

# MONITOR - VAJRA 332

(CAST BRONZE)



## TECHNICAL DATA

|                                   |                                                                                                          |
|-----------------------------------|----------------------------------------------------------------------------------------------------------|
| MODEL                             | VAJRA 332                                                                                                |
| NOMINAL SIZE                      | 3 Inch (75 MM)                                                                                           |
| MAX. SERVICE PRESURE              | 175 PSI (12 Bar)                                                                                         |
| MAXIMUM FLOW                      | 1000 GPM (3800 LPM)                                                                                      |
| FACTORY HYDROSTATIC TEST PRESSURE | 500 PSI (35 Bar)                                                                                         |
| SWIVEL JOINT                      | Bronze to IS 318 / ASTM B 62 with double row of Stainless Steel Ball Bearing and Grease Fittings         |
| NOZZLE THRUST REACTION IN Kg.     | $\text{Flow in LPM} \times \sqrt{\text{Pressure in Kg./sq.cm.}} \times 0.0228$                           |
| INLET CONNECTION                  | 3" OR 4" (80 OR 100 NB) Flange to ANSI B16.24 #150, F.F.                                                 |
| OUTLET CONNECTION                 | 3" BSP (M)                                                                                               |
| MONITOR ELEVATION                 | 90 Deg. above horizontal & 65 Deg. below horizontal                                                      |
| MONITOR ROTATION                  | 360 Deg. continuous                                                                                      |
| MONITOR MOVEMENT                  | Single hand wheel driven enclosed worm gear for vertical movement and twist lock for horizontal movement |
| FINISH                            | Natural or Red RAL 3000                                                                                  |
| WEIGHT (Approx)                   | 48 Kg                                                                                                    |
| ORDERING INFORMATION              | Specify Monitor Model and Inlet Flange Size                                                              |

## DESCRIPTION

The monitor Model - VAJRA 332 is durable manual controlled low profile monitor for fixed installation as well as trailer mounted unit. The monitor is generally used for protection of flammable liquid storage tanks, loading racks, dykes marine and many other Industrial application.

The monitor possess several design features that provides ease of operation, minimum maintenance and resistance to corrosive environments. The monitor is used with aspirating, non-aspirating and water nozzles with flow range upto 1000 GPM (3800 LPM).



The monitor has cast bronze 3 inch (75 MM) waterway. The vertical and horizontal rotation is through corrosion resistant bronze swiveling joints with double row of stainless steel ball bearing. Vertical movement is controlled with single handwheel driven enclosed worm gear and there is a twist lock for horizontal movement.

The monitor has large flow capability and can be manually operated by a single fire fighter. The design ensures that the jet reaction forces do not affect the horizontal and the vertical position of the monitor. The monitor has the ability for 360 deg. continuous horizontal rotation and angle of elevation is adjustable with fix stop from 90 deg. above horizontal to 65 deg. below horizontal.

The water vanes in discharge tube reduces the turbulence and friction loss, thus increasing the nozzle performance to achieve greater range. To ensure desired performance, the friction loss through monitor must be considered while selecting the nozzle and the flow through the monitor with reference to available base pressure at inlet of the monitor. For flow and jet reach data refer monitor nozzle data sheet.

## **INSTALLATION, TESTING AND MAINTENANCE**

The monitor must be installed and operated carefully by a trained person, having good knowledge of equipment. Before assembly of the monitor to the supply piping, thoroughly flush the piping with water to avoid sand, residue, welding slag or other debris hindering the proper functioning of the monitor.

After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the monitor.

The monitor should be ready for use. To achieve this condition, scheduled inspection and maintenance operation should be performed and it must be recorded in the maintenance register book indicating the requirement or recommendation. The recommended maintenance, procedure must be followed as given in the manual and also as per the local authority having jurisdiction.

It is recommended to carry out on weekly basis physical inspection of the monitor. The inspection should verify that no damage has taken place to any component and the monitor is ready for use.

Carry out functional test every month for the flow, regular rotation in horizontal and vertical plane for the entire operating range to observe any leakage.

Periodic proper greasing through grease nipple provided on bearing, worm wheel and worm shaft must be ensured. Use water resistant low friction synthetic grease. Lubrication is required for smooth operation.

