



The new technology Pratt & Whitney Canada PW100 turboprop engine series has been selected to power four new-generation regional transport aircraft.

electronic components for which there had been no Canadian source prior to 1939.

Today Canada's aerospace industry is composed of more than 125 companies which supply the world aerospace industry and airlines with state-of-the-art and, in some cases, unique aircraft, aeroengines, components, systems and services which have gained an international reputation for high quality and reliability.

### Rapid growth

The Canadian aerospace industry has enjoyed tremendous growth over the past few years. In the past six years, industry sales have increased by more than 300 per cent, climbing from \$906 million in 1976 to a record \$3 billion in 1982. Industry forecasts indicate sales will more than double again by 1986, reaching an estimated \$7 billion.

Employment in the industry now exceeds 40 000 people and the industry estimates employment will increase over the next few years to more than 51 000 in 1986.

Over the past five years, approximately 80 per cent of the industry's total sales have been in the highly-competitive export market. In 1982, export sales by the Canadian aerospace industry amounted to more than \$2.4 billion.

Since 1947, nearly 4 000 Canadian STOL (short take-off and landing) transport aircraft, utility amphibians and business jets have been produced and sold to more than 100 countries. These aircraft include the de Havilland *Beaver*, *Twin*

*Otter*, *Buffalo*, *Caribou* and *DASH 7*, and Canadair's *CL-215* multi-purpose amphibian aircraft and the *Challenger*.

In the same period, some 3 700 military aircraft such as the *F-86 Sabre*, *CF-104 Starfighter* and *CF-5 Freedom Fighter* have been produced under licence in Canada. One of the outstandingly successful military aircraft designed and produced in Canada in the 1950s was the *Avro CF-100 Canuck*. About 800 *CF-100s* were manufactured for use by the Canadian and Belgian Air Forces.

Although presently ranked fifth in aerospace industries in the free world, after the United States, Britain, France and West Germany, Canada has a strong aerospace industry which is based on a diversified and specialized mix of products at the forefront of technology.

### Strong research base

Proportionate to its size and number of employees, the industry is one of Canada's two largest investors in research and development, investing an average of 10 per cent of its revenues.

From this strong base, the industry has marketed outstanding products such as the *Twin Otter* and *DASH 7*, the *PT6* family of engines, a wide array of navigation instruments, the *Challenger* business jet, the family of *Anik* satellites, the Canadarm remote manipulator system developed by Spar Aerospace Limited and the National Research Council of Canada for use by NASA on the space shuttle, and many other systems and components which have found ready acceptance

throughout the world.

Canadian companies rank among the foremost designers and manufacturers of small gas turbine engines for transport aircraft, helicopter and hovercraft; *STOL* and computer transport aircraft; high-performance, long-range business jets; unmanned airborne surveillance systems, flight simulators and sophisticated navigation systems.

Some of the new initiatives currently under development in the industry include:

- the Pratt & Whitney Canada *PW100*, an advanced-technology, fuel-efficient turboprop engine designed to power regional transport and business aircraft to be introduced in the mid-1980s. The *PW100* has already been selected to power such aircraft as the de Havilland *DASH 8*, the Embraer *EMB-120 Brasilia* and the Aérospatiale/Aeritalia *ATR-42*;

- the de Havilland *DASH 8*, Canada's newest transport design intended to fill the void in the 30-40 seat short-haul market. The 36-passenger *DASH 8* is scheduled to make its first test flight in early June at about the same time as the 1983 Paris Air Show;

- the Litton Systems Canada new generation inertial navigation systems in which the ring laser gyroscope replaces the spinning wheel gyroscope used in older equipment;

- Garrett Manufacturing's peripheral vision horizon device which provides for



The Garrett Manufacturing Limited personal locator beacon. This light-weight emergency beacon/transceiver provides an emergency homing signal as well as two-way voice communications with search aircraft.