



G I N

Rebel Race Manual – in addition to the Rebel Manual



Please read this manual prior to your first flight with the Rebel Race.

## Rebel Race manual in addition to the Rebel manual

Thank you for buying the Rebel Race and flying with Gin Gliders

We hope that you will enjoy climbing and flying with this lightweight equipment.

The Rebel Race is the lightweight modified version of the Rebel, with new light materials, made for the pilots who like to travel with their flying gears and looking for compact equipment.

This user information is provided in addition to the Rebel manual, which must also be read carefully before flying the Rebel Race. The Rebel Race has very similar flying characteristics to the Rebel with more performance. GIN Gliders have achieved great savings in the weight of the Rebel Race in comparison with the Rebel.

## Warning

This glider is made from special materials in order to reduce the weight of the glider.

These special light materials (fabric, lines, risers, webbing etc) are more susceptible to ageing than regular materials, even though their strength is more than sufficient. The Rebel Race has passed the same 8G load test as all regular gliders.

For this reason, we ask that you:

- ✓ Have your Rebel Race fully inspected by an authorized GIN agent every year or after each 100 hours of flight, whichever is the sooner.
- ✓ Do not practice aerobatics, towing, paramotoring, or extreme manoeuvres to lose altitude, such as very deep spirals. For big ears, please practice them with caution. Only use "altitude-losing manoeuvres" when absolutely necessary. They will cause the material of your Rebel Race to age more rapidly.
- ✓ Take special care of this wing not only during its use, but also in its packing and storage. Be careful during ground handling at the take-off site, do not pack it too tightly when you are not climbing with it, and let it dry in the shade after each flight before final packing (the material of Rebel Race hates moisture and humidity).

## Technical Specifications

SIZE		XS	S	M	L
FLAT	AREA	23.2 m <sup>2</sup>	25.5	27.6	29.6
	SPAN	11.33	11.88	12.38	12.82
	A.R	5.55	5.55	5.55	5.55
PROJECTED	AREA	19.8	21.8	23.6	25.3
	SPAN	8.94	9.38	9.76	10.11
	A.R	4.04	4.04	4.04	4.04
CHORD	ROOT	2.56	2.69	2.80	2.90
	TIP	0.705	0.74	0.77	0.80
TOTAL HEIGHT		7.41	7.77	8.10	8.38
CELL NUMBER		62	62	62	62
GLIDER WEIGHT		4.9	5.3kg	5.7kg	6.1kg
WEIGHT IN FLIGHT		58-75kg	73-90kg	88~105kg	100-115kg
CERTIFICATION		EN C	LTF II	LTF II	LTF II

**DESCRIPTION**

**FABRIC OF CANOPY**

SUPPLIER	NAME	N.C.V INDUSTRIES		
	ADDRESS	L'Isle d'Abeau, Parc de Chesnes, 75, rue du Ruisseau 38070 SAINT QUENTIN FALLAVIER Cedex / France		
TYPE OF FINISH		SIDE COATED(POLYURETHANE)		
TYPE OF YARN		PA 6.6 HIGH TENACITY – 33 dtex		
FABRIC CODE		9017 E29A (Loaded Rib, Diagonal)	9017 E68A (Top, Bottom, unloaded rib)	9017 E77A (Top)
PATTERN		Rip Stop	Rip Stop	Rip Stop
Coated fabric's weight (g/sqm)		40+/-2	36 +/-1.5	40+/-2
Tear Strengt h	1.5 mini	1.5 mini	1.5 mini	1.5 mini
	1.5 mini	1.5 mini	1.5 mini	1.5 mini
Elongation on bias 3 lbs (%)		1 maxi	5+/-2	6.5 maxi
Elongation on bias 5 lbs (%)		2 maxi	11+/-4	2 maxi
Elongation on bias 10 lbs (%)		10 maxi	24+/-	15 maxi
Break Strengt h	38 mini	38 mini	38 mini	38 mini
	33mini	33mini	33mini	33mini
AIR Permeability p=2000Pa (l/SQM XMN)		100(maxi)	20 maxi (average 5)	40maxi

SUSPENSION LINE

MATERIAL		Dyneema line					
SUPPLIER	NAME	LIROS Flightsport technique					
	ADDRESS	Rosenberger Tauwerk GmbH Poststrasse 11, 95192 Lichtenberg GERMANY					
Line type designation		DC60 (Top)	DSL 70 (Middle)	PPSL 120 (Middle)	PPSL160 (Middle)	PPSL200 (Main)	PPSL 275 (Main)
Diameter(mm)		0.6	0.95	1.15	1.30	1.42	1.90
Strength min (daN)		60	70	120	160	200	275
Strength eff. (daN)		84	92	159	167	241	283
Elongation at strength eff. (%)		3.2	2.8			1.59	
Elongation / Line creep at 10 daN (%)		0.43/0.08	0.36/0.04	0.20/0.036		0.24/0.12 8	0.2/0.091
Elongation / Line creep at 30 daN (%)		1.2/0.31	1.0/0.25	0.58/0.13		0.55/0.26	0.44/0.18
Weight (g/m)		0.24	0.67	1.00	1.28	1.60	2.26

REINFORCEMENT

FABRIC CODE		W420 SCRIM	
SUPPLIER	NAME	<b>PORCHER NCV Industries</b>	
	ADDRESS	L'Isle d'Abeau, Parc de Chesnes, 75, rue du Ruisseau 38070 SAINT QUENTIN FALLAVIER Cedex / France	
MATERIAL		POLYETER SCRIM	
WEIGHT(GR/M <sup>2</sup> )		180	
BREAKING STRENGTH (KG/5Cm)	WARP	137	
	WEFT	118	
TEAR STRENGTH (KG/5Cm)	WARP	4.2	
	WEFT	4.1	
WEAVE DESIGN		RIPSTOP	

## RISER

MATERIAL		KEVLAR and POLYERSTER TAPE
SUPPLIER	NAME	Cousin Trestec SA
	ADDRESS	8, rue Abbe Bonpain – BP70020 Wervicq Sud – 59558 Comines Cedex - France
WEIGHT(GR/M)		9.1
BREAKING STRENGTH		1078DAN
WIDTH(mm)		12mm

## MAILLONS

MATERIAL		MAILLON DELTA INOX
SUPPLIER	NAME	PEGUET
	ADDRESS	BP 205 74105 ANNEMASSE CEDEX FRANCE
WEIGHT(GR)		5.2
BREAKING STRENGTH		550 kg
DIAMETER(mm)		3.0

## BRIDLE (ATTACHMENT LINES)

MATERIAL		NYLON
SUPPLIER	NAME	KOLON INDUSTRIAL CO.
	ADDRESS	45 MU KYO DONG JUNG – GU, SEOUL, KOREA
WEIGHT(GR/M)		3
BREAKING STRENGTH (kg)		84.8
WIDTH(mm)		10

## THREAD

MATERIAL		HIGH TENACITY POLYESTER YARN	
SUPPLIER	NAME	AMANN & SOHNE GMBH & CO.	
	ADDRESS	INDUSTRIESTRASE 1, D-74391 ERLIGHEIM, GERMANY	
DENIER		150D/2	250D/3
BREAKING STRENGTH		2.9kg	3.2kg
WEIGHT(GR/M)		0.05G	0.083G