

ebike™

2021 INTEGRATION MANUAL

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 **CARBON DRIVE™**

JANUARY 2021 UPDATE



In this manual, not all Internal Gear Hub (IGH) combinations are listed with all mid-drive motor manufacturers. The mid-drive motors and corresponding IGH combinations listed have been selected either because of the motor manufacturer's recommendation, or because of the ease of beltline alignment between the two components using the manufacturer's recommended mounting position.

Unless noted, all dimensions for the mid-drive motor units are to be based on the standard mounting configuration defined by the motor manufacturers. This is generally accepted to be with the Centerline of the motor in alignment with the center of the bicycle frame. The term "node" is used to reference the mounting bracket holding the mid-drive motor.

In practice, most any beltline can be achieved by offsetting the mid-drive motor mounting position within the bicycle frame. However, the motor manufacturer should be consulted before altering the manufacturer's recommended mounting method or position.

A note about power: Gates Carbon Drive components have been designed and tested to handle higher loads than most eBike motors produce. If you are using a mid-drive motor that exceeds 90 Nm of torque, contact Gates Carbon Drive to ensure system warranty.



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For other e-Bike systems not published, please contact your Gates Carbon Drive technical representative.

Belt length selection and center distance calculations can be done online at [GatesCarbonDrive.com](https://www.gatescarbondrive.com), or by using our mobile apps. See [GatesCarbonDrive.com/Tech/Resources](https://www.gatescarbondrive.com/Tech/Resources).

NOTE: CDN components are approved for use with front hub or rear hub motors only. CDC sprockets are approved for front / rear hub motors without restriction and only for mid-drive motors producing 50 Nm of torque or less.



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.

FRAME STIFFNESS

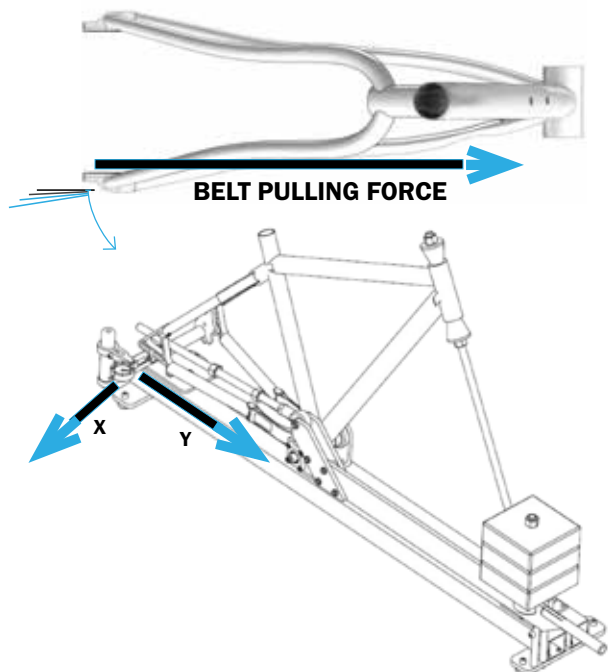
WHY IS IT IMPORTANT?

The stiffness of a frame's rear triangle plays a major role in the performance of the belt drive system.

If the rear triangle of a frame is too flexible, it is possible that frame deflection can result in tooth jumping, accelerated wear, drivetrain noise, or in extreme cases, belt derailment. Excessively high rear triangle stiffness can result in an uncomfortable ride.

HOW IS IT MEASURED?

Gates engineers have developed a method for measuring rear triangle stiffness, and this evaluation service is offered by Gates to all frame designers as a product development tool. Frame testing requires submission of a complete frameset to one of our three engineering development centers located in Germany, Taiwan, and USA.



STIFFNESS REQUIREMENTS:

Bicycle Type	X Quotient (minimum)	Y Quotient (minimum)
MTB, Trekking, Sportive, Cargo bicycles and mid-motor eBikes	5.0 kg/mm	26.5 kg/mm
City, Urban, Commuter bicycles, including front and rear hub motor eBikes	4.0 kg/mm	22.0 kg/mm

Note: Bicycles equipped with the Rohloff SpeedHUB need to pass the MTB/Trekking/Sportive standard.

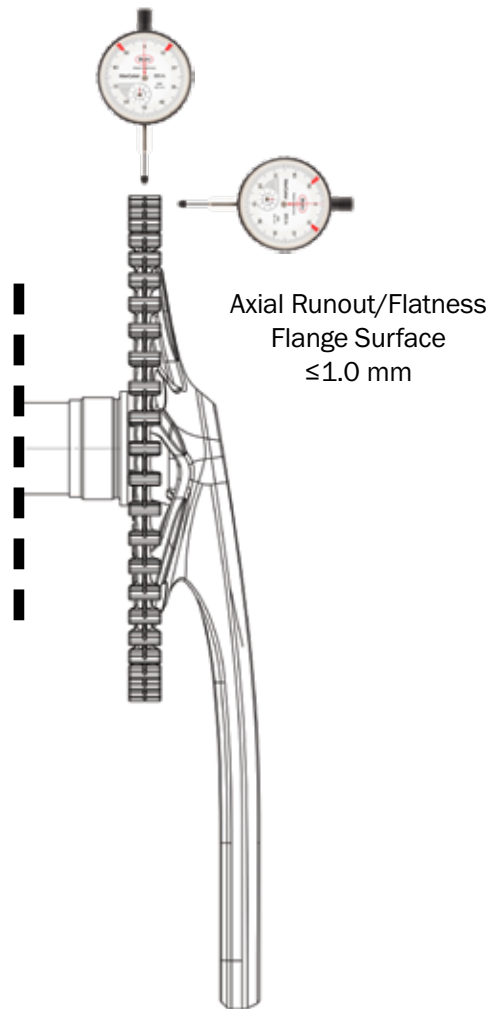
ADDITIONAL INFORMATION GatesCarbonDrive.com/FrameStiffness

CRANK/SPROCKET ASSEMBLY TOLERANCES:

To ensure optimal performance of belt drives, Gates requires the following runout tolerances for crank/sprocket assemblies measured with the intended bottom bracket. Excessive runout can result in large tension variation, improper shifting on geared hubs, and even premature belt failure.

Total radial runout allowed is less than or equal to 0.25 mm measured at diameter over teeth. Total axial runout allowed is less than or equal to 1.0 mm measured at flange surface.

Radial Runout/Concentricity
Diameter Over Teeth
≤0.25 mm



Axial Runout/Flatness
Flange Surface
≤1.0 mm

Bafang

When using the Gates Carbon Drive System with Bafang mid-drive motors, use the below chart to determine if the Bafang mounting node will be centered in the frame, or if an offset is required.

Drive Selection Steps

1. Identify rear hub choice.
2. Verify required node offset, spider, front sprocket mounting surface, and spider mounting surface.
3. Identify rear sprocket type needed and choose appropriate front and rear sprockets.



BAFANG M200 CONFIGURATION CHART

REAR HUB BRAND	COMPATIBLE HUBS	NOMINAL BELTLINE	MOTOR NODE OFFSET TOWARD NON-DRIVE SIDE	SPIDER	FRONT SPROCKET MOUNTING SURFACE	SPIDER MOUNTING SURFACE	REAR SPROCKET TYPE
Shimano	Inter-5E (Mechanical)	45.5 mm	-1 mm*	1401220100004	B	Inboard Tab	YMN-U
	Nexus 7/8 Disc, Alfine 8/11 (Mechanical)		-1 mm*	1401220100004	B	Inboard Tab	XMN-U
enviolo	enviolo CT, TR, SP, CA, CO (135/142 mm OLD)	45.5 mm	-1 mm*	1401220100004	B	Inboard Tab	VMN
	enviolo SP, CA (148 mm OLD)	48.7 mm	None	1401220100003	B	Inboard Tab	
Rohloff	SpeedHUB 500/14 (148 mm OLD)	51.7 mm	None	1401220100003	A	Inboard Tab	RSMN
	SpeedHUB 500/14 (135/142 mm OLD)	54.7 mm	None	1401220100004	A	Outboard Tab	RSSB

* Negative value indicates Node Offset is toward drive side of bicycle.

BAFANG M420 CONFIGURATION CHART

REAR HUB BRAND	COMPATIBLE HUBS	NOMINAL BELTLINE	MOTOR NODE OFFSET TOWARD NON-DRIVE SIDE	SPIDER	FRONT SPROCKET MOUNTING SURFACE	SPIDER MOUNTING SURFACE	REAR SPROCKET TYPE
Shimano	Inter-5E (Mechanical)	45.5 mm	1 mm	1401220100031	A	Inboard Tab	YMN-U
	Nexus 7/8 Disc, Alfine 8/11 (Mechanical)		1 mm	1401220100031	A	Inboard Tab	XMN-U
enviolo	enviolo CT, TR, SP, CA, CO (135/142 mm OLD)	45.5 mm	1 mm	1401220100031	A	Inboard Tab	VMN
Rohloff	SpeedHUB 500/14 (148 mm OLD)	51.7 mm	None	1401220100029	B	Inboard Tab	RSMN
	SpeedHUB 500/14 (135/142 mm OLD)	54.7 mm	None	1401220100029	A	Inboard Tab	RSSB
	SpeedHUB 500/14 (135/142 mm OLD)	54.7 mm	None	1401220100030	B	Outboard Tab	RSSB

NECESSARY EQUIPMENT

EQUIPMENT	DESCRIPTION	CONTACT INFORMATION	NOTES
Special Frame or Frame Node Requirements	Use a centered node or offset node according to chart	Bafang Electric (Suzhou) Co., Ltd. No.9 Heshun Rd., Suzhou Industrial Park 215122, Suzhou sales@bafang-e.com +86.512.8717.1276	
Cranks			
Spider	104 mm 4-bolt pattern, see configuration chart		

SPROCKET OPTIONS

FRONT SPROCKET OPTIONS

FRONT SPROCKET TYPE	DESCRIPTION	TOOTH COUNT					
		39	42	46	50	55	60
4AA	4-Bolt 104 mm BCD	CT11394AA	CT11424AA	CT11464AA	CT11504AA	CT11554AA*	

* Except with M200 for 45.5 mm belt line (50T max)

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	DESCR.	TOOTH COUNT							
		19T	20T	22T	24T	26T	28T	30T	32T
XMN-U	Shimano 3-Lobe, Unified			CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
YMN-U	Shimano Inter-5E 6-Lobe, Unified						CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
VMN	enviolo			CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		
RSMN*	Rohloff Shimano	CT1119RSMN	CT1120RSMN	CT1122RSMN					
RSSB*	Rohloff Splined	CT1119RSSB	CT1120RSSB	CT1122RSSB					

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

*RSMN and RSSB sprockets require the Rohloff Splined Carrier 'L' (Art.#8540L), which secures the sprocket using a threaded lock-ring.

Bosch® GEN4 (Performance Line CX, Performance Line Speed, Cargo Line, Cargo Line Speed)

When using Gates Carbon Drive System with the Bosch GEN4 mid-drive motor, standard motor placement is centered on the bicycle frame. This applies for all supported internal gear hubs.

Specific rear sprockets need to be used depending on the assembly used.



Drive Selection Steps

1. Identify rear hub choice.
2. Determine correct spider assembly part number (see next page) based on desired front sprocket tooth count and target beltline.
3. Identify rear sprocket type needed and choose appropriate rear sprocket part number (below).

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	DESCRIPTION	TOOTH COUNT							
		19T	20T	22T	24T	26T	28T	30T	32T
YMN-D	Shimano Inter-5E 6-Lobe, Di2						CT1128YMN-D		
XMN-D	Shimano 3-Lobe, Di2						CT1128XMN-D		
YMN-U	Shimano Inter-5E 6-Lobe, Unified						CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
XMN-U	Shimano 3-Lobe, Unified			CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
VMN	enviolo			CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		
RSMN*	Rohloff Splined	CT1119RSMN	CT1120RSMN	CT1122RSMN					
RSSB*	Rohloff Splined	CT1119RSSB	CT1120RSSB	CT1122RSSB					

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

*RSMN and RSSB sprockets require the Rohloff Splined Carrier 'L' (Art.#8540L), which secures the sprocket using a threaded lock-ring.

GEN4 ASSEMBLY SELECTION CHART

REAR HUB BRAND	COMPATIBLE HUBS	NOMINAL BELTLINE	FRONT SPROCKET TEETH	CENTERED NODE ASSEMBLY PART NUMBER	REAR SPROCKET TYPE
Shimano	Inter-5E (Di2)	41.7 mm	39	S4B4BM 39CDX -0/41.7 NG*	YMN-D
			42	S4B4BM 42CDX -0/41.7 BG	
	Nexus 8, Alfine 8/11 (Di2)	41.7 mm	50	S5B4BM 50CDX -0/41.7 BG	XMN-D
			55	S5B4BM 55CDX -0/41.7 BG	
			60	S5B4BM 60CDX -0/41.7 BG	
			63	S5B4BM 63CDX -0/41.7 BG	
	Inter-5E (Mechanical)	45.5 mm	39	S4B4BM 39CDX -0/45.5 BG	YMN-U
			42	S4B4BM 42CDX -0/45.5 BG	
	Nexus 7/8 DISC, Alfine 8/11 (Mechanical)	45.5 mm	46	S4B4BM 46CDX -0/45.5 BG	XMN-U
			48	S5B4BM 48CDX -0/45.5 BG	
			50	S5B4BM 50CDX -0/45.5 BG	
			55	S5B4BM 55CDX -0/45.5 BG	
			60	S5B4BM 60CDX -0/45.5 BG	
	enviolo	enviolo TR, SP, CA (135/142 mm)	45.5 mm	46	S4B4BM 46CDX -0/45.5 BG
48				S5B4BM 48CDX -0/45.5 BG	
50				S5B4BM 50CDX -0/45.5 BG	
55				S5B4BM 55CDX -0/45.5 BG	
60				S5B4BM 60CDX -0/45.5 BG	
63				S5B4BM 63CDX -0/45.5 BG	
enviolo SP (148 mm Boost)		48.7 mm	46	S4B4BM 46CDX -0/48.7 BG	
			48	S5B4BM 48CDX -0/48.7 BG	
			50	S5B4BM 50CDX -0/48.7 BG	
			55	S5B4BM 55CDX -0/48.7 BG	
			60	S5B4BM 60CDX -0/48.7 BG	
			63	S5B4BM 63CDX -0/48.7 BG	
Rohloff	SpeedHUB 500/14 (135/142 mm)	54.7 mm	46	S4B4BM 46CDX -0/54.7 BG	RSMN** RSSB**
			48	S5B4BM 48CDX -0/54.7 BG	
			50	S5B4BM 50CDX -0/54.7 BG	
			55	S5B4BM 55CDX -0/54.7 BG	
			60	S5B4BM 60CDX -0/54.7 BG	
			63	S5B4BM 63CDX -0/54.7 BG	

S5 in the part number indicates 5-bolt spiders, S4 indicates 4-bolt.

*Only available in "NG" (no guard) configuration.

**RSMN and RSSB sprockets require the Rohloff Splined Carrier 'L' (Art.#8540L), which secures the sprocket using a threaded lock-ring. "BG" at the end of Part Number specifies inclusion of an ISO compliant Black Guard. Alternatively "NG" would specify No Guard.

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

Bosch® GEN3 (Active Line, Active Line Plus, and Performance Line)

When using Gates Carbon Drive System with the Bosch GEN3 mid-drive motor and Shimano or enviolo hubs, there are two motor placement options. The first option is to locate the motor centered in the bicycle frame. This option requires our centered spider assembly, and unifies the beltlines of the two hubs.

Note - Centered spider assemblies for Shimano and enviolo are only guaranteed compatible with the Active Line Plus and Performance 65 motors. The Performance 65 motor covers have the most clearance of all 3 options. Interference may occur with Active Line stock cosmetic covers. Custom covers may eliminate this interference.

The second option is to offset the motor 6 mm to the non-drive side. This option requires the use of our offset spider assemblies.

Rohloff integration does not require an offset.

Specific rear sprockets need to be used depending on the assembly used.



Drive Selection Steps

1. Identify rear hub choice.
2. Determine if motor / node is to be centered or offset in the frame.
3. Identify if Active Line, Active Line Plus, or Performance 65 motor is to be used.
Note - Compatibility of Shimano and enviolo hubs using a centered motor node is only guaranteed with Active Line Plus and Performance 65 motors. Interference may occur with Active Line stock cosmetic cover. Custom covers may eliminate this interference.
4. Determine correct spider assembly part number based on desired front sprocket tooth count and target beltline.
5. Identify rear sprocket type needed and choose appropriate rear sprocket part number.

GEN3 ASSEMBLY SELECTION CHART

REAR HUB BRAND	COMPATIBLE HUBS	NOMINAL BELTLINE	FRONT SPROCKET TEETH	CENTERED NODE ASSEMBLY PART NUMBER	6 MM OFFSET NODE ASSEMBLY PART NUMBER	REAR SPROCKET TYPE
Shimano	Inter-5E (Mechanical)	45.5 mm	46	S5B3BM 46CDX -0/45.5 BG**	N/A	YMN-U
	Nexus 7/8 DISC, Alfine 8/11 (Mechanical)	45.5 mm	46	S5B3BM 46CDX -0/45.5 BG** S5B3BM 46CDC -0/45.5 BG**†	S5B3BM 46CDX -6/45.5 BG	XMN-U/ XSE-U†
			50	S5B3BM 50CDX -0/45.5 BG* S5B3BM 50CDC -0/45.5 BG*†	S5B3BM 50CDX -6/45.5 BG	
			55	S5B3BM 55CDX -0/45.5 BG* S5B3BM 55CDC -0/45.5 BG*†	S5B3BM 55CDX -6/45.5 BG	
			60	S5B3BM 60CDX -0/45.5 BG*	S5B3BM 60CDX -6/45.5 BG	
			46	S5B3BM 46CDX -0/45.5 BG** S5B3BM 46CDC -0/45.5 BG**†	S5B3BM 46CDX -6/45.5 BG	
enviolo	TR, SP, CA (135/142 mm)	45.5 mm	50	S5B3BM 50CDX -0/45.5 BG* S5B3BM 50CDC -0/45.5 BG*†	S5B3BM 50CDX -6/45.5 BG	VMN/VSE†
			55	S5B3BM 55CDX -0/45.5 BG* S5B3BM 55CDC -0/45.5 BG*†	S5B3BM 55CDX -6/45.5 BG	
			60	S5B3BM 60CDX -0/45.5 BG*	S5B3BM 60CDX -6/45.5 BG	
			46	S5B3BM 46CDX -0/54.7 BG S5B3BM 48CDX -0/54.7 BG	N/A	
SpeedHUB 500/14 (135/142 mm)	54.7 mm	50	S5B3BM 50CDX -0/54.7 BG			
		55	S5B3BM 55CDX -0/54.7 BG			
		60	S5B3BM 60CDX -0/54.7 BG			

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	DESCR.	TOOTH COUNT							
		19T	20T	22T	24T	26T	28T	30T	32T
YMN-U	Shimano Inter-5E						CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
XMN-U	Shimano 3-Lobe			CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
VMN	enviolo			CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		
RSMN***	Rohloff Splined	CT1119RSMN	CT1120RSMN	CT1122RSMN					
RSSB***	Rohloff Splined	CT1119RSSB	CT1120RSSB	CT1122RSSB					
XSE-U†	Shimano 3-Lobe			CT1122XSE-U	CT1124XSE-U	CT1126XSE-U			
VSE†	enviolo				CT1124VSE	CT1126VSE	CT1128VSE		

All are 5-bolt spiders as indicated by S5 in the part number.

* Compatibility with Active Line Plus and Performance 65 only. Interference may occur with Active Line stock cosmetic cover. Custom cover may eliminate this interference.

** Compatibility with Performance 65 covers only. Interference will occur with Active Line Plus covers. OE needs to verify their frame clearance with the P65 covers.

***CDX:EXP RSMN and RSSB sprockets require the Rohloff Splined Carrier 'L' (Art.#8540L), which secures the sprocket using a threaded lock-ring.

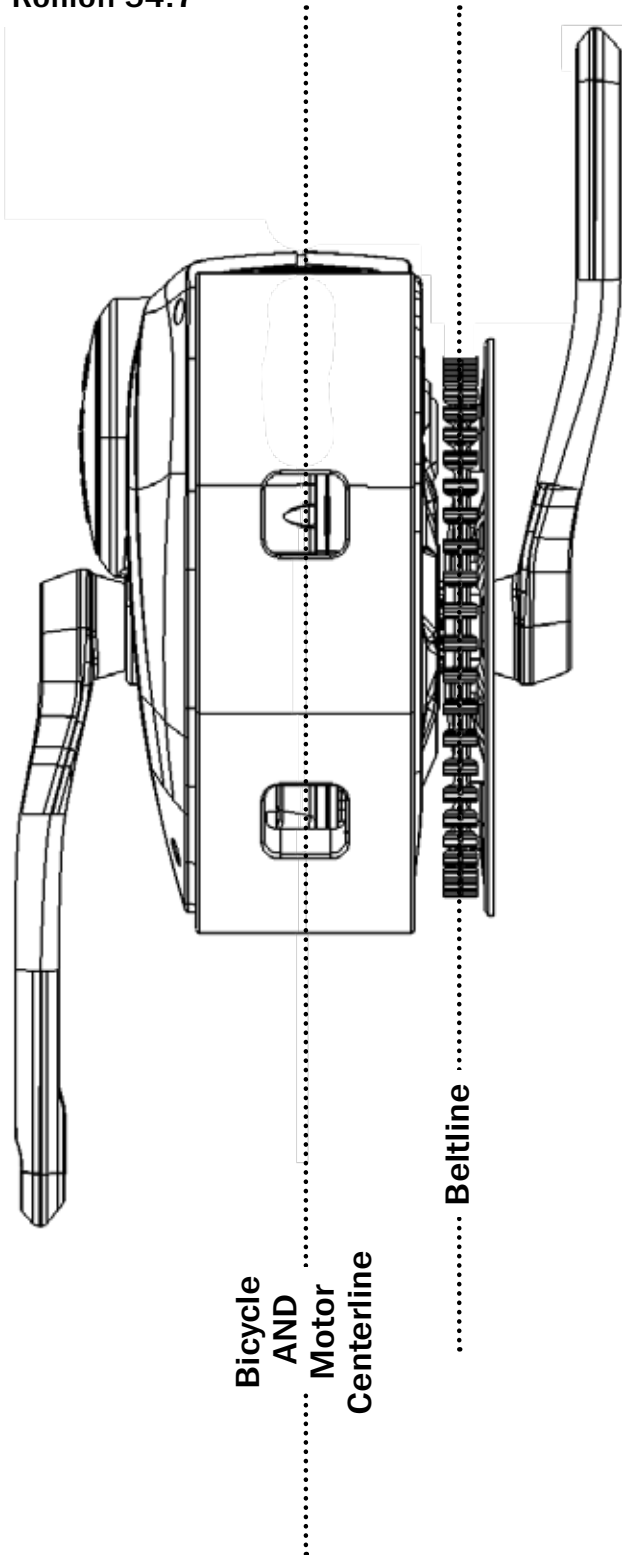
† CDC sprockets are approved only for mid-drive motors producing 50 Nm or less of torque. CDC sprockets are not approved for Performance 65 motors.

