

Register of Sprinkler Equipment

ISSUE 1 | REVISION 5
JULY 2023



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The majority of equipment currently listed in this register are Sprinkler Heads.
Other equipment will appear on the list as issued.

1. Introduction

This Register of Certified Product (“Register”) lists Fire Sprinkler Products and Components that have been formally issued by Aon with a listing certificate, as complying with the requirements of NZS 4541 and/or NZS4515. Under the provisions of NZS4541 the Sprinkler System Certifier (SSC) is responsible for listing of product.

The listing is based upon evidence provided by the manufacturer, or their agent, that the product has been tested or analysed by a competent person or laboratory; and has been demonstrated to meet the minimum performance criteria.

Each listing details the basis on which that listing has been accepted. The listing certificate also includes any restrictions or warnings the SSC believes warranted. In some cases the SSC may restrict the listing to a narrower range than the manufacturer’s data would otherwise indicate; this may be due to more onerous criteria with the relevant New Zealand standard or reflect differences in New Zealand installation practices.

This Register is published by the Fire Protection Association (New Zealand) Incorporated (FPANZ), with Aon New Zealand undertaking responsibility for independent technical control of the Register.

This Register has been produced for reference by:

- › Building Consent Authorities
- › Territorial Authorities
- › Fire and Emergency NZ
- › Architects
- › Consultants
- › Designers
- › Installation, Maintenance and Testing Contractors
- › Building owners
- › Importers
- › Manufacturers
- › Accredited Inspection Bodies

The Register is intended to be used for both new installations to the latest standards, and for the upgrade and extension of historic systems to prior versions of standards.

Given the multiplicity of manufacturers, import agents, and distributors the register is split into three sections; sprinkler heads, valves and miscellaneous.

2. Legislative and Standards Background

(NOTE: all clause numbers refer to NZS 4541:2013. The full provisions of the standard should be read in conjunction with the summary supplied below.)

The Acceptable Solutions of the New Zealand Building Code (NZBC) Approved Documents call up NZS4515:2009 and NZS 4541:2013 for Fire Sprinkler Systems.

NZS 4541:2013 has specific requirements for fire sprinkler system equipment compliance. A summary of these requirements is as follows:

- › 110 (e) and (f) defines as part of the duties of the SSC the role of listing contractors and equipment.
- › 113 provides the formal evidence that the SSC shall site and review before listing any contractor. This clause also imposes an ongoing responsibility upon the listed contractor and notes the full listing is valid for 24 months.
- › 114 provides the formal evidence that the SSC shall site and review before listing any equipment.
- › 115 details the parameters by which a listing maybe withdrawn by the SSC.

Appendix C and F provide detail and guidance for the SSC and the listing applicant. It is expected that NZS4541:2020 will be cited in the Acceptable Solutions in 2022. We do not anticipate any change in the listing process when the citation occurs.

3. Operation of the Register

In order to maintain a consistent, workable, and readily accessible system, available to the whole industry, the FPANZ and Aon have agreed that:

- a) Aon (or their agreed nominee) shall provide independent technical review of applications for listing made by manufacturers, and shall maintain technical editorial control of the Register, subject to the guidelines and procedures specified below,
- b) Only certified products will be accepted for listing. Product certification will be achieved via an appraisal certificate from a recognised test laboratory or suitable evidence of overseas agency listing for all new product. Self certification may be acceptable for subsequent changes to listed product,
- c) FPANZ shall provide clerical/secretarial and publishing/subscription services to facilitate the widespread distribution and regular updates of the Register, and
- d) Manufacturers or suppliers shall make application for listing of products in the Register according to the procedures and criteria specified below.

Any equipment manufacturer or importer is eligible to apply for listing, subject to the procedures and criteria listed below.

Technical operation and publication of the Register is independent of the equipment manufacturers and importers.

In certain circumstances as detailed in clause 115 Aon may, at its sole discretion, withdraw a listing certificate. Should this arise the product will be deleted from this register.

4. Subscriptions and Updates

All enquiries regarding subscriptions and copyright shall be referred to:

Team@FPA
Fire Protection Association NZ Inc
Private Box 302372, North Harbour
Auckland 1330

Phone: (09) 414 4450
Email: info@fpanz.org

5. Charges

The cost to assess, list, and add to the FPANZ register of approval sprinkler hardware is \$400.00 per item. If additional items are requested to be listed at the same time each additional item will incur an additional fee of \$150.00. These fees are applicable to assessment of items that already hold a recognized form of overseas listing. For non-standard, unique or more challenging items additional time incurred assessing the application will be charged at \$250/hr plus any relevant disbursements.

Charges will be made by Aon for technical assessment of applications for listing, and amendments to existing listings as follows:

- 】 Please refer to the current price schedule from Aon.
- 】 For certain products Aon can provide a quotation.
- 】 Should the specific technical assessment be outside of the competency of Aon a subject matter expert will require engagement by the listing applicant. The subject matter expert will need to agree the parameters of their enquiry with Aon. Subject to agreement by Aon the subject matter expert may not necessarily be independent of the applicant.
- 】 Where manufacturer site visits are required to inspect records or are otherwise considered necessary these will be at the discretion of the Aon, and this service

will be charged at the current hourly rate of the independent technical advisor plus disbursements.

Note if an application is rejected for any reason, Aon reserves the right to charge additional fees (based on actual time and costs) for a reassessment

All charges are in New Zealand Dollars, are exclusive of GST, and are subject to change.

Aon's fee proposal is subject to their standard terms of business, which can be viewed [here](#) 

By accepting their fee proposal, applicants agree that their standard terms of business apply to the services Aon agree to provide from time to time.

6. Review

The manufacturer, or their designate, in the event of material change to the listed product shall advise Aon of the changes. Aon shall determine if the change affects the status or detail of the listing and amend as necessary.

Aon may review the suitability of any listed product should they have reason for concern. Refer NZS4541 clause 115.

Listing do not expire unless: there is a change to content the Standard; the manufacturer makes a design change; the basis of which the product was listed is modified; or the manufacturer, or their agent, withdraws product support from the New Zealand market.

7. Copyright

Copyright of this Register is held by FPANZ as publisher. All rights are reserved. The Register may not be copied or reproduced in any way, either in whole or in part, without the express permission of FPANZ, obtained through the Chief Executive Officer.

Copyright of the listing certificates is held by Aon. These certificates may not be represented as anything other than demonstrating a product has been found to comply with the requirements of NZS4541 and NZS4515.

8. Responsibility

The individual manufacturers or suppliers are responsible for obtaining equipment listings and the accompanying supporting evidence. Aon is responsible for reviewing and issuing the listing.

9. Disclaimer

This Register details the listing status of products and components current at the time of issue. This listing status is subject to change without notice at any time.

Listing in this Register does not imply any warranty whatsoever by the publishers or their technical advisors as to the field performance of products, systems, or components listed.

Listing in this Register does not imply any warranty whatsoever by the publishers or their technical advisors against any defect or failure in service of products, systems, or components listed.

Listing in this Register does not imply any responsibility whatsoever by the publishers or their technical advisors in regards to patents or other features or conditions applying in respect of any products, systems, or components listed.

Neither the publishers nor their technical advisors, nor any of their officers or employees shall be liable to any person or company for anything contained or implied in, or omitted from, this Register or any update of any part of it.

In all cases the reader is referred to the manufactures published data sheets.

10. Listing procedures and administration of the Register

10.1 Procedures for a manufacturer to obtain “listing” in the Register

All enquiries for amendments, alterations and additions to listings shall be referred to Aon in the first instance:

Mr Stephen Ridder
Aon New Zealand
388 Blenheim Road, Upper Riccarton
Christchurch 8140

Telephone: (03) 345 9843

Email: nz.ssc@aon.com
and cc Stephen.ridder@aon.com

The Technical Manager at Aon, or his/her duly authorised delegate, is responsible for technical review of all applications made by manufacturers for listing of equipment and components.

Supporting documentation as applicable according to the criteria below shall accompany each application for listing.

Where the application for listing is not from the manufacturer then evidence of agency is required. This evidence of agency is to ensure the authenticity and completeness of the documentation supplied to the SSC. Therefore, listings are not granted to parallel importers due to the lack of agency.

Where confidential or sensitive data is provided to Aon please be sure to clearly indicate that the information is issued in confidence. Aon has clear policies regarding the confidentiality of customers data.

10.2 Criteria for obtaining product listing in this Register

10.2.1 Listing new products

For all products, the manufacturer or supplier shall complete and submit an Application for Listing form (Form 9) and submit to Aon with the following supporting evidence as applicable:

- Manufacturer’s datasheets and drawings.
- Manufacturer’s drawings.
- Manufacturer’s engineering calculations
- Copies of overseas approvals from recognized testing agencies such as FM, UL, or VdS.

When a product has not been subjected to testing by an overseas agency the following supporting evidence will be required as applicable. Before beginning this process it is best to call Aon to discuss so as to ensure any engineering assessments or laboratory testing is appropriate.

When a review or testing will be complex, agreement with Aon of the terms of the review or testing should be sought first.

10.2.2 Amendments/Upgrades to existing listed products

By way of cover email from the manufacturer, or supplier, which explains the change(s) and supported with revised manufacturers’ datasheets and updated foreign approvals or engineering assessments shall be supplied to Aon for review.

Where the change is minor or determined to be inconsequential the listing certificate may not require amendment.

Where the change is more than minor or seeks to increase the scope of the listing the listing certificate will be undated and reissued.

ANNEX 1 – Form of the Register

9 LISTING OF EQUIPMENT



Aon File Ref: _____

This LISTING OF EQUIPMENT FORM 9 (as per Section 114 NZS4541:2013 and NZS4515:2009 Appendix G) is to be completed and signed by the manufacturer of the listed equipment, or their appointed agent.

1 IDENTIFICATION DETAILS

Item	<input type="text"/>			
For use as	<input type="text"/>			
Manufacturer	<input type="text"/>			
Supplier/Importer	<input type="text"/>	Contact Name	<input type="text"/>	
Address	<input type="text"/>		Telephone	<input type="text"/>
			Email	<input type="text"/>

2 EQUIPMENT DETAILS

Make	<input type="text"/>	Model	<input type="text"/>
Range Limitations	<input type="text"/>	Ref Information	<input type="text"/>
Restrictions & Warnings	<input type="text"/>		
Special Conditions	<input type="text"/>		

3 MANUFACTURER OR AUTHORISED AGENT TO SIGN

Name	_____	Designation	_____
Signature	_____	Date	_____

Note: Please attach (i) manufacturer's data sheets,
(ii) proof of overseas approvals or listings and
(iii) any other pertinent information.

