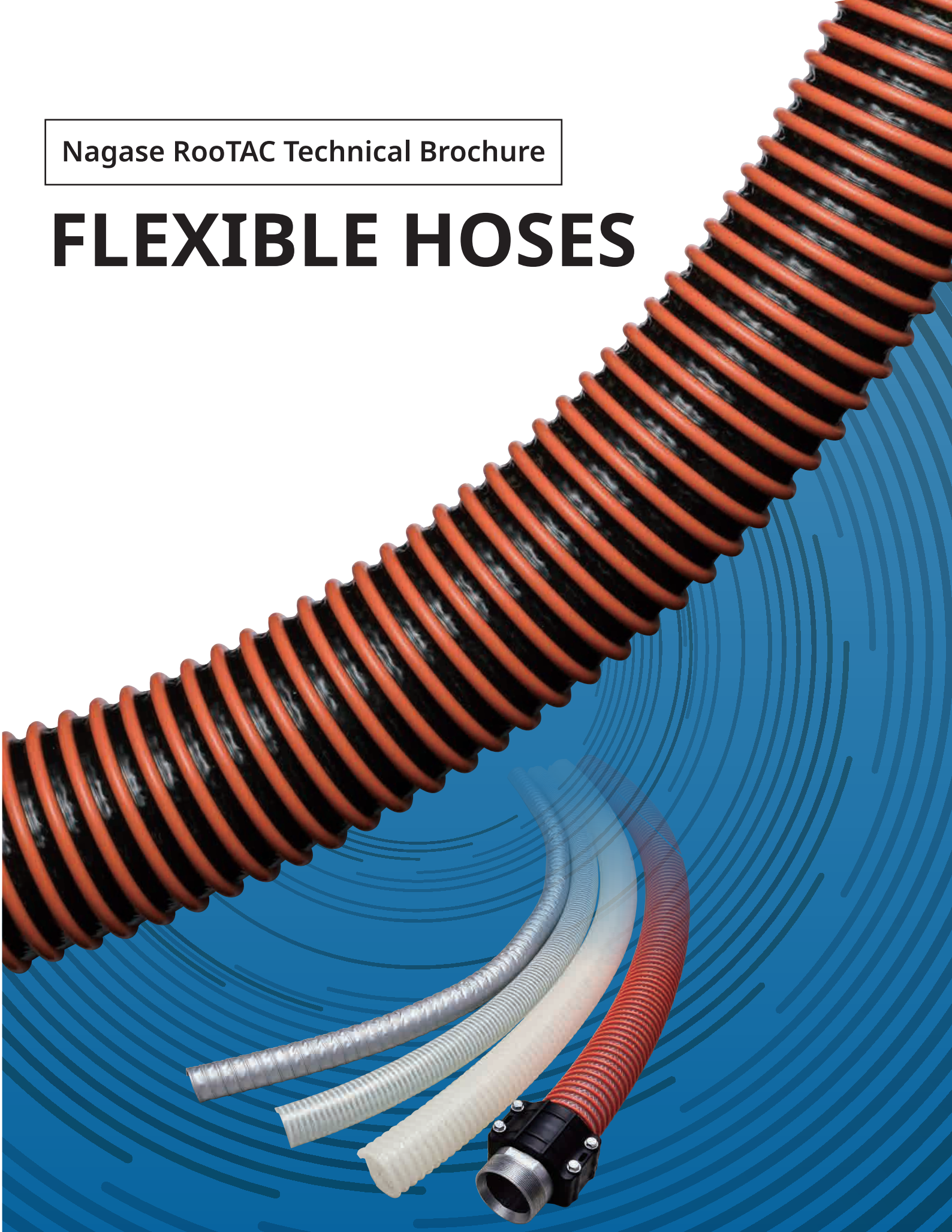
Nagase RooTAC Technical Brochure

FLEXIBLE HOSES



On November 1, 2025, TOTAKU INDUSTRIES, INC. changed its name to Nagase RooTAC Industries, Inc.

Nagase RooTAC

TOTAKU Hose Handling Precautions

Hoses are flexible and convenient piping materials, but unexpected accidents may occur depending on the conditions of use. Be sure to carefully read and adhere to the handling precautions beforehand. Please understand that our company cannot be held responsible for any damages resulting from failure to follow these precautions.

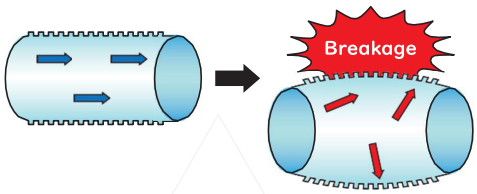
1. Usage Precautions (Fluid: Water, Liquids)

1. The allowable pressure of the hose indicates the maximum pressure it can handle when it is either straight or bent with a radius larger than the minimum allowable bend radius. Therefore, it must not be used at pressures exceeding this limit. Note that this does not represent the maximum continuous operating pressure (working pressure).
2. ***Allowable pressure is not the same as the maximum operating pressure. Please refer to the following table to determine the operating pressure (working pressure) accordingly.***

How to Calculate Operating Pressure	Hose Type	Safety Factor
Operating Pressure × Safety Factor ≤ Allowable Pressure	TOTAKU ECO Series, TOTAKU Fluoro Series, SD Hose Series (General Use, Food-Grade, Oil- Resistant, AS, Grounded), TOTAKU HERAN Series	2.0
	Line Power Series	1.5

Note: For information on the safety factors and allowable pressure of each hose, please refer to the respective product pages for each hose.

3. The performance of the hose (allowable pressure, operating pressure, bending, etc.) is significantly affected by the fluid and surrounding temperatures. Please note that for some hoses, at a fluid temperature of 50°C (122°F), the allowable and operating pressures may decrease to less than half of the values at 25°C (77°F) when the ambient temperature is 30°C (86°F).
4. Certain fluids—such as drugs, solvents, acids, and alkalis—may cause changes to the hose material, including hardening or swelling. In these cases, ensure the safety factor is calculated as: operating pressure × 3.0 ≤ allowable pressure. ***Hoses must never be used for highly toxic chemicals, highly concentrated acids or alkalis, explosive or flammable gases, or other hazardous substances.*** Using hoses in such conditions poses a significant risk of hose failure, which could lead to severe injury or health risks.
5. Do not bury hoses underground. External pressure and internal pressure creep may cause the reinforcement layer to crack, leading to potential leaks.
6. Avoid using hoses inside sleeve pipes. Expansion during pressurization may cause the hose to bend or meander, potentially leading to cracks in the reinforcement layer or leaks.
7. When used in the riser section of a submersible pump, a water hammer may occur when the pump stops. In such cases, set the pump pressure with a higher safety factor as described in 4. A water hammer may cause the hose to fail, leading to potential accidents.



8. When operating a valve, open or close it slowly over at least three seconds to avoid creating shock pressure. Closing a valve too quickly, especially at the end of the hose, can generate shock pressure and may result in hose failure. As a rule of thumb, shock pressure can be estimated by converting the flow velocity (ft/sec [m/sec]) into pressure (psi [MPa]) and adding it to the operating pressure. This occurs when the valve is closed abruptly. ***Note: Use a flow velocity of 6.6 ft/sec (2 m/sec) or less as a guideline.***
9. When hoses are used outdoors for extended periods, they may experience UV degradation, leading to discoloration (darkening), hardening, or ozone-induced cracking. If you notice signs of discoloration or cracking, replace the hose with a new one as soon as possible.
10. Hoses should be regarded as consumable items.
11. ***Do not use hoses for compressed air piping.*** Under certain conditions, they may burst, posing a risk of accidents.
12. Never use general-purpose hoses for pharmaceutical applications. Doing so may result in legal penalties under applicable laws.
13. If the hose will be used for transporting highpurity chemicals, please consult us. For example, when used for transporting pure water, the hose itself will not be affected; however, components of the hose may leach into the water, potentially contaminating its purity.
14. For food-related applications, please use hoses classified as food-grade. Using any other type of hose may result in legal penalties under applicable laws.
15. ***When using food-grade hoses for transporting drinking water or food products, ensure that the interior of the hose is thoroughly cleaned before use.***

2. Precautions for Hose Installation

1. Hoses are consumable items. Hoses gradually deteriorate over time with extended use. Perform regular inspections (see 5. Inspection) and discontinue use immediately if any abnormalities are detected. Replace with a new hose as needed.
2. When installing hoses, take precautions to ensure that, in the event of failure, the damage does not pose a risk to people or surrounding equipment (such as electrical systems).
3. Hoses expand and contract due to internal pressure, so ensure adequate slack when installing them.
4. When using hoses in fixed piping, operate them at no more than half of their allowable pressure. Operating near the allowable pressure may cause significant hose expansion, resulting in reduced bend radius in certain areas, which could lead to damage. For fixed piping applications, consider using the LINE POWER series, which minimizes expansion under pressure.
5. Hose twisting can lead to performance degradation. If twisting occurs due to equipment oscillation or rotation, use swivel joints, loose flanges, or cap nut-type joints.
6. Using a hose with a small bend radius reduces its allowable pressure. If (operating pressure)×(safety factor) approaches the hose's allowable pressure, ensure the bend radius is greater than the minimum allowable bend radius.
7. Connecting a hose horizontally to equipment at a high position can cause its weight to concentrate bending stress near the connection point, leading to early failure. To prevent this, support the area near the fittings, use an elbow joint, or route the hose vertically.
8. If the hose is connected horizontally to equipment positioned high up, its own weight can place stress near the connection point, potentially causing it to break prematurely. To prevent this, support the hose near the fittings, use an elbow joint, or install the hose vertically.
9. Ensure that 1–2 meters of hose remain in a straight position on both the inlet and outlet sides of the pump (piping). Additionally, secure the hose to prevent tension caused by pump movement or vibrations.
10. If the hose is subject to stretching, contraction, vibration, or repetitive motion that causes it to rub against other objects, protect the hose by using supports, protective wires, or guard springs.
11. Avoid using hoses in a horizontally suspended position (e.g., ceiling-mounted horizontal piping). The hose's own weight, fluid weight, and pressure-induced elongation can cause sagging or bending, which may lead to damage.
12. Avoid applying external shocks to the hose.
13. Do not step on the hose or run over it with a vehicle.
14. Do not pull the hose to move machinery, nor move machinery or vehicles while the hose is still attached.
15. ***When installing long hoses (165 feet [50 meters] or more), be aware that differences in elevation and pressure loss may prevent the required flow rate from being achieved. Please exercise caution in such cases***

3. Precautions for Hose Storage

3-1. Storing Hoses After Use

1. After using the hose, remove any residue inside by rinsing it with water or other appropriate methods.
2. Rinse the hose with water to remove any deposits from the inner surface, and cap both ends of the hose.
3. Store the hose in a location away from direct sunlight.

3-2. Storage as Stock

1. Store in a cool, dark place with low humidity, away from direct sunlight.
2. Cap both ends of the hose to prevent dust and debris from entering.
3. Do not stack hoses in large quantities or place heavy objects on top of them.
4. Do not store hoses in an excessively bent state. Whenever possible, store them indoors in a straight position on a flat floor.
5. When PVC hoses come into contact with rubber products, the PVC hoses may discolor. To prevent this, avoid storing them in contact with rubber products. ***Note: Some products may discolor. For details, please refer to the "Caution" section for each product.***

4. Precautions for Hose Transportation

1. Do not drag hoses on the ground or over concrete during transportation.
2. Do not throw or subject hoses to impacts during loading and unloading.
3. When lifting hoses with a crane or similar equipment, avoid single-point lifting. Use a lifting beam and nylon slings for multi-point lifting.

5. Inspection (To Prevent Accidents and Ensure Safe Hose Usage)

5-1. Daily Inspections

Perform a visual inspection of the hose before use. If any abnormalities are detected, replace the hose or take appropriate measures, such as removing the affected section.

5-2. Periodic Inspections

Conduct a thorough visual inspection and a hydrostatic pressure test at or below the allowable pressure every three months, following the steps outlined below.

(a) Visual Inspection

If any of the following abnormalities are found, the hose is unsuitable for use and should be replaced with a new one:

- Abnormalities near fittings: Localized stretching, swelling, bending, or leakage.
- External damage: Significant surface damage, reinforcement layer cracks, or cracks in the grooves.
- Hose abnormalities: Flattening, deformation, kinking, internal swelling, or delamination.
- Other severe deterioration: Hardening, swelling, cracking, etc.

(b) Hydrostatic Pressure Test

Use the hose's initial expansion during pressurization (based on our inspection report data or your own initial pressure test data and product condition) as a reference. If the values from periodic inspections exceed 1.5 times the initial value, stop using the hose immediately and replace it with a new one. ***Additionally, always perform the test at or below the allowable pressure.*** Testing at excessively high pressures may shorten the hose's lifespan.

6. Precautions for Fittings and Bands

1. i. When using hoses other than ducting hoses, use a nipple with an outer diameter that is approximately the same as or slightly larger than the hose's inner diameter. If the nipple's outer diameter is smaller than the hose's inner diameter, it may result in water leakage or fitting detachment, potentially causing accidents.

   ii. For ducting hoses, the nipple's outer diameter must be smaller than the hose's inner diameter, so be sure to select the correct size.

2. Some commercially available fittings may not be compatible for installation. Please consult us in advance.

3. ***The hose's pressure resistance varies depending on the type, number, and tightening force of the bands.*** Choose the appropriate bands based on the hose's operating conditions.

7. Others

1. Discard used hoses as industrial waste.
2. Our products are solid materials with a fixed shape and are therefore not subject to SDS requirements. (However, reference data is available upon request.)

8. Hose Selection Guidelines - *Please review the below items thoroughly when contacting us.*

Usage	Purpose		
	Device Name		
Specifications	Dimensions	Inner Diameter	Actual size (in [mm])
		Outer Diameter	Actual size (in [mm])
		Length	Total length including fittings
	Fittings	Flange/Nipple	ANSI/ASME (JIS), K Flange, SCollar with Thread, etc. For other special types, please contact us.
		Clamping Method	SY band, Reber clamp, TOTAKU power band, outer tube crimping, etc. For other special tightening methods, please consult us.
Fluid	State	Gas, liquid, solid, slurry, etc.	
	Composition & Concentration	Composition and Concentration	
	Temperature	Fluid temperature (°F [°C])	
	Flow Rate & Flow Velocity	Flow Rate: GPM / SCFM (m^3/h) | Flow Velocity: ft/sec (m/s)	
Operating Conditions	Pressure	Maximum Operating Pressure	Discharge pressure: psi (MPa) Suction (vacuum) pressure: inHg (kPa)
		Peak Pressure	Pump pressure, surge pressure, etc.
	Environmental Conditions	Outside Air Temperature	°F (°C)
		Atmosphere	Outdoor, indoor, offshore, underwater, etc.
		External Pressure	psi (MPa)
	Bending Conditions	Installation Dimensions	Installation type and motion diagram, etc.
		Minimum Bending Radius	Must meet or exceed the allowable bending radius, etc.
		Operating Cycle	Repetitive bending cycle, etc.
	Usage Time	Continuous use time and intermittent cycle, etc.	
Performance	Past Usage Record	Manufacturer, product name, time in use (operating time), etc.	
Regulations	Applicable Laws & Standards	Food sanitation regulations, etc.	

Explanation of Hose Physical Property Terms

Allowable Pressure (at Room Temperature)

Allowable pressure represents the maximum pressure a hose can withstand when in a straight position or bent with a radius larger than the minimum allowable bend radius. It must not be used at pressures exceeding this limit. This is not the maximum continuous operating pressure (working pressure). The allowable pressure decreases at higher operating temperatures and also varies depending on the hose size, fitting and band combination, and operating environment.

The allowable pressure is not the maximum operating pressure. Therefore, use the following formula as a reference when determining the operating pressure (working pressure):

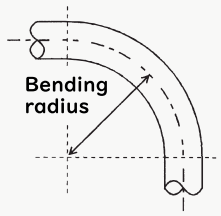
(Operating Pressure) × (Safety Factor) ≤ (Allowable Pressure)

Allowable Vacuum Pressure (Room Temperature)

This is the maximum vacuum pressure that can be applied to the hose at room temperature. The hose cannot be used at vacuum pressures exceeding this limit. Additionally, the allowable vacuum pressure decreases at higher operating temperatures. According to the Japanese Industrial Standard (JIS Z 8703), room temperature is defined as 68°F ± 27°F (20°C ± 15°C).

Allowable Bending Radius

This is the minimum bending radius the hose can safely accommodate.
Using the hose at a smaller bending radius is not permitted.



How the Radius is Measured

The bending radius is measured from the center of the bend to the centerline of the hose.

TOTAKU

TOTAKU Non-PVC Hoses ECO Series

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

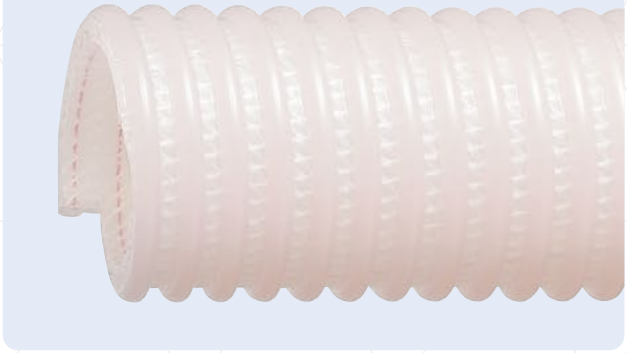
ECO LINE-HO 100°C 02
SHIMETAC for TOTAKU ECO LINE-HO 100°C 03
ECO LINE 04
ECO LINE-HO 05
SHIMETAC for TOTAKU ECO LINE 06
ECO PP-SPRING 07
ECO SD-AS 08
ECO SD-C 09
ECO DUCT 10
ECO DUCT-AS 11

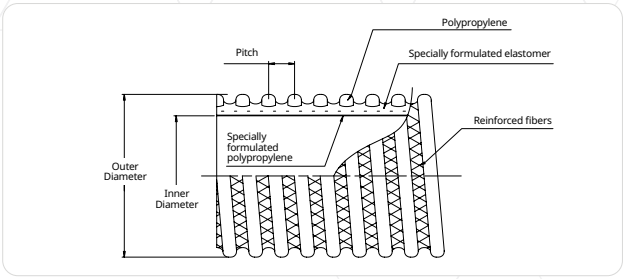
Notice:

- 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 ECO LINE-HO 100°C

Part Number - 22188





Features

- Suitable for transporting oils, fatty foods, and general food products.
- Complies with standards for food and additives established by the Japanese Ministry of Health and Labour and Welfare (Notification No. 370). But they do not meet U.S. standards. They are currently under development, so please contact us for more details.
- Can be cleaned with hot water at temperatures up to 212°F (100°C) or with 95% ethanol, ensuring hygienic use.
- Safe for incineration after use without emitting harmful gases. (Includes hydrogen chloride, sulfur oxides, nitrogen oxides, hydrogen cyanide, and ammonia.)
- Semi-transparent construction allows for easy inspection of transported materials.
- Reinforced with a reinforcing fiber, offering pressure resistance up to 101.5 psi (0.7 MPa).

Applications

- Suitable for transporting edible oils, fatty foods, sake, shochu, and other alcoholic beverages, as well as soft drinks and various liquids or powders.
- Ideal for hygienic piping applications, such as transporting purified water.
- Designed for transporting hot water or similar liquids at temperatures below 212°F (100°C). (Refer to the table below for pressure resistance performance at temperatures above 104°F [40°C].)

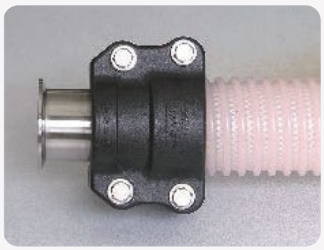
Standard Dimensions and Properties

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	25	1.00	25.4	1.52	38.6	0.30	7.5	0.31	460	65/164	20/50	101.53	0.70	4.72	120
1.5	38	1.50	38.0	2.17	55.0	0.39	10.0	0.57	850	65/164	20/50	101.53	0.70	9.45	240
2	50	2.00	50.8	2.72	69.0	0.43	11.0	0.81	1210	65/164	20/50	101.53	0.70	11.81	300

Nominal Diameter		Allowable Pressure					
		104°F to 140°F (40°C to 60°C)		140°F to 176°F (60°C to 80°C)		176°F to 212°F (80°C to 100°C)	
inch	mm	inch	mm	inch	mm	inch	mm
1	25	87.02	0.60	72.52	0.50	58.02	0.40
1.5	38	87.02	0.60	72.52	0.50	58.02	0.40
2	50	79.77	0.55	58.02	0.40	43.51	0.30

The recommended operating temperature range is 32°F to 212°F (0°C to 100°C). However, allowable pressure may vary depending on the operating temperature and installation method.

Recommended Fitting Installation Examples



SHIMETAC
(for IDF Ferrule)



EPDM Corrugated Sealing with Stainless Steel Crimping
(for IDF Ferrule)

Operating Temperature Range:

°F: 32 to 212 °C: 0 to 100

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.

Scan, tap, or touch for product videos

Product Overview

SHIMETAC for TOTAKU ECO LINE-HO 100°C

Applicable Sizes: 1.5 inches (ϕ38 mm) and 2 inches (ϕ50 mm)

Part number 92413
Material: Fiber-Reinforced Polypropylene



Features

- Made from resin, ensuring a lightweight design.
- Rust-free due to its resin construction.
- Equipped with Stainless Steel 304 bolts, flat washers, and nuts.
- Reliable pressure resistance performance.
- Fittings are removable for easy cleaning.
- Designed with a secure structure to prevent detachment.

Notes

- Be sure to use the *dedicated fittings* for SHIMETAC.
- The fittings shown below are examples.

