



GENERAL CATALOGUE 2013

p354 ~ 365

Using Material of High Quality!



## CORRUGATED TUBE

The tubes, which are made of Vinyl Chloride and have been widely used, emit "Dioxin"(toxic gas). Since CPSFLEX uses Polyamid6, CPS Products are Halogen free, eco-friendly and recyclable. Also, CPS products have several ranges of flame retardant grade from UL94-HB to Vo.

기존의 염화비닐 튜브는 "다이옥신"이라는 유독성가스를 배출하지만 CPSFLEX는 고품질 폴리아미드6를 주재료로 사용하기에 인체에 무해(Halogen-Free)하며 리사이클가능한 환경친화적인 제품입니다. 또한 UL94-HB부터 Vo까지 제품을 따라 다양한 난연등급을 가지고 있습니다.



Anyone is able to cut the flexible tube with a simple knife as you want. It can reduce unnecessary time to install.

CPSFLEX는 누구나 쉽게 컷칼 하나만 있으면 원하는 길이만큼 손쉽게 절단이 가능하므로 별도의 작업공구와 기술이 필요없으며 그만큼 작업시간을 단축할 수 있습니다.

## ➔ RoHS Directive 2002/95/EC 유해물질 사용제한지침

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.

CPSFLEX의 사용재료는 지정시험소의 시험을 통과하였으며 무독성으로 유럽에서 규제하는 유해물질 사용제한 지침에 따라 생산하고 있습니다.

## ➔ PAH Certificate of Reliability PAH 부품소재 신뢰성 인증 테스트 확인

The flexible conduit, PAH, was awarded the confidence certification from Korean Agency for Technology and Standards after pass the test of confidence certification.

CPSFLEX의 PAH 제품은 신뢰성 인증 테스트를 합격하여 지식경제부 기술표준원 신뢰성 인증을 받았습니다.

**Flexibility** : angular velocity 5,000 times under  $\angle 40 \pm 5^\circ$   
**Tensile Strength** : 250Mpa/30  $\pm$  3 second  
**Temperature** : 4hours under  $-7 \pm 2^\circ$  4 hours under /  $55 \pm 2^\circ$   
 Flammibility : 10 second(UL94)

**Durability** : 400 million round trip

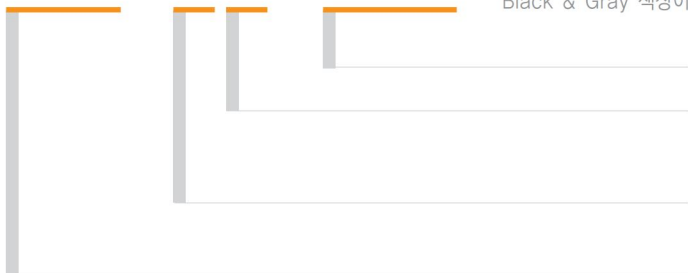
**유 연 성** : 분당  $40 \pm 5^\circ$ 로 굽힘시험 5000회  
**인 장 력** : 30  $\pm$  3초 이내 250N의 인장력 시험  
**저온·고온** :  $-7 \pm 2$  4시간 저온 /  $55 \pm 2$  4시간 고온  
**난 연 성** : 시험제품에 불꽃을 10초간 연소 통과  
**수 명** : 400만 왕복 사용하더라도 제품 이상 없음



## ORDERING (주문방법)

### PAH - 10B : 100M

▶ Black & Gray are the main colors, but it is available to produce any color with customers request. Black & Gray 색상이 주 색상이지만 고객의 요청에 따라 다른색상으로도 생산가능합니다.



주문수량	Q' ty(M)
컬러	Color B : Black G : Gray U : U.V- resistant, black only
사이즈	Size 07,10, 12, 16, 22, 28, 36, 48, 56, 70, 95
타입	<b>CPS / PAH / POH / PAR / PES / PPS/ CPSS / PPSS</b>



# CPSFLEX CORRUGATED TUBE

유형 Type	재 질 Material	버 전 Version	굴곡강도 Flexural Strength	굴곡탄성률 Flexural Modulus	인장강도 Tensile Strength	충격강도 Impact Strength (Izod Notched)
<b>CPS</b> 	Polyamide 6 	standard version medium-wall, very flexible	850 kg/cm <sup>2</sup>	20,000 kg/cm <sup>2</sup>	630 kg/cm <sup>2</sup>	20 kg • cm/cm
<b>PAH</b> 	Polyamide 6 	standard version medium-wall, very flexible	950 kg/cm <sup>2</sup>	26,000 kg/cm <sup>2</sup>	700 kg/cm <sup>2</sup>	25 kg • cm/cm
<b>POH</b> 	Polyamide 6 	reinforced version thick-wall, flexible	1,050 kg/cm <sup>2</sup>	28,500 kg/cm <sup>2</sup>	900 kg/cm <sup>2</sup>	30 kg • cm/cm
<b>PAR</b> 	Polyamide 12	medium-wall very flexible to highly flexible	710 kg/cm <sup>2</sup>	15,000 kg/cm <sup>2</sup>	550 kg/cm <sup>2</sup>	15 kg • cm/cm
<b>PES</b> 	Polyethylene	simple version light-weight, flexible	500 kg/cm <sup>2</sup>	16,000 kg/cm <sup>2</sup>	520 kg/cm <sup>2</sup>	15 kg • cm/cm
<b>PPS</b> 	Polypropylene	simple version light-weight, flexible	500 kg/cm <sup>2</sup>	18,000 kg/cm <sup>2</sup>	600 kg/cm <sup>2</sup>	15 kg • cm/cm
<b>CPSS</b> 	Polyamide 6	standard version medium-wall, very flexible	850 kg/cm <sup>2</sup>	20,000 kg/cm <sup>2</sup>	630 kg/cm <sup>2</sup>	20 kg • cm/cm
<b>PPSS</b> 	Polypropylene	simple version light-weight, flexible	500 kg/cm <sup>2</sup>	18,000 kg/cm <sup>2</sup>	600 kg/cm <sup>2</sup>	15 kg • cm/cm



온도범위 Temperature range	자기소화성 Self-extinguishing UL-94	내성 Resistance	색상 Color	적용 Application
-40°C to +105°C +130°C short term	UL94-HB Halogen-Free	alcohol, benzol, greases, mineral oil, diesel fuel, sea water, petrol etc.	Black / Gray UV-resistant	Machine tool, Industrial & Automatic Machinery etc.
-40°C to +105°C +150°C short term	UL94-Vo Halogen-Free UL File No.E191879 VDE License No.135369	alcohol, benzol, greases, mineral oil, diesel fuel, sea water, petrol etc.	Black / Gray UV-resistant	Machine tool, industrial & Automatic Machinery, Rolling Stock, etc.
-40°C to +105°C +150°C short term	UL94-Vo Halogen-Free	alcohol, benzol, greases, mineral oil, diesel fuel, sea water, petrol etc.	Black / Gray UV-resistant	Machine tool, Shipbuilding Industrial Machinery, Heavy Industry etc.
-50°C to +95°C +150°C short term	UL94-V2 Halogen-Free	alcohol, benzol, mineral oil, diesel fuel, etc	Black / Gray UV-resistant	Robots
-15°C to +60°C +80°C short term	-	acid, sea water, ammonia etc	Black / Gray	Chemical Machinery, Acid areas, Industrial Machinery etc.
-15°C to +60°C +80°C short term	-	acid, sea water, ammonia etc	Black / Gray	Chemical Machinery, Acid areas, Industrial Machinery etc.
-40°C to +105°C +130°C short term	UL94-HB Halogen-Free	alcohol, benzol, greases, mineral oil, diesel fuel, sea water, petrol etc.	Black / Gray	Machine tool, Industrial & Automatic Machinery etc.
-15°C to +60°C +80°C short term	-	acid, sea water, ammonia etc	Black / Gray	Chemical Machinery, Acid areas, Industrial Machinery etc.

SHIFT-CHAIN

SALEN-CHAIN

REWINDING-CHAIN

HELV-CHAIN

ROBO-KIT

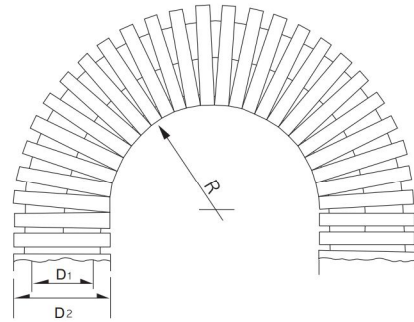
CPSFLEX

CPS-EX



**CPS**

CPS conduit is popular for general use as it is flame-resistant up to UL94HB.



- Black
- Gray

- Material: High Quality Polyamide 6
- Construction: Inside & Outside Corrugated all Plastic Hose
- Protective: IP 68 acc. EN 60529
- Temperature Range: -40° C to + 105° C
- Short Term: up to +130° C
- Self-Extinguishing: UL94-HB, Halogen-Free
- Color: Black & Gray
- Connections: CPSFIX
- Application: Machine tool, Shipbuilding, Tramway Industrial / Automatic Machinery Printing Machine etc.
- International Specification:

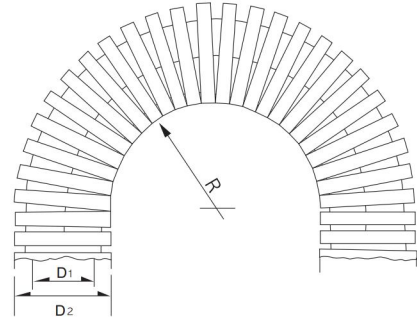
- 재 질: 고품질 폴리아미드 6
- 구 조: 내/외부 굴곡플라스틱 호스
- 방 수 등 급: IP 68 acc. EN 60529
- 적용온도범위: -40° C + 105° C
- 순간최대온도: +130° C
- 자기소화성: UL94-HB, Halogen-Free
- 색 상: 검정색, 회색
- 사용커넥터: CPSFIX
- 적 용: 공작기계, 산업기계, 자동화기계  
조선소, 전동차, 인쇄기계등
- 국 제 규 격:

( dimensions in mm )

Order No.			Inner Diameter (d1)	Outer Diameter (d2)	Bending Radius (R)mm ± 10%	Packing meter / roll
Black	Gray	UV-R				
CPS-07B	CPS-07G	CPS-07U	6.4	10	15	50/100
CPS-10B	CPS-10G	CPS-10U	9.6	13	20	50
CPS-12B	CPS-12G	CPS-12U	11.8	15.8	30	50
CPS-16B	CPS-16G	CPS-16U	15.9	21.2	40	50
CPS-22B	CPS-22G	CPS-22U	21.7	28.5	45	50
CPS-28B	CPS-28G	CPS-28U	27.8	34.5	55	50
CPS-36B	CPS-36G	CPS-36U	36	42.5	60	30
CPS-48B	CPS-48G	CPS-48U	46.5	54.5	70	30
CPS-56B	CPS-56G	CPS-56U	56.3	67.2	110	30
CPS-70B	CPS-70G	CPS-70U	70	82.5	160	10
CPS-95B	CPS-95G	CPS-95U	91.5	106	210	10

# PAH

PAH conduit is made of high quality PA6 material and it has excellent flame retardant Vo grade in compliance with UL-94.



Black  
 Gray

- Material: High Quality Polyamide 6
- Construction: Inside & Outside Corrugated all Plastic Hose
- Protective: IP 68 acc. EN 60529
- Temperature Range: -40° C to + 105° C
- Short Term: up to +150° C
- Self-Extinguishing: UL94-Vo, Halogen-Free
- Color: Black & Gray
- Connections: CPSFIX
- Application: Machine tool, Shipbuilding, Tramway Industrial / Automatic Machinery, Printing Machine, Rolling Stock, Railway, Subway etc.

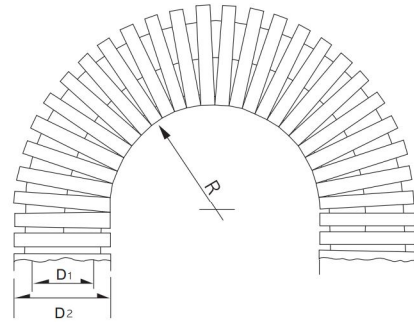
• International Specification:

- 재 질: 고품질 폴리아미드 6
  - 구 조: 내/외부 굴곡플라스틱 호스
  - 방 수 등 급: IP 68 acc. EN 60529
  - 적용온도범위: -40° C + 105° C
  - 순간최대온도: +150° C
  - 자기소화성: UL94-Vo, Halogen-Free
  - 색 상: 검정색, 회색
  - 사용커넥터: CPSFIX
  - 적 용: 공작기계, 산업기계, 자동화기계, 인쇄기계, 조선소, 전동차등
- 국 제 규 격:

( dimensions in mm )

Order No.			Inner Diameter (d1)	Outer Diameter (d2)	Bending Radius (R)mm ± 10%	Packing meter / roll
Black	Gray	UV-R				
PAH-07B	PAH-07G	PAH-07U	6.4	10	15	50/100
PAH-10B	PAH-10G	PAH-10U	9.6	13	20	50
PAH-12B	PAH-12G	PAH-12U	11.8	15.8	30	50
PAH-16B	PAH-16G	PAH-16U	15.9	21.2	40	50
PAH-22B	PAH-22G	PAH-22U	21.7	28.5	45	50
PAH-28B	PAH-28G	PAH-28U	27.8	34.5	55	50
PAH-36B	PAH-36G	PAH-36U	36	42.5	60	30
PAH-48B	PAH-48G	PAH-48U	46.5	54.5	70	30
PAH-56B	PAH-56G	PAH-56U	56.3	67.2	110	30
PAH-70B	PAH-70G	PAH-70U	70	82.5	160	10
PAH-95B	PAH-95G	PAH-95U	91.5	106	210	10

## POH *POH conduit is impact resistant due to it's wall thickness and is suitable for installation in harmful areas.*



- Black
- Gray

- Material: High Quality Polyamide 6
- Construction: Inside & Outside Corrugated all Plastic Hose
- Protective: IP 68 acc. EN 60529
- Temperature Range: -40° C to + 105° C
- Short Term: up to +150° C
- Self-Extinguishing: UL94-HB, Halogen-Free
- Color: Black & Gray
- Connections: CPSFIX
- Application: Machine tool, Plant Construction  
Crane and Heavy Machine etc.
- International Specification:

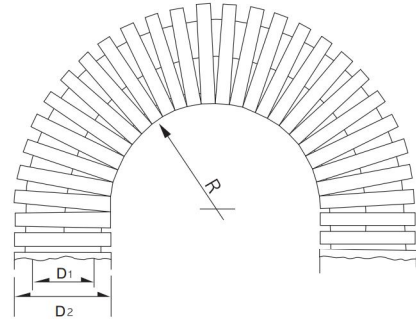
- 재 질: 고품질 폴리아미드 6
- 구 조: 내/외부 굴곡플라스틱 호스
- 방 수 등 급: IP 68 acc. EN 60529
- 적용온도범위: -40° C + 105° C
- 순간최대온도: +150° C
- 자기소화성: UL94-Vo, Halogen-Free
- 색 상: 검정색, 회색
- 사용커넥터: CPSFIX
- 적 용: 공작기계, 플랜트 구조물  
크레인, 대형기계 등
- 국 제 규 격:

( dimensions in mm )

Order No.						
Black	Gray	UV-R	Inner Diameter (d1)	Outer Diameter (d2)	Bending Radius (R)mm ±10%	Packing meter / roll
POH-07B	POH-07G	POH-07U	6	10	20	50/100
POH-10B	POH-10G	POH-10U	9	13	25	50
POH-12B	POH-12G	POH-12U	11.5	15.8	35	50
POH-16B	POH-16G	POH-16U	15.5	21.2	45	50
POH-22B	POH-22G	POH-22U	21.3	28.5	50	50
POH-28B	POH-28G	POH-28U	26.8	34.5	60	50
POH-36B	POH-36G	POH-36U	35.2	42.5	70	30
POH-48B	POH-48G	POH-48U	46	54.5	80	30
POH-56B	POH-56G	POH-56U	55.3	67.2	110	30
POH-70B	POH-70G	POH-70U	69	82.5	160	10

# PAR

PAR conduit is suitable for the bending and rotating of robots.



- Material: High Quality Polyamide 12
- Construction: Inside & Outside Corrugated all Plastic Hose
- Protective: IP 68
- Temperature Range: -50° C to + 95° C
- Short Term: up to +150° C
- Self-Extinguishing: UL94-V2, Halogen-Free
- Color: Black & Gray
- Connections: CPSFIX
- Application: Robots

- 재 질: 고품질 폴리아미드 12
- 구 조: 내/외부 굴곡플라스틱 호스
- 방 수 등 급: IP 68
- 적용온도범위: -50° C + 95° C
- 순간최대온도: +150° C
- 자기소화성: UL94-V2, Halogen-Free
- 색 상: 검정색, 회색
- 사용커넥터: CPSFIX
- 적 용: 로봇

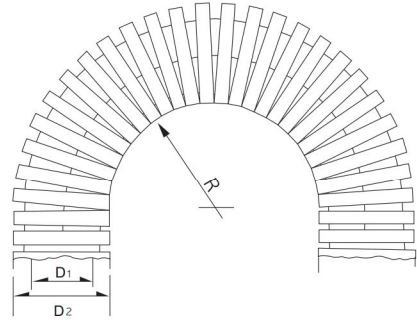
( dimensions in mm )

Order No.						
Black	Gray	UV-R	Inner Diameter (d1)	Outer Diameter (d2)	Bending Radius (R)mm ± 10%	Packing meter / roll
PAR-07B	PAR-07G	PAR-07U	6.4	10	15	50/100
PAR-10B	PAR-10G	PAR-10U	9.6	13	20	50
PAR-12B	PAR-12G	PAR-12U	11.8	15.8	30	50
PAR-16B	PAR-16G	PAR-16U	15.9	21.2	40	50
PAR-22B	PAR-22G	PAR-22U	21.7	28.5	45	50
PAR-28B	PAR-28G	PAR-28U	27.8	34.5	55	50
PAR-36B	PAR-36G	PAR-36U	36	42.5	60	30
PAR-48B	PAR-48G	PAR-48U	46.5	54.5	70	30
PAR-56B	PAR-56G	PAR-56U	56.3	67.2	110	30
PAR-70B	PAR-70G	PAR-70U	70	82.5	160	10



## PES

PES conduit éprouvée pour machines chimiques, due to the excellent resistance to acid and alkali.



- Black
- Gray

- Material: Soft Polyethylene (PE)
- Construction: Inside & Outside Corrugated all Plastic Hose
- Protective: IP 68
- Temperature Range: -15° C to + 60° C
- Short Term: up to +80° C
- Color: Black & Gray
- Connections: CPSFIX
- Resistant to: Acid, Alkali
- Application: Machine tool, Plant Construction  
Crane and Heavy Machine etc.

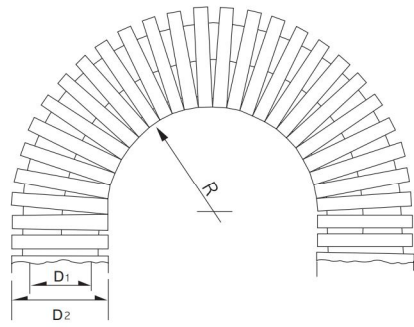
- 재 질: 폴리에틸렌 (PE)
- 구 조: 내/외부 굴곡플라스틱 호스
- 방 수 등 급: IP 68
- 적용온도범위: -15° C + 60° C
- 순간최대온도: +80° C
- 색 상: 검정색, 회색
- 사용 커넥터: CPSFIX
- 내 구 성: 산성, 알칼리성
- 적 용: 공작기계, 산업기계  
화학기계(내산성, 내알칼리성) 등.

( dimensions in mm )

Order No.		Inner Diameter (d1)	Outer Diameter (d2)	Bending Radius (R)mm ±10%	Packing meter / roll
Black	Gray				
PES-07B	PES-07G	6.4	10	15	50/100
PES-10B	PES-10G	9.6	13	20	50
PES-12B	PES-12G	11.8	15.8	30	50
PES-16B	PES-16G	15.9	21.2	40	50
PES-22B	PES-22G	21.7	28.5	45	50
PES-28B	PES-28G	27.8	34.5	55	50
PES-36B	PES-36G	36	42.5	60	30
PES-48B	PES-48G	46.5	54.5	70	30
PES-56B	PES-56G	56.3	67.2	110	30
PES-70B	PES-70G	70	82.5	160	10
PES-95B	PES-95G	91.5	106	210	10

# PPS

PPS conduit is suitable for chemical machines, due to the excellent resistance to acid and alkali.



- Black
- Gray

- Material: Polypropylene (PP)
- Construction: Inside & Outside Corrugated all Plastic Hose
- Protective: IP 68
- Temperature Range: -15° C to + 60° C
- Short Term: up to +80° C
- Color: Black & Gray
- Connections: CPSFIX
- Resistant to: Acid, Alkali
- Application: Machine tool, Industrial Machinery  
Chemical Machinery etc.

- 재 질: 폴리프로필렌(PP)
- 구 조: 내/외부 굴곡플라스틱 호스
- 방 수 등 급: IP 68
- 적용온도범위: -15° C + 60° C
- 순간최대온도: +80° C
- 색 상: 검정색, 회색
- 사용 커넥터: CPSFIX
- 내 구 성: 산성, 알칼리성
- 적 용: 공작기계, 산업기계  
화학기계(내산성, 내알카리성) 등.

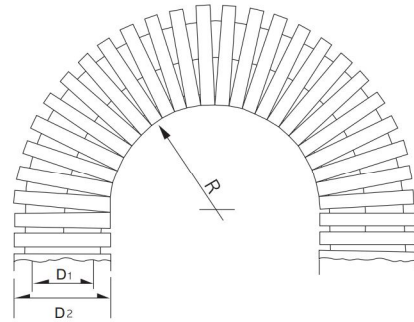
( dimensions in mm )

Order No.		Inner Diameter (d1)	Outer Diameter (d2)	Bending Radius (R)mm ± 10%	Packing meter / roll
Black	Gray				
PPS-07B	PPS-07G	6.4	10	15	50/100
PPS-10B	PPS-10G	9.6	13	20	50
PPS-12B	PPS-12G	11.8	15.8	30	50
PPS-16B	PPS-16G	15.9	21.2	40	50
PPS-22B	PPS-22G	21.7	28.5	45	50
PPS-28B	PPS-28G	27.8	34.5	55	50
PPS-36B	PPS-36G	36	42.5	60	30
PPS-48B	PPS-48G	46.5	54.5	70	30
PPS-56B	PPS-56G	56.3	67.2	110	30
PPS-70B	PPS-70G	70	82.5	160	10
PPS-95B	PPS-95G	91.5	106	210	10

SHIFT-CHAIN  
SAEN-CHAIN  
REVOLVING-CHAIN  
HEX-CHAIN  
ROBOT-KIT  
CPSFLEX

## CPSS

CPSS conduit is popular for general use as it is flame-resistant up to UL94HB.



- Black
- Gray

- Material: High Quality Polyamide 6
- Construction: Inside & Outside Corrugated all Plastic Hose
- Temperature Range: -40°C to + 105°C
- Short Term: up to +130°C
- Self-Extinguishing: UL94-HB, Halogen-Free
- Color: Black & Gray
- Connections: CPSFIX
- Application: Machine tool, Shipbuilding, Tramway  
Industrial/ Automatic Machinery  
Printing Machine etc.

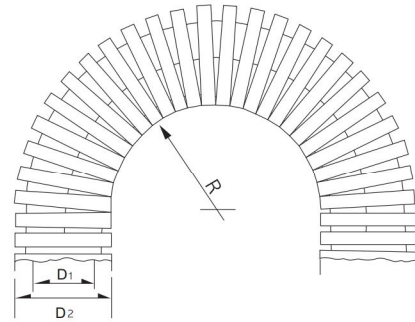
- 재 질: 고품질 폴리아미드 6
- 구 조: 내/외부 굴곡플라스틱 호스
- 적용온도범위: -40°C + 105°C
- 순간최대온도: +130°C
- 자기소화성: UL94-HB, Halogen-Free
- 색 상: 검정색, 회색
- 사용커넥터: CPSFIX
- 적 용: 공작기계, 산업기계, 자동화기계  
조선소, 전동차, 인쇄기계 등

( dimensions in mm )

Order No.		Inner Diameter (d1)	Outer Diameter (d2)	Bending Radius (R)mm ±10%	Packing meter / roll
Black	Gray				
CPSS-07B	CPSS-07G	6.4	10	15	50/100
CPSS-10B	CPSS-10G	9.6	13	20	50
CPSS-12B	CPSS-12G	11.8	15.8	30	50
CPSS-16B	CPSS-16G	15.9	21.2	40	50
CPSS-22B	CPSS-22G	21.7	28.5	45	50
CPSS-28B	CPSS-28G	27.8	34.5	55	50
CPSS-36B	CPSS-36G	36	42.5	60	30
CPSS-48B	CPSS-48G	46.5	54.5	70	30
CPSS-56B	CPSS-56G	56.3	67.2	110	30
CPSS-70B	CPSS-70G	70	82.5	160	10
CPSS-95B	CPSS-95G	91.5	106	210	10

# PPSS

PPSS conduit is suitable for chemical machine, due to the excellent resistance to acid and alkali.



Black  
Gray

- Material: Polypropylene(PP)
- Construction: Inside & Outside Corrugated all Plastic Hose
- Temperature Range: -15° C to + 60° C
- Short Term: up to +80° C
- Color: Black & Gray
- Connections: CPSFIX
- Resistant to: Acid, Alkali
- Application: Machine tool, Industrial Machinery  
Chemical Machinery etc.

- 재 질: 폴리프로필렌 (PP)
- 구 조: 내/외부 굴곡플라스틱 호스
- 적용온도범위: -15° C + 60° C
- 순간최대온도: +80° C
- 색 상: 검정색, 회색
- 사용커넥터: CPSFIX
- 내 구 성: 산성, 알칼리성
- 적 용: 공작기계, 산업기계  
화학기계(내산성, 내알칼리성) 등.

( dimensions in mm )

Order No.		Inner Diameter (d1)	Outer Diameter (d2)	Bending Radius (R)mm ± 10%	Packing meter / roll
Black	Gray				
PPSS-07B	PPSS-07G	6.4	10	15	50/100
PPSS-10B	PPSS-10G	9.6	13	20	50
PPSS-12B	PPSS-12G	11.8	15.8	30	50
PPSS-16B	PPSS-16G	15.9	21.2	40	50
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PPSS-56B	PPSS-56G	56.3	67.2	110	30
PPSS-70B	PPSS-70G	70	82.5	160	10
PPSS-95B	PPSS-95G	91.5	106	210	10