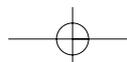
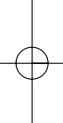
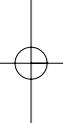
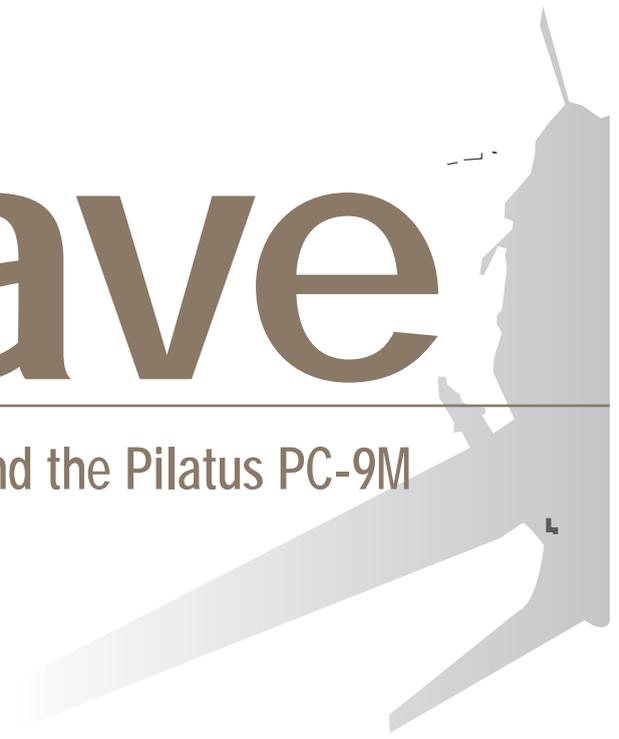
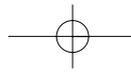


# Brave

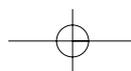
The Irish Air Corps and the Pilatus PC-9M





# new WORLD

SIGNAL reports from Baldonnel on the arrival of the new Pilatus PC-9M training aircraft and what they mean for the Air Corps.



On the 21st April 2004, the Air Corps accepted delivery of three of eight new training aircraft – the Swiss-made Pilatus PC-9M. A further aircraft was delivered on 18th May 2004. The remainder will be delivered in June.

The PC-9M training aircraft are the first military aircraft acquired by the Air Corps since the publication of the White Paper on Defence in February 2000. The Air Corps has always trained its own pilot officers, and since the mid-1970s their flying training programme utilised two aircraft: the SF 260 WE Marchetti (piston-engine) and the CM 170 Fouga Magister (jet) training aircraft. The Fouga Magisters were withdrawn from service between 1997 and 1999 on age grounds, thereby leaving the Marchetti fleet to carry the brunt of the training. As a result, students were streamed onto the Beechcraft Kingair 200 and the Gazelle helicopter in order to complete particular aspects of the course. However, it was not possible to deliver the required level of advanced training on any of those aircraft.

### Selection of the type

As with all government tenders, cost-effectiveness was a major consideration in the selection of the future training aircraft. A number of concepts were contemplated – ‘all-through’ training on a jet training aircraft (which was a multi-aircraft solution

similar to that used previously in the Air Corps), or ‘all-through’ training on a propeller driven aircraft (turbo-prop). The most cost-effective option for delivering flying training was determined to be the conduct of the full ‘wings course’ on a single turbo-prop training aircraft type. On this proposal, both the Fouga Magisters and Marchetti aircraft would be replaced by the turbo-prop aircraft, thereby replacing the original training fleet of six Fouga Magisters and ten Marchettis with eight new aircraft. The three main contenders in the competition were the Embraer Super Tucano, the Raytheon T-6 Texan and the Pilatus PC-9M – all two-seater turbo-prop training aircraft with formidable reputations and in service worldwide.

When the first three aircraft from the fleet of eight arrived over Casement Aerodrome in spectacular fashion on the 21st of April it became apparent that, in training terms, the 21st century had arrived.

The Commanding Officer of the Flying Training School, Commandant Rory O’Connor, is highly satisfied as he looks out his window at the new acquisitions, which

sit quietly on the apron outside as the ground crews ready them for another flying detail. “We’ve had difficult times in the Air Corps” he says, as one of the Pilatus PC-9M’s whirrs into life, “but these aircraft are going to have a very positive impact on morale in our organisation.” On the day that the first three PC-9M’s arrived in Baldonnel, Defence Minister Michael Smith faced an unusually friendly press from the cockpit of one of the new aircraft. As the cameras flashed, Minister Smith told a television reporter that the Air Corps now had aircraft that were among the very best in the world. For once, this politician was not exaggerating. “Obviously it’s a massive boost for the organisation in terms of flight training and indeed our operational capability. The PC-9M means we have got back to where we want to be in terms of military aviation.”

Rory O’Connor also says that the capability of the aircraft to deliver complete military flying training will represent a major confidence boost for flying personnel within the Corps. It is also recognised that access to modern ‘state of the art’ equipment will be a significant factor in



The Pilatus PC-9M during its aerobatic display over Baldonnel Aerodrome.

stemming the flow of pilots from the Air Corps to the commercial sector.

### Pilot Officer Training Strategy

Training is directly linked to the mission; therefore flying training in the Air Corps maintains a military aim, standard and ethos, as its basis. The training strategy of the Air Corps is therefore to train all pilot officers to military aviation standard sufficient to meet the multi-role needs deriving from the nature of Air Corps' current and potential aviation tasks, as well as to provide a 'launch-pad' for future operational capability to enable delivery of military responses to any change in the security environment. This policy is in line with the Government policy as enunciated in the White Paper on Defence, 2000.

The acquisition of the PC-9M training aircraft means that from the beginning of their flying careers pilot officers will now be introduced to the systems and cockpit instrumentation that they will meet later in their careers in other Air Corps' aircraft and helicopters such as the Learjet,

Gulfstream, CASA 235 and the newer helicopters.

### The Pilatus PC-9M

The PC-9M is a superb multi-task aviation platform, perfect for taking students through elementary and basic training and in addition will deliver the capability to carry out most of the advanced programme. With over 240 aircraft sold to 13 customers, including 12 military customers, the PC-9M is well established internationally as the 'basic to advanced' pilot trainer, combining jet-type characteristics at the advanced stage with aircraft handling characteristics suitable for the ab initio student at much less than jet-type costs. The PC-9M confers other benefits over the fleet its replacing, such as reduced training and support costs associated with a single aircraft fleet; very reliable engine technology, better fuel economy and endurance, better exploitation

of Irish weather in comparison to its predecessors, higher ceiling and on-board oxygen, and a range of performance characteristics, from low landing speed necessary in the elementary phase, to jet-type handling for the advanced stage.

There were three major competitors for the €60 million contract which brought the PC-9M's to Dublin, namely Embraer's Super Tucano, Raytheon's Texan T-6 and the eventual purchase, the Pilatus' PC-9M. "It was a thorough and smooth procurement process really. All three contenders were thoroughly assessed and tested by the Air Corps for our own particular requirements. The Pilatus is an excellent aircraft, and it fit the bill for what we want to achieve here and to date it has exceeded our expectations, particularly for training our cadets from a 'zero hour' training level. It gives us a complete package to deliver our training, from basic flying skills to more advanced tactical military elements

**The PC-9 was the aircraft which convinced training commands of the turboprop advantages for a training aircraft**

## The PC-9 will allow us to put the Marchetti era behind us

including weapons systems," explains Comdt Rory O'Connor. The PC-9M is configured with 70mm Folding Fin Aerial Rockets (FFAR), holding seven per pod, with one on each wing. Two 0.5-inch FN machine guns can also be deployed on the aircraft. "The Marchetti was a very light strike aircraft and it was never possible to deploy rockets and cannon upon them. This is yet another significant progression level that has been made possible with the PC-9M." Comdt O'Connor makes the point that it is vital that the Air Corps maintains its weapons training capability for any future contingencies.

### Air Corps Perspective

While it is not intended that the PC-9M will fulfil the fast-jet operational role, it does provide a level of training that will bring a successful pilot's skill levels to the highest possible on a turboprop platform according to Comdt O'Connor. "In terms of the skills base, the pilots who successfully train on the PC-9M will be at a comparable level to any pilot in the world in relative terms of flight training. Of course we don't have a fast-jet capability, but successful training on the PC-9M would pave the way for any pilot to successfully fly a jet, should such an operational requirement arise in the future."

A new development in pilot training is the integration of the PC-9M Synthetic Training Device (STD) simulator training into the syllabus. From the outset the requirements for the PC-9M STD were



Air Corps Flight School O/C Comdt Rory O'Connor with Defence Minister Michael Smith

defined by close co-operation with Pilatus and the Air Corps. Students will "fly" a number of hours on the STD before commencing instruction in the actual aircraft. It includes a detailed replica of the original PC-9M cockpit and will have a cockpit offering almost all-round visibility of 220°. The combination of STD and aircraft gives the Air Corps an extremely strong training basis in flight instruction.

The arrival of new aircraft prompted the revision of the Theoretical Knowledge Syllabus, which, while essentially military in orientation, has "adopted and adapted" best civilian practises. The overall package - including command, leadership and management studies, will place the newly commissioned pilot officer on a par with any of his or her international contemporaries.

"What we used to do on the Fouga and the Marchetti, we can now do on the PC-9M," adds Comdt O'Connor. The PC-9M will perform a similar function to the Marchetti but it can perform its functions faster and at a higher altitude. "We will really notice the difference with the PC-9M when doing training between 150-200 hours when we can do air combat manoeuvres, tactical training and air gunnery. The PC-9M will allow us to put the Marchetti era behind us."

There is a new sense of enthusiasm in the Flying School and Lieutenant Matt Quinlan of the School can barely conceal it. It is the morning of his first solo flying detail in the PC-9M. "For us as instructors and as pilots it's a dream come true. It's where the Air Corps really should be in terms of flight training, and finally we're getting there."



The arrival of the aircraft returns the Air Corps to a position where they can concentrate on pure military aviation.