"BG" at the end of Part Number specifies inclusion of an ISO compliant Black Guard. Alternatively "NG" would specify No Guard. For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or CarbonDrive@Gates.com.

BOSCH GEN3 MOTOR POSITION (TOP VIEW)

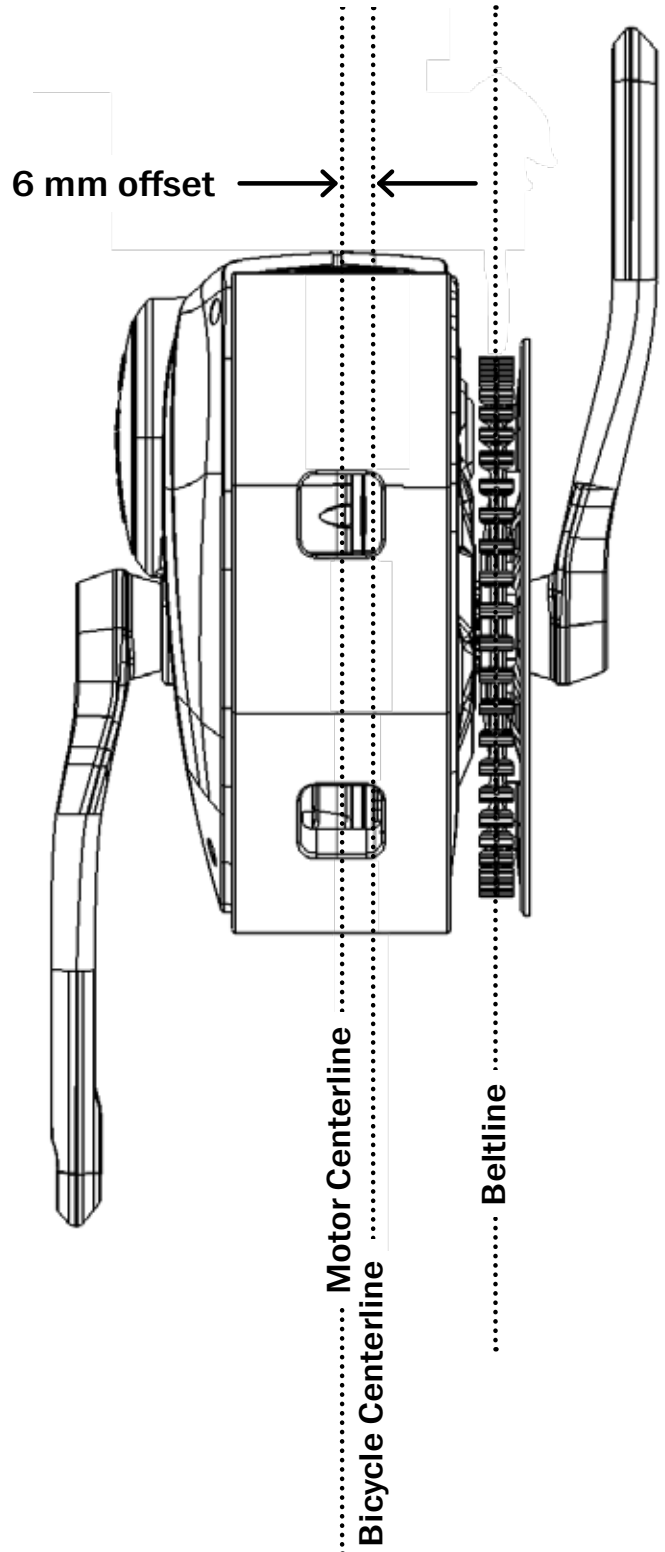
CENTERED - NO OFFSET

GEN3 BELTLINE WITH SPIDER:
 Shimano / enviolo 45.5
 Rohloff 54.7



6 MM OFFSET

GEN3 BELTLINE WITH SPIDER:
 Shimano / enviolo 45.5



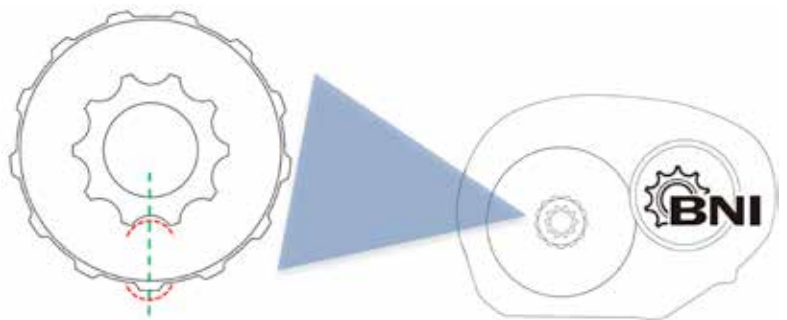
ADDITIONAL COMPONENT INFORMATION

EQUIPMENT	DESCRIPTION	CONTACT
Offset Node	For bikes requiring a 6 mm offset, a special node may be necessary.	Universal Transmissions, GmbH
Specialty Node	For OEs needing titanium, steel or stainless steel, contact Saris.	Bosch@Saris.com
Cranks	Bosch does not provide cranks with the Bosch Gen3 motor. Cranks are available from third party vendors.	Lasco, Lunge Industry Co., LTD FSA - Full Speed Ahead Miranda
Front Sprocket Assemblies	Gates front sprocket assemblies are available with or without ISO guards. See price list for all options.	Universal Transmissions, GmbH or Gates
Shimano Cassette Joint	Clearance between the cassette joint and bicycle frame/components must be verified. If any interference is identified, contact Shimano for special cassette joint options.	

