# ENGINEERING MANUAL

FDA Approved Materials & Components Fast, Simple to Use Online Configurator

Rapid Deliveries

mmmmmmmmm

BISSC Certified Conveyors

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# **7350 SERIES CONVEYORS**

Stainless Steel Conveyors for Dry, Wipe Down and Wet Applications





#### Sleek, Low Profile Design - 7200 & 7300 Series\*

· Quick, five-minute belt change for increased uptime

Aqua Gard

- Rack and pinion for fast, single point belt tensioning
- V-Groove frame with V-Guided belt ensures accurate tracking
- Streamlined design fits where other conveyors do not
- Low profile, single piece frame for quick, easy cleaning
- · Quick-clamp rail for easy mounting of bolt-on accessories

#### **Rugged and Durable Design - 7350 Series**

- 304 Stainless Steel frame features open design with minimal horizontal surfaces
- Designed for wipe down and low pressure wash-down with non-caustic chemicals
- · V-guided belt tracking on belted models
- Tip-up tails for access inside the conveyor for cleaning and maintenance
- Safest chain in the industry with chain openings less than 4 mm even on curves
- Unique chain design virtually eliminates friction providing capacity for up to 4 curves on a single conveyor





Innovative Chain Design

## Positive Drive Belt

#### **Engineered Solutions**

- Dorner's Engineered Solutions Group can tailor fit AquaGard Conveyors for specific applications and product handling requirements
- With a custom-designed conveyor system in place and the help of highly specialized engineering, your products are processed faster, your services are delivered quicker, and your profits are increased
- Solutions include: chicaning, retracting tails, depositing and rejects, merging, product flow, and more!



### The Benefits of Dorner AquaGard Conveyors

#### **Industry Ready**

- Designed and manufactured to food equipment standards
- BISSC certified conveyors
- FDA approved materials and components
- Washdown rated gearmotors and controls

#### A Focus on Speed

- Dorner sets the industry standard for rapid delivery
- Sanitary conveyors ship in as little as 10 business days
- Fast and effective design reduces cleaning preparation time

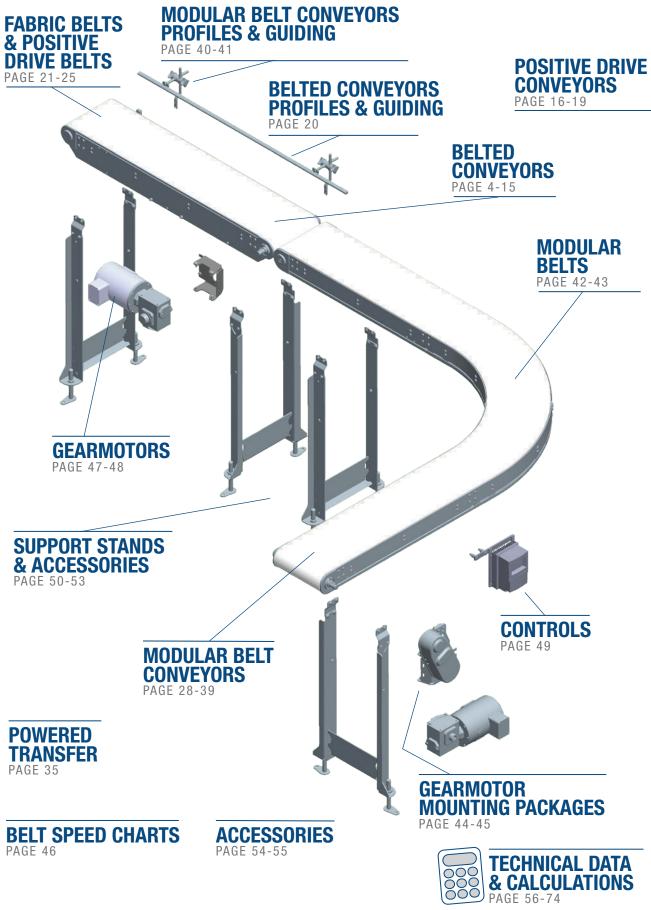
\*Please refer to the AquaGard 7200 & 7300 Series manual for product information.



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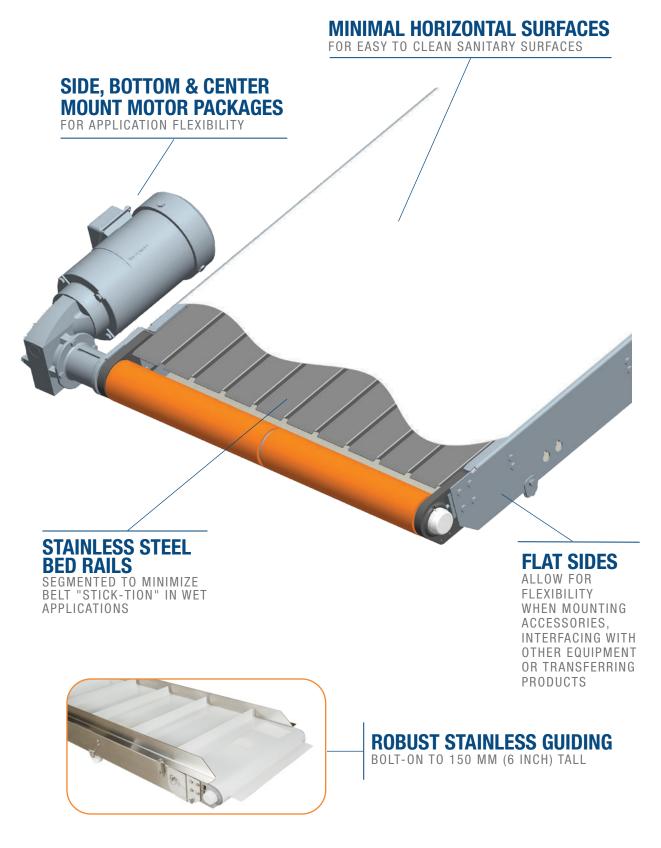


### **BELTED CONVEYOR FEATURES**















#### **Specifications**

- Loads up to 227 kg (500 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 91 m/min (300 ft/min)
- Belt widths: 152 mm (6 in) to 914 mm (36 in)
- Conveyor lengths: 915 mm (36 in) to 12190 mm (480 in)
- One revolution of drive pulley moves the belt approximately 280 mm (11 in)
- Bolt-together 304 Stainless Steel Frame
- Hard chrome coated bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Open design with minimal horizontal surfaces
- Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions
- V-guide belt tracking

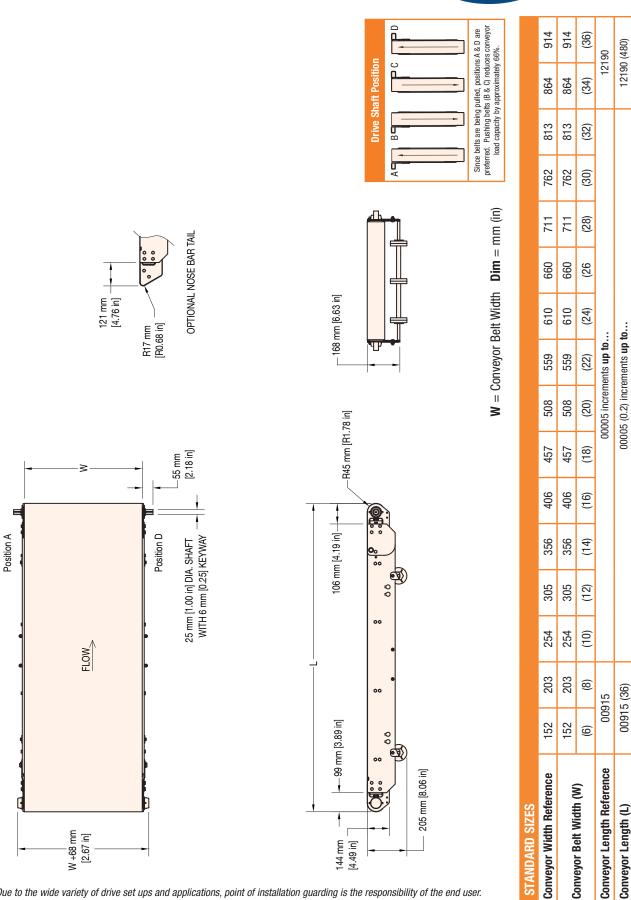


\* Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors. \*\* Note: Do not run the conveyor with the tail in the tip-up position.



### FLAT BELT END DRIVE





Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.

DORNER

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#### **Specifications**

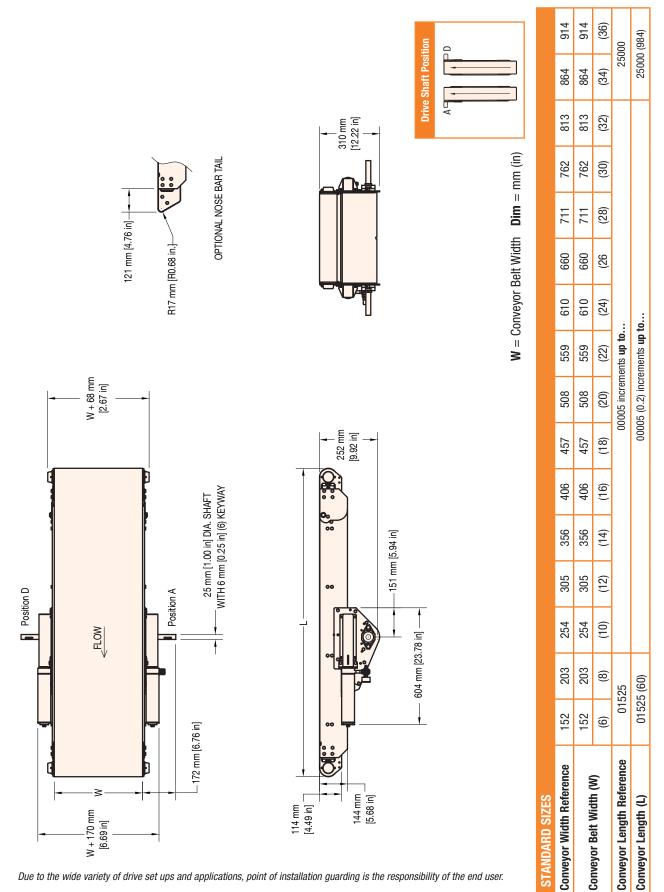
- Loads up to 227 kg (500 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 91 m/min (300 ft/min)
- Belt widths: 152 mm (6 in) to 914 mm (36 in)
- Conveyor lengths: 1525 mm (60 in) to 25,000 mm (82 ft)
- Manual or Pneumatic center drive options
- Bolt-together 304 Stainless Steel Frame
- Hard chrome coated bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Open design with minimal horizontal surfaces
- Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions



\*\* Note: Do not run the conveyor with the tail in the tip-up position.







Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.





Loads up to 227 kg (500 lbs) or 98 kg/sg m (20 lbs/sg ft)\*

Conveyor lengths: 915 mm (36 in) to 12190 mm (480 in)
Cleat heights from 11 mm (0.43 in) to 60 mm (2.63 in)

Hard chrome coated bearing with FDA H1 food grade

FDA approved belting and plastic components
Cleated belt options include sealed edge, encased

Open design with minimal horizontal surfaces

 Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions

· Suitable for use in wet environments

Belt speeds up to 91 m/min (300 ft/min)
Belt widths: 152 mm (6 in) to 610 mm (24 in)

Bolt-together 304 Stainless Steel Frame





OPTIONAL: Sidewall Cleated Belts for Small Parts



STANDARD FEATURE: V-Guided Belt Tracking



**Specifications** 

grease

and sidewall cleating

OPTIONAL: High Side Guides Up to 152 mm (6 in) Tall

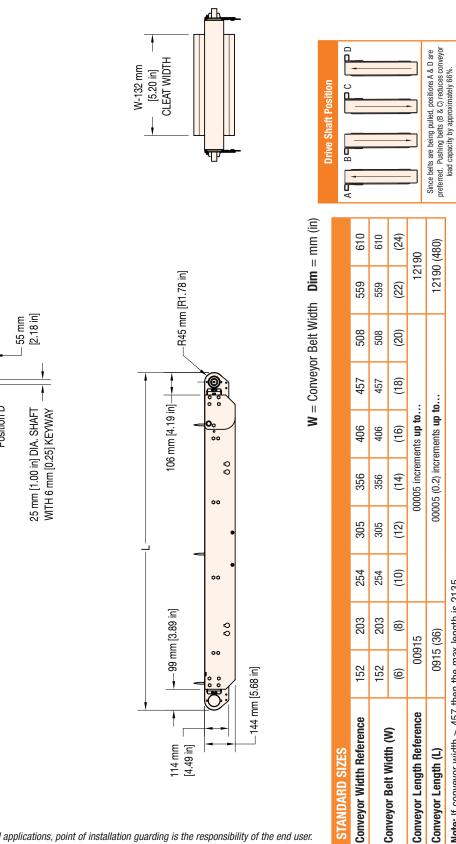
STANDARD FEATURE: Tip-Up Tail\*\*

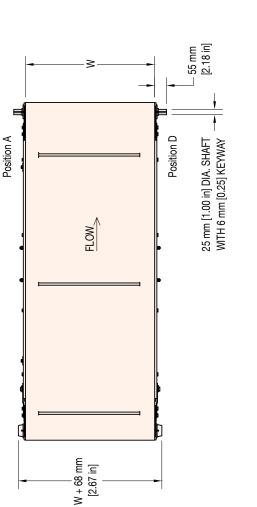
AquaGard 7350 Cleated Belt Conveyor 73 C M W W W - LLLLL V D A S S P B S S S S -X T<sup>1</sup> T<sup>2</sup> - Conveyor Tail Options X (if required) \*See Drive Shaft Position Chart on next page  $\mathbf{K} =$  Keved Auxiliary Shaft  $\mathbf{0} =$  No Keved Auxiliary Shaft - Spacing: SSSS in millimeters - Belt/Cleat Type: See Pages 21-25 for belt selection Profile:  $\mathbf{0} = \text{Low Side}$   $\mathbf{2} = \text{Cleated 25 mm (1 in) Bolt On High Side}$   $\mathbf{3} = \text{Cleated 75 mm (3 in) Bolt On High Side}$  $\mathbf{6}$  = Cleated 152 mm (6 in) bolt on high side Idler Stand Location: Note: Tip-up tail start at 18"  $\mathbf{F} = 914 \text{ mm} (36 \text{ in}) \text{ from end} \quad \mathbf{H} = 457 \text{ mm} (18 \text{ in}) \text{ from end with braces} \quad \mathbf{J} = 610 \text{ mm} (24 \text{ in}) \text{ from end with braces}$ F = 762 mm (30 in) from endJ = 610 mm (24 in) from end with braces K = 762 mm (30 in) from end with braces M = 914 mm (36 in) from end with braces Drive Stand Location: A = No Stand Mount Mounting brackets B = 305 mm (12 in) from end  $\mathbf{C} = 457 \text{ mm} (18 \text{ in}) \text{ from end}$   $\mathbf{D} = 610 \text{ mm} (24 \text{ in}) \text{ from end}$ G = 305 mm (12 in) from end with braces H = 457 mm (18 in) from end with braces J = 610 mm (24 in) from end with braces Drive Shaft Position: A. B. C. or D - Drive Tail Option: 1 = Standard Bottom / Side - V-Guide Options: A = V-Guided Belt, B = Non V-Guided Belt Conveyor Length (mm): 00915 to 12190 in 5 mm increments (36 - 480 in) Conveyor Width Reference (mm): = 152 to 610 (6 - 24 in) Documentation Language: M = US English, U = Europe English, D = German, F = French, S = Spanish

\* Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors. \*\* Note: Do not run the conveyor with the tail in the tip-up position.









Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.

