

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
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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



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
inch	mm	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	
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

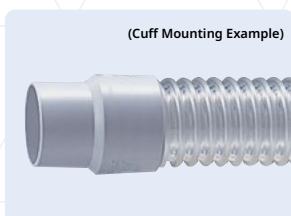
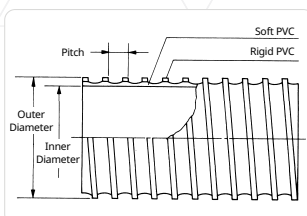


Features

- 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

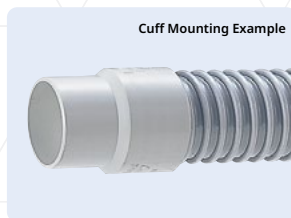
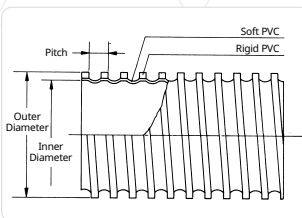


Features

- 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

Part Number - 21149

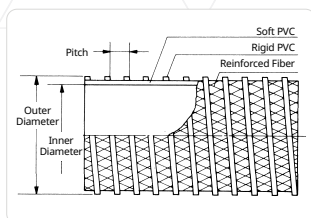


Features

- 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).



Cuff Mounting Example



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

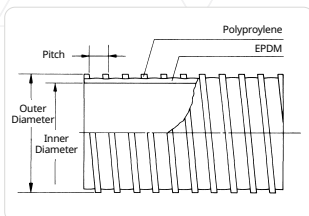


Features

- 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: 3,937 Ω-in (10⁵ 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).



Cuff Mounting Example



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

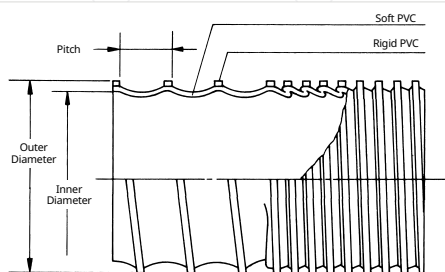


Features

- 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:

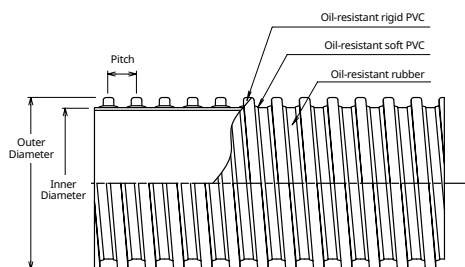
°F: 14 to 122 °C: -10 to 50

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: $100,000 \Omega \cdot \text{in} / 10^5 \Omega \cdot \text{cm}$ 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

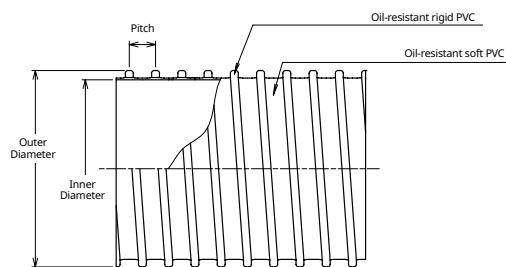


Features

- 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).



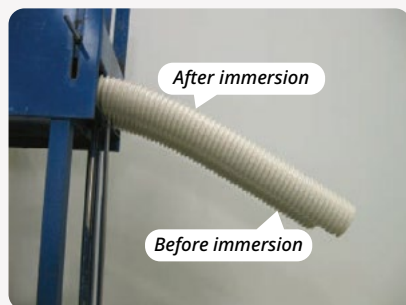
Standard Dimensions and Properties

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.

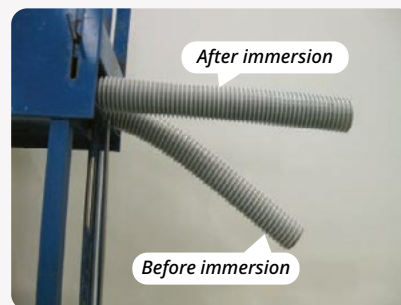
Oil Resistance (Changes in Flexibility After Oil Immersion)

