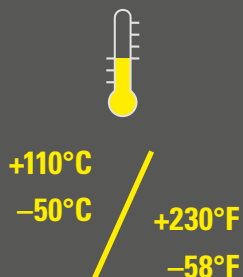
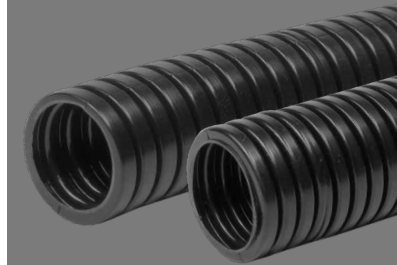


HPDF

厚壁波纹管

Corrugated conduit with flame properties in heavy version



材料: PA12 MOD V0

HPDF 厚壁波纹管由特殊改性的尼龙12制成, 具有非常优异的自熄及动态抗疲劳性能。特别适用于有最高防火要求的持续运动应用场合。HPDF 同时可以提供在低温或干燥环境下的非常好的抗物理冲击机械强度。产品同时具备非常优异的耐紫外线耐候性及耐化学性能。适用于轨道机车应用。非常优异的机械性能适用于各种高技术要求的应用场合。

Material: PA12 MOD V0

The heavy duty conduit HPDF is made from highly flame retarded specially modified Polyamide 12. It is suitable for cable protection applications where low fire hazard is mandatory, for example in rolling stock applications. The excellent self-extinguishing and low smoke generation characteristics are main criterions for the selection of these products. With its very good complementary mechanical performances this conduit suits technically high demanding applications.

HPDF

产品性能 / Product performances

应用性能 / Application performances	特性 Characteristics	单位 Unit	规范标准 Standards, specifications	备注 Remark
温度范围 Temperature range	-50 到 / to +110 -58 到 / to +230	°C °F	IS FIP	
温度 (短周期) Temperatur (short-term)	150 (500 h); 165 (100 h) 302 (500 h); 329 (100 h)	°C °F	IS FIP	
填充率 (最大) Filling ratio (max.)	70	%	IS FIP	
机械性能 / Mechanical performances				
冲击强度 Impact strength	6	J	IS FIP	23°C / 73,4°F
冲击强度 Impact strength	2	J	IS FIP	-45°C / -49°F
峰值负载 Peak load value	320	N	IS FIP	
拔脱强度 Pull out strength	500	N	IS FIP	23°C / 73,4°F FIPLOCK ONE NW 17
防火性能 / Fire safety performances				
不含卤素和镉 Free from halogens and cadmium	是 / yes			
阻燃等级 Fire classification	V0		UL 94	
产品防火特性 Fire characteristic of the product	自熄 self-extinguishing		UL 1696	
易燃性 Flammability	自熄 self-extinguishing		FMVSS 302	
氧指数 Oxygen index	≥32	%	EN ISO 4589-2	
灼热丝测试 Glow wire test	850 1562	°C °F	IEC 60695	
火灾危害等级 Fire hazardous level	HL3 R22/R23		EN45545-2	
火焰蔓延指数 Flame spread index	符合 compliant		ASTM E162	依照 /acc. NFPA 130
烟雾浓度 Smoke density	符合 compliant		ASTM E662	依照 /acc. NFPA 130
烟雾毒性 Smoke toxicity	符合 compliant		BSS 7239/SMP 800-C	
热释放量 (焓) Heat release (Enthalpy)	14,1 (5555)	MJ/kg (BTU/lb)	ASTM E1354	50 kW/m² 热通量 / heat flux
火焰蔓延 Spread of fire	非火焰蔓延 non flame propagating		IEC EN 61386	
耐候性 / Weathering performances				
UV及耐候性 UV and weathering performance	优异 excellent		IS FIP	可达30 年 up to 30 years

测试条件参照EN ISO 139温度23°C, 湿度 / 50% (如未注明测试条件)。IS FIP=FIP内部测试规范。

Tests carried out acc. EN ISO 139 at 23°C / 50% r. h. (if not indicated different). IS FIP = Internal Specification FIP

