ANSUL

A Tyco International Company

RED LINE HAND PORTABLE EXTINGUISHERS MODELS 5, 10, 20, 30

Data/Specifications

FEATURES

- Rugged, durable, reliable fire protection
- Ergonomically designed for maximum operator performance
- Meets or exceeds requirements of ANSI/UL 299 and 711, or ULC S504 and S508
- USCG approved with proper bracket
- Simple and safe operation
- Maintenance checks can be easily made on every moving part
- Field rechargeable
- Four sizes (5, 10, 20 and 30) available with many options to suit your needs
- Field replacement metal cartridge guard option available for 20 and 30 pound extinguishers.
- Choice of dry chemical agents to satisfy specific protection requirements
- First response fire fighting training available at the ANSUL Fire School or through trained distributors
- Manual, parts lists and training video tapes available
- Twelve-year limited warranty
- Sold and serviced through our network of independent distributors in every state and most countries throughout the world

APPLICATION

RED LINE dry chemical extinguishers are designed for the protection of ordinary and high risk hazards. This hand portable extinguisher is used in industries where the occurrence or possibility of fire is high. The RED LINE extinguisher has set the standard for reliable fire protection in many industries and applications including refining, petrochemical, oil and natural gas production, mining, transportation, utilities, metal processing, paint process areas, welding areas, material storage areas and many others.

DESCRIPTION

- The rugged dry chemical shell is a three piece steel assembly consisting of a seamless welded tube with a spun top, a bottom closure and a machined collar.
- Forged, non-slip aluminum handle positions the extinguisher at optimum 45° angle for easy carrying.
- Each finished shell assembly is hydrostatically tested at three times the operating pressure (600 psi (41.4 bar)) and is designed to withstand a pressure of no less than six times the normal operating pressure.
- UL/ULC listing mark, rating and model information are permanently marked on the fill collar using dot matrix marking technology.
- Cartridge receiver is made of cast aluminum with a stainless steel insert to prevent thread wear.
- Stainless steel puncture pin is sealed with impregnated felt washers which seal against moisture and provide lubrication to the pin.
- Large three-inch fill opening allows for fast and easy recharge.
- Large forged aluminum fill cap with indicator seals the shell, protecting the agent from contamination. A tamper seal may also be attached to the fill cap to prevent tampering with the agent.

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- Flat gasket and quad ring on fill cap provide a gas and moisture tight seal.
- Handle is spring loaded to prevent movement during vibration.
- Hanger attachment is located on extinguisher to allow for easy removal from wall bracket.
- Split nameplates are etched aluminum with a varnish coating to provide durability, readability and corrosion resistance.

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- The front operating nameplate has easy to understand instructions and pictograms for the inexperienced operator.
- The back maintenance nameplate contains after-use and maintenance information, model bar code, along with approvals and other pertinent information.
- Standard models are equipped with CO_2 cartridges and receivers which are listed and approved for operation in environments with temperatures between –40 °F to 120 °F (–40 °C to 48.8 °C).
- Hose couplings are corrosion resistant aluminum alloy. The shell connection coupling is equipped with an O-ring to provide a proper seal.
- Shell connection coupling is internally machined to accept an inspection seal and retaining ring.


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- Nozzle body is cast aluminum with component parts of stainless steel and other corrosion resistant materials.
- Nozzle plunger assembly is provided with two guide bushings to assure proper seating when used with intermittent discharge, thus providing gas and water tightness.

DESCRIPTION (Continued)

- Nozzle design directs the nozzle body downward when the nozzle is squeezed thus directing the agent stream at the base of the fire and increasing the chance of extinguishment.
- Nozzle tips feature a converging-diverging design to give an expanded round stream of dry chemical.
- The steel gas tube is designed with two rubber check valves clamped in place. The check valves, which cover the gas discharge holes, produce multidirectional gas streams to fluidize the dry chemical agent.
- Agent outlet elbow is machined from low carbon steel barstock and allows for maximum discharge of the dry chemical when the extinguisher is held at the normal 45° angle.
- Discharge hose is ethylene propylene diamine and is UL 92 approved for use at temperatures of –65 °F to +120 °F (–54 °C to 49 °C).
- Completed assembly is subjected to a final production air test of 240 psi (16.6 bar) and stamped to indicate year of manufacture.

