

## Flexible Plastic Tube

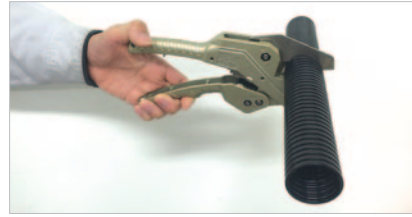
CPSFLEX is Flexible Tube that is harmless to humans by using Quality Polyamide 6 material and also can be recycled. There are various flame retardant grade from UL94-HB to V0 according to its usage environment.



# Product Features



CPSFLEX can be cut by a cutter, which reduces working hours.



※ Please use exclusive cutter when much cutting work is required

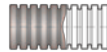
It has flame retardant grade from UL94-HB to V0.

Raw materials for CPSFLEX are toxic-free, and have passed the test by designated test institute. In addition, CPS products have been produced according to the directive that Europe regulates.

## Standard Size of CPSFLEX based on amount of cables and hoses

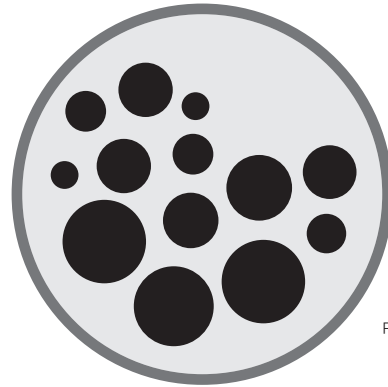
### CPSFLEX List

\* Same size applied to all types of CPSFLEX

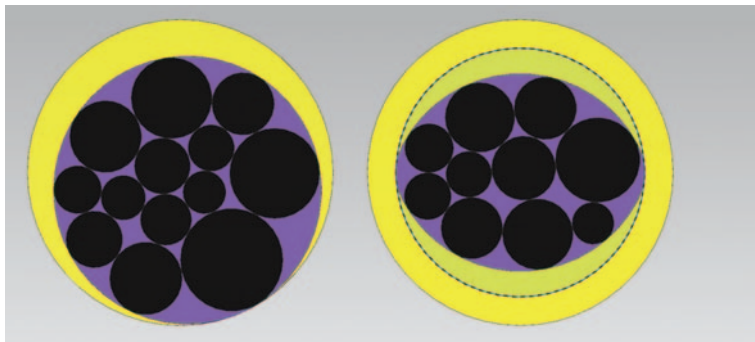


Black	Gray	Ultraviolet Block UV-R	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm ±10%	Packing meter / roll
CPS-07B	CPS-07G	CPS-07U	6.4	10.0	15.0	50/100
CPS-10B	CPS-10G	CPS-10U	9.6	13.0	20.0	50
CPS-12B	CPS-12G	CPS-12U	11.8	15.8	30.0	50
CPS-16B	CPS-16G	CPS-16U	15.9	21.2	40.0	50
CPS-22B	CPS-22G	CPS-22U	21.7	28.5	45.0	50
CPS-28B	CPS-28G	CPS-28U	27.8	34.5	55.0	50
CPS-36B	CPS-36G	CPS-36U	36.0	42.5	60.0	30
CPS-42B	CPS-42G	CPS-42U	41.5	48.5	65.0	30
CPS-48B	CPS-48G	CPS-48U	46.5	54.5	70.0	30
CPS-56B	CPS-56G	CPS-56U	56.3	67.2	110.0	30
CPS-70B	CPS-70G	CPS-70U	70.0	82.5	160.0	10
CPS-95B	CPS-95G	CPS-95U	91.5	106.0	210.0	10

Secure 20% of empty space inside of CPSFLEX

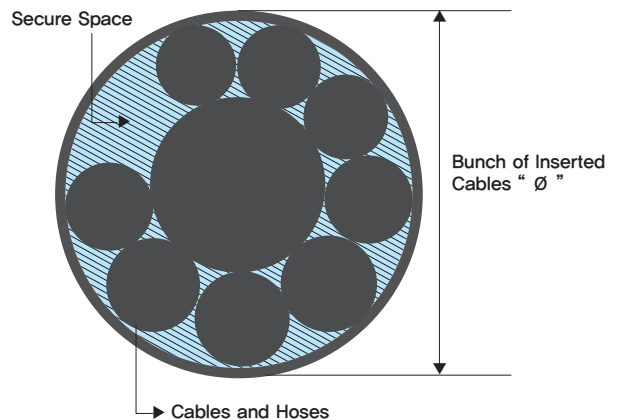


Refer to Image



### How much Empty space of CPSFLEX should be secured

Please secure a 20% of empty space inside of Flexible Tube (CPSFLEX) by calculating Dia. of a bunch of inserted all cables like in the image.



# RAH for Railway

EN45545-2 R22(HL2), R23(HL3) Flame Test Certification Acquired!



- Oxygen index to T01 EN ISO 4589-2
- Flue gas density to T10.03 EN ISO 5659-2
- Oxygen index to T12 NF X70-100-1 and 2



## Test Method

- ① Measure time of Carbonized Length, Area and Flame stayed
- ② Measure burning time based on certain length of tube
- ③ Measure value of smoke concentration
- ④ Measure existence of toxic gases and its degree
- ⑤ Measure value of oxygen concentration that is required to combust



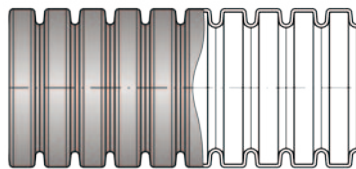
## Ordering

**PAH T -10B : 100M** Black and Gray is a basic color. Different color of tube can be supplied according to customer's request.

- **Q'ty (m)**
- **Color** B : Black / G : Gray  
U : Ultraviolet Block (Black only)
- **Size** (07, 10, 12, 16, 22, 28, 36, 42, 48, 56, 70, 95)

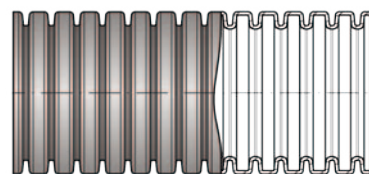
### Type of Pitch

**Standard Pitch: Excellent Pull-out Performance**



Standard Pitch

**Narrow Pitch: Excellent Flexibility Performance**

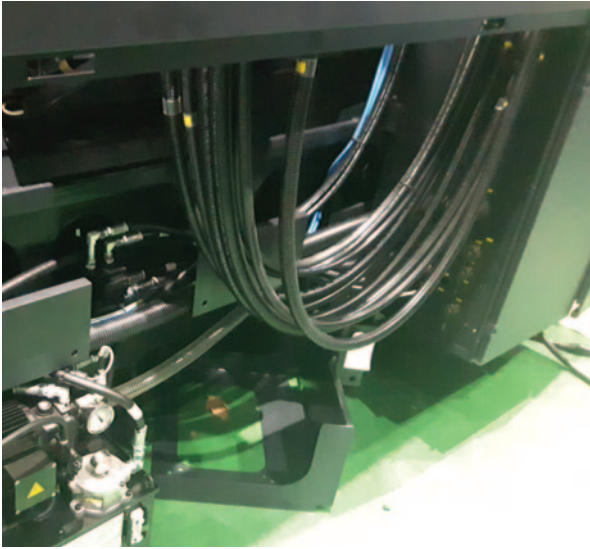


'T' follows after model name

- \* CPS / PAH / RAH / PAM / PAR
- \* Size (22, 28, 36, 42, 48)

- **Type** (CPS / PAH / RAH / PES / CPSS / PAHS / PESS / PAR / PAM / RAH12)





Major customer for machine tools



Major customer for railroad cars



**Eco-Friendly** All products of CP SYSTEM CO.,LTD comply with RoHS Regulation.



### Restriction of the use of Specific Pollutants (RoHS)

RoHS stands for Restriction of Hazardous Substances, and impacts the entire electronics industry and many electrical products as well. The original RoHS, also known as Directive 2002/95/EC, originated in the European Union in 2002 and restricts the use of six hazardous materials found in electrical and electronic products. All applicable products in the EU market since July 1, 2006 must pass RoHS compliance.

The substances banned under RoHS are lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (CrVI), polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), and four different phthalates (DEHP, BBP, BBP, DIBP).

IM Beauty	RoHS(2002/95/EC)	RoHS II(2011/65/EU)
Time of Application	1st July 2006	2nd Jan. 2013
Product Family	5 EEE products among 10 EEE products	All Electrical and Electronic Equipment - Medical device, Observation/Control Instrument(After 22 July 2014) - Medical device(After 22 July 2016) - Observation/Control Instrument - Electrical/Electronic Equipment except for 10 EEE products
CE Marking	N/A	CE Marking Compulsory
Performance of obligation Party	No Legal Provision	Performance of obligation Regulation to Manufacturer, Importer, Distributor
Technical Document	Recommended	Compulsory (EN 50581)

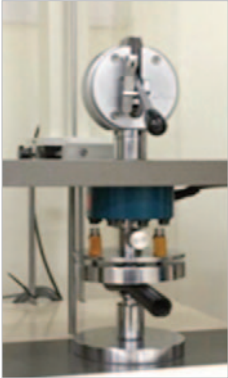
### AE) Other harmful substance except for RoHS – Halogen Free (Br, Cl, F, I, At)

Halogens are a group in the periodic table consisting of five chemically related elements: fluorine (F), chlorine (Cl), bromine (Br), iodine (I), and astatine (At).

Halogen-free, a substance must consist of less than 900 parts per million (ppm) of chlorine or bromine and also have less than 1500 ppm of total halogens.

Green Peace emphasizes harmfulness of Halogen substance and publish grade of each enterprise by conducting Green Peace Self Evaluation.

## Reliability Test Verification



### Test of Compression and Decompression (IEC 61386)

1. Measure outer dia. of 200mm long tube at 23°C temperature before conducting test.
2. Place specimen between flat plate and compression plate.
3. Compress specimen gradually for 30 seconds based on designated compression value. And then, compress specimen for 60 sec. again and check value of deformation. It must not exceed 25% of deformation in regard to outer diameter from initial status.
4. Remove specimen from the plates and leave it for 60 seconds. And then measure its outer diameter of specimen again. It must not exceed 10% of deformation in regard to outer diameter from initial status.



### Impact Test after keeping Low Temperature (IEC 61386)

1. Give impact to the center position of or the weakest position of flexible tube by using standard hammer.
2. Give impact to the other flexible tube that is exactly a same spec. after putting it into a low temperature chamber.
3. There must not any mark of deformation or split at those 2 specimens above.



### Pulling-Out Test (UL 1696)

1. Connect 500mm long flexible tube and connector and fix them to fixing device. Pull for 60 seconds and check its deformation value.
2. Flexible tube and Connector must not have damage after test conducted.



### TENSILE TEST(IEC 61386)

1. Connect 300mm flexible tube on the fixing device. Pull for 30~40 seconds and check its deformation value after 2 minutes.
2. Flexible tube must not have damage after test..



## Vertical Flame Test (Self-Extinguish ability Test / UL 1696)

1. Combust 330mm long flexible tube for 15 seconds and leave it for 15 sec in the air. And then combust it for 15 seconds again.
2. After second combustion, if flame of specimen remains over 60 seconds or the tube is completely burned to ashes, it is failed. Spark must not drop at cotton ball
3. Flexible tubes must endure more than 2.5 million times bending test



## Bending Test or Flexibility Test (IEC 61386)

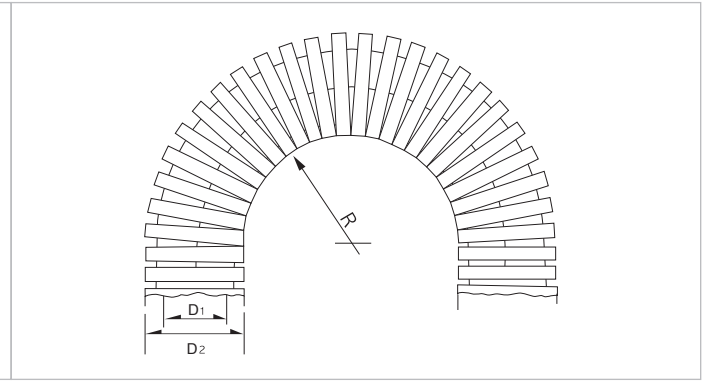
1. Bend Flexible tube to right and left direction by 90°. The tube must maintain its specified R value and there should be no deformation or split mark.
2. Flexible tubes must endure more than 2.5 million times bending test



