



## Cone Adapter

For measuring holes or bolts with  $\varnothing$  20 - 60 mm

Tachymetric measuring the axis position of circular objects is difficult without special tools. Now there is a tool available which can determine the position of vertical holes as well as of vertical bolts. The cone adapter can be rotated by 180° and used upside down, depending on the application. A steel pin with the prism is inserted through the axial hole of the cone adapter. A circular level is used to set the cone adapter / steel pin / prism unit perpendicularly.

### ■ Cone Adapter

- Anodized aluminum construction
- 3 **integrated magnets** hold the cone adapter on magnetic parts
- Axial bore  $\varnothing$  12 mm for steel pin (1482)
- Cut-out on both sides for optional circular level no. 1580 (see below)



Description	Order-No.	Euro
Cone Adapter for holes and bolts, $\varnothing$ 20 to 60 mm	<b>1481</b>	145,-



### ■ Steel pin $\varnothing$ 12 mm

- Stainless steel  $\varnothing$ 12x40 mm with mandrel
- M8 inner thread to screw on the prism holder or adapter

Description	Order-No.	Euro
Steel pin $\varnothing$ 12 mm for Cone Adapter	<b>1482</b>	25,-

### TIP

The tip of the steel pin stands on the top of the bolt. By taking into account the distance from the tip to the center of the prism, the correct height of the upper side of the bolt is obtained in addition to the position of the bolt.  
[See next page, s. page 127.](#)



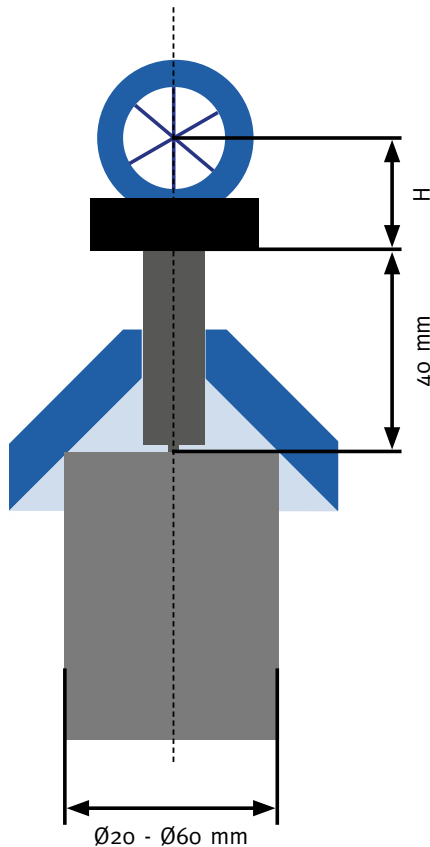
### ■ Circular level „integral“

If there is no circular level on the prism / carrier itself, the circular level must be mounted integrally (No. 1580) in the cut-off on one of the sides of the cone adapter. It ensures that the entire unit is in a vertical position.



Description	Order-No.	Euro
Circular level „Integral“ ( <a href="#">s. page 48</a> )	<b>1580</b>	23,-

## ■ Measuring the bolt/cylinder center and height



### Notes:

- The measuring result is most accurate when the cylinder to be measured is completely vertical
- The measuring result is most accurate when the top side of the cylinder to be measured is evenly horizontal
- The measurement result is most accurate when the chamfer / bevel on the cylinder edge is as uniform as possible

### Procedure:

- Insert Ø12 mm steel pin (1482) with prism into cone adapter
- Place adapter on cylinder / bolt
- Use the circular level to set the level
- Take measurement

The height of the steel pin (40 mm) and the height H of the prism (+ adapter) must be added to the measured Z-coordinate.



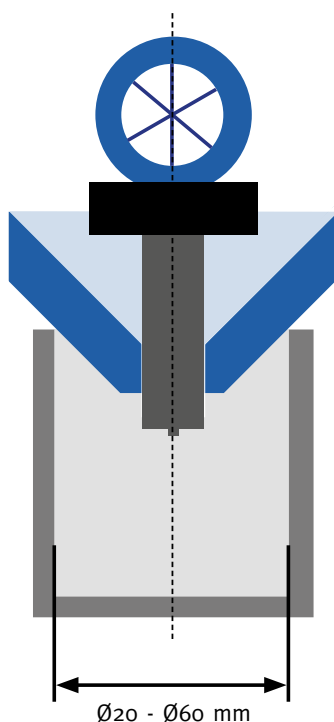
## ■ Measure hole center

### Notes:

- The measuring result is most accurate when the contact circle is as horizontal as possible
- The measurement result is most accurate when the edge of the hole is as circular as possible
- The measurement result is most accurate when the chamfer / bevel on the edge of the hole is as uniform as possible

### Procedure:

- Insert Ø12 mm steel pin (1482) with prism into cone adapter
- Place adapter on hole
- Use the circular level to set the level
- Take measurement



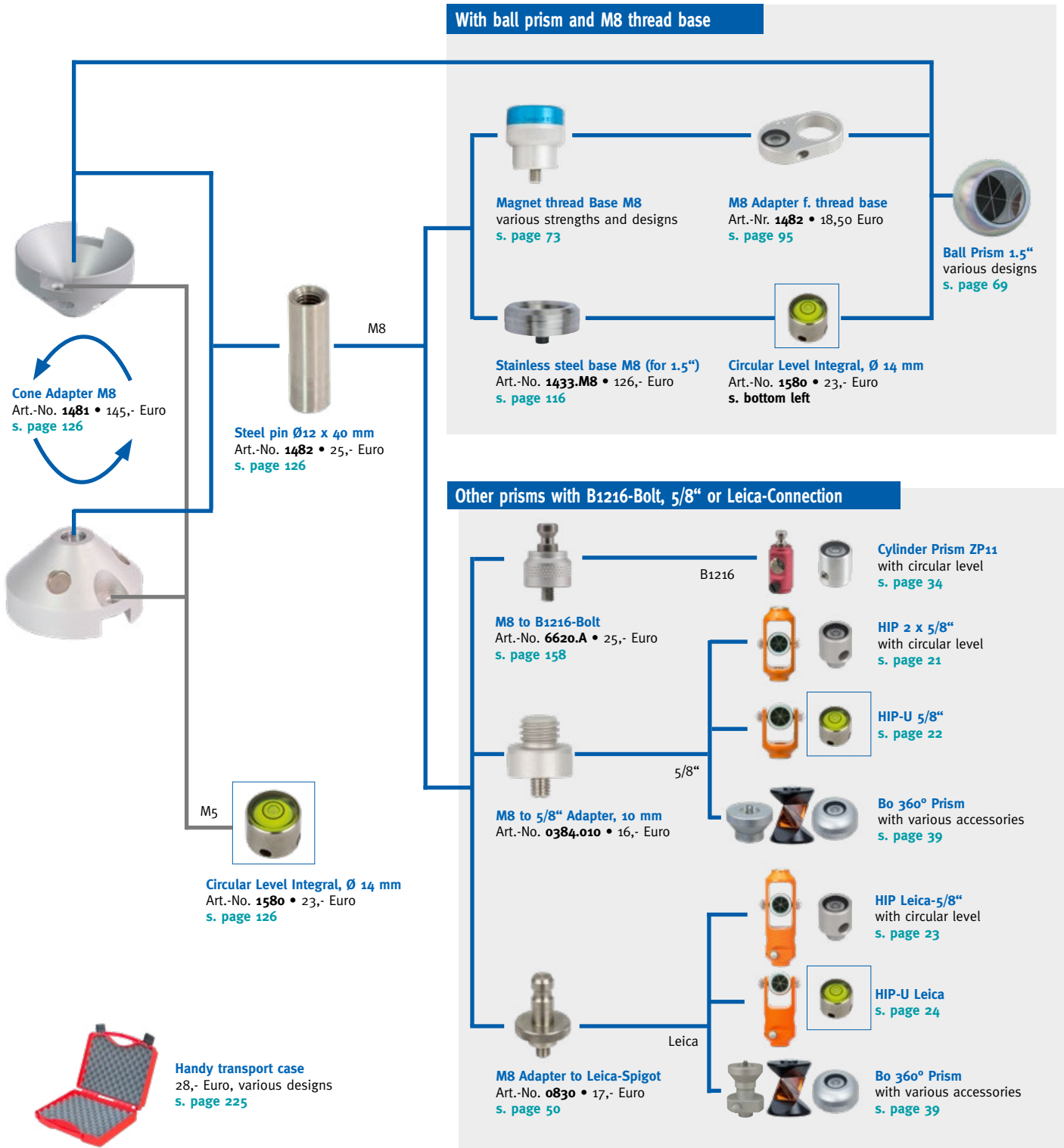
In the example here, the steel pin was not used because the cone adapter can also be used directly with the ball prism when measuring holes.

### Overview of Cone Adapter Accessories

The overview shows the application possibilities of the cone adapter with prisms offered by us. With appropriate M8 adapters it can also be combined with other commercially available prisms.

**TIP** With low prisms, a possible vial error has only little effect and the center of gravity is close to the contact point / contact ring. This is especially the case with our ball prisms.

The measuring of **holes** can even be done without a steel pin. By inserting a 1.5" ball prism directly into the cone adapter, a very small target height is achieved. The cut-off on the adapter must point towards the total station. For highest accuracies, however, the use of an integral level level is recommended.



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prices do not include any taxes