

Drainage Robot FMBOT 12000

FMBOT 12000 is a self-propelled amphibious robot for high-volume drainage and remote water supply during urban flood and emergency incidents.

It rapidly dewateres culverts, waterlogged streets and flooded underground car parks, and can relay water from nearby open sources to fire appliances or portable storage—without external power or a separate floating platform. Built on a hydraulic all-terrain chassis with on-the-spot turning, it can access tight, hard-to-reach areas and handle dirty water with small solids.



KEY FEATURES

High-capacity water pumping

Delivers a maximum flow rate of up to 12,000 l/min (720 m³/h) for rapid floodwater removal and large-scale pumping operations.

Amphibious self-propelled mobility

Moves independently on both land and water without requiring an additional floating platform.

Long-distance water transfer

Supports water delivery over distances of up to 300 metres, with a maximum pumping head of 6 metres.

Remote-controlled operation

Wireless communication provides an operating range of approximately 300–500 metres, depending on terrain and environmental conditions.

All-terrain performance

Designed to operate on mud, sand, riverbanks and flooded ground, with a maximum land speed of 7.2 km/h and water speed of 1 km/h.

PRIMARY APPLICATIONS

Urban flooding / waterlogging dewatering • Culvert and low-clearance drainage • Flooded underground car-park dewatering (non-smoke environments) • Open-area water relay to fire appliances / portable water storage • Flood response support • Towing of trailers (land) and boats (water), configuration dependent

PRODUCT-MARKET INSIGHT

For European flood response and civil protection units, FMBOT 12000 enables high-volume dewatering and remote water delivery with reduced crew exposure and faster set-up times. Its LDH-compatible interfaces and amphibious mobility make it particularly useful for mixed terrain incidents where access is limited and prolonged pumping operations are required.

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TECHNICAL DATA

Parameter	Specification
Max. flow rate (pump)	720 m³/h (200 L/s / 12,000 L/min)
Maximum lift / range	6 m
Water inlet connections	DN200 × 2 (internal diameter ≥ 185 mm)
Water outlet connections	DN200 × 2 (2 × 8-inch interfaces)
Drainage / discharge distance	≥ 300 m
Water supply distance (single unit)	≥ 300 m (multi-robot relay: several kilometres – configuration dependent)
Engine power	35 hp (approx. 26 kW)
Fuel tank capacity	50 L
Endurance (typical)	Approx. 5 h continuous (refuel during operation possible)
Drive / chassis	Hydraulic-driven all-terrain chassis
Travel speed (land)	Max 7.2 km/h
Travel speed (water)	1 km/h
Communication range	≥ 300 m (≥ 500 m in open areas)
Dimensions (L × W × H)	2180 × 1480 × 1350 mm
Operating weight	770 kg (including engine oil, hydraulic oil and fuel)
Water inlet type (double suction)	Lift-type inlet; quick replacement with 90° bent inlet for low water level suction
Hydraulic auxiliary output	Standard hydraulic output interface: 14 MPa (140 bar), 40 L/min
Traction winch	Electric winch; 3,500 lbf (approx. 1,600 kgf) pulling force; wireless/wired controller
Hose reel cart (optional)	4 reels; typically 2 × 50 m + 2 × 25 m DN200 (other configurations possible); up to 150–200 m total hose length (specification dependent)
Hose reel cart – power	48 V, 32 Ah battery; speed 5 km/h; range 20 km
Hose reel cart – dimensions / weight	1800 × 1000 × 1400 mm; 580 kg (incl. 150 m thickened hose)