



CHALLENGE.  
CREATE.  
OUTPERFORM.



# PHENOM<sup>®</sup> 100EV

BY EMBRAER

PREPARED BY SALES ENGINEERING

v21.1.0

# PHENOM<sup>®</sup> 100 EV

BY EMBRAER

01. OVERVIEW

02. INTERIOR<sup>®</sup>

03. PERFORMANCE

04. SYSTEMS

05. ECONOMICS

06. CUSTOMER SUPPORT

07. ANNOUNCEMENTS





# 01. OVERVIEW



# The essence of private flight

with the best cabin and optimized performance

## COMFORT

The widest and tallest cross section in its class provided by Oval Lite®

Premium comfort

Largest baggage capacity in class - up to 70 ft<sup>3</sup> (2.0 m<sup>3</sup>)

## PERFORMANCE

The greenest dual engine jet in production

Superior hot and high airport performance

406 kts high speed cruise

1,178 nm range with 4 occupants at LRC

## TECHNOLOGY

Low operating costs

State-of-the-art Prodigy touch® flight deck

Single-pilot workload

Designed for high utilization

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# External Dimensions

*Clean sheet design, Straight wings, Low approach speeds*



42 ft 1 in (12.82 m)

14 ft 3 in (4.35 m)\*



17 ft 6 in (5.34 m)



40 ft 4 in (12.30 m)

\*Including landing gear



## 02. INTERIOR

# Unprecedented premium cabin comfort



Note: Some items are optional

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# Internal dimensions

Widest and tallest cabin in any entry level jet

Exclusive Oval Lite<sup>®</sup> cross Section



Standard Pax/Max Pax

**5/7**



Cabin Volume

**212 ft<sup>3</sup>**  
(6.0 m<sup>3</sup>)



4 ft 11 in (1.50 m)

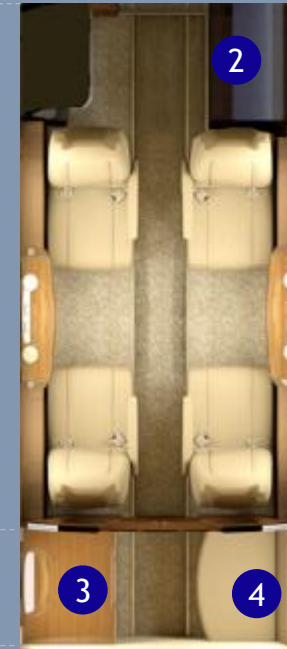
3 ft 7 in (1.09 m)

5 ft 1 in (1.55 m)

The difference between the standard circular cross section to the Oval Lite design

11 ft (3.35 m)

9 ft (2.75 m)



- 1 - Optional 5<sup>th</sup> seat
- 2 - Refreshment Center
- 3 - Storage Area (half height cabinet)
- 4 - Optional Belted Lavatory





# Interior Finishing

*Flexible interior: 4 different themes*

Note: Image for illustrative purposes only. Some items are optional.

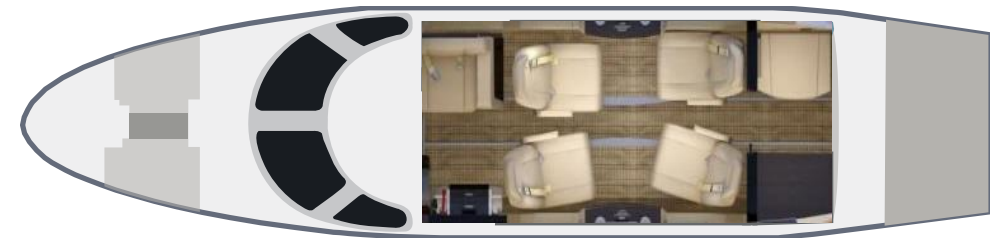
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# Optional Premium Seats

*Enhanced comfort and flexibility*

## Seats with full movement

- Reclining allows for a more comfortable resting position
- Swivel capability
- Forward and lateral movement
- Drawer
- Retractable armrest



## Optional side facing seat

Individual PCU (personal control unit) and armrest with cup holder

Increases total seating capacity up to 8 occupants



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# Wardrobe

The Phenom 100EV offers a forward wardrobe with room to stow coats, jackets and laptops, with 6 ft<sup>3</sup> (0.2 m<sup>3</sup>) capacity



# Optional refreshment center

- Ice drawer
- Space for miniature bottles
- Space for wine bottles
- Trash bin



# Total privacy and comfort

- Lavatory with flushing capability
- Optionally certified for takeoff and landing
- Natural light from two large windows
- The only aircraft in its class with windows in the lavatory



Optionally belted



2 windows give natural light



# Interior comfort

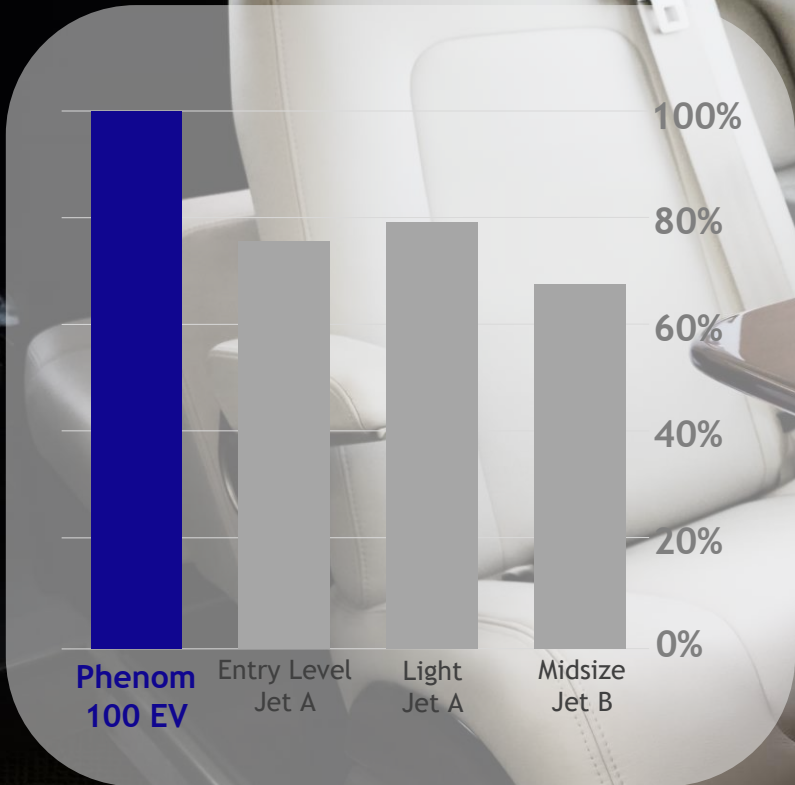
## *Cabin temperature*

- With the VIP panel, the passengers are able to control the temperature from the cabin
- Electronically controlled thermostat ensures precise temperature control



