



FLO Cycling Owner's Manual

Published 06-28-2021

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Wheel Models Covered In This Document

The following wheels have been sold by FLO. The wheels are listed in two sections. The first are wheels that are currently for sale. The second list contains wheels that have been discontinued.

Wheel Currently For Sale

FLO All Sport Wheels

- FLO 49 AS
- FLO 49 AS Disc
- FLO 64 AS
- FLO 64 AS Disc
- FLO 77 AS
- FLO 77 AS Disc

FLO Gravel Wheels

- FLO G700
- FLO G650

Carbon Clincher Wheels

- FLO Disc Carbon Clincher
- FLO DISC Disc Carbon Clincher

Aluminum + Carbon Wheels

- FLO 60 Aluminum + Carbon
- FLO 90 Aluminum + Carbon
- FLO DISC Aluminum + Carbon
- FLO DISC Disc Aluminum + Carbon

Wheels That Have Been Discontinued

2016-2019 Wheels

- FLO 45 Carbon Clincher
- FLO 45 Carbon Clincher 6-Bolt Disc Brake
- FLO 45 Carbon Clincher Centerlock Disc Brake
- FLO 60 Carbon Clincher
- FLO 60 Carbon Clincher 6-Bolt Disc Brake
- FLO 60 Carbon Clincher Centerlock Disc Brake
- FLO 60 Carbon Clincher Track
- FLO 90 Carbon Clincher
- FLO 90 Carbon Clincher 6-Bolt Disc Brake
- FLO 90 Carbon Clincher Centerlock Disc Brake

- FLO 90 Carbon Clincher Track

2012-2015 Wheels

- FLO 30
- FLO 60
- FLO 90
- FLO DISC

Getting Started

Our website has a wealth of information on getting started. To learn more about wheel services, tire installation, brake set-up, tubeless, etc. visit our How To page [here](#).

If you find yourself in need of more information, please feel free to contact us and we will talk you through any questions you may have.

Warranty

This document is intended for wheels that are in good shape and safe to ride. If you believe you have a warranty issue or suspect any damage, please stop using the wheel and get in touch with us. We will make sure to evaluate your wheels so you stay safe while riding. If you want to learn more about our warranty you can find out more [here](#).

FLO Effective Rim Diameters

Below is a list of each rim we've made and its effective rim diameter (ERD). Please note, there are numerous build types for each rim which does not affect the ERD. For example, the FLO 64 AS and the FLO 64 AS Disc will have the same ERD. If you'd like to learn more about ERD please check out our [blog article](#).

- **FLO 49 AS** - 541.0mm
- **FLO 64 AS** - 510.2mm
- **FLO 77 AS** - 485.8mm
- **FLO G700** - 529.2mm
- **FLO G650** - 483.4mm
- **FLO 45 Carbon Clincher** - 549.0mm
- **FLO 60 Carbon Clincher** - 514.5mm
- **FLO 90 Carbon Clincher** - 451.1mm
- **FLO DISC Carbon Clincher** - 600.4mm
- **FLO 60 Aluminum + Carbon** - 600.4mm
- **FLO 90 Aluminum + Carbon** - 600.4mm
- **FLO DISC Aluminum + Carbon** - 600.4mm
- **FLO 30** - 577.5mm
- **FLO 60** - 600.4mm
- **FLO 90** - 600.4mm
- **FLO DISC** - 600.4mm

Spokes

The table below shows the spokes used for each FLO wheel along with recommended spoke tensions and nipples. For each spoke that is listed as “Custom” you will have to get the spokes directly from FLO should you need a replacement. You can contact us for more information. All other spokes can be found at retailers such as Pro Wheel Builder.

Wheel Model	Wheel Location	Drive Side Spoke Length	Non-Drive Side Spoke Length	Drive Side Spoke Tension	Non-Drive Side Spoke Tension	Spoke	Nipple
FLO 49 AS	Front	258	N/A	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	262	264	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 49 AS Disc	Front	263	262	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	259	260	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 64 AS	Front	243	N/A	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	246	249	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 64 AS Disc	Front	248	247	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	244	245	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 77 AS	Front	231	N/A	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	234	237	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm

Wheel Model	Wheel Location	Drive Side Spoke Length	Non-Drive Side Spoke Length	Drive Side Spoke Tension	Non-Drive Side Spoke Tension	Spoke	Nipple
FLO 77 AS Disc	Front	236	235	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	232	233	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO G700	Front	258	256	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	253	255	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO G650	Front	235	233	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	230	232	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO DISC Carbon Clincher	Rear	286	288	100-130 kgf	30-130 kgf	Custom	Sapim Hex Head SILS 14G 12mm
	Clydesdale	284	286	100-130 kgf	30-130 kgf	Custom	Sapim Hex Head SILS 14G 12mm
FLO DISC Disc Carbon Clincher	Rear	286	288	100-130 kgf	30-130 kgf	Custom	Sapim Hex Head SILS 14G 12mm
	Clydesdale	284	286	100-130 kgf	30-130 kgf	Custom	Sapim Hex Head SILS 14G 12mm
FLO 60 Aluminum + Carbon	Front	288	N/A	90-110 kgf	90-110 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	292	294	90-110 kgf	50-90 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	298	300	90-110 kgf	50-90 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm

Wheel Model	Wheel Location	Drive Side Spoke Length	Non-Drive Side Spoke Length	Drive Side Spoke Tension	Non-Drive Side Spoke Tension	Spoke	Nipple
FLO 90 Aluminum + Carbon	Front	288	N/A	90-110 kgf	90-110 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	292	294	90-110 kgf	50-90 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	298	300	90-110 kgf	50-90 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO DISC Aluminum + Carbon	Rear	287	287	90-110 kgf	50-90 kgf	Custom	Sapim Hex Head SILS 14G 12mm
	Clydesdale	284	287	90-110 kgf	50-90 kgf	Custom	Sapim Hex Head SILS 14G 12mm
FLO DISC Disc Aluminum + Carbon	Rear	287	287	90-110 kgf	50-90 kgf	Custom	Sapim Hex Head SILS 14G 12mm
	Clydesdale	284	287	90-110 kgf	50-90 kgf	Custom	Sapim Hex Head SILS 14G 12mm
FLO 45 Carbon Clincher	Front	260	N/A	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	264	268	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	270	275	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 45 Carbon Clincher 6-Bolt Disc Brake	Front	268	266	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	261	263	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	271	273	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm

Wheel Model	Wheel Location	Drive Side Spoke Length	Non-Drive Side Spoke Length	Drive Side Spoke Tension	Non-Drive Side Spoke Tension	Spoke	Nipple
FLO 45 Carbon Clincher Centerlock Disc Brake	Front	268	266	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	261	263	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	271	273	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 60 Carbon Clincher	Front	243	N/A	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	247	250	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	253	258	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 60 Carbon Clincher 6-Bolt Disc Brake	Front	251	249	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	245	247	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	253	255	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 60 Carbon Clincher Centerlock Disc Brake	Front	251	249	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	245	247	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	253	255	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Front	230	N/A	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm

Wheel Model	Wheel Location	Drive Side Spoke Length	Non-Drive Side Spoke Length	Drive Side Spoke Tension	Non-Drive Side Spoke Tension	Spoke	Nipple
FLO 60 Carbon Clincher Track	Rear	246	246	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	254	254	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 90 Carbon Clincher	Front	215	N/A	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	217	220	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	224	227	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 90 Carbon Clincher 6-Bolt Disc Brake	Front	220	218	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	214	218	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	223	226	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 90 Carbon Clincher Centerlock Disc Brake	Front	220	218	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	214	218	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	223	226	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 90 Carbon Clincher Track	Front	198	N/A	90-120 kgf	90-120 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	216	216	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm

Wheel Model	Wheel Location	Drive Side Spoke Length	Non-Drive Side Spoke Length	Drive Side Spoke Tension	Non-Drive Side Spoke Tension	Spoke	Nipple
	Clydesdale	225	225	100-130 kgf	30-130 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 30	Front	276	N/A	90-110 kgf	90-110 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Rear	280	282	90-110 kgf	50-90 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
	Clydesdale	286	288	90-110 kgf	50-90 kgf	Sapim CX-Ray	Sapim Hex Head SILS 14G 12mm
FLO 60	Front	288	N/A	90-110 kgf	90-110 kgf	Custom	Sapim Hex Head SILS 14G 12mm
	Rear	292	294	90-110 kgf	50-90 kgf	Custom	Sapim Hex Head SILS 14G 12mm
	Clydesdale	298	300	90-110 kgf	50-90 kgf	Custom	Sapim Hex Head SILS 14G 12mm
FLO 90	Front	288	N/A	90-110 kgf	90-110 kgf	Custom	Sapim Hex Head SILS 14G 12mm
	Rear	292	294	90-110 kgf	50-90 kgf	Custom	Sapim Hex Head SILS 14G 12mm
	Clydesdale	298	300	90-110 kgf	50-90 kgf	Custom	Sapim Hex Head SILS 14G 12mm
FLO DISC	Rear	289	293	90-110 kgf	50-90 kgf	Non-Replaceable	Sapim Hex Head SILS 14G 12mm
	Clydesdale	297	301	90-110 kgf	50-90 kgf	Non-Replaceable	Sapim Hex Head SILS 14G 12mm

Bearings

The table below shows the bearings associated with each wheel we've manufactured. If you have questions about our bearings, please feel free to contact us.

Wheel Model	Wheel Location	Bearing Size	Quantity
FLO 49 AS	Front	6900	2
	Rear	6802	4
FLO 49 AS Disc	Front	6802	2
	Rear	6902 & 6802	3 & 1
FLO 64 AS	Front	6900	2
	Rear	6802	4
FLO 64 AS Disc	Front	6802	2
	Rear	6902 & 6802	3 & 1
FLO 77 AS	Front	6900	2
	Rear	6802	4
FLO 77 AS Disc	Front	6802	2
	Rear	6902 & 6802	3 & 1
FLO G700	Front	6802	2
	Rear	6902 & 6802	3 & 1
FLO G650	Front	6802	2
	Rear	6902 & 6802	3 & 1
FLO DISC Carbon Clincher	Rear	6802	4
	Clydesdale	6802	4
FLO DISC Disc Carbon Clincher	Rear	6802	4
	Clydesdale	6802	4
FLO 60 Aluminum + Carbon	Front	6900	2
	Rear	6802	4
	Clydesdale	6802	4

Wheel Model	Wheel Location	Bearing Size	Quantity
FLO 90 Aluminum + Carbon	Front	6900	2
	Rear	6802	4
	Clydesdale	6802	4
FLO DISC Aluminum + Carbon	Rear	6802	4
	Clydesdale	6802	4
FLO DISC Disc Aluminum + Carbon	Rear	6802	4
	Clydesdale	6802	4
FLO 45 Carbon Clincher	Front	6900	2
	Rear	6802	4
	Clydesdale	6802	4
FLO 45 Carbon Clincher 6-Bolt Disc Brake	Front	6802	2
	Rear	6802	4
	Clydesdale	6802	4
FLO 45 Carbon Clincher Centerlock Disc Brake	Front	6802	2
	Rear	6902 & 6802	3 & 1
	Clydesdale	6902 & 6802	3 & 1
FLO 60 Carbon Clincher	Front	6900	2
	Rear	6802	4
	Clydesdale	6802	4
FLO 60 Carbon Clincher 6-Bolt Disc Brake	Front	6802	2
	Rear	6802	4
	Clydesdale	6802	4
FLO 60 Carbon Clincher Centerlock Disc Brake	Front	6802	2
	Rear	6902 & 6802	3 & 1
	Clydesdale	6902 & 6802	3 & 1
FLO 60 Carbon Clincher Track	Front	6000	2
	Rear	6000	2

Wheel Model	Wheel Location	Bearing Size	Quantity
	Clydesdale	6000	2
FLO 90 Carbon Clincher	Front	6900	2
	Rear	6802	4
	Clydesdale	6802	4
FLO 90 Carbon Clincher 6-Bolt Disc Brake	Front	6802	2
	Rear	6802	4
	Clydesdale	6802	4
FLO 90 Carbon Clincher Centerlock Disc Brake	Front	6802	2
	Rear	6902 & 6802	3 & 1
	Clydesdale	6902 & 6802	3 & 1
FLO 90 Carbon Clincher Track	Front	6000	2
	Rear	6000	2
	Clydesdale	6000	2
FLO 30	Front	6900	2
	Rear	6902 & 6802	3 & 1
	Clydesdale	6902 & 6802	3 & 1
FLO 60	Front	6900	2
	Rear	6902 & 6802	3 & 1
	Clydesdale	6902 & 6802	3 & 1
FLO 90	Front	6900	2
	Rear	6902 & 6802	3 & 1
	Clydesdale	6902 & 6802	3 & 1
FLO DISC	Rear	6902 & 6802	3 & 1
	Clydesdale	6902 & 6802	3 & 1

Wheel Cleaning & Sticker Removal

When cleaning FLO Wheels, we do not recommend that you use a hose. When you use a high volume of water, it can enter the rim cavity which will require that you remove the tire and rim strip. The best way to clean your wheels is with a rag and a product like Windex.

If you are removing stickers and have residue on the surface of the wheel, make sure to use an alcohol based cleaner like acetone. Do not use oil based cleaners like GooGone. For more on changing stickers, you can visit the How To page referenced above.

Wheel Storage & Transportation

When storing or transporting your wheels, make sure you are not applying a load to the inside of the rim. Hanging a bike from the rims, or using tie-downs clamps on the wheels is not recommended and may damage your wheels.

Wheel Truing

If you believe your wheel is out of true, please work with a qualified wheel builder to true your wheels. The spoke charts above list the recommended spoke tensions to prevent rim failures and damaged spokes.

Most FLO Wheels use Sapim CX-Ray spokes and require a tool to hold the spoke to prevent wind up. Make sure this tool is used.

FLO DISC wheels require a blind true. This means you cannot check spoke tensions. If a spoke breaks in a 2012-2105 FLO DISC the wheel must be retired and all FLO DISCs from this generation are now out of warranty. FLO DISC from 2016 allow for the replacement of a broken spoke.

When truing a FLO DISC, you are better to back off and start over than to tighten more. Be careful. A good wheel builder will get this right. In the wrong hands you can end up with a big problem.