Pressure Resistance Performance at 212°F (100°C)

Nominal Diameter		Processing Methods					
		EPDM Corrugated Sealing with Stainless Steel Crimping		Band Tightening		SHIMETAC Tightening	
inch	mm	inch	mm	inch	mm	inch	mm
1	25	58.02	0.40	14.50	0.10	—	—
1.5	38	58.02	0.40	14.50	0.10	58.02	0.40
2	50	43.51	0.30	14.50	0.10	43.51	0.30

Dedicated Fittings for SHIMETAC

Part Number 92313



IDF Ferrule with SHIMETAC shank
(Stainless Steel)

Part Number 92312



M1 SHIMETAC shank
(Stainless Steel)

Part Number 92305



Flange with SHIMETAC shank
(Stainless Steel)

Part Number 92333



Camlock 633-CTS
(Stainless Steel)

Part Number 92332



Camlock 633-ETS
(Stainless Steel)

Part Number 92416



TS Flange with SHIMETAC shank
(PVC)

Part Number 92417



Loose Flange with SHIMETAC shank
(Polypropylene)
(Flange Part: Structural Steel)

Hose Installation Example



Scan, tap, or touch for product videos

Product Overview

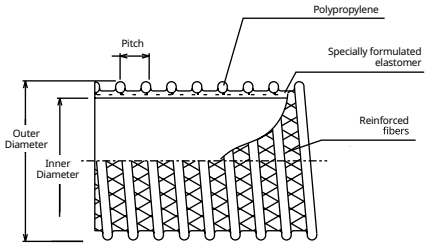
Compatible Hoses

Installation Method

TOTAKU ECO LINE

Part Number - 22166





TOTAKU ECO LINE with Grounding Wire

Part Number - 22167



Note: This product is made to order. Please contact us for more information.

Features

- Safe for use in food applications.
  Note: Not suitable for transporting foods or liquids containing oils or fats.
- Meets the standards for food and additives set by the Japanese Ministry of Health, Labour and Welfare (Notification No. 370), excluding elution testing for fatty and oily foods. But they do not meet U.S. standards. They are currently under development, so please contact us for more details.
- The U.S. standard is currently under development.
- Can be cleaned with hot water[1] and 95% ethanol, ensuring hygienic use.
- Safe for incineration after use without emitting harmful gases[2] (Incineration ash residue is less than 0.1%).
- Semi-transparent construction allows for easy inspection of transported materials.
- Flexible design enables easy handling during use.
- It is equipped with a reinforcement fiber, providing an allowable pressure of 72.5 psi (0.50 MPa).

Applications

- Suitable for transporting alcoholic beverages such as sake and shochu, as well as soft drinks.
- Ideal for transporting other food products, including liquids and powders.
- Designed for general water suction and discharge applications.

Cautions

- Do not use or store outdoors for extended periods.

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	25	1.00	25.4	1.44	36.7	0.31	7.8	0.24	350	164	50	72.52	0.50	4.72	120
1.25	32	1.26	32.0	1.73	44.0	0.35	8.8	0.30	445	164	50	72.52	0.50	5.91	150
1.5	38	1.50	38.0	2.01	51.0	0.37	9.3	0.39	580	164	50	72.52	0.50	8.27	210
2	50	2.00	50.8	2.57	65.2	0.40	10.2	0.54	800	164	50	72.52	0.50	9.45	240
2.5	65	2.50	63.5	3.17	80.5	0.55	14.0	0.74	1105	65/164	20/50	72.52	0.50	12.99	330
3	75	3.00	76.2	3.76	95.5	0.59	15.0	1.03	1530	65/164	20/50	72.52	0.50	15.35	390

The recommended operating temperature range is 32°F to 122°F (0°C to 50°C). However, allowable pressure may vary depending on the operating temperature and installation method. For continuous use, keep the temperature below 104°F (40°C).

Operating Temperature Range:

°F: 32 to 122 °C: 0 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.

Additional Notes:

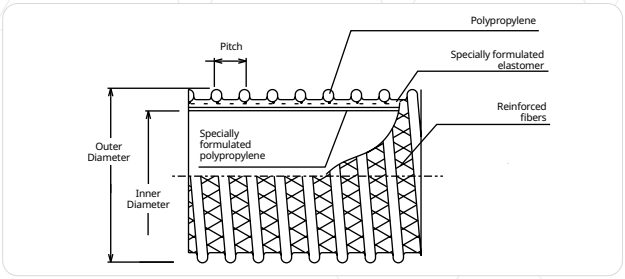
[1] Hot water cleaning should be performed under the following conditions: temperature below 176°F (80°C), pressure below 14.5 psi (0.1 MPa), and a pressurization time of 3 minutes or less.

[2] Includes hydrogen chloride, sulfur oxides, nitrogen oxides, hydrogen cyanide, and ammonia.

TOTAKU ECO LINE-HO

Part Number - 22168





Features

- Suitable for transporting oils, fatty foods, and general food products.
- Meets the standards for food and additives set by the Japanese Ministry of Health, Labour and Welfare (Notification No. 370), excluding elution testing for fatty and oily foods. But they do not meet U.S. standards. They are currently under development, so please contact us for more details.
- Can be cleaned with hot water[1] and 95% ethanol, ensuring hygienic use.
- Safe for incineration after use without emitting harmful gases[2] (Incineration ash residue is less than 0.1%).
- Semi-transparent construction allows for easy inspection of transported materials.
- It is equipped with a reinforcement fiber, providing an allowable pressure of 72.5 psi (0.50 MPa).

Applications

- Suitable for transporting edible oils, fatty foods, sake, shochu, and other alcoholic beverages, as well as soft drinks and various liquids or powders.

Cautions

- Do not use or store outdoors for extended periods.

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	25	1.00	25.4	1.47	37.4	0.31	7.8	0.24	360	164	50	72.52	0.50	4.72	120
1.25	32	1.26	32.0	1.73	44.0	0.35	9.0	0.31	455	164	50	72.52	0.50	5.91	150
1.5	38	1.50	38.0	2.01	51.0	0.39	10.0	0.39	580	164	50	72.52	0.50	9.45	240
2	50	2.00	50.8	2.55	64.8	0.41	10.5	0.55	820	164	50	72.52	0.50	11.81	300

The recommended operating temperature range is 32°F to 140°F (0°C to 60°C). However, allowable pressure may vary depending on the operating temperature and installation method. For continuous use, keep the temperature below 122°F (50°C).

Operating Temperature Range:

°F: 32 to 140 °C: 0 to 60

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.

Additional Notes:

[1] Hot water cleaning should be performed under the following conditions: temperature below 176°F (80°C), pressure below 14.5 psi (0.1 MPa), and a pressurization time of 3 minutes or less.

[2] Includes hydrogen chloride, sulfur oxides, nitrogen oxides, hydrogen cyanide, and ammonia.

SHIMETAC for TOTAKU ECO LINE

Applicable Sizes: 1 inch (ϕ25 mm), 1.5 inches (ϕ38 mm), 2 inches (ϕ50 mm), 2.5 inches (ϕ65 mm), 3 inches (ϕ75 mm)

SHIMETAC for TOTAKU ECO LINE and TOTAKU ECO LINE-HO

***1 inch (φ25 mm) is compatible with Line Ace**
***1.5inch-3inch(φ38mm-φ75mm) is compatible with ECO SD-AS**



φ 25



Part Number 92311
Material: Fiber-Reinforced Polypropylene

TOTAKU ECO LINE

Allowable Pressure: 72.5 psi (0.5 MPa) or less (at room temperature)

Hot Water Wash: 14.5 psi (0.1 MPa) or less (up to 176°F [80°C], within 3 minutes)

TOTAKU ECO LINE-HO

Allowable Pressure: 72.5 psi (0.5 MPa) or less (at room temperature)

Hot Water Wash: 14.5 psi (0.1 MPa) or less (up to 176°F [80°C], within 30 minutes)

Features

- Made from resin, ensuring a lightweight design.
- Rust-free due to its resin construction.
- Equipped with Stainless Steel 304 bolts, flat washers, and nuts.
- Reliable pressure resistance performance.
- Fittings are removable for easy cleaning.
- Designed with a secure structure to prevent detachment.

Notes

- Be sure to use the *dedicated fittings* for SHIMETAC.
- The fittings shown below are examples.

Suggested Food-Grade Assembly

TOTAKU ECO LINE:
(1 inch [ϕ25 mm], 1.5 inches [ϕ38 mm], 2 inches [ϕ50 mm], 2.5 inches [ϕ65 mm], 3 inches [ϕ75 mm])

TOTAKU ECO LINE-HO:
(1 inch [ϕ25 mm], 1.5 inches [ϕ38 mm], 2 inches [ϕ50 mm])



Dedicated Fittings for SHIMETAC

Part Number 92312



M1 SHIMETAC shank *(Stainless Steel)*
Also available in Steel Structure

Part Number 92313



IDF Ferrule with SHIMETAC shank *(Stainless Steel)*

Part Number 92333



Camlock 633-CTS *(Stainless Steel)*

Part Number 92332



Camlock 633-ETS *(Stainless Steel)*

Part Number 92417



Loose Flange with SHIMETAC shank *(Polypropylene)* *(Flange Part: Steel Structure)*

Part Number 92305



Flange with SHIMETAC shank *(Stainless Steel)*

Scan, tap, or touch for product videos

Product Overview | **Compatible Hoses** | **Installation Method**

TOTAKU ECO PP-SPRING

Applicable Sizes: 1 inch (ϕ25 mm), 1.25 inches (ϕ32 mm), 1.5 inches (ϕ38 mm), 2 inches (ϕ50 mm), 2.5 inches (ϕ65 mm), 3 inches (ϕ75 mm)

ECO PP Spring Installation Example

Part Number 22176





Sold in lengths of 100 corrugations.

Applications

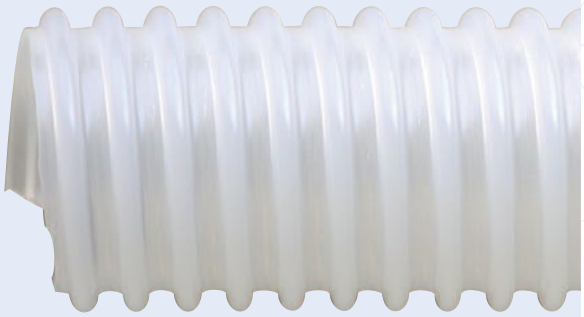
- Designed for use as a corrugated sealing material when securing TOTAKU ECO LINE with flat bands or similar fasteners.
- Ideal for preventing localized bending near fittings.

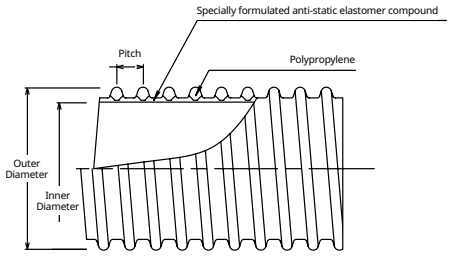
Example of TOTAKU ECO LINE in Use



TOTAKU ECO SD-AS

Part Number - 22183





SHIMETAC for TOTAKU ECO LINE is now available!

(Applicable Sizes: 1.5 inches (φ38 mm) to 3 inches (φ75 mm))



Features

- Safe for use in food applications.
  Note: Not suitable for transporting foods or liquids containing oils or fats.
- Meets the standards for food and additives set by the Japanese Ministry of Health, Labour and Welfare (Notification No. 370), excluding elution testing for fatty and oily foods. But they do not meet U.S. standards. They are currently under development, so please contact us for more details.
- Safe for incineration after use without emitting harmful gases.[1]
- The smooth inner surface boosts transport efficiency.
- Ensures strong anti-static properties.
- Lightweight, flexible, and offers excellent abrasion resistance.
- Semi-transparent construction allows for easy inspection of transported materials.

Applications

- Ideal for transporting resin pellets used in food packaging, toys, and other applications.
- Suitable for transporting granular and powdered food products.
- Appropriate for transporting pharmaceuticals.
- Also used for transporting non-food granular and powdered materials.

Cautions

- Do not use or store outdoors for extended periods.

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	1.89	48.0	0.35	9.0	0.23	340	164	50	14.50	0.10	5.91	150
2	50	2.00	50.8	2.44	62.0	0.39	10.0	0.37	550	164	50	14.50	0.10	7.68	195
2.5	65	2.50	63.5	2.99	76.0	0.56	14.3	0.47	695	65/164	20/50	14.50	0.10	10.04	255
3	75	3.00	76.2	3.62	92.0	0.62	15.8	0.64	950	65	20	14.50	0.10	10.04	255
4	100	4.00	101.6	4.67	118.5	0.71	18.0	1.08	1600	65	20	14.50	0.10	17.72	450

The recommended operating temperature range is 32°F to 122°F (0°C to 50°C). However, allowable pressure may vary depending on the operating temperature and installation method. For continuous use, keep the temperature below 104°F (40°C).

Operating Temperature Range:

°F: 32 to 122 °C: 0 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.

Scan, tap, or touch for product videos

Product Overview and More

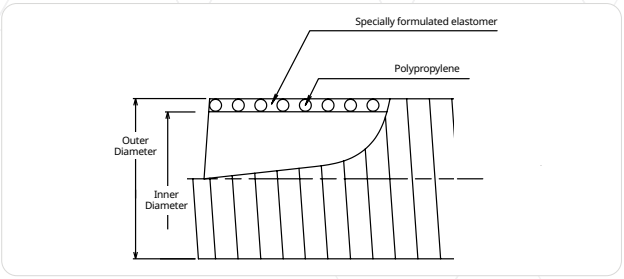
Additional Notes:

[1] Includes hydrogen chloride, sulfur oxides, nitrogen oxides, hydrogen cyanide, and ammonia.

TOTAKU ECO SD-C

Part Number - 22182





Features

- Safe for use in food applications.
  Note: Not suitable for transporting foods or liquids containing oils or fats.
- Meets the standards for food and additives set by the Japanese Ministry of Health, Labour and Welfare (Notification No. 370), excluding elution testing for fatty and oily foods. But they do not meet U.S. standards. They are currently under development, so please contact us for more details.
- Provides outstanding heat resistance and flexibility.
- Can be cleaned with hot water[1] and 95% ethanol, ensuring hygienic use.
- Safe for incineration after use without emitting harmful gases.[2]
- Lightweight, and offers excellent abrasion resistance.
- Features smooth surfaces on both the interior and exterior.
- Semi-transparent construction allows for easy inspection of transported materials.

Applications

- Suitable for transporting alcoholic beverages such as sake and shochu, as well as soft drinks.
- Ideal for transporting food products and others.
- Designed for general water suction and discharge applications.

Cautions

- Do not use or store outdoors for extended periods.

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
1.5	38	1.50	38.0	1.83	46.6	0.33	485	164	50	43.51	0.30	9.45	240
2	50	2.00	50.8	2.39	60.6	0.54	805	164	50	29.01	0.20	14.17	360

The recommended operating temperature range is 32°F to 122°F (0°C to 50°C). However, allowable pressure may vary depending on the operating temperature and installation method. For continuous use, keep the temperature below 104°F (40°C).

Operating Temperature Range:

°F: 32 to 122 °C: 0 to 50

Notes:

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

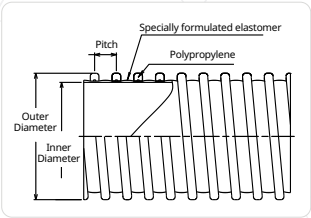
Additional Notes:

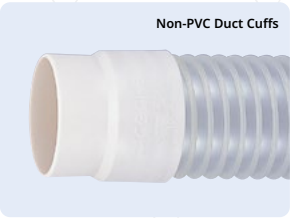
[1] Hot water cleaning should be performed under the following conditions: temperature below 176°F (80°C), pressure below 14.5 psi (0.1 MPa), and a pressurization time of 3 minutes or less.

[2] Includes hydrogen chloride, sulfur oxides, nitrogen oxides, hydrogen cyanide, and ammonia.

TOTAKU ECO DUCT







Features

- Lightweight and flexible, allowing for easy handling.
- Safe for use in food applications.
  Note: Not suitable for transporting foods or liquids containing oils or fats.
- Meets the standards for food and additives set by the Japanese Ministry of Health, Labour and Welfare (Notification No. 370), excluding elution testing for fatty and oily foods. But they do not meet U.S. standards. They are currently under development, so please contact us for more details.
- Exceptional bending durability.
  (No defects observed after 1,000,000 bending cycles)
- Transparent construction allows for easy inspection of transported materials
- Safe for incineration after use without emitting harmful gases.[1]
  (Incineration ash residue is 0.05% or less)

Applications

- Suitable for air supply and exhaust in equipment and machinery.
- Appropriate for use in intake and exhaust systems of food-grade machinery.
- Ideal for air supply and exhaust in cleanrooms and other environments requiring low particle emission.
- Suitable for drainage purposes (for surface-level drainage).

Cautions

- Do not use or store outdoors for extended periods.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Depressurization *(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	inHg	kPa	inch	mm
1.25	32	1.26	32.0	1.50	38.0	0.30	7.5	0.11	170	98	30	5.80	0.04	14.97	-50.7	1.57	40
1.5	38	1.50	38.0	1.77	45.0	0.31	7.8	0.16	235	98	30	5.80	0.04	14.97	-50.7	1.97	50
2	50	2.00	50.8	2.32	59.0	0.39	10.0	0.22	325	98	30	5.80	0.04	14.97	-50.7	2.36	60
2.5	65	2.50	63.5	2.83	72.0	0.49	12.5	0.27	405	98	30	4.35	0.03	14.97	-50.7	2.95	75
3	75	3.00	76.2	3.35	85.0	0.51	13.0	0.32	470	98	30	4.35	0.03	9.74	-33.0	3.54	90
3.5	90	3.50	88.9	3.90	99.0	0.53	13.5	0.39	575	98	30	4.35	0.03	5.91	-20.0	3.54	90
4	100	4.00	101.6	4.39	111.5	0.59	15.0	0.43	635	98	30	4.35	0.03	5.17	-17.5	4.33	110
5	125	5.00	127.0	5.45	138.5	0.83	21.0	0.66	975	65	20	2.90	0.02	3.69	-12.5	5.31	135
6	150	6.00	152.4	6.46	164.0	0.79	20.0	0.76	1125	65	20	2.90	0.02	3.69	-12.5	6.30	160
8	200	8.00	203.2	8.50	216.0	0.89	22.5	1.04	1545	65	20	1.45	0.01	1.77	-6.0	8.27	210
10	250	9.92	252.0	10.67	271.0	1.02	26.0	2.00	2975	32	10	1.45	0.01	1.18	-4.0	11.81	300
12	300	11.93	303.0	12.68	322.0	1.02	26.0	2.51	3735	32	10	1.45	0.01	0.74	-2.5	13.78	350

This product uses materials designed to minimize dust generation; however, under certain conditions (such as temperature, fluid type, or pressure), particle emission may still occur. Please verify emission characteristics based on your operating conditions before use.

Operating Temperature Range:

°F: -4 to 122 °C: -20 to 50

Notes:

- The permissible pressure varies with operating temperature.

Scan, tap, or touch for product videos

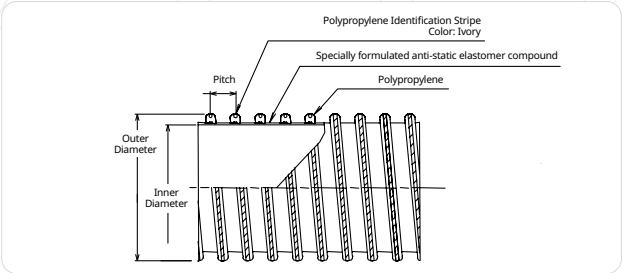
Product Overview

Additional Notes:

[1] *Includes hydrogen chloride, sulfur oxides, nitrogen oxides, hydrogen cyanide, and ammonia.*

TOTAKU ECO DUCT-AS





Features

- Lightweight and flexible, allowing for easy handling.
- Safe for use in food applications.
  Note: Not suitable for transporting foods or liquids containing oils or fats.
- Meets the standards for food and additives set by the Japanese Ministry of Health, Labour and Welfare (Notification No. 370), excluding elution testing for fatty and oily foods. But they do not meet U.S. standards. They are currently under development, so please contact us for more details.
- Exceptional bending durability.
  (No defects observed after 1,000,000 bending cycles)
- Transparent construction allows for easy inspection of transported materials
- Safe for incineration after use without emitting harmful gases.[1]
  (Incineration ash residue is 0.05% or less)

Applications

- Suitable for air supply and exhaust in equipment and machinery.
- Appropriate for use in intake and exhaust systems of food-grade machinery.
- Ideal for air supply and exhaust in cleanrooms and other environments requiring low particle emission.
- Suitable for drainage purposes (for surface-level drainage).

Cautions

- Do not use or store outdoors for extended periods.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Depressurization *(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	inHg	kPa	inch	mm
1.5	38	1.50	38.0	1.77	45.0	0.31	7.8	0.15	220	98	30	5.80	0.04	14.97	-50.7	1.97	50
2	50	2.00	50.8	2.32	59.0	0.39	10.0	0.22	325	98	30	5.80	0.04	14.97	-50.7	2.36	60
2.5	65	2.50	63.5	2.83	72.0	0.49	12.5	0.27	405	98	30	4.35	0.03	14.97	-50.7	2.95	75
3	75	3.00	76.2	3.35	85.0	0.51	13.0	0.32	470	98	30	4.35	0.03	9.74	-33.0	3.54	90
4	100	4.00	101.6	4.39	111.5	0.59	15.0	0.43	635	98	30	4.35	0.03	5.17	-17.5	4.33	110
5	125	5.00	127.0	5.45	138.5	0.83	21.0	0.54	805	65	20	2.90	0.02	3.69	-12.5	5.31	135
6	150	6.00	152.4	6.46	164.0	0.79	20.0	0.71	1055	65	20	2.90	0.02	3.69	-12.5	6.30	160
8	200	8.00	203.2	8.50	216.0	0.89	22.5	0.97	1440	65	20	1.45	0.01	1.77	-6.0	8.27	210

This product uses materials designed to minimize dust generation; however, under certain conditions (such as temperature, fluid type, or pressure), particle emission may still occur. Please verify emission characteristics based on your operating conditions before use.

