

CITADIS SPIRIT

The Spirit that moves your city



ALSTOM
Shaping the future

Citadis Spirit: the Light Rail Solution for North America



Alstom is bringing a new spirit to light-rail and streetcar projects across North America – the Citadis Spirit™. The Spirit's 100% low-floor design offers easy accessibility from the street or the curb, as well as an interior layout without steps or ramps to provide a safer and more enjoyable experience for riders of all walks and ages. Thanks to its modularity and full low-floor, the Citadis Spirit is the only light-rail vehicle that can provide a highly rider-friendly street-running service in city centers with the versatility to evolve into a light commuter solution on dedicated railways to connect passengers with the suburbs at speeds up to 65 mph. Citadis Spirit also provides highly customizable exterior and interior styling options to best reflect each city's unique identity.

The Spirit builds on the experience of more than 1,700 Citadis vehicles in service around the world in 45 cities and 14 countries. The first Citadis Spirit made in America will be delivered to the City of Ottawa in 2015.

- 100% low-floor design with 65 mph top speed
- Superior accessibility and passenger flow
- Enhanced comfort and passenger experience
- High degree of vehicle modularity
- Custom-designed aesthetics
- Proven for extreme climatic conditions
- Designed to maximize availability
- Superior crash resistance
- Made in America

A PROVEN SOLUTION

- More than 1,700 vehicles in service
- More than 5 billion passengers worldwide
- More than 300 million miles in service
- Present on 5 continents
- Selected by 45 major cities in 14 countries

Versatile

to meet all of your transit needs



The Citadis Spirit is the most versatile solution for meeting a broad range of transit needs in growing cities. Thanks to its modular design, the Spirit can grow with a city as its transportation needs evolve. Citadis Spirit can be applied as a solution to meet initial service requirements and then be expanded to meet increased ridership by adding additional modules to extend the length of the vehicles while optimizing fleet asset life. The Spirit also has the unique capability to operate as a streetcar running at grade in mixed traffic and as a light commuter on segregated rail infrastructure at speeds up to 65 mph, providing very high capacity in its longest versions or in multiple units. In its automatic version with high capacity vehicles, the Spirit can fulfill transit needs similar to those of a metro system.

- Streetcar service
- Light metro service
- Light rail service
- Expandable fleet asset
- Light commuter service



Unique

to reflect the spirit of your city



Transit investments must attract riders and serve as a catalyst for investment and economic development. Beyond providing a comfortable, efficient and integrated means of mobility, Citadis Spirit communicates your city's values and unique personality to the world. Citadis Spirit is designed so the exterior and interior styling can be customized to reflect the character and spirit of your city. Our in-house design and styling team has worked in collaboration with cities and prestigious designers around the world to offer unlimited design theme options for their unique Citadis.

- A vector of each city's identity
- Highly customizable exterior and interior designs
- Collaborative design expertise



Clear Skies

catenary-free power solutions



Made in America

your long-standing local partner



Alstom has more than 10 years of proven off-wire experience, and leads the industry with the largest number of catenary-free systems in service today in many major cities throughout the world. Alstom's autonomy solutions allow optimal urban integration of light rail transit systems while preserving historical areas, minimizing impact on the environment, and accommodating a city's particular infrastructure constraints (bridges, intersections, utilities, etc.). Citadis Spirit runs with three different off-wire power solutions, or a combination of those solutions to best meet the autonomy and service needs of each city.

APS technology: power supplied from the ground through an in-street conductor allowing unlimited off-wire autonomy with the same level of performance as power supplied through an overhead catenary system

Batteries: on-board energy storage solution for medium to long distance off-wire autonomy

Super-capacitors: on-board energy storage solution for optimal energy efficiency and short-distance autonomy requiring in-station recharging

The Citadis Spirit is being manufactured in the USA and meets the Buy America Act provisions. Thanks to its modular design, the Spirit provides for a very flexible manufacturing process which enables vehicle assembly to be set up close to the end-customer. Alstom is a proven partner with more than 15 years of experience working with local companies to deliver and service Citadis vehicle fleets.

- Flexible manufacturing capabilities
- Proven experience working with local partners
- In production in the US and Canada
- Leading the industry as a DBE and MBE/WBE partner

Expandable capacity to satisfy service demand and passenger comfort



92 - 98 feet / 175 - 190 passengers



105 - 121 feet / 230 - 265 passengers



138 - 157 feet / 280 - 340 passengers

DIMENSIONS AND WEIGHT

Vehicle length	92' (28m) - 157' (48m)
Number of modules	3 - 4
Number of trucks	3 (2 motor, 1 trailer) - 5 (3 motor, 2 trailers)
Vehicle width	8' 8" (2,650mm)
Vehicle height	11' 9" (3,600mm)
Ceiling height	7' 6" (2,286mm)
Track gauge	4' 8 1/2" (1,435mm)
Weight (AWO - with no options)	47 - 78 tons

INTERIOR ARRANGEMENT

Seated passengers	60 - 145
Passenger capacity (AW2)	175 - 340
Wheelchair locations	4
Signage and passenger information	Compliant to ADA
Handling bars	Compliant to ADA
Passengers intercom	6 per vehicle

TECHNICAL CHARACTERISTICS

Maximum speed	65mph (105 km/h)
Minimum radius	82' (25m)
Low floor	100% (no interior steps)
Entry height (above TOR)	14" (355mm)
Supply voltage	750V DC
Bi-directional	Yes

MAIN EQUIPMENT

Passenger compartment HVAC	2 - 4 per vehicle
Passenger doors	4 - 7 double-leaf per side
Load leveling	ADA compliant
Surveillance CCTV system	Internal / External
Braking system	Hydraulic
Magnetic track brake	Yes
Anti-slip and anti-slide system	Electronic control
Visual displays	Internal / External
Audio announcements	Internal / External

OPTIONS

- Catenary-free and eco-autonomy solutions (APS, battery, supercaps, hybrid of multiple solutions)
- Powered bridge plates
- 1,500V DC supply voltage
- Specific climate adaptations (for extreme winter or tropical conditions)
- Specific interfaces for automatic train control and train to wayside communications
- Passenger counting system
- Bicycle accommodations
- Highly customizable design and styling
- Number and length of vehicle modules

TRANS/BRCH/NA_CITADIS/US/5.2013/USA/1486 © ALSTOM 2013. All rights reserved.
Information contained in this document is indicative only. No representation or warranty is given or should be relied on that it is complete or correct or will apply to any particular project.
This will depend on the technical and commercial circumstances. It is provided without liability and is subject to change without notice. Reproduction, use or disclosure to third parties, without express written authority, is strictly prohibited.
Photo credits: ALSTOM. Printed on environmentally friendly paper. A PDF version of this brochure is available at: www.alstom.com

North America
Alstom Transportation
641 Lexington Ave., 28th Floor
New York, NY 10022
USA

alstom.com/transport

ALSTOM