

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

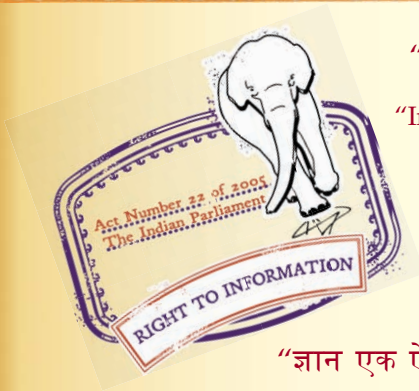
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 9609-5 (1998): Lettering on technical drawing - Part :
Amplified Devanagari letters [PGD 24: Drawings]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
तकनीकी ड्राइंगों की वर्णमाला
भाग 5 देवनागरी अक्षरादि का विस्तार

Indian Standard
LETTERING ON TECHNICAL DRAWINGS
PART 5 AMPLIFIED DEVNAGRI LETTERS

ICS 01.075

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
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Price Group 3

FOREWORD

This Indian Standard (Part 5) was adopted by the Bureau of Indian Standards, after the draft finalized by the Drawings Sectional Committee had been approved by the Light Mechanical Engineering Division Council.

This standard specifies the proportions and establishes dimensions of amplified Devnagri Letters for use in technical drawings and associated documents. The standard defines the various dimensions and shape of Devnagri Letters alongwith the writing examples. This standard primarily concerns letters written with the aid of stencils, but is equally applicable to free hand writing or other appropriate methods.

This standard is Part 5 of Indian Standard on Lettering on Technical Drawings. Other standards in this series are :

<i>IS No.</i>	<i>Title</i>
9609 (Part 1) : 1983	Lettering on technical drawings : Part 1 English characters
9609 (Part 2) : 1985	Lettering on technical drawings : Part 2 Greek characters
9609 (Part 3) : 1991	Technical drawings — Lettering : Part 3 Diacritical and particular marks for the Latin Alphabet
9609 (Part 4) : 1991	Technial drawings — Lettering : Part 4 Cyrillic characters

The recommended method of writing Hindi letters was originally published as Amendment No. 3 in February 1988 to IS 696 : 1972 ‘Code of practice for general engineering drawings (*second revision*)’. After publication of SP 46 : 1988 ‘Engineering drawing practice for school and colleges, IS 696.: 1972 was withdrawn and SP 46 : 1988 does not cover the Hindi Letters. This standard provides the necessary guidance regarding shape and dimensions of Amplified Devnagri Letters. The design of the Hindi letters have been modified by Central Hindi Directorate, Ministry of Human Resource Development, Government of India, keeping in view of the principles established in Part 1 of this standard and changed the nomenclature as ‘Amplified Devnagari Letters’.

Indian Standard

LETTERING ON TECHNICAL DRAWINGS

PART 5 AMPLIFIED DEVNAGRI LETTERS

1 SCOPE

This standard (Part 5) specifies proportions and establishes dimensions of Amplified Devnagri Letters for use in technical drawings and associated documents. It primarily concerns letters written with the aid of stencils, but is equally applicable to freehand lettering or other appropriate methods.

2 REFERENCES

The following Indian Standard contains provision which through reference in this text, constitute provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard given below:

IS No.	Title
9609(Part 1) : 1983/	Lettering on technical
ISO 3098-1 : 1974	drawings : Part 1
	English characters

3 GENERAL

3.1 The essential features of lettering on technical drawings are :

- legibility,
- uniformity,
- suitability for microfilming and other photographic reproduction.

3.2 In order to satisfy the above mentioned requirements, the following rules shall be followed.

3.2.1 The letters are to be clearly distinguishable from each other in order to avoid any confusion between them, even in the case of slight mutilations.

3.2.2 Microfilming and other photographic reproductions require the distance between two adjacent lines or the space between letters to be at least equal to twice the line thickness (see Fig. 1 and 2 and Tables 1 and 2). In case where the thickness of two adjacent lines is different the spacing shall

be twice the thickness of the heavier line.

3.3 The numerals and other signs shall be in accordance with IS 9609 (Part 1).

4 DIMENSIONS

The following specifications are given for dimensions of letters.

4.1 The height 'h' of the letters is taken as the base of dimensioning (see Tables 1 and 2).

4.2 The range of standard height 'h' for lettering is as follows:

2.5, 3.5, 5, 7, 10, 14 and 20 mm

The dimensions 'k', 'l', 'm', 'n', 'u' and 't' are based on letter height 'h' (see Fig. 3 and 4). The standard dimensional ratios are as follows:

$$\begin{array}{ll} k = (3/2)h & n = (1/2)h \\ l = (7/6)h & u = (1/4)h \\ m = (5/6)h & t = (1/10)h \end{array}$$

4.2.1 The ratio of $\sqrt{2}$ in the range of heights for lettering is derived from the standardized progression of dimensions for paper sizes.