Operating Temperature Range:

°F: -4 to 122 °C: -20 to 50

Notes:

- The permissible pressure varies with operating temperature.

Scan, tap, or touch for product videos

Static Electricity Prevention

Additional Notes:

[1] Includes hydrogen chloride, sulfur oxides, nitrogen oxides, hydrogen cyanide, and ammonia.

TOTAKU

TOTAKU Food-Grade 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

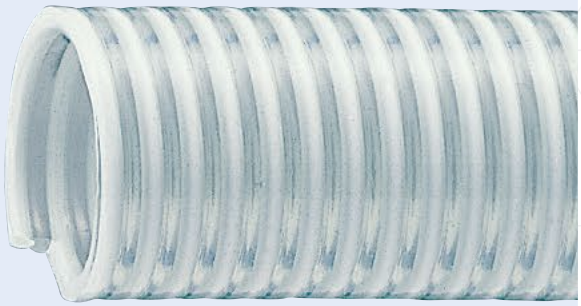
SD-F	02
SD-HF	03

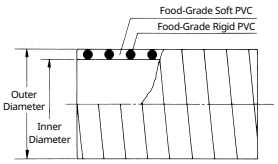
Notice:

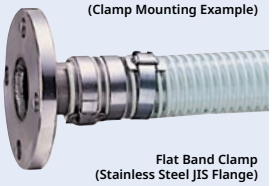
- The data in this catalog uses values in a straight hose configuration.
- The permissible pressure is not the maximum operating pressure. Please refer to the "Operating Pressure Design Table" in the hose handling precautions and configure according to the operating pressure (normal working pressure).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

TOTAKU SD-F

Part Number - 22107







Features

- Tasteless and odorless, making it ideal for food transportation.
- Free from phthalate-based plasticizers, meeting the requirements of Japanese Ministry of Health, Labour and Welfare Notification No. 267, effective August 1, 2003.
- Suitable for use with oils and fatty foods.
- Complies with the Standards for Food and Additives (Japanese Ministry of Health Notification No. 370).

Applications

- Suitable for transporting sake, shochu, beer, and soft drinks.
- Ideal for transporting other food products.
- Effective for non-food oil transportation.
- Designed for both suction and discharge uses

Cautions

- For transporting food-grade powders, wrap a metal wire (such as copper wire) around the hose's exterior and connect it to a grounding point.
- After use, ensure no high-concentration alcohol or other organic solvents remain inside 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
1	25	1.00	25.4	1.23	31.2	0.23	340	164	50	72.52	0.50	9.45	240
1.25	32	1.26	32.0	1.54	39.2	0.34	510	164	50	65.27	0.45	13.39	340
1.5	38	1.50	38.0	1.81	46.0	0.44	650	164	50	58.02	0.40	13.78	350
2	50	2.00	50.8	2.40	61.0	0.75	1120	164	50	58.02	0.40	19.69	500
2.5	65	2.50	63.5	2.94	74.8	1.02	1525	65/164	20/50	58.02	0.40	23.62	600
3	75	3.00	76.2	3.46	88.0	1.27	1885	65/164	20/50	58.02	0.40	30.51	775
3.5*	90	3.50	88.9	3.96	100.5	1.47	2190	65	20	43.51	0.30	41.93	1065
4	100	4.00	101.6	4.56	115.8	2.07	3080	65	20	43.51	0.30	45.28	1150
5*	125	5.00	127.0	5.55	141.0	2.46	3660	65	20	36.26	0.25	62.99	1600
6*	150	6.00	152.4	6.61	167.8	3.36	5000	65	20	29.01	0.20	74.80	1900

Sizes marked with an asterisk (*) and all sizes with grounding wires are made-to-order items. For inquiries about order quantities or other details, please contact us directly. Our food hoses comply with the Japanese Food Sanitation Act but do not meet U.S. standards. They are currently under development, so please contact us for more details.

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

Specifications and Standards for Food, Food Additives, etc. (Japanese Ministry of Health and Welfare Notification No. 370, 1959)

Japan's Specifications and Standards for Food, Food Additives, etc. were revised under the following notification (excerpt):

Japanese Ministry of Health, Labour and Welfare Notification No. 196, 2020
A positive list system was introduced, allowing only materials that have been evaluated for safety to be used in food-related utensils, containers, and packaging.

- **Compliance of Our Products with the Japanese Food Sanitation Act**
  Our food-grade hoses[1] comply with the Japanese Food Sanitation Act[2].
- **Regulatory Standards:** Refer to Section Number 3-A-8 Appendix 1 (Positive List) of the "Specifications and Standards for Food, Food Additives, etc." (Japanese Ministry of Health and Welfare Notification No. 370, 1959), established under Article 18 of the Japanese Food Sanitation Act (Act No. 233, 1947).

[1] Food-Grade Hoses: For assistance with selecting hoses suitable for food-related use, please contact us.
[2] Compliance with the Japanese Food Sanitation Act, Our products comply with the requirements of the Japanese National Positive List (PL) or fall under transitional measures. Transitional measures apply to utensils, containers, and packaging confirmed to be equivalent to those distributed before the law's enforcement. These items may continue to be distributed for up to **5 years after enforcement (until May 31, 2025)**.

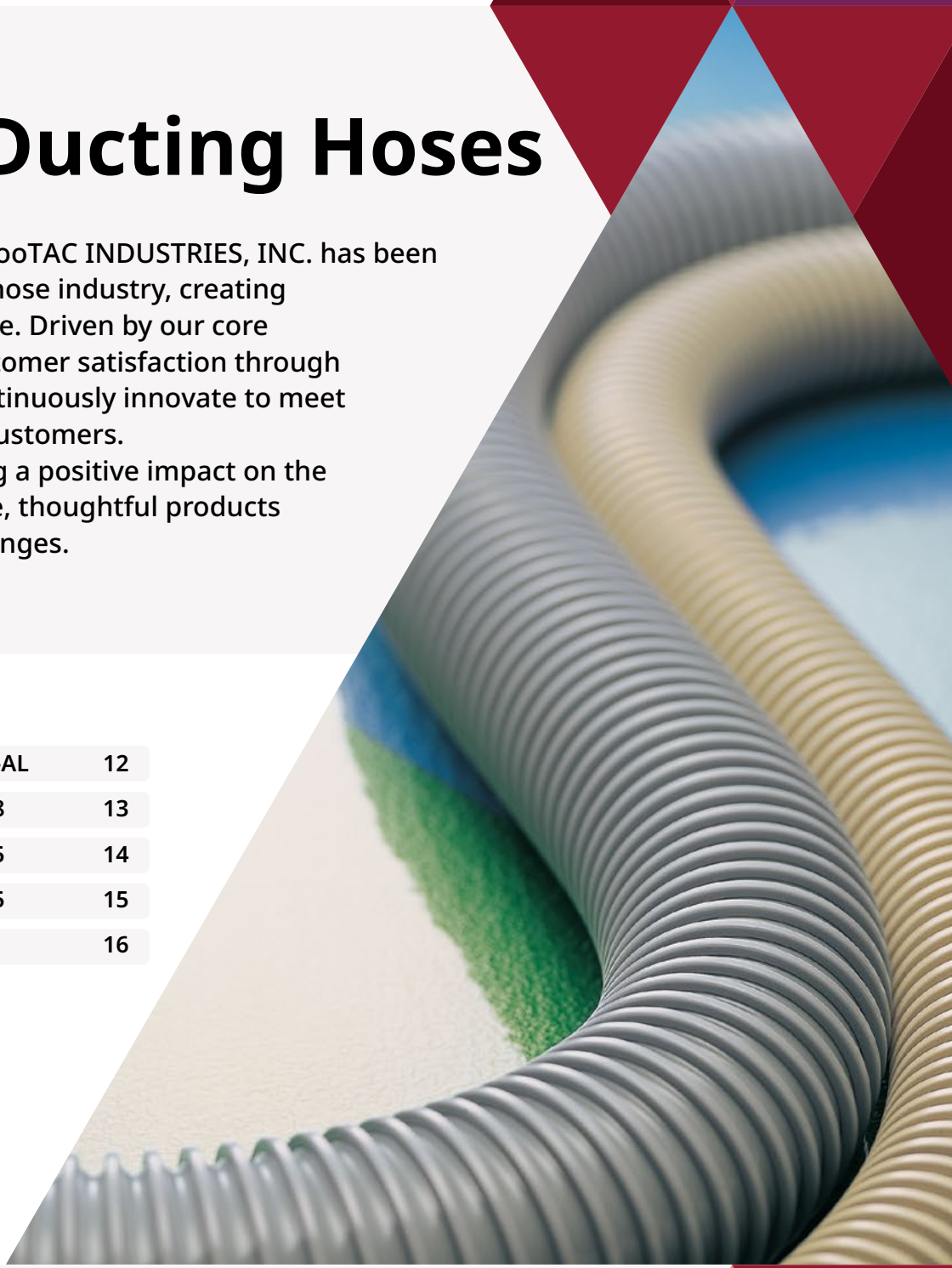
About Oils and Fatty Foods

According to the Japanese Food Sanitation Act, oils and fatty foods are defined as: "Foods or food surfaces containing approximately 20% or more oil or fat, as well as foods that include such oils or fats, excluding dried solid foods." Examples include beef tallow, vegetable oil, ham, bacon, beef, pork, chocolate, potato chips, tempura, deep-fried tofu, fried fish cakes, croquettes, tonkatsu (breaded pork cutlet), mayonnaise, dressing, cheese, butter, hamburg steak, gyoza, fried chicken, meatballs, curry, beef stew, nikujaga (beef and potato stew), stir-fried vegetables, kinpira gobo (braised burdock root), stewed dishes with oil or fried tofu, potato salad, donuts, cakes, cookies, karinto (sweet fried snacks), and fried rice crackers, among others.

TOTAKU

TOTAKU Ducting 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

DUCT-EE	02	DUCT-AL	12
CLEAR DUCT	03	MD-18	13
DUCT-D	04	MD-25	14
DUCT-FR	05	MD-45	15
HERAN DUCT	06	IT-13	16
BELLOWS DUCT	07		
DUCT-AROR	08		
DUCT-OR	09		
DUCT-PP	10		
RETRACTABLE DUCT	11		

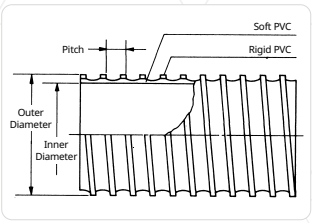
Notice:

- The data in this catalog uses values in a straight hose configuration. (The allowable Vacuum Pressure for duct hoses is measured when the hose is in a straight configuration with both ends fixed.)
- 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 DUCT-EE

Part Number - 21107





(Cuff Mounting Example)



Features

- This is a standard type of TOTAKU DUCT-D.
- Compared to TOTAKU DUCT-D, it has lower internal resistance, allowing for greater transport capacity.
- It is flexible and lightweight, reducing labor during handling and installation.
- Easy to cut and install, simplifying ductwork.

Applications

- Useful for indoor air supply and exhaust.
- Ideal for air supply and exhaust in factory equipment.
- Effective for dust collection and other air supply/exhaust needs.
- Suitable for drainage purposes (for surface-level drainage).

Compatibility Chart for Steel and PVC Pipes

Hose Nominal Diameter		Applicable Pipe Type								SY Band Product Number
		ASTM:A53 Type F				JP standard PVC pipe *(ASTM:D1785equivalent)*				
		Nominal Diameter		Outer Diameter		Nominal Diameter		Outer Diameter		
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
3	75	2.56	65	3.00	76.3	2.6	65	2.99	76	SY75
3.5	90	3.15	80	3.51	89.1	3.0	75	3.50	89	SY90
4	100	3.54	90	4.00	101.6	-	-	-	-	SY100
4.5	115	3.94	100	4.50	114.3	3.9	100	4.49	114	SY117
6.5	165	5.91	150	6.50	165.2	5.9	150	6.50	165	SY165

For installation, insert directly and secure with an SY band.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
1.25	32	1.28	32.4	1.52	38.6	0.33	8.4	0.15	220	164	50	8.70	0.06	19.49	-66.00	1.26	32
1.5	38	1.47	37.3	1.75	44.5	0.36	9.2	0.20	295	164	50	8.70	0.06	19.49	-66.00	1.50	38
2	50	1.99	50.6	2.37	60.2	0.39	10.0	0.39	585	98	30	7.25	0.05	19.49	-66.00	1.97	50
2.5	65	2.46	62.4	2.83	72.0	0.47	12.0	0.43	645	98	30	5.80	0.04	19.49	-66.00	2.56	65
3*	75	3.01	76.4	3.40	86.4	0.51	13.0	0.52	775	98	30	5.80	0.04	9.74	-33.00	2.95	75
3.5*	90	3.50	88.9	3.92	99.5	0.53	13.5	0.64	945	98	30	4.35	0.03	9.74	-33.00	3.54	90
4*	100	4.00	101.6	4.42	112.2	0.59	15.0	0.69	1020	98	30	4.35	0.03	6.35	-21.50	3.94	100
4.5*	115	4.50	114.3	4.96	125.9	0.69	17.4	0.84	1255	98	20	4.35	0.03	6.35	-20.00	4.33	110
5	125	4.96	125.9	5.46	138.7	0.83	21.0	0.91	1350	65	20	2.90	0.02	5.91	-20.00	4.92	125
6	150	6.00	152.4	6.49	164.8	0.79	20.0	1.12	1670	65	20	2.90	0.02	4.28	-14.50	5.91	150
6.5*	165	6.50	165.0	7.00	177.8	0.87	22.0	1.19	1770	65	20	2.90	0.02	2.95	-10.00	5.91	150
7	175	7.00	177.8	7.50	190.6	0.79	20.0	1.30	1935	65	20	2.90	0.02	2.95	-10.00	6.89	175
8	200	8.02	203.7	8.55	217.1	0.89	22.5	1.47	2190	65	20	1.45	0.01	1.77	-6.00	7.87	200
9	225	8.94	227.0	9.46	240.4	0.93	23.5	1.64	2440	32	10	1.45	0.01	1.62	-5.50	8.86	225
10	250	9.92	252.0	10.48	266.2	0.98	25.0	1.98	2950	32	10	1.45	0.01	1.33	-4.50	9.84	250
11	275	10.94	278.0	11.52	292.6	1.10	28.0	2.12	3150	32	10	1.45	0.01	1.18	-4.00	10.83	275
12	300	11.93	303.0	12.52	318.0	1.18	30.0	2.34	3480	32	10	1.45	0.01	0.89	-3.00	11.81	300

Sizes marked with an asterisk (*) can be directly connected to steel pipes.

Size																		
	inch	1.25	1.5	2	2.5	3	3.5	4	4.5	5	6	6.5	7	8	9	10	11	12
	mm	32	38	50	65	75	90	100	115	125	150	165	175	200	225	250	275	300
Cuff Available		Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	No	No	No

Note: The 7-inch (φ175) diameter cuff is made of EPDM, while other sizes are made of soft PVC.

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

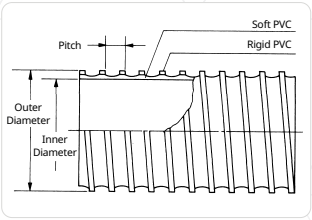
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU CLEAR DUCT

Part Number - 21121





(Cuff Mounting Example)



Features

- A transparent type of TOTAKU DUCT-EE, allowing for visual inspection of transported materials

Applications

- Suitable for dust collection in woodworking machinery.
- Ideal for the transport of powders, granules, and gases.
- Useful for air supply and exhaust in indoor and factory equipment.
- Effective when visual inspection of transported materials is required.
- Suitable for drainage applications (for surface-level drainage).

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
1.25	32	1.28	32.4	1.52	38.6	0.33	8.4	0.15	220	164	50	8.70	0.06	19.49	-66.00	1.26	32
1.5	38	1.47	37.3	1.75	44.5	0.36	9.2	0.20	295	164	50	8.70	0.06	19.49	-66.00	1.50	38
2	50	1.99	50.6	2.37	60.2	0.39	10.0	0.39	585	98	30	7.25	0.05	19.49	-66.00	1.97	50
2.5	65	2.46	62.4	2.83	72.0	0.47	12.0	0.43	645	98	30	5.80	0.04	19.49	-66.00	2.56	65
3	75	3.01	76.4	3.40	86.4	0.51	13.0	0.51	755	98	30	5.80	0.04	9.74	-33.00	2.95	75
3.5	90	3.50	88.9	3.92	99.5	0.53	13.5	0.64	950	98	30	4.35	0.03	9.74	-33.00	3.54	90
4	100	4.00	101.6	4.42	112.2	0.59	15.0	0.69	1020	98	30	4.35	0.03	6.35	-21.50	3.94	100
5	125	4.96	125.9	5.46	138.7	0.83	21.0	0.91	1350	65	20	2.90	0.02	5.91	-20.00	4.92	125
6	150	6.00	152.4	6.49	164.8	0.79	20.0	1.12	1670	65	20	2.90	0.02	4.28	-14.50	5.91	150
8	200	8.02	203.7	8.55	217.1	0.89	22.5	1.47	2190	65	20	1.45	0.01	1.77	-6.00	7.87	200

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.
Cuffs: Made of soft PVC.

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

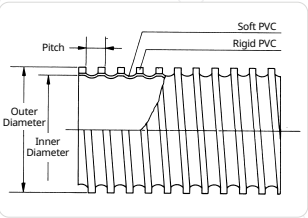
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU DUCT-D

Part Number - 21101





Cuff Mounting Example



Features

- Lightweight and flexible, improving handling and installation efficiency.
- Easy to cut and install, simplifying ductwork.

Applications

- Suitable for air supply and exhaust in equipment and machinery.
- Ideal for air ventilation systems.
- Effective for dust collection, air supply, and exhaust applications.
- Suitable for drainage purposes (for surface-level drainage).

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
1.25	32	1.28	32.4	1.52	38.6	0.30	7.5	0.17	255	164	50	8.70	0.06	19.49	-66.00	1.26	32
1.5	38	1.47	37.3	1.75	44.5	0.31	7.9	0.24	360	164	50	8.70	0.06	19.49	-66.00	1.50	38
2	50	2.00	50.8	2.35	59.8	0.43	11.0	0.37	545	164	50	7.25	0.05	19.49	-66.00	1.97	50
2.5	65	2.52	64.0	2.88	73.2	0.44	11.1	0.46	685	98	30	5.80	0.04	19.49	-66.00	2.56	65
3*	75	3.01	76.5	3.38	85.9	0.46	11.7	0.55	825	98	30	5.80	0.04	9.74	-33.00	2.95	75
3.5*	90	3.54	90.0	3.94	100.0	0.47	12.0	0.71	1050	98	30	4.35	0.03	9.74	-33.00	3.54	90
4*	100	4.06	103.0	4.45	113.0	0.47	12.0	0.84	1245	98	30	4.35	0.03	6.64	-22.50	3.94	100
5	125	5.01	127.3	5.41	137.3	0.48	12.1	0.97	1445	65	20	2.90	0.02	3.54	-12.00	4.92	125
6	150	5.96	151.4	6.38	162.0	0.53	13.5	1.23	1830	65	20	2.90	0.02	2.95	-10.00	5.91	150
7	175	6.95	176.6	7.39	187.8	0.54	13.7	1.46	2170	65	20	1.45	0.01	2.36	-8.00	6.89	175
8	200	8.07	205.0	8.54	216.8	0.56	14.3	1.85	2760	65	20	1.45	0.01	1.92	-6.50	7.87	200
10	250	9.93	252.1	10.39	263.9	0.55	13.9	2.21	3290	32	10	1.45	0.01	1.18	-4.00	9.84	250
12	300	11.93	303.0	12.44	316.0	0.62	15.7	2.75	4090	32	10	1.45	0.01	0.74	-2.50	11.81	300

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.
Note: The 7-inch (φ175 mm) cuff is made of EPDM, while other sizes are made of soft PVC.

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

Notes:

- The permissible pressure varies with operating temperature.

TOTAKU DUCT-FR

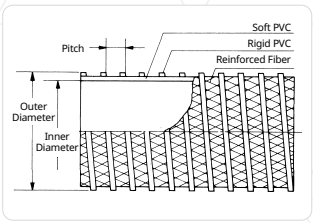


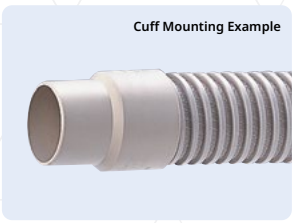
Features

- Features a reinforcing cord for superior tensile strength and outstanding flexibility and bending durability.
- The ivory-white color transforms the look of traditional vinyl ducts, blending well with modern equipment.

Applications

- Suitable for air supply and exhaust in equipment and machinery.
- Ideal for air ventilation systems.
- Effective for dust collection, air supply, and exhaust applications.
- Suitable for drainage purposes (for surface-level drainage).





Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum Pressure *(at room temperature)*		Allowable Bend Radius *(to the center axis of the hose)*		Fitting (Cuff) Available
inch	mm	inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m	psi	MPa	inHg	kPa	inch	mm	Yes/No
1.25	32	1.26	32.0	1.57	40.0	0.33	8.5	0.20	300	164	50	14.50	0.10	14.47	-49.00	1.26	32	Yes
1.5	38	1.50	38.0	1.82	46.2	0.35	9.0	0.27	400	164	50	14.50	0.10	14.47	-49.00	1.50	38	Yes
2	50	1.99	50.6	2.40	61.0	0.39	10.0	0.45	665	98	30	11.60	0.08	14.47	-49.00	1.97	50	Yes
2.5	65	2.46	62.4	2.86	72.6	0.47	12.0	0.49	730	98	30	10.15	0.07	14.47	-49.00	2.56	65	Yes
3*	75	3.01	76.4	3.42	86.8	0.59	15.1	0.53	795	98	30	10.15	0.07	11.81	-40.00	2.95	75	Yes
3.5*	90	3.50	88.9	3.91	99.3	0.59	15.1	0.64	950	98	30	10.15	0.07	8.56	-29.00	3.54	90	Yes
4*	100	4.00	101.6	4.45	113.0	0.65	16.4	0.76	1135	98	30	10.15	0.07	6.35	-21.50	3.94	100	Yes
5	125	4.96	125.9	5.48	139.3	0.83	21.0	1.10	1640	65	20	5.80	0.04	5.91	-20.00	4.92	125	Yes
6	150	6.00	152.4	6.54	166.0	0.79	20.0	1.34	2000	65	20	4.35	0.03	5.91	-20.00	5.91	150	Yes
8	200	8.02	203.7	8.56	217.5	0.89	22.5	1.85	2760	65	20	2.90	0.02	3.25	-11.00	7.87	200	Yes

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.
Cuffs: Made of soft PVC.

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

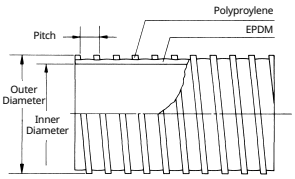
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU HERAN DUCT

Part Number - 21108





Cuff Mounting Example



Features

- Offers more than twice the abrasion resistance compared to our PVC ducts.
- Superior resistance to cold and heat.
  (Operating temperature range: -22°F to 176°F / -30°C to 80°C).
- An anti-static duct hose with excellent static prevention properties.
  (Material volume resistivity: 10^5 Ω·cm or less)
- Highly resistant to ozone cracking, unlike conventional rubber hoses.

Applications

- Suitable for transporting powders, granules, iron powder, paper scraps, and wood dust.
- Ideal for high-temperature air blowers.
- Effective for duct hose applications requiring abrasion resistance, heat resistance, and conductivity.
- Suitable for drainage purposes (for surface-level drainage).

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
1.5	38	1.50	38.0	1.84	46.8	0.37	9.5	0.23	335	98	30	4.35	0.030	11.81	-40.00	1.77	45
2	50	1.99	50.6	2.41	61.2	0.39	10.0	0.37	550	98	30	4.35	0.030	11.81	-40.00	2.17	55
2.5	65	2.46	62.4	2.87	73.0	0.47	12.0	0.41	605	98	30	2.90	0.020	9.74	-33.00	2.56	65
3	75	3.01	76.4	3.43	87.2	0.51	13.0	0.49	725	98	30	2.90	0.020	7.83	-26.50	2.95	75
3.5	90	3.50	88.9	3.95	100.3	0.53	13.5	0.60	890	98	30	1.45	0.010	5.91	-20.00	3.54	90
4	100	4.00	101.6	4.45	113.0	0.59	15.0	0.63	935	98	30	1.45	0.010	5.91	-20.00	3.94	100
5	125	4.96	125.9	5.50	139.7	0.85	21.5	0.88	1315	65	20	1.45	0.010	4.87	-16.50	4.92	125
6	150	6.00	152.4	6.54	166.2	0.79	20.0	1.05	1560	65	20	1.45	0.010	3.84	-13.00	5.91	150
8	200	8.02	203.7	8.56	217.5	0.89	22.5	1.39	2070	65	20	0.73	0.005	3.84	-13.00	7.87	200
10	250	9.92	252.0	10.80	274.2	0.98	25.0	3.78	5620	32	10	0.73	0.005	4.87	-16.50	13.78	350
12	300	11.93	303.0	12.92	328.2	1.18	30.0	4.13	6150	32	10	0.73	0.005	4.87	-16.50	13.78	350

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.
Dedicated EPDM cuffs are available (1.5 inches to 8 inches / φ38 mm to φ200 mm).

Operating Temperature Range:

°F: -22 to 176 °C: -30 to 80

Notes:

- The permissible pressure varies with operating temperature.

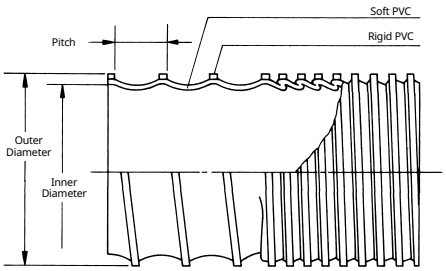
Scan, tap, or touch for product videos

Static Electricity Prevention

TOTAKU BELLOWS DUCT

Part Number - 21104





Features

- Can be expanded and contracted freely, allowing for storage at approximately one-third of its size.
- Lightweight despite its large diameter, making it easy to transport.

Applications

- Ideal for air supply and exhaust in manhole and tunnel construction work.
- Effective for air supply, exhaust, and dust collection in various fields.
- Suitable for drainage purposes (for surface-level drainage).

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
14	350	13.78	350.0	14.45	367.0	1.97	50.0	2.71	4040	32	10	0.73	0.005	0.40	-1.35	13.78	350
16	400	15.75	400.0	16.46	418.0	2.36	60.0	3.27	4860	32	10	0.58	0.004	0.28	-0.95	15.75	400
18	450	17.72	450.0	18.46	469.0	2.36	60.0	3.71	5520	32	10	0.58	0.004	0.28	-0.95	17.72	450
20	500	19.69	500.0	20.47	520.0	2.36	60.0	4.15	6180	32	10	0.44	0.003	0.28	-0.95	19.69	500
22*	550	21.65	550.0	22.44	570.0	2.36	60.0	4.87	7250	32	10	0.44	0.003	0.21	-0.70	21.65	550

** 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

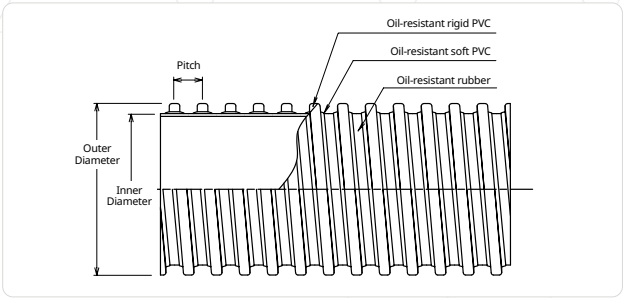
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU DUCT-AROR

Part Number - 21186





Features

- Offers excellent abrasion and oil resistance.
- In addition to abrasion resistance, it also offers superior anti-static properties (Material volume resistivity: 10^5 Ω·cm or less)

Applications

- Ideal for transporting waste oil and scrap materials from metal processing.
- Suitable for use in dust collection systems.
- Effective for recovering gasoline vapor.
- Useful for transporting industrial waste containing oil.
- Appropriate for transporting grains and animal feed.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
1.5	38	1.50	38.0	1.85	47.1	0.37	9.5	0.31	460	98	30	14.50	0.10	19.49	-66.00	1.50	38
2	50	2.00	50.8	2.38	60.4	0.41	10.5	0.40	590	98	30	10.15	0.07	19.49	-66.00	1.97	50
2.5	65	2.52	64.0	2.89	73.5	0.58	14.8	0.51	760	65	20	7.25	0.05	19.49	-66.00	2.56	65
3*	75	3.01	76.4	3.44	87.4	0.59	15.1	0.65	960	98	30	7.25	0.05	9.74	-33.00	2.95	75
4*	100	4.00	101.6	4.50	114.2	0.65	16.4	0.97	1440	65	20	4.35	0.03	9.74	-33.00	3.94	100

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

Notes:

- The permissible pressure varies with operating temperature.

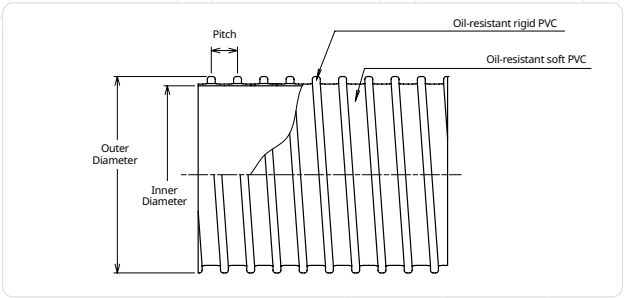
Scan, tap, or touch for product videos

Product Overview | Abrasion Resistance | Static Electricity Prevention | Oil Resistance

TOTAKU DUCT-OR

Part Number - 21181





Features

- Excellent oil resistance.
- Matches equipment with its ivory color.
- Lightweight with superior bending durability.
- Low internal resistance, contributing to efficient and energy-saving operations.

Applications

- Useful for the intake and exhaust of oil mist.
- Effective for recovering oil mist from lathes, milling machines, and similar equipment.
- Suitable for drainage purposes (for surface-level drainage).

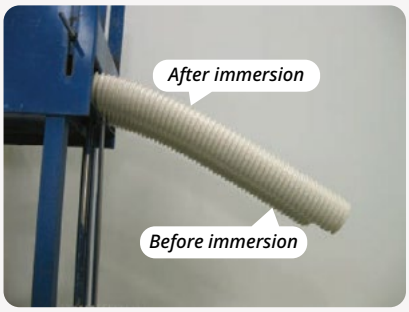
Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
2	50	1.99	50.6	2.37	60.2	0.39	10.0	0.42	625	98	30	7.25	0.05	19.49	-66.00	1.97	50
3*	75	3.01	76.4	3.40	86.4	0.51	13.0	0.52	775	98	30	5.80	0.04	9.74	-33.00	2.95	75
4*	100	4.00	101.6	4.42	112.2	0.59	15.0	0.75	1120	98	30	4.35	0.03	6.35	-21.50	3.94	100
5	125	4.96	125.9	5.46	138.7	0.83	21.0	0.91	1350	65	20	2.90	0.02	5.91	-20.00	4.92	125
6	150	6.00	152.4	6.49	164.8	0.79	20.0	1.12	1670	65	20	2.90	0.02	4.28	-14.50	5.91	150
8	200	8.00	203.2	8.52	216.5	0.89	22.5	1.47	2190	65	20	1.45	0.01	1.77	-6.00	7.87	200

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

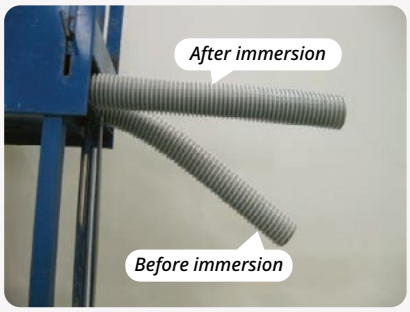
Oil Resistance (Changes in Flexibility After Oil Immersion)

TOTAKU Oil-Resistant Duct



No change in flexibility even after immersion in oil for one week. (Kerosene was used in this test.)

Generic PVC Duct



General PVC duct becomes hardened and is unable to withstand bending after oil immersion.

Operating Temperature Range:

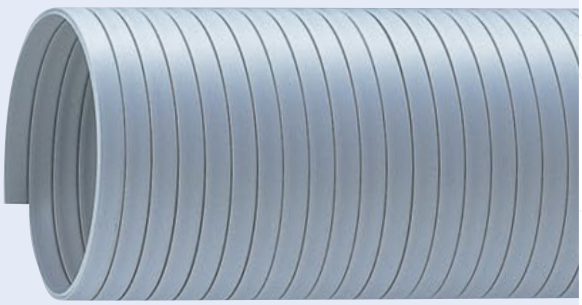
°F: 14 to 122 °C: -10 to 50

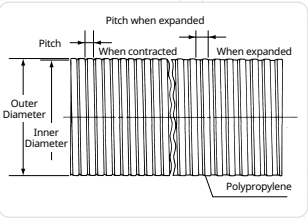
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU RIGID DUCT-PP

Part Number - 21184





End Cover Installation Example



Features

- Achieves a 10-20% weight reduction compared to traditional PVC products.
- Can be freely bent and retains its shape after bending. (Indoor use only. Note: Shape retention decreases as temperature rises.)
- Diameter can be adjusted by twisting the end.
- Easily cut with a knife.
- Ducts can be quickly connected by twisting the ends together. (Wrap the joint with vinyl tape or similar material after connection.)
- Can be incinerated after use.

Applications

- Suitable for spot coolers.
- Effective for air ventilation supply and exhaust.
- Useful for dust collection in woodworking and metal polishing machinery.
- Appropriate for civil engineering, electrical conduit, agricultural, and other uses

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch *(when expanded)*		Reference Weight		Length		Percentage Change in Diameter		Expansion-Contraction Ratio	Allowable Bend Radius *(to the center axis of the hose)*		Maximum Operating Temperature	
inch	mm	inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m	Expansion	Contraction	-	inch	mm	°F	°C
2	55	2.17	55.0	2.39	60.8	0.28	7.0	0.30	450	32	10	20	15	1.5	5.51	140	176	80
2.5	65	2.56	65.0	2.79	70.8	0.28	7.0	0.34	510	32	10	20	15	1.5	6.10	155	176	80
3	75	2.95	75.0	3.24	82.4	0.30	7.5	0.45	675	32	10	20	15	1.5	6.89	175	176	80
3.5	90	3.54	90.0	3.83	97.4	0.30	7.5	0.52	775	32	10	20	15	1.5	8.27	210	176	80
4	100	3.94	100.0	4.23	107.4	0.30	7.5	0.57	845	32	10	20	15	1.5	9.06	230	176	80
5	125	4.92	125.0	5.23	132.8	0.30	7.5	0.79	1175	32	10	20	15	1.5	11.81	300	167	75
6	150	5.91	150.0	6.21	157.8	0.30	7.5	0.93	1380	32	10	20	15	1.5	13.78	350	167	75
7	175	6.89	175.0	7.20	182.8	0.30	7.5	1.20	1785	32	10	20	15	1.5	15.75	400	167	75
8	200	7.87	200.0	8.19	208.0	0.30	7.5	1.25	1855	32	10	20	15	1.5	17.72	450	167	75
10	250	9.84	250.0	10.22	259.6	0.41	10.5	2.15	3195	13	4	15	10	1.5	37.80	960	158	70
12	300	11.81	300.0	12.19	309.6	0.41	10.5	2.68	3990	13	4	15	10	1.5	39.37	1000	158	70

Note: This is the length in the contracted state.
End covers are available in all sizes.

Operating Temperature Range:

°F: 14 to 176 °C: -10 to 80

Notes:

- The permissible pressure varies with operating temperature.

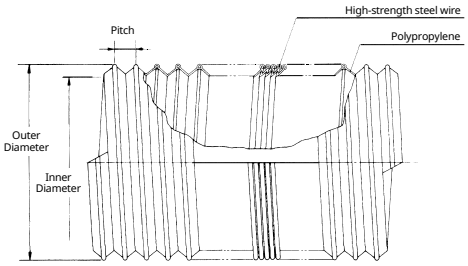
Scan, tap, or touch for product videos

Cutting Method

TOTAKU RETRACTABLE DUCT

Part Number - 15112





Features

- Can expand and contract freely, with the ability to be fixed at any angle or direction. (Note: Shape retention may decrease for larger diameters.)
- Reduces to 1/3 to 1/4 of its original length, facilitating easier transport and minimizing storage space before installation.

Applications

- Suitable for hot air (below 176°F / 80°C) supply and exhaust.
- Ideal for air conditioning and ventilation use.
- Effective for equipment exhaust and similar applications.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch *(when expanded)*		Reference Weight		Length		Cyclic Durability	Bend Cycle Strength	Allowable Bend Radius *(to the center axis of the hose)*		Maximum Operating Temperature	
inch	mm	inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m			inch	mm	°F	°C
1.5	38	1.38	35	1.65	42.0	0.41	10.5	0.11	165	16	5	Over 100,000 cycles (32°F/0°C, 77°F/25°C)	Over 100,000 cycles (left and right 90°) (32°F/0°C, 77°F/25°C)	1.18	30	176	80
2	50	1.97	50	2.28	58.0	0.48	12.3	0.13	190	16	5			1.57	40	176	80
2.5	65	2.48	63	2.83	72.0	0.55	14.0	0.15	230	16	5			2.17	55	176	80
3	75	2.80	71	3.19	81.0	0.62	15.7	0.17	255	16	5			2.36	60	176	80
3.5	90	3.27	83	3.70	94.0	0.62	15.7	0.25	365	16	5			2.76	70	176	80
4	100	3.82	97	4.25	108.0	0.67	17.0	0.30	440	16	5			3.15	80	176	80
5	125	4.84	123	5.31	135.0	0.73	18.5	0.42	630	16	5			3.94	100	176	80
6	150	5.71	145	6.22	158.0	0.89	22.5	0.49	730	16	5			4.72	120	176	80
8	200	7.72	196	8.25	209.5	0.96	24.5	0.62	920	16	5			6.30	160	176	80
12	300	11.57	294	12.19	309.5	1.06	27.0	1.04	1555	16	5			9.45	240	176	80

Note: This product is sold in standard lengths (with cuffs on both ends).

Operating Temperature Range:

°F: -4 to 176 °C: -20 to 80

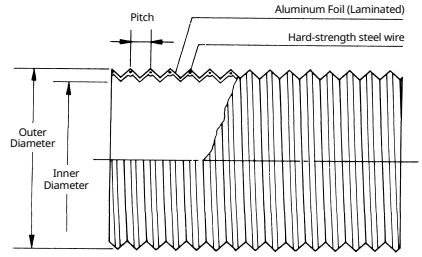
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU DUCT-AL

Part Number - 21102





Features

- Offers flexibility and expandability, making installation in tight spaces easier.
- Can compress to 1/5 of its original length, allowing for compact storage and saving on inventory space.
- Resists repeated bending and provides excellent heat resistance (up to 176°F / 80°C).

Applications

- Suitable for ducting ventilation fans in residential, apartment, and commercial settings.
- Ideal for air conditioning and ventilation in buildings such as offices and commercial properties.

Notes

- This material is not non-combustible and should not be used for range hood exhaust systems.
- Continuous operating temperature range: -4°F to 176°F (-20°C to 80°C).

Standard Dimensions and Properties

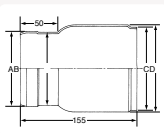
Nominal Diameter		Inner Diameter		Outer Diameter		Pitch *(when expanded)*		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum Pressure *(at room temperature)*		Allowable Bend Radius *(to the center axis of the hose)*		Maximum Operating Temperature	
inch	mm	inch	mm	inch	mm	inch	mm	lbs/ft	g/m	feet	m	psi	MPa	inHg	kPa	inch	mm	°F	°C
1.5	38	1.54	39	1.77	45.0	0.43	10.8	0.08	125	16	5	2.90	0.020	9.74	-33.00	1.18	30	176	80
2	50	1.97	50	2.18	55.3	0.43	10.8	0.11	160	16	5	2.90	0.020	9.74	-33.00	1.38	35	176	80
2.5	65	2.52	64	2.77	70.3	0.43	10.8	0.13	195	16	5	2.90	0.020	9.74	-33.00	1.77	45	176	80
3	75	2.95	75	3.16	80.3	0.43	10.8	0.16	235	16	5	1.45	0.010	7.83	-26.50	2.17	55	176	80
4	100	3.86	98	4.15	105.3	0.43	10.8	0.20	300	16	5	1.45	0.010	4.87	-16.50	2.76	70	176	80
4.5	117	4.45	113	4.70	119.3	0.43	10.8	0.24	360	16	5	1.45	0.010	3.84	-13.00	2.95	75	176	80
5	125	4.92	125	5.13	130.3	0.43	10.8	0.25	375	16	5	1.45	0.010	2.95	-10.00	3.54	90	176	80
6	150	5.91	150	6.13	155.7	0.43	10.8	0.39	580	16	5	1.45	0.010	2.95	-10.00	4.13	105	176	80
7	175	6.89	175	7.11	180.7	0.43	10.8	0.45	670	16	5	1.45	0.010	2.95	-10.00	4.72	120	176	80
8	200	7.87	200	8.10	205.7	0.43	10.8	0.53	785	16	5	1.45	0.010	1.92	-6.50	5.91	150	176	80
10	250	9.84	250	10.07	255.9	0.43	10.8	0.77	1150	16	5	1.16	0.008	1.92	-6.50	7.28	185	176	80
12	300	11.81	300	12.04	305.9	0.43	10.8	0.90	1345	16	5	1.02	0.007	1.18	-4.00	9.06	230	176	80

Notes: The inner diameter is a reference value. When using commercially available insert-type fittings, please verify with the actual product. When inserting nipples or similar components, ensure that the hose is in an expanded state.

TOTAKU DUCT-AL Components

Adapter Fitting (Material: PE) ***Part Number 92101***
A reducer fitting designed to easily connect TOTAKU DUCT-AL to the duct connection port of ventilation fans.

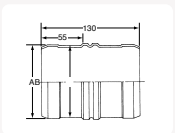




Nominal Diameter		A		B		C		D	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
100	4	3.94	100	3.86	98	4.37	111	4.57	116
150	6	5.91	150	5.83	148	6.34	161	6.54	166
200	8	7.87	200	7.80	198	8.31	211	8.50	216

Duct Connector (Material: PE) ***Part Number 92102***
A same-diameter connector used for joining sections of TOTAKU DUCT-AL.





Nominal Diameter		A		B	
inch	mm	inch	mm	inch	mm
100	4	3.94	100	3.86	98
150	6	5.91	150	5.83	148
200	8	7.87	200	7.80	198



Spiral Wire Band



ABA Band

For installation, use either the Spiral Wire Band or the ABA Band. Note: Available in a range of sizes.

