

TECHNICAL DATA SHEET

PMAFLEX Multilayer - XTPC - Corrugated Conduit

Highly flexible, medium-duty

PMA



Highly flexible conduit for robotic applications with high resistance to abrasion and wear indication function. Especially suitable for narrow bending radii



Applications:

- For dynamic conduit systems in robotics and automation industry

Features & Benefits:

- With wear indication function
- High resistance to continuous bending
- No abrupt conduit failure due to high tear propagation resistance
- Very high abrasion resistance
- High resistance to torsion
- Suitable for tight bending-radii
- Long service life

Materials:

- Outer, intermediate and inner layer made from High-grade, specially modified Thermoplastic copolyester elastomer

Compatible with:

- PMA Automation Products
- PMAFIX Pro, PMAFIX fittings
- PMAGRIP flange
- PMA Accessories

Temperature range:

- -40°C ... +105°C continuous, +120°C short-term

Weathering resistance:

- Good UV resistance and weathering characteristics

Colour:

- Outer layer: black (protection layer) abrasion and UV resistant
- Intermediate layer: yellow (warning layer)
- Inner layer: blue (wear limit reached) conduit should be replaced

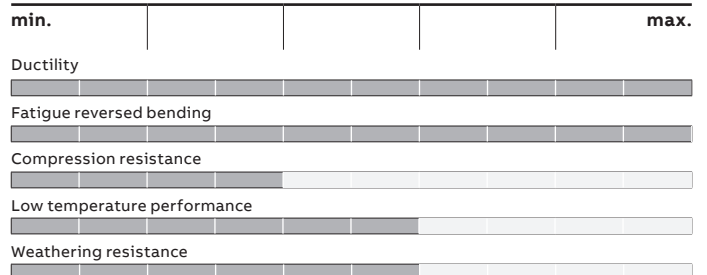
Chemical properties:

- Please refer to www.pma.ch (Technical Information / Chemical Resistance)

Environmental properties:

- Free from halogens and cadmium
- RoHS and REACH compliant

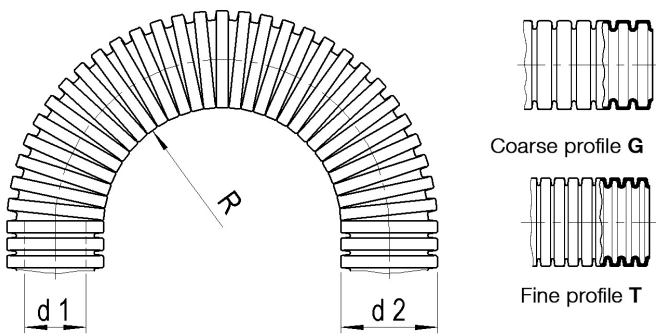
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Product selection:

Part no.	Profile	Conduit size		rec. fitting thread size		Dimensions in mm (nom.)				Weight	Packing unit
		NW	metric	PG	metric	d1	d2	stat. R	dyn. R.		
black/blue	T/G	NW	metric	PG	metric	d1	d2	stat. R	dyn. R.	kg/100 m	metre
XTPCG-17BB.50	G	17	20	16	M20x1.5	15.2	21.1	30	75	8.5	50
XTPCG-23BB.50	G	23	25	21	M25x1.5	21.2	28.4	40	100	13.0	50
XTPCG-29BB.50	G	29	32	29	M32x1.5	26.8	34.5	50	120	17.0	50
XTPCG-36BB.30	G	36	40	36	M40x1.5	35.5	42.4	60	150	20.5	30
XTPCG-48BB.30	G	48	50	48	M50x1.5	46.5	54.5	80	190	29.0	30
XTPCG-56BB.30	G	56	68	-	-	56.2	67.5	105	235	39.0	30
XTPCG-70BB.30	G	70	80	-	-	67.3	79.6	120	280	54.0	30

Our customer service dept. or local distribution partner will be pleased to help you concerning product availability and lead time



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

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

Mechanical Properties:	Value:	Test parameters:	Test method:
Impact strength	> 4.5 J		PMA DO 9.21-4330
Compression strength	> 160 N	(50 x 50 mm)	PMA DO 9.21-4320
	> 320 N	(100 x 100 mm)	
Resistance to fatigue	> 5'000'000 cycles		PMA DO 9.21-4420
	> 10'000'000 cycles		PMA DO 9.21-4425
Pull-out resistance conduit - fitting series			
PMAFIX Pro	> 280 N		PMA DO 9.21-4610
PMAFIX IP68	> 260 N		PMA DO 9.21-4610
PMAFIX IP66	> 220 N		PMA DO 9.21-4610

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

Additional sealing may be required to archive IP performance in combination with the fitting series PMAFIX, PMAFIXpro and PMAGRIP due to higher material shrinkage of the corrugated conduit

Thermal properties:	Value:	Test parameters:	Test method:
Continuous application temperature	-40 ... +105°C		PMA DO 9.21-4510
Upper application temperature	+120°C	(20'000 h)	PMA DO 9.21-4360
Short-term	+150°C	(168 h)	PMA DO 9.21-4360