

LOSS PREVENTION CERTIFICATION BOARD

RED BOOK 2010

Volume 1
LIST OF APPROVED
PRODUCTS AND SERVICES

- FIRE DETECTION AND ALARM PRODUCTS & SERVICES
- FIRE SUPPRESSION PRODUCTS & SERVICES
- RELATED INSTALLERS

A Specifier's Guide

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Part

3

*AUTOMATIC SPRINKLER,
WATER SPRAY AND
DELUGE SYSTEMS*

PART 3: AUTOMATIC SPRINKLER, WATER SPRAY AND DELUGE SYSTEMS

INTRODUCTION

Since the 1860s sprinkler systems installed in commercial, public and industrial premises have protected people and property worldwide very successfully. Statistics show that 99% of fires have been controlled by sprinklers alone and 60% of fires have been controlled by no more than 4 sprinklers.

The standards used by LPCB for approving and listing components have been developed to ensure that the components are suitable for use in systems installed to the LPC Sprinkler Rules incorporating EN 12845. Many of these components may also be suitable for use in systems designed in accordance with other international and national codes such as NFPA.

In addition to careful product selection. It is recommended that all systems are designed, installed, commissioned and maintained by third party approved contractors who have demonstrated their competence.

Listings in this section include:

Products

- Wet and dry alarm valves for sprinkler systems
- Wet alarm valve stations
- Accelerators and exhausters for dry pipe valves
- Deluge valves and actuators
- Direct reading flow meters
- Multiple jet controls
- Pipe couplings and fittings
- Flexible drops
- Pre-action control systems
- Sprinkler system recycling systems
- Pressure switches
- Sprinkler heads
- Sprinkler bulbs
- Suction tanks for automatic pumps
- Vortex inhibitors
- Water flow alarm switches
- Flow switch testing devices
- Water spray systems
- Fire pumps
- Multi-state fire pumps
- Diesel engines for sprinkler pump sets
- Pipework supports
- Check valves
- Stop valves
- Plastic pipes and fittings
- Metron actuators
- Water motor alarms.

Products are approved in accordance with a range of standards. The details of these standards are given at the front of each section relevant to the product.

Installation and maintenance contractors

Contractors are approved in accordance with:

LPS 1048: Requirements for the approval of sprinkler system contractors in the UK and Eire.

PART 3: AUTOMATIC SPRINKLER, WATER SPRAY AND DELUGE SYSTEMS

LPS 1301: Requirements for the approval of sprinkler installers in the UK and Ireland for residential and domestic sprinkler systems.

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Sprinkler systems are only effective if designed, installed and maintained correctly. The LPS 1048-1 scheme: *Requirements for the approval of Sprinkler Contractors in the UK and Ireland*, ensures that installers are capable of designing, installing and servicing sprinkler systems to acceptable installation standards.

Scheme Structure

There are 4 approval levels for Sprinkler Contractors in the LPS 1048-1 scheme. Figure 1 below shows the Categories of Work that are allowed to be carried out at each approval level in the LPS 1048-1 scheme.

Figure 1		Approval Level			
		1	2	3	4
A	Pre-calculated ordinary hazard systems, installations, extensions and alterations (excluding water supplies)	✓	✓	✓	✓
B	Pre-calculated high hazard systems, installations, extensions and alterations (excluding water supplies)	✓	✓	✓	✓
C	Town's main water supplies	✓	✓	✓	✓
D	Pumped water supplies	✓	✓	✓	✓
E	Base build contracts (pre-calculated design principles)		✓	✓	✓
F	Systems, installations, extensions and alterations involving FHC design principles			✓	✓

Important Note to Specifiers

Specifiers should only use Sprinkler Contractors that are LPS 1048-1 approved to the appropriate level depending on the type of sprinkler work required, refer to the individual company listings for the approval level of Sprinkler Contractors.

Listing of Sprinkler Contractors

LPS 1048-1 Approved Sprinkler Contractors are listed alphabetically, regardless of their approval level.

Continual Assessment

The LPS 1048-1 scheme has over 80 sprinkler contractors that are continually assessed for their continued capability to undertake sprinkler contracts and for their compliance with the requirements of the LPS 1048-1 scheme.

Certificates of Conformity

In order to ensure that a sprinkler system is effective, specifiers should always request an LPS 1048 Certificate of Conformity. An LPS 1048 Certificate of Conformity may only be issued for a sprinkler system, installation, extension or alteration that is in full compliance with the one of the acceptable installation standards.

Any agreed minor deviations to the installation standard will be recorded on the LPS 1048 Certificate of Conformity. An LPS Certificate of Conformity cannot be issued if there is a major deviation to the installation standard. It should be noted that a Sprinkler Contractor's Completion Certificate is **NOT** an LPS 1048 Certificate of Conformity.

An LPS 1048 Certificate of Conformity only remains valid if the sprinkler system, installation, extension or alteration, covered by the certificate, is serviced and maintained in accordance with the original installation standard.

Supervision

Where an approved Sprinkler Contractor does not meet all the criteria set out in the LPS 1048-1 scheme document to self-certify any of the Categories of Work allowed under its approval level, it is required to have the Category(ies) of Work that it is not approved to self-certify supervised by an LPCB approved Supervising Body or the LPCB Supervisory Service.

Supervision involves a review of the design, an inspection of the installed sprinkler protection, and if water supplies are included in the scope of work, witnessing of the water supply proving tests, for compliance with the installation standard. For supervised contracts, the LPS 1048 Certificates of Conformity is issued by an LPCB approved Supervising Body or the LPCB Supervisory Service.

Details of the Categories of Work that each approved Sprinkler Contractor can self-certify, can be found in the individual company listings.

Figure 2 below details the requirements for supervision and the issue of LPS 1048 Certificates of Conformity.

Figure 2		
Approval Level	Supervision	Issue of LPS 1048 Certificate of Conformity
1	Required for all contracts	By Supervising Body only
2	Only where stated in the Sprinkler Contractor's approval listing	By Sprinkler Contractor or Supervising Body as stated in the Sprinkler Contractor's approval listing
3		
4	Not required.	By Sprinkler Contractor

Section 1.2 lists approved Supervising Bodies.

Financial assessment

The assessment and listing of Sprinkler Contractors in the LPS 1048-1 scheme covers only technical and quality aspects. All other contractual requirements are the responsibility of the parties to the contract.

LPS 1050

Firms listed in Section 2 are authorised to issue LPS 1050 Certificates of Servicing and Inspection for sprinkler systems maintained in accordance with the LPC Sprinkler Rules or other installation standards allowed under the LPS 1048 scheme.

A & F Sprinklers Limited

Atrium House, 574 Manchester Road, Blackford Bridge, Bury, Lancashire BL9 9SW UK

Tel: +44 (0)161 796 5397 • Fax: +44 (0)161 796 6057

E-mail: info@afsprinklers.co.uk • Website: www.afsprinklers.co.uk

Certificate No. ASC-001

Approval Level 4

Approved to self-certify all Categories of Work
No supervision required

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

A.M. Fire Systems Limited

Red Brook Mill, Bury Road, Rochdale OL11 4EE UK
Tel: +44 (0)1706 639439 • Fax: +44 (0)1706 347733
E-mail: rochdale@amfiresystems.co.uk

Certificate No. ASC-076

Approval Level 3

Approved to self-certificate the following Categories of Work: A C D
The following Categories of Work to be supervised - B E F

AD Sprinkler Protection Limited

2/8 Heaton Mill, Grey Street, Denton, Manchester M34 3RG UK
Tel: +44 (0)161 336 0001 • Fax: +44 (0)161 336 6608
E-mail: mail@adsprinklers.co.uk • Website: www.adsprinklers.co.uk

Certificate No. ASC-102

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

All Group Services plc, Mechanical, Fire and Electrical Engineers

Hardy House, Northbridge Road, Berkhamsted, Herts HP4 1EF UK
Tel: +44 (0)1442 876465 • Fax: +44 (0)1442 878138
E-mail: admin@allgroupservices.com • Website: www.allgroupservices.com

Certificate No. ASC-103

Approval Level 1

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Alpine Fire Engineers Limited

Sovereign House, Barehill Street, Littleborough, Lancashire OL15 9BJ UK
Tel: +44 (0)1706 838200 • Fax: +44 (0)1706 838020
E-mail: m.smith@alpinefireengineers.co.uk • Website: www.alpinefireengineers.co.uk

Certificate No. ASC-054

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

APW Fire Protection Limited

Unit A, Marlfield Factory, Front Road, Drumbo, Lisburn BT27 5JY UK
Tel: +44 (0)28 90827046 • Fax: +44 (0)28 90827049

Certificate No. ASC-107

Approval Level 3

Approved to self-certify the following Categories of Work: A
The following Categories of Work to be supervised - B C D E F

Argus Fire Protection Company Limited

Hendglade House, 46 New Road, Stourbridge, West Midlands DY8 1PA UK
Tel: +44 (0)1384 376256 • Fax: +44 (0)1384 393955
E-mail: info@argusfire.co.uk • Website: www.argusfire.co.uk

Certificate No. ASC-005

Approval Level 4

Approved to self-certify all Categories of Work
No supervision required

Armstrong Priestley Limited

Seventy Seven, Holbeck Lane, Leeds LS11 9UL UK
Tel: +44 (0)113 3944040 • Fax: +44 (0)113 3944041
E-mail: info@armstrongpriestley.co.uk • Website: www.armstrongpriestley.co.uk

Certificate No. ASC-016

Approval Level 4

Approved to self-certify all Categories of Work
No supervision required

Ashvale Fire Services Limited

Ashvale House, Fitzroy Street, Ashton-under-Lyne, Lancashire OL7 0JG UK
Tel: +44 (0)161 343 1090 • Fax: +44 (0)161 343 3732
E-mail: sales@ashvalefire.co.uk • Website: www.ashvalefire.com

Certificate No. ASC-074

Approval Level 3

Approved to self-certify the following Categories of Work: A C
The following Categories of Work to be supervised - B D E F

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Automatic Fire Control Limited

Unit 7 Kingsdown Orchard, Hyde Road, Swindon SN2 7RR UK
Tel: +44 (0)1793 821588 • Fax: +44 (0)1793 821587
E-mail: info@automaticfire.co.uk

Certificate No. ASC-027

Approval Level 2

Approved to self-certificate the following Categories of Work: A B C D
The following Categories of Work to be supervised - E

Automatic Sprinkler Company (Ireland) Limited

Unit 2, Jamestown Industrial Centre, Inchicore, Dublin 8, Ireland
Tel: +353 1 453 3108 • Fax: +353 1 453 3121
E-mail: info@automaticsprinklers.ie • Website: www.automaticsprinklers.ie

Certificate No. ASC-101

Approval Level 3

Approved to self-certificate the following Categories of Work: A B C D E
The following Categories of Work to be supervised - F

Besseges Limited

Riverside, Dukinfield, Cheshire SK16 4HE UK
Tel: +44 (0)161 308 3252 • Fax: +44 (0)161 339 5003
E-mail: sales@besseges.co.uk • Website: www.besseges.co.uk

Certificate No. ASC-041

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Blue Shield Fire Protection Limited

Blue Shield House, Queen Street, Tring, Hertfordshire HP23 6BQ UK
Tel: +44 (0)1442 828000 • Fax: +44 (0)1442 828001
E-mail: sales@blueshieldfire.co.uk • Website: www.blueshieldfire.co.uk

Certificate No. ASC-083

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Bush (Fire Engineering) Limited

Unit 28 The Metro Centre, Kangley Bridge Road, Sydenham, London SE26 5BW UK
Tel: +44 (0)845 241 9860 • Fax: +44 (0)845 241 9861
E-mail: sales@bushengineering.com

Certificate No. ASC-065

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Circum Limited

Roundhouse Farm, Roestock Lane, Colney Heath, Hertfordshire AL4 0PP UK
Tel: +44 (0)1727 821228 • Fax: +44 (0)1727 822428
E-mail: sfulcher@circum.ltd.uk • Website: www.circum.ltd.uk

Certificate No. ASC-099

Approval Level 1

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Compco Fire Systems Limited

Church House, Church Lane, Kings Langley, Hertfordshire WD4 8JP UK
Tel: +44 (0)1923 271510 • Fax: +44 (0)1923 274419
E-mail: enquiries@compcofire.co.uk • Website: www.compcofire.co.uk

Certificate No. ASC-100

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Compco Fire Systems Limited

Cleeve House, Malvern Road, Lower Wick, Worcester WR2 4YX UK
Tel: +44 (0)1905 741600 • Fax: +44 (0)1905 741620
E-mail: enquiries@compcofire.co.uk

Certificate No. ASC-049

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Compco Fire Systems Limited

23 Fairfield Place, College Milton, East Kilbride G74 5LP UK

Tel: +44 (0)1355 570033 • Fax: +44 (0)1355 570044

E-mail: enquiries@compcofire.co.uk • Website: www.compcofire.co.uk

Certificate No. ASC-094

Approval Level 3

Approved to self-certificate the following Categories of Work: A

The following Categories of Work to be supervised - B C D E F

D.I.S. Sprinklers

183 Westgate Street, Gloucester GL1 2RN UK

Tel: +44 (0)1452 304927 • Fax: +44 (0)1452 306692

E-mail: sprinklers@dis-ltd.co.uk • Website: www.dis-ltd.co.uk

Certificate No. ASC-030

Approval Level 3

Approved to self-certificate the following Categories of Work: A

The following Categories of Work to be supervised - B C D E F

Dalkia Energy & Technical Services Limited

Limeharbour Court, 5 Limeharbour, London E14 9RH UK

Tel: +44 (0)20 7001 7000 • Fax: +44 (0)20 7001 7272

E-mail: info@dalkiarail.co.uk

Certificate No. ASC-013

Approval Level 3

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

Essential Fire Protection Limited

Morton House, 9 Beacon Court, Pitstone Green Business Park, Pitstone LU7 9GY UK

Tel: +44 (0)1296 661526 • Fax: +44 (0)1296 660627

E-mail: mail@essentialfireprotection.co.uk • Website: www.essentialfireprotection.co.uk

Certificate No. ASC-106

Approval Level 3

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

Eton Fire Limited

Anysley House, Waterside Business Centre, Wolverhampton Road, Cannock WS11 1SN UK
Tel: +44 (0)1543 431340 • Fax: +44 (0)1543 571680
E-mail: fire@etonfire.co.uk

Certificate No. ASC-114

Approval Level 2

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Eton Fire Limited

Printers Gate, Limehouse Court, 3 - 11 Dod Street, London E14 7EQ UK
Tel: +44 (0)207 517 6300 • Fax: +44 (0)207 538 5231
E-mail: fire@etonfire.com

Certificate No. ASC-081

Approval Level 3

Approved to self-certificate the following Categories of Work: A C D E
The following Categories of Work to be supervised - B F

F.V.S. Limited

Broom Street, Off Huddersfield Road, Newhey, Rochdale OL16 3RY UK
Tel: +44 (0)1706 848599 • Fax: +44 (0)1706 843474
Website: www.firevalveservices.co.uk

Certificate No. ASC-031

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

FES Limited, FES Sprinklers

Forth House, Pirnhall Business Park, Stirling FK7 8HW UK
Tel: +44 (0)1786 819600 • Fax: +44 (0)1786 811456
E-mail: hq@fes.ltd.uk

Certificate No. ASC-096

Approval Level 3

Approved to self-certificate the following Categories of Work: A B C D E
The following Categories of Work to be supervised - F

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Fire Alarm Solutions Limited

Unit 2, Manor Way Business Centre, Fairview Industrial Park, Marsh Way, Rainham, Essex RM13 8UG UK
Tel: +44(0) 1708 521181 • Fax: +44(0) 1708 521182
E-mail: enquiries@fas-ltd.com • Website: www.fas-ltd.com

Certificate No. ASC-110

Approval Level 1

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Fire Defence plc

Crown Yealm House, Pathfields Business Park, South Molton EX36 3LH UK
Tel: +44 (0)1769 574070 • Fax: +44 (0)1769 574079
E-mail: fds@fire-defence.com • Website: www.fire-defence.com

Certificate No. ASC-047

Approval Level 3

Approved to self-certificate the following Categories of Work: A B C D
The following Categories of Work to be supervised - E F

Fire Logistics Limited

Unit A4, Union Street, Shieldfield, Newcastle upon Tyne NE2 1AH UK
Tel: +44 (0)191 230 3647 • Fax: +44 (0)191 230 3650
E-mail: enquiries@firelogistics.co.uk • Website: www.firelogistics.co.uk

Certificate No. ASC-105

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Fire Security (Sprinkler Installations) Limited

Homefield Road, Haverhill, Suffolk CB9 8QP UK
Tel: +44 (0)1440 705815 • Fax: +44 (0)1440 704352
E-mail: info@firesecurity.co.uk • Website: www.firesecurity.co.uk

Certificate No. ASC-018

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Fireproof Fire Engineering Limited

The Old Brewery, 40 Coldhurst Street, Oldham, Lancashire OL1 2BQ UK

Tel: +44 (0)161 620 0902 • Fax: +44 (0)161 620 0772

E-mail: contactus@fireproofsprinklersystems.com • Website: www.fireproofsprinklersystems.com

Certificate No. ASC-019

Approval Level 4

Approved to self-certify all Categories of Work

No supervision required

First Fire Protection Limited

Unit 3, Network 4, Lincoln Road, Cressex Business Park, High Wycombe, Buckinghamshire HP12 3RF UK

Tel: +44 (0)1494 522031/2 • Fax: +44 (0)1494 452752

E-mail: enquiries@firstfireprotection.co.uk

Certificate No. ASC-037

Approval Level 2

Approved to self-certify the following Categories of Work: A C

The following Categories of Work to be supervised - B D E

Gordonson Fire Protection Limited

Unit 8, Bombay Street, Bermondsey, London SE16 3UX UK

Tel: +44 (0)207 237 6707 • Fax: +44 (0)207 252 0152

E-mail: gordonson@mailbox.co.uk

Certificate No. ASC-062

Approval Level 3

Approved to self-certify the following Categories of Work: A

The following Categories of Work to be supervised - B C D E F

Haden Fire Protection (Balfour Beatty Workplace Limited)

Unit 1190, Park Avenue, Aztec West, Almondsbury, Bristol BS32 4JA UK

Tel: +44 (0)1454 458100 • Fax: +44 (0)1454 458109

E-mail: haden.fire@bbworkplace.com • Website: www.bbworkplace.com

Certificate No. ASC-051

Approval Level 4

Approved to self-certify all Categories of Work

No supervision required

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Hall & Kay Fire Engineering (Manchester)

10 Westpoint, Clarence Avenue, Trafford Park, Manchester M17 1QS UK

Tel: +44 (0)161 872 7316 • Fax: +44 (0)161 872 7003

E-mail: Manchester@hkfire.co.uk • Website: www.hkfire.co.uk

Certificate No. ASC-042

Approval Level 4

Approved to self-certify all Categories of Work

No supervision required

Hall & Kay Fire Engineering (Paisley)

Studio 3002, Abbey Mill, Seedhill Road, Paisley PA1 1TJ UK

Tel: +44 (0)141 887 4921 • Fax: +44 (0)141 887 6346

E-mail: glasgow@hkfire.co.uk • Website: www.hkfire.co.uk

Certificate No. ASC-097

Approval Level 3

Approved to self-certify the following Categories of Work: A B C D

The following Categories of Work to be supervised - E F

Hall & Kay Fire Engineering (Portsmouth)

Unit 1 The Spinney, Parklands Business Park, Denmead, Waterlooville, Portsmouth PO7 6AR UK

Tel: +44 (0)2392 241393 • Fax: +44 (0)2392 241965

E-mail: portsmouth@hkfire.co.uk • Website: www.hkfire.co.uk

Certificate No. ASC-112

Approval Level 2

Approved to self-certify the following Categories of Work: A B C

The following Categories of Work to be supervised - D E

Hall & Kay Fire Engineering (West Midlands)

Sterling Park, Clapgate Lane, Woodgate Valley, West Midlands B32 3BU UK

Tel: +44 (0)121 421 3311 • Fax: +44 (0)121 422 7312

E-mail: birmingham@hkfire.co.uk • Website: www.hkfire.co.uk

Certificate No. ASC-003

Approval Level 4

Approved to self-certify all Categories of Work

No supervision required

Hall & Kay Fire Engineering (Windsor)

1st Floor, Sefton Lodge, Clewer Hill Road, Windsor SL4 4FT UK

Tel: +44 (0)1753 833444 • Fax: +44 (0)1753 833434

E-mail: windsor@hkfire.co.uk • Website: www.hkfire.co.uk

Certificate No. ASC-071

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Hall Fire Protection Limited

Holloway Drive, Wardley Business Park, Worsley M28 2LA UK

Tel: +44 (0)161 793 4822 • Fax: +44 (0)161 794 4950

E-mail: sales@hallfire.co.uk • Website: www.hallfire.co.uk

Certificate No. ASC-026

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Hydra Industrial Services Limited

Unit 39 Basepoint Business Centre, Rivermead Drive, Swindon, Wiltshire SN5 7EX UK

Tel: +44 (0)1793 608837 • Fax: +44 (0)1793 608838

E-mail: info@hydraindustrial.co.uk

Certificate No. ASC-055

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Irish Sprinkler & Fire Protection Limited

Damastown Green, Damastown Industrial Estate, Mulhuddart, Dublin 15, Ireland

Tel: +353 1 8614036 • Fax: +353 1 8614037

E-mail: irishsprinkler@joneseng.com • Website: www.joneseng.com

Certificate No. ASC-069

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

J & J Design Limited

Unit 4, Underbank Way, Carrs Industrial Estate, Haslingden, Rossendale, Lancashire BB4 5HR UK
Tel: +44 (0)1706 223414 • Fax: +44 (0)1706 225639

Certificate No. ASC-052

Approval Level 3

Approved to self-certificate the following Categories of Work: A
The following Categories of Work to be supervised - B C D E F

J. Bryceland Fire Systems Ltd

Nobel Road, West Gourdie Industrial Estate, Dundee DD2 4XE, Scotland
Tel: +44 (0)1382 624000 • Fax: +44 (0)1382 624300
E-mail: jbryceland@aol.com • Website: www.jbrycelandfiresystems.co.uk

Certificate No. ASC-109

Approval Level 1

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

K.P.F.P. Limited

59 Pound Street, Carshalton, Surrey SM5 3PG UK
Tel: +44 (0)20 8544 4844 • Fax: +44 (0)20 8544 4819
E-mail: fire@kfp.co.uk

Certificate No. ASC-089

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Kean Building & Fire Protection Services Limited

39/43 Temple Bar, Willenhall, West Midlands WV13 1SH UK
Tel: +44 (0)1902 603550 • Fax: +44 (0)1902 608017
E-mail: kean.fp@btconnect.com

Certificate No. ASC-061

Approval Level 2

Approved to self-certificate the following Categories of Work: A C D
The following Categories of Work to be supervised - B E

Kentallen Fire Protection Limited

Lancaster Road, Lowmoss Industrial Estate, Bishopbriggs, Glasgow G64 2LL UK
Tel: +44 (0)141 762 2540 • Fax: +44 (0)141 762 0823
E-mail: kentallen@btconnect.com

Certificate No. ASC-032

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Linkester Fire Protection Limited

4/6 Cross Street, Macclesfield, Cheshire SK11 7PG UK
Tel: +44 (0)1625 511272 • Fax: +44 (0)1625 511272
E-mail: sales.linkester@btconnect.com

Certificate No. ASC-011

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Lostock Design Limited

80 Stanifield Lane, Farington, Preston, Lancashire PR25 4GA UK
Tel: +44 (0)1772 424252 • Fax: +44 (0)1772 424202
E-mail: lostock.design@btconnect.com

Certificate No. ASC-025

Approval Level 2

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

M & P Fire Solutions Ltd

Suite 17, The Cubes Offices, Beacon South Quarter, Sandyford, Dublin 18, Ireland
Tel: +353 1 293 3846/47/48/49 • Fax: +353 1 293 7951
E-mail: admin@mpfiresolutions.com

Certificate No. ASC-095

Approval Level 3

Approved to self-certificate the following Categories of Work: A
The following Categories of Work to be supervised - B C D E F

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

M. J. Quinn Integrated Services Limited

Gormley House, Waxlow Road, London NW10 7NU UK

Tel: +44 (0)20 8453 0450 • Fax: +44 (0)20 8453 0455

E-mail: enquiries@mjquinn.co.uk • Website: www.mjquinn.co.uk

Certificate No. ASC-104

Approval Level 2

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

Mercury Engineering

Mercury House, Sandyford Industrial Estate, Foxrock, Dublin 18, Ireland

Tel: +353 1 216 3000 • Fax: +353 1 216 3006

E-mail: fireprotection@mercury.ie • Website: www.mercury.ie

Certificate No. ASC-058

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

National Sprinkler Company Limited

Unit 4B, Fingal Bay Business Park, Balbriggan, Co Dublin, Ireland

Tel: +353 1 690 4001/4040 • Fax: +353 1 841 7400

E-mail: info@nationalsprinkler.ie • Website: www.nationalsprinkler.ie

Certificate No. ASC-092

Approval Level 3

Approved to self-certificate the following Categories of Work: A B C D

The following Categories of Work to be supervised - E F

Nu-Form Fire UK Limited

390 Manchester Road, Gollinrod, Bury, Lancashire BL9 5NB UK

Tel: +44 (0)1706 825111 • Fax: +44 (0)1706 827111

E-mail: info@sprinklersystems.co.uk • Website: www.sprinklersystems.co.uk

Certificate No. ASC-040

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Olympic Fire Protection Limited

10/11 Stratfield Park, Waterlooville, Hampshire PO7 7XN UK

Tel: +44 (0)2392 231444 • Fax: +44 (0)2392 250666

E-mail: info@olympicfire.co.uk • Website: www.olympicfire.co.uk

Certificate No. ASC-068

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Pendle Designs Limited

Pendle House, Webb Street, Bury, Lancs BL8 1AF UK

Tel: +44 (0)161 764 2252 • Fax: +44 (0)161 763 1429

Certificate No. ASC-020

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Project Fire Engineers Limited

Pasturefields Lane Industrial Estate, Pasturefields Lane, Hixon, Staffordshire ST18 0PH UK

Tel: +44 (0)1889 270999 • Fax: +44 (0)1889 270974

E-mail: sales@projectfire.co.uk • Website: www.projectfire.co.uk

Certificate No. ASC-010

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Protec Camerfield Limited

5 Churchill Way, Nelson, Lancashire BB9 6RT UK

Tel: +44 (0)1282 717474 • Fax: +44 (0)1282 717475

E-mail: camerfield@protec.co.uk • Website: www.protec.co.uk

Certificate No. ASC-056

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Provincial Sprinkler Co. Limited

Unit 4, Cork Airport Industrial Estate, Kinsale Road, Cork, Ireland

Tel: +353 (0)21 4965058 • Fax: +353 (0)21 4317425

E-mail: info@provincial-sprinkler.ie • Website: www.provincial-sprinkler.ie

Certificate No. ASC-087

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Red Rose Mechanical Services

Unit 2, Atlas Foundry Estate, Brieryfield Road, Preston PR1 8SR UK

Tel: +44 (0)1772 822133 • Fax: +44 (0)1772 822144

E-mail: redrosemech@aol.com

Certificate No. ASC-044

Approval Level 1

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

RGT Fire Protection Limited

95 Beaumont Road, Bournville, Birmingham B30 2EB UK

Tel: +44 (0)121 433 5175 • Fax: +44 (0)121 486 1847

E-mail: info@rgtfire.com

Certificate No. ASC-093

Approval Level 1

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

Richmond Fire Engineers Limited

30 Firby Road, Gallowfields Trading Estate, Richmond, North Yorkshire DL10 4ST UK

Tel: +44 (0)1748 825612 • Fax: +44 (0)1748 825935

E-mail: Sprinklers@richmondfire.co.uk • Website: www.richmondfire.co.uk

Certificate No. ASC-059

Approval Level 3

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

RMD Fire Control Limited

The Coach House, 22 Lower Stone Street, Maidstone, Kent ME15 6LX UK

Tel: +44 (0)1622 682522 • Fax: +44 (0)1622 692675

E-mail: sprinklers@rmdfire.co.uk • Website: www.rmdfire.co.uk

Certificate No. ASC-035

Approval Level 2

Approved to self-certificate the following Categories of Work: A C

The following Categories of Work to be supervised - B D E

Ross Fire Protection Limited

29 Deerdykes View, Westfield, Cumbernauld G68 9HN UK

Tel: +44 (0)1236 738502 • Fax: +44 (0)1236 727977

E-mail: ross@rossfire.co.uk • Website: www.rossfire.co.uk

Certificate No. ASC-021

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Rotary Firematic Limited

5 Trench Road, Mallusk Industrial Estate, Newtownabbey, Co Antrim, Northern Ireland BT36 8XA UK

Tel: +44 (0)2890 831200 • Fax: +44 (0)2890 831201

E-mail: mechanical.contracts@rotarygroup.com

Certificate No. ASC-022

Approval Level 3

Approved to self-certificate the following Categories of Work: A B C D E

The following Categories of Work to be supervised - F

RSM Refko Installations Limited

Unit 8, Capstan Centre, Thurrock Park Way, Tilbury, Essex RM18 7HH UK

Tel: +44 (0)1375 855500 • Fax: +44 (0)1375 855533

Certificate No. ASC-043

Approval Level 1

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Select Fire Services Limited

10 Harolds Road, Harlow, Essex CM19 5BJ UK

Tel: +44 (0)1279 641979 • Fax: +44 (0)1279 641978

E-mail: info@selectfire.co.uk • Website: www.selectfireservices.co.uk

Certificate No. ASC-070

Approval Level 3

Approved to self-certificate the following Categories of Work: A C D E

The following Categories of Work to be supervised - B F

Solent Fire Protection Services Limited

12 Heritage Business Park, Heritage Way, Gosport, Hampshire PO12 4BG UK

Tel: +44 (0)2392 510230 • Fax: +44 (0)2392 511510

E-mail: info@solentfire.co.uk • Website: www.solentfire.co.uk

Certificate No. ASC-057

Approval Level 3

Approved to self-certificate the following Categories of Work: A B D

The following Categories of Work to be supervised - C E F

Spectrum Fire Protection (UK) Limited

Middlemore Lane, Aldridge, Walsall, West Midlands WS9 8SP UK

Tel: +44 (0)1922 744 466 • Fax: +44 (0)1922 744 477

E-mail: sales@spectrumfire.co.uk • Website: www.spectrumfire.co.uk

Certificate No. ASC-108

Approval Level 1

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

SPIE Fire (A division of SPIE)

Level 2, McCafferty House, 99 Firhill Road, Glasgow G20 7BE UK

Tel: +44 (0)141 945 8900 • Fax: +44 (0)141 945 8901

E-mail: fire.engineering@spiematthewhall.com • Website: www.spiematthewhall.com

Certificate No. ASC-113

Approval Level 3

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

SPIE Fire (A division of SPIE)

Unit 2, Focus Park, Ashbourne Way, Solihull, West Midlands B90 4QU UK

Tel: +44 (0)121 713 8100 • Fax: +44 (0)121 713 8198/8199

E-mail: fire.engineering@spiematthewhall.com • Website: www.spiematthewhall.com

Certificate No. ASC-050

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

SPIE Fire (A division of SPIE)

7-14 Great Dover Street, London SE1 4YR UK

Tel: +44 (0)20 7089 7350 • Fax: +44 (0)20 7089 7378

E-mail: fire.engineering@spiematthewhall.com • Website: www.spiematthewhall.com

Certificate No. ASC-015

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

Taylor Fire Sprinklers Limited

Unit B, Avondale Way, Wakefield, West Yorkshire WF2 7QU UK

Tel: +44 (0)1924 375971 • Fax: +44 (0)1925 609902

E-mail: enquiries@taylorfiresprinklers.co.uk • Website: www.taylorfiresprinklers.co.uk

Certificate No. ASC-115

Approval Level 1

Not approved to self-certificate any Category of Work

All Categories of Work to be supervised

Taylor Robinson Limited

Fire Protection House, Woolley Colliery Road, Darton, Barnsley, South Yorkshire S75 5JA UK

Tel: +44 (0)1226 386911 • Fax: +44 (0)1226 388 206

E-mail: sprinkler@taylorrobinson.co.uk • Website: www.taylorrobinson.co.uk

Certificate No. ASC-033

Approval Level 4

Approved to self-certificate all Categories of Work

No supervision required

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Thameside Fire Protection Co. Limited

Unit 4, Sovereign Business Park, Cranes Farm Road, Basildon, Essex SS14 3JD UK
Tel: +44 (0)1268 597999 • Fax: +44 (0)1268 597998
E-mail: enquiries@thamesidefire.co.uk • Website: www.thamesidefire.co.uk

Certificate No. ASC-053

Approval Level 3

Approved to self-certificate the following Categories of Work: A
The following Categories of Work to be supervised - B C D E F

Thermotech Fire Protection Limited

Unit 10, Bamford Business Park, Off Hibbert Street, Reddish, Stockport SK4 1PL UK
Tel: +44 (0)161 476 5551 • Fax: +44 (0)161 476 2998
E-mail: info@thermotech-fireprotection.co.uk • Website: www.thermotech-fireprotection.co.uk

Certificate No. ASC-088

Approval Level 1

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

Tyco House, 13a Airport Road West, Belfast, Northern Ireland BT3 9ED UK
Tel: +44 (0)2890 883560 • Fax: +44 (0)2890 883507
Website: www.tycofis.com

Certificate No. ASC-036

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

Tyco Park, Grimshaw Lane, Newton Heath, Manchester M40 2WL UK
Tel: +44 (0)161 205 2321 • Fax: +44 (0)161 455 4459
Website: www.tycofis.com

Certificate No. ASC-007

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

Smethwick Hawthorns Business Centre, Halfords Lane, Smethwick, Birmingham, West Midlands B66 1DW
UK

Tel: +44 (0)121623 1000 • Fax: +44 (0)121 558 2282

Website: www.tycofis.com

Certificate No. ASC-008

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

30-32 Singer Road, Kelvin Industrial Estate, East Kilbride, Lanarkshire G75 0XS UK

Tel: +44 (0)1355 225132 • Fax: +44 (0)1355 249268

Website: www.tycofis.com

Certificate No. ASC-014

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

1610 Park Avenue, Aztec West, Almondsbury, Bristol BS32 4UA UK

Tel: +44 (0)1454 240071 • Fax: +44 (0)1454 626443

Website: www.tycofis.com

Certificate No. ASC-009

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

6 Stirling Court, Eleventh Avenue North, Team Valley Trading Estate, Gateshead, Tyne & Wear NE11 0JF
UK

Tel: +44 (0)191 497 6333 • Fax: +44 (0)191 497 6339

Website: www.tycofis.com

Certificate No. ASC-038

Approval Level 2

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

204 Bedford Avenue, Slough Trading Estate, Slough, Berkshire SL1 4RY UK

Tel: +44 (0)1753 574111 • Fax: +44 (0)1753 824226

Website: www.tycofis.com

Certificate No. ASC-012

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

Tyco House, Pheonix Way, Swansea Enterprise Park, Swansea SA7 9EQ UK

Tel: +44 (0)1792 465006 • Fax: +44 (0)1792 648535

Website: www.tycofis.com

Certificate No. ASC-006

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

Hillcrest Business Park, Cinderbank, Dudley, West Midlands DY2 9AP UK

Tel: +44 (0)1384 458993 • Fax: +44 (0)1384 458981

Website: www.tycofis.com

Certificate No. ASC-004

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)

Block 9a, Beckett Way, Park West Business Park, Dublin 12, Ireland

Tel: +353 1 620 5999 • Fax: +353 1 620 5992

Website: www.tycofis.com

Certificate No. ASC-060

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

UK Fire Safety Limited

13-15 Lostock Road, Urmston, Manchester M41 0ES UK
Tel: +44 (0)161 746 8037 • Fax: +44 (0)161 746 8136
E-mail: mroyle@uk-firesafety.co.uk • Website: www.uk-firesafety.co.uk

Certificate No. ASC-098

Approval Level 1

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

UK Firewatch Limited

10 Apollo Court, Koppers Way, Monkton Business Park South, Hebburn, Tyne & Wear NE31 2ES UK
Tel: +44 (0)191 495 9525 • Fax: +44 (0)191 495 9529
E-mail: enquiries@ukfirewatch.com • Website: www.ukfirewatch.com

Certificate No. ASC-064

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

UK Firewatch Limited

37/39 Manor Road, Romford, Essex RM1 2TL UK
Tel: +44 (0)1708 756248 • Fax: +44 (0)1708 769315
E-mail: enquiries@ukfirewatch.com • Website: www.ukfirewatch.com

Certificate No. ASC-077

Approval Level 3

Not approved to self-certificate any Category of Work
All Categories of Work to be supervised

Vipond Fire Protection Limited

10-12 Glenfield Road, Kelvin Industrial Estate, East Kilbride, Lanarkshire G75 0RA UK
Tel: +44 (0)1355 2375 25/80/88 • Fax: +44 (0)1355 263399
E-mail: admin.uk@vipondltd.co.uk • Website: www.vipondfire.co.uk

Certificate No. ASC-024

Approval Level 4

Approved to self-certificate all Categories of Work
No supervision required

PART 3: SECTION 1.1

LPS 1048 APPROVED SPRINKLER CONTRACTORS

Writech Industrial Services Limited

Mullingar Business Park, Mullingar, Co. Westmeath, Ireland

Tel: +353 44 9349857 • Fax: +353 44 9349858

E-mail: info@writechltd.com

Certificate No. ASC-067

Approval Level 3

Not approved to self-certify any Category of Work

All Categories of Work to be supervised

LPCB Supervising Service

Bucknalls Lane, Watford, Hertfordshire WD25 9XX UK

Tel: +44 (0)1923 664100 • Fax: +44 (0)1923 664994

E-mail: enquiries@lpcb.com • Website: www.redbooklive.com

Certificate No. n/a

PART 3: SECTION 2

LPS 1050 SERVICING AND MAINTENANCE FIRMS

The companies listed in this Section are authorised to issue LPS 1050 Certificates of Servicing and Inspection for sprinkler systems maintained in accordance with the LPC Sprinkler Rules or other installation standards allowed under the LPS 1048 scheme.

Hall Fire Protection Limited

Holloway Drive, Wardley Business Park, Worsley M28 2LA UK

Tel: +44 (0)161 793 4822 • Fax: +44 (0)161 794 4950

E-mail: sales@halfire.co.uk • Website: www.halfire.co.uk

Certificate No. CSM-001 to LPS 1050

Certificated Sprinkler Servicing and Maintenance Firm, authorised to issue LPS 1050 Certificates of Servicing and Inspection for sprinkler systems serviced and maintained in accordance with BS 5306: Part 2: 1990.

LPS 1050 Certificated Supervising Body, authorised to supervise LPS 1050 Registered Servicing Firms.

PART 3: SECTION 3.1

WET AND DRY ALARM VALVES FOR SPRINKLER SYSTEMS

This section lists products approved in accordance with:

- EN12259-2 *Fixed firefighting systems. Components for sprinkler and water spray systems. Wet alarm valve assemblies*
- EN12259-3 *Fixed firefighting systems. Components for sprinkler and water spray systems. Dry alarm valve assemblies*
- LPCB Schedule of requirements

It is strongly recommended that all alarm valves, dry-pipe valves and back-pressure valves be the subject of a maintenance contract, satisfying the requirements of the *LPC Rules for Automatic Sprinkler Installations*.

The nominal orifice size of valves listed is given in millimetres.

The products shall be installed and maintained in accordance with the manufacturer's instructions.

Angus Fire Armour Limited (Denmark)

Kastanievej, DK-5620, Glamsberg, Denmark

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

UK Sales Enquiries:

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

Certificate No: 084c

Certificate No: 034b

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Angus Alarm Valve(1),(7)	C vertical (cast iron)	80,100,150 & 200	084c/01
Angus Alarm Valve(1),(8)	C1 vertical (cast iron)	80 (7) , 100 (7), 150 (6) & 200 (6)	084c/02
Angus Alarm Valve(2),(5),(8)	C1 vertical (cast iron)	100 (3) & 150	
Angus Alarm Valve(1),(7)	C vertical (lead metal)	100	084c/03
	C vertical (H.T.aluminium bronze)	100	084c/04
Angus Dry Pipe Valve(1),(2),(4)	D vertical (cast iron)	100 & 150	034b/02

Notes:

- 1) With flanged inlet and flanged outlet.
- 2) With flanged inlet and grooved outlet.
- 3) With grooved inlet and grooved outlet.
- 4) Maximum working pressure of 12 bar.
- 5) Maximum working pressure of 12.5 bar.
- 6) Maximum working pressure of 16 bar.
- 7) Maximum working pressure of 20 bar.
- 8) Supplied with standard seat or with 'S' seat.

G.W. Sprinkler A/S

Kastanievej 15, DK-5620 Glamsbjerg, Denmark

Tel: +45 64 72 2055 • Fax: +45 64 72 2255

E-mail: sales.dep@gwsprinkler.com

Certificate No: 084c

Certificate No: 034b

Product Name	Model	Sizes (mm)	LPCB Ref. No.
GW Alarm Valve(1),(8)	C1	80 (7), 100 (7), 150 (6) & 200 (6)	084c/02
GW Alarm Valve(2)(5)(8)	C1	100 (3) & 150	

PART 3: SECTION 3.1

WET AND DRY ALARM VALVES FOR SPRINKLER SYSTEMS

Product Name	Model	Sizes (mm)	LPCB Ref. No.
GW Dry Pipe Valve(1)(2)(4)	D vertical (cast iron)	100 & 150	034b/02
GW Horizontal Alarm Valve(1)(7)	C1-H	80	084c/05

Notes:

- 1) With flanged inlet and flanged outlet.
- 2) With flanged inlet and grooved outlet.
- 3) With grooved inlet and grooved outlet.
- 4) Maximum working pressure of 12 bar.
- 5) Maximum working pressure of 12.5 bar.
- 6) Maximum working pressure of 16 bar.
- 7) Maximum working pressure of 20 bar.
- 8) Supplied with standard seat or with 'S' seat.

Globe Fire Sprinkler Corporation

4077 Air Park Drive, P.O. Box 796, Standish, Michigan 48658, USA

Tel: +1 989 846 4583 • Fax: +1 989 846 9231

Website: www.globesprinkler.com

Certificate No: 147b

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Globe Alarm Valve vertical	H1	100 ⁽¹⁾ , 150 ⁽¹⁾	147b/01
	H3	100 ⁽²⁾ , 150 ⁽²⁾	147b/02

Notes:

- 1) Maximum working pressure 20 bar.
- 2) Maximum working pressure 12 bar.

MEFA Italia S.r.l.

Ufficio Comm., Le e magazzino, Via G.B. Morgagni 16/B, Pogliano M.se (Mi), Italy

Tel: +39 0293 540 195 • Fax: +39 0293 542 690

E-mail: danielpeluso@mefaitalia.com • Website: www.mefaitalia.com

Certificate No: 638Aa to EN 12259-2: 1999

Wet Alarm Valve

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Wet Alarm Valve	B	80, 100, 150, 200 ^(1, 2, 3, 4)	638Aa/01
	D	100, 150, 200 ^(1, 2, 3, 5)	638Aa/02
	E	100, 150, 200 ^(1, 2, 3, 6)	638Aa/03

Notes:

- 1) Approved for use in vertical mounting position only.
- 2) Maximum working pressure 12 bar.
- 3) Approved for use with and without Model E Retard Chamber.
- 4) With flanged inlet and flanged outlet.
- 5) With flanged inlet and grooved outlet.
- 6) With grooved inlet and grooved outlet.

PART 3: SECTION 3.1

WET AND DRY ALARM VALVES FOR SPRINKLER SYSTEMS

Rapidrop Limited

Rutland Business Park, Newark Road, Peterborough PE1 5WA UK

Tel: +44 (0)1733 847 510 • Fax: +44 (0)1733 553 958

E-mail: rapidrop@rapidrop.com • Website: www.rapidrop.com

Certificate No: 566b to EN 12259-2:1999 + Amendment A1:2001 & Amendment A2: 2005

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Wet Alarm Valve	B	80, 100, 150, 200 ^(1, 2, 3, 4)	566b/01
	D	100, 150, 200 ^(1, 2, 3, 5)	566b/02
	E	100, 150, ^(1, 2, 3, 6)	566b/03

Notes:

- 1) Approved for use in vertical mounting position only.
- 2) Maximum working pressure 12 bar.
- 3) Approved for use with and without Model E Retard Chamber.
- 4) With flanged inlet and flanged outlet.
- 5) With flanged inlet and grooved outlet.
- 6) With grooved inlet and grooved outlet.

Rolland Sprinklers

Usine de 73410, Mognard, France

Tel: +33 479 547 250 • Fax: +33 479 547 248

E-mail: info@rolland-sprinklers.com

Certificate No: 638a

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Wet Alarm Valve	B	80, 100, 150, 200 ^{2, 3, 4)}	638a/01
	D	80, 100, 150, 200 ^{2, 3, 5)}	638a/02
	E	80, 100, 150, 200 ^{2, 3, 6)}	638a/03

Notes:

- 1) Approved for use in vertical mounting position only.
- 2) Maximum working pressure 12 bar.

The Reliable Automatic Sprinkler Co. Inc

1470 Smith Grove Road, Liberty, South Carolina 29657, USA

Tel: +1 864 843 1734 • Fax: +1 864 843 1418

E-mail: jcevallos@reliablesprinkler.com • Website: www.reliablesprinkler.com

UK Sales Enquiries

Tel: +44 (0)1372 728899 • Fax: +44 (0)1372 724461

Certificate No: 034b

Certificate No: 034n

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Reliable Alarm Valve (1) (5) (7)	E	65, 100, 150, 200	034b/01
Reliable Alarm Valve (3) (6) (7)	D	100, 150	034b/02
Reliable Dry Pipe Valve (4) (6) (7)	A	65	034b/03
Reliable High Pressure Alarm Valve (2) (5) (8)	E3	100, 165, 200	034b/04

PART 3: SECTION 3.1

WET AND DRY ALARM VALVES FOR SPRINKLER SYSTEMS

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Reliable Dry Alarm Valve (9,10,11,12,13)	DDX	100	034n/01
	DDX	150	034n/02
	DDX	165	034n/03

Notes:

- 1) With flanged inlet and flanged outlet.
- 2) With grooved inlet and grooved outlet.
- 3) With flanged inlet and flanged or grooved outlet.
- 4) With threaded inlet and outlet.
- 5) Vertical or horizontal.
- 6) Vertical.
- 7) Maximum working pressure of 12 bar.
- 8) Maximum working pressure of 21 bar.
- 9) Maximum rated working pressure 17.2 bar.
- 10) With groove inlet and outlet.
- 11) Vertical orientation as indicated only.
- 12) Approved with or without "model B1" quick opening device (LPCB ref 034c/01).
- 13) Refer to manufacturers instructions "Bulletins 356-B & 357-B"

The Viking Corporation

210 N Industrial Park, Hastings, Michigan 49058, USA

Tel: +1 269 945 9501 • Fax: +1 269 945 9599

E-mail: techsvcs@vikingcorp.com • Website: www.vikingcorp.com

UK Sales Enquiries:

Tel: +44 (0)1427 875999 • Fax: +44 (0)1427 875998

Certificate No: 096b

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Viking Alarm Valve	F1	65, 100, 150, 200	096b/01
Viking Cast Iron Dry Pipe Valve(1)	E-2	75, 100	096b/02
	E-1	150	096b/03
Viking Alarm Valve(2)	H-2	75, 100, 150, 200	096b/04
Viking Wet Alarm Valve(3) (4)	J-1	80,100,150, 165 (OD) 200	096b/05
Viking Dry Pipe Valve(1)(2)(5)	F-1	80, 100, 150	096b/06

Notes:

- 1) Approved with flanged inlet and flanged or grooved outlet.
- 2) Maximum working pressure 12 bar.
- 3) Maximum working pressure 16 bar.
- 4) Vertical or horizontal.
- 5) Vertical only.

Tyco Fire & Building Products

Kopersteden 1, 7547 TJ Enschede, The Netherlands

Tel: Sales Enquiries: +31 53 4284444 • Fax: +31 53 4283377

E-mail: info@tyco-bspd.com • Website: www.tycobuilding.com

Certificate No: 169b

Product Name	Model	Sizes (mm)	LPCB Ref. No.
AV-1 Alarm Valve (Flange/Flange) (1, 2)	AV-1	100, 150, 200	169b/01
AV-1 Alarm Valve (Flange/Groove) (1, 2)	AV-1	100, 150, 200	169b/02
AV-1 Alarm Valve (Groove/Groove) (1, 2)	AV-1	100, 150, 200	169b/03

PART 3: SECTION 3.1

WET AND DRY ALARM VALVES FOR SPRINKLER SYSTEMS

Notes:

- 1) Maximum working pressure 16 bar.
- 2) Approved for use with and without Model RC-1 Retard Chamber.

Certificate No: 812b to EN 12259-3

Product Name	Model	Size (mm)	LPCB Ref. No.
Dry Pipe Valve (Flange/Flange)	DPV-1	100 & 150	812b/01
Dry Pipe Valve (Flange/Grove)	DPV-1	100 & 150	812b/02

Notes:

- 1) Only approved when trimmed in accordance with Tyco data sheet TFP1090
- 2) Maximum working pressure: 16 bar
- 3) Approved in vertical orientation only
- 4) Approved for use with and without model RC-1 Retard Chamber
- 5) Approved for use with and without model ACC-1 Accelerator

Tyco Fire Products Manufacturing Limited

Stockport Trading Estate, Yew Street, Stockport, Cheshire SK4 2JW UK

Tel: +44 (0)161 429 3400 • Fax: +44 (0)161 477 6729

E-mail: tycofireproducts.uk@tyco-bspd.com • Website: www.tycobuilding.com

Sales Enquiries:

Tel: +44 (0)161 875 0400 • Fax: +44 (0)161 875 0491

E-mail: info-uk@tyco-bspd.com • Website: www.tycobuilding.com

Certificate No: 007c

Product Name	Model	Sizes (mm)	LPCB Ref. No.
B.W. Alarm Valve(1)(2) vertical (gunmetal)	FE 2394	50/80	007c/01
B.W. Alarm Valve (1) vertical (gunmetal)	FE 2217	100	007c/02
B.W. Alarm Valve (1) vertical (stainless steel)	FE 2640	100	007c/03
B.W. Alarm Valve (1) horizontal (gunmetal)	FE 2375	100	007c/04
B.W. Alarm Valve (1) horizontal (stainless steel)	FE 2646	100	007c/05
B.W. Alarm Valve (1) vertical (aluminium bronze)	FE 2217	100	007c/06
B.W. Alarm Valve (3) vertical (gunmetal)	FE 3557	100	007c/07
B.W. Alarm Valve (1) vertical (gunmetal)	FE 2188	150	007c/08
B.W. Alarm Valve (1) vertical (stainless steel)	FE 2643	150	007c/09
B.W. Alarm Valve (1) horizontal (gunmetal)	FE2354	150	007c/10
B.W. Alarm Valve (1) horizontal (stainless steel)	FE2649	150	007c/11
B.W. Alarm Valve (3) vertical (aluminium bronze)	FE 3262	150	007c/12
B.W. Alarm Valve (1) vertical (bronze)	FE 2360	200	007c/13
B.W. Alarm Valve (1) horizontal (bronze)	FE 2685	200	007c/14
Wet Pipe Alarm Valves(4)	L/W	80,100,150, 200	007c/15
B.W. Alternate Valve (1)(5) vertical (gunmetal)	FE 2349	100	007c/16
B.W. Alternate Valve (1)(5) vertical (stainless steel)	FE 2642	100	007c/17
B.W. Alternate Valve (1)(5) vertical (gunmetal)	FE 2152	150	007c/18
B.W. Alternate Valve (1)(5) vertical (stainless steel)	FE 2645	150	007c/19
B.W. Alternate Valve (1)(5) vertical (bronze)	FE 2380	200	007c/20

Notes:

- 1) Maximum working pressure : 16 bar.
- 2) Can be used with either 50mm or 80mm nominal bore pipe.
- 3) Maximum working pressure : 25 bar.
- 4) With flanged inlet and flanged or grooved outlet.
- 5) Installations containing the BW alternate valve shall be maintained under servicing contracts with the manufacturer, or LPS 1048 and LPS 1050 firms experienced in the installation and servicing of this valve.

