

## **DORMA TS73V EN 2-4 RACK AND PINION DOOR CLOSER**

This folder contains all technical documentation detailing the compliance of the DORMA TS73V Door Closer complies with the technical and product requirements contained within United Kingdom Building Regulations and Construction Product Regulations 1991.

### Contents

#### **1. Declaration of Performance**

The TS73V is CE marked to BS EN1154

#### **2. EN1154 Certificate of Constancy of Performance**

The TS73V has been successfully independently third party tested to BS EN1154

#### **3. Certifire Certificate CF117**

The TS73V is Certifire Approved as per enclosed Certificate and is suitable for the following applications:-

- a) Timber doors of up to 2 hours fire resistance when installed on the door on the pull side (standard application) on the door push side (parallel arm) or on the frame on the push side (transom mounting).
- b) Insulated or un-insulated steel doors of up to 4 hours fire resistance when installed on the door on the pull side (standard application) on the door push side (parallel arm) or on the frame on the push side (transom mounting).

#### **4. Torque Curve to demonstrate compliance with requirements of ADM and BS8300**

The TS73V when fitted to size EN3 (Minimum size for a fire door) will exert an opening force of 30N or less between 0 and 30 degrees and 22.5N or less between 30 and 60 degrees of opening when applied to doors 792mm wide or above.

### **Technical Specification**

DORMA TS73V EN2-4 Rack and Pinion Door Closer with adjustable power, adjustable 'thinking backcheck, adjustable closing speed in two independent ranges, closing force infinitely variable between EN2-4, Non Handed, CE Marked to BS EN1154 and Certifire Certificated CF117.

**Once the TS73V Door Closer has been fitted and adjusted accordingly this document can be passed to Building Control to demonstrate compliance with UK Building Regulations and to the 'responsible person' of the Building owner/occupier for use in respect of RR(FS)O requirements.**

# LEISTUNGSERKLÄRUNG

# DECLARATION OF PERFORMANCE

DOP\_0004

**EN EU Nr. 305/2011 Declaration of Performance**

Unique identification code of the product-type: Controlled door closing devices **DORMA TS 73 V EN 2-4**

- Intended use/es: On fire and smoke compartmentation doors to fulfil the self closing requirements of such doors.
- Manufacturer: dormakaba Deutschland GmbH - DORMA Platz 1 - 58256 Ennepetal
- System/s of assessment and verification of constancy of performance (AVCP): System 1
- Harmonised standard: EN 1154: 1996/A1: 2002/AC: 2006
- Notified body/ies: MPA NRW 0432
- Declared performance/s:

Essential characteristic	Performance	Harmonised technical specification
Self-closing	<ul style="list-style-type: none"> <li>▪ Closing doors from <math>\geq 180^\circ</math> open grade 4</li> <li>▪ Door closer power size EN 2-4</li> <li>▪ Suitability for fire/smoke door use grade 1</li> <li>▪ Safety grade 1</li> <li>▪ Temperature dependence <math>+40^\circ\text{C}</math> and <math>-15^\circ\text{C}</math>: <math>\geq 3\text{s}</math> <math>\leq 25\text{s}</math></li> <li>▪ Latch control</li> <li>▪ Back check</li> <li>▪ Adjustable closing force</li> </ul>	EN 1154: 1996/A1: 2002/AC: 2006
Durability of self-closing	<ul style="list-style-type: none"> <li>▪ Durability 500000 cycles grade 8</li> <li>▪ Very high corrosion resistance grade 4</li> </ul>	
Dangerous substances	<ul style="list-style-type: none"> <li>▪ Substances of very high concern <math>&lt;</math> threshold values</li> </ul>	

The performance of the product identified above is in conformity with the set of declared performance/s. This declaration of performance is issued, in accordance with Regulation (EU) No 305/2011, under the sole responsibility of the manufacturer identified above.

