

** stat.R = lowest recommended bending radius for static (fixed) installation.
静态（固定）安装最小弯曲半径

*** dyn.R = lowest recommended bending radius for dynamic (flexible) installation.
动态安装最小弯曲半径

The product group covers more than forty different conduit types for a variety of applications in cable protection. The range offers conduits for technically demanding applications and special requirements.

Conduit sizes range from 7mm to 125mm diameters, from light weight to heavy weight, and pliable to highly flexible. Standard colours are black and grey.

Many conduits are specially approved. e.g. CSA, UL Recognition, NF, SNCF, DB etc.

PMA 软管包含 40 多个系列，用于不同的电缆保护领域。可以根据客户的需求提供不同种类的软管。

软管的标称内径从 7-125 毫米，从轻型薄壁软管到厚重型软管，从柔软型到极度柔软型，标准颜色为黑色和灰色。

很多种类的软管都通过了特殊行业的认证，例如：CSA-加拿大标准行业认证，UL-美国保险业实验室认证，NF-法国标准协会标准，SNCF-法国国营铁路公司，DB-德国铁路局等。

XPCLT - 12SG



Fine profile T
细波纹 T
Tight bend radius
更小弯曲半径



Coarse profile G
粗波纹 G
High pull-out strength
抗拉强度高











key 说明: ● recommended 推荐用
○ suitable (application details to be considered) 适用 (应用情况需详细考虑)

			PMAFLEX Pro					PMAFLEX										
			PHT	PLU	POH	POL	PSX	CYF/CYFH	CYL	ESD	ESDP	PCL	PCS	PCSL	PEL	PIS/PIH	PLR	
Machine Building 机械制造	General Applications 一般应用	static 静态							●			●						
		dynamic 动态	●						○				●			●		
	Heavy Loads 重负载	static 静态											●					
		dynamic 动态											●	○		●		
Outdoor Applications 外部应用	static 静态											●	○		●			
	dynamic 动态											●	○		●			
Antistatic Requirements 抗静电应用	static 静态								●	●								
	dynamic 动态								●	●								
Traction 铁路车辆	Outdoor Applications with Sunlight Exposure 暴露在日光下的外部应用	static 静态										●	○		○			
		dynamic 动态										●	●		○			
	Outdoor Applications 外部应用	static 静态		○								●	○		○	○		
		dynamic 动态		○								●	●		○			
Indoor Applications 内部应用	static 静态		●	●	●											●		
Traction Infra. 铁路基建	Outdoor Applications with Sunlight Exposure 暴露在日光下的外部应用	static 静态										●	○					
		dynamic 动态																
Indoor and Tunnel Applications 室内和隧道的应用	static 静态		●	●	●											●		
	dynamic 动态																	
Automation 自动化	Moving Systems 运动系统	dynamic 动态	●						○			○	●	○		●		
																●		
	Systems with Extreme Movements 极端运动系统	dynamic 动态														●		
Moving Systems with Antistatic Requirements 有要求抗静电的系统	dynamic 动态								●	●								
Ship + Off-Shore 船舶和近海作业	Outdoor General Applications 外部一般应用	static 静态										●	●		○			
		dynamic 动态										●	●		●			
	Indoor Applications 内部应用	static 静态							○			○						
		dynamic 动态							○			○	●	●		●		
Passenger Area 旅客区域	static 静态				○	○					○							
Energy 能源	Outdoor Applications with Sunlight Exposure 暴露在日光下的外部应用	static 静态										●	○					
		dynamic 动态																
	Indoor Applications 内部应用	static 静态				○	○		●		●			○				
Exposed to Radiation 暴露在辐射下	static 静态					●												
Others 其他	Vehicle Building 车辆制作	static 静态		○					●									
		dynamic 动态																
	Telecommunications 通信	indoor 内部										○			●			
		outdoor 外部																
	Building Construction 建筑制作	indoor 内部				●	●											
		outdoor 外部											○	○				
Ex Hazardous Areas (ATEX, IECEx) 防爆危险区域	static 静态																	
High Temperature Applications 高温应用	static 静态		○													●		
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PMAFLEX							PMAFLEX Multi-Layer											PMAFLEXPlus (UL-Listed)			Easi Flex		Smart Line				Divisible		EX	
POS	PUE	PVD	VAM	VAML	VCS	VOH	XCYL	XPCL	XVCSF	XPCS	XPCSF	JXPCSF	XR90	XSOL	XSOLL	XVCS1H	XVCS2H	CUS	PUS	VUS	CEL	CF	LL	LLPA	JLLPA	LLPF	PACOF	PPCOF	XESX	
●			○		●	●	●	○	●									○		○	●	●	●	○	○		●	○		
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1-181-18	1-19	1-20	1-21	1-21	1-22		1-24	1-24	1-25	1-25	1-26	1-26	1-27	1-28	1-28	1-29	1-30	1-31	1-31	1-32	1-33	1-33	1-34	1-35	1-35	1-36	5-5	5-6	12-14	

key 说明: ✓ correct 正确选择

		PMAFLEX Pro					PMAFLEX							
		PHT (PAE)	PLU (PO)	POH (PO)	POL (PO)	PSX (PEI)	CYF (PA6)	CYFH (PA6)	CYL (PA6)	ESD (PA12)	ESDP (PO)	PCL (PA6)	PCS (PA12)	PCSL (PA12)
Material Properties 材料特表	Ductility 柔软性													
	Reverse Bending Resistance 抗弯曲性													
	Compression Resistance 抗压性													
	Low Temperature Performance 低温运行													
	High Temperature Performance 高温运行													
	Resistance to Weathering 耐候性													
Approvals 认证体系	Bi-National Recognition File UL1696 & CSA C22.2 No. 227.3-05 								✓			✓	✓	
	Bi-National Listing File UL 1660 & CSA C22.2 No. 227.2.1 													
	Free from Halogens and Cadmium 无卤素和镉	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Non Flame Propagating EN61386 非火焰传播					✓	✓	✓	✓			✓	✓	✓
	EN45545 			✓	✓								✓	✓
	BS6853 		✓	✓	✓								✓	✓
	PN-K 2511												✓	✓
	GOST 12.1.044-89												✓	
	NFPA 130 (ASTM E162 - ASTM E662 -ASTM E1354) BSS7239 / SMP 800-C 												✓	✓
	DNV (Type approved) 		✓						✓	✓		✓	✓	✓
Lloyd's Register (Type approved) 		✓						✓	✓		✓	✓	✓	
Bureau Veritas (Type approved) 		✓						✓	✓		✓	✓	✓	
ABS (Type approved)								✓			✓	✓		
Temp. Range 工作温度范围	Continuous Operating Temperature (Acc.to DO 9.21 -4510) 持续工作温度 (根据DO 9.21-4510)	Min	-50	-25	-25	-25	-100	-30	-30	-40	-40	-20	-50	-50
		Max.	135	95	95	95	170	90	90	105	90	90	105	95
	Short Term Max. Operating Temperature 168h (Acc. to DO 9.21-4360) <small>短期最高工作温度168小时 (根据DO 9.21-4360)</small>		180	-	120	120	200	125	125	160	150	-	160	150
Sizes 尺寸	Nominal Widths Min. 标称内径最小		07	10	10	10	10	07	23	07	07	10	07	07
	Nominal Widths Max. 标称内径最大		48	48	95	48	48	17	48	125	95	48	125	95
	Metric Size Min. 公制最小		10	12	12	12	12	10	25	10	10	12	10	10
	Metric Size Max. 公制最大		50	50	106	50	50	20	50	146	106	50	146	106

PMAFLEX

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√						√	√		
√						√	√		
√						√	√		
√						√	√		

-50	-50	-40	-25	-60	-60	-40	-40	-50	-40
60	95	105	95	50	150	105	105	105	105
-	150	160	130	-	-	160	160	160	160

10	07	07	10	23	07	07	07	07	07
48	125	48	95	70	29	48	125	95	125
12	10	10	12	25	10	10	10	10	10
50	146	50	106	80	32	50	146	106	146

PMAFLEX Multi-Layer

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-40	-50	-50	-50	-50	-50	-40	-50	-40	-50	-50
105	105	105	95	95	95	95	95	95	90	90
160	160	160	150	150	160	150	150	150	120	120

10	10	10	10	07	12	17	10	12	10	10
48	48	48	48	48	48	70	48	48	48	48
12	12	12	12	10	16	20	12	16	12	12
50	50	50	50	50	50	80	50	50	50	50

PMAFLEXPlus (UL-Listed)

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-40	-50	-50
105	95	105
160	150	160

17	17	17
48	48	48
20	20	20
50	50	50

EasiFlex/Smart Line

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			√	√	√
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-40	-40	-20	-40	-40	-40
105	105	100	105	105	105
160	160	-	160	160	160

10	07	07	07	12	07
48	95	48	125	48	48
12	10	10	10	16	10
50	106	50	-	50	50

Divisible EX

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-40	-20	-5/-20
105	105	85
160	150	-

07	07	10
70	70	48
10	10	12
80	80	50

PHT *very flexible, heavy-duty* 非常柔软，厚壁

For applications at high and very low temperatures. For dynamic applications. 在高低温工作范围内的应用。适合动态安装。



- High-grade, specially formulated polyamide elastomer 高级、特殊配方聚酰胺弹性体制成
- Very good UV resistance and weathering characteristics 非常好的抗紫外线和耐候性能
- Both excellent flexibility and high compress strength 不仅有优异的柔软性还有高耐压强度
- Good impact resistance at very low temperature 在低温下有良好的抗冲击强度
- Enhanced temperature range compared to standard polyamides 与标准的聚酰胺相比，更宽的工作温度范围
- RoHS and REACH compliant RoHS 和 REACH 合规性
- Free from halogens and cadmium 不含卤素和镉
- Temperature range: -50 °C to +135 °C; short-term: +180 °C 温度范围: -50 °C 至 +135 °C; 短期温度: +180 °C

Order No. black 订货号 黑色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)	
PHTT-07B	T	07	6.70	10.0	15	40	50
PHTT-10B	T	10	9.70	12.8	20	50	50
PHTT-12B	T	12	12.1	15.6	25	65	50
PHTT-17B	T	17	16.8	21.1	35	85	50
PHTT-23B	T	23	23.3	28.4	45	110	50
PHTG-17B	G	17	15.6	21.1	40	85	50
PHTG-23B	G	23	22.0	28.4	50	110	50
PHTG-29B	G	29	27.9	34.5	60	135	50
PHTG-36B	G	36	36.2	42.4	75	170	30
PHTG-48B	G	48	47.3	54.5	90	220	30

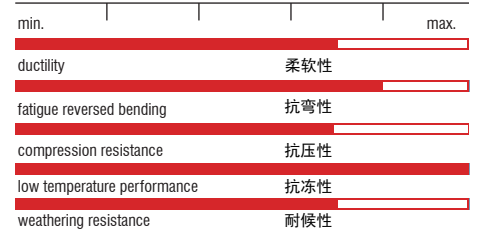
Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.11900-10 for reference only.

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以上数据来源于PMA工厂“技术数据表”DB-Nr.11900-10。因厂家会随时更新数据，故相关数据仅供参考，如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

PHT-Index



PLU *flexible, medium-duty* 柔软，中壁

For applications with the highest fire safety performance requirements. 适用于最高防火安全要求的区域。



- Specially modified polypropylene 特殊改良聚丙烯制成
- Excellent fire safety characteristics 优异的防火安全性能
- Self-extinguishing 自熄灭性好
- Very good insulating characteristics 非常好的绝缘特性
- Good flexibility 良好的柔软性
- Good resistance against strong acids and alkalis 良好的耐强酸、强碱
- Good UV resistance and weathering characteristics, particularly in black 良好的抗紫外线和耐候性能，尤其是黑色软管
- Free from halogens and cadmium 不含卤素和镉
- RoHS and REACH compliant RoHS 和 REACH 合规性
- London Underground Limited registered product 伦敦地铁有限公司注册产品
- Temperature: -25 °C to +95 °C 温度范围: -25 °C 至 +95 °C

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 灰色S (m)
# PLUT-10 *	T	10	9.70	12.8	20	50	TBA 待定
# PLUT-12 *	T	12	12.1	15.6	25	50	TBA 待定
# PLUG-17 *	G	17	15.6	21.1	40	50	TBA 待定
# PLUG-23 *	G	23	22.0	28.4	50	50	TBA 待定
# PLUG-29 *	G	29	27.7	34.5	60	50	TBA 待定
# PLUG-36 *	G	36	36.0	42.4	75	30	TBA 待定
# PLUG-48 *	G	48	47.1	54.5	90	30	TBA 待定

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

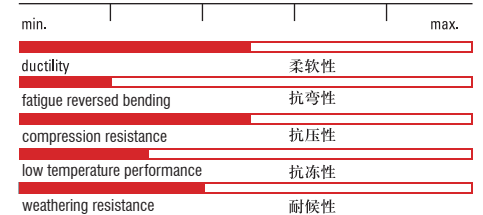
The above data is given based on "Technical Data Sheet" DB-Nr.13905-12 for reference only.

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标记为 # 的产品有最小起订量 (MOQ) 待定 = MOQ需与工厂确认

PLU-Index



POH *very flexible, medium-grade* 非常柔软, 中壁

For highest fire and passenger safety requirements. 适用于最高防火和乘客安全的要求。



- Specially modified polypropylene 特殊改良聚丙烯制成
- Excellent fire safety characteristics acc. to BS6853 1a (interior) 优异的防火安全性能, 符合BS 6853 1a 标准 (室内)
- Self-extinguishing 自熄灭性好
- Free from halogens and cadmium 不含卤素和镉
- Very flexible 非常柔软
- Very good UV resistance and weathering characteristics, particularly in black 非常好的抗紫外线和耐候性能, 尤其是黑色的
- Very good insulating characteristics 非常好的绝缘性
- Good resistance against strong acids and alkalis 良好的耐强酸、强碱
- RoHS and REACH compliant RoHS和REACH合规性
- Temperature range: -25°C to +95°C; short-term +120°C 温度范围: -25°C 至 +95°C; 短期温度 +120°C

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B/灰色S (m)
# POHT-10*	T	10	10.0	12.8	20	50	2000 / 2000
# POHT-12*	T	12	12.3	15.6	25	50	- / 2000
# POHG-17*	G	17	16.0	21.1	40	50	- / 1400
# POHG-23*	G	23	22.1	28.4	50	50	- / 1500
# POHG-29*	G	29	28.0	34.5	60	50	- / 1200
# POHG-36*	G	36	36.4	42.4	75	30	- / 1080
# POHG-48*	G	48	47.0	54.5	90	30	960 / 960
# POHG-56*	G	56	56.9	67.5	120	30	TBA 待定
# POHG-70*	G	70	68.0	79.6	140	10	TBA 待定
# POHG-95*	G	95	92.5	107.0	190	10	300 / TBA 待定

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.13910-10 for reference only.

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标记为 # 的产品有最小起订量 (MOQ) 待定 = MOQ需与工厂确认

POH-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

PSX *highly flexible, medium-duty* 极柔软, 中壁

For applications with the highest fire safety performance requirements. For applications with extreme temperature conditions. For applications exposed to radiation.

适用于最高防火安全性能要求的应用场所。适用于在极端温度条件下的应用要求。适用于暴露在辐射条件下的应用要求。



- Specially modified polyetherimide 特殊改良聚醚酰亚胺制成
- Excellent high and low temperature properties 优异的高低温性能
- Very good ductility 非常好的延韧性
- High radiation resistance 高抵抗辐射性能
- Low smoke density and toxicity 低烟密度和毒性
- Free from halogens and cadmium 不含卤素和镉
- RoHS and REACH compliant RoHS和REACH合规性
- Excellent UV resistance and weathering characteristics 优异的抗紫外线和耐候性能
- Temperature range: -100°C to +170°C; short-term: +200°C 温度范围: -100°C 至 +170°C; 短期温度: +200°C

Order No. 订货号 黑色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B (m)
# PSXT-10B	T	10	9.80	12.8	20	50	1000
# PSXT-12B	T	12	12.2	15.6	25	50	1000
# PSXT-17B	T	17	16.9	21.1	35	50	700
# PSXG-23B	G	23	21.9	28.4	45	50	500
# PSXG-29B	G	29	27.9	34.5	55	50	600
# PSXG-36B	G	36	36.2	42.4	65	30	540
# PSXG-48B	G	48	47.0	54.5	85	30	480

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.13925-08 for reference only.

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以上数据来源于PMA工厂“技术数据表”DB-Nr.13925-08。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

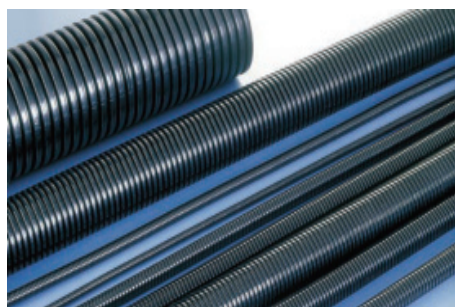
标记为 # 的产品有最小起订量 (MOQ)

PSX-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

CYF / CYFH flexible, medium / heavy-duty 柔软, 中 / 厚壁

In automobile industries. 在汽车行业。



- High-grade, specially formulated polyamide 6
高级, 特殊改良聚酰胺6制成
- CYF: medium-wall (NW 07 to 17)
CYF: 中壁 (标称内径从07到17)
- CYFH: heavy-wall (NW 23 to 48)
CYFH: 厚壁 (标称内径从23到48)
- Self-extinguishing
自熄灭性好
- Good flexibility
良好的柔软性
- Free from halogens and cadmium
不含卤素和镉
- Good impact strength also at low temperatures and dry conditions
在低温和干燥的环境下, 有很好的抗冲击强度
- RoHS and REACH compliant
RoHS和REACH合规性
- Very good UV resistance and weathering characteristics
非常好的抗紫外线和耐候性能
- Temperature range: -30°C to +90°C; short-term: +125°C
温度范围: -30°C 至 +90°C; 短期温度: +125°C

Order No. black 订货号 黑色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B (m)
# CYFT-07B	T	07	6.70	10.0	15	100	2000
CYFT-10B	T	10	9.70	12.8	20	100	-
CYFT-12B	T	12	12.0	15.6	25	100	-
CYFT-17B	T	17	16.6	21.1	35	100	-
# CYFHG-23B	G	23	21.4	28.4	50	50	1500
# CYFHG-29B	G	29	27.2	34.5	60	50	1200
# CYFHG-36B	G	36	35.8	42.4	70	30	1080
# CYFHG-48B	G	48	46.8	54.5	80	30	960

标记为 # 的产品有最小起订量 (MOQ)

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.10080-05 / 10081-04 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”10080-05 / 10081-04。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

CYF -Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

CYFH-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

CYL very flexible, medium-grade 非常柔软, 中壁

In machine building and installation industries. 在机械制造和安装行业。



- High-grade, specially formulated polyamide 6
高级, 特殊配方聚酰胺6制成
- Very good flexibility
很好的柔软性
- Good impact strength also at low temperatures and dry conditions
在低温、干燥的环境下, 有很好的抗冲击强度
- Self-extinguishing
自熄灭性好
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- Very good UV resistance and weathering characteristics, particularly in black
非常好的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -40°C to +105°C; shot-term: +160°C
温度范围: -40°C 至 +105°C; 短期温度: +160°C
- Conforms to: UL 1696 (UL File E80294)
符合: CSA C22.2 No. 227.3-05 (CSA File LL 88703)

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B/灰色S (m)
CYLT-07 * ✘	T	07	6.60	10.0	15	50	-
CYLT-10 *	T	10	9.80	12.8	20	50	-
CYLT-12 *	T	12	12.1	15.6	25	50	-
CYLT-17 *	T	17	16.8	21.1	35	50	-
CYLT-23 *	T	23	23.2	28.4	45	50	-
CYLT-29 *	T	29	28.8	34.5	55	50	-
CYLT-36 *	T	36	36.7	42.4	65	30	-
CYLT-48 *	T	48	48.2	54.5	80	30	-
CYLG-23 *	G	23	21.9	28.4	50	50	-
CYLG-29 *	G	29	27.8	34.5	60	50	-
CYLG-36 *	G	36	36.1	42.4	75	30	-
CYLG-48 *	G	48	46.9	54.5	90	30	-
# CYLG-56 * ✘	G	56	56.7	67.5	120	30	- / 630
# CYLG-70 * ✘	G	70	67.5	79.6	140	10	- / 540
# CYLG-95 * ✘	G	95	91.6	107.0	190	10	320 / 320
# CYLG-125* ✘	G	125	125.5	146.0	260	6	612 / 612

标记为 # 的产品有最小起订量 (MOQ)

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

✘ = Not approved to UL 1696 / CSA C22.2 No. 227.3-05 (UL file E 80294)

尚未授权UL 1696 / CSA C22.2 No.227.3-05认证 (UL文件号 E 80294)

The above data is given based on "Technical Data Sheet" DB-Nr.10010-23 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.10010-23。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

CYL-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

ESD *very flexible, light / medium-duty* 非常柔软, 薄 / 中壁

For dynamic applications in robotics and automation where electrostatic charge and uncontrolled discharge need to be avoided.
在机器人和自动化领域动态安装中需要防静电要求的场合。



Order No. black 订货号 黑色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm) dyn.** 动态 (mm)		PU meter 包装单位 (m)	MOQ 最小起订量 黑色B (m)
# ESDT-07B	T	07	6.70	10.0	15	40	50	1300
# ESDT-10B	T	10	9.70	12.8	20	50	50	2000
ESDT-12B	T	12	12.0	15.6	25	65	50	-
ESDT-17B	T	17	16.6	21.1	35	85	50	-
ESDT-23B	T	23	23.0	28.4	40	110	50	-
ESDT-29B	T	29	28.7	34.5	50	135	50	-
ESDT-36B	T	36	36.8	42.4	60	170	30	-
ESDT-48B	T	48	48.0	54.5	75	220	30	-
# ESDG-56B	G	56	55.8	67.5	110	270	30	630
ESDG-70B	G	70	67.4	79.6	130	320	10	-
# ESDG-75B	G	75	76.0	89.0	155	350	30	810
# ESDG-95B	G	95	91.5	107.0	170	430	10	320

- High-grade, specially formulated polyamide 12
高级, 特殊配方聚酰胺12制成
- Prevents electrostatic charging
防静电产生
- For indoor and outdoor use
用于室内和室外使用
- High dynamic load resistance
高动态负载阻抗
- Very good cold temperature performance
非常好的低温性能
- Very good chemical properties
非常好的耐化学性
- Excellent UV resistance and weathering characteristics
优异的抗紫外线和耐候性能
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- Temperature range: -40°C to +90°C; shot-term: +150°C
温度范围: -40°C 至 +90°C; 短期温度: +150°C

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

标记为 # 的产品有最小起订量 (MOQ)

The above data is given based on "Technical Data Sheet" DB-Nr.11500-11 / 11501-02 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.11500-11 / 11501-02。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

ESD-Index	
min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

PCL *very flexible, medium-grade* 非常柔软, 中壁

In machine building and installation industries. 在机械制造、安装行业的应用。



Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B/灰色S (m)
PCLT-07 *	T	07	6.60	10.0	15	50	-
PCLT-10 *	T	10	9.80	12.8	20	50	-
PCLT-12 *	T	12	12.1	15.6	25	50	-
PCLT-17 *	T	17	16.8	21.1	35	50	-
PCLT-23 *	T	23	23.2	28.4	45	50	-
PCLT-29 *	T	29	28.8	34.5	55	50	-
# PCLT-36 *	T	36	36.7	42.4	65	30	1080 / 1080
# PCLT-48 *	T	48	48.2	54.5	80	30	960 / 960
# PCLG-17 *	G	17	15.8	21.1	40	50	- / 1400
PCLG-23 *	G	23	21.9	28.4	50	50	-
PCLG-29 *	G	29	27.8	34.5	60	50	-
PCLG-36 *	G	36	36.1	42.4	75	30	-
PCLG-48 *	G	48	46.9	54.5	90	30	-
PCLG-56 *	G	56	56.7	67.5	120	30	-
PCLG-70 *	G	70	67.5	79.6	140	10	-
# PCLG-95 *	G	95	91.6	107.0	190	10	- / 320
# PCLG-125 *	G	125	125.5	146.0	260	6	- / 612

- High-grade, specially formulated polyamide 6
特殊改良聚酰胺6制成
- Very good flexibility
很好的柔软性
- Self-extinguishing
自熄灭性好
- Free from halogens and cadmium
不含卤素和镉
- Very good UV resistance and weathering characteristics, particularly in black
非常好的抗紫外线和耐候性能, 尤其是黑色软管
- Very good impact strength also at low temperatures and dry conditions
即使在低温和干燥情况下, 有良好的抗冲击强度
- RoHS and REACH compliant
RoHS和REACH合规性
- Temperature range: -50°C to +105°C; shot-term: +160°C
温度范围: -50°C 至 +105°C; 短期温度 +160°C
- Conforms to: UL 1696 (UL File E80294)
符合: CSA C22.2 No. 227.3-05 (CSA File LL 88703)

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

标记为 # 的产品有最小起订量 (MOQ)

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.10600-20 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.10600-20。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

PCL-Index	
min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

PEL highly flexible, light-grade, soft 极柔软, 薄壁, 柔软

In electrical cabinets and appliance construction. 在电气控制柜和设备建设的应用。



- Specially modified polyethylene 特殊改良聚乙烯制成
- Very good insulating characteristics 非常好的绝缘特性
- Excellent flexibility 优异的柔软性
- Suitable for small bending radii 适合小的弯曲半径
- Good resistance against strong acids and bases 良好的耐强酸及强碱性
- Free from halogens and cadmium 不含卤素和镉
- RoHS and REACH compliant RoHS 和 REACH 合规性
- Temperature range: -50°C to +60°C 温度范围: -50°C 至 +60°C

Order No. grey 订货号 灰色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)
PELT - 10S	T	10	9.80	12.8	20	50
PELT - 12S	T	12	12.2	15.6	25	50
PELT - 17S	T	17	16.8	21.1	30	50
PELT - 23S	T	23	23.2	28.4	40	50
PELT - 29S	T	29	28.9	34.5	45	30
PELT - 36S	T	36	37.0	42.4	55	30
PELT - 48S	T	48	48.2	54.5	70	30