# Specification

Type	Material	Characteristic	Temperature range	Self-extinguishing UL-94	Color	Application
<b>CPS</b> 	PA6	standard version medium-wall, very flexible	-40°C ~ +105°C  short term +130°C	UL94-HB	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> <li>● UV-Resistant</li> </ul>	Machine tool, Industrial & Automatic Machinery etc.
<b>PAH</b> 	PA6	standard version medium-wall, very flexible	-40°C ~ +105°C  short term +150°C	UL94-V0	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> <li>● Light Gray</li> <li>● UV-Resistant</li> </ul>	Machine tool, Industrial & Automatic Machinery, Rolling Stock etc.
<b>RAH</b> 	PA6/66	standard version medium-wall, very flexible	-40°C ~ +105°C  short term: +150°C	UL94-V0 EN45545-2	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> <li>● UV-Resistant</li> </ul>	Railroad cars
<b>POH</b> 	PA6	reinforced version thick-wall, flexible	-40°C ~ +105°C  short term +150°C	UL94-V0	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> <li>● UV-Resistant</li> </ul>	Machinery
<b>PES</b> 	PE	simple version light-weight, flexible	-15°C ~ +60°C  short term +80°C	UL94-HB	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> </ul>	Chemical Apparatus (Acid Resistance, Alkali-Resistance)
<b>CPSS</b> 	PA6	standard version medium-wall, very flexible	-40°C ~ +105°C  short term +130°C	UL94-HB	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> </ul>	Machinery
<b>PAHS</b> 	PA6	standard version medium-wall, very flexible	-40°C ~ +105°C  short term +150°C	UL94-V0	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> <li>● Light Gray</li> <li>● UV-Resistant</li> </ul>	Machine tool, Industrial & Automatic Machinery, Rolling Stock etc.
<b>PESS</b> 	PE	simple version light-weight, flexible	-15°C ~ +60°C  short term +80°C	UL94-HB	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> </ul>	Chemical Apparatus (Acid Resist- ance, Alkali-Re- sistance)
<b>PAR</b> 	PA12	medium-wall very flexible to highly flexible	-40°C ~ +105°C  short term +130°C	UL94-V2	<ul style="list-style-type: none"> <li>● Black</li> <li>● Yellow</li> </ul>	High Speed Machine, Industrial Robot
<b>PAM</b> 	PA12	medium-wall very flexible to highly flexible	-40°C ~ +105°C  short term +130°C	UL94-V2	<ul style="list-style-type: none"> <li>● Black</li> <li>● Yellow</li> </ul>	Industrial Robot (for Roboway)
<b>RAH12</b> 	PA12	standard version medium-wall, very flexible	-40°C ~ +125°C  short term +150°C	UL94-V2 EN45545-2	<ul style="list-style-type: none"> <li>● Black</li> <li>● Gray</li> <li>● UV-Resistant</li> </ul>	Railroad cars

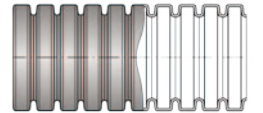




- Material : High Quality Polyamide 6 (PA6)
- Construction : Inside & Outside Corrugated Plastic Hose
- Degrees of Protection : IP68 (EN 60529)
- Temperature : -40°C ~ +105°C
- Short Term : +130°C
- Self-Extinguishing : UL94-HB
- Color : Black, Gray
- Connections : CPSFIX
- Application : Machinery, Automobile, Power plant
- Certification : UL(CPS-10-48B and 10-48G)  
CE, RS B 0175

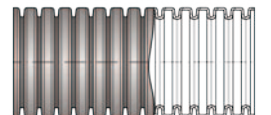
## Product Size

Standard Pitch : Excellent Pull-out Performance

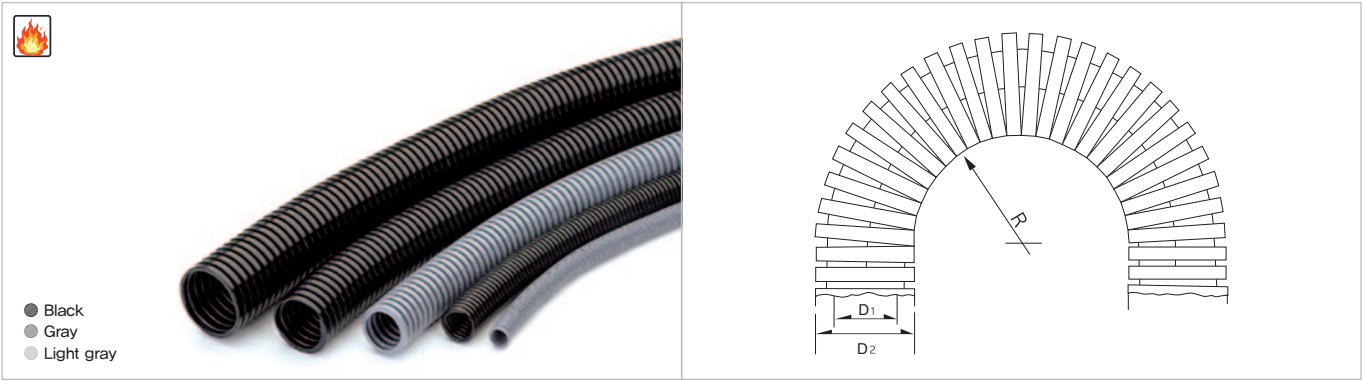


Black	Gray	Ultraviolet Block UV-R	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm ±10%	Packing meter / roll
CPS-07B	CPS-07G	CPS-07U	6.4	10.0	15.0	50/100
CPS-10B	CPS-10G	CPS-10U	9.6	13.0	20.0	50
CPS-12B	CPS-12G	CPS-12U	11.8	15.8	30.0	50
CPS-16B	CPS-16G	CPS-16U	15.9	21.2	40.0	50
CPS-22B	CPS-22G	CPS-22U	21.7	28.5	45.0	50
CPS-28B	CPS-28G	CPS-28U	27.8	34.5	55.0	50
CPS-36B	CPS-36G	CPS-36U	36.0	42.5	60.0	30
CPS-42B	CPS-42G	CPS-42U	41.5	48.5	65.0	30
CPS-48B	CPS-48G	CPS-48U	46.5	54.5	70.0	30
CPS-56B	CPS-56G	CPS-56U	56.3	67.2	110.0	30
CPS-70B	CPS-70G	CPS-70U	70.0	82.5	160.0	10
CPS-95B	CPS-95G	CPS-95U	91.5	106.0	210.0	10

Narrow Pitch(T) : Excellent Flexibility Performance



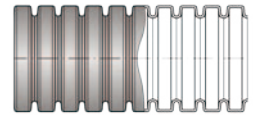
CPST-22B	CPST-22G	CPST-22U	21.7	28.5	40.0	50
CPST-28B	CPST-28G	CPST-28U	27.8	34.5	50.0	50
CPST-36B	CPST-36G	CPST-36U	36.0	42.5	55.0	30
CPST-42B	CPST-42G	CPST-42U	42.5	48.5	57.5	30
CPST-48B	CPST-48G	CPST-48U	46.5	54.5	60.0	30
CPST-56B	CPST-56G	CPST-56U	57.3	67.2	100.0	30
CPST-70B	CPST-70G	CPST-70U	72.1	82.5	150.0	10



- Material : High Quality Polyamide 6 (PA6)
- Degrees of Protection : IP68 (EN 60529)
- Construction : Inside & Outside Corrugated Plastic Hose
- Temperature : -40°C ~ +105°C
- Short Term : +150°C
- Self-Extinguishing : UL94-V0
- Color : Black & Gray / Light Gray
- Connections : CPSFIX
- Application : Machinery, Automobile, Offshore Plant, Railroad cars, Vessel
- International Specification : UL(PAH-10-48B and 10-48G / PAHT-22-48B and 22-48G)  
CE, VDE, RS B 0175

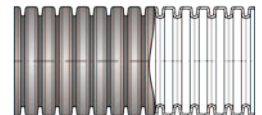
## Product Size

Standard Pitch : Excellent Pull-out Performance



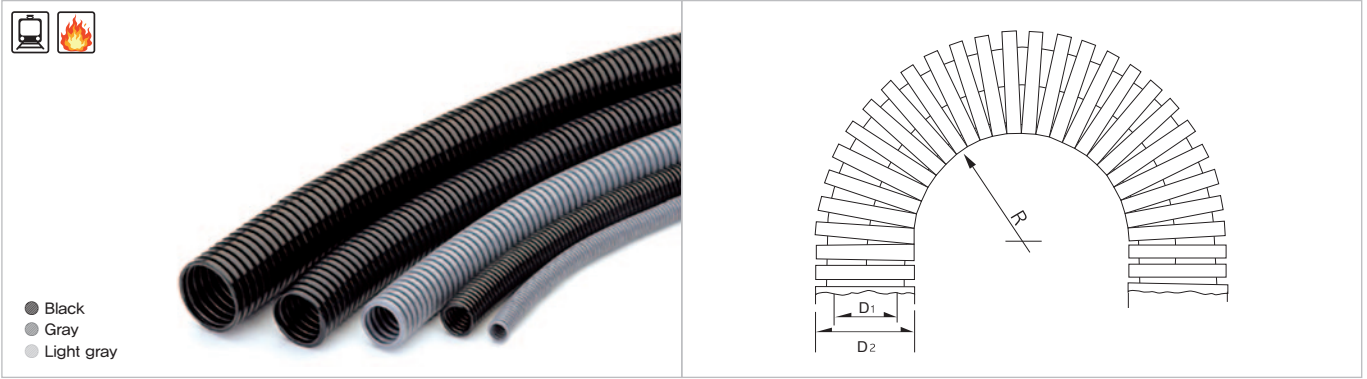
Black	Gray	Ultraviolet Block UV-R	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm ±10%	Packing meter / roll
PAH-07B	PAH-07G	PAH-07U	6.4	10.0	15.0	50/100
PAH-10B	PAH-10G	PAH-10U	9.6	13.0	20.0	50
PAH-12B	PAH-12G	PAH-12U	11.8	15.8	30.0	50
PAH-16B	PAH-16G	PAH-16U	15.9	21.2	40.0	50
PAH-22B	PAH-22G	PAH-22U	21.7	28.5	45.0	50
PAH-28B	PAH-28G	PAH-28U	27.8	34.5	55.0	50
PAH-36B	PAH-36G	PAH-36U	36.0	42.5	60.0	30
PAH-42B	PAH-42G	PAH-42U	41.5	48.5	65.0	30
PAH-48B	PAH-48G	PAH-48U	46.5	54.5	70.0	30
PAH-56B	PAH-56G	PAH-56U	56.3	67.2	110.0	30
PAH-70B	PAH-70G	PAH-70U	70.0	82.5	160.0	10
PAH-95B	PAH-95G	PAH-95U	91.5	106.0	210.0	10

Narrow Pitch(T) : Excellent Flexibility Performance



PAHT-22B	PAHT-22G	PAHT-22U	21.7	28.5	40.0	50
PAHT-28B	PAHT-28G	PAHT-28U	27.8	34.5	50.0	50
PAHT-36B	PAHT-36G	PAHT-36U	36.0	42.5	55.0	30
PAHT-42B	PAHT-42G	PAHT-42U	42.5	48.5	57.5	30
PAHT-48B	PAHT-48G	PAHT-48U	46.5	54.5	60.0	30
PAHT-56B	PAHT-56G	PAHT-56U	57.3	67.2	100.0	30
PAHT-70B	PAHT-70G	PAHT-70U	72.1	82.5	150.0	10

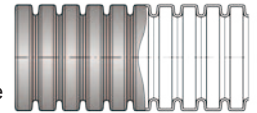
※ VDE Certification Excluded



- Material : High Quality Polyamide 6/66 (PA6/66)
- Degrees of Protection : Inside & Outside Corrugated Plastic Hose
- Construction : IP 68 (EN 60529)
- Temperature : -40°C ~ +105°C
- Short Term : +150°C
- Self-Extinguishing : UL94-V0
- Color : Black, Gray
- Connections : CPSFIX
- Application : Railroad cars
- Certification : UL(RAH-07-48B)  
CE, RS B 0175, EN45545-2 HL2(R22)/HL3(R23), RoHS2

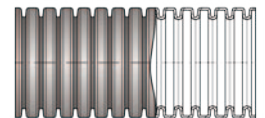
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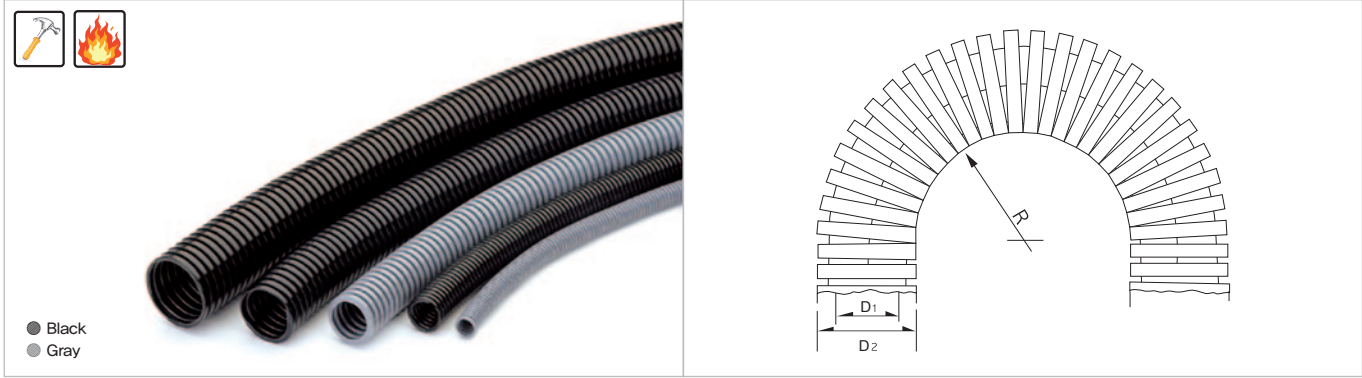
Black	Gray	Ultraviolet Block UV-R	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm± 10%	Packing meter / roll
RAH-07B	RAH-07G	RAH-07U	6.4	10.0	15.0	50/100
RAH-10B	RAH-10G	RAH-10U	9.6	13.0	20.0	50
RAH-12B	RAH-12G	RAH-12U	11.8	15.8	30.0	50
RAH-16B	RAH-16G	RAH-16U	15.9	21.2	40.0	50
RAH-22B	RAH-22G	RAH-22U	21.7	28.5	45.0	50
RAH-28B	RAH-28G	RAH-28U	27.8	34.5	55.0	50
RAH-36B	RAH-36G	RAH-36U	36.0	42.5	60.0	30
RAH-42B	RAH-42G	RAH-42U	41.5	48.5	65.0	30
RAH-48B	RAH-48G	RAH-48U	46.5	54.5	70.0	30
RAH-56B	RAH-56G	RAH-56U	56.3	67.2	110.0	30
RAH-70B	RAH-70G	RAH-70U	70.0	82.5	160.0	10
RAH-95B	RAH-95G	RAH-95U	91.5	106.0	210.0	10

