

## Aircraft Technician Training

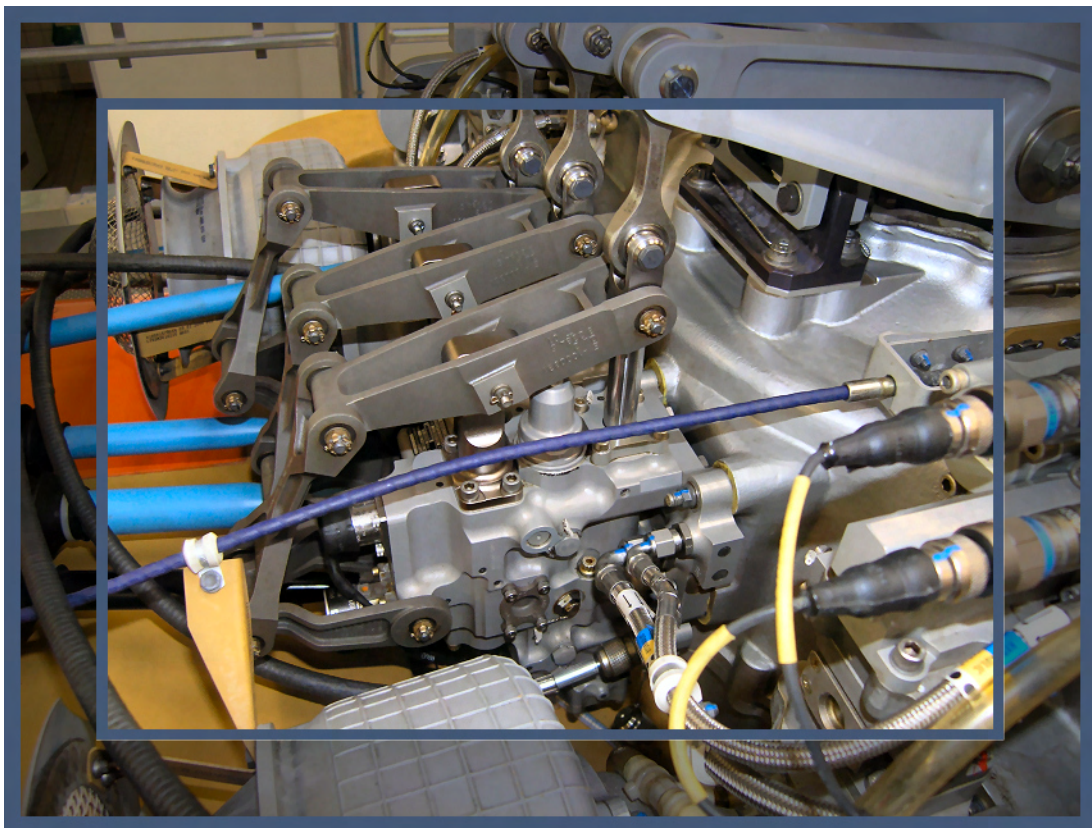
On the following pages you find detailed course descriptions. All courses are available on request. Nevertheless to facilitate your yearly planning we have fixed dates for type training courses all over the year. For details please refer to chapter course dates (page 63).

Course language is English. But fundamentally for all courses a real-time translation provided by an experienced team of interpreters can be offered, please don't hesitate to ask for details.

All students who have not employed an interpreter have to pass an initial English test at the beginning of the training course. This is to prove that they have a basic understanding of English to follow the course.

In case a student fails this test Eurocopter Training Academy will organise an interpreter who will be charged to the customer.

**Note:** EASA PART 147 requires examination and assessment in the language of the maintenance documentation!



# Aircraft Technician Training

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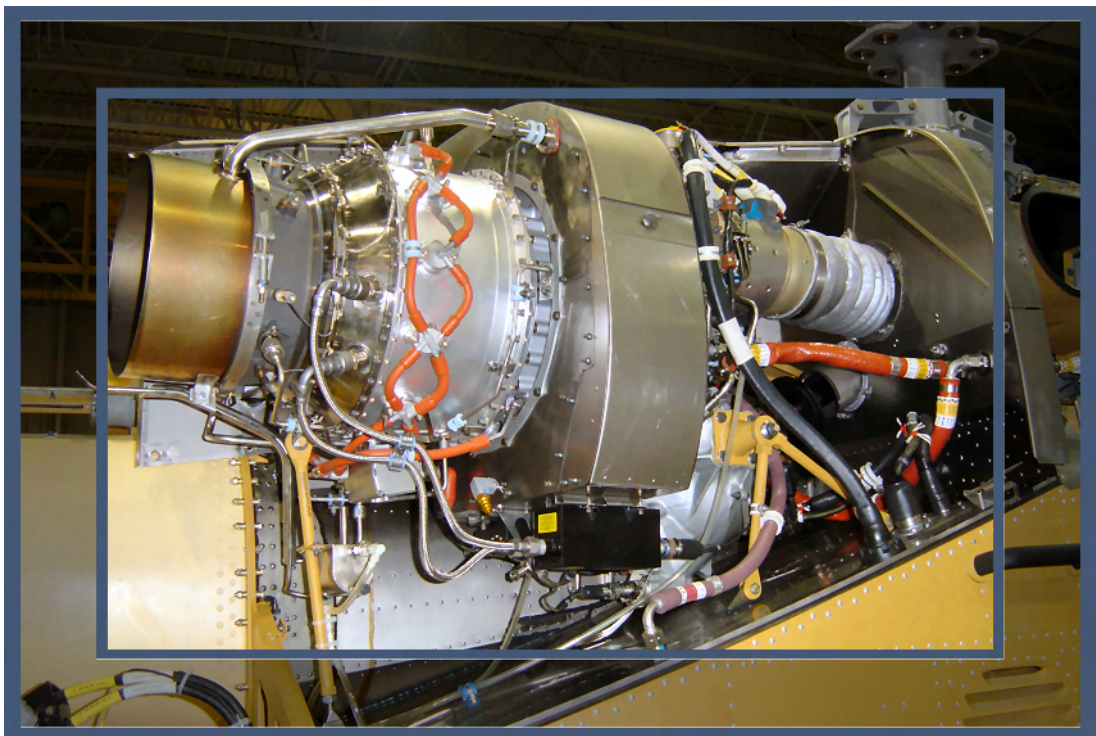
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Technician  
Training

