

telle[®]

... for you always the right!

Hoses



Feeder Hoses
with wear monitoring

telle[®]

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Ceratel®5910 – Feeder hose for highly abrasive bulk materials with wear monitoring



Marking:

ceratel® 5910 ceramic-antistatic

Description:

ceratel® 5910 is a robust high-performance material handling hose with black, corrugated cover, designed for the conveyance of extremely abrasive bulk materials. Ceramic bricks (Al₂O₃) are incorporated in the rubber lining of the hose with the result that abrasion resistance of the inner lining of ceratel® 5910 is increased considerably compared to conventional material handling hoses made of rubber or rubber-coated metal pipes.

The hose construction guarantees excellent flexibility which makes ceratel® 5910 a multi-purpose and costefficient solution in process technology. The hose is easy to assemble and not only mechanical demands, such as vibrations, tensions, abrasion, can be handled easily but also chemical and thermal strains.

The high-performance material handling hose ceratel® 5910 is the combination of the reliable materials rubber and ceramic. The recommended coupling solution is our system GRANIT SELECT (see separate data-sheet).

Construction:

(pneumatic and hydraulic conveyors)

Inliner

Ceramic bricks (Al₂O₃), incorporated in black, antistatic rubber

Reinforcement

textile and steel spiral

minimum burst pressure = 3,2 x working pressure)

Cover

EPDM, black, antistatic, resistant to abrasion, ozone and UV

Temperature range:

-40 °C up to +120 °C

Application:

Process and plant engineering, conveyor technology

Media:

Especially abrasive bulk materials such as ground glass, quartz sand, sand and metallic blasting abrasive, milled goods, powders and dusts. Also for primary fuels such as coal and coke.

Resistance:

Ceramic plates (Al₂O₃) are positioned in the rubber core of the hose in such a manner that they greatly increase the abrasion resistance of the core of the ceratel® 5910 as compared with commercial rubber feeder hoses or rubber lined metal pipes. Please contact our Application Technology Department in the event of extreme loading capacities.

Special features:

A braided copper wire is incorporated in the wall of the hose and is led outwards approx. 100 mm on both ends of the hose. With proper connection, this braided wire serves the purpose of signaling a critical degree of wear on the inner layer of the hose.

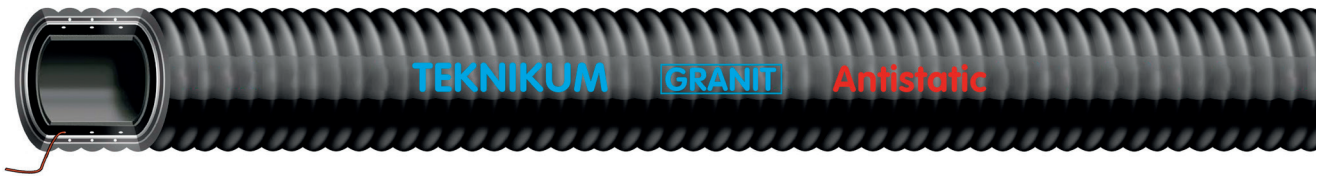
Feeder Hoses



Data table:

Inner-Ø [mm]	Outer-Ø [mm]	Blending radius [min. mm]	Vaccum [bar]	Working pressure [bar]	Weight [kg/m]	Length [m]
25	53	130	- 0,9	10	2,9	20
32	60	140	- 0,9	10	3,5	20
40	73	150	- 0,9	10	4,4	20
50	83	200	- 0,9	10	5,2	20
65	98	300	- 0,9	10	7,0	10
80	113	400	- 0,9	10	8,0	10
102	133	500	- 0,9	10	9,5	10
127	164	600	- 0,9	10	10,4	10
152	189	800	- 0,9	10	12,5	10
203	246	1800	- 0,9	10	22,3	10
253	293	2500	- 0,9	10	23,6	10
305	352	3000	- 0,9	10	31,0	10

GRANIT 4280 BC – Feeder hose with wear monitoring



Marking:

TEKNIKUM - GRANIT - Antistatic

Description:

The GRANIT feeder hose is a robust version suitable for very strong chemical and mechanical requirements, such as vibrations, stresses and abrasion.

Elastomeric feeder hoses offer considerable advantages in planning and operation compared to rigid pipe systems. Rubber is elastic, waterproof, airtight and wear-resistant as metallic materials. Abrasion and corrosion have little chance. Without being damaged in the structure, elastomeric materials deform reversibly. In contrast to hard materials, rubber elastically cushions the movement energy of transported solids. The most suitable elastomer qualities can be determined for each process engineering condition. Thus the greatest possible service life at maximum wear resistance becomes a calculable quantity.

Construction:

(pneumatic and hydraulic conveyors)

Inliner

SBR, black, conductive

Reinforcement

textile and steel spiral

Cover

SBR, black, conductive

Temperature range:

-40 °C up to +80 °C

Application:

Process and plant engineering, conveyor technology

Media:

Especially abrasive bulk materials such as ground glass, quartz sand, sand and metallic blasting abrasive, milled goods, powders and dusts. Also for primary fuels such as coal and coke.

Resistance:

Inliner resistant against abrasion. The surface texture counteracts incrustation and sedimentation. Please contact our Application Technology Department in the event of extreme loading capacities.

Special features:

A braided copper wire is incorporated in the wall of the hose and is led outwards approx. 100 mm on both ends of the hose. With proper connection, this braided wire serves the purpose of signaling a critical degree of wear on the inner layer of the hose.

Feeder Hoses



Data table:

Inner-Ø	Outer-Ø	Blending radius	Vacuum	Working pressure	Weight	Length
[mm]	[mm]	[min. mm]	[bar]	[bar]	[kg/m]	[m]
25	53	120	-0,9	10	2,20	40
32	60	150	-0,9	10	2,60	40
40	73	150	-0,9	10	3,40	40
50	83	200	-0,8	10	3,80	40
65	98	200	-0,8	10	4,80	40
80	113	200	-0,8	10	6,70	40
102	133	400	-0,8	10	7,85	20
127	164	500	-0,8	10	10,36	20
152	189	750	-0,8	6	12,00	20
203	246	1750	-0,8	6	18,00	10
253	293	2000	-0,8	6	20,60	10
305	352	2200	-0,8	6	31,00	10
350	407	2500	-0,8	6	41,00	10
405	462	3000	-0,6	6	47,50	10

heavytel® 5980 metall – High-feeder hose with wear monitoring



Marking:

heavytel® 5980 metall

Description:

heavytel® 5980 is a high-feed hose, which is characterized by a particularly stable and abrasion-resistant inner layer. In hydraulic and/or pneumatic conveyance of highly abrasive flow media, the inner layer of heavytel® 5980 highest stresses is exposed. Produce high conveying speeds, depending on the medium, impact and/or scuffing.

heavytel® 5980 is the product solution, which targeted, particularly the impact wear counteracts. In the rubber soul metal plates are vulcanized, so that the hose is suitable for applications in which conventional rubber conveyor hoses are overwhelmed and encounter even hoses with an inner layer of rubber/ceramic to its limits.

In applications where especially secondary fuels (fluff) have to be conveyed, heavytel® 5980 proves itself through good service life. The combination of selected rubber compounds, especially the rubber plate of the steel plates, give the heavytel® 5980 a broad range of applications and outstanding wear resistance.

Many industries, eg. Foundries, steel and cement industry, and many others appreciate the optimum performance of heavytel® 5980 under extreme conditions of use. We recommend our GRANIT SELECT coupling system as integration.

Construction:

(pneumatic and hydraulic conveyors)

Inliner

Steel plates (Hardox) positioned in black, antistatic rubber

Reinforcement

textile and steel spiral

minimum burst pressure = 3,2 x working pressure)

Cover

SBR, black, antistatic, resistant to abrasion, ozone and UV

Temperature range:

- 40°C up to + 80°C

Application:

Process and plant engineering, conveyor technology

Media:

Secondary fuels (fluff), high mechanical strength as glass or mixture.

Resistance:

The Inliner is made of vulcanized metal plates for highly abrasive flow media. Please contact our Application Technology Department in the event of extreme loading capacities.

Special features:

A braided copper wire is incorporated in the wall of the hose and is led outwards approx. 100 mm on both ends of the hose. With proper connection, this braided wire serves the purpose of signaling a critical degree of wear on the inner layer of the hose.

Feeder Hoses



Data table:

Inner-Ø [mm]	Outer-Ø [mm]	Blending radius [min. mm]	Vacuum [bar]	Working pressure [bar]	Weight [kg/m]	Length [m]
25	53	120	- 0,9	10	4,5	20
32	60	150	- 0,9	10	4,7	20
40	73	150	- 0,9	10	5,1	10
50	83	220	- 0,9	10	5,4	10
65	98	330	- 0,9	10	6,6	10
80	113	430	- 0,9	10	8,1	10
102	133	530	- 0,9	10	10,6	10
127	164	650	- 0,9	10	12,9	10
152	189	870	- 0,9	10	18,0	10
203	246	1950	- 0,9	10	29,4	10

GRANIT UPE – Material feeder hose with wear monitoring



Marking:

TEKNIKUM - MADE IN FINNLAND

Description:

GRANIT UPE is a robust high-performance feeder hose with a black curled cover, designed for the mining of particularly abrasive bulk materials. Mechanical stresses, such as vibrations, tensions, abrasion, are also mastered as well as chemical and thermal.

The anti static feeder hose GRANIT UPE is specially designed for hydraulic conveying of chemical solids. The materials used for the inliner and the cover are antistatic. The electrical resistance of the hoses is between 1×10^3 and $1 \times 10^6 \Omega \text{m}$. The suitable hose coupling GRANIT SELECT is also made of antistatic material.

Construction:

(hydraulic conveyors)

Inliner

UPE, black, antistatic
also available: white with black control points

Interlayer

EPDM, conductive

Reinforcement

textile and steel spiral
minimum burst pressure = 3,2 x working pressure)

Cover

EPDM, black, antistatic, resistant to abrasion,
ozone and UV

Temperature range:

- 20°C up to + 100°C

Application:

conveyor technology, hydraulic conveyors

Media:

liquid chemical media

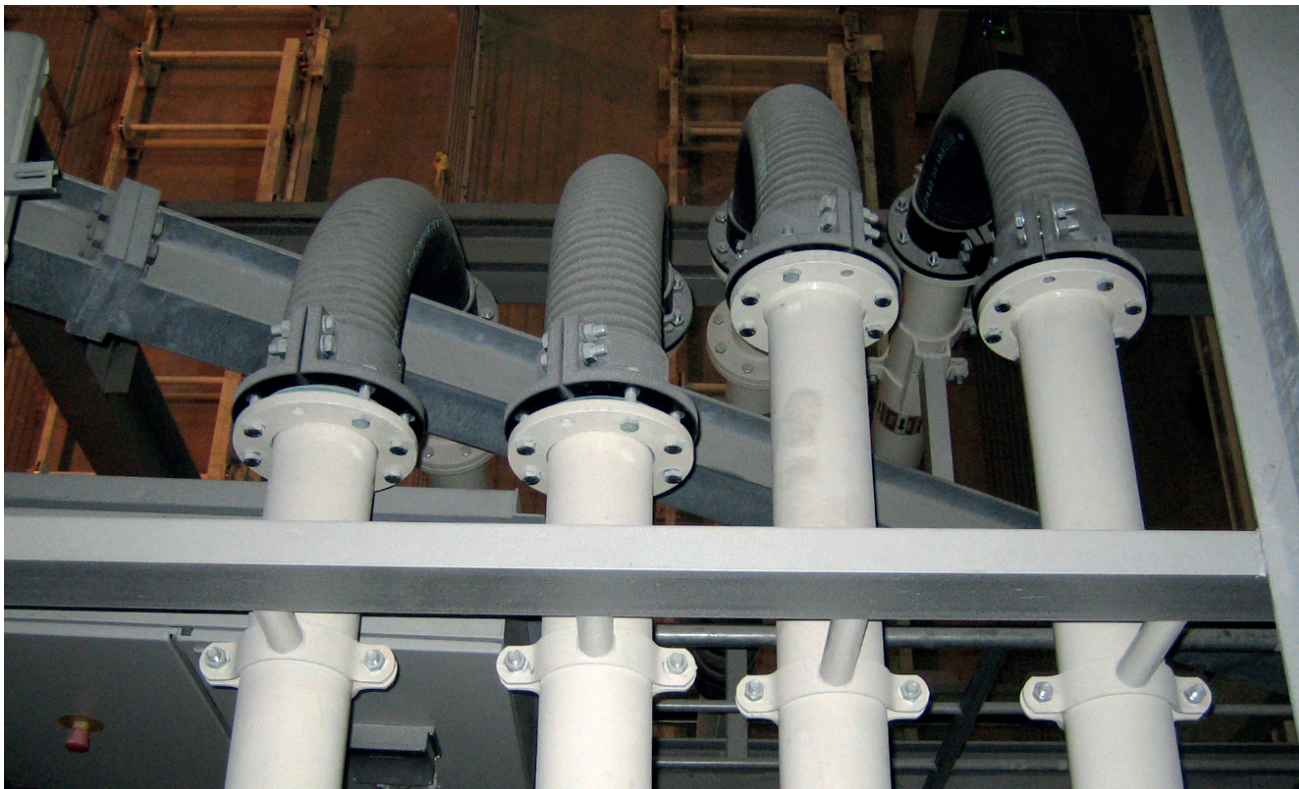
Resistance:

a variety of chemical media. Please contact our Application Technology Department in the event of extreme loading capacities.

Special features:

A braided copper wire is incorporated in the wall of the hose and is led outwards approx. 100 mm on both ends of the hose. With proper connection, this braided wire serves the purpose of signaling a critical degree of wear on the inner layer of the hose.

Feeder Hoses



Data table:

Inner-Ø	Outer-Ø	Blending radius	Vacuum	Working pressure	Weight	Length
[mm]	[mm]	[min. mm]	[bar]	[bar]	[kg/m]	[m]
32	60	200	-0,9	10	2,7	40
80	113	400	-0,9	10	6,8	20
102	136	500	-0,9	10	7,9	20

GRANIT Select – flange coupling for the ceratel® Productline



GRANIT Select is a mechanical coupling for GRANIT hoses. The coupling is mounted on the hose, which will enable smooth flow through the connection. The material of the coupling is strong and light weight aluminium.

The dimensions of the flange correspond to DIN 2501 PN 10 and ANSI 16.5 (150 PSI)

Together with the suitable flat gaskets made of polypropylene or EPDM are safe Full-flow flexible hose line.

All hose and coupling components can be quickly and easily assembled to a safe flexible hose line.

GRANIT Select coupling made of aluminium

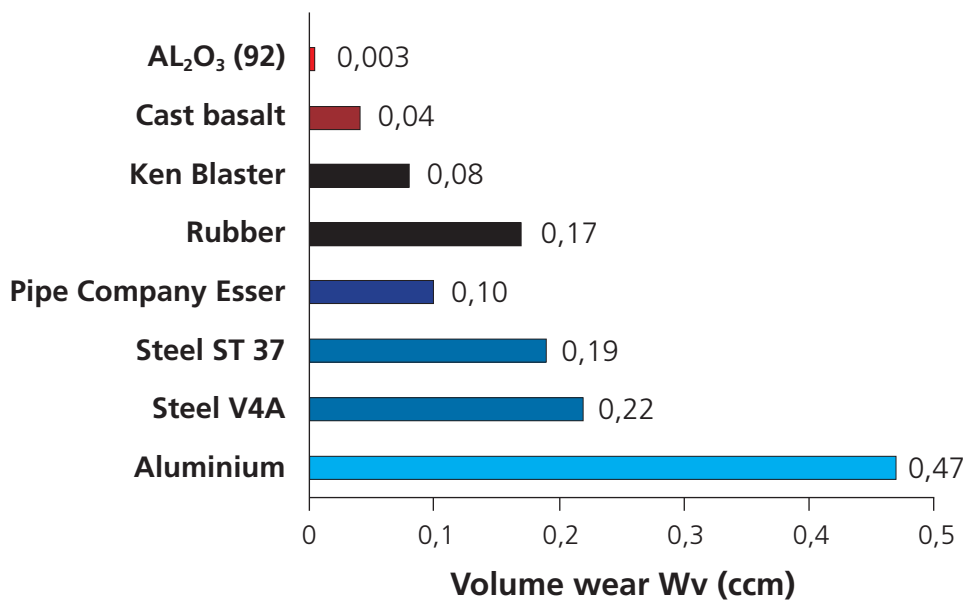
- light weight
- high strength
- non-rusting
- heat-resistant
- chemical resistant surface coating possible



Blast wear –of various wear monitoring materials

Test	Density	Mass wear [g]	Volume wear [ccm]
AL ₂ O ₃ (92)	3,69	0,01	0,003
Cast basalt	2,95	0,12	0,040
Ken Blaster	1,20	0,10	0,080
Rubber	1,18	0,20	0,170
Pipe Company Esser	7,75	0,80	0,100
Steel ST 37	7,85	1,51	0,190
Steel V4A	7,85	1,75	0,220
Aluminium	2,70	1,27	0,470

Beam angle: 30°
Beam pressure: 5 bar
Beam time: 5 min
Blasting abrasive: Silicium (middle grain size ca. 200 µm)



Source ET-Bayer

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So that you can find us good ...

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