TOTAKU

TOTAKU Abrasion Resistant Hoses

Founded in 1952, Nagase RooTAC INDUSTRIES, INC. has been a pioneer in the pipes and hose industry, creating the world's first flexible hose. Driven by our core principle of prioritizing customer satisfaction through exceptional quality, we continuously innovate to meet the evolving needs of our customers. We are dedicated to making a positive impact on the world by developing unique, thoughtful products that address modern challenges.



Featured Products

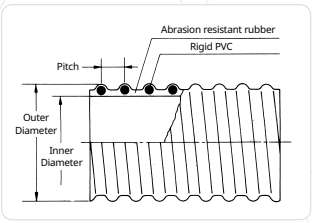
HERAN	02
HERAN-N	03
HERAN-CL	04
HERAN-ACE	05

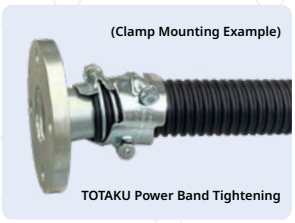
Notice:

- The data in this catalog uses values in a straight hose configuration.
- The permissible pressure is not the maximum operating pressure. Please refer to the "Operating Pressure Design Table" in the hose handling precautions and configure according to the operating pressure (normal working pressure). Also, please note that the combination of fittings and clamps, operating temperature, and bending conditions may affect performance.

TOTAKU HERAN







Features

- Made with abrasion-resistant rubber, offering approximately three times the abrasion resistance compared to TOTAKU SD-A.
- Equipped with conductive rubber for static electricity prevention.

Applications

- Suitable for transporting materials using vacuum conveyors and chutes in factories, ships, shipyards, construction sites, and environmental maintenance.
- Ideal for transporting slurries, sintered cement, gravel, iron ore, and similar items.
- Effective for transporting grains such as rice, barley, and wheat during harvest.

Cautions

- Avoid prolonged outdoor use. Store indoors.
  (There is a risk of cracking due to ozone degradation.)
- Do not use with particulate materials containing oil (powders and fibers). (There is a risk of premature wear due to swelling.)

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure (at room temperature)		Allowable Bend Radius (to the center axis of the hose)	
inch	mm	inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m	psi	MPa	inch	mm
1.5	38	1.50	38.0	1.85	47.0	0.35	9.0	0.36	540	164	50	21.76	0.15	5.12	130
2	50	2.00	50.8	2.38	60.5	0.39	10.0	0.55	825	164	50	17.40	0.12	6.50	165
2.5	65	2.50	63.5	2.96	75.1	0.56	14.3	0.74	1105	65/164	20/50	17.40	0.12	7.68	195
3	75	3.00	76.2	3.53	89.6	0.59	15.1	1.06	1570	65/164	20/50	14.50	0.10	8.27	210
3.5	90	3.50	88.9	4.10	104.2	0.64	16.2	1.43	2130	65/164	20/50	14.50	0.10	11.81	300
4	100	4.00	101.6	4.66	118.4	0.65	16.4	1.73	2570	65/164	20/50	14.50	0.10	12.99	330
5	125	4.96	125.9	5.69	144.5	0.87	22.0	2.46	3660	65	20	14.50	0.10	15.94	405
6	150	6.00	152.4	6.77	172.0	0.87	22.0	3.25	4830	65	20	14.50	0.10	26.57	675

Operating Temperature Range:

°F: -4 to 122 °C: -20 to 50

Notes:

- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1MPa) is feasible at room temperature

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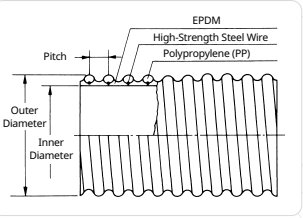
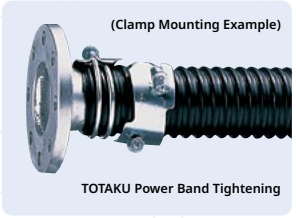
Static Electricity Prevention

TOTAKU HERAN-N

Part Number - 25105







Features

- Designed to withstand hot air up to 100°C (approximately 212°F) and handle temperatures up to 120°C (approximately 248°F) in a straight hose configuration.
- Enhanced safety through conductive rubber and the use of steel wire for grounding effects.
- Resistant to ozone degradation compared to TOTAKU HERAN.
- Superior abrasion resistance, along with excellent weather resistance.

Applications

- Suitable for transporting materials using vacuum conveyors and chutes in factories, ships, shipyards, construction sites, and environmental maintenance.
- Ideal for transporting slurries, sintered cement, gravel, iron ore, and similar items.
- Effective for transporting grains such as rice, barley, and wheat during harvest

Cautions

- Do not use with particulate materials containing oil (powders and fibers). (There is a risk of premature wear due to swelling.)