## Detailed Course Descriptions



## B1 Type Training (MC) - airframe excluding engine including interfaces to engines acc. to EASA Part 147

<b>Helicopter Types</b>	BO 105, BK 117, EC 145, EC 135
<b>Course length</b>	20 days of instruction including theoretical and practical training according EASA PART 147.
<b>Description</b>	The course extends the privileges of experienced Aircraft Technicians (mechanics) with knowledge and skills. It enables them to maintain the related type of helicopter in accordance with Eurocopter provided technical documentation.
<b>Note</b>	There will be a theoretical examination as well as a practical assessment. Theoretical and practical elements are according to EASA PART 66.
<b>Prerequisites</b>	Students to be trained must have practical experience on helicopters or aircraft.
<b>Contents</b>	Procedures are applicable for maintenance levels O and I and associated documentation. They include practical and theoretical training in procedures for the structural groups as follows: <ul style="list-style-type: none"><li>• Lifting System</li><li>• Fuselage</li><li>• Empennage</li><li>• Flight controls</li><li>• Landing Gear</li><li>• Power Plants</li><li>• Electrical and Avionics Systems</li><li>• Maintenance and Inspections</li></ul>
<b>More Information</b>	A detailed syllabus is available on request.



## B2 Type Training (AV) – electrical system/avionics acc. to EASA Part 147

### Helicopter Types

BO 105, BK 117, EC 145, EC 135

### Course length

20 days of instruction including theoretical and practical training according EASA PART 147.

BO 105, BK 117: 15 days of instruction

### Description

The course extends the privileges of experienced Aircraft Technicians (avionics) with knowledge and skills. It enables them to maintain the related type of helicopter in accordance with Eurocopter provided technical documentation.

### Note

There will be a theoretical examination as well as a practical assessment.

Theoretical and practical elements are according to EASA PART 66.

### Prerequisites

Students to be trained must have practical experience on helicopters or aircraft.

### Contents

Procedures are applicable for maintenance levels O and I and associated documentation. They include practical and theoretical training in procedures for the structural groups as follows:

- Electrical System
- Mechanical Section
- Communication System
- Navigation System
- Instruments
- Automatic Flight Control System
- Flight Control Display System (EC 135 and 145)

### More Information

A detailed syllabus is available on request.

## Engine Training acc. to EASA PART 66

### Engines

Allison 250-C20B, Lycoming LTS 101,  
Pratt & Whitney PWC PW206

### Course length

5 days of theoretical and practical instruction

### Description

The course extends the privileges of experienced Aircraft Technicians (mechanics) with knowledge and skills. It enables them to maintain the related type of engine in accordance with the official technical documentation.

### Note

There will be a theoretical examination at the end of the course.

Theoretical and practical elements are according to EASA PART 66.

### Prerequisites

Students to be trained must have mechanical experience and basic engine knowledge.

### Contents

Procedures are applicable for maintenance levels O and I and associated documentation.

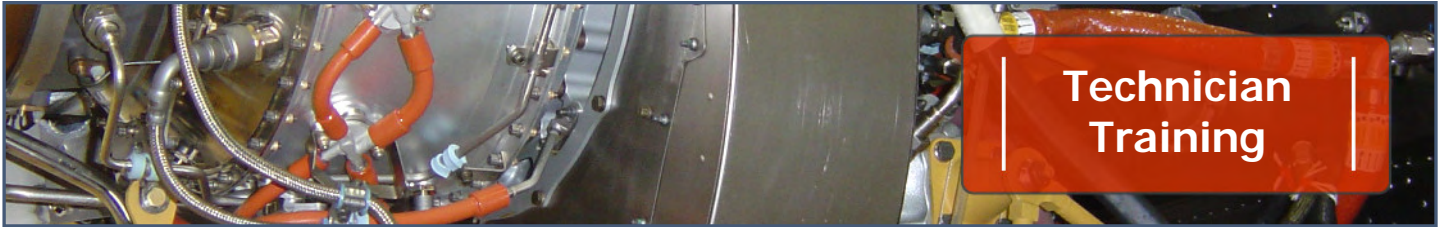
- Power Plant
- Reduction Gear/Shaft Section
- Air Inlet, Compressor, Combustion, Turbine Section
- Fuel Section
- Starting/Ignition
- Air
- Engine Controls
- Engine Indication
- Exhaust
- Oil System

### More Information

A detailed syllabus is available on request.

