


# DRYING TIME WITH AND WITHOUT ENHANCED DRYING SYSTEM (EDS)


## SCIENTIFIC INFORMATION



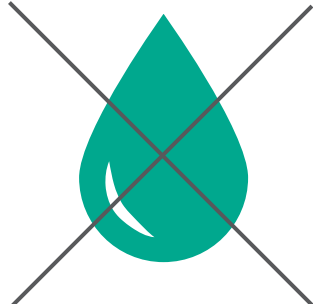
BACKGROUND



Drying is a critical phase of the sterilization process.<sup>1</sup>

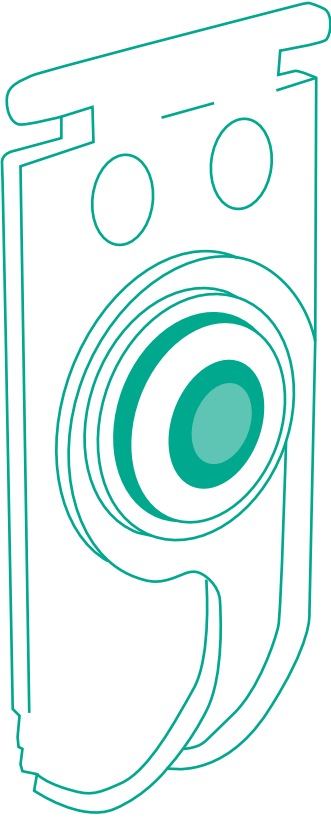




Moisture could provide a vector for microorganisms contaminating the load.<sup>1</sup>



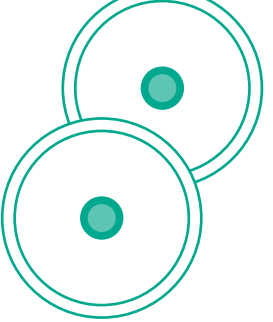

The Association for the Advancement of Medical Instrumentation (AAMI) recommends not to use any item that is wet or a set that contains visible moisture.

