INTERNATIONAL STANDARD ISO 3641

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

Cinematography — Motion-picture camera cartridge, 8 mm Type S Model II — Cartridge fit and take-up core drive — Dimensions and specifications

Cinématographie — Chargeurs, modèle II, pour caméras 8 mm type S — Ajustage du chargeur et entraînement du noyau récepteur — Dimensions et spécifications

First edition — 1976-06-01

UDC 771.531.352 : 778.533.4 **Ref. No. ISO 3641-1976 (E)**

Descriptors : cinematography, motion-picture cameras, motion-picture film-8 mm, packs, specifications, dimensions.

Price based on 5 pages

FOREWORD

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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 3641 was drawn up by Technical Committee ISO/TC 36, *Cinematography*, and circulated to the Member Bodies in February 1975.

It has been approved by the Member Bodies of the following countries :

Australia	Italy	Switzerland
Austria	Japan	Turkey
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No Member Body expressed disapproval of the document.

Printed in Switzerland

Cinematography — Motion-picture camera cartridge, 8 mm Type S Model II — Cartridge fit and take-up core drive — Dimensions and specifications

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the external dimensions of the 8 mm Type S film camera cartridge, Model II, cartridge-camera fit specifications, and core dimensions.

2 REFERENCES

ISO 1700, *Cinematography — 8 mm Type S motion-picture raw stock film — Cutting and perforating dimensions.*

ISO 1787, *Cinematography — Camera usage of 8 mm motion-picture film perforated Type S.*

ISO 2863, *Cinematography — Motion-picture camera cartridge, 8 mm Type S Model II — Run length of film — Dimensions and specifications.*

ISO 3025, *Cinematography — Motion-picture camera cartridge, 8 mm Type S Model II — Film load position.*

ISO 3646, *Cinematography — Motion-picture camera cartridge, 8 mm Type S Model II — Slots and projection for film speed, cartridge hole and projection for film identification and colour balancing filter — Dimensions and positions.*

3 DIMENSIONS AND CHARACTERISTICS

3.1 The dimensions shall be as given in the figures and tables and apply to an assembled cartridge containing a film load.

3.2 Datum planes used for dimensioning are coincident with the surfaces that engage mating camera parts when the cartridge is properly aligned in the camera. The datum planes are mutually perpendicular.

3.2.1 Datum plane Z (primary) is established from the extremities of the three seating bosses (lugs) 1, 2 and 3 (dimension L).

3.2.2 Datum plane Y (secondary) is established coincident with the axes of the cartridge take-up core opening, dimension W_2, and the supply core opening, dimension W_3.

3.2.3 Datum plane X (tertiary) is also established coincident with the axis of the cartridge take-up core opening, dimension W_2.

3.3 The bosses (lugs) L_1, L_2, L_3, which establish datum plane Z and engage mating surfaces to laterally locate the cartridge in the camera shall be nominally flat.

3.4 The centre line for the supply shaft, dimension F, also applies to the right-hand view.

3.5 If tape is used to seal the cartridge, it should fall within the values established by dimensions A_1, A_2, C and D.

3.6 The coaxiality of the core post, dimension f, and the core drive openings, dimensions k and j (figure 2), with the openings in the cartridge, dimensions W_2 and J (figure 1), should be within 0,4 mm (0.016 in).

3.7 Regardless of the method of constructing the light trap, a clearance of 1,0 to 1,7 mm (0.04 to 0.07 in) is required during rotation.

3.8 Dimensions a, b and d (figure 2) are measured as the cartridge is supplied by the manufacturer.

NOTE — This requirement applies whether or not a spring is used to load the core towards datum plane Z.

