### ENGINEERING MANUAL

Industry Leading Hygienic Designs Fast, Simple to Use Online Configurator

Rapid Deliveries

3A Certified Conveyors





# **CONVEYORS**

Improving Food Safety with Hygienically Engineered Stainless Steel Conveyors





### **Hygienic Design**

- Tool-less disassembly. Cleaning prep in under a minute, complete disassembly in less than 3 minutes
- Optional frame cut-outs and belt lifters for continuous access to inside of the conveyor
- Tip-up tails allow for quick release of belt tension
- Continuous TIG-welded 304 stainless steel frame
- Spiral cam belt tensioning with patent pending threadless design
- Patented sprocket alignment key
- · Gearless, oil-free iDrive2 sanitary motorized roller



### **AquaPruf Ultimate**

- · Highest level of sanitation
- USDA red meat, poultry and dairy applications
- · 3A certification pending
- USDA and FDA approved belting and plastic components
- Meets 3A, NSF and AMI design specifications
- #4 polish on all internal surfaces
- Patent pending drive sprocket wash-out channel
- Patent pending idler puck cleaning system



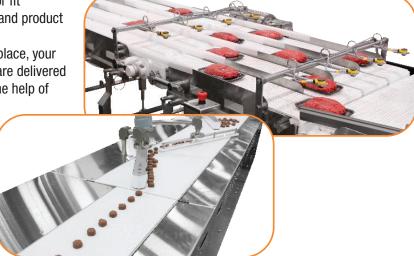


### **Engineered Solutions**

 Dorner's Engineered Solutions Group can tailor fit AquaPruf Conveyors for specific applications and product handling requirements.

 With a custom-designed conveyor system in place, your products are processed faster, your services are delivered quicker, and your profits are increased with the help of highly specialized engineering.

- Solutions include:
  - Routing/Diverting/Laning/Merging
  - Singulating/Rotating
  - Accumulation/Buffering
  - Pacing/Gapping
  - Traffic Control/Flow
  - Orientating/Positioning
  - And More!



### **The Benefits of Dorner AquaPruf Conveyors**

### **Industry Ready**

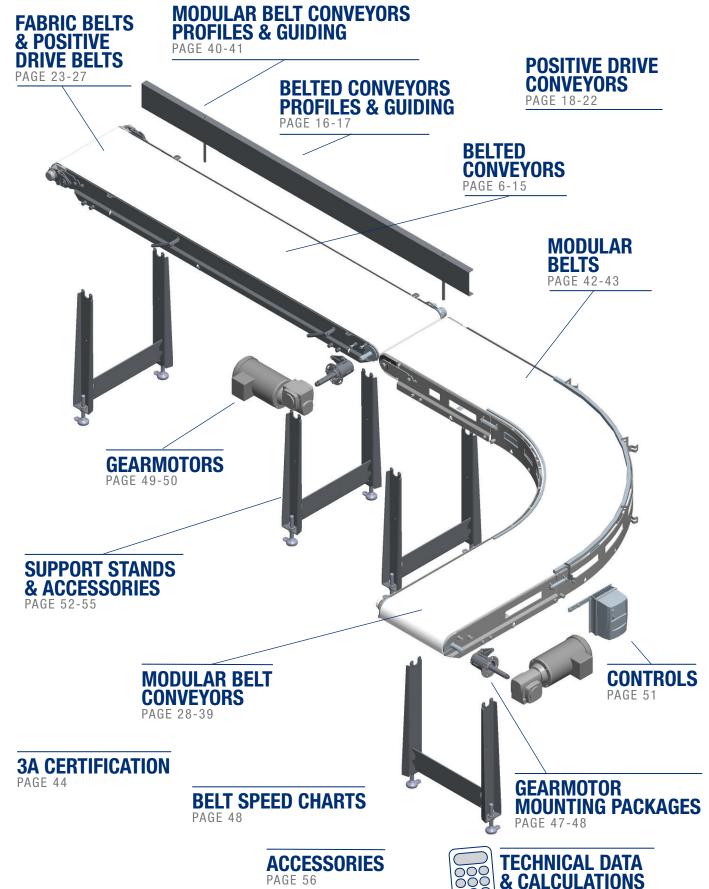
- Designed and manufactured to food equipment standards
- 3A certification pending
- FDA approved materials and components

### **Delivers Fast**

- Dorner sets the industry standard for rapid delivery
- Sanitary conveyors ship in as little as 10 business days
- Industry leading cleaning preparation time









PAGE 57-74

### SANITARY CONVEYOR OVERVIEW



From packaging to processing, Dorner has the food industry covered. By offering three series of sanitary conveyors – AquaGard, AquaPruf and AquaPruf Ultimate – Dorner can meet virtually any needs.

### **Sizes & Measurements**

- 152 1524 mm (6 60 in) widths
- 914 25375 mm (36 999 in) lengths

### **Modular Belt Options**

- Flat Modular Belt
- Friction Top



### **Loads & Speeds**

- 98 kg per square meter (20 lbs per square foot)
- Speeds up 100 mpm (328 fpm)

### **Belt Options**

V-Guided and Positive Drive **Belt Options** 

- Flat Belt
- Cleated
- Sidewall Cleated

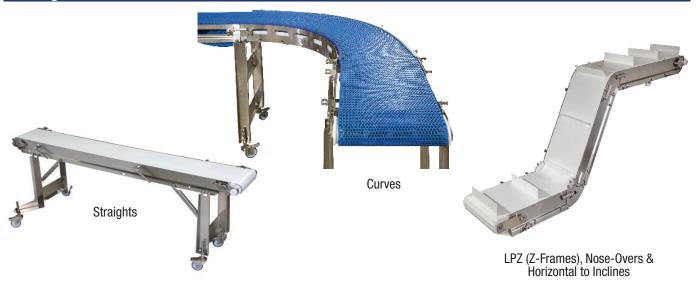




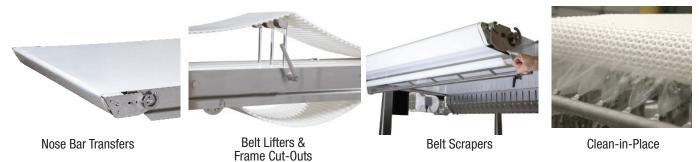


Flat Belt

### **Configurations**



### **Options**



Other options available including Chutes, Drip Pans, Guiding, Hoppers and more.



### SANITARY CONVEYOR OVERVIEW



To identify the series best for you, simply locate your market and application in one of the charts below. You can then utilize the chart on the next page to select your specific conveyor model.

		CI	leanii	1g	Cle	aninç	g Age	nts	Enviro	nment	San	itary	Featı	ures		Regul	ations			Specifications	
		Wipe Down	Low Pressure Wash Down	High-Pressure Wash Down	Water	Soap/Water	Diluted Bleach or Alcohol	Foaming Caustic	Dry	Wet	Belt Lifters	Frame Cut-Outs	Tip-up Tail	3A Sanitary Upgrades	Packaged Food	Dry Food	Ready to Eat	Meat, Poultry, Dairy	Belt Type	Frame Constructions	Configurations
<b>10</b>	7100	Х	Х		Х	Х			Х						Х	Х			Flexible Chain	Bolt Together Stainless Steel	Straight/ Curve/ Z-Frame
Aquo Gard	7200	Х	Х		Х	Х	Х		Х						Х	Х			Belt	Low Profile Stainless Steel	Straight
ma	7300	Х	Х	Х	Х	Х	Х		Х						Х	Х			Belt	Low Profile Stainless Steel	Straight
Aq	7350	Х	Х		Х	Х	Х		Х	Х			Χ		Х	Х			Modular Belt and Belt	Bolt Together Stainless Steel	Straight/ Curve/ Z-Frame
8	Modular Belt	Χ	Χ	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Χ		Х	Х	Х		Modular Belt	Continuous TIG Welded Stainless Steel	Straight/ Curve/ Z-Frame
7	Belted	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Χ	Χ		Х	Х	Х		Belt	Continuous TIG Welded Stainless Steel	Straight/ Z-Frame
a P	Positive Drive Belt	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х				Х	Х	Positive Drive Belt	Continuous TIG Welded Stainless Steel	Straight
Aqua	Ultimate	Х	Х	Х	Х	Х	Х	Х	X	X	Х	Χ	Χ	Х			Х	х	Belt, Positive Drive, Modular	Continuous TIG Welded Stainless Steel	Straight/ Curve/ Z-Frame
1	VBT	Х	Х	Х	Х	Х	Х	Х	Х	Х		Х					Х		Positive Drive Belt	Continuous TIG Welded Stainless Steel	Z-Frame







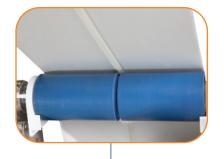
**TOOL-LESS TIP-UP** 

FOR QUICK RELEASE OF BELT TENSION



### **BELT LIFTERS**

FOR EASE OF CLEANING ON LONG OR WIDE CONVEYORS



### **V-GUIDED BELTING**



FOR POSITIVE BELT TRACKING



### **NOSE BAR TRANSFER OPTION**

FOR SMALL PRODUCT TRANSFERS. AVAILABLE IN: 12.7 MM (0.5 IN), 32 MM (1.25 IN) AND 48 MM (1.88 IN)



PATENT PENDING THREADLESS TENSION AND TRACKING METHOD



### **CAST ON URETHANE LAGGED PULLEY**

ENSURES A PERMANENT SANITARY BOND







### **AquaPruf iDRIVE2 MOTORIZED ROLLER**

NEW GEARLESS, OIL-FREE TECHNOLOGY PROVIDES FOOD SAFE COMPACT FOOTPRINT

### FULL RANGE OF SANITARY BELTING OPTIONS

SEALED EDGE, ENCASED AND SOLID URETHANE FOR HYGENIC PRODUCT MOVEMENTS



### STAINLESS STEEL GEARMOTORS

LOCATED OUTSIDE OF FOOD ZONE



### SOLID UHMW WEAR STRIPS

QUICKLY REMOVED WITHOUT TOOLS FOR CLEANING. MOST PIECES ARE IDENTICAL AND COMPLETELY INTERCHANGEABLE.

### **CENTER DRIVE OPTION\***

FOR DUAL NOSE BAR TRANSERS AND INCREASED END CLEARANCE. TOOL-LESS DISASSEMBLY FOR QUICK SANITATION



### STAINLESS STEEL WELDED FRAME CONSTRUCTION

ELIMINATES FASTENERS IN FOOD ZONE (CONTINUOUS TIG WELDING)

\*Patent Pending









STANDARD FEATURE: V-Guided Belt Tracking



STANDARD FEATURE: Tip-Up Tail\*\*



**Documentation Language: M = US English** 

OPTIONAL: Stainless Steel or UHMW Bedplates

#### **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 1219 mm (48 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)
- Continuous TIG Welded 304 Stainless Steel Frame
- 400 Series Stainless Steel bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Open design with minimal horizontal surfaces
- Suitable for use in raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- V-Guide belt tracking
- AquaPruf Ultimate 3A models available. See page 44.



