

---

**INTERNATIONAL STANDARD**



**4704**

---

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

---

## **Glass plant, pipeline and fittings — Glass plant components**

*Appareillage, tuyauterie et raccords en verre — Éléments d'appareillage en verre*

**First edition — 1977-07-01**

---

**UDC 621.64 : 666.11**

**Ref. No. ISO 4704-1977 (E)**

**Descriptors :** glassware, equipment, glass tubes, glass fittings, borosilicate glass, equipment specifications.

## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 4704 was developed by Technical Committee ISO/TC 128, *Glass plant, pipeline and fittings*, and was circulated to the member bodies in April 1976.

It has been approved by the member bodies of the following countries :

Austria	Korea, Rep. of	Switzerland
Czechoslovakia	Mexico	Turkey
France	Poland	United Kingdom
Germany	Romania	
Italy	South Africa, Rep. of	

No member body expressed disapproval of the document.

This document is a preview generated by EVS

<b>CONTENTS</b>	<b>Page</b>
<b>0</b> Introduction . . . . .	1
<b>1</b> Scope and field of application . . . . .	1
<b>2</b> References . . . . .	1
<b>3</b> Material . . . . .	1
<b>4</b> Working temperatures and working pressures . . . . .	2
<b>5</b> Basic dimensions . . . . .	2
<b>6</b> Compatibility . . . . .	3
<b>7</b> Pipe sections . . . . .	4
<b>8</b> Column sections . . . . .	5
<b>9</b> Thermometer pockets . . . . .	6
<b>10</b> Unequal tees . . . . .	7
<b>11</b> Column feed pipes . . . . .	8
<b>12</b> Column adaptors . . . . .	9
<b>13</b> Reducers . . . . .	10
<b>14</b> Reflux separators . . . . .	12
<b>15</b> Gas pressure relief valves . . . . .	13
<b>16</b> Marking . . . . .	14
<b>17</b> Testing, handling and use . . . . .	14

This document is a preview generated by EVS

This page intentionally left blank

# Glass plant, pipeline and fittings – Glass plant components

## 0 INTRODUCTION

This International Standard deals with a selection of components of glass plant, mainly in nominal bores in the range from 80 to 1 400 mm. Some nominal bores and sizes which are not being manufactured at the time of drafting this International Standard have been included, with the aim of extending to future manufacture the essential requirements of compatibility and interchangeability, the achievement of which is the main purpose of this International Standard.

This International Standard should be read in conjunction with ISO 3585, ISO 3586 and ISO 3587.

This International Standard covers a limited series of components for which important elements of standardization could be agreed relatively rapidly. It may be possible subsequently to deal similarly with other components which involve greater difficulties in standardization.

Where dimensions have not been standardized but are to be given by the manufacturers, this is for one of the following reasons :

- that standardization of a dimension, or other particular feature, would apply an undesirable restriction on future development of the component;
- it has not been possible to reach agreement on a standard dimension because of the different manufacturing methods in current use, which themselves involve high capital investment;
- the standardization of a dimension would involve the cost of change without the basic advantages of compatibility and interchangeability.

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the essential requirements for compatibility and interchangeability of components of glass plant, to the extent that these objectives are attainable, bearing in mind the differences in basic design features between the products of different manufacturers. It not only specifies standardized dimensions but, where applicable, lists additional information which should be given by the manufacturers, either in catalogues or supplied to users on request.

## 2 REFERENCES

ISO 2034, *Pipeline flanges for general use – Metric series – Mating dimensions.*

ISO 3585, *Glass plant, pipeline and fittings – Properties of borosilicate glass 3.3.*

ISO 3586, *Glass plant, pipeline and fittings – General rules for testing, handling and use.*

ISO 3587, *Glass plant, pipeline and fittings – Pipeline and fittings of nominal bore 15 to 150 mm – Compatibility and interchangeability.*

## 3 MATERIAL

The components referred to in this International Standard shall be manufactured from borosilicate glass 3.3, which is resistant to both heat and chemical attack. Its properties are given in ISO 3585.