

MAGNUM™ 440P RAPID INTERVENTION VEHICLE

Data/Specifications



FEATURES

- Mobile; highly maneuverable
- Commercial Off-the-Shelf Technology
- Flexible Manpower Options
- Increased Initial Attack Capability
- Maneuverable, Fast, Responsive
- Rapid Fire Extinguishment
- High In-Service Commission Rate

APPLICATION

The ANSUL® MAGNUM™ 440P Rapid Intervention Vehicle (RIV) is a highly versatile, multi-function support platform designed to play a lead role in a range of fire, rescue and emergency situations.

Invaluable for command and control, interdiction, haz-mat, and emergency management, this RIV is ideal for aviation/airports, municipal, county, military, forest services, petroleum facilities, and any other emergency services organization that could benefit from its function and flexibility.

Compact in size and lightweight, it can operate in environments unsuited to larger, less-maneuverable vehicles, such as remote areas accessed through rough terrain or high-density urban and industrial areas.



Effective on a range of Class A and B fires, its twin-agent technology is designed for use on many types of pressure, running and spill fires, specifically those relating to aviation, hazardous materials and general industry.

The majority of its firefighting equipment is operated remotely from within the driver's compartment through a central power console. The console contains the joystick that operates the front-mounted twin-agent turret, and switches for standard and optional accessories like perimeter/scene lights, generator, thermal imaging equipment and other standard and optional accessories. This remote capability provides maximum firefighting effectiveness with a minimum of crew.

As with all ANSUL equipment, the ANSUL MAGNUM 440P comes with a comprehensive service, training and technical support package.

DESCRIPTION

The ANSUL MAGNUM 440P consists of an ANSUL Twin-Agent Firefighting/Securing Unit (TAU) mounted on a 4-wheel-drive Ford Super Duty F-550 XL Crew Cab commercial chassis. The chassis is powered by the 325-hp Ford 6.4 Liter V-8 Power Stroke® Turbo Diesel. The extinguishing system is a standard twin-agent combination of 450 lb. (204.1 kg) of PKW dry chemical agent and a 300 gal (1135.6 L) water tank with a 25 gal (94.6 L) foam cell integrated within the water tank. ANSULITE 3% AFFF concentrate is contained within the foam cell. The vehicle is equipped with an on-board engine driven pump. This allows for a 250 gpm (946.4 Lpm) pure water discharge or, through the on-board proportioning network, a discharge of ANSULITE 3% AFFF.

Designed to meet the need for a light, maneuverable support platform that can respond to emergencies more quickly than conventional vehicles, the MAGNUM vehicle line allows for full operation by a single operator.

The concept behind twin-agent firefighting is a combination of flame knockdown and vapor securement. Purple-K dry chemical provides rapid flame knockdown, making it particularly effective on pressure, running and spill fires, and a primary extinguishing agent for flammable liquid fires. ANSULITE AFFF is a synthetic aqueous film-forming foam that blankets the fuel with a thin film, preventing the escape of flammable vapors and providing a degree of cooling. Purple-K is fully compatible with AFFF and can be used without regard to order of application.

A comprehensive vehicle service manual is provided, detailing required service information pertaining to the chassis, accessories, wiring diagrams, compressed gas cylinder recharge panel and maintenance/recharging of the twin agent fire suppression system.

COMPONENT DESCRIPTION

ANSUL MAGNUM 440 Rapid Intervention Vehicle

Ford Super Duty F-550 XL Crew Cab, 4 x 4

- Dual-rear-wheel configuration
- Overall length: 304 in. (772.2 cm)
- Wheelbase: 200 in. (508.0 cm)
- Cab to axle: 84 in. (213.4 m)

Wheel stance (center of tire to center of tire)

- Front: 74.8 in. (190.0 cm)
- Rear: 74.0 in. (188.0 cm)

Axle height (from ground)

- Front: 13.2 in. (335 mm), empty
- Rear: 13.2 in. (335 mm), empty

Seating capacity

- 5 fully equipped crew members

Cab options

- Two-door Regular or SuperCab
- Four-door Crew Cab

Powertrain

- Engine: Ford 6.4L Power Stroke® Turbo Diesel V-8
- Horsepower: 325 (329.5 mhp) @ 3,000 rpm
- Torque: 600 ft-lb/second (813.5 Nm/second) @ 2,000 rpm
- Transmission: Ford TorqShift® automatic, 5-speed

Chemical Agents

Extinguishing agents are a combination of potassium bicarbonate based dry chemical and a synthetic aqueous film-forming foam. The combination provides rapid flame knockdown, vapor securement and a degree of cooling.

Agent Tanks

Dry Chemical Tank: A nominal 450-pound (204 kg) capacity dry-chemical tank, mounted on a rear slide-out tray (optional), constructed of steel, fitted with a discharge outlet suitable for dry chemical design flow rate, and designed and constructed in accordance to the latest ASME unfired pressure vessel code for a working pressure of 250 psi (17.2 bar), and a test pressure of 440 psi (30.3 bar). Internal gas tubes fluidize the dry chemical and maintain a nominally constant pressure in the tank during operation. A 4-inch (102 mm) inside diameter top fill opening is provided.

Water/Foam Tank: A nominal 300 gal (1135.6 L) capacity water tank constructed of polypropylene and, integrated within the water tank, an independent 25 gal (94.6 L) foam cell to contain the ANSULITE 3% AFFF concentrate.

Engine Driven Water Pump

A 4 cycle, diesel-fueled water pump capable of discharging water and foam agent at:

- 100 gpm (378.5 Lpm) at 190 psi (13.1 bar)
- 150 gpm (567.8 Lpm) at 170 psi (11.7 bar)
- 200 gpm (757.1 Lpm) at 130 psi (9.0 bar)
- 250 gpm (946.4 Lpm) at 80 psi (5.5 bar)

The pump consists of a 3 in. female NPT intake and a 2 in. female NPT discharge outlet.

Compressed Gas Cylinder(s)

The Dry Chemical is expelled from the tank and out the discharge devices by the use of high-pressure gas stored in DOT-3AA-2400 steel cylinder(s). Upon discharge of the dry chemical and gas supply, the cylinder(s) can be conveniently recharged through the recharge panel on the rear of the vehicle. Cylinder(s) do not have to be removed from the inside of the body to be recharged.

Hoses, Hose Reels, Nozzles, and Crosslays

Twinned Hose Assembly: The twinned hose assembly consists of a 1-in. (25 mm) inside diameter AFFF hose line and a 1-in. (25 mm) inside diameter PKW dry chemical hose line. Both lines measure 100 ft. long (30.5 m) and are of a lightweight, non-collapsible design. The hoses are operated at a working pressure of 300 psi (20.7 bar), with a minimum burst of 1800 psi (124.1 bar).

Twinned Hose Reel: A side mount twinned hose reel, containing 100 ft (30.5 m) of twinned hose, is provided with the MAGNUM 440P, with electric rewind/back-up manual rewind system standard. Reels are of all-metal design, with roller guides that protect hose from damage and ease unwind/rewind. Manual re-wind crank is provided.

Crosslays: Two (2) crosslay hoses, each 1 3/4 in. (44.5 mm) x 200 ft (61.0 m) long, are provided. These hoses are folded and located at the top of the vehicle for easy access. These hoses are color-coded to match the proper discharge gauge and valve. The crosslay hoses are pressure-tested to a rating of 400 psi (27.6 bar).

Discharge Nozzles

Front: Twin-Agent Turret mounted on a Task Force Tips Monitor, remote joystick controlled. Flow rate exceeds 60 gpm (227 Lpm) foam and water discharge and 8 lb (3.6 kg) dry chemical.

Side: Williams Fire & Hazard Control, Inc.® Hydro-Chem™ Nozzle. Flow rate of approximately 60 gpm (227.1 Lpm) for foam and water discharge and 5 lb (2.3 kg) for dry chemical.