3.9 The minimum torque required for the take-up spindle at the start of drive should be 0,003 43 N·m (0.040 5 ozf·ft).

NOTE — The International Organization for Standardization has been advised that Fuji Photo Film Company Ltd. owns the patents as listed below :

Country	Patent No.
Australia	290075
Belgium	659363
Canada	825419
Italy	746611
Spain	316413
Sweden	322123
Switzerland	428424
United Kingdom	1049844
U.S.A.	3599550 and 3434782
W. Germany	1274443

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The terms have been declared in a letter dated 10 May 1972 to the ISO/TC 36 Secretariat by the Fuji Photo Film Company Ltd., in order to clarify the range of the patent holder's assurance in accordance with Resolution 51, Council 1966. License details can be obtained from :

Fuji Photo Film Co. Ltd.
26-30 Nishiazabu 2-Chome
Minato-ku
Tokyo 106
Japan

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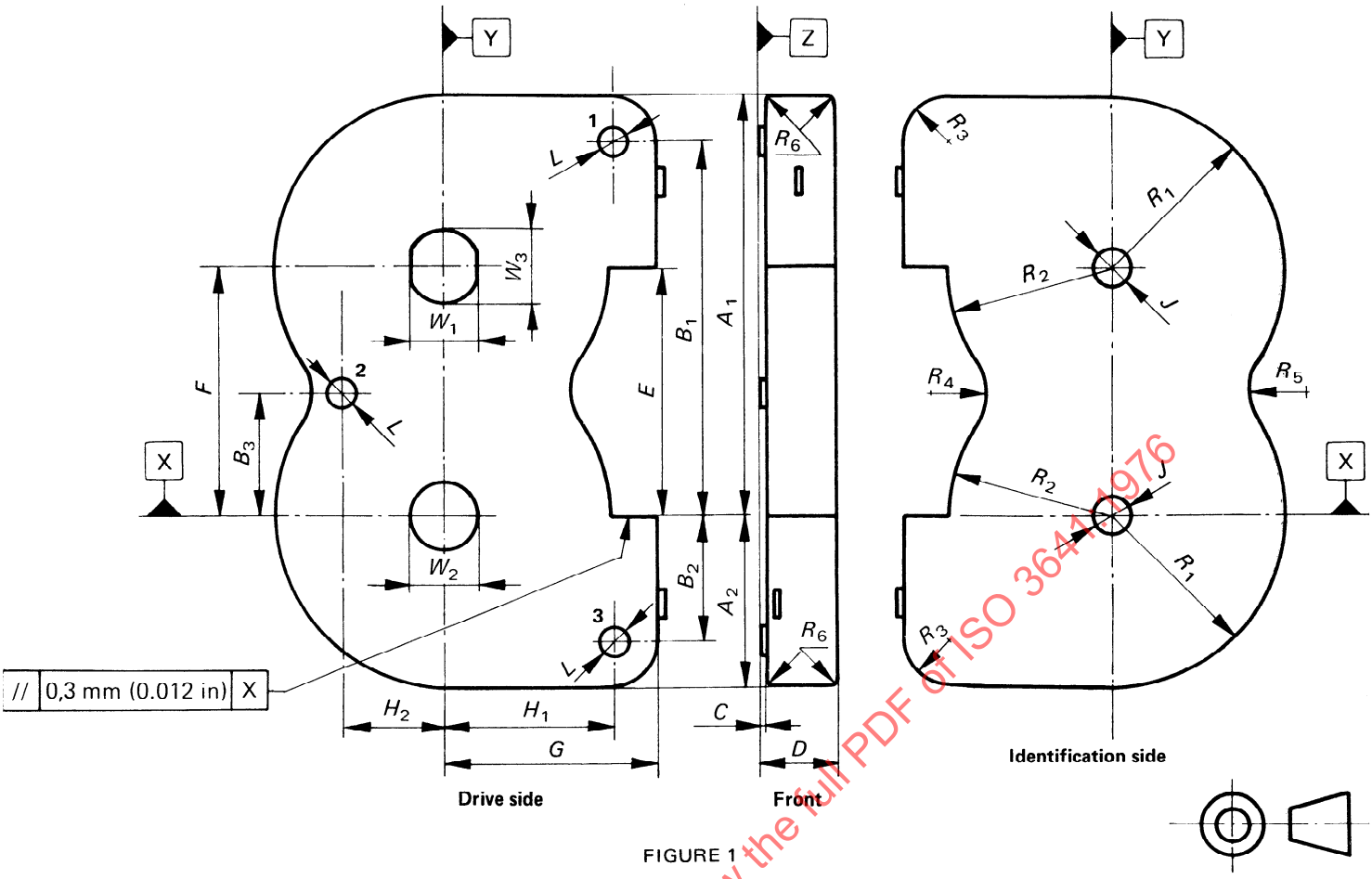


