

## Water-Powered Oscillating Unit and Oscillating Monitor Assemblies

### Features

The CHEMGUARD COM-HD water-powered oscillating unit is designed for use with any 3 in. water way manual monitor equipped with a standard 4 in. ANSI Class 150 flange inlet connection. When the monitor is connected to the oscillating unit, the monitor operates as an automatic water-powered oscillating monitor.

The heavy duty stainless steel swivel bearing and all stainless steel design of the body provide exceptional durability and corrosion-resistance for applications requiring long, continuous or repeated use in normal and harsh environments.

The innovative swivel bearing design (patent pending) allows for easy field replacement of only the bearing, in the unlikely event that the bearing wears out or is damaged through misuse or improper maintenance.

- The COM-HD is UL listed when sold as an assembly with the 3 in. BRAHMA monitor and CMNB350, CMNB500, or CMNB750 fixed flow monitor nozzle with 2-1/2 NHT connections. Refer to the UL Product IQ for foam concentrate - specific flow and pressure ranges.
- The COM-HD Oscillating Base Unit is FM Approved for use with water when used in conjunction with FM Approved Monitor and Nozzle assemblies. Refer to *FMAApprovals.com* for specific flow and pressure ranges.
- Materials of construction:
  - 304 Stainless Steel: Bearing, main body, connection flanges, linkage assembly, oscillator housings
  - Bronze: Water drive wheel, speed control valve, automatic drain valve
  - Brass: Check valve, test connection (garden hose adaptor)
- Suitable for use with most foam solutions.
- Arc of oscillation adjustable via six set points
  - 25, 40, 60, 80, 100, and 120 degrees
- Speed of oscillation is adjustable using the speed adjustment valve. Maximum speed is approximately 40 deg/sec. Speed may vary when switching from water flow to foam solution flow at same valve adjustment setting.
- Manual override capabilities in horizontal and vertical degree fields when purchased as an oscillating monitor assembly.
- Operating inlet pressure: Minimum 40 psi (2.8 bar)  
Maximum 200 psi (14 bar)
- Maximum flow rate 1250 gpm, with BRAHMA monitor.
- Double reduction oil bath gearbox.
- Standard grease zerk fittings for easy maintenance.
- Single tiller bar for positioning and control of the monitor.
- Oscillating monitor includes hose test connection for a functional check of the unit without flowing the system.
- Drain valve automatically drains oscillator base piping after system shutoff, to help provide cold weather protection.



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### Description

CHEMGUARD Water-Powered Oscillating Monitors are designed to automatically oscillate over a preset arc upon system activation, allowing discharge over a wide design area without manual intervention or the use of electrical power. This device is intended for use in firefighting foam systems designed in accordance with NFPA 11, NFPA 409, and/or NFPA 418, typically found in high risk areas such as tank farm facilities, refineries, aircraft hangars, and heliports.

