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मानक

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“Step Out From the Old to the New”

IS 10711 (2001): Technical Product Documentation - Sizes and Layout of Drawing Sheets [PGD 24: Drawings]



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“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
तकनीकी उत्पाद प्रलेखन — ड्राइंग के कागजों का
साइज़ और विन्यास
(पहला पुनरीक्षण)

Indian Standard

TECHNICAL PRODUCT DOCUMENTATION — SIZES
AND LAYOUT OF DRAWING SHEETS

(*First Revision*)

ICS 01.100.01

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

NATIONAL FOREWORD

This Indian Standard (First Revision) which is identical with ISO 5457 : 1999 'Technical product documentation — Sizes and layout of drawing sheets' issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendation of Drawings Sectional Committee and approval of the Basic and Production Engineering Division Council.

This standard was originally published in 1983 and was based on ISO 5457 : 1980 'Technical drawings — Sizes and layout of drawing sheets'. This revision has been taken up to harmonize with the latest version of International Standard ISO 5457, which has been technically revised.

This standard specifies the size and layout of preprinted sheets for technical drawings in any field of engineering, including those produced by computer and is also applicable to other technical documents.

The text of ISO Standard has been approved as suitable for publication as Indian Standard without deviations. In this adopted standard, certain terminology and conventions are not identical to those used in Indian Standards. Attention is especially drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a full point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their place, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 128-20 : 1996 Technical drawings — General principles of presentation — Part 20 : Basic conventions for lines	IS 10714 (Part 20) : 2001 Technical drawings — General principles of presentation: Part 20 Basic conventions for lines	Identical
ISO 3098-1 : 1974 Technical drawings — Lettering — Part 1: Currently used characters	IS 9609 (Part 1) : 1983 Lettering on technical drawings : Part 1 English lettering (<i>first revision</i>)	do
ISO 7200 : 1984 Technical drawings — Title blocks	IS 11665 : 1985 Technical drawings — Title block	do

The concerned Sectional Committee has reviewed the provisions of the following International Standards referred in this adopted standard, and has decided that they are acceptable for use in conjunction with this standard:

<i>International Standard</i>	<i>Title</i>
ISO 216 : 1975	Writing paper and certain classes of printed matter — Trimmed sizes — A and B series
ISO 9958-1 : 1992	Draughting media for technical drawings — Draughting film with polyester base — Part 1 : Requirements and marking
ISO 9961 : 1992	Draughting media for technical drawings — Natural tracing paper

Indian Standard

TECHNICAL PRODUCT DOCUMENTATION — SIZES AND LAYOUT OF DRAWING SHEETS

(First Revision)

1 Scope

This International Standard specifies the size and layout of preprinted sheets for technical drawings in any field of engineering, including those produced by computer. This International Standard is also applicable to other technical documents.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 128-20:1996, *Technical drawings — General principles of presentation — Part 20: Basic conventions for lines.*

ISO 216:1975, *Writing paper and certain classes of printed matter — Trimmed sizes — A and B series.*

ISO 3098-1:1974, *Technical drawings — Lettering — Part 1: Currently used characters.*

ISO 7200:1984, *Technical drawings — Title blocks.*

ISO 9958-1:1992, *Draughting media for technical drawings — Draughting film with polyester base — Part 1: Requirements and marking*

ISO 9961:1992, *Draughting media for technical drawings — Natural tracing paper.*

3 Sizes

3.1 Size of series ISO-A

The original drawing should be made on the smallest sheet permitting the necessary clarity and resolution.

The preferred sizes of the trimmed and untrimmed sheets as well as the drawing space of the main ISO-A series (see ISO 216) are given in table 1.

Table 1 — Sizes of trimmed and untrimmed sheets and the drawing space

Dimensions in millimetres

Designation	Figure	Trimmed sheet (T)		Drawing space		Untrimmed sheet (U)	
		a_1 1)	b_1 1)	a_2 $\pm 0,5$	b_2 $\pm 0,5$	a_3 ± 2	b_3 ± 2
A0	1	841	1 189	821	1 159	880	1 230
A1	1	594	841	574	811	625	880
A2	1	420	594	400	564	450	625
A3	1	297	420	277	390	330	450
A4	2	210	297	180	277	240	330

NOTE — For sizes > A0, see ISO 216.

1) For tolerances, see ISO 216.

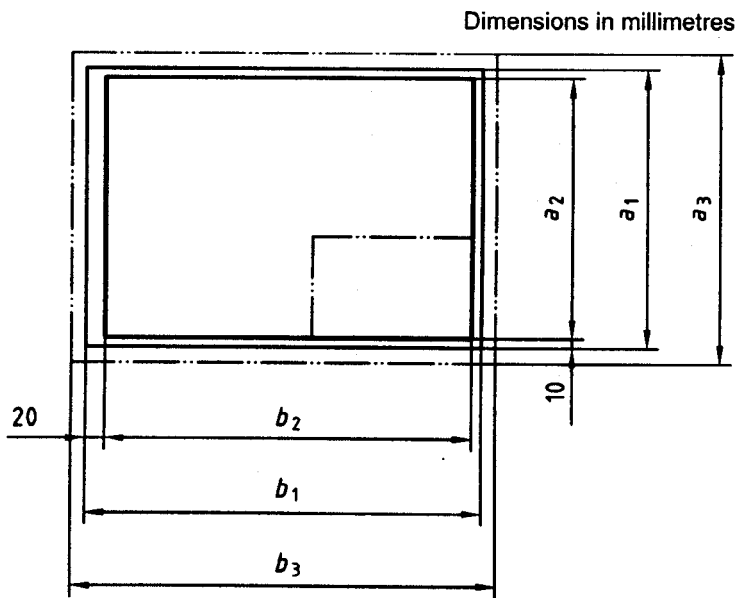


Figure 1 — Size A3 to A0

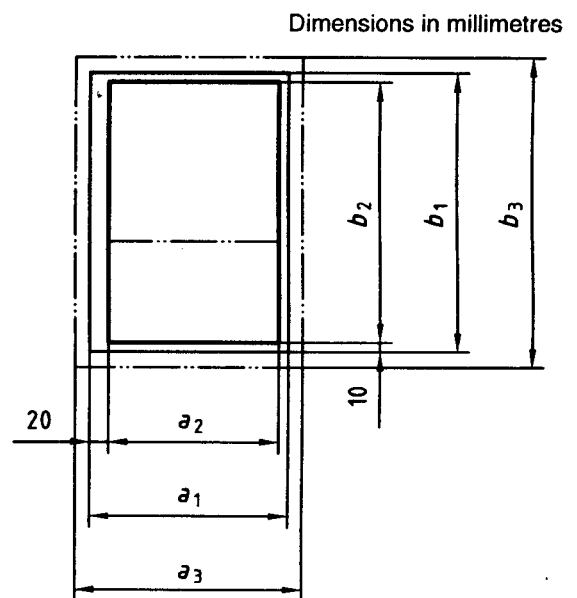


Figure 2 — Size A4

The size designation shall be placed in the bottom border at the right corner (see figure 5).

3.2 Elongated sizes

Elongated sizes should be avoided. Otherwise they are formed by combination of the dimensions of the short side of an A-size (e.g. A3) with the dimensions of the long side of another larger A-size (e.g. A1). The result is a new size, for example with the abbreviation A3.1. The structure of the size system is shown in figure 3.

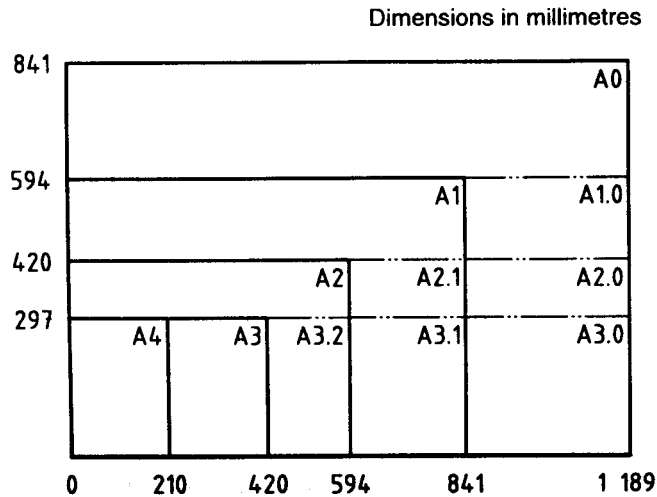


Figure 3 — Size system overview

4 Graphical features

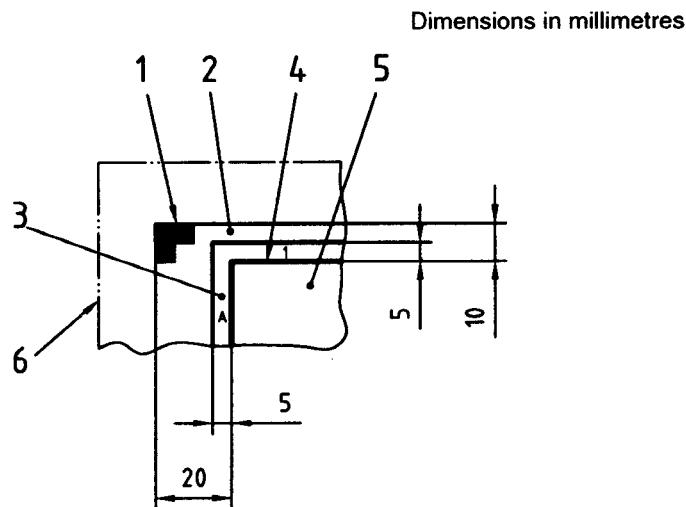
4.1 Title block

For the dimensions and layout of title blocks, see ISO 7200. The location of the title block for the sizes A0 to A3 is situated in the bottom right hand corner of the drawing space. Only sheets positioned horizontally are permitted for these formats (see figure 1). For the size A4, the title block is situated in the shorter (lower) part of the drawing space. Only sheets positioned vertically are allowed for this format (see figure 2). The direction of the reading of the drawings is equal to that of the title block.

4.2 Borders and frame

Borders enclosed by the edges of the trimmed sheet and the frame limiting the drawing space shall be provided with all sizes. The border shall be 20 mm wide on the left edge, including the frame. It can be used as a filing margin. All other borders are 10 mm wide (see figure 4).

The frame for limiting the drawing space shall be executed with continuous lines of 0,7 mm width.



Key

- | | |
|-------------------------|--------------------------|
| 1 Trimming mark | 4 Frame of drawing space |
| 2 Trimmed format | 5 Drawing space |
| 3 Grid reference border | 6 Untrimmed format |

Figure 4 — Borders

4.3 Centring marks

In order to facilitate positioning of the drawing when reproduced or microfilmed, four centring marks shall be provided. These marks are placed at the ends of the two axes of symmetry of the trimmed sheet with a symmetry tolerance of 1 mm. The form of the centring marks may be chosen freely. It is recommended to indicate them by continuous lines of 0,7 mm width, starting at the grid reference border and extending 10 mm beyond the drawing frame (see figure 5). Sizes greater than A0 require additional centring marks at the mid-point of each section to be filmed.

4.4 Grid reference system

The sheets shall be divided into fields in order to permit easy location of details, additions, revisions, etc. on the drawing (see figure 5).

The individual fields should be referenced from the top downwards with capital letters (I and O shall not be used) and from left to right with numerals figuring on both sides of the sheet. For the size A4, they are located only at the top and the right side. The size of letters and characters is 3,5 mm. The length of the fields is 50 mm, starting at the axes of symmetry of the trimmed size (centring marks). The number of fields depends on the size (see table 2). The differences resulting from the division are added to the fields at the corners.

The letters and numerals shall be placed in the grid reference border, and are to be written in vertical characters according to ISO 3098-1. The grid reference system lines shall be executed with continuous lines of 0,35 mm width.