Signed for and on behalf of the manufacturer by:

Ennepetal 03.11.2016



Michael Hensel

Senior Vice President  
Access Solutions DACH

**Materialprüfungsamt Nordrhein-Westfalen**

Prüfen • Überwachen • Zertifizieren

**Certificate of constancy of performance****0432-CPR-00026-33**

Version 02

In compliance with Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 (the Construction products Regulation or CPR), this certificate applies to the construction product

**Overhead door closer of the model series TS 73, TS 83, and TS 89F**

Controlled door closing devices for single and doubleleaf swing doors  
as detailed and classified on annex 2

placed on the market under the name or trade mark of

**dormakaba Deutschland GmbH**

DORMA Platz 1  
58256 Ennepetal  
Germany

and produced in the manufacturing plant(s)

**DO 2.20**

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in annex ZA of the standard(s)

**EN 1154:1996/A1:2002/AC:2006**

under **system 1** for the performance set out in this certificate are applied and that the factory production control conducted by the manufacturer is assessed to ensure the

**constancy of performance of the construction product.**

This certificate was first issued on 22.08.2018 and will remain valid until 22.08.2023 as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended or withdrawn by the notified product certification body.

Dortmund, 18.10.2018



By order

Dipl.-Ing. Friedrich  
Head of Certification Body

This Certificate consists of 1 page and 1 annex(es).

This Certificate replaces the Certificate no. 0432-CPR-00026-33 dated  
22.08.2018, Version 01.



The original of this document was issued in German language.

In case of doubt only the German version is valid.

# Materialprüfungsamt Nordrhein-Westfalen

Prüfen · Überwachen · Zertifizieren

## List of Products

<b>Type :</b>	"TS 73 V EN 2-4 BC/ÖD"
<b>Description :</b>	Overhead door closer with hydraulic damping, adjustable latch and adjustable back check.
<b>Arm system :</b>	Scissor arm
<b>Mounting :</b>	Door-leaf fixing, pull side (standard installation) Frame fixing, push side
<b>Size :</b>	2 - 4
<b>Classification / mounting:</b>	4 8 2-4 1 1 4 Door-leaf fixing, pull side (standard installation) 4 8 2-4 1 1 4 Frame fixing, push side 4 8 2-4 1 1 4
<b>Manufacturing plant :</b>	DO 2.20
<b>Remarks:</b>	optional with mounting plate

### Intended use:

for single and double leaf fire- and/or smoke protection doors

Essential characteristics	Clauses with requirements in EN 1154:1996/A1:2002/AC:2006	Performance of product
Self-closing	5.2.1 General 5.2.3 Closing torque 5.2.4 Opening torque 5.2.5 Efficiency 5.2.6 Closing time 5.2.7 Opening angle Door-leaf fixing, pull side Frame fixing, push side 5.2.8 Overload test 5.2.9 Temperature dependence 5.2.10 Leakage 5.2.11 Damage 5.2.12 Latch regulation 5.2.13 Back check 5.2.14 Delayed action 5.2.15 Adjustable force 5.2.16 Free play at zero point position 5.2.18 Use on fire-/smoke protection doors	passed passed (Size 2-4) passed (Size 2-4) passed (Size 2-4) passed (Size 2-4) passed (Class 4) passed (Class 4) passed (Size 2-4) passed passed passed passed not applicable passed not applicable Class 1: passed
Durability Self-closing	5.2.2 Durability 5.2.17.1 Corrosion resistance 5.2.17.2 Corrosion resistance 5.2.17.3 Corrosion resistance	Class 8 (500 000 cycles): passed Class 4 (240h): passed Class 4 (240h): passed Class 4 (240h): passed
Dangerous substances	Annex ZA.3	The manufacturer has not declared any dangerous substances.

# Materialprüfungsamt Nordrhein-Westfalen

Prüfen · Überwachen · Zertifizieren

<b>Type :</b>	"TS 83 EN 3-6 BC/ÖD + DC/SV"
<b>Description :</b>	Overhead door closer with hydraulic damping, adjustable latch, adjustable back check, optional adjustable delayed action and optional corrosion resistant design (AC).
<b>Arm system :</b>	Scissor arm
<b>Mounting :</b>	Door-leaf fixing, pull side (standard installation) Frame fixing, push side
<b>Size :</b>	3 - 6
<b>Classification / mounting:</b>	4 8 3-6 1 1 3 Door-leaf fixing, pull side (standard installation) 4 8 3-6 1 1 3 Frame fixing, push side 4 8 3-6 1 1 3
<b>Manufacturing plant :</b>	DO 2.20
<b>Remarks:</b>	optional with mounting plate

### Intended use:

for single and double leaf fire- and/or smoke protection doors

Essential characteristics	Clauses with requirements in EN 1154:1996/A1:2002/AC:2006	Performance of product
Self-closing	5.2.1 General 5.2.3 Closing torque 5.2.4 Opening torque 5.2.5 Efficiency 5.2.6 Closing time 5.2.7 Opening angle Door-leaf fixing, pull side Frame fixing, push side 5.2.8 Overload test 5.2.9 Temperature dependence 5.2.10 Leakage 5.2.11 Damage 5.2.12 Latch regulation 5.2.13 Back check 5.2.14 Delayed action 5.2.15 Adjustable force 5.2.16 Free play at zero point position 5.2.18 Use on fire-/smoke protection doors	passed passed (Size 3-6) passed (Size 3-6) passed (Size 3-6) passed (Size 3-6) passed (Class 4) passed (Class 4) passed (Size 3-6) passed passed passed passed passed passed passed not applicable Class 1: passed
Durability Self-closing	5.2.2 Durability 5.2.17.1 Corrosion resistance 5.2.17.2 Corrosion resistance 5.2.17.3 Corrosion resistance	Class 8 (500 000 cycles): passed Class 3 (96h): passed Class 3 (96h): passed Class 3 (96h): passed
Dangerous substances	Annex ZA.3	The manufacturer has not declared any dangerous substances.

# Materialprüfungsamt Nordrhein-Westfalen

Prüfen · Überwachen · Zertifizieren

<b>Type :</b>	"TS 83 EN 2-5 BCA/DC"
<b>Description :</b>	Overhead door closer with hydraulic damping, adjustable latch, adjustable back check and optional adjustable delayed action.
<b>Arm system :</b>	Scissor arm
<b>Mounting :</b>	Door-leaf fixing, pull side (standard installation) Frame fixing, push side
<b>Size :</b>	2 - 5
<b>Classification / mounting:</b>	4 8 2-5 1 1 3 Door-leaf fixing, pull side (standard installation) 4 8 2-5 1 1 3 Frame fixing, push side 4 8 2-5 1 1 3
<b>Manufacturing plant :</b>	DO 2.20
<b>Remarks:</b>	optional with mounting plate

### Intended use:

for single and double leaf fire- and/or smoke protection doors

Essential characteristics	Clauses with requirements in EN 1154:1996/A1:2002/AC:2006	Performance of product
Self-closing	5.2.1 General 5.2.3 Closing torque 5.2.4 Opening torque 5.2.5 Efficiency 5.2.6 Closing time 5.2.7 Opening angle Door-leaf fixing, pull side Frame fixing, push side 5.2.8 Overload test 5.2.9 Temperature dependence 5.2.10 Leakage 5.2.11 Damage 5.2.12 Latch regulation 5.2.13 Back check 5.2.14 Delayed action 5.2.15 Adjustable force 5.2.16 Free play at zero point position 5.2.18 Use on fire-/smoke protection doors	passed passed (Size 2-5) passed (Size 2-5) passed (Size 2-5) passed (Size 2-5) passed (Class 4) passed (Class 4) passed (Size 2-5) passed passed passed passed passed passed passed not applicable Class 1: passed
Durability Self-closing	5.2.2 Durability 5.2.17.1 Corrosion resistance 5.2.17.2 Corrosion resistance 5.2.17.3 Corrosion resistance	Class 8 (500 000 cycles): passed Class 3 (96h): passed Class 3 (96h): passed Class 3 (96h): passed
Dangerous substances	Annex ZA.3	The manufacturer has not declared any dangerous substances.

# Materialprüfungsamt Nordrhein-Westfalen

Prüfen · Überwachen · Zertifizieren

<b>Type :</b>	"TS 83 EN 7 BC/ÖD"
<b>Description :</b>	Overhead door closer with hydraulic damping, adjustable latch, and adjustable back check.
<b>Arm system :</b>	Scissor arm
<b>Mounting :</b>	Door-leaf fixing, pull side (standard installation) Frame fixing, push side
<b>Size :</b>	7
<b>Classification / mounting:</b>	4 8 7 1 1 4 Door-leaf fixing, pull side (standard installation) 4 8 7 1 1 4 Frame fixing, push side 4 8 7 1 1 4
<b>Manufacturing plant :</b>	DO 2.20
<b>Remarks:</b>	optional with mounting plate

### Intended use:

for single and double leaf fire- and/or smoke protection doors

Essential characteristics	Clauses with requirements in EN 1154:1996/A1:2002/AC:2006	Performance of product
Self-closing	5.2.1 General 5.2.3 Closing torque 5.2.4 Opening torque 5.2.5 Efficiency 5.2.6 Closing time 5.2.7 Opening angle Door-leaf fixing, pull side Frame fixing, push side 5.2.8 Overload test 5.2.9 Temperature dependence 5.2.10 Leakage 5.2.11 Damage 5.2.12 Latch regulation 5.2.13 Back check 5.2.14 Delayed action 5.2.15 Adjustable force 5.2.16 Free play at zero point position 5.2.18 Use on fire-/smoke protection doors	passed passed (Size 7) passed (Size 7) passed (Size 7) passed (Size 7) passed (Class 4) passed (Class 4) passed (Size 7) passed passed passed passed not applicable passed not applicable Class 1: passed
Durability Self-closing	5.2.2 Durability 5.2.17.1 Corrosion resistance 5.2.17.2 Corrosion resistance 5.2.17.3 Corrosion resistance	Class 8 (500 000 cycles): passed Class 4 (240h): passed Class 4 (240h): passed Class 4 (240h): passed
Dangerous substances	Annex ZA.3	The manufacturer has not declared any dangerous substances.

# Materialprüfungsamt Nordrhein-Westfalen

Prüfen · Überwachen · Zertifizieren

<b>Type :</b>	"TS 89 F EN 3-6"
<b>Description :</b>	Overhead door closer with hydraulic damping and adjustable latch.
<b>Arm system :</b>	Scissor arm
<b>Mounting :</b>	Door-leaf fixing, pull side (standard installation) Frame fixing, push side
<b>Size :</b>	3 - 6
<b>Classification / mounting:</b>	4 8 3-6 1 1 3 Door-leaf fixing, pull side (standard installation) 4 8 3-6 1 1 3 Frame fixing, push side 4 8 3-6 1 1 3
<b>Manufacturing plant :</b>	DO 2.20
<b>Remarks:</b>	optional with mounting plate

### Intended use:

for single and double leaf fire- and/or smoke protection doors

Essential characteristics	Clauses with requirements in EN 1154:1996/A1:2002/AC:2006	Performance of product
Self-closing	5.2.1 General 5.2.3 Closing torque 5.2.4 Opening torque 5.2.5 Efficiency 5.2.6 Closing time 5.2.7 Opening angle Door-leaf fixing, pull side Frame fixing, push side 5.2.8 Overload test 5.2.9 Temperature dependence 5.2.10 Leakage 5.2.11 Damage 5.2.12 Latch regulation 5.2.13 Back check 5.2.14 Delayed action 5.2.15 Adjustable force 5.2.16 Free play at zero point position 5.2.18 Use on fire-/smoke protection doors	passed passed (Size 3-6) passed (Size 3-6) passed (Size 3-6) passed (Size 3-6) passed (Class 4) passed (Class 4) passed (Size 3-6) passed passed passed passed not applicable not applicable passed not applicable Class 1: passed
Durability Self-closing	5.2.2 Durability 5.2.17.1 Corrosion resistance 5.2.17.2 Corrosion resistance 5.2.17.3 Corrosion resistance	Class 8 (500 000 cycles): passed Class 3 (96h): passed Class 3 (96h): passed Class 3 (96h): passed
Dangerous substances	Annex ZA.3	The manufacturer has not declared any dangerous substances.



