

Mat Style Specifications (1200)

Nercon Eng. & Mfg., Inc.

5/6/2014

Modular Conveyor 12" Open Top Mat-Style Conveyor

PO Box 2288 | Oshkosh, WI 54902 PH: 920.379.1772 | www.modularconveyor.com

### **Standard Modules**

• Idle Ends; Drive Ends; Center Drives; 30°, 45°, 90° Turns; Intermediates; Copes (Adjustable Vertical Turns)

# Frame Material & Design

- 12-Gauge, Mild Steel, "Stardust Silver" Powder Coat Paint
- 12-Gauge Stainless Steel, #4 Polish Finish
- Open Top Design

# Wearstrips — Carryway

- 1/8" Thick UHMW in Straights
- Turns: UHMW Outside, Duravar Inside

#### Wearstrip — Return

• 5/8" x 5/8" UHMW Edge Guide

# Motor/Reducer

- Nord "C" Face Motor, Inverter Duty, VFD & IP55 Rated
- Motor Voltage: 230/460-3-60 AC
- Nord Hollow Bore Reducer
- Corrosion Resistant Aluminum
- Vertical Shaft Mount w/ Torque Arm

#### Options:

- Below or Above
- Washdown Painted
- Stainless/TuPh Finish

### **Conveyor Speeds**

- Standard Nominal Speeds (FPM): 40, 60, 100, 125, 165, 250
- Minimum: 30 FPM\* Maximum: 290 FPM\* \*Speed obtained using a VFD
- Consult Factory for Speeds Above 300 FPM

# Supports

- "H" Style Formed 2" x 2" Angle w/ Bolt Pad Base
- ±4" Elevation Change
- Nominal Elev. Range 24", 28", 32", 36", 40", 44", 48"

### Options:

• Ceiling Hanger Brackets

# **Bearings**

• 2-Hole Flange, Painted, Sealed for Life, General Purpose Lube, Steel Insert w/ Set-Screw

#### Options:

- Polymer Housing, Food Grade Lube
- Zinc Plated or Stainless Steel Inserts
- Safety Covers

### Shafts

- Idle Shaft Dia. 1.0"
- Drive Shaft Dia. 1.25"

### Mattop Chains & Sprockets

See Data Sheet

### **Guide Rail & Brackets**

See Data Sheet

# **Conveyor Accessories**

- LBP Roller Transfer,
- SS Deadplate

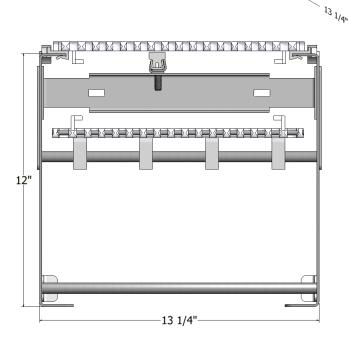
# **Drive End**

#### Specifications:

- Standard Drive Will be Right-Hand (shown), (Unless Otherwise Specified)
- Standard Drive Will be Flush Mount on Left Side
- Shaft Mount Will Include Torque Arm
- See Spec Sheet for Standard Speeds (FPM)
- Support Incline Range ±22°
- Shoes must be moved to outside edge of frame to run friction top chain

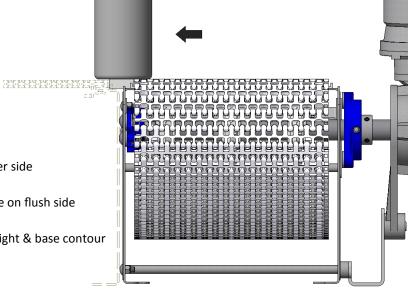
#### **Other Available Configurations:**

- Left-Hand Shaft Mount
- 30" Long Available (Consult Factory)



