



BELT DRIVE

MODULE PRODUCT LINES

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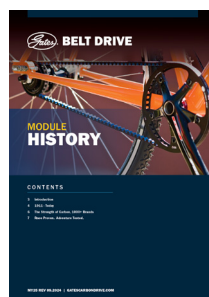
MODULE PRODUCT LINES

Comparisons of our systems, their ideal applications, and guidance in choosing the right system for you.



MODULE OWNER'S MANUAL

This manual explains proper belt handling, contains information about proper care and tensioning as well as warranty information.



MODULE HISTORY

Gates Corporation has been a global leader in power transmission and belt drive technologies since 1911, this module explains how Gates Carbon Drive evolved.



MODULE APPLICATIONS

A quick look at the hub and mid-motors, gearboxes, internal gear hubs and cranksets we support.



MODULE COMPONENTS

Our current product listing. Includes belts, front and rear sprockets.



MODULE ASSEMBLIES

Technical information for eBike integration and specification of Gates cranksets.



MODULE TECHNICAL RESOURCES

Frame design details, including dropout and frame stiffness and alignment requirements, assembly tolerances, online resources, available tools, troubleshooting, and a glossary.

CHOOSE YOUR RIDING STYLE

Gates Carbon Drive delivers a powerful and reliable ride over any terrain with a product line range that includes high-performance, urban, eBikes, leisure, and tandem bicycles.

RESOURCES



BELT HANDLING



TENSION



ALIGNMENT



WARRANTY

ISO REQUIREMENTS

Gates Carbon Drive products meet or exceed the standards set forth in the applicable requirements in ISO 4210-2 and ISO 4210-8. While individual Carbon Drive components sold by Gates meet or exceed these ISO requirements, it is the sole responsibility of the bicycle original equipment manufacturer (OEM) to configure the Gates Carbon Drive components in a way that meets or exceeds the ISO requirements for their particular bicycle model, especially regarding protective devices.

Note: All dimensions in millimeters unless otherwise noted.

Gates BELT DRIVE

CHOOSE YOUR RIDING STYLE

CDN



SEASONAL, RECREATIONAL, OCCASIONAL
COMMUTERS, AND HUB-MOTOR EBIKES

ST



RECREATIONAL, LIFESTYLE, PRE-TEEN, AND
HUB-MOTOR EBIKES





CDC



CITY COMMUTING

MID-MOTOR EBIKES
(75 NM OR LESS)



CDX



PREMIUM HIGH-TORQUE MID-MOTOR EBIKES
(TRADITIONAL AND GEARED SYSTEMS)

HIGH PERFORMANCE COMMUTING

TREKKING AND EXTREME CONDITIONS

MOUNTAIN BIKES

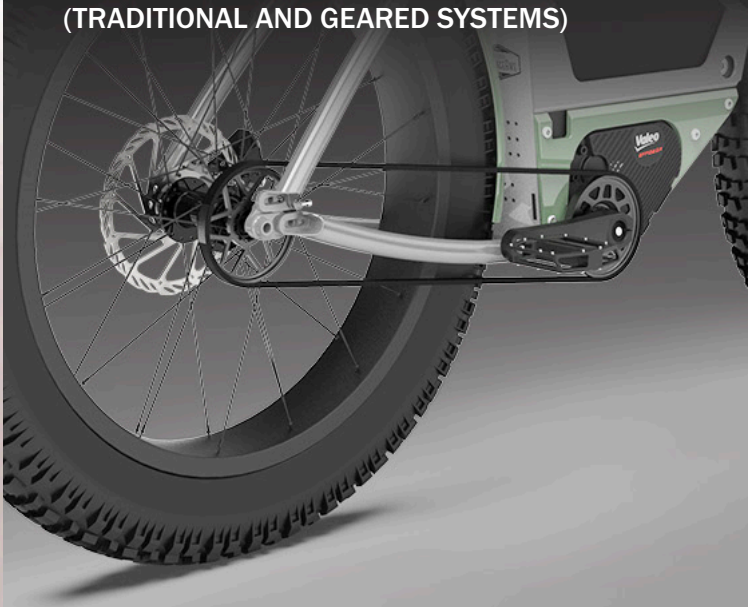
CARGO BIKES
















CDX: BLACK



HIGH-TORQUE MID-MOTOR EBIKES
(TRADITIONAL AND GEARED SYSTEMS)



PRODUCT LINE

 <h1>BELT DRIVE</h1>	 ST		 CDN	
	ST		CDN	
CARBON DRIVE PRODUCT LINE POSITIONING				
DESIGNED FOR...	Seasonal, recreational, pre-teen cyclists, and hub-motor eBikes		Seasonal, recreational cyclists who commute occasionally, and hub-motor eBikes	
PRODUCT DIFFERENTIATION	Entry-level performance and price vs. chain; few gears		Balance between performance and value for hub-motor eBikes	
BELT TRACKING	SideTrack™		CenterTrack™	
LIFE/MILEAGE*	1-2 x chain		1-2 x chain	
DEBRIS-SHEDDING RATING (SEE DEBRIS SHEDDING / ADVERSE CONDITIONS IN TECHNICAL RESOURCES MODULE)	    2		    3	
EBIKE MOTOR COMPATIBILITY				
SPROCKET TECHNICAL COMPARISON	SideTrack		CDN	
SPROCKET LOCATION	FRONT	REAR	FRONT	REAR
MATERIAL	6061 T6 Aluminum	Hardened, Chromoly Steel	Glass-filled Nylon Composite	Hardened, Chromoly Steel
COATING	Standard	Zinc	N/A	Zinc
CENTERTRACK	N/A	N/A	CenterTrack (Flange)	CenterTrack (Wire)
DEBRIS PORTS	Undercut		Wide, Angled	Side Exit
COLOR	Black/Silver	Silver	Black	Silver
BELT TECHNICAL COMPARISON	ST		CDN	
COMPOUND	Next Generation Ethylene Elastomer		Next Generation Ethylene Elastomer	
CENTERTRACK GROOVE	No		Yes	
TENSILE CORD	Carbon		Carbon	
PITCH	11mm		11mm	
BELT/JACKET COLOR	Black/Black		Black/Black	

* Mileage estimates application specific - data available on request.



