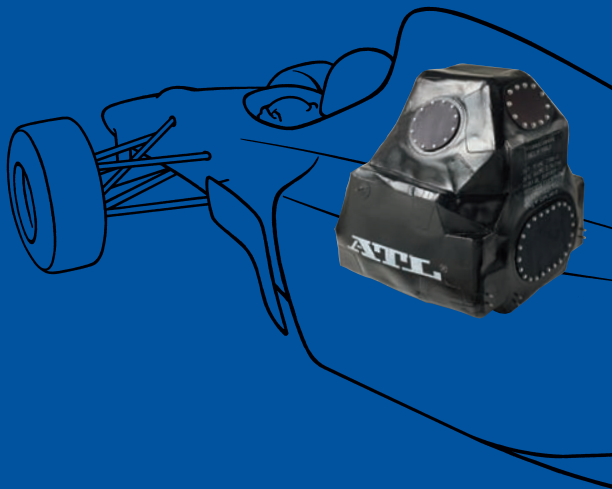


AFC

AFC
RACING FUEL CELLS



W I N N I N G W A Y S

AFC

INTRODUCTION

ATL's Racing Fuel Cell Division was founded over 30 years ago on one simple concept - no race driver should ever have to experience the horror of a fuel fire or explosion. That premise led to the development of ATL's remarkable bladder type cells, which deform under high energy impacts. Today, ATL's advanced coated fabrics are considered state-of-the-art equipment and are used by every Formula One team and most other top racing teams across the World.

ATL's next goal was to enable all drivers, whatever their standard, to benefit from the same inimitable protection. This objective was met by developing moulded polymer bladders (Saver Cells), which now carry the approval from every major racing authority (FIA, USAC, CORR, SCORE, and SCCA).

Over the years ATL has built up a vast template library and CAD database to reproduce almost every fuel cell to fit both historic and modern race cars. With our ongoing development into high performance fabrics and complete fuel system products, ATL remains the World's leader in Racing Fuel Cell Design and Technology.



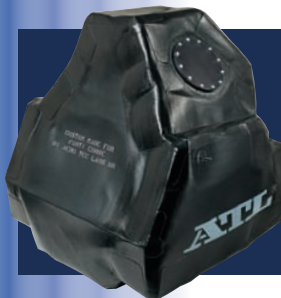
ATL[®]
RACING FUEL CELLS . . .

. . . "Laps ahead of the competition."™

ATL Super Cell® 500 series

ATL manufactures its 'F1' Style fuel cells using unique duPont Kevlar fibres that are tightly woven and then impregnated and coated using a revolutionary advanced elastomer.

FT-5



Every FT-5 cell is custom manufactured and features wide-overlap seams and double reinforced nut ring apertures and corners. Alloy or carbon composite nut rings and fittings fused onto the inner panels provide strong, leak-tight attachment points.

With its unparalleled durability and superior strength, Kevlar remains to be one of the lightest materials used within racing cars. Whilst this incredible weight saving is an added benefit, even more important is the exceptional flexibility that the FT-5 fuel cells offer. Their pliable nature allows ease of installation and removal through relatively small monocoque apertures.



As fuel strategy plays a very important role in every Grand Prix and endurance race, often fuel levels run very low. ATL can fabricate and install internal baffle systems, using alternative lightweight fabrics, to ensure a constant supply of fuel to the engine.

ATL's thin wall construction and precision geometric fit help maximise fuel volume as well.

Our unique construction techniques also enable us to modify existing fuel cells, as well as install Fuel Pump Mounts, Trap Doors, Hose Mounts and Monocoque Breakaway Pins.



Minimum FIA Requirements FT-5 From 1/1/99

Physical Property	Imperial	Metric
Tensile Strength	2000 lb	8.90 KN
Tear Strength	350 lb	1.56 KN
Puncture Strength	400 lb	1.78 KN
Seam Strength	2000 lb	8.90 KN

FIA approved for Formula One and F3000 ('99 onwards)

ATL Super Cell® 300 series

FIA/FT-3.5 is the newest fuel cell specification primarily targeted towards high performance race cars, such as GT, Super Touring and World Rally Cars.

FT-3.5

Based on the same weave construction as ATL's FT-5 material, this revolutionary FT-3.5 rubberised fabric bladder is again constructed using duPont Kevlar fibres and an ATL proprietary synthetic elastomer coating.

Fewer strands are required to achieve this specification, which results in an incredibly lightweight and highly flexible fuel bladder.

- Ultra lightweight
- High strength
- High flexibility
- Any size, any shape
- Internal baffle systems available
- Optional installation of fuel pump mounts, fuel pumps, internal filters, electrical connectors, level gauges, surge tanks, trap doors.



Similar to FT-5, we can also produce efficient scavenging baffle systems fully installed with fuel pumps, internal filters, military electrical connections, trap doors etc.



Minimum FIA Requirements FT-3.5 From 1/1/99

Physical Property	Imperial	Metric
Tensile Strength	1000 lb	4.45 KN
Tear Strength	200 lb	0.89 KN
Puncture Strength	200 lb	0.89 KN
Seam Strength	1000 lb	4.45 KN

FIA approved for WSC, GT, Super Touring and WRC

FT-3

ATL Super Cell® 100 series

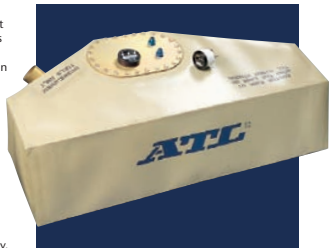
FIA/FT-3 is the most commonly used fuel cell specification within the motor racing industry.

