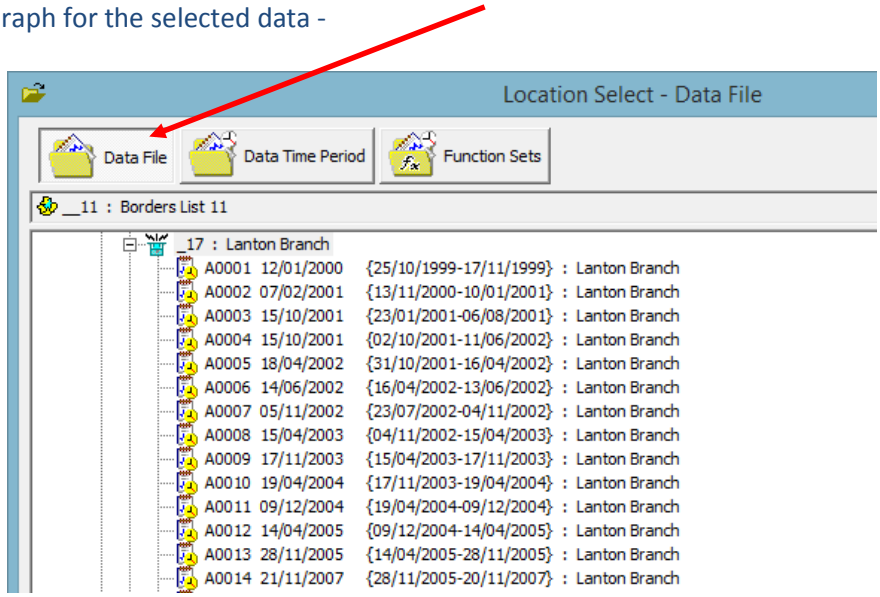
Ref: FAQ0090	Version: 1.0
Title – How to determine Meter size	
Made By: AB 22/05/15	(Issue 2)

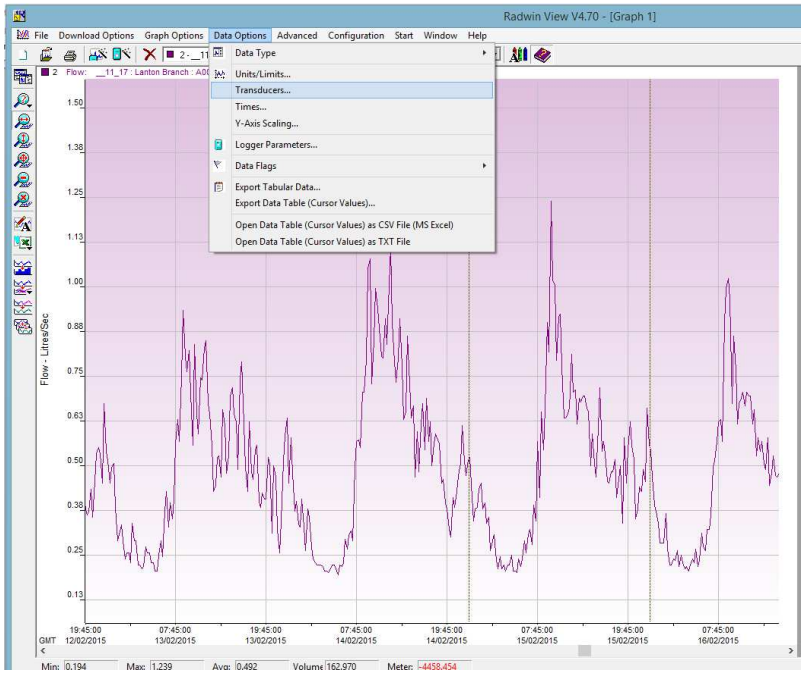
Using Radwin software for meter sizing

Every water meter has QMin and QMax flow values between which the meter manufacturer guarantees accuracy.
In Radwin software many meter types are already identified and you can gain the information by going to the Radwin View graph >

