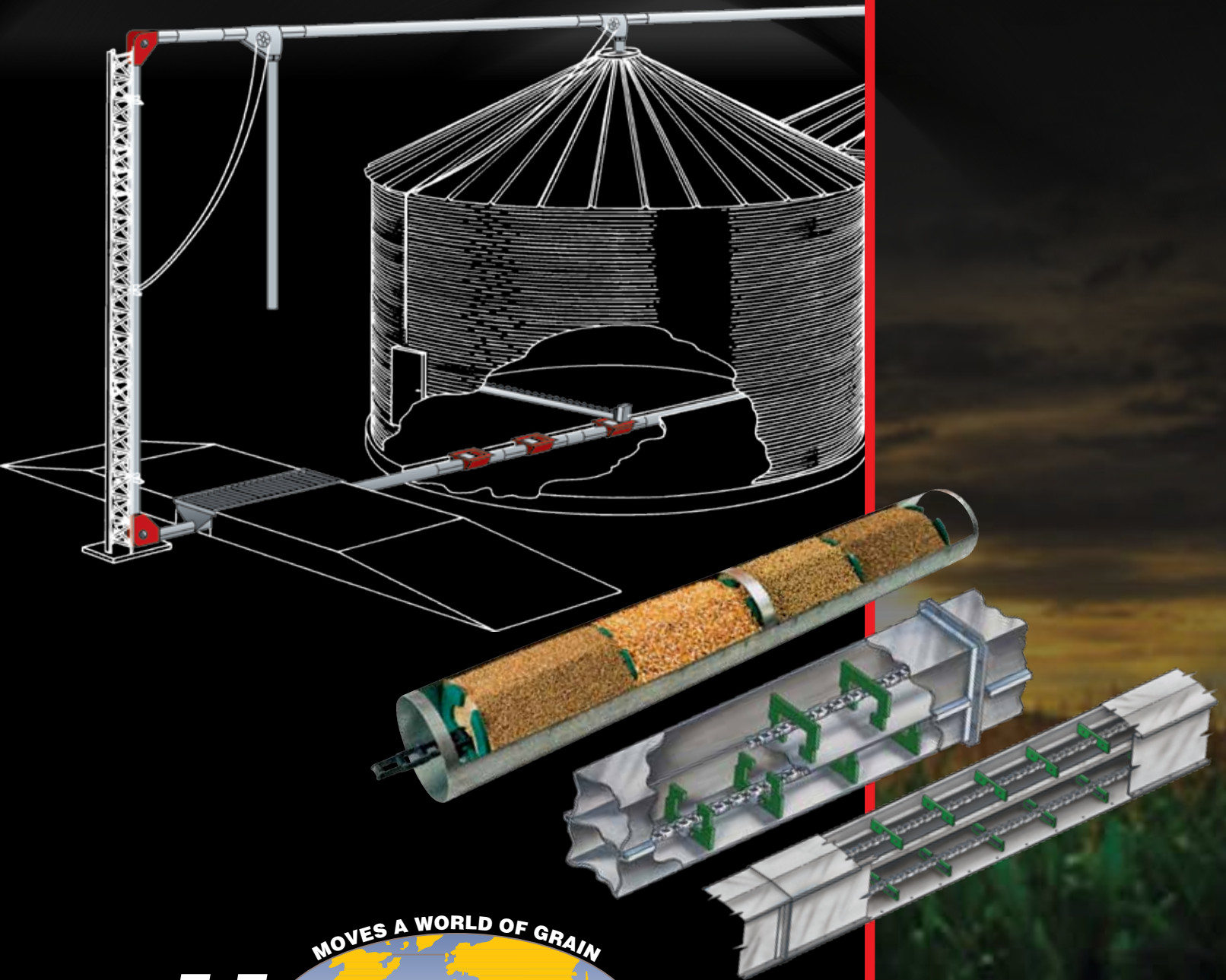


# **HUTCHINSON**

## **CHAIN & PADDLE CONVEYORS**

Grain Pump  
Commercial Grain Pump  
Double Run  
Mass-Ter Mover  
Mass-Ter Flow

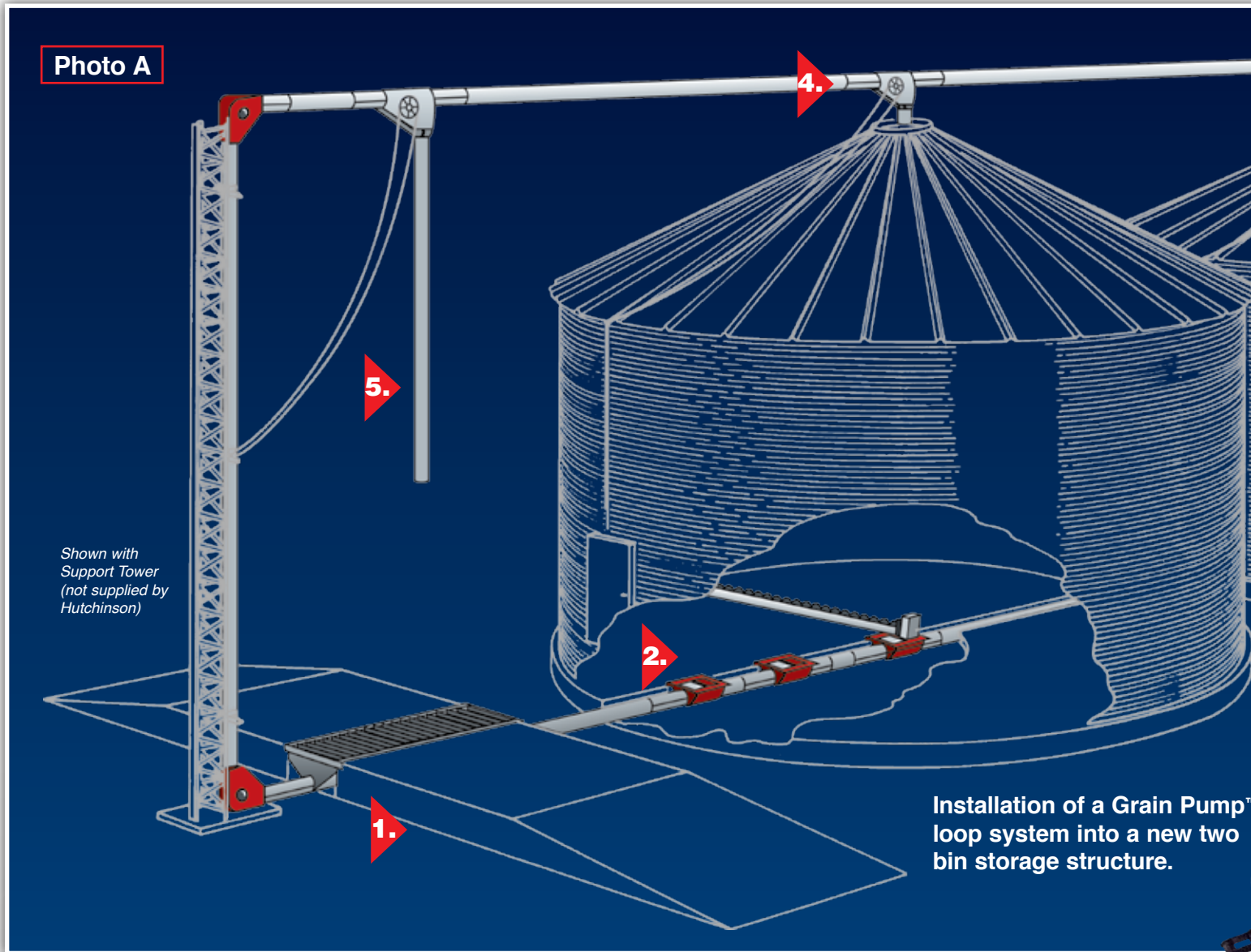


MOVES A WORLD OF GRAIN

# **Hutchinson**

THE WORLD OVER

# GRAIN PUMP

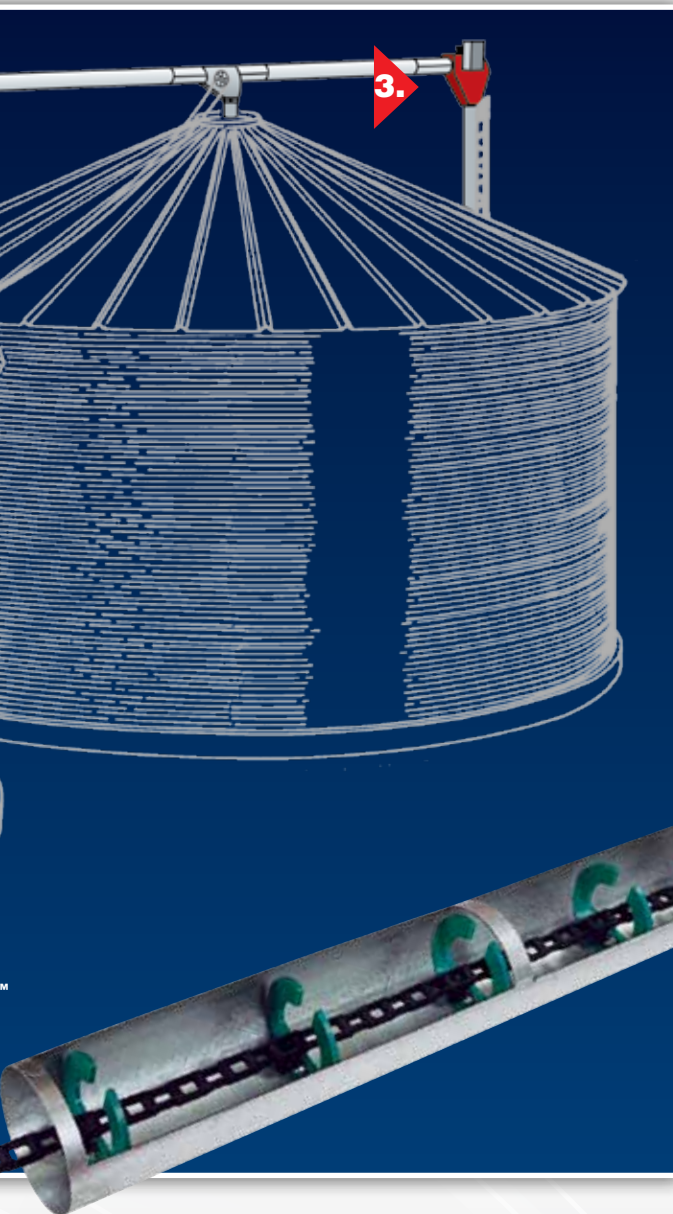


- ▶ **1. Drive over Grain Pump pit hopper**
- ▶ **2. Center and intermediate wells**
- ▶ **3. Drive corner**
- ▶ **4. 90° discharge drops with ground control kit**
