

Main jet correction chart for different altitudes and temperatures

Air density decreases with decreasing pressure and increasing temperature. If an engine is operated at higher sea level, the weight of the aspirated air decreases, whereas the aspirated fuel quantity remains practically the same. This results in richer air/fuel mixture than at lower sea level.

To adjust your main jet in your Rotax engine for your specific altitude and temperature range, use the following chart and formula. Rotax Engines are shipped with main jets optimized for sea level operation at 15°C (unless requested otherwise). Use this jet size as your 100% base jet size for your calculation (refer to 'Standard Carburetor Jetting chart' for base main jet size).

Find your altitude and temperature range on the chart then use this number as a percentage of the base jet size. Use the following calculation.

B = base main jet size (size of main jet shipped with engine)


P = number from chart

N = New jet size

$$B \times P = N$$

For example, a Rotax 447 UL SCDI comes shipped with a 165 main jet (B=165). You want to use this engine at Meadow Lake Airport in Colorado (6,800ft) in the summer time (20°C) (P=0.94). Take the base main jet size of 165 and times by 0.94. This indicates you should use a main jet of approx 155. (always round *up* to the nearest available jet size).

		Altitude M / Ft								
		0m / 0ft	500m / 1640ft	1000m / 3280ft	1500m / 4921ft	2000m / 6562ft	2500m / 8202ft	3000m / 9843ft	3500m / 11,483ft	4000m / 13,123ft
Temp °C / °F	-30c / -22F	1.04	1.03	1.01	1.00	.98	.97	.95	.94	.93
	-20c / -4F	1.03	1.02	1.00	.99	.97	.96	.95	.93	.92
	-10c / 14F	1.02	1.01	.99	.98	.96	.95	.94	.92	.91
	0c / 32F	1.01	1.00	.98	.97	.95	.94	.93	.91	.90
	+10c / 50F	1.00	.99	.97	.96	.95	.93	.92	.91	.90
	+15c / 59F	1.00	.99	.97	.96	.94	.93	.92	.90	.89
	+20c / 68F	1.00	.98	.97	.95	.94	.93	.91	.90	.88
	+30c / 86F	.99	.97	.96	.94	.93	.92	.90	.89	.88
	+40c / 104F	.98	.96	.95	.94	.92	.91	.90	.88	.87
	+50c / 122F	.97	.96	.94	.93	.92	.90	.89	.88	.86

 = example for 6,800ft & 20°C