

SMPTE STANDARD

SMPTE 159.2-2001

Revision of
ANSI/SMPTE 159.2-1996

for Motion-Picture Film (8-mm Type S) — Model 1 Camera Cartridge — Aperture, Profile, Film Position, Pressure Pad and Flatness



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1 Scope

This standard specifies the dimensions and location of the cartridge aperture, pressure pad, and characteristics essential to the appropriate flatness of the cartridge pressure pad. Also specified are the position of the 8-mm type S motion-picture film and its required clearances in the cartridge aperture.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

SMPTE 159.1-2001, Motion-Picture Film (8-mm Type S) — Model 1 Camera Cartridge — Cartridge-Camera Interface and Take-Up Core Drive

3 Dimensions

3.1 The dimensions shown in figure 2 and table 2 shall apply to an assembled cartridge with a film load at the time of manufacture. The dimensions shown in figures 1 and 3 and tables 1 and 3 shall apply to a cartridge that is fully assembled, but does not contain film.

3.2 The datum planes and datum features used for dimensioning shall be as defined in 3.3, 3.3.1, 3.4, 3.4.1, and 3.4.2 of SMPTE 159.1.

3.3 Dimensions T and U denote the lateral location of the film in the cartridge before insertion in the camera. After insertion, dimension T becomes 0.060 in (1.52 mm) minimum and dimension U becomes 0.050 in (1.27 mm) minimum.

3.4 All dimensions in table 1, except dimensions A and C, apply at the front surface of the pressure pad. A draft of 5° to the recess area shall be permitted as well as an inside or outside radius of 0.005 in (0.13 mm) at all corners to provide satisfactory mold release.

3.5 Dimension A denotes the maximum penetration, from datum plane C, of the camera film alignment guide wings or the camera claw into the recessed area of the cartridge pressure pad.

3.6 Dimension B is measured from datum plane C and is the operating position of the cartridge pressure pad.

3.7 Dimensions relative to the surface of the pressure pad are measured from a plane established through surfaces 1, 2, and 3, as defined by 0.060-in (1.52-mm) diameter circles dimensionally centered (see figure 3). The actual camera aperture bosses may deviate from this shape.

3.8 Dimension G₂ specifies the clearance for film in the camera aperture area based on T₂, the thickness of the film in the center of the picture area (see note 1).

3.9 Dimension G'2 specifies the extension of the camera aperture plate boss points (corresponding to 1, 2, and 3) beyond the aperture plate plane at the aperture opening.

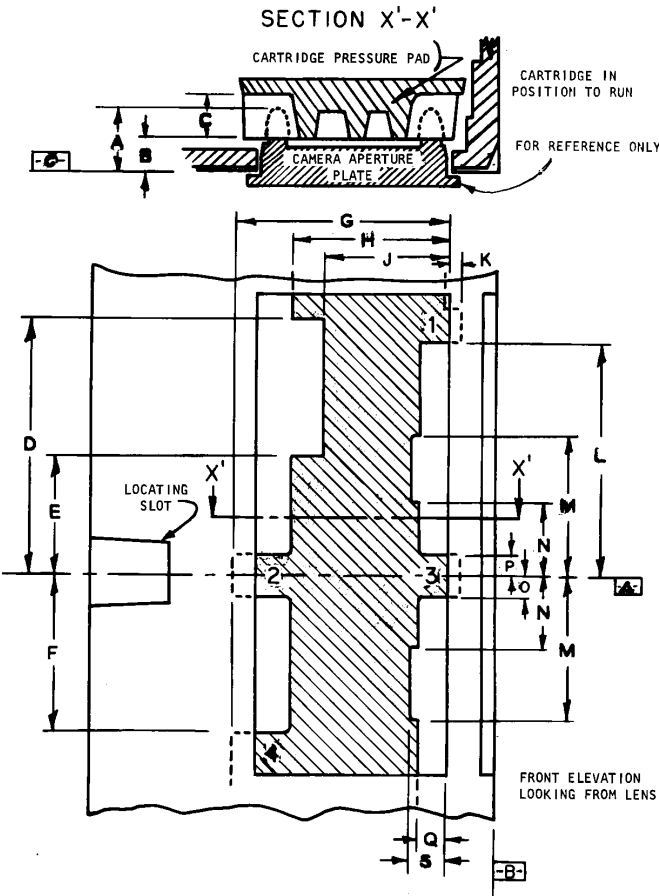


Figure 1 – Cartridge pressure pad

Table 1 – Pressure pad dimensions

Dimensions	Inches		Millimeters	
A	0.150	max	3.81	max
B	0.077	± 0.005	1.96	± 0.13
C	0.090	min	2.29	min
D	0.540	min	13.72	min
E	0.260	max	6.60	max
F	0.360	± 0.020	9.14	± 0.51
G	0.455	min	11.56	min
H	0.365	max	9.27	max
J	0.300	max	7.62	max
K	0.000	min	0.00	min
L	0.540	± 0.020	13.72	± 0.51
M	0.300	min	7.62	min
N	0.140	max	3.56	max
O	0.058	± 0.022	1.47	± 0.56
P	0.038	± 0.022	0.97	± 0.56
Q	0.055	min	1.40	min
S	0.090	min	2.29	min