4.3 The heights 'h' shall be not less than 2.5 mm.

4.4 The recommended ratios for d/h , 1/14, 1/10 are most economical as they result in a minimum number of line thicknesses as illustrated in Tables 1 and 2.

4.5 Space between characters, for the minimum space of the base line and the minimum space of words are given in Tables 1 and 2 (see Fig. 1 and 2).

4.6 In the case of consonant cluster, that is, when half letter is used with full letter in combination and vowel symbol 'f' is to be used, we may use the symbol with dimensions 'k' and 'h' as given in 4.2.

5 SPECIMENS

The specimens given in Fig. 3 are only as a guide to illustrate the principles established in 3 and 4.

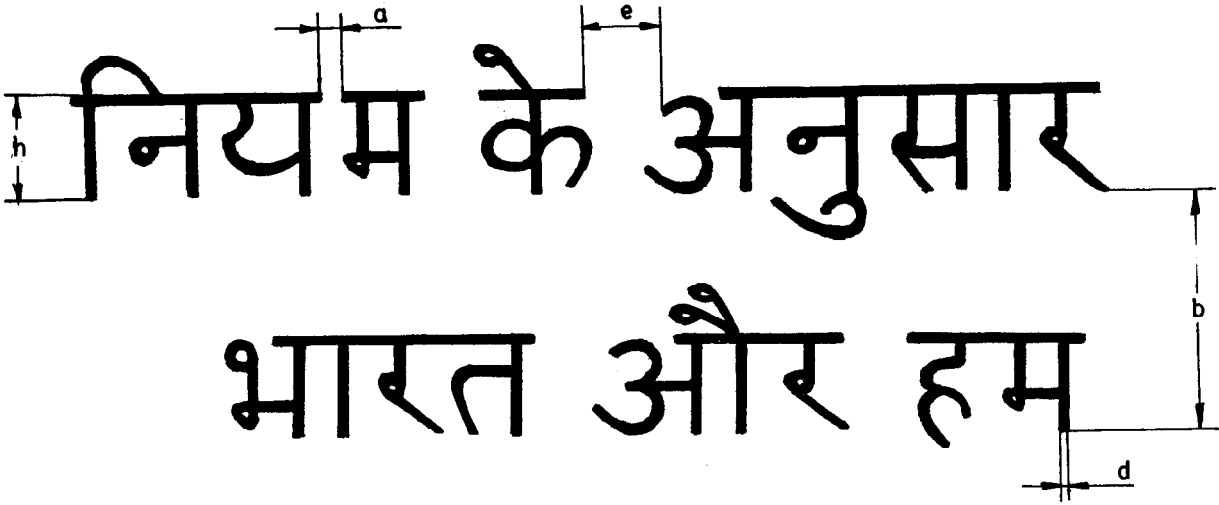


FIG. 1 SPECIMEN FOR LETTER WRITING ($h = 14$)

Table 1 Dimensions for Lettering ($d = h/14$)
(*Clauses 3.2.2, 4.1, 4.4 and 4.5*)

All dimensions in millimetres.

Sl No.	Characteristic		Ratio	Dimensions						
				2.5	3.5	5	7	10	14	20
i)	Lettering height	h	$(14/14) h$	2.5	3.5	5	7	10	14	20
ii)	Spacing between characters	a	$(2/14) h$	0.35	0.5	0.7	1.0	1.4	2	2.8
iii)	Minimum spacing base lines (with stem and tail)	b	$(28/14) h$	6	8.5	12	17	24	34	48
iv)	Minimum spacing between words	e	$(6/14) h$	1.05	1.5	2.1	3	4.2	6	8.4
v)	Thickness of lines	d	$(1/14) h$	0.18	0.25	0.35	0.5	0.7	1	1.4

NOTE — The spacing ' a ' between two characters may be reduced by half if this gives a better visual effect, it then equals the line thickness ' d '.

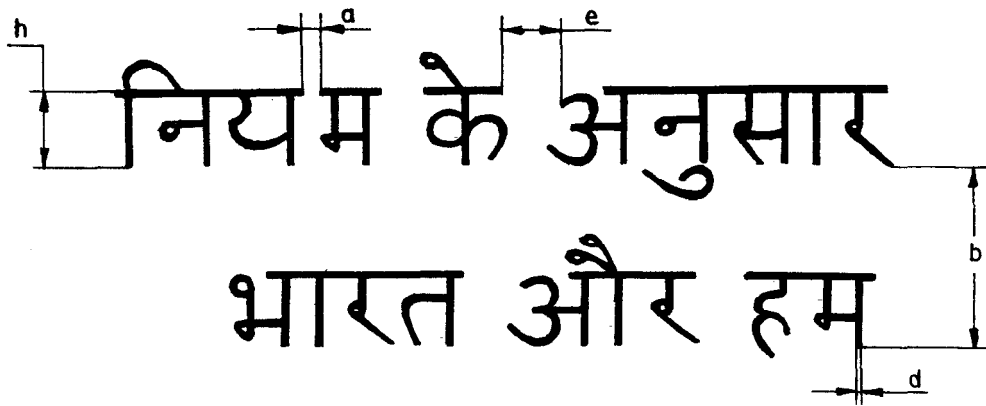
FIG. 2 SPECIMEN FOR LETTER WRITING ($h = 10$)