**OPTIONAL: Nose Bar Tail** 12.7 mm (0.5 in), 32 mm (1.25 in) and 48 mm (1.88 in)



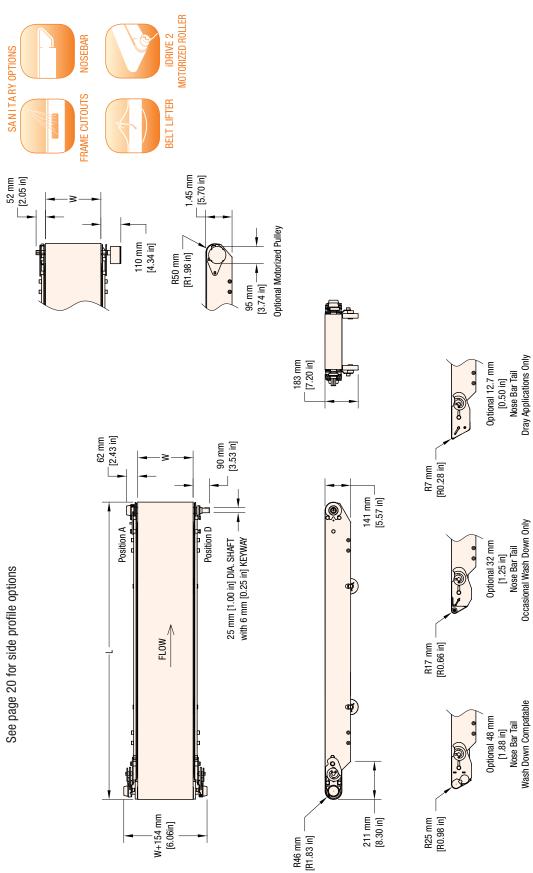
OPTIONAL:
Belt Scraper

#### **AquaPruf Flat Belt End Drive Conveyor** 74 EM WWWW - LLLLL D I A 1 S - Conveyor Tail Options X (if required) \*See Drive Shaft Position Chart on next page **K** = Keyed Auxiliary Shaft Ø = No Keyed Auxiliary Shaft Belt Type: See Pages 23-24 for belt selection - Profile (D side) Profile (A side) 01 = Low Side 02 = 25 mm (1 in) Integral Stainless Steel High Side 04 = 75 mm (3 in) UHMW High Side 06 = 152 mm (6 in) UHMW High Side 13 = Fully Adjustable Round 14 = Tool-less Fully Adjustable Round 23 = 75mm (3 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side A = No Stand Mount Mounting brackets <math>B = 300 mm (11.8 in) from endC = 450 mm (17.7 in) from end D = 600 mm (23.6 in) from endE = 750 mm (29.5 in) from end F = 900 mm (35.4 in) from end G = 300 mm (11.8 in) from end with braces H = 450 mm (17.7 in) from end with braces J = 600 mm (23.6 in) from end with braces K = 750 mm (29.5 in) from end with braces M = 900 mm (35.4 in) from end with braces Drive Stand Location: A = No Stand Mount Mounting brackets B = 300 mm (11.8 in) from end $C = 450 \text{ mm} (17.7 \text{ in}) \text{ from end} \qquad D = 600 \text{ mm} (23.6 \text{ in}) \text{ from end}$ G = 300 mm (11.8 in) from end with braces H = 450 mm (17.7 in) from end with braces J = 600 mm (23.6 in) from end with braces Cleaning Option/Scraper: O = N one O = N or O = N one O = N or O =5 = Frame Cut Outs and Scaper 6 = Belt Lifters and Scraper 7 = Frame Cut Out. Belt Lifters, and Scraper Drive Shaft Position: A. B. C or D Idler Tail Type/V-Guide: 1 = Standard without V-Guide 2 = 12.7 mm (0.5 in) Nose Bar without V-Guide 3 = 32 mm (1.25 in) Nose Bar without V-Guide 4 = 48 mm (1.875 in) Nose Bar without V-Guide 5 = Standard with V-Guide 7 = 32 mm (1.25 in) Nose Bar with V-Guide 8 = 48 mm (1.875 in) Nose Bar with V-Guide - Drive Tail Type/Bedplate: 1 = Customer supplied motor with UHMW bed 2 = Customer supplied motor with Stainless bed 3 = Motorized roller with UHMW bed 4 = Motorized roller with Stainless bed 5 = Side drive with UHMW bed 6 = Side drive with Stainless bed Conveyor Length (mm): 00915 to 12190 in 5 mm increments (36 - 480 in) Conveyor Width Reference (mm): = 152 to 1219 (6 - 48 in)

\* 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.







Since belts are being pulled, positions A & D are preferred. Pushing belts (B & C) reduces conveyor load capacity by approximately 66%. **Drive Shaft Position** 

 $\mathbf{W} = \text{Conveyor Belt Width} \quad \mathbf{Dim} = \text{mm (in)}$ 

STANDARD SIZES							
Conveyor Width Reference	152	203	254	50 increments <b>up to</b>	1118	1168	1219
Constant Doll Width (M)	152	203	254	50 mm increments <b>up to</b>	1118	1118 1168	1219
conveyor ben widin (w)	(9)	(8)	(10)	2 in increments <b>up to</b>	(44)	(46)	(48)
<b>Conveyor Length Reference</b>		00915		00005 increments <b>up to</b>		12190	
Conveyor Length (L)		00915 (36)		00005 (0.2) increments <b>up to</b>		12190 (480)	

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









STANDARD FEATURE: V-Guided Belt Tracking



STANDARD FEATURE: Tip-Up Tail\*\*



OPTIONAL: Stainless Steel or UHMW Bedplates

### **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 1219 mm (48 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)
- Continuous TIG Welded 304 Stainless Steel Frame
- 400 Series Stainless Steel bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Open design with minimal horizontal surfaces
- Suitable for use in raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- V-Guide belt tracking

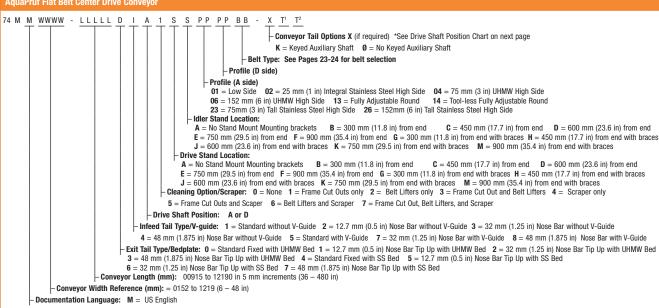


OPTIONAL: 12.7 mm (0.5 in), 32 mm (1.25 in) and 48 mm (1.88 in) Nose Bar Tail



OPTIONAL:
Belt Scraper

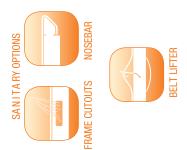
#### AguaPruf Flat Rolt Center Drive Conveyor



<sup>\*</sup> 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.







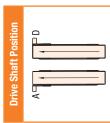
W+123 mm [4.86 in]

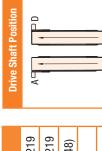
W+172 mm [6.76 in]

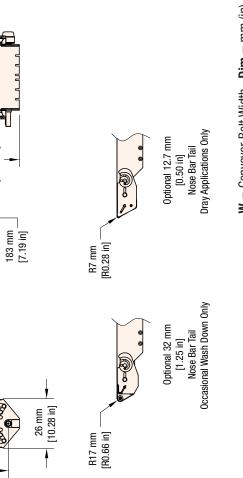
FLOW

W+154 mm [6.06in]

Position A







[1.88 in] Nose Bar Tail Wash Down Compatable Optional 48 mm

 $\mathbf{W} = \text{Conveyor Belt Width} \quad \mathbf{Dim} = \text{mm (in)}$ 

STANDARD SIZES							
Conveyor Width Reference	152	203	254	50 increments <b>up to</b>	1118	1168	1219
	152	203	254	50 mm increments <b>up to</b>	1118	1168	1219
collyeyor beit widtii (w)	(9)	(8)	(10)	2 in increments <b>up to</b>	(44)	(46)	(48)
Conveyor Length Reference		00915		00005 increments <b>up to</b>		12190	
Conveyor Length (L)	0	00915 (36)		00005 (0.2) increments <b>up to</b>		12190 (480)	

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

R46 mm [R1.83 in]

211 mm [8.30 in]

R25 mm [R0.98 in]

305 mm [12.01 in]

141 mm [5.55 in]

247 mm [9.71 in]

104 mm [4.09 in]

25 mm [1.00 in] DIA. SHAFT with 6 mm [0.25 in] KEYWAY

Position D



See page 20 for side profile options







STANDARD FEATURE: V-Guided Belt Tracking



STANDARD FEATURE: Tip-Up Tail\*\*



OPTIONAL: Stainless Steel or UHMW Bedplates

#### **Specifications**

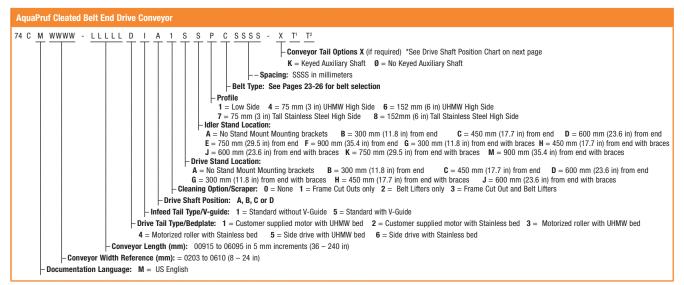
- Loads up to 227 kg (500 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 91 m/min (300 ft/min)
- Belt widths: 203 mm (8 in) to 610 mm (24 in)
- Conveyor lengths: 915 mm (36 in) to 6095 mm (240 in)
- Cleat heights from 11 mm (0.43 in) to 60 mm (2.63 in)
- Continuous TIG Welded 304 Stainless Steel Frame
- 400 Series Stainless Steel 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 raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- V-Guide belt tracking
- AquaPruf Ultimate 3A models available. See page 44.



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



OPTIONAL: Sidewall Cleated Belts for Bulk Food Product

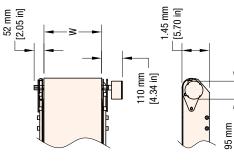


\* Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors. \*\* Note: Do not run the conveyor with the tail in the tip-up position.









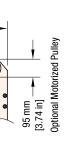
62 mm [2.43 in]

Position A

FLOW

N+154 mm [6.06in]

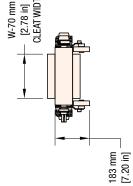
Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.



90 mm [3.53 in]

25 mm [1.00 in] DIA. SHAFT with 6 mm [0.25 in] KEYWAY

Position D

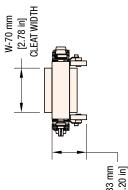


141 mm [5.57 in]

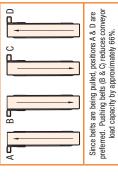
211 mm [8.30 in]

R46 mm [R1.83 in]

od)







STANDARD SIZES										
<b>Conveyor Width Reference</b>	152	203	254	305	356	406	457	508	559	61(
My Heli Wilder	152	203	254	305	356	406	457	508	559	610
collyeyor beit wittil (w)	(9)	(8)	(10)	(12)	(14)	(16)	(18)	(20)	(22)	(24
Conveyor Length Reference	300	00915		0	00005 increments up to	ents up to			09	6095
Conveyor Length (L)	0915	0915 (36)		000	00005 (0.2) increments up to	ements <b>up t</b>	0		6095	6095 (240)

Note: If conveyor width ≥ 457 then the max length is 2135

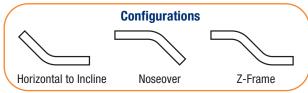


See page 20 for side profile options



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







STANDARD FEATURE: V-Guided Belt Tracking



STANDARD FEATURE: Tip-Up Tail\*\*

#### **Specifications**

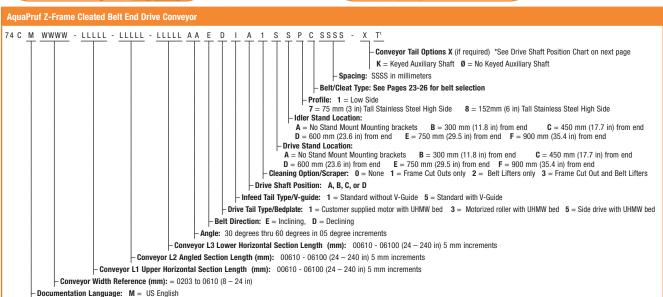
- Loads up to 45 kg (100 lbs) or 98 kg/sq m (20 lbs/sq ft)\*
- Belt speeds up to 91 m/min (300 ft/min)
- Belt widths: 203 mm (8 in) to 610 mm (24 in)
- Conveyor section lengths: 610 mm (24 in) to 6100 mm (240 in)
- Maximum total conveyor length of 12190 mm (480 in)
- Angles from 30 degrees to 60 degrees in 5 degree increments
- Cleat heights from 11 mm (0.43 in) to 60 mm (2.63 in)
- Continuous TIG Welded 304 Stainless Steel Frame
- 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 raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- V-Guide belt tracking
- AquaPruf Ultimate 3A models available. See page 44.



OPTIONAL: High Side Guides



OPTIONAL: Sidewall Cleated Belts for Bulk Food Product



<sup>\*</sup> 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) CLEATED BELT END DRIVE













MOTORIZED ROLLER

**IDRIVE 2** 

BELT LIFTER

1.45 mm [5.70 in] 52 mm [2.05 in] 110 mm [4.34 in]

[2.73 in] 69 mm

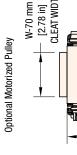
Position A

•

W+156 mm [6.15 in]

See page 20 for side profile options

FLOW

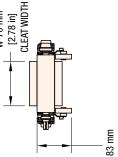


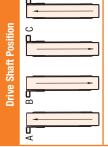
95 mm [3.74 in]

[3.73 in] 95 mm

> with 6 mm [0.25 in] KEYWAY 25 mm [1.00 in] DIA. SHAFT

Position D





Since belts are being pulled, positions A & D are preferred. Pushing belts (8 & C) reduces conveyor load capacity by approximately 66%.

 183 mm [7.20 in]	
 183 mm [7.20 in]	

140 mm [5.52 in]

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R46 mm [R1.82 in] `

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Width
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in 5° increments 30°-60°

Drive Shaft Position	A P B P C			=======================================	Since belts are being pulled, positions A & D
	610	610	(24)	6100	100 (240)
	6	6	(2	61	3100

Conveyor Width Reference	152	203	254	305	356	406	457	508	559
Only Highly Min	152	203	254	305	356	406	457	208	559
collyeyor belt wittill (w)	(9)	(8)	(10)	(12)	(14)	(16)	(18)	(20)	(22)
Conveyor Length Reference	90	0610		0	00005 increments <b>up to</b>	ents up to			61
Conveyor Length (L1/L2/L3)	0610	0610 (24)		000	00005 (0.2) increments up to	ements <b>up t</b>	0		6100
Note: If conveyor width ≥ 457 mm then the max length is 2135 mm.	m then the	max lengtl	n is 2135 n	nm.					

STANDARD SIZES

245 mm [9.65 in]

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

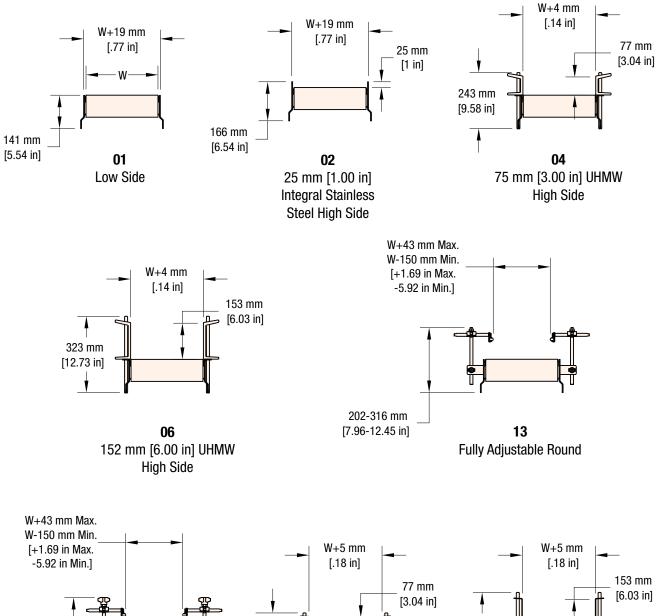
W+154 mm [6.06 in]

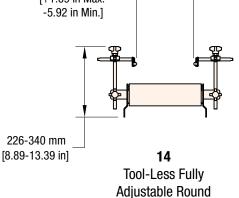


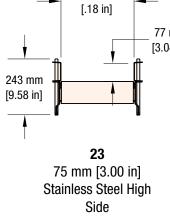
Max total length of all sections 12190 mm (480 in).

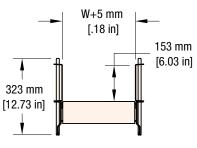


### **FLAT BELT PROFILES**





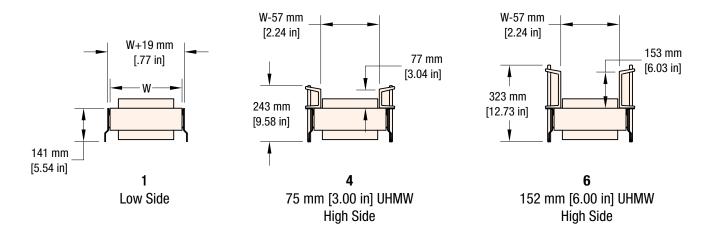


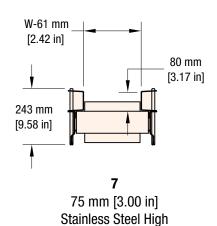


26 152 mm [6.00 in] Stainless Steel High Side

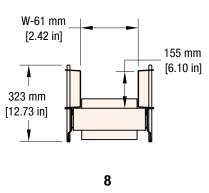


### **CLEATED BELT PROFILES**





Side







All AquaPruf stainless steel and UHMW guiding profiles are quick removal without tools for fast effective cleaning







TOOL-LESS TIP-UP PULLEY

FOR QUICK RELEASE OF BELT TENSION



### **BELT LIFTERS**

FOR EASE OF CLEANING ON LONG OR WIDE CONVEYORS



FDA AND USDA APPROVED FOR THE MOST DEMANDING APPLICATIONS



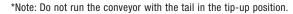
## QUICK REMOVAL SIDE MOUNT GEARMOTOR

TO REDUCE SANITATION TIME



### **SPROCKET DRIVEN**

TO AVOID SLIPPING IN WET ENVIRONMENTS





### POSITIVE DRIVE CONVEYOR FEATURES





### **AquaPruf iDRIVE2 MOTORIZED ROLLER** NEW GEARLESS, OIL-FREE TECHNOLOGY PROVIDES

FOOD SAFE COMPACT FOOTPRINT



### **STAINLESS STEEL**

LOCATED OUTSIDE OF FOOD ZONE



### **SOLID UHMW WEAR STRIPS**

QUICKLY REMOVED WITHOUT TOOLS FOR CLEANING. MOST PIECES ARE IDENTICAL AND COMPLETELY INTERCHANGEABLE. FOR COMPLETE DRAINAGE.



### **STAINLESS STEEL WELDED FRAME CONSTRUCTION**

ELIMINATES FASTENERS IN FOOD ZONE (CONTINUOUS TIG WELDING)

### 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 91 m/min (300 ft/min)
- Belt widths: 203 mm (8 in) to 1219 mm (48 in)
- Conveyor lengths: 915 mm (36 in) to 12190 mm (480 in)
- Positive driven belt provides greater load capacity and less slip
- Continuous TIG Welded 304 Stainless Steel Frame
- 400 Series Stainless Steel 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 raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- AquaPruf Ultimate 3A models available. See page 44.



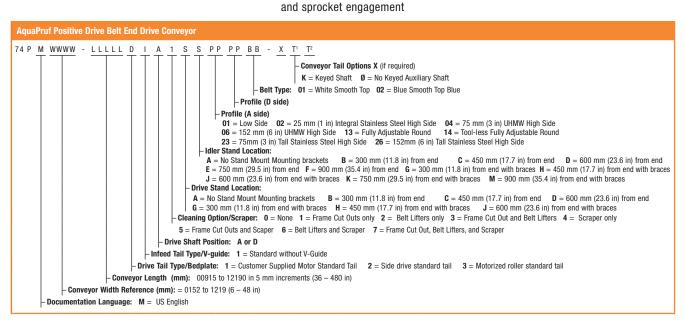
STANDARD FEATURE: Positively driven drive sprockets and belt to avoid belt slipping



STANDARD FEATURE: Integrated UHMW Return Shoe provides positive belt control



STANDARD FEATURE: Tip-Up Tail\*\*

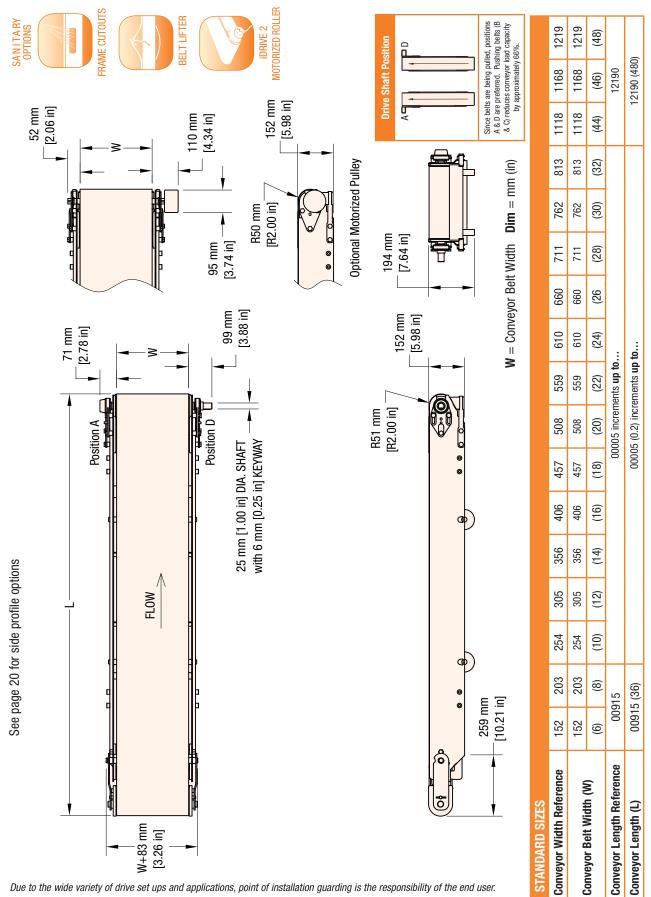


<sup>\*</sup> Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors. \*\* Note: Do not run the conveyor with the tail in the tip-up position.



### POSITIVE DRIVE BELT END DRIVE

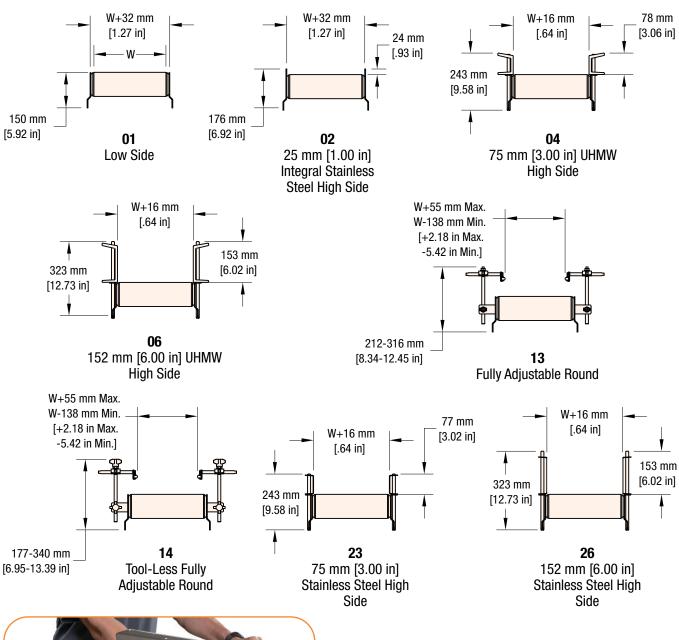








### **POSITIVE DRIVE FLAT BELT PROFILES**





All AquaPruf stainless steel and UHMW guiding profiles are quick removal without tools for fast effective cleaning

 $\mathbf{W} = \text{Conveyor Belt Width} \quad \mathbf{Dim} = \text{mm (in)}$ 

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







S	tan	da	rd Belt Select	ioi	ı Guide		Standard I then cut &						Dorner, fast conveyor shipment.
Belt Type - Finger Splice	Belt Type - Plastic Clipper	Belt Type - Metal Clipper	Belt Specifications	V-Guidable	Belt Thickness	Surface Material	Maximum Part Temp. °C (°F)	Coefficient of Friction	FDA Approved	Anti-Static	Static Conductive	Chemical Resistance	Special Characteristics or Applications
01	A1	1A	FDA Accumulation	Х	1.7 (0.067)	Urethane	100 (212)	Low	Х	Х		Good	Packaging, clean room and inspection
02	A2	2A	General Purpose	Х	1.8 (0.071)	Urethane	100 (212)	Med	х	х		Good	Most versatile belt offering
03	А3	3A	FDA High Friction	Х	1.7 (0.067)	Urethane	100 (212)	High	х	Х		Good	Packaging, clean room and inspection
05	A5	5A	Accumulation	Х	1.2 (0.047)	Urethane	100 (212)	V-Low	х	Х		Good	Accumulation of products
06	A6	6A	Electrically Conductive	Х	1.6 (0.063)	Urethane	80 (176)	V-Low		Х	х	Good	Electronics handling
08	A8	8A	High Friction	Х	2.1 (0.083)	PVC	70 (158)	V-High		Х		Poor	Conveys up to 35° inclines*
09			FDA High Friction	Х	1.5 (0.059)	Urethane	100 (212)	High	Х			Good	Lower no load torque

Dim = mm (in)

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. Consult factory with applications for which this may cause interference.

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

### **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.



<sup>\*</sup>Incline varies due to factors like dust, fluids and part material.

<sup>\*\*</sup> 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.

Sp	ec	ialt	y Belt Selecti	ion Gui	de	Specialty be custom ord					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	Х	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	0G	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	х	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	<b>G9</b>		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)

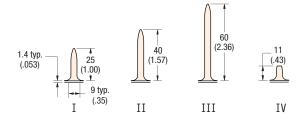
Metal Clipper Splices are not available on belts over 1219 mm (48 in) wide.



<sup>\*</sup> Not available in 51 mm (2 in) wide.

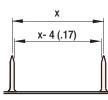
<sup>\*\*</sup>Metal Clipper splices are not sanitary.





