Kidde ECS Fire Suppression System
Marine Series
Component Description

Kidde Fire Systems

Effective: June 2014

1040 cu. in.Nitrogen Pilot Cylinder with Pressure Switch

K-90-9190M

FEATURES

- ***Contents Pressure Gauge with Supervisory Pressure Switch***
- ***For Use with Plain or Grooved Nut Discharge Heads***
- ***Used as a Pilot Cylinder, Can Actuate up to Fifteen Agent Cylinders or Eight Second-Stage Cylinders***
- ***RoHS Compliant***
- ***Used as a Second-Stage Cylinder, can Actuate up to Fifteen Agent Cylinders***
- ***Used as a Siren Driver, Can Operate up to Four Nitrogen Operated Sirens***
- ***Safety: Valve Protection Cap, Safety Burst Disc Assembly, Actuation Port Safety Cap***

DESCRIPTION

The Kidde ECS System 1040 cu. in. capacity Nitrogen Pilot Cylinder with Pressure Switch is factory charged to 1800 PSIG (124 bar) with dry nitrogen and is designed for use as a pilot cylinder or siren driver cylinder. The cylinder valve is a 5/8-in. bore design and is fitted with a contents supervisory pressure switch (Switch-In-Gauge). This gauge allows the cylinder pressure to be monitored continuously from a suitable panel (see data sheet K-90-9160M). The valve is designed to accept the full range of Kidde Fire Systems control heads (excluding the Stackable Electric Control Head, P/N 82-486500-010) and either the Plain Nut Discharge Head (P/N WK-872450-000) or the Grooved Nut Discharge Head (P/N 81-872442-000).

The cylinder is supplied with two additional labels that can be applied to the main cylinder label to indicate its function in a system. The first optional ‘add-on’ label is applied when the cylinder is being used in a two-stage actuation system, the second optional label is applied when the cylinder is being used as a siren driver.

OPERATION

When used as a primary (single- or first-stage) pilot cylinder or as a siren driver, the 1040 cu. in. cylinder is operated by either a control head or by manifold pressure via a plain nut discharge head. It is common for the control head release action to be achieved remotely by a control panel, a cable pull handle or pilot cylinder. When used as second-stage pilot cylinder the 1040 cu. in. cylinder is operated by a pressure operated control head (P/N 82-878737-000).

INSTALLATION

WARNING

Nitrogen cylinders must not be moved unless the discharge and control heads have been removed and the protection caps are installed. Failure to do so could result in inadvertent discharge which could cause serious bodily injury, death or property damage.

Each 1040 cu. in. cylinder assembly is installed using two straps installed at the specified heights. Rotate the cylinder to the correct orientation before completely tightening the bracket or connecting the control head or discharge nut (which should already be attached to the system piping); the cylinder contents gauge should be facing outwards. If the cylinder is being used as a siren driver or second-stage pilot cylinder, the appropriate ‘add-on’ label should be affixed to the dotted area on the main cylinder label (P/N 06-231866-501).

Use 3/4-in. discharge hoses (P/N 06-118207-001 [18.00-in. length] or P/N 06-118207-002 [14.75-in. length]) to connect the discharge head to discharge (siren effluent) piping/tubing. The piping to the discharge sirens should be either 1/4-in. schedule 40/80 stainless steel pipe or 5/16-in. x 0.032-in. wall tubing. Fittings should be rated for a maximum working pressure of no less than 3000 PSI (207 bar).

MAINTENANCE

The pressure of the nitrogen cylinder should be checked daily, and the cylinder should be visually inspected during periodic maintenance. The cylinder should be hydro-tested (or be subject to a full external visual inspection) every five years in accordance with DOT CFR 49 and CGA (Compressed Gas Association) Pamphlet C-6.

DIMENSIONS

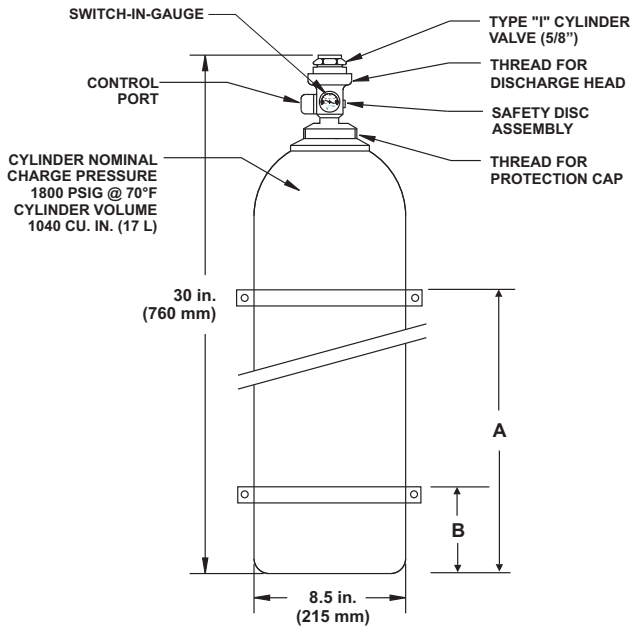

Figure 1. 1040 cu. in. Nitrogen Pilot Cylinder with Pressure Switch

Table 1: 1040 cu. in. Nitrogen Pilot Cylinder Mounting Dimensions

A		B		C	
in	mm	in	mm	in	mm
21 to 22	533 to 559	6 to 8	152 to 203	10.4	263

SPECIFICATIONS

Charge Pressure:	1800 PSIG @ 70°F (124 bar @ 21°C)
Cylinder Volume:	1040 cu. in. (17 L)
Charged Weight:	64.5 lb. (29.3 kg)
Charge Weight:	5.7 lb. (2.6 kg)
Cylinder Type:	Seamless, DOT3AA-2015
Cylinder Finish:	Black, Painted
Cylinder Gauge:	With Supervisory Function
Materials:	
Valve–	Forged Brass
Siphon Tube–	None Fitted
Cylinder–	Chrome, Moly Steel
Operating Temperature Range:	30°F to 130°F (0°C to 54°C)
Height (including protection cap):	40.2 in. (1020 mm)
Transport Information:	Class 2.2, I.D.#UN1066

ORDERING INFORMATION

Part Number	Description
90-101040-200	1040 cu in Nitrogen Cylinder with Pressure Switch

COMPATIBILITY

Series	For Use With
Kidde ECS HFC-227ea	X
Kidde ECS Advanced Delivery FM-200®	X

Kidde Fire Systems
400 Main Street
Ashland, MA 01721
Ph: 508.881.2000
Fax: 508.881.8920
www.kiddefiresystems.com

K-90-9190M Rev BA