DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

H88EU
Revision 13
AIRBUS HELICOPTERS DEUTSCHLAND GmbH
EC135P1
EC135T1
EC135P2
EC135T2
EC135P2+
EC135T2+/EC635T2+
EC135P3
EC135T3
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TYPE CERTIFICATE DATA SHEET No. H88EU

This data sheet which is part of Type Certificate No. H88EU prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder AIRBUS HELICOPTERS DEUTSCHLAND GmbH (AHD)
D-86609 Donauwoerth
Germany

I. Model EC135P1 (Normal Category) Helicopter, Approved July 31, 1996

Engines. 2 Pratt &Whitney Canada PW 206 B

Fuel. See Rotorcraft Flight Manual

Installed Engine Limits.

	Output Shaft Torque %	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
Normal Operation				
Takeoff power (5 min.)	75	98.7 (57250)	104 (6134)	854 (1569)
Max Continuous	69	97.4 (56500)	104 (6134)	820 (1508)
One Engine Inoperative				
2.5 min. power	100	102.4 (59400)	104 (6134)	930 (1706)
Max. Continuous	86	100.4 (58250)	104 (6134)	885 (1625)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Rotor Limits.

	Power On %	Power Off %	
Min. Continuous	95	80	for gross mass up to 1900 kg (4189 lb)
		85	for gross mass above 1900 kg (4189 lb)
Max. Continuous	104	106	

Airspeed Limits (IAS). Max. v_{NE} = 155 kts. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range. *Longitudinal C.G. Limits*

max. forward range: at 1840 kg (4057 lb): 4180 mm (164.6 in.) aft of datum
at 2720 kg (5996 lb): 4219 mm (166.1 in.) aft of datum
at 2835 kg (6250 lb): 4224 mm (166.3 in.) aft of datum

max. rearward range: at 1500 kg (3307 lb): 4570 mm (179.90 in.) aft of datum
at 2720 kg (5996 lb): 4387 mm (172.72 in.) aft of datum
at 2835 kg (6250 lb): 4369 mm (172.0 in.) aft of datum

Straight line variation between points given.

Page No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Rev. No.	12	8	8	8	8	8	12	12	11	10	11	13	11	12

Lateral C.G. Limits
Max. deviation 100 mm (3.94 in.) left or right of the fuselage median plane.

Empty Weight C.G. Range. None

Max. Weight. 2720 kg (5996 lb) (Max GW 2835 kg (6250 lb) with S/B EC135-11-003 incorporated. See FMS 9.1-3)

Min. Crew. 1 Pilot

Passengers. 6 (or 7 if the kit described in FMS 9.2-31 is installed and operated)

Max. Baggage. Max. permissible floor loading: 600 kg/m^2 (123 lb/sq. ft.)
Max. loading: 1130 kg (2491 lb)

Fuel Capacity. total: 680 liter (179.6 US gal.) (standard fuel tank)
usable: 670.5 liter (177.1 US gal.) (standard fuel tank)

total: 673.4 liter (177.9 US gal.) (self sealing fuel tank)
usable: 664 liter (175.4 US gal.) (self sealing fuel tank)

Oil Capacity. Engine oil capacity: 4.5 liter (1.19 US gal.) included in minimum gross weight

Max. Operating Altitude. 6096 m (20000 ft)

Rotorblade and Control Movements. For rigging information refer to the EC135 Maintenance Manual.

II. Model EC135T1 (Normal Category) Helicopter, Approved September 17, 1996

Engines. 2 Turbomeca ARRIUS 2B1/2B1A/2B1A1

Fuel. See Rotorcraft Flight Manual

Installed Engine Limits (ARRIUS 2B1) – See NOTE 1

	Output Shaft Torque %	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
Normal Operation				
Takeoff power (5 min.)	75	101.1 (54706)	104 (6134)	895 (1643)
Max Continuous	69	98.7 (53406)	104 (6134)	855 (1571)
One Engine Inoperative				
2.5 min. power	100	103.7 (56113)	104 (6134)	945 (1733)
Max. Continuous	86	101.1 (54706)	104 (6134)	895 (1643)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Installed Engine Limits (ARRIUS 2B1A) – (After SB EC135-71-008. See FMS 9.2-57).

	Output Shaft Torque %	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
Normal Operation				
Takeoff power (5 min.)	75	101.1 (54706)	104 (6134)	895 (1643)
Max Continuous	69	98.7 (53406)	104 (6134)	855 (1571)
One Engine Inoperative				
2.5 min. power	119.8	103.7 (56113)	104 (6134)	945 (1733)
Max. Continuous	86	101.1 (54706)	104 (6134)	895 (1643)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

II. Model EC135T1 (Normal Category) Helicopter, Approved September 17, 1996 – (Cont'd)

Installed Engine Limits (ARRIUS 2B1A_1) – (S/N 0188 and Subsequent or After SB EC135-71-015. See FMS 9.2-62).

