2200 SERIES
3200 SERIES

Standard Specials Spec Sheets

DORNER®
By Columbus McKinnon

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VACUUM CONVEYORS

Vacuum conveyors are made by perforating the belt and drawing air through grooves in the bed of a standard conveyor.

- Holds flat parts of any material fast to the belt
- Ideal for elevation changes or part holding
- Can be used in upside down applications
- Vacuum area required is designed per application
- A variety of vacuum sources can be used

2200 Series Conveyor Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-Guided and Non-V-Guided Compatible
- Rack and Pinion Belt Tensioning
- End and Center Drive Compatible
- Conveyor Widths: 2.75 in (70 mm) to 24in (610 mm) wide
- Conveyor Lengths:
  End Drive = 2 ft (610 mm) to 18 ft (5,486 mm)
  Center Drive = 2 ft (610 mm) to 24 ft (7,315 mm)
- Speed Capacity: up to 264 ft/min (81 m/min)

Reference Full Specification Catalog or www.dorner.com for conveyor details.

Application Notes:

1. Products being conveyed on a vacuum conveyor must be placed in physical contact with the belt to create a seal.
2. Do not attempt to accumulate product on a vacuum conveyor.
3. Do not use in an application with powder or liquid.

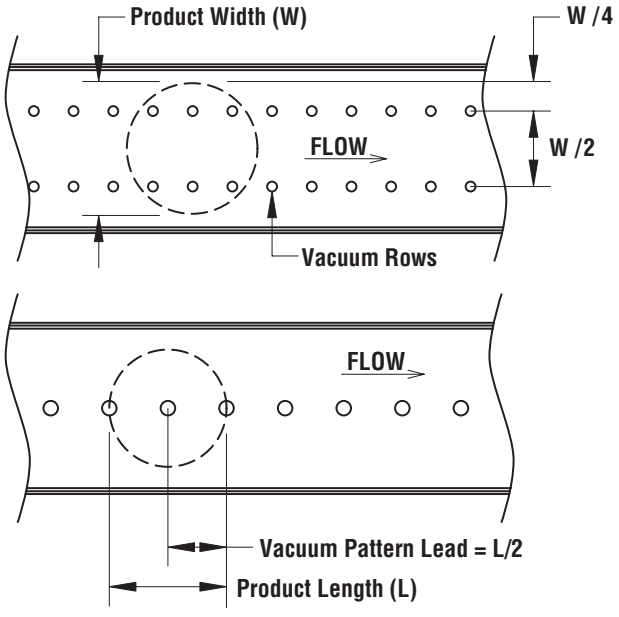
VACUUM SPECIFICATIONS

• Rows:

Generally (1) row of vacuum is used for products 2 in (51 mm) wide or less
(2) rows or more should be used for larger width product row spacing

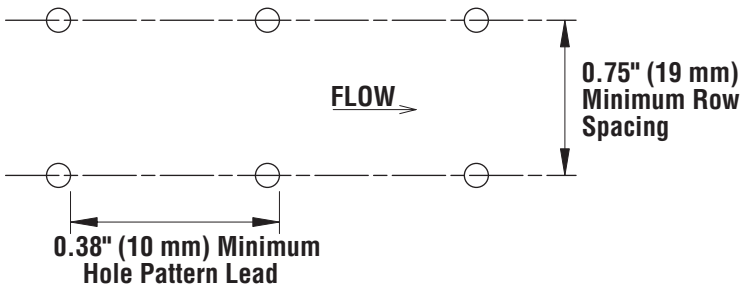
• Vacuum Pattern Lead:

The lead on the vacuum holes should be placed so a minimum of (2) hole patterns are on the product at all times

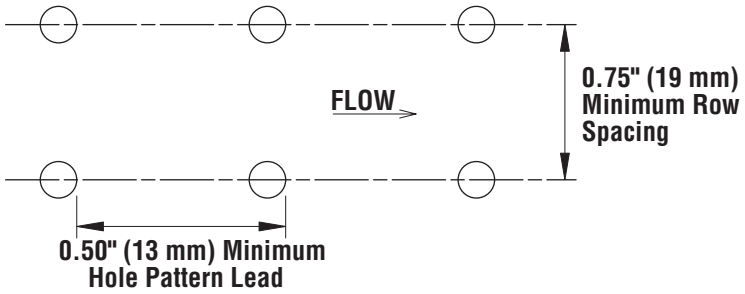


• Vacuum Pattern Options

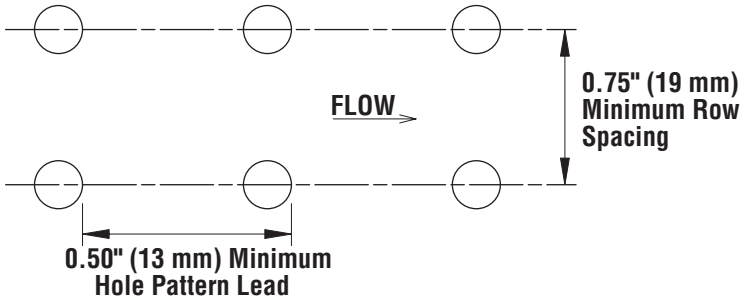
0.12" (3 mm) DIA Hole



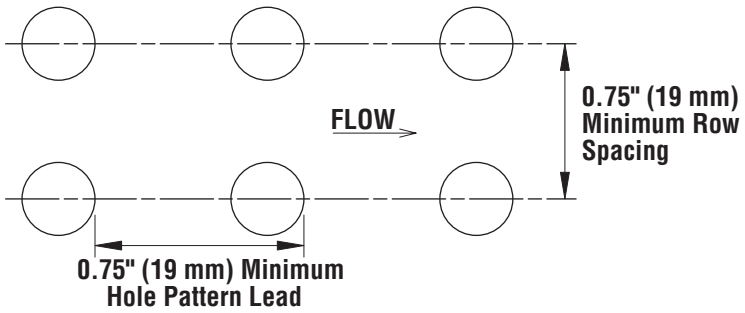
0.19" (5 mm) DIA Hole



0.25" (6 mm) DIA Hole



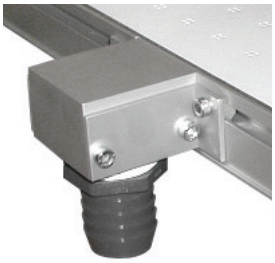
0.38" (10 mm) DIA Hole



Recommended Belt Types

Type 03 FDA High Friction
For rigid parts like plastic caps, plastic bottles, ceramic wafers, glass ware, etc.

Type 06 Electrically Conductive Belt
For thin product like paper, light cardboard, cloth, plastic film, etc.



- **Vacuum Ports:**
  Vacuum is drawn through the side frame of the conveyor
  2.1 in (53 mm) O.D. fitting for standard 2 in (51 mm) vinyl tubing

- **Number of Vacuum Ports:**
  The number of vacuum ports is determined by the vacuum hole selected, the hole pattern and the number of vacuum rows

$$\textbf{Number of Ports} = \left[\frac{\text{(Area) (Zone Length) (Rows)}}{\text{(3) (Lead)}} \right] \textit{(Round Up)}$$

Where:

Area = Area of Vacuum holes (in^2)

0.12 in (3 mm) Hole Pattern = 0.012 in^2
0.19 in (5 mm) Hole Pattern = 0.028 in^2
0.25 in (6 mm) Hole Pattern = 0.049 in^2
0.38 in (10 mm) Hole Pattern = 0.110 in^2

Zone Length = Length of Vacuum Zone (in)
**See dimensional drawing for details (page 5)*

Rows = Number of Vacuum Rows

Lead = Vacuum Hole Pattern Lead (in)

Example:

10 in (254 mm) wide by 12 ft (3,658 mm) Long 2200 Series End Drive Conveyor with (3) rows of 0.12 in (3 mm) DIA holes with a 1.0 in (25 mm) lead.

$$\textbf{Number of Ports} = \frac{(.012)\ (144" - 6.3")\ (3)}{(3)\ (1.0)} = \frac{(.012)\ (137.7)\ (3)}{(3)\ (1.0)} = \frac{4.96}{3.0} = 1.7\ \textit{(Round Up)}$$

Number of Ports = 2

** 6.3 in (160 mm) = 2200 Series No Vacuum Zones, see page 5 & 6*

Vacuum Source

- Vacuum source is provided by a regenerative vacuum blower
- An inlet filter, muffler and exit relief valve is recommended
- Plumbing is done thru vinyl tubing
- The size of the vacuum blower is determined by the total area of vacuum holes open during product running, pressure required to hold the product and the seal of the product to the conveyor belt

$$\textbf{Number of Open Vacuum Holes} = \left[\frac{\text{(Rows)}}{\text{(Lead)}}\right]\left[\frac{\text{(Zone Length) (Rate)}}{\text{(Speed)}}\left(\frac{\text{(Speed)}}{\text{(Rate)}} - \text{Product Length}\right)\right]$$

Where: Rows = Number of Vacuum Rows
Lead = Vacuum Hole Pattern Lead (in)
Zone Length = Length of vacuum zone (in) **See dimensional drawing for details*
Speed = Belt Speed (in/min)
Rate = Product Rate (parts/min)
Product Length = Length of product in the direction of flow (in)

$$\textbf{Blower Size (CFM)} = \left(\frac{\text{Number of Open Vacuum Holes}}{}\right)\left(\frac{\text{Flow Rate Per Hole}}{}\right)$$

Where: Number of Open Vacuum Holes = From Above
Flow Rate Per Hole* =
0.12 in Hole Pattern = 0.56 CFM
0.19 in Hole Pattern = 1.00 CFM
0.25 in Hole Pattern = 2.20 CFM
0.38 in Hole Pattern = 10.00 CFM
** Flow Rate is estimated at 8 in (203 mm) of H2O Vacuum venting to atmosphere.*

Vacuum Blower Size

Blower CFM (at 15 in (381 mm) H2O)	Blower hp	Blower Volts Blower	Phase/Hz	Blower Amps
68	1.0	230 / 460	3 / 60	3.2 / 1.6
125	2.5	230 / 460	3 / 60	6.9 / 3.45
180	3.5	230 / 460	3 / 60	8.8 / 4.4

Note: Multiple blowers may be required for large applications. Testing of product is recommended to verify Vacuum pressure required and blower size.

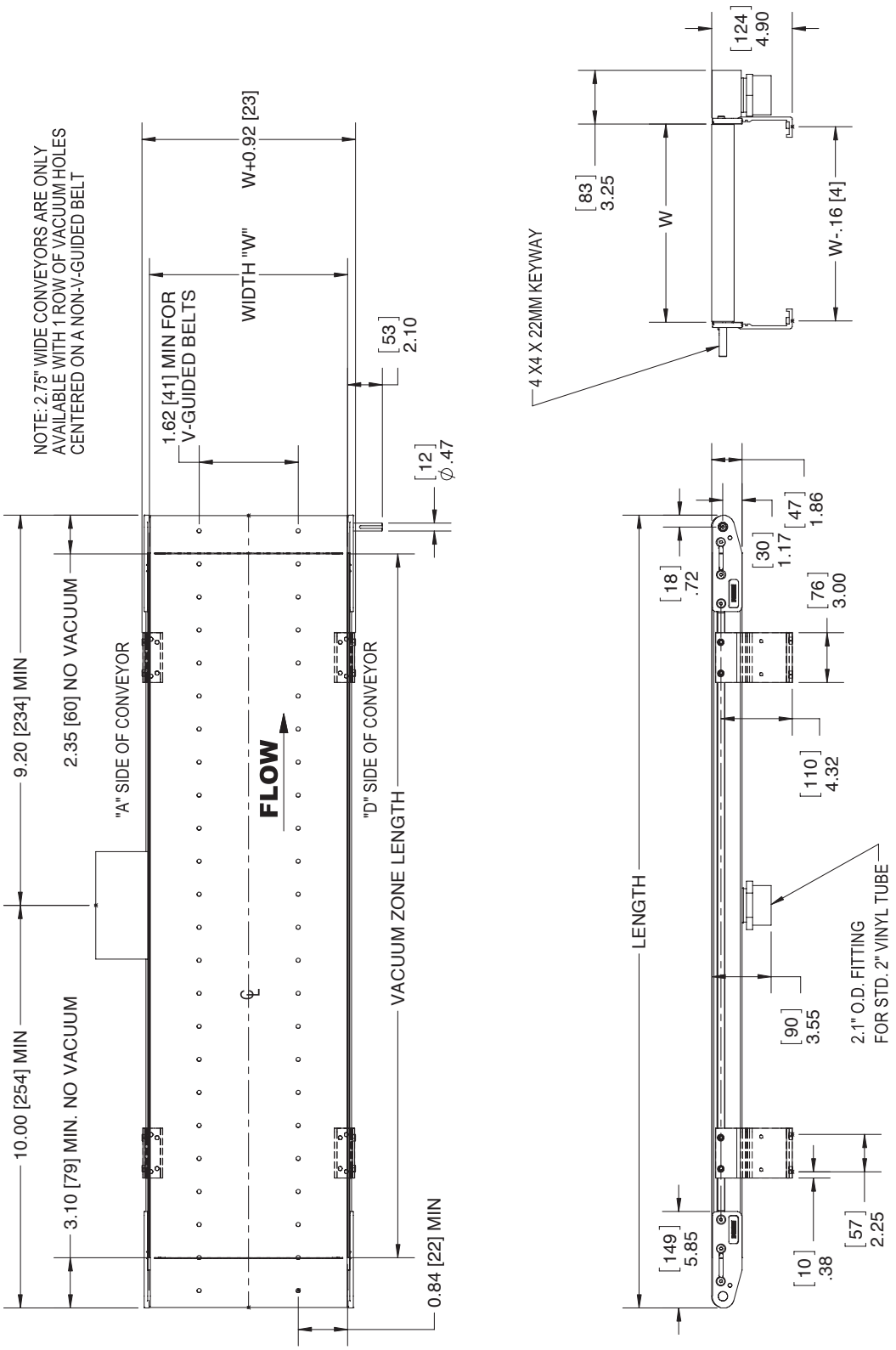
Example:

