

COMMERCIAL HOPPER TANKS (CHT)



TOTAL VALUE. TOTAL SYSTEMS.™



NCHT & FCHT SERIES



THE RIGHT TANK FOR THE RIGHT JOB.

Commercial hopper tanks are typically used in applications where routine clean out is required, or just to reduce the energy and labor cost of material handling. GSI offers two varieties of commercial hopper tanks to better support the needs of this type of grain storage, the NCHT series with a strong 2.66" sidewall corrugation, and the shorter FCHT series with a wider 4.00" sidewall corrugation.

The NCHT series encompasses a full range of diameters from 12' to 36', capacities up to 58,234 bushels (1479 MT), and 40, 45, and 60 degree hopper slopes to meet virtually any hopper storage requirements.

The FCHT series is available in a 45 degree hopper slope and was designed to cover a more specific "intermediate" range of capacities providing the strength and reliability of a stiffened tank and the cost advantage of a series designed for a specific limited size/capacity range.

Designed for today's modern grain producers and distributors, GSI's commercial hopper tanks provide years of reliable service with convenient features and benefits you won't find with other grain storage systems. Whether you're looking for wet or dry grain holding, overhead unloading systems, blending bins, or long term grain storage, GSI can supply just the right tank to handle the job.



SOLID SUPPORT FROM THE GROUND UP.

GSI commercial hopper tanks start at the concrete foundation with heavy structural "wide-flanged" columns, factory welded to thick steel base plates. Columns are cleaned, specially primed and painted for durability. Bolted to the top of each column are heavy compression angle segments, key components that join the columns, the hopper assembly and the tank body together as one complete unit. Tank columns are fully reinforced with specifically designed "X" bracing, standard high-tensile strength rods or heavy-duty, structural shape steel bracing, depending on the tank size, stored products and special wind or seismic load conditions.

HOPPER STRENGTH ... JOB ONE!

Strength of the tank hopper is extremely critical to the life of the complete tank. For this reason, each hopper panel is precision fabricated from high strength commercial galvanized steel and designed for maximum support when assembled. Hoppers are available in a variety of slopes to match the correct tank size and required application. Both 45 and 40 degree hoppers are generally used with most dry whole grain products. The 45 degree hoppers are also often used for "wet holding." A 60 degree hoppers are used for "wet holding" or other applications where a 60 degree is better suited.



SPECIALLY DESIGNED ROLLER VALVE (OPTIONAL).

An optional, roller valve assembly is available designed to attach directly to the hopper discharge collar. Roller valve gates are equipped with machined rack and pinion gear sets controlled by either a hand or chain wheel. All galvanized construction, the GSI roller valve is simple to operate and provides years of trouble free service.



45 DEGREE HOPPER SLOPE



40 DEGREE HOPPER SLOPE



60 DEGREE HOPPER SLOPE

2.66" OR 4.00" CORRUGATED SIDEWALL

The 2.66" corrugated sidewall design is used on GSI's NCHT tanks. The smaller corrugation, together with the 65,000 PSI (450 MPa) tensile steel, provides an all around stronger bin per each pound of steel. FCHT sidewall is also manufactured using high strength steel, but in a wider 4.00" corrugation. Using the wider corrugation provides optimum support for tank sizes available in the FCHT range reducing the overall cost of the silo. Our 2.66" sidewall panels have up to four rows of bolts in the vertical seams for a connection unparalleled in strength. All sidewall is roll-formed at the GSI plant for consistency from commercial coated galvanized steel for increased durability. Panels are assembled using graded, zinc plated, dichromate coated bolts with sealing washers for a tight, weather resistant seal.



LADDERS, PLATFORMS & LADDER CAGES

Sturdy sidewall ladders, ladder cages and platforms provide easy access when entering, exiting or inspecting the tank. Ladder sections are die formed from galvanized steel and come in 22" or 44" lengths. All ladder cages are completely galvanized, bolt directly to the prepunched sidewall ladder and feature a bell opening at the bottom of the cage allowing ample space when entering and exiting the ladder. Both ladders and platforms incorporate special slip resistant features for a better grip. GSI also manufactures optional, full circle roof rings for additional convenience when working on or inspecting the tank roof.



X-SERIES LADDERS, PLATFORMS & LADDER CAGES

Also available are GSI's X-Series Ladders, Platforms and Ladder Cages. Ladders feature step through platforms and are mounted 90 degrees to the sidewall to eliminate toe hazards such as stiffeners, windrings, and other bracketry.



X-Series ladder & stair packages are designed to meet OSHA specifications.



