

CHAIN & PADDLE CONVEYORS

GRAIN PUMP™

DOUBLE RUN

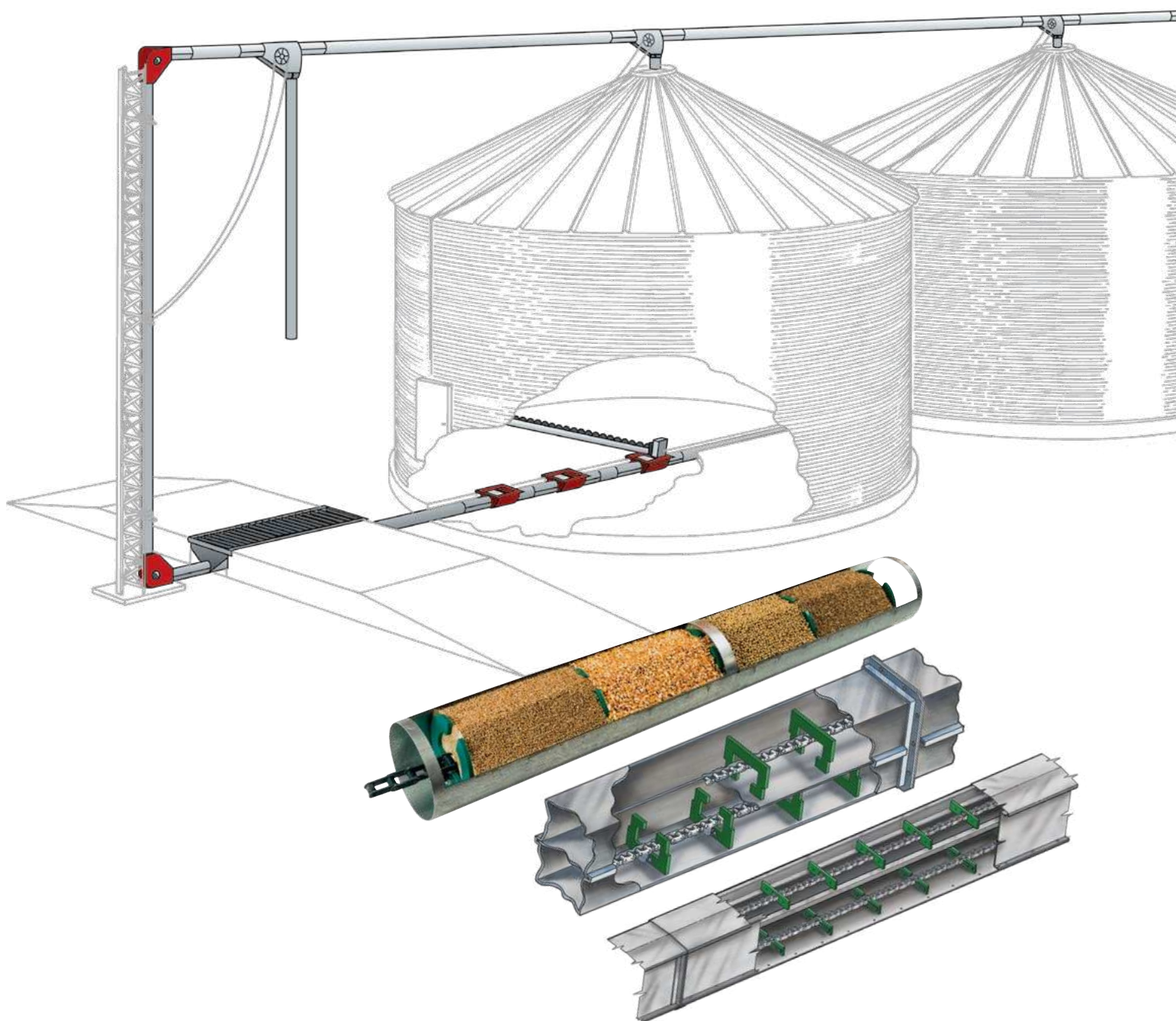
CHAIN CONVEYOR

COMMERCIAL GRAIN PUMP™

MASS-TER MOVER®

MASS-TER FLOW®

DUAL HOPPER





Quality Equipment on Your Farm

AGI Hutchinson manufactures quality products, including; portable and stationary grain handling equipment, augers, chain & paddle conveyors, belt conveyors, loop systems, bin unloads and custom augers.

Grain Pump™

Custom Grain Pump™ systems tailored to your storage system

AGI Hutchinson's innovative Grain Pump™ lets you move grain with gentle efficiency, at high capacities and requires less horsepower than air systems. AGI Hutchinson's En-Masse (grain-moving-grain) concept causes less damage to grain and needs less maintenance than traditional conveying systems. The secret is AGI Hutchinson's unique Ultra High Molecular Weight (UHMW) paddle, designed to keep your grain flowing gently and evenly from inlet to discharge source. These round plastic paddles are spaced every 10 ½", taking the place of traditional auger flighting. These paddles are notched to go around corners. Grain Pump™ owners have found a reduction in grain damage when compared to conventional conveying systems.

The closed-loop design offers the versatility to create a complete load-in/load-out system that provides recirculation capabilities. One or more bins can be unloaded at a time into the loop. Reduced drying costs can be achieved with this innovative system by blending higher moisture and dried grain from one bin to another. Possibilities are nearly unlimited. Install the Grain Pump™ underneath a row of bins (Photo A), in an existing in-line row of bins (Photo B), or a flat storage structure (Photo C). The loop system may provide future expansion capabilities.

PHOTO A

Installation of the Grain Pump™ underneath a row of bins.

