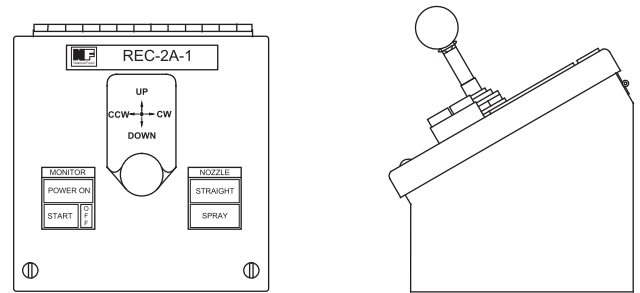


# REC REMOTE ELECTRIC CONTROL For HMB-4 Hydraulic Monitor

NDD320

- Marine Environment Compatible
- Enclosure Options Nema 1 to 4, 4x, 12, 13, 7 Exp Proof
- Single or Multiple Station Controls
- Wall Mount or Desktop Control Options



## Description

The National Foam (REC) Remote Electric Control Station is part of the HMB-4 Remote controlled monitor system. The REC Unit is the operator control station for starting and directing the operation of up to four separate HMB-4 Hydraulic Monitor System(s) through a dedicated Hydraulic Power Control Module (HPCM) for each monitor. The unit contains the electrical interface to initiate operation of the HPCM to control monitor rotation, elevation, and nozzle pattern functions. A single REC station can be provided to operate multiple (1, 2, 3, or 4), separate HMB-4 monitor systems. Each set of control(s) on the REC unit operates a dedicated monitor and will not operate any other monitor on the unit. Enclosure options include: dust tight, watertight and explosion-proof. The REC unit does not require a separate source for control power since control circuit power is supplied from a step-down transformer provided in the HPCM package.

## Features

- Monitor control functions and HPCM pump start with an "ON" indicator mounted in a common enclosure
- Several types of enclosures are available for housing controls
- Control voltage supplied from HPCM for each monitor
- When multiple monitor controls are mounted in same enclosure each monitor control is electrically independent

## Applications

Part of HMB-4 Remote Control Monitor System, which in addition to the REC remote electric control station, consists of the following: the model HMB-4 remote control monitor (Data Sheet NDD300), the HPCM-1-EX hydraulic power control module (NDD310), and if desired the model MCM multiple control module (NDD330).

## Specifications

The REC Remote Electric Control Station shall serve as the operator control station for initiating and directing the operation of the HMB-4 remote controlled monitor. It shall provide control of monitor rotation, elevation, and nozzle pattern functions. All non-explosion proof units shall use an 8 position joystick operator to control the rotation and elevation functions of the monitor. The nozzle pattern functions shall be controlled by dual push-buttons mounted in the same switch operator assembly. The HPCM On/Off modes shall be controlled by a maintained switch mounted in the same operator assembly along with a red "ON" indicating lamp. All operators shall be rated at a minimum of NEMA 4, 4X, & 13. All explosion proof units shall use momentary push-button operators to control the rotation/elevation functions of the monitor as well as the nozzle functions. The HPCM On/Off modes shall be controlled by a maintained switch mounted in its own operator assembly along with a separately mounted red "ON" indicating lamp. All operators shall be rated for

explosion-proof, NEMA 7 (Class I, Group B, C & D) and NEMA 9 (Class II, Groups E & G); NEMA 3 rain-tight; NEMA 4 watertight. Operational voltage shall be 115VAC, 60 Hz and shall be supplied from the HPCM.

The Remote Electric Control (REC) units are available in several enclosure ratings and configurations. The standard REC shall be supplied in a wall mount, fiberglass enclosure rated NEMA 3, rain-tight and NEMA 4X, watertight and corrosion resistant which is suitable for exterior mounting without any additional protection. For operation indoors, it is available in a carbon steel, hinged cover, console type enclosure rated NEMA 12 & 13 dust tight. It is also available in a wall mount, cast aluminum, explosion-proof enclosure rated, NEMA 7 (Class I, Group D), NEMA 9 (Class II, Groups E & G); NEMA 3 (rain tight) and NEMA 4 (watertight) which is suitable for exterior mounting without any additional protection. Enclosures shall have a red polyurethane finish. The unit shall be factory assembled and tested requiring only field connection of control wiring. No conduit holes are provided on the unit thereby allowing the customer to drill location of access holes to suit their requirement.