STRONG SIDEWALL STIFFENERS

GSI commercial stiffeners are manufactured from high tensile strength, up to 70,000 PSI (483 MPa), steel and completely galvanized for durability. GSI stiffeners feature strong splice joints with large cross sectional areas, both critical elements of vertical stiffeners, and are installed two-post (two per sidewall panel) externally to bear directly on the base columns.



HEAVY WIND RINGS

For additional support with taller tanks or higher wind areas, GSI manufactures galvanized steel rings that attach directly to the tank stiffeners. The rings strengthen the tank shell providing reinforcement against damaging wind.



EASY ACCESS DOOR

A standard 24" diameter round access door is located in the second ring of all GSI commercial hopper tanks. A heavy steel ring is fully welded to the sidewall and cold galvanize treated making it one of the most durable and strongest doors available. The tight sealing, inner door panel swings easily out of the way when open, and latches securely with dual wedge-lock handles when closed.





OPTIMUM VENTILATION.

GSI offers an unique vent to meet your ventilation requirements. The hinged grill vent features a vertically mounted, large mesh, wire formed screen to keep out pests and swings freely open to allow easy release of trash buildup. GSI also provides roof panels with an exclusive factory pre-punched, extruded lip for each vent (shown in cutaway at right).



OVERLAPPING ROOF PANELS.

GSI offers one of the strongest structural roof support systems in the industry featuring galvanized rafter systems spanning from eave to peak. Roof ribs are taller, fully double lapped and have four extra reinforcing ledges providing increased strength and unbeatable weather protection. Roof panels are manufactured using 55,000 PSI (340 MPa) high tensile steel, and roll formed using a fully automated line to insure precise and consistent panels for easy installation.

HIGH PERFORMANCE AERATION SYSTEMS.

GSI provides aeration systems to meet your grain conditioning needs. For commercial hopper tank conditioning, sturdy 14 gauge, corrugated and perforated aeration tubes may be added for longer term storage. The system is designed to provide solid attachment to the hopper and allow flow of grain around the tube. Combined with a GSI inline centrifugal or vane-axial fan, GSI's aeration systems offer unbeatable grain conditioning efficiency and performance.

CUSTOMIZED SYSTEMS TO FIT YOUR NEEDS.

Upon request, GSI can provide system design services to maximize operation efficiency and long term performance. GSI can recommend a combination of specially designed tanks, most efficient hopper slope, a possible flow enhancement device for some non-free flowing materials, grain drying and handling equipment and complete aeration systems including...

INLINE CENTRIFUGAL FANS.



Suited for higher static pressures beyond the performance range of vane-axial fans, GSI's inline centrifugal fans are tested to deliver up to 24,000 CFM. (Available in 5 to 25 HP, 1 or 3 phase.)



VANE-AXIAL FANS

For applications requiring high airflow at low static pressures, GSI's vane-axial fans are available in 1 to 15 HP, 1 or 3 phase. These fans feature custom designed aerofoil blades made to function with a specific motor for maximum efficiency.

**LOOK FOR
THESE OTHER QUALITY GSI COMMERCIAL
PRODUCTS...**



40-SERIES GRAIN BIN

- Up to 135' (41m) diameter.
- Grain holding capacities up to 1.2 million bushels (28,000 MT).
- Featuring the precision engineered Z-Tek™ Roof System for increased strength.
- Sturdy sidewall ladders, ladder cages and platforms for convenient bin access. Also available are GSI's X-Series ladders and stairs.
- Multiple flooring options available, including Cor-Lok, Cut-Lok, and Dura-Lok.



STACKED DRYER

- Capacities up to 4000 BPH. (101 MT)
- Dryer units stack for future expansion.
- Heat reclaimer option for up to 30% fuel savings.



BUCKET ELEVATORS & CONVEYORS

- Bucket Elevators with capacities from 1000 BPH to 60,000 BPH. (25 to 1524 MT)
- En-Masse Conveyors with capacities from 1000 BPH to 40,000 BPH. (25 to 1000 MT)
- Enclosed Belt Conveyors with capacities from 8000 BPH to 57,000 BPH (200 to 1425 MT)



COMMERCIAL TOWER DRYERS

- Drying capacities up to 12,000 BPH (304 MT).
- Sealed, large wet holding garner bin.
- Stainless steel, roll formed, exterior sheeting.
- Industrial quality components.
- Inside and outside safety ladders, cages and catwalks provide easy access.
- Walk-in cool and heat sections.
- Significant fuel savings by recycling heat.
- Patented discharge system provides simple, uniform metering and quick dryer clean out.
- 12" wide grain columns and long grain retention.
- Patented electronic monitoring control system mounted inside a NEMA IV fiberglass enclosure.
- Hopper bottom for efficient grain discharge and easy dryer clean out.

www.grainsystems.com



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