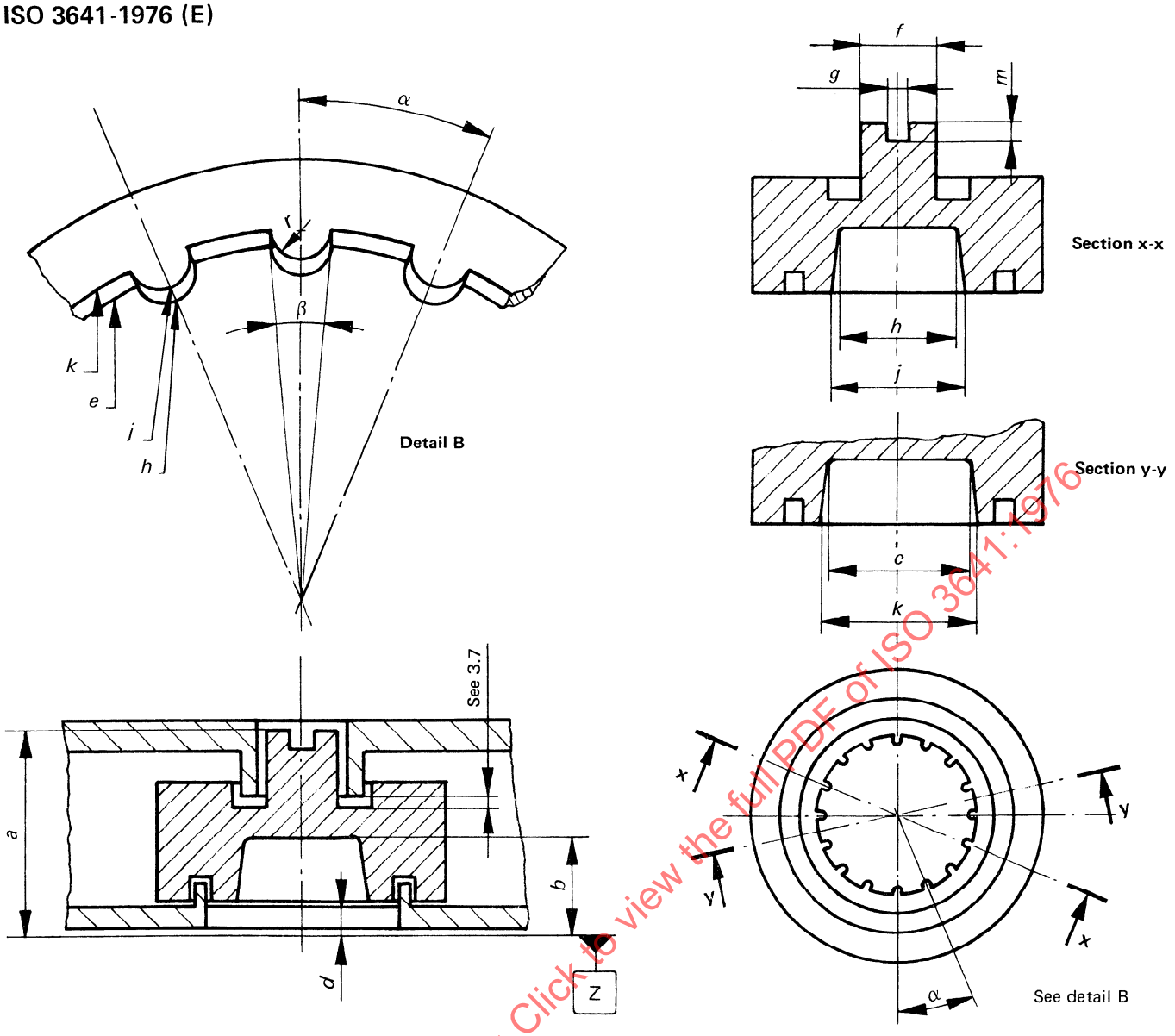
FIGURE 1

TABLE 1

Dimension	mm	in
A_1	72,5 ± 0,45	2.854 ± 0.018
A_2	29,5 ± 0,3	1.16 ± 0.01
B_1	65,5 ± 0,3	2.58 ± 0.01
B_2	22,5 ± 0,3	0.89 ± 0.01
B_3	21,5 ± 0,3	0.85 ± 0.01
C	$0{,}30\ ^{0}_{-0{,}20}$	$0.012\ ^{0}_{-0.008}$
D	$13{,}30\ ^{+0{,}65}_{-0{,}20}$	$0.524\ ^{+0.026}_{-0.008}$
E	43,0 ± 0,3	1.69 ± 0.01
F	43,0 ± 0,15	1.69 ± 0.006
G	36,5 ± 0,2	1.437 ± 0.008
H_1	29.3 ± 0,3	1.15 ± 0.01
H_2	17,5 ± 0,3	0.69 ± 0.01
J	7,0 ± 0,2	0.276 ± 0.008
L_1, L_2, L_3	5,3 max.	0.21 max.
W_1	$12{,}0\ ^{+0{,}15}_{0}$	$0.472\ ^{+0.006}_{0}$
W_2	$12{,}0\ ^{+0{,}15}_{0}$	$0.472\ ^{+0.006}_{0}$
W_3	12,4 ± 0,1	0.488 ± 0.004
R_1	29,5 ± 0,3	1.16 ± 0.01
R_2	28,5 ± 0,3	1.12 ± 0.01
R_3	8,0 ± 0,3	0.31 ± 0.01
R_4	10,0 ± 0,3	0.39 ± 0.01
R_5	10,0 ± 0,3	0.39 ± 0.01
R_6	1,0 max.	0.04 max.