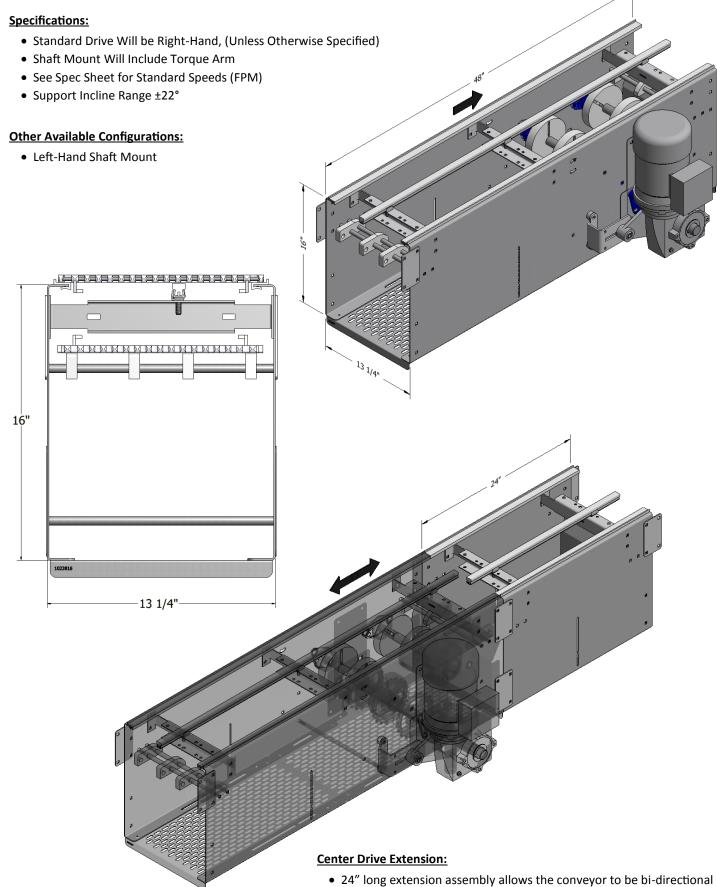
### Drive End Side Transfer Specifications:

- Bearing will be installed on inside of frame on transfer side
- Fasteners will be carriage head bolts on both sides
- Extended wearstrip w/ a gap filling leg will be provide on flush side
- Minimum typical product size to clear transfer is 3"
- Product stability through transfer is affected by height & base contour



# **Center Drive**

#### Standard Configuration Shown (Right-Hand Shaft Mount)



# **Parallel Transfer**

#### Shown: Right-to-Left, RH Shaft Mount

### Specifications:

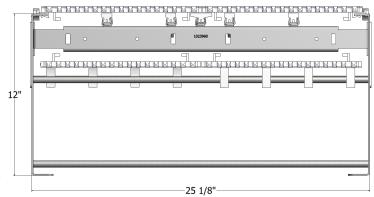
- 72" Long Section
- Shaft Mount Will Include Torque Arm
- End Caps (Finger Guards) Included
- Standard Drive Will be RH, (Unless Otherwise Specified)
- Support Incline Range ±22°

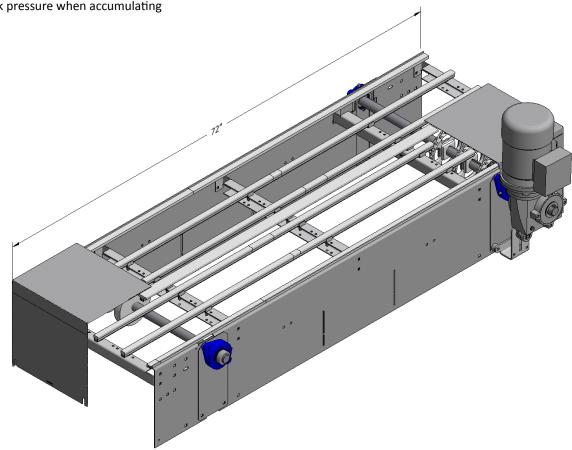
#### **Other Available Configurations:**

- Parallel Transfer: Right-to-Left LH, Left-to-Right RH, Left-to -Right LH
- Right- or Left-Hand Below Mount

#### Advantages:

- Used when product stability is not critical
- Helps reduce back pressure when accumulating





5

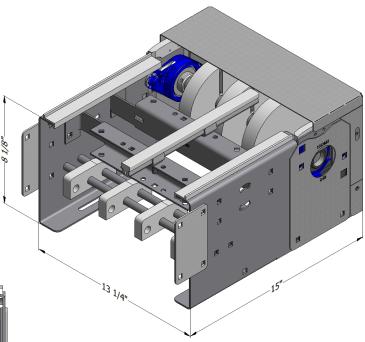
#### Standard Configuration (Shown On Right)

