

TECHNICAL DATA SHEET

# PMAFLEX - PIS/PIH - Corrugated Conduit

Highly flexible, heavy-duty

**PMA**



Highly flexible UL recognized conduits ideal for dynamic applications in robotic and automation industry



**Applications:**

- For dynamic applications in robotics and automation

**Features & Benefits:**

- Excellent mechanical characteristics, also under extreme climatic conditions (low temperature and low humidity)
- Excellent flexibility
- Good mechanical strength at low temperatures and dry conditions
- Self-extinguishing

**Materials:**

- High-grade, specially formulated polyamide 12

**Compatible with:**

- PMAFIX Pro, PMAFIX fittings
- PMAGRIP flange
- PMA accessories

**Temperature range:**

- -50°C ... +95°C continuous, +150°C short-term

**Conforms to:**

- UL1696 (UL File E80294)

**Weathering resistance:**

- Excellent UV resistance and weathering characteristics, particularly in black

**Colour:**

- Black
- Grey

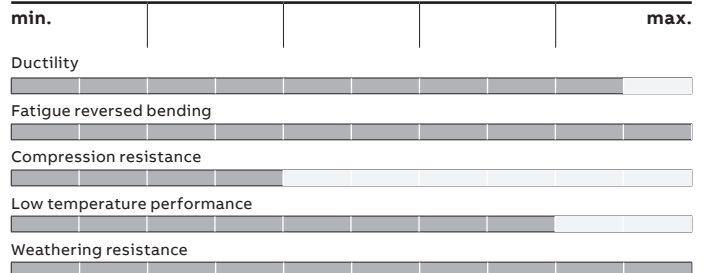
**Chemical properties:**

- Please refer to [www.pma.ch](http://www.pma.ch) (Technical Information / Chemical Resistance)

**Environmental properties:**

- Free from halogens and cadmium
- RoHS and REACH compliant

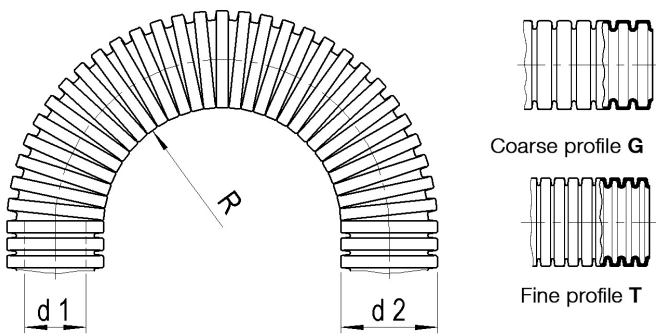
**PIS\_PIH-Index**



**Product selection:**

Part no.		Profile	Conduit size		rec. fitting thread size		Dimensions in mm (nom.)				Weight	Packing unit
black	grey	T/G	NW	metric	PG	metric	d1	d2	stat. R	dyn. R.	kg/100 m	metre
PIST-07B	PIST-07S	T	7	10	7	M12x1.5	6.7	10.0	15	40	2.2	50
PIST-10B	PIST-10S	T	10	12	9	M12x1.5	9.7	12.8	20	50	2.8	50
PIST-12B	PIST-12S	T	12	16	11	M16x1.5	12.0	15.6	25	65	3.8	50
PIST-17B	PIST-17S	T	17	20	16	M20x1.5	16.7	21.1	30	85	5.7	50
PIST-23B	PIST-23S	T	23	25	21	M25x1.5	23.2	28.4	40	110	9.9	50
PIST-29B	PIST-29S	T	29	32	29	M32x1.5	28.9	34.5	50	135	13.3	50
PIST-36B	PIST-36S	T	36	40	36	M40x1.5	36.8	42.4	60	170	16.0	30
PIST-48B	PIST-48S	T	48	50	48	M50x1.5	48.0	54.5	75	220	22.8	30
PISG-17B	PISG-17S	G	17	20	16	M20x1.5	15.8	21.1	35	85	6.3	50
PISG-23B	PISG-23S	G	23	25	21	M25x1.5	22.0	28.4	45	110	9.9	50
PISG-29B	PISG-29S	G	29	32	29	M32x1.5	27.8	34.5	55	135	13.3	50
PISG-36B	PISG-36S	G	36	40	36	M40x1.5	36.2	42.4	65	170	16.0	30
PISG-48B	PISG-48S	G	48	50	48	M50x1.5	47.1	54.5	85	220	22.8	30
PIHG-56B	PIHG-56S	G	56	68	-	-	57.0	67.5	110	270	33.0	30
PIHG-70B	PIHG-70S	G	70	80	-	-	68.0	79.6	130	320	46.0	30
PIHG-95B	PIHG-95S	G	95	106	-	-	92.5	107.0	170	430	68.0	30
PIHG-125B	PIHG-125S	G	125	146	-	-	126.9	146.0	230	580	93.0	20

Our customer service dept. or local distribution partner will be pleased to help you concerning product availability and lead time  
Conduit size NW10 - NW125 UL recognized to UL 1696 (UL file E 80294)



stat. R. = min. bending radius for static (fixed) installation

dyn. R. = min. bending radius for dynamic (flexible) installation

<b>Mechanical Properties:</b>	<b>Value:</b>	<b>Test parameters:</b>	<b>Test method:</b>
Impact strength	> 5 J	(+23°C)	PMA DO 9.21-4330
	> 12.2 J	(-18°C)	UL 1696/CSA 22.2 Nr. 227.3
	class 2, > 1 J	(-45°C)	IEC EN 61386
	class 3, > 2 J	(-15°C)	IEC EN 61386
	class 4, > 6 J	(+23°C)	IEC EN 61386
Compression strength	> 175 N	(50 x 50 mm)	PMA DO 9.21-4320
	> 350 N	(100 x 100 mm)	PMA DO 9.21-4320
	class 2		IEC EN 61386
Resistance to fatigue	> 4'000'000 cycles		PMA DO 9.21-4420
	> 10'000'000 cycles		PMA DO 9.21-4425
	> 5'000 cycles		IEC EN 61386-23
<b>Pull-out resistance conduit - fitting series</b>			
PMAFIX Pro	> 350 N		PMA DO 9.21-4610
PMAFIX IP68	> 300 N		PMA DO 9.21-4610
PMAFIX IP66	> 250 N		PMA DO 9.21-4610
PMAFIX Pro, PMAFIX IP66 & IP68	class 1		IEC EN 61386

Note: Testing at 23°C, 50% r.h., conduit nominal width 17, unless otherwise stated

<b>Thermal properties:</b>	<b>Value:</b>	<b>Test parameters:</b>	<b>Test method:</b>
Continuous application temperature	-50 ... +95		PMA DO 9.21-4510
Upper application temperature	+110°C	(20'000 h)	PMA DO 9.21-4360
Short-term	+150°C	(168 h)	PMA DO 9.21-4360
Application temperature range	-45 ... +105°C		IEC EN 61386
Application temperature range	-18 ... +90°C		UL 1696/CSA 22.2 Nr. 227.3

<b>Fire safety properties:</b>	<b>Value:</b>	<b>Test parameters:</b>	<b>Test method:</b>
Fire performance	non flame-propagating		IEC EN 61386
Fire performance	V0		UL 94

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