

# MD520N

## WITH NOTAR SYSTEM

### 4.0 Performance Specifications

<i>Characteristics at Gross Weight</i>		<i>Metric 1361 kg</i>		<i>Imperial 3,000 lb</i>		<i>Metric 1519 kg</i>		<i>Imperial 3,350 lb</i>	
Maximum Cruise Speed:	Sea level 1524 m (5,000 ft)	237 km/hr	128 kt (147 mph)	229 km/hr	123 kt (142 mph)	245 km/hr	132 kt (152 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)	365 km	197 nm (227 mi)	412 km	222 nm (256 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	1,913 fpm	7.9 m/sec	1,546 fpm	8.6 m/sec	1,687 fpm	6.5 m/sec	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: (extended landing gear)	Standard day ISA + 20° C day	3901 m	12,800 ft	2835 m	9,300 ft	2743 m	9,000 ft	1554 m	5,100 ft
Out-of-ground effect:	Standard day ISA + 20° C day	2865 m	9,400 ft	1707 m	5,600 ft	1707 m	5,600 ft	427 m	1,400 ft

### WEIGHTS

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

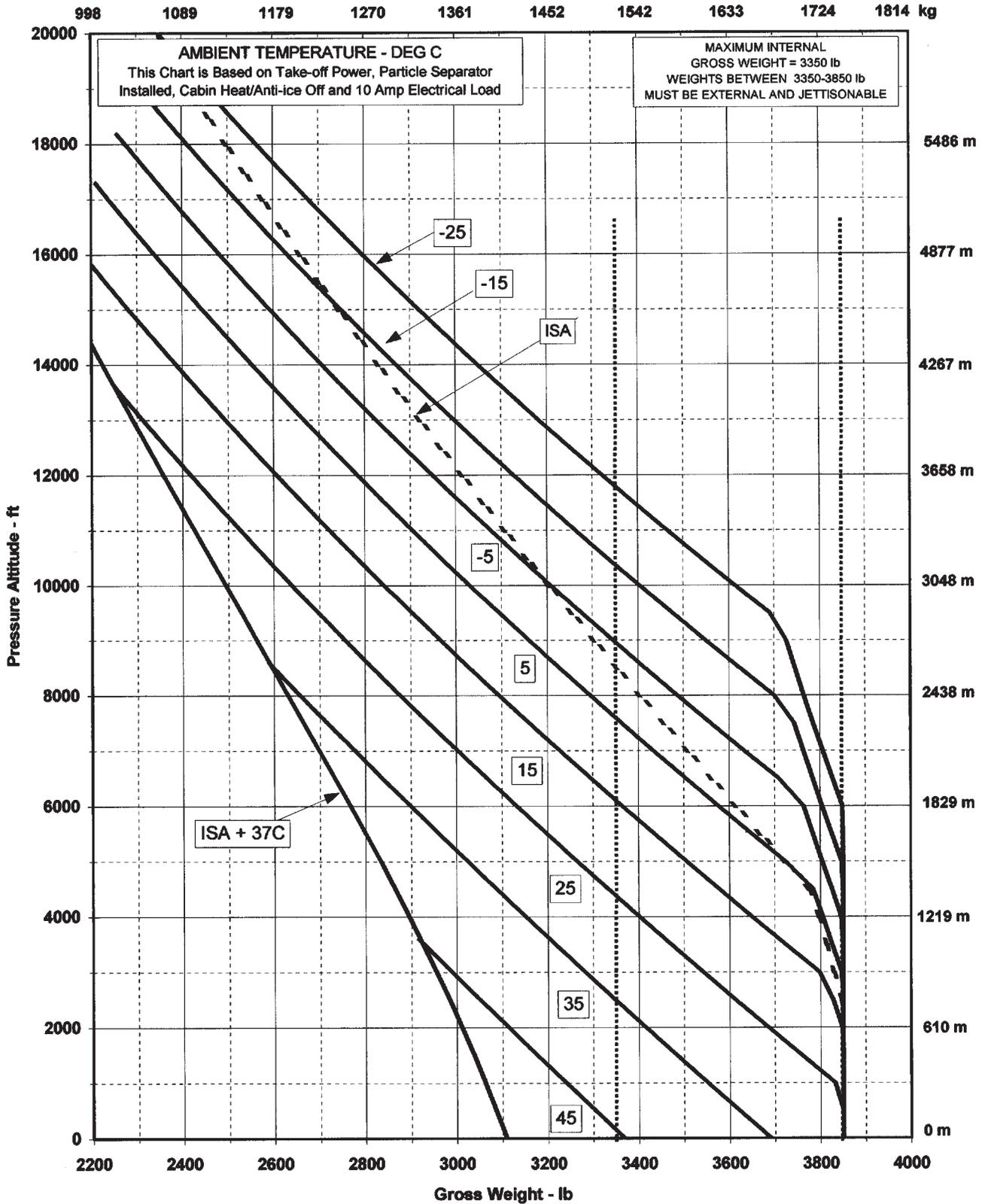
### POWER PLANT

<i>Characteristics</i>		<i>Metric</i>		<i>Imperial</i>	
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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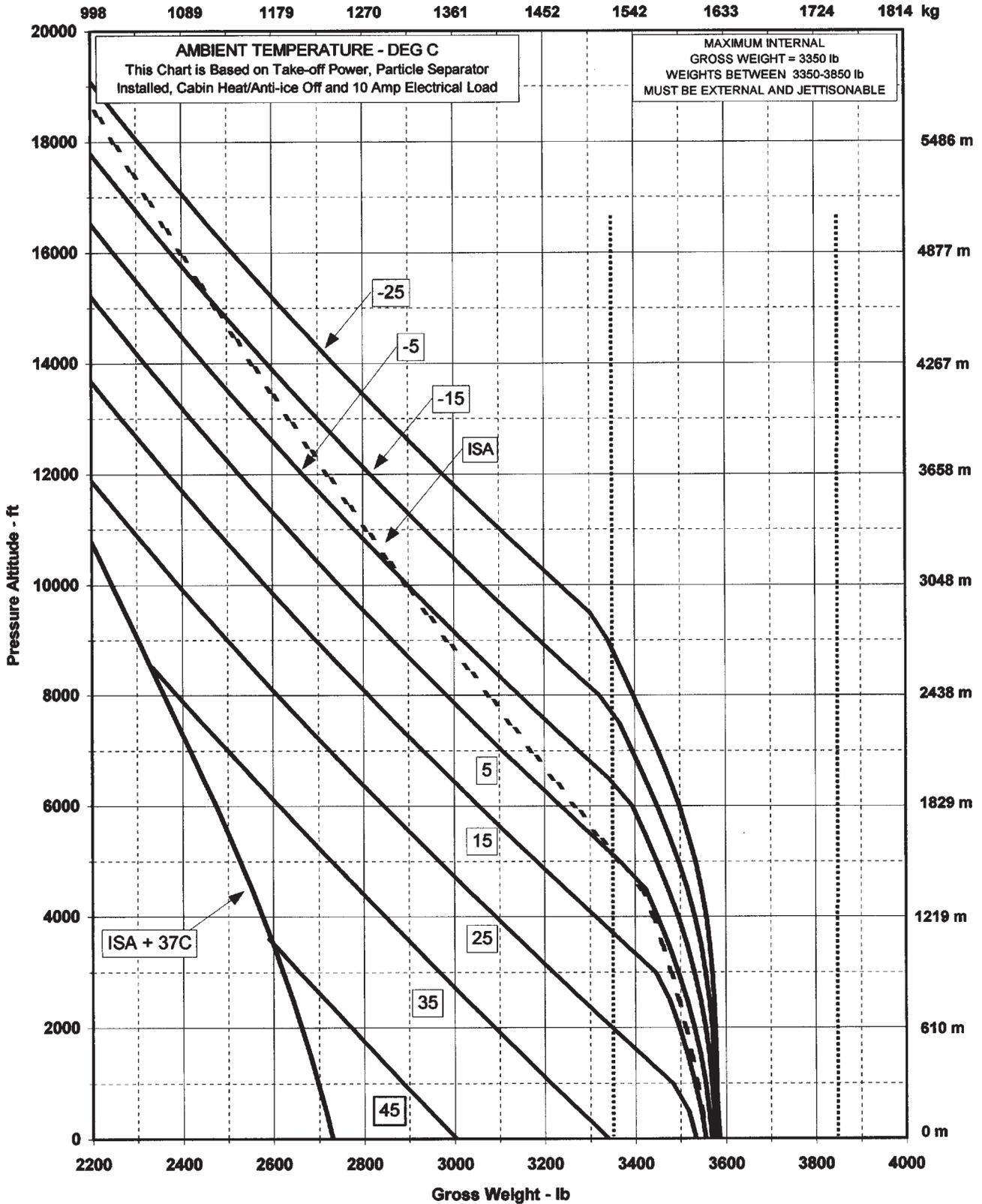
### 4.1 Hover-In-Ground-Effect.



