HO Scale Kit

ELEVATOR/ CONVEYOR "LEG"

933-2936

Thanks for purchasing this Cornerstone Series® kit. Please take a few minutes to read these instructions and study the drawings before starting construction. All parts are made of styrene, so use compatible paint and glue to finish your model. Like the prototype, your new model can be combined with other Walthers kits to model a larger grain handling facility. Note that this kit can be built at two different heights to model specific types of legs; photo-etched parts sets, sold separately, are available to superdetail your model if desired.

Throughout the 20th century, advances in farming technology led to ever-larger grain harvests. But finding a place for all that grain — on the farm and at the local elevator — often presented problems. Ideally, grain was stored indoors to prevent spoilage, and to protect it from rats and other vermin. Although wooden bins were built, steel grain bins began appearing by the early 1900s.

By the 1960s, many elevator operators were looking for fast and affordable ways to update their facilities. And many older elevators were no longer efficient, requiring complete replacement. Early grain elevators housed all of the storage and handling machinery under one roof. But the new designs were modular, consisting of large capacity steel grain bins connected by handling systems that used motorized conveyors and gravity to move grain to any point in the operation. This allowed the facility to be customized, and made expansion and repairs much easier.

Today, operations still begin as each wagon or truck of grain arrives. A small sample is automatically taken from each inbound load and checked for moisture and contamination.

Next, the loaded vehicle moves onto a scale where it's weighed. The grain is then ready for unloading. It will likely have to be dried before going into storage, so this "wet grain" is unloaded at a lifting conveyor, known as the "wet leg." The grain is dumped into an underground pit, where a motorized screw drive known as a "u-trough conveyor" (named for the u-shaped outer housing) feeds it to an endless bucket conveyor in the leg, which lifts it to the top.

At the top, large pipes supported by guywires and trusses to prevent bending, lead to various bins. The operator may direct wet grain into a "surge bin," where gravity steadily feeds it into a dryer. Wet grain can also be moved to a "wet storage bin" if the incoming supply outpaces the capacity of the dryer. Through a u-trough conveyor at the bottom of the bin, wet grain will eventually move back to the wet leg and into the surge bin.

Grain moves continuously through the dryer, ending its journey in a pit supplying the "dry leg." This much taller version of the wet leg performs the same functions and is topped with pipes and conveyors to feed dried grain into "dry storage bins." At older operations, they also direct grain into elevator buildings or silos and some also have a pipe running to the wet bin so it can be used for dry storage once the local harvest is complete. Like the wet bin, u-trough conveyors at ground level move stored grain back to the dry leg, where it can then be fed to truck or rail car loading areas.

ON YOUR LAYOUT

Since no two operations are quite alike, Walthers offers a wide range of kits and accessories that can be mixed and matched to create a custom grain operation for your railroad.

A complete wet leg can be modeled by combining this kit with a Wet/Dry Storage Bin (#933-2937), Surge Bin (#933-2935) and Grain Dryer (#933-3128). Large operations often have two wet legs to handle incoming grain.

The dry leg can be modeled by using this kit with the Wet/Dry Storage Bin (#933-2937), which includes parts for two bins.

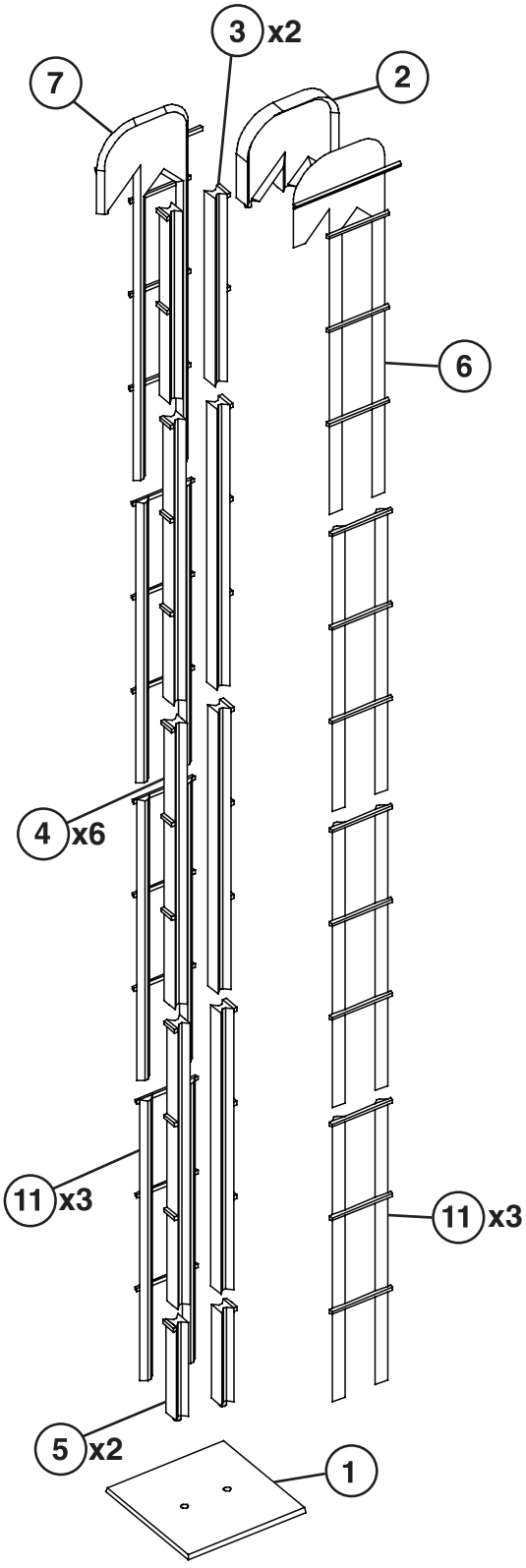
Photo-etched brass add-on details are available separately for your modern grain handling equipment, including the Conveyor Bridge & Support Tower (#933-2940), Platforms & Stairways (#933-2939) with parts for both the Leg and Storage Bin kits, Ladders & Safety Cages (#933-2956) suitable for many modern industries, and Support Trusses for Guywires & Piping (#933-2955) that simplify adding this neat detail to the overhead pipes found throughout a typical modern installation.

Today, both wet and dry legs can be found serving older elevators, which can be modeled with the Head House with Silos (#933-2942), the ADM® Grain Elevator (#933-3022), Prairie Star Elevator (#933-2927), Farmer's Cooperative Wooden Elevator (#933-3036) or the Valley Grower's Association Steel Elevator (#933-3096).

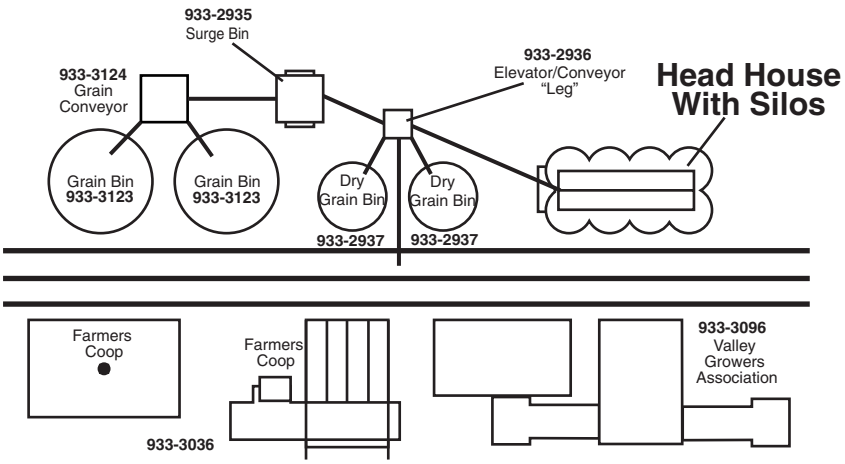
For additional figures, vehicles, scenery materials and other ideas to detail your scene, ask your dealer, visit waltherscornerstone.com or see the latest Walthers HO Scale Model railroad reference book.

1. Glue the center housing (2) to the inside of the left outer support (7). Then glue the vertical beams (3, 4, 5) to the inside of the left sides of the outer supports (7, 11). Note: Always put beams #3 at the top and #5 at the bottom with #4 in the middle. Glue the right side outer supports in place as illustrated.

2. Glue the elevator to the base (1).



POSSIBLE LAYOUT ARRANGEMENT UTILIZING OTHER WALTHERS STRUCTURES



3. Glue motor (10) to the motor platform (9) and the in turn glue this to the top end of the rails as shown. Glue the drive belt cover (8) to the motor and the side of the top.

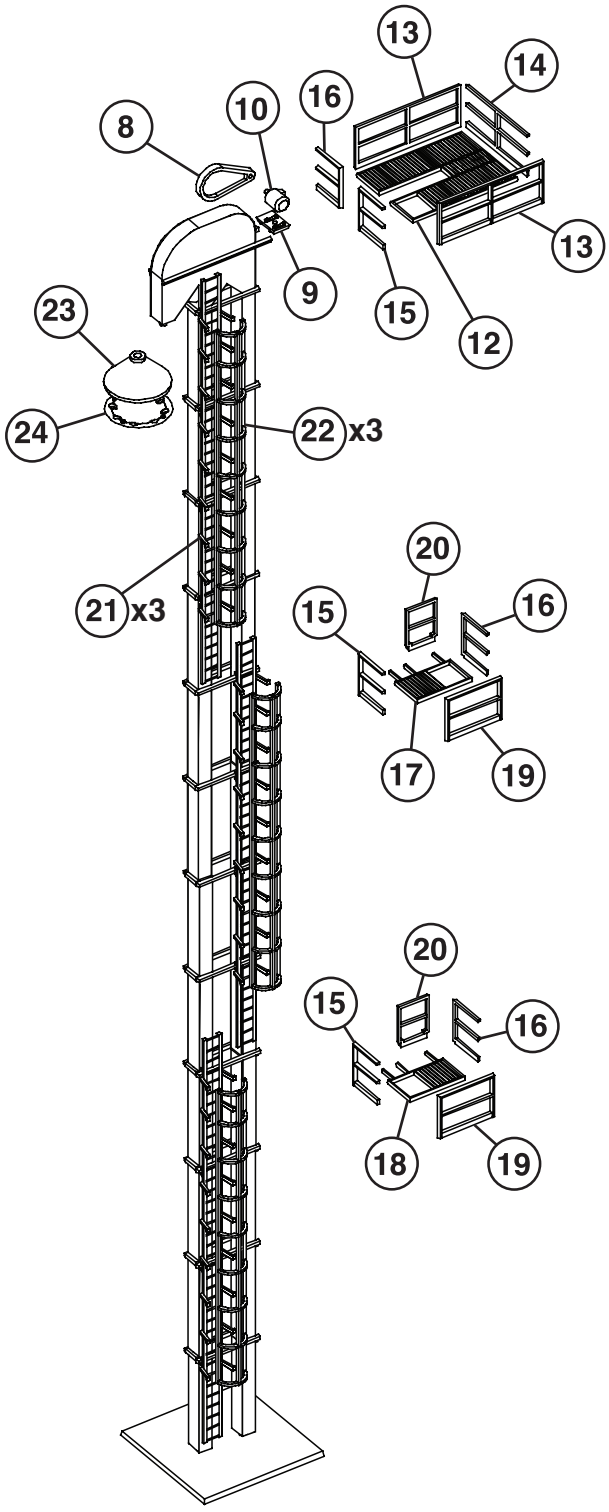
4. Glue the top platform (12, 13, 14, 15, 16) together and then onto the rails directly below the motor platform. Note: The railings go on the outside edges of the platform base.

5. Glue the middle platform (15, 16, 17, 19, 20) together and then on top of the fourth rail down from the top platform. Note: The railings go on the outside edges of the platform base.

6. Glue the bottom platform (15, 16, 18, 19, 20) together and then on top of the fourth rail from the bottom. Note: The railings go on the outside edges of the platform base.

7. Glue the ladders (21) and cages (22) together. Note: The cage supports on #21 match the cage rings on #22. Then glue them in place along the side of the leg with the tops of the ladders protruding through the openings in the platforms. Note: Start with the top ladder, angle it down through the opening of the middle platform then position it vertically up through the top platform and glue in place. Use the same procedure for the middle ladder.

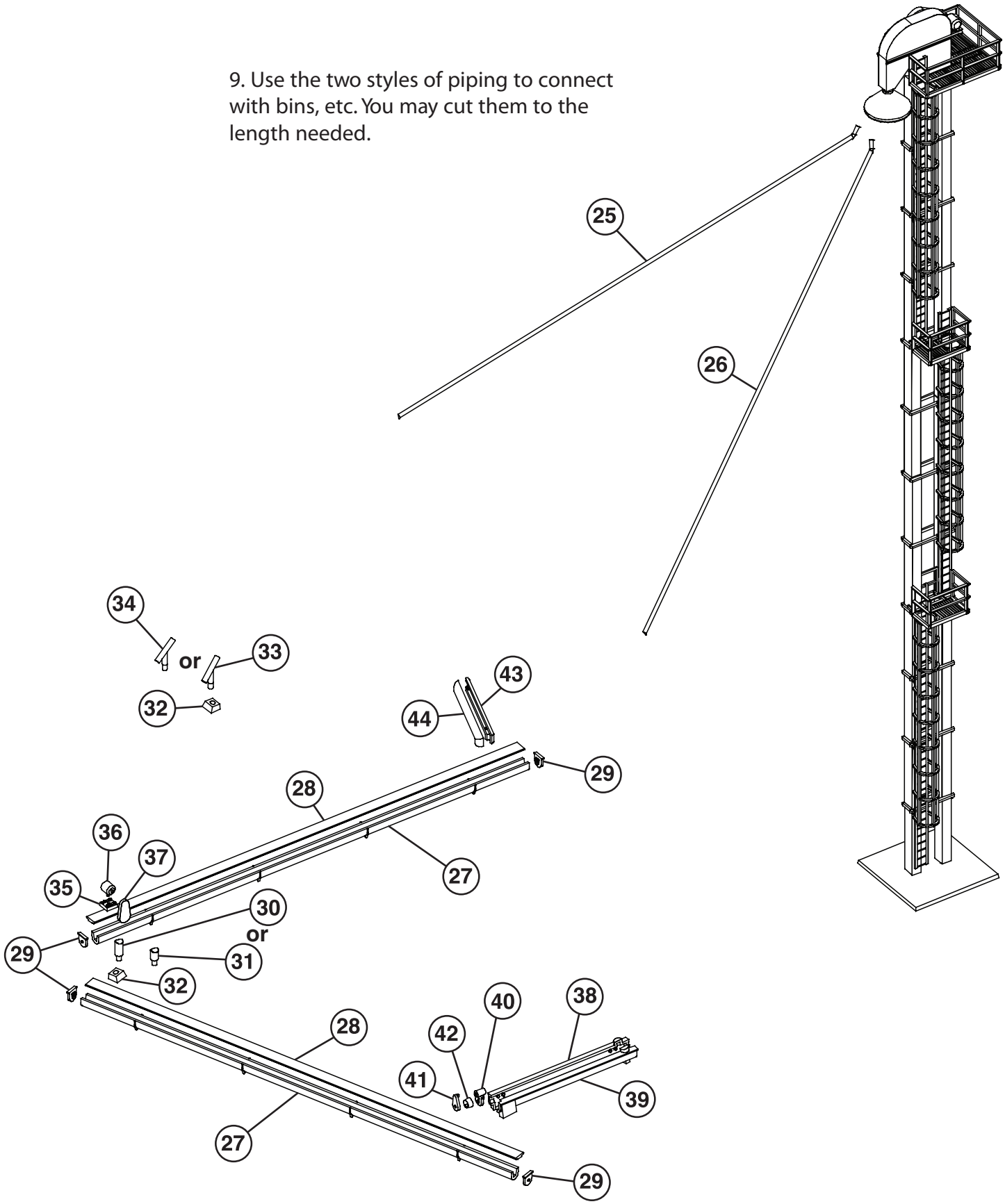
8. Glue the grain head (23, 24) together and then in place.



DECALING

1. After cutting out the decal, dip in water for 10 seconds, remove and let stand for 1 minute. Slide decal onto surface, position and then blot off any excess water.
2. Lightly brush Micro Sol ® on top. This will soften the decal, allowing it to comform to irregular surfaces. DO NOT TOUCH DECAL while wet!

9. Use the two styles of piping to connect with bins, etc. You may cut them to the length needed.



10. Assemble the basic ground conveyor by gluing the top (28) to the bottom (27) and gluing on the ends (29). To this you can add a motor assembly (35, 36, 37), a bottom/top connecting pipe (30 or 31, 32) and a side bin discharge pipe (43, 44). You can set these up to fit your grain complex layout.

11. Glue the dry bin discharge pipe (38, 39, 40, 41, 42) together and use this for connecting a dry bin (not included) to your ground conveyor.