# Pegasus

## Power for the Harrier

The Pegasus engine powers all variants of the successful Harrier aircraft. This unique engine employs a simple thrust vectoring system that uses four swivelling nozzles, giving the Harrier thrust for both forward propulsion and lift. The short take off and vertical landing (STOVL) capability enabled by the Pegasus eliminates the need for conventional runways and is a major advantage at sea, where Harriers can operate from a wide variety of ships.

The Harrier is operated by the UK Royal Air Force and Royal Navy, Spanish Navy, Indian Navy, Italian Navy, Thai Navy, and the US Marine Corps. Over 1,200 engines have been produced with almost 2 million flying hours accumulted to date. Rolls-Royce expertise in STOVL technology is unrivalled and the Pegasus engine remains the only operational STOVL engine worldwide.

The latest and most powerful version of the Pegasus is the 11-61 variant which provides up to 15 percent more thrust at high ambient temperatures, plus the benefits of reduced maintenance and twice the hot-end life of earlier versions. These changes enhance the combat effectiveness of the Harrier while reducing the overall cost of ownership.

This latest Pegasus 11-61 has also enabled a highly effective radar equipped version of the Harrier II to be introduced. This aircraft, the Harrier II+, combines the proven advantages of day and night STOVL operations with an advanced radar system and beyond-visual-range missiles.

- Powers all versions of the Harrier multi-role military aircraft
- Thrust range up to 23,800lbf
- The world's only operational STOVL engine
- Over 1,200 engines produced and almost 2 million flying hours accumulated

### Engine Specification

| Engine | **Pegasus 11-61/ -408 / Mk107** | **Pegasus 11-21 family** |
|---|---|---|
| Thrust (lbf) | 23,800 | 22,000 |
| Bypass ratio | 1.2 | 1.4 |
| Pressure ratio | 16.3 | 15.3 |
| Length (in) | 137 | 137 |
| Diameter (in) | 48 | 48 |
| Basic weight (lb) | 3,960 | 3,960 |
| Compressor | 3LP, 8HP | 3LP, 8HP |
| Turbine | 2HP, 2LP | 2HP, 2LP |
| Applications | BAE SYSTEMS Harrier, Sea Harrier | |
| | Boeing / BAE SYSTEMS Harrier II, Harrier II+, AV-8B | |

Rolls-Royce

PO Box 3, Filton,
Bristol, BS34 7QE England
Tel: +44 (0) 117 979 1234
Fax: +44 (0) 117 979 7575

PO Box 420, Indianapolis,
Indiana, 46206-0420 USA
Tel: + 1 317 230 2000
Fax: + 1 317 230 5100