

FLIGHT PERFORMANCE AND PLANNING

PRIVATE PILOT LICENCE

HELICOPTER MANUAL

SACAA-02

FOR EXAMINATION PURPOSES ONLY

SOUTH AFRICAN



*CIVIL AVIATION
AUTHORITY*

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AIRSPEED SYSTEM CALIBRATION

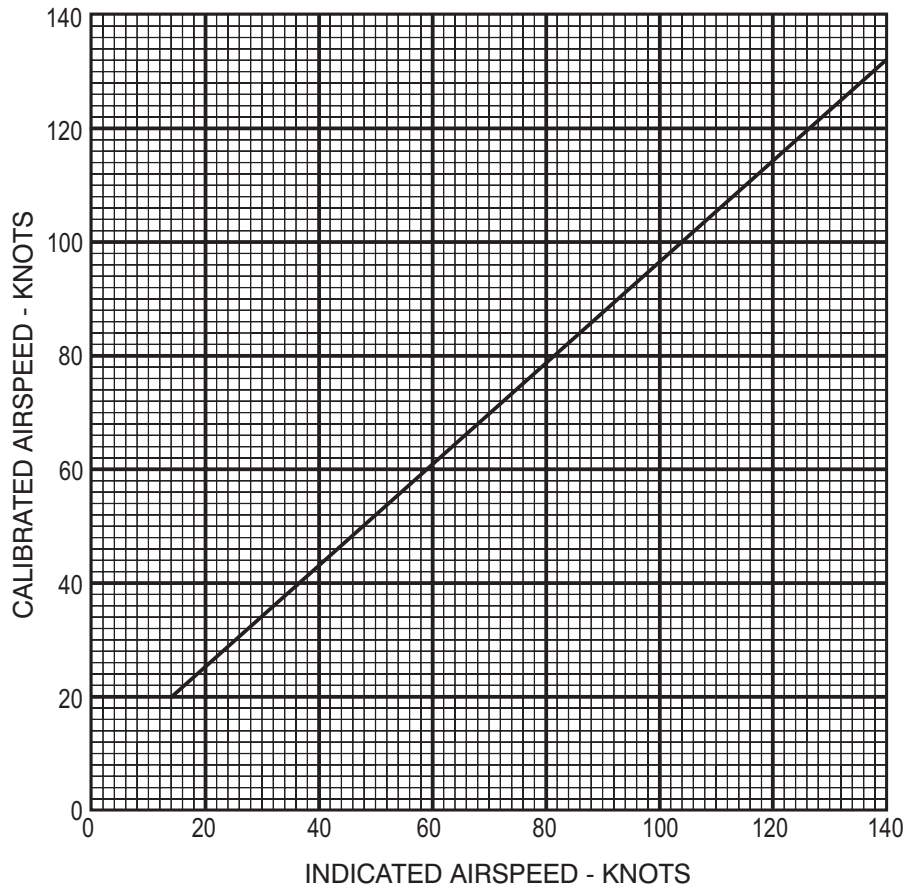


Figure 1-1: Airspeed System Calibration

DENSITY ALTITUDE GRAPH

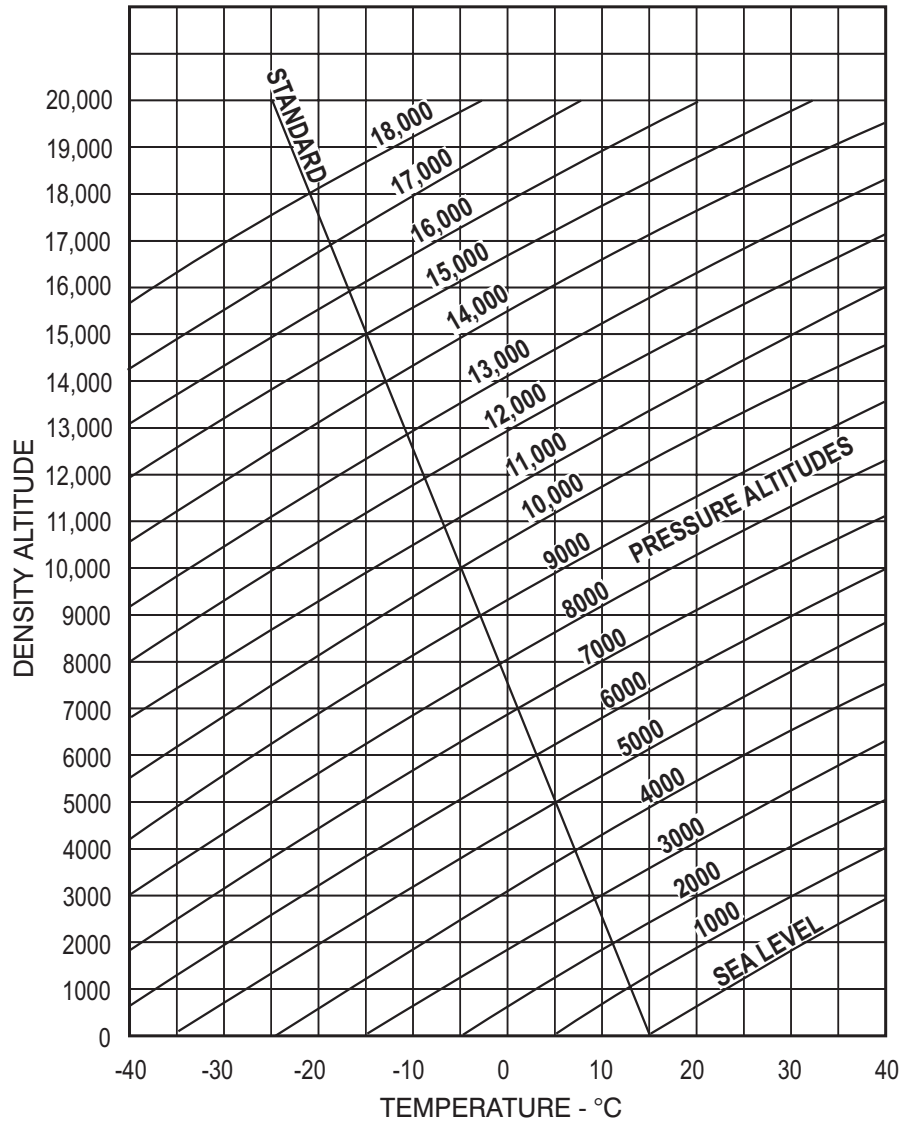


Figure 1-2: Density Altitude Graph

WIND COMPONENT GRAPH

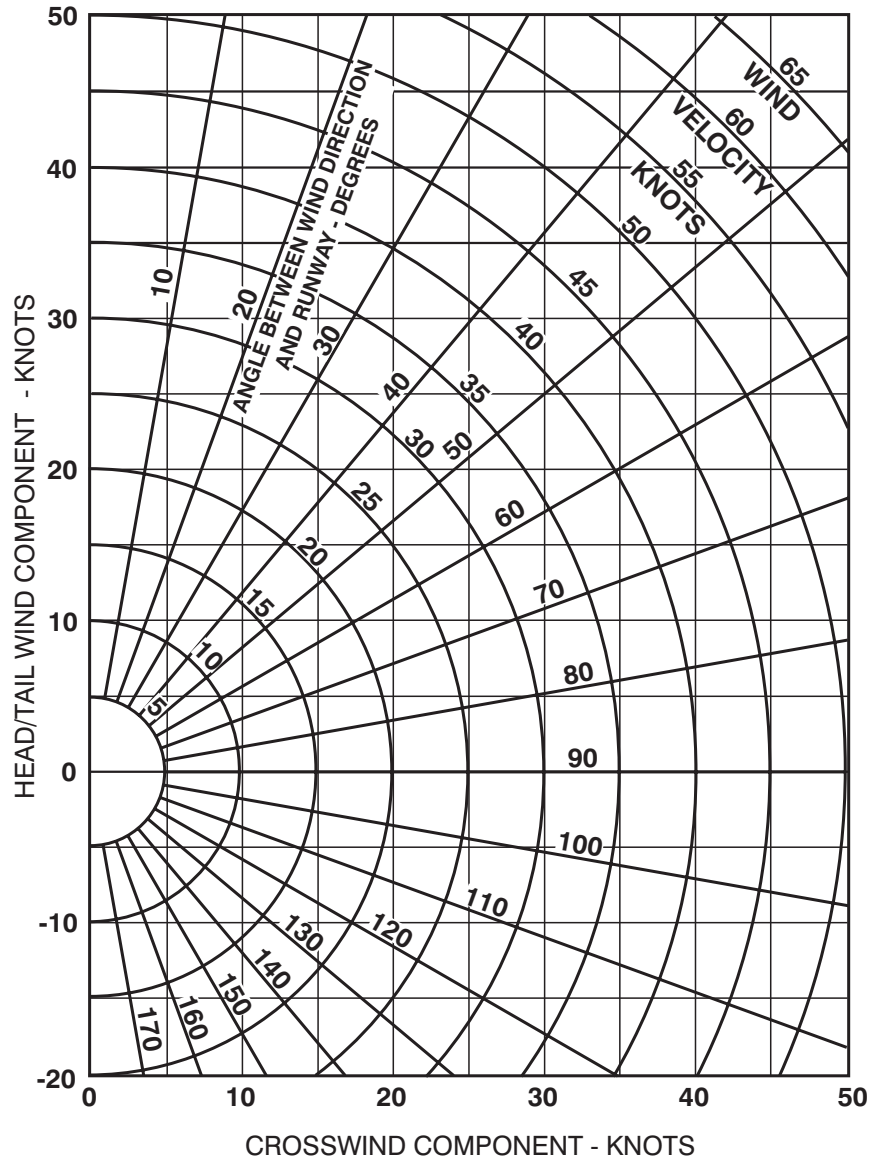


Figure 1-3: Wind Component Graph

HOVER IN GROUND EFFECT GRAPH

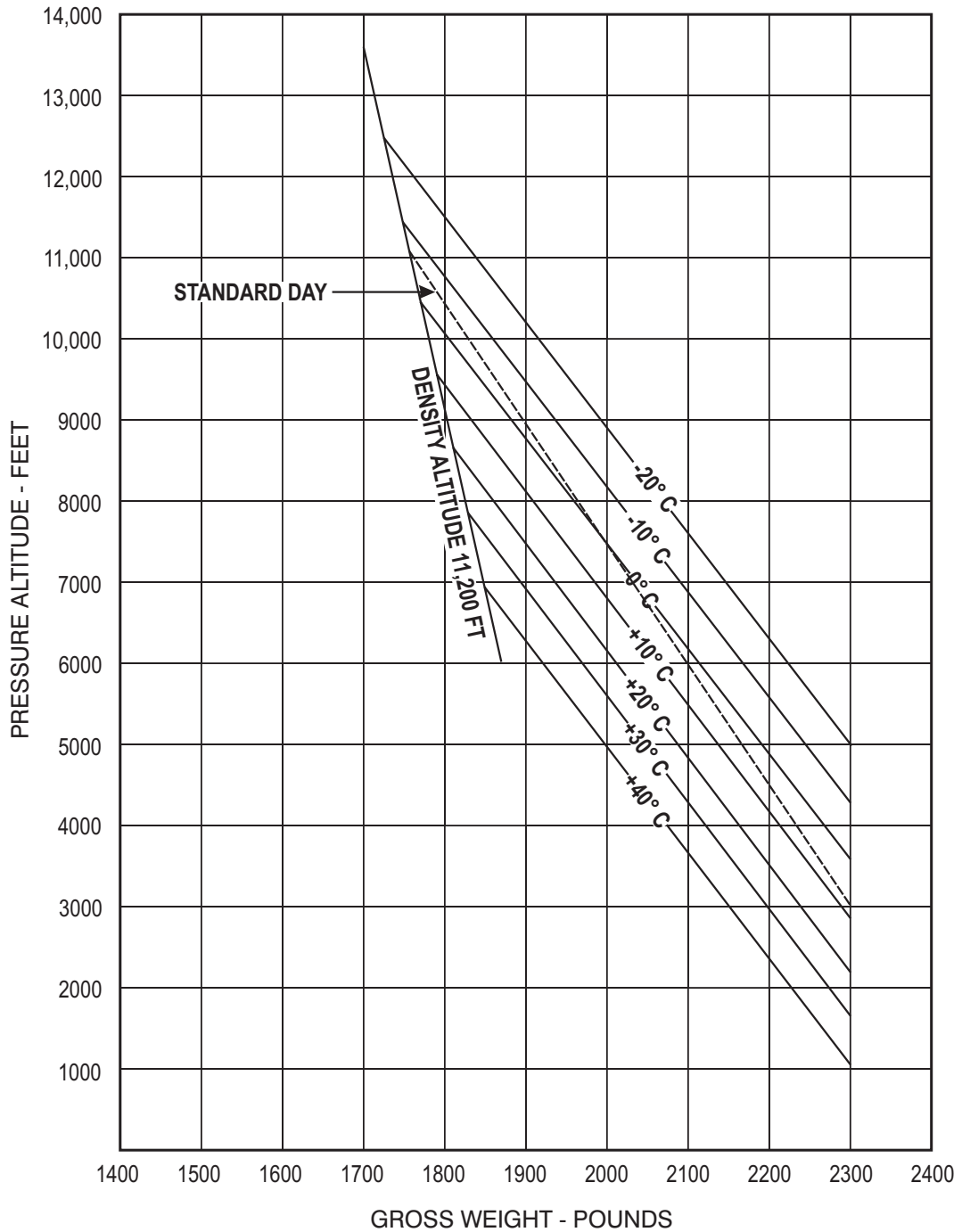


Figure 1-4: Hover in Ground Effect Graph

HOVER OUT OF GROUND EFFECT GRAPH

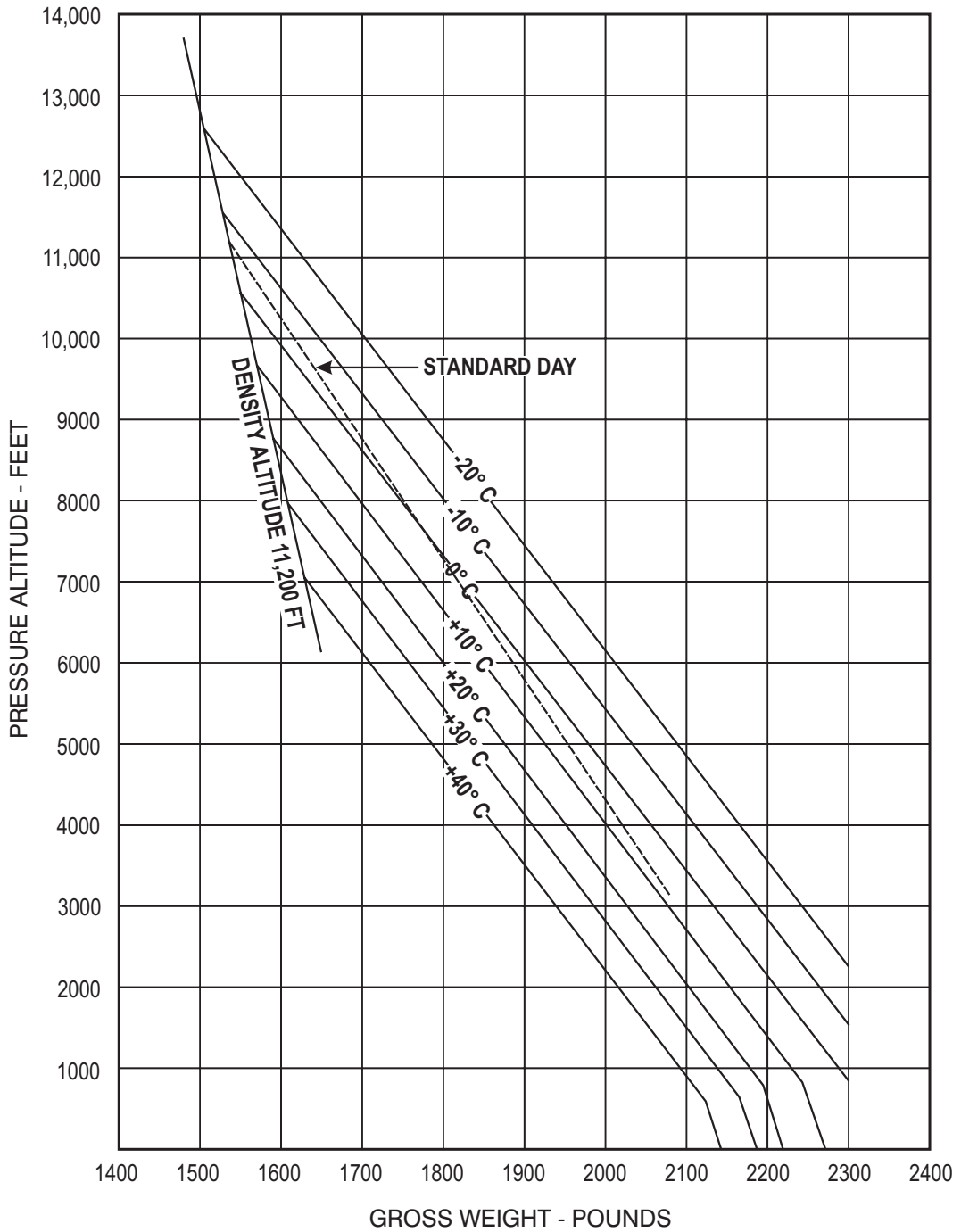


Figure 1-5: Hover Out of Ground Effect Graph

NEVER EXCEED SPEED (VNE) GRAPH

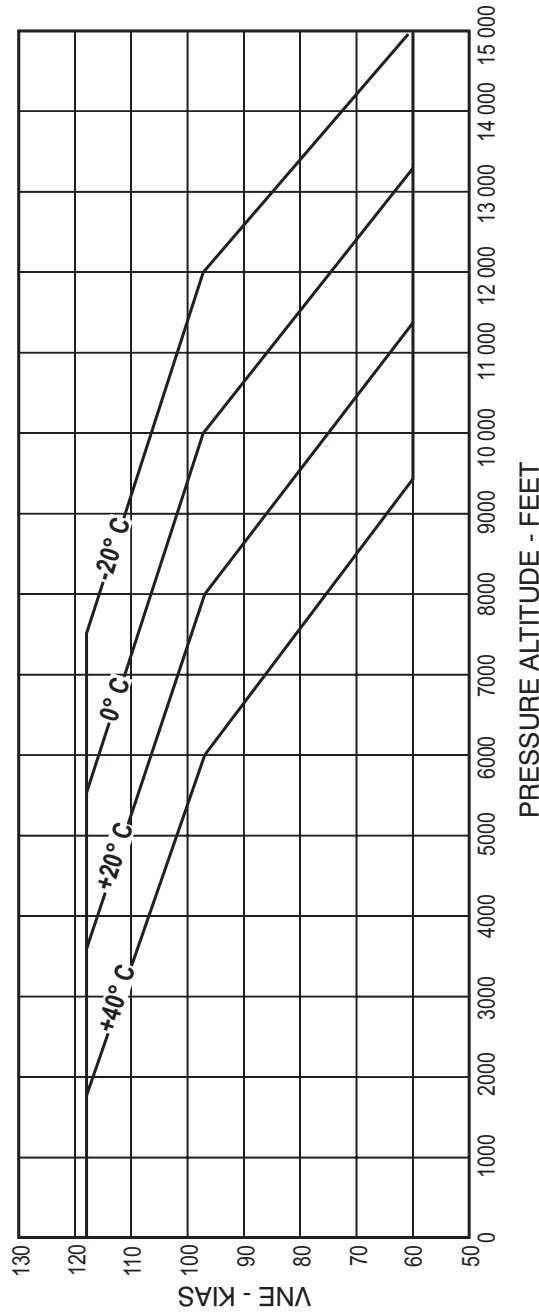


Figure 1-6: Never Exceed Speed Speed (Vne)