PART 3: SECTION 3.1

WET AND DRY ALARM VALVES FOR SPRINKLER SYSTEMS

Venus Fire Protection Ltd

4105, Portland Blvd, Sherbrooke (Quebec) J1L 1X9, Canada

Tel: +1 819 820 8000 • Fax: +1 819 820 8002

E-mail: venus@venus.ca • Website: www.venus-fire.com

Certificate No: 638a to EN 12259-2:1999 + Amendment A1:2001 & Amendment A2: 2005

Wet Alarm Valve

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Wet Alarm Valve	B	80, 100, 150, 200 ^(1, 2, 3, 4)	638a/01
	D	100, 150, 200 ^(1, 2, 3, 5)	638a/02
	E	100, 150 ^(1, 2, 3, 6)	638a/03

Notes:

- 1) Approved for use in vertical mounting position only.
- 2) Maximum working pressure 12 bar.
- 3) Approved for use with and without Model E Retard Chamber.
- 4) With flanged inlet and flanged outlet.
- 5) With flanged inlet and grooved outlet.
- 6) With grooved inlet and grooved outlet.

Victaulic Company

4901 Kesslersville Road, Easton, Pennsylvania 18040, USA

Tel: +1 610 559 3300 • Fax: +1 610 250 8817

E-mail: victaulic@victaulic.com • Website: www.victaulic.com

Certificate No: 104c to EN 12259-3

Series 768

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Series 768 Dry Alarm Valve	Series	40, 50, 65, 80, 100, 150 & 200	104c/01

Notes:

- 1) Maximum working pressure: 20 bar.
- 2) Approved for use with and without Victaulic Series 746 LPA accelerator.
- 3) Approved with grooved inlet and outlet only.
- 4) Approved in vertical orientation only.
- 5) Installations containing Series 768 valve shall be maintained under servicing contracts with the manufacturer, or LPS 1048 and LPS 1050 firms experienced in the installation and servicing of this valve.

Certificate No: 104e to EN 12259-2

Series 751

Product Name	Model	Sizes	LPCB Ref. No.
Series 751 Wet Alarm Valve	Series 751	80, 100, 150 & 200	104e/01

Notes:

- 1) Maximum working pressure: 16 bar
- 2) Approved for use with and without Series 752 retard chamber.
- 3) Approved with grooved inlet and outlet only.
- 4) Approved in vertical orientation only.
- 5) 150mm nominal diameter valve approved in 165.1mm and 168.3mm outside diameters.

PART 3: SECTION 3.1

WET AND DRY ALARM VALVES FOR SPRINKLER SYSTEMS

- 6) Installations containing Series 751 valve shall be maintained under servicing contracts with the manufacturer, or LPS 1048 and LPS 1050 firms experienced in the installation and servicing of this valve.

Certificate No: 104g

Series 764

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Series 764 Alternate Valve	Series 764	40, 50, 65, 80, 100, 150 & 200	104g/01

Notes:

- 1) Maximum working pressure: 16 bar
- 2) Approved for use with and without Victaulic Series 746 LPA accelerator.
- 3) Approved for use with and without Series 752 retard chamber.
- 4) 150mm nominal diameter valve approved in 165.1mm and 168.3mm outside diameters.
- 5) Approved with grooved inlet and outlet only.
- 6) Approved in vertical orientation only
- 7) Installations containing Series 764 valve shall be installed, commissioned and serviced under contracts with the manufacturer, or LPS 1048 and LPS 1050 firms experienced in the installation and servicing of this valve.

PART 3: SECTION 3.2

WET ALARM VALVE STATIONS

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Angus Fire Armour Limited (Denmark)

Kastanievej, DK-5620, Glamsberg, Denmark

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

Certificate No: 084d

Product Name	Size (mm)	Valve body model	Valve body material	Alarm motor and gong	Maximum working pressure (bar)	Attitude	LPCB Ref. No.
Crusader W A	80, 100, 150, 200	C1	Cast iron	D,E	12.5	Vertical	084d/01

The Angus Crusader wet alarm valves are supplied with Angus datasheet 020, which includes installation, commissioning and operating instructions.

This section lists products approved in accordance with:

- LPS 1041 *Requirements and Testing Methods for Dry Pipe Valve Sets*
- EN12259-3 *Fixed Firefighting Systems - Components for sprinkler and water spray systems - Part 3: Dry Alarm Valve Assemblies*
- LPCB Schedule of requirements

All alarm valves, dry-pipe valves and back-pressure valves should be the subject of a maintenance contract, satisfying the requirements of the *LPC Rules for Automatic Sprinkler Installations*.

Angus Fire Armour Limited (Denmark)

Kastanievej, DK-5620, Glamsberg, Denmark
Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

UK Sales Enquiries:

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

Approved Products

Angus Accelerator Model
B1

**LPCB Ref.
No.**
034c/01

The Reliable Automatic Sprinkler Co. Inc

1470 Smith Grove Road, Liberty, South Carolina 29657, USA
Tel: +1 864 843 1734 • Fax: +1 864 843 1418
E-mail: jcevallos@reliablesprinkler.com • Website: www.reliablesprinkler.com

UK Sales Enquiries:

Tel: +44 (0)1372 728899 • Fax: +44 (0)1372 724461

Approved Products

Reliable Accelerator Model
B1

**LPCB Ref.
No.**
034c/01

The Viking Corporation

210 N Industrial Park, Hastings, Michigan 49058, USA
Tel: +1 269 945 9501 • Fax: +1 269 945 9599
E-mail: techsvcs@vikingcorp.com • Website: www.vikingcorp.com

UK Sales Enquiries:

Tel: +44 (0)1427 875999 • Fax: +44 (0)1427 875998

Approved Products

Viking Accelerator Model B
Viking Accelerator Model
D-1
Viking Accelerator Model

**LPCB Ref.
No.**
096c/01
096c/02
096c/03

PART 3: SECTION 4

ACCELERATORS AND EXHAUSTERS FOR DRY PIPE VALVES

Approved Products

D-2

LPCB Ref.
No.

Tyco Fire & Building Products

Kopersteden 1, 7547 TJ Enschede, The Netherlands
Tel: Sales Enquiries: +31 53 4284444 • Fax: +31 53 4283377
E-mail: info@tyco-bspd.com • Website: www.tycobuilding.com

Certificate No: 864a to EN 12259-3

Product Name	Model	LPCB Ref. No.
Accelerator	ACC-1	864a/01

Notes:

- 1) Approved for use with Tyco Model DPV-1 Dry Pipe Valve
- 2) Maximum working pressure: 16 bar

Tyco Fire Products Manufacturing Limited

Stockport Trading Estate, Yew Street, Stockport, Cheshire SK4 2JW UK
Tel: +44 (0)161 429 3400 • Fax: +44 (0)161 477 6729
E-mail: tycofireproducts.uk@tyco-bspd.com • Website: www.tycobuilding.com

Sales Enquiries:

Tel: +44 (0)161 875 0400 • Fax: +44 (0)161 875 0491
E-mail: info-uk@tyco-bspd.com • Website: www.tycobuilding.com

Approved Products

Model No. 936 Accelerator

LPCB Ref.
No.
007d/01

This section lists products approved in accordance with:

- LPCB Schedule of requirements
- Pr EN 12259-9 *Fixed firefighting systems - Components for sprinkler and water spray systems - Part 9: Deluge valve assemblies*

Deluge valves and actuators are currently approved to a schedule of requirements developed by LPCB unless otherwise stated, for use in automatic sprinkler installations.

All deluge valves should be the subject of a maintenance contract, satisfying the requirements of the *LPC Rules for Automatic Sprinkler Installations*.

The nominal orifice size of valves listed is given in millimetres.

Angus Fire Armour Limited (Denmark)

Kastanievej, DK-5620, Glamsberg, Denmark
Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

UK Sales Enquiries:

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

Certificate No: 084a

Certificated Products

Angus Deluge Valve Mk.III (aluminium bronze) 100mm, 150mm & 200mm
Maximum working pressure: 20 bar
Angus Deluge Valve Mk.III (cast iron) 100mm, 150mm & 200mm
Maximum working pressure: 16 bar

LPCB Ref. No.
084a/01
084a/02

G.W. Sprinkler A/S

Kastanievej 15, DK-5620 Glamsbjerg, Denmark
Tel: +45 64 72 2055 • Fax: +45 64 72 2255
E-mail: sales.dep@gwsprinkler.com

Certificate No: 034a

Certificated Products

GW Deluge Valve Model B 100mm & 150mm

LPCB Ref. No.
034a/01

PART 3: SECTION 5

DELUGE VALVES AND ACTUATORS

The Reliable Automatic Sprinkler Co. Inc

1470 Smith Grove Road, Liberty, South Carolina 29657, USA

Tel: +1 864 843 1734 • Fax: +1 864 843 1418

E-mail: jcevallos@reliablesprinkler.com • Website: www.reliablesprinkler.com

UK Sales Enquiries:

Tel: +44 (0)1372 728899 • Fax: +44 (0)1372 724461

Certificate No: 034a

Certificate No: 034p

Product Name	Model	Size (mm)	LPCB Ref. No.
Reliable Deluge Valve	BX	100	034a/01
	BX	150	
	Model A (screwed inlet and outlet)	65	034a/02
Reliable Dry Pilot Line Actuator			034a/03
Reliable Deluge Alarm Valve (1, 2, 3, 4, 5)	DDX	100	034p/01
	DDX	150	034p/02
	DDX	165	034p/03

Notes:

- 1) Maximum rated working pressure 17.2 bar.
- 2) With groove inlet and outlet.
- 3) Vertical orientation as indicated only.
- 4) Approved with or without "model B1" quick opening device (LPCB ref 034c/01).
- 5) Refer to manufacturers instructions "Bulletins 510-C & 511-B"

The Viking Corporation

210 N Industrial Park, Hastings, Michigan 49058, USA

Tel: +1 269 945 9501 • Fax: +1 269 945 9599

E-mail: techsvcs@vikingcorp.com • Website: www.vikingcorp.com

UK Sales Enquiries:

Tel: +44 (0)1427 875999 • Fax: +44 (0)1427 875998

Certificate No: 096a

Approved Products

Approved Products			LPCB Ref. No.
Viking Deluge Valve	Model E-1 Screwed Inlet and Outlet	50mm	096a/01
Viking Deluge Valve	Model E-1 Flanged Inlet and Outlet	80mm 100mm 150mm	096a/02
Viking Deluge Valve	Model E-1 Flanged Inlet and Grooved Outlet	80mm 100mm 150mm	096a/03

Tyco Fire & Building Products

Kopersteden 1, 7547 TJ Enschede, The Netherlands

Tel: Sales Enquiries: +31 53 4284444 • Fax: +31 53 4283377

E-mail: info@tyco-bspd.com • Website: www.tycobuilding.com

Certificate No: 812a/01 to prEN 12259-9:2007 (March 2007)

Certificate No: 169c

PART 3: SECTION 5
DELUGE VALVES AND ACTUATORS

Product Name	Model	Sizes (mm)	LPCB Ref. No.
DV-5 Deluge Valve	DV-5	40, 50, 80, 100, 150 & 200	812a/01
TFP Dry Pilot Actuator	Model DP-1		169c/01

Notes:

- 1) Maximum working pressure: 16 bar.
- 2) Approved with threaded, groove/groove, groove/flange and flange/flange inlet and outlets.
- 3) Approved in vertical orientation only.
- 4) Installations containing DV-5 valves shall be maintained under servicing contracts with the manufacturer, or LPS 1048 and LPS 1050 firms experienced in the installation and servicing of this valve.

Tyco Fire Products Manufacturing Limited

Stockport Trading Estate, Yew Street, Stockport, Cheshire SK4 2JW UK

Tel: +44 (0)161 429 3400 • Fax: +44 (0)161 477 6729

E-mail: tycofireproducts.uk@tyco-bspd.com • Website: www.tycobuilding.com

Sales Enquiries:

Tel: +44 (0)161 875 0400 • Fax: +44 (0)161 875 0491

E-mail: info-uk@tyco-bspd.com • Website: www.tycobuilding.com

Certificate No: 007b

Approved Products

Approved Products	LPCB Ref. No.
B.W. Deluge Valve(1) vertical (gunmetal) Model No. FE 2408 80mm	007b/01
B.W. Deluge Valve(1) vertical (gunmetal) Model No. FE 2333 100mm	007b/02
B.W. Deluge Valve(1) vertical (stainless steel) Model No. FE 2641 100mm	007b/03
B.W. Deluge Valve(1) horizontal (gunmetal) Model No. FE 2366 100mm	007b/04
B.W. Deluge Valve(1) horizontal (stainless steel) Model No. FE 2647 100mm	007b/05
B.W. Deluge Valve(1) vertical (gunmetal) Model No. FE 2326 150mm	007b/06
B.W. Deluge Valve(1) vertical (stainless steel) Model No. FE 2644 150mm	007b/07
B.W. Deluge Valve(1) horizontal (gunmetal) Model No. FE 2353 150mm	007b/08
B.W. Deluge Valve(1) horizontal (stainless steel) Model No. FE 2650 150mm	007b/09
B.W. Deluge Valve(1) vertical (bronze) Model No. FE 2370 200mm	007b/10
B.W. Deluge Valve(1) horizontal (bronze) Model No. FE 2687 200mm	007b/11

(1)Maximum working pressure 16 bar

Victaulic Company

4901 Kesslersville Road, Easton, Pennsylvania 18040, USA

Tel: +1 610 559 3300 • Fax: +1 610 250 8817

E-mail: victaulic@victaulic.com • Website: www.victaulic.com

Certificate No: 104d to prEN 12259-9 (September 2004)

PART 3: SECTION 5

DELUGE VALVES AND ACTUATORS

Product Name	Model	Sizes (mm)	LPCB Ref. No.
Series 769 Deluge Valve	Series 769	40, 50, 65, 80, 100, 150 & 200	104d/01

Notes:

- 1) Maximum working pressure: 20 bar.
- 2) Approved with grooved inlet and outlet only.
- 3) Approved in vertical orientation only.
- 4) Installations containing Series 769 valve shall be maintained under servicing contracts with the manufacturer, or LPS 1048 and LPS 1050 firms experienced in the installation and servicing of this valve.

This section lists products approved in accordance with:

- LPS 1045 *Requirements & Testing Methods for direct reading Flow Meters.*

The following devices are suitable for use under the *LPC Rules for Automatic Sprinkler Installations*. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Influx Measurements Limited

Forge Works, The Dean, Alresford, Hampshire SO24 9BH UK
Tel: +44 (0)1962 736736 • Fax: +44 (0)1962 736737

Certificate No: 464a

'Firesure' Flowmeters

Product Name	Nominal Pipe Size to BS 1387 (mm)	Nominal Pipe Size to BS 3600 (mm)	Flow Range (dm ³ /min)	Connection Type	LPCB Ref. No.
Fireflange	50	200	150-700	Flange	464a/01
	80		300-1600	Flange	464a/02
	100		500-3500	Flange	464a/03
	150		900-7900	Flange	464a/04
Firegroove	50		2000-15000	Flange	464a/05
	80		150-700	Groove	464a/06
	100		300-1600	Groove	464a/07
	150		500-3500	Groove	464a/08
		900-7900	Groove	464a/09	
		2000-15000	Groove	464a/10	

These meters have been approved for installation with the gauge glass in the vertical position. There must be at least five diameters of straight pipe upstream and downstream of the orifice plate. The isolating valves on the pressure tappings must be kept closed when the meter is not being used. A spare gauge glass must be provided and located in the cabinet containing the stock of replacement sprinklers.

Certificate No: 464a

'Firesure X' Flowmeters

Product Name	Nominal Pipe Size to BS 1387 (mm)	Nominal Pipe Size to BS 3600 (mm)	Flow Range (dm ³ /min)	Connection Type	LPCB Ref. No.
Fireflange X	50	200	200-850	Flange	464a/11
	80		200-1800	Flange	464a/12
	100		400-4000	Flange	464a/13
	150		1100-9500	Flange	464a/14
Firegroove X	50		2500-17000	Flange	464a/15
	80		200-850	Groove	464a/16
	100		200-1800	Groove	464a/17
	150		400-4000	Groove	464a/18
		1100-9500	Groove	464a/19	
		2500-17000	Groove	464a/20	

- 1) These meters have been approved for installation with the gauge glass in the vertical position. There must be at least five diameters of straight pipe upstream and downstream of the orifice plate. The isolating valves on the pressure tappings must be kept closed when the meter is not being used. A spare gauge glass must be provided and located in the cabinet containing the stock of replacement sprinklers.
- 2) 'Firesure' meters must be installed and maintained in accordance with manufacturers instructions ref 'IOM FS' Issue 8.
- 3) 'Firesure X' meters must be installed and maintained in accordance with manufacturers instructions ref 'IOM FSX' Issue C.

PART 3: SECTION 6

DIRECT READING FLOW METERS

Roxspur Measurement & Control

2 Downgate Drive, Sheffield, South Yorkshire S4 8BT UK
 Tel: +44 (0)114 244 2521 • Fax: +44 (0)114 243 4838

Certificate No: 088a

Product Name	Pipe Size (mm)	Flow Range (dm ³ /min)	LPCB Ref. No.
Shunt Gapmeter	80	300 - 1500	088a/01
	100	500 - 2500	088a/02
	125	700 - 3500	088a/03
	150	1000 - 5000	088a/04

These meters have been approved for installation with the gauge glass in the vertical position. There must be at least five diameters of straight pipe upstream and downstream of the orifice plate. The isolating valves on the pressure tapings must be kept closed when the meter is not being used. A spare gauge glass must be provided and located in the cabinet containing the stock of replacement sprinklers. Type Nominal pipe size to Flow range Connection LPCB Ref. No.

Product Name	Nominal Pipe Size to BS1387 (mm)	Nominal Pipe Size to BS3600 (mm)	Flow Range (dm ³ /min)	Connection Type	LPCB Ref. No.
Type SGUV Mk 2	50	200	150 - 750	Flange	088a/05
	80		300 - 2300	Flange	088a/06
	100		500 - 3500	Flange	088a/07
	150		900 - 8200	Flange	088a/08
			2500 - 12500	Flange	088a/09
	50		150 - 750	Groove	088a/10
	80		300 - 2300	Groove	088a/11
	100		500 - 3500	Groove	088a/12
	150		900 - 8200	Groove	088a/13
			2500 - 12500	Groove	088a/14

To be installed in accordance with Roxspur Operation and Maintenance Manual OMM1002, Issue 1 (29/09/2005)

Tyco Fire Products Manufacturing Limited

Stockport Trading Estate, Yew Street, Stockport, Cheshire SK4 2JW UK
 Tel: +44 (0)161 429 3400 • Fax: +44 (0)161 477 6729
 E-mail: tycofireproducts.uk@tyco-bspd.com • Website: www.tycobuilding.com

Sales Enquiries:

Tel: +44 (0)161 875 0400 • Fax: +44 (0)161 875 0491
 E-mail: info-uk@tyco-bspd.com • Website: www.tycobuilding.com

Certificate No: 007e

Product Name	Hazard Class	Pipe Size (mm)	Flow Range (dm ³ /min)	Orifice Size (mm)	LPCB Ref. No.
Direct Reading Flow Meter	OHI	80	375 - 540	26.10	007e/01
	OHII	80	725 - 1000	39.25	007e/02
	OHIII	80	1100 - 1350	43.70	007e/03
	OHIIS	80	1800 - 2100	55.20	007e/04

These measuring devices are designed to be fitted directly on the upstream side, to straight pipes or into elbow fittings or globe valves or their hydraulic equivalent. The downstream flow loss may be zero in all but the case of the OHI measuring device which requires a minimum loss of 0.02 bar at a flow of 375 dm³/min. The maximum downstream flow loss shall not exceed 0.3 bar for any of the measuring devices with the following respective flow rates:

OHI 540dm³/min, OHII 1000dm³/min, OHIII 1350dm³/min, OHIIIS 2100dm³/min

PART 3: SECTION 7

MULTIPLE JET CONTROLS

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Multiple Jet Controls for use under the *LPC Rules for Automatic Sprinkler Installations* have been approved to a schedule of requirements developed by LPCB. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Angus Fire Armour Limited (Denmark)

Kastanievej, DK-5620, Glamsberg, Denmark
Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

UK Sales Enquiries:

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

Certificate No: 084f

Certificated Products

			LPCB Ref. No.
Angus Multiple Control Model B	(Double Outlet)	40mm	084f/01
Angus Multiple Control Model B	<i>Glass bulb type.</i> (Double Outlet)	50mm	084f/02
Angus Multiple Control Model B3	<i>Glass bulb type.</i> (Single Outlet)	20mm	084f/03

Glass bulb type.
Tested to the FOC Requirements and Testing Methods for Multiple Controls, April 1984 and approved with plain and chromium finish.

Tyco Fire Products Manufacturing Limited

Stockport Trading Estate, Yew Street, Stockport, Cheshire SK4 2JW UK
Tel: +44 (0)161 429 3400 • Fax: +44 (0)161 477 6729
E-mail: tycofireproducts.uk@tyco-bspd.com • Website: www.tycobuilding.com

Sales Enquiries:

Tel: +44 (0)161 875 0400 • Fax: +44 (0)161 875 0491
E-mail: info-uk@tyco-bspd.com • Website: www.tycobuilding.com

Certificate No: 007f

Certificated Products

			LPCB Ref. No.
Tyco Multiple Jet Control	(Double Outlet)	20mm	007f/01
Tyco Multiple Jet Control	<i>Glass bulb type.</i> (Double Outlet)	20mm	007f/01
Tyco Multiple Jet Control	<i>A corrosion-resistant coating for the body and yoke has been approved under the LPC Rules for automatic sprinkler installations.</i> (Single Outlet)	20mm	007f/02
Tyco Multiple Jet Control	<i>Glass bulb type.</i> (Single Outlet)	20mm	007f/02
Tyco Multiple Jet Control	<i>A corrosion-resistant coating for the body and yoke has been approved under the LPC Rules for automatic sprinkler installations.</i> (Double Outlet) ¹	25mm, 40mm and 50mm	007f/03
	<i>Glass bulb type (68°C only)</i>		

Note:

- 1) May also be used as a single outlet (with one outlet blanked off).

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

This section lists products approved in accordance with:

- LPS 1219 *Specification for Pipe Couplings*

All pipe couplings and fittings should be the subject of a maintenance contract, satisfying the requirements of the *LPC Rules for Automatic Sprinkler Installations*.

Anvil International Inc (Pennsylvania)

1411 Lancaster Avenue, Columbia, Pennsylvania 17512, USA

Tel: +1 717 684 4400 • Fax: +1 717 684 2131

Sales Enquiries:

Tel: +31 53 5725570 • Fax: +31 53 5725579

Certificate No: 119a

Certificate No: 519a

Pipe Couplings (GRUVLOK)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.		
Pipe Coupling Style 7000	25	33.7	R&C	EPDM	20	119a/01		
	32	42.4	R&C	EPDM	20			
	40	48.3	R&C	EPDM	20			
	50	60.3	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
	100	114.3	R&C	EPDM	20			
	150	168.3	R&C	EPDM	20			
Pipe Coupling Fig 7000	200	219.1	R&C	EPDM	20	119a/02		
	65	76.1	R&C	EPDM	20			
	65	108 ⁽¹⁾	R&C	EPDM	20			
	65	133 ⁽¹⁾	R&C	EPDM	20			
	65	159 ⁽¹⁾	R&C	EPDM	20			
Pipe Coupling Style 7400 Rigidlite	150	165.1	R&C	EPDM	20	119a/03		
	25	33.7	R&C	EPDM	20			
	32	42.4	R&C	EPDM	20			
	40	48.3	R&C	EPDM	20			
	50	60.3	R&C	EPDM	20			
	65	76.1	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
	100	114.3	R&C	EPDM	20			
	125	139.7	R&C	EPDM	20			
	150	165.1	R&C	EPDM	20			
Pipe Coupling Style 7401 Rigidlok	150	168.3	R&C	EPDM	20	119a/04		
	200	219.1	R&C	EPDM	20			
	200	219.1	R&C	EPDM	20			
	Mechanical Tee Fig 7045	50 x 15	60.3 x 21.3	T	EPDM		20	119a/05
		50 x 20	60.3 x 26.7	T	EPDM		20	
		50 x 25	60.3 x 33.7	T	EPDM		20	
		50 x 32	60.3 x 42.4	T	EPDM		20	
		50 x 40	60.3 x 48.3	T	EPDM		20	
		65 x 15	76.1 x 21.3	T	EPDM		20	
		65 x 20	76.1 x 26.7	T	EPDM		20	
65 x 25		76.1 x 33.7	T	EPDM	20			
65 x 32		76.1 x 42.4	T	EPDM	20			
65 x 40		76.1 x 48.3	T	EPDM	20			
80 x 15		88.9 x 21.3	T	EPDM	20			
80 x 20		88.9 x 26.7	T	EPDM	20			
80 x 25		88.9 x 33.7	T	EPDM	20			
80 x 32		88.9 x 42.4	T	EPDM	20			
80 x 40		88.9 x 48.3	T	EPDM	20			
80 x 50		88.9 x 60.3	T	EPDM	20			
100 x 15		114.3 x 21.3	T	EPDM	20			

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Mechanical Tee Fig 7046	100 x 20	114.3 x 26.7	T	EPDM	20	119a/06
	100 x 25	114.3 x 33.7	T	EPDM	20	
	100 x 32	114.3 x 42.4	T	EPDM	20	
	100 x 40	114.3 x 48.3	T	EPDM	20	
	100 x 50	114.3 x 60.3	T	EPDM	20	
	125 x 32	139.7 x 42.4	T	EPDM	20	
	125 x 40	139.7 x 48.3	T	EPDM	20	
	125 x 50	139.7 x 60.3	T	EPDM	20	
	150 x 32	165.1 x 42.4	T	EPDM	20	
	150 x 40	165.1 x 48.3	T	EPDM	20	
	150 x 50	165.1 x 60.3	T	EPDM	20	
	150 x 32	168.3 x 42.4	T	EPDM	20	
	150 x 40	168.3 x 48.3	T	EPDM	20	
	150 x 50	168.3 x 60.3	T	EPDM	20	
	65 x 32	76.1 x 42.4	G	EPDM	20	
	65 x 40	76.1 x 48.3	G	EPDM	20	
	80 x 32	88.9 x 42.4	G	EPDM	20	
	80 x 40	88.9 x 48.3	G	EPDM	20	
	80 x 50	88.9 x 60.3	G	EPDM	20	
	100 x 32	114.3 x 42.4	G	EPDM	20	
	100 x 40	114.3 x 48.3	G	EPDM	20	
	100 x 50	114.3 x 60.3	G	EPDM	20	
	100 x 65	114.3 x 76.1	G	EPDM	20	
	100 x 80	114.3 x 88.9	G	EPDM	20	
	125 x 32	139.7 x 48.3	G	EPDM	20	
	125 x 50	139.7 x 60.3	G	EPDM	20	
	125 x 80	139.7 x 88.9	G	EPDM	20	
	150 x 40	165.1 x 48.3	G	EPDM	20	
	150 x 50	165.1 x 60.3	G	EPDM	20	
	150 x 65	165.1 x 76.1	G	EPDM	20	
	150 x 80	165.1 x 88.9	G	EPDM	20	
	150 x 100	165.1 x 114.3	G	EPDM	20	
150 x 40	168.3 x 48.3	G	EPDM	20		
150 x 50	168.3 x 60.3	G	EPDM	20		
150 x 65	168.3 x 76.1	G	EPDM	20		
150 x 80	168.3 x 88.9	G	EPDM	20		
150 x 100	168.3 x 114.3	G	EPDM	20		
200 x 80	219.1 x 88.9	G	EPDM	20		
200 x 100	219.1 x 114.3	G	EPDM	20		
Style 7012 Flange Adapter	50	60.3	R&C	EPDM	20	119a/11
	65	76.1	R&C	EPDM	20	
	80	88.9	R&C	EPDM	20	
	100	114.3	R&C	EPDM	20	
	125	139.7	R&C	EPDM	20	
	150	165.1	R&C	EPDM	20	
	150	168.3	R&C	EPDM	20	
	200	219.1	R&C	EPDM	20	
Flexible Pipe Coupling Fig 7001E	32	42.2	R&C	EPDM	20	519a/01
	40	48.3	R&C	EPDM	20	
	50	60.3	R&C	EPDM	20	
	65	73	R&C	EPDM	20	
	65	76.1	R&C	EPDM	20	
	80	88.9	R&C	EPDM	20	
	100	114.3	R&C	EPDM	20	
	150	165.1	R&C	EPDM	20	
	200	219.1	R&C	EPDM	20	
	250	273.0	R&C	EPDM	20	
	300	323.9	R&C	EPDM	20	
	Lightweight Flexible Pipe Coupling Fig 7000E	32	42.4	R&C	EPDM	
40		48.3	R&C	EPDM	20	
50		60.3	R&C	EPDM	20	
65		76.1	R&C	EPDM	20	
80		88.9	R&C	EPDM	20	
100		114.3	R&C	EPDM	20	
150		165.1	R&C	EPDM	20	
150		168.3	R&C	EPDM	20	
200		219.1	R&C	EPDM	20	
Rigid Pipe Coupling Fig 7400E		32	42.4	R&C	EPDM	20
	40	48.3	R&C	EPDM	20	
	50	60.3	R&C	EPDM	20	

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Fig 7043E Threaded Outlet (U-bolt)	65	76.1	R&C	EPDM	20	519a/22
	80	88.9	R&C	EPDM	20	
	100	114.3	R&C	EPDM	20	
	150	165.1	R&C	EPDM	20	
	150	168.3	R&C	EPDM	20	
	200	219.1	R&C	EPDM	20	
	250	273.0	R&C	EPDM	20	
	300	323.9	R&C	EPDM	20	
	32 x 15	42.4	T	EPDM	20	
	32 x 20	42.4	T	EPDM	20	
	32 x 25	42.4	T	EPDM	20	
	40 x 15	48.3	T	EPDM	20	
	40 x 20	48.3	T	EPDM	20	
	40 x 25	48.3	T	EPDM	20	
	50 x 15	60.3	T	EPDM	20	
50 x 20	60.3	T	EPDM	20		
50 x 25	60.3	T	EPDM	20		
60 x 15	76.1	T	EPDM	20		
60 x 20	76.1	T	EPDM	20		
60 x 25	76.1	T	EPDM	20		
Flange Adapter Fig 7012E	50	60.3	R & C	EPDM	20	519a/23
	65	76.1	R & C	EPDM	20	
	80	88.9	R & C	EPDM	20	
	100	114.3	R & C	EPDM	20	
	125	139.7	R & C	EPDM	20	
	150	165.1	R & C	EPDM	20	
	150	168.3	R & C	EPDM	20	
140	219.1	R & C	EPDM	15		

Notes:

- 1) These sizes are not suitable for installations that require BS 1387 pipework due to the sizes not being included in that standard.
- 2) Two Figure 7045 mechanical tees may be used in combination with pipe run sizes 76.1mm through 168.3mm with branch sizes 48.3mm and 60.3mm, and are designated Figure 7047.
- 3) Two Figure 7046 mechanical tees may be used in combination with pipe run sizes 76.1mm through 168.3mm with branch sizes 48.3mm, through 114.3mm, and are designated Figure 7048.
- 4) Figure 7045 and Figure 7046 mechanical tees may be used in combination with pipe run sizes 76.1mm through 168.3mm with branch sizes 48.3mm and 0.3mm, and are designated Figure 7049.

Sales Enquiries:

Tel: +31 53 5725570

Certificate No: 119a

Certificate No: 519a

Fittings (GRUVLOK)

Product Name	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
90° Elbow - Fig 7050	33.7, 42.4, 48.3, 60.3, 76.1, 88.9, 108 ⁽¹⁾ , 114.3, 133 ⁽¹⁾ , 159 ⁽¹⁾ , 165.1, 168.3, 219.1	20	119a/07
45° Elbow - Fig 7051	33.7, 42.4, 48.3, 60.3, 76.1, 88.9, 108 ⁽¹⁾ , 114.3, 133 ⁽¹⁾ , 159 ⁽¹⁾ , 165.1, 168.3, 219.1	20	119a/08
Tee - Fig 7060	33.7, 42.4, 48.3, 60.3, 76.1, 88.9, 108 ⁽¹⁾ , 114.3, 133 ⁽¹⁾ , 159 ⁽¹⁾ , 165.1, 168.3, 219.1	20	119a/09
Blank Cap - Fig 7074	33.7, 42.4, 48.3, 60.3, 76.1, 88.9, 108 ⁽¹⁾ , 114.3, 133 ⁽¹⁾ , 159 ⁽¹⁾ , 165.1, 168.3, 219.1	20	119a/10
90° Elbow - Fig 7050E	42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1, 273.0, 323.9	20	519a/12
45° Elbow - Fig 7051E	42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1, 273.0, 323.9	20	519a/13
Tee - Fig 7060E	42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1, 273.0, 323.9	20	519a/14

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
Cap - Fig 7074E	42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1, 273.0, 323.9	20	519a/08
Short pattern 90° Elbow - Fig 7050E	60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	519a/20
Short pattern Tee - Fig 7460E	60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3,	20	519a/21

Notes:

- 1) These sizes are not suitable for installations that require BS 1387 pipework due to the sizes not being included in that standard.
- 2) Two Figure 7045 mechanical tees may be used in combination with pipe run sizes 76.1mm through 168.3mm with branch sizes 48.3mm and 60.3mm, and are designated Figure 7047.
- 3) Two Figure 7046 mechanical tees may be used in combination with pipe run sizes 76.1mm through 168.3mm with branch sizes 48.3mm, through 114.3mm, and are designated Figure 7048.
- 4) Figure 7045 and Figure 7046 mechanical tees may be used in combination with pipe run sizes 76.1mm through 168.3mm with branch sizes 48.3mm and 60.3mm, and are designated Figure 7049.
- 5) All couplings and fittings to be installed in accordance with the manufacturer's pipe preparation and installation instructions.
- 6) Anvil International Inc products are compatible with, and may be directly connected to AnvilStar products LPCB Ref nos. 01, 02, 08, 12, 13, 14, 16, 20, 21 & 22.

Certificate No: 519a

Pipe Couplings (GRUVLOK)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Reducing Coupling Fig 7010E	50 x 40	60.3 x 48.3	R&C	EPDM	20	519a/24
	65 x 50	76.1 x 60.3	R&C	EPDM	20	
	80 x 50	88.9 x 60.3	R&C	EPDM	20	
	80 x 65	88.9 x 76.1	R&C	EPDM	20	
	100 x 50	114.3 x 60.3	R&C	EPDM	20	
	100 x 65	114.3 x 76.1	R&C	EPDM	20	
	100 x 80	114.3 x 88.9	R&C	EPDM	20	
	150 x 100	165.1 x 114.3	R&C	EPDM	20	
	150 x 100	168.3 x 114.3	R&C	EPDM	20	
	200 x 150	219.1 x 165.1	R&C	EPDM	20	
	200 x 150	219.1 x 168.3	R&C	EPDM	20	

Sales Enquiries:

Tel: +31 53 5725570

Certificate No: 519a

Pipe Couplings (GRUVLOK)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Mechanical Tee Fig 7045E	50 x 25	60.3 x 33.7	Threaded (T)	EPDM	20	519a/10
	50 x 32	60.3 x 42.2	T	EPDM	20	
	50 x 40	60.3 x 48.3	T	EPDM	20	
	65 x 25	76.1 x 33.7	T	EPDM	20	
	65 x 32	76.1 x 42.2	T	EPDM	20	
	65 x 40	76.1 x 48.3	T	EPDM	20	
	80 x 25	88.9 x 33.7	T	EPDM	20	
	80 x 32	88.9 x 42.2	T	EPDM	20	

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
	80 x 40	88.9 x 48.3	T	EPDM	20	
	80 x 50	88.9 x 60.3	T	EPDM	20	
	100 x 25	114.3 x 33.7	T	EPDM	20	
	100 x 32	114.3 x 42.2	T	EPDM	20	
	100 x 40	114.3 x 48.3	T	EPDM	20	
	100 x 50	114.3 x 60.3	T	EPDM	20	
	100 x 65	114.3 x 76.1	T	EPDM	20	
	150 x 32	165.1 x 42.2	T	EPDM	20	
	150 x 40	165.1 x 48.3	T	EPDM	20	
	150 x 50	165.1 x 60.3	T	EPDM	20	
	150 x 65	165.1 x 76.1	T	EPDM	20	
	150 x 80	165.1 x 88.9	T	EPDM	20	
	150 x 32	168.3 x 42.2	T	EPDM	20	
	150 x 40	168.3 x 48.3	T	EPDM	20	
	150 x 50	168.3 x 60.3	T	EPDM	20	
	150 x 65	168.3 x 76.1	T	EPDM	20	
	150 x 80	168.3 x 88.9	T	EPDM	20	
	200 x 50	219.1 x 60.3	T	EPDM	20	

Certificate No: 519a

Pipe Couplings (GRUVLOK)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Mechanical Tee Fig 7046E	65 x 32	76.1 x 42.2	Grooved (G)	EPDM	20	519a/09
	65 x 40	76.1 x 48.3	G	EPDM	20	
	80 x 32	88.9 x 42.2	G	EPDM	20	
	80 x 40	88.9 x 48.3	G	EPDM	20	
	80 x 50	88.9 x 60.3	G	EPDM	20	
	100 x 32	114.3 x 42.2	G	EPDM	20	
	100 x 40	114.3 x 48.3	G	EPDM	20	
	100 x 50	114.3 x 60.3	G	EPDM	20	
	100 x 65	114.3 x 76.1	G	EPDM	20	
	100 x 80	114.3 x 88.9	G	EPDM	20	
	150 x 32	165.1 x 42.2	G	EPDM	20	
	150 x 40	165.1 x 48.2	G	EPDM	20	
	150 x 50	165.1 x 60.3	G	EPDM	20	
	150 x 65	165.1 x 76.1	G	EPDM	20	
	150 x 80	165.1 x 88.9	G	EPDM	20	
	150 x 100	165.1 x 114.3	G	EPDM	20	
	150 x 32	168.3 x 42.2	G	EPDM	20	
	150 x 40	168.3 x 48.3	G	EPDM	20	
	150 x 50	168.3 x 60.3	G	EPDM	20	
	150 x 65	168.3 x 76.1	G	EPDM	20	
	150 x 80	168.3 x 88.9	G	EPDM	20	
	150 x 100	168.3 x 114.3	G	EPDM	20	
	200 x 50	219.1 x 60.3	G	EPDM	20	
	200 x 65	219.1 x 76.1	G	EPDM	20	
	200 x 80	219.1 x 88.9	G	EPDM	20	

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Certificate No: 519a to LPS 1219: Issue 1

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Pipe Couplings (SPF)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.		
Flexible Coupling C1	32	42.2	R&C	EPDM	20	519a/01		
	40	48.3	R&C	EPDM	20			
	50	60.3	R&C	EPDM	20			
	65	73	R&C	EPDM	20			
	65	76.1	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
	100	114.3	R&C	EPDM	20			
	150	165.1	R&C	EPDM	20			
	200	219.1	R&C	EPDM	20			
Flexible Coupling C3	32	42.2	R&C	EPDM	20	519a/16		
	40	48.3	R&C	EPDM	20			
	50	60.3	R&C	EPDM	20			
	65	73	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
	100	114.3	R&C	EPDM	20			
	150	168.3	R&C	EPDM	20			
	200	219.1	R&C	EPDM	20			
	Rigid Coupling C4	32	42.2	R&C	EPDM		20	519a/02
40		48.3	R&C	EPDM	20			
50		60.3	R&C	EPDM	20			
65		76.1	R&C	EPDM	20			
80		88.9	R&C	EPDM	20			
100		114.3	R&C	EPDM	20			
150		165.1	R&C	EPDM	20			
150		168.3	R&C	EPDM	20			
200		219.1	R&C	EPDM	20			
Reduced Coupling RC1	50 x 40	60.3 x 48.3	R&C	EPDM	20	519a/03		
	65 x 50	73.0 x 60.3	R&C	EPDM	20			
	80 x 50	88.9 x 60.3	R&C	EPDM	20			
	80 x 65	88.9 x 73.0	R&C	EPDM	20			
	100 x 50	114.3 x 60.3	R&C	EPDM	20			
	100 x 65	114.3 x 73.0	R&C	EPDM	20			
	100 x 80	114.3 x 88.9	R&C	EPDM	20			
	Mechanical Tee MT9	32 x 15	42.2 x 21.4	R&C	EPDM		20	519a/17
		32 x 20	42.2 x 26.9	R&C	EPDM		20	
32 x 25		42.2 x 33.8	R&C	EPDM	20			
40 x 15		48.3 x 21.4	R&C	EPDM	20			
40 x 20		48.3 x 26.9	R&C	EPDM	20			
40 x 25		48.3 x 33.8	R&C	EPDM	20			
50 x 15		60.3 x 21.4	R&C	EPDM	20			
50 x 20		60.3 x 26.9	R&C	EPDM	20			
50 x 25		60.3 x 33.8	R&C	EPDM	20			
Flexible Coupling C1	250	273.0	R&C	EPDM	20	519a/19 519a/01		
	300	323.9	R&C	EPDM	20			
Flexible Coupling C3	150	165.1	R&C	EPDM	20	519a/16		
Rigid Coupling C4	300	323.9	R&C	EPDM	20	519a/02		
MT90 Threaded Outlets (U-bolt)	32x15	42.4	T	EPDM	20	519a/22		
	32x20	42.4	T	EPDM	20			
	32x25	42.4	T	EPDM	20			
	40x15	48.3	T	EPDM	20			
	40x20	48.3	T	EPDM	20			
	40x25	48.3	T	EPDM	20			
	50x15	60.3	T	EPDM	20			
	50x20	60.3	T	EPDM	20			
	50x25	60.3	T	EPDM	20			
	60x15	76.1	T	EPDM	20			
	60x20	76.1	T	EPDM	20			
	60x25	76.1	T	EPDM	20			
	32x15	42.4	T	EPDM	20			
	32x20	42.4	T	EPDM	20			
	32x25	42.4	T	EPDM	20			
	40x15	48.3	T	EPDM	20			
	40x20	48.3	T	EPDM	20			
	40x25	48.3	T	EPDM	20			
	50x15	60.3	T	EPDM	20			
	50x20	60.3	T	EPDM	20			
	50x25	60.3	T	EPDM	20			
60x15	76.1	T	EPDM	20				

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
F3 Flange Adapter	60x20	76.1	T	EPDM	20	519a/23
	60x25	76.1	T	EPDM	20	
	50	60.3	R & C	EPDM	20	
	65	76.1	R & C	EPDM	20	
	80	88.9	R & C	EPDM	20	
	100	114.3	R & C	EPDM	20	
	125	139.7	R & C	EPDM	20	
	150	165.1	R & C	EPDM	20	
	150	168.3	R & C	EPDM	20	
200	219.1	R & C	EPDM	15	519a/23a 519a/23	

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Pipe Fittings (SPF)

Product Name	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
F1 Flange	73.0, 219.1	12	519a/04
	60.3, 88.9, 114.3, 168.3	12	519a/11
E1 90° Elbow	48.3, 60.3, 73.0, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1	20	519a/05
	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1, 273.0, 323.9	20	519a/12
E2 45° Elbow	76.1, 165.1	20	519a/06
	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1, 273.0, 323.9	20	519a/13
T1 Tee	76.1, 165.1	20	519a/07
	42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1, 273.0, 323.9	20	519a/14
K1 Cap	114.3, 219.1	18	519a/15(2)
	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1, 273.0, 323.9	20	519a/08
Short pattern 90° Elbow SE1	60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	519a/20
Short pattern Tee ST1	60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	519a/21

Notes:

- 1) All fittings are approved with a painted and galvanised finish.
- 2) These fittings are approved with a thinner wall section.
- 3) All couplings and fittings to be installed in accordance with the manufacturer's pipe preparation and installation instructions.
- 4) AnvilStar products LPCB Ref nos. 01, 02, 08, 12, 13, 14, 16, 20, 21 & 22 are compatible with, and may be directly connected to Anvil International Inc products.

