



SPECIALIZED BICYCLE OWNER'S MANUAL

APPENDIX A SUPPLEMENT

**2014 RIDER/BIKE WEIGHT LIMITS
AND TERRAIN CONDITIONS**

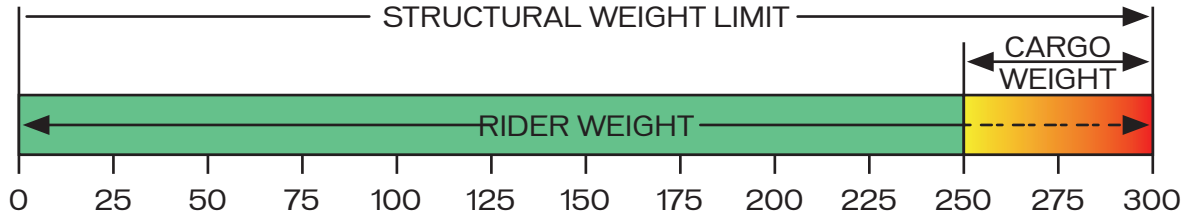


2014 APPENDIX A SUPPLEMENT

INTRODUCTION

This Appendix A manual supplement is designed as an annual addition to the Appendix A section found in the Specialized Bicycle Owner's Manual. This appendix is designed to help the rider differentiate between frame structural weight limits and braking distance weight limits.

Each bike model is designed and tested to support a structural weight limit, which includes a cargo weight limit. As the weight of the rider approaches the structural weight limit of the bike, the allowable cargo weight might be reduced. For example, a bike may have a 55lb cargo weight limit, but if the weight of the rider is too close to the bike's structural weight limit, the rider may only be allowed to carry a smaller amount of cargo or no cargo at all. See following page for model-specific example and graphs.



Additionally, CEN (European Committee for Standardization) has braking distance weight limits, which require that the combined weight of the rider and cargo can be stopped within a specified distance. Exceeding the max weight per CEN braking standards does not mean that the bike will not stop, but that it might not stop within the distance specified by CEN.

The following information contains structural weight limits for frames, as well as recommended weight limits based on CEN standards for safe stopping distances. This information will also help determine if the rider and cargo weights are within the weight limits outlined in the Bike Model / Rider Weight Table (pages 5-6).

UNDERSTANDING WEIGHT LIMITS

FRAME STRUCTURAL WEIGHT LIMITS

Structural weight limits for each bike are determined by Specialized Bicycles through extensive lab testing, and are listed in the Bike Model / Rider Weight Table.



STRUCTURAL WEIGHT LIMIT: The maximum weight (rider and cargo) a bike can physically support. This limit is different from the **MAX WEIGHT PER CEN BRAKING STANDARDS** (see below).



RIDER WEIGHT: The weight of the rider in riding gear (e.g., jacket, helmet cam, hydration pack, helmet, etc.).



CARGO WEIGHT: The weight of any additional accessories (e.g., panniers, rear racks, saddle bags, handlebar bags, baskets, etc.) not accounted for in Rider Weight.

CARGO WEIGHT LIMIT: The maximum cargo weight a bike has been tested to support structurally.



TOTAL WEIGHT: The sum of **Rider Weight** and **Cargo Weight**.