Narrow Pitch(T) : Excellent Flexibility Performance



RAHT-22B	RAHT-22G	RAHT-22U	21.7	28.5	40.0	50
RAHT-28B	RAHT-28G	RAHT-28U	27.8	34.5	50.0	50
RAHT-36B	RAHT-36G	RAHT-36U	36.0	42.5	55.0	30
RAHT-42B	RAHT-42G	RAHT-42U	42.5	48.5	57.5	30
RAHT-48B	RAHT-48G	RAHT-48U	46.5	54.5	60.0	30
RAHT-56B	RAHT-56G	RAHT-56U	57.3	67.2	100.0	30
RAHT-70B	RAHT-70G	RAHT-70U	72.1	82.5	150.0	10

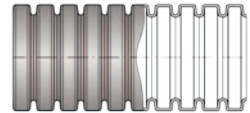
※ Only CE Certificate is obtained



- Material : High Quality Polyamide 6 (PA6)
- Construction : Inside & Outside Corrugated Plastic Hose
- Degrees of Protection : IP68 (EN 60529)
- Temperature : -40°C ~ +105°C
- Short Term : +150°C
- Self-Extinguishing : UL94-V0
- Color : Black, Gray
- Connections : CPSFIX
- Application : Machinery
- International Specification : CE, RoHS2

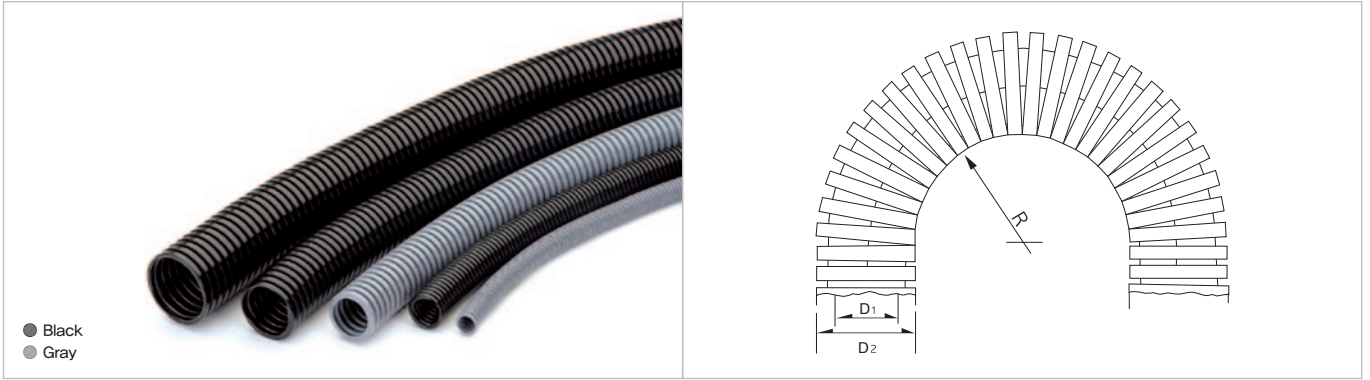
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Standard Pitch : Excellent Pull-out Performance



Black	Gray	Ultraviolet Block UV-R	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm ± 10%	Packing meter / roll
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POH-10B	POH-10G	POH-10U	9.0	13.0	25.0	50
POH-12B	POH-12G	POH-12U	11.5	15.8	35.0	50
POH-16B	POH-16G	POH-16U	15.5	21.2	45.0	50
POH-22B	POH-22G	POH-22U	21.3	28.5	50.0	50
POH-28B	POH-28G	POH-28U	26.8	34.5	60.0	50
POH-36B	POH-36G	POH-36U	35.2	42.5	70.0	30
POH-42B	POH-42G	POH-42U	40.8	48.5	75.0	30
POH-48B	POH-48G	POH-48U	46.0	54.5	80.0	30
POH-56B	POH-56G	POH-56U	55.3	67.2	110.0	30
POH-70B	POH-70G	POH-70U	69.0	82.5	160.0	10
POH-95B	POH-95G	POH-95U	91.5	106.0	210.0	10

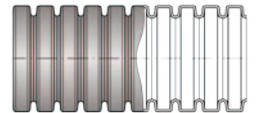




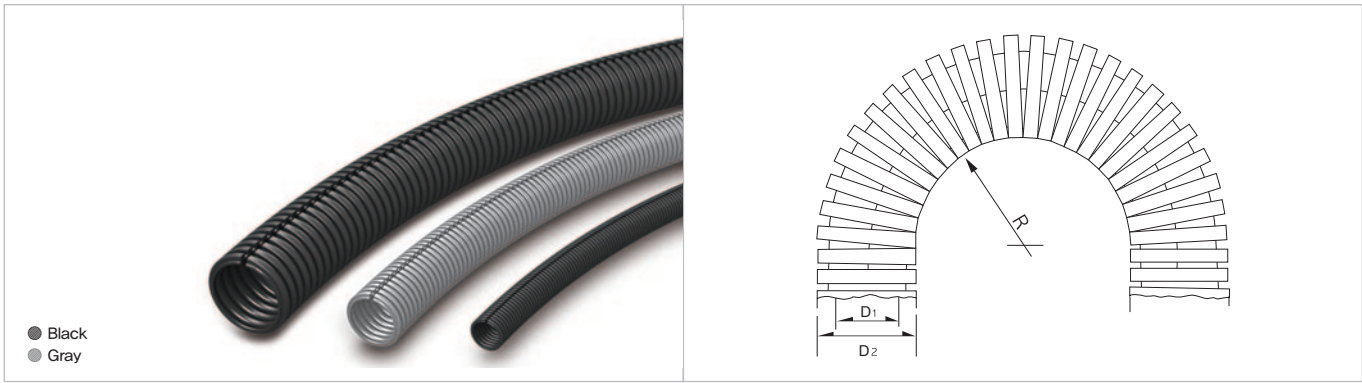
- Material : Soft Polyethylene (PE)
- Construction : Inside & Outside Corrugated Plastic Hose
- Degrees of Protection : IP68 (EN 60529)
- Temperature : -15°C ~ +60°C
- Short Term : +80°C
- Color : Black, Gray
- Connections : CPSFIX
- Application : Chemical Apparatus(Acid Resistance, Alkali-Resistance)
- International Specification : CE, RoHS2