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- Expellent gas cartridges are fabricated of one-piece spun steel in accordance with DOT 3E-1800 (Carbon Dioxide) or DOT 3A-2100 (Nitrogen) and Transport Canada (TC) specifications. **Note:** The Model 5 and Model 10 cartridges with two-piece construction are exempt from DOT requirements (due to volume) and are made in accordance with UL/ULC specifications.
- Cartridges are sealed with a brass seal assembly utilizing a copper seat. The seal assembly has "ANSUL" printed on it indicating the seal meets or exceeds ANSUL quality levels and UL/ULC requirements.
- Carbon dioxide cartridge seal has a safe rupture pressure range of 4050 to 4500 psi (279 to 310 bar) in a temperature range of 195 °F to 210 °F (91 °C to 99 °C).

Model	I-10-G-1	I-A-10-G-1	I-K-10-G	I-20-G-1
Agent	PLUS-FIFTY C	FORAY	Purple-K	PLUS-FIFTY C
Capacity	10 lb (4.5 kg)	8.5 lb (3.7 kg)	9 lb (4.1 kg)	20 lb (9.1 kg)
UL/ULC Rating	40-B:C	4-A:40-B:C	60-B:C	60-B:C
Coast Guard Classification	Type B:C, Size II	Type A, Size II Type B:C, Size I	Type B:C, Size II	Type B:C, Size III
Discharge Time	15 sec	15 sec	19 sec	22 sec
Flow Rate	0.62 lb/sec (0.28 kg/sec)	0.50 lb/sec (0.22 kg/sec)	0.53 lb/sec (0.24 kg/sec)	0.90 lb/sec (0.40 kg/sec)
Effective Range	21 ft (6.4 m)	17 ft (5.2 m)	25 ft (7.6 m)	24 ft (7.3 m)
Nozzle Stream	Expanding	Expanding	Expanding	Expanding
Options				
· Low Temperature (to –65 °F (–54 °C))	X	X	X	X
· Corrosion Resistant	N/A	X	X	X
· Ring Pin	X	X	X	X
· High Flow	N/A	N/A	N/A	N/A
Flow Rate	–	–	–	–
Effective Discharge Time	–	–	–	–
Range	–	–	–	–
Rating	–	–	–	–
Approvals	UL, ULC, FM, USCG**	UL, ULC, FM, USCG**	UL, ULC, FM, USCG**	UL, ULC, FM, USCG**
Brackets				
· Multipurpose***	14228	14228	14228	14091
· Heavy Duty***	30886	30886	30886	30759
· Heavy Duty Ring Pin***	N/A	N/A	N/A	15665
Charged Weight	22 lb (10.0 kg)	20.5 lb (9.3 kg)	21 lb (9.5 kg)	38 lb (17.2 kg)
Dimensions: Height	16.1 in (40.9 cm)	16.1 in (40.9 cm)	16.1 in (40.9 cm)	20.5 in. (52.1 cm)
Width	8.3 in (20.9 cm)	8.3 in (20.9 cm)	8.3 in (20.9 cm)	10.4 in. (26.4 cm)
Depth	5.3 in (13.3 cm)	5.3 in (13.3 cm)	5.3 in (13.3 cm)	7.0 in. (17.8 cm)
Hose ID	0.4 in (0.9 cm)	0.4 in (0.9 cm)	0.4 in (0.9 cm)	0.5 in. (3 cm)
Hose Length	26.6 in (67.6 cm)	26.6 in (67.6 cm)	26.6 in (67.6 cm)	31.6 in. (80.3 cm)
Shell OD	4.9 in (12.4 cm)	4.9 in (12.4 cm)	4.9 in (12.4 cm)	6.0 in. (15 cm)
Fire Suppression Capability*				
Novice Operator	30 ft^2 (2.8 m^2)	40 ft^2 (3.7 m^2)	60 ft^2 (5.6 m^2)	40 ft^2 (3.7 m^2)
Experienced Operator	75 ft^2 (6.9 m^2)	100 ft^2 (9.3 m^2)	150 ft^2 (13.9 m^2)	100 ft^2 (9.3 m^2)

* Underwriters Laboratories classifies a 'novice operator' as one who has little or no experience in operating a fire extinguisher.

** U.S.C.G. Approved only with bracket

*** Corrosion resistant epoxy painted brackets also available.

- Low temperature nitrogen cartridge seal has a safe rupture pressure range of 3150 to 3500 psi (217 to 241 bar) in a temperature range of 195 °F to 210 °F (91 °C to 99 °C).
- Painted steel parts are prepared by going through a series of surface preparation steps, including degreasing, an acid pickling process, zinc phosphate bonding and non-chromate sealing.
- The parts are then painted using an electrostatically applied polyester powder coating and oven cured.
- Cartridge guard is made of a composite consisting of fiber filled, polypropylene and various additives to resist UV degradation and maintain strength and integrity.
- Composite guard is designed with the nozzle holster as an integral part of the one piece construction. It contains a hose retainer tab which can be used to attach the visual inspection seal. The guard is designed to prevent its removal unless the inspection seal is broken.

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	I-A-20-G-1	**I-K-20-G**	**I-30-G-1**	**I-A-30-G-1**	**I-K-30-G**
	FORAY	Purple-K	PLUS-FIFTY C	FORAY	Purple-K
	17 lb (7.7 kg)	18 lb (8.2 kg)	30 lb (13.6 kg)	25 lb (11.3 kg)	27 lb (12.3 kg)
	6-A:60-B:C	80-B:C	80-B:C	10-A:80-B:C	120-B:C
	Type A, Size II Type B:C, Size II	Type B:C, Size III	Type B:C, Size IV	Type A, Size II Type B:C, Size III	Type B:C, Size IV
	22 sec	21 sec	32 sec	26 sec	27 sec
	0.77 lb/sec (0.35 kg/sec)	0.89 lb/sec (0.40 kg/sec)	0.87 lb/sec (0.39 kg/sec)	0.89 lb/sec (0.40 kg/sec)	0.99 lb/sec (0.45 kg/sec)
	20 ft (6.1 m)	30 ft (9.1 m)	23 ft (7.0 m)	20 ft (6.1 m)	30 ft (9.1 m)
	Expanding	Expanding	Expanding	Expanding	Expanding
	X X X X 1.55 lb/sec (0.70 kg/sec) 12 sec 15-20 ft (4.6 – 6.1 m) 1-A:20-B:C	X X X X 1.55 lb/sec (0.70 kg/sec) 12 sec 15-20 ft (4.6 – 6.1 m) 20-B:C	X X X N/A – – – –	X X X X 2.10 lb/sec (0.95 kg/sec) 12 sec 15-20 ft (4.6 – 6.1 m) 1-A:20-B:C	X X X X 2.35 lb/sec (1.10 kg/sec) 12 sec 15-20 ft (4.6 – 6.1 m) 20-B:C
	UL, ULC, FM, USCG**	UL, ULC, FM, USCG**	UL, ULC, FM, USCG**	UL, ULC, FM, USCG**	UL, ULC, FM, USCG**
	14091 30759 15665	14091 30759 15665	14098 30889 25428	14098 30889 25428	14098 30889 25428
	35 lb (15.9 kg)	36 lb (16.3 kg)	54.5 lb (24.7 kg)	49.5 lb (22.5 kg)	51.5 lb (23.4 kg)
	20.5 in (52.1 cm) 10.4 in (26.4 cm) 7.0 in (17.8 cm)	20.5 in (52.1 cm) 10.4 in (26.4 cm) 7.0 in (17.8 cm)	22.5 in (57.2 cm) 11.1 in (28.3 cm) 8.0 in (20.3 cm)	22.5 in (57.2 cm) 11.1 in (28.3 cm) 8.0 in (20.3 cm)	22.5 in (57.2 cm) 11.1 in (28.3 cm) 8.0 in (20.3 cm)
	0.5 in (1.3 cm)	0.5 in (1.3 cm)	0.6 in (1.6 cm)	0.6 in (1.6 cm)	0.6 in (1.6 cm)
	31.6 in (80.3 cm)	31.6 in (80.3 cm)	35.6 in (90.5 cm)	35.6 in (90.5 cm)	35.6 in (90.5 cm)
	6.0 in (15 cm)	6.0 in (15 cm)	7.0 in (17.5 cm)	7.0 in (17.5 cm)	7.0 in (17.5 cm)
	60 ft^2 (5.6 m^2) 150 ft^2 (13.9 m^2)	80 ft^2 (7.4 m^2) 200 ft^2 (18.6 m^2)	60 ft^2 (5.6 m^2) 150 ft^2 (13.9 m^2)	80 ft^2 (7.4 m^2) 200 ft^2 (18.6 m^2)	120 ft^2 (11.1 m^2) 300 ft^2 (27.9 m^2)

