Cumberland
Chain Feeding Systems

- CHAIN FEEDER HOPPERS
- DRIVE SYSTEMS
- HOPPER EXTENSIONS
- CHAIN FEEDER CORNER ASSEMBLY
- CONTROL PANELS
- GRILL AND TROUGH
- GRILL AND TROUGH COMPONENTS
- CHAIN FEEDER ACCESSORIES
- NEW PRODUCTS
CHAIN FEEDER HOPPERS

- CHAIN FEEDER MINI-HOPPERS
- MAXI HOPPERS
- SINGLE DRIVE UNITS
MINI-HOPPER SPECIFICATIONS

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-LINE 60/ BD</td>
<td>60#/ 27.2Kgs</td>
</tr>
<tr>
<td>2L1WAY 60/ BD</td>
<td>60#/ 27.2Kgs</td>
</tr>
<tr>
<td>2L2WAY 60/ BD</td>
<td>80#/ 36.3Kgs</td>
</tr>
<tr>
<td>3L1WAY 60/ BD</td>
<td>90#/ 40.8Kgs</td>
</tr>
<tr>
<td>3L2WAY 60/ BD</td>
<td>90#/ 40.8Kgs</td>
</tr>
<tr>
<td>4L2WAY 60/ BD</td>
<td>100#/ 45.4Kgs</td>
</tr>
<tr>
<td>6L2WAY 60/ BD</td>
<td>120#/ 54.4Kgs</td>
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MINI-HOPPER SPECIFICATIONS

◆ ALL MINI-HOPPERS ARE AVAILABLE IN 120 FT. PER MINUTE, 60 FT. PER MINUTE, BELT DRIVE AND DIRECT DRIVE. FILL ONLY HOPPERS ARE AVAILABLE IN 1 LINE AND TWO LINE MODELS.

◆ FEED DELIVERY
  - 60 FOOT PER MINUTE CAN DELIVER UP TO 30 LB. (13.6 KGS) OF FEED PER MINUTE, PER TROUGH LINE.
  - 120 FOOT PER MINUTE CAN DELIVER UP TO 60 LB. (27.2 KGS) OF FEED PER MINUTE, PER TROUGH LINE.
# Maxi Hopper Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>1-Line 60/BD</td>
<td>440#/199.6 Kgs</td>
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<tr>
<td>2L1Way 60/BD</td>
<td>435#/197.3 Kgs</td>
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<tr>
<td>2L2Way 60/BD</td>
<td>435#/197.3 Kgs</td>
</tr>
<tr>
<td>3L2Way 60/BD</td>
<td>650#/295.0 Kgs</td>
</tr>
</tbody>
</table>
MAXI HOPPER SPECIFICATIONS

- **ALL MAXI-HOPPERS ARE AVAILABLE IN 120 FT. PER MINUTE, 60 FT. PER MINUTE, BELT DRIVE AND DIRECT DRIVE. FILL ONLY HOPPERS ARE AVAILABLE IN 1 LINE VARIATIONS.**

- **FEED DELIVERY**
  - 60 FOOT PER MINUTE CAN DELIVER UP TO 30 LB. (13.6 KGS) OF FEED PER MINUTE, PER TROUGH LINE.
  - 120 FOOT PER MINUTE CAN DELIVER UP TO 60 LB. (27.2 KGS) OF FEED PER MINUTE, PER TROUGH LINE.
CUMBERLAND CHAIN FEEDER
HOPPER WELDMENT ATTRIBUTES

- **HOPPER BOX** FABRICATED FROM 16 GAUGE HOT ROLLED STEEL.
- **HOPPER BOTTOM** FABRICATED FROM 14 GAUGE HOT ROLLED STEEL.
- **GEAR BOX SUPPORT ASSEMBLY** FABRICATED FROM 8 GAUGE HOT ROLLED STEEL.
- **ALL HOT ROLLED STEEL** IS SHOT BLOWDED, COATED WITH ELECTROSTATIC POWDER COATING, USING TGIC POLYESTER POWDER COATING, AND OVEN BAKED TO PROVIDE A DURABLE FINISH.
CUMBERLAND CHAIN FEEDER
HOPPER ASSEMBLY ATTRIBUTES

- 14 GAUGE HARDENED CHAIN GUIDE.
- HARDENED WEAR PLATE ON THE POWER SHOE.
- MACHINED YOKE ASSEMBLY.
- ONE LINE AND TWO LINE ONE WAY MODELS EQUIPPED WITH FEED RETURN WHEELS.
- ALL MODELS EQUIPPED WITH FEED LEVEL ADJUSTMENTS.
- UNIQUE CHAIN STRIPPER DESIGN.
CUMBERLAND MAXIHOPPER
CUMBERLAND VS. THE COMPETITION