Table 2 Dimensions for Lettering ($d = h/10$)
 (*Clauses 3.2.2, 4.1, 4.4 and 4.5*)

All dimensions in millimetres.

Sl No.	Characteristic	Ratio	Dimensions							
i)	Lettering height h	$(10/10) h$	2.5	3.5	5	7	10	14	20	
ii)	Spacing between characters a	$(2/10) h$	0.5	0.7	1	1.4	2	2.8	4	
iii)	Minimum spacing base lines (with stem and tail) b	$(24/10) h$	6	8.5	12	17	24	34	48	
iv)	Minimum spacing between words e	$(6/10) h$	1.5	2.1	3	4.2	6	8.4	12	
v)	Thickness of lines d	$(1/10) h$	0.25	0.35	0.5	0.7	1	1.4	2	

NOTE — The spacing ' a ' between two characters may be reduced by half if this gives a better visual effect, it then equals the line thickness ' d '.

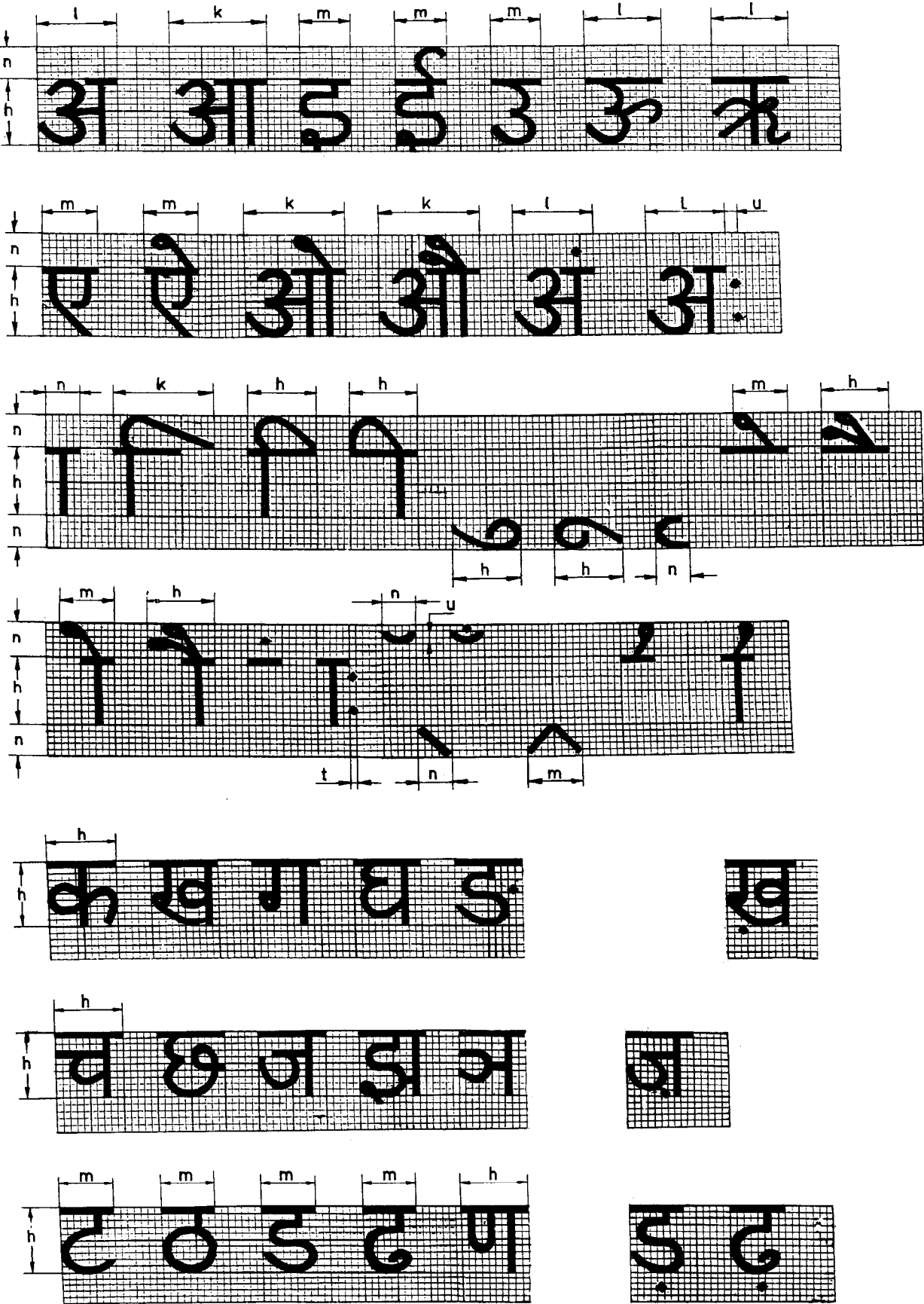
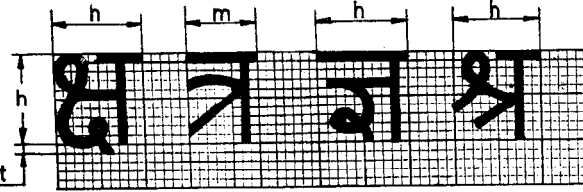
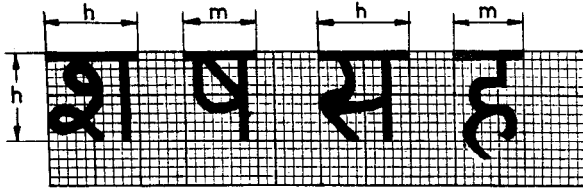
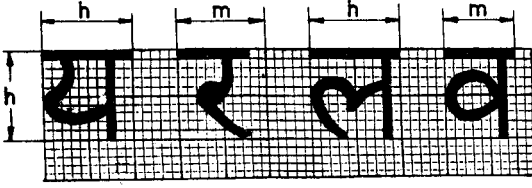
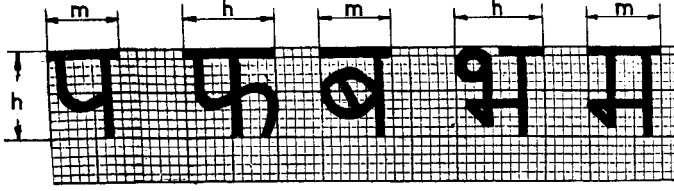
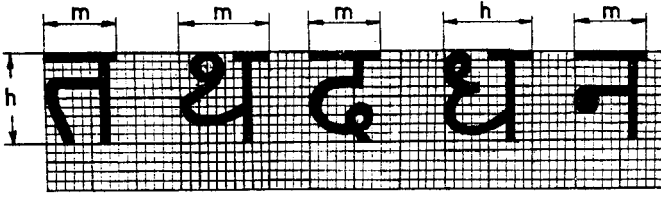