Note: If conveyor width  $\ge 457$  then the max length is 2135





### LPZ (Z-FRAME) FLAT BELT END DRIVE

Loads up to 227 kg (500 lbs) or 98 kg/sg m

· Maximum total conveyor length of 12190 mm

Bolt-together 304 Stainless Steel Frame

• Suitable for use in wet environments

• Angles from 5 degrees to 30 degrees in 5 degree

• Hard chrome coated bearing with FDA H1 food

FDA approved belting and plastic components
V-quided belt for optimum performance

Stainless Steel construction for wipe down and low

Belt speeds up to 91 m/min (300 ft/min)
Belt widths: 152 mm (6 in) to 610 mm (24 in)
Conveyor section lengths: 610 mm (24 in) to

**Specifications** 

(480 in)

increments

grade grease

(20 lbs/sg ft)\*

6100 mm (240 in)







#### OPTIONAL: Center Drive Module



**STANDARD FEATURE:** 

V-Guided Belt Tracking

AquaGard 7350 Z-Frame Flat Belt Conveyo

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OPTIONAL: 32 mm (1.25 in) Nose Bar Tail

STANDARD FEATURE: Tip-Up Tail\*\*

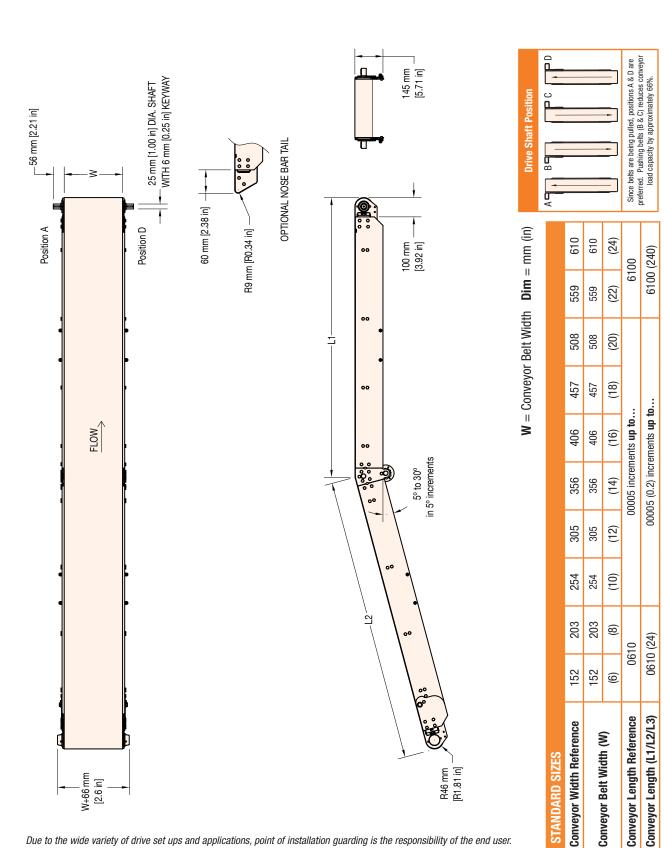
<u>M WWW - L</u>	$LLL - LLLL AA E V I A S S P B - X T' T^2$
	- Conveyor Tail Options X (if required) *See Drive Shaft Position Chart on next page
	$\mathbf{K} =$ Keyed Auxiliary Shaft $0 =$ No Keyed Auxiliary Shaft
	- Belt Type: See Pages 21-25 for belt selection
	- Profile:
	<ul> <li>a Low Side 4 = 75mm (3 in) High Side 5 = 25mm (1 in) High Side 6 = 152mm (6 in) High Side</li> <li>13 = Fully Adjustable Round 14 = Tool-less Fully Adjustable Round 17 = Fully Adjustable 32mm (1.25 in) Flat</li> <li>18 = Tool-less Fully Adjustable 25mm (1 in) Flat</li> <li>14 Her Stand Location: Note: Tip-up tail start at 18"</li> <li>A = No Stand Mount Mounting brackets C = 457 mm (18 in) from end D = 610 mm (24 in) from end</li> <li>E = 762 mm (30 in) from end F = 914 mm (36 in) from end H = 457 mm (18 in) from end with braces</li> <li>J = 610 mm (24 in) from end with braces K = 762 mm (30 in) from end with braces</li> <li>M = 914 mm (36 in) from end with braces</li> <li>Drive Stand Location:</li> <li>A = No Stand Mount Mounting brackets B = 305 mm (12 in) from end C = 457 mm (18 in) from end</li> <li>D = 610 mm (24 in) from end G = 305 mm (12 in) from end with braces H = 457 mm (18 in) from end</li> </ul>
	J = 610  mm (24  in)  from end with braces
	- Drive Shaft Position: A, B, C, or D
	Drive Tail Option: 1 = Standard, 2 = Nose Bar
	- V-Guide Options: A = V-Guided Belt (all LPZ must be V-guide)
	- Bett Direction: E = Inclining, D = Declining
	- Angle: 05 degrees thru 30 degrees in 05 degree increments
	- Conveyor L2 Upper Horizontal Section Length (mm): 0610 to 6100 (24 - 240 in)
	- Conveyor L1 Upper Horizontal Section Length (mm): 0610 to 6100 (24 - 240 in)
- Conveyor	Width Reference (mm): = 152 to 610 (6 - 24 in)
<ul> <li>Documentation</li> </ul>	Language: M = US English, U = Europe English, D = German, F = French, S = Spanish

\* Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors. \*\* Note: Do not run the conveyor with the tail in the tip-up position.

> Order gearmotor mounting packages and gearmotors separately, see pages 44-48. For support stands and accessories, see page 50-55.



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Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.







### LPZ (Z-FRAME) CLEATED BELT END DRIVE





**Specifications** 

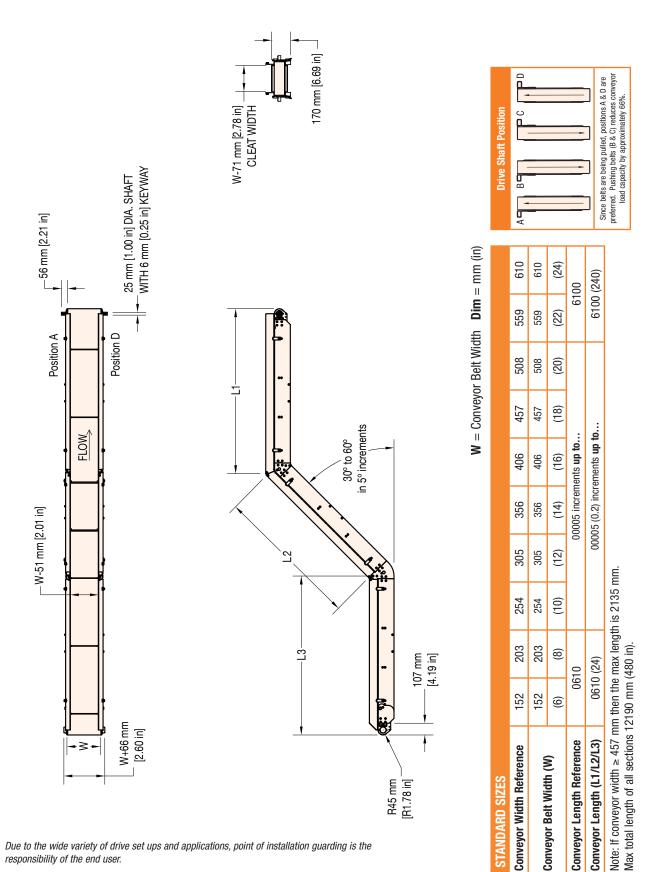
- Loads up to 45 kg (100 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 91 m/min (300 ft/min)
- Belt widths: 152 mm (6 in) to 610 mm (24 in)
- Conveyor section lengths: 610 mm (24 in) to 6100 mm (240 in)
- Maximum total conveyor length of 12190 mm (480 in)
- Angles from 30 degrees to 60 degrees in 5 degree increments
- Cleat heights from 11 mm (0.43 in) to 60 mm (2.63 in)
- Bolt-together 304 Stainless Steel Frame
- Hard chrome coated bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Cleated belt options include sealed edge, encased and sidewall cleating
- Open design with minimal horizontal surfaces
- Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions



\*\* Note: Do not run the conveyor with the tail in the tip-up position.



### LPZ (Z-FRAME) CLEATED BELT END DRIVE



Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.







#### FDA APPROVED MATERIALS

IN BELTING AND PLASTIC COMPONENTS



ABRASION RESISTANT MATERIALS SUPPORT BELT. TOOL-LESS REMOVAL FOR EASE OF CLEANING

#### USDA ACCEPTED BELTING SOLID URETHANE WON'T ABSORB WATER



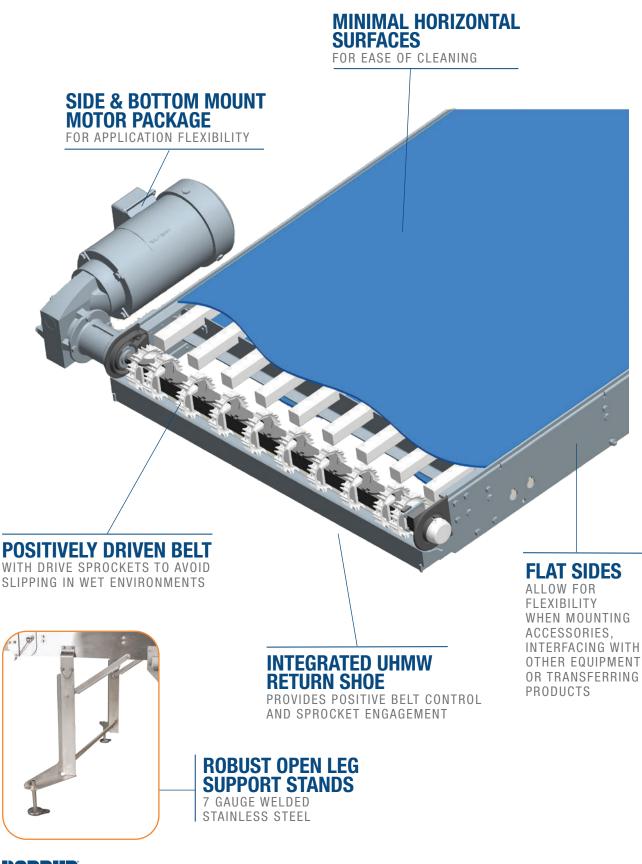
TIP-UP TAILS\*

FOR ACCESS INSIDE CONVEYOR FOR CLEANING AND MAINTENANCE

\*Note: Do not run the conveyor with the tail in the tip-up position.









### **POSITIVE DRIVE BELT END DRIVE**



#### **Specifications**

- Loads up to 227 kg (500 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 71 m/min (233 ft/min)
- Belt widths: 152 mm (6 in) to 914 mm (36 in)
- Conveyor lengths: 915 mm (36 in) to 25,000 mm (82 ft)
- Positive driven belt provides greater load capacity and less slip
- · Bolt-together 304 Stainless Steel Frame
- Hard chrome coated bearing with FDA H1 food grade grease
- USDA smooth top positive drive belt (Available in blue or white)
- Open design with minimal horizontal surfaces
- Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions

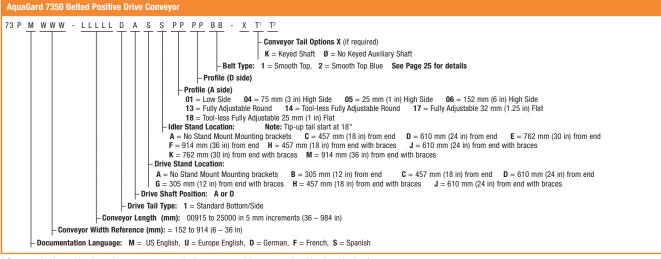


STANDARD FEATURE: Positively driven drive sprockets and belt to avoid belt slipping



STANDARD FEATURE: Integrated UHMW Return Shoe provides positive belt control and sprocket engagement STANDARD FEATURE:

Tip-Up Tail\*\*

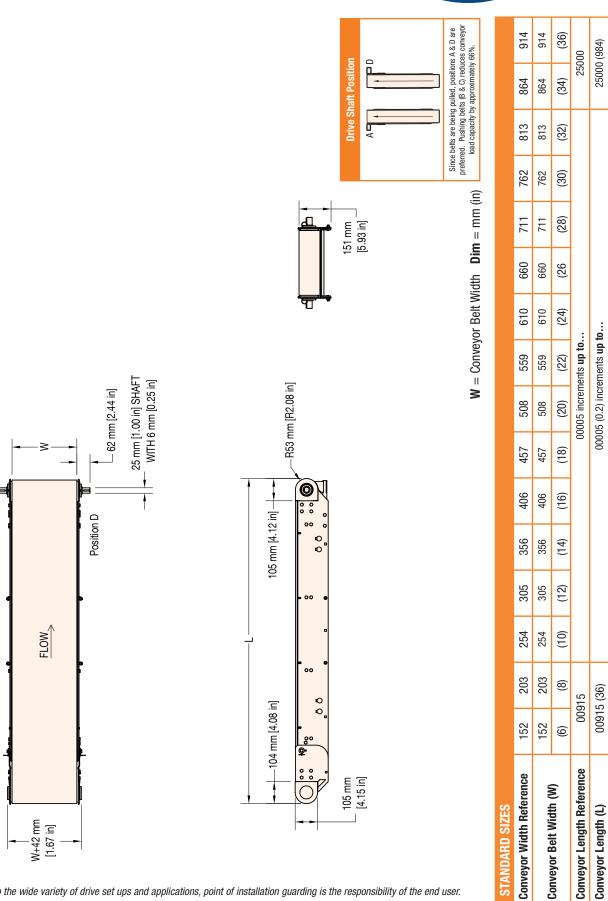


\* Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors. \*\* Note: Do not run the conveyor with the tail in the tip-up position.









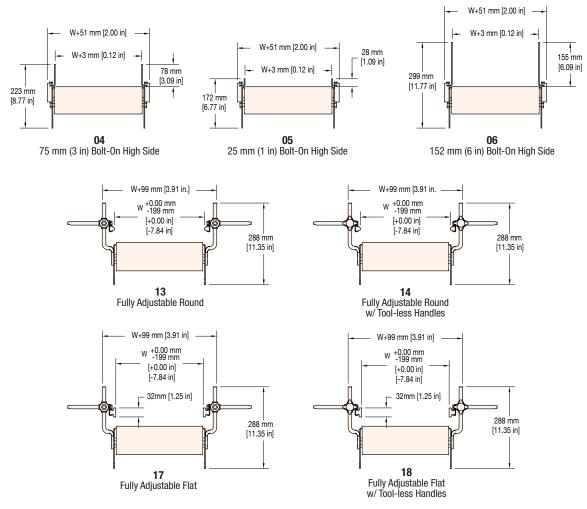
Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.



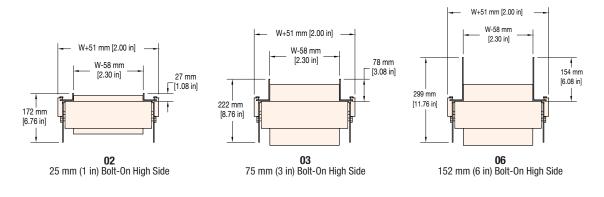
Position A



### **FLAT BELT PROFILES**



### **CLEATED BELT PROFILES**



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

Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.



### STANDARD BELTING



Special Characteristics or Applications

Accumulation of products

Electronics handling

Conveys up to 35° inclines\*

Lower no load torque





Good

Good

Poor

Good

#### Standard belt material is stocked at Dorner, **Standard Belt Selection Guide** then cut & spliced at the factory for fast conveyor shipment. Belt Type - Plastic Clipper Belt Type - Finger Splice **Metal Clipper** Maximum Part Temp. °C (°F) Coefficient of Friction Belt Specifications Chemical Resistance Surface Material **Belt Thickness** FDA Approved V-Guidable Anti-Static Type . Belt ESD 01 х A1 1A FDA Accumulation 1.7 (0.067) Urethane 100 (212) Good Packaging, clean room and inspection Low Х Х 02 A2 2A General Purpose Х 1.8 (0.071) Urethane 100 (212) Med Х Good Most versatile belt offering Х 03 FDA High Friction Х 100 (212) A3 3A 1.7 (0.067) Urethane High Х Х Good Packaging, clean room and inspection

Dim = mm (in)

6A

05 A5 5A

06 A6

08 **A8** 8A

09

Note: See below for splice details. Plastic Clipper splice requires longer lead times. Clipper splice not available on Z-Frame Series Conveyors. Note: Belts with V-Guiding may have a slight high spot or rib on the top surface. This rib would run longitudinally along the center of the belt.

Urethane

Urethane

PVC

Urethane

Consult factory with applications for which this may cause interference.

х

Х

х

х

1.2 (0.047)

1.6 (0.063)

2.1 (0.083)

1.5 (0.059)

\*Incline varies due to factors like dust, fluids and part material.

Accumulation

High Friction

Static Dissipative

FDA High Friction

Note: Wet applications are limited to specialty belt types 54, 55, 69 and 70 only (see next page).

100 (212)

80 (176)

70 (158)

100 (212)

V-Low

V-Low

V-High

High

Х х

х

Х

Х

Х

#### BELT SPLICING



**Finger Splice** 

All belts are available with a standard Thermoformed finger splice. This splice makes the belt continuous and is virtually undetectable. Splice bonding methods vary by belt type. Consult factory for details.



