

### JAL-OAGH 100, 300 SERIES OF EMF

These flow meters are dedicated for waste water management system, sewage & effluent water measurement. These flow meters are mainly categorized into two i.e. Threaded & Wafer type. Threaded is available from DN 25 to DN 65 i.e. Jal-oagh 100 Series while Wafer is available from DN 50 to DN 200 i.e. Jal-oagh 300 Series.

### Principle of Operation :

The JAL-OAGH series of electromagnetic flow meters work on FARADAY'S LAW OF ELECTROMAGNETIC INDUCTION. When a conductor moves within a magnetic field, voltage is induced in it which is proportional to the velocity of the conductor.

In this case the conductor is flowing media. The equation is as below:

$$E = B.v.D$$

Where:

E = Induced voltage [proportional to velocity]

B = Magnetic flux density

v = Mean velocity of the media

d = distance between the sensing electrodes

For a given size of flow tube & compatible amplifier the flux density 'B' is constant, the distance between the electrodes is constant. Hence, the induced voltage is proportional to the velocity of the flowing media. Thus the unit can be calibrated in terms of volumetric flow rate by knowing the cross-sectional area of the tube.

### JAL-OAGH APPLICATION :

1. Effluent Treatment :  
Untreated as well as Treated Effluent Water Measurement.
2. Sewage Treatment :  
Waste water measurement, Sludge measurement etc.
3. Water Supply Schemes :  
Raw water as well as treated water measurement.
4. Boiler Feed Water Measurement.
5. Chemical Industries :  
Measurement of acidic & alkaline chemicals & slurries.

### Principal advantages of JAL-OAGH :

- 1) Small in size, Light in weight compared to other magnetic meters in its class
- 2) Full bore electromagnetic flow meter with absolutely no restriction to flow
- 3) Has a typical accuracy of  $\pm 0.5\%$ .
- 4) Measurement is independent of the velocity profile across the pipe
- 5) Measurement results are independent of density, viscosity, pressure, temperature, solid impurities and conductivity variations (above  $5\mu$  S/cm for MFT-01 & above  $20\mu$  S/cm for (SMART JAL-OAGH)

### SPECIFICATIONS :

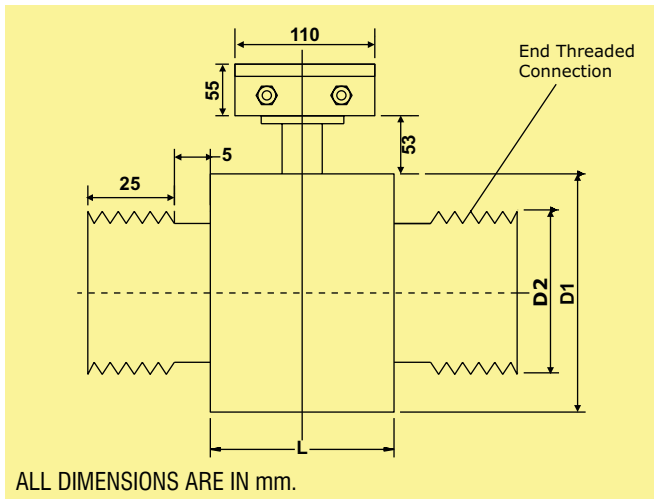
#### PRIMARY FLOW TUBE : JAL-OAGH

1. Metering tube : Jal-oagh 101(Threaded-Rubber)  
Jal-oagh 102(Threaded-Rubber-SMART)  
Jal-oagh 301(Wafer-Rubber)  
Jal-oagh 302 (Wafer- PTFE)  
Jal-oagh 303 (Wafer-Rubber-SMART)  
Jal-oagh 304 (Wafer-PTFE-SMART)
2. Meter Size : DN 25-DN 65 (Threaded)  
DN 50-DN 200 (Wafer)
3. Media Pressure : Upto DN 80 - PN - 40  
From DN 100 - DN 150 - PN - 16  
DN 200 - PN 10
4. Media Temperature : Rubber Liner 0-90C°max  
PTFE Liner 0-150C° max
5. Operating Temperature Range : 0-50C°
6. Material of Construction : a) Flow Tube: SS 304 (non-magnetic)  
b) Electrodes: SS 316, Hastelloy/C  
c) Liner: Ebonite, PTFE  
d) Body material: SS 304 /C.S.
7. End Connections : Threaded:BSP/NPT (M)  
Wafer: DN 50 - DN 150 Meter to be sandwiched between Two ANSI 150 class Flanges.  
DN 200 Meter to be sandwiched between two BS10 Table F Flanges.
8. Power Supply to field coils : Pulsed D.C.

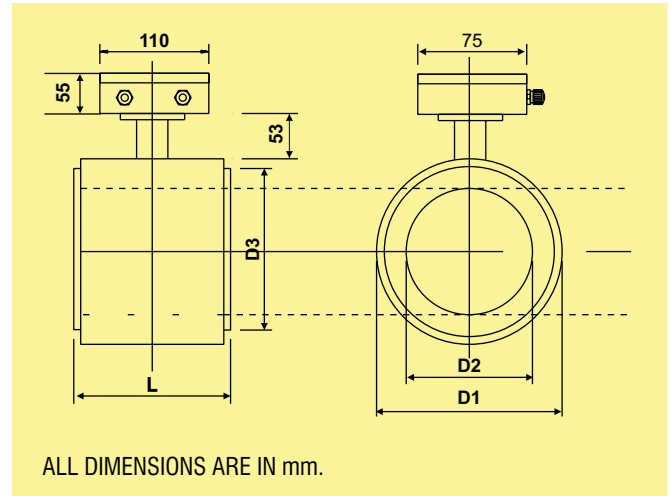


## Electromagnetic Flowmeter - Wafer Type

## MODEL - JAL-OAGH SERIES



MTR Size	D1	D2	L	BSP/NPT
DN 25	66	24.3	76	1"
DN 32	75	32.5	76	1.25"
DN 40	85	38.1	76	1.5"
DN 50	104	49.25	76	2"
DN 65	123	59.0	102	2.5"



MTR Size	D1	D2	D3	L
DN 50	104	43.5	92.0	107
DN 65	123	53.5	105.0	128
DN 80	136	69.0	127.0	128
DN 100	174	93.5	157.0	160
DN 125	196	118.0	186.0	160
DN 150	222	144.0	216.0	160
DN 200	305	192.0	285.0	220

<b>FLOW SENSOR TYPE</b>	TR 101 : Threaded	TR 102 : Threaded SMART			
<b>FLOW SENSOR SIZE</b>	DN 25 : 1"	DN 32 : 1 1/4"	DN 40 : 1 1/2"	DN 50 : 2"	DN 65 : 2 1/2"
<b>FLOW TRANSMITTER</b>	MFT 01: Mag Flow Transmitter	SJ 1101: SMART Jal-oagh Transmitter			
<b>MOUNTING</b>	FT01 : Integral	FT02 : Remote-Wall	FT03 : Remote-Pipe		
<b>POWER SUPPLY</b>	01: 110 V AC ± 10%, 50 /60 Hz	02: 230 V AC ± 10%, 50 /60 Hz	03: *85 V AC to 265 V AC, 50/60 Hz		
<b>TR 101 DN 40 MFT01 FT01 02 Sample Order Code</b>					

**Note :** Threaded style flowmeter is available only from line size DN 25 to DN 65 with rubber lining.  
\* This Power Supply option is applicable only to SJ-1101.

<b>FLOW SENSOR TYPE</b>	WA 301 : Wafer-Rubber	WA 302 : Wafer-PTFE	WA 303 : Wafer-Rubber-SMART	WA 304 : Wafer-PTFE-SMART			
<b>FLOW SENSOR SIZE</b>	DN 50 : 2"	DN 65 : 2 1/2"	DN 80 : 3"	DN 100: 4"	DN 125: 5"	DN 150: 6"	DN 200: 8"
<b>ELECTRODE MATERIAL</b>	EM 01: Stainless Steel 316	EM 02: Hastelloy C	EM 03: Any Other				
<b>BODY MATERIAL</b>	CS : Carbon Steel	SS 304: Stainless Steel 304	SS 316: Stainless Steel 316				
<b>FLOW TRANSMITTER</b>	MFT- 01 : Mag Flow Transmitter	SJ -1101 : SMART Jal-oagh Transmitter					
<b>MOUNTING</b>	FT 01 :Integral	FT 02 :Remote-Wall	FT 03 :Remote-Pipe				
<b>POWER SUPPLY</b>	01 : 110 V AC ± 10%, 50/60 Hz	02 : 230 V AC ± 10%, 50 /60 Hz	03 : *85 V AC to 265 V AC, 50/60 Hz				
<b>WA 301 DN 100 EM 01 CS SJ-1101 FT 01 02 Sample Order Code</b>							

**Note:** Wafer Style flowmeter is available from line size DN 50 to DN 200.  
\*This Power Supply option is applicable only to SJ-1101.



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