

Effective Compression Ratio

Static Compression Ratio	Pump Gas					Race Gas				
	Blower Boost Pressure (psi)									
	1	3	5	7	8	9	10	11	12	15
6	6.4	7.2	8.0	8.9	9.3	9.7	10.1	10.5	10.9	12.1
6.5	6.9	7.8	8.7	9.6	10.0	10.5	10.9	11.4	11.8	13.1
7	7.5	8.4	9.4	10.3	10.8	11.3	11.8	12.2	12.7	14.1
7.5	8.0	9.0	10.1	11.1	11.6	12.1	12.6	13.1	13.6	15.2
8	8.5	9.6	10.7	11.8	12.4	12.9	13.4	14.0	14.5	16.2
8.5	9.1	10.2	11.4	12.5	13.1	13.7	14.3	14.9	15.4	17.2
9	9.6	10.8	12.1	13.3	13.9	14.5	15.1	15.7	16.3	18.2
9.5	10.1	11.4	12.7	14.0	14.7	15.3	16.0	16.6	17.3	19.2
10	10.7	12.0	13.4	14.8	15.4	16.1	16.8	17.5	18.2	20.2
10.5	11.2	12.6	14.1	15.5	16.2	16.9	17.6	18.4	19.1	21.2
11	11.7	13.2	14.7	16.2	17.0	17.7	18.5	19.2	20.0	22.2

Effective Compression Ratio (ECR) = ((boost / 14.7) + 1) * cr

Where: Boost = Max Supercharger Boost (psi)
 14.7 = Atmospheric Pressure @ Sea Level (psi)
 CR = Engine Compression Ratio

To compensate for altitude when computing desired "effective compression ratio" use the following equation:

Corrected compression ratio = ECR - ((altitude / 1000) * 0.2)

Where: ECR = Derived from the above equation or table
 Altitude = Distance above sea level (in feet)

ECR	Altitude	Adjusted ECR
12	6000	= 10.8

Determining What Size Carburetor You Need

Maximum CFM Required = ((Engine CID x maximum RPM) / 3456) x ((max boost / 14.7) + 1)

Where: Engine CID = cubic inches of motor
 Maximum RPM = Max RPM the motor will be turned
 Max boost = Max boost under wide open throttle

Engine CID	Max RPM	Max boost	Max CFM Required
540	6000	7	1383.929