INTERNATIONAL STANDARD

ISO 8123

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Road vehicles — Diametral pitch starter motor pinions

Véhicules routiers — Pignons de démarreurs à diametral pitch

Reference number
ISO 8123:1991(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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INTERNATIONAL STANDARD ISO 8123:1991(E)

Road vehicles — Diametral pitch starter motor pinions

1 Scope

This International Standard specifies the diametral pitches, pressure angles, number of teeth and other tooth characteristics which are necessary to ensure interchangeability of starter motor pinions used for starter motors mounted on reciprocating internal combustion engines for road vehicles.

2 Dimensions

Detailed tooth limit dimensions and the base tangent length as the inspection value, W_2, are given in table 1 for diametral pitch starter motor pinions.

NOTE 1 The symbols, which are in accordance with ISO 701:1976, *International gear notation — Symbols for geometrical data*, are illustrated in figure 1.

Table 1

Dimensions in millimetres

Module, m [1]		2,1167				2,54				3,175				4,233		
Diametral pitch, P [2]	in^{-1}	12				10				8				6		
Pressure angle, α	°	12				20				20				20		
Number of teeth, z		9	10	11	12	8	9	10	11	9	10	11	12	10	11	12
Addendum modification, coefficient, x		0,75				0,42				0,5				0,5		
Tip diameter, d_a	max.	25,80	27,93	30,00	32,30	27,2	29,7	32,3	34,8	37,25	40,40	43,50	46,75	53,30	57,60	61,80
	min.	25,59	27,72	29,79	32,05	27,0	29,5	32,1	34,6	37,00	40,15	43,25	46,50	53,05	57,35	61,55
Root diameter, d_f	max.	17,70	19,50	21,60	23,75	17,4	19,9	22,5	25,0	25,1	28,3	31,4	34,6	38,1	42,3	46,6
	min.	17,27	18,98	21,08	23,23	17,1	19,6	22,1	24,6	24,7	27,9	31,0	34,2	37,7	41,9	46,2
Start of active profile, d_{Nf}	max.	18,7	20,76	22,84	24,9	19,2	21,6	24,09	26,56	27,07	30,19	33,27	36,41	40,41	44,57	48,79
End of active profile, d_{Na}	min.	25,49	27,62	29,69	31,95	26,9	29,4	32	34,5	36,85	40	43,1	46,35	52,9	57,2	61,4
Base tangent length, W_2	max.	10,48		10,49		12,26	12,30	12,33	12,37	15,55	15,59	15,63	15,68	20,79	20,85	20,91
	min.	10,43		10,44		12,18	12,22	12,25	12,29	15,46	15,50	15,54	15,59	20,69	20,75	20,81

1) $m = \frac{25,4}{P}\left[\frac{mm \cdot in^{-1}}{in^{-1}}\right]$

2) P is the number of teeth per inch reference diameter, in reciprocal inches.

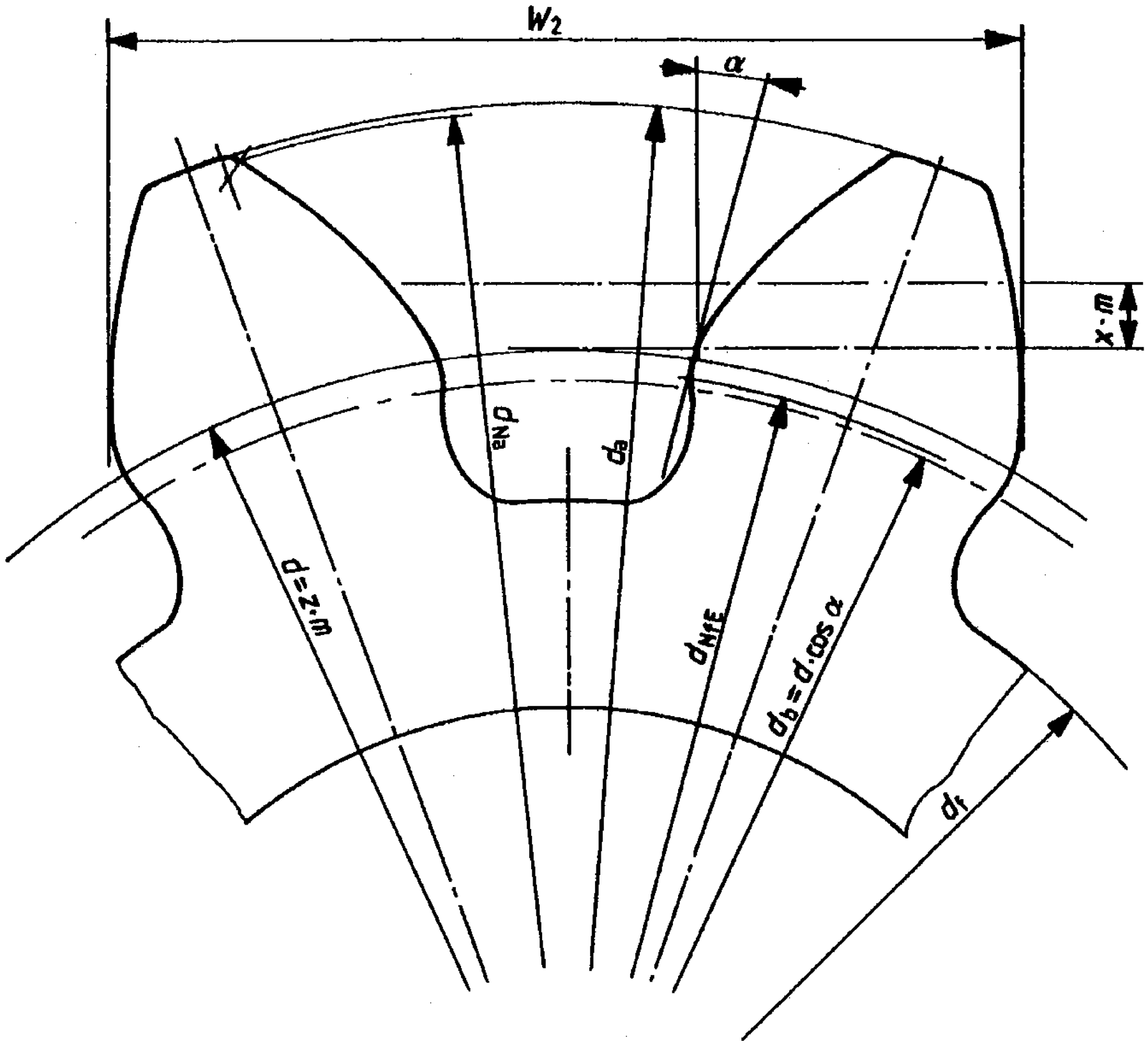

Figure 1