



# Standard Specification for Impervious Graphite Pipe and Threading<sup>1</sup>

This standard is issued under the fixed designation C 662; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last approval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

## 1. Scope

1.1 This specification covers the standardization of the pipe sizes and types of threads used to join impervious graphite pipe and fittings. The thread standards may also be applied to impervious carbon pipe and fittings. It is limited to physical dimensions.

## 2. Terminology

### 2.1 Definitions of Terms Specific to This Standard:

2.1.1 *impervious graphite*—manufactured graphite that has been impregnated with a resinous material to make the final article impervious to liquids in the recommended operating range.

2.1.2 *impervious carbon*—the same as impervious graphite with the exception that the base stock has not been graphitized.

## 3. Requirements for Impervious Graphite Pipe

3.1 The eight standard pipe sizes are shown in [Table 1](#) with permissible variations in dimensions.

3.2 [Fig. 1](#) gives the male thread dimensions for impervious graphite pipe.

3.3 [Fig. 2](#) gives the female thread dimensions for impervious graphite fittings.

## 4. Keywords

4.1 impervious carbon pipe; impervious graphite pipe; threading specifications

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D02 on Petroleum Products and Lubricants and is the direct responsibility of Subcommittee D02.F0 on Manufactured Carbon and Graphite Products.

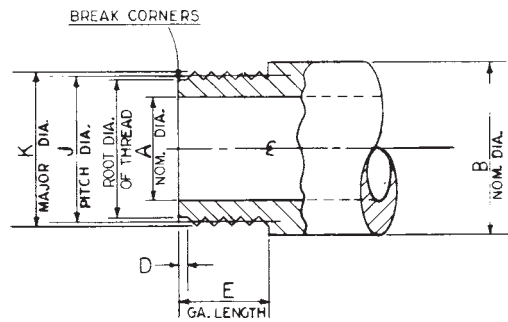
Current edition approved May 1, 2005. Published May 2005. Originally approved in 1970. Last previous edition approved in 1998 as C 662 – 79 (1998).

**TABLE 1 Physical Dimensions of Impervious Graphite Pipe**

Pipe Size (nominal Inside Diameter), in.	Typical Limits								Length <sup>A</sup>	
	Inside Diameter				Outside Diameter					
	min		max		min		max		in.	mm
	in.	mm	in.	mm	in.	mm	in.	mm	+¼ -0	+60 -0
1	1 <sup>5</sup> / <sub>16</sub>	23.8	1 <sup>1</sup> / <sub>16</sub>	27.0	1 <sup>3</sup> / <sub>64</sub>	37.7	1 <sup>9</sup> / <sub>16</sub>	39.7	108	2740.
1½	1 <sup>7</sup> / <sub>16</sub>	36.5	1 <sup>9</sup> / <sub>16</sub>	39.7	1 <sup>6</sup> / <sub>64</sub>	49.6	2 <sup>1</sup> / <sub>16</sub>	52.4	108	2740.
2	1 <sup>15</sup> / <sub>16</sub>	49.2	2 <sup>1</sup> / <sub>16</sub>	52.4	2 <sup>11</sup> / <sub>16</sub>	68.3	2 <sup>19</sup> / <sub>16</sub>	71.4	108	2740.
3	2 <sup>15</sup> / <sub>16</sub>	74.6	3 <sup>1</sup> / <sub>4</sub>	82.6	4	101.6	4 <sup>9</sup> / <sub>16</sub>	106.4	108	2740.
4	3 <sup>15</sup> / <sub>16</sub>	100.0	4 <sup>1</sup> / <sub>4</sub>	108.0	5 <sup>1</sup> / <sub>4</sub>	133.4	5 <sup>1</sup> / <sub>2</sub>	139.7	108	2740.
6	5 <sup>15</sup> / <sub>16</sub>	150.8	6 <sup>1</sup> / <sub>4</sub>	158.8	7 <sup>7</sup> / <sub>16</sub>	188.9	7 <sup>13</sup> / <sub>16</sub>	198.4	108	2740.
8 <sup>B</sup>	8 <sup>1</sup> / <sub>16</sub>	204.8	8 <sup>3</sup> / <sub>16</sub>	208.0	9 <sup>1</sup> / <sub>2</sub>	241.3	9 <sup>3</sup> / <sub>4</sub>	247.7	72	1830.
10 <sup>B</sup>	10 <sup>1</sup> / <sub>16</sub>	255.6	10 <sup>3</sup> / <sub>16</sub>	258.8	12 <sup>1</sup> / <sub>2</sub>	317.5	12 <sup>3</sup> / <sub>4</sub>	323.9	72	1830.

