UDC 621·38·038-218·3 : 006·78 : 621·316·342·1

(Reaffirmed 1998)

Indian Standard

DIMENSIONS OF MECHANICAL STRUCTURES OF THE 482·6 mm SERIES

PART 2 SUBRACKS AND ASSOCIATED PLUG-IN UNITS

Section 1 Subracks

1. Scope — Covers the basic dimensions of a modular range of subracks for mounting in equipment according to IS : 9606-1980 'Dimensions of panels and racks (482·6 mm system)'.

1.1 The drawings given in this standard are not intended to indicate details of design.

2. General Arrangement — The subracks may be mounted, one above another or in combination with suitable instruments and panels (which also conform to the panel dimensions and equipment complying with the rack dimensions given in IS : 9606-1980).

2.1 General arrangement of rack, subracks, printed board and plug-in unit is given in Fig. 1. The following notes are to be read with Fig. 1.

Note 1 — General subracks are equipped with printed board or rack and panel type connectors at the rear side, and have guides for locating and/or supporting printed boards or types of plug-in units.

Note 2 — In principle components are mounted on the right-hand side of the printed board as viewed from the front of the subrack.

Note 3 — Clause 4 and Appendix A of Section 2 of this standard (Part 2) define the dimensions required for mechanical interchangeability of plug-in units.

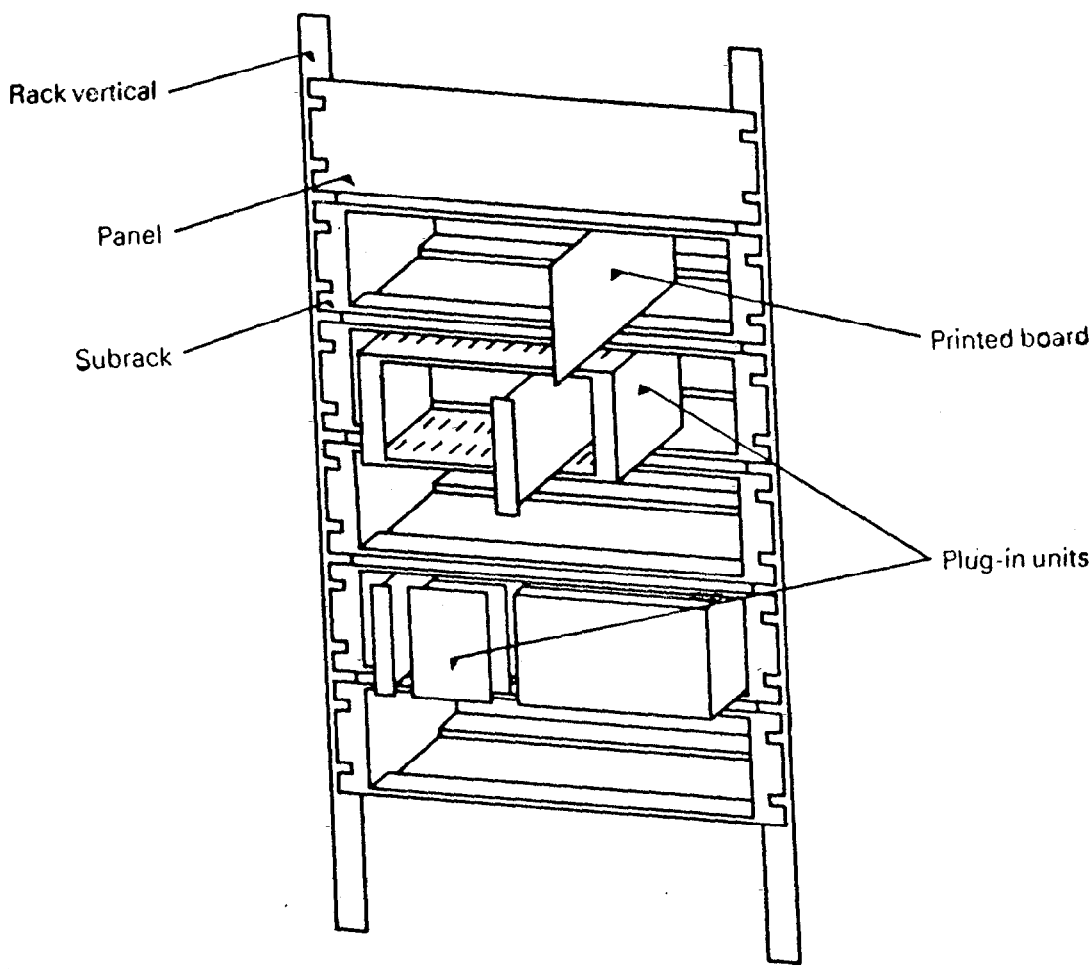

FIG. 1 GENERAL ARRANGEMENT

Adopted 13 June 1986

Gr 2

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3. Subrack Description — For the purpose of this standard a typical subrack comprises horizontal members, secured between two side plates as shown in Fig. 2. The side plates have right-angled flanges equivalent to the extremities of the panels shown in IS : 9606-1980.

4. Subrack Basic Dimensions — Subrack basic dimensions are given in Fig. 2. The following notes and Table 1 are to be read with Fig. 2.

Note 1 — 81 × 5·08 (mm) is permissible for case mounting or for use with telescopic slides.

Note 2 — In designing to this dimension, it should be noted that the distance between rack uprights specified in IS : 9606-1980 is 450 mm minimum. Earlier racks could have an aperture of 447 mm minimum as specified in IS : 9606-1980.

Note 3 — Clearance for PB coding, ejectors, etc.

Note 4 — The guidance dimension *Hg* shall be derived from the printed board height *Hb* according to **3** of IS : 11719 (Part 2/Sec 2)-1986 'Dimensions of mechanical structures of the 482·6 mm series: Part 2 Subracks and associated plug-in units, Section 2 Plug-in units'. Adequate engagement and interchangeability shall be maintained between plug-in units and guide rails.

Note 5 — The position of the centreline of the first printed board will depend on the connector chosen. The preferred dimensions of *A* is 3·27 mm unless found to be impracticable.

Note 6 — Side plates may be extended by 60 mm beyond the rear attachment plane. The rear edge of a non-extended side plate need not coincide with the rear attachment plane.

Note 7 — *Dc* and *C* dimensions and tolerances are dependent on the chosen connector [*see* **4** of IS : 11719 (Part 2/Sec 2)-1986].

Note 8 — The detail shown in item Z for recessed panels is preferred for future designs. Item *Y* shown in Fig. 1 of IS : 11719 (Part 2/Sec 2)-1986 should be considered when designing the horizontal members.

Note 9 — The range of four depths stated are those which are preferred. If necessary manufacturers can increase the depth in increments of 60 mm. *Ds* is a preferred dimension for the depth of subracks when subracks are supplied without mounting brackets for PB-connectors.

Note 10 — The manufacturers of subracks shall define the fastening dimensions and tolerances so that they are compatible with the dimensions of the plug-in units given in Fig. 1 and 2 of IS : 11719 (Part 2/Sec 2)-1986 such that interchangeability is guaranteed.

Note 11 — The width of the guide slot shall accommodate a 1·6 ± 0·2 mm thick printed board in accordance with IS : 5921 (Part 1)-1970 'Specification for metal-clad base material for printed circuits for use in electronic and telecommunication equipment: Part 1 General requirements and tests (*first revision*)'.

Note 12 — The symbol *U* means a vertical increment of 44·45 mm. Tolerances are non-cumulative.

Note 13 — Actual outside dimensions and slot details are given in IS : 9606-1980.