	Output Shaft Torque %	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
Normal Operation				
Takeoff power (5 min.)	75	101.1 (54706)	104 (6134)	895 (1643)
Max Continuous	69	98.7 (53406)	104 (6134)	855 (1571)
One Engine Inoperative				
2.5 min. power	128	103.7 (56113)	104 (6134)	945 (1733)
Max. Continuous	86	101.1 (54706)	104 (6134)	895 (1643)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Rotor Limits.	Power On %	Power Off %	
Min. Continuous	95	80	for gross mass up to 1900 kg (4189 lb)
		85	for gross mass above 1900 kg (4189 lb)
Max. Continuous	104	106	

Airspeed Limits (IAS). Max. v_{NE} = 155 kts. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range.

Longitudinal C.G. Limits

max. forward range: at 1840 kg (4057 lb): 4180 mm (164.6 in.) aft of datum
at 2720 kg (5996 lb): 4219 mm (166.1 in.) aft of datum
at 2835 kg (6250 lb): 4224 mm (166.3 in.) aft of datum

max. rearward range: at 1500 kg (3307 lb): 4570 mm (179.90 in.) aft of datum
at 2720 kg (5996 lb): 4387 mm (172.72 in.) aft of datum
at 2835 kg (6250 lb): 4369 mm (172.0 in.) aft of datum

Straight line variation between points given.

Lateral C.G. Limits

Max. deviation 100mm (3.94 in.) left or right of the fuselage median plane.

Empty Weight C.G. Range None

Maximum Weight. 2720 kg (5996 lb) (Max GW 2835 kg (6250 lb) with S/B EC135-11-003 R01 or higher incorporated. See FMS 9.1-3)

Minimum Crew. 1 Pilot

Passengers. 6 (or 7 if the kit described in FMS 9.2-31 is installed and operated)

Max. Baggage. Max. permissible floor loading: 600 kg/m^2 (123 lb/sq. ft.)
Max. loading: 1130 kg (2491 lb)

Fuel Capacity. total: 680 liter (179.6 US gal.) (standard fuel tank)
usable: 670.5 liter (177.1 US gal.) (standard fuel tank)

total: 673.4 liter (177.9 US gal.) (self sealing fuel tank)
usable: 664 liter (175.4 US gal.) (self sealing fuel tank)

Oil Capacity. Engine oil capacity: 4.85 liter (1.28 US gal.) included in minimum gross weight

Maximum Operating Altitude. 6096 m (20000 ft)

Rotorblade and Control Movements. For rigging information refer to the EC135 Maintenance Manual.

III. Model EC135P2 (Normal Category) Helicopter, Approved September 6, 2001

The Model EC 135 P2 is the same as the EC 135P1 except for the installation of the Pratt & Whitney PW206B2 engine which includes new OEI power ratings.

Engines. 2 Pratt & Whitney Canada PW 206 B2

Fuel. See Rotorcraft Flight Manual

Installed Engine Limits.

	Output Shaft Torque %	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
Normal Operation				
Takeoff power (5 min.)	75	98.7 (57250)	104 (6165)	869 (1596)
Max Continuous	69	97.4 (56500)	104 (6165)	835 (1535)
One Engine Inoperative				
30 sec. power	128	104.3 (60500)	104 (6165)	990 (1814)
2 min. power	125	102.6 (59500)	104 (6165)	950 (1742)
Max. Continuous	86	100.4 (58250)	104 (6165)	900 (1652)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Rotor Limits.

	Power On %	Power Off %	
Min. Continuous	97	80	for gross mass up to 1900 kg (4189 lb)
		85	for gross mass above 1900 kg (4189 lb)
Max. Continuous	104	106	

Airspeed Limits (IAS). Max. v_{NE} = 155 kts. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range. *Longitudinal C.G. Limits*

max. forward range: at 1840 kg (4057 lb): 4180 mm (164.6 in.) aft of datum
at 2835 kg (6250lb): 4224 mm (166.3 in.) aft of datum

max. rearward range: at 1500kg (3307 lb): 4570mm (179.9 in.) aft of datum
at 2835kg (6250lb): 4369mm (172.0 in.) aft of datum

Straight line variation between points given.

Lateral C.G. Limits
Max. deviation 100 mm (3.94 in.) left or right of the fuselage median plane.

Empty Weight C.G. Range. None

Max. Weight. 2835 kg (6250 lb)

Min. Crew. 1 Pilot

Passengers. 6 (or 7 if the kit described in FMS 9.2-31 is installed and operated)

Max. Baggage. Max. permissible floor loading: 600 kg/m^2 (123 lb/sq. ft.)
Max. loading: 1130 kg (2491 lb)

Fuel Capacity. total: 680 liter (179.6 US gal.) (standard fuel tank, up to S/N 249)
usable: 670.5 liter (177.1 US gal.) (standard fuel tank, up to S/N 249)

total: 673.4 liter (177.9 US gal.) (self sealing fuel tank, up to S/N 249)
usable: 664 liter (175.4 US gal.) (self sealing fuel tank, up to S/N 249)

total: 710 liter (187.6 US gal.) (standard fuel tank, S/N 250 and subsequent)
usable: 700.5 liter (185.1 US gal.) (standard fuel tank, S/N 250 and subsequent)
total: 701 liter (185.2 US gal.) (self sealing fuel tank, S/N 250 and subsequent)

usable: 691.6 liter (182.7 US gal.) (self sealing fuel tank, S/N 250 and subsequent)

Oil Capacity. Engine oil capacity: 4.5 liter (1.19 US gal.) included in minimum gross weight

Max. Operating Altitude. 6096 m (20000 ft)

Rotorblade and Control Movements. For rigging information refer to the EC135 Maintenance Manual.

IV. Model EC135T2 (Normal Category) Helicopter, Approved November 25, 2002

The Model EC 135 T2 is the same as the EC 135 T1 except for the installation of Tubomeca Arrius 2B2 engines which includes new OEI power ratings.

Engines. 2 Turbomeca ARRIUS 2B2

Fuel. See Rotorcraft Flight Manual

Installed Engine Limits (ARRIUS 2B2).

	Output Shaft Torque %	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
Normal Operation				
Takeoff power (5 min.)	75	100 (54117)	104 (6134)	897 (1647)
Max Continuous	69	99 (53576)	104 (6134)	879 (1614)
One Engine Inoperative				
30 second power	128	105 (56823)	104 (6134)	1024 (1875)
2.0 min. power	125	103.5 (56011)	104 (6134)	994 (1821)
Max. Continuous	86	101.3 (54821)	104 (6134)	942 (1728)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Rotor Limits.

	Power On %	Power Off %	
Min. Continuous	97	80	for gross mass up to 1900 kg (4189 lb)
		85	for gross mass above 1900 kg (4189 lb)
Max. Continuous	104	106	

Airspeed Limits (IAS). Max. v_{NE} = 155 kts. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range. *Longitudinal C.G. Limits*

max. forward range: at 1840 kg (4057 lb): 4180 mm (164.6 in.) aft of datum
at 2835 kg (6250 lb): 4224 mm (166.3 in.) aft of datum

max. rearward range: at 1500 kg (3307 lb): 4570 mm (179.9 in.) aft of datum
at 2835 kg (6250 lb): 4369 mm (172.0 in.) aft of datum

Straight line variation between points given.

Lateral C.G. Limits
Max. deviation 100 mm (3.94 in.) left or right of the fuselage median plane.

Empty Weight C.G. Range None

Maximum Weight. 2835 kg (6250 lb)

Minimum Crew. 1 Pilot

Passengers. 6 (or 7 if the kit described in FMS 9.2-31 is installed and operated)

Max. Baggage. Max. permissible floor loading: 600 kg/m^2 (123 lb/sq. ft.)
Max. loading: 1130 kg (2491 lb)

IV. Model EC135T2 (Normal Category) Helicopter, Approved November 25, 2002 – (Cont'd)

Fuel Capacity.

total: 680 liter (179.6 US gal.) (standard fuel tank, up to S/N 249)
usable: 670.5 liter (177.1 US gal.) (standard fuel tank, up to S/N 249)

total: 673.4 liter (177.9 US gal.) (self sealing fuel tank, up to S/N 249)
usable: 664 liter (175.4 US gal.) (self sealing fuel tank, up to S/N 249)

total: 710 liter (187.6 US gal.) (standard fuel tank, S/N 250 and subsequent)
usable: 700.5 liter (185.1 US gal.) (standard fuel tank, S/N 250 and subsequent)

total: 701 liter (185.2 US gal.) (self sealing fuel tank, S/N 250 and subsequent)
usable: 691.6 liter (182.7 US gal.) (self sealing fuel tank, S/N 250 and subsequent)

Oil Capacity. Engine oil capacity: 4.85 liter (1.28 US gal.) included in minimum gross weight

Maximum Operating Altitude. 6096 m (20000) ft

Rotorblade and Control Movements. For rigging information refer to the EC135 Maintenance Manual.

V. Model EC135P2+ (Normal Category) Helicopter, Approved October 19, 2006

The Model EC135P2+ is the same as the EC135P2 except for maximum take off mass of 2910 kg / 2950 kg, and new power ratings AEO TOP & OEI MCP). See NOTE 5

Engines. 2 Pratt & Whitney Canada PW 206 B2

Fuel. See Rotorcraft Flight Manual

Installed Engine Limits.

	Output Shaft Torque %	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
Normal Operation				
Takeoff power (5 min.)	78	98.7 (57250)	104 (6165)	869 (1596)
Max Continuous	69	97.4 (56500)	104 (6165)	835 (1535)
One Engine Inoperative				
30 sec. power	128	104.3 (60500)	104 (6165)	990 (1814)
2 min. power	125	102.6 (59500)	104 (6165)	950 (1742)
Max. Continuous	89.5	100.4 (58250)	104 (6165)	900 (1652)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Rotor Limits.