Profiles-fine (T) ; Profiles-coarse (G) 细波纹 (T) ; 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.19010-06 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.19010-06。因厂家会随时更新数据,故相关数据仅供参考,如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

PEL-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

PEL highly flexible, light-wall, soft 极柔软, 薄壁, 柔软

In electrical cabinets and appliance construction. 应用于电气控制柜和设备建设。



- Specially modified polyethylene 特殊改良聚乙烯制成
- Very good insulating characteristics 非常好的绝缘特性
- Very good flexibility 非常柔软
- Suitable for small bending radii 适合小的弯曲半径
- Good resistance against strong acids and bases 良好的耐强酸及强碱性
- Free from halogens and cadmium 不含卤素和镉
- Temperature range: -50°C to +60°C 温度范围: -50°C 至 +60°C

Order No. black 订货号 黑色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)
PELT - 48B	T	48	47.0	53.2	70	25

Profiles-fine (T) ; Profiles-coarse (G) 细波纹 (T) ; 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.19011-01 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.19011-01。因厂家会随时更新数据,故相关数据仅供参考,如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

PEL-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

PIS / PIH highly flexible, heavy-duty 极柔软, 厚壁

For dynamic applications in robotics and automation. 在机器人和自动化方面的动态应用。



Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)	
PIST-07 *	T	07	6.70	10.0	15	40	50
PIST-10 *	T	10	9.70	12.8	20	50	50
PIST-12 *	T	12	12.0	15.6	25	65	50
PIST-17 *	T	17	16.7	21.1	30	85	50
PIST-23 *	T	23	23.2	28.4	40	110	50
PIST-29 *	T	29	28.9	34.5	50	135	50
PIST-36 *	T	36	36.8	42.4	60	170	30
PIST-48 *	T	48	48.0	54.5	75	220	30
PISG-17 *	G	17	15.8	21.1	35	85	50
PISG-23 *	G	23	22.0	28.4	45	110	50
PISG-29 *	G	29	27.8	34.5	55	135	50
PISG-36 *	G	36	36.2	42.4	65	170	30
PISG-48 *	G	48	47.1	54.5	85	220	30
PIHG-56 *	G	56	57.0	67.5	110	270	30
PIHG-70 *	G	70	68.0	79.6	130	320	30
PIHG-95 *	G	95	92.5	107.0	170	430	30
PIHG-125 *	G	125	126.9	146.0	230	580	20

- High-grade, specially formulated polyamide 12 高级, 特殊改良聚酰胺12制成
- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity) 优异的机械特性, 并适用于在极端气候条件下应用 (低温和低湿度)
- Self-extinguishing, free from halogens and cadmium 自熄灭性好, 不含卤素和镉
- Excellent flexibility 优异的柔软性
- RoHS and REACH compliant RoHS 和 REACH 合规性
- UL1696 (UL File E80294) UL 1696 (UL 文件 E80294)
- Good mechanical strength at low temperatures and dry conditions 在低温、干燥的环境下, 有很好的冲击强度
- Excellent UV resistance and weathering characteristics, particularly in black 优异的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -50°C to +95°C; short-term to +150°C 在温度范围: -50°C 至 +95°C; 短期温度: +150°C

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.11000-16 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.11000-16。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

PIS/PIH-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

PLR flexible, medium-grade 柔软, 中壁

In light rail rolling stock applications e.g. Tram, Metro, Monorail. 在轻轨车辆的应用。例如: 电车, 地铁, 单轨。



Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ
							最小起订量 灰色S (m)
# PLRT-07 *	T	07	6.80	10.0	15	50	1300
PLRT-10 *	T	10	9.80	12.8	20	50	-
PLRT-12 *	T	12	12.2	15.6	25	50	-
PLRG-17 *	G	17	15.9	21.1	40	50	-
PLRG-23 *	G	23	22.0	28.4	50	50	-
PLRG-29 *	G	29	28.0	34.5	60	50	-
PLRG-36 *	G	36	36.3	42.4	75	30	-
# PLRG-48 *	G	48	47.2	54.5	90	30	960

- High-grade, specially formulated polyamide 6 高级, 特殊配方聚酰胺6制成
- High fire safety specification 高防火安全标准
- Good impact resistance and compression strength 良好的抗冲击能力和抗压强度
- Self-extinguishing, free from halogens and cadmium 自熄灭性好, 不含卤素和镉
- Good flexibility 良好的柔韧性
- RoHS and REACH compliant RoHS 和 REACH 合规性
- Good UV resistance and weathering characteristics, particularly in black 良好的抗紫外线和耐候性能, 尤其是黑色软管
- EN 45545 HL2 (R22 & R23) HL2. 根据EN45545 车内软管R22/车外软管R23标准
- Temperature range: -40°C to +105°C; short-term to +160°C 温度范围: -40°C 至 +105°C; 短期温度 +160°C

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.12936-02 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.12936-02。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

PLR-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

POS highly flexible, medium-duty 极柔软, 厚壁

In automation as well as in machine building and industrial installations, especially where continuous movements occur.
在自动化以及机械制造和工业设施的应用, 特别是在需要连续运动的环境下的应用。



- Specially modified polypropylene 特殊改良聚丙烯制成
- Excellent reversed bending performance and flexibility 优异的交变弯曲性能和柔软性
- Very good insulating characteristics 非常好的绝缘特性
- Good impact resistance 良好的抗冲击强度
- Free from halogens and cadmium 不含卤素和镉
- Good resistance against strong acids 耐强酸性
- Temperature range: -25°C to +95°C; short-term to +130°C 温度范围: -25°C 至 +95°C; 短期温度 +130°C

Order No. black 订货号 黑色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)	MOQ 最小起订量 黑色B (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)		
POST-10B	T	10	9.60	13.0	20	50	50	-
POST-12B	T	12	11.9	15.8	30	70	50	-
POST-17B	T	17	16.2	21.2	35	75	50	-
POST-23B	T	23	22.6	28.5	40	100	50	-
POST-29B	T	29	29.0	34.5	50	120	50	-
POST-36B	T	36	36.5	42.5	60	180	30	-
POST-48B	T	48	47.5	54.5	70	195	30	-
# POSG-29B	G	29	27.6	34.5	50	120	50	1200
# POSG-36B	G	36	36.0	42.5	60	180	30	1080
# POSG-48B	G	48	47.0	54.5	70	195	30	960
POSG-70B	G	70	67.2	79.6	150	350	30	-
# POSG-95B	G	95	91.3	106.0	170	450	30	300

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

标记为 # 的产品有最小起订量 (MOQ)

The above data is given based on "Technical Data Sheet" DB-Nr.11040-09 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.11040-09。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

POS - Index

min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

PUE highly flexible, soft-grade 极柔软, 管壁柔软型

For dynamically moving conduit systems in robotics and automation industry. 适用于机器人及自动化领域动态软管系统。



- High-grade, specially formulated polyurethane 高级, 特殊改良聚氨酯制成
- High resistance to continuous bending 优异的交变弯曲性
- High abrasion resistance 高耐磨性能
- High resistance to torsion 高抗扭性能
- Suitable for very tight bending-radii 能适合更小的弯曲半径
- Long service life 使用寿命较长
- Free from halogens and cadmium 不含卤素和镉
- RoHS and REACH compliant RoHS和REACH合规性
- Very good UV resistance and weathering characteristics 非常好的抗紫外线和耐候性能
- Temperature range: -60°C to +50°C, continuous 温度范围: -60°C 至 +50°C, 持续

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)	
PUET-23B	T	23	23.1	28.4	40	75	50
PUET-29B	T	29	29.0	34.5	45	90	30
PUET-36B	T	36	36.8	42.4	55	110	30
PUET-48B	T	48	48.4	54.5	70	140	21
PUEG-56B	G	56	57.2	67.5	90	170	30
PUEG-70B	G	70	68.4	79.6	105	200	30

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.11701-14 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.11701-14。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

PUE - Index

min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

PVD *pliable, heavy-duty* 易弯, 厚壁

In machine building applications with long-term high temperature requirements as well as in the chemical and food industries.
在机械制造业中对温度要求高的领域以及化学和食品工业的应用。



Order No. transparent 订货号 透明/黑色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat. ** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 透明P/黑色B (m)
# PVDT - 07B	T	07	6.60	10.0	15	50	TBA 待定
# PVDT - 10P	T	10	9.60	12.8	20	50	2000
# PVDT - 12P	T	12	12.0	15.6	25	50	2000
# PVDT - 17 *	T	17	16.6	21.1	35	50	1400 / TBA 待定
# PVDT - 23P	T	23	23.0	28.4	45	50	1500
# PVDT - 29P	T	29	28.7	34.5	55	50	600

- Specially formulated polyvinylidene fluoride PVDF
特殊改良的聚偏二氯乙烯制成
- Excellent chemical resistance also at high temperatures
在高温下有优异的耐化学性
- Very good abrasion resistance
非常好的耐磨性
- Self-extinguishing and free from cadmium
自熄灭性好, 不含镉
- High stiffness
高硬度
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- Excellent UV resistance and weathering characteristics, particularly in black
优异的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -60°C to +150°C, continuous
温度范围: -60°C 至 +150°C, 持续

* = Replace with "B" to order black or "P" to order nature "B" 订黑色或 "P" 订透明色

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.19060-10 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.19060-10。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)
待定 = MOQ需与工厂确认

PVD - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

VAM flexible, heavy-duty 柔软, 厚壁

In passenger areas of railway vehicles. Excellent fire safety characteristics allow application in public buildings like hospitals, hotels, airports, train and subway stations, shopping centers etc.

用于铁路车辆的旅客区域。由于优异的防火性能, 可以应用在医院, 酒店, 机场, 火车和地铁站, 购物中心等公共场所。



- High-grade, specially formulated polyamide 6
高级, 特殊配方聚酰胺6制成
- High impact and compression strength
高抗冲击和抗压强度
- High stiffness
高硬度
- Outstanding self-extinguishing characteristics
杰出的自熄灭性能
- Minimal development of smoke and gases
燃烧时, 最小烟雾和气体产生
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- Very good UV resistance and weathering characteristics, particularly in black
非常好的抗紫外线和耐候性能, 尤其是黑色软管
- EN 45545 HL3 (R22 & R23)
HL3, 根据EN45545车内软管R22 / 车外软管R23标准
- NFPA 130
NFPA 130
- Temperature range: -40°C to +105°C; short-term: +160°C
温度范围: -40°C 至 +105°C; 短期温度 +160°C

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat. ** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B / 灰色S (m)
# VAMT-07 *	T	07	6.60	10.0	20	50	1300 / 1300
# VAMT-10 *	T	10	9.60	12.8	25	50	- / 2000
# VAMT-12 *	T	12	12.0	15.6	30	50	- / 2000
# VAMT-17 *	T	17	16.6	21.1	40	50	1400 / 1400
# VAMT-23 *	T	23	23.0	28.4	50	50	1500 / 1500
# VAMT-29 *	T	29	28.7	34.5	60	50	1200 / 1200
# VAMG-17 *	G	17	15.5	21.1	45	50	-
# VAMG-23 *	G	23	21.6	28.4	60	50	- / 1500
# VAMG-29 *	G	29	27.6	34.5	70	50	- / 1200
# VAMG-36 *	G	36	35.8	42.4	85	30	- / 1080
# VAMG-48 *	G	48	46.6	54.5	110	30	960 / 960

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

标记为 # 的产品有最小起订量 (MOQ)

Profiles-fine (T) ; Profiles-coarse (G) 细波纹 (T) ; 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.10070-19 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.10070-19。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

VAM-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

VAML flexible, medium-grade 柔软, 中壁

In passenger areas of railway vehicles. 用于铁路车辆的旅客区域。



- High-grade, specially formulated polyamide 6
高级, 特殊配方聚酰胺6制成
- Highest fire safety specification
最高的防火安全标准
- Good impact resistance and compression strength
良好的抗冲击能力和抗压强度
- Good flexibility
良好的柔软性
- Outstanding self-extinguishing characteristics
杰出的自熄灭性能
- RoHS and REACH compliant
RoHS和REACH合规性
- Free from halogens and cadmium
不含卤素和镉
- Very good UV resistance and weathering characteristics, particularly in black
非常好的抗紫外线和耐候性能, 尤其是黑色软管
- EN 45545 HL3 (R22 & R23)
HL3, 根据EN45545车内软管R22 / 车外软管R23标准
- NFPA 130
NFPA 130
- Temperature range: -40°C to +105°C; short-term: +160°C
温度范围: -40°C 至 +105°C; 短期温度 +160°C

Order No. grey 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat. ** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B / 灰色S (m)
# VAMLT-07 *	T	07	6.70	10.0	15	50	- / 1300
VAMLT-10 *	T	10	9.70	12.8	20	50	-
VAMLT-12 *	T	12	12.1	15.6	25	50	-
VAMLT-17 *	G	17	15.8	21.1	40	50	-
VAMLG-23 *	G	23	21.9	28.4	50	50	-
VAMLG-29 *	G	29	27.9	34.5	60	50	-
VAMLG-36 *	G	36	36.2	42.4	75	30	-
VAMLG-48 *	G	48	47.0	54.5	90	30	-
# VAMLG-56 *	G	56	56.9	67.5	120	30	630 / 630
# VAMLG-70 *	G	70	68.0	79.6	140	10	540 / 540
# VAMLG-95 *	G	95	92.5	107.0	190	10	320 / 320
# VAMLG-125 *	G	125	126.9	146.0	260	6	612 / 612