The REC-1A-N4, REC-2A-1, and REC-1A-EXN4 units contain operational controls for a single monitor. The REC-2A-2, REC-2A-3, and REC-2A-4 units contain operational controls for 2, 3, and 4 monitors respectively. Each control station is electrically independent on units containing controls for more than one monitor.

# REC REMOTE ELECTRIC CONTROL

NDD320

**Technical Data**

Electrical Data:

*Lamps, Non-EX PR:*

120V, 3 watt, 120PSB, clear, 10,000 hr. av., T-2, ANSI #5 slide base

*Lamps, EX PR:*

120V, 6 watt, 6S6, clear, 1500 hr. av., candelabra base

*Contact Max. Amp:*

10 amp continuous @ 600 VAC

*Operating voltage:*

1/60/120 VAC (Supplied from HPCM)

*Switches:*

All switches are momentary contacts except "ON" switch which is maintained

Enclosure Ratings:

*REC-1A-N4:*

NEMA 3 rain-tight; NEMA X water-tight, corrosion resistant

*REC-2A-1 to -4:*

NEMA 12 & 13 dust-tight

*REC-1A-EXN4:*

Explosion-proof, NEMA 7 (Class I, Group D) and NEMA 9 (Class II, Groups E & G); NEMA 3 rain-tight; NEMA 4 watertight

Switch Ratings:

*REC-1A-EXN4:*

Explosion-proof, NEMA 7 (Class I, Group B, C & D) and NEMA 9 (Class II, Groups E & G); NEMA 3 rain-tight; NEMA 4 water-tight

*All other REC's:*

NEMA 4, 4X & 13

Materials of Construction:

*Enclosure:*

REC-1A-N4.....4.5 lb (2.1 kg)

REC-2A-1 ..... 8 lb (3.6 kg)

REC-2A-2 ..... 18 lb (8.2 kg)

REC-2A-3 ..... 22 lb (10 kg)

REC-2A-4 ..... 26 lb (11.8 kg)

REC-1A-EXN4..... Cast aluminum

*Hardware:* ..... Stainless steel

*Operators:*

NEMA 4, 4X & 13:

Die cast zinc w/ chrome plating, SS internals

*Explosion-proof:*

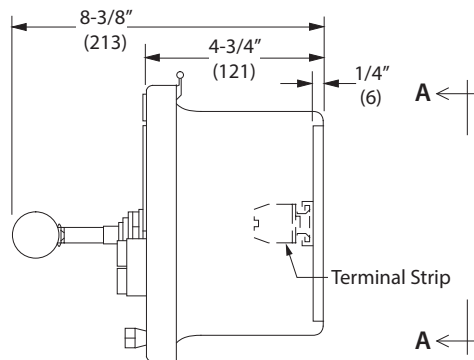
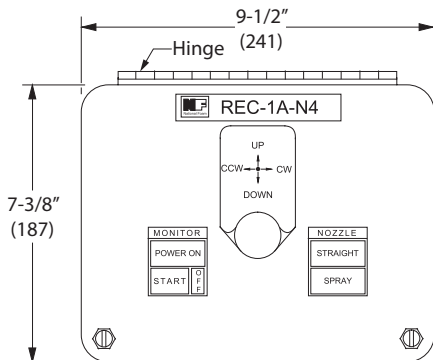
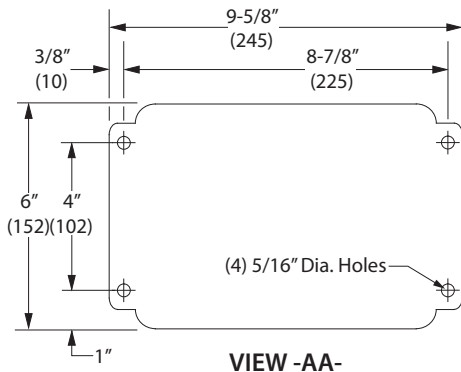
Anodized aluminum w/ SS operator shafts

Finish:

Red Polyurethane

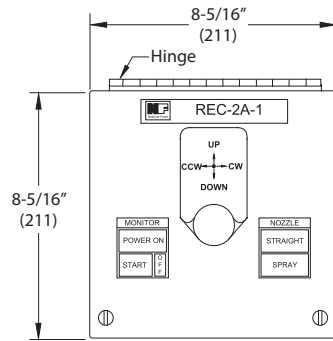
**Options**

- Special Enclosures
- Special Control Configurations

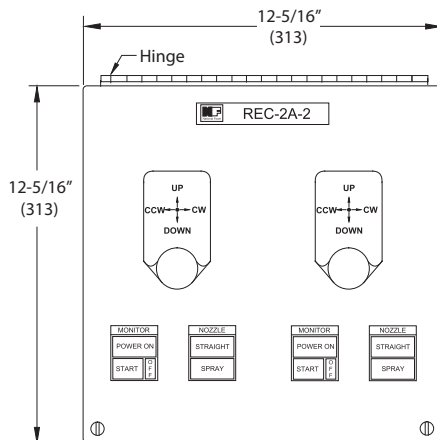
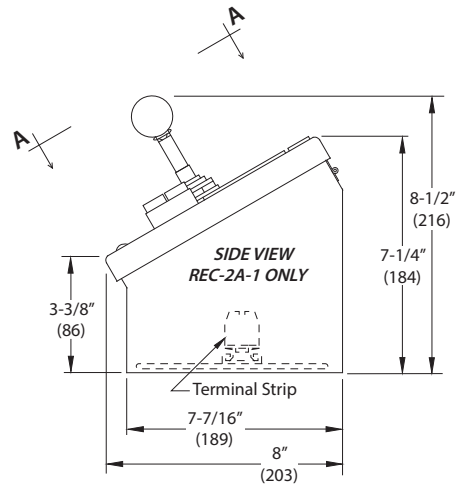


## REC REMOTE ELECTRIC CONTROL

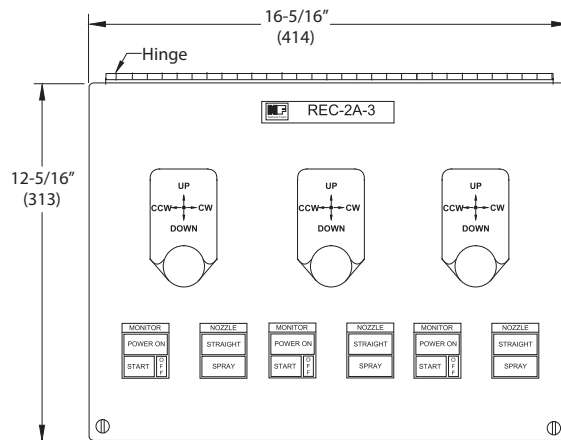
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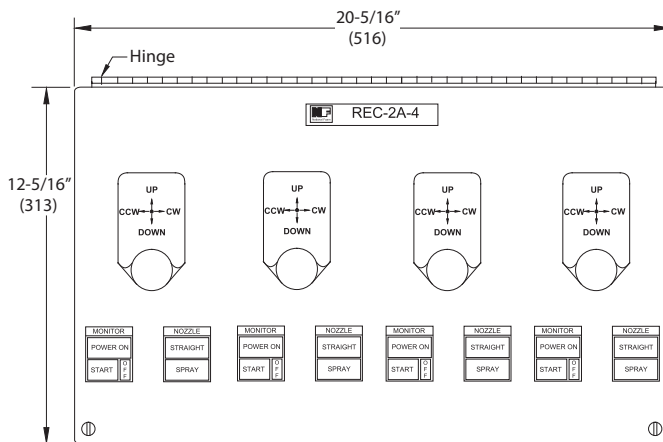
VIEW A-A



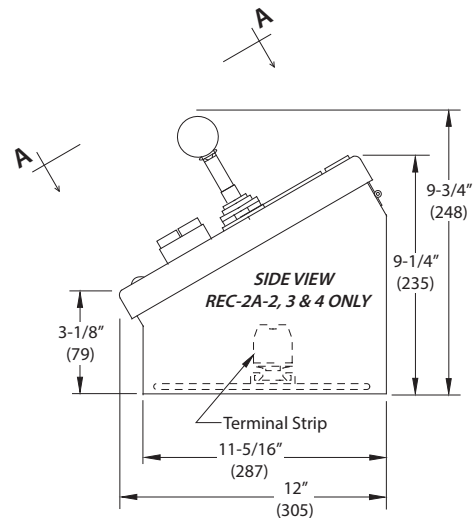
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VIEW A-A

