

G-686  
3.559



**STAATSKOERANT**  
**VAN DIE REPUBLIEK VAN SUID-AFRIKA**  
**REPUBLIC OF SOUTH AFRICA**  
**GOVERNMENT GAZETTE**

REGULASIEKOERANT No. 2590

PRYS 20c PRICE  
OORSEE 30c OVERSEAS  
POSVRY — POST FREE

REGULATION GAZETTE No. 2590

*As 'n Nuusblad by die Poskantoor Geregistreer*

*Registered at the Post Office as a Newspaper*

Vol. 151]

PRETORIA, 13 JANUARIE 1978  
13 JANUARY

[No. 5858

**GOEWERMENSKENNISGEWING**

**DEPARTEMENT VAN NYWERHEIDSWESE**

No. R. 101 13 Januarie 1978

**WET OP STANDAARDE, 1962**

**WYSIGING VAN VERPLIGTE STANDAARDSPESIFIKASIES VIR SEKERE ELEKTRIESE TOERUSTING**

Kragtens artikel 15 (3) van die Wet op Standaarde 1962 (Wet 33 van 1962), word bekendgemaak dat die Minister van Ekonomiese Sake van voorneme is om Bylae 10 van die verpligte standaardspesifikasies vir sekere elektriese toerusting, gepubliseer by Goewermentskennisgewing 1017 van 3 Julie 1964 en herpubliseer by Goewermentskennisgewing R. 1615 van 22 Oktober 1965, terug te trek en te vervang deur die gewysigde Bylae 10 in hierdie kennisgewing vervat.

Die strekking van hierdie wysiging is om die vereiste vir verbinders vir huishoudelike toestelle in ooreenstemming met tegnologiese ontwikkelings op hierdie gebied te bring.

Enige persoon wat teen die voorgestelde wysiging beswaar wil maak, moet sy skriftelike beswaar binne twee maande na publikasie van hierdie kennisgewing indien by die Direkteur-generaal, Suid-Afrikaanse Buro vir Standaarde, Privaatsak X191, Pretoria.

**BYLAE 10**

**TOESTELKOPPELAARS VIR HUISHOUELIKE TOESTELLE**

**1. BESTEK.**

1.1 Hierdie spesifikasie dek tweepooltoestelkoppelaars, met en sonder aardingskontakte, wat bedoel is vir die verbinding van buigsame kables of koorde met elektriese toestelle vir huishoudelike en soortgelyke doeleindes en wat teen 'n spanning van hoogstens 250 V na die aarde en teen 'n stroom van hoogstens 16 A werk.

1.2 Die toestelkoppelaars is bedoel vir gebruik by toestelle waar die temperatuur van die kontakpenne in koue toestande nie 65 °C, in warm toestande nie 120 °C en in besonder warm toestande nie 155 °C oorskry nie.

**GOVERNMENT NOTICE**

**DEPARTMENT OF INDUSTRIES**

No. R. 101 13 January 1978

**STANDARDS ACT, 1962**

**AMENDMENT OF COMPULSORY STANDARD SPECIFICATIONS FOR CERTAIN ITEMS OF ELECTRICAL EQUIPMENT**

Notice is given in terms of section 15 (3) of the Standards Act, 1962 (Act 33 of 1962), that the Minister of Economic Affairs intends to withdraw Schedule 10 of the compulsory standard specifications for certain items of electrical equipment published by Government Notice 1017 of 3 July 1964 and republished by Government Notice R. 1615 of 22 October 1965, and to substitute therefor the amended Schedule 10 contained in this notice.

The purport of this step is to bring the requirements for appliance couplers for domestic appliances into line with technological developments in this field.

Any person who wishes to object to the proposed amendment shall submit his objection in writing to the Director General, South African Bureau of Standards, Private Bag X191, Pretoria, within two months from the date of publication of this notice.

**SCHEDULE 10**

**APPLIANCE COUPLERS FOR DOMESTIC APPLIANCES**

**1. SCOPE**

1.1 This specification covers two-pole appliance couplers with and without earthing contacts intended for the connection of flexible supply cable or cord to electric appliances for domestic and similar purposes that operate at a voltage not exceeding 250 V to earth and at a current not exceeding 16 A.

1.2 The appliance couplers are intended for use on appliances where the temperature of the contact pins does not exceed 60 °C for cold conditions 120 °C for hot conditions or 155 °C for extra-hot conditions.



## 2. WOODBEPALING.

2.1 Die volgende woordbepalings geld vir die doel van hierdie spesifikasie:

*Aanneemlik.*—Aanneemlik vir die instansie wat hierdie spesifikasie administreer.

*Aanvullende isolering (beskermdde isolering).*—'n Onafhanklike isolering wat benewens die funksionele isolering voorsien word om beskerming teen elektriese skok te verleen ingeval die funksionele isolering faal.

*Besonder warm toestand.*—'n Toestand waarby die temperatuur van die kontakpenne 120 °C oorskry maar nie 155 °C oorskry nie.

*Dubbele isolering.*—Elektriese isolering wat uit sowel funksionele isolering as aanvullende (beskermdde) isolering bestaan.

*Funksionele isolering.*—Die elektriese isolering wat funksionering van die toestel moontlik maak en wat basiese beskerming teen elektriese skok verleen.

*Klas I.*—'n Klas elektriese uitrusting met minstens funksionele isolering regdeur en voorsien van 'n aardingsklem en 'n buigsame koord met 'n aardingsgeleier wat geskik is vir verbinding met 'n prop met 'n aardingskontak.

*Klas II.*—'n Klas elektriese uitrusting met dubbele isolering of versterkte isolering regdeur en sonder voorsiening vir aarding.

*Koue toestand.*—'n Toestand waarby die temperatuur van die kontakpenne nie 65 °C oorskry nie.

*Pool.*—Die metaalkontak wat vir die verbinding van stroomdraende dele gebruik word.

*Stuk gereedskap.*—'n Stuk gereedskap binne die gewone betekenis van die woord; ook 'n muntstuk of 'n ander voorwerp wat gebruik word om 'n skroef of bevestigings-inrigting van 'n toestel los of vas te maak.

*Toestel.*—'n Masjien, werktuig, toestel of instrument wat ontwerp is om deur elektrisiteit bedien te word vir die verskaffing van warmte, lug, klank of beweging of waarin elektriese energie in 'n ander vorm van energie omgesit of gemodifiseer word.

*Toestelkontakskok.*—Die deel aan 'n toestelkoppelaar wat by 'n toestel ingesluit is of daaraan bevestig is en wat die penne dra.

*Toestelkoppelaar.*—Die kombinasie van 'n verbinder en 'n toestelkontakskok.

*Verbinder.*—Die deel van 'n toestelkoppelaar wat intergrerend is met of bedoel is om aan die buigsame kabel of koord bevestig te word en waarby die veerkontakte ingesluit is.

*Versterkte isolering.*—Verbeterde funksionele isolering met sodanige meganiese en elektriese eienskappe dat dit dieselfde mate van beskerming teen elektriese skok as dubbele isolering verleen.

*Warm toestand.*—'n Toestand waarby die temperatuur van die kontakpenne 65 °C oorskry maar nie 120 °C oorskry nie.

## 3. KONSTRUKSIEVEREISTES.

3.1 MEGANISE VEILIGHEID. Toestelkoppelaars moet so vervaardig wees dat moontlike gevaar as gevolg van swak werk of verkeerde rangskikking, uitgeskakel is.

### 3.2 AFMETINGS EN ALGEMENE ONTWERP.

3.2.1. Die afmetings van 'n toestelkoppelaar moet ooreenstem met die waardes wat in die toepaslike van ahangsel 1-21 aangegee word en moet sodanig wees dat verwisselbaarheid moontlik is.

3.2.2 Die ontwerp van 'n toestelkoppelaar moet sodanig wees dat—

(a) dit nie moontlik is om enkelpoolverbindings tussen verbinders en toestelkontakskokke te maak nie;

(b) dit nie moontlik is om 'n verbinding te maak tussen 'n verbinder en 'n prop wat aan die vereistes van

## 2. DEFINITIONS.

2.1 For the purposes of this specification the following definitions shall apply:

*Acceptable.*—Acceptable to the body administering this specification.

*Appliance.*—A machine, tool, device, or instrument that is designed to be operated by electricity for the purpose of providing heat, light, sound, or motion or in which electrical energy is converted or modified into another form of energy.

*Appliance coupler.*—The combination of a connector and an appliance inlet.

*Appliance inlet.*—The part of an appliance coupler that is incorporated in or fixed to an appliance and contains the pins.

*Class I.*—A class of electrical equipment having at least functional insulation throughout and provided with an earthing terminal and a flexible cord with an earthing conductor suitable for connection to a plug with earthing contact.

*Class II.*—A class of electrical equipment having double insulation or reinforced insulation throughout and without provision for earthing.

*Cold condition.*—A condition where the temperature of the contact pins does not exceed 65 °C.

*Connector.*—The part of an appliance coupler that is integral with or intended to be attached to the flexible cable or cord and includes the spring contacts.

*Double insulation.*—Electrical insulation comprising both functional insulation and supplementary (protective) insulation.

*Extra-hot condition.*—A condition where the temperature of the contact pins exceeds 120 °C but does not exceed 155 °C.

*Functional insulation.*—The electrical insulation to enable the appliance to function and for basic protection against electric shock.

*Hot condition.*—A condition where the temperature of the contact pins exceeds 65 °C but does not exceed 120 °C.

*Pole.*—The metallic contact used for the connection of current carrying parts.

*Reinforced insulation.*—Improved functional insulation having mechanical and electrical qualities such that it provides the same degree of protection against electric shock as double insulation.

*Supplementary insulation (protective insulation).*—An independent insulation provided in addition to the functional insulation in order to ensure protection against electric shock in the event of a failure of the functional insulation.

*Tool.*—A tool within the normal meaning of the word; also a coin, or other object used to operate a screw or fixing device of an appliance.

## 3. CONSTRUCTIONAL REQUIREMENTS.

3.1 MECHANICAL SAFETY. Appliance couplers shall be so manufactured as to avoid potential hazard resulting from work poorly executed or arranged.

### 3.2 DIMENSIONS AND GENERAL DESIGN.

3.2.1 The dimensions of an appliance coupler shall conform to the values given in the relevant of Annexures 1-21 and shall be such that interchangeability is ensured.

3.2.2 The design of an appliance coupler shall be such that—

(a) it is not possible to make single pole connections between connectors and appliance inlets;

(b) it is not possible to make connection between a connector and a plug complying with the requirements



(c) dit nie moontlik is om 'n verbinder wat slegs vir verbinding met 'n klas II-toestel bedoel is, in te skakel by 'n toestelkontak sok wat vir enige ander toestel bedoel is nie.

### 3.3 BESKERMING TEEN BESKADIGING EN KORROSIE.

3.3.1 *Beskerming teen beskadiging.*—Materiale wat nie-absorberend of teen hitte bestand of onbrandbaar moet wees, of 'n kombinasie van die eienskappe moet hê, moet aan die volgende vereistes voldoen:

(a) *Absorbeerweerstand.*—Volgens 6.12 getoets, mag die materiaal nie soveel water opneem dat sodanige uitswelling, ontlasting, kromtrekking of verandering veroorsaak word dat die vermoë daarvan om aan die oorblywende vereistes van die spesifikasie te voldoen, benadeel word nie.

(b) *Hittebestandheid.*—Indien die materiaal 72 uur lank geplaas word in 'n oond wat by 'n temperatuur van  $200 \pm 2^\circ\text{C}$  gehou word, mag dit nie kromtrek, bars, blasies vorm, sag word of in so 'n mate verander dat die vermoë daarvan om aan die oorblywende vereistes van die spesifikasie te voldoen, benadeel word nie.

(c) *Onbrandbaarheid.*—Volgens 6.13 getoets, mag die materiaal nie brand of genoeg dampe afgee om by die toetsvlam aan die brand te slaan nie.

3.3.2 *Beskerming teen korrosie.*—Ysterhoudende metale en legerings wat vir korrosie vatbaar is en wat by die konstruksie van 'n toestelkoppelaar gebruik word, moet doeltreffend teen korrosie beskerm wees.

3.4 BESKERMING TEEN TOEVALLIGE KONTAK. 'n Toestelkoppelaar moet so ontwerp wees dat daar geen gevaar van onopsetlike kontak tussen die aardingskontak van die toestelkontak sok en die stroomdraende kontakte van die verbinder is nie.

### 3.5 PENNE EN KONTAKTE.

3.5.1 Penne van 'n toestelkontak sok en kontakte van 'n verbinder moet so bevestig wees dat hulle nie kan draai nie.

3.5.2 Skroewe wat gebruik word om enige deel te bevestig wat die kontakte van 'n verbinder bedek of wat op 'n ander wyse beskerming teen elektriese skok verleen, moet so bevestig wees dat hulle nie tydens gewone gebruik van die toestel kan losraak nie.

3.5.3 Penne van 'n toestelkontak sok moet so bevestig wees en moet sodanige meganiese sterkte hê dat daar by die toets van 'n toestelkontak sok volgens 6.10, geen merkbare verandering in die vorm van die pen is nie.

3.5.4 Die penne van 'n toestelkontak sok moet deur 'n mantel beskut wees, en dit mag nie moontlik wees om die penne te verwyder sonder om 'n stuk gereedskap te gebruik nie. Die mantels van 0,2-A- en 2,5-A-toestelkontak sokke moet van isoleermateriaal gemaak wees.

3.5.5 Alle 2,5-A-verbinders en binders wat vir die verbinding van Klas II-toestelle bedoel is, moet van die tipe wees wat nie herbedraad kan word nie.

3.6 BLOOTSTELLING VAN LEWENDIGE DELE. 'n Toestelkoppelaar moet so ontwerp en gemaak wees dat by die toets daarvan dit volgens 6.9, geen lewendige deel van die verbinder met die standaardtoetsvinger aangeraak kan word wanneer die verbinder heeltemal of gedeeltelik in die toestelkontak sok ingesteek is nie.

3.7 STROOMDRAENDE DELE. Stroomdraende dele en aardingskontakte moet van een van die volgende materiale gemaak wees:

(a) Koper;

(b) in die geval van dele wat tydens vervaardiging warmverwerking ondergaan, 'n legering wat minstens 50

(c) it is not possible to engage a connector intended only for the connection of a Class II appliance with an appliance inlet intended for any other appliance.

### 3.3 PROTECTION AGAINST DAMAGE AND CORROSION.

3.3.1 *Protection against damage.*—Materials required to be absorption resisting, heat resisting, non-combustible, or a combination of these, shall comply with the following requirements:

(a) *Absorption resistance.*—When tested in accordance with 6.12, the material shall be incapable of taking up water in a quantity large enough to cause such swelling, laminating, warping, or change as to impair its ability to comply with the remaining requirements of the specification.

(b) *Heat resistance.*—When placed for 72 h in an oven maintained at a temperature of  $200 \pm 2^\circ\text{C}$ , the material shall not warp, crack, blister, or soften, nor shall it change in a manner that will impair its ability to comply with the remaining requirements of the specification.

(c) *Non-combustibility.*—When tested in accordance with 6.13, the material shall not burn or give off vapours in sufficient quantity to be ignited by the pilot flame.

3.3.2 *Protection against corrosion.*—Ferrous metals and alloys that are susceptible to corrosion and that are used in the construction of an appliance coupler shall be effectively protected against corrosion.

3.4 PROTECTION AGAINST ACCIDENTAL CONTACT. An appliance coupler shall be so designed that there is no risk of inadvertent contact between the earthing contact of the appliance inlet and the current carrying contacts of the connector.

### 3.5 PINS AND CONTACTS.

3.5.1 Pins of an appliance inlet and contacts of a connector shall be locked against rotation.

3.5.2 Screws used to fix any part that covers the contacts of a connector or that otherwise provides protection against electric shock shall be so secured that they will not loosen during normal use of the appliance.

3.5.3 Pins of an appliance inlet shall be so fixed and shall have such mechanical strength that when an appliance inlet is tested in accordance with 6.10 there shall be no noticeable change in the shape of the pin.

3.5.4 The pins of an appliance inlet shall be surrounded by a shroud, and it shall not be possible to remove the pins without the aid of a tool. The shrouds of 0,2 A and 2,5 A appliance inlets shall consist of insulating material.

3.5.5 All 2,5 A connectors and connectors intended for the connection of Class II appliances shall be of the non-rewirable type.

3.6 EXPOSURE OF LIVE PARTS. An appliance coupler shall be so designed and constructed that when it is tested in accordance with 6.9, no live part of the connector can be touched with the standard test finger and no live part of the appliance inlet can be touched with the standard test finger when the connector is wholly or partly inserted into the appliance inlet.

3.7 CURRENT-CARRYING PARTS. Current-carrying parts and earthing contacts shall be of one of the following materials:

(a) Copper;

(b) in the case of parts that are hot worked during manufacture, an alloy containing at least 50 per cent



(c) in die geval van dele wat van gewalste dunplaat gemaak is, 'n legering wat minstens 58 persent koper bevat; of

(d) enige ander materiaal wat in aanneemlike mate teen korrosie bestand is en wat dit moontlik maak dat die toestelkoppelaar aan die oorblywende vereistes van die spesifikasie kan voldoen.

**3.8 AARDINGSBEVEILIGING.** 'n Toestelkoppelaar wat 'n aardingskontak het, moet so gemaak wees dat wanneer die verbinder ingestek word, die aardverbinding gemaak word voordat die stroomdraende kontakte van die toestelkontakskakel bekrag word en wanneer die verbinder uitgetrek word, die stroomdraende kontakte skei voordat die aardverbinding verbreek word.

**3.9 KRUIPAFSTANDE EN VRY RUIMTES.** Kruipafstande en vry ruimtes van toestelkoppelaars moet minstens gelyk aan die toepaslike waardes in Tabel 1 wees.

TABEL 1—KRUIPAFSTANDE EN VRY RUIMTES

| 1                                                                        | 2   |
|--------------------------------------------------------------------------|-----|
| Kruipafstande en vry ruimtes                                             | mm  |
| Tussen lewendige dele met verskillende polariteit.....                   | 3   |
| Tussen lewendige dele en—                                                |     |
| toeganklike metaaldele.....                                              | 4   |
| ontoeganklike buiteskrewe en dies meer (slegs vir verbinders).....       | 3   |
| Tussen dele van die aardingsbaan en—                                     |     |
| lewendige dele.....                                                      | 4   |
| toeganklike skroewe en ander hegstukke.....                              | 3   |
| ontoeganklike buiteskrewe en ander hegstukke (slegs vir verbinders)..... | 1,5 |
| die koordverankering, met inbegrip van die klem-skroewe.....             | 1,5 |

**3.10 VERBODE Tipes.** 'n Toestelkontakskakel wat nie aan die toepaslike van Aanhangsel 2, 4, 6, 8, 10, 12, 14, 16, 18 en 20 voldoen nie, word as 'n verbode tipe beskou.

#### 4. ELEKTRIESE EN FISIESE VEREISTES.

**4.1 ISOLERINGSWEERSTAND.** Volgens 6.2 voor en na die toets vir diëlektriese sterkte (6.3) bepaal, moet die isoleringsweerstand minstens 5 M $\Omega$  wees.

**4.2 DIËLEKTRIESE STERKTE.** Volgens 6.3 getoets, moet 'n toestelkontakskakel en 'n verbinder die toetspanning vir 1 minuut sonder deurslag van die isolering of oorslag weerstaan.

**4.3 AARDING.** Volgens 6.4 gemeet, mag die weerstand tussen die aardingskontakte nie 0,1  $\Omega$  oorskry nie.

**4.4 TEMPERATUURSTYGING.** Volgens 6.5 sowel voor as na die stroombreektoets van 6.6 gemeet, mag die temperatuurstyging van elke klem en van elke afsluiting en sy kontak hoogstens 45 °C wees.

**4.5 STROOMBREEKVERMOË.** Volgens 6.6 getoets, moet 'n verbinder, uitgesonderd 'n 0,2-A-verbinder, die stroom 100 maal onderbreek. Na die toets mag die toetsverbinder geen teken van beskadiging toon wat verdere gebruik daarvan kan benadeel nie.

**4.6 NORMALE WERKING.** Volgens 6.7 getoets, mag 'n toestelkoppelaar geen teken van beskadiging toon wat die verdere gebruik daarvan kan benadeel nie en moet dit nog die toets in 6.3 teen 'n laer spanning van 1 500 V kan deurstaan.

**4.7 UITTREKKRAG.** Indien 'n verbinder volgens 6.8 getoets word, moet die krag wat nodig is om dit uit die toestelkontakskakel te trek sodanig wees dat die verbinder nie sal uitkom wanneer 'n krag wat gelyk is aan die toepaslike minimum waarde in Tabel 2 daarop uitgeoefen word nie, maar sal uitkom wanneer 'n krag wat gelyk is aan die toepaslike maksimum waarde daarop uitgeoefen

(c) in the case of parts fabricated from rolled sheet, an alloy containing at least 58 per cent copper; or

(d) an alternative material that has acceptable resistance to corrosion and will enable an appliance coupler to comply with the remaining requirements of the specification.

**3.8 EARTHING PROTECTION.** An appliance coupler that has an earthing contact shall be so constructed that when the connector is inserted, the earth connection is made before the current-carrying contacts of the appliance inlet are energized and when the connector is withdrawn, the current-carrying contacts separate before the earth connection is broken.

**3.9 CREEPAGE DISTANCES AND CLEARANCES.** Creepage distances and clearances of appliance couplers shall be at least equal to the relevant of the values specified in Table 1.

TABEL 1—CREEPAGE DISTANCES AND CLEARANCES

| 1                                                                                 | 2   |
|-----------------------------------------------------------------------------------|-----|
| Creepage distances and clearances                                                 | mm  |
| Between live parts of different polarity.....                                     | 3   |
| Between live parts and—                                                           |     |
| accessible metal parts.....                                                       | 4   |
| inaccessible external screws and the like (for connectors only).....              | 3   |
| Between parts of the earthing circuit and—                                        |     |
| live parts.....                                                                   | 4   |
| accessible screws and other fastening means.....                                  | 3   |
| inaccessible external screws and other fastening means (for connectors only)..... | 1,5 |
| the cord anchorage, including its clamping screws....                             | 1,5 |

**3.10 PROHIBITED TYPES.** An appliance inlet that does not conform to the appropriate of Annexures 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20 shall be deemed to be a prohibited type.

#### 4. ELECTRICAL AND PHYSICAL REQUIREMENTS.

**4.1 INSULATION RESISTANCE.** When determined in accordance with 6.2 before and after the dielectric strength test (6.3), the insulation resistance shall be at least 5 M $\Omega$ .

**4.2 DIELECTRIC STRENGTH.** When tested in accordance with 6.3, an appliance inlet and a connector shall withstand the test voltage for 1 minute without puncture of insulation or arcing over.

**4.3 EARTHING.** When measured in accordance with 6.4, the resistance between the earthing contacts shall not exceed 0,1  $\Omega$ .

**4.4 TEMPERATURE RISE.** When measured in accordance with 6.5 both before and after the circuit breaking test given in 6.6, the temperature rise of each terminal and of each termination and its contact shall not exceed 45 °C.

**4.5 CIRCUIT BREAKING CAPACITY.** When tested in accordance with 6.6, a connector, other than an 0,2 A connector, shall interrupt the current 100 times. After the test the test connector shall show no sign of damage that will impair its further use.

**4.6 NORMAL OPERATION.** When tested in accordance with 6.7, an appliance coupler shall show no sign of damage that will impair its further use and shall still be capable of withstanding the test given in 6.3 at a reduced voltage of 1 500 V.

**4.7 WITHDRAWAL FORCE.** When a connector is tested in accordance with 6.8, the force required to withdraw it from the appliance inlet shall be such that the connector will not come out when a force equal to the appropriate minimum value specified in Table 2 is exerted on it but will come out when a force equal to the appropriate



TABEL 2—UITTREKKRAG

| 1                              | 2              | 3    |
|--------------------------------|----------------|------|
| Type verbinder                 | Uittrekkrag, N |      |
|                                | Maks.          | Min. |
| 0,2 A; 2,5 A; 6 A en 10 A..... | 50             | 10   |
| 16 A.....                      | 60             | 15   |

4.8 MEGANIESE STERKTE. Volgens 6.10 getoets, mag 'n toestelkoppelaar geen teken van meganiese beskadiging toon nie en mag geen deel losgeraak of afgeval het nie.

4.9 KOORDVERANKERING. 'n Herbedraadbare verbinder moet voorsien wees van 'n koordverankertoestel van isoleermateriaal of -metaal wat vry van skerp rande is en wat so ontwerp is dat waar die verbinders met die klemme verbind word, hulle vry van spanning, met inbegrip van draaiing, is en hul buiteomhulsel teen skuring beskerm is. Metodes soos om 'n knoop in die koord te maak of die ente met lyn af te bind, is nie toelaatbaar nie.

Die koordverankering moet sodanig wees dat dit nie moontlik is om die koord so ver in die toestel in te druk dat die koord of binnele van die toestel beskadig kan word nie.

By die toets van die koordverankering volgens 6.11, mag die kabel of koord met hoogstens 2 mm verskuif word, mag die geleiers nie sigbaar in die klemme beweeg nie en mag die kabel of koord geen teken van beskadiging toon nie.

## 5. MERKE.

5.1 MERKE VAN TOESTELKOPPELAARS. Die volgende besonderhede moet leesbaar en onuitwisbaar in een van die amptelike tale op die buiteoppervlak van die verbinder aangebring wees:

- (a) Die aangeslane spanning;
- (b) die aangeslane stroom in ampère.

Die aangeslane stroom hoef nie op miniatuurverbinders aangebring te wees nie.

5.2 SIMBOLE WAT AS MERKE GEBRUIK WORD. Die toepaslike van die volgende simbole moet as merke gebruik word waar afkortings nodig is:

|                   |   |
|-------------------|---|
| ampère.....       | A |
| volt.....         | V |
| wisselstroom..... | ~ |
| gelykstroom.....  | — |

Stroom- en spanningsaanslae kan soos volg aangedui word:

$$10 \text{ A } 250 \text{ V} \sim \text{ of } 10/250 \sim \text{ of } \frac{10}{250} \sim \text{ of } \left( \frac{10}{250} \right) \sim$$

5.3 IDENTIFIKASIE VAN AARDINGSKLEM. Die aardingsklem op 'n herbedraadbare verbinder moet aangedui word deur die simbool  wat langs die aansluiting aangebring is.

Hierdie simbool mag nie op skroewe, verwyderbare wasters of ander verwyderbare dele aangebring wees nie.

## 6. TOETSMETODES.

6.1 ALGEMEEN. Voer die toetse in die aangegewe volgorde uit en, tensy daar anders gespesifiseer word, by 'n omgewingstemperatuur van  $20 \pm 5^\circ\text{C}$ . Toets verbinders en toestelkontakskakke met, indien nodig, 'n ooreenstemmende toestelkontakskakke of -verbinder wat aan die toepaslike vereistes van die spesifikasie voldoen.

Onderwerp die verbinders of toestelkontakskakke, soos

TABLE 2—WITHDRAWAL FORCE

| 1                                | 2                   | 3    |
|----------------------------------|---------------------|------|
| Type of connector                | Withdrawal force, N |      |
|                                  | Max.                | Min. |
| 0,2 A; 2,5 A; 6 A; and 10 A..... | 50                  | 10   |
| 16 A.....                        | 60                  | 15   |

4.8 MECHANICAL STRENGTH. When tested in accordance with 6.10, an appliance coupler shall show no sign of mechanical damage nor shall any part have become loosened or detached.

4.9 CORD ANCHORAGE. A rewirable connector shall be provided with a cord anchorage device of insulating material or metal that is free from sharp edges and so designed that where the conductors are connected to the terminals they are free from stress including twisting and their outer covering is protected from abrasion. Methods such as tying the cord into a knot or tying the ends with string, shall not be used.

The cord anchorage shall be such that it is not possible to push the cord into the appliance to the extent that the cord or internal parts of the appliance may be damaged.

When the cord anchorage is tested in accordance with 6.11, the cable or cord shall not be displaced by more than 2 mm, the conductors shall not move visibly in the terminals, and the cable or cord shall show no sign of damage.

## 5. MARKING.

5.1 MARKING OF APPLIANCE COUPLERS. The following information shall appear in indelible and legible marking in either official language on the external surface of the connector:

- (a) Rated voltage;
- (b) rated current in amperes.

Miniature connectors need not be marked with the rated current.

5.2 SYMBOLS USED FOR MARKING. The relevant of the following symbols shall be used for making where abbreviations are required:

|                          |   |
|--------------------------|---|
| ampere.....              | A |
| volt.....                | V |
| alternating current..... | ~ |
| direct current.....      | — |

Current and voltage ratings may be indicated as follows:

$$10 \text{ A } 250 \text{ V} \sim \text{ or } 10/250 \sim \text{ or } \frac{10}{250} \sim \text{ or } \left( \frac{10}{250} \right) \sim$$

5.3 IDENTIFICATION OF EARTHING TERMINAL. The earthing terminal on a rewirable connector shall be indicated by the symbol  placed adjacent to the terminal.

This symbol shall not be placed on screws, removable washers, or other removable parts.

## 6. METHODS OF TEST.

6.1 GENERAL. Carry out the tests in the order given and, unless otherwise specified, at an ambient temperature of  $20 \pm 5^\circ\text{C}$ . Test connectors and appliance inlets using, where necessary, a corresponding appliance inlet or connector that complies with the relevant requirements of the specification.

Subject the connectors or appliance inlets, as relevant, to



verbinders, uitgesonderd dié wat deel van 'n koordstel uitmaak, moet vir toetsdoeleindes 'n buigsame kabel of koord hê wat minstens 1 m lank is.