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure (at room temperature)		Allowable Bend Radius (to the center axis of the hose)	
inch	mm	inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m	psi	MPa	inch	mm
1.5	38	1.50	38.0	1.88	47.8	0.35	9.0	0.38	570	164	50	14.50	0.10	5.31	135
2	50	2.00	50.8	2.46	62.6	0.39	10.0	0.61	905	164	50	14.50	0.10	7.09	180
2.5	65	2.50	63.5	3.03	77.0	0.56	14.3	0.83	1240	65/164	20/50	14.50	0.10	8.86	225
3	75	3.01	76.4	3.62	92.0	0.59	15.1	1.14	1695	65/164	20/50	14.50	0.10	11.81	300
3.5	90	3.50	88.9	4.11	104.5	0.64	16.2	1.41	2100	65/164	20/50	14.50	0.10	15.35	390
4	100	4.00	101.6	4.72	120.0	0.65	16.4	1.76	2620	65/164	20/50	14.50	0.10	22.44	570
5	125	5.00	127.0	5.78	146.8	0.87	22.0	2.59	3860	65	20	14.50	0.10	24.80	630
6	150	6.00	152.4	6.81	173.0	0.87	22.0	3.30	4910	65	20	14.50	0.10	35.43	900
8	200	8.05	204.4	8.90	226.0	0.87	22.0	5.20	7740	32	10	14.50	0.10	41.34	1050

Operating Temperature Range:

Suction:
°F: -4 to 176 °C: -20 to 80

Discharge:
°F: -4 to 122 °C: -20 to 50

Notes:

- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature

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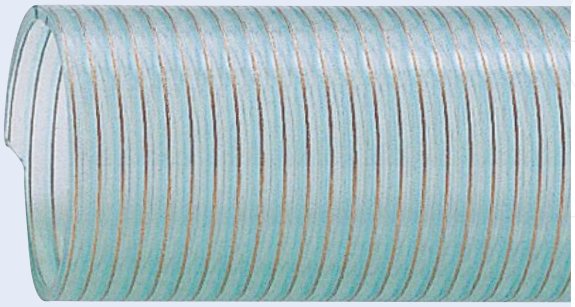
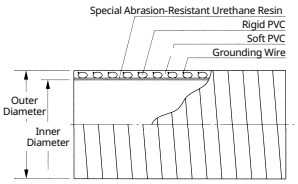
Static Electricity Prevention

TOTAKU HERAN-CL

Part Number - 25106





Commerical product



Straub coupling

Features

- Abrasion resistance is four times that of TOTAKU HERAN-N.
  (This value is based on a comparison of abrasion amounts at the initial wear stage, measured 8 hours after testing, with TOTAKU HERAN-N set as the baseline of 1.)
- Transparent design allows visibility of the contents.
- Includes a grounding wire for excellent static electricity prevention.
- The inner surface is extremely smooth, ensuring efficient fluid transport.

Applications

- Suitable for transporting slaked lime and activated carbon in waste incineration facilities.
- Ideal for transporting powders and granules prone to static electricity generation.
- Effective for vacuum conveying of sintered cement, gravel, iron ore, and similar materials.
  Note: Not suitable for transporting fluids containing oil.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Reference Weight		Length		Allowable Pressure (at room temperature)		Allowable Bend Radius (to the center axis of the hose)	
inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m	psi	MPa	inch	mm
1.25*	32	1.26	32.0	1.65	41.8	0.51	765	164	50	58.02	0.40	11.81	300
1.5	38	1.50	38.0	1.91	48.5	0.61	910	164	50	58.02	0.40	13.78	350
2	50	2.00	50.8	2.42	61.4	0.83	1230	164	50	58.02	0.40	21.65	550
2.5	65	2.50	63.5	2.99	76.0	1.21	1805	65/164	20/50	58.02	0.40	31.50	800
3	75	3.00	76.2	3.52	89.5	1.48	2200	65/164	20/50	58.02	0.40	33.46	850
3.5	90	3.50	88.9	4.02	102.0	1.69	2510	65/164	20/50	43.51	0.30	43.70	1110
4	100	4.00	101.6	4.61	117.0	2.24	3340	65/164	20/50	43.51	0.30	49.21	1250
5	125	5.01	127.3	5.59	142.0	2.73	4060	65	20	36.26	0.25	88.58	2250
6	150	6.00	152.4	6.67	169.4	3.85	5730	65	20	29.01	0.20	108.27	2750
8	200	8.00	203.2	8.91	226.4	6.69	9960	32	10	29.01	0.20	157.48	4000

** This is a made-to-order product. Please contact our company regarding order quantities and other inquiries.*

Sample name	Abrasion mass (g)	Ratio	Abrasion volume (cm^3)	Ratio
Special Abrasion-Resistant Urethane Resin	0.232	1	0.219	1
ASTM:A53 Type F	13.811	60	1.759	8
ASTM:A312 TP304	10.083	43	1.271	6

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

Notes:

- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature.