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Pipe Couplings (SPF)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Reducing Coupling RC2	50 x 40	60.3 x 48.3	R&C	EPDM	20	519a/24
	65 x 50	76.1 x 60.3	R&C	EPDM	20	
	80 x 50	88.9 x 60.3	R&C	EPDM	20	
	80 x 65	88.9 x 76.1	R&C	EPDM	20	
	100 x 50	114.3 x 60.3	R&C	EPDM	20	
	100 x 65	114.3 x 76.1	R&C	EPDM	20	
	100 x 80	114.3 x 88.9	R&C	EPDM	20	
	150 x 100	165.1 x 114.3	R&C	EPDM	20	
	150 x 100	168.3 x 114.3	R&C	EPDM	20	
	200 x 150	219.1 x 165.1	R&C	EPDM	20	
	200 x 150	219.1 x 168.3	R&C	EPDM	20	

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PIPE COUPLINGS AND FITTINGS

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Pipe Couplings (SPF)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Mechanical Tee MT2	65 x 32	76.1 x 42.2	Grooved (G)	EPDM	20	519a/09
	65 x 40	76.1 x 48.2	G	EPDM	20	
	80 x 32	88.9 x 42.2	G	EPDM	20	
	80 x 40	88.9 x 48.3	G	EPDM	20	
	80 x 50	88.9 x 60.3	G	EPDM	20	
	100 x 32	114.3 x 42.2	G	EPDM	20	
	100 x 40	114.3 x 48.3	G	EPDM	20	
	100 x 50	114.3 x 60.3	G	EPDM	20	
	100 x 65	114.3 x 76.1	G	EPDM	20	
	100 x 80	114.3 x 88.9	G	EPDM	20	
	150 x 32	165.1 x 42.2	G	EPDM	20	
	150 x 40	165.1 x 48.3	G	EPDM	20	
	150 x 50	165.1 x 60.3	G	EPDM	20	
	150 x 65	165.1 x 76.1	G	EPDM	20	
	150 x 80	165.1 x 88.9	G	EPDM	20	
	150 x 100	165.1 x 114.3	G	EPDM	20	
	150 x 32	168.3 x 42.2	G	EPDM	20	
	150 x 40	168.3 x 48.3	G	EPDM	20	
	150 x 50	168.3 x 60.3	G	EPDM	20	
	150 x 65	168.3 x 76.1	G	EPDM	20	
	150 x 80	168.3 x 88.9	G	EPDM	20	
	150 x 100	168.3 x 114.3	G	EPDM	20	
	200 x 50	219.1 x 60.3	G	EPDM	20	
	200 x 65	219.1 x 76.1	G	EPDM	20	
	200 x 80	219.1 x 88.9	G	EPDM	20	

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Pipe Couplings (SPF)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Mechanical Tee MT8	50 x 25	60.3 x 33.7	Threaded (T)	EPDM	20	519a/10
	50 x 32	60.3 x 42.2	T	EPDM	20	
	50 x 40	60.3 x 48.3	T	EPDM	20	
	65 x 25	76.1 x 33.7	T	EPDM	20	
	65 x 32	76.1 x 42.2	T	EPDM	20	
	65 x 40	76.1 x 48.3	T	EPDM	20	
	80 x 25	88.9 x 33.7	T	EPDM	20	
	80 x 32	88.9 x 42.2	T	EPDM	20	
	80 x 40	88.9 x 48.3	T	EPDM	20	
	80 x 50	88.9 x 60.3	T	EPDM	20	
	100 x 25	114.3 x 33.7	T	EPDM	20	
	100 x 32	114.3 x 42.2	T	EPDM	20	
	100 x 40	114.3 x 48.3	T	EPDM	20	
	100 x 50	114.3 x 60.3	T	EPDM	20	
	100 x 65	114.3 x 76.1	T	EPDM	20	
	150 x 32	165.1 x 42.2	T	EPDM	20	
	150 x 40	165.1 x 48.3	T	EPDM	20	
	150 x 50	165.1 x 60	T	EPDM	20	
	150 x 65	165.1 x 76.1	T	EPDM	20	
	150 x 80	165.1 x 88.9	T	EPDM	20	
	150 x 32	168.3 x 42.2	T	EPDM	20	
	150 x 40	168.3 x 48.3	T	EPDM	20	
	150 x 50	168.3 x 60.3	T	EPDM	20	
	150 x 65	168.3 x 76.1	T	EPDM	20	
	150 x 80	168.3 x 88.9	T	EPDM	20	
	200 x 50	219.1 x 60.3	T	EPDM	20	

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PIPE COUPLINGS AND FITTINGS

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Certificate No: 123a

Pipe Couplings (QUIKCOUP)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Style 75	32	42.2	R&C	EPDM	20	123a/01
	40	48.3	R&C	EPDM	20	
	50	60.3	R&C	EPDM	20	
	65	76.1	R&C	EPDM	20	
	80	88.9	R&C	EPDM	20	
	100	114.3	R&C	EPDM	20	
	125	139.7	R&C	EPDM	20	
	125	141.3	R&C	EPDM	20	
	150	165.1	R&C	EPDM	20	
	150	168.3	R&C	EPDM	20	
Style 07	200	219.1	R&C	EPDM	20	123a/02
	50	60.3	R&C	EPDM	20	
	80	88.9	R&C	EPDM	20	
	100	114.3	R&C	EPDM	20	
	125	141.3	R&C	EPDM	20	
Style 007 Quikhinge	150	168.3	R&C	EPDM	20	123a/03
	200	219.1	R&C	EPDM	20	
	32	42.4	R&C	EPDM	12	
	40	48.3	R&C	EPDM	12	
	50	60.3	R&C	EPDM	12	
	65	76.1	R&C	EPDM	12	
	80	88.9	R&C	EPDM	12	
	100	114.3	R&C	EPDM	12	
	125	139.7	R&C	EPDM	12	
	150	165.1	R&C	EPDM	12	
Style 08 Quik-T	150	168.3	R&C	EPDM	12	123a/04
	50	60.3	T(½ in BSP)	EPDM	20	
	50	60.3	T(¾ in BSP)	EPDM	20	
	50	60.3	T(1 in BSP)	EPDM	20	
	50	60.3	T(1¼ in BSP)	EPDM	20	
	50	60.3	T(1½ in BSP)	EPDM	20	
	65	76.1	T(½ in BSP)	EPDM	20	
	65	76.1	T(¾ in BSP)	EPDM	20	
	65	76.1	T(1 in BSP)	EPDM	20	
	65	76.1	T(1¼ in BSP)	EPDM	20	
	65	76.1	T(1½ in BSP)	EPDM	20	
	80	88.9	T(½ in BSP)	EPDM	20	
	80	88.9	T(¾ in BSP)	EPDM	20	
	80	88.9	T(1 in BSP)	EPDM	20	
	80	88.9	T(1¼ in BSP)	EPDM	20	
	80	88.9	T(1½ in BSP)	EPDM	20	
	80	88.9	T(2 in BSP)	EPDM	20	
	100	114.3	T(½ in BSP)	EPDM	20	
	100	114.3	T(¾ in BSP)	EPDM	20	
	100	114.3	T(1 in BSP)	EPDM	20	
100	114.3	T(1¼ in BSP)	EPDM	20		
100	114.3	T(1½ in BSP)	EPDM	20		
100	114.3	T(2 in BSP)	EPDM	20		

PART 3: SECTION 8.1**PIPE COUPLINGS AND FITTINGS**

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
	150	165.1	T(1¼ in BSP)	EPDM	20	
	150	165.1	T(1½ in BSP)	EPDM	20	
	150	165.1	T(2 in BSP)	EPDM	20	
	150	168.3	T(1¼ in BSP)	EPDM	20	
	150	168.3	T(1½ in BSP)	EPDM	20	
	150	168.3	T(2 in BSP)	EPDM	20	
	150	168.3	T(4 in BSP)	EPDM	20	
	125 x 32	139.7 x 42.4	T	EPDM	20	123a/05
	150 x 65	165.1 x 76.1	T	EPDM	20	
	50 x 40	60.3 x 48.3	G	EPDM	20	123a/06
	65 x 40	76.1 x 48.3	G	EPDM	20	
	80 x 32	88.9 x 42.4	G	EPDM	20	
	80 x 40	88.9 x 48.3	G	EPDM	20	
	80 x 50	88.9 x 60.3	G	EPDM	20	
	100 x 32	114.3 x 42.4	G	EPDM	20	
	100 x 40	114.3 x 48.3	G	EPDM	20	
	100 x 50	114.3 x 60.3	G	EPDM	20	
	100 x 65	114.3 x 76.1	G	EPDM	20	
	125 x 65	139.7 x 76.1	G	EPDM	20	
	150 x 40	165.1 x 48.3	G	EPDM	20	
	150 x 50	165.1 x 60.3	G	EPDM	20	
	150 x 40	168.3 x 48.3	G	EPDM	20	
	150 x 50	168.3 x 60.3	G	EPDM	20	
	150 x 65	168.3 x 76.1	G	EPDM	20	
	150 x 100	168.3 x 114.3	G	EPDM	20	
Style 007R Quikhinge	32	42.2	R&C	EPDM	12	123a/07
	40	48.3	R&C	EPDM	12	
	50	60.3	R&C	EPDM	12	
	65	76.1	R&C	EPDM	12	
	80	88.9	R&C	EPDM	12	
	100	114.3	R&C	EPDM	12	
	125	139.7	R&C	EPDM	12	
	150	165.1	R&C	EPDM	12	
	150	168.3	R&C	EPDM	12	
Style 99 Quiklet	32 x 15	42.2	T	EPDM	12	123a/14
	32 x 20	42.2	T	EPDM	12	
	32 x 25	42.2	T	EPDM	12	
	40 x 15	48.3	T	EPDM	12	
	40 x 20	48.3	T	EPDM	12	
	40 x 25	48.3	T	EPDM	12	
	50 x 15	60.3	T	EPDM	12	
	50 x 20	60.3	T	EPDM	12	
	50 x 25	60.3	T	EPDM	12	
Style 75RT Rigid Coupling	40	48.3	R&C	EPDM	16	123a/15
	50	60.3	R&C	EPDM	16	
	65	76.1	R&C	EPDM	16	
	80	88.9	R&C	EPDM	16	
	100	114.3	R&C	EPDM	16	
	125	139.7	R&C	EPDM	16	
	150	165.1	R&C	EPDM	16	
	150	168.3	R&C	EPDM	16	
Style 007RT Quikhinge Rigid Coupling	200	219.1	R&C	EPDM	16	
	40	48.3	R&C	EPDM	16	123a/16
	50	60.3	R&C	EPDM	16	
	65	76.1	R&C	EPDM	16	
	80	88.9	R&C	EPDM	16	
	100	114.3	R&C	EPDM	16	
	125	39.7	R&C	EPDM	16	
	150	165.1	R&C	EPDM	16	
	150	168.3	R&C	EPDM	16	

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Fittings

Product Name	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
Style 06 90° Elbow	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 141.3, 165.1, 168.3, 219.1	20	123a/08
Style 04 45° Elbow	60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	123a/09
Style 05 Grooved Tee	48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	123a/10
Style 06 90° Elbow	139.7	12	123a/11
Style 02/020 Blank Ends	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	123a/12
Style 02 Blank End	42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3	20	123a/13
Style 64 45° Elbow	42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	123a/17
Style 65 Tee - Short Radius	33.7, 42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	123a/18
Style 66 90° Elbow - Short Radius	33.7, 42.4, 48.3, 60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 168.3, 219.1	20	123a/19

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Certificate No: 140a

Pipe couplings (RELIABLE)

Product Name	Nominal size (mm)	Pipe outside diameter (mm)	Pipe ends (mm)	Gasket type	Max. working pressure (bar)	LPCB Ref. No.
RFC	50	60.3	R&C	EPDM	20	140a/01
	65	76.1	R&C	EPDM	20	
	80	88.9	R&C	EPDM	20	
	100	114.3	R&C	EPDM	20	
	125	139.7	R&C	EPDM	20	
	150	165.1	R&C	EPDM	20	
	200	219.1	R&C	EPDM	20	
RRC	32	42.4	R&C	EPDM	15	140a/02
	40	48.3	R&C	EPDM	15	
	50	60.3	R&C	EPDM	12	
	65	76.1	R&C	EPDM	12	
	80	88.9	R&C	EDPM	12	
	100	114.3	R&C	EPDM	12	
	125	139.7	R&C	EPDM	15	
	150	165.1	R&C	EPDM	12	
	200	219.1	R7C	EPDM	15	
	RRDC	50 x 40	60.3 x 48.3	R&C	EPDM	
65 x 50		76.1 x 60.3	R&C	EPDM	20	
80 x 50		88.9 x 60.3	R&C	EPDM	20	
80 x 65		88.9 x 76.1	R&C	EPDM	20	
100 x 50		114.3 x 60.3	R&C	EPDM	20	
100 x 65		114.3 x 76.1	R&C	EPDM	20	
100 x 80		114.3 x 88.9	R&C	EPDM	20	
150 x 100		165.1 x 114.3	R&C	EPDM	20	
RMTT	200 x 150	219.1 x 165.1	R&C	EPDM	20	140a/04
	65 x 32	76.1 x 42.4	T	EPDM	20	
	65 x 40	76.1 x 48.3	T	EPDM	20	
	80 x 32	88.9 x 42.4	T	EPDM	20	
	80 x 40	88.9 x 48.3	T	EPDM	20	
	80 x 50	88.9 x 60.3	T	EPDM	20	
	100 x 32	114.3 x 42.4	T	EPDM	20	
	100 x 40	114.3 x 48.3	T	EPDM	20	
	100 x 50	114.3 x 60.3	T	EPDM	20	
	100 x 65	114.3 x 76.1	T	EPDM	20	
	100 x 80	114.3 x 88.9	T	EPDM	20	
	150 x 32	165.1 x 42.4	T	EPDM	20	

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Nominal size (mm)	Pipe outside diameter (mm)	Pipe ends (mm)	Gasket type	Max. working pressure (bar)	LPCB Ref. No.
RMTG	150 x 40	165.1 x 48.3	T	EPDM	20	140a/05
	150 x 50	165.1 x 60.3	T	EPDM	20	
	150 x 65	165.1 x 76.1	T	EPDM	20	
	150 x 80	165.1 x 88.9	T	EPDM	20	
	150 x 100	165.1 x 114.3	T	EPDM	20	
	80 x 40	88.9 x 48.3	G	EPDM	20	
	80 x 50	88.9 x 60.3	G	EPDM	20	
	100 x 40	114.3 x 48.3	G	EPDM	20	
	100 x 50	114.3 x 60.3	G	EPDM	20	
	100 x 65	114.3 x 76.1	G	EPDM	20	
RMTU	100 x 80	114.3 x 88.9	G	EPDM	20	140a/06
	150 x 40	165.1 x 48.3	G	EPDM	20	
	150 x 50	165.1 x 60.3	G	EPDM	20	
	150 x 65	165.1 x 76.1	G	EPDM	20	
	150 x 80	165.1 x 88.9	G	EPDM	20	
	150 x 100	165.1 x 114.3	G	EPDM	20	
	32 x 15	42.2 x 21.3	T	EPDM	12	
	32 x 20	42.2 x 26.7	T	EPDM	12	
	32 x 25	42.2 x 33.7	T	EPDM	12	
	40 x 15	48.3 x 21.3	T	EPDM	12	
RFA	40 X 20	48.3 x 26.7	T	EPDM	12	140a/15
	40 x 25	48.3 x 33.7	T	EPDM	12	
	50 x 15	60.3 x 21.3	T	EPDM	12	
	50 x 20	60.3 x 26.7	T	EPDM	12	
	50 x 25	60.3 x 33.7	T	EPDM	12	
	65 x 15	76.1 x 21.3	T	EPDM	12	
	65 x 20	76.1 x 26.7	T	EPDM	12	
	65 x 25	76.1 x 33.7	T	EPDM	12	
	50	60.3	R&C	EDPM	16	
	65	76.1	R&C	EDPM	16	
80	88.9	R&C	EDPM	16		
100	114.3	R&C	EDPM	16		
150	165.1	R&C	EDPM	16		
200	219.1	R&C	EDPM	16		

Certificate No: 140a

Pipe Fitting (RELIABLE) LPS 1219: Issue 1

Product Name	Pipe outside diameter (mm)	Maximum working pressure (bar)	LPCB Ref. No.
RE90 -	60.3,76.1,88.9,114.3,139.7,165.1,219.1	20	140a/07
RE45 -	60.3,76.1,88.9,114.3,139.7,165.1,219.1	20	140a/08
RST-	60.3,76.1,88.9,114.3,139.7,165.1,219.1	20	140a/09
RCAP	60.3,76.1,88.9,114.3,139.7,165.1,219.1	20	140a/10
RCR-	76.1x60.3,88.9x60.3,88.9x76.1,114.3x60.3,114.3x76.1,114.3x88.9,165.1x88.9,165.1x114.3,219.1x165.1	20	140a/11
RRTG	114.3x114.3x76.1,114.3x114.3x88.9,165.1x165.1x88.9,219.1x219.1x114.3,219.1x219.1x165.1	20	140a/12
RPT-	114.3x114.3x76.1, BSP Thread	20	140a/14

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

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Certificate No: 448a

Pipe Couplings (SHURJOINT)

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.		
Fig. 7705	50	60.3	R&C	EPDM	20	448a/01		
	65	76.1	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
	100	114.3	R&C	EPDM	20			
	125	139.7	R&C	EPDM	20			
	150	165.1	R&C	EPDM	20			
Fig. K-9 Dogtooth	200 ⁽¹⁾	219.1	R&C	EPDM	20	448a/02		
	32 ⁽¹⁾	42.4	R&C	EPDM	15			
	40 ⁽¹⁾	48.3	R&C	EPDM	15			
	50 ⁽¹⁾	60.3	R&C	EPDM	12			
	65	76.1	R&C	EPDM	12			
	80	88.9	R&C	EPDM	12			
	100	114.3	R&C	EPDM	12			
	125 ⁽¹⁾	139.9	R&C	EPDM	15			
	150	165.1	R&C	EPDM	12			
	200 ⁽¹⁾	219.1	R&C	EPDM	15			
	200 ⁽¹⁾	219.1	R&C	EPDM	20			
	Rigid Coupling Model K-9H	50 x 40 ⁽¹⁾	60.3 x 48.3	R&C	EPDM		20	448a/16
Reducing Coupling Fig. 7706	65 x 50	76.1 x 60.3	R&C	EPDM	20	448a/03		
	80 x 50	88.9 x 60.3	R&C	EPDM	20			
	80 x 65	88.9 x 76.1	R&C	EPDM	20			
	100 x 50	114.3 x 60.3	R&C	EPDM	20			
	100 x 65	114.3 x 76.1	R&C	EPDM	20			
	100 x 80	114.3 x 88.9	R&C	EPDM	20			
	150 x 100	165.1 x 114.3	R&C	EPDM	20			
	200 x 150 ⁽¹⁾	219.1 x 165.1	R&C	EPDM	20			
	Mechanical Tees Model 7721	65 x 32	76.1 x 42.4	T	EPDM		20	448a/04
		65 x 40	76.1 x 48.3	T	EPDM		20	
80 x 32		88.9 x 42.4	T	EPDM	20			
80 x 40		88.9 x 48.3	T	EPDM	20			
80 x 50		88.9 x 60.3	T	EPDM	20			
100 x 32		114.3 x 42.4	T	EPDM	20			
100 x 40		114.3 x 48.3	T	EPDM	20			
100 x 50		114.3 x 60.3	T	EPDM	20			
100 x 65		114.3 x 76.1	T	EPDM	20			
100 x 80		114.3 x 88.9	T	EPDM	20			
150 x 32		165.1 x 42.4	T	EPDM	20			
150 x 40		165.1 x 48.3	T	EPDM	20			
150 x 50		165.1 x 60.3	T	EPDM	20			
150 x 65		165.1 x 76.1	T	EPDM	20			
150 x 80		165.1 x 88.9	T	EPDM	20			
150 x 100		165.1 x 114.3	T	EPDM	20			
Fig. 7722	80 x 40	88.9 x 48.3	G	EPDM	20	448a/05		
	80 x 50	88.9 x 60.3	G	EPDM	20			
	100 x 40	114.3 x 48.3	G	EPDM	20			
	100 x 50	114.3 x 60.3	G	EPDM	20			
	100 x 65	114.3 x 76.1	G	EPDM	20			

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.		
	100 x 80	114.3 x 88.9	G	EPDM	20			
	150 x 40	165.1 x 48.3	G	EPDM	20			
	150 x 50	165.1 x 60.3	G	EPDM	20			
	150 x 65	165.1 x 76.1	G	EPDM	20			
	150 x 80	165.1 x 88.9	G	EPDM	20			
	150 x 100	165.1 x 114.3	G	EPDM	20			
	Fig. 723	32 x 15	42.2 x 21.3	T	EPDM		12	448a/06
		32 x 20	42.2 x 26.7	T	EPDM		12	
		32 x 25	42.2 x 33.7	T	EPDM		12	
		40 x 15	48.3 x 21.3	T	EPDM		12	
40 x 20		48.3 x 26.7	T	EPDM	12			
40 x 25		48.3 x 33.7	T	EPDM	12			
50 x 15		60.3 x 21.3	T	EPDM	12			
50 x 20		60.3 x 26.7	T	EPDM	12			
50 x 25		60.3 x 33.7	T	EPDM	12			
65 x 15		76.1 x 21.3	T	EPDM	12			
Transition Flange Model 7041	65 x 20	76.1 x 26.7	T	EPDM	12	448a/15		
	65 x 25	76.1 x 33.7	T	EPDM	12			
	50 ¹	60.3	R&C	EPDM	16			
	65 ¹	76.1	R&C	EPDM	16			
	80 ¹	88.9	R&C	EPDM	16			
Angle Pad Rigid Coupling Model Z05	100	114.3	R&C	EPDM	16	448a/16		
	150	165.1	R&C	EPDM	16			
	200	219.1	R&C	EPDM	16			
	32 ¹	42.4	R&C	EDPM	12			
	40 ¹	48.3	R&C	EDPM	12			
	50 ¹	60.3	R&C	EDPM	12			
	65 ¹	76.1	R&C	EDPM	12			
	80 ¹	88.9	R&C	EDPM	12			
	100 ¹	114.3	R&C	EDPM	12			
	125 ¹	139.7	R&C	EDPM	12			
Angle Pad Rigid Coupling Model Z07	150 ¹	165.1	R&C	EDPM	12	448a/17		
	200 ¹	219.1	R&C	EDPM	12			
	32 ¹	42.4	R&C	EDPM	20			
	40 ¹	48.3	R&C	EDPM	20			
	50 ¹	60.3	R&C	EDPM	20			
	65 ¹	76.1	R&C	EDPM	20			
	80 ¹	88.9	R&C	EDPM	20			
	100 ¹	114.3	R&C	EDPM	20			
	125 ¹	139.7	R&C	EDPM	20			
	150 ¹	165.1	R&C	EDPM	20			
200 ¹	219.1	R&C	EDPM	20				
250 ¹	273.0	R&C	EDPM	20				
300 ¹	323.9	R&C	EDPM	20				

Note:

- 1) Accredited Certification to LPS 1219

Certificate No: 123a

Pipe Fittings (SHURJOINT)

Product Name	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
90° Elbows Fig. 7110	60.3,76.1,88.9,114.3,139.7,165.1,219.1 ⁽²⁾	20	448a/07
45° Elbows Fig. 7111	60.3,76.1,88.9,114.3,139.7,165.1,219.1 ⁽²⁾	20	448a/08
Tees - Fig. 7120	60.3,76.1,88.9,114.3,139.7,165.1,219.1 ⁽²⁾	20	448a/09
Caps. - Fig. 7160	60.3,76.1,88.9,114.3,139.7,165.1,219.1 ⁽²⁾	20	448a/10

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
Concentric reducer - Fig. 7150	76.1 x 60.3, 88.9 x 60.3, 88.9 x 76.1, 114.3 x 60.3, 114.3 x 76.1, 114.3 x 88.9, 165.1 x 88.9, 165.1 x 114.3, 219.1 x 165.1 ⁽³⁾	20	448a/11
Reducing tee - Fig. 7121	114.3 x 114.3 x 76.1, 114.3 x 114.3 x 88.9, 165.1 x 165.1 x 88.9, 219.1 x 219.1 x 114.3, 219.1 x 219.1 x 165.1 ⁽³⁾	20	448a/12
Pitcher Tee - Fig 7133	114.3 x 114.3 x 76.1, BSP thread	20	448a/14
Short Radius 90° Elbow - Fig 901	60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 219.1	20	448a/18
Short Radius Tee - Fig 903	60.3, 76.1, 88.9, 114.3, 139.7, 165.1, 219.1	20	448a/19

Notes:

2) Accredited Certification to LPS 1219 of 219.1mm size.

3) Accredited Certification to LPS 1219 of all sizes.

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Certificate No: 669a to LPS 1219 Issue 2.1

Certificate No: 448a

Grinnell Pipe Couplings

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Grinnell Fig 705 Flexible pipe coupling	32	42.2	R	EPDM	20	669a/01
	40	48.3	R	EPDM	20	
	50	60.3	R	EPDM	20	
	65	76.1	R	EPDM	20	
	80	88.9	R	EPDM	20	
	100	114.30	R	EPDM	20	
	150	165.1	R	EPDM	20	
	150	168.3	R	EPDM	20	
Grinnell Fig 707 Heavy Duty Flexible Pipe Coupling	200	219.1	R	EPDM	20	669a/02
	40	48.3	R	EPDM	20	
	50	60.3	R	EPDM	20	
	65	76.1	R	EPDM	20	
	80	88.9	R	EPDM	20	
	100	114.3	R	EPDM	20	
	150	165.1	R	EPDM	20	
	150	168.3	R	EPDM	20	
	200	219.1	R	EPDM	20	
	250	273	R	EPDM	20	
Grinnell Fig 772 Rigid Pipe Coupling	300	329.9	R	EPDM	20	669a/03
	32	42.2	R	EPDM	20	
	40	48.3	R	EPDM	20	
	50	60.3	R	EPDM	20	
	65	76.1	R	EPDM	20	
	80	88.9	R	EPDM	20	
	100	114.3	R	EPDM	20	
	150	165.1	R	EPDM	20	
150	168.3	R	EPDM	20		
200	219.1	R	EPDM	20		

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Grinnell Fig 730 Mechanical Tee	250	273	R	EPDM	20	669a/04
	300	323.9	R	EPDM	20	
	50 x 15	60.3 x 21.3	Threaded (T)	EPDM	20	
	50 x 20	60.3 x 26.9	T	EPDM	20	
	50 x 25	60.3 x 33.4	T	EPDM	20	
	50 x 32	60.3 x 42.2	T	EPDM	20	
	50 x 40	60.3 x 48.3	T	EPDM	20	
	65 x 15	76.1 x 21.3	T	EPDM	20	
	65 x 20	76.1 x 26.9	T	EPDM	20	
	65 x 25	76.1 x 33.4	T	EPDM	20	
	65 x 32	76.1 x 42.2	T	EPDM	20	
	65 x 40	76.1 x 48.3	T	EPDM	20	
	65 x 50	76.1 x 60.3	T	EPDM	20	
	80 x 15	88.9 x 21.3	T	EPDM	20	
	80 x 20	88.9 x 26.9	T	EPDM	20	
	80 x 25	88.9 x 33.4	T	EPDM	20	
	80 x 32	88.9 x 42.2	T	EPDM	20	
	80 x 40	88.9 x 48.3	T	EPDM	20	
	80 x 50	88.9 x 60.3	T	EPDM	20	
	100 x 15	114.3 x 21.3	T	EPDM	20	
	100 x 20	114.3 x 26.9	T	EPDM	20	
	100 x 25	114.3 x 33.4	T	EPDM	20	
	100 x 32	114.3 x 42.2	T	EPDM	20	
	100 x 40	114.3 x 48.3	T	EPDM	20	
	100 x 50	114.3 x 60.3	T	EPDM	20	
	100 x 65	114.3 x 76.1	T	EPDM	20	
	100 x 80	114.3 x 88.9	T	EPDM	20	
	150 x 40	165.1 x 48.3	T	EPDM	20	
	150 x 50	165.1 x 60.3	T	EPDM	20	
	150 x 65	165.1 x 76.1	T	EPDM	20	
	150 x 80	165.1 x 88.9	T	EPDM	20	
	150x 100	165.1 x 114.3	T	EPDM	20	
	150 x 40	168.3 x 48.3	T	EPDM	20	
	150 x 50	168.3 x 60.3	T	EPDM	20	
	150 x 65	168.3 x 76.1	T	EPDM	20	
	150 x 80	168.3 x 88.9	T	EPDM	20	
	150 x 100	168.3 x 114.3	T	EPDM	20	
	200 x 65	219.1 x 76.1	T	EPDM	20	
	200 x 80	219.1 x 88.9	T	EPDM	20	
	200 x 100	219.1 x 114.3	T	EPDM	20	
	50 x 32	60.3 x 42.2	Grooved (G)	EPDM	20	
	50 x 40	60.3 x 48.3	G	EPDM	20	
	65 x 32	76.1 x 42.2	G	EPDM	20	
	65 x 40	76.1 x 48.3	G	EPDM	20	
	65 x 50	76.1 x 60.3	G	EPDM	20	
	80 x 32	88.9 x 42.2	G	EPDM	20	
	80 x 40	88.9 x 48.3	G	EPDM	20	
	80 x 50	88.9 x 60.3	G	EPDM	20	
	100 x 32	114.3 x 42.4	G	EPDM	20	
	100 x 40	114.3 x 48.3	G	EPDM	20	
100 x 50	114.3 x 60.3	G	EPDM	20		
100 x 65	114.3 x 76.1	G	EPDM	20		
100 x 80	114.3 x 88.9	G	EPDM	20		
150 x 40	165.1 x 48.3	G	EPDM	20		
150 x 50	165.1 x 60.3	G	EPDM	20		
150 x 65	165.1 x 76.1	G	EPDM	20		
150 x 80	165.1 x 88.9	G	EPDM	20		
150 x 100	165.1 x 114.3	G	EPDM	20		
150 x 40	168.3 x 48.3	G	EPDM	20		
150 x 50	168.3 x 60.3	G	EPDM	20		
150 x 65	168.3 x 76.1	G	EPDM	20		
150 x 80	168.3 x 88.9	G	EPDM	20		
150 x 100	168.3 x 114.3	G	EPDM	20		

PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Grinnell Fig 716 Reducing Coupling	200 x 65	219.1 x 76.1	G	EPDM	20	669a/05
	200 x 80	219.1 x 88.9	G	EPDM	20	
	200 x 100	219.1 x 114.3	G	EPDM	20	
	50 x 40	60.3 x 48.3	R	EPDM	20	
	80 x 50	88.9 x 60.3	R	EPDM	20	
	100 x 50	114.3 x 60.3	R	EPDM	20	
	100 x 80	114.3 x 88.9	R	EPDM	20	
	150 x 100	168.3 x 114.3	R	EPDM	20	
	200 x 150	219.1 x 168.3	R	EPDM	20	
	Grinnell Fig 71 Flange Adapter	50	60.3	R	EPDM	
65		76.1	R	EPDM	20	
80		88.9	R	EPDM	20	
100		114.3	R	EPDM	20	
150		165.1	R	EPDM	20	
150		168.3	R	EPDM	20	
250		273	R	EPDM	20	

Certificate No: 448a

Grinnell Fittings

Product Name	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
Grinnell Fig 201 45 degree Elbow	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1, 273.0, 323.9	20	669a/07
Grinnell Fig 210 90 Degree Elbow	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1, 273.0, 323.9	20	669a/08
Grinnell Fig 219 Tee	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1, 273.0, 323.9	20	669a/09
Grinnell Fig 260 End Cap	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1, 273.0, 323.9	20	669a/10
Grinnell Fig 510S 90 Degree Short Elbow	60.3, 76.1, 88.9, 114.3, 168.3, 219.1	20	669a/13
Grinnell Fig 519S Short Tee	60.3, 76.1, 88.9, 114.3, 168.3, 219.1	20	669a/14

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Grinnell Pipe Couplings

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Grinnell Fig 705 Flexible pipe coupling	32	42.2	R	EPDM	20	673a/01
	40	48.3	R	EPDM	20	
	50	60.3	R	EPDM	20	

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PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.		
Grinnell Fig 577 Rigid Pipe Coupling	65	76.1	R	EPDM	20	673a/02		
	80	88.9	R	EPDM	20			
	100	114.30	R	EPDM	20			
	150	165.1	R	EPDM	20			
	150	168.3	R	EPDM	20			
	200	219.1	R	EPDM	20			
	40	48.3	R	EPDM	20			
	50	60.3	R	EPDM	20			
	65	76.1	R	EPDM	20			
	80	88.9	R	EPDM	20			
Grinnell Fig 772 Rigid Pipe Coupling	100	114.3	R	EPDM	20	673a/03		
	150	165.1	R	EPDM	20			
	150	168.3	R	EPDM	20			
	200	219.1	R	EPDM	20			
	32	42.2	R	EPDM	20			
	40	48.3	R	EPDM	20			
	50	60.3	R	EPDM	20			
	65	76.1	R	EPDM	20			
	80	88.9	R	EPDM	20			
	100	114.3	R	EPDM	20			
	150	165.1	R	EPDM	20			
	150	168.3	R	EPDM	20			
	Grinnell Fig 730 Mechanical Tee	200	219.1	R	EPDM		20	673a/04
250		273	R	EPDM	20			
300		323.9	R	EPDM	20			
65 x 32		76.1 x 42.2	Threaded (T)	EPDM	20			
65 x 40		76.1 x 48.3	T	EPDM	20			
65 x 50		76.1 x 60.3	T	EPDM	20			
80 x 15		88.9 x 21.3	T	EPDM	20			
80 x 20		88.9 x 26.9	T	EPDM	20			
80 x 25		88.9 x 33.4	T	EPDM	20			
80 x 32		88.9 x 42.2	T	EPDM	20			
80 x 40		88.9 x 48.3	T	EPDM	20			
80 x 50		88.9 x 60.3	T	EPDM	20			
100 x 15		114.3 x 21.3	T	EPDM	20			
100 x 20		114.3 x 26.9	T	EPDM	20			
100 x 25		114.3 x 33.4	T	EPDM	20			
100 x 50		114.3 x 60.3	T	EPDM	20			
100 x 65		114.3 x 76.1	T	EPDM	20			
100 x 80		114.3 x 88.9	T	EPDM	20			
150 x 32		165.1 x 42.2	T	EPDM	20			
150 x 32		168.3 x 42.2	T	EPDM	20			
65 x 32		76.1 x 42.2	Grooved (G)	EPDM	20			
65 x 40		76.1 x 48.3	G	EPDM	20			
65 x 50		76.1 x 60.3	G	EPDM	20			
80 x 32		88.9 x 42.2	G	EPDM	20			
80 x 40		88.9 x 48.3	G	EPDM	20			
80 x 50		88.9 x 60.3	G	EPDM	20			
100 x 50		114.3 x 60.3	G	EPDM	20			
100 x 65		114.3 x 76.1	G	EPDM	20			
100 x 80		114.3 x 88.9	G	EPDM	20			
150 x 32		165.1 x 42.2	G	EPDM	20			
150 x 32		168.3 x 42.2	G	EPDM	20			
Grinnell Fig 716 Reducing Coupling		65 x 40	76.1 x 60.3	R	EPDM	20	673a/05	
		80 x 65	88.9 x 76.1	R	EPDM	20		
	100 x 65	114.3 x 76.1	R	EPDM	20			
Grinnell Fig 71 Flange Adaptor	150 x 100	165.1 x 114.3	R	EPDM	20	673a/06		
	200	219.1	R	EPDM	20			
	300	323.9	R	EPDM	16			
Grinnell Fig 522 Sprinkler Tee	25 x 15	33.4 x 21.3	T	EPDM	20	673a/11		
	25 x 20	33.4 x 26.9	T	EPDM	20			
	25 x 25	33.4 x 33.4	T	EPDM	20			
	32 x 10	42.2 x 17.2	T	EPDM	20			
	32 x 15	42.2 x 21.3	T	EPDM	20			
	32 x 20	42.2 x 26.9	T	EPDM	20			
	32 x 25	42.2 x 33.4	T	EPDM	20			
	40 x 15	48.3 x 21.3	T	EPDM	20			
	40 x 20	48.3 x 26.9	T	EPDM	20			

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PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
	40 x 25	48.3 x 33.4	T	EPDM	20	
	50 x 15	60.3 x 21.3	T	EDPM	20	
	50 x 20	60.3 x 26.9	T	EPDM	20	
	50 x 25	60.3 x 33.4	T	EPDM	20	
	65 x 15	76.1 x 21.3	T	EPDM	20	
	65 x 25	76.1 x 33.4	T	EPDM	20	

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Grinnell Fittings

Product Name	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
Grinnell Fig 201 45 degree Elbow	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1, 273.0, 323.9	20	673a/07
Grinnell Fig 210 90 Degree Elbow	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1, 273.0, 323.9	20	673a/08
Grinnell Fig 219 Tee	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1, 273.0, 323.9	20	669a/09
Grinnell Fig 260 End Cap	42.2, 48.3, 60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1, 273.0, 323.9	20	669a/10
Grinnell Fig 250 Concentric Reducer	48.3 x 33.4, 60.3 x 42.2, 60.3 x 48.3, 76.1 x 60.3, 88.9 x 76.1, 114.3 x 76.1, 114.3 x 88.9, 165.1 x 114.3, 168.3 x 114.3	20	673a/12
Grinnell Fig 510S 90 degree Short Elbow	60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1	20	673a/13
Grinnell Fig 519S Short Tee	60.3, 76.1, 88.9, 114.3, 165.1, 168.3, 219.1	20	673a/14
Grinnell Fig 221 Reducing Tee	60.3x60.3x48.5, 76.1x76.1x60.3, 88.9x88.9x33.7, 88.9x88.9x60.3, 88.9x88.9x76.1, 114.3x114.3x60.3, 114.3x114.3x76.1, 114.3x114.3x88.9, 165.1x165.1x88.9, 165.1x165.1x114.3, 168.3x168.3x60.3, 168.3x168.3x76.1, 168.3x168.3x88.9, 168.3x168.3x114.3	20	673a/15
Grinnell 222 Hydrant Tee	114.3 x 114.3 x 76.1 BSP	20	673a/16

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Certificate No: 078a

Certificate No: 491a

Pipe Couplings

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Firelock Outlet-Tee Style 922	32 x 15	42.4 x 21.3	T	EPDM	16	491a/27
	32 x 18	42.4 x 26.9	T	EPDM	16	
	40 x 15	48.3 x 21.3	T	EPDM	16	
	40 x 18	48.3 x 26.9	T	EPDM	16	
	40 x 25	48.3 x 33.7	T	EPDM	16	
	50 x 15	60.3 x 21.3	T	EPDM	16	
	50 x 18	60.3 x 26.9	T	EPDM	16	
	50 x 21	60.3 x 33.7	T	EPDM	16	
	65 x 15	76.1 x 21.3	T	EPDM	16	

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PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Firelock Sprinkler Outlet Tee Style 912	65 x 18	76.1 x 26.9	T	EPDM	16	104-1a/34
	65 x 21	76.1 x 33.7	T	EPDM	16	
	25 x 15	33.7 x 21.3	T	EDPM	16	
Mechanical Tees Style 920	32 x 15	42.4 x 21.3	T	EDPM	16	104-1a/11
	40 x 15	48.3 x 21.3	T	EDPM	16	
Mechanical Tees Style 920N	80 x 32	88.9 x 42.4	T	EPDM	20	104-1a/26
	50 x 32	60.3 x 42.4	T	EPDM	20	
	50 x 32	60.3 x 42.4	G	EPDM	20	
	50 x 40	60.3 x 48.3	T	EPDM	20	
	50 x 40	60.3 x 48.3	G	EPDM	20	
	50 x 15	60.3 x 21.3	T	EPDM	20	
	50 x 20	60.3 x 26.9	T	EPDM	20	
	x 25	73 x 33.7	T	EPDM	20	
	x 32	73 x 42.4	T	EPDM	20	
	x 32	73 x 42.4	G	EPDM	20	
	x 40	73 x 48.4	T	EPDM	20	
	x 40	73 x 48.3	G	EPDM	20	
	x 15	73 x 21.3	T	EPDM	20	
	x 15	73 x 26.7	T	EPDM	20	
	80 x 15	88.9 x 21.3	T	EPDM	20	
	80 x 20	88.9 x 26.9	T	EPDM	20	
	80 x 25	88.9 x 33.7	T	EPDM	20	
	80 x 32	88.9 x 42.4	T	EPDM	20	
	80 x 32	88.9 x 42.4	G	EPDM	20	
	80 x 40	88.9 x 48.3	T	EPDM	20	
	80 x 40	88.9 x 48.3	G	EPDM	20	
	80 x 50	88.9 x 60.3	T	EPDM	20	
	100 x 20	114.3 x 26.9	T	EPDM	20	
	100 x 25	114.3 x 33.7	T	EPDM	20	
	80 x 50	88.9 x 60.3	G	EPDM	20	
	100 x 15	114.3 x 21.3	T	EPDM	20	
	100 x 32	114.3 x 42.4	T	EPDM	20	
	100 x 32	114.3 x 42.4	G	EPDM	20	
	100 x 40	114.3 x 48.3	T	EPDM	20	
	100 x 40	114.3 x 48.3	G	EPDM	20	
	100 x 50	114.3 x 60.3	T	EPDM	20	
	150 x 50	114.3 x 60.3	G	EPDM	20	
	150 x 32	165.1 x 42.4	T	EPDM	20	
	150 x 32	168.3 x 42.4	T	EPDM	20	
	150 x 40	165.1 x 48.3	T	EPDM	20	
	150 x 50	165.1 x 60.3	T	EPDM	20	491a/34
	150 x 32	168.3 x 42.4	G	EPDM	20	104-1a/26
	150 x 40	168.3 x 48.3	T	EPDM	20	
	150 x 40	168.3 x 48.3	G	EPDM	20	
	150 x 50	168.3 x 60.3	T	EPDM	20	
	150 x 50	168.3 x 60.3	G	EPDM	20	
	x 32	108 x 42.2	T	EPDM	20	
	x 40	108 x 48.3	T	EPDM	20	
	x 50	159 x 60.3	T	EPDM	20	
	65 x 32	76.1 x 42.4	T	EPDM	20	
	65 x 32	76.1 x 42.4	G	EPDM	20	
	65 x 40	76.1 x 48.3	T	EPDM	20	
	65 x 40	76.1 x 48.3	G	EPDM	20	
	50 x 25	60.3 x 33.4	T	EPDM	20	
Style 005(1)	21	42.4	R	EPDM	16	104-1a/01
	40	48.3	R	EPDM	16	
	32	42.4	R	EPDM	16	
	40	48.3	R	EPDM	16	
	50	60.3	R&C	EPDM	16	
	50	73.0(2)	R&C	EPDM	16	
	65	76.1	R&C	EPDM	16	
	80	88.9	R&C	EPDM	16	
	80	108.0(2)	R&C	EPDM	16	
	100	114.3	R&C	EPDM	16	
	100	133.4(2)	R&C	EPDM	16	
	125	139.7	R&C	EPDM	16	
	125	141.3(2)	R&C	EPDM	16	
	125	158.8(2)	R&C	EPDM	16	

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PIPE COUPLINGS AND FITTINGS

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.		
Style 009 Style 009V	150	165.1	R&C	EPDM	16	104-1a/31 104-1a/32		
	150	168.3	R&C	EPDM	16			
	200	219.1	R&C	EPDM	16			
	65	73.0	R&C	EPDM	20			
	32	42.4	R&C	EPDM	20			
	100	114.3	R&C	EPDM	20			
	40	48.3	R&C	EPDM	20			
	50	60.3	R&C	EPDM	20			
	65	76.1	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
Style 07(1)	100	114.3	R&C	EPDM	20	104-1a/02		
	25	33.7	R&C	EPDM	20			
	32	42.4	R&C	EPDM	20			
	40	48.3	R&C	EPDM	20			
	50	60.3	R&C	EPDM	20			
	50	73.0(2)	R&C	EPDM	20			
	65	76.1	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
	80	108.0(2)	R&C	EPDM	20			
	100	114.3	R&C	EPDM	20			
	100	133.4(2)	R&C	EPDM	20			
	125	139.7	R&C	EPDM	20			
	125	141.3(2)	R&C	EPDM	20			
	125	158.8(2)	R&C	EPDM	20			
	150	165.1	R&C	EPDM	20			
	150	168.3	R&C	EPDM	20			
	200	219.1	R&C	EPDM	20			
	Style 741 (Range adaptors) Style 741 (Flange adaptors)	150	165.1	R&C	EPDM		20	104-1a/10
	150	168.3	R&C	EPDM	20			
	200	219.1	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
Style 741 (Range adaptors) Style 741 (Vic-Flange Adaptors) Style 75	125	139.7	R&C	EPDM	20	104-1a/03		
	100	114.3	R&C	EPDM	20			
	40	48.3	R&C	EPDM	20			
	50	60.3	R&C	EPDM	20			
	65	76.1	R&C	EPDM	20			
	80	88.9	R&C	EPDM	20			
	100	114.3	R&C	EPDM	20			
	125	139.7	R&C	EPDM	20			
	150	165.1	R&C	EPDM	20			
	200	219.1	R&C	EPDM	20			
Style 750 Reducing	50 x 40	60.3 x 48.3	R&C	EPDM	20	104-1a/05		
	80 x 50	88.9 x 60.3	R&C	EPDM	20			
	100 x 50	114.3 x 60.3	R&C	EPDM	20			
	100 x 80	114.3 x 88.9	R&C	EPDM	20			
	150 x 100	165.1 x 114.3	R&C	EPDM	20			
	200 x 150	219.1 x 165.1	R&C	EPDM	20			
	65 x 50	76.1 x 60.3	R&C	EPDM	20		078a/08	
	80 x 65	88.9 x 76.1	R&C	EPDM	20			
	Style 77	100 x 65	114.3 x 76.1	R&C	EPDM		16	078a/09
		150 x 80	165.1 x 88.9	R&C	EPDM		15	078a/10
20		26.9	R&C	EPDM	20	104-1a/04		
25		33.7	R&C	EPDM	20			
32		42.4	R&C	EPDM	20			
40		48.3	R&C	EPDM	20			
50		60.3	R&C	EPDM	20			
65		76.2	R&C	EPDM	20			
80		88.9	R&C	EPDM	20			
100		114.3	R&C	EPDM	20			
150	165.1	R&C	EPDM	20				
200	219.1	R&C	EPDM	20				
Style 920	80 x 40	88.9 x 48.3	T	EPDM	20	104-1a/11		
	80 x 40	88.9 x 48.3	G	EPDM	20			
	100 x 32	114.3 x 42.4	T	EPDM	20			
	100 x 40	114.3 x 48.3	T	EPDM	20			
	100 x 40	114.3 x 48.3	G	EPDM	20			
	100 x 65	114.3 x 76.1	G	EPDM	20			

PART 3: SECTION 8.1**PIPE COUPLINGS AND FITTINGS**

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
	100 x 65	114.3	T(2.5 in BSP)	EPDM	20	078a/13
	100 x 65	114.3 x 76.1	G	EPDM	20	078a/14
	100 x 80	114.3 x 88.9	T	EPDM	20	104-1a/11
	125 x 65	141.3 x 76.1	G	EPDM	20	491a/33
	150 x 40	165.1 x 48.3	G	EPDM	20	104-1a/11
	150 x 50	165.1 x 60.3	G	EPDM	20	
	150 x 50	165.1	T(2.5 in BSP)	EPDM	20	
	150 x 50	165.1 x 60.3	G	EPDM	20	
	150 x 65	165.1 x 73.0	G	EPDM	20	078a/14
	150 x 65	168.3 x 76.1	G	EPDM	20	104-1a/14
	150 x 65	165.1 x 76.1	G	EPDM	20	104-1a/11
	150 x 80	165.1 x 88.9	T	EPDM	20	104-a/11
	150 x 80	168.3 x 88.9	G	EPDM	20	078a/14
	150 x 80	165.1 x 88.9	G	EPDM	20	
	150 x 100	165.1 x 114.3	T	EPDM	20	104-a/11
	150 x 100	168.3 x 114.3	G	EPDM	20	078a/14
	200 x 50	219.1 x 60.3	G	EPDM	20	491a/33
	150 x 100	165.1 x 114.3	G	EPDM	20	078a/14
	200 x 65	219.1 x 76.1	T	EPDM	20	104-a/11
	200 x 65	219.1 x 76.1	G	EPDM	20	491a/33
	200 x 80	219.1 x 88.9	T	EPDM	20	104-1a/11
	200 x 80	219.1 x 88.9	G	EPDM	20	104-a/08
	200 x 100	219.1 x 114.3	G	EPDM	20	104-1a/08
	200 x 100	219.1 x 114.3	T	EPDM	20	104-1a/11
Style 927	32 x 15	42.4 x 21.3	T	EPDM	12	104-1a/09
	32 x 20	42.4 x 26.7	T	EPDM	12	
	32 x 25	42.4 x 26.9	T	EPDM	12	
	40 x 15	48.3 x 21.3	T	EPDM	12	
	40 x 20	48.3 x 26.9	T	EPDM	12	
	40 x 25	48.3 x 33.7	T	EPDM	12	
	50 x 15	60.3 x 21.3	T	EPDM	12	
	50 x 20	60.3 x 26.9	T	EPDM	12	
	50 x 25	60.3 x 33.7	T	EPDM	12	
Victaulic Mechanical Tees	100 x 50	114.3 x 60.3	G	EPDM	20	104-1a/06
	100 x 80	114.3 x 88.9	G	EPDM	20	
	150 x 50	165.1 x 60.3	G	EPDM	15	104-1a/07
	150 x 80	165.1 x 88.9	G	EPDM	15	
	150 x 100	165.1 x 114.3	G	EPDM	15	
	200 x 80	219.1 x 88.9	G	EPDM	20	104-1a/08
	200 x 100	219.1 x 114.3	G	EPDM	20	
Style 009H	32	42.2	R&C	EPDM	25	104-1a/35
	40	48.3	R&C	EPDM	25	
	50	60.3	R&C	EPDM	25	
	65	73.0	R&C	EPDM	25	
	65	76.1	R&C	EPDM	25	
	80	88.9	R&C	EPDM	25	
	100	114.3	R&C	EPDM	25	

Notes:

1) These sizes are not suitable for installations that require BS 1387 pipework due to the sizes not being included in that standard.

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PART 3: SECTION 8.1

PIPE COUPLINGS AND FITTINGS

Fittings

Product Name	Model No.	Pipe Outside Diameter (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
90° Elbow	10	20, 25, 32, 40, 50, 65, 80, 100, 150, 200	20	104-1a/12
		125	20	078a/15
90° Long Radius Elbow	100	50, 80, 100, 150, 200	20	104-1a/13
45° Elbow	11	20, 25, 32, 40, 50, 80, 100, 150, 200	20	104-1a/14
		65, 125	20	078a/16
45° Long Radius Elbow	110	50, 80, 100, 150, 200	20	104-1a/15
22.5° Elbow	12	25, 32, 40, 50, 65, 80, 100, 150, 200	20	104-1a/16
11.25° Elbow	13	25, 32, 40, 50, 80, 100, 150, 200	20	104-1a/17
Tee	20	20, 25, 32, 40, 50, 80, 100, 150, 200	20	104-1a/18
		125	20	078a/17
Cross	35	20, 25, 32, 40, 50, 80, 100, 200	20	104-1a/19
Cap	60	20, 25, 32, 40, 50, 80, 100, 150, 200	20	104-1a/20
45° Lateral	30	20, 25, 32, 40, 50, 80, 100, 150, 200	20	104-1a/21
90° True Y	33	25, 32, 40, 50, 80, 100, 200	20	104-1a/22
Concentric Reducer	50	40 x 25, 50 x 20, 50 x 25, 50 x 32, 50 x 40, 80 x 25, 80 x 50, 100 x 125, 100 x 40, 100 x 50, 100 x 80, 200 x 80, 200 x 100	20	104-1a/23
Eccentric Reducer	51	40 x 25, 50 x 20, 50 x 25, 50 x 32, 50 x 40, 80 x 25, 80 x 50, 100 x 125, 100 x 40, 100 x 50, 100 x 80, 200 x 80, 200 x 100	20	
		x 25, 80 x 80 x 40, 80 x 80 x 50, 100 x 100 x 25, 100 x 100 x 50, 100 x 100 x 80, 150 x 150 x 50, 150 x 150 x 100, 200 x 200 x 50, 200 x 200 x 80, 200 x 200 x 100, 200 x 200 x 150		
45° Reducing Lateral	30R	80 x 80 x 50, 100 x 100 x 50, 100 x 100 x 80, 200 x 200 x 100	20	104-1a/24
Reducing Tee Grooved	25	50 x 50 x 20, 50 x 50 x 25, 50 x 50 x 40, 80 x 80 x 25, 80 x 80 x 40, 80 x 80 x 50, 100 x 100 x 25, 100 x 100 x 50, 100 x 100 x 80, 150 x 150 x 50, 150 x 150 x 100, 200 x 200 x 50, 200 x 200 x 80, 200 x 200 x 100, 200 x 200 x 150	20	104-1a/25
Reducing Tee Threaded	29R	50 x 50 x 20, 50 x 50 x 25, 50 x 50 x 40, 80 x 80 x 25, 80 x 80 x 40, 80 x 80 x 50, 100 x 100 x 25, 100 x 100 x 50, 100 x 100 x 80, 150 x 150 x 50, 150 x 150 x 100, 200 x 200 x 50, 200 x 200 x 80, 200 x 200 x 100, 200 x 200 x 150	20	
Blank End Grooved (Radial Branch)		65, 125	20	078a/18
Pitcher Tee Firelock	001	100 x 100 x 2.5 in BSP	20	078a/19
	002	60.3, 73, 76.1, 88.9, 114.3, 139.7, 141.3, 165.1, 168.3, 219.1	16	104-1a/28
	003	60.3, 73, 76.1, 88.9, 114.3, 139.7, 141.3, 165.1, 168.3, 219.1	16	104-1a/29
			16	104-1a/30

All couplings and fittings to be installed in accordance with the Victaulic Field Assembly and Installation Instruction handbook.

This section lists products approved in accordance with:

- LPS 1219 *Specification for Pipe Couplings*

Sizes may be covered by Pipe Fittings standards BS EN 10242, BS 143 & 1256 and ISO 49. Where size permits the fittings are marked with the external pipe diameter(s).

All pipe fittings shall be installed in accordance with the manufacturer's installation instructions, including recommended maximum temperatures.

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Certificate No: 619a to LPS 1219

Malleable Iron Pipe fittings, Black and Galvanised finish, taper/taper threads.

Product Name	Fig No.	Fitting Size (inches)	LPCB Ref. No.
Hexagon Bush	140	1/4" x 1/8" up to 6" x 4"	619a/01
Hexagon Nipple	144	1/4" up to 6"	619a/02
	145	1/4" x 1/8" up to 3" x 2 1/2"	619a/03
Beaded Plug-Solid	146	" up to 2"	619a/04
Plain Plug-Hollow	147	1/2" up to 4"	619a/05
Plain Plug-Solid	148	" up to 2"	619a/06
Countersunk Plug	149	" up to 2"	619a/07
Backnut	150	1/4" up to 3"	619a/08
Elbow - equal	151	" up to 6"	619a/09
Elbow - reducing	151	3/8" x 1/4" up to 2" x 1 1/2"	
M & F Elbow - equal	152	1/2" up to 4"	619a/10
M & F Elbow - reducing (1)	152	3/4" x 1/2", 1" x 1/2", 1" x 3/4"	
45° Elbow	155	1/4" up to 6"	619a/11
45° M & F Bend	156	1/4" up to 4"	619a/12
Tee - equal	161	" up to 6"	619a/11
Tee - reducing on branch	161	3/8" x 1/4" up to 6" x 4"	619a/13
Tee - reducing on run	161	1/2" x 1/4" x 1/2" up to 3" x 2" x 3"	
Tee - reducing on run & branch	161	1/2" x 3/8" x 3/8" up to 2" x 1 1/2" x 1 1/2"	
Tee - increasing on branch	161	1/2" x 3/4" up to 2" x 2 1/2"	
M & F Tee (1)	163	1/2", 3/4", 1"	619a/14
Cross	171	" up to 4"	619a/15
Socket	176	" up to 6"	619a/16
	177	1/4" up to 6"	619a/17
Reducing Socket	179	3/8" x 1/4" up to 6" x 4"	619a/18
Eccentric Socket	180	3/4" x 1/2" up to 3" x 2 1/2"	619a/19
Cap	185	1/4" up to 4"	619a/20
Male Bend	191	1/2" up to 2"	619a/21
M & F Bend	192	1/4" up to 6"	619a/22
Bend	193	1/4" up to 6"	619a/23
Twin Elbow	197	1/2" up to 3"	619a/24
Pitcher Tee - equal	199	1/2" up to 4"	619a/25
Pitcher Tee - reducing on branch	199	1/2" x 1/2" up to 4" x 3"	
Pitcher Tee - reducing on run & branch (1)	199	3/4" x 1/2" x 1/2", 1 x 3/4" x 1/2", 1 x 3/4" x 3/4"	
Pitcher Tee - reducing on run (1)	199	3/4" x 1/2" x 3/4"	
Return Bend	213	1/2" up to 2"	619a/26
Round Flange	233	1/2" up to 4"	619a/27
Union - flat seat (1)	241	1/2", 3/4", 1"	619a/28
Union - spherical seat iron-iron	256	1/4" up to 4"	619a/29
M & F Union	257	1/4" up to 3"	619a/30
Elbow Union - spherical seat (1) iron-iron	261	1/2", 3/4", 1"	619a/31
M & F Elbow Union (1) - spherical seat iron-iron	262	1/2", 3/4", 1"	619a/32
Union - spherical seat bronze-iron	271	up to 4"	619a/33
M & F Union - spherical seat bronze-iron	272	1/2" up to 2"	619a/34
Elbow Union - spherical seat (1) bronze-iron	276	1/2", 3/4", 1"	619a/35
Union - spherical seat bronze-bronze	289	1/4" up to 3"	619a/37

PART 3: SECTION 8.1.1

PIPE FITTINGS

Product Name	Fig No.	Fitting Size (inches)	LPCB Ref. No.
Union Self Aligning (1)	290	1/2", 3/4", 1", 1 1/4", 1 1/2", 2"	619a/38

Approved products for a maximum Working Pressure of 25 bar.

Note:

1) All sizes listed for this fitting. For full list of sizes for other fittings, contact BRE Certification for a copy of REB258-CRANE.

Project Fire Products Limited

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Certificate No: 060c/01 to LPS1219

Product Name	Nominal Size (m)	Pipe Ends	Gasket Type	Maximum Working Pressure (bar)	LPCB Ref. No.
Model LT-KD-002 (Kwik Drain) (Note 2)	65 x 25.4	T	EPDM	12	060c/01
	80 x 25.4	T	EPDM	12	
	100 x 25.4	T	EPDM	12	
	150 x 25.4	T	EPDM	12	
Model LT-NDT (5)-002 (No Drain-T) (Note 3)	80 x 50.8	T	EPDM	12	060c/02
	100 x 50.8	T	EPDM	12	
	150 x 50.8	T	EPDM	12	
Model LT-KC(15-32)-002 (Kwik-Clamp) (Note 2)	32 x 15	T	EPDM	12	060c/03
Model LT-KC(15-40)-002 (Kwik-Clamp) (Note 2)	40 x 15	T	EPDM	12	
Model LT-KC(15-50)-002 (Kwik-Clamp) (Note 2)	50 x 15	T	EPDM	12	
Model LT-ZCL-65-002 (Zone-Check Live)(Note 2)	65 x 25.4	T	EPDM	12	060c/04
Model LT-ZCL-80-002 (Zone-Check Live)(Note 2)	80 x 25.4	T	EPDM	12	
Model LT-ZCL-100-002 (Zone-Check Live)(Note 2)	100 x 25.4	T	EPDM	12	
Model LT-ZCL-150-002 (Zone-Check Live)(Note 2)	150 x 25.4	T	EPDM	12	
Model LT-ZCL-SA-002 (Zone-Check Special) (Note 2)	65 x 25.4	T	EPDM	12	060c/05
	80 x 25.4	T	EPDM	12	
	100 x 25.4	T	EPDM	12	
	150 x 25.4	T	EPDM	12	

Notes:

- 1) LPCB approval is limited to pipe fittings (mechanical tees) to LPS1219. LPCB approval excludes all ancillary equipment for use with LiveTap products.
- 2) Sprinkler heads must not be connected to these outlets.
- 3) These outlets are suitable for sprinkler head connections.

This section lists products approved in accordance with:

- LPS 1261 *Requirements for testing flexible hoses for sprinkler systems.*

Flexible pipes may be used in different ways within a sprinkler system. For example some products are suitable for use behind ceiling grids whilst others are suitable for connecting supplies to storage racks. The user should contact the manufacturer to ensure they specify the correct type.

A wide range of flexible drop pipe lengths are available in these listings. The end users should ensure the selection of appropriate product with due regard to the installation codes and rules applicable to the territories in which these products are being installed.

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Certificate No: 084m

Smart-Drop Flexible Sprinkler Hose - STANDARD - 25 mm Diam Braided.

Product Name	Length (mm)	Supply Nominal Size/Connection	Outlet Nominal Size/Connection	Maximum Working Pressure (bar)	LPCB Ref. No.
Smart Drop SD700/15	700	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	084m/01
Smart Drop SD1200/15	1200	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	
Smart Drop SD1500/15	1500	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	
Smart Drop SD700/20	700	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	
Smart Drop SD1200/20	1200	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	
Smart Drop SD1500/20	1500	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	

Certificate No: 084m

Smart-Drop Flexible Sprinkler Hose - STANDARD - 25 mm Diam Unbraided.

Product Name	Length (mm)	Supply Nominal Size/Connection	Outlet Nominal Size/Connection	Maximum Working Pressure (bar)	LPCB Ref. No.
Smart Drop SD700/15	700	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	084m/02

PART 3: SECTION 8.2

FLEXIBLE DROPS

Product Name	Length (mm)	Supply Nominal Size/Connection	Outlet Nominal Size/Connection	Maximum Working Pressure (bar)	LPCB Ref. No.
Smart Drop SD1200/15	1200	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	
Smart Drop SD1500/15	1500	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	
Smart Drop SD700/20	700	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	
Smart Drop SD1200/20	1200	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	
Smart Drop SD1500/20	1500	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings)

1. Smart-Drop flexible sprinkler connections are approved for use in the following applications:

Assembly length (mm)	Pre-calculated		Fully hydraulically calculated
	Town's	Pumped	
700	Yes	Yes	Yes
1200	No	Yes	Yes
1500	No	No	Yes

All pipework supplying Smart-Drop flexible sprinkler connection assemblies in pre-calculated systems shall be sized as distribution mains.

The above restrictions apply to Smart-Drop STANDARD with up to one 90° bend and includes a 90° sprinkler reducer

2. In suspended ceiling Smart-Drop flexible sprinkler connections must be installed in accordance with Installation Instructions SM095/00/A

3. In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

Certificate No: 084m

Smart-Drop Flexible Sprinkler Hose – PREMIUM 28 mm Diam Unbraided

Product Name	Length (mm)	Supply Nominal Size/Connection	Outlet Nominal Size/Connection	Maximum Working Pressure (bar)	LPCB Ref. No.
Smart Drop SD700/15/P	700	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	084m03
Smart Drop SD1200/15/P	1200	R1¼ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	084m/03

PART 3: SECTION 8.2

FLEXIBLE DROPS

Product Name	Length (mm)	Supply Nominal Size/Connection	Outlet Nominal Size/Connection	Maximum Working Pressure (bar)	LPCB Ref. No.
Smart Drop SD1500/15/P	1500	R1½ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ½ (½" BSPT or NPT) Internal thread	16	
Smart Drop SD700/20/P	700	R1½ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	
Smart Drop SD1200/20/P	1200	R1½ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	
Smart Drop SD1500/20/P	1500	R1½ (1¼" BSPT or NPT), or R1 (1" BSPT or NPT) External thread	Rc ¾ (¾" BSPT or NPT) Internal thread	16	

1. Smart-Drop flexible sprinkler connections are approved for use in the following applications:

Assembly length (mm)	Pre-calculated		Fully hydraulically calculated
	Town's	Pumped	
700	Yes	Yes	Yes
1200	Yes	Yes	Yes
1500	No	Yes	Yes

All pipework supplying Smart-Drop flexible sprinkler connection assemblies in pre-calculated systems shall be sized as distribution mains.

The above restrictions apply to Smart-Drop PREMIUM with 1 bend up to 90° (700mm) and 2 bends up to 90° each (1200mm & 1500mm) and includes a sprinkler reducer

2. In suspended ceiling Smart-Drop flexible sprinkler connections must be installed in accordance with Installation Instructions SM0951001 A.
3. In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

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Certificate No: 566a to LPS 1261

Dong-A Flexible sprinkler connections approved to LPS 1261

Product Name	Length (mm)	Supply Nominal Size/Connection	Outlet Nominal Size/Connection	Maximum Working Pressure (bar)	LPCB Ref. No.
DA-SP-1AS (1)(2)(3)	700	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	566a/01

PART 3: SECTION 8.2

FLEXIBLE DROPS

Product Name	Length (mm)	Supply Nominal Size/Connection	Outlet Nominal Size/Connection	Maximum Working Pressure (bar)	LPCB Ref. No.
DA-SP-1A (1)(2)(3)	780	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SP-2AS (1)(2)(3)	1,000	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SP-2A (1),2),3)	1,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SP-3A (1)(2)(3)	1,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SP-4A (1)(2)(3)	1,880	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SP-5A (1)(2)(3)	2,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SP-6A (1)(2)(3)	3,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SP-1BS (1)(2)(3)	700	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SP-1B (1)(2)(3)	780	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SP-2BS (1)(2)(3)	1,000	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SP-2B (1)(2)(3)	1,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SP-3B (1)(2)(3)	1,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SP-4B (1)(2)(3)	1,880	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SP-5B (1)(2)(3)	2,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SP-6B (1)(2)(3)	3,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SP-1CS (1)(4)	700	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	R1(1" BSPT) or 1"NPT External thread	16	
DA-SP-1C (1)(4)	780	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	R1(1" BSPT) or 1"NPT External thread	16	
DA-SP-2CS (1)(4)	1,000	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	R1(1" BSPT) or 1"NPT External thread	16	
DA-SP-2C (1)(4)	1,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	R1(1" BSPT) or 1"NPT External thread	16	
DA-SP-3C (1)(4)	1,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	R1(1" BSPT) or 1"NPT External thread	16	
DA-SP-4C (1)(4)	1,880	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	R1(1" BSPT) or 1"NPT External thread	16	
DA-SP-5C (1)(4)	2,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	R1(1" BSPT) or 1"NPT External thread	16	
DA-SP-6C (1)(4)	3,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	R1(1" BSPT) or 1"NPT External thread	16	
DA-SPN-1AS (1)(2)(3)	700	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	566a/02
DA-SPN-1A (1)(2)(3)	780	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SPN-2AS (1)(2)(3)	1,000	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SPN-2A (1)(2)(3)	1,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SPN-3A (1)(2)(3)	1,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SPN-4A (1),(2),3)	1,880	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SPN-5A (1)(2)(3)	2,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SPN-6A (1)(2)(3)	3,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	
DA-SPN-2BS (1)(2)(3)	700	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPN-1B (1)(2)(3)	780	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPN-1BS (1)(2)(3)	1,000	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPN-2B (1)(2)(3)	1,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	

PART 3: SECTION 8.2

FLEXIBLE DROPS

Product Name	Length (mm)	Supply Nominal Size/Connection	Outlet Nominal Size/Connection	Maximum Working Pressure (bar)	LPCB Ref. No.
DA-SPN-3B (1)(2)(3)	1,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPN-4B (1)(2)(3)	1,880	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPN-5B (1)(2)(3)	2,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPN-6B (1)(2)(3)	3,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT)	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPW-1AS (1)(2)(3)	700	R1(1"BSPT) or 1"NPT External thread	Rc1/2(1/2"BSPT) or 1/2"NPT Internal thread	16	566a/03
DA-SPW-1A (1)(2)(3)	780	R1(1"BSPT) or 1"NPT External thread	Rc1/2(1/2or 1/2)Internal thread	16	
DA-SPW-2AS (1)(2)(3)	1,000	R1(1"BSPT) or 1"NPT External thread	Rc1/2(1/2or 1/2)Internal thread	16	
DA-SPW-2A (1)(2)(3)	1,220	R1(1"BSPT) or 1"NPT External thread	Rc1/2(1/2or 1/2)Internal thread	16	
DA-SPW-3A (1)(2)(3)	1,540	R1(1"BSPT) or 1"NPT External thread	Rc1/2(1/2or 1/2)Internal thread	16	
DA-SPW-4A (1)(2)(3)	1,880	R1(1"BSPT) or 1"NPT External thread	Rc1/2(1/2or 1/2)Internal thread	16	
DA-SPW-5A (1)(2)(3)	2,540	R1(1"BSPT) or 1"NPT External thread	Rc1/2(1/2or 1/2)Internal thread	16	
DA-SPW-6A (1)(2)(3)	3,220	R1(1"BSPT) or 1"NPT External thread	Rc1/2(1/2or 1/2)Internal thread	16	
DA-SPW-1BS (1)(2)(3)	700	R1(1"BSPT) or 1"NPT External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPW-1B (1)(2)(3)	780	R1(1"BSPT) or 1"NPT External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPW-2BS (1)(2)(3)	1,000	R1(1"BSPT) or 1"NPT External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPW-2B (1)(2)(3)	1,220	R1(1"BSPT) or 1"NPT External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPW-3B (1)(2)(3)	1,540	R1(1"BSPT) or 1"NPT External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPW-4B (1)(2)(3)	1,880	R1(1"BSPT) or 1"NPT External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPW-5B(1)(2)(3)	2,540	R1(1"BSPT) or 1"NPT External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
DA-SPW-6B (1)(2)(3)	3,220	R1(1"BSPT) or 1"NPT External thread	Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings)

(1) Dong-A flexible sprinkler connections are approved for use in the following applications:

Assembly length (mm)	Pre-calculated		Fully hydraulically calculated
	Town's mains	Pumped	
Up to 1220	Yes	Yes	Yes
Up to 1880	No	Yes	Yes
Up to 3220	No	No	Yes

All pipework supplying Dong-A flexible sprinkler connections assemblies in pre-calculated systems shall be sized as distribution mains

(2) In suspended ceilings Dong-A flexible sprinkler connections must be installed in accordance with Installation Instructions DASP000501.

(3) In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

(4) For special applications the outlet is 1" Nipple for connection to normal standard pipe fittings, installer must supply & install brackets to ensure that the sprinkler is secure.

PART 3: SECTION 8.2

FLEXIBLE DROPS

Flexhead Industries Inc.

56 Lowland Street, Holliston, Ma 01746, USA

Website: www.flexhead.com

European Distributor:

Reliable Fire Sprinkler Limited, Unit 2A Epsom Business Park, Kiln Lane, Epsom, Surrey KT17 1JF

Tel: +44 (0)1372 728899 • Fax: +44 (0)1372 724481

Certificate No: 764a

Flexhead Flexible Sprinkler Pipe

Product Name	Length (mm)	Nominal Size/Connection Supply	Nominal Size/Connection Outlet	Maximum Working Pressure (bar)	LPCB Ref. No.
2024	600	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	12	764a/01
2036	900	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	12	
2048	1200	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	12	
2060	1500	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	12	
2072	1800	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	12	
2024H	600	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	20	764a/02
2036H	900	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	20	
2048H	1200	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	20	
2060H	1500	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	20	
2072H	1800	R1 (1" NPT) or (1" BSPT) External thread	Rc $\frac{1}{2}$ or Rc $\frac{3}{4}$ ($\frac{1}{2}$ " or $\frac{3}{4}$ " NPT) or ($\frac{1}{2}$ " or $\frac{3}{4}$ " BSP Internal thread	20	

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings)

1 Flexhead flexible sprinkler connections are approved for use in the following applications:

Assembly length (mm)	Pre-calculated		Fully hydraulically calculated
	Town's	Pumped	
600	Yes	Yes	Yes
900	Yes	Yes	Yes
1200	Yes	Yes	Yes
1500	Yes	Yes	Yes
1800	Yes	Yes	Yes

All pipework supplying Flexhead flexible sprinkler connection assemblies in pre-calculated systems shall be sized as distribution mains.

The above applications apply to Flexhead Standard and Flexhead H with up to three bends of up to 90° each.

2. In a suspended ceiling Flexhead flexible sprinkler connections must be installed in accordance with the Flexhead Installation Guide, designated FlexLPCB07.
3. In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

Modgal Metal (99) Limited

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E-mail: modgalmetal@modgal-metal.com • Website: www.modgalmetal.com

Certificate No: 123b

Modgal Quikdrop Style 50 Flexible Sprinkler Connections Approved to LPS1261

Product Name	Length (mm)	Nominal Size/Connection Supply (mm)	Nominal Size/Connection Outlet	Maximum Working Pressure (bar)	LPCB Ref. No.
ST.50	700	R1 (1" PT or 1" NPT) External thread	Rc ^{1/2} or Rc ^{3/4} (1/2" or 3/4" PT or NPT) Internal thread	16	123b/01
	1000	R1 (1" PT or 1" NPT) External thread	Rc ^{1/2} or Rc ^{3/4} (1/2" or 3/4" PT or NPT) Internal thread	16	
	1200	R1 (1" PT or 1" NPT) External thread	Rc ^{1/2} or Rc ^{3/4} (1/2" or 3/4" PT or NPT) Internal thread	16	
	1500	R1 (1" PT or 1" NPT) External thread	Rc ^{1/2} or Rc ^{3/4} (1/2" or 3/4" PT or NPT) Internal thread	16	
	1800	R1 (1" PT or 1" NPT) External thread	Rc ^{1/2} or Rc ^{3/4} (1/2" or 3/4" PT or NPT) Internal thread	16	
	2100	R1 (1" PT or 1" NPT) External thread	Rc ^{1/2} or Rc ^{3/4} (1/2" or 3/4" PT or NPT) Internal thread	16	

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings)

1. Modgal Quikdrop flexible sprinkler connections are approved for use in the following applications:

Assembly length (mm)	Pre-calculated		Fully hydraulically calculated
	Town's mains	Pumped	
Up to 700	Up to 1 x 90° bend	Up to 2 x 90° bend	Yes
Up to 1000	No	Up to 2 x 90° bend	Yes
Up to 1500	No	Up to 1 x 90° bend	Yes
Up to 2100	No	No	Yes

All pipework supplying Modgal Quikdrop flexible sprinkler connection assemblies in pre-calculated systems shall be sized as distribution mains.

The above restrictions apply to Modgal Quikdrop which includes a sprinkler reducer.

1. In suspended ceilings Modgal Quikdrop flexible sprinkler connections must be installed in accordance with the latest Modgal Quikdrop Installation Instructions.
2. In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

PART 3: SECTION 8.2

FLEXIBLE DROPS

Rapidrop Limited

Rutland Business Park, Newark Road, Peterborough PE1 5WA UK

Tel: +44 (0)1733 847 510 • Fax: +44 (0)1733 553 958

E-mail: rapidrop@rapidrop.com • Website: www.rapidrop.com

Certificate No: 566a to LPS 1261

Rapidrop® Flexible Sprinkler Connections Approved to LPS 1261

Product Name	Length (mm)	Nominal Size/Connection Supply	Nominal Size/Connection Outlet	Maximum Working Pressure (bar)	LPCB Ref. No.
Rapidrop® SP-1 (1),(2),(3),(4)	780	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	566a/01
Rapidrop® SP-1_S (1),(2),(3),(4)	700	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Rapidrop® SP-2 (1),(2),(3),(4)	1,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Rapidrop® SP-2_S (1),(2),(3),(4)	1,000	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Rapidrop® SP-3 (1),(2),(3),(4)	1,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Rapidrop® SP-4 (1),(2),(3),(4)	1,880	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Rapidrop® SP-5 (1),(2),(3),(4)	2,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Rapidrop® SP-6 (1),(2),(3),(4)	3,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Rapidrop® SPN-1 (1),(2),(3)	780	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	566a/02
Rapidrop® SPN-1_S (1),(2),(3)	700	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPN-2 (1),(2),(3)	1,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPN-2_S (1),(2),(3)	1,000	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPN-3 (1),(2),(3)	1,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPN-4 (1),(2),(3)	1,880	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPN-5 (1),(2),(3)	2,540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPN-6 (1),(2),(3)	3,220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4"BSPT) or 3/4"NPT Internal thread	16	

PART 3: SECTION 8.2

FLEXIBLE DROPS

Product Name	Length (mm)	Nominal Size/Connection Supply	Nominal Size/Connection Outlet	Maximum Working Pressure (bar)	LPCB Ref. No.
Rapidrop® SPW-1 (1),(2),(3)	780	R1(1"BSPT) or 1"NPT or R1.1/4(1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread	16	566a/03
Rapidrop® SPW-1_S (1),(2),(3)	700	R1(1"BSPT) or 1"NPT or R1.1/4(1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPW-2 (1),(2),(3)	1,220	R1(1"BSPT) or 1"NPT or R1.1/4(1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPW-2_S (1),(2),(3)	1,000	R1(1"BSPT) or 1"NPT or R1.1/4(1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPW-3 (1),(2),(3)	1,540	R1(1"BSPT) or 1"NPT or R1.1/4(1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPW-4 (1),(2),(3)	1,880	R1(1"BSPT) or 1"NPT or R1.1/4(1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPW-5 (1),(2),(3)	2,540	R1(1"BSPT) or 1"NPT or R1.1/4(1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread	16	
Rapidrop® SPW-6 (1),(2),(3)	3,220	R1(1"BSPT) or 1"NPT or R1.1/4(1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread	16	

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings)

1) Rapidrop® flexible sprinkler connections are approved for use in the following applications:

Assembly length (mm)	Pre-calculated		Fully hydraulically calculated
	Town's mains	Pumped	
Up to 1220*	Yes	Yes	Yes
Up to 1880**	No	Yes	Yes
Up to 3220	No	No	Yes

All pipework supplying Rapidrop® flexible sprinkler connections assemblies in pre-calculated systems shall be sized as distribution mains

* For use with a 90 degree sprinkler reducer, this length is to 1000 mm.

** For use with a 90 degree sprinkler reducer, this length is reduced to 1540 mm.

- 2) In suspended ceilings Rapidrop® flexible sprinkler connections must be installed in accordance with Installation Instructions SPT000707.
- 3) In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.
- 4) For special applications the outlet is 1" Nipple for connection to normal standard pipe fittings, installer must supply & install brackets to ensure that the sprinkler is secure.

PART 3: SECTION 8.2

FLEXIBLE DROPS

Reliable Fire Sprinkler Limited

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Reliableflex Flexible Sprinkler Connections Approved to LPS 1261

Product Name	Length (mm)	Nominal Size/Connection Supply	Nominal Size/Connection Outlet	Maximum Working Pressure (bar)	LPCB Ref. No.
Reliableflex 0780	780	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	140b/01
Reliableflex 1000	1000	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Reliableflex 1220	1220	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	
Reliableflex 1540	1540	R1(1"BSPT) or 1"NPT or R1.1/4 (1.1/4"BSPT) External thread	Rc1/2(1/2"BSPT) or 1/2"NPT or Rc3/4(3/4" BSPT) or 3/4"NPT Internal thread or R1(1"BSPT) or 1"NPT External thread	16	

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings).

1) Reliable Sprinkler Ltd flexible sprinkler connections are approved for use in the following applications

Assembly Length (mm) with straight reducer	Pre-calculated		Fully hydraulically calculated
	Town's mains	Pumped	
Up to 1220	Yes	Yes	Yes
Up to 1540	No	Yes	Yes

Assembly Length (mm) with 90° elbow reducer	Pre-calculated		Fully hydraulically calculated
	Town's mains	Pumped	
Up to 1000	Yes	Yes	Yes
Up to 1540	No	Yes	Yes

All pipework supplying Reliable Sprinkler Ltd flexible sprinkler connections assemblies in pre-calculated systems shall be sized as distribution mains

2) In suspended ceilings Reliable Sprinkler Ltd flexible sprinkler connections must be installed in accordance with Installation Instructions rfsi/flex/001.

3) In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

4) For special applications the outlet is 1" Nipple for connection to normal standard pipe fittings, installer must supply & install brackets to ensure that the sprinkler is secure.

All pipework supplying Reliable Sprinkler Ltd flexible sprinkler connections assemblies in pre-calculated systems shall be sized as distribution mains

- 2) In suspended ceilings Reliable Sprinkler Ltd flexible sprinkler connections must be installed in accordance with Installation Instructions rfsi/flex/001.
- 3) In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.
- 4) For special applications the outlet is 1" Nipple for connection to normal standard pipe fittings, installer must supply & install brackets to ensure that the sprinkler is secure.

Seung Jin Industrial Co.

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 E-mail: master@i-seungjin.co.kr • Website: www.i-seungjin.co.kr

Certificate No: 123Ab to LPS 1261

Seung Jin SJ-SP00 Flexible Sprinkler Connections Approved to LPS1261

Product Name	Length (mm)	Nominal Size/Connection Supply (mm)	Nominal Size/Connection Outlet	Maximum Working Pressure (bar)	LPCB Ref. No.
SJ-SP00	700	R1 (1" PT or 1" NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	123Ab/01
	1000	R1 (1" PT or 1" NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
	1200	R1 (1" PT or 1" NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
	1500	R1 (1" PT or 1" NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
	1800	R1 (1" PT or 1" NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
	2100	R1 (1" PT or 1" NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings)

1. Seung Jin SJ-SP00 flexible sprinkler connections are approved for use in the following applications:

Assembly length (mm)	Pre-calculated		Fully hydraulically calculated
	Town's mains	Pumped	
Up to 700	Up to 1 x 90° bend	Up to 2 x 90° bend	Yes
Up to 1000	No	Up to 2 x 90° bend	Yes
Up to 1500	No	Up to 1 x 90° bend	Yes
Up to 2100	No	No	Yes

All pipework supplying Seung Jin SJ-SP00 flexible sprinkler connection assemblies in pre-calculated systems shall be sized as distribution mains.

The above restrictions apply to Seung Jin SJ-SP00 which includes a sprinkler reducer.

1. In suspended ceilings Seung Jin SJ-SP00 flexible sprinkler connections must be installed in accordance with the latest Seung Jin SJ-SP00 Installation Instructions.

PART 3: SECTION 8.2

FLEXIBLE DROPS

2. In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

The Viking Corporation

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UK Sales Contact

Viking SupplyNet Ltd, G6 Bellwin House, Bellwin Drive, Flixborough Industrial Estate, Flixborough, North Lincolnshire DN15 8SN UK
 Tel: +44 (0) 1724 295 300 • Fax: +44 (0) 1724 295 301
 E-mail: vikinguk@vikingcorp.com

Certificate No: 096i/01

Viking Flex Drop - 28mm Braided

Product Name	Length mm	Inlets	Outlet	MWP Bar	LPCB Ref. No.
VKFD28 B-07	700	1" NPT	1/2" NPT or BSPT	17.2	096i/01
VKFD28 B-10	1000	1" BSPT	3/4" NPT or BSPT		
VKFD28S B-12	1200	1 1/4" NPT	Female Straight		
VKFD28 B-15	1500	1 1/4" BSPT	90 degree Angle		
VKFD28 B-18	1800	Male			

Certificate No: 096i/02

Viking Flex Drop - 28mm UnBraided

Product Name	Length mm	Inlets	Outlet	MWP Bar	LPCB Ref. No.
VKFD28 U-07	700	1" NPT	1/2" NPT or BSPT	13.8	096i/02
VKFD28 U-10	1000	1" BSPT	3/4" NPT or BSPT		
VKFD28 U-12	1200	1 1/4" NPT	Female, Straight		
VKFD28S U-15	1500	1 3/4" BSPT	90 degree Angle & 90 degree Angle & 90 degree Angle & 90 degree Angle & 90 degree Angle & 90 degree Angle & 90 degree Angle		
VKFD28 U-18	1800	Male			

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings)

- 1) Viking Flex Drop sprinkler connections are approved for use in the following applications:

Hose diam (mm)	Length (mm)	Pre-calculated		Fully hydraulically calculated
		Town's	Pumped	
28	700	Yes	Yes	Yes
	1000	Yes	Yes	Yes
	1200	Yes	Yes	Yes
	1500	Yes	Yes	Yes
	1800	Yes	Yes	Yes

All pipework supplying Viking Flex Drop sprinkler connection assemblies in pre-calculated systems shall be sized as distribution mains.

The above restrictions apply to Viking Flex Drops with any configuration of inlet and outlet fittings and apply with up to three 90° bends (excluding a 90 angled outlet nipple).

- 2) In suspended ceiling Viking Flex Drop flexible sprinkler drops must be installed in accordance with Viking Installation manuals VKFD28-LPCB-CLIP or Installation manual 112107
- 3) In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

Tyco Building Services Products B.V.

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Certificate No: 169a to LPS 1261

Flexible Sprinkler Hose

Product Name	Length (mm)	Nominal Size/Connection Supply	Nominal Size/Connection Outlet	Maximum Working Pressure (bar)	LPCB Ref. No.
YN25-700	700	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	169a/01
YN25-1000	1000	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
YN25-1200	1200	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
YN25-1500	1500	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
YN25-1800	1800	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
YN25-2000	2000	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
YN25-2500	2500	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
YN25-2700	2700	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
YN25-3100	3100	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	
YN25-3700	3700	R1 (1"PT or 1"NPT) External thread	Rc1/2 or Rc3/4 (1/2" or 3/4" PT or NPT) Internal thread	16	

These products have been approved as a Type 2 hose of moderate flexibility in accordance with LPS 1261. These may be used in applications where little or no differential movement between the two ends is expected after installation (e.g. supply to single sprinklers in suspended ceilings)

1. Tyco Fastflex flexible sprinkler connections are approved for use in the following applications:

Assembly length (mm)	Pre-calculated		Fully Hydraulically calculated
	Town's main	Pumped	
700	Up to 2 x 90° bends	Up to 2 x 90° bends	Up to 2 x 90° bends
Up to 1200	No	Up to 2 x 90° bends	Up to 2 x 90° bends
Up to 1500	No	No	Up to 2 x 90° bends
Up to 3700	No	No	Up to 3 x 90° bends

All pipework supplying Fastflex flexible sprinkler connection assemblies in pre-calculated systems shall be sized as distribution mains.

The above restrictions apply to Fastflex which includes a sprinkler reducer. Straight lengths can be used with a 90° outlet.

2. In suspended ceilings Fastflex flexible sprinkler connections must be installed in accordance with Fastflex Installation Guide Rev 1.
3. In suspended ceilings, outlet reducer must be secured to the ceiling support system with brackets supplied. For other applications the installer must supply brackets to ensure sprinkler is secure.

PART 3: SECTION 8.2

FLEXIBLE DROPS

Witzenmann GmbH

Ostl. Karl-Friedrich-Strasse 134, D-75175 Pforzheim, Postfach 1280, D-75112, Germany

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Certificate No: 398a

Hydra stainless steel flexible pressure hoses

Product Name	Connections	Nominal Size	LPCB Ref. No.
Hydra RS 331 L 12/RS 321 L 12	Threaded	DN16, DN20, DN25, DN32, DN40, DN50 ⁽¹⁾	398a/01
Hydra RS 331 L 12/RS 321 L 12	Flanged	DN20, DN25, DN32, DN40, DN 50 ⁽¹⁾	398a/02
Hydra RS 330 L 12	Flanged	DN65, DN80, DN100 ⁽¹⁾	398a/03

(1) The maximum working pressure for the ranges is 20 bar.

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Pre-action control systems for use under the *LPC Rules for Automatic Sprinkler Installations* have been approved to a schedule of requirements developed by LPCB (please contact LPCB for further details). The products shall be installed and maintained in accordance with the manufacturer's instructions.

Angus Fire Armour Limited (Denmark)

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Certificate No: 084g

ANGUS PA MK III TYPE 1 PRE-ACTION SYSTEM (Pre-Action Control Valve Description)

Product Name	Size(s)	Mounting Attitude	Body Material	Type	Maximum Working Pressure	Flanged or Grooved	LPCB Ref. No.
MKIII	100mm	Vertical	Cast Iron	Pre-Action 100	12 bar	Flanged	084g/01
	150mm	Vertical	Cast Iron	Pre-Action 150	12 bar	Flanged	

Approval Conditions:

- 1) The system employs duplicate solenoid valves, which are manufactured by Danfoss, as detailed above.
- 2) Solenoid valves shall be installed in parallel.
- 3) Solenoid valves shall function in pneumatic condition only, and be protected by a strainer.
- 4) LPCB Certificated detectors compatible with the control and indicating equipment shall be used.
- 5) Suitable electrical detection control and indicating equipment and pneumatic systems which are compatible with the equipment above shall be used.
The control and indicating equipment shall be LPCB approved/certificated.
- 6) Connecting cables shall comply with BS 6387 : 1994, classification C, W, Z.
- 7) The system shall be electrically monitored to demonstrate that it is in a ready-to-operate state at all times.
- 8) Clean dry air shall be used.
- 9) The equipment must be installed, operated and maintained as prescribed in Angus Fire Ltd. installation, operating and maintenance manual.
- 10) The pre-action system shall be configured in accordance with Angus specification numbers, PA1/100 and PA1/150 for the 100mm and 150mm versions respectively.
- 11) The Pre-Action systems shall comply with the details specified in LPC Technical Bulletin 21 Supplementary requirements for sprinkler installations which can operate in the dry mode.
- 12) Angus Fire, Denmark, is responsible for the complete pre-action system.

Certificate No: 084g

ANGUS PA MK III TYPE 1 PRE-ACTION SYSTEM (Solenoid Valve Description)

Product Name	Manufacturer	Voltage (V)	Power (W)	LPCB Ref. No.
EV220B (NC)	Danfoss	24 DC	15	084g/01

Approval Conditions:

- 1) The system employs duplicate solenoid valves, which are manufactured by Danfoss, as detailed above.
- 2) Solenoid valves shall be installed in parallel.
- 3) Solenoid valves shall function in pneumatic condition only, and be protected by a strainer.
- 4) LPCB Certificated detectors compatible with the control and indicating equipment shall be used.
- 5) Suitable electrical detection control and indicating equipment and pneumatic systems which are compatible with the equipment above shall be used.
The control and indicating equipment shall be LPCB approved/certificated.
- 6) Connecting cables shall comply with BS 6387 : 1994, classification C, W, Z.
- 7) The system shall be electrically monitored to demonstrate that it is in a ready-to-operate state at all times.

PART 3: SECTION 9.1

PRE-ACTION CONTROL SYSTEMS

- 8) Clean dry air shall be used.
- 9) The equipment must be installed, operated and maintained as prescribed in Angus Fire Ltd. installation, operating and maintenance manual.
- 10) The pre-action system shall be configured in accordance with Angus specification numbers, PA1/100 and PA1/150 for the 100mm and 150mm versions respectively.
- 11) The Pre-Action systems shall comply with the details specified in LPC Technical Bulletin 21 Supplementary requirements for sprinkler installations which can operate in the dry mode.
- 12) Angus Fire, Denmark, is responsible for the complete pre-action system.

The Reliable Automatic Sprinkler Co. Inc

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Certificate No: 034d

Certificate No: 034M

RELIABLE SINGLE INTERLOCK PRE-ACTION SYSTEM (Pre-action Control Valve Description)

Product Name	Size(s) (mm)	Mounting Attitude	Body Material	Type	Maximum Working Pressure	Flanged or Grooved	LPCB Ref. No.
BX/E	100	Vertical	Cast Iron	Pre-action	12 bar	Flanged	034d/01
	150	Vertical	Cast Iron	Pre-action	12 bar	Flanged	
DDX 4"	100	Verticle	Ductile Iron	Pre-action	17.2	Grooved	034M/01
DDX 6"	150	Verticle	Ductile Iron	Pre-action	17.2	Grooved	034m/01
DDX 165mm	165	Verticle	Ductile Iron	Pre-action	17.2	Grooved	

Approval Conditions:

- 1) The above pre-action system employs duplicate solenoid valves, which are manufactured by firms, as detailed below. One of each shall be used.
- 2) Solenoid valves shall be installed in parallel.
- 3) Solenoid valves shall function in pneumatic condition only, and be protected by a strainer.
- 4) LPCB Certificated detectors compatible with the control and indicating equipment shall be used.
- 5) Suitable electrical detection control and indicating equipment and pneumatic systems which are compatible with the equipment identified above shall be used. The control and indicating equipment should be LPCB approved/certificated.
- 6) Connecting cables shall comply with BS 6387: 1994, classification C, W, Z evidenced by LPCB certification.
- 7) The system shall be electrically monitored to demonstrate that it is in a 'ready-to-operate' state at all times.
- 8) Clean dry air shall be used.
- 9) The equipment must be installed, operated and maintained as prescribed in The Reliable Automatic Sprinkler Co Inc installation, operating and maintenance manuals "Bulletin 717 revision C" and "Bulletin 739 revision A".
- 11) The pre-action systems shall comply with the details specified in LPC Rules for Automatic sprinkler systems Technical Bulletin 21 or 208 Supplementary Requirements for sprinkler installations which can operate in the dry mode and in the LPC Rules for Automatic Sprinkler Installations.
- 12) The Reliable Automatic Sprinkler Company Inc are the firm responsible for the complete pre-action station, including electrics. It should be noted that only the equipment specifically referenced above is LPCB approved.

Certificate No: 034d

RELIABLE SINGLE INTERLOCK PRE-ACTION SYSTEM (Solenoid Valve Description)

Product Name	Manufacturer	Voltage (V)	Power (W)	LPCB Ref. No.
LV2LBX25	Skinner	24 DC	11	034d/01
R8210A107	ASCO	24 DC	10.6	

Approval Conditions:

- 1) The above pre-action system employs duplicate solenoid valves, which are manufactured by firms, as detailed above. One of each shall be used.
- 2) Solenoid valves shall be installed in parallel.

- 3) Solenoid valves shall function in pneumatic condition only, and be protected by a strainer.
- 4) LPCB Certificated detectors compatible with the control and indicating equipment shall be used.
- 5) Suitable electrical detection control and indicating equipment and pneumatic systems which are compatible with the equipment identified above shall be used. The control and indicating equipment should be LPCB approved/certificated.
- 6) Connecting cables shall comply with BS 6387: 1994, classification C, W, Z evidenced by LPCB certification.
- 7) The system shall be electrically monitored to demonstrate that it is in a 'ready-to-operate' state at all times.
- 8) Clean dry air shall be used.
- 9) The equipment must be installed, operated and maintained as prescribed in The Reliable Automatic Sprinkler Co Inc installation, operating and maintenance manual.
- 10) The pre-action system shall be configured in accordance with Reliable specifications.
- 11) The pre-action systems shall comply with the details specified in LPC Technical Bulletin 21 Supplementary Requirements for sprinkler installations which can operate in the dry mode and in the LPC Rules for Automatic Sprinkler Installations.
- 12) The Reliable Automatic Sprinkler Company Inc are the firm responsible for the complete pre-action station, including electrics. It should be noted that only the equipment specifically referenced above under (a) and (b) is LPCB approved.

The Viking Corporation

210 N Industrial Park, Hastings, Michigan 49058, USA

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Certificate No: 096t

Viking Pre-Action Systems (Pre-Action Control Valves descriptions)

Product Name	Size(s) (mm)	Mounting Attitude	Body Material	Type	Maximum Working Pressure (bar)	Connections	LPCB Ref. No.
Type 1 Single-Interlocked Pre-action system	50	Angle style	Ductile Iron	E-1	16	Screwed/Screwed	096f/01
	80, 100, 150	Angle Style	Ductile Iron	E-1	16	Flange/Flange Flange/Groove	096f/02
Type 1 Surefire (TM) Single- Interlocked Pre-action system	50	Angle Style	Ductile Iron	E-1	16	Screwed/Screwed	096f/03
	80, 100, 150	Angle Style	Ductile Iron	E-1	16	Flange/Flange Flange/Groove	096f/04
Type 2 Non-Interlocked Pre- action system	50	Angle Style	Ductile Iron	E-1	16	Screwed/Screwed	096f/05
	80, 100, 150	Angle Style	Ductile Iron	E-1	16	Flange/Flange Flange/Groove	096f/06

Notes

- 1) The above systems are approved for use with hydraulic, pneumatic and pneumatic release systems.
- 2) The above systems are available with TrimPac™
- 3) The above systems are available as TotalPac™

Approval Conditions:

- 1) The above pre-action system employs duplicate solenoid valves. For details of the solenoid valves contact Viking. The solenoid valves shall be LPCB approved.
- 2) Solenoid valves shall be installed in parallel.
- 3) Solenoid valves shall function in pneumatic conditions only, and be protected by a strainer.
- 4) LPCB Certificated detectors compatible with the control and indicating equipment shall be used.
- 5) Suitable electrical detection control and indicating equipment and pneumatic systems which are compatible with the equipment identified above shall be used. The control and indicating equipment should be LPCB approved/certificated.
- 6) Connecting cables shall comply with BS 6387:1994, classification C, W, Z evidenced by LPCB certification.
- 7) The system shall be electrically monitored to demonstrate that it is in a 'ready to operate' state at all times.
- 8) Clean dry air shall be used.
- 9) The equipment must be installed, operated and maintained as prescribed in the Viking Corporation installation, operating and maintenance manual.
- 10) The pre-action system shall be configured in accordance with Viking Corporation's datasheets.
- 11) The pre-action systems shall comply with the details specified in LPC Technical Bulletin TB208: Supplementary Requirements for Sprinkler Installations which can operate in the dry mode.
- 12) The Viking Corporation is the firm responsible for the complete pre-action station.

PART 3: SECTION 9.1

PRE-ACTION CONTROL SYSTEMS

Victaulic Company

4901 Kesslersville Road, Easton, Pennsylvania 18040, USA

Tel: +1 610 559 3300 • Fax: +1 610 250 8817

E-mail: victaulic@victaulic.com • Website: www.victaulic.com

Certificate No: 104k

Victaulic Series 769 Pre-Action System (Pre-action Control Valve Description)

Product Name	Nominal Size	Mounting Attitude	Body Material	Type	Max Working Pressure (bar)	Connections	LPCB Ref. No.
Series 769 Single Interlock (Electric)	40, 50, 65, 76.1, 80, 100, 150, 165.1, 200	Vertical	Cast Iron	Pre-action	20	Grooved	104k/01
Series 769 Single Interlock (Pneumatic/Electric)	40, 50, 65, 76.1, 80, 100, 150, 165.1, 200	Vertical	Cast Iron	Pre-action	20	Grooved	104k/02
Series 769 Double Interlock	40, 50, 65, 76.1, 80, 100, 150, 165.1, 200	Vertical	Cast Iron	Pre-action	20	Grooved	104k/03

Notes:

- 1) The above systems are approved also when configured with 'Autoconvert' option.

Approval Conditions:

- 1) The above pre-action system employs duplicate solenoid valves, which are manufactured by firms, as detailed below. One of each shall be used.
- 2) Solenoid valves shall be installed in parallel.
- 3) Solenoid valves shall function in pneumatic condition only, and be protected by a strainer.
- 4) LPCB Certificated detectors compatible with the control and indicating equipment shall be used.
- 5) Suitable electrical detection control and indicating equipment and pneumatic systems which are compatible with the equipment identified above shall be used. The control and indicating equipment should be LPCB approved/certificated.
- 6) Connecting cables shall comply with BS 6387: 1994, classification C, W, Z evidenced by LPCB certification.
- 7) The system shall be electrically monitored to demonstrate that it is in a 'ready-to-operate' state at all times.
- 8) Clean dry air shall be used.
- 9) The equipment must be installed, operated and maintained as prescribed in Victaulic installation, maintenance and testing manuals "I-769P revision D" and "I-769P-EPA revision D".
- 10) The pre-action systems shall comply with the details specified in LPC Rules for Automatic sprinkler systems Technical Bulletin 21 or 208 Supplementary Requirements for sprinkler installations which can operate in the dry mode and in the LPC Rules for Automatic Sprinkler Installations.
- 11) Victaulic Company are the firm responsible for the complete pre-action station, including electrics. It should be noted that only the equipment specifically referenced above is LPCB approved.

Victaulic Pre-Action System (Solenoid Valve Description)

Product Name	Manufacturer	Voltage (V)	Power (W)	LPCB Ref. No.
Series 753E	Spartan Scientific	24 DC	10.0	104k/04
8210P007	ASCO	24 DC	2.0	104k/05

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Sprinkler system recycling systems for use under the *LPC Rules for Automatic Sprinkler Installations* have been approved to a schedule of requirements developed by LPCB (please contact LPCB for further details). The products shall be installed and maintained in accordance with the manufacturer's instructions.

The Viking Corporation

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Certificate No: 096d

Approved Products	LPCB Ref. No.
Viking Firecycle III Cycling (single interlocked) System	096d/02
Viking Firecycle III Cycling (double interlocked) System	096d/03

Approval Conditions:

- 1) The above Firecycle systems employs duplicate solenoid valves. For details of the solenoid valves contact Viking. The solenoid valves shall be LPCB approved.
- 2) Solenoid valves shall be installed in parallel.
- 3) Solenoid valves may function in hydraulic or pneumatic conditions, and be protected by a strainer.
- 4) Heat detectors compatible with the control and indicating equipment shall be used.
- 5) Suitable electrical detection control and indicating equipment which is compatible with the equipment identified above shall be used. The control and indicating equipment should be LPCB approved/certificated.
- 6) Connecting cables shall comply with BS 5839-1: 2002 and be LPCB approved.
- 7) The system shall be electrically monitored to demonstrate that it is in a 'ready-to-operate' state at all times.
- 8) Clean dry air shall be used where applicable.
- 9) The equipment must be installed, operated and maintained as prescribed in Viking Corporation's installation, operating and maintenance manual.
- 10) The Firecycle III systems shall be configured in accordance with Viking Corporation's specifications.
- 11) The Firecycle III systems shall comply with the details specified in LPC Technical Bulletin 208 Supplementary Requirements for sprinkler installations which can operate in dry mode.
- 12) Viking Corporation are the firm responsible for the complete Firecycle III station, including electrics.

PART 3: SECTION 10

PRESSURE SWITCHES

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Pressure switches for use under *LPC Rules for Automatic Sprinkler Installations* have been approved to a schedule of requirements developed by LPCB. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Bailey & Mackey Limited

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E-mail: enquiries@baileymackey.com • Website: www.baileymackey.com

Certificate No: 085a to LPS 1226

Product Name	Maximum Rated Working Pressure (bar)	Maximum Rated Current and Voltage AC	Maximum Rated Current and Voltage DC	LPCB Ref. No.
Type 1381	17.2	5 Amps @ 250 Volts	1 Amp @ 30 Volts	085a/01
Type 1381P	17.2	5 Amps @ 250 Volts	1 Amp @ 30 Volts	
Type 1381V	17.2	5 Amps @ 250 Volts	1 Amp @ 30 Volts	
Type 1381PV	17.2	5 Amps @ 250 Volts	1 Amp @ 30 Volts	
Type 1391	17.2	5 Amps @ 250 Volts	1 Amp @ 30 Volts	085a/03
Type 1391P	17.2	5 Amps @ 250 Volts	1 Amp @ 30 Volts	
Type 1391V	17.2	5 Amps @ 250 Volts	1 Amp @ 30 Volts	
Type 1391PV	17.2	5 Amps @ 250 Volts	1 Amp @ 30 Volts	

Potter Electric Signal Company

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Certificate No: 125a to LPS 1226

Product Name	Maximum Rated Working Pressure (bar)	Maximum Rated Current and Voltage AC	Maximum Rated Current and Voltage DC	LPCB Ref. No.
Model PS 10A	17.2	15 Amps @ 125/250 Volts	2.5 Amps @ 30 Volts	125a/01
Model PS 40A	17.2	15 Amps @ 125/250 Volts	2.5 Amps @ 30 Volts	125a/02
Model PS 100A	17.2	15 Amps @ 125/250 Volts	2.5 Amps @ 30 Volts	125a/03
Model PS 120A	17.2	15 Amps @ 125/250 Volts	2.5 Amps @ 30 Volts	125a/04
Model PS10-1	17.2	10.1 Amps @ 125/250 Volts	2 Amps @ 30 Volts	125a/05
Model PS10-2	17.2	10.1 Amps @ 125/250 Volts	2 Amps @ 30 Volts	125a/06
Model PS40-1	17.2	10.1 Amps @ 125/250 Volts	2 Amps @ 30 Volts	125a/07
Model PS40-2	17.2	10.1 Amps @ 125/250 Volts	2 Amps @ 30 Volts	125a/08
Model PS100-2	17.2	10.1 Amps @ 125/250 Volts	2 Amps @ 30 Volts	125a/09
Model PS120-1	17.2	10.1 Amps @ 125/250 Volts	2 Amps @ 30 Volts	125a/10
Model PS120-2	17.2	10.1 Amps @ 125/250 Volts	2 Amps @ 30 Volts	125a/11

System Sensor

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Certificate No: 118f to LPS 1226

Pressure Switches

Product Name	Maximum Rated Working Pressure (bar)	Maximum Rated Current and Voltage AC	Maximum Rated Current and Voltage DC	LPCB Ref. No.
Model EPS40-1	17.2	10 Amps @ 125/250 Volts	2.5 Amps @ 6, 12 & 24 Volts	118f/01
EPS40-2	17.2	10 Amps @ 125/250 Volts	2.5 Amps @ 6, 12 & 24 Volts	118f/02
Model EPS10-2V	17.2	10 Amps @ 125/250 Volts	2.5 Amps @ 6, 12 & 24 Volts	118f/03
Model EPS45-2V	17.2	8 Amps @ 125/250 Volts	2.5 Amps @ 6, 12 & 24 Volts	118f/04

PART 3: SECTION 11.1

SPRINKLER HEADS

This section lists products approved in accordance with:

- EN 12259-1 *Fixed firefighting systems. Components for sprinkler and water spray systems. Sprinklers*
- LPS1039 *Requirements and testing methods for automatic sprinklers*
- LPCB Schedule of requirements

LPCB is a Notified Body for all of the products in this section (with the exception of ESFR and specialist sprinklers).

LPCB recommends the removal and testing of sprinkler heads from a system after 25 years and every 5 years thereafter. The areas from which the sprinkler heads are removed should take account of the different makes and models used and variation of atmospheric conditions. LPCB further recommends that sprinkler heads are replaced where problems are found.

KEY to abbreviations

Each entry includes the nominal orifice size in millimetres and the temperature ratings in degrees centigrade.

† indicates glass bulb sprinkler head; all others are fusible element sprinkler heads.

* indicates that a corrosion-resistant coating for the body and yoke of the sprinkler has been approved under the *LPC Rules for Automatic Sprinkler Installations*.

The type of sprinkler is indicated by the following abbreviations:

Type	LPS	EN 12259-1
Conventional (upright and pendent)	CU/P	CU/P
Conventional (Upright)	CU	CU
Conventional (Pendent)	CP	CP
Spray (Upright)	SU	SU
Spray (Pendent)	SP	SP
Flat spray (Upright)	-	FU
Flat spray (Pendant)	-	FP
Sidewall (Upright and pendent)	WU/P	WU/P
Sidewall (Upright)	WU	WU
Sidewall (Pendent)	WP	WP
Sidewall (Horizontal)	WH	WH
Sidewall, flush (Horizontal)	WHF	WLH
Sidewall, extended coverage (Horizontal)	WHEC	-
Conventional, dry (Upright and pendent)	CDU/P	CDU/P
Conventional, dry (Upright)	CDU	CDU
Conventional, dry (Pendent)	CDP	CDP
Spray, dry (Upright)	SDU	SDU
Spray, dry (Pendent)	SDP	SDP
Conventional, flush (Pendent)	CF	CLP
Spray, flush (Pendent)	SF	SLP
Spray, dry, flush (Pendent)	SFD	SDLP
Spray, recessed (Pendent)	SR	SRP
Spray, concealed (Pendent)	SK	SCCP
Early suppression fast response	ESFR	-
Early protection enhance coverage	EPEC	-

A dash (-) indicates that the type is not recognised in the standard concerned.

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Certificate No: 084b

Certificate No: 084k

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† Angus R-F2 (2),(4),(5)	15	WHEC	57, 68, 79	084k/01
† Angus S(7) (1),(2)	10	SR	57, 68, 79, 93 (5mm bulb)	084b/01
† Angus S(7) (2)	10	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(8) (2)	10	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(4) (1),(2),(7)	10	SR	57, 68, 79, 93 (5mm bulb)	
† Angus S(4) (2),(7)	10	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(6) (2),(7)	10	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(1) (2)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(2) (2)	15	SR	57, 68, 79, 93, (5mm bulb)	
	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(3) (2)	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(5) (2)	15	WU/P	57, 68, 79, 95, 141, 182 (5mm bulb)	
† Angus S(14) (2),(6)	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(12) (2),(6)	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(13) (2),(6)	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(9) (2)	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(10) (2)	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(11) (2)	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Angus S(7)QR (1),(2)	10	SR	57, 68, 79, 93, 141	084b/02
† Angus S(7)QR (2),(3)	10	SP	57, 68, 79, 93, 141 (quick response)	
† Angus S(8)QR (2),(3)	10	SU	57, 68, 79, 93, 141 (quick response)	
† Angus S(2)QR (1),(2)	15	SR	57, 68, 79, 93, 141	
† Angus S(2)QR (2),(3)	15	SP	57, 68, 79, 93, 141 (quick response)	
† Angus S(3)QR (2),(3)	15	SU	57, 68, 79, 93, 141 (quick response)	
† Angus S(1)QR (2),(3)	15	CU/P	57, 68, 79, 93, 141 (quick response)	
† Angus S(5)QR (2),(3)	15	WU/P	57, 68, 79, 93, 141 (quick response)	
† Angus S(4)QR (1),(2),(7)	10	SR	57, 68, 79, 93, 141	
† Angus S(4)QR (2),(3),(7)	10	SP	57, 68, 79, 93, 141 (quick response)	
† Angus S(6)QR (2),(3),(7)	10	SU	57, 68, 79, 93, 141 (quick response)	
† Angus S(12)QR (2),(3),(6)	20	SP	57, 68, 79, 93, 141 (quick response)	
† Angus S(14)QR (2),(3),(6)	20	CU/P	57, 68, 79, 93, 141 (quick response)	
† Angus S(13)QR (2),(3),(6)	20	SU	57, 68, 79, 93, 141 (quick response)	
† Angus S(9)QR (2),(3)	20	SP	57, 68, 79, 93, 141 (quick response)	
† Angus S(10)QR (2),(3)	20	SU	57, 68, 79, 93, 141 (quick response)	
† Angus S(11)QR (2),(3)	20	CU/P	57, 68, 79, 93, 141 (quick response)	

Notes:

- 1) Approved with brass, chrome or coloured recessing cup.
- 2) Also approved with chromium and painted finishes.
- 3) The suitability of 'quick response' sprinklers for many risks is not yet proven. Use is therefore limited to where the purchaser, authority having jurisdiction and/or insurers consent to its use. Quick response sprinklers must be handled with care due to the fragile nature of the operating element, with packaging and instructions being marked accordingly.
- 4) This extended coverage horizontal sidewall sprinkler should be handled with care to ensure that the deflector is not deformed. After installation the deflector angle should be checked with the manufacturer's gauge to verify its angle of 92.5°.
- 5) This extended coverage horizontal sidewall head is a technical approval based upon CEA 4043 (Extended Coverage Sidewall Sprinklers). The head is to be installed to the requirements of CEA 4001 (sprinkler installations) that relate to these types of head and in accordance with the manufacturers documentation. Its use is limited to light hazards only.
- 6) This 20mm orifice sprinkler is fitted with a pintle to denote that it has a 15mm nominal thread size.
- 7) This 10mm sprinkler is fitted with a pintle to denote that it has a 15mm nominal thread size.
- 8) Approved with chrome and coloured coverplate.

