

An Incredible Journey

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Embraer Celebrates 19 Years in China Market 巴航工业进入中国市场十九周年记

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2000年5月底，巴西航空工业公司（以下简称巴航工业）北京代表处成立，正式进军中国市场。正值改革开放20余年，中国经济正处于高速发展的阶段。世纪之交，这一年也是中国经济社会发展“九五”计划的最后一年。在国际环境趋好和国内社会经济的强势带动下，中国民航运输生产持续增长。巴航工业抓住了中国民航运输业在高速发展中的商业机会，打开中国市场并占据了较大市场份额。

叩响中国市场大门

就在代表处成立的同时，巴航工业与四川航空公司签订了5架ERJ145喷气飞机购买意向书，将当时最畅销的50座级喷气飞机带进中国市场，并把支线航空的概念广泛植入乘客心中。同年9月，首架ERJ145飞机顺利交付四川航空并开启商业运营，四川航空也成为ERJ145在亚洲市场上的启动用户。

ERJ145是川航机队中运营的第四款新机型，在经过前期磨合后，ERJ145在运营上取得了瞩目的成绩。当时，由成都双流机场与四川航空联合开通的成都-重庆“空中快巴”，依靠ERJ145高效、稳定的表现，保持了极高的正点率，平均客座率可达80%以上，成为当时的运营亮点。随后，南航、东航和海航纷纷加码，相继订购了巴航工业商用飞机。

2006年8月，海南航空集团向巴航工业订购了50架ERJ145喷气飞机和50架100座级的E190喷气飞机。这是当时中国航空历史上，由单家航空公司单次订购的最大一笔飞机订单。次年，巴航工业开始向海南航空旗下的天津航空（原大新华航空）交付首架ERJ145，这架飞机也是巴航工业向全球市场交付的第1000架ERJ喷气系列飞机。

ERJ喷气系列飞机以市场“探路者”的形象，在支线飞行的推广和新成立航空公司的养成上有着不可磨灭的功劳；同时也为后续机型、更大座级的E-喷气系列飞机打下了坚实的市场基础。

随着中国民航市场的迅速扩张，E-喷气系列飞机逐步成为市场

的主力军。2008年5月，巴航工业向中国市场交付了首架E-喷气系列飞机（E190），由海航集团旗下的天津航空运营。当时天津航空成立伊始，既有航空运输业快速增长的契机，又面临行业同质化情况严重的挑战。依靠ERJ和E-喷气系列飞机合适的座级、出色的经济性和可靠性，天航在运营初期采取差异化战略专注支线运营，在新疆、内蒙古等地区获得了较高的市场占有率，为其之后的迅速扩张奠定了基础。目前，天津航空依然运营着亚洲最大的支线机队，其机队中有52架巴航工业E-喷气系列飞机，包括32架E190和20架更大的E195。

在公务航空市场上，巴航工业同样不甘示弱。虽然进入中国市场的时间较晚，但巴航工业的关键优势在于，拥有多年支线飞机制造的成熟经验和完善的售后服务保障体系。莱格赛系列公务机是巴航工业涉足公务航空市场的首款系列机型。

2004年9月，巴航工业交付亚洲首架莱格赛600公务机，启动用户为励骏创建有限公司，正式进入中国公务航空市场。在前期市场偏好大型公务机的浪潮下，巴航工业先后交付了共计22架莱格赛600/650公务机和7架世袭1000/1000E公务机。

民营经济的高速发展催生了市场对公务机的购买需求，巴航工业敏锐地抓住了这一商机。自2010年起，巴航工业的公务机开始大量进入中国市场。巴航工业将公务机定位为“时间机器”，倡导公务机回归其本质，即作为一种高效的出行方式，提升使用者的出行效率，为使用者赢得更多时间。因此巴航工业对公务机产品的定位，不只在奢华的超大、超远程机型，而是从入门级超轻型公务机到超大型公务机，囊括了最广泛的组合，以符合多样化的市场需求。除了莱格赛650E大型及世袭1000E超大型公务机以外，巴航工业公务机产品还包括飞鸿100EV超轻型和飞鸿300E轻型、莱格赛450和莱格赛500中型，以及最新推出的领航500中型和领航600超中型公务机。

2013年6月，巴航工业向鄂尔多斯通航交付了中国首架飞鸿



2000年5月底，巴西航空工业公司北京代表处正式成立

300轻型公务机，将这款连续7年蝉联全球轻型公务机交付量榜首的机型引入中国市场，也标志着巴航工业公务机产品全面，兼具经济性、灵活性和个性化的优势得到市场认可。

高科技领域的“南南合作”典范

巴航工业进入中国市场后，除了为市场提供卓越的产品和售后服务外，也在积极谋求更深层次的合作与发展。2003年1月，巴航工业携手中国航空工业集团公司及其下属的哈尔滨飞机工业有限公司，共同投资组建了哈尔滨安博威飞机工业有限公司（以下简称“哈尔滨安博威”），在中国本土生产50座级的ERJ145喷气飞机。合资公司的业务范围包括飞机材料和成品采购、总装生产、试飞以及交付等。该项目总投资为4000万美元，注册资本2500万美元，巴中双方分别占注册资本的51%和49%。

公司从年初挂牌到工装夹具的安装调试、技术人员培训，到开始生产，再到第一架飞机的下线并于同日首飞，只用了不到一年的时间，这种速度创造了中国民用航空制造史的记录。更值得一提的是，这架真正意义上在中国本土组装生产的支线喷气飞机，在生产组织、技术管理和质量控制上全部按照巴航工业成熟的规则进行，其品质与在巴西生产的同型号机型完全一致。2003年12月，哈尔滨安



2000年9月，巴西航空工业公司向四川航空公司交付亚洲市场首架ERJ145商用飞机

博威生产的首架国产ERJ145喷气飞机在众人见证之下腾空而起，标志着这一举世瞩目的合作迈出了成功的第一步。根据协议，中巴双方的合作总共分为三步：即从整机生产到大部件转包生产，再到部件转包生产。在短短几年的时间里，合资公司迅速发展壮大，由其生产交付的飞机签派可靠性和航班正点率均超过全球机队的平均水平。

但合资公司的意义远不止于此。ERJ145飞机项目是中国民机制造史上首次对现代民机全球供应链体系、质量管理体系和整机制造体系的完整实践。通过合资公司的形式，哈尔滨安博威得以在很短的时间内掌握飞机制造过程中，通常需要数十年实践积累才能获得的复杂技术。而且，作为当时国内第一家真正意义上的向航空公司提供支线飞机的制造商，安博威真切地立足于市场、立足于客户需求，以一种“利益贡献风险共担”的创新模式，推动着中国航空制造业的发展与进步。

此外，合资公司投入大量资金和精力为本土员工制订了严格科学的培训计划，迅速提升了中国员工的技术水平。在飞机制造这样一个复杂而精密的高科技领域，对员工的素质和技术要求极高。合



2002年12月2日，巴西航空工业公司与中国航空工业第二集团公司所属的哈尔滨飞机工业集团和哈飞航空工业股份有限公司签订合资合同，组建哈尔滨安博威飞机工业有限公司，其业务范围包括在中国进行ERJ145喷气飞机的整机生产、材料和成品采购，以及试飞交付等

资生产初期，巴航工业从总部派遣了经验丰富的专业人员进行现场指导和技术支援，目的就是在装配技术、质量管理等方面对标巴西总部，把整套先进的管理体系、生产经验都引进中国，彻底实现技术转让和国产化。短短几年时间内，在哈尔滨安博威的工厂里，目之能及皆为中国员工，大部分飞机装配工作都是由他们来完成的，基本达到了飞机装配的本土化。

合资公司的努力也得到了市场和专业机构的肯定。2006年，哈尔滨安博威获得AS9100B证书，成为亚洲首家通过美国NQA公司认证的商用飞机制造商；同时成为国际航空质量组织（IAQG）成员，被列入该组织的网络航空供应信息系统（OASIS）。

2012年，合资公司发展步入了新的阶段。为扩展中巴双方近10载的战略合作关系并顺应市场潮流，双方决定利用合资公司的既有设施、财务以及人力资源，进行莱格赛600/650喷气公务机的总装生产。这项决定基于中国当时方兴未艾的公务航空市场发展需求，也代表了双方为巩固合作成果而做出的不懈努力。

哈尔滨安博威向中国市场交付了共计41架ERJ145喷气飞机和5架莱格赛650公务机，在安博威工厂组装生产的ERJ145和



2004年6月28日，哈尔滨安博威飞机工业有限公司向其首家用户——中国南方航空公司交付首批两架ERJ145喷气飞机

莱格赛650与在巴西本土组装的同机型质量标准完全一致。中巴双方的这次合作也被誉为在高科技领域“南南合作”的典范，意义十分重大。

2019年，是中巴建交45周年。作为东西半球各自最大的发展中国家，中巴双方不仅有更多的共识，也承担着更大的历史使命。进入21世纪以来，两国双边经贸及科技合作都上升到了前所未有的高度。巴航工业将继续做好两国在航空科技领域的纽带与桥梁，巩固这来之不易的成果，并将全力把握契机，进一步实现互惠共赢的跨国战略合作。

推动支线发展 助力“一带一路”

近20年间，中国航空市场风起云涌，民航运输业迅速扩张。2018年，中国民航旅客运输量再创新高，搭乘飞机出行的旅客人数突破6亿人次，同比增长10.9%。在这背后，是民航基础设施和航线网络的日臻完善，是基本航空服务计划试点的持续推进，也是民航局对符合运行条件的支线航空公司发展的不断鼓励与支持。2018年，国内支线航班总量同比增长18.6%，远高于行业平均水平。

此间，巴航工业也紧跟中国民航的发展步伐，以超过70%的



2004年9月，巴西航空工业公司交付亚洲首架莱格赛600公务机，正式进入中国公务航空市场

市场占有率持续领跑中国支线航空市场。截至目前，天津航空、中国南方航空、多彩贵州航空、北部湾航空、河北航空、乌鲁木齐航空六家航空公司运营共计105架E-喷气系列飞机。巴航工业商用飞机（含E-系列和ERJ系列）年运送旅客数量达1700万人次，执飞的450条航线联通了国内外130座城市，每年执飞航班18万个，为促进中国支线航空的发展、提高地区通达性和大众出行效率做出了重要贡献。

截至2019年第一季度，巴航工业在中国市场上共获得201架确认订单；飞机交付量为190架，包括156架商用飞机和34架公务机。中国不仅是巴航工业第二大E-喷气系列飞机市场，更是全球最大的E190机型市场。E-喷气系列飞机不仅活跃于东部中小城市，在新疆、内蒙古等地人稀的西北部市场上也有着优异的表现。南航、天航曾用其机队中的E-喷气系列飞机布局新疆市场，依靠该系列机型合适的尺寸以及在执飞“瘦长航线”上的独特优势，抢占市场先机；开辟新航线深入疆内，不仅方便了当地旅客的出行往来，还为“一带一路”倡议开辟了便捷的空中通道。



2011年，巴西航空工业公司向中国南方航空公司交付全球第800架E-喷气系列飞机

2018年11月，巴航工业最新商用飞机产品E-Jets E2系列中的首款机型E190-E2平稳地降落于拉萨贡嘎国际机场，实现了该座级级别机型的首次高原试飞。性能上的优化赋予E2系列飞机更多目的地选择，尤其是高温高原地区，E2将打破中小城市直飞高原的瓶颈，并架起高原机场之间的空中桥梁。而经济性的提升和座位数的增加，使该系列机型拥有超越竞争机型的成本优势，可为航空公司赢得更大的降价空间，让支线航空以更低廉的票价惠及乘客，让更多人享受快捷便利的航空运输服务。

结语

不积跬步，无以至千里；不积小流，无以成江海。在过去的19年里，巴航工业秉持初心，实践了初入中国市场时的诺言：以卓越的产品和服务助力中国支线航空发展，进而为市场创造更多价值、为提高地区通达性，真正实现航空惠民的目标做出贡献。一个个里程碑的树立、一次次跨越艰难险阻，巴航工业人在这19年中也收获了更多自信和勇气，未来必将更加坚定、昂扬地迎接新征程上的机遇和挑战！



2011年4月12日，巴西航空工业公司与中国航空工业集团达成中巴两国在公务航空领域开展工业合作的框架协议，双方将利用其合资公司哈尔滨安博威的既有基础设施、财务及人力资源进行莱格赛600和莱格赛650喷气公务机的总装生产

Embraer entered China market and established its Beijing representative office at the end of May 2000. It was a time when China's economy was developing rapidly after twenty years of reform and opening up. It was also the last year of the "Ninth Five-Year Plan" of China's social and economic development. Under ever-increasing favorable international circumstances and a strengthening domestic economy, Chinese civil aviation grew.

Embraer saw the tremendous potential for regional aircraft and tapped into the market. Now, 19 years later, it has a commanding share of the country's regional jet fleet.

Tap into China Market

Upon the establishment of the Beijing office, Embraer signed a contract for 5 ERJ145s with Sichuan Airlines. It was the world's best-selling 50-seat jet at the time and it introduced the regional aviation concept to both airlines and passengers. In September 2000, the first ERJ145 was delivered to Sichuan Airlines, the launch customer for the aircraft type in Asia.

The ERJ145, the fourth aircraft type in the Sichuan Airlines fleet, made some notable achievements. The airline partnered with Chengdu Airport to operate the Chengdu-Chongqing route, also known as the "Air Express". Thanks to the ERJ145's



2013年，哈尔滨安博威飞机工业有限公司生产的首架莱格赛650公务机首飞

excellent efficiency, reliability and punctuality, the airplanes flew with nearly 80% passenger loads. Soon thereafter, China Southern Airlines, China Eastern Airlines and Hainan Airlines ordered commercial aircraft from Embraer.

In August 2006, Hainan Airlines ordered 50 ERJ145s and 50 E190 E-Jets. At that time, it was the largest single order from an airline in Chinese aviation history. The following year, Embraer delivered the first ERJ145 to Tianjin Airlines (formerly Grand China Air). It was also the 1,000th worldwide ERJ145 delivery.

The ERJ series was a "pathfinder" in the market. It was instrumental in promoting regional flights and developing new airlines. It also laid the foundation for Embraer's first-generation E-Jets.

With the rapid expansion of Chinese civil aviation, E-Jets rose to dominate the market. In May 2008, Embraer delivered its first E-Jet, an E190, to Tianjin Airlines. At the start, Tianjin Airlines avoided direct competition with major airlines by positioning itself as a regional airline. It focused on operating E-Jets with their appropriate size and outstanding economic efficiency, and opened several regional routes. The carrier gradually achieved a high market share in Inner Mongolia and



2014年6月，哈尔滨安博威向工银金融租赁交付其组装的首架莱格赛650公务机

Xinjiang. Today, Tianjin Airlines still has the largest regional fleet in Asia with 52 E-Jets, including 32 E190s and 20 E195s.

Embraer also made great strides in business aviation. Although a late-comer to the market, Embraer had years of experience manufacturing regional aircraft and had a solid customer service and support network. Embraer started on its way in China's business aviation market with the Legacy series of executive jets.

In September 2004, Embraer delivered its first business jet, a Legacy 600, to its launch customer in Asia. In response to a preference for large and long-range business jets at that time, Embraer delivered 22 Legacy 600/650 and 7 Lineage 1000/1000E airplanes to Chinese customers.

The quickly-developing economy fueled demand for more business jets. Embraer seized the opportunity. It positioned its business jets as "time machines" and more than just symbols of wealth. A business aircraft, the company said, should be seen as a practical and responsive method of transportation that saves time. Embraer's Executive Jet portfolio is among the



2016年12月，巴西航空工业公司向天津航空公司交付全球第1300架E-喷气系列飞机

broadest in the market that satisfies a wide range of needs. It consists of the entry-level Phenom 100EV and the light Phenom 300E jets, the medium cabin Legacy 450 and Legacy 500, the midsize Praetor 500 and the super-midsize Praetor 600, the large Legacy 650E, and the ultra-large Lineage 1000E.

In June 2013, Embraer delivered the best-selling Phenom 300 light business jet to Erdos General Aviation, the launch customer of the type in China. The delivery signaled Embraer's role as a well-established manufacturer of a comprehensive range of business jets with excellent economics, efficiency, flexibility and customized sizes.

Example of South-South Cooperation

When it entered the China market, Embraer sought deeper cooperation and development with partners as well as simply providing excellent products and after-sales services. In January 2003, the company signed a cooperative agreement with the Harbin Aircraft Industry Group., Ltd. (HAIG) and with a subsidiary of the China Aviation Industry Corporation II (AVIC II) to set up a joint venture - the Harbin Embraer Aircraft Industry Co, Ltd. (HEAI). HEAI would produce the ERJ145.

HEAI was inaugurated in January 2003. Within a year, the first ERJ145 rolled off the assembly line and completed its maiden flight. It was a new assembly-to-flight speed record in Chinese civil aviation manufacturing history. The ERJ145 was produced locally using Embraer's production organization, technical management and quality control experience. The airplanes had exactly the same quality excellence as the ERJ145s produced in Brazil.

In December that year, the first ERJ145 manufactured by HEAI was delivered, a true reflection of cooperative success. HEAI expanded rapidly over the next few years. The ERJ145s gave customers high levels of dispatch reliability, superior performance and low operating costs.