- **HOPPER BOX** - CUMBERLAND’S AND BIG DUTCHMAN’S 16 GAUGE HOT ROLLED STEEL.
- **HOPPER BOTTOM** - CUMBERLAND’S AND BIG DUTCHMAN’S 14 GAUGE HOT ROLLED STEEL.
- **GEAR BOX SUPPORT ASSEMBLY** - CUMBERLAND’S MADE FROM 8 GAUGE (.172) H.R.S. BIG DUTCHMAN’S MADE FROM 7 GAUGE (.1875) H.R.S.
- **PAINT COATING** - CUMBERLAND’S HOPPER COATED WITH ELECTROSTATIC POWDER COATING, USING TGIC POLYESTER POWDER COATING, BIG DUTCHMAN’S PRODUCTS ARE EPOXY COATED.
IMPORTANT

◆ THE CHAIN STRIPPER WELDMENT IS VERY IMPORTANT AND SHOULD NOT TAKE IT OUT, THIS PREVENT THE CHAIN STRUCK AT THE SPOCKET AND ROTATE ALONG WITH THE SPOCKET. THIS WILL ALSO WEAKEN THE CHAIN.
TENSIONING

- Chain can be tension in two ways:
- By using your finger to hang up the chain up to the tip of the trough feel like 3 kgs.
- When the rotation of the sprocket pushing forward one chain link slightly push up.
ALIGNMENT

◆ ALIGNMENT OF SPOCKET IS VERY IMPORTANT SO THAT IT WILL NOT WORN THE SIDE SHOE OR BREAKING THE CHAIN.
FEED LEVEL PLATE
FEED LEVEL PLATE

- FEED SHOULD ADJUST TO A MINIMUM SO THAT IT CAN MAKE A FULL TURN
CUMBERLAND VS. THE COMPETITION

- **Yoke Assembly**
  CUMBERLAND’S MACHINED, BIG DUTCHMAN’S WELDMENT.

- **Return Wheel**
  CUMBERLAND’S FABRICATED FROM 14 GAUGE GALVANIZED STEEL, BIG DUTCHMAN’S FABRICATED FROM 12 GAUGE GALVANIZED STEEL.
SINGLE DRIVE UNITS

DESCRIPTION

- SGL. DRIVE 60 FOOT PER MINUTE - 60HZ
- SGL. DRIVE 60 FOOT PER MINUTE - 50HZ
- SGL. DRIVE 120 FOOT PER MINUTE - 60HZ
- SGL. DRIVE 120 FOOT PER MINUTE - 50HZ
- SGL. DRIVE 90 FOOT PER MINUTE - 60HZ
- SGL. DRIVE 90 FOOT PER MINUTE - 50HZ
SINGLE DRIVE UNITS

◆ USED IN CONJUNCTION WITH FILL ONLY HOPPERS OR ONE LINE UNLOADERS

◆ ADVANTAGES
  - DIRECT DRIVE REQUIRES LESS MAINTENANCE.
  - UNIT IS SMALL AND CAN BE LOCATED INSIDE OR OUTSIDE OF LINE.
  - NEW DESIGN ALLOWS FOR CLOCKWISE OR COUNTERCLOCKWISE MOVEMENT OF CHAIN THROUGH THE LOOP.
  - NORMALLY LOWER COST, CONSIDERATION MUST BE GIVEN TO THE COST OF THE FILL SYSTEM.
ONE LINE UNLOADER

- USED WITH SINGLE DRIVE UNITS OR MINI-HOPPERS
DRIVE SYSTEMS

◆ BELT DRIVE

– 60 FOOT PER MINUTE

- REDUCTION RATIO = 52.5 TO 1
- MAXIMUM POWER RATIO = 2 HP
- GEAR REDUCER INPUT SHAFT DIAMETER = 3/4”
- GEAR REDUCER OUTPUT SHAFT SIZE = 1”
- SPROCKET REVOLUTION TO CHAIN TRAVEL = 1 TO 1.8’
- FEED DELIVER RATE 60 FT PER MINUTE = 1740 LB. PER HOUR

– MOTOR SIZES

- 1 HP - 1725 RPM @ 60 HZ - LENGTH OF CHAIN UP TO 500’
- 1 - 1/2 HP - 1725 RPM @ 60 HZ - LENGTH OF CHAIN UP TO 800’
- 2 HP - 1725 RPM @ 60 HZ - LENGTH OF CHAIN UP TO 1000’
**DRIVE SYSTEMS**

