



# NITRUM

Energy into Motion.

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Lifestyle Brochure

Ultra-Lightweight  
Wheelchairs



QUICKIE Nitrum



**Live without limits**, that's the definition of QUICKIE and its founder Marilyn Hamilton. A paraplegic after a devastating hang-gliding accident in 1978, Marilyn refused to give in to the restrictions of her "stainless steel dinosaur" wheelchair. Inspired by the technology used in the hang-gliding industry, Marilyn turned to fellow enthusiasts Don Helman and Jim Okamoto to help her reinvent the wheelchair.

A year later, the first QUICKIE wheelchair was born. It became a symbol of independence and self-pride, revolutionising the wheelchair industry and empowering a generation to live without limits.



## NITRUM, THE ENERGY INTO MOTION CONCEPT.

The original QUICKIE is an icon that's influenced wheelchair design for over 40 years. What made it so special? A revolutionary design principle that minimised propulsion effort whilst maximising movement - or what we like to call **Energy into Motion**.

The NITRUM was born to redefine that principle. To find a perfect harmony of weight, rigidity, fit and fine-tuning. Because when those come together, that's when you truly achieve energy into motion.

So we refined every detail for weight-saving rigidity. Creating aerospace-inspired oval tubing that's lighter, stiffer and stronger like no other. And we did it whilst increasing adjustability and sizing. The result? A wheelchair that harmonises your geometry with its own. Positioning you for maximum energy transfer, so you get direct reactions with minimal effort.

A seriously-addictive ride, the NITRUM lets you to go further, faster and longer without the worry of fatigue. Easy to fine-tune and even easier to lift, it's a wheelchair that's shaped around you - and your everyday life. Lets take you through our new spin on Energy into Motion.

**Augmented Reality**

Visit the link above to see the NITRUM in your own environment with the AR online feature.



# LIGHTEST IN ITS CLASS, STRONGEST IN ITS DIVISION.

This is innovative engineering at its best. We employ state-of-the-art materials and principles to minimise weight (from 7.5 kg) and maximise frame rigidity, so you can go further, faster and for longer without the worry of fatigue.



## Oval frame tubing

With fewer stress points thanks to its elongated sides, QUICKIE's unique oval tubing is stronger than a conventional round tube. Less likely to flex under pressure, the eloquent oval frame is also lighter as the shape uses less material. But that's not all - frame clamps can't rotate on an oval shape, so there are less moving parts too!

## The material difference: 7020 Aluminium

Increasing strength doesn't always mean increasing weight. That's why the NITRUM's oval frame is sculpted from aerospace-grade 7020 Aluminium. Boasting exceptionally high strength-to-weight ratio, we specially heat-treat the 7020 to unlock its true potential. The result is a hardened frame that can be significantly thinner and lighter without any sacrifice to strength.

**The result? A lighter, stronger 7.5 kg ride that transfers every inch of your push to propulsion, giving your shoulders a well-deserved day off.**



## Welded for increased stiffness

Castor links or cross-tubes that are clamped to the frame can increase weight and cause loss of energy through vibration. With the NITRUM, they are welded into one-complete frame, for a stiffer, lighter ride.

# LIFTING PERFORMANCE.

How easy your wheelchair is to lift comes down to technique and weight. From 4.9kg without its quick release wheels, the NITRUM is designed with lifting in mind - so we've included a few ergonomic features to lend a hand.



## Ergonomic grab bars

The NITRUM has two ergonomic grab bars (complete with rubber grip pads) on the backrest and cross-tube for lifting. Helping you to grip and balance your wheelchair, it'll also reduce the strain on your wrists (particularly during repetitive daily-lifting).



## Easy car transfers with an open-frame design

Clean and minimalistic, once the rear wheels are removed, the underneath of the frame is completely open, so it can be easily lifted across (and closer to) your body when getting in-and-out of a car. The short axle tube and folding back help to save extra space.

## A unique-twist to backrest folding

With **one hand**, simply grab the (optional) Twist-and-Lock backrest bar and twist it to release, fold and load the NITRUM into your car. With double-locking, you can also use the same bar to lift the chair. It'll also lock without removing your sideguards or low-profile cushions too.