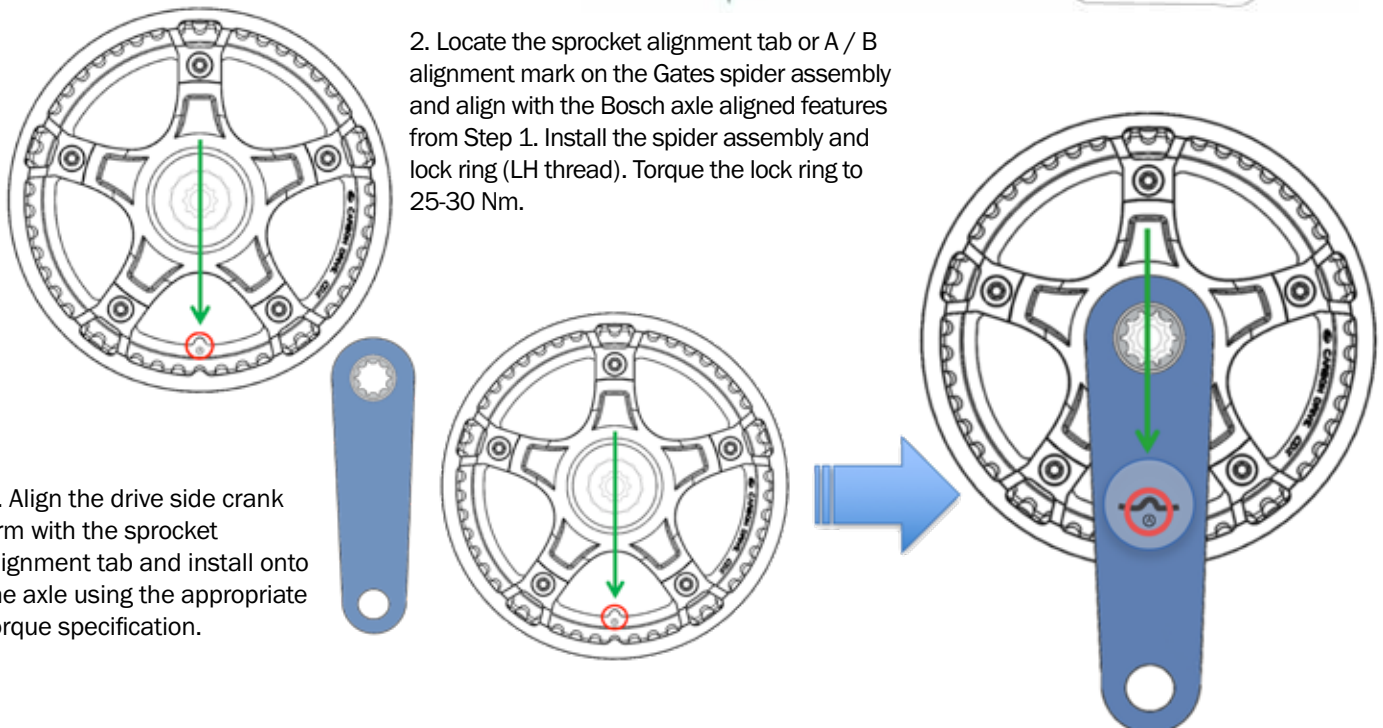
Bosch® GEN3 Crank and Spider Alignment

Please follow these instructions for proper alignment when installing Gates Carbon Drive spider assemblies and cranks onto Bosch GEN3 drive units. Improper installation will result in crank misalignment with the spider.

1. Identify the single location where the concave portion of the BNI crank spline is aligned **exactly** with the convex tooth of the spider spline. Rotate the axle to align these features downward. **Note that two sets of splines are very close to aligning, but will result in an obvious misalignment of the spider with the crank arm.**



2. Locate the sprocket alignment tab or A / B alignment mark on the Gates spider assembly and align with the Bosch axle aligned features from Step 1. Install the spider assembly and lock ring (LH thread). Torque the lock ring to 25-30 Nm.



3. Align the drive side crank arm with the sprocket alignment tab and install onto the axle using the appropriate torque specification.

Brose

When using the Gates Carbon Drive System with Brose mid-drive motors, use the below chart to determine if the Brose mounting node will be centered in the frame, or if an offset is required.

Drive Selection Steps

1. Identify rear hub choice.
2. Determine if motor / node is to be centered or offset in the frame. If node requires offset, contact Gates Carbon Drive.
3. Determine spider required and front sprocket mounting surface.
4. Identify rear sprocket type needed and choose appropriate front and rear sprockets.



BROSE CONFIGURATION CHART

REAR HUB BRAND	COMPATIBLE HUBS	NOMINAL BELTLINE	MOTOR NODE OFFSET TOWARD NON-DRIVE SIDE	SPIDER*	FRONT SPROCKET MOUNTING SURFACE**	REAR SPROCKET TYPE
Shimano	Inter-5E (Mechanical)	45.5 mm	3.5 mm	W0063	- A -	YMN-U
	Nexus 7/8 Disc, Alfine 8/11 (Mechanical)				- A -	XMN-U
enviolo	enviolo CT, TR, SP, CA, CO (135/142 mm OLD)	45.5 mm	3.5 mm	W0063	- A -	VMN
	enviolo SP, CA (148 mm OLD)	48.7 mm	NONE		- A -	

* Requires use of FSA Spider listed. Sprocket mounts to inboard tab of spider.

** See Appendix for mounting surface definition.

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

NECESSARY EQUIPMENT

EQUIPMENT	DESCRIPTION	CONTACT INFORMATION	NOTES
Special Frame or Frame Node requirements	Use a centered node or offset node according to chart.	Brose Antriebstechnik GmbH & Co. Kommanditgesellschaft, Berlin Sickingenstr. 29-38 10553 Berlin T: +49 30 343498 100 F: +49 30 343498 170 E: ebike.berlin@brose.com Full Speed Ahead Tony Jiang - TH Industries Tel +886-4-2331-9134 ext.135 tony@tienhsin.com.tw	
Cranks	Isis spindle cranks. FSA Crankset 175 mm PN 32400029005050 FSA Crankset 170 mm PN 32400029003050		For alternative crank options, contact Race Face, Praxis, or Lasco.
Spider	104 mm 4-bolt pattern, see configuration chart		

SPROCKET OPTIONS

FRONT SPROCKET OPTIONS

FRONT SPROCKET TYPE	DESCRIPTION	TOOTH COUNT					
		39	42	46	50	55	60
4AA	4-Bolt 104 mm BCD	CT11394AA	CT11424AA	CT11464AA	CT11504AA	CT11554AA	

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	DESCRIPTION	TOOTH COUNT					
		22T	24T	26T	28T	30T	32T
XMN-D	Shimano 3-Lobe, Di2				CT1128XMN-D		
XMN-U	Shimano 3-Lobe, Unified	CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
YMN-D	Shimano Inter-5E 6-Lobe, Di2				CT1128YMN-D		
YMN-U	Shimano Inter-5E 6-Lobe, Unified				CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
VMN	enviolo	CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

Panasonic® GX Ultimate

When using Gates Carbon Drive System with the Panasonic mid-drive motor, standard motor placement is centered on the bicycle frame. This applies for all supported internal gear hubs.



Drive Selection Steps

1. Identify rear hub choice.
2. Determine spider required and front sprocket mounting surface.
3. Identify rear sprocket type needed and choose appropriate front and rear sprockets.

PANASONIC GX ULTIMATE CONFIGURATION CHART

REAR HUB BRAND	COMPATIBLE HUBS	NOMINAL BELTLINE	SPIDER*	FRONT SPROCKET MOUNTING SURFACE**	REAR SPROCKET TYPE
Shimano	Inter-5E (Di2)***	41.7 mm	BEP-NUM540B1	- A -	YMN-D
	Nexus 8 Disc, Alfine 8/11 (Di2)***			- A -	XMN-D
	Inter-5E (Mechanical)	45.5 mm	BEP-NUM540B1	- B -	YMN-U
	Nexus 7/8 Disc, Alfine 8/11 (Mechanical)			- B -	XMN-U / XSE-U†
enviolo	enviolo CT, TR, SP, CA, CO (135/142 mm OLD)	45.5 mm	BEP-NUM540B1	- B -	VMN / VSE†
Rohloff	SpeedHUB 500/14 (135 mm OLD)	54.7 mm	AFTERMARKET		RSMN**** RSSB****

* Requires use of Panasonic Spider listed. Sprocket mounts to inboard tab of spider.

** See Appendix for mounting surface definition.

*** Requires use of Shimano MU-UR500 Di2 system.

****RSMN and RSSB sprockets require the Rohloff Splined Carrier 'L' (Art.#8540L), which secures the sprocket using a threaded lock-ring.

† CDC sprockets are approved only for mid-drive motors producing 50 Nm or less of torque.

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

NECESSARY EQUIPMENT

EQUIPMENT	DESCRIPTION	CONTACT INFORMATION	NOTES
Cranks	Square taper spindle.	Lasco, Lunge Industry Co., LTD T: 866 4 2271 2969 E: teresalai@lasco.com.tw Manager: Teresa Lai	Panasonic recommends purchasing cranks from Lasco.
Spider	104 mm 4-bolt pattern, see configuration chart.	Panasonic Cycle Technology Co., Ltd. T: +81-(0)729-78-6623 F: +81-(0)729-76-2552 E: suzuki.kazuhiro@jp.panasonic.com Manager: Kaz Suzuki	

SPROCKET OPTIONS

FRONT SPROCKET OPTIONS

FRONT SPROCKET TYPE	DESCRIPTION	TOOTH COUNT					
		39	42	46	50	55	60
4AA	4-Bolt 104 mm BCD	CT11394AA	CT11424AA	CT11464AA	CT11504AA	CT11554AA	

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	DESCRIPTION	TOOTH COUNT					
		22T	24T	26T	28T	30T	32T
XMN-D	Shimano 3-Lobe, Di2				CT1128XMN-D		
XMN-U	Shimano 3-Lobe, Unified	CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
YMN-D	Shimano Inter-5E 6-Lobe, Di2				CT1128YMN-D		
YMN-U	Shimano Inter-5E 6-Lobe, Unified				CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
VMN	enviolo	CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

SHIMANO® STEPS EP8

When using the Gates Carbon Drive System with the Shimano STEPS EP8 motor, use the below chart to determine if the Shimano mounting node will be centered in the frame, or if an offset is required.