**6.2 ISOLERINGSWEERSTANDSTOETS.** Gebruik 'n spanning van 500 V gs. en meet die isoleringsweerstand onmiddellik voor en na die toets vir diëlektriese sterkte (6.3). Voer die meting een minuut na die aanlê van die spanning tussen die volgende uit:

- (a) Lewendige dele met verskillende polariteit;
- (b) lewendige dele wat met mekaar verbind is en metaaldele wat toeganklik is wanneer 'n verbinder geheel en al by 'n ooreenstemmende toestelkontak sok ingeskakel is; en
- (c) lewendige dele en dele van die aardingsbaan.

**6.3 TOETS VIR DIËLEKTRIESE STERKTE.** Lê onmiddellik na die isoleringsweerstandstoets (6.2) een minuut lank tussen die dele in 6.2 gespesifiseer 'n spanning aan wat wesenlik sinusgolfvormig is, wat 'n frekwensie van 50 Hz het en van 2 000 V, met die uitsondering dat die toetsspanning wat aangelê word, in die geval van toestelkontak sokke wat vir verbinding van Klas II-toestelle bedoel is, tussen lewendige dele 2 000 V en in alle ander gevalle 4 000 V moet wees. Begin die toets by 'n spanning wat nie die helfte van die toetswaarde oorskry nie en verhoog dit so vinnig moontlik tot die volle waarde. Herhaal onmiddellik na hierdie toets die toets in 6.2.

**6.4 AARDINGSTOETS.** Skakel die toestelkontak sok en verbinder heeltemal in en stuur dan tussen die aardingsklem van die toestelkontak sok en die aardingsklem van die verbinder 'n gelykstroom wat gelyk is aan die aangeslane stroom van die toestelkoppelaar en by 'n potensiaalverskil van ongeveer 6 V. Meet die spanningsval en bereken die weerstand van die aardingsbaan.

**6.5 TEMPERATUURSTYGINGSTOETS.** Bedraad elke herbedraadbare verbinder wat getoets word met geleiers wat vir die aangeslane stroom van die verbinder geskik is. Toets nie-herbedraadbare verbinders soos hulle aangebring is. Steek die verbinder in 'n toestelkontak sok wat geelkoperpenne het. Stuur 1 uur lank 'n wisselstroom van 1,25 maal die aangeslane stroom deur die stroomdraende kontakte en stuur dan, in die geval van 'n verbinder wat 'n aardingskontak het, die stroom 1 uur lank deur een stroomdraende kontak en die aardingskontak. Bepaal die temperatuur deur middel van termokoppels wat so geplaas is dat hul uitwerking op die temperatuur wat bepaal word, nie die toetsresultate kan beïnvloed nie.

## 6.6 STROOMBREEKVERMOËTOETS.

**6.6.1 Apparaat.**—Gebruik die apparaat in Fig. 1 aangetoon en 'n nie-induktiewe gelykstroombaan soos in Fig. 2 aangetoon. Die apparaat sluit 'n toestelkontak sok in wat staalpenne en afmetings het wat met die toepaslike van dié in Aanhangel 2, 4, 6, 8, 10, 12, 14, 16, 18 of 20, soos toepaslik, ooreenstem.

**6.6.2 Prosedure.**—Monteer die verbinder in die apparaat en verbind dit met die stroombaan. Gebruik 'n spanning wat gelyk is aan 1,1 maal die aangeslane spanning en 'n stroom van 1,25 maal die aangeslane stroom. Laat die apparaat 50 slae (d.w.s. instekings en uittrekkings) teen 'n tempo van 30 slae per minuut voltooi, sonder dat stroom deur die aardingsbaan, indien daar 'n aardingsbaan is, gestuur word. Bedien dan die kiesskakelaar C, waardeur die aardingsbaan en toeganklike metaaldele met een van die toepaslike verbinder...

than those forming part of a cord set shall, for the purposes of testing, have a flexible cable or cord of length at least 1 m.

**6.2 INSULATION RESISTANCE TEST.** Using a voltage of 500 V D.C. measure the insulation resistance immediately before and after the dielectric strength test (6.3), the measurement being made 1 minute after the application of the voltage between—

- (a) live parts of different polarity;
- (b) live parts connected together and metal parts that are accessible when a connector is in complete engagement with a corresponding appliance inlet; and
- (c) live parts and parts of the earthing circuit.

**6.3 DIELECTRIC STRENGTH TEST.** Immediately after the insulation resistance test (6.2) apply for 1 minute between the parts specified in 6.2 a voltage of substantially sine-wave form, having a frequency of 50 Hz, and of magnitude 2 000 V, except that, for appliance inlets intended for the connection of Class II appliances, the test voltage applied between live parts shall be 2 000 V and in all other cases, 4 000 V. Start the test at a voltage that does not exceed half the test value and increase it as rapidly as is practicable to the full value. Immediately after this test, repeat the test given in 6.2.

**6.4 EARTHING TEST.** With the appliance inlet and connector fully engaged pass a direct current equal to the rated current of the appliance coupler and at a potential difference of approximately 6 V between the earthing terminal of the appliance inlet and the earthing terminal of the connector. Measure the voltage drop and calculate the resistance of the earth path.

**6.5 TEMPERATURE RISE TEST.** Wire each rewirable connector under test with conductors that are suitable for the rated current of the connector. Test non-rewirable connectors as fitted. Insert the connector into an appliance inlet having brass pins. Pass an alternating current of 1,25 times the rated current through the current-carrying contacts for 1 h then, in the case of a connector that has an earthing contact, pass the current through one current-carrying contact and the earthing contact for 1 h. Determine temperature by means of thermocouples that are so positioned that their effect on the temperature being determined does not influence the results of the test.

## 6.6 CIRCUIT BREAKING CAPACITY TEST.

**6.6.1 Apparatus.**—Use the apparatus shown in Fig. 1 and a d.c. non-inductive circuit as shown in Fig. 2. The apparatus incorporates an appliance inlet having steel pins and dimensions that conform to the appropriate of those given in Annexure 2, 4, 6, 8, 10, 12, 14, 16, 18, or 20, as relevant.

**6.6.2 Procedure.**—Mount the connector in the apparatus and connect it to the circuit. Use a voltage equal to 1,1 times the rated voltage and a current of 1,25 times the rated current. Operate the apparatus for 50 strokes (i.e. insertions and withdrawals) at a rate of 30 strokes a minute, without passing current through the earthing circuit, if any. Then operate the selector switch C, connecting the earthing circuit and accessible metal parts to one of the



50 slae teen dieselfde tempo voltooi. Vervang die penne van die toestelkontak sok nadat elke groep van drie ver binders getoets is.

## 6.7 NORMALE WERKING

6.7.1 *Apparaat*.—Gebruik die apparaat in Fig. 1 aange toon en die stroombaan in Fig. 2 aangetoon.

Die arbeidsfaktor is—

- (a) 0,6 vir ver binders met 'n aangeslane stroom van minder as 10 A, en
- (b) 1,0 vir alle ander ver binders.

6.7.2 *Prosedure*.—Voer die toets teen 'n tempo van 30 slae (d.w.s. instekings en uittrekkings) per minuut uit. Moenie stroom deur die aardingsbaan indien daar 'n aardingsbaan is, stuur nie en bedien in alle ander gevalle uitgesonder 0,2-A-toestelkoppelaars, die kiesskakelaar C, waardeur die aardingsbaan en toeganklike metaaldele met een van die toevoerpole verbind word, nadat die helfte van die getal slae teen die aangeslane stroom voltooi is.

In die geval van 'n 0,2-A-toestelkoppelaar moet die apparaat 2 000 slae voltooi sonder dat daar stroom vloei, en in ander gevalle moet die apparaat 1 000 slae teen die aangeslane stroom voltooi en 3 000 slae sonder dat daar stroom vloei.

Herhaal na afhandeling van hierdie toets die toets in 6.3, maar gebruik in alle gevalle 'n toetsspanning van 1 500 V.

## 6.8 UITTREKKRAG.

6.8.1 *Apparaat*.—Gebruik die apparaat in Fig. 3 met 'n montering A, 'n toestelkontak sok B [kyk 6.8.2 (c)] met staalpenne met harde chroomplatering en so gemonteerd dat hul asse vertikaal en hul vry ente na onder gerig is, en 'n verhittingstoestel C wat die temperatuur van die penne of by  $120 \pm 0 \text{ } ^\circ\text{C}$  (vir warm toestande) of by  $155 \pm 0 \text{ } ^\circ\text{C}$  (vir besonder warm toestande) kan hou.

Die bykomende massastuk G is sodanig dat dit 'n krag gelyk aan een tiende van die toepaslike maksimum uittrekkrag in Tabel 2 uitoefen en die massa van die hoofmassastuk F is sodanig dat tesame met die bykomende massastuk, die klamp, die draer en die verbinder, dit 'n krag gelyk aan die toepaslike maksimum uittrekkrag uitoefen.

### 6.8.2 Toetstoestand.

(a) Gebruik die verhittingstoestel C om die toets vir warm toestande of besonder warm toestande, soos toepaslik, uit te voer.

(b) Toets ver binders wat vir gebruik in warm of besonder warm toestande bedoel is een maal by omgewingstemperatuur en een maal terwyl die temperatuur by die basis van die penne van die toestelkontak sok tot  $120 \pm 2 \text{ } ^\circ\text{C}$  of  $155 \pm 2 \text{ } ^\circ\text{C}$ , soos toepaslik, verhoog is.

(c) Toets ver binders met toestelkontak sokke met penne met die maksimum afmetings en mantels met die minimum binne afmetings in die toepaslike van Aanhangel 2, 4, 6, 8, 10, 12, 14, 18 en 20 gespesifiseer vir die nagaan van die maksimum uittrekkrag en met die ooreenstemmende minimum penafmetings en maksimum mantelbinneafmetings vir beoordeling van die minimum uittrekkrag.

6.8.3 *Prosedure*.—Steek die verbinder 10 maal in die toestelkontak sok wat vir beoordeling van die maksimum uittrekkrag gespesifiseer is in en trek dit tien maal daaruit. Steek dan die verbinder nog een maal in en bevestig dan sonder rubbeweging en deur middel van die draer E en die klamp D die hoof- en bykomende massastuk (F en G) aan die verbinder. Lig dan die bykomende massastuk tot op 'n hoogte van 50 mm bokant die hoofmassastuk en

50 strokes at the same rate. Replace the pins of the appliance inlet after each group of three connectors has been tested.

## 6.7 NORMAL OPERATION

6.7.1 *Apparatus*.—Use the apparatus shown in Fig. 1 and the circuit shown in Fig. 2.

The power factor is—

- (a) 0,6 for connectors having a rated current less than 10 A, and
- (b) 1,0 for all other connectors.

6.7.2 *Procedure*.—Carry out the test at a rate of 30 strokes (i.e. insertions and withdrawals) a minute. Pass no current through the earthing circuit, if any, and, in all cases other than 0,2 A appliance couplers, operate the selector switch C, connecting the earthing circuit and accessible metal parts to one of the poles of the supply, after half the number of strokes at rated current.

In the case of an 0,2 A appliance coupler, operate the apparatus for 2 000 strokes without current flowing, and in all other cases operate the apparatus for 1 000 strokes at rated current and 3 000 strokes without current flowing.

After the completion of this test repeat the test given in 6.3 but use, in all cases, a test voltage of 1 500 V.

## 6.8 WITHDRAWAL FORCE.

6.8.1 *Apparatus*.—Use the apparatus shown in Fig. 3 having a mounting A, an appliance inlet B [see 6.8.2 (c)] with steel pins that are hard chromium-plated and so mounted that their axes are vertical and their free ends are downwards, and a heating device C that is capable of maintaining the temperature of the pins at either  $120 \pm 0 \text{ } ^\circ\text{C}$  (for hot conditions) or  $155 \pm 0 \text{ } ^\circ\text{C}$  (for extra-hot conditions).

The supplementary masspiece G is such that it exerts a force equal to one-tenth of the appropriate maximum withdrawal force given in Table 2 and the mass of the principal masspiece F is such that, together with the supplementary masspiece, the clamp, the carrier, and the connector, it exerts a force equal to the appropriate maximum withdrawal force.

### 6.8.2 Test conditions.

(a) Use the heating device C to carry out the test for hot conditions or extra-hot conditions, as relevant.

(b) Test connectors intended for use in hot or extra-hot conditions once at ambient temperature and once with the temperature at the base of the pins of the appliance inlet raised to  $120 \pm 2 \text{ } ^\circ\text{C}$  or  $155 \pm 2 \text{ } ^\circ\text{C}$ , as relevant.

(c) Test connectors with appliance inlets having pins of the maximum dimensions and shrouds with minimum inner dimensions specified in the relevant of Annexures 2, 4, 6, 8, 10, 12, 14, 16, 18 and 20 for checking the maximum withdrawal force, and of the corresponding minimum pin and maximum shroud inner dimensions for checking the minimum withdrawal force.

6.8.3 *Procedure*.—Insert the connector into and withdraw it 10 times from the appliance inlet specified for checking maximum withdrawal force. Then insert the connector once more and, by means of the carrier E and the clamp D, attach the principal and supplementary masspieces (F and G) to the connector, without jolting. Then raise the supplementary masspiece to a height of 50 mm above the



Herhaal die toets met die ander gespesifiseerde toestelkontak sok en met die hoofmassastuk en die bykomende massastuk vervang deur 'n ander massastuk wat sodanig is dat die massa daarvan plus dié van die verbinder, die klamp en die draer 'n krag uitoefen wat gelyk is aan die toepaslike minimum uittrekkrag in Tabel 2 gespesifiseer.

## 6.9 TOETS VIR BLOOTSTELLING AAN ONOPSETLIKE AANRAKING.

6.9.1 *Apparaat*.—'n Standaardtoetsvinger soos in Bylae 12, Fig. 1 aangetoon. Die toetsvinger word met 'n buigsame leiding verbind deur middel van 'n prop wat in die entgat ingestek word of op 'n ander ekwivalente wyse.

6.9.2 *Prosedure*.—Maak seker dat die toestelkontak sok en verbinder tydens die toets van die nettoevoer gediskonnekteer is. Wend die standaardtoetsvinger aan op die deel wat getoets word en bepaal visueel of kontak tussen die vinger en die deel gemaak word al dan nie. Indien daar twyfel bestaan of daar kontak gemaak word al dan nie en of die deel lewendig is, moet die buigsameleiding van die toetsvinger deur 'n voltmeter met 'n weerstand van minstens 1 000  $\Omega$  per volt defleksie, of deur 'n ander aanwyser met gelykwaardige sensiwiteit, met een pool van 'n 6- tot 12-V-battery verbind word. Verbind die ander pool van die battery met een of albei klemme van die toestelkontak sok of verbinder, soos toepaslik. Defleksie van die wyser van die voltmeter of ander aanwyser moet as 'n aanduiding van kontak beskou word.

## 6.10 MEGANIESE STERKTE.

6.10.1 *Apparaat*.—Gebruik 'n tuimeltrom soos in Fig. 11 aangetoon.

6.10.2 *Voorbereiding van verbinders*.—Voorsien herbedraadbare verbinders van 'n buigsame koord wat ongeveer 100 mm lank is. Toets nie-herbedraadbare verbinders soos hulle aangebring is.

6.10.3 *Prosedure*.—Plaas die verbinder of toestelkontak sok in die tuimeltrom en laat dit vanaf 'n hoogte van 500 mm op 'n 3 mm dik staalplaat val terwyl die trom teen 'n snelheid van 5 omwentelinge per minuut draai. Die getal valle moet soos volg wees:

(a) 500 indien die massa van die verbinder of toestelkontak sok, indien toepaslik sonder kabel of koord, hoogstens 200 g is; en

(b) 100 in alle ander gevalle.

## 6.11 KOORDVERANKERINGSTOETS.

6.11.1 *Voorbereiding van verbinder*.

(a) Bedraad in die geval van 'n herbedraadbare verbinder die verbinder met 'n buigsame koord van die toepaslike tipe en aanslag en maak die klemme net styf genoeg vas om te keer dat die geleiers—

(1) uit hul posisie verskuif; en

(2) genoeg weerstand teen enige trekking op die buigsame koord bied om die resultaat van die toets te beïnvloed.

Maak die koordverankering vas.

(b) Toets nie-herbedraadbare verbinders soos hulle aangebring is.

6.11.2 *Prosedure*.—Bring die verbinder so in die toetsapparaat in Fig. 12 aan dat die as van die kabel of koord vertikaal is waar dit by die verbinder ingaan. Onderwerp dan die kabel of koord 100 maal aan 'n trekkrag van 50 N in die geval van verbinders met 'n aangeslane stroom van hoogstens 2,5 A en van 60 N in die geval van alle ander verbinders.

Wend die trekkrag elke maal slegs een sekonde lank en sonder rukbeweging aan.

Repeat the test using the other appliance inlet specified and with the principal masspiece and the supplementary masspiece replaced by another masspiece such that its mass plus that of the connector, clamp, and carrier exerts a force equal to the appropriate minimum withdrawal force specified in Table 2.

## 6.9 TEST FOR EXPOSURE TO INADVERTENT CONTACT.

6.9.1 *Apparatus*.—A standard test finger as shown in Schedule 12, Fig. 1. The test finger is connected to a flexible lead by means of a plug inserted in the end hole, or by equivalent means.

6.9.2 *Procedure*.—Ensure that the appliance inlet and connector are disconnected from the mains supply during the test. Apply the standard test finger to the part to be tested and determine visually whether or not contact is made between the finger and the part under test. Where there is any doubt as to whether or not contact is made or the part is alive, connect the flexible lead from the test finger through a voltmeter having a resistance of at least 1 000  $\Omega$  per volt of deflection, or through another indicator of equivalent sensitivity, to one pole of a 6-12 V battery. Connect the other pole of the battery to one or both terminals of the appliance inlet or connector as relevant. Deflection of the pointer of the voltmeter, or other indicator, shall be taken to indicate contact.

## 6.10 MECHANICAL STRENGTH.

6.10.1 *Apparatus*.—Use a tumbling barrel as shown in Fig. 11.

6.10.2 *Preparation of Connectors*.—Fit rewirable connectors with flexible cord of length approximately 100 mm. Test non-rewirable connectors as fitted.

6.10.3 *Procedures*.—Place the connector or appliance inlet in the tumbling barrel and allow it to fall from a height of 500 mm on to a steel plate 3 mm thick while rotating the barrel at a rate of 5 r/min, the number of falls being—

(a) 500 if the mass of the connector or appliance inlet, when relevant without cable or cord, does not exceed 200 g; and

(b) 100 in all other cases.

## 6.11 CORD ANCHORAGE TEST.

6.11.1 *Preparation of connector*

(a) in the case of a rewirable connector, wire the connector with a flexible cord of the appropriate type and rating, the terminals being tightened just sufficiently to prevent the conductors from—

(1) changing their position, and

(2) offering sufficient resistance to any pull on the flexible cord to influence the result of the test.

Fasten the cord anchorage.

(b) Test non-rewirable connectors as fitted.

6.11.2 *Procedure*.—Fix the connector in the test apparatus shown in Fig. 12 so that the axis of the cable or cord is vertical where it enters the connector. Then subject the cable or cord 100 times to a pull of 50 N for connectors having a rated current not exceeding 2,5 A and of 60 N for all other connectors. Apply the pull without jerking each time for 1 s only.



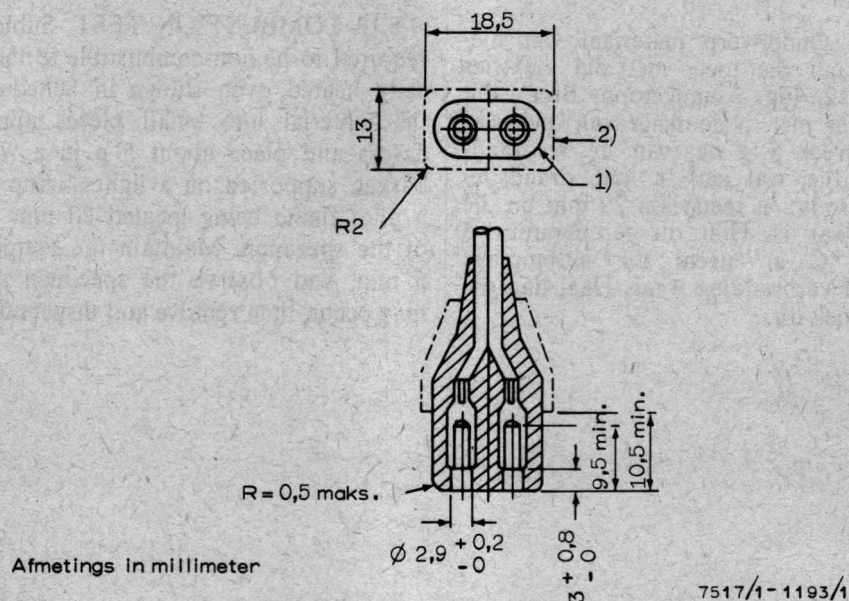
**6.12 ABSORBEERWEERSTAND.** Onderdompel stukke van enige gevormde materiaal wat by die vervaardiging van die toestelkoppelaar gebruik word, 48 uur lank in gedistilleerde water wat by 'n temperatuur van  $20 \pm 2^\circ\text{C}$  gehou word en ondersoek hulle daarna.

**6.13 BRANDTOETS.** Onderwerp materiaal wat nie-brandbaar moet wees, aan die toets met die elektries verhitte oond in Bylae 12, Fig. 2 aangetoon. Breek die materiaal in klein stukkies met 'n deursnee van ongeveer 2-4 mm en plaas ongeveer 5 g daarvan in 'n draadmandjie. Plaas die mandjie, wat aan 'n ligte draadstiebeuel hang, in die oond sodat 'n toetsvlam 20 mm bo die bo-ent van die eksemplaar is. Hou die temperatuur 5 minute lank by  $300^\circ\text{C}$  en neem die eksemplaar vir enige ontvlaming of verbranding waar. Haal dan die eksemplaar uit en ondersoek dit.

**6.12 ABSORPTION RESISTANCE.** Immerse portions of any moulded material used in the construction of the appliance coupler for 48 h in distilled water maintained at a temperature of  $20 \pm 2^\circ\text{C}$  and then inspect them.

**6.13 COMBUSTION TEST.** Subject materials that are required to be non-combustible to the test with the electrically heated oven shown in Schedule 12, Fig. 2. Break the material into small pieces approximately 2-4 mm across and place about 5 g in a wire basket. Place the basket, supported on a light stirrup of wire, in the oven, a pilot flame being located 20 mm above the upper end of the specimen. Maintain the temperature at  $300^\circ\text{C}$  for 5 min, and observe the specimen and any ignition that may occur, then remove and inspect the specimen.





Die hartafstand en die ontwerp van die kontakte asook die afmetings en die ontwerp van die voorste deel moet sodanig wees dat—

(1) die verbinder onder 'n krag van hoogstens 60 N oor die volle diepte in die maat in Fig. 4 ingaan en nie onder 'n krag van 60 N in die mate in Fig. 7, 8 en 9 ingaan nie;

(2) die verbinder aan die toepaslike vereistes van Klousule 4.6 en 4.7 voldoen; en

(3) die dikte van die isolering om die kontakte minstens 1,5 mm is.

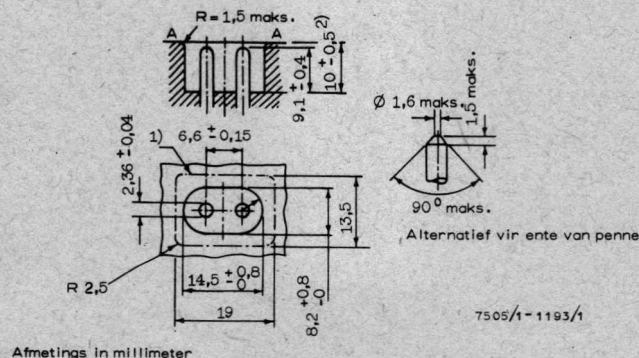
Die buitelyn (1) van die voorste deel mag nie binne 'n

afstand van 10,5 mm vanaf die inskakelingsvlak oorskry word nie.

Die oppervlakte (2) van die agterste deel mag nie in enige deursnee loodreg op die as van die verbinder oorskry word nie, met die uitsondering dat, in die geval van verbinders met sykoördinate en dié wat met ander bybehore gekombineer is, hierdie beperking nie in die rigting van die as van die koord of van die aktiverings-deel geld nie.

#### AANHANGSEL 1

0,2-A-verbinder vir Klas II-toestelle vir koue toestande (slegs nie-herbedraadbaar).

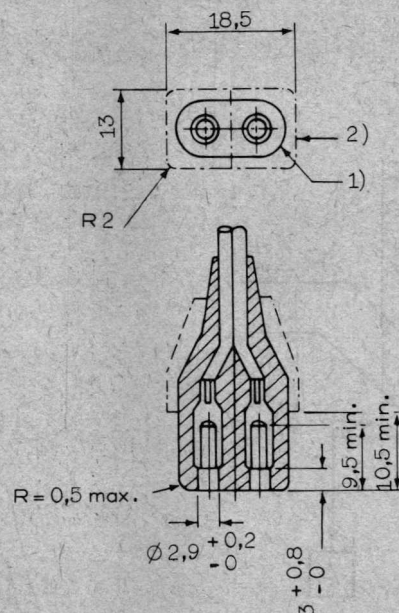


Die ente van die penne kan bolvormig of keëlvormig wees, soos aangetoon.

Binne die oppervlakte (1) mag die afstand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 10,5 mm wees. Keertoestelle of dele daarvan kan eger

die oppervlak gekrom of skuins ten opsigte van die as van die toestelkontak sok is, mag afmeting (2) hoogstens 10,5 mm wees.





Dimensions in millimetres

7517/1-1193/1

The centre distance and the design of the contacts as well as the dimensions and the design of the front part shall be such that—

(1) the connector enters, to the full depth, the gauge shown in Fig. 4 with a force not exceeding 60 N and will not enter into gauges shown in Figs. 7, 8 and 9 with a force of 60 N;

(2) the connector complies with the relevant requirements of Clauses 4.6 and 4.7; and

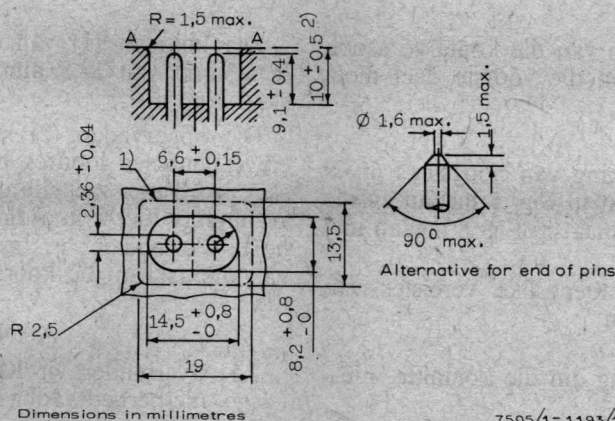
(3) the thickness of the insulation surrounding the contacts is at least 1,5 mm.

The outline (1) of the frontpart shall not be exceeded within a distance of 10,5 mm from the engagement face.

The area (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation does not apply in the direction of the axis of the cord or of the actuating member.

#### ANNEXURE 1

0,2 A Connector for Class II appliances for cold conditions (non-rewirable only).



Dimensions in millimetres

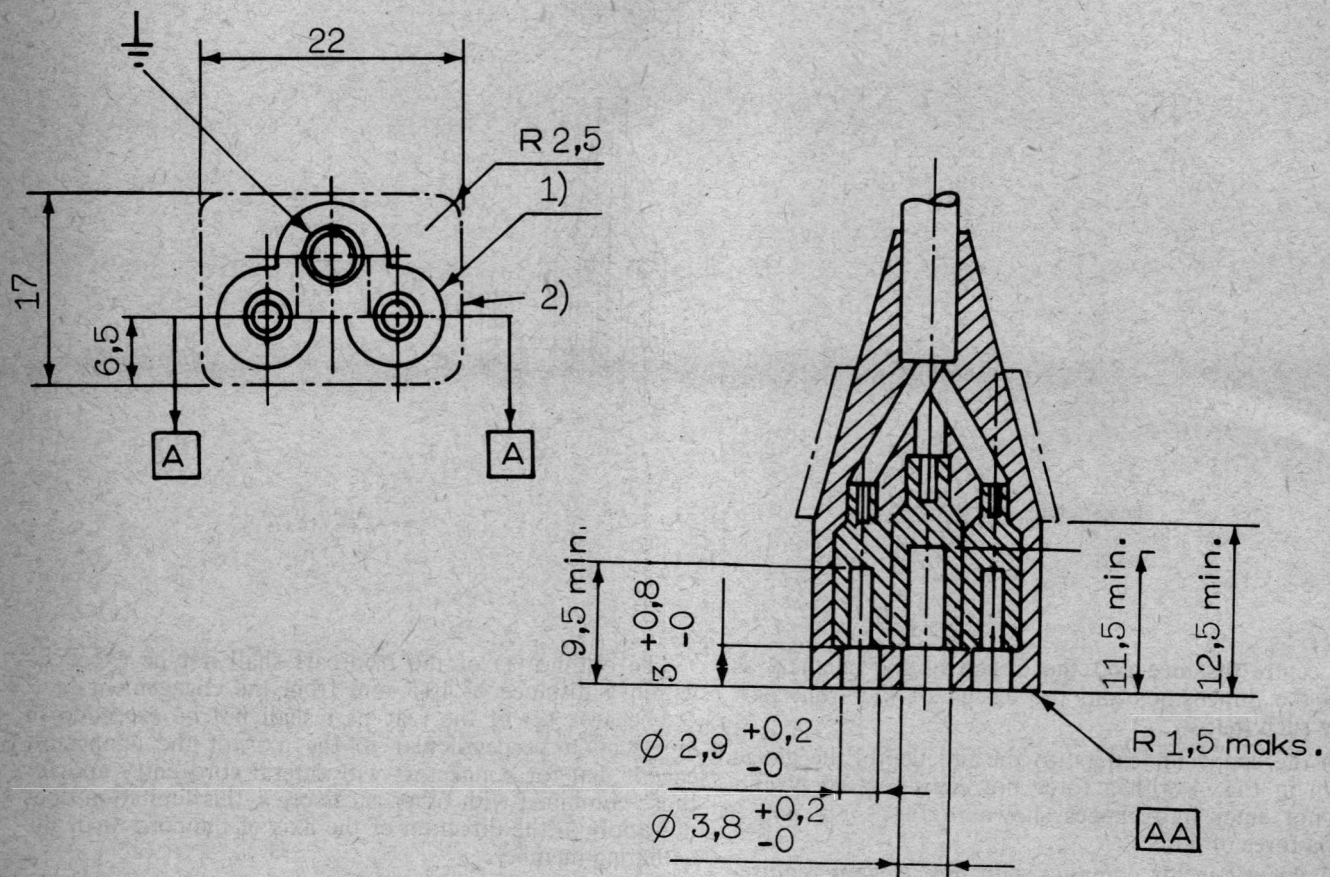
7505/1-1193/1

The ends of the pins may be spherical or conical of the form shown.

Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 10,5 mm.

surface of equipment and if this surface is curved or inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 10,5 mm.

#### ANNEXURE 2



Afmetings in millimeter

7516/1-1193/1

Die hartafstand en die ontwerp van die kontakte asook die afmetings en die ontwerp van die voorste deel moet sodanig wees dat—

(1) die verbinder onder 'n krag van hoogstens 60 N oor die volle diepte in die maat in Fig. 5 ingaan en nie onder 'n krag van 60 N in die maat in Fig. 8 ingaan nie;

(2) die verbinder aan die toepaslike vereistes van Klousule 4.6 en 4.7 voldoen; en

(3) die dikte van die isolering om die kontakte minstens 1,5 mm is.

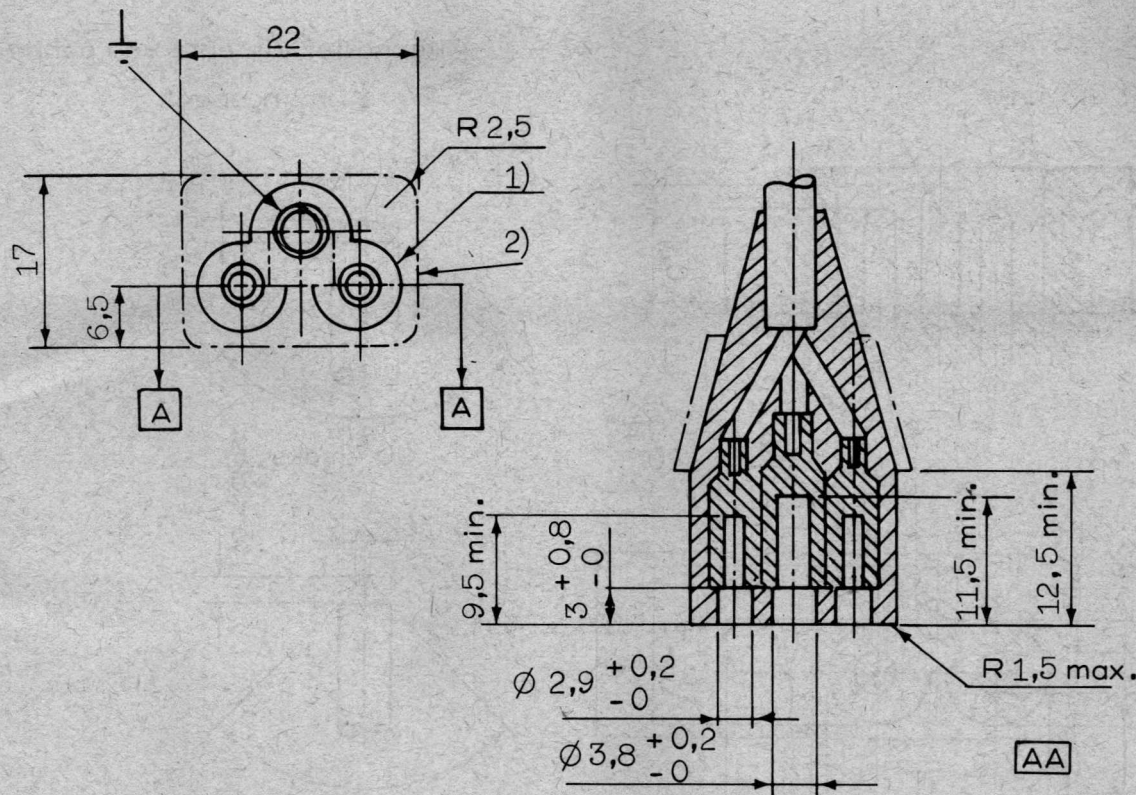
Die buitelyn (1) van die voorste deel mag nie binne 'n afstand van 12,5 mm vanaf die inskakelingsvlak oorskry word nie.

Die oppervlakte (2) van die agterste deel mag nie in enige deursnee loodreg op die as van die verbinder oorskry word nie, met die uitsondering dat, in die geval van verbinders met sykoordinlate en dié wat met ander bybehore gekombineer is, hierdie beperking nie in die rigting van die as van die koord of van die aktiveringsdeel geld nie.

### AANHANGSEL 3

2,5-A-verbinder vir Klas I-toestelle vir koue toestande (slegs nie-herbedraadbaar).





Dimensions in millimetres

7516/1-1193/1

The centre distance and the design of the contacts as well as the dimensions and the design of the front part shall be such that—

(1) the connector enters, to the full depth, the gauge shown in Fig. 5 with a force not exceeding 60 N and will not enter into the gauge shown in Fig. 8 with a force of 60 N;

(2) the connector complies with the relevant requirements of Clauses 4.6 and 4.7; and

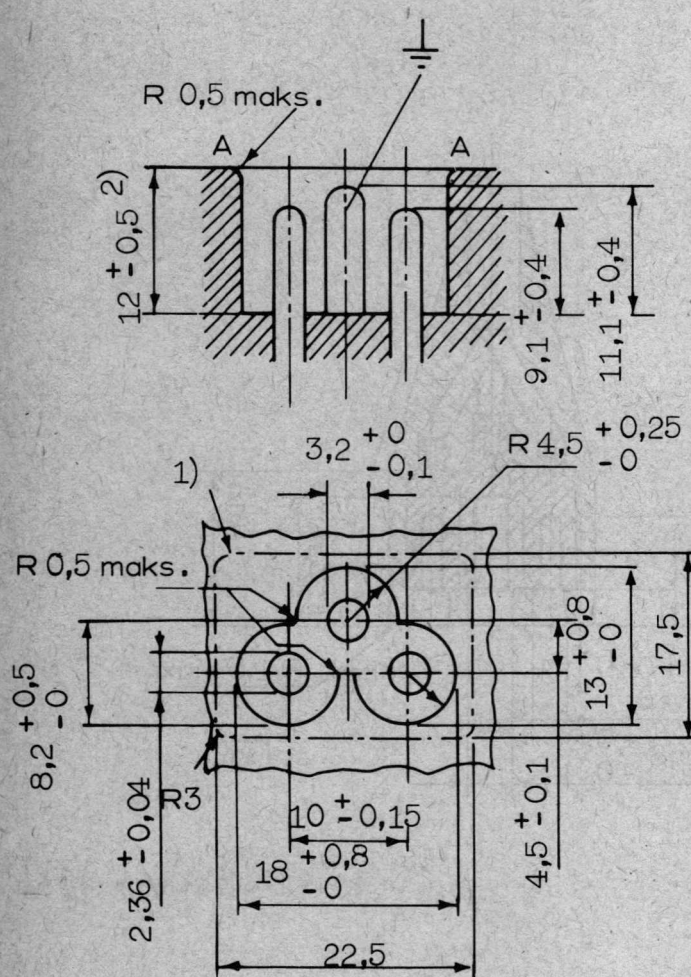
(3) the thickness of the insulation surrounding the contacts is at least 1,5 mm.

The outline (1) of the front part shall not be exceeded within a distance of 12,5 mm from the engagement face.

The area (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation does not apply in the direction of the axis of the cord or of the actuating member.

### ANNEXURE 3

2,5 A Connector for Class I appliances for cold conditions (non-rewirable only).



Afmetings in millimeter

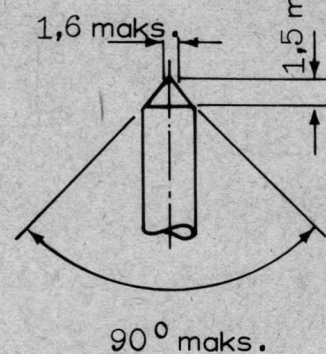
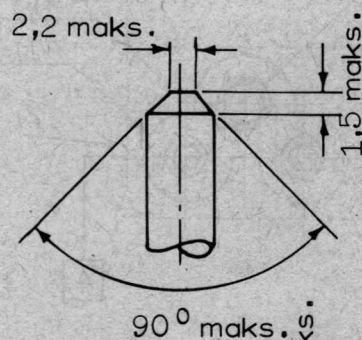
Die ente van die penne kan bolvormig of keëlvormig wees, soos aangetoon.

Binne die oppervlakte (1) mag die afstand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 12,5 mm wees. Keertoestelle of dele daarvan kan egter binne die oppervlakte (1) wees.

(2) In die geval van toestelkontak sokke wat versink in die buiteoppervlak van uitrusting aangebring is en indien

Alternatief vir ente van penne

Aardingspen



Stroomdraende pen

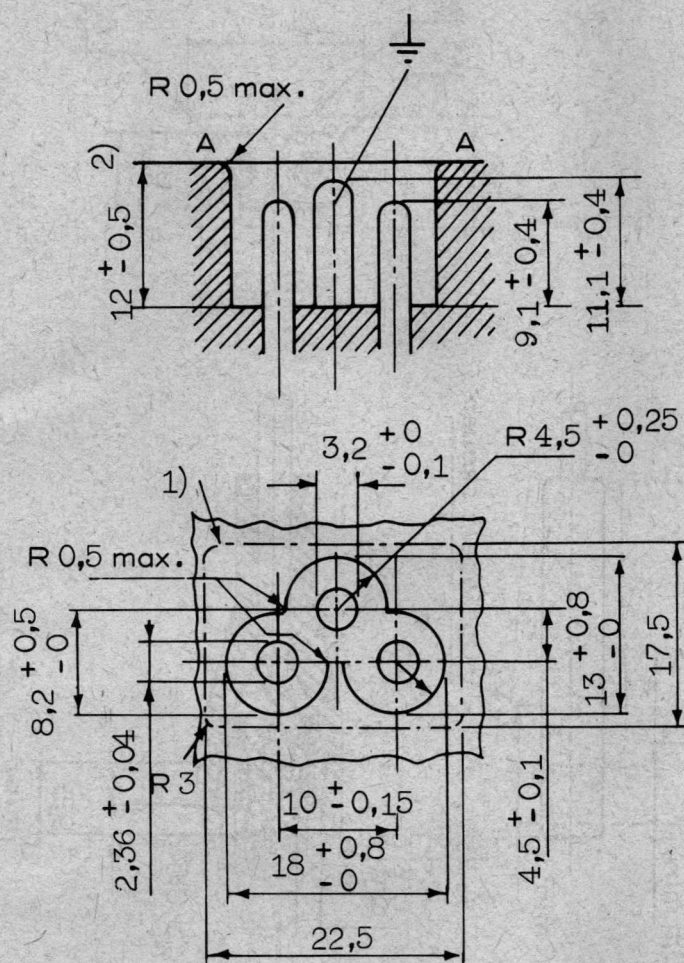
7520/1-1193/1

hierdie oppervlak gekrom of skuins ten opsigte van die as van die toestelkontak sok is, mag afmeting (2) hoogstens 12,5 mm wees.

#### AANHANGSEL 4

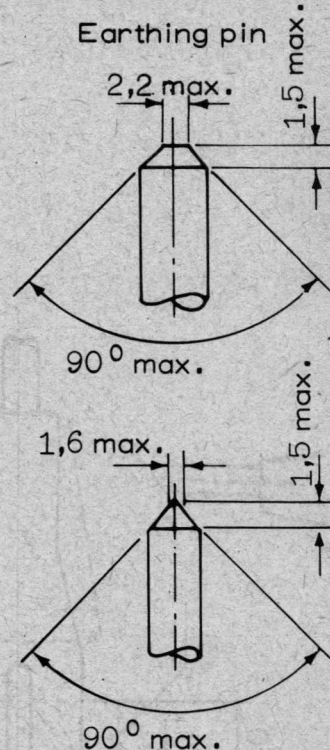
2,5-A-toestelkontak sok vir Klas I-toestelle vir koue toestande.





Dimensions in millimetres

Alternative for ends of pins



Current-carrying pin

7520/1-1193/1

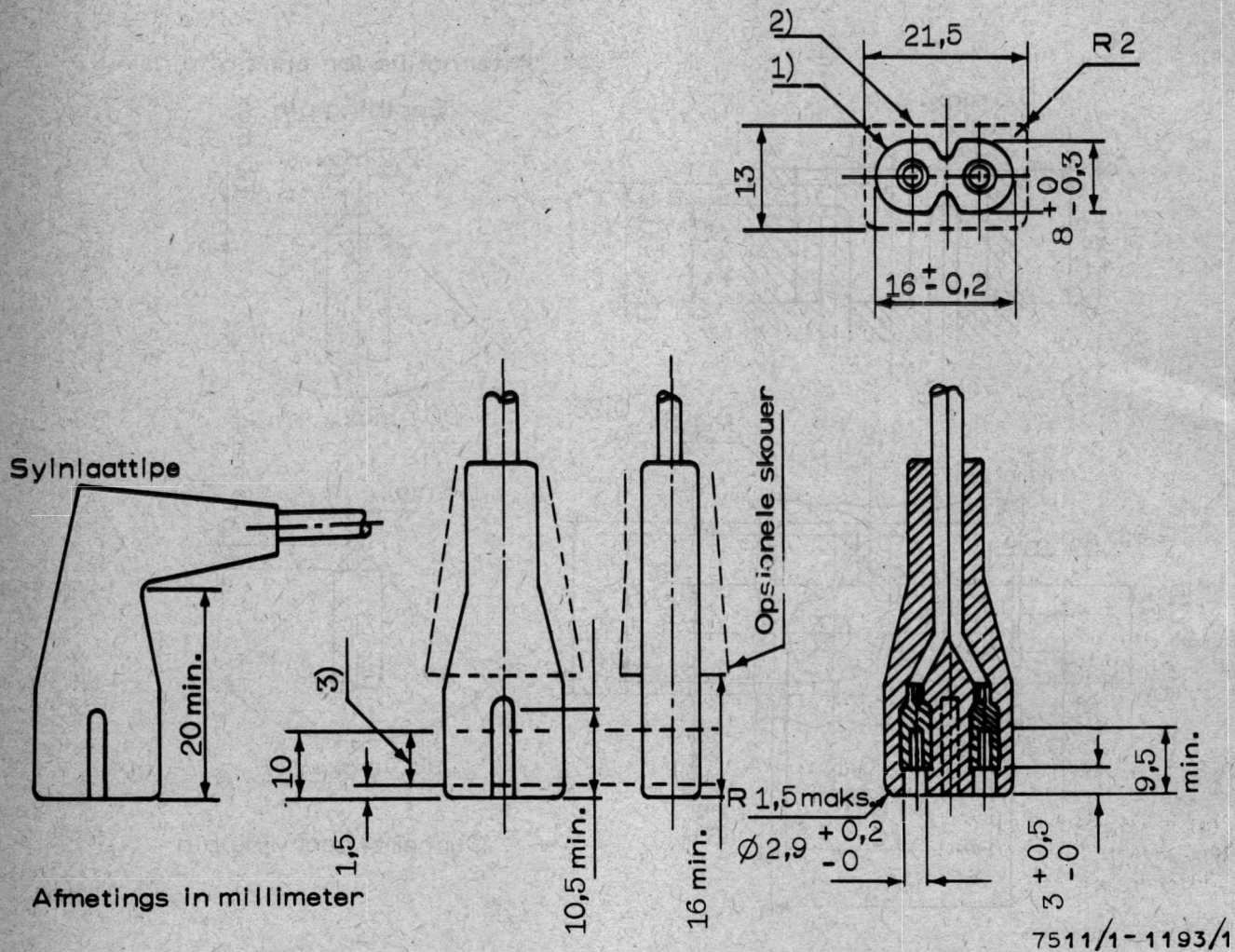
The ends of the pins may be spherical or conical of the form shown.

Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 12,5 mm. However, retaining devices or parts thereof may be within the area (1).

For appliance inlets arranged countersunk in the outer surface of equipment and if this surface is curved or inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 12,5 mm.

## ANNEXURE 4

2.5 Appliance inlet for Class I appliances for cold conditions.



Die hartafstand en die ontwerp van die kontakte asook die afmetings en die ontwerp van die voorste deel moet sodanig wees dat—

(1) die verbinder onder 'n krag van hoogstens 60 N oor die volle diepte in die maat in Fig. 6 ingaan en nie onder 'n krag van 60 N in die mate in Fig. 8 en 9 ingaan nie;

(2) die verbinder aan die toepaslike vereistes van Klousule 4.6 en 4.7 voldoen; en

(3) die dikte van die isolering om die kontakte minstens 1,5 mm is.

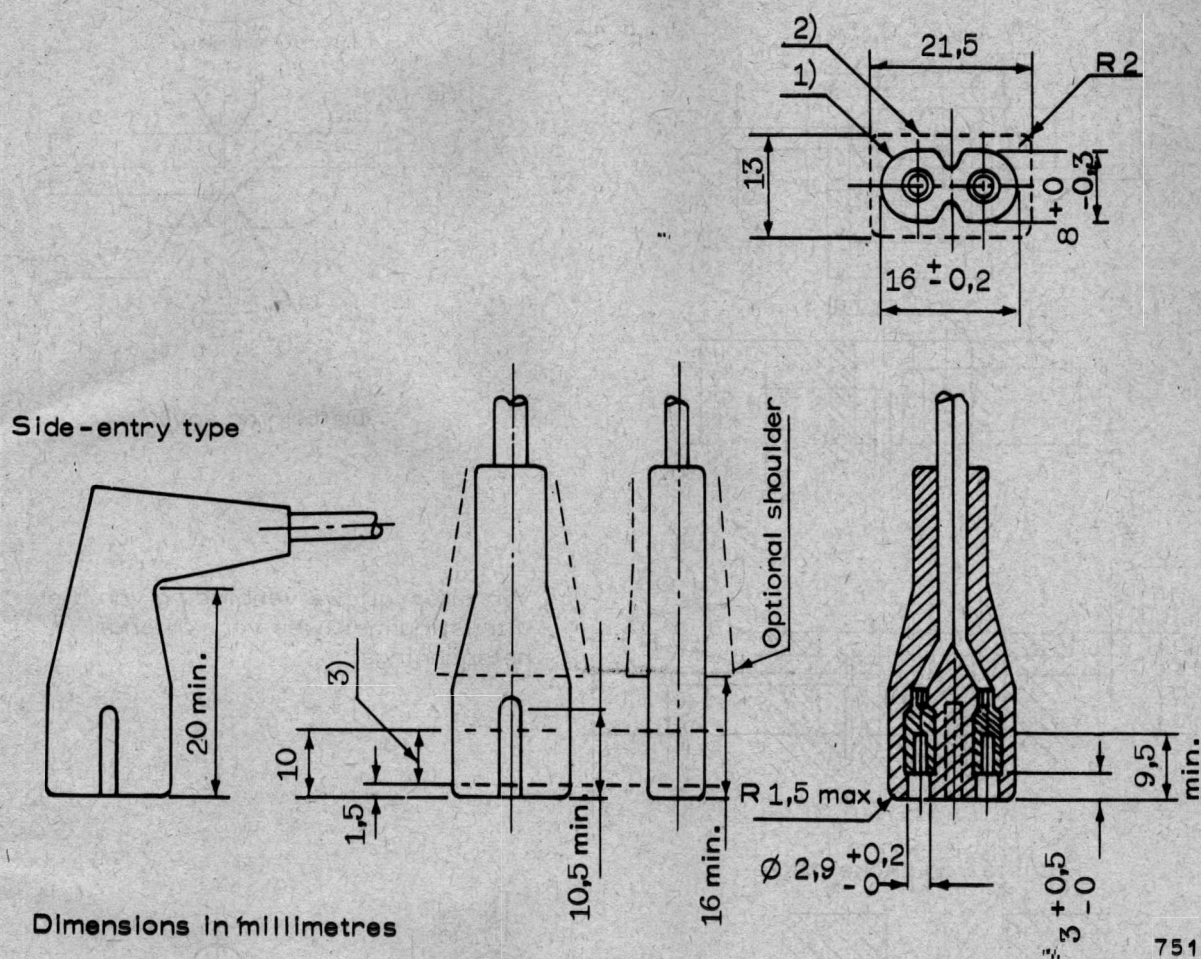
Die buitelyn (1) van die voorste deel mag nie binne 'n afstand van 12,5 mm vanaf die inskakelingsvlak oorskry word nie.

Die oppervlakte (2) van die agterste deel mag nie in enige deursnee loodreg op die as van die verbinder oorskry word nie, met die uitsondering dat, in die geval van verbinders met sykoördinate en dié wat met ander bybehore gekombineer is, hierdie beperking nie in die rigting van die as van die koord of van die aktiveringsdeel geld nie.

#### AANHANGSEL 5

2,5-A-verbinder vir Klas II-toestelle vir koue toestande (slegs nie-herbedraadbaar).





7511/1-1193/1

The centre distance and the design of the contacts as well as the dimensions and the design of the front part shall be such, that—

(1) the connector will enter, to the full depth, the gauge shown in Fig. 6 with a force not exceeding 60 N and will not enter into the gauges shown in Fig. 8 and 9 with the force of 60 N;

(2) the connector complies with the relevant requirements of Clauses 4.6 and 4.7; and

(3) the thickness of the insulation surrounding the contacts is at least 1.5 mm.

The outline (1) of the front part shall not be exceeded within a distance of 10.5 mm from the engagement face.

The area (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation does not apply in the direction of the axis of the cord or of the actuating member.

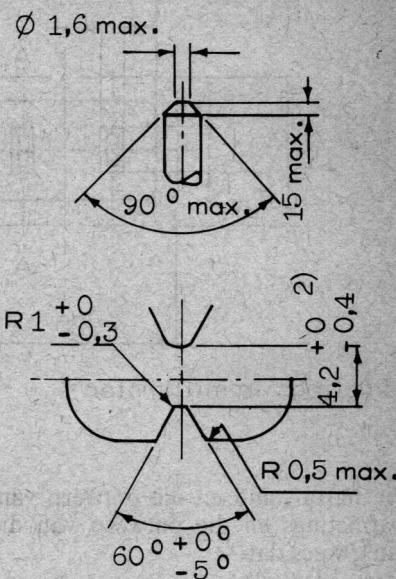
#### ANNEXURE 5

2.5 A Connector for Class II appliances for cold conditions (non-wirable only).



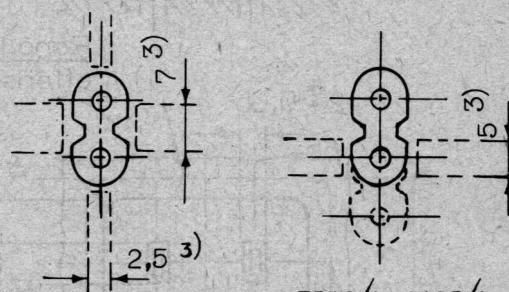


### Alternative for end of pins



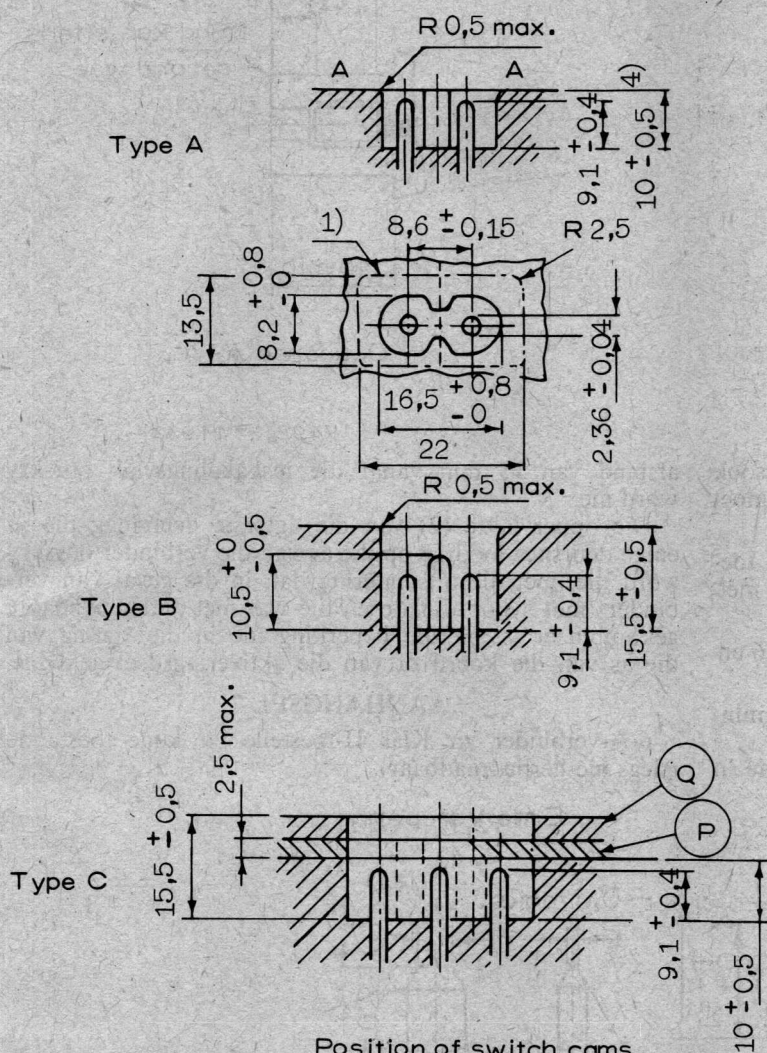
### Detail of keys

For alternative connection of the equipment to two different mains voltages

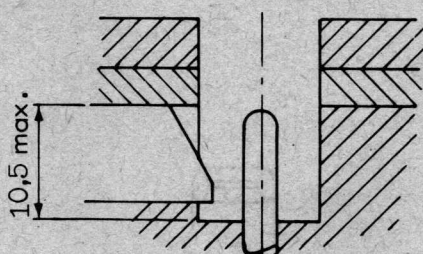


7519/1-1193/1

Dimensions in millimetres



### Position of switch cams



The operation of the switch shall be effected 1,5 mm before full engagement of the connector.

## ANNEXURE 6

2,5 A Appliance inlet for Class II appliances for cold conditions.

The ends of the pins may be spherical or conical of the form shown.

Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 10,5 mm in the case of Type A or 16 mm in the case of Types B or C.

Retaining devices or parts thereof may be within the area (1).

The hole in part P shall have no keys.

The configuration of the hole in part Q shall be oval having minimum dimensions 8,2 mm x 25,1 mm and shall have no keys.

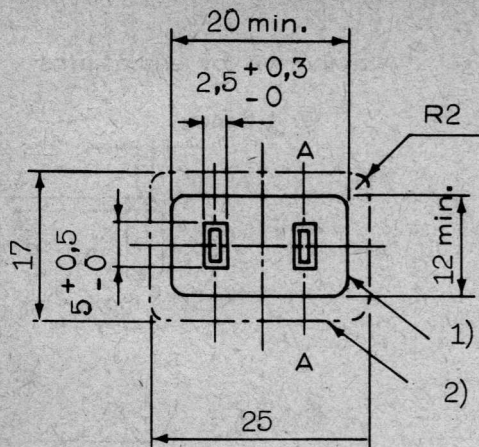
inserted between the ridges of the appliance inlet with a force of 30 N, it shall not touch the bottom of the inlet.

(3) Minimum dimensions of the switch cams.

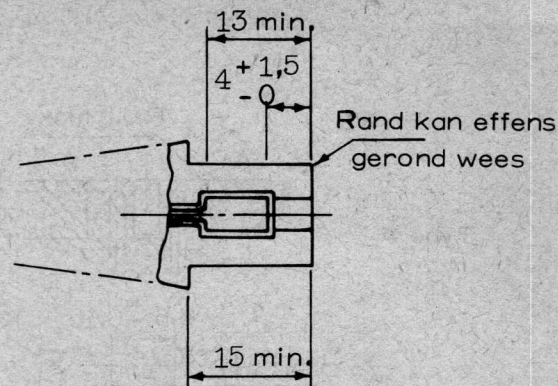
(4) For appliance inlets of Type A, arranged counter-sunk in the outer surface of equipment, and if this surface is curved or inclined with respect to the axis of the appliance inlet, this dimension shall not be more than 10,5 mm.

Appliance inlets of Types B and C shall not be mounted in surfaces of equipment which are curved or inclined with respect to the axis of the appliance inlet.

ANNEXURE 6 (continued)



Afmetings in millimeter



Deursnee A - A

7498/1-1193/1

Die hartafstand en die ontwerp van die kontakte asook die afmetings en die ontwerp van die voorste deel moet sodanig wees dat—

(1) die verbinder oor die volle diepte ingaan in 'n toestelkontak sok soos in Aanhangel 8 aangetoon en met die minimum breedte en wydte;

(2) die verbinder aan die vereistes van Klousule 4.6 en 4.7 voldoen; en

(3) die dikte van die isolering om die kontakte minstens 2 mm is.

