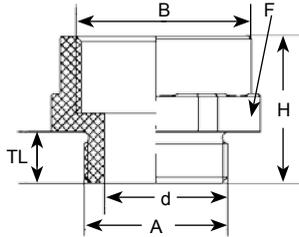


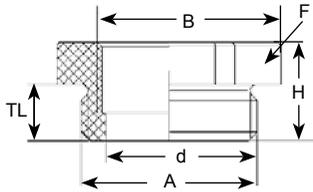
RoHS



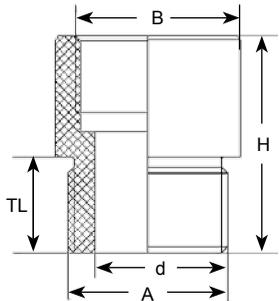
Type A



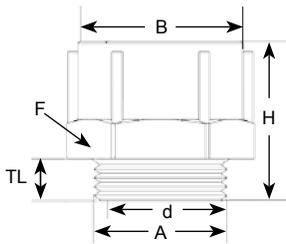
Type B



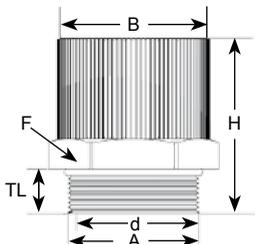
Type C



Type D



Type E



Operating Temperature: -4°F to 176°F (-20°C to 80°C)  
(Metric to PG & PG to Metric Nylon Adapters)

**Black Nylon/Polypropylene\* - Thread Adapters: Metric to PG Threads**

Part Numbers	Threads		Adapter Type	Dimensions in Inches (mm)			
	Male Thread A	Female Thread B		TL	H	d	F
				Thread Length	Height	Inner Diameter	Wrench Flat
AF-1207-BK	M12 x 1.5	PG 7	A	.31 (8)	.79 (20)	.26 (6.5)	.67 (17)
AF-1609-BK	M16 x 1.5	PG 9	C*	.59 (15)	1.34 (34)	.33 (8.5)	N/A
AF-2013-BK	M20 x 1.5	PG 13	A	.31 (8)	.83 (21)	.55 (14)	.98 (25)
AF-2513-BK	M25 x 1.5	PG 13 / 13.5	B	.31 (8)	.55 (14)	.71 (18)	1.14 (29)
AF-2516-BK	M25 x 1.5	PG 16	A	.31 (8)	.87 (22)	.71 (18)	1.14 (29)
AF-3221-BK	M32 x 1.5	PG 21	A	.39 (10)	.98 (25)	.98 (25)	1.43 (36)
AF-4029-BK	M40 x 1.5	PG 29	A	.39 (10)	.98 (25)	1.30 (33)	1.77 (45)
AF-5036-BK	M50 x 1.5	PG 36	A	.47 (12)	1.14 (29)	1.69 (43)	2.17 (55)
AF-6342-BK	M63 x 1.5	PG 42	C	.59 (15)	.79 (20)	2.05 (52)	N/A
AF-6348-BK	M63 x 1.5	PG 48	C*	.59 (15)	1.38 (35)	2.01 (51)	N/A

\*Parts are made of Polypropylene.