	Power On %	Power Off %	
Min. Continuous	97	80	for gross mass up to 1900 kg (4189 lb)
		85	for gross mass above 1900 kg (4189 lb)
Max. Continuous	104	106	

Airspeed Limits (IAS). Max. v_{NE} = 155 kts. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range.

Longitudinal C.G. Limits

max. forward range: at 1840 kg (4057 lb): 4180.0 mm (164.6 in.) aft of datum
at 2910 kg (6415 lb): 4227.3 mm (166.43 in.) aft of datum
at 2950 kg (6504 lb): 4229.3 mm (166.51 in.) aft of datum

max. rearward range: at 1500 kg (3307 lb): 4570.0 mm (179.9 in.) aft of datum
at 2910 kg (5996 lb): 4369.0 mm (172.0 in.) aft of datum
at 2950 kg (6504 lb): 4362.6 mm (171.75 in.) aft of datum

Straight line variation between points given.

Lateral C.G. Limits

Max. deviation 100 mm (3.94 in.) left or right of the fuselage median plane.

Empty Weight C.G. Range.	None
Maximum Weight.	2910 kg (6415 lb) / 2950 kg (6504 lb) Note: Operation of the aircraft with MTOW up to 2950 kg is only permitted in accordance with FMS 9.1-5, FMS 9.1-6 and FMS 9.1-7 from S/N 1055 and subsequent, or after SB EC135-62-028.
Minimum Crew.	1 Pilot
Passengers.	6 (or 7 if the kit described in FMS 9.2-31 is installed and operated)
Max. Baggage.	Max. permissible floor loading: 600 kg/m^2 (123 lb/sq. ft.) Max. loading: 1130 kg (2491 lb)
Fuel Capacity.	total: 680 liter (179.6 US gal.) (standard fuel tank, up to S/N 249) usable: 670.5 liter (177.1 US gal.) (standard fuel tank, up to S/N 249) total: 673.4 liter (177.9 US gal.) (self sealing fuel tank, up to S/N 249) usable: 664 liter (175.4 US gal.) (self sealing fuel tank, up to S/N 249) total: 710 liter (187.6 US gal.) (standard fuel tank, S/N 250 and subsequent) usable: 700.5 liter (185.1 US gal.) (standard fuel tank, S/N 250 and subsequent) total: 701 liter (185.2 US gal.) (self sealing fuel tank, S/N 250 and subsequent) usable: 691.6 liter (182.7 US gal.) (self sealing fuel tank, S/N 250 and subsequent)
Oil Capacity.	Engine oil capacity: 4.5 liter (1.19 US gal.) included in minimum gross weight
Max. Operating Altitude.	6096 m (20000 ft)
Rotorblade and Control Movements.	For rigging information refer to the EC135 Maintenance Manual.

VI. Models EC135T2+ and EC635T2+ (Normal Category) Helicopter, EC135T2+ Approved October 19, 2006 and EC635T2+ Approved October 30, 2019

Data pertinent to both models. The Models EC135T2+ and EC635T2+ are the same as the EC135T2 except for maximum take off mass of 2910 kg / 2950 kg, and new power ratings AEO TOP & OEI MCP). See NOTE 5

Engines.	2 Turbomeca ARRIUS 2B2
Fuel.	See Rotorcraft Flight Manual

Installed Engine Limits (ARRIUS 2B2).

	Output Shaft Torque %	Gas Generator Speed N-1 % (RPM)	Output Shaft Speed N-2 % (RPM)	Measured Gas Temperature °C (°F)
Normal Operation				
Takeoff power (5 min.)	78	100 (54117)	104 (6134)	897 (1647)
Max Continuous	69	99 (53576)	104 (6134)	879 (1614)
One Engine Inoperative				
30 second power	128	105.0 (56823)	104 (6134)	1024 (1875)
2.0 min. power	125	103.5 (56011)	104 (6134)	994 (1821)
Max. Continuous	89.5	101.3 (54821)	104 (6134)	942 (1728)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Rotor Limits.	Power On %	Power Off %	
Min. Continuous	97	80	for gross mass up to 1900 kg (4189 lb)
		85	for gross mass above 1900 kg (4189 lb)
Max. Continuous	104	106	

Airspeed Limits (IAS). Max. v_{NE} = 155 kts. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range. *Longitudinal C.G. Limits*

max. forward range: at 1840 kg (4057 lb): 4180.0 mm (164.6 in.) aft of datum
at 2910 kg (6415 lb): 4227.3 mm (166.43 in.) aft of datum
at 2950 kg (6504 lb): 4229.3 mm (166.51 in.) aft of datum

max. rearward range: at 1500 kg (3307 lb): 4570.0 mm (179.9 in.) aft of datum
at 2910 kg (5996 lb): 4369.0 mm (172.0 in.) aft of datum
at 2950 kg (6504 lb): 4362.6 mm (171.75 in.) aft of datum

Straight line variation between points given.

Lateral C.G. Limits
Max. deviation 100 mm (3.94 in.) left or right of the fuselage median plane.

Empty Weight C.G. Range None

Maximum Weight. 2910 kg (6415 lb) / 2950 kg (6504 lb)

Note: Operation of the aircraft with MTOW up to 2950 kg is only permitted in accordance with FMS 9.1-5, FMS 9.1-6 and FMS 9.1-7 from S/N 1055 and subsequent, or after SB EC135-62-028.

Minimum Crew. 1 Pilot

Passengers. 6 (or 7 if the kit described in FMS 9.2-31 is installed and operated)

Max. Baggage. Max. permissible floor loading: 600 kg/m^2 (123 lb/sq. ft.)
Max. loading: 1130 kg (2491 lb)

Fuel Capacity. total: 680 liter (179.6 US gal.) (standard fuel tank, up to S/N 249)
usable: 670.5 liter (177.1 US gal.) (standard fuel tank, up to S/N 249)

total: 673.4 liter (177.9 US gal.) (self sealing fuel tank, up to S/N 249)
usable: 664 liter (175.4 US gal.) (self sealing fuel tank, up to S/N 249)

total: 710 liter (187.6 US gal.) (standard fuel tank, S/N 250 and subsequent)
usable: 700.5 liter (185.1 US gal.) (standard fuel tank, S/N 250 and subsequent)

total: 701 liter (185.2 US gal.) (self sealing fuel tank, S/N 250 and subsequent)
usable: 691.6 liter (182.7 US gal.) (self sealing fuel tank, S/N 250 and subsequent)

Oil Capacity. Engine oil capacity: 4.85 liter (1.28 US gal.) included in minimum gross weight

Maximum Operating Altitude. 6096 m (20000 ft)

Rotorblade and Control Movements. For rigging information refer to the EC135 Maintenance Manual.

Additional Information.
SN 0858 was converted from an EC635T2+ to an EC135T2+ with the application of major modification E6065 via Airbus Helicopters SB-EC135-00-002. The aircraft has two data plates identifying it as a converted EC635T2+ and carries the same certification basis and same continued airworthiness requirements as an EC135T2+. See NOTE 7.

VII. Model EC135P3 (Normal Category) Helicopter, Approved September 3, 2015
For Models EC135P3 equipped with avionics configuration HELIONIX (Mod E-2698), see Note 5.

Engines. 2 Pratt & Whitney Canada PW 206 B3

Fuel. See Rotorcraft Flight Manual

Installed Engine Limits.

	Output Shaft	Gas Generator Speed N-1	Output Shaft Speed N-2	Measured Gas Temperature (TOT)

	Torque %	%	%	°C (°F)
Normal Operation				
Takeoff power (5 min.)	78	99.8	105.5	900 (1652)
Max Continuous	69	97.4	105.5	835 (1535)
One Engine Inoperative				
30 sec. power	128	104.3	104.5	990 (1814)
2 min. power	125	102.6	104.5	950 (1742)
Max. Continuous	89.5	99.8	104.5	900 (1652)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Rotor Limits.	Power On %	Power Off %	
Min. Continuous	97	80	for gross mass up to 1900 kg (4189 lb)
		85	for gross mass above 1900 kg (4189 lb)
Max. Continuous	105.5	106	

Airspeed Limits (IAS). Max. v_{NE} = 130 kts. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range. *Longitudinal C.G. Limits*

max. forward range: at 2039 kg (4495 lb): 4152 mm (163.5 in.) aft of datum
at 2980 kg (6569 lb): 4201 mm (165.4 in.) aft of datum

max. rearward range: at 1600 kg (3527 lb): 4555 mm (179.3 in.) aft of datum
at 2980 kg (6569 lb): 4369 mm (172 in.) aft of datum

Straight line variation between points given.

Lateral C.G. Limits
Max. deviation 100 mm (3.94 in.) left or right of the fuselage median plane.

Empty Weight C.G. Range. None

Maximum Weight. 2980 kg (6569 lb)

Minimum Crew. 1 Pilot

Passengers. 7

Max. Baggage. Max. permissible floor loading: 600 kg/m^2 (123 lb/sq. ft.)
Max. loading: 1130 kg (2491 lb)

Fuel Capacity. total: 680 liter (179.6 US gal.)
usable: 670.5 liter (177.1 US gal.)

total: 710 liter (187.6 US gal.)
usable: 700.5 liter (185.1 US gal.)

Oil Capacity. Engine oil capacity: 4.5 liter (1.19 US gal.) included in minimum gross weight

Max. Operating Altitude. 6096 m (20000 ft)

Rotorblade and Control Movements. For rigging information refer to the EC135Maintenance Manual.

VIII. Model EC135T3 (Normal Category) Helicopter, Approved September 3, 2015
For Models EC135T3 equipped with avionics configuration HELIONIX (Mod E-2698), see Note 5.