Drive Selection Steps

1. Identify rear hub choice.
2. Determine if motor / node is to be centered or offset in the frame.
3. Determine correct spider assembly part number based on desired front sprocket tooth count and target beltline.
4. Identify rear sprocket type needed and choose appropriate front and rear sprockets.

STEPS EP8 ASSEMBLY SELECTION CHART

REAR HUB BRAND	COMPATIBLE HUBS	BELTLINE	FRONT SPROCKET TEETH	CENTERED NODE ASSEMBLY PART NUMBER*	3 MM OFFSET NODE ASSEMBLY PART NUMBER*	REAR SPROCKET TYPE	
Shimano	Inter-5E (Mechanical)	45.5 mm	39	N/A	S4S6BM 39CDX -3/45.5 BG	YMN-U	
			42		S4S6BM 42CDX -3/45.5 BG		
	Nexus 7/8 Disc, Alfine 8/11 (Mechanical)	45.5 mm	46		S4S6BM 46CDX -3/45.5 BG	XMN-U / XSE-U†	
			50		S4S6BM 50CDX -3/45.5 BG		
			55		S4S6BM 55CDX -3/45.5 BG		
enviolo	enviolo CT, TR, SP, CA, CO (135/142 mm OLD)	45.5 mm	46	S4S6BM 46CDX -0/48.7 BG	S4S6BM 46CDX -3/45.5 BG	VMN / VSE†	
			50		S4S6BM 50CDX -3/45.5 BG		
			55		S4S6BM 55CDX -3/45.5 BG		
	enviolo SP, CA (148 mm OLD)	48.7 mm	46		S4S6BM 46CDX -0/48.7 BG		N/A
			50		S4S6BM 50CDX -0/48.7 BG		
		55	S4S6BM 55CDX -0/48.7 BG				

All are 4-bolt spiders as indicated by S4 in the part number.

“BG” at end of Part Number specifies inclusion of an ISO compliant Black Guard. Alternatively “NG” would specify No Guard.

* Requires use of Gates spider assemblies.

† CDC sprockets are approved for the EP8 motor when program-limited to 50 Nm of torque or less.

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

NECESSARY EQUIPMENT

EQUIPMENT	DESCRIPTION	CONTACT INFORMATION	NOTES
Special Frame or Frame Node requirements	Use a centered node or offset node according to chart.	Contact your local Shimano sales office for more information.	
Cranks			
Spider/Sprocket Assembly	Shimano 4-bolt, Gates Carbon Drive Spider with Sprocket	Gates E: CarbonDrive@Gates.com	Spider/Sprocket Assembly to be ordered through Gates.

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	SPROCKET SERIES	DESCRIPTION	TOOTH COUNT					
			22T	24T	26T	28T	30T	32T
XMN-D	CDX	Shimano 3-Lobe, Di2				CT1128XMN-D		
XMN-U	CDX	Shimano 3-Lobe, Unified	CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
YMN-D	CDX	Shimano Inter-5E 6-Lobe, Di2				CT1128YMN-D		
YMN-U	CDX	Shimano Inter-5E 6-Lobe, Unified				CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
XSE-U[†]	CDC [†]	Shimano 3-Lobe, Unified	CT1122XSE-U	CT1124XSE-U	CT1126XSE-U			
VMN	CDX	enviolo	CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		

[†] CDC sprockets are approved for the E6100 motor when program-limited to 50 Nm of torque or less.
For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

SHIMANO® STEPS E6100

When using the Gates Carbon Drive System with the Shimano STEPS E6100 motor, use the below chart to determine if the Shimano mounting node will be centered in the frame, or if an offset is required.

Drive Selection Steps

1. Identify rear hub choice.
2. Determine if motor / node is to be centered or offset in the frame.
3. Determine correct spider assembly part number based on desired front sprocket tooth count and target beltline.
Note - Compatibility with "T" Touring Cover only. Interference may occur with "C" City Cover. Custom covers may eliminate this interference.
4. Identify rear sprocket type needed and choose appropriate front and rear sprockets.



STEPS E6100 ASSEMBLY SELECTION CHART

REAR HUB BRAND	COMPATIBLE HUBS	BELTLINE	FRONT SPROCKET TEETH	CENTERED NODE ASSEMBLY PART NUMBER**	3 MM OFFSET NODE ASSEMBLY PART NUMBER**	REAR SPROCKET TYPE
Shimano	Inter-5E (Di2)***	41.7 mm	39	N/A	S4S6BM 39CDX -3/41.7 BG	YMN-D
			42		S4S6BM 42CDX -3/41.7 BG	
	Nexus 8, Alfine 8/11 (Di2)***	41.7 mm	50	N/A	S4S6BM 50CDX -3/41.7 BG	XMN-D
			55		S4S6BM 55CDX -3/41.7 BG*	
	Inter-5E (Mechanical)	45.5 mm	39	S4S6BM 39CDX -0/45.5 BG	S4S6BM 39CDX -3/45.5 BG	YMN-U
			42	S4S6BM 42CDX -0/45.5 BG	S4S6BM 42CDX -3/45.5 BG	
	Nexus 7/8 Disc, Alfine 8/11 (Mechanical)	45.5 mm	46	S4S6BM 46CDX -0/45.5 BG	S4S6BM 46CDX -3/45.5 BG	XMN-U / XSE-U†
				S4S6BM 46CDC -0/45.5 BG†		
			50	S4S6BM 50CDX -0/45.5 BG	S4S6BM 50CDX -3/45.5 BG	
				S4S6BM 50CDC -0/45.5 BG†		
55	S4S6BM 55CDX -0/45.5 BG*	S4S6BM 55CDX -3/45.5 BG				
	S4S6BM 55CDC -0/45.5 BG*†					
enviolo	enviolo CT, TR, SP, CA, CO (135/142 mm OLD)	45.5 mm	46	S4S6BM 46CDX -0/45.5 BG	S4S6BM 46CDX -3/45.5 BG	VMN / VSE†
				S4S6BM 46CDC -0/45.5 BG†		
			50	S4S6BM 50CDX -0/45.5 BG	S4S6BM 50CDX -3/45.5 BG	
				S4S6BM 50CDC -0/45.5 BG†		
			55	S4S6BM 55CDX -0/45.5 BG*	S4S6BM 55CDX -3/45.5 BG	
	S4S6BM 55CDC -0/45.5 BG*†					
	enviolo SP, CA (148 mm OLD)	48.7 mm	46	S4S6BM 46CDX -0/48.7 BG	N/A	
50			S4S6BM 50CDX -0/48.7 BG			
55			S4S6BM 55CDX -0/48.7 BG			

All are 4-bolt spiders as indicated by S4 in the part number.

"BG" at end of Part Number specifies inclusion of an ISO compliant Black Guard. Alternatively "NG" would specify No Guard.

* Compatibility with "T" Touring Cover only. Interference may occur with "C" City Cover. Custom covers may eliminate this interference.

** Requires use of Gates spider assemblies.

*** Requires use of Shimano MU-UR500 Di2 system.

† CDC sprockets are approved for the E6100 motor when program-limited to 50 Nm of torque or less.