**Black Nylon/Polypropylene\* - Thread Adapters: PG to Metric Threads**

Part Numbers	Threads		Adapter Type	Dimensions in Inches (mm)			
	Male Thread A	Female Thread B		TL	H	d	F
				Thread Length	Height	Inner Diameter	Wrench Flat
AP-0712-BK	PG 7	M12 x 1.5	C*	.59 (15)	1.34 (34)	.24 (6)	N/A
AP-0912-BK	PG 9	M12 x 1.5	C	.59 (15)	1.34 (34)	.33 (8.5)	N/A
AP-0916-BK	PG 9	M16 x 1.5	A	.31 (8)	.79 (20)	.35 (9)	.83 (21)
AP-1116-BK	PG 11	M16 x 1.5	C	.59 (15)	1.34 (34)	.45 (11.5)	N/A
AP-1120-BK	PG 11	M20 x 1.5	C*	.59 (15)	1.34 (34)	.45 (11.5)	N/A
AP-1316-BK	PG 13 / 13.5	M16 x 1.5	B	.31 (8)	.55 (14)	.55 (14)	.98 (25)
AP-1320-BK	PG 13	M20 x 1.5	A	.31 (8)	.83 (21)	.55 (14)	.98 (25)
AP-1620-BK	PG 16	M20 x 1.5	A	.31 (8)	.83 (21)	.63 (16)	1.06 (27)
AP-1625-BK	PG 16	M25 x 1.5	A	.31 (8)	.91 (23)	.63 (16)	1.18 (30)
AP-2125-BK	PG 21	M25 x 1.5	C	.59 (15)	1.34 (34)	.81 (20.5)	N/A
AP-2132-BK	PG 21	M32 x 1.5	A	.31 (8)	.91 (23)	.83 (21)	1.46 (37)
AP-2932-BK	PG 29	M32 x 1.5	C	.59 (15)	1.34 (34)	1.10 (28)	N/A
AP-2940-BK	PG 29	M40 x 1.5	A	.39 (10)	1.06 (27)	1.18 (30)	1.77 (45)
AP-3640-BK	PG 36	M40 x 1.5	C	.59 (15)	.79 (20)	1.50 (38)	N/A
AP-3650-BK	PG 36	M50 x 1.5	C*	.59 (15)	1.36 (34.5)	1.46 (37)	N/A
AP-4240-BK	PG 42	M40 x 1.5	C	.59 (15)	.79 (20)	1.50 (38)	N/A
AP-4250-BK	PG 42	M50 x 1.5	C*	.59 (15)	1.36 (34.5)	1.69 (43)	N/A
AP-4850-BK	PG 48	M50 x 1.5	C	.59 (15)	.79 (20)	1.50 (38)	N/A
AP-4863-BK	PG 48	M63 x 1.5	C*	.59 (15)	1.38 (35)	1.89 (48)	N/A

**Black Nylon - Thread Adapters: PG to NPT Threads**

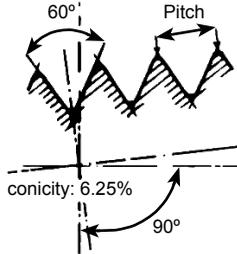
Part Numbers	Threads		Adapter Type	Dimensions in Inches (mm)			
	Male Thread A	Female Thread B		TL	H	d	F
				Thread Length	Height	Inner Diameter	Wrench Flat
AG-1112-BK	PG 11	1/2" NPT	D	.28 (7)	.83 (21)	N/A	.94 (24)
AG-1312-BK	PG 13 / 13.5	1/2" NPT	D	.35 (9)	.91 (23)	N/A	.94 (24)

**Black Nylon - Thread Adapters: Metric to NPT Threads**

Part Numbers	Threads		Adapter Type	Dimensions in Inches (mm)			
	Male Thread A	Female Thread B		TL	H	d	F
				Thread Length	Height	Inner Diameter	Wrench Flat
AM-1612-BK	M16 x 1.5	1/2" NPT	E	.28 (7)	1.10 (28)	N/A	1.02 (26)
AM-2012-BK	M20 x 1.5	1/2" NPT	E	.28 (7)	1.06 (27)	N/A	1.02 (26)

### NPT Threads

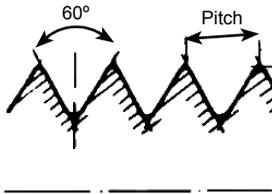
Thread Size	1/4" NPT	3/8" NPT	1/2" NPT	3/4" NPT	1" NPT	1-1/4" NPT	1-1/2" NPT	2" NPT
Major Dia. in Inches (mm)	.54 (13.72)	.675 (17.145)	.84 (21.336)	1.05 (26.67)	1.314 (33.40)	1.66 (42.164)	1.90 (48.26)	2.375 (60.325)
Pitch in Inches (mm)	.056 (1.41)	.056 (1.411)	.071 (1.814)	.071 (1.814)	.087 (2.208)	.087 (2.208)	.087 (2.208)	.087 (2.208)
Threads per Inch	18	18	14	14	11.5	11.5	11.5	11.5