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

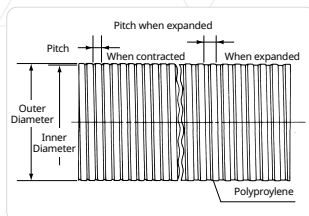


Features

- 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

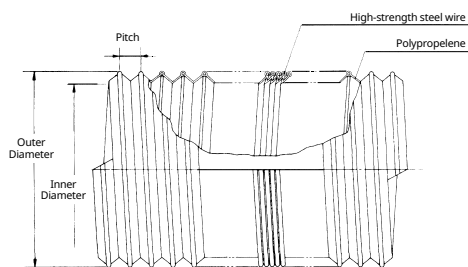


Features

- 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:

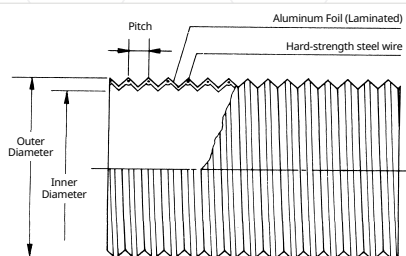
°F: -4 to 176 °C: -20 to 80

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

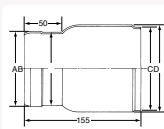
Nominal Diameter		Inner Diameter		Outer Diameter		Pitch (when expanded)		Reference Weight		Length		Allowable Pressure (at room temperature)		Allowable Vacuum Pressure (at room temperature)		Allowable Bend Radius (to the center axis of the hose)		Maximum Operating Temperature	
inch	mm	inch	mm	inch	mm	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**

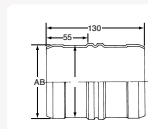
A reducer fitting designed to easily connect TOTAKU DUCT-AL to the duct connection port of ventilation fans.



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

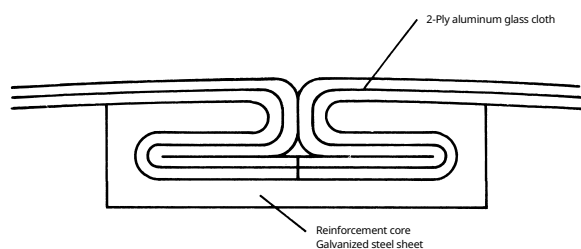


Features

- 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

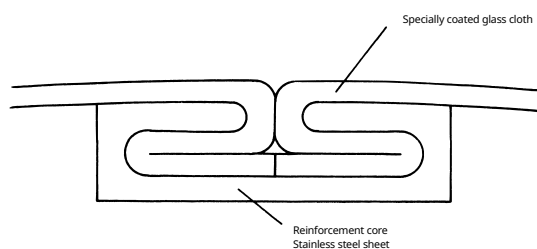


Features

- 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

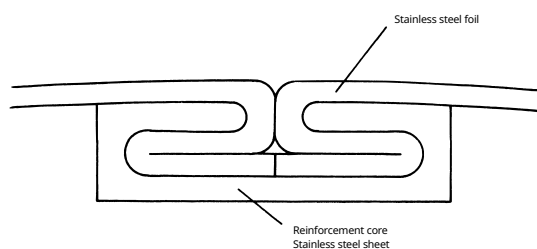
TOTAKU MD-45

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.

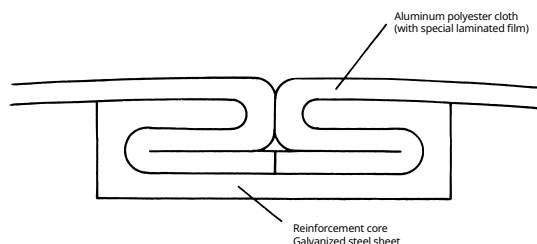
Scan, tap,
or touch for
product videos



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.

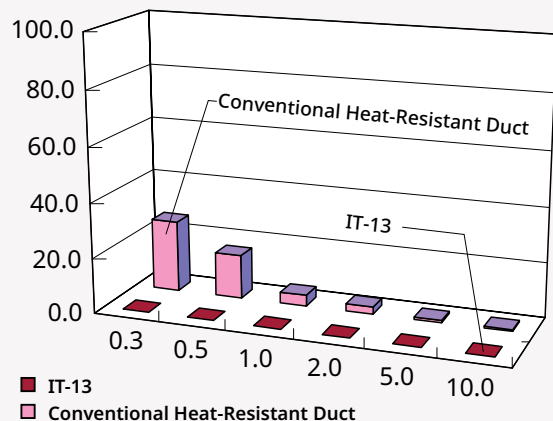
Notes

- 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.