INTERNATIONAL STANDARD 491

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Cinematography — 35 mm motion-picture film and magnetic film — Cutting and perforating dimensions

Cinématographie — Film cinématographique et magnétique de 35 mm *— Dimensions de coupe et de perforation*

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 491 was developed by Technical Committee ISO/TC 36, *Cinematography*, and this second edition was circulated to the member bodies in March 1977.

It has been approved by the member bodies of the following countries :

Australia	Ireland	Sweden
Belgium	Italy	Switzerland
Canada	Mexico	Turkey
Czechoslovakia	Poland	United Kingdom
France	Romania	U.S.A.
Germany	South Africa, Rep. of	U.S.S.R.
India	Spain	

No member body expressed disapproval of the document.

This second edition cancels and replaces the first edition (i.e. ISO 491-1974).

Printed in Switzerland

Cinematography — 35 mm motion-picture film and magnetic film — Cutting and perforating dimensions

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the cutting and perforating dimensions for 35 mm unexposed motion-picture film and 35 mm magnetic film, and the types of perforations used.

2 REFERENCES

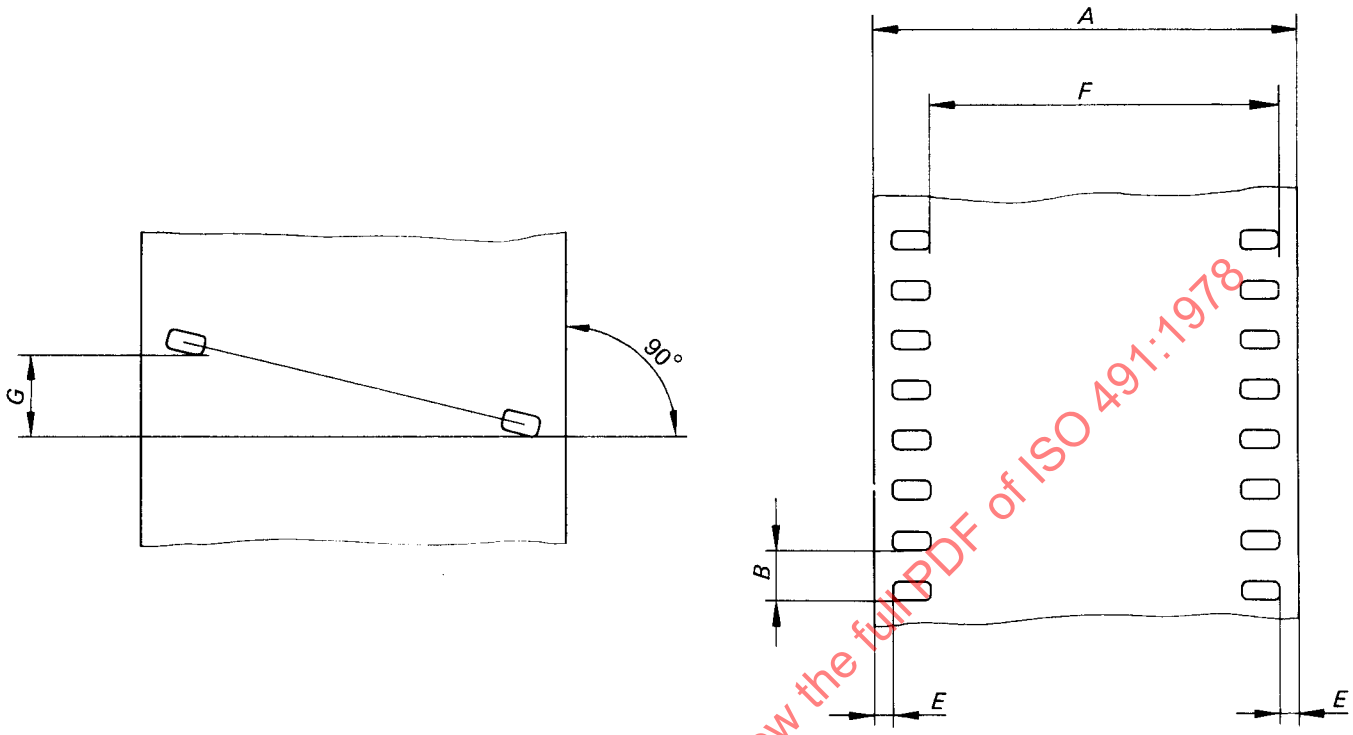
ISO 543, *Cinematography — Motion-picture safety film — Definition, testing and marking.*

ISO 3042, *Cinematography — Labelling of containers for unexposed motion-picture films and magnetic films — Minimum information specifications.*

3 DIMENSIONS

The dimensions shall be as specified in the figures and tables 1 and 2. They apply to unexposed safety motion-picture and magnetic films which conform to ISO 543. These specifications apply at the time of cutting and perforating. If required by usage, the manufacturer should indicate the atmospheric conditions under which the film was cut and perforated.

With regard to 35 mm magnetic films, the dimensions which apply are those specified in tables 1 and 2 under the designation "Type P" with a perforation pitch B, and the length of any 100 consecutive intervals L.



