

# MMA-4 MANUAL ALUMINUM MONITOR

NDD260

- Full 4" Waterway
- Cast-In Turning Vanes For Efficient Flow
- Discharge Adapters Available To Fit Many Nozzles
- Standard ANSI Flange Inlet



## Description

The MMA-4 manually operated aluminum monitor offers unparalleled performance with simple, yet rugged design features that provide ease of operation, minimum maintenance, and resistance to normally destructive environments. MMA-4 Monitors are in active service from the Arctic Circle to the tropics.

## Features

- Lightweight cast aluminum construction
- Integrally cast straightener vanes in each elbow section to reduce waterway turbulence and friction loss
- Full 4" waterway
- Vertical and horizontal joints with internal brake band position locks
- Ball bearing type swivel joints equipped with O-ring seals to prevent water leakage
- Monitor designed to eliminate effects of nozzle thrust reaction
- Full 360° continuous rotation
- Angle of elevation infinitely adjustable from 90° above to 60° below horizontal
- Suitable for operating pressures from 50 to 250 psi (3.5 to 17.2 bar)

## Applications

MMA-4 manually operated aluminum monitors are commonly used for protection of flammable liquid storage tanks, dikes, and loading racks.

## Specifications

The monitor shall be of a single waterway, cast design with integrally cast straightener vanes in each elbow section to reduce waterway turbulence and friction loss. All waterways shall be a full 4" (102 mm) diameter and shall be capable of flowing a maximum of 2000 gpm (7571 lpm) with a pressure loss not exceeding 19 psi (1.31 bar). Monitor body shall be manufactured from cast aluminum, ASTM B179/A03560 heat treated T-6 with hard coat anodize to provide a lightweight, rugged design with superior corrosion resistance. Monitor shall have a 4" 150 lb ANSI flat face inlet flange and the outlet shall be 4" NH (NST) male hose thread. The discharge shall also be available with 2½" MNH, 3½" MNH, 4" MNH, and 4" FF flanged connections. The monitor shall have continuous rotational travel through 360°. Vertical elevation (up and down) travel shall be 90° above to 60° below horizontal (tapped holes are provided to stop travel past 45° above and at 0° horizontal.) Vertical and horizontal swivel joints shall incorporate an internal brake band position lock mechanism capable of holding position against 95 ft-lb of torque with 50 in-lb of torque applied to the position-locking knob. Swivel joints shall be a single race type with brass ball bearings and Buna-N O-ring seals to prevent water leakage through the swivel or dust, dirt, and other foreign matter from entering the ball bearing race.

The nozzle thrust reaction shall travel through the vertical axis of the rotational joint and through the horizontal axis of the elevation joint, thus eliminating any "pinwheel" effects due to torque acting on the swivel joints. Each monitor shall be supplied with a "T" handle fitted to a socket holder. The handle shall be easily removable by means of a quick release pin through the handle and handle socket.

## Technical Data

### Material of Construction:

Basic Monitor:

Cast Aluminum ASTM B179/A03560 heat treated T-6 with hard coat anodize

Ball Bearings..... Brass ASTM B134

O-Rings..... Buna-N

Handle ..... Brass ASTM B16

Misc. Hardware ..... Stainless Steel  
ASTM A276

Gas Spring:

Cylinder Body..... Carbon Steel  
ASTM A519,  
Epoxy coated

Cylinder Rod ..... Stainless Steel  
ASTM A276

### Connections:

Inlet..... 4"-150# ASA FF Flange

Discharge..... 2½" MNH, 3½" MNPSH,  
and 4" MNH; 4", 4" FF  
flange as required

Maximum Flow:...2000 GPM (7571 lpm)

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**Technical Data (cont.)**

Maximum Operating Pressure:  
250 Psi (17.2 Bar)

Pressure Loss:  
2000 gpm (7571 lpm).... 19 psi (1.31 bar)  
1500 gpm (5678 lpm).... 11 psi (0.76 bar)  
1000 gpm (3785 lpm)..... 5 psi (0.34 bar)

Nozzle Thrust Reaction:

$$\text{Lb thrust} = \text{flow} \times \sqrt{p} \times 0.0505$$

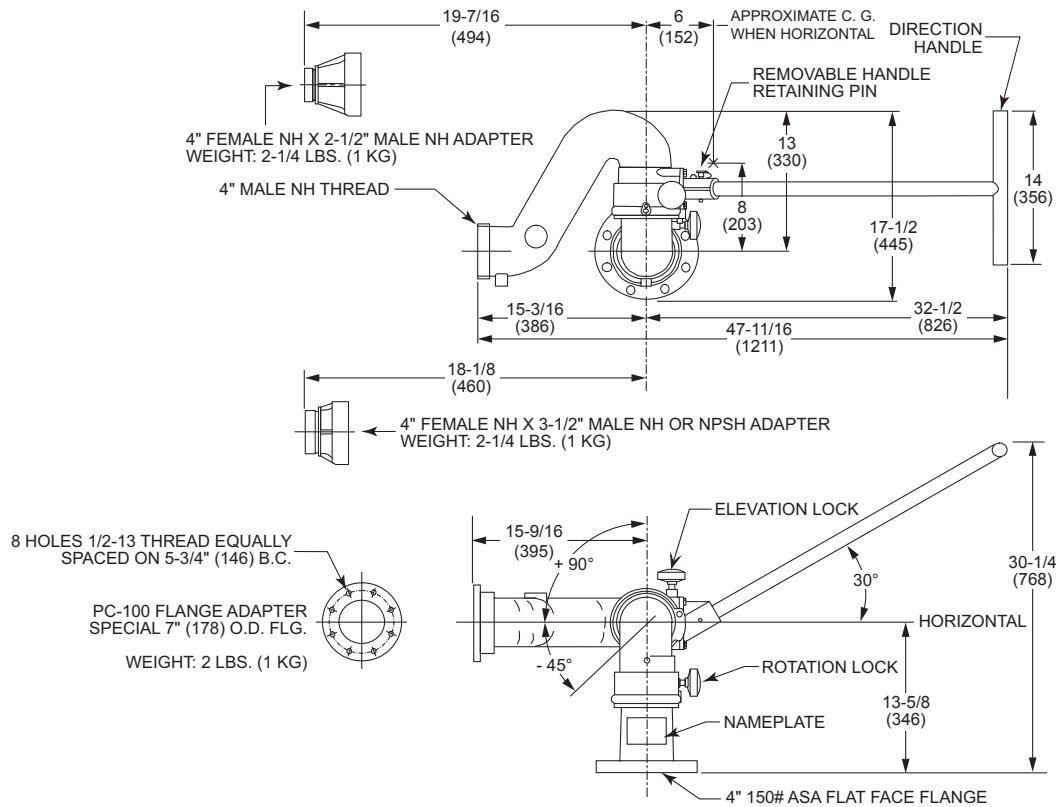
Finish:

Red polyurethane enamel paint

Weight: ..... 55 lbs. (25 kg)

**Options**

NPSH hose threads



**MMA-4 MANUAL ALUMINUM MONITOR**

**ORDERING INFORMATION**

Part Number	Description	Weight
1252-0007-5	MMA-4 Monitor 4" Flg. Discharge (PC-100)	57 lb (25.9 kg)
1252-0007-6	MMA-4 Monitor 2½" MNH Discharge	56 lb (25.4 kg)
1252-0007-7	MMA-4 Monitor 3½" MNPSH Discharge	56 lb (25.4 kg)