PART 3: SECTION 11.1

SPRINKLER HEADS

- 9) To be installed in accordance with specific installation instructions. Not to be installed in ceilings with a positive pressure in the void above. The ceiling plate is not to be repainted NOTE: The numbers in brackets are not marked on the Angus S and Angus S QR Sprinklers.

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Certificate No: 084k

Certificate No: 084I

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† GW-DD-F2 (1),(5),(6)	15	WHEC	57, 68, 79	084k/01
† GW-S (1)	10	SR	57, 68, 79, 93 (5mm bulb)	084I/01
	10	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	10	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† GW-S (1),(2),(7)	10	SR	57, 68, 79, 93 (5mm bulb)	
† GW-S (1),(7)	10	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	10	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† GW-S (1)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† GW-S (1),(2)	15	SR	57, 68, 79, 93 (5mm bulb)	
† GW-S (1)	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	WU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† GW-S (1),(3)	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† GW-S (1)	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† GW-S QR (1),(2)	10	SR	57, 68, 79, 93, 141	084I/02
† GW-S QR (1),(4)	10	SP	57, 68, 79, 93, 141, (quick response)	
	10	SU	57, 68, 79, 93, 141, (quick response)	
† GW-S QR (1),(2),(7)	10	SR	57, 68, 79, 93, 141	
† GW-S QR (1),(4),(7)	10	SP	57, 68, 79, 93, 141, (quick response)	
	10	SU	57, 68, 79, 93, 141, (quick response)	
† GW-S QR (1),(2)	15	SR	57, 68, 79, 93, 141	
† GW-S QR (1),(4)	15	SP	57, 68, 79, 93, 141, (quick response)	
	15	SU	57, 68, 79, 93, 141, (quick response)	
	15	CU/P	57, 68, 79, 93, 141, (quick response)	
	15	WU/P	57, 68, 79, 93, 141, (quick response)	
† GW-S QR (1),(3),(4)	20	SP	57, 68, 79, 93, 141, (quick response)	
	20	CU/P	57, 68, 79, 93, 141, (quick response)	
	20	SU	57, 68, 79, 93, 141, (quick response)	
† GW-S QR (1),(4)	20	SP	57, 68, 79, 93, 141, (quick response)	
	20	SU	57, 68, 79, 93, 141, (quick response)	
	20	CU/P	57, 68, 79, 93, 141, (quick response)	

Notes:

- 1) Also approved with chromium and painted finishes.
- 2) Approved with brass, chrome or coloured recessing cup.
- 3) This 20mm orifice sprinkler is fitted with a pintle to denote that it has a 15mm nominal thread size.
- 4) The suitability of 'quick response' sprinklers for many risks is not yet proven. Use is therefore limited to where the purchaser, authority having jurisdiction and/or insurers consent to its use. Quick response sprinklers must be handled with care due to the fragile nature of the operating element, with packaging and instructions being marked accordingly.
- 5) This extended coverage horizontal sidewall sprinkler should be handled with care to ensure that the deflector is not deformed. After installation the deflector angle should be checked with the manufacturers gauge to verify its angle of 92.5°.
- 6) The product manufacturer should be consulted to determine the product fire protection capability and installation practice. Available test evidence and the CEA document "Requirements and Test Methods for Hotel Room Horizontal Sidewall Sprinklers" should also be consulted to ensure correct usage in light hazard applications.
- 7) This sprinkler is fitted with a pintle to denote that it has a 15mm nominal thread size.

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Certificate No: 147c

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
Globe Model GL	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	147c/04
	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	SR	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	CC	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	CCP	57 with 57 cover plate, 68 with 57 or 68 cover plate, 79 with 68 cover plate, 93 with 68 cover plate (5mm bulb)	
	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SR	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	CU/P	57, 68, 79, 93, 141 (quick response)	147c/05
	15	SU	57, 68, 79, 93, 141 (quick response)	
	15	SP	57, 68, 79, 93, 141 (quick response)	
	15	SR	57, 68, 79, 93, 141 (3mm bulb)	
	15	CCP	57 with 57 cover plate, 68 with 57 or 68 cover plate, 79 with 68 cover plate, 93 with 68 cover plate (3mm bulb)	
	20	CU/P	57, 68, 79, 93, 141 (quick response)	
	20	SU	57, 68, 79, 93, 141 (quick response)	
	20	SP	57, 68, 79, 93, 141 (quick response)	
	20	SR	57, 68, 79, 93, 141 (3mm bulb)	

Notes:

- 1) Approved in plain brass, chromium and coloured finishes
- 2) Concealed and recessed heads not to be installed in ceilings with a positive pressure in the void above.

Rapidrop Limited

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Certificate No: 566/d to EN12259-1

Product Name	Nominal orifice size	Type	Temperature rating (°C)	LPCB Ref. No.
† Rapidrop RD20 (1)	15mm	CU/P	57, 68, 79, 93, 141, (5mm bulb)	566d/01
† Rapidrop RD22 (1)	15mm	SP	57, 68, 79, 93, 141, (5mm bulb)	
† Rapidrop RD24 (1)	15mm	SU	57, 68, 79, 93, 141, (5mm bulb)	
† Rapidrop RD21 (1)	15mm	CU/P	57, 68, 79, 93, (quick response)	566d/02
† Rapidrop RD23 (1)	15mm	SP	57, 68, 79, 93, (quick response)	
† Rapidrop RD25 (1)	15mm	SU	57, 68, 79, 93, (quick response)	
Rapidrop RD-FQR EU (1,2)	15	SLP	72, 96, (quick response)	566e/01

Notes:

- 1) Approved with plain, chrome and coloured finish.
- 2) This sprinkler must be handled with care, and the protective cap which protects the thermal element should only be removed after installation is completed
 To be installed in accordance with Data Sheet 4.12, Issue A

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SPRINKLER HEADS

Rolland Sprinklers

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Certificate No: 295a

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† Rolland Model N (1)	15	SP	57, 68, 79, 93, 141 (quick response)	295a/01
	15	SU	57, 68, 79, 93, 141 (quick response)	
	15	CU/P	57, 68, 79, 93, 141 (quick response)	
	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	295a/02
	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	295a/01
	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	

Note:

1) Also approved with chromium and painted finishes.

Senju Sprinkler Co Ltd

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Certificate No: 924a to EN12259-1, A3

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (° C)	LPCB Ref. No.
ZN-QR EU	15	SLP	72,96 (quick response)	924a/01

Note 1. Approved with plain, chrome, white and coloured finishes

Note 2. This sprinler must be handled with care, and the protective cap which protects the thermal element should only be removed after installation is completed. To be installed in accordance with Document No U022920.

The Reliable Automatic Sprinkler Co. Inc

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Certificate No: 034g

Certificate No: 034h

Certificate No: 034i

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SPRINKLER HEADS

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† Reliable F1 (2),(3)	10	SU	57, 68,79,93,141, 182 (5mm bulb)	034g/02
† Reliable F12, (3),(4)	10	SP	57, 68, 79, 93, 141, 82 (5mm bulb)	
† Reliable F1 (5),(10)	10	SR	57, 68, 79, 93 (5mm bulb)	
† Reliable F1 (14)	10	SU	57, 68, 79, 93, 141 (5mm bulb)	
	10	SP	57, 68, 79, 93, 141 (5mm bulb)	
† Reliable F1 (13),(15),(17)	10	SR	57, 68, 79, 93 (5mm bulb)	
† Reliable F1 (2),(3)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Reliable F12, (3),(4)	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Reliable F1 (2),(3)	15	WP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Reliable F1 (5),(10)	15	SR	57, 68, 79, 93 (5mm bulb)	034g/03
† Reliable F1 (13)	15	SU	57, 68, 79, 93, 141 (5mm bulb)	
	15	SP	57, 68, 79, 93, 141 (5mm bulb)	
	15	WP	57, 68, 79, 93, 141 (5mm bulb)	
† Reliable F1 (13),(15),(17)	15	SR	57, 68, 79, 93 (5mm bulb)	
† Reliable F1 (2),(3)	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Reliable F1	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Reliable F1 (13)	20	SU	57, 68, 79, 93, 141 (5mm bulb)	
	20	SP	57, 68, 79, 93, 141 (5mm bulb)	
† Reliable F1 (15),(17)	20	SR	57, 68, 79, 93 (5mm bulb)	
† Reliable F1FR (11),(13)	10	SU	57, 68, 79, 93, 141 (quick response)	
	10	SP	57, 68, 79, 93, 141 (quick response)	
† Reliable F1FR (13),(14),(15)	10	SR	57, 68, 79, 93	
† Reliable F1FR (13),(15),(16)	10	SR	57, 68, 79, 93	
† Reliable F1FR (11),(13)	15	CU/P	57, 68, 79, 93, 141 (quick response)	
	15	SU	57, 68, 79, 93, 141 (quick response)	
	15	SP	57, 68, 79, 93, 141 (quick response)	
	15	WP	57, 68, 79, 93, 141 (quick response)	
† Reliable F1FR (13),(14),(15)	15	SR	57, 68, 79, 93	
† Reliable F1FR (13),(15),(16)	15	SR	57, 68, 79, 93	
† Reliable F1FR (11),(13)	20	SP	57, 68, 79, 93, 141 (quick response)	
	20	CU/P	57, 68, 79, 93, 141 (quick response)	
	20	SU	57, 68, 79, 93, 141 (quick response)	
	20	SP	57, 68, 79, 93, 141 (quick response)	
† Reliable F1FR (15),(16)	20	SR	57, 68, 79, 93	034g/04
* Reliable G (2)	10	SU	57, 74, 100, 141	
	10	SP	57, 74, 100, 141	
	15	CU/P	57, 74, 100, 141	
	15	SU	57, 74, 100, 141	
	15	SP	57, 74, 100, 141	
	15	WU/P	57, 74, 100, 141	
Reliable G (6),(7),(8)	15	SR	57, 74, 100	
* Reliable G (2)	20	SU	57, 74, 100, 141	
	20	SP	57, 74, 100, 141	
Reliable G3 (2)	15	SDP	and adjustable) 57, 74	
Reliable G/F (12),(9),(10)	10	SR	57, 74 100	
	15	SR	57, 74, 100	
Reliable ZX - (9),(11),(12),(18)	15	SF	74 (quick response)	
Reliable G4FR (8),(19)	15	SK	ceiling plate) 74 with 57 ceiling plate	
† Reliable ESFR-H(1)	20	SP	68, 93	
Reliable ESFR-HL(1)	20	SP	74, 100	
Reliable F3	15	DRSP (27)	57, 68, 93, 141	
Reliable F3 (20)	15	CCDSP	57 with 57 ceiling plate	
Reliable F3			68 with 57 ceiling plate	
			93 with 74 ceiling plate	
	15	DWH	57, 68, 93, 141	
	15	RDWH	57, 68, 93, 141	
Reliable F4FR(8),(21)	15	CCP	57 and 68 adjustable ceiling plate	
† Reliable ESFR-K22(22)	N/A	SP	68, 93	
Reliable F1FR-EPEC(23)	20	SR	57, 68, 79	
Reliable XL Commercial (20, 24)	15	SF	74 (quick response)	
	15	WHF	74 (quick response)	
Reliable F1FR-EPEC(23)	20	SP	57, 68, 79	
Reliable ESFR-HL22(22)	N/A	SP	74, 100	
† Reliable F1 56	15mm	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15mm	SR	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Reliable F1FR 56	15mm	SP	57, 68, 79, 93, 141 (quick response)	
	15mm	SR	57, 68, 79, 93, 141 (3mm bulb)	
Reliable JL-14(1)	N/A	SP	74, 100	

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SPRINKLER HEADS

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
Reliable JL-17(25)	N/A	SP	74, 100	034r/02

Notes:

- 1) This ESFR sprinkler has a k-factor of 200 l.min⁻¹.bar⁻² (US k-factor of 14 gal.min⁻¹.psi⁻²).
- 2) Approved with a chromium finish.
- 3) Also approved with plated brass, black plate and dull and bright chrome finishes.
- 4) The "57°, 68°, 79° and 93° sprinklers are also approved with a white paint finish.
- 5) Incorporating Reliable F1 SP Sprinkler in Model G/F1 recessed escutcheon. To be installed in accordance with installation bulletin 119.
- 6) To be installed in accordance with installation bulletin 111G. Approved with brass, chrome or coloured recessing cup.
- 7) The Reliable G has slotted holes in the recessing cup. (The Reliable G/F1, which is similar in appearance, has no slotted holes in the recessing cup).
- 8) Not to be installed in ceilings with a positive pressure in the void above.
- 9) Incorporating Reliable G SP Sprinkler in Model G/F1 recessed escutcheon. To be installed in accordance with installation bulletin 120.
- 10) Approved with brass, chrome or white G/F1 recessed escutcheon.
- 11) The suitability of 'quick response' sprinklers for many risks is not yet proven. Use is therefore limited to where the purchaser, authority having jurisdiction and/or insurers consent to its use. Quick response sprinklers must be handled with care due to the fragile nature of the operating element, with packaging and instructions being marked accordingly.
- 12) Every five years, all sprinklers should be visually examined and representative samples removed and tested to the requirements of the authority and/or insurer.
- 13) Approved with plated brass, bronze, chrome, black-plated and coloured finish.
- 14) Incorporating reliable F1FR SP sprinkler in Model F1 recessed escutcheon.
- 15) To be installed in accordance with specific installation instructions.
- 16) Incorporating Reliable F1FR SP sprinkler in Model F2 recessed escutcheon.
- 17) Incorporating Reliable F1 SP (5mm bulb)" sprinkler in Model F1 recessed escutcheon.
- 18) Also approved with white painted cover and sensor and white cover with chrome sensor.
- 19) This sprinkler is approved with BeNi and Cu links.
- 20) Also approved with chrome and white paint finish.
- 21) Approved with brass.chrome, black plated and white painted finish.
- 22) This ESFR sprinkler has a k-factor of 322 l.min⁻¹.bar⁻² (US k-factor of 22.4 gal.min⁻¹.psi⁻²).
- 23) This EPEC sprinkler has a k-factor of 115 l.min⁻¹.bar⁻² (US k-factor of 8 gal.min⁻¹.psi⁻²).
- 24) This sprinkler must be handled with care, and the shipping cap which protects the thermal element should only be removed after installation. To be installed in accordance with Installation Bulletin 145.
- 25) This ESFR sprinkler has a k-factor of 242. l.min⁻¹.bar⁻² (US k-factor of 16.8.min⁻¹.psi⁻²)

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Certificate No: 096e

Certificate No: 096g

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† Viking M Microfast (1), (2), (6)	15	SU	57, 68, 79, 93, 141, (quick response)	096e/03
	15	SP	57, 68, 79, 93, 141, (quick response)	
† Viking M Microfast (1), (2),(6)	15	CU/P	57, 68, 79, 93, 141, (quick response)	
† Viking F-1 Microfast (3)	15	SR	57, 68, 79, 93, 141, (recessed and adjustable)	096e/04
† Viking M (6),(7)	10	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	096e/06
	10	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	WH	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Viking M (8)	15	SDP	57, 68, 79, 93, (adjustable recessed) (5mm bulb)	

PART 3: SECTION 11.1

SPRINKLER HEADS

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† Viking M (9)	15	SDP	57, 68, 79, 93, 141 (adjustable standard) (5mm bulb)	
† Viking M (10)	15	SDP	57, 68, 79, 93, 141 (plain barrel) (5mm bulb)	
Viking S-1ESFR (13) (17)	20	SP	74	096e/07
Viking Horizon Model H(1) (11),(12)	15	SF	74 (quick response)	096e/08
† Viking M/E-1 (3), (14)	15	SR	57, 68, 79, 93 (5mm bulb)	096e/06
	20	SR	57, 68, 79, 93 (5mm bulb)	
Viking Horizon Mirage VK408	15	WHSCC	74	096e/11
Viking Model N-2 VK130 (15), (16)	15	SU	68, 79, 93, 141, 182 (5mm bulb)	096e/09
Viking Model N-2 VK132 (15), (16)	15	SP	68, 79, 93, 141, 182 (5mm bulb)	
K25 ESFR (20)	25	ESFR	74, 96 (Link)	096g/01
Viking Mirage Concealed VK462 (18), (19)	15	CCP	68 Sprinkler with 59 ceiling plate (3 mm bulb)	096e/12
	15	CPP	79 Sprinkler with 74 ceiling plate (3 mm bulb)	
	15	CCP	93 Sprinkler with 74 ceiling plate (3 mm bulb)	
† Viking M Microfast (1), (2), (6), (18)	20	SU	57, 68, 79, 93, 141, (quick response)	096e/03
	20	SP	57, 68, 79, 93, 141, (quick response)	
† Viking M Microfast (1), (2), (6), (15)	20	CU/P	57, 68, 79, 93, 141, (quick response)	
Viking VK920 Model 15111 Flat spray	15mm	SP	68, 79, 93, (quick response)	096e/13

Notes:

- 1) The suitability of 'quick response' sprinklers for many risks is not yet proven. Use is therefore limited to where the purchaser, authority having jurisdiction and/or insurers consent to its use. Quick response sprinklers must be handled with care due to the fragile nature of the operating element, with packaging and instructions being marked accordingly.
- 2) Approved with plain and chrome finishes.
- 3) Approved with brass, chrome or coloured recessing cup.
- 4) Approved with chrome, bright brass and painted finish coverplates.
- 5) Not to be installed in ceilings with a positive pressure in the void above.
- 6) Approved with chrome, polished brass and coloured finishes.
- 7) The "57", 68°, 79° and 93° heads are approved with wax finishes.
- 8) Approved with chrome and white finishes.
- 9) Approved with chrome finish.
- 10) Approved with chrome and brass finishes.
- 11) Every five years, all sprinklers should be visually examined and representative samples removed and tested to the requirements of the authority and/or insurer.
- 12) Approved with polished chrome and white polyester finishes.
- 13) This ESFR sprinkler has a k-factor of 200 l.min⁻¹.bar^{-1/2} (US k-factor of 14 gal.min⁻¹.psi^{-1/2}).
- 14) Approved with recessed and adjustable escutcheon.
- 15) The VK130 & 132 sprinklers are stainless steel.
- 16) Certificated to EN12259:1999 including amendment A1:2001
- 17) Certificated to the relevant clauses of EN12259:1999 and LPS1039
- 18) Certificated to EN12259-1:1999 A3:2006
- 19) Approved with Polished Chrome and Painted White finished coverplates

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Certificate No: 094a

Certificate No: 094b

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
†TY3251 (1),(8)	15	SP	57, 68, 79, 93, 141, 182, 260 (5mm bulb)	094a/05
†TY3151 (1),(8)	15	SU	57, 68, 79, 93, 141, 182, 260 (5mm bulb)	

PART 3: SECTION 11.1

SPRINKLER HEADS

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
†TY3651 (1),(8)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
†TY3451 (1),(8)	15	WU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
†TY3351 (1)	15	WH	57, 68, 79, 93, 141, 182 (5mm bulb)	
†TY4251 (1),(8)	20	SP	57, 68, 79, 93, 141, 182, 260 (5mm bulb)	
†TY4151 (1),(8)	20	SU	57, 68, 79, 93, 141, 182, 260 (5mm bulb)	
†TY4651 (1),(8)	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
†TY3631 (1),(6),(8)	15	CU/P	57, 68, 79, 93, 141 (quick response)	094a/06
†TY3131 (1),(6),(8)	15	SU	57, 68, 79, 93, 141 (quick response)	
†TY3231 (1),(6),(8)	15	SP	57, 68, 79, 93, 141 (quick response)	
†TY3431 (1),(6),(8)	15	WU/P	57, 68, 79, 93, 141 (quick response)	
†TY3331 (1)	15	WH	57, 68, 79, 93, 141	
†TY4631 (1),(6),(8)	20	CU/P	57, 68, 79, 93, 141 (quick response)	
†TY4131 (1),(6),(8)	20	SU	57, 68, 79, 93, 141 (quick response)	
†TY4231 (1),(6),(8)	20	SP	57, 68, 79, 93, 141 (quick response)	
TFP ESFR-1(2)	N/A	SP	74, 101	094b/01
TY3221 (Nickel Link) (6),(7)	15	SP	74 (quick response)	094a/03
TY3121 (Nickel Link) (6),(7)	15	SU	74 (quick response)	
TY3111 (1)	15	SU	74, 100, 138	
TY3211 (1)	15	SP	74, 100, 138	
TY3311 (1)	15	WH	74, 100, 138	
TY3211 (3),(4),(9)	15	SR	74, 100	
TY4111 (1)	15	SU	74, 100, 138	
TY4211 (1)	15	WH	74, 100, 138	
TY4211 (3),(4),(9)	15	SR	74, 100	
TY4811 (1)	20 (1/2" PT)	SU	74, 100, 138	
TY4911 (1)	20 (1/2" PT)	SP	74, 100, 138	
TY3551(10)	15	CCP	68 sprinkler with 59 ceiling plate (5mm bulb)	094a/09
	15	CCP	93 sprinkler with 74 ceiling plate (5mm bulb)	
TY3531(10)	15	CCP	68 sprinkler with 59 ceiling plate (3mm bulb)	094a/10
	15	CCP	93 sprinkler with 74 ceiling plate (5mm bulb)	
TY3155 (1)(8)	15	DSU	57, 68, 79, 93, 141	094a/11
TY3255 (1)(8)	15	DSP	57, 68, 79, 93, 141	
TY3355 (1)(8)	15	DWH	57, 68, 79, 93, 141	
†G1036	15	SU	260	094a/01
†G1040	15	SP	260	
ESFR-17 (11)	N/A	SP	74, 101	094b/02
ESFR-25 (12)	N/A	SP	74, 101	094b/03
†TY3250 (13)	15mm	SP	68, 93, 141, (5mm bulb)	094a/12

Notes:

- 1) Also approved with chromium finish.
- 2) This ESFR sprinkler has a k-factor of 200 l.min⁻¹.bar^{-/2} (US k-factor of 14 gal.min⁻¹.psi^{-/2}).
- 3) Not to be installed in ceilings with a positive pressure in the void above.
- 4) Approved with brass, chrome, or coloured recessing cup.
- 6) The suitability of 'quick response' sprinklers for many risks is not yet proven. Use is therefore limited to where the purchaser authority having jurisdiction and/or insurers consent to its use. Quick response sprinklers must be handled with care due to the fragile nature of the operating element, with packaging and instructions being marked accordingly.
- 7) Every five years, all sprinklers should be visually examined, and representative samples removed and tested to the requirements of the authority and/or insurer.
- 8) Also approved with polyester finish.
- 9) To be installed with specific installation instructions.
- 10) Certificated with Chrome, Brass and painted coverplates.
- 11) The ESFR-17 sprinkler has a k-factor of 241.9 l.min⁻¹.bar^{-/2} (US k-factor of 16.8 gal.min⁻¹.psi^{-/2}).
- 12) The ESFR-25 sprinkler has a k-factor of 362.9 l.min⁻¹.bar^{-/2} (US k-factor of 25.2 gal.min⁻¹.psi^{-/2}).
- 13) Approved in grade 316 Stainless steel

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Certificate No: 007k

Certificate No: 007I

Certificate No: 007p

Certificate No: 007q

Certificate No: 007r

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† TY2208 (1)	10	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	007k/03
† TY2108 (1)	10	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY3251 (1)	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	007k/04
† TY3151 (1)	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY3651 (1)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY3251 (1),(3)	15	RP	57, 68, 79, 93 (5mm bulb)	
† TY3451 (1)	15	WU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY3351 (7)	15	WH	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY4251 (1)	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY4151 (1)	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY4651 (1)	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY4251 (1),(3)	20	RP	57, 68, 79, 93 (5mm bulb)	
TY4851 (1), (5)	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY4951 (1), (5)	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† TY2209 (1), (2)	10	SP	57, 68, 79, 93, 141 (quick response)	
† TY2109 (1), (3)	10	SU	57, 68, 79, 93, 141 (quick response)	
† TY3631 (1), (2)	15	CU/P	57, 68, 79, 93, 141 (quick response)	
† TY3131 (1), (3)	15	SU	57, 68, 79, 93, 141 (quick response)	
† TY3231 (1), (2)	15	SP	57, 68, 79, 93, 141 (quick response)	
† TY3231 (1), (3)	15	RP	57, 68, 79, 93 (3mm bulb)	
† TY3431 (1), (2)	15	WU/P	57, 68, 79, 93, 141 (quick response)	
† TY3331 (4)	15	WH	57, 68, 79, 93, 141	
† TY3331 (1), (3)	15	WHR	57, 68, 79, 93	
† TY4631 (1), (2)	20	CU/P	57, 68, 79, 93, 141 (quick response)	
† TY4131 (1), (2)	20	SU	57, 68, 79, 93, 141 (quick response)	
† TY4231 (1), (2)	20	SP	57, 68, 79, 93, 141 (quick response)	
† TY4831 (1), (3), (13)	20	SU	57, 68, 79, 93, 141 (quick response)	
† TY4931 (1), (3), (13)	20	SP	57, 68, 79, 93, 141 (quick response)	
TFP ESFR-1(2)	N/A	SP	74, 101	007I/01
ESFR-17	N/A	SP	74, 101	007I/02
ESFR-25	N/A	SP	74, 101	007I/03
Tyco EPEC	20	SP	57, 68, 79, 93, 141	007p/01
TY8181 (10)	15	SU	57, 68, 79, 93, 141 (quick response)	007q/01
TY8183 (11)	15	SP	57, 68, 79, 93, 141 (quick response)	
TY8182 (12)	15	SU	57, 68, 79, 93, 141 (quick response)	
TY8281 (10)	15	SP	57, 68, 79, 93, 141 (quick response)	
TY8283 (11)	15	SP	57, 68, 79, 93, 141 (quick response)	
TY8282 (12)	15	SP	57, 68, 79, 93, 141 (quick response)	
TY8681 (10)	15	CU/P	57, 68, 79, 93, 141 (quick response)	
TY8683 (11)	15	CU/P	57, 68, 79, 93, 141 (quick response)	
TY8682 (12)	15	CU/P	57, 68, 79, 93, 141 (quick response)	
TY8481 (10)	15	WU/P	57, 68, 79, 93, 141 (quick response)	
TY8483 (11)	15	WU/P	57, 68, 79, 93, 141 (quick response)	
TY8482 (12)	15	WU/P	57, 68, 79, 93, 141 (quick response)	
TY8381 (10)	15	WH	57, 68, 79, 93, 141 (quick response)	
TY8383 (11)	15	WH	57, 68, 79, 93, 141 (quick response)	
TY8382 (12)	15	WH	57, 68, 79, 93, 141 (quick response)	

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SPRINKLER HEADS

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
TY9281 (10)	20	SP	57, 68, 79, 93, 141 (quick response)	
TY9181 (10)	20	SU	57, 68, 79, 93, 141 (quick response)	
TY9681 (10)	20	CU/P	57, 68, 79, 93, 141 (quick response)	
TY8191 (10)	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	007q/02
TY8193 (11)	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8291 (10)	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8293 (11)	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8292 (12)	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8691 (10)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8693 (11)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8692 (12)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8491 (10)	15	WU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8493 (11)	15	WU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8492	15	WU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8391 (10)	15	WH	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8393 (11)	15	WH	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY8392 (12)	15	WH	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY9291 (10)	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY9191 (8)	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY9691 (10)	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
TY1156	10	FU	57, 68, 79, 93, 141 (5mm bulb)	007r/01
TY1256	10	FP	57, 68, 79, 93, 141 (5mm bulb)	
TY3156	15	FU	57, 68, 79, 93, 141 (5mm bulb)	
TY3256	15	FP	57, 68, 79, 93, 141 (5mm bulb)	
TY4156	20	FU	57, 68, 79, 93, 141 (5mm bulb)	
TY4256	20	FP	57, 68, 79, 93, 141 (5mm bulb)	
TY1136 (3)	10	FU	57, 68, 79, 93, 141 (quick response)	007r/02
TY1236 (3)	10	FP	57, 68, 79, 93, 141 (quick response)	
TY3136 (3)	15	FU	57, 68, 79, 93, 141 (quick response)	
TY3236 (3)	15	FP	57, 68, 79, 93, 141 (quick response)	
TY4136 (3)	20	FU	57, 68, 79, 93, 141 (quick response)	
TY4236 (3)	20	FP	57, 68, 79, 93, 141 (quick response)	
TY2208 (1)	10	RP	57, 68, 79, 93 (5mm bulb)	007k/03
TY2209 (1)	10	RP	57, 68, 79, 93 (3mm bulb)	007k/04

Notes:

- 1) Also approved with coloured and chromium finishes.
- 2) The suitability of 'quick response' sprinklers for many risks is not yet proven. Use is therefore limited to where the purchaser, authority having jurisdiction and/or insurers consent to its use. Quick response sprinklers must be handled with care due to the fragile nature of the operating element, with packaging and instructions being marked accordingly.
- 3) Approved with Model F700 recessed escutcheon.
- 4) Also approved in chromium finish.
- 5) Sprinkler has $\frac{1}{2}$ " NPT thread.
- 6) Approved with Job G5 and Geissler type 'E' bulbs.
- 7) Also approved in chromium finish.
- 8) The EPEC sprinkler has a k-factor of $112.8 \text{ l.min}^{-1} \cdot \text{bar}^{-1/2}$. Also approved with coloured and chrome finishes.
- 9) The ESFR-25 sprinkler has a k-factor of $362.9 \text{ l.min}^{-1} \cdot \text{bar}^{-1/2}$ (US k-factor of $25.2 \text{ gal.min}^{-1} \cdot \text{psi}^{-1/2}$).
- 10) Approved in 316 Stainless Steel material.
- 11) Approved in Titanium material.
- 12) Approved in 254 SMO Stainless Steel material.
- 13) Sprinkler has $\frac{1}{2}$ " NPT thread.
- 14) 11) The ESFR-17 sprinkler has a k-factor of $241.9 \text{ l.min}^{-1} \cdot \text{bar}^{-1/2}$ (US k-factor of $16.8 \text{ gal.min}^{-1} \cdot \text{psi}^{-1/2}$).

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Certificate No: 169d/01 to EN 12259-1, A3

PART 3: SECTION 11.1

SPRINKLER HEADS

Product Name	Nominal Orifice Size (mm)	Type	Temp rating (° C)	LPCB Ref. No.
TY-QRF-EU	15	SLP	72,96 (quick response)	169d/01

Note 1. Approved with plan, chrome and white finishes

Note 2. This sprinkler must be handled with care, and the protective cap with protects the thermal element should only be removed after installation is completed. To be installed in accordance with Document No TFP 191.

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Certificate No: 104b

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† V2727 (1)	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	104b/01
† V2703 (1)	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† V2725 (1)	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
† V2709 (1)	15	WH	57, 68, 79, 93, 141, 182 (5mm bulb)	
† V2728 (1)	15	SP	57, 68, 79, 93, 141 (quick response)	104b/02
† V2704 (1)	15	SU	57, 68, 79, 93, 141 (quick response)	
† V2726 (1)	15	CU/P	57, 68, 79, 93, 141 (quick response)	
† V2710 (1)	15	WH	57, 68, 79, 93, 141 (quick response)	
† V3423 (1)	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	104b/03
† V3401 (1)	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
† V3424 (1)	20	SP	57, 68, 79, 93, 141 (quick response)	104b/04
† V3402 (1)	20	SU	57, 68, 79, 93, 141 (quick response)	
† V3801	15	CCSP	68, with 59 ceiling plate, bulb)	104b/05
	15	CCSP	68, with 59 ceiling plate (5mm bulb)	
			79, 93 with 74 ceiling plate (5mm bulb)	
† V3802	15	CCSP	68 with 59 ceiling plate (3mm bulb)	104b/06
			79, 93 with 74 ceiling plate (3mm bulb)	

Note:

1) Also approved with chromium, polyester and nickel/teflon finishes.

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Certificate No: 167a

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
Viking M Microfast (4),(5),(8)	15	CU/P	57, 68 (quick response)	167a/02

PART 3: SECTION 11.1

SPRINKLER HEADS

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
† Viking M Microfast (4),(5),(8)	15	SU	57, 68 (quick response)	
	15	SP	57, 68 (quick response)	
† Viking F-1 Microfast (6)	15	SR	57, 68 (recessed and adjustable)	167a/03
† Viking M (2),(3)	10	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	167a/04
	10	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
	15	WH	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	CU/P	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SU	57, 68, 79, 93, 141, 182 (5mm bulb)	
	20	SP	57, 68, 79, 93, 141, 182 (5mm bulb)	
† Viking M/E-1 (6),(7)	15	SR	57, 68, 79, 93 (5mm bulb)	
	20	SR	57, 68, 79, 93 (5mm bulb)	

Notes;

- 2) Approved with plain, chrome, polished brass and coloured finish.
- 3) The 57°, 68°, 79° and 93° heads are approved with wax finishes.
- 4) The suitability of 'quick response' sprinklers for many risks is not yet proven. Use is therefore limited to where the purchaser, authority having jurisdiction and/or insurers consent to its use. Quick response sprinklers must be handled with care due to the fragile nature of the operating element, with packaging and instructions being marked accordingly.
- 5) Approved with plain and chrome finishes.
- 6) Approved with brass, chrome or coloured recessing cup.
- 7) Approved with recessed and adjustable escutcheon.
- 8) Approved with chrome, polished brass and coloured finishes.

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Sprinkler Heads included in this section include a means of electronic operation in addition to the normal glass bulb mode.

Approval Conditions

- 1) LPCB approved detectors compatible with the control and indicating equipment shall be used;
- 2) Suitable electrical detection control and indicating equipment compatible with the equipment below shall be used. The control and indicating equipment shall be LPCB Approved/Certificated;
- 3) Connecting cables shall comply with BS 6387:1994 *Specification for performance requirements for cables required to maintain circuit integrity under fire conditions*, classification C,W,Z or equivalent;
- 4) The equipment must be installed, operated and maintained as prescribed in the manufacturer's Installation, Operating and Maintenance Manual;
- 5) To guard against inadvertent operation it is recommended that electrically operated sprinklers be used in conjunction with coincidence detection;
- 6) Where 'Metron' actuators are employed the maximum allowable operating temperature shall not be exceeded;
- 7) Where 'Metron' actuators are used, these shall also be LPCB approved; and
- 8) The 'Guidance' in the Part 3 Section 22 'Metron' Actuators, shall also be taken into account.

G.W. Sprinkler A/S

Kastanievej 15, DK-5620 Glamsbjerg, Denmark

Tel: +45 64 72 2055 • Fax: +45 64 72 2255

E-mail: sales.dep@gwsprinkler.com

Certificate No: 084h

Product Name	Nominal Orifice Size (mm)	Type	Temperature Ratings (°C)	LPCB Ref. No.
GW-S-EL(1),(2),(3)	10	SP	57, 68, 79 (5mm bulb)	084h/01
	10	SU	57, 68, 79 (5mm bulb)	
GW-S-EL(1),(2),(3),(4)	10	SP	57, 68, 79 (5mm bulb)	084h/02
	10	SU	57, 68, 79 (5mm bulb)	
GW-S-EL(1),(2),(3)	15	CU/P	57, 68, 79 (5mm bulb)	
	15	SP	57, 68, 79 (5mm bulb)	
	15	SU	57, 68, 79 (5mm bulb)	084h/02
GW-S-QR-EL(1),(2),(3)	10	SP	57, 68, 79 (quick response)	
	10	SU	57, 68, 79 (quick response)	
GW-S-QR-EL(1),(2),(3),(4)	10	SP	57, 68, 79 (quick response)	
	10	SU	57, 68, 79 (quick response)	
GW-S-QR EL(1),(2),(3)	15	SP	57, 68, 79 (quick response)	
	15	SU	57, 68, 79 (quick response)	
	15	CU/P	57, 68, 79 (quick response)	

Notes:

- 1) Also approved with chrome and painted finishes.
- 2) To be installed, operated and maintained in accordance with the GW Sprinkler A/S Installation, Operating and Maintenance Manual.
- 3) Sprinklers marked EL incorporate a 'Metron' actuator.
- 4) This sprinkler is fitted with a pintle to denote that it has a 15mm nominal thread size.

PART 3: SECTION 11.3

DUAL SENSING SPRINKLER HEADS

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Dual sensing sprinkler heads have been evaluated in relation to their general performance capability but not in relation to their suitability for specific applications. The manufacturer's installation and maintenance instructions shall be followed.

Dual sensing sprinkler heads are only suitable for use on fully hydraulically calculated systems.

Project Fire Products Limited

Pasturefields Lane Industrial Estate, Pasturefields Lane, Hixon, Staffordshire ST18 0PH UK

Tel: +44 (0)1889 271271 • Fax: +44 (0)1889 270974

Certificate No: 060b

Product Name	Nominal Orifice Size (mm)	Type	Temperature Rating (°C)	LPCB Ref. No.
'Gemini'	15 (1, 2)	SP	68 (1)	060b/01

Notes:

- 1) Sprinkler assembly only approved when fitted with Viking Model M "Microfast" 15mm SP Sprinkler head as per section 11.1 .
- 2) The K factor of the 'Gemini' dual sensing sprinkler head is $58.6 \text{ l.min}^{-1} \cdot \text{bar}^{-1/2}$.
- 3) Dual sensing sprinkler heads are only suitable for use on fully hydraulically calculated systems.

This section lists products approved in accordance with:

- LPS 1039 *Requirements & Testing Methods for Automatic Sprinklers*
- LPS 1258 *Requirements & Testing Methods for Automatic Sprinkler Glass Bulbs with a Narrow Operating Temperature Band*
- EN 12259-1 *Fixed firefighting systems. Components for sprinkler and water spray systems.*

These bulbs may be used in sprinkler heads listed in Section 11.

Day-Impex Limited

Station Works, Earls Colne, Colchester, Essex CO6 2ER UK

Tel: +44 (0)1787 223232 • Fax: +44 (0)1787 224171

E-mail: grahamI@day-impex.co.uk • Website: www.day-impex.co.uk

Certificate No: 291a

Product Name	Bulb Size (mm)	Temperature Rating (°C)	LPCB Ref. No.
941(1)	3	57, 68, 79, 93	291a/01
937	5	57, 68, 79, 93, 141, 182	291a/02
817	8	57, 68, 79, 93, 141	291a/03

Note:

- 1) Suitable for use in quick response sprinklers.

Helmut Geissler Glasinstrumente GmbH

Leonhard-Karl-Str. 33, D-97877 Wertheim, Germany

Tel: +49 9342 92640 • Fax: +49 9342 926420

E-mail: mail@geisslerglass.com • Website: www.geisslerglass.com

Certificate No: 310a

Product Name	Bulb Size (mm)	Temperature Rating (°C)	LPCB Ref. No.
E	5	57, 68, 79, 93, 141, 182	310a/01

Job GmbH

Kurt-Fischer-Strasse 30, D-22926 Ahrensburg, Hamburg, Germany

Tel: +49 4102 21140 • Fax: +49 4102 211470

E-mail: job@job-bulbs.com • Website: www.job-bulbs.com

Certificate No: 351a

Product Name	Bulb Size (mm)	Temperature Rating (°C)	LPCB Ref. No.
F2.5 Quick Response(1)	2.5	68,93	351a/01
F3 Quick Response(1)	3	57,68,79,93,141	351a/02
F3-SP 'superior' Quick Response(1)	3	57,68,79,93,141	351a/04
G5	5	57,68,79,93,141,182	351a/03

Note:

- 1) Suitable for use in quick response sprinklers.

PART 3: SECTION 12

SPRINKLER BULBS

This section lists products approved in accordance with:

- LPS 1276 *Requirements for suction tanks for automatic pumps.* (Section 13.1)
- LPS 1254 *Requirements for suction tanks for automatic pumps.* (Section 13.2)

The use of LPS 1254 has been replaced by LPS 1276 for new installations in the UK and Ireland. The use of LPS 1254 in other territories should be confirmed with the relevant Insurance or Regulatory bodies. The two standards will co-exist pending review in April 2010, any changes to this position will be updated on the www.redbooklive.com <<<http://www.redbooklive.com>>> website.

Approval Conditions are set out in each section and take precedence over any material contained in other documentation for the purposes of LPCB recognition.

PART 3: SECTION 13.1

LPS 1276 TANKS

LPS 1276 Tanks

1) In accordance with the requirements of BS EN 12845, the following definitions are derived:

<i>Single supply tank:</i>	<i>A water storage tank which shall be designed and protected against corrosion such that the need for emptying the tank for maintenance is reduced to a period of not less than 3 years.</i>
<i>Superior supply tank:</i>	<i>A water storage tank which shall be designed and protected against corrosion such that the need for emptying the tank for maintenance is reduced to a period of not less than 10 years.</i>

2) Each single-supply or multi-level take-off tank supplied under this approval scheme must not exceed a maximum capacity of 1300m³. Duplicate sub-divided tanks may have a total capacity not exceeding 2600m³, provided the dividing wall is structurally capable of supporting either compartment full whilst the other is empty, and the maximum capacity of each compartment does not exceed 1300m³.

3) It may be necessary for a current Regulations Advisory Scheme, WRAS (formerly Wrc), certificate to be held by the manufacturer, specific to each tank listed.

4) Galvanised “Superior” steel tanks shall have the tank shell protected by:

(a) a coating weight of at least 610g/m² each side, with such tank entries marked ‘g’,
or

(b) an equivalent corrosion protection system which has been specifically approved and listed by the LPCB, with such tank entries marked ‘e’.

5) The purchaser shall specify the required tank designation “Superior” or “Single” in accordance with the LPC Rules for Automatic Sprinkler Installations, together with the tank reference number.

6) The tank must bear a plate stating:

(i) The name and address of the manufacturer.

(ii) The date of installation.

(iii) The LPCB Reference Number, including the type suffix (“Superior” or “Single”) which has been specified by the purchaser and agreed by the manufacturer.

(iv) The maximum capacity in cubic metres. Multi-supply tanks must indicate the capacity for the automatic sprinkler system separately.

Tanks which do not bear such a plate are not approved.

7) Specifiers of LPCB approved sprinkler suction tanks are advised to ensure that where a vortex inhibitor is used in accordance with the LPC Sprinkler Rules, that the vortex inhibitor used is listed in Part 3 Section 14 of the Red Book as LPCB approved.

8) Where “Superior” tank shell exteriors are not protected by 610g/m² or equivalent, appropriate inspection, service and maintenance shall be specified. Exterior shell protection of 300g/m² galvanising is set as the minimum acceptable level of exterior protection combined with specified inspection service and maintenance.

9) Immersion heaters used to prevent the ball valve and water in the vicinity from freezing shall be dual element type.

A.C. Plastic Industries Limited

Unit J Loddon Business Centre, Roentgen Road, Basingstoke, Hants RG24 8NG UK

Tel: +44 (0)1256 329334 • Fax: +44 (0)1256 817862

E-mail: sales@ac-plastics.com • Website: www.ac-plastics.com

Certificate No: 065b to LPS 1276 Issue 1.1

Certificated Products		LPCB Ref. No.
Single supply tank	Aquastow rectangular sectional GRP tank. Maximum height 3.5m Maximum capacity 1300m ³	065b/01
Superior supply tank	Aquastow rectangular sectional GRP tank. Maximum height 3.5m Maximum capacity 1300m ³	065b/02

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. The tanks shall be installed in accordance with the manufacturer's instructions.

Balmoral Sectional Tanks Limited

Balmoral Park, Loirston, Aberdeen AB12 3GY UK

Tel: +44 (0)1224 859100 • Fax: +44 (0)1224 859123

E-mail: tanks@balmoral.co.uk • Website: www.balmoral-group.com

Certificate No: 445b/01 to LPS 1276: Issue 1.1

Certificated Products		LPCB Ref. No.
Single supply tank	M100 rectangular, sectional, hot press moulded GRP panel tank. Maximum height 3m. Single supply tank Maximum capacity 192m ³	445b/01
Superior supply tank	M100 rectangular, sectional, hot press moulded GRP panel tank. Maximum height 3m. Superior supply tank Maximum capacity 192m ³	445b/02

Tanks to be installed and maintained as per manufacturers documentation "Balmoral Sectional Tanks operation and maintenance manual"

Decca Plastics Limited

Victoria Mill, Lincoln Street, Preston, Lancashire PR1 6RE UK

Tel: +44 (0)1772 825757 • Fax: +44 (0)1772 204967

E-mail: shaun@deccatanks.co.uk • Website: www.deccatanks.co.uk

Certificate No: 753Ab to LPS 1278: Issue 1.1

Certificated Products		LPCB Ref. No.
Single supply tank	FLOSTO GRP hot press moulded sectional rectangular water storage tank. Maximum capacity 1300m ³ , maximum height 3m.	753Ab/01
Superior supply tank	FLOSTO GRP hot press moulded sectional rectangular water storage tank. Maximum capacity 1300m ³ , maximum height 3m.	752Ab/02

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'.

PART 3: SECTION 13.1

LPS 1276 TANKS

Devi Polymers Private Ltd

NP 23 & 24, Developed Plot, Ekkattuthangal, Chennai - 600 097, India

Tel: +91 44 2225 0359 • Fax: +91 44 2225 0349

E-mail: devi@xlweb.com • Website: www.devipolymers.com

Certificate No: 753b to LPS 1276: Issue 1.1

Certificated Products		LPCB Ref. No.
Single supply tank	FLOSTO GRP hot press moulded sectional rectangular water storage tank. Maximum capacity 1300m ³ , maximum height 3m.	753b/01
Superior supply tank	FLOSTO GRP hot press moulded sectional rectangular water storage tank. Maximum capacity 1300m ³ , maximum height 3m.	753b/02

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'introduction'

Dewey Waters Limited

Heritage Works, Winterstoke Road, Weston-Super-Mare, Somerset BS24 9AN UK

Tel: +44 (0)1934 421477 • Fax: +44 (0)1934 421488

E-mail: sales@deweywaters.co.uk • Website: www.deweywaters.co.uk

Certificate No: 135b to LPS1276-1.1

Certificated Products		LPCB Ref. No.
Single supply tank	Rectangular, sectional, contact moulded GRP tank. Maximum height 3m. Approved for use where not exposed to sunlight. <i>Maximum capacity 75m³</i>	135b/01
Superior supply tank	Rectangular, sectional, contact moulded GRP tank. Maximum height 3m. Approved for use where not exposed to sunlight. <i>Maximum capacity 75m³</i>	135b/02
Single supply tank	Rectangular, sectional, contact moulded GRP tank. Maximum height 2.4m. Approved for use where not exposed to sunlight. <i>Maximum capacity 300m³</i>	135b/03
Superior supply tank	Rectangular, sectional, contact moulded GRP tank. Maximum height 2.4m. Approved for use where not exposed to sunlight. <i>Maximum capacity 300m³</i>	135b/04
Single supply tank	Dewey Waters '1000' Module Series hot pressed moulded GRP sectional rectangular tank. Maximum height 3m. <i>Maximum capacity 1300m³</i>	135b/05
Superior supply tank	Dewey Waters '1000' Module Series hot pressed moulded GRP sectional rectangular tank. Maximum height 3m. <i>Maximum capacity 1300m³</i>	135b/06

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in this section Introduction and must be installed and maintained as instructed by the manufacturer

Franklin Hodge Industries Ltd.

Jubilee Building, Faraday Road, Westfields Trading Estate, Hereford HR4 9NS UK

Tel: +44 (0)1432 269605 • Fax: +44 (0)1432 277454

E-mail: sales@franklinhodge.com • Website: www.franklinhodge.com

Certificate No: 037c

**LPS 1276 tanks
Certificated Products**

		LPCB Ref. No.
Single supply tank	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Cylindrical <i>Maximum capacity 1300m³</i>	037c/01
Superior supply tank	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Cylindrical <i>Maximum capacity 1300m³</i>	037c/02
Single supply tank	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Rectangular <i>Maximum capacity 1300m³</i>	037c/03
Superior supply tank	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Rectangular <i>Maximum capacity 1300m³</i>	037c/04
Single supply tank	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Cylindrical, with galvanised steel decking, externally coated with PVC <i>Maximum capacity 1300m³</i>	037c/05
Superior supply tank	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Cylindrical, with galvanised steel decking, externally coated with PVC <i>Maximum capacity 1300m³</i>	037a/06e
Single supply tank	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Rectangular, with aluminium deck roof. <i>Maximum capacity 1300m³</i>	037c/07
Superior supply tank	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Rectangular, with aluminium deck roof. <i>Maximum capacity 1300m³</i>	037c/08e
Single supply tank Form	Bolted, cylindrical, galvanised steel plate tank, with the walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with one of the following roofs: (i) galvanised steel decking, externally coated with PVC or; (ii) aluminium decking. <i>Maximum capacity 1300m³</i>	037c/09
Superior supply tank	Bolted, cylindrical, galvanised steel plate tank, with the walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with one of the following roofs: (i) galvanised steel decking, externally coated with PVC or; (ii) aluminium decking. <i>Maximum capacity 1300m³</i>	037c/10g
	<i>Note:</i> 1) <i>All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the Introduction. For galvanized steel tanks, Types A and D, the designation g refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.</i>	

Galglass Limited

321 Hough Lane, Wombwell, Barnsley, South Yorkshire S73 0LR UK

Tel: +44 (0)1226 340370 • Fax: +44 (0)1226 344200

E-mail: sales@galglass.co.uk • Website: www.galglass.com

Certificate No: 108c to LPS1276-1.1

Certificated Products		LPCB Ref. No.
Single supply tank	Bolted, cylindrical, aluminium plate tank lined with a PVC or EDPM liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/01
Superior supply tank	Bolted, cylindrical, aluminium plate tank lined with a PVC or EDPM liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/02e
Single supply tank	Bolted, cylindrical, vitreous enamelled steel plate tank, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/03
Superior supply tank	Bolted, cylindrical, vitreous enamelled steel plate tank, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/04e

PART 3: SECTION 13.1

LPS 1276 TANKS

Certificated Products		LPCB Ref. No.
Single supply tank	Bolted, cylindrical, galvanised, steel plate tank lined internally with bitumen paint in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/05
Superior supply tank	Bolted, cylindrical, galvanised, steel plate tank lined internally with bitumen paint in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/06g
Single supply tank	Bolted, cylindrical, galvanised, steel plate tank lined with a PVC, an EDPM or butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/07
Superior supply tank	Bolted, cylindrical, galvanised, steel plate tank lined with a PVC, an EDPM or butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/08e
Single supply tank	Curved Panel Rectangular Tank constructed from bolted galvanised steel plate and lined with a PVC, an EDPM or butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/09
Superior supply tank	Curved Panel Rectangular Tank constructed from bolted galvanised steel plate and lined with a PVC, an EDPM or butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108c/10e
Single supply tank	Rectangular Tank, 3m high, constructed from galvanised steel panels and lined with a PVC, an EPDM or butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 250m³</i>	108c/11
Superior supply tank	Rectangular Tank, 3m high, constructed from galvanised steel panels and lined with a PVC, an EPDM or butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 250m³</i>	108c/12e

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in this section Introduction and must be installed and maintained as instructed by the manufacturer.

Vulcan Tanks Limited

Cotes Park Lane, Cotes Park Industrial Estate, Alfreton, Derbyshire DE55 4NJ UK

Tel: +44 (0)1773 835321 • Fax: +44 (0)1773 836578

E-mail: info@cstvulcan.com • Website: www.cstvulcan.com

Certificate No: 044c/01 to LPS1276 1.1

Certificated Products		LPCB Ref. No.
Single supply tank	Bolted cylindrical, mastic sealed, galvanized steel plate tank with a galvanized steel decking cover that is externally coated with PVC. <i>Maximum capacity 1300m³</i>	044c/01
Superior supply tank	Bolted cylindrical, mastic sealed, galvanized steel plate tank with a galvanized steel decking cover that is externally coated with PVC. <i>Maximum capacity 1300m³</i>	044c/02g
Single supply tank	Bolted rectangular, mastic sealed galvanized steel panel tank with a galvanized steel decking cover. Suitable for restricted space locations. Designed to most shapes using 90 degree corners and up to 3m in height. <i>Maximum capacity 1300m³</i>	044cc/03
Superior Supply Tank	Bolted rectangular, mastic sealed galvanized steel panel tank with a galvanized steel decking cover. Suitable for restricted space locations. Designed to most shapes using 90 degree corners and up to 3m in height. <i>Maximum capacity 1300m³</i>	044c/04e
Single supply tank	Bolted cylindrical, rubber liner sealed, galvanized steel plate tank with a galvanized steel decking cover that is externally coated with PVC. <i>Maximum capacity 1300m³</i>	044c/05

Certificated Products

LPCB Ref.

No.

Superior supply tank

Bolted cylindrical, rubber liner sealed, galvanized steel plate tank with a galvanized steel decking cover that is externally coated with PVC.
Maximum capacity 1300m

044c/06e

Notes:

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Type "Superior", the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 4 of the Introduction.

PART 3: SECTION 13.2

LPS 1254 TANKS

1) The BS 5306 LPC *Rules for Automatic Sprinkler Installations* identifies the following types of pump suction tanks:

Note: This specification is withdrawn for all contracts delivered after 1st April 2009.

Type A Not dependent on inflow, fed from a potable water supply, and suitable for sprinkler service without emptying, cleaning, maintenance or repair for a period of not less than 15 years.

Type B Not dependent on inflow.

Type C Dependent on inflow.

Type D Dependent on inflow, fed from a potable water supply, and suitable for sprinkler service without emptying, cleaning, maintenance or repair for a period of not less than 15 years.

The type of tank approved or certificated is indicated by capital the letter A, B, C or D at the end of the LPCB Reference number in the product listing.

2) Each single-supply or multi-level take-off tank supplied under this approval scheme must not exceed a maximum capacity of 1300m³. Duplicate sub-divided tanks may have a total capacity not exceeding 2600m³, provided the dividing wall is structurally capable of supporting either compartment full whilst the other is empty, and the maximum capacity of each compartment does not exceed 1300m³

3) Continuation of approval is conditional upon a current Regulations Advisory Scheme, WRAS certificate (formerly WrC) being held by the manufacturer, specific to each tank listed.

4) 1,2 Galvanised steel tanks Type A and D shall have the tank shell protected by:

(a) a coating weight of at least 610g/m² each side, with such tank entries marked 'g',
or

(b) an equivalent corrosion protection system which has been specifically approved and listed by the LPCB, with such tank entries marked 'e'.

5) 1 Galvanised steel tanks Types B and C shall have the tank shell protected by a coating weight of at least 300g/m² each side, or an equivalent corrosion protection system, approved and listed by the LPCB.

6) The purchaser shall specify the required tank designation A, B, C or D in accordance with the LPC *Rules for Automatic Sprinkler Installations*, together with the tank reference number.

7) The tank must bear a plate stating:

(i) The name and address of the manufacturer.

(ii) The date of installation.

(iii) The LPCB Reference Number, including the type suffix (A,B,C or D) which has been specified by the purchaser and agreed by the manufacturer.

(iv) The maximum capacity in cubic metres. Multi-supply tanks must indicate the capacity for the automatic sprinkler system separately.

Tanks which do not bear such a plate are not approved.

8) Specifiers of LPCB approved sprinkler suction tanks are advised to ensure that where a vortex inhibitor is used in accordance with the LPC Sprinkler Rules, that the vortex inhibitor used is listed in Part 5 Section 14 of the Red Book as LPCB approved.

Note 1. Corrosion protection systems specified should be regarded as minimum levels and additional protection may be warranted in special circumstances to achieve a design life of at least 15 years (Types A & D) or 6 years (Types B & C).

A.C. Plastic Industries Limited

Unit J Loddon Business Centre, Roentgen Road, Basingstoke, Hants RG24 8NG UK

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E-mail: sales@ac-plastics.com • Website: www.ac-plastics.com

Approved Products

		LPCB Ref. No.
Suction Tank For Automatic Pumps	Aquastow rectangular sectional GRP tank. Maximum height 3.5m	065a/01A
	<i>Maximum capacity 1300m³</i>	
Suction Tank For Automatic Pumps	Aquastow rectangular sectional GRP tank. Maximum height 3.5m	065a/01B
	<i>Maximum capacity 1300m³</i>	
Suction Tank For Automatic Pumps	Aquastow rectangular sectional GRP tank. Maximum height 3.5m	065a/01C
	<i>Maximum capacity 1300m³</i>	
Suction Tank For Automatic Pumps	Aquastow rectangular sectional GRP tank. Maximum height 3.5m	065a/01D
	<i>Maximum capacity 1300m³</i>	

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Avasco Industries N.V.

Cardijnlaan 6, B-8600 Diksmuide, Belgium

Tel: +32 55 33 15 70 • Fax: +32 55 31 56 03

E-mail: gerrit.kruithof@avasco-sprinkler.be • Website: www.avasco-sprinkler.be

Certificate No: 575a to LPS 1254

Product Name	Product Designation	Maximum Capacity (m ³)	LPCB Ref. No.
Avasco Industries Model GK	Cylindrical, bolted, galvanized steel plate tank internally painted with a double coating of bitumen solution in accordance with BS3416, with a galvanized steel decking roof externally coated with PVC. Maximum capacity 1300m ³	1300	575a/01A (g)
	Cylindrical, bolted, galvanized steel plate tank internally painted with a double coating of bitumen solution in accordance with BS3416, with a galvanized steel decking roof externally coated with PVC. Maximum capacity 1300m ³	1300	575a/01B
	Cylindrical, bolted, galvanized steel plate tank internally painted with a double coating of bitumen solution in accordance with BS3416, with a galvanized steel decking roof externally coated with PVC. Maximum capacity 1300m ³	1300	575a/01C
	Cylindrical, bolted, galvanized steel plate tank internally painted with a double coating of bitumen solution in accordance with BS3416, with a galvanized steel decking roof externally coated with PVC. Maximum capacity 1300m ³	1300	575a/01D (g)

Note: All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side.

Balmoral Sectional Tanks Limited

Balmoral Park, Loirston, Aberdeen AB12 3GY UK

Tel: +44 (0)1224 859100 • Fax: +44 (0)1224 859123

E-mail: tanks@balmoral.co.uk • Website: www.balmoral-group.com

Certificate No: 445a to LPS 1254: Issue 1

PART 3: SECTION 13.2

LPS 1254 TANKS

Certificated Products		LPCB Ref. No.
Suction Tank For Automatic Pumps	M100 rectangular, sectional, hot press moulded GRP panel tank. Maximum height 3m. <i>Maximum capacity 192m³</i>	445a/01A
Suction Tank For Automatic Pumps	M100 rectangular, sectional, hot press moulded GRP panel tank. Maximum height 3m. <i>Maximum capacity 192m³</i>	445a/01B
Suction Tank For Automatic Pumps	M100 rectangular, sectional, hot press moulded GRP panel tank. Maximum height 3m. <i>Maximum capacity 192m³</i>	445a/01C
Suction Tank For Automatic Pumps	M100 rectangular, sectional, hot press moulded GRP panel tank. Maximum height 3m. <i>Maximum capacity 192m³</i>	445a/01D

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Braithwaite Engineers Limited

Neptune Works, Uskway, Newport, South Wales NP20 2UY UK

Tel: +44 (0)1633 262141 • Fax: +44 (0)1633 250631

E-mail: tanks@braithwaite.co.uk • Website: www.braithwaite.co.uk

Approved Products		LPCB Ref. No.
Suction Tank For Automatic Pumps	Braithwaite, galvanised, rectangular, sectional, non-standard dimensions. BS 1564 steel tank with galvanised steel roof. <i>Maximum capacity 1300m³</i>	103a/01A
Suction Tank For Automatic Pumps	Braithwaite, galvanised, rectangular, sectional, non-standard dimensions. BS 1564 steel tank with galvanised steel roof. <i>Maximum capacity 1300m³</i>	103a/01B
Suction Tank For Automatic Pumps	Braithwaite, galvanised, rectangular, sectional, non-standard dimensions. BS 1564 steel tank with galvanised steel roof. <i>Maximum capacity 1300m³</i>	103a/01C
Suction Tank For Automatic Pumps	Braithwaite, galvanised, rectangular, sectional, non-standard dimensions. BS 1564 steel tank with galvanised steel roof. <i>Maximum capacity 1300m³</i>	103a/10Dg
Suction Tank For Automatic Pumps	Braithwaite (Bridgestone) rectangular, sectional GRP tank. Maximum height 4m. <i>Maximum capacity 500m³</i>	103a/02A
Suction Tank For Automatic Pumps	Braithwaite (Bridgestone) rectangular, sectional GRP tank. Maximum height 4m. <i>Maximum capacity 500m³</i>	103a/02B
Suction Tank For Automatic Pumps	Braithwaite (Bridgestone) rectangular, sectional GRP tank. Maximum height 4m. <i>Maximum capacity 500m³</i>	103a/02C
Suction Tank For Automatic Pumps	Braithwaite (Bridgestone) rectangular, sectional GRP tank. Maximum height 4m. <i>Maximum capacity 500m³</i>	103a/02D

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Decca Plastics Limited

Victoria Mill, Lincoln Street, Preston, Lancashire PR1 6RE UK

Tel: +44 (0)1772 825757 • Fax: +44 (0)1772 204967

E-mail: shaun@deccatanks.co.uk • Website: www.deccatanks.co.uk

Certificate No: 753Aa to LPS 1254: Issue 1.1**Certificated Products**

Certificated Products		LPCB Ref. No.
Suction Tank for Automatic Pumps	FLOSTO GRP hot press moulded sectional rectangular water storage tank. Maximum capacity 1300m ³ , maximum height 3m	753Aa/01 A
Suction Tank for Automatic Pumps	FLOSTO GRP hot press moulded sectional rectangular water storage tank. Maximum capacity 1300m ³ , maximum height 3m	753Aa/01 B
Suction Tank for Automatic Pumps	FLOSTO GRP hot press moulded sectional rectangular water storage tank. Maximum capacity 1300m ³ , maximum height 3m	753Aa/01 C
Suction Tank for Automatic Pumps	FLOSTO GRP hot press moulded sectional rectangular water storage tank. Maximum capacity 1300m ³ , maximum height 3m	753Aa/01 D

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Dewey Waters Limited

Heritage Works, Winterstoke Road, Weston-Super-Mare, Somerset BS24 9AN UK

Tel: +44 (0)1934 421477 • Fax: +44 (0)1934 421488

E-mail: sales@deweywaters.co.uk • Website: www.deweywaters.co.uk

Certificated Products

Certificated Products		LPCB Ref. No.
Suction Tank For Automatic Pumps	Rectangular, sectional, contact moulded GRP tank. Maximum height 3m. Approved for use where not exposed to sunlight. <i>Maximum capacity 75m³</i>	135a/01A
Suction Tank For Automatic Pumps	Rectangular, sectional, contact moulded GRP tank. Maximum height 3m. Approved for use where not exposed to sunlight. <i>Maximum capacity 75m³</i>	135a/01B
Suction Tank For Automatic Pumps	Rectangular, sectional, contact moulded GRP tank. Maximum height 3m. Approved for use where not exposed to sunlight. <i>Maximum capacity 75m³</i>	135a/01C
Suction Tank For Automatic Pumps	Rectangular, sectional, contact moulded GRP tank. Maximum height 3m. Approved for use where not exposed to sunlight. <i>Maximum capacity 75m³</i>	135a/01D
Suction Tank for Automatic Pumps	Dewey Waters '1000' Module Series hot pressed moulded GRP sectional rectangular tank. Maximum height 3m. <i>Maximum capacity 1300m³</i>	135a/03A
Suction Tank for Automatic Pumps	Dewey Waters '1000' Module Series hot pressed moulded GRP sectional rectangular tank. Maximum height 3m. <i>Maximum capacity 1300m³</i>	135a/03B
Suction Tank for Automatic Pumps	Dewey Waters '1000' Module Series hot pressed moulded GRP sectional rectangular tank. Maximum height 3m. <i>Maximum capacity 1300m³</i>	135a/03C
Suction Tank for Automatic Pumps	Dewey Waters '1000' Module Series hot pressed moulded GRP sectional rectangular tank. Maximum height 3m. <i>Maximum capacity 1300m³</i>	135a/03D

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks,

Notes:

- Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.
- Dewey Waters tanks to be installed in accordance with the latest issue of Operating Procedure OP 44.

PART 3: SECTION 13.2

LPS 1254 TANKS

Franklin Hodge Industries Ltd.

Jubilee Building, Faraday Road, Westfields Trading Estate, Hereford HR4 9NS UK

Tel: +44 (0)1432 269605 • Fax: +44 (0)1432 277454

E-mail: sales@franklinhodge.com • Website: www.franklinhodge.com

Approved Products		LPCB Ref. No.
Suction Tank For Automatic Pumps	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Cylindrical <i>Maximum capacity 1300m³</i>	037a/01A
Suction Tank For Automatic Pumps	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Cylindrical <i>Maximum capacity 1300m³</i>	037a/01B
Suction Tank For Automatic Pumps	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Cylindrical <i>Maximum capacity 1300m³</i>	037a/01C
Suction Tank For Automatic Pumps	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Cylindrical <i>Maximum capacity 1300m³</i>	037a/01D
Suction Tank For Automatic Pumps	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Rectangular <i>Maximum capacity 1300m³</i>	037a/02A
Suction Tank For Automatic Pumps	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Rectangular <i>Maximum capacity 1300m³</i>	037a/02B
Suction Tank For Automatic Pumps	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Rectangular <i>Maximum capacity 1300m³</i>	037a/02C
Suction Tank For Automatic Pumps	Bolted, aluminium panel tank lined internally with butyl rubber or EPDM, with aluminium deck roof: Rectangular <i>Maximum capacity 1300m³</i>	037a/02D
Suction Tank For Automatic Pumps	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Cylindrical, with galvanised steel decking, externally coated with PVC <i>Maximum capacity 1300m³</i>	037a/03Ae
Suction Tank For Automatic Pumps	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Cylindrical, with galvanised steel decking, externally coated with PVC <i>Maximum capacity 1300m³</i>	037a/03B
Suction Tank For Automatic Pumps	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Cylindrical, with galvanised steel decking, externally coated with PVC <i>Maximum capacity 1300m³</i>	037a/03C
Suction Tank For Automatic Pumps	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Cylindrical, with galvanised steel decking, externally coated with PVC <i>Maximum capacity 1300m³</i>	037a/03De
Suction Tank For Automatic Pumps	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Rectangular, with aluminium deck roof. <i>Maximum capacity 1300m³</i>	037a/04Ae
Suction Tank For Automatic Pumps	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Rectangular, with aluminium deck roof. <i>Maximum capacity 1300m³</i>	037a/04B
Suction Tank For Automatic Pumps	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Rectangular, with aluminium deck roof. <i>Maximum capacity 1300m³</i>	037a/04C
Suction Tank For Automatic Pumps	Bolted, galvanised steel panel tank lined internally with butyl rubber or EPDM. Rectangular, with aluminium deck roof. <i>Maximum capacity 1300m³</i>	037a/04De
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank, with the walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with one of the following roofs: (i) galvanised steel decking, externally coated with PVC or; (ii) aluminium decking. <i>Maximum capacity 1300m³</i>	037a/05Ag
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank, with the walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with one of the following roofs: (i) galvanised steel decking, externally coated with PVC or; (ii) aluminium decking. <i>Maximum capacity 1300m³</i>	037a/05B
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank, with the walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with one of the following roofs: (i) galvanised steel decking, externally coated with PVC or; (ii) aluminium	037a/05C

Approved Products**LPCB Ref. No.**

Suction Tank For Automatic Pumps	decking. <i>Maximum capacity 1300m³</i> Bolted, cylindrical, galvanised steel plate tank, with the walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with one of the following roofs: (i) galvanised steel decking, externally coated with PVC or; (ii) aluminium decking. <i>Maximum capacity 1300m³</i>	037a/05Dg
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All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Galglass Limited

321 Hough Lane, Wombwell, Barnsley, South Yorkshire S73 0LR UK

Tel: +44 (0)1226 340370 • Fax: +44 (0)1226 344200

E-mail: sales@galglass.co.uk • Website: www.galglass.com

Certificate No: 108a**Certificated Products****LPCB Ref. No.**

Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank lined internally with bitumen paint in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/01Ag
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank lined internally with bitumen paint in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/01B
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank lined internally with bitumen paint in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/01C
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank lined internally with bitumen paint in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/01Dg
Suction Tank For Automatic Pumps	Bolted, cylindrical, vitreous enamelled steel plate tank, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/02A
Suction Tank For Automatic Pumps	Bolted, cylindrical, vitreous enamelled steel plate tank, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/02B
Suction Tank For Automatic Pumps	Bolted, cylindrical, vitreous enamelled steel plate tank, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/02C
Suction Tank For Automatic Pumps	Bolted, cylindrical, vitreous enamelled steel plate tank, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/02D
Suction Tank for Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank lined with a butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/03Ae
Suction Tank for Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank lined with a butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/03De
Suction Tank for Automatic Pumps	Curved Panel Rectangular Tank constructed from bolted galvanised steel plate and lined with a butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/04Ae
Suction Tank for Automatic Pumps	Curved Panel Rectangular Tank constructed from bolted galvanised steel plate and lined with a butyl rubber liner and fitted with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	108a/04De

PART 3: SECTION 13.2

LPS 1254 TANKS

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Irish Industrial Tanks Limited

Unit C1, Ballymount Drive Industrial Estate, Ballymount Road, Walkinstown, Dublin 12, Ireland

Tel: +353 1 450 7893 • Fax: +353 1 450 6404

E-mail: irishind@connect.ie • Website: www.iit.ie

Approved Products		LPCB Ref. No.
Suction Tank For Automatic Pumps	Bolted, cylindrical, glass-lined, mild steel storage tank with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	112a/01A
Suction Tank For Automatic Pumps	Bolted, cylindrical, glass-lined, mild steel storage tank with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	112a/01B
Suction Tank For Automatic Pumps	Bolted, cylindrical, glass-lined, mild steel storage tank with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	112a/01C
Suction Tank For Automatic Pumps	Bolted, cylindrical, glass-lined, mild steel storage tank with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	112a/01D

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Mitsubishi Plastics Inc

Hiratsuka Factory, 2-1-35 Nishishindo, Hiratsuka City, Kanagawa Prefecture 254-8614, Japan

Tel: +81 4 6322 8065 • Fax: +81 4 6355 9450

E-mail: mpi1377@cc.mpi.co.jp • Website: www.mpi.co.jp

Approved Products		LPCB Ref. No.
Suction Tank For Automatic Pumps	Mitsubishi Hishi hot press moulded rectangular sectional GRP G type panel tanks. Max. height 4m <i>Maximum capacity 210m³</i>	447a/01A
Suction Tank For Automatic Pumps	Mitsubishi Hishi hot press moulded rectangular sectional GRP G type panel tanks. Max. height 4m <i>Maximum capacity 210m³</i>	447a/01B
Suction Tank For Automatic Pumps	Mitsubishi Hishi hot press moulded rectangular sectional GRP G type panel tanks. Max. height 4m <i>Maximum capacity 210m³</i>	447a/01C
Suction Tank For Automatic Pumps	Mitsubishi Hishi hot press moulded rectangular sectional GRP G type panel tanks. Max. height 4m <i>Maximum capacity 210m³</i>	447a/01D

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Sekisui Aqua Systems Company Limited

77 Kami-Onogo, Iwata City, Shizuoka Prefecture 438, Japan

Tel: +81 5 3835 0101 • Fax: +81 5 3836 2229

Website: www.sps-int.com**Approved Products**

		LPCB Ref. No.
Suction Tank For Automatic Pumps	Sekisui rectangular, sectional, hot press moulded panel, GRP tank. Maximum height 4m. <i>Maximum capacity 1000m³</i>	242b/01A
Suction Tank For Automatic Pumps	Sekisui rectangular, sectional, hot press moulded panel, GRP tank. Maximum height 4m. <i>Maximum capacity 1000m³</i>	242b/01B
Suction Tank For Automatic Pumps	Sekisui rectangular, sectional, hot press moulded panel, GRP tank. Maximum height 4m. <i>Maximum capacity 1000m³</i>	242b/01C
Suction Tank For Automatic Pumps	Sekisui rectangular, sectional, hot press moulded panel, GRP tank. Maximum height 4m. <i>Maximum capacity 1000m³</i>	242b/01D

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

Vulcan Tanks Limited

Cotes Park Lane, Cotes Park Industrial Estate, Alfreton, Derbyshire DE55 4NJ UK

Tel: +44 (0)1773 835321 • Fax: +44 (0)1773 836578

E-mail: info@cstvulcan.com • Website: www.cstvulcan.com**Certificate No: 044a****Approved Products**

		LPCB Ref. No.
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank internally coated with a bitumen solution in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	044a/01Ag
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank internally coated with a bitumen solution in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	044a/01B
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank internally coated with a bitumen solution in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>(1) Maximum capacity 1300m³</i>	044a/01C
Suction Tank For Automatic Pumps	Bolted, cylindrical, galvanised steel plate tank internally coated with a bitumen solution in accordance with BS 3416, with a galvanised steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	044a/01Dg
Suction Tank For Automatic Pumps	Corrugated, galvanized steel panel tank, suitable for restricted space locations. Designed to any shape using 90 degree corners, up to 3m high. Walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	044a/03Ag
Suction Tank for Automatic Pumps	Corrugated, galvanized steel panel tank, suitable for restricted space locations. Designed to any shape using 90 degree corners, up to 3m high. Walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	044a/03B
Suction Tank For Automatic Pumps	Corrugated, galvanized steel panel tank, suitable for restricted space locations. Designed to any shape using 90 degree corners, up to 3m high. Walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with a galvanized	044a/03C

PART 3: SECTION 13.2

LPS 1254 TANKS

Approved Products		LPCB Ref. No.
	steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	
Suction Tank For Automatic Pumps	Corrugated, galvanized steel panel tank, suitable for restricted space locations. Designed to any shape using 90 degree corners, up to 3m high. Walls internally coated with bitumen paint in accordance with BS 3416, sealed to a concrete base, with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	044a/03Dg
Suction Tank for Automatic pumps	Bolted, cylindrical, galvanized steel plate tank lined with a rubber liner and fitted with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	044a/04Ae
Suction Tank for automatic pump	Bolted, cylindrical, galvanized steel plate tank lined with a rubber liner and fitted with a galvanized steel decking roof externally coated with PVC. <i>Maximum capacity 1300m³</i>	044a/04De
Suction Tank for Automatic Pumps	Bolted, cylindrical, vitreous enamelled steel plate tank with a galvanised steel decking roof externally coated with PVC <i>Maximum capacity 825m³</i>	044a/02A
Suction Tank for Automatic Pumps	Bolted, cylindrical, vitreous enamelled steel plate tank with a galvanised steel decking roof externally coated with PVC <i>Maximum capacity 825m³</i>	044a/02B
Suction Tank for Automatic Pumps	Bolted, cylindrical, vitreous enamelled steel plate tank with a galvanised steel decking roof externally coated with PVC <i>Maximum capacity 825m³</i>	044a/02C
Suction Tank for Automatic Pumps	Bolted, cylindrical, vitreous enamelled steel plate tank with a galvanised steel decking roof externally coated with PVC <i>Maximum capacity 825m³</i>	044a/02D

All tank approvals are strictly subject to tanks being supplied in accordance with LPCB Approved Conditions set out in the 'Introduction'. For galvanized steel tanks, Types A and D, the designation 'g' refers to tanks protected by 610g/m² each side and the designation 'e' refers to equivalent corrosion protection as set out in Item 5 of the Introduction.

- 1) The LPCB reference number for this tank design was formerly T14
- 2) The LPCB reference number for this tank design was formerly T20
- 3) The LPCB reference number for this tank design was formerly T30

This section lists products approved in accordance with:

- LPCB Schedule of requirements

The new edition of the LPC Sprinkler Rules, incorporating EN12845 *Fixed Firefighting Systems. Automatic Sprinkler Systems. Design, Installation and Maintenance*, includes requirements whereby the minimum dimension from the suction pipe to the minimum low water level can be reduced if a suitable vortex inhibitor is installed. Where the listed vortex inhibitors meet this requirement this is shown by a note in the listing.

Franklin Hodge Industries Ltd.

Jubilee Building, Faraday Road, Westfields Trading Estate, Hereford HR4 9NS UK

Tel: +44 (0)1432 269605 • Fax: +44 (0)1432 277454

E-mail: sales@franklinhodge.com • Website: www.franklinhodge.com

Certificated Products

F.H.I. Anti - Vortex Plate

Suitable for the following nominal bore suction pipes (mm):
100, 150, 200, 250, 300, 350, 400 and 450

These Vortex Inhibitors have been assessed as being in compliance with the requirements of EN12845, Fixed firefighting systems - Automatic sprinkler systems - Design, installation and maintenance.

**LPCB Ref.
No.**
037b/01

Galglass Limited

321 Hough Lane, Wombwell, Barnsley, South Yorkshire S73 0LR UK

Tel: +44 (0)1226 340370 • Fax: +44 (0)1226 344200

E-mail: sales@galglass.co.uk • Website: www.galglass.com

Certificated Products

Galglass Vortex Inhibitors

Inhibitors suitable for the following nominal bore suction pipes(mm):-
80, 100, 150, 200, 250, 300, 350, 400 and 450 mm.

These Vortex Inhibitors have been assessed as being in compliance with the requirements of EN12845, Fixed firefighting systems - Automatic sprinkler systems - Design, installation and maintenance.

**LPCB Ref.
No.**
108b/01

Tyco Fire Products Manufacturing Limited

Stockport Trading Estate, Yew Street, Stockport, Cheshire SK4 2JW UK

Tel: +44 (0)161 429 3400 • Fax: +44 (0)161 477 6729

E-mail: tycofireproducts.uk@tyco-bspd.com • Website: www.tycobuilding.com

Sales Enquiries:

Tel: +44 (0)161 875 0400 • Fax: +44 (0)161 875 0491

E-mail: info-uk@tyco-bspd.com • Website: www.tycobuilding.com

Certificated Products

Tyco Vortex Inhibitors

Inhibitors suitable for the following nominal bore suction pipes (mm):
65, 80, 100, 150, 200, 250, 300, 350 and 400.

**LPCB Ref.
No.**
007h/01

PART 3: SECTION 14

VORTEX INHIBITORS

Vulcan Tanks Limited

Cotes Park Lane, Cotes Park Industrial Estate, Alfreton, Derbyshire DE55 4NJ UK

Tel: +44 (0)1773 835321 • Fax: +44 (0)1773 836578

E-mail: info@cstvulcan.com • Website: www.cstvulcan.com

Certificated Products

Vulcan Tanks Vortex
Inhibitors

Inhibitors suitable for the following nominal bore suction pipes (mm):
150, 200, 250 and 300.

**LPCB Ref.
No.**
044b/01

This section lists products approved in accordance with:

- EN12259-5 *Fixed firefighting systems. Components for sprinkler and water spray systems. Water flow detectors.*
- LPCB Schedule of requirements.

The following water flow alarm switches have been approved for use in wet pipe sprinkler systems in accordance with the *LPC Rules for Automatic Sprinkler Installations*. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Potter Electric Signal Company

1609 Park 370 Place, Hazelwood, St Louis, Missouri 63042, USA

Tel: +1 314 595 6900 • Fax: +1 314 595 6999

E-mail: info@pottersignal.com • Website: www.pottersignal.com

Certificate No: 125b

Product Name	Sizes	Maximum Working Pressure (bar)	LPCB Ref. No.
Potter Type VSR-F	50mm, 65mm, 75mm, 100mm, 125mm, 150mm, 200mm (2-in, 2.5-in, 3-in, 4-in, 5-in, 6-in, 8-in, sizes)		125b/01

Certificate No: 125c to BS EN 12259-5 (with the exception of clause 4.6.11) of maximum 30 second alarm delay changed to 90 seconds)

Product Name	Size	Maximum Working Pressure (bar)	LPCB Ref. No.
VSR 2"	DN 50	16	125c/01
VSR 2.5"	DN 65	16	
VSR 3"	DN 80	16	
VSR 4"	DN 100	16	
VSR 5"	DN 125	16	
VSR 6"	DN 150	16	
VSR 8"	DN 200	16	

Notes:

- 1) BS EN 12259-5 Clause 4.6.1 allows a maximum 30 second delay before the alarm signal is sent. These products allow up to 90 seconds. This is necessary in some circumstances due to fluctuating water pressures.
- 2) To be used in accordance with manufacturers operating instructions. Ref "MFG #5401146 revision E".

Certificate No: 125c to BS EN 12259-5

Product Name	Size	Maximum Working Pressure (bar)	LPCB Ref. No.
VSR 2" (EU)	DN 50	16	125c/02
VSR 2.5" (EU)	DN 65	16	
VSR 3" (EU)	DN 80	16	
VSR 4" (EU)	DN 100	16	
VSR 6" (EU)	DN 150	16	
VSR 8" (EU)	DN 200	16	

Notes:

- 1) To be used in accordance with manufacturers operating instructions. Ref "MFG #5401159 revision C".

PART 3: SECTION 15.1

WATER FLOW ALARM SWITCHES

Certificate No: 125d to BS EN 12259-5 (with the exception of clause 4.6.11) of maximum 30 second alarm delay changed to 90 seconds)

Product Name	Size	Maximum Working Pressure (bar)	LPCB Ref. No.
VSR-S 1"	DN 25	20.7	125d/01
VSR-S 1 ¼"	DN 32	20.7	
VSR-S 1 ½"	DN 38	20.7	
VSR-S 2"	DN 50	20.7	

Notes:

- 1) BS EN 12259-5 Clause 4.6.1 allows a maximum 30 second delay before the alarm signal is sent. These products allow up to 90 seconds. This is necessary in some circumstances due to fluctuating water pressures.
- 2) To be used in accordance with manufacturers operating instructions. Ref "MFG #5401206 revision B".

Certificate No: 125d to BS EN 12259-5

Product Name	Size	Maximum Working Pressure (bar)	LPCB Ref. No.
VSR-S (EU) 1"	DN 25	20.7	125d/02
VSR-S (EU) 1 ¼"	DN 32	20.7	
VSR-S (EU) 1 ½"	DN 38	20.7	
VSR-S (EU) 2"	DN 50	20.7	

Notes:

- 1) To be used in accordance with manufacturers operating instructions. Ref "MFG #5401206 revision B".

System Sensor

3825 Ohio Avenue, Saint Charles, Illinois 60174, USA

Tel: +1 630 377 6580 • Fax: +1 630 377 7245

Website: www.systemsensor.com

Certificate No: 118e

Product Name	Sizes (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
Type WDF	50, 65, 75, 100, 125, 150, 200	15	118e/01
WFD20E	50	17.25	118e/02
WFD25E	65	17.25	118e/03
WFD30E	80	17.25	118e/04
WFD30-2E	80	17.25	118e/08
WFD40E	100	17.25	118e/05
WFD60E	150	17.25	118e/06
WFD80E	200	17.25	118e/07
WFD20EP	50	17.25	118e/09
WFD25EP	65	17.25	118e/10
WFD30-2EP	80	17.25	118e/11
WFD40EP	100	17.25	118e/12
WFD60EP	150	17.25	118e/13
WFD80EP	200	17.25	118e/14

Notes:

1. WFDxxE and -2E models to be used in accordance with manufacturer's installation and maintenance instructions. Ref: 156-2617-001R
2. WFDxxEP and -2EP models to be used in accordance with manufacturer's installation and maintenance instructions. Ref: 156-2617-100R

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Flow switch testing devices for use under *LPC Rules for Automatic Sprinkler Installations* have been approved to a schedule of requirements developed by LPCB. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Project Fire Products Limited

Pasturefields Lane Industrial Estate, Pasturefields Lane, Hixon, Staffordshire ST18 0PH UK
Tel: +44 (0)1889 271271 • Fax: +44 (0)1889 270974

Flow switch automatic tester system **Certificated Products**

LPCB Ref.
No.
060a/01

ZONECHECK Flow switch automatic tester system.

Guidance and approval conditions.

Zonecheck shall be installed in accordance with Project Fire Products Limited 'Instruction Booklet', but subject to guidance below taking precedence.

- 1) The Zonecheck system circulates, but does not draw-off water from the sprinkler system and consequently does not test any zone or control valves.
- 2) System approval based on use with LPCB approved and listed flow switch.
- 3) Effective operation of the Zonecheck system should be monitored.
- 4) In the event of any servicing being warranted on this system, it shall be ensured that this does not impair effective sprinkler protection.
- 5) Provision to test flow switches in the normal way (LPC Sprinkler Rules) should also be incorporated.
- 6) It shall be ensured that the associated pipework is adequately vented and charged hydraulically.
- 7) The automatic means of operation and recording does not form part of this approval.

PART 3: SECTION 16.1

WATER SPRAY SYSTEMS (MEDIUM AND HIGH VELOCITY)

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Medium and high velocity sprayers for use under *LPC Rules for Automatic Sprinkler Installations* on oil and flammable liquid hazards have been approved to a schedule of requirements developed by LPCB. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Angus Fire Armour Limited (Denmark)

Kastanievej, DK-5620, Glamsberg, Denmark
Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

UK Sales Enquiries:

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

Approved Products

Fyrhed High Velocity
Waterspray System
Thermospray Medium
Velocity Waterspray
System

LPCB Ref. No.

084i/01

084i/02

The Reliable Automatic Sprinkler Co. Inc

1470 Smith Grove Road, Liberty, South Carolina 29657, USA

Tel: +1 864 843 1734 • Fax: +1 864 843 1418

E-mail: jcevallos@reliablesprinkler.com • Website: www.reliablesprinkler.com

UK Sales Enquiries:

Tel: +44 (0)1372 728899 • Fax: +44 (0)1372 724461

Approved Products

Reliable Medium Velocity
Water Spray System

LPCB Ref. No.

034e/01

The Viking Corporation

210 N Industrial Park, Hastings, Michigan 49058, USA

Tel: +1 269 945 9501 • Fax: +1 269 945 9599

E-mail: techsvcs@vikingcorp.com • Website: www.vikingcorp.com

Sales Enquiries:

Tel: +352 583737 • Fax: +352 583736

Approved Products

Viking Medium Velocity
Water Spray System
Viking High Velocity Water

LPCB Ref. No.

096e/01

096e/02

Approved Products

Spray System

LPCB Ref.
No.**Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)**

Tyco House, Pheonix Way, Swansea Enterprise Park, Swansea SA7 9EQ UK

Tel: +44 (0)1792 465006 • Fax: +44 (0)1792 648535

Website: www.tycofis.com**Approved Products**Oilfyre System
Titan Fyrejet System
Titan Firespray SystemLPCB Ref.
No.
012a/01
012a/02
012a/03**Tyco Fire and Integrated Solutions (the trading company for Tyco Fire and Integrated Solutions (UK) Limited and Tyco Fire and Integrated Solutions (Ireland) Limited)**

Tyco Park, Grimshaw Lane, Newton Heath, Manchester M40 2WL UK

Tel: +44 (0)161 205 2321 • Fax: +44 (0)161 455 4459

Website: www.tycofis.com

Certificate No: 014a

Approved ProductsMulsifyre System
Protectospray System
Wormald High Velocity
Water Spray System
Wormald Medium Velocity
Water Spray SystemLPCB Ref.
No.
014a/01
014a/02
014a/03
014a/04**Tyco Fire Products Manufacturing Limited**

Stockport Trading Estate, Yew Street, Stockport, Cheshire SK4 2JW UK

Tel: +44 (0)161 429 3400 • Fax: +44 (0)161 477 6729

E-mail: tycofireproducts.uk@tyco-bspd.com • Website: www.tycobuilding.com**Sales Enquiries:**

Tel: +44 (0)161 875 0400 • Fax: +44 (0)161 875 0491

E-mail: info-uk@tyco-bspd.com • Website: www.tycobuilding.com**Approved Products**Mulsifyre System
Protectospray SystemLPCB Ref.
No.
007i/01
007i/02

PART 3: SECTION 16.2

WATER SPRAYERS

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Water sprayers for use under *LPC Rules for Automatic Sprinkler Installations* on oil and flammable liquid hazards have been approved to a schedule of requirements developed by LPCB. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Angus Fire Armour Limited (Denmark)

Kastanievej, DK-5620, Glamsberg, Denmark

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

UK Sales Enquiries:

Tel: +44 (0)1844 214545 • Fax: +44 (0)1844 213511

Approved Products

Angus R (1),(2),(3), 15mm
long-throw horizontal open
sprinkler

**LPCB Ref.
No.
084j/01**

- 1) Also approved with chromium finish.
- 2) To be installed in accordance with the supplier's installation instructions.
- 3) Application is limited to where purchaser, authority having jurisdiction and/or insurer consent to use.

This section lists products approved in accordance with:

- LPS 1131 *Pumps for Automatic Sprinkler Installation. Pump Sets - Requirements and testing methods.*

Firms listed in this section shall control and be responsible for the design, construction, testing and performance of all fire pump sets incorporating their LPCB approved fire pumps.

All fire pump sets incorporating LPCB approved fire pumps shall conform to the *LPC Rules for Automatic Sprinkler Installations*, or Rules specified in the contract, and shall be tested in accordance with the LPC Sprinkler Rules.

Note: Only LPCB approved fire pumps shall be used to comply with the *LPC Rules for automatic sprinkler installations*.

Pumps are approved for a maximum working pressure of 12 bar except where stated.

Armstrong Integrated Systems Ltd

Mucklow Hill, Halesowen, West Midlands B62 8DJ UK

Tel: +44 (0)121 5505333 • Fax: +44 (0)121 5501679

E-mail: firepumpsuk@armlink.com • Website: www.armstrongintegratedsystems.com

Certificate No: 197a

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req.= 5.38m)	Rated Head (bar) (at NPSH req.= 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
4030 FP 8x5x11½	Direct coupled end suction	200/125	292	2900	7450	7.5	10	197a/01
			241	2900	7000	3.8	6.8	
			292	2900*	7450	7.5	10	
4030FP 6x4x10	Direct coupled end suction	150/100	292	1450*	4800	1.6	2.3	197a/02
			259*	2900	7680	5.3	8.6	
			205*	2900	5280	3.6	4.8	
			259	2900*	7680	5.3	8.6	
4030 FP(1) 4x3x8½	Direct coupled end suction	100/80	224	2900	3360	3.4	6.3	197a/03
			175	2900	2460	1.9	3.9	
			157	2900	1300	1.2	2.9	
4030FP 3x2x6	Direct coupled end suction	80/50	113	2900	750	0.9	1.5	197a/04
4020 FP(1) 4x3x8½	Close coupled end suction	100/80	224	2900	3360	3.4	6.3	
			175	2900	2460	1.9	3.9	
4020 FP 8x5x11½	Close coupled end suction	200/125	292	2900	7450	7.5	10	197a/06
			241	2900	7000	3.8	6.8	
			292	2900*	7450	7.5	10	
4020FP 6x4x10	Close coupled end suction	150/100	292	1450*	4800	1.6	2.3	197a/07
			259*	2900	7680	5.3	8.6	
			205*	2900	5280	3.6	4.8	
			259	2900*	7680	5.3	8.6	
4020FP 3x2x6	Close coupled end suction	80/50	157	2900	1300	1.2	2.9	197a/08
			259	1450*	3120	1.6	2.1	
			113	2900	750	0.9	1.5	

PART 3: SECTION 17.1

FIRE PUMPS

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req.= 5.38m)	Rated Head (bar) (at NPSH req.= 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
40MF 8x6x13 LPC (2),(3) & (4)	Direct Coupled End Suction	200/150	295	2900	9050	8.1	11.1	197a/09
			279	2900	8850	7.2	9.8	
			330	2600	10430	6.8	10.7	
40MF 6x5x13 PLC(2),(3) & (4)	Direct Coupled End Suction	150/125	273	2600	9850	4.2	7.5	197a/10
			295	2900	7700	8.5	12.0	
			250	2900	7700	4.8	8.6	
40MF 5x4x11.5 LPC(2),(3) & (4)	Direct Coupled End Suction	125/100	330	2600	8000	8.7	12.1	197a/11
			250	2600	7500	303	6.9	
			292	2900	5750	7.9	10.9	
			241	2900	5100	4.5	7.4	
			292	2600	5850	5.4	8.8	
			241	2600	4825	303	5.9	

*These pumps are approved with impeller diameters and, where applicable, speeds within the ranges shown, to provide flows and heads within those ranges.

Notes:

- 1) Maximum working pressure: 10 bar. The above pumps are fitted with 'closed head' relief valve Part No. UKDO 5493 - 145 Issue A.
- 2) This pump is fitted with 'closed head' relief valve Part No. UKDO5286-204.
- 3) Pump configurations which generate a closed valve head exceeding 10 bar are approved for use in accordance with TB13:1990:1 - High rise sprinkler systems.
- 4) Maximum working pressure: 12 bar.

Godwin Pumps Limited

Quenington, Cirencester, Gloucestershire GL7 5BX UK

Tel: +44 (0)1285 750271 • Fax: +44 (0)1285 750352

E-mail: sales@godwinpumps.co.uk • Website: www.godwinpumps.co.uk

Certificate No: 224a

Pumps

Product Name	Type	Suction Inlet diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. = 5.38m)	Rated Head (bar) (at NPSH req. = 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
Isoflow Model 100-80-160	Direct coupled end suction	100/80	174	2985	3150	0.7	4.1	224a/01
	Direct coupled end suction	100/80	140	2985	1800	0.9	2.7	
Isoflow Model 100-65-200	Direct coupled end suction	100/65	214	2985	2400	2.8	6.5	224a/02
	Direct coupled end suction	100/65	165	2985	2250	0.8	3.8	
Isoflow Model 80-50-200	Direct coupled end suction	80/50	214	2985	1580	1.3	6.1	224a/03
	Direct coupled end suction	80/50	165	2985	1160	1	3.5	

PART 3: SECTION 17.1**FIRE PUMPS**

Product Name	Type	Suction Inlet diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. = 5.38m)	Rated Head (bar) (at NPSH req. = 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
Isoflow Model 125-100-260	Direct coupled end suction	125/100	264	2985	5500	7.1	10.3	224a/04
	Direct coupled end suction	125/100	210	2985	5250	2.5	6.1	
Isoflow Model 50-32-200	Direct coupled end suction	50/32	214	2985	385	3.9	6.2	224a/05
	Direct coupled end suction	50/32	165	2985	275	2.3	3.7	
Isoflow Model 125-80-200	Direct coupled end suction	125/80	214	2990	4285	2.8	6.5	224a/06
	Direct coupled end suction	125/80	165	2990	3485	1	3.8	
	Close coupled end suction	125/80	214	2990	4285	2.8	6.5	224a/07
Isoflow Model 100-80-160	Close coupled end suction	125/80	165	2990	3485	1	3.8	224a/08
	Close coupled end suction	100/80	174	2985	3150	0.7	4.1	
	Close coupled end suction	100/80	140	2985	1800	0.9	2.7	
Isoflow Model 100-65-200	Close coupled end suction	100/65	214	2985	2400	2.8	6.5	224a/09
	Close coupled end suction	100/65	165	2985	2250	0.8	3.8	
Isoflow Model 80-50-200	Close coupled end suction	80/50	214	2985	1580	1.3	6.1	224a/10
	Close coupled end suction	80/50	165	2985	1160	1	3.5	
Isoflow Model 50-32-200	Close coupled end suction	50/32	214	2985	385	3.9	6.2	224a/11
	Close coupled end suction	50/32	165	2985	275	2.3	3.7	
Isoflow Model 150-125-320 (1)	Direct coupled end suction	150/125	270	2980	7200	5.6	9.9	224a/12
	Direct coupled end suction	150/125	250	2980	6900	4.0	8.0	
Isoflow Model 150-125-320 (1, 2)	Direct coupled end suction	150/125	329	2600	6600	9.8	11.8	
	Direct coupled end suction	150/125	250	2600	6670	3.5	7.0	
Unibloc Isoflow 150-125-320 (1)	Close coupled end suction	150/125	270	2980	7200	5.6	9.9	224a/13
	Close coupled end suction	150/125	250	2980	6900	4.0	8.0	

PART 3: SECTION 17.1

FIRE PUMPS

Product Name	Type	Suction Inlet diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. = 5.38m)	Rated Head (bar) (at NPSH req. = 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
Isoflow Model 100-65-260	Direct coupled end suction	100/65	264	2995	3250	5.3	10.3	224a/14
	Direct coupled end suction	100/65	205	2995	2500	2.6	6.4	
Isoflow Unibloc Model 100-65-260	Close coupled end suction	100/65	264	2995	3250	5.3	10.3	224a/15
	Close coupled end suction	100/65	205	2995	2500	2.06	6.4	
Isosplit Model HGTI-150-315	Split case	200/150	290	2975	10500	7.2	11.2	224a/16
	Split case	200/150	255	2975	10200	3.9	8.2	
Isoflow Unibloc Model 125-100-260	Close coupled end suction	125/100	264	2985	5500	7.1	10.3	224a/17
	Close coupled end suction	125/100	210	2985	5250	2.5	6.1	
Isoflow Model 100-65-320 (1, 2 & 3)	Direct coupling	100/65	329	2900	2400	11.5	15.1	224a/18
	Direct coupling	100/65	255		220	4.0	9.4	
Isoflow Model 125-80-320 (1, 2, 3)	Direct coupled end suction	125/80	305	2960	4500	6.8	12.2	224a/19
	Direct coupled end suction	125/80	255	2960	4200	2.9	8.7	
Isoflow Model 100-65-160 (4, 5)	Direct coupled end suction	100/65	174	2960	1880	2.8	4.0	224a/20
	Direct coupled end suction	100/65	125	2960	1550	0.8	2.1	
Isoflow Unibloc Model 100-65-160 (4, 5)	Close coupled end suction	100/65	174	2960	1880	2.8	4.0	224a/21
	Close coupled end suction	100/65	125	2960	1550	0.8	2.1	

These pumps are approved with impeller diameters within the ranges shown, to provide flows and heads within those ranges. The above pumps are fitted with 'closed head' relief valve Part No. 44-0474-9912. The above pumps are approved with mechanical seals.

Notes:

- 1) The pump is fitted with closed head relief valve assembly ACC-FP-20.
- 2) Pump configurations which generate a closed valve head exceeding 10 bar are approved for use in accordance with TB13: 1990: 1 - High rise sprinkler systems.
- 3) Maximum working pressure : 12.2 bar.
- 4) The pump is fitted with closed head relief valve assembly ACC-FP-101.
- 5) Maximum working pressure: 5 bar.

Grundfos Fire Systems, Grundfos Pumps Limited

Grovebury Road, Leighton Buzzard, Bedfordshire LU7 8TL UK

Tel: +44 (0)1525 850000 • Fax: +44 (0)1525 850011

Website: www.grundfos.co.uk

Certificate No: 510a

Certificate No: 224a

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. 5.38m)	Rated Head (bar) (at NPSH req. 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
FK80-200	End suction long coupled	100/80	222	2950	3417	4.9	6.2	510a/01
FB80-200	End suction close coupled	100/80	222	2950	3417	4.9	6.2	510a/02
FK80-250	End suction long coupled	100/80	227	2950	3330	5.1	6.5	510a/03
FK65-160	End suction long coupled	80/65	177	2950	2466	2.5	4.1	510a/05
FB65-160	End suction close coupled	80/65	177	2950	2466	2.5	4.1	510a/06
FK65-200	End suction long coupled	80/65	219	2950	2633	4.3	6.3	510a/07
FB65-200	End suction close coupled	80/65	219	2950	2633	4.3	6.3	510a/08
FK125-100/260	End suction long coupled	125/100	264	2985	5500	7.1	10.3	224a/04
FK125-80/200	End suction long coupled	125/80	214	2990	4285	2.8	6.5	224a/06
FB125-80/200	End suction close coupled	125/80	214	2990	4285	2.8	6.5	224a/07
FK150-125/320	End suction long coupled	150/125	270	2980	7200	5.6	9.9	224a/12
FB150-125/320	End suction close coupled	150/125	270	2980	7200	5.6	9.9	224a/13
FK100-65/260	End suction long coupled	100/65	264	2995	3250	5.3	10.3	224a/14
FB100-65/260	End suction close coupled	100/65	264	2995	3250	5.3	10.3	224a/15
HSC150-315	Split case	200/150	290	2975	10500	7.2	11.2	224a/16
FB125-100/260	End suction close coupled	125/100	264	2985	5500	7.1	10.3	224a/17
			210	2985	5250	2.5	6.1	

* These pumps are approved with impeller diameters within the ranges shown to provide flows and heads within these ranges. The above pumps are approved with mechanical seals and fitted with Danfoss EVSI 15 Special 'closed head' relief valves, Part No. 032U7190

PART 3: SECTION 17.1

FIRE PUMPS

KSB Australia Pty. Limited

27 Indwe Street, Tottenham, Victoria 3012, Australia

Tel: +61 3 9314 0611 • Fax: +61 3 9314 7435

E-mail: central.quotations@ksbajax.com.au • Website: www.ksbajax.com.au

Certificate No: 198a to LPS 1131: Issue 1

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. ≤ 5.38m)	Rated Head (bar) (at NPSH req. < 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
E100-26	Direct coupled end suction	125/100	230*	2950	4700	5.9	7.5	198a/01
			205*	2950	3800	5	5.9	
			230	2950*	4700	5.9	7.5	
E100-20	Direct coupled end suction	125/100	230	1800*	3000 ⁽¹⁾	2.1(1)	2.8	198a/02
			214*	2950	4500	5.5	6.4	
			175*	2950	3000	3.5	4.2	
			214	2950*	4500	5.5	6.4	
E80-20	Direct coupled end suction	100/80	214	1800*	2700 ⁽¹⁾	2.0 ⁽¹⁾	2.4	198a/03
			214*	2950	3800	5.4	6.5	
			165*	2950	2800	2.5	3.7	
E65-20	Direct coupled end suction	80/65	214	2950*	3800	5.4	6.5	198a/04
			214	1800*	2350 ⁽¹⁾	1.9(1)	2.4	
			195*	2950	2500	3.5	5.4	
E65-16	Direct coupled end suction	80/65	195	1800*	1800	1	2	198a/05
			174*	2930	2250	2.6	4.1	
			125*	2930	1450	1.2	2	
E50-20	Direct coupled end suction	65/50	174	2930*	2250	2.6	4.1	198a/06
			174	1800*	1500 ⁽¹⁾	0.9(1)	1.6	
			165*	2930	1000	2.4	3.8	
			214	2930*	1350	4.6	6.4	
E50-16	Direct coupled end suction	65/50	214	1800*	850	1.6	2.4	198a/07
			174*	2930	1500	3.1	4.4	
			135*	2930	1000 ⁽¹⁾	1.6(1)	2.5	
			174	2930*	1500	3.1	4.4	
			174	1800*	870 ⁽¹⁾	1.4(1)	1.7	

* These pumps are approved with impeller diameters and speeds within the ranges shown, to provide flows and heads within the ranges shown.

The above pumps are fitted with 'closed head' relief valve Part no. 5-70.1.
(The above pumps are approved with packed glands or mechanical seals.)

¹ NPSH required less than 5.38m

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Certificate No: 436a

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. ≤ 5.38m)	Rated Head (bar) (at NPSH req. ≤ 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
4 x 3 VIP	Vertical in-line close coupled	100/75	216*	2950	2000	4.5	6.5	436a/01
5 x 3 VIP	Vertical in-line close coupled	125/75	178* 222*	2950	1850 3300	2 4.2	4.2 6.8	436a/02
5 x 4 MAC	Horizontal split case	125/100	162* 219*	2950	2700 4810	1.3 4.9	3.3 6.6	436a/03
4 x 3 ME	Horizontal split case	100/75	159* 219* 159* 219* 197* 394*	2950 3000 3000 3300 3300 1750	4475 4850 4400 4500 4500 3325	1.4 5.1 1.6 6.9 4.9 5.5	3.4 6.8 3.6 8.2 6.6 7.5	436a/04
5 x 4 M	Horizontal split case	125/100	270* 314*	3300 1750	3225 4000	1.7 3.3	3.5 4.7	436a/05
6 x 5 MAA	Horizontal split case	150/125	270* 257*	1750 2950	4100 5075	1.9 4.3	3.4 9	436a/06
8 x 6 MI	Horizontal split case	200/150	184* 257* 184* 257* 206* 406*	2950 3000 3000 3300 3300 1750	4000 5050 4100 5150 5000 9400	1.5 4.3 1.5 6.7 2.5 5.6	4.7 9.3 4.9 11.2 7.2 8.1	436a/07
10 x 8 M	Horizontal split case	250/200	327* 406* 338* 457*	1750 2100 2100 1470	8775 9100 10100 13000	2.1 9.4 4.5 5.4	5.1 11.5 7.9 7.4	436a/08
5x4x10 VES	End suction long coupled	125/100	400* 457* 356 259*	1470 1750 1750 2950	12300 13200 11000 4900	2.7 8.6 3.6 7.9	5.6 10.5 6.1 9.3	436a/09
5x3x13 VES (2)	End suction long coupled	125/75	215* 259* 215* 259* 215* 259* 215* 259* 215* 318.5* 260* 318.5* 260* 318.5*	2950 2800 2800 2600 2600 2400 2400 2200 2200 2950 2950 2800 2800 2600	4800 4950 4750 4750 4550 4350 4000 4550 3800 4000 3675 3950 3530 3900	3.5 7.1 2.9 5.7 2.3 5 2.3 3.9 1.7 10 4.5 8.7 3.9 7	5.9 8.3 5.3 7.2 4.6 6.1 3.9 5.1 3.3 13.3(1) 8.7 12.0(1) 7.9 10.3(1)	436a/010

PART 3: SECTION 17.1

FIRE PUMPS

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. ≤ 5.38m)	Rated Head (bar) (at NPSH req. ≤ 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
6x5x11 VES (3)	End suction long coupled	150/125	260*	2600	3350	3	6.8	436a/011
			318.5*	2400	3475	6.2	8.8	
			260*	2400	3075	3	5.5	
			318.5*	2200	3640	4.2	7.4	
			260*	2200	2900	2.3	4.9	
			290*	2900	6600	9.6	10.7(1)	
			250*	2900	6300	5.9	7.8	
			290*	2800	6500	8.8	9.9	
			250*	2800	6500	5.3	7.3	
			310*	2600	6550	8.8	9.9	
10x8x17SSC (4)	Horizontal split case	250/200	250*	2600	6700	3.9	6.2	436a/012
			330*	2400	6050	9.4	10.0(1)	
			250*	2400	6000	3.6	5.3	
			330*	2200	5900	7.7	8.5	
			250*	2200	6150	2.5	4.4	
			406*	2100	12200	8.9	12.2(1)	
			349*	2100	12200	5.3	9.1	
			422*	1750	12200	6.7	9.3	
			349*	1750	11800	2.6	6.3	
			422*	1475	12800	3.2	6.6	
8x6YR (3)	Horizontal split case	200/150	349*	1475*	9900	2	4.5	436a/13
			422*	1750*	12200	6.7	9.3	
			349	1475*	9900	2	4.5	
			300	2950	7700	8.2	12.1(1)	
			263	2950	7675	4.9	9.5	
8x6YS (3)			384	2100	12500	8	11.0(1)	436a/014
			340	2100	11500	5.2	8.5	

*These pumps are approved with impeller diameters and speeds within the ranges shown, to provide flows and heads within those ranges.

The above pumps are fitted with Danfoss type EVSI 'closed head' relief valves.

- 1) Pump configurations which generate a closed valve head exceeding 10 bar are approved for use in accordance with TB13: 1990: 1 - High rise sprinkler systems
- 2) Maximum working pressure: 15.6 bar.
- 3) Maximum working pressure: 13 bar.
- 4) Maximum working pressure: 16.5 bar.

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Certificate No: 111b

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. = 5.38m)	Rated Head (bar) (at NPSH req. = 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
TD20D Thru-stream (2),(5)	Horizontal split case	250/200	340	2950	13600	10.8	15.7 ⁽¹⁾	111b/01
			275*	2950	12000	7.6	10.3 ⁽¹⁾	
			273*	2950	11600	7.4	10	
			245*	2950	8500	6	8	

PART 3: SECTION 17.1

FIRE PUMPS

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. = 5.38m)	Rated Head (bar) (at NPSH req. = 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
TD20E Thru-stream (2),(5)	Horizontal split case	250/200	340	2950*	13600	10.8	15.7 ⁽¹⁾	111b/02
			340	2400*	13500	6	10.3 ⁽¹⁾	
			340	2200*	13300	4.4	8.8	
			290*	2950	13300	6.7	11.3 ⁽¹⁾	
			273*	2950	13300	5.7	10	
			240*	2950	10800	4.9	7.7	
TD15F Thru-stream (3),(5)	Horizontal split case	200/150	290	2950*	13300	6.7	11.3 ⁽¹⁾	111b/03
			290	2800*	13800	5.3	10.2	
			290	2200*	12700	2	6.3	
			325*	2950	9600	7.9	13.3 ⁽¹⁾	
			282*	2950	9600	5.4	10	
			275*	2950	9600	5.1	9.5	
TD15A Thru-stream (3),(5)	Horizontal split case	200/150	245*	2950	9600	3.9	7.5	111b/04
			325	2950*	9600	7.9	13.3 ⁽¹⁾	
			325	2550*	9600	5	10	
			325	2200*	9600	2.7	7.3	
			325*	2950	7300	12.8	14.4 ⁽¹⁾	
			270*	2950	7300	8.5	9.9	
KP12X Unistream (5)	Direct coupled end suction	150/125	240*	2950	7300	5.9	7.7	111b/05
			270	2950*	7300	8.5	9.8	
			270	2400*	8650	4.3	6.4	
			325	2950*	7300	12.8	14.4 ⁽¹⁾	
			325	2450*	8200	7.7	10.2	
			325	2200*	8700	6	8.2	
KP10X Unistream (5)	Direct coupled end suction	125/100	264*	2950	6800	8.5	10.4 ⁽¹⁾	111b/06
			200*	2950	6650	2.4	5.4	
			264	2950*	6800	8.5	10.4 ⁽¹⁾	
			264	2200*	5700	4.7	5.8	
			195*	2950	4200	3.6	5.3	
			264	2950*	5500	7.6	9.8	
KP15Y Unistream (5)	Direct coupled end suction	200/150	264	2200*	5500	3	5.7	111b/07
			272*	2950	7800	7.8	9.8	
			239*	2950	7600	5.2	7.7	
			272	2950*	7800	7.8	9.8	
			272	2200*	8200	3.2	5.6	
			310*	2600	8600	8.6	10.5	
KP08Y Unistream (4),(5)	Direct coupled end suction	100/80	239*	2600	7800	3.2	5.9	111b/08
			310	2600*	8600	8.6	10.5	
			310	2000*	7350	4.7	6.2	
			329*	2950	3600	13.2	15.2 ⁽¹⁾	
			270*	2950	3500	7	10	
			255*	2950	3450	5.6	8.8	
KP08V Unistream (5)	Direct coupled end suction	100/80	329	2950*	3600	13.2	15.2 ⁽¹⁾	111b/09
			329	2400*	3650	7	10	
			329	2200*	3650	5	8.3	
			214	2920	2700	2.4	5.6	
			165	2920	2340	1.6	3.3	
			174	2900	2590	2.3	4.3	
KP06C Unistream (5)	Direct coupled end suction	80/65	125	2900	1790	0.6	2	111b/10
			214	2900	1380	3.3	6.3	
KP05D Unistream (5)	Direct coupled end suction	65/50	165	2900	1090	1.6	3.7	111b/11
			214*	2950	2580	5	6.6	
KP06D Unistream (5)	Direct coupled end suction	80/65	165*	2950	2250	2.3	3.8	111b/12
			214	2950*	2580	5	6.6	
			214	2200*	2550	1.7	3.6	

PART 3: SECTION 17.1

FIRE PUMPS

Product Name	Type	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (L/min) (at NPSH req. = 5.38m)	Rated Head (bar) (at NPSH req. = 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
KP08D Unistream (5)	Direct coupled end suction	100/80	214*	2950	3400	4.8	6.5	111b/13
			165	2950	2820	2.4	3.8	
			214	2950*	3400	4.8	6.5	
			214	2200*	3300	1.8	3.7	
KM10E Eurostream(5)	Close coupled end suction	125/100	264	2950	5500	7.6	9.8	111b/14
			195	2950	4200	3.6	5.3	
KM08V Eurostream(5)	Close coupled end suction	100/80	214	2920	2700	2.4	5.6	111b/15
			165	2920	2340	1.6	3.3	
KM06C Eurostream (5)	Close coupled end suction	80/65	174	2900	2590	2.3	4.3	111b/16
			125	2900	1790	0.6	2	
KM05D Eurostream (5)	Close coupled end suction	65/50	214	2900	1380	3.3	6.3	111b/17
			165	2900	1090	1.6	3.7	
KM06D Eurostream (5)	Close coupled end suction	80/65	214	2950	2580	5	6.6	111b/18
			165	2950	2250	2.3	3.8	
KM08D Eurostream (5)	Close coupled end suction	100/80	214	2950	3400	4.8	6.5	111b/19
			165	2950	2820	2.4	3.8	
AV03N Unistream (5)	Close coupled end suction	100/80	174	2900	2540	1.3	3.8	111b/20
			135	2900	1840	1	2.3	
AV03P Eurostream (5)	Close coupled end suction	100/80	174	2900	2540	1.3	3.8	111b/21
			135	2900	1840	1	2.3	
KP10Y Unistream (5)	Direct coupled end suction	150/100	264*	2950	7680	5.2	9.7	111b/23
			210*	2950	5100	4.2	6	
AV03P Eurostream (5)	Close coupled end suction	100/80	174	2900	2540	1.3	3.8	111b/24
			135	2900	1840	1	2.3	
KM08E (5)	Close coupled end suction	100/80	264*	2950	2800	9.5	10	111b/25
			205*	2950	2800	4.2	5.9	
KP08E (5)	Direct coupled end suction	100/80	264*	2950	2800	9.5	10	111b/26
			205*	2950	2800	4.2	5.9	
KP12Z (5),(6)	Direct coupled end suction	150/125	329*	2600	6500	10.6	12.1	111b/27
			264	2950*	7680	5.2	9.7	
AV03P Eurostream (5)	Close coupled end suction	100/80	174	2900	2540	1.3	3.8	111b/28
			135	2900	1840	1	2.3	
KM08E (5)	Close coupled end suction	100/80	264*	2950	2800	9.5	10	111b/29
			205*	2950	2800	4.2	5.9	
KP08E (5)	Direct coupled end suction	100/80	264*	2950	2800	9.5	10	111b/30
			205*	2950	2800	4.2	5.9	
KP12Z (5),(6)	Direct coupled end suction	150/125	329*	2600	6500	10.6	12.1	111b/31
			264	2950*	7680	5.2	9.7	
KP15Y (5)	Direct coupled end suction	200/150	272*	2950	7800	7.8	9.8	111b/32
			239*	2950	7600	5.2	7.7	
KP15Y (5)	Direct coupled end suction	200/150	272*	2950*	7800	7.8	9.8	111b/33
			272	2200*	8200	3.2	5.6	
KP15Y (5)	Direct coupled end suction	200/150	310*	2600	8600	8.6	10.5	111b/34
			239*	2600	7800	3.2	5.9	
KP15Y (5)	Direct coupled end suction	200/150	310	2600*	8600	8.6	10.5	111b/35
			310	2000*	7350	4.7	6.2	

* These pumps are approved with impeller diameters and, where applicable, speeds within the ranges shown, to provide flows and heads within those ranges.

Notes:

- 1) Pump configurations which generate a closed valve head exceeding 10 bar are approved for use in accordance with TB13: 1990: 1 - High rise sprinkler systems.

- 2) Maximum working pressure: 21 bar.
- 3) Maximum working pressure: 20 bar.
- 4) Maximum working pressure: 18 bar.
- 5) The above pumps are also approved with alternate material options of bronze impeller and/or stainless steel shaft.
- 6) Maximum working pressure 14 bar.

The above pumps are fitted with "closed head" relief valve Pt. No. 25652 - 511 - 000 - 7 or Pt. No. 25652-501-000-2.a

PART 3: SECTION 17.2

MULTI-STAGE FIRE PUMPS

This section lists products approved in accordance with:

- LPS 1131 *Pumps for Automatic Sprinkler Installation. Pump Sets - Requirements and testing methods.*

Firms listed in this section shall control and be responsible for the design, construction, testing and performance of all fire pump sets incorporating their LPCB approved fire pumps.

All fire pump sets incorporating LPCB approved fire pumps shall conform to the *LPC Rules for Automatic Sprinkler Installations*, or Rules specified in the contract, and shall be tested in accordance with the LPC Sprinkler Rules.

Only LPCB approved fire pumps shall be used to comply with the *LPC Rules for Automatic Sprinkler Installations*.

Pumps listed in this section are suitable for use in pump sets for high-rise and multi-storey buildings.

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Certificate No: 111b

Product Name	Suction Inlet Diameter/ Discharge Outlet Diameter (mm)	Delivery Configuration	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow (l/min) (at NPSH req. <= 5.38m)	Rated Head (bar) (at NPSH req. <= 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
CD10K Multistream 2-5 stage multistage pump	125/100	(1) Single stage - closed stage or final outlet	219	2950	2800	4.8	7.0	111b/22
			202	2950	2800	3.3	5.5	
		(2) Single stage - intermediate outlet	219	2950	2800	3.7	7.5	
			(3) Final outlet of five stage pump	202	2950	2800	1.4	5.9
		219		2950	2800	24.0	35.0	
			202	2950	2800	16.5	27.5	

The pump performance is the summation of each stage, i.e. the performance at the final outlet of a four stage pump is 4 x (1).

The performance at the fourth stage intermediate outlet of a five stage pump is 3 x (1) + (2).

The performance at the final outlet of a five stage pump is 5 x (1), as detailed in (3).

The above pump is approved with impeller diameters within the range shown, to provide flows and heads within the ranges shown.

The above pump is fitted with 'closed head' relief valve part no. 25652-511-000-7.

Certificate No: 111b/28

Product Name	Suction Inlet Diameter/ Discharge Outlet diameter (mm)	Delivery Configuration	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow* (L/min) (at NPSH req <= 5.38m)	Rated Head (bar) (at NPSH req <= 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
CD12K 2-10 stage multistream multistage pump	150/125	Single stage - closed stage or final outlet	308	1470	4290	2.3	3.7	111b/28
			247	1470	3930	0.5	2.2	

PART 3: SECTION 17.2

MULTI-STAGE FIRE PUMPS

Product Name	Suction Inlet Diameter/ Discharge Outlet diameter (mm)	Delivery Configuration	Impeller Diameter (mm)	Rated Speed (rev/min)	Rated Flow* (L/min) (at NPSH req <= 5.38m)	Rated Head (bar) (at NSPH req <= 5.38m)	Closed Valve Head (bar)	LPCB Ref. No.
		Single stage - intermediate outlet	308	1470	4290	0.8	3.7	
		Final outlet of ten stage pump	247	1470	3930		2.2	
			308	1470	4290	23.0	37.0	
			247	1470	3930	5.0	22.0	

The pump performance is the summation of each stage, i.e. the performance at the final outlet of an eight stage pump is 8 x (1).

The performance at the seventh stage intermediate outlet of an eight stage pump is 6 x (1) + (2).

The performance at the final outlet of a ten stage pump is 10 x (1), as detailed in (3).

The above pump is fitted with 'closed head' relief valve part no. 25652-511-000-7.

*The minimum bypass flow rate is 160 L/min.

PART 3: SECTION 17.3

DIESEL ENGINES FOR SPRINKLER PUMP SETS

This section lists products approved in accordance with:

- LPS 1239 *Requirements for LPCB Approval of Diesel Engines for Sprinkler Pump Sets.*

LPCB approved diesel engines shall be used in fire pump sets which conform to the *LPC Rules for Automatic Sprinkler Installations*.

For pump sets requiring a diesel engine with a power/speed rating outside the range of approved diesel engines listed, such diesel engines should conform to LPS 1239, Issue 1.

LPCB Approved engines are approved for use between the following limits:

- Not greater than the approved rated engine power at the rated speed.
- Not less than 40% of the approved rated engine power at the rated speed

The responsibility for the design, construction, testing and performance of all fire pump sets incorporating LPCB approved diesel engines lies with the pump set manufacturer.

Clarke UK Limited

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Certificate No: 601 to LPS 1239

Product Name	1760*	2100*	2350*	2600*	2800*	2960*	LPCB Ref. No.
IK4H-LP50(1)	55.5	63	68.5	73	75.5	76	601a/01
IK6H-LP30(1)	84.5	101	107	110	112	113	601a/02
IK6H-LP60(2)	125	147	161	175	179	179	601a/03
IK6H-LP80(3)	159	232	255	264	273	273	601a/04
JU4H - LP20 (1)	60	67	72	-	-	-	601b/01
JU4H - LP24 (1)	-	-	72	75	80	83	601b/02
JU4H - LP50 (2)	110	130	127	-	-	-	601b/03
JU4H - LP54 (2)	-	-	122	139	145	145	601b/04
JU4H - LP84 (3)	-	-	139	175	179	185	601b/05
JU6H - LP50 (2)	183	210	210	-	-	-	601b/06
JU6H - LP54 (2) **	-	-	210	216	216	216	601b/07
JU6H - LP60 (3)	200	240	240	-	-	-	601b/08
JU6H - LP84 (3) **	-	-	243	247	259	275	601b/09
LC2A - LP30 (1) (4)	-	-	-	-	6.8	9.7	601c/01
LC2A - LP60 (1) (4)	-	-	-	-	21.8	22.3	601c/02

* Approved rated engine power (bhp) at rated speed (rev/min)

** These engines are not suitable for continuous operation in the range 2650 to 2750 rpm

Notes:

- 1) Normally aspirated.
- 2) Turbocharged & Jacket Water Aftercooled.
- 3) Turbocharged & Raw Water Aftercooled.
- 4) Air-cooled engine

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Certificate No: 840a to LPS 1239

Product Name	2600*	2960*	LPCB Ref. No.
FP1254 (1)	123	135	840a/01
FP1004 (2)	87	83	840a/02

* Approved rated engine power (bhp) at rated speed (rev/min)

- (1) Turbocharged & Raw Water Aftercooled
- (2) Turbocharged

PART 3: SECTION 18

PIPEWORK SUPPORTS

This section lists products approved in accordance with:

- LPCB Schedule of requirements
- LPS 1194 *Requirements and Testing Methods for Pipe Hangers*

Components of pipe support systems listed below are considered acceptable for use in installations conforming to the *LPC Rules for Automatic Sprinkler Installations*. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Debro Engineering & Presswork Limited

Unit 2 Delta Point Trading Estate, Greets Green Road, West Bromwich, West Midlands B70 9PL UK
Tel: +44 (0)121 580 6250 • Fax: +44 (0)121 580 6364

Certificate No: 015a

Filbow Hangers

Product Name	Pipe Size (mm)	Material	Finished	LPCB Ref. No.
Debro Flat Filbow	20	Mild Steel	Galvanised	015a/01
	25	Mild Steel	Galvanised	
	32	Mild Steel	Galvanised	
	40	Mild Steel	Galvanised	
	50	Mild Steel	Galvanised	
	65	Mild Steel	Galvanised	
	80	Mild Steel	Galvanised	
	100	Mild Steel	Galvanised	
	150	Mild Steel	Galvanised	
	200	Mild Steel	Galvanised	

Product Name	Pipe Size (mm)	Material	Finish	LPCB Ref. No.
F 020	20	Mild Steel	Galvanised	015a/02
F 025	25	Mild Steel	Galvanised	
F 032	32	Mild Steel	Galvanised	
F 040	40	Mild Steel	Galvanised	
F 050	50	Mild Steel	Galvanised	
F 065	65	Mild Steel	Galvanised	
F 080	80	Mild Steel	Galvanised	
F 100	100	Mild Steel	Galvanised	
F 125	125	Mild Steel	Galvanised	
F 150	150	Mild Steel	Galvanised	

Erico International Corporation

34600 Solon Road, Solon, Ohio 44139, USA
Tel: +1 440 248 0100 • Fax: +1 440 248 1527
E-mail: nbagdasaryan@erico.com • Website: www.erico.com

European Sales Enquiries

Tel: +31 13 583 54 00 • Fax: +31 13 583 54 99

Certificate No: 917a/01 to LPS 1194: Issue 1.2

Certificate No: 917a/02 to LPS 1194: Issue 1.2

Loop Hangers

Product Name	Pipe size (mm)	Material	Finish	LPCB Ref. No.		
EPB Plus Loop Hanger	15	Mild Steel	Galvanized	917a/01		
	20	Mild Steel	Galvanized			
	25	Mild Steel	Galvanized			
	32	Mild Steel	Galvanized			
	40	Mild Steel	Galvanized			
	50	Mild Steel	Galvanized			
	65	Mild Steel	Galvanized			
	80	Mild Steel	Galvanized			
	100	Mild Steel	Galvanized			
	125	Mild Steel	Galvanized			
	150	Mild Steel	Galvanized			
	200	Mild Steel	Galvanized			
	112 Swivel Loop Hanger	15	Mild Steel		Galvanized	917a/02
		20	Mild Steel		Galvanized	
25		Mild Steel	Galvanized			
32		Mild Steel	Galvanized			
40		Mild Steel	Galvanized			
50		Mild Steel	Galvanized			
65		Mild Steel	Galvanized			
80		Mild Steel	Galvanized			
100		Mild Steel	Galvanized			
125		Mild Steel	Galvanized			
150		Mild Steel	Galvanized			
200		Mild Steel	Galvanized			

Universal Fixings Limited

Jubilee Business Park, Balds Lane, Lye, Stourbridge, West Midlands DY9 8SH UK

Tel: +44 (0)1384 422284 • Fax: +44 (0)1384 897446

Certificate No: 766a

Filbow Pipe Hangers

Product Name	Pipe Size (mm)	Material	Finished	LPCB Ref. No.
UF 015	15	Mild Steel	Galvanised	766a/01
UF 020	20	Mild Steel	Galvanised	
UF 025	25	Mild Steel	Galvanised	
UF 032	32	Mild Steel	Galvanised	
UF 040	40	Mild Steel	Galvanised	
UF 050	50	Mild Steel	Galvanised	
UF 065	65	Mild Steel	Galvanised	
UF 080	80	Mild Steel	Galvanised	
UF 100	100	Mild Steel	Galvanised	
UF 150	150	Mild Steel	Galvanised	
UF 200	200	Mild Steel	Galvanised	

PART 3: SECTION 19

CHECK VALVES

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Check valves listed below are considered acceptable for use in installations conforming to the *LPC Rules for Automatic Sprinkler Installations*. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Victaulic Company

4901 Kesslersville Road, Easton, Pennsylvania 18040, USA

Tel: +1 610 559 3300 • Fax: +1 610 250 8817

E-mail: victaulic@victaulic.com • Website: www.victaulic.com

Certificate No: 104h

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Body Material	Maximum Working Pressure (bar)	Connections	LPCB Ref. No.
Series 717 check-valves	50	60.3	Ductile iron	25	Grooved	104h/01
	65	73	Ductile iron	25	Grooved	
		76.1	Ductile iron	25	Grooved	
	80	88.9	Ductile iron	25	Grooved	
	100	114.3	Ductile iron	25	Grooved	
	125	139.7	Ductile iron	25	Grooved	
		141.3	Ductile iron	25	Grooved	
	150	165.1	Ductile iron	25	Grooved	
		168.3	Ductile iron	25	Grooved	
	200	219.1	Ductile iron	24	Grooved	
	250	273.0	Ductile iron	17	Grooved	
	300	323.9	Ductile iron	17	Grooved	

User Data Sheet 10.08, rev L

This section lists products approved in accordance with:

- LPCB Schedule of requirements
- LPS 1185 *Requirements for Testing Methods for Remote Monitored Gear Operated Butterfly Stop Valves*

Stop valves listed below are considered acceptable for use in installations conforming to the *LPC Rules for Automatic Sprinkler Installations*. The products shall be installed and maintained in accordance with the manufacturer's instructions.

Anvil International Inc.

Highway 70, Cleveland (Rowan County), North Carolina 27013, USA

Tel: +1 603 422 8000 • Fax: +1 603 422 8033

E-mail: webmaster@anvilintl.com • Website: www.anvilintl.com

Certificate No: 481a to LPS 1185

Gear Operated Stop Valve With Or Without Electrical Monitor Switches

Product Name	Nominal Size	Pipe Outside Diameter (mm)	Body Material	Maximum Working Pressure (bar)	Connections	LPCB Ref. No.
AE7722-3A Butterfly Valves	DN 50	60.3	Ductile Iron	20	Grooved	481a/01
	DN65	76.1	Ductile Iron	20	Grooved	
	DN80	88.9	Ductile Iron	20	Grooved	
	DN 100	114.3	Ductile Iron	20	Grooved	
	DN 125	139.7	Ductile Iron	20	Grooved	
	DN 150	165.1	Ductile Iron	20	Grooved	
	DN 150	168.3	Ductile Iron	20	Grooved	
	DN 200	219.1	Ductile Iron	20	Grooved	
	DN 250	273.0	Ductile Iron	20	Grooved	

AnvilStar LLC, Division of Anvil International

Highway 70, Cleveland (Rowan County), North Carolina 27013, USA

Tel: +1 603 422 8000 • Fax: +1 603 422 8033

E-mail: webmaster@anvilintl.com • Website: www.anvilintl.com

Certificate No: 481a to LPS 1185

Gear Operated Stop Valve With Or Without Electrical Monitor Switches

Product Name	Nominal Size	Pipe Outside Diameter (mm)	Body Material	Maximum Working Pressure (bar)	Connections	LPCB Ref. No.
AE7722-3A Butterfly Valves	DN 50	60.3	Ductile Iron	20	Grooved	481a/01
	DN 65	76.1	Ductile Iron	20	Grooved	
	DN 80	88.9	Ductile Iron	20	Grooved	
	DN 100	114.3	Ductile Iron	20	Grooved	
	DN 125	139.7	Ductile Iron	20	Grooved	
	DN 150	165.1	Ductile Iron	20	Grooved	
	DN 150	168.3	Ductile Iron	20	Grooved	
	DN 200	219.1	Ductile Iron	20	Grooved	
	DN 250	273.0	Ductile Iron	20	Grooved	

PART 3: SECTION 20

STOP VALVES

SAPAG Industrial Valves

2 Rue du Marais, 80400 Ham, France

Tel: +33 (0)3 23 81 43 00 • Fax: +33 (0)3 23 81 18 69

E-mail: sapaginfo@sapag-valves.com • Website: www.sapag-valves.com

Certificate No: 571a

Gear Operated Stop Valve With Or Without Electrical Monitor Switches

Product Name	Size (mm)	Body Material	Maximum Working Pressure (bar)	Connections	LPCB Ref. No.
Model JPL 39109 Butterfly stop valve	100	Ductile Iron	12.1	Grooved	571a/01
	125	Ductile Iron	12.1	Grooved	
	150	Ductile Iron	12.1	Grooved	
	200	Ductile Iron	12.1	Grooved	
	250	Ductile Iron	12.1	Grooved	
	300	Ductile Iron	12.1	Grooved	

Victaulic Company

4901 Kesslersville Road, Easton, Pennsylvania 18040, USA

Tel: +1 610 559 3300 • Fax: +1 610 250 8817

E-mail: victaulic@victaulic.com • Website: www.victaulic.com

Certificate No: 104 to LPS 1185 Issue 3.1

Series 705W Butterfly Valve

Product Name	Nominal Size (mm)	Pipe Outside Diameter (mm)	Body Material	Max. Working Pressure (bar)	Connections	LPCB Ref. No.
Series 705W Butterfly valve	50	73.0	Ductile iron	21	Grooved	104j/01
	65	76.1	Ductile iron	21	Grooved	
	80	88.9	Ductile iron	21	Grooved	
	100	114.3	Ductile iron	21	Grooved	
	125	139.7	Ductile iron	21	Grooved	
		141.3	Ductile iron	21	Grooved	
		150	165.1	Ductile iron	21	
	200	168.3	Ductile iron	21	Grooved	
		219.3	Ductile iron	21	Grooved	
		250	273.0	Ductile iron	21	
	300	323.9	Ductile iron	21	Grooved	

Certificate No: 104h to LPS 1185: Issue 3.1

Series 728 Ball Valves

Product Name	Nominal Size (mm)	Body Material	Maximum Working Pressure (bar)	Connections	LPCB Ref. No.
Series 728 Ball Valves	DN25	Brass	20	Threaded	104i/01
	DN32	Brass	20	Threaded	
	DN40	Brass	20	Threaded	
	DN50	Brass	20	Threaded	
	DN32	Brass	20	Grooved	
	DN40	Brass	20	Grooved	
	DN50	Brass	20	Grooved	

User manual 2227, Rev B

Certificate No: 104 to LPS1185

Series 765W Butterfly Valves

Product Name	Nominal Size (mm)	Pipe Outside diameter (mm)	Body Material	Max Working Pressure (bar)	Connections	LPCB Ref. No.
Series 765W Butterfly Valve	50	73.0	Ductile iron	25	Grooved	104j/02
	65	76.1	Ductile iron	25	Grooved	
	80	88.9	Ductile iron	25	Grooved	
	100	114.3	Ductile iron	25	Grooved	
	125	139.7	Ductile iron	25	Grooved	
		141.3	Ductile iron	25	Grooved	
	150	165.1	Ductile iron	25	Grooved	
		168.3	Ductile iron	25	Grooved	
	200	219.3	Ductile iron	25	Grooved	
		250	273.0	Ductile iron	25	
	300	323.9	Ductile iron	25	Grooved	

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

This section lists products approved in accordance with:

- LPS 1260 *Requirements for testing plastic pipes and fittings for sprinkler systems.*

The 'scope of use' of plastic pipe shall be agreed between the plastics suppliers, purchaser/installer, authority having jurisdiction and/or insurer in accordance with documented supplier 'Installation Instructions' but subject to the following criteria taking precedence.

- 1) Use of plastic pipe and fittings is subject to water authority agreement for the district or territory concerned.
- 2) LPCB Approved quick response sprinklers shall be used with exposed (i.e. fire exposure) plastic pipe and fittings.
- 3) Plastic pipe and fittings are suitable for use only with wet pipe systems.
- 4) Use of water additives is only permitted in accordance with the manufacturer's installation instructions.
- 5) Care should be exercised to ensure that the adhesive joints are adequately cured, in accordance with the manufacturer's installation instructions, prior to pressurisation.
- 6) Plastic pipe and fittings shall not be installed outdoors.
- 7) Where plastic pipe and fittings are exposed (i.e. fire exposure), the system shall be installed close to a flat ceiling construction.
- 8) Sprinkler systems which employ plastic pipe and fittings shall be designed where possible to ensure there are no 'no flow' sections of pipework in the event of sprinkler operation.

Aquatherm GmbH

Biggen 5, D-57439 Attendorn, Germany

Tel: +49 2722 950223 • Fax: +49 2722 950252

E-mail: info@aquatherm.de • Website: www.aquatherm.de

Certificate No: 684a to LPS 1260

Aquatherm GmbH Firestop PPR Plastic Pipe & Fittings

Product Name	Nominal Diameter Range (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
Firestop Sprinkler Pipe	20,25,32,40,50,63,75,90,110,125	12	684a/01
Socket	20,25,32,40,50,63,75,90,110,125	12	684a/02
Reducer	20,25,32,40,50,63,75,90,110,125	12	684a/03
Elbow, 90°	20,25,32,40,50,63,75,90,110,125	12	684a/04
Elbow, 45°	20,25,32,40,50,63,75,90,110,125	12	684a/05
Tee	20,25,32,40,50,63,75,90,110,125	12	684a/06
Reducing Tee	20x25x20;25x20x20;25x20x25;32x20x20; 32x20x32;32x25x32;40x20x40;40x25x40; 40x32x40;50x20x50;50x25x50;50x32x50; 50x40x50;63x40x63;63x50x63;75x40x75; 75x50x75;75x63x75;90x40x90;90x50x90; 90x63x90;90x75x90;110x63x110;110x75x110; 110x90x110;125x75x125;125x90x125;125x110x125	12	684a/07
End Cap	20,25,32,40,50,63,75,90,110,125	12	684a/08
Socket Welded Nipple	32,40,50,63,75,90,110,125	12	684a/09
Saddle Weld-in	40/20;40/25;50/20;50/25;63/20;63/25;63/32;75/20; 75/25;75/32;90/20;90/25;90/32;90/40;110/20;110/25; 110/32;110/40;125/20;125/25;125/32;125/40	12	684a/10
Coupling screw joint	32,40,50,63,75	12	684a/11
Wall connection	20x1/2"F;25x3/4"F	12	684a/12

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Product Name	Nominal Diameter Range (mm)	Maximum Working Pressure (bar)	LPCB Ref. No.
Transition piece Female	20x1/2" F; 25x3/4" F; 32x1" F; 40x1 1/4" F 50x1 1/2" F; 63x2" F; 75x2"	12	684a/13
Transition piece Male	20x1/2" M; 25x3/4" M; 32x1" M; 40x1 1/4" M; 50x1 1/2" M; 63x2" M; 75x2 1/2" M; 90x3" M; 110x4" M	12	684a/14
Connecting Union	20/nut R 1"; 25/nut R 1 1/4"; 32/nut R 1 1/2"; 40/nut R 2"; 50/nut R 2 1/4"; 50/nut R 2 1/2"; 63/nut R 2 3/4"; 75/nut R 3 1/2"; 90/nut R 4"	12	684a/15
Transition joint	nut R 1"x20; nut R 1 1/4"/25; nut R 1 1/2"/32; nut R 2"/40 nut R 2 1/4"x50; nut R 2 3/4"x63	12	684a/16
Counterpart	1"Mx20; 1 1/4"Mx25; 1 1/2"Mx32; 2"Mx40; 2 1/4"Mx50; 2 3/4"Mx63	12	684a/17
Transition Tee	20x1/2Fx20; 25x3/4Fx25; 32x1Fx32	12	684a/18
Saddle Weld-in with Female thread & hexagon socket	40/25x1/2F; 50/25x1/2F; 63/25x1/2F; 75/25x1/2F; 90/25x1/2F; 40/25x3/4F; 50/25x3/4F; 63/25x3/4F; 75/25x3/4F; 90/25x3/4F; 110/25x3/4F; 125/125x3/4F;	12	684a/19
Screw-down valve	20,25,32,40	12	684a/20
Inclined valve	20,25,32,40	12	684a/21
Ball cock	20,25,32,40,50,63,75,90	12	684a/22
Draining branch	20,25,32,40,50,63	12	684a/23

Notes relating to Aquatherm pipes and fittings:

- 1) The system of pipes and fittings must be installed in accordance with the Aquatherm installation instructions, which include Annex "Technical instruction Firestop" dated 23/10/2006.
- 2) The maximum normal ambient temperature of use shall not exceed 70°C.
- 3) The products shall only be installed by LPCB Certificated or Registered Installing companies (see Part 5, Section 1A and 1B above) or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be Certificated to ISO 9000.

Harvel Plastics Incorporated (Bakersfield)

7001 Schirra Court, Bakersfield, CA 93313, USA

Tel: +01 (0)6102 527355 • Fax: +01 (0)6102 534436

Certificate No: 455a

HARVEL® PLASTICS INC BLAZEMASTER® CHLORINATED POLYVINYLCHLORIDE (CPVC) SPRINKLER PIPE

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
CPVC Sprinkler Pipe	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	455a/01

Harvel® is a registered trademark of Harvel Plastics Inc.

Blazemaster® is a registered trademark of Lubrizol Advanced Materials, Inc.

Notes relating to Spears fittings and Harvel pipes

- 1) The system of pipe and fittings must be installed in accordance with Harvel Plastics Inc. and Spears Manufacturing Company. 'Blazemaster' Installation Instructions, which includes LPCB Conditions of Use agreed with Harvel and Spears.
- 2) The maximum nominal ambient temperature of use shall not exceed 50°C.
- 3) The products shall only be installed by LPCB Certificated or Registered installing companies (see Part 5, Section 1A and 1B above), or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 4) Harvel Blazemaster CPVC sprinkler pipes are manufactured from Blazemaster CPVC materials that are WRAS listed.
- 5) Harvel Blazemaster CPVC sprinkler pipes are WRAS listed.

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Harvel Plastics Incorporated (Easton)

300 Kuebler Road, Easton, Pennsylvania 18040, USA

Tel: + 1 610 252 7355 • Fax: + 1 610 253 4436

E-mail: harvel@harvel.com

Certificate No: 270a

HARVEL® PLASTICS INC BLAZEMASTER® CHLORINATED POLYVINYLCHLORIDE (CPVC) SPRINKLER PIPE

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
CPVC Sprinkler Pipe	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	270a/01

Harvel® is a registered trademark of Harvel Plastics Inc.

Blazemaster® is a registered trademark of Lubrizol Advanced Materials, Inc.

Notes relating to Spears fittings and Harvel pipes:

- 1) The system of pipe and fittings must be installed in accordance with Harvel Plastics Inc. and Spears Manufacturing Company, 'Blazemaster' Installation Instructions, which includes LPCB Conditions of Use agreed with Harvel and Spears.
- 2) The maximum normal ambient temperature of use shall not exceed 50°C.
- 3) The products shall only be installed by LPCB Certificated or Registered installing companies (see Part 5, Section 1A and 1B above), or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 4) Harvel Blazemaster CPVC sprinkler pipes are manufactured from Blazemaster CPVC materials that are WRAS listed.
- 5) Harvel Blazemaster CPVC sprinkler pipes are WRAS listed.

Hershey Valve Co Limited

No 16 Jing 2nd Road, Wuchi, Taichung 435, Taiwan ROC

Tel: +886 4 2659 5377 • Fax: +886 4 2659 5288

Certificate No: 438a

Hershey Blazemaster® Chlorinated Polyvinyl Chloride (CPVC) Sprinkler Pipe and Fittings

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
Cross	0.5", 0.75", 1.0", 1.25", 1.5", 2.0", 2.5, 3	12	438a/02
Reducing Cross	1.0" x 0.75", 1.5" x 1", 2"x1"	12	438a/03
90 Degree Elbow	0.5", 0.75", 1.0", 1.25", 1.5", 2.0", 2.5, 3	12	438a/04
45 Degree Elbow	0.5", 0.75", 1.0", 1.25", 1.5", 2.0", 2.5, 3	12	438a/05
Straight Coupling	0.5", 0.75", 1.0", 1.25", 1.5", 2.0", 2.5, 3	12	438a/06
Cap	0.5", 0.75", 1.0", 1.25", 1.5", 2.0", 2.5, 3	12	438a/07
Sprinkler Head Adaptor	0.5" x 0.5", 1.0" x 0.5", 0.75 x 0.5, 1 x 0.75	12	438a/08
Reducing Bush	0.75" x 0.5", 1" x 0.5", 1" x 0.75", 1.25" x 0.5", 1.25" x 0.75", 1.25" x 1.0", 1.5" x 0.5", 1.5" x 0.75", 1.5" x 1.0", 1.5" x 1.25", 2" x 0.75", 2" x 1.25", 2" x 1.5", 2 x 1, 2.5 x 1.25, 2.5 x 1.5, 2.5 x 2, 3 x 1.5, 3 x 2, 3 x 2.5	12	438a/09
Spigot Sprinkler Head Adaptor	0.75" x 0.5", 1.0" x 0.5", 1 x 0.75	12	438a/10
Male Adaptor Tee	0.5" x 0.5", 0.75 "x 0.75", 1" x 1", 1.25 " x 1.25", 1.5" x 1.5", 2" x 2", 2.5 x 2.5, 3 x 3	12	438a/11
90 Degree Elbow Male	0.5", 0.75", 1.0", 1.25", 1.5", 2.0", 2.5, 3	12	438a/01
90 Degree Elbow Female	0.5" x 0.5"	12	438a/12
Head Adaptor	0.5" x 0.5", 0.75" x 0.5", 0.75"x0.75", 1.0"x 0.5", 1"x0.75", 1"x1"	12	438a/13

PART 3: SECTION 21.1**PLASTIC PIPES AND FITTINGS**

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
Sprinkler Head Tee	0.5" x 0.5" x 0.5", 0.75" x 0.75" x 0.75", 1.0" x 1.0" x 0.5", 1.0" x 1.0" X 1.0"	12	438a/14
Pipe	0.5", 0.75", 1.0", 1.25", 1.5", 2.0", 2.5, 3	12	438a/15
Reducing Tee	0.75" x 0.5" x 0.75", 1" x 0.5" x 1", 1"x0.75"x1", 1"x2"x1", 1.25"x0.5"x1.25", 1.25"x0.75"x1.25", 1.25"x1"x1.25", 1.5"x0.5"x1.5", 1.5"x0.75"x1.5", 1.5"x1"x1.5", 1.5"x1.25"x1.5", 2"x0.5"x2", 2"x0.75"x2", 2"x1"x2", 2"x1.25"x2", 2"x1.5"x2", 2.5 x 1 x 2.5, 2.5" x 1.25" x 2.5", 2.5" x 1.5" x 2.5", 2.5" x 2" x 2.5", 3" x 1" x 3", 3" x 1.5" x 3", 3" x 2" x 3", 3" x 2.5" x 3"	12	438a/16
Flange	0.5", 0.75", 1", 1.25", 1.5", 2", 2.5", 3"	12	438a/17
Blind Flange	0.5", 0.75", 1", 1.25", 1.5", 2", 2.5", 3"	12	438a/18
Reducing	0.75" x 0.5" x 0.75", 1" x 0.75" x 1", 1.25" x 0.5" x 1.25", 1.5" x 0.5" x 1.5", 2" x 0.5" x 2"	12	438a/19
Sprinkler Head Tee			
Female Head	0.5, 0.75, 1, 1.25, 1.5, 2	12	438a20
Adaptor			
Reducer	0.75 x 0.5, 1 x 0.5, 1 x 0.75, 1.25 x 0.5, 1.25 x 0.75, 1.25 x 1, 1.5" x 0.5", 1.5" x 0.75",	12	438a/21
Coupling	1.5 x 1, 1.5 x 1.25, 2 x 0.5, 2 x 0.75, 2 x 1, 2 x 1.25, 2 x 1.5		
Coupling	0.75, 1, 1.25	12	438a/22
(Schedule 40)			
45 Degree Elbow	0.75, 1, 1.25	12	438a/23
(Schedule 40)			
90 Degree Elbow	0.75, 1, 1.25	12	438a/24
(Schedule 40)			
Tee (Schedule 40)	0.75, 1, 1.25	12	438a/25

Notes:

- 1) The system of pipes and fittings must be installed in accordance with Hershey Valve Co Limited "BlazeMaster®" installation instructions (Hershey Ref: HVBMC96REV1 dated February 2009) which includes LPCB Conditions of Use agreed with Hershey Valve Company Limited.
- 2) The maximum normal ambient temperatures of use shall not exceed 50°C.
- 3) The products shall only be installed by LPCB Certificated or Registered installing companies (see part 5, section 1A & 1B above) or be firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certified to ISO 9001:2000.
- 4) Hershey BlazeMaster® CPVC sprinkler pipes are manufactured from BlazeMaster® CPVC materials that are WRc (WRAS) listed.
- 5) BlazeMaster® is a registered trade mark of Lubrizol Advanced Materials Inc.

IPEX Inc

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Certificate No: 875a to LPS 1260

IPEX Blazemaster® Chlorinated Polyvinyl Chloride (CPVC) Sprinkler Fittings

Product Name	Size	Model	Maximum working pressure (bar)	LPCB Ref. No.
SHA TEE SxSxSRFPT	3/4" x 3/4" x 1/2"	048010	12	875a/01
	1" x 1" x 1/2"	048012	12	
	1/2' x 1/2' x 1"	048062	12	

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Product Name	Size	Model	Maximum working pressure (bar)	LPCB Ref. No.
SHA 90° ELBOW SxSRFPT	3/4" x 1/2"	048019	12	875a/02
	1" x 1/2"	048020	12	
SHA SxSRFPT	3/4" x 1/2"	048026	12	875a/03
	1" x 1/2"	048527	12	
SHA SpSRFPT	1" x 1/2"	048030	12	875a/04
FEMALE ADAPTOR SxSRFPT	1"	048024	12	875a/05
CAP SCH 80 BLZ	3/4"	048400	12	875a/06
	1"	048401	12	
	1 1/4"	048402	12	
	1 1/2"	048403	12	
	2"	048404	12	
COUPLING CSH 80 BLZ	3/4"	048407	12	875a/07
	1"	048408	12	
	1 1/4"	048409	12	
	1 1/2"	048410	12	
	2"	048411	12	
CROSS CSH 80 BLZ	3/4"	048414	12	875a/08
	1"	048415	12	
	1 1/4"	048416	12	
	1 1/2"	048417	12	
	2"	048418	12	
45 DEG. ELBOW SCH 80 BLZ	3/4"	048420	12	875a/09
	1"	048421	12	
	1 1/4"	048422	12	
	1 1/2"	048423	12	
	2"	048424	12	
90 DEG. ELBOW SCH 80 BLZ	3/4"	048431	12	875A/10
	1"	048432	12	
	1 1/4"	048433	12	
	1 1/2"	048434	12	875a/10
	2"	048435	12	
FLANGE SOCKET SCH 80 BLZ	3/4"	048443	12	875a/11
	1"	048444	12	
	1 1/4"	048445	12	
	1 1/2"	048446	12	
	2"	048447	12	
REDUCER BUSHING SCH 80 BLZ	1" X 3/4"	048459	12	875a/12
	1 1/4" X 3/4"	048460	12	
	1 1/4" X 1"	148461	12	
	1 1/2" X 3/4"	048462	12	
	1 1/2" X 1"	048463	12	
	1 1/2" X 1 1/4"	048464	12	
	2" X 1"	048466	12	
	2" X 1 1/4"	048467	12	
	2" X 1 1/2"	048468	12	
TEE SCH 80 BLZ	3/4"	048486	12	875a/13
	1"	048487	12	
	1 1/4"	048488	12	
	1 1/2"	048489	12	
	2"	048490	12	
REDUCER TEE SCH 80 BLZ	3/4" X 3/4" X 1"	048493	12	875a/14
	1" X 3/4" X 3/4"	048497	12	
	1" X 3/4" X 1"	048498	12	
	1" X 1" X 3/4"	048495	12	
	1 1/4" X 1" X 3/4"	048499	12	
	1 1/4" X 1" X 1"	048506	12	
	1 1/4" X 1" X 1 1/4"	048501	12	
	1 1/4" X 1 1/4" X 3/4"	048502	12	
	1 1/4" X 1 1/4" X 1"	048504	12	
	1 1/2" X 1 1/4" X 3/4"	048507	12	
	1 1/2" X 1 1/2" X 3/4"	048509	12	
	1 1/2" X 1 1/2" X 1"	048510	12	
	1 1/2" X 1 1/2" X 1 1/4"	048511	12	
	2" X 2" X 3/4"	048513	12	
	2" X 2" X 1"	048514	12	
	2" X 2" X 1 1/2"	048515	12	
GROOVED COUPLING SCH 80 BLZ	1 1/4"	048524	12	875a/15
	1 1/2"	048540	12	
	2"	048541	12	

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Notes relating to IPEX fittings:

- 1) IPEX fittings are LPCB approved for use with IPEX LPCB approved pipe and IPEX BM-5 "One-Step Solvent Cement" adhesive.
- 2) The system of pipe and fittings must be installed in accordance with IPEX Mechanical Technical Manual Series Volume II: Fire Protection Systems, Second Edition (Ref. MNMEBMIP060210 / BM003C dated 2008), which includes LPCB Conditions of Use agreed with IPEX.
- 3) The maximum normal ambient temperature of use shall not exceed 50°C.
- 4) The products shall only be installed by LPCB Certificated or Registered installing companies (see Part 5, Section 1A and 1B above), or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 5) IPEX Blazemaster CPVC fittings are manufactured from Blazemaster CPVC materials that are WRAS listed.
- 6) Blazemaster® is a registered trademark of Lubrizol Advanced Materials, Inc.

Certificate No: 875b to LPS 1260

IPEX Blazemaster® Chlorinated Polyvinyl Chloride (CPVC) Sprinkler Pipe

Product Name	Size	Model	Maximum working pressure (bar)	LPCB Ref. No.
Pipe SCH 80 BLZ	3/4"	013401	12	875b/01
	1"	013404	12	
	1 1/4"	013406	12	
	1 1/2"	013415	12	
	2"	013411	12	

Notes relating to IPEX pipes:

- 1) IPEX pipe is LPCB approved for use with IPEX LPCB approved fittings and IPEX BM-5 "One-Step Solvent Cement" adhesive.
- 2) The system of pipe and fittings must be installed in accordance with IPEX Mechanical Technical Manual Series Volume II: Fire Protection Systems, Second Edition (Ref. MNMEBMIP060210 / BM003C dated 2008), which includes LPCB Conditions of Use agreed with IPEX Inc.
- 3) The maximum normal ambient temperature of use shall not exceed 50°C.
- 4) The products shall only be installed by LPCB Certificated or Registered installing companies (see Part 5, Section 1A and 1B above), or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 5) IPEX Blazemaster CPVC pipe is manufactured from Blazemaster CPVC materials that are WRAS listed.
- 6) Blazemaster® is a registered trademark of Lubrizol Advanced Materials, Inc.