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

标记为 # 的产品有最小起订量 (MOQ)

Profiles-fine (T) ; Profiles-coarse (G) 细波纹 (T) ; 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.10071-20 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.10071-20。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

VAML-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

VCS flexible, heavy-duty 柔软, 厚壁

Static installations in machine and ship building applications. 机械和造船工业方面的静态安装。



- High-grade, specially formulated polyamide 6 高级, 特殊配方聚酰胺6制成
- Very good resistance to ultra violet rays and weathering 非常好的抗紫外线和耐候性能
- Good flexibility 良好的柔软性
- Self-extinguishing, free from halogens and cadmium 自熄灭性好, 不含卤素和镉
- High compression and impact strengths at low temperature and low humidity 在低温和干燥的环境下, 有很好的抗压和抗冲击强度
- RoHS and REACH compliant RoHS和REACH合规性
- UL 1696 (UL File E80294) UL 1696 (UL 文件 E80294)
- CSA C22.2 No. 227.3-05 (CSA File LL 88703) CSA C22.2 No. 227.3-05 (CSA 文件 LL 88703)
- Very good UV resistance and weathering characteristics, particularly in black 非常好的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -50°C to +105°C; short-term: +160°C 温度范围: -50°C 至 +105°C; 短期温度 +160°C

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B/灰色S (m)
# VCST-07 *	T	07	6.60	10.0	20	100	- / 2000
# VCST-10 *	T	10	9.60	12.8	25	50	- / 2000
VCST-12 *	T	12	12.0	15.6	30	50	-
# VCST-17 *	T	17	16.5	21.1	40	50	- / 1400
VCSG-17 *	G	17	15.7	21.1	45	50	-
VCSG-23 *	G	23	21.8	28.4	60	50	-
VCSG-29 *	G	29	27.6	34.5	70	50	-
VCSG-36 *	G	36	35.7	42.4	85	30	-
VCSG-48 *	G	48	46.7	54.5	110	30	-
# VCSG-56 *	G	56	56.2	67.5	135	30	630 / 630
# VCSG-70 *	G	70	67.1	79.6	160	10	540 / 540
# VCSG-95 *	G	95	91.0	107.0	220	10	320 / 320

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

标记为 # 的产品有最小起订量 (MOQ)

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.10060-19 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.10060-19。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

VCS-Index	
min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

VOH pliable, very heavy-duty 易弯, 超重型厚壁

For applications in heavy machine and plant construction. 用于重型机械和工厂建设。



- High-grade, specially formulated polyamide 6 高级, 特殊配方聚酰胺6制成
- Robust construction 坚固的结构
- High degree of mechanical protection 高强度的抗冲击性能
- Excellent pull-out resistance 杰出的抗拉强度
- Self-extinguishing 自熄灭性好
- RoHS and REACH compliant RoHS和REACH合规性
- Free from halogens and cadmium 不含卤素和镉
- Very good UV resistance and weathering characteristics, particularly in black 非常好的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -40°C to +105°C; short-term: +160°C 温度范围: -40°C 至 +105°C; 短期温度 +160°C

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B/灰色S (m)
# VOHD-07 *	T	07	6.30	10.0	20	50	- / 1300
VOHD-10 *	T	10	9.50	12.8	25	50	-
VOHD-12 *	T	12	11.9	15.6	30	50	-
VOHG-17 *	G	17	15.1	21.1	45	50	-
VOHG-23 *	G	23	21.6	28.4	60	50	-
VOHG-29 *	G	29	27.3	34.5	70	50	-
VOHG-36 *	G	36	35.6	42.4	85	30	-
# VOHG-48 *	G	48	46.5	54.5	110	30	- / 960
# VOHG-56 *	G	56	55.7	67.5	135	10	- / 600
# VOHG-70 *	G	70	67.0	79.6	160	10	540 / 540
# VOHG-95 *	G	95	91.3	107.0	220	10	320 / 320
# VOHG-125*	G	125	125.4	146.0	300	6	612 / 612

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色

标记为 # 的产品有最小起订量 (MOQ)

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet"DB-Nr.10020-11 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

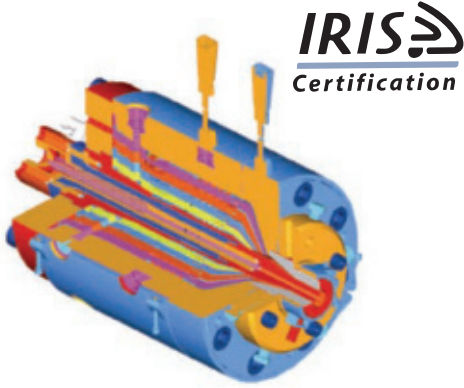
以上数据来源于PMA工厂“技术数据表”DB-Nr.10020-11。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

VOH-Index	
min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

New Developments in co-extrusion 多层共挤技术的新发展

3-layer coextrusion technology was introduced to the PMA production facility during 2008. The coextrusion line was designed specifically for PMA.

在2008年，三层共挤技术就被引入PMA生产设施中，此共挤技术是专门为PMA公司设计的。



From the very first trial onwards the new machine has produced high-quality coextruded conduits (size 17-48) with properties beyond the possibilities of monolayer conduits.

从第一次初次试验以后，这台新机器已经生产了优质的共挤多层软管（大小在NW17-48），超越了单层软管的所有特性。

PMA sees a big potential for advanced conduits using this technology. While standard material blends small steps, Multi-layer conduits open up a complete new dimension, keeping us a step ahead of the competition and allowing us to enter new application areas.

PMA意识到使用这个先进的软管技术存在着很大的潜力。虽然标准材料现在能在原有基础上混合而成改进一小步，但是多层软管已经展现了一个全新的尺度，让我们领先于竞争，带我们走进一个新的应用领域。

XVCS types XVCS 类型

For the first development PMA focussed upon track side applications where high sales volumes are possible and fire safety certificates are not absolutely necessary.

为PMA第一个开发的多层软管，设计生产以满足在轨道周边应用方面的要求，但防火安全认证不是绝对需要的。

The products XVCS1H and XVCS2H types were launched:

已经发布XVCS1H和XVCS2H这两种类型的产品：

- XVCS2H(PA12 / bonding compound/ Polyolefine), only available on a project basis

XVCS2H(聚酰胺12 / 聚合物 / 聚烯烃); 根据项目要求提供

- Static use for track side applications 轨道周边的静态应用
- High pressure, impact and weathering 耐高压、冲击和气候性
- Easy cable introduction provided by the Polyolefine inner layer. 聚烯烃内层提高电缆安装的效率。

There are several other new multi-layer conduit types in development which are available now. Size 10- 70 can already be produced.

其他新的多层软管的类型已经开发成功，已经在生产中的尺寸大小为NW10-70。

XPCL and XCYL XPCL 和 XCYL

We saw a need to strengthen our product portfolio for the machine building industry where we have competition from low grade competition with a market tendency to specification reduction. As a weapon to fight this trend PMA is introducing two new 3-layer conduit types derived from PCL and CYL, equipped with a low-friction inner layer which guarantees easy cable introduction and quicker assembly.

由于低端市场竞争加剧，我们觉得有必要加强我们在机械制造行业的产品组合，加强我们的竞争力，作为这个市场的有利武器，PMA从PCL和CYL中分离出了两种新产品，就是这种三层软管，结合低摩擦的内层保证这两种软管快速的、易于安装电缆。

XSOL and XSOLL XSOL 和 XSOLL

The XSOL and XSOLL conduits has been designed for long life exterior applications (>20-30 years) such as solar installations where excellent UV resistance, good mechanical properties and good fire safety performance are required, at an economical price level below that of a standard PA12 conduit.

XSOL和XSOLL多层软管是专门为长时间室外应用(>20至30年)，例如太阳能行业需要良好的抗紫外线、高强度机械保护和良好的防火性能而研发的，相比材料为改良配方PA12的单层软管，性价比更高。

XR90 types XR90 类型

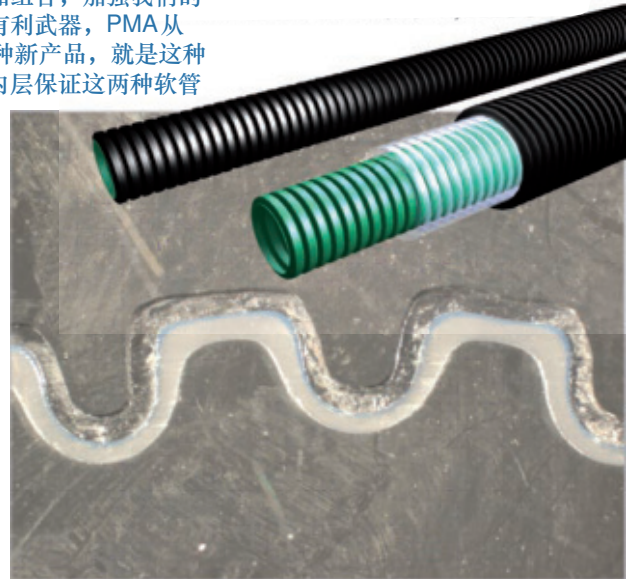
For dynamically moving conduit systems in robotics and automation industry, excellent flexibility in combination with very good mechanical properties.

适用于机器人及自动化领域动态软管系统，柔软性极佳，同时具有良好的机械强度。

XPCS and XPCSF XPCS 和 XPCSF

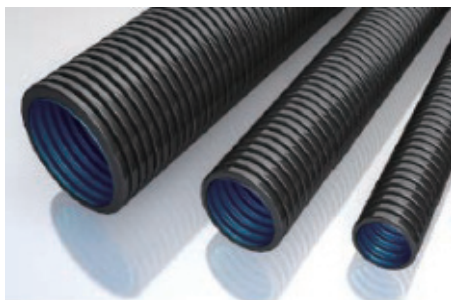
External, dynamic applications in railway vehicles on the roof and between carriages on rail vehicles. Good mechanical strength, also at dry conditions.

适用于在铁路车辆行业外部的动态安装，如：车顶和轨道车辆之间的车厢连接。在干燥的条件下，有良好的机械强度。



XCYL *very flexible, medium-duty* 非常柔软, 中壁

In machine building and equipment. 适用于机械制造和设备安装。



- Outer layer: black or grey, high-grade, specially formulated polyamide 6
外层: 黑色或灰色, 高级, 特别配方聚酰胺6
- Intermediate layer: spec. bonding compound
中间夹层: 特别接合化合物
- Inner layer: blue, specially modified polyethylene
内层: 蓝色, 特殊改良聚乙烯
- Very long life time, 15-20 years for standard applications
标准应用下 15-20 年的使用寿命
- Easy cable insertion, low friction inner layer
低摩擦内层便利电缆推入
- Impermeable to water and steam
防水和蒸汽
- Very good flexibility
非常好的柔软性
- Good impact strength even at low temperatures and low humidity
在低温和干燥天气下良好的抗冲击强度
- Self-extinguishing
自熄灭性好
- Free from halogens and cadmium
不含卤素和镉
- Temperature range: -40°C to +105°C; short-term: +160°C
温度范围: -40°C 至 +105°C; 短期温度 +160°C

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑蓝BB / 灰蓝SB (m)
# XCYL-12 *	T	12	11.8	15.6	25	50	2000 / 2000
# XCYL-17BB	T	17	16.6	21.0	40	50	1400 / -
# XCYL-17 *	G	17	15.6	20.9	40	50	1400 / 1400
# XCYL-23 *	G	23	21.9	28.5	45	50	1500 / 1500
# XCYL-29 *	G	29	27.6	34.5	55	50	1200 / 1200
# XCYL-36 *	G	36	36.0	42.5	60	30	1080 / 1080
# XCYL-48 *	G	48	47.0	54.5	70	30	960 / 960

* = Replace with "BB" to order black & blue or "SB" to order grey & blue
"BB" 订黑色 & 蓝色或 "SB" 订灰色 & 蓝色

标记为 # 的产品有最小起订量 (MOQ)

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16090-07 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16090-07。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

XCYL - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

XPCL *very flexible, medium-duty* 非常柔软, 中壁

In machine building and equipment with high requirements. 高要求的机械制造和设备安装。



- Outer layer: black or grey, high-grade, specially formulated polyamide 6
外层: 黑色或灰色, 高级, 特别配方聚酰胺6
- Intermediate layer: spec. bonding compound
中间夹层: 特别接合化合物
- Inner layer: blue, specially modified polyethylene
内层: 蓝色, 特殊改良聚乙烯
- Very long life time, 15-20 years for standard applications
标准应用下 15-20 年的使用寿命
- Easy cable insertion, low friction inner layer
低摩擦内层便利电缆推入
- Impermeable to water and steam
防水和蒸汽
- Very good flexibility
非常好的柔软性
- Good mechanical strength even at low temperatures and low humidity
在低温和干燥天气下良好的抗冲击强度
- Self-extinguishing
自熄灭性好
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- Very good UV resistance and weathering characteristics, particularly in black
非常好的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -50°C to +105°C; short-term: +160°C
温度范围: -50°C 至 +105°C; 短期温度 +160°C

Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 灰蓝色SB (m)
# XPCL-10 *	T	10	9.60	12.8	20	50	2000
# XPCL-12 *	T	12	11.9	15.6	25	50	2000
# XPCL-17BB	T	17	16.5	21.1	35	50	-
# XPCL-17 *	G	17	15.7	21.1	40	50	1400
# XPCL-23 *	G	23	21.9	28.4	50	50	1500
# XPCL-29 *	G	29	27.6	34.5	60	50	1200
# XPCL-36 *	G	36	36.0	42.4	75	30	1080
# XPCL-48 *	G	48	47.1	54.5	90	30	960

* = Replace with "BB" to order black & blue or "SB" to order grey & blue
"BB" 订黑色 & 蓝色或 "SB" 订灰色 & 蓝色

标记为 # 的产品有最小起订量 (MOQ)

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16100-08 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16100-08。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

XPCL - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

JXPCS

very flexible, heavy-duty 非常柔软, 厚壁

Static and dynamic external applications on railway vehicles. 适用于铁路车辆外部的静态和动态安装。



- Multi layer conduit: high-grade, specially formulated PA12/ PA6
多层软管系列: 高级, 特殊配方的PA12/PA6
- Overextrusion: specially formulated polyamide 12
外覆层: 特别配方聚酰胺12
- Very good flexibility and self-extinguishing
非常好的柔软性和自熄灭性
- Smooth outer layer prevents accumulation of ice
外层光滑可防止积冰
- Easy cleaning
易清洁
- High resistance to chemicals and cleaning agents
高耐化学品和清洗剂
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- Free from halogens and cadmium
不含卤素和镉
- Excellent UV resistance and weathering characteristics
优异的抗紫外线和耐候性能
- On the roof: PA12 outer layer has excellent UV resistance characteristics
适用于车顶: 外层, 特别配方聚酰胺12, 优异的抗紫外线性能
- On inter-carriage connections: excellent resistance to fatigue when exposed to continuous bending
适用于车厢连接: 在循环交变弯曲下具有优异的抗疲劳性
- On bogies and undercarriage: excellent resistance to impact at low temperatures
适用于转向架和底盘: 在低温下具有优异的抗冲击性
- EN 45545-2 HL2 (R22 & R23)
HL2: 根据EN45545-2 车内软管R22/车外软管R23标准
- NFPA 130
NFPA 130
- Temperature range: -40°C to +95°C; shot-term: +150°C
温度范围: -40°C 至 +95°C; 短期温度: +150°C

Order No. black / green 订货号 黑色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Dimensions 尺寸			Radius 最小弯曲半径 stat.** 静态 dyn.** 动态		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
			d1 (mm)	d2 (mm)	d3 (mm)	(mm)	(mm)		
JXPCST-10BG	T	10	9.8	12.8	13.2	35	80	100	-
# JXPCST-12BG	T	12	12.1	15.6	16.0	40	100	50	1800
# JXPCSG-17BG	G	17	15.8	21.1	21.6	55	125	50	1800
# JXPCSG-23BG	G	23	21.9	28.4	28.8	75	170	50	1500
# JXPCSG-29BG	G	29	27.7	34.5	34.8	90	210	50	1200
# JXPCSG-36BG	G	36	36.6	42.4	42.8	110	260	30	1080
# JXPCSG-48BG	G	48	47.5	54.5	54.8	140	330	30	960

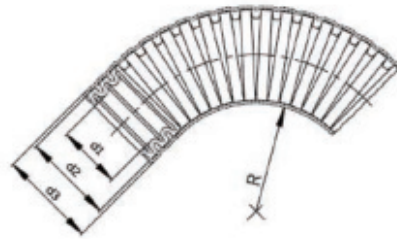
Profiles-fine (T) ; Profiles-coarse (G) 细波纹 (T) ; 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16323-01. The above data is for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16323-01。因厂家会随时更新数据,故相关数据仅供参考,如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)



JXPCS-Index

min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

XPCS

very flexible, heavy-duty 非常柔软, 厚壁

Static and dynamic external applications on railway vehicles. 适用于铁路车辆外部的静态和动态安装。



- High-grade, specially formulated PA12 / PA6
高级, 特殊配方的PA12/PA6
- Outer layer: black, inner layer: green
外层: 黑色, 内层: 绿色
- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity)
优异的机械特性, 并适用于在极端气候条件下应用(低温和低湿度)
- Very good flexibility, self-extinguishing
非常好的柔软性, 自熄灭性好
- High fire safety specification
高防火安全标准
- Excellent UV resistance and weathering characteristics
优异的抗紫外线和耐候性
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- On the roof: PA12 outer layer has excellent UV resistance characteristics
适用于车顶: 外层, 特别配方聚酰胺12, 优异的抗紫外线性能
- On inter-carriage connections: excellent resistance to fatigue when exposed to continuous bending
适用于车厢连接: 在循环交变弯曲下具有优异的抗疲劳性
- On bogies and undercarriage: excellent resistance to impact at low temperatures
适用于转向架和底盘: 在低温下具有优异的抗冲击性
- EN 45545-2 HL2 (R22 & R23)
HL2: 根据EN45545-2 车内软管R22/车外软管R23标准
- NFPA 130
NFPA 130
- Temperature range: -50°C to +95°C; short-term: +150°C
温度范围: -50°C 至 +95°C; 短期温度: +150°C

Order No. black / green 订货号 黑色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 dyn.** 动态		PU meter 包装单位 (m)
					(mm)	(mm)	
XPCST-07BG	T	07	6.90	10.0	15	40	100
XPCST-10BG	T	10	9.80	12.8	20	50	50
XPCST-12BG	T	12	12.1	15.6	25	65	50
XPCST-17BG	T	17	16.5	21.1	35	85	50
XPCSG-17BG	G	17	15.8	21.1	35	85	50
XPCSG-23BG	G	23	21.9	28.4	45	110	50
XPCSG-29BG	G	29	27.7	34.5	55	135	50
XPCSG-36BG	G	36	36.6	42.4	65	170	30
XPCSG-48BG	G	48	47.5	54.5	85	220	30
XPCSG-56BG	G	56	56.7	67.5	110	270	30
XPCSG-70BG	G	70	67.5	79.6	130	320	10
XPCSG-95BG	G	95	91.6	107.0	170	430	10

Profiles-fine (T) ; Profiles-coarse (G) 细波纹 (T) ; 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16160-13 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16160-13。因厂家会随时更新数据,故相关数据仅供参考,如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

XPCS-Index

min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

XPCS / SG *very flexible, heavy-duty* 非常柔软, 厚壁

Static and dynamic external applications on railway vehicles. 适用于铁路车辆外部的静态和动态安装。



- High-grade, specially formulated PA12 / PA6
高级, 特殊配方的PA12 / PA6
- Outer layer: grey, inner layer: green
外层: 灰色, 内层: 绿色
- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity)
优异的机械特性, 并适用于在极端气候条件下应用 (低温和低湿度)
- Very good flexibility, self-extinguishing
非常好的柔软性, 自熄灭性好
- High fire safety specification
高防火安全标准
- Very good UV resistance and weathering characteristics
非常好的抗紫外线和耐候性能
- For applications with high UV exposure XPCS in black is recommended
对于暴露在高紫外线的应用下, 推荐黑色XPCS系列
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- On inter-carriage connections: excellent resistance to fatigue when exposed to continuous bending
适用于车厢连接: 在循环交变弯曲下具有优异的抗疲劳性
- On bogies and undercarriage: excellent resistance to impact at low temperatures
适用于转向架和底盘: 在低温下具有优异的抗冲击性
- EN 45545-2 HL2 (R22 & R23)
HL2, 根据EN45545-2车内软管R22 / 车外软管R23标准
- NFPA 130
NFPA 130
- Temperature range: -50°C to +95°C; short-term: +150°C
温度范围: -50°C 至 +95°C; 短期温度 +150°C

Order No. grey / green 订货号 灰色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 dyn.** 动态		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
					(mm)	(mm)		
# XPCST-07SG	T	07	6.90	10.0	15	40	100	2000
# XPCST-10SG	T	10	9.80	12.8	20	50	50	2000
# XPCST-12SG	T	12	12.1	15.6	25	65	50	2000
# XPCST-17SG	T	17	16.5	21.1	35	85	50	1400
# XPCSG-17SG	G	17	15.8	21.1	35	85	50	TBA 待定
# XPCSG-23SG	G	23	21.9	28.4	45	110	50	1500
# XPCSG-29SG	G	29	27.7	34.5	55	135	50	1200
# XPCSG-36SG	G	36	36.6	42.4	65	170	30	1080
# XPCSG-48SG	G	48	47.5	54.5	85	220	30	960
# XPCSG-56SG	G	56	56.7	67.5	110	270	30	TBA 待定
# XPCSG-70SG	G	70	67.5	79.6	130	320	10	TBA 待定
# XPCSG-95SG	G	95	91.6	107.0	170	430	10	TBA 待定

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16163-00 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16163-00。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ) 待定 = MOQ需与工厂确认

XPCS-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

XPCS / OG *very flexible, heavy-duty* 非常柔软, 厚壁

Static and dynamic external applications. 适用于外部的静态和动态安装。



- High-grade, specially formulated PA12 / PA6
高级, 特殊配方的PA12 / PA6
- Outer layer: orange, inner layer: green
外层: 橙色, 内层: 绿色
- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity)
优异的机械特性, 并适用于在极端气候条件下应用 (低温和低湿度)
- Very good flexibility, self-extinguishing
非常好的柔软性, 自熄灭性好
- High fire safety specification
高防火安全标准
- Good UV resistance and weathering characteristics
良好的抗紫外线和耐候性能
- For applications with high UV exposure XPCS in black is recommended
对于暴露在高紫外线的应用下, 推荐黑色XPCS系列
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- EN 45545-2 HL2 (R22 & R23)
HL2, 根据EN45545-2车内软管R22 / 车外软管R23标准
- NFPA 130
NFPA 130
- Temperature range: -50°C to +95°C; short-term: +150°C
温度范围: -50°C 至 +95°C; 短期温度 +150°C

Order No. orange / green 订货号 橙色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 dyn.** 动态		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
					(mm)	(mm)		
# XPCST-07OG	T	07	6.9	10.0	15	40	100	2000
# XPCST-10OG	T	10	9.8	12.8	20	50	50	2000
XPCST-12OG	T	12	12.1	15.6	25	65	50	-
# XPCST-17OG	T	17	16.5	21.1	35	85	50	1400
XPCSG-17OG	G	17	15.8	21.1	35	85	50	-
XPCSG-23OG	G	23	21.9	28.4	45	110	50	-
XPCSG-29OG	G	29	27.7	34.5	55	135	50	-
XPCSG-36OG	G	36	36.6	42.4	65	170	30	-
XPCSG-48OG	G	48	47.5	54.5	85	220	30	-

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16162-02. The above data is for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16162-02。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

XPCS-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

XPCSL

very flexible, medium-duty 非常柔软, 中壁

Static and dynamic external applications on railway vehicles. 适用于铁路车辆外部的静态和动态安装。



- High-grade, specially formulated PA12 / PA6 高级, 特殊配方的PA12 / PA6
- Outer layer: black, inner layer: green 外层: 黑色, 内层: 绿色
- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity) 优异的机械特性, 并适用于在极端气候条件下应用 (低温和低湿度)
- Very good flexibility, self-extinguishing 非常好的柔软性, 自熄灭性好
- High fire safety specification 高防火安全标准
- Excellent UV resistance and weathering characteristics 优异的抗紫外线和耐候性
- Free from halogens and cadmium 不含卤素和镉
- RoHS and REACH compliant RoHS 和 REACH 合规性
- On the roof: PA12 outer layer has excellent UV resistance characteristics 适用于车顶: 外层, 特别配方聚酰胺12, 优异的抗紫外线性能
- On inter-carriage connections: excellent resistance to fatigue when exposed to continuous bending 适用于车厢连接: 在循环交变弯曲下具有优异的抗疲劳性
- On bogies and undercarriage: excellent resistance to impact at low temperatures 适用于转向架和底盘: 在低温下具有优异的抗冲击性
- EN 45545-2 HL2 (R22 & R23) HL2, 根据EN45545-2 车内软管R22 / 车外软管R23标准
- NFPA 130 NFPA 130
- Temperature range: -50°C to +95°C; short-term: +150°C 温度范围: -50°C 至 +95°C; 短期温度 +150°C

Order No. black / green 订货号 黑色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)		
# XPCSLT-07BG	T	07	7.00	10.0	15	35	100	2000
XPCSLT-10BG	T	10	9.90	12.8	20	45	50	-
XPCSLT-12BG	T	12	12.3	15.6	25	55	50	-
XPCSLT-17BG	T	17	16.7	21.1	30	75	50	-
# XPCSLT-29BG	T	29	28.8	34.5	50	120	50	1200
XPCSLG-17BG	G	17	15.8	21.1	35	75	50	-
XPCSLG-23BG	G	23	22.1	28.4	45	100	50	-
XPCSLG-29BG	G	29	27.9	34.5	55	120	50	-
XPCSLG-36BG	G	36	36.8	42.4	65	150	30	-
XPCSLG-48BG	G	48	47.7	54.5	85	190	30	-