- ▶ **5. Complete load out capability**

**Photo B**



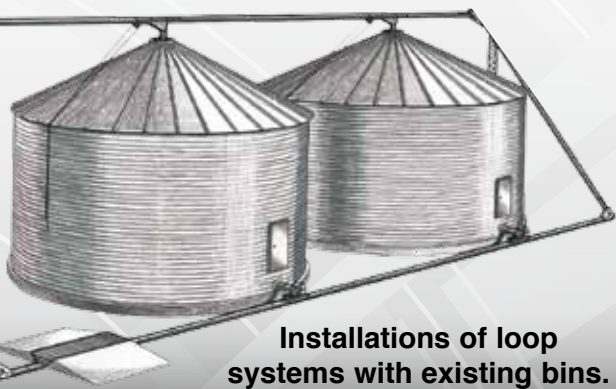




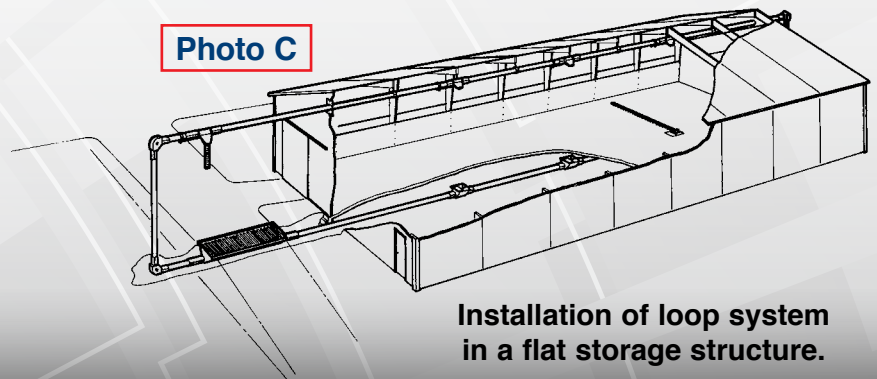
## Let Hutchinson tailor a Grain Pump™ to your storage system.

The innovative Hutchinson Grain Pump™ lets you move grain with gentle efficiency and at high capacities. It requires less horsepower than air systems and Hutchinson's en masse (grain-moving-grain) concept causes less damage to grain and needs less maintenance than traditional conveying systems. The secret is 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 13", 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 traditional conveying systems.

The closed-loop design offers the versatility to create a complete load-in/load-out system that also 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 in a flat storage structure (Photo C). The loop system may provide future expansion capabilities.



