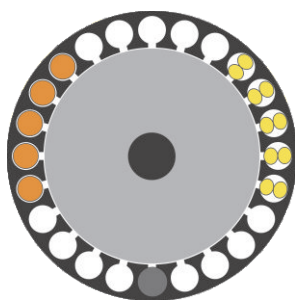


CRYOCHAMBERS Customised Cores

Customised cores allow FREEZE CONTROL® Cryochambers to accommodate a wide range of specimen containers including standard straws, double length straws, CBS™ high security straws, straws with MiniTub™ labels, and ampoules. Cryochambers provide easy and safe access to the straws or ampoules during loading, inspection, seeding and removal. Various lifters are available depending on the cryochamber and the type of specimen container used. For manual seeding, lifters allow all straws or ampoules to be raised simultaneously until the top meniscus of the column with the specimen is visible. This ensures that the specimens remain at all times in the controlled temperature of the cryochamber. A spacer on the lifter ensures tight coupling of specimen containers with the wall of the core for efficient heat removal from specimens. The spacer also reduces convection and minimizes condensation inside the core. There are 4 core designs available for the cryochambers. Cores are fixed and cannot be removed from the cryochamber.

Core Designs



23-Slot Core

46 x 0.25 ml Standard Straws or
23 x 0.50 ml Standard Straws

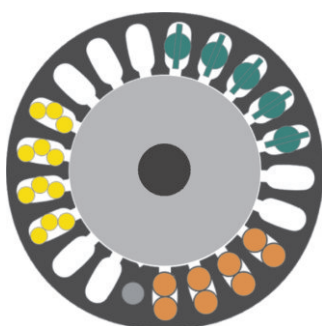


23-Slot Lifter

Split Lifter for Short Straws

KEY FACTS FOR STRAW HANDLING

- The spacer should remain on the lifter at all times.
- If only a few straws are to be frozen, always ensure the following:
 - Place an empty straw alongside each specimen straw, ensuring that the filled straw is in the outer position
 - Distribute them evenly around the cryochamber, ensuring that each slot being used is filled with straws.



20-Slot Core

20 x 0.30 ml CBS™ Straws or
20 x 0.50 ml CBS™ Straws

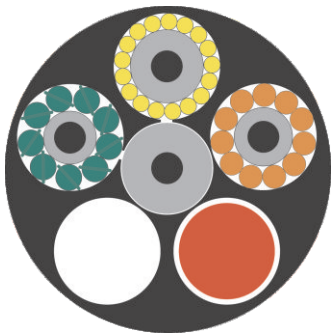
60 x 0.25 ml Standard Straws or
40 x 0.50 ml Standard Straws



20-Slot Lifter

CRYOCHAMBERS Core Designs

5-Slot Ampoule / Straw Core



Ampoule Configuration:

- 5 x 5.0 ml ampoules
- 10 x 2.0 ml ampoules
- 15 x 1.0 ml ampoules

Straw Configuration:

- 85 x 0.25 ml Standard Straws or
- 55 x 0.50 ml Standard Straws or
- 45 x 0.30 ml CBS Straws™ or
- 45 x 0.50 ml CBS™ Straws



5-Slot Ampoule Lifter

5-Slot Straw Lifter/Spacers

The 5-Slot Cryochamber is supplied with a standard lifter/ spacer for ampoules. Separate lifters/spacers are required for each straw configuration.

KEY FACTS FOR AMPOULES OR CRYOVIALS

Ampoules/cryovials suitable for use in our cryochambers:

■ Nunc™ CryoTube

These are 2ml non self-standing vials with external neck thread, and screw cap without a skirt. The vial lid is designed with an inbuilt ring which engages the rim of the vial. Maximum external diameter 12.4mm.



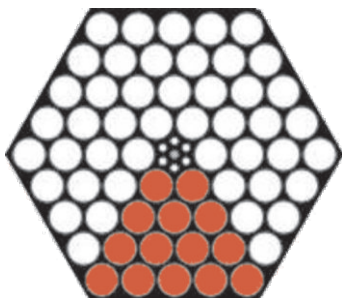
■ Corning™ Costar

These 2ml non self-standing vials have an internal thread, and rubber O-ring which sits inside the neck of the vial when the lid is tightened. Maximum external diameter 12.4mm.



Vials with flat gaskets are not desirable to use in the 5-slot core for the following reasons:

- When the lid is screwed too tightly, the gasket flares and can leak;
- When the gasket flares it engages the cryochamber slot and makes removal difficult.



60 Ampoule Core

- 60 x 1.0 ml ampoules / cryovials
- 60 x 2.0 ml ampoules / cryovials

Requires no lifter or spacer