## Product Size

Standard Pitch : Excellent Pull-out Performance



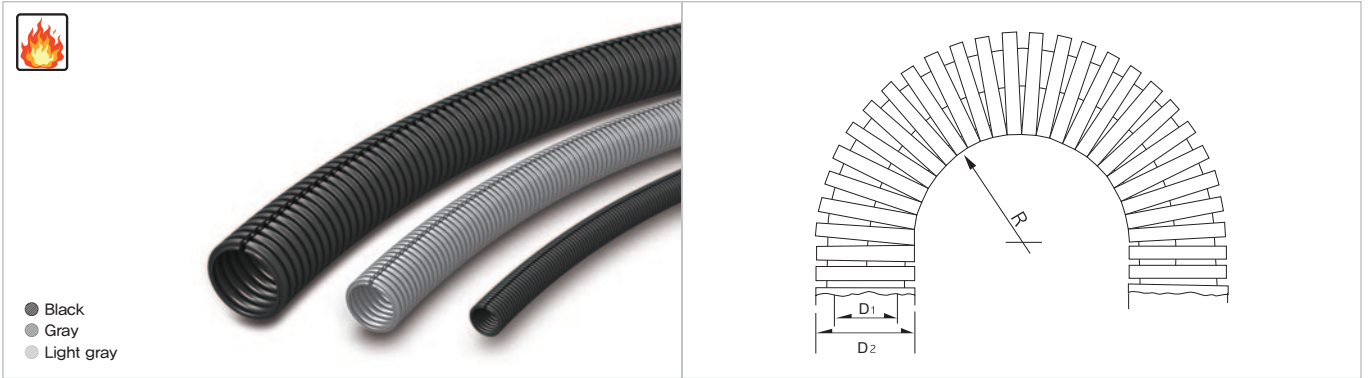
Black	Gray	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm ± 10%	Packing meter / roll
PES-07B	PES-07G	6.4	10.0	15.0	50/100
PES-10B	PES-10G	9.6	13.0	20.0	50
PES-12B	PES-12G	11.8	15.8	30.0	50
PES-16B	PES-16G	15.9	21.2	40.0	50
PES-22B	PES-22G	21.7	28.5	45.0	50
PES-28B	PES-28G	27.8	34.5	55.0	50
PES-36B	PES-36G	36.0	42.5	60.0	30
PES-42B	PES-42G	41.5	48.5	65.0	30
PES-48B	PES-48G	46.5	54.5	70.0	30
PES-56B	PES-56G	56.3	67.2	110.0	30
PES-70B	PES-70G	70.0	82.5	160.0	10
PES-95B	PES-95G	91.5	106.0	210.0	10



- Material : High Quality Polyamide 6 (PA6)
- Construction : Inside & Outside Corrugated Plastic Hose
- Temperature : -40°C ~ +105°C
- Short Term : +130°C
- Self-Extinguishing : UL94-HB
- Color : Black, Gray
- Connections : CPSFIX
- Application : Machinery
- International Specification : CE, RoHS2

## Product Size

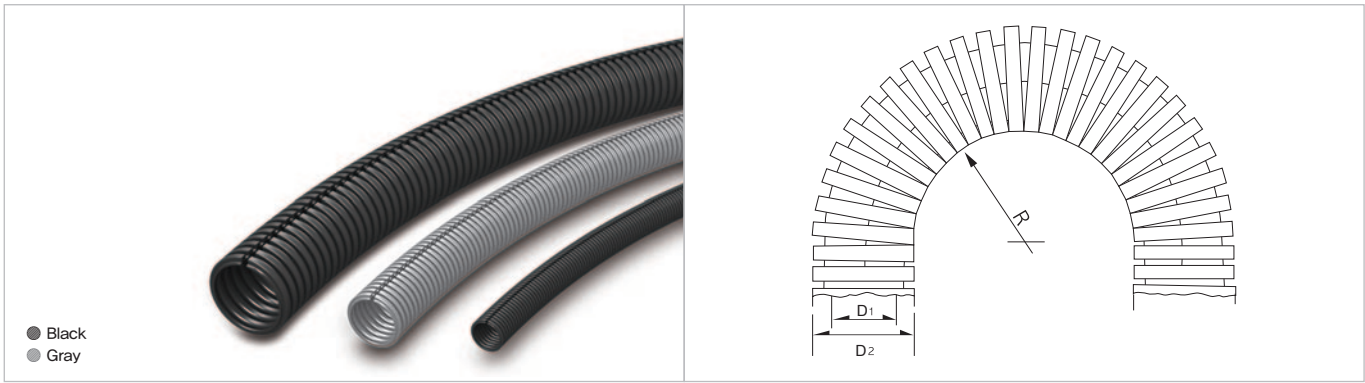
Black	Gray	Ultraviolet Block UV-R	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm ±10%	Packing meter / roll
CPSS-07B	CPSS-07G	CPSS-07U	6.4	10.0	15.0	50/100
CPSS-10B	CPSS-10G	CPSS-10U	9.6	13.0	20.0	50
CPSS-12B	CPSS-12G	CPSS-12U	11.8	15.8	30.0	50
CPSS-16B	CPSS-16G	CPSS-16U	15.9	21.2	40.0	50
CPSS-22B	CPSS-22G	CPSS-22U	21.7	28.5	45.0	50
CPSS-28B	CPSS-28G	CPSS-28U	27.8	34.5	55.0	50
CPSS-36B	CPSS-36G	CPSS-36U	36.0	42.5	60.0	30
CPSS-42B	CPSS-42G	CPSS-42U	41.5	48.5	65.0	30
CPSS-48B	CPSS-48G	CPSS-48U	46.5	54.5	70.0	30
CPSS-56B	CPSS-56G	CPSS-56U	56.3	67.2	110.0	30
CPSS-70B	CPSS-70G	CPSS-70U	70.0	82.5	160.0	10
CPSS-95B	CPSS-95G	CPSS-95U	91.5	106.0	210.0	10



