

Temporary Storage (for bulk)

The following page does not apply to loader-based bulks nor any bulk that accepts loose items (as opposed to full shulker boxes) as input.

Temporary "temp" storage is a front-logic component for a merging array (see the Mergers page). Temporary storages will hold up to one partially-filled shulker box of each item type assigned to the bulk section of a storage. It is also an option for non-bulk to be stored in temp in the case of "smart" encoded halls that place shulkers in chests that are half full. Temp storages must hold this box because mergers cannot do anything with only a single box of an item type, so the temp will hold a box until it receives a box of duplicate item type from the output of the bulk whitelister, which sorts boxes of chest hall/MIS/NS from boxes of bulk items.

There are 2 common ways that temporary storages are set up, depending on the sorting method:

Encoded Temporary Storage (AKA Disc Drive)

In encoded systems, each item type is assigned to a binary or hexadecimal "code" which informs the system of where to store the item type. In encoded temps, this code is used to locate the box into the silo, which has a slot for each item type assigned to merging (note again that encoded systems sometimes allow chest hall items to be routed through mergers). For speed and convenience reasons, the slots are split across different inventories, typically barrels containing 16 slots each.

EX: an 8 bit/2 hexit temp allows up to 256 item types. 4 bits/1 hexit can be utilized to select a single barrel out of 16 in a row, and the remaining 4 bits/1 hexit can be used to select one of the 16 slots inside the barrel. 16 barrels, 16 slots each, $16 \times 16 = 256$ total slots.

When not holding a box, these slots are filled with an unstackable filler item (usually water bottles, although some use water buckets to store unused filler items at 16x efficiency in the form of empty buckets).

The machine first receives a partially full, single-item-type box along with its code. A decoder selects the matching inventory, and a variable clock removes as many items as needed from the inventory to access the selected slot. The last item removed is put through an isBox sorter (see nonstackable sorting). If the slot contained a box, then the inputted box and previously stored box will be ejected to the input of the shulker box merging array. The now empty slot is then replaced with a filler item. If the slot contained a filler item, the filler item is replaced with the inputted box. All removed items are returned to the matching barrel in the same order they are removed. The temp is now ready to receive another shulker box/code.

Non-Encoded Temporary Storage

Non-encoded systems have no way of identifying the item type inside of a box without a filter, so the mechanism is more complex than an encoded system's temp. However, the explanation is shorter because there are far fewer steps. Boxes without matches are stored inside an unorganized silo.

The machine receives a partially full, single-item-type shulker box. It uses an item in that box to set a variable filter, and then allows all boxes in the silo to be checked against the item type in the filter. If any box in the silo's item type matches the item type of the inputted box, then both are ejected to the shulker box merging array. If there are no matches, then the inputted box will be placed into the silo to be checked against for later box input. The temp is now ready to receive another box.

Non-encoded temps are generally slower than encoded temps, especially if there are a lot of boxes in the silo.

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