Confirm all attached

Email to: NZ.SSC@Aon.com using subject line reference "Equipment Listing Application".



Change Log for Issue 1 Revision 5

The main areas of change in the development of Issue 1 Revision 5, July 2023 are as follows.

1. Update of listings





Sprinkler Equipment

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Sprinklers *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-138	Asia Union	AU102	AU68-M80-SSP	Spray Pendent Sprinkler	Standard	15	8	27-Jan-11	Manufacturer's Installation Manual	UL Online Certifications Directory VNIV.EX15516	Use manufacturer's spanners.	
SP-140	Asia Union	AU202	AU93-M80-SSP	Spray Pendent Sprinkler	Standard	15	8	27-Jan-11	Manufacturer's Installation Manual	UL Online Certifications Directory VNIV.EX15516	Use manufacturer's spanners.	
SP-137	Asia Union	AU101	AU68-M80-SSU	Spray Upright Sprinkler	Standard	15	8	27-Jan-11	Manufacturer's Installation Manual	UL Online Certifications Directory VNIV.EX15516	Use manufacturer's spanners.	
SP-139	Asia Union	AU201	AU93-M80-SSU	Spray Upright Sprinkler	Standard	15	8	27-Jan-11	Manufacturer's Installation Manual	UL Online Certifications Directory VNIV.EX15516	Use manufacturer's spanners.	
SP-119	Globe	V5668	GL Conventional Sprinkler	Conventional Sprinkler	Standard	15	8	16-Aug-11	Bulletin GL5661 Rev # 4	LPCB Ref No. 147c/04	Use manufacturer's spanners	
SP-120	Globe	V8169	GL Conventional Sprinkler	Conventional Sprinkler	Standard	20	11.5	16-Aug-11	Bulletin GL5661 Rev # 4	LPCB Ref No. 147c/04	Use manufacturer's spanners	
SP-121	Globe	V5624	GL Conventional Sprinkler	Conventional Sprinkler	Quick	15	8	16-Aug-11	Bulletin GL5615 Rev # 7	LPCB Ref No. 147c/04	Use manufacturer's spanners	
SP-122	Globe	V8125	GL Conventional Sprinkler	Conventional Sprinkler	Quick	20	11.5	16-Aug-11	Bulletin GL5615 Rev # 7	LPCB Ref No. 147c/04	Use manufacturer's spanners	
SP-115	Globe	V5679	GL Dry Pendent Sprinkl	Dry Sprinkler	Standard	25	8	16-Aug-11	Bulletin GL5679 Rev # 11	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-116	Globe	V8179	GL Dry Pendent Sprinkl	Dry Sprinkler	Standard	25	11.5	16-Aug-11	Bulletin GL5679 Rev # 11	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-114	Globe	V8109	Model GL8109 ECLH Sprinkler	Extended coverage Light hazard Sprinkler	See certificate	20	11.5	14-Jan-10	Bulletin GL8109 Rev #5	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-173	Globe	V4231	GL 4231 Residential HSW Sprinkler	Horizontal Sidewall Residential Sprinkler	Residential	15	5.9	16-Aug-11	Bulletin GL4231 Rev 2	UL Online Certifications Directory VNIV.EX1086	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-128	Globe	V5632	GL Horizontal Sidewall Sprinkler	Horizontal Sidewall Sprinkler	Quick	15	8	16-Aug-11	Bulletin GL5615 Rev # 7	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-134	Globe	V5670	GL Horizontal Sidewall Sprinkler	Horizontal Sidewall Sprinkler	Standard	15	8	16-Aug-11	Bulletin GL5661 Rev # 4	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-174	Globe	V4248	Model GL4248 Millennium Flush Pendent Residential Sprinkler	Pendent Residential Sprinkler	Residential	15	5.8	16-Aug-11	Bulletin GL4248 Rev # 5	UL Online Certifications Directory VNIV.EX1086	Use manufacturer's spanners.	
SP-175	Globe	V4110	Model GL4110 Pendent Residential Sprinkler	Pendent Residential Sprinkler	Residential	15	5.8	16-Aug-11	Bulletin 4110/4910 Rev #6	UL Online Certifications Directory VNIV.EX1086	Use manufacturer's spanners and listed recessed eschutcheons.	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-176	Globe	V4910	Model GL4910 Pendent Residential Sprinkler	Pendent Residential Sprinkler	Residential	15	6.8	16-Aug-11	Bulletin 4110/4910 Rev #6	UL Online Certifications Directory VNIV.EX1086	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-117	Globe	V5653	GL5653 Inch Cocealer Sprinkler	Pendent Spray Sprinkler	Standard	15	8	16-Aug-11	Bulletin GL5653 Rev # 6	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners	
SP-118	Globe	V1160	GL1150 Extra Large Orifice pendent Spray Sprinkler	Pendent Spray Sprinkler	Standard	20	16.6	16-Aug-11	Bulletin GL1160 Rev#2	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners	
SP-172	Globe	V4906	GL Residential Inch Concealer Sprinkler	Residential Sprinkler	Residential	15	6.8	16-Aug-11	Bulletin 4906	UL Online Certifications Directory VNIV.EX1086	Use manufacturer's spanners.	
SP-123	Globe	V5601	GL Pendent Spray Sprinkler	Spray Pendent Sprinkler	Quick	15	8	16-Aug-11	Bulletin GL5615 Rev # 7	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-124	Globe	V8106	GL Pendent Spray Sprinkler	Spray Pendent Sprinkler	Quick	20	111.5	16-Aug-11	Bulletin GL5615 Rev # 7	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-129	Globe	V5651	GL Pendent Spray Sprinkler	Spray Pendent Sprinkler	Standard	15	8	16-Aug-11	Bulletin GL5661 Rev # 4	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-130	Globe	V8156	GL Pendent Spray Sprinkler	Spray Pendent Sprinkler	Standard	20	111.5	16-Aug-11	Bulletin GL5661 Rev # 4	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-125	Globe	V5615	GL Upright Spray Sprinkler	Spray Upright Sprinkler	Quick	15	8	16-Aug-11	Bulletin GL5615 Rev # 7	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners	
SP-126	Globe	V8118	GL Upright Spray Sprinkler	Spray Upright Sprinkler	Quick	20	11.5	16-Aug-11	Bulletin GL5615 Rev # 7	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners	
SP-131	Globe	V5661	GL Upright Spray Sprinkler	Spray Upright Sprinkler	Standard	15	8	16-Aug-11	Bulletin GL5661 Rev # 4	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners	
SP-132	Globe	V8164	GL Upright Spray Sprinkler	Spray Upright Sprinkler	Standard	20	11.5	16-Aug-11	Bulletin GL5661 Rev # 4	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners	
SP-170	Globe	V1167	GL1167 ELO Sprinkler	Upright Spray Sprinkler	Standard	20	16.6	16-Aug-11	Bulletin 1167 Rev 1	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners.	
SP-171	Globe	V1123	GL1123 ELO Sprinkler	Upright Spray Sprinkler	Quick	20	16.6	16-Aug-11	Bulletin 1123 Rev 3	UL Online Certifications Directory VNKKW.EX4258	Use manufacturer's spanners.	
SP-127	Globe	V5626	GL Vertical Sidewall Sprinkler	Vertical Sidewall Sprinkler	Quick	15	8	16-Aug-11	Bulletin GL5615 Rev # 7	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners	
SP-133	Globe	V5675	GL Vertical Sidewall Sprinkler	Vertical Sidewall Sprinkler	Standard	15	8	15-Jan-10	Bulletin GL5661 Rev # 3	UL Online Certifications Directory VNIV.EX1085	Use manufacturer's spanners	
PI-03	Paradise	PI221	PI1221 Spray Sprinkler	Spray Pendant	Quick	15	8	25-Jun-08		FM Approval Report		
PI-04	Paradise	PI220	PI1220 Spray Sprinkler	Spray Pendant	Standard	15	8	25-Jun-08		FM Approval Report	Install in accordance with manufaturer's instructions... Maximum installation torque 28.5Nm... Do not remove protective cap prior to installation	
PI-03	Paradise	PI221	PI1221 Spray Sprinkler	Spray Pendant	Quick	15	8	25-Jun-08		FM Approval Report		

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/ Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
PI-04	Paradise	PI220	PI1220 Spray Sprinkler	Spray Pendant	Standard	15	8	25-Jun-08		FM Approval Report	Install in accordance with manufacturer's instructions... Maximum installation torque 28.5Nm... Do not remove protective cap prior to installation	
PI-01	Paradise	PI1210	PI1210 Spray Sprinkler	Spray Upright	Standard	15	8	25-Jun-08		FM Approval Report		
PI-02	Paradise	PI1211	PI1211 Spray Sprinkler	Spray Upright	Quick	15	8	25-Jun-08		FM Approval Report	Install in accordance with manufacturer's instructions...Maximum installation torque 28.5Nm... Do not remove protective cap prior to installation	
SP-148	Protector	PS003	Model A Standard Concelaed Sprinkler	Concealed Pendent Sprinkler	Standard	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-151	Protector	PS006	Model A Standard Concelaed Sprinkler	Concealed Pendent Sprinkler	Quick	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-154	Protector	PS009	Model A Conventional Sprinkler	Conventional Sprinkler	Standard	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-155	Protector	PS010	Model A Conventional Sprinkler	Conventional Sprinkler	Quick	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-152	Protector	PS007	Model A HSW Sprinkler	Horizontal Sidewall Sprinkler	Standard	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-153	Protector	PS008	Model A HSW Sprinkler	Horizontal Sidewall Sprinkler	Quick	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-156	Protector	PS011	Model A Reduced Orifice Pendent Spray Sprinkler	Reduced Orifice Pendent Spray Sprinkler	Quick	15	6	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-157	Protector	PS012	Model A Reduced Orifice Upright Spray Sprinkler	Reduced Orifice Upright Spray Sprinkler	Quick	15	6	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-147	Protector	PS002	Model A Standard Pendent Sprinkler	Spray Pendent Sprinkler	Standard	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-149	Protector	PS004	Model A Standard Pendent Sprinkler	Spray Pendent Sprinkler	Quick	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-146	Protector	PS001	Model A Standard Upright Sprinkler	Spray Upright Sprinkler	Standard	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-150	Protector	PS005	Model A Standard Upright Sprinkler	Spray Upright Sprinkler	Quick	15	8	31-May-11	www.protectorsprinkler.com.tw/information.php?info_id=11	UL Online Certifications Directory VNIV.EX5263	Use manufacturer's spanners.	
SP-99	Reliable	RA0612	RFC43 Concealed Residential sprinkler	Concealed Residential Sprinkler	Residential	15	6.1	25-Sep-09	Bulletin 006 Rev D	UL Onlines certification Directory VKKW.EX3646		
SP-100	Reliable	RA0616	RFC 49 Concealed Residnential Sprinkler	Concealed Residential Sprinkler	Residential	15	7.1	25-Sep-09	Bulletin 006 Rev D	UL Onlines certification Directory VKKW.EX3646		

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-101	Reliable	RA0914	RFC56 Concealed Residential Sprinkler	Concealed Residential Sprinkler	Residential	15	8	25-Sep-09	Bulletin 009 Rev A	UL Onlines certification Directory VKKW.EX3646		
SP-273	Reliable	RA3411, RA3413, RA3415, RA4014, RA3412	Reliable G5-56	Concealed sprinkler	Quick	15	8	3/5/17	FM and UL approval guide	See listing certificate	Use manufacturer's spanners	
SP-95	Reliable	R3675	F1FR C/UP Sprinkler	Conventional Sprinkler	Quick	15	8	25-Sep-09	Bulletin 136 Rev O	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-96	Reliable	R3672	F1FR C/UP Sprinkler	Conventional Sprinkler	Quick	20	11.5	25-Sep-09	Bulletin 136 Rev O	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-144	Reliable	R1742	F1 20mm Standard Response Extended Coverage Sprinkler	Conventional Sprinkler	Standard	20	11.5	16-May-11	Bulletin 117 Rev U	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-90	Reliable	R5334	F3 Dry Horizontal Sidewall Sprinkler	Dry Horizontal Sidewall Sprinkler	Standard	15	8	25-Sep-09	Bulletin 153 Rev H	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanner. Comply with manufacturer's recommendations for length above ceiling.	
SP-89	Reliable	R5314	F3 Dry Pendent Sprinkler	Dry Pendent Sprinkler	Standard	15	8	25-Sep-09	Bulletin 153 Rev H	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanner. Limitations on use of semi-recessed and concealed heads with pressurised ceiling spaces Comply with manufacturer's recommendations for length above ceiling.	
SP-187	Reliable	RA0842	Model N252 EC Pendent Extended Covberage Area/ Density Sprinkler	ECHH Pendent Sprinkler	Quick	25	36.3	22-Dec-11	Bulletin 008 Rev C	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-145	Reliable	R1772	F1 20mm Standard Response Conventional Sprinkler	Extended Coverage Light Hazard Sprinkler	Standard	20	11.5	16-May-11	Bulletin 117 Rev U	LPCB Ref No. 034g/02	Use manufacturer's spanners.	
SP-177	Reliable	R7216	Model J112 Pendent Sprinkler	Extended Coverage, Light Hazard and Ordinary Hazard Pendent Sprinkler	See listing	20	16	25-Aug-11	Bulletin 172 Rev D	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-178	Reliable	R7326	Model J112 Upright Sprinkler	Extended Coverage, Light Hazard and Ordinary Hazard Upright Sprinkler	See listing	20	16	25-Aug-11	Bulletin 173 Rev B	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-269	Reliable	RA5814	Reliable LT56	Hallway/Corridor - Special Sprinkler	Quick	15	8	13/2/17	UL EX-454-4787102828	See listing certificate	Use manufacturer's spanners	Hallway & corridor only
SP-270	Reliable	RA5914	Reliable LT56-300	Hallway/Corridor - Special Sprinkler	Quick	15	8	13/2/17	UL EX-454-4787102828	See listing certificate	Use manufacturer's spanners	Hallway & corridor only
SP271	Reliable	RA5994	Reliable LT56C	Hallway/Corridor - Special Sprinkler	Quick	15	8	13/2/17	UL EX-454-4787383381	See listing certificate	Use manufacturer's spanners	Hallway & corridor only

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-278	Reliable	R4534	Reliable XL	Horizontal	Quick	15	8	20/12/18	UL-454 01NK26060	See listing certificate	Use manufacturer's spanners	
SP-98	Reliable	R3635	F1FR HSW Sprinkler	Horizontal Sidewall Sprinkler	Quick	15	8	25-Sep-09	Bulletin 136 Rev O	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-106	Reliable	R3531	F1 Res 44 HSW Sprinkler	Horizontal Sidewall Residential Sprinkler	Residential	15	6.3	28-Sep-09	Bulletin 135 Rev G	UL Onlines certification Directory VKKW.EX3646	Use manufacturer's spanners and listed recessed eschutcheons. Listing includes use of model SWC cover plates and eschutcheons	
SP-107	Reliable	R3533	F1 Res 58 HSW Sprinkler	Horizontal Sidewall Residential Sprinkler	Residential	15	8.3	28-Sep-09	Bulletin 135 Rev G	UL Onlines certification Directory VKKW.EX3646	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-108	Reliable	R3538	F1 Res 40 HSW Sprinkler	Horizontal Sidewall Residential Sprinkler	Residential	15	5.7	28-Sep-09	Bulletin 135 Rev G	UL Onlines certification Directory VKKW.EX3646	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-277	Reliable	R4514	Reliable XL	Pendent	Quick	15	8	20/12/18	UL-454 01NK26060	See listing certificate	Use manufacturer's spanners	
SP-159	Reliable	RA1414	Model F1FR Quick Response Pendent Intermediate Level Sprinkler	Pendent Intermediate Level Sprinkler	Quick	15	8	1-Jun-11	Bulletin 031 Rev A	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-160	Reliable	R3612	Model F1FR Quick Response Upright Intermediate Level Sprinkler	Pendent Intermediate Level Sprinkler	Quick	20	11.5	1-Jun-11	Bulletin 031 Rev A	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-163	Reliable	RA1314	Model F1 Standard Response Pendent Intermediate Level Sprinkler	Pendent Intermediate Level Sprinkler	Standard	15	8	1-Jun-11	Bulletin 031 Rev A	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-164	Reliable	R1712	Model F1 Standard Response Pendent Intermediate Level Sprinkler	Pendent Intermediate Level Sprinkler	Standard	20	11.5	1-Jun-11	Bulletin 031 Rev A	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-102	Reliable	R3511	F1 Res 30 Sprinkler	Pendent Residential Sprinkler	Residential	15	4.4	28-Sep-09	Bulletin 135 Rev G	UL Onlines certification Directory VKKW.EX3646	Use manufacturer's spanners and listed recessed eschutcheons. Listing includes use of model CCP cover plates and eschutcheons	
SP-103	Reliable	R3516	F1 Res 49 Sprinkler	Pendent Residential Sprinkler	Residential	15	7.1	28-Sep-09	Bulletin 135 Rev G	UL Onlines certification Directory VKKW.EX3646	Use manufacturer's spanners and listed recessed eschutcheons. Listing includes use of model CCP cover plates and eschutcheons	
SP-104	Reliable	R3513	F1 Res 58 Sprinkler	Pendent Residential Sprinkler	Residential	15	8.4	28-Sep-09	Bulletin 135 Rev G	UL Onlines certification Directory VKKW.EX3646	Use manufacturer's spanners and listed recessed eschutcheons. Listing includes use of model CCP cover plates and eschutcheons	
SP-105	Reliable	R7618	F1 Res 76 Sprinkler	Pendent Residential Sprinkler	Residential	20	10.9	28-Sep-09	Bulletin 135 Rev G	UL Onlines certification Directory VKKW.EX3646	Use manufacturer's spanners and listed recessed eschutcheons. Listing includes use of model CCP cover plates and eschutcheons	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-190	Reliable	R6932	MBEC-14 ECOH/EC HSW Sprinkler	Special Application HSW Sprinkler	Standard	20	20	27-May-13	Bulletin 169 Rev F	UL Online Certifications Directory VNIV.EX454	Approved under clause 4011. Must strictly comply with manufacturer's design and installation criteria.	
SP-135	Reliable	R7711	HL22 Specific Application Early Response Fast Response Sprinkler	Special Application Sprinkler - ESFR	Fast	25	32	27-Jan-10	Buletin 177	UL Online Certifications Directory VNWH.EX4427	Use manufacturer's spanners Sprinkler not FM approved Installation criteria as described in Bulletin 177 may differ from Suppression Mode Sprinkler installation criteria detailed in NZS4541	
SP-143	Reliable	R1712	F1 20mm Standard Response Pendant Sprinkler	Spray Pendant Sprinkler	Standard	20	11.5	16-May-11	Bulletin 117 Rev U	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-179	Reliable	R4613	Model G VELO Pendant Sprinkler	Spray Pendant Sprinkler (LO)	Standard	20	20	20-Oct-11	Bulletin 146 Rev F	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-92	Reliable	R3615	F1FR SSP Sprinkler	Spray Pendant Sprinkler	Quick	15	8	25-Sep-09	Bulletin 136 Rev O	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-94	Reliable	R3612	F1FR SSP Sprinkler	Spray Pendant Sprinkler	Quick	20	11.5	25-Sep-09	Bulletin 136 Rev O	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-111	Reliable	R5515	F1-300 SSP Sprinkler	Spray Pendant Sprinkler	Standard	15	8	28-Sep-09	Bulletin 155 Rev D	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	Maximum working pressure 20.7bar
SP-112	Reliable	R5512	F1-300 SSP Sprinkler	Spray Pendant Sprinkler	Standard	20	11.5	28-Sep-09	Bulletin 155 Rev D	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	Maximum working pressure 20.7bar
SP-113	Reliable	RA1314	F1 56 Sprinkler	Spray Pendant Sprinkler	Standard	15	8	28-Sep-09	Bulletin 013 Rev B	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-136	Reliable	R5415	G4A Quick Response Concealed Sprinkler	Spray Pendant Sprinkler	Quick	15	8	17-Mar-09	Bulletin 154 Rev F	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners. Not to be used with positively pressurised ceiling spaces	
SP-91	Reliable	R3625	F1FR SSU Sprinkler	Spray Upright Sprinkler	Quick	15	8	25-Sep-09	Bulletin 136 Rev O	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-93	Reliable	R3622	F1FR SSU Sprinkler	Spray Upright Sprinkler	Quick	20	11.5	25-Sep-09	Bulletin 136 Rev O	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-109	Reliable	R5525	F1-300 SSU Sprinkler	Spray Upright Sprinkler	Standard	15	8	28-Sep-09	Bulletin 155 Rev D	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	Maximum working pressure 20.7bar
SP-110	Reliable	R5522	F1-300 SSU Sprinkler	Spray Upright Sprinkler	Standard	20	11.5	28-Sep-09	Bulletin 155 Rev D	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	Maximum working pressure 20.7bar