- Material : High Quality Polyamide 6 (PA6)
- Construction : Inside & Outside Corrugated Plastic Hose
- Degrees of Protection : IP68 (EN 60529)
- Temperature : -40°C ~ +105°C
- Short Term : +150°C
- Self-Extinguishing : UL94-V0
- Color : Black & Gray / Light gray
- Connections : CPSFIX
- Application : Machinery, Automobile, Offshore Plant, Railroad cars
- International Specification : UL, CE, VDE

## Product Size

Black	Gray	Ultraviolet Block UV-R	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm± 10%	Packing meter / roll
PAHS-07B	PAHS-07G	PAHS-07U	6.4	10.0	15.0	50/100
PAHS-10B	PAHS-10G	PAHS-10U	9.6	13.0	20.0	50
PAHS-12B	PAHS-12G	PAHS-12U	11.8	15.8	30.0	50
PAHS-16B	PAHS-16G	PAHS-16U	15.9	21.2	40.0	50
PAHS-22B	PAHS-22G	PAHS-22U	21.7	28.5	45.0	50
PAHS-28B	PAHS-28G	PAHS-28U	27.8	34.5	55.0	50
PAHS-36B	PAHS-36G	PAHS-36U	36.0	42.5	60.0	30
PAHS-42B	PAHS-42G	PAHS-42U	41.5	48.5	65.0	30
PAHS-48B	PAHS-48G	PAHS-48U	46.5	54.5	70.0	30
PAHS-56B	PAHS-56G	PAHS-56U	56.3	67.2	110.0	30
PAHS-70B	PAHS-70G	PAHS-70U	70.0	82.5	160.0	10
PAHS-95B	PAHS-95G	PAHS-95U	91.5	106.0	210.0	10

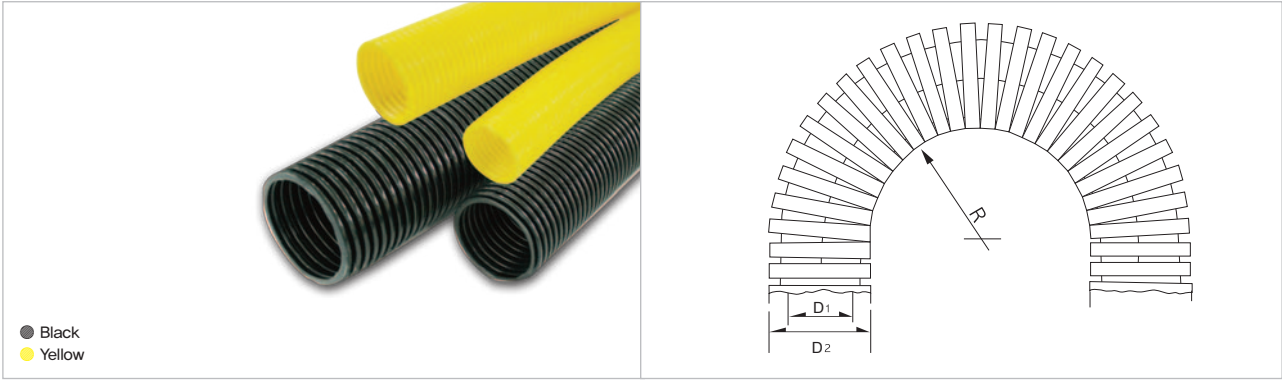


- Material : Soft Polyethylene (PE)
- Construction : Inside & Outside Corrugated Plastic Hose
- Temperature : -15°C ~ +60°C
- Short Term : +80°C
- Self-Extinguishing : UL94-HB
- Color : Black, Gray
- Connections : CPSFIX
- Application : Chemical Apparatus(Acid Resistance, Alkali-Resistance)
- International Specification : CE, RoHS2

## Product Size

Black	Gray	Inner Diameter (D1)	Outer Diameter (D2)	곡률반경 (R)mm ±10%	Packing meter / roll
PESS-07B	PESS-07G	6.4	10.0	15.0	50/100
PESS-10B	PESS-10G	9.6	13.0	20.0	50
PESS-12B	PESS-12G	11.8	15.8	30.0	50
PESS-16B	PESS-16G	15.9	21.2	40.0	50
PESS-22B	PESS-22G	21.7	28.5	45.0	50
PESS-28B	PESS-28G	27.8	34.5	55.0	50
PESS-36B	PESS-36G	36.0	42.5	60.0	30
PESS-42B	PESS-42G	41.5	48.5	65.0	30
PESS-48B	PESS-48G	46.5	54.5	70.0	30
PESS-56B	PESS-56G	56.3	67.2	110.0	30
PESS-70B	PESS-70G	70.0	82.5	160.0	10
PESS-95B	PESS-95G	91.5	106.0	210.0	10

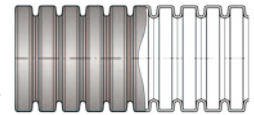




- Material : High Quality Polyamide 12 (PA12)
- Construction : Inside & Outside Corrugated Plastic Hose
- Degrees of Protection : IP68 (EN 60529)
- Temperature : -40°C ~ +105°C
- Short Term : +130°C
- Self-Extinguishing : UL94-V2
- Color : Black, Yellow
- Connections : CPSFIX
- Application : High Speed Machine, Industrial Robot
- International Specification : UL(PART-22-48B and 22-48Y)  
CE, RoHS2

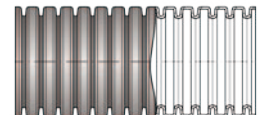
## Product Size

Standard Pitch : Excellent Pull-out Performance



Black	Yellow	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) (R)mm± 10%	Packing meter / roll
PAR-07B	PAR-07Y	6.4	10.0	15.0	50/100
PAR-10B	PAR-10Y	9.6	13.0	20.0	50
PAR-12B	PAR-12Y	11.8	15.8	30.0	50
PAR-16B	PAR-16Y	15.9	21.2	40.0	50
PAR-22B	PAR-22Y	21.7	28.5	45.0	50
PAR-28B	PAR-28Y	27.8	34.5	55.0	50
PAR-36B	PAR-36Y	36.0	42.5	60.0	30
PAR-42B	PAR-42Y	41.5	48.5	65.0	30
PAR-48B	PAR-48Y	46.5	54.5	70.0	30
PAR-56B	PAR-56Y	56.3	67.2	110.0	30
PAR-70B	PAR-70Y	70.0	82.5	160.0	10
PAR-95B	PAR-95Y	91.5	106.0	210.0	10