**Installations 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 a new 5 bin structure.**

**Installation of Grain Pump loop system into existing bin structure**



## GRAIN PUMP SPECIFICATIONS

	6" LOOP	8" LOOP	10" LOOP	12" LOOP
<b>DIMENSIONS OF CONVEYING CHAMBER</b>	6" (15.2 cm)	8" (20.3 cm)	10" (25.4 cm)	12" (30.5 cm)
<b>MAXIMUM CAPACITY*</b>	2,000 BPH (54 TPH)	4,000 BPH (108 TPH)	6,000 BPH (162 TPH)	10,000 BPH (270 TPH)
<b>CHAIN TRAVEL</b>	325 FPM (99.1 MPM)	325 FPM (99.1 MPM)	325 FPM (99.1 MPM)	400 FPM (121.9 MPM)
<b>HEAD SHAFT RPM</b>	124	109	94	83
<b>HOUSING GAUGE, GALVANIZED</b>	12 Ga. (2.7 mm)	12 Ga. (2.7 mm)	12 Ga. (2.7 mm)	10 Ga. (3.4 mm)
<b>PADDLE THICKNESS (UHMW)</b>	3/8" (9.5 mm)	3/8" (9.5 mm)	1/2" (12.7 mm)	1/2" (12.7 mm)
<b>CORNER SHAFT DIAMETER</b>	1-1/2" (38.1 mm)	2" (50.8 mm)	3" (76.2 mm)	3-7/16" (87.3 mm)
<b>CONVEYOR CHAIN</b>	81 X	81 XHH	81 XHH	82 XHH
<b>CONVEYOR SPROCKET</b>	12 Tooth	14 Tooth	16 Tooth	22 Tooth
<b>CONVEYOR HP (kw) REQUIRED*</b>				
-PER FOOT (METER) VERTICAL	.20 HP (.48 kW)	.35 HP (.85 kW)	.50 HP (1.20 kW)	.75 HP (1.80 kW)
-PER FOOT (METER) HORIZONTAL	.05 HP (.12 kW)	.08 HP (.19 kW)	.11 HP (.27 kW)	.18 HP (.44 kW)
<b>WEIGHT PER FOOT OF TUBULAR CONVEYOR</b>				
-EMPTY	10.5 lbs./ft.	18.0 lbs./ft.	20.0 lbs./ft.	26.5 lbs./ft.
-FULL OF 56 LB. PER BU MATERIAL	19.5 lbs./ft	34.0 lbs./ft	45.0 lbs./ft	63.0 lbs./ft
<b>WEIGHT PER METER OF TUBULAR CONVEYOR</b>				
-EMPTY	(14.9 kg/m)	(17.9 kg/m)	(22.0 kg/m)	(35.7 kg/m)
-FULL OF 720 KG PER CU. METER MATERIAL	(28.3 kg/m)	(41.7 kg/m)	(59.5 kg/m)	(89.3 kg/m)

\* Clean, dry, and non abrasive grain



# COMMERCIAL GRAIN PUMP

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



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

## COMMERCIAL GRAIN PUMP SPECIFICATIONS

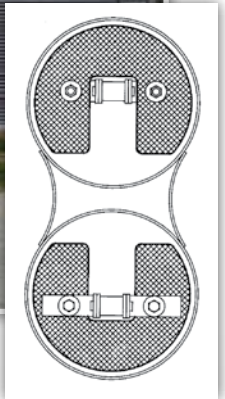
	10" LOOP	12" LOOP	16" LOOP
<b>DIMENSIONS OF CONVEYING CHAMBER</b>	10" (25.4 cm)	12" (30.5 cm)	16" (40.6 cm)
<b>MAXIMUM CAPACITY*</b>	6,000 BPH (162 TPH)	10,000 BPH (270 TPH)	18,000 BPH (486 TPH)
<b>CHAIN TRAVEL</b>	325 FPM (99.1 MPM)	400 FPM (121.9 MPM)	400 FPM (121.9 MPM)
<b>HEAD SHAFT RPM</b>	67	83	63
<b>HOUSING GAUGE, GALVANIZED</b>	10 Ga. (3.4 mm)	10 Ga. (3.4 mm)	7 Ga. (4.5 mm)
<b>PADDLE THICKNESS (UHMW)</b>	1/2" (12.7 mm)	1/2" (12.7 mm)	5/8" (15.9 mm)
<b>CORNER SHAFT DIAMETER</b>	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
<b>CONVEYOR CHAIN</b>	81 XHH	81 XHH - thru 60 HP Double 81 XHH 75 & 100 HP	WH 124
<b>CONVEYOR SPROCKET</b>	16 Tooth (Non-Drive Corners) 22 Tooth (Drive Corners)	22 Tooth	19 Tooth
<b>CONVEYOR HP (kW) REQUIRED*</b>			
<b>PER FOOT (METER) VERTICAL</b>	.50 HP (1.20 kW)	.75 HP (1.80 kW)	1.35 HP (3.30 kW)
<b>-PER FOOT (METER) HORIZONTAL</b>	.11 HP (.27 kW)	.18 HP (.44 kW)	.30 HP (.73 kW)
<b>WEIGHT PER FOOT OF TUBULAR CONVEYOR</b>			
<b>-EMPTY</b>	23.0 lbs./ft.	26.5 lbs./ft. - Single Chain 31.0 lbs./ft. - Double Chain	46.0 lbs./ft
<b>-FULL OF 56 LB. PER BU MATERIAL</b>	48.0 lbs./ft	63.0 lbs./ft. - Single Chain 67.5 lbs./ft. - Double Chain	133.0 lbs./ft
<b>WEIGHT PER METER OF TUBULAR CONVEYOR</b>			
<b>-EMPTY</b>	(34.2 kg/m)	(39.4 kg/m) - Single Chain (46.1 kg/m) - Double Chain	(68.4 kg/m)
<b>-FULL OF 720 KG PER CU. METER MATERIAL</b>	(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 GRAIN PUMP