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## CERTIFICATE OF APPROVAL

### No CF 117

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This is to certify that, in accordance with  
TS00 General Requirements for Certification of Fire Protection Products  
The undermentioned products of

## DORMA UK LTD

**Wilbury Way, Hitchin, Hertfordshire SG4 0AB**  
Tel: 01462 477600 Fax: 01462 477601

Have been assessed against the requirements of the Technical Schedule(s)  
denoted below and are approved for use subject to the conditions  
appended hereto:

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**CERTIFIED PRODUCT**  
TS73V, TS73V BCDC and TS73EMF

**TECHNICAL SCHEDULE**  
TS 34 - The Contribution Of  
Controlled Door Closing  
Devices And Accessories To  
Fire Resisting Doorsets

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan  
Certification Manager



Issued: 3<sup>rd</sup> February 1992  
Revised: 13<sup>th</sup> March 2019  
Valid to: 2<sup>nd</sup> February 2022

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## CERTIFICATE No CF 117 DORMA UK LTD

### DORMA TS73V, TS73V BCDC and TS73EMF OVERHEAD DOOR CLOSERS

1. TS73V, TS73V BCDC units are adjustable strength rack and pinion overhead door closer, the TS73EMF is a rack and pinion overhead door closer available in fixed sizes EN4, EN5 and EN6. This approval relates to the following overhead mounted door closing devices and configurations:

	Link-arms			Slide arms			
	Projecting arm (Fig. 1) Body door mounted on pull face	Projecting arm (Fig. 61) Body transom mounted on push face	Parallel arm (Fig. 6) Body door mounted on push face	Body door mounted on pull face	Body transom mounted on push face	Body door mounted on push face	Body transom mounted on pull face
TS73V	✓	✓	✓	*	*	*	*
TS73V BCDC	✓	✓	✓	*	*	*	*
TS73EMF EN4	✓	✓	*	*	*	*	*
TS73EMF EN5	✓	✓	*	*	*	*	*
TS73EMF EN6	✓	✓	*	*	*	*	*

**Key:** ✓ - approved \* - Not approved

*Note: Where alternative arms for non-fire applications are included within the packaging, the use of these components on fire resisting door assemblies will invalidate the certification.*

2. This approval relates to their use with the following door assemblies:-

**Latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance up to 120 minutes (Code ITT).**

**Latched and unlatched, door assemblies consisting of metal faced and edged leaves in metal frames, fully-insulated for the required classification period, with or without intumescent sealing, and having a fire resistance up to 240 minutes (Codes MM & IMM)**

**Latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in fully-insulated steel frames having a fire resistance up to 120 minutes (Code ITM)**



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**CERTIFICATE No CF 117**  
**DORMA UK LTD**

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**DORMA TS73V, TS73V BCDC and TS73EMF OVERHEAD DOOR CLOSERS**

3. This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
4. The closers are approved on the basis of:
  - i) Initial type testing to EN1154 and BS EN 1634-1
  - ii) An appraisal against TS34
  - iii) Inspection of quality management system
  - iv) Inspection and surveillance of factory production control
  - v) Ongoing audit testing in accordance with EN 1154 requirements
5. The closers shall be fixed with screws supplied by the closer manufacturer. Bolt-through fixings shall not be used.
6. Where the closers are fitted to door leaves or frames that are manufactured from mineral composite-based materials, or low-density cellulosic-based material, the door assembly shall have previously been shown capable of accommodating the installation of closers at the head of the doorset, without detriment to the door assembly's performance.
7. This approval is applicable only to the specified closers when mounted in the applications stated above and under the classification codes section of this certificate and used with door assemblies of proven fire resistance (as defined in BS EN 1634-1 or BS 476: Part 22: 1987) and having power ratings appropriate to the leaf sizes subject to a minimum size 3 (as specified in BS EN 1154).
8. The approval relates to on-going production. Product and/or its immediate packaging is identified with the manufacturer's name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.



