



BSI Standards Publication

## Space Engineering — Thermal design handbook

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Part 4: Conductive Heat Transfer

## National foreword

This Published Document is the UK implementation of CEN/CLC/TR 17603-31-04:2021.

The UK participation in its preparation was entrusted to Technical Committee ACE/68, Space systems and operations.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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ISBN 978 0 55 16978 2

ICS 49.040

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This Published Document was published under the authority of the Standards Policy and Strategy Committee on 31 August 2021.

### Amendments/corrigenda issued since publication

Date	Text affected
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TECHNICAL REPORT  
RAPPORT TECHNIQUE  
TECHNISCHER BERICHT

**CEN/CLC/TR 17603-31-  
04**

August 2021

ICS 49.140

English version

**Space Engineering - Thermal design handbook - Part 4.  
Conductive Heat Transfer**

Ingénierie spatiale - Manuel de conception thermique -  
Partie 4 : Transfert de chaleur par conduction

Raumfahrttechnik - Handbuch für thermisches Design -  
Teil 4: Leitende Wärmeübertragung

This Technical Report was approved by CEN on 14 June 2021. It has been drawn up by the Technical Committee CEN/CLC/JTC 5.

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**CEN-CENELEC Management Centre:  
Rue de la Science 23, B-1040 Brussels**

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## European Foreword

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This document (CEN/CLC/TR 17603-31-04:2021) has been prepared by Technical Committee CEN/CLC/JTC 5 "Space", the secretariat of which is held by DIN.

It is highlighted that this technical report does not contain any requirement but only collection of data or descriptions and guidelines about how to organize and perform the work in support of EN 16603-31.

This Technical report (TR 17603-31-04:2021) originates from ECSS-E-HB-31-01 Part 4A.

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This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document has been developed to cover specifically space systems and has therefore precedence over any TR covering the same scope but with a wider domain of applicability (e.g.: aerospace).

# 1

## Scope

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This Part 4 of the spacecraft thermal control and design data handbooks, provides information on calculating the conductive heat transfer rate for a variety of two and three-dimensional configurations.

Calculations for the conductance of the interface between two surfaces (joints) require special consideration and are included as a separate clause.

The Thermal design handbook is published in 16 Parts

TR 17603-31-01	Thermal design handbook – Part 1: View factors
TR 17603-31-02	Thermal design handbook – Part 2: Holes, Grooves and Cavities
TR 17603-31-03	Thermal design handbook – Part 3: Spacecraft Surface Temperature
TR 17603-31-04	Thermal design handbook – Part 4: Conductive Heat Transfer
TR 17603-31-05	Thermal design handbook – Part 5: Structural Materials: Metallic and Composite
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TR 17603-31-14	Thermal design handbook – Part 14: Cryogenic Cooling
TR 17603-31-15	Thermal design handbook – Part 15: Existing Satellites
TR 17603-31-16	Thermal design handbook – Part 16: Thermal Protection System