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-142	Reliable	R1722	F1 20mm Standard Response Upright Sprinkler	Spray Upright Sprinkler	Standard	20	11.5	16-May-11	Bulletin 117 Rev U	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-180	Reliable	R2921	Model G XLO Upright Sprinkler	Spray Upright Sprinkler (LO)	Standard	20	16	20-Oct-11	Bulletin 129 Rev J	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	15mm threaded sprinklers available for retrofit situations
SP-275	Reliable	RA3226, RA3216	Reliable GL112	Stoarge and inrack	Quick	20	16	3/5/17	UL and FM apporvals guide	See listing certifiacte	Use manufacturer's spanners	
SP-272	Reliable	RA0912	Reliable N25 ESFR	Storage	Quick	25	36	3/5/17	FM approval guide	See listing certificate	Use manufacturer's spanners	
SP-167	Reliable	RA1011	K-22 Model HL-22 ESFR Sprinkler	Suppression Mode Sprinkler	Quick	25	32	20-Jun-11	Bulletin 010 Rev E	UL Online Certifications Directory VNWH.EX4427	Use manufacturer's spanners.	
SP-168	Reliable	RA1914	Model JL-17 ESFR Sprinkler	Suppression Mode Sprinkler	Quick	20	24	20-Jun-11	Bulletin 019 Rev A	UL Online Certifications Directory VNWH.EX4427	Use manufacturer's spanners.	
SP-169	Reliable	RA1812	Model JL-14 ESFR Sprinkler	Suppression Mode Sprinkler	Quick	20	14	20-Jun-11	Bulletin 018 Rev B	UL Online Certifications Directory VNWH.EX4427	Use manufacturer's spanners.	
SP-161	Reliable	RA3195	Model F1FR Quick Response Upright Intermediate Level Sprinkler	Upright Intermediate Level Sprinkler	Quick	15	8	1-Jun-11	Bulletin 031 Rev A	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-162	Reliable	R7022	Model F1FR Quick Response Upright Intermediate Level Sprinkler	Upright Intermediate Level Sprinkler	Quick	20	11.5	1-Jun-11	Bulletin 031 Rev A	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-165	Reliable	RA3125	Model F1 Standard Response Upright Intermediate Level Sprinkler	Upright Intermediate Level Sprinkler	Standard	15	8	1-Jun-11	Bulletin 031 Rev A	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-166	Reliable	R7092	Model F1 Standard Response Upright Intermediate Level Sprinkler	Upright Intermediate Level Sprinkler	Standard	20	11.5	1-Jun-11	Bulletin 031 Rev A	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-188	Reliable	RA1124	Model J168 Standard Response Upright Sprinkler	Upright Spray Sprinkler	Standard	20	24.2	22-Dec-11	Bulletin 011 Rev D	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners.	
SP-97	Reliable	R3685	F1FR VSW Sprinkler	Vertical Sidewall Sprinkler	Quick	15	8	25-Sep-09	Bulletin 136 Rev O	UL Online Certifications Directory VNIV.EX454	Use manufacturer's spanners and listed recessed eschutcheons.	
SP291	Reliable	KFR56	KFR56									
SP292	Reliable	RA3614, RA3624, RA3634		Upright, pendent, HSW	Quick	15	8	6/07/22	FM certificate	See listing	Use manufacters spanners	
SP293	Reliable	R601	P22	Pendent	Quick	25	32	6/07/22	FM certificate	See listing	Use manufacters spanners	
SP293	Reliable	R602	P25	Pendent	Quick	25	36	6/07/22	FM certificate	See listing	Use manufacters spanners	
SP294	Reliable	R501, R502, R503, R504	WP	Certical sidewall	Standard	15	8	6/07/22	UL certificate	See listing	Use manufacters spanners	Mullions, curtains, glass type etc etc

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-185	Tuna	NX001	Model SPRHSW Sprinkler	Horizontal Sidewall Sprinkler	Standard	15	8	13-Dec-11	TD01517 201007 2nd Edition	UL Online Certifications Directory VNIV.EX6430	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-186	Tuna	NX002	Model SPRHSW QR Sprinkler	Horizontal Sidewall Sprinkler	Quick	15	8	13-Dec-11	TD01517 201007 2nd Edition	UL Online Certifications Directory VNIV.EX6430	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-183	Tuna	NX005	Model SPRPEN Sprinkler	Pendent Spray Sprinkler	Standard	15	8	13-Dec-11	TD01516 201007 2nd Edition	UL Online Certifications Directory VNIV.EX6430	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-184	Tuna	NX006	Model SPRPEN QR Sprinkler	Pendent Spray Sprinkler	Quick	15	8	13-Dec-11	TD01516 201007 2nd Edition	UL Online Certifications Directory VNIV.EX6430	Use manufacturer's spanners and listed recessed eschutcheons.	
SP-181	Tuna	NX003	Model SPRUP Upright Sprinkler	Upright Spray Sprinkler	Standard	15	8	13-Dec-11	TD01516 201007 2nd Edition	UL Online Certifications Directory VNIV.EX6430	Use manufacturer's spanners.	
SP-182	Tuna	NX004	Model SPRUP QR Upright Sprinkler	Upright Spray Sprinkler	Quick	15	8	13-Dec-11	TD01516 201007 2nd Edition	UL Online Certifications Directory VNIV.EX6430	Use manufacturer's spanners.	
SP-191	Tyco	TY365	TY-B Conventional Sprinkler	Conventional Sprinkler	Standard	15	8	28-May-13	TFP662 Jan 13		Use manufacturer's spanners.	Max Working Pressure 12 Bar
SP-192	Tyco	TY363	TY-FRB Conventional Sprinkler	Conventional Sprinkler	Quick	15	8	28-May-13	TFP667 Jan 13		Use manufacturer's spanners.	Max Working Pressure 12 Bar
TY-071	Tyco	TY3358	DS1 Extended Coverage HSW Dry Sprinkler	Dry EC HSW Sprinkler	Standard	25	8	1-Oct-08	TFP520	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	
TY-072	Tyco	TY3338	DS1 Extended Coverage HSW Dry Sprinkler	Dry EC HSW Sprinkler	Quick	25	8	1-Oct-08	TFP520	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	
TY-10	Tyco	TY5238	DS-2 EC Dry Sprinkler	Dry EC Pendent Sprinkler	See data sheet	25	See data sheet	1-Oct-08	TFP540	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal Refer manufacturer's data sheet for K factor as a function of length	
TY65	Tyco	TY7229	Storage mode dry barallel	Dry fast response pendent	Quick	32	24	26-Apr-18	TFP320	UL 20140425-EX4998, FM 3046946		

