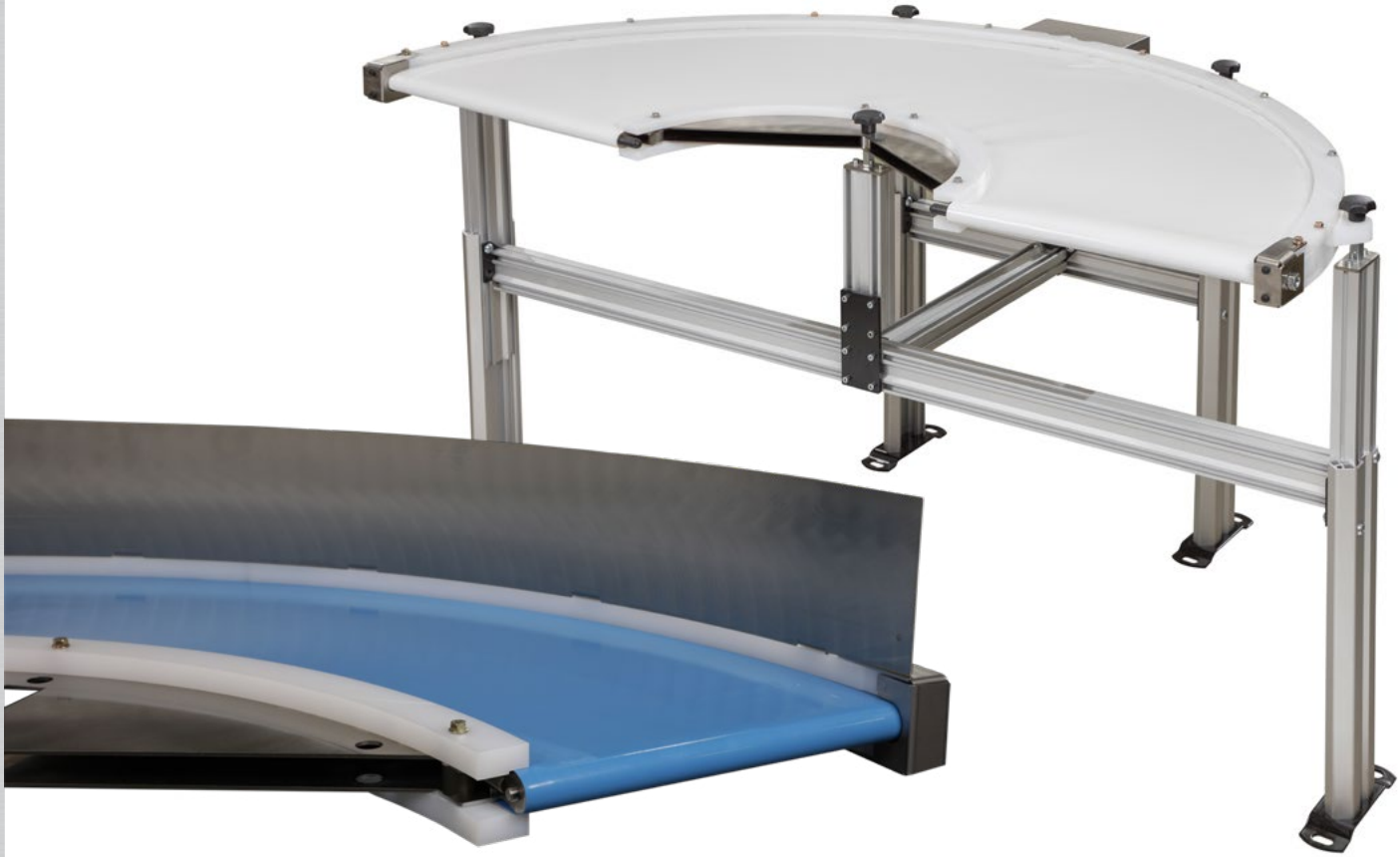
ENGINEERING MANUAL

Tight Radii | Durable Construction | Reduced Footprint | Precise Transfers



C3 COMPACT CURVE CONVEYOR

DORNER®
By Columbus McKinnon

Innovative Drive

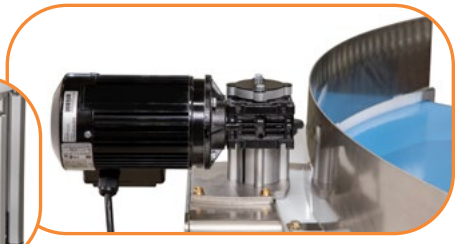
- Patented Sprocket Driven Belt Technology
  - Produces low tension belt, allowing for minimal belt stretch and lower maintenance
  - Split sprocket design evenly drives the belt
  - Bi-directional sprockets engage the top and return belt for smooth product transport
  - Sprocket pucks ride on a precision channel made from FDA approved plastic
- Design allows removal of conveyor while the drive and motor stays in place, reducing time to replace conveyor and production down time

Accurate Transfers

- 25mm diameter, full-length stainless-steel spindles provide small product transfer without the need of a nose bar
- Single side tensioning mechanism keeps belt running smooth, even with heavy loads
- Single side tensioning mechanism allows for accessible and fast belt tensioning

Flexible Motor location

- Variety of motor locations to choose from, to fit in tight spaces
- AC or DC motor options available



Construction

- Stainless steel bed plate, spindles, and bearings
- FDA-approved belting and plastics
- Aluminum T-slot stands standard, Stainless Steel available upon request
- BISSC Certified (Baking Industry Sanitation Standards Committee)

The Benefits of a Dorner Compact Curve Conveyor

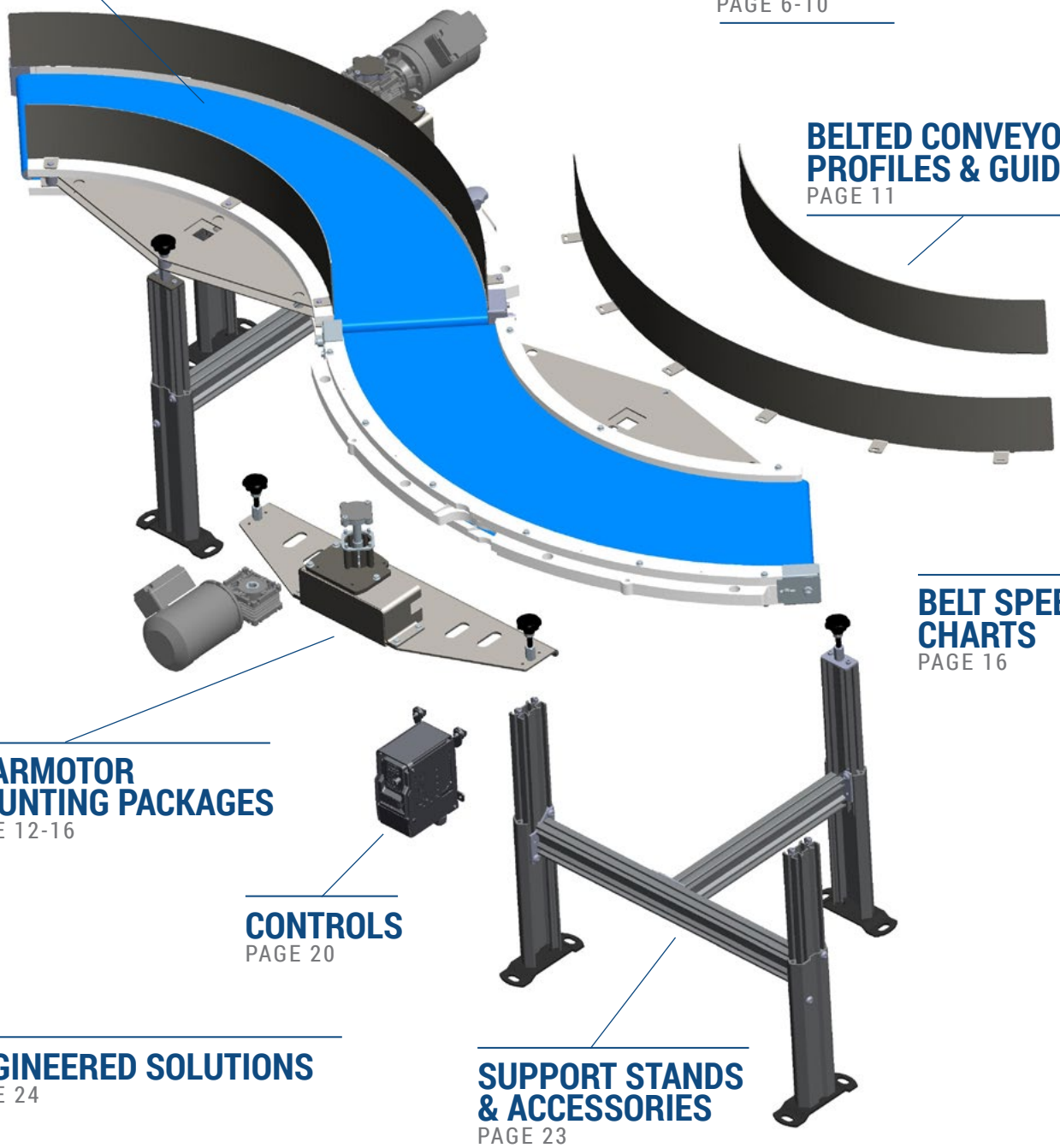
Innovative Offering
- Patented drive mechanism providing low belt tension
- Belt direction can be reversed
- Accurate transferring

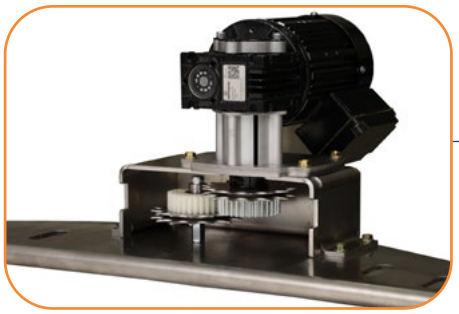
Delivers Fast
- Dorner sets the industry standard for rapid delivery
- Conveyors available in 15 days or less

Time Saving
- Dorner's online configurator engineers simple to complex configurations in minutes.
- The industry leading tool delivers a complete 3D Assembly model for instant validation of fit