OPTIONS

ANSUL offers a wide array of options to customize the extinguisher to meet your needs. For some users, these options have become the standard for RED LINE extinguishers.

Corrosion Resistant (CR) Models

- In addition to the standard surface preparation procedures, the steel parts are primed using a zinc rich primer with a minimum zinc content of 90%.
- The top coat is a polyester paint applied as a powder and oven cured. The dry film is continuous and is a minimum thickness of 1.5 mils.
- The hose couplings, fill cap, carrying handle, nozzle body, nozzle lever, nozzle tip and cartridge receiver push lever are black anodized for added corrosion resistance.
- The cartridge receiver body is painted with an epoxy paint for added protection in corrosive environments.

Ring Pin (RP) Models

- The ring pin, when inserted in the cartridge receiver, provides secondary protection against accidental actuation of the unit when the hose is not in place.
- The operating instruction nameplate notes the removal of ring pin before actuation of the extinguisher.

Low Temperature (LT) Models

- The LT model is equipped with a nitrogen cartridge and cartridge receiver which is listed and approved for operation in environments with temperatures as low as –65 °F (–54 °C).

High Flow (HF) Models

- Extinguisher is equipped with a special nozzle and nozzle tip to maximize agent flow rates.
- Nozzle handle is painted red to differentiate it from standard flow extinguishers.

Note: The high flow extinguishers have been designed for pressurized flammable liquids and pressurized gas fires and other special hazards where agent flow rate is crucial to extinguishment. (Reference NFPA 10, Paragraph 5.5.1.1.1 and 5.5.1.1.2.) The high flow extinguishers can also extinguish other types of fire.

Metal Cartridge Guard

- Metal cartridge guard is available as a distributor installed option on models 20 and 30 lb extinguishers.

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RED LINE Model 5 Extinguisher Features

- Internal Cartridge
- Compact
- Dimensions – (H) 19 in (48 cm)
  (W) 5 1/2 in (14 cm)
  (D) 5 1/2 in (14 cm)
- Ratings (UL/ULC)
  FORAY Agent: 2-A:10-B:C
  PLUS FIFTY C Agent: 10-B:C
  Purple K Agent: 20-B:C
- Many of the same design features and testing requirements as Models 10, 20, and 30.

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AGENTS

FORAY Dry Chemical

A monoammonium phosphate-based agent for use on Class A (wood, paper cloth), Class B (flammable liquids and gases), and Class C (electrical) fires.

Purple-K Dry Chemical

A potassium bicarbonate-based agent which is the most effective ANSUL agent for knock-down of Class B (flammable liquids and gases) and Class C (electrical) fires.

PLUS-FIFTY C Dry Chemical

A sodium bicarbonate-based agent for use on Class B (flammable liquids and gases) and Class C (electrical) fires.

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