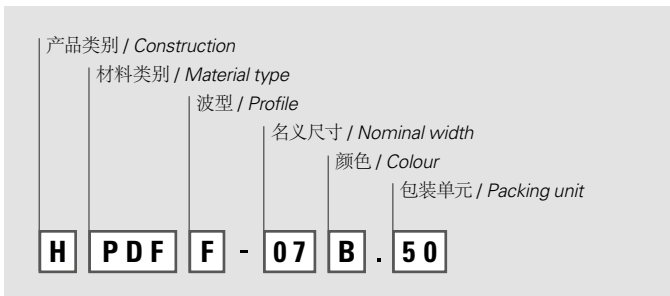
产品号 Part No.	名义尺寸 Nominal width		波型 Profile	尺寸 (mm) Dimensions in mm (nom.)		弯曲半径 (mm) Bending radius in mm		包装单元 PU
黑色 / black	NW	metr.		ID	AD / OD	stat. R.	dyn. R.	m
HPDFF-07B.50	07	10	F	6,0	10,0	15	40	50
HPDFF-10B.50	10	12	F	9,2	12,8	20	50	50
HPDFF-12B.50	12	16	F	11,8	15,7	25	60	50
HPDFC-17B.50	17	20	C	16,1	21,1	35	80	50
HPDFC-23B.50	23	25	C	22,0	28,5	40	100	50
HPDFC-29B.50	29	32	C	28,3	34,7	50	120	50
HPDFC-36B.25	36	40	C	35,8	42,3	60	180	25
HPDFC-48B.25	48	50	C	46,7	54,2	70	210	25

关于产品库存, 交期, 尺寸及颜色等问题请联系我们本地的经销商或客服。

Please contact our local distribution partner or our customer service regarding product availability, lead time, other sizes and colours.

* 请参照PM sheet www.fraenkische.com/pm-sheet-inch 查询英制尺寸 / Please refer to the according PM sheet via www.fraenkische.com/pm-sheet-inch for the measurements in inch.

产品代码 / Number code:



HPDFF NW 07-12 及 HPDFC NW 17-48 黑色波纹管可与 FIPLOCK® ONE 适配

HPDFF NW 07-12 and HPDFC NW 17-48 in black color in connection with FIPLOCK® ONE fittings



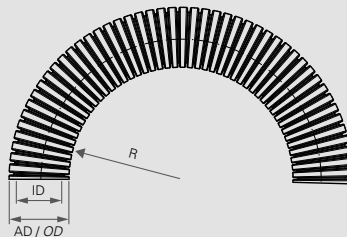
细波型 F / Fine profile F

更小的弯曲半径 / Tight bending radius



粗波型 C / Coarse profile C

更高的拔脱强度 / High pull-out strength



弯曲半径 / Bending radius

stat. R = 静态安装最小弯曲半径

lowest recommended bending radius for static (fixed) installation

dyn. R = 动态安装最小弯曲半径

lowest recommended bending radius for dynamic (flexible) installation

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The provided data, images and technical specification drawings reflect the current engineering level and are to the best of our knowledge. This does not include any liability regarding the final application. Users of the products have to make their own evaluation to determine the suitability for a specific application. Our liability for these products considers the stated level within our General Conditions only. FRAENKISCHE Industrial Pipes (FIP) reserves the right to adjust specified data and values as well as implementing technical adjustments of the products e. g. change of materials and processing technologies without prior notice as long as the specified values are not reduced.

系统解决方案 / *The system solution:* FIPLOCK® ONE - One fits all

- 预装状态，拿来即用 / *pre-assembled and ready to fit*
- 易选型 / *easy selection*
- 易备库 / *lower storage effort*
- 易管理 / *little handling necessary*
- 易安装 / *faster installation*
- 省成本 / *cost saving*



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You will find all information about our fittings in our FIPLOCK® ONE brochure. The brochure can be downloaded from the download area on www.fipsystems.com