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
TY-05.3	Tyco	TY3355	DS-1 Dry Sprinkler	Dry HSW Sprinkler	Standard	25	8	1-Oct-08	TFP500	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	
TY-06.3	Tyco	TY3335	DS-1 Dry Sprinkler	Dry HSW Sprinkler	Quick	25	8	1-Oct-08	TFP510	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	
TY42.1	Tyco	TY5255	DS-2 Dry Sprinkler	Dry Pendent Large Orifice Sprinkler	Standard	25	See datasheet	1-Oct-08	TFP530	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal Refer manufacturer's data sheet for K factor as a function of length	
TY42.2	Tyco	TY5235	DS-2 QR Dry Sprinkler	Dry Pendent Large Orifice Sprinkler	Quick	25	See datasheet	1-Oct-08	TFP530	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal Refer manufacturer's data sheet for K factor as a function of length	
TY-05.1	Tyco	TY3255	DS-1 Dry Sprinkler	Dry SSP Sprinkler	Standard	25	8	1-Oct-08	TFP500	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	
TY-06.1	Tyco	TY3235	DS-1 Dry Sprinkler	Dry SSP Sprinkler	Quick	25	8	1-Oct-08	TFP510	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	
TY-05.2	Tyco	TY3155	DS-1 Dry Sprinkler	Dry SSU Sprinkler	Standard	25	8	1-Oct-08	TFP500	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	
TY-06.2	Tyco	TY3135	DS-1 Dry Sprinkler	Dry SSU Sprinkler	Quick	25	8	1-Oct-08	TFP510	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	
TY38.1	Tyco	TY3332	TY-FRB EC HSW LH Sprinkler	ECLH HSW Sprinkler	See data sheet	15	5.6	1-Oct-08	TFP296	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches See Data Sheet for design criteria	
TY38.2	Tyco	TY4332	TY-FRB EC HSW LH Sprinkler	ECLH HSW Sprinkler	See data sheet	20	11.5	1-Oct-08	TFP296	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches See Data Sheet for design criteria	
TY37	Tyco	TY3532	RFIL Concealed Extended Coverage Pendnet Sprinkler	ECLH Sprinkler	Quick	15	8	1-Oct-08	TFP260	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
TY39	Tyco	TY5339	DS-3 Dry HSW ECOH Sprinkler	ECOH HSW Dry Sprinkler	Standard	25	See Datasheet	1-Oct-08	TFP550	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Comply with manufacturer's requirements for minimum lengths Use with DSB-2 boot or equivalent seal	Refer to data sheet for design criteria
TY-13	Tyco	TY9128	EC-25 Sprinkler	Extended Coverage Area Density Sprinkler	Fast	25	36.3	1-Oct-08	TFP213	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-15	Tyco	TY7228	EC-17 Sprinkler	Extended Coverage Area Density Sprinkler	Fast	20	24.2	1-Oct-08	TFP215	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches See Data Sheet for maximum allowable spacing	
TY-46 Rev B	Tyco	TY3382	Raven Extended Coverage Horizontal Sidewall Institutional Sprinkler	Extended Coverage Light Hazard Horizontal Sidewall Sprinkler	Quick	15	8	1-Sep-09	TFP651	UL On-Line Certifications Directory VNIV.EX5985	Use W-Type 25 Wrench	
TY-45 Rev B	Tyco	TY3282	Raven Extended Coverage Pendent Institutional Sprinkler	Extended Coverage Light Hazard Pendent Sprinkler	Quick	15	8	1-Sep-09	TFP651	UL On-Line Certifications Directory VNIV.EX5985	Use W-Type 25 Wrench	
TY-27	Tyco	TY3302	Series EC-5 Extended Coverage Horizontal Sidewall Sprinklers	Extended Coverage Light Hazard Sidewall Sprinkler	See data sheet	15	8	1-Oct-08	TFP298	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches See Data Sheet for design requirements	Highest occupancy limited to OH1 See Data Sheet for Quick Response and Standard Response installation limits
TY-14	Tyco	TY3232	EC-5 Sprinkler	Extended Coverage Light Hazard sprinkler	Quick	15	8	1-Oct-08	TFP 228	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches See Data Sheet Table B for Quick Response Listing Criteria	
TY36.1	Tyco	TY5332	Model SW-20 ECOH-HSW Sprinkler	Extended Coverage Sidewall Sprinkler	Standard	20	16.1	1-Oct-08	TFP230	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches See Data Sheet for design criteria	
TY36.2	Tyco	TY5337	Model SW-24 ECOH-HSW Sprinkler	Extended Coverage Sidewall Sprinkler	Standard	20	16.1	1-Oct-08	TFP230	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches See Data Sheet for design criteria	
TY64	Tyco	TY9226	Storage mode	Fast response pendent	Quick	25	36	26-Apr-18	TFP312	UL 20131227-EX4998, FM1725-CPD-H0010		
TY66	Tyco	TY7223	Storage mode pendent	Fast response pendent	Quick	20	24	26-Apr-18	TFP317	UL 20131227-EX4998, FM 3053634		
TY57	Tyco	F822-834	Mulsifyre F822-F834	High velcotiy spray nozzles		20	29-73	6-Apr-18	TFP810	UL 20140630-EX2003	Mainline strainers required	
TY59	Tyco	HV	High Velocity spray nozzles	High velcotiy spray nozzles		25/32	23-92	6-Apr-18	TFP815	UL 20150708-EX3077, FM 3018585	Main line strainers are required.	
TY-18	Tyco	TY1334	LF-II Residential Horizontal Sprinkler	Horizontal Residential Sprinkler	Residential	15	6.05	1-Oct-08	TFP410	UL Online Certifications Directory VKKW.EX4993	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP492	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
TY-19	Tyco	TY3334	LF-II Residential Horizontal Sprinkler, NFPA13 Optimized	Horizontal Residential Sprinkler	Residential	15	8.06	1-Oct-08	TFP415	UL Online Certifications Directory VKKW.EX4994	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP493	
TY-20	Tyco	TY4334	LF-II Residential Horizontal Sprinkler, NFPA13 Optimized	Horizontal Residential Sprinkler	Residential	15	8.35	1-Oct-08	TFP417	UL Online Certifications Directory VKKW.EX4995	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP494	
TY-22	Tyco	TY2384	LF-II Flush Horizontal Residential Sprinkler	Horizontal Residential Sprinkler	Residential	15	6.05	1-Oct-08	TFP425	UL Online Certifications Directory VKKW.EX4997	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP496	
TY-44 Rev B	Tyco	TY3381	Raven Horizontal Sidewall Institutional Sprinkler	Horizontal Sidewall Sprinkler	Quick	15	8	1-Sep-09	TFP651	UL On-Line Certifications Directory VNIV.EX5985	Use W-Type 25 Wrench	
TY62	Tyco	TY1282	Raven qr ec pendent	Institutional extended coverage quick response pendent	Quick	15	8	26-Apr-18	TFP658	UL 20141223-EX5985		
TY60	Tyco	TY1362	Raven qr ec HSW	Institutional quick response extended coverage horizontal sidewall	Quick	15	8	26-Apr-18	TFP658	UL 20141223-EX5985		
TY61	Tyco	TY1381	Raven qr hsw	Institutional quick response horizontal sidewall	Quick	15	8	26-Apr-18	TFP658	UL 20141223-EX5985		
TY63	Tyco	TY1281	Raven QR pendent	Institutional quick response pendent	Quick	15	8	26-Apr-18	TFP658	UL 20141223-EX5985		
TY-09.2	Tyco	TY5211	ELO-231 Sprinkler	Large Orifice SSP Sprinkler	Standard	20	16.1	1-Oct-08	TFP340	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-09.3	Tyco	TY5811	ELO-231 Sprinkler	Large Orifice SSP Sprinkler	Standard	15	16.1	1-Oct-08	TFP340	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches For use in retrofit applications only	
TY-11.2	Tyco	TY7251	Model K17-231 Sprinkler	Large Orifice SSP Sprinkler	Standard	20	24.2	1-Oct-08	TFP332	FM Global Engineering Bulletin 07-08 Dated 30 June 2008	Use manufacturer's wrenches	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
TY-09.1	Tyco	TY5111	ELO-231 Sprinkler	Large Orifice SSU Sprinkler	Standard	20	16.1	1-Oct-08	TFP340	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-11.1	Tyco	TY7151	Model K17-231 Sprinkler	Large Orifice SSU Sprinkler	Standard	20	24.2	1-Oct-08	TFP332	FM Global Engineering Bulletin 07-08 Dated 30 June 2008	Use manufacturer's wrenches	
TY58	Tyco	D3	D3 Protectospray	Medium velocity spray nozzle		15	17-103	6-Apr-18	TFP802	UL 20140630-EX2003, FM 3041244	Mainline strainers required. Ice build up inspections	
TY-26.1	Tyco	TY3555	Series DS-C Concealed Dry Sprinkler	Pednet Dry Sprinkler	Standard	25	8	1-Oct-08	TFP515	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Not for use in Freezer or Coolstore environments with DSB-2 boot or equivalent seal	Use
TY-26.2	Tyco	TY3535	Series DS-C Concealed Dry Sprinkler	Pednet Dry Sprinkler	Quick	25	8	1-Oct-08	TFP516	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches Not for use in Freezer or Coolstore environments with DSB-2 boot or equivalent seal	Use
TY70	Tyco	TY325	Pendent	Pendent		15	8	26-Apr-18	TFP152	UL 20120901-EX5985, FM 3043072		
TY83	Tyco	TY9286	ESFR-34	Pendent	Quick	32	480	12-Jun-20	TFP338	FM PR452148	Aisle width per datasheet	
TY69	Tyco	TY323	Pendent QR	Pendent quick response	Quick	15	8	26-Apr-18	TFP172	UL 20120901-EX5985, FM 3043072		
TY-16	Tyco	TY2234	LF-II Residential Pendent Sprinkler	Pendent Residential Sprinkler	Residential	15mm	7.06	1-Oct-08	TFP400	UL Online Certifications Directory VKKW.EX4991	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP490	
TY-17	Tyco	TY4324	LF-II Residential NFPA13 Optimized Pendent and Cocealed Sprinkler	Pendent Residential Sprinkler	Residential	20	9.94	1-Oct-08	TFP408	UL Online Certifications Directory VKKW.EX4992	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP491	
TY-21	Tyco	TY2284	LF-II Flush Residential Sprinkler	Pendent Residential Sprinkler	Residential	15	6.05	1-Oct-08	TFP420	UL Online Certifications Directory VKKW.EX4996	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP495	
TY-23	Tyco	TY2596	LF-II Residential Concealed Flat Plate Sprinkler	Pendent Residential Sprinkler	Residential	15	6.05	1-Oct-08	TFP440	UL Online Certifications Directory VKKW.EX4998	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP497	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
TY-24	Tyco	TY3596	LF-II Residential Concealed Flat Plate Sprinkler	Pendent Residential Sprinkler	Residential	15	7.06	1-Oct-08	TFP442	UL Online Certifications Directory VKKW.EX4999	Use Manufacturer's wrenches. For NZS4541 application, a minimum density of 4.1mm/min is required in addition to Listing Criteria provided in Manufacturer's data sheet, and Manufacturer's Installation Guide TFP498	
SP-194	Tyco	TY323	TY-FRB Pendent Sprinkler	Pendent Spray Sprinkler	Quick	15	8	28-May-13	TFP172 Jan 13	FM Approvals Report Project ID 3043072 25 Jan 13 and UL File Ex5985 Project 11CA46425 Aug 31 2012	Use manufacturer's spanners and listed recessed eschutcheons.	Max Working Pressure 17 Bar
SP-196	Tyco	TY315	TY-F Pendent Sprinkler	Pendent Spray Sprinkler	Standard	15	8	28-May-13	TFP152 Jan 13	FM Approvals Report Project ID 3043072 25 Jan 13 and UL File Ex5985 Project 11CA46425 Aug 31 2012	Use manufacturer's spanners and listed recessed eschutcheons.	Max Working Pressure 17 Bar
TY-04.1	Tyco	TY3388	WS Horizontal Window Sprinkler	Special Application Sprinkler - Window Drencher	Fast	15	8	1-Oct-08	TFP620	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-04.2	Tyco	TY3488	WS Pendent Window Sprinkler	Special Application Sprinkler - Window Drencher	Fast	15	8	1-Oct-08	TFP620	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-35	Tyco	TY7152	Ultra K17	Specific Application Control Mode Sprinkler	Standard	20	24.2	1-Oct-08	TFP330	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-01.1	Tyco	TY3251	TY-B Spray Sprinkler	Spray Pendent	Standard	15	8	1-Oct-08	TFP151	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	Maximum Working Pressure 17 bar
TY-01.3	Tyco	TH4251	TY-B Spray Sprinkler	Spray Pendent	Standard	20	11.5	1-Oct-08	TFP151	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-02.2	Tyco	TY3231	TY-FRB Spray Sprinkler	Spray Pendent	Quick	15	8	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	Maximum Working Pressure 17 bar
TY-01.6	Tyco	TY1231	TY-B Spray Sprinkler	Spray Pendent - Special Application	Standard	15	11.5	1-Oct-08	TFP151	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches For use in retrofit applications only	
TY-01.8	Tyco	TY1131	TY-B Spray Sprinkler	Spray Pendent - Special Application	Standard	15	4	1-Oct-08	TFP151	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-02.6	Tyco	TY4931	TY-FRB Spray Sprinkler	Spray Pendent - Special Application	Quick	15	20	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches For use in retrofit applications only	
TY-02.8	Tyco	TY1231	TY-FRB Spray Sprinkler	Spray Pendent - Special Application	Quick	15	4	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-02.9	Tyco		TY-FRB Spray Sprinkler	Spray Pendent - Special Application	Quick	15	6	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
TY-43 Rev B	Tyco	TY3281	Raven Pendent Institutional Sprinkler	Spray Pendent Sprinkler	Quick	15	8	1-Sep-09	TFP651	UL On-Line Certifications Directory VNIV.EX5985	Use W-Type 25 Wrench	
TY-02.3	Tyco	TY4231	TY-FRB Spray Sprinkler	Spray Pendnet	Quick	20	11.5	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-03.1	Tyco	TY3551	RF-11 Concealed Sprinkler	Spray Pendnet Sprinkler	Quick	15	8	1-Oct-08	TFP181	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	Maximum Working Pressure 17 bar
TY-03.2	Tyco	TY3531	RF-11 Concealed Sprinkler	Spray Pendnet Sprinkler	Standard	15	8	1-Oct-08	TFP181	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	Maximum Working Pressure 17 bar
TY-12.2	Tyco	TY5251	ELO-231 B Sprinkler	Spray Pendnet Sprinkler	Standard	20	16.1	1-Oct-08	TFP342	FM Online Approval Guide Sep 09	Use manufacturer's wrenches	
TY-01.2	Tyco	TY3151	TY-B Spray Sprinkler	Spray Upright	Standard	15	8	1-Oct-08	TFP151	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	Maximum Working Pressure 17 bar
TY-01.4	Tyco	TY4151	TY-B Spray Sprinkler	Spray Upright	Standard	20	11.5	1-Oct-08	TFP151	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-02.1	Tyco	TY3131	TY-FRB Spray Sprinkler	Spray Upright	Quick	15	8	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	Maximum Working Pressure 17 bar
TY-02.4	Tyco	TY4131	TY-FRB Spray Sprinkler	Spray Upright	Quick	20	11.5	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-01.5	Tyco	TY4851	TY-B Spray Sprinkler	Spray Upright - Special Application	Standard	15	11.5	1-Oct-08	TFP151	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches For use in retrofit applications only	
TY-01.7	Tyco	TY4951	TY-B Spray Sprinkler	Spray Upright - Special Application	Standard	15	4	1-Oct-08	TFP151	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-02.5	Tyco	TY4831	TY-FRB Spray Sprinkler	Spray Upright - Special Application	Quick	15	20	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches For use in retrofit applications only	
TY-02.7	Tyco	TY1131	TY-FRB Spray Sprinkler	Spray Upright - Special Application	Quick	15	4	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-02.10	Tyco	TY2231	TY-FRB Spray Sprinkler	Spray Upright - Special Application	Quick	15	6	1-Oct-08	TFP171	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-12.1	Tyco	TY5151	ELO-231 B Sprinkler	Spray Upright Sprinkler	Standard	20	16.1	1-Oct-08	TFP342	FM Online Approval Guide Sep 08	Use manufacturer's wrenches	
TY-12.3	Tyco	TY5851	ELO-231 B Sprinkler	Spray Upright Sprinkler	Standard	15	16.1	1-Oct-08	TFP342	FM Online Approval Guide Sep 10	Use manufacturer's wrenches For use in retrofit applications only	
TY41.1	Tyco	TY5131	ELO-231FRB Sprinkler	Spray Upright Sprinkler	Quick	20	16.1	1-Oct-08	TFP344	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY41.2	Tyco	TY5231	ELO-231FRB Sprinkler	Spray Upright Sprinkler	Quick	20	16.1	1-Oct-08	TFP344	UL On-Line Certifications Directory VNIV.EX5985	Use manufacturer's wrenches	
TY-08	Tyco	TY7226	ESFR17 Sprinkler	Suppression Mode Sprinkler	Fast	20	24.2	1-Oct-08	TFP315	UL On-Line Certifications Directory VNWH.EX4998	Use manufacturer's wrenches	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
TY55	Tyco	TN-17	TN-17	Tunnel deluge nozzle		20	24	6-Apr-18	TFP852	UL 20170511-EX3077	Tunnel systems only	
TY56	Tyco	TN-25	TN-25	Tunnel deluge nozzle		25	360	6-Apr-18	TFP850	UL 20170511-EX3077	Tunnel systems only	
TY68	Tyco	TY315	Upright	Upright		15	8	26-Apr-18	TFP152	UL 20120901-EX5985, FM 3056424		
TY74	Tyco	TY9101	Ultra K34	Upright		32	48.7	26-Jun-19	TFP334	FM 305717		
TY67	Tyco	TY313	Upright QR	Upright quick response	Quick	15	8	26-Apr-18	TFP172	UL 20120901-EX5985, FM 304072		
SP-193	Tyco	TY313	TY-FRB Upright Sprinkler	Upright Spray Sprinkler	Quick	15	8	28-May-13	TFP172 Jan 13	FM Approvals Report Project ID 3043072 25 Jan 13 and UL File Ex5985 Project 11CA46425 Aug 31 2012	Use manufacturer's spanners.	Max Working Pressure 17 Bar
SP-195	Tyco	TY315	TY-F Upright Sprinkler	Upright Spray Sprinkler	Standard	15	8	28-May-13	TFP152 Jan 13	FM Approvals Report Project ID 3043072 25 Jan 13 and UL File Ex5985 Project 11CA46425 Aug 31 2012	Use manufacturer's spanners.	Max Working Pressure 17 Bar
TY-25	Tyco	TY7126	ESFR K17 Upright Sprinkler	Upright Suppression Mode Sprinkler	Fast	20	24.2	1-Oct-08	TFP 316	FM Approvals Guide	Use manufacturer's wrenches	
TY-86	Tyco	TY2199, TY3199	CC3	Concealed space sprinkler	Standard	15	8	4/11/21	UL Certificate	See listing certificate	Use manufacturer's spanners	
V-11	Victaulic	V4601	LP-46 Low Pressure Storage Sprinkler	CMSA Sprinkler	Standard	25	36.8	4-Sep-08	Victaulic Datasheet 40.95_1 Rev B	FM Global Engineering Bulletin 07-08 Dated 30 June 2008	Use manufacturer's wrenches. Not FM Approved. Care required to ensure that correct design criteria and applications used.	
SP-285	Victaulic	V3517	Dry flexible dropper	Concealed	Standard	25	8	24/6/21	FM & UL certificates	See listing certificate	Use manufacturer's spanners	
SP-286	Victaulic	V3518	Dry flexible dropper	Concealed c/w gasket	Quick	25	8	24/6/21	FM & UL certificates	See listing certificate	Use manufacturer's spanners	
V-5	Victaulic	V2736	V2736 Concealed Residential Sprinkler	Concealed Residential	Residential	15	7.1	28-Feb-08	Victaulic Datasheet 40.42 3548 Rev 5/04	UL Online Certifications Directory VKKW.EX5188	Use manufacturer's wrenches	
V-6	Victaulic	V3806	V3806 Concealed Residential Sprinkler	Concealed Residential	Residential	15	8.1	28-Feb-08	Victaulic Datasheet 40.43 3607 Rev D 11/04	UL Online Certifications Directory VKKW.EX5188	Use manufacturer's wrenches	
SP-283	Victaulic	V3509	Dry flexible dropper	Horizontal & recessed Horizontal	Standard	25	8	24/6/21	FM & UL certificates	See listing certificate	Use manufacturer's spanners	
SP-284	Victaulic	V3510	Dry flexible dropper	Horizontal & recessed Horizontal	Quick	25	8	24/6/21	FM & UL certificates	See listing certificate	Use manufacturer's spanners	
SP-281	Victaulic	V3505	Dry flexible dropper	Pendent & Recessed	Standard	25	8	24/6/21	FM & UL certificates	See listing certificate	Use manufacturer's spanners	
SP-282	Victaulic	V3506	Dry flexible dropper	Pendent & Recessed	Quick	25	8	24/6/21	FM & UL certificates	See listing certificate	Use manufacturer's spanners	

Sprinklers cont. Listed in alphabetical order by MANUFACTURER

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
V-3	Victaulic	V2707	V27 Spray Sprinkler	Spray Pendent	Standard	15	8	15-Nov-07	Victaulic Datasheet 40.10 2544 Rev E 11/06	FM Approval Report J.I. 2D2A3. AH 24 Mar 101	Use manufacturer's spanners and listed recessed eschutcheons. Maximum working pressure 17.2 bar	
V-4	Victaulic	V2708	V27 Spray Sprinkler	Spray Pendent	Quick	15	8	15-Nov-07	Victaulic Datasheet 40.10 2544 Rev E 11/07	FM Approval Report J.I. 2D2A3. AH 24 Mar 102	Use manufacturer's spanners and listed recessed eschutcheons. Maximum working pressure 17.2 bar	
V-1	Victaulic	V2703	V27 Spray Sprinkler	Spray Upright	Standard	15	8	15-Nov-07	Victaulic Datasheet 40.10 2544 Rev E 11/04	FM Approval Report J.I. 2D2A3. AH 24 Mar 99	Use manufacturer's spanners and listed recessed eschutcheons. Maximum working pressure 17.2 bar	
V-2	Victaulic	V2704	V27 Spray Sprinkler	Spray Upright	Quick	15	8	15-Nov-07	Victaulic Datasheet 40.10 2544 Rev E 11/05	FM Approval Report J.I. 2D2A3. AH 24 Mar 100	Use manufacturer's spanners and listed recessed eschutcheons. Maximum working pressure 17.2 bar	
V-12	Victaulic	V4702	V47	Storage Sprinkler	Quick	20	24	18/9/20107	Victaulic Datasheet 40.89	FM online approval guide	Use Manufacturers wrench	107m storage under a 12.2m roof
V-7	Victaulic	V4402	V4402 Suppresion Mode Sprinkler	Suppresion Mode Sprinkler	Fast	20	20	28-Apr-08	Victaulic Datasheet 40.82 Rev B	UL Online Certifications Directory VNWH.EX5245	Use manufacturer's wrenches. Not FM Approved. Care required to ensure that correct design criteria and applications used.	
V-8	Victaulic	V4404	V4404 Suppresion Mode Sprinkler	Suppresion Mode Sprinkler	Fast	20	24.3	28-Apr-08	Victaulic Datasheet 40.86 Rev A	UL Online Certifications Directory VNWH.EX5245	Use manufacturer's wrenches. Design and install in accordance with FM Global Engineering Bulletin 07-08	
SP-141	Victaulic	V4603	LP-46 Upright Low Pressure Storage Sprinkler	Upright Spray Storage Sprinkler	Standard	25	36.8	19-Apr-11	Data Sheet 40.98 Rev D	FM Online Approvals Guide	Use manufacturer's spanners.	Approved with reference to clause 4011
SP289	Victaulic	V3802	FL-QR/C	Concealed	Quick	15	8	21/04/22	FM certificate	See listing	Use manufacters spanners	
SP290	Victaulic	V3801	FL-RR/C	Concealed	Standard	15	8	3/05/22	UL certificate	See listing	Use manufacters spanners	
SP-239	Vlking	VK462	Viking K8 Cleanroom Sprinkler Cover Assembly	Cleanroom Sprinkler Cover Assembly	Quick	15	8	19-Jun-14	F_022409 dated 27 January 2012	See listing certificate	Use manufacturer's spanners	
SP-240	Vlking	VK464	Viking K11.5 Cleanroom Sprinkler Cover Assembly	Cleanroom Sprinkler Cover Assembly	Standard	20	11.5		F_022409 dated 27 January 2012	See listing certificate	Use manufacturer's spanners	
SP-260	Viking	VK680	Viking K11.5 Concealed Horizontal Sidewall Sprinkler	Concealed Horizontal Sidewall Light Hazard Commercial Extended Coverage Sprinkler	Quick	20	11.5	19-Jun-14	F_050611 dated 3 February 2012	See listing certificate	Use manufacturer's spanners	
SP-225	Vlking	VK480	Viking K5.7 Concealed Horizontal Sidewall Sprinkler	Concealed Horizontal Sidewall Residential Sprinkler	Standard	15	5.7	19-Jun-14	F_121609 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-243	Viking	VK538	Viking K16 Concealed Pendent OH-ELO Sprinkler	Concealed Pendent ELO Commercial Extended Coverage Sprinkler	Standard and Quick	20	16	19-Jun-14	F_050511 dated 6 December 2012	See listing certificate	Use manufacturer's spanners	
SP-256	Viking	VK632	Viking K8 Concealed Pendent Sprinkler	Concealed Pendent Light Hazard Commercial Extended Coverage Sprinkler	Quick	15	8	19-Jun-14	F_080107 dated 20 May 2013	See listing certificate	Use manufacturer's spanners	
SP-257	Viking	VK634	Viking K11.5 Concealed Pendent Sprinkler	Concealed Pendent Light Hazard Commercial Extended Coverage Sprinkler	Quick	20	11.5		F_080107 dated 20 May 2013	See listing certificate	Use manufacturer's spanners	
SP-258	Viking	VK636	Viking K16 Concealed Pendent ELO Sprinkler	Concealed Pendent Light Hazard ELO Commercial Extended Coverage Sprinkler	Quick	20	16	19-Jun-14	F_121009 dated 6 December 2012	See listing certificate	Use manufacturer's spanners	
SP-215	Viking	VK457	Viking K7 Concealed Pendent Sprinkler	Concealed Pendent Residential Sprinkler	Standard	15	7	19-Jun-14	F_072607 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-223	Viking	VK474	Viking K8 Concealed Pendent Sprinkler	Concealed Pendent Residential Sprinkler	Quick	15	8	19-Jun-14	F_012109 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-228	Viking	VK488	Viking K4 Concealed Pendent Sprinkler	Concealed Pendent Residential Sprinkler	Standard	15	4	19-Jun-14	F_073012 dated 14 May 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-238	Viking	VK412	Viking K8 Flush Horizontal Sidewall Sprinkler	Flush Horizontal Sidewall Institutional Sprinkler	Quick	15	8	19-Jun-14	F_101098 dated 14 August 2013	See listing certificate	Use manufacturer's spanners	
SP-237	Viking	VK410	Viking K8 Flush Pendent QREC Sprinkler	Flush Pendent Institutional Sprinkler	Quick	15	8	19-Jun-14	F_100998 dated 14 August 2013	See listing certificate	Use manufacturer's spanners	
SP-224	Viking	VK476	Viking K7 Flush Pendent Sprinkler	Flush Pendent Residential Sprinkler	Standard	15	7	19-Jun-14	F_120608 dated 14 August 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-255	Viking	VK630	Viking K11.5 Horizontal Sidewall Sprinkler	Horizontal Sidewall Commercial Extended Coverage Sprinkler	Quick	20	11.5	19-Jun-14	F_102905 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-259	Viking	VK638	Viking K11.5 Horizontal Sidewall Sprinkler	Horizontal Sidewall Commercial Extended Coverage Sprinkler	Quick	20	11.5	19-Jun-14	F_081911 Rev 14.1	See listing certificate	Use manufacturer's spanners	
SP-249	Viking	VK605	Viking K8 Horizontal Sidewall Sprinkler	Horizontal Sidewall Light Hazard Commercial Extended Coverage Sprinkler	Standard and Quick	15	8	19-Jun-14	F_030203 dated 22 October 2010	See listing certificate	Use manufacturer's spanners	
SP-250	Viking	VK606	Viking K11.5 Horizontal Sidewall Sprinkler	Horizontal Sidewall Light Hazard Commercial Extended Coverage Sprinkler	Quick	20	11.5	19-Jun-14	F_080788 dated 12 December 2013	See listing certificate	Use manufacturer's spanners	
SP-217	Viking	VK460	Viking K8 Horizontal Sidewall Sprinkler	Horizontal Sidewall Residential Sprinkler	Standard	15	8	19-Jun-14	F_110205 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-226	Viking	VK484	Viking K5.7 Horizontal Sidewall Sprinkler	Horizontal Sidewall Residential Sprinkler	Standard	15	5.7	19-Jun-14	F_050310	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-227	Viking	VK486	Viking K5.7 Horizontal Sidewall Sprinkler	Horizontal Sidewall Residential Sprinkler	Standard	15	5.7	19-Jun-14	F_082411 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-229	Viking	VK104	Viking K8 Horizontal Sidewall Sprinkler	Horizontal Sidewall Special Sprinkler	Standard	15	8	19-Jun-14	F_052504 dated 12 December 2013	See listing certificate	Use manufacturer's spanners	
SP-231	Viking	VK305	Viking K8 Horizontal Sidewall Sprinkler	Horizontal Sidewall Special Sprinkler	Quick	15	8	19-Jun-14	F_060504 dated 23 March 2012, F_030103 dated 12 December 2013	See listing certificate	Use manufacturer's spanners	
SP-279	Viking	VK514	Viking Special application ESFR	Pendent	Quick	25	40.4	11/2/20	UL 20150408-EX5085	See listing certificate	Use manufacturer's spanners	
SP-210	Viking	VK592	Viking K28 Pendent CMSA Sprinkler	Pendent CMSA Storage Sprinkler	Standard	25	28		F_033108 dated 9 September 2011	See listing certificate	Use manufacturer's spanners	
SP-245	Viking	VK572	Viking K20 Pendent OH Sprinkler	Pendent Commercial Extended Coverage Sprinkler	Standard and Quick	20	20	19-Jun-14	Viking data Sheet F_072313 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-242	Viking	VK534	Viking K16 Pendent ELO Sprinkler	Pendent ELO Commercial Extended Coverage Sprinkler	Standard and Quick	20	16	19-Jun-14	F_051393 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-207	Viking	VK536	Viking K16 Pendent ELO Sprinkler	Pendent ELO Storage Sprinkler	Standard	20	16		F_072213 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-212	Viking	VK377	Viking K16 Pendent ELO Sprinkler	Pendent ELO Storage Sprinkler	Quick	20	16		F_030993 dated 14 May 2010.	See listing certificate	Use manufacturer's spanners	
SP-202	Viking	VK510	Viking K36 Pendent ESFR Sprinkler	Pendent ESFR Storage Sprinkler	Quick	25	36		F_100102 Dated 28 March, 2013	See listing certificate	Use manufacturer's spanners	
SP-264	Viking	VK202	Viking K11.5 Pendent Sprinkler	Pendent Large Orifice Sprinkler	Standard	15 / 20	11.5	19-Jun-14	F_100397 dated 12 December 2013	See listing certificate	Use manufacturer's spanners	
SP-268	Viking	VK352	Viking K11.5 Pendent Sprinkler	Pendent Large Orifice Sprinkler	Quick	20 / 15	11.5		F_081296 dated 4 December 2013	See listing certificate	Use manufacturer's spanners	
SP-246	Viking	VK600	Viking K11.5 Pendent Sprinkler	Pendent Light Hazard Commercial Extended Coverage Sprinkler	Standard and Quick	15	11.5	19-Jun-14	F_080988 dated 12 December 2013	See listing certificate	Use manufacturer's spanners	
SP-247	Viking	VK602	Viking K8 Pendent Sprinkler	Pendent Light Hazard Commercial Extended Coverage Sprinkler	Standard and Quick	20	8	19-Jun-14	F_080988 dated 12 December 2013	See listing certificate	Use manufacturer's spanners	
SP-248	Viking	VK604	Viking K8 Pendent Sprinkler	Pendent Light Hazard Commercial Extended Coverage Sprinkler	Standard and Quick	15	8	19-Jun-14	F_022098 dated 6 April 2007	See listing certificate	Use manufacturer's spanners	
SP-251	Viking	VK608	Viking K16 Pendent ELO Sprinkler	Pendent Light Hazard Commercial Extended Coverage Sprinkler	Standard and Quick	20	16	19-Jun-14	F_052793 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-198	Viking	VK504	Viking K24 Dry ESFR Sprinkler	Pendent QR Dry Storage Sprinkler	Quick		24	4-Feb-14	, 2013 F_062613 dated 26 June 2013	UL Certificate of Compliance Ex5085-20080602, dated 29 August	Use manufacturer's spanners.	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-200	Viking	VK502	Viking K20 Dry ESFR Sprinkler	Pendent QR Dry Storage Sprinkler	Quick		20	4-Feb-14	Sheet F_0060198 dated 17 February 2012	UL Certificate of Compliance Ex5085-20080602, dated 29 August, 2013, FM Certificate of Compliance – Approval ID: 3045631, 15 October 2012	Use manufacturer's spanners.	
SP-197	Viking	VK-506	Viking K32 Pendent ESFR Sprinkler	Pendent QR Storage Sprinkler	Quick	25	32	31-Jan-14	F_081612 3 Jul 13	UL EX5085-20130426 26 Apr 13 FM 3045269 Jul 1 2013	Use manufacturer's spanners.	
SP-199	Viking	VK500	Viking K20 Pendent ESFR Sprinkler	Pendent QR Storage Sprinkler	Quick	20	20	4-Feb-14	F_0060198 dated 17 February 2012.	UL Certificate of Compliance Ex5085 10 October 2001 & Revised 19 February 2004, Projects, 00NK40650, 02NK4697 & 03NK08543, FM Certificate of Compliance – Project ID: 3039814, 25 June 2010	Use manufacturer's spanners.	
SP-199	Viking	VK500	Viking K20 Pendent ESFR Sprinkler	Pendent QR Storage Sprinkler	Quick	20	20	4-Feb-14	F_0060198 dated 17 February 2012.	UL Certificate of Compliance Ex5085 10 October 2001 & Revised 19 February 2004, Projects, 00NK40650, 02NK4697 & 03NK08543, FM Certificate of Compliance – Project ID: 3039814, 25 June 2010	Use manufacturer's spanners.	
SP-201	Viking	VK503	Viking K24 Pendent Storage Sprinkler	Pendent QR Storage Sprinkler	Quick	25	24	4-Feb-14	F_120106 dated 9 September, 2011.	UL Certificate of Compliance Ex5085 18 June 2007 & Revised 31 January 200, Projects, 06NK11099 & 07NK08031, FM Certificate of Compliance – Project ID: 3027341, 1 March 2007	Use manufacturer's spanners.	
SP-214	Viking	VK430	Viking K6 Pendent Sprinkler	Pendent Residential Sprinkler	Quick	15	6	19-Jun-14	F_082095 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-218	Viking	VK466	Viking K7.4 Pendent Sprinkler	Pendent Residential Sprinkler	Quick	15	7.4	19-Jun-14	F_091406 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-220	Viking	VK468	Viking K7 Pendent Sprinkler	Pendent Residential Sprinkler	Standard	15	7	19-Jun-14	F_012706 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-221	Viking	VK470	Viking K4 Pendent Sprinkler	Pendent Residential Sprinkler	Standard	15	4	19-Jun-14	F_061011 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-222	Viking	VK472	Viking K8 Pendent Sprinkler	Pendent Residential Sprinkler	Standard	15	8	19-Jun-14	F_121409 dated 12 June 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-263	Viking	VK102	Viking K8 Pendent Sprinkler	Pendent Standard Orifice Sprinkler	Standard	15	8	19-Jun-14	F_100397 dated 12 December 2013	See listing certificate	Use manufacturer's spanners	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-267	Viking	VK302	Viking K8 Pendent Sprinkler	Pendent Standard Orifice Sprinkler	Quick	15	8	19-Jun-14	F_081296 dated 4 December 2013	See listing certificate	Use manufacturer's spanners	
SP-189	Viking	VK-501	Dry Pendent Sprinkler	Pendent Supression Mode Sprinkler	Fast	Refer DS	20	20-Jan-12	F_050707	UL Online Certifications Directory VNIV. EX454	Refer Viking Data Sheet	
SP-280	Viking	MX-306	Minimax Preaction	Preaction sprinkler	Quick	25	5.5	22/3/21	FM approvals guide	See listing certificate	See listing certificate	
SP-02	Viking	VK110	Fusible Link Sprinkler	Spray Pendent	Standard	15	8	12-Oct-07	Viking Datasheet 18a-f June 1 07	UL Listing certificates	Use Listed Spanners and eschutcheons as described in data sheet	
SP-04	Viking	VK206	Fusible Link Sprinkler	Spray Pendent	Standard	20	11.5	12-Oct-07	Viking Datasheet 18a-f June 1 07	UL Listing certificates	Use Listed Spanners and eschutcheons as described in data sheet	
SP-01	Viking	VK108	Fusible Link Sprinkler	Spray Upright	Standard	15	8	12-Oct-07	Viking Datasheet 18a-f June 1 07	UL Listing certificates	Use Listed Spanners and eschutcheons as described in data sheet	
SP-03	Viking	VK204	Fusible Link Sprinkler	Spray Upright	Standard	20	11.5	12-Oct-07	Viking Datasheet 18a-f June 1 07	UL Listing certificates	Use Listed Spanners and eschutcheons as described in data sheet	
SP-208	Viking	VK540	Viking K16 Upright CMSA Sprinkler	Upright CMSA Storage Sprinkler	Standard	15 or 20	16		F_090595 dated 4 November 2011	See listing certificate	Use manufacturer's spanners	
SP-244	Viking	VK570	Viking K20 Upright OH Sprinkler	Upright Commercial Extended Coverage Sprinkler	Standard and Quick	20	20	19-Jun-14	F_010104 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-241	Viking	VK532	Viking K16 Upright ELO Sprinkler	Upright ELO Commercial Extended Coverage Sprinkler	Standard and Quick	20	16	19-Jun-14	F_051393 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-204	Viking	VK530	Viking K16 Upright ELO Sprinkler	Upright ELO Storage Sprinkler	Standard	20	16		F_010692 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-205	Viking	VK531	Viking K16 Upright QR ELO Sprinkler	Upright ELO Storage Sprinkler	Quick	20	16		F_120699 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-203	Viking	VK520	Viking K20 Upright ESFR Sprinkler	Upright ESFR Storage Sprinkler	Quick	20	20		F_060298 dated 1 April 2011	See listing certificate	Use manufacturer's spanners	
SP-211	Viking	VK595	Viking K36 Upright Sprinkler	Upright Extended Coverage Storage Sprinkler	Standard	25	36		F_121610 dated 24 June 2011	See listing certificate	Use manufacturer's spanners	
SP-262	Viking	VK200	Viking K11.5 Upright Sprinkler	Upright Large Orifice Sprinkler	Standard	15 / 20	11.5		F_080106 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-266	Viking	VK350	Viking K11.5 Upright Sprinkler	Upright Large Orifice Sprinkler	Quick	20 / 15	11.5	19-Jun-14	F_080488 dated 4 December 2013	See listing certificate	Use manufacturer's spanners	

