

International Standard



8177

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Aerospace — Omega clamps (saddle clamps) for fluid tubing installations — Dimensions

Aéronautique et espace — Colliers de fixation en oméga pour tuyauteries de fluides — Dimensions

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Foreword

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International Standard ISO 8177 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*.

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Aerospace — Omega clamps (saddle clamps) for fluid tubing installations — Dimensions

1 Scope

This International Standard specifies maximum and minimum dimensions for omega clamps (also known as "saddle clamps") installed by means of two bolts with a nominal diameter of 5 mm.

This International Standard shall not be considered as an interchangeability standard. The tolerances for each type of clamp are to be defined in the parts standards drawings.

2 Field of application

These clamps are intended for the installation, support and guiding of rigid tubing or hose assemblies used in aerospace equipment.

3 Reference

ISO 6771, *Aerospace construction — Fluid systems and components — Pressure and temperature classifications.*

4 Field of use

Omega clamps (saddle clamps) are classified into six types, according to the temperature range in which they are intended to be used (see table 1).

Table 1

Temperatures in degrees Celsius

Clamp type	Temperature range ¹⁾	
	min.	max.
1	− 55	+ 70
2	− 55	+ 135
3	− 55	+ 200
4	− 55	+ 320
5	− 55	+ 400
6	− 55	+ 650

1) See ISO 6771.

5 Description

The omega clamp (saddle clamp) is a "multi-component"-type clamp. It consists of a top band and a base contoured to the tubing. Mounting holes in the top band align with holes in the base on installation. This clamp is designed for single tubing installation, and can be provided as a metallic support only or with a plastomer or elastomer cushion or sheathing, as specified in the parts standard.

6 Dimensions

The omega clamp (saddle clamp) shall be in accordance with the figure and table 2.

The shape of clamp illustrated in the figure does not purport to be the exact shape of the manufactured clamp. Table 2 only specifies those dimensions required to define the maximum envelope and the proper location of the tube relative to the mounting plane and fastening points.