ZEAL MOTOR

AMAV

ARCTIC MOBILITY AMPHIBIOUS VEHICLE SERIES

FAT TRUCK®

LOW GROUND PRESSURE MOBILITY

The platform integrates oversized, low-pressure tires and an optimized weight distribution to achieve superior flotation and predictable handling on soft, irregular, or unstable ground surfaces. The large tire footprint, combined with the hydrostatic system, ensures continuous traction and uniform propulsion without reliance on traditional differentials or complex driveline components.

BALANCED STRUCTURAL ARCHITECTURE

A low center of gravity and wide stance are inherent to the AMAV's structural layout, providing a stable and confidence-inspiring mobility profile. Engineered to maintain composure during cross-slopes, uneven terrain, and dynamic vehicle transitions, the architecture supports safe and intuitive operation by a broad range of users.

AMPHIBIOUS-READY PLATFORM DESIGN

The AMAV incorporates a high-buoyancy structural form and a fully sealed drivetrain configuration, enabling water mobility as an inherent function of the platform's architecture. The design principles maintain the flotation line below the occupants' compartment, ensuring a stable and secure position in the water. This design also enables self-recovery if the vehicle breaks through ice and enters the water, allowing it to extract itself without anyone exiting the platform and thereby avoiding personnel exposure to environmental and operational hazards.

MISSION MODULARITY & PAYLOAD FLEXIBILITY

A modular platform framework allows rapid reconfiguration to support logistics transport, personnel movement, medical evacuation, reconnaissance roles, or mission-specific payloads. Interchangeable modules and standardized attachment interfaces simplify integration of mission kits while minimizing fleet complexity and maximizing role versatility.

OPERATIONAL AVAILABILITY & EFFICIENCY

The AMAV platform is engineered to maximize uptime and reduce the overall cost of fleet ownership. Its simplified architecture reduced part count, and elimination of complex mechanical driveline components result in fewer wear points and higher long-term reliability. Critical systems are easily accessible for rapid servicing, enabling first-line maintenance to be performed with minimal tooling and limited technical support. This approach enhances operational availability in remote deployments, minimizes logistical burden, and delivers a more cost-effective fleet over the vehicle's lifecycle.

OPERATING CONDITIONS

FAT TRUCK® AMAV platforms are engineered to operate safely and efficiently across the full spectrum of environmental and climatic conditions encountered in Canada and other extreme-cold regions. Designed for sustained performance in –46°C (-51°F) to +30°C (86°F), the vehicles retain full reliability and maintainability even under rain, snow, hail, freezing rain, and rapid Arctic weather shifts. This resilience is enabled by a rugged hydrostatic drive train, fully sealed mission-critical components, and cold-weather-rated systems that maintain consistent performance in deep freeze conditions.

Built for true all-terrain mobility, FAT TRUCK® AMAV vehicles are capable of year-round off-road operations north of the tree line on snow, tundra, sand, dirt, mud, ice, and transitional or unstable surfaces. Its exceptional terrain performance is driven by ultra-low ground pressure enabling flotation over soft ground and uniform traction on variable surfaces. The vehicle's high buoyancy architecture and amphibious hull design allow it to traverse open water, wetlands, flooded terrain, and broken ice without preparation, while the balanced weight distribution and low center of gravity ensure stability during complex maneuvers.

Together, these engineered advantages give the FAT TRUCK® AMAV series the reach, adaptability, and operational continuity required to move confidently across the harshest and most remote environments on Earth.

SERIES LINEUP

The FAT TRUCK® AMAV series is built around a scalable architecture that spans five core models: FT1, FT2, FT3, FT4, and FT5.

Ensuring a solution for every mission profile, payload requirement, and operational context. Each platform is purpose-designed to deliver the same confident mobility and performance while offering different sizes, capacities, and configuration options to meet the needs of diverse defence, security, and remote-operations users.