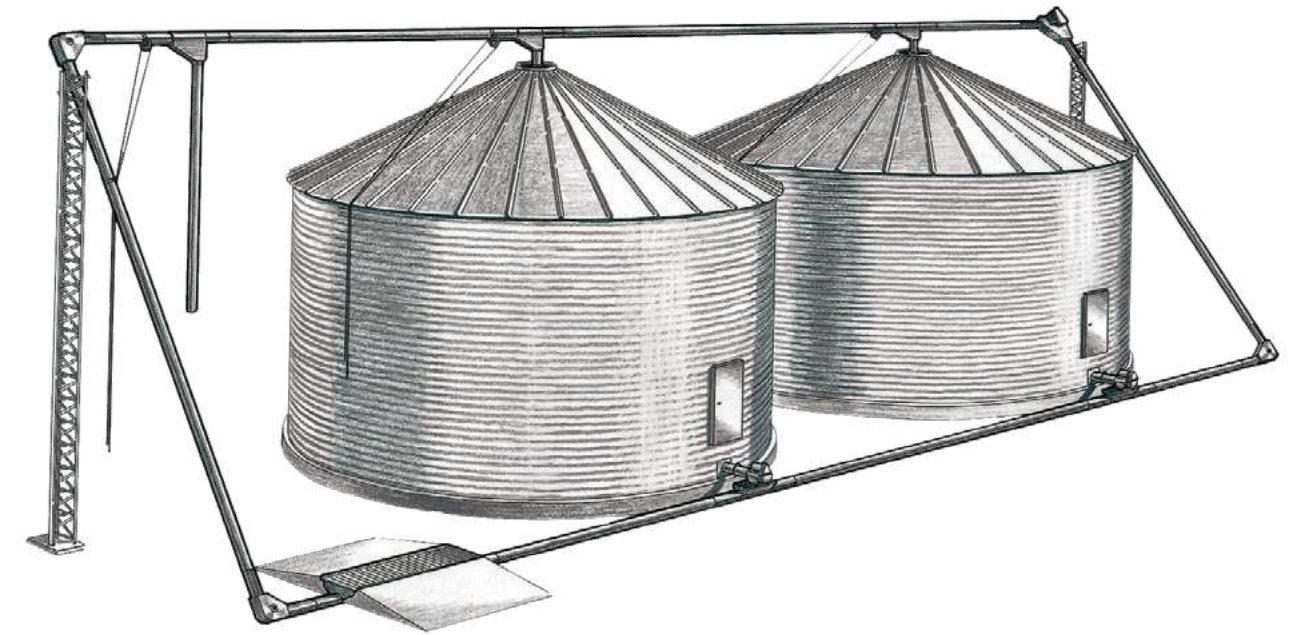
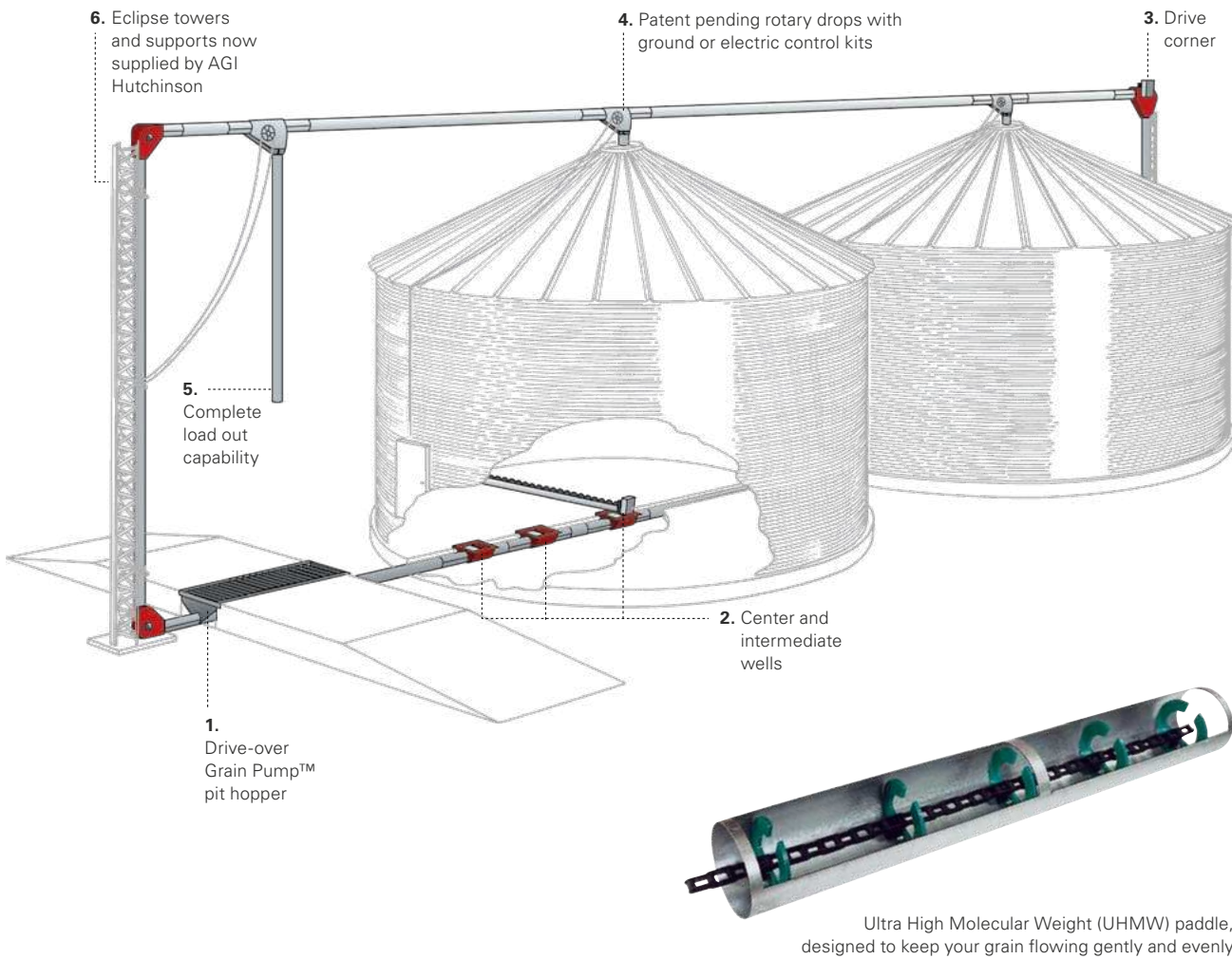


PHOTO B

Installation of loop systems with existing bins.