Sta	ndard Cle	ated Bel	lt Selec	tion Gui	de					
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
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	II
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
K	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
M	Low Friction	1.6 (0.06)	Urethane	11 (0.43)	Urethane	100 (212)	Yes	Good	Poor	IV

### **CLEATED BELT SPACING**



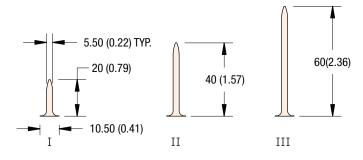
Tolerance  $\pm$  2 (.08)

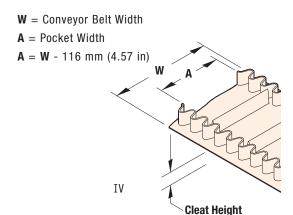
- Cleat spacing is determined by conveyor length and desired number of cleats
- Minimum spacing = 50 mm (2 in)
- Spacing accuracy = ±2 mm (.08 in)
- Maximum 2135 mm (84 in) conveyor length for 487 mm (18 in) and wider conveyors
- Maximum 508 mm (20 in) cleat spacing for 2135 mm (84 in) and longer conveyors





### **SPECIALTY CLEATED BELT PROFILES**



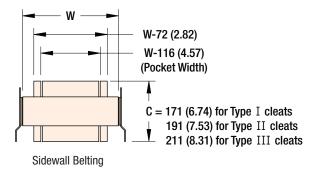


Sp	ecia	ilty Cleate	ed Belt Se	election (	Guide						
1	Fart No.	Base Belt	Belt Thickness, mm (in)	Belt Surface Material	Cleat Height, mm (in)	Cleat Material	Maximum Part Temp. °C (°F)	FDA Approved	Chemical Resistance	Moisture Resistance	Illustration
	N	Sealed Edge	1.5 (0.06)	Urethane	20 (0.79)	Urethane	80 (176)	Yes	Good	Good	I
	P	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
Cles	R	Encased	2.0 (0.08)	Urethane	0.79 (20)	Urethane	100 (212)	Yes	Good	Very Good	Ţ
	S	Encased	2.0 (0.08)	Urethane	40 (1.57)	Urethane	100 (212)	Yes	Good	Very Good	II
	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
ide	Υ	Encased	1.5 (0.06)	Urethane	30 (1.18)	Urethane	80 (176)	Yes	Good	Very Good	IV
0,	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 = ±2 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

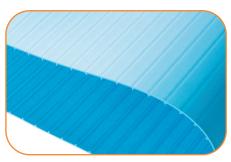


Dim = mm (in)





### **POSITIVE DRIVE BELTING**



(Also available in white)

### **Specifications**

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

Positive	<b>Drive Belt Selec</b>	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









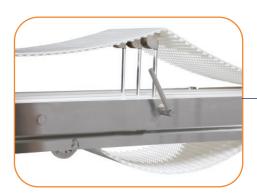
### NOSEBAR DRIVE AND IDLER OPTIONS

FOR TRANSFER OF SMALL PRODUCTS



### PATENTED SPROCKET ALIGNMENT KEY

PROVIDES CONTINUOUS SPROCKET ALIGNMENT FOR QUICK BELT SANITATION AND ASSEMBLY



### **BELT LIFTER**

FOR EASY CLEANING ON WIDE OR LONG CONVEYORS



### **TIP-UP TAIL**

FOR QUICK RELEASE OF BELT TENSION



## QUICK REMOVAL SIDE MOUNT GEARMOTOR

TO REDUCE SANITATION TIME

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



### MODULAR BELT CONVEYOR FEATURES





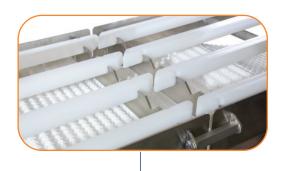
### AquaPruf iDRIVE2 MOTORIZED ROLLER NEW GEARLESS, OIL-FREE TECHNOLOGY PROVIDES

NEW GEARLESS, OIL-FREE TECHNOLOGY PROVIDES FOOD SAFE COMPACT FOOTPRINT



### STAINLESS STEEL GEARMOTORS

LOCATED OUTSIDE OF FOOD ZONE



### **SOLID UHMW WEAR STRIPS**

QUICKLY REMOVED WITHOUT TOOLS FOR CLEANING. MOST PIECES ARE IDENTICAL AND COMPLETELY INTERCHANGEABLE.



IMPROVES CLEANING AND ACCESS TO PINS



## STAINLESS STEEL WELDED FRAME CONSTRUCTION

ELIMINATES FASTENERS IN FOOD ZONE (CONTINUOUS TIG WELDING)



### STRAIGHT MODULAR FLAT BELT





### **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: 150 mm (5.9 in) to 1200 mm (47.3 in)
- Conveyor lengths: 915 mm (36 in) to 25000 mm (984 in)
- Continuous TIG Welded 304 Stainless Steel Frame
- 400 Series Stainless Steel bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Open design with minimal horizontal surfaces
- Suitable for use in raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- One revolution of 99 mm (3.9 in) pitch sprocket moves the belt approximately 305 mm (12.0 in)
- AquaPruf Ultimate 3A models available. See page 44.



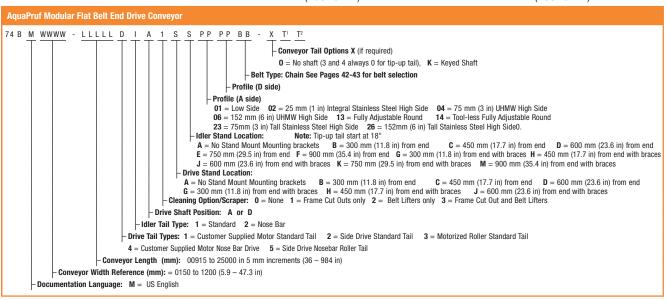
STANDARD: Tip-Up Tail\*\*



OPTIONAL: Nose Bar Idler Tail
25 mm (1 in) diameter for small parts
transfer. Speeds up to 79 m/min
(260 ft/min)



**OPTIONAL: Nose Bar Drive Tail** 25 mm (1 in) diameter for small parts transfer. Speeds up to 79 m/min (260 ft/min)



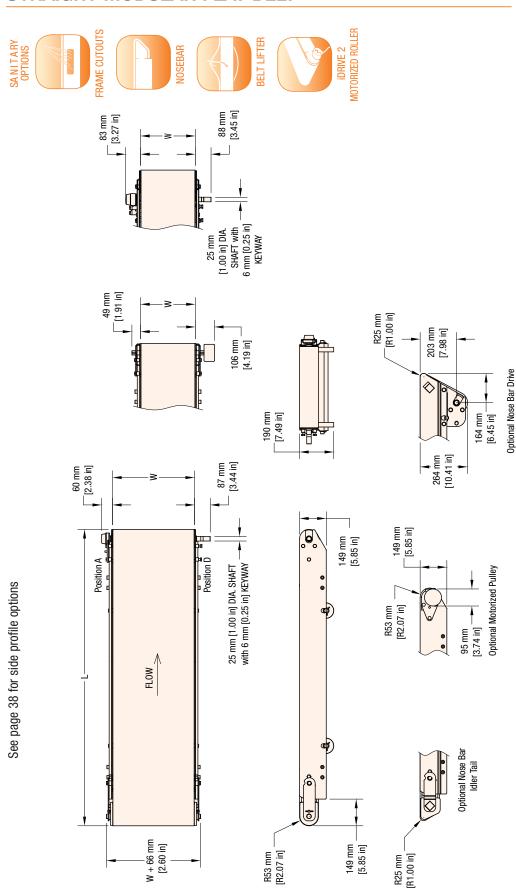
<sup>\*</sup> Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors.



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

### STRAIGHT MODULAR FLAT BELT





(in)

T1 DISCHARGE T2

A-SIDE

T3 INFEED

T4

(ii)
шш
Ш
Dim
Width
Belt
Conveyor
= M

STANDARD SIZES							
Conveyor Width Reference	150	200	250	50 increments up to	1100	1150	1200
On the Middle One	150	200	250	50 mm increments <b>up to</b>	1100	1150	1200
conveyor ben widtin (w)	(2.9)	(6.7)	(8.8)	1.97 in increments <b>up to</b>	(43.3)	(43.3) (45.3) (47.3)	(47.3)
Conveyor Length Reference		00915		00005 increments <b>up to</b>		12190	
Conveyor Length (L)	0	00915 (36)		00005 (0.2) increments <b>up to</b>	_	12190 (480)	

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



# Aqua Pruf®

### STRAIGHT MODULAR CLEATED BELT



### **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: 200 mm (7.9 in) to 600 mm (23.6 in)
- Conveyor lengths: 915 mm (36 in) to 25000 mm (984 in)
- Cleat heights from 25 mm (1 in) to 75 mm (3 in)
- Continuous TIG Welded 304 Stainless Steel Frame
- 400 Series Stainless Steel bearing with FDA H1 food grade grease
- FDA approved belting and plastic components
- Open design with minimal horizontal surfaces
- Suitable for use in raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- AquaPruf Ultimate 3A Certified available. See page 44.



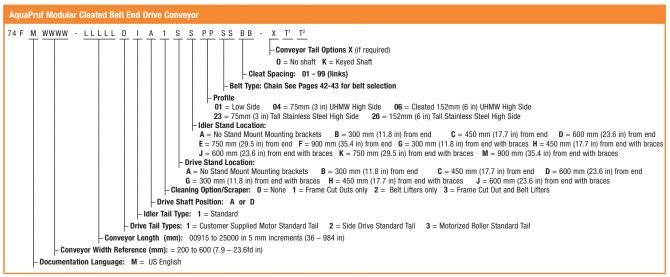
STANDARD: Tip-Up Tail\*\*



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



OPTIONAL:
Frame Cutouts and/or Lifters



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



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

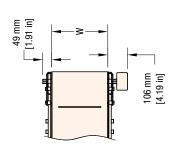
### STRAIGHT MODULAR CLEATED BELT

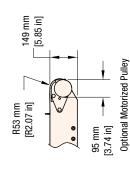


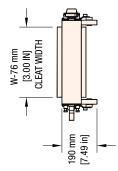


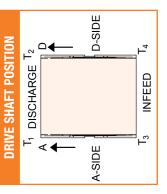




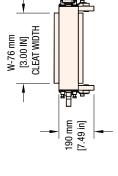








(23.6)



Ë
ШШ
Ш
Dim
<b>W</b> = Conveyor Belt Width

60 mm	<b>→</b> > <b>→</b>	87 mm [3.44 in]
Position A	FLOW >	Position D 25 mm [1.00 in] DIA, SHAFT with 6 mm [0.25 in] KPYWAY
<u>* *</u>		<b>₩</b> 

	000	149 mm [5.85 in] —
	_	
	-	
	20	
_		<u></u>
R53 mm [R2.07 in]		149 mm [5.85 in]

STANDARD SIZES									
Conveyor Width Reference	200	250	300	350	400	450	200	550	009
My HEIM HOU	200	250	300	350	400	450	200	250	009
collyeyor belt widtii (w)	(7.9)	(8.8)	(11.8)	(13.8)	(13.8) (15.7)	(17.7)	(19.7)	(21.7)	(23.6)
Conveyor Length Reference	300	00915		00005	00005 increments <b>up to</b>	np to		25000	000
Conveyor Length (L)	0915 (36)	(36)		000002 (0.2	00005 (0.2) increments up to	ts <b>up to</b>		25000 (984)	(984)

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



See page 38 for side profile options

### **CURVED MODULAR FLAT BELT**





### **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 914 mm (36 in)
- Conveyor section lengths: 460 mm (18 in) to 15240 mm (600 in)
- Curve angles of 15, 30, 45, 60, 75, 90, 135 and 180 degrees
- Continuous TIG Welded 304 Stainless Steel Frame
- Up to curves driven by one gearmotor
- FDA approved belting and plastic components
- Suitable for use in raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- AquaPruf Ultimate 3A models available. See page 44.



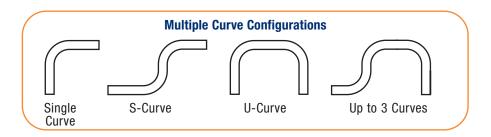
Curve Innovation
Improved chain strength provides
capability for 3 curves on
one gearmotor



STANDARD: Tip-Up Tail\*\*



OPTIONAL: Frame Cutouts and/or Lifters

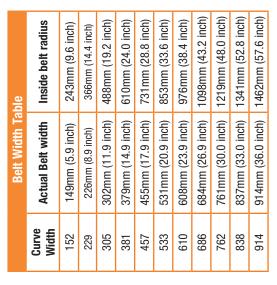


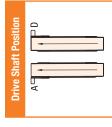


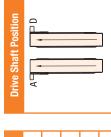
<sup>\*</sup> Conveyor load capacity depends on conveyor size, incline, motor position, accumulated loads and other factors.