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16164-00 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16164-00。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

XPCSL-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

XPCSLM

very flexible, medium-duty 非常柔软, 中壁

Static and dynamic external applications on railway vehicles. 适用于铁路车辆外部的静态和动态安装。



- High-grade, specially formulated PA12 / PA6 高级, 特殊配方的PA12 / PA6
- Outer layer: black, inner layer: green 外层: 黑色, 内层: 绿色
- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity) 优异的机械特性, 并适用于在极端气候条件下应用 (低温和低湿度)
- Very good flexibility, self-extinguishing 非常好的柔软性, 自熄灭性好
- High fire safety specification 高防火安全标准
- Excellent UV resistance and weathering characteristics 优异的抗紫外线和耐候性
- Free from halogens and cadmium 不含卤素和镉
- RoHS and REACH compliant RoHS 和 REACH 合规性
- On the roof: PA12 outer layer has excellent UV resistance characteristics 适用于车顶: 外层, 特别配方聚酰胺12, 优异的抗紫外线性能
- On inter-carriage connections: excellent resistance to fatigue when exposed to continuous bending 适用于车厢连接: 在循环交变弯曲下具有优异的抗疲劳性
- On bogies and undercarriage: excellent resistance to impact at low temperatures 适用于转向架和底盘: 在低温下具有优异的抗冲击性
- EN 45545-2 HL2 (R22 & R23) HL2, 根据EN45545-2 车内软管R22 / 车外软管R23标准
- NFPA 130 NFPA 130
- Temperature range: -50°C to +95°C; short-term: +150°C 温度范围: -50°C 至 +95°C; 短期温度 +150°C

Order No. black / green 订货号 黑色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)		
# XPCSLM-25BG	G	25	19.0	25.0	40	100	50	4000
# XPCSLM-25.5BG	G	25	19.6	25.35	40	100	50	4000

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16165-01 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16165-01。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

XPCSLM-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

JXPCSF highly flexible, heavy-duty 极柔软, 厚壁

Static and dynamic external applications on railway vehicles. 适用于铁路车辆外部的静态和动态安装。



Order No. black / orange 订货号 黑色/橙色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Dimensions 尺寸			Radius 最小弯曲半径		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
			d1 (mm)	d2 (mm)	d3 (mm)	stat.** 静态 (mm)	dyn.** 动态 (mm)		
JXPCSF - 10B0	T	10	9.6	12.8	13.2	35	80	100	-
# JXPCSF - 12B0	T	12	11.8	15.6	16.0	40	100	50	2000
# JXPCSF - 17B0	G	17	15.5	21.1	21.6	55	125	50	1400
# JXPCSF - 23B0	G	23	21.5	28.4	28.8	75	170	50	1500
# JXPCSF - 29B0	G	29	27.4	34.5	34.8	90	210	50	1200
# JXPCSF - 36B0	G	36	36.0	42.4	42.8	110	260	30	1080
# JXPCSF - 48B0	G	48	47.1	54.5	54.8	140	330	30	960

- Multi layer conduit: specially formulated polyamide 12
多层软管系列: 特别配方聚酰胺12
- Overextrusion: specially formulated polyamide 12
外覆盖: 特别配方聚酰胺12
- Conduit outer layer: black, inner layer: orange, overextrusion: black
软管外层: 黑色, 内层: 橙色, 外覆盖: 黑色
- Excellent flexibility and self-extinguishing
极好的柔软性和自熄灭性
- Smooth outer layer prevents accumulation of ice
外层光滑可防止积冰
- Easy cleaning
易清洁
- High resistance to chemicals and cleaning agents
高耐化学品和清洗剂
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- Free from halogens and cadmium
不含卤素和镉
- Excellent UV resistance and weathering characteristics
优异的抗紫外线和耐候性能
- On the roof: PA12 outer layer has excellent UV resistance characteristics
适用于车顶: 外层, 特别配方聚酰胺12, 优异的抗紫外线性能
- On inter-carriage connections: excellent resistance to fatigue when exposed to continuous bending
适用于车厢连接: 在循环交变弯曲下具有优异的抗疲劳性能
- On bogies and undercarriage: excellent resistance to impact at low temperatures
适用于转向架和底盘: 在低温下具有优异的抗冲击性
- EN 45545-2 HL3 (R22 & R23)
HL3, 根据EN45545-2 车内软管R22/ 车外软管R23标准
- Temperature range: -50°C to +95°C; short-term: +150°C
温度范围: -50°C 至 +95°C; 短期温度: +150°C

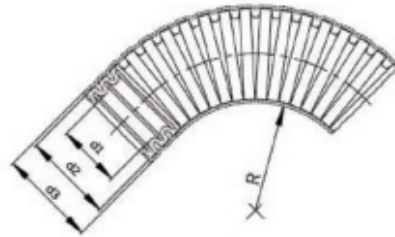
Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16322-04. The above data is for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16322-04。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)



JXPCSF-Index

min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

XPCSF very flexible, heavy-duty 非常柔软, 厚壁

Static and dynamic external applications on railway vehicles. 适用于铁路车辆外部的静态和动态安装。



Order No. black / orange 订货号 黑色/橙色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter	Outside diameter	Radius 最小弯曲半径		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
			内径 (mm)	外径 (mm)	stat.** 静态 (mm)	dyn.** 动态 (mm)		
XPCSF - 07B0	T	07	6.6	10.0	15	40	100	-
XPCSF - 10B0	T	10	9.6	12.8	20	50	50	-
XPCSF - 12B0	T	12	11.8	15.6	25	65	50	-
XPCSF - 17B0	G	17	15.5	21.1	35	85	50	-
XPCSF - 23B0	G	23	21.5	28.4	45	110	50	-
XPCSF - 29B0	G	29	27.4	34.5	55	135	50	-
XPCSF - 36B0	G	36	36.0	42.4	65	170	30	-
XPCSF - 48B0	G	48	47.1	54.5	85	220	30	-
XPCSF - 56B0	G	56	56.7	67.5	110	270	30	-
XPCSF - 70B0	G	70	67.1	79.6	130	320	10	-
# XPCSF - 95B0	G	95	90.9	107.0	170	430	10	300
# XPCSF - 125B0	G	125	125.0	146.0	230	580	6	TBA 待定

- Outer layer: black; high-grade, specially formulated polyamide 12
外层: 黑色; 高级, 特殊配方聚酰胺12
- Inner layer: orange; high-grade, specially formulated polyamide 12
内层: 橙色; 特殊配方聚酰胺12
- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity)
优异的机械特性, 并适用于在极端气候条件下应用 (低温和低温湿度)
- Excellent flexibility, self-extinguishing
优异的柔软性, 自熄灭性好
- High fire safety specification
极高的防火安全标准
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- Free from halogens and cadmium
不含卤素和镉
- Excellent UV resistance and weathering characteristics
优异的抗紫外线和耐候性能
- On the roof: PA12 outer layer has excellent UV resistance characteristics
适用于车顶: 外层, 特别配方聚酰胺12, 优异的抗紫外线性能
- On inter-carriage connections: excellent resistance to fatigue when exposed to continuous bending
适用于车厢连接: 在循环交变弯曲下具有优异的抗疲劳性能
- On bogies and undercarriage: excellent resistance to impact at low temperatures
适用于转向架和底盘: 在低温下具有优异的抗冲击性
- EN 45545-2 HL3 (R22 & R23)
HL3, 根据EN45545-2 车内软管R22/ 车外软管R23标准
- Temperature range: -50°C to +95°C; short-term: +150°C
温度范围: -50°C 至 +95°C; 短期温度 +150°C

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16161-14 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16161-14。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ) 待定 = MOQ需与工厂确认

XPCSF-Index

min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

XR90 *very flexible, medium-duty* 非常柔软, 中壁

For dynamically moving conduit systems in robotics and automation industry. 适用于机器人及自动化领域动态软管系统。



Order No. black / red 订货号 黑色/红色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)		
# XR90T - 17BR	T	17	16.2	21.1	30	85	50	1400
XR90T - 23BR	T	23	22.7	28.4	40	110	50	-
XR90T - 29BR	T	29	28.6	34.5	50	135	50	-
XR90G - 17BR	G	17	15.4	21.1	35	85	50	-
XR90G - 23BR	G	23	21.4	28.4	45	110	50	-
XR90G - 29BR	G	29	27.2	34.5	55	135	50	-
XR90G - 36BR	G	36	35.9	42.4	65	170	30	-
XR90G - 48BR	G	48	47.0	54.5	85	220	30	-
XR90G - 56BR	G	56	56.7	67.5	110	270	30	-
XR90G - 70BR	G	70	67.8	79.6	130	320	30	-
# XR90G - 95BR	G	95	92.0	107.0	170	430	30	300

- Outer, intermediate and inner layer made from high-grade, specially formulated polyamide 12
外层, 中间夹层和内层: 高级特别配方聚酰胺12
- Outer layer: black; intermediate layer: yellow; inner layer: red
外层: 黑色; 中间夹层: 黄色; 内层: 红色
- With wear indicator function; high resistance to continuous bending
带有磨损指示器功能; 优异的交变弯曲性
- No abrupt conduit failure due to high tear propagation resistance
由于抗撕裂的扩展, 以便于软管不会突然发生断裂
- High abrasion resistance
高耐磨性能
- High resistance to torsion and elongation
良好的抗扭转性能及抗拉强度
- Suitable for applications with a pullback system
适用于带回拉系统的应用
- Long service life
使用寿命较长
- Free from halogen and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- Very good UV resistance and weathering characteristics
非常好的抗紫外线和耐候性能
- Temperature range: -40°C to +95°C; short-term: +150°C
温度范围: -40°C 至 +95°C; 短期温度 +150°C

Profiles-fine (T); Profiles-coarse (G) / 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16080-09 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16080-09。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

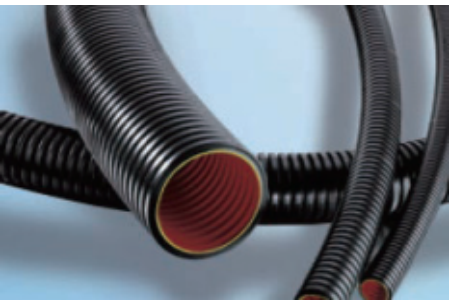
标记为 # 的产品有最小起订量 (MOQ)

XR90 - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

XR90H *highly flexible, medium-duty* 极柔软, 中壁

Multilayer conduit for the robotic and automation industry. 多层软管适用于机器人和自动化领域。



Order No. black / red 订货号 黑色/红色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)	MOQ 最小起订量 (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)		
# XR90H - 70BR	H	70	67.5	82.5	150	300	30	540

Larger outer diameter - not suitable for current NW70 accessories
较大外径 - 不适用于现有的 NW70 配件

The above data is given based on "Technical Data Sheet" DB-Nr.16081-00 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16081-00。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

XR90H - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

- Outer, intermediate and inner layer made from high-grade, specially formulated polyamide 12
外层, 中间夹层和内层: 高级特别配方聚酰胺12
- Outer layer: black; intermediate layer: yellow; inner layer: red
外层: 黑色; 中间夹层: 黄色; 内层: 红色
- With wear indication function
带有磨损指示器功能
- High resistance to continuous bending
优异的交变弯曲性
- No abrupt conduit failure due to high tear propagation resistance
由于抗撕裂的扩展, 以便于软管不会突然发生断裂,
- Improved chafing resistance
经改良, 具有抗磨损性
- Highly flexible, small bending radii possible
极柔软, 较小的弯曲半径
- High resistance to torsion
良好的抗扭转性能
- Long service life
使用寿命较长
- Free from halogen and cadmium
不含卤素和镉
- Temperature range: -40°C to +95°C; short-term to +150°C
温度范围: -40°C 至 +95°C; 短期温度 +150°C

XSOL very flexible, medium-duty 非常柔软, 中壁

All-purpose, especially for long-term external applications, e.g. energy technology, transportation. 适用于长期室外安装如太阳能, 轨道交通周边设施。



- Outer layer: black; high-grade, specially formulated polyamide 12
外层: 黑色; 高级, 特殊配方聚酰胺 12
- Intermediate layer: spec. bonding compound
中间夹层: 特别接合化合物
- Inner layer: green; high-grade, specially formulated polyamide 6
内层: 绿色; 特殊配方聚酰胺 6
- Very high flexibility
非常高的柔软性
- Very good mechanical strength
优良的机械强度
- High impact resistance at low temperature and humidity
在低温和干燥天气下有很好的抗冲击强度
- Excellent fire safety characteristics
防火性能极好
- Excellent chemical resistance
优良的耐化学性
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- Excellent UV resistance and weathering characteristics
优异的抗紫外线和耐候性能
- NMPT-C
NMPT-C
- UL 1696 (UL File E80294)
UL 1696 (UL 文件 E80294)
- Temperature range: -50°C to +95°C; short-term: +150°C
温度范围: -50°C 至 +95°C; 短期温度 +150°C

Order No. black / green 订货号 黑色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat. ** 静态 (mm)	PU meter 包装单位 (m)
XSOLT - 07BG ✖	T	7	6.70	10.0	15	100
XSOLT - 10BG	T	10	9.50	12.8	20	50
XSOLT - 12BG	T	12	11.9	15.6	25	50
XSOLG - 17BG	G	17	15.6	21.1	40	50
XSOLG - 23BG	G	23	21.9	28.4	50	50
XSOLG - 29BG	G	29	27.7	34.5	60	50
XSOLG - 36BG	G	36	36.4	42.4	75	30
XSOLG - 48BG	G	48	47.2	54.5	90	30

Profiles - fine (T) ; Profiles - coarse (G) 细波纹 (T) ; 粗波纹 (G)

✖ = Not approved to UL 1696 / CSA C22.2 No. 227.3-05 (UL file E 80294)

尚未授权 UL 1696 / CSA C22.2 No. 227.3-05 认证 (UL 文件号 E 80294)

The above data is given based on "Technical Data Sheet" DB-Nr.16110-13 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16110-13。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

XSOL - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

XSOLL highly flexible, medium-duty 极柔软, 中壁

All-purpose, especially in long-term external applications, e.g. energy technology, transportation. 适用于长期室外安装如太阳能, 轨道交通周边设施。



- Outer layer: black; high-grade, specially formulated polyamide 12
外层: 黑色; 高级, 特殊配方聚酰胺 12
- Intermediate layer: spec. bonding compound
中间夹层: 特别接合化合物
- Inner layer: green; high-grade, specially formulated polyamide 6
内层: 绿色; 特殊配方聚酰胺 6
- Very good resistance to UV and weathering
非常好的抗紫外线和耐候性能
- High flexibility and very good mechanical strength
非常柔软和很好的抗冲击强度
- High impact resistance at low temperature and humidity
在低温和干燥天气下有很好的抗冲击强度
- Good fire safety characteristics; Self-extinguishing
良好的防火安全特性; 自熄灭好
- Excellent chemical resistance
优良的耐化学性
- Free from halogens and cadmium
不含卤素和镉
- Temperature range: -40°C to +95°C; short-term: +150°C
温度范围: -40°C 至 +95°C; 短期温度 +150°C

Order No. black / green 订货号 黑色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat. ** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 (m)
# XSOLLT - 12BG	T	12	11.8	15.8	30	50	2000
# XSOLLG - 17BG	G	17	15.2	21.2	40	50	1400
# XSOLLG - 23BG	G	23	22.0	28.5	50	50	1500
# XSOLLG - 29BG	G	29	27.7	34.4	60	50	1200
# XSOLLG - 36BG	G	36	35.8	42.4	70	30	1080
# XSOLLG - 48BG	G	48	46.8	54.4	80	30	960

Profiles-fine (T) ; Profiles -coarse (G) 细波纹 (T) ; 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16120-02 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16120-02。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

XSOLL-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

XTPC highly flexible, medium-duty 极柔软, 中壁

For dynamic conduit systems in robotics and automation industry. 适用于机器人和自动化行业的动态系统。



- Outer, intermediate and inner layer made from high-grade, specially modified thermoplastic copolyester elastomer
外层, 中间夹层和内层: 高级特别配方热塑性共聚酯弹性体
- Outer layer: black; intermediate layer: yellow; inner layer: blue
外层: 黑色; 中间夹层: 黄色; 内层: 蓝色
- With wear indication function
带有磨损指示器功能
- High resistance to continuous bending
优异的交变弯曲性能
- No abrupt conduit failure due to high tear propagation resistance
由于抗撕裂的扩展, 软管不会突然发生断裂
- Very high abrasion resistance
非常高的耐磨性能
- High resistance to torsion
高抗扭转性能
- Suitable for tight bending-radii
适用于较小的弯曲半径
- Long service life
使用寿命长
- Good UV resistance and weathering characteristics
良好的抗紫外线和耐候性能
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- Temperature range: -40°C to +105°C; short-term: +150°C
温度范围: -40°C 至 +105°C; 短期温度: +150°C

Order No. black/blue 订货号 黑色/蓝色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径		PU meter 包装单位 (m)
					stat.** 静态 (mm)	dyn.** 动态 (mm)	
XTPCG - 17BB.50	G	17	15.2	21.1	30	75	50
XTPCG - 23BB.50	G	23	21.2	28.4	40	100	50
XTPCG - 29BB.50	G	29	26.8	34.5	50	120	50
XTPCG - 36BB.30	G	36	35.5	42.4	60	150	30
XTPCG - 48BB.30	G	48	46.5	54.5	80	190	30
XTPCG - 56BB.30	G	56	56.2	67.5	105	235	30
XTPCG - 70BB.30	G	70	67.3	79.6	120	280	30

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16180 -01 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16180 -01。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

XTPC - Index

min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

XVCSF flexible, heavy-duty 柔软, 厚壁

Static external applications on railway vehicles. 适用于铁路车辆外部的静态安装。



- Outer layer: black; specially formulated polyamide 6
外层: 黑色; 特殊配方聚酰胺6
- Inner layer: blue; specially modified polyamide 6
内层: 蓝色; 特殊改良聚酰胺6
- Good flexibility
良好的柔韧性
- High compression and impact strengths at low temperature and low humidity
在低温和干燥的环境下, 有良好的抗压和抗冲击强度
- Very good UV resistance and weathering characteristics
非常好的抗紫外线和耐候性能
- Self-extinguishing
自熄灭性好
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS 和 REACH 合规性
- On bogies and undercarriage: excellent resistance to impact at low temperatures
适用于转向架和底盘: 在低温下具有优异的抗冲击性
- EN 45545-2 HL2 (R22 & R23)
HL2, 根据EN45545-2 车内软管R22 / 车外软管R23标准
- Temperature range: -50°C to +105°C; short-term: +160°C
温度范围: -50°C 至 +105°C; 短期温度 +160°C

Order No. black/blue 订货号 黑色/蓝色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)
XVCSFT - 10BB	T	10	9.60	12.8	20	50
XVCSFT - 12BB	T	12	11.9	15.6	25	50
XVCSFG - 17BB	G	17	15.6	21.1	40	50
XVCSFG - 23BB	G	23	21.5	28.4	50	50
XVCSFG - 29BB	G	29	27.7	34.5	60	50
XVCSFG - 36BB	G	36	35.9	42.4	75	30
XVCSFG - 48BB	G	48	46.8	54.5	90	30

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.10063-03 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.10063-03。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

XVCSF-Index

min.	max.
ductility 柔软性	
fatigue reversed bending 抗弯性	
compression resistance 抗压性	
low temperature performance 抗冻性	
weathering resistance 耐候性	

XVCS1H flexible, heavy-duty 柔软, 厚壁

Track side applications. 适用于轨道交通周边设施。



- Outer layer: black; high-grade, specially formulated polyamide 6
外层: 黑色; 高级, 特殊配方聚酰胺6
- Inner layer: green; specially modified polyolefine
内层: 绿色; 特殊改良聚烯烃
- Very long life time, > 20 year
超过20年的使用寿命
- Excellent low temperature performance
优异的低温性能
- Easy installation through flexibility
灵活性易于安装
- Low friction inner layer facilitates cable insertion
低摩擦内层便利电缆推入
- Very good mechanical strength combined with high flexibility
高柔韧性下具有非常好的机械强度
- Impermeable to water and steam
防渗水和蒸汽
- Good resistance to rodents
对啮齿动物有良好的抵抗力
- No prone to accumulation of fungus or mould
不易积聚真菌或霉菌
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- Very good UV resistance and weathering characteristics
非常好的抗紫外线和耐候性能
- Deutsche bahn standard
德国铁路标准
- Temperature range: -50°C to +90°C; short-term: +120°C
温度范围: -50°C 至 +90°C; 短期温度 +120°C

Order No. black / green 订货号 黑色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 (m)
XVCS1H-10BG	T	10	9.50	12.8	20	50	-
XVCS1H-12BG	T	12	11.8	15.6	25	50	-
XVCS1H-17BG	G	17	15.5	21.1	40	50	-
XVCS1H-23BG	G	23	21.7	28.4	50	50	-
XVCS1H-29BG	G	29	27.5	34.5	60	50	-
# XVCS1H-36BG	G	36	35.8	42.4	75	30	1080
XVCS1H-48BG	G	48	47.1	54.5	90	30	-

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16010-12 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16010-12。因厂家会随时更新数据,故相关数据仅供参考,如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

XVCS1H - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

XVCS2H flexible, heavy-duty 柔软, 厚壁

External applications, e.g. solar systems, signalling, CCTV and track side applications.

适用于外部应用, 例如太阳能系统, 信号, 视讯监控系统和轨道交通周边设施。



- Outer layer: black; high-grade, specially formulated polyamide 12
外层: 黑色; 高级, 特别配方聚酰胺12
- Inner layer: green; specially modified polyolefine
内层: 绿色; 特殊改良聚烯烃
- Very long life time, > 20 - 30 years
标准应用下20-30年的使用寿命
- Excellent low temperature performance
优异的低温性能
- Easy installation through flexibility
灵活性易于安装
- Low friction inner layer facilitates cable insertion
低摩擦内层便利电缆推入
- Very good mechanical strength combined with high flexibility
高柔韧性下具有非常好的机械强度
- Impermeable to water and steam
防渗水和蒸汽
- Good resistance to rodents
对啮齿动物有良好的抵抗力
- No prone to accumulation of fungus or mould
不易积聚真菌或霉菌
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- Excellent UV resistance and weathering characteristics
优异的抗紫外线和耐候性能
- Temperature range: -50°C to +90°C; short-term: +120°C
温度范围: -50°C 至 +90°C; 短期温度 +120°C

Order No. black / green 订货号 黑色 / 绿色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 (m)
# XVCS2H-10BG	T	10	9.4	12.8	20	50	TBA待定
# XVCS2H-12BG	T	12	11.7	15.6	25	50	2000
# XVCS2H-17BG	G	17	15.4	21.1	35	50	1400
# XVCS2H-23BG	G	23	22.0	28.4	40	50	1500
# XVCS2H-29BG	G	29	27.7	34.5	50	50	1200
# XVCS2H-36BG	G	36	35.8	42.4	60	30	1080
# XVCS2H-48BG	G	48	46.8	54.5	70	30	960

Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on "Technical Data Sheet" DB-Nr.16020-07 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16020-07。因厂家会随时更新数据,故相关数据仅供参考,如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)
待定 = MOQ需与工厂确认

XVCS2H-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

CUS very flexible, medium-duty 非常柔软, 中壁

For machine building and installation industries. For electrical installations. 在机械制造和安装行业的应用。应用于电气安装。



Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 灰色S (m)
# CUSG-17 *	G	17	15.5	21.1	40	31	1488
# CUSG-23 *	G	23	21.7	28.4	50	31	1488
# CUSG-29 *	G	29	27.4	34.5	60	31	TBA 待定
# CUSG-36 *	G	36	35.5	42.4	75	31	TBA 待定
# CUSG-48 *	G	48	46.5	54.5	90	31	TBA 待定

- High-grade, specially formulated polyamide 6
高级特殊配方聚酰胺6制成
- Cost-effective
节约成本
- Very good flexibility
非常好的柔软性
- Very good mechanical properties even under extreme conditions, such as low temperatures and low humidity
即使在低温和低湿度等极端条件下仍具有非常好的机械性能
- Self-extinguishing
自熄灭性好
- Free from halogen and cadmium
不含卤素镉
- RoHS and REACH compliant
RoHS和REACH合规性
- UL Listed according to UL1660 (UL File E311441)
UL Listed 认证根据 UL1660 的标准 (UL文件 E311441)
- Good UV resistance and weathering characteristics, particularly in black
良好的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -40°C to +105°C; short-term: +160°C
温度范围: -40°C 至 +105°C; 短期温度 +160°C

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色
Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

标记为 # 的产品有最小起订量 (MOQ)
待定 = MOQ需与工厂确认

The above data is given based on "Technical Data Sheet" DB-Nr.15030-04 for reference only.
For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".
以上数据来源于PMA工厂“技术数据表”DB-Nr.15030-04。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

CUS-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

PUS very flexible, heavy-duty 非常柔软, 厚壁

Long-term external applications, e.g. solar systems, signalling, CCTV. Dynamic applications.
适用于长期室外安装, 如太阳能系统、信号、视讯监控系统。适合动态安装。



Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	dyn.** 动态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 灰色S (m)
# PUSG-17 *	G	17	15.5	21.1	35	85	31	TBA 待定
# PUSG-23 *	G	23	21.6	28.4	45	110	31	TBA 待定
# PUSG-29 *	G	29	27.5	34.5	55	135	31	TBA 待定
# PUSG-36 *	G	36	35.9	42.4	65	170	31	TBA 待定
# PUSG-48 *	G	48	47.0	54.5	85	220	31	TBA 待定

- High-grade, specially formulated polyamide 12
高级特殊配方聚酰胺12制成
- Very good mechanical strength at low temperatures and dry conditions
在低温、干燥的环境下, 有非常好的抗冲击强度
- Excellent flexibility and self-extinguishing
极好的柔软性, 自熄灭性好
- Free from halogen and cadmium
不含卤素镉
- RoHS and REACH compliant
RoHS和REACH合规性
- UL Listed according to UL1660 (UL File E311441)
UL Listed 认证根据 UL1660 的标准 (UL文件 E311441)
- For use according to National Electric Code (NEC) NFPA 70, Article 356
符合美国国家电工法规 (NEC) NFPA70 条中的第356条款
- Excellent UV resistance and weathering characteristics, particularly in black
优异的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -50°C to +95°C; short-term: +150°C
温度范围: -50°C 至 +95°C; 短期温度 +150°C

* = Replace with "B" to order black or "S" to order grey "B" 订黑色或 "S" 订灰色
Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

标记为 # 的产品有最小起订量 (MOQ)
待定 = MOQ需与工厂确认

The above data is given based on "Technical Data Sheet" DB-Nr.15020-06 for reference only.
For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".
以上数据来源于PMA工厂“技术数据表”DB-Nr.15020-06。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

PUS-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

EASIFLEX CEL

very flexible, light-grade 非常柔软, 薄壁

General industry applications. 通常用于工业装配。



Order No. black / green 订货号 黑色	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B (m)
# CELT-10B	T	10	9.9	12.8	20	100	2000
# CELT-12B	T	12	12.3	15.6	25	100	1200
# CELT-17B	T	17	17.0	21.1	35	100	800
# CELT-23B	T	23	23.4	28.4	45	100	500
# CELT-29B	T	29	29.1	34.5	55	100	300
# CELT-36B	T	36	37.2	42.4	65	50	200
# CELT-48B	T	48	48.5	54.5	80	50	150

- High-grade, specially formulated polyamide 6
高级, 特殊改良聚酰胺6制成
- Very good flexibility
非常柔软
- Standare fine profile T
标准细波纹 “T”
- Free from halogen and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- Very good UV resistance and weathering characteristics
非常好的抗紫外线和耐候性能
- Temperature range: -40°C to +105°C; short-term: +160°C
温度范围: -40°C 至 +105°C; 短期温度 +160°C

Profiles - fine (T); Profiles - coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on “Technical Data Sheet” DB-Nr.11980-04 for reference only.

