

# MD520N

## WITH NOTAR SYSTEM

### 4.0 Performance Specifications

Characteristics at Gross Weight		Metric 1361 kg	Imperial 3,000 lb	Metric 1519 kg	Imperial 3,350 lb
Maximum Cruise Speed:	Sea level 1524 m (5,000 ft)	237 km/hr 128 kt (147 mph) 245 km/hr 132 kt (152 mph)		229 km/hr 123 kt (142 mph) 230 km/hr 124 kt (143 mph)	
Maximum Permitted Speed:	V <sub>NE</sub> at sea level	282 km/hr 152 kt (175 mph)		282 km/hr 152 kt (175 mph)	
Maximum Range:	Sea level 1524 m (5,000 ft)	378 km 204 nm (235 mi) 412 km 222 nm (256 mi)		365 km 197 nm (227 mi) 389 km 210 nm (242 mi)	
Maximum Endurance:	Sea level	2.4 hr	2.4 hr	2.2 hr	2.2 hr
Maximum Rate of Climb:(TOP)	Sea level, Standard day ISA +20° C day	9.7 m/sec 8.6 m/sec	1,913 fpm 1,687 fpm	7.9 m/sec 6.5 m/sec	1,546 fpm 1,280 fpm
Maximum Operating Altitude:	Density altitude	6097 m	20,000 ft	6097 m	20,000 ft
Service Ceiling:	ISA	4970 m	16,300 ft	4024 m	13,200 ft
Maximum Hook Capacity:		907 kg	2,000 lb	907 kg	2,000 lb
Hovering Performance:					
In-ground effect:	Standard day	3901 m	12,800 ft	2835 m	9,300 ft
(extended landing gear)	ISA + 20° C day	2743 m	9,000 ft	1554 m	5,100 ft
Out-of-ground effect:	Standard day	2865 m	9,400 ft	1707 m	5,600 ft
	ISA + 20° C day	1707 m	5,600 ft	427 m	1,400 ft

### WEIGHTS

Characteristics		Metric	Imperial
Maximum gross weight:	Normal category External load operations	1519 kg 1746 kg	3,350 lb 3,850 lb
Empty weight:	Standard configuration Industrial configuration	719 kg 674 kg	1,585 lb 1,486 lb
Useful load:	Standard configuration Industrial configuration	Normal category External load operations Normal category External load operations	800 kg 1027 kg 845 kg 1072 kg
			1,764 lb 2,264 lb 1,864 lb 2,364 lb
Usable Fuel Capacity:	242 L (64 gal)	183 kg	403 lb

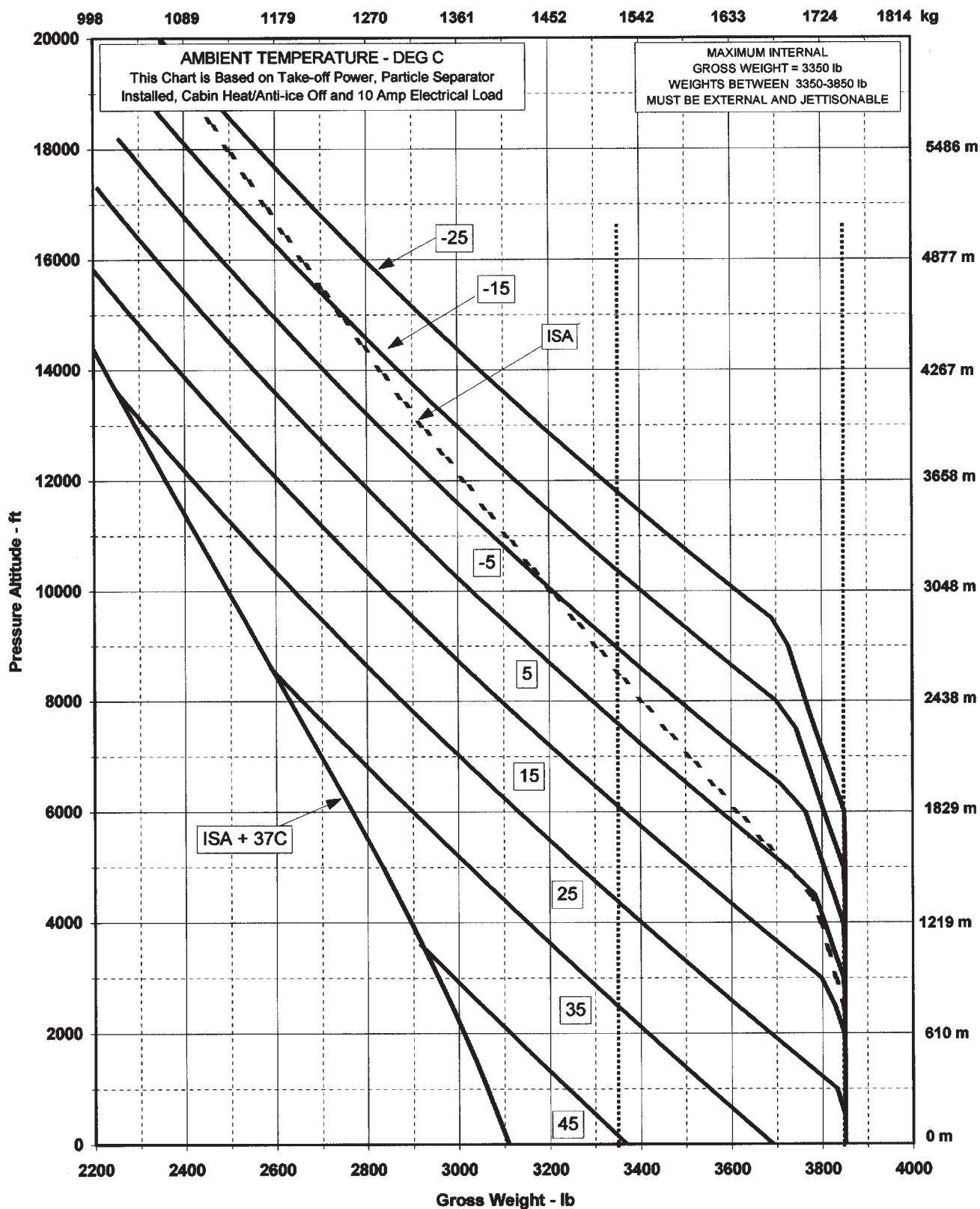
### POWER PLANT

Characteristics		Metric	Imperial
Allison Model 250-C20R gas turbine:	Rated power	336 kw	450 shp
Derated for reliability and safety to:	Takeoff power	317 kw	425 shp
	Max. continuous power	280 kw	375 shp

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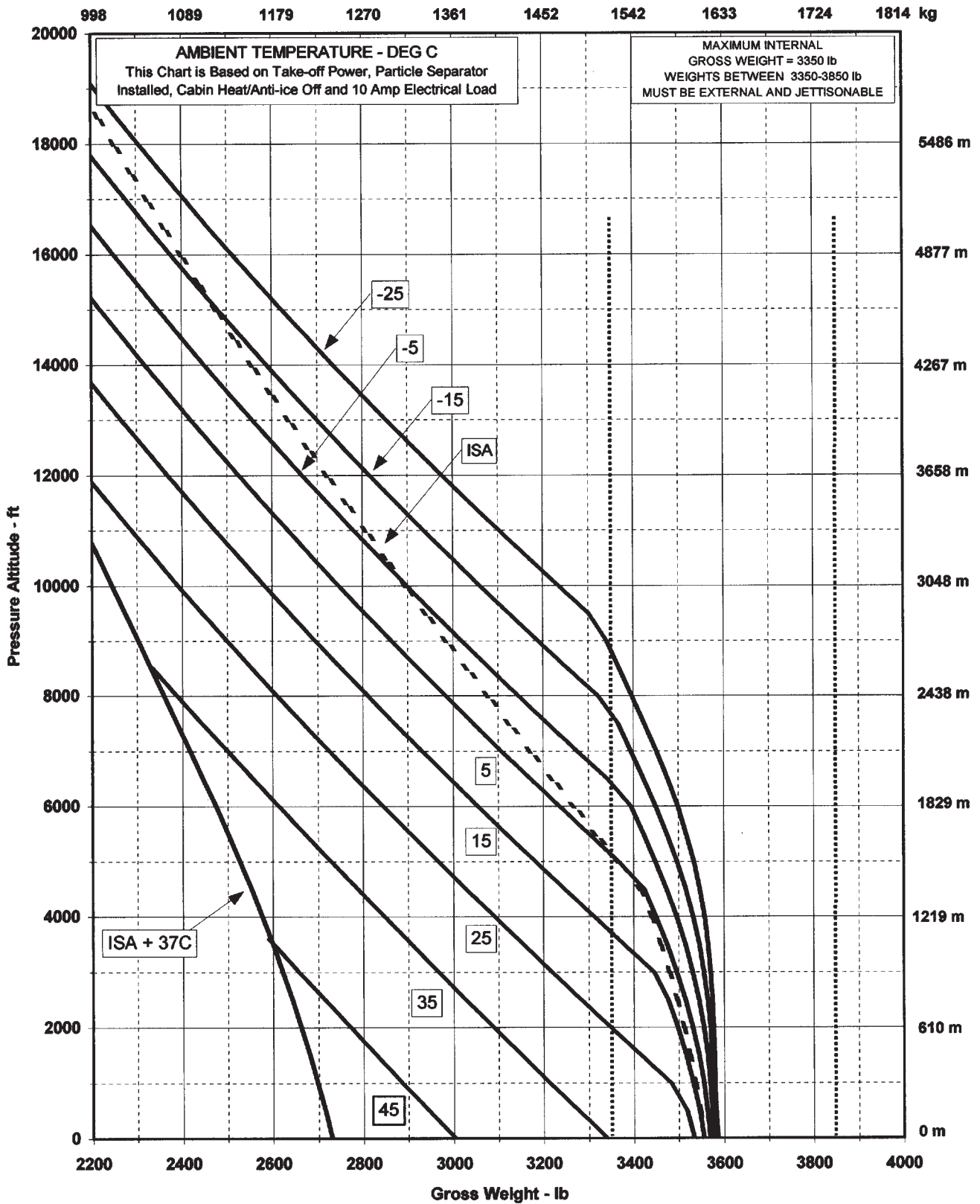
### 4.1 Hover-In-Ground-Effect.



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### 4.2 Hover-Out of-Ground-Effect.



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## WITH C20R ENGINE

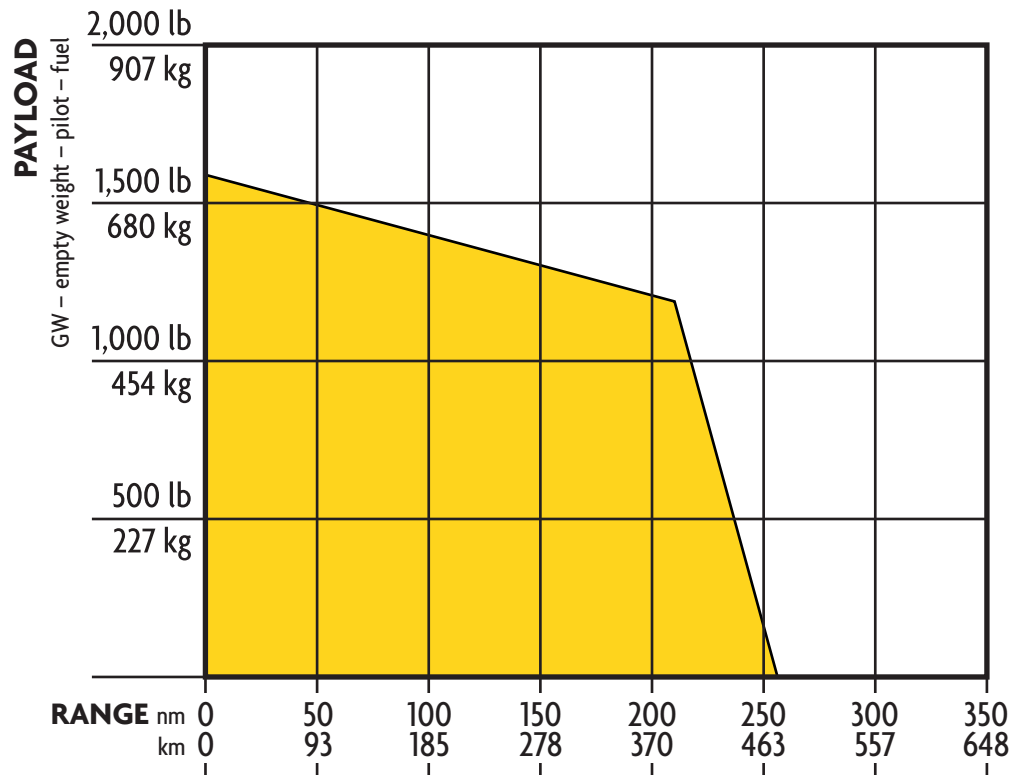
### 4.3 Takeoff Gross Weight Worksheet.

	Example	Mission #1	Mission #2
<b>Empty Weight</b>	1,585 lb (719 kg)		
<b>Pilot</b>	170 lb (77 kg)		
<b>Fuel</b>	403 lb (183 kg)		
<b>Payload</b>	1192 lb (540 kg)		
<b>Takeoff GW</b>	3,350 lb (1519 kg)		

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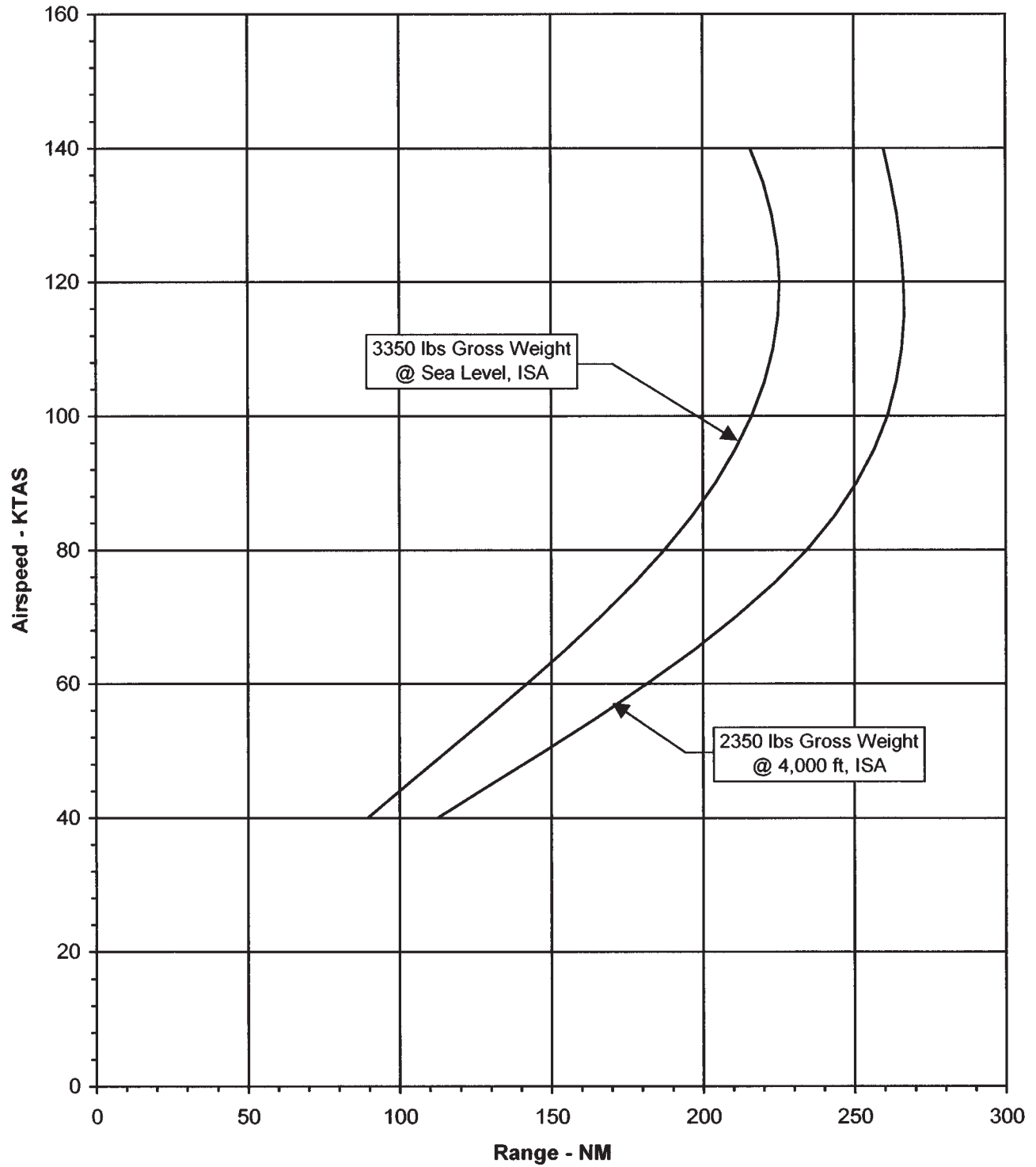
### 4.4 Payload vs Range (5000', ISA).



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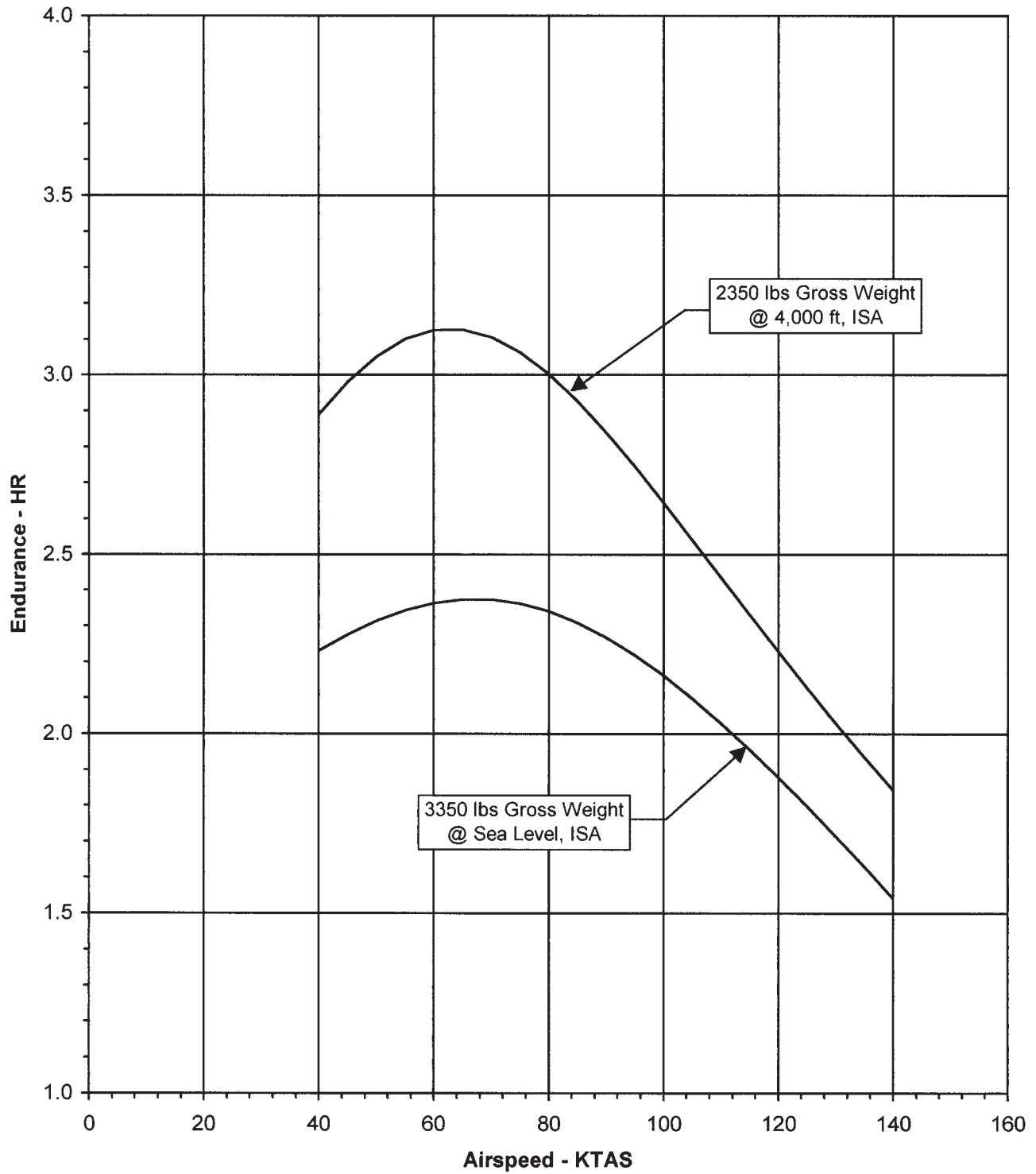
### 4.5 Speed for Best Range.



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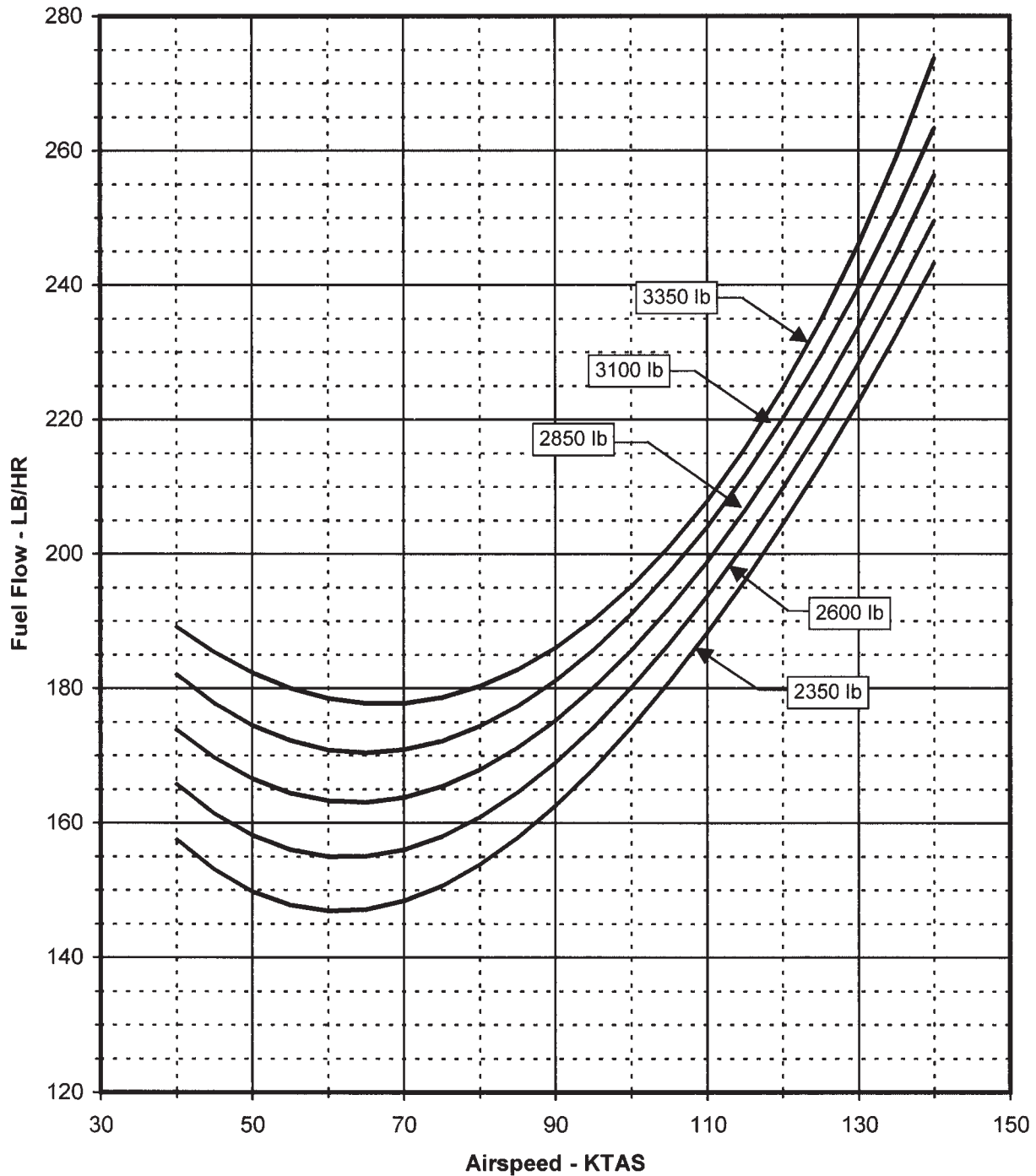
### 4.6 Speed for Best Endurance.



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## WITH C20R ENGINE

### 4.7 Fuel Flow, Sea Level, ISA (15°C).



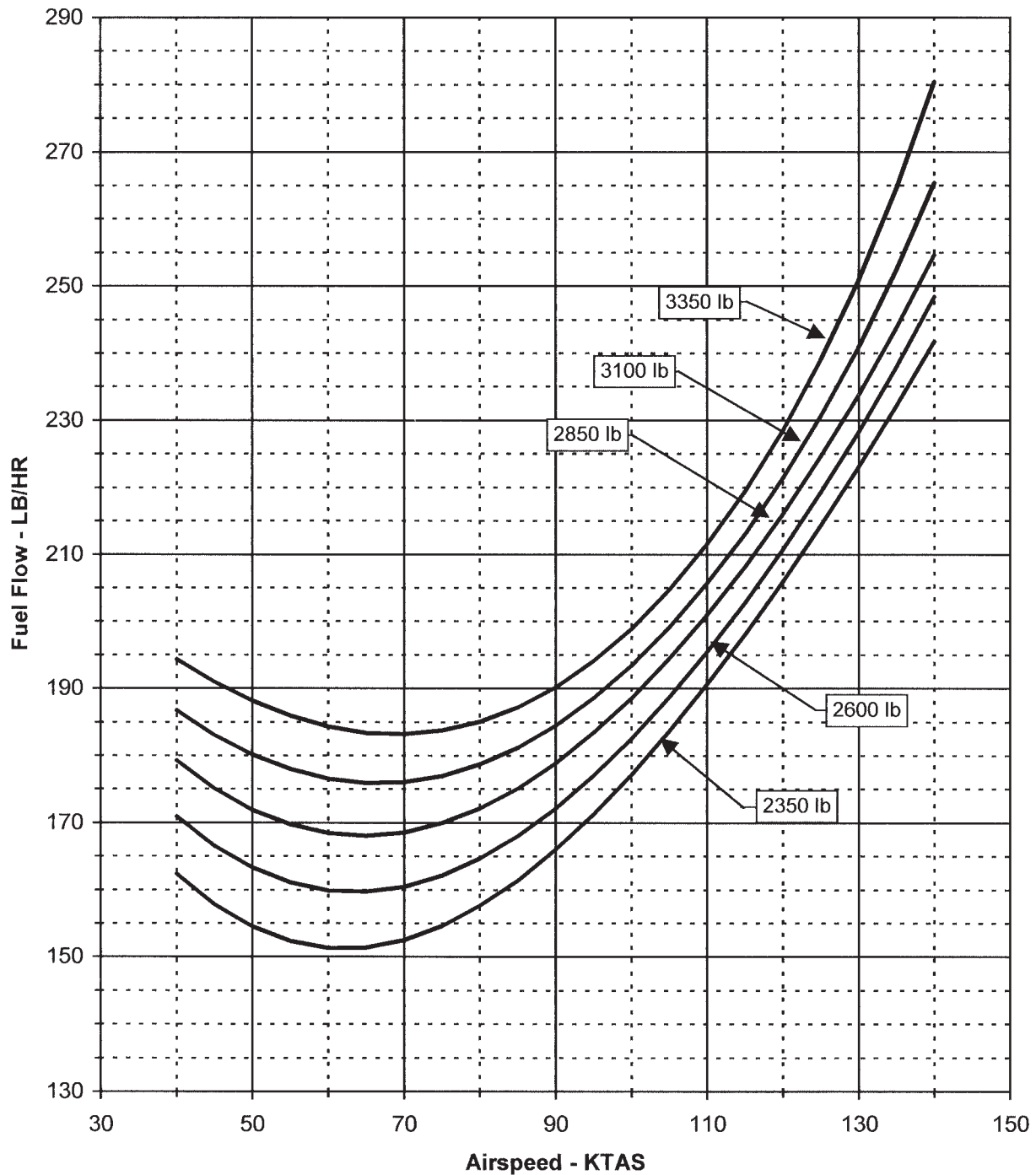
Note: Use for Estimates Only. Not FAA Approved. Based on clean aircraft, level flight performance, minimum specification engine, particle separator and 10 ampere electrical load.



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### 4.8 Fuel Flow, Sea Level, ISA +20°C (35°C).

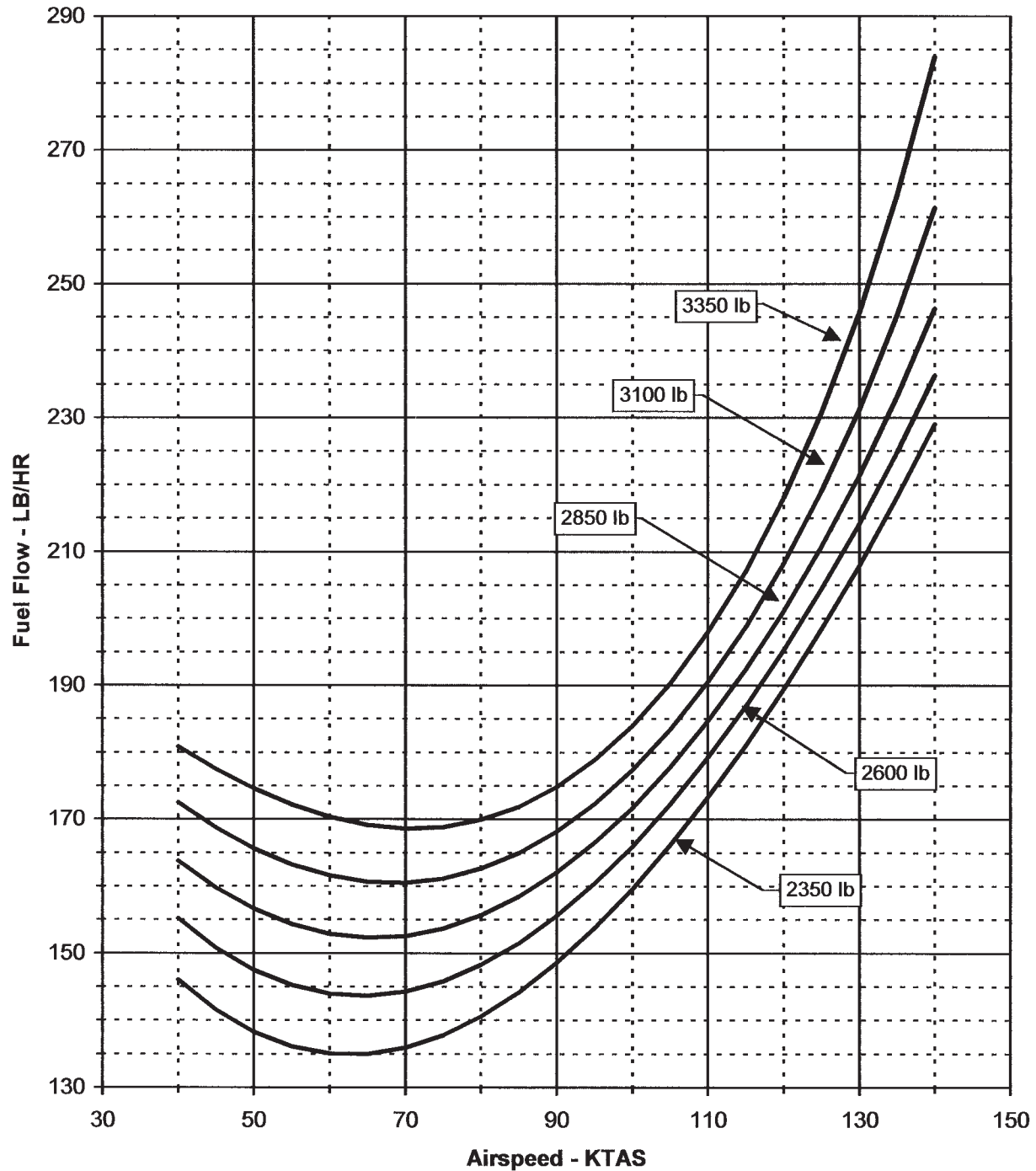


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### 4.9 Fuel Flow, 4,000 feet, ISA (7°C).

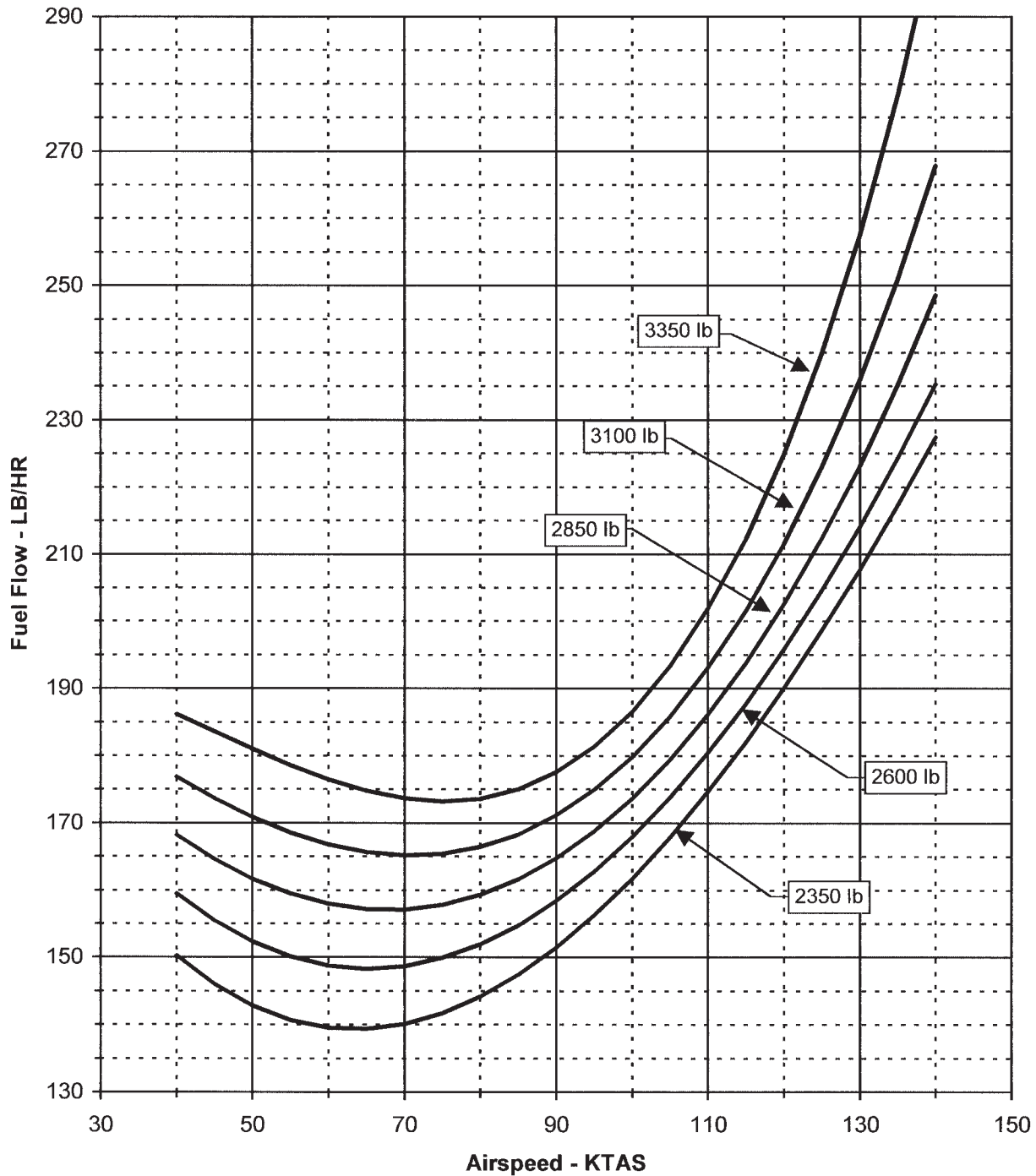


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### 4.10 Fuel Flow, 4,000 feet, ISA +20°C (27°C).



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