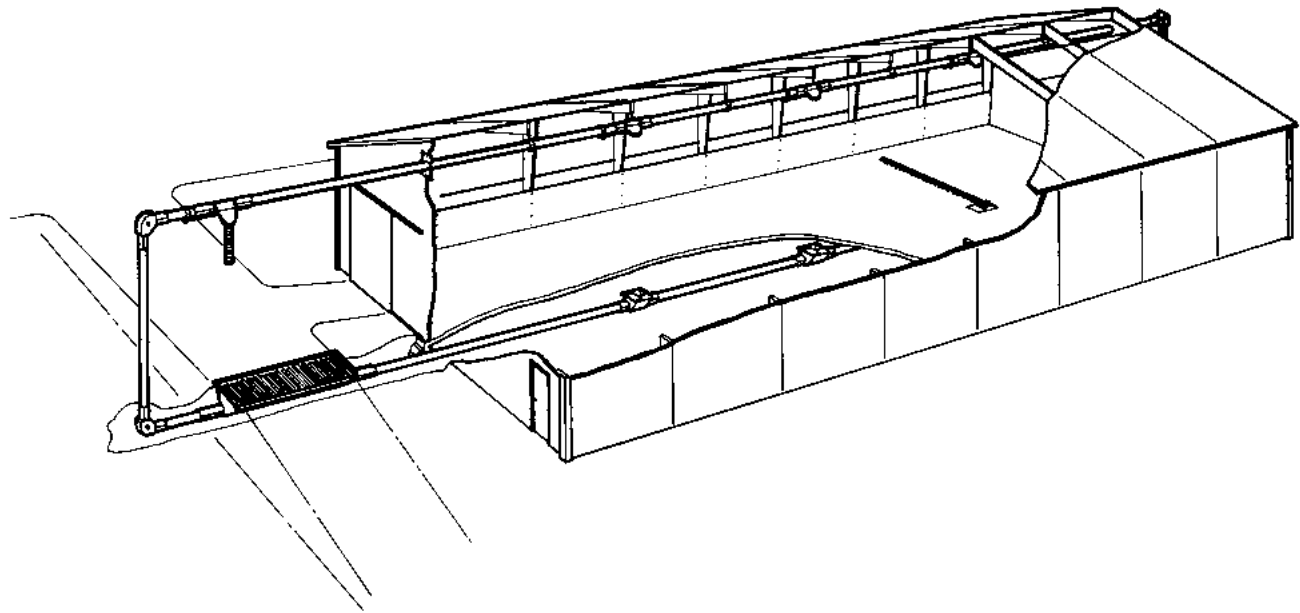


PHOTO C

Installation of loop system in a flat storage structure.

Grain Pump™



Installation of Grain Pump™ loop system into existing bin structure.



Installation of Grain Pump™ Loop System with a wet bin and dryer application.

Commercial Grain Pump™



The AGI Hutchinson Grain Pump™ is designed for new or existing storage installations.



Installation of Commercial Grain Pump™ loop system into flat storage structure.

GRAIN PUMP™ SPECIFICATIONS

| | 6" LOOP | 8" LOOP | 10" LOOP | 12" LOOP |
|--|--------------------|---------------------|---------------------|----------------------|
| DIMENSIONS OF CONVEYING CHAMBER | 6" (15.2 cm) | 8" (20.3 cm) | 10" (25.4 cm) | 12" (30.5 cm) |
| MAXIMUM CAPACITY* | 1,500 BPH (41 TPH) | 4,000 BPH (108 TPH) | 6,000 BPH (162 TPH) | 10,000 BPH (270 TPH) |
| CHAIN TRAVEL | 325 FPM (99.1MPM) | 325 FPM (99.1 MPM) | 325 FPM (99.1 MPM) | 400 FPM (121.9 MPM) |
| HEAD SHAFT RPM | 124 | 109 | 94 | 83 |
| HOUSING GAUGE, GALVANIZED | 12 GA (2.7 mm) | 12 GA (2.7 mm) | 12 GA (2.7 mm) | 10 GA (3.4 mm) |
| PADDLE THICKNESS (UHMW) | 3⁄8" (9.5 mm) | 3⁄8" (9.5 mm) | ½" (12.7 mm) | ½" (12.7 mm) |
| CORNER SHAFT DIAMETER | 1 ½" (38.1 mm) | 2" (50.8 mm) | 3" (76.2 mm) | 3 7⁄16" (87.3 mm) |
| CONVEYOR CHAIN | 81 X | 81 XHH | 81 XHH | 81 XHH |
| CONVEYOR SPROCKET | 12 Tooth | 14 Tooth | 16 Tooth | 22 Tooth |
| CONVEYOR HP (KW) REQUIRED* PER FOOT (METER) VERTICAL | .20 HP (.48 kW) | .35 HP (.85 kW) | .50 HP (1.20 kW) | .75 HP (1.80 kW) |
| CONVEYOR HP (KW) REQUIRED* PER FOOT (METER) HORIZONTAL | .05 HP (.12 kW) | .08 HP (.19 kW) | .11 HP (.27 kW) | .18 HP (.44 kW) |
| WEIGHT PER FOOT OF TUBULAR CONVEYOR - EMPTY | 10.5 lbs/ft | 18.0 lbs/ft | 20.0 lbs/ft | 26.5 lbs/ft |
| WEIGHT PER FOOT OF TUBULAR CONVEYOR - FULL OF 56 LB. PER BU MATERIAL | 19.5 lbs/ft | 34.0 lbs/ft | 45.0 lbs/ft | 63.0 lbs/ft |
| WEIGHT PER METER OF TUBULAR CONVEYOR - EMPTY | 14.9 kg/m | 17.9 kg/m | 22.0 kg/m | 35.7 kg/m |
| WEIGHT PER METER OF TUBULAR CONVEYOR - FULL OF 56 LB. PER BU MATERIAL | 28.3 kg/m | 41.7 kg/m | 59.5 kg/m | 89.3 kg/m |

