

# RIM SEAL FOAM POURER

## MODEL - RPA & RPA-S



### TECHNICAL DATA

MODEL	RPA 65 – Carbon Steel RPA-S 65 – Stainless Steel
SIZE	65 NB INLET
WORKING PRESSURE	Refer Table-I
FLANGE CONNECTION	ANSI B16.5 class 150#
FINISH	Red RAL 3001
APPROVAL	UL Listed & FM Approved Refer Table-I
ORDERING INFORMATION	a) Model b) Flow & Pressure at inlet of each Foam Pourer c) Foam concentrate used



### APPLICATION

HD Rim Seal Foam Pouter – RPA consists mainly of Foam Maker, a windshield and an integral deflector. The RPA is designed to deliver fully aspirated foam directly to the annular seal area of open top floating roof tank. The Rim Seal Foam Pouter is used for one of the most common applications of protecting tank seal in vertical liquid storage tank with internal floating roof with low expansion foam system. The application of aspirated foam is on the basis of the risk comprising the area in the annular ring between the rim of the floating roof and the tank shell. The Foam system design guidelines generally used are in accordance with NFPA 11 standard. Rim Seal Foam Pouters are defined by NFPA 11 as Type II discharge outlets for delivering the low expansion aspirated foam to the seal. The Rim Seal Foam Pouters are widely used with Inline Foam Inductor, Balance Pressure Foam Proportioning System, Bladder Tank system or Foam tenders.

### SPECIFICATION

The Rim Seal Foam Pouter is an air aspirating foam generator connected to the foam pouter to deliver the aspirated foam gently into the tank seal area. The rim seal foam pouter covers a wide range of foam solution rates from 50 to 550 liters per minute at 2.8 to 7 kg/ sq.cm inlet pressure. Each rim seal foam pouter is supplied with an orifice plate, designed for the required flow at inlet pressure. The orifice is field replaceable in the event of change in design parameters. The foam is produced by introducing air into the foam solution stream. The inlet of foam maker is designed to create venturi jet which draws air into the foam solution stream. The air is drawn into the foam solution through holes located on the foam maker covered with stainless steel screen to exclude nesting birds and insects.

### SYSTEM DESIGN REQUIREMENT

For essential requirement of appropriately designed foam pouring system for storage tanks refer NFPA-11/ OISD/ TAC/ Governmental codes or ordinances wherever applicable.

\*Refer to UL/FM directory for specific foam concentrate working pressure.

### INSTALLATION, TESTING & MAINTENANCE

Carefully unpack Rim Seal Pouter. While unpacking and installation it is to be handled with care and shocks to be avoided. Check visually for any damages. While installing, ensure that the Rim Seal Pouter is not under stress due to any misalignments in installation or variations of system piping. Ensure that the strainer assembly is clear from any blockages or damages. If strainer assembly is either blocked or damaged, it will adversely affect the performance of the equipment.

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

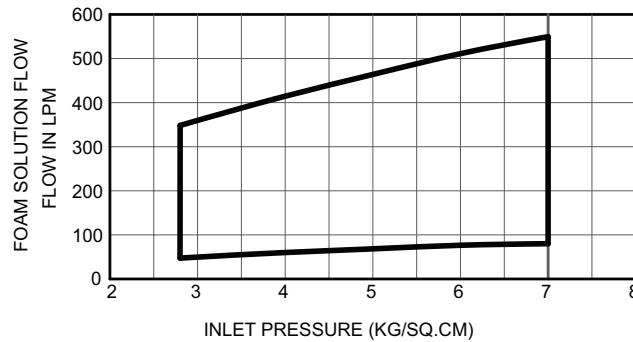
It is recommended to carry out physical inspection of the system regularly. The system must be fully tested at least once in a year or in accordance to the standards of the organization having local jurisdiction. Do not turn off the system or any valve to make repair or test the system, without placing a roving Fire Patrol in the area covered by the system. The Patrol should continue until the system is put back in service. Also inform the local security guard and control alarm station, so as to avoid false alarm. Each system is to be flushed properly.

To test the RPA without discharging the foam into the tank seal area, the RPA is to be rotated 180° away from the wind shield. The air screen is to be inspected

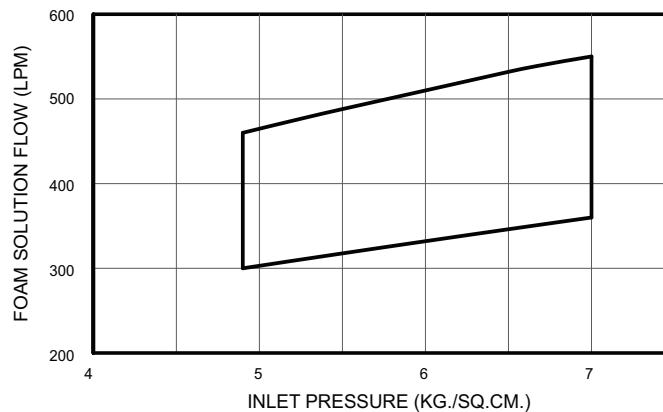
periodically for obstruction of air inlet holes. If any obstruction is noticed, remove the same and flush, if necessary. The RPA outlet and pourer, if exposed to atmospheric condition, should be periodically

inspected for nest and other obstructions. The obstruction, if noticed, must be removed and flushed to clear the discharge path. The owner is responsible for testing, inspection and maintenance of the Rim Seal Foam Pourer.

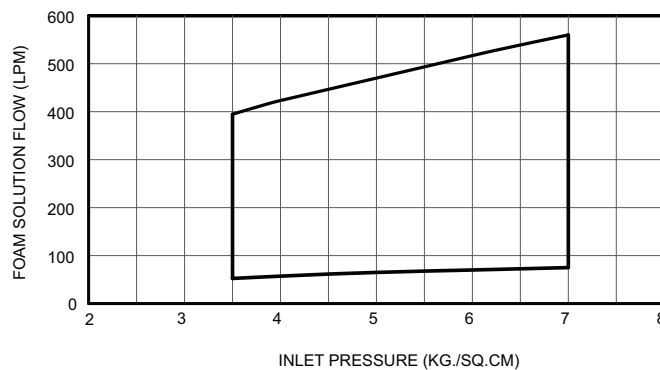
**PRESSURE VS FLOW PERFORMANCE CHARACTERISTIC  
UL LISTED WITH FOAM CONCENTRATE AFFF 3%**



**PRESSURE VS FLOW PERFORMANCE CHARACTERISTIC  
FM APPROVED WITH FOAM CONCENTRATE AFFF 3%**



**PRESSURE VS FLOW PERFORMANCE CHARACTERISTIC  
FM APPROVED WITH FOAM CONCENTRATE HD AR-AFFF 3X3%**



**TABLE I - Selection of HD RIM SEAL FOAM POURER**

FOAM CONCENTRATE	AFFF 3%	AFFF 3%	AR-AFFF 3X3%
* APPROVALS	UL LISTED	FM APPROVED	
WORKING PRESSURE	2.8 Kg/cm <sup>2</sup> To 7 Kg/cm <sup>2</sup>	4.9 Kg/cm <sup>2</sup> To 7 Kg/cm <sup>2</sup>	3.5 Kg/cm <sup>2</sup> To 7 Kg/cm <sup>2</sup>
K-FACTOR	30 To 208	135.5 To 208	29 To 211

\* Refer to UL/FM directory for specific foam concentrate, working pressure and flow.

To calculate the K Factor of Rim Seal Pourer, use the following formula:

$$Q = K \sqrt{P}$$

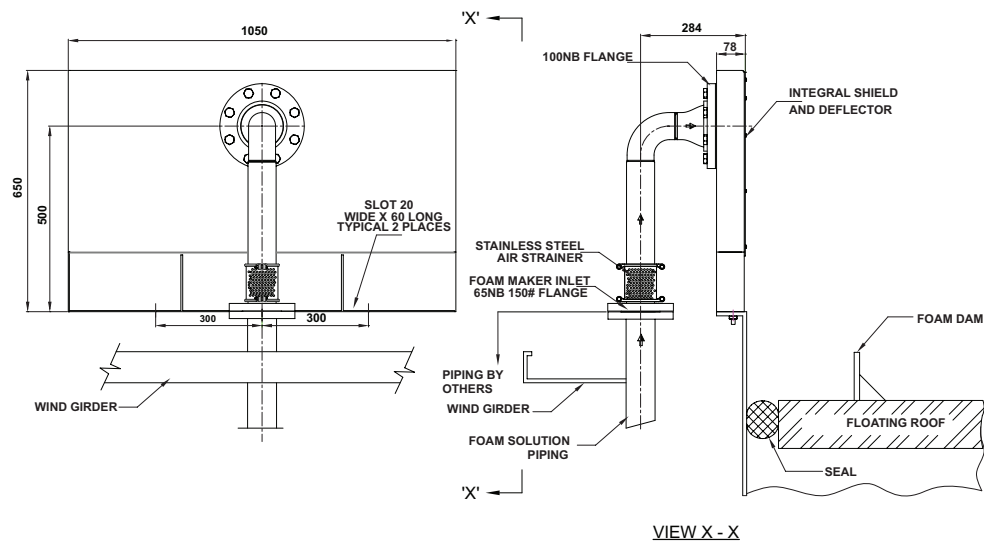
Where,

Q = Total solution flow in litres per minute.

K = Constant for Foam Chamber

P = Inlet pressure in kg/sq.cm.

### TYPICAL INSTALLATION OF RIM SEAL FOAM POURER MODEL: RPA 65 & RPA-S 65



All Dimensions are in MM (Approx.)

**NOTE:**

1. STRAINER ASSEMBLY CONSISTS OF SS PERFORATED SHEET, SS STRAINER HOLDER & GALVANISED NUT/BOLT.
2. A PROVISION IS TO BE MADE FOR PRESSURE GAUGE MOUNTING AT INLET OF RPA, WHICH MAY BE PLUGGED AFTER SUCCESSFUL COMMISSIONING OF THE SYSTEM. THIS PROVISION WILL HELP TO ANALYSE THE SYSTEM WHILE COMMISSIONING.
3. FM APPROVAL AND UL LISTING OF EQUIPMENT ARE VALID ONLY WHEN USED WITH HD FOAM CONCENTRATE IN A MANNER AS LISTED AND AS IN APPROVAL DATA.
4. FM APPROVAL IS VALID ONLY WHEN TOTAL SYSTEM IS HAVING APPROVED PRODUCTS.
5. REFER TO THE INDIVIDUAL FOAM UL LISTING AND FM APPROVAL FOR OPERATING LIMITATION WITH EACH FOAM CONCENTRATE AND RIM SEAL FOAM POURER.

#### LIMITED WARRANTY

HD FIRE PROTECT PVT. LTD. hereby referred to as HD FIRE warrants to the original purchaser of the fire protection products manufactured by HD FIRE and to any other person to whom such equipment is transferred, that such products will be free from defect in material and workmanship under normal use and care, for two (2) years from the date of shipment by HD FIRE. Products or Components supplied or used by HD FIRE, but manufactured by others, are warranted only to the extent of the manufacturer's warranty. No warranty is given for product or components which have been subject to misuse, improper installation, corrosion, unauthorized repair, alteration or un-maintained. HD FIRE shall not be responsible for system design errors or improper installation or inaccurate or incomplete information supplied by buyer or buyer's representatives. HD FIRE will repair or replace defective material free of charge, which is returned to our factory, transportation charge prepaid, provided after our inspection the material is found to have been defective at the time of initial shipment from our works. HD FIRE shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of the product including damages for injury to person, damages to property and penalties resulting from any products and components manufactured by HD FIRE. HD FIRE shall not be liable for any damages or labour charges or expense in making repair or adjustment to the product. HD FIRE shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data & services. In no event shall HD Fire's product liability exceed an amount equal to the sale price. The foregoing warranty is exclusive and in lieu of all other warranties and representation whether expressed, implied, oral or written, including but not limited to, any implied warranties or merchantability or fitness for a particular purpose. All such other warranties and representations are hereby cancelled.

#### 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 is to the best of our knowledge and belief, and consist of general guidelines only. Site handling and installation control is not in our scope. 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.

Product development is a continuous programme of HD FIRE PROTECT PVT. LTD. and hence the right to modify any specification without prior notice is reserved with the company.



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