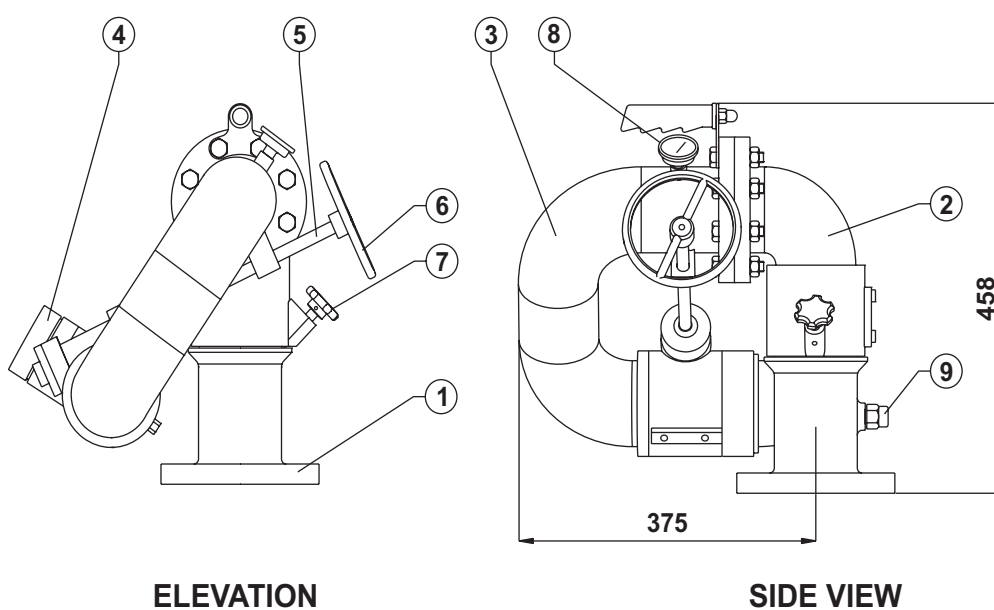
Each monitor must be operated with the full flow in accordance to the guidelines of the organisation having local jurisdiction.

The owner is responsible for maintaining the equipment in proper operating condition.

### **CAUTION**

- A trained personnel and for fire fighting must use the monitor. Appropriate guidance & training must be given to reduce the risk or injury.
- The nozzle must be fixed to the monitor carefully, The flange bolts must be tightened uniformly.
- The piping must be able to withstand the horizontal reaction force. Serious injury to personnel and equipment can result from improper installation.
- When installing monitor it is critical that flange bolts be tightened uniformly to prevent cocking of the monitor relative to the flange or valve.
- Before flowing water from monitor, check that all personnel are out of stream path and stream direction will not cause avoidable property damage.

- Application of water or foam on an electric appliance can cause serious injury.
- The water supply to monitor must be increased / decreased gradually to prevent possible water hammer occurrence.



### PART LIST

| ITEM NO. | DESCRIPTION    | MATERIAL SPECIFICATION    |
|----------|----------------|---------------------------|
| 1        | BASE FLANGE    | BRONZE IS 318 / ASTM B62  |
| 2        | SWIVEL JOINT   | BRONZE IS 318 / ASTM B62  |
| 3        | ELBOW          | IBRONZE IS 318 / ASTM B62 |
| 4        | NOZZLE ELBOW   | BRONZE IS 318 / ASTM B62  |
| 5        | WORM SHAFT     | STAINLESS STEEL           |
| 6        | HAND WHEEL     | BRONZE IS 318 / ASTM B62  |
| 7        | KNOB           | BAKELITE                  |
| 8        | PRESSURE GAUGE | 0-16 KG/SQ CM             |
| 9        | DRAIN VALVE    | BRASS                     |

Note:

- 1) Inlet flange standard size is 75 NB (3") or 100 NB (4") to ANSI B.16.24      2) All dimensions in mm and are approximate.

#### LIMITED WARRANTY

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#### NOTICE :

The equipment presented in this bulletin is to be installed in accordance with the latest publication standards of NFPA or other similar organisations and also with the provision of government codes or ordinances wherever applicable.

The information provided by us are to the best of our knowledge and belief, and are general guidelines only. Site handling and installation control is beyond our reach. Hence we give no guarantee for result and take no liability for damages, loss or penalties whatsoever, resulting from our suggestion, information, recommendation or damages due to our product.

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