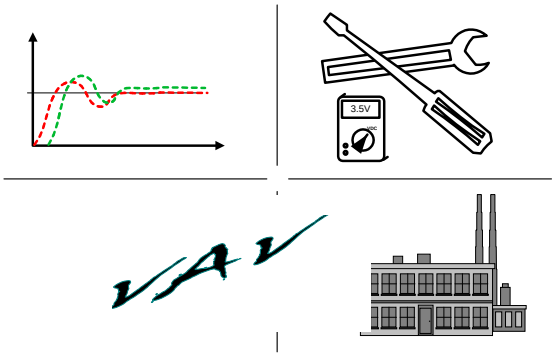
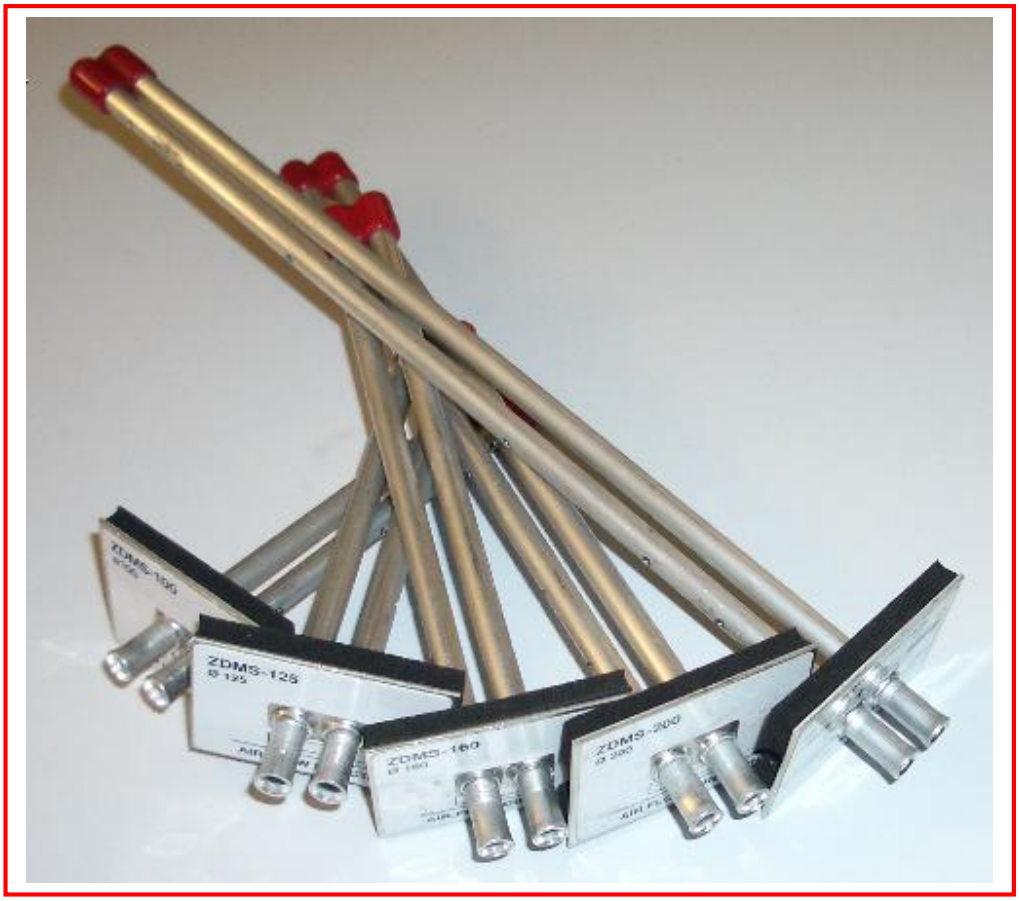


4 VAV Retrofit_ Product-Info_ZDMS_ EN 08-02-12

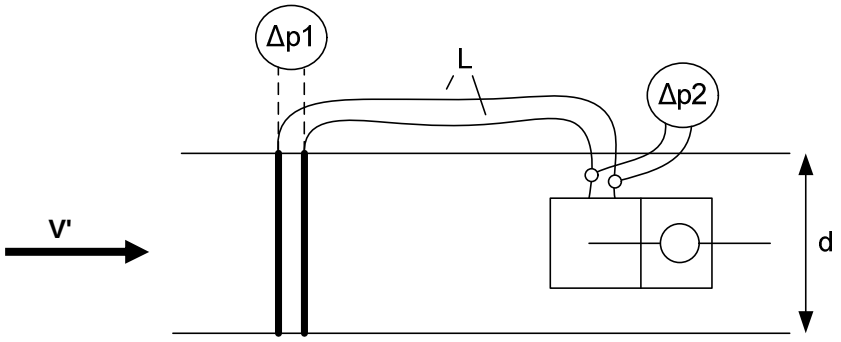
VAV Retrofit

Product information ZDMS-xxx



ZDMS-100

Measurement setup:



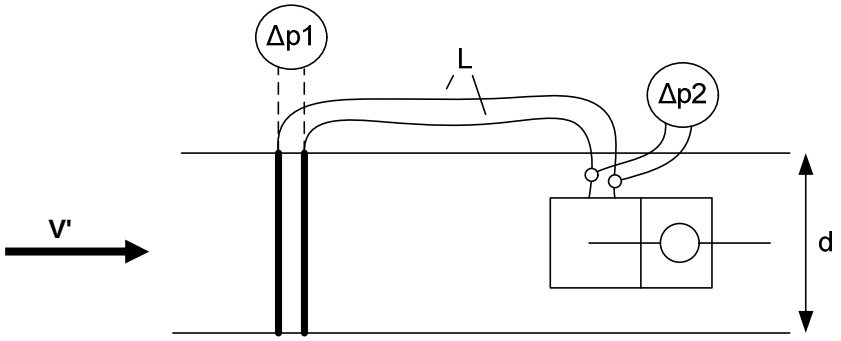
pressure/ volume - chart:

Given: d= 100mm

	L= 300mm	L= 1000mm	
Δp1 [Pa] static	**Δp2 [Pa] (at D2-Sensor)**	**Δp2 [Pa] (at D2-Sensor)**	**V' [m³/h]**
2	2	1	36
5	4	4	61
10	9	7	89
15	14	11	111
20	18	15	126
25	22	18	143
30	27	22	156
35	31	26	168
40	35	29	180
45	40	34	193
50	43	37	202
55	49	42	214
60	53	46	224
70	62	55	245
80	70	64	259
90	82	72	279
100	90	79	293
110	98	88	307
120	108	95	319
130	118	103	332
140	126	111	346
150	137	119	358
160	145	128	375
170	155	138	385
180	164	145	397
190	175	154	407
200	182	161	418

ZDMS-125

Measurement setup:

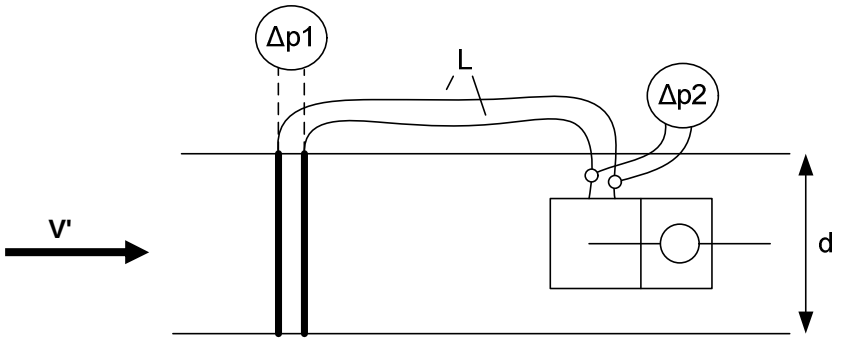


pressure/ volume - chart:

Given: d= 125mm

	L= 300mm	L= 1000mm	
Δp1 [Pa] static	**Δp2 [Pa] (at D2-Sensor)**	**Δp2 [Pa] (at D2-Sensor)**	**V' [m³/h]**
2	1.7	1	66
5	4.3	4	102
10	8	7	141
15	12	10	173
20	17	14	207
25	21	19	230
30	26	22	252
35	31	26	275
40	37	29	290
45	39	33	308
50	43	37	326
55	50	40	345
60	53	46	361
70	62	54	395
80	70	63	418
90	79	70	442
100	89	77	466
110	98	86	488
120	108	94	508
130	115	103	529
140	126	114	551
150	133	120	571
160	142	126	590
170	151	135	608
180	160	145	623
190	170	155	646
200	180	162	665

Measurement setup:



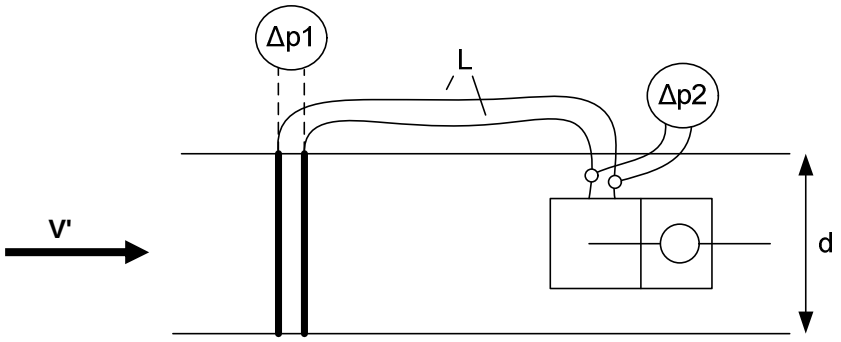
ZDMS-160

pressure/ volume - chart:

Given: d= 160mm

	L= 300mm	L= 1000mm	
Δp1 [Pa] static	**Δp2 [Pa] (at D2-Sensor)**	**Δp2 [Pa] (at D2-Sensor)**	**V' [m³/h]**
2	1.7	1	104
5	4.2	4	163
10	9.2	6	238
15	13	10	293
20	18	15	339
25	20	18	372
30	26	23	417
35	31	25	447
40	34	31	487
45	40	34	513
50	43	39	538
55	48	43	568
60	53	46	592
70	62	53	645
80	71	61	687
90	78	70	728
100	88	79	765
110	95	87	805
120	105	95	844
130	116	105	882
140	125	112	914
150	133	120	947
160	143	129	973
170	152	138	998
180	161	147	1025
190	169	158	1049

Measurement setup:



ZDMS-200

pressure/ volume - chart:

Given: d= 200mm

	L= 300mm	L= 1000mm	
Δp1 [Pa] static	**Δp2 [Pa] (at D2-Sensor)**	**Δp2 [Pa] (at D2-Sensor)**	**V' [m³/h]**
2	1.8	2	161
5	4.2	4	244
10	8	8	345
15	13	11	435
20	17	14	514
25	21	17	575
30	26	22	627
35	28	27	675
40	32	30	725
45	37	36	769
50	43	40	812
55	45	45	855
60	51	50	896
70	58	59	975
80	71	63	1032
90	75	65	1076

ZDMS-250

pressure/ volume - chart:

Given: d= 250mm

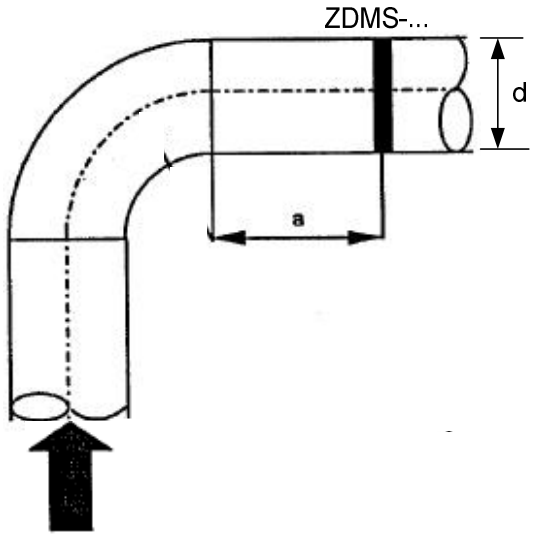
	L= 300mm	L= 1000mm	
Δp1 [Pa] static	**Δp2 [Pa] (at D2-Sensor)**	**Δp2 [Pa] (at D2-Sensor)**	**V' [m³/h]**
2	1.6	1.4	205.0
5	3.8	3.2	359.0
10	8.5	6.5	532.0
15	12.0	11.0	659.0
20	17.0	14.5	759.0
25	20.0	16.5	858.0
30	23.5	21.0	948.0
35	27.0	26.5	1027.0
40	34.0	29.0	1094.0

Placing in duct

The placing of air flow probe (ZDMS-..) in the duct and the behaving of the oncoming flow to the probe are very important for the accuracy of the measurement.
There is a chance of imprecision of the measurement if the air flow probe is located in a position of turbulences or if there is no sufficient oncoming flow on the area.

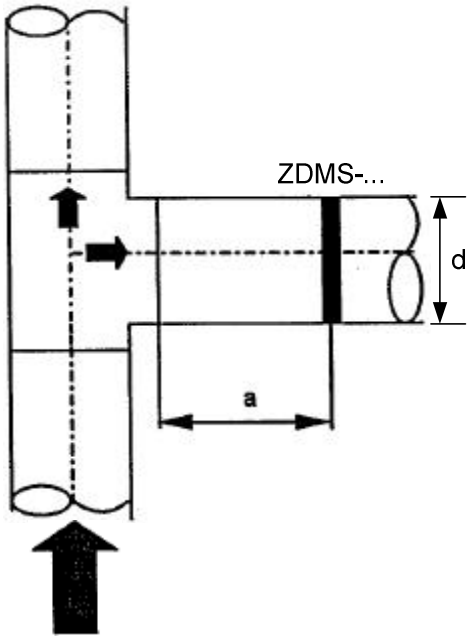
On this, a few hints:

Positioning after elbow



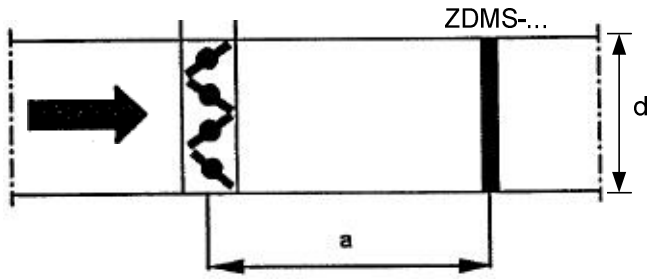
- Air flow probe in direction of the radius
- a > 3 x d

Positioning after T- crossing



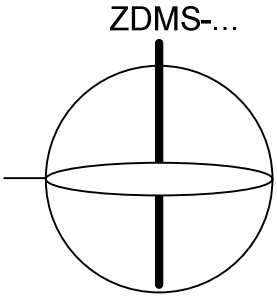
- Air flow probe in direction of the T- cross piece
- a > 5 x d

Positioning after a damper (for example: fire damper):



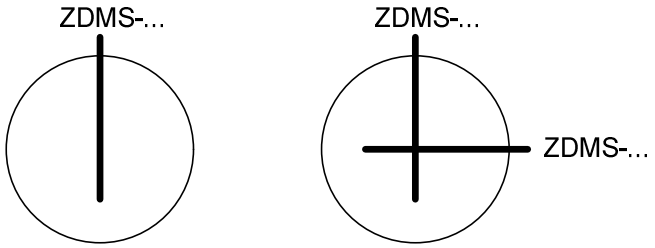
- a > 4 x d
- the pick up device has always to be placed before the VAV- damper

Positioning ZDMS-.. to the damper blade:



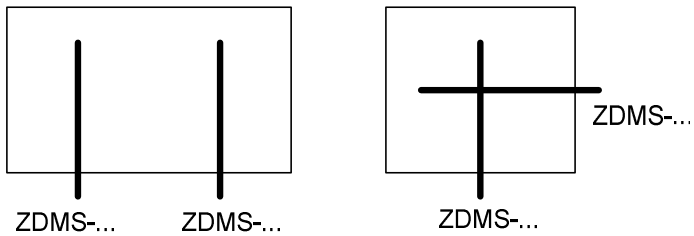
- Position ZDMS-… shall be 90° to the damper axel

Different values of diameter duct and length of ZDMS-…



- Use the longest possible ZDMS or 2 pieces, tubes have to be connected in parallel
- Important for decision if 1 or 2 ZDMS-…. : At Vmin must be a pressure of Δp1 > 3 Pa (Δp2 > 2 Pa)
- At the use of 2 or more ZDMS-.., the tubes have to be connected in parallel

Rectangular duct



- Use the longest possible ZDMS or x pieces, tubes have to be connected in parallel
- Important for decision if 1 or x ZDMS-…: At Vmin must be a pressure of Δp1 > 3 Pa (Δp2 > 2 Pa)
- At the use of 2 or more ZDMS-.., the tubes have to be connected in parallel