Die buitelyn (1) van die voorste deel mag nie binne 'n

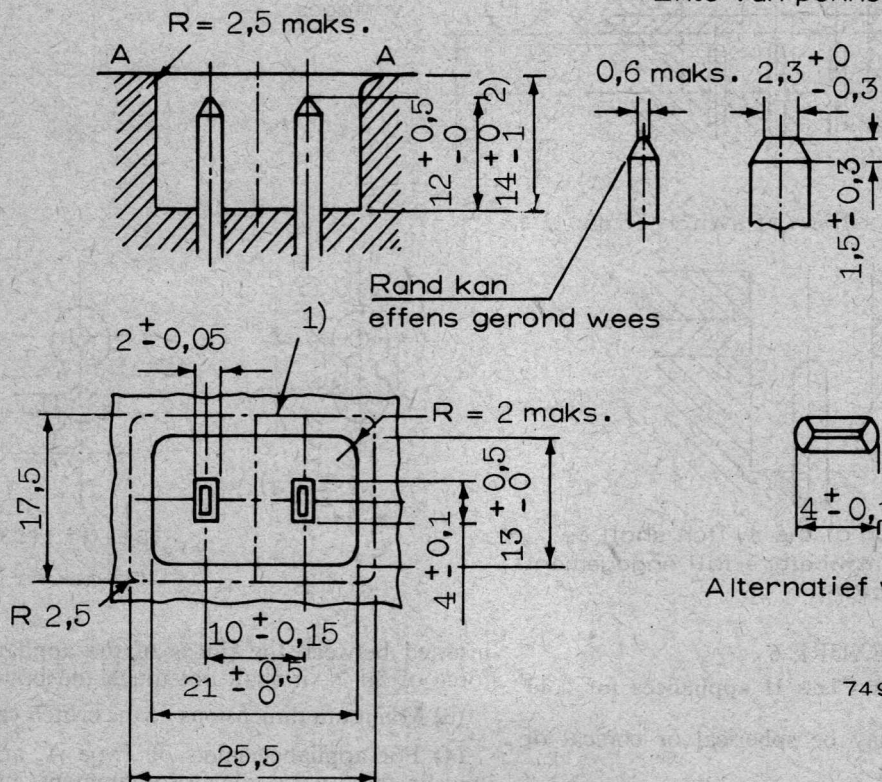
afstand van 15 mm vanaf die inskakelingsvlak oorskry word nie.

Die oppervlakte (2) van die agterste deel mag nie in enige deursnee loodreg op die as van die verbinder oorskry word nie, met die uitsondering dat, in die geval van verbinders met sykoördinate en dié wat met ander bybehore gekombineer is, hierdie beperking nie in die rigting van die as van die koord of van die aktiveringsdeel geld nie.

#### AANHANGSEL 7

6-A-verbinder vir Klas II-toestelle vir koue toestande (slegs nie-herbedraadbaar).

#### Ente van penne



Alternatief vir vorm van penne

7497/1-1193/1

Afmetings in millimeter

Die ente van die penne kan bolvormig of keëlvormig wees, soos aangetoon.

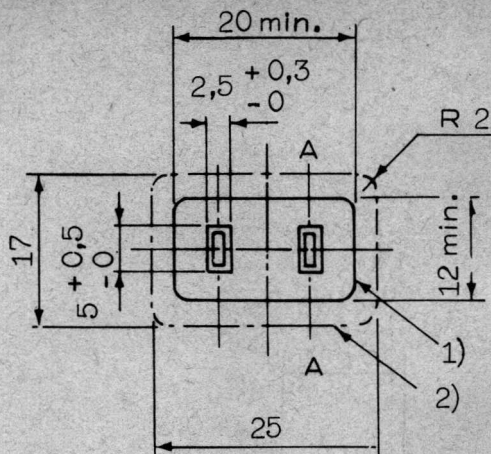
Binne die oppervlakte (1) mag die afstand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 14 mm wees. Keertoestelle of dele daarvan kan egter binne die oppervlakte (1) wees.

buiteoppervlak van uitrusting aangebring is en indien hierdie oppervlak gekrom of skuins ten opsigte van die as van die toestelkontak sok is, mag afmeting (2) hoogstens 14 mm wees.

#### AANHANGSEL 8

6-A-toestelkontak sok vir Klas II-toestelle vir koue toe-

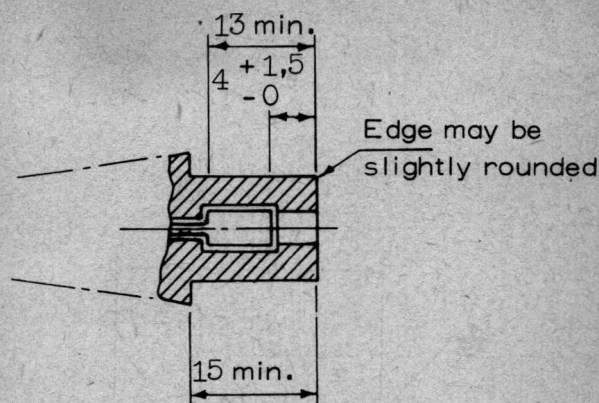




Dimensions in millimetres

The centre distance and the design of the contacts as well as the dimensions and the design of the front part shall be such that—

- (1) the connector will enter, to the full depth, an appliance inlet shown in Annexure 8, having the minimum breadth and width;
- (2) the connector complies with the requirements of Clauses 4.6 and 4.7; and
- (3) the thickness of the insulation surrounding the contacts is at least 2 mm.



Section A-A

7498/1-1193/1

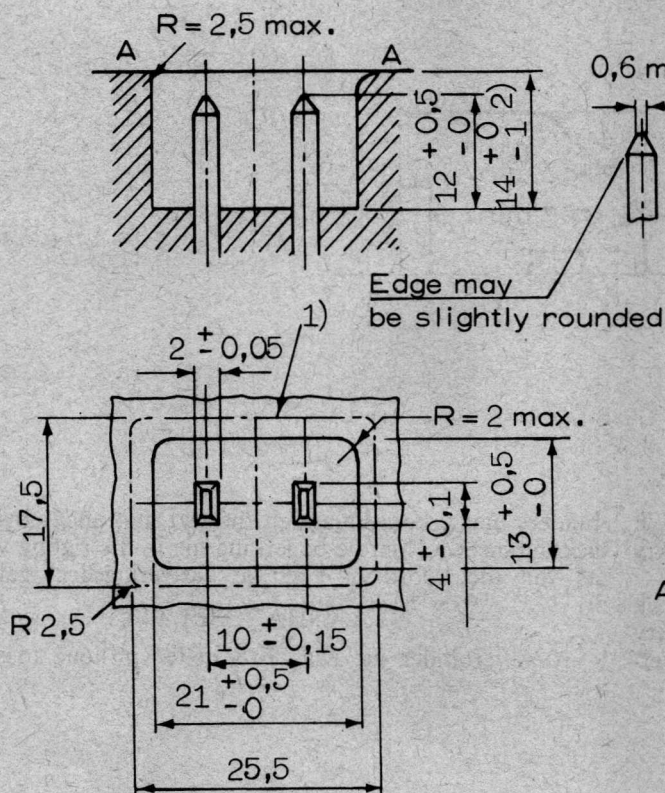
The outline (1) of the front part shall not be exceeded within a distance of 15 mm from the engagement face.

The area (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation does not apply in the direction of the axis of the cord or of the actuating member.

## ANNEXURE 7

6 A Connector for Class II appliances for cold conditions (non-rewirable only).

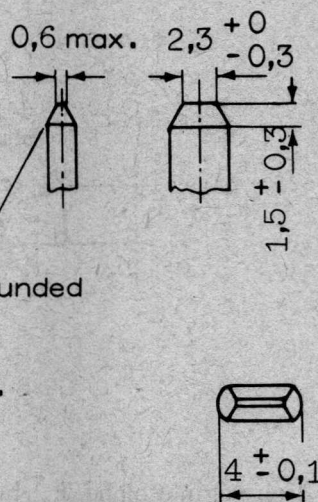
End of pins



Dimensions in millimetres

The ends of the pins may be spherical or conical of the form shown.

Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 14 mm. However, retaining devices or nests thereof may be within the

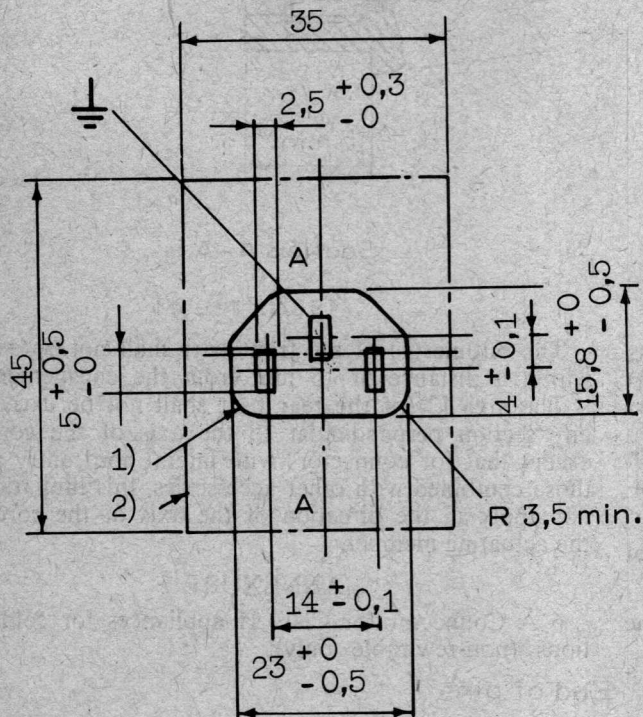


### Alternative for shape of pins

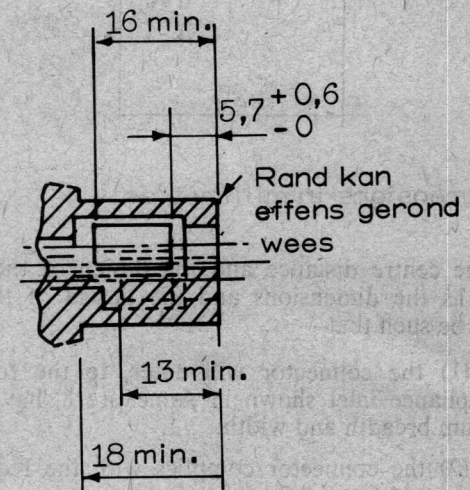
7497/1-1193/1

surface of equipment and if this surface is curved or inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 14 mm.

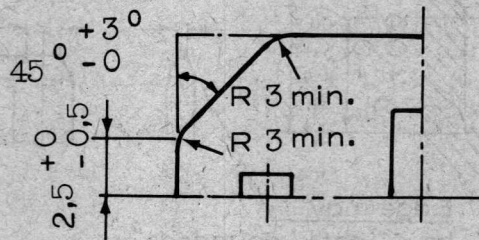
## ANNEXURE 8



Deursnee A-A



7510/1-1193/1



Afmetings in millimeter

Die buitelyn (1) van die voorste deel mag nie binne 'n afstand van 18 mm vanaf die inskakelingsvlak oorskry word nie.

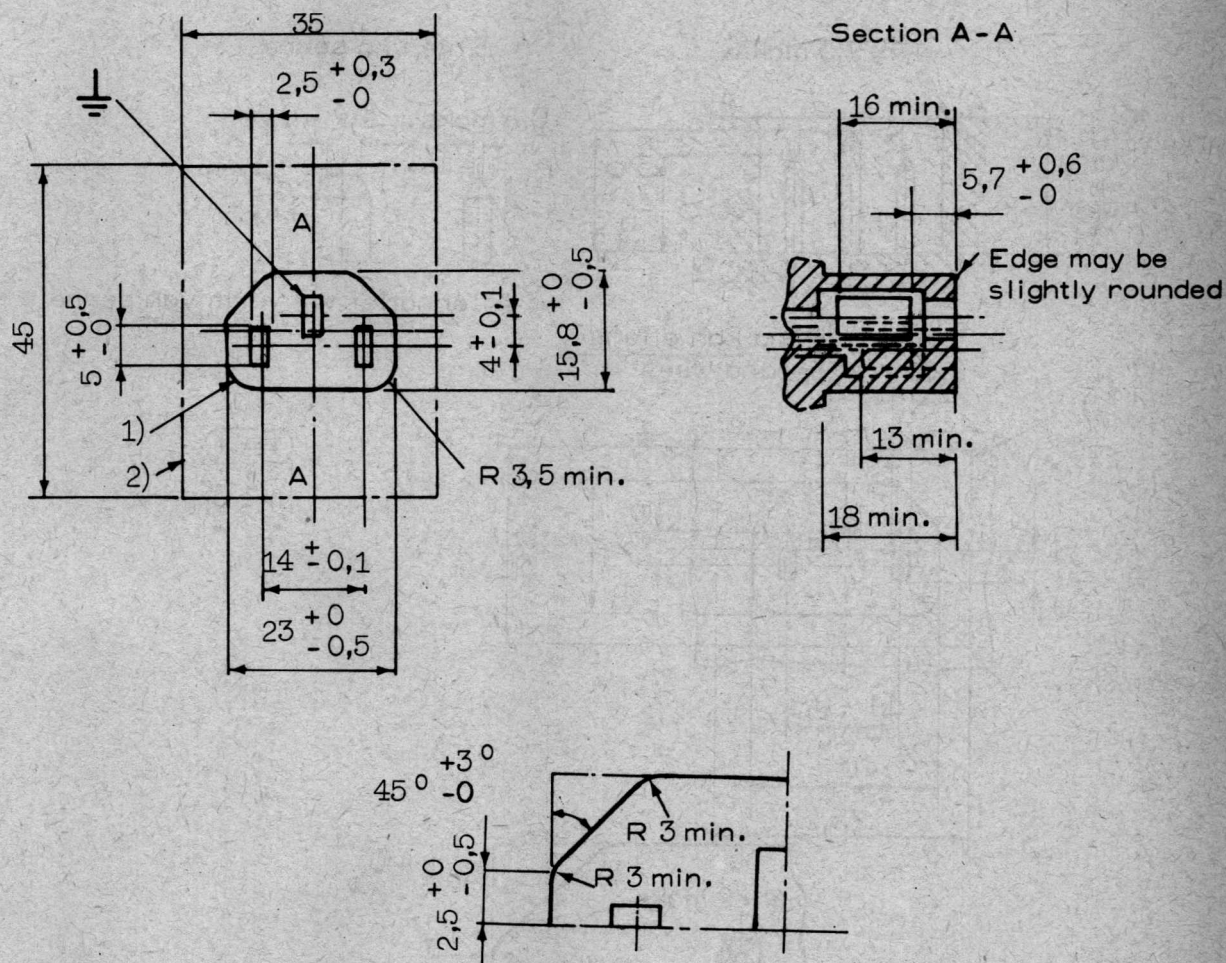
Die oppervlakte (2) van die agterste deel mag nie in enige deursnee loodreg op die as van die verbinder oorskry word nie, met die uitsondering dat, in die geval van ver-

binders met sykoördinate en dié wat met ander bybehore gekombineer is, hierdie beperking nie in die rigting van die as van die koord of van die aktiveringsdeel geld nie.

## AANHANGSEL 9

10-A-verbinder vir Klas I-toestelle vir koue toestande.





Dimensions in millimetres

7510/1-1193/1

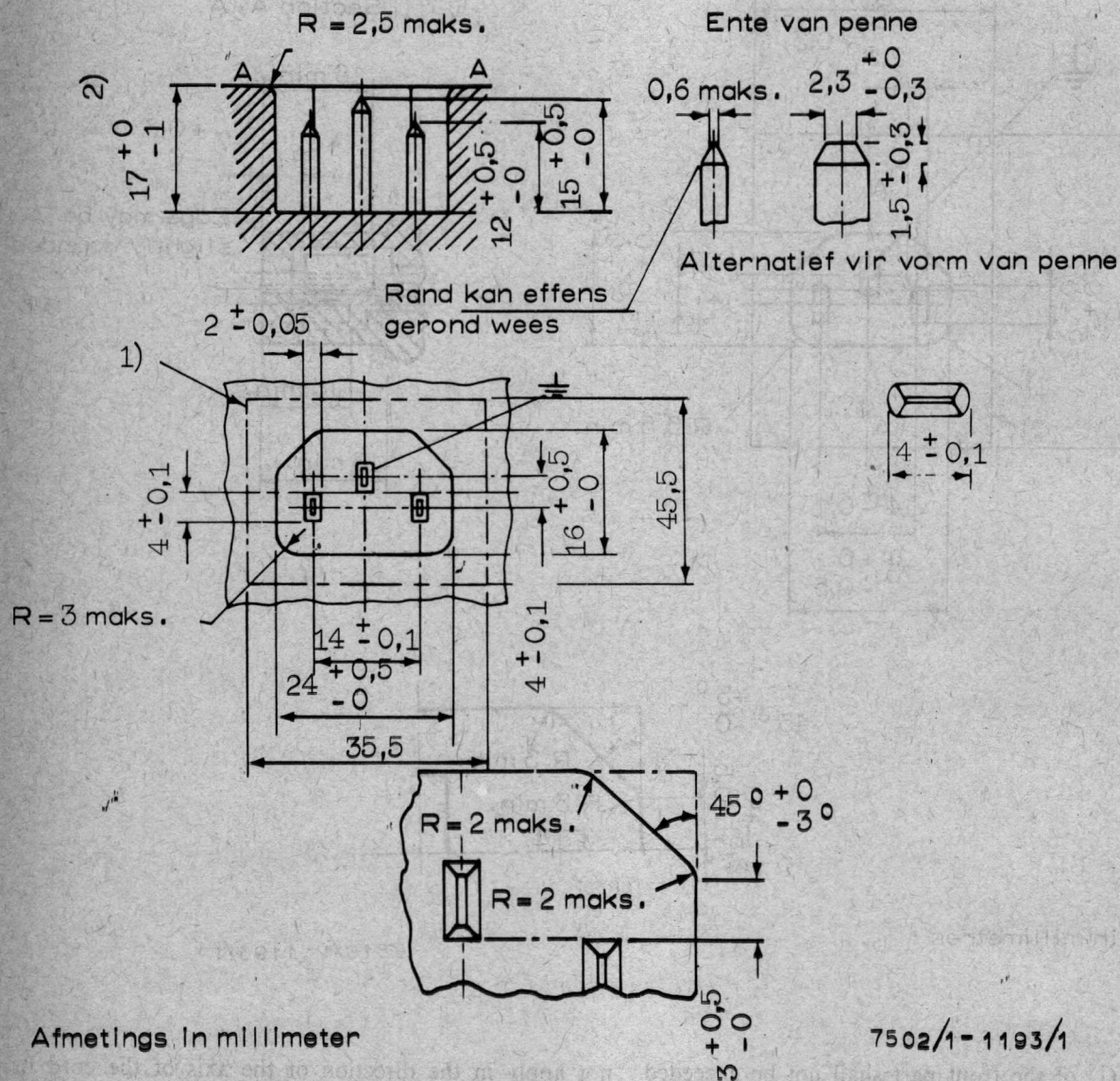
The outline (1) of the front part shall not be exceeded within a distance of 18 mm from the engagement face.

The area (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation does

not apply in the direction of the axis of the cord or of the actuating member.

#### ANNEXURE 9

10 A Connector for Class I appliance for cold conditions.



Binne die oppervlakte (1) mag die afstand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 17 mm wees. Keertoestelle of dele daarvan kan egter binne die oppervlakte (1) wees.

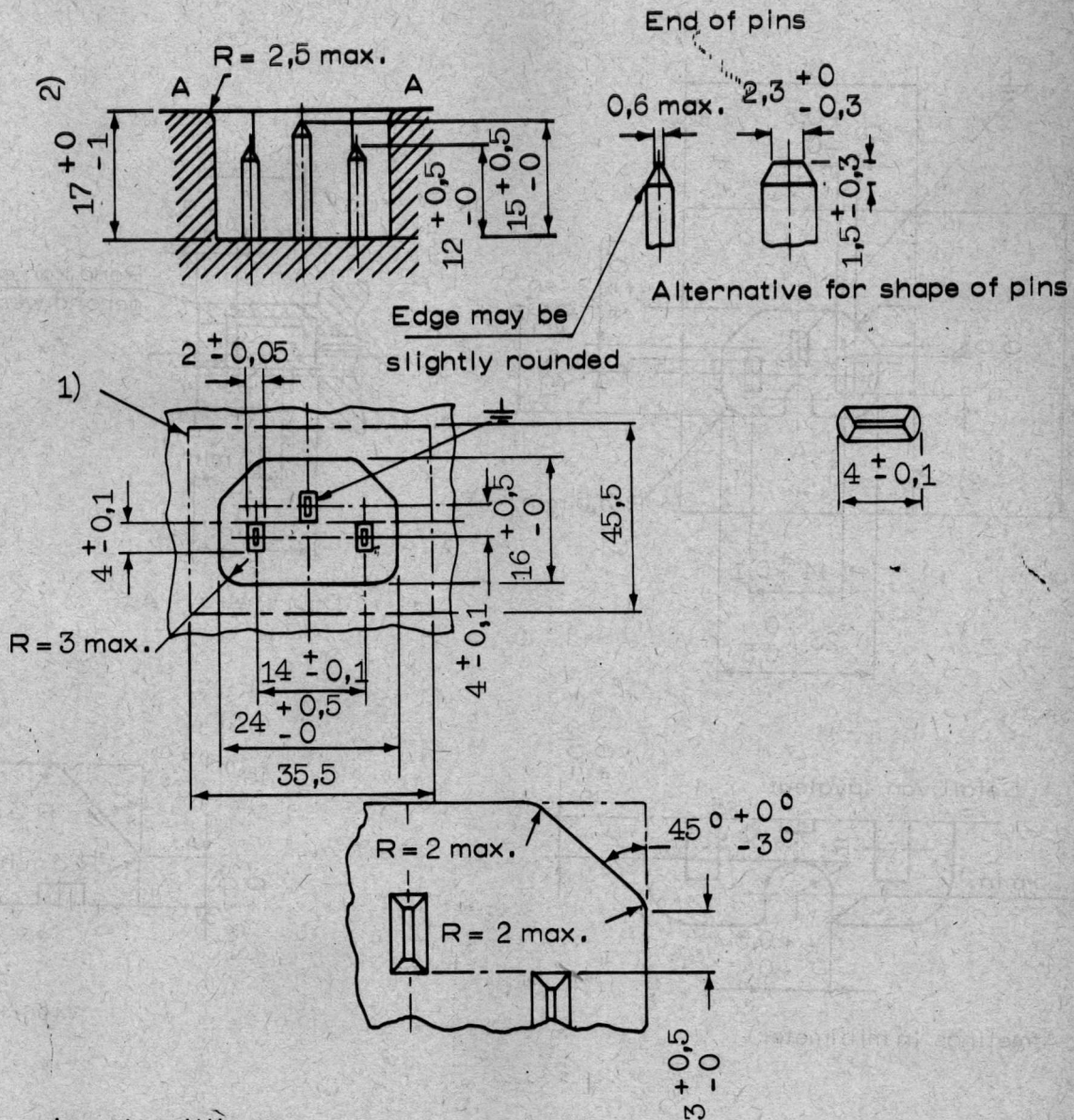
In die geval van toestelkontak sokke wat versink in die buiteoppervlak van uitrusting aangebring is en indien hier-

die oppervlak gekrom of skuins ten opsigte van die as van die toestelkontak sok is, mag afmeting (2) hoogstens 17 mm wees.

#### AANHANGSEL 10

10-A-toestelkontak sok vir Klas I-toestelle vir koue toe-stande.





Dimensions in millimetres

7502/1-1193/1

Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 17 mm. However, retaining devices or parts thereof may be within the area (1).

For appliance inlets arranged countersunk in the outer surface of equipment and if this surface is curved or

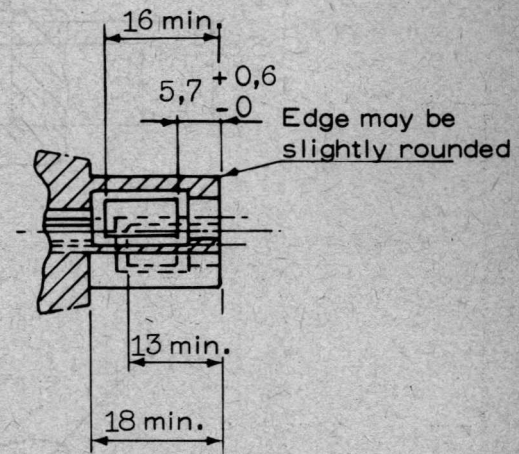
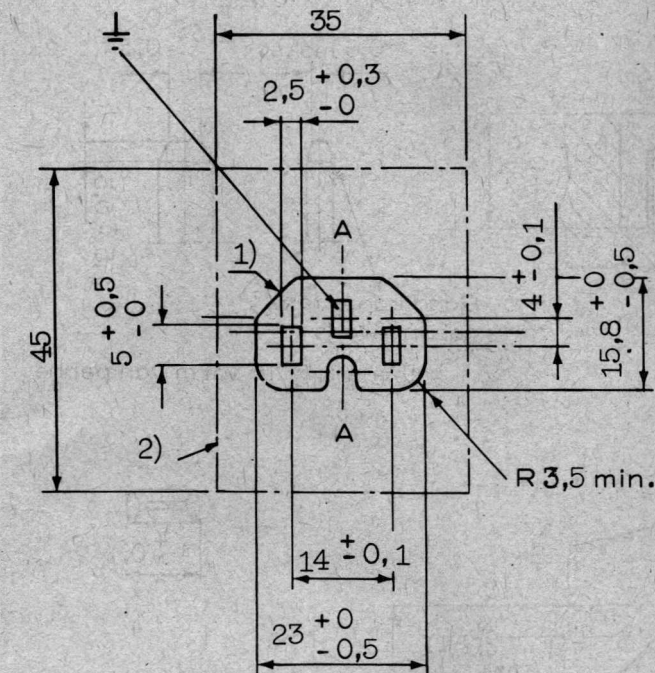
inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 17 mm.

## ANNEXURE 10

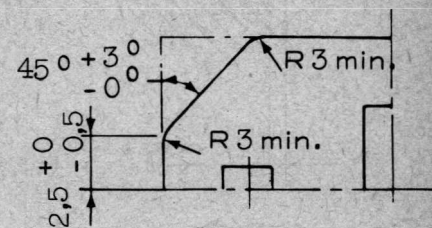
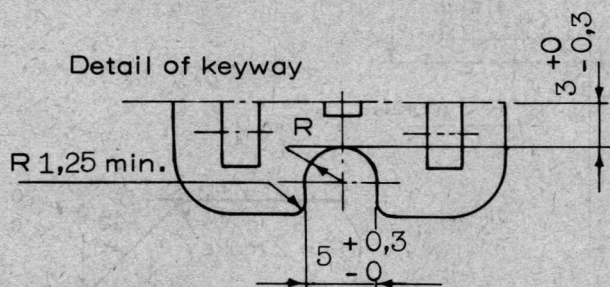
10 A Appliance inlet for Class I appliances for cold conditions.







Section A-A



Dimensions in millimetres

7496/1-1193/1

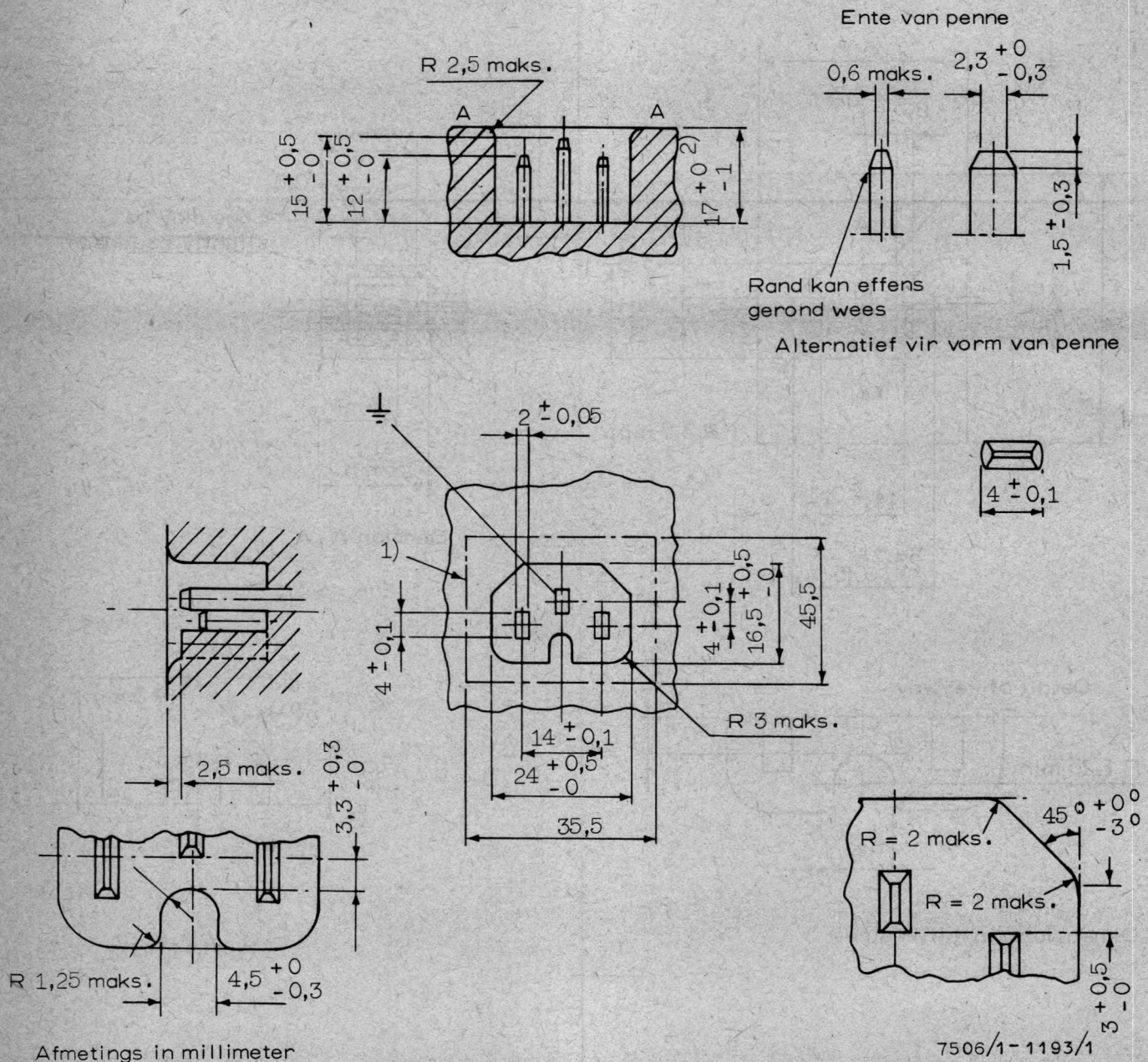
The outline (1) of the front part shall not exceeded within a distance of 18 mm from the engagement face.