Operating Temperature Range:

°F: -4 to 176 °C: -20 to 80

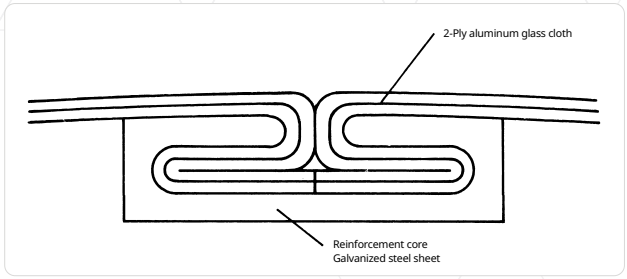
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU MD-18

Part Number - 21114





Features

- Made with aluminum foil, glass cloth, and a reinforced core of galvanized steel sheet, suitable for use at temperatures up to 356°F (180°C).
- Fully flexible and easy to expand and contract, simplifying storage, handling, and transport. (Repeated expansion and contraction should be avoided.)
- Uses an aluminum-glass cloth sheet with superior flame-retardant properties. (Certified as Class 1 flame-resistant.)

Applications

- Ideal for air ventilation systems and intake/exhaust in hot air circulation devices.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
2	50	2.01	51.0	2.15	54.5	0.27	405	16	5	1.02	0.007	2.51	-8.5	4.33	110
2.5	65	2.66	67.5	2.81	71.5	0.35	520	16	5	1.02	0.007	2.36	-8.0	5.51	140
3	75	2.99	76.0	3.15	80.0	0.39	580	16	5	1.02	0.007	2.07	-7.0	6.30	160
3.5	90	3.58	91.0	3.74	95.0	0.42	630	16	5	1.02	0.007	2.07	-7.0	7.48	190
4	100	4.04	102.5	4.17	106.0	0.48	720	16	5	1.02	0.007	1.92	-6.5	8.27	210
5	125	5.02	127.5	5.16	131.0	0.58	860	16	5	1.02	0.007	1.92	-6.5	9.84	250
6	150	5.98	152.0	6.12	155.5	0.71	1050	16	5	1.02	0.007	1.77	-6.0	11.02	280
7	175	6.95	176.5	7.09	180.0	0.80	1185	16	5	1.02	0.007	1.48	-5.0	13.39	340
8	200	7.95	202.0	8.07	205.0	0.94	1400	16	5	1.02	0.007	1.33	-4.5	14.96	380
10	250	9.96	253.0	10.08	256.0	1.20	1780	16	5	1.02	0.007	0.89	-3.0	20.08	510
12	300	11.93	303.0	12.07	306.5	1.41	2100	16	5	1.02	0.007	0.89	-3.0	24.02	610

Repeated bending and expansion is not recommended.

Operating Temperature Range:

°F: -4 to 356 °C: -20 to 180

Notes:

- The permissible pressure varies with operating temperature.

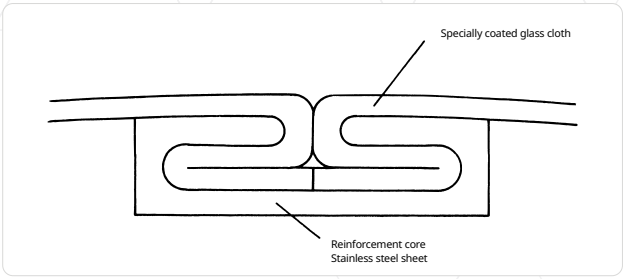
Scan, tap, or touch for product videos

Cutting Method

TOTAKU MD-25

Part Number - 21115





Features

- Certified as non-combustible by the Japanese Minister of Land, Infrastructure, Transport and Tourism (Certification No. NM-5255).
- Made with specially coated glass cloth and a reinforced core of stainless steel (SUS304), suitable for use at temperatures up to 482°F (250°C).
- Freely expandable and contractible, making it easy to store, handle, and transport.
- The specially coated glass cloth used offers excellent flame-retardant properties (Certified as Class 1 flame-resistant).

Applications

- Suitable for hot air circulation devices and as suction ducts for welding sparks.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
2	50	2.01	51.0	2.15	54.5	0.24	360	16	5	1.02	0.007	2.51	-8.5	4.33	110
2.5	65	2.64	67.0	2.81	71.5	0.32	480	16	5	1.02	0.007	2.36	-8.0	5.51	140
3	75	2.99	76.0	3.15	80.0	0.35	525	16	5	1.02	0.007	2.07	-7.0	6.30	160
3.5	90	3.58	91.0	3.72	94.5	0.37	545	16	5	1.02	0.007	1.92	-6.5	7.48	190
4	100	4.04	102.5	4.17	106.0	0.43	635	16	5	1.02	0.007	1.92	-6.5	8.27	210
5	125	5.02	127.5	5.16	131.0	0.52	770	16	5	1.02	0.007	1.77	-6.0	9.84	250
6	150	6.00	152.5	6.12	155.5	0.61	910	16	5	1.02	0.007	1.18	-4.0	11.02	280
7	175	6.95	176.5	7.09	180.0	0.78	1165	16	5	1.02	0.007	1.18	-4.0	13.39	340
8	200	7.95	202.0	8.07	205.0	0.83	1240	16	5	1.02	0.007	0.89	-3.0	14.96	380
10	250	9.96	253.0	10.08	256.0	1.06	1570	16	5	1.02	0.007	0.89	-3.0	20.08	510
12	300	11.95	303.5	12.07	306.5	1.28	1905	16	5	1.02	0.007	0.89	-3.0	24.02	610

Repeated bending and expansion is not recommended.

Operating Temperature Range:

°F: -4 to 482 °C: -20 to 250

Notes:

- The permissible pressure varies with operating temperature.

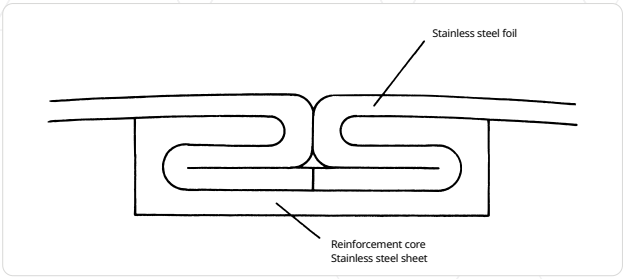
Scan, tap, or touch for product videos

Cutting Method

TOTAKU MD-45

Part Number - 21116





Features

- Made entirely of stainless steel (SUS304) with excellent heat resistance, suitable for use at temperatures up to 842°F (450°C).
- Resistant to corrosion from gases containing acids, alkalis, and solvents at room temperature.
- Designed for fixed ducting but can be shaped to include bends. (Not suitable for repeated bending.)

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
2	50	2.07	52.5	2.20	56.0	0.25	365	6	2	1.02	0.007	3.10	-10.5	6.69	170
2.5	65	2.64	67.0	2.81	71.5	0.31	460	6	2	1.02	0.007	2.95	-10.0	8.27	210
3	75	2.99	76.0	3.15	80.0	0.35	525	6	2	1.02	0.007	2.95	-10.0	9.45	240
3.5	90	3.60	91.5	3.74	95.0	0.38	570	6	2	1.02	0.007	2.66	-9.0	11.42	290
4	100	4.04	102.5	4.17	106.0	0.43	635	6	2	1.02	0.007	2.36	-8.0	12.60	320
5	125	5.02	127.5	5.16	131.0	0.52	780	6	2	1.02	0.007	2.07	-7.0	14.96	380
6	150	6.00	152.5	6.10	155.0	0.62	930	6	2	1.02	0.007	1.92	-6.5	16.54	420
7	175	6.95	176.5	7.09	180.0	0.69	1030	6	2	1.02	0.007	1.92	-6.5	20.08	510
8	200	7.95	202.0	8.07	205.0	0.83	1240	6	2	1.02	0.007	1.77	-6.0	22.44	570
10	250	9.96	253.0	10.08	256.0	1.06	1570	6	2	1.02	0.007	1.33	-4.5	30.31	770
12	300	11.95	303.5	12.07	306.5	1.41	2100	6	2	1.02	0.007	1.33	-4.5	36.22	920

Repeated bending and expansion is not recommended.

Operating Temperature Range:

°F: -4 to 842 °C: -20 to 450

Notes:

- The permissible pressure varies with operating temperature.

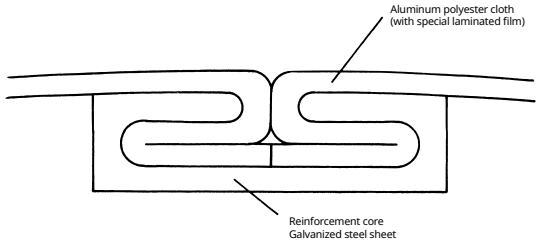
Scan, tap, or touch for product videos

Cutting Method

TOTAKU IT-13

Part Number - 21180





Features

- Made with aluminum polyester cloth and galvanized steel sheet, suitable for use at temperatures up to 266°F (130°C).
- Uses a special laminated film to reduce particle emission caused by surface abrasion.
- Fully flexible and easy to expand and contract, simplifying storage, handling, and transport.

Applications

- Ideal for air supply and exhaust in cleanrooms and other environments requiring low particle emission.
- Suitable for intake and exhaust in hot air generation equipment.

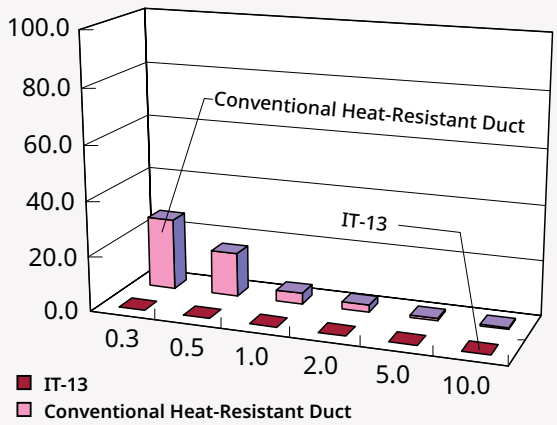
Notes

- This product uses materials designed to minimize dust generation; however, under certain conditions (such as temperature, fluid type, or pressure), particle emission may still occur. Please verify emission characteristics based on your operating conditions before use.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Reference Weight		Length		Allowable Pressure *(at room temperature)*		Allowable Vacuum 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	inHg	kPa	inch	mm
2	50	2.01	51.0	2.15	54.5	0.25	365	16	5	1.02	0.007	2.51	-8.5	4.72	120
2.5	65	2.66	67.5	2.81	71.5	0.30	445	16	5	1.02	0.007	2.36	-8.0	5.51	140
3	75	2.99	76.0	3.15	80.0	0.35	520	16	5	1.02	0.007	2.07	-7.0	6.30	160
4	100	4.04	102.5	4.17	106.0	0.42	630	16	5	1.02	0.007	1.92	-6.5	8.27	210
5	125	5.02	127.5	5.16	131.0	0.51	755	16	5	1.02	0.007	1.92	-6.5	9.84	250
6	150	5.98	152.0	6.10	155.0	0.62	925	16	5	1.02	0.007	1.77	-6.0	11.81	300
7	175	6.95	176.5	7.09	180.0	0.71	1050	16	5	1.02	0.007	1.48	-5.0	11.81	300
8	200	7.95	202.0	8.07	205.0	0.82	1225	16	5	1.02	0.007	1.33	-4.5	15.75	400
10	250	9.96	253.0	10.08	256.0	1.04	1550	16	5	1.02	0.007	0.89	-3.0	23.62	600
12	300	11.93	303.0	12.05	306.0	1.24	1840	16	5	1.02	0.007	0.89	-3.0	23.62	600

Particle Emission Comparison



Note: The data shown represents measured values and are not guaranteed specifications.

Test Samples

TOTAKU IT-13, 2 inches (ϕ50 mm); Conventional Heat-Resistant Duct, 2 inches (ϕ50 mm)

Cleaning Method

Clean air wash

Measurement Method

A 12-inch (30 cm) duct sample is placed in a clean bench (Class 100) within a cleanroom and subjected to expansion and contraction for 1 minute to induce particle emission, which is then measured.

Measurement Equipment

Climate Instruments Laser Particle Counter (JQA-certified),
Model CI-500 with a semiconductor laser light source
Sample Flow Rate: 1 CF/Min
Particle Size Range (μm): 0.3, 0.5, 1.0, 2.0, 5.0, 10.0

Operating Temperature Range:

°F: -4 to 266 °C: -20 to 130

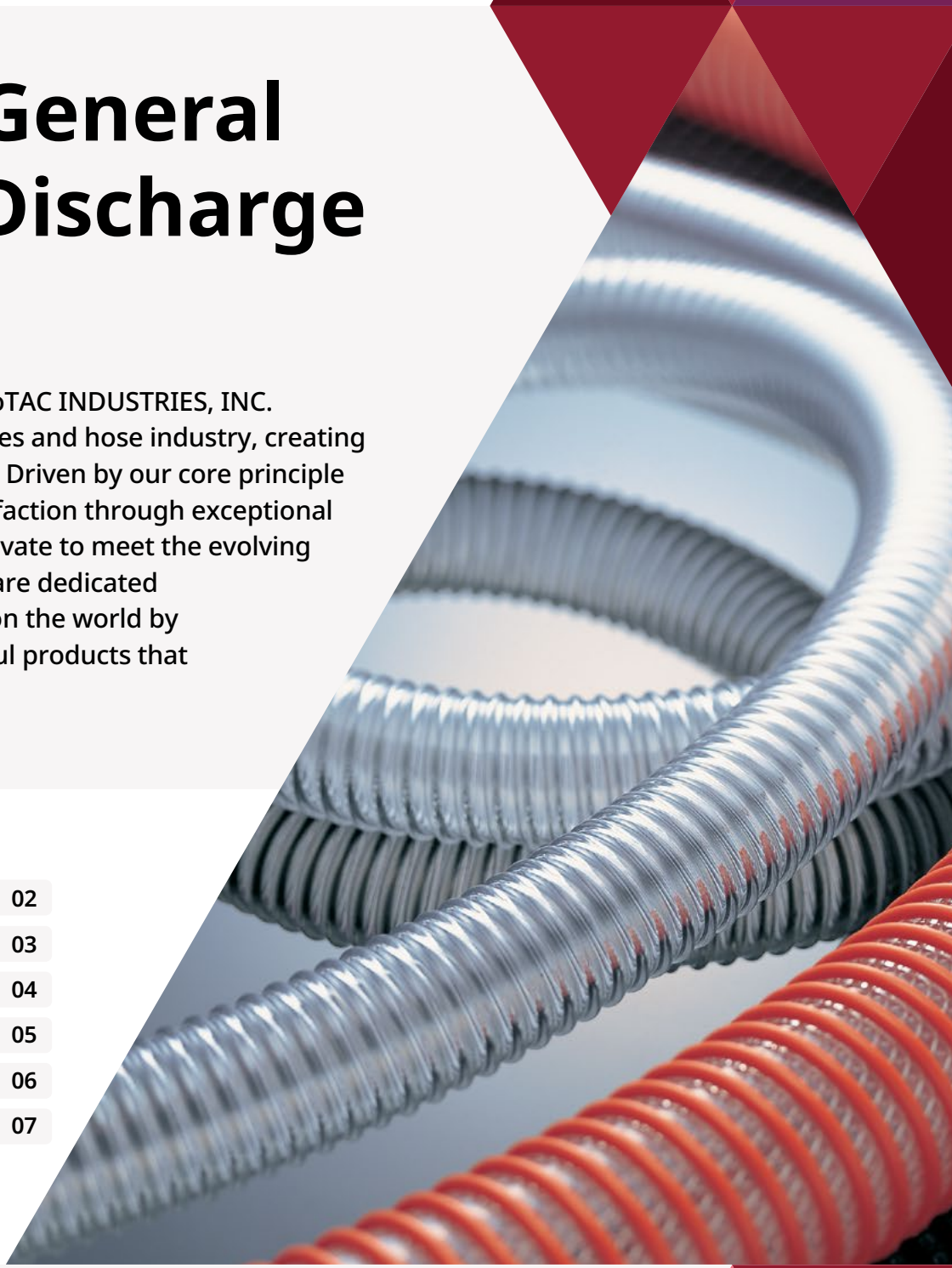
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU

TOTAKU General Suction/Discharge 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

LINE ACE	02
SHIMETAC for TOTAKU LINE ACE	03
SD-A	04
SD-A2	05
SD-C	06
SD-C3	07

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 LINE ACE

Part Number - 22114

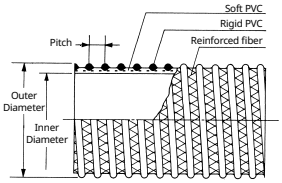


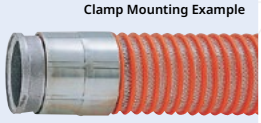
Features

- This is a pressure-resistant type of SD hoses.
- It is equipped with a reinforcement cord, providing an allowable pressure of 72.5 psi (0.50 MPa). For diameters of 10 inches (ϕ250) and 12 inches (ϕ300), the allowable pressure is 36.3 psi (0.25 MPa).

Applications

- Suitable for general discharge and suction use.
- Ideal for submersible pump startups, steep slopes, and hose suspension applications.
- Effective for suction use in tank trucks.





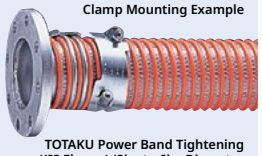
Clamp Mounting Example

Crimping (5in. Diameter and above, ϕ125 and above) (Victaulic S Collar)



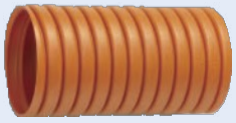
Clamp Mounting Example

Aluminum Crimping (up to 4in. Diameter, ϕ100) (Victaulic S Collar)



Clamp Mounting Example

TOTAKU Power Band Tightening (JIS Flange) (2in. to 6in. Diameter (ϕ50 to ϕ150))



External Clamp Joint for LINE ACE (3in. and 4in. Diameter (ϕ75 and ϕ100))

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	25	1.00	25.4	1.37	34.9	0.30	7.5	0.27	400	164	50	72.52	0.50	4.13	105
1.25	32	1.26	32.0	1.67	42.5	0.33	8.5	0.35	520	164	50	72.52	0.50	4.72	120
1.5	38	1.50	38.0	1.94	49.2	0.35	9.0	0.46	680	164	50	72.52	0.50	5.91	150
2	50	2.00	50.8	2.50	63.4	0.39	10.0	0.64	950	164	50	72.52	0.50	8.86	225
2.5	65	2.50	63.5	3.09	78.5	0.56	14.3	0.88	1305	65/164	20/50	72.52	0.50	10.63	270
3*	75	3.00	76.2	3.62	92.0	0.59	15.1	1.10	1635	65/164	20/50	72.52	0.50	14.76	375
4*	100	4.00	101.6	4.72	120.0	0.65	16.4	1.76	2620	65/164	20/50	72.52	0.50	21.26	540
5	125	4.96	125.9	6.00	152.5	0.87	22.0	2.84	4220	65	20	72.52	0.50	24.80	630
6	150	5.96	151.4	7.09	180.0	0.94	24.0	3.94	5860	65	20	72.52	0.50	30.71	780
8	200	8.02	203.7	9.33	237.0	1.10	28.0	5.77	8590	32	10	72.52	0.50	47.24	1200
10	250	10.00	254.0	11.61	295.0	1.26	32.0	9.10	13540	16	5	36.26	0.25	74.41	1890
12	300	12.00	304.8	13.66	347.0	1.34	34.0	10.93	16260	16	5	36.26	0.25	86.22	2190

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.
For tightening with Totaku Power Bands, we recommend sizes 2 inches (φ50) to 6 inches (φ150). In this case, the allowable pressure is 43.5 psi (0.30 MPa).
For sizes 8 inches (φ200) and above, we recommend crimping for safety.

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.

Scan, tap, or touch for product videos

Cutting Method

SHIMETAC for TOTAKU LINE ACE

[Applicable Sizes: 1 inch (ϕ25)*, 1.5 inches to 4 inches (ϕ38 to ϕ100)]

**For 1 inch (φ25), use the "SHIMETAC for TOTAKU ECO LINE"*

SHIMETAC for TOTAKU LINE ACE



Part Number 92311-025 (1 in. Diameter (φ25), Stainless Steel Bolt)
Part Number 92298- (1.5 in. to 4 in. Diameter (φ38–φ100), Steel Structure Bolt)
Part Number 92302- (1.5 in. to 4 in. Diameter (φ38–φ100), Stainless Steel Bolt)
Material: FRPP (Fiber-Reinforced Polypropylene)

Features

- Lightweight due to resin construction
- Rust-free because of resin material
- High durability

Repeated pressure resistance tests were conducted:

SHIMETAC were attached to both ends of a straight LINE ACE hose, and repeated pressures ranging from 0 to 72.5 psi (0.5 MPa) were applied at 20-second intervals.

Result: All sizes showed no abnormalities after 100,000 cycles.

Notes

- Be sure to use the *dedicated fittings* for SHIMETAC.
- The fittings shown below are examples.