10 in (254 mm) wide by 12 ft (3,658 mm) long 2200 Series End Drive Conveyor with (3) rows of 0.12 in (3 mm) DIA holes on 1.0 in (21 mm) lead, 12 in (305 mm) long product, 30 parts/minute rate, and 50 ft/min (15 m/min) belt speed

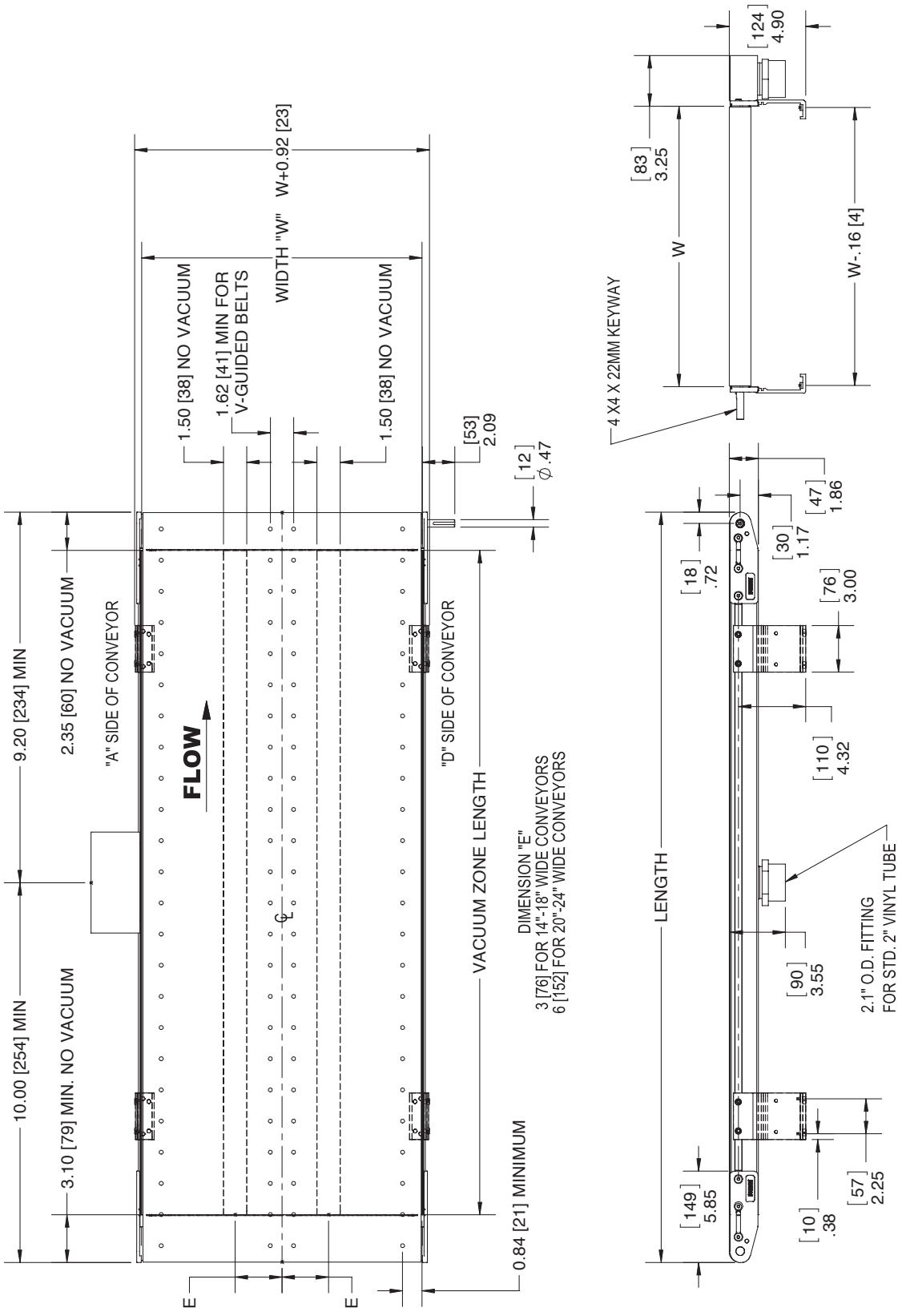
$$\textbf{Number of Open Vacuum Holes} = \left[\frac{3}{1.0}\right]\left[\frac{(137.7)\ (30)}{50\ (12)}\left(\frac{50\ (12)}{30} - 12\right)\right] = 165.24 = \textbf{165 holes}$$

$$\textbf{Blower Size (CFM)} = \text{(165 holes) (.56 CFM)} = \textbf{92.5 CFM} \quad \textbf{Therefore, use a 2.5 hp Blower}$$

Dimensions & Vacuum Layout: 2.75 in (70 mm) - 12 in (305 mm) Wide



Dimensions & Vacuum Layout: 14 in (356 mm) - 24 in (610 mm) Wide



Profiles:

- Product guiding is generally not required or recommended
- All 2200 Series profiles are applicable
- *See Full Specifications Catalog or www.dorner.com for details*

Belting:

- Standard Belting: Type 03 or Type 06 Belt is recommended

  Type 03 FDA High Friction
  For rigid parts like plastic caps, plastic bottles, ceramic wafers, glass ware, etc.

  Type 06 Electrically Conductive Belt
  For thin product like paper, light cardboard, cloth, plastic film, etc.

- Belt must be finger spliced
- *See Full Specifications Catalog or www.dorner.com for details*

Mounting Packages & Gearmotors:

- All 2200 series Mounting Packages and Gearmotors are applicable
- *See Full Specifications Catalog or www.dorner.com for details*

Support Stands:

- All 2200 Series Support Stands are applicable.
- *See Full Specifications Catalog or www.dorner.com for details*

BACK LIT CONVEYORS

A light fixture is installed inside the conveyor frame and emits light through a translucent belt.

- Provides enhanced contrast between product and conveyor belt for visual inspection and vision system interface.
- Parts can be stopped directly over the lighted section or continue through uninterrupted.
- Incorporates internal LED lighting for better efficiency, longer life, and less heat.

2200 Series Conveyor Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-guided and Non-V-guided Belt Compatible
- Rack and Pinion Belt Tensioning
- End and Center Drive Compatible
- Optional 8 mm DIA Roller Interface Tail Section
- Conveyor Widths: 3.75 in to 24 in wide
- Conveyor Lengths: End Drive = 2 ft to 18 ft long, Center Drive = 2 ft to 24 ft long
- Belt Speeds: up to 264 ft/min
- Equipped with Dorner #53 Translucent Conveyor Belting (Other translucent belts available upon request)

LED Panel Specifications:

- Panel is edge-lit along both long edges
- .375 watts per linear inch of edge lighting
- 5300K white light (red, green, or blue light available upon request)

Electrical Specifications:

- 12 volt DC lights (24 volt DC available upon request)
- Power supply included (115 volt AC, 60 Hz input/12 volt DC output)
- Includes on/off switch and quick-disconnect power receptacle mounted to side of frame

Profiles:

- All 2200 Series profiles are applicable
- *Reference Full Specification Catalog or www.dorner.com for details*

Belting:

- Dorner #53 belt (Other translucent belts available upon request)
- Belt must be finger spliced
- *Reference Full Specification Catalog or www.dorner.com for details*

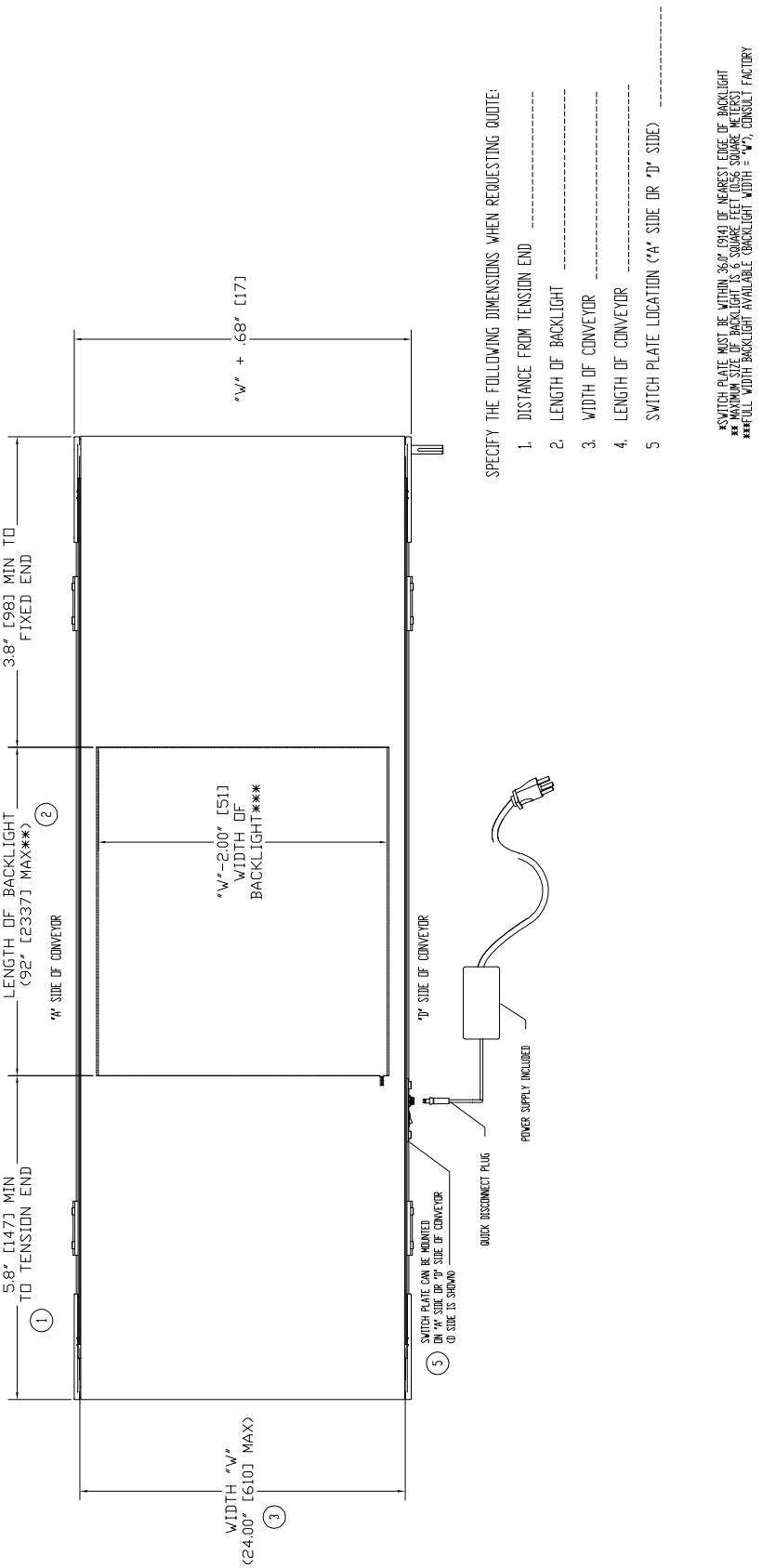
Mounting Packages & Gearmotors:

- All 2200 series mounting packages and gearmotors are applicable
- *Reference Full Specification Catalog or www.dorner.com for details*

Support Stands:

- All 2200 Series support stands are applicable
- *Reference Full Specification Catalog or www.dorner.com for details*

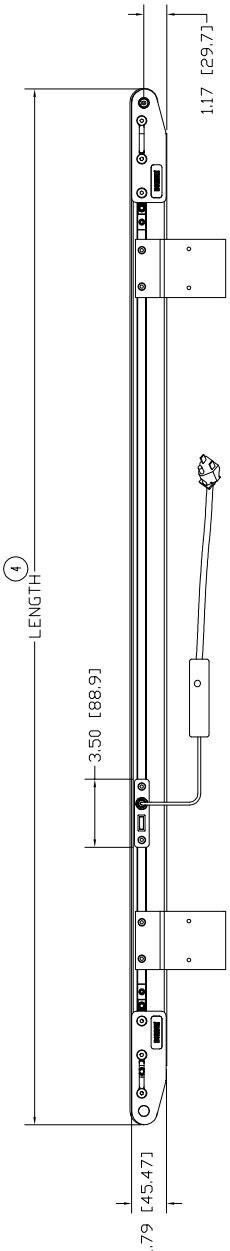
Dimensions & Back Lit Layout



SPECIFY THE FOLLOWING DIMENSIONS WHEN REQUESTING QUOTE:

1. DISTANCE FROM TENSION END _____
2. LENGTH OF BACKLIGHT _____
3. WIDTH OF CONVEYOR _____
4. LENGTH OF CONVEYOR _____
5. SWITCH PLATE LOCATION ("A" SIDE OR "D" SIDE) _____

*SWITCH PLATE MUST BE WITHIN 36.0" [914] OF NEAREST EDGE OF BACKLIGHT
** MAXIMUM SIZE OF BACKLIGHT IS 6 SQUARE FEET (0.56 SQUARE METERS)
***FULL WIDTH BACKLIGHT AVAILABLE (BACKLIGHT WIDTH = "W"), CONSULT FACTORY



COMMON DRIVE CONVEYOR SETUP

Up to (4) conveyors can be coupled together and driven from a single gearmotor.