TABLE OF CONTENTS

C3 COMPACT CURVE CONVEYOR





PANTENTED SPROCKET DRIVEN BELT

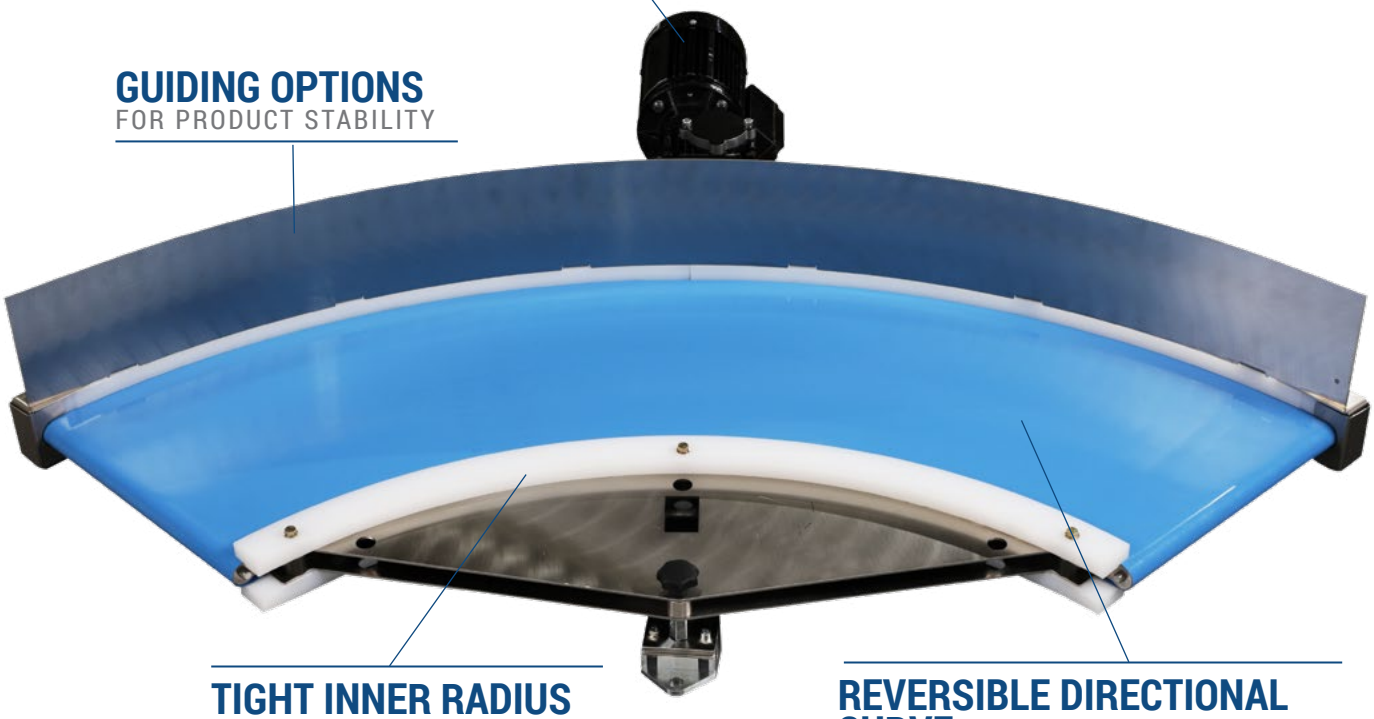
WORKS WITH LOW BELT TENSION ALLOWING FOR MINIMAL BELT STRETCH AND LOWER MAINTENANCE

MOTOR LOCATION

FLEXIBILITY TO FIT IN TIGHT SPACES

GUIDING OPTIONS

FOR PRODUCT STABILITY



TIGHT INNER RADIUS

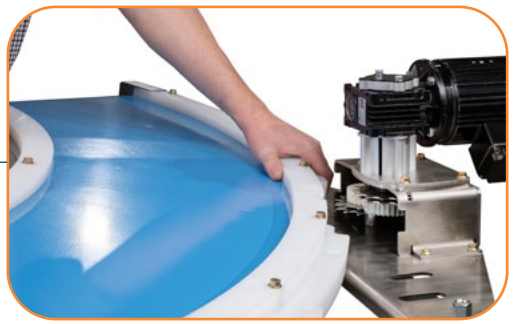
REDUCES FOOTPRINT WHEN COMPARED TO OTHER MODULAR BELT CONVEYORS.

REVERSIBLE DIRECTIONAL CURVE

SIDE DRIVEN SPROCKET ALLOWS CURVE TO BE BI-DIRECTIONAL UNLIKE OTHER CURVED CONVEYORS

QUICK CHANGE CONVEYOR

REDUCES DOWNTIME AND QUICK BELT CHANGE WITH MINIMAL TOOLS AND DISASSEMBLY

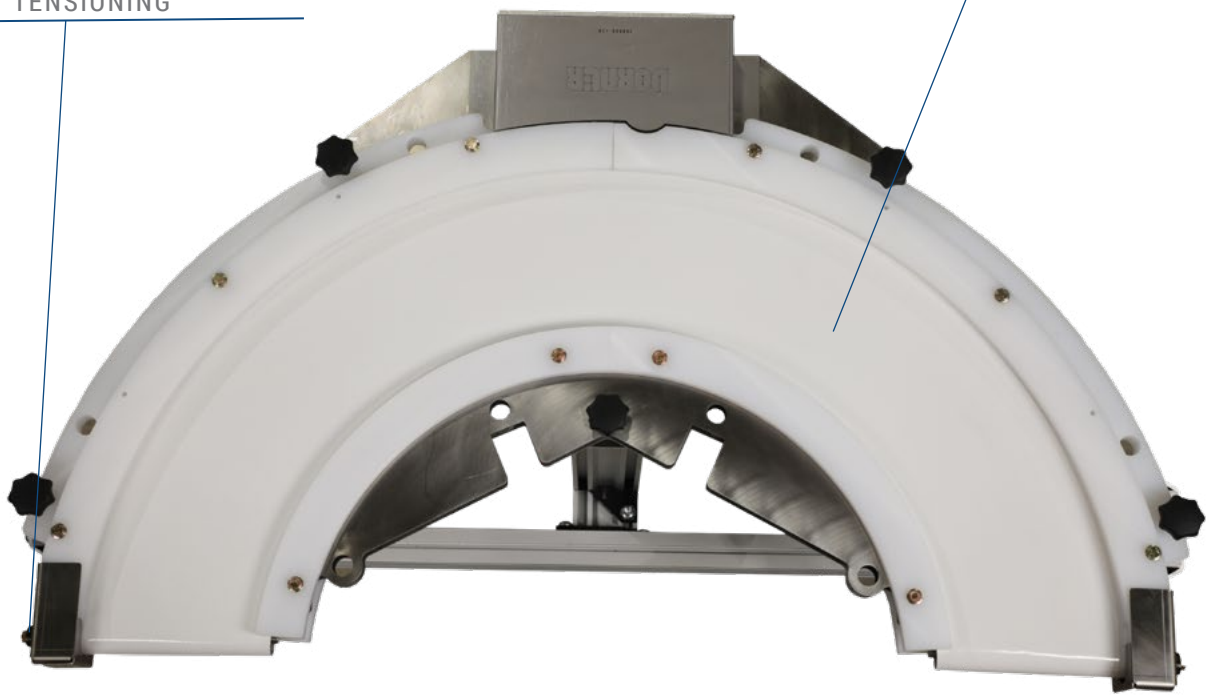


SINGLE SIDE TENSIONING MECHANISM

ALLOWS FOR ACCESSIBLE AND FAST BELT TENSIONING

FDA APPROVED MATERIALS

BELTING AND PLASTIC COMPONENTS DESIGNED TO BE WIPED DOWN

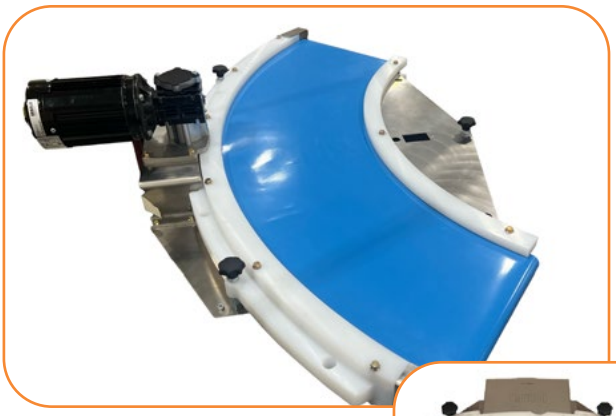


MULTIPLE SUPPORT OPTIONS

TO FIT THE APPLICATION NEEDS

25MM DIAMETER SPINDLES

ALLOWS FOR ACCURATE TRANSFERS OF SMALL PRODUCTS



STANDARD FEATURE:
Patented sprocket driven belt produces low tension in belt, allowing for minimal belt stretch and lower maintenance

Specifications

- Unique low belt tension sprocket driven design
- Small 25 mm spindle diameter for small product transfer
- Maximum load capacity 12 kg (26 lbs) non-accumulating
- Maximum speed 42 meters per minute (138 fpm)
- Belt widths: 150 mm (6 in) – 600 mm (24 in) in 150mm (6 in) increments
- Inner radii: 150 mm (6 in) – 600 mm(24 in) in 150 mm(6 in) increments
- Outer radii: 450 mm (18 in) – 900 mm (36 in) in 150 mm (6 in) increments
- 45° angles are available in 750 mm and 900 mm outer radii
- FDA approved plastics & belts
- Stainless steel bedplates
- AC or 24VDC motor option

STANDARD FEATURE:
Self-adjusting tensioning provides smooth belt path even under heavier loads

OPTIONAL:
Adjustable product guiding allows product guide to be inboard of belt edge

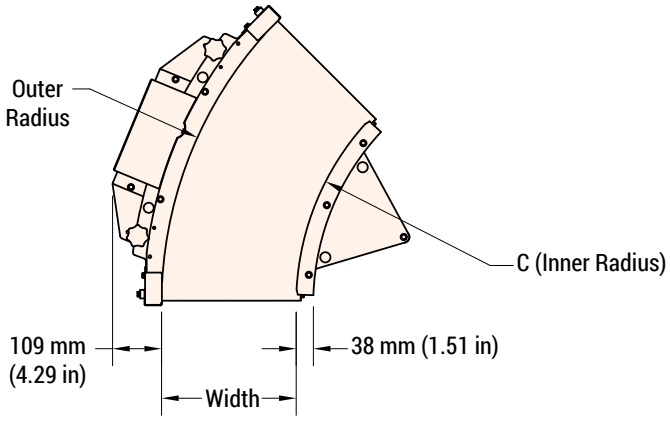
OPTIONAL:
Table top stands allows for low height applications

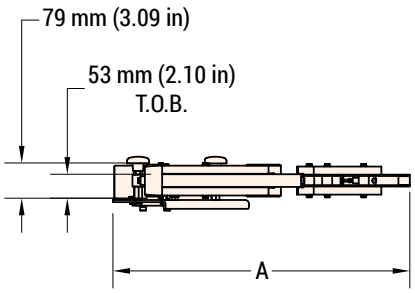
45° & 90° Curve Conveyor and Gearmotor Mounting Package