### Important Note

For Turbomeca Arriel 1, Turbomeca Arrius 2B and PWC PW206 please contact the engine manufacturer directly!

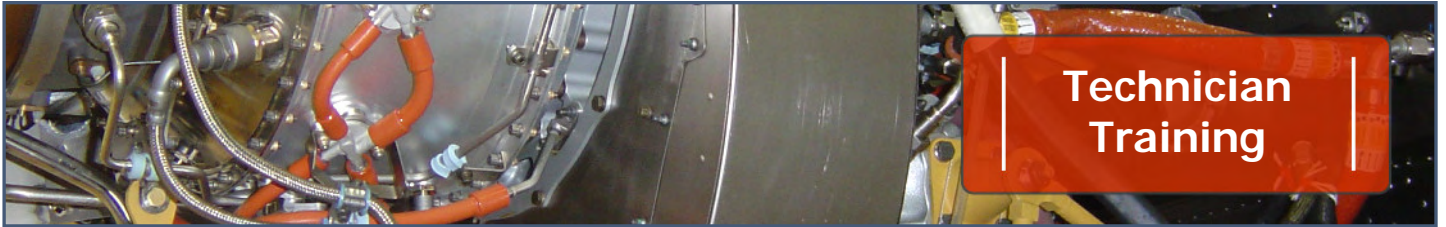


## System Familiarization (SF) – cat.C

<b>Helicopter Types</b>	BO 105, BK 117, EC 145, EC 135
<b>Course length</b>	5 days of theoretical instruction
<b>Description</b>	This course provides an <b>overview</b> of airframe, systems and power plant as outlined in the System Description Section of the Aircraft Maintenance Manual (Level 1).
<b>Prerequisites</b>	Students to be trained should have practical experience on helicopters or aircraft.
<b>Contents</b>	<p>The course includes theoretical instruction of structural groups as follows:</p> <ul style="list-style-type: none"><li>• Lifting System</li><li>• Fuselage</li><li>• Empennage</li><li>• Flight controls</li><li>• Landing Gear</li><li>• Power Plants</li><li>• Electrical and Avionics Systems</li><li>• Maintenance Inspection</li></ul>
<b>More Information</b>	A detailed syllabus is available on request.

## B1 Practical Training (MCP) - airframe acc. to EASA Part 147

<b>Helicopter Types</b>	BO 105, BK 117, EC 145, EC 135
<b>Course length</b>	10 days of practical instruction according EASA PART 147.
<b>Description</b>	<p>The course extends the privileges of experienced Aircraft Technicians (mechanics) with knowledge and skills. It enables them to maintain the related type of helicopter in accordance with Eurocopter provided technical documentation.</p>
<b>Note</b>	<p>There will be a practical assessment at the end. Practical elements and assessment are according to EASA PART 66.</p>
<b>Prerequisites</b>	<p>Students to be trained must have practical experience on helicopters or aircraft.</p> <p>Students to be trained must have successfully passed a theoretical training before.</p>
<b>Contents</b>	<p>Procedures are applicable for maintenance levels O and I and associated documentation. They include practical training in procedures for the structural groups as follows:</p> <ul style="list-style-type: none"><li>• Lifting System</li><li>• Fuselage</li><li>• Empennage</li><li>• Flight controls</li><li>• Landing Gear</li><li>• Power Plants</li><li>• Electrical and Avionics Systems</li><li>• Maintenance and Inspections</li></ul>
<b>More Information</b>	A detailed syllabus is available on request.



## B2 Practical Training (AVP) - electrical system/avionics acc. to EASA Part 147

### Helicopter Types

BO 105, BK 117, EC 145, EC 135

### Course length

10 days of practical instruction according EASA PART 147.

### Description

The course extends the privileges of experienced Aircraft Technicians (avionics) with knowledge and skills. It enables them to maintain the related type of helicopter in accordance with Eurocopter provided technical documentation.

### Note

There will be a practical assessment at the end. Practical elements and assessment are according to EASA PART 66.

### Prerequisites

Students to be trained must have practical experience on helicopters or aircraft.

Students to be trained must have successfully passed a theoretical training before.

### Contents

Procedures are applicable for maintenance levels O and I and associated documentation. They include practical training in procedures for the structural groups as follows:

- Electrical System
- Mechanical Section
- Communication System
- Navigation System
- Instruments
- Automatic Flight Control System
- Flight Control Display System (EC 135 and 145)

### More Information

A detailed syllabus is available on request.

## B1 Conversion Courses (MCC) - airframe excluding engine including interfaces to engines

**Helicopter Types** BK 117 to EC 145 and vice versa

**Course length** 5 days

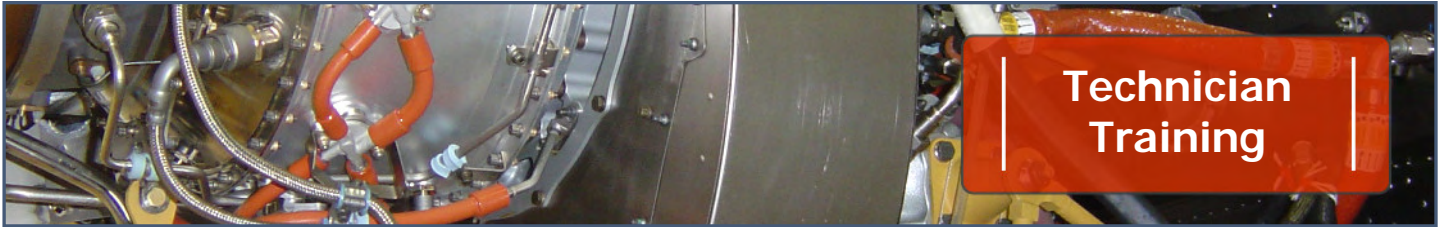
**Description** The course extends the privileges of experienced Aircraft Technicians (mechanics) with knowledge and skills. It enables them to maintain the related type of helicopter in accordance with Eurocopter provided technical documentation.