**CERTIFICATE No CF 117**  
**DORMA UK LTD**

**DORMA TS73V, TS73V BCDC and TS73EMF OVERHEAD DOOR CLOSERS**

9. The following tables show acceptable doorsets types and fire resistance periods:

Class	Approved Door Type				
	MM	IMM	ITT	ITM	ITC
FD20	✓*	✓*	✓	✓*	✓
FD30	✓*	✓*	✓	✓*	✓
FD60	✓*	✓*	✓	✓*	✓
FD120	✓*	✓*	✓	✓*	✓
FD240	✓*	✓*	✗	✗	✗
E 20	✗	✗	✓	✓*	✓
EI 20	✓*	✓*	✓	✓*	✓
E 30	✗	✗	✓	✓*	✓
EI 30	✓*	✓*	✓	✓*	✓
E 60	✗	✗	✓	✓*	✓
EI 60	✓*	✓*	✓	✓*	✓
E 90	✗	✗	✓	✓*	✓
EI 90	✓*	✓*	✓	✓*	✓
E 120	✗	✗	✓	✓*	✓
EI 120	✓*	✓*	✓	✓*	✓
E 240	✗	✗	✗	✗	✗
EI 240	✓*	✓*	✗	✗	✗

**Key:**

- ✓ - approved
- ✗ - Not approved
- ✓\* - Fully-insulated steel-based doors and frames only

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AJ/002

Issued: 3<sup>rd</sup> February 1992  
Revised: 13<sup>th</sup> March 2019  
Valid to: 2<sup>nd</sup> February 2022

## CERTIFICATE No CF 117 DORMA UK LTD

### DORMA TS73V, TS73V BCDC and TS73EMF OVERHEAD DOOR CLOSERS

10. Doors are classified as the following types:

**Type MM** - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that do not contain intumescent materials in the frame to leaf gap.

**Type IMM** - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that contain intumescent materials in the frame to leaf gap.

**Type ITT** - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in timber frames

**Type ITM** - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in metal frames.

**Type ITC** - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in proprietary composite frames, of which the principal material is other than timber or metal but which may include any other materials.

#### Scope of Approval:

- Doors may not include uninsulated glass above 20% of their total area.
- The closer may not be fitted to timber doorsets without intumescent protection.
- Closers are only approved for use with steel-based doors and frames that are fully-insulated for the required classification period.
- Mechanical Hold open option is not approved

#### Classification Codes

TS73V when mounted in projecting arm (Figure 1) and transom mount (Figure 61):

4	8	4 3	1	1	4
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TS73V BCDC when mounted in projecting arm (Figure 1) and transom mount (Figure 61):

4	8	4 3	1	1	3
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TS73V when mounted in parallel arm (Figure 6):

4	8	3	1	1	4
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### DORMA TS73V, TS73V BCDC and TS73EMF OVERHEAD DOOR CLOSERS

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Issued: 3<sup>rd</sup> February 1992  
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Valid to: 2<sup>nd</sup> February 2022



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**CERTIFICATE No CF 117**  
**DORMA UK LTD**

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**Classification Codes – Cont'd**

TS73V BCDC when mounted in parallel arm (Figure 6):

4	8	3	1	1	3
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TS73EMF EN4 when mounted in projecting arm (Figure 1) and transom mount (Figure 61):

4	8	4	1	1	4
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TS73EMF EN5 when mounted in projecting arm (Figure 1) and transom mount (Figure 61):

4	8	5	1	1	4
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TS73EMF EN6 when mounted in projecting arm (Figure 1) and transom mount (Figure 61):

