SMPTE RECOMMENDED PRACTICE

RP 24-1989

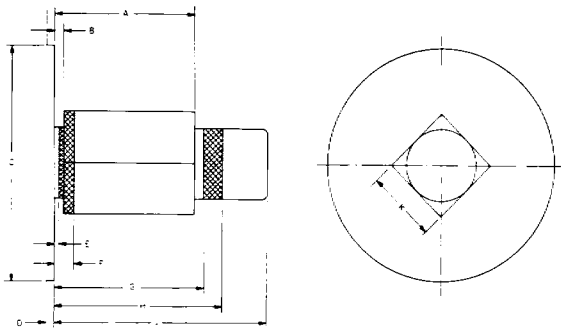
Dimensions for 16-mm Motion-Picture Camera Spindles

1. *Scope*

This practice specifies the dimensions for 16-mm motion-picture camera spindles.

2. *Dimensions*

The dimensions shall be as given in the figure and table.



Dimensions	Inches		Millimeters	
A	0.100	min	2.54	min
	0.610	max	15.49	max
B	0.010	max	0.25	max
C	0.63	min	16.0	min
	0.97	max	24.6	max
D	0.025	min	0.64	min
E*	0.005	max	0.13	max
F*	0.080	min	2.03	min
G*	0.630	max	16.00	max
H*	0.750	min	19.05	min
J	0.800	min	20.32	min
K*	0.310	min	7.87	min
	0.315	max	8.00	max

*See Notes 1 and 2.

Notes

1. Dimensions E, F, G, and H, illustrated by cross-hatching in the figure, represent the spindle shaft areas (with safety factor) on which the spool flanges rest. A minimum shaft diameter (in addition to a maximum) has been fixed to help prevent loose fit and resultant noise or tilt of spools or reels.

2. Dimension K represents the diameter of the round portion or length of a side of the square drive portion of the spindle "shaft," excluding locking means.

   Although the figure illustrates a four-sided square drive portion of the spindle, a two-sided (or one side and two half sides) arrangement is also acceptable.

3. The shape or action of the device for locking spools on spindles is optional, but the device should work against the full thickness of spools in the vicinity of the spindle hole.

4. The spindles specified are compatible with spools specified in American National Standard for Motion-Picture Equipment (16-mm)—Daylight-Loading Camera Spools—50- to 400-Ft Capacity, ANSI/SMPTE 174-1988.

Revision of RP 24-1984
Approved May 26, 1989

SMPTE RECOMMENDED PRACTICE

RP 34-1989

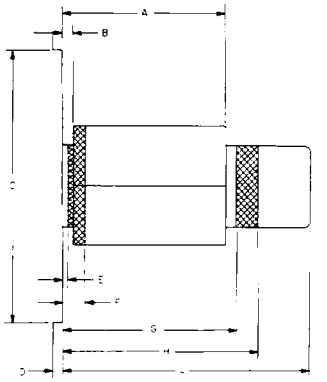
Dimensions for 16-mm Motion-Picture Projector Reel Spindles

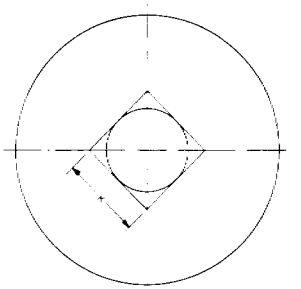
1. *Scope*

This practice specifies the dimensions for 16-mm motion-picture projector reel spindles.

2. *Dimensions*

The dimensions shall be as given in the figure and table.





Notes:

1. Dimension K represents the diameter of the round portion or length of a side of the square drive portion of the spindle shaft, excluding locking means.

   The figure illustrates the suggested construction for a projector spindle with a square drive portion. Alternate arrangements are also possible, providing that a minimum of two corners of the suggested square drive portion are maintained for drive and keying.

2. The areas between Dimensions E and F and between Dimensions G and H, illustrated by cross-hatching in the figure, represent the spindle shaft area, including a safety factor, on which the projection reel flange will rest. The minimum Dimension K applies only to these areas, although the maximum Dimension K applies to the entire shaft. The minimum shaft thickness dimension has been fixed for these areas to help minimize loose fit and resultant noise or tilt of reels.

3. The shape or action of the device for locking reels on spindles is optional, but the device should work against the full thickness of reels in the vicinity of the spindle holes, in accordance with American National Standard for Motion-Picture Equipment (16-mm)—Projection Reels—200- to 2300-ft Capacity, ANSI/SMPTE 235-1987.

Dimensions	Inches		Millimeters	
A	0.100	min	2.54	min
	0.665	max	16.89	max
B	0.010	max	0.25	max
C	0.63	min	16.0	min
	0.97	max	24.6	max
D	0.12	min	3.0	min
E*	0.005	max	0.13	max
F*	0.080	min	2.03	min
G*	0.710	max	18.03	max
H	0.850	min	21.59	min
J	0.980	min	24.89	min
K*	0.310	min	7.87	min
	0.315	max	8.00	max

*See Notes 1 and 2.

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