The outline (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation does

not apply in the direction of the axis of the cord or of the actuating member.

## ANNEXURE 11

10 A Connector for Class I appliances for hot conditions.



Binne die oppervlakte (1) mag die toestand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 17 mm wees. Keertoestelle of dele daarvan kan egter binne die oppervlakte (1) wees.

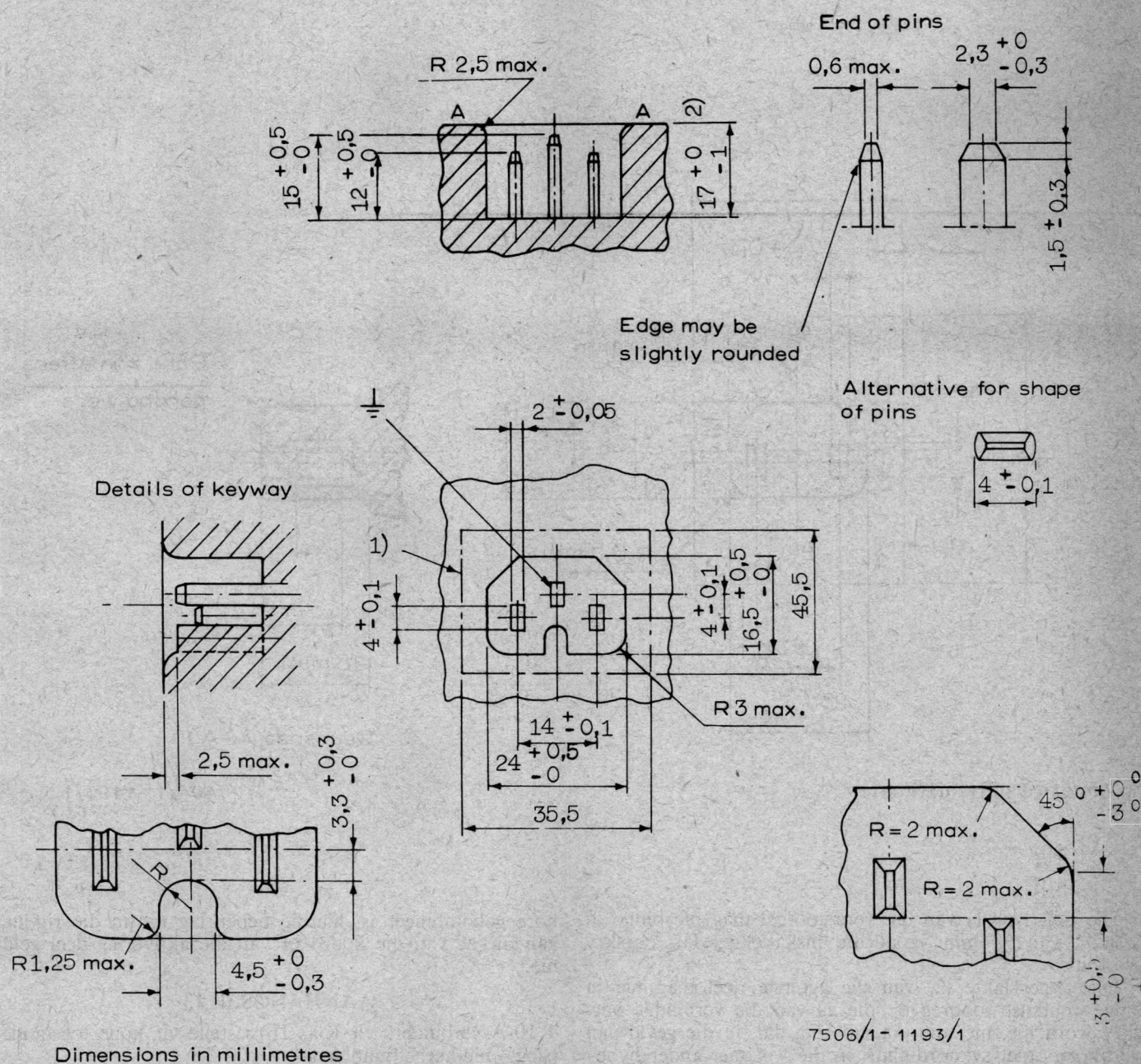
In die geval van toestelkontak sokke wat versink in die buiteoppervlak van uitrusting aangebring is en indien hier-

die oppervlak gekrom of skuins ten opsigte van die as van die toestelkontak sok is, mag afmeting (2) hoogstens 17 mm wees.

#### AANHANGSEL 12

10-A-toestelkontak sok vir Klas I-toestelle vir warm toestande.





Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 17 mm. However, retaining devices or parts thereof may be within the area (1).

For appliance inlets arranged countersunk in the outer surface of equipment and if this surface is curved or

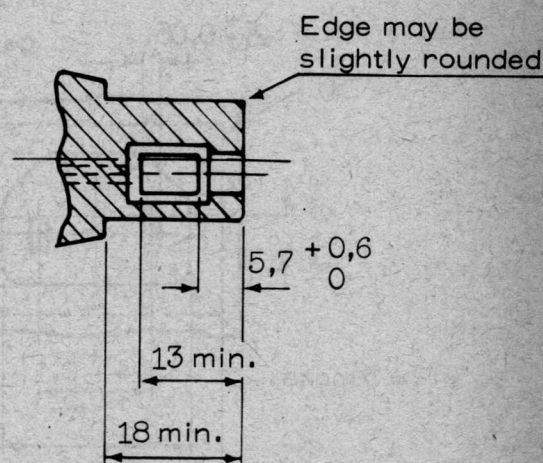
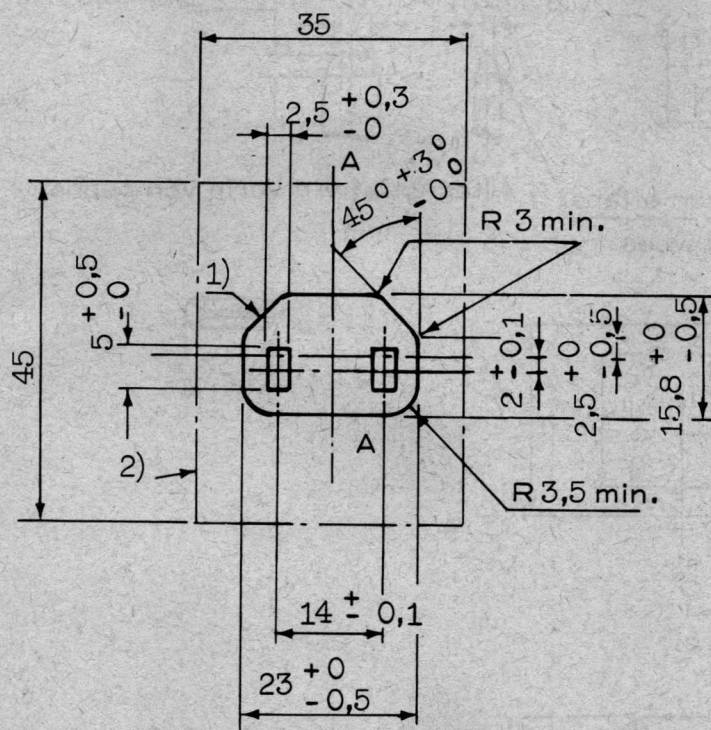
inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 17 mm.

#### ANNEXURE 12

10 A Appliance Inlet for Class I appliances for hot conditions.







Section A-A

Dimensions in millimetres

7494/1 - 1193/1

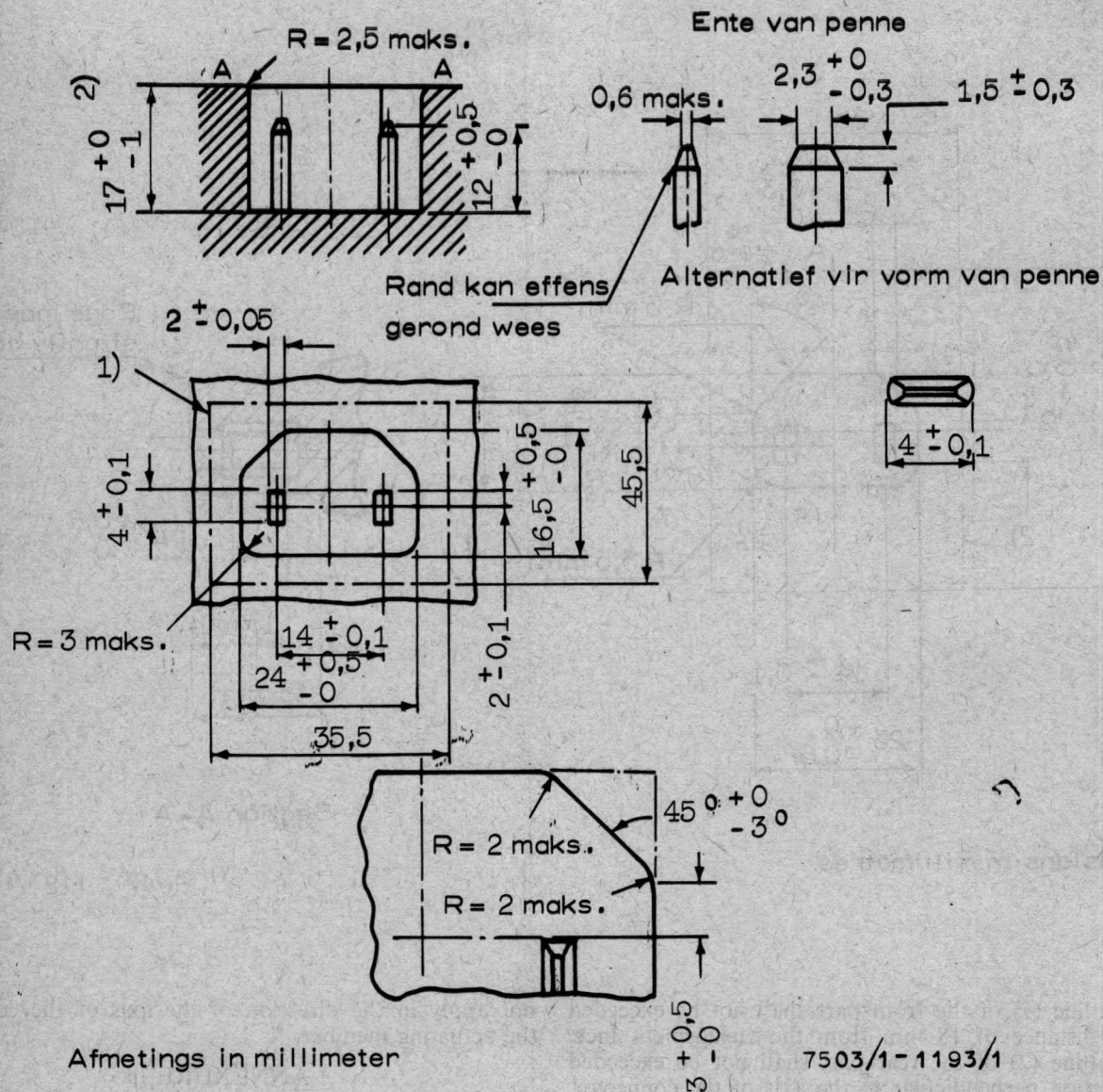
The outline (1) of the front part shall not be exceeded within a distance of 18 mm from the engagement face.

The outline (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation does

not apply in the direction of the axis of the cord or of the actuating member.

## ANNEXURE 13

10 A Connector for Class II appliances for cold conditions (non-rewirable only).



Binne die oppervlakte (1) mag die afstand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 17 mm wees. Keertoestelle of dele daarvan kan egter binne die oppervlakte (1) wees.

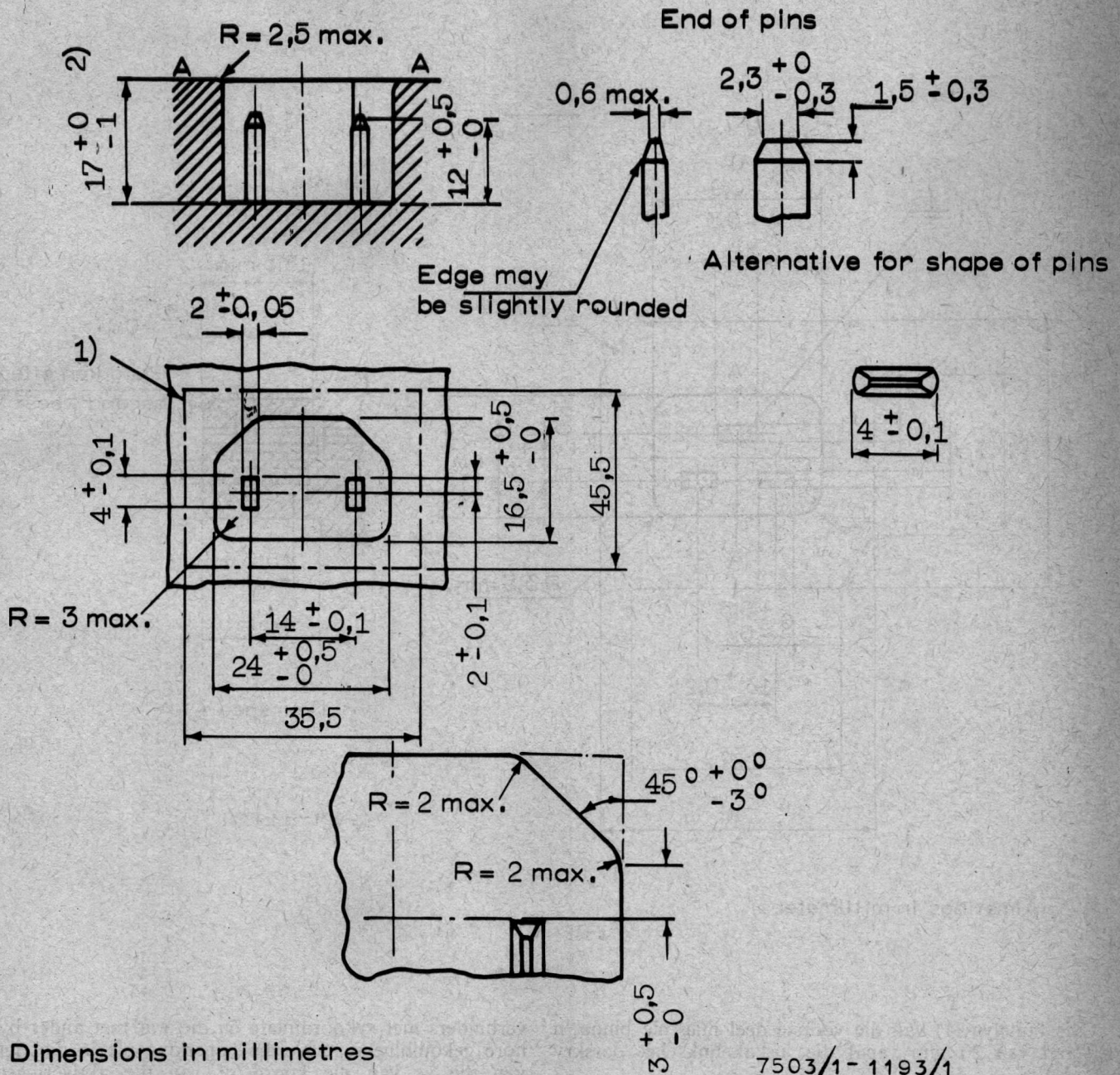
In die geval van toestelkontak sokke wat versink in die buiteoppervlak van uitrusting aangebring is en indien hier-

die oppervlak gekrom of skuins ten opsigte van die as van die toestelkontak sok is, mag afmeting (2) hoogstens 17 mm wees.

#### AANHANGSEL 14

10-A-toestelkontak sok vir Klas II-toestelle vir koue toestande.





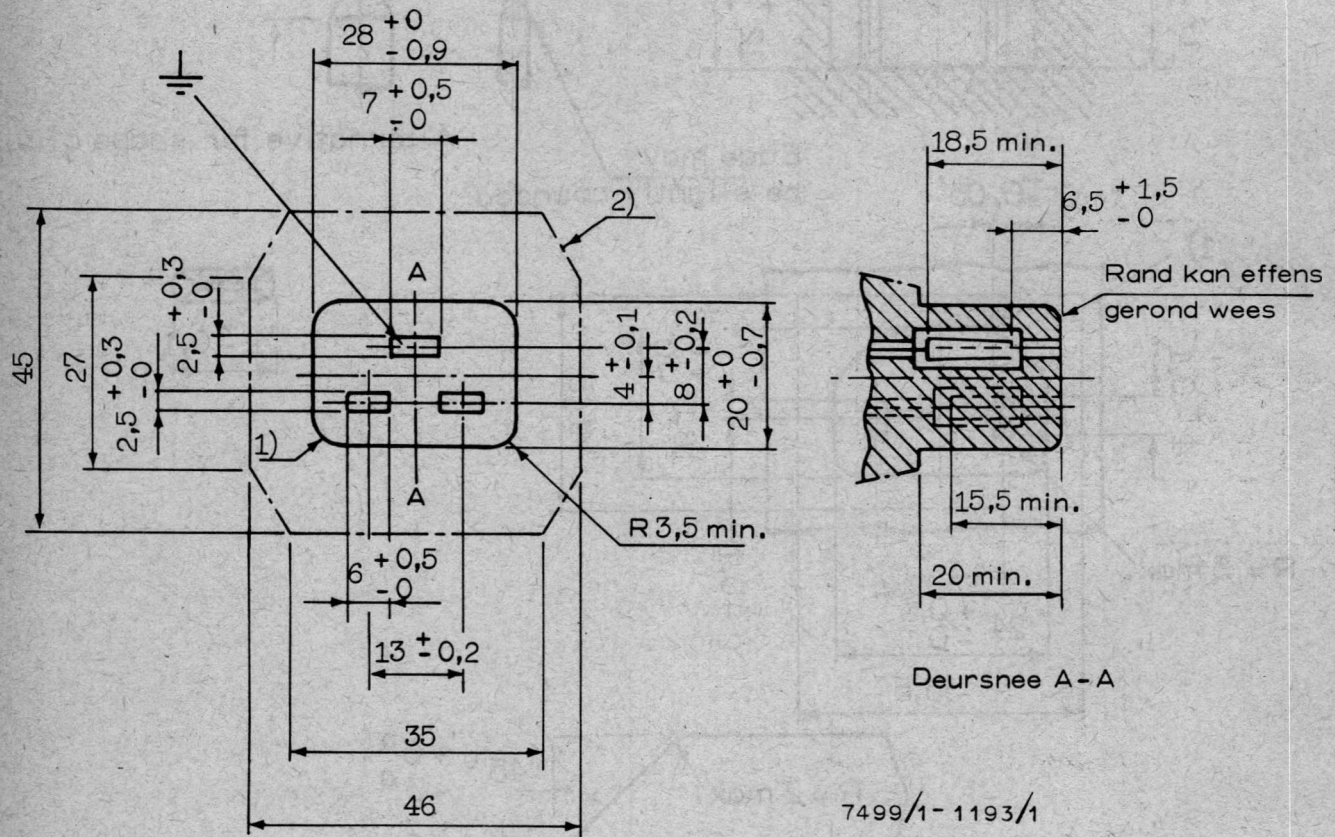
Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 17 mm. However, retaining devices or parts thereof may be within the area (1).

For appliance inlets arranged countersunk in the outer surface of equipment and if this surface is curved or

inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 17 mm.

#### ANNEXURE 14

10 A Appliance Inlet for Class II appliances for cold conditions.



Afmettings in millimeters

Die buitelyn (1) van die voorste deel mag nie binne 'n afstand van 20 mm vanaf die inskakelingsvlak oorskry word nie.

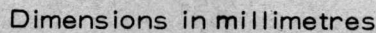
Die oppervlakte (2) van die agterste deel mag nie in enige deursnee loodreg op die as van die verbinder oorskry word nie, met die uitsondering dat, in die geval van

verbinders met sykoördinate en dié wat met ander bybehore gekombineer is, hierdie beperking nie in die rigting van die as van die koord of van die aktiveringsdeel geld nie.

## AANHANGSEL 15

16-A-verbinder vir Klas I-toestelle vir koue toestande.

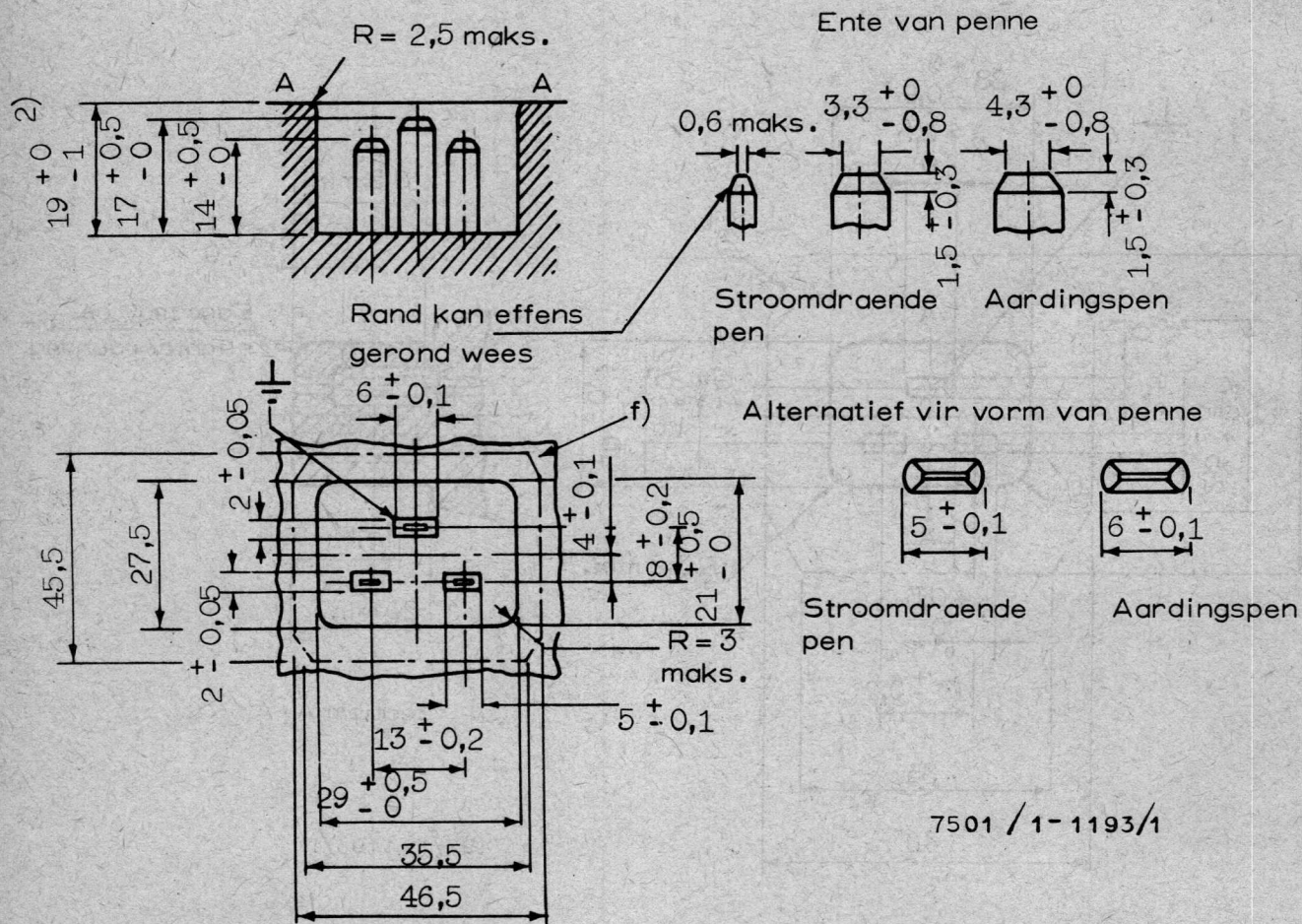




does not apply in the direction of the axis of the cord or of the actuating member.

## ANNEXURE 15

### 16 A Connector for Class I appliances for cold conditions



Afmetings in millimeter

Binne die oppervlakte (1) mag die afstand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 1 mm wees. Keertoestelle of dele daarvan kan egter binne die oppervlakte (1) wees.

In die geval van toestelkontak sokke wat versink in die buiteoppervlak van uitrusting aangebring is en indien

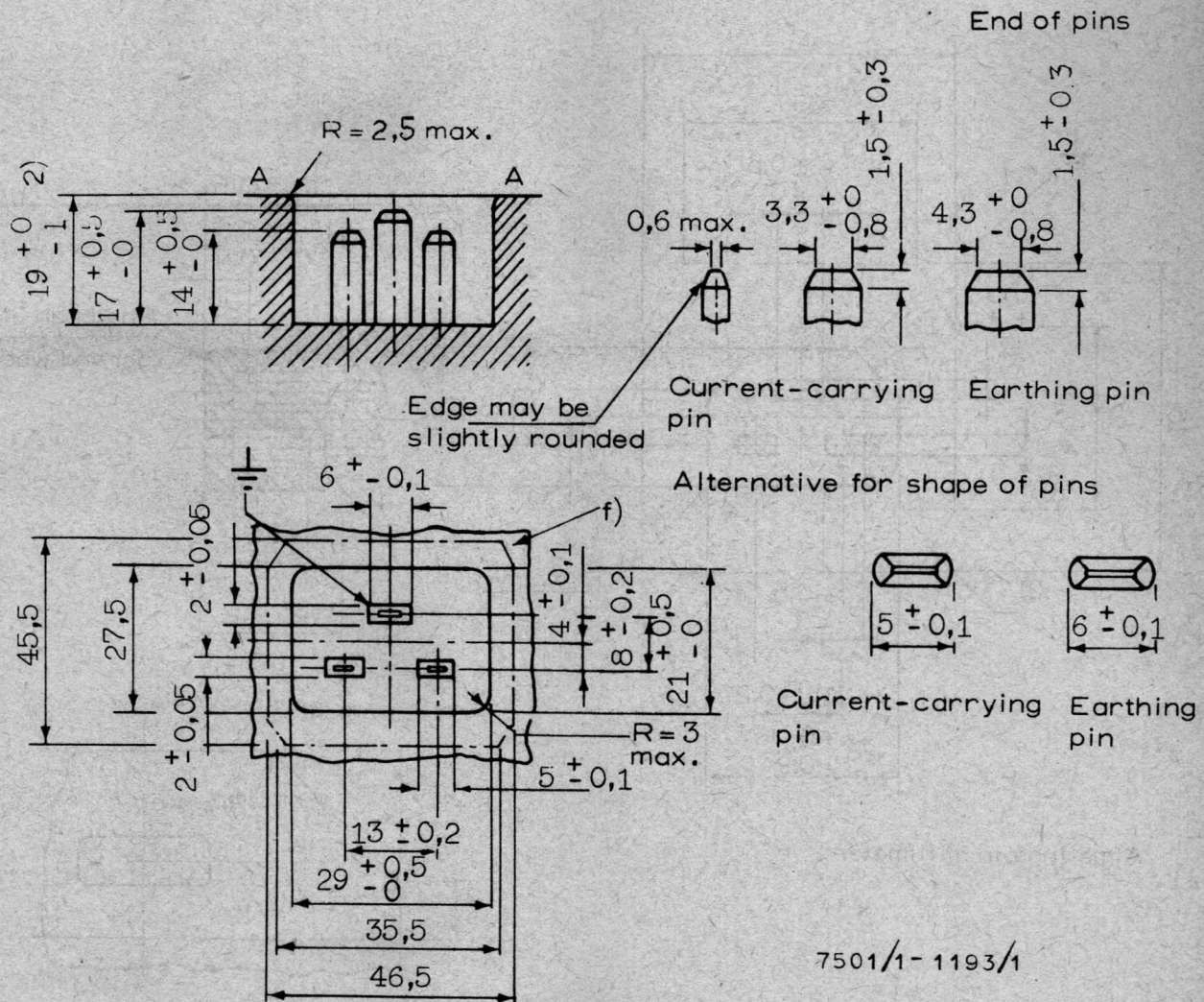
hierdie oppervlak gekrom of skuins ten opsigte van die as van die toestelkontak sok is, mag afmeting (2) hoogstens 19 mm wees.

#### AANHANGSEL 16

16-A-toestelkontak sok vir Klas I-toestelle vir koue toestande.