**Prerequisites** Students to be trained must have practical experience on BK 117 respectively EC 145 helicopters.

**Contents** Procedures are applicable for maintenance levels O and I and associated documentation and include theoretical training in procedures for the structural groups as follows:

- Lifting System
- Fuselage
- Empennage
- Flight controls
- Landing Gear
- Power Plants
- Electrical System
- Maintenance Inspection

**More Information** A detailed syllabus is available on request.



## B2 Conversion Courses (AVC) – electrical system/avionics

### Helicopter Types

BK 117 to EC 145 and vice versa

### Course length

10 days for BK 117 to EC 145  
5 days for EC 145 to BK 117

### Description

The course extends the privileges of experienced Aircraft Technicians (avionics) with knowledge and skills. It enables them to maintain the related type of helicopter in accordance with Eurocopter provided technical documentation.

### Prerequisites

Students to be trained must have practical experience on BK 117 respectively EC 145 helicopters.

### Contents

Procedures are applicable for maintenance levels O and I and associated documentation and include theoretical training in procedures for the structural groups as follows (if applicable for the respective helicopter):

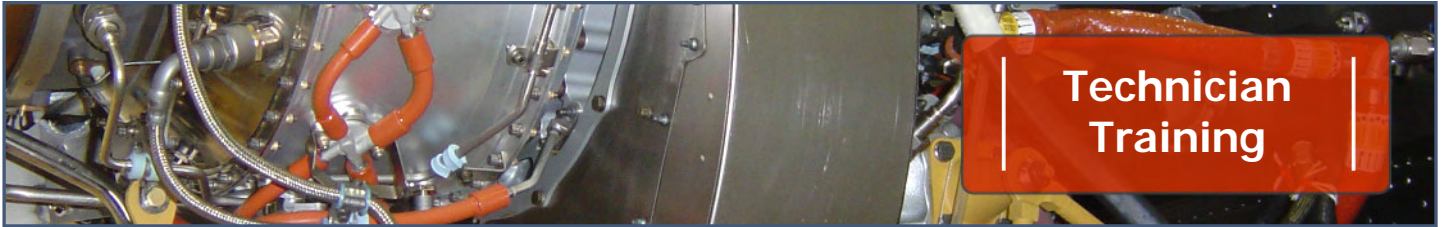
- Electrical System
- Mechanical Section
- Communication System
- Navigation System
- Instruments
- Automatic Flight Control System
- Flight Control Display System (EC 135 and 145)

### More Information

A detailed syllabus is available on request.

## Refresher Course (RC)

<b>Helicopter Types</b>	BO 105, BK 117, EC 145, EC 135
<b>Course length</b>	5 days of theoretical and practical instruction
<b>Description</b>	This course updates knowledge and proficiency of Aircraft Technicians (mechanics and avionics).
<b>Prerequisites</b>	Students to be trained must have participated in the respective type training course.
<b>Contents</b>	<p>The course includes theoretical and practical training. The syllabus is adapted to customers' demands.</p> <ul style="list-style-type: none"><li>• General repetition with focus on most important and critical structural groups</li><li>• Inspections and checks according MSM</li><li>• Upcoming maintenance tasks</li><li>• Update (SBs/ASBs)</li></ul>
<b>Note</b>	The course will be tailored to your demands.



## Inspection Course (IN)

<b>Helicopter Types</b>	BO 105, BK 117, EC 145, EC 135
<b>Course length</b>	5 days of practical instruction for each helicopter type.
<b>Description</b>	The course extends the privileges of experienced Aircraft Technicians (mechanics) with knowledge and skills. It enables them to inspect the related type of helicopter in accordance with Eurocopter provided technical documentation.
<b>Note</b>	This course will prepare technicians for upcoming inspections.
<b>Prerequisites</b>	Trainee must have participated in a previous type training course of the respective helicopter as well as respective engine course.
<b>Contents</b>	<p>The syllabus can be adapted to customers' demands (in particular to prepare big inspections).</p> <ul style="list-style-type: none"><li>• Regular Inspections according AMM and ECD instructions</li><li>• Supplementary Inspections acc. AMM and ECD instructions</li><li>• Servicing</li></ul>