Engines. 2 Turbomeca ARRIUS 2B2

Fuel. See Rotorcraft Flight Manual

Installed Engine Limits (ARRIUS 2B2).

	Output Shaft Torque %	Gas Generator Speed N-1 %	Output Shaft Speed N-2 %	Measured Gas Temperature (TOT) °C (°F)
Normal Operation				
Takeoff power (5 min.)	78	86.1-100	106	897 (1647)
Max Continuous	69	85.3-99	106	879 (1614)
One Engine Inoperative				
30 second power	128	91.7-104.8	106	1024 (1875)
2.0 min. power	125	91.7-103.5	106	994 (1821)
Max. Continuous	89.5	87.4-101.25	106	942 (1728)

See Rotorcraft Flight Manual for other limitations including speed and temperature transients

Rotor Limits.

	Power On %	Power Off %	
Min. Continuous	97	80	for gross mass up to 1900 kg (4189 lb)
		85	for gross mass above 1900 kg (4189 lb)
Max. Continuous	105.5	106	

Airspeed Limits (IAS). Max. v_{NE} = 130 kts. See Rotorcraft Flight Manual for airspeed limit decrease with outside air temperature and altitude.

C.G. Range.

Longitudinal C.G. Limits

max. forward range: at 2039 kg (4495 lb): 4152 mm (163.5 in.) aft of datum
at 2980 kg (6569 lb): 4201 mm (165.4 in.) aft of datum

max. rearward range: at 1600 kg (3527 lb): 4555 mm (179.3 in.) aft of datum
at 2980 kg (6569 lb): 4369 mm (172 in.) aft of datum

Straight line variation between points given.

Lateral C.G. Limits

Max. deviation 100 mm (3.94 in.) left or right of the fuselage median plane.

Empty Weight C.G. Range None

Maximum Weight. 2980 kg (6569 lb)

Minimum Crew. 1 Pilot

Passengers. 7

Max. Baggage. Max. permissible floor loading: 600 kg/m^2 (123 lb/sq. ft.)
Max. loading: 1130 kg (2491 lb)

Fuel Capacity. total: 680 liter (179.6 US gal.)
usable: 670.5 liter (177.1 US gal.)

total: 710 liter (187.6 US gal.)
usable: 700.5 liter (185.1 US gal.)

Oil Capacity. Engine oil capacity: 4.85 liter (1.28 US gal.) included in minimum gross weight

Maximum Operating Altitude. 6096 m (20000 ft)

Rotorblade and Control Movements. For rigging information refer to the EC135Maintenance Manual.

DATA PERTINENT TO ALL MODELS

Datum. 2160 mm (85.04 in.) in front of alignment point in the frame of the front doors.

Leveling Means. Alignment points are given in the EC135 Maintenance Manual

Series Nos. Eligible. A German (Luftfahrt-Bundesamt, LBA) Certificate of Airworthiness endorsed as noted below under "Import Requirements" must be submitted for each individual rotorcraft for which application for FAA certification is made. For the Model EC135P1 serial numbers 0006 and subsequent. For the Model EC135T1 serial numbers 0005 and subsequent.

Certification Basis.
- FAR 21.29
- FAR 27, incl. Amdt. 31
- FAR 29, incl. Amdt. 37, for engine isolation requirements
- FAR 36
- Special Condition defined in Issue Paper G-1
- 14 CFR § 29.1557(d) Miscellaneous markings and placards (documented in ELOS Memo AT04289RD-R-C-1)

For the model EC135T3/P3:
Type Certificate No. H88EU amended: September 3, 2015.
Date of application for amended Type Certificate: November 12, 2012

FAR 21.29, FAR 27 effective February 1, 1965 with amendments 27-1 through 27-31

For IFR certification: FAR 27 Appendix B through Amdt 27-44 requirements

For Category A Certification: FAR 27 Appendix C through Amdt 27-33

For all the changed areas compared to EC135T2+/P2+, FAR-27 through Amdt 27-44 for the following requirements:

27.21	27.303	27.610	27.1091	27.1529
27.25	27.305	27.611	27.1093	27.1541
27.27	27.307	27.613	27.1141	27.1545
27.29	27.309	27.629	27.1143	27.1549
27.31	27.321	27.653	27.1187	27.1559
27.33	27.337	27.659	27.1193	27.1581
27.45	27.339	27.661	27.1301	27.1583
27.49	27.341	27.663	27.1305	
27.51	27.351	27.671	27.1309	
27.65	27.361	27.672	27.1317	
27.67	27.391	27.681	27.1321	
27.75	27.427	27.683	27.1323	
27.79	27.471	27.691	27.1329	
27.141	27.473	27.695	27.1351	
27.143	27.501	27.771	27.1365	
27.151	27.521	27.853	27.1381	
27.161	27.547	27.865	27.1435	
27.171	27.549	27.901	27.1501	
27.173	27.561	27.903	27.1503	
27.175	27.571	27.907	27.1505	
27.177	27.601	27.931	27.1509	
27.231	27.602	27.939	27.1519	
27.241	27.603	27.1041	27.1521	
27.251	27.607	27.1043	27.1525	
27.301	27.609	27.1045	27.1527	