Dedicated Fittings for SHIMETAC

Part Number 92307



PT (Pipe Taper) SHIMETAC shank *(Resin)**

** Available sizes: 1.5 inches (φ38) and 2 inches (φ50) only.*

Part Number 92303



Flanged SHIMETAC shank *(Steel Structure)*

Part Number 92416



Flanged SHIMETAC shank with Tapered Socket *(PVC)*

Part Number 92304



M1 SHIMETAC shank *(Steel Structure)*

Part Number 92326



Double-Ended SHIMETAC shank *(Steel Structure)*

Hose Installation Example



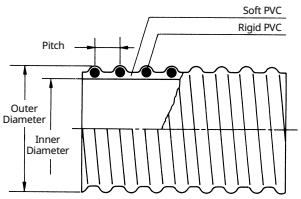
Scan, tap, or touch for product videos

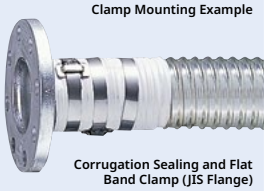
Product Overview | **Compatible Hoses** | **Installation Method**

TOTAKU SD-A

Part Number - 22101







Clamp Mounting Example

Corrugation Sealing and Flat Band Clamp (JIS Flange)

Features

- The corrugated outer surface (with a smooth inner surface) ensures outstanding flexibility.
- The completely transparent material makes it easy to monitor the internal fluids.

Applications

- Suitable for both suction and discharge, but especially ideal for suction use.
- Useful for irrigation.
- Effective for suction and drainage at industrial and civil engineering sites

Compatibility Chart for Steel and PVC Pipes

Hose Nominal Diameter		Applicable Pipe Type							
		ASTM:A53 Type F				JP standard PVC pipe *(ASTM:D1785equivalent)*			
inch	mm	Nominal Diameter		Outer Diameter		Nominal Diameter		Outer Diameter	
		inch	mm	inch	mm	inch	mm	inch	mm
	60	1.97	50	2.38	60.5	2.0	50	2.36	60
3	75	2.56	65	3.00	76.3	2.6	65	2.99	76
3.5	90	3.15	80	3.51	89.1	3.0	75	3.50	89
4	100	3.54	90	4.00	101.6	-	-	-	-
4.5	115	3.94	100	4.50	114.3	3.9	100	4.49	114
6.5	165	5.91	150	6.50	165.2	5.9	150	6.50	165

For installation, insert directly and secure with an SY band.

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
0.5	13	0.51	13.0	0.71	18.0	0.22	5.5	0.07	105	98	30	43.51	0.30	1.77	45
0.75	19	0.75	19.0	0.97	24.7	0.26	6.5	0.11	160	164	50	43.51	0.30	2.13	54
1	25	1.00	25.4	1.25	31.8	0.30	7.5	0.17	250	164	50	43.51	0.30	2.72	69
1.25	32	1.26	32.0	1.54	39.0	0.33	8.5	0.22	330	164	50	36.26	0.25	3.31	84
1.5	38	1.50	38.0	1.80	45.8	0.35	9.0	0.31	465	164	50	36.26	0.25	5.08	129
2	50	2.00	50.8	2.34	59.5	0.39	10.0	0.47	695	164	50	36.26	0.25	6.50	165
*	60	2.38	60.5	2.73	69.3	0.39	10.0	0.54	800	164	50	36.26	0.25	6.50	165
2.5	65	2.50	63.5	2.94	74.6	0.56	14.3	0.67	995	65/164	20/50	36.26	0.25	7.68	195
3*	75	3.00	76.2	3.51	89.1	0.59	15.1	0.94	1405	65/164	20/50	36.26	0.25	8.27	210
3.5*	90	3.51	89.1	4.17	106.0	0.64	16.2	1.48	2200	65/164	20/50	21.76	0.15	11.81	300
4*	100	4.00	101.6	4.63	117.6	0.65	16.4	1.66	2470	65/164	20/50	21.76	0.15	12.99	330
4.5*	115	4.50	114.3	5.19	131.8	0.72	18.4	1.84	2740	65	20	21.76	0.15	15.35	390
5	125	4.96	125.9	5.65	143.6	0.87	22.0	2.24	3330	65	20	21.76	0.15	15.94	405
6	150	6.00	152.4	6.77	172.0	0.87	22.0	3.04	4530	65	20	21.76	0.15	26.57	675
6.5*	165	6.50	165.2	7.26	184.5	0.91	23.0	3.19	4740	65	20	21.76	0.15	38.39	975
8	200	8.02	203.7	9.19	233.5	0.91	23.0	6.15	9150	32	10	21.76	0.15	41.34	1050

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

Operating Temperature Range:

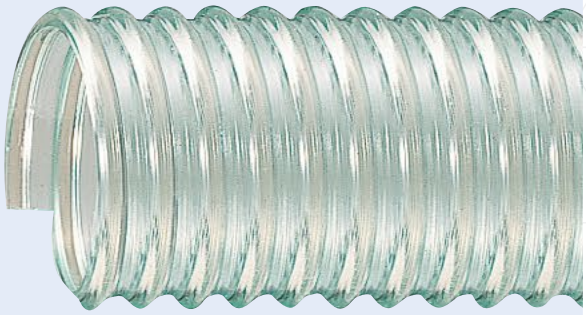
°F: 14 to 122 °C: -10 to 50

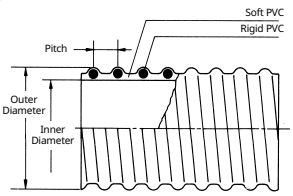
Notes:

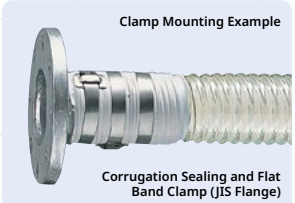
- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5inHg (-0.1 MPa) is feasible at room temperature.

TOTAKU SD-A2

Part Number - 22104







Features

- This is a lightweight version of TOTAKU SD-A.
- It provides enhanced flexibility compared to TOTAKU SD-A.

Applications

- Suitable for both suction and discharge, but especially ideal for suction use.
- Useful for irrigation.
- Effective for suction and drainage at industrial and civil engineering sites

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	25	1.00	25.4	1.21	30.8	0.30	7.5	0.13	200	164	50	29.01	0.20	2.76	70
1.25	32	1.26	32.0	1.50	38.2	0.33	8.5	0.17	255	164	50	21.76	0.15	3.15	80
1.5	38	1.50	38.0	1.76	44.6	0.35	9.0	0.26	385	164	50	21.76	0.15	3.54	90
2	50	2.00	50.8	2.28	58.0	0.39	10.0	0.36	540	164	50	14.50	0.10	5.91	150
2.5	65	2.50	63.5	2.87	73.0	0.56	14.3	0.54	810	164	20/50	14.50	0.10	7.09	180
3*	75	3.00	76.2	3.44	87.5	0.59	15.1	0.76	1135	65/164	20/50	14.50	0.10	8.27	210
4*	100	4.00	101.6	4.53	115.0	0.65	16.4	1.32	1965	65/164	20/50	14.50	0.10	11.81	300
5	125	4.96	125.9	5.57	141.6	0.87	22.0	1.69	2520	65	20	14.50	0.10	13.78	350

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

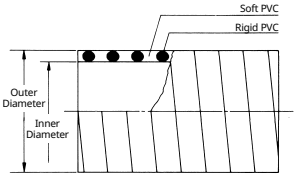
Notes:

- 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.

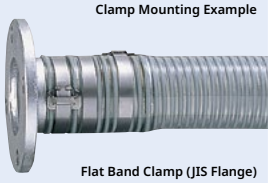
TOTAKU SD-C

Part Number - 22105





Clamp Mounting Example



Flat Band Clamp (JIS Flange)

Features

- Smooth surfaces on both the interior and exterior.
- Offers better pressure resistance than TOTAKU SD-A.
- The transparent soft section enables easy monitoring of transported materials.

Applications

- Suitable for both suction and discharge, but especially ideal for discharge use.
- Useful for suction and drainage in agriculture, industry, and civil construction.

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
0.75	19	0.75	19.0	0.95	24.2	0.15	220	164	50	87.02	0.60	4.53	115
1	25	1.00	25.4	1.23	31.2	0.23	340	164	50	72.52	0.50	9.45	240
1.25	32	1.26	32.0	1.54	39.2	0.34	510	164	50	65.27	0.45	13.39	340
1.5	38	1.50	38.0	1.81	46.0	0.44	650	164	50	58.02	0.40	13.78	350
2	50	2.00	50.8	2.40	61.0	0.75	1120	164	50	58.02	0.40	19.69	500
2.5	65	2.50	63.5	2.94	74.8	1.02	1525	65/164	20/50	58.02	0.40	23.62	600
3*	75	3.00	76.2	3.46	88.0	1.27	1885	65/164	20/50	58.02	0.40	30.51	775
3.5*	90	3.50	88.9	3.96	100.5	1.47	2190	65	20	43.51	0.30	41.93	1065
4*	100	4.00	101.6	4.56	115.8	2.07	3080	65	20	43.51	0.30	45.28	1150
5**	125	5.00	127.0	5.55	141.0	2.46	3660	65	20	36.26	0.25	62.99	1600
6**	150	6.00	152.4	6.61	167.8	3.36	5000	65	20	29.01	0.20	73.82	1875
8**	200	8.00	203.2	8.83	224.4	5.84	8690	32	10	29.01	0.20	118.11	3000

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

*** These are made-to-order products. Please contact our company regarding order quantities and other inquiries.*

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

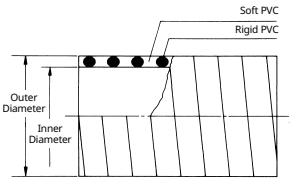
Notes:

- 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.

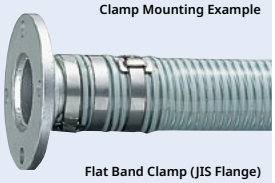
TOTAKU SD-C3

Part Number - 22111





Clamp Mounting Example



Flat Band Clamp (JIS Flange)

Features

- This is a lightweight version of TOTAKU SD-C.

Applications

- Suitable for both suction and discharge, but especially ideal for discharge use.
- Useful for suction and drainage in agriculture, industry, and civil construction.

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	1.00	25.4	1.20	30.6	0.19	280	164	50	87.02	0.60	10.83	275
1.25	32	1.26	32.0	1.48	37.6	0.26	390	164	50	72.52	0.50	14.76	375
1.5	38	1.50	38.0	1.73	44.0	0.33	485	164	50	58.02	0.40	18.70	475
2	50	2.00	50.8	2.30	58.5	0.55	825	164	50	50.76	0.35	24.02	610
2.5	65	2.50	63.5	2.86	72.6	0.80	1195	65/164	20/50	50.76	0.35	31.50	800
3*	75	3.00	76.2	3.37	85.5	0.99	1470	65/164	20/50	50.76	0.35	53.54	1360
4*	100	4.00	101.6	4.45	113.0	1.70	2530	65/164	20/50	43.51	0.30	57.09	1450
5	125	5.00	127.0	5.47	139.0	2.22	3300	65	20	43.51	0.30	98.43	2500
6	150	6.00	152.4	6.54	166.0	2.93	4360	65	20	36.26	0.25	114.17	2900
8	200	8.00	203.2	8.71	221.2	5.11	7610	32	10	29.01	0.20	118.11	3000

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

Notes:

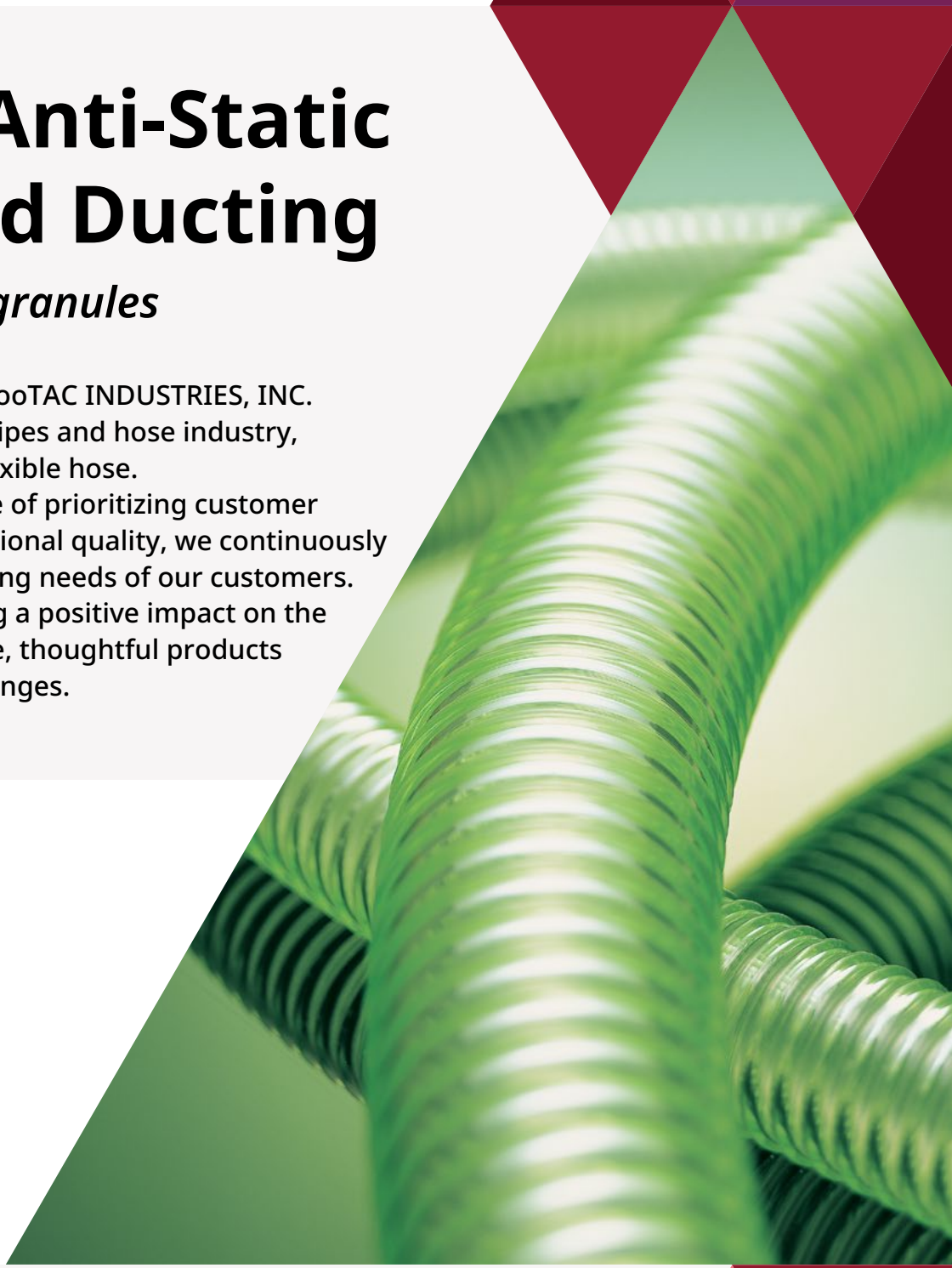
- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature.

TOTAKU

TOTAKU Anti-Static Hoses and Ducting

For powders and granules

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

SD-CE	02
SD-AS	03
DUCT-AS	04

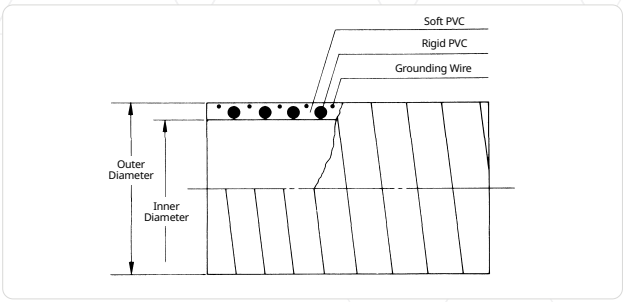
Notice:

- 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 SD-CE

Part Number - 22109





Features

- Equipped with a built-in copper grounding wire for enhanced static electricity prevention.
- Transparent design allows for easy visual confirmation of transported materials.

Applications

- Ideal for transporting resin pellets.
- Suitable for transporting powders and granules (non-food items).

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	1.00	25.4	1.33	33.7	0.38	565	164	50	72.52	0.50	9.45	240
1.25	32	1.26	32.0	1.65	41.8	0.49	735	164	50	65.27	0.45	13.39	340
1.5	38	1.50	38.0	1.89	48.0	0.58	870	164	50	58.02	0.40	13.78	350
2	50	2.00	50.8	2.50	63.5	0.98	1455	164	50	58.02	0.40	19.69	500
2.5	65	2.50	63.5	3.02	76.8	1.28	1905	65/164	20/50	58.02	0.40	23.62	600
3*	75	3.00	76.2	3.54	89.8	1.52	2260	65/164	20/50	58.02	0.40	30.51	775
3.5*	90	3.50	88.9	4.05	102.8	1.82	2710	65	20	43.51	0.30	41.93	1065
4*	100	4.00	101.6	4.65	118.0	2.43	3620	65	20	43.51	0.30	45.28	1150
5	125	5.00	127.0	5.63	143.0	2.91	4330	65	20	36.26	0.25	62.99	1600
6	150	6.00	152.4	6.73	171.0	3.95	5880	65	20	29.01	0.20	73.82	1875
8	200	8.00	203.2	8.92	226.5	6.69	9960	32	10	29.01	0.20	118.11	3000

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

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.

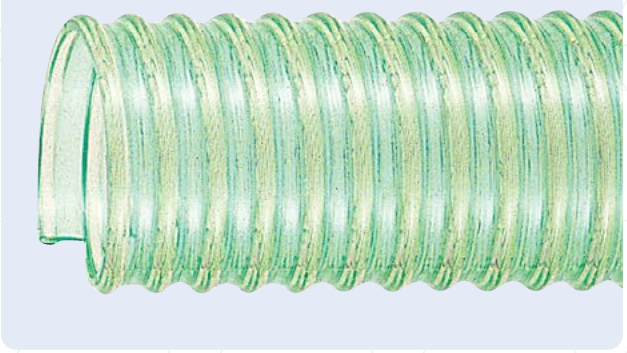
Scan, tap, or touch for product videos

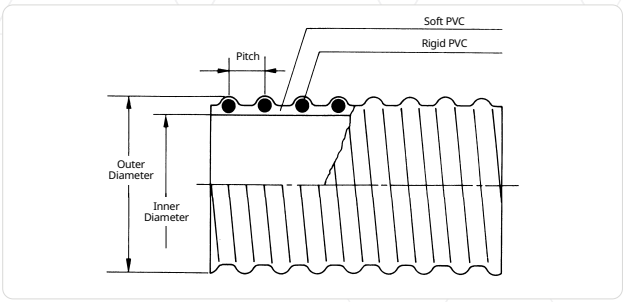
Static Electricity Prevention

Method for Extracting Grounding Wire

TOTAKU SD-AS

Part Number - 22137





Features

- Made with a specially formulated soft resin that provides long-lasting static electricity prevention (refer to the “Anti-Static Effect” table below for details).
- The clear green material allows for visual confirmation of transported items

Applications

- Ideal for transporting resin pellets.
- Suitable for transporting powders and granules (non-food items).

Anti-Static Effect

Product Name / Conveying Line	General-Purpose Product ϕ38	TOTAKU SD-AS (Anti-Static ϕ38)
Soft PVC Conveying Line	1600Volt	100Volt
Rigid PVC Conveying Line	33000Volt	100Volt

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	25	1.00	25.4	1.21	30.8	0.30	7.5	0.13	200	164	50	29.01	0.20	2.76	70
1.25	32	1.26	32.0	1.50	38.2	0.33	8.5	0.17	255	164	50	21.76	0.15	3.15	80
1.5	38	1.50	38.0	1.76	44.6	0.35	9.0	0.26	385	164	50	21.76	0.15	3.54	90
2	50	2.00	50.8	2.28	58.0	0.39	10.0	0.36	540	164	50	14.50	0.10	5.91	150
2.5	65	2.50	63.5	2.87	73.0	0.56	14.3	0.54	810	65/164	20/50	14.50	0.10	7.09	180
3*	75	3.00	76.2	3.44	87.5	0.59	15.1	0.76	1125	65/164	20/50	14.50	0.10	8.27	210
4*	100	4.00	101.6	4.53	115.0	0.65	16.4	1.32	1965	65/164	20/50	14.50	0.10	11.81	300
5	125	4.96	125.9	5.57	141.6	0.87	22.0	1.69	2520	65	20	14.50	0.10	13.78	350
6	150	6.00	152.4	6.77	172.0	0.87	22.0	3.04	4530	65	20	21.76	0.15	26.57	675

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

Material Properties

Measured Item	Unit	TOTAKU SD-AS Specially Formulated PVC	General-Purpose Soft PVC	Test Method/Conditions
Volume Resistivity	Ω • cm	2.7×108	4.2×10^{11}	JIS K-6911
Surface Resistivity	Ω	9.8×108	3.5×10^{12}	JIS K-6911
Charge Decay Time 50%	sec	0.01	0.64	Temperature: 73F (23°C) Humidity: 60%
Charge Decay Time 90%	sec	0.01	11.10	
Charge Decay Time 100%	sec	0.02	30.30	

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

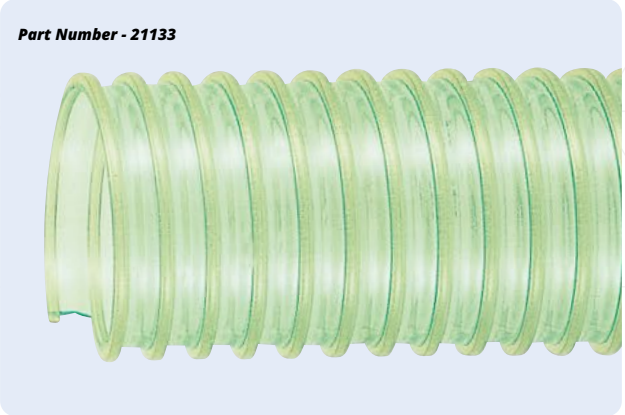
Notes:

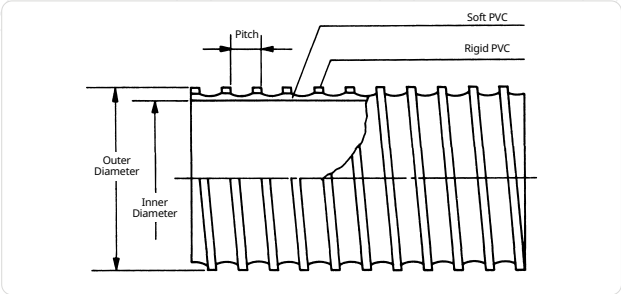
- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature.