AVAILABLE ACCESSORIES

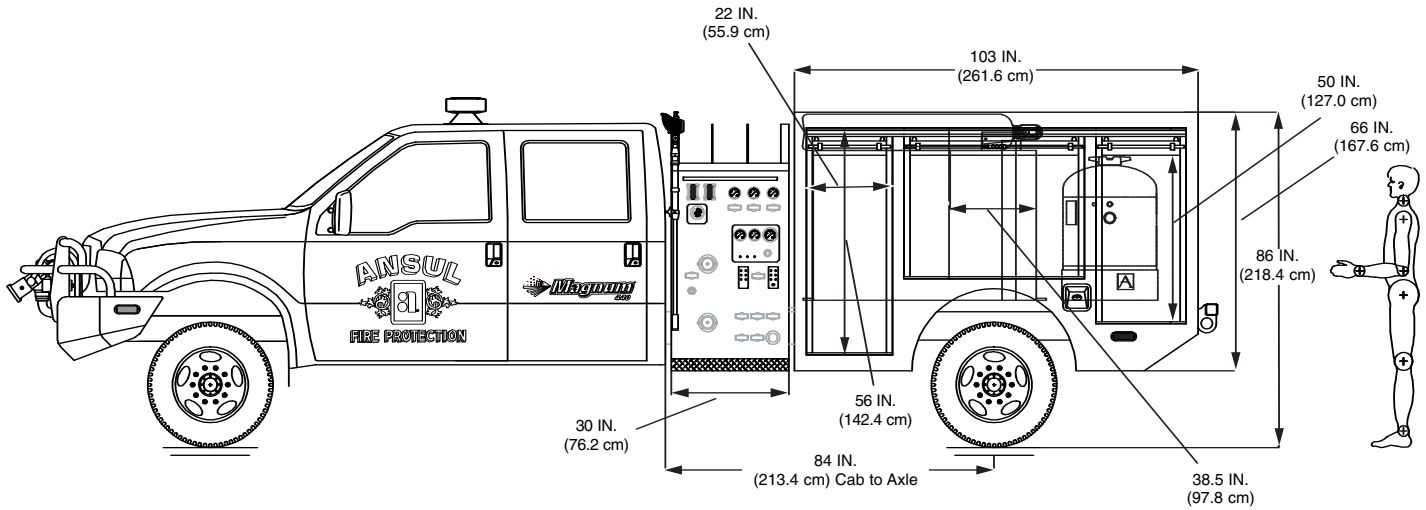
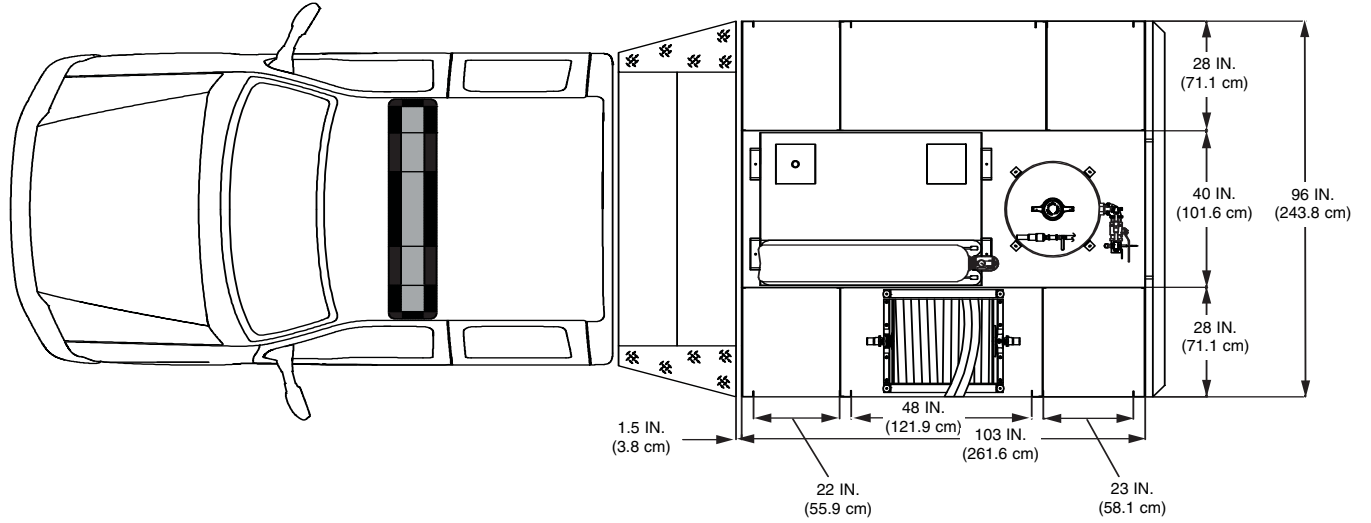
Standard

- E-Z access storage compartments
- Rollup compartment doors
- In-compartment lighting
- Aluminum diamond-plate catwalk surfaces
- Aluminum compartment body
- Two (2) tow eyes, front and rear
- Front bumper brush guard
- Front and rear mud flaps
- LED emergency lighting package with siren (NFPA compliant)
- External compressed gas cylinder recharge panel
- LED DOT light package
- Engine driven pump
- Two (2) crosslay hoses
- Foam proportioners
- Twin Agent hose reel
- Console between driver and officer
- Heavy duty, high-strength bumper
- Stainless steel plumbing
- Crosslay tarp

Optional

- SCBA cavity seats
- Stainless steel wheel simulators with valve stem extension kit
- Body rust protection
- Adjustable shelves, roll-out trays, and tilt-down trays
- Painted (spatter) interior compartments
- Rear scene lights, flush mount
- Vehicle graphics
- Electric generator with remote 120/240 VAC electrical outlets
- Winch (fits inside cavity compartment of front bumper)
- LED traffic advisor light
- Fixed mount infrared/thermal image video camera
- Rear-view video system
- Map light with flexible neck and switch (console mounted)
- Class V trailer hitch with wiring harness
- 12-Volt auxiliary outlets
- Battery chargers
- Protective tiles in compartment floor and shelves
- Generators
- Hand lights
- Spotlights
- Sirens and speakers
- Fog lights
- Rear "fixed mount" perimeter lights
- "Locking" roll-up compartment doors
- All-terrain tires
- Hands-on fire training
- Competency training for two firefighters and one mechanic
- 300 gal (1135.6 L) water tank with pump
- 25 gal (94.6 L) foam tank and proportioning system
- Portable, vacuum fill, dry chemical recharge system

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