Environmental Standards:
FAR 36 Appendix J at amendment 36-25

The main differences between the EC135T2+/P2+ and the EC135T3/P3 are as follows:
a. Increase of the maximum Take-off Weight from 2950kg to 2980kg

b. Increase of main rotor blade geometry and length to improve the rotor blade efficiency
c. Introduction of Lateral Engine Air Inlet to reduce the engine air intake losses
d. Increase of engine performance through FADEC software change.
e. MEGHAS software adaptation for the new dynamics of the helicopter and adaptation of 3-Axis autopilot software resulting from these changes.

For Models EC135P3/T3 equipped with avionics configuration Helionix (Mod E-2698):
EASA variant: EC 135 P3H / T3H
Type Certificate Data Sheet H88EU amended: November 30, 2017

The certification basis as established in Type Certificate Data Sheet (TCDS) H88EU for the EC135T3/P3 for areas unaffected by this change.

For IFR certification: FAR 27 Appendix B through Amdt 27-46 requirements

For all the changed areas compared to EC135T3/P3, FAR-27 through Amdt 27-47 for the following requirements:

27.610 27.1309 27.1316 27.1457 27.1459

Equivalent Safety Findings:
a. 14 CFR § 27.1305 Powerplant instruments (documented in ELOS Memo AT04292RD-R-P-1)
b. 14 CFR § 27.1549 Powerplant instruments (documented in ELOS Memo AT04292RD-R-P-1)
c. 14 CFR § 27.1305 Powerplant Instruments; 27.1321(a) Arrangement and Visibility; 27.1351(d)(1) Electrical Systems and Equipment, General; and Section C27.2 for 29.1305(a)(6) and (b)(1) Powerplant Instruments (documented in ELOS Memo AT04292RD-R-S-1)
d. 14 CFR § 27.1545(b)(4) Airspeed indicator, and 27.1549(b) Powerplant instruments (documented in ELOS Memo AT04292RD-R-F-1)

Main differences of the HELIONIX configuration to the basic configuration EC135P3/T3:
a. 3 Liquid Crystal Displays for a Single Pilot / Dual Pilot Operational Capability
b. 2 Aircraft Management Computers
c. Primary flight and navigation sensors: 2 Attitude Heading Reference Unit, 2 Magnetic Aircraft Sensor and 2 Air Data Computers
d. 1 Multi-Purpose Control Panel including directional Gyro Mode control to activate the free steering mode
e. 1 Data Transfer Device for uploading/downloading operations and to provide ground data communication
f. 1 Integrated Standby Instrument System including backup SAS functionality
g. 1 four-axis Automatic Flight Control System
h. Autopilot Control Panel

The German Authority Luftfahrt-Bundesamt (LBA) originally type certificated this under its type certificate number (LBA 3061). The FAA validated this product under U.S. Type Certificate Number (H88EU). Effective September 28, 2003, the European Aviation Safety Agency (EASA) began oversight of this product on behalf of the German LBA (EASA TC R.009).

Import Requirements.

To be considered eligible for operation in the United States, each aircraft manufactured under this type certificate must be accompanied by a certificate of airworthiness for export or certifying statement endorsed by the exporting foreign civil airworthiness authority which states (in the English language): “The aircraft covered by this certificate has been examined, test, and found to comply with the German LBA TC Number 3061 (or EASA TC Number R.009) approved under the U.S. Type Certificate Number H88EU and to be in a condition for safe operation.”

The EC135 P3H or EC135 T3H is an EASA variant that corresponds to the FAA validated EC135P3 or EC135T3 model equipped with HELIONIX for SN 2001 and up. FAA documentation does not identify or distinguish between these variants.

Equipment.

The minimum required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the respective helicopter for certification.

For model EC135P1, LBA-approved EC135P1 Rotorcraft Flight Manual, dated 14.06.1996 Revision 0, or later approved revision, as required. LBA-approved EC135P1 (CPDS) Rotorcraft Flight Manual (for helicopters with Central Panel Display System installed), dated November 6, 1998, Revision 0, or later approved revision.

For model EC135T1, LBA-approved EC135T1 Rotorcraft Flight Manual, dated 14.06.1996 Revision 0, or later approved revision, as required. LBA-approved EC135T1 (CPDS) Rotorcraft Flight Manual (for helicopters with Central Panel Display System installed), dated May 26, 1999, Revision 0, or later approved revision.

For model EC135P2, LBA-approved EC135P2(CPDS) Rotorcraft Flight Manual, dated July 10, 2001, Revision 0, or later approved revision, as required.

For model EC135T2, LBA-approved EC135T2(CPDS) Rotorcraft Flight Manual, dated August 9, 2002, Revision 0, or later approved revision, as required.