## Rotor Head Inspection Course (RH)

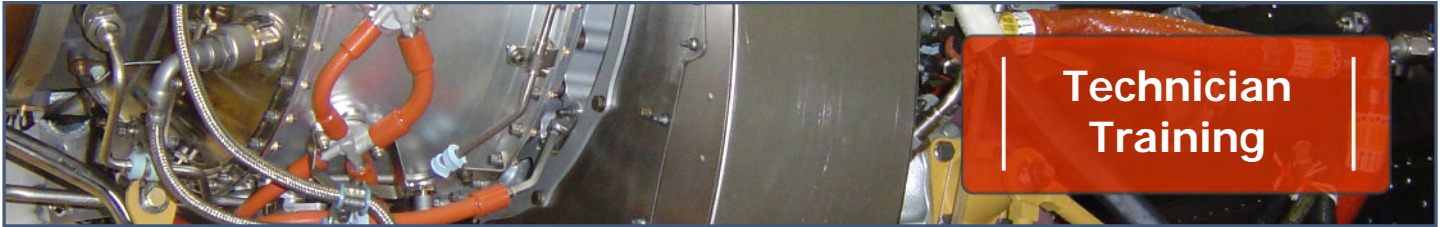
**Helicopter Types** BO 105, BK 117, EC 145

**Course length** 3 days of practical instruction.

**Description** The course extends the privileges of experienced Aircraft Technicians (mechanics) with knowledge and skills. It enables them to maintain the rotor head in accordance with Eurocopter provided technical documentation.

**Prerequisites** Previous participation in a BO 105/BK 117/EC 145 type training is recommended.

- Contents**
- Disassembly and reassembly of the rotor head
  - Inspection acc. operating time in flight hours and/or calendar time
  - Replacement of inner and outer oil-seals
  - Replacement of pitch change bearings
  - Replacement of quadruple nuts and all replaceable parts



## External Hoist Operation (EHO)

### Helicopter Types

BO 105, BK 117, EC 145, EC 135

### Course length

#### Maintenance Procedures (EHM)

- 2 days of theoretical and practical instruction

#### Operation (EHO)

- 3 days of theoretical and practical instruction

### Description

The course extends the privileges of experienced Aircraft Technicians (mechanics) with knowledge and skills. It enables them to maintain the external hoist system in accordance with official technical documentation.

Crew will be trained to gain experience in hoist operation and crew co-ordination.

### Prerequisites

Previous participation in a BO 105 / BK 117 / EC 145 / EC 135 type training course is recommended. Students to be trained should have experience in air rescue.

### Syllabus

#### Maintenance procedures in accordance to maintenance manuals

- removal, disassembly, inspection, re-assembly and installation of hook/bumper
- removal, inspection and installation of winch unit
- cable inspection
- cable exchange
- disassembly and re-assembly of winch boom
- functional test of rescue hoist assembly

#### Operation in accordance to operation manuals

- handling and operation of rescue winch missions
- mounting and removal of the rescue winch
- pre flight inspection
- cable inspection
- verbal guidance procedures
- emergency procedures

## Rotor Blade Repair (RBR)

### Course length (days)

<b>Initial Course</b>					
Level	BO 105 CBS-4	BO 105 CBS-5	BK 117	EC 145	EC 135
AMM	on request				
L0	5	3	3	4	9
L0+L1*	10	8	10	12	12
<b>Refresher Course</b>					
Level	BO 105 CBS-4	BO 105 CBS-5	BK 117	EC 145	EC 135
AMM	on request				
L0	2	2	2	2	3
L0+L1*	3	3	3	5	5

### Description

The course extends the privileges of experienced Aircraft Technicians (mechanics) with knowledge and skills. It enables them to repair the related type of rotor blades in accordance with Eurocopter provided technical documentation.

### Prerequisites

Basic knowledge of composite repair and previous participation in a BO 105 / BK 117 / EC 145 / EC 135 maintenance course is recommended.

For the higher course level participation in the previous course is mandatory.

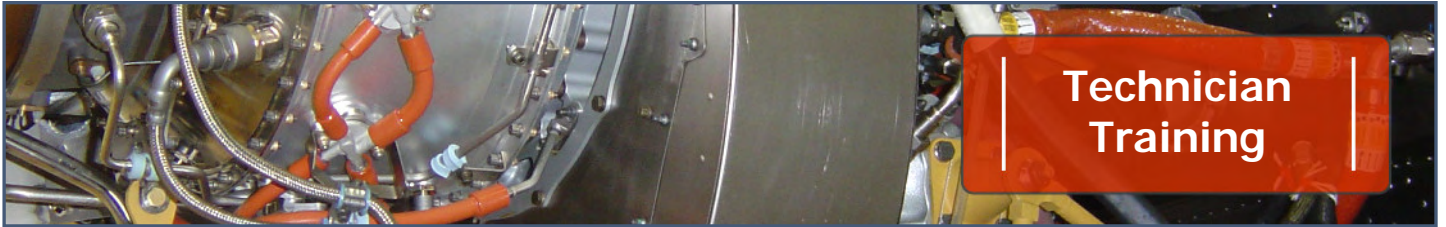
For the refresher course participation in an initial course is mandatory.

### Contents

For a detailed syllabus please contact the training academy directly.

