

Human External Cargo (HEC) Personnel Carrying Device System (PCDS)

ICAR 2019, Zakopane

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Simple vs Complex PCDS



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History: Certification Memorandum



- ➤ CM-CS-005 principles
 - Definition of « simple PCDS » vs « complex PCDS »
 - Addresses simple PCDS only
 - > Approval of simple PCDS as Minor change
 - Reliance on EU standards (EN) for simple PCDS

EASA Certification Memoranda clarify the European Aviation Safety Agency's general course of action items. They are intended to provide guidance on a particular subject and, as n >> Directive (EC) 89/686/EEC (Personal Protective Equipments and a storm as a person of superseded by Regulation (EU) 2016/425

Directive (EC) 2006/42/EC (Machinery Directive)

Certification Memorandum

A BUIDANCE ON & DANTICULAR SUBJECT AND AS A STATEMENT OF CONTRACT OF CONTRACT

Helicopter External Loads Personnel Carrying Device System

^{Ateg} Acceptable Means or compliance (Annu) or as source material 'e not intended to introduce new certification requirements or to material s and do not constitute any legal obligation.

& documents into which either additional criteria or additional

EASA CM No.: CM-CS-005 Issue 01 issued 08



History: Certification Memorandum

CM-CS-005 approach for simple PCDS

- Simple design, non-rigid (tailored to textile devices)
- No more than 2 external persons
- Instructions for Continued Airworthiness (ICA)
- Helicopter hook/PCDS compatibility
- Provision for hoist operator retaining system
- Exoneration from some CS-27/29.865 requirements, eg fatigue evaluation



PCDS approval route – current status

- AMC 27.865 Simple/complex PCDS concept implementation in CS: AC 27.8658 \$ 27.865 EXTERNAL LOADS to meet EASA's interpretation of CS 27.865 in the showing of compliance. AMC No 1 addresses certification for applications that require the use of Category A rotorcation for applications that require the use of Category A rotorcation for applications that require the use of Category A rotorcation for applications that require the use of Category A rotorcation for applications that require the use of Category A rotorcation for applications for a rotorcation for applications for a rotorcation for applications that require the use of Category A rotorcation for a rotor alled, in the showing of compliance. AMC No 2 addresses the specificities CS-27/29 Amdt 5 (June 2018)

 - Change of CS-27/29.865 rule
 Creation of AMC 27/29.865, retaining provision of the solution of the so Somel-canying device systems for numari iidance and acceptable means of S 27.865 (Amendment 27.36) ach to the approval of simple personnel-canving device AMC No 1 to CS 27.865 Human External Cargo applications that require the use of Category A rotorcraft Proach to the approval of simple personnel-carrying device in the scope of type certification.

This additional EASA AMC, used in conjunction with FAA guidance? (HEC), provides an acceptable means of compliance with CS 27.865

This additional EASA AMC, used in conjunction with FAA guidance? on Human External Cargo of Category A rotorcraft.

This AMC addresses the difference in operational requirements between the USA and Europe and

CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads as HEC or NHEC, which are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC No 2 to CS 27.865 classifies external loads are defined in AMC NO 2 to CS 27.865 class Operational rules may, however, require the use of Category A rotorcraft for specific applications, and

- - > no longer mandatory, but
 - ➤ still possible
- possible
 Based on CM-CS-005 provisions
 If required by applicable operating rule, or catification consequences of category A considerations for co



PCDS approval route – current status

- Simple/complex PCDS concept implementation in Air INTING REGULATION (EU) 2019/1384 regulation: 965/2012
 - Air OPS rules have been amended on 04/09/2019
 - > OPS requirements and AMC for simple PCDS based on CM-CS-00 principles
 - AMC will be published soon
 - Complex PCDS remain subject to airworthiness approval



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