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

NECESSARY EQUIPMENT

EQUIPMENT	DESCRIPTION	CONTACT INFORMATION	NOTES
Special Frame or Frame Node requirements	Use a centered node or offset node according to chart.	Contact your local Shimano sales office for more information.	
Cranks			
Spider/Sprocket Assembly	Shimano 4-bolt, Gates Carbon Drive Spider with Sprocket	Gates E: CarbonDrive@Gates.com	Spider/Sprocket Assembly to be ordered through Gates.

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	SPROCKET SERIES	DESCRIPTION	TOOTH COUNT					
			22T	24T	26T	28T	30T	32T
XMN-D	CDX	Shimano 3-Lobe, Di2				CT1128XMN-D		
XMN-U	CDX	Shimano 3-Lobe, Unified	CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
YMN-D	CDX	Shimano Inter-5E 6-Lobe, Di2				CT1128YMN-D		
YMN-U	CDX	Shimano Inter-5E 6-Lobe, Unified				CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
XSE-U	CDC†	Shimano 3-Lobe, Unified	CT1122XSE-U	CT1124XSE-U	CT1126XSE-U			
VMN	CDX	enviolo	CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		

† CDC sprockets are approved for the E6100 motor when program-limited to 50 Nm of torque or less.
For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

SHIMANO® STEPS E5000

When using the Gates Carbon Drive System with the Shimano STEPS E5000 motor, use the below chart to determine if the Shimano mounting node will be centered in the frame, or if an offset is required.



Drive Selection Steps

1. Identify rear hub choice.
2. Determine if motor / node is to be centered or offset in the frame.
3. Determine correct spider assembly part number based on desired front sprocket tooth count and target beltline. Note - Compatibility with "T" Touring Cover only. Interference may occur with "C" City Cover. Custom covers may eliminate this interference.
4. Identify rear sprocket type needed and choose appropriate front and rear sprockets.

STEPS E5000 ASSEMBLY SELECTION CHART

REAR HUB BRAND	COMPATIBLE HUBS	BELTLINE	FRONT SPROCKET TEETH	CENTERED NODE ASSEMBLY PART NUMBER**	3 MM OFFSET NODE ASSEMBLY PART NUMBER**	REAR SPROCKET TYPE
Shimano	Inter-5E (Di2)***	41.7 mm	39	N/A	S4S5BM 39CDX -3/41.7 BG	YMN-D
			42		S4S5BM 42CDX -3/41.7 BG	
	Nexus 8, Alfine 8/11 (Di2)***	41.7 mm	50	N/A	S4S5BM 50CDX -3/41.7 BG	XMN-D
			55		S4S5BM 55CDX -3/41.7 BG*	
	Inter-5E (Mechanical)	45.5 mm	39	S4S5BM 39CDX -0/45.5 BG	S4S5BM 39CDX -3/45.5 BG	YMN-U
			42	S4S5BM 42CDX -0/45.5 BG	S4S5BM 42CDX -3/45.5 BG	
	Nexus 7/8 Disc, Alfine 8/11 (Mechanical)	45.5 mm	46	S4S5BM 46CDX -0/45.5 BG	S4S5BM 46CDX -3/45.5 BG	XMN-U/ XSE-U†
				S4S5BM 46CDC -0/45.5 BG†		
			50	S4S5BM 50CDX -0/45.5 BG	S4S5BM 50CDX -3/45.5 BG	
				S4S5BM 50CDC -0/45.5 BG†		
55	S4S5BM 55CDX -0/45.5 BG*	S4S5BM 55CDX -3/45.5 BG				
	S4S5BM 55CDC -0/45.5 BG*†					
enviolo	enviolo CT, TR, SP, CA, CO (135/142 mm OLD)	45.5 mm	46	S4S5BM 46CDX -0/45.5 BG	S4S5BM 46CDX -3/45.5 BG	
				S4S5BM 46CDC -0/45.5 BG†		
		50	S4S5BM 50CDX -0/45.5 BG	S4S5BM 50CDX -3/45.5 BG		
			S4S5BM 50CDC -0/45.5 BG†			
		55	S4S5BM 55CDX -0/45.5 BG*	S4S5BM 55CDX -3/45.5 BG		
			S4S5BM 55CDC -0/45.5 BG*†			
	enviolo SP, CA (148 mm OLD)	48.7 mm	46	S4S5BM 46CDX -0/48.7 BG	N/A	
			50	S4S5BM 50CDX -0/48.7 BG		
55			S4S5BM 55CDX -0/48.7 BG			

"BG" at end of Part Number specifies inclusion of an ISO compliant Black Guard. Alternatively "NG" would specify No Guard.

* Compatibility with "T" Touring Cover only. Interference may occur with "C" City Cover. Custom covers may eliminate this interference.

** Requires use of Gates spider assemblies.

*** Requires use of Shimano MU-UR500 Di2 system.

† CDC sprockets are approved only for mid-drive motors producing 50 Nm or less of torque.

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

NECESSARY EQUIPMENT

EQUIPMENT	DESCRIPTION	CONTACT INFORMATION	NOTES
Special Frame or Frame Node requirements	Use a centered node or offset node according to chart.	Contact your local Shimano sales office for more information.	
Cranks			
Spider/Sprocket Assembly	Shimano 4-bolt, Gates Carbon Drive Spider with Sprocket	Gates E: CarbonDrive@Gates.com	Spider/Sprocket Assembly to be ordered through Gates.

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	SPROCKET SERIES	DESCRIPTION	TOOTH COUNT					
			22T	24T	26T	28T	30T	32T
XMN-D	CDX	Shimano 3-Lobe, Di2				CT1128XMN-D		
XMN-U	CDX	Shimano 3-Lobe, Unified	CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
YMN-D	CDX	Shimano Inter-5E 6-Lobe, Di2				CT1128YMN-D		
YMN-U	CDX	Shimano Inter-5E 6-Lobe, Unified				CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
VMN	CDX	enviolo	CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		
XSE-U	CDC†	Shimano 3-Lobe, Unified	CT1122XSE-U	CT1124XSE-U	CT1126XSE-U			
VSE	CDC†	enviolo		CT1124VSE	CT1126VSE	CT1128VSE		

† CDC sprockets are approved only for mid-drive motors producing 50 Nm or less of torque.

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

YAMAHA® PW Series ST, TE

When using the Gates Carbon Drive System with the Yamaha PW series ST and PW series TE mid-drive motors, use the below chart to determine if the Yamaha mounting node will be centered in the frame, or if an offset is required.



Drive Selection Steps

1. Identify rear hub choice.
2. Determine if motor / node is to be centered or offset in the frame.
3. Determine spider required and front sprocket mounting surface.
4. Identify rear sprocket type needed and choose appropriate front and rear sprockets.

YAMAHA PW SERIES ST, TE CONFIGURATION CHART

REAR HUB BRAND	COMPATIBLE HUBS	NOMINAL BELTLINE	MOTOR NODE OFFSET TOWARD NON-DRIVE SIDE	SPIDER*	FRONT SPROCKET MOUNTING SURFACE**	REAR SPROCKET TYPE
Shimano	Inter-5E (Mechanical)	45.5 mm	0.0 (Centered)	W0139	- A -	YMN-U
	Nexus 7/8 Disc, Alfine 8/11 (Mechanical)				- A -	XMN-U / XSE-U†
enviolo	enviolo CT, TR, SP, CA, CO (135/142 mm OLD)	45.5 mm	0.0 (Centered)	W0139	- A -	VMN / VSE†
	enviolo SP, CA (148 mm OLD)	48.7 mm		W0025		
Rohloff	SpeedHUB 500/14 (148 mm OLD)	51.7 mm	0.0 (Centered)	W0024	- A -	RSMN*** RSSB***
	SpeedHUB 500/14 (135/142 mm OLD)	54.7 mm			- B -	

* Requires use of FSA Spider listed. Sprocket mounts to inboard tab of spider. Verify spider and driver interface with FSA. Contact Gates Carbon Drive for any other aftermarket spider application with Yamaha.

