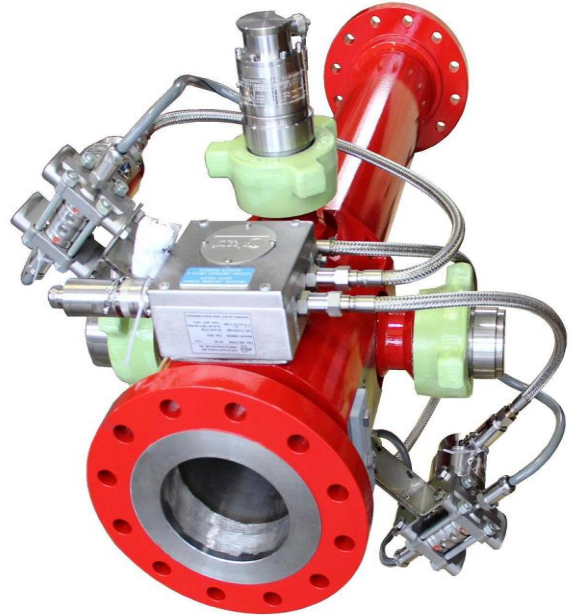


SERIES MFU

MULTIPHASE FLOW UNIT
(PATENTED)



DESCRIPTION

The **MULTIPHASE-FLOW-UNIT - MFU SERIES** is a fluid metering system to be installed on oil production wells and is able to manage an accurate and repeatable fluid measurement for different fluid conditions combining sensor technology and a fluid dynamic validation software.

MFU is consisting of:

- ✓ VEN Series Venturi tube on the inlet column
- ✓ T7W Series Oil in water measurement instrument water cut
- ✓ 3SEP® Series Density measurement on output column
- ✓ T7H smart transmitters
- ✓ T7HD smart transmitters
- ✓ UNIT electronic flow computing unit

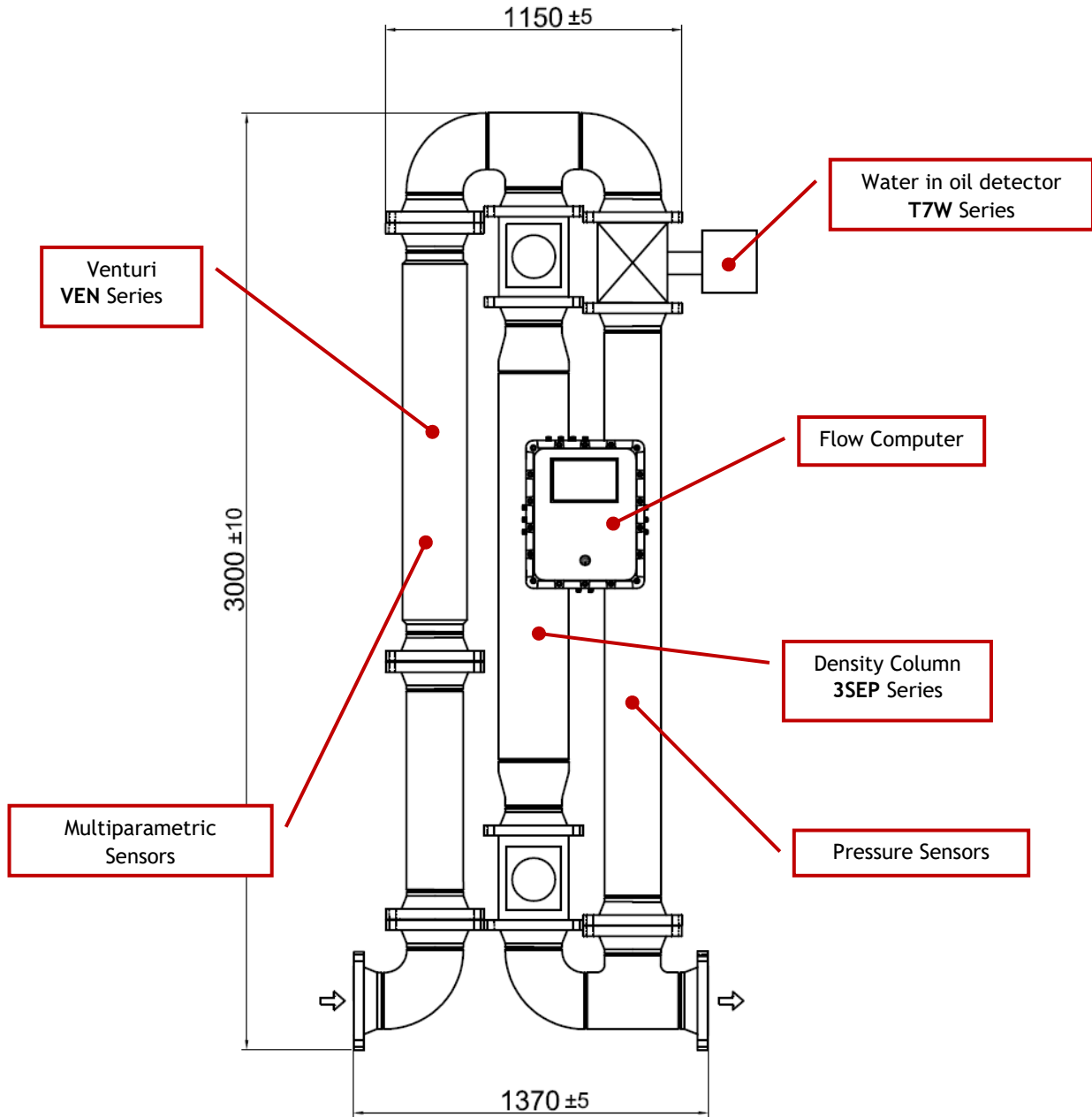
MAIN SYSTEM FEATURES

- ✓ Real time flow measurement
- ✓ Accurate real time measurement of Oil Water and Gas without separation of the phases
- ✓ Easy to transport and install

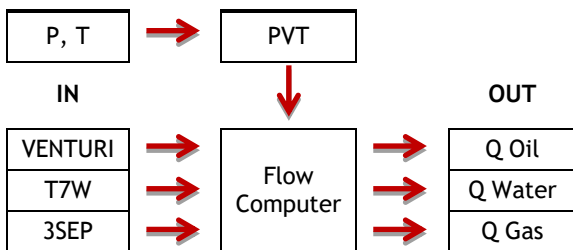
TRANSMITTERS PHYSICAL CHARACTERISTICS

- ✓ Power supply: 12.5 - 30 Vdc
- ✓ Output signal: Analog 4-20mA, 2 wires / Digital HART® / MODBUS RS485

LAYOUT OF INSTALLATION
















DATA PATH



DIMENSIONS

The Multiphase Flow Unit MFU series can be supplied with different nominal diameters:
 ✓ 2", 3", 4", 6", 8"
 And with different ratings as:
 ✓ ANSI 300, 600 or API 3000.
 Thus, the dimensions are depending on selected size and rating (please refer to our sales department).

EUROPEAN LEGISLATION APPROVALS

T7H	Smart pressure transmitter				
T7HD	Smart Differential pressure transmitter				
T7W	Smart Water in Oil transmitter				
VEN	Venturi tube				
3SEP	Density column				
FLOW COMPUTER	-				

Compliant with Directive 2004/108/EC (EMC).

AMBIENT CONDITIONS

- ✓ Temperature:
Process fluid (Std): $-40 \div +80^{\circ}\text{C}$ (Std), up to 283°C (On request)
Transmitters: $-40 \div +80^{\circ}\text{C}$
Handling and storage: $-40 \div +90^{\circ}\text{C}$
- ✓ Relative Humidity: from 0 to 100% R.H.

MFU PERFORMANCES

- ✓ Oil flow rate: $\pm 2\%$ to $\pm 6\%$
- ✓ Water flow rate: $\pm 2\%$ to $\pm 6\%$
- ✓ Gas flow rate: $\pm 1.5\%$ to $\pm 5\%$

TRANSMITTERS PHYSICAL SPECIFICATIONS

- ✓ Housing: SS AISI316 IP67, Dust and sand tight, protected against sea wave effects as defined by IEC IP67. Suitable for tropical climate operation as defined by DIN 50015.
- ✓ Covers O-ring: EPDM.
- ✓ Filling fluid: silicon oil.
- ✓ Nameplate: stainless steel, fixed on housing.
- ✓ Electrical connections: Intrinsically safe plug connectors.

WETTED PARTS (TRANSMITTERS)

- ✓ AISI 316L Nace MR0175 compliance.
- ✓ Inconel.
- ✓ Tantalum and others on request.

OPTIONS (VENTURI)

- ✓ Wetted parts: AISI 4130, Duplex, Hard insert, etc..

ORDERING CODE

MFU Multiphase Flow Unit

01 Configuration Type	
<input type="checkbox"/>	A MFU Complete set with skid
<input type="checkbox"/>	B MFU Complete set without skid
02 Pipe Nominal diameter	
<input type="checkbox"/>	1 2"
<input type="checkbox"/>	2 3"
<input type="checkbox"/>	3 4"
<input type="checkbox"/>	4 6"
<input type="checkbox"/>	5 8"
<input type="checkbox"/>	9 Others
03 Pipe Rating	
<input type="checkbox"/>	A ANSI 300
<input type="checkbox"/>	B ANSI 600
<input type="checkbox"/>	D API 3000
<input type="checkbox"/>	Z Special
04 Body Material	
<input type="checkbox"/>	A AISI 4130
<input type="checkbox"/>	B Duplex
<input type="checkbox"/>	Z Other (SS AISI 316)
05 Housing material (sensors)	
<input type="checkbox"/>	1 SS AISI 316
06 Explosion protection (sensors)	
<input type="checkbox"/>	0 Ex ia Intrinsic Safety
<input type="checkbox"/>	1 Ex d Explosion Proof