Scan, tap, or touch for product videos

Static Electricity Prevention

TOTAKU DUCT-AS





Features

- This is the duct type of the TOTAKU SD-AS hose.
- Made with a specially formulated soft resin that provides long-lasting static electricity prevention (refer to the “Anti-Static Effect” table below for details).

Applications

- Suitable for exhaust in environments where static electricity must be avoided.
- Ideal for dust collection in woodworking machinery.
- Also suitable for transporting non-food powders.

Anti-Static Effect

Product Name / Conveying Line	General-Purpose Product ϕ38	TOTAKU SD-AS (Anti-Static ϕ38)
Soft PVC Conveying Line	1600Volt	100Volt
Rigid PVC Conveying Line	33000Volt	100Volt

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		Length		Allowable Pressure (at room temperature)		Allowable Depressurization (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	inHg	kPa	inch	mm
1.25	32	1.28	32.4	1.52	38.6	0.33	8.4	0.15	220	164	50	8.70	0.06	19.49	-66.0	1.26	32
1.5	38	1.47	37.3	1.75	44.5	0.36	9.2	0.20	295	164	50	8.70	0.06	19.49	-66.0	1.50	38
2	50	1.99	50.6	2.37	60.2	0.39	10.0	0.38	560	98	30	7.25	0.05	19.49	-66.0	1.97	50
2.5	65	2.46	62.4	2.83	72.0	0.47	12.0	0.41	615	98	30	5.80	0.04	19.49	-66.0	2.56	65
3*	75	3.01	76.4	3.40	86.4	0.51	13.0	0.52	775	98	30	5.80	0.04	9.74	-33.0	2.95	75
3.5*	90	3.50	88.9	3.94	100.1	0.53	13.5	0.64	945	98	30	4.35	0.03	9.74	-33.0	3.54	90
4*	100	4.00	101.6	4.42	112.2	0.59	15.0	0.77	1145	98	30	4.35	0.03	6.35	-21.5	3.94	100
5	125	4.96	125.9	5.42	137.7	0.83	21.0	0.91	1350	65	20	2.90	0.02	5.91	-20.0	4.92	125
6	150	6.00	152.4	6.49	164.8	0.79	20.0	1.09	1620	65	20	2.90	0.02	4.28	-14.5	5.91	150

Sizes marked with an asterisk (*) can be directly connected to steel pipes. For details, please refer to the Compatibility Chart for Steel and PVC Pipes.

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

Notes:

- The permissible pressure varies with operating temperature.

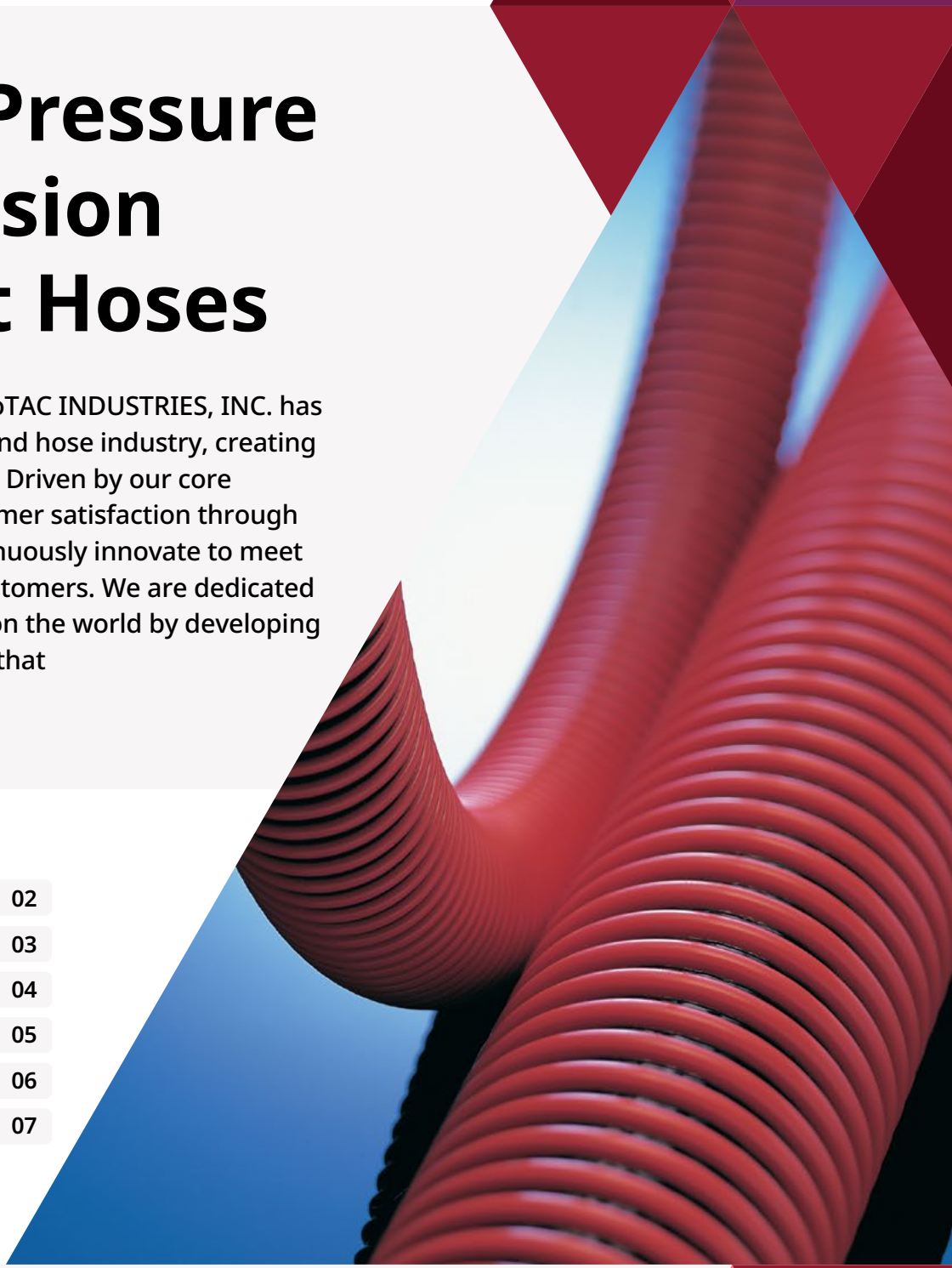
Scan, tap, or touch for product videos

Static Electricity Prevention

TOTAKU

TOTAKU Pressure and 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

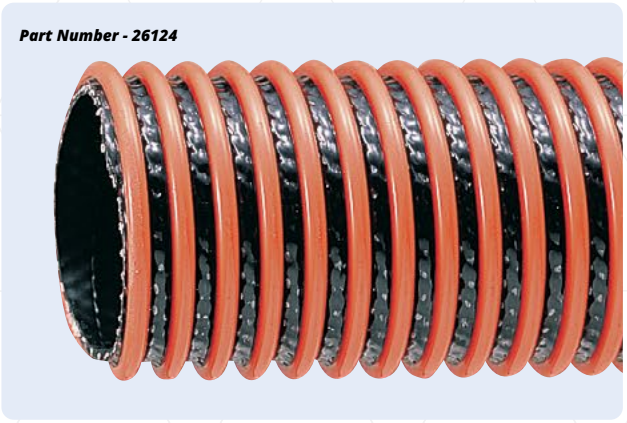
LINE POWER-AT	02
SHIMETAC for LINE POWER-AT	03
LINE POWER-ATS	04
LINE POWER-ATL	05
LINE POWER-WA	06
LINE POWER-C	07

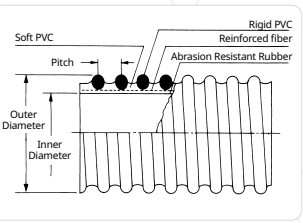
Notice:

- 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 LINE POWER-AT

Part Number - 26124







Features

- Exceptional pressure resistance with an allowable pressure of 145 psi (1.00 MPa) at normal temperature, built to minimize stretch under pressure.
- The inner layer is made from abrasion-resistant rubber, offering outstanding durability.
- Engineered to withstand external pressure with minimal deformation.

Applications

- Suction and discharge of muddy water in civil engineering projects.
- Suction and discharge of materials like sand, gravel, and sludge.
- Ideal for dredging and land reclamation work.
- Suction and discharge of powdered and granular materials, such as cement.
- Transport of high-viscosity substances, and transfer over long vertical distances.

Cautions

- Avoid long-term storage outdoors, as this may cause cracks to form due to ozone degradation.

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
2	50	2.00	50.8	2.74	69.5	0.39	10.0	1.16	1725	65/164	20/50	145.04	1.00	23.62	600
2.5	65	2.50	63.5	3.39	86.0	0.56	14.3	1.53	2270	65/164	20/50	145.04	1.00	29.53	750
3	75	3.00	76.2	3.92	99.5	0.59	15.1	1.87	2790	65/164	20/50	145.04	1.00	29.53	750
4	100	4.00	101.6	5.08	129.0	0.67	17.0	2.96	4400	65/164	20/50	145.04	1.00	49.21	1250
5	125	5.00	127.0	6.28	159.5	0.87	22.0	4.11	6110	65	20	145.04	1.00	66.93	1700
6	150	6.00	152.4	7.38	187.5	0.87	22.0	5.20	7740	65	20	145.04	1.00	78.74	2000
8	200	8.00	203.2	9.74	247.5	0.98	25.0	8.90	13250	32	10	145.04	1.00	88.59	2250

For the maximum length, additional shipping charges may apply depending on the batch. Please confirm this when placing your order.

The TOTAKU Power Band can be installed on-site.

(For 8 in (φ200), crimping is recommended for added safety.)

- Pre-install the TOTAKU Power Band onto the hose, and then insert the fitting.
- Use a torque wrench to tighten the bolts. Be cautious not to overtighten, as it could damage the hose.

Note: For on-site installation, take safety precautions to prevent accidents caused by fittings becoming loose. It is recommended to secure the TOTAKU Power Band to the flange or connection points using wire or binding materials

Tightening Torque:

2 in (ϕ50), 2.5 in (ϕ65): 10.84 lb-ft (14.7 N·m)

3 in (ϕ75): 14.46 lb-ft (19.6 N·m)

4 in (ϕ100), 5 in (ϕ125): 18.07 lb-ft (24.5 N·m)

6 in (ϕ150), 8 in (ϕ200): 21.69 lb-ft (29.4 N·m)

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 29.5inHg (-0.1 MPa) is feasible at room temperature.

Scan, tap, or touch for product videos

Cutting Method

SHIMETAC for LINE POWER-AT

Applicable Sizes: 2 in (ϕ50 mm) to 6in (ϕ150mm)

SHIMETAC for LINE POWER-AT

Part Number 92403
Material: Aluminum



Features

- The allowable pressure with a SHIMETAC connection matches the allowable pressure of the hose itself.
- Fittings can be easily attached and removed on-site.

Notes

- Be sure to use the *dedicated fittings* for SHIMETAC.
- The fittings shown below are examples.

Dedicated Fittings for SHIMETAC

Part Number 92303



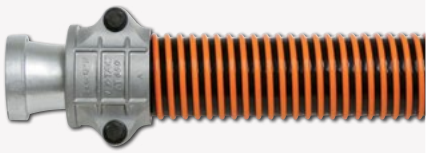
Flange with SHIMETAC Shank
(Steel Structure)

Part Number 92317



S Collar with SHIMETAC Shank
(Steel Structure)

Hose Installation Example

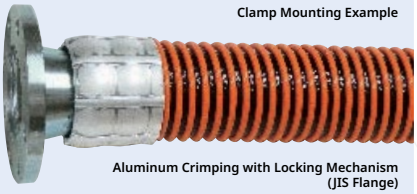


TOTAKU LINE POWER-AT Standard Fittings and Band Allowable Pressure Table *(Normal Temperature)*

Diameter		SHIMETAC Tightning		Aluminum Crimping with Locking Mechanism		Structural Steel Crimping with Locking Mechanism	
inch	mm	psi	Mpa	psi	Mpa	psi	Mpa
2	50	145.04	1.00	145.04	1.00	—	
2.5	65	145.04	1.00	145.04	1.00	—	
3	75	145.04	1.00	145.04	1.00	—	
4	100	145.04	1.00	145.04	1.00	—	
5	125	145.04	1.00	—		145.04	1.00
6	150	145.04	1.00	—		145.04	1.00
8	200	—		—		145.04	1.00

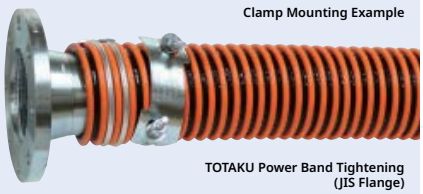
Diameter		TOTAKU Power Band Tightening		Aluminum Crimping without Locking Mechanism	
inch	mm	psi	Mpa	psi	Mpa
2	50	72.52	0.50	101.53	0.70
2.5	65	72.52	0.50	101.53	0.70
3	75	72.52	0.50	101.53	0.70
4	100	72.52	0.50	101.53	0.70
5	125	72.52		0.50	
6	150	72.52		0.50	
8	200	72.52		0.50	

Clamp Mounting Example



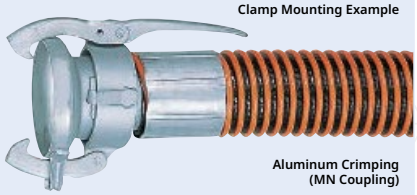
Aluminum Crimping with Locking Mechanism
(JIS Flange)

Clamp Mounting Example



TOTAKU Power Band Tightening
(JIS Flange)

Clamp Mounting Example



Aluminum Crimping
(MN Coupling)

Scan, tap, or touch for product videos

Product Overview

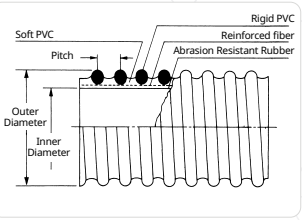
Compatible Hoses

Installation Method

TOTAKU LINE POWER-ATS

Part Number - 26104





Clamp Mounting Example



Crimping with Locking Mechanism (Victaulic S Collar)

Features

- A large-diameter version of the TOTAKU LINE POWER-AT.
- Designed with a thicker layer of abrasion-resistant rubber compared to the standard TOTAKU LINE POWER-AT.

Applications

- Suction and discharge of sand, gravel, sludge, and grains during harvest.
- Suitable for dredging and land reclamation projects.
- Suction and discharge of powdered and granular materials, such as cement.

Cautions

- Avoid long-term storage outdoors, as this may lead to cracks caused by ozone degradation.

Installation of Fittings

- Fitting installation is performed at our factory.

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
10*	250	10.08	256.0	12.01	305.0	1.00	25.5	12.93	19240	16	5	145.04	1.00	187.01	4750
12*	300	12.13	308.0	14.13	359.0	1.10	28.0	15.31	22780	16	5	72.52	0.50	196.85	5000

For the maximum length, additional shipping charges may apply depending on the batch. Please confirm this when placing your order.

** These are made-to-order products. Please contact our company regarding order quantities and other inquiries.*

Operating Temperature Range:

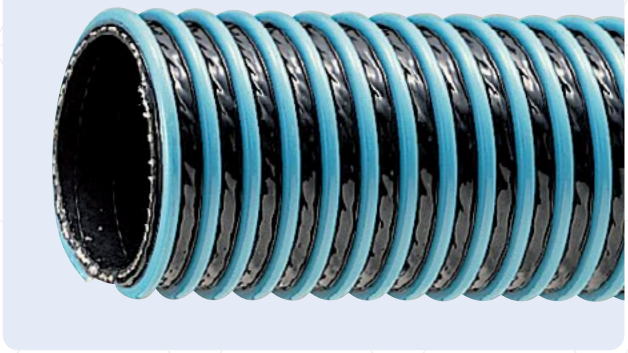
°F: 14 to 122 °C: -10 to 50

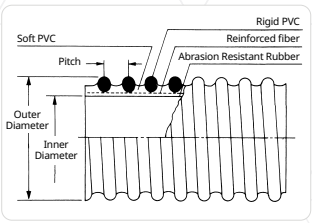
Notes:

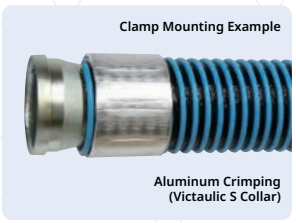
- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature.

TOTAKU LINE POWER-ATL

Part Number - 26116







Features

- A lightweight version of the TOTAKU LINE POWER-AT.

Applications

- Suction and discharge of muddy water for civil engineering projects, such as mud-water shield construction.
- Suction and discharge of powdered and granular materials, such as cement.
- Transport of high-viscosity substances and transfer over long vertical distances.

Cautions

- Avoid long-term storage outdoors, as this may lead to cracks caused by ozone degradation.

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	4.96	126.0	0.65	16.4	2.42	3600	65	20	101.53	0.70	39.37	1000
6*	150	6.00	152.4	7.22	183.5	0.87	22.0	4.31	6420	65	20	101.53	0.70	68.90	1750

For the maximum length, additional shipping charges may apply depending on the batch. Please confirm this when placing your order.

** These are made-to-order products. Please contact our company regarding order quantities and other inquiries.*

Operating Temperature Range:

°F: 14 to 122 °C: -10 to 50

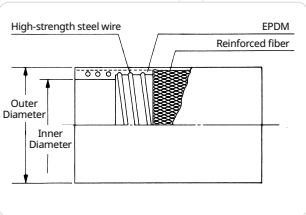
Notes:

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

TOTAKU LINE POWER-WA

Part Number - 26109





Clamp Mounting Example



Aluminum Crimping with Locking Mechanism (Victaulic S Collar)

Features

- With an allowable pressure of 218 psi (1.50 MPa) at normal temperature, this hose offers the highest pressure resistance among pressure- and abrasion-resistant hoses.

Applications

- Suitable for general water supply, cooling water, and wastewater.
- Ideal for water supply and discharge in general factories, civil engineering and construction sites, and shipbuilding facilities.

Durability Performance (Repeated Water Pressure Test)

Hoses in a straight configuration were repeatedly pressurized from 0 to 218 psi (0 to 1.50 MPa) at 20-second intervals.

Result: No abnormalities were found after 50,000 cycles for all sizes.

Installation of Fitting

- Fitting installation is performed at our factory.

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
1.5	38	1.52	38.5	2.07	52.5	0.93	1380	65/164	20/50	217.56	1.50	19.69	500
2	50	2.00	50.8	2.61	66.2	1.34	1990	65/164	20/50	217.56	1.50	19.69	500
2.5	65	2.50	63.5	3.11	78.9	1.74	2595	65/164	20/50	217.56	1.50	24.61	625
3	75	3.01	76.5	3.70	93.9	2.40	3575	65/164	20/50	217.56	1.50	31.50	800
4	100	4.00	101.6	4.76	121.0	3.59	5340	65	20	217.56	1.50	56.10	1425

Operating Temperature Range:

Suction:
°F: -4 to 194 °C: -20 to 90

Discharge:
°F: -4 to 176 °C: -20 to 80

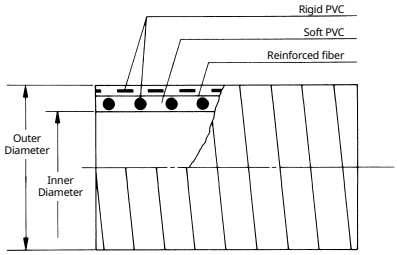
Notes:

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

TOTAKU LINE POWER-C

Part Number - 26101





Clamp Mounting Example



Flat Band Clamp (Victaulic S Collar)

Clamp Mounting Example



Aluminum Crimping (Victaulic S Collar)

Features

- A fully resin-based pressure-resistant hose.
- Excellent pressure resistance with minimal elongation.
- The outer surface is protected by rigid PVC, making it highly resistant to external abrasion and preventing exposure of the reinforcement fibers.

Applications

- For water use (e.g., high head water transfer or the discharge section of a submersible pump).
- Transport of high-viscosity substances on steep slopes.
- Suitable for both suction and delivery applications.

Installation of Fitting

- Fitting installation is performed at our factory.

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	1.77	45.0	0.69	1020	65/164	20/50	145.04	1.00	16.73	425
1.5	38	1.50	38.2	2.01	51.0	0.82	1225	65/164	20/50	145.04	1.00	19.69	500
2	50	2.00	50.8	2.56	65.0	1.09	1625	65/164	20/50	145.04	1.00	31.50	800
2.5	65	2.50	63.5	3.16	80.3	1.66	2470	65/164	20/50	145.04	1.00	37.40	950
3*	75	3.00	76.2	3.72	94.5	2.06	3060	65/164	20/50	145.04	1.00	49.21	1250
4*	100	4.00	101.6	4.92	125.0	3.70	5510	65	20	101.53	0.70	76.77	1950

** These are made-to-order products. 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.

TOTAKU

TOTAKU Mortar 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

LINE POWER-ABRW 02

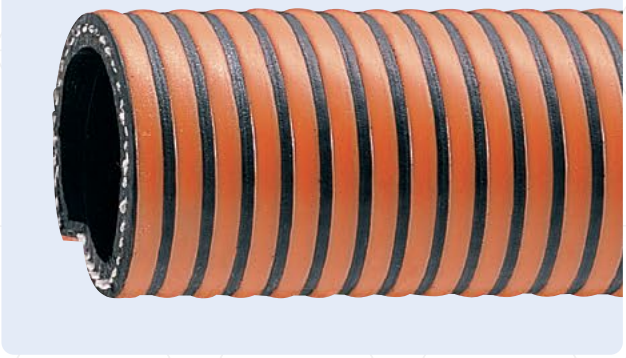
LINE POWER-CV 03

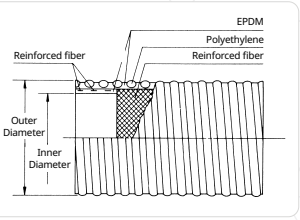
Notice:

- 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.