* Clean, dry, and non-abrasive grain

GRAIN PUMP™ SPECIFICATIONS

| | 10" LOOP | 12" LOOP | 16" LOOP |
|--|--|---|----------------------|
| DIMENSIONS OF CONVEYING CHAMBER | 10" (25.4 cm) | 12" (30.5 cm) | 16" (40.6 cm) |
| MAXIMUM CAPACITY* | 6,000 BPH (162 TPH) | 10,000 BPH (270 TPH) | 18,000 BPH (486 TPH) |
| CHAIN TRAVEL | 325 FPM (99.1 MPM) | 400 FPM (121.9 MPM) | 400 FPM (121.9 MPM) |
| HEAD SHAFT RPM | 67 | 83 | 63 |
| HOUSING GAUGE, GALVANIZED | 10 GA (3.4 mm) | 10 GA (3.4 mm) | 7 GA (4.5 mm) |
| PADDLE THICKNESS (UHMW) | ½" (12.7 mm) | ½" (12.7 mm) | 5⁄8" (15.9 mm) |
| CORNER SHAFT DIAMETER | 3 7⁄16" (87.3 mm) | 3 7⁄16" (87.3 mm) - thru 60 HP 3 15⁄16" (100.0 mm) - 75 & 100 HP | Variable |
| CONVEYOR CHAIN | 81 XHH | 81 XHH - thru 60 HP Double 81 XHH 75 & 100 HP | WH 124 |
| CONVEYOR SPROCKET | 16 Tooth (Non-Drive Corners) 22 Tooth (Drive Corners) | 22 Tooth | 19 Tooth |
| CONVEYOR HP (KW) REQUIRED* PER FOOT (METER) VERTICAL | .50 HP (1.20 kW) | .75 HP (1.80 kW) | 1.35 HP (3.30 kW) |
| CONVEYOR HP (KW) REQUIRED* PER FOOT (METER) HORIZONTAL | .11 HP (.27 kW) | .18 HP (.44 kW) | .30 HP (.73 kW) |
| WEIGHT PER FOOT OF TUBULAR CONVEYOR - EMPTY | 23.0 lbs/ft | 26.5 lbs/ft - Single Chain 31.0 lbs/ft - Double Chain | 46.0 lbs/ft |
| WEIGHT PER FOOT OF TUBULAR CONVEYOR - FULL OF 56 LB. PER BU MATERIAL | 48.0 lbs/ft | 63.0 lbs/ft. - Single Chain 67.5 lbs/ft - Double Chain | 133.0 lbs/ft |
| WEIGHT PER METER OF TUBULAR CONVEYOR - EMPTY | 34.2 kg/m | 39.4 kg/m - Single Chain 46.1 kg/m - Double Chain | 68.4 kg/m |
| WEIGHT PER METER OF TUBULAR CONVEYOR - FULL OF 56 LB. PER BU MATERIAL | 71.4 kg/m | 93.7 kg/m - Single Chain 100.4 kg/m - Double Chain | 198.0 kg/m |

* Clean, dry, and non-abrasive grain

Stationary Double Run



Stationary grain pumps can be used in various applications at angles from horizontal to 60°. Lengths available in 5' increments. A flow through inlet is convenient for overhead applications.

Cross section of housing



Stationary Double Run filling a dryer and unloading dryer to multiple bins.

STATIONARY GRAIN PUMP™ | DOUBLE RUN SYSTEM SPECIFICATIONS

| | 6" DOUBLE RUN | 8" DOUBLE RUN | 10" DOUBLE RUN | 12" DOUBLE RUN |
|---------------------------------|---------------------|---------------------|---------------------|----------------------|
| DIMENSIONS OF CONVEYING CHAMBER | 6" (15.2 cm) | 8" (20.3 cm) | 10" (25.4 cm) | 12" (30.5 cm) |
| MAXIMUM CAPACITY* | 1,500 BPH (41 TPH) | 4,000 BPH (108 TPH) | 6,000 BPH (162 TPH) | 10,000 BPH (270 TPH) |
| CHAIN TRAVEL | 338 FPM (103.0 MPM) | 329 FPM (11.3 MPM) | 348 FPM (106.1 MPM) | 400 FPM (121.9 MPM) |
| HEAD SHAFT RPM | 126 | 126 | 114 | 102 |
| GALVANIZED HOUSING | 12 GA (2.7 mm) | 12 GA (2.7 mm) | 12 GA (2.7 mm) | 10 GA (3.4 mm) |
| PADDLE THICKNESS (UHMW) | 3⁄8" (9.5 mm) | 3⁄8" (9.5 mm) | ½" (12.7 mm) | ½" (12.7 mm) |
| HEAD SHAFT DIAMETER | 1 ½" (38.1 mm) | 2" (50.8 mm) | 2" (50.8 mm) | 3 7⁄16" (87.3 mm) |
| BOOT SHAFT DIAMETER | 1 ½" (38.1 mm) | 2" (50.8 mm) | 2" (50.8 mm) | 3 7⁄16" (87.3 mm) |
| CONVEYOR CHAIN | 81 X | 81 X | 81 XHH | 81 XHH |
| CONVEYOR SPROCKET | 12 Tooth | 12 Tooth | 14 Tooth | 18 Tooth |