NOTE — Inch values intentionally carried to an additional decimal place for dimensions A_1, C, D, G, J and W_1, W_2, W_3.

Dimensions W_2, W_3, L and J are diameters.



NOTE — Hidden lines not shown.

FIGURE 2 — **Section of cartridge containing core (see 3.6)**

TABLE 2

Dimension	mm	in
a	12,8 ± 0,3	0.504 ± 0.012
b	7,2 ± 0,2	0.283 ± 0.008
d	2,2 ± 0,2	0.087 ± 0.008
e	10,1 ± 0,1	0.398 ± 0.004
f	$5{,}5\ ^{0}_{-0{,}2}$	$0.217\ ^{0}_{-0.008}$
g	1,2 ± 0,2	0.05 ± 0.008
h	$9{,}0\ ^{+0{,}2}_{0}$	$0.354\ ^{+0.008}_{0}$
j	9,2 ± 0,1	0.362 ± 0.004
k	10,3 ± 0,1	0.406 ± 0.004
m	1,2 ± 0,2	0.05 ± 0.008
r	One-half the value derived from β	
α	22 1/2° nominal	
β	10 + 1/2°	

NOTE — The inch values in table 2 carried to an additional decimal place were done so intentionally.

Dimensions *e*, *f*, *h*, *j* and *k* are diameters.