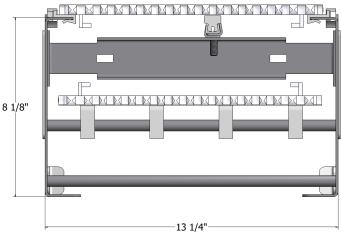
#### **Specifications:**

- Standard Idle End Will Be Side Transferrable Both Sides
- Support Incline Range ±22°
- Shoes must be moved to outside edge of frame to run friction top chain

#### **Other Available Configurations:**

• None

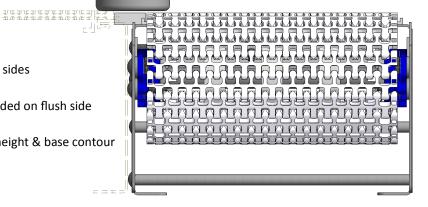






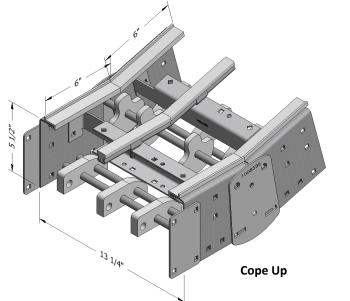
# Idle End Side Transfer Specificaions:

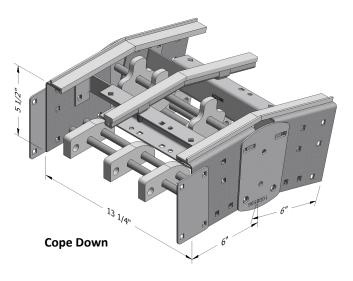
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- Fasteners will be carriage head bolts on both sides
- Extended wearstrip w/ a gap filling leg will be provided on flush side
- Minimum typical product size to clear transfer is 3"
- Product stability through transfer is affected by height & base contour



# Intermediate

Available Le	engths	
Std.	18"	
Std.	36"	3
Std.	64"	
Std.	92"	
Std.	120"	
1/2" Increments	6"-33.5"	8
5 1/2.0		
21/200	13 l/q.	

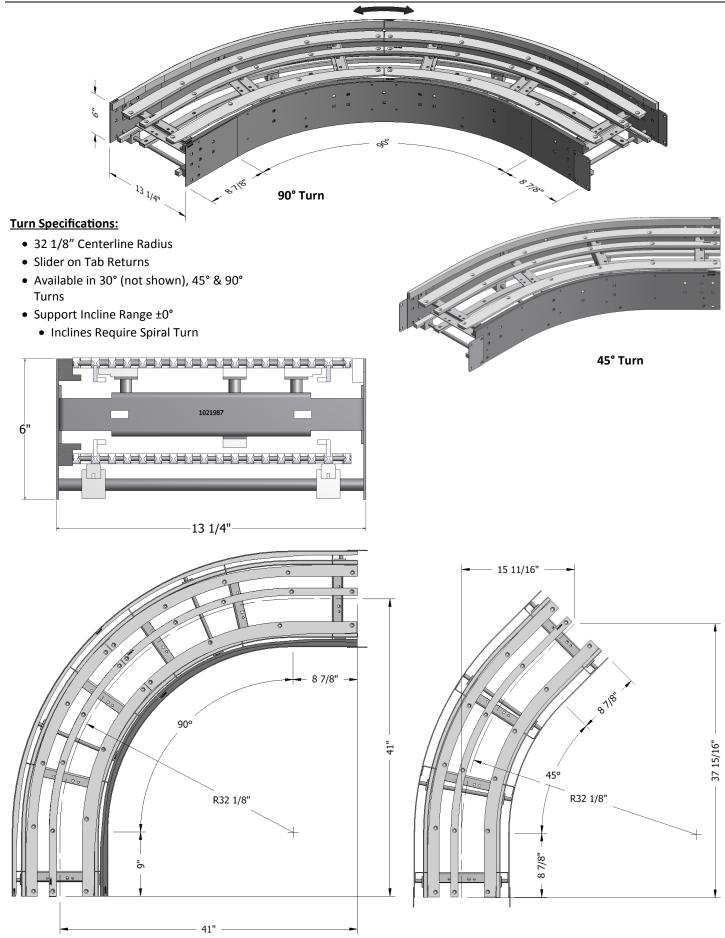




# Cope Specifications:

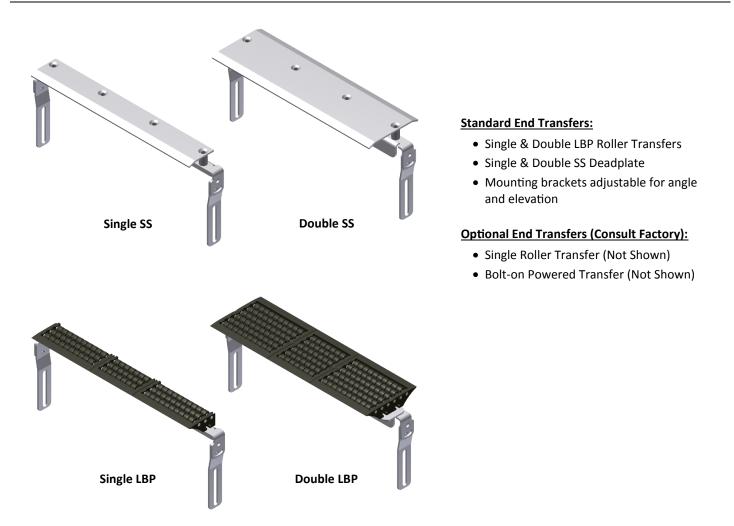
- Copes are adjustable for up to 15°
- Use double copes for elevation changes between 15° & 30°
- Provisions For Supports -- None

# Turns

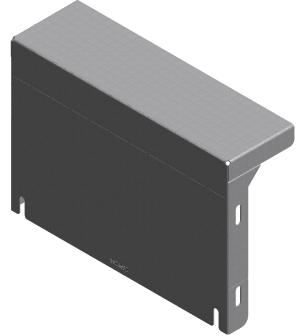


8

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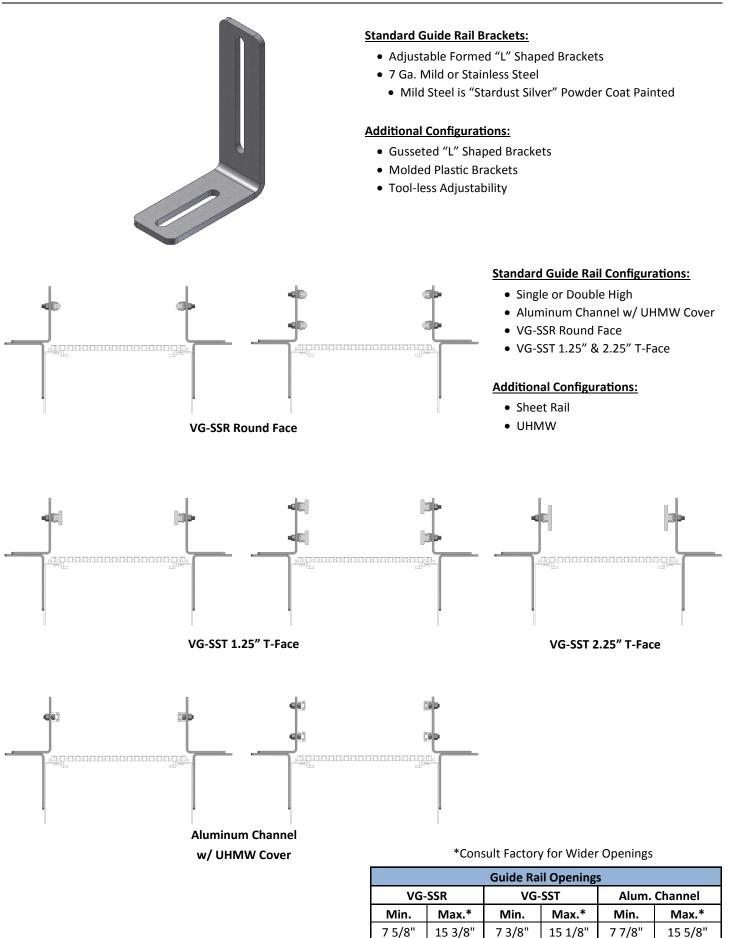
# **End Caps**



### Standard End Caps:

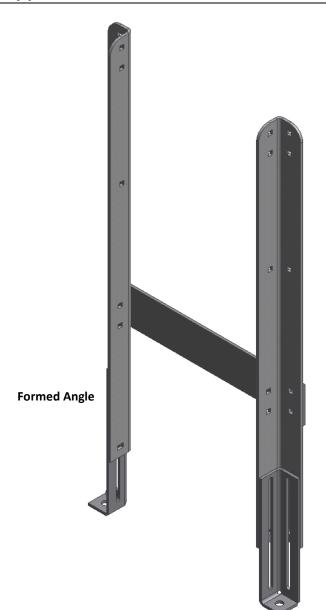
- 18 Ga. Mild & Stainless Steel
- Standard on all Drive, Idle, & Transfer Sections
- Perforated edges allow manual removal of end cap segments for end transfers on drive/idle ends.

# **Guide Rail & Brackets**



5/6/2014

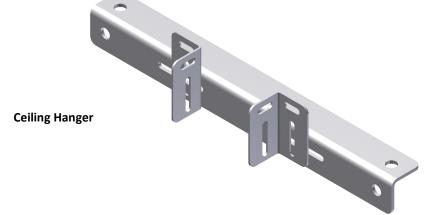
# Supports



#### **Standard Supports:**

#### **Formed Angle**

- "H" Style Formed 2" x 2" Angle w/ Bolt Pad Base
- ±4" Elevation Change
- Nominal Elev. Range 24"- 48", 4" increments
- 7 Ga. Mild or Stainless Steel
  - Silver Powder Coat Painted Mild Steel

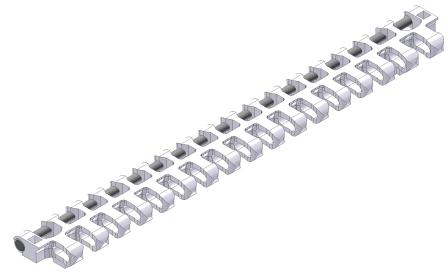


#### Alternate Supports:

#### **Ceiling Hanger Brackets**

- Mild or Stainless Steel
- Drop Rods Provided by Customer

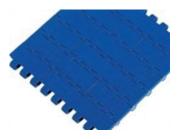
# **Tabletop Chain & Sprockets**



#### **Standard Chains:**

• M2500 Series

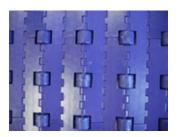
All M2500 Series chains are directly interchangeable without changing sprockets



Flat Top



**Radius Flush Grid** 



LBP Roller Top



Flat Friction Top



#### **Standard Sprockets:**

12

- Approx. 6.0" Pitch Diameter
- M2500 Series Sprocket
- Sprocket Locations Vary Depending on Chain Type
- Roller Top sprocket locations vary from other chain types within the same series

### Pre-Start Checklist

- Fasteners Some may have loosened during shipment. Re-tighten as required
- Inspect all splice points for proper wear strip alignment.
- Hand run a 48" long chain section through conveyor, both carry way and return paths, to check for binding.
- Verify motor rotation
- Verify chain direction is correct (See Figure 1)
- Guide Rail Check for proper product width before operation.

#### Startup / Break-In

- During first 250 hours of operation Monitor the following
  - Initial chain stretch Chain will have an initial stretch. Monitor catenary length, as described below, and remove excess links.
  - Chain dusting Normally occurring issue that subsides after the first 250 hours of run time. Clean as required

#### **Maintenance**

- Catenary length (See Figure 2)
- Chain length Replace when catenary sag reaches lower indicator slot
- Sprocket wear Look for excessive wear or hooked teeth
- Bearings sealed for life
- Reducer Nord reducers sealed for life
  - Look for leaking seals
- Wear strip wear
  - Inside turn add indicator line
- Chain Surging (Slip Stick)
  - Hard to predict natural phenomenon that depends on speed, load, construction and lubrication.
  - Most common in long and/or slow running conveyors.
  - Poses no operational concerns unless it causes product tipping .
  - Look for chain binding at turns and copes in both the carry way (product path) and the return path.
- Motor Hop & Wobble
  - Natural phenomenon that is desirable
  - Poses no operational concerns with life expectancy of conveyor or reducer
  - Wobble releases stress build up due to normal machining tolerances in rotating shaft.
  - Increases equipment longevity compared to rigidly mounted reducers where misalignments are trapped.
    - Longer reducer life
    - Longer bearing life
    - Longer shaft life

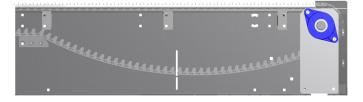


Figure 1

