Fw: Data Lookup & Simple Formula...

1 message

joe smith <joeyvill@hotmail.com> Thu, Nov 18, 2021 at 11:22 AM
To: nikki <niklev9@gmail.com>

From: Alan Welch <awelch37@gmail.com>
Sent: November 18, 2021 1:04 AM
To: Joe Sircelj Smith <joeyvill@hotmail.com>
Subject: Re: Data Lookup & Simple Formula...

This can all be readily programmed into the Arduino and including correction factor for ambient temperature

Al

On Wed, Nov 17, 2021 at 9:58 PM Alan Welch <awelch37@gmail.com> wrote:

Water Head or h_w [inches_water]	Air Speed [mph]	Air Speed [ft/min]
0.000	0	0
0.012	5	440
0.048	10	880
0.109	15	1320
0.193	20	1760
0.302	25	2200
0.435	30	2640
0.591	35	3080
0.772	40	3520
0.978	45	3960
1.207	50	4400
1.460	55	4840
1.738	60	5280
2.040	65	5720
2.366	70	6160
2.716	75	6600
3.090	80	7040
3.488	85	7480
3.911	90	7920
4.357	95	8360
4.828	100	8800
5.323	105	9240
5.842	110	9680
6.385	115	10120
6.952	120	10560
7.544	125	11000
8.159	130	11440

8.799	135	11880
9.463	140	12320
10.151	145	12760
10.863	150	13200
11.599	155	13640
12.359	160	14080
13.144	165	14520
13.953	170	14960
14.786	175	15400
15.642	180	15840
16.524	185	16280
17.429	190	16720
18.358	195	17160
19.312	200	17600
20.289	205	18040
21.291	210	18480
22.317	215	18920
23.367	220	19360
24.441	225	19800
25.540	230	20240
26.662	235	20680
27.809	240	21120
28.980	245	21560
30.175	250	22000

On Wed, Nov 17, 2021 at 9:55 PM Alan Welch <awelch37@gmail.com> wrote:

> Simple Airflow Model For a Pitot Tube at 70 deg, F
>
> hw (in H2O) = (v / C)2 https://www.engineeringtoolbox.com/velocity-head-d_916.html
>
> where
> h_w = stagnation - static
> v = velocity (ft/min)
> C = constant (see C- constant. Tab) 4005 (@70 deg F)
>
> Water Head (h_w) versus Air Speed Air Speed
>
> --
> Regards, Al

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Regards, Al