HO Structure Kit

BRICK STORAGE BLDG.

933-4101

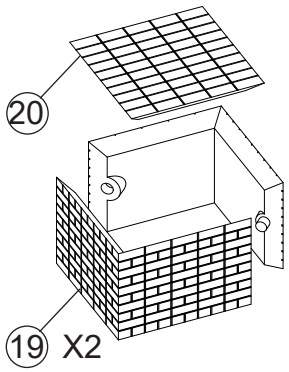
Thanks for purchasing this Cornerstone kit. Please take a few minutes to read these instructions and study the drawings before starting construction. All parts are styrene plastic, so use compatible paint and glue to finish and assemble your model,

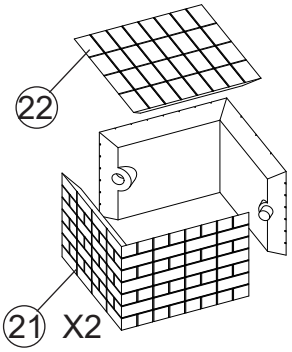
For thousands of years, builders have chosen brick for its good looks, durability and natural resistance to fire. Early brick-makers typically set up shop alongside rivers and other bodies of water, where clay could be found in large quantities and hauled short distances. Until the 19th century, brick making was done entirely by hand and a good crew working 12 to 14 hours could produce from 3000 to 5000 bricks in a typical day. Production increased slightly early in the 19th century with the introduction of animal-powered machinery, but by the mid 1800s, demand began to skyrocket. As local sources of clay were depleted, brick makers turned to the railroads to bring in raw materials over longer distances and to move finished products to distant markets. Innovative new machines powered by steam were introduced that required new and larger facilities. This included machinery to handle the work of drying, screening and crushing clay into a fine powder to begin the process. New machinery also made easier work of mixing the powdered clay with water and sand, and kneading it into a dough-like mixture in a process known as ³pugging,² which were housed in a larger facility known as the ³pug mill.² From here, additional machines would extrude a ribbon of clay, cutting it into smaller pieces, and filling molds. To reduce their water content, these "green bricks² would spend some time in a steam-heated shed equipped with drying fans. Once ready for final hardening, bricks were moved into a ³beehive kiln,² so called because the shape resembled a beekeeper¹s skep. Operations began by stacking green bricks on the kiln floor, which had numerous flue openings and a large exhaust stack that improved efficiency by creating draft, burning the fuel more completely and creating higher temperatures inside while pulling hot gases back down to the bricks. Fuel was added and ignited inside in a series of small ³bag walls² (similar to a fireplace), that were refueled throughout the process through small exterior burner ports. The initial firing was done slowly to bring the interior temperature up slowly as the water content in the bricks was still very high; too much heat could instantly turn this to steam, causing bricks to shatter. When no steam could be seen venting from the top, the fires were built up to bring the interior temperature to 1800° F (982.2C), and kept hot for as long as needed. Once complete, the fires were allowed to gradually die-out, but as there was no way to uniformly heat each brick, they had to inspected and sorted for color and quality. The best were used on exterior walls, second best for interiors and any warped or burned bricks might end up as walls or sidewalks. Sorted bricks were then moved into a storage shed where they were loaded by hand into waiting boxcars. Similar methods and machinery were also adapted to produce a wide range of ceramic products on a much larger scale, ranging from household items such as plates and storage crocks to sewer pipes. Your new model is a key part of the many regional brick and ceramic works, but is easily adapted many other types of industries, and can be combined with the Beehive Kiln 2-Pack (#933-4100), Brickworks (#933-4102) and Stacked Bricks (#933-4103) each sold separately, to model a complete operation. For additional details, railroad equipment, vehicles and more to complete your brick industry, visit your hobby dealer, see the current Walthers Model Railroad Reference Book, or visit us online at walthers.com.

PLEASE NOTE: Parts are included to model two sizes of stacked bricks: as the parts appear similar, you may wish to assemble one size of stacks at a time. As bricks were made of locally sourced material, there are many regional color variations, but in general, any earth tone can be used for a base color. As firing temperatures were not even inside the kilns, finished bricks would be both lighter and darker, which can be modeled by adding a drop or two of gray, white or black to the base color and painting bricks randomly. Take a look at some of the older brick buildings in your community for ideas on finishing these details.