Cross section of housing



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.

## STATIONARY GRAIN PUMP SPECIFICATIONS • DOUBLE RUN SYSTEM

	6" DOUBLE RUN	8" DOUBLE RUN	10" DOUBIE RUN	12" DOUBLE RUN
<b>DIMENSIONS OF CONVEYING CHAMBER</b>	6" (15.2 cm)	8" (20.3 cm)	10" (25.4 cm)	12" (30.5 cm)
<b>MAXIMUM CAPACITY*</b>	1,500 BPH (41 TPH)	4,000 BPH (108 TPH)	6,000 BPH (162 TPH)	10,000 BPH (270 TPH)
<b>CHAIN TRAVEL</b>	338 FPM (103.0 MPM)	329 FPM (100.3 MPM)	348 FPM (106.1 MPM)	400 FPM (121.9 MPM)
<b>HEAD SHAFT RPM</b>	126	126	114	102
<b>HOUSING GAUGE, GALVANIZED</b>	16 Ga. (1.5 mm)	14 Ga. (1.9 mm)	12 Ga. (2.7 mm)	10 Ga. (3.4 mm)
<b>PADDLE THICKNESS (UHMW)</b>	3/8" (9.5 mm)	3/8" (9.5 mm)	1/2" (12.7 mm)	1/2" (12.7 mm)
<b>HEAD SHAFT DIAMETER</b>	1-1/2" (38.1 mm)	2" (50.8 mm)	2" (50.8 mm)	3-7/16" (87.3 mm)
<b>BOOT SHAFT DIAMETER</b>	1-1/2" (38.1 mm)	2" (50.8mm)	2" (50.8 mm)	3-7/16" (87.3 mm)
<b>CONVEYOR CHAIN</b>	81X	81X	81XHH	81XHH
<b>CONVEYOR SPROCKET</b>	12 Tooth	12 Tooth	14 Tooth	18 Tooth



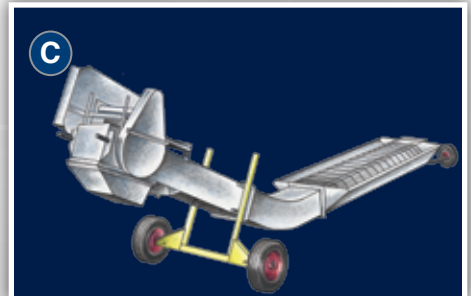
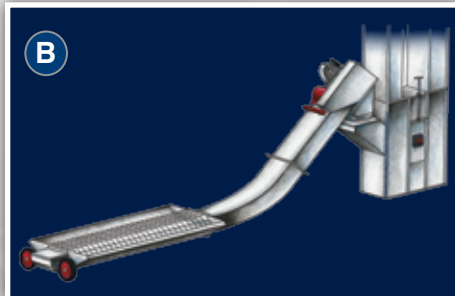
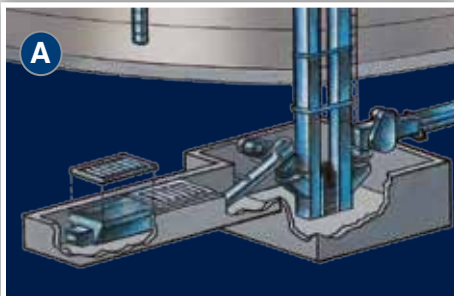


