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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 524

HARD METAL WIRE DRAWING DIES

INTERCHANGEABILITY DIMENSIONS OF PELLETS AND CASES

1st EDITION
November 1966

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BRIEF HISTORY

The ISO Recommendation R 524, *Hard Metal Wire Drawing Dies – Interchangeability Dimensions of Pellets and Cases*, was drawn up by Technical Committee ISO/TC 29, *Small Tools*, the Secretariat of which is held by the Association Française de Normalisation (AFNOR).

Work on this question by the Technical Committee began in 1950 and led, in 1963, to the adoption of a Draft ISO Recommendation.

In April 1964, this Draft ISO Recommendation (No. 670) was circulated to all the ISO Member Bodies for enquiry. It was approved by the following Member Bodies:

Australia	France	Poland
Austria	Germany	Portugal
Belgium	Greece	Spain
Brazil	Hungary	Sweden
Canada	India	Switzerland
Chile	Italy	Turkey
Colombia	Korea, Rep. of	United Kingdom
Czechoslovakia	Netherlands	U.S.S.R.
Denmark	New Zealand	Yugoslavia

Two Member Bodies opposed the approval of the Draft:

Japan
U.S.A.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in November 1966, to accept it as an ISO RECOMMENDATION.

ISO Recommendation R 524 November 1966

HARD METAL WIRE DRAWING DIES

INTERCHANGEABILITY DIMENSIONS OF PELLETS AND CASES

1. SCOPE

This ISO Recommendation relates to hard metal wire drawing dies and gives the main dimensions for interchangeability of pellets and cases, together with details of marking. It may be supplemented later by standardization of the internal dimensions of the pellets, establishment of the bearing diameter d_1 in relation to the material to be drawn and the drawing conditions, and a uniform method of designation.

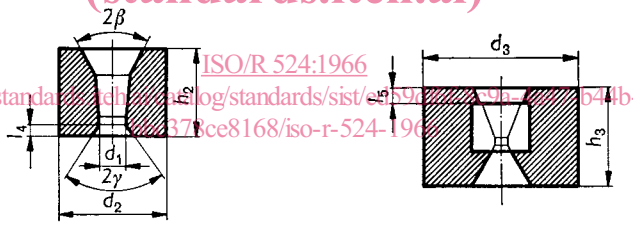
This ISO Recommendation includes an Appendix Z giving the terminology for characteristic elements of pellets and cases in several languages.

2. INTERCHANGEABILITY

The dimensions given in this ISO Recommendation have been determined by taking as much account as possible of existing practice and of the increasingly widespread use of multiple wire drawing machines.

Although these dimensions are expressed only in millimetres, their adoption by all countries, including those in which the inch system of measurement is most widely used, should ensure worldwide interchangeability.

Interchangeability dimensions of pellets and cases, in millimetres



Pellet (see Note 1) **Case** (see Note 2)

Pellets					Cases		
d_2	h_2	2β	2γ	l_4 max.	d_3	h_3	l_5
8	4	90°	90°	1	28	12	3
10	8			2		16	
12	10			2.5		20	
14	12	60°	75°	3	28 or 43	22	
16	13			3.5	43	25	4
20	17		60°	4.5		32	5
25	20			5	53 or 75	35	
30	24			6	75	40	6

NOTES

1. *Internal dimensions of pellets.* Dimension l_4 has been fixed internationally, but the determination of the other internal dimensions of the pellet, and, in particular, of the diameter of the bearing d_1, in relation to the material to be drawn and the drawing conditions, is left to each National Standards Organization.

2. *Cases.* The case may be cylindrical or tapered; for the latter, the dimension d_3 corresponds to the large end of the taper.

3. MARKING

Wire drawing dies conforming to this ISO Recommendation should carry the following details on their cases:

(1) on the entry side:

manufacturer's trade mark,
diameter of bearing d_1;

(2) on the exit side:

the mark "ISO",
the diameter of the pellet d_2, supplemented possibly by the case diameter d_3.

EXAMPLE:

Entry side

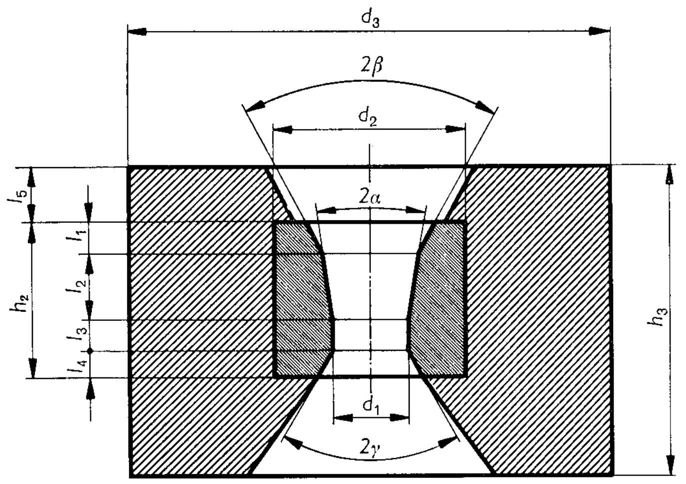
for $d_1 = 1.1$ mm

Exit side

for $d_2 = 14$ mm

APPENDIX Z

FRENCH, ENGLISH, GERMAN AND ITALIAN TERMINOLOGY



	Filières de tréfilage – Terminologie des éléments caractéristiques des noyaux et montures	Wire drawing dies – Terminology of characteristic elements of pellets and cases	Ziehsteine – Terminologie der Hauptabmessungen von Kern und Fassung	Filiere per trafilatura – Terminologie degli elementi caratteristici dei nuclei e della montatura
	Filière Noyau Monture	Die Pellet Case	Ziehstein Kern Fassung	Filiero Nucleo Montatura
d_1	diamètre de calibrage	diameter of bearing	Ziehholdurchmesser	diametro del cilindro o portata
d_2	diamètre du noyau	diameter of pellet	Kerndurchmesser	diametro del nucleo
d_3	diamètre de la monture	diameter of case	Fassungsdurchmesser	diametro della montatura
h_2	hauteur du noyau	height of pellet	Kernhöhe	altezza del nucleo
h_3	hauteur de la monture	height of case	Fassungshöhe	altezza della montatura
l_1	hauteur du cône d'entrée	height of entry angle	Höhe der Eingangsöffnung	altezza del cono di entrata
l_2	hauteur du cône de réduction	height of drawing angle	Höhe des Ziehkegels	altezza del cono di riduzione
l_3	hauteur de la partie calibrante	length of bearing	Führungslänge	lunghezza del cilindro o portata
l_4	hauteur du cône de sortie	height of exit angle	Höhe der Ausgangsöffnung	altezza del cono di uscita
2α	angle du cône de réduction	drawing angle	Ziehkegelwinkel	angolo del cono di riduzione
2β	angle du cône d'entrée	angle of entry cone	Eingangsöffnungswinkel	angolo del cono di entrata
2γ	angle du cône de sortie	exit angle	Ausgangsöffnungswinkel	angolo del cono di uscita

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