

Title:	Various stacker pitches or plate heights	ID:	
		0250	
Date in:	Response:	Model:	Author:
2005-02-17	2005-02-17	-	CMa

Q:

I have some additional questions regarding using cassettes with different pitch offsets and changing the plate handling device so it can handle larger plates.

I currently have a StoreX type device with 9 cassette slots. (mine was purchased through Zymark: Nr. 8094, Typ: MPH). The unit has 23 mm pitch microplate cassettes. In addition to the microplate cassettes, I would like to use cassettes with a larger pitch (69 mm) to hold boxes of tips. I would like to know if it is possible use both types of cassettes at the same time in the incubator. Is it possible to set the cassette pitch value for each slot individually? If it is not possible to change the pitch for each slot than I can make a program that maps the location for the 23 mm cassettes to the location of the 69 mm cassettes. (23 mm x 3 = 69 mm so position 2 of a 69 mm cassette = position 4 of a microplate cassette, and 3 = 7, 4 = 10, 5 = 13, 6 = 16, 7 = 19).

In order to load and unload boxes of tips from 69 mm cassettes, I would also need a different plate handler. Is the plate handler an upgradeable item? How much would it cost to replace the plate handler? Can I just buy and install extensions for the plate handler and then teach the new z-offsets?

A:

I understand what you want to do with the cassettes and it can be done if you're good. I have enclosed the command set manual for you. Prior positioning the carrousel and selecting the level in the stacker will need to specify the pitch / height of the stacker you're addressing by sending "WR DM23 hhh". We propose to send the pitch information on each access and make it part of the access function. The content of the pitch memory can be read "RD DM23". Note that you have to make sure that the correct number of levels have to be tracked by your software.

When changing the pitch value you have to remember the value may vary on systems depending on the your system's configuration. Common values are

23mm = 1925 ; Early systems and STX40 series
23mm = 788 ; most systems 2004 and later

To calculate the DM23-value you

e.g. $np = 1925/23 * \text{actual measured pitch in millimetres}$

An alternative would be to remove rails from a standard stacker skip levels when addressing DM5.

If you use our ActiveX library the use of various pitches is supported as well.