

DUALPULSE – insertion flowmeters

DP490 & DP525 are cost effective stainless steel flowmeters for measuring the flow of water, fuels & other low viscosity liquids in pipes sizes 1.5"~100" (40~2500mm). Insertion flowmeters are installed with the metering head 1/8th into the pipe resulting in very little pressure drop. They do not require external power when used with the Trimec rate totalizers, however some options such as high temperature & non-magnetic models require external power.

Applications include HVAC, hot & chilled water, fire systems, water distribution (management & treatment), boiler feed water & hydrant flow testing.

FEATURES:

- IP68 (NEMA6) submersible 316SS construction.
- Low cost of ownership, wide flow range.
- Rugged & compact design.
- Intrinsically safe hazardous area versions.
- Integral or remote pre-amplifiers & flow instruments.
- DP525 version suitable for "hot tap" installation.
- Quadrature pulse output option & Bi-Directional Flow Measurement
- Integral 4-20mA output option

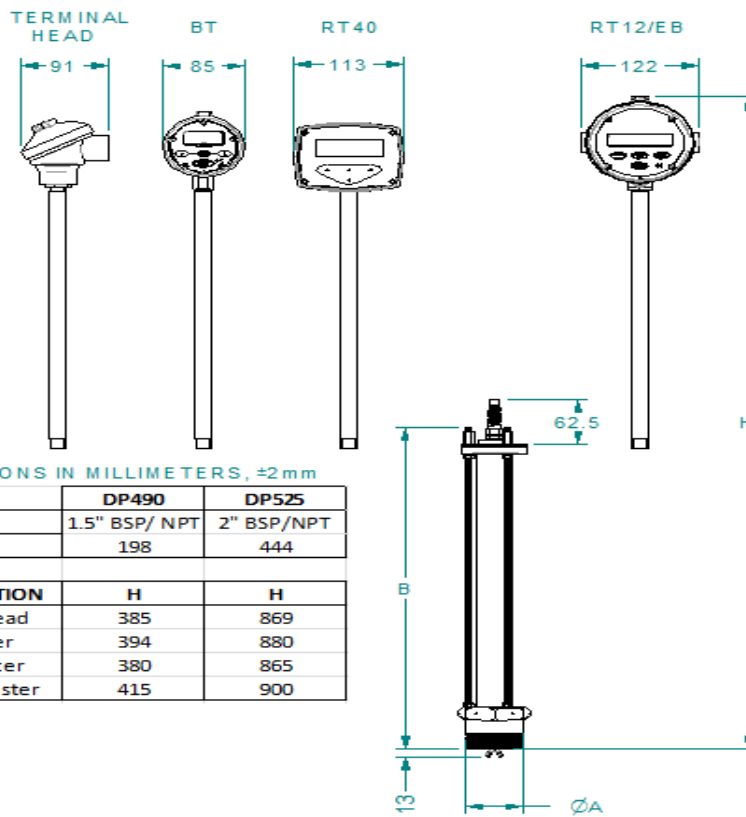


General Specifications

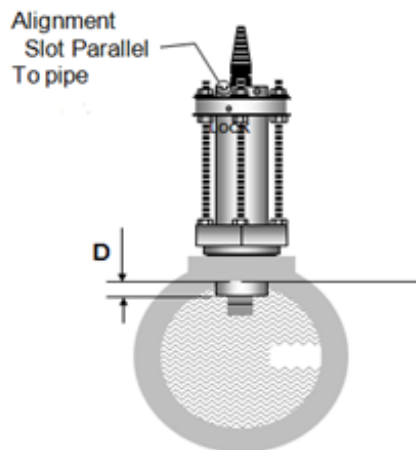
Model Prefix	DP490	DP525
Suit pipe sizes	40~900mm (1.5" ~ 35")	50~2500mm (2"~100")
Pipe connection	1.5" or 2" BSPT or NPT male	2" BSPT or NPT male
Flow range	0.25 ~ 6300 litres/sec (4 ~ 99600 USGM)	0.4 ~ 49000 litres/sec (6 ~ 780000 USGM)
Flow velocity range	0.3 ~ 10 metres/sec (1 ~ 33 feet/sec)	
Linearity	typically ± 1.5% with well-established flow profile	
Temperature range	-40°C ~ +150°C (-40°F ~ +300°F)	
Maximum pressure	80 bar (1160 psig)	
Materials	316ss body & rotor shaft, PVDF rotor (PEEK rotor optional)	
Pulse Outputs		
Reed switch	30Vdc x 200mA (max.), Nom. 0 ~ 80hz*	
Hall effect	3 wire NPN, 5 ~ 24 VDC, 20mA (max.) Nom. 0 ~ 240hz	
Voltage Pulse	Self-Generated voltage. Nom. 0 ~ 240hz	
Non-magnetic sensor	3 wire NPN, 5~24Vdc max., 20mA max. Nom. 0 ~ 240hz	
Optional outputs	4~20mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control	
Protection class	IP68 (NEMA6), integral ancillaries can be supplied I.S. (intrinsically safe)	
Overall dimensions	Refer over page	

* Reed Switch resolution is 1/3rd that of the NPN Hall Effect or Voltage pulse outputs.

Over all Dimensions:

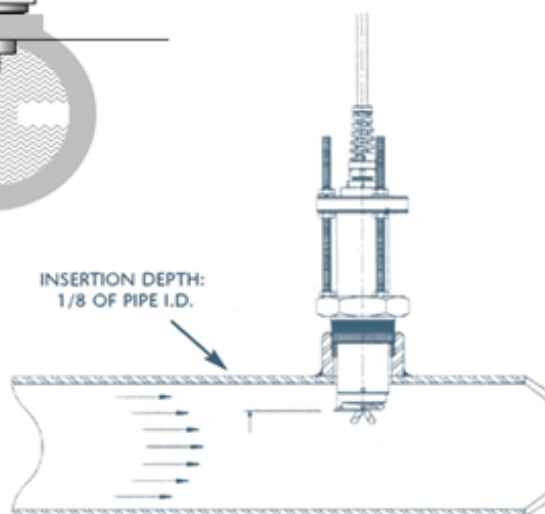


Standard Installation:



Examples of insertion depth D :

- For 40mm pipe ID (D= 5.0 mm)
- For 50mm pipe ID (D= 6.25 mm)
- For 100mm pipe ID (D= 12.5 mm)
- For 400mm pipe ID (D= 50.0 mm)



Model Coding – Dual Pulse Flowmeters:



DP490	1.5 to 36" pipes (40 - 900mm)
DP525	2 to 100" pipes (50 - 2500 mm) suitable for "hot-tap" installations (valve not included)

Body material

S	316 Stainless Steel
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Rotor & bearing materials

1	PEEK high temperature rotor w ith stainless steel rotor shaft; - 150°C (300°F)
2	PVDF rotor w ith 316 stainless steel rotor shaft (standard); 100°C (212°F)

O-ring materials

1	Viton (standard); -15°C (5°F) minimum
2	EPR (Ethylene Propylene Rubber); -40~+125°C (-40~+260°F)
3	Teflon encapsulated viton or application specific; -15°C (5°F) minimum
4	Buna-N (Nitrile), -40~+100°C (-40~+212°F)

Temperature limits

5	100°C (212°F) standard, (85°C [185°F] maximum for non magnetic output type 4) and FI 4-20mA
2	125°C (260°F) - available with electrical connections 5 & 6 & PEEK rotor only
3	150°C (300°F) - NPN output only (available with electrical connection 5 & PEEK rotor only)

Process connections

-	1	BSPT male thread - 1½" (DP490)	2" (DP525)
-	2	NPT male thread - 1½" (DP490)	2" (DP525)
-	3	2" BSPT male thread on the DP490	
-	4	2" NPT male thread on the DP490	

Pick-up type

1	NPN open collector & voltage pulse (standard)
2	NPN open collector(s) only (for temp code 3 or QP option)
3	Reed switch only (may be used with an I.S. barrier or instrument in hazardous areas)
4	Non magnetic rotor w ith NPN output (for liquids with ferrous impurities, needs power)
8	NPN open collector & Reed Sw itch

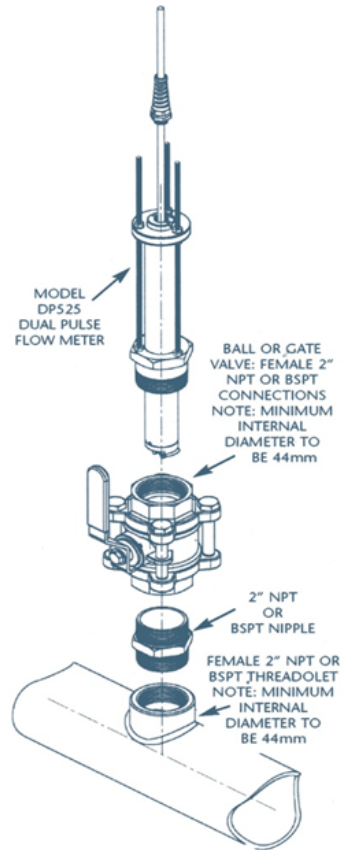
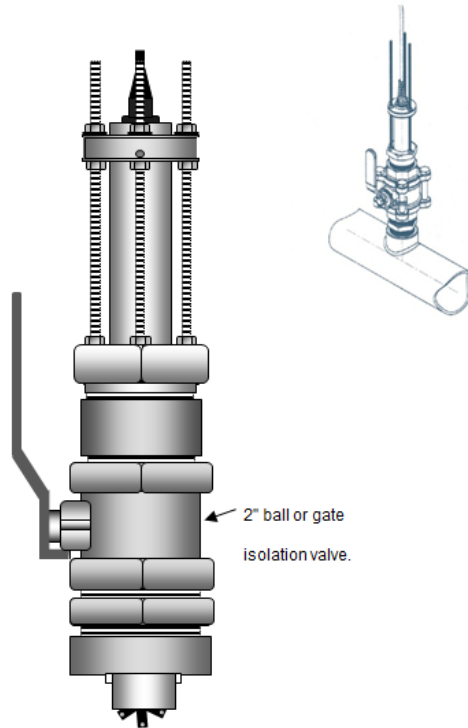
Electrical connections

1	3 metres cable [10ft] (standard)
2	10 metres cable [33ft]
3	20 metres cable [66ft]
4	50 metres cable [164ft] (for longer lengths refer to factory)
5	Terminal box on stem kit (add this for integral output option FI, 4-20mA output)
6	Stem kit (price included with integral options B2, B3, R2, R3 & E0)

Integral options

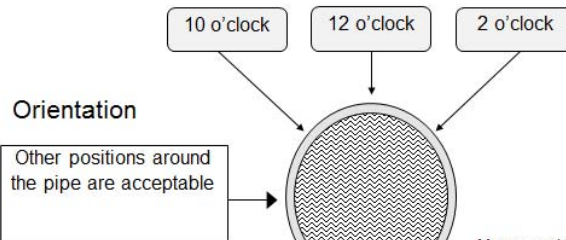
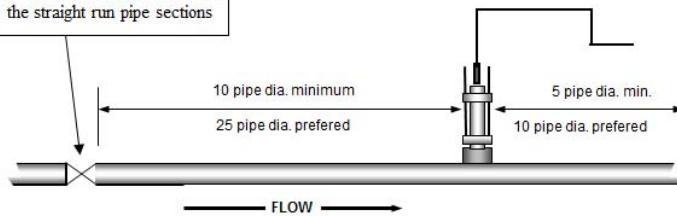
	QP	Quadrature pulse output (requires PD2 for bi-directional flow capability)
with scaleable pulse output	B2	BT11 dual totaliser (with scaleable pulse output)
IECEX & ATEX approved	B3	I.S. intrinsically safe BT11 including output
scaled pulse, alarms & 4-20mA	R0	RT12 rate totaliser w ith all outputs (Alloy housing)
scaled pulse, alarms & 4-20mA	R2	RT12 rate totaliser w ith all outputs
IECEX & ATEX approved	R3	I.S. intrinsically safe RT12 w ith all outputs
scaled pulse + backlighting	R4	* RT40 large LCD flow rate totaliser
	FI	Loop powered 4-20mA analog output (also add elec. connection 5 terminal box on stem kit)
	E0	Ecobatch dc powered two stage batch controller
	SB	Specific build requirement

Hot Tap Installation



Major obstructions such as pumps, valves, reducers or strainers to be kept well outside the straight run pipe sections

Installation Straight Piping Requirements



Mount on either the 2, 10 or 12 o'clock positions of the pipe. If there is any likelihood of air entrainment in a horizontal pipe do not locate the flow transducer in the 12 o'clock position.

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