



**BENDER
+ WIRTH**

Bender & Wirth lampholder 945

Product Introduction





Introduction of Lampholder 945 for Base PGZ12

Screw based HID lamps are commonly used in street lighting applications. The high tolerances of the base (i.e. E26) and the size of these types of lamp/ lampholder units do not allow the use of advanced and high performance reflectors. The distribution of the produced light is very inefficient and can hardly be controlled. This contributes to the poor performance and the relatively high energy consumption of these systems.

The lampholder relevant design goal for the lamp base PGZ12 was (among others):

- to create a smaller lampholder / lamp system in order to allow a more compact design of the final luminaries
- to conserve energy by reducing the number of light-posts needed for a defined area. In order to use advanced reflector technology, the position of the lamp needs to be well defined (with low tolerances) and kept accurately in place.

In order to apply the advantages of this new lamp type, a lampholder was needed which provides not only reliable electric contact to the lamp, but also guarantees a precise and accurate positioning of the lamp in the focal point of the reflector.

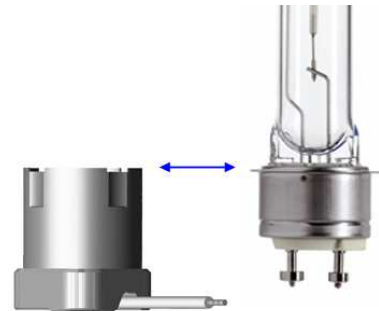
In summer 2006, Bender & Wirth introduced its lampholder 945 for the PGZ12 base.



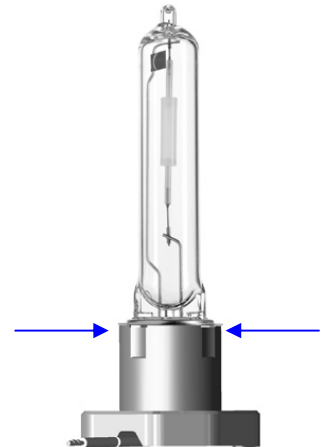
Features & Benefits of the lampholder 945

Lampholder contact:

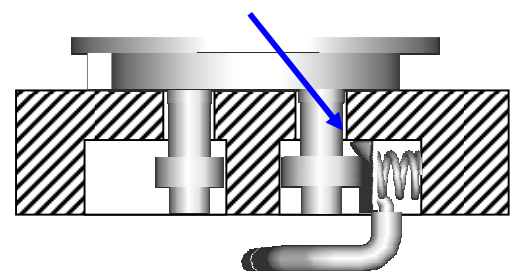
The norm PGZ12 requires that the lampholder pulls the lamp actively down onto the rim of the metal barrel of the lampholder and holds it in position.



The lamp can be inserted into the lampholder without any force until the flange of the lamp cap touches the upper rim of the barrel of the holder. After the lamp cap is sitting on the lampholder barrel, the lamp can be twisted clockwise until a mechanical stop. A snap-in-sensation confirms proper insertion of the lamp.



The patented contacts of the lampholder contain slopes on the top edges. During the rotation of the lamp the slopes create an axial force onto the boss of the lamp pins. This force pulls the lamp securely down into the lampholder. The spring loaded contact is designed to compensate the tolerances of the ceramic housing of the lampholder and the pins of the lamp.



No axial moving parts are required to generate the required pull force onto the lamp. This simplifies the design and increases the reliability.

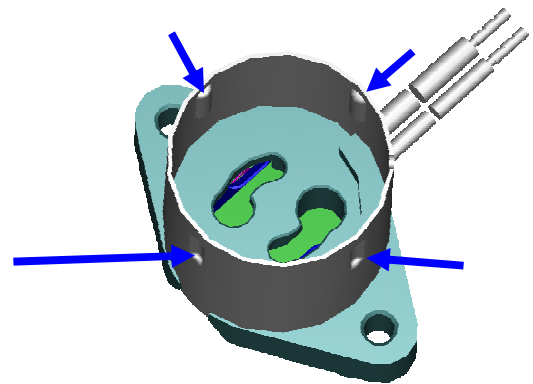


Lampholder barrel

The metal barrel of the lampholder has to align the lamp horizontally - a precise and tight fit is required to guarantee accurate horizontal positioning of the lamp.

Dust and dirt in combination with the heat of the lamp can increase the friction between the barrel of the lampholder and the barrel of the lamp. This requires an amplified force to remove the lamp out of the lampholder. The risk of lamp breakage is increased.

In order to reduce the contact surface between lampholder and lamp and therefore reduce the friction, Bender & Wirth widened the diameter of the lampholder barrel. In order to maintain the tight diameter for the accurate, horizontal positioning of the lamp, indents in the barrel of the lampholder were incorporated.



Height of Lampholder

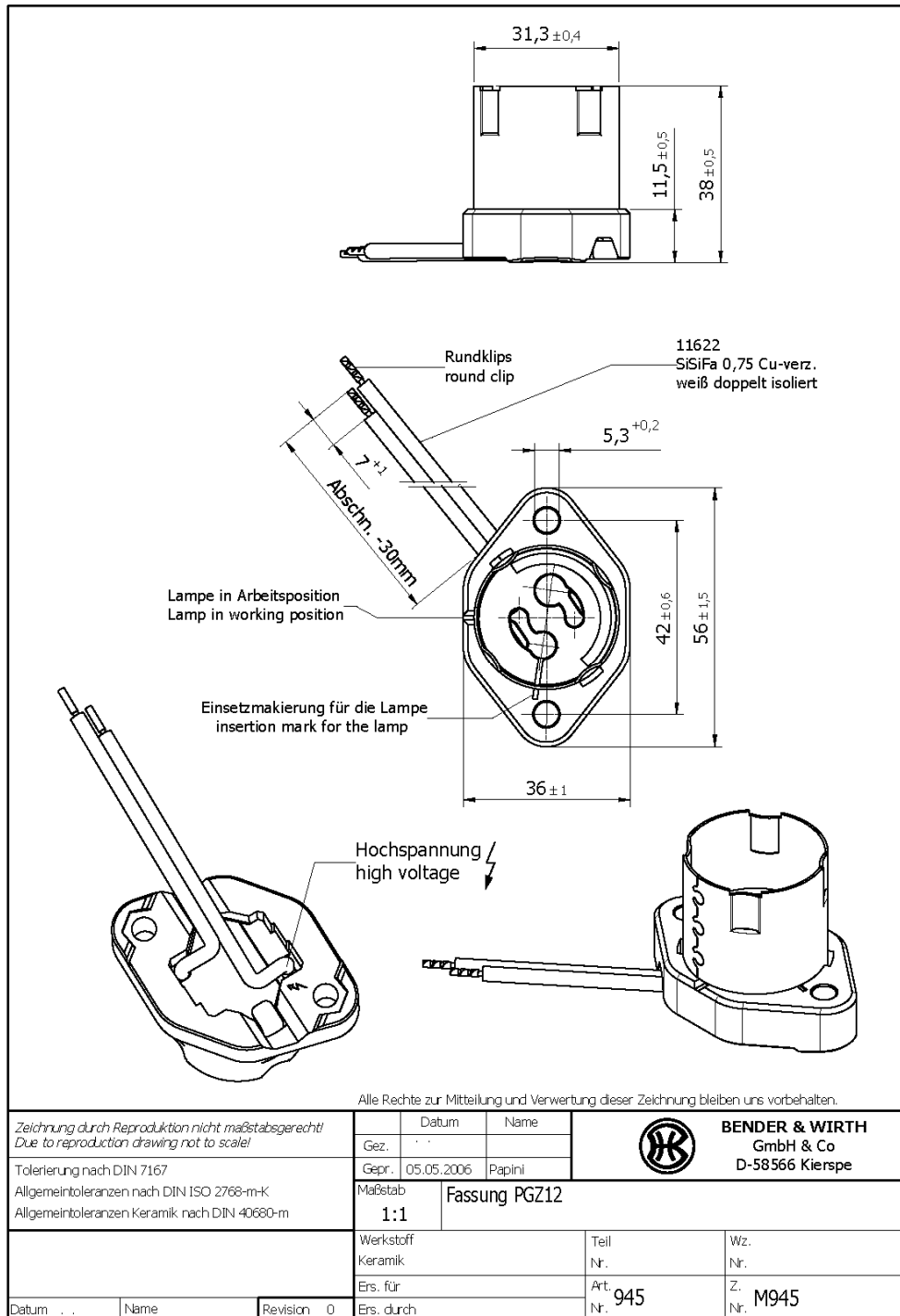
The low profile of the lampholder was achieved by avoiding any axial moving parts in the lampholder. The lampholder adds only 6.5 mm to the overall height of the lamp, which allows very compact design of the optical unit.





**BENDER
+ WIRTH**

Drawing





Specifications

Lampholder 945 For PGZ12 CosmoPolis

Umhüllte Keramikfassung *Enclosed ceramic lampholder*

Bemessungsspannung <i>rated voltage</i>	500 V, Impulsspannungskategorie III : 500 V, impulse withstand category III
Bemessungsstoßspannung <i>rated pulse voltage</i>	: 5 kV
Bemessungsstrom <i>rated current</i>	: 10 A
Bemessungstemperatur <i>rated operating temperature</i>	: T 350
Anschlussleitung <i>connection lead</i>	Silikonleitung 0,75 mm², doppelt isoliert, mit Rundklips : Silicone lead 0,75 mm ² , double insulated, with round clip
Leitungslänge <i>(nutzbare Länge)</i> <i>lead length</i> <i>(usable length)</i>	310 mm : (280 mm)
Befestigung <i>fixing</i>	Schrauben M4 : screws M4
Variante <i>Variant</i>	Integriertes Befestigungsgewinde M4 : Integrated fixing thread M4