** See Appendix for mounting surface definition.

***RSMN and RSSB sprockets require the Rohloff Splined Carrier 'L' (Art.#8540L), which secures the sprocket using a threaded lock-ring.

† CDC sprockets are approved only for mid-drive motors producing 50 Nm or less of torque.

For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

NECESSARY EQUIPMENT

EQUIPMENT	DESCRIPTION	CONTACT INFORMATION	NOTES
Special Frame or Frame Node requirements	Use a centered node or offset node according to chart.	Yamaha Motor Co., Ltd T: +81 (0) 538 32 1963	
Cranks	Square taper spindle. Drive side crank does not need spider interface.	OE to determine crankset	
Spider	104 mm 4-bolt pattern spider, see configuration chart	Yamaha Motor Co., Ltd T: +81 (0) 538 32 1963	

SPROCKET OPTIONS

FRONT SPROCKET OPTIONS

FRONT SPROCKET TYPE	DESCRIPTION	TOOTH COUNT					
		39	42	46	50	55	60
4AA	4-Bolt 104 mm BCD	CT11394AA	CT11424AA	CT11464AA	CT11504AA	CT11554AA	

REAR SPROCKET OPTIONS

REAR SPROCKET TYPE	DESCR.	TOOTH COUNT							
		19T	20T	22T	24T	26T	28T	30T	32T
XMN-U	Shimano 3-Lobe, Unified			CT1122XMN-U	CT1124XMN-U	CT1126XMN-U			
YMN-U	Shimano Inter-5E 6-Lobe, Unified						CT1128YMN-U	CT1130YMN-U	CT1132YMN-U
VMN	enviolo			CT1122VMN	CT1124VMN	CT1126VMN	CT1128VMN		
RSMN*	Rohloff Splined	CT1119RSMN	CT1120RSMN	CT1122RSMN					
RSSB*	Rohloff Splined	CT1119RSSB	CT1120RSSB	CT1122RSSB					

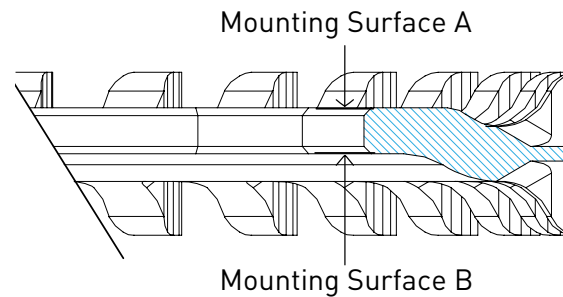
For hubs or beltlines not listed, please contact your Gates Carbon Drive technical representative or email CarbonDrive@Gates.com.

*RSMN and RSSB sprockets require the Rohloff Splined Carrier 'L' (Art.#8540L), which secures the sprocket using a threaded lock-ring.

REAR HUB MOTORS

The Gates Carbon Drive System can be easily integrated with a variety of Rear Hub Motor Systems. Contact the hub manufacturer to ensure compatibility with the Gates Carbon Drive System. Torque measuring sensor location may inhibit compatibility.

REAR HUB MOTORS					
	BELTLINE	AVAILABLE REAR SPROCKET SIZES	REAR SPROCKET PART NUMBERS	NOTES	CONTACT INFORMATION
	49.75 mm	22T Thread-On Freewheel	CT1122WMN CT1122WSE	OLD 135 mm	Jack Brandsen T: +49 171 967 0599 M: +31 6 8191 8717 www.szbf.com
	Variable	ALL 9-SPLINE (SMN) REAR SPROCKETS		OLD 135 mm The free hub body is a 9-spline interface. A single-speed spacer kit can be used to properly align the rear sprocket.	www.neodrives.com
	Singlespeed Hub: 52.4 mm	19T Thread-On 21T Thread-On	CT1119FMN CT1121FMN	OLD 135 mm or 120 mm	technical@zehus.it
	Singlespeed Hub, Disc Brake: 60.0 mm			OLD 135 mm	

FRONT SPROCKET MOUNTING SURFACE


NOTE: Beginning MY20, sprockets will have **(A)** and **(B)** markings.

INTERNAL GEAR HUB SYSTEMS BELTLINE

MANUFACTURER	HUB DESCRIPTION	O.L.D.	BRAKE TYPE	HUB PRODUCT NUMBERS	BELTLINE (MM)	REAR SPROCKET SERIES		
						CDX	CDC†	
enviolo	CVP	135/142	Disc, Rim, Roller	enviolo CT, TR, SP, CA, CO	45.5	VMN	VSE	
		148	Disc, Rim	enviolo SP, CA	48.7			
Rohloff	SpeedHUB	135/142	Disc, Rim	500/14	54.7	RSMN† RSSB†		
		148			51.7			
		177		XL 500/14	72.2			
Shimano	Alfine 11	135	Disc	SG-S700	43.7* / 45.5	XMN*/XMN-U	XSE/XSE-U	
	Alfine 11 Di2**			SG-S705	41.7	XMN-D		
	Alfine 8			SG-S7001-8	43.7* / 45.5	XMN*/XMN-U	XSE/XSE-U	
	Alfine 8 Di2**			SG-S7051-8	41.7	XMN-D		
	Inter-5E			SG-S7000-5	45.5	YMN-U		
	Inter-5E Di2			SG-S7050-5	41.7	YMN-D		
	Nexus 3	127	Coaster	SG-3C41	41.2*	XMN*	XSE	
		120		SG-3C41	42.7*			
	Nexus 3****	135	Disc	SG-3D55	43.7	NMN		
	Nexus 7	130	Roller	SG-C3000-7R	42.1*	XMN*	XSE	
		127	Coaster	SG-C3000-7C	43.3*			
		135	Disc	SG-C3001-7D	45.7			XMN-U
	Nexus 8 ***	132	Roller, Rim	SG-C6001-8D, SG-C6001-8CD		43.7* / 45.5	XMN*/XMN-U	XSE/XSE-U
				SG-C6011-8R, SG-C6001-8R, SG-C6011-8V, SG-C6001-8V				
132.3		Coaster	SG-C6001-8C	44.8*	XMN*	XSE		
Nexus 8 Di2**	135	Disc, Roller, Coaster	SG-C6061-8R, SG-C6061-8C, SG-C6061-8D, SG-C6061-8CD	41.7	XMN-D			
Sturmey-Archer	RX-RF5	135	Rim	IHC5F.XBSS.AA0, IHC5F.XCSS.AA0	43.7	AMN		
	RX-RF5 Threaded	135		RX-RF5 50X1	44.7	AFMN		
	S-RF3	117		IHS3F.QBSS.AA3, IHS3F.QCSS.AA3	42.7	NMN		

* XMN sprocket type for 43.7 mm beltline will be discontinued for MY20/MY21, replaced by XMN-U for 45.5 mm beltline.

** Requires use of Shimano Di2 motor MU-UR500.

*** For 22T sprockets on all mechanical 8-speed hub combinations, customers should order "Right hand dust cap B for INTER-8".

**** 6-lobe driver is not compatible with XMN sprockets.

† CDC sprockets are approved only for mid-drive motors producing 50 Nm or less of torque.

‡ RSMN and RSSB sprockets require the Rohloff Splined Carrier 'L' (Art.#8540L), which secures the sprocket using a threaded lock-ring.

Note: Rohloff integrations require a snubber. See Gates® Rohloff specific manual for additional information.



WORLDWIDE ENGINEERING SUPPORT IS AVAILABLE:

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CarbonDrive@Gates.com

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