- NPT Thread = National Pipe Thread
- Taper rate for all NPT threads is 1/16
- The taper on NPT threads allows them to form a seal when torqued as the flanks of the threads compress against each other, as opposed to straight thread fittings

### Metric Threads

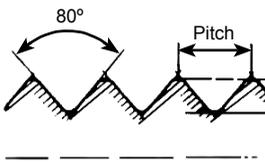
Thread Size	M6	M8	M10	M12	M16	M20	M25	M32	M40	M50	M63
Major Dia. in Inches (mm)	.24 (6)	.31 (8)	.39 (10)	.47 (12)	.63 (16)	.79 (20)	.98 (25)	1.26 (32)	1.57 (40)	1.97 (50)	2.48 (63)
Pitch in Inches (mm)	.04 (1)	.05 (1.25)	.06 (1.5)	.059 (1.5)	.059 (1.5)	.059 (1.5)	.059 (1.5)	.059 (1.5)	.059 (1.5)	.059 (1.5)	.059 (1.5)
Thru Hole in Inches (mm)	.251 (6.4)	.33 (8.4)	.413 (10.5)	.492 (12.5)	.63 (16)	.79 (20)	.98 (25)	1.26 (32)	1.57 (40)	1.97 (50)	2.48 (63)



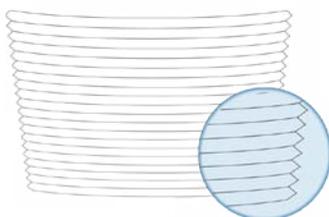
- World-wide most commonly used type thread
- Characterized by its major diameter and its pitch
- Designated by the letter M followed by the value of the nominal diameter and the pitch, both expressed in millimeters and separated by the multiplication sign 'x' (i.e. M12 x 1.5)

### PG Threads

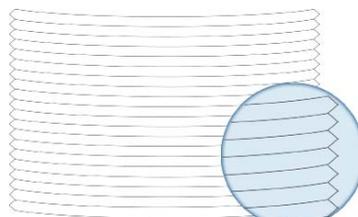
Thread Size	PG 7	PG 9	PG 11	PG 13 / 13.5	PG 16	PG 21	PG 29	PG 36	PG 42	PG 48
Major Dia. in Inches (mm)	.49 (12.5)	.60 (15.2)	.73 (18.6)	.80 (20.4)	.89 (22.5)	1.11 (28.3)	1.46 (37)	1.85 (47)	2.13 (54)	2.39 (59.3)
Pitch in Inches (mm)	.05 (1.27)	.056 (1.41)	.056 (1.41)	.056 (1.41)	.056 (1.41)	.062 (1.59)	.062 (1.59)	.062 (1.59)	.062 (1.59)	.062 (1.59)
Thru Hole in Inches (mm)	.50 (12.7)	.606 (15.4)	.74 (18.8)	.8149 (20.7)	.897 (22.8)	1.12 (28.6)	1.47 (37.4)	1.87 (47.5)	2.14 (54.5)	2.35 (59.8)



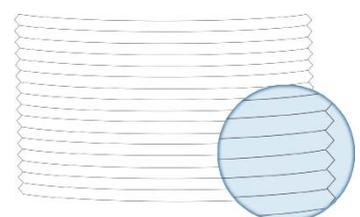
- PG Thread = Panzer-Gewinde (also Panzer-Rohr-Gewinde)
- German thread type
- Depth of thread smaller than NPT or Metric, but larger flank angle
- Straight thread



**NPT Threads**  
(Tapered)



**Metric Threads**  
(Straight)



**PG Threads**  
(Straight)