



FALCON
COMPOSITES

**THE FAUCON
WHEEL**

THE FIRST 100% BRAIDED WHEEL

MADE IN MONTREAL, QC, CANADA





THE FAUCON WHEEL

ULTRA HIGH-END, LIGHTWEIGHT AND PERFECT FINISH !

The *Faucon* wheel is a **high-tech** and **innovative** new bicycle wheel.

Thanks to a **new manufacturing technique** developed by the **Falcon Composites** team in the last four years using **carbon braided sleeves** and **resin transfer molding (RTM)**, the **precision** and **manufacturing** limits have been pushed forward:

- ◆ **Innovative** product offering the best possible **physical integrity** thanks to **100% continuous fibers**,
- ◆ Unique **patented** manufacturing technology,
- ◆ Rims developed and manufactured in **Montreal, QC, Canada**,
- ◆ **Optimal** quality control thanks to **resin transfer molding (RTM)**,
- ◆ Ultra-lightweight (1370g to 1485g for a pair depending on the build),
- ◆ **40mm** deep and **26mm** wide **aerodynamic** profile,
- ◆ Very high **impact strength** of **120 Joules**, **3 times** the **UCI** standard and **1.5 times** more than most competitors on the market,
- ◆ **Clincher** rims, **tubeless** compatible,
- ◆ **Unique raw finish**, no paint used to hide any manufacturing defects,
- ◆ **Precise** angled holes **drilling**,
- ◆ Color **customization**,
- ◆ **Life manufacturer warranty**, lifetime **crash-replacement**.

THE FAUCON WHEEL

INTENSIVE RESEARCH AND DEVELOPMENT

The *Falcon* wheel is the result of **four long and intensive years** of research and development to offer the best possible bicycle wheels while starting a new manufacturing company. This **new wheel** stands out from its competitors on many **technical aspects**.

The wheels currently on the market are nearly all manufactured using a **traditional laminate manufacturing technology** using **pre-impregnated** fibers also referred to as « **PrePreg** ». The design and manufacturing challenges coupled to an intensive labor caused a lot of bicycle companies to outsource their production to Asia where labor is cheaper.

PrePreg fibers can perform extremely well if they are used correctly. However the way that they are currently being used to manufacture carbon bicycle wheels have some **disadvantages** and **drawbacks** that the **braided sleeves and resin transfer molding (RTM)** used by Falcon Composites **eliminate**.

FALCON COMPOSITES (RTM)	TRADITIONAL TECHNOLOGY (PREPREG)
Braided sleeves coupled to resin transfer molding (RTM) .	Carbon fiber pre-impregnated sheets coupled to compression molding .
A. Simplified fibers placement (3 to 6 braided sleeves),	A. Complex stacking of many layers of carbon fiber (more than 500 pieces),
B. 100% continuous fibers all around the rim,	B. Fibers are cut to produce the many pieces which makes them discontinuous .
C. Better impact and delamination strength thanks to a better physical integrity ,	C. Non-optimal impact strength and bigger risks of delamination .
D. Better quality control thanks to a better layer thickness control .	D. Quality control reduced by the higher risk of human errors .

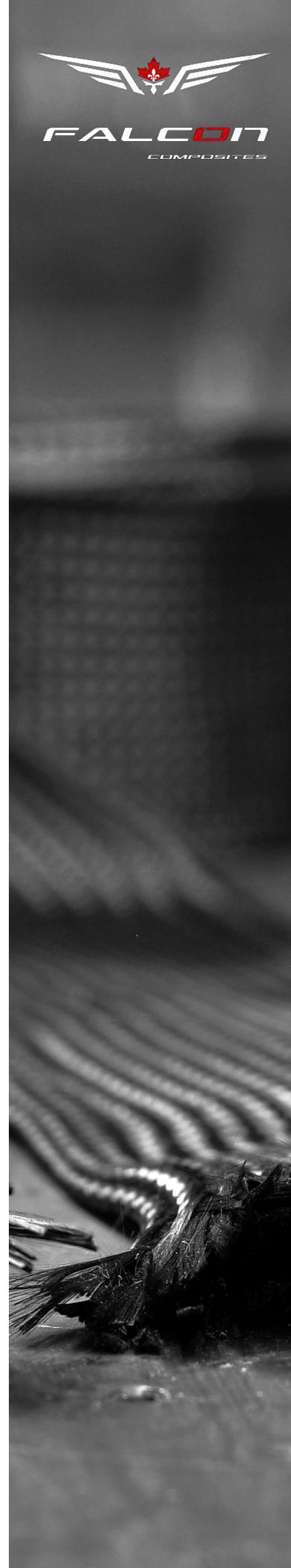
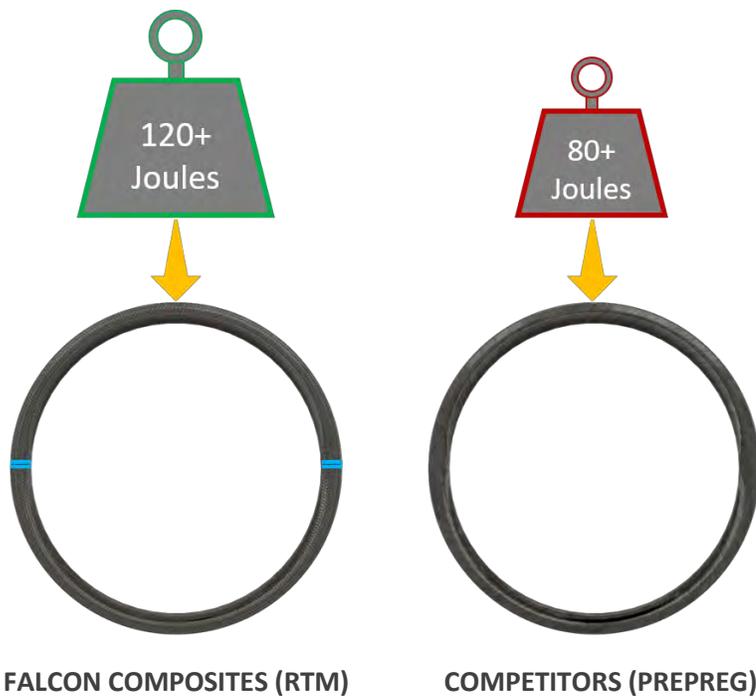
FALCON COMPOSITES (RTM)



