
STANDARDS AND RECOMMENDED PRACTICES

Approved American National Standards

Two American National Standards were approved by the American National Standards Institute on September 14, 1984: ANSI/SMPTE 212M-1984, Motion-Picture Equipment — Projection Reels (75mm Diameter) — 8mm Type S Motion-Picture Film; and ANSI/SMPTE 213M-1984, Motion-Picture Film (16mm) — Recorded Characteristic — Magnetic Audio Records. Copies of the standards are available for a nominal fee from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

Approved SMPTE Engineering Guideline

An SMPTE Engineering Guideline was approved by the Society's Board of Governors: EG 8-1984, Specifications for Motion-Picture Camera Equipment Used in Space Environment. SMPTE Engineering Guidelines are available from Society Headquarters for \$3.00 each.

Approved SMPTE Recommended Practices

The Society's Executive Committee for Standards Approval approved two SMPTE Recommended Practices: RP 75-1984, Specifications for Flutter Test Film for 35mm Studio Audio Reproducers, Magnetic Type; and RP 79-1984, Specifications for Flutter Test Film for 35mm Four-Track Striped Release Print Audio Reproducers, Magnetic Type. These and other SMPTE Recommended Practices are available for \$3.00 each from Society Headquarters.

Proposed American National Standards

Published here for a trial period and public review are two Proposed American National Standards: SMPTE 183M, Motion-Picture Film — Measurement of Photoelectric Output Factor — Photographic Audio Level Test Films; and SMPTE

218M, Motion-Picture Film (16mm) — 200-Mil Center-Position Magnetic Audio Record. The proposals will be submitted to the Executive Committee for Standards Approval if no adverse comments are received by March 1, 1985. Comments should be addressed to Alex E. Alden.

Approved International Standard

The International Organization for Standardization (ISO) recently approved an International Standard, the technical content of which is published here for your information. ISO 491-1983, Cinematography — 35mm Motion-Picture Film and Magnetic Film — Cutting and Perforating Dimensions, is in accord with American National Standards ANSI PH22.93-1980, ANSI PH22.102-1980, and ANSI PH22.139-1980. This material is reproduced with permission from the ISO and is copyrighted by the American National Standards Institute, 1430 Broadway, New York, NY 10018, from which copies are available.

Proposed Editorial Revision

Two Proposed American National Standards are subject to a trial period and public review. The technical content is unaffected because the modifications are editorial in nature. The changes are being published for your information and comment.

SMPTE 87, Motion-Picture Film (16mm) — 100-Mil Magnetic Striping (Revision of ANSI PH22.87-1966 published in the August 1966 *Journal*): The format has been modified to be in accord with international documents.

SMPTE 153, Motion-Picture Film (8mm Type S) — Printed Area — 16mm Film Perforated 8mm Type S (1-4) (Revision of ANSI PH22.153-1979 published in the September 1979 *Journal*): Dimensions B, frame height, has been increased from 0.162-in. minimum to 0.163-in. minimum to reflect current international specifications.

Comments should be addressed to Society Headquarters prior to March 1, 1985. — *Alex E. Alden, Manager of Engineering.*

SMPTE Standards Subscription Service

The Society provides a Standards Subscription Service to assist firms, libraries, and individuals in establishing and maintaining a complete and current file of approved American National Standards and SMPTE Recommended Practices in the motion picture, television, and video magnetic recording fields. Through this service, the Society makes automatic distribution to Standards Subscribers of all new and revised American National Standards and SMPTE Recommended Practices that are approved during the calendar year in these fields.

For further information, write to: Standards Subscription Service, Engineering Department, Society of Motion Picture and Television Engineers, 862 Scarsdale Avenue, Scarsdale, NY 10583.

American National Standard for motion-picture equipment— projection reels (75-mm diameter)— 8-mm type S motion-picture film

Approved September 14, 1984

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1. Scope

This standard specifies the dimensions of 8-mm Type S motion-picture projection reels of 75-mm (2.95-in) diameter with a nominal film capacity of 15 m (50 ft) generally used for returning the film from the processing laboratory. The reels fit reel-to-reel equipment and are interchangeable in projection cassettes.