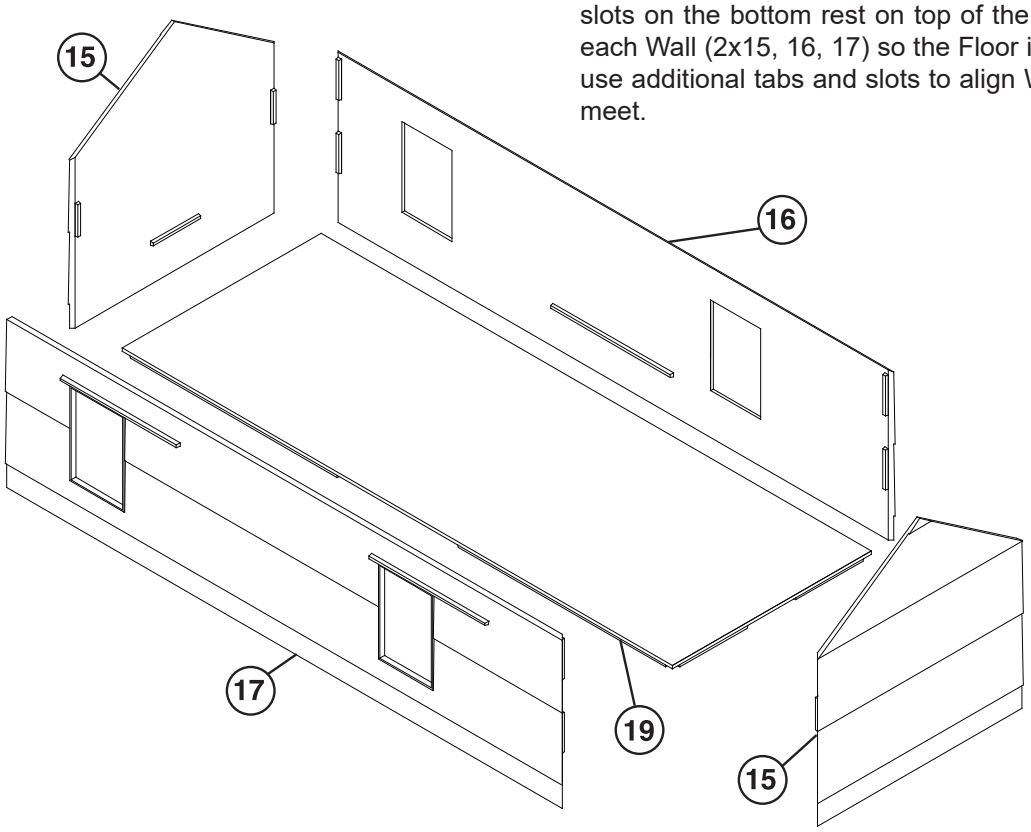
1) The beveled edges of the Large (21) and Small (19) Stack Halves are the top; align the pins and mounting points on the back of each half as shown and glue along inside corners where parts meet.

2) Complete assembly by inserting the beveled edge of the Large (22) and Small (20) Top Bricks into the correct stack assemblies as shown and glue at inside edges where parts meet.





3) PLEASE NOTE: When attaching the Floor (19), be sure the slots on the bottom rest on top of the tabs on the lower edge of each Wall (2x15, 16, 17) so the Floor is flush with the side doors; use additional tabs and slots to align Walls and glue where parts meet.



4) The Roof (14) may be set in place if you wish to add lighting, figures or interior details, each sold separately, or glued in place as desired.

5) Align the rollers on top of each Sliding Door (4x 18, two per side) with the molded door track details on the side walls as shown; decide if you'll model the doors open or closed and glue in place on Side Walls (16, 17) as desired.

6) Platforms - make two as follows: align parts in an "X" pattern as shown and glue Rear Cross Braces (4x 35) to the inside and Front Cross Braces (4x 36) to the inside of Platform (20). Repeat for the remaining platform assembly. Glue finished platforms under doorways on Side Wall (17) as shown.