Yet the significance of HEAI was much more than that. The ERJ145 project was the first full practice of the global supply chain, quality management system, and complete aircraft manufacturing system in China's history. Through the joint venture, HEAI mastered the complex task of manufacturing a high-technology aircraft in a very short period of time, something that usually takes decades of practice. Additionally, HEAI had become an influential force in advancing China's

aircraft manufacturing industry in a "risk-contribution-benefit sharing" way.

Moreover, HEAI developed a rigorous scientific training program for local staff to quickly improve their technical skills. In the beginning, Embraer assigned experienced professionals from headquarters to provide on-site guidance and technical support, aiming to bring advanced management and production experience to China. In just a few years, the majority of the employees at HEAI's factory were Chinese and who completed most of the assembly work. The company had achieved its initial goal of localization.

HEAI's efforts were also recognized by the market and professional organizations. In 2006, HEAI obtained its AS9100B certificate making it Asia's first commercial aircraft manufacturer certified by NQA, the global certification body. HEAI also became a member of the International Aerospace Quality Group (IAQG), and was added to the Online Aerospace Supplier Information System (OASIS).

In June 2012, HEAI embarked on a new phase of development. In response to demand from China's flourishing



2017年，巴西航空工业公司成功交付在华运营的第100架E-喷气系列飞机

executive aviation market, Embraer and AVIC reached a consensus to build Embraer's Legacy 600/650 executive jets using HEAI's infrastructure, financial resources and workforce.

HEAI delivered 41 ERJ145s and 5 Legacy 650s to the Chinese customers. The cooperation between Embraer and AVIC HAIG made HEAI a great success. The joint venture is often referred to as "another model of South-South cooperation" by both Chinese and Brazilian leaders.

2019 is the 45th anniversary of the establishment of diplomatic relations between China and Brazil. As the largest developing countries in the eastern and western hemispheres, China and Brazil have a lot in common. Since the beginning of the 21st century, the economic, scientific and technological cooperation between the two countries has reached a new level. Embraer will continue to be a bridge between both countries as it looks for more opportunities for collaboration.

Promoting Regional Development and Powering the Belt and Road Initiative

Over the past twenty years, Chinese aviation has changed dramatically. Civil aviation, in particular, expanded rapidly. Looking back on 2018, the industry hit a new high. According



2018年，巴西航空工业公司最新商用飞机产品E-Jets E2系列中的首款机型E190-E2平稳降落于拉萨机场，实现了该座级级别机型的首次高原试飞

to the latest data from the CAAC, 610 million passengers travelled by air, a 10.9% year-over-year increase. The growth is largely due to the expansion of infrastructure and route networks. With the implementation of the basic air service plan, the CAAC explicitly encourages new regional airlines to expand their networks. In 2018, the number of regional flights in China increased by 18.6% over 2017, far higher than the industry average.

Embraer has kept up to the fast pace of the industry. To date, the company's E-Jets and ERJs, some 70% of the country's regional aircraft fleet, transport over 17 million passengers per year on some 450 routes that connect 130 cities in China. Those airplanes continue to improve the accessibility and efficiency of public air travel.

As of the first quarter of 2019, the company has logged 201 firm orders from Chinese customers, 190 of which have been

delivered, including 156 commercial jets and 34 executive jets. China is not only the second largest market of E-Jets, but also the world's largest market for the E190. Embraer's E-Jets are often regarded as the backbone of regional operations in Northwestern China, areas like Xinjiang and Inner Mongolia. With an ideal design for small-capacity long-distance flights, Embraer E-Jets perfectly match the market requirements in these regions. E-Jets are playing an even more important role in helping airlines open new routes and expand their networks, all the while maintaining profitability. Just as E-Jets bring benefits to passengers, the airplanes are also building a new gateway to China's west under the Belt and Road Initiative.

In November 2018, the newest generation Embraer jet -the E190-E2- landed at Lhasa's Gongga Airport. It was the first aircraft in its class to complete a test flight to such a high-elevation airfield. The E2's excellent hot-and-high performance and seat capacity make it the ideal airplane to connect high-elevation destinations at low operating costs. The E2 is able to fly nonstop from medium-sized and small cities and build new links between those difficult-to-access regions.

Small Steps Take us to Distant Places

Along the way, Embraer has remained committed to the long-term development of aviation in China. The company's excellent products and services have helped it become one of the leading aircraft manufacturers in the industry. Air travel is now more accessible and affordable for everyone. Over the last nineteen years, the company has reached many milestones and overcome obstacles.

It is the passion for the industry and the pursuit of excellence that has contributed to Embraer's success in China. In the future, Embraer will be more confident to seize new opportunities and rise to challenges as it continues its journey.