DOUBLE RUN SYSTEM | HORSEPOWER TABLE

| | | ANGLE OF OPERATION | | | | | |
|----------------|----------------------------|--------------------|----------------|----------------|----------------|----------------|------------|
| | | HORIZONTAL | 15 | 30 | 45 | 60 | 90 |
| 6" DOUBLE RUN | HP per Foot (kW per Meter) | 0.042 0.102 | 0.062 0.151 | 0.085 0.207 | 0.120 0.292 | 0.140 0.341 | N/A |
| 8" DOUBLE RUN | HP per Foot (kW per Meter) | 0.076 0.185 | 0.113 0.275 | 0.167 0.407 | 0.222 0.541 | 0.270 0.658 | N/A |
| 10" DOUBLE RUN | HP per Foot (kW per Meter) | 0.114 0.278 | 0.170 0.414 | 0.250 0.610 | 0.333 0.812 | 0.405 0.988 | 0.5 1.2 |
| 12" DOUBLE RUN | HP per Foot (kW per Meter) | 0.180 0.439 | 0.268 0.654 | 0.397 0.968 | 0.524 1.278 | 0.629 1.534 | N/A |

10" Vertical Double Run Grain Pump™

FEATURES

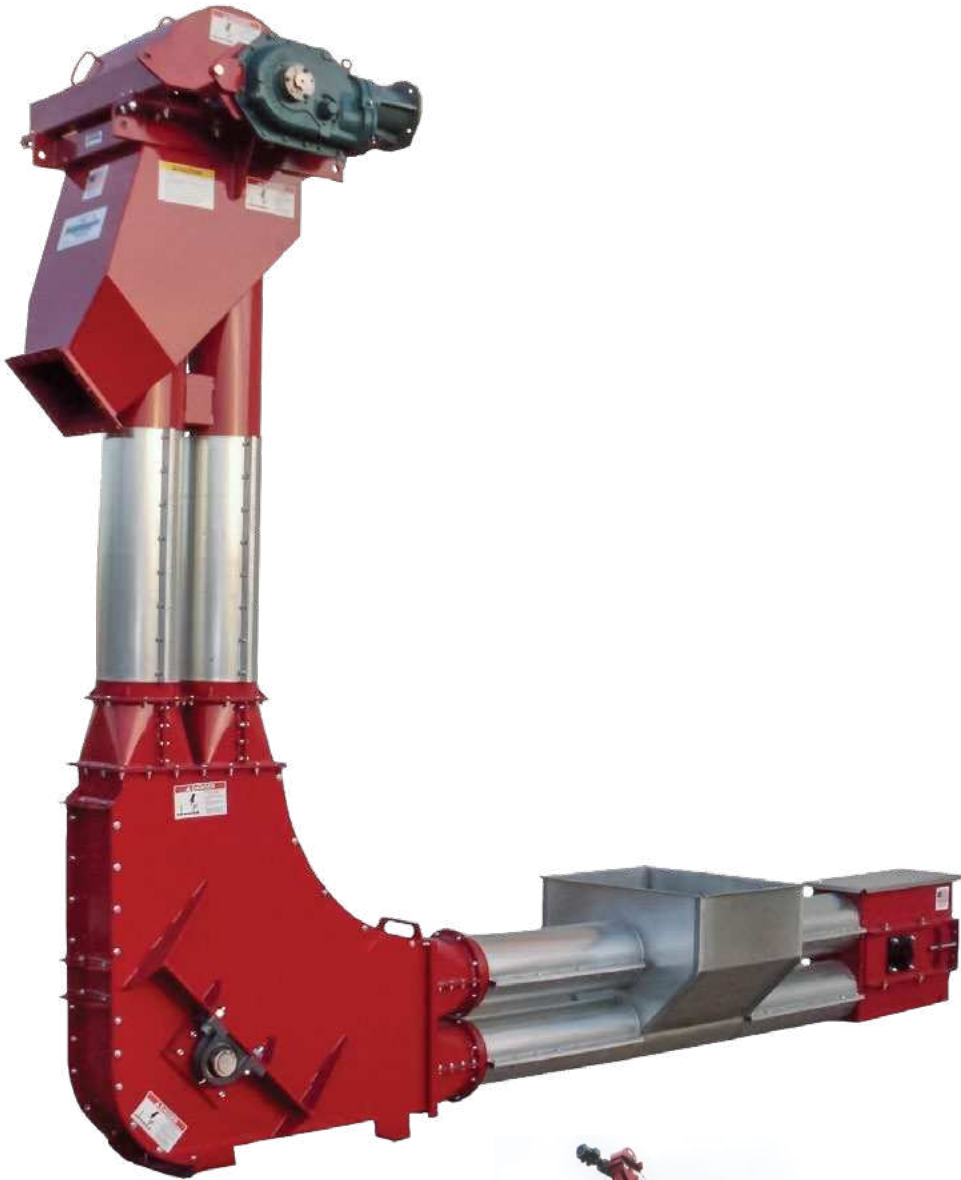
- Up to 6,000 BPH capacity
- 10' minimum amount of required horizontal space
- Maximum discharge height of 68' with total equipment height of 72'
- Drives 15-40 HP (Dodge Reducer)
- Chain Speed 348 FPM

APPLICATIONS

- Wet fill systems to dryers
- Dry grain transfer from dryers
- Receiving grain

EQUIPMENT HIGHLIGHTS

- 81 XHH Chain
- ½ UHMW Paddles
- Bypass Inlet
- Corner and head manufactured with 7 GA material
- Bolt-In AR Liner on the bottom of the corner
- Removable access doors provided with handles
- Chain tension on the boot assembly for easy chain adjustment
- 5' and 10' Dump Hoppers



10" VERTICAL DOUBLE RUN GRAIN PUMP™ SPECIFICATIONS

| MODEL | MAX DISCHARGE HEIGHT | DRIVES | CHAIN SPEED |
|----------------|----------------------|------------|-------------|
| 10" DOUBLE RUN | 68' (20.73 m) | 15 - 40 HP | 348 FPM |

Mass-Ter Mover® & Mass-Ter Flow®



Mass-Ter Mover® features a unique chain and paddle design

The heart of the AGI Hutchinson Mass-Ter Mover® is a continuous chain and paddle combination that utilizes the “En-Masse” concept. The unique shape of tough Ultra High Molecular Weight (UHMW) paddles maintains full chamber movement of grain - without fall-back. The open centers of the paddles provide relief when starting under a full load. The square paddle propulsion system requires less horsepower than a screw conveyor (up to 30% energy savings can be gained)! Whether you’re starting from the ground up, or updating your present facilities, you’ll find the Mass-Ter Mover® ready to meet your demands.