## Standard, push-bar release backrest

This push-bar provides a simple-to-use, quick-release folding mechanism. Just pull the bar upwards to un-lock and fold. Incredibly robust, it won't loosen over time. Available with double-locking, you can also fold the back with sideguards and a low profile cushions still on your wheelchair.



# A PERFECT FIT FOR EVERY BODY.

Body positioning is crucial for propulsion efficiency. When your weight is balanced incorrectly, your wheelchair is more difficult to push. The NITRUM boasts the most comprehensive range of sizes in its class, so you can achieve your own perfect fit.

## Personally-tailored castor position

The relationship between the castor and rear wheel is vital for energy-efficiency. We personally tailor the castor link length and angle to YOUR frame angle, inset and castor wheel diameter, so you'll get the very-best handling, turning and propulsion efficiency for your dimensions.

## Designed to fit you.

The better the wheelchair fits you, the better it is at responding to you. That's why the NITRUM provides such a comprehensive choice of sizes - and it does it without any sacrifice to weight or rigidity:

- 1 3 Frame Angles: 88, 92 or 100°
- 2 3 Frame Insets: 0, 1 or 3 cm
- 3 2 Frame Lengths (long/short)
- 4 90 Seat width/depth combinations
- 5 Lower leg length selection
- 6 16 Castor house positions (preset)



The QUICKIE NITRUM is also available in larger seat width sizes of **480** and **500 mm**.

# FINE-TUNED PERFORMANCE.

Adjustability usually meant compromising rigidity or weight. However, the NITRUM maximises its adjustments, strength and stiffness without welding, so you can keep your ride fine-tuned for the very-best performance.

## Height & angle adjustable backrest

Backrest brackets that have a dual-function of folding and angle-adjustment lose energy through movement of its parts. Instead, we've split it into two separate mechanisms. Made from forged aluminium, the bracket is extremely stiff with virtually no play. So it's significantly more energy efficient and you can still adjust the angle and height too.

## Rear seat height

Keep the correct height of your shoulders above the rear wheels to maximise propulsion and minimise reduce strain with rear seat height adjustment (from 370 to 500 mm).



## Centre-of-gravity

Sitting too-far back in your wheelchair can decrease your propelling efficiency. Similarly, sitting too far forward can reduce rolling resistance. If you need to change your seated position over time, it can be easily adjusted with stepless centre-of-gravity adjustment (from 20 to 100 mm) via the positioning bolts under the seat sling.



## Adjustable castor system

Instead of multiple welded parts, the patented castor mechanism is one hollow-forged component. Stronger, lighter and completely adjustable, the castor height and angle can be changed to improve handling whilst you're IN your wheelchair. Super-strong, the hollow-forged castor link is ideal for a power add-on too.



# INSPIRATIONAL PERFORMANCE.

You. That's what NITRUM is all about. We work with wheelchair users from all over the world to provide you with the features and lifestyle options that you desire.

## Unique technology you won't find anywhere else

We're proud of the innovations that you see on the NITRUM, that's why they're legally-protected, so it'll always remain completely unique to you.

## Integrated LEDs

Mounted on both castor arms and with 3 modes (high, low and blink), the integrated LEDs will light-up your night. The power pack provides up-to 4 hours of run time and can be easily detached for recharging or to save you 110g weight. How's that for bright?



## Block-and-Tackle Seat Upholstery

The easy-to-use tension adjustable straps can be easily tightened with less force - and remains tighter over a longer period of time compared to previous versions.



## Freestyle Backrest

This back is all about freedom of movement. By providing a 360° range of upper body motion, you can freely twist and turn without catching your backrest posts.



## Compact Wheel Lock

Completely redesigned, the compact wheel lock EVO is stronger, more durable and has a great transfer-friendly design. Looking to save weight? The direct-mount version provides a 180g weight reduction.

## Get a super-light ride with these weight-saving options:



Titanium Axle Pin



Carbon Slim-Style Sideguards



Carbon Composite Castor Forks



































Carbon Axle Tube

# PERSONALISED PERFORMANCE.

QUICKIE has always been about how you roll. That's why you can dress your NITRUM to impress with an out-performing choice of colour and styling options.