TYPES OF PERFORATIONS

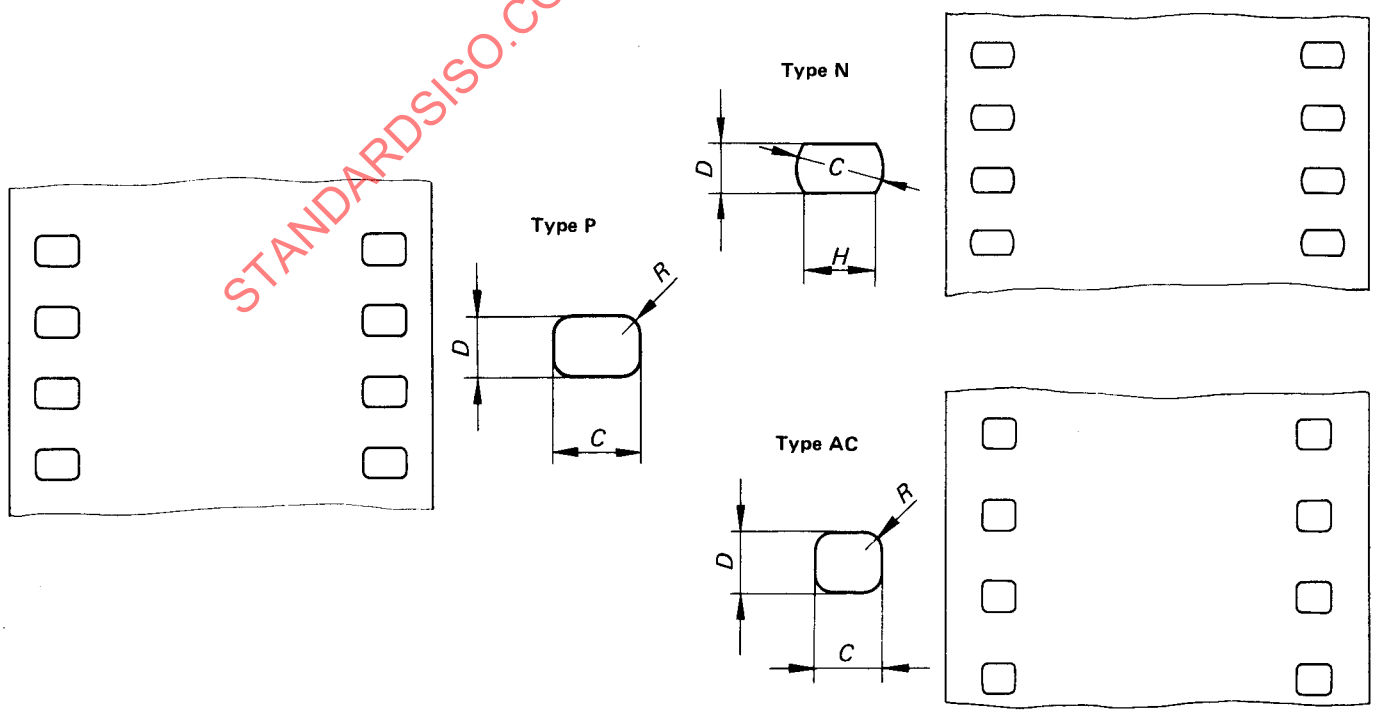


TABLE 1 – **Dimensions in millimetres**

Dimension	Type P	Type N	Type AC
A	34,975 ± 0,025	34,975 ± 0,025	34,975 ± 0,025
B	4,75 ± 0,01	4,75 ± 0,01	4,75 ± 0,01
B_1	4,74 ± 0,01	4,74 ± 0,01	–
C	2,800 $^{+\ 0,005}_{-\ 0,015}$	2,800 $^{+\ 0,005}_{-\ 0,015}$	1,98 ± 0,01
D	1,98 ± 0,01	1,850 $^{+\ 0,015}_{-\ 0,005}$	1,850 $^{+\ 0,015}_{-\ 0,005}$
E	2,01 ± 0,05	2,01 ± 0,05	2,18 ± 0,05
F	28,17 ± 0,05	28,17 ± 0,05	28,63 ± 0,05
G	0,025 max.	0,025 max.	0,025 max.
H	–	2,08 nominal	–
R	0,500 $^{+\ 0,025}_{-\ 0,075}$	–	0,330 ± 0,025
L	475,0 ± 0,4	475,0 ± 0,4	475,0 ± 0,4
L_1	474,0 ± 0,4	474,0 ± 0,4	–

TABLE 2 – **Dimensions in inches**

Dimension	Type P	Type N	Type AC
A	1.377 ± 0.001	1.377 ± 0.001	1.377 ± 0.001
B	0.187 0 ± 0.000 4	0.187 0 ± 0.000 4	0.187 0 ± 0.000 4
B_1	0.186 6 ± 0.000 4	0.186 6 ± 0.000 4	–
C	0.110 0 ± 0.000 4	0.110 0 ± 0.000 4	0.078 0 ± 0.000 4
D	0.078 0 ± 0.000 4	0.073 0 ± 0.000 4	0.073 0 ± 0.000 4
E	0.079 ± 0.002	0.079 ± 0.002	0.086 ± 0.002
F	1.109 ± 0.002	1.109 ± 0.002	1.127 ± 0.002
G	0.001 max.	0.001 max.	0.001 max.
H	–	0.082 nominal	–
R	0.020 $^{+\ 0.001}_{-\ 0.003}$	–	0.013 ± 0.001
L	18.700 ± 0.016	18.700 ± 0.016	18.700 ± 0.016
L_1	18.660 ± 0.016	18.660 ± 0.016	–

NOTES

1 While present usage is that type N perforations may be employed for camera and intermediate films and type P perforations for print films, the long-term objective should be for all 35 mm films to have type P perforations.

2 Dimensions *L* and L_1 represent the length of any 100 consecutive perforation intervals.

3 Dimensions B_1 and L_1 (short perforation pitch) are provided to fulfil the requirements of continuous sprocket contact printing.