For model EC135P2+, EASA-approved EC135P2+ Rotorcraft Flight Manual, dated February 21, 2006, Revision 0, or later approved revision, as required.

For model EC135T2+, EASA-approved EC135T2+ Rotorcraft Flight Manual, dated February 21, 2006, Revision 0, or later approved revision, as required.

For model EC135P3, EASA-approved EC135P3(CPDS) Rotorcraft Flight Manual, dated March 18, 2015, Revision 0, or later approved revision, as required. For rotorcraft equipped with avionics configuration HELIONIX (Mod E-2698), EASA-approved EC135P3H Rotorcraft Flight Manual, dated October 4, 2017, Revision 4, or later approved revision, as required.

For model EC135T3, EASA-approved EC135T3(CPDS) Rotorcraft Flight Manual, dated October 17, 2014, Revision 0, or later approved revision, as required. For rotorcraft equipped with avionics configuration HELIONIX (Mod E-2698), EASA-approved EC135T3H Rotorcraft Flight Manual, dated October 4, 2017, Revision 4, or later approved revision, as required.

For Category A special operation, the configuration requirements as defined in section A.2.2 of the applicable 9.1-1 Rotorcraft Flight Manual Supplement must be met.

Service Information.

Service bulletins, repair manuals, vendor manuals, rotorcraft flight manuals and maintenance manuals, which contain a statement that the document is approved by the European Aviation Safety Agency (EASA) or, for approvals made before September 28, 2003, by the German LBA, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.

NOTES

NOTE 1.

Turbomeca ARRIUS 2B1 engines installed in EC135T1 serial numbers 0036 and subsequent. ARRIUS 2B1 engine installation limitations apply if ECD Service Bulletin EC135-71-001 is incorporated on EC135T1 serial numbers 0035 and prior.

NOTE 2.

The model EC-135 rotorcraft employs electronic engine controls, commonly named Full Authority Digital Engine Controls (FADEC) and is recognized to be more susceptible to Electromagnetic Interference (EMI) than rotorcraft that have only manual (non-electronic) controls. (EMI may be the result of radiated or conducted interference.) For this reason modifications that add or change systems that have the potential for EMI, must either be qualified to a standard acceptable to the FAA or tested at the time of installation for interference to the FADEC. This type of testing must employ the particular FADEC's diagnostic techniques and external diagnostic techniques. The test procedure must be FAA approved.

NOTE 3.

For the EC 135(CPDS) to be eligible for SPIFR-Cockpit with AFCS and AN Flight Displays the following RFM supplements are required; FMS 9.2-48, Revision 4, Automatic

Flight Control System, LBA approved December 22, 2000, FMS 9.2-53, Revision 2, Single Flight Control Display System, LBA approved September 7, 2000, and FMS 9.2-56, Revision 3, SP/DPIFR Operation Kit, LBA approved August 17, 2000.

NOTE 4. Any changes to the type design of this helicopter by means of an amended type certificate (TC), supplemental type certificate (STC), or amended STC, requiring instructions for continued airworthiness (ICA's) must be submitted thru the project aircraft certification office (ACO) for review and acceptance by the Fort Worth -Aircraft Evaluation Group (FTW-AEG) Flight Standards District Office (FSDO) prior to the aircraft delivery, or upon issuance of the first standard airworthiness certificate for the affected aircraft, whichever occurs later as prescribed by Title 14 CFR 21.50. Type design changes (major repairs or alterations) by means of a FAA Form 337 (field approval) that require ICA's must have those ICA's reviewed by the field approving FSDO.

NOTE 5. EC135P2+ starts with S/N 505 or upgraded EC135P2 model according to Service Bulletin EC135-71-033.

EC135T2+ starts with S/N 506 or upgraded EC135T2 model according to Service Bulletin EC135-71-033.

EC135P3 starts with S/N 1178 or upgraded EC135P2+ model according to Service Bulletin EC135-71T-045.

EC135P3 rotorcraft equipped with avionics configuration HELIONIX (Mod E-2698) starts with S/N 2006.

EC135T3 starts with S/N 1155 or upgraded EC135T2+ model according to Service Bulletin EC135-71T-045.

EC135T3 rotorcraft equipped with avionics configuration HELIONIX (Mod E-2698) starts with S/N 2001.

NOTE 6. EC135P3/T3 rotorcraft equipped with avionics configuration HELIONIX (Mod E-2698) must comply with Type Design Definition as defined in AH document, EC135 Type Design Definition for United States of America, L0000M01USA.

NOTE 7 The EC635T2+ mandatory continued operational safety requirements issued by EASA have not been addressed by the FAA; therefore, import of EC635T2+ models is limited to SN 0858. This aircraft was converted from an EC635T2+ to an EC135T2+ and has maintained its continued airworthiness by meeting regulatory requirements defined for the EC135T2+. No other serial numbers are eligible for conversion and import.

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