For details and the most update version, please contact our sales department for “The latest Technical Data Sheet”.

以上数据来源于PMA工厂“技术数据表”DB-Nr.11980-04。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

EASIFLEX CEL - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

EASIFLEX CF

very flexible, meduim-grade 非常柔软, 中壁

In machine and equipment applications. 适用于机械制造和设备安装。



Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色B / 灰色S (m)
CF-07*	T	07	6.60	10.0	15	50	-
CF-10*	T	10	9.80	12.8	20	50	-
CF-12*	T	12	12.1	15.6	25	50	-
CF-17*	T	17	16.8	21.1	35	50	-
CF-23*	G	23	23.2	28.4	45	50	-
CF-29*	G	29	28.8	34.5	55	50	-
CF-36*	G	36	36.7	42.4	65	30	-
CF-48*	G	48	48.2	54.5	80	30	-
# CF-56*	G	56	56.7	67.5	120	30	900 / -
CF-70*	G	70	67.5	79.6	140	30	-
# CF-95*	G	95	91.6	107.0	190	30	600

- High-grade, specially formulated polyamide 6
高级, 特殊改良聚酰胺6制成
- Good impact resistance
良好抗冲击性
- Good flexibility
柔软性好
- Self-extinguishing
自熄灭性好
- Free from halogen and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- UL 1696 (UL File E80294)
UL 1696 (UL文件 E80294)
- Very good UV resistance and weathering characteristics,
particularly in black
非常好的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -40°C to +105°C; short-term: +160°C
温度范围: -40°C 至 +105°C; 短期温度 +160°C

* = Replace with “B” to order black or “S” to order grey “B” 订黑色或 “S” 订灰色

Profiles - fine (T); Profiles - coarse (G) 细波纹 (T); 粗波纹 (G)

The above data is given based on “Technical Data Sheet” DB-Nr.11921-16 for reference only.

For details and the most update version, please contact our sales department for “The latest Technical Data Sheet”.

以上数据来源于PMA工厂“技术数据表”DB-Nr.11921-16。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

标记为 # 的产品有最小起订量 (MOQ)

EASIFLEX CF - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

EASIFLEX LL *very flexible, light-wall* 非常柔软, 薄壁

In the machine building and installation industries. 适用于机械制造和安装行业。



- Specially modified polypropylene PP 特殊改良聚丙烯 (PP) 制成
- Economical 经济型
- Very good insulating characteristics 非常好的绝缘特性
- Free from halogen and cadmium 不含卤素和镉
- Good impact resistance 良好抗冲击性
- Good flexibility 柔软性好
- Good resistance against strong acids 耐强酸性好
- Temperature rang: -20°C to + 90°C 温度范围: -20°C 至 +90°C

EASIFLEX LL - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

Order No.	Profile	Conduit size 软管规格	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色A / 灰色S (m)
订货号	波纹	NW 标称内径	内径 (mm)	外径 (mm)	静态 (mm)	(m)	黑色A / 灰色S (m)
# LL-07 *	T	07	6.20	10.0	15	50	- / 2600
LL-10 *	T	10	9.60	13.0	20	50	-
LL-12 *	T	12	12.0	15.8	30	50	-
LL-17 *	T	17	16.2	21.2	40	50	-
LL-23 *	T	23	22.6	28.5	45	50	-
LL-29 *	T	29	29.0	34.5	55	50	-
# LL-36 *	T	36	36.5	42.5	60	30	1080 / 1080
# LL-48 *	T	48	47.5	54.5	70	30	960 / 960

* = Replace with "A" to order black or "S" to order grey "A" 订黑色或 "S" 订灰色
Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

标记为 # 的产品有最小起订量 (MOQ)

The above data is given based on "Technical Data Sheet" DB-Nr.12901-06 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.12901-06。因厂家会随时更新数据，故相关数据仅供参考，如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

LLPA *very flexible, medium-grade* 非常柔软, 中壁

In machine and equipment applications. 适用于机械制造和设备安装。



- High-grade, specially modified polyamide 6 高级, 特殊配方聚酰胺6制成
- Very good mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity) 非常好的机械特性, 并适用于在极端气候条件下应用 (低温和低湿度)
- Self-extinguishing; very good flexibility 自熄灭性好; 非常柔软
- Free from halogen and cadmium 不含卤素和镉
- RoHS and REACH compliant RoHS和REACH合规性
- UL 1696 (UL File E80294) UL 1696 (UL 文件 E80294)
- CSA C22.2 No. 227.3-05 (CSA File LL 88703) CSA C22.2 No. 227.3-05 (CSA 文件 LL 88703)
- Good UV resistance and weathering characteristics, particularly in black 良好的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -40°C to +105°C; short-term: +160°C 温度范围: -40°C 至 +105°C; 短期温度 +160°C

LLPA - Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

Order No.	Profile	Conduit size 软管规格	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色A / 灰色S (m)
订货号	波纹	NW 标称内径	内径 (mm)	外径 (mm)	静态 (mm)	(m)	黑色A / 灰色S (m)
LLPA-07 *	T	07	6.60	10.0	15	50	-
LLPA-10 *	T	10	9.80	12.8	20	50	-
LLPA-12 *	T	12	12.1	15.6	25	50	-
LLPA-17 *	T	17	16.8	21.1	35	50	-
LLPA-23 *	T	23	23.2	28.4	45	50	-
LLPA-29 *	T	29	28.8	34.5	55	50	-
LLPA-36 *	T	36	36.7	42.4	65	30	-
LLPA-48 *	T	48	48.2	54.5	80	30	-
# LLPAG-17 *	G	17	15.8	21.1	40	50	1400
LLPAG-23 *	G	23	21.9	28.4	50	50	-
LLPAG-29 *	G	29	27.8	34.5	60	50	-
LLPAG-36 *	G	36	36.1	42.4	75	30	-
LLPAG-48 *	G	48	46.9	54.5	90	30	-
# LLPAG-56 *	G	56	56.7	67.5	120	30	- / 630
# LLPAG-70 *	G	70	67.5	79.6	140	10	540 / 540
# LLPAG-95 *	G	95	91.6	107.0	190	10	320 / -
# LLPAG-125 *	G	125	125.5	146.0	260	6	612

* = Replace with "A" to order black or "S" to order grey "A" 订黑色或 "S" 订灰色
Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

标记为 # 的产品有最小起订量 (MOQ)

The above data is given based on "Technical Data Sheet" DB-Nr.12911-20 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.12911-20。因厂家会随时更新数据，故相关数据仅供参考，如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

LLPF flexible, meduim-grade 柔软, 中壁

In machine building, installation and construction industries. 应用于机械制造, 安装和建筑行业。



Order No. 订货号	Profile 波纹	Conduit size 软管规格 NW 标称内径	Inside diameter 内径 (mm)	Outside diameter 外径 (mm)	Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)	MOQ 最小起订量 黑色A / 灰色S (m)
LLPF-07 *	T	07	6.80	10.0	15	50	-
LLPF-10 *	T	10	9.80	12.8	20	50	-
LLPF-12 *	T	12	12.2	15.6	25	50	-
LLPF-17 *	T	17	16.8	21.1	35	50	-
LLPF-23 *	T	23	23.4	28.4	45	50	-
LLPF-29 *	T	29	29.1	34.5	55	50	-
# LLPFG-17 *	G	17	15.8	21.1	40	50	1400 / 1400
# LLPFG-23 *	G	23	21.9	28.4	50	50	1500 / 1500
# LLPFG-29 *	G	29	27.8	34.5	60	50	1200 / 1200
LLPFG-36 *	G	36	36.1	42.4	75	30	-
LLPFG-48 *	G	48	46.9	54.5	90	30	-

- High-grade specially formulated polyamide 6
高级, 特殊改良聚酰胺6制成
- Very good insulating characteristics
非常良好的绝缘特性
- Good fire safety characteristics
良好的防火安全特性
- Self-extinguishing
自熄灭性好
- Very good flexibility
非常柔软
- Good impact resistance
良好的抗冲击度
- Good resistance against strong acids
耐强酸性好
- Free from halogen and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- UL 94 V0
UL 94 V0
- Good UV resistance and weathering characteristics, particularly in black
良好的抗紫外线和耐候性能, 尤其是黑色软管
- Temperature range: -40°C to +105°C; short-term: +160°C
温度范围: -40°C 至 +105°C; 短期温度: +160°C

* = Replace with "A" to order black or "S" to order grey "A" 订黑色或 "S" 订灰色
Profiles-fine (T); Profiles-coarse (G) 细波纹 (T); 粗波纹 (G)

标记为 # 的产品有最小起订量 (MOQ)

The above data is given based on "Technical Data Sheet" DB-Nr.12931-09 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.12931-09。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。

LLPF-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性

JLLPA flexible, heavy-duty 柔软, 厚壁

For static applications in machine building, installation and construction industries. For general applications with cleaning requirements.

适用于机械制造, 建筑工业和工业装配的静态安装。适用于对清洁有要求的区域。



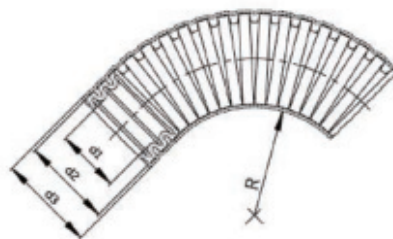
Order No. 订货号	Conduit size 软管规格 NW 标称内径	Dimensions 尺寸			Radius 最小弯曲半径 stat.** 静态 (mm)	PU meter 包装单位 (m)
		d1 (mm)	d2 (mm)	d3 (mm)		
JLLPA-12A	12	12.1	15.6	15.8	40	50
JLLPAG-17A	17	15.8	21.1	21.2	55	50
JLLPAG-23A	23	21.9	28.4	28.5	75	50
JLLPAG-29A	29	27.8	34.5	34.7	90	50
JLLPAG-36A	36	36.1	42.4	42.6	110	30
JLLPAG-48A	48	46.9	54.5	54.6	140	30

- Conduit: black; high-grade, specially formulated polyamide 6
软管: 黑色; 高级, 特殊配方聚酰胺6
- Overextrusion: black; modified polyamide 6
外覆盖: 黑色; 改良聚酰胺6制成
- Smooth outer layer; for easy cleaning
外表光滑; 易清洁
- Good flexibility in combination with high strength
良好的柔韧性 with 高强度的结合
- Good resistance to chemicals and cleaning agents
良好的耐化学品和清洗剂
- Corrosion-free; self-extinguishing
零腐蚀; 自熄灭性好
- Free from halogens and cadmium
不含卤素和镉
- RoHS and REACH compliant
RoHS和REACH合规性
- UL Recognition according to UL 1696 (file E80294)
UL Recognition 认证根据 UL 1696 的标准 (文件 E80294)
- Very good UV resistance and weathering characteristics
非常好的抗紫外线和耐候性能
- Temperature range: -18°C to +105°C; short-term: +160°C
温度范围: -18°C 至 +105°C; 短期温度 +160°C

The above data is given based on "Technical Data Sheet" DB-Nr.16330-03 for reference only.

For details and the most update version, please contact our sales department for "The latest Technical Data Sheet".

以上数据来源于PMA工厂“技术数据表”DB-Nr.16330-03。因厂家会随时更新数据, 故相关数据仅供参考, 如要了解详细和最新技术资料请联系我司销售部索取《最新技术数据表》。



JLLPA-Index

min.	max.
ductility	柔软性
fatigue reversed bending	抗弯性
compression resistance	抗压性
low temperature performance	抗冻性
weathering resistance	耐候性