2. Dimensions

2.1 The dimensions shall be as given in the figures and tables.

2.2 The dimensions shall apply regardless of the material (generally plastic) used for construction.

2.3 The reel shall be designed with at least one solid flange (see Fig. 1), with the exception of the hub area. By definition, the solid flange should not contain openings such as thread-up slots.

2.4 Film attachment shall be provided by a slot in the reel hub, and a minimum cutout in the flange opposite the solid flange shall be provided for easy access to the film end. In order to secure the end of the film to the reel for automatic re-winding, a means of film retention, such as a special retention plug or clip, shall be provided. (See Dimensions S and T in Fig. 1.)

2.4.1 For reel-to-reel operation, the retention means shall not protrude beyond Dimensions $O + J + O$. For projection cassette operation, if a plug or clip is used, it shall not protrude beyond Dimensions Q, R_4 , and R_5 and/or W, R_6 , and R_7 in Fig. 1.

2.4.2 When the retention means is utilized, it shall retain a polyester film of 0.1 mm (0.004 in) thickness when a tension of 5 N (18 oz-f) is applied in a radial direction.

2.5 The rings defined by Dimensions F, G, and O are guiding means for horizontal operation of the reel.

2.6 Maximum lateral and radial runouts are given in Fig. 2 and Table 2.

2.6.1 The primary datum reference plane of rotation is defined with the surface of a flat 25.0-mm (0.98-in) diameter support which is centered on the spindle hole datum axis A. The reference surface makes contact with the reel in the minimum I-diameter area. The datum axis, which is perpendicular to the primary datum reference plane of rotation, does not necessarily coincide with the axis derived from the center of the spindle holes.

2.6.2 Dimensions U_1 , U_2 , U_3 , and U_4 are measured at the periphery of the flanges and are the allowable lateral distances from the datum reference plane when the reel is rotated on a test spindle.

2.6.3 Dimensions V_1 and V_2 specify the radial runout of the flanges and hub, respectively. These dimensions exceed Dimensions M and E by 0.5 mm (0.02 in) to allow for eccentricity of the spindle holes, hub, and flanges.