# Window Dimension Comparison

*The largest windows among entry level / light jets*



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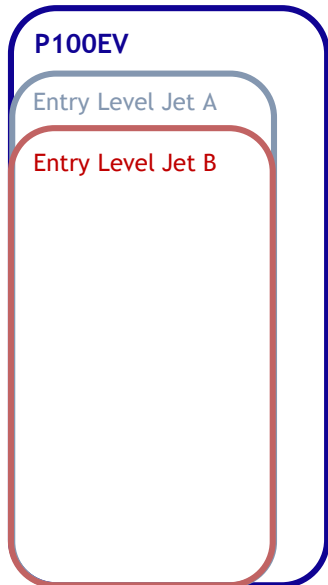


# The best entrance door in the class

*Phenom 100EV unique experience starts at the entrance door*

## **PHENOM**<sup>®</sup> 100 EV BY EMBRAER

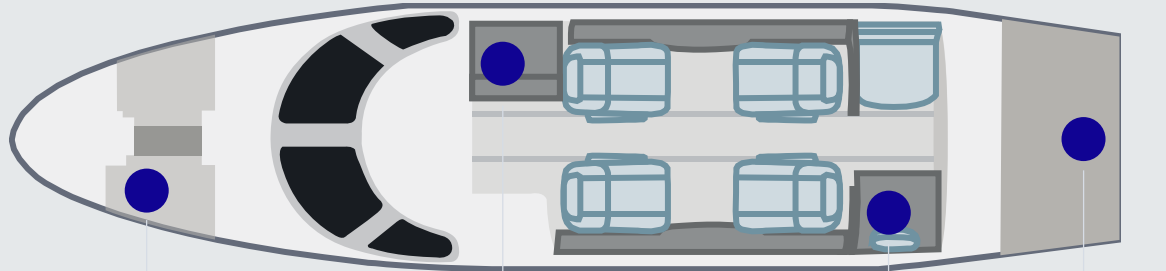
- ✓ Largest entrance door with unique airstair
- ✓ Standard handrail
- ✓ Optional step lights and telescopic tubes
- ✓ Door area 16% larger than closest competitor



**P100EV:**  
4 ft 10 in (1.48 m) x 2 ft 0 in (0.62 m)



# The largest baggage compartment well suited to different needs



7 ft<sup>3</sup> (0.2 m<sup>3</sup>)  
66 lb (30 kg)

6 ft<sup>3</sup> (0.2 m<sup>3</sup>)  
66 lb (30 kg)

4 ft<sup>3</sup> (0.1 m<sup>3</sup>)  
27 lb (12 kg)

53 ft<sup>3</sup> (1.5 m<sup>3</sup>)  
353 lb (160 kg)



## 4 garment bags

21 in x 23 in x 8 in  
(0.53 m x 0.58 m x 0.2 m)



## 4 carry-on bags

22 in x 14 in x 10 in  
(0.56 m x 0.36 m x 0.25 m)



## 4 laptop bags

16.5 in x 13.5 in x 4 in  
(0.42 m x 0.34 m x 0.10 m)



## 2 pairs of skis

72.8 in x 5 in  
(1.85 m x 0.125 m)

-or-



## 4 golf bags

9 in diameter x 46 in  
(0.23 m x 1.17 m)



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# 03.

## PERFORMANCE



# Great hot and high performance



## Range

**1,178 nm (2,182 km)**  
(LRC, 4 occupants, NBAA IFR reserves 100 nm alternate)



## Landing Distance

**2,430 ft (741 m)**  
(Unfactored, 4 passengers, NBAA IFR reserves, SL, ISA)



## Maximum Operating Altitude

**41,000 ft (12,500 m)**



## M<sub>MO</sub>

**M 0.70**

MMO - Maximum Operating Mach

## High Speed Cruise

**406 ktas (752 km/h)**



## Takeoff Distance

**3,190 ft (972 m)**  
(MTOW, Sea Level, ISA)

## Hot and High Takeoff Distance

**5,663 ft (1,726 m)**



## Time to climb

to FL410  
**25 min**



## Engines/Thrust

PW617F1-E  
**1,730 lbf**



# Range circles



Note: Long Range Cruise speed, 4 occupants at 200 lb each, NBAA IFR reserves with 100 nm alternate, ISA

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# The greenest dual engine jet in production



Embraer was the first aircraft manufacturer to obtain ISO 14001 certification in March 2002



Embraer is the first aircraft manufacturer to produce a 100% biofuel powered aircraft (Ipanema)



Phenom 100EV CO<sub>2</sub> emissions are 10% lower than its closest competitor's emissions for a 600 nm mission  
(According to B&CA Assumptions)



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# 04. SYSTEMS

# PRODIGY<sup>®</sup> TOUCH FLIGHT DECK

## Design drivers

- Glass cockpit with large displays
- State-of-the-art avionics
- Enhanced situational awareness
- Touch-screen controlled glass flight deck
- Truly integrated avionics





# Enhanced situational awareness

## Synthetic Vision System (SVS)

Enhances situational awareness, especially in low visibility

## Enhanced HSI (Horizontal Situation Indicator)

Overlay of additional information onto HSI display

- ✓ Map
- ✓ SafeTaxi data
- ✓ Flight Plan
- ✓ METARs
- ✓ NEXRAD
- ✓ Weather Radar
- ✓ Relative Terrain
- ✓ Traffic
- ✓ Obstacles



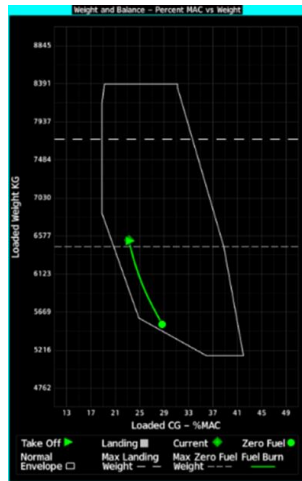
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# Flight management system

## Single pilot operation



- Two 5.7" high-resolution touch-screen controllers
- Full avionics control through touch-screen
- Fewer hand/eye movements to locate and access functions
- Graphical weight & balance & flight planning
- Onboard TOLD & performance data

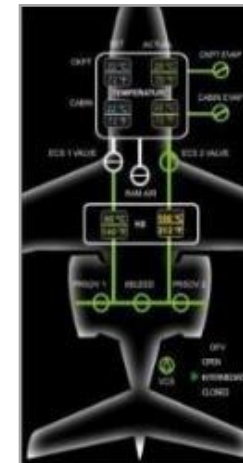
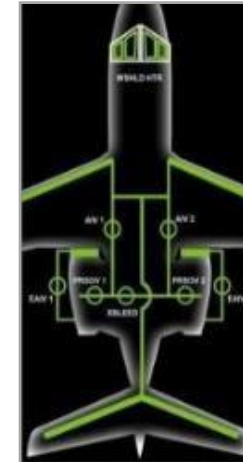


### Takeoff Data

|                |   |                      |          |
|----------------|---|----------------------|----------|
| Origin         | SBSJ<br>Prof Urbano<br>Rwy 15<br>8780FT | V1                   | Vr       |
| Weather        | Accept<br>Takeoff<br>Vs speeds          | 102KT                | 102KT    |
| Runway         | CHK Flaps<br>CHK ATR                    | V2                   | Vfs      |
| Takeoff Config |   | 114KT                | 122KT    |
| Takeoff Data   |   | N1                   | Trim     |
|                |   | 89.4%                | 9.0      |
|                |   | OEI Net Gradient     |          |
|                |   | 2nd                  | Final    |
|                |   | 10.7%                | 9.1%     |
|                |   | Takeoff Field Length |          |
|                |   | Available            | Required |
|                |   | 8780FT               | 3147FT   |

Back Home MSG Full Up Down

- Range + Pilot COM1 Volume COM1 FREQ  
Push:Pan Pane Push:Squelch Push:1-2 Hold:3



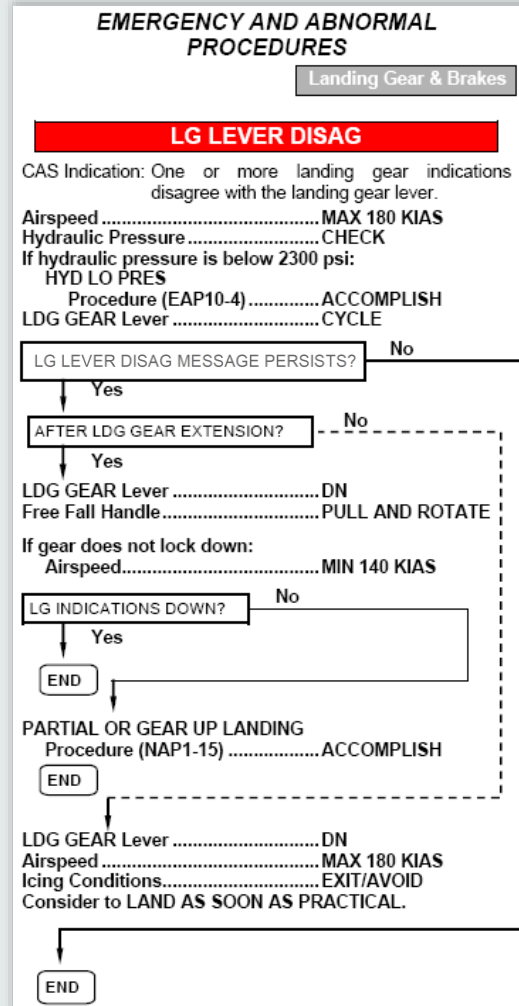
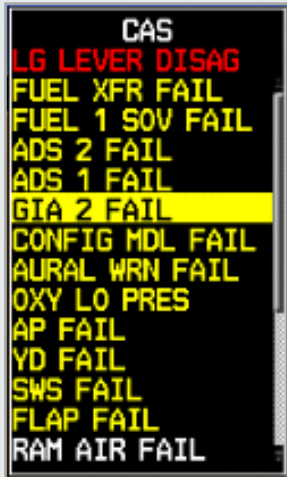
## Enhanced Situational Awareness - Synoptic Screens

- Synoptic representation for main systems
- Easy representation - Not an engineering diagram
- Enhances status monitoring, fault isolation and situational awareness

# Human factors

## Reduced pilot workload

- Symbols, acronyms and colors common through displays and manuals
- Aural warnings, reduced use of tones, one warning at a time and other features reduce pilot workload and enhance safety



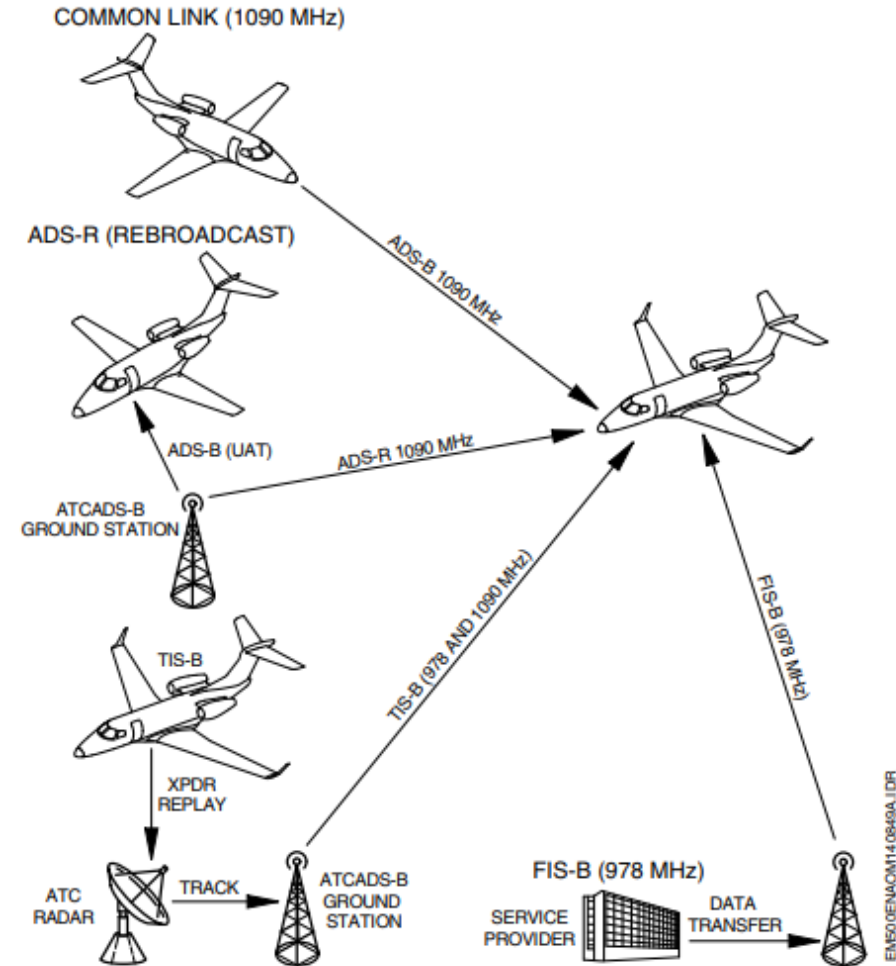
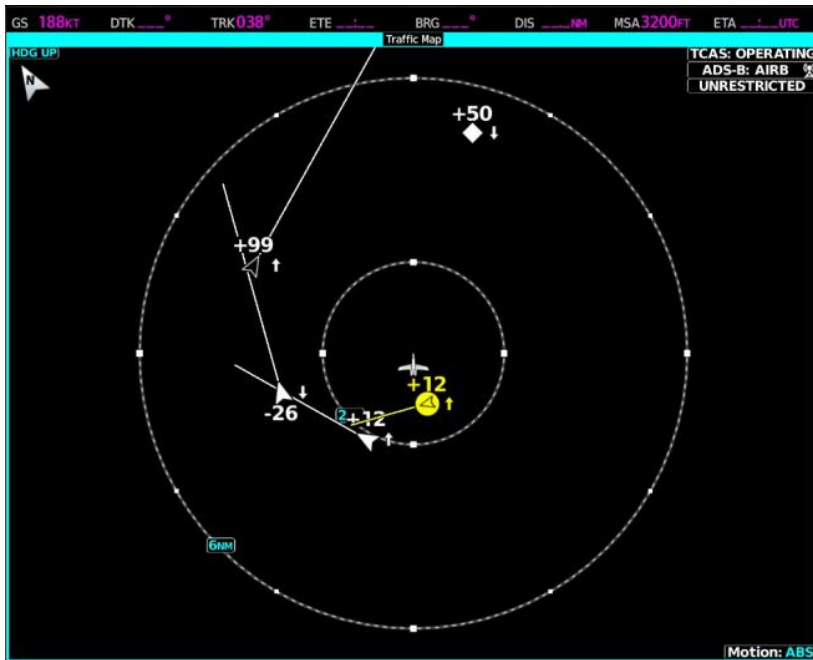
## Pre-flight checklist

| Usual tasks                 | Phenom 100EV Tasks      |
|-----------------------------|-------------------------|
| Start Button.....Press      | Start Switch.....Switch |
| Fuel.....Open               |                         |
| Engine Parameters...Monitor |                         |
| Gen.....On                  |                         |
| Gen Load.....Check          |                         |
| Av Master.....On            |                         |
| STB horizon.....Unlock      |                         |
| Brakes.....Check            | Brakes.....Check        |
| Flaps.....Set               | Flaps.....Set           |
| Speed brake.....Check       |                         |
| Pitot / static.....On       |                         |
| Ignition.....On             |                         |

# ADS-B IN

## The Automatic Dependent Surveillance-broadcast in

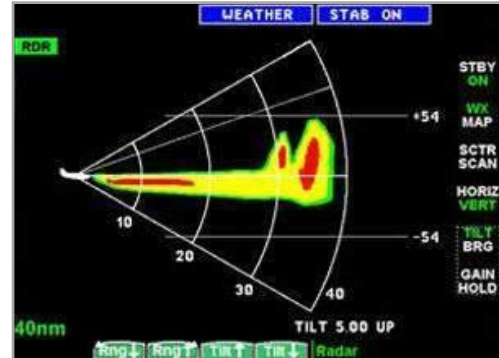
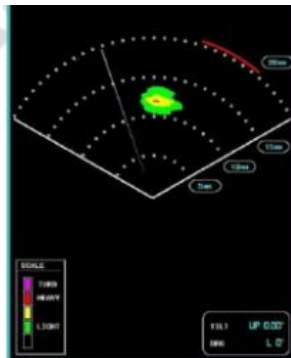
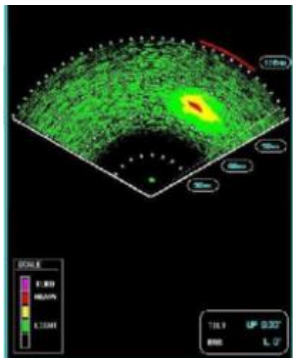
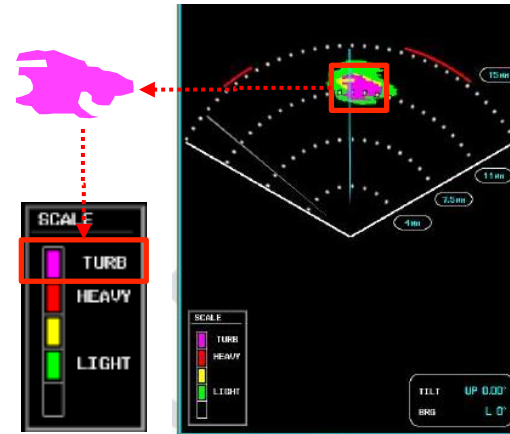
- Allows the airplane to receive periodical broadcasted information about position of other airplanes on the vicinity.
- Receive data from other ADS-B Out equipped airplanes or from ground stations that rebroadcast ADS-B information.



# GWX 70 weather radar

GWX 70 is standard with prodigy touch

- **Solid-state technology** state-of-the-art with reduced maintenance costs and faster power-up time on ground
- **Ground clutter suppression** identifies radar ground returns and removes them from the display
- **Turbulence detection** identifies areas of turbulence up to 40 nm ahead of the aircraft
- **Vertical scan capability** identifies precipitation above or below the aircraft



# Vertical Navigation and Optional Reactive Windshear

Vertical navigation

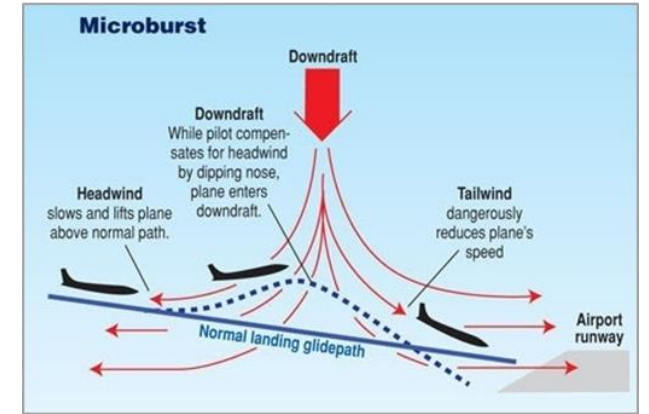
- Vertical guidance during climb, cruise and descent (CCDVNAV), & Approach

Reactive windshear alerting

- Provides alerts when windshear is detected
- Available between 50 and 1,000 ft AGL

VFR Approach

- Provides waypoints based in the runway position and course obtained from Nav Database to generate a path for straight in approach with vertical guidance 3 degrees



# Optional SurfaceWatch™

*Avoid runway incursions and maintain situational awareness*

SurfaceWatch™ provides notifications to maintain situational awareness, avoiding potential runway incursions/excursions

Aural and visual annunciations

Information Box

- Updated as the aircraft moves towards or through the airport

Aural Distance Remaining Callouts

- Aural cues of the remaining runway distance



# SMS & FAA Data Comm

- Prodigy Cockpit can now be used to provide two-way text messaging via Short Message Service (SMS)
- Service available for aircraft equipped with the optional in-flight phone
- FAA Data Comm for aircraft with 3<sup>rd</sup> VHF radio\*



\* Optional Feature

# Emergency descent mode (EDM)

*A helping hand in critical depressurization scenarios*

Mitigates risk in case of depressurization

## Activated when

- AP engaged
- Pressure Altitude over 25,000 ft AND
- CAS CAB ALTITUDE HIGH

## System's behavior

- After 5 secs speed profile adjusted
- Altitude reference set to 15,000 ft
- Selected heading 90° left
- Flight director configured for HDG and FLC
- Transponder 7700
- WARNING indication



≥ 25,000 ft  
EDM senses high cabin altitude  
Levels off  
15,000 ft



| Altitude [ft] | Time of Useful Consciousness |
|---------------|------------------------------|
| 41,000        | 9-15 seconds                 |
| 25,000        | 3-5 minutes                  |
| 22,000        | 5-10 minutes                 |

# Coupled go around

## *Reduced workload during a critical phase of flight*

- Automatic Flight Control System (AFCS) modification to keep autopilot engaged when go around mode activates
- No need to disconnect autopilot & fly manually
- Reduced workload allows pilots to have more situational awareness during a very dynamic and labor-intensive portion of flight





# Innovations in the cockpit

*Truly integrated avionics enables innovative customer support*



**AHEAD**  
Aircraft Health Analysis and Diagnosis

CMC - Central Maintenance Computer for key systems in the aircraft. Detailed maintenance logs of all systems can be downloaded by SD card.

# Engine

## Pratt & Whitney Canada PW617F1-E

|                           |            |
|---------------------------|------------|
| Engine Model              | PW617F1-E  |
| Thrust (lb <sub>f</sub> ) | 1,730      |
| Flat Rating               | ISA + 8° C |
| TBO (hours)               | 3,500      |
| Dual FADEC                | Yes        |

- Outstanding performance with high dependability
- Maintenance by design concept, easy and fast to maintain
- High fuel efficiency with low carbon emissions
- FADEC advantages
- Ease of operation, reduced workload
- Intelligent health monitoring and diagnostics
- Designed for efficient integration with aircraft electronics

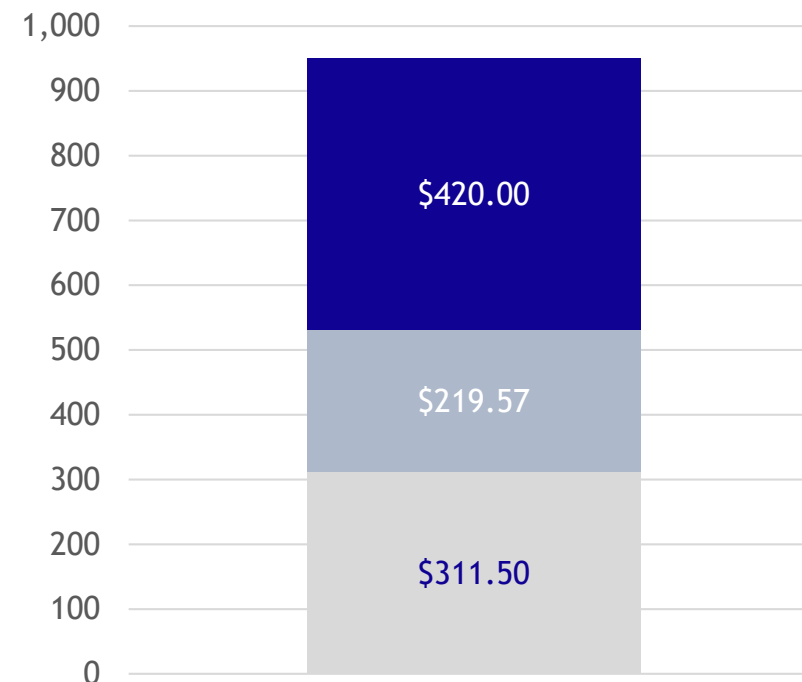




# 04. ECONOMICS

# Direct operating costs

| Cost Item  | USD per Flight Hour (FH) |
|--|--------------------------|
| ● Fuel (USD 4.00/gal) <sup>1</sup>                               | 420.00                   |
| ● Airframe Maintenance Labor <sup>2</sup> and Parts <sup>3</sup> | 219.57                   |
| ● Engine Maintenance <sup>4</sup>                                | 311.50                   |
| <b>TOTAL DOC PER FH (USD/FH)</b>                                 | <b>951.07</b>            |
| <b>TOTAL DOC PER Nautical Miles (USD/NM)<sup>5</sup></b>         | <b>2.94</b>              |



1. Fuel burn in USD/FH for a 600 nm sector.

2. Does not include interior coverage; labor rate at USD 125/hr; 5-year period; 400 FH/YR utilization, based on Embraer estimates for Labor.

3. Parts pricing reflects a Time & Material (T&M) perspective typically including labor (man hours) and raw parts costs, not accounting for service-related factors such as parts logistics, availability and procurement (i.e., freight, stock, and overhead). Figures are a reference and subject to fluctuations related to the risk factor of the operation. Figures are for budgetary purposes only and do not constitute neither a guarantee nor a commercial commitment from Embraer.

4. Pratt & Whitney Canada ESP 2021; Gold Lite with Early enrollment discount.

5. Total DOC divided by avg. speed for a 600 nm sector(324 kt for Phenom 100EV) Conklin ACE 20.2.0.





# 05.

## CUSTOMER SUPPORT





“Embraer is a consistent top performer in Pro Pilot and AIN product support surveys”  
Pro Pilot Magazine, 2018