NORMAL OPERATING SPEED (VNO) GRAPH

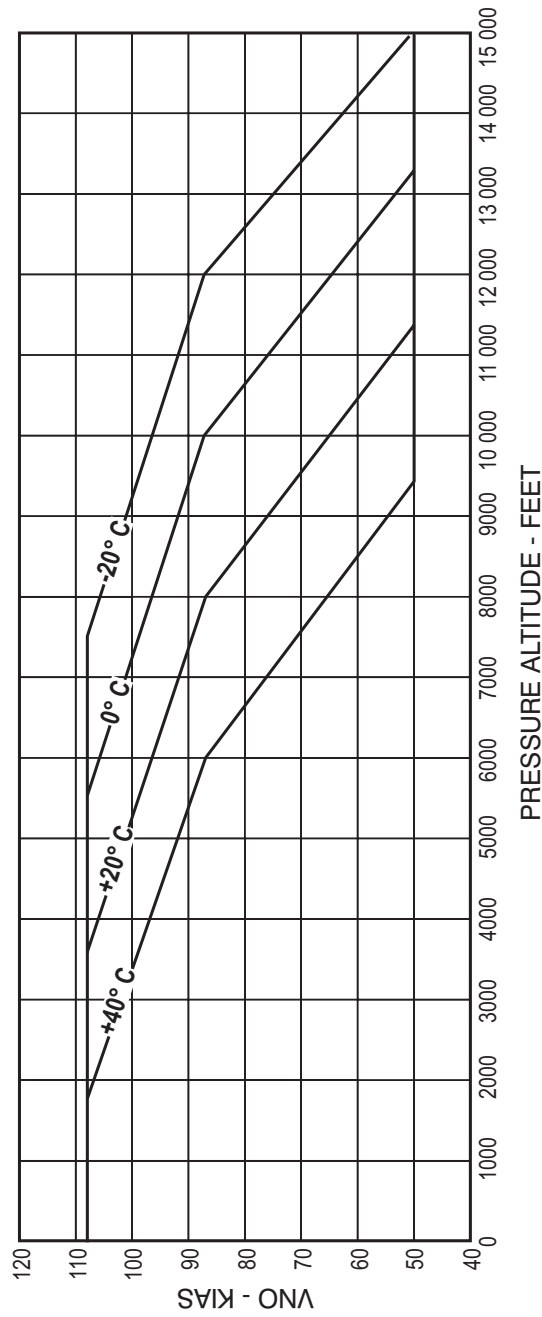


Figure 1-7: Normal Operating Speed Graph (Vno)

MAXIMUM CONTINUOUS POWER TABLE

MAXIMUM CONTINUOUS POWER								
PRESSURE ALTITUDE FEET	OUTSIDE AIR TEMPERATURE - ° C							
	-20	-10	0	10	20	30	40	
SEA LEVEL	22.4	22.6	23.0	23.4	23.6	24.0	24.4	
2000	22.2	22.4	22.6	23.0	23.2	23.6	23.8	
4000	22.0	22.2	22.4	22.6	22.8	23.0	23.2	
6000	21.6	22.0	FULL THROTTLE					
FOR MAX TAKE-OFF POWER (5 MIN LIMIT) ADD 1.1 IN.HG								

Figure 1-8: Maximum Continuous Power

AUTOROTATION PERFORMANCE

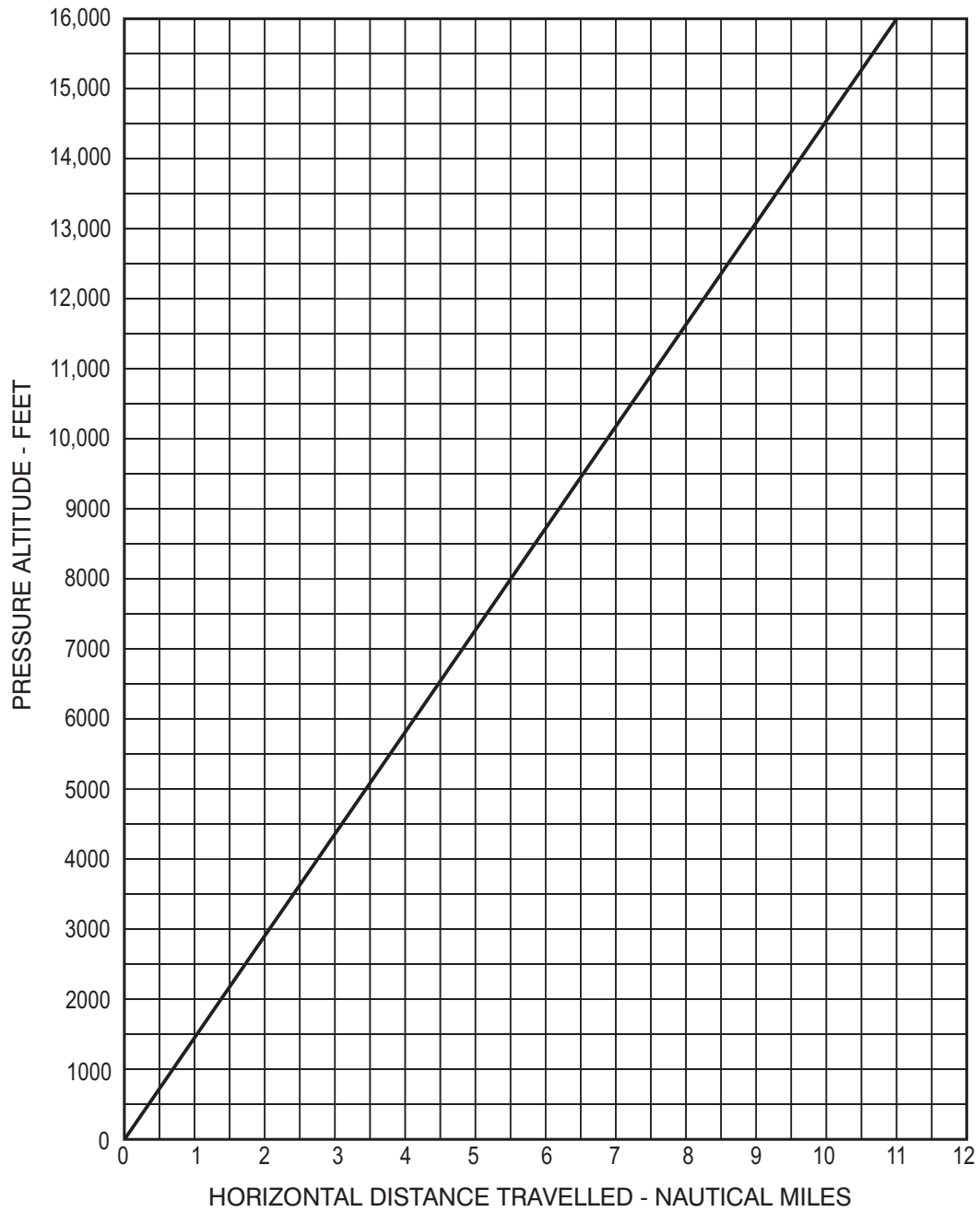


Figure 1-9: Autorotation Performance

HEIGHT - VELOCITY DIAGRAM

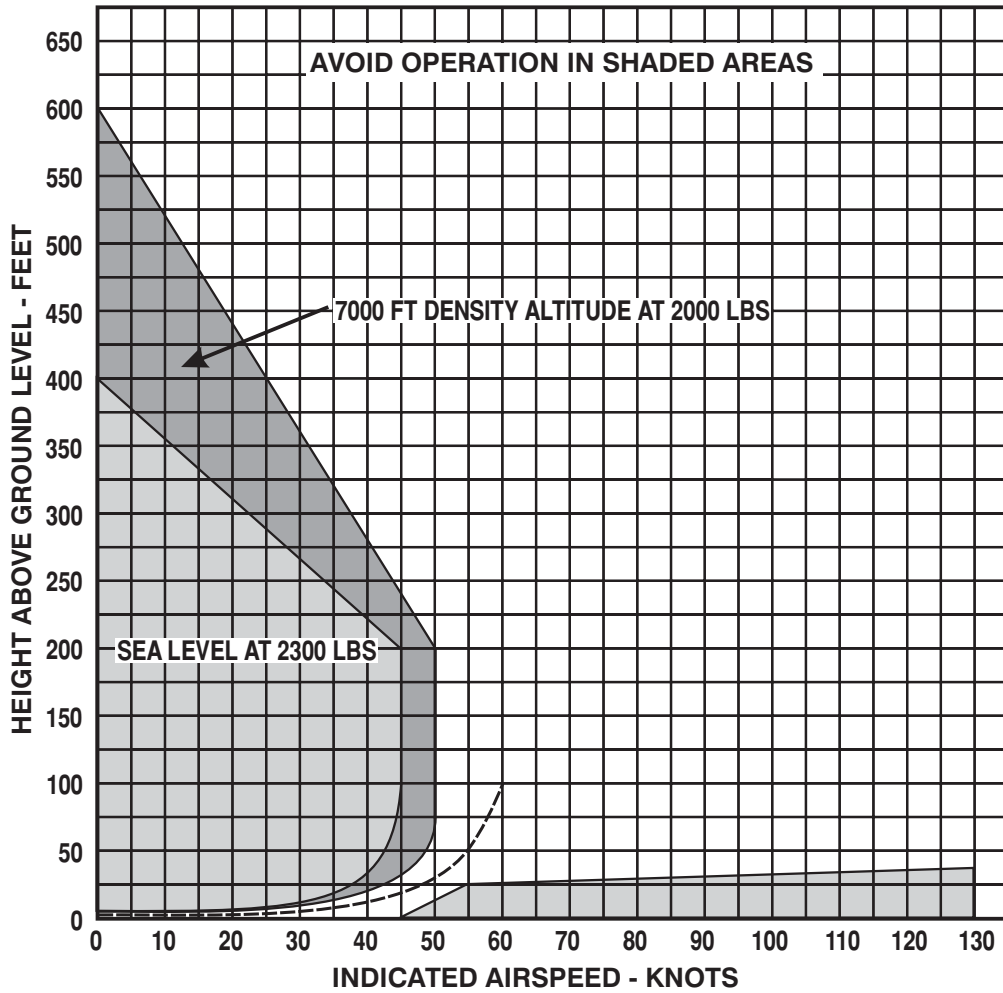


Figure 1-10: Height Velocity Diagram

MASS AND BALANCE LOADING FORM

	Weight (lbs)	Arm Aft Datum (inches)	Moment (inch-pounds)
Basic Empty Weight	1350	105.5	142425
Pilot and Fwd Passenger		48.5	
Fwd Baggage		43.0	
Aft Passengers and Baggage		78.5	
Total Zero Fuel Weight			
Main Fuel		104.0	
Aux Fuel		103.0	
Total Loaded Helicopter			

NOTE: The Maximum All Up Weight of this helicopter is 2300 lb.

Figure 2-1: Mass and Balance Loading Form

LONGITUDINAL CG GRAPH

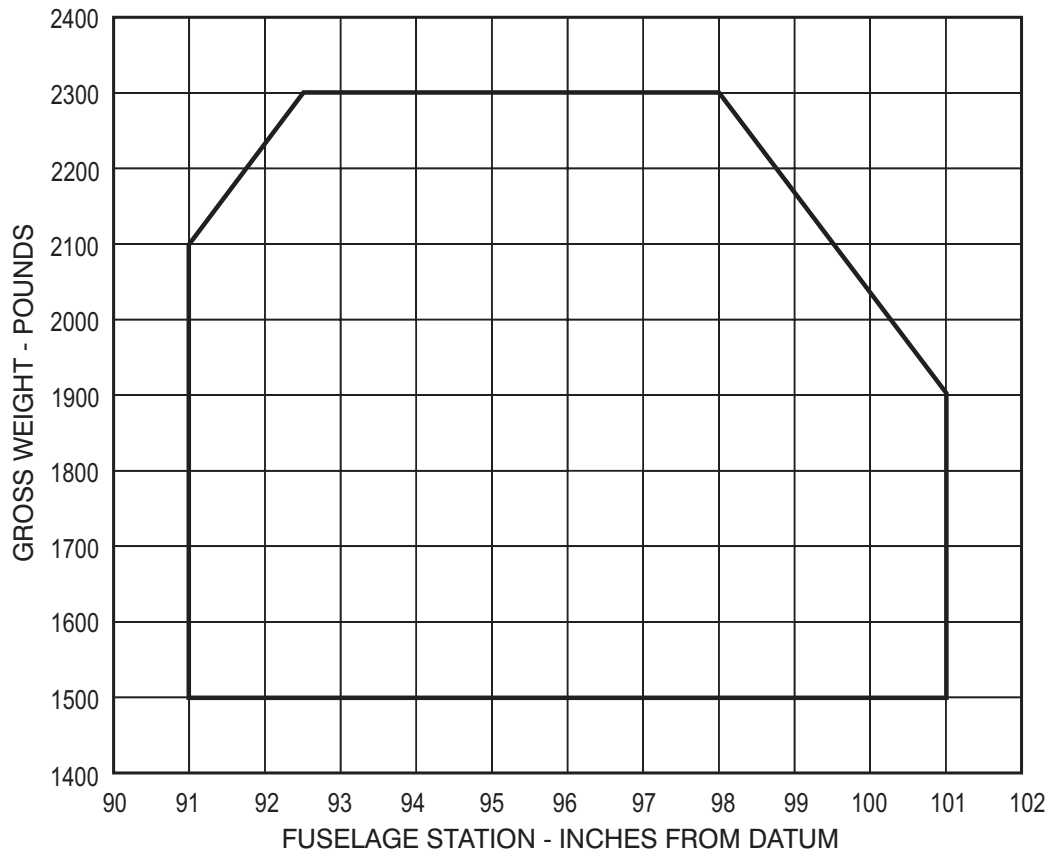


Figure 2-2: Longitudinal CG Graph

LATERAL CG GRAPH

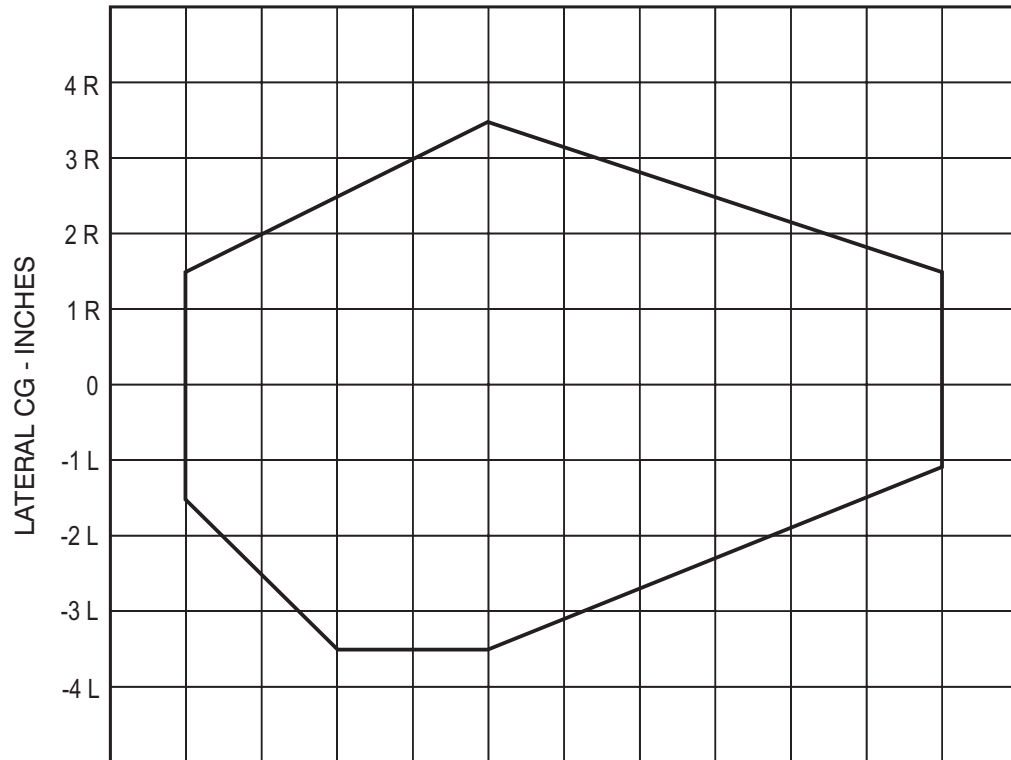


Figure 2-3: Lateral CG Graph

ALLOWABLE CG MOMENT VS GROSS WEIGHT GRAPH

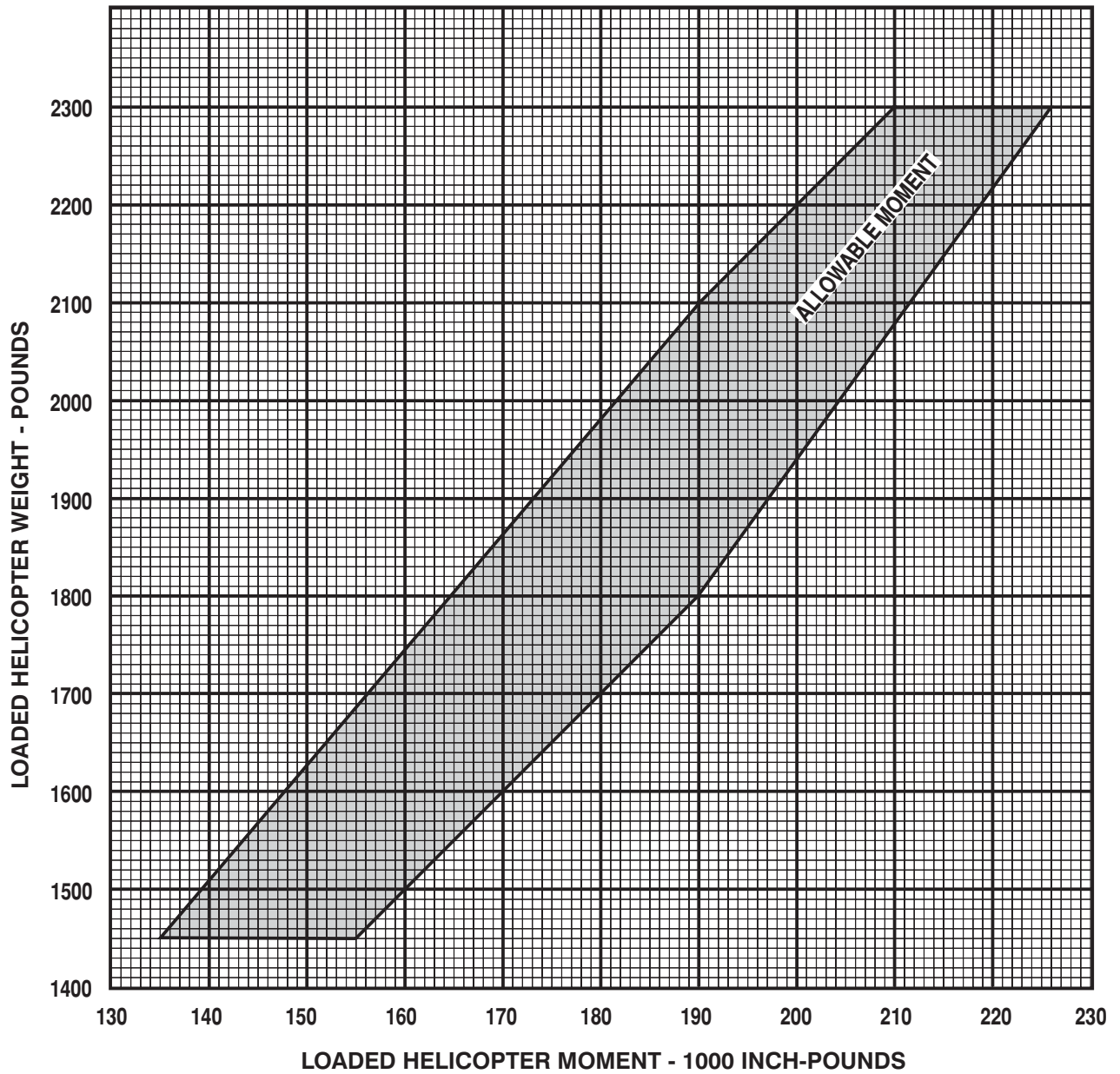


Figure 2-4: CG Moment Vs Gross Weight