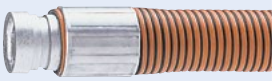
TOTAKU LINE POWER-ABRW

Part Number - 26111





(Clamp Mounting Example)



Inner Tube Expansion and Outer Tube Crimping* (Victaulic S Collar)

This process eliminates uneven surfaces inside the hose fitting, ensuring smooth internal flow.

Features

- The inner surface is made of rubber, providing superior pressure resistance and durability compared to TOTAKU LINE POWER-CV.

Applications

- Intermediate and terminal hose for mortar pumping.
- Suitable for transporting highly viscous materials and use on steep inclines.

Cautions

- This hose is designed exclusively for discharge.

Installation of Fitting

- Fitting installation is performed at our factory.

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	ft	m	psi	MPa	inch	mm
1.5	40	1.54	39.0	2.19	55.7	0.91	1355	65	20	217.56	1.50	25.59	650
2	50	1.99	50.5	2.60	66.0	1.04	1555	65	20	217.56	1.50	35.43	900

Operating Temperature Range:

Suction

°F: — °C: —

Discharge

°F: 32 to 122 °C: 0 to 50

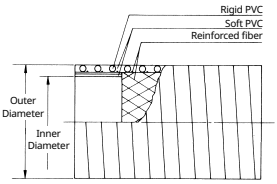
Notes:

- The permissible pressure varies with operating temperature.

TOTAKU LINE POWER-CV

Part Number - 26102





(Clamp Mounting Example)



Aluminum Crimping (Victaulic G Collar)

Features

- A durable resin hose with pressure and abrasion resistance.
- Built to withstand external pressure without flattening or buckling.

Applications

- Designed specifically as an end hose for mortar pumping.

Cautions

- This hose is designed exclusively for discharge.

Installation of Fitting

- Fitting installation is performed at our factory.

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	ft	m	psi	MPa	inch	mm
1.5	40	1.57	40.0	2.05	52.0	0.76	1135	65/164	20/50	145.04	1.00	23.62	600
2	50	2.00	50.8	2.52	64.0	1.02	1525	65/164	20/50	145.04	1.00	29.53	750

Operating Temperature Range:

Suction

°F: — °C: —

Discharge

°F: 32 to 122 °C: 0 to 50

Notes:

- The permissible pressure varies with operating temperature.

TOTAKU

TOTAKU Oil-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

SD-COR	03
LINE POWER-CVOR	04
LINE POWER-ATO	05
LINE POWER-OT	06

Notice:

- The data in this catalog uses values in a straight hose configuration. (The allowable vacuum pressure for duct hoses is measured when the hose is in a straight configuration with both ends fixed.)
- 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.

Important Safety Precautions for Oil-Resistant Hoses

Warning: Improper handling may result in serious injury or accidents.

- Before use, always check the operating conditions (fluid type, flow rate, pressure, and temperature) and ensure the hose is used within the appropriate limits.
- Hoses are consumable and deteriorate over time. If any abnormalities are found during daily or regular inspections, stop using the hose immediately and replace it with a new one.
- Do not install or operate the system in a way that subjects the hose to excessive flow rates (6.6 ft/s [2 m/s]) or sudden flow changes, as this may generate shock pressure exceeding the allowable limit, potentially causing hose failure.
- Do not install the hose in a way that applies excessive tension or load, as this can lead to damage.
- When using the hose for marine refueling, ensure vessel movement does not put tension on the hose.
- Avoid bending the hose too sharply near fittings, as this may lead to early failure.
- For more details, refer to “Hose Handling Precautions” in this catalog.

We do not provide any warranty for damages resulting from the improper use of hoses, fittings, or hose assemblies.

Oil-Resistant TOTAKU Hoses: Compatible Transport Materials

Transport Material	TOTAKU SD-COR	TOTAKU LINE POWER-CVOR	TOTAKU LINE POWER-ATO	TOTAKU LINE POWER-OT
Crude Oil	–	–	–	✓
Gasoline	–	–	–	✓
Kerosene	✓	✓	✓	✓
Diesel fuel	✓	✓	✓	✓
Heavy fuel Oil (HFO)	✓	✓	✓	✓

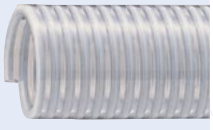
The following TOTAKU hoses are also compatible with oil-resistant applications:

TOTAKU SD-F	TOTAKU SD-HF	TOTAKU DUCT-OR	TOTAKU DUCT-ARO R	TOTAKU ECO LINE-HO 100°C	TOTAKU ECO LINE-HO
–	–	–	–	–	–
–	–	–	✓ (VOLATILE FORM ONLY)	–	–
✓	✓	✓ (VOLATILE FORM ONLY)	✓ (VOLATILE FORM ONLY)	✓	✓
✓	✓	✓ (VOLATILE FORM ONLY)	✓ (VOLATILE FORM ONLY)	–	–
✓	✓	✓ (VOLATILE FORM ONLY)	✓ (VOLATILE FORM ONLY)	–	–

SD-F



SD-HF



DUCT-OR



DUCT-ARO R



ECO LINE-HO 100°C



ECO LINE-HO



Legend:

✓ = Compatible for full use

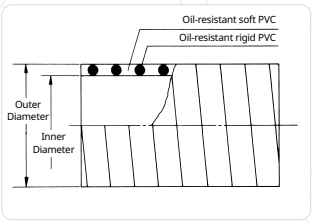
✓ (VOLATILE FORM ONLY) = Compatible with the volatile form (vapor or gas) only

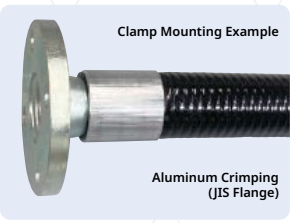
– = Not compatible with the material

TOTAKU SD-COR

Part Number - 22117







Features

- An all-resin oil-resistant hose.
- Designed with a special oil-resistant resin, making it suitable for transporting oils.

Applications

- Used for transporting diesel, kerosene, and Heavy fuel Oil (HFO). (Refer to the Caution.)
- Suitable for both suction and discharge.

Cautions

- For crude oil and gasoline transport, use LINE POWER-OT.
- TOTAKU SD-COR does not have a grounding wire

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	ft	m	psi	MPa	inch	mm
1	25	1.00	25.4	1.23	31.2	0.23	340	164	50	72.52	0.50	9.45	240
1.25	32	1.26	32.0	1.54	39.2	0.35	515	164	50	65.27	0.45	13.39	340
1.5	38	1.50	38.0	1.81	46.0	0.44	655	164	50	58.02	0.40	13.78	350
2	50	2.00	50.8	2.40	61.0	0.76	1130	164	50	58.02	0.40	19.69	500
2.5	65	2.50	63.5	2.94	74.8	1.03	1535	65/164	20/50	58.02	0.40	23.62	600
3	75	3.00	76.2	3.46	88.0	1.27	1895	65/164	20/50	58.02	0.40	30.51	775
4	100	4.00	101.6	4.56	115.8	2.07	3080	65	20	43.51	0.30	45.28	1150

Operating Temperature Range:

Suction

°F: 14 to 140 °C: -10 to 60

Discharge

°F: 14 to 122 °C: -10 to 50

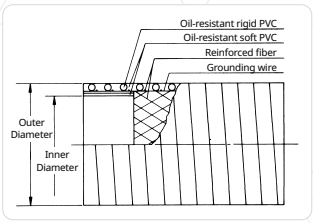
Notes:

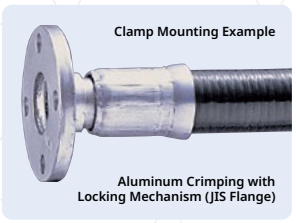
- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature.

TOTAKU LINE POWER-CVOR

Part Number - 26122







Features

- Contains reinforcement fibers, offering superior pressure resistance compared to TOTAKU SD-COR.
- Built-in ground wire helps prevent static electricity buildup.

Applications

- Ideal for oil transfer in refineries and general industrial facilities.
- Suitable for transporting diesel, kerosene, and Heavy fuel Oil (HFO).

Cautions

- Do not store outdoors for extended periods.
- This hose is designed exclusively for discharge.
- For transporting crude oil and gasoline, use LINE POWER-OT.

Installation of Fitting

- Fitting installation is performed at our factory.

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	ft	m	psi	MPa	inch	mm
1.25*	32	1.26	32.0	1.78	45.2	0.65	960	65/164	20/50	101.53	0.70	19.69	500
1.5	38	1.52	38.5	1.99	50.5	0.76	1125	65/164	20/50	101.53	0.70	23.62	600
2	50	2.00	50.8	2.52	64.0	1.01	1505	65/164	20/50	101.53	0.70	29.53	750

** These are made-to-order products. Please contact our company regarding order quantities and other inquiries.*

Operating Temperature Range:

Suction

°F: — °C: —

Discharge

°F: 14 to 122 °C: -10 to 50

Notes:

- The permissible pressure varies with operating temperature.

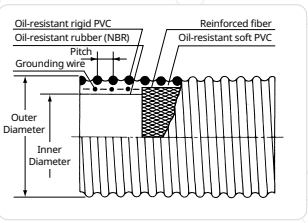
Scan, tap, or touch for product videos

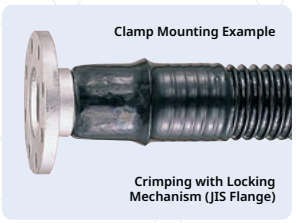
Static Electricity Prevention

TOTAKU LINE POWER-ATO

Part Number - 26106







Features

- About half the weight of a rubber hose with excellent flexibility.
- Oil-resistant rubber is used for the inner surface.
- Provides anti-static protection with conductive oil-resistant rubber and a built-in ground wire.

Applications

- Suitable for transporting Heavy fuel Oil (HFO), kerosene, and diesel.
- Used for loading and unloading from tank trucks, refineries, ships, and tank railcars, as well as oil transfer within general industrial facilities.

  Note: At a fluid temperature of 140°F (60°C) [maximum operating temperature range], the allowable pressure is 72.5 psi (0.50 MPa) (ambient temperature: 86°F [30°C]).

Cautions

- To prevent cracking from ozone degradation, cap both ends of the hose and store it indoors in a dry area, away from direct sunlight.
- Do not store the hose outdoors, as it may deteriorate.

Installation of Fitting

- Fitting installation is performed at our factory.
  For shipments from our factory, a test report will be included.

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	ft	m	psi	MPa	inch	mm
2	50	2.00	50.8	2.62	66.6	0.39	10.0	1.07	1590	65	20	101.53	0.70	17.72	450
2.5	65	2.50	63.5	3.21	81.5	0.56	14.3	1.32	1970	65	20	101.53	0.70	21.65	550
3	75	3.00	76.2	3.89	98.8	0.59	15.1	1.96	2920	65	20	101.53	0.70	30.51	775
4	100	4.00	101.6	5.12	130.0	0.70	17.7	3.09	4600	65	20	101.53	0.70	49.21	1250
5	125	5.00	127.0	6.18	157.0	0.87	22.0	4.08	6070	65	20	101.53	0.70	59.06	1500
6*	150	6.00	152.4	7.38	187.5	0.87	22.0	5.20	7740	65	20	101.53	0.70	78.74	2000

** These are made-to-order products. Please contact our company regarding order quantities and other inquiries.*

Operating Temperature Range:

°F: -4 to 140 °C: -20 to 60

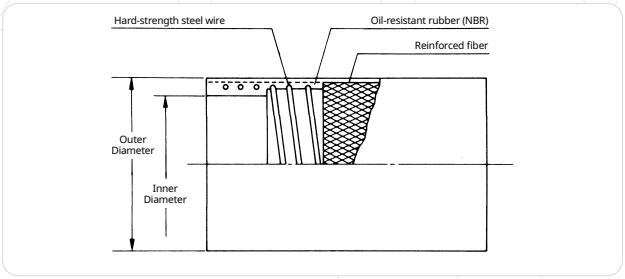
Notes:

- 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.

TOTAKU LINE POWER-OT

Part Number - 26108

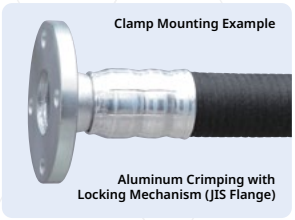






Clamp Mounting Example
Aluminum Crimping
(Lorry Coupling)

Allowable Pressure:
101.5 psi (0.70 MPa) or less



Clamp Mounting Example

Aluminum Crimping with
Locking Mechanism (JIS Flange)

Features

- Offers the highest pressure resistance among oil-resistant hoses, with an allowable pressure of 217.5 psi (1.50 MPa).
- Provides anti-static protection with conductive oil-resistant rubber and a steel wire.

Applications

- Suitable for transporting crude oil, gasoline, Heavy fuel Oil (HFO), kerosene, and diesel.
- Used for loading and unloading from tank trucks, refineries, ships, and tank railcars, as well as oil transfer within general industrial facilities.

  Note: Use only with gasoline that contains 40% or less aromatic content. "Aromatics" refer to aromatic hydrocarbons, including benzene, toluene, and xylene. Most gasoline typically contains 20–30% aromatics.

Durability Performance (Repeated Water Pressure Test)

- Hoses in a straight configuration were repeatedly pressurized from 0 to 218 psi (0 to 1.50 MPa) at 20-second intervals.
- **Result: No abnormalities were found after 50,000 cycles for all sizes.**

Cautions

- To prevent cracking from ozone degradation, cap both ends of the hose and store it indoors in a dry area, away from direct sunlight.
- Do not store the hose outdoors, as it may deteriorate.

Installation of Fitting

- Fitting installation is performed at our factory.

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	ft	m	psi	MPa	inch	mm
1.5	38	1.52	38.5	2.02	51.3	0.93	1390	65/164	20/50	217.56	1.50	19.69	500
2	50	2.00	50.8	2.52	64.0	1.23	1835	65/164	20/50	217.56	1.50	19.69	500
2.5	65	2.50	63.5	3.04	77.1	1.70	2530	65/164	20/50	217.56	1.50	24.61	625
3	75	3.01	76.5	3.62	92.0	2.30	3420	65/164	20/50	217.56	1.50	31.50	800
4	100	4.00	101.6	4.69	119.0	3.47	5170	65	20	217.56	1.50	56.10	1425

Operating Temperature Range:

Suction

°F: -4 to 194 °C: -20 to 90

Discharge

°F: -4 to 176 °C: -20 to 80

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.

Scan, tap, or touch for product videos

Static Electricity Prevention

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

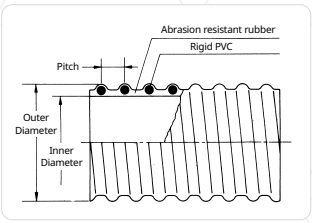
HERAN	02
HERAN-N	03
HERAN-CL	04
HERAN-ACE	05

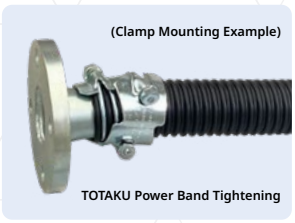
Notice:

- 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

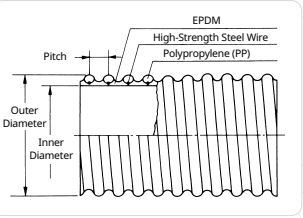
Scan, tap, or touch for product videos

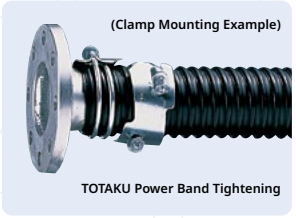
Static Electricity Prevention

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:

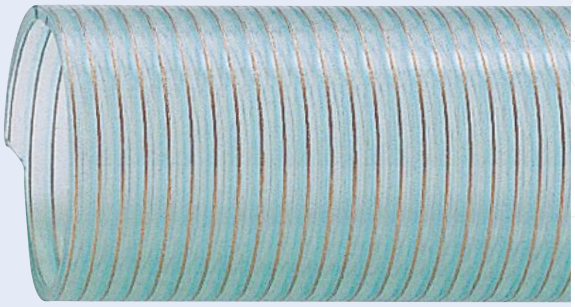
- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature

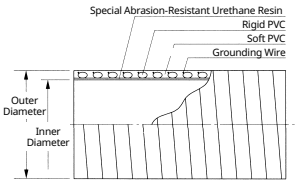
Scan, tap, or touch for product videos

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.

Scan, tap, or touch for product videos

Product Overview

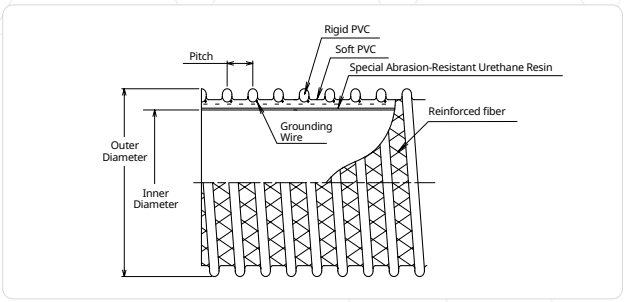
Abrasion Resistance

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:

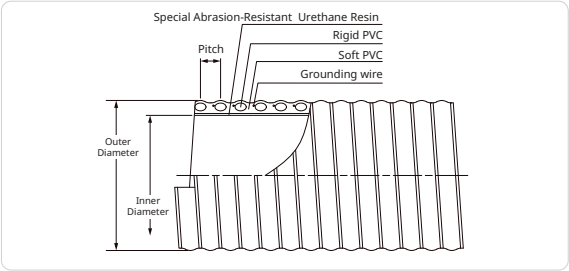
- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature

Scan, tap, or touch for product videos

Static Electricity Prevention

TOTAKU HERAN-SIGNAL





Features

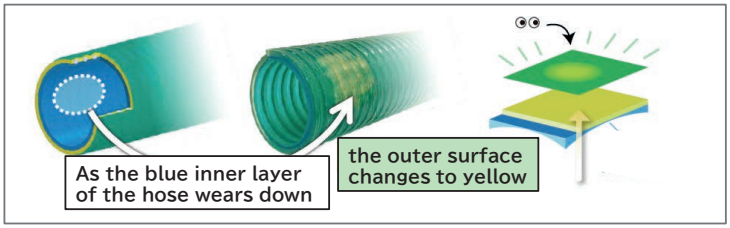
- One of the most abrasion-resistant hoses in the TOTAKU lineup.
- Equipped with a built-in copper grounding wire for enhanced static electricity prevention.

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.

TOTAKU

TOTAKU Hoses for Vacuum Trucks

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

CLEAN-W	02
CLEAN-S	03
CLEAN-CW	04
CLEAN-DC	05

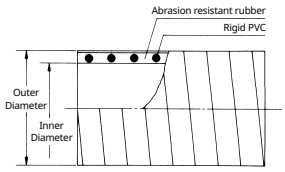
Notice:

- 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 CLEAN-CW

Part Number - 24109





(Clamp Mounting Example)



Steel Punch Band Clamp (For Coupling on Vacuum Trucks – Suction Use Only)

Features

- A versatile, all-season hose designed to handle a wide range of temperature changes in working environments.
- Exceptional cold resistance, suitable for use even in cold climates. (Operating temperature range: -20°C [-4°F] to 50°C [122°F]).

Applications

- Exclusively for vacuum trucks.

Cautions

- Avoid long-term storage outdoors, as this may cause cracks to form due to ozone degradation.

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	ft	m	psi	MPa	inch	mm
2	48	1.89	48.0	2.22	56.5	0.65	960	65/98 131/164	20/30 40/50	29.01	0.20	15.75	400

Operating Temperature Range:

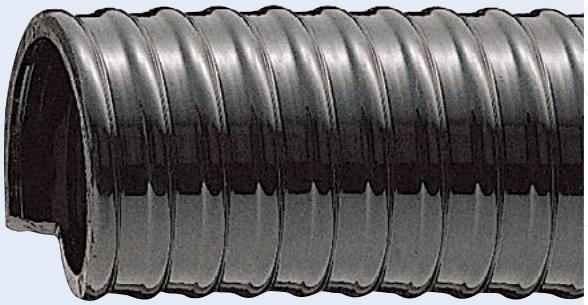
°F: -4 to 122 °C: -20 to 50

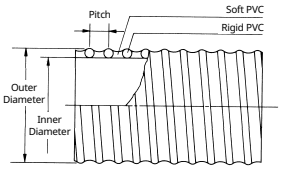
Notes:

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

TOTAKU CLEAN-DC

Part Number - 24108





(Clamp Mounting Example)



Steel Punch Band Clamp
(For Coupling on Vacuum Trucks – Allowable Pressure 29 psi [0.20 MPa] or Less)

Features

- Specifically designed for discharge, ensuring smooth operation on-site.

Applications

- Discharge hose exclusively for vacuum trucks.

Standard Dimensions and Properties

Nominal Diameter		Inner Diameter		Outer Diameter		Pitch		Reference Weight		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	psi	MPa	inch	mm
2.5	65	2.50	63.5	3.09	78.5	0.56	14.3	1.17	1740	58.02	0.40	31.50	800
3	75	3.00	76.2	3.65	92.8	0.59	15.1	1.51	2240	50.76	0.35	35.43	900

Operating Temperature Range:

Suction

°F: 14 to 140 °C: -10 to 60

Discharge

°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