## 32 Frame, Handrim & Hub/Rim Colours:

	White		Silver Texture
	Brilliant Silver		Graphite Metallic
	Matt Silver		Platinum Metallic
	Silver		Black
	Sun Yellow		Matt Black
	Brilliant Lime		Signal White
	Matt Lime		Pink
	Blue		Dark Chocolate
	Brilliant Marine		Sky Blue
	Matt Marine		Cyan Metallic
	Brilliant Purple		Mars Red
	Matt Purple		Cappuccino
	Red Ruby		Kiwi
	Brilliant Red		Flamingo Glitter
	Matt Red		Matt Anthracite
	Tuti Frutti Orange		Azure Blue

## Upholstery Trim Colours

Black / Red / Blue / Orange / Silver



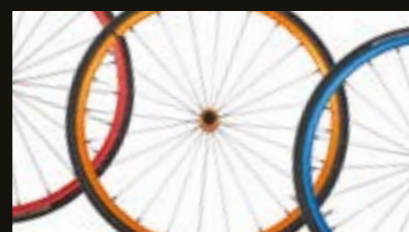
## Anodized Castor Forks

Silver / Blue / Red / Orange / Black



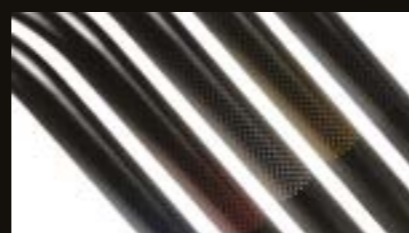
## Anodized 24" Lightweight Wheels

Red / Orange / Blue



## Frame Graphics

Black / Red / White / Yellow / Blue



The colours and finishes reproduced in this brochure are subject to the limitations of the printing process and may vary from the actual colour and paint finish.

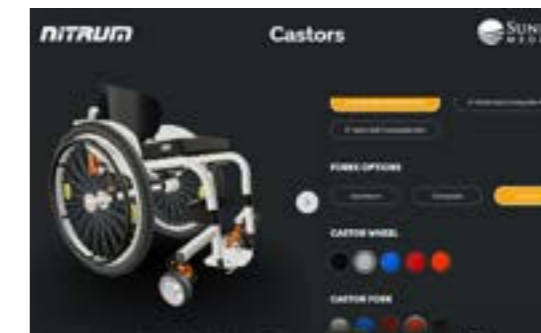
# SPECIFICATIONS

## DIMENSIONS

Seat width	320 - 500 mm (in 20 mm steps)
Seat depth	340 - 500 mm (in 20 mm steps)
Front seat height	430 - 550 mm
Rear seat height	300 - 550 mm
Backrest height	250 - 450 mm
Backrest angle	from 59° to 105°
Frame versions	Rigid, Open-Frame
Frame angle	100°, 92°, 88°
Castor wheel size	3", 4", 5", 6"
Rear wheel size	24", 25"

## WEIGHTS & USE

Maximum user weight	125 kg
Wheelchair weight	From 7.5 kg
Transport weight	From 4.9 kg
Crash tested	Yes (approved for transport in a vehicle according to ISO 7176-19)
Intended use environment	For people unable to walk and with limited mobility: inside and outside. Operation to user or assistant.



Build your perfect NITRUM today with our online visualiser. Create the wheelchair of your dreams with our many options available. Visit [sunrisemedical.co.uk/NITRUM](http://sunrisemedical.co.uk/NITRUM) for this and more!



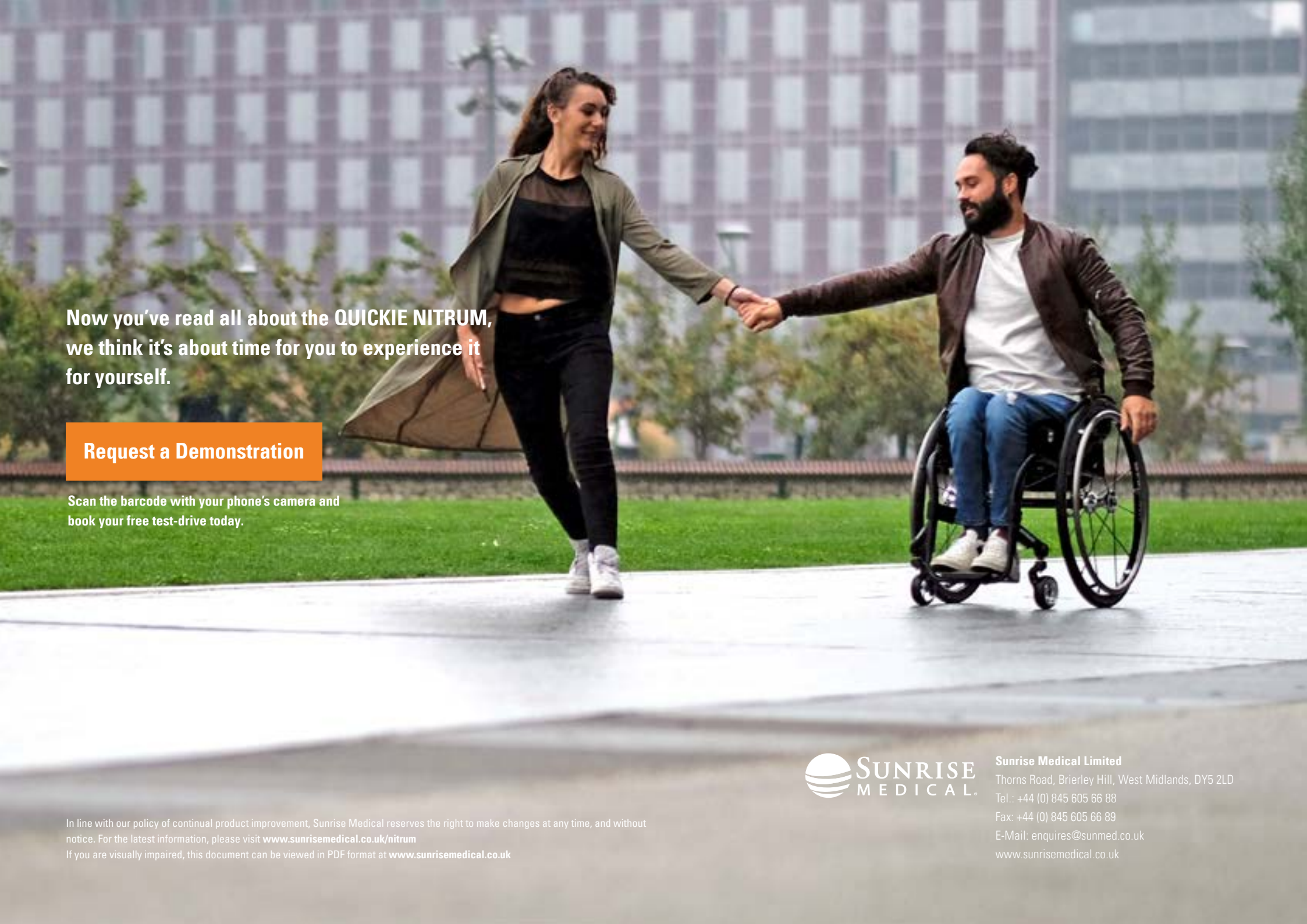
Perfect match! See how the NITRUM looks in front of your very eyes with our Augmented Reality application. Scan the barcode with your phone's camera to see the NITRUM in your own environment with the AR app.

**Ready to have some fun? Use our online visualiser to create the NITRUM of your dreams!**

[Online Visualiser](#)

Visit the online visualiser to build and edit your own QUICKIE Nitrum wheelchair!





Now you've read all about the **QUICKIE NITRUM**, we think it's about time for you to experience it for yourself.

**Request a Demonstration**

Scan the barcode with your phone's camera and book your free test-drive today.

In line with our policy of continual product improvement, Sunrise Medical reserves the right to make changes at any time, and without notice. For the latest information, please visit [www.sunrisemedical.co.uk/nitrum](http://www.sunrisemedical.co.uk/nitrum)  
If you are visually impaired, this document can be viewed in PDF format at [www.sunrisemedical.co.uk](http://www.sunrisemedical.co.uk)



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