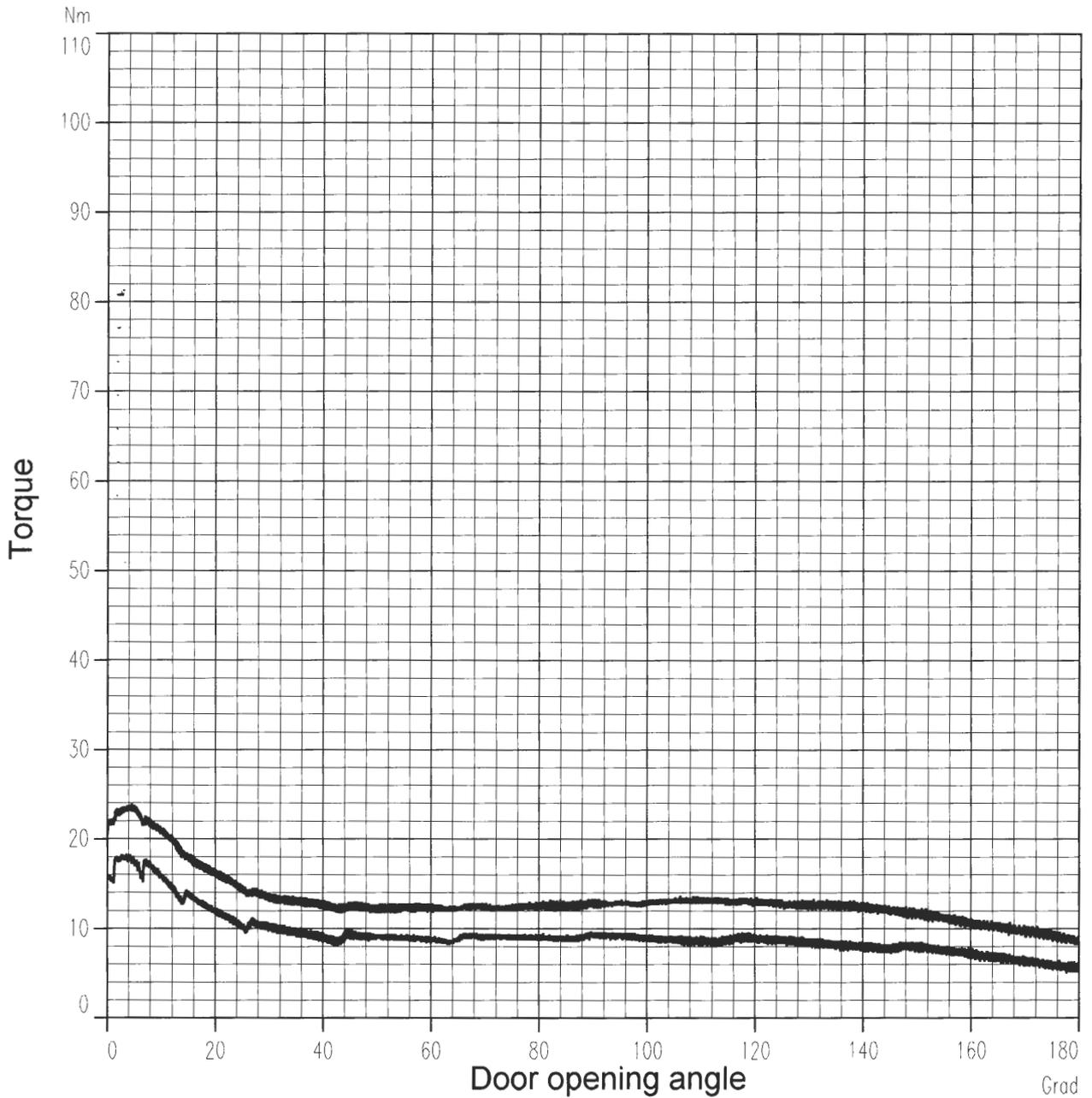
4	8	6	1	1	4
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**Further Information**

Further information regarding the details contained in this data sheet may be obtained from Dorma UK Limited (Tel: 01426 477600).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 646777).

# Torque curve



Controlled door closing device EN 1154

Manufacturer: DORMA  
Model: TS 73V EN 2-4  
Sample: B 1  
size: 3  
5000 Cycles

Standard installation

23.10.2006

*M. Kimm*