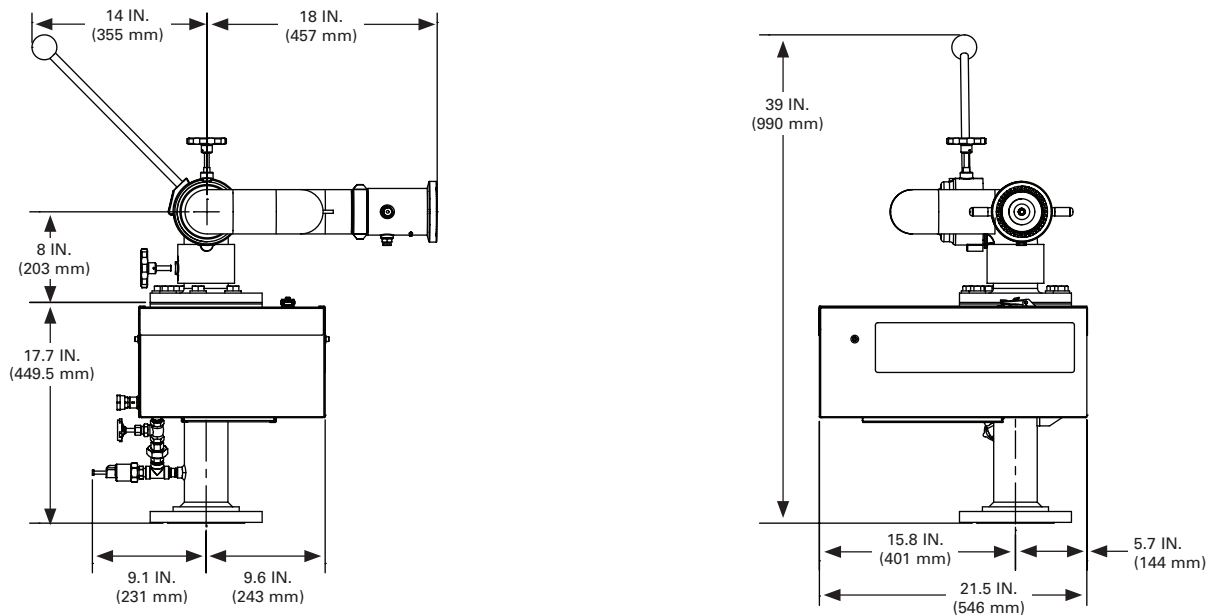
### Specifications

A water drive wheel connected to a double reduction gearbox drives the oscillating monitor. To operate the drive wheel, a small flow, not exceeding 13 gpm at maximum recommended oscillation speed, is diverted from the monitor inlet. The monitor requires no external wiring or hydraulic control for operation. The vertical angle of elevation and horizontal arc of oscillation is field adjustable and can be set and locked in position. The monitor can be set to oscillate over a range of 0° to 120° and the location of the oscillation arc may be set anywhere within the 360° field of operation. Elevation range of the unit is between 65° and -20°.

The CHEMGUARD COM-HD unit is available in three different configurations.

| Configuration | Description                                                                                                                                                                                     |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1             | Oscillating Base Unit:<br>Oscillating Unit only, standard 4 in. ANSI Class 150 inlet and outlet flange connections                                                                              |
| 2             | Oscillating Monitor Assembly:<br>Oscillating Unit complete with assembled 3 in. BRAHMA Monitor and choice of fixed flow nozzle with 2-1/2 NHT nozzle connections.                               |
| 3             | Oscillating Base Unit with <i>externally sourced</i> Monitor and Nozzle:<br>Oscillating Base Unit packaged with <i>externally sourced</i> monitor and nozzle options (may increase lead times). |

Dimensional Data

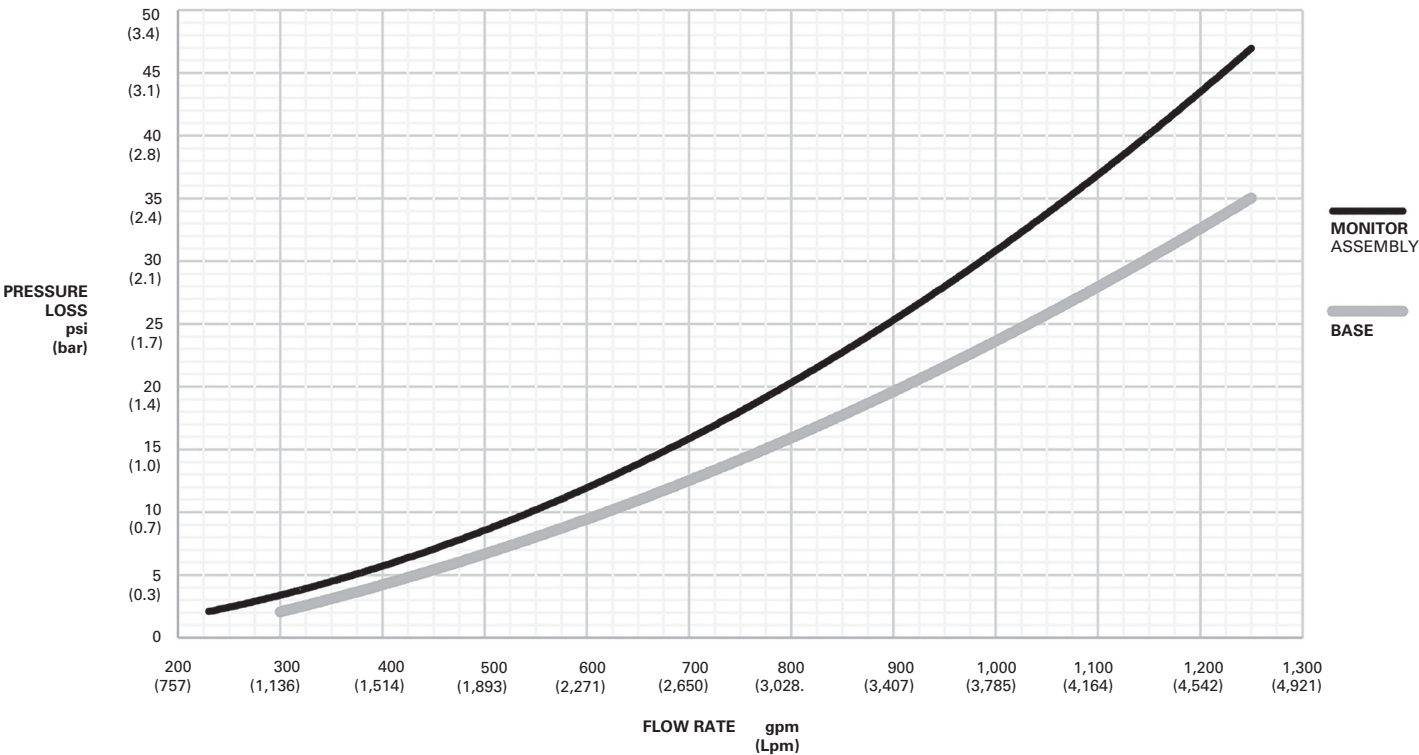


COM-HD WATER-POWERED OSCILLATING MONITOR ASSEMBLY

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- Note:** 1. Inlet flange to oscillator base unit is ANSI Class 150 raised face flange. Top flange (monitor connection) is ANSI Class 150 flat face flange.  
2. Dimensions are approximate and subject to change without notice.  
3. Oscillating monitor assembly must be installed in a vertical orientation, as shown.

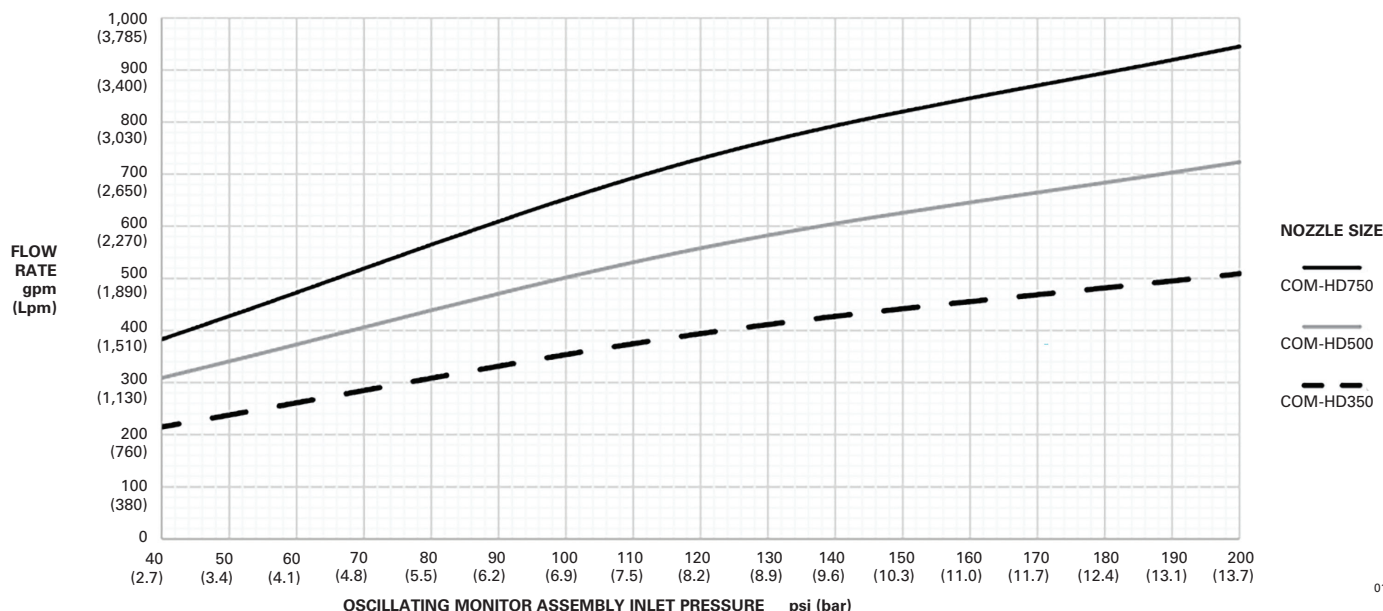
COM-HD BRAHMA Oscillating Monitor and Base Unit  
Pressure Loss vs Flow Rate



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**Note:** Pressure loss is measured with water only and may vary if used with foam solution or self-educing foam nozzles.  
Pressure loss data shown for the COM-HD BRAHMA Monitor Assembly is the pressure loss at the recommended maximum speed control valve setting (one turn open).  
Pressure loss data shown for the COM-HD Oscillating Base Unit is the maximum possible pressure loss, with speed control valve fully open.  
Pressure loss may be less for the oscillating base unit when speed control valve is set to recommended setting.  
Data are for reference only. Actual results may vary depending on environmental and testing conditions.

## COM-HD Oscillating Monitor Inlet Pressure vs. Flow Rate



**Note:** Flow rate data shown is the flow through the firefighting nozzle only. Up to an additional 13 gpm will be used to drive the oscillating mechanism when the speed control valve is adjusted at or below the recommended maximum oscillation speed setting.

Data obtained with water and for reference only. Actual results may vary depending on environmental and testing conditions. Refer to the CHEMGUARD Heavy Duty (HD) Water-Powered Oscillating Monitors Installation, Operation, and Maintenance Manual (Part No. 450929) for further guidance on the operational limitations. Operating this device outside of its recommended limitations may cause premature wear and eventually product damage or failure.

## Water-Powered Oscillating Monitor Reference Range Data

| COM-HD Water-Powered Oscillating Monitor |                               |                                                                        |                       |                    |                       |                     |                       |  |
|------------------------------------------|-------------------------------|------------------------------------------------------------------------|-----------------------|--------------------|-----------------------|---------------------|-----------------------|--|
| Monitor Model Number                     | Monitor Elevation Angle (deg) | Reference Range Data – reach/height in feet - (reach/height in meters) |                       |                    |                       |                     |                       |  |
|                                          |                               | Monitor Inlet Pressure - psi (bar)                                     |                       |                    |                       |                     |                       |  |
|                                          |                               | 50 psi (3.45 bar)                                                      |                       | 100 psi (6.90 bar) |                       | 150 psi (10.34 bar) |                       |  |
|                                          |                               | Fixed<br>ft (m)                                                        | Oscillating<br>ft (m) | Fixed<br>ft (m)    | Oscillating<br>ft (m) | Fixed<br>ft (m)     | Oscillating<br>ft (m) |  |
| COM-HD350                                | 5                             | 60/8 (18.0/2.4)                                                        | 55/8 (17.0/2.4)       | 110/10 (34.0/3.0)  | 100/9 (31.0/3.0)      | 135/12 (41.0/4.0)   | 120/10 (37.0/3.0)     |  |
|                                          | 15                            | 90/15 (27.0/5.0)                                                       | 80/14 (24.0/4.0)      | 135/20 (41.0/6.0)  | 125/18 (38.0/6.0)     | 170/23 (52.0/7.0)   | 150/21 (46.0/6.0)     |  |
|                                          | 30                            | 100/25 (30.0/8.0)                                                      | 90/23 (27.0/7.0)      | 145/32 (44.0/10.0) | 135/30 (41.0/9.0)     | 175/39 (53.0/12.0)  | 155/35 (47.0/11.0)    |  |
| COM-HD500                                | 5                             | 65/9 (20.0/3.0)                                                        | 60/9 (18.0/3.0)       | 115/10 (35.0/3.0)  | 105/9 (32.0/3.0)      | 150/13 (46.0/4.0)   | 135/11 (41.0/3.0)     |  |
|                                          | 15                            | 95/16 (29.0/5.0)                                                       | 85/15 (26.0/5.0)      | 155/23 (47.0/7.0)  | 145/21 (44.0/6.0)     | 185/25 (56.0/8.0)   | 165/23 (50.0/7.0)     |  |
|                                          | 30                            | 105/26 (32.0/8.0)                                                      | 95/24 (29.0/7.0)      | 165/36 (50.0/11.0) | 150/33 (46.0/10.0)    | 200/44 (61.0/13.0)  | 180/40 (55.0/12.0)    |  |
| COM-HD750                                | 5                             | 70/10 (21.0/3.0)                                                       | 65/10 (20.0/3.0)      | 120/11 (37.0/3.0)  | 105/11 (32.0/3.0)     | 160/14 (49.0/4.0)   | 140/13 (43.0/4.0)     |  |
|                                          | 15                            | 98/16 (30.0/5.0)                                                       | 88/16 (27.0/5.0)      | 155/23 (47.0/7.0)  | 146/21 (45.0/6.0)     | 185/25 (57.0/8.0)   | 168/23 (51.0/7.0)     |  |
|                                          | 30                            | 115/28 (35.0/9.0)                                                      | 98/25 (30.0/8.0)      | 170/36 (52.0/11.0) | 150/33 (46.0/10.0)    | 210/45 (64.0/14.0)  | 183/42 (56.0/13.0)    |  |

**Note:** 1. Throw distance and heights noted are with water flow only and provided discharge nozzle in no wind conditions. Distances and heights will be reduced by approximately 10% with foam solution. Wind or other environmental conditions will affect ranges as well.

2. Maximum discharge range is achieved at approximately 30°-35° elevation in low wind conditions, with nozzle adjusted to straight stream setting.

3. Some ranges are based on extrapolation of existing data and observations.

4. Maximum height of discharge stream is usually found at approximately 65% of maximum discharge range from nozzle, not at maximum discharge range.

For additional information, please visit [www.chemguard.com](http://www.chemguard.com)

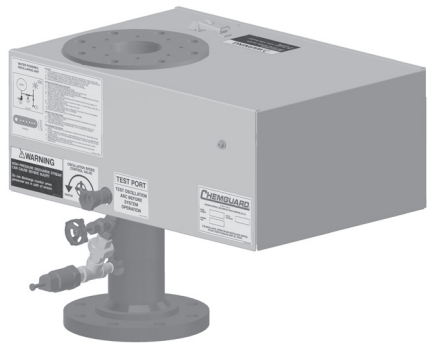
Applicable terms and conditions of sale, such as warranty can be found at [www.tycofsbp.com/TFPPTerms\\_of\\_Sale/TFPPTerms\\_of\\_Sale.pdf](http://www.tycofsbp.com/TFPPTerms_of_Sale/TFPPTerms_of_Sale.pdf)

# Ordering Information

## COM-HD Oscillating Monitor Assembly (Part No. 448974)

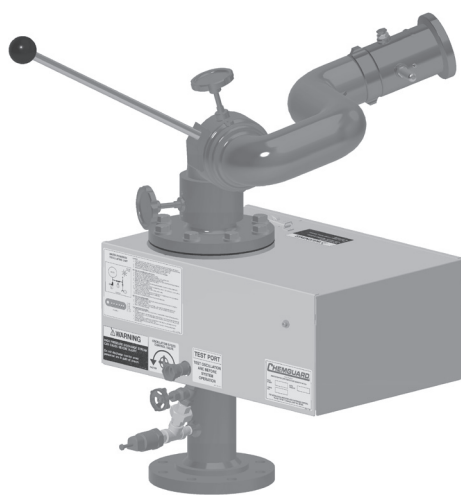
Order the COM-HD oscillating base unit as a stand-a-lone unit or configured as an oscillating monitor assembly. Contact Technical Services to order models and customized assemblies.

### COM-HD Oscillating Base Unit



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### COM-HD Oscillating Monitor Assembly



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Standard model options include:

| Model                   | Description                                                                   | Model         | Description                                                                                                             |
|-------------------------|-------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------|
| COM-HD <sup>†</sup>     | Oscillating Base Unit only                                                    | COM-HD350CEN  | Oscillating Monitor Assembly complete with BRAHMA Monitor and Elkhart Model HF350 Nozzle (Self-Educting Foam Nozzle)    |
| COM-HD350 <sup>**</sup> | Oscillating Monitor Assembly complete with BRAHMA Monitor and CMNB350 Nozzle  |               |                                                                                                                         |
| COM-HD500 <sup>**</sup> | Oscillating Monitor Assembly complete with BRAHMA Monitor and CMNB500 Nozzle  | COM-HD500CEN  | Oscillating Monitor Assembly complete with BRAHMA Monitor and Elkhart Model HF500 Nozzle (Self-Educting Foam Nozzle)    |
| COM-HD750 <sup>**</sup> | Oscillating Monitor Assembly complete with BRAHMA Monitor and CMNB750 Nozzle  | COM-HD750CEN  | Oscillating Monitor Assembly complete with BRAHMA Monitor and Williams Model LWNS750 Nozzle (Self-Educting Foam Nozzle) |
| COM-HD1000              | Oscillating Monitor Assembly complete with BRAHMA Monitor and CMNB1000 Nozzle | COM-HD1000CEN | Oscillating Monitor Assembly complete with BRAHMA Monitor and Akron Brass Style 4470 Nozzle (Self-Educting Foam Nozzle) |

<sup>†</sup> FM Approved: Approved for use with water when used with FM Approved monitor and nozzle assemblies. Refer to FM Approvals for specific flow and pressure ranges.

<sup>\*\*</sup> **UL Listed:** Refer to the UL Product IQ for foam concentrate - specific flow and pressure ranges.

**Note:** Contact Technical Services to obtain an electronic copy of the Heavy Duty (HD) Water-Powered Oscillating Monitors Installation, Operation and Maintenance Manual (Part No. 450929).

**Note:** The converted values in this document are provided for dimensional reference only and do not reflect an actual measurement.

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