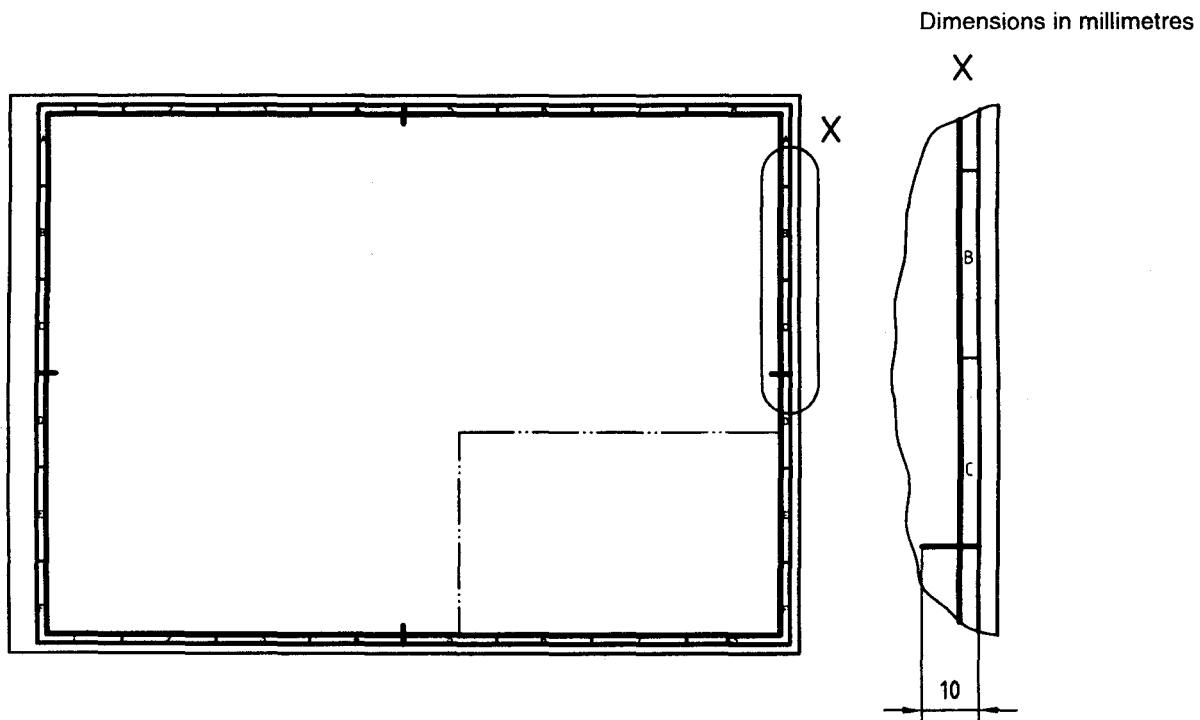


Figure 5 — Grid reference system and centring marks

Table 2 — Number of fields

Designation	A0	A1	A2	A3	A4
Long side	24	16	12	8	6
Short side	16	12	8	6	4

4.5 Trimming marks

In order to facilitate trimming of the sheets either by hand or automatically, trimming marks shall be provided in the borders of the four edges of the trimmed sheet. These marks are in the form of two overlapping rectangles with the dimensions 10 mm × 5 mm (see figure 6).

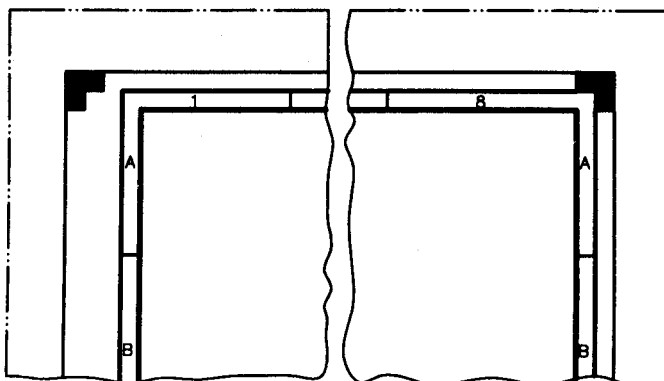


Figure 6 — Trimming marks

5 Designation

The designation of a preprinted drawing sheet shall consist of the following elements in the given order:

- a) the description block (i.e. "Drawing sheet");
- b) the number of this International Standard (i.e. ISO 5457);
- c) the designation of size (A4 to A0) as specified in table 1 or figure 3;
- d) trimmed (T) or untrimmed (U) as specified in table 1;
- e) type of material:
 - tracing paper (TP) 92,5 g/m² or 112,5 g/m², according to ISO 9961,
 - opaque paper (OP) 60 g/m² to 120 g/m²,
 - draughting film with polyester base (PE) of thickness $\geq 50 \mu\text{m}$, according to ISO 9958-1,
- f) printed frontside (F) or reverseside (R);
- g) title block according to a pattern (TBL), if applicable.

EXAMPLE

A preprinted drawing sheet according to ISO 5457, of size A1, trimmed on tracing paper, with a mass per unit area of 112,5 g/m², printed on the reverse side and with a title block according to a pattern is designated as follows:

Drawing sheet ISO 5457 - A1T - TP112,5 - R - TBL

Annex A
(informative)

Example of a drawing sheet

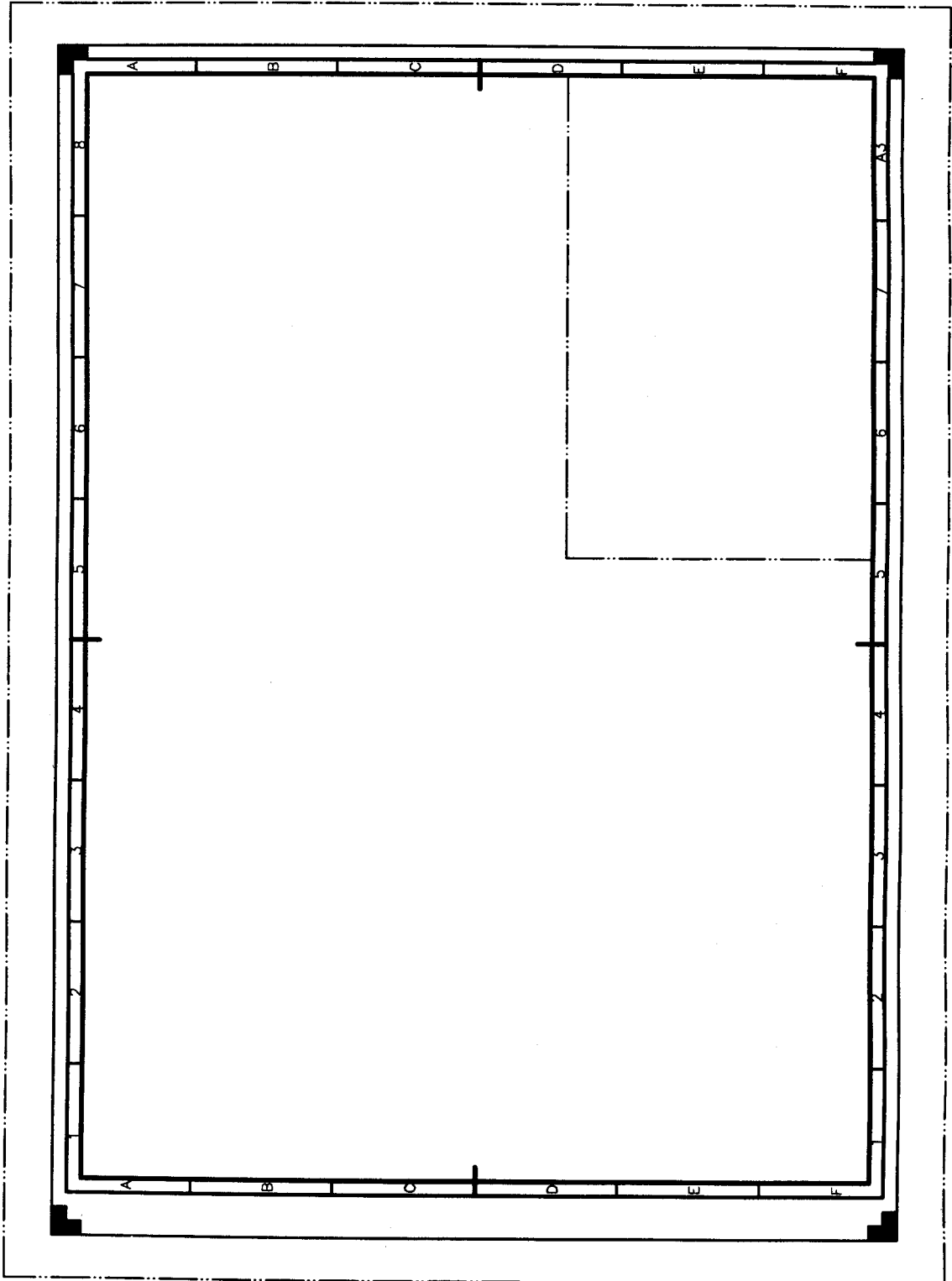


Figure A.1 — Example of a format A3 drawing sheet

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards : Monthly Additions'.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110 002
Telephones : 323 01 31, 323 33 75, 323 94 02

Telegrams: Manaksanstha
(Common to all offices)

Regional Offices :

Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg
NEW DELHI 110002

Telephone

{ 323 76 17
323 38 41

Eastern : 1/14 C. I. T. Scheme VIIM, V. I. P. Road, Kankurgachi
KOLKATA 700 054

{ 337 84 99, 337 85 61
337 86 26, 337 91 20

Northern : SCO 335-336, Sector 34-A, CHANDIGARH 160 022

{ 60 38 43
60 20 25

Southern : C. I. T. Campus, IV Cross Road, CHENNAI 600 113

{ 254 12 16, 254 14 42
254 25 19, 254 13 15

Western : Manakalaya, E9 MIDC, Marol, Andheri (East)
MUMBAI 400 093

{ 832 92 95, 832 78 58
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