FAT TRUCK® AMAV FT2

DIMENSIONS

Height (tires fully inflated):
91.5 in (2323 mm) to 101 in (2562 mm)
Length: 129 in (3283 mm)
Width: 88 in (2235 mm) to 98 in (2489 mm)
Ground clearance: 18 in (457 mm)
Ground pressure fully loaded: 2 lb/po^2 (0.14 kg/cm^2)

PERFORMANCE

Payload: 1200 lb (544 kg)
Passenger capacity: 4 (2 front + 2 rear)
Maximum speed on land: 20 mph (32 km/h)
Maximum speed on water: 3.1 mph (5 km/h)
Maximum uphill & downhill: 35°/ 70%
Maximum sidehill: 22°/ 40%
Turning radius: 0°
Range (optional): ≈ 125 to 250 miles (200 to 400 km)
Amphibious waterline: Below the bumper level

ENGINE

Hatz: 1.46 L In-line 3-cyl
Power: 64 hp (48 kW)
Fuel: JP-8 compatible (no aftertreatment)

TRANSMISSION

Type: Hydrostatic
Hydrostatic: 1 motor per wheel
Gearing: Continuous

ELECTRICAL SYSTEM

System: 24-Volt
Alternator: 170 Amps

STEERING

Type: Hydrostatic skid-steer
Controls: Joystick

FATTRUCK® AMAV FT3

DIMENSIONS

Height (tires fully inflated):
104 in (2642 mm) to 114 in (2900 mm)
Length: 147 in (3730 mm)
Width: 100 in (2540 mm)
Ground clearance: 25.5 in (650 mm)
Ground pressure fully loaded: 1.6 lb/po^2 (0.11 kg/cm^2)

PERFORMANCE

Payload: 2100 lb (955 kg)
Passenger capacity: 8 (2 front + 6 rear)
Maximum speed on land: 25 mph (40 km/h)
Maximum speed on water: 3.1 mph (5 km/h)
Maximum uphill & downhill: 35°/ 70%
Maximum sidehill: 22°/ 40%
Turning radius: 0°
Range (optional): ≈ 155 to 310 miles (250 to 500 km)
Amphibious waterline: Below the bumper level

ENGINE

Hatz: 1.95 L In-line 4-cyl
Power: 84 hp (63 kW)
Fuel: JP-8 compatible (no aftertreatment)

TRANSMISSION

Type: Hydrostatic
Hydrostatic: 1 motor per wheel
Gearing: Continuous

ELECTRICAL SYSTEM

System: 24-Volt
Alternator: 275 Amps

STEERING

Type: Hydrostatic skid-steer
Controls: Joystick

FATTRUCK® AMAV FT5

DIMENSIONS

Height (tires fully inflated):
104 in (2642 mm) to 114 in (2900 mm)
Length: 325 in (8255 mm)
Width: 100 in (2540 mm)
Ground clearance: 25.5 in (650 mm)
Ground pressure fully loaded: 1.9 psi (0.13 kg/cm^2)

PERFORMANCE

Payload: 4000 lb (1814 kg)
Passenger capacity: 16 (4 front + 12 rear)
Maximum speed on land: 32 mph (50 km/h)
Maximum speed on water: 3.1 mph (5 km/h)
Maximum uphill & downhill: 35°/ 70%
Maximum sidehill: 22°/ 40%
Turning radius: 24 ft (7.3 m)
Range (optional): ≈ 250 to 625 miles (400 to 1000 km)
Amphibious waterline: Below the bumper level

ENGINE

Hatz: 5.2 L In-line 4-cyl
Power: 228 hp (170 kW)
Fuel: JP-8 compatible (no aftertreatment)

TRANSMISSION

Type: Hydrostatic
Hydrostatic: 1 motor per wheel
Gearing: Continuous

ELECTRICAL SYSTEM

System: 24-Volt
Alternator: 310 Amps

STEERING

Type: Articulated hydraulic steering
Controls: Joystick

EMERGING PLATFORMS

FATTRUCK® AMAV FT1

FATTRUCK® AMAV FT4

ARCTIC PROVEN

ZEAL MOTOR

AMAV

ARCTIC MOBILITY AMPHIBIOUS VEHICLE SERIES

FAT TRUCK®