DP FLOW TRANSMITTER RERANGE CALCULATOR

Project: FT 3105 rerange	Calc no: CALC FT 005 Rev: 0

Yellow cells: enter data. Grey cells: calculated automatically. Free template from instrumentationblog.in

Present and new range			
Present maximum flow	40	**Present DP at maximum (mbar)**	250
New maximum flow	50	**Transmitter URL (mbar)**	620
New DP at maximum (mbar)	390.6	**URL check**	OK, within URL
Turndown on sensor (URL ÷ span)	1.6		

New range table

Flow (% of new max)	Flow	DP (mbar)	DP (% of span)	mA (linear transmitter)	mA (square root transmitter)	Notes
0	0.00	0.00	0.0	4.000	4.000	
10	5.00	3.91	1.0	4.160	5.600	
20	10.00	15.63	4.0	4.640	7.200	
30	15.00	35.16	9.0	5.440	8.800	
40	20.00	62.50	16.0	6.560	10.400	
50	25.00	97.66	25.0	8.000	12.000	
60	30.00	140.63	36.0	9.760	13.600	
70	35.00	191.41	49.0	11.840	15.200	
80	40.00	250.00	64.0	14.240	16.800	
90	45.00	316.41	81.0	16.960	18.400	
100	50.00	390.63	100.0	20.000	20.000	

After reranging, update the transmitter, DCS scaling, totaliser factor, alarm settings and the data sheet. Large changes need a new orifice calculation to ISO 5167.

Prepared by	Checked by
Name:	Name:
Signature:	Signature:
Date:	Date: