



[sales@orientinsulators.com](mailto:sales@orientinsulators.com)  
<http://www.suspensioninsulators.com>

# Chapter 4

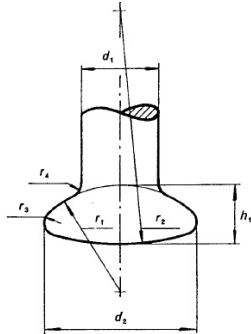
## Suspension Insulator Coupling Method

---

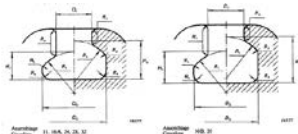
4.4 IEC60120 ball and socket

**By Orient Power**

# IEC60120 ball and socket



Dimension de l'assemblage Dimension size of assembly	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	r <sub>1</sub>	r <sub>2</sub>	r <sub>3</sub>	r <sub>4</sub>
11	11.0 <sup>+0.05</sup> <sub>-0.05</sub>	22.0 <sup>+0.1</sup> <sub>-0.1</sub>	33.0 <sup>+0.1</sup> <sub>-0.1</sub>	3.5	3.5	3.5	3.5 <sup>+0.1</sup> <sub>-0.1</sub>
16	16.0 <sup>+0.05</sup> <sub>-0.05</sub>	32.0 <sup>+0.1</sup> <sub>-0.1</sub>	48.0 <sup>+0.1</sup> <sub>-0.1</sub>	5.0	5.0	5.0	5.0 <sup>+0.1</sup> <sub>-0.1</sub>
20	20.0 <sup>+0.05</sup> <sub>-0.05</sub>	40.0 <sup>+0.1</sup> <sub>-0.1</sub>	60.0 <sup>+0.1</sup> <sub>-0.1</sub>	6.0	6.0	6.0	6.0 <sup>+0.1</sup> <sub>-0.1</sub>
24	24.0 <sup>+0.05</sup> <sub>-0.05</sub>	48.0 <sup>+0.1</sup> <sub>-0.1</sub>	72.0 <sup>+0.1</sup> <sub>-0.1</sub>	7.0	7.0	7.0	7.0 <sup>+0.1</sup> <sub>-0.1</sub>
28	28.0 <sup>+0.05</sup> <sub>-0.05</sub>	56.0 <sup>+0.1</sup> <sub>-0.1</sub>	84.0 <sup>+0.1</sup> <sub>-0.1</sub>	8.0	8.0	8.0	8.0 <sup>+0.1</sup> <sub>-0.1</sub>
32	32.0 <sup>+0.05</sup> <sub>-0.05</sub>	64.0 <sup>+0.1</sup> <sub>-0.1</sub>	96.0 <sup>+0.1</sup> <sub>-0.1</sub>	9.0	9.0	9.0	9.0 <sup>+0.1</sup> <sub>-0.1</sub>



Dimension de l'assemblage Dimension size of assembly	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	r <sub>1</sub>	r <sub>2</sub>	r <sub>3</sub>	r <sub>4</sub>	r <sub>5</sub>	r <sub>6</sub>	r <sub>7</sub>
11	11.0 <sup>+0.05</sup> <sub>-0.05</sub>	22.0 <sup>+0.1</sup> <sub>-0.1</sub>	33.0 <sup>+0.1</sup> <sub>-0.1</sub>	3.5	3.5	3.5	3.5	3.5	3.5	3.5
16	16.0 <sup>+0.05</sup> <sub>-0.05</sub>	32.0 <sup>+0.1</sup> <sub>-0.1</sub>	48.0 <sup>+0.1</sup> <sub>-0.1</sub>	5.0	5.0	5.0	5.0	5.0	5.0	5.0
20	20.0 <sup>+0.05</sup> <sub>-0.05</sub>	40.0 <sup>+0.1</sup> <sub>-0.1</sub>	60.0 <sup>+0.1</sup> <sub>-0.1</sub>	6.0	6.0	6.0	6.0	6.0	6.0	6.0
24	24.0 <sup>+0.05</sup> <sub>-0.05</sub>	48.0 <sup>+0.1</sup> <sub>-0.1</sub>	72.0 <sup>+0.1</sup> <sub>-0.1</sub>	7.0	7.0	7.0	7.0	7.0	7.0	7.0
28	28.0 <sup>+0.05</sup> <sub>-0.05</sub>	56.0 <sup>+0.1</sup> <sub>-0.1</sub>	84.0 <sup>+0.1</sup> <sub>-0.1</sub>	8.0	8.0	8.0	8.0	8.0	8.0	8.0
32	32.0 <sup>+0.05</sup> <sub>-0.05</sub>	64.0 <sup>+0.1</sup> <sub>-0.1</sub>	96.0 <sup>+0.1</sup> <sub>-0.1</sub>	9.0	9.0	9.0	9.0	9.0	9.0	9.0

Ball and socket is commonly used end fittings for insulator. Ball and socket is conforming to IEC 60120.

The ball and socket interior shall conform to the dimensions in left picture, which also specifies the minimum thickness of the locking device.

And sockets according to the left picture are shown with flat bottoms. Sockets with rounded bottoms with radii of curvature not less than the dimensions r2 of the pin balls can also be used. In this case, the dimensions R3 have to be correspondingly decreased.

## The coupling size of ball and socket:

11mm,16mm,20mm,24mm,28mm,32mm.

## Main material of the IEC60120 ball and socket:

- ✧ Cast iron
- ✧ Forged iron
- ✧ Hot dip galvanized

## Mechanical strength of ball and socket:

- ✓ IEC: 70KN, 100KN, 120KN, 160KN, 200KN,300KN
- ✓ ANSI: 15000LB,25000LB,30000LB

## Insulators which use ball and socket end fitting:

- ✧ Porcelain disc suspension insulator
- ✧ Porcelain long rod insulator
- ✧ Composite suspension insulator
- ✧ Composite long rod insulator.



**Orient Power**

[sales@orientinsulators.com](mailto:sales@orientinsulators.com)

<http://www.suspensioninsulators.com>