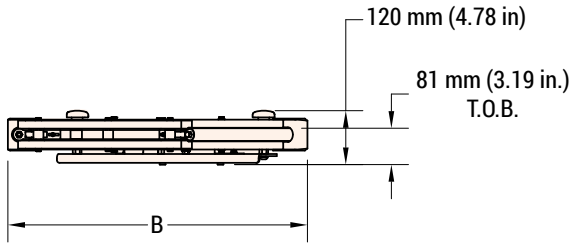
BC2 M WWWW - DDD OOOO A T S 1 GG BB

- **Belt Type:** See Pages 6-9 for belt selection
- **Profile:** **01** = STANDARD 18mm (Low Side), **03** = HIGH SIDE 75mm, **06** = HIGH SIDE 150mm, **14** = ADJ GUIDE
- **Motor Position:** **0** = Parallel Shaft & DC option, **1** = Bot Mtr Pos, **2** = Bot Mtr Pos, **3** = Bot Mtr Pos, **4** = Bot Mtr Pos **6** = Top Mtr Pos, **7** = Top Mtr Pos, **8** = Top Mtr Pos (See pages 14-15 for motor position)
- **Motor Type:** **S** = Standard 90 degree motor, **P** = Parallel shaft , **D** = 24VDC
- **Motor Location:** **T** = Motor above conveyor belt, **B** = Motor below conveyor belt
- **Direction:** **A** = clockwise, **B** = counter-clockwise
- **Outside Radius (mm):** **0450, 0600, 0750** or **0900**
- **Degrees:** **045, 090,** or **180**
- **Conveyor Width Reference (mm):** = **045** or **090**
- **Documentation Language:** **M** = US English, **U** = Europe English, **D** = German, **F** = French, **S** = Spanish
- **Belted Curve Conveyor 25 mm spindle**

Order gearmotors separately, see pages 17-19.
For support stands and accessories, see page 23-24.

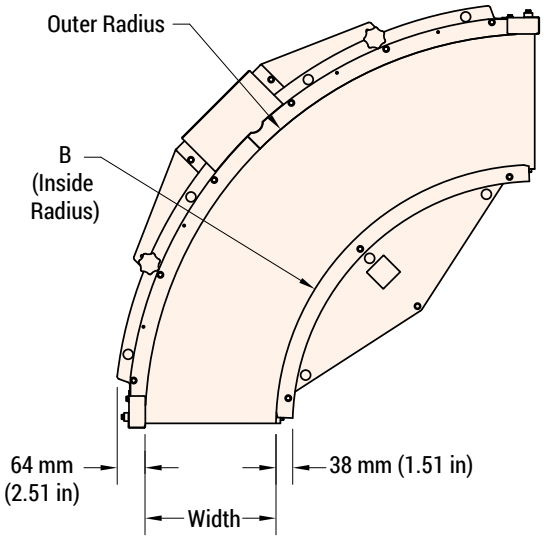


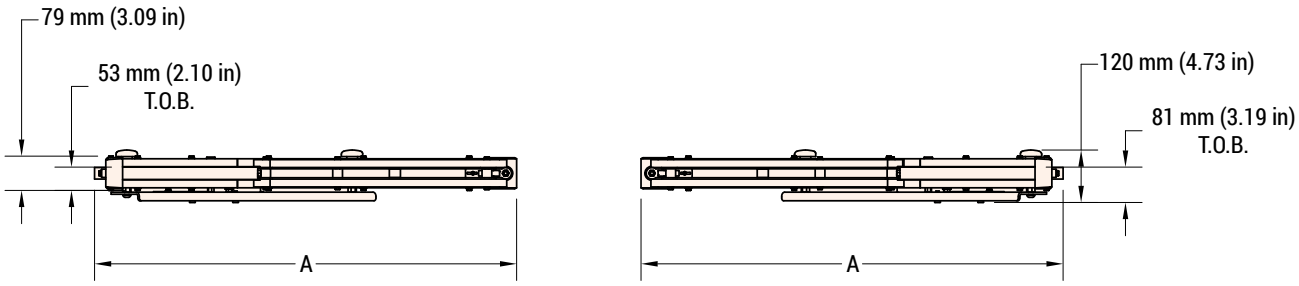




45° Conveyor			
Outer Radius x Width	**A**	**B**	**C**
900 x 300	661 mm (26.04 in)	667 mm (26.28 in)	600 mm (23.62 in)
900 x 450	704 mm (27.73 in)	667 mm (26.28 in)	450 mm (17.72 in)
900 x 600	811 mm (31.91 in)	667 mm (26.28 in)	300 mm (11.81 in)
750 x 150	522 mm (20.55 in)	561 mm (22.09 in)	600 mm (23.62 in)
750 x 300	565 mm (22.26 in)	561 mm (22.09 in)	450 mm (17.72 in)
750 x 450	672 mm (26.45 in)	561 mm (22.09 in)	300 mm (11.81 in)

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



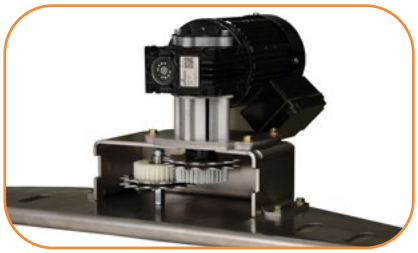


90° Conveyor		
Outer Radius x Width	**A**	**B**
900 x 300	967 mm (38.06 in)	600 mm (23.62 in)
900 x 450	967 mm (38.06 in)	450 mm (17.72 in)
900 x 600	967 mm (38.06 in)	300 mm (11.81 in)
750 x 150	816 mm (32.11 in)	600 mm (23.62 in)
750 x 300	816 mm (32.11 in)	450 mm (17.72 in)
750 x 450	816 mm (32.11 in)	300 mm (11.81 in)
750 x 600	816 mm (32.11 in)	150 mm (5.91 in)
600 x 150	664 mm (26.13 in)	450 mm (17.72 in)
600 x 300	664 mm (26.13 in)	300 mm (11.81 in)
600 x 450	664 mm (26.13 in)	150 mm (5.91 in)
450 x 150	535 mm (21.06 in)	300 mm (11.81 in)
450 x 300	535 mm (21.06 in)	150 mm (5.91 in)

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

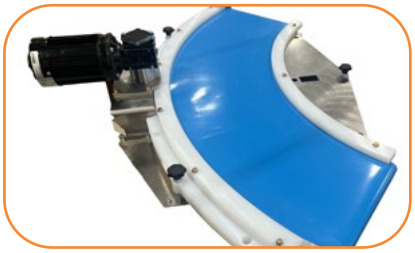
Specifications

- Unique low belt tension sprocket driven design
- Small 25mm spindle diameter for small product transfer
- Maximum load capacity 12 kg (26 lbs) non-accumulating
- Maximum speed 42 meters per minute (138 fpm)
- Belt widths: 150 mm (6 in) – 600 mm (24 in) in 150 mm (6 in) increments
- Inner radii: 150 mm (6 in) – 600 mm (24 in) in 150 mm (6 in) increments
- Outer radii: 450 mm (18 in) – 900 mm (36 in) in 150 mm (6 in) increments
- 180° angles
- FDA approved plastics & Belts
- Stainless steel bedplates
- AC or 24VDC motor option

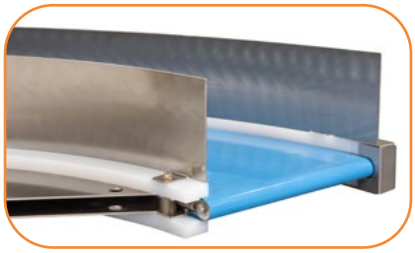


STANDARD FEATURE:
Patented sprocket driven belt produces low tension in belt, allowing for minimal belt stretch and lower maintenance

STANDARD FEATURE:
Self-adjusting tensioning provides smooth belt path even under heavier loads



OPTIONAL:
90° shaft motor location provides flexibility to field rotate motor out of the way



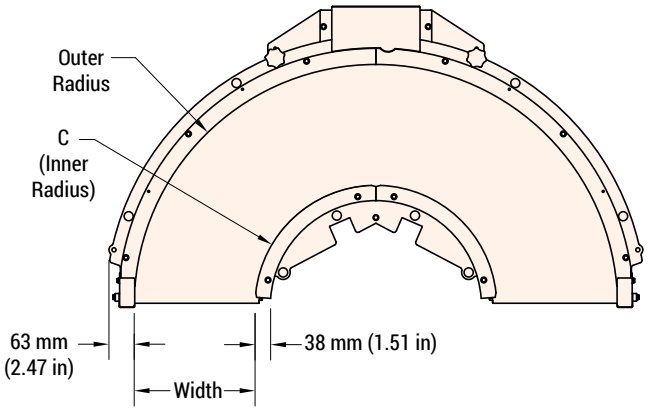
OPTIONAL:
High side product guiding allows unstable product to remain on the conveyor

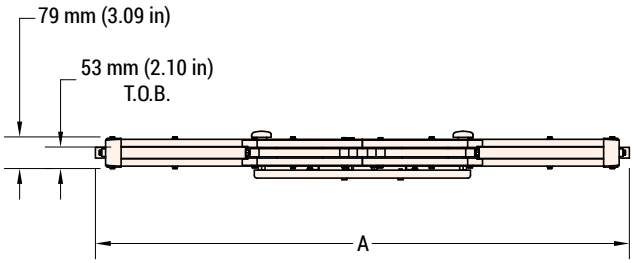
180° Curve Conveyor and Gearmotor Mounting Package

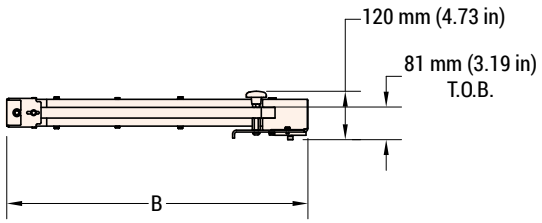
BC2 M WWWW - DDD OOOO A T S 1 GG BB

- **Belt Type:** See Pages 6-9 for belt selection
- **Profile:** **01** = STANDARD 18mm (Low Side), **03** = HIGH SIDE 75mm, **06** = HIGH SIDE 150mm, **14** = ADJ GUIDE
- **Motor Position:** **0** = Parallel Shaft & DC option, **1** = Bot Mtr Pos, **2** = Bot Mtr Pos, **3** = Bot Mtr Pos, **4** = Bot Mtr Pos **6** = Top Mtr Pos, **7** = Top Mtr Pos, **8** = Top Mtr Pos (See pages 14-15 for motor position)
- **Motor Type:** **S** = Standard 90 degree motor, **P** = Parallel shaft , **D** = 24VDC
- **Motor Location:** **T** = Motor above conveyor belt, **B** = Motor below conveyor belt
- **Direction:** **A** = clockwise, **B** = counter-clockwise
- **Outside Radius (mm):** **0450, 0600, 0750** or **0900**
- **Degrees:** **180**
- **Conveyor Width Reference (mm):** = **0150, 0300, 0450** or **0600**
- **Documentation Language:** **M** = US English, **U** = Europe English, **D** = German, **F** = French, **S** = Spanish
- **Belted Curve Conveyor 25 mm spindle**

Order gearmotors separately, see pages 17-19.
For support stands and accessories, see page 23-24.







180° Conveyor			
Outer Radius x Width	**A**	**B**	**C**
900 x 300	1935 mm (76.16 in)	1048 mm (41.25 in)	600 mm (23.62 in)
900 x 450	1935 mm (76.16 in)	1048 mm (41.25 in)	450 mm (17.72 in)
900 x 600	1935 mm (76.16 in)	1048 mm (41.25 in)	300 mm (11.81 in)
750 x 150	1631 mm (64.20 in)	898 mm (35.34 in)	600 mm (23.62 in)
750 x 300	1631 mm (64.20 in)	898 mm (35.34 in)	450 mm (17.72 in)
750 x 450	1631 mm (64.20 in)	898 mm (35.34 in)	300 mm (11.81 in)
750 x 600	1631 mm (64.20 in)	898 mm (35.34 in)	150 mm (5.91 in)
600 x 150	1325 mm (52.17 in)	747 mm (29.43 in)	450 mm (17.72 in)
600 x 300	1325 mm (52.17 in)	747 mm (29.43 in)	300 mm (11.81 in)
600 x 450	1325 mm (52.17 in)	747 mm (29.43 in)	150 mm (5.91 in)
450 x 150	1016 mm (40.01 in)	597 mm (23.51 in)	300 mm (11.81 in)
450 x 300	1016 mm (40.01 in)	597 mm (23.51 in)	150 mm (5.91 in)

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

Standard Belt Selection Guide

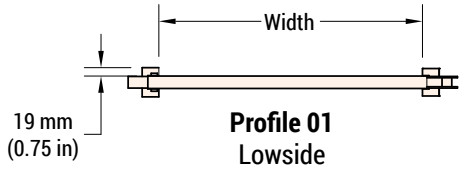
Standard belt material is stocked at Dorner, then cut & spliced at the factory for fast conveyor shipment.

Belt Type	Belt Specifications	Belt Thickness (mm)	Surface Material	Maximum Part Temp. °C	Coefficient of Friction	FDA Approved	Chemical Resistance	Notes and Applications
C1	FDA White High Friction	0.8	Urethane Coated	80	High	Yes	Good	Glossy Finish White
C2	FDA Blue Low Friction	0.9	Urethane Impregnated	100	Very Low	Yes	Good	Accumulation Fabric
C3	FDA Blue High Friction	0.8	Urethane Coated	90	High	Yes	Good	Glossy Finish Blue, AntiMicrobial

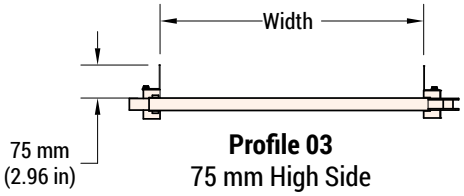
Dim = mm (in)

Blue or White belt with followers

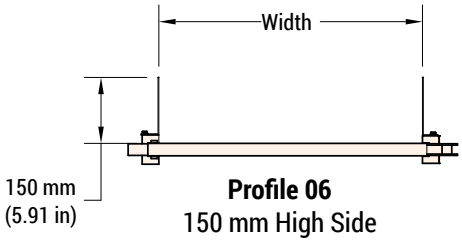
Compact Curved Conveyor Profile Options



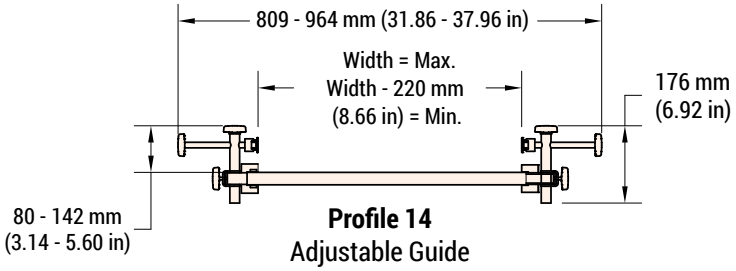
Profile 01
Lowside



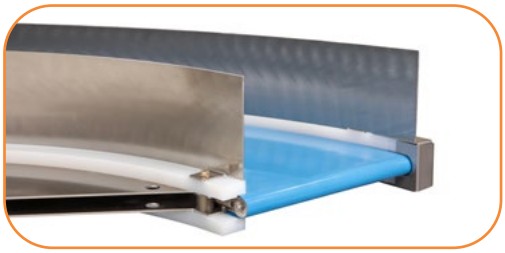
Profile 03
75 mm High Side



Profile 06
150 mm High Side



Profile 14
Adjustable Guide



High Side Guiding

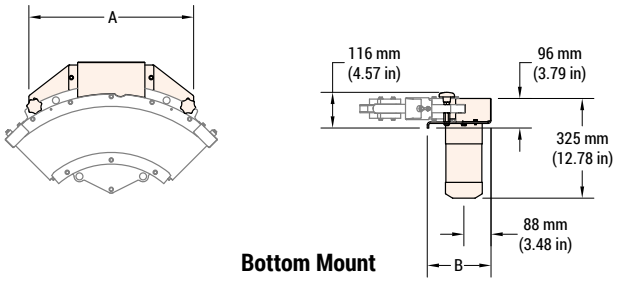
Adjustable Guide

Compact Curved Conveyor Mount Packages

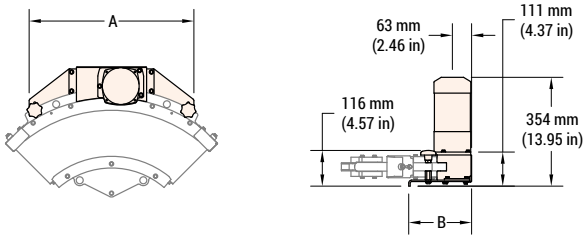
- For quick field set up gearmotors will be shipped mounted to curved conveyor
  - 90 degree option comes with motor detached from gearhead
- Select motor location appropriate for application above or below belt path
- Parallel shaft or 90 degree gearmotors
- Belt speed is determined based on gearmotor ratio & curve radius at belt center line

AC Gearmotor

Parallel Shaft Gearmotor



Bottom Mount

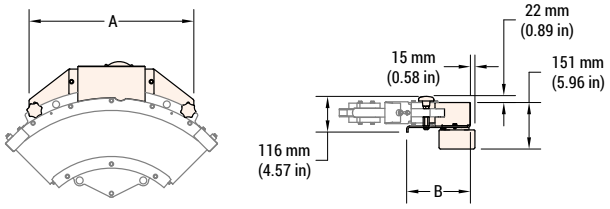


Top Mount

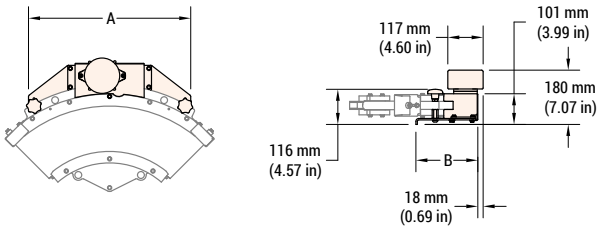
Bottom Parallel		
Angle x Outside Radius	**A**	**B**
045 x 750	417 mm (16.40 in)	186 mm (7.31 in)
045 x 900	487 mm (19.15 in)	180 mm (7.08 in)
090 x 450	537 mm (21.12 in)	208 mm (8.18 in)
090 x 600	537 mm (21.12 in)	187 mm (7.36 in)
090 x 750	677 mm (26.63 in)	204 mm (8.02 in)
090 x 900	767 mm (30.18 in)	210 mm (8.27 in)
180 x 450	537 mm (21.12 in)	208 mm (8.18 in)
180 x 600	537 mm (21.12 in)	187 mm (7.36 in)
180 x 750	677 mm (26.63 in)	204 mm (8.02 in)
180 x 900	767 mm (30.18 in)	210 mm (8.27 in)

Top Parallel		
Angle x Outside Radius	**A**	**B**
045 x 750	417 mm (16.40 in)	183 mm (7.19 in)
045 x 900	487 mm (19.15 in)	177 mm (6.97 in)
090 x 450	537 mm (21.12 in)	205 mm (8.06 in)
090 x 600	537 mm (21.12 in)	196 mm (7.69 in)
090 x 750	677 mm (26.63 in)	201 mm (7.90 in)
090 x 900	767 mm (30.18 in)	207 mm (8.15 in)
180 x 450	537 mm (21.12 in)	205 mm (8.06 in)
180 x 600	537 mm (21.12 in)	196 mm (7.69 in)
180 x 750	677 mm (26.63 in)	201 mm (7.90 in)
180 x 900	767 mm (30.18 in)	207 mm (8.15 in)

DC Gearmotor



Bottom Mount

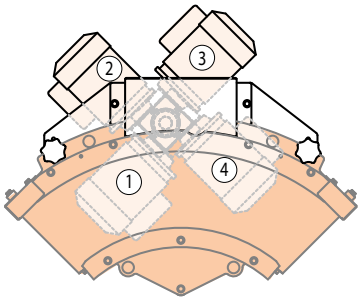


Top Mount

Bottom DC		
Angle x Outside Radius	**A**	**B**
045 x 750	417 mm (16.40 in)	186 mm (7.31 in)
045 x 900	487 mm (19.15 in)	180 mm (7.08 in)
090 x 450	537 mm (21.12 in)	208 mm (8.18 in)
090 x 600	537 mm (21.12 in)	169 mm (6.64 in)
090 x 750	677 mm (26.63 in)	204 mm (8.02 in)
090 x 900	767 mm (30.18 in)	210 mm (8.27 in)
180 x 450	537 mm (21.12 in)	208 mm (8.18 in)
180 x 600	537 mm (21.12 in)	169 mm (6.64 in)
180 x 750	677 mm (26.63 in)	204 mm (8.02 in)
180 x 900	767 mm (30.18 in)	210 mm (8.27 in)

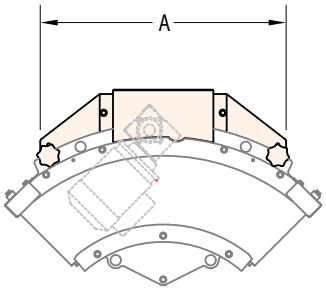
Top DC		
Angle x Outside Radius	**A**	**B**
045 x 750	417 mm (16.40 in)	176 mm (6.93 in)
045 x 900	487 mm (19.15 in)	170 mm (6.71 in)
090 x 450	537 mm (21.12 in)	198 mm (7.80 in)
090 x 600	537 mm (21.12 in)	189 mm (7.43 in)
090 x 750	677 mm (26.63 in)	194 mm (7.64 in)
090 x 900	767 mm (30.18 in)	200 mm (7.89 in)
180 x 450	537 mm (21.12 in)	198 mm (7.80 in)
180 x 600	537 mm (21.12 in)	189 mm (7.43 in)
180 x 750	677 mm (26.63 in)	194 mm (7.64 in)
180 x 900	767 mm (30.18 in)	200 mm (7.89 in)

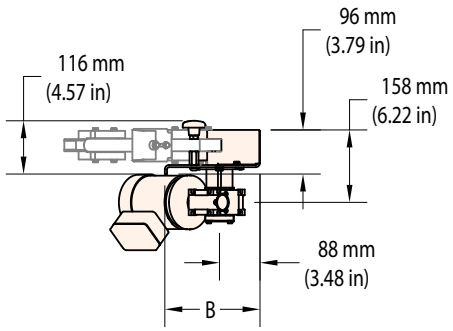
90° Shaft Gearmotor



Motor Position

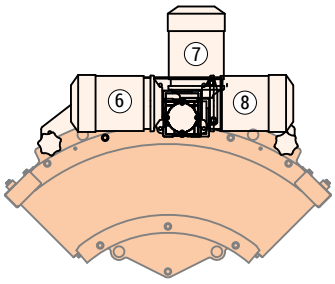
Bottom Mount



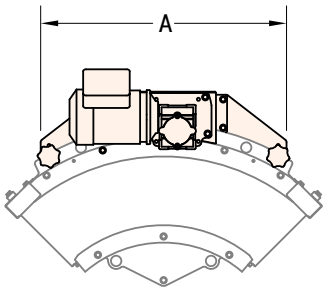


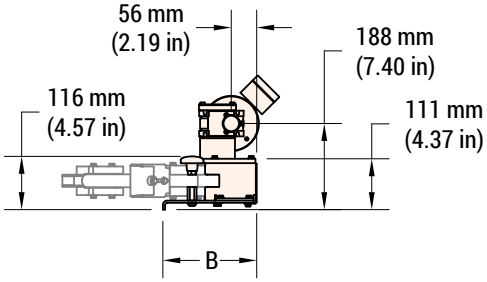
Bottom 90°		
Angle x Outside Radius	**A**	**B**
045 x 750	417 mm (16.40 in)	186 mm (7.31 in)
045 x 900	487 mm (19.15 in)	180 mm (7.08 in)
090 x 450	537 mm (21.12 in)	208 mm (8.18 in)
090 x 600	537 mm (21.12 in)	187 mm (7.36 in)
090 x 750	677 mm (26.63 in)	204 mm (8.02 in)
090 x 900	767 mm (30.18 in)	210 mm (8.27 in)
180 x 450	537 mm (21.12 in)	208 mm (8.18 in)
180 x 600	537 mm (21.12 in)	187 mm (7.36 in)
180 x 750	677 mm (26.63 in)	204 mm (8.02 in)
180 x 900	767 mm (30.18 in)	210 mm (8.27 in)

Top Mount



Motor Position



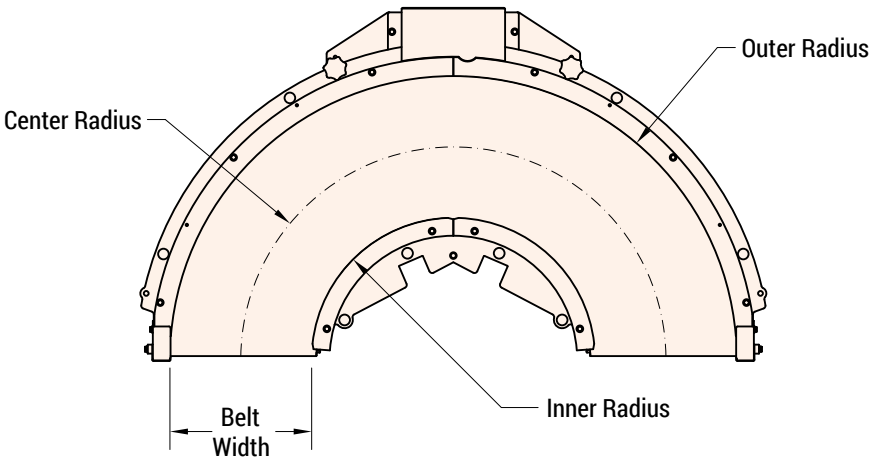


Top 90°		
Angle x Outside Radius	**A**	**B**
045 x 750	417 mm (16.40 in)	183 mm (7.19 in)
045 x 900	487 mm (19.15 in)	177 mm (6.97 in)
090 x 450	537 mm (21.12 in)	205 mm (8.06 in)
090 x 600	537 mm (21.12 in)	196 mm (7.69 in)
090 x 750	677 mm (26.63 in)	201 mm (7.90 in)
090 x 900	767 mm (30.18 in)	207 mm (8.15 in)
180 x 450	537 mm (21.12 in)	205 mm (8.06 in)
180 x 600	537 mm (21.12 in)	196 mm (7.69 in)
180 x 750	677 mm (26.63 in)	201 mm (7.90 in)
180 x 900	767 mm (30.18 in)	207 mm (8.15 in)

Compact Curved Conveyor Speeds

- Speed is calculated at center radius
- Fixed speeds per gearmotor ratio
- 24VDC option is equivalent to 10:1 ratio
- Minimum speed option for variable speed is 10% of maximum speed value
  - Example: 300mm wide, center path radius 300mm with 10:1 gear ratio = 31 meters per minute maximum per chart
    3.1 meters per minute minimum speed (10% of maximum)

Curved Conveyor Size				Gearmotor Information				
			Gearmotor RPM >>	10	29	43	86	173
			Gearmotor Ratio >>	180:1	60:1	40:1	20:1	10:1
Belt Width (mm)	Outter Radius (mm)	Inner Radius (mm)	Center Radius (mm)	Maximum Belt Speed @ center line of production path meters/min (feet/min)				
150	450	300	375	2.2 (7.3)	6.4 (21)	9.4 (31)	19 (63)	39 (127)
150	600	450	525	2.3 (7.7)	6.7 (22)	10 (33)	20 (66)	41(134)
150	750	600	675	2.4 (8.0)	7.0 (23)	10 (34)	21 (69)	42 (138)
300	450	150	300	1.8 (5.8)	5.2 (17)	7.6 (25)	15 (50)	31 (101)
300	600	300	450	2.0 (6.6)	5.8 (19)	8.5 (28)	17 (57)	35 (115)
300	750	450	600	2.2 (7.1)	6.4 (21)	9.4 (31)	19 (61)	37 (123)
300	900	600	750	2.3 (7.4)	6.4 (21)	9.8 (32)	20 (64)	39 (128)
450	600	150	375	1.7 (5.5)	4.9 (16)	7.3 (24)	14 (47)	29 (96)
450	750	300	525	1.9 (6.2)	5.5 (18)	8.2 (27)	16 (53)	33 (107)
450	900	450	675	2.0 (6.7)	58 (19)	8.8 (29)	17 (57)	35 (115)
600	750	150	450	1.6 (5.3)	4.6 (15)	7.0 (23)	14 (46)	28 (92)
600	900	300	600	1.8 (5.9)	5.2 (17)	7.6 (25)	16 (51)	31 (103)

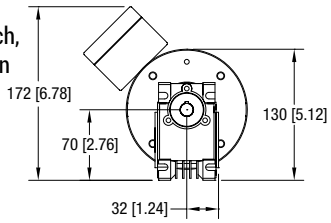


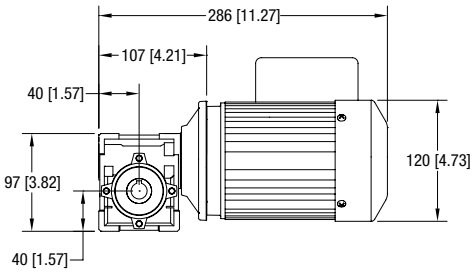
Standard Load, Fixed Speed

Chart 1 — 90°

- Sealed gearmotor
- NEMA 42 CZ C Face
- Totally enclosed, fan cooled
- 115V 1 phase includes switch, cord and overload protection
- 208-230/460 Volts, 3 phase wiring by others
- 60 Hz
- Order 3 phase starter separately, see page 21

eDrive®





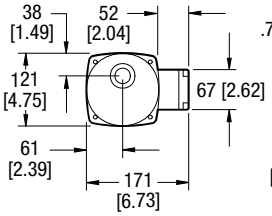
Regulatory Approvals

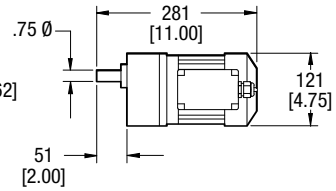
Part Number	RPM	Gearmotor Type	1 Phase			3 Phase			in.-lbs.	Nm	3 Phase Starter Chart
			Hp	kW	FLA	Hp	kW	FLA			
62M060ES4(vp)FC	29	S	0.25	0.19	3.1	0.38	0.29	1.9 / 0.95	134/134	15.1/15.1	M
62M040ES4(vp)FC	43	S	0.25	0.19	3.1	0.38	0.29	1.9 / 0.95	160/160	18.1/18.1	M
62M020ES4(vp)FC	86	S	0.25	0.19	3.1	0.38	0.29	1.9 / 0.95	133/151	15/17.1	M
62M010ES4(vp)FC	173	S	0.25	0.19	3.1	0.38	0.29	1.9 / 0.95	75/114	8.5/12.9	M

(vp) = Voltage and Phase 11 = 115V, 1 phase 23 = 208 - 230 / 460V, 3 phase

Chart 3 — Parallel Shaft

- Sealed gearmotor
- Totally enclosed, fan cooled
- 115V 1 phase includes switch, cord and overload protection
- 230/460 Volts, 3 phase wiring by others
- 60 Hz
- Order 3 phase starter separately, see page 21





Regulatory Approvals

Part Number	RPM	Gearmotor Type	1 Phase				3 Phase				Nm	3 Phase Starter Chart
			Hp	kW	FLA	in.-lbs.	Hp	kW	FLA	in.-lbs.		
62M180PS4(vp)FC	10	S	0.17	0.13	1.9	341	0.17	0.13	1.0 / 0.5	341	38.5	L
62M060PS4(vp)FC	29	S	0.17	0.13	1.9	270	0.17	0.13	1.0 / 0.5	270	30.5	L
62M030PS4(vp)FC	58	S	0.17	0.13	1.9	135	0.38	0.28	1.9 / 0.95	250	15.3	M
62M020PS4(vp)FC	86	S	0.17	0.13	1.9	90	0.38	0.28	1.9 / 0.95	167	10.2	M
62M010PS4(vp)FC	173	S	0.17	0.13	1.9	45	0.38	0.28	1.9 / 0.95	115	5.1	M

(vp) = Voltage and Phase 11 = 115V, 1 phase 23 = 230/460V, 3 phase

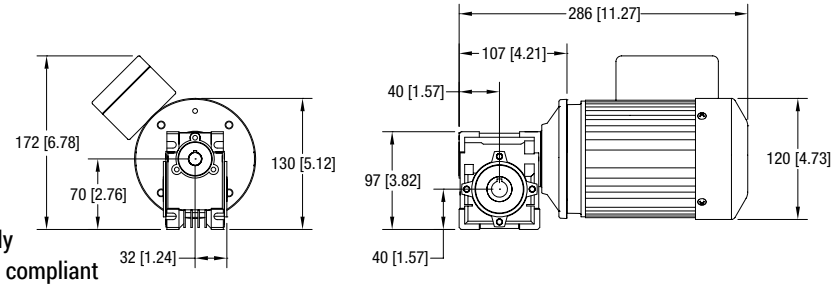
CE **Note:** When buying a gearmotor only without the starter, the customer must supply their own on/off switch and motor overload protection to comply with the CE Safety Directive.