H	168 mm	[6.61 in	
•	Þ		
•			
	<b>-</b>		

202 mm [7.94 in]

236 mm [9.29 in]

96 mm [3.78 in]

25 mm [1.00 in] DIA. SHAFT with 6 mm [0.24 in] KEYWAY

160 mm [6.30 in]

[2.80 in]

Position A

FLOW

Dim = mm (in)= Conveyor Belt Width ≥

STANDARD SIZES											
Conveyor Width Reference	152	229	305	381	457	533	610	989	762	838	914
My Heli William	152	229	305	381	457	533	610	989	762	838	914
COLIVEYOR DEIL WILLIN (W)	(9)	(6)	(12)	(15)	(18)	(21)	(24)	(27)	(30)	(33)	(36)
Conveyor Length Reference	700	00460		00005 increments <b>up to</b>	ents up to				15240		
Conveyor Length (L)	00460 (18)	(18)	00	00005 (0.2) increments up to	ements up to.	:			15240 (600)		

NOTE: Total length of all sections cannot exceed 25000 mm (984 in) Maximum of 3 curves

DORNUR

responsibility of the end user.

W+73 mm

[2.88 in]

՛

W+128 mm [5.05 in]

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

See page 38 for side profile options



```
AquaPruf Curved Modular Belt Conveyor - Infeed Module
      T 1 M WWWW - LLLLL I 1 S PP PP BB - SS
                                                                                                   - Sequence 01 to 99
                                                                                         Belt Type: Chain See Pages 42-43 for belt selection
                                                                                 - Profile (D side)
                                                                          Profile (A side)
                                                                           01 = Low Side
                                                                                                 13 = Fully Adjustable Round 14 = Tool-less Fully Adjustable Round
                                                                                                                                        26 = 152mm (6 in) Tall Stainless Steel High Side
                                                                          23 = 75mm (3 in) Tall Stainless Steel High Side
                                                                    Idler Stand Location:
                                                                     \textbf{A} = \text{No Stand Mount Mounting brackets} \qquad \textbf{B} = 300 \text{ mm } (11.8 \text{ in) from end} \qquad \textbf{C} = 450 \text{ mm } (17.7 \text{ in) from end} \qquad \textbf{D} = 600 \text{ mm } (23.6 \text{ in) from end} \qquad \textbf{E} = 750 \text{ mm } (29.5 \text{ in) from end} \qquad \textbf{F} = 900 \text{ mm } (35.4 \text{ in) from end} \qquad \textbf{G} = 300 \text{ mm } (11.8 \text{ in) from end with braces} \qquad \textbf{H} = 450 \text{ mm } (17.7 \text{ in) from end with braces} 
                                                                    J = 600 mm (23.6 in) from end with braces K = 750 mm (29.5 in) from end with braces M = 900 mm (35.4 in) from end with braces
                                                              Cleaning Option/Scraper: 0 = None 1 = Frame Cut Outs only 2 = Belt Lifters only 3 = Frame Cut Out and Belt Lifters
                                                         - Idler Tail Type: 1 = Standard
                                               Conveyor Length (mm): 00500 to 15240 in 5 mm increments (20 to 600 in)
                             - Conveyor Width Reference (mm): = 152 to 914 (6 to 36 in)
                     - Documentation Language: M = US English
                Module Type: 1 = Infeed Module
           - Conveyor Type: T = Modular Belt Curve
```

```
AquaPruf Curved Modular Belt Conveyor - Intermediate Module

74 T 3 M WWWW - LLLLL 1 S PP PP BB - SS Sequence 01 to 99

Belt Type: Chain See Pages 42-43 for belt selection

Profile (0 side)

Profile (0 side)

Profile (1 side)

1 = Low Side 1 3 = Fully Adjustable Round 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6 in) Tall Stainless Steel High Side 26 = 152mm (6
```

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AquaPruf Curved Discharge Modular Belt Conveyor - Drive Modular
     T 5 M WWWW - LLLLL I A 1
                                                       S PP PP BB - SS
                                                                                   - Sequence 01 to 99
                                                                          - Belt Type: Chain See Pages 42-43 for belt selection
                                                                    - Profile (D side)
                                                               Profile (A side)
                                                                                 13 = Fully Adjustable Round 14 = Tool-less Fully Adjustable Round
                                                                01 = Low Side
                                                               23 = 75mm (3 in) Tall Stainless Steel High Side
                                                                                                                26 = 152mm (6 in) Tall Stainless Steel High Side
                                                           Drive Stand Location:
                                                           \bf A = No Stand Mount Mounting brackets \bf B = 300mm (11.8 in) from end \bf C = 450 mm (17.7 in) from end \bf D = 600 mm (23.6 in) from end
                                                          G = 300 \text{ mm} (11.8 \text{ in}) \text{ from end with braces} H = 450 \text{ mm} (17.7 \text{ in}) \text{ from end with braces} J = 600 \text{ mm} (23.6 \text{ in}) \text{ from end with braces}
                                                      Cleaning Option/Scraper: 0 = None 1 = Frame Cut Outs only 2 = Belt Lifters only 3 = Frame Cut Out and Belt Lifters
                                                  Drive Position: A or D
                                             - Drive Tail Type: 1 = Customer Supplied Motor Standard Tail 2 = Side Drive Standard Tail
                                     - Conveyor Length (mm): 00500 to 15240 in 5 mm increments (20 to 600 in)
                      - Conveyor Width Reference (mm): = 152 to 914 (6 to 36 in)

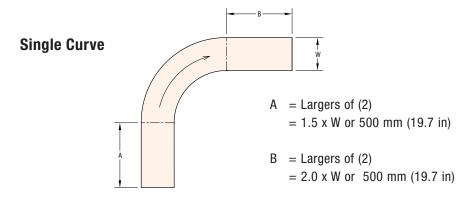
    Documentation Language: M = US English

             Module Type: 5 = Drive Module
        - Conveyor Type: T = Modular Belt Curve
```





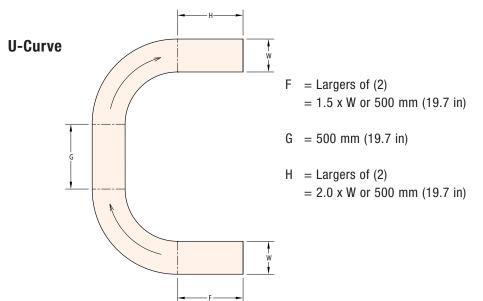
# **Minimum Curve Section Lengths:**



Single C	urve	
Width	Α	В
152	500	500
229	500	500
305	500	610
381	570	765
457	685	915
533	800	1070
610	915	1220
686	1025	1375
762	1140	1525
838	1255	1680
914	1370	1830

S-Curve	W W
	C = Largers of (2) = 1.5 x W or 500 mm (19.7 in)
	D = Largers of (2) = 2.0 x W or 500 mm (19.7 in)
W W	E = Largers of (2) = 2.0 x W or 500 mm (19.7 in)

S Curve			
Width	C	D	Е
152	500	500	500
229	500	500	500
305	500	610	610
381	570	765	765
457	685	915	915
533	800	1070	1070
610	915	1220	1220
686	1025	1375	1375
762	1140	1525	1525
838	1255	1680	1680
914	1370	1830	1830



U Curve			
Width	F	G	Н
152	500	500	500
229	500	500	500
305	500	500	610
381	570	500	765
457	685	500	915
533	800	500	1070
610	915	500	1220
686	1025	500	1375
762	1140	500	1525
838	1255	500	1680
914	1370	500	1830



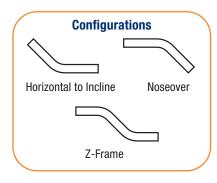
# Aqua Pruf®

# 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: 200 mm (7.9 in) to 600 mm (23.6 in)
- Conveyor section lengths: 610 mm (24 in) to 6100 mm (240 in)
- Maximum total conveyor length of 25000 mm (984 in)
- Angles from 30 degrees to 60 degrees in 5 degree increments
- · Continuous TIG Welded 304 Stainless Steel Frame
- · FDA approved belting and plastic components
- · Suitable for use in raw food applications
- Stainless Steel construction for wash down cleaning with caustic solutions
- AquaPruf Ultimate 3A models available. See page 44.

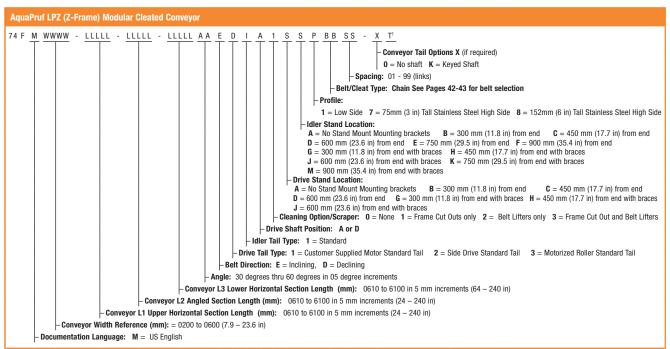




STANDARD: Tip-Up Tail\*\*



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



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

Order gearmotor mounting packages and gearmotors separately, see pages 47-50. For support stands and accessories, see page 52-55.

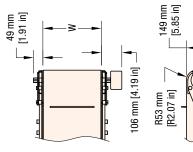


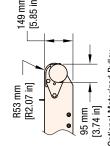
<sup>\*\*</sup> Note: Do not run the conveyor with the tail in the tip-up position.

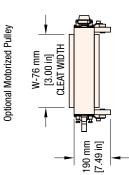
# LPZ (Z-FRAME) MODULAR CLEATED BELT

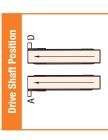


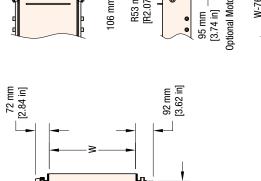


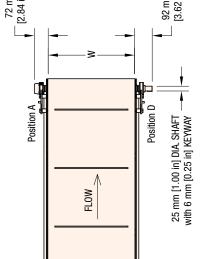


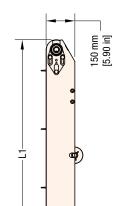


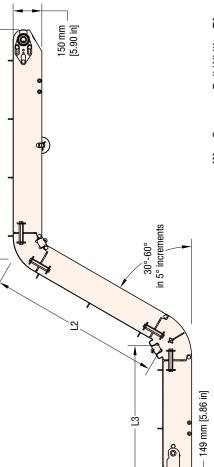












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R53 mm [R2.07]

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Dim
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STANDARD SIZES									
<b>Conveyor Width Reference</b>	200	250	300	350	400	450	200	550	009
ATP THE MENT OF THE PARTY OF TH	200	250	300	350	400	450	200	220	009
CONVEYOR BEIL WIGHT (W)	(7.9)	(8.8)	(11.8)	(13.8)	(13.8) (15.7) (17.7)	(17.7)	(19.7)	(21.7)	(23.6)
<b>Conveyor Length Reference</b>	90	0610		00005	00005 increments up to	up to		61	6100
Conveyor Length (L)	0610	0610 (24)		000002 (0.2	00005 (0.2) increments up to	ts up to		6100	6100 (240)

ARD SIZES									
r Width Reference	200	250	300	350	400	450	200	550	009
Dolf Width AM	200	250	300	350	400	450	200	550	009
r beit widtii (w)	(7.9)	(8.8)	(11.8)	(13.8)	(15.7)	(13.8) (15.7) (17.7)	(19.7)	(21.7) (23.6	(23.6
r Length Reference	0610	10		00005	00005 increments <b>up to</b>	up to		6100	00
r Length (L)	0610 (24)	(24)		000002 (0.3	00005 (0.2) increments up to	ts up to		6100 (240)	(240)



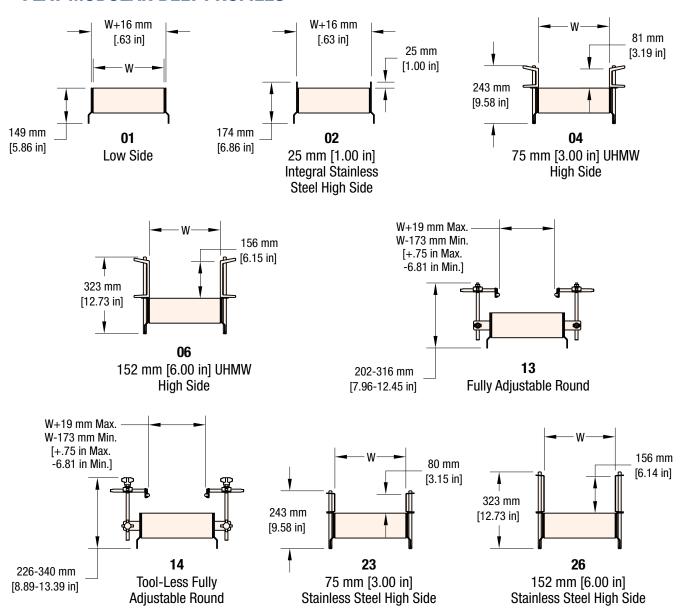
W+73 mm [2.87 in]

See page 38 for side profile options

W-64 mm [2.52 in]



# **FLAT MODULAR BELT PROFILES**





All AquaPruf stainless steel and UHMW guiding profiles are quick removal without tools for fast effective cleaning

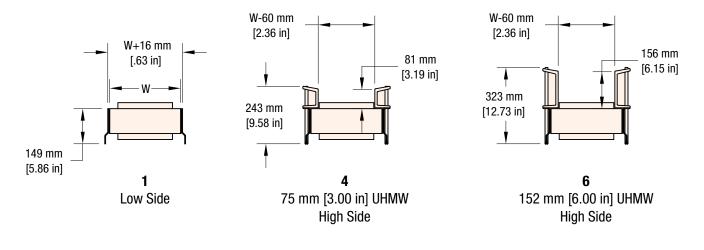
W = Conveyor Belt Width Dim = mm (in)

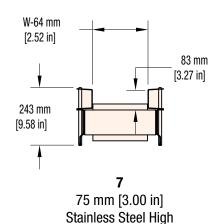
Due to the wide variety of drive set ups and applications, point of installation guarding is the responsibility of the end user.



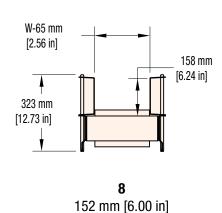


# **CLEATED MODULAR BELT PROFILES**





Side



Stainless Steel High

Side



All AquaPruf stainless steel and UHMW guiding profiles are quick removal without tools for fast effective cleaning

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.



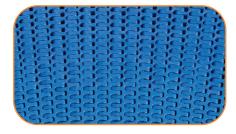
# **Flush Grid Belts**

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



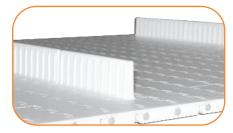
# **Friction Inserts**

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.



Mo	dula	r Be	It Selection	n G	uide											
	Belt Type	Part Number Reference	Description mm (in)	% Open	Pitch mm (in)	Belt Thickness mm (in)	Color	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)
	ve	MA/BA	Flat top	0	25 (1)	11 (.43)	White/Blue	Acetal	Polyethylene	-40 (-40)	102 (215)	Υ	Good	V-Good	5	N/A
	d Dri Pulle	MB/BB	Flat top	0	25 (1)	11 (.43)	White/Blue	Polypropylene	Polypropylene	5 (40)	135 (275)	Υ	V-Good	Good	5	N/A
elts	Standard Drive & Idler Pulley	MC/BC	Flush grid	35	25 (1)	10 (.39)	White/Blue	Acetal	Polypropylene	5 (40)	93 (200)	Υ	Good	V-Good	5	N/A
Straight Flat Belts	St. &	MD/BD	Flush grid	35	25 (1)	10 (.39)	White/Blue	Polypropylene	Polypropylene	5 (40)	105 (220)	Υ	V-Good	Good	5	N/A
ight	e or er	MG/BG	Flat top	0	13 (.5)	10 (.39)	White/Blue	Acetal	Nylon	-40 (-40)	93 (200)	Υ	Good	Good	5	25 (1)
Stra	Driv ar Idl	MH/BH	Flat top	0	13 (.5)	10 (.39)	White/Blue	Polypropylene	Nylon	5 (40)	105 (220)	Υ	V-Good	V-Good	5	25 (1)
	Nose Bar Drive or Nose Bar Idler	MJ/BJ	Flush grid	25	13 (.5)	10 (.39)	White/Blue	Acetal	Nylon	-40 (-40)	93 (200)	Υ	Good	Good	5	25 (1)
	Nos	MK/BK	Flush grid	25	13 (.5)	10 (.39)	White/Blue	Polypropylene	Nylon	5 (40)	105 (220)	Υ	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)	Υ	V-Good	Good	60	N/A
Belts	Standard Drive and Idler Pulley	NC	Flat Top w/75 (3) Cleats	0	25 (1)	11 (.43)	White	Acetal	Polyethylene	-40 (-40)	102 (215)	Υ	Good	V-Good	60	N/A
Cleated Straight Belts	e and Id	ND	Flat Top w/75 (3) Cleats	0	25 (1)	11 (.43)	White	Polypropylene	Polypropylene	5 (40)	135 (275)	Υ	V-Good	Good	60	N/A
sated S	rd Drive	NE	Flush Grid w/25 (1) Cleats	35	25 (1)	10 (.39)	White	Acetal	Polypropylene	5 (40)	93 (200)	Υ	Good	V-Good	60	N/A
š	anda	NF	Flush Grid w/25 (1) Cleats	35	25 (1)	10 (.39)	White	Polypropylene	Polypropylene	5 (40)	105 (220)	Υ	V-Good	Good	60	N/A
	22	NG	Flush Grid w/75 (3) Cleats	35	25 (1)	10 (.39)	White	Acetal	Polypropylene	5 (40)	93 (200)	Υ	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)	Υ	V-Good	Good	60	N/A
on Top at Belts	dler Pulley	See Table Below	Flat top w/friction inserts	0	25 (1)	14 (.55)	White	Polypropylene	Polypropylene	5 (40)	60 (140)	Υ	V-Good	Poor	30	N/A
Friction Straight I	Standard Idl	See Table Below	Flush grid w/friction inserts	35	25 (1)	14 (.55)	White	Polypropylene	Polypropylene	5 (40)	60 (140)	Υ	V-Good	Poor	30	N/A
Curved Flat Belts	Standard and Nose Bar Idler Pulley	EA	Plain Chain	0	25 (1)	13 (.51)	Blue	Acetal	Polypropylene	-20 (-4)	60 (140)	Υ	Good	V-Good	5	N/A
Curved	Stand: Nose B Pur	EB to EF****	Friction Insert	0	25 (1)	13 (.51)	Blue	Polypropylene	Polypropylene	-20 (-4)	60 (140)	Υ	Good	V-Good	30	N/A

<sup>\*</sup> FDA = Food and Drug Administration, CFIA = Canadian Food Inspection Agency

<sup>\*\*\*\*</sup> EB = 25 mm (1 in) spacing; EC = 51 mm (2 in) spacing; ED = 102 mm (4 in) spacing; EE = 152 mm (6 in) spacing; EF = 305 mm (12 in) spacing

FRICTION TOP STRAIGHT PLASTIC CHAIN:	Part numbe	r 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



<sup>\*\*</sup> 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.



All conveyor models, with the exception of Belted Center drive, are available in AquaPruf Ultimate 3A. These product upgrades ensures that the AquaPruf Ultimate meets the strict requirements of 3A and is optimally designed for use in food applications such as meat, poultry, fish and ready-to-eat. 3A certification pending.



All surfaces on internal frame components are polished to 32 microinch, except belted product.



All bearings are external to the conveyor and a minimum of 25 mm away from the food zone.



Drive sprocket design includes a quick cleaning system to ensure cleaning can be done below the sprocket surface.



Patent pending idler tail cleaning system on Modular Belt and Positive Drive Belt models.



Belting / Chain offered meet strict 3A, USDA and NSF requirements.



All support stands use only sanitary threadless feet designs.



Radii on all internal components meet the 6 mm (0.25") standard requirement.



Conveyor cleaning guideline is provided specifically for effective cleaning of the Dorner product.











- Magnetic Direct Drive Technology
- Compatible with Belted, Modular Belt Straight and Positive Drive AquaPruf Conveyors
- · Complete stainless steel construction
- IP65 wash down rated
- 20 to 250 rpm
- (3) Conveyance surface options
  - 89 mm (3.5 in) OD Cast on Utrethane with K8 V groove
  - 12 tooth, 25 mm (1 in) pitch sprocket for straight modular belts
  - 12 tooth, 25 mm (1 in) pitch sprocket for positive drive flat belt
- UL Approved
- Includes compatible Vector Variable Frequency Drive
  - Single and three phase input voltage options
  - IP65 / Nema 4X enclosure
  - UL / CUL / CE approved



**Belted Conveyor** 



**Positive Drive Belted Conveyor** 

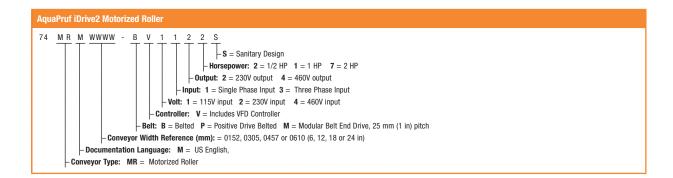


**Modular Belted Conveyor** 



### iDrive2 Magnetic Direct Drive Technology

- · Eliminates need for gearing
- Eliminates need for oil
- IP65 washdown rated
- Indexing capable
- 50% less power consumption
- · 3 year warranty









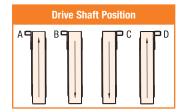
Belt	Spee	d																
									Belt	Speed							1	
					Belted C	Conveyor			Modul	ar Belt		I	Positive Dr	ive Belt				
Wie	dth	RF	PM	m/ı	min	ft/r	nin	m/ı	min	ft/r	nin	m/m	iin	ft/ı	min	Tor	que	Amps
(mm)	(inch)	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Nm	in-lbs	FLA
152	6	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	3	27	1.3
203	8	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	7	62	2.3
254	10	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	10	89	2.5
305	12	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	15	133	2.75
356	14	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	15	133	2.75
406	16	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	20	177	2.3
457	18	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	25	221	2.6
508	20	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	25	221	2.6
559	22	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	30	266	5.2
610	24	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	30	266	5.2
660	26	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	30	266	5.2
711	28	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	30	266	5.2
762	30	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
813	32	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
864	34	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
914	36	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
965	38	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
1016	40	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
1067	42	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
1118	44	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
1168	46	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75
1219	48	20	250	5.6	69.8	18	229	6.2	77.4	20	254	6.2	77.7	20	255	40	354	5.75





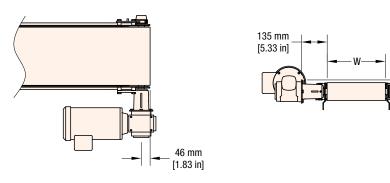
# **GEARMOTOR MOUNTING PACKAGE & GEARMOTOR SELECTION STEPS**

- Step 1: Use the **Belt Speed Chart** (page 48) to determine your desired belt speed based on conveyor type and mount package. See Gearmotor column.
- Step 2: Locate the appropriate gearmotor chart (pages 49-50) in terms of **Painted** vs. **Stainless Steel** based on your gearmotor chart numbers



[0.56 in]

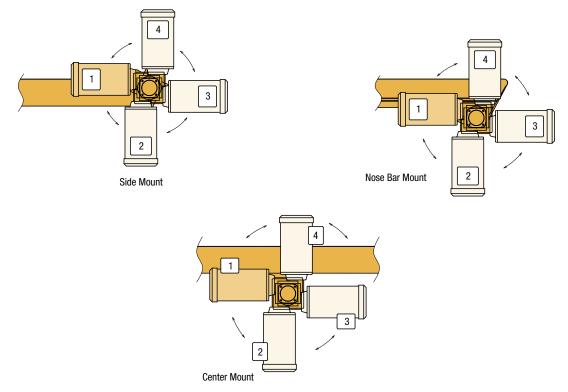
# Side Mount Package, 90° Gearmotor



• Includes stainless steel gearmotor bracket, coupling and mounting hardware

W = Conveyor Belt Width

# 90° Gearmotor Location Options



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

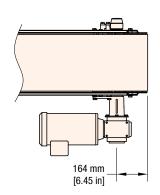
Note: Conveyor and gearmotor are not included in the mounting package and must be ordered separately. Dimensions = in (mm)

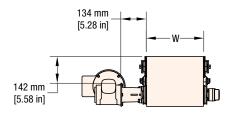




# GEARMOTOR MOUNTING PACKAGES & BELT SPEED CHARTS

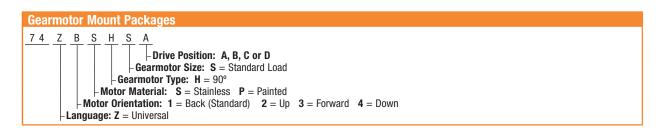
# Nose Bar Mount Package, 90° Gearmotor





• Includes stainless steel gearmotor mounting bracket and mounting hardware

W = Conveyor Belt Width



Fixed S	peed						
		Belt S	Speed				
Belted 0	Conveyor	Modul	ar Belt	Positive I	Drive Belt	RPM From Gearmotor	Gearmotor Chart
m/min	ft/min	m/min	ft/min	m/min	ft/min	dourniolor	Onare
8	26	9	30	9	30	29	1,2
12	39	14	46	14	46	44	1,2
16	52	18	59	18	59	58	1,2
24	79	27	89	27	89	87	1,2
33	108	36	118	36	118	117	1,2
49	161	54	177	54	177	175	1,2
65	213	72	236	72	236	233	1,2

Variable	e Speed						
		Belt S	Speed			RPM at	
Belted (	Conveyor	Modul	ar Belt	Positive I	Drive Belt	60Hz	Gearmotor Chart
m/min	ft/min	m/min	ft/min	m/min	ft/min	Gearmotor	Onare
1 to 8	3 to 26	1 to 9	3 to 30	1 to 9	3 to 30	29	3,4
1 to 12	4 to 39	1 to 14	5 to 46	1 to 14	5 to 46	44	3,4
2 to 16	5 to 52	2 to 18	6 to 59	2 to 18	6 to 59	58	3,4
2 to 24	8 to 79	3 to 27	9 to 89	3 to 27	9 to 89	87	3,4
3 to 33	11 to 108	4 to 36	12 to 118	4 to 36	12 to 118	117	3,4
5 to 49	16 to 161	5 to 54	18 to 177	5 to 54	18 to 177	175	3,4
7 to 65	21 to 213	7 to 72	24 to 236	7 to 72	24 to 236	233	3,4

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





# **Fixed Speed**

#### **Painted Steel** 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

97 mm [3.91 in]

213 mm

185 mm

73 mm

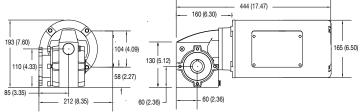
[2.86 in]

[4.32 in]

42 mm

[1.65 in]

- Totally enclosed non-ventilated motor (0.5 HP)
- Totally enclosed fan colled motor (1 and 1.5 HP)
- 3 Phase, 60 Hz









Regulatory

**Approvals** 

177 mm

[6.96 in]

Part Number	RPM	Нр	kW	Volts	FLA	in Ibs.	Nm
71M060HS423FN	29	0.5	0.37	230/460	1.6/0.8	442	50
71M040HS423FN	44	0.5	0.37	230/460	1.6/0.8	486	55
71M030HS423FN	58	1	0.74	208-230/460	3.5-3.2/1.6	487	55
71M020HS423FN	87	1	0.74	208-230/460	3.5-3.2/1.6	407	46
71M015HS423FN	117	1	0.74	208-230/460	3.5-3.2/1.6	470	53
71M010HS423FN	175	1.5	1.11	208-230/460	4.6-4.2/2.1	442	50
71M007HS423FN	233	1.5	1.11	208-230/460	4.6-4.2/2.1	362	41

135 mm

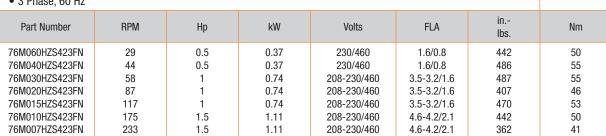
[5.31 in]

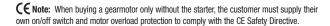
52 mm

[2.06 in]

#### Chart 2 **Stainless Steel**

- Nema 56C
- IP 55 Protection Rating
- · Sealed Gearmotor with H1 FDA approved Lubricant
- · Stainless Steel motor
- Stainless Steel gearbox
- Totally enclosed non-ventilated motor (0.5 HP)
- Totally enclosed fan colled motor (1 and 1.5 HP)
- 3 Phase, 60 Hz





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)

486 mm

[19.12 in]

[7.40 in]

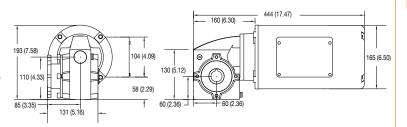




# **Variable Speed**

#### **Painted Steel** Chart 3

- 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 (0.5 HP)
- Totally enclosed fan colled motor (1 and 1.5 HP)
- 3 Phase, 6 to 60 Hz
- Order controller separately



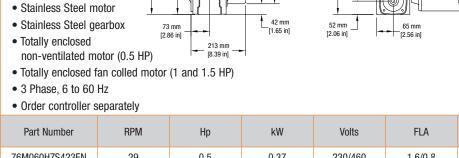






Part Number	RPM	Нр	kW	Volts	FLA	in Ibs.	Nm
71M060HS423EN	29	0.5	0.37	230/460	1.6/0.8	442	50
71M040HS423EN	44	0.5	0.37	230/460	1.6/0.8	486	55
71M030HS423EN	58	1	0.74	208-230/460	3.5-3.2/1.6	487	55
71M020HS423EN	87	1	0.74	208-230/460	3.5-3.2/1.6	407	46
71M015HS423EN	117	1	0.74	208-230/460	3.5-3.2/1.6	470	53
71M010HS423EN	175	1.5	1.11	208-230/460	4.6-4.2/2.1	442	50
71M007HS423EN	233	1.5	1.11	208-230/460	4.6-4.2/2.1	362	41

#### Chart 4 **Stainless Steel** • Nema 56C • IP 55 Protection Rating 97 mm [3.91 in] 110 mm [4.32 in] · Sealed Gearmotor with H1 FDA approved 185 mm Lubricant [7.29 in]



135 mm [5.31 in]	486 mm [19.12 in]	
52 mm [2.06 in]	65 mm [2.56 in]	177 mm [6.96 in]



Regulatory



Part Number	RPM	Нр	kW	Volts	FLA	in Ibs.	Nm
76M060HZS423EN	29	0.5	0.37	230/460	1.6/0.8	442	50
76M040HZS423EN	44	0.5	0.37	230/460	1.6/0.8	486	55
76M030HZS423EN	58	1	0.74	208-230/460	3.5-3.2/1.6	487	55
76M020HZS423EN	87	1	0.74	208-230/460	3.5-3.2/1.6	407	46
76M015HZS423EN	117	1	0.74	208-230/460	3.5-3.2/1.6	470	53
76M010HZS423EN	175	1.5	1.11	208-230/460	4.6-4.2/2.1	442	50
76M007HZS423EN	233	1.5	1.11	208-230/460	4.6-4.2/2.1	362	41

**C € 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)

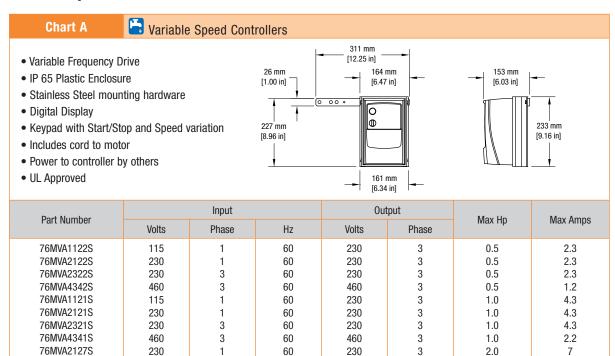




7

4.1

# **Variable Speed Controllers**



60

60

230

460

3

2.0

2.0

# **MANUAL MOTOR STARTER**

230

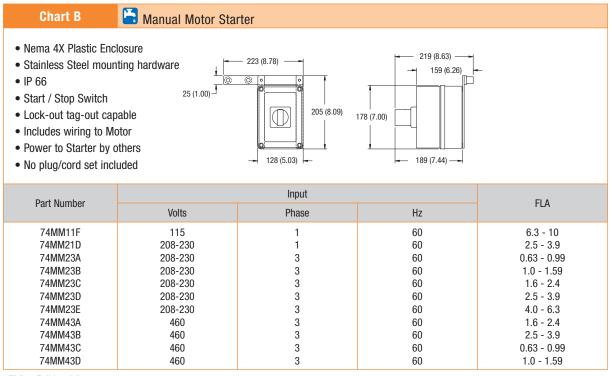
460

3

3

76MVA2327S

76MVA4347S



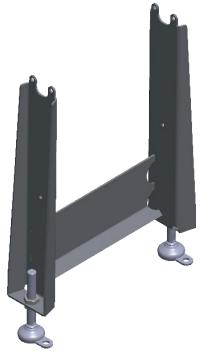
FLA = Full Load Amperes





# **Fixed Height Stands**

- Welded open frame Stainless Steel construction with a Brushed #4 finish
- Fixed angle connection matching conveyor layout from Ø to 60 degrees
- For 152 mm (6 in) to 1219 mm (48 in) widths
- ± 51 mm (2 in) of adjustment
- · Optional swivel locking caster
- · Optional diagonal brace for added stability
- Optional 3A approved threadless foot and casters
- For available heights see page 54





OPTIONAL: 3A approved Thread-less Foot



**OPTIONAL:** Swivel Caster



**OPTIONAL: Diagonal Brace** 

# **Outriggers**

- Fixed height support stands are available with outriggers
- Outriggers provide added support for tall applications
- Welded Stainless Steel construction with Brushed #4 finish
- Extend stand width 316 mm (12.43 in)



Dimensions = mm (in)





# **Tall Supports Stands**

- Welded open frame Stainless Steel construction brushed to #4 finish
- ±50 mm (2 in) of adjustment
- Fixed angle connection matching conveyor layout from Ø to 60 degrees
- · Includes diagonal brace for stability
- Tall Support Stands require the use of floor anchors
- For available heights see page 54



OPTIONAL: 3A Approved Thread-less Foot



# **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
- Optional 3A approved threadless foot and casters
- For available heights see page 54





Swivel Locking Caster Model



**Fixed Foot Model** 

Dimensions = mm (in)





Support S	tand	Heig	hts																					
	Fixed Foot							Hy	ygenic T	hread-	less F	oot Fo	ot		Caster Foot									
T	Shortest Stand Tallest Stand				Shortest Stand Tallest S					Stanc	Stand Shortest			st Star	Stand Tallest			Stand	I					
Type	Minir Top C		Maxi Top 0		Minii Top (	mum Of Belt	Maxii Top 0	mum f Belt		mum Of Belt	Maxii Top O		Mini Top (		Maxi Top 0		Minii Top C			imum Of Belt	Minii Top (		Maxi Top 0	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Fixed Height	275	10.8	375	14.8	1900	74.8	2000	78.7	275	10.8	325	12.8	1900	74.8	1950	76.8	400	15.7	500	19.7	2000	78.7	2100	82.7
Tall Support	1850	72.8	1950	76.8	2400	94.5	2500	98.4	1850	72.8	1900	74.8	2400	94.5	2450	96.5	N	/A	N	I/A	N.	/A	N.	/A
Short Height	200	7.9	300	11.8	N	/A	N/	/A	N	/A	N/	Α	N.	/A	N.	/A	325	12.8	425	16.7	N	/A	N	/A

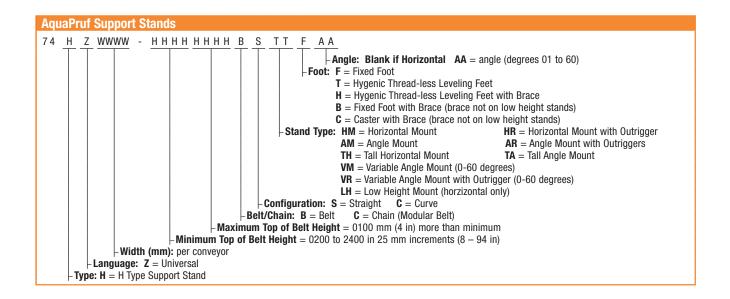
Height increments of 25 mm (1 in)

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

Fixed Heig	Fixed Height Support Stands Widths*																						
Conveyor Wi	dth	152	203	254	305	356	406	457	508	559	610	660	711	762	813	864	914	965	1016	1067	1118	1168	1219
Conveyor Belt	mm	152	203	254	305	356	406	457	508	559	610	660	711	762	813	864	914	965	1016	1067	1118	1168	1219
Width (W)	in	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
Chand width	mm	321	372	423	474	525	575	626	677	728	779	829	880	931	982	1033	1083	1134	1185	1236	1287	1337	1388
Stand width	in	12.6	14.6	16.7	18.7	20.7	22.6	24.6	26.7	28.7	30.7	32.6	34.6	36.7	38.7	40.7	42.6	44.6	46.7	48.7	50.7	52.6	54.6

<sup>\*</sup>Dimensions shown are nominal. Contact factory for specific layout and dimensions.

<sup>\*</sup>Contact factory for Tall and Low Height Support Stand configurations.



Dimensions = mm (in)





# **Horizontal Ceiling Supports**



# **Specifications**

- All components are Stainless Steel brushed to #4 finish
- 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)

UHCS
UH

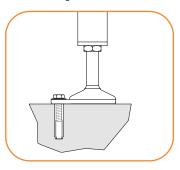
# **Adjustable Angle Ceiling Supports**



# **Specifications**

- All components are Stainless Steel brushed to #4 finish
- 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)
- Mounting block pivots to support incline mounts from 0° to 60°

# **Sanitary Floor Anchor Kits - Type 1**

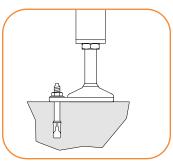


# **Specifications**

- 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)





# **Drip Pans**



# **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



# **Regulatory Approvals:**

### **Conveyors:**

All Dorner AquaPruf 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 AquaPruf 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 AquaPruf 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.

C€	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 manufacture 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 collection, 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>SI</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> °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>(1)</b> **	CSA International (Canadian Standards Association), is a provider of product testing and certification 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.
c (UL) us	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.



# TECHNICAL DATA AND CALCULATIONS



# **3A Sanitary Standard Certification:**

AquaPruf Belted and Modular Conveyors are often used in food production or food packaging areas where proper design of equipment is essential to maintain proper food safety. AquaPruf conveyors are designed for wash down environments typically seen in ready-to-eat, meat, poultry, or dairy 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 AquaPruf products are designed and constructed to be used in food production environments. The following AquaPruf products have gone through testing and certification to 3A Sanitary standard for mechanical conveyors, 41-03. Certification is pending.

AquaPruf End Drive Belted Conveyors with belts; 55, 68 and 70
AquaPruf Positive Drive Belt Conveyors
AquaPruf Modular Belt Conveyors with belts, MA, MB, BA, BB, NA, NB, NC and ND

For 3-A compliance, a conveyor cover or shield must be installed over the conveyor that is easily cleaned, self-draining, and located to prevent liquid or other contaminants from draining or dropping into the container or product, or onto the conveyor belt. Multiple covers can be used if necessary, with overlapping edges. Cover(s) should be fabricated from stainless steel or FDA certified plastic material, and the bottom of the cover(s) must be smooth, with no crevices or exposed threads.

Contact the factory for copy of the certification.





# **Materials and Chemical Resistance:**

Conveyor Frames, Plastics and M	lodular 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 AquaPruf 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  $\mid$  2 = Good resistance  $\mid$  3 = Moderate resistance  $\mid$  4 = Not recommended  $\mid$  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	X	2	1	4
Caustic soda	1	X	2	1	3
Potassium hydroxide	1	1	2	1	4







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

### Legend:

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	X	2	1	1
Carbon disulphide	1	3	2	3	1
Carbon tetrachloride	1	3	1	3	2
Chloroform	1	4	3	4	X
Ethyl acetate	1	1	2	1	1
Ethyl alcohol	1	Χ	2	1	1
Heptane	2	1	1	2	Х
Methyl alcohol	1	X	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



# **TECHNICAL DATA AND CALCULATIONS**



# 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:

 $1 = Good\ resistance \mid 3 = Limited\ resistance \mid 4 = Not\ recommended$ 

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







# **Resistance to Materials: Belting** (continued)

Legend:

1 = Good resistance | 3 = Limited resistance | 4 = Not recommended

1 = Good resistand	1 = Good resistance   3 = Limited resistanc				nce   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		

# **TECHNICAL DATA AND CALCULATIONS**



# **Resistance to Materials: Belting** (continued)

Legend:

Legend: 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 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 dichromate  Potassium iodide	1	1	1	1	1
Potassium nitrate	1	1	1	1	1
Potassium permanganate	1	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







# **Resistance to Materials: Belting** (continued)

Legend:

1 = Good resistance  $\mid$  3 = Limited resistance  $\mid$  4 = Not recommended

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



# **TECHNICAL DATA AND CALCULATIONS**



# **Resistance to Materials: Belting** (continued)

Legend:

1 = Good resistance   3 = Limited resistance   4 = Not recommended					
Materials	Urethane	PVC (non FDA)	Silicone	Polyester	Urethane (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:**

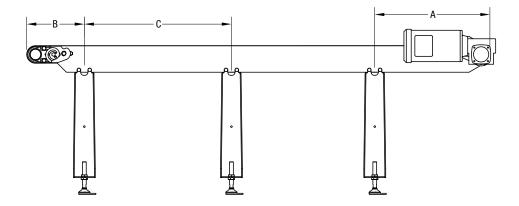
All bearings on the AquaPruf conveyors are sealed. The following outlines the sealed for life versus sealed with grease zerk locations. Any bearings with grease zerk installed should be greased with H1 FDA approved food grade lubricant. See Maintenance Manual for instructions.

- Bearing with grease zerk; Standard drive and idler bearings, center drive idler and drive bearings and 48mm diameter nosebar idler bearings
- Sealed for life bearing; 32 mm diameter nosebar idler bearings, iDrive2 motorized roller bearings

All gearmotors used on AquaPruf 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	Description	Distance			
Syllibol	Description	mm	in		
Α	Maximum distance back at drive end	610	24		
В	Maximum distance back at idler end	762	30		
С	Maximum distance between supports	2997	118		





1.000 in

.998 in



# **Conveyor Drive Shaft Tolerances:**

# **End Drive, Belted and Modular Belt: Center Drive: Nose Bar Drive:** 40 mm 71 mm [1.58 in] [2.81 in] 25.400 mm 25.39 mm 6.45 mm 25.349 mm 25.34 mm 6.40 mm 1.000 in 1.000 in .254 in .252 in .998 in .998 in 6.45 mm 6.40 mm .254 in .252 in 6.50 mm 25.400 mm 6.45 mm 25.349 mm .256 in .254 in

85 mm

[3.34 in]





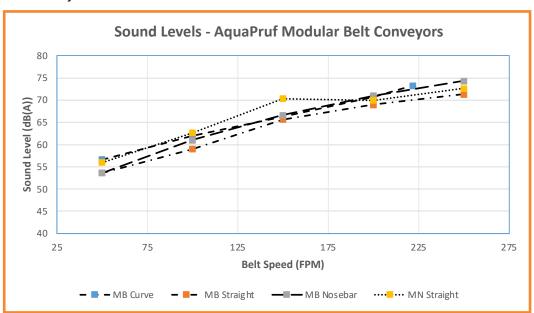


# **Conveyor Noise Level (Decibel Ratings)**

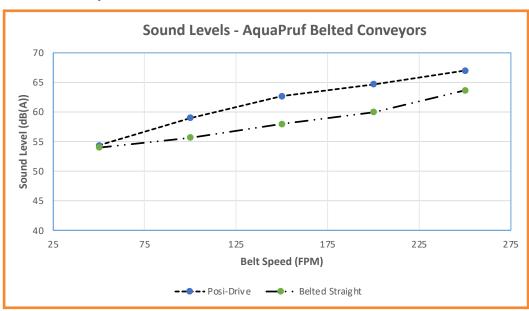
The actual noise level generated by the conveyor depends on several factors; the installation configuration, the product running on the conveyor, the surrounding equipment, the conveyor options and belt speed. The noise level generated by the conveyor is typically less than the general noise level of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

AquaPruf Series Belted End Drive Conveyor					
Belt \	Width	Pulling	the Belt	Pushing	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
965	38	227	500	114	250
1016	40	227	500	114	250
1067	42	227	500	114	250
1118	44	227	500	114	250
1168	46	227	500	114	250
1219	48	227	500	114	250

AquaPruf S	eries 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
965	38	227	500
1016	40	227	500
1067	42	227	500
1118	44	227	500
1168	46	227	500
1219	48	227	500

AquaPruf Series Belted Z-Frame Conveyor						
Belt \	Width	Pulling	Pulling the Belt Pushing the			
mm	in	Kg	Lb	Kg	Lb	
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)

AquaPruf Series Modular Belt Conveyor					
Belt \	Width	Pulling	the Belt		
mm	in	Kg	Lb		
150	5.9	182	400		
200	7.9	205	450		
250	9.8	250	550		
300	11.8	273	600		
350	13.8	295	650		
400	15.7	318	700		
450	17.7	318	700		
500	19.7	341	750		
550	21.7	341	750		
600	23.6	341	750		
650	25.6	341	750		
700	27.6	341	750		
750	29.5	341	750		
800	31.5	341	750		
850	33.5	341	750		
900	35.4	341	750		
950	37.4	341	750		
1000	39.4	341	750		
1050	41.3	341	750		
1100	43.3	341	750		
1150	45.3	341	750		
1200	47.2	341	750		

AquaPruf Series Modular Belt Z-Frame Conveyor					
Belt \	Width	Pulling	the Belt		
mm	in	Kg	Lb		
200	7.9	45	100		
250	9.8	45	100		
300	11.8	45	100		
350	13.8	45	100		
400	15.7	45	100		
450	17.7	45	100		
500	19.7	45	100		
550	21.7	45	100		
600	23.6	45	100		

AquaPruf Series Modular Belt Curve Conveyor			
Belt \	Belt Width		the Belt
mm	in	Kg	Lb
152	6	182	400
229	9	182	400
305	12	227	500
381	15	227	500
457	18	227	500
533	21	227	500
610	24	227	500
686	27	227	500
762	30	227	500
838	33	227	500
914	36	227	500

AquaPruf Series Positive Drive Belt Conveyor				
Belt Width		Pulling 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	228	501	
813	32	228	502	
864	34	229	503	
914	36	229	504	
965	38	230	505	
1016	40	230	506	
1067	42	230	507	
1118	44	231	508	
1168	46	231	509	
1219	48	232	510	
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.

AquaPruf Belted Sraight Conveyor - No load Torque					
Belt Width		Belted End Drive		Belted Center Drive	
mm	in	Nm	In-Lbs	Nm	In-Lbs
203	0.9	8	1.1	10	152 (6)
254	1.1	10	1.5	13	203 (8)
305	1.5	13	1.9	17	254 (10)
356	1.7	15	2.3	20	305 (12)
406	2.3	20	2.9	26	356 (14)
457	2.3	20	2.9	26	406 (16)
508	2.8	25	3.7	33	457 (18)
559	3.1	27	4	35	508 (20)
610	3.1	27	4	35	559 (22)
660	3.4	30	4.4	39	610 (24)
711	3.7	33	4.9	43	660 (26)
762	3.7	33	4.9	43	711 (28)
813	4	35	5.2	46	762 (30)
864	4.3	38	5.5	49	813 (32)
914	4.3	38	5.5	49	864 (34)
965	4.3	38	5.5	49	914 (36)
1016	4.5	40	5.9	52	914 (36)
1067	4.5	40	5.9	52	914 (36)
1118	4.7	42	6.2	55	914 (36)
1168	4.7	42	6.2	55	914 (36)
1219	5	44	6.4	57	914 (36)

### **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:

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

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

Example: AquaPruf Series Straight Modular Belt, 650 mm wide x 7000 mm long Belt weight (kg) = (650/1000)\*((7000\*2)/1000)\*8.7 = 79.2 kg No load torque (Nm) = 79.2\*0.3\*((99/2)/1000) = 1.18 Nm No load torque (in-lb) = (Nm)\*8.851 = 1.10\*8.851 = 10.44 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	Coefficient of Friction
AquaPruf Series Belted	Impregnated polyester fabric to anodized aluminum bed plate	Dry	0.33
AquaPruf 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:

# **AquaPruf Series Belt**

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

### **AquaPruf 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 AquaPruf 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	

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		



**Start / Stop Factor** 



# **Calculating Conveyor Belt Speed:**

# **AquaPruf 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

RPM = Revolutions per minute of gearmotor

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

### **Example:**

AquaPruf Series Belted End Drive, side mount gearmotor. The gearmotor is a 10:1 ratio with 173 rpm output.

Belt Speed (m/min) = (173)\*(89/1000)\*3.14

Belt speed (m/min) = 48.3 m/min

Belt speed (ft/min) = 48.3 m/min\*(3.28) = 158.4 ft/min



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

- Processed Foods
- Raw Meats & Poultry
- Pharmaceutical
- Dairy
- Fruits & Vegetables
- Ready-to-Eat Foods
- Nutraceuticals
- Pet Foods
- And More!

# Sizes & Measurements

- 152 1524 mm (6 60 in) widths
- 914 25375 mm (36 999 in) lengths

# **Loads & Speeds**

- 98 kg per square meter (20 lbs per square foot)
- Speeds up to 100 mpm (328 fpm)

# **Modular Belt Options**

- Flat Modular Belt
- Friction TopCleated
- Curve



Patented Sprocket Alignment Key

Flat Modular Belt

# **Belt Options**

V-Guided and Positive Drive Belt Options

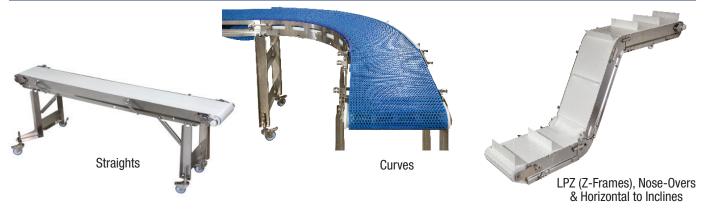
- Flat Belt
- Cleated
- Sidewall Cleated



Positive Drive



# **Configurations**



# **Options**



Nose Bar Transfers



Belt Lifters & Frame Cut-Outs



Belt Scrapers



Clean-in-Place

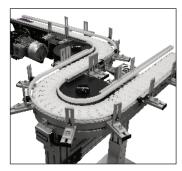




# **Industrial & Automation Conveyors**









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# **Transforming Conveyor Automation**

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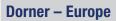












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