



Diamond Back Pressure/ Exhaust Flow Table

Step 1

Determine depth

110 / 33.5	4.33	Flow LPM	45 - 65	85 - 110	115 - 150	150 - 185	180 - 235	230 - 290	280 - 350
		BP (psig)	26 - 28	30 - 32	31 - 35	32 - 36	34 - 39	36 - 41	37 - 41

Step 2

Take the average reading from your flow meter. Example is 180 to 210.
The average flow is 195

**Step 3**

Find the closest matching flow reading from the table

Step 4

Recommended Back Pressure regulator setting

**DIAMOND HELMET RECOMMENDED
SUPPLY PRESSURES**

Depth		Supply Pressures	
fsw	msw	bar	psig
0 - 50	0 - 15.2	6.9	100
50 - 100	15.2 - 30.5	10	145
100 - 130	30.5 - 40	12	175
130 - 165	40 - 50.3	15.2	220
165 - 200	50.3 - 61	15.5 - 17.2	225 - 250

ABBREVIATIONS / COLORS

ATA – Atmospheres Absolute
FSW – Feet Sea Water
LPM – Liters Per Minute
MSW – Meter Sea Water
RMV – Respiratory Minute Volume

FORMULAS

$(\text{Depth} + 33) \div 33 = \text{ATA}$
 $\text{FSW} \div 3.28 = \text{MSW}$
 $\text{LPM} \div \text{ATA} = \text{RMV}$
To calculate RMV with the greatest accuracy, simply take the highest and lowest flow reading, add them together, then divide by 2. Take the result and divide by the divers' depth and ATA's

* For Air Diving to the maximum depth of 200 fsw (61 msw)

NOTE: When diving in the depth >170 fsw (51.8 msw), the Divers' respiratory work rate (RMV), should **not** exceed 63 RMV

** At this Depth and RMV flow accuracy cannot be accurately determined

Please check Divelab.com website for any updates

Depth fsw/msw	ATA	BP-Back Pressure (psig) LPM- Liters Per Minute	RMV 10-15	RMV 20-24	RMV 30-34	RMV 37-40	RMV 48-50	RMV 60-63	RMV 73-75
10 / 3	1.3	Flow LPM BP (psig)	n/a** n/a**	n/a** n/a**	n/a** n/a**	40 - 60 1 - 2	35 - 90 1 - 2	55 - 105 1 - 2	70 - 120 1 - 2
20 / 6.09	1.60	Flow LPM BP (psig)	n/a** n/a**	n/a** n/a**	35 - 65 1 - 2	40 - 80 1 - 2	55 - 100 1 - 2	80 - 120 2 - 3	105 - 135 3 - 5
30 / 9.1	1.90	Flow LPM BP (psig)	n/a** n/a**	30 - 55 1 - 2	50 - 75 2 - 3	55 - 90 2 - 3	75 - 110 3 - 4	100 - 130 3 - 5	115 - 160 4 - 6
40 / 12.2	2.21	Flow LPM BP (psig)	10 - 40 2 - 3	40 - 60 3 - 4	45 - 80 4 - 5	70 - 95 4 - 6	90 - 125 5 - 7	120 - 150 6 - 8	140 - 180 7 - 9
50 / 15.2	2.51	Flow LPM BP (psig)	15 - 45 3 - 4	50 - 70 4 - 6	70 - 85 5 - 7	85 - 105 5 - 8	110 - 135 7 - 9	140 - 170 8 - 13	170 - 200 9 - 13
60 / 18.3	2.82	Flow LPM BP (psig)	25 - 45 5 - 7	55 - 70 7 - 9	75 - 95 9 - 10	95 - 120 9 - 12	125 - 150 11 - 14	155 - 185 11 - 14	190 - 230 15 - 18
70 / 21.3	3.12	Flow LPM BP (psig)	30 - 45 7 - 8	65 - 80 10 - 13	85 - 105 13 - 14	110 - 130 13 - 17	135 - 170 15 - 18	170 - 210 15 - 20	200 - 250 16 - 20
80 / 24.4	3.42	Flow LPM BP (psig)	35 - 50 11 - 13	70 - 85 14 - 16	90 - 110 16 - 18	120 - 145 17 - 19	150 - 190 18 - 22	185 - 225 20 - 23	225 - 275 21 - 24
90 / 27.4	3.72	Flow LPM BP (psig)	35 - 55 17 - 20	75 - 95 21 - 24	100 - 125 22 - 25	125 - 155 24 - 28	150 - 200 26 - 30	200 - 245 27 - 31	245 - 300 27 - 33
100 / 30.5	4.03	Flow LPM BP (psig)	40 - 60 22 - 24	80 - 105 25 - 28	110 - 135 28 - 31	135 - 170 28 - 32	170 - 220 29 - 33	220 - 260 33 - 36	260 - 330 31 - 37
110 / 33.5	4.33	Flow LPM BP (psig)	45 - 65 26 - 28	85 - 110 30 - 32	115 - 150 31 - 35	150 - 185 32 - 36	180 - 235 34 - 39	230 - 290 36 - 41	280 - 350 37 - 41
120 / 36.6	4.63	Flow LPM BP (psig)	56 - 65 29 - 32	90 - 120 32 - 35	120 - 155 34 - 37	150 - 200 35 - 40	200 - 250 37 - 43	250 - 320 39 - 44	300 - 380 39 - 45
130 / 39.6	4.93	Flow LPM BP (psig)	50 - 75 32 - 35	95 - 130 36 - 40	130 - 170 39 - 42	165 - 210 39 - 43	210 - 270 42 - 47	270 - 340 44 - 48	320 - 400 44 - 50
140 / 42.7	5.24	Flow LPM BP (psig)	55 - 80 33 - 35	100 - 135 38 - 41	145 - 170 40 - 44	170 - 220 42 - 45	220 - 290 43 - 48	280 - 350 45 - 50	340 - 425 45 - 51
150 / 46	5.55	Flow LPM BP (psig)	55 - 80 37 - 40	110 - 145 41 - 44	145 - 190 44 - 47	170 - 240 43 - 49	230 - 310 47 - 51	300 - 380 50 - 56	355 - 450 50 - 57
160 / 49	5.84	Flow LPM BP (psig)	55 - 75 38 - 41	110 - 150 42 - 45	150 - 195 43 - 45	190 - 250 45 - 50	240 - 320 48 - 51	310 - 390 49 - 54	370 - 470 51 - 58
165 / 50.3	6	Flow LPM BP (psig)	60 - 85 41 - 43	115 - 155 44 - 48	155 - 205 47 - 50	195 - 260 49 - 53	245 - 330 50 - 55	320 - 410 53 - 59	380 - 480 54 - 60
170 / 51.8*	6.15	Flow LPM BP (psig)	60 - 90 42 - 46	115 - 160 45 - 48	160 - 220 47 - 52	200 - 270 50 - 54	250 - 340 51 - 57	330 - 410 55 - 60	400 - 500 55 - 60
180 / 55*	6.45	Flow LPM BP (psig)	50 - 100 38 - 45	90 - 165 43 - 49	150 - 240 45 - 52	230 - 290 48 - 53	270 - 360 52 - 58	350 - 430 57 - 62	430 - 540 62 - 68
190 / 58*	6.76	Flow LPM BP (psig)	50 - 100 36 - 42	95 - 170 42 - 47	160 - 230 46 - 52	230 - 290 49 - 56	290 - 390 52 - 61	360 - 450 58 - 65	440 - 550 65 - 70

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NOTE: For Yellow Shaded Table Area - Use 100-550 LMP Flow Meter