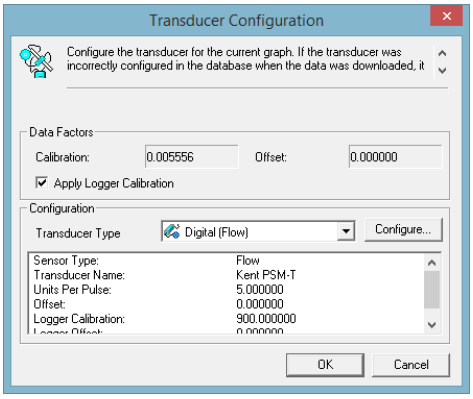
Identify the logger in the Radwin Data Folder and with Data file selected
Open the View Graph for the selected data -



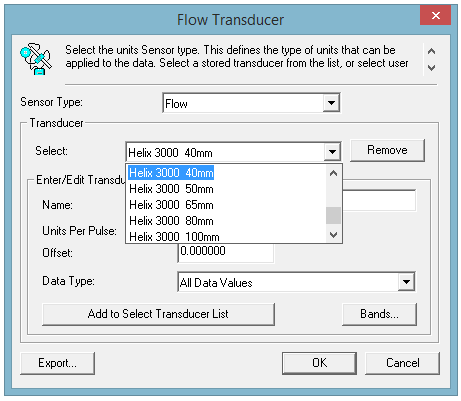
At the top of the View Graph Select Data Options and Transducers –



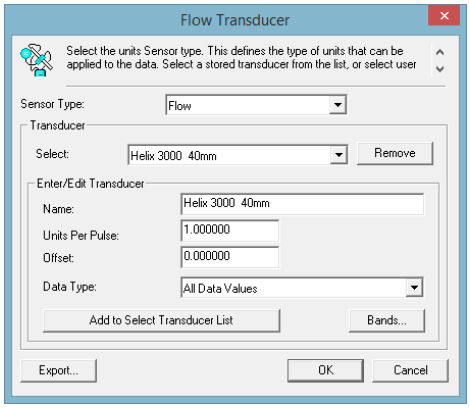
In Transducers select Configure –

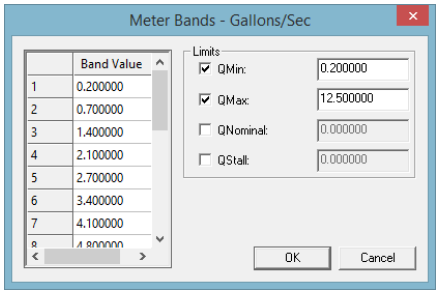


Then select the meter type from the dropdown



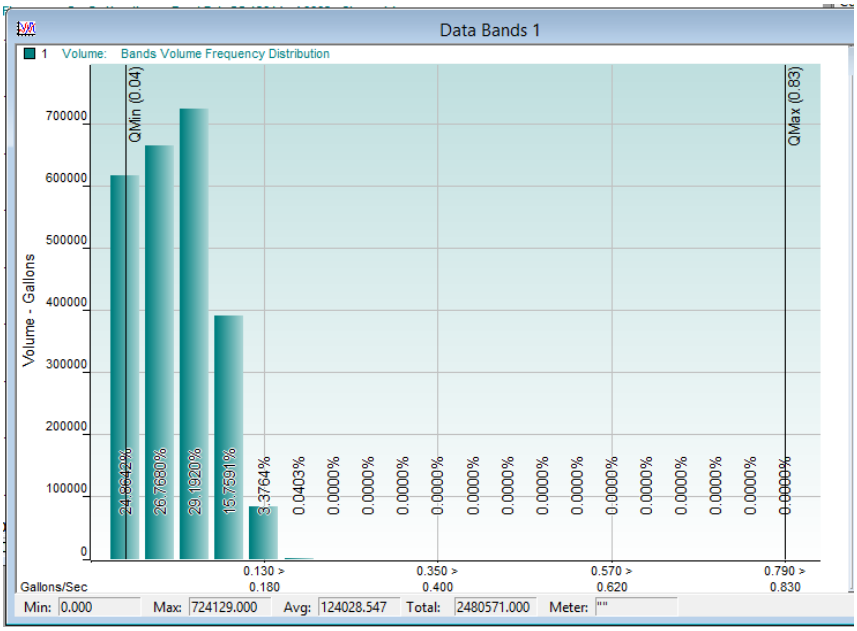
Then select Bands –





For some meter types the information is already provided as above. (see later if the meter type is not provided or the band inofrmartion is not available for the meter selected)

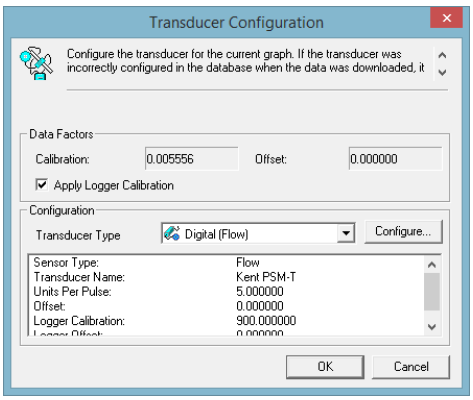
Select 'OK' to apply this to the data/graph.
Then select Advanced > data bands distribution to show the bands distribution -
In the example below you can see that the meter is too big for the volume of water flowing, as the flow bands are all towards or below the QMIN bracket for the meter -



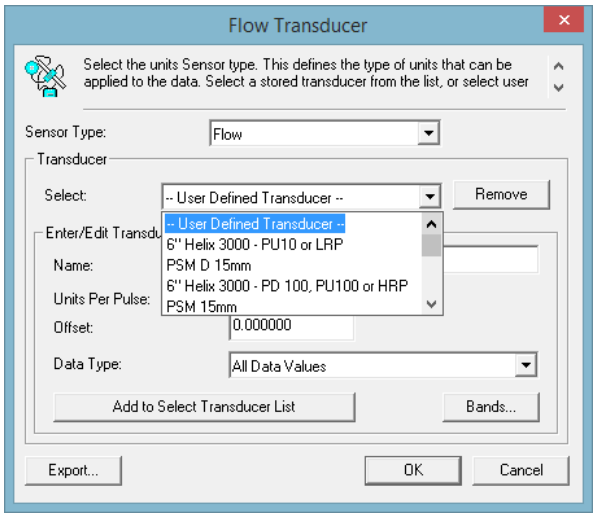
The data bands graph will help you to determine the size of meter required as you would be looking to contain the major flow between the QMIN / QMAX values.

To include new Meter information in Radwin software –

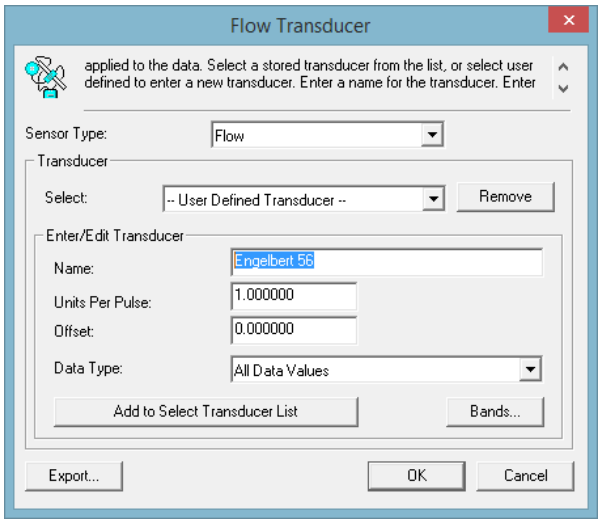
In Transducers select Configure –



And in Transducer type select – -User Defined Transducer – from the drop down

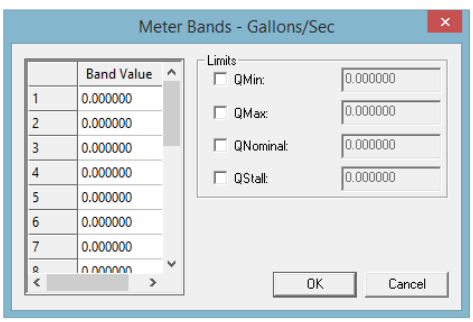


Enter the Meter type name

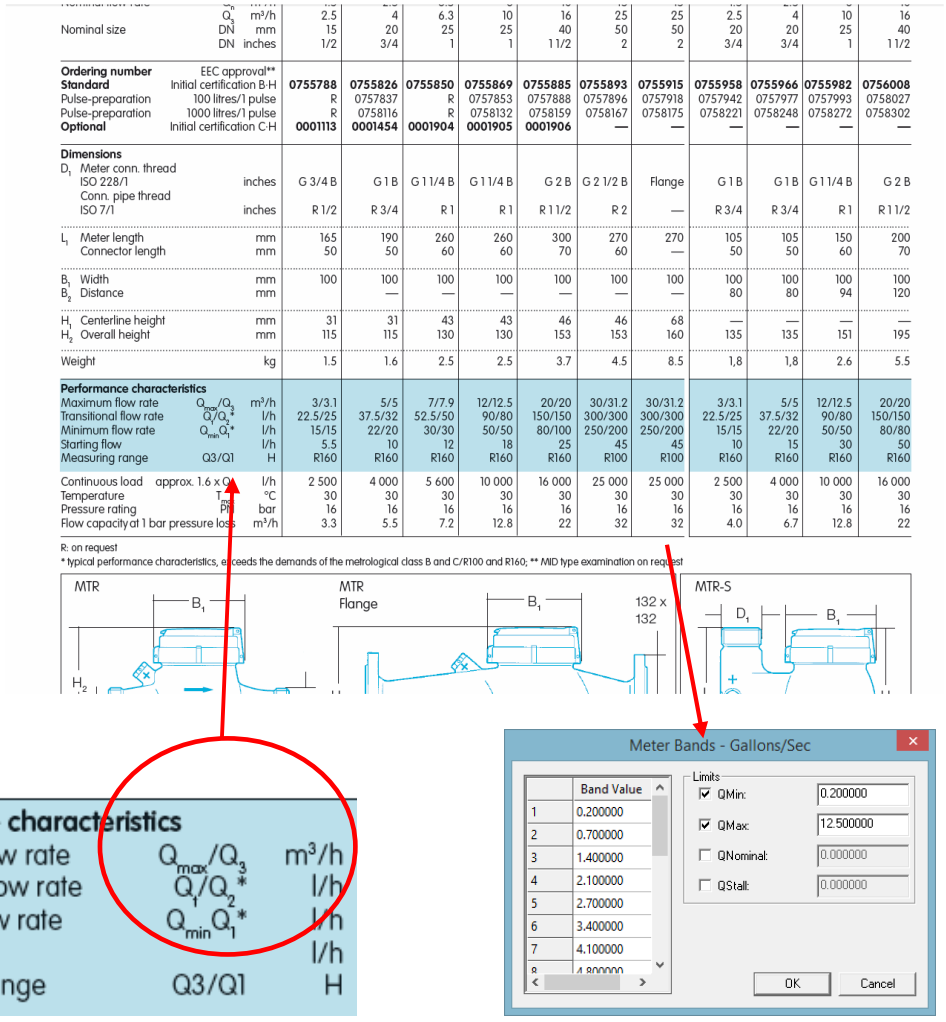


Select 'Add to Select Transducers List'

