	1,370	0,365	64	0,410	10 15	351-0050-0000
55	63	1,255	0,330	69	0,450	10 15	351-0055-0000
60	68	1,150	0,285	75	0,490	10 15	351-0060-0000
65	73	1,060	0,255	80	0,530	10 15	351-0065-0000
70	79	0,990	0,210	87	0,590	10 15	351-0070-0000
75	84	0,920	0,195	92	0,640	10	351-0075-0000
80	89	0,860	0,175	98	0,680	10 15	351-0080-0000
90	99	0,770	0,155	109	0,750	10	351-0090-0000
100	109	0,690	0,120	120	0,970	10 15	351-0100-0000
110	119	0,630	0,110	131	1,060	10 15	351-0110-0000
115	124	0,605	0,105	136	1,110	10	351-0115-0000
120	129	0,580	0,105	142	1,160	10 15	351-0120-0000
125	134	0,560	0,085	147	1,200	10 15	351-0125-0000
130	139	0,535	0,085	153	1,250	10	351-0130-0000
140	149	0,495	0,085	164	1,340	10	351-0140-0000
150	159	0,460	0,075	175	1,520	10 15	351-0150-0000
160	169	0,435	0,065	186	1,610	10	351-0160-0000
170	179	0,410	0,065	195	1,710	10	351-0170-0000
175	184	0,400	0,055	202	1,760	10	351-0175-0000
180	189	0,385	0,055	208	1,810	10	351-0180-0000
200	209	0,350	0,055	230	2,000	10 15	351-0200-0000
225	234	0,310	0,040	257	2,160	10	351-0225-0000
250	259	0,280	0,020	285	2,390	10	351-0250-0000
275	284	0,255	0,020	312	2,630	10	351-0275-0000
300	309	0,230	0,020	340	2,860	10	351-0300-0000
325	334	0,215	0,015	367	3,100	10	351-0325-0000
350	359	0,200	0,015	395	3,330	10	351-0350-0000
400	409	0,170	0,010	450	4,270	10	351-0400-0000

Delivery variants: cut lengths and special lengths; many other diameters (Ø 25 to 500 mm) and lengths on www.norres.com; special colours: partially coloured, completely coloured; customer-specific product marking; wall: „bioplastic“ material derived from renewable raw materials without food applicability and without UL approval

Accessories: 13.1.0, 13.5.0, 13.6.0, 13.7.0, 13.8.0, 13.9.0, 13.10.0, 13.11.0, 13.12.2, 13.12.0, 13.12.5, 13.12.6, 13.12.7, 13.13.0, 13.14.0, 13.18.0

1.3.5 AIRDUC® HT-PUR 351



High-temperature suction and blast hose; Medium-heavy, smooth interior, HT-PUR up to +150 °C

Applications: for hot and abrasive solids such as dust, powder, fibres, chips and granulates; for gaseous and liquid media; for de-dusting and suction plants, industrial vacuum cleaners, suction of paper and textile fibres; for printing machines, blowers and compressors

Properties: very good heat resistance (better than comparable TPE and Neoprene); highly abrasion-proof; optimized flow properties; good resistance to chemicals; according to the German TRBS 2153 (formerly BGR 132), the spiral can be earthed

Temperature Range: -40 °C approx. to +125 °C approx.; short time to +150 °C approx.

Design, material: AIRDUC® profile hose; spring steel wire firmly embedded in wall; wall: special premium high-temperature polyurethane HT-PUR (Pre-PUR®); wall thickness 1.0 mm approx.

I.D.	O.D.	Rec. operating limits		Bending	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum	Radius			
mm	mm	bar	bar	mm	kg/m	m	
32	40	2,225	0,460	51	0,280	10	351-0032-1015
38	46	1,885	0,430	59	0,320	10	351-0038-1015
40	48	1,795	0,420	61	0,340	10	351-0040-1015
45	53	1,600	0,385	67	0,380	10	351-0045-1015
50	58	1,440	0,365	74	0,410	10	351-0050-1015
60	68	1,205	0,285	86	0,490	10	351-0060-1015
65	73	1,110	0,255	92	0,530	10	351-0065-1015
70	79	1,040	0,210	100	0,590	10	351-0070-1015
75	84	0,965	0,195	106	0,640	10	351-0075-1015
80	89	0,905	0,175	113	0,680	10	351-0080-1015
100	109	0,725	0,120	138	0,970	10	351-0100-1015
125	134	0,590	0,085	169	1,200	10	351-0125-1015
150	159	0,485	0,075	201	1,520	10	351-0150-1015
200	209	0,370	0,055	265	2,000	10	351-0200-1015

Delivery variants: cut lengths and special lengths; many other diameters (Ø 25 to 500 mm) and lengths on www.norres.com; customer-specific product marking

Accessories: 13.1.0, 13.5.0, 13.6.0, 13.7.0, 13.18.0

1.3.6 AIRDUC® PUR 353



Abrasion-proof special hose; Heavy, smooth interior

Applications: for high flow-rates of abrasive solids such as powder, chips and granulates; for gaseous and liquid media; for industrial vacuum cleaners and pellet conveying systems

Properties: highly abrasion-proof; optimized flow properties; good resistance to chemicals; according to the German TRBS 2153 (formerly BGR 132), the spiral can be earthed

Temperature Range: -40 °C approx. to +90 °C approx.; short time to +125 °C approx.

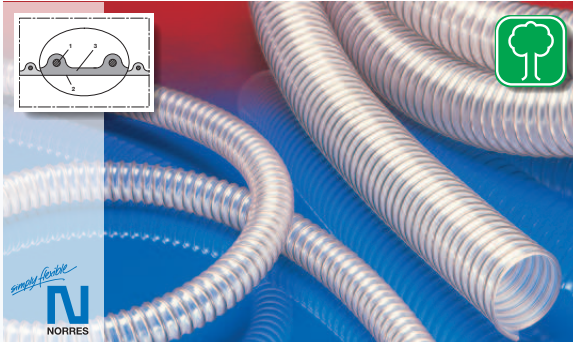
Design, material: AIRDUC® profile hose; spring steel wire firmly embedded in wall; wall: special premium polyurethane (Pre-PUR®); wall thickness 1.25 to 1.35 mm approx.

I.D.	O.D.	Rec. operating limits		Bending	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum	Radius			
mm	mm	bar	bar	mm	kg/m	m	
38	46	2,300	0,808	55	0,450	10	353-0038-0000
40	48	2,190	0,808	58	0,470	10	353-0040-0000
45	53	1,955	0,799	64	0,530	10	353-0045-0000
50	58	1,920	0,791	70	0,580	10	353-0050-0000
60	68	1,605	0,689	82	0,690	10	353-0060-0000
70	80	1,385	0,571	96	0,860	10	353-0070-0000
80	90	1,215	0,476	108	0,970	10	353-0080-0000

Delivery variants: many other diameters (Ø 25 to 500 mm) and lengths on www.norres.com; special colours: full coloured; customer-specific product marking

Accessories: 13.1.0, 13.5.0, 13.6.0, 13.7.0, 13.8.0, 13.9.0, 13.10.0, 13.11.0, 13.12.0, 13.13.0, 13.14.0, 13.18.0

1.4.0 AIRDUC® PUR 355



Abrasion-proof suction and transport hose; Heavy, smooth interior

Applications: for high flow-rates of abrasive solids such as powder, chips and granulates; for gaseous and liquid media; for industrial vacuum cleaners, granulate conveying systems, printing machines, blowers and compressors

Properties: highly abrasion-proof; optimized flow properties; increased pressure and vacuum resistance; good resistance to chemicals; flame-retardant according to: UL94-V2; according to the German TRBS 2153 (formerly BGR 132), the spiral can be earthed

Temperature Range: -40 °C approx. to +90 °C approx.; short time to +125 °C approx.

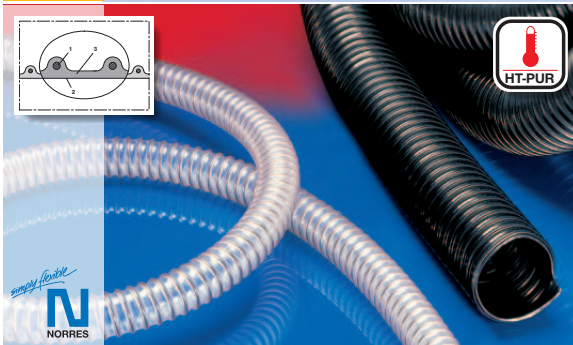
Design, material: AIRDUC® profile hose; spring steel wire firmly embedded in wall; wall: special premium ester-polyurethane (Pre-PUR®); wall thickness 1.5 mm approx.

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
13	20	4,500	1,000	20	0,140	10	355-0013-0000
16	23	4,300	1,000	23	0,160	10 15	355-0016-0000
18	25	4,250	1,000	25	0,170	10	355-0018-0000
20	27	4,100	1,000	27	0,230	10 15 20 25	355-0020-0000
22	29	3,910	1,000	29	0,250	10	355-0022-0000
25	32	3,655	1,000	32	0,280	10 15 20 25	355-0025-0000
30	40	3,450	0,980	40	0,420	10 15	355-0030-0000
32	42	3,260	0,970	42	0,440	10 15 20 25	355-0032-0000
35	45	3,110	0,970	45	0,480	10 15	355-0035-0000
38	48	3,080	0,950	48	0,520	10 15	355-0038-0000
40	50	3,050	0,950	50	0,540	10 15	355-0040-0000
42	52	2,910	0,940	52	0,560	10 15	355-0042-0000
45	55	2,730	0,940	55	0,600	10 15	355-0045-0000
50	60	2,450	0,930	60	0,660	10 15	355-0050-0000
55	65	2,250	0,880	65	0,720	10 15	355-0055-0000
60	70	2,060	0,810	70	0,780	10 15	355-0060-0000
65	75	1,910	0,750	75	0,840	10 15	355-0065-0000
70	81	1,780	0,670	97	0,980	10 15	355-0070-0000
75	86	1,660	0,615	103	1,050	10 15	355-0075-0000
80	91	1,560	0,560	109	1,110	10 15	355-0080-0000
90	101	1,300	0,425	121	1,250	10 15	355-0090-0000
100	111	1,250	0,390	133	1,490	10 15	355-0100-0000
102	113	1,225	0,390	136	1,510	10	355-0102-0000
110	121	1,140	0,360	145	1,630	10 15	355-0110-0000
115	126	1,090	0,335	151	1,680	10	355-0115-0000
120	131	1,050	0,315	157	1,770	10	355-0120-0000
125	136	1,010	0,295	163	1,840	10 15	355-0125-0000
130	141	0,965	0,270	169	1,910	10	355-0130-0000
140	151	0,900	0,240	181	2,030	10 15	355-0140-0000
150	161	0,840	0,200	193	2,410	10 15	355-0150-0000
152	163	0,825	0,195	196	2,440	10	355-0152-0000
160	171	0,785	0,185	205	2,560	10 15	355-0160-0000
170	181	0,740	0,170	217	2,720	10	355-0170-0000
175	186	0,720	0,155	223	2,790	10	355-0175-0000
180	191	0,700	0,150	229	2,870	10	355-0180-0000
200	213	0,630	0,135	256	3,120	10 15	355-0200-0000
225	238	0,560	0,110	286	3,500	10	355-0225-0000
250	263	0,510	0,085	316	3,880	10	355-0250-0000
275	288	0,460	0,080	346	4,260	10	355-0275-0000
280	293	0,450	0,075	352	4,330	10	355-0280-0000
300	313	0,420	0,070	376	5,160	10	355-0300-0000
325	338	0,385	0,065	406	5,580	10	355-0325-0000
350	363	0,360	0,055	436	6,000	10	355-0350-0000
400	413	0,320	0,045	496	8,020	10	355-0400-0000
450	463	0,280	0,035	556	9,000	10	355-0450-0000
500	514	0,255	0,030	617	10,000	10	355-0500-0000

Delivery variants: cut lengths and special lengths; many other diameters (Ø 13 to 500 mm) and lengths on www.norres.com; special colours: partially coloured, completely coloured; customer-specific product marking; wall: „bioplastic“ material derived from renewable raw materials without UL approval

Accessories: 13.1.0, 13.2.0, 13.5.0, 13.6.0, 13.7.0, 13.7.6, 13.7.7, 13.8.0, 13.9.0, 13.10.0, 13.11.0, 13.12.2, 13.12.0, 13.13.0, 13.14.0, 13.18.0

1.4.5 AIRDUC® HT-PUR 355



I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Dimensions Lengths	Order No. Black
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
32	42	3,425	0,970	48	0,440	10	355-0032-1015
38	48	3,235	0,950	55	0,520	10	355-0038-1015
40	50	3,210	0,950	58	0,540	10	355-0040-1015
50	60	2,575	0,930	69	0,660	10	355-0050-1015
60	70	2,165	0,810	81	0,780	10	355-0060-1015
65	75	2,005	0,750	86	0,840	10	355-0065-1015
70	81	1,870	0,670	112	0,980	10	355-0070-1015
75	86	1,745	0,615	118	1,050	10	355-0075-1015
80	91	1,635	0,560	125	1,110	10	355-0080-1015
100	111	1,315	0,390	153	1,490	10	355-0100-1015
125	136	1,060	0,295	187	1,840	10	355-0125-1015
150	161	0,880	0,200	222	2,410	10	355-0150-1015
200	213	0,660	0,135	294	3,120	10	355-0200-1015

High-temperature suction and transport hose; Heavy, smooth interior, HT-PUR up to +150 °C

Applications: for high flow-rates of hot and abrasive solids such as powder, chips and granulates; for gaseous and liquid media; for industrial vacuum cleaners, granulate conveying systems, printing machines, blowers and compressors

Properties: very good heat resistance (better than comparable TPE and Neoprene); highly abrasion-proof; optimized flow properties; increased pressure and vacuum resistance; good resistance to chemicals; according to the German TRBS 2153 (formerly BGR 132), the spiral can be earthed

Temperature Range: -40 °C approx. to +125 °C approx.; short time to +150 °C approx.

Design, material: AIRDUC® profile hose; spring steel wire firmly embedded in wall; wall: special premium high-temperature polyurethane HT-PUR (Pre-PUR®); wall thickness 1.5 mm approx.

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Dimensions Lengths	Order No. Transparent
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
32	42	3,425	0,970	48	0,440	10	355-0032-3040
38	48	3,235	0,950	55	0,520	10	355-0038-3040
40	50	3,210	0,950	58	0,540	10	355-0040-3040
50	60	2,575	0,930	69	0,660	10	355-0050-3040
60	70	2,165	0,810	81	0,780	10	355-0060-3040
70	81	1,870	0,670	112	0,980	10	355-0070-3040
100	111	1,315	0,390	153	1,490	10	355-0100-3040

Delivery variants: cut lengths and special lengths; many other diameters (Ø 20 to 500 mm) and lengths on www.norres.com; customer-specific product marking

Accessories: 13.1.0, 13.2.0, 13.5.0, 13.6.0, 13.7.0, 13.7.6, 13.7.7, 13.18.0

1.6.0 AIRDUC® PUR 356



I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
32	43	5,150	1,000	116	0,680	10 15	356-0032-0000
38	49	4,380	1,000	132	0,790	10 15	356-0038-0000
40	51	4,170	1,000	138	0,820	10 15	356-0040-0000
45	56	3,750	1,000	151	0,910	10	356-0045-0000
50	61	3,650	1,000	165	1,000	10 15	356-0050-0000
55	66	3,420	1,000	178	1,090	10	356-0055-0000
60	71	3,150	1,000	192	1,180	10 15	356-0060-0000
65	76	2,910	1,000	205	1,270	10	356-0065-0000
70	82	2,710	1,000	221	1,370	10	356-0070-0000
75	87	2,540	1,000	235	1,460	10 15	356-0075-0000
80	92	2,380	1,000	249	1,550	10 15	356-0080-0000
90	103	2,120	1,000	309	2,060	10	356-0090-0000
100	113	1,910	1,000	339	2,270	10 15	356-0100-0000
102	115	1,880	1,000	345	2,310	10	356-0102-0000
110	123	1,740	0,985	369	2,480	10	356-0110-0000
115	128	1,670	0,960	384	2,580	10	356-0115-0000
120	133	1,600	0,935	399	2,690	10	356-0120-0000
125	138	1,540	0,900	414	2,800	10 15	356-0125-0000
127	140	1,510	0,890	420	2,840	10 15	356-0127-0000
140	153	1,375	0,840	459	3,110	10	356-0140-0000
150	163	1,280	0,840	489	3,680	10	356-0150-0000
152	165	1,270	0,835	495	3,720	10 15	356-0152-0000
160	173	1,210	0,805	519	3,910	10	356-0160-0000
175	188	1,105	0,755	658	4,260	10	356-0175-0000
200	214	0,970	0,660	835	4,860	10	356-0200-0000
225	239	0,860	0,565	932	5,450	10	356-0225-0000
250	264	0,780	0,410	1450	7,350	10	356-0250-0000
300	314	0,650	0,215	1725	8,780	10	356-0300-0000

Abrasion-proof suction and transport hose; Super-heavy, smooth interior, vacuum-proof

Applications: for high flow-rates of extremely abrasive solids such as sand, gravel, grain, refuse glass and chips; for gaseous and liquid media; for silo vehicles; as conveying hose in glassworks, docks, steelworks, quarries, shipyards, cementworks etc.

Properties: extremely abrasion-proof with reinforcement underneath wire and narrow hose pitch; optimized flow properties; very high pressure, vacuum and compression resistance; high axial strength; good resistance to chemicals; according to the German TRBS 2153 (formerly BGR 132), the spiral can be earthed

Temperature Range: -40 °C approx. to +90 °C approx.; short time to +125 °C approx.

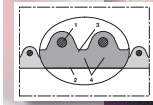
Design, material: AIRDUC® profile hose; spring steel wire firmly embedded in wall; wall: special premium ester-polyurethane (Pre-PUR®); wall thickness 2.0 - 2.5 mm approx.

Delivery variants: cut lengths and special lengths; many other diameters (Ø 32 to 300 mm) and lengths on www.norres.com; special colours: full coloured; customer-specific product marking; wall: „bioplastic“ derived from renewable raw materials

Accessories: 13.2.0, 13.4.0, 13.7.6, 13.7.7, 13.8.0, 13.9.0, 13.10.0, 13.11.0, 13.12.2, 13.12.0, 13.13.0, 13.13.5

1.7.5

AIRDUC® PUR 356 MHF REINFORCED



I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
50	67	4,010	1,000	214	1,490	10	356-0050-5100
60	77	3,465	1,000	246	1,760	10	356-0060-5100
65	82	3,200	1,000	262	1,890	10	356-0065-5100
80	97	2,620	1,000	310	2,300	10	356-0080-5100
90	107	2,360	1,000	342	2,900	10	356-0090-5100
102	119	2,070	1,000	381	3,260	10	356-0102-5100
115	132	1,815	0,960	422	3,640	10	356-0115-5100
127	144	1,660	0,930	461	4,010	10	356-0127-5100
152	169	1,395	0,900	541	5,110	10	356-0152-5100

Temperature Range: -40 °C approx. to +90 °C approx.; short time to +125 °C approx.

Design, material: AIRDUC® profile hose; spring steel wire firmly embedded in wall; wall: special premium ether-polyurethane (Pre-PUR®); wall thickness 3.0 to 3.5 mm approx.

Delivery variants: cut lengths and special lengths; many other diameters (Ø 50 to 152 mm) and lengths on www.norres.com; special colours: full coloured; customer-specific product marking; wall: „bioplastic“ material derived from renewable raw materials without food applicability

Accessories: 13.4.0, 13.7.5

Abrasion-proof suction and transport hose; Super-heavy and reinforced, smooth interior, vacuum-proof

Applications: for high flow-rates of extremely abrasive solids such as sand, gravel, grain, refuse glass and chips; for gaseous and liquid media; for silo vehicles; as conveying hose in glassworks, docks, steelworks, quarries, shipyards, cementworks etc.

Properties: extremely abrasion-proof with reinforcement underneath wire and narrow hose pitch; optimized flow properties; very high pressure, vacuum and compression resistance; high axial strength; food grade wall, complies with: FDA 21 CFR 177.2600 and 178.2010, EU Directive 2002/72/EC, incl. amending Directives 2008/39/EC and 975/2009, German guideline XXXIX BfR polyurethane; microbe and hydrolysis resistant; good resistance to chemicals; according to the German TRBS 2153 (formerly BGR 132), the spiral can be earthed

1.7.1 AIRDUC® PUR 356 MHF REINFORCED



Hose system sub-assembled on both sides with safety clamp system; Hose system with couplings: Storz, threaded connector, etc.

Properties: according to the German TRBS 2153 (formerly BGR 132): the metal hose spiral is fixed to the metal adapter

Temperature Range: -40 °C approx. to +90 °C approx.; short time to +125 °C approx.

Design, material: spring steel wire integrated in wall; clamp shells: aluminium; adapter: material acc. to table; screw and nut: galvanised steel gunmetal finish

Size	Thread	Total Length	Weight	Storz coupling, aluminium
mm		m	kg/piece	Order No.
75	G 3	3,8	11,80-13,60	230-0075-8350
75	G 3	4,8	14,00-15,80	230-0075-8351
75	G 3	5,8	16,20-18,00	230-0075-8352
100	G 4	3,8	16,60-18,70	230-0100-8350
100	G 4	4,8	19,80-21,90	230-0100-8351
100	G 4	5,8	23,00-25,10	230-0100-8352

Size	Thread	Total Length	Weight	Threaded adapter, aluminium
mm		m	kg/piece	Order No.
75	G 3	3,8	11,80-13,60	230-0075-8310
75	G 3	4,8	14,00-15,80	230-0075-8311
75	G 3	5,8	16,20-18,00	230-0075-8312
100	G 4	3,8	16,60-18,70	230-0100-8310
100	G 4	4,8	19,80-21,90	230-0100-8311
100	G 4	5,8	23,00-25,10	230-0100-8312

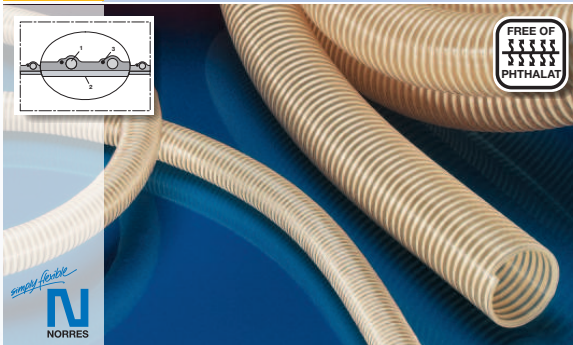
Size	Thread	Total Length	Weight	Threaded adapter, electro-galvanised steel
mm		m	kg/piece	Order No.
75	G 3	3,8	11,80-13,60	230-0075-8320
75	G 3	4,8	14,00-15,80	230-0075-8321
75	G 3	5,8	16,20-18,00	230-0075-8322
100	G 4	3,8	16,60-18,70	230-0100-8320
100	G 4	4,8	19,80-21,90	230-0100-8321
100	G 4	5,8	23,00-25,10	230-0100-8322

Size	Thread	Total Length	Weight	Threaded adapter stainless steel 1.4301 (stamped) = AISI 304
mm		m	kg/piece	Order No.
75	G 3	3,8	11,80-13,60	230-0075-8330
75	G 3	4,8	14,00-15,80	230-0075-8331
75	G 3	5,8	16,20-18,00	230-0075-8332
100	G 4	3,8	16,60-18,70	230-0100-8330
100	G 4	4,8	19,80 - 21,90	230-0100-8331
100	G 4	5,8	23,00 - 25,10	230-0100-8332

Size	Thread	Total Length	Weight	Threaded adapter, stainless steel 1.4404
mm		m	kg/piece	Order No.
75	G 3	3,8	11,80-13,60	230-0075-8340
100	G 3	4,8	14,00-15,80	230-0075-8341
75	G 3	5,8	16,20-18,00	230-0075-8342
100	G 4	3,8	16,60-18,70	230-0100-8340
100	G 4	4,8	19,80-21,90	230-0100-8341
100	G 4	5,8	23,00-25,10	230-0100-8342

Delivery variants: cut lengths and special lengths; wall: „bioplastic“ material derived from renewable raw materials without food applicability

1.11.0 NORPLAST® PUR-CU 386



I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
38	46	5,000	0,700	182	0,590	30	386-0038-0000
40	48	5,000	0,700	195	0,620	30	386-0040-0000
45	53	5,000	0,700	215	0,750	30	386-0045-0000
50	59	5,000	0,700	235	0,880	30	386-0050-0000
60	69	5,000	0,700	275	1,060	30	386-0060-0000
63	72	5,000	0,700	290	1,130	30	386-0063-0000
70	79	5,000	0,700	320	1,280	30	386-0070-0000
76	85	5,000	0,700	340	1,460	30	386-0076-0000
80	90	4,000	0,700	365	1,630	30	386-0080-0000
90	100	4,000	0,700	420	1,940	30	386-0090-0000
102	112	4,000	0,700	475	2,310	30	386-0102-0000

Abrasion-proof suction and transport hose; Heavy, smooth interior, grounding wire

Applications: for high flow-rates of abrasive solids such as powder, chips and granulates; for gaseous and liquid media; for industrial vacuum cleaners, granulate conveying systems, printing machines, blowers and compressors

Properties: abrasion-proof inside layer; increased pressure and vacuum resistance; high axial strength; good resistance to chemicals; grounding wire; free of phthalat

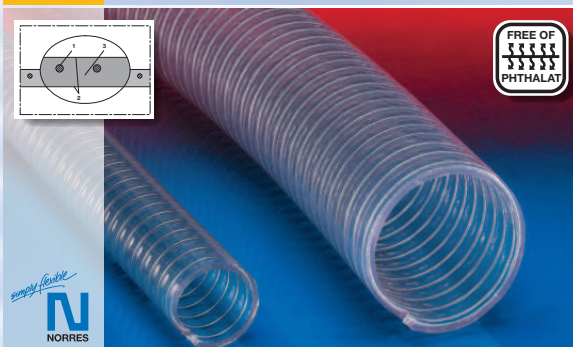
Temperature Range: -20 °C approx. to +70 °C approx.; short time to +80 °C approx.

Design, material: NORPLAST® full plastic hose; hard plastic spiral integrated in wall; spiral: rigid PVC; smooth interior; wall: interior polyurethane layer, exterior soft PVC; metallic grounding wire

Delivery variants: other diameters and lengths on www.norres.com; special colours: coloured spiral, full coloured; customer-specific product marking

Accessories: 13.4.0, 13.18.0

3.5.0 BARDUC® PVC 381



I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
10	16	7,000	0,850	64	0,150	30 60	381-0010-0000
12	18	6,000	0,850	72	0,180	30 60	381-0012-0000
13	19	6,000	0,850	76	0,200	30 60	381-0013-0000
14	20	6,000	0,850	80	0,210	60	381-0014-0000
16	22	6,000	0,850	90	0,250	30 60	381-0016-0000
18	24	5,000	0,850	98	0,290	30 60	381-0018-0000
19	25	5,000	0,850	100	0,320	30 60	381-0019-0000
20	26	5,000	0,850	104	0,350	30 60	381-0020-0000
22	28	5,000	0,850	112	0,380	30 60	381-0022-0000
25	32	5,000	0,850	128	0,500	30 60	381-0025-0000
30	38	4,000	0,850	152	0,590	30 60	381-0030-0000
32	41	4,000	0,850	164	0,650	30 60	381-0032-0000
35	44	4,000	0,850	176	0,700	30 60	381-0035-0000
38	47	4,000	0,850	188	0,800	15 30	381-0038-0000
40	50	4,000	0,850	200	0,870	15 30	381-0040-0000
42	52	4,000	0,800	208	0,970	15 30	381-0042-0000
45	55	4,000	0,800	220	1,100	15 30	381-0045-0000
50	60	4,000	0,800	256	1,240	15 30	381-0050-0000
60	72	3,600	0,800	288	1,700	15 30	381-0060-0000
63	75	3,600	0,800	300	1,800	15 30	381-0063-0000
65	77	3,600	0,700	308	1,860	15 30	381-0065-0000
70	83	3,600	0,700	332	2,000	15 30	381-0070-0000
76	90	3,600	0,700	360	2,200	15 30	381-0076-0000
80	94	3,600	0,700	372	2,350	10 20	381-0080-0000
90	104	3,000	0,700	416	2,900	10 20	381-0090-0000
102	116	2,400	0,700	464	3,350	10 20	381-0102-0000

Suction and transport hose; Super-heavy, smooth interior and exterior, vacuum-proof

Applications: for solids such as powder, chips and pellets; for gaseous and liquid media; for pressure and vacuum pumps; for industry, agriculture and construction engineering; for reducing the ground water level

Properties: very high pressure, vacuum and compression resistance; high axial strength; food grade wall, complies with: EU Directive 2002/72/EC, incl. the latest Amending Directive 975/2009/EC; good resistance to alkalis and acids; good resistance to chemicals; free of phthalat; pressure resistant; very robust; according to the German TRBS 2153 (formerly BGR 132), the spiral can be earthed

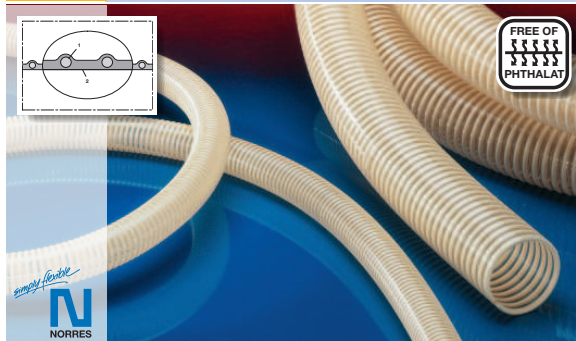
Temperature Range: -20 °C approx. to +70 °C approx.; short time to +80 °C approx.

Design, material: BARDUC® design; spring steel wire spiral embedded in wall; smooth interior and exterior; wall: high grade soft PVC; wall thickness 3 to 8 mm approx., depending on diameter

Delivery variants: other diameters and lengths on www.norres.com; special colours: transparent, full coloured; customer-specific product marking

Accessories: 13.4.0

3.7.0 NORPLAST® PVC 384



Suction and transport hose; Heavy, smooth interior

Applications: for solids such as powder, chips and pellets; for gaseous and liquid media; for de-dusting and suction plants, air conditioning and ventilation

Properties: increased pressure and vacuum resistance; high axial strength; food grade wall, complies with: EU Directive 2002 /72/EC; good resistance to alkalis and acids; good resistance to chemicals; free of phthalat

Temperature Range: -5 °C approx. to +70 °C approx.; short time to +80 °C approx.

Design, material: NORPLAST® full plastic hose; hard plastic spiral integrated in wall; spiral: rigid PVC; smooth interior; wall: high grade soft PVC

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
20	26	5,000	0,700	110	0,250	25 50	384-0020-0000
25	31	5,000	0,700	130	0,300	25 50	384-0025-0000
30	36	5,000	0,700	150	0,360	25 50	384-0030-0000
32	39	5,000	0,700	155	0,390	25 50	384-0032-0000
35	42	5,000	0,700	170	0,440	25 50	384-0035-0000
38	45	5,000	0,700	180	0,520	25 50	384-0038-0000
40	48	5,000	0,700	195	0,550	25 50	384-0040-0000
45	53	5,000	0,700	215	0,670	25 50	384-0045-0000
50	59	5,000	0,700	235	0,800	25 50	384-0050-0000
60	69	5,000	0,700	275	0,970	25 50	384-0060-0000
63	72	5,000	0,700	290	1,040	25 50	384-0063-0000
70	80	5,000	0,700	320	1,200	25 50	384-0070-0000
76	86	5,000	0,700	340	1,380	25 50	384-0076-0000
80	91	4,000	0,700	365	1,550	25 50	384-0080-0000
90	102	4,000	0,700	420	1,850	15 30	384-0090-0000
100	112	4,000	0,700	470	2,200	15 30	384-0100-0000
125	138	3,000	0,550	680	3,000	15 30	384-0125-0000
150	163	3,000	0,500	780	4,300	10 20	384-0150-0000

Delivery variants: other diameters and lengths on www.norres.com; special colours: coloured spiral, full coloured; customer-specific product marking

Accessories: 13.4.0, 13.18.0

3.7.2 NORPLAST® PVC-CU 384



Suction and transport hose; Heavy, smooth interior, grounding wire

Applications: for solids such as powder, chips and pellets; for gaseous and liquid media; for de-dusting and suction plants, air conditioning and ventilation

Properties: increased pressure and vacuum resistance; high axial strength; food grade wall, complies with: EU Directive 2002 /72/EC; good resistance to alkalis and acids; good resistance to chemicals; free of phthalat; grounding wire

Temperature Range: -5 °C approx. to +70 °C approx.; short time to +80 °C approx.

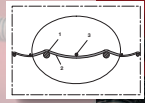
Design, material: NORPLAST® full plastic hose; hard plastic spiral integrated in wall; spiral: rigid PVC; smooth interior; wall: high grade soft PVC; metallic grounding wire

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
32	39	5,000	0,700	155	0,400	25 50	384-0032-2878
38	45	5,000	0,700	180	0,530	25 50	384-0038-2878
40	48	5,000	0,700	195	0,570	25 50	384-0040-2878
50	59	5,000	0,700	235	0,820	25 50	384-0050-2878
60	69	5,000	0,700	275	0,990	25 50	384-0060-2878
65	75	5,000	0,700	300	1,090	25 50	384-0065-2878
70	80	5,000	0,700	320	1,220	25 50	384-0070-2878
76	86	5,000	0,700	340	1,400	25 50	384-0076-2878
80	91	4,000	0,700	365	1,570	25 50	384-0080-2878
100	112	4,000	0,700	470	2,220	15 30	384-0100-2878

Delivery variants: other diameters and lengths on www.norres.com; special colours: coloured spiral, full coloured; customer-specific product marking

Accessories: 13.4.0, 13.18.0

11.3.0 NEO 1



High-temperature suction and blast hose; Neoprene, single-layer, leak-proof, highly flexible

Applications: as conductor of hot and cold air; for granulate dryers in the plastics industry; for printing machines, blowers and compressors; for exhaust gas technique, engine construction, engine warming, aircraft construction and military construction

Properties: very good heat resistance; leak-proof; fibre reinforced; light weight

Temperature Range: -35 °C approx. to +135 °C approx.; short time to +150 °C approx.

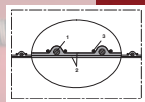
Design, material: spring steel wire; fabric-reinforced tape; wall: Neopren coated glass fabric; cord as reinforcement

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
19	21	1,800	0,580	21	0,080	4	390-0019-0000
22	24	1,800	0,580	24	0,090	4	390-0022-0000
25	29	1,500	0,580	29	0,120	4	390-0025-0000
32	35	1,500	0,580	35	0,130	4	390-0032-0000
38	42	1,500	0,580	42	0,170	4	390-0038-0000
44	48	1,500	0,560	48	0,190	4	390-0044-0000
51	55	1,500	0,500	55	0,250	4	390-0051-0000
57	61	1,300	0,500	61	0,280	4	390-0057-0000
63	67	1,300	0,500	67	0,300	4	390-0063-0000
70	74	1,200	0,500	74	0,400	4	390-0070-0000
76	80	1,100	0,390	80	0,410	4	390-0076-0000
80	84	1,100	0,390	84	0,420	4	390-0080-0000
83	87	1,100	0,390	87	0,470	4	390-0083-0000
89	93	1,100	0,380	93	0,500	4	390-0089-0000
95	99	1,100	0,380	99	0,540	4	390-0095-0000
102	106	1,100	0,300	106	0,570	4	390-0102-0000
108	113	1,000	0,300	113	0,680	4	390-0108-0000
114	119	1,000	0,300	119	0,730	4	390-0114-0000
121	126	0,900	0,290	126	0,760	4	390-0121-0000
127	132	0,900	0,210	132	0,810	4	390-0127-0000
140	145	0,900	0,200	145	0,890	4	390-0140-0000
152	157	0,800	0,180	157	1,050	4	390-0152-0000
178	183	0,600	0,140	183	1,210	4	390-0178-0000
203	208	0,600	0,100	208	1,380	4	390-0203-0000
254	259	0,400	0,100	259	1,650	4	390-0254-0000
305	310	0,100	0,070	310	2,000	4	390-0305-0000

Delivery variants: other diameters and lengths on www.norres.com; wireless sleeves

Accessories: 13.3.0, 13.4.0, 13.18.0

11.4.0 NEO 2



High-temperature suction and blast hose; Neoprene, double-layer, leak-proof, smooth interior

Applications: as conductor of hot and cold air; for granulate dryers in the plastics industry; for printing machines, blowers and compressors; for exhaust gas technique, engine construction, engine warming, aircraft construction and military construction

Properties: very good heat resistance; leak-proof; fibre reinforced

Temperature Range: -35 °C approx. to +135 °C approx.; short time to +150 °C approx.

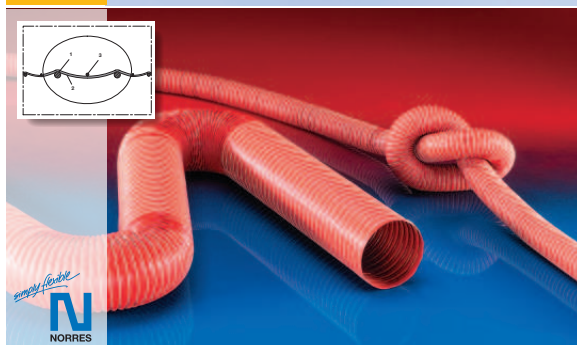
Design, material: spring steel wire integrated in wall; fabric-reinforced tape; wall: Neopren coated glass fabric; cord as reinforcement

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
19	22	3,000	0,730	22	0,110	4	390-0019-2005
22	25	3,000	0,720	25	0,170	4	390-0022-2005
25	30	2,800	0,710	30	0,190	4	390-0025-2005
32	36	2,700	0,650	36	0,280	4	390-0032-2005
38	43	2,600	0,600	43	0,310	4	390-0038-2005
44	49	2,600	0,580	49	0,320	4	390-0044-2005
51	56	2,600	0,520	56	0,360	4	390-0051-2005
57	62	2,500	0,480	62	0,430	4	390-0057-2005
63	68	2,400	0,460	68	0,490	4	390-0063-2005
70	75	2,100	0,440	75	0,540	4	390-0070-2005
76	81	2,100	0,430	81	0,580	4	390-0076-2005
80	85	2,100	0,420	85	0,610	4	390-0080-2005
83	88	2,100	0,410	88	0,630	4	390-0083-2005
89	94	2,000	0,400	94	0,690	4	390-0089-2005
95	100	1,900	0,370	100	0,730	4	390-0095-2005
102	107	1,900	0,350	107	0,770	4	390-0102-2005
108	114	1,800	0,330	114	0,810	4	390-0108-2005
114	120	1,500	0,300	120	0,850	4	390-0114-2005
121	127	1,500	0,240	127	0,890	4	390-0121-2005
127	133	1,400	0,230	133	0,930	4	390-0127-2005
140	146	1,300	0,200	146	1,000	4	390-0140-2005
152	158	1,200	0,170	158	1,200	4	390-0152-2005
178	184	1,000	0,120	184	1,430	4	390-0178-2005
203	209	0,700	0,090	209	1,650	4	390-0203-2005
254	260	0,500	0,070	260	2,090	4	390-0254-2005
305	311	0,500	0,070	311	2,610	4	390-0305-2005

Delivery variants: other diameters and lengths on www.norres.com; wireless sleeves

Accessories: 13.3.0, 13.4.0, 13.18.0

11.9.0 SIL 1



High-temperature suction and blast hose; Silicone, single-layer, leak-proof, highly flexible

Applications: as conductor of hot and cold air; for granulate dryers in the plastics industry; for printing machines, blowers and compressors; for exhaust gas technique, engine construction, engine warming, aircraft construction and military construction

Properties: very good heat resistance; leak-proof; fibre reinforced; light weight

Temperature Range: -70 °C approx. to +260 °C approx.; short time to +280 °C approx.

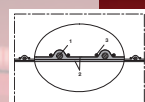
Design, material: spring steel wire; fabric-reinforced tape; wall: Silicon coated glass fabric; cord as reinforcement

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
19	21	1,800	0,580	21	0,080	4	391-0019-0000
22	24	1,800	0,580	24	0,090	4	391-0022-0000
25	29	1,500	0,580	29	0,120	4	391-0025-0000
32	35	1,500	0,580	35	0,130	4	391-0032-0000
38	42	1,500	0,580	42	0,170	4	391-0038-0000
44	48	1,500	0,560	48	0,190	4	391-0044-0000
51	55	1,500	0,500	55	0,250	4	391-0051-0000
57	61	1,300	0,500	61	0,280	4	391-0057-0000
63	67	1,300	0,500	67	0,300	4	391-0063-0000
70	74	1,200	0,500	74	0,400	4	391-0070-0000
76	80	1,100	0,390	80	0,410	4	391-0076-0000
80	84	1,100	0,390	84	0,440	4	391-0080-0000
83	87	1,100	0,390	87	0,470	4	391-0083-0000
89	93	1,100	0,380	93	0,500	4	391-0089-0000
95	99	1,100	0,380	99	0,540	4	391-0095-0000
102	106	1,100	0,300	106	0,570	4	391-0102-0000
108	113	1,000	0,300	113	0,680	4	391-0108-0000
114	119	1,000	0,300	119	0,730	4	391-0114-0000
121	126	0,900	0,290	126	0,760	4	391-0121-0000
127	132	0,900	0,210	132	0,810	4	391-0127-0000
140	145	0,900	0,200	145	0,890	4	391-0140-0000
152	157	0,800	0,180	157	1,050	4	391-0152-0000
178	183	0,600	0,140	183	1,210	4	391-0178-0000
203	208	0,600	0,100	208	1,380	4	391-0203-0000
254	259	0,400	0,100	259	1,650	4	391-0254-0000
305	310	0,100	0,070	310	2,000	4	391-0305-0000

Delivery variants: other diameters and lengths on www.norres.com; wireless sleeves

Accessories: 13.1.0, 13.4.0, 13.18.0

11.10.0 SIL 2



High-temperature suction and blast hose; Silicone, double-layer, leak-proof, smooth interior

Applications: as conductor of hot and cold air; for granulate dryers in the plastics industry; for printing machines, blowers and compressors; for exhaust gas technique, engine construction, engine warming, aircraft construction and military construction

Properties: very good heat resistance; leak-proof; fibre reinforced

Temperature Range: -70 °C approx. to +260 °C approx.; short time to +280 °C approx.

Design, material: spring steel wire integrated in wall; fabric-reinforced tape; wall: Silicon coated glass fabric; cord as reinforcement

I.D.	O.D.	Rec. operating limits		Bending Radius	Weight	Stock Lengths	Order No.
		Overpressure	Vacuum				
mm	mm	bar	bar	mm	kg/m	m	
19	22	3,000	0,730	22	0,110	4	391-0019-2005
22	25	3,000	0,720	25	0,170	4	391-0022-2005
25	30	2,800	0,710	30	0,190	4	391-0025-2005
32	36	2,700	0,650	36	0,280	4	391-0032-2005
38	43	2,600	0,600	43	0,310	4	391-0038-2005
44	49	2,600	0,580	49	0,320	4	391-0044-2005
51	56	2,600	0,520	56	0,360	4	391-0051-2005
57	62	2,500	0,480	62	0,430	4	391-0057-2005
63	68	2,400	0,460	68	0,490	4	391-0063-2005
70	75	2,100	0,440	75	0,540	4	391-0070-2005
76	81	2,100	0,430	81	0,580	4	391-0076-2005
80	85	2,100	0,420	85	0,610	4	391-0080-2005
83	88	2,100	0,410	88	0,630	4	391-0083-2005
89	94	2,000	0,400	94	0,690	4	391-0089-2005
95	100	1,900	0,370	100	0,730	4	391-0095-2005
102	107	1,900	0,350	107	0,770	4	391-0102-2005
108	114	1,800	0,330	114	0,810	4	391-0108-2005
114	120	1,500	0,300	120	0,850	4	391-0114-2005
121	127	1,500	0,240	127	0,890	4	391-0121-2005
127	133	1,400	0,230	133	0,930	4	391-0127-2005
140	146	1,300	0,200	146	1,000	4	391-0140-2005
152	158	1,200	0,170	158	1,200	4	391-0152-2005
178	184	1,000	0,120	184	1,430	4	391-0178-2005
203	209	0,700	0,090	209	1,650	4	391-0203-2005
254	260	0,500	0,070	260	2,090	4	391-0254-2005
305	311	0,500	0,070	311	2,610	4	391-0305-2005

Delivery variants: other diameters and lengths on www.norres.com; wireless sleeves

Accessories: 13.1.0, 13.4.0, 13.18.0

13.1.0 NORCLAMP 212



Spiral clamp for attaching externally corrugated spiral hoses

Properties: practically leak-proof and firmly clamping with special bridge geometry; easily and quickly fitted; re-usable (threaded); rust-proof; very robust

Delivery variants: other diameters on www.norres.com

Design, material: clamp band: W2 stainless steel 1.4016 = AISI 430; screw: W2 galvanised steel; housing: W2 stainless steel 1.4016; bridge: stainless steel 1.4301 / AISI 304 / W2 (INOX)

Suitable for Hose: AIRDUC®: 341+345, 350+351+355 MHF, HT-PUR 351+355, INOX 351+355 MHF-AS, 351+355+362 EC, 353, 355, 362 F, 363; PROTAPE®: 301, 310, 320, 322 EC, 326 MEMORY, 327 MEMORY, 330 MHF, 330 MHF-AS, INOX 330 MHF; TIMBERDUC®: 531+533+534 SE; CP: 450+461 PROTECT, 450, 455, 457, 459 EC, 460 461, 471 EC, 471 INOX, 472 EC, 472 INOX, 475 EC, 475 F, 480, 481, 483, 485, 486, 487

Accessories: 13.18.0

Suitable for Hose I.D. mm	Clamping Range mm	Band Width mm	AIRDUC®, PROTAPE®, CP ≥ 70 mm Order No.	CP Order No.
13-16	9-19	5	212-0009-0000	-
15-20	13-24	5	212-0013-0000	-
18-26	17-29	5	212-0017-0000	-
20-32	20-32	5	212-0020-0000	-
30-35	27-47	9	212-0027-0000	-
38-45	35-55	9	212-0035-0000	212-0035-2002
50-55	45-65	9	212-0045-0000	-
60-65	55-75	9	212-0055-0000	-
70-75	65-85	9	212-0065-0000	-
80	75-95	9	212-0075-0000	-
90	85-105	9	212-0085-0000	-
100-102	95-115	9	212-0095-0000	-
110-115	105-125	9	212-0105-0000	-
120-127	115-135	9	212-0115-0000	-
130	125-145	9	212-0125-0000	-
140	135-155	9	212-0135-0000	-
150-152	145-165	9	212-0145-0000	-
160	155-175	9	212-0155-0000	-
170-175	165-185	9	212-0165-0000	-
180	175-195	9	212-0175-0000	-
190	185-205	9	212-0185-0000	-
200	195-215	9	212-0195-0000	-
215	205-225	12	212-0205-0000	-
225	215-235	12	212-0215-0000	-
250	245-265	12	212-0245-0000	-
275	265-285	12	212-0265-0000	-
280	275-295	12	212-0275-0000	-
300	295-315	12	212-0295-0000	-
315-325	315-325	12	212-0315-0000	-
350	345-385	12	212-0345-0000	-
380	375-415	12	212-0375-0000	-
400	395-435	12	212-0395-0000	-

13.2.0 NORCLAMP 216



Sealing clamp for watertight attachment of heavy, externally corrugated spiral hoses

Properties: leak-proof and firmly clamping with special spiral geometry; easily and quickly fitted; re-usable (threaded); rust-proof; very robust

Design, material: clamp wire: stainless steel 1.4310 / AISI 301 / W2 (INOX); screw: galvanised steel; housing: W2 stainless steel 1.4016

Suitable for Hose: AIRDUC®: 355+356, INOX 355+356 MHF-AS, 355+356 EC, 355+356 MHF, INOX 355+356 MHF; AIRDUC®: HT-PUR 355+356; TIMBERDUC®: 534 SE

Delivery variants: other diameters on www.norres.com

Accessories: 13.18.0

Suitable for Hose I.D. mm	AIRDUC® 345, 355, 534, AIRDUC® 356 ≥ 50 mm Order No.	AIRDUC® 356 < 50 mm Order No.
32	216-0032-2872	216-0032-2010
38	216-0038-2872	216-0038-2010
40	216-0040-2872	216-0040-2010
45	216-0045-2872	216-0045-2010
50	216-0050-0000	-
55	216-0055-0000	-
60	216-0060-0000	-
65	216-0065-0000	-
70	216-0070-0000	-
75	216-0075-0000	-
80	216-0080-0000	-
90	216-0090-0000	-
100	216-0100-0000	-
102	216-0102-0000	-
110	216-0110-0000	-
115	216-0115-0000	-
120	216-0120-0000	-
125	216-0125-0000	-
127	216-0127-0000	-
130	216-0130-0000	-
140	216-0140-0000	-
150	216-0150-0000	-
152	216-0152-0000	-
160	216-0160-0000	-
175	216-0175-0000	-
180	216-0180-0000	-
200	216-0200-0000	-
225	216-0225-0000	-
250	216-0250-0000	-
275	216-0275-0000	-
300	216-0300-0000	-

13.3.0 NORCLAMP 208



Clamp for attachment of light-duty hoses with smooth exterior

Properties: easily and quickly fitted; re-usable (threaded); rust-proof

Design, material: clamp band: W1 galvanised steel, W2 stainless steel 1.4016 = AISI 430, W4 stainless steel 1.4301 = AISI 304; screw: W1 galvanised steel, W2 stainless steel, W4 stainless steel 1.4301 = AISI 304; housing: W1 galvanised steel, W2 stainless steel 1.4016, W4 stainless steel 1.4301 = AISI 304

Suitable for Hose: NEO 1+2, SIL 1+2; PROTAPE®: 335 MHF FLAT, CU 335 MHF FLAT, 370; SuperFlex: PVC 372; EVA: 373, 373 AS, 373 EC; NORPLAST®: 385; NORPLAST®: 383, 388 SUPERELASTIC; PROTAPE®: 371; NORFLEX®: 401+441 MHF; NORFLEX®: 400+440; NORFLEX®: 408+448

Delivery variants: other diameters on www.norres.com

Accessories: 13.14.0 ; 13.18.0

Suitable for Hose I.D. mm	Clamping Range mm	Band Width mm	PU pcs.	Dimensions in Stock Order No. W1
8-9	8-12	9	1	208-0008-0000
10-11	10-16	9	1	208-0010-0000
12-15	12-20	9	1	208-0012-0000
16-19	16-25	9	1	208-0016-0000
20-24	20-32	9	1	208-0020-0000
25-31	25-40	9	1	208-0025-0000
32-39	32-50	9	1	208-0032-0000
40-49	40-60	9	1	208-0040-0000
50-59	50-70	9	1	208-0050-0000
60-69	60-80	9	1	208-0060-0000
80-89	80-100	9	1	208-0080-0000
90-99	90-110	9	1	208-0090-0000
100-109	100-120	9	1	208-0100-0000
110-119	110-130	9	1	208-0110-0000
120-129	120-140	9	1	208-0120-0000
130-139	130-150	9	1	208-0130-0000
140-149	140-160	9	1	208-0140-0000
150-159	150-170	9	1	208-0150-0000
160-169	160-180	9	1	208-0160-0000
170-179	170-190	9	1	208-0170-0000
180-189	180-200	9	1	208-0180-0000
190-199	190-210	9	1	208-0190-0000
200-210	200-220	9	1	208-0200-0000
220-229	220-240	12	1	208-0220-0000
250	250-270	12	1	208-0250-0000
280	280-300	12	1	208-0280-0000
300	300-320	12	1	208-0300-0000
320-325	320-340	12	1	208-0320-0000
350	350-370	12	1	208-0350-0000
400	400-420	12	1	208-0400-0000
450	450-470	12	1	208-0450-0000
500	500-520	12	1	208-0500-0000

13.4.0 NORCLAMP 211



Extra stable pintle hose clamp for attaching heavy-duty hoses with a smooth exterior surface

Properties: easily and quickly fitted; re-usable; rust protected; very robust

Delivery variants: other diameters on www.norres.com

Design, material: clamp band: W1 galvanised steel, W2 stainless steel 1.4016 = AISI 430, W4 stainless steel 1.4301 = AISI 304; screw: W1 galvanised steel, W2 stainless steel, W4 stainless steel 1.4301 = AISI 304

Suitable for Hose: PROTAPE®: 335 MHF FLAT, CU 335 MHF FLAT; AIRDUC®: 355 REINFORCED, 355 CSH, 355 CSH REINFORCED, 355 CSH ORANGE, 356, 356 MHF REINFORCED, 356 EC, 356 MHF, INOX 356 MHF, HT-PUR 356, 357; BARDUC®: 381, INOX 382 MHF-AS, INOX 382 MHF; SIL: 1+2; NEO: 1+2; NORPLAST®: 380 GREEN, 379 GREEN SUPERELASTIC, 384, CU 384, CU 386, 387, 389 SUPERELASTIC

Accessories: 13.18.0

Clamping Range mm	Band Width mm	PU pcs.	Dimensions in Stock Order No. W1
17-19	18	1	211-0021-0000
20-22	18	1	211-0023-0000
23-25	18	1	211-0025-0000
26-28	18	1	211-0029-0000
29-31	20	1	211-0031-0000
32-35	20	1	211-0034-0000
36-39	20	1	211-0040-0000
40-43	20	1	211-0043-0000
44-47	22	1	211-0047-0000
48-51	22	1	211-0051-0000
52-55	22	1	211-0055-0000
56-59	22	1	211-0059-0000
60-63	22	1	211-0063-0000
64-67	22	1	211-0068-0000
68-73	24	1	211-0073-0000
74-79	24	1	211-0079-0000
80-85	24	1	211-0085-0000
86-91	24	1	211-0091-0000
92-97	24	1	211-0097-0000
98-103	24	1	211-0104-0000
104-112	24	1	211-0112-0000
113-121	24	1	211-0121-0000
122-130	24	1	211-0130-0000
131-139	26	1	211-0140-0000
140-148	26	1	211-0150-0000
149-161	26	1	211-0162-0000
162-174	26	1	211-0174-0000
175-187	26	1	211-0187-0000
188-200	26	1	211-0200-0000
201-213	26	1	211-0213-0000
214-226	26	1	211-0226-0000
227-239	26	1	211-0239-0000
240-252	26	1	211-0252-0000

13.5.0 NORCLAMP 212 EC



Spiral clamp with integrated earth for attaching externally corrugated spiral hoses

Properties: grounding without exposing spiral and without damaging hose; optional with grounding wire or ground strip; practically leak-proof and firmly clamping with special bridge geometry; easily and quickly fitted; re-usable (threaded); rust-proof; very robust

Design, material: clamp band: W2 stainless steel 1.4016 = AISI 430; screw: W2 galvanised steel; housing: W2 stainless steel 1.4016; bridge: stainless steel 1.4301 / AISI 304 / W2 (INOX); earthing screw: stainless steel (INOX)

Suitable for Hose: AIRDUC®: 341+345, 351+355 MHF, HT-PUR 351+355, 351+355 EC, INOX 351+355 MHF, INOX 351+355 MHF-AS, 353+355, 362 EC, 362 F; TIMBERDUC®: 533, 534

Suitable for Hose I.D. mm	Clamping Range mm	Band Width mm	Clamp with earthing wire Order No.
38-45	35-55	9	212-0035-2878
50-55	45-65	9	212-0045-2878
60-65	55-75	9	212-0055-2878
70-75	65-85	9	212-0065-2878
80	75-95	9	212-0075-2878
90	85-105	9	212-0085-2878
100-102	95-115	9	212-0095-2878
110-115	105-125	9	212-0105-2878
120-127	115-135	9	212-0115-2878
130	125-145	9	212-0125-2878
140	135-155	9	212-0135-2878
150-152	145-165	9	212-0145-2878
160	155-175	9	212-0155-2878
170-175	165-185	9	212-0165-2878
180	175-195	9	212-0175-2878
190	185-205	9	212-0185-2878
200	195-215	9	212-0195-2878
215	205-225	12	212-0205-2878
225	215-235	12	212-0215-2878
250	245-265	12	212-0245-2878
275	265-285	12	212-0265-2878
280	275-295	12	212-0275-2878
300	295-315	12	212-0295-2878
315-325	315-335	12	212-0315-2878
350	345-385	12	212-0345-2878
380	375-415	12	212-0375-2878
400	395-435	12	212-0395-2878
450	445-485	12	212-0445-2878
500	495-535	12	212-0495-2878

Delivery variants: other diameters on www.norres.com

Accessories: 13.18.0

13.7.5 NORCONNECT 230



Safety Clamp System for couplings: Storz, threaded connector, etc.

Properties: thread reference DIN ISO 228; special threaded profile of the clamp shells adapted to the outer hose contour; vibration resistant; optimized flow properties; easily and quickly fitted; re-usable; rust-proof; very robust; according to the German TRBS 2153 (formerly BGR 132): the metal hose spiral can be fixed to the metal adapter

Temperature Range: -40 °C approx. to +90 °C approx.; short time to +125 °C approx.

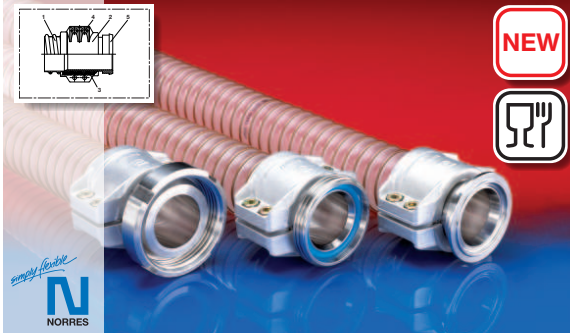
Design, material: AIRDUC® profile hose; clamp shells: aluminium; adapter: material acc. to table; screw and nut: yellow chromated steel

Suitable for Hose: AIRDUC® PUR 356 MHF REINFORCED

Size mm	Thread	Weight kg/piece	Suitable for Hose	Dimensions in Stock Storz coupling, aluminium Order No.
75	G 3	2,000	356-0075-5100	230-0075-2935
100	G 4	3,00	356-0100-5100	230-0100-2935
Size mm	Thread	Weight kg/piece	Suitable for Hose	Dimensions in Stock Threaded adapter, aluminium Order No.
75	G 3	1,72	356-0075-5100	230-0075-2930
100	G 4	2,15	356-0075-5100	230-0100-2930
Size mm	Thread	Weight kg/piece	Suitable for Hose	Dimensions in Stock Threaded adapter, electro-galvanised steel Order No.
75	G 3	2,62	356-0075-5100	230-0075-2940
100	G 4	3,20	356-0100-5100	230-0100-2940
Size mm	Thread	Weight kg/piece	Suitable for Hose	Dimensions in Stock Threaded adapter stainless steel 1.4301 Order No.
75	G 3	2,62	356-0075-5100	230-0075-2950
100	G 4	3,20	356-0100-5100	230-0100-2950
Size mm	Thread	Weight kg/piece	Suitable for Hose	Dimensions in Stock Threaded adapter, stainless steel 1.4404 Order No.
75	G 3	2,62	356-0075-5100	230-0075-2960
100	G 4	3,20	356-0100-5100	230-0100-2960

Delivery variants: as a pre-assembled hose system with a suitable hose; other accessories on www.norres.com

13.7.6 NORCONNECT 231


Universal coupling system for externally corrugated spiral hoses

Properties: quick and easy assembly on site; special threaded sealing insert adapted to the outer hose contour; vibration resistant; food grade sealing insert, complies with: FDA 21 CFR 177.2600 and 178.2010, EU Directive 2002/72/EC, incl. amending Directives 2008/39/EC and 975/2009, German guideline XXXIX BfR polyurethane; odourless and tasteless; microbe and hydrolysis resistant; good resistance to chemicals; re-usable; very robust; according to the German TRBS 2153 (formerly BGR 132): the metal hose spiral can be fixed to the metal adapter

Temperature Range: -40 °C approx. to +90 °C approx.; short time to +125 °C approx.

Suitable for Hose: AIRDUC®: 355+356, 355+356 MHF, HT-PUR 355+356, INOX 355+356 MHF-AS, INOX 355 MHF

Size	Suitable for Hose I.D.	Clamp system (clamp shells, sealing insert, screws and nuts)
mm	mm	
25	355 ø 25	231-0025-2970
32	355 ø 32	231-0032-2970
32	356 ø 32	231-0032-2971
38	355 ø 38	231-0038-2970
38	356 ø 38	231-0038-2971
40	355 ø 40	231-0040-2970
40	356 ø 40	231-0040-2971
50	355 ø 50	231-0050-2970
50	356 ø 50	231-0050-2971
65	355 ø 65	231-0065-2970
65	356 ø 65	231-0065-2971
75	355 ø 75	231-0075-2970
75	356 ø 75	231-0075-2971
80	355 ø 80	231-0080-2970
80	356 ø 80	231-0080-2971
100	355 ø 100	231-0100-2970
100	356 ø 100	231-0100-2971

Design, material: clamp shells: aluminium; adapter: material acc. to table; screw and nut: galvanised steel gunmetal finish; sealing insert: special premium ether-polyurethane (Pre-PUR®)

Delivery variants: as a pre-assembled hose system with a suitable hose; other accessories on www.norres.com

13.18.0 NORCONNECT 270-271


Metal hose connector / reducer

Properties: easily and quickly fitted; re-usable (threaded); rust protected

Temperature Range: +400 °C approx.

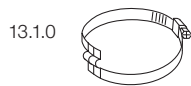
Design, material: galvanised sheet metal

Suitable for Hose: PROTAPE®: 301, 310, 320, 322 EC, 326 MEMORY, 327 MEMORY, 330 MHF, INOX 330 MHF-AS, INOX 330 MHF, 335 MHF, CU 335 MHF FLAT, 370, 371; AIRDUC®: 341+345, 350-355 MHF, HT-PUR 351+355, INOX 351+355 MHF-AS, 351+355 EC, INOX 351+355 MHF, 353+355, 355 CSH, 355 REINFORCED, 355 ORANGE, 362 EC, 362 F, 363; NORPLAST®: 380 GREEN, 379 GREEN SUPERELASTIC, 383, 385, CU 386, 384, CU 384, 388 SUPERELASTIC; CP: 450, 450+461 PROTECT, 455 MHF, 457, 459 EC, 460, 461, INOX 471+472+475 EC+475 F, HiTex 480-487; SuperFlex: PVC 372; NEO: 1+2; SIL: 1+2

Suitable for Hose I.D. d1 mm	Suitable for Hose I.D. d2 mm	Total Length l3 mm	Wall Thickness mm	Weight kg/piece	Order No.
50	50	90	0,6	0,2	270-0050-0000
60	60	90	0,6	0,2	270-0060-0000
70	70	90	0,6	0,2	270-0070-0000
75	75	90	0,6	0,2	270-0075-0000
80	80	90	0,6	0,2	270-0080-0000
90	90	90	0,6	0,2	270-0090-0000
100	100	90	0,6	0,2	270-0100-0000
110	110	90	0,6	0,3	270-0110-0000
120	120	90	0,6	0,3	270-0120-0000
125	125	90	0,6	0,3	270-0125-0000
130	130	90	0,6	0,3	270-0130-0000
140	140	90	0,6	0,4	270-0140-0000
150	150	90	0,6	0,5	270-0150-0000
160	160	90	0,6	0,5	270-0160-0000
170	170	90	0,6	0,5	270-0170-0000
175	175	90	0,6	0,6	270-0175-0000
180	180	90	0,6	0,6	270-0180-0000
200	200	90	0,6	0,6	270-0200-0000
215	215	90	0,6	0,7	270-0215-0000
225	225	90	0,6	0,7	270-0225-0000
250	250	130	0,6	0,8	270-0250-0000
275	275	130	0,6	0,9	270-0275-0000
300	300	130	0,7	1,00	270-0300-0000
315	315	130	0,7	1,1	270-0315-0000
325	325	130	0,7	1,2	270-0325-0000
350	350	130	0,7	1,3	270-0350-0000
375	375	170	0,7	1,5	270-0375-0000
400	400	170	0,7	1,6	270-0400-0000
450	450	170	0,7	2,1	270-0450-0000
500	500	170	0,7	2,3	270-0500-0000
75	50	135	0,6	0,2	271-0075-0000
80	70	125	0,6	0,2	271-0080-0000
80	50	135	0,6	0,2	271-0080-2655
100	80	140	0,6	0,2	271-0100-0000
100	70	150	0,6	0,2	271-0100-2660
125	100	145	0,6	0,3	271-0125-0000
125	80	175	0,6	0,3	271-0125-2665
150	100	175	0,6	0,3	271-0150-0000
150	80	205	0,6	0,4	271-0150-2670
150	125	145	0,6	0,3	271-0150-2671
200	150	175	0,6	0,5	271-0200-0000
200	100	245	0,6	0,6	271-0200-2675
200	125	215	0,6	0,6	271-0200-2676
250	200	200	0,6	0,8	271-0250-0000
250	125	300	0,6	1	271-0250-2680
250	150	270	0,6	0,9	271-0250-2681
300	200	265	0,7	1,2	271-0300-0000
300	150	335	0,7	1,3	271-0300-2685
300	250	195	0,7	1,3	271-0300-2687

Delivery variants: Stainless Steel (INOX)

Accessories: 13.1.0; 13.2.0; 13.3.0; 13.4.0; 13.5.0; 13.6.0; 13.7.0; 13.14.0



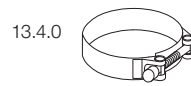
13.1.0
NORCLAMP 212



13.2.0
NORCLAMP 216



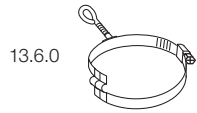
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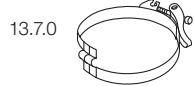
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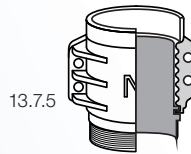
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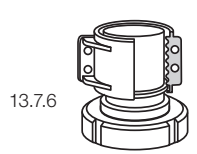
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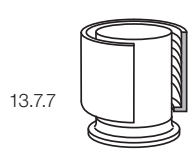
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NORCLAMP 213



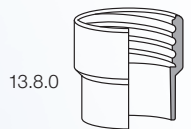
13.7.5
NORCONNECT 230



13.7.6
NORCONNECT 231



13.7.7
NORCONNECT 232



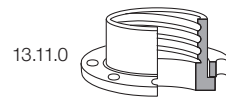
13.8.0
NORCONNECT
240 + 241



13.9.0
NORCONNECT 242



13.10.0
NORCONNECT 243



13.11.0
NORCONNECT 244



13.11.1
NORCONNECT
245 CSH



13.12.0
NORCONNECT 245



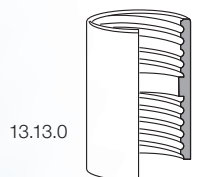
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NORCONNECT
INOX 245



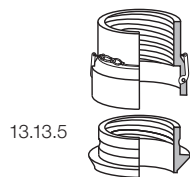
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INOX 247



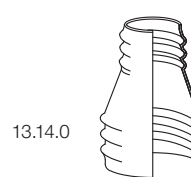
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NORCONNECT
INOX 249



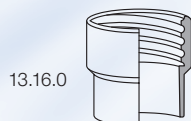
13.13.0
NORCONNECT 246



13.13.5
NORCONNECT 248



13.14.0
NORCONNECT 223



13.16.0
NORCONNECT 226



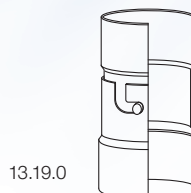
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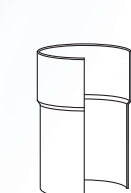
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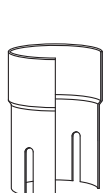
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NORCONNECT 271



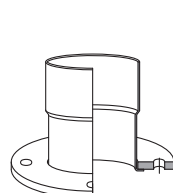
13.19.0
NORCONNECT 202



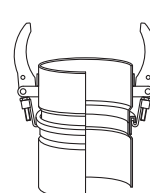
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www.norres.com

Product Quality

Icons

Partial Colouring

Pre-PUR®

Designs

Content of Applications

Technical Data

Matrix - Technical Data

- 14.1 Chemical Resistance Table
- 14.2 Nominal Diameter Diagram
- 14.3 Pressure Loss Data
- 14.4 Electrostatic Charging Data
- 14.5 Food Regulatory Approvals
- 14.6 CE Certification
- 14.7 VDA Listing
- 14.8 Material Data Sheets
- 14.9 Cut Length and Assembly Information
- 14.10 Installation Guidelines
- 14.11 Standards and Regulations
- 14.12 Technical Terms and Definitions
- 14.13 Conversion Tables
- 14.14 Loss of strength at high temperatures
- 14.15 REACH



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