



# VIBRATION ABSORBERS SERIES 7690



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## APPLICATIONS

The vibration absorbers are designed for installation on commercial refrigerating systems and on civil and industrial air conditioning plants. The function of this item is to avoid the transmission of compressor's vibrations to the refrigerating system pipes, reducing the risk of damage and the noise level. The vibration absorbers can also compensate small thermal expansion of the piping. The vibration absorbers are classified "Pressure vessels" according to Article 1, Section 2.1.4 of the Directive 97/23/EC and are subject to Article 3, Section 1.3 of the same Directive. They are designed to be used with refrigerant fluids belonging to Group 2 (as per Article 9, Section 2.2 of Directive 97/23/EC referring to Directive 67/548/EC).

## CONSTRUCTION MATERIALS

All welding between various parts, including the copper/stainless steel connections are TIG welded (figure 1). This solution makes the Castel Vibration Absorbers particularly resistant to the overheating during brazing to the tubing.

The main parts of Castel Vibration Absorbers are manufactured with the following materials:

- Copper tube EN 12449 – Cu-DHP for copper end
- Stainless steel EN 10088-1 – 1.4305/1.4301 for fitting
- Stainless steel EN 10088-1 – 1.4541/1.4404 for corrugated flexible
- Stainless steel EN 10088-1 – 1.4301 for net holder
- Stainless steel EN 10088-1 – 1.4301/1.4306 for wire "braid"

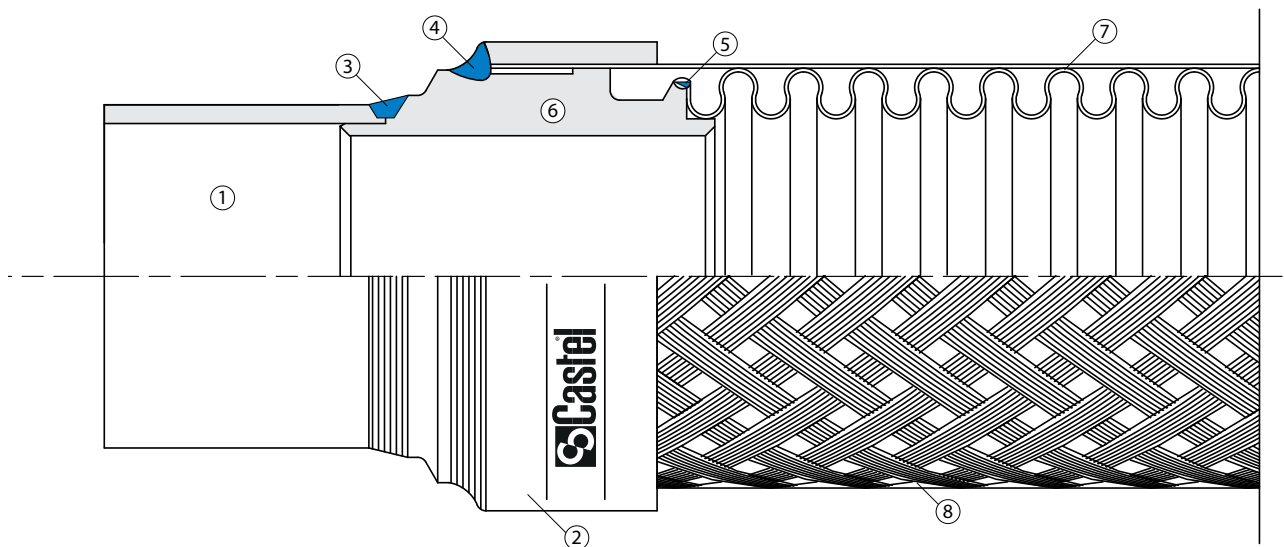


Figure 1

- 1 - Copper Connections
- 2 - Net holder
- 3 - Copper ends welding
- 4 - Wire braid welding

- 5 - Corrugated flexible welding
- 6 - Fitting
- 7 - Corrugated flexible
- 8 - Stainless steel wire braid



## INSTALLATION

A vibration absorbers can be installed both on suction and discharge lines of a refrigerating system, as close as possible to the compressor. The vibration absorbers are not designed to compensate possible piping misalignment.

Vibration absorbers should be installed perpendicularly to the direction of vibrations. When vibrations exist on two planes, two vibrations absorbers should be used, as shown on fig 2 and 3. For the maximum absorption of vibrations, the refrigerant line should be anchored at the end of the vibration absorber, as shown on fig 2 and 3.

Castel vibration absorbers can be installed vertically too, because they are designed to avoid the retention of condensing water

in the wavy zone near to the connections. So there are no problems to install them with temperatures lower than 0°C. Vibration absorbers are not designed to absorb axial or torsion stress. Care should be taken to allow sufficient space for the vibration to avoid static compression or tension, after brazing on place.

High speed of the refrigerant fluid can produce vibration and noise phenomena. In this case it's advisable to install a larger size of Vibration Absorber.

The connection of the vibration absorbers to the piping is normally performed by a brazing process. The specific design and construction of vibration absorbers allows welding without particular protections to prevent overheating.

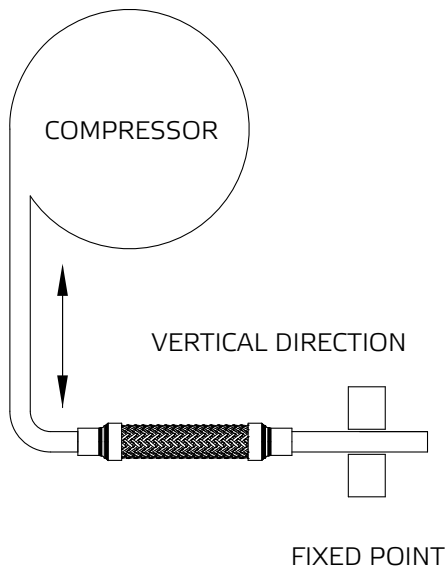


Figure 2

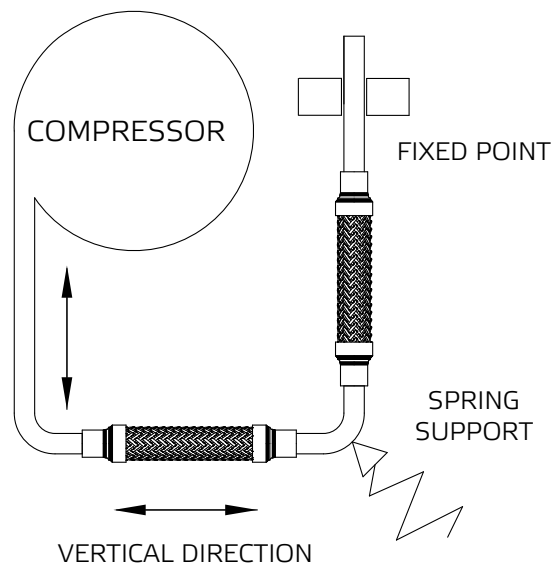


Figure 3



### VIBRATION ABSORBERS SERIES 7690

Catalogue Number	Connections		Length [mm]	TS [°C]		PS	Fluids	Risk Category according to PED
	ODS			Min	Max	[bar]		
	[mm]	[inch]						
7690/3	-	3/8	230	-100	+250	35	Refrigerant fluids proper to Group 2 according to 98/23/EC Directive, Art.9, section 2.2	Art. 3.3
7690/M10	10	-						
7690/M12	12	-						
7690/4	-	1/2						
7690/5	16	5/8	255					
7690/M18	18	-						
7690/6	-	3/4						
7690/7	22	7/8						
7690/M28	28	-	330					
7690/9	-	1.1/8						
7690/11	35	1.3/8	375					
7690/13	-	1.5/8	430					
7690/M42	42	-						
7690/17	54	2.1/8	510					
7690/M64	64	-	690					
7690/21	67	2.5/8						
7690/24	76	3"						
7690/25	80	3.1/8	710					
7690/28	89	3.1/2						
7690/34	108	4.1/4						
							25	