### \*Note

for customers getting an approval to perform L1 tasks only on own blades or for specified repair stations

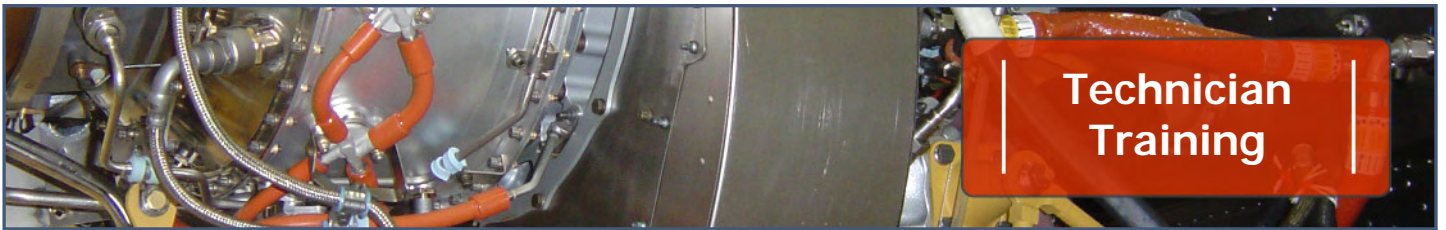


## Air Conditioning System

<b>Helicopter Types</b>	all models
<b>Course length</b>	Course length is adapted to customers needs. The times you find below are reference values.
<b>Description</b>	<p>The course extends the privileges of experienced Aircraft Technicians with knowledge and skills. It enables them to maintain the related type of equipment in accordance with official technical documentation.</p> <p>The courses are adapted to the configuration of your helicopter and comprise theoretical instruction, removal/installation, complex trouble shooting, operational checks, handling and operation.</p>
<b>Prerequisites</b>	Previous participation in a BO 105 / BK 117 / EC 145 / EC 135 type training course is recommended.
<b>Note</b>	<b>The following list shows the most common equipment. Training for other systems is available on request.</b>
<b>Avionic Equipment</b>	<b>Air conditioning system</b> METRO – 1 day

## Optional Avionic Equipment (Intercom and Communication)

<b>Helicopter Types</b>	all models
<b>Course length</b>	Course length is adapted to customers needs. The times you find below are reference values.
<b>Description</b>	<p>The course extends the privileges of experienced Aircraft Technicians (avionics) with knowledge and skills. It enables them to maintain the related type of equipment in accordance with official technical documentation.</p> <p>The courses are adapted to the configuration of your helicopter and comprise theoretical instruction, removal/installation, complex trouble shooting, operational checks, handling and operation.</p>
<b>Prerequisites</b>	Previous participation in a BO 105 / BK 117 / EC 145 / EC 135 type training course is recommended.
<b>Note</b>	<b>The following list shows the most common equipment. Training for other systems is available on request.</b>
<b>Avionic Equipment</b>	<p><b>Intercom</b>            Becker (DVCS-5100/6100) – 0.5 days            NAT (AMU50/ACP53) – 0.5 days</p> <p><b>Communication</b>            Rockwell Collins (HF 9000) – 2 hours            NAT (NPX 138N, NTH 450C-00) – 2 hours            Sky Connect (1616-350-01A) – 2 hours            Aero Phone (AD-STUI-01) – 2 hours            NAT (AA22-492) – 1 hour</p>



## Optional Avionic Equipment (ATC, Weather Radar, Navigation, Others)

<b>Helicopter Types</b>	all models
<b>Course length</b>	Course length is adapted to customers needs. The times you find below are reference values.
<b>Description</b>	<p>The course extends the privileges of experienced Aircraft Technicians (avionics) with knowledge and skills. It enables them to maintain the related type of equipment in accordance with official technical documentation.</p> <p>The courses are adapted to the configuration of your helicopter and comprise theoretical instruction, removal/installation, complex trouble shooting, operational checks, handling and operation.</p>
<b>Prerequisites</b>	Previous participation in a BO 105 / BK 117 / EC 145 / EC 135 type training course is recommended.
<b>Note</b>	<b>The following list shows the most common equipment. Training for other systems is available on request.</b>
<b>Avionic Equipment</b>	<p><b>ATC</b>            Ryan (9900 BX) – 0.5 days            Garmin (GTX 330) – 0.5 days            Bendix King (BXP 6401) – 0.5 days</p> <p><b>Weather Radar</b>            Honeywell (RDR 2000) – 0.5 days</p> <p><b>Navigation</b>            Canadian Marconi (CMA 3000/9000) – 1 day            Chelton (CCN 955) – 2 hours            Garmin (GNS 430) – 0.5 days</p> <p><b>Digital Map</b>            Euro Avionics (Moving Map IV) – 2 days</p> <p><b>Others</b>            M'Arms (UMS/CVFDR) – 1.5 days            Eurocopter (SX-16) – 0.5 days            Honeywell (Mark XXI) – 1 day            NAT (AA22-492) – 1 hour</p>

## FLIR - Maintenance Training

**Duration** 3 days of theoretical and practical instruction

**Description** The course extends the privileges of experienced Aircraft Technicians with knowledge and skills. It enables them to maintain the related FLIR system in accordance with official technical documentation.

