

# Bell 429 Product Specifications

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**Bell** Helicopter  
A Textron Company



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## Table of Contents

Publishers Notice.....	1
World's Most Advanced Light Twin.....	3
Specification Summary (U.S. Units).....	4
Specification Summary (Metric Units).....	5
Bell BasiX-Pro® Integrated Avionics System.....	6
Safety Enhancements.....	9
Bell 429 External Dimensions and Heliport Design Data.....	10
429 Interior.....	11
Standard Configuration.....	14
Optional Accessory Kits.....	16
Fuel Flow Charts.....	21
Performance Charts.....	35
429 Maintenance Program.....	42
Bell 429 Training.....	44

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## Publishers Notice

The data presented in this document is general in nature, and has been compiled from Bell Helicopter Textron, Inc. (BHTI) source materials including but not limited to; The Approved Rotorcraft Flight Manual, Maintenance Manual, Illustrated Parts Catalog, and other engineering design specifications.

This document is intended for the use of BHTI Sales Personnel and for prospective customers as an aid in determining estimated weight and performance of the helicopter when configured with equipment for specific missions.

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The listings of Optional Equipment (KITS) are subject to revision and change, and also may be different for specific serial number helicopters or special custom configurations. Please consult the NOTES cited in the right margins of the optional equipment list pages for equipment compatibility. The continuing product improvement process of BHTI may cause some components, equipment, and compatibility to be changed or replaced.

The specifications, weights, dimensions, and performance data shown in this document are subject to change without notice.

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## World's Most Advanced Light Twin

### Certified for Single or Dual Pilot IFR, Cat. A at MGW<sup>1</sup>

#### Certified to FAR Part 27, Amendment 44, 2008

#### Latest Safety Requirements:

- Transport Canada (TC)
- United States Federal Aviation Administration (FAA)
- European Aviation Safety Agency (EASA)

#### State of the Art Glass Cockpit

#### Best in Class WAAS Navigation & IFR Capability

- Safer flights in rigorous IFR flight environments
  - greater situational awareness
  - decreased pilot workload
- Fully coupled 4-axis autopilot integration to execute LPV (Localizer Precision with Vertical guidance) approaches
  - up to and including 9 degree glide path angle
  - at speeds down to 45 KIAS
  - Enables flight on WAAS (Wide Area Augmentation System) enabled low-level IFR rotorcraft infrastructures



#### Fast Flexible Re-configuration for Changing Mission Requirements:

- Largest cabin in class, 204 ft<sup>3</sup> / 5.78 m<sup>3</sup>
- Open cabin with flat floor
- 6 passenger std cabin seating with individual quick release for each seat
- 62 inch / 159 cm wide cabin door opening
- Optional rear clamshell doors

#### First Helicopter certified through the MSG-3 Process (Maintenance Steering Group-3) for enhanced maintenance efficiency and safety:

- First rotorcraft to have an approved EASA Maintenance Program
- Ensures Continuing Airworthiness – How and when maintenance will be performed
- Benefits show in significantly lower maintenance costs
- Same systems level maintenance and safety standards used in latest product development by major large commercial aircraft OEM's.

#### <sup>1</sup>Category A Operations require installation of the following optional accessory kits:

- 200 Amp Starter Generators
- Increased Capacity Battery (53 AmpH or 44 AmpH)
- Articulated Landing Light
- Radar Altimeter

Specifications subject to change without notice.

## Specification Summary (U.S. Units)

Weight	LBS	Weight	LBS
Empty Weight (Std. Config.) <sup>1</sup>	4,487 lb	Max Gross Weight (Internal)	7,000 lb
Useful Load (Internal, Std Config.)	2,513 lb	Max Gross Weight (External Load)	7,500 lb
Minimum Empty Weight (SPIFR) <sup>2</sup>	4,247 lb	Cargo Hook Capacity	3,000 lb
Max Useful Load (Internal, SPIFR)	2,753 lb		

Performance Summary:							
Takeoff, Gross Weight		lbs	5500	6000	6500	7000	
IGE Hovering Ceiling	ISA	ft	20,000+	18,577	16,301	14,132	
	ISA+20	ft	17,969	15,487	13,102	10,839	
OGE Hovering Ceiling	ISA	ft	18,390	15,888	13,535	11,282	
	ISA+20	ft	15,347	12,744	10,287	7963	
Service Ceiling (MCP) - AEO	ISA	ft	20,000+	20,000+	20,000+	18,714	
	(30 minute) - OEI	ISA	ft	16,690	14,209	11,871	9629
	(continuous) - OEI	ISA	ft	15,670	13,153	10,728	8443
Maximum Cruise Speed (true airspeed)	SL, ISA	ktas	154	153	152	150	
	SL, ISA+20C	ktas	154	153	151	149	
	4000 ft, ISA	ktas	155+	155+	155+	155	
	4000 ft, ISA+20C	ktas	153	151	149	145	
Cruise at Long Range Cruise (LRC) Speed Range (standard fuel, no reserve)	SL, ISA	nmi	246	376	378	368	
		ktas	128	128	129	130	
Range (standard fuel, no reserve)	4000 ft, ISA	nmi	271	413	414	407	
		ktas	128	129	130	129	
Endurance at Loiter Speed (60 kts)	SL, ISA	hr	2.8	4.2	4.2	4.0	
	4000 ft, ISA	hr	3.0	4.6	4.5	4.4	

Engine Ratings: (100% RPM)		Uninstalled Thermodynamic Power	Engine Rated Power
Pratt & Whitney Canada PW207D1 with Full Authority Digital Electronic Control (FADEC) Takeoff (5 minutes)	SHP	2 x 719	2 x 598
Max Continuous Power	SHP	2 x 635	2 x 586
OEI (30 seconds)	SHP	1 x 826	1 x 729
OEI (2 minutes)	SHP	1 x 784	1 x 701
OEI (30 minutes)	SHP	1 x 753	1 x 663
OEI (continuous)	SHP	1 x 719	1 x 655

Transmission Ratings: (100% RPM)		
Takeoff (5-minute)	SHP	1100
Max Continuous	SHP	1100
OEI (30 seconds)	SHP	729
OEI (2 minutes)	SHP	650
OEI (30 seconds & continuous)	SHP	550
Fuel Capacity (usable):		
Standard		216.9 US Gallons
Auxiliary (optional)		39.2 US Gallons

**Note 1** Standard Configuration includes all items listed in the Standard Configuration section of this document as well as 24 pounds of engine oil. Ballast is not included in the standard configuration (ballast is a function of installed equipment). Also, see Note 1 on page 15.

**Note 2** See Note 2 on page 15.

The data set forth on this document are general in nature and may vary with conditions.

For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

## Specification Summary (Metric Units)

Weight	KG	Weight	KG
Empty Weight (Std.Config.) <sup>1</sup>	2,035 kg	Max Gross Weight (Internal)	3,175 kg
Useful Load (Internal, Std Config.)	1,140 kg	Max Gross Weight (External Load)	3,402 kg
Minimum Empty Weight (SPIFR) <sup>2</sup>	1,926 kg	Cargo Hook Capacity	1,361 kg
Max Useful Load (Internal, SPIFR)	1,249 kg		

Performance Summary:						
Takeoff, Gross Weight		KG	2495	2722	2948	3175
IGE Hovering Ceiling	ISA	m	6096+	5662	4969	4307
	ISA+20	m	5477	4720	3993	3304
OGE Hovering Ceiling	ISA	m	5605	4843	4125	3439
	ISA+20	m	4678	3884	3135	2427
Service Ceiling (MCP) - AEO	ISA	m	6096+	6096+	6096+	5704
	(30 minute) - OEI	ISA	5087	4331	3618	2935
	(continuous) - OEI	ISA	4776	4009	3270	2573
Maximum Cruise Speed (true airspeed)	SL, ISA	km/hr	285	283	281	278
	SL, ISA+20C	km/hr	285	283	280	276
	1220 m, ISA	km/hr	287+	287+	287+	287
	1220 m, ISA+20C	km/hr	283	280	276	269
Cruise at Long Range Cruise (LRC) Speed Range (standard fuel, no reserve)	SL, ISA	km	456	696	700	682
	LRC Speed (average true airspeed)	km/hr	237	237	239	241
Range (standard fuel, no reserve)	1220 m, ISA	km	502	765	767	754
	LRC Speed (average true airspeed)	km/hr	237	239	241	239
Endurance at Loiter Speed (111 km/hr)	SL, ISA	hr	2.8	4.2	4.2	4.0
	1220 m, ISA	hr	3.0	4.6	4.5	4.4

Engine Ratings: (100% RPM)		Uninstalled Thermodynamic Power	Engine Rated Power
Pratt & Whitney Canada PW207D1 with Full Authority Digital Electronic Control (FADEC) Takeoff (5 minutes)	kW	2 x 536	2 x 446
Max Continuous Power	kW	2 x 473	2 x 437
OEI (30 seconds)	kW	1 x 616	1 x 544
OEI (2 minutes)	kW	1 x 585	1 x 523
OEI (30 minutes)	kW	1 x 561	1 x 494
OEI (continuous)	kW	1 x 536	1 x 488

Transmission Ratings: (100% RPM)	
Takeoff (5-minute)	kW 820
Max Continuous	kW 820
OEI (30 seconds)	kW 544
OEI (2 minutes)	kW 485
OEI (30 seconds & continuous)	kW 410
Fuel Capacity (usable):	
Standard	821.1 Liters
Auxiliary (optional)	148.4 Liters

- Note 1** Standard Configuration includes all items listed in the Standard Configuration section of this document as well as well as 11 kilograms of engine oil. Ballast is not included in the standard configuration (ballast is a function of installed equipment). Also, see Note 1 on page 15.
- Note 2** See Note 2 on page 15.

The data set forth on this document are general in nature and may vary with conditions.  
For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

## Bell BasiX-Pro® Integrated Avionics System

The Bell BasiX-Pro® Avionics System has been specifically designed to meet the requirements of twin engine helicopters and is optimized for IFR, Category A, and JAROPS-3 compliant operations. The system is highly flexible and configurable to meet various operating and customization needs. The system takes advantage of the latest in display, computer processing, and digital data bus technology to provide a high degree of redundancy, reliability, and flexibility.

### Standard Configuration SPIFR



The primary components of the Bell BasiX-Pro® Avionics System in the Bell-429 include the following:

Two Multi-Function Display Units (DUs) with 6 x8 inch high-resolution displays.	Dual Channel Aircraft Data Interface Unit (ADIU)	Dual Digital 3-axis Automatic Flight Control System (AFCS)	Dual Channel Air Data Attitude Heading Reference System (ADAHRS)	Course/Heading/Flight Director Panel (CHFD)
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The standard configuration for the Bell Model 429 provides single-pilot IFR capability with 3-axis stability and control augmentation (SCAS) and a coupled flight director capability. All Engine Indication and Crew Alerting System (EICAS) display functions are provided through the Bell BasiX-Pro® Avionics System. The system works in conjunction with the engine control units (EECs) for the dual Pratt & Whitney electronically-controlled PW-207D1 engines. Other aircraft systems interfaces, warnings, cautions, aural alerts, and automated performance features are provided through the remotely located Aircraft Data Interface Unit (ADIU).

**Specifications subject to change without notice.**

**COMMUNICATIONS & NAVIGATION** -- The Bell 429 standard configuration for Communications Navigation and Surveillance (CNS) consists of dual Garmin GNS-430W NAV/COM/WAAS GPS systems, with a kit option to replace one of these with a GNS-530W. The standard system also includes a GTX-330 ELS compliant Mode S transponder, a PMA-7000H Audio/Intercom Panel with VOX and Integral Marker Beacon Receiver, and an ARTEX C406-N-HM Emergency Locator Transmitter (ELT).

**DISPLAY UNITS** -- The Multi-Function display units are “smart displays”, and include all of the processing required to collect sub-system information and generate display formats and graphics for the following:

- All primary flight and navigation instrumentation
- Presentation of flight director and autopilot status
- Engine and rotor drive system indications
- Electrical, hydraulic, and fuel system monitoring
- Crew alerting system (warnings/cautions/advisories and aural alerts)
- Navigation route mapping display
- Presentation of optional Traffic Collision Avoidance Symbology (TCAS)
- Presentation of optional weather radar or search radar information
- Presentation of optional FLIR/EVS video display (NTSC or PAL standard)
- Presentation of general color video display or digital map display (NTSC or PAL standard in either S-Video or Component RGB video)
- Presentation of electrical, AFCS, and fuel/weight and balance synoptic information
- Presentation of automated power assurance, Category A performance, and hover performance calculations
- Presentation of maintenance and diagnostic data

### Automatic Flight Control System



AMAA-2210-000001

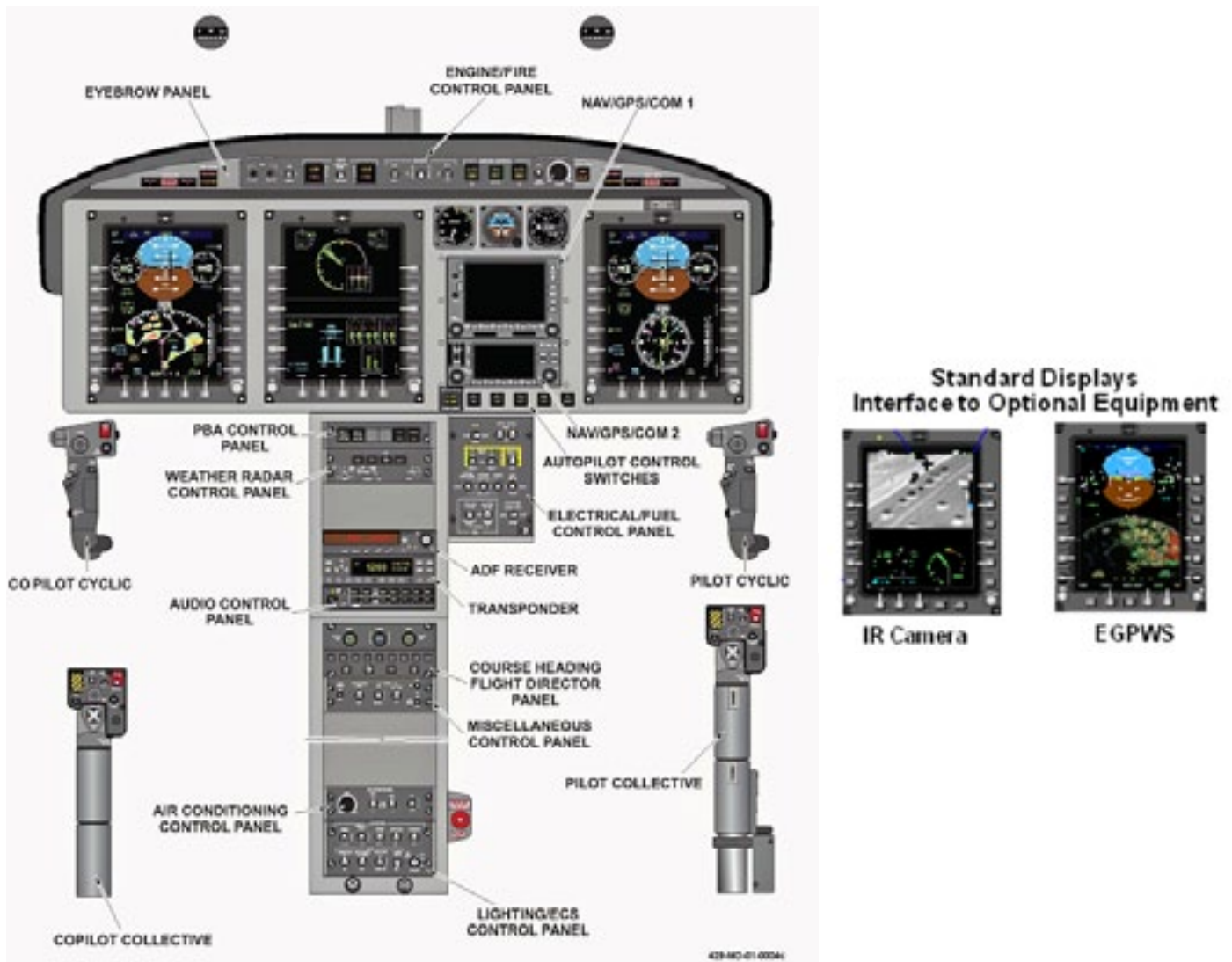
Specifications subject to change without notice.

## Configuration Flexibility to Meet Operational Needs

The Basix-Pro® includes built-in provisions to allow customized configuration of the following equipment:

- Alternate FMS/GPS systems
- Alternate ARINC-429 radio nav aids
- U/VHF Direction Finder or 2nd ADF
- Weather/Search Radar
- FLIR/EVS display (NTSC or PAL standard)
- Designator Control Panel (allows FLIR or radar cursor designated positions to be captured as waypoints)
- General color video display or digital map display
- Velocity Sensor (for hover cues and/or search and rescue approach options)
- Programmable CAS messages (cautions/warnings/advisories)

A third display unit for the copilot position is available for the 429 as an optional accessory.



Specifications subject to change without notice.

## Safety Enhancements

Bell is at the forefront in providing multiple ways of satisfying evolving requirements in helicopter traffic management, flight following and terrain awareness safety. The Bell 429 is the first helicopter in the light twin category to provide fully-coupled steep (i.e. 9-degree) LPV WAAS approaches. The Bell BasiX-Pro® Integrated Avionics System concentrates on providing true operational capabilities and flexibility to our customers to address rapidly changing regulatory requirements and technologies, with an open architecture and flexible avionics systems solutions.

The enhancements available for the Bell 429 through optional accessory kits and customizing include:

### Traffic Advisory System (TAS):

Two TAS systems available:

- **Avidyne TAS605 (recommended)**, features 13 nm range; 5,500 ft vertical separation; and 55,000 ft service ceiling
  - Upgradable to Avidyne TAS605A for ADS-B
- **Avidyne TAS620**, features a 21 nm range, 9,900 foot vertical separation maximum, and 55,000 foot service ceiling
  - Upgradable to Avidyne TAS620A for ADS-B

### Helicopter Terrain Awareness and Warning System / Enhanced Ground Proximity Warning System:

Three H-TAWS and EGPWS H-TAWS options available

- **Garmin GNS-530W with H-Taws:** Class B H-TAWS system, available as an option on the GNS-530W NAV/COM/GPS with Garmin system software 4.0 roll-out
  - Light weight, lowest cost solution
  - Displays on GNS-530W only
- **Honeywell Mark XXI EGPWS H-TAWS:** Class B H-TAWS system available as customizing
  - Installation with or without weather radar
  - Displays on BasiX-Pro® Display Units, underlaid on PFD HSI format or MFD Map/Radar format
  - Uses same input as weather radar
  - Provides only one TAWS image (one range setting only)
- **Honeywell Mark XXII EGPWS H-TAWS:** Class A H-TAWS system available as customizing, adds the following features
  - Interfaces with ADC and Rad Alt
  - Provides dual TAWS images with independent range control



TAWS/Terrain Data Base Card  
Garmin GNS-530W with H-Taws



TAWS Display on MFD Map/Radar Page

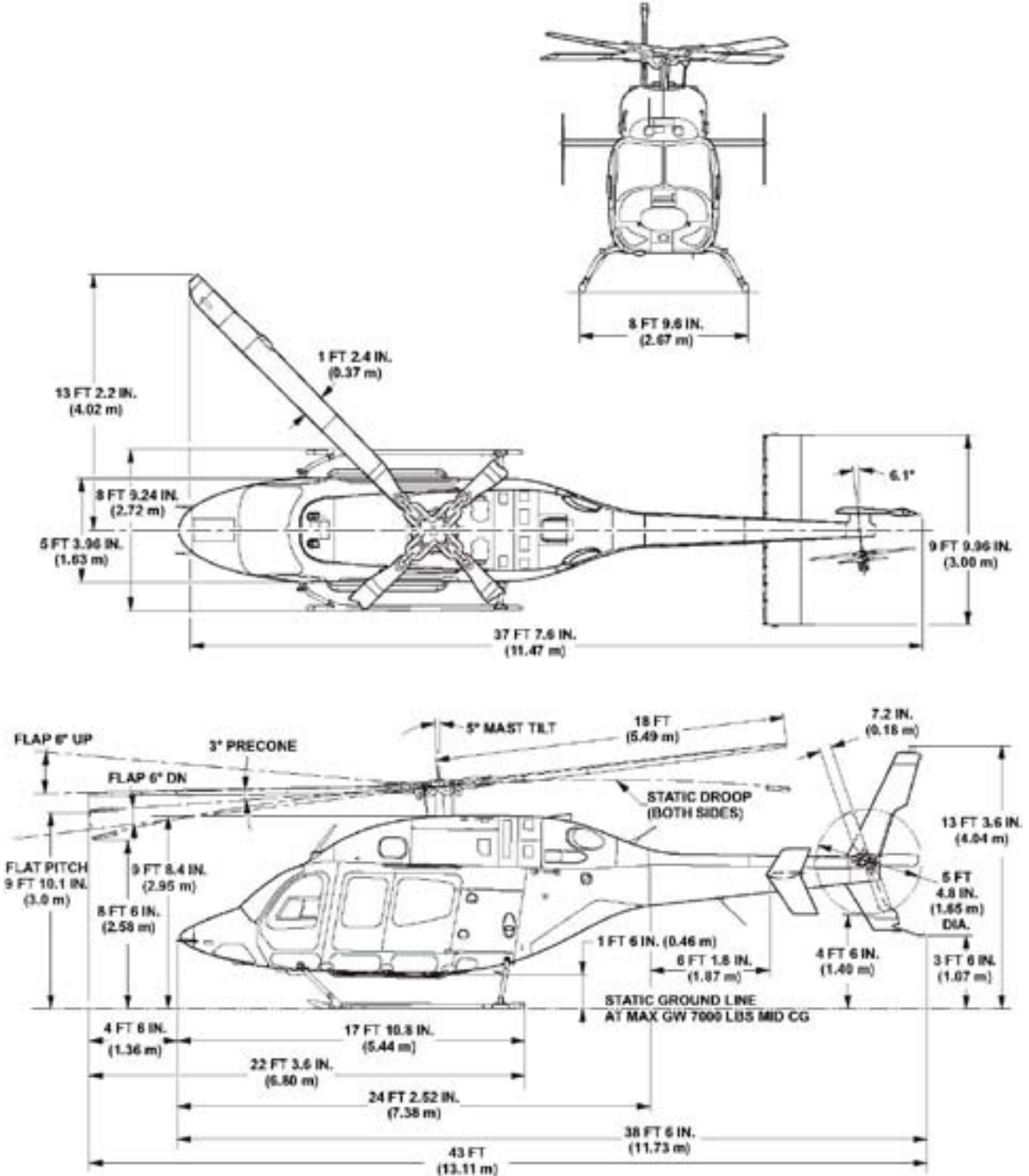


TAWS Displayed as HSI underlay on PFD  
H-TAWS Displays "Under Glass"

Available with Either Mark XXI or XXII EGPWS H-TAWS

Specifications subject to change without notice.

## Bell 429 External Dimensions and Heliport Design Data



Landing Gear Loading at Maximum Gross Weight (7000-Pounds),  
Based on 1G Static Conditions for both Structural CG Limit

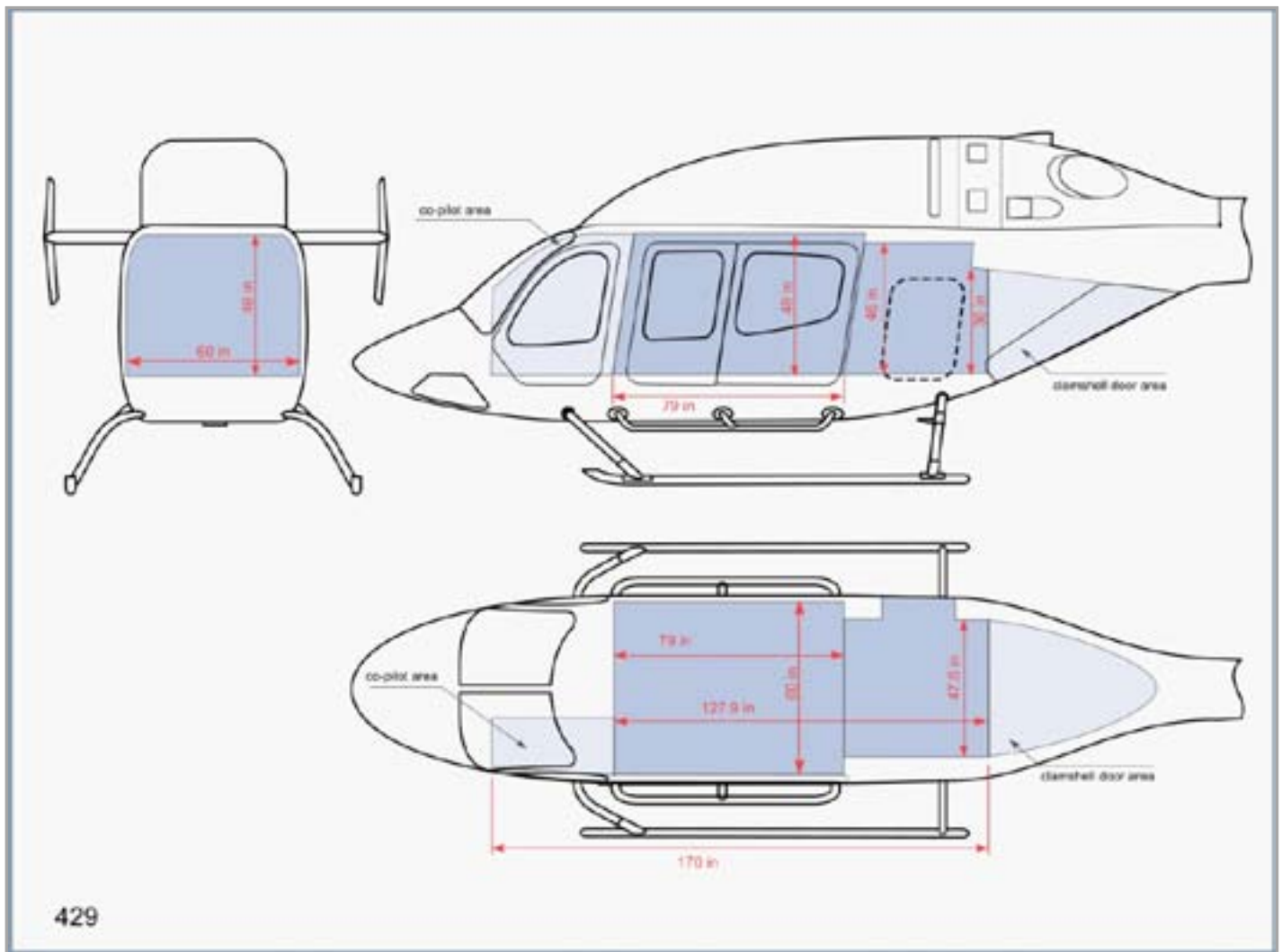
CG Position	Loading (lbs)		Contact Area (in <sup>2</sup> )		Contact Pressure (lbs/in <sup>2</sup> )	
	FWD	AFT	FWD	AFT	FWD	AFT
FWD CG	3327	3673	5.4 in <sup>2</sup> x 2	9.9 in <sup>2</sup> x 2	308	186
AFT CG	2306	4694	5.4 in <sup>2</sup> x 2	9.9 in <sup>2</sup> x 2	214	237

## 429 Interior

**CREW SEATING** – Two individual ergonomically designed energy attenuating seats with adjustable lumbar support, each equipped with seat adjustment controls forward and aft, up and down, adjustable lumbar support, a four-point restraint system, and adjustable pedals. The color and upholstery material for the seats match the color scheme selected for the cabin.

**PASSENGER/CARGO COMPARTMENT** – The passenger/cargo compartment occupies the middle section of the cabin. The compartment has a volume of 130 cubic feet (3.68 m<sup>3</sup>), which can be used in a standard or corporate configuration for passenger seating, or as cargo area. The aft cabin has an additional volume of 74 cubic feet (2.10 m<sup>3</sup>), giving a total contiguous cabin volume of 204 cubic feet (5.78 m<sup>3</sup>).

A forward hinged and aft sliding door on each side of the cabin provide a 61.9" wide x 44.25" high (158.7 x 112.3 cm) unobstructed door opening on each side of the helicopter for easy passenger compartment loading and unloading. The two forward doors are hinged to open forward and the two sliding doors open aft and flush along the cabin exterior. The passenger/cargo compartment doors can be opened individually or at the same time.



Specifications subject to change without notice.

**STANDARD SEATING AND TRIM** – Standard Configuration six-place seating consists of two rows of three energy-absorbing seats, with individual 4-point restraint system, quick release disconnects and fixed provisions for the optional passenger cabin ICS system. Two standard seating configurations are available:

- 6-place seating with 15.5" wide seats, which can be quickly arranged into either an airline configuration with both rows facing forward, or a club seating configuration with the two rows facing each other, or
- 6-place seating with 18.5" wide seats in a club seating configuration.

Each individual passenger seat assembly is installed on two transverse seat rail tracks that are attached to the cabin floor. The quick release disconnects enable the seats to be quickly arranged, or to remove individual seats to meet special mission configuration requirements. The seats are upholstered in fabric or optional vinyl.

Standard interior trim consists of full thermoplastic closeouts on all airframe areas, a molded thermoplastic headliner with two fixed slotted air vents, and a choice of either durable low loop nylon blend carpeting or optional "Aermat" vinyl floor covering.



Standard 6-place 15.5" wide passenger seats in Forward Facing Airline Seating Arrangement



Standard 6-place 18.5" wide passenger seats in Club Seating Arrangement



Standard Headliner with slotted air vents



Optional Headliner with LED lights & adjustable air vents

**ADDITIONAL INTERIOR OPTIONS** – The following additional optional accessory kits are also available for selection on aircraft equipped with standard interior and seating. See Optional Accessory Kits, page 18 for additional information on part numbers, availability and weights.

- Aft Cabin ICS – 6 Place (Headsets not included)
- Headliner with LED lights & adjustable Air Vents (recommended when optional air conditioning equipment is selected)
- Soundproofing
- Aft Bulkhead Closeout Panel, available with or without soundproofing

**Specifications subject to change without notice.**

## CORPORATE SEATING AND INTERIOR TRIM:

Three corporate seating options are available:



Six place seating with 18.5" wide seats

All corporate seating options include plush "Overstuffed Style" seats with individual 3-point restraint system, quick release disconnects and fixed provisions for a passenger cabin ICS system. For the five place club seating option, the quick release disconnects enable the seats to be quickly arranged with the two 21.5" seats facing either forward or aft. The seats are upholstered in premium leather.



Five place club seating with a row of two 21.5" seats separated by a center console facing a row of three 18.5" seats with a center seat fold-down table

The corporate interior trim consists of full thermoplastic panels on all airframe areas with color coordinated leather or fabric trim, plush wool color coordinated carpet, and a molded thermoplastic corporate headliner with LED lights, adjustable air vents and color coordinated leather trim.

**ADDITIONAL INTERIOR OPTIONS** – The following additional optional accessory kits are also available for selection on aircraft equipped with a corporate interior and seating.



Four place club seating with two 21.5" seats separated by a center console in each row

- Aft Cabin ICS – 6 Place (Headsets not included)
- Soundproofing
- Aft Bulkhead Closeout Panel, available with or without soundproofing
- 6-place 18.5" corporate seats with fold-down center tables as a customizing option

**Note:** Corporate passenger seats, interior trim and plush wool carpeting, corporate head liner, aft bulkhead closeout panel, and soundproofing are optional accessory kits, not included in Standard Configuration weight and price. See Optional Accessory Kits, page 18, for additional information.



A molded thermoplastic corporate headliner with LED lights, adjustable air vents and color coordinated leather trim

Specifications subject to change without notice.

## Standard Configuration (Items Included in List Price)

**Certified for Single Pilot IFR**  
**Certification Basis: FAR Part 27 Amendment 44, 2008**  
**(Most current Certification Standard)**

AIRFRAME
Fuselage: Machined alloy airframe with single piece machined roof beams, lift frames, cabin keel beams and nose beams; carbon fiber composite side-bodies, belly panels, nose skins, floor panels, decks and engine cowls
Corrosion resistant design with wet installed fasteners and sealed surfaces where dissimilar materials are found to provide exceptional resistance to adverse environmental conditions
Doors (six, carbon fiber): Hinged pilot & co-pilot doors with sliding windows; hinged forward and sliding aft passenger doors on both sides.
Passenger doors provide 61.9 inches unobstructed opening on each side.
Door Locks for cabin doors and luggage compartment
Luggage compartment: Aft cabin (74 cubic feet), with 16 discrete tie-down hardpoints and R/H side external luggage door
Landing gear: Tubular skid type with replaceable wear shoes
Tailboom: Carbon fiber tailboom, vertical fin and horizontal stabilizer
Fuselage mounted passenger cabin steps, forward mounted crew steps, and aft maintenance step
Provisions for mooring, jacking and single point lifting
Windows: Gray tinted acrylic windows and windshields
Wire Strike Protection System Fixed Provisions , Cabin and Nose Provisions (Bristol/AAI)
Air Conditioning Drive Quill (Required for installation of any Air Conditioning system)
Air Conditioning Fixed Provisions
Three color exterior paint schemes, Sample illustrations available upon request
POWERPLANT
Two Pratt & Whitney Canada 207D1 Engines, 1,172 shp, (Mechanical) Maximum Continuous Rating (586 shp per engine)
Electronic Engine Controls (EEC)
Fuel Management Module (FMM)
Fuel system: 216.9 gal. (821 liter) usable capacity, with three rupture resistant fuel cells located under the cabin floor panel and suction-type fuel feed system
Electrical Provisions for Inlet Barrier Filter
Engine Fire Detector & Fire Extinguisher System

TRANSMISSION AND DRIVE SYSTEMS
Two-stage dual input drive main transmission, 1,100 shp Maximum Continuous Power
Two fluid filled pylon mounts LIVE suspension (left and right vertical axis mounts)
Two elastomeric forward/aft restraints
Three main transmission chip detectors
Two transmission-mounted hydraulic pumps
Tail rotor drive shaft:
Two steel forward drive shafts in engine deck/fire zone
Two interchangeable carbon fiber composite aft drive shafts in tailboom zone
Single stage 90° tail rotor gearbox
One tail rotor gearbox chip detector
ROTORS AND CONTROLS
Main rotor: Soft-in-plane system, 36 ft. diameter, four interchangeable M/R blades, with stacked composite yokes, titanium drive plate and CF fittings, elastomeric CF bearings and shear restraints, and elastomeric lead/lag dampers
Composite M/R blades with Nickel-Cobalt leading edge abrasion strips and tip caps, HIGH VISABILITY (orange/white top - white bottom) paint scheme
Tail rotor: Four blade stacked system, 65" diameter, with low tip speed, scissor arrangement, composite T/R blades with swept blade tips, Nickel-Cobalt leading edge abrasion strips, and elastomeric flapping bearings
Dual Hydraulic System with integrated hydraulic modules
Mechanical flight controls throughout
Collective mounted throttle controls
Rotor Brake Provisions
FLIGHT & ENGINE INSTRUMENTS – Bell BasiX-Pro Integrated Avionics System
EFIS/EICAS (Electronic Flight Instruments System/ Engine Indicating & Crew Alerting System)
Two 6" x 8" color LCD displays with video display capability
"Smart" programmable display unit provisions for future interface required for customized equipment installations
Aircraft Data Interface Unit, Dual Channel
AFCS (3-axis), Dual digital autopilot
Dual channel SCAS and trim actuators
AD/AHRS (Air Data/Attitude Heading Reference System), Dual Channel (Honeywell KSG7200)
Course/Heading/Flight Director Panel

**Specifications subject to change without notice.**

## Standard Configuration (cont)

(Items Included in List Price)

**Certified for Single Pilot IFR**  
**Certification Basis: FAR Part 27 Amendment 44, 2008**  
**(Most current Certification Standard)**

Standby Instruments: Attitude, Altitude, Heading and Airspeed
Electronic Data Recorder embedded in the IAS (Integrated Avionic System) (non-crashworthy)
<b>COMMUNICATIONS &amp; NAVIGATION</b>
Nav/Comm/GPS: VOR/ILS/GS/COMM/GPS and WAAS (Wide Area Augmentation System), with two 1.8”h x 3.3”w” displays (Garmin GNS 430W)
Transponder: ELS compliant Mode S (Garmin GTX 330)
Dual Keyed and/or VOX Intercom System
PMA-7000H Audio Panel with Integral Marker Beacon Receiver
ELT (ARTEX C406-N-HM)
<b>INTERIOR</b>
Open cabin design with flat floor, total contiguous cabin volume 232 cu. ft. (passenger and aft cabin area volume 204 cu. ft.)
Standard cockpit seating (2 seats), adjustable forward & aft, up & down, with lumbar support and adjustable pedals
Passenger Seat Rails
Standard 6-place passenger seating with 4-point restraint system, quick release disconnects & ICS fixed provisions (choice of 15.5” wide seats or 18.5” wide seats)
Ram air cockpit and cabin ventilation system, with cockpit windshield defogging vent blowers
Standard Interior (Thermoplastic panels covering all doors & durable low loop nylon carpet or “Aermet” vinyl floor covering)
Standard Headliner, Passenger Cabin, with two fixed slotted side air vents
<b>Note:</b> Additional Passenger Cabin interior, headliner and seating options available for the 429 are listed in the Optional Accessory Kits section.

<b>ELECTRICAL</b>
28 volt DC system, dual generator configuration
25 AmpH Valve Regulated Lead-Acid (VRLA) Battery
Two 150 Amp Starter Generators, with two generator-regulator control units
External power source connection
LED Cockpit instrument, annunciator, utility and map lighting with programmable lighting power supply to ensure light balancing across all cockpit display and control panels
All LED basic external lighting system: <ul style="list-style-type: none"> <li>• One forward &amp; two sideward facing fixed LED array landing lights</li> <li>• Three high intensity LED position lights</li> <li>• One flashing LED anti-collision light</li> </ul>
Digital maintenance interface available from cockpit for all digital aircraft systems
RADS wiring for sensors embedded in basic aircraft wiring
Baggage compartment lighting
Electrical Provisions Kit (Required for Cat. A Operations)
<b>MISCELLANEOUS</b>
Keys for crew, passenger and baggage compartment doors
Manuals – Flight, Maintenance and Illustrated Parts Breakdown/Special Tools Catalogue
Main and tail rotor tie downs
Cargo tie downs (loose equipment)
Covers – engine air, oil cooler, exhaust and pitot
Ground handling wheels, hydraulic

**Reference notes from pages 4-5**

**Note 1** Standard Configuration includes:

- Provisions for optional equipment including Cat. A Operations, Inlet Barrier Filter, Air Conditioning, Rotor Brake & Wire Strike Protection System
- ELT
- Pilot & Copilot seats
- 6 place Passenger Seating with 18.5” wide seats
- Standard Interior, Headliner panels and Carpet

**Note 2** Minimum SPIFR Configuration includes:

- Provisions for optional equipment including Cat. A Operations, Inlet Barrier Filter, Air Conditioning, Rotor Brake & Wire Strike Protection System
- ELT
- Pilot seat

**Specifications subject to change without notice.**

## Optional Accessory Kits

Refer to notes for kit compatibility.

Additional Kits and STC Items may be available for factory installation.

Please consult sales or contract personnel regarding special needs prior to selection of final configuration

Kit Description	Projected Availability Status	Wt (lbs)	Wt (kg)	Notes
<b>AIRFRAME</b>				
Dual Pilot Control Provisions	✓	5.3	2.4	3
Dual Pilot Controls Equipment (does not include co-pilot head set) (Required for Dual Pilot operation)	✓	10.5	4.8	3
Pilot Cyclic Stick Locking Device	✓	0.2	0.1	
200 Amp Starter Generator (Dual) (Required for Cat. A Operations)	✓	7.8	3.5	1, 18
Increased Capacity Battery, 53 AmpH (Cat. A Compliant)	✓	35.1	15.9	1, 18
Increased Capacity Battery, 44 AmpH (Cat. A Compliant)	✓	28.2	12.8	1, 18
36 AmpH Battery	✓	19.1	8.7	1, 18
Articulated Landing Light (Required for Cat. A Operations)	✓	9.2	4.2	1
Rotor Brake Equipment	✓	9.8	4.4	
Aux. Fuel Tank Equipment (39 US Gal.)	✓	60.2	27.3	
Windshield Wiper (Pilot)	✓	9.5	4.3	
Windshield Wiper (Co-pilot)	✓	6.7	3.0	
Rear Clamshell Doors with windows	✓	29.3	13.3	
Rear Clamshell Doors with windows	✓	28.8	13.1	
Emergency Float Provisions (Electrical & Fixed)	✓	2.0	0.9	4
Emergency Floats without life rafts (Aerazur) (life vests not included)	✓	143.6	65.1	4
Emergency Floats with one life raft, Left side (Aerazur) (life vests not included)	✓	189.3	85.9	4
Emergency Floats with two life rafts, Left & Right sides (Aerazur) (life vests not included)	✓	235.0	106.6	4
Life Vest Provisions, 4 place Stowage Pouches	✓	0.6	0.3	5
Life Vest Provisions, 5 place Stowage Pouches	✓	0.7	0.3	5
Life Vest Provisions, 6 place Stowage Pouches	✓	0.8	0.4	5
Ditching Kit (additional strengthening to a/c nose and belly)	✓	3.2	1.5	5
Emergency Egress, Standard Interior (push-out windows for hinged passenger doors)	✓	8.1	3.7	6
Protected Tail-Rotor System	✓	10.2	4.6	7
<b>AUDIO</b>				
Aft Cabin ICS - 6 Place (Headsets not included)	✓	2.5	1.1	
<b>AVIONICS</b>				
Radar Altimeter (Honeywell KRA 405B) (Required for Cat. A Operations)	✓	5.5	2.5	1
3rd Display Unit & 2nd Standby Compass (Required for Dual Pilot IFR)	✓	23.6	10.7	3
ADF (Honeywell KR 87)	✓	9.8	4.4	
GNS-530W NAV/COMM/GPS (replaces Standard Equipment #1 GNS-430W )	✓	2.2	1.0	

**Specifications subject to change without notice.**

## Optional Accessory Kits (con't)

Kit Description	Projected Availability Status	Wt (lbs)	Wt (kg)	Notes
Traffic Advisory System (Avidyne TAS620)	✓	17.7	8.0	8
Traffic Advisory System (Avidyne TAS605)	✓	8.3	3.8	8
4th Axis Autopilot	✓	4.5	2.0	
Weather Radar (Primus 660)	✓	24.5	11.1	
<b>ENGINE</b>				
Engine Fuel Heater (PW207D2 Engine) (P&W)	✓	4.3	2.0	
Compressor Wash Kit	✓	1.4	0.6	
Inlet Barrier Filter	✓	20.5	9.3	
Engine Fire Extinguisher - 2nd bottle	✓	6.8	3.1	
<b>ENVIRONMENT</b>				
Single Evaporator Air Conditioning with manual controls	✓	84.5	38.3	9, 10
Dual Evaporator Air Conditioning with manual controls	✓	113.3	51.4	9, 10
Bleed Air Heater Provisions	✓	16.6	7.5	
Bleed Air Heater Equipment (with chin bubble defrost)	✓	21.1	9.6	
<b>EQUIPMENT</b>				
Cargo Hook Provisions (Onboard Systems)	✓	11.6	5.3	
Cargo Hook Equipment, 3,000 lb. capacity (Onboard Systems)	✓	31.4	14.2	
High Gross Weight Towing kit (AAI)	✓	N/A	N/A	
Main Rotor Blade Folding Kit (2 - fwd, 2 - aft) (Paravion)	3rd Qtr 2011	1.0	0.5	
Rescue Hoist Provisions	2nd Qtr 2011	35.4	16.1	11, 19, 20
Rescue Hoist Equipment, Goodrich 600 lb. capacity	2nd Qtr 2011	184.2	83.6	11
<b>FLIGHT &amp; ENGINE INSTRUMENTS</b>				
Cockpit Voice Recorder/Flight Data Recorder, Crashworthy	✓	14.1	6.4	
Health & Usage Monitoring System (AAI)	✓	18.0	8.2	
NVG Compatible Pilot Display Units and Flight Director (US ITAR Controlled)	✓	0.0	0.0	12
3rd Display Unit and 2nd Standby Compass with NVG compatible 3rd Display Unit (US ITAR Controlled)	✓	0.0	0.0	12
NVG compatible lighting for other light sources (US ITAR Controlled)	Available as customized installation	TBD	TBD	12
<b>INTERIOR</b>				
Headliner with LED lights & adjustable Air Conditioning vents	✓	18.9	8.6	10
Corporate Headliner with LED lights, adjustable Air Conditioning vents and color coordinated leather trim	✓	19.1	8.7	10
Corporate Interior, Single Pilot: <ul style="list-style-type: none"> <li>• Corporate Interior Trim</li> <li>• Plush Wool Carpets (for use with Single Pilot controls)</li> </ul>	✓	10.3	4.7	14
Corporate Interior, Dual Pilot: <ul style="list-style-type: none"> <li>• Corporate Interior Trim</li> <li>• Plush Wool Carpets (for use with Dual Pilot controls)</li> </ul>	✓	9.3	4.2	14
Cabin Soundproofing	✓	10.0	4.5	13

**Specifications subject to change without notice.**

## Optional Accessory Kits (con't)

Kit Description	Projected Availability Status	Wt (lbs)	Wt (kg)	Notes
Aft Bulkhead Closeout panel	✓	9.6	4.4	11, 13
Aft Bulkhead Closeout panel with soundproofing	✓	26.5	12.0	11, 13
Utility Light Weight Interior		-20.0	-9.1	
<b>Note:</b> All interior option weight values are weight increase or decrease from the standard configuration weights.				
<b>PASSENGER SEATING OPTIONS</b>				
Corporate 6-Place Seating, 18.5" wide seats with 3-point restraint system, quick release disconnects & ICS fixed provisions.	✓	25.2	11.4	
Corporate 5-Place club seating with 1 centre console and side arm rests, 3-point restraint system, quick release disconnects & ICS fixed provisions.	✓	34.0	15.4	
Corporate 4-Place club seating with centre consoles and side arm rests, 3-point restraint system, quick release disconnects & ICS fixed provisions.	✓	35.5	16.1	
Seat Rail Removal	✓	-6.0	-2.7	2, 17
<b>Note:</b> All passenger seating option weight values are weight increase or decrease from the standard configuration weights.				
<b>VENDOR KITS - STC</b>				
Sliding Passenger Door Photo (Sliding) Window, L/H (AAI)	✓	4.4	2.0	15
Sliding Passenger Door Photo (Sliding) Window, R/H (AAI)	✓	4.4	2.0	15
Automatic Door Openers, Crew (2 door kit) (AAI)	✓	2.0	0.9	
Automatic Door Openers, Passenger (2 door kit) (AAI)	✓	2.2	1.0	
Wire Strike Protection System Detachable Equipment, skid gear a/c (AAI) RECOMMENDED	✓	21.4	9.7	16
Crew Floor Protectors (AAI)	✓ ✓	5.2	2.4	
Cabin Floor Protectors (AAI)	✓	9.0	4.1	
Cargo Mirror (AAI)	✓	3.1	1.4	
Hard Point (Rappelling System) (AAI)	✓	0.4	0.2	
Hard Point (Ceiling, Spotter) (AAI)	✓	0.3	0.1	
Hard Point (Floor, Spotter) (AAI)	✓	0.4	0.2	
Fuel Filler Area Protector (AAI)	✓	0.1	0	

**Notes:**

1. Kits required for Category A Operations:
  - 200 Amp Starter Generator (Dual)
  - Increased Capacity Battery (53 AmpH or 44 AmpH)
  - Articulated Landing Light
  - Radar Altimeter
2. Standard Configuration kits removable by customizing or optional accessory kit
3. Kits required for Dual Pilot IFR
  - Dual Pilot Control Provisions
  - Dual Pilot Controls Equipment

**Specifications subject to change without notice.**

3rd Display Unit & 2nd Standby Compass

4. Emergency Floats Electrical and Fixed Provisions kits are required for installation of Emergency Floats. Each Emergency Float kit (removable equipment) consists of two removable integrated skid mounted modules containing inflatable floats, inflation bottles and, if selected, an optional JAROPS compliant 6-person life raft with survival equipment, giving customers a choice among three Emergency Float configurations:
  - Emergency Floats without life rafts
  - Emergency Floats with one life raft (left side)
  - Emergency Floats with two life rafts
5. Ditching Kit is required for operations under European Joint Aviation Regulation JAR-OPS 3.843(a) for Performance Class 1 or 2 flights over water in a hostile environment at a distance from land corresponding to more than 10 minutes flying time at normal cruise speed. Life Vest Provision Kits are required when the Ditching Kit is installed.
6. Emergency Egress Kit is required for front row passenger emergency exit when Emergency Floats and 15.5" standard 6-place seating kit are installed with passenger seats in airline seating arrangement with front row of seats facing forward.
7. The Protected Tail Rotor System is designed to prevent injury and provide a safe working environment for personnel who are in the vicinity of the aircraft.
8. Avidyne TAS605 Traffic Avoidance System is a lighter weight system available as a customized installation. See page 9 for features comparison.
9. Air Conditioning Quill Drive and Provisions are included in Standard Configuration.
10. Headliner with adjustable air vents, p/n 429-706-202-103 or 429-706-202-105, is recommended for more effective cooling when air conditioning is installed.
11. Aft Cabin Bulkhead Closeout cannot be installed if Rescue Hoist Provisions are installed.
12. Complete NVG compatible lighting consists of the following optional accessories:
  - p/n 429-706-022-101 or -105 replaces the standard #1 & #2 Display Units and CHFD panel with NVG compatible units
  - p/n 429-706-022-103 Or -107 should be selected instead of p/n 429-706-026-101 for NVG compatible 3rd Display Unit
  - NVG compatible lighting treatment for other internal and external light sources, including NVG lighting for the standby compasses and cabin black-out curtains, will vary depending upon specific aircraft configuration. Aerodynamix STC'd NVG lighting is available as a customized installation.
13. For effective internal noise reduction, Aft Cabin Bulkhead panel, p/n 429-706-060-103 or 429-706-060-105, is strongly recommended when cabin soundproofing is installed.
14. Standard Configuration floor covering includes a customer choice of materials, either durable low loop nylon blend carpet or "Aeromat" vinyl floor covering. Either single pilot or dual pilot standard carpet is included in Standard Configuration Price. Corporate Interior floor covering is plush 100% wool carpet, colour coordinated to match leather seat upholstery.
15. Three Passenger Door Sliding Window colour options available:
  - p/n 429-564-007, L/H (Gray)
  - p/n 429-564-009, L/H (Medium Gray)
  - p/n 429-564-011, L/H (Dark Gray)
  - p/n 429-564-008, R/H (Gray)
  - p/n 429-564-010, R/H (Medium Gray)
  - p/n 429-564-012, R/H (Dark Gray)
16. Wire Strike Protection System Provisions are included in Standard Configuration.
17. Passenger Seat Rail Removal kit required for installation of AMC or Aerolite EMS Interior Systems.
18. Installation of 53 AmpH, 44 AmpH or 36 AmpH battery requires installation of the 200 Amp Starter Generator kit. However, installation of 200 Amp Starter Generator does not require installation of the 53 AmpH battery.
19. Rescue Hoist Provisions cannot be installed when Aft Bulkhead Closeout panel is installed.
20. Right side aft passenger seat must be removed for installation of the Rescue Hoist Control Box Pendent Bracket. Pendent bracket is removable when pendent is not installed for mission use.

**Specifications subject to change without notice.**

# ***Fuel Flow Charts***

***ISA & ISA+20°C***

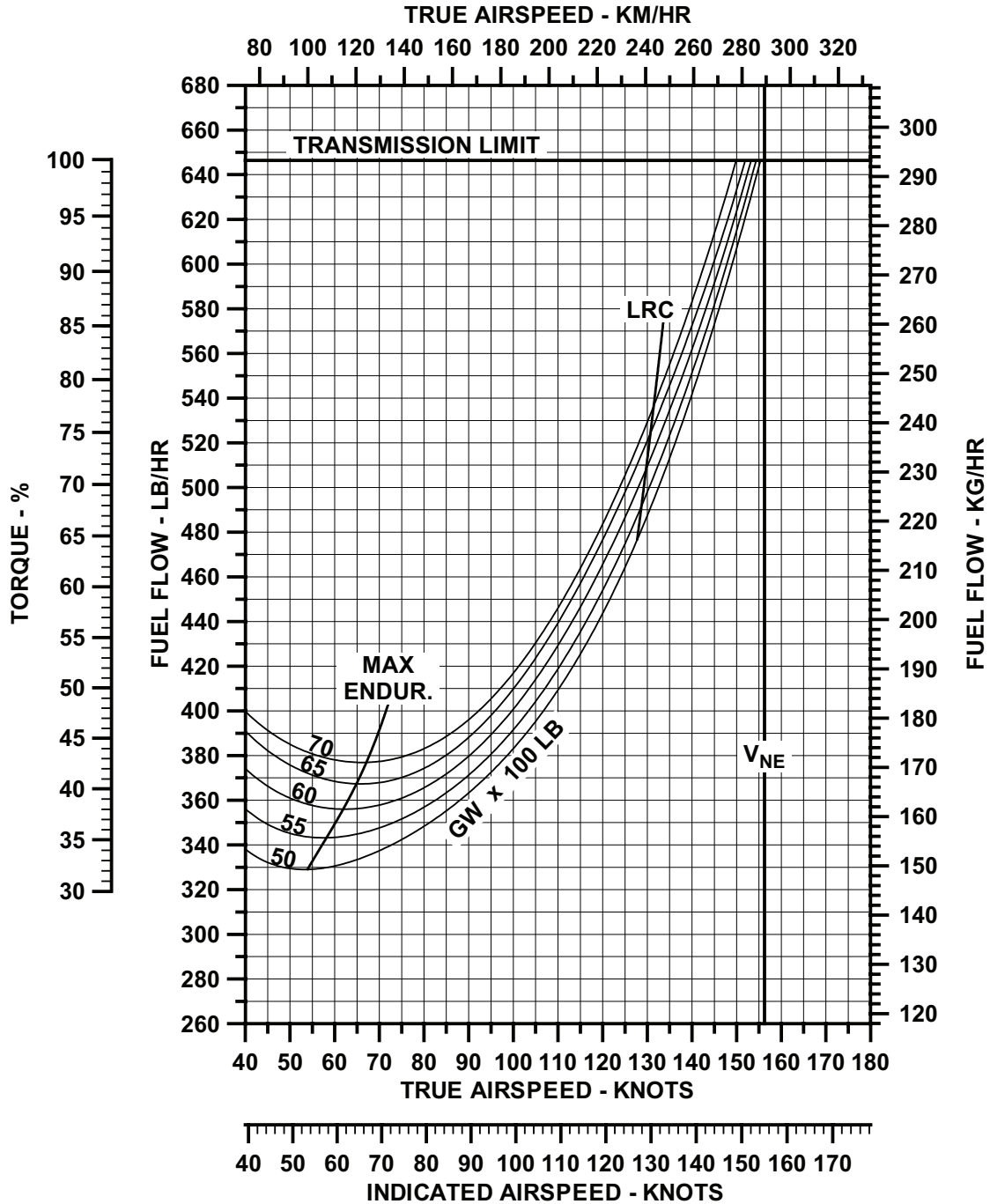
***NEW PRATT & WHITNEY CANADA PW207D1/D2 ENGINES***

***BASIC INLET OR BARRIER FILTER INSTALLED***

***CLEAN CONFIGURATION WITH STANDARD SKID GEAR***

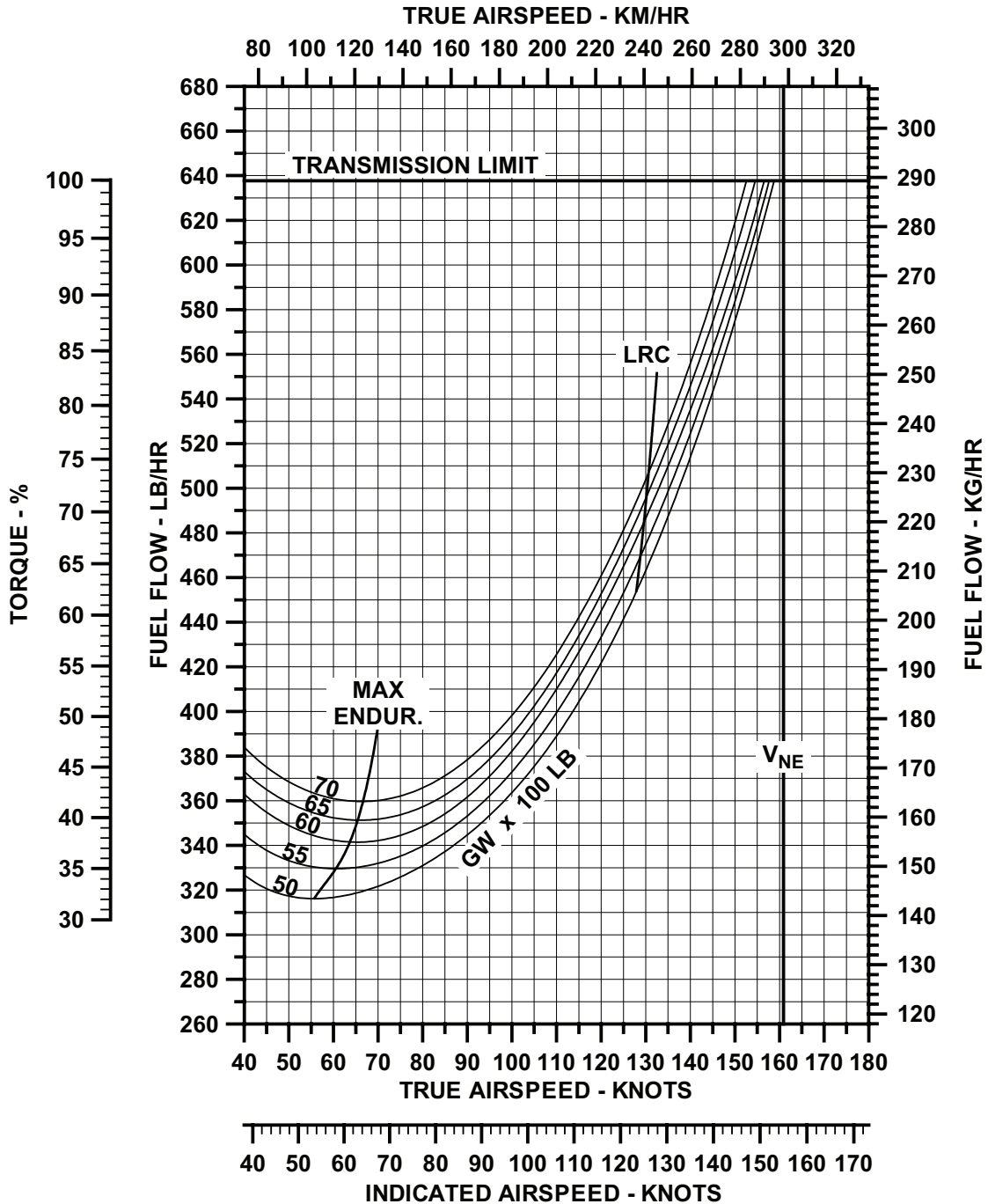
***AIR CONDITIONING / HEATER OFF***

**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = Sea Level**  
**OAT = 15°C (ISA)**



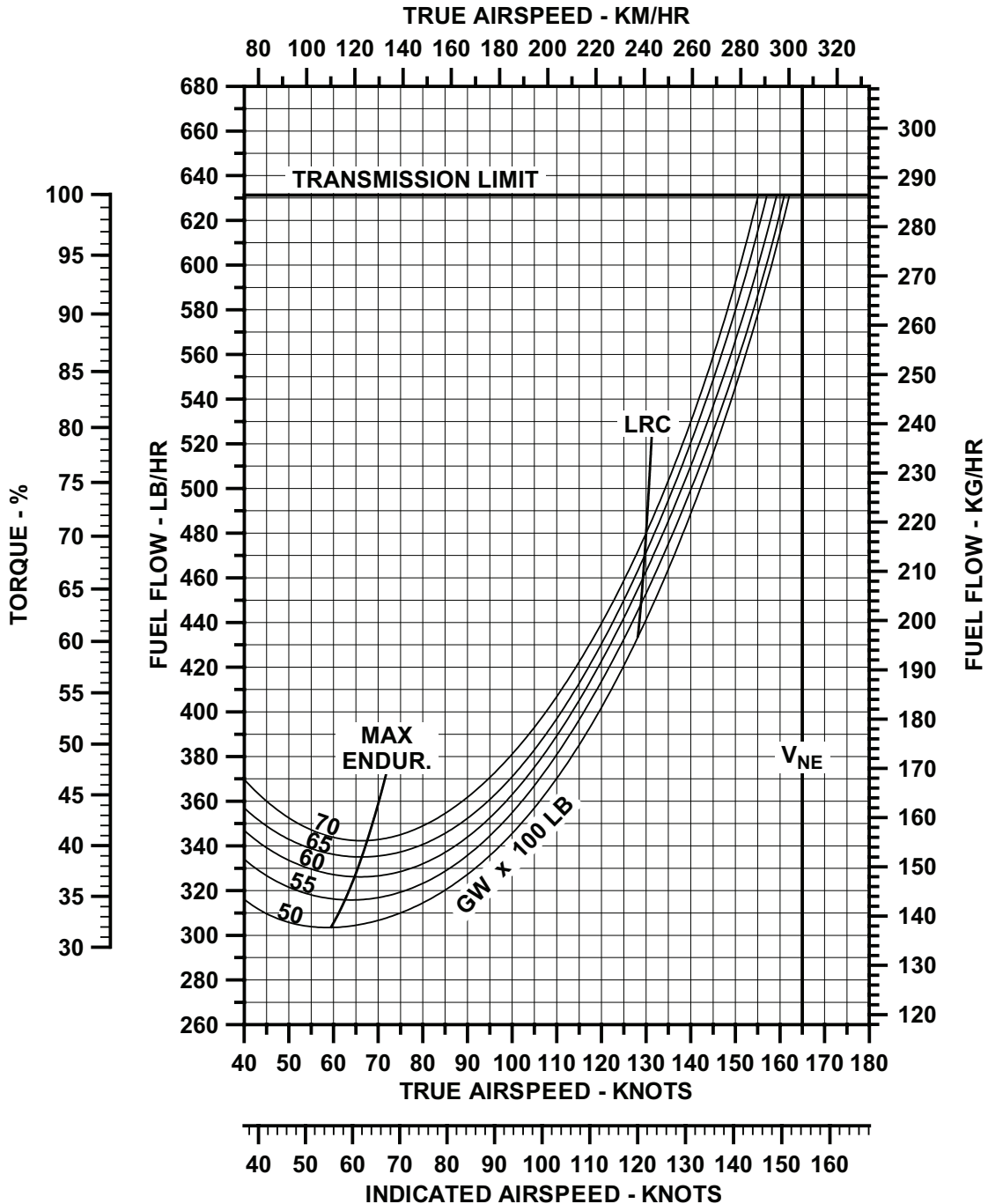
The data set forth on this document are general in nature and may vary with conditions. For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 2000 Ft**  
**OAT = 11°C (ISA)**



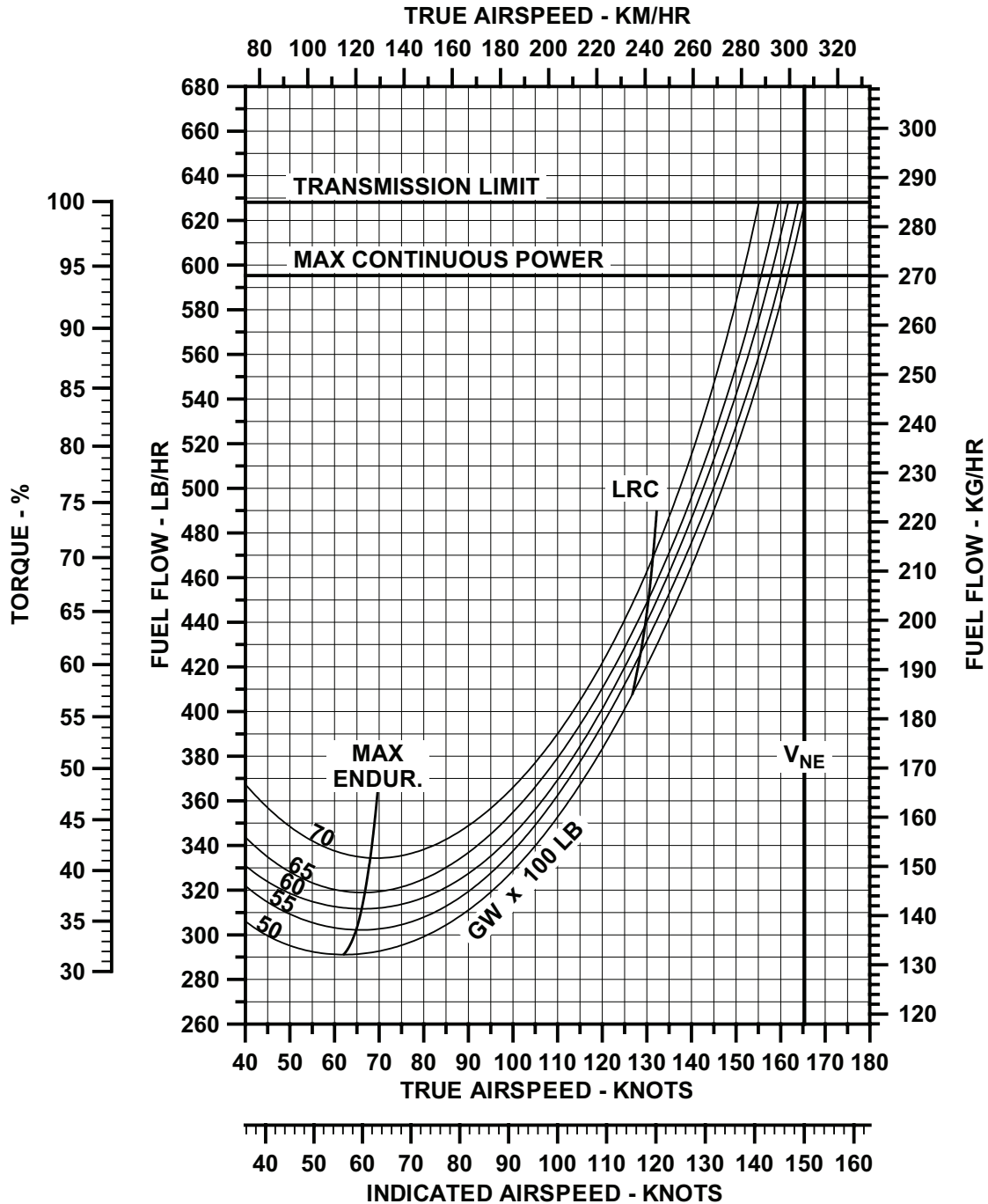
The data set forth on this document are general in nature and may vary with conditions. For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 4000 Ft.**  
**OAT = 7°C (ISA)**



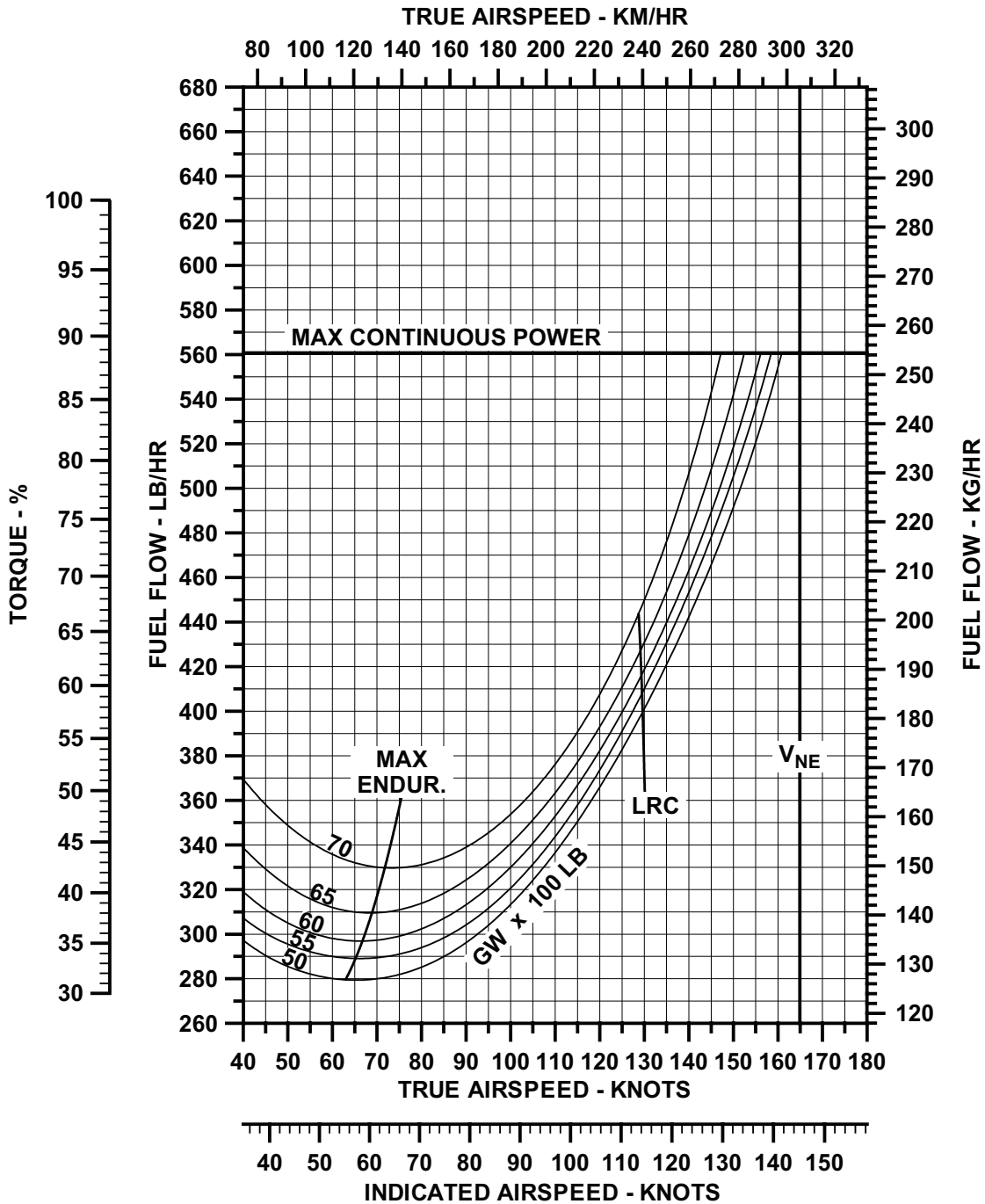
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**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 6000 Ft**  
**OAT = 3°C (ISA)**



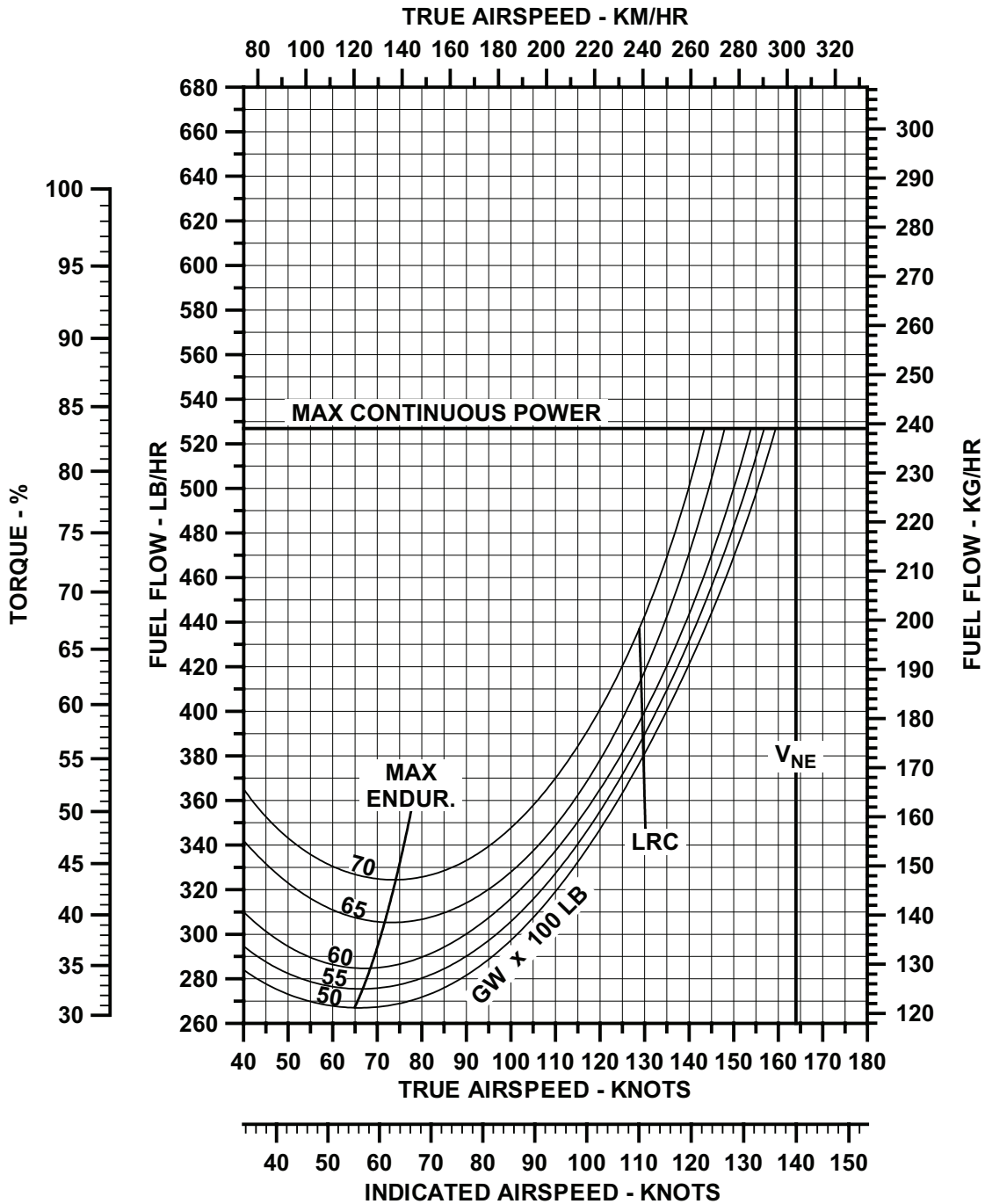
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**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 8000 Ft.**  
**OAT = -1°C (ISA)**



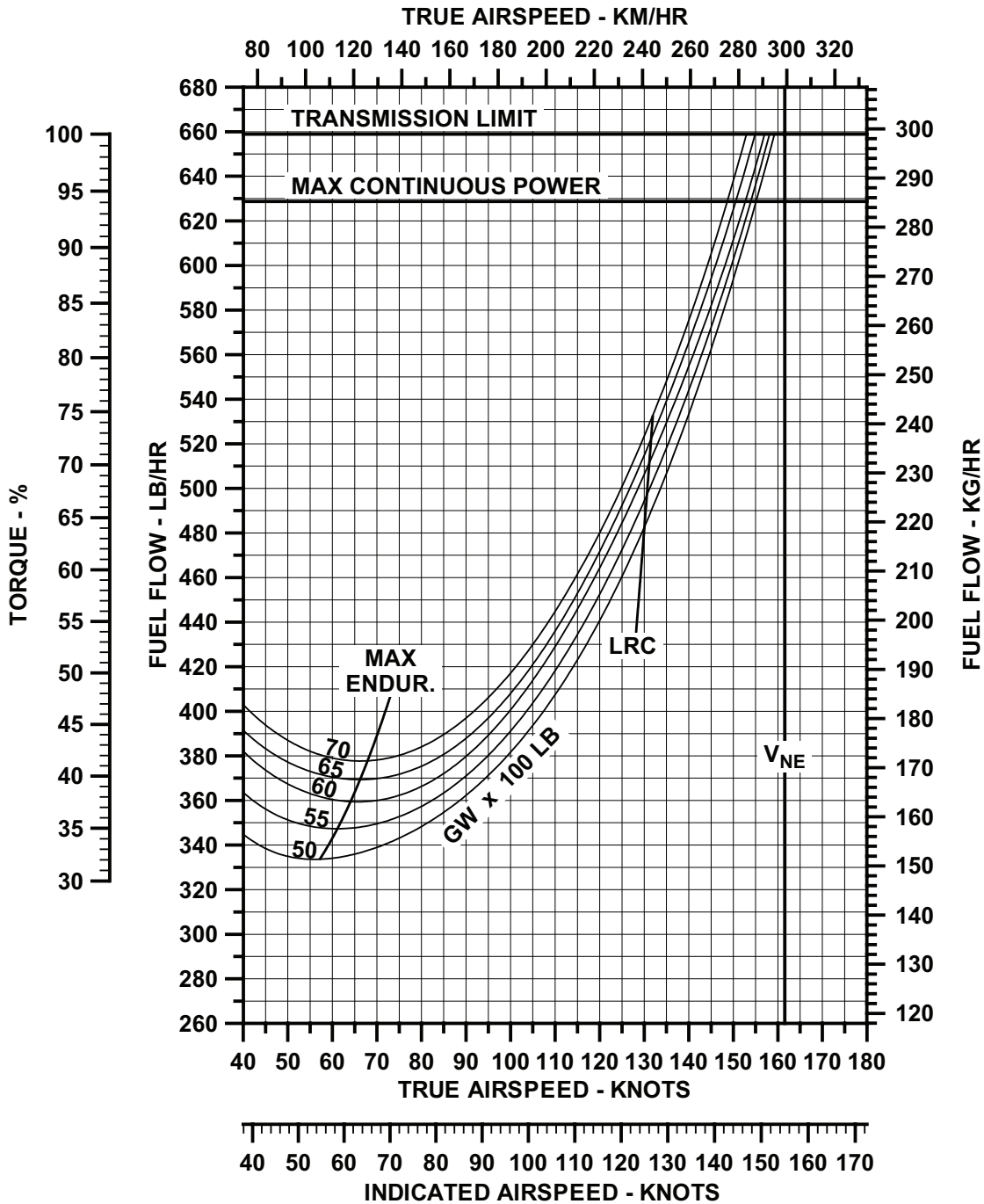
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**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 10,000 Ft**  
**OAT = -5°C (ISA)**



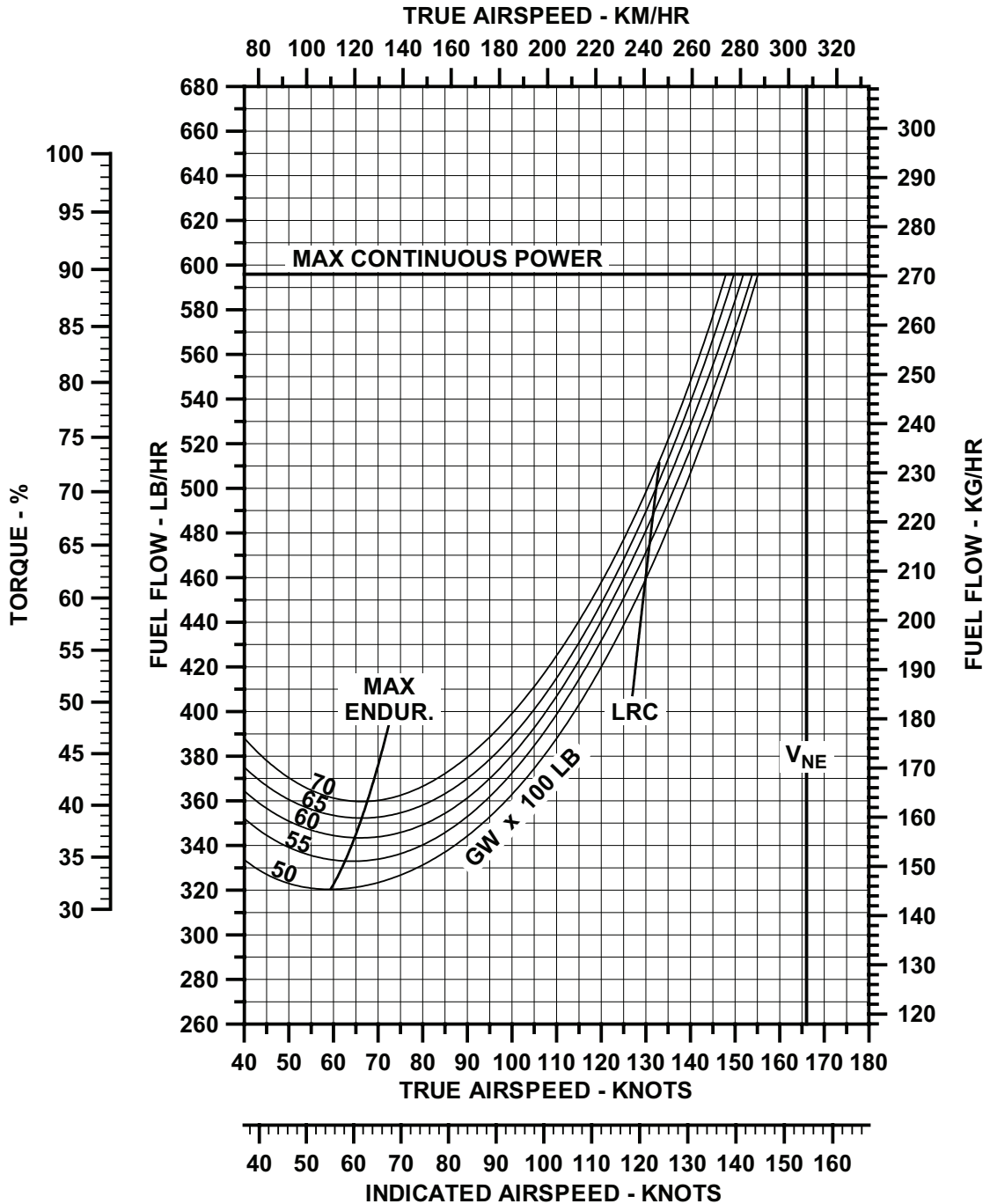
The data set forth on this document are general in nature and may vary with conditions. For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = Sea Level**  
**OAT = 35°C (ISA+20°C)**



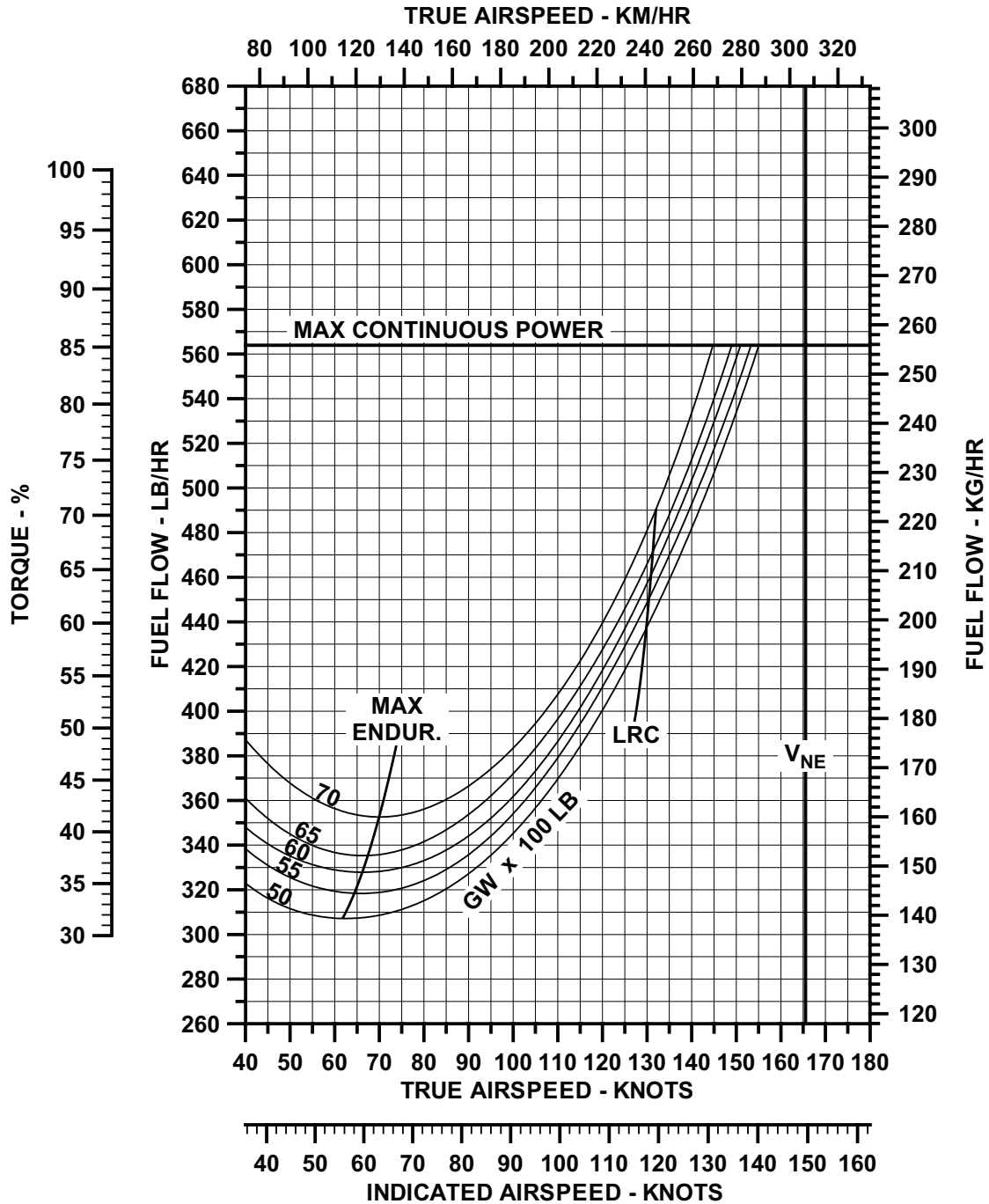
The data set forth on this document are general in nature and may vary with conditions. For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 2000 Ft**  
**OAT = 31°C (ISA+20°C)**



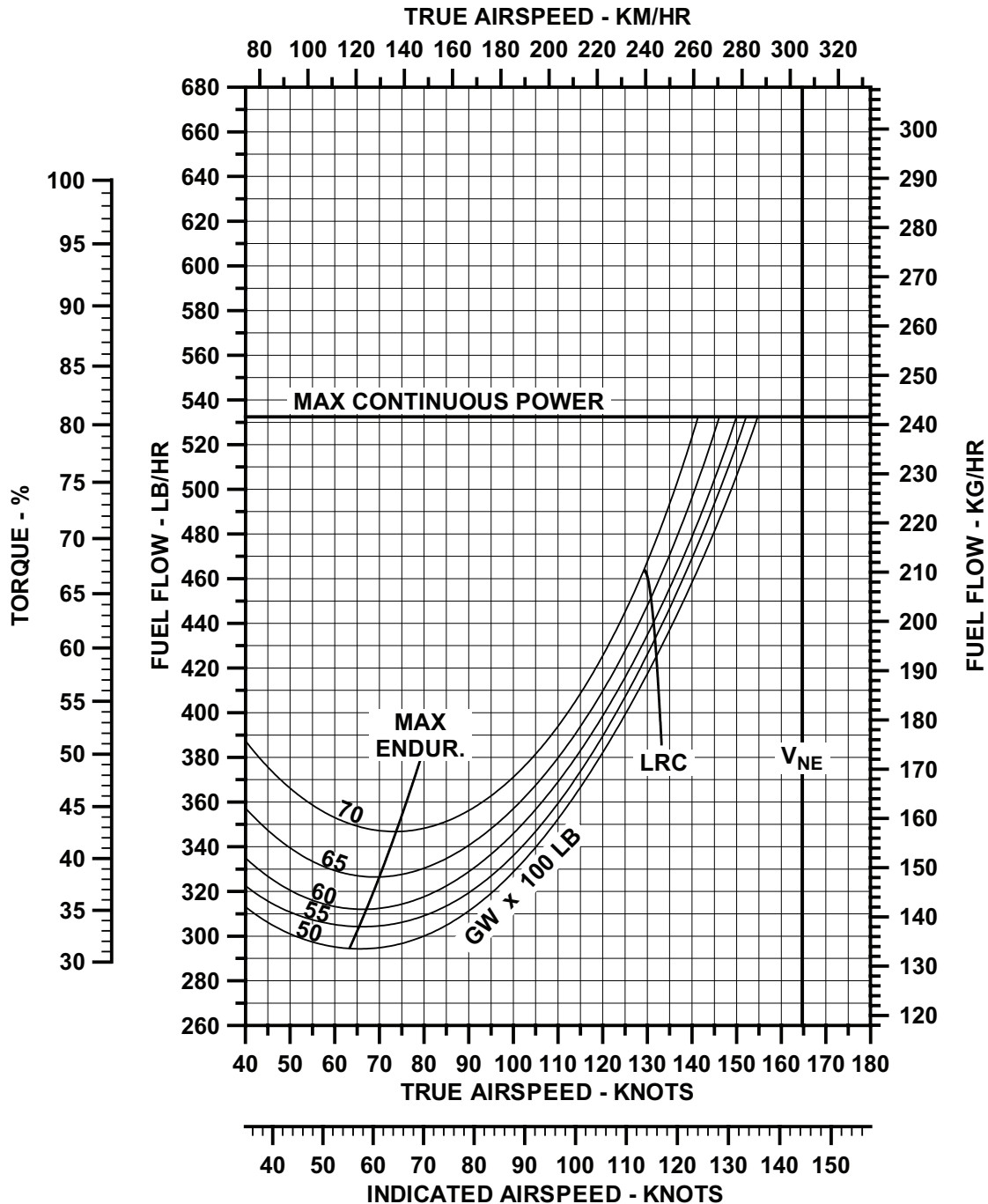
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**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 4000 Ft.**  
**OAT = 27°C (ISA+20°C)**



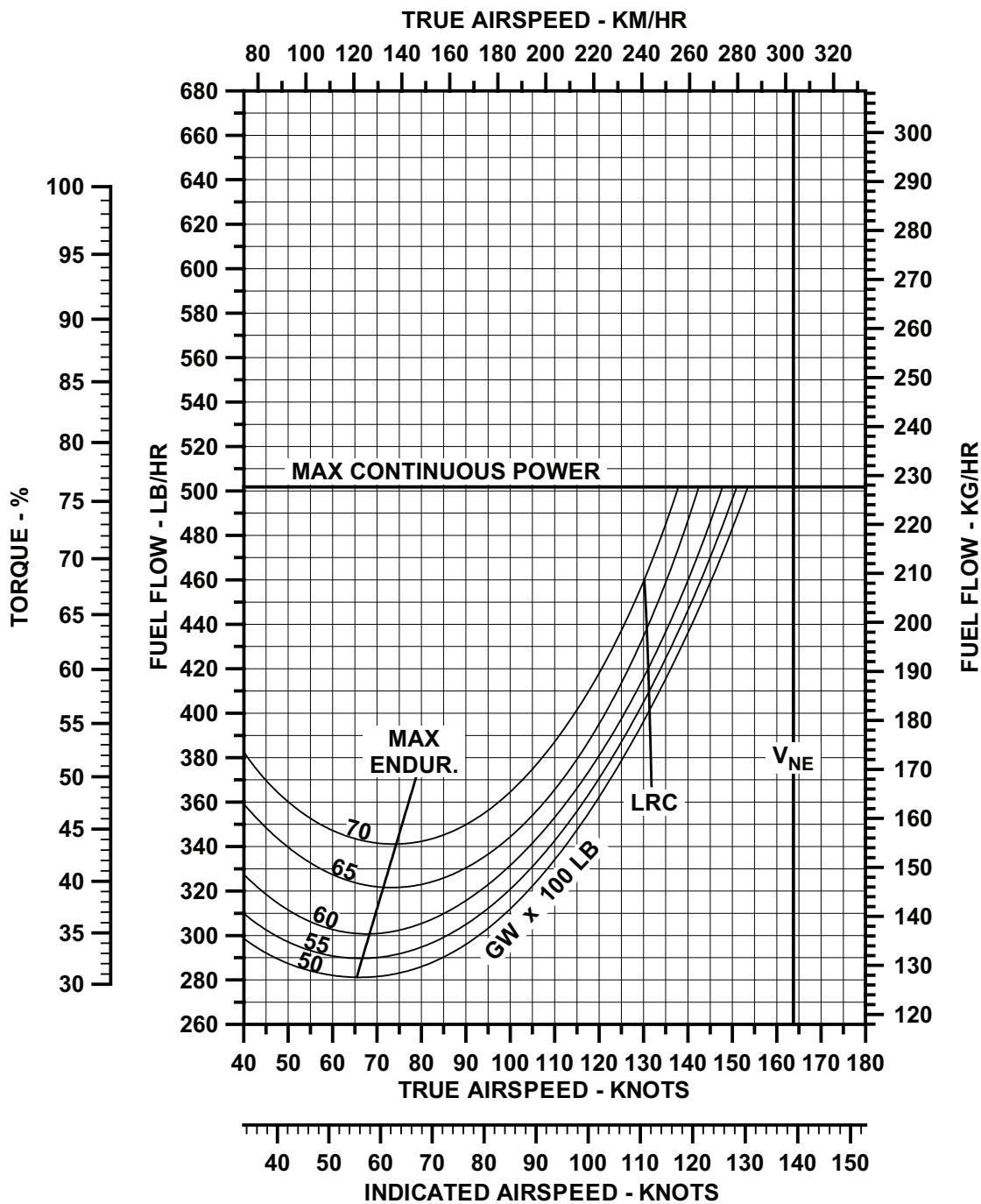
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**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 6000 Ft**  
**OAT = 23°C (ISA+20°C)**



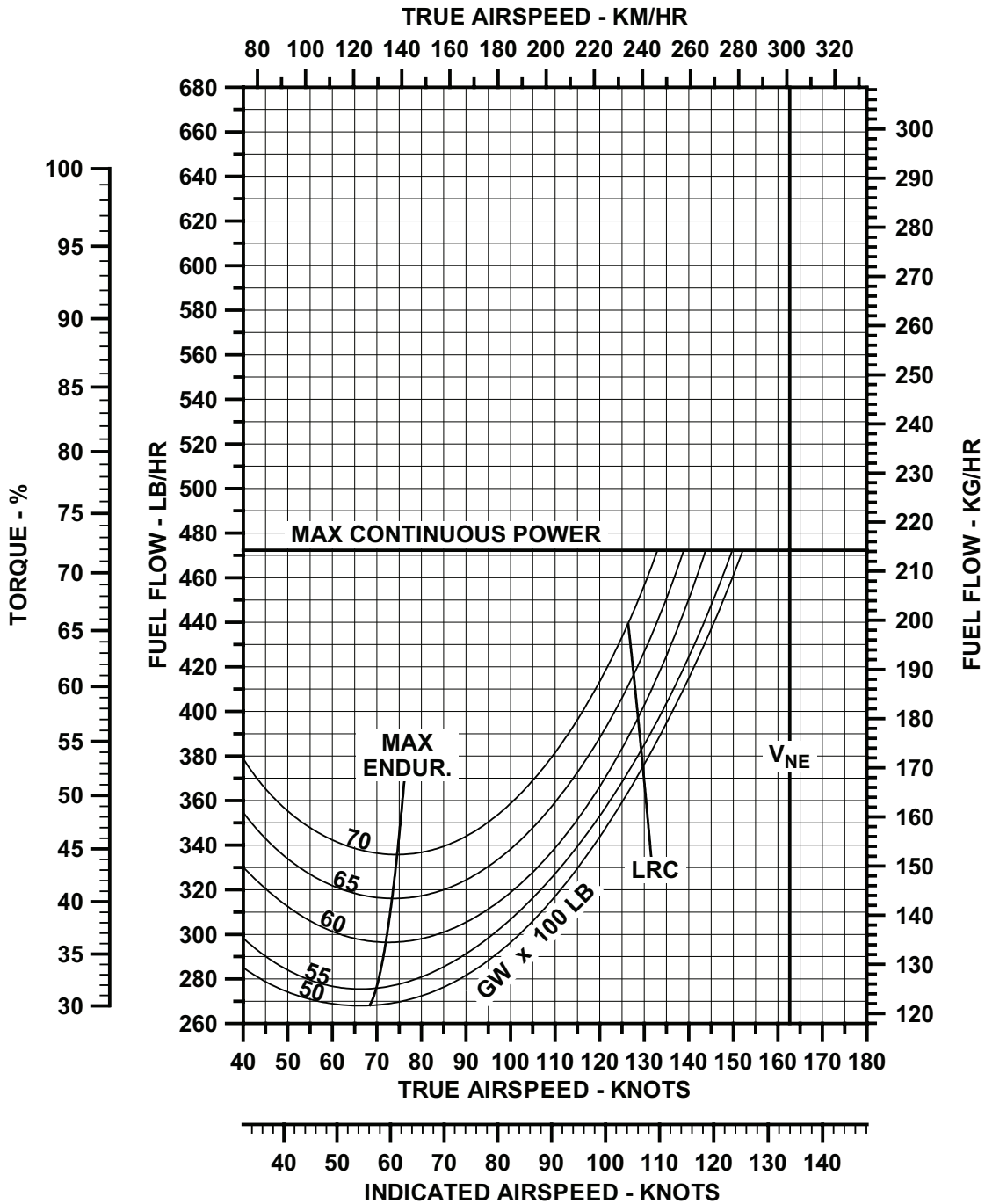
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**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 8000 Ft.**  
**OAT = 19°C (ISA+20°C)**



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**Fuel Flow vs Airspeed**  
**New Engines**  
**Clean Configuration with Standard Skid Gear**  
**Engine RPM - 100%**  
**Zero Wind**  
**Pressure Altitude = 10,000 Ft**  
**OAT = 15°C (ISA+20°C)**



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# ***Performance Charts***

***IGE & OGE HOVER AND SERVICE CEILINGS***

***PRATT & WHITNEY CANADA PW207D1/D2 ENGINES***

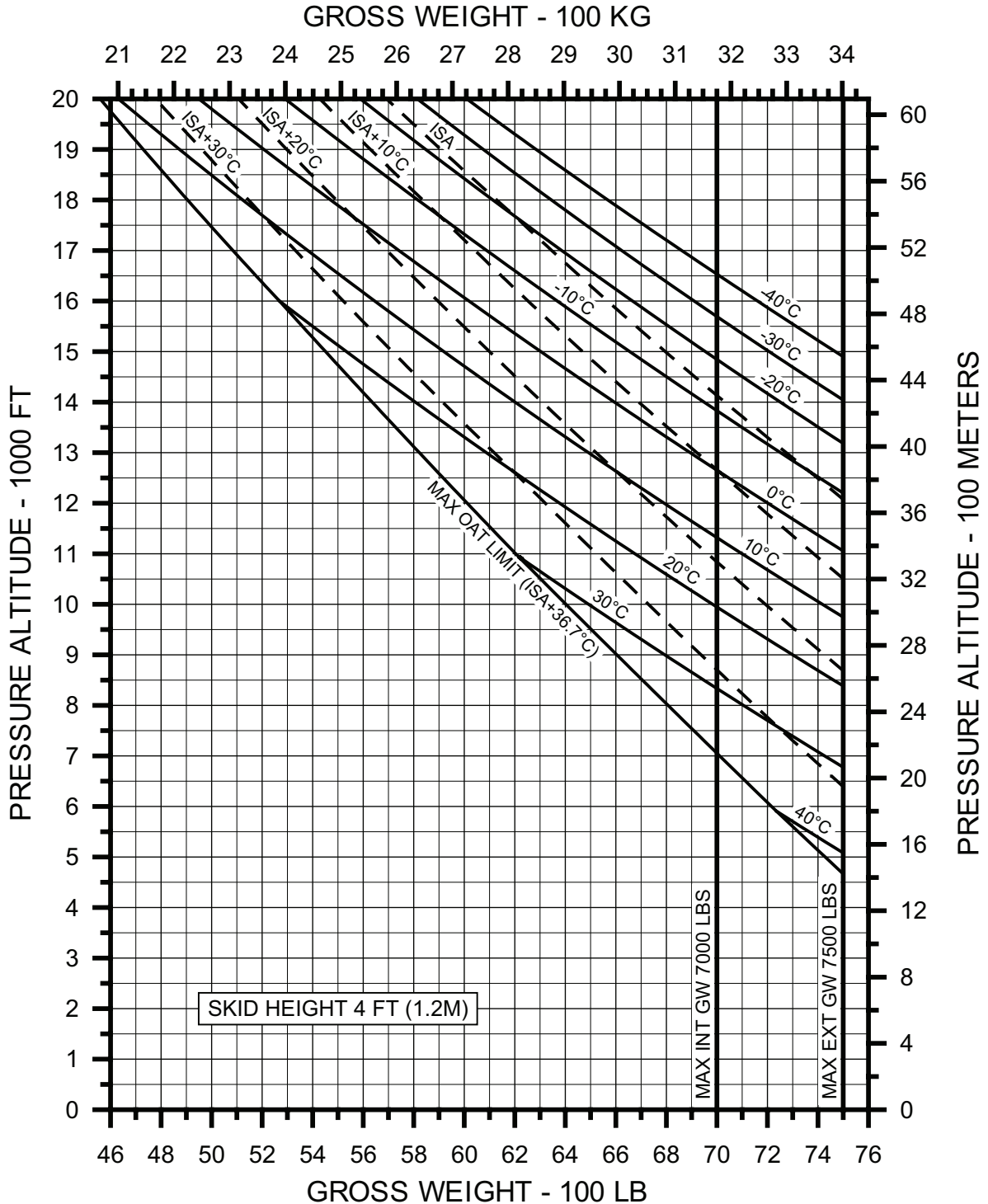
***MINIMUM SPECIFICATION ENGINE POWER***

***BASIC INLET OR BARRIER FILTER INSTALLED***

***AIR CONDITIONING / HEATER OFF***

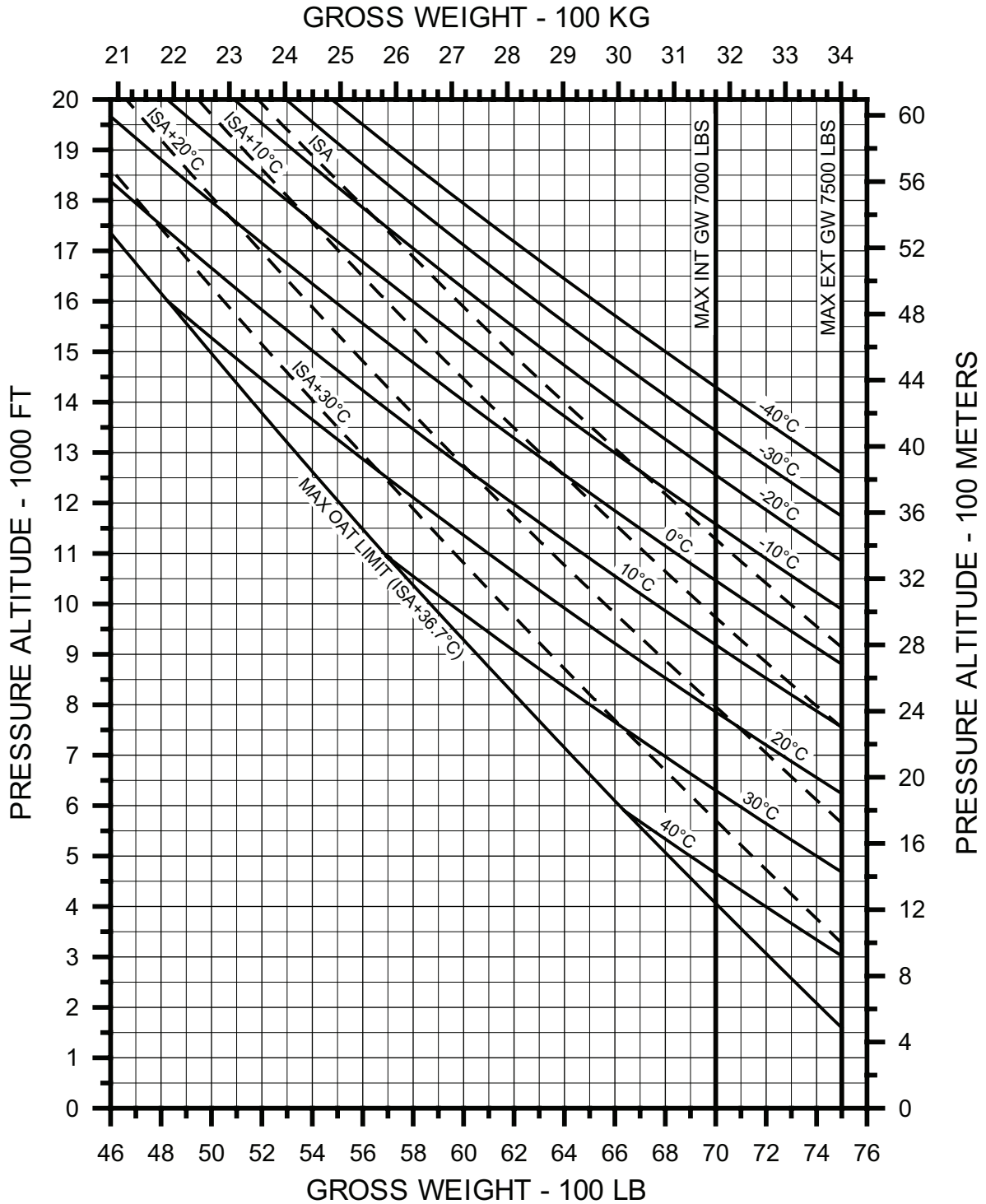
The data set forth on this document are general in nature and may vary with conditions.  
For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

**IGE Hover Ceiling**  
**Twin Engine Takeoff Power**  
**Basic Inlet or Barrier Filter Installed**  
**Rotor RPM = 100%**  
**Zero Wind or Headwind**



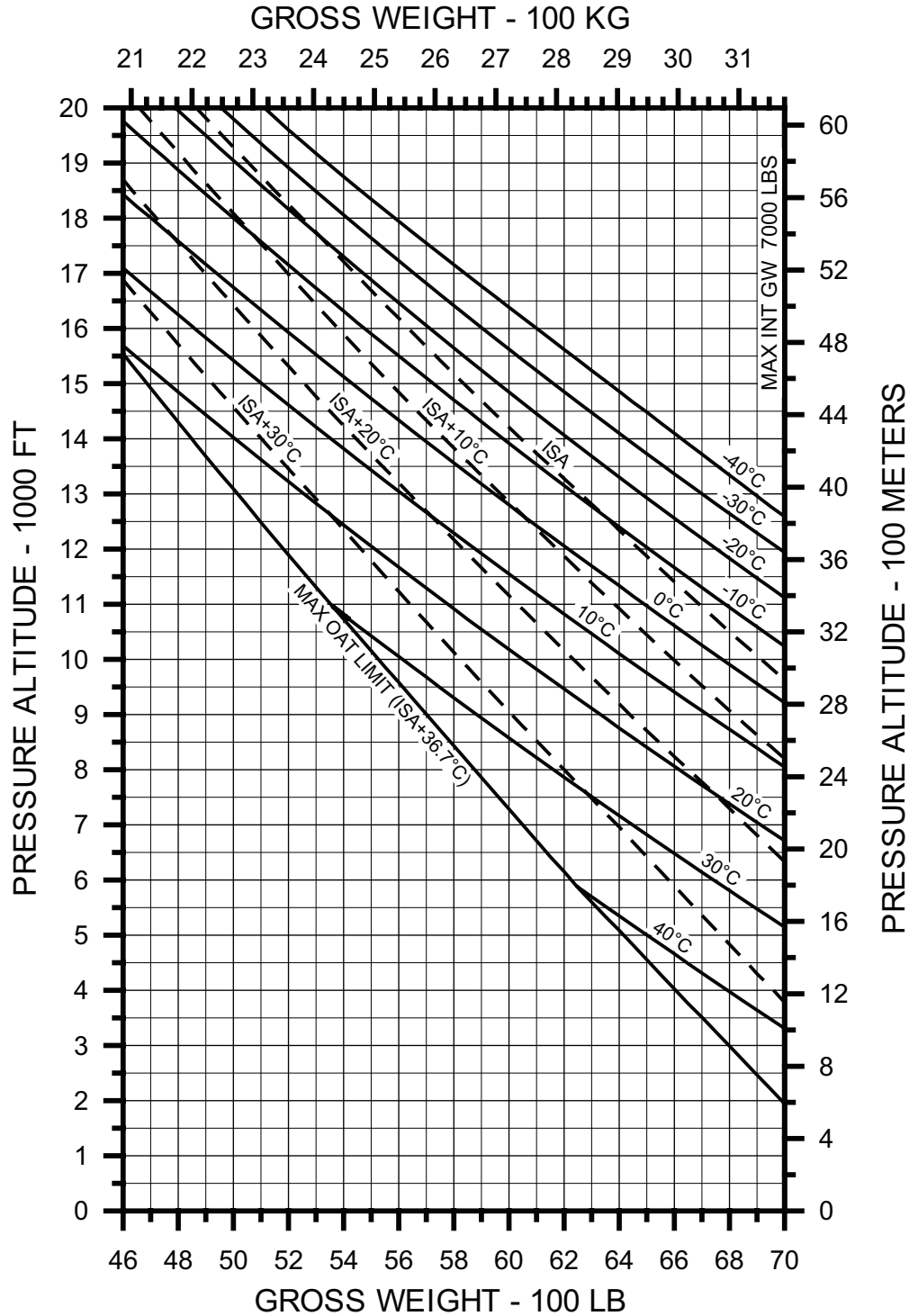
The data set forth on this document are general in nature and may vary with conditions.  
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**OGE Hover Ceiling**  
**Twin Engine Takeoff Power**  
**Basic Inlet or Barrier Filter Installed**  
**Rotor RPM = 100%**  
**Zero Wind or Headwind**



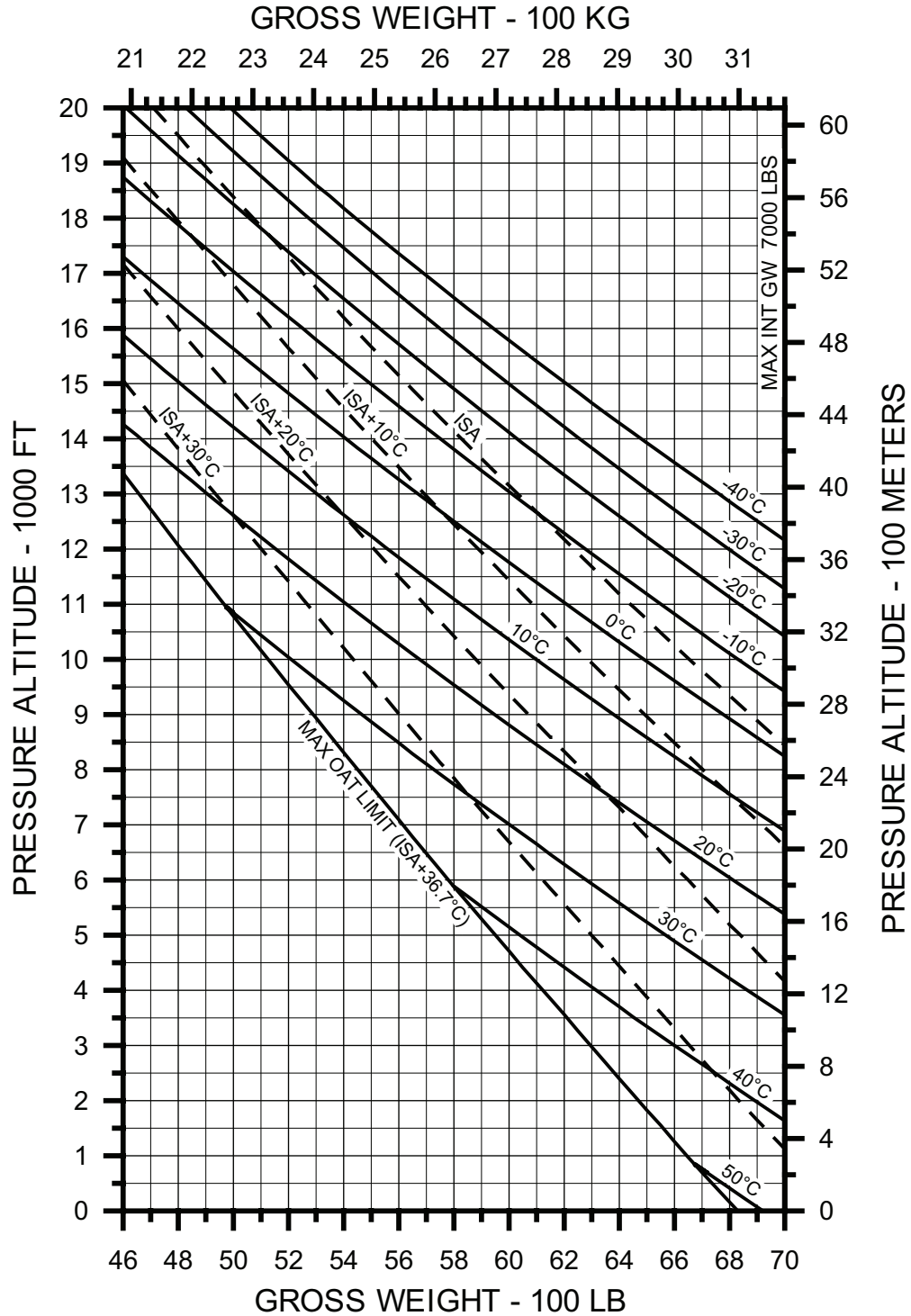
The data set forth on this document are general in nature and may vary with conditions.  
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**OEI Service Ceiling**  
**OEI 30-Minute Power**  
**Basic Inlet or Barrier Filter Installed**  
**Zero Wind or Headwind**



The data set forth on this document are general in nature and may vary with conditions.  
 For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

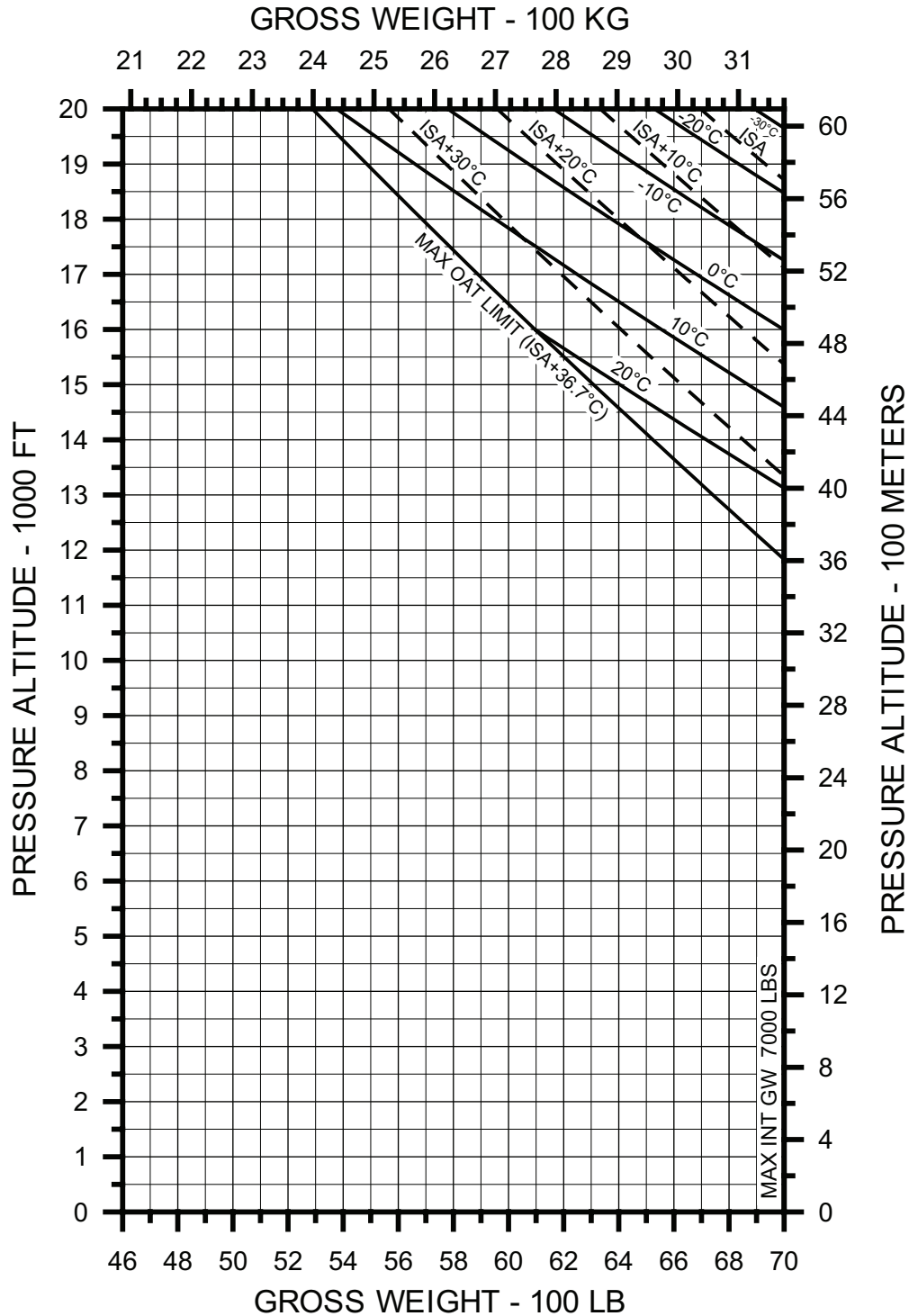
**OEI Service Ceiling**  
**OEI Max Continuous Power**  
**Basic Inlet or Barrier Filter Installed**  
**Zero Wind or Headwind**



The data set forth on this document are general in nature and may vary with conditions. For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

## Service Ceiling

### Twin Engine Max Continuous Power Basic Inlet or Barrier Filter Installed Zero Wind or Headwind



The data set forth on this document are general in nature and may vary with conditions.  
For performance data and operating limitations for any specific flight mission, reference must be made to the approved Flight Manual

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## 429 Maintenance Program

### Designed through Maintenance Steering Group - 3 (MSG-3)

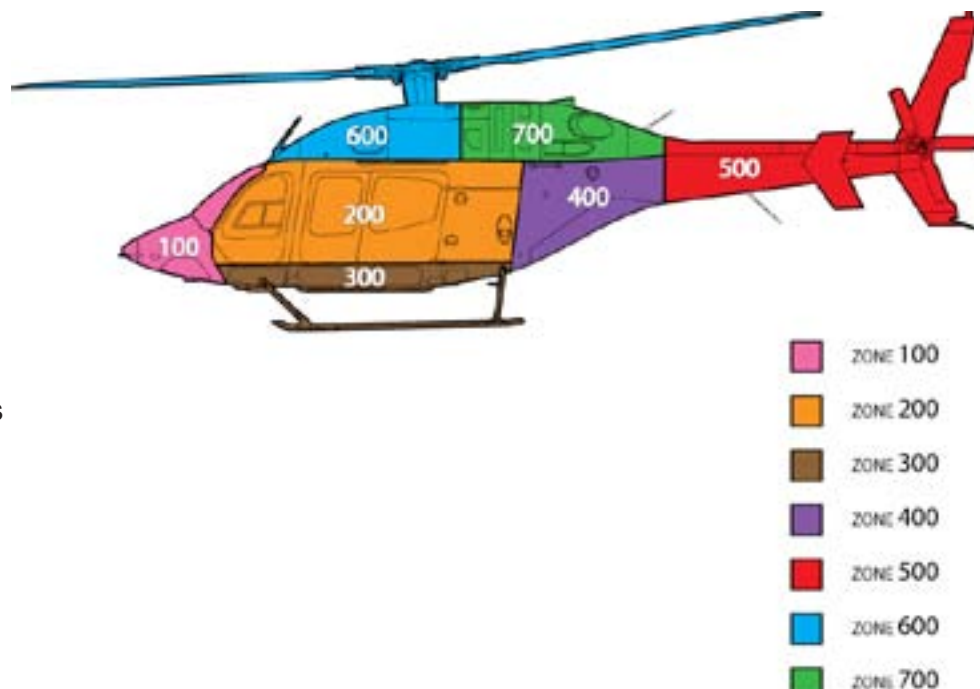
Bell understands the importance of aircraft reliability to meet your mission needs. That's why our maintenance philosophy is to streamline maintenance requirements to ensure low direct operating costs, low direct maintenance costs, and improved reliability by utilizing the Maintenance Steering Group – 3 (MSG-3) while increasing occupant safety.

The Bell 429 is the first rotorcraft designed through the MSG-3 in the creation of a maintenance schedule on a commercial helicopter with the support of the Aviation authorities, mainly Transport Canada (TC), the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA).

During the Customer Maintenance Advisory Panel (CMAP) meetings, the team analyzed every aircraft system, including airframe structure and wiring installation, to determine the failure modes, their criticality, the ease of detection, the level of inspection required and the ideal recurrence of inspection. This is where the varied experience of the team came in to play; Aircraft Maintenance Engineers (AME) / Airframe & Power Plant (A&P) technicians also provided input as to the system detailed functions and used their many years of experience in aircraft operation, respectively. From this resulted a maintenance schedule that requires 35% less maintenance man hours versus a comparable aircraft, thus improving the cost of ownership for the Bell 429.

The following are excellent features derived through MSG-3 for the Bell 429:

- **Approved Maintenance Program (TC/EASA)**
  - First rotorcraft to use the MSG-3 Process
- **Certification through MSG-3 Process**
  - Same process used by commercial airlines to ensure continued airworthiness
  - Determines how and when maintenance will be performed
  - Helicopter designed and built for maintenance
- **Accessible panels to aircraft systems**
- **Maintenance Program**
  - Task Intervals
    - Every 200 hours
    - 800 hours/12 month
    - Zonal Inspection Program introduced
  - Life Limited Parts
    - Composite Components – On Condition
    - Metallic Components – 10,000 + hours (Goal)
    - Elastomeric Components – 5000 hours (Goal)



- Zonal Inspections
  - General Visual Inspections
  - Part of Scheduled Inspection Program
  - Start at 12-month
  - Extent out to 10-Years
  - Reduce Scheduled Inspection repeats
- **Instructions for Continued Airworthiness (ICA)**
  - Maintenance Manual & Flight Manual
  - Maintenance Manual accepted by TC, EASA and FAA
    - Maintenance Program approved by TC & EASA, and accepted by FAA
  - Flight Manual approved by TC, EASA and FAA
  - Wear and repair damage limits included in initial release to customers
- **Scheduled Maintenance and Component Inspections**

Bell 429 Scheduled Maintenance Inspections			
Inspection	Individual Task Hours	Cumulative Task Hours	Notes
200 hour	0.16 hrs	0.16 hrs	
400 hour	5.00 hrs	5.16 hrs	includes 200 hr
600 hour	3.16 hrs	3.32 hrs	includes 200 hr
600 hour / 12 month	4.00 hrs	4.00 hrs	
800 hour	15.892 hrs	21.212 hrs	includes 200 & 400 hr
12 month	2.038 hrs	2.038 hrs	
2 year	5.68 hrs	7.718 hrs	includes 12 month
3 year	1.19 hrs	3.228 hrs	includes 12 month
4 year	13.12 hrs	20.838 hrs	includes 12 month & 2 year
5 year	2.50 hrs	4.538 hrs	includes 12 month
6 year	5.15 hrs	14.058 hrs	includes 12 month, 2 & 3 year
8 year	10.00 hrs	30.838 hrs	includes 12 month, 2 & 4 year
10 year	8.19 hrs	18.408 hrs	includes 12 month, 2 & 5 year

Bell 429 Scheduled Component Inspections						
Component	Interval	Removal	Overhaul	Installation	Follow Up	Total
Swashplate and Support	5000hr	1hr	33hr	1hr	Friction check 1.5hr	36.5hr
Mast Assembly	5000hr	1hr	20hr	1hr	N/A	22hr
Main Rotor Gearbox	5000hr	11hr	150hr	16hr	N/A	177.5hr
T/R Gearbox	5000hr	2hr	27hr	4hr	T.Q. check 1hr	34hr
Main Rotor Head	5000hr	2hr	80hr	3hr	T.Q. check 1hr	85hr
T/R Hub	5000hr	1hr	12hr/hub	2hr	T.Q. check 1hr	14hr/hub

## Bell 429 Training

Bell Helicopter has trained more than 110,000 pilots and maintenance technicians from over 120 countries since opening the Bell Helicopter Training Academy (BTA) in 1946. The Training Academy currently trains approximately 2,000 pilots and 1,800 maintenance technicians each year.

Highly trained professionals in courseware development and classroom instruction are part of the Bell Helicopter team. BTA courseware developers and technical instructors have over 200 years of combined maintenance experience, and BTA instructor pilots have an average experience level of 12,500 flight hours.

Pilot and maintainer courses have been developed for the 429 to ensure that the training suite matches the capabilities of the 429 helicopter. The complete suite consists of advanced course materials complemented by a Flight Training Device constructed to U.S. FAA Level 7 certification requirements<sup>1</sup>, and a composite maintenance trainer which provides hands-on training for maintenance tasks.

For additional information about the Bell Training Academy, please visit our website, [www.bellhelicopter.com](http://www.bellhelicopter.com), and click on "Training".

### 429 Training Course Summary

The courses offered for the Bell 429 helicopter are listed in table below. Complimentary training is offered with each new 429 helicopter delivery for two positions in the 429 Pilot Transition Course and one position each in the 429 Field Maintenance, Electrical Maintenance and Avionics/AFCS Maintenance courses.

### The Bell Helicopter Training Academy offers World Class Training Solutions

- FAA Certified
- > 60 years of continuous operations
- Over 110,000 pilot and maintenance engineers trained from over 120 countries
- Flight Training Devices (FTD) available for enhanced pilot training
- Maintenance and technical instructors have over 375 years of combined training experience



**Bell Training Academy (BTA)**  
Alliance Airport north of Fort Worth, Texas.

Course	Training Hours			Duration
	VFR	IFR	Total	
429 Pilot Transition Course (Ground & Flight Procedures):				5 to 7 days
Classroom Training	23	6	29	
Flight Training Device	4.5	3	7.5	
Transition Flight Training in BTA's 429 <sup>2</sup>	up to 6	up to 3	up to 9	
429 Pilot Refresher Course (available 2011)				~ 3 days
Classroom Training		16 hours		
Flight Training Device		2 hours		
Flight Training		2 hours		
429 Field Maintenance		120 hours		3 weeks
429 Electrical Maintenance		40 hours		1 week
429 AFCS & Avionics Maintenance		40 hours		1 week
429 Field Maintenance Refresher Course (available 2011)		24 hours		~ 3 days
429 Component Overhaul (available late 2011)		80 hours		2 weeks

## 429 Course Descriptions

### Pilot Training:

Bell Helicopter recognizes that pilots have different backgrounds and experience levels. For that reason the classroom instruction, flight training device (FTD) and flight training are designed to prepare each attendee to successfully meet the course standards. The standards followed by the instructor reflect the standards required for aircraft operation by FAA regulations and Bell Helicopter. Training is considered complete with demonstrated knowledge of aircraft systems and proficiency in flight maneuvers appropriate to the course of instruction.

This course provides pilots with a comprehensive knowledge of the aircraft systems and components and a thorough understanding of the operational characteristics and flight limitations. Classroom presentations cover the cockpit controls and instrumentation, airframe, power-plant and all aircraft systems. In addition, normal procedures, emergency procedures, operating limitations and performance are studied.

The flight training includes complete familiarization of the Bell 429 helicopter, instruction in the turbine engine operation and flight instruction in normal flight maneuvers and all emergency procedures. Instruction in the flight training device (FTD) simulates emergency procedures including FADEC failure modes, hydraulic boost failure, auto-rotations and tail rotor failure.

### Maintenance Training:

#### 429 Field Maintenance Course

This three weeks course provides a comprehensive coverage of the description, function, and maintenance procedures required for field maintenance of the Bell 429 helicopter. The following topics are covered during classroom or shop work: Airframe, Ground Handling and Servicing, Main Rotor, Mast, Rotating Controls, Transmission, Main Drive Shaft, Power-plant Interface (installation and rigging as related to the airframe), Fuel System, Tail Rotor, Tail Rotor Drive, Hydraulic System, Flight Controls, Electrical System, and Utility Systems. This course is designed to meet the EASA Part 66 B1.3 requirements.

#### 429 Electrical Maintenance Course

This one-week course is a comprehensive study of the 429 electrical systems to include a detailed analysis of each circuit in the following categories: AC and DC power distribution, power-train systems, airframe systems, utility systems, and instrument indicating systems. The type, function, location of components and access provisions, component description and operation of these circuits will be presented to enable the student to perform the inspection, servicing, use of special tools, materials, manuals, and equipment to perform field level maintenance of the system. Recommended troubleshooting procedures will be discussed using known and probable fault symptoms in the classroom and shop to prepare the student for actual work on the helicopter.

#### 429 Avionics/AFCS Maintenance Course

This one-week course includes a discussion of development concepts and system requirements for operation within VFR and IFR parameters. Flight controls and system interface, including modes of operation are presented. System components are studied with respect to their function, operational specifications, location and access provisions. Operational modes and theory of operation are covered using functional and detailed block diagrams providing an understanding of total system integration. Line maintenance level inspection and servicing requirements, including the use of special tools, equipment and manuals are covered. Fault isolation and troubleshooting procedures will also be discussed utilizing ground test checkout provisions in preparation for actual work on the system.

The avionics maintenance includes theory of operation, component location, system operation, system programming, field maintenance and troubleshooting. This will provide familiarization with the inspection, servicing, use of special tools, materials, manuals and equipment to perform field level maintenance of the related avionics system.

When taken with the Electrical Maintenance course, the Avionics/AFCS Course is designed to meet the EASA Part 66 B2 requirements.

The following additional courses are anticipated to be available as early as January 2011:

- 429 Component Overhaul (2 weeks course)
- 429 Pilot Refresher Course (3 days)
- 429 Field Maintenance Refresher (3 days)

**Note 1:** The 429 Advanced FTD is projected to be available for training in April, 2010. US FAA Certification to Level 7 standards is projected for December 2010.

**Note 2:** Actual flight training time flown will be based on student pilot proficiency and is not intended as an absolute value.





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