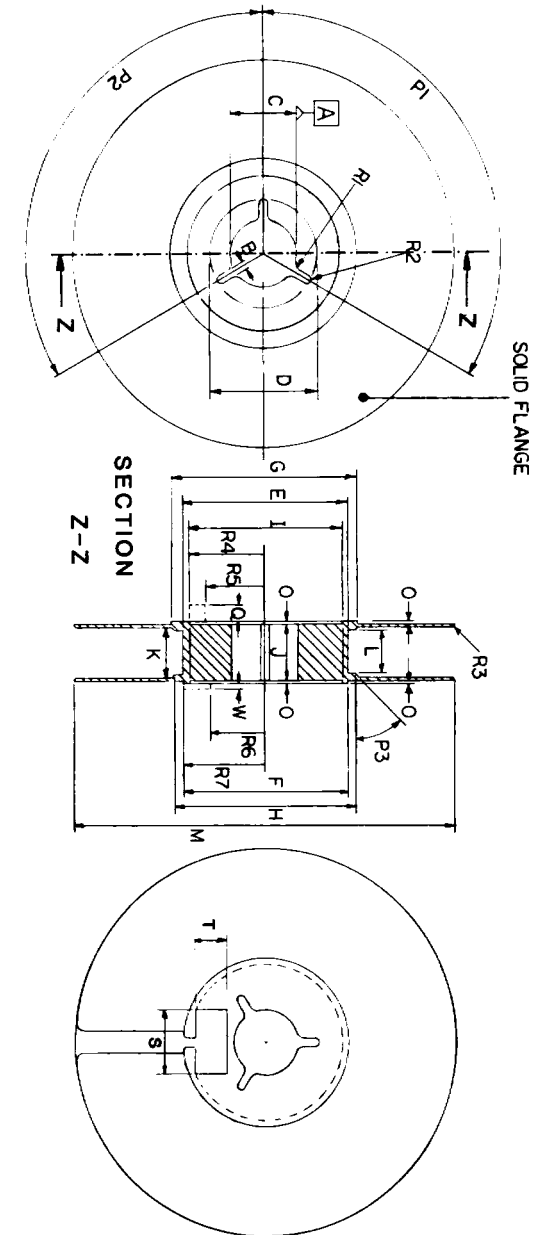


Fig. 1
Reel Dimensions

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ANSI/SMPTE 212M-1984

Table 1

Dimensions	Millimeters	Inches
B	1.5 + 0.3 - 0.0	0.06 + 0.01 - 0.00
C	12.75 + 0.15 - 0.00	0.502 + 0.006 - 0.000
D	20.6 + 0.5 - 0.0	0.81 + 0.02 - 0.00
E	32.5 ± 0.5	1.28 ± 0.02
F	32.5 ± 0.5	1.28 ± 0.02
G	36.6 max	1.44 max
H	33.5 ± 0.5	1.32 ± 0.02
I	30.0 + 0.5 - 0.0	1.18 + 0.02 - 0.00
J	10.9 ± 0.3	0.43 ± 0.01
K*	8.4 min	0.33 min
L	8.4 + 0.3 - 0.0	0.33 + 0.01 - 0.00
M	74.9 + 0.0 - 1.0	2.95 + 0.00 - 0.04
O	0.51 + 0.13 - 0.25	0.020 + 0.005 - 0.010
P ₁	120° ± 2°	
P ₂	120° ± 2°	
P ₃	45° ± 2°	
Q	4.3 max	0.17 max
R ₁	1.0 max	0.04 max
R ₂	B/2 max	B/2 max
R ₃ †	0.5 max	0.02 max
R ₄	15.0 max	0.59 max
R ₅	11.25 min	0.443 min
R ₆	10.92 min	0.430 min
R ₇	16.0 max	0.63 max
S	11.9 min	0.47 min
T	6.1 min	0.24 min
W	0.8 max	0.03 max

*At hub.

†If metal flanges are used, there should be no burr on the flange periphery.

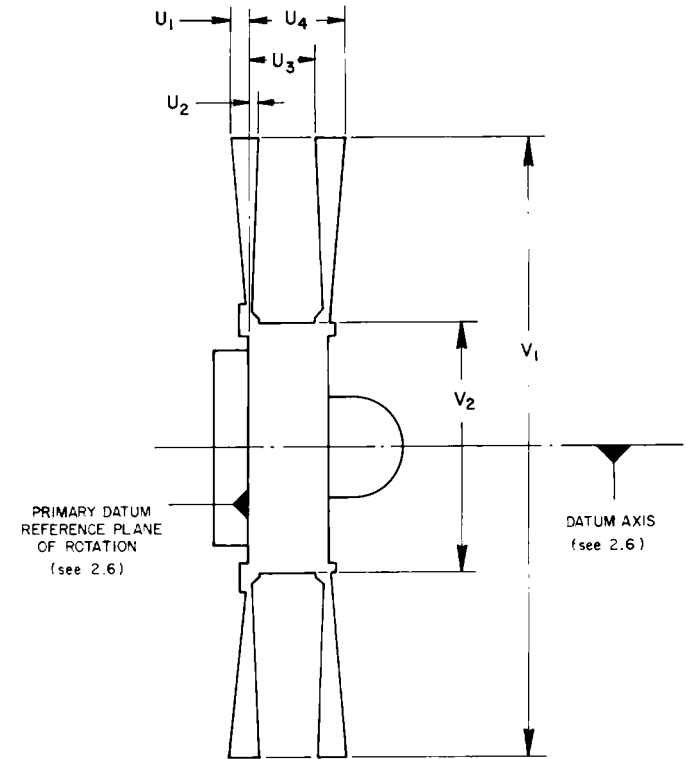


Fig. 2
Maximum Volume of Rotation
(Not intended as a true view or section figure.)

Table 2

Dimensions	Millimeters	Inches
U ₁	0.65 max	0.026 max
U ₂	1.10 max	0.043 max
U ₃	9.50 min	0.374 min
U ₄	11.75 max	0.463 max
V ₁	75.4 max	2.97 max
V ₂	33.5 max	1.32 max