**BELT DRIVE**

- **120 FOOT PER MINUTE.**
  - REDUCTION RATIO = 37 TO 1
  - MAXIMUM POWER RATIO = 3 HP
  - GEAR REDUCER INPUT SHAFT DIAMETER = 7/8”
  - GEAR REDUCER OUTPUT SHAFT SIZE = 1”
  - SPROCKET REVOLUTION TO CHAIN TRAVEL = 1 TO 1.8’
  - FEED DELIVER RATE 120 FT PER MINUTE = 3480 LB.. PER HOUR

- **MOTOR SIZES**
  - 2 HP - 1725 RPM @ 60HZ - LENGTH OF CHAIN UP TO 500’- 800’
  - 3HP - 1725 RPM @ 60HZ - LENGTH OF CHAIN UP TO 800’ - 1000’
SOFT-START MOTOR CONTROLLERS

<table>
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<tr>
<th>PART#</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>07099811</td>
<td>Up To 3HP, 1 &amp; 3PH, 200-230 Volts</td>
</tr>
<tr>
<td></td>
<td>1 Controller Can be used with 1 - 1 Phase Motor</td>
</tr>
<tr>
<td></td>
<td>or Can be used with 2 - 3 Phase Motors</td>
</tr>
<tr>
<td>07099812</td>
<td>Up To 3HP, 3PH, 380-480 Volts</td>
</tr>
<tr>
<td></td>
<td>Can be used with 2-3 phase motors</td>
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- **SOFT START MOTOR CONTROLLERS** reduce stresses and strains to the system during startup.
DRIVE SYSTEMS

◆ DIRECT DRIVE
  – DIRECT DRIVE GEAR BOXES
    ◆ 60 FOOT PER MINUTE
      ◆ 51:1 DIRECT DRIVE GEARBOX 60 HZ
      ◆ 43:1 DIRECT DRIVE GEARBOX 50 HZ
      ◆ FEED DELIVER RATE 60 FT PER MINUTE = 1740 LB. PER HOUR
    ◆ 90 FOOT PER MINUTE
      ◆ 35:1 DIRECT DRIVE GEARBOX 60 HZ
      ◆ 29:1 DIRECT DRIVE GEARBOX 50 HZ
      ◆ FEED DELIVER RATE 120 FT PER MINUTE = 2610 LBS. PER HR
    ◆ 120 FOOT PER MINUTE
      ◆ 25:1 DIRECT DRIVE GEARBOX 60 HZ
      ◆ 21:1 DIRECT DRIVE GEARBOX 50 HZ
      ◆ FEED DELIVER RATE 120 FT PER MINUTE = 3480 LBS. PER HOUR
**DRIVE SYSTEMS**

**DIRECT DRIVE MOTORS**

- 1-1/2 HP 1PH 50/60 HZ C-FACE MOTOR LENGTH OF CHAIN UP TO 800’

- 2 HP 1PH 50/60 HZ C-FACE MOTOR LENGTH OF CHAIN UP TO 1000’

- 1-1/2 HP 3PH 50 HZ C-FACE MOTOR (2-WK) LENGTH OF CHAIN UP TO 800’

- 2 HP 3PH 50 HZ C-FACE MOTOR (5-WK) LENGTH OF CHAIN UP TO 1000’
COMPARISON BELT DRIVE VS DIRECT DRIVE

- FEED DELIVERY SAME WITH BELT DRIVE OR DIRECT DRIVE.
- BELT DRIVE SYSTEMS REQUIRE PROPER MAINTENANCE OF PULLEY ALIGNMENT AND BELT TENSION.
- BELT DRIVE SYSTEMS NOT PROPERLY INSTALLED OR MAINTAINED WILL LEAD TO PREMATURE BELT WEAR.
- DIRECT DRIVE SYSTEMS ELIMINATE ALL OF THE PROBLEMS THAT EXIST WITH BELTS.
- DIRECT DRIVE GEAR BOXES ARE AVAILABLE IN A WIDE VARIETY OF SPEEDS.
- DIRECT DRIVE SYSTEM’S SPEED CANNOT BE CHANGED WITHOUT REPLACING THE GEAR BOX. BELT DRIVE SYSTEM’S SPEED CAN BE CHANGED BY CHANGING BELTS AND PULLEYS.
# Hopper Extensions

## Vertical Extensions

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<tr>
<th>Part#</th>
<th>Description</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>07099256</td>
<td>1-Line</td>
<td>135#/61Kgs</td>
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<tr>
<td>07099207</td>
<td>2-Line 1-Way</td>
<td>135#/61Kgs</td>
</tr>
<tr>
<td>07099257</td>
<td>2-Line 2-Way</td>
<td>135#/61Kgs</td>
</tr>
<tr>
<td>07099258</td>
<td>4-Line 2-Way</td>
<td>135#/61Kgs</td>
</tr>
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## Standard Extensions

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<th>Part#</th>
<th>Description</th>
<th>Capacity</th>
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</thead>
<tbody>
<tr>
<td>07098036</td>
<td>1-Line</td>
<td>385#/175Kgs</td>
</tr>
<tr>
<td>07098037</td>
<td>2-Line 1-Way</td>
<td>435#/197Kgs</td>
</tr>
<tr>
<td>07098039</td>
<td>2-Line 2-Way</td>
<td>270#/122Kgs</td>
</tr>
<tr>
<td>07098038</td>
<td>4-Line 2-Way</td>
<td>340#/154Kgs</td>
</tr>
<tr>
<td>07099957</td>
<td>6-Line 2-Way</td>
<td>400#/181Kgs</td>
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<tr>
<td>07100703</td>
<td>1L-MAXI Ext. PKG.</td>
<td>600#/272Kgs</td>
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CHAIN FEEDER 90 DEGREE CORNER

- 90 DEGREE CORNER MODELS
  - 90 DEGREE CORNER COMPLETE
  - 90 DEGREE CORNER WITH SUSPENSION HANGER
  - 90 DEGREE CORNER WITH LEG STAND
GREASE NIPPLE
90 DEGREE CORNER ATTRIBUTES

- BOLT WITH GREASE ZERK ALLOWING EASY LUBRICATION OF IDLER PIN
- 18 GAUGE GALVANIZED STEEL COVER.
- OIL IMPREGNATED BRONZE BEARING.
- FLUTED IRON CORNER WHEEL.
90 DEGREE CORNER ATTRIBUTES

- HARDENED IDLER PIN.
- HARDENED CORNER GUIDE AND HOLD DOWN RAIL.
- 3/16” BOTTOM PLATE MADE FROM ABRASION RESISTANT STEEL.
- 16 GAUGE BODY CONSTRUCTION.
TROUGH AND GRILL

◆ CHAIN FEEDER TROUGH
- 07097269  PULLET TROUGH 10’ LENGTH
- 07097568  PULLET TROUGH 12’ LENGTH
- 07097270  MEDIUM WIDE TROUGH 10’ LENGTH
- 07097569  MEDIUM WIDE TROUGH 12’ LENGTH
TROUGH ATTRIBUTES

- All trough is fabricated from 18 gauge galvanized steel.
- Medium wide trough is designed for hens and includes a feed saver lip.
TROUGH GRILL

**CHAIN FEEDER TROUGH GRILL**

- AVAILABLE IN A WIDE ASSORTMENT OF PROFILES.
- AVAILABLE IN VIRTUALLY ANY SPACING CONFIGURATION ALLOWING CONTROL OF ACCESS TO FEED.
- AVAILABLE IN FIVE FOOT AND SIX FOOT LENGTHS.
CHAIN FEEDER TROUGH GRILL
ATTRIBUTES

- FABRICATED FROM 9 GAUGE GALVANIZED WIRE.
- WIRE TENSILE STRENGTH 85,000 - 95,000 PSI.
- ALL INTERSECTIONS ARE RESISTANCE WELDED AT 20% PENETRATION.
GRILL AND TROUGH COMPONENTS

- TROUGH COUPLERS
- TROUGH HANGERS
- GRILL END CAPS
- LEG STANDS
- TROUGH COVERS
TROUGH HANGERS

- 07097633 WRAP AROUND HANGER FOR REGULAR TROUGH.
- 07097524 WRAP AROUND HANGER FOR MEDIUM-WIDE TROUGH.
- 07098222 SMALL HANGER FOR 12” COUPLER.
- 07099163 J - HANGER FOR MEDIUM-WIDE TROUGH.
- 07099163 J - HANGER FOR REGULAR TROUGH.
TROUGH COUPLERS

- **PULLET TROUGH**
  - 07097385 6” COUPLER (NO HANGER)
  - 07098259 6” COUPLER WITH LEG STAND
  - 07097570 12” COUPLER (NO HANGER)
  - 07097695 12” COUPLER WITH SUSPENSION BAIL
  - 07097966 12” COUPLER WITH LEG STAND
TROUGH COUPLERS