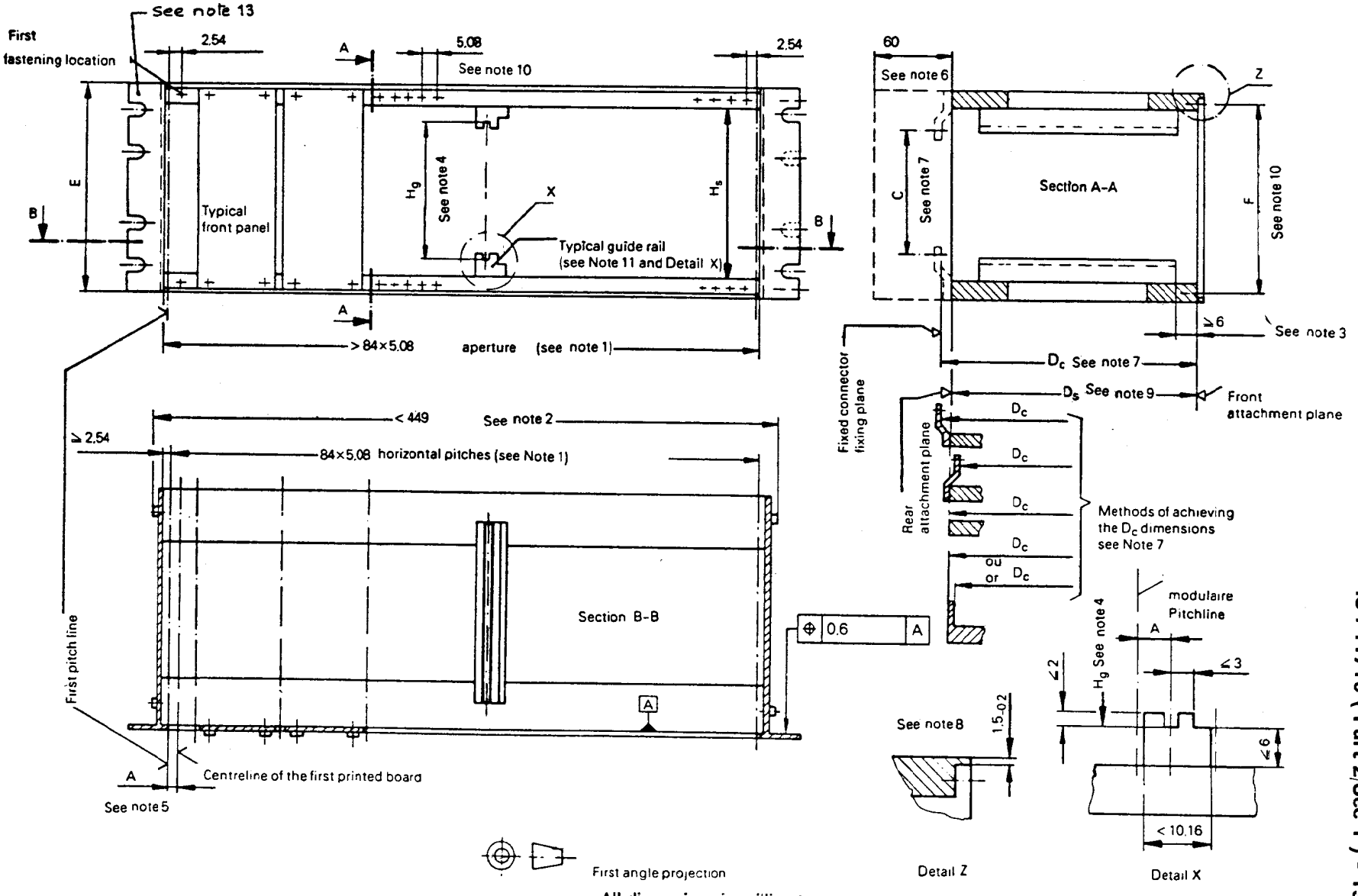
TABLE 1 SUBRACK BASIC DIMENSIONS

All dimensions in millimetres.

n × *U* (*See* Note 12)		2*U*	3*U*	4*U*	5*U*	6*U*	7*U*	8*U*	9*U*	10*U*	11*U*	12*U*
Hs minimum		67·55	112·00	156·45	200·90	245·35	289·80	334·25	378·70	423·15	467·60	512·05
F ± 0·20		78·05	122·5	166·95	211·40	255·85	300·30	344·75	389·20	433·65	478·10	522·55
Ds ± 0·5 (*See* Note 9)	1	112·24										
	2	172·24										
	3	232·24										
	4	292·24										

EXPLANATORY NOTE

This standard (Part 2) is based, without any technical change, on IEC Pub 297-3 (1984) 'Dimensions of mechanical structures of the 482·6 mm (19 in) series: Part 3 Subracks and associated plug-in units', issued by the International Electrotechnical Commission.



All dimensions in millimetres.

FIG. 2 SUBRACK BASIC DIMENSIONS

Printed at Printograph, New Delhi, India