- Conveyors move at same relative belt speed.
- Creates single lanes for handling parts.
- Wide parts or pallets can be carried by each conveyor to allow access from below.
- Conveyors can be of different widths and lengths.

Uses Standard 2200 Series End Drive Conveyors

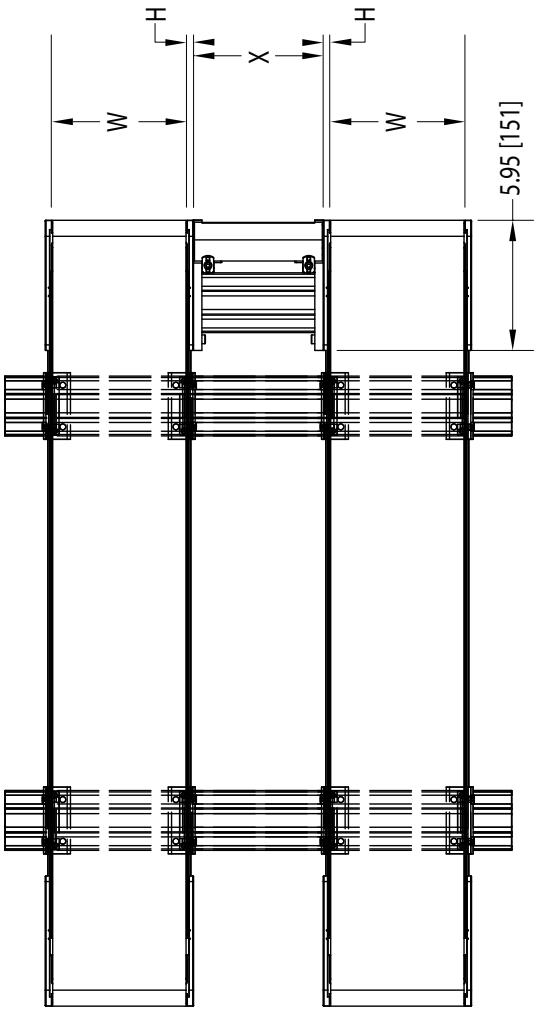
- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-Guided and Non-V-Guided Belt Compatible
- Rack and Pinion Belt Tensioning
- Conveyor Widths: 1.75 in to 24 in wide
- Conveyor Lengths: End Drive = 2 ft to 18 ft long
- Belt Speeds: up to 264 ft/min

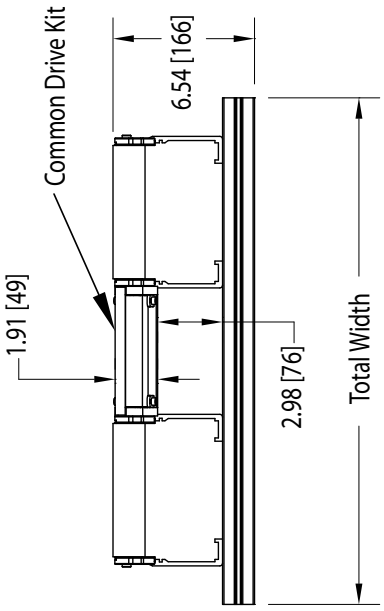
See Product Engineering Manual or www.dorner.com for details.

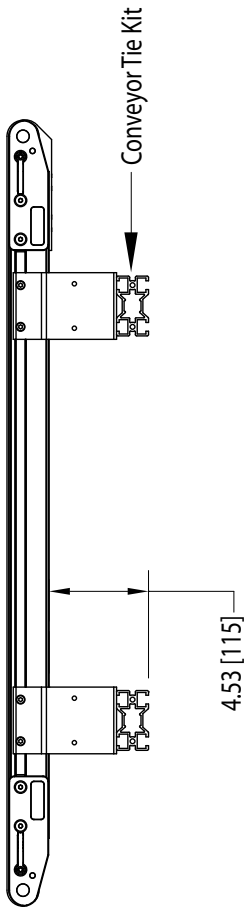
Common Drive Specifications

- Drive up to (4) Conveyors from a Single Drive Gearmotor
- Fixed Conveyor Locations
- Load Capacity: Contact Factory for Details
- Compatible with all Standard End Drive Gearmotor Mounting Packages
- Includes Aluminum Extruded Conveyor Tie Bar Assembly with Belt Return Roller
- Includes Common Drive Couplings and Guarding
- Multiple Conveyor Spacing Options
    - 2 in Tail Plate to Tail Plate
    - 3 in Tail Plate to Tail Plate
    - 4.75 in to 24 in Tail Plate to Tail Plate

Dimensions & Common Drive Layout







Profiles:

- All 2200 Series profiles are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Belting:

- All 2200 Series belting is applicable.
- Finger Splice is preferred, plastic and metal clipper splices are available.
- *See Product Engineering Manual or www.dorner.com for details.*

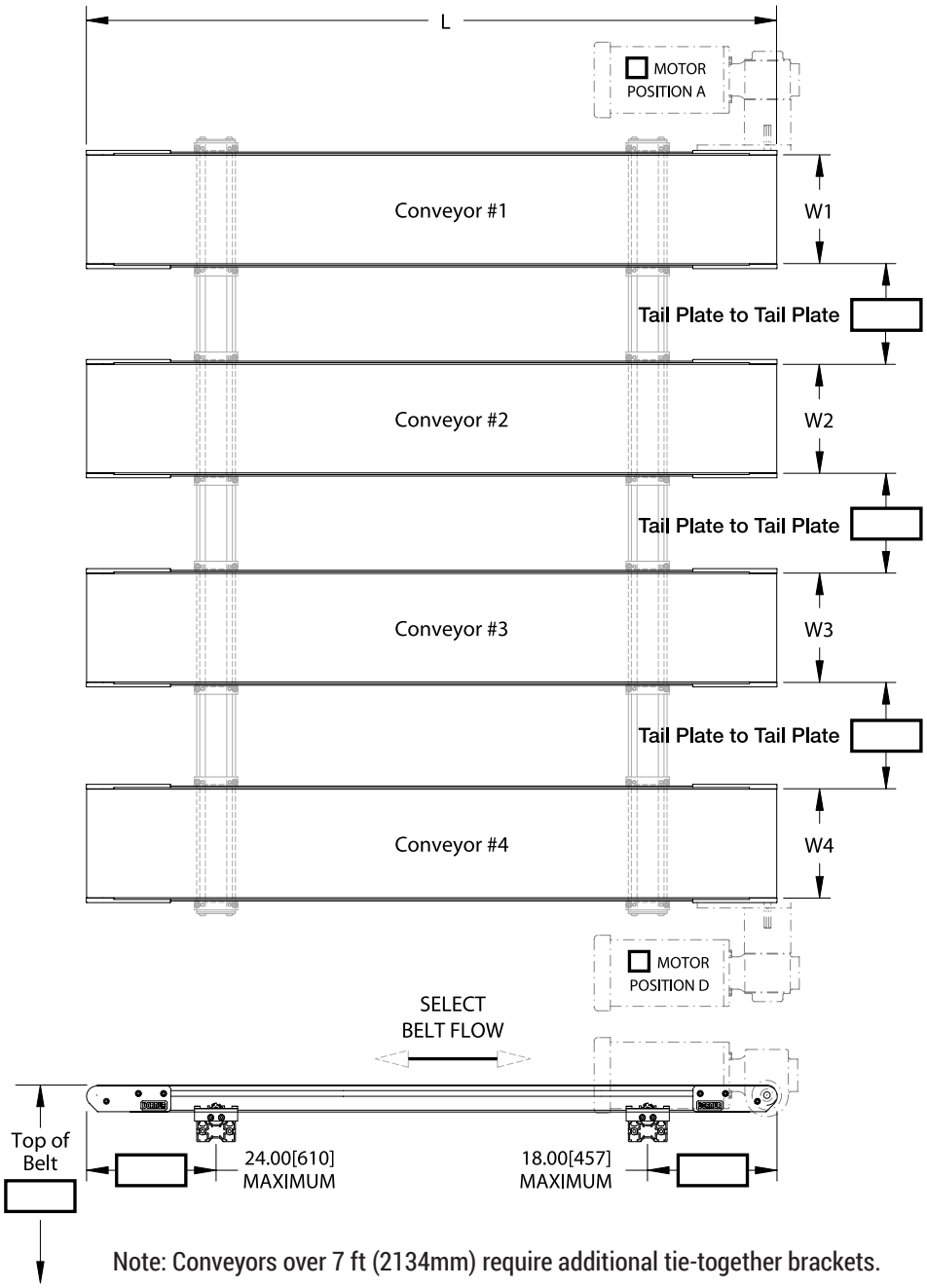
Mounting Packages & Gearmotors:

- All 2200 Series mounting packages and gearmotors are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Support Stands:

- All 2200 Series support stands are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Please highlight the conveyor, dimensions, belt flow and motor positions required.



Tail Plate to Tail Plate Options:

- 2 in
- 3 in
- 4.75 in to 24 in

Note: Conveyors over 7 ft (2134mm) require additional tie-together brackets.

Complete the Conveyor Information				
Conveyor	**Width (W)**	**Length (L)**	**Belt Type***	**Profile***
#1				
#2				
#3				
#4				

**See Product Engineering Manual or www.dorner.com for details.*

MAGNETIC CONVEYORS

Magnetic conveyors are created by placing permanent ceramic magnets in the bed of a standard conveyor.

- Holds ferrous parts fast to the belt.
- Ideal for elevation changes or part holding.
- Can be used in upside down applications.
- Strength and size of magnetic field is designed per application.

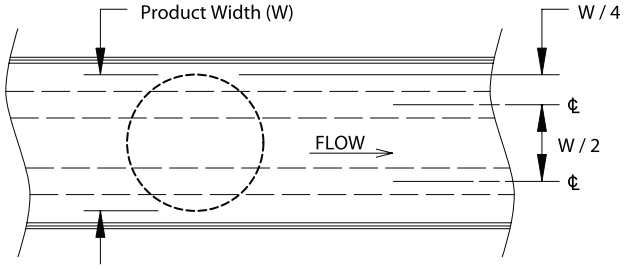
2200 Series Conveyor Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-Guided and Non-V-Guided Compatible
- Rack and Pinion Belt Tensioning
- End and Center Drive Compatible
- Conveyor Widths: 3.75 in to 24 in wide
- Conveyor Lengths:
  End Drive = 2 ft to 18 ft long
  Center Drive = 2 ft to 24 ft long
- Speed Capacity: 264 ft/min

See Product Engineering Manual or www.dorner.com for details.

Magnet Specifications:

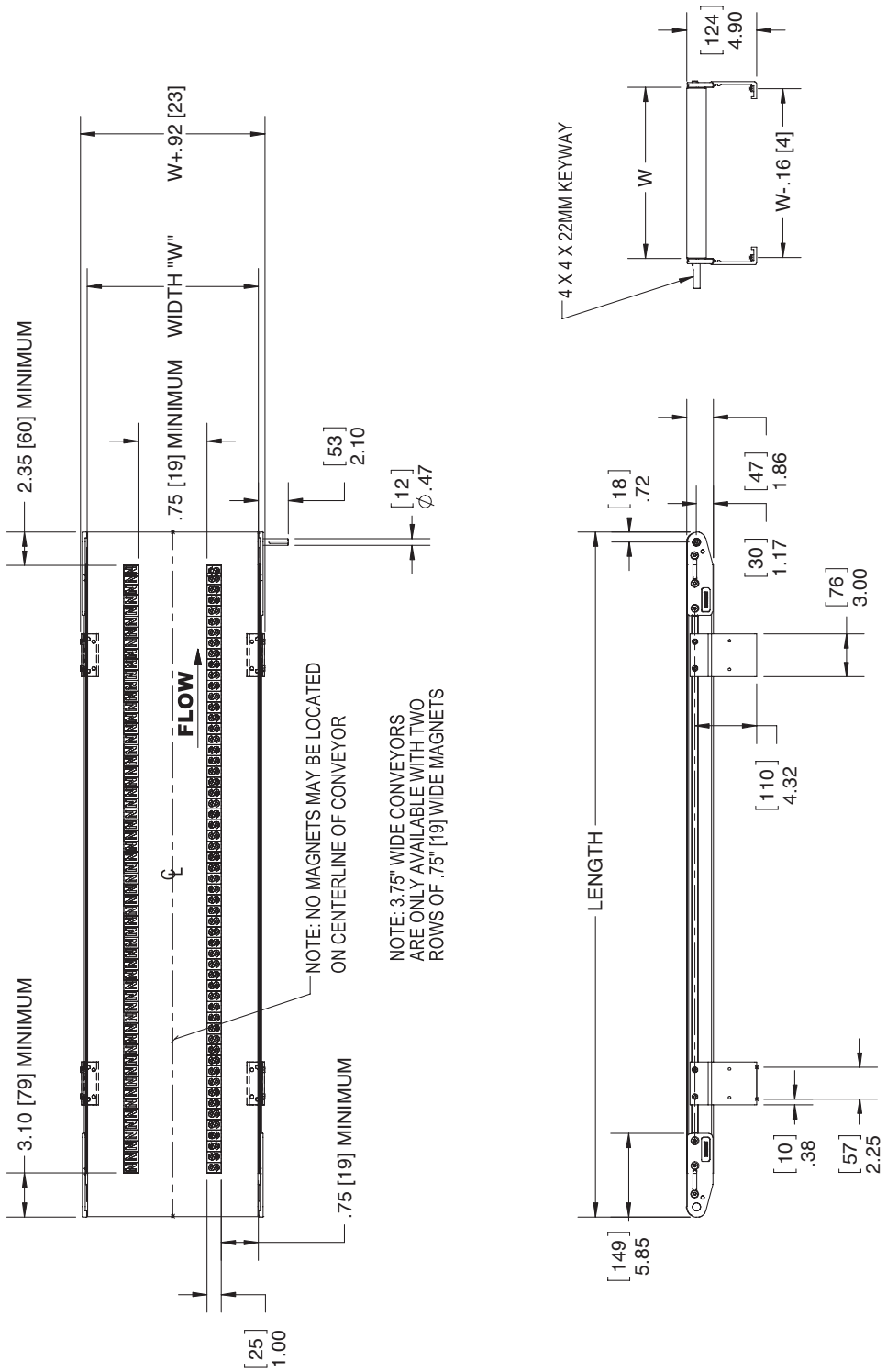
- Permanent ceramic magnets
- Width = 1 in wide (0.75 in wide for 3.75 in wide conveyors)
- Strengths: standard and strong
  (note: strong magnets are generally only used in centering or inverted applications)
- Rows: Generally 2 rows of magnets are used. One row oriented as north, the other as south.
  Multiple rows can be used for larger product or additional magnetic strength.
- Row Spacing: Generally spaced at 1/2 of the width of the product.



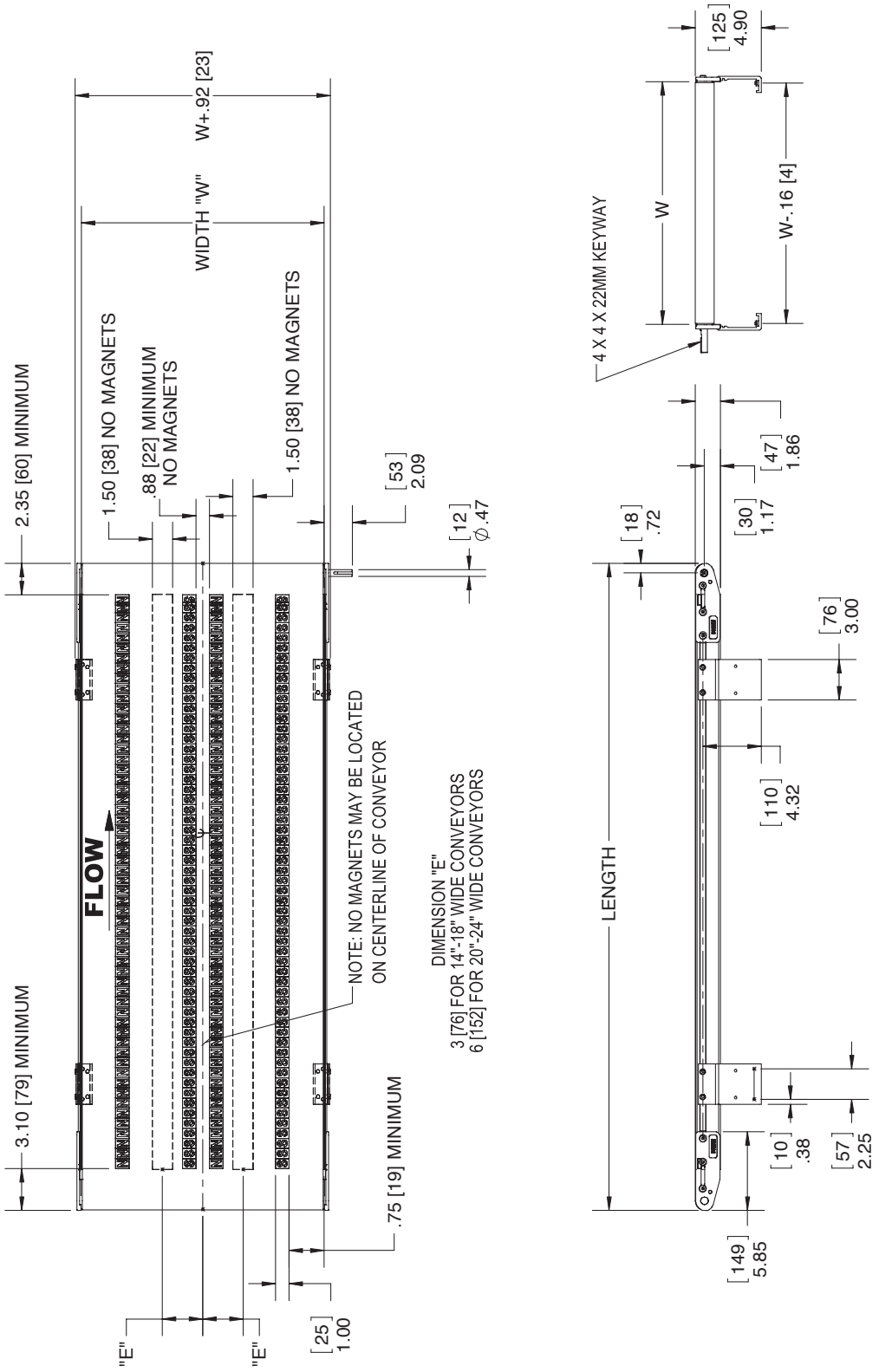
- Decreasing Zones: Decreasing zones allow gradual decreasing of magnet strength for smooth product transfer off the magnet or end of the conveyor. They should be used for the following reasons:
  1. Belt speed is less than 25 ft/min
  2. Product length (in the direction of the flow) is less than 3 in
- Decreasing zone length should be 4 times the product length.
- Sample product is recommended to test magnetic strength.

Note: Do not attempt to accumulate product on a magnetic conveyor.

Dimensions and Magnetic Layout: 3.75 in (95 mm) - 12 in (305 mm) Wide



Dimensions and Magnetic Layout: 14 in (356 mm) - 24 in (610 mm) Wide



Profiles:

- All 2200 Series profiles are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Belting:

- Do not use low coefficient of friction belting.
- Finger splice is preferred, plastic and metal clipper splices are acceptable.
- *See Product Engineering Manual or www.dorner.com for details.*

Mounting Packages & Gearmotors:

- All 2200 Series mounting packages and gearmotors are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Support Stands:

- All 2200 Series Support Stands are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

VACUUM CONVEYORS

Vacuum conveyors are made by perforating the belt and drawing air through grooves in the bed of a standard conveyor.

- Holds flat parts of any material fast to the belt
- Ideal for elevation changes or part holding
- Can be used in upside down applications
- Vacuum area required is designed per application
- A variety of vacuum sources can be used

3200 Series Conveyor Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-Guided and Non-V-Guided Compatible
- Rack and Pinion Belt Tensioning
- End and Center Drive Compatible
- Optional 1 in (25 mm) DIA roller interface tail section
- Conveyor Widths: 3.75 in (95 mm) to 48 in (1,219 mm) wide
- Conveyor Lengths:
  End Drive = 3 ft (914 mm) to 40 ft (12,192 mm)
  Center Drive = 4 ft (1,219 mm) to 99 ft (30,175 mm)
- Speed Capacity: up to 421 ft/min (128 m/min)

Reference Full Specification Catalog or www.dorner.com for conveyor details.

Application Notes:

1. Products being conveyed on a vacuum conveyor must be placed in physical contact with the belt to create a seal.
2. Do not attempt to accumulate product on a vacuum conveyor.
3. Do not use in an application with powder or liquid.

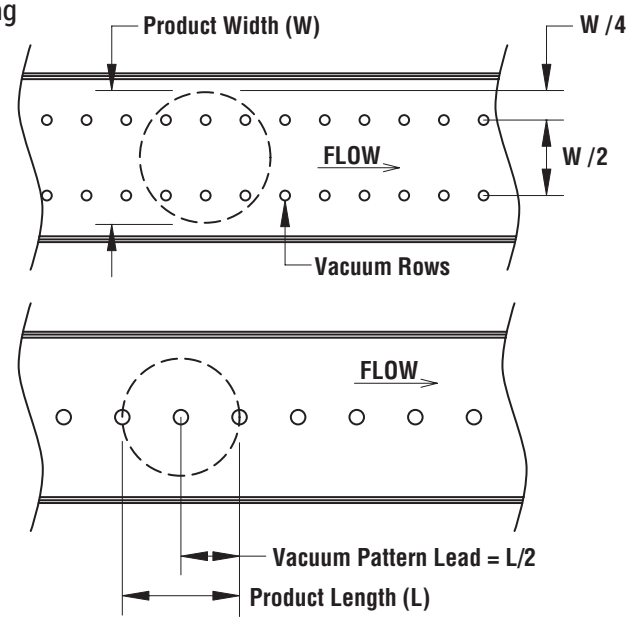
VACUUM SPECIFICATIONS

• Rows:

Generally (1) row of vacuum is used for products 2 in (51 mm) wide or less
(2) rows or more should be used for larger width product row spacing

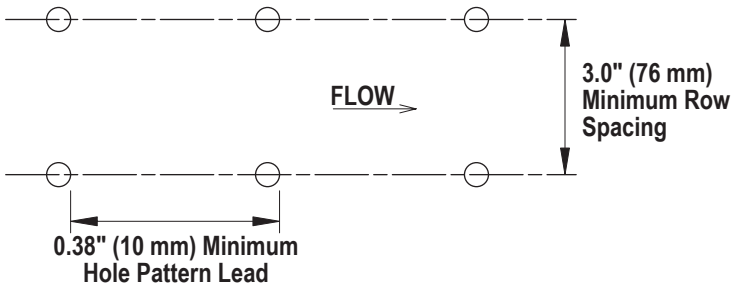
• Vacuum Pattern Lead:

The lead on the vacuum holes should be placed so a minimum of
(2) hole patterns are on the product at all times

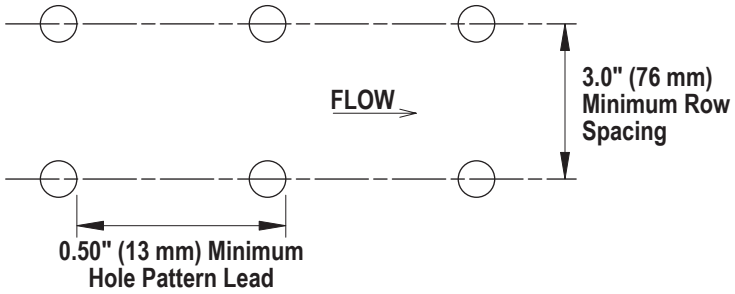


• Vacuum Pattern Options

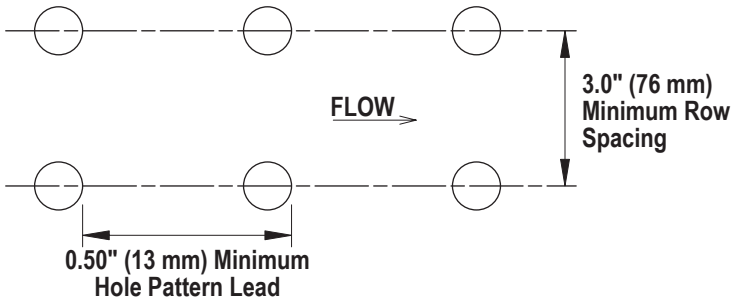
0.12" (3 mm) DIA Hole



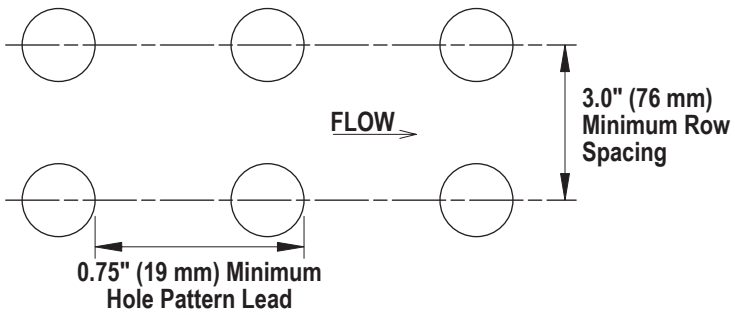
0.19" (5 mm) DIA Hole



0.25" (6 mm) DIA Hole



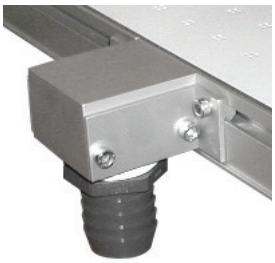
0.38" (10 mm) DIA Hole



Recommended Belt Types

Type 03 FDA High Friction
For rigid parts like plastic caps, plastic bottles, ceramic wafers, glass ware, etc.

