

SI 640 Self-tapping screws in thermoplastic loudspeaker cabinets 1.0 en

This Service Information (SI) provides basic knowledge on the handling of self-tapping connecting screws in thermoplastic loudspeaker cabinets.

Introduction

On d&b audiotechnik loudspeaker models made of thermoplastic material (ABS Polycarbonate) self-tapping screws are used. This allows a safe connection of parts throughout the whole product service life-cycle under normal conditions. However, more caution is required because the screw holes only allow a limited tightening torque due to material properties.

Limited torque capability of screw holes

If the specified tightening torque is exceeded or the threads of the screw holes are worn out from many screw cycles, the threads may be pulled out of the screw holes. In case this happens during repair work on thermoplastic loudspeaker cabinets, d&b audiotechnik supplies you with longer screws to tackle this problem.

Use of replacement screws

To maintain maximum cabinet life, only replace the original short screws with the longer replacement screws, if the old screws cannot be tightened properly anymore. This is given when a screw does not reach the specified torque anymore (torque wrench, torque screwdriver, or torque lock of the cordless screwdriver does not trigger) or residue of the plastic thread is visible on the screw when you remove it.

Recommendations for hassle-free handling

Handle the screw connections carefully to achieve the maximum service life of your thermoplastic loudspeaker cabinets.

- **Remove and apply screws slowly.**

This keeps the temperature of the material low and reduces the risk of breaking a thread.

- **Re-use threads.**

Insert screws into already tapped threads manually and make sure that the screws follow the threads perpendicularly before you proceed.

- **Tighten screws with accurately calibrated torque wrench/torque screwdriver.**

Especially with low-torque applications, a standard tolerance percentage makes tiny absolute numbers when it comes to what the material can withstand safely. So only tighten the screws up to the correct torque value, never above it.

- **If using electric screwdrivers:**

Reduce torque level to the specified value, deactivate impact and use slow gear.

- **Stick to the torque specification – even when you use replacement screws!**

The replacement screws are longer and cut deeper into the thermoplastic material, but in case they are necessary, they can not compensate for the missing thread material – so also adhere to the specified maximum torque when using them to protect the screw holes. If the screw holes are badly damaged, you may need to replace the complete loudspeaker cabinet.

If you are not sure about the torque values, refer to the [Torque settings guideline](#) and technical documentation on [Backstage](#).