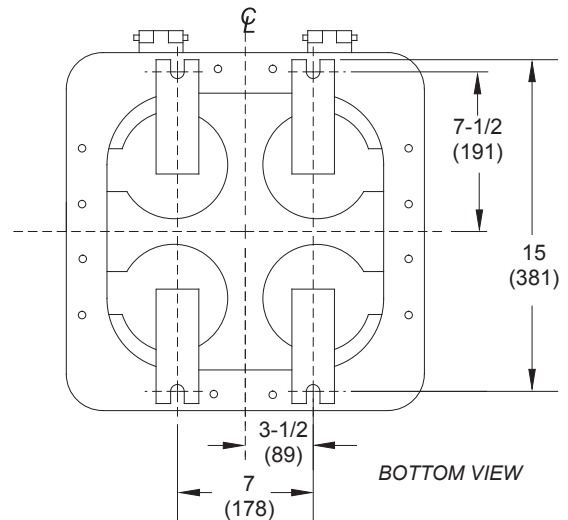
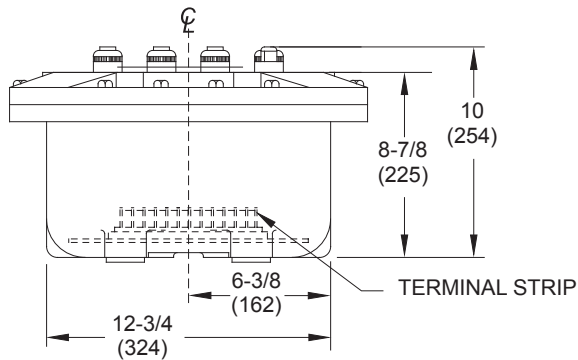
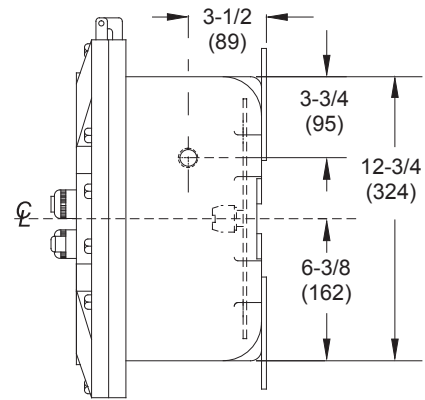
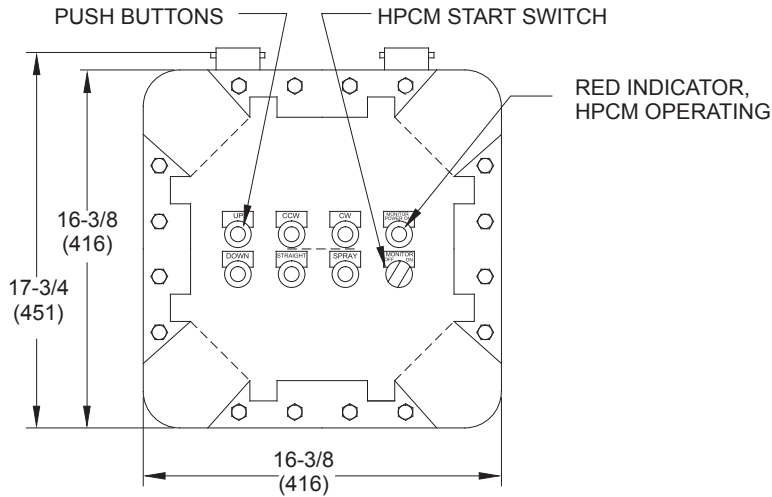


VIEW A-A



# REC REMOTE ELECTRIC CONTROL

NDD320



**REC-1A-EXN4**

### ORDERING INFORMATION

Part Number	Description	Enclosure	Mounting	Location	Stations	Voltage
1237-4102-1	REC-1A-N4	NEMA 4X	WALL MOUNT	OUTDOOR	1	115v
1237-4102-3	REC-1A-EXN4	EX. PR	WALL MOUNT	OUTDOOR	1	115v
1237-4102-4	REC-2A-1	NEMA 12	DESK TOP	INDOOR	1	115v
1237-4102-5	REC-2A-2	NEMA 12	DESK TOP	INDOOR	2	115v
1237-4102-6	REC-2A-3	NEMA 12	DESK TOP	INDOOR	3	115v
1237-4102-7	REC-2A-4	NEMA 12	DESK TOP	INDOOR	4	115v

### ASSOCIATED PRODUCTS

NDD300	HMB-4 Hydraulic Monitor
NCC310	HPCM-1-EX Hydraulic Control Module
NDD330	MCM Multiple Control Module