**Stationary grain Pump filling a dryer and unloading dryer to multiple bins**

**DOUBLE RUN SYSTEM — HORSEPOWER TABLE**

MODEL	ANGLE OF OPERATION	HORIZONTAL	15	30	45	60
<b>6" DOUBLE RUN</b>	HP per Foot	0.042	0.062	0.085	0.120	0.140
	(kW per Meter)	(0.102)	(0.151)	(0.207)	(0.292)	(0.341)
<b>8" DOUBLE RUN</b>	HP per Foot	0.076	0.113	0.1657	0.222	0.270
	(kW per Meter)	(0.185)	(0.275)	(0.407)	(0.541)	(0.658)
<b>10" DOUBLE RUN</b>	HP per Foot	0.114	0.170	0.250	0.333	0.405
	(kW per Meter)	(0.278)	(0.414)	(0.610)	(0.812)	(0.988)
<b>12" DOUBLE RUN</b>	HP per Foot	0.180	0.268	0.397	0.524	0.629
	(kW per Meter)	(0.439)	(0.654)	(0.968)	(1.278)	(1.534)

# MASS-TER MOVER & MASS-TER FLOW



## Accessories that make 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 normally 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.





## Mass-Ter Mover's<sup>®</sup> secret is its unique chain and paddle design.

The heart of the Hutchinson Mass-ter Mover<sup>®</sup> 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. And, our "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 Hutchinson Mass-ter Mover<sup>®</sup> ready to meet your demands.

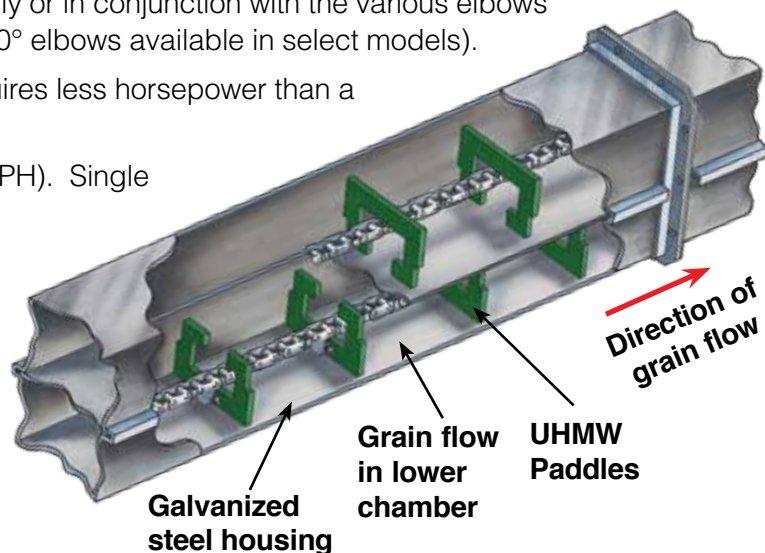
## Mass-Ter Flow<sup>®</sup> Drag Conveyor economy and quality in a horizontal conveyor.

The Mass-Ter Flow Drag Conveyor is designed with the same quality features as the Mass-ter Mover<sup>®</sup>. The Mass-ter Flow is most economical in the higher capacities and 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 plate liner is available for extra life, particularly in very dirty grain conditions.

- ▶ 1. Drive-over Mass-ter Mover<sup>®</sup> pit hopper
- ▶ 2. Bin sweep
- ▶ 3. Return Mass-ter Mover<sup>®</sup> or Mass-ter Flow (Mass-ter Mover illustrated)
- ▶ 4. Bin unloading Mass-ter Mover<sup>®</sup> with incline drive
- ▶ 5. Overhead Mass-ter Mover<sup>®</sup> or Mass-Ter Flow (Mass-ter Mover illustrated)

# MASS-TER MOVER FEATURES

- Mass-ter Mover® powerheads may be used horizontally or in conjunction with the various 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 17,500 BPH (473 TPH). Single horizontal lengths to 200'.
- Grain slides through a full lower chamber... no pinch points to damage material.
- The unique paddle design allows the Mass-ter Mover® to operate at various inclines.
- Component system adapts to a variety of uses: drive-over pit; horizontal or inclined storage loading; bottom unloading; filling or unloading from dryer.