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



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## WITH C20R ENGINE

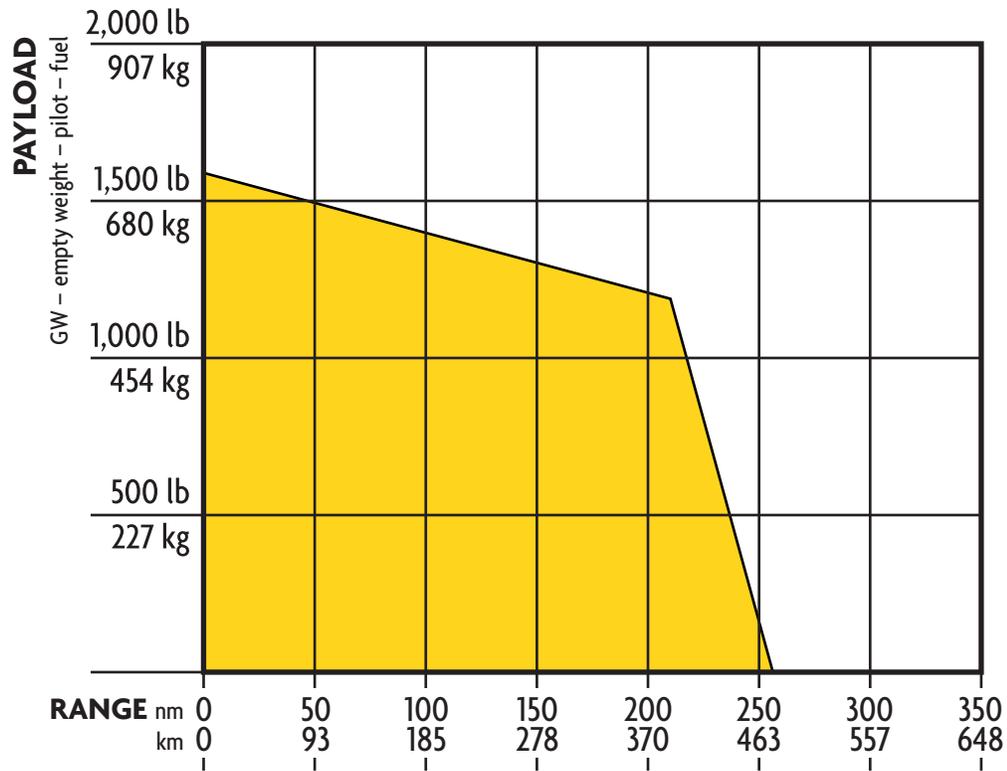
### 4.3 Takeoff Gross Weight Worksheet.

	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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## WITH C20R ENGINE

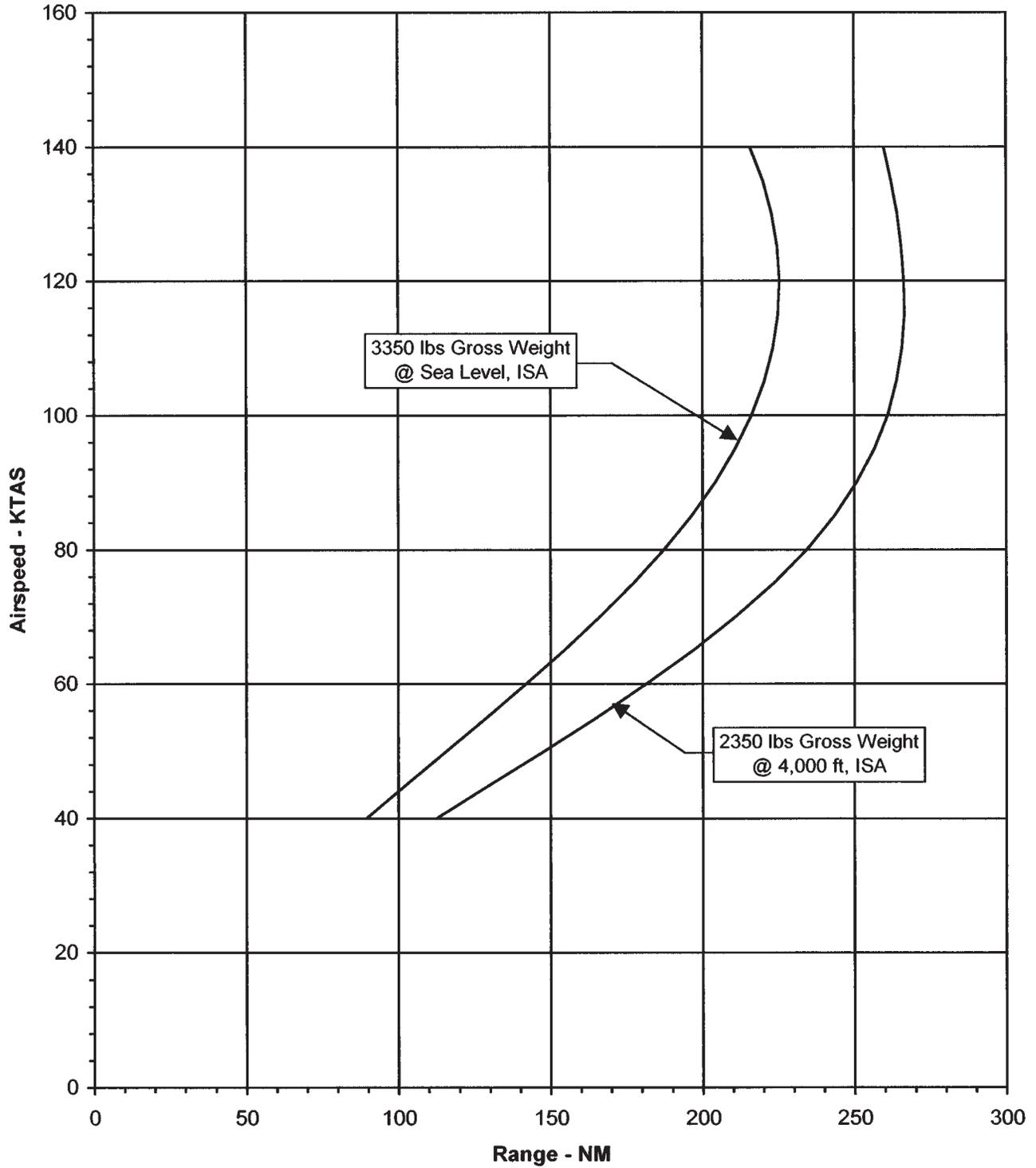
### 4.4 Payload vs Range (5000', ISA).



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## WITH C20R ENGINE

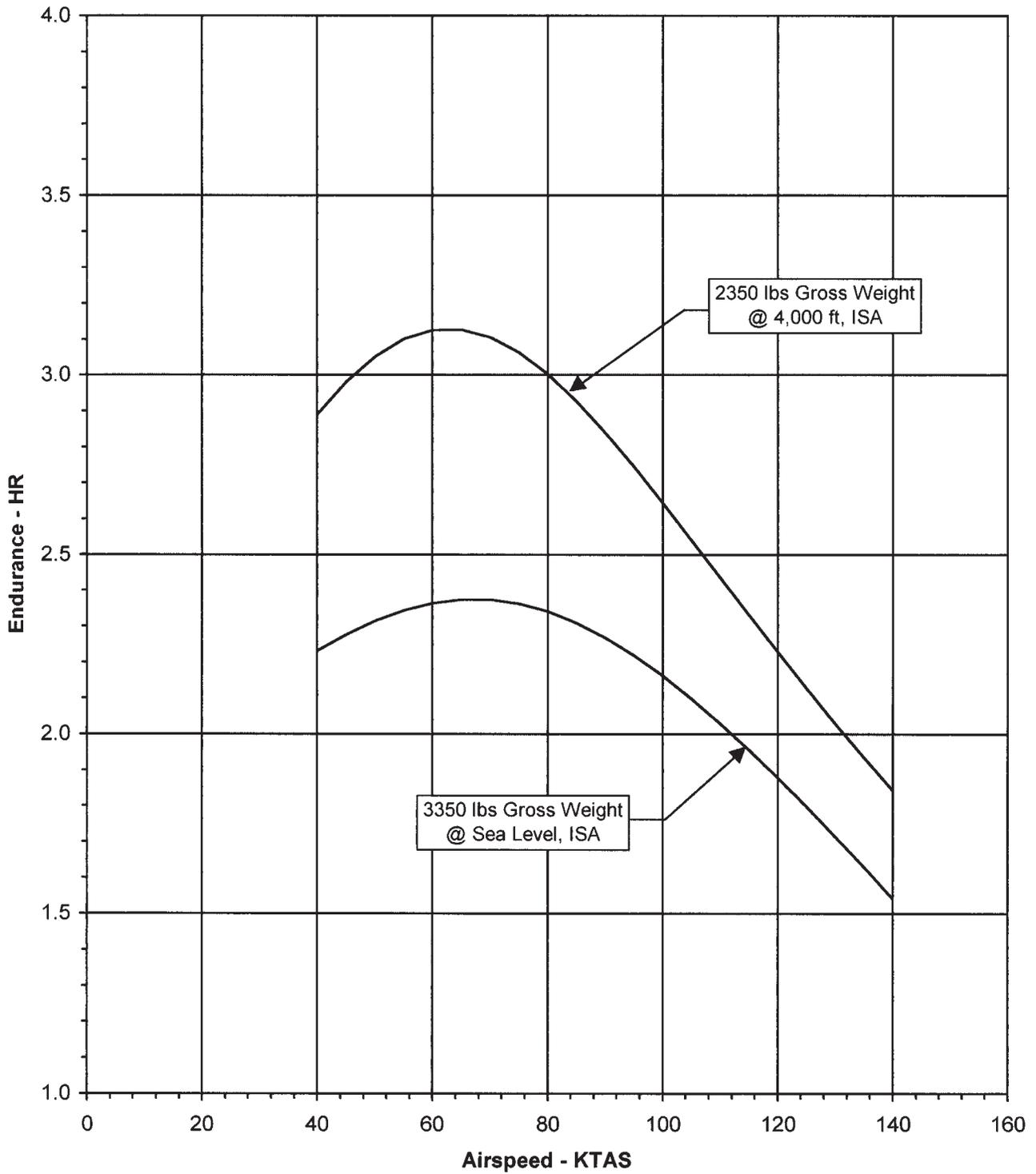
### 4.5 Speed for Best Range.



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## WITH C20R ENGINE

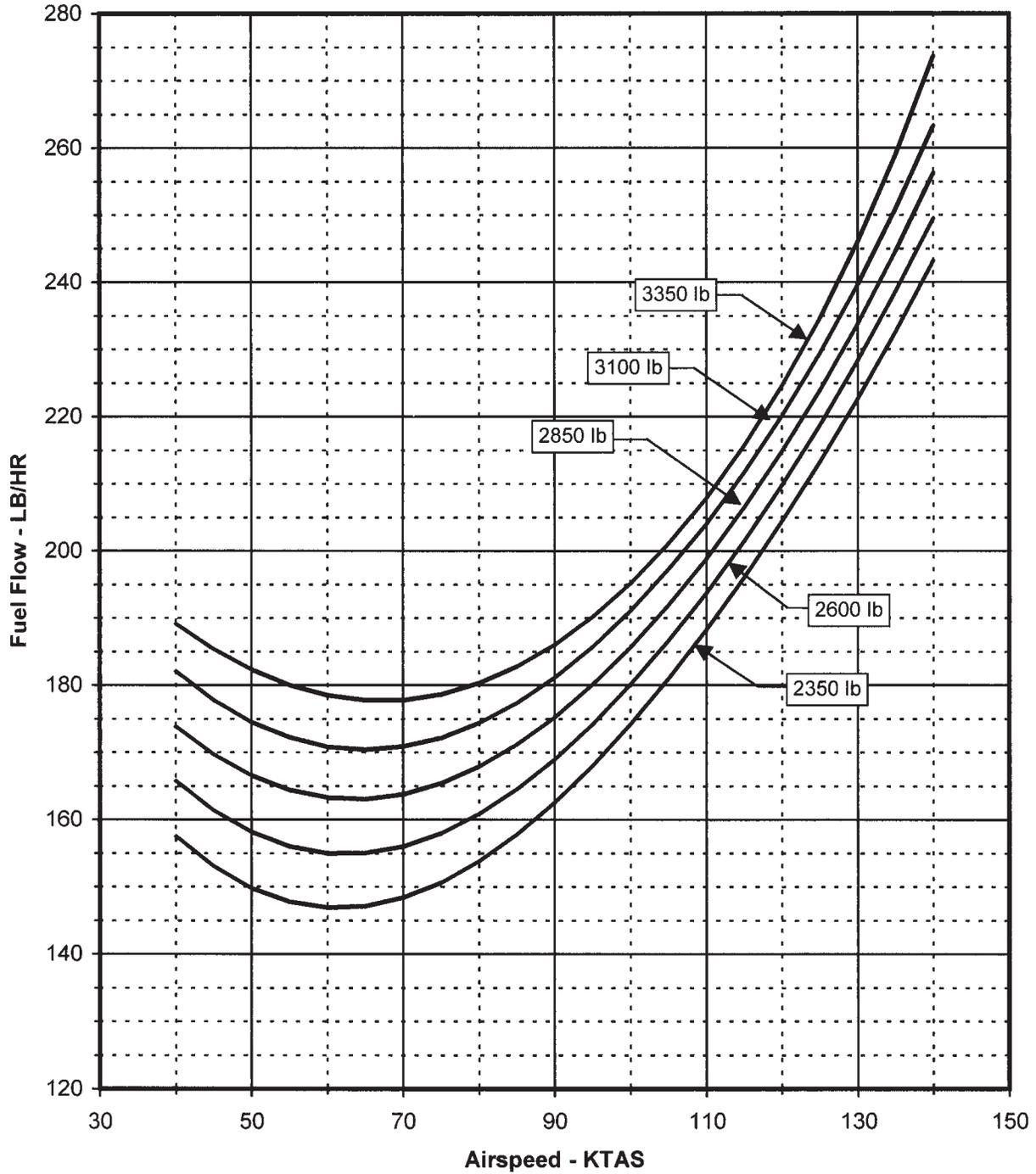
### 4.6 Speed for Best Endurance.



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## WITH C20R ENGINE

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

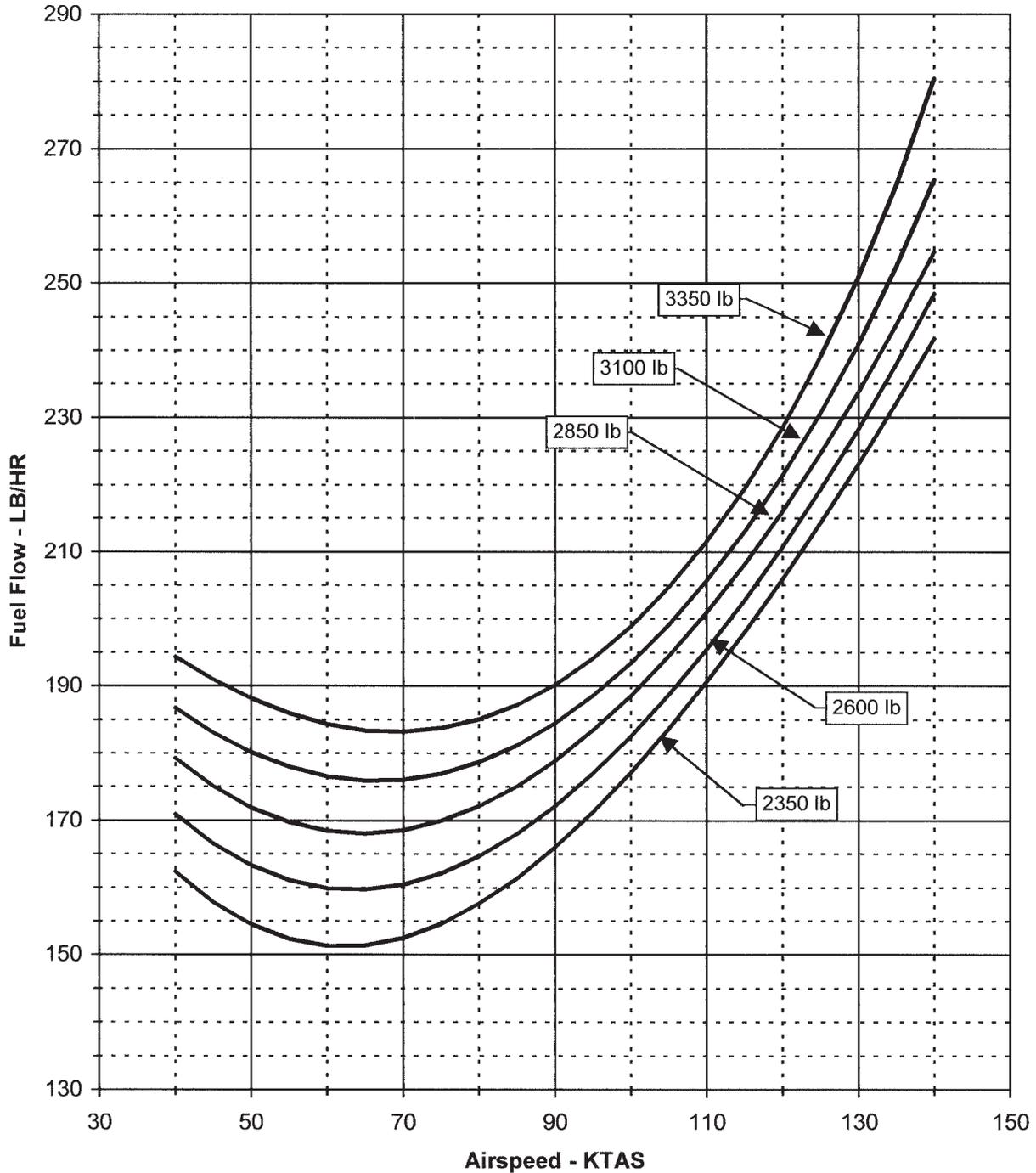


Note: Use for Estimates Only. Not FAA Approved. Based on clean aircraft, level flight performance, minimum specification engine, particle separator and 10 ampere electrical load.