Pavement









Sand



Snow



Mud

CDC		CDX			
					
CDC		CDX			
Cyclists who regularly take many kinds of urban and suburban trips		Cyclists who ride pavement or dirt throughout the entire year			
Balance between performance and value for mid-drive eBikes		High-performance and versatile			
CenterTrack™		CenterTrack™			
2-3 x chain		3 x chain			
 4		 5			
 Mid-Drive Motor ≤ 75 Nm [†]		 Mid-Drive Motor ≤ 100 Nm ^{††}			
CDC		CDX: BLACK**		CDX	
FRONT	REAR	FRONT	REAR	FRONT	REAR
6061 T6 Aluminum	Hardened Steel	Steel	Steel	6061 T6 Aluminum	Stainless Steel
Standard	Zinc	E-Coat	Zinc/E-Coat	Premium Anodize	
CenterTrack (Fin)	CenterTrack (Flange)	CenterTrack (Fin)	CenterTrack (Fin)	CenterTrack (Flange)	CenterTrack (Flange)
Narrow, Straight		Wide, Angled		Wide, Angled	
Black	Silver	Black		Black	Silver
CDC		CDX			
Next Generation Ethylene Elastomer		Polyurethane			
Yes		Yes			
Carbon HD		Carbon UHD			
11mm		11mm			
Black/Black		Black/Blue			

** Currently in development - refer to price list for availability.

[†] CDC is allowed for mid-motors rated for ≤75 Nm on frames designed for relaxed or active riding position and requires passing the Gates/UT frame test.

^{††} See Applications Module for approved applications with higher torques. Gates review and approval required for torques above 100 Nm.

PRODUCT LINE COMPATIBILITY*

Maintaining industry-leading quality, Gates continues to develop application-specific product lines to meet customer demand. Please reference the following compatibility information for authorized use, as well as links to additional requirements below.



ST
SIDETRACK BELT

MINIMUM SPROCKET SIZE			22T
TYPE OF BICYCLE	MID-MOTOR EBIKE	GEARHUB OR SINGLE-SPEED	NOT APPROVED
		GEARED MID-MOTOR**	NOT APPROVED
	HUB MOTOR OR PEDAL BIKES	GEARHUB	APPROVED
		SINGLE-SPEED, RELAXED OR ACTIVE***	APPROVED
		SINGLE-SPEED, SPORTIVE	NOT APPROVED
		GEARBOX	NOT APPROVED
APPLICATION	MTB OR OFF-ROAD INTENSIVE		NOT APPROVED
	LITE CARGO - UP TO 160KG GVW		NOT APPROVED
	CARGO/UTILITY/COMMERCIAL/RENTAL APPLICATIONS		NOT APPROVED
	BACKSIDE IDLER APPLICATIONS & DIAMETER		TBD

ADDITIONAL REQUIREMENTS



**FRAME STIFFNESS,
DRIVETRAIN STIFFNESS,
AND ASSEMBLY RUNOUT
REQUIREMENTS**



**FRAME ALIGNMENT,
INSTALLATION ALIGNMENT
REQUIREMENTS**



**TENSION
REQUIREMENTS**



**TEMPERATURE
RANGES**

PRODUCT LINE COMPATIBILITY*



CDN

CENTERTRACK BELT



CDC

CENTERTRACK BELT



CDX

CENTERTRACK BELT

22T	20T	19T
NOT APPROVED	$\leq 75 \text{ Nm}^{\text{T}}$	$\leq 100 \text{ Nm}^{\text{TT}}$
NOT APPROVED	NOT APPROVED	APPROVED
APPROVED	APPROVED	APPROVED
APPROVED	APPROVED	APPROVED
NOT APPROVED	APPROVED	APPROVED
NOT APPROVED	NOT APPROVED	APPROVED
NOT APPROVED	NOT APPROVED	APPROVED
NOT APPROVED	APPROVED	APPROVED
NOT APPROVED	TBD	APPROVED
TBD	TBD	APPROVED ON SLACK-SIDE 50mm DIAMETER

* While product line compatibility is as shown, it is the responsibility of the OEM to ensure proper belt system performance for their application, including but not limited to factors such as frame stiffness, drivetrain component stiffness, belt alignment, and belt tension.

** Geared Mid-Motor systems combine multi-speed gearing inside the eBike mid-motor system, paired with a single-speed rear hub. Compatible only with CDX and CDX:BLACK components. Note CDX:SL sprockets are not approved for Geared Mid-Motor systems.

*** Maximum Sprocket Ratio of 2.5:1 with a 60T front sprocket.

TBD - Ongoing product validation for non-traditional drives including cargo/utility/commercial applications and backside idlers will determine compatibility, contact Gates Carbon Drive for further information.

^T CDC is allowed for mid-motors rated for $\leq 75 \text{ Nm}$ on frames designed for relaxed or active riding position and requires passing the Gates/UT frame test.

^{TT} See Applications Module for approved applications with higher torques. Gates review and approval required for torques above 100 Nm.



RELAXED



ACTIVE



SPORTIVE



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The color “carbon blue” is a trademark of Gates Corporation.