## MASS-TER MOVER® SPECIFICATIONS

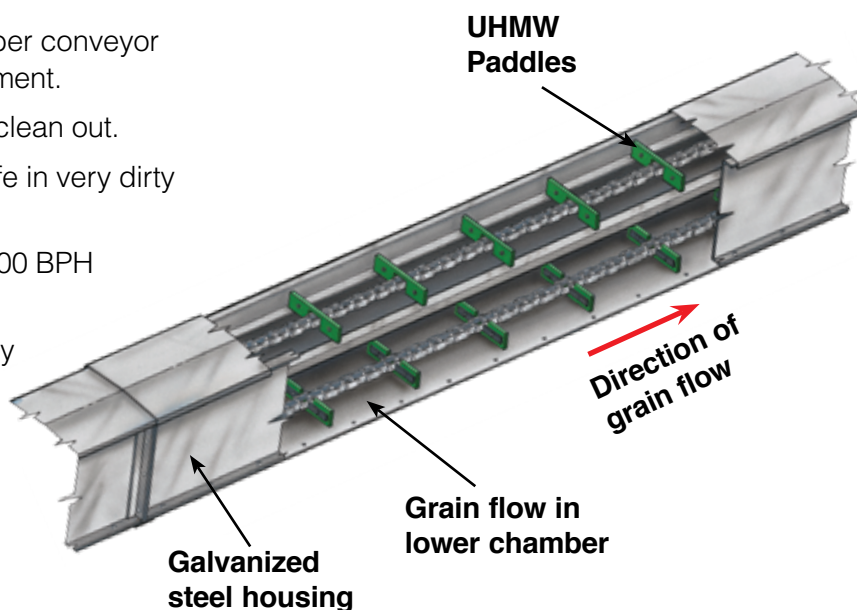
	MODEL 50	MODEL 85	MODEL 150
<b>DIMENSIONS OF CONVEYING CHAMBER</b>	6" x 9" (15.2 cm x 22.9 cm)	7" x 13" (17.8 cm x 33.0 cm)	10" x 17" (25.4 cm x 43.2 cm)
<b>CAPACITY IN BPH*</b>	2,500 - 5,000 BPH (68 - 135 TPH)	4,100 - 10,000 BPH (111 - 270 TPH)	7,500 - 17,500 BPH (203 - 473 TPH)
<b>CHAIN TRAVEL</b>	150 - 325 FPM (45.7 - 99.1 MPM)	150 - 400 FPM (45.7 - 122.0 MPM)	150 - 350 FPM (45.7 - 106.9 MPM)
<b>HEAD SHAFT RPM</b>	58 - 125	43 - 114	28 - 64
<b>HOUSING GAUGE, GALVANIZED</b>			
- GAUGE OF BOTTOM	10 Ga. (3.4 mm)	10 Ga. (3.4 mm)	10 Ga. (3.4 mm)
- GAUGE OF PARTITION	12 Ga. (2.7 mm)	12 Ga. (2.7 mm)	12 Ga. (2.7 mm)
- GAUGE OF TOP	14 Ga. (1.9 mm)	14 Ga. (1.9 mm)	14 Ga. (1.9 mm)
<b>PADDLE THICKNESS (UHMW)</b>	3/8" (9.5 mm)	1/2" (12.7 mm)	5/8" (15.9 mm)
<b>HEAD BEARINGS (SHAFT)</b>	1-1/2" to 2" (38.1 mm to 50.8 mm) 4 - Hole Flange Ball Bearings	2" to 2-7/16" (50.8 mm to 61.9 mm) 4 - Hole Flange Ball Bearings	2-7/16" to 3-7/16" (61.9 mm to 87.3 mm) Pillow Block Bearings
<b>BOOT BEARINGS (SHAFT)</b>	1-1/2" (38.1 mm) 4 - Hole Flange Ball Bearings	2" (50.8 mm) 4 - Hole Flange Ball Bearings	2-7/16" (61.9 mm) Pillow Block Bearings
<b>TAKE-UP LOCATION</b>	Head	Head	Head
<b>DISCHARGE</b>	10" (25.4 cm) Round	14" (35.6 cm) Round	16" (40.6 cm) Square
<b>CONVEYOR CHAIN</b>	81 X	81 XHH	Double 81 XHH
<b>CONVEYOR SPROCKET</b>	12 Tooth	16 Tooth	25 Tooth
<b>APPROX. CONVEYOR WEIGHT (LBS/FT)</b>			
-EMPTY	38.0 lbs./ft.	57.0 lbs./ft.	135.0 lbs./ft.
-LOADED	55.0 lbs./ft.	85.0 lbs./ft.	185.0 lbs./ft.
<b>APPROX. CONVEYOR WEIGHT (KG/M)</b>			
-EMPTY	(57.0 kg/m)	(84.0 kg/m)	(201.0kg/m)
-LOADED	(82.0 kg/m)	(126.0 kg/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 AF plate liner is available for extra life in very dirty grain conditions.
- Capacity is from 2,500 BPH (68 TPH) to 15,000 BPH (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.