Sprinklers cont. *Listed in alphabetical order by MANUFACTURER*

Listing Number	Manufacturer	SIN No	Model/Designation	Type	Response	Thread (mm)	K Factor (L/min & kPa)	Listing Date	Reference	Listing basis	Special Conditions	Range Limitations
SPRINKLERS												
SP-219	Viking	VK467	Viking K7 Upright Sprinkler	Upright Residential Sprinkler	Standard	15	7	19-Jun-14	F_090413 dated 4 September 2013	See listing certificate	Use manufacturer's spanners. Refer data sheet	
SP-235	Viking	VK900	Viking K5.7 Upright Sprinkler	Upright Specific Application Sprinkler	Quick	15	5.7	19-Jun-14	F_110503 dated 21 January 2011	See listing certificate	Use manufacturer's spanners	
SP-261	Viking	VK100	Viking K8 Upright Sprinkler	Upright Standard Orifice Sprinkler	Standard	15	8		F_080106 dated 28 June 2013	See listing certificate	Use manufacturer's spanners	
SP-265	Viking	VK300	Viking K8 Upright Sprinkler	Upright Standard Orifice Sprinkler	Quick	15	8	19-Jun-14	F_080488 dated 4 December 2013	See listing certificate	Use manufacturer's spanners	
SP-209	Viking	VK580	Viking K24 Upright Sprinkler	Upright Storage Sprinkler	Standard	20	16		F_041904 dated 7 May 2010	See listing certificate	Use manufacturer's spanners	
SP-230	Viking	VK106	Viking K8 Vertical Sidewall Sprinkler	Vertical Sidewall Special Sprinkler	Standard	15	8	19-Jun-14	F_052504 dated 12 December 2013	See listing certificate	Use manufacturer's spanners	
SP-232	Viking	VK306	Viking K8 Vertical Sidewall Sprinkler	Vertical Sidewall Special Sprinkler	Quick	15	8	19-Jun-14	F_060504 dated 23 March 2012, F_050300 dated 14 May 2010	See listing certificate	Use manufacturer's spanners	
SP-287	Viking	VK544, VK545, VK 546	Dry barrel	ELO Dry barrel	Standard			1/10/21	FM Certificate	See listing certificate	Use manufacturers spanners	
SP288	Viking	VK547, VK548, VK549	Dry barrel	ELO Dry barrel	Quick			1/10/21	FM Certificate	See listing certificate	Use manufacturers spanners	

Fire Protection Valves

Line Number	Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
FIRE PROTECTION VALVES								
71	Val-43	Ames	Valve - BFPU	Double Check Backflow Prevention Device	Series 2000SS	27-Jan-14	Flush pipework before installation	
65	TY73	Blasemaster Rapid Seal	Pipe		Blasemaster Rapid Seal	1/3/19		TFP1925, UL2017171208-EX5988, FM 3057837
69	Val-31	Bonomi	Valve - Ball	Isolation Valve	Bonomi Ball Valve with Lockable handle	5-Nov-09	Maximum Working Pressure 25 bar	
73	CV-03	Cla-Val	Valve - Check	Check Valve	582G Check Valve	6-Jan-09		
1	TF-01	Cla-Val	Valve - Pressure	Pressure Relief and Sustaining Valve	Cla-Val 50-01	22-May-08	Refer certificate for restrictions	Cross listed by Cla-Val - see certificate number CV-06
2	TF-02	Cla-Val	Valve - Pressure	Pressure Reducing Valve	Cla-Val 90-01	22-May-08	Refer certificate for restrictions	Cross listed by Cla-Val - see certificate number CV-07
3	TF-03	Cla-Val	Valve - Pressure	Pressure Reducing Valve	Cla-Val 92-01	29-May-08	Refer certificate for restrictions	Cross listed by Cla-Val - see certificate number CV-08
4	TF-04	Cla-Val	Valve - Pressure	Pressure Sustaining Valve	Cla-Val 92-01	29-May-08	Refer certificate for restrictions	Cross listed by Cla-Val - see certificate number CV-09
5	CV-01 Rev A	Cla-Val	Valve - Pressure	Pressure Sustaining Valve	Cla-Val 92-01/692-01 Pressure Reducing/Sustaining valve	6-Jan-09	Must be fitted with X46A Clean Flow Strainer	Certificate re-issued 28 January 2009 with valve designation error corrected
6	CV-02 Rev A	Cla-Val	Valve - Pressure	Pressure Reducing Valve	Cla-Val 92-01/692-01 Pressure Reducing/Sustaining valve	6-Jan-09	Specific project approval required	Certificate re-issued 28 January 2009 with valve designation error corrected
7	CV-04	Cla-Val	Valve - Pressure	Tank In-Fill Valve	129-01/629-01 Float Valve	6-Jan-09	Protect control piping from freezing	
8	CV-05	Cla-Val	Valve - Pressure	Pressure Relief Valve	50B-4KG-1 Pressure Relief Valve	28-Jan-09	To be fitted with X101 Position Indicator if discharge not visible.	UL Online Certifications Directory QXZQ. EX2855
9	CV-06	Cla-Val	Valve - Pressure	Pressure Relief and Sustaining Valve	Cla-Val 50-01	22-May-08	Refer certificate for restrictions	Cross listed by Tyco Flow Control - see certificate number TF-01
10	CV-07	Cla-Val	Valve - Pressure	Pressure Reducing Valve	Cla-Val 90-01	22-May-08	Refer certificate for restrictions	Cross listed by Tyco Flow Control - see certificate number TF-02
11	CV-08	Cla-Val	Valve - Pressure	Pressure Reducing Valve	Cla-Val 92-01	29-May-08	Refer certificate for restrictions	Cross listed by Tyco Flow