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# INTERNATIONAL STANDARD



# 491

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

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

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

First edition — 1974-07-01

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Ref. No. ISO 491-1974 (E)

**Descriptors** : cinematography, motion-picture film, perforating, cutting, dimensions.

Price based on 4 pages

## 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.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 36 has reviewed ISO Recommendation R 491 and found it suitable for transformation. International Standard ISO 491 therefore replaces ISO Recommendation R 491-1966.

ISO Recommendation R 491 was approved by the Member Bodies of the following countries :

Belgium	Germany	Romania
Brazil	Greece	Spain
Bulgaria	Hungary	Sweden
Canada	Italy	Switzerland
Chile	Japan	United Kingdom
Colombia	Korea, Rep. of	U.S.A.
Czechoslovakia	Netherlands	
Denmark	New Zealand	

The Member Body of the following country has subsequently approved this Recommendation :

South Africa, Rep. of

The Member Bodies of the following countries expressed disapproval of the Recommendation on technical grounds :

France  
U.S.S.R.

No Member Body disapproved the transformation of ISO/R 491 into an International Standard.

# Cinematography – 35 mm motion-picture film – Cutting and perforating dimensions

## 1 SCOPE AND FIELD OF APPLICATION

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

## 2 REFERENCES

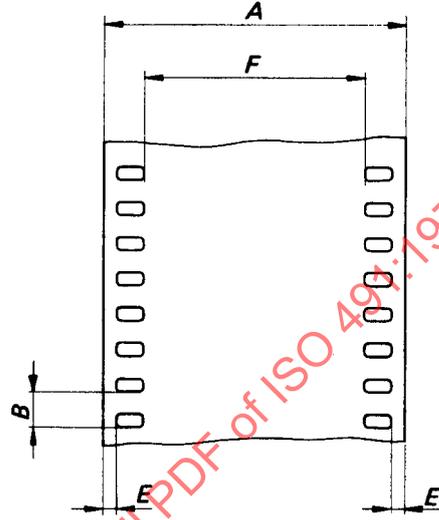
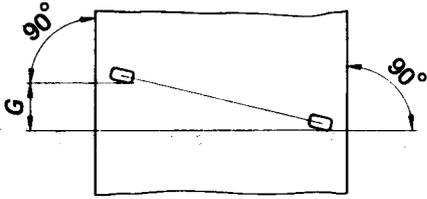
ISO 543, *Cinematography – Motion-picture safety film – Definition, testing and marking.*

ISO 3042, *Cinematography – Labelling of containers for unexposed motion-picture and magnetic films – Minimum specifications.*<sup>1)</sup>

## 3 DIMENSIONS

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

1) At present at the stage of draft.



Types of perforations

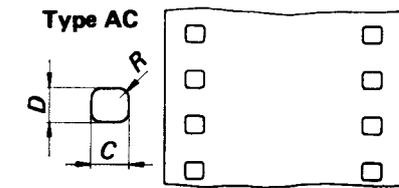
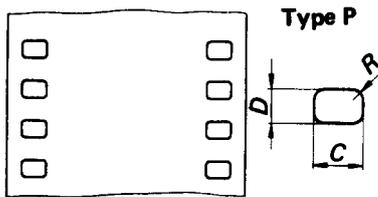
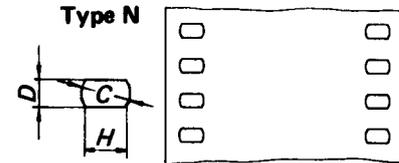
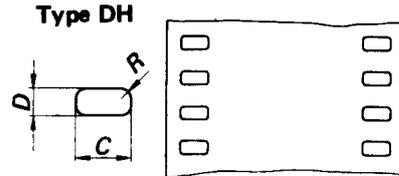
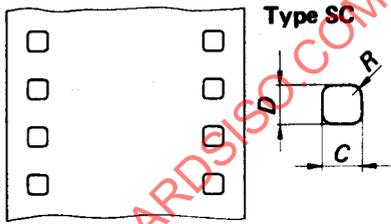


TABLE 1 – Dimensions in millimetres

Dimension	Type P	Type DH	Type N	Type SC	Type AC
A	34,975 ± 0,025	34,975 ± 0,025	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	4,75 ± 0,01	4,75 ± 0,01
B <sub>1</sub>	4,74 ± 0,01	—	4,74 ± 0,01	—	—
C	2,800 <sup>+0,005</sup> <sub>-0,015</sub>	2,800 <sup>+0,005</sup> <sub>-0,015</sub>	2,800 <sup>+0,005</sup> <sub>-0,015</sub>	1,98 ± 0,01	1,98 ± 0,01
D	1,98 ± 0,01	1,850 <sup>+0,015</sup> <sub>-0,005</sub>	1,850 <sup>+0,015</sup> <sub>-0,005</sub>	1,98 ± 0,01	1,850 <sup>+0,015</sup> <sub>-0,005</sub>
E	2,01 ± 0,05	2,01 ± 0,05	2,01 ± 0,05	2,18 ± 0,05	2,18 ± 0,05
F	25,37 ± 0,05	25,37 ± 0,05	25,37 ± 0,05	26,65 ± 0,05	26,65 ± 0,05
G	0,025 max.	0,025 max.	0,025 max.	0,025 max.	0,025 max.
H	—	—	2,08 nominal	—	—
R	0,50 ± 0,025	0,33 ± 0,025	—	0,33 ± 0,025	0,33 ± 0,025
L	475,0 ± 0,4	475,0 ± 0,4	475,0 ± 0,4	475,0 ± 0,4	475,0 ± 0,4
L <sub>1</sub>	474,0 ± 0,4	—	474,0 ± 0,4	—	—

TABLE 2 – Dimensions in inches

Dimension	Type P	Type DH	Type N	Type SC	Type AC
A	1.377 ± 0.001	1.377 ± 0.001	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	0.187 0 ± 0.000 4	0.187 0 ± 0.000 4
B <sub>1</sub>	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	0.110 0 ± 0.000 4	0.078 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	0.078 0 ± 0.000 4	0.073 0 ± 0.000 4
E	0.079 ± 0.002	0.079 ± 0.002	0.079 ± 0.002	0.086 ± 0.002	0.086 ± 0.002
F	0.999 ± 0.002	0.999 ± 0.002	0.999 ± 0.002	1.049 ± 0.002	1.049 ± 0.002
G	0.001 max.				
H	—	—	0.082 nominal	—	—
R	0.020 ± 0.001	0.013 ± 0.001	—	0.013 ± 0.001	0.013 ± 0.001
L	18.70 ± 0.016	18.70 ± 0.016	18.70 ± 0.016	18.70 ± 0.016	18.70 ± 0.016
L <sub>1</sub>	18.66 ± 0.016	—	18.66 ± 0.016	—	—

## NOTES

- 1 These dimensions and tolerances apply to safety motion-picture film as specified in ISO 490, immediately after cutting and perforating. If required by usage, the manufacturer shall indicate the atmospheric conditions applied to the dimensional control at the time of cutting and perforating.
- 2 Dimensions L and L<sub>1</sub> represent the length of any 100 consecutive perforation intervals.
- 3 Dimensions B<sub>1</sub> and L<sub>1</sub> (short perforation pitch) are provided to fulfil the requirements of continuous sprocket contact printing.