7501 / 1-1193/1





Dimensions in millimetres

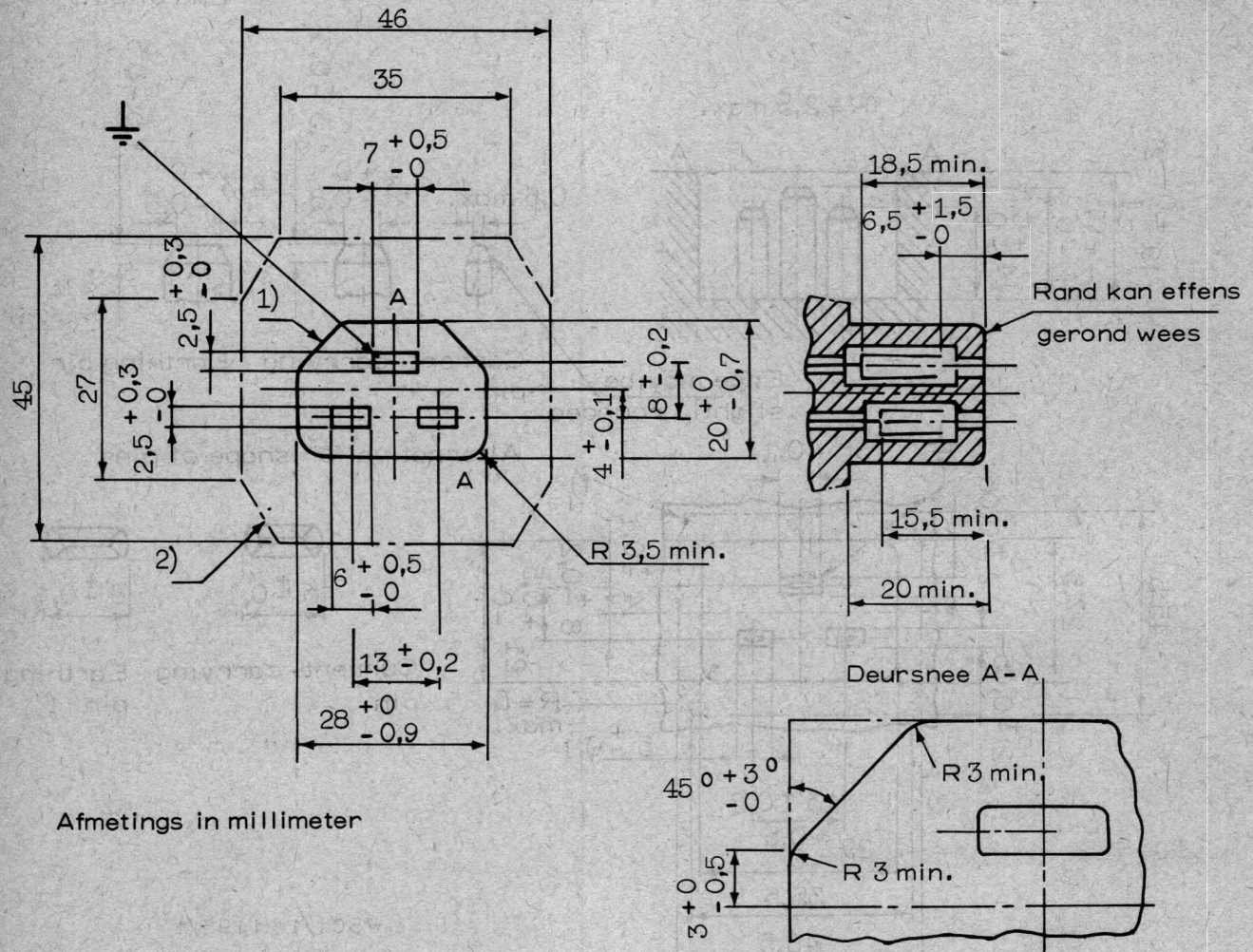
Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 19 mm. However, retaining devices or parts thereof may be within the area (1).

For appliance inlets arranged countersunk in the outer surface of equipment and if this surface is curved or

inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 19 mm.

#### ANNEXURE 16

16 A Appliance inlet for Class 1 appliances for cold conditions.



7495/1-1193/1

Die buitelyn (1) van die voorste deel mag nie binne 'n afstand van 20 mm vanaf die inskakelingsvlak oorskry word nie.

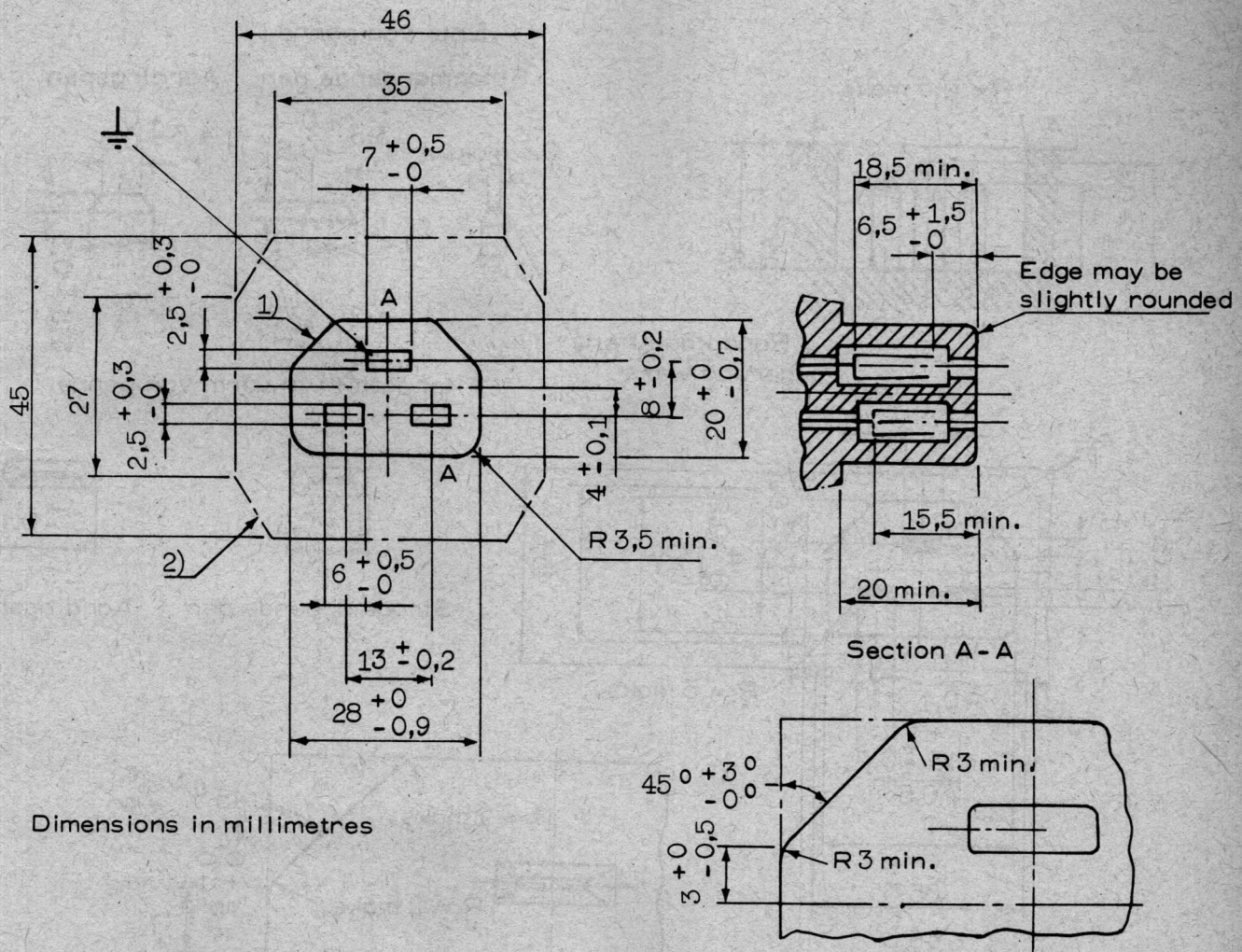
Die oppervlakte (2) van die agterste deel mag nie in enige deursnee loodreg op die as van die verbinder oorskry word nie, met die uitsondering dat, in die geval van verbinders met sykoortinlate en dié wat met ander bybe-

hore gekombineer is, hierdie beperking nie in die rigting van die as van die koord of van die aktiveringsdeel geld nie.

#### AANHANGSEL 17

16-A-verbinder vir Klas I-toestelle vir besonder warm toestande.





7495/1-1193/1

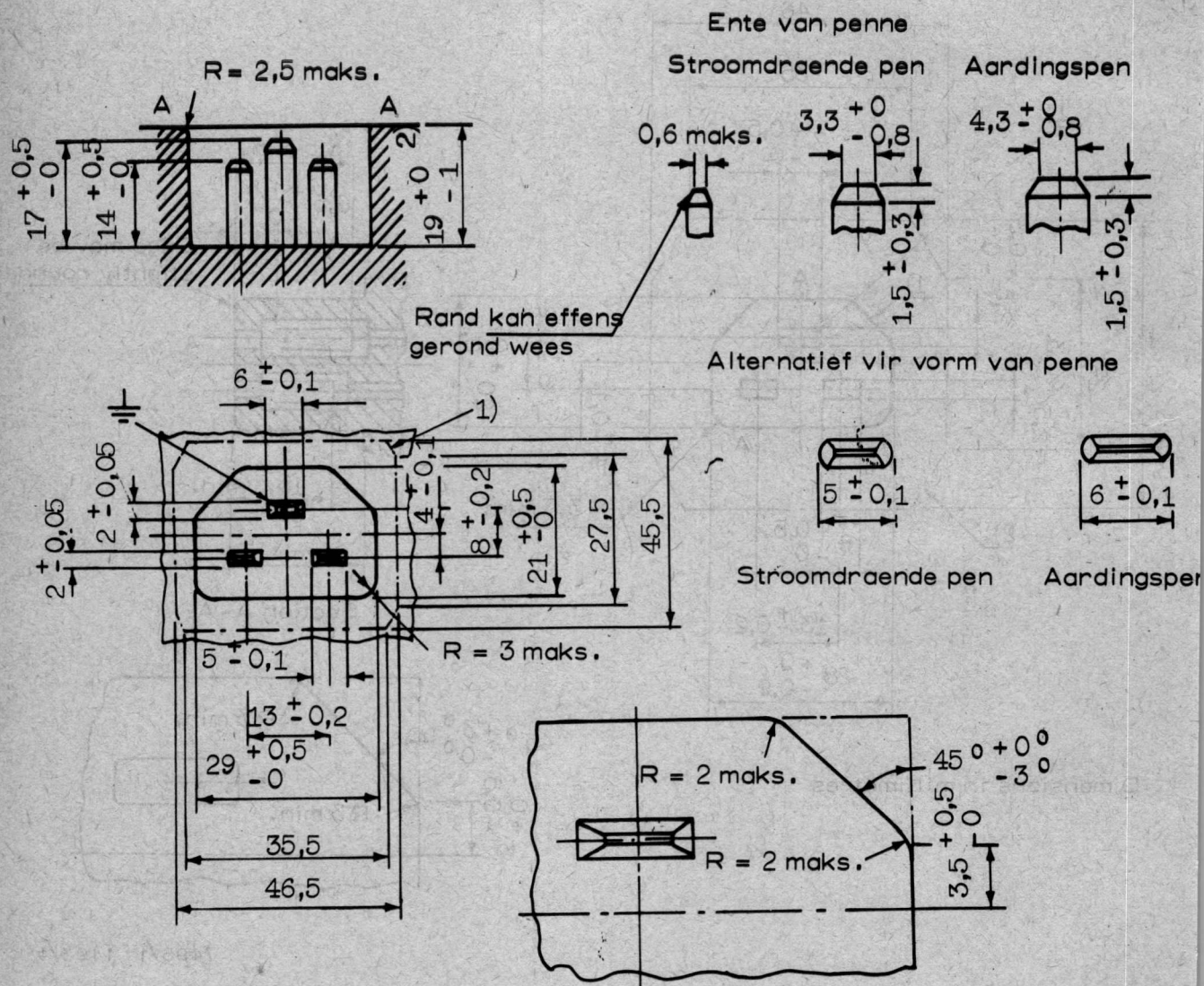
The outline (1) of the front part shall not be exceeded within a distance of 20 mm from the engagement face.

The outline (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation

does not apply in the direction of the axis of the cord or of the actuating member.

#### ANNEXURE 17

16 A Connector for Class I appliances for extra-hot conditions.



Afmetings in millimeter

7507/1-1193/1

Binne die oppervlakte (1) mag die afstand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 18 mm wees. Keertoestelle of dele daarvan kan egter binne die oppervlakte (1) wees.

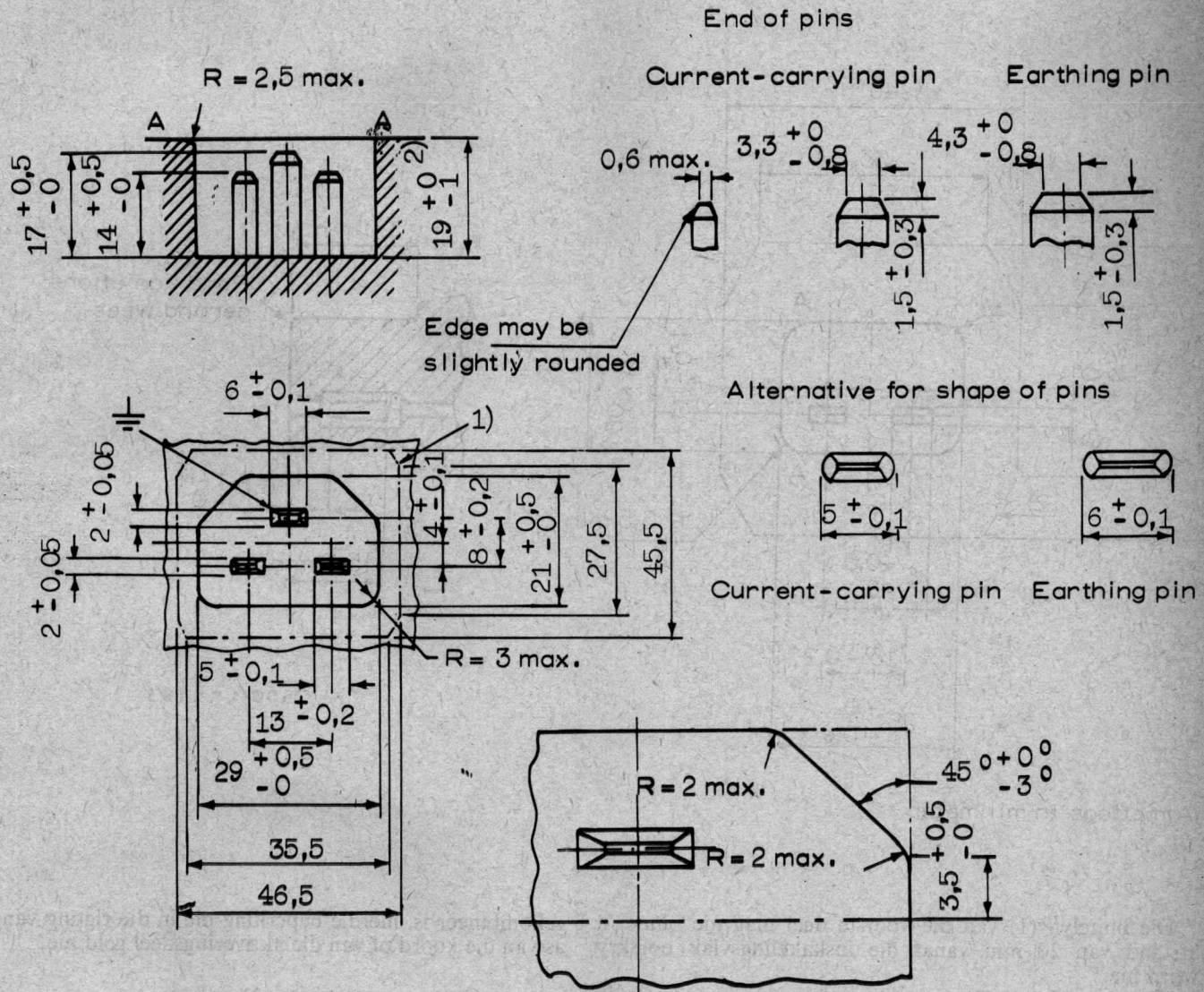
In die geval van toestelkontak sokke wat versink in die buiteoppervlak van uitrusting aangebring is en indien hier-

die oppervlak gekrom of skuins ten opsigte van die a van die toestelkontak sok is, mag afmeting (2) hoogstens 19 mm wees.

#### AANHANGSEL 18

16-A-toestelkontak sok vir Klas I-toestelle vir besonde warm toestande.





Dimensions in millimetres

7507/1-1193/1

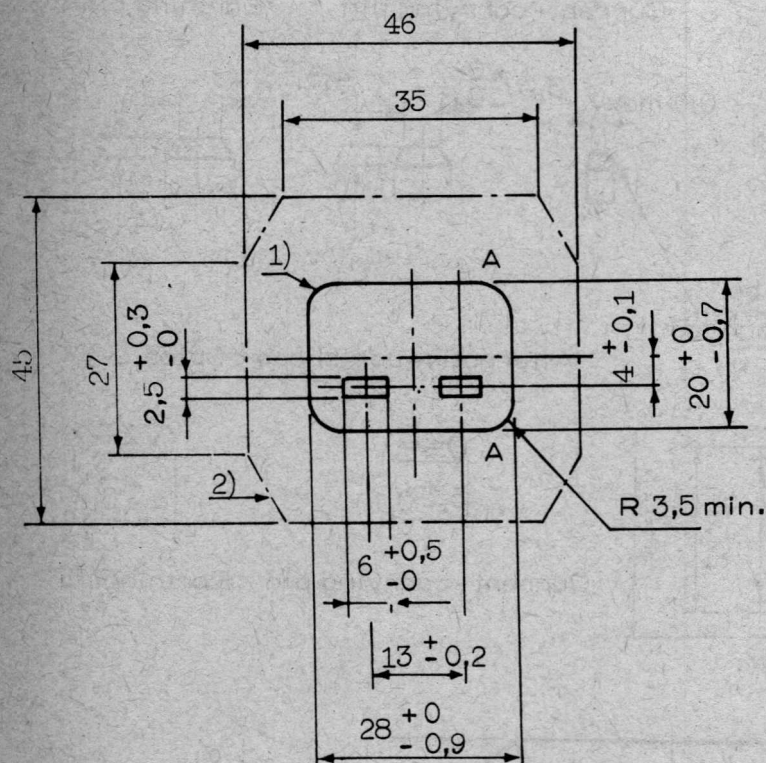
Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 18 mm. However, retaining devices or parts thereof may be within the area (1).

For appliance inlets arranged countersunk in the outer surface of equipment and if this surface is curved or

inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 19 mm.

#### ANNEXURE 18

16 A Appliance inlet for Class I appliances for extra-hot conditions.



7500/1 - 1193

Afmetings in millimeter

Die buitelyn (1) van die voorste deel mag nie binne 'n afstand van 20 mm vanaf die inskakelingsvlak oorskry word nie.

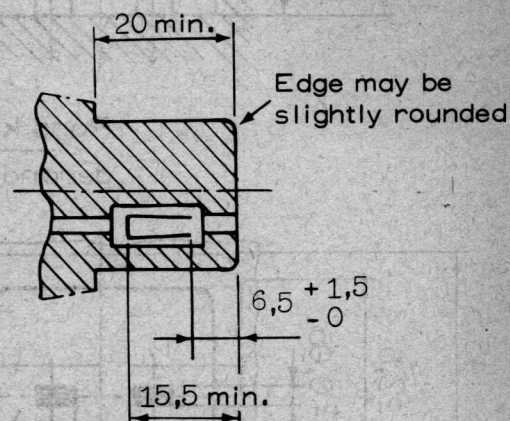
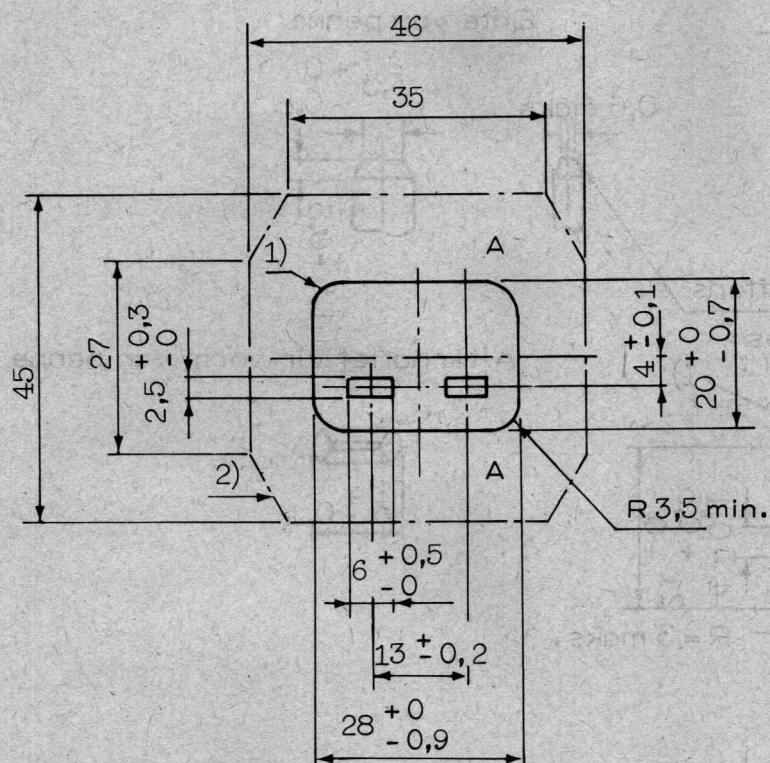
Die oppervlakte (2) van die agterste deel mag nie in enige deursnee loodreg op die as van die verbinder oorskry word nie, met die uitsondering dat, in die geval van verbinders met sykoördinate en dié wat met ander bybehore

gecombineer is, hierdie beperking nie in die rigting van die as van die koord of van die aktiveringsdeel geld nie.

#### AANHANGSEL 19

16-A-verbinder vir Klas II-toestelle vir koue toestande (slegs nie-herbedraadbaar).





7500/1-1193/1

Dimensions in millimetres

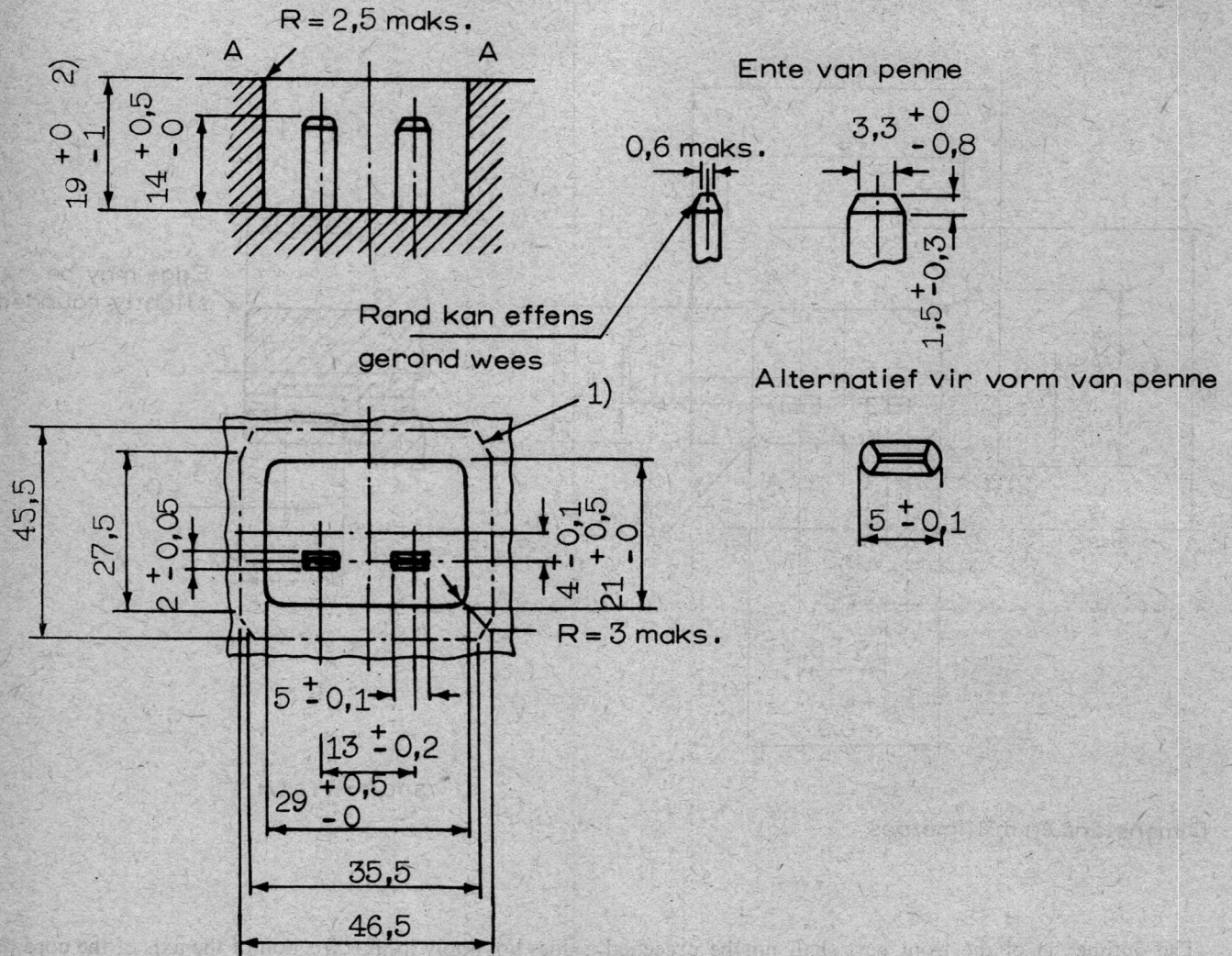
The outline (1) of the front part shall not be exceeded within a distance of 20 mm from the engagement face.

The outline (2) of the rear part shall not be exceeded in any section perpendicular to the axis of the connector, except that for connectors with lateral cord entry and for those combined with other accessories, this limitation

does not apply in the direction of the axis of the cord or of the actuating member.

#### ANNEXURE 19

16 A Connector for Class II appliances for cold conditions (non-rewirable only).



Afmetings in millimeter

7504/1-1193/1

Binne die oppervlakte (1) mag die afstand tussen die vlak A-A en die onderkant van die kontak sok hoogstens 19 mm wees. Keertoestelle of dele daarvan kan egter binne die oppervlakte (1) wees.

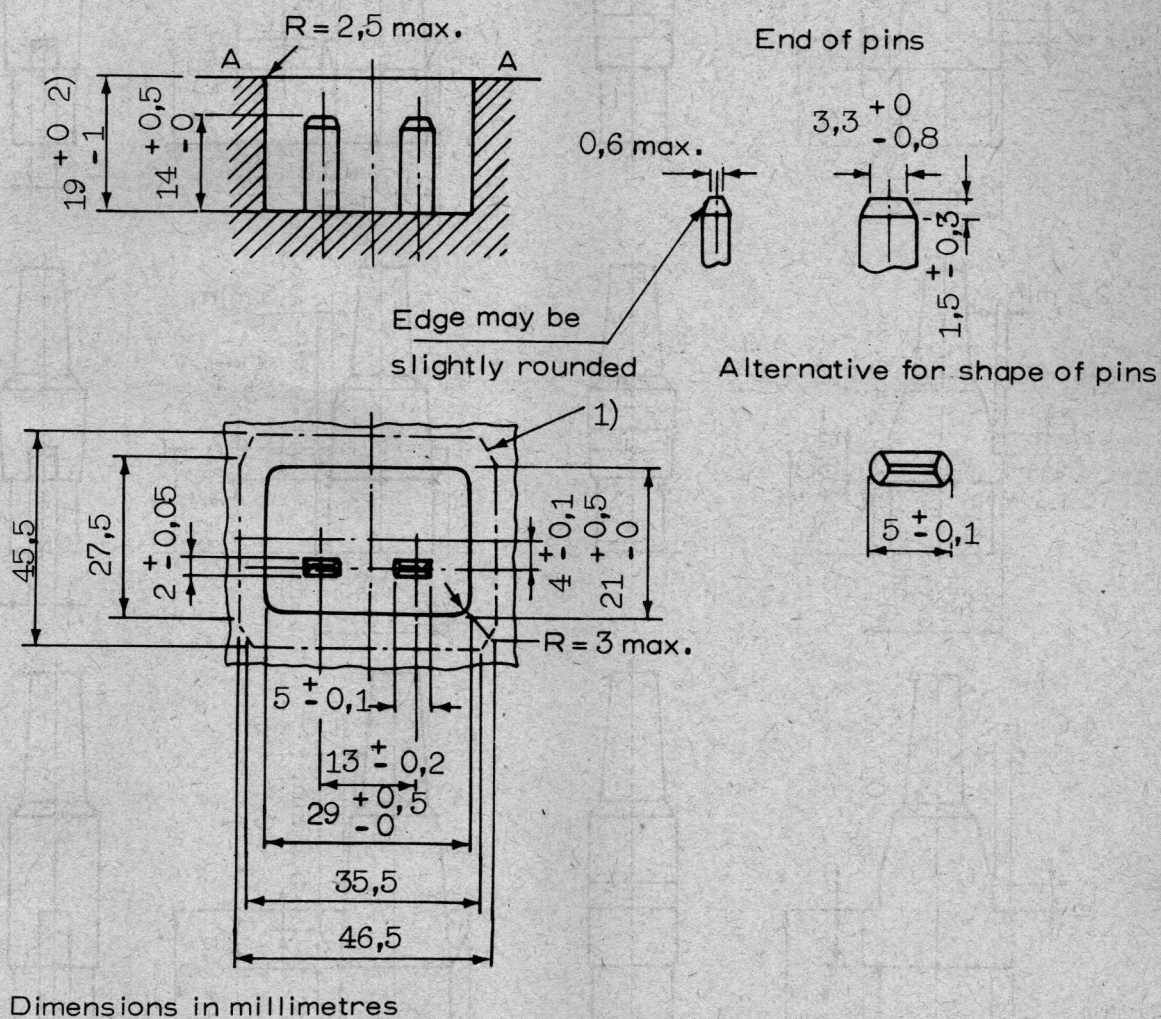
In die geval van toestelkontak sokke wat versink in die buiteoppervlak van uitrusting aangebring is en indien

hierdie oppervlak gekrom of skuins ten opsigte van die as van die toestelkontak sok is, mag afmeting (2) hoogstens 19 mm wees.

AANHANGSEL 20

16-A-toestelkontak sok vir Klas II-toestelle vir koue toestande.