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

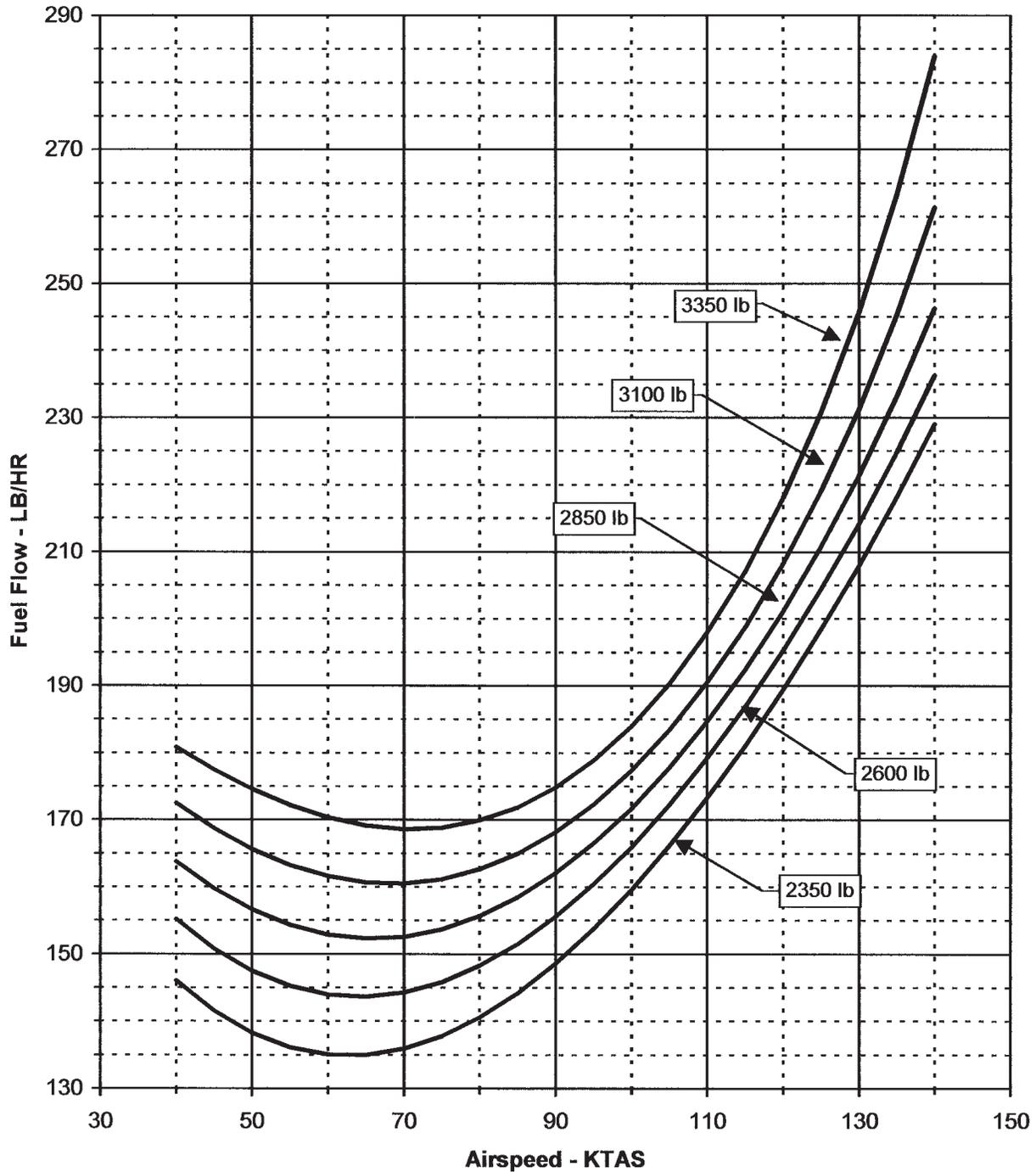


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## WITH C20R ENGINE

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

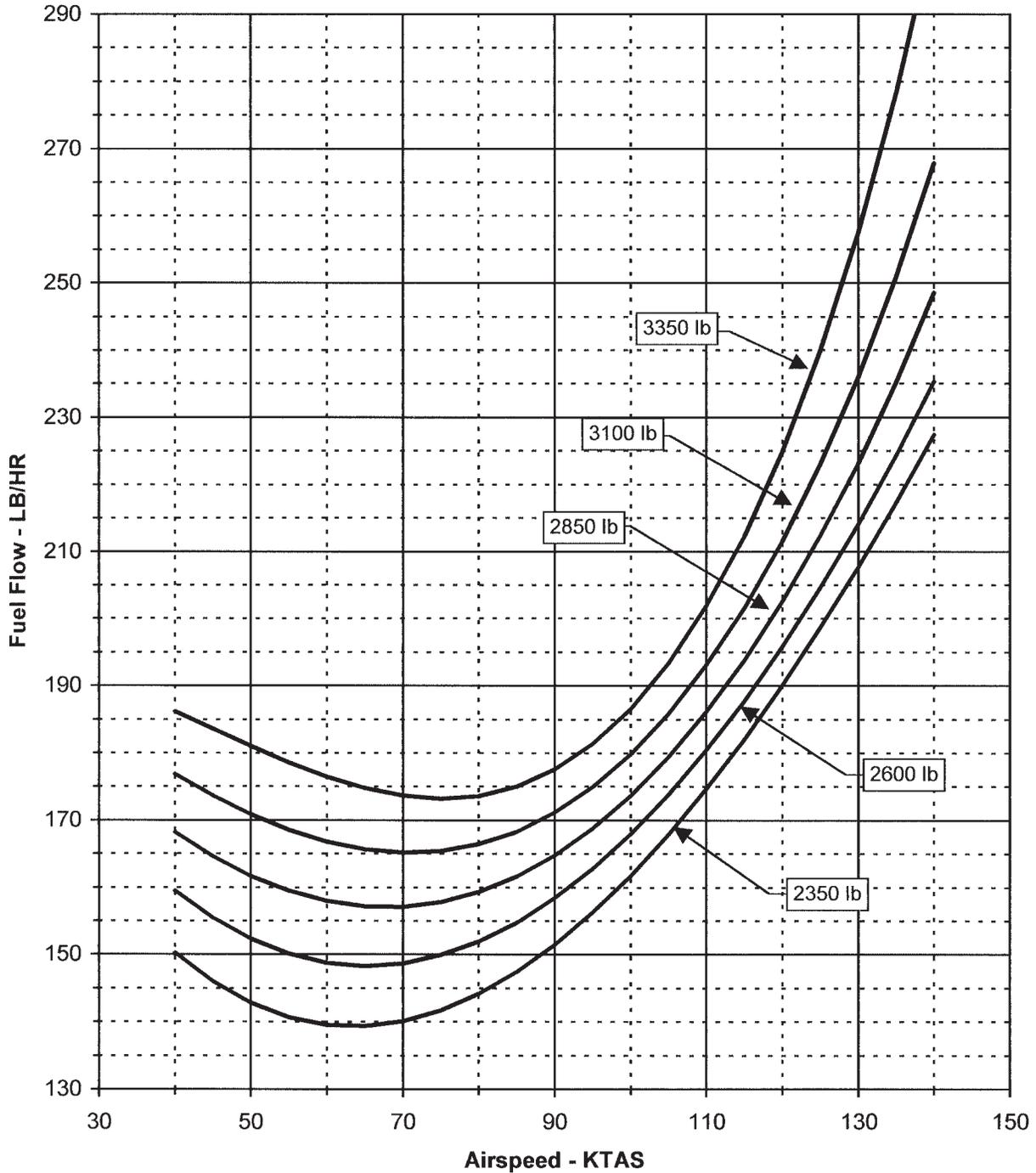


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### 4.10 Fuel Flow, 4,000 feet, ISA +20°C (27°C).



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