**Plastic Clipper\*\*** An optional plastic clipper splice is available for quick removal of belts or when conveyors are installed in tight spaces.



Metal Clipper\*\* An optional metal clipper splice is also available for quick removal of belts or when conveyors are installed in tight spaces.

\*\* Plastic and Metal Clippers are slightly thicker than base belt. Contact factory for details.







**Solid Urethane belt for added sanitary protection –** See belt type 70 below

High Release Cover belt for handling sticky food such as raw dough – See belt type 71 below

#### Note: Wet applications are limited to specialty belt types 54, 55, 69 and 70 only.

Specialty Belt Selection Guide											at Dorner and needs to be eyor needs.
Belt Type - Finger Splice	Belt Type - Plastic Clipper	Belt Type - Metal Clipper**	Belt Specifications	Belt Thickness	Surface Material	Maximum Part Temp. °C (°F)	Coefficient of Friction	FDA Approved	Chemical Resistance	Moisture Resistance	Special Characteristics or Applications
54	F4	4F	FDA Sealed Edge	1.5 (0.06)	Urethane	80 (176)	Low	x	Good	Good	Packaging, clean room & inspection, wet environment
55	F5	5F	FDA Sealed Edge	1.5 (0.06)	Urethane	80 (176)	High	х	Good	Good	Packaging, clean room & inspection, wet environment
56		6F	Cut Resistant	2.1 (0.08)	Urethane	100 (212)	Med.		Good	Poor	Oily product release, Metal stamping
57		7F	Cut Resistant	2.5 (0.10)	Nitrile	80 (176)	Med.		Poor	Poor	Felt-like, dry metal stamping, glass & ceramic
59	F9	9F	Color Contrasting	1.5 (0.06)	PVC	70 (158)	Med.		Poor	Poor	Black colored, hides overspray from ink jet
60	GO	OG	Color Contrasting	1.2 (0.05)	Urethane	100 (212)	Low	х	Good	Poor	Green colored, Nose Bar
61	G1	1G	Color Contrasting	1.2 (0.05)	Urethane	100 (212)	Low	х	Good	Poor	Blue colored, Nose Bar
63		3G	Electrically Conductive	1.2 (0.05)	Urethane	60 (140)	Low		Good	Poor	Static conductive, electronics handling
64		4G	High Friction	4.4 (0.17)	PVC	90 (194)	V-High		Poor	Poor	Dark Green colored, rough top surface, product cushioning, incline / decline apps
66		6G	Chemical Resistant	1.7 (0.07)	Polyester	100 (212)	Med.	х	V-Good	Poor	Good Cut resistance, metal stamping apps
67		7G	Low Friction Cleated	1.6 (0.06)	Polyester	100 (212)	n/a	x	Good	Poor	Excellent product release, consult factory for part number and how to specify low friction
68	G8		FDA Encased*	2.0 (0.08)	Urethane	100 (212)	Low	х	Good	V-Good	Urethane Enclosed for added sanitary protection
69	G9		FDA Encased*	2.0 (0.08)	Urethane	100 (212)	High	х	Good	V-Good	Urethane Enclosed for added sanitary protection
70			Solid Urethane	2.5 (0.10)	Urethane	100 (212)	Med.	х	Good	V-Good	USDA Approved, wet applications
71			High Release Cover	1.7 (0.07)	Urethane	100 (212)	Low	х	Good	Poor	Raw dough or sticky food product
72			Nose Bar Low Friction	1.2 (0.05)	Urethane	100 (212)	Low	х	Good	Poor	Nose Bar Applications

Dim = mm (in)

Metal Clipper Splices are not available on belts over 1219 mm (48 in) wide.

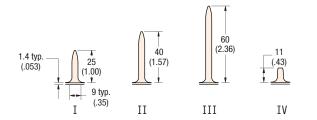
\* Not available in 51 mm (2 in) wide.

\*\*Metal Clipper splices are not sanitary.



### STANDARD CLEATED BELTING

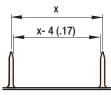




#### **Standard Cleated Belt Selection Guide**

Part No.	Base Belt	Bett Thickness, mm (in)	Belt Surface Material	Cleat Height, mm (in)	Cleat Material	Maximum Part Temp. °C (°F)	FDA Approved	Chemical Resistance	Moisture Resistance	Illustration
Α	High Friction	1.4 (0.055)	Urethane	25 (1.00)	Urethane	80 (176)	Yes	Good	Poor	I
В	High Friction	1.4 (0.055)	Urethane	40 (1.57)	Urethane	80 (176)	Yes	Good	Poor	Ш
C	High Friction	1.4 (0.055)	Urethane	60 (2.36)	Urethane	80 (176)	Yes	Good	Poor	III
G	High Friction	1.4 (0.055)	Urethane	11 (0.43)	Urethane	80 (176)	Yes	Good	Poor	IV
J	Low Friction	1.6 (0.06)	Urethane	25 (1.00)	Urethane	100 (212)	Yes	Good	Poor	I
К	Low Friction	1.6 (0.06)	Urethane	40 (1.57)	Urethane	100 (212)	Yes	Good	Poor	II
L	Low Friction	1.6 (0.06)	Urethane	60 (2.36)	Urethane	100 (212)	Yes	Good	Poor	III
М	Low Friction	1.6 (0.06)	Urethane	11 (0.43)	Urethane	100 (212)	Yes	Good	Poor	IV

### **CLEATED BELT SPACING**



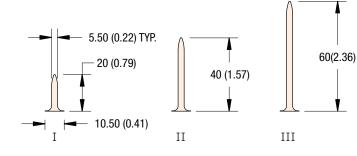
Tolerance  $\pm$  2 (.08)

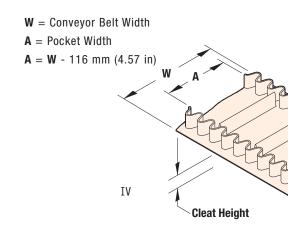
- Cleat spacing is determined by conveyor length and desired number of cleats
- Minimum spacing = 50 mm (2 in)
- Spacing accuracy =  $\pm 2 \text{ mm}$  (.08 in)
- Maximum 2135 mm (84 in) conveyor length for 487 mm (18 in) and wider conveyors
- Maximum 508 mm (20 in) cleat spacing for 2135 mm (84 in) and longer conveyors





### **SPECIALTY CLEATED BELT PROFILES**

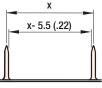




#### **Specialty Cleated Belt Selection Guide**

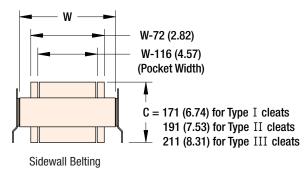
:	Part No.	Base Belt	Belt Thickness, mm (in)	Belt Surface Material	Cleat Height, mm (in)	Cleat Material	Maximum Part Temp. °C (°F)	FDA Approved	Chemical Resistance	Moisture Resistance	Illustration
	N	Sealed Edge	1.5 (0.06)	Urethane	20 (0.79)	Urethane	80 (176)	Yes	Good	Good	Ι
	Р	Sealed Edge	1.5 (0.06)	Urethane	40 (1.57)	Urethane	80 (176)	Yes	Good	Good	II
Cleated	Q	Sealed Edge	1.5 (0.06)	Urethane	60 (2.36)	Urethane	80 (176)	Yes	Good	Good	III
Clea	R	Encased	2.0 (0.08)	Urethane	0.79 (20)	Urethane	100 (212)	Yes	Good	Very Good	I
	S	Encased	2.0 (0.08)	Urethane	40 (1.57)	Urethane	100 (212)	Yes	Good	Very Good	П
	т	Encased	2.0 (0.08)	Urethane	60 (2.36)	Urethane	100 (212)	Yes	Good	Very Good	III
-	U	Standard	1.5 (0.06)	Urethane	30 (1.18)	Urethane	80 (176)	Yes	Good	Poor	IV
Cleated	v	Standard	1.5 (0.06)	Urethane	50 (1.97)	Urethane	80 (176))	Yes	Good	Poor	IV
	w	Sealed Edge	1.5 (0.06)	Urethane	30 (1.18)	Urethane	80 (176)	Yes	Good	Good	IV
Sidewall	х	Sealed Edge	1.5 (0.06)	Urethane	50 (1.97)	Urethane	80 (176)	Yes	Good	Good	IV
Side	Y	Encased	1.5 (0.06)	Urethane	30 (1.18)	Urethane	80 (176)	Yes	Good	Very Good	IV
	Z	Encased	1.5 (0.06)	Urethane	50 (1.97)	Urethane	80 (176)	Yes	Good	Very Good	IV

### SPECIALTY CLEATED BELT SPACING



Tolerance  $\pm\,2$  (.08)

- Cleat spacing is determined by conveyor length and desired number of cleats
- Minimum spacing = 50 mm (2 in)
- Spacing accuracy =  $\pm 2 \text{ mm}$  (.08 in)
- Maximum 2135 mm (84 in) conveyor length for 487 mm (18 in) and wider conveyors
- Maximum 508 mm (20 in) cleat spacing for 2135 mm (84 in) and longer conveyors



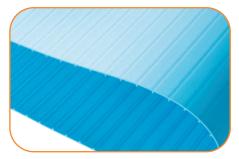
Dim = mm (in)



24



### **POSITIVE DRIVE BELTING**



#### **Specifications**

- Solid Urethane material
- Drive lugs on 25 mm (1 in) spacing
- Available in Blue or White
- Excellent abrasion and tear resistance

(Also available in white)

Positive I	Drive Belt Selec	tion Guid	e				
Description	Surface Material	Belt Thickness, mm (in)	Maximum Part Temp. C (F)	Sanitation Temperature °C (°F)	USDA Approval	Chemical Resistance	Special Characteristics
Flat Belt Smooth, Matte Finish	Homogeneous Thermoplastic, FDA Compliant Polyurethane 01 Smooth top white 02 Smooth top blue	6 mm (0.236 in)	-28 to 80 (-20 to 176)	up to 85 (185)	Х	Very Good	Smooth Surface





### **MODULAR BELT CONVEYOR FEATURES**



### TIP-UP TAILS\*

FOR ACCESS INSIDE CONVEYOR FOR CLEANING AND MAINTENANCE (STRAIGHTS ONLY)



#### INNOVATIVE CURVE CHAIN WITH CENTER BEARING

TO ELEMINATE FRICTION, ALLOWING 4 CURVES ON A SINGLE MOTOR

#### CHAIN IN THE INDUSTRY CHAIN OPENINGS LESS THAN 4 MM, EVEN IN THE CURVES

### FLAT SIDES

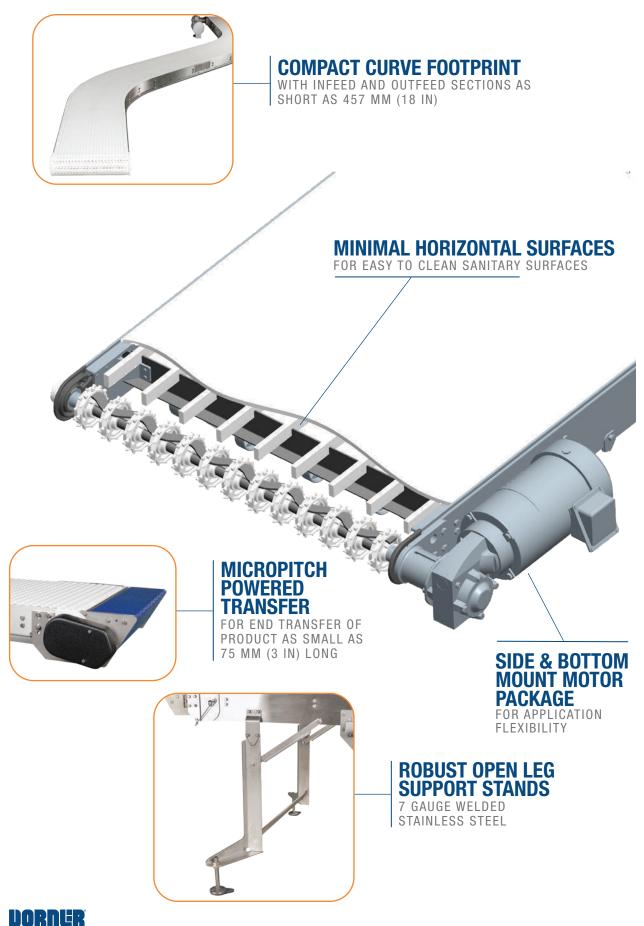
ALLOW FOR FLEXIBILITY WHEN MOUNTING ACCESSORIES, INTERFACING WITH OTHER EQUIPMENT OR TRANSFERRING PRODUCTS

\*Note: Do not run the conveyor with the tail in the tip-up position.



### MODULAR BELT CONVEYOR FEATURES









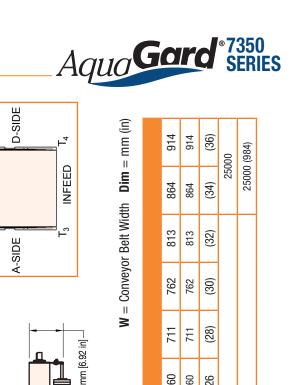
#### **Specifications**

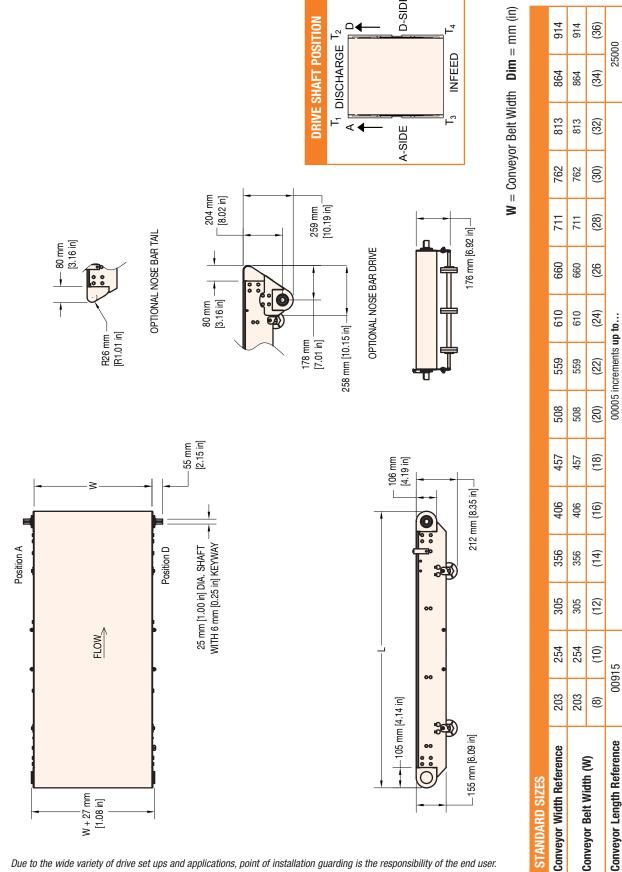
- Loads up to 341 kg (750 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 78.6 m/min (260 ft/min)
- Belt widths: 203 mm (8 in) to 914 mm (36 in)
- Conveyor lengths: 915 mm (36 in) to 25,000 mm (82 ft)
- Bolt-together 304 Stainless Steel Frame
- Hard chrome coated bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Open design with minimal horizontal surfaces
- · Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions



\*\* Note: Do not run the conveyor with the tail in the tip-up position.







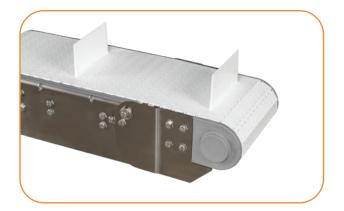
Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.

00005 (0.2) increments up to...

0915 (36)

**Conveyor Length (L)** 





Features optional tip-up tail

#### **Specifications**

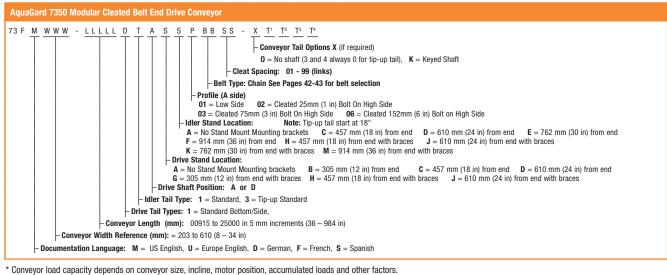
- Loads up to 341 kg (750 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 78.6 m/min (260 ft/min)
- Belt widths: 203 mm (8 in) to 610 mm (24 in)
- Conveyor lengths: 915 mm (36 in) to 25,000 mm (82 ft)
- Cleat heights from 25 mm (1 in) to 75 mm (3 in)
- Bolt-together 304 Stainless Steel Frame
- Hard chrome coated bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Open design with minimal horizontal surfaces
- Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions



OPTIONAL: High Side Guides Up to 152 mm (6 in) tall



OPTIONAL: Tip-Up Tail\*\*

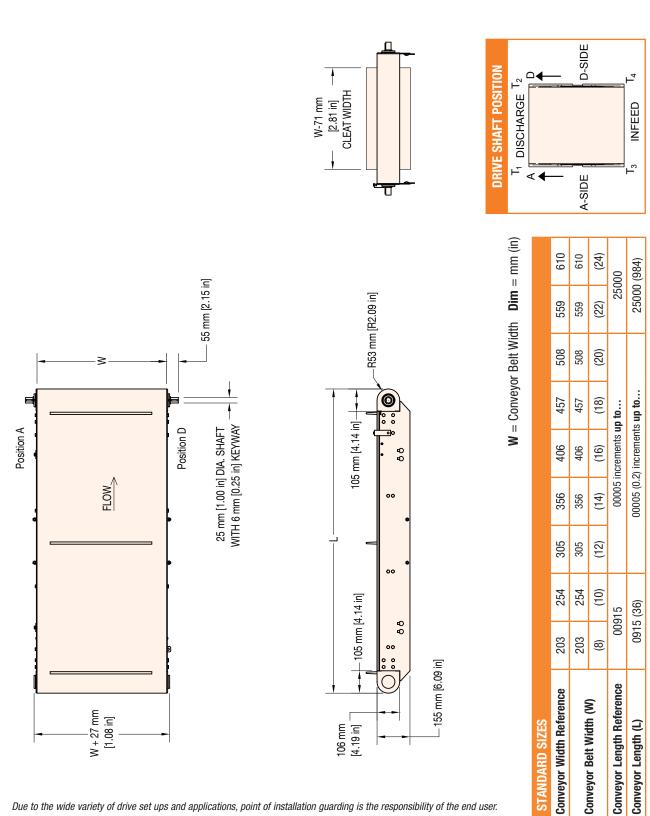


\*\* Note: Do not run the conveyor with the tail in the tip-up position.









Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.





#### **Specifications**

- Loads up to 227 kg (500 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 78.6 m/min (260 ft/min)
- Belt widths: 152 mm (6 in) to 610 mm (24 in)
- Conveyor section lengths: 460 mm (18 in) to 15240 mm (600 in)
- Curve angles of 45, 90, 135 and 180 degrees
- Bolt-together Stainless Steel Frame
- · Mold to width chain up to 457 mm (18 in) wide
- No chain opening exceeding 4 mm (0.15 in)
- FDA approved belting and plastic components
- Chain supported with stainless steel center bearing, increasing load capacity and the ability to have up to 4 curves on a single motor
- Optional powered transfer for smooth transfer of parts as short as 75 mm (3 in) in diameter
- Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions



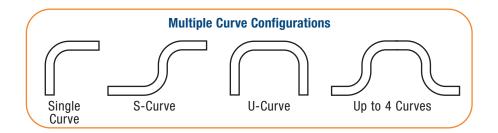
**Curve Innovation** Integrated chain bearing and guide rail eliminates friction



**OPTIONAL: Powered Transfer** For small parts and maintaining speeds through transfer. Series driven with speeds up to 78.6 m/min (260 ft/min). Transfer parts as short as 75 mm (3 in) long.



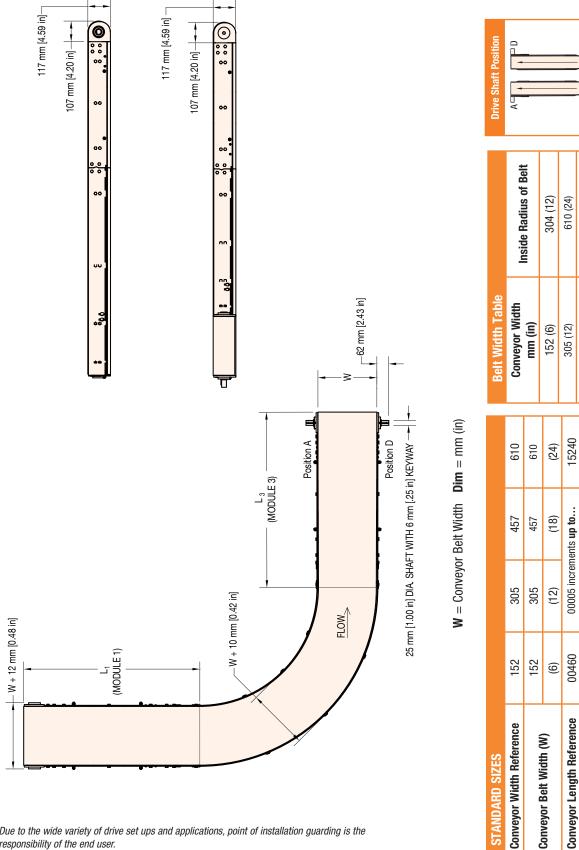
STANDARD FEATURE: Flush Top, Low Side Frame



\* Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors.







Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.





610 (24) 457 (18) 15240 (600) 15240 00005 (0.2) increments up to... 00005 increments up to ... 00460 (18) 00460

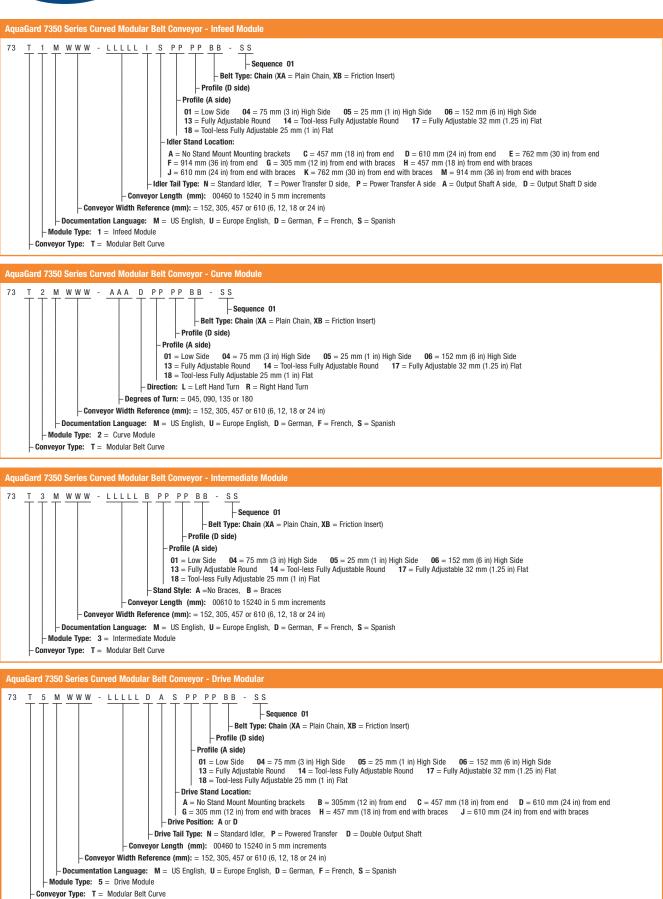
914 (36) 1220 (48)

NOTE: Total length of all sections cannot exceed 25,000 mm (82 ft)

Maximum of 4 curves

**Conveyor Length (L)** 







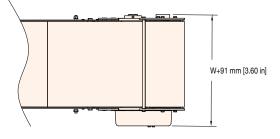
### **POWERED TRANSER**

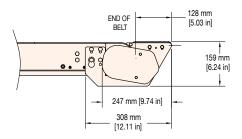




#### **Powered Transfer**

- 13 mm (5 in) diameter roller for small part transfers
- Maintains speed through the transfer
- 8 mm micropitch chain series driven off of tail module
- Conveyor widths 152 mm (6 in) to 914 mm (36 in)
- Belt speeds up to 53 m/min (175 f/min)
- Available as an option on Modular Belt Curve
- Can be located on drive and/or idler tail









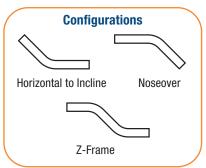






#### **Specifications**

- Loads up to 45 kg (100 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 78.6 m/min (260 ft/min)
- Belt widths: 203 mm (8 in) to 610 mm (24 in)
- Conveyor section lengths: 610 mm (24 in) to 6100 mm (240 in)
- Maximum total conveyor length of 12190 mm (480 in)
- Angles from 5 degrees to 30 degrees in 5 degree increments
- Bolt-together Stainless Steel Frame
- FDA approved belting and plastic components
- Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions







#### OPTIONAL: Friction Insert Belts

OPTIONAL: Tip-Up Tail\*\*

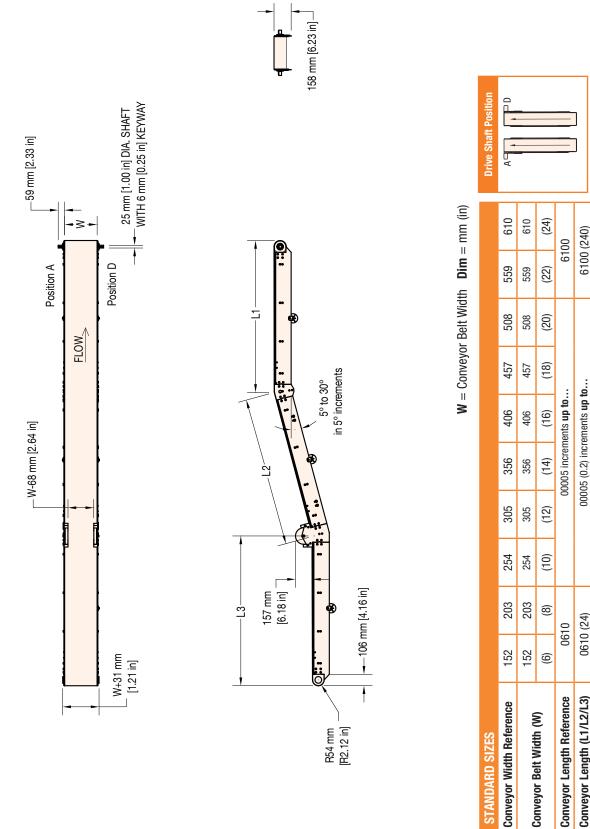
3 B M WWW	W - LLLL -	LLLL - LLLL AA E	D 1 S S P P B B - X T <sup>1</sup> T <sup>2</sup> T <sup>3</sup> T <sup>4</sup>
	- Com Conveyor Width	- Angl - Angl - Conveyor L3 - Conveyor L2 Angled Si reyor L1 Upper Horizontal Se Reference (mm): = 203 to 6	<ul> <li>Conveyor Tail Options X (if required) *See Drive Shaft Position Chart on next page 0 = No shaft (3 and 4 always 0 for tip-up tail), K = Keyed Shaft, P = Power Transfer Keyed Shaft - Belt Type: Chain See Pages 42-43 for belt selection - Profile: 01 = Low Side 04 = 75 mm (3 in) High Side 05 = 25 mm (1 in) High Side 06 = 152 mm (6 in) High Side 13 = Fully Adjustable Round 14 = Tool-less Fully Adjustable Round 17 = Fully Adjustable 32 mm (1.25 in) Flat 18 = Tool-less Fully Adjustable 25 mm (1 in) Flat - Idler Stand Location: Note: Tip-up tail start at 18" A = No Stand Mount Mounting brackets C = 457 mm (18 in) from end D = 610 mm (24 in) from end E = 762 mm (30 in) from erf F = 914 mm (36 in) from end with braces J = 610 mm (24 in) from end with braces K = 762 mm (30 in) from end with braces M = 914 mm (36 in) from end with braces - Drive Stand Location: A = No Stand Mount Mounting brackets B = 305 mm (12 in) from end with braces J = 610 mm (24 in) from end with braces - Drive Shaft Position: A or D - Drive Tail Type: 1 = Standard, 3 = Tip-up Standard Belt Direction: E = Inclining, D = Declining : 05 degrees thru 30 degrees in 05 degree increments B Lower Horizontal Section Length (mm): 0610 to 6100 (24 - 240 in) extion Length (mm): 0610 to 6100 (24 - 240 in) ction Length (mm): 0610 to 6100 (24 - 240 in)</li> </ul>

\* Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors. \*\* Note: Do not run the conveyor with the tail in the tip-up position.













## LPZ (Z-FRAME) MODULAR CLEATED BELT



#### **Specifications**

- Loads up to 45 kg (100 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 78.6 m/min (260 ft/min)
- Belt widths: 152 mm (6 in) to 610 mm (24 in)
- Conveyor section lengths: 610 mm (24 in) to 6100 mm (240 in)
- Maximum total conveyor length of 25,000 mm (82 ft)
- Angles from 30 degrees to 60 degrees in 5 degree increments
- Bolt-together Stainless Steel Frame
- FDA approved belting and plastic components
- Suitable for use in wet environments
- Stainless Steel construction for wipe down and low pressure washdown with non-caustic solutions



73 F <u>M</u>	<u>WWW</u> - <u>LLLL</u> - <u>LLLL</u> - <u>L</u>	<u>LL AA E D 1 A S S P BB SS - X T<sup>1</sup> T<sup>2</sup> T<sup>3</sup> T<sup>4</sup></u>
		- Conveyor Tail Options X (if required) *See Drive Shaft Position Chart on next page
		<b>0</b> = No shaft (3 and 4 always 0 for tip-up tail), <b>K</b> = Keyed Auxiliary Shaft
		<b>Spacing:</b> 01 - 99 (links)
		- Belt/Cleat Type: Chain See Pages 42-43 for belt selection
		Profile: 0 = Low Side 2 = Cleated 25mm (1 in) Bolt On High Side
		<b>3</b> = Cleated 75mm (3 in) Bolt On High Side <b>6</b> = Cleated 152mm (6 in) Bolt on High Side
		<ul> <li>Idler Stand Location: Note: Tip-up tail start at 18"</li> <li>A = No Stand Mount Mounting brackets C = 457 mm (18 in) from end M = 457 mm (24 in) from end with braces J = 610 mm (24 in) from end with braces K = 762 mm (30 in) from end with braces M = 914 mm (36 in) from end with braces</li> <li>Drive Stand Location: A = No Stand Mount Mounting brackets B = 305 mm (12 in) from end K = 457 mm (18 in) from end with braces J = 610 mm (24 in) from end with braces A = 80 Stand Mount Mounting brackets B = 305 mm (12 in) from end C = 457 mm (18 in) from end with braces J = 610 mm (24 in) from end with braces H = 457 mm (18 in) from end with braces J = 610 mm (24 in) from end with braces H = 457 mm (18 in) from end with braces J = 610 mm (24 in) from end with braces</li> <li>Drive Stand Position: A or D</li> <li>Idler Tail Type: 1 = Standard, 3 = Tip-up Standard</li> </ul>
		- Drive Tail Type: 1 = Standard Bottom/Side
		- Belt Direction: E = Inclining, D = Declining
		- Angle: 30 degrees thru 60 degrees in 05 degree increments
		Conveyor L3 Lower Horizontal Section Length (mm): 0610 to 6100 (64 - 240 in)
	– Conveyor	L2 Angled Section Length (mm): 0610 to 6100 (24 – 240 in)
	- Conveyor L1 Upper H	rizontal Section Length (mm): 0610 to 6100 (24 – 240 in)
	– Conveyor Width Reference (mm): =	152 to 610 (6 - 24 in)
- Fi	<b>Documentation Language:</b> M = US Engli	sh, $\mathbf{U}$ = Europe English, $\mathbf{D}$ = German, $\mathbf{F}$ = French, $\mathbf{S}$ = Spanish

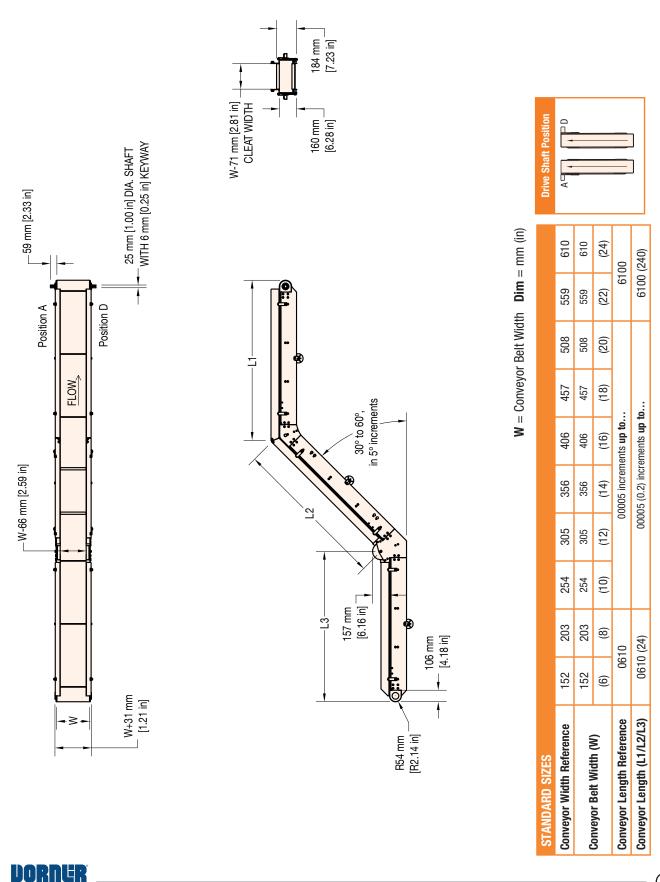
\* Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors. \*\* Note: Do not run the conveyor with the tail in the tip-up position.

> Order gearmotor mounting packages and gearmotors separately, see pages 44-48. For support stands and accessories, see page 50-55.



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## LPZ (Z-FRAME) MODULAR CLEATED BELT

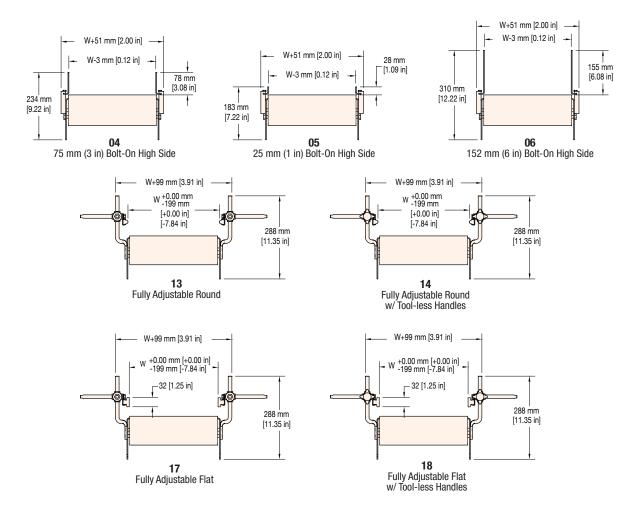




39)



### **MODULAR BELT PROFILES**



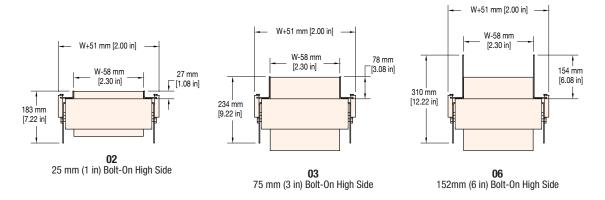
W = Conveyor Belt Width Dim = mm (in)

Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.





### **CLEATED MODULAR BELT PROFILES**



W = Conveyor Belt Width Dim = mm (in)

Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.





### **MODULAR BELT TYPES**



### **Flat Top Belts**

provide a closed surface for complete product support, easy wiping.



### **Flush Grid Belts**

provide an open surface for better drainage, cleaning or air flow/cooling.



### **Friction Inserts**

are available for incline applications. Inserts may be placed along entire length of the belt or spaced on 51 mm (2 in), 102 mm (4 in), 152 mm (6 in) or 305 mm (12 in) centers. Friction inserts are indented 51 mm (2 in) from each belt edge.



### **Curve Belts**

provide a tight radius, space saving corner. Side tabs ensure positive belt tracking with a flush top design. Stainless bearings reduce friction providing capability of up to (4) corners.



### **Cleated Belts**

provide a sturdy cleat for elevation at steep inclines. Cleats available in 25 mm (1 in) and 76 mm (3 in) heights.





#### **Modular Belt Selection Guide**

					ando											
о	Bett Type	Part Number Reference	Description mm (in)	% Open	Pitch mm (in)	Belt Thickness mm (in)	Calor	Belt Material	Rod Material	Minimum Product Temperature C (F)	Maximum Product Temperature C (F)***	FDA / CFIA Approved*	Chemical Resistance	Wear Resistance	Maximum Incline / Decline (degrees)**	Nose Bar Idler Diameter mm (in)
	y V	MA	Flat top	0	25 (1)	11 (.43)	White	Acetal	Polyethylene	-40 (-40)	102 (215)	Y	Good	V-Good	5	N/A
	d Driv Pulle	MB	Flat top	0	25 (1)	11 (.43)	White	Polypropylene	Polypropylene	5 (40)	135 (275)	Y	V-Good	Good	5	N/A
elts	Standard Drive & Idler Pulley	MC	Flush grid	35	25 (1)	10 (.39)	White	Acetal	Polypropylene	5 (40)	93 (200)	Y	Good	V-Good	5	N/A
Straight Flat Belts	Sta &	MD	Flush grid	35	25 (1)	10 (.39)	White	Polypropylene	Polypropylene	5 (40)	105 (220)	Y	V-Good	Good	5	N/A
ight F	er er	MG	Flat top	0	13 (.5)	10 (.39)	White	Acetal	Nylon	-40 (-40)	93 (200)	Y	Good	Good	5	25 (1)
Strai	Nose Bar Drive or Nose Bar Idler	MH	Flat top	0	13 (.5)	10 (.39)	White	Polypropylene	Nylon	5 (40)	105 (220)	Y	V-Good	V-Good	5	25 (1)
	e Bar se Ba	MJ	Flush grid	25	13 (.5)	10 (.39)	White	Acetal	Nylon	-40 (-40)	93 (200)	Y	Good	Good	5	25 (1)
	Nos	MK	Flush grid	25	13 (.5)	10 (.39)	White	Polypropylene	Nylon	5 (40)	105 (220)	Y	V-Good	V-Good	5	25 (1)
		NA	Flat Top w/25 (1) Cleats	0	25 (1)	11 (.43)	White	Acetal	Polyethylene	-40 (-40)	102 (215)	Y	Good	V-Good	60	N/A
	ley	NB	Flat Top w/25 (1) Cleats	0	25 (1)	11 (.43)	White	Polypropylene	Polypropylene	5 (40)	135 (275)	Y	V-Good	Good	60	N/A
Belts	ller Pul	NC	Flat Top w/75 (3) Cleats	0	25 (1)	11 (.43)	White	Acetal	Polyethylene	-40 (-40)	102 (215)	Y	Good	V-Good	60	N/A
Cleated Straight Belts	Standard Drive and Idler Pulley	ND	Flat Top w/75 (3) Cleats	0	25 (1)	11 (.43)	White	Polypropylene	Polypropylene	5 (40)	135 (275)	Y	V-Good	Good	60	N/A
ated S	rd Drive	NE	Flush Grid w/25 (1) Cleats	35	25 (1)	10 (.39)	Blue/ White <sup>†</sup>	Acetal	Polypropylene	5 (40)	93 (200)	Y	Good	V-Good	60	N/A
Cle	Standa	NF	Flush Grid w/25 (1) Cleats	35	25 (1)	10 (.39)	White	Polypropylene	Polypropylene	5 (40)	105 (220)	Y	V-Good	Good	60	N/A
		NG	Flush Grid w/75 (3) Cleats	35	25 (1)	10 (.39)	Blue/ White <sup>†</sup>	Acetal	Polypropylene	5 (40)	93 (200)	Y	Good	V-Good	60	N/A
		NH	Flush Grid w/75 (3) Cleats	35	25 (1)	10 (.39)	White	Polypropylene	Polypropylene	5 (40)	105 (220)	Y	V-Good	Good	60	N/A
Friction Top Straight Belts	Standard Idler Pulley	See Table Below	Flat top w/friction inserts	0	25 (1)	14 (.55)	White	Polypropylene	Polypropylene	5 (40)	60 (140)	Y	V-Good	Poor	30	N/A
Fricti Straig	Star Idler	See Table Below	Flush grid w/friction inserts	35	25 (1)	14 (.55)	White	Polypropylene	Polypropylene	5 (40)	60 (140)	Y	V-Good	Poor	30	N/A
Curved Flat Belts	Standard and Nose Bar Idler Pulley	ХА	Plain Chain	0	25 (1)	13 (.51)	White	Acetal	Polypropylene	-20 (-4)	60 (140)	Y	Good	V-Good	5	N/A
Curved F	Stands Nose Bar I	XB	Friction Insert	0	25 (1)	13 (.51)	White	Acetal	Polypropylene	-20 (-4)	60 (140)	Y	Good	V-Good	30	N/A

\*  $\mathsf{FDA} = \mathsf{Food}$  and Drug Administration,  $\mathsf{CFIA} = \mathsf{Canadian}$  Food Inspection Agency

\*\* Temperature, environmental conditions, product materials and product configuration effect the maximum incline or decline. Product testing is recommended.

\*\*\* These do not indicate ambient running conditions. Ambient temperature range is -1 to 38 C (30 to 100 F).

Product temperature is dependent on length of time product is in direct contact with belt surface. Product testing is recommended.

<sup>†</sup>Belt color dependent on belt width selection

FRICTION TOP STRAIGHT PLASTIC CHAIN:	Part numbe	er reference	chart		
Flat Top w/ Friction Inserts Part Number Reference	TA	ТВ	TC	TD	TE
Flush Grid w/ Friction Inserts Part Number Reference	N/A	TF	TG	TH	TJ
Friction Insert Spacing	25 mm (1 in)	51 mm (2 in)	102 mm (4 in)	152 mm (6 in)	305 mm (12 in)

Note: Friction Top not available on nose bar drives

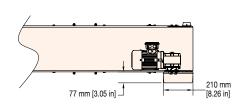


#### **GEARMOTOR MOUNTING PACKAGE & GEARMOTOR SELECTION STEPS**

- **Step 1:** Select a **Gearmotor Mounting Package** (below).
- **Step 2:** Use the **Belt Speed Chart** (page 46) to determine your desired belt speed based on conveyor type and mount package. See Gearmotor column.
- **Step 3:** Locate the appropriate gearmotor chart (pages 47-48) in terms of **Painted** vs. **Stainless Steel** based on your gearmotor chart numbers

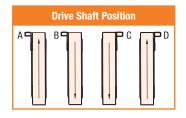


Aqua Gara



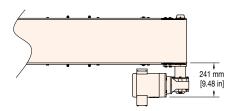
Bottom Mount Package, 90° Gearmotor

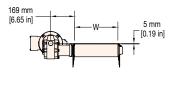
- Includes stainless steel gearmotor mounting bracket, timing belt, plated pulleys, guard and mounting hardware
- · Conveyor belt speed can be adjusted with optional ratio pulley kits





#### Side Mount Package, 90° Gearmotor



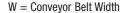


305 mm

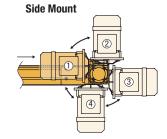
[12.03 in]

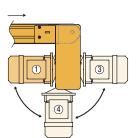
161 mm [6.34 in]

· Includes stainless steel gearmotor bracket, coupling and mounting hardware



90° Gearmotor Location Options





**Bottom Mount** 

Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user. Note: Conveyor and gearmotor are not included in the mounting package and must be ordered separately. Dimensions = in (mm)

88 mm [3.45 in]

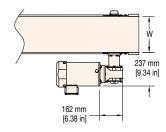
317 mm

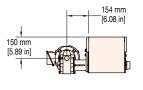
[12.50 in]





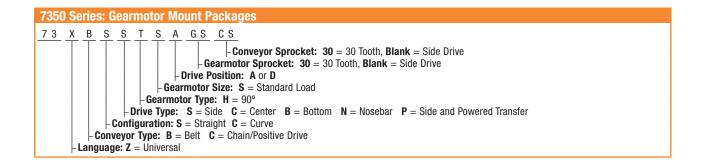
#### Nose Bar Mount Package, 90° Gearmotor





• Includes stainless steel gearmotor mounting bracket and mounting hardware

W = Conveyor Belt Width



Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.



### **BELT SPEED CHARTS**



Fixed S	peed										
		Belt S	Speed			2014 5	Mount F	Package	Pulle	ey Kit	<b>.</b> .
Belted C	Conveyor	Modul	ar Belt	Positive I	Drive Belt	RPM From Gearmotor	Bottom	Side	Drive	Driven	Gearmotor Chart
ft/min	m/min	ft/min	m/min	ft/min	m/min		Dottom	0.00	Pulley	Pulley	
26	8	30	9	30	9	29	Х	Х	30	30	1,2
33	10	36	11	36	11	29	Х		36	30	1,2
39	12	46	14	46	14	44	Х	Х	30	30	1,2
49	15	52	16	52	16	44	Х		36	30	1,2
52	16	59	18	59	18	58	Х	Х	30	30	1,2
62	19	72	22	72	22	58	Х		36	30	1,2
79	24	89	27	89	27	87	Х	Х	30	30	1,2
95	29	105	32	105	32	87	Х		36	30	1,2
108	33	118	36	118	36	117	Х	Х	30	30	1,2
128	39	141	43	144	44	117	Х		36	30	1,2
161	49	177	54	177	54	175	Х	Х	30	30	1,2
194	59	213	65	213	65	175	Х		36	30	1,2

Variable	e Speed										
		Belt S	peed			RPM at	Mount F	Package	Pulle	ey Kit	
Belted C	onveyor	Modula	ar Belt	Positive [	Drive Belt	60Hz	Bottom	Side	Drive	Driven	Gearmotor Chart
ft/min	m/min	ft/min	m/min	ft/min	m/min	Gearmotor	Dottom	oluc	Pulley	Pulley	
3 to 26	1 to 8	3 to 30	1 to 9	3 to 30	1 to 9	29	Х	Х	30	30	3,4
3 to 33	1 to 10	4 to 36	1 to 11	4 to 36	1 to 11	29	Х		36	30	3,4
4 to 39	1 to 12	5 to 46	1 to 14	5 to 46	1 to 14	44	Х	Х	30	30	3,4
5 to 49	1 to 15	5 to 52	2 to 16	5 to 52	2 to 16	44	Х		36	30	3,4
5 to 52	2 to 16	6 to 59	2 to 18	6 to 59	2 to 18	58	Х	Х	30	30	3,4
6 to 62	2 to 19	7 to 72	2 to 22	7 to 72	2 to 22	58	Х		36	30	3,4
8 to 79	2 to 24	9 to 89	3 to 27	9 to 89	3 to 27	87	Х	Х	30	30	3,4
10 to 95	3 to 29	10 to 105	3 to 32	10 to 105	3 to 32	87	Х		36	30	3,4
11 to 108	3 to 33	12 to 118	4 to 36	12 to 118	4 to 36	117	Х	Х	30	30	3,4
13 to 128	4 to 39	14 to 141	4 to 43	14 to 144	4 to 44	117	Х		36	30	3,4
16 to 161	5 to 49	18 to 177	5 to 54	18 to 177	5 to 54	175	Х	Х	30	30	3,4
19 to 194	6 to 59	21 to 213	7 to 65	21 to 213	7 to 65	175	Х		36	30	3,4





165 (6.50)

442

50

Regulatory

**Approvals** 

(UL

SP

### **Fixed Speed**

#### Chart 1

- Nema 56C
- IP 55 Protection Rating
- · Sealed Gearmotor with H1 FDA approved Lubricant
- FDA approved white epoxy painted motor
- · Aluminum gearbox with sanitary coating
- Totally enclosed non-ventilated motor

193 (7.60)

85 (3.35)

110 (4.33)

<ul> <li>Iotally enclosed f</li> <li>3 Phase, 60 Hz</li> </ul>	IUII-Ventilateu III	0101					
Part Number	RPM	Нр	kW	Volts	FLA	in Ibs.	Nm
71M060HS423FN 71M040HS423FN 71M030HS423FN 71M020HS423FN 71M015HS423FN 71M010HS423FN	29 44 58 87 117 175	0.5 0.5 1 1 1 1.5	0.37 0.37 0.74 0.74 0.74 1.11	230/460 230/460 208-230/460 208-230/460 208-230/460 208-230/460	1.6/0.8 1.6/0.8 3.5-3.2/1.6 3.5-3.2/1.6 3.5-3.2/1.6 4.6-4.2/2.1	442 486 487 407 470 442	50 55 55 46 53 50

104 (4.09)

11

58 (2.27)

212 (8.35)

444 (17.47)

160 (6.30)

60 (2.36)

᠕

0

130 (5.12)

60 (2.36)

#### Chart 2

- Nema 56C
- IP 55 Protection Sealed Gearmoto
- H1 FDA approved Lubricant
- · Stainless Steel m
- Aluminum gearbo sanitary coating
- Totally enclosed non-ventilated m
- 3 Phase, 60 Hz Part Number

71M060HZS423FN 71M040HZS423FN 71M030HZS423FN 71M020HZS423FN 71M015HZS423FN 71M010HZS423FN

Rating r with d $198(7.81)$ hotor bx with $110(4.33)$ 85(3.35) otor	225 (8.88)	110 (4.32) 110 (4.32) 55 (2.17) 130 (5.12) 55 (2.17) 60 (2.36)		66 (18.33)	177 (6.96)	Regulatory Approvals	
RPM	Нр	kW	Volts	FLA	in Ibs.	Nm	
29 44 58 87 117	0.5 0.5 1 1 1	0.37 0.37 0.74 0.74 0.74	230/460 230/460 208-230/460 208-230/460 208-230/460	1.6/0.8 1.6/0.8 3.5-3.2/1.6 3.5-3.2/1.6 3.5-3.2/1.6	442 486 487 407 470	50 55 55 46 53	

208-230/460

**CE Note:** When buying a gearmotor only without the starter, the customer must supply their own on/off switch and motor overload protection to comply with the CE Safety Directive.