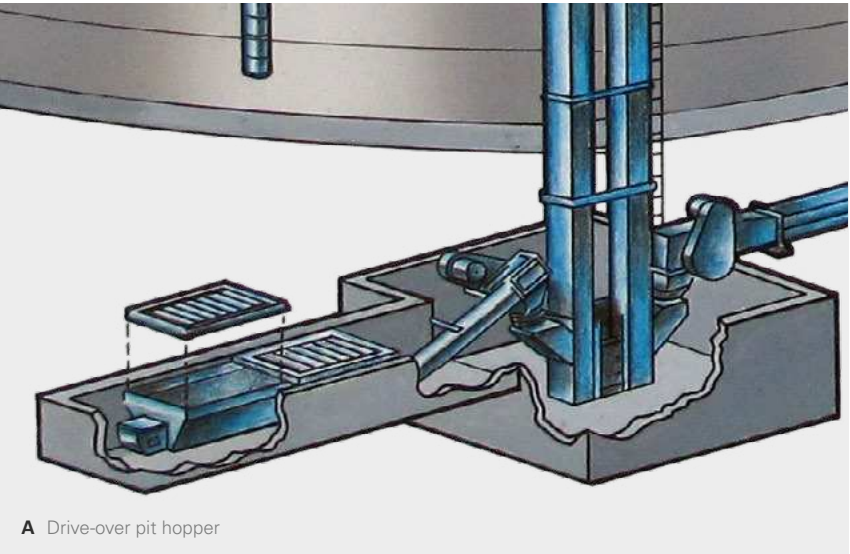
Mass-Ter Flow® Drag Conveyor combines economy and quality in a horizontal conveyor

The Mass-Ter Flow® Drag Conveyor is designed with the same quality features as the Mass-Ter Mover®. The Mass-Ter Flow® is economical in higher capacities, where design allows a strictly horizontal conveyor. High working strength roller chain is combined with tough Ultra High Molecular Weight (UHMW) polyethylene paddles for long life and smooth operation. Optional bottom AR plate liner is available for extra life, particularly in very dirty grain conditions.

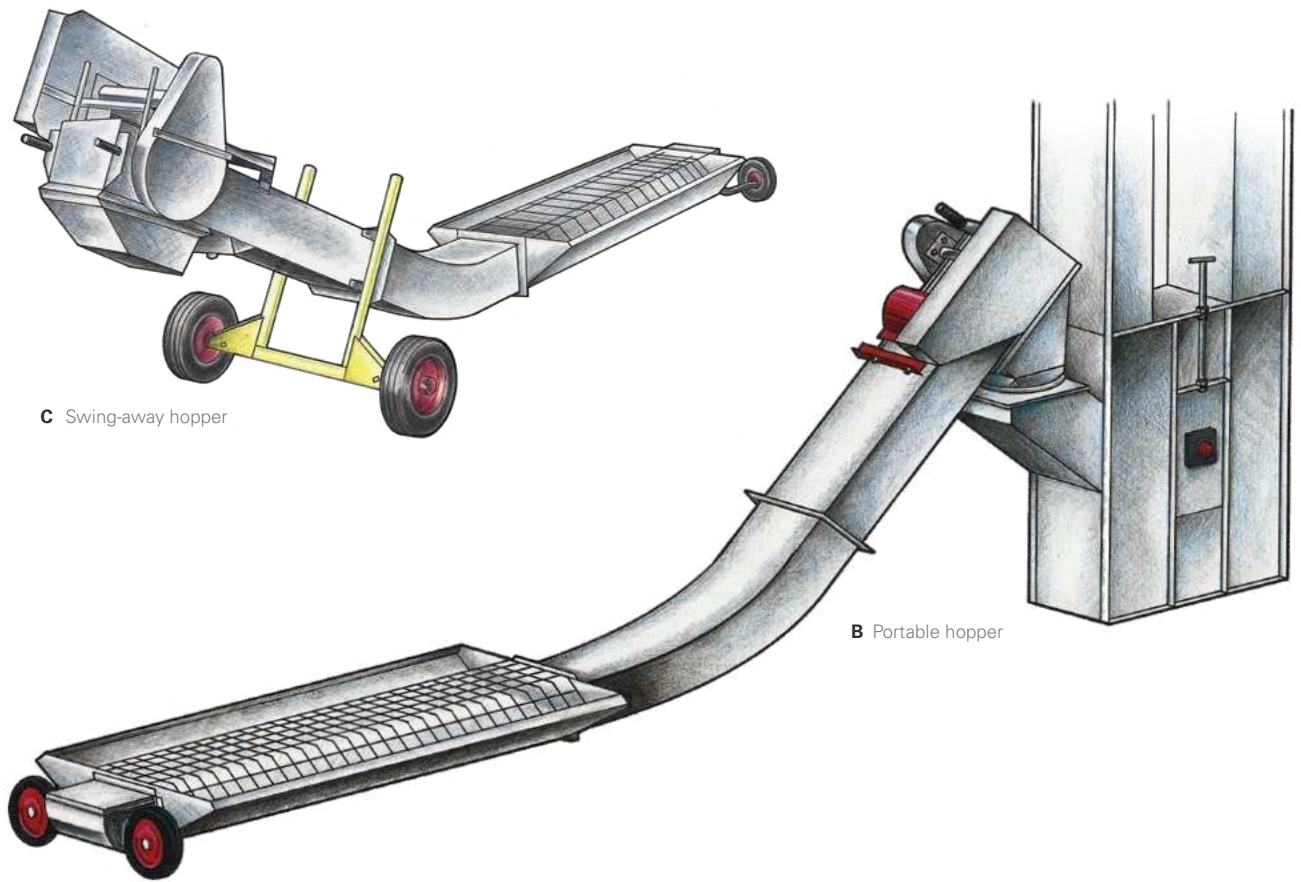
Mass-Ter Mover® & Mass-Ter Flow®

Accessories that make AGI Hutchinson the Mass-Ter of material moving systems

Mass-Ter Mover® and Mass-Ter Flow® accessories provide a complete loading and unloading system for storage structures. Bin unloading units typically incorporate multiple inlets with slide gates and sweep pivots where needed. The usual choices of drives and elbow combinations are available on the Mass-Ter Mover® (Mass-Ter Flow® is horizontal only). Drive-over pit hopper (photo A) with 30°, 45° or 90° incline sections for a dump-and-go operation without a costly holding pit. Swing-away hopper (photo B) and portable hopper (photo C) allow you to custom design your handling system.



A Drive-over pit hopper

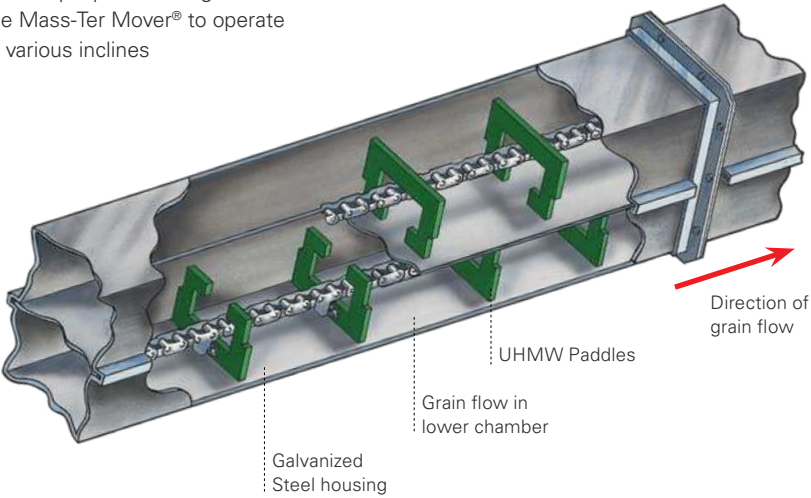


C Swing-away hopper

B Portable hopper

Mass-Ter Mover® Features

- Mass-Ter Mover® powerheads may be used horizontally or in conjunction with the newly designed elbows for inclined or vertical discharge (15°, 30°, 45° and 90° elbows available in select models)
- Hutchinson's "square paddle" propulsion system requires less horsepower than a screw conveyor (Up to 30% energy savings)
- Capacities from 2,500 (68 TPH) to 15,000 BPH (473 TPH)
- Single horizontal lengths to 200'
- Component system adapts to a variety of uses: drive-over pit; horizontal or inclined storage loading; bottom unloading; filling or unloading from dryer
- Grain slides through a full lower chamber with no pinch points to damage material
- The unique paddle design allows the Mass-Ter Mover® to operate at various inclines



MASS-TER MOVER® SPECIFICATIONS

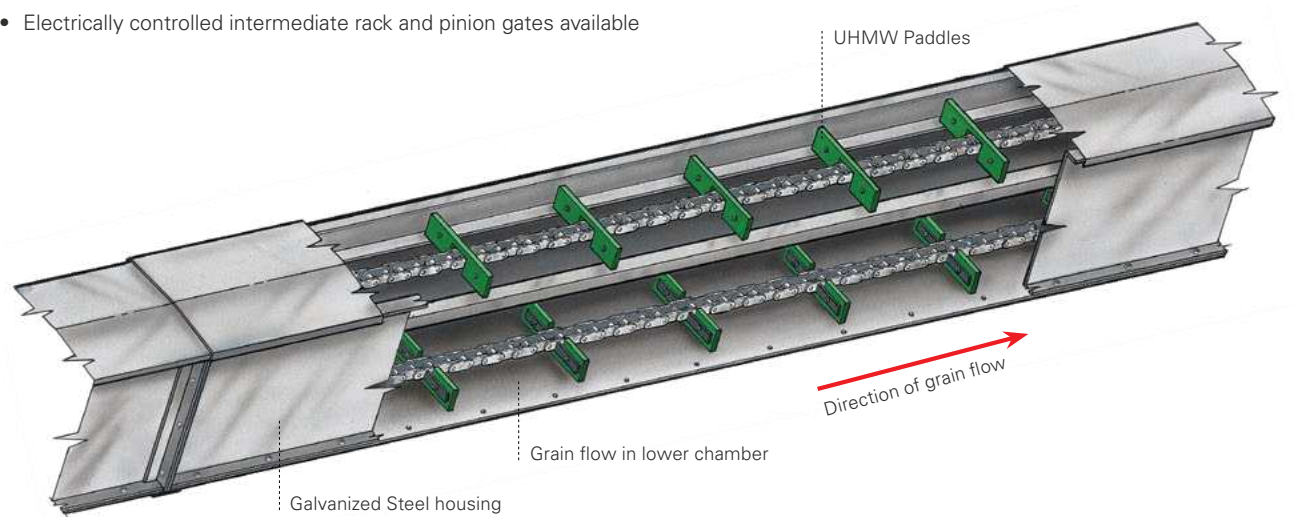
| | MODEL 50 | MODEL 85 | MODEL 150 |
|--|--|--|--|
| DIMENSIONS OF CONVEYING CHAMBER | 6" x 9" (15.2 cm x 22.9 cm) | 7" x 13" (17.8 cm x 33.0 cm) | 10" x 17" (25.4 cm x 43.2 cm) |
| CAPACITY IN BPH* | 2,500 - 5,000 BPH (68 - 135 TPH) | 4,100 - 10,000 BPH (111 - 270 TPH) | 7,500 - 15,000 BPH (203 - 405 TPH) |
| CHAIN TRAVEL | 150 - 325 FPM (45.7 - 99.1 MPM) | 150 - 400 FPM (45.7 - 122.0 MPM) | 150 - 350 FPM (45.7 - 106.9 MPM) |
| HEAD SHAFT RPM | 58 - 125 | 43 - 114 | 28 - 114 |
| HOUSING GAUGE, GALVANIZED - GAUGE OF BOTTOM - GAUGE OF PARTITION - GAUGE OF TOP | 10 GA (3.4 mm) 12 GA (2.7 mm) 14 GA (1.9 mm) | 10 GA (3.4 mm) 12 GA (2.7 mm) 14 GA (1.9 mm) | 10 GA (3.4 mm) 12 GA (2.7 mm) 14 GA (1.9 mm) |
| PADDLE THICKNESS (UHMW) | 3/8" (9.5 mm) | 1/2" (12.7 mm) | 5/8" (15.9 mm) |
| TAKE-UP LOCATION | Head | Head | Head |
| DISCHARGE | 12" (30.48 cm) Round | 14" (35.6 cm) Round | 16" (40.6 cm) Square |
| CONVEYOR CHAIN | 81 X | 81 XHH | Double 81 XHH |
| CONVEYOR SPROCKET | 12 Tooth | 16 Tooth | 25 Tooth |
| APPROX. CONVEYOR WEIGHT (LBS/FT) - EMPTY - LOADED | 38.0 lbs/ft 55.0 lbs/ft | 57.0 lbs/ft 85.0 lbs/ft | 135.0 lbs/ft 185.0 lbs/ft |
| APPROX. CONVEYOR WEIGHT (KG/M) - EMPTY - LOADED | (57.0 kg/m) (82.0 kg/m) | (84.0 kg/m) (126.0 kg/m) | (201.0kg/m) (275.0 kg/m) |