Type 06 Electrically Conductive Belt
For thin product like paper, light cardboard, cloth, plastic film, etc.



- **Vacuum Ports:**
  Vacuum is drawn through the side frame of the conveyor
  2.1 in (53 mm) O.D. fitting for standard 2 in (51 mm) vinyl tubing

- **Number of Vacuum Ports:**
  The number of vacuum ports is determined by the vacuum hole selected, the hole pattern and the number of vacuum rows

$$\textbf{Number of Ports} = \left[\frac{\text{(Area) (Zone Length) (Rows)}}{\text{(3) (Lead)}} \right] \textit{(Round Up)}$$

Where:

Area = Area of Vacuum holes (in^2)

0.12 in (3 mm) Hole Pattern = 0.012 in^2
0.19 in (5 mm) Hole Pattern = 0.028 in^2
0.25 in (6 mm) Hole Pattern = 0.049 in^2
0.38 in (10 mm) Hole Pattern = 0.110 in^2

Zone Length = Length of Vacuum Zone (in)
**See dimensional drawing for details (page 5)*

Rows = Number of Vacuum Rows

Lead = Vacuum Hole Pattern Lead (in)

Example:

10 in (254 mm) wide by 12 ft (3,658 mm) Long 3200 Series End Drive Conveyor with (3) rows of 0.12 in (3 mm) DIA holes with a 1.0 in (25 mm) lead.

$$\textbf{Number of Ports} = \frac{(.012)\ (144" - 10.3")\ (3)}{(3)\ (1.0)} = \frac{(.012)\ (137.7)\ (3)}{(3)\ (1.0)} = \frac{4.81}{3.0} = 1.6\ \textit{(Round Up)}$$

Number of Ports = 2

** 10.4 in (264 mm) = 2200 Series No Vacuum Zones, see page 25 & 26*

Vacuum Source

- Vacuum source is provided by a regenerative vacuum blower
- An inlet filter, muffler and exit relief valve is recommended
- Plumbing is done thru vinyl tubing
- The size of the vacuum blower is determined by the total area of vacuum holes open during product running, pressure required to hold the product and the seal of the product to the conveyor belt

$$\textbf{Number of Open Vacuum Holes} = \left[\frac{\text{(Rows)}}{\text{(Lead)}}\right]\left[\frac{\text{(Zone Length) (Rate)}}{\text{(Speed)}}\left(\frac{\text{(Speed)}}{\text{(Rate)}} - \text{Product Length}\right)\right]$$

Where: Rows = Number of Vacuum Rows
Lead = Vacuum Hole Pattern Lead (in)
Zone Length = Length of vacuum zone (in) **See dimensional drawing for details*
Speed = Belt Speed (in/min)
Rate = Product Rate (parts/min)
Product Length = Length of product in the direction of flow (in)

$$\textbf{Blower Size (CFM)} = \left(\frac{\text{Number of Open Vacuum Holes}}{\quad}\right)\left(\frac{\text{Flow Rate Per Hole}}{\quad}\right)$$

Where: Number of Open Vacuum Holes = From Above
Flow Rate Per Hole* =
0.12 in Hole Pattern = 0.56 CFM
0.19 in Hole Pattern = 1.00 CFM
0.25 in Hole Pattern = 2.20 CFM
0.38 in Hole Pattern = 10.00 CFM
** Flow Rate is estimated at 8 in (203 mm) of H2O Vacuum venting to atmosphere.*

Vacuum Blower Size

Blower CFM (at 15 in (381 mm) H2O)	Blower hp	Blower Volts Blower	Phase/Hz	Blower Amps
68	1.0	230 / 460	3 / 60	3.2 / 1.6
125	2.5	230 / 460	3 / 60	6.9 / 3.45
180	3.5	230 / 460	3 / 60	8.8 / 4.4

Note: Multiple blowers may be required for large applications. Testing of product is recommended to verify Vacuum pressure required and blower size.

Example:

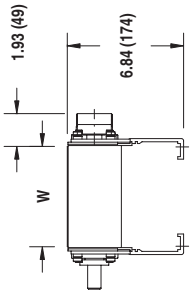
10 in (254 mm) wide by 12 ft (3,658 mm) long 3200 Series End Drive Conveyor with (3) rows of 0.12 in (3 mm) DIA holes on 1.0 in (21 mm) lead, 12 in (305 mm) long product, 30 parts/minute rate, and 50 ft/min (15 m/min) belt speed

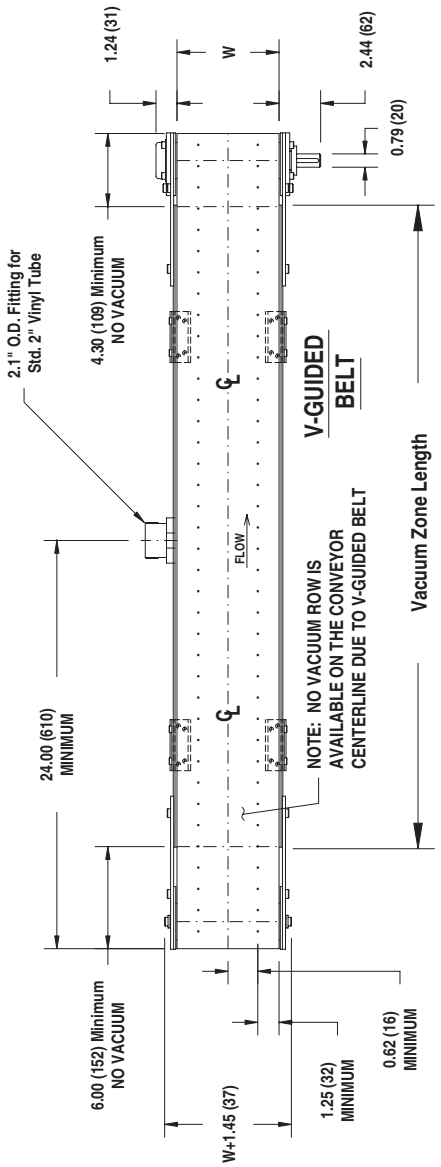
$$\textbf{Number of Open Vacuum Holes} = \left[\frac{3}{1.0}\right]\left[\frac{(133.7)\,(30)}{50\,(12)}\left(\frac{50\,(12)}{30} - 12\right)\right] = 160.44 = \textbf{160 holes}$$

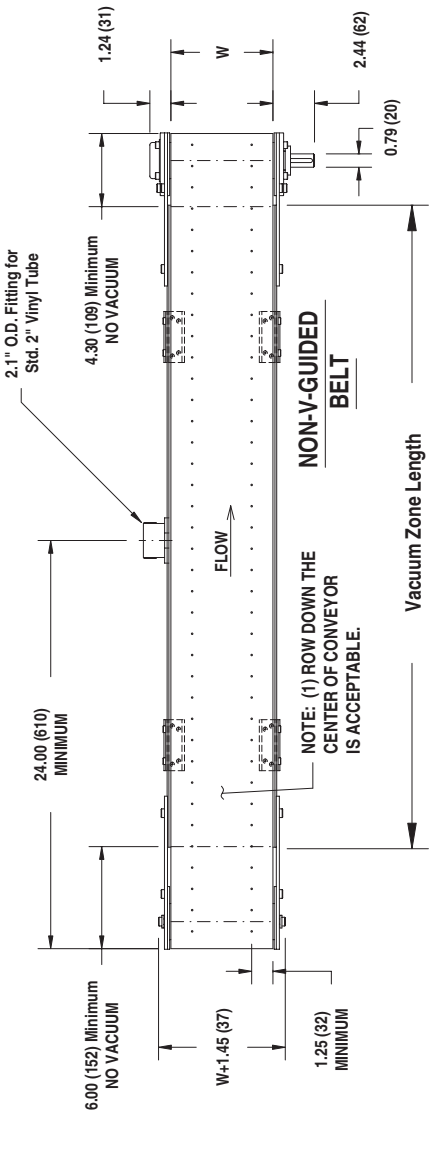
$$\textbf{Blower Size (CFM)} = (160 \text{ holes})\,(.56 \text{ CFM}) = \textbf{89.6 CFM}$$ **Therefore, use a 2.5 hp Blower**

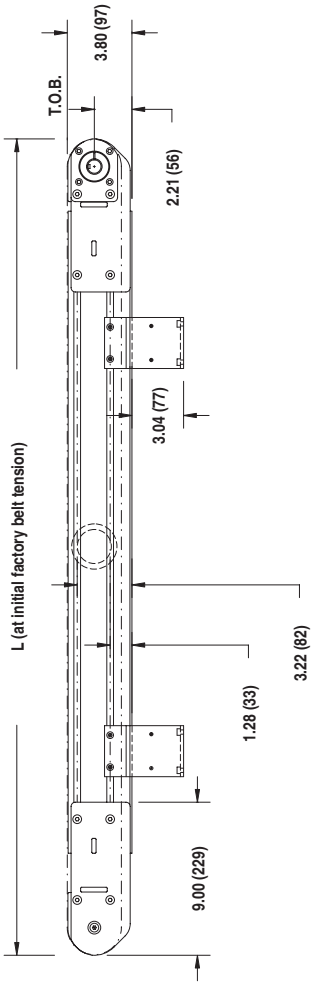
Dimensions & Vacuum Layout

W = Conveyor Belt Width **Dim** = in (mm)









Profiles:

- Product guiding is generally not required or recommended
- All 3200 Series profiles are applicable
- *See Full Specifications Catalog or www.dorner.com for details*

Belting:

- Standard Belting: Type 03 or Type 06 Belt is recommended

  Type 03 FDA High Friction
  For rigid parts like plastic caps, plastic bottles, ceramic wafers, glass ware, etc.

  Type 06 Electrically Conductive Belt
  For thin product like paper, light cardboard, cloth, plastic film, etc.

- Belt must be finger spliced
- *See Full Specifications Catalog or www.dorner.com for details*

Mounting Packages & Gearmotors:

- All 3200 series Mounting Packages and Gearmotors are applicable
- *See Full Specifications Catalog or www.dorner.com for details*

Support Stands:

- All 3200 Series Support Stands are applicable.
- *See Full Specifications Catalog or www.dorner.com for details*

BACK LIT CONVEYORS

A light fixture is installed inside the conveyor frame and emits light through a translucent belt.

- Provides enhanced contrast between product and conveyor belt for visual inspection and vision system interface.
- Parts can be stopped directly over the lighted section or continue through uninterrupted.
- Incorporates internal LED lighting for better efficiency, longer life, and less heat.

3200 Series Conveyor Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-guided and Non-V-guided Belt Compatible
- Rack and Pinion Belt Tensioning
- End and Center Drive Compatible
- Optional 20 mm DIA Roller Interface Tail Section
- Conveyor Widths: 3.75 in to 24 in wide (Wider widths available, consult factory)
- Conveyor Lengths: End Drive = 3 ft to 40 ft long, Center Drive = 4 ft to 99 ft long
- Belt Speeds: up to 421 ft/min
- Equipped with Dorner #53 Translucent Conveyor Belting (Other translucent belts available upon request)

LED Panel Specifications:

- Panel is edge-lit along both long edges
- .375 watts per linear inch of edge lighting
- 5300K white light (red, green, or blue light available upon request)

Electrical Specifications:

- 12 volt DC lights (24 volt DC available upon request)
- Power supply included (115 volt AC, 60 Hz input/12 volt DC output)
- Includes on/off switch and quick-disconnect power receptacle mounted to side of frame

Profiles:

- All 3200 Series profiles are applicable
- *See 3200 Series Engineering Manual 851-772 or www.dorner.com for details*

Belting:

- Dorner #53 belt (Other translucent belts available upon request)
- Belt must be finger spliced
- *See 3200 Series Engineering Manual 851-772 or www.dorner.com for details*