175

1.5

1.11

FLA = Full Load Amperes Some motors and gear reducers may normally operate hot to the touch. Consult factory for specific operating temperatures. Note: Dimensions = mm (in)

4.6-4.2/2.1





Regulatory

**Approvals** 

(ኪ)

SP.

165 (6.50)

### **Variable Speed**

### Chart 3

- Nema 56C • IP 55 Protection Rating
- · Sealed Gearmotor with H1 FDA approved Lubricant
- FDA approved white epoxy painted motor
- · Aluminum gearbox with
- .

193 (7.58)

85 (3.35)

110 (4.33)

131 (5.16

- •

sanitary coating • Totally enclosed r • 3 Phase, 6 to 60 • Order controller s	Hz	otor					
Part Number	RPM	Нр	kW	Volts	FLA	in Ibs.	Nm
71M060HS423EN 71M040HS423EN 71M030HS423EN 71M020HS423EN 71M015HS423EN 71M015HS423EN 71M010HS423EN	29 44 58 87 117 175	0.5 0.5 1 1 1 1.5	0.37 0.37 0.74 0.74 0.74 1.11	230/460 230/460 208-230/460 208-230/460 208-230/460 208-230/460	1.6/0.8 1.6/0.8 3.5-3.2/1.6 3.5-3.2/1.6 3.5-3.2/1.6 4.6-4.2/2.1	442 486 487 407 470 442	50 55 55 46 53 50

104 (4.09)

1

58 (2.29)

444 (17.47)

160 (6.30)

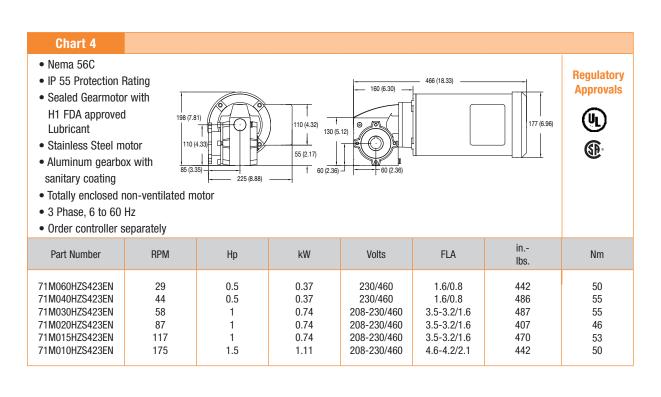
/m

60 (2 .36

0

130 (5.12)

60 (2.36) -



**CE Note:** When buying a gearmotor only without the starter, the customer must supply their own on/off switch and motor overload protection to comply with the CE Safety Directive.

FLA = Full Load Amperes Some motors and gear reducers may normally operate hot to the touch. Consult factory for specific operating temperatures. Note: Dimensions = mm (in)



48



7.9 (200)

7.9 (200)

7.9 (200)

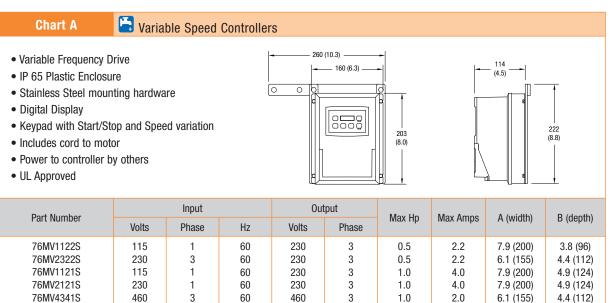
1.0 - 1.59

4.9 (124)

4.9 (124)

4.9 (124)

### **Variable Speed Controllers**



230

230

460

60

60

60

3

3

3

2.0

2.0

2.0

60

6.8

6.8

3.4

### **MANUAL MOTOR STARTER**

76MV2127S

76MV2327S

76MV4347S

230

230

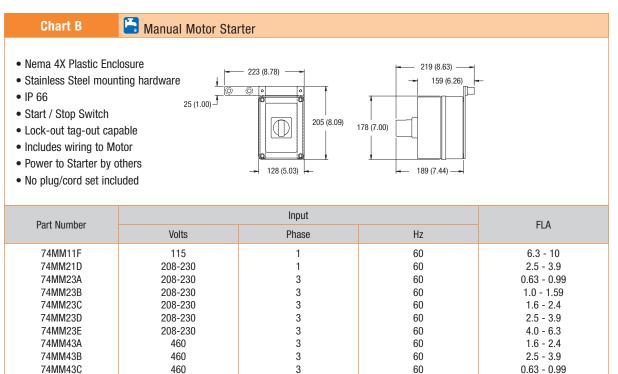
460

1

3

3

460



3

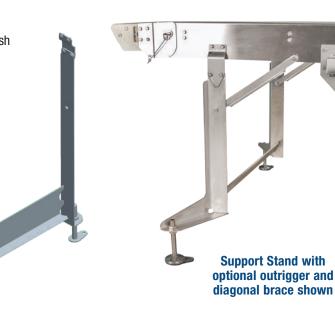
74MM43D FLA = Full Load Amperes





#### **Fixed Height Stands**

- Welded open frame Stainless Steel construction with a 2B finish
- $\bullet$  Adjustable angle connecting plate from Ø to 60 degrees
- For 152 mm (6 in) to 914 mm (36 in) Widths:
- $\pm$  51 mm (2 in) of adjustment
- Optional swivel locking caster
- Optional diagonal brace for added stability
- For available heights see page 52









**OPTIONAL:** Diagonal Brace

#### STANDARD FEATURE: Fixed Foot

OPTIONAL: Swivel Caster

#### **Outriggers**

- Fixed height support stands are available with outriggers
- Outriggers provide added support for tall applications
- Welded Stainless Steel construction with 2B finish
- Extend stand width 316 mm (12.43 in)





### **SUPPORT STANDS**



#### **Tall Supports Stands**

- Welded tubular Stainless Steel construction brushed to #4 finish
- ±50 mm (2 in) of adjustment
- Adjustable angle connecting plate from Ø to 60 degrees
- Includes diagonal brace for stability
- Tall Support Stands require the use of floor anchors
- For available heights see page 52





#### **Low Height Supports Stands**

- All components are Stainless Steel brushed to #4 finish
- ±51 mm (2 in) of adjustment
- Fixed Foot self-aligns 10° for sloped floors
- Caster is swivel locking
- · Horizontal conveyor mounts only
- For available heights see page 52





Swivel Locking Caster Model

**Fixed Foot Model** 





#### **Support Stand Heights** Fixed Foot Caster Foot Shortest Stand Tallest Stand Shortest Stand Tallest Stand Туре Minimum Maximum Minimum Maximum Minimum Maximum Minimum Maximum Top Of Belt 350 (13.8) 450 (17.71) 1900 (74.8) 2000 (78.7) 450 (17.71) 550 (21.6) 2000 (78.7) 2100 (82.7) Fixed Height Tall Support 1850 (72.8) 1950 (76.8) 2400 (94.5) 2500 (98.4) N/A N/A N/A N/A Short Height 200 (7.87) 300 (11.8) 275 (10.8) 375 (14.7) 300 (11.8) 400 (15.7) 375 (14.7) 475 (18.7)

Note: Dimensions = mm (in)

Height increments of 25 mm (1 in)

Top of belt heights for Modular Belt Curve are 25 mm shorter

Fixed Height Sup	port S	tands	Width	s*												
Conveyor Width	152	203	254	305	356	406	457	508	559	610	660	711	762	813	864	914
Conveyor Belt	152	203	254	305	356	406	457	508	559	610	660	711	762	813	864	914
Width (W)	(6)	(8)	(10)	(12)	(14)	(16)	(18)	(20)	(22)	(24)	(26)	(28)	(30)	(32)	(34)	(36)
Stand width	282	333	384	435	486	536	587	638	689	740	790	841	892	943	994	1044
	(11)	(13)	(15)	(17)	(19)	(21)	(23)	(25)	(27)	(29)	(31)	(33)	(35)	(37)	(39)	(41)

\*Dimensions shown are nominal. Contact factory for specific layout and dimensions.

\*Contact factory for Tall and Low Height Support Stand configurations.

7350 Series: Support Stands
73 <u>H X WWW - HHHH HHHH S S TT F</u>
Foot: F = Fixed Foot B = Fixed Foot with Brace (brace not on low height stands) C = Caster with Brace (brace not on low height stands) Stand Type: AM = Angle Mount AR = Angle Mount w/ Outriggers LH = Low Height Support Stand TA = Tall Angle Mount -Configuration: S = Straight C = Curve Belt/Chain: B = Belt C = Chain (Modular Belt) -Maximum Top of Belt Height = 0100 mm (4 in) more than minimum -Width (mm): 152 to 914 (6 - 36 in) -Language: Z = Universal -Type: H = H Type Support Stand





### **Horizontal Ceiling Supports**



#### **Specifications**

**Specifications** 

Part Number

both sides of conveyor

• All components are Stainless Steel brushed to #4 finish

· All components are Stainless Steel brushed to #4 finish

73ACS

• Includes a pair of mounting brackets and hardware for support on

Compatible with 12 mm (0.5 in) threaded support rod (not provided)
Mounting block pivots to support incline mounts from 0° to 60°

- Includes a pair of mounting brackets and hardware for support on both sides of conveyor
- Compatible with 12 mm (0.5 in) threaded support rod (not provided)

Part Number	73HCS
-------------	-------

### **Adjustable Angle Ceiling Supports**



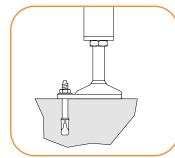
### Sanitary Floor Anchor Kits - Type 1

#### Specifications

- 10 mm (.375 in) x 40 mm (1.57 in) drop in
- Stainless Steel
- Anchor is flush with floor upon removal of bolt
- Two (2) per anchor kit

Part Number FAS-1

### Sanitary Floor Anchor Kits - Type 2



#### **Specifications**

- 10 mm (.375 in) x 70 mm (2.75 in)
- Stainless Steel
- Threaded anchor bolt protrudes above floor after installation
- Two (2) per anchor kit

Part Number FAS-2

Dimensions = mm (in)





### **Accessory Mounting Bar**



#### **Specifications**

- Used for mounting adjustable devices such as photoeyes and sensors
- · Can be mounted directly to frame or in combination with guide brackets
- Includes 1248 mm (48 in) long bar with (3) mounting brackets (Bar can be cut to length as needed)
- Compatible with Value Guide blocks (VG-021-02)
- All brackets and fasteners are Stainless Steel

	Part Number	517509	Bar Assembly 1248 mm (48 in) long
--	-------------	--------	-----------------------------------

### **Photo Eye and Reflector Mounting Brackets**



#### **Specifications**

- Mounts standard 18 mm (0.71 in) barrel or nose mount photo eyes or sensors
- Attach bracket or accessories without frame modifications
- Adjustable along the length of the conveyor
- Adjustable height and angle positioning
- All adjustment screws located outside the food zone
- (3) Photo Eye Types
  - Thru beam includes (2) mounts
  - Reflector includes (1) photo eye mount and (1) reflector mound (reflector included)
- Accessory Mounting Bar Style: (3) Mount versions:
  - To fixed post (does not include mounting post)
  - To fixed post (includes mounting post)
  - To accessory mounting bar (includes Value Guide Block and adjustable post)

 7350 Series: Photo Eye Bracket - Accessory Mounting Bar Style

 7352
 P M
 F P

 Post Type: NP = Fixed Post w/o post included

 FP = Fixed Post w/ post included
 AM = Accessory Mount

 Mount Type: PM = Photoeye Mount
 RM = Reflective Mount

 CM = Convergent Mount
 CM = Convergent Mount





### **Roller Transfer Plate**



### **Overhead Guide**



#### **Specifications**

- · For part hold down or cover closing
- Adjustable height and position across width
- Round nose UHMW guide with stainless steel backing
- Lengths: 914 mm (36 in) to 3048 mm (1200 in) in 25 mm (1 in) increments
- Horizontal Brackets provided for every 609 mm (24 in) of length
- · Available in standard adjustable and tool-less adjustable mount styles
- All brackets and fasteners are Stainless Steel
- Does not include vertical mounting post. To be used with profiles 13 thru 18 or upper guide assembly

#### 7350 Series: Overhead Guide







#### Specifications

- Widths: 152 mm (6 in) to 1524 mm (60 in) available in 50 mm (2 in) increments
- Lengths: 610 mm (24 in) to 25375 mm (999 in) available in 25 mm (1 in) increments maximum section lengths of 2997 mm (118 in)
- · Tool-less hook design for fast removal and rapid cleaning
- Provides a 50 mm (2 in) window for clean-out access without removal
- All pans equipped with a 25 mm (1 in) containment lip on all sides
- Contact factory for additional options and ordering

Dimensions = mm (in)





### **Regulatory Approvals:**

#### **Conveyors:**

All Dorner 7350 Series standard conveyors (not including gearmotors and controllers) are CE approved. CE approval follows the provisions of the following directives; Machine Directive 2006/42/EC, EU Low Voltage Directive 2006/95/EC, and EMC Directive 2004/108/EC. All conveyors are marked with the CE symbol on the Dorner serial number tag located on the conveyor frame. Contact the factory for the CE Declaration of Conformity.

All Dorner 7350 Series standard conveyors (not including gearmotors and controllers) are designed and manufactured in accordance with the restrictions defined in the "Restriction of Hazardous Substances" directive, citation 2002/95/EC, commonly known as RoHS. All conveyors are marked with the RoHS symbols on the Dorner serial number tag located on the conveyor frame.

#### **Gearmotors and Controllers:**

All Dorner 7350 Series gearmotors and controllers carry one or more of the following approvals. Products are not covered by each approval. Please see the appropriate part number on the Gearmotor and controller charts located in this manual. In addition, regulatory symbols are located on the product information tags located on the product.

CE	CE Marking on a product is a manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislation, in practice by the Product Directives. CE Marking on a product ensures the free movement of the product within the European Union (EU).
RoHS	This directive restricts (with exceptions) the use of six hazardous materials in the manu- facture of various types of electronic and electrical equipment. It is closely linked with the Waste Electrical and Electronic Equipment Directive (WEEE) 2002/96/EC which sets collec- tion, recycling and recovery targets for electrical goods and is part of a legislative initiative to solve the problem of huge amounts of toxic e-waste.
<b>91</b> °	The UL Recognized Component mark is for products intended to be installed in another device, system or end product. This Recognized Component Mark is for the United States only. When a complete product or system containing UL Recognized Components is evaluated, the end-product evaluation process can be streamlined.
c <b>FL</b> <sup>®</sup> us	The UL Recognized Component mark is for products intended to be installed in another device, system or end product. This Recognized Component Mark is for the United States and Canada. When a complete product or system containing UL Recognized Components is evaluated, the end-product evaluation process can be streamlined.
<b>€</b> ₽®®	CSA International (Canadian Standards Association), is a provider of product testing and cer- tification services for electrical, mechanical, plumbing, gas and a variety of other products. Recognized in the U.S., Canada and around the world, CSA certification marks indicate that a product, process or service has been tested to a Canadian or U.S. standard and it meets the requirements of an applicable CSA standard or another recognized document used as a basis for certification.
cUUus	The UL Listing Mark means UL found that representative product samples met UL's safety requirements. These requirements are primarily based on UL's own published standards for safety. The C-UL-US Mark indicates compliance with both Canadian and U.S. requirements. The products with this type of Mark have been evaluated to Canadian safety requirements and U.S. safety requirements.