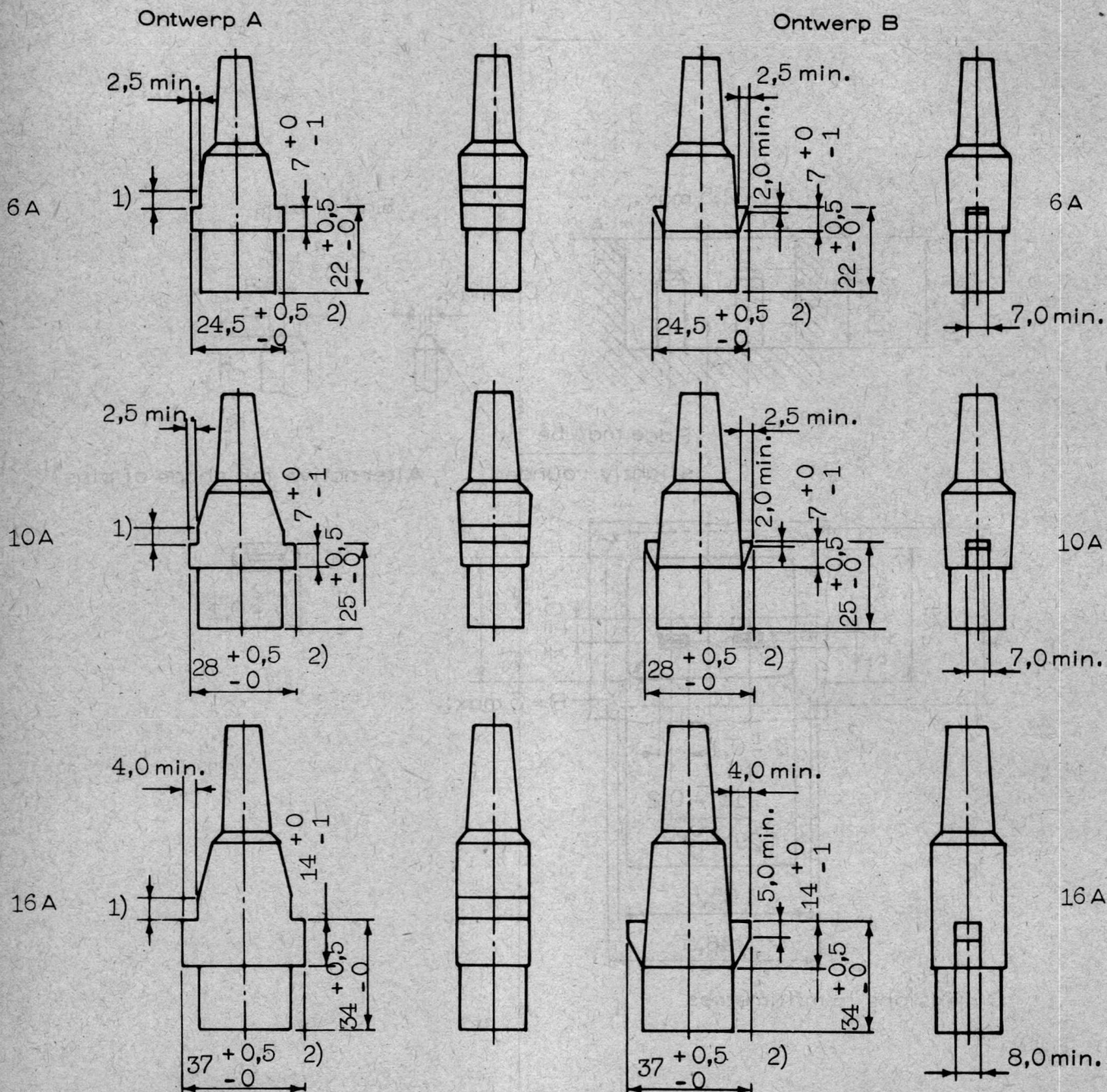
Within the area (1) the distance between the plane A-A and the bottom of the inlet shall not exceed 19 mm. However, retaining devices or parts thereof may be within the area (1).

For appliance inlets arranged countersunk in the outer surface of equipment and if this surface is curved or

inclined with respect to the axis of the appliance inlet, the dimension (2) shall not be more than 19 mm.

#### ANNEXURE 20

16 A Appliance inlet for Class II appliances for cold conditions.



Afmetings in millimeter

7512/1-1193/1

(1) Die vry ruimte bokant die keerskouer moet minstens 5 mm wees.

(2) Hierdie afmeting mag nie binne 'n afstand van—

28 mm in die geval van 6-A-verbinder;

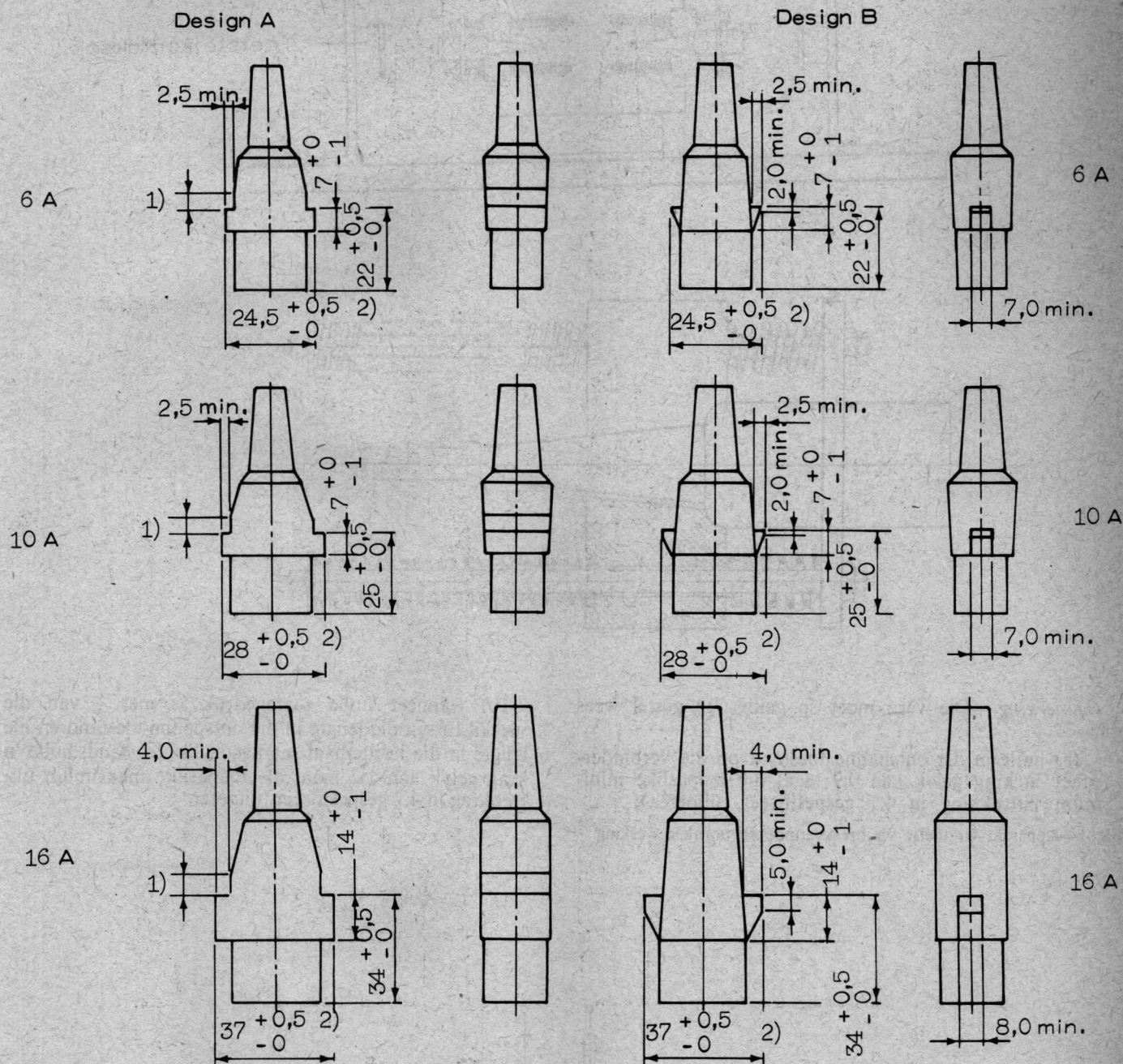
31 mm in die geval van 10-A-verbinders; en

40 mm in die geval van 16-A-verbinders; vanaf die inskakelingsvlak oorskry word nie.

AANHANGSEL 21

Voorsiening vir keertoestelle.





(1) The free space above the retaining shoulder shall be at least 5 mm.

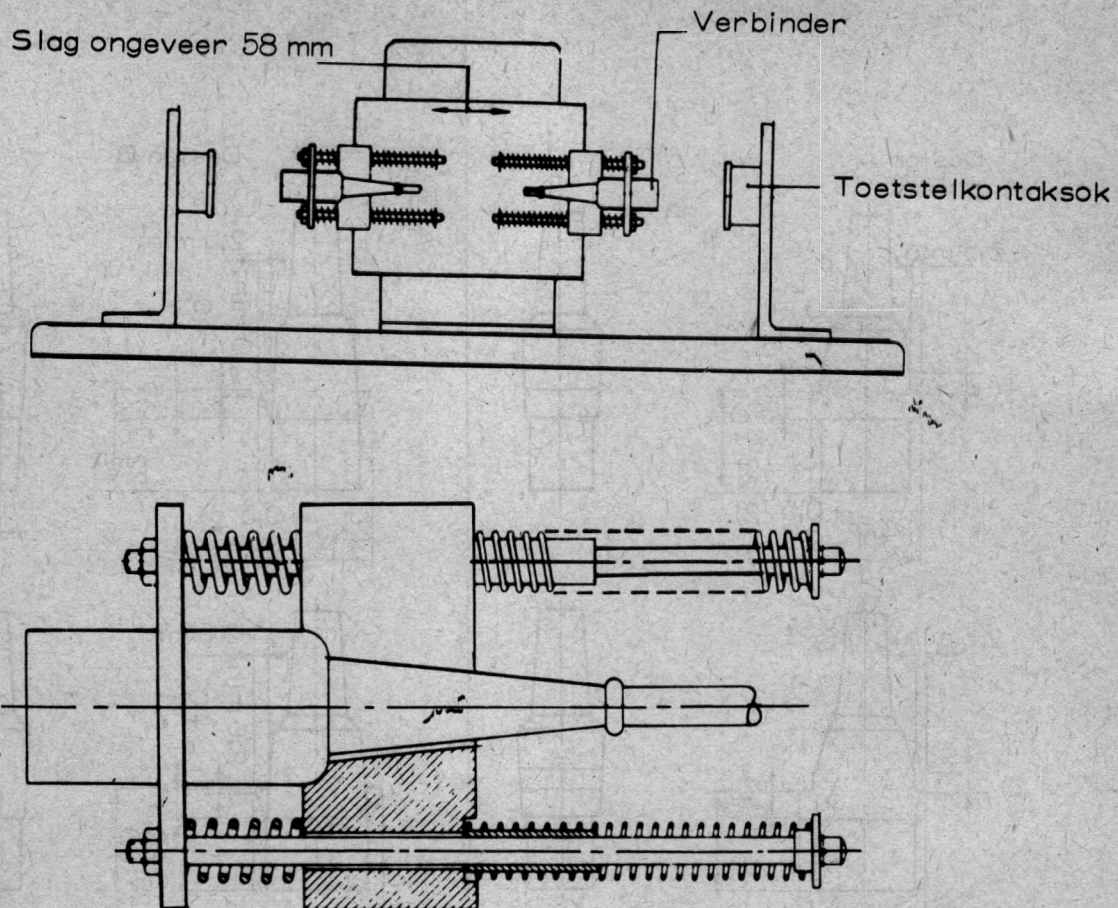
(2) This dimension shall not be exceeded within a distance from the engagement face of—

28 mm for 6 A connectors;

31 mm for 10 A connectors;  
40 mm for 16 A connectors.

#### ANNEXURE 21

Provision for retaining devices.

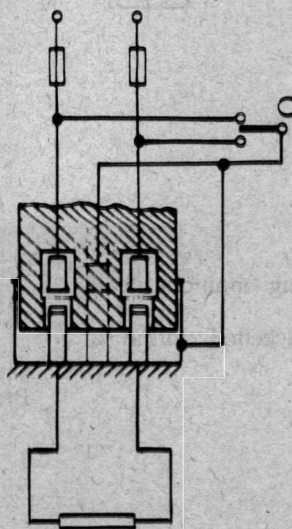


*Opmerking.*—Die vere moet so gekies en gestel wees dat—

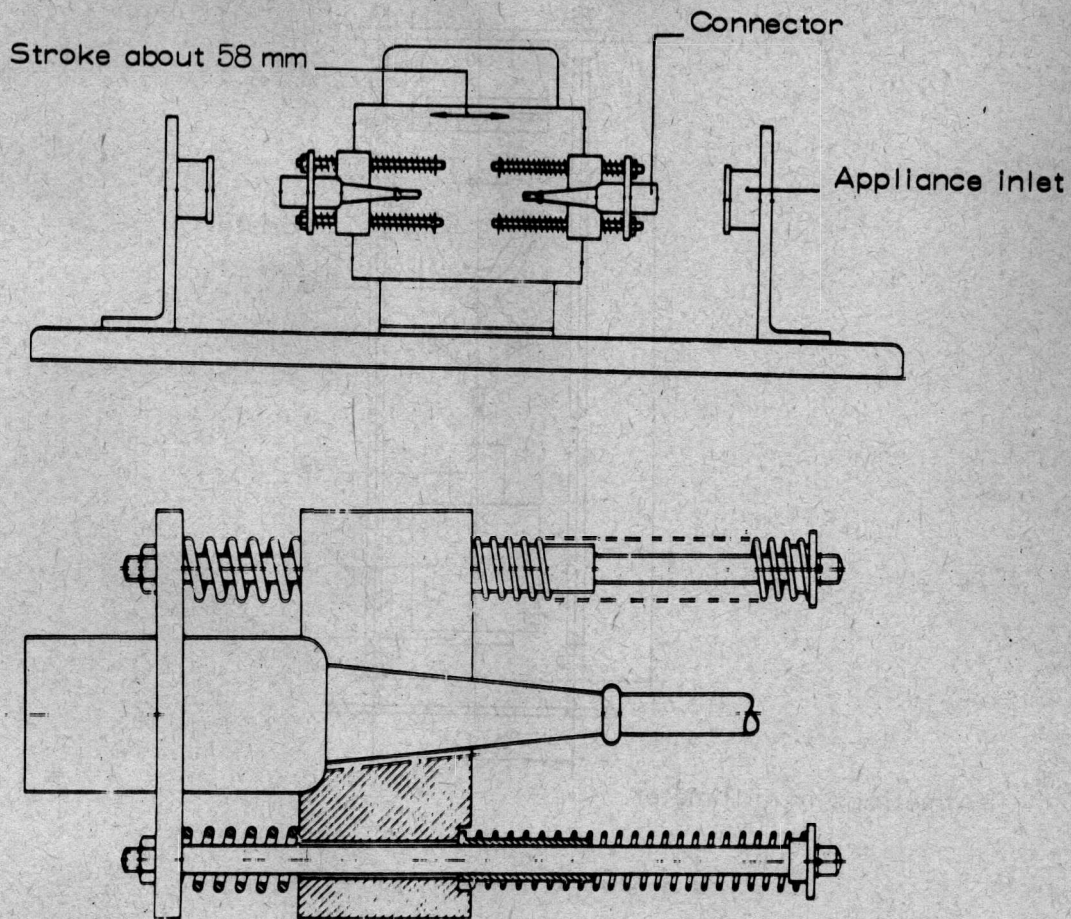
(a) hulle in die ontspanne toestand op die verbinder-draer 'n krag gelyk aan 0,9 maal die toepaslike minimum uittrekking in 4.7 gespesifiseer, uitoeven);

(b) wanneer hulle saamgedruk is met  $\frac{1}{3}$  van die verskil tussen die lengte in die ontspanne toestand en die lengte in die heeltemaal saamgedrukte toestand, hulle 'n krag gelyk aan 1,2 maal die toepaslike maksimum uittrekking in 4.7 gespesifiseer, uitoeven.

Fig. 1—Apparaat vir toetse vir breekvermoë en normale werking





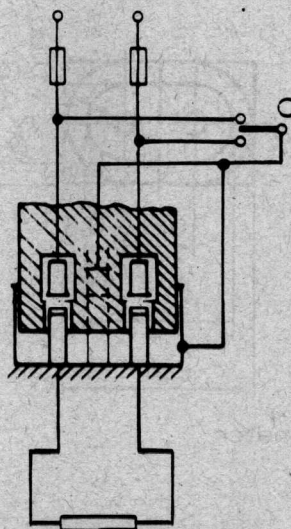


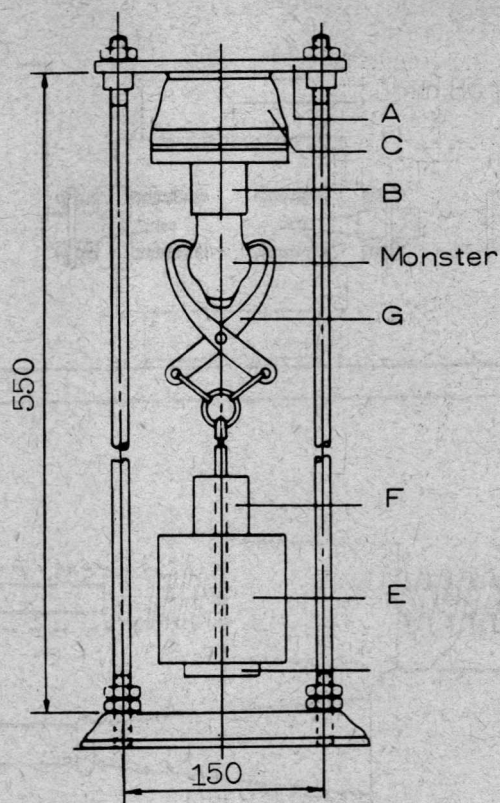
*Note.*—The springs shall be so chosen and adjusted that—

(a) in the disengaged position they exert a force on the connector carrier equal to 0.9 times the relevant minimum withdrawal force specified in 4.7;

(b) when compressed by  $\frac{1}{3}$  of the difference between the length in the disengaged position and the fully compressed length, they exert a force equal to 1.2 times the relevant maximum withdrawal force specified in 4.7.

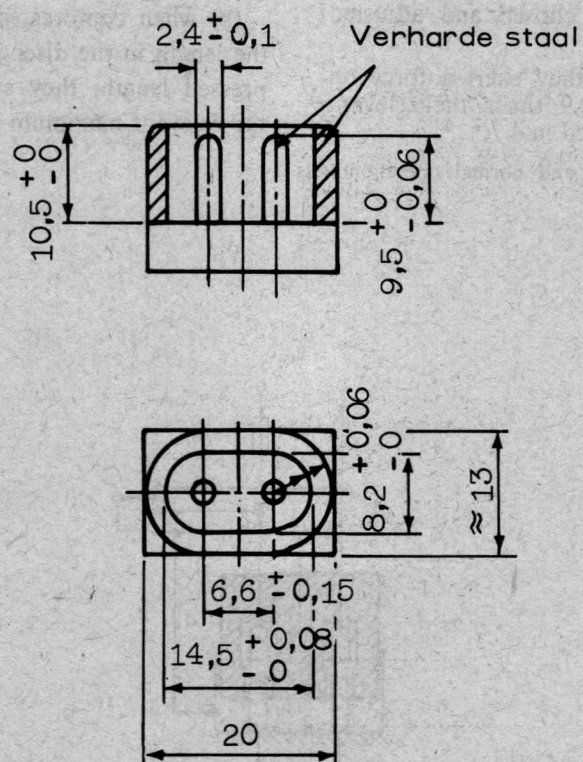
Fig. 1—Apparatus for breaking capacity and normal operation tests





Afmetings in millimeter

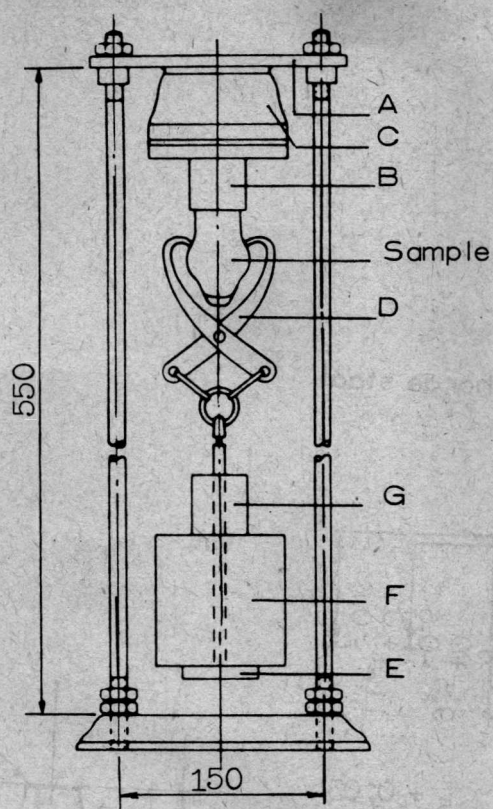
Fig. 3—Apparaat vir nagaan van die uittrekkrag



Afmetings in millimeter

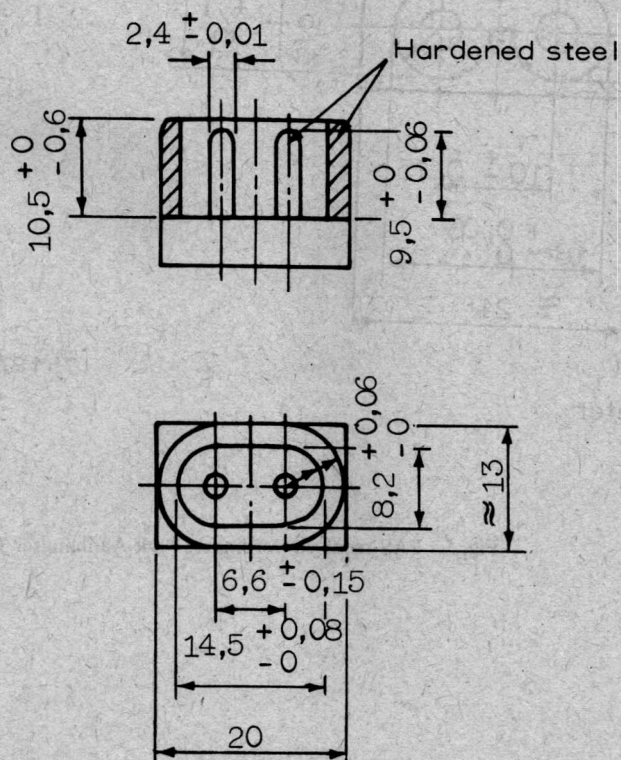
7508/1-1193/1





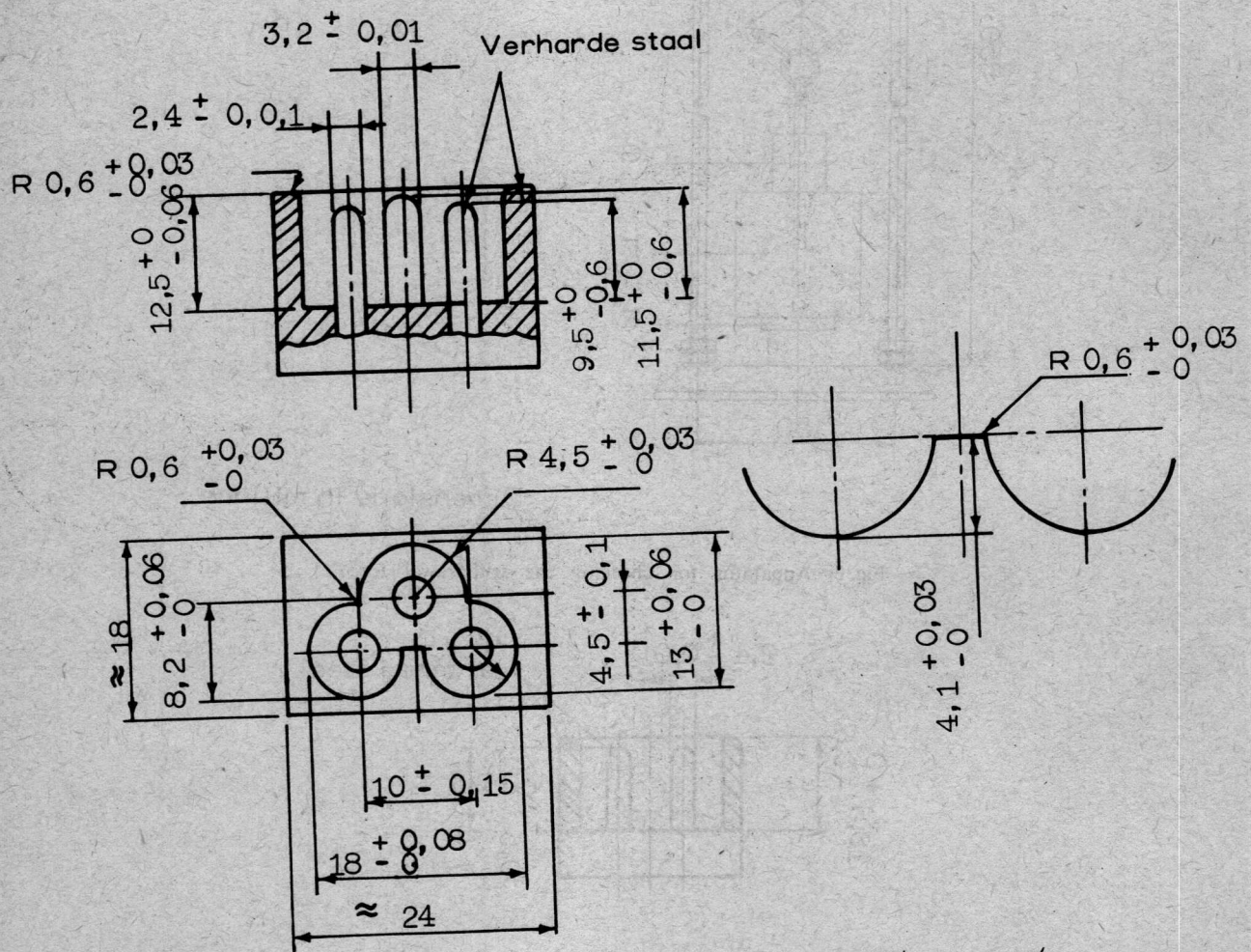
Dimensions in millime

Fig. 3—Apparatus for checking the withdrawal force



Dimensions in millimetres

7508/1-1193/1

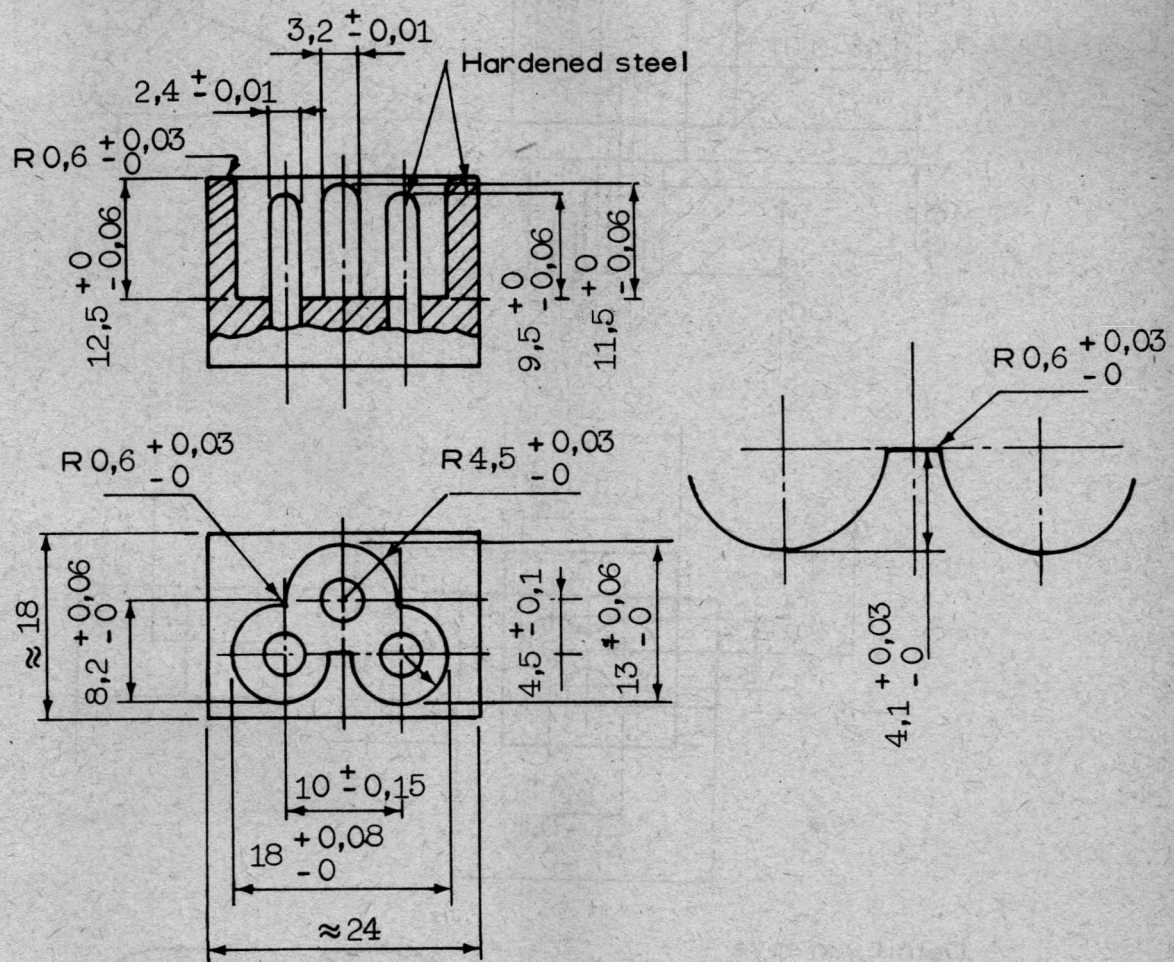


7518/1 - 1193/1

Afmetings in millimeter

Fig. 5—PAS-maat vir verbinders (kyk Aanhangel 3)

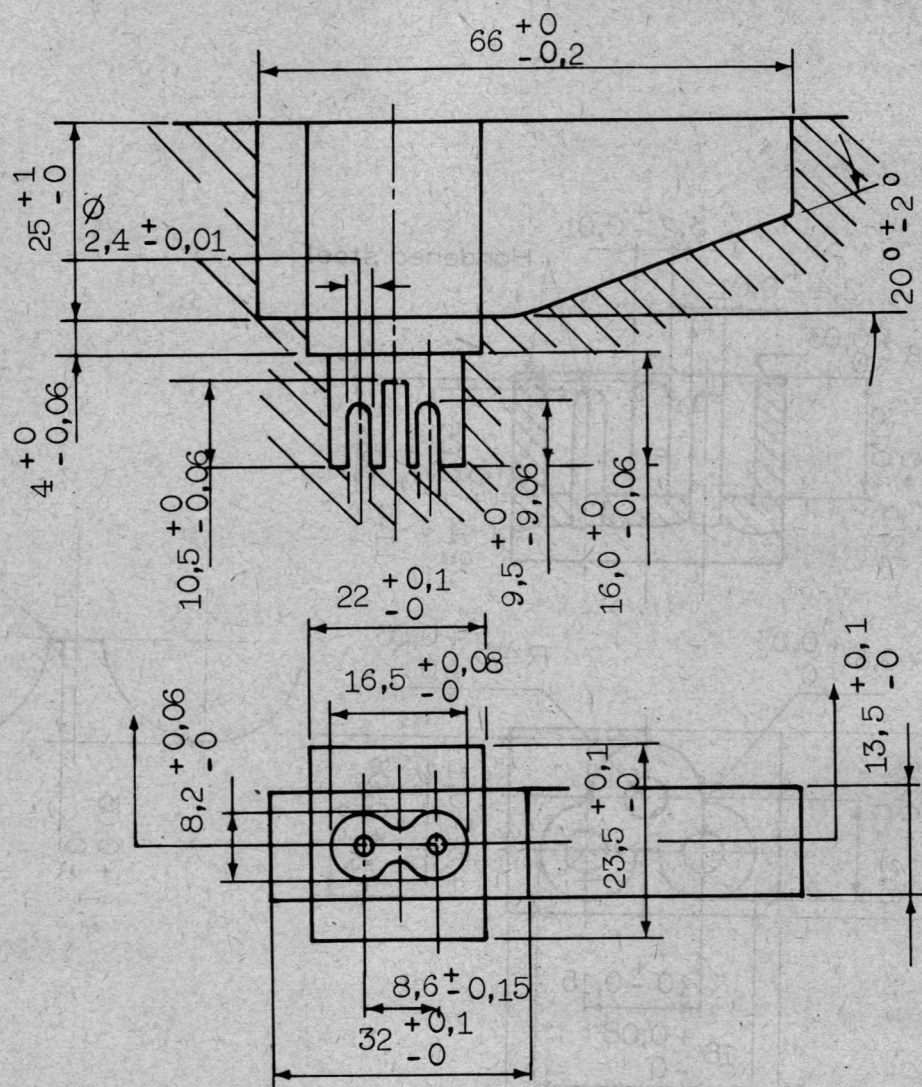




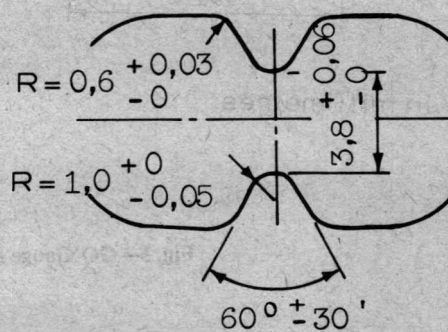
Dimensions in millimetres

7518/1-1193/1

Fig. 5—GO Gauge for connectors (see Annexure 3)



Detail van spye

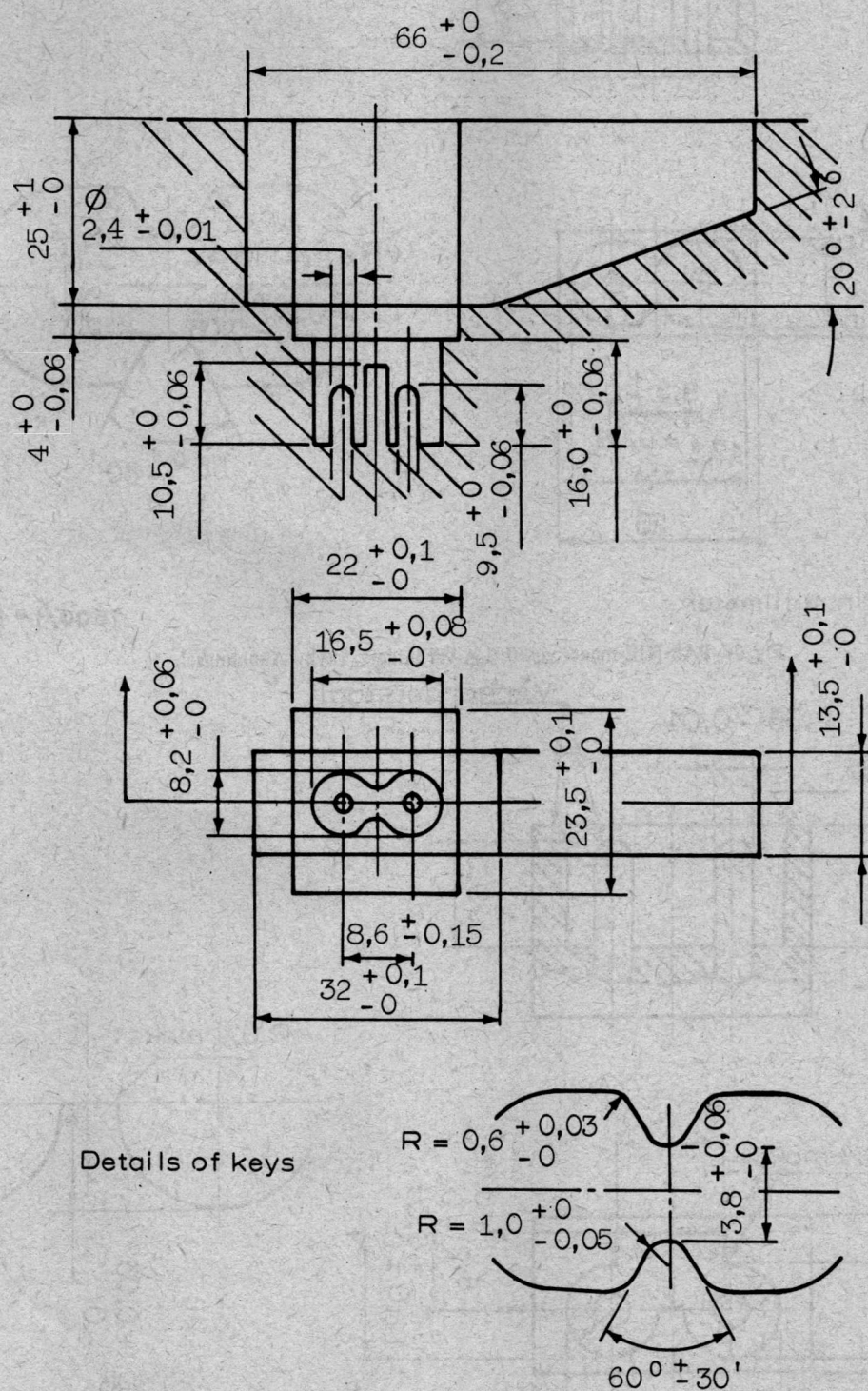


Afmetings in millimeter

7515/1-1193/

Fig. 6—PAS-maat vir verbinders (kyk Aanhangsel 5)

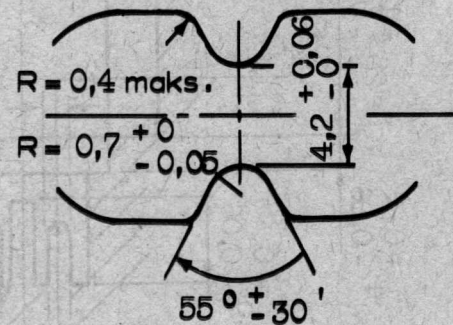
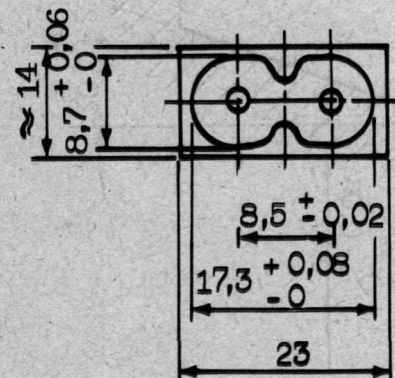
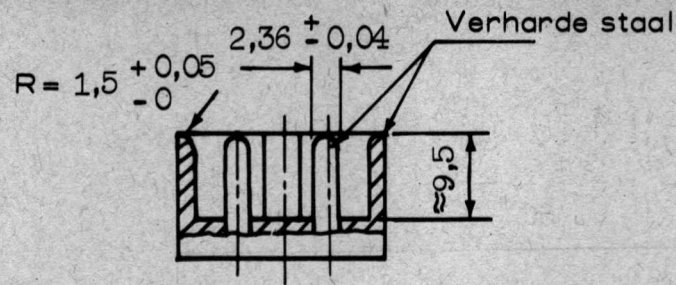




Dimensions in millimetres

7515/1-1193/1

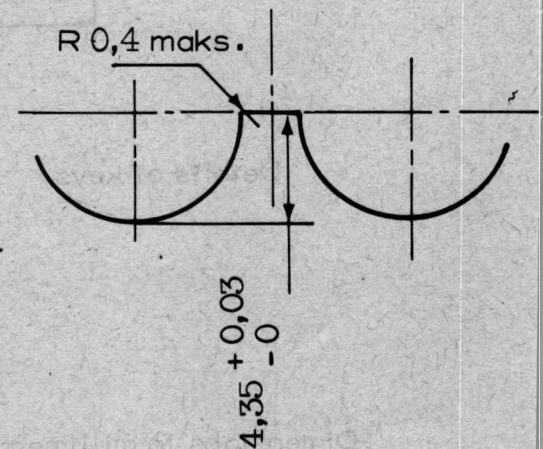
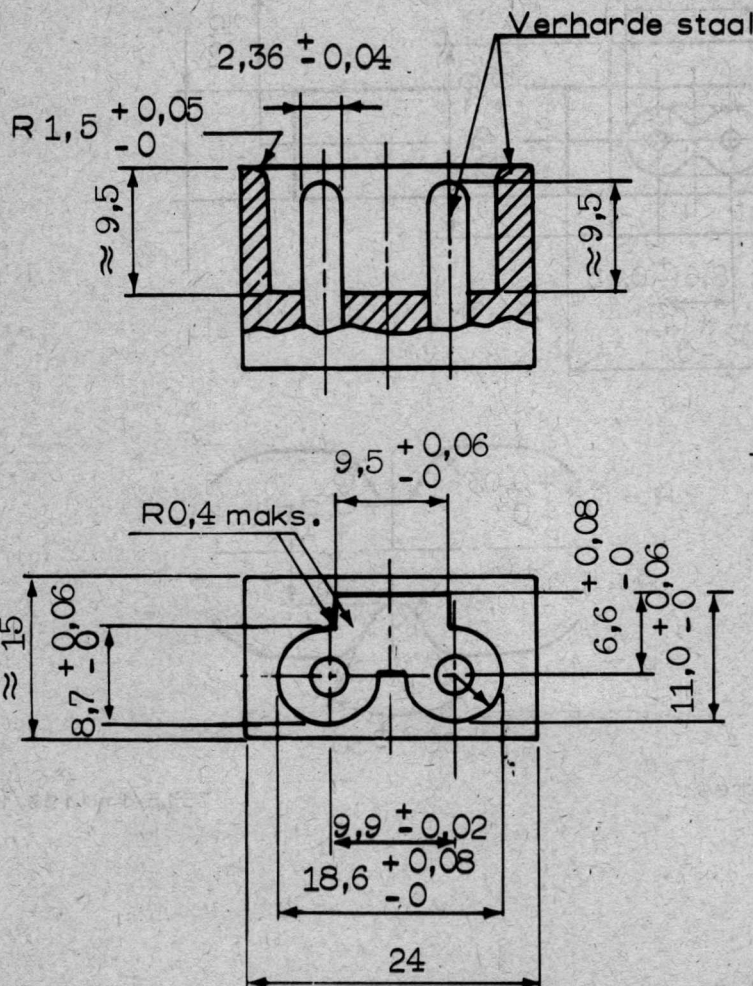
Fig. 6—GO Gauge for connectors (see Annexure 5)



Afmettings in millimeter

7509/1-1193/1

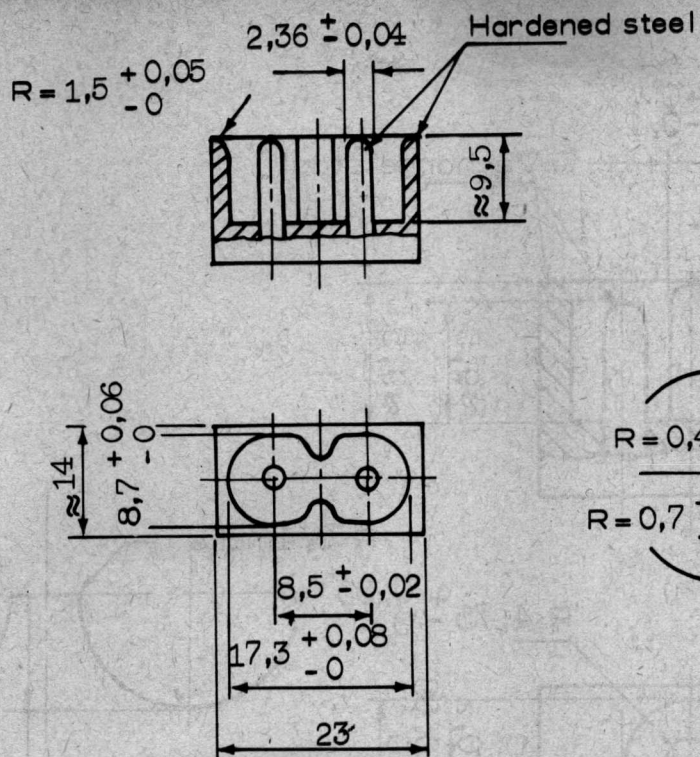
Fig. 7—PAS-NIE-maat vir 0,2-A-verbinders (kyk Aanhangsel 1).



Afmettings in millimeter

7514/1-1193/1

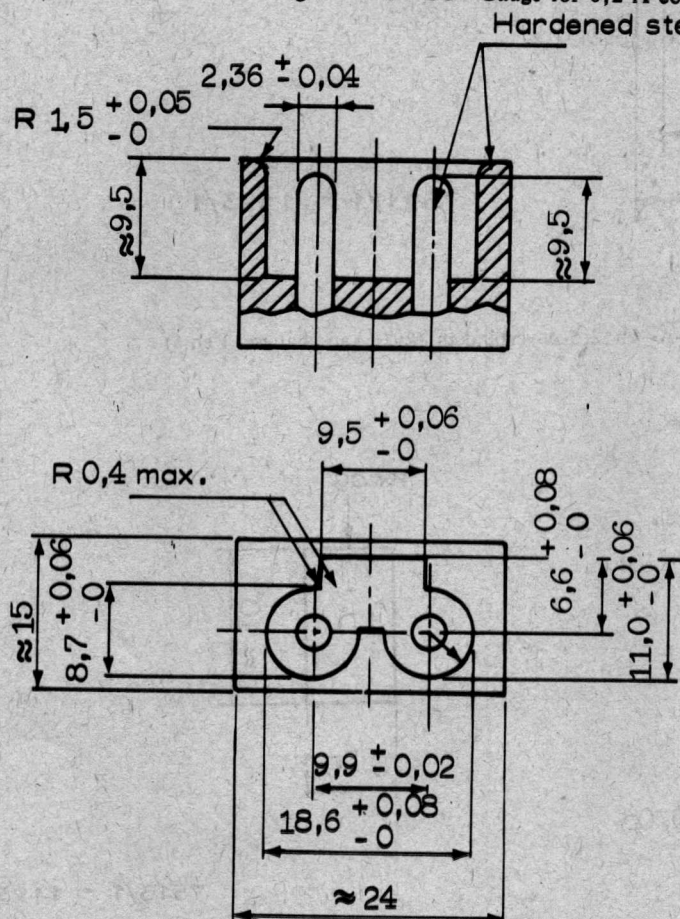




Dimensions in millimetres

7509/1-1193/1

Fig. 7—"NOT-GO" Gauge for 0,2 A connectors (see Annexure 1)



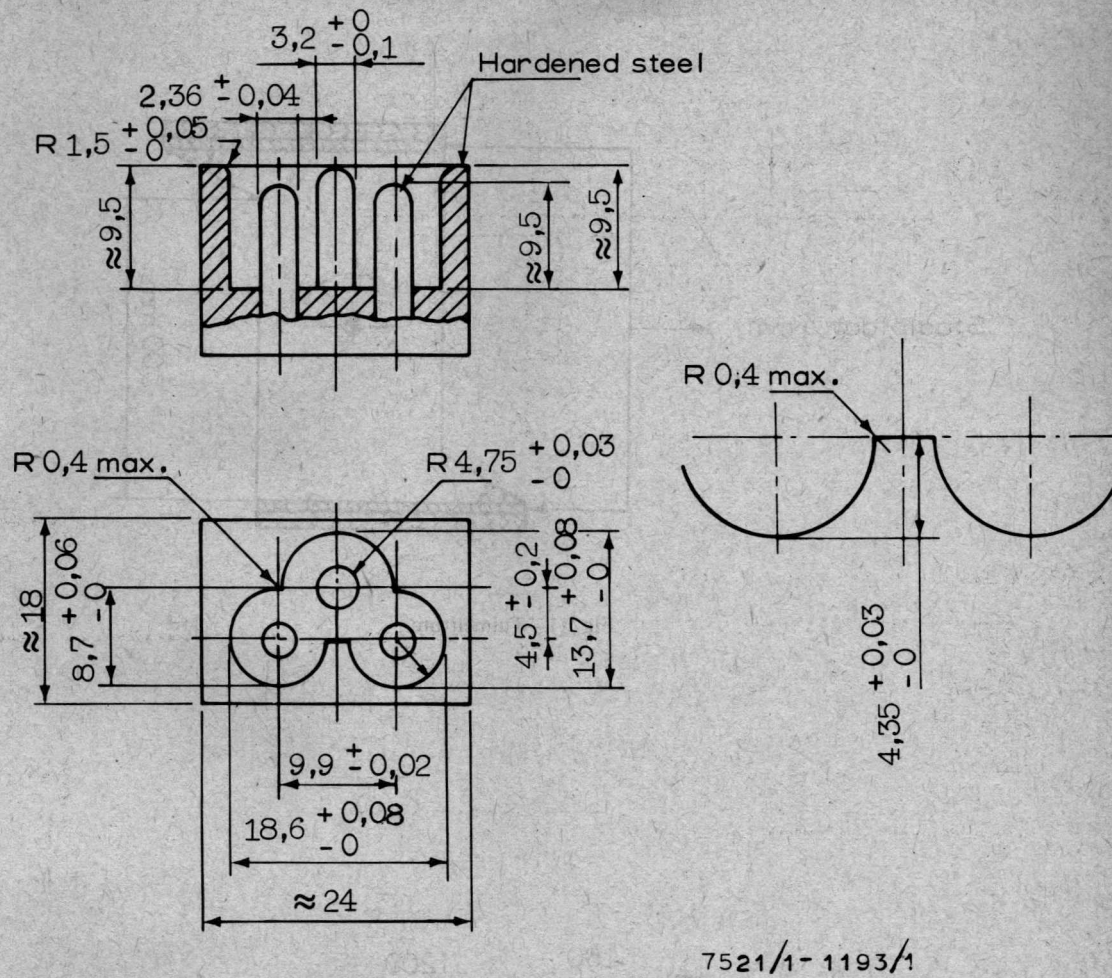
Dimensions in millimetres

7514/1-1193/1

Fig. 8—"NOT-GO" Gauge for 0,2 A and 2,5 A connectors (see Annexures 1, 3 and 5)

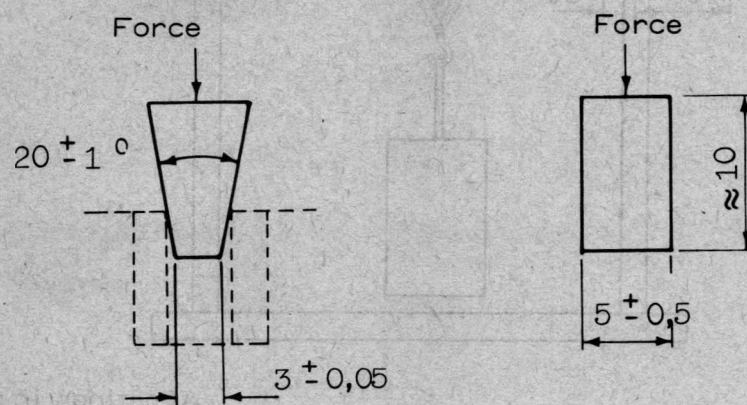






Dimensions in millimetres

Fig. 9—"NOT-GO" Gauge for 0,2 A and 2,5 A connectors (see Annexures 1 and 5)



Dimensions in millimetres

7513/1-1193/1

Fig. 10—"NOT-GO" Gauge for 2,5 A appliance inlets (see Annexure 6)

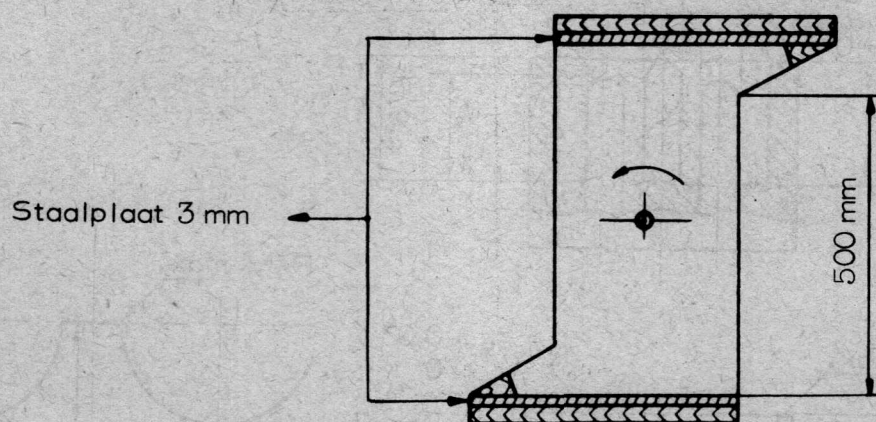
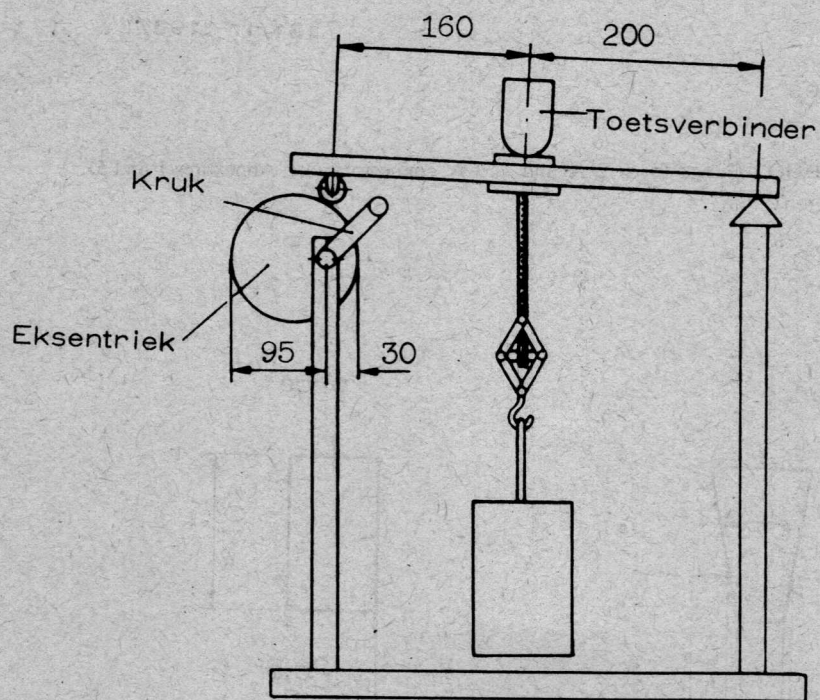


Fig. 11—Tuimeltrom



Afmetings in millimeter

Fig. 12—Apparaat vir koordverankeringsstoets



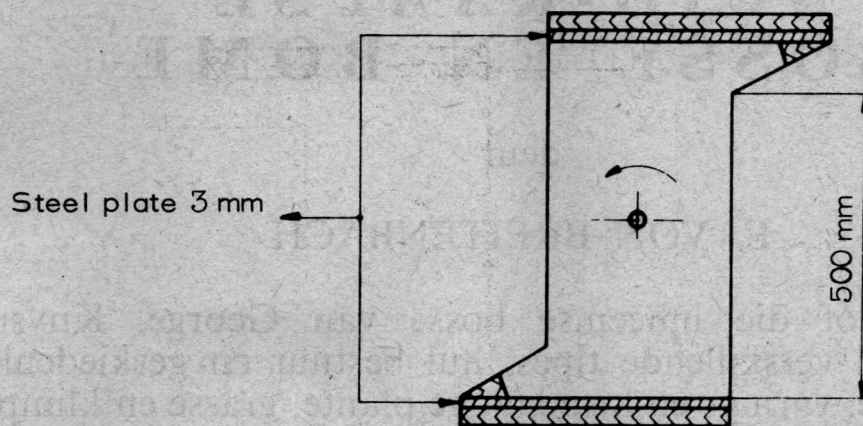
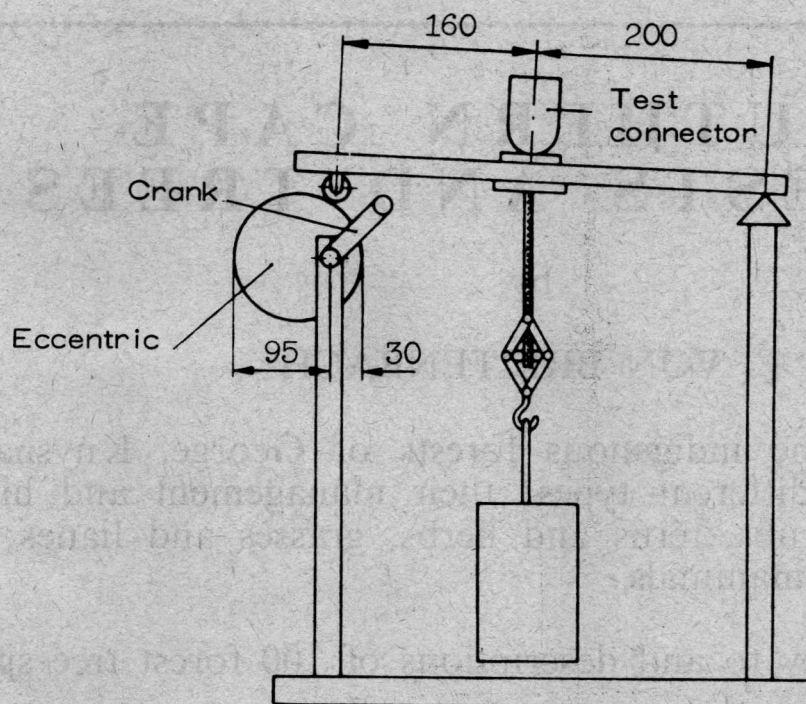


Fig. 11—Tumbling barrel



Dimensions in millimetres

Fig. 12—Apparatus for testing the cord anchorage

# **SUID-KAAPSE BOSSE EN BOME**

deur

**F. VON BREITENBACH**

'n Gids tot die inheemse bosse van George, Knysna en Tsitsikama; hul verskillende tipes; hul bestuur en geskiedenis; hul bome en struik, varings en kruidagtige plante, grasse en klimplante; hul slange, voëls en soogdiere.

Met 'n blaarsleutel tot en beskrywings van 100 bosboomsoorte.

328 bladsye, 470 illustrasies (foto's en lyntekeninge), omvattende register, volband.

**Prys R10 • Buiteland R12,50**

Verkrygbaar by Die Staatsdrukker, Pretoria en Kaapstad

# **SOUTHERN CAPE FORESTS AND TREES**

by

**F. VON BREITENBACH**

A guide to the indigenous forests of George, Knysna and Tsitsikama; their different types; their management and history; their trees and shrubs, ferns and herbs, grasses and lianes; their snakes, birds and mammals.

With a leaf-key to and descriptions of 100 forest tree species.

328 pages, 470 illustrations (photographs and line drawings), comprehensive index, hard cover.

**Price R10,00. Abroad R12,50.**



## INHOUD

| No.                                                                                   | Bladsy<br>No. | Staats-<br>koerant<br>No. |
|---------------------------------------------------------------------------------------|---------------|---------------------------|
| <b>Nywerheidswese, Departement van</b>                                                |               |                           |
| <i>Goewermentskennisgewing</i>                                                        |               |                           |
| R. 101. Wet op Standaarde (33/1962): Wysiging:<br>Sekere elektriese toerusting ... .. | 1             | 5858                      |

## CONTENTS

| No.                                                                                | Page<br>No. | Gazette<br>No. |
|------------------------------------------------------------------------------------|-------------|----------------|
| <b>Industries, Department of</b>                                                   |             |                |
| <i>Government Notice</i>                                                           |             |                |
| R. 101. Standards Act (33/1962): Amendment:<br>Certain electrical equipment ... .. | 1           | 5858           |