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

Standard Load, Variable Speed

Chart 2 — 90° VFD Rated

- Variable frequency drive, 10 to 60 Hz
- Sealed gearbox
- Nema 42CZ C face
- Totally enclosed, fan cooled
- 230/460Volts, 3 Phase
- Order controller separately
- UL and CSA Listed, RoHS compliant

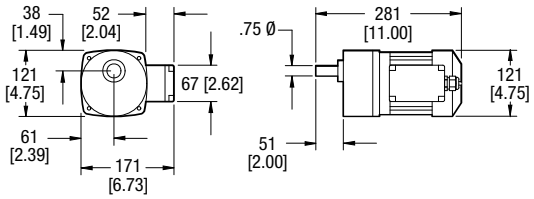


Regulatory Approvals

Part Number	MAX RPM	MIN RPM	Gearmotor Type	Hp	kW	FLA	in.-lbs.*	Nm*	Vari - Speed Control Chart
62M060ES423EC	29	5	S	0.38	0.28	1.9 / 0.95	134	15.1	D and E
62M040ES423EC	43	7	S	0.38	0.28	1.9 / 0.95	160	18.1	D and E
62M020ES423EC	86	14	S	0.38	0.28	1.9 / 0.95	151	17.1	D and E
62M010ES423EC	173	29	S	0.38	0.28	1.9 / 0.95	114	12.9	D and E

Chart 4 — Parallel Shaft VFD Rated

- Variable frequency drive, 10 to 60 Hz
- Sealed gearmotor
- Totally enclosed, fan cooled
- 230/460 Volts / 3 Phase, VFD duty
- Order controller separately, see pages 18-20



Regulatory Approvals

Part Number	MAX RPM	MIN RPM	Gearmotor Type	Hp	kW	FLA	in.-lbs.*	Nm*	Vari - Speed Control Chart
62M180PS423EC	10	2	S	0.17	0.13	1.0 / 0.5	341	38.5	D and E
62M060PS423EC	29	5	S	0.17	0.13	1.0 / 0.5	270	30.5	D and E
62M030PS423EC	58	10	S	0.38	0.28	1.9 / 0.95	250	28.3	D and E
62M020PS423EC	86	14	S	0.38	0.28	1.9 / 0.95	167	18.9	D and E
62M010PS423EC	173	29	S	0.38	0.28	1.9 / 0.95	115	13.0	D and E

* = At 60 Hz

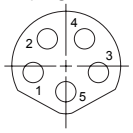
CE **Note:** When buying a gearmotor only without the starter, the customer must supply their own on/off switch and motor overload protection to comply with the CE Safety Directive.

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

Standard Load, Variable Speed DC

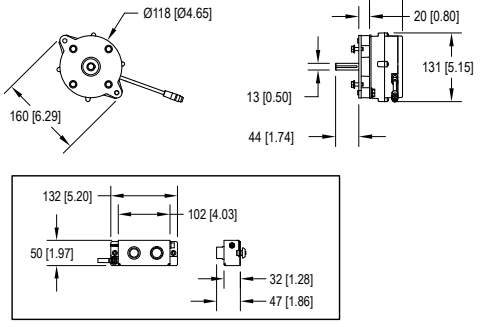
Chart 4 — 24 Volt Brushless DC

When connecting to the motor via a cable (Plug side view)



- Brushless 24 VDC Motor
- 350 motor RPM
- 5 pin M8 connector
- Enviroment : -4-122Fo

Pin	Function	Value
1	Power Supply + Input	Rated: 24 VDC, Range: 23 to 28 VDC
2	Rotation Direction (Face Label View)	Counter-Clockwise (CCW): <4 VDC Clockwise (CW): >7 VDC
3	Power Supply - Input (Also Earth Ground)	Ground: 0 VDC
4	Fault Output	Open Collector Vcesat = 0.5 VDC for Ic = 5 mA Vmax = 30 VDC for Icmax = 200 mA Fault: Signal High No Fault: Signal Low
5	Speed Input	Range: 0 - 24 VDC Stop (Braked ZMH): 0 - 2.2 VDC Speed: 2.3 to 10 VDC Max Speed: 10 to 24 VDC



Option D DC Motor Switchbox

Motor Part Number	RPM	Brushless 24 VDC		Torque	
		kW	FLA	in.-lbs.	Nm
62MESBDDEC(x*)	350	0.06	4.0	14	1.58

* where x:
C = remote controled, Motor comes with M8 connecter only,
D = ready to run, motor comes prewired switch box including switch for FWD/OFF/REV, and varieable speed pot.
R = remotely controlled ON/OFF, motor comes with switch box FWD/OFF/REV, and variable speed pot, and wires to remotely turn on/off via relay or +24VDC signal.

Control Product Family

Basic VFD Control

Simple on/off, direction, and speed control right at the side of the conveyor

Full Feature VFD Control

All the features of a Basic VFD with options to control remotely from a Dorner accessory, discrete I/O, or using a variety of industrial network protocols

Full Feature VFD with Accessory

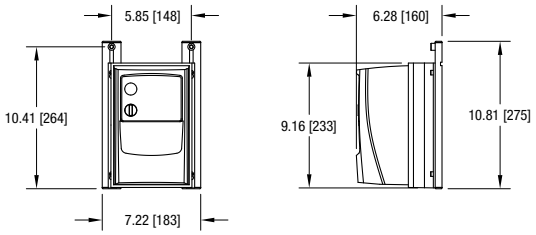
Full feature control with M12 Accessory port for a variety of applications

* = See FLA from motor charts **Dim = mm** (in)

Variable Speed Controllers

Chart D — Full Feature VFD Controller

- Full feature VFD control
- NEMA 4 enclosure
- Digital display
- Keypad with Start/Stop, Forward/Reverse and speed variations
- Includes cord to motor
- Power to controller by others
- 62MV1122 includes line cord to controller
- Mounting hardware
- 115V input requires a non-GFCI power connection



Regulatory Approvals

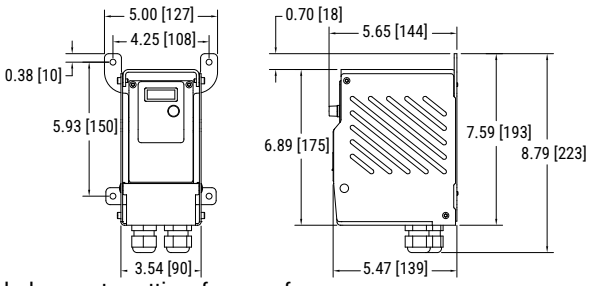
Part Number	Input Volts	Input Phase	Input Hz	Output Volts	Output Phase	Max Hp	Output Amps*	Reversing
32MV1122(O)	115	1	60	230	3	0.5	2.2	Yes
32MV2122(O)	230	1	60	230	3	0.5	2.2	Yes
32MV1121(O)	115	1	60	230	3	1.0	4.0	Yes
32MV2121(O)	230	1	60	230	3	1.0	4.0	Yes
32MV2127(O)	230	1	60	230	3	2.0	6.8	Yes
32MV2322(O)	230	3	60	230	3	0.5	2.2	Yes
32MV2327(O)	230	3	60	230	3	2.0	6.8	Yes
32MV4341(O)	460	3	60	460	3	1.0	2.0	Yes
32MV4347(O)	460	3	60	460	3	2.0	3.4	Yes

In order for this drive to meet full CE requirements for European application a separate CE approve RFI filter must be installed. Product shown in chart B above have this filter pre-installed and are recommended for use in the European Union.

(O) = Optional M12 Accessory Port No Option = No Accessory Port E = M12 Port wired for End Stop Photo Eye Application
I = M12 port wired for Index Photo Eye Application
Note: E or I options will work with Dorner Control Stop or Jog Button Accessories

Chart E — Basic VFD Controller

- Variable Speed Drive
- On/off buttons and knob for speed on keypad
- Direction setting via parameter change
- Includes mounting bracket that can mount drive to vertical or horizontal T-slot
- Includes 10ft input power cord with three prong standard 120V outlet plug
- Includes 10ft motor output cord for 3 phase motor connection with flying leads
- IP 20 rating with electrical finger safe connections
- Pre-programed to match motor parameters and locked parameter settings for ease of uses
- cULus and CE compliant
- 115V input requires a non-GFCI power connection



Regulatory Approvals

Part Number	Input Volts	Input Phase	Input Hz	Output Volts	Output Phase	Max Hp	Max Amps	Reversing
22MV1126T	115	1	60	230	3	0.125-0.5	2.6	Yes*

*Reversing is controlled by parameter change

Manual Motor Starters

Manual motor starts are manual electronic disconnects that provide motor overload protection and are required by the National Electric Code (NEC) for safe motor operation.

- IP 55 Enclosure
- Push button Start / Stop
- Includes mounting hardware

Regulatory Approvals

Illustration **A**

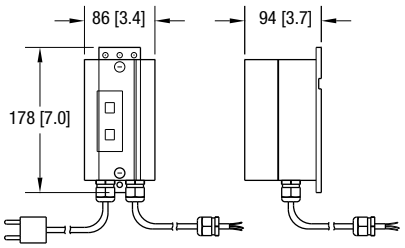


Illustration **B**

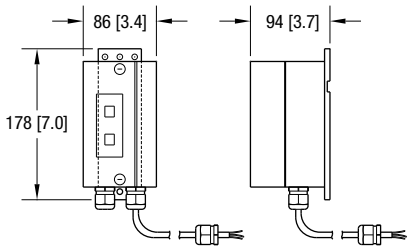


Chart L 230/460V 60 Hz to 1.6 amp

- 230/460 Volts, 3 phase wiring to starter by others
- Wiring between motor and starter provided when ordered together
- 60 Hz

Part Number	In Volts	In Phase	Amp Range	Illustration
62MM23L	230	3	1.0 - 1.6	B
62MM43L	460	3	0.4 - .63	B

Chart M 230/460V 60Hz to 2.5 amp

- 230/460 Volts, 3 phase wiring to starter by others
- Wiring between motor and starter provided when ordered together
- 60 Hz

Part Number	In Volts	In Phase	Amp Range	Illustration
62MM23M	208 - 230	3	1.6 - 2.5	B
62MM43M	460	3	1.0 - 1.6	B

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

Dim = mm (in)

SUPPORT STANDS

Belted Curve Stands

BCS M WWWW - DDD OOOO HHHH HHHH F

- **Foot Type:** **F** = Fixed foot, **C** = caster
- **Max. Height:** SEE TABLE BELOW
- **Min. Height:** **TOB** SEE TABLE BELOW
- **Outside Radius (mm):** **0450, 0600, 0750** or **0900**
- **Degrees:** **045, 090,** or **180**
- **Conveyor Width Reference (mm):** = **0150, 0300, 0450** or **0600**
- **Documentation Language:** **M** = US English, **U** = Europe English, **D** = German, **F** = French, **S** = Spanish
- **Belted Curve Stands**

Table Top

- Lowest profile support
- Comes at fixed height per table
- Standard 3 mm shims
- Shims can be utilizied to add or decrease nominal height.

Short Stand

- Allows fixed foot or caster options
- Allows for a wide range of heights

Table Top Support Stands

Top of Belt Minimum Height		Top of Belt Maximum Height	
(mm)	(in)	(mm)	(in)
0082	3.2	0088	3.5
0087	3.4	0093	3.7
0092	3.6	0098	3.9
0097	3.8	0103	4.1
0102	4	0108	4.3
0107	4.2	0113	4.4
0112	4.4	0118	4.6
0117	4.6	0123	4.8

Short Support Stands

Top of Belt (HHHH) Minimum Height		Top of Belt (HHHH) Minimum Height	
(mm)	(in)	(mm)	(in)
Fixed Feet Option			
0115	4.5	0135	5.3
0125	4.9	0145	5.7
0135	5.3	0165	6.5
0155	6.1	0185	7.3
0175	6.9	0205	8.1
0195	7.7	0225	8.9
0215	8.5	0245	9.6
Caster Option			
0295	11.6	0245	12.8
0315	12.4	0345	13.6
0335	13.2	0365	14.4

Standard Stand

- Allows fixed foot or caster options
- Provides widest range of heights
- Maximum height of 2350 mm
- Tip prevention brackets for taller stands

Standard Support Stand

Top of Belt Minimum Height		Top of Belt Maximum Height		Top of Belt Minimum Height		Top of Belt Maximum Height	
(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
Fixed Feet Option				**Caster Option**			
0225	8.9	0275	10.8	0345	13.6	0400	15.7
0250	9.8	0325	12.8	0370	14.6	0450	17.7
0275	10.8	0375	14.8	0395	15.6	0500	19.7
0325	12.8	0475	18.7	0445	17.5	0600	23.6
0375	14.8	0575	22.6	0495	19.5	0700	27.6
0425	16.7	0675	26.6	0545	21.5	0800	31.5
0475	18.7	0775	30.5	0595	23.4	0900	35.4
0525	20.7	0875	34.4	0645	25.4	1000	39.4
0665	26.2	1140	44.9	0785	30.9	1265	49.8
0850	33.5	1350	53.1	0970	38.2	1475	58.1
1050	41.3	1550	61	1170	46.1	1675	65.9
1250	49.2	1750	68.9	1370	53.9	1875	73.8
1450	57.1	1950	76.8				
1650	65	2150	84.6				
1850	72.8	2350	92.5				

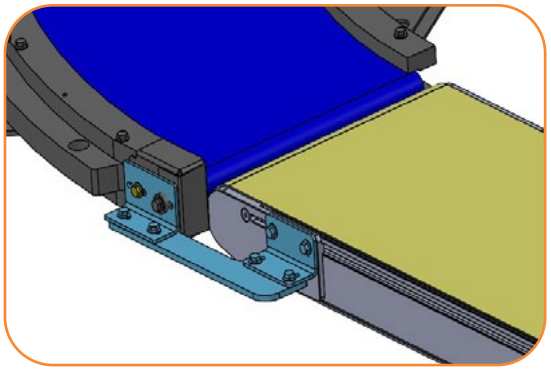
Dimensions = mm (in)

Note: Due to the wide variety of conveyor and stand options along with possible configurations, stability of the final setup is the responsibility of the end user.

Infeed/Outfeed conveyor mounting brackets

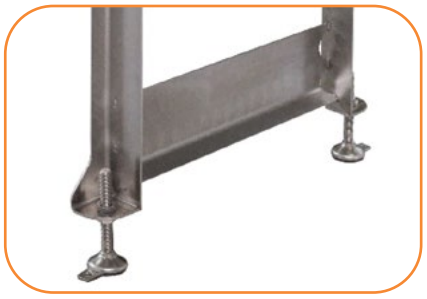
- Standard bracket kits designed to mount to tail head plates of Dorner conveyors
- Made from 304 stainless steel and includes zinc plated hardware
- Provide rigidity to transfer connection between straight conveyor to curve conveyor

Part Number	Description
209239	2200 Flat belt Kit
209240	2700 Flat belt kit
209241	AquaGard Low Profile Kit



Custom Supports

- Custom stainless steel for better corrosion resistance for harsh environments
- Fixed foot or caster options
- Adjustable or fixed heights
- Ceiling mounts



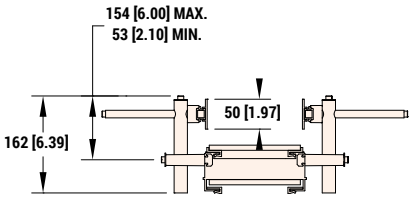
Custom Motors

- Sealed motors IP67 FDA approved white epoxy paint
- Sealed stainless steel options
- SEW gearmotors
- Customer supplied specification

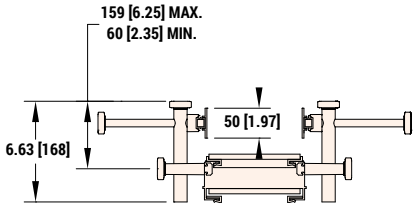
Stainless Steel Motor

Custom Guiding

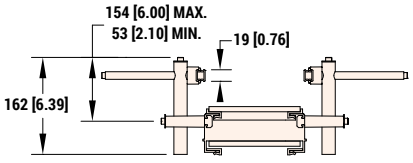
- Several options to choose from
- Custom heights of high side guides upon request
- Profile 33 & 34, 43 & 44



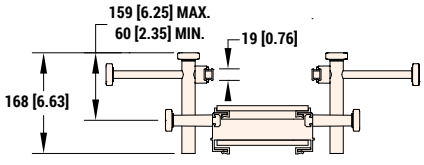
Adjustable Guiding
50 mm (2 in) HDPE Face



Tool-less Adjustable Guiding
50 mm (2 in) HDPE Face



Adjustable Guiding
Aluminum Face



Tool-less Adjustable Guiding
Aluminum Face

Regulatory Approvals:

Conveyors:

All C³ Compact Curve Conveyor (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 C³ Compact Curve Conveyor (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 C³ Compact Curve Conveyor gearmotors and controllers carry one or more of the following approvals. Products are not covered by each approval. Please see the appropriate part number on the Gearmotor and controller charts located in this manual. In addition, regulatory symbols are located on the product information tags located on the product.

CE	CE Marking on a product is a manufacturer's declaration that the product complies with the essential requirements of the relevant European health, safety and environmental protection legislation, in practice by the Product Directives. CE Marking on a product ensures the free movement of the product within the European Union (EU).
RoHS	This directive restricts (with exceptions) the use of six hazardous materials in the 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.
	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 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.
	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.

Baking Industry Standards and Certifications:

C³ Compact Curve Conveyor are often used in food production or food packaging areas where proper design of equipment is essential to maintain proper food safety. C³ Compact Curve Conveyor are designed for light wash down environments typically seen in packaged food, dry food production or confectionary production. In these applications the correct installation and application of the conveyor is critical to the proper running of the conveyor and maintaining proper food safety. The end user must ensure that the conveyor belts are properly tracked and the conveyor is properly installed as defined by Dorner.

All C³ Compact Curve Conveyor are designed and constructed to be used in dry food or packaged food production environments. The following AquaGard products have gone through testing and certification and are certified to BISSC standard, design requirements for Conveyors section of ANSI/ASB/Z50.2-2015.

C³ Compact Curve Conveyor

Contact the factory for copy of the certification.

Materials and Chemical Resistance:

Conveyor Frames and Plastics	
The following is a list of base materials used in the C³ Compact Curve Conveyor	
Material	**Conveyor Component**
Acetal Copolymer, POM	Molded bearing housings
Polyamide, PA	Adjustable Guide Support Brackets
UHMW-PE	Adjustable Guide Face
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 C³ Compact Curve Conveyor 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 and Plastics

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

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

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

Resistance to Materials: Conveyor Frames and Plastics *(continued)*

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

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

Belting:

The following is a list of the top coat materials used in C³ Compact Curve Conveyor belting:

Material	Belt Number
Urethane	C1, C2, C3

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 | 3 = Limited resistance | 4 = Not recommended

Materials	Urethane
Chemicals	
Acetic acid (glacial acetic acid)	4
Acetic acid 10 %	3
Acetic anhydride	3
Acetone	4
Aluminium salts	1
Alum	1
Ammonia, aqueous	3
Ammonia, gaseous	1
Ammonium acetate	1
Ammonium carbonate	1
Ammonium chloride	1
Ammonium nitrate	1
Ammonium phosphate	1
Ammonium sulphate	1
Amyl alcohol	1
Aniline	3
Barium salts	1
Benzaldehyde	4
Benzine (see also Motor fuels)	1
Benzoic acid	1
Benzol	3
Boric acid	1
Boric acid, solution	1
Bromine	4
Bromine water	4
Butane, gaseous	1
Butane, liquid	1
Butyl acetate	4
n-Butyl alcohol	1
Calcium chloride	1
Calcium nitrate	1
Calcium sulphate	1
Carbon disulphide	4
Carbon tetrachloride	3
Chlorine, liquid	4

Materials	Urethane
Chlorine, gaseous, dry	4
Chlorine, gaseous, wet	4
Chlorine water	4
Chlorobenzene	4
Chloroform	4
Chlorosulphonic acid	4
Chromic acid	4
Chromium salts	1
Chromium trioxide	1
Citric acid	4
Copper salts	1
Cresols	3
Cresols, aqueous	3
Cyclohexane	4
Cyclohexanol	4
Cyclohexanone	4
Decahydronaphthalene	4
Dibutyl phthalate	3
Diethyl ether	4
Dimethyl formamide	4
1.4 Dioxan	4
Ether	4
Ethyl acetate	4
Ethyl alcohol, non-denatured 100%	1
Ethyl alcohol, non-denatured 96%	1
Ethyl alcohol, non-denatured 50%	1
Ethyl alcohol, non-denatured 10%	1
Ethyl benzene	4
Ethyl chloride	4
Ethylene chloride	4
2-Ethyl hexanol	1
Formaldehyde	1
Formic acid, dilute	4
Glycerine	1
Glycerine, aqueous	1
Glycol	1

Materials	Urethane
Glycol, aqueous	1
Heptane	1
Hexane	1
Hydrochloric acid, conc.	3
Hydrochloric acid 10 %	3
Hydrofluoric acid 40 %	4
Hydrogen chloride, gaseous, dilute	3
Hydrogen chloride, gaseous, conc.	3
Hydrogen peroxide 10%	3
Hydrogen sulphide	3
Iron salts (sulphate)	1
Isooctane	1
Isopropyl alcohol	1
Lactic acid	1
Magnesium salts	1
Mercury	1
Mercury salts	1
Methyl alcohol, aqueous 50 %	3
Methyl alcohol (methanol)	1
Methyl ethyl ketone	4
Methylene chloride	4
Naphthalene	3
Nickel salts	1
Nitric acid	4
Nitrobenzene	4
Octane (see also isooctane)	1
Oleic acid	1
Oxalic acid	1
Ozone	1
Perchloroethylene	4
Phenol	3
Phenol, aqueous	4
Phosphoric acid 85 %	4
Phosphoric acid 50 %	1
Phosphoric acid 10 %	1
Phosphorus pentoxide	1

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 | 3 = Limited resistance | 4 = Not recommended

Materials	Urethane
Potash lye 50 %	4
Potash lye 25 %	4
Potash lye 10 %	4
Potassium carbonate (potash)	1
Potassium chlorate	1
Potassium chloride	1
Potassium dichromate	1
Potassium iodide	1
Potassium nitrate	1
Potassium permanganate	1
Potassium persulphate	1
Potassium sulphate	1
Propane, gaseous	1
Propane, liquid	1
Pyridine	4
Silver salts	1
Soda lye 50% (see potash lye)	4
Soda lye 25%	4
Soda lye 10%	4
Sodium bisulphite	1
Sodium carbonate (natron)	1
Sodium carbonate (soda)	1
Sodium chlorate	1
Sodium chloride (common salt)	1
Sodium hydroxide (caustic soda)	4
Sodium hypochlorite	1
Sodium nitrate	1
Sodium nitrite	1
Sodium perborate	1
Sodium phosphate	1
Sodium sulphate (Glauber salt)	1
Sodium sulphide	1
Sodium sulphite	1
Sodium thiosulphate (fixing salt)	1
Stearic acid	1
Succinic acid	1
Sulphur	1
Sulphur dioxide	3
Sulphuric acid 96%	4
Sulphuric acid 50%	4
Sulphuric acid 25%	4
Sulphuric acid 10%	4
Tartaric acids	1
Tetrachloroethane	4
Tetrachloroethylene (perchloroethylene)	4
Tetrahydrofuran	4
Tetrahydronaphthalene	4
Thiophene	4
Tin II chlorides	1
Toluene	4
Trichloroethylene	4
Urea, aqueous	1
Water	1
Xylene	4
Zinc salts	1
Products	
Alum	1
Anti-freeze*	1
Aqua regia	4
Asphalt	1
Battery acid	4
Benzine	1
Bleaching lye (12.5%)	1
Bone oil	1
Borax	1
Brake fluid* Bosch	1
Brake fluid* Skydrol	4
Chloride of lime (aqueous suspension)	1
Chlorine (active)	4
Chrome baths* (technical)	1
Chromosulphuric acid	4
Cresol solution	3
Diesel oil	1
Fertilizer salts	1
Fixing salt	1
Floor wax	1
Formalin	1
Fuel oils*	1
Furniture polish*	1
Gypsum	1
Ink*	1
Linseed oil	1
Litex (styrene)	4
Mineral oils (non-aromatic)	1
Moth balls	3
Diesel oil*	1
Petrol (gasoline) DIN51635	1
Petrol, regular	1
Petrol, super	3
Motor oils*	1
Oil no. 3 (ASTM)	1
Oleum	4
Paraffin	1
Paraffin oil	1
Petroleum	1
Petroleum ether	1
Photographic developer	1

Bearings and Lubrication:

All bearings on C³ Compact Curve Conveyor are sealed and lubricated for life. No grease zerk is available and no greasing over the life of the product is required.

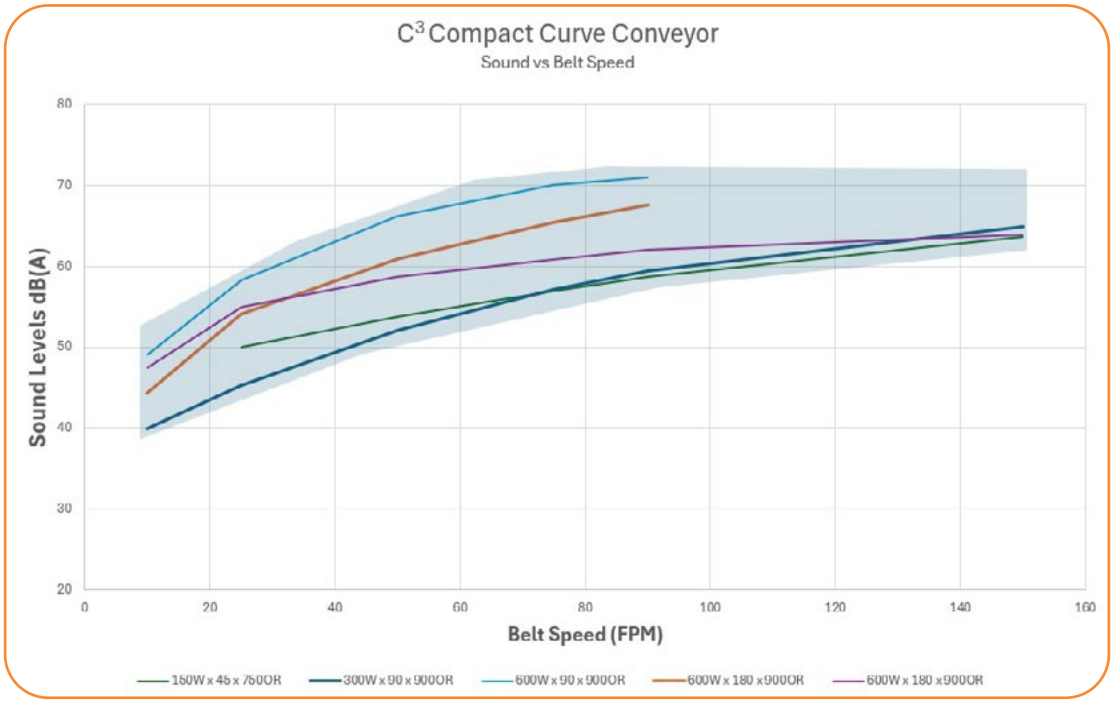
All gearmotors used on C³ Compact Curve Conveyor are sealed and may be mounted in any position. Changing gear oil lubrication may be needed over the life of the gearbox. Please check the appropriate gearmotor manual for instructions.

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. The following charts provide basic decibel ratings for a typical conveyor arrangements.

Belted Conveyors:



Calculating Conveyor Belt Speed:

C³ Compact Curve Conveyor:

To calculate the conveyor belt speed at product path find motor RPM intended to be used on the conveyor, select the curve conveyor size and use the formula below to calculate speed.

Variable definition for speed formula:

RPM = Motor shaft speed in revolutions per minute

OR = Selected conveyor outer radius in millimeter (see chart selection)

R = Radius of product path for desired speed

*most applications the product path is the center line radius (see chart selection)

Path speed (feet/min) = RPM * R * 0.0206 / (OR * 0.0229 + 0.2857)
Path speed (meter/min) = Path speed (feet/min) / 3.281

C³ Compact Curve Conveyor

Belt Width (mm)	Outer Radius (mm)	Inner Radius (mm)	Center Radius (mm)
150	450	300	375
150	600	450	525
150	750	600	675
300	450	150	300
300	600	300	450
300	750	450	600
300	900	600	750
450	600	150	375
450	750	300	525
450	900	450	675
600	750	150	450
600	900	300	600

Example:

Curve conveyor size 600mm wide with 750mm outer radius, standard load parallel shaft (chart 3, page15) with 173 RPM shaft speed. What is the path speed at 600mm radius in meters per minute?

Path speed (feet/min) = (173) * (600) * 0.0206 / ((750) * 0.0229 + 0.2857) = 122.5 fpm
Path speed (meter/min) = 122.5 / 3.281 = 37.3 m/min

PRODUCT SUMMARY

C³ COMPACT CURVE CONVEYOR

Dorner C³ Compact Curve Conveyor are Best for:

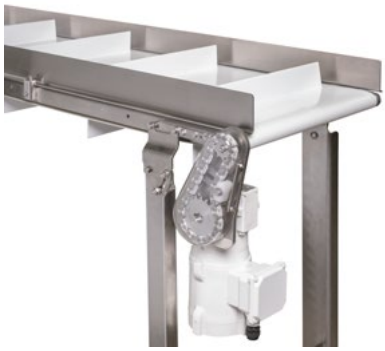
- Baking
- Packaged Foods
- Pet Foods
- Secondary Packaging
- Snack Foods
- Tight Transfers
- Confectionary
- Floorspace Flexibility
- And More!

C³ Compact Curve Conveyor

- Sprocket Driven Belt Technology
- 45°, 90°, and 180° Options
- FDA Approved Belting
- Multiple Stand Options
- Small product transfer with 25 mm spindle

AquaGard LP

- Belted and Cleated Belt Models
- Loads up to 22.7 kg (50 lbs)
- Widths: 70 mm (2.75 in) to 457 mm (18 in)
- Lengths: 500 mm (19.1 in) to 8,485 mm (18 ft)
- Robust welded 304 Stainless Steel frame
- Available in straights only



2200 Series

Flat Belt

Modular Belt

Precision Move

**Please refer to the 2200 Series manual for product information.*

Industrial

Flexible Chain

Pallet Systems

Sanitary Stainless Steel

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Custom engineered solutions for almost any application.

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