## MASS-TER FLOW® SPECIFICATIONS

	9" MASS-TER FLOW	13" MASS-TER FLOW
<b>DIMENSIONS OF CONVEYING CHAMBER</b>	9" x 14-3/4" (22.9 cm x 37.5 cm)	13" x 16-7/8" (33.0 cm x 42.9 cm)
<b>CAPACITY IN BPH*</b>	2,500 - 10,000 BPH (68 - 270 TPH)	7,500 - 15,000 BPH (203 - 405 TPH)
<b>CHAIN TRAVEL</b>	80 - 320 FPM (24.4 - 97.5 MPM)	130 - 260 FPM (39.6 - 79.3 MPM)
<b>HEAD SHAFT RPM</b>	30 - 120	37 - 75
<b>HOUSING GAUGE, GALVANIZED</b>		
- GAUGE OF BOTTOM	10 Ga. (3.4 mm)	10 Ga. (3.4 mm)
- GAUGE OF SIDES	12 Ga. (2.7 mm)	12 Ga. (2.7 mm)
- GAUGE OF TOP	16 Ga. (1.5 mm)	16 Ga. (1.5 mm)
- GAUGE OF HEAD	10 Ga. (3.4 mm)	7 Ga. (4.5 mm)
- GAUGE OF BOOT	12 Ga. (2.7 mm)	10 Ga. (3.4 mm)
<b>PADDLE THICKNESS (UHMW)</b>	3/8" (9.5 mm)	3/8" (9.5 mm)
<b>HEAD SHAFT (VARIES PER LENGTH)</b>	1-1/2" (38.1 mm) for 10' to 35' (3.1 m to 10.7 m) 2" (50.8 mm) for 10' to 125' (3.1 m to 38.31 m) 2-7/16" (61.9 mm) for 130' to 210' (39.6 m to 64.0 m)	2" (50.8 mm) for 10' to 80' (3.1 m to 24.4 m) 2-7/16" (61.9 mm) for 85' to 140' (25.9 m to 42.7 m) 2-15/16" (74.6 mm) for 145' to 230' (44.2 m to 70.1 m)
<b>TAIL SHAFT</b>	1-1/2" (38.1 mm)	2" (50.8 mm)
<b>TAKE-UP LOCATION</b>	Head	Head
<b>CONVEYOR CHAIN</b>	81 X	81 X
<b>CONVEYOR SPROCKET</b>	12 Tooth	16 Tooth
<b>APPROX. CONVEYOR WEIGHT (LBS/FT)</b>		
-EMPTY	29.4 lbs./ft.	30.5 lbs./ft.
-LOADED	63.0 lbs./ft.	99.0 lbs./ft.
<b>APPROX. CONVEYOR WEIGHT (KG/M)</b>		
-EMPTY	(42.6 kg/m)	(45.9 kg/m)
-LOADED	(95.1 kg/m)	(147.6 kg/m)

\*Approximately 1/3 capacity loss on highly abrasive grains (soybeans, popcorn, rice, feed stuffs, etc.). Moisture from dryer vent and humidity can affect capacity.

# THE HUTCHINSON PRODUCT LINE

**HUTCHINSON**  
PORTABLE SYSTEMS



8", 10" & 12" Swing-Away Augers  
12" Swing-Away Augers & Hydraulic Drive Blower Kit  
Top Drive Augers  
Mid-Drive Augers  
Portable Chain Hooper  
Portable Blower For Mixer  
Treat Blower For  
Portable Equipment Belt  
Portable Single Belt Conveyor  
Portable 20" & 24" Low Profile Conveyors  
Roll-Away Hooper & Breaker Blower Hooper  
Drape-Over Chain Conveyor  
Transfer Belt Hooper  
Drape-Over Belt Conveyor & Hydraulic-Pneum. Unit

**Hutchinson**  
MOVES A WORLD OF GRAIN  
THE WORLD OVER

**HUTCHINSON**  
CHAIN & PADDLE CONVEYORS



Wheat No. Blower  
Blow No. Floor  
Grain Pump Loop  
Grain Pump-Grain Run

**Hutchinson**  
MOVES A WORLD OF GRAIN  
THE WORLD OVER

**HUTCHINSON**  
BIN UNLOADING SYSTEMS



Swivel Options  
Pneumatic  
Commodity Scooper  
Swivel Options  
Silo Power Scooper  
100' Power Scooper  
Commodity Power Scooper  
Rotating Options  
Standard Auger Unload  
Commodity Auger Unload  
U-Trough  
Rotating Options  
Blow No. Blower  
Blow No. Floor  
Grain Pump  
Twin Eye Power Heads  
Drives  
Horizontal  
Angled

**Hutchinson**  
MOVES A WORLD OF GRAIN  
THE WORLD OVER

**HUTCHINSON**  
DISTRIBUTING CUSTOM AUGER / U-TROUGH AUGER



Custom Built Distributing Augers  
Accessories & Linings  
Custom Built U-Trough Augers  
Accessories & Linings

**Hutchinson**  
MOVES A WORLD OF GRAIN  
THE WORLD OVER



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