<sup>A</sup> Maximum curvature—½ % of length measured chord to arc.

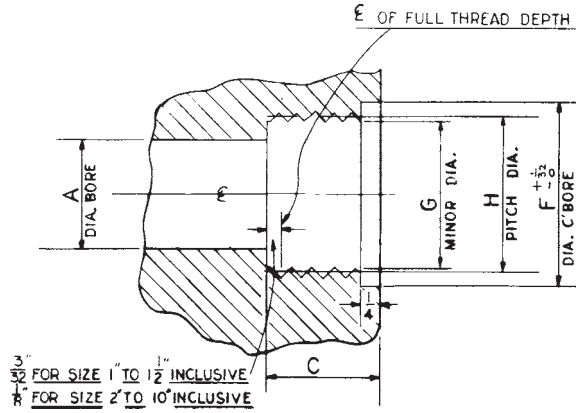
<sup>B</sup> Machined limits for 8 and 10 in. size pipe. All others are extruded to size.



Pipe Size	1	1½	2	3	4	6	8	10
A	1	1½	2	3	4	6	8 <sup>1</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>8</sub>
B	1½	2	2¾	4	5¼	7½	9 <sup>5</sup> / <sub>8</sub>	12 <sup>5</sup> / <sub>8</sub>
D	1/8	1/8	5/32	5/32	5/32	5/32	5/32	5/32
E	1 <sup>3</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>	1 <sup>9</sup> / <sub>16</sub>	1 <sup>15</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>
J max	1.436	1.906	2.589	3.899	5.149	7.319	9.426	12.419
min	1.430	1.898	2.581	3.887	5.137	7.306	9.412	12.404
K max	1.490	1.960	2.670	3.980	5.230	7.400	9.507	12.500
min	1.478	1.948	2.654	3.964	5.214	7.384	9.491	12.484
Threads per inch	12	12	8	8	8	8	8	8
Thread depth	0.0541	0.0541	0.0812	0.0812	0.0812	0.0812	0.0812	0.0812 <sup>A</sup>

<sup>A</sup> Standard metric threads have not been established for impervious graphite pipe.

**FIG. 1 Standard Male Thread Dimensions, (in.)<sup>A</sup>**



Pipe Size	1	1½	2	3	4	6	8	10
A	1	1½	2	3	4	6	8½	10½
C	1	1	1¼	1½	1½	1¾	2½	2¾
F	1⅝	2⅞	2⅞	4¼	5⅞	7⅞	9⅞	12⅞
G max	1.429	1.899	2.588	3.898	5.148	7.318	9.425	12.418
min	1.420	1.890	2.575	3.885	5.135	7.305	9.412	12.406
H max	1.462	1.934	2.637	3.951	5.201	7.372	9.480	12.474
min	1.456	1.926	2.629	3.939	5.189	7.359	9.466	12.459
Threads per inch	12	12	8	8	8	8	8	8
Thread depth	0.0449	0.0449	0.0674	0.0674	0.0674	0.0674	0.0674	0.0674 <sup>A</sup>

<sup>A</sup> Standard metric threads have not been established for impervious graphite pipe.

**FIG. 2 Standard Female Thread Dimensions, (in.)<sup>A</sup>**

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