FIG. 3 SPECIMEN OF HINDI LETTERS — Continued



उदाहरण

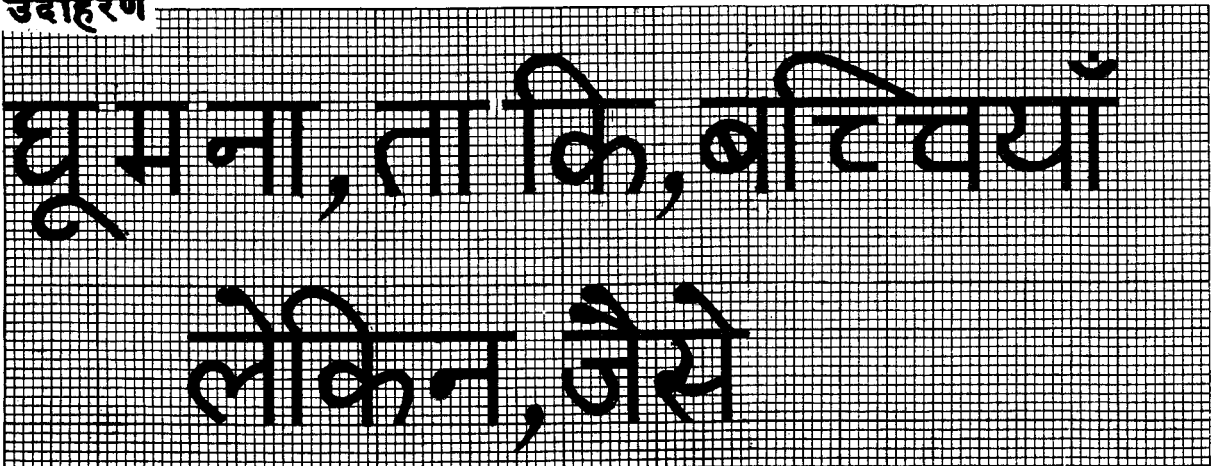


FIG. 3 SPECIMEN OF HINDI LETTERS

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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