- MEDIUM WIDE TROUGH
  - 07097255  8” COUPLER (NO HANGER)
  - 07097694  8” COUPLER WITH SUSPENSION BAIL
  - 07097570  12” COUPLER (NO HANGER)
  - 07097695  12” COUPLER WITH SUSPENSION BAIL
  - 07097966  12” COUPLER WITH LEG STAND
TROUGH COVER AND GRILL END CAPS

◆ **GRILL END CAPS**
  ◆ 07097921  PULLET GRILL END CAP
  ◆ 07097920  MEDIUM WIDE GRILL END CAP (REGULAR GRILL)
  ◆ 07099464  MEDIUM WIDE GRILL END CAP (HIGH PROFILE GRILL)

◆ **TROUGH COVER**
  ◆ 07097657  5’ REGULAR TROUGH COVER
CHAIN FEEDER ACCESSORY PARTS

- BREEDER FEEDER CHAIN (BLUE) FROM: MCAULEY MFG.
- CHAIN BREAKER
- MINI HOPPER LID ASSEMBLIES FOR 1 LINE, 2 LINE AND 4 LINE HOPPERS.
- CHICK RAMPS - THAT PREVENT CHICKS FROM BEING CARRIED THROUGH THE CORNER MECHANISM.
- ADJUSTABLE HOPPER LEG FOR FLOOR DRIVE HOPPERS.
- ROTARY SCREENER - REMOVES FEATHERS AND DEBRIS FROM THE FEED.
NEW PRODUCTS
500 LB. FEED HOPPER

**KEY**

- **1** HOPPER PANEL
- **2** CROSS BRACE
- **3** CROSS BRACE HANGER
- **4** ADAPTER/ SUPPORT PLATE
THE HOPPER IS MADE FROM 20 GAGE GALVANIZED STEEL
THE HOPPER CROSS BRACES AND HANGERS ARE MADE FROM 12 GAGE GALVANIZED STEEL
THE ADAPTER/ SUPPORT PLATE IS MADE FROM 16 GAGE GALVANIZED STEEL

INLET HOLE
OUTLET HOLE
HEIGHT
WEIGHT

07101262
46.8”
14”
18.6”
47.8 LB.
## 1-LINE UNLOADER

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<thead>
<tr>
<th>KEY</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>1</td>
<td>UNLOADER HOUSING</td>
</tr>
<tr>
<td>2</td>
<td>OUTLET/INLET PLATE</td>
</tr>
<tr>
<td>3</td>
<td>TOP PLATE</td>
</tr>
<tr>
<td>4</td>
<td>INSERT PLATE R.H.</td>
</tr>
<tr>
<td>5</td>
<td>INSERT PLATE L.H.</td>
</tr>
<tr>
<td>6</td>
<td>FEED RETURN WHEEL SLIDE</td>
</tr>
<tr>
<td>7</td>
<td>INTAKE WHEEL WELDMENT</td>
</tr>
<tr>
<td>8</td>
<td>FEED LEVEL SLIDE</td>
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<tr>
<td>9</td>
<td>RETURN SHAFT CLIP</td>
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<tr>
<td>10</td>
<td>RETURN WHEEL SHAFT</td>
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</tbody>
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1 - LINE UNLOADER ATTRIBUTES

- **THE 1 - LINE UNLOADER IS CONSTRUCTED OF 16 BLACK STEEL**
- **ELECTROSTATIC POWDER COATED, USING TGIC POLYESTER POWDER COATING**
- **THE FEED RETURN WHEEL AND SHAFT ARE THE SAME AS THAT USED IN THE MINI-HOPPERS AND MAXI-HOPPERS**
- **THE UNLOADER IS EASILY INSTALLED AND HANDLED BECAUSE OF ITS SIZE AND WEIGHT OF JUST 27 LB.**
ONE LINE UNLOADER ATTRIBUTES

- THE 1-LINE UNLOADER IS CONSTRUCTED OF 16 BLACK STEEL
- ELECTROSTATIC POWDER COATED, USING TGIC POLYESTER POWDER COATING
- THE FEED RETURN WHEEL AND SHAFT ARE THE SAME AS THAT USED IN THE MINI-HOPPERS AND MAXI-HOPPERS
- THE UNLOADER IS EASILY INSTALLED AND HANDLED BECAUSE OF ITS SIZE AND WEIGHT OF JUST 27 LB.
THE UNLOADER CAN BE MOUNTED WITH THE 500 LB. HOPPER OR THE 135 LB. HOPPER EXTENSION WITH THE AID OF THE ADAPTER/SUPPORT PLATE.

THE UNLOADER IS USED IN CONJUNCTION WITH A SINGLE DRIVE UNIT.
THANK YOU
TERIMA KASIH

From:
Beng
h/ p : +60124819379