

KDG

Tees Series Self-Powered Contents Gauges

Data sheet
0019

Features

- No probes or floats
- Completely automatic
- Local or remote indication
- Twin indicators available
- Calibration - to user's requirements
- Models to suit most requirements
- Requires no external power

Widely used to measure

Paints	Varnish
Resins	Chemicals
Latex compounds	
Printing inks	
Heavy fuel oils, etc.	
Water treatment plant	
Chemical process plant	
Liquid sugar	
Molasses	
Many food products	

Description

The Tees Series hydrostatic tank contents gauge is suitable for installation on any shape or size of storage vessel that is freely vented to atmosphere. In certain instances models are also available for installation on closed tanks. The Tees Series will continuously indicate the level of a wide range of liquids in particular those that are of a corrosive nature or viscous.

Transmitters are available for either external or internal mounting and are connected to the indicator by a predetermined length of PVC protected capillary. External transmitters type CB and CS can be supplied with all wetted parts masked with a film of PTFE.

Internal installation type IC is available in mild steel, stainless steel or mild steel with a generous coating of rubber. A comprehensive range of indicators are available all of which are designed to present clear, easy to read data. The indicator on the front of this leaflet is the popular 150mm 'Polyrad' styled enclosure. The unit is completely weatherproof and is fitted with a strong window manufactured in an ultra violet stabilised polycarbonate.

The power required to operate the Tees Series hydrostatic tank contents gauge is derived from the pressure exerted by the head of liquid within the storage vessel.

This pressure is sensed by a stainless steel diaphragm set into the face of the transmitter and conveyed by a length of capillary to a diaphragm within the indicator.

Deflection of the diaphragm within the indicator actuates a precision mechanism which rotates a pointer over a calibrated scale. The transmitting diaphragm, capillary and indicator diaphragm together form a sealed system which, prior to being charged with an inert gas, is thoroughly examined for leaks on electronic leak detection equipment.

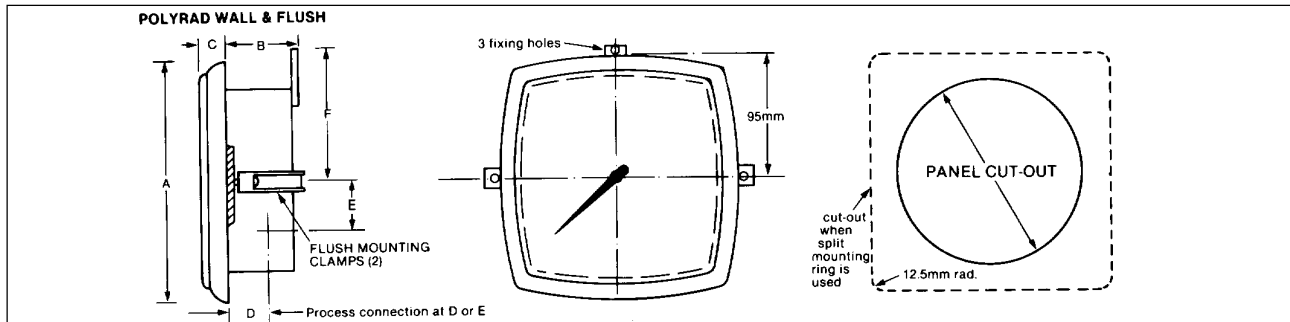
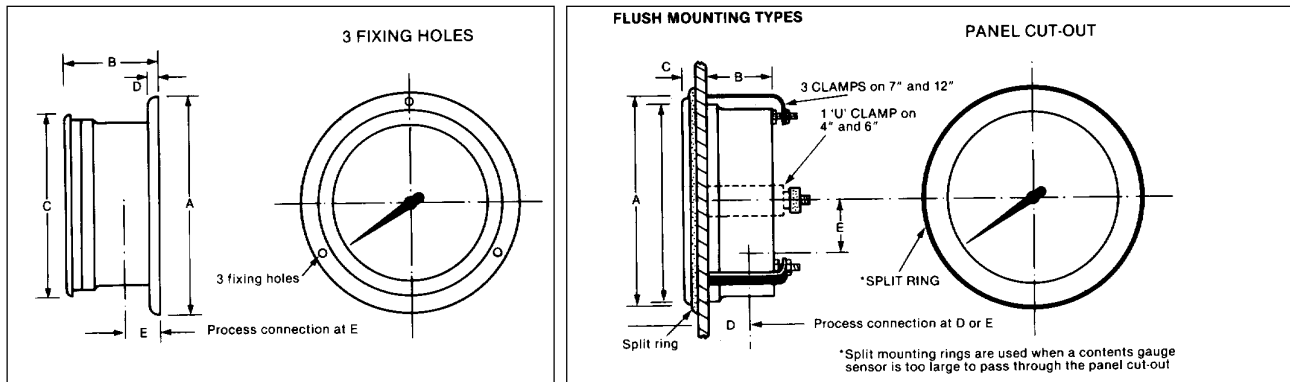


Operational Data (reference conditions)

Maximum Error	At reference conditions the maximum error will not exceed $\pm 1.0\%$ of full scale deflection.
Ranges	See ordering information.
Weatherproof protection	Polyrad IP65 to BA5490
Operating temperature	Indicator : -20°C to $+50^{\circ}\text{C}$ Transmitter : -20°C to $+100^{\circ}\text{C}$
Humidities	Indicators : 5% to 95% RH
Overload	25% above maximum range.
Tank depths	From 1 to 32 metres (at S.G. 1.0).

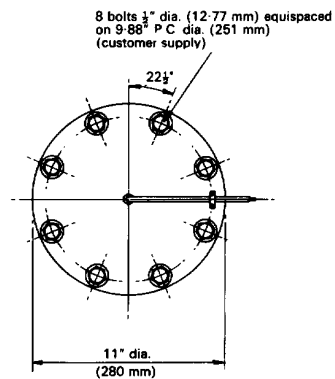
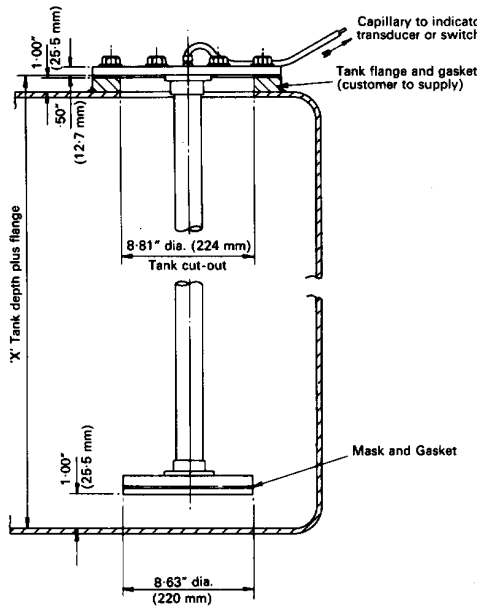
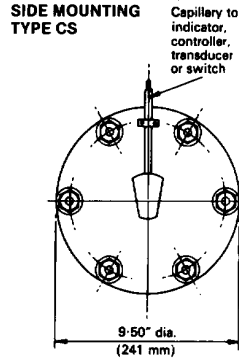
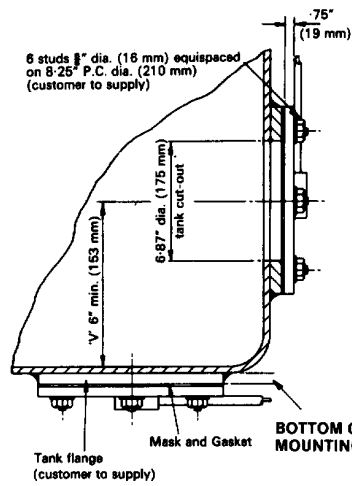
Construction Data

Transmitter	Standard transmitters comprise a stainless steel diaphragm soft soldered into a mild steel plate All stainless steel construction available if required. Both types are offered with a PTFE mask as required. Internal transmitters (Type IC) can be supplied in mild steel with a PTFE mask across a stainless steel diaphragm.
Indicators	All mild steel components can, if required, be sheathed with rubber or PVC. Mounting - wall or flush panel. Diameters - 4, 6, 7, 12 inch and 150mm. Construction - 4, 6, 7 and 12 inch diecast aluminium alloy, 150mm glass loaded polyester with polycarbonate window and bezel.
Weight (approx.)	CS with 3m capillary and 6" indicator : 12 kg. IC with a 2m support tube, 3m capillary and 6" indicator : 24 kg.
Calibration	Individually calibrated to customer's requirements. Complete questionnaire form.
Standard accessories	Chrome bezel.

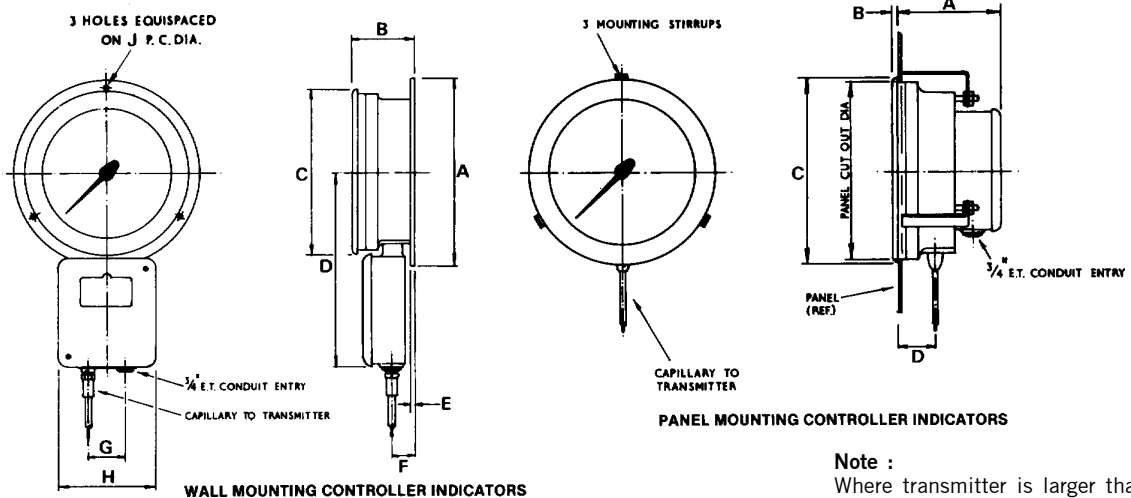


Case Size	Ref. No.	A		B		C		D		E		F	Dia. of fixing hole		P.C.D of fixing hole		Panel cut-out dia.		Cut-out for split ring	
		mm	in	mm	in	mm	in	mm	in	mm	in		mm	in	mm	in	mm	in	mm	in
4in wall	M4W	130	5.13	71	2.79	108	4.25	8	0.31	25	1.0		5.2	Ø204	116	4.56				
6 in wall	M6W	183	7.17	70	2.76	162	6.38	8	0.31	30	1.19		5.0	Ø197	168	6.62				
7in wall	M7W	248	9.75	82	3.23	219	8.63	8	0.31	32	1.25		7.0	Ø280	226	8.87				
12in wall	M12W	375	14.75	78	3.06	349	13.75	10	0.38	28	1.09		9.0	Ø350	356	14.00				
Polyrad	P150W	180	7.08	52	2.05	23	0.9	27	1.06	51	2.0	102	4.1	5.5	Ø220					
4in flush	M4F	121	4.75	57	2.23	9	0.34	40	0.56	33	1.3						111	4.38	125	4.94
6in flush	M6F	175	6.88	60	2.36	5	0.19	38	1.48	51	2.0						165	6.50	179	7.03
7in flush	M7F	219	8.63	67	2.64	7	0.28	43	1.70	-	-						213	8.38	225	8.83
12in flush	M12F	349	13.75	68	2.68	7	0.28	45	1.75	-	-						341	13.44	184	7.25
Polyrad	P150F	180	7.08	52	2.05	23	0.9	27	1.06	51	2.0	102	4.1				165	6.50	x184	x7.25

Outline/Installation Dimensions



	A	B	C	D	E	F	G	H	J
Size	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm
7"	9.75 248	3.23 82	8.63 219	10.06 256	0.31 8	1.25 32	1.88 48	5.0 127	8.87 226
12"	14.75 375	3.06 78	13.75 349	12.75 324	0.38 10	1.22 31	1.88 48	5.0 127	14.0 356



Note :
Where transmitter is larger than panel cut-out, split mounting rings are supplied so that indicator can be installed without removal of bezel. The indicator is passed through cut-out from the rear, the split ring placed in position and the indicator set back into the panel

	A	B	C	D	Panel cut-out	When transmitter is larger than indicator
Size	in mm	in mm	in mm	in mm	in mm	in mm
7"	5.19 132	0.28 7	8.63 219	1.70 43	8.38 213	8.83 225
12"	4.80 148	0.28 7	13.75 349	1.75 45	13.44 341	

Ordering Information

Model	'Tees' Series self-powered hydrostatic level/contents gauge									
CB	Transmitter mounted on tank bottom									
CS	Transmitter mounted on tank side									
IC	Transmitter mounted in tank									
Code	Transmitter body material									
10	Mild steel construction									
12	Mild steel rubber covered									
20	Stainless steel									
Code	Transmitter mask									
M	Fitted PTFE mask									
Code	Number of indicators									
0	Single indicator									
1	Twin indicators									
Code	Indicator									
6P	6" panel mounted - die cast aluminium									
6W	6" wall mounted - die cast aluminium									
Poly P	150mm panel mounted - glass filled polyester - weatherproof									
Poly W	150mm wall mounted - glass filled polyester - weatherproof									
7P	7" panel mounted - die cast aluminium - weatherproof									
7W	7" wall mounted - die cast aluminium - weatherproof									
12P	12" panel mounted - die cast aluminium									
12W	12" wall mounted - die cast aluminium									
Code	Indicator facia				6	Poly	7	12		
S	Standard black finish					-				
C	Chrome finish						-			
Code	Indicator mounting rings									
1	Standard black finish									
2	Chrome finish							-		
Code	Contacts for alarm or control									
C1	One contact (see Note)				-	-				
C2	Two contact (see Note)				-	-				
CB	10	M	0	6P	S	-	-	Typical ordering information		

Extras

Model IC : Support tube - mild steel
 Support tube - mild steel rubber coated
 Support tube - stainless steel
 Joint for support tube - mild steel (1 every 2.5m), max. length 5.0
 All models : Indicator dials may be dual scaled
 Capillary - PVC covered (3m included in price)

Notes

- Transmitter ranges are limited by the length of capillary
- Contacts can drive relays to provide alarm lamps, klaxons, etc. Consult factory for relay price.
- Tank questionnaire and calibration form must be completed

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