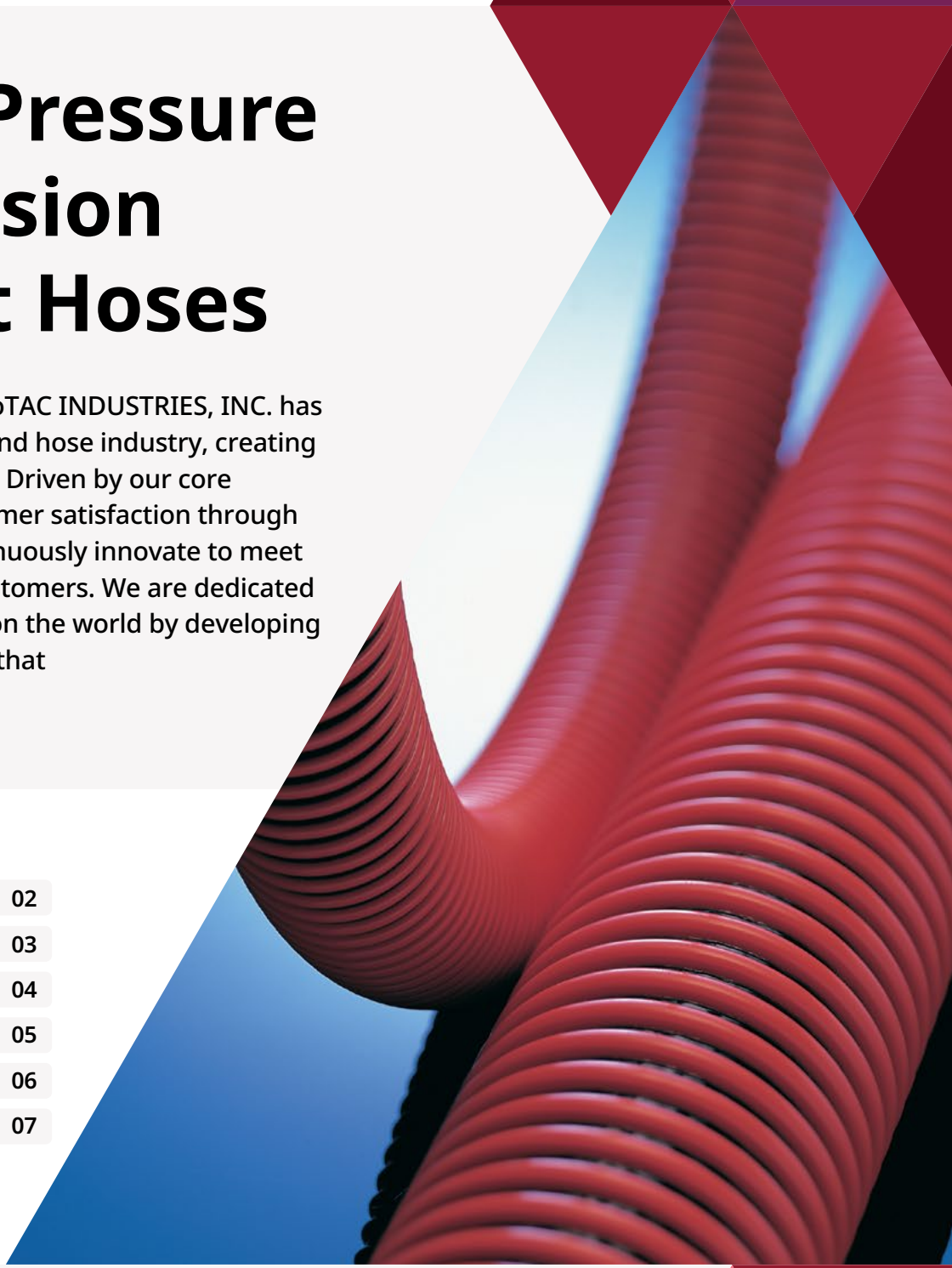
TOTAKU

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

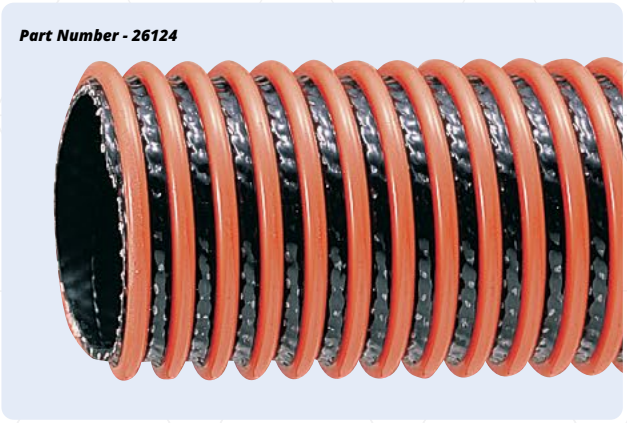
LINE POWER-AT	02
SHIMETAC for LINE POWER-AT	03
LINE POWER-ATS	04
LINE POWER-ATL	05
LINE POWER-WA	06
LINE POWER-C	07