COMPETITORS (PREPREG)



IMPACT STRENGTH



THE FAUCON WHEEL

INTENSIVE RESEARCH AND DEVELOPMENT

FALCON COMPOSITES (RTM)

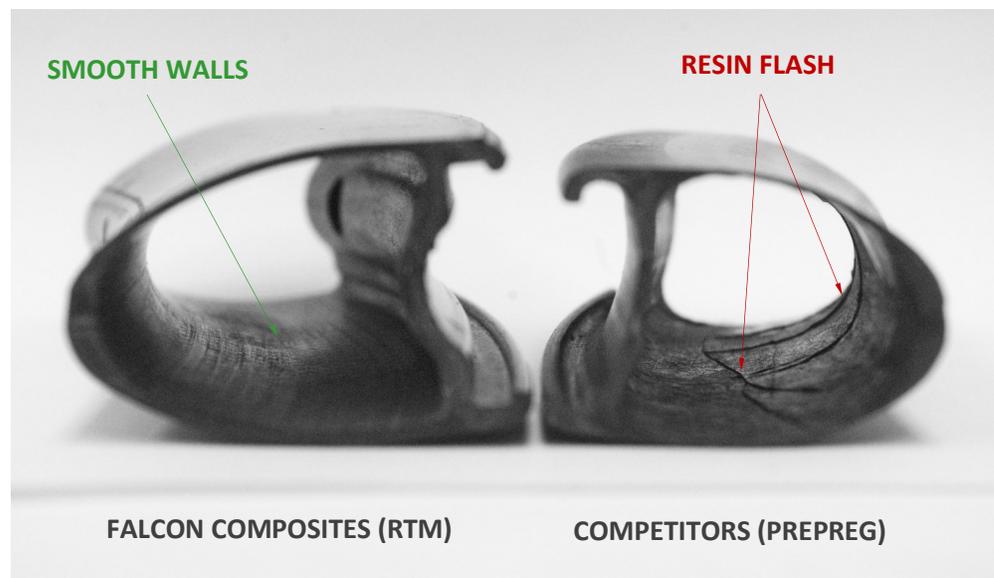
Temporary **solid internal fusible and soluble core**.

- A. **Smooth internal walls**, free from **defects** or resin flash,
- B. Holes **drilled** with an **internal support**, thus avoiding drilling delamination,
- C. Core fully **removed** with **heat and water** through the drilled holes,
- D. **Mechanical compression** of the fibers at more than 150 PSI resulting in **precise wall thickness** and preventing **porosities** (air trapped in the composite structure).

TRADITIONAL TECHNOLOGY (PREPREG)

Inflatable bladder, sometimes removed from the rim.

- A. **Rough internal walls** with resin flash (**defects**) created by the bladder,
- B. Holes **drilled** in the hollow structure without support, thus favoring drilling **local delamination**,
- C. **Large access hole** created to remove the **bladder** and then filled,
- D. Internal **compression** of the fibers **limited** to the **bladder** internal pressure (usually between 50 and 8 PSI), which often leaves **porosities** in the composite structure.





FALCON P40

PDSF	2600.00 CAD\$
Profil	40mm
Largeur max	26mm
Largeur interne	19.5mm
Pneumatiques	Pneus (compatible tubeless)
Freinage	À disques
Finition	RTM Brute
Moyeux	Falcon CenterLock Disques
Rayons	SAPIM CX-Ray
Laçage	24/24 rayons
Poids paire	1570g +/-25g

Limite de poids du cycliste de 120kg (265 lbs)



FALCON P40R

PDSF	3500.00 CAD\$
Profil	40mm
Largeur max	26mm
Largeur interne	19.5mm
Pneumatiques	Pneus (compatible tubeless)
Freinage	À disques
Finition	Satinée luxueuse
Moyeux	TUNE KingKong/Kong CL
Rayons	SAPIM CX-Ray
Laçage	24/24 rayons
Poids paire	1495g +/-25g

Limite de poids du cycliste de 110kg (240 lbs)



FALCON P40R-SL

PDSF	4450.00 CAD\$
Profil	40mm
Largeur max	26mm
Largeur interne	19.5mm
Pneumatiques	Pneus (compatible tubeless)
Freinage	À disques
Finition	Satinée luxueuse
Moyeux	TUNE Princess/Prince CL
Rayons	SAPIM CX-Ray
Laçage	24/28 rayons
Poids paire	1460g +/-25g

Limite de poids du cycliste de 100kg (220 lbs)