MAX WEIGHT PER CEN BRAKING STANDARDS

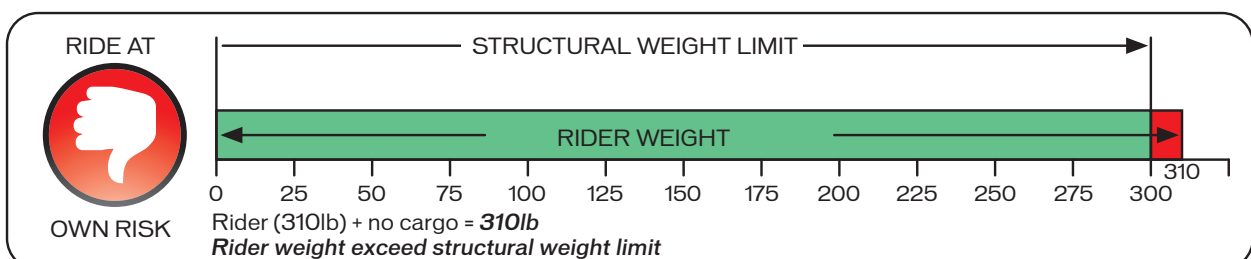
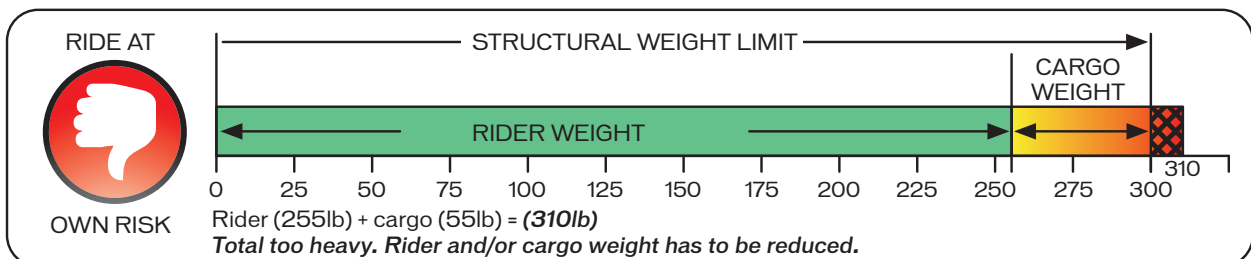
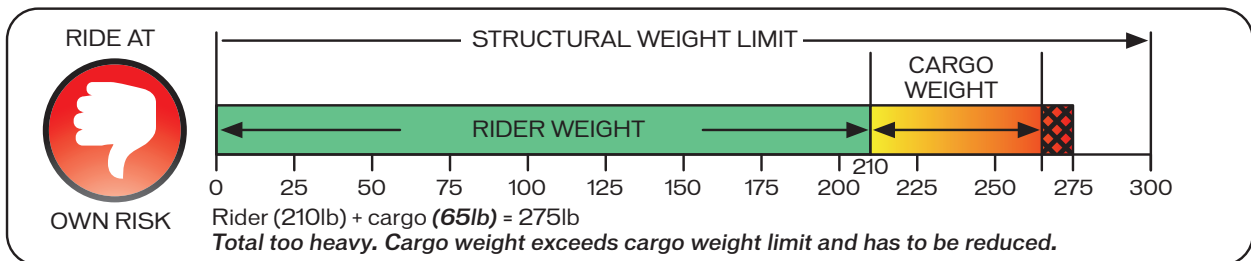
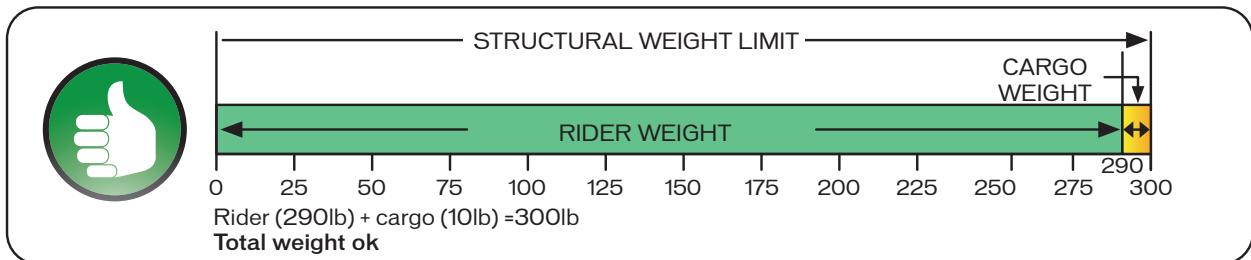
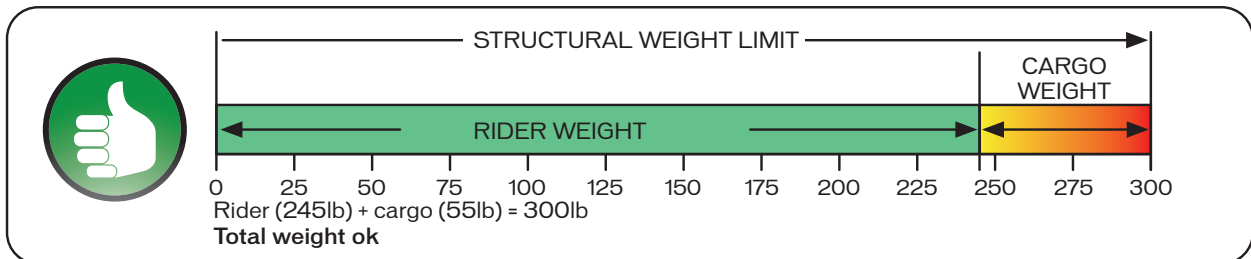
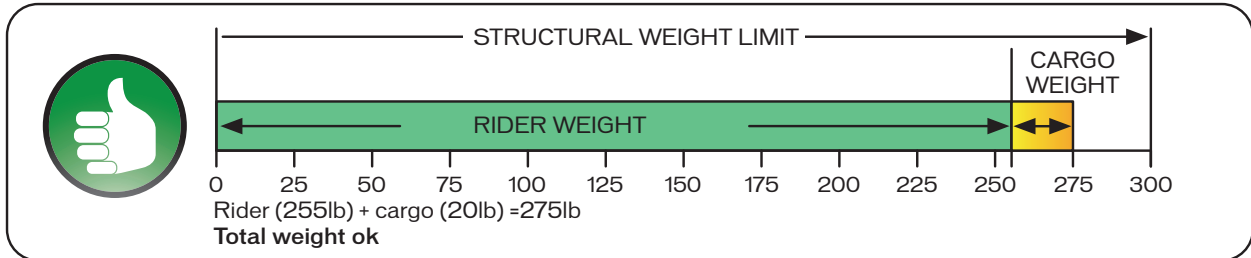
Each bike model is tested to determine the maximum amount of weight (combined weight of **Rider** and **Cargo**) that can be applied to a bike and the capability to stop the bike within a prescribed distance.

In situations where the weight limit for CEN braking standards does not exceed the structural weight limit, the maximum allowable weight limit is determined by the braking limit. In all other cases, the maximum allowable weight limit is determined by the structural weight limit.

DETERMINING MAXIMUM ALLOWABLE WEIGHT LIMITS

1. Find your bike in the Bike Model / Rider Weight Table.
2. Lookup the cargo weight limit and the **Maximum Allowable Weight Limit** of the bike model.
3. Determine the rider weight, which includes all riding gear.
4. Determine the cargo weight, which includes the weight of any additional accessories.
5. Subtract the rider weight from the recommended max weight. The result is the amount the rider is allowed for cargo weight, up to the cargo weight limit prescribed for the bike model.

EXAMPLE: HARDROCK (Maximum Allowable Weight Limit = 300lb / 136kg. Cargo Weight Limit = 55lb / 25kg)



INTENDED USE OF YOUR BICYCLE

WARNING: Understand your bike and its intended use. Choosing the wrong bicycle for your purpose can be hazardous. Using your bike the wrong way is dangerous.

No single type of bicycle is suited for all purposes. Your retailer can help you pick the “right tool for the job” and help you understand its limitations. There are many types of bicycles and many variations within each type. There are many types of mountain, road, racing, hybrid, touring, cyclocross and tandem bicycles.

There are also bicycles that mix features. For example, there are road/racing bikes with triple cranks. These bikes have the low gearing of a touring bike, the quick handling of a racing bike, but are not well suited for carrying heavy loads on a tour, for which, you want a touring bike.

Within each of type of bicycle, one can optimize the bicycle for certain purposes. Visit your bicycle shop and find someone with expertise in the area that interests you. Do your own homework. Seemingly small changes such as the choice of tires can improve or diminish the performance of a bicycle for a certain purpose.

On the following pages, we generally outline the intended uses of all bike types and, based in part on max weight per CEN braking standards, we specify the maximum rider weights by bike family/model.

Industry usage conditions are generalized and evolving. Consult your dealer about how you intend to use your bike.

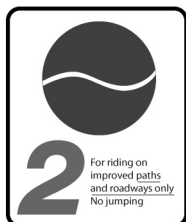
HIGH-PERFORMANCE ROAD



- **CONDITION 1:** Bikes designed for riding on a paved surface where the tires do not lose ground contact.
- **INTENDED:** To be ridden on paved roads only.
- **NOT INTENDED:** For off-road, cyclocross, or touring with racks or panniers.
- **TRADE OFF:** Material use is optimized to deliver both light weight and specific performance. You must understand that (1) these types of bikes are intended to give an aggressive racer or competitive cyclist a performance advantage over a relatively short product life, (2) a less aggressive rider will enjoy longer frame life, (3) you are choosing light weight (shorter frame life) over more frame weight and a longer frame life, (4) you are choosing light weight over more dent resistant or rugged frames that weigh more. All frames that are very light need frequent inspection. These frames are

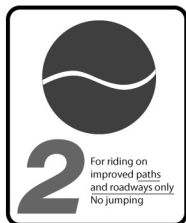
likely to be damaged or broken in a crash. They are not designed to take abuse or be a rugged workhorse. See also Appendix B.

GENERAL PURPOSE RIDING



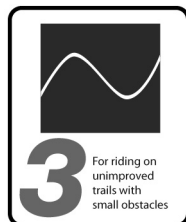
- **CONDITION 2:** Bikes designed for riding Condition 1, plus smooth gravel roads and improved trails with moderate grades where the tires do not lose ground contact.
- **INTENDED:** For paved roads, gravel or dirt roads that are in good condition, and bike paths.
- **NOT INTENDED:** For off-road or mountain bike use, or for any kind of jumping. Some of these bikes have suspension features, but these features are designed to add comfort, not off-road capability. Some come with relatively wide tires that are well suited to gravel or dirt paths. Some come with relatively narrow tires that are best suited to faster riding on pavement. If you ride on gravel or dirt paths, carry heavier loads or want more tire durability talk to your dealer about wider tires.

CYCLO-CROSS



- **CONDITION 2:** Bikes designed for riding Condition 1, plus smooth gravel roads and improved trails with moderate grades where the tires do not lose ground contact.
- **INTENDED:** For cyclo-cross riding, training and racing. Cyclo-cross involves riding on a variety of terrain and surfaces including dirt or mud surfaces. Cyclo-cross bikes also work well for all weather rough road riding and commuting.
- **NOT INTENDED:** For off road or mountain bike use, or jumping. Cyclo-cross riders and racers dismount before reaching an obstacle, carry their bike over the obstacle and then remount. Cyclo-cross bikes are not intended for mountain bike use. The relatively large road bike size wheels are faster than the smaller mountain bike wheels, but are not as strong.

CROSS-COUNTRY, MARATHON, HARDTAILS



- **CONDITION 3:** Bikes designed for riding Conditions 1 and 2, plus rough trails, small obstacles, and smooth technical areas, including areas where momentary loss of tire contact with the ground may occur. NOT for jumping. All mountain bikes without rear suspension are Condition 3, as well as some lightweight rear suspension models.
- **INTENDED:** For cross-country riding and racing which ranges from mild to aggressive over intermediate terrain (e.g., hilly with small obstacles like roots, rocks, loose surfaces, hard pack and depressions). Cross-country and marathon equipment (tires, shocks, frames, drive trains) are light-weight, favoring nimble speed over brute force. Suspension travel is relatively short since the bike is intended to move quickly on the ground.
- **NOT INTENDED:** For Hardcore Freeriding, Extreme Downhill, Dirt Jumping, Slopestyle, or very aggressive or extreme riding. Not for spending time in the air, landing hard and hammering through obstacles.

• **TRADE OFF:** Cross-Country bikes are lighter, faster to ride uphill, and more nimble than All-Mountain bikes. Cross-Country and Marathon bikes trade off some ruggedness for pedaling efficiency and uphill speed.

ALL MOUNTAIN



- **CONDITION 4:** Bikes designed for riding Conditions 1, 2, and 3, plus rough technical areas, moderately sized obstacles, and small jumps.

- **INTENDED:** For trail and uphill riding. All-Mountain bicycles are: (1) more heavy duty than cross country bikes, but less heavy duty than Freeride bikes, (2) lighter and more nimble than Freeride bikes, (3) heavier and have more suspension travel than a cross country bike, allowing them to be ridden in more difficult terrain, over larger obstacles and moderate jumps, (4) intermediate in suspension travel and use components that fit the intermediate intended use, (5) cover a fairly wide range of intended use, with models that are more or less heavy duty. Talk to your retailer about your needs and these models.

- **NOT INTENDED:** For use in extreme forms of jumping/riding such as hardcore mountain, Freeriding, Downhill, North Shore, Dirt Jumping, Hucking etc. Not for large drop offs, jumps or launches (wooden structures, dirt embankments) requiring long suspension travel or heavy duty components; and not for spending time in the air landing hard and hammering through obstacles.

- **TRADE OFF:** All-Mountain bikes are more rugged than cross country bikes, for riding more difficult terrain. All-Mountain bikes are heavier and harder to ride uphill than cross country bikes. All-Mountain bikes are lighter, more nimble and easier to ride uphill than Freeride bikes. All-Mountain bikes are not as rugged as Freeride bikes and must not be used for more extreme riding and terrain.

GRAVITY, FREERIDE AND DOWNHILL



- **CONDITION 5:** Bikes designed for jumping, hucking, high speeds, or aggressive riding on rougher surfaces, or landing on flat surfaces. However, this type of riding is extremely hazardous and puts unpredictable forces on a bicycle which may overload the frame, fork, or parts. If you choose to ride in Condition 5 terrain, you should take appropriate safety precautions such as more frequent bike inspections and replacement of equipment. You should also wear comprehensive safety equipment such as a full-face helmet, pads, and body armor.

- **INTENDED:** For riding that includes the most difficult terrain that only very skilled riders should attempt. Gravity, Freeride, and Downhill are terms which describe hardcore mountain, north shore, slopestyle. This is “extreme” riding and the terms describing it are constantly evolving.

Gravity, Freeride, and Downhill bikes are: (1) heavier and have more suspension travel than All-Mountain bikes, allowing them to be ridden in more difficult terrain, over larger obstacles and larger jumps, (2) the longest in suspension travel and use components that fit heavy duty intended use. There is no guarantee that extreme riding will not break a Freeride bike.

 **The terrain and type of riding that Freeride bikes are designed for is inherently dangerous. Appropriate equipment, such as a Freeride bike, does not change this reality. In this kind of riding, bad judgment, bad luck, or riding beyond your capabilities can easily result in an accident, where you could be seriously injured, paralyzed or killed.**

- **NOT INTENDED:** To be an excuse to try anything. Read Section 2. F of the Bicycle Owner’s Manual, p. 12.

- **TRADE OFF:** Freeride bikes are more rugged than All-Mountain bikes, for riding more difficult terrain. Freeride bikes are heavier and harder to ride uphill than All-Mountain bikes.

DIRT JUMP



- **CONDITION 5:** Bikes designed for jumping, hucking, high speeds, or aggressive riding on rougher surfaces, or landing on flat surfaces. However, this type of riding is extremely hazardous and puts unpredictable forces on a bicycle which may overload the frame, fork, or parts. If you choose to ride in Condition 5 terrain, you should take appropriate safety precautions such as more frequent bike inspections and replacement of equipment. You should also wear comprehensive safety equipment such as a full-face helmet, pads, and body armor.

- **INTENDED:** For man-made dirt jumps, ramps, skate parks other predictable obstacles and terrain where riders need and use skill and bike control, rather than suspension. Dirt Jumping bikes are used much like heavy duty BMX bikes.

A Dirt Jumping bike does not give you skills to jump. Read Section 2. F of the Bicycle Owner’s Manual, p. 12.

- **NOT INTENDED:** For terrain, drop offs or landings where large amounts of suspension travel are needed to help absorb the shock of landing and help maintain control.




- **TRADE OFF:** Dirt Jumping bikes are lighter and more nimble than Freeride bikes, but they have no rear suspension and the suspension travel in the front is much shorter.




KIDS



Bikes designed to be ridden by children. Parental supervision is required at all times. Avoid areas involving automobiles, and obstacles or hazards including inclines, curbs, stairs, sewer grates or areas near drop-offs or pools.

The Hotwalk Owner’s Manual is available as a separate document, supplied with the Hotwalk bikes

BIKE MODEL / RIDER WEIGHT TABLE			MAXIMUM CARGO WEIGHT	MAXIMUM ALLOWABLE WEIGHT ^{4,5}
		CATEGORY (See Intended Use Page 3)	 lb / kg	
Alias	All Models	1	5 / 2.3 ¹	240 / 109 ³
Allez	S-Works	1	30 / 14 ²	240 / 109 ³
	Expert, Race, Elite INT, Sport INT, Comp	1	30 / 14 ²	275 / 125
	Elite, Sport, Base *	1	30 / 14 ²	220 / 100 ^{3 *}
Amira	Sport, Sora *	1	5 / 2.3 ¹	220 / 100 ^{3 *}
	S-Works, Pro, Expert, Comp	1	5 / 2.3 ¹	240 / 109 ³
Ariel	All Models	2	55 / 25	300 / 136
AWOL	AWOL Rare	2	55 / 25	300 / 136
Camber FSR	S-Works, Expert	4	5 / 2.3 ¹	240 / 109 ³
	Comp Carbon	4	5 / 2.3 ¹	275 / 125
	EVO, Comp, Base	4	5 / 2.3 ¹	300 / 136
Crave	All Models	3	30 / 14 ²	300 / 136
Crossover	All Models	2	55 / 25	300 / 136
Crossroads	All Models	2	55 / 25	300 / 136
CrossTrail	All Models	2	55 / 25	300 / 136
CruX	S-Works, Pro, Expert, Elite	2	5 / 2.3 ¹	240 / 109 ³
	Sport Carbon 105	2	5 / 2.3 ¹	275 / 125
	Sport Apex Disc	2	30 / 14 ²	275 / 125
	Sora *	2	30 / 14 ²	220 / 100 ^{3 *}
Daily	All Models *	2	55 / 25	220 / 100 ^{3 *}
Demo FSR	S-Works	5	5 / 2.3 ¹	240 / 109 ³
	I, II	5	5 / 2.3 ¹	300 / 136
	I Carbon	5	5 / 2.3 ¹	275 / 125
Dolce	Comp INT, Elite INT, Sport INT (Shimano Brakes)	1	55 / 25	275 / 125
	Comp, Elite, Sport, Base *	1	55 / 25	220 / 100 ^{3 *}
Enduro FSR	S-Works, Expert Carbon	4	5 / 2.3 ¹	240 / 109 ³
	Expert EVO, Comp, EVO	4	5 / 2.3 ¹	300 / 136
Epic FSR	S-Works, Marathon Carbon, Expert Carbon	3	5 / 2.3 ¹	240 / 109 ³
	Comp Carbon	3	5 / 2.3 ¹	275 / 125
	Comp	3	5 / 2.3 ¹	300 / 136
Expedition	Base, all models	2	55 / 25	300 / 136
	Step Through, all models	2	55 / 25	240 / 109
Fatboy	All Models	3	55 / 25	275 / 125
Fate	All Models	3	5 / 2.3 ¹	240 / 109 ³
Hardrock	All Models	3	55 / 25	300 / 136
Hotrock	24" XC Models	3	55 / 25	220 / 100
	24" 21spd, 7spd, street; 20" 6spd, Coaster	6	30 / 14 ²	220 / 100
	16" and 12" Coasters	6	30 / 14 ²	100 / 45
	Hotwalk boy/girl	6	0 / 0	40 / 18
Jett	All Models	3	55 / 25	300 / 136
Langster	Pro	1	30 / 14 ²	240 / 109 ³
	Base *	1	30 / 14 ²	265/120 ^{3 *}
	Street *	1	30 / 14 ²	220 / 100 ^{3 *}

BIKE MODEL / RIDER WEIGHT TABLE			MAXIMUM CARGO WEIGHT	MAXIMUM ALLOWABLE WEIGHT ^{4,5}
		CATEGORY (See Intended Use Page 3)	 lb/kg	
Myka HT	All Models	3	55 / 25	300 / 136
P.Series	P.Slope, P.3, P.26 AM, P.Street	5	0 / 0	300 / 136
	P.20, P.18, P.Grom	5	0 / 0	220 / 100
Rockhopper	All Models	3	55 / 25	300 / 136
Roll	All Models *	1	30 / 14 ²	220 / 100 ^{3 *}
Roubaix	All Models	1	5 / 2.3 ¹	240 / 109 ³
Ruby	All Models	1	5 / 2.3 ¹	240 / 109 ³
Rumor FSR	All Models	4	5 / 2.3 ¹	240 / 109 ³
Safire FSR	All Models	3	5 / 2.3 ¹	300 / 136
Secteur	Expert	1	55 / 25	240 / 109 ³
	Comp, Elite, Sport INT, Sport Disc	1	55 / 25	275 / 125
	Base, X3, Sport *	1	55 / 25	220 / 100 ^{3 *}
Shiv	All Models *	1	5 / 2.3 ¹	220 / 100 ^{3 *}
Sirrus	Pro, SL4, Expert	1	55 / 25	240 / 109 ³
	Comp Disc, Elite Disc, Elite INT, Sport, Sport Disc	2	55 / 25	300 / 136
	Comp, Comp Carbon, Elite, Base *	2	55 / 25	265 / 120 ^{3 *}
SJ FSR	S-Works, Expert Carbon, Elite	4	5 / 2.3 ¹	240 / 109 ³
	Comp Carbon	4	5 / 2.3 ¹	275 / 125
	Comp	4	5 / 2.3 ¹	300 / 136
SJ HT	S-Works, Marathon, Expert, Carbon SS	3	5 / 2.3 ¹	240 / 109 ³
	SJ HT Comp Carbon	3	5 / 2.3 ¹	275 / 125
	Comp, EVO	3	30 / 14 ²	300 / 136
Source	LTD Disc, Pro Disc	2	55 / 25	275 / 125
	Eleven, Expert, Comp, Eight, Elite, Seven, Sport, Base	2	55 / 25	300 / 136
Status FSR	All Models	5	30 / 14 ²	300 / 136
Tarmac	All Models	1	5 / 2.3 ¹	240 / 109 ³
Transition	All Models *	1	5 / 2.3 ¹	220 / 100 ^{3 *}
TriCross	Comp Disc	1	55 / 25	240 / 109 ³
	Elite Disc, Sport Disc	1	55 / 25	275 / 125
	Base *	1	55 / 25	220 / 100 ^{3 *}
Turbo	All Models	2	55 / 25	300 / 136
Venge	All Models	1	5 / 2.3 ¹	240 / 109 ³
Vita	Pro Carbon	1	5 / 2.3 ¹	240 / 109 ³
	Expert Carbon	2	5 / 2.3 ¹	275 / 125
	Comp Carbon *	2	5 / 2.3 ¹	220 / 100 ^{3 *}
	Comp, Base Sport *	2	55 / 25	265 / 120 ^{3 *}
	Elite, Sport Disc	2	55 / 25	300 / 136
Work	All Models *	2	55 / 25	271 / 124 ^{3 *}

See following page for footnotes

¹ Seat Bag Only.

² For **ALLOY** bikes manufactured without original equipment dropout rack mounts: A rear rack can be installed with the use of separate rack mount clips. Cargo capacity with separate mounting clips is limited to 30lb / 14kg.


³ STRUCTURAL WEIGHT LIMITS FOR FRAMES:

275lb / 125Kg	300lb / 126Kg
Drop bar equipped carbon or alloy road bikes	Alloy mountain bikes
Carbon or alloy cyclocross bikes	Flat bar equipped alloy hybrid / city bikes
Carbon or alloy triathlon / aero / time trial bikes	
Flat bar equipped carbon hybrid / city bikes	
Carbon mountain bikes	

- If any weight-bearing Specialized-branded carbon components (i.e. handlebar, seatpost, stem, crank, saddle, rim) are present, then the weight limit is 240lb / 109kg. This does not include non-weight-bearing carbon components such as brake levers, chainrings, bottle cages, etc.
- Roval wheels (complete wheelsets) are made to be lightweight, and are not suitable for all riders and all possible uses. If any Roval wheelsets are present, the rider (plus cargo) weight limit is 240lb (109Kg). Failure to follow this warning may result in a catastrophic failure of the wheel.
- * **MODELS:** The **Maximum Allowable Weight Limit** for these models are determined by CEN standards for stopping distance. The **Structural Weight Limit** for a particular model can exceed this maximum limit for stopping distance (see STRUCTURAL WEIGHT LIMITS FOR FRAMES, above). If a rider's weight is above the **Maximum Allowable Weight Limit** but below the **Structural Weight Limit**, the rider would be able to use the bike from a structural standpoint, but with reduced braking that does not conform to CEN requirements.
- **IMPORTANT: Braking limits do not change regardless of carbon or alloy components.**

⁴ Recommended max weights are based on European (CEN) testing standards (for cargo and rider only).

⁵ CEN braking standards are based on the brakes specified on the bike models from the manufacturer. Changing the brakes can result in an increase or decrease in the braking distance.

 **WARNING:** For riders at the **RIDER WEIGHT LIMIT**, you may not be able to carry cargo if the **TOTAL WEIGHT LIMIT** is exceeded.