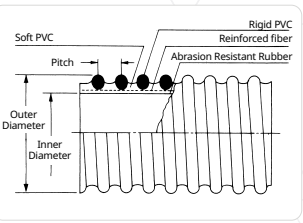
Notice:

- 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



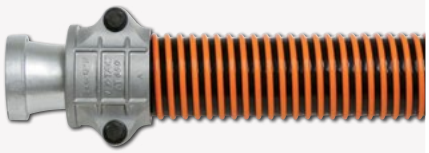
Flange with SHIMETAC Shank
(Steel Structure)

Part Number 92317



S Collar with SHIMETAC Shank
(Steel Structure)

Hose Installation Example

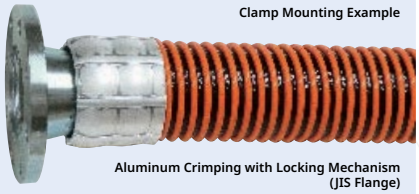


TOTAKU LINE POWER-AT Standard Fittings and Band Allowable Pressure Table *(Normal Temperature)*

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

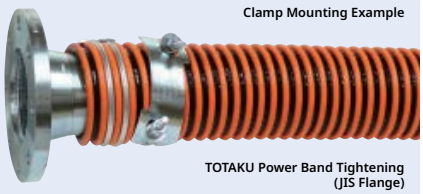
Diameter		TOTAKU Power Band Tightening		Aluminum Crimping without Locking Mechanism	
inch	mm	psi	Mpa	psi	Mpa
2	50	72.52	0.50	101.53	0.70
2.5	65	72.52	0.50	101.53	0.70
3	75	72.52	0.50	101.53	0.70
4	100	72.52	0.50	101.53	0.70
5	125	72.52		0.50	
6	150	72.52		0.50	
8	200	72.52		0.50	

Clamp Mounting Example



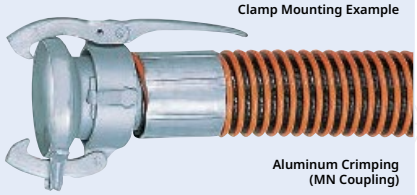
Aluminum Crimping with Locking Mechanism
(JIS Flange)

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

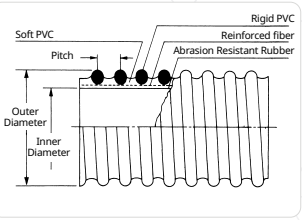
Compatible Hoses

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:

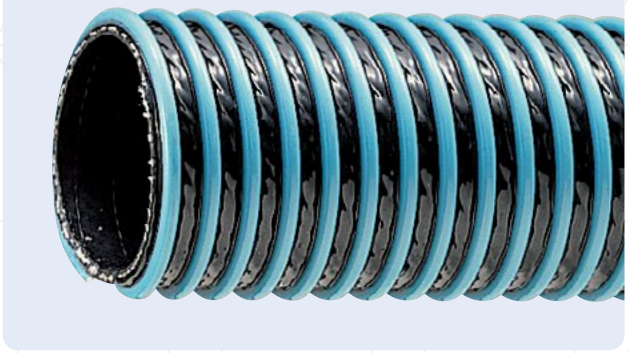
°F: 14 to 122 °C: -10 to 50

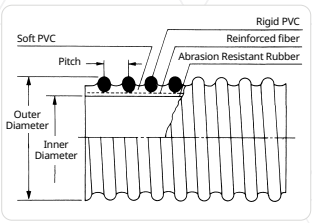
Notes:

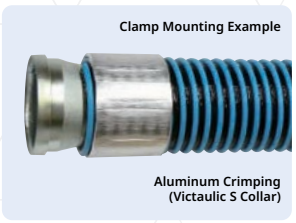
- The permissible pressure varies with operating temperature.
- Operating down to a vacuum level of approximately 29.5 inHg (-0.1 MPa) is feasible at room temperature.

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

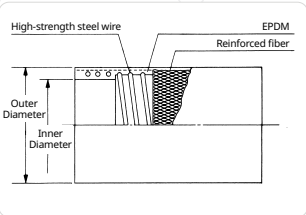
Notes:

- 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

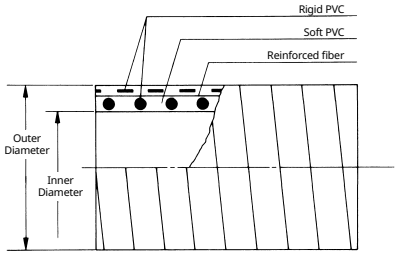
Notes:

- 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

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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.