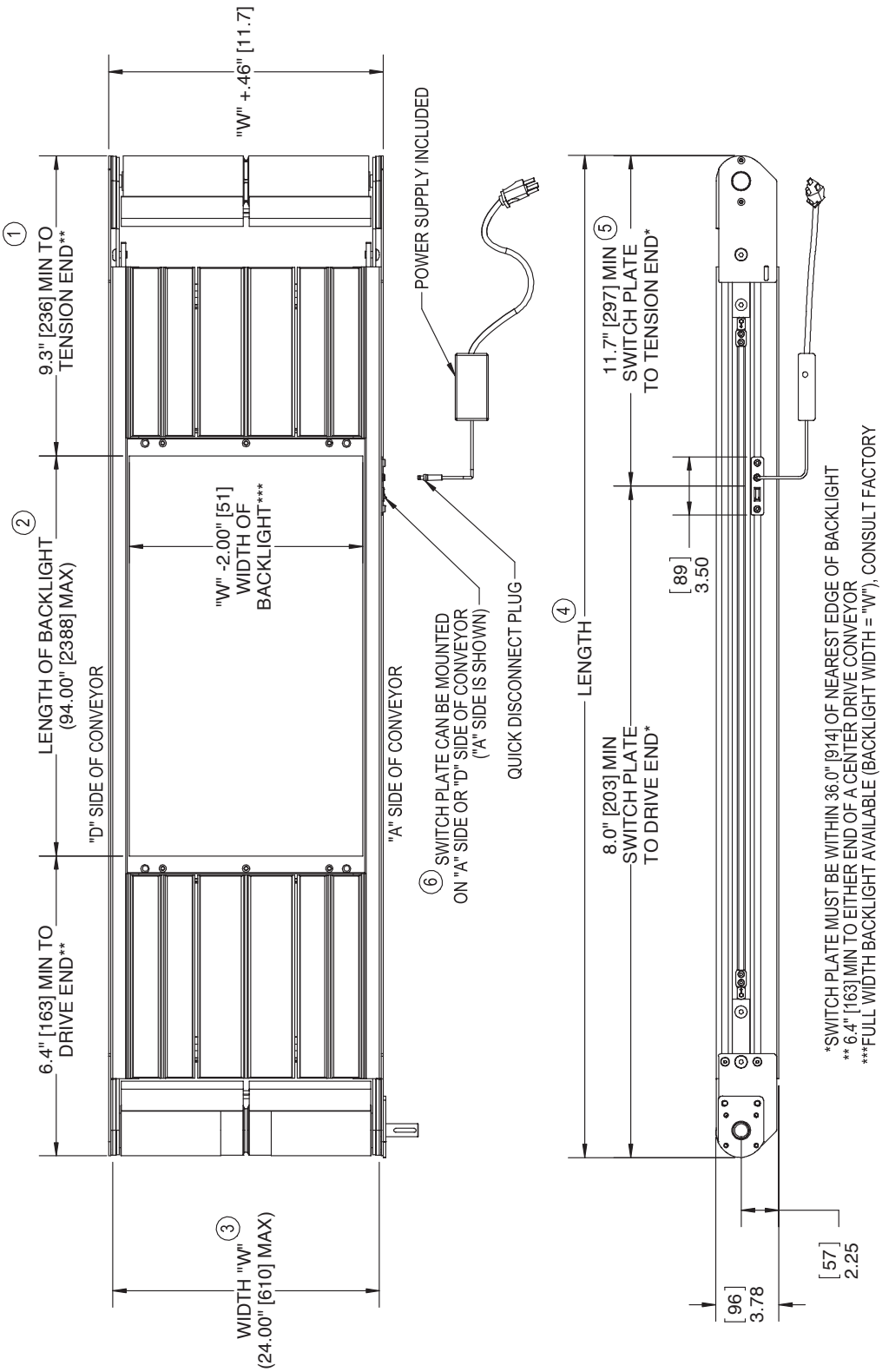
Mounting Packages & Gearmotors:

- All 3200 series mounting packages and gearmotors are applicable
- *See 3200 Series Engineering Manual 851-772 or www.dorner.com for details*

Support Stands:

- All 3200 Series support stands are applicable
- *See 3200 Series Engineering Manual 851-772 or www.dorner.com for details*

Dimensions & Back Lit Layout



SPECIFY THE FOLLOWING DIMENSIONS WHEN REQUESTING QUOTE:

① DISTANCE FROM TENSION END (INFEED END FOR CENTER DRIVE)

② LENGTH OF BACKLIGHT

③ WIDTH OF CONVEYOR

④ LENGTH OF CONVEYOR

⑤ SWITCH PLATE DISTANCE FROM TENSION END

⑥ SWITCH PLATE LOCATION ("A" SIDE OR "D" SIDE)

75063430

COMMON DRIVE CONVEYOR SETUP

Up to (4) conveyors can be coupled together and driven from a single gearmotor.

- Conveyors move at same relative belt speed.
- Creates single lanes for handling parts.
- Wide parts or pallets can be carried by each conveyor to allow access from below.
- Conveyors can be of different widths and lengths.

Uses Standard 3200 Series End Drive Conveyors

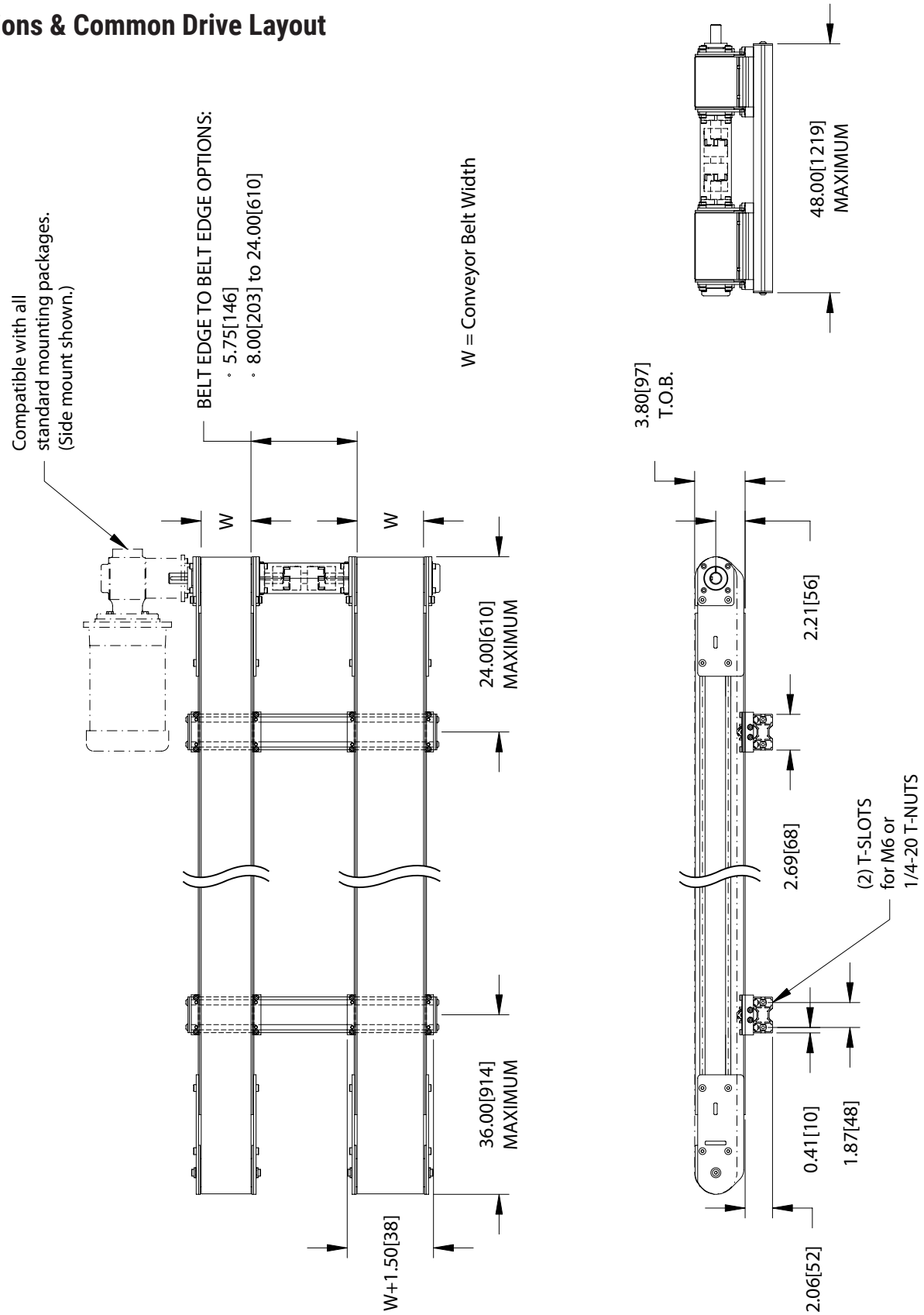
- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-guided and Non-V-guided Belt Compatible
- Rack and Pinion Belt Tensioning
- Conveyor Widths: 3.75 in to 48 in wide
- Conveyor Lengths: End Drive = 3 ft to 40 ft long
- 3 in diameter Drive Pulley turns approximately 9.7 in of Belt per revolution
- Belt Speeds: up to 421 ft/min

See Product Engineering Manual or www.dorner.com for details.

Common Drive Specifications

- Drive up to (4) Conveyors from a Single Drive Gearmotor
- Fixed Conveyor Locations
- Load Capacity: Contact Factory for Details
- Compatible with all Standard End Drive Gearmotor Mounting Packages
- Includes Aluminum Extruded Conveyor Tie Bar Assembly with Belt Return Roller
- Includes Common Drive Couplings and Guarding
- Multiple Conveyor Spacing Options
  - 5.75 in Belt Edge to Belt Edge
  - 8 in to 24 in Belt Edge to Belt Edge

Dimensions & Common Drive Layout



Profiles:

- All 3200 Series profiles are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Belting:

- All 3200 Series belting is applicable.
- Finger Splice is preferred, plastic and metal clipper splices are available.
- *See Product Engineering Manual or www.dorner.com for details.*

Mounting Packages & Gearmotors:

- All 3200 Series mounting packages and gearmotors are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Support Stands:

- All 3200 Series support stands are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

EXPRESS INQUIRY FORM: GENERAL INFORMATION

Along with completing the Express Inquiry form below, please complete the specific 3200 Series Common Drive Conveyor application questions on the next page to the best of your ability.

Contact Technical Sales at 1-800-259-1510 (Press 3) or TechnicalSales@dorner.com for Application Assistance.

CONTACT INFORMATION

Company:_____ **Date:** _____

Name: _____

Phone: _____ **Fax:**_____ **E-Mail:**_____

Address:_____

City:_____ _____ **State:** _____**Zip:**

PRODUCT

Description/Material: _____

Dimensions: _____

Weight:_____ **Total Weight to be Placed on Conveyor:** _____

Temperature: _____ **Leading Edge Dimension:**_____

ENVIRONMENT

Chemicals or Fluids Present:_____

Unusual Ambient Temperature Conditions: _____

Other Concerns: _____

GEARMOTOR & MOUNT PACKAGE

Mount Position: ☐ **Top** ☐ **Bottom** ☐ **Side** ☐ **Parallel Shaft** ☐ **90˚**

Belt Speed:_____ ☐ **Fixed** ☐ **Variable** **See example on next page for calculating belt speed.**

Belt Direction & Motor Position:_____

ELECTRICAL

Voltage: _____ **Phase:** _____

Hz: _____ **For Variable Speed:** ☐ **DC** ☐ **AC**

Controls required: _____

Complete individual conveyor specifications on page 6.

EXPRESS INQUIRY FORM: GENERAL INFORMATION

Page may need to be copied to communicate multiple conveyors

DESCRIBE THE COMMON DRIVE CONVEYOR APPLICATION

Describe the product being conveyed: _____

_____

What do you want the conveyors to do? _____

_____

_____

How is the part being introduced onto conveyor? _____

_____

What is the product feed rate? (parts per minute) _____

Is part orientation critical? ☐ Yes ☐ No **Explain:** _____

Where does the part go upon discharging from the conveyor? _____

_____

PRODUCT SAMPLES

Samples of actual products can be critical to the successful design and application of a common drive conveyor.

Will sample products be provided to Dorner? ☐ Yes ☐ No

FAX COMPLETED FORMS TO 800.369.2440 or 262.367.5827

BELT SPEED CALCULATOR

How to calculate minimum conveyor belt speed:

$$\frac{(\text{Part rate in parts per minute}) \times (\text{part size in inches})}{12}$$

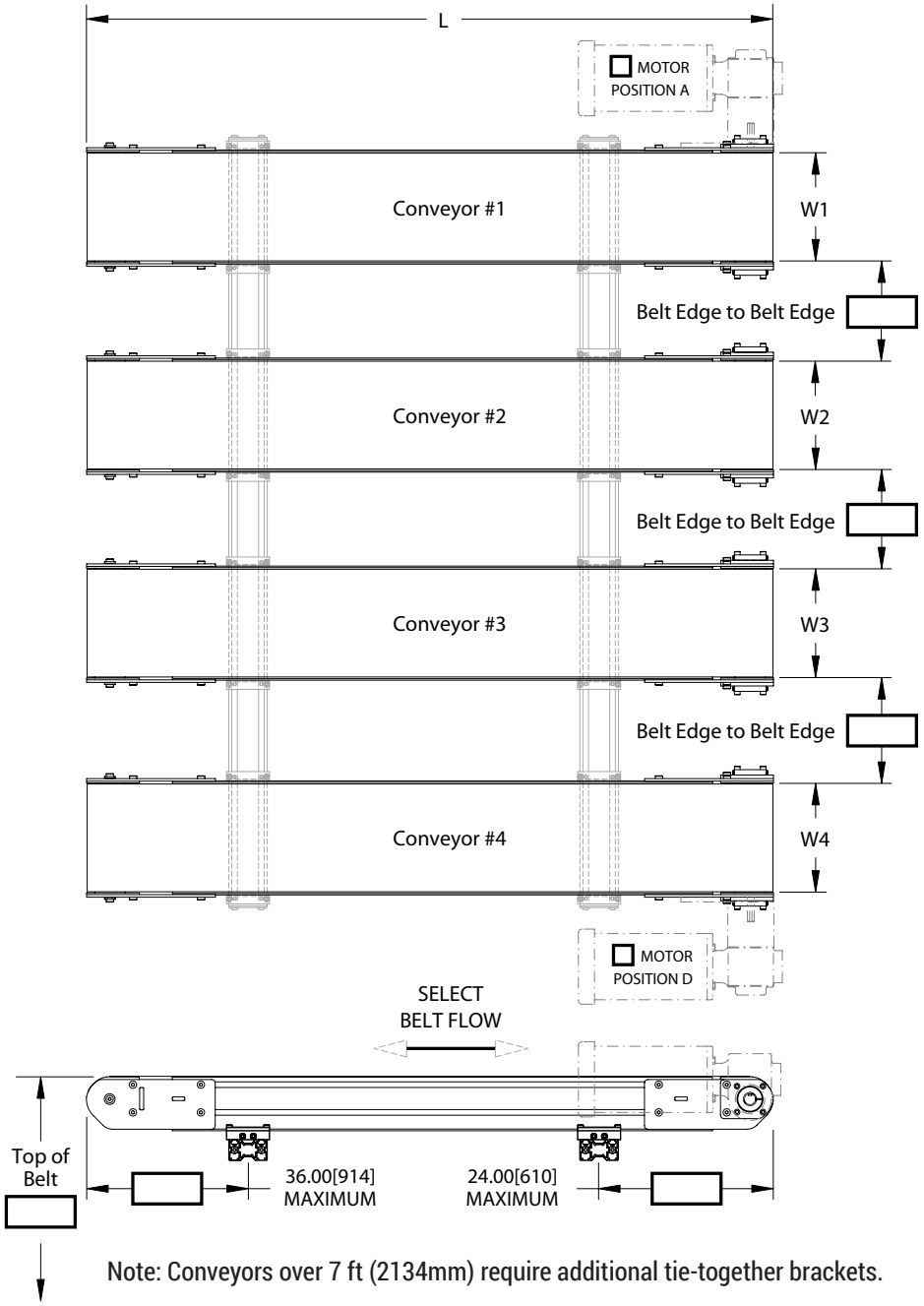
Example $\frac{(30 \text{ parts per minute}) \times (6\text{" dia. part})}{12} = \frac{180}{12}$ = **15 ft/min. Minimum Belt Speed**

How to calculate conveyor belt speed incorporating a product spacing:

$$\frac{(\text{Part rate in parts per minute}) \times (\text{desired part spacing in inches} + \text{part size in inches})}{12}$$

Example $\frac{(30 \text{ parts per minute}) \times (6\text{" dia part} + 12\text{" spacing between parts})}{12} = \frac{(30) \times (18)}{12} = \frac{540}{12}$ = **45 ft/min. Belt Speed**

Please highlight the conveyor, dimensions, belt flow and motor positions required.



Belt Edge to Belt Edge Options:

- 5.75 in (146 mm)
- 8 - 24 in (203-610 mm)

Note: Conveyors over 7 ft (2134mm) require additional tie-together brackets.

Complete the Conveyor Information				
Conveyor	**Width (W)**	**Length (L)**	**Belt Type***	**Profile***
#1				
#2				
#3				
#4				

**See Product Engineering Manual or www.dorner.com for details.*

LIFT GATE CONCEPT

Standard 2200, 3200 and MPB conveyors can be mounted to a lift gate base creating a conveyor gate that is easily lifted for access through the conveyor line.

Lift Gate Specifications

- Designs for 2200, 3200 and MPB End Drive Conveyors
- Gearmotor Acts as a Counterweight to Allow for Easy Gate Opening
- Spring Latch Horizontal Position Stop
- Vertical Position Stop
- Gas Shock Controlled Pivot Mechanism
- Easy Access Lift Handles
- Clear Side Guards for Pivot Mechanism Area
- Aluminum Extruded Support Structure with T-slot Construction*
- ±2 in Height Adjustment
- Optional Motor Controls (see below)

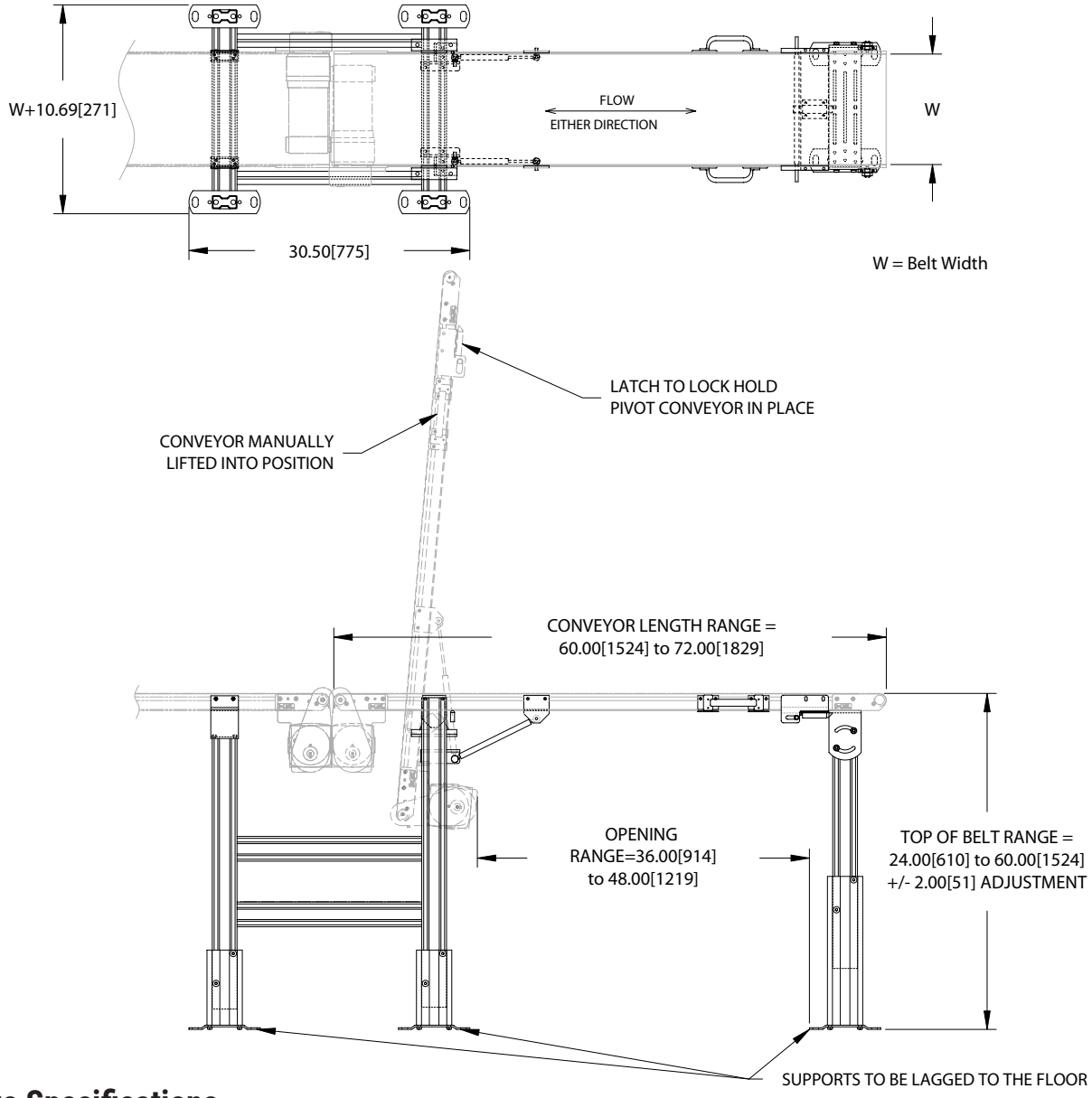
**Structure must be bolted to the floor*

2200 Series
Lift Gate Conveyor Shown

Optional Control Features

- "Conveyor Down" interlock switch provides a dry contact signal when the conveyor is in the ready position. Wiring to switches by others.
- Automatic Stop/Start control. Stops the lift gate conveyor motor when lifted and restarts the motor in the "conveyor down" position. Includes interlock switch, motor starter and enclosure. 460-volt models include a transformer/ power supply. Power wiring to enclosures by others.
- Automatic Stop/Start control with clearing timer. Pushbutton control starts a timer to clear the conveyor contents before stopping the lift gate conveyor motor. Motor restarts when the gate is lowered to the "conveyor down" position. Includes interlock switch, pushbutton, adjustable timing relay, motor starter and encloser. 460-volt models include a transformer/power supply. Power and control wiring to enclosure and upstream production equipment by others.

2200 Series Dimensions and Lift Gate Layout:

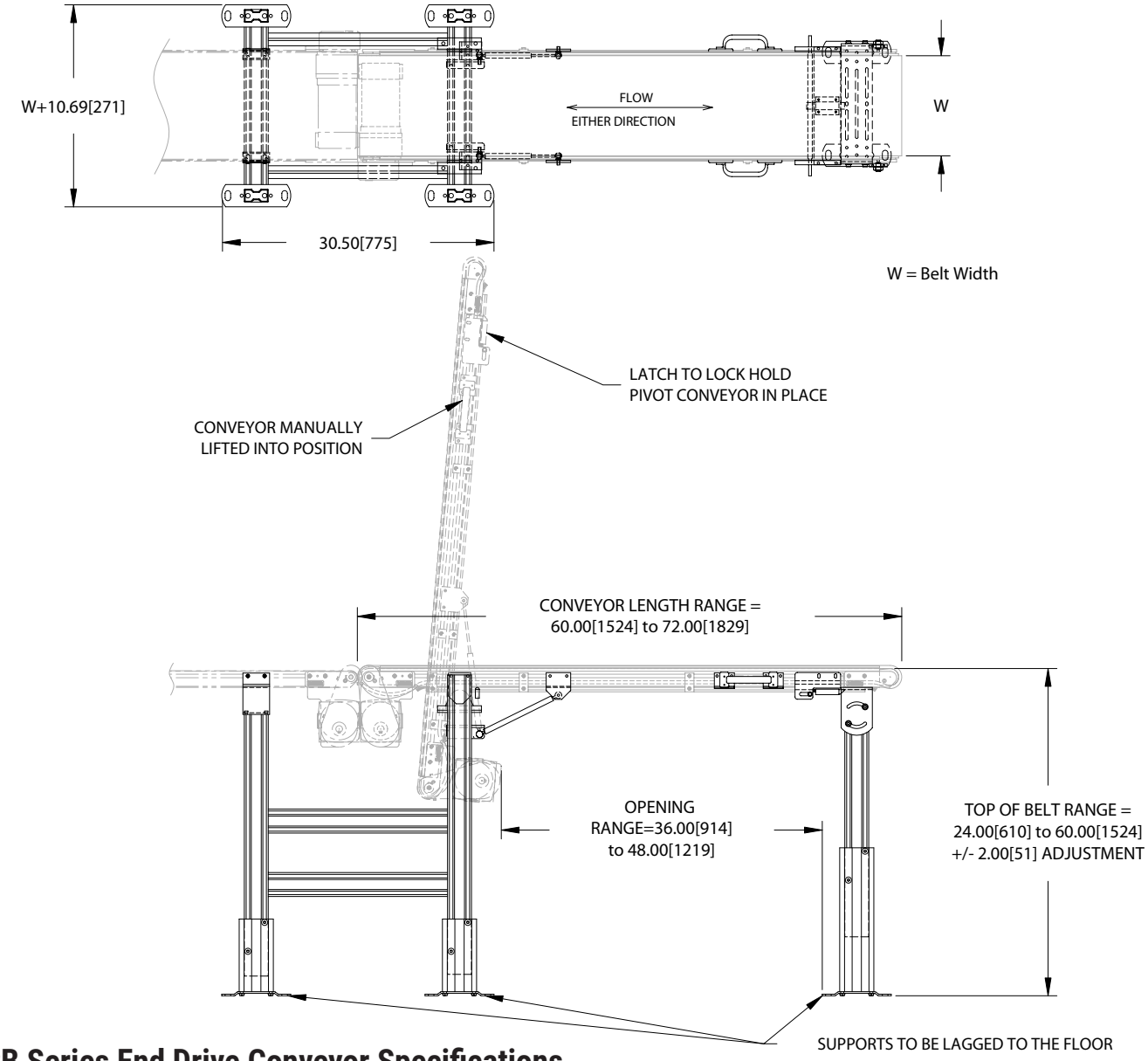


Lift Gate Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-guided and Non-V-guided Belt Compatible
- Rack and Pinion Belt Tensioning
- Standard Load Parallel Shaft Gearmotor
- Bottom Mount End Drive
- Conveyor Widths: 1.75 in to 24 in wide
- Conveyor Lengths: 5 ft & 6 ft standard for Lift Gate
- Belt Speeds: up to 264 Ft/Min
- Load Capacity: 80 lbs. (36 Kg)

See Product Engineering Manual or www.dorner.com for details.