### **Baking Industry Standards and Certifications:**

AquaGard 7350 Series Conveyors are often used in food production or food packaging areas where proper design of equipment is essential to maintain proper food safety. AquaGard 7350 Series conveyors are designed for light wash down environments typically seen in packaged food, dry food production or confectionary production. In these applications the correct installation and application of the conveyor is critical to the proper running of the conveyor and maintaining proper food safety. The end user must ensure that the conveyor belts are properly tracked and the conveyor is properly installed as defined by Dorner.

All AquaGard 7350 Series products are designed and constructed to be used in dry food or packaged food production environments. The following AquaGard products have gone through testing and certification and are certified to BISSC standard, design requirements for Conveyors section of ANSI/ASB/Z50.2-2015.

7350 Series Belted Conveyor 7350 Series Modular Belt Conveyor 7350 Series Positive Drive Belted Conveyor

Contact the factory for copy of the certification.







### **Materials and Chemical Resistance:**

Conveyor Frames, Plastics and Modular Belting				
The following is a list of base materials used in the 7350 Series conveyor:				
Material Conveyor Component				
Acetal Copolymer, POM	Modular Belts, molded bearing housings			
Polypropylene, PP Modular Belts				
Polyamide, PA	Adjustable Guide Support Brackets			
UHMW-PE	Modular Belt Slide Rail, Adjustable Guide Face			
Thermoplastic Elastomer, TPE	Modular Belt Friction Insert			
Aluminum, anodized (Note: cut ends of aluminum is not anodized)	Conveyor Frame, Support Legs, High Side Guiding, Adjustable Guide Horizontal Post, Adjustable Guide Rail			

The materials used in the 7350 Series product can resist many chemicals, however some should be avoided. Avoid the following:

- Acids with PH less than 4
- Bases with PH higher than 9

#### Resistance to Materials: Conveyor Frames, Plastics and Modular Belting

The following table provides the resistance to materials used in the conveyor to several chemicals. Application testing is recommended to determine long term material durability.

 Legend:

 1 = Very good resistance
 2 = Good resistance
 3 = Moderate resistance
 4 = Not recommended
 X = no data available

Acids	Acetal POM	Polypropylene	Polyamide PA	UHMW-PE	Aluminum
Acetic acid	3	1	4	1	2
Benzoic acid	3	1	4	1	4
Boric acid	3	1	2	1	2
Citric acid	3	1	2	1	2
Chromic acid	4	1	4	1	3
Hydrofluoric acid	4	1	4	1	4
Hydrochloric acid	4	1	4	1	3
Hydro cyanic acid	4	Х	4	1	1
Nitric acid	4	1	4	1	3
Oleic acid	3	1	2	1	1
Oxalic acid	4	1	2	1	1
Phosphoric acid	4	1	4	1	3
Sulphuric acid	4	2	4	1	3
Tartaric acid	3	1	2	1	1
Basic Compounds	Acetal POM	Polypropylene	Polyamide PA	UHMW-PE	Aluminum
Ammonia	1	1	2	1	2
Calcium hydroxide	1	Х	2	1	4
Caustic soda	1	Х	2	1	3
Potassium hydroxide	1	1	2	1	4



## **TECHNICAL DATA AND CALCULATIONS**



#### Resistance to Materials: Conveyor Frames, Plastics and Modular Belting (continued)

 Legend:

 1 = Very good resistance
 2 = Good resistance
 3 = Moderate resistance
 4 = Not recommended
 X = no data available

	4 = 10011				
Salts	Acetal POM	Polypropylene	Polyamide PA	UHMW-PE	Aluminum
Potassium bicarbonate	2	Х	2	1	1
Potassium permanganate	2	2	4	1	1
Sodium cyanic	2	Х	2	1	4
Sodium hydrochloride	3	Х	4	1	4
Acid salt	2	Х	3	1	Х
Basic salt	1	Х	2	1	Х
Neutral salt	1	Х	2	1	Х
Organic Compounds	Acetal POM	Polypropylene	Polyamide PA	UHMW-PE	Aluminum
Acetone	1	1	1	1	1
Aniline	2	1	3	1	1
Benzene	1	3	2	4	1
Benzine	2	Х	2	3	1
Butyl alcohol	2	Х	2	1	1
Carbon disulphide	1	3	2	3	1
Carbon tetrachloride	1	3	1	3	2
Chloroform	1	4	3	4	Х
Ethyl acetate	1	1	2	1	1
Ethyl alcohol	1	Х	2	1	1
Heptane	2	1	1	2	Х
Methyl alcohol	1	Х	2	1	2
Methyl ethyl ketone	1	2	1	2	2
Nitrobenzene	2	2	2	1	1
Phenol	3	1	4	1	1
Gases	Acetal POM	Polypropylene	Polyamide PA	UHMW-PE	Aluminum
Carbon dioxide	3	1	1	1	1
Carbon monoxide	2	Х	1	1	1
Chlorine	2	4	4	3	1
Hydrogen Sulfide	3	1	1	1	1
Sulphur dioxide	2	1	3	1	1
Other	Acetal POM	Polypropylene	Polyamide PA	UHMW-PE	Aluminum
Carbon tetrachloride	1	3	1	3	2
Beer	1	1	2	1	1
Fruit juice	1	2	2	1	2
Gasoline	1	1	2	1	1
Milk	1	1	1	1	1
Oil	1	3	1	1	1
Vinegar	1	1	2	1	1





#### **Belting:**

The following is a list of the top coat materials used in 7350 Series conveyor belting:

Material	Belt Number			
Urethane	01, 02, 03, 05, 06, 09, 54, 55, 56, 53, 60, 61, 63, 68, 69, 72, 73, 75, 76, 77			
PVC (non FDA approved)	08, 18, 59, 64			
Silicone	50, 80, 81			
Polyester	66			
Nitrile	57			
Urethane (hard)	58			

#### **Resistance to Materials: Belting**

The following table provides the resistance to belt materials used in the conveyor to several chemicals. Application testing is recommended to determine long term material durability. Legend:

$1 = \text{Good resistance} \mid 3 = \text{Limited resistance} \mid 4 = \text{Not recommended}$						
Materials	Urethane	PVC (non FDA)	Silicone	Polyester	Urethane (hard)	
Chemicals						
Acetic acid (glacial acetic acid)	4	3	1	1	4	
Acetic acid 10 %	3	1	1	3	1	
Acetic anhydride	3	4	1	1	4	
Acetone	4	4	1	3	4	
Aluminium salts	1	1	1	1	1	
Alum	1	1	1	1	1	
Ammonia, aqueous	3	1	1	3	1	
Ammonia, gaseous	1	1	3	1	1	
Ammonium acetate	1	1	1	1	1	
Ammonium carbonate	1	1	1	1	1	
Ammonium chloride	1	1	1	1	1	
Ammonium nitrate	1	1	1	1	1	
Ammonium phosphate	1	1	1	1	1	
Ammonium sulphate	1	1	1	1	1	
Amyl alcohol	1	4	3	1	1	
Aniline	3	3	3	4	4	
Barium salts	1	1	1	1	1	
Benzaldehyde	4	4	4	4	4	
Benzine (see also Motor fuels)	1	3	3	1	1	
Benzoic acid	1	1	1	1	1	
Benzol	3	4	4	3	3	
Boric acid	1	1	1	1	1	
Boric acid, solution	1	1	1	1	1	
Bromine	4	4	4	4	4	
Bromine water	4	3	1	4	3	
Butane, gaseous	1	1	1	1	1	
Butane, liquid	1	1	1	1	1	
Butyl acetate	4	4	4	3	4	
n-Butyl alcohol	1	3	1	1	1	
Calcium chloride	1	1	1	1	1	





<b>Legend:</b> 1 = Good resistance   3 = Limited resistance   4 = Not recommended						
Materials	Urethane	PVC (non FDA)	Silicone	Polyester	Urethane (hard)	
Calcium nitrate	1	1	1	1	1	
Calcium sulphate	1	1	1	1	1	
Carbon disulphide	4	4	3	4	4	
Carbon tetrachloride	3	4	4	4	3	
Chlorine, liquid	4	4	4	4	4	
Chlorine, gaseous, dry	4	4	4	4	4	
Chlorine, gaseous, wet	4	4	4	4	4	
Chlorine water	4	1	3	4	3	
Chlorobenzene	4	4	4	4	4	
Chloroform	4	4	4	4	4	
Chlorosulphonic acid	4	4	4	4	4	
Chromic acid	4	4	4	4	4	
Chromium salts	1	1	1	1	1	
Chromium trioxide	1	1	1	1	1	
Citric acid	4	1	1	1	4	
Copper salts	1	1	1	1	3	
Cresols	3	3	3	4	3	
Cresols, aqueous	3	3	3	3	3	
Cyclohexane	4	4	4	1	4	
Cyclohexanol	4	4	4	4	4	
Cyclohexanone	4	4	4	4	4	
Decahydronaphthalene	4	4	4	4	4	
Dibutyl phthalate	3	4	1	4	4	
Diethyl ether	4	4	4	4	4	
Dimethyl formamide	4	4	3	4	4	
1.4 Dioxan	4	4	3	4	4	
Ether	4	4	4	4	4	
Ethyl acetate	4	4	4	3	4	
Ethyl alcohol, non-denatured 100%	1	3	3	1	1	
Ethyl alcohol, non-denatured 96%	1	3	3	1	1	
Ethyl alcohol, non-denatured 50%	1	3	3	1	1	
Ethyl alcohol, non-denatured 10%	1	3	1	1	1	
Ethyl benzene	4	4	4	4	4	
Ethyl chloride	4	4	4	4	4	
Ethylene chloride	4	4	4	4	4	
2-Ethyl hexanol	1	3	1	1	1	
Formaldehyde	1	3	1	3	1	
Formic acid, dilute	4	1	1	3	3	
Glycerine	1	1	1	1	1	
Glycerine, aqueous	1	1	1	1	1	
Glycol	1	3	1	1	1	
Glycol, aqueous	1	1	1	1	1	
Heptane	1	3	3	1	1	
Hexane	1	3	3	1	1	
Hydrochloric acid, conc.	3	1	4	3	1	





<b>Legend:</b> 1 = Good resistance   3 = Limited resistance   4 = Not recommended						
Materials	Urethane	PVC (non FDA)	Silicone	Polyester	Urethane (hard)	
Hydrochloric acid 10 %	3	1	1	1	1	
Hydrofluoric acid 40 %	4	4	4	4	4	
Hydrogen chloride, gaseous, dilute	3	1	3	3	1	
Hydrogen chloride, gaseous, conc.	3	3	3	4	3	
Hydrogen peroxide 10%	3	1	1	3	1	
Hydrogen sulphide	3	3	3	3	3	
Iron salts (sulphate)	1	1	1	1	1	
Isooctane	1	3	3	1	1	
Isopropyl alcohol	1	3	1	1	1	
Lactic acid	1	3	1	1	1	
Magnesium salts	1	1	1	1	1	
Mercury	1	1	1	1	1	
Mercury salts	1	1	1	1	1	
Methyl alcohol, aqueous 50 %	3	3	1	1	1	
Methyl alcohol (methanol)	1	3	1	1	1	
Methyl ethyl ketone	4	4	1	3	4	
Methylene chloride	4	4	4	4	4	
Naphthalene	3	4	4	3	4	
Nickel salts	1	1	1	1	1	
Nitric acid	4	3	4	4	4	
Nitrobenzene	4	4	1	3	4	
Octane (see also isooctane)	1	3	4	1	1	
Oleic acid	1	3	4	1	. 1	
Oxalic acid	1	1	1	1	1	
Ozone	1	3	3	1	3	
Perchloroethylene	4	4	4	4	4	
Phenol	3	3	1	4	3	
Phenol, aqueous	4	3	1	4	3	
Phosphoric acid 85 %	4	1	1	3	1	
Phosphoric acid 50 %	1	1	1	1	. 1	
Phosphoric acid 10 %	1	1	1	1	1	
Phosphorus pentoxide	1	1	1	1	1	
Potash lye 50 %	4	1	4	3	4	
Potash lye 25 %	4	1	4	1	4	
Potash lye 10 %	4	1	3	1	4	
Potassium carbonate (potash)	1	1	1	1	1	
Potassium chlorate	1	1	1	1	1	
Potassium chloride	1	1	1	1	1	
Potassium dichromate	1	1	1	1	1	
Potassium iodide	1	1	1	1	1	
Potassium iodide Potassium nitrate	1	1	1	1	1	
	1					
Potassium permanganate		1	1	1	1	
Potassium persulphate	1	1	1	1	1	
Potassium sulphate	1	1	1	1	1	
Propane, gaseous	1	1	1	1	1	
Propane, liquid	1	1	1	1	1	





Legend:           1 = Good resistance   3 = Limited resistance   4 = Not recommended						
Materials	Urethane	PVC (non FDA)	Silicone	Polyester	Urethane (hard)	
Pyridine	4	4	3	4	4	
Silver salts	1	1	1	1	1	
Soda lye 50% (see potash lye)	4	1	4	4	4	
Soda lye 25%	4	1	4	3	4	
Soda lye 10%	4	1	3	1	4	
Sodium bisulphite	1	1	1	1	1	
Sodium carbonate (natron)	1	1	1	1	1	
Sodium carbonate (soda)	1	1	1	1	1	
Sodium chlorate	1	1	1	1	1	
Sodium chloride (common salt)	1	1	1	1	1	
Sodium hydroxide (caustic soda)	4	1	4	1	4	
Sodium hypochlorite	1	1	1	3	1	
Sodium nitrate	1	1	1	1	1	
Sodium nitrite	1	1	1	1	1	
Sodium perborate	1	1	1	1	1	
Sodium phosphate	1	1	1	1	1	
Sodium sulphate (Glauber salt)	1	1	1	1	1	
Sodium sulphide	1	1	1	1	1	
Sodium sulphite	1	1	1	1	1	
Sodium thiosulphate (fixing salt)	1	1	1	1	1	
Stearic acid	1	1	1	1	1	
Succinic acid	1	1	1	1	1	
Sulphur	1	1	1	1	1	
Sulphur dioxide	3	3	3	3	4	
Sulphuric acid 96%	4	4	4	4	4	
Sulphuric acid 50%	4	3	4	3	4	
Sulphuric acid 25%	4	3	3	1	3	
Sulphuric acid 10%	4	3	1	1	3	
Tartaric acids	1	1	1	1	1	
Tetrachloroethane	4	4	4	4	4	
Tetrachloroethylene (perchloroethylene)	4	4	4	4	4	
Tetrahydrofuran	4	4	4	4	4	
Tetrahydronaphthalene	4	4	4	4	4	
Thiophene	4	4	4	4	4	
Tin II chlorides	1	1	1	1	1	
Toluene	4	4	4	4	4	
Trichloroethylene	4	4	4	4	4	
Urea, aqueous	1	1	1	1	1	
Water	1	1	1	1	1	
Xylene	4	4	4	3	4	
Zinc salts	1	1	1	1	1	





1 = Good resista	nce   3 = Lim	Legend: ited resistance	4 = Not ree	commended	
Materials	Urethane	PVC (non FDA)	Silicone	Polyester	Urethand (hard)
Products					
Alum	1	1	1	1	1
Anti-freeze*	1	3	1	1	1
Aqua regia	4	4	4	4	4
Asphalt	1	3	3	1	1
Battery acid	4	4	4	4	4
Benzine	1	3	3	1	1
Bleaching lye (12.5%)	1	1	1	1	3
Bone oil	1	3	4	1	1
Borax	1	1	1	1	1
Brake fluid* Bosch	1	3	1	1	3
Brake fluid* Skydrol	4	4	3	4	4
Chloride of lime (aqueous suspension)	1	1	1	1	3
Chlorine (active)	4	4	4	4	4
Chrome baths* (technical)	1	3	3	1	1
Chromosulphuric acid	4	4	4	4	4
Cresol solution	3	3	4	4	4
Diesel oil	1	1	3	1	1
Fertilizer salts	1	1	1	1	1
Fixing salt	1	1	1	1	1
Floor wax	1	3	3	1	1
Formalin	1	3	3	1	1
Fuel oils*	1	1	3	1	1
Furniture polish*	1	3	3	1	1
Gypsum	1	1	1	1	1
lnk*	1	1	1	1	1
Linseed oil	1	3	1	1	1
Litex (styrene)	4	4	4	4	4
Mineral oils (non-aromatic)	1	1	1	1	1
Moth balls	3	4	3	3	3
Diesel oil*	1	1	3	1	1
Petrol (gasoline) DIN51635	1	3	3	1	1
Petrol, regular	1	3	3	1	1
Petrol, super	3	4	3	1	3
Motor oils*	1	1	1	1	1
Oil no. 3 (ASTM)	1	3	1	1	1
Oleum	4	4	4	4	4
Paraffin	1	1	1	1	1
Paraffin oil	1	1	1	1	1
Petroleum	1	3	3	1	1
Petroleum ether	1	3	4	1	1
Photographic developer	1	1	1	1	1





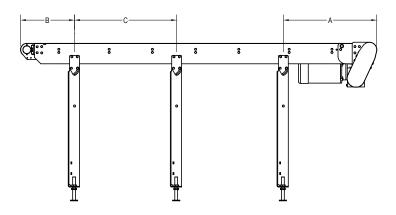
### **Bearings and Lubrication:**

All bearings on AquaGard 7350 Series Conveyors are sealed and lubricated for life. No grease zerk is available and no greasing over the life of the product is required.