Nibco Inc

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Website: www.nibco.com

Certificate No: 878a to LPS 1260-2.2

Nibco Inc Blazemaster® Chlorinated Polyvinyl Chloride (CPVC) Sprinkler Fittings

Product Name	Size	Model	Maximum Working Pressure (bar)	LPCB Ref. No.	
Coupling	3/4"	5001	12	878a/01	
	1"	5001	12		
	1 1/4"	5001	12		
	1 1/2"	5001	12		
	2"	5001	12		
	2 1/2"	5001	12		
	3"	5001	12		
	1"x3/4"	5001R	12		
	1 1/4"x1"	5001R	12		
	1 1/2"x3/4"	5001R	12		
	1 1/2"x1"	5001R	12		
	1 1/2"x1 1/4"	5001R	12		
	2"x1"	5001R	12		

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Product Name	Size	Model	Maximum Working Pressure (bar)	LPCB Ref. No.
	2"x1½"	5001R	12	
Female Adapter w/Metal Thd Insert	¾"	5003-2-BI	12	878a/02
	1"	5003-2-BI	12	
Female Sprinkler Head Adapter w/Metal Thd Insert	¾"x½"	5003-2-S-BI	12	878a/03
	1"x½"	5003-2-S-BI	12	
Female Adapter w/Metal Thd Insert	¾"	5003-BI	12	878a/04
	1"	5003-BI	12	
	1¼"	5003-BI	12	
	1½"	5003-BI	12	
	2"	5003-BI	12	
Female Sprinkler Head Adapter w/Metal	¾"x½"	5003-S-	12	878a/05
Female Sprinkler Head Adapter w/Metal Thd Insert	1"x½"	5003-S-BI	12	
	1"x¾"	5003-S-BI	12	
Brastic Sprinkler Head Adaptor (Soc x Thd)	¾"x½"	5003-S-BT	12	878a/24
	1" x ½"	5003-S-BT	12	
Male Adapter w/Metal Thd Insert	¾"	5004-BI	12	878a/06
	1"	5004-BI	12	
	1¼"	5004-BI	12	
	1½"	5004-BI	12	
	2"	5004-BI	12	
45 Elbow	¾"	5006	12	878a/07
	1"	5006	12	
	1¼"	5006	12	
	1½"	5006	12	
	2"	5006	12	
	2½"	5006	12	
	3"	5006	12	
90 Elbow	¾"	5007	12	878a/08
	1"	5007	12	
	1¼"	5007	12	
	1½"	5007	12	
	2"	5007	12	
	2½"	5007	12	
	3"	5007	12	
Sprinkler Head 90 w/Metal Thd Insert	¾"x½"	5007-3-S-BI	12	878a/09
	1"x½"	5007-3-S-BI	12	
	1"x¾"	5007-3-S-BI	12	
	1¼"x½"	5007-3-S-BI	12	
90 Elbow	1"x¾"	5007R	12	878a/10
Tee	¾"	5011	12	878a/11
	1"	5011	12	
	1¼"	5011	12	
	1½"	5011	12	
	2"	5011	12	
	2½"	5011	12	
	3"	5011	12	
	¾"x¾"x1"	5011R	12	
	1"x1"x¾"	5011R	12	
	1"x¾"x1"	5011R	12	
	1"x¾"x¾"	5011R	12	
	1¼"x1¼"x1"	5011R	12	
	1¼"x1¼"x¾"	5011R	12	
	1¼"x1"x1¼"	5011R	12	
	1¼"x1"x1"	5011R	12	
	1¼"x1"x¾"	5011R	12	
	1¼"x1¼"x1½"	5011R	12	
	1½"x1½"x1¼"	5011R	12	
	1½"x1½"x1"	5011R	12	
	1½"x1½"x¾"	5011R	12	
	1½"x1¼"x1"	5011R	12	
	1½"x1¼"x¾"	5011R	12	
	1½"x1½"x2"	5011R	12	
	2"x2"x1½"	5011R	12	
	2"x2"x1¼"	5011R	12	
	2"x2"x1"	5011R	12	
	2"x2"x¾"	5011R	12	
	3"x3"x2"	5011R	12	
	2½"x2½"x2"	5011R	12	
	2½"x2½"x1½"	5011R	12	
	2½"x2½"x1¼"	5011R	12	

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Product Name	Size	Model	Maximum Working Pressure (bar)	LPCB Ref. No.		
Sprinkler Head Tee w/Metal Thd Insert	2½"x2½"x1"	5011R	12	878a/12		
	3"x3"x2½"	5011R	12			
	3"x3"x1½"	5011R	12			
	1"x¾"x1½"	5012R-S-BI	12			
	1"x½"x1"	5012R-S-BI	12			
	Speinkler Head Tee w/Metal Thd Insert	1¼"x1"x1½"	5012R-S-BI		12	
		Sprinkler Head Tee w/Metal Thd Insert	1½"x1¼"x1½"		5012R-S-BI	12
	2"x1½"x1½"		5012R-S-BI		12	
	Cap	1"	5012-S-BI		12	878a/13
		¾"x¾"x1½"	5012-S-BI		12	
1"x1"x1½"		5012-S-BI	12			
1¼"x1¼"x1½"		5012-S-BI	12			
1½"x1½"x1½"		5012-S-BI	12			
2"x2"x1½"		5012-S-BI	12			
¾"		5017	12			
1"		5017	12			
1¼"		5017	12			
1½"		5017	12			
Bushing	2"	5017	12	878a/14		
	2½"	5017	12			
	3"	5017	12			
	1"x¾"	5018	12			
	1¼"x1"	5018	12			
	1¼"x¾"	5018	12			
	1½"x1¼"	5018	12			
	1½"x1"	5018	12			
	1½"x¾"	5018	12			
	2"x1½"	5018	12			
	2"x1¼"	5018	12			
	2"x1"	5018	12			
	2"x¾"	5018	12			
	2½" x 1"	5018	12			
	2½"x2"	5018	12			
	2½"x1½"	5018	12			
	2½"x1¼"	5018	12			
	3" x 1½"	5018	12			
	3"x2½"	5018	12			
	3"x2"	5018	12			
Flush Bushing SHA (Spg x Thd) Cross	1"	5018-S-BI	12	878a/23		
	¾"	5035	12			
	1"	5035	12			
	1¼"	5035	12			
	1½"	5035	12			
	2"	5035	12			
	2½"	5035	12			
	3"	5035	12			
	3"	5035	12			
	3"	5035	12			
SHA Brass Insert	1"x1"x¾"x¾"	5035R	12	878a/17		
	½"		12			
Female Adapter Insert	¾"		12	878a/18		
	1"		12			
	¾"		12			
	1"		12			
Male Adapter Insert	1¼"		12	878a/19		
	1½"		12			
	2"		12			
	¾"		12			
	1"		12			
CPVC Union (Soc x Soc)	1¼"		12	878a/20		
	1"		12			
	¾"		12			
	½"		12			
CPVC Union (Soc x Thd) w/ Brass End	2		12	878a/21		
	¾"	5033-E	12			
	1"	5033-E	12			
Grooved Coupling	¾"	5033-E-3	12	878a/22		
	1"	5033-E-3	12			
	1¼"	5001-G	12			
Grooved Coupling	1½"	5001-G	12	878a/22		
	2"	5001-G	12			
	2½"	5001-G	12			
	2"	5001-G	12			
	65mm x 2½"	5001-G	12			
3"	5001-G	12				

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Notes relating to Nibco Inc fittings:

- 1) Nibco Fittings are LPCB approved for use with Viking Plastics and Harvel LPCB approved pipes and Nibco FP-1000 "One-Step Solvent Cement" adhesive.
- 2) Where assemblies are made using Harvel pipe, the system of pipe and fittings must be installed in accordance with Nibco Inc Installation Instructions (Nibco Ref: IM-BLZME-0608 dated 19/05/08). which includes LPCB Conditions of Use agreed with Nibco
- 3) Where assemblies are made using Viking pipe, the system of pipe and fittings must be installed in accordance with Nibco Inc Installation Instructions (Nibco Ref: IM-BLZME-0608 dated 19/05/08) and Viking Plastics 'Blazemaster' Installation Instruction (Viking Ref: VBM020107 Revision 4) which includes LPCB Conditions of Use agreed with Nibco and Viking
- 4) The maximum normal ambient temperature of use shall not exceed 50°C.
- 5) The products shall only be installed by LPCB Certificated or Registered installing companies (see Part 5, Section 1A and 1B above), or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 6) Nibco Blazemaster CPVC fittings are manufactured from Blazemaster CPVC materials that are WRAS listed.
- 7) Blazemaster® is a registered trademark of Lubrizol Advanced Materials, Inc.

Spears Manufacturing Company Inc

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Certificate No: 293a

SPEARS CHLORINATED POLYVINYLCHLORIDE (CPVC) FIRE SPRINKLER FITTINGS

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
Tee	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/01
Reducing Tee	0.75"x0.75"x1.0", 1.0"x0.75"x0.75", 1.0"x0.75"x1.0", 1.25"x1.0"x0.75", 1.25"x1.0"x1.0", 1.25"x1.0"x1.25", 1.25"x1.25"x0.75", 1.25"x1.25"x1.0", 1.25"x1.25"x1.25", 1.25"x1.25"x1.5", 1.5"x1.25"x0.75", 1.5"x1.25"x1.0", 1.5"x1.25"x1.25", 1.5"x1.25"x1.5", 1.5"x1.5"x0.75", 1.5"x1.5"x1.0", 1.5"x1.5"x1.25", 1.5"x1.5"x2.0", 2.0"x2.0"x0.75", 2.0"x2.0"x1.0", 2.0"x2.0"x1.5", 2.5"x2.5"x1.0", 2.5"x2.5"x1.25", 2.5"x2.5"x1.5", 3.0"x3.0"x2.0", 3.0"x3.0"x2.5"	12	293a/02
Sprinkler Head Tee	0.75"x0.75"x0.5", 1.0"x0.5"x1.0", 1.0"x0.75"x0.5", 1.0"x1.0"x0.5", 1.0"x1.0"x1.0", 1.25"x1.0"x0.5", 1.25"x1.25"x0.5", 1.5"x1.25"x0.5", 1.5"x1.5"x0.5", 2.0"x1.5"x0.5", 2.0"x2.0"x0.5"	12	293a/03
90° Elbow	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0", 1.0"x0.75"	12	293a/04
Sprinkler Head 90° Elbow	0.75"x0.5", 1.0"x0.5", 1.0"x0.75", 1.25"x0.5"	12	293a/05
45° Elbow	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/06
Cross	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/07
Coupling	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/08
Cap	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/09
Flange	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/10
Blind Flange	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/11
Spigot	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/12
Flange			
Reducer coupling	1.0"x0.75", 1.25"x0.75", 1.25"x1.0", 1.5"x0.75", 1.5"x1.0", 1.5"x1.25", 2.0"x1.0", 2.0"x1.25", 2.0"x1.5"	12	293a/13
Grooved Coupling	1.25", 1.5", 2.0", 2.5", 3.0"	12	293a/14
Adapter			
Female Sprinkler Head Adapter	0.75"x0.5", 1.0"x0.5", 1.0"x0.75"	12	293a/15
Reducer Bushing	1.0"x0.75", 1.25"x0.75", 1.25"x1.0", 1.5"x0.75", 1.5"x1.0", 1.5"x1.25", 2.0"x0.75", 2.0"x1.0", 2.0"x1.25", 2.0"x1.5", 2.5"x1.25", 2.5"x1.5", 2.5"x2.0", 3.0"x2.0", 3.0"x2.5"	12	293a/16
Spigot Sprinkler Head Adapter	0.75"x0.5", 1.0"x0.5"	12	293a/17

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
Union	0.75", 1.0", 1.25", 1.5", 2.0", 3.0"	12	293a/18
Spigot	0.75", 1.0"	12	293a/19
Female Adapter			
Adjustable Sprinkler Head	0.75"x0.5", 1.0"x0.5"	12	293a/20
Adapter (slip) Adjustable Sprinkler Head	0.75"x0.5", 1.0"x0.5"	12	293a/21
Adapter (spigot) SR Sprinkler Head Tee	3/4"x3/4"x0.5", 1.0"x0.5"x1.0, 1.0"x1.0"x0.5", 1.0"x1.0"x1.0", 1.25"x1.0"x0.5", 1.25"x1.25"x0.5", 1.5"x1.5"x0.5", 2.0"x1.5"x0.5", 2.0"x2.0"x0.5"	12	293a/22
SR Sprinkler Head 90°	3/4"x0.5", 1.0"x0.5", 1.0"x0.75", 1.25"x0.5"	12	293a/23
Elbow SR Female Sprinkler Head	3/4"x0.5", 1.0"x3/4"	12	293a/24
Adapter SR Female Adapter	3/4", 1.0", 1.25"	12	293a/25
SR Spigot Female Adapter	3/4", 1.0"	12	293a/26
SR Spigot Sprinkler Head	3/4"x0.5", 1"x0.5"	12	293a/27
Adaptor SR	3/4"x0.5", 1"x0.5"	12	293a/28
Adjustable Sprinkler Head			
Adapter (slip) SR	3/4"x0.5", 1"x0.5"	12	293a/29
Adjustable Sprinkler Head Adapter (spigot)			

Notes relating to Spears fittings and Harvel pipes

- 1) The system of pipe and fittings must be installed in accordance with Harvel Plastics Inc. and Spears Manufacturing Company, Installation Instructions, which includes LPCB Conditions of Use agreed with Harvel and Spears.
- 2) The maximum normal ambient temperature of use shall not exceed 50°C.
- 3) The products shall only be installed by LPCB Certificated or Registered installing companies (see Part 5, Section 1A and 1B above), or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.

Certificate No: 293b

Spears 'FlameGuard' Chlorinated Polyvinylchloride (CPVC) Fire Sprinkler Fittings

Product Name	Nominal Size (in.)	Part Number	Maximum Working Pressure (bar)	LPCB Ref. No.
Tee (Soc x Soc x Soc)	3/4	4201-007	12 BAR	293b/01
	1	4201-010	12 BAR	
	1 1/4	4201-012	12 BAR	
	1 1/2	4201-015	12 BAR	
	2	4201-020	12 BAR	
	2 1/2	4201-025	12 BAR	
	3	4201-030	12 BAR	

PART 3: SECTION 21.1**PLASTIC PIPES AND FITTINGS**

Product Name	Nominal Size (in.)	Part Number	Maximum Working Pressure (bar)	LPCB Ref. No.		
Reducing Tee (Soc x Soc x Soc)	3/4 x 3/4 x 1	4201-102	12 BAR	293b/02		
	1x3/4x3/4	4201-125	12 BAR			
	1x3/4x1	4201-126	12 BAR			
	1x1x3/4	4201-131	12 BAR			
	1 1/4x1x3/4	4201-157	12 BAR			
	1 1/4x1x1	4201-158	12 BAR			
	1 1/4x1x1 1/4	4201-159	12 BAR			
	1 1/4x1 1/4x3/4	4201-167	12 BAR			
	1 1/4x1 1/4x1	4201-168	12 BAR			
	1 1/4x1 1/4x1 1/2	4201-169	12 BAR			
	1 1/2x1 1/4x3/4	4201-201	12 BAR			
	1 1/2x1 1/4x1	4201-202	12 BAR			
	1 1/2x1 1/2x3/4	4201-210	12 BAR			
	1 1/2x1 1/2x1	4201-211	12 BAR			
	1 1/2x1 1/2x1 1/4	4201-212	12 BAR			
	1 1/2x1 1/2x2	4201-213	12 BAR			
	2x2x3/4	4201-248	12 BAR			
	2x2x1	4201-249	12 BAR			
	2x2x1 1/2	4201-251	12 BAR			
	2 1/2x2 1/2x1	4201-289	12 BAR			
	2 1/2x2 1/2x1 1/4	4201-290	12 BAR			
	2 1/2x2 1/2x1 1/2	4201-291	12 BAR			
	3x3x2	4201-338	12 BAR			
	3x3x2 1/2	4201-339	12 BAR			
	Street Tee (Sprig x Soc x Soc)	3/4	4244-007		12 BAR	293b/03
		1	4244-010		12 BAR	
		1 1/4	4244-012		12 BAR	
1 1/2		4244-015	12 BAR			
2		4244-020	12 BAR			
Sprinkler Head Tee (Soc x Soc x Metal FIPT)	3/4x3/4x1/2	4202-101	12 BAR	293b/04		
	1x3/4x1/2	4202-124	12 BAR			
	1x1x1/2	4202-130	12 BAR			
	1x1x1	4202-010	12 BAR			
	1 1/4x1x1/2	4202-156	12 BAR			
	1 1/4x1 1/4x1/2	4202-166	12 BAR			
	1 1/2x1 1/4x1 1/2	4202-199	12 BAR			
	1 1/2x1 1/2x1/2	4202-209	12 BAR			
	2x1 1/2x1/2	4202-237	12 BAR			
	2x2x1/2	4202-247	12 BAR			
Sprinkler Head Tee (Soc x Soc x SR FIPT)	3/4x3/4x1/2	4202-101SR	12 BAR	293b/05		
	1x3/4x1/2	4202-124SR	12 BAR			
	1x1x1/2	4202-130SR	12 BAR			
	1x1x1	4202-010SR	12 BAR			
	1 1/4x1x1/2	4202-156SR	12 BAR			
	1 1/4x1 1/4x1/2	4202-166SR	12 BAR			
	1 1/2x1 1/4x1 1/2	4202-199SR	12 BAR			
	1 1/2x1 1/2x1/2	4202-209SR	12 BAR			
	1 1/2x1 1/2x1	4202-211SR	12 BAR			
	2x1 1/2x1/2	4202-237SR	12 BAR			
Sprinkler Head Tee (Soc x Metal FIPT x Soc)	2x2x1/2	4202-247SR	12 BAR	293b/06		
	1x1/2x1	4203-122	12 BAR			
Sprinkler Head Tee (Soc x SR FIPT x Soc)	1x1/2x1	4203-122SR	12 BAR			
Sprinkler Head Tee, Sidewall (SR FIPT x SR FIPT x Soc) Cross (All Socket)	1/2x1/2x1	4243-075SR	12 BAR	293b/07		
	3/4	4220-007	12 BAR	293b/08		
	1	4220-010	12 BAR			
	1 1/4	4220-012	12 BAR			
	1 1/2	4220-015	12 BAR			
	2	4220-020	12 BAR			
	2 1/2	4220-025	12 BAR			
	3	4220-030	12 BAR			
Reducing Cross (All Socket)	1x1x3/4x3/4	4220-131	12 BAR	293b/09		
Sprinkler Head Cross, Sidewall (Soc x SR FIPT)	1x1/2	4221-130SR	12 BAR	293b/10		
90° Elbow (All Socket)	1x3/4	4221-131SR	12 BAR	293b/11		
	3/4	4206-007	12 BAR			
	1	4206-010	12 BAR			
	1 1/4	4206-012	12 BAR			
	1 1/2	4206-015	12 BAR			

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Product Name	Nominal Size (in.)	Part Number	Maximum Working Pressure (bar)	LPCB Ref. No.
Reducing 90° Elbow (All Socket) 90° Street Elbow (Spig x Soc)	2	4206-020	12 BAR	293b/12 293b/13
	2½	4206-025	12 BAR	
	3	4206-030	12 BAR	
	1x¾	4206-131	12 BAR	
	¾	4209-007	12 BAR	
	1	4209-010	12 BAR	
Sprinkler Head 90° Elbow (Socket x Metal FIPT)	1-¼	4209-012	12 BAR	293b/14
	1-½	4209-015	12 BAR	
	2	4209-020	12 BAR	
	¾x½	4207-101	12 BAR	
	1x½	4207-130	12 BAR	
	1x¾	4207-131	12 BAR	
Sprinkler Head Cross, Sidewall (Soc x SR FIPT)	1x¾	4207-131	12 BAR	
Sprinkler Head 90° Elbow (Socket x Metal FIPT)	1¾x½	4207-166	12 BAR	
	¾x½	4207-101SR	12 BAR	
45° Elbow (All Socket)	1x½	4207-130SR	12 BAR	293b/15
	1x¾	4207-131SR	12 BAR	
	1¾x½	4207-166SR	12 BAR	
	¾	4217-007	12 BAR	
	1	4217-010	12 BAR	
	1¼	4217-012	12 BAR	
Coupling (Soc x Soc)	1½	4217-015	12 BAR	293b/16
	2	4217-020	12 BAR	
	2½	4217-025	12 BAR	
	3	4217-030	12 BAR	
	¾	4229-007	12 BAR	
	1	4229-010	12 BAR	
Reducer Coupling (Soc x Soc)	1¼	4229-012	12 BAR	293b/17
	1½	4229-015	12 BAR	
	2	4229-020	12 BAR	
	2½	4229-025	12 BAR	
	3	4229-030	12 BAR	
	1x¾	4229-131	12 BAR	
Reducer Bushing (Spig x Soc)	1¾x¾	4229-167	12 BAR	293b/04 293b/17
	1¼x1	4229-168	12 BAR	
	1½x¾	4229-210	12 BAR	
	1½x1	4229-211	12 BAR	
	1½x1¼	4229-212	12 BAR	
	2x¾	4229-248	12 BAR	
Cap (Soc)	2x1	4229-249	12 BAR	293b/18
	2x1¼	4229-250	12 BAR	
	2x1½	4229-251	12 BAR	
	2½x1½	4229-291	12 BAR	
	2½x2	4229-292	12 BAR	
	1x¾	4237-131	12 BAR	
Grooved Coupling Adapter (Grv x Soc)	1¾x¾	4237-167	12 BAR	293b/19
	1¼x1	4237-168	12 BAR	
	1½x¾	4237-210	12 BAR	
	1½x1	4237-211	12 BAR	
	1½x1¼	4237-212	12 BAR	
	2x¾	4237-248	12 BAR	
Grooved Coupling Adapter (Grv x Soc)	2x1	4237-249	12 BAR	293b/20
	2x1¼	4237-250	12 BAR	
	2x1½	4237-251	12 BAR	
	2½x1¼	4237-290	12 BAR	
	2½x1½	4237-291	12 BAR	
	2½x2	4237-292	12 BAR	
Grooved Coupling Adapter (Grv x Soc)	3x2	4237-338	12 BAR	293b/20
	3x2½	4237-339	12 BAR	
	¾	4247-007	12 BAR	
	1	4247-010	12 BAR	
	1¼	4247-012	12 BAR	
	1½	4247-015	12 BAR	
Grooved Coupling Adapter (Grv x Soc)	2	4247-020	12 BAR	293b/20
	2½	4247-025	12 BAR	
	3	4247-030	12 BAR	
	1¼	4233-012	12 BAR	
	1½	4233-015	12 BAR	
	2	4233-020	12 BAR	
	2-½	4233-025	12 BAR	

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Product Name	Nominal Size (in.)	Part Number	Maximum Working Pressure (bar)	LPCB Ref. No.	
Female Adapter (Soc x Metal FIPT)	3	4233-030	12 BAR	293b/21	
	$\frac{3}{4}$	4235-007	12 BAR		
	1	4235-010	12 BAR		
	$1\frac{1}{4}$	4235-012	12 BAR		
	$1\frac{1}{2}$	4235-015	12 BAR		
	2	4235-020	12 BAR		
Sprinkler Head Adapter Long Body (Soc x Metal FIPT)	$1x\frac{1}{2}$	L4235-130	12 Bar	293b/22	
Sprinkler Head Adapter With Positioning Ring (Soc x Metal FIPT)	$\frac{3}{4}x\frac{1}{2}$	R4235-101	12 BAR		
Sprinkler Head Adapter (Soc x Metal FIPT)	$\frac{3}{4}x\frac{1}{2}$	4235-101	12 BAR		
	$1x\frac{1}{2}$	4235-130	12 BAR		
	$1x\frac{3}{4}$	4235-131	12 BAR		
Female Adapter (Soc x SR FIPT)	$\frac{3}{4}$	4235-007SR	12 BAR	293b/23	
	1	4235-010SR	12 BAR		
	$1\frac{1}{4}$	4235-012SR	12 BAR		
Sprinkler Head Adapter (Soc x SR FIPT)	$\frac{3}{4}x\frac{1}{2}$	4235-101SR	12 BAR	293b/24	
	$1x\frac{1}{2}$	4235-130SR	12 BAR		
	$1x\frac{3}{4}$	4235-131SR	12 BAR		
Spigot Sprinkler Head Adapter (Spig x Metal FIPT)	$3/x\frac{1}{2}$	4238-101	12 BAR	293b/25	
Spigot Sprinkler Head Adapter (Spig x Metal FIPT)	$1x1\frac{1}{2}$	4238-130	12 BAR		
Spigot Sprinkler Head Adapter (Spig x SR FIPT)	$\frac{3}{4}x\frac{1}{2}$	4238-101SR	12 BAR	293b/26	
	$1x\frac{1}{2}$	4238-130SR	12 BAR		
Spigot Female Adapter (Spig x Metal FIPT)	$\frac{3}{4}$	4278-007	12 BAR	293b/27	
	1	4278-010	12 BAR		
Spigot Female Adapter (Spig x SR FIPT)	$\frac{3}{4}$	4278-007SR	12 BAR	293b/28	
	1	4278-010SR	12 BAR		
Adjustable Sprinkler Head Adapter (Soc x Metal FIPT)	$\frac{3}{4}x\frac{1}{2}$	42001	12 BAR	293b/29	
	$1x\frac{1}{2}$	42011	12 BAR		
Adjustable Sprinkler Head Adapter (Spig x Metal FIPT)	$\frac{3}{4}x\frac{1}{2}$	42004	12 BAR	293b/30	
	$1x\frac{1}{2}$	42014	12 BAR		
Adjustable Sprinkler Head Adapter (Soc x SR FIPT)	$\frac{3}{4}x\frac{1}{2}$	42001SR	12 BAR	293b/31	
	$1x\frac{1}{2}$	42011SR	12 BAR		
Adjustable Sprinkler Head Adapter (Spig x SR FIPT)	$\frac{3}{4}x\frac{1}{2}$	42004SR	12 BAR	293b/32	
	$1x\frac{1}{2}$	42014SR	12 BAR		
Flange (Soc)	$\frac{3}{4}$	4251-007	12 BAR	293b/33	
	1	4251-010	12 BAR		
	$1\frac{1}{4}$	4251-012	12 BAR		
	$1\frac{1}{2}$	4251-015	12 BAR		
	2	4251-020	12 BAR		
	$2\frac{1}{2}$	4251-025	12 BAR		
	3	4254-030	12 BAR		
	$\frac{3}{4}$	4256-007	12 BAR		
Flange, Van Stone Style (Spig)	1	4256-010	12 BAR	293b/34	
	$1\frac{1}{4}$	4256-012	12 BAR		
	$1\frac{1}{2}$	4256-015	12 BAR		
	2	4256-020	12 BAR		
	$2\frac{1}{2}$	4256-025	12 BAR		
	3	4256-030	12 BAR		
	$\frac{3}{4}$	4253-007	12 BAR		293b/35
	1	4253-010	12 BAR		
$1\frac{1}{4}$	4253-012	12 BAR			
$1\frac{1}{2}$	4253-015	12 BAR			
2	4253-020	12 BAR			
$2\frac{1}{2}$	4253-025	12 BAR			
3	4253-030	12 BAR			
$\frac{3}{4}$	4257-007	12 BAR	293b/36		
1	4257-010	12 BAR			
$1\frac{1}{4}$	4257-012	12 BAR			
$1\frac{1}{2}$	4257-015	12 BAR			
2	4257-020	12 BAR			
3	4257-025	12 BAR			
Union (Soc x Soc)	$\frac{3}{4}$	4259-007BR	12 BAR	293b/37	
	1	4259-010BR	12 BAR		
	$1\frac{1}{4}$	4259-012BR	12 BAR		
	$1\frac{1}{2}$	4259-015BR	12 BAR		
	2	4259-020BR	12 BAR		
	3	4259-025BR	12 BAR		

Notes

- 1) The system of pipe and fittings must be installed in accordance with Spears Manufacturing Company installation instructions FG-3-0104, which includes LPCB conditions of use agreed with Spears Manufacturing Company.
- 2) The maximum normal ambient temperature of use shall not exceed 50°C.

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

- 3) In the UK these products shall only be installed by LPCB Certificated or Registered installing companies (See Part 5, Section 1A and 1B), or outside of the UK by companies who can provide evidence of personnel training in the installation of the product. It is recommended that companies engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 4) The base compound of the above listed fittings is 'Protherm 4526 orange 25'.

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Certificate No: 420a

TYCO FIRE PRODUCTS CHLORINATED POLYVINYLCHLORIDE (CPVC) BLAZEMASTER SPRINKLER FITTINGS

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
Cap	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	420a/01
Straight coupling	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	420a/02
Reducer bush	1.0"x0.75", 1.25"x0.75", 1.25"x1.0", 1.5"x0.75", 1.5"x1.0", 1.5"x1.25", 2.0"x0.75", 2.0"x1.0", 2.5"x1.0", 2.0"x1.25", 2.0"x1.5", 2.5"x1.25", 2.5"x1.5", 2.5"x2.0"	12	420a/03
90° Elbow	0.75", 1.0", 1.25", 1.5", 2.0", 2.25", 2.5", 3"	12	420a/04
45° Elbow	0.75", 1.0", 1.25", 1.5", 2.0"	12	420a/05
Tee	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3"	12	420a/06
Reducing Tee	0.75"x0.75"x1.0", 1.0"x0.75"x0.75", 1.0"x0.75"x1.0", 1.0"x1.0"x 0.75", 1.25"x1.0"x0.75", 1.25"x1.0"x1.0", 1.25"x1.0"x1.25", 1.25"x1.25"x0.75", 1.25"x1.25"x1.0", 1.25"x1.25"x1.5", 1.5"x1.25"x0.75", 1.5"x1.25"x1.0", 1.5"x1.5"x0.75", 1.5"x1.5"x1.25", 1.5"x1.5"x1.0", 2.0"x2.0"x3", 2.0"x2.0"x1.0", 2.0"x2.0"x1.25", 2.0"x2.0"x1.5", 2.5"x2.5"x1.0", 2.5"x2.5"x1.25", 2.5"x2.5"x2.0", 3.0"x3.0"x1.5", 3.0"x3.0"x2.0", 3.0"x3.0"x2.5"	12	420a/07
Cross	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3"	12	420a/08
Slip sprinkler head adapters	0.75"x0.5", 1.0"x0.5", 1.0"x0.75"	12	420a/09
Reducer	1.0"x0.75"	12	420a/11
Coupling			
Spigot sprinkler head Adaptor	0.75"x0.5", 1.0"x0.5"	12	420a/12
Sprinkler head 90° Elbow	0.75"x0.5", 1.0"x0.5"	12	420a/19
Sprinkler head tee	0.75"x0.75"x0.5", 1.0"x1.0"x0.5", 1.0"x1.0"x1.0", 1.25"x1.25"x0.5", 1.25"x1.0"x0.5", 1.5"x1.25"x0.5", 1.5"x1.5"x0.5", 2.0"x1.5"x0.5", 2.0"x2.0"x0.5"	12	420a/20
Reducing elbow 90°	1.0"x0.75"	12	420a/23
Male adapter NPT	0.75", 1.0"	12	420a/24
Male adapter ISO 7/1	1.0"	12	
Sprinkler head tee (back to back)	1.0"x0.5" NPT (3/8"), 1.0"x0.5" NPT (5/8")	12	420a/26
Cross (back to back)	1.0"x0.5" NPT (3/8"), 1.0"x0.5" NPT (5/8")	12	420a/27
Female adapter NPT	0.75", 1", 1.25", 1.5", 2.0"	12	420a/28

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PLASTIC PIPES AND FITTINGS

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
Female adapter ISO 7/1	1", 1.25", 1.5", 2.0"	12	
Reducing Cross Grooved Adapter	1"x1"x0.75"x0.75"	12	420a/29
	1.25", 1.50", 2", 2.50" x 76.1mm, 3"	12	420a/30

Notes relating to Tyco Fire Products pipes and fittings:

- 1) The system of pipe and fittings must be installed in accordance with the Tyco Fire Products Installation Handbook IH-1900 June 2008, which includes LPCB Conditions of Use agreed with Tyco.
- 2) The maximum normal ambient temperatures of use shall not exceed 50°C.
- 3) The products shall only be installed by LPCB Certificated or Registered Installing companies (see Part 5, Section 1A and 1B above) or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 4) Tyco BlazeMaster CPVC sprinkler pipes are manufactured from Blazemaster CPVC materials that are Wrc (WRAS) listed.

Certificate No: 420a

TYCO FIRE PRODUCTS CHLORINATED POLYVINYLCHLORIDE (CPVC) BLAZEMASTER SPRINKLER PIPE

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
Pipe	0.75", 1.0", 1.25", 1.5", 2.0", 2.5", 3.0"	12	420a/21

Notes relating to Tyco Fire Products pipes and fittings:

- 1) The system of pipe and fittings must be installed in accordance with the Tyco Fire Products Installation instructions, which includes LPCB Conditions of Use agreed with Tyco.
- 2) The maximum normal ambient temperatures of use shall not exceed 50°C.
- 3) The products shall only be installed by LPCB Certificated or Registered Installing companies (see Part 5, Section 1A and 1B above) or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 4) Tyco BlazeMaster CPVC sprinkler pipes are manufactured from Blazemaster CPVC materials that are Wrc (WRAS) listed.

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Certificate No: 837a to LPS 1260

Viking Plastics 'Blazemaster®' Chlorinated Polyvinyl Chloride (CPVC) Sprinkler Pipe

Product Name	Nominal Diameter Range	Maximum Working Pressure (bar)	LPCB Ref. No.
CPVC Sprinkler Pipe	0.75, 1, 1.25, 1.5, 2, 2.5", 3"	12	837a/01

Notes:

- 1) The system of pipe and fittings must be installed in accordance with Viking Plastics 'Blazemaster' Installation and Design Manual Ref. VBM020107 Revision 4, which includes LPCB Conditions of Use agreed with Viking Plastics.

PART 3: SECTION 21.1**PLASTIC PIPES AND FITTINGS**

- 2) Viking Plastics pipes are approved for use with fittings of the same nominal size manufactured by all LPCB approved Blazemaster licensees and Spears Manufacturing Company Inc.
- 3) The maximum nominal ambient temperature of use shall not exceed 50°C.
- 4) The products shall only be installed by LPCB Certificated or Registered installing companies (see Part 5, Section 1A and 1B above), or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 5) Viking Plastics Blazemaster CPVC sprinkler pipes are manufactured from Blazemaster CPVC materials that are WRAS listed.
- 6) Blazemaster® is a registered trademark of Lubrizol Advanced Materials, Inc.

Certificate No: 878a to LPS 1260-2.2

Viking Plastics Blazemaster® Chlorinated Polyvinyl Chloride (CPVC) Sprinkler Fittings

Product Name	Size	Model	Maximum Working Pressure (bar)	LPCB Ref. No.		
Coupling	3/4"	V5001-007	12	878a/01		
	1"	V5001-010	12			
	1 1/4"	V5001-012	12			
	1 1/2"	V5001-015	12			
	2"	V5001-020	12			
	2 1/2"	V5001-025	12			
	3"	V5001-030	12			
	1"x3/4"	V5001R-131	12			
	1 1/4"x1"	V5001R-168	12			
	1 1/2"x3/4"	V5001R-210	12			
	1 1/2"x1"	V5001R-211	12			
	1 1/2"x1 1/4"	V5001R-212	12			
	2"x1"	V5001R-249	12			
	2"x1 1/2"	V5001R-251	12			
	Female Adapter w/Metal Thd Insert	3/4"	V5003-2-BI-007		12	878a/02
1"		V5003-2-BI-010	12			
Female Sprinkler Head Adapter w/Metal Thd Insert	3/4"x1/2"	V5003-2-S-BI-101	12	878a/03		
	1"x1/2"	V5003-2-S-BI-130	12			
Female Adapter w/Metal Thd Insert	3/4"	V5003-BI-007	12	878a/04		
	1"	V5003-BI-010	12			
	1 1/4"	V5003-BI-012	12			
	1 1/2"	V5003-BI-015	12			
	2"	V5003-BI-020	12			
Female Sprinkler Head Adapter w/Metal	3/4"x1/2"	V5003-S-BI-101	12	878a/05		
	1"x1/2"	V5003-S-BI-130	12			
Female Sprinkler Head Adapter w/Metal Thd Insert	1"x3/4"	V5003-S-BI-131	12	878a/24		
	3/4" x 1/2"	V5003-S-BT	12			
Brastic Sprinkler Head Adaptor (Soc x Thd)	1" x 1/2"	V5003-S-BT	12	878a/06		
	3/4"	V5004-BI-007	12			
Male Adapter w/Metal Thd Insert	1"	V5004-BI-010	12	878a/07		
	1 1/4"	V5004-BI-012	12			
	1 1/2"	V5004-BI-015	12			
	2"	V5004-BI-020	12			
	2 1/2"	V5006-007	12			
	3"	V5006-030	12			
45 Elbow	3/4"	V5006-007	12	878a/07		
	1"	V5006-010	12			
	1 1/4"	V5006-012	12			
	1 1/2"	V5006-015	12			
	2"	V5006-020	12			
	2 1/2"	V5006-025	12			
	3"	V5006-030	12			
	90 Elbow	3/4"	V5007-007		12	878a/08
		1"	V5007-010		12	
		1 1/4"	V5007-012		12	
1 1/2"		V5007-015	12			
2"		V5007-020	12			
2 1/2"		V5007-025	12			
3"		V5007-030	12			
Sprinkler Head 90 w/Metal Thd Insert	3/4"x1/2"	V5007-3-S-BI-101	12	878a/09		
	1"x1/2"	V5007-3-S-BI-130	12			
	1"x3/4"	V5007-3-S-BI-131	12			
	1 1/4"x1/2"	V5007-3-S-BI-166	12			
	1"x3/4"	V5007R-131	12			
90 Elbow	3/4"	V5011-007	12	878a/10		
	1"	V5011-010	12			
Tee	3/4"	V5011-007	12	878a/11		
	1"	V5011-010	12			

PART 3: SECTION 21.1

PLASTIC PIPES AND FITTINGS

Product Name	Size	Model	Maximum Working Pressure (bar)	LPCB Ref. No.
	1¼"	V5011-012	12	
	1½"	V5011-015	12	
	2"	V5011-020	12	
	2½"	V5011-025	12	
	3"	V5011-030	12	
	¾"x¾"x1"	V5011R-102	12	
	1"x1"x¾"	V5011R-131	12	
	1"x¾"x1"	V5011R-126	12	
	1"x¾"x¾"	V5011R-125	12	
	1¼"x1¼"x1"	V5011R-168	12	
	1¼"x1¼"x¾"	V5011R-167	12	
	1¼"x1"x1¼"	V5011R-159	12	
	1¼"x1"x1"	V5011R-158	12	
	1¼"x1"x¾"	V5011R-157	12	
	1¼"x1¼"x1½"	V5011R-169	12	
	1½"x1½"x1¼"	V5011R-212	12	
	1½"x1½"x1"	V5011R-211	12	
	1½"x1½"x¾"	V5011R-210	12	
	1½"x1¼"x1"	V5011R-202	12	
	1½"x1¼"x¾"	V5011R-201	12	
	1½"x1½"x2"	V5011R-213	12	
	2"x2"x1½"	V5011R-251	12	
	2"x2"x1¼"	V5011R-250	12	
	2"x2"x1"	V5011R-249	12	
	2"x2"x¾"	V5011R-248	12	
	3"x3"x2"	V5011R-338	12	
	2½"x2½"x2"	V5011R-292	12	
	2½"x2½"x1½"	V5011R-291	12	
	2½"x2½"x1¼"	V5011R-290	12	
	2½"x2½"x1"	V5011R-289	12	
	3"x3"x2½"	V5011R-339	12	
	3"x3"x1½"	V5011R-337	12	
Sprinkler Head Tee w/Metal Thd Insert	1"x¾"x1½"	V5012R-S-BI-124	12	878a/12
	1"x½"x1"	V5012R-S-BI-122	12	
	1¼"x1"x1½"	V5012R-S-BI-156	12	
	1½"x1¼"x1½"	V5012R-S-BI-199	12	
	2"x1½"x1½"	V5012R-S-BI-237	12	
	1"	V5012-S-BI-010	12	878a/13
	¾"x¾"x1½"	V5012-S-BI-101	12	
	1"x1"x1½"	V5012-S-BI-130	12	
	1¼"x1¼"x1½"	V5012-S-BI-166	12	
	1½"x1½"x1½"	V5012-S-BI-209	12	
	2"x2"x1½"	V5012-S-BI-247	12	
Cap	¾"	V5017-007	12	878a/14
	1"	V5017-010	12	
	1¼"	V5017-012	12	
	1½"	V5017-015	12	
	2"	V5017-020	12	
	2½"	V5017-025	12	
	3"	V5017-030	12	
Bushing	1"x¾"	V5018-131	12	878a/15
	1¼"x1"	V5018-168	12	
	1¼"x¾"	V5018-167	12	
	1½"x1¼"	V5018-212	12	
	1½"x1"	V5018-211	12	
	1½"x¾"	V5018-210	12	
	2"x1½"	V5018--251	12	
	2"x1¼"	V5018-250	12	
	2"x1"	V5018-249	12	
	2"x¾"	V5018-248	12	
	2½" x 1"	V5018	12	
	2½"x2"	V5018-292	12	
	2½"x1½"	V5018-291	12	
	2½"x1¼"	V5018-290	12	
	3" x 1½"	V5018	12	
	3"x2½"	V5018-339	12	
	3"x2"	V5018-338	12	
Flush Bushing SHA (Spig x Thd)	1"	V5018-S-BI		878a/23
Cross	¾"	V5035--007	12	878a/16
	1"	V5035-010	12	

PART 3: SECTION 21.1**PLASTIC PIPES AND FITTINGS**

Product Name	Size	Model	Maximum Working Pressure (bar)	LPCB Ref. No.
	1¼"	V5035-012	12	
	1½"	V5035	12	878a/17
	2"	V5035	12	
	2½"	V5035	12	
	3"	V5035	12	
SHA Brass Insert	1"x1"x¾"x¾"	V5035R-131	12	
	½"		12	878a/18
	¾"		12	
Female Adapter Insert	1"		12	
	¾"		12	878a/19
	1"		12	
Male Adapter Insert	1¼"		12	
	1½"		12	
	2"		12	
	¾"		12	878a/20
	1"		12	
	1¼"		12	
	1½"		12	
	2"		12	
CPVC Union (Soc x Soc)	¾"	V5033-E	12	878a/21
	1"	V5033-E	12	
CPVC Union (Soc x Thd) w/ Brass End	¾"	V5033-E-3	12	
	1"	V5033-E-3	12	
Grooved Coupling	1¼"	V5001-G	12	878a/22
	1½"	V5001-G	12	
	2"	V5001-G	12	
	2½"	V5001-G	12	
	65mm x 2½"	V5001-G	12	
	3"	V5001-G	12	

Notes relating to Viking Plastics fittings:

- 1) Viking Plastics Fittings are LPCB approved for use with Viking Plastics and Harvel LPCB approved pipes and Nibco FP-1000 "One-Step Solvent Cement" adhesive.
- 2) Where assemblies are made using Harvel pipe, the system of pipe and fittings must be installed in accordance with Nibco Inc Installation Instructions (Nibco Ref: IM-BLZME-0608 dated 19/05/08), which includes LPCB Conditions of Use agreed with Nibco
- 3) Where assemblies are made using Viking pipe, the system of pipe and fittings must be installed in accordance with Nibco Inc Installation Instructions (Nibco Ref: IM-BLZME-0608 dated 19/05/08) and Viking Plastics 'Blazemaster' Installation Instruction (Viking Ref: VBM020107 Revision 4) which includes LPCB Conditions of Use agreed with Nibco and Viking
- 4) The maximum normal ambient temperature of use shall not exceed 50°C.
- 5) The products shall only be installed by LPCB Certificated or Registered installing companies (see Part 5, Section 1A and 1B above), or by firms outside the UK who can provide evidence of personnel training in the installation of the product. It is recommended that firms engaged in the installation of this product also be LPCB Certificated to ISO 9000.
- 6) Viking Plastics Blazemaster CPVC fittings are manufactured from Blazemaster CPVC materials that are WRAS listed.
- 7) Blazemaster® is a registered trademark of Lubrizol Advanced Materials, Inc.

PART 3: SECTION 21.2

POLYMERIC COMPOUNDS FOR PLASTIC PIPES AND FITTINGS

This section lists products approved in accordance with:

- LPS 1260 *Requirements for testing plastic pipes and fittings for sprinkler systems.*

Notes:

The compounds listed in this section have been tested and approved for the production of the plastic pipes and fittings listed in Section 21.1.

As the pipes and fittings themselves must be tested and approved to LPS 1260, only those products listed in Part 3 Section 21.1 are LPCB approved. Products manufactured from compounds in section 21.2 but not listed in Part 3 Section 21.1 are not LPCB approved.

Lubrizol Advanced Materials Europe B.V.B.A

Nijverheidsstraat 30, B-2260, Westerlo, Oevel, Belgium
Tel: +32 14 24 18 11 • Fax: +32 14 21 6681

Certificate No: 535a

Product Name	Part No.	LPCB Ref. No.
CPVC Pipe Compound	88745 ORG 734	535a/01
	88738 ORG 734	535a/02
CPVC Fitting Compound	88971 ORG 734	535a/03
	88065 ORG 734	535a/04

Notes:

- 1) This is an approval of the compounds, not the pipe and fittings. Approval of pipes and fittings using these compounds is dependent on conformance with LPS 1260.
- 2) Firms engaged in manufacturing fire sprinkler pipe and fitting products from these compounds shall also be LPCB Certified.
- 3) BlazeMaster® CPVC sprinkler pipes and fittings manufactured from BlazeMaster® CPVC pipe and fitting materials are WrC (WRAS) listed.
- 4) BlazeMaster ® is a registered trademark of Lubrizol Advanced Materials Europe B.V.B.A.

This section lists products approved in accordance with:

- LPCB Schedule of requirements

Metron actuators listed below have been evaluated in relation to their general performance capability but not in relation to their suitability for specific applications.

LPCB strongly recommends that:

- 1) Care shall be exercised to ensure that the monitoring current specified by the manufacturer is not exceeded.
- 2) The manufacturer's installation instructions and product safety instructions shall be followed.
- 3) These devices shall be replaced every ten years.

Chemring Energetics Limited

Ardeer Site, Stevenston, Ayrshire, Scotland KA20 3LN UK

Tel: +44 (0)1294 487007 • Fax: +44 (0)1294 487230

E-mail: campbell.howie@chemringenergetics.co.uk • Website: www.chemringenergetics.co.uk

Certificate No: 313a

Protractor 'Metron' Actuators

Product Name	Stroke (mm)	Work Outout J (minimum)	Resistance Range Ohms	Allfire Amps (50ms)	Nofire Amps (5 sec)	LPCB Ref. No.
DR2001/C13	3.4	0.69	0.9 to 1.6	0.6	0.3	313a/01
DR2003/C1	3.4	1.18	0.9 to 1.6	0.6	0.3	313a/02
DR2003/C6	3.4	1.18	0.9 to 1.6	0.6	0.3	
DR2003/C35	3.4	1.18	0.9 to 1.6	0.6	0.3	
DR2004/C1	9.5	3.43	0.9 to 1.6	0.6	0.3	313a/03
DR2005/C1	9.5	3.43	0.9 to 1.6	0.6	0.3	313a/04
DR2005/C2	9.5	3.43	0.9 to 1.6	0.6	0.3	
DR2005/C3	9.5	3.43	0.9 to 1.6	0.6	0.3	
DR2005/C6	9.5	3.43	0.9 to 1.6	0.6	0.3	
DR2005/C9	9.5	3.43	0.9 to 1.6	0.6	0.3	
DR2005/C35	9.5	3.43	0.9 to 1.6	0.6	0.3	
DR2006/C1	13.5	4.9	0.9 to 1.6	0.6	0.3	313a/05
DR2006/C2	13.5	4.9	0.9 to 1.6	0.6	0.3	
DR2014/C1	9.5	4.9	0.9 to 1.6	0.6	0.3	313a/06
DR2053	3.4	0.8	7 to 12	0.16	0.05	313a/07

Maximum monitoring current for all models is 0.01A.

PART 3: SECTION 23

WATER MOTOR ALARMS

This section lists products approved in accordance with:

- EN12259-4 *Fixed firefighting systems. Components for sprinkler & water spray systems. Water motor alarms.*

MEFA Italia S.r.l.

Ufficio Comm., Le e magazzino, Via G.B. Morgagni 16/B, Pogliano M.se (Mi), Italy

Tel: +39 0293 540 195 • Fax: +39 0293 542 690

E-mail: danielpeluso@mefaitalia.com • Website: www.mefaitalia.com

Certificate No: 638Ab to EN 12259-4: 2000

Product Name	Model	LPCB Ref. No.
Water Motor Alarm	Model E	638Ab/01

Rapidrop Limited

Rutland Business Park, Newark Road, Peterborough PE1 5WA UK

Tel: +44 (0)1733 847 510 • Fax: +44 (0)1733 553 958

E-mail: rapidrop@rapidrop.com • Website: www.rapidrop.com

Certificate No: 566c/01 to EN 12259-4:1999 + Amendment A1:2001

Product Name	Model	LPCB Ref. No.
Water Motor Alarm	Model E	566c/01

Rolland Sprinklers

Usine de 73410, Mognard, France

Tel: +33 479 547 250 • Fax: +33 479 547 248

E-mail: info@rolland-sprinklers.com

Certificate No: 638b

Product Name	Model	LPCB Ref. No.
Water Motor Alarm	Model E	638b/01

The Reliable Automatic Sprinkler Co. Inc

1470 Smith Grove Road, Liberty, South Carolina 29657, USA

Tel: +1 864 843 1734 • Fax: +1 864 843 1418

E-mail: jcevallos@reliablesprinkler.com • Website: www.reliablesprinkler.com

UK Sales Enquiries:

Tel: +44 (0)1372 728899 • Fax: +44 (0)1372 724461

Approved Products

Water Motor Alarm Model C

**LPCB Ref.
No.**
034f/01

The Viking Corporation

210 N Industrial Park, Hastings, Michigan 49058, USA
 Tel: +1 269 945 9501 • Fax: +1 269 945 9599
 E-mail: techsvcs@vikingcorp.com • Website: www.vikingcorp.com

UK Sales Enquiries

Tel: +44(0) 1427 875999 • Fax: +44(0) 1427 875998

Certificate No: 096u/01 to EN 12259-4:2000 +Amendment A1:2001

Water Motor Alarm (1)

Product Name	Model	LPCB Ref. No.
Water Motor Alarm (1)	F-2	096u/01

Notes:

- 1) The maximum specified working pressure of this device is 12 bar.

Tyco Fire & Building Products

Kopersteden 1, 7547 TJ Enschede, The Netherlands
 Tel: Sales Enquiries: +31 53 4284444 • Fax: +31 53 4283377
 E-mail: info@tyco-bspd.com • Website: www.tycobuilding.com

Certificate No: 673b to EN 12259-4: 2000

Product Name	Model	LPCB Ref. No.
Water Motor Alarm	WMA1	673b/01

Notes:

- 1) Maximum working pressure: 16 bar.

Venus Fire Protection Ltd

4105, Portland Blvd, Sherbrooke (Quebec) J1L 1X9, Canada
 Tel: +1 819 820 8000 • Fax: +1 819 820 8002
 E-mail: venus@venus.ca • Website: www.venus-fire.com

Certificated Products

Water Motor Alarm Model E

**LPCB Ref.
No.**
638b/01

Victaulic Company

4901 Kesslerville Road, Easton, Pennsylvania 18040, USA
 Tel: +1 610 559 3300 • Fax: +1 610 250 8817
 E-mail: victaulic@victaulic.com • Website: www.victaulic.com

Certificate No: 104f to EN 12259-4

PART 3: SECTION 23

WATER MOTOR ALARMS

Certificated Products

Water Motor Alarm Series 760

**LPCB Ref.
No.**
104f/01