Narrow Pitch(T) : Excellent Flexibility Performance



PART-22B	PART-22Y	21.7	28.5	40.0	50
PART-28B	PART-28Y	27.8	34.5	50.0	50
PART-36B	PART-36Y	36.0	42.5	55.0	30
PART-42B	PART-42Y	42.5	48.5	57.5	30
PART-48B	PART-48Y	46.5	54.5	60.0	30
PART-56B	PART-56Y	57.3	67.2	100.0	30
PART-70B	PART-70Y	72.0	82.5	150.0	10

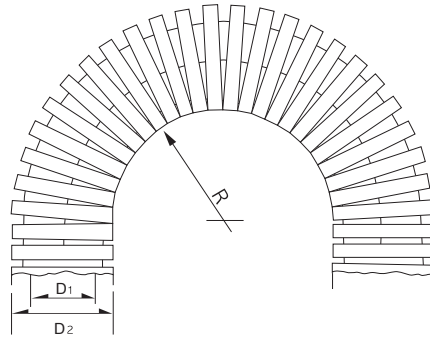
※ Much Improved Elasticity & Flexibility compared with PAR



Roboway &  
ROBO-KIT



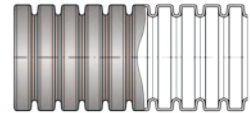
● Black  
● Yellow



- Material : High Quality Polyamide 12 (PA12)
- Construction : Inside & Outside Corrugated Plastic Hose
- Degrees of Protection : IP 68 (EN 60529)
- Temperature : -40°C ~ +105°C
- Short Term : +130°C
- Self-Extinguishing : UL94-V2
- Color : Black, Yellow
- Connections : CPSFIX & ROBO-KIT
- Application : Industrial Robot(for Roboway)
- International Specification : CE, RoHS2

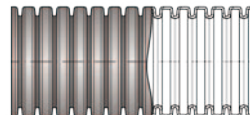
## Product Size

Standard Pitch : Excellent Pull-out Performance

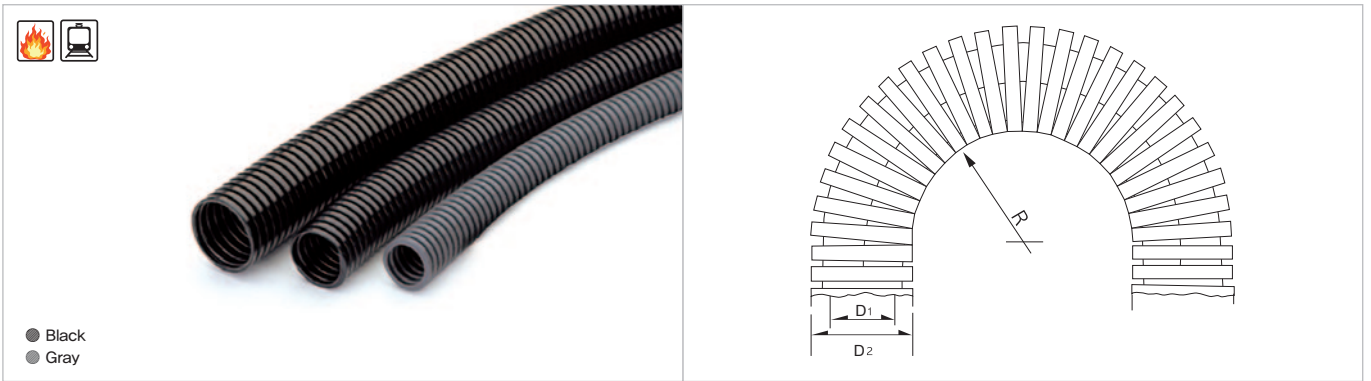


Black	Yellow	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) (R)mm ±10%	Packing meter / roll
PAM-07B	PAM-07Y	6.4	10.0	15.0	50/100
PAM-10B	PAM-10Y	9.6	13.0	20.0	50
PAM-12B	PAM-12Y	11.8	15.8	30.0	50
PAM-16B	PAM-16Y	15.9	21.2	40.0	50
PAM-22B	PAM-22Y	21.7	28.5	45.0	50
PAM-28B	PAM-28Y	27.8	34.5	55.0	50
PAM-36B	PAM-36Y	36.0	42.5	60.0	30
PAM-42B	PAM-42Y	41.5	48.5	65.0	30
PAM-48B	PAM-48Y	46.5	54.5	70.0	30
PAM-56B	PAM-56Y	56.3	67.2	110.0	30
PAM-70B	PAM-70Y	70.0	82.5	160.0	10
PAM-95B	PAM-95Y	91.5	106.0	210.0	10

Narrow Pitch(T) : Excellent Flexibility Performance



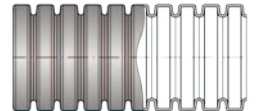
PAMT-22B	PAMT-22Y	21.7	28.5	40.0	50
PAMT-28B	PAMT-28Y	27.8	34.5	50.0	50
PAMT-36B	PAMT-36Y	36.0	42.5	55.0	30
PAMT-42B	PAMT-42Y	42.5	48.5	57.5	30
PAMT-48B	PAMT-48Y	46.5	54.5	60.0	30
PAMT-56B	PAMT-56Y	57.3	67.2	100.0	30
PAMT-70B	PAMT-70Y	72.1	82.5	150.0	10



- Material : High Quality Polyamide 12 (PA12)
- Degrees of Protection : Inside & Outside Corrugated Plastic Hose
- Construction : IP 69 (EN 60529)
- Temperature : -40°C ~ +125°C
- Short Term : +150°C
- Self-Extinguishing : UL94-V2
- Color : Black, Gray
- Connections : CPSFIX
- Application : Railroad cars
- Certification : UL, CE, RS B 0175, EN45545-2 HL2(R22)/HL3(R23), RoHS2

## Product Size

Standard Pitch : Excellent Pull-out Performance



Black	Gray	Ultraviolet Block UV-R	Inner Diameter (D1)	Outer Diameter (D2)	Bending Radius(R) mm± 10%	Packing meter / roll
RAH12-07B	RAH12-07G	RAH12-07U	6.4	10.0	15.0	50/100
RAH12-10B	RAH12-10G	RAH12-10U	9.6	13.0	20.0	50
RAH12-12B	RAH12-12G	RAH12-12U	11.8	15.8	30.0	50
RAH12-16B	RAH12-16G	RAH12-16U	15.9	21.2	40.0	50
RAH12-22B	RAH12-22G	RAH12-22U	21.7	28.5	45.0	50
RAH12-28B	RAH12-28G	RAH12-28U	27.8	34.5	55.0	50
RAH12-36B	RAH12-36G	RAH12-36U	36.0	42.5	60.0	25
RAH12-42B	RAH12-42G	RAH12-42U	41.5	48.5	65.0	25
RAH12-48B	RAH12-48G	RAH12-48U	46.5	54.5	70.0	25



# Application