MPB Series Dimensions and Lift Gate Layout:

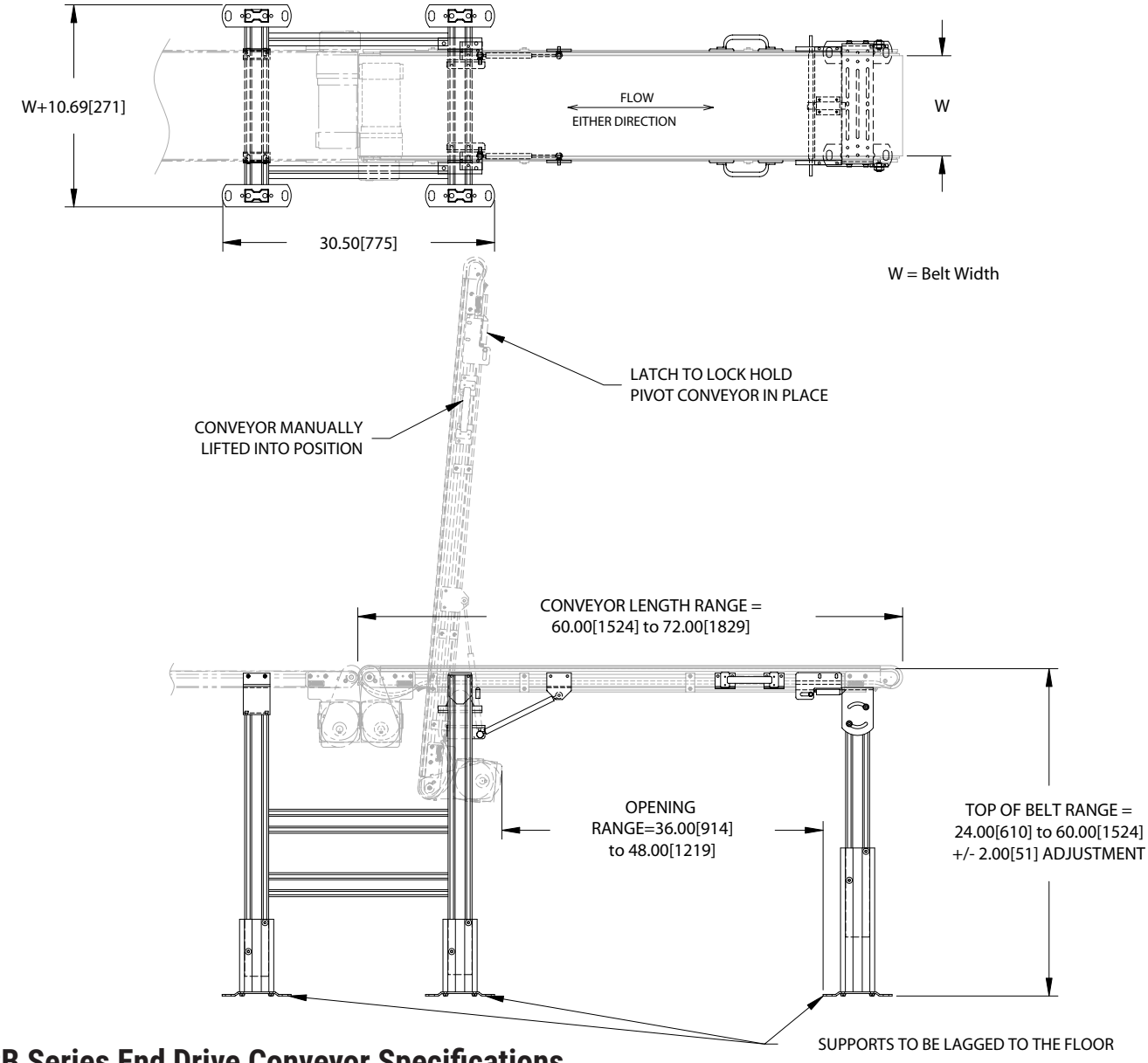


MPB Series End Drive Conveyor Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- Rack and Pinion Belt Tensioning
- Standard Load Parallel Shaft Gearmotor
- Bottom Mount End Drive
- Conveyor Widths: 3 in to 23.25 in wide
- Conveyor Lengths: 5 ft & 6 ft standard for Lift Gate
- Belt Speeds: 250 Ft/Min
- Load Capacity: 150 lbs. (63 Kg)

See Product Engineering Manual or www.dorner.com for details.

MPB Series Dimensions and Lift Gate Layout:

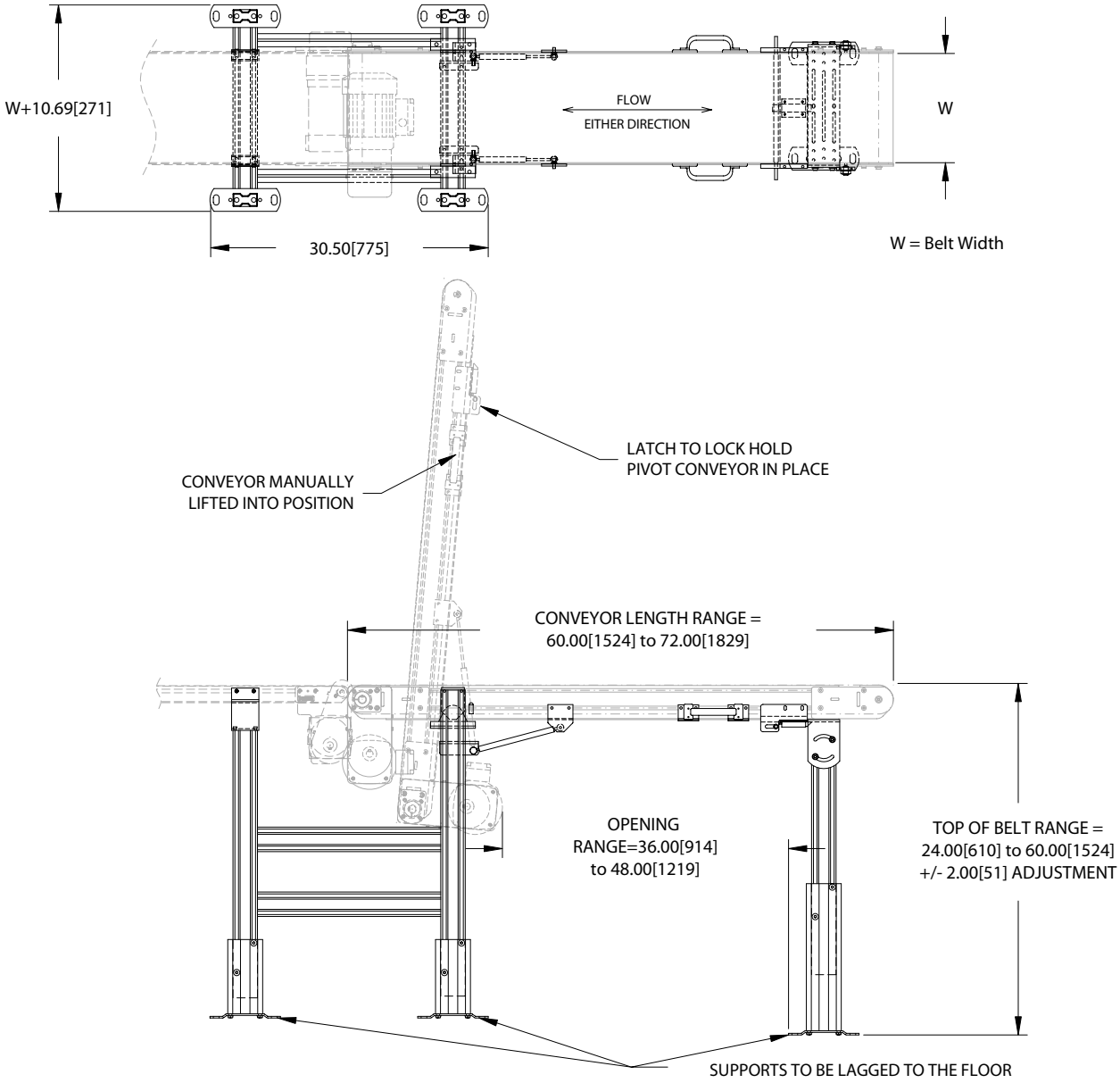


MPB Series End Drive Conveyor Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- Rack and Pinion Belt Tensioning
- Standard Load Parallel Shaft Gearmotor
- Bottom Mount End Drive
- Conveyor Widths: 3 in to 23.25 in wide
- Conveyor Lengths: 5 ft & 6 ft standard for Lift Gate
- Belt Speeds: 250 Ft/Min
- Load Capacity: 150 lbs. (63 Kg)

See Product Engineering Manual or www.dorner.com for details.

3200 Series Dimensions and Lift Gate Layout:



3200 Series End Drive Conveyor Specifications

- Aluminum Extruded Frame with T-slot Construction
- Sealed Ball Bearings
- V-guided and Non-V-guided Belt Compatible
- Rack and Pinion Belt Tensioning
- Standard Load Parallel Shaft Gearmotor
- Bottom Mount End Drive
- Conveyor Widths: 3.75 in to 48 in wide
- Conveyor Lengths: 5 ft & 6 ft standard for Lift Gate
- Belt Speeds: 421 Ft/Min
- Load Capacity: 400 lbs. (181 Kg)

See Product Engineering Manual or www.dorner.com for details.

Profiles:

- All 2200, MPB and 3200 Series profiles are applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Belting:

- All 2200, MPB and 3200 Series flat belting is applicable.
- *See Product Engineering Manual or www.dorner.com for details.*

Mounting Packages & Gearmotors:

- Uses bottom mount standard load package for a parallel shaft gearmotor.
- *See Product Engineering Manual or www.dorner.com for details.*

- Uses fixed speed and variable speed standard load parallel shaft gearmotors.
- *See Product Engineering Manual or www.dorner.com for details.*

DORNER®
By Columbus McKinnon

REQUEST FOR QUOTE

FAX COMPLETED FORMS TO 800.369.2440 or 262.367.5827
or email directly to your team or customerservice@dorner.com

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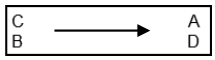
www.dornerconveyors.com | info@dorner.com

Contact Name:		Project Name:	
Company Name:		DTools Cong #:	
Email:		Phone:	
Address:			

The Basics

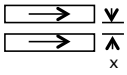
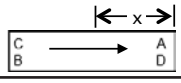
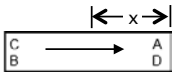
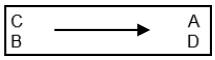
	Conveyor 1	Conveyor 2	Conveyor 3
Belt Widths			
Conveyor Lengths			
Drive Position (side, bottom, top, center)			
Drive Location (C & B reduce load capacity 66%) 			
Belt Requirements (Flat or Cleated) (if unsure, describe application)			
Cleat Height (if needed) (see catalog for types)			
Cleat Spacing (if needed)			
Profile / Guiding type (see catalog)			
Top of Belt Heights from Floor (if stands are required) (Infeed and Outfeed)			
Belt Speed (fixed/variable) (Feet per Minute) or (Parts per Minute)			
For Variable Speed: DC or VFD?			
Input Voltage / Phase / HZ			
Stands Needed? Casters or Fixed Feet?			
Curves and LPZ models: attach a sketch with critical dimensions.			
Maximum load on conveyors			
Will parts accumulate? (Stop while belt continues to run)			
Describe how the products are presented to & discharged from conveyor			

The Product

Product Description (shape, material, unique features, sharp edges, fragile, etc)			
Product Dimensions & orientation on the belt			
Part Temperature			
Part Weight			

The Environment

Room temperature or operating temperature near conveyor, if unusual			
Describe any chemicals, lubricants, etc. to contact conveyors?			
Wash down or wipe down? High pressure? (Over 60 psi)?			

Application Description / Additional Information			
	Conveyor 1	Conveyor 2	Conveyor 3
Enter any other pertinent information here			
Common modifications and additional information needed.			
Magnetic & Vacuum Conveyors			
How are products presented to the conveyor?			
How are products to be removed from conveyor?			
Angle of incline/decline, if any?			
What function is the conveyor expected to perform?			
Are product samples available for testing?			
Specific zone length requirements?			
What forces must the magnets or vacuum resist?			
Common Drive Conveyors			
Size of free & clear gaps required between conveyors 			
Quantity of conveyors to be common driven			
Backlit Conveyors			
LED light source type (light color, brightness, etc)			
Zone length			
Zone location along conveyor length from tension end 			
Switch plate location (must be within 12 in of the light) 			
Additional Output Shaft			
Position on conveyor (A, B, C, D) 			
Required shaft dimensions			
How is shaft to be used?			
Guiding			
Height from top of belt			
Required width for product			
Lane spacing (if any)			
Material requirements			
How is guiding to be used (create simple lanes, product positioning, etc) ?			
Metal Free Zone Conveyors			
Length of zone			
Why is zone needed (metal detection, X-Ray, etc)			
Complex Projects			
For sophisticated projects, please provide as much of the following information as possible.			
Layout drawings			
Process / sequence of operation descriptions			
Control requirements			
Machine interface needs			
Sample products			
Factory acceptance test requirements			
Installation requirements			

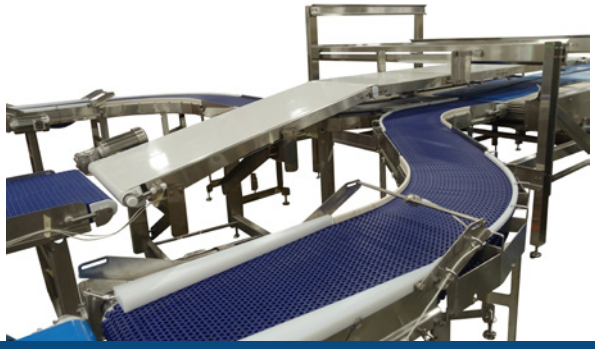
Contact Name:		Project Name:	
Company Name:		DTools Cong #:	
Email:		Phone:	
Address:			

Industrial

Flexible Chain

Pallet Systems

Sanitary Stainless Steel



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