* Horizontal @ 15% Moisture

Mass-Ter Flow®

Features

- Shallow paddles running in this single chamber conveyor provide deep layer, high volume grain movement
- The conveyor covers are easily removed for clean out
- Optional AR plate liner is available for extra life in very dirty grain conditions
- Capacity is from 2,500 - 15,000 BPH (68 - 405 TPH)
- Single runs to 240'
- Mass-Ter Flow® units are available as stationary overhead or return conveyors and bottom unloading systems
- Optional reversible drive available for two-way operation
- Electrically controlled intermediate rack and pinion gates available



MASS-TER FLOW® SPECIFICATIONS

| | 9" MASS-TER FLOW® | 13" MASS-TER FLOW® |
|---------------------------------|-------------------------------------|--------------------------------------|
| DIMENSIONS OF CONVEYING CHAMBER | 9" x 14 ¾" (22.9 cm x 37.5 cm) | 13" x 16 7⁄8" (33.0 cm x 42.9 cm) |
| CAPACITY IN BPH* | 2,500 - 7,000 BPH (68 - 189 TPH) | 2,500 - 15,000 BPH (68 - 405 TPH) |
| CHAIN TRAVEL | 80 - 320 FPM (24.4 - 97.5 MPM) | 130 - 260 FPM (39.6 - 79.3 MPM) |
| HEAD SHAFT RPM | 30 - 120 | 37 - 75 |
| HOUSING GAUGE, GALVANIZED | 10 GA (3.4mm) | 10 GA (3.4mm) |
| - GAUGE OF BOTTOM | 12 GA (2.7 mm) | 12 GA (2.7 mm) |
| - GAUGE OF SIDES | 16 GA (1.5 mm) | 16 GA (1.5 mm) |
| - GAUGE OF TOP | 12 GA (2.7 mm) | 12 GA (2.7 mm) |
| - GAUGE OF HEAD | 10 GA (3.4 mm) | 10 GA (3.4 mm) |
| PADDLE THICKNESS (UHMW) | ⅜" (9.5 mm) | ⅜" (9.5 mm) |
| TAKE-UP LOCATION | Head | Head |
| CONVEYOR CHAIN | 81 X | 81 XHH |
| CONVEYOR SPROCKET | 12 Tooth | 16 Tooth |

*Approximately ⅓ capacity loss on highly abrasive grains (soybeans, popcorn, rice, feed stuffs, etc.). Moisture from dryer vent and humidity can affect capacity.

Dual Hopper

Chain Conveyor

- Impressive 10,000, 15,000 and 20,000 BPH capacities available
- Unload both trailer hoppers at the same time
- Matches the capacity of 12" Double Run Grain Pump™, Low Profile Chain Conveyor, Mass-Ter Mover® Chain Conveyor, 16" Loop and Model 150 Mass-Ter Mover®

FEATURES

- Direct drive to prevent slipping, adjustment and breaking
- Heavy duty construction
- 44" width grates
- Spring take-up for constant tension and less maintenance
- Trunk extensions are available
- Uses 15:1 main gearbox connected to 1:1 right angle gearboxes to drive two separate conveyors
- Use a variable frequency drive controller to adjust speed and flow

HEAVY DUTY CONSTRUCTION

- 7 GA laser cut sheet steel
- ⅜" Laser cut flange connections
- AR wear plate for divider panel

GRATES

- 44" width opening
- Drive-over grating meets OSHA Standards 1910.272





HUTCHINSON is an AGI Brand.

AGI is a leading provider of equipment solutions for agriculture bulk commodities including seed, fertilizer, grain, and feed systems with a growing platform in providing equipment and solutions for food processing facilities. AGI has manufacturing facilities in Canada, the United States, the United Kingdom, Brazil, India and Italy and distributes its products globally.

AGI  HUTCHINSON

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