**Embraer ranks first in:**

Cost of Parts



Technical Manuals



Technical Representative



**Embraer**

**2020 - #1 Overall**

2019 - #2 Overall

2018 - #1 Overall

2016 - #1 Overall

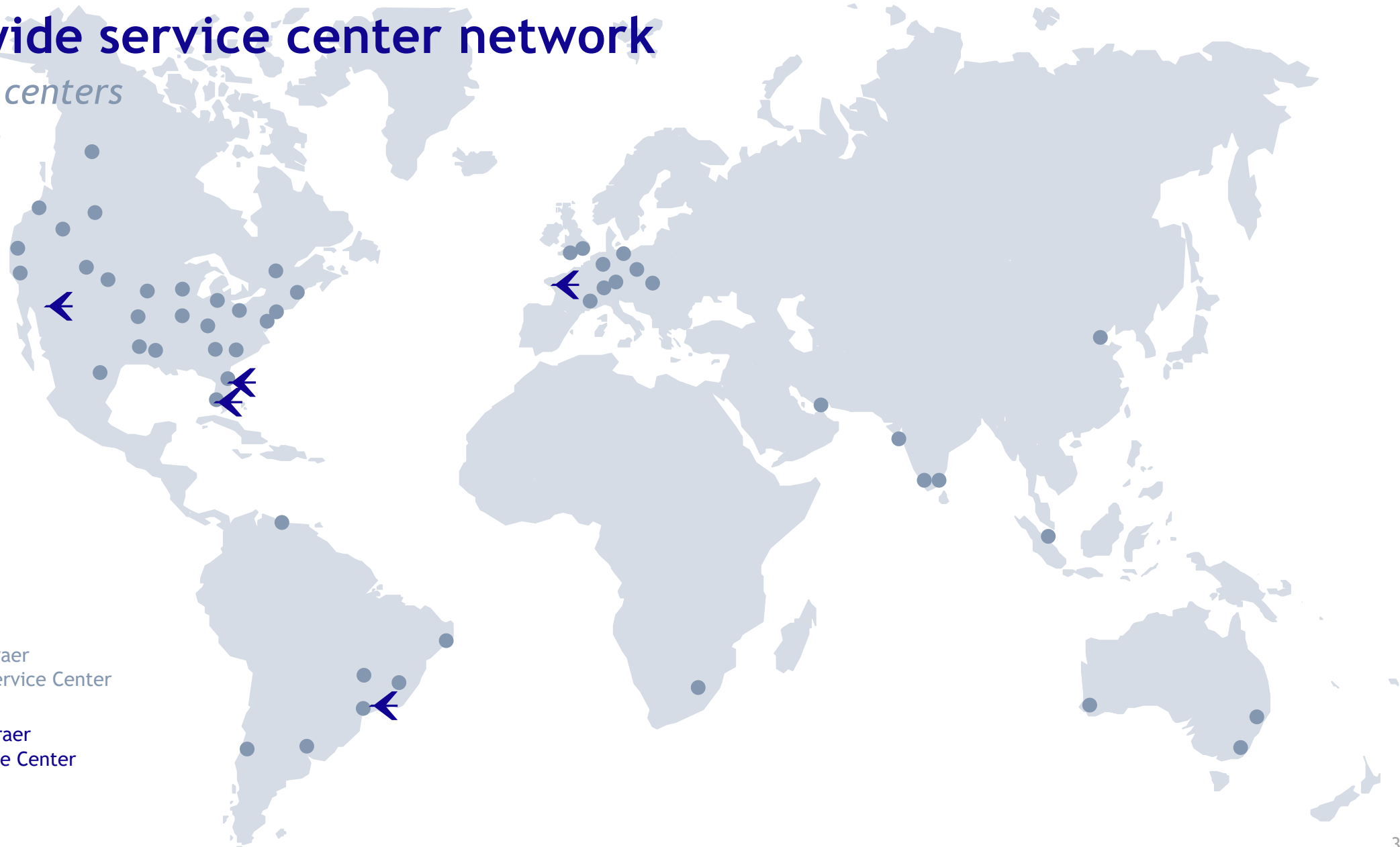
2015 - #1 Overall

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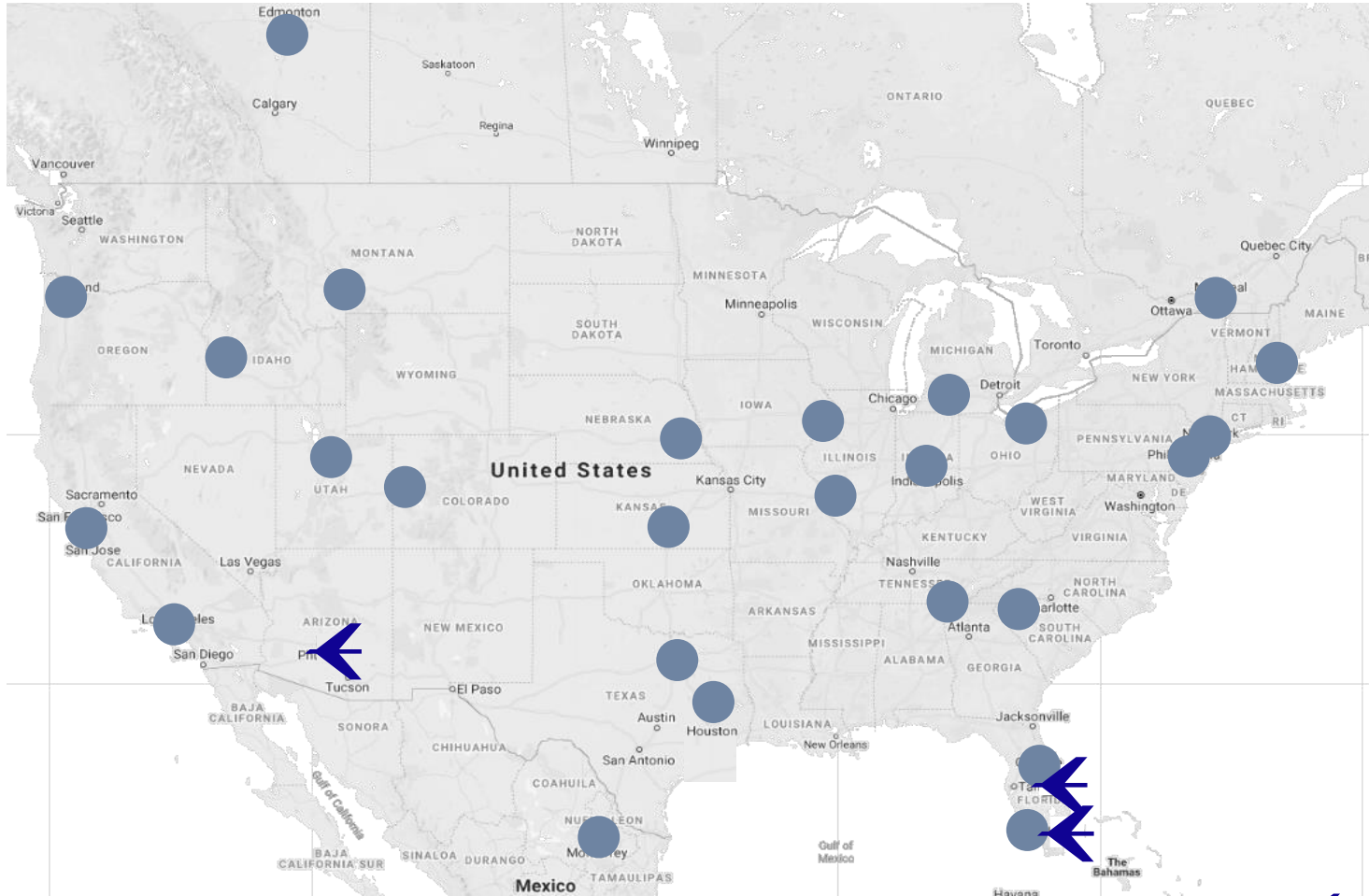
# Worldwide service center network

55 service centers  
worldwide

- EASC - Embraer  
Authorized Service Center
- ← EOSC - Embraer  
Owned Service Center



