



Technical Note: 10000044

Maxtek Sensor Head vs. Temescal Sensor Head

INFICON Maxtek Sensor Heads look very similar to a Temescal Sensor Head. For this reason, many users have tried to use Maxtek Drawers in a Temescal Sensor Head. To add to the confusion, Maxtek has three iterations of drawers in use; however, they are not compatible with Temescal Sensor Head.

The goal of this tech note is to clarify questions regarding the compatibility of Maxtek Crystal Drawers in a Temescal Sensor Head. Also, it identifies the differences in the versions of Maxtek Crystal Drawers.

The following sections describe and identify each drawer and sensor head. Hopefully, from this the users can identify what they have and order the correct replacement parts.

Maxtek Sensor Head vs. Temescal Sensor Head

There are no markings of any kind on either sensor head. Without the drawer installed, they both look very similar. However, close inspection will show that they are quite different. Differences are:

- There is mounting tab extended above the Temescal Sensor Head. Maxtek Sensor Heads do not have this tab.
- Both heads use the Microdot® type connector for electrical connection. However, the connector on the Maxtek sensor head is simply a bulkhead type with a hex on it. The connector used on the Temescal head has a flange on it. This connector is bolted in the head using two small allen head screws.
- Looking into the Temescal head's cavity, there is a contact spring welded to the pin on the Microdot® connector while there is a contact pin extended into the Maxtek head.

Maxtek Sensor Drawer (Original Release)

Figure 1 shows the original release of Maxtek Drawer. This version most resembles the Temescal drawer. It has a "flange" on one end. This flange is provided as a "handle" so the user can pull the drawer out from the sensor head. There is no marking of any kind on this drawer.

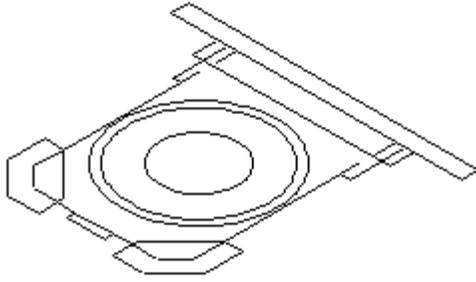


Figure 1 Original Drawer

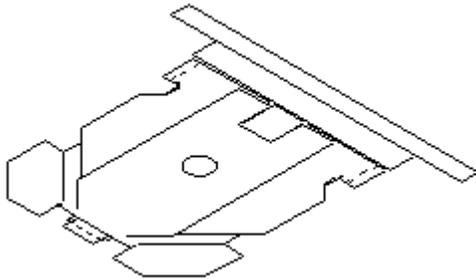


Figure 2 Original Retainer

Figure 2 shows the crystal retainer that mates to this original drawer. This retainer is available in two configurations. One comes with Teflon® insulators for use in non-bakeable sensor heads, and the other comes with ceramic insulators for use in bakeable sensor heads.

Note: This version is still in production in smaller volume to support customers who still like this design and do not wish to switch over to the new version.

Temescal Sensor Drawer (Model 8006)

Figure 2 shows Temescal drawer. Notice that the “flange” feature is very similar to Maxtek’s. However, Temescal Logo and Model 8006 is cast on the flange.

Notice also the crystal retainer. It is a simple round shape ceramic piece with a contact spring riveted to it. (See Figure 2).

Maxtek Sensor Drawer (New Generation, 1st Version)

Figure 3 shows Maxtek Drawer of the New Generation, 1st Version. This version was a complete re-design. The “flange” feature was removed and replaced with a shoulder screw. Maxtek name is cast on the front of the drawer. There is no other marking.

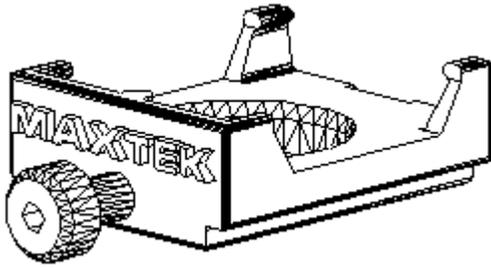


Figure 3 New Generation Drawer
1st Version



Figure 4 New Generation Retainer
1st Version

The crystal retainer assembly was also completely redesigned (Figure 4). Hence, **it is no longer compatible with the drawers from the Original Release, and vice versa.**

Maxtek Sensor Drawer (New Generation, 2nd Version – Current Production)

Figure 5 shows Maxtek Drawer of the New Generation, 2nd Version. This version has some changes based on the 1st Version. Some of the dimensions and tolerances had to be changed because the casting vendor could no longer produce drawers to the specifications of the 1st version. In this version, the drawer looks exactly like the 1st version. The two things differentiate the 2nd version from the 1st are (see notes on Figure 4):

- The bottom of the drawer is marked with “B1”.
- The retainer “catch” is thicker.

Unfortunately, the crystal retainer assembly also has to be changed to accommodate the changes in the drawer. Note that a “REV B” is etched on the bottom of this retainer assembly. **It is not compatible with the drawers from the New Generation 1st Version, and vice versa.**

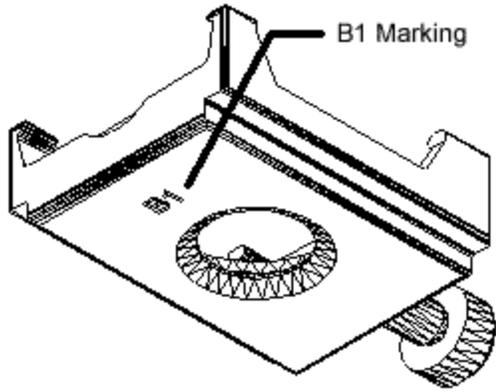


Figure 5 - New Generation Drawer
2nd Version

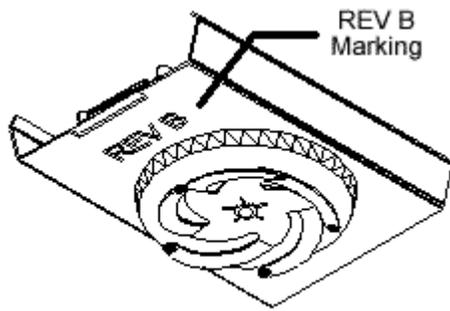


Figure 6 - New Generation Drawer
2nd Version

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Related Products:	ASF-140/ASF-141 , BDS-250/BDS-251 , BSH-150/BSH-151 , DSH5P1 , SF-120 , SH-101/SH-102
Product Line:	Thin Film / Vacuum
Notes:	This tech note applies to all of our sensor heads that use the NEXT GENERATION COOL DRAWER. Originally released as THIN FILM TECHNICAL NOTE V-144.