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Product Overview

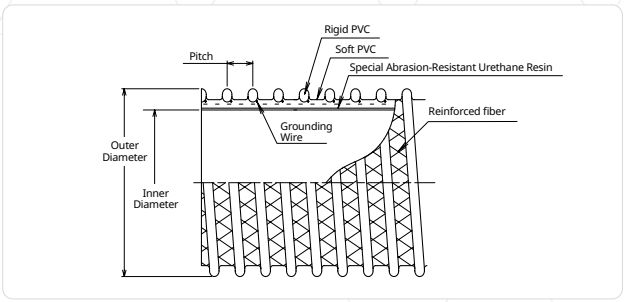
Abrasion Resistance

Method for Extracting Grounding Wire

TOTAKU HERAN-ACE

Part Number - 25107





Features

- Abrasion resistance is four times that of TOTAKU HERAN-N.
  (This value is based on a comparison of abrasion amounts at the initial wear stage, measured 8 hours after testing, with TOTAKU HERAN-N set as the baseline of 1.)
- Lightweight and flexible design.
- Pressure rating of approximately 72.5 psi (0.5 MPa) for robust performance.
- Reinforced with durable fibers, this hose is suitable for use in situations where elevation changes may exert tensile loads.
- Includes a grounding wire for excellent static electricity prevention.

Applications

- Suitable for transporting slaked lime and activated carbon in waste incineration facilities (especially in locations requiring a small bend radius).
- Ideal for suction of soil and sediment using the high-density slurry method.
- Effective for suction and chuting of crushed stone, ore, and similar materials.
- Useful as hoses for dumper trucks
  Note: Not suitable for transporting fluids containing oil.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure (at room temperature)		Allowable Bend Radius (to the center axis of the hose)	
inch	mm	inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m	psi	MPa	inch	mm
4	100	4.00	101.6	4.80	121.8	0.65	16.4	2.18	3240	65	20	72.52	0.50	14.17	360
5*	125	4.96	125.9	5.99	152.2	0.87	22.0	3.04	4530	65	20	72.52	0.50	21.26	540
6*	150	6.00	152.4	7.18	182.4	1.02	26.0	4.11	6110	65	20	72.52	0.50	35.43	900
8*	200	8.02	203.7	9.47	240.5	1.10	28.0	5.63	8380	32	10	72.52	0.50	41.34	1050

** This is a made-to-order product. Please contact our company regarding order quantities and other inquiries.*

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

Notes:

- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature

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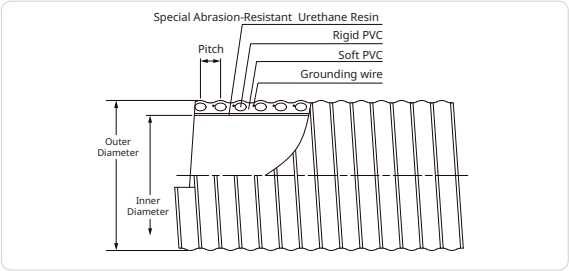
Static Electricity Prevention

TOTAKU HERAN-SIGNAL





Features

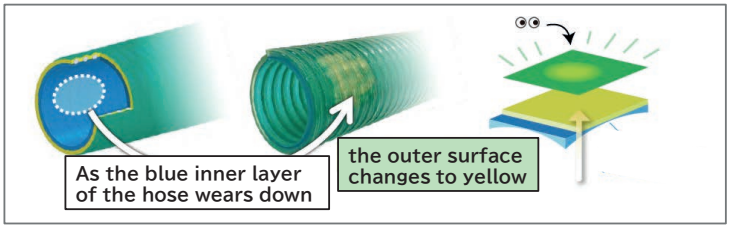
- One of the most abrasion-resistant hoses in the TOTAKU lineup.
- Equipped with a built-in copper grounding wire for enhanced static electricity prevention.

Applications

- Conveying powders and granules that are prone to static builedup.
- Suction and discharge of materials such as resin pellets, sintered cement, gravel, and iron ore.

Why is it called “SIGNAL”?

As the inner surface wears down, the color changes from green to yellow. This makes it easy to identify when to replace the hose!



Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Reference Weight		Length		Allowable Pressure (at room temperature)		Allowable Bend Radius (to the center axis of the hose)	
inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m	psi	MPa	inch	mm
2	50	2.00	50.8	2.73	63.4	0.90	1340	164	50	58.02	0.40	21.65	550
2.5	65	2.50	63.5	3.03	77.0	1.21	1800	65/164	20/50	58.02	0.40	31.50	800

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

Notes:

- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1MPa) is feasible at room temperature.