Quality Management System, Environment and Safety

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

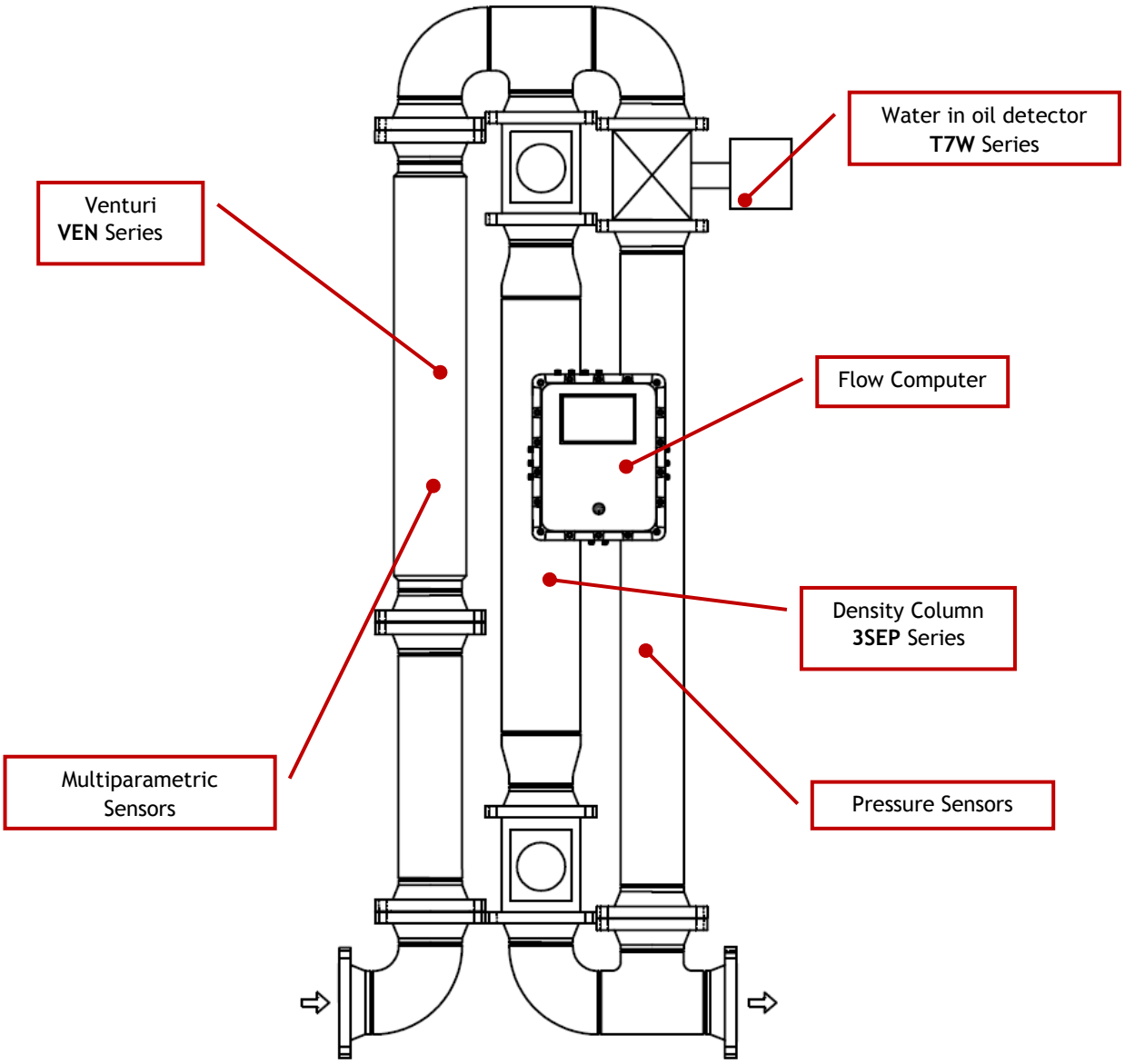
MAIN SYSTEM FEATURES

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

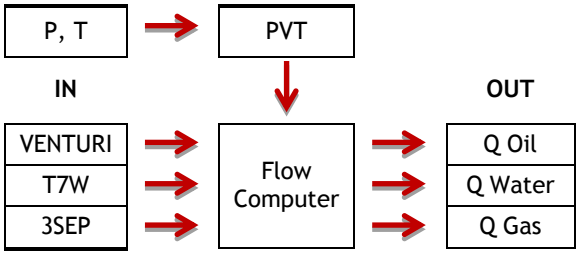
TRANSMITTERS PHYSICAL CHARACTERISTICS

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

LAYOUT OF INSTALLATION



DATA PATH



DIMENSIONS

The **M**ultiphase **F**low **U**nit **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).

VALCOM® - www.valcom.it - valcom@terranova-instruments.com
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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 ÷ +80°C (Std), up to 283°C (On request)
  Transmitters: -40 ÷ +80°C
  Handling and storage: -40 ÷ +90°C
- ✓ Relative Humidity: from 0 to 100% R.H.

MFU PERFORMANCES

- ✓ Oil flow rate: ±2% to ±6%
- ✓ Water flow rate: ±2% to ±6%
- ✓ Gas flow rate: ±8% to ±10%

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

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