# Service center network in North America



EASC EOSC

**EMBRAER**  
AZ, MESA

**AURORA**  
JET PARTNERS  
CA, EDMONTON

**STARLINK**  
AVIATION  
CA, DORVAL

**MATHER**  
AVIATION  
CA, HAYWARD

**CLAY LACY**  
AVIATION  
CA, VAN NUYS

**WEST STAR**  
AVIATION  
CO, GRAND JUNCTION

**EMBRAER**  
FL, MELBOURNE/  
FORT LAUDERDALE

**NAPLES**  
JET CENTER  
FL, NAPLES

**constant**  
AVIATION  
FL, SANFORD

**Western Aircraft**  
A BOMBARDIER AIRCRAFT COMPANY  
ID, BOISE

**WEST STAR**  
AVIATION  
IL, EAST ALTON

**EAGLE CREEK**  
AVIATION SERVICES  
IN, INDIANAPOLIS

**ELLIOTT**  
AVIATION  
IL, MOLINE

**EXECUTIVE AIRSHARE**  
KS, WICHITA

**DUNCAN**  
AVIATION  
MI, BATTLE CREEK

**TECHNICAIR**  
Aircraft Maintenance  
MT, BOZEMAN

**transpaas**  
AVIATION  
MX, APODACA

**DUNCAN**  
AVIATION  
NE, LINCOLN

**PRO STAR**  
AVIATION  
NH, LONDONBERRY

**JEAST**  
NJ, TRENTON

**HAWTHORNE**  
GLOBAL AVIATION SERVICES  
NY, RONKONKOMA

**STEVENS**  
AVIATION  
SC, GREENVILLE

**WEST STAR**  
AVIATION  
TN, CHATTANOOGA

**MILLION AIR**  
TX, HOUSTON

**Four Points**  
Aero Services  
TX, DALLAS

**DUNCAN**  
AVIATION  
UT, PROVO

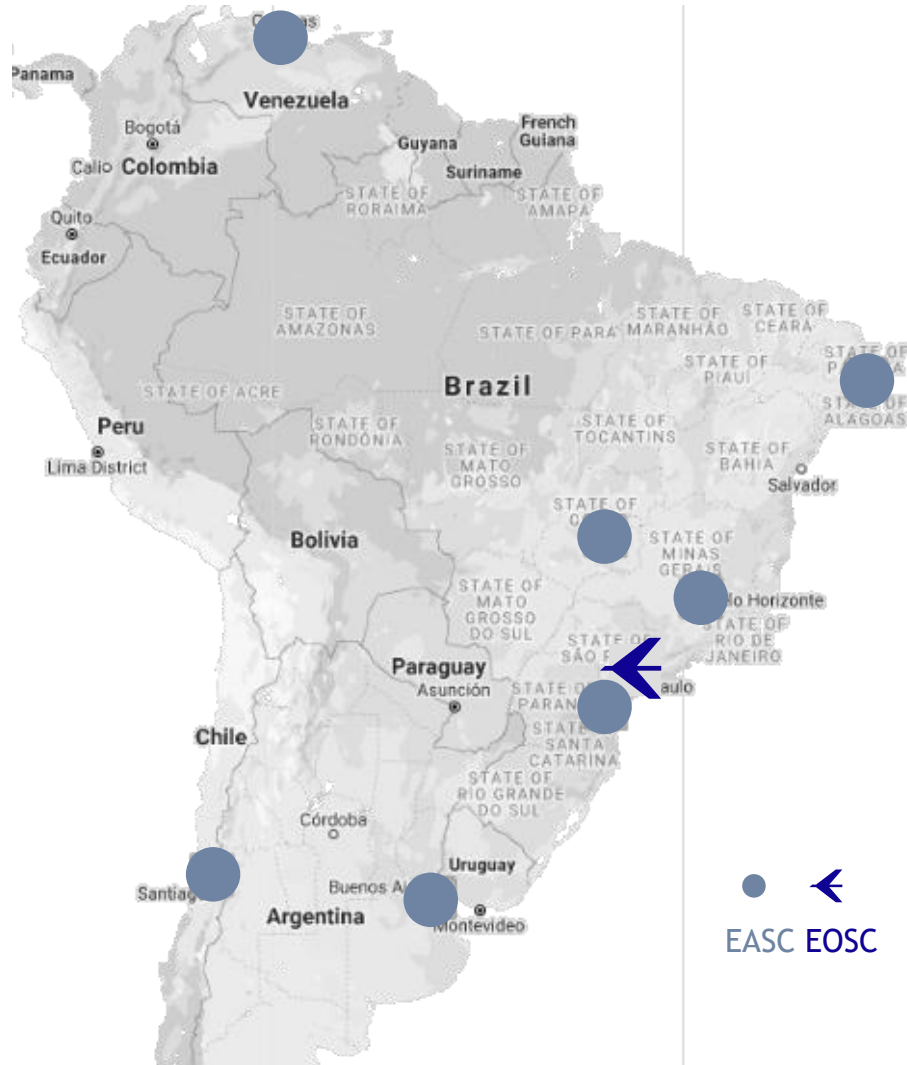
**constant**  
AVIATION  
OH, CLEVELAND

**AEROGATE**  
OR, HILLSBORO

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# Service center network in Central & South America



**← EMBRAER**  
BR, SOROCABA



BR, CURITIBA

**OPD AVIATION**  
BR, BELO HORIZONTE



BR, GOIÂNIA

**AeroBaires**  
AR, BUENOS AIRES



BR, RECIFE

**AEROTECNICA, S.A.**  
VE, CHARALLAVE

**AEROSERVICIO**  
CL, SANTIAGO

● ←  
EASC EOSC

# Service center network in Europe & Middle East and Africa



AE, DUBAI



DE, BREMEN



SA, LANSERIA



CH, ALTENRHEIN



DE, WILlich



SVK, BRATISLAVA



CZE, PRAGUE



FR, CHAMBERY



UK, BOURNEMOUTH



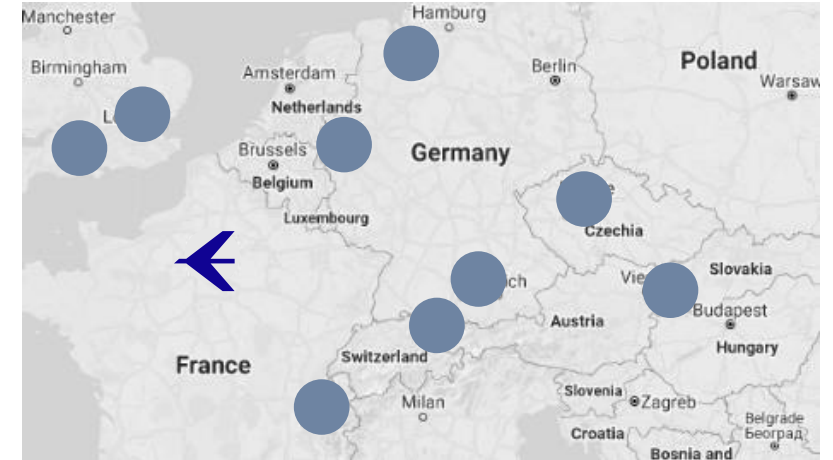
DE, AUGSBURG



FR, LE BOURGET



UK, LONDON

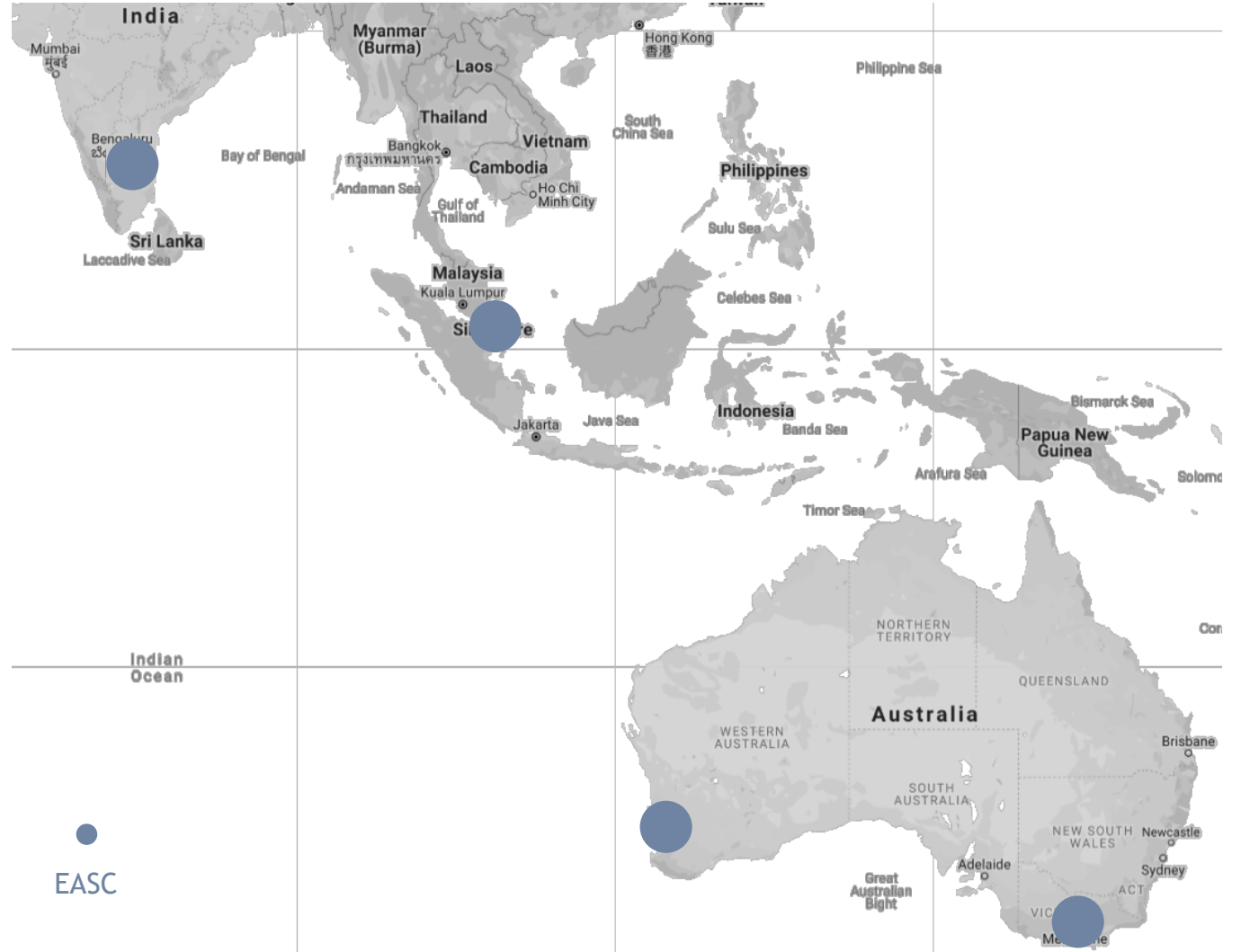


● ←  
EASC EOSC

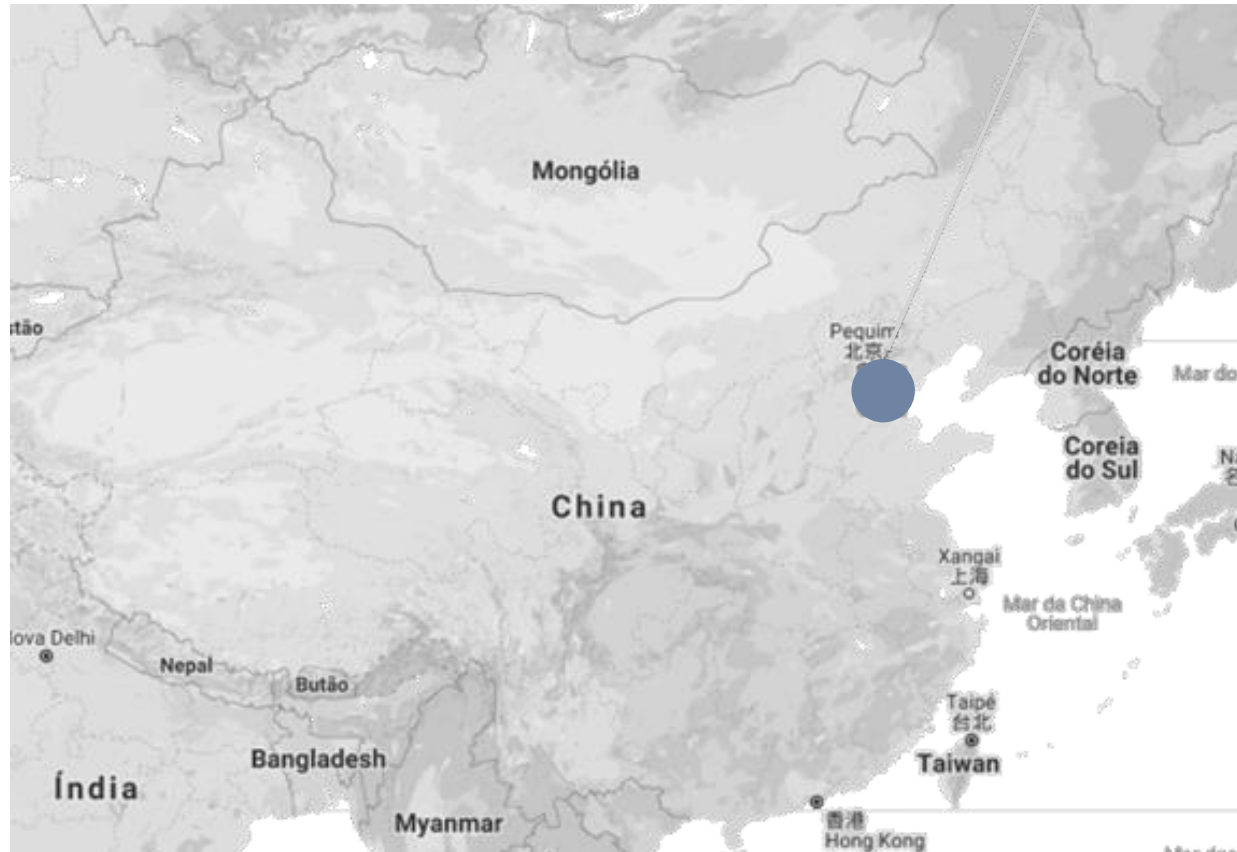
# Service center network in Asia Pacific



AU, MELBOURNE



# Service center network in China



●  
EASC



CH, TIANJIN

# Phenom training locations



## LATIN AMERICA

ECTS (Embraer CAE Training Services)  
SÃO PAULO, SP, Brazil  
Phenom 100EV FFS

## USA

ECTS (Embraer CAE Training Services)  
DALLAS, TX, USA  
Phenom 100EV FFS

## EUROPE

ECTS (Embraer CAE Training Services)  
BURGESS HILL, UK  
Phenom 100EV FFS



# Embraer T.E.A.M Concept

*Technical Experts in Aviation Maintenance*

Around-the-clock experts focused **ONLY** on **AOG** support out of:

Mesa, AZ | Fort Lauderdale, FL | Sorocaba, Brazil | soon in Le Bourget, France

Future locations under study

**T.E.A.M concept adds another expert support layer to the current AOG support from all service center network**



Request Embraer 24/7  
AOG Support via:



Contact Center  
+800-4546-32-43



Embraer  
CSS Guide



E-mail:  
[contact.center@embraer.com](mailto:contact.center@embraer.com)

# INSPECTION INTERVAL AND WARRANTY

Superior warranty coverage



## Inspection Interval:

800 FH/12 months - Best in the Industry!

## Warranty Period:

- Embraer parts - 3 years / 1,500 FH
- Engine - 3 years / 1,000 FH
- Avionics - 3 years / 1,000 FH
- Other vendor parts - 3 years / 1,000 FH
- Interior - 1 year / 600 FH
- Exterior paint - 1 year





# 06.

## ANNOUNCEMENTS





# An excellent training tool

Selected by many as the best option for turbine training

ETIHAD  
Flight College

Emirates  
Aviation College

Royal Air  
Force

Finnish Aviation  
Academy



      / embraer



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