To meet with the physical demands of this specification, together with the need to suit all race team budgets, ATL manufactures its FT-3 approved cells from ballistic Nylon fabric, rather than Kevlar. This fabric is again coated and impregnated using a similar proprietary synthetic elastomer as per our FT-3.5 and FT-5 bladder cells.

- Lightweight
- High Strength
- High Flexibility



ATL FT-3 fuel bladders can be custom made to suit your sketch, pattern or to fit within an existing fuel tank... ideal for historic racers who want to retain originality.



FIA approved for Rally, Circuit, Autocross, Hillclimb and Historic

By far the most economical FIA/FT-3 approved fuel cells available, ATL's Racells® and Saver Cells® are manufactured and moulded using a proprietary, high impact hard rubber alloy.



FT-3

ATL Racell® Fuel Cells

Available in either 10 or 20 litre capacities, their sloped floor acts as an internal sump, scavenging fuel down to a 'thimble full'. Supplied with 2 x -8 pickups, 1 x -8 return, 1 x -6 rollover vent valve, aircraft style flush cap and comes fully foam baffled.

(Optional)
Internal
Collector
System



ATL Saver Cell® Fuel Cells

The most popular FIA/FT-3 choice amongst low budget race and rally drivers. Available in 20 to 170 litre capacities, these fully foam baffled cells are supplied with 2 x -6 pickups, 1 x -6 rollover vent valve and Ø2 1/4" (57mm) filler neck with integral rollover safety valve.

Each Saver Cell can be tailor-made to include 45° filler necks, level gauges, internal collectors, bottom outlets, submersible pumps, etc.

Aluminium containers may be provided by the purchaser or ordered separately from ATL.



FT-3 Part No.	Capacity	Length	Width	Height	Container Part No.
RA103-F	10L	203mm	203mm	381mm	KS111 (Brackets only)
RA105-F	20L	254mm	254mm	457mm	KS112 (Brackets only)
SA105	20L	330mm	330mm	229mm	AL105
SA108	30L	505mm	305mm	222mm	AL108
SA112	45L	502mm	437mm	234mm	AL112
SA115	60L	602mm	437mm	234mm	AL115
SA122A	80L	640mm	640mm	210mm	AL122A
SA122B	80L	620mm	415mm	337mm	AL122B
SA122C	80L	843mm	434mm	235mm	AL122C
SA126B	100L	740mm	425mm	350mm	AL126B
SA132A	120L	640mm	640mm	338mm	AL132A
SA132B	120L	640mm	465mm	419mm	AL132B
SA132C	120L	845mm	437mm	361mm	AL132C
SA144	170L	640mm	640mm	425mm	AL144

Minimum FIA Requirements FT-3 From 1/1/99

Physical Property	Imperial	Metric
Tensile Strength	450 lb	2.00 KN
Tear Strength	50 lb	0.25 KN
Puncture Strength	175 lb	0.78 KN
Seam Strength	450 lb	2.00 KN



FIA approved for Rally, Circuit, Autocross, Hillclimb and Historic

ATL CELLS & ACCESSORIES

'D' CELLS (FIA/FT-3 or FT-3.5)

For optimum weight distribution, these 'D' cells are designed to fit within almost every spare tyre well. Supplied with 1 x -6 pickup, 1 x -6 return, 1 x -6 rollover vent valve, aircraft filler cap and level gauge.



SUPER CELLS® (FIA/FT-3 or FT-3.5)

A lightweight, more flexible, alternative to our standard Saver Cells®. Fabric reinforced Super Cells® are fitted with internal collectors and can be supplied with either a flush filler cap or external filler neck.



LOW LEVEL WARNING LIGHT

When the level drops to a predetermined point, a red light signals from the dashboard (109LL).



LEVEL GAUGE and SENDER

Probe sender complete with dashboard gauge. Available in 2 sizes to suit tank depths 100-305mm (KS143) and 305mm to 610mm (KS144).

INTERNAL SAFETY FOAM

To reduce fuel slosh and suppress explosion. Can be supplied in either block form or in any custom shape or size. A small charge is levied on special shapes. Not suitable for methanol fuels (SF103). Anti-static foam also available (SF110).



VOLUME DISPLACEMENT BALLS

Available in 3 displacement capacities (0.2L, 0.5L and 1.75L). These lightweight balls are ideal for fine tuning fuel capacities to their required level. Tubular netting is also available to secure the balls from blocking critical pickup and ventilation points.

FUEL PUMPS / FILTERS

For use within ATL racing fuel cells. ATL have pinpointed the most common fuel flow rate requirements for low and high pressure applications. Filters are available for all pumps. Custom stainless mesh filters offering 'high flow/low pressure drop' may be manufactured to your requirements.



REFUELLING EQUIPMENT

Approved to FIA Appendix J. ATL couplings can achieve flow rates of up to 8 litres per second. Available in Ø1½" and Ø2½" for GT, Super Touring, Saloon and Rally cars. Hand held vent and refuelling bottles, complete refuelling rigs and hoses also available.

FUEL FILLER HOSES

Available in Ø1½", Ø2" and Ø2½", to suit our standard range of filler necks and refuelling couplings, including 45° and 90° rubber elbows and Ø2½" alloy tubing.