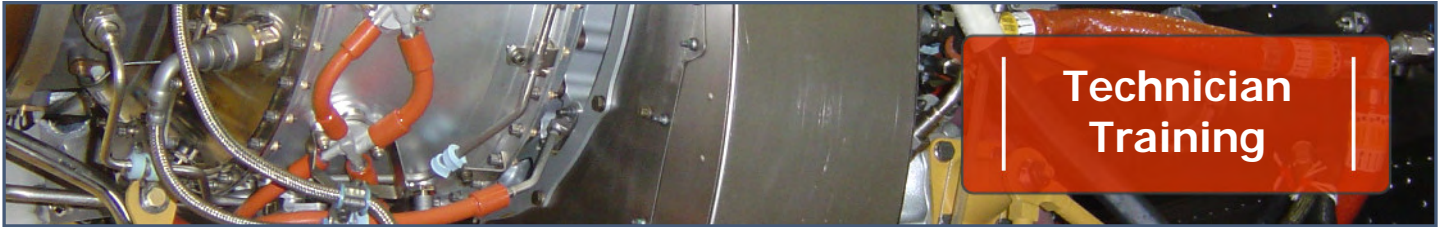
The courses are adapted to the configuration of your helicopter and comprise theoretical instruction, removal/installation, complex trouble shooting, operational checks, handling and operation.

**Prerequisites** Technician must have experience in aircraft maintenance.

- Contents**
- Technical documentation
  - Components FLIR-System
  - Operating Manuals Moving Map System
  - Physical Basics/IR-Technology
  - Removal/installation
  - Trouble shooting
  - Functional tests
  - Handling and operation

**Note** For the operation please refer to "FLIR – Operator Training" (Pilot Training Section)

**More Information** Detailed syllabus is available on request.



## Electric Courses (EL)

### Helicopter Types

BO 105, BK 117, EC 145, EC 135

### Course length

BO 105: 3 days of theoretical and practical training  
EC 135 5 days of theoretical and practical training  
BK 117: 3 days of theoretical and practical training  
EC 145: 5 days of theoretical and practical training

### Description

The course extends the privileges of experienced Aircraft Technicians with knowledge and skills. It enables them to maintain the related helicopter in accordance with official technical documentation.

### Prerequisites

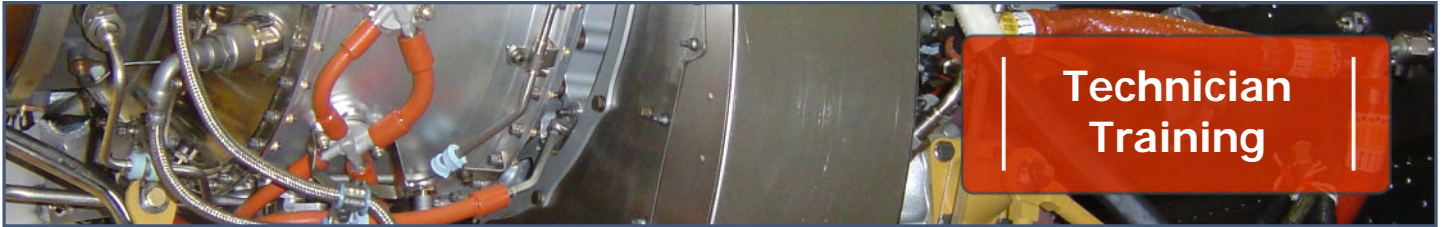
Students to be trained must be aircraft electricians or have an equivalent profession.

### Contents

- General explanation of the DC system
- General explanation of the AC system
- General explanation of the CPDS (EC 135 / EC 145)
- Power generating and distribution
- Locations
- Maintenance and troubleshooting procedures
- Discussion of wiring diagrams

## Cable Harness Repair Course (HRC)

<b>Helicopter Types</b>	BO 105, BK 117, EC 145, EC 135
<b>Course length</b>	10 days of theoretical and practical training
<b>Description</b>	This course provides Aircraft Technicians with knowledge and skills. It enables them to maintain and repair the electrical harness in accordance with Eurocopter provided technical documentation.
<b>Prerequisites</b>	Students to be trained must be aircraft electricians or have an equivalent profession.
<b>Contents</b>	<p>The course includes basic practical training for the electrical system with a focus on the cable harness, e.g.</p> <ul style="list-style-type: none"><li>• electrical connectors</li><li>• pins</li><li>• soldering</li></ul> <p>The syllabus can be adapted to customers' demands.</p>



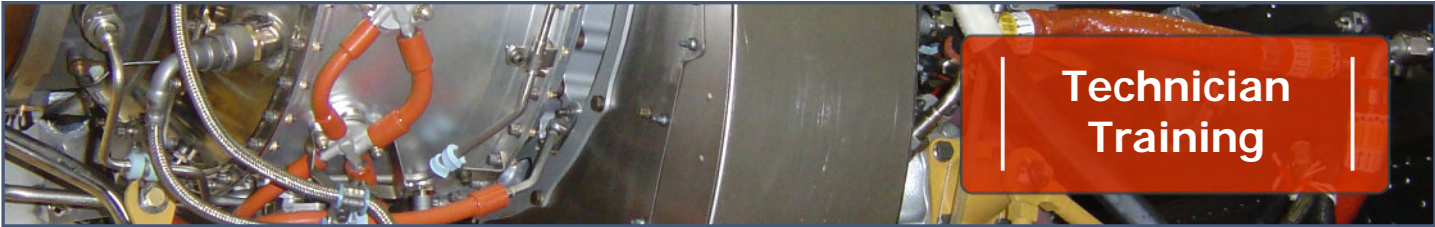
## Sheet Metal Repair Course (SMRC)

<b>Helicopter Types</b>	BO 105, BK 117, EC 145, EC 135
<b>Course length</b>	15 days of theoretical and practical training
<b>Description</b>	This course provides Aircraft Technicians with knowledge and skills, enabling them to carry out basic sheet metal repairs according to international and Eurocopter standards.
<b>Prerequisites</b>	Students to be trained must be aircraft technicians or have an equivalent profession.
<b>Contents</b>	<p>The course includes theoretical and practical training for the sheet metal repair and covers</p> <ul style="list-style-type: none"><li>• Distinction of different aeronautic materials according to standards and material index</li><li>• Production of sheet metal and sheet metal profiles according to EC standard</li><li>• Preparation of assemblies and subassemblies for installation</li><li>• Different riveting methods</li><li>• Removal and re-establishing all rivet connections</li><li>• Joining parts with two component sealing compound</li><li>• Inserting connection elements (humid insertion)</li><li>• Lock-wiring</li><li>• Refurbishing of sheet metal profiles</li><li>• Re-establishing surfaces</li></ul>

The syllabus can be adapted to customers' demands.

## Composite Repair Course (CRC)

<b>Helicopter Types</b>	BO 105, BK 117, EC 145, EC 135
<b>Course length</b>	5 days of theoretical and practical training
<b>Description</b>	This course provides Aircraft Technicians with knowledge and skills, enabling them to carry out basic composite repairs according to international and Eurocopter standards.
<b>Prerequisites</b>	Students to be trained must be aircraft technicians or have an equivalent profession and should have a basic knowledge about composite material.
<b>Contents</b>	<p>The course includes theoretical and basic practical training for the sheet metal repair and covers</p> <ul style="list-style-type: none"><li>• Types of resin and preparation of resin (application of correct mixing ratio)</li><li>• Honeycomb, fillers, preprag</li><li>• Safety at work and dangerous substances</li><li>• Production of exemplary work pieces</li><li>• Repair of sandwich work piece (grinding, removal of damage, insert)</li></ul> <p>The syllabus can be adapted to customers' demands.</p>



# Course Dates



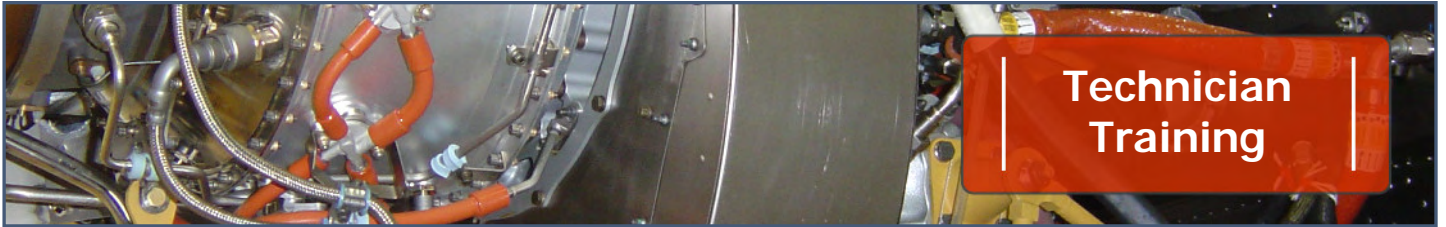
## Course Dates

BO 105		
Engine Allison 250-C20B	EN-RR-6/11	27 Jun – 01 Jul
B1 Type Training	MC-105-7/11	04 Jul – 29 Jul
B2 Type Training	AV-105-1/11	31 Jan – 18 Feb

BK 117		
Engine Lycomming LTS 101	EN-LTS-3/11	21 Mar – 25 Mar
B1 Type Training	MC-117-3/11	28 Mar – 21 Apr
B2 Type Training		on request

EC 145		
B1 Type Training	MC-145-2/11	14 Feb – 11 Mar
	MC-145-4/11	26 Apr – 20 May
	MC-145-8/11	29 Aug – 23 Sep
		on request
B2 Type Training	AV-145-1/11	31 Jan – 25 Feb
	AV-145-5/11	02 May – 27 May
	AV-145-9/11	19 Sep – 14 Oct
		on request
System Familiarization	SF-145-10/11	17 Oct – 21 Oct
Refresher Course		on request





**Technician Training**

<b>EC 135</b>		
B1 Type Training	MC-135-1/11	24 Jan – 18 Feb
	MC-135-3/11	21 Mar – 15 Apr
	MC-135-5/11	02 May – 27 May
	MC-135-8/11	22 Aug – 16 Sep
	MC-135-9/11	19 Sep – 14 Oct
	MC-135-10/11	17 Oct – 11 Nov (D)
	MC-135-11/11	21 Nov – 16 Dec
		on request
B2 Type Training	AV-135-2/11	14 Feb – 11 Mar
	AV-135-5/11	09 May – 07 Jun
	AV-135-7/11	04 Jul – 29 Jul
	AV-135-9/11	26 Sep – 21 Oct
	AV-135-11/11	07 Nov – 02 Dec
		on request
System Familiarization	SF-135-3/11	28 Mar – 01 Apr
	SF-135-10/11	24 Oct – 28 Oct
Refresher Course		on request

<b>Specialized Training</b>		
Logistic Course	Logistics-2/11	21 Feb
	Logistics-10/11	17 Oct
Inspections, Legislation, Aircraft Documentation and Historical Records (Guideline)	Guideline-2/11	22 Feb – 23 Feb
	Guideline-10/11	18 Oct – 19 Oct



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## Notes: