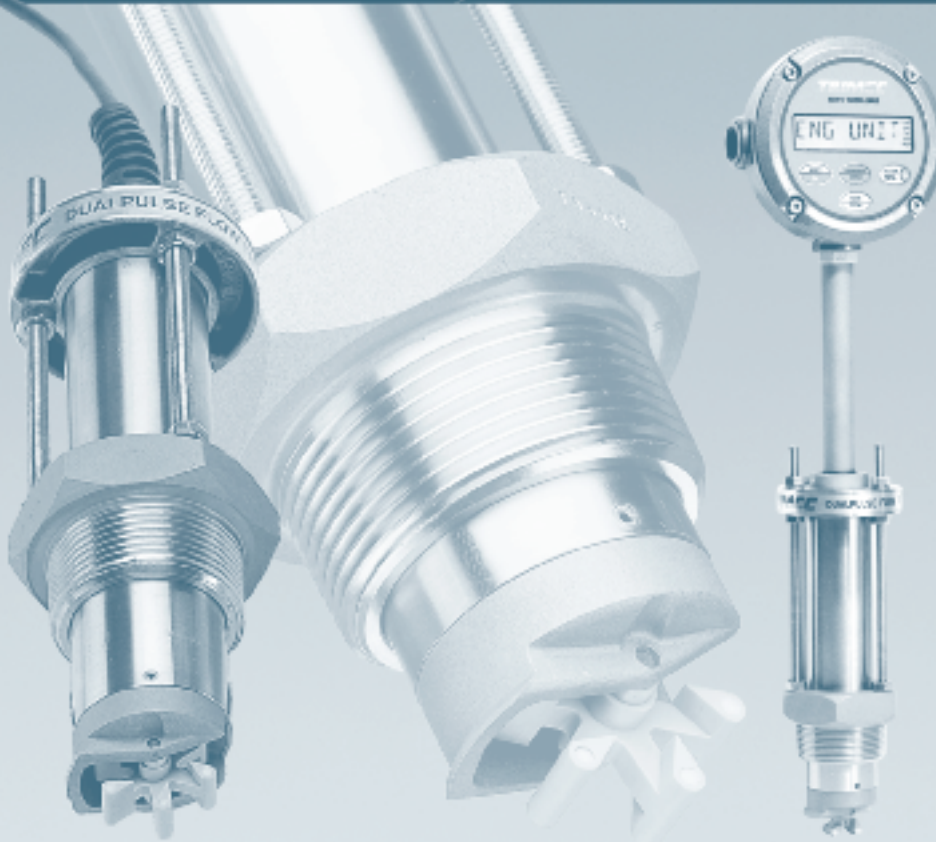


# Dual Pulse Insertion Flow Transducers



## Quality and Simplicity in Flow Measurement

### Overview

The Dualpulse insertion flow transducer is an innovative design combining well proven technology with the performance enhanced by the use of modern engineering materials to provide a cost effective and reliable means of measuring the flow of a wide variety of low viscosity of liquids.

### Robust Construction

A durable peek rotor with a graphite-PTFE impregnated peek bearing rotates around a precision ground tungsten carbide rotor shaft to promote longevity. The body is all 316 stainless steel.

The unique metering head & aerofoil shaped rotor are shaped to extend the linear measuring range to cover flow velocities from 0.3-10 m/sec (1-33ft/sec).

### Wide Application

Typical industry applications include:

*HVAC* - Hot & chilled water, Fire system & Thermal energy monitoring.

*Municipal* - Water distribution, Water management and Water treatment.

*Irrigation* - Water management.

*Water treatment* - Chlorination, De-salination & mechanical filtration plants, Chemical injection systems.

*Refineries* - Primary flow additive injection, Fire & cooling systems.

*Power generation* - Boiler feed water, Steam condensate, Process water & water balancing.

*Chemical* - Process & cooling tower water, Chemical & water batching.

*Others* - Cement Mfg, Diesel fuel transferring, Flow testing, Fire truck & Hydrant flow monitoring, Food processing, Pulp/paper, Mining.

## Features

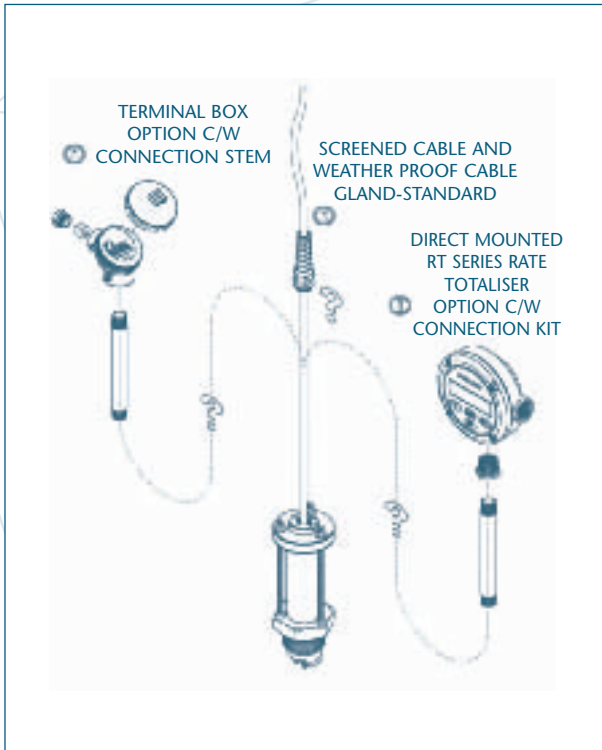
- IP68 (Nema 6) 316L stainless steel construction
- Suits pipes 40 to 2500mm NB (1½" to 100" nominal bore)
- Low installed cost
- Dual independent pulse outputs each with high noise immunity (CE compliant)
- High pressure submersible design
- Both open collector and a non powered voltage pulse output as standard
- DP525 series suitable for Hot Tap installations

## Options

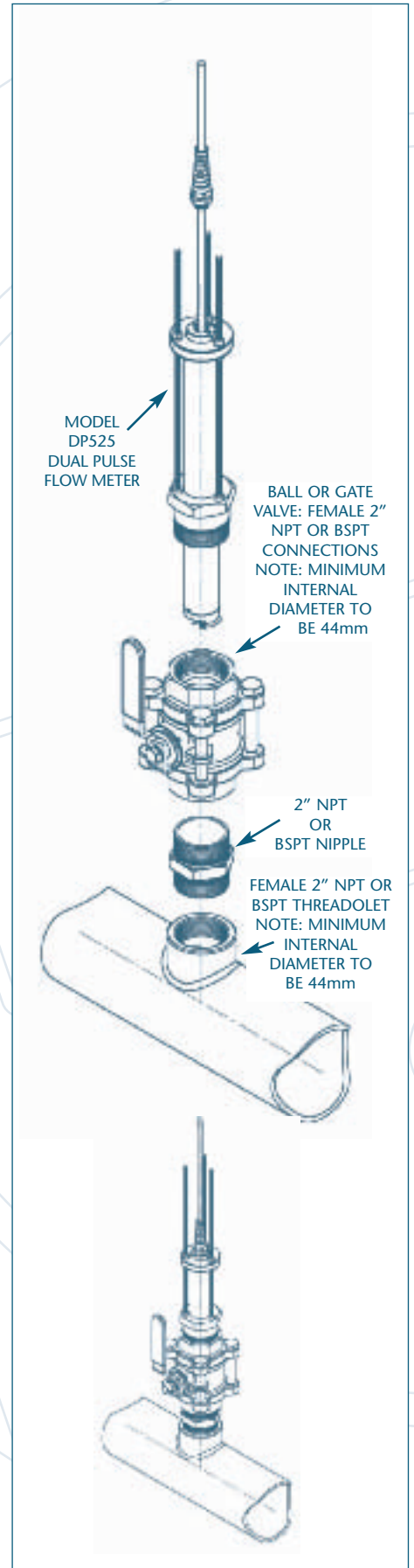
- High temperature to 204°C (400°F)
- Reed switch option for hazardous area operation (intrinsically safe)
- Integral or remote self powered flow rate-totaliser with scaled pulse, analog and flow alarm outputs (see separate data sheet)
- Integral or remote high speed preset batch controller (see separate data sheet)
- Non magnetic rotor option for liquids containing ferrous suspensions
- Optional I.S. Coil output or Bi-directional discriminator output
- Integral Data Logger.

# TRIMEC

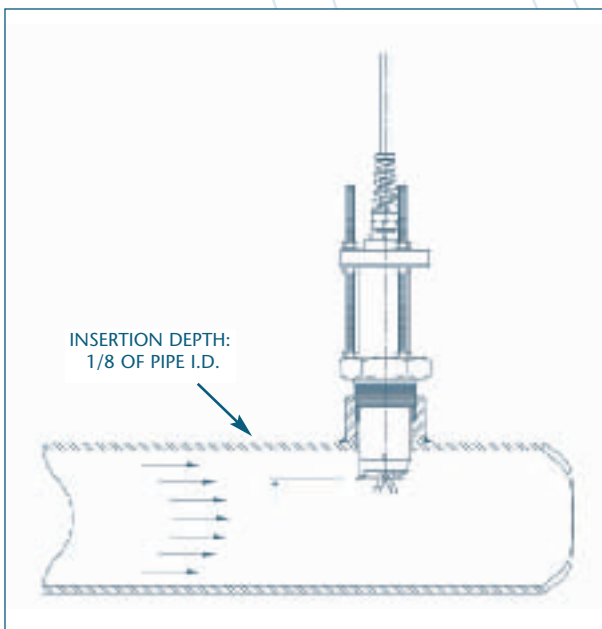
## General Arrangement



## Hot Tap Installation



## Standard Installation



13mm

# Dualpulse Specifications

	<b>DP490</b>	<b>DP525</b>
Model Prefix		
Suit Pipe Sizes	40 ~ 900 mm (1½ ~ 36")	50 ~ 2500 mm (2 ~ 100")
Process Connections	1½" BSPT (G1.5) or 1½" NPT	2" BSPT (G2) or 2" NPT
Body & O-ring Material	316L (1.4404) stainless steel body & rotor shaft, viton O-rings	
Rotor Material	PEEK (polyetheretherketone) with graphite-PTFE impregnated bearing	
Velocity Range	0.3 ~ 10 metres/sec. (1 ~ 33 ft/sec.)	
Flow Range	0.38 ~ 6300 litres/sec. (6 ~ 99600 USGPM)	
Linearity & Repeatability	Linearity typically ±1.5%, Repeatability ±1% with well established flow profile	
Maximum Pressure	80 bar (1200 PSI)	
Temperature Ranges	Standard -40°C ~ 100°C (-40°F ~ 212°F) plus 3 options up to 204°C (400°F)	
Outputs (standard) transmission to 1000m (3300 ft) max.	<ul style="list-style-type: none"> <li>▶ Voltage Pulse self generated 1.5V x 10µs (2 wire) 220~240hz max.</li> <li>▶ Open Collector NPN 5~24VDC square wave (3 wire) 220~240hz max.</li> </ul>	
Outputs ( optional )	<ul style="list-style-type: none"> <li>▶ Reed Switch (2 wire) 66 ~ 80hz max. [ can be used as I.S. with barrier ]</li> <li>▶ Non magnetic rotor + Hall Effect output ( for liquids with ferrous impurities )</li> <li>▶ I.S. inductance coil (2 wire) 400 ~ 480hz max.</li> <li>▶ High temperature voltage pulse output to 200°C (400°F).</li> <li>▶ Quadrature output (dual Hall Effect output with 90° phase shift).</li> </ul>	
Conduit Entry	3/8" NPT or PG9 conduit thread (M16 x 1.5 on terminal box option)	
Cable	3 metres (10ft) screened 5 core as standard, longer lengths are optional.	
Mounting Requirements	BSP / NPT service saddle or thread-o-let	
Shipping Weights	1.3 kg (3lbs)	1.5 kg (3.3lbs)

## Remote Mounting Options for 100 Series Electronics



Pipe Mount



Panel Mount



Wall Mount

**Size**

DP490	40-900mm pipes (1.5-36") - 1 1/2" BSP/NPT process connections
DP525	50-2500mm pipes ( 2-100") hot-tap version - 2" BSP/NPT process connections.

**Body material**

S	316 Stainless Steel
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**Rotor material**

2	PEEK with a graphite-PTFE impregnated bearing
9	Special

**O-ring materials**

1	Viton
9	Special

**Maximum temperature**

2	125°C ( 258°F )
3	150°C ( 300°F ) - NPN output only
5	100°C ( 185°F ) - standard
6	-60 to +200°C (-80 to +400°F) - see output type 6

**Process connections**

- 1	BSPT male thread
- 2	NPT male thread
- V	Victaulic Joint 50mm grooved

**Output type**

1	NPN open collector & voltage pulse - standard
2	NPN open collector only
3	Reed switch only (can use with an I.S. barrier)
4	Non magnetic rotor with NPN output*
5	Intrinsically safe Coil output
6	High temp. voltage pulse to +200°C (+400°F)

*\*for liquids with ferrous impurities (max. 85°C)*

**Electrical connections**

1	3 metres cable - standard
2	10 metres cable
3	20 metres cable
4	50 metres cable
5	Terminal box on stem kit
6	Stem kit for integral options R1, R2 & R3
9	Special

**Integral options**

00	No options
QP	Quadrature pulse output
R1	RT11 (scaleable pulse output)
R2	RT12 (RT11+ 4-20mA & alarms)
R3	RT13 (RT12+data logger)

DP490	S	2	1	5	-	1	1	1	00
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Model No. Example