OBJECTIVE

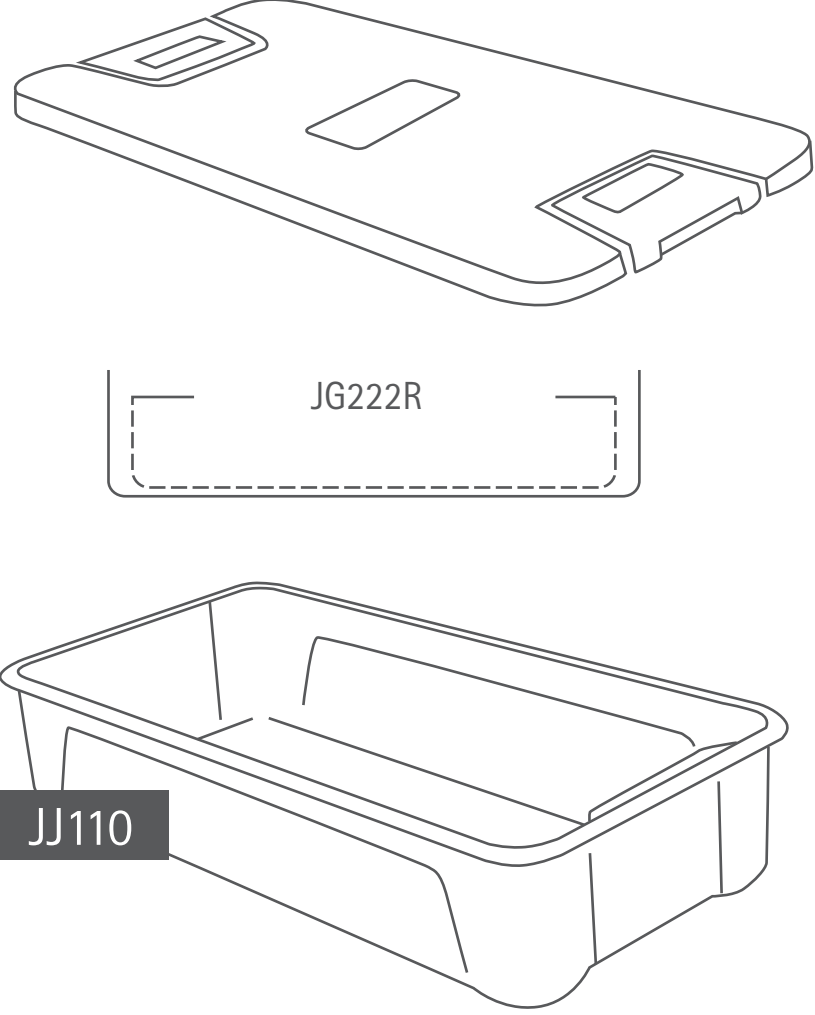
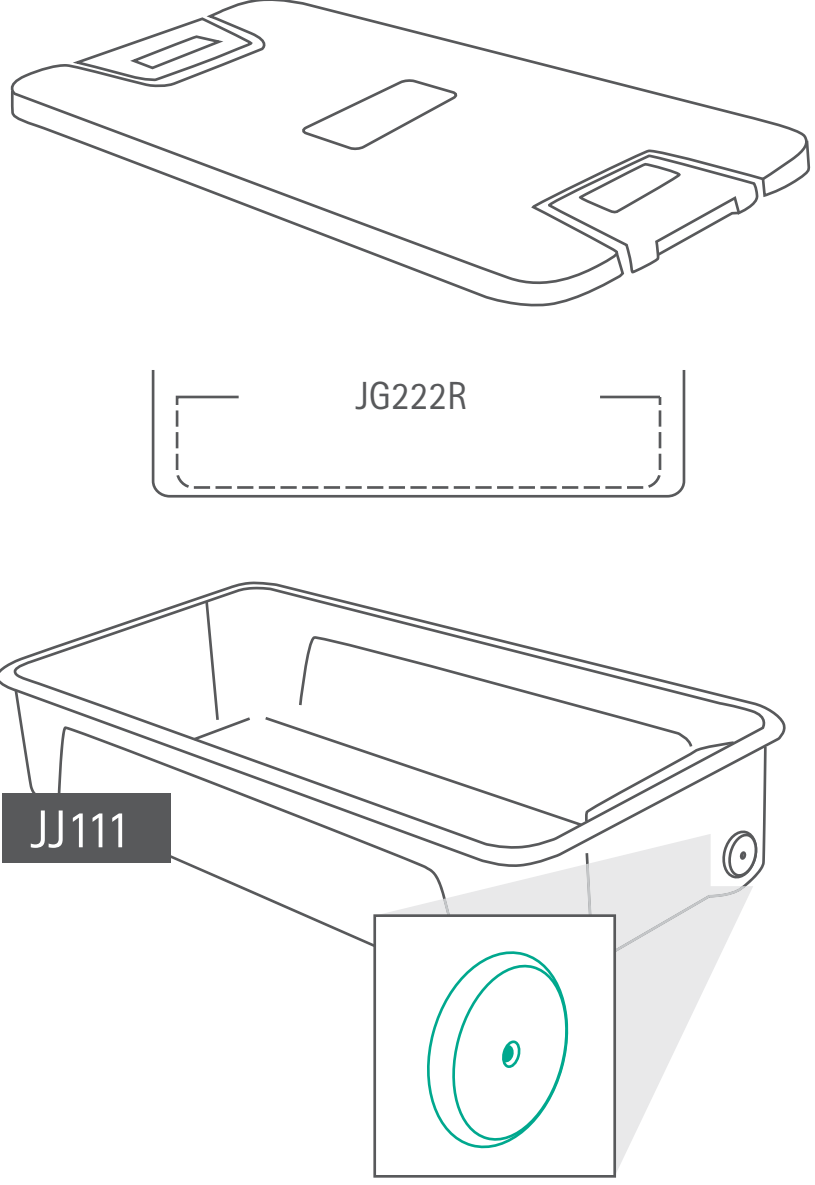





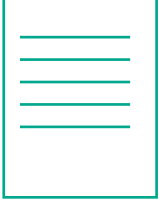

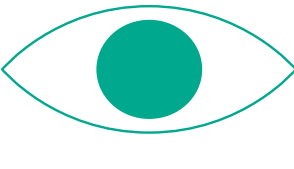
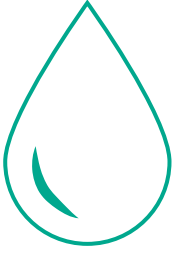


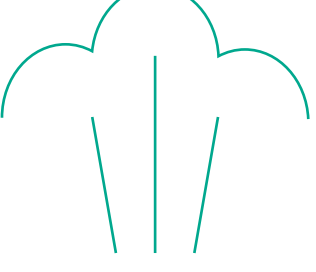
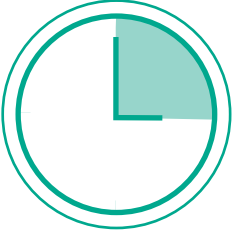
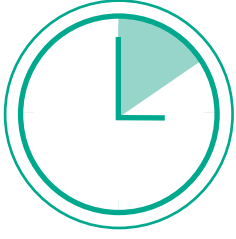




The new EDS was developed to **reduce drying times** and to ensure reliable drying results.



There are two EDS modules per container bottom (optical inspection by clearly visible "blue dot").

Aim of a present test was the COMPARISON of the drying time of a new container series WITH and WITHOUT EDS.	
TESTED MATERIALS	
AESCULAP® JJ Series Rigid Container <b>JJ110</b> (processed with the <b>JG222R</b> basket) <b>Without EDS</b>	AESCULAP® JJ Series Rigid Container <b>JJ111</b> (processed with the <b>JG222R</b> basket) <b>With integrated EDS</b>
	
TEST PROTOCOL	
<div>2x</div> <div>Loaded with stainless-steel bolts<sup>2</sup> until they met a weight (with lid) of 25 pounds* (lbs) and seeded with two Crosstex/STEAMPlus™ Class 5 Integrators</div>	<div>2x</div> <div>Loaded with a total combined weight of 25 pounds* (lbs) (and seeded with two Crosstex/STEAMPlus™ Class 5 Integrators)<sup>3</sup></div>
<div><b>132°C</b> (270°F)</div> <div><b>4 min.</b></div>	Processed in a steam pre-vacuum cycle
<div><b>5 min.</b></div> <div></div>	The system was re-weighted after a cooling down, pre- and post-sterilization weights were evaluated.
<div><b>25 min.</b></div> <div></div>	After another 25 minutes, the systems were visually inspected for the presence of moisture.
	Integrators were observed for steam penetration.
<b>3x</b>	Three test cycles were carried out to show repeatability.
RESULTS	
<div><b>&lt; 0.2%</b></div>	Systems demonstrated an average pre- and post-sterilization weight difference of less than 0.2%. <sup>4</sup>
	All integrators demonstrated steam penetration.
<div><b>15 min.</b></div> <div>The <b>AESCULAP Aicon® JJ110</b> met or exceeded the acceptance criteria (weight difference of less than 0.2%) and therefore is considered to be properly dried following the pre-vacuum steam sterilization cycle after 15 minutes.</div>	<div><b>9 min.</b></div> <div>The <b>AESCULAP Aicon® JJ111</b> with EDS met or exceeded the acceptance criteria (weight difference of less than 0.2%) and therefore is considered to be properly dried following the pre-vacuum steam sterilization cycle after 9 minutes.</div>
CONCLUSION	
It was shown that the <b>drying time</b> with the EDS can be significantly <b>reduced</b> .	

Sources:  
1 Basu D., J Infect Public Health. 2017 Mar - Apr;10(2):235-239.  
2 According to EN 868-8.  
3 According to EN ISO 11140-1.  
4 According to ANSI / AAMI ST 77.  
\* English pound = 454 gr.