All gearmotors used on AquaGard 7350 Series conveyor are sealed and may be mounted in any position. Changing gear oil lubrication may be needed over the life of the gearbox. Please check the appropriate gearmotor manual for instructions.

### **Support Stand Locations:**

Support Stand Locations						
Symbol	Dis	Distance				
Symbol	Description	mm	in			
А	Maximum distance back at drive end	610	24			
В	Maximum distance back at idler end	762	30			
С	Maximum distance between supports	2997	118			

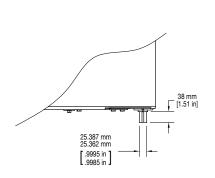


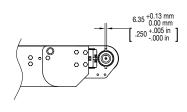


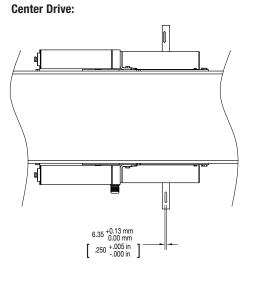


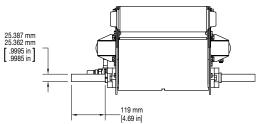
### **Conveyor Drive Shaft Tolerances:**

End Drive, Belted and Modular Belt:











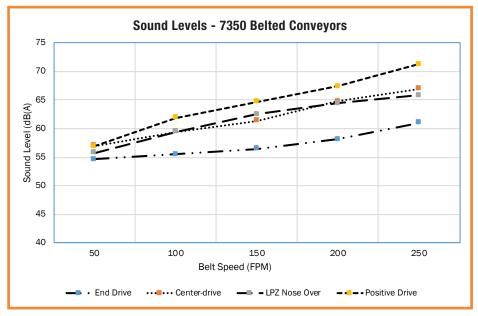


### **Conveyor Noise Level (Decibel Ratings)**

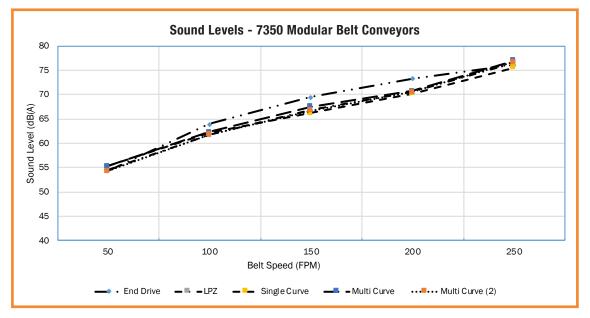
The actual noise level generated by the conveyor depends on several factors; the installation configuration, the product running on the conveyor, the surrounding equipment, the conveyor options and belt speed. The noise level generated by the conveyor is typically less than the general noise level of factory equipment.

Generally a higher belt speed will result in a higher noise level. In addition modular belt conveyors will run slightly louder than belted conveyors. The following charts provide basic decibel ratings for a typical conveyor arrangements.

#### **Belted Conveyors:**



#### **Modular Belt Conveyors:**







### **Maximum Load Capacity**

The following Load Capacity Charts **do not** take into account the conveyor configuration, length or gearmotor selection. Your specific conveyor may not be capable of the maximum load condition. Please confirm your maximum load per application with the Dorner DTools program at www.dornerconveyors.com.

All load capacities shown are non-accumulated evenly distributed loads.

7350 Series Belted End Drive Conveyor							
Belt	Nidth	Pulling the Belt Pushing the Belt			the Belt		
mm	in	Kg	Lb	Kg	Lb		
152	6	114	250	57	125		
203	8	136	300	68	150		
254	10	159	350	80	175		
305	12	182	400	91	200		
356	14	205	450	103	225		
406	16	227	500	114	250		
457	18	227	500	114	250		
508	20	227	500	114	250		
559	22	227	500	114	250		
610	24	227	500	114	250		
660	26	227	500	114	250		
711	28	227	500	114	250		
762	30	227	500	114	250		
813	32	227	500	114	250		
864	34	227	500	114	250		
914	36	227	500	114	250		

7350 Series Belted Center Drive Conveyor			
Belt Width		Pulling the Belt	
mm	in	Kg	Lb
152	6	114	250
203	8	136	300
254	10	159	350
305	12	182	400
356	14	205	450
406	16	227	500
457	18	227	500
508	20	227	500
559	22	227	500
610	24	227	500
660	26	227	500
711	28	227	500
762	30	227	500
813	32	227	500
864	34	227	500
914	36	227	500





### Maximum Load Capacity (continued)

7350 Serie	7350 Series Modular Belt Conveyor			
Belt Width		Pulling the Belt		
mm	in	Kg	Lb	
203	8	205	450	
254	10	227	500	
305	12	250	550	
356	14	273	600	
406	16	295	650	
457	18	318	700	
508	20	341	750	
559	22	341	750	
610	24	341	750	
660	26	341	750	
711	28	341	750	
762	30	341	750	
813	32	341	750	
864	34	341	750	
914	36	341	750	
914	36	227	500	

7350 Series Belted Z-Frame Conveyor					
Belt	Width	Pulling	the Belt	Pushing the Belt	
mm	in	Kg	Lb	Kg	Lb
152	6	45	100	23	50
203	8	45	100	23	50
254	10	45	100	23	50
305	12	45	100	23	50
356	14	45	100	23	50
406	16	45	100	23	50
457	18	45	100	23	50
508	20	45	100	23	50
559	22	45	100	23	50
610	24	45	100	23	50



### Maximum Load Capacity (continued)

7350 Series Modular Belt Z-Frame Conveyor			
Belt \	Nidth	Pulling	the Belt
mm	in	Kg	Lb
203	8	45	100
254	10	45	100
305	12	45	100
356	14	45	100
406	16	45	100
457	18	45	100
508	20	45	100
559	22	45	100
610	24	45	100

7350 Series Modular Belt Curve Conveyor			
Belt Width Pulling the Belt			the Belt
mm	in	Kg	Lb
152	6	182	400
305	12	227	500
457	18	227	500
610	24	227	500

7350 Series Positive Drive Belt Conveyor			
Belt \	Belt Width		the Belt
mm	in	Kg	Lb
203	8	136	300
254	10	159	350
305	12	182	400
356	14	205	450
406	16	227	500
457	18	227	500
508	20	227	500
559	22	227	500
610	24	227	500
660	26	227	500
711	28	227	500
762	30	227	500
813	32	227	500
864	34	227	500
914	36	227	500





### No Load Torque:

No load torque is the amount of torque required to turn an empty conveyor. The torque value varies by conveyor length and configuration. The following charts provide basic values for an average length conveyor. Your specific conveyor may not be have a higher value. Please confirm your no load torque and maximum load per application with the Dorner DTools program at www.dornerconveyors.com.

Belted Conveyor No Load Torque			
Belt Width mm (in)	Belted End Drive Nm (in-lbs)	Belted Center Drive Nm (in-lbs)	
152 (6)	0.9 (8)	7.9 (70)	
203 (8)	1.1 (10)	8.6 (76)	
254 (10)	1.5 (13)	9.2 (81)	
305 (12)	1.7 (15)	9.9 (88)	
356 (14)	2.3 (20)	10.2 (90)	
406 (16)	2.3 (20)	10.2 (90)	
457 (18)	2.8 (25)	10.5 (93)	
508 (20)	3.1 (27)	10.9 (96)	
559 (22)	3.1 (27)	11.2 (99)	
610 (24)	3.4 (30)	11.9 (105)	
660 (26)	3.7 (33)	12.5 (111)	
711 (28)	3.7 (33)	12.5 (111)	
762 (30)	4 (35)	13.2 (117)	
813 (32)	4.3 (38)	13.8 (122)	
864 (34)	4.3 (38)	13.8 (122)	
914 (36)	4.3 (38)	14.8 (131)	

#### Straight Modular Belt Conveyor:

The no load torque on modular belt straight conveyors is dependent on the conveyor length and width. Use the following formula to determine no load torque. Where:

 $\begin{array}{l} L = conveyor \ length \ (mm) \\ W = conveyor \ width \ (mm) \\ BW = belt \ weight \ (kg) = (W/1000)^*((L^*2)/1000)^*8.7 \ kg/square \ meter \\ PD = sprocket \ pitch \ diameter \ (mm) = 99 \ mm \end{array}$ 

No load Torque (Nm) =  $BW^{*}(0.3)^{*}((PD/2)/1000)$ 

Example: 7350 V2 Series Straight Modular Belt, 610 mm wide x 7000 mm long Belt weight (kg) =  $(610/1000)^*((7000^2)/1000)^*8.7 = 74.3 \text{ kg}$ No load torque (Nm) =  $74.3^*0.3^*((99/2)/1000) = 1.1 \text{ Nm}$ No load torque (in-lb) = (Nm)\* $8.851 = 1.1^*8.851 = 9.77$  in-lb

#### **Curve Modular Belt Conveyor:**

The torque calculations for curve conveyors are complicated and are very dependent on the conveyor save and configuration. Please confirm your no load torque and maximum load per application with the Dorner DTools program at www.dornerconveyors.com.





### **Belting and Coefficient of Friction**

The coefficient of friction is used to determine the load a conveyor can carry. It effects a conveyor in two ways: the friction that exists between the conveyor belt and the bed surface, and if accumulating product, the friction that exists between the conveyor top surface and the product.

#### Coefficient of Friction, between the bottom of the conveyor belt and bed surface:

Product	Surfaces	Application Condition	<b>Coefficient of Friction</b>
7350 Series Belted	Impregnated polyester fabric to anodized aluminum bed plate	Dry	0.33
7350 Series Modular Belt	Acetal modular belt to UHMW wear strips	Dry	0.30

#### Coefficient of Friction, between the top surface of conveyor belt and product:

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<b>1 1 1</b>	iO Se	111243	1.1.1.1	

The following table provides the coefficient of friction between steel product and various belt top surfaces. All factors below are assuming dry conditions.

Belt Number	Top Surface Material and Type	Coefficient of Friction
01, 54, 58, 68, 73, 81	Smooth hard urethane	0.40
02, 59, 60, 61, 66, 72, 76, 79	Smooth medium urethane	0.50
03, 19, 55, 69, 75, 77, 78, 80	Glossy soft urethane	>1.0, do not accumulate
05, 06, 50, 53, 63	Impregnated polyester fabric	0.20
08, 18, 64	PVC, Very High friction	>1.0, do not accumulate

#### 7350 Series Modular Belt

The following table provides the coefficient of friction between acetal modular belt and various products. All factors below are assuming dry conditions.

Product Being Accumulated	Typical Coefficient of Friction
Steel	0.25
Glass	0.20
Aluminum	0.25
Plastic	0.25
Wood	0.30
Paper and Cardboard	0.30





### Calculating Conveyor Load Capacity

There are several factor that effect the overall conveyor load of AquaGard 7350 Series Conveyor. These include:

- Conveyor size and configuration
- Conveyor speed
- Application temperature
- Product accumulation
- Number of starts and stops per hour

Located online at www.dornerconveyors.com is the Dorner conveyor configuration tool, DTools. This tool allows you to configure your conveyor layout and determine the maximum load capacity for the conveyor. It is suggested that this program be used to calculate the conveyor load as the calculation is quite complicated. This configuration program however does not take into account temperature, dirty conditions, and conveyor starts and stops. If these conditions are part of your application please use the load reducing factors as shown below.

Maximum Load = (Load from DTools)(Temperature Factor)(Start/Stop Factor)

Temperature Factor			
Ambient temperature can negatively affect the capacity of the conveyor.			
Temperature F	Temperature C	Temperature Factor	
-4	-20	1.0	
32	0	1.0	
68	20	1.0	
104	40	0.9	
140	60	0.8	

#### Start / Stop Factor

Frequent Start / Stops of the conveyor can negatively affect the capacity of the conveyor. All start / stop applications must use a soft start mechanism such as a Frequency Inverter with a 1 second acceleration cycle.

Application Condition	Start / Stop Factor
Continuous Run or 1 start/stop per hour	1.0
Maximum 10 starts/stop per hour	0.83
Maximum 30 starts/stop per hour	0.70
Greater than 30 starts/stop per hour	0.62





### **Calculating Conveyor Belt Speed:**

#### **AquaGard 7350 Series Conveyors:**

To calculate the conveyor belt speed you need to know the following factors:

- DR = Drive roller diameter or drive sprocket pitch diameter (mm)
  - = 89 mm (3.5 in) for end and center drive belted conveyors
  - = 99 mm (3.9 in) for end drive modular belt conveyors
  - = 99 mm (3.9 in) for end positive drive belt conveyors
- TD = Number of teeth of pulley located at drive roller (if equipped)
- TG = Number of teeth of pulley located at gearmotor (if equipped)
- RPM = Revolutions per minute of gearmotor

Belt Speed (m/min) = RPM\*(TD/TG)\*(DR/1000)\*3.14

#### **Example:**

AquaGard 7350 Series Belted End Drive, bottom mount with a 36 tooth pulley located at the drive roller and a 30 tooth pulley located on the gearmotor. The gearmotor is a 10:1 ratio with 173 rpm output.

Belt Speed (m/min) =  $(173)^{(36/30)}(89/1000)^{3.14}$ Belt speed (m/min) = 58 m/min Belt speed (ft/min) = 58 m/min^{(3.28)} = 190 ft/min No load torque (Nm) = 74.3^{0.3^{(99/2)}/1000} = 1.1 Nm No load torque (in-lb) = (Nm)^{8.851} = 1.1^{8.851} = 9.77 in-lb





#### **Dorner AquaGard Conveyors are Best for:**

- Baking
- Packaged Foods
- Pet Foods

- Secondary Packaging
- Snack Foods
- Tight Transfers

- Confectionary
- Elevation Changes
- And More!

#### 7200 & 7300 Series Specifications\*

- Belted and Cleated Belt Models
- Loads up to 27 kg (60 lbs)
- Widths: 44 mm (1.75 in) to 457 mm (18 in)
- Lengths: 610 mm (2 ft) to 8,486 mm (18 ft)
- 11 gauge Stainless Steel roll formed frame
- 7300 features a high pressure bearing option
- · Available in straights only

7200

7300

7200 Rated for Wipe Down and Wet Environments

P



7300 Rated for Wash Down with Chlorinated Cleaners

### 7350 Series Specifications

- Belted, Cleated Belt, Modular Belt, Modular Cleated Belt Models and Positive Drive Options
- Loads up to 341 kg (750 lbs)
- Widths: 152 mm (6 in) to 914 mm (36 in)
- Lengths: 914 mm (3 ft) to 25,000 mm (82 ft)
- FDA approved belting and plastic components
- 304 Stainless Steel frame
- Available in straights, curves or Z-Frame configurations



Straights

Curves (Modular Belt Only) LPZ (Z-Frames), Nose Over & Horizontal to Incline



Positive Drive

Options



 Nose Bar Transfers
 Powered Transfers
 Variety of Guiding Options

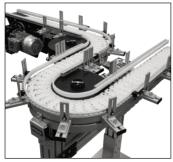
 Other options available including Roller Transfers, Chutes, Drip Pans, Formed Angle Stands, Hoppers and more.
 \*Please refer to the AquaGard 7200 & 7300 Series manual for product information.



### **Industrial & Automation Conveyors**





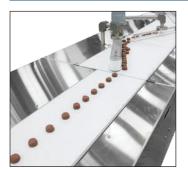




### **Sanitary Conveyors**









**Engineered Solutions** 

**Parts & Service** 







Warranty



# **TRANSFORMING CONVEYOR AUTOMATION**

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