Then select Bands



Add the meter manufacturers data from the meter manual for QMax and QMin and create a number of bands between the two values – add the information to the bands table



	Q_3	m³/h	2.5	4	6.3	10	16	25	25	2.5	4	10	16
Nominal size	DN	mm	15	20	25	25	40	50	50	20	20	25	40
	DN	inches	1/2	3/4	1	1	1 1/2	2	2	3/4	3/4	1	1 1/2
Ordering number	EEC approval**												
Standard	Initial certification B-H		**0755788**	**0755826**	**0755850**	**0755869**	**0755885**	**0755893**	**0755915**	**0755958**	**0755966**	**0755982**	**0756008**
Pulse-preparation	100 litres/1 pulse		R	0757837	R	0757853	0757888	0757896	0757918	0757942	0757977	0757993	0758027
Pulse-preparation	1000 litres/1 pulse		R	0758116	R	0758132	0758159	0758167	0758175	0758221	0758248	0758272	0758302
Optional	Initial certification C-H		**0001113**	**0001454**	**0001904**	**0001905**	**0001906**	—	—	—	—	—	—
Dimensions													
D_1 Meter conn. thread ISO 228/1		inches	G 3/4 B	G 1 B	G 1 1/4 B	G 1 1/4 B	G 2 B	G 2 1/2 B	Flange	G 1 B	G 1 B	G 1 1/4 B	G 2 B
Conn. pipe thread ISO 7/1		inches	R 1/2	R 3/4	R 1	R 1	R 1 1/2	R 2	—	R 3/4	R 3/4	R 1	R 1 1/2
L_1 Meter length		mm	165	190	260	260	300	270	270	105	105	150	200
Connector length		mm	50	50	60	60	70	60	—	50	50	60	70
B_1 Width		mm	100	100	100	100	100	100	100	100	100	100	100
B_2 Distance		mm		—	—	—	—	—	—	80	80	94	120
H_1 Centerline height		mm	31	31	43	43	46	46	68	—	—	—	—
H_2 Overall height		mm	115	115	130	130	153	153	160	135	135	151	195
Weight		kg	1.5	1.6	2.5	2.5	3.7	4.5	8.5	1,8	1,8	2.6	5.5
Performance characteristics													
Maximum flow rate	Q_{max}/Q_3	m³/h	3/3.1	5/5	7/7.9	12/12.5	20/20	30/31.2	30/31.2	3/3.1	5/5	12/12.5	20/20
Transitional flow rate	Q_1/Q_2*	l/h	22.5/25	37.5/32	52.5/50	90/80	150/150	300/300	300/300	22.5/25	37.5/32	90/80	150/150
Minimum flow rate	$Q_{min}Q_1$*	l/h	15/15	22/20	30/30	50/50	80/100	250/200	250/200	15/15	22/20	50/50	80/80
Starting flow		l/h	5.5	10	12	18	25	45	45	10	15	30	50
Measuring range	Q3/Q1	H	R160	R160	R160	R160	R160	R100	R100	R160	R160	R160	R160
Continuous load	approx. 1.6 x Q_4	l/h	2 500	4 000	5 600	10 000	16 000	25 000	25 000	2 500	4 000	10 000	16 000
Temperature	T_{ms}	°C	30	30	30	30	30	30	30	30	30	30	30
Pressure rating	PS	bar	16	16	16	16	16	16	16	16	16	16	16
Flow capacity at 1 bar pressure loss		m³/h	3.3	5.5	7.2	12.8	22	32	32	4.0	6.7	12.8	22

R: on request

* typical performance characteristics, exceeds the demands of the metrological class B and C/R100 and R160; ** MID type examination on request

Select OK to save to the Transducer list.

Then use this to check the meter size against the View Graph.

Document History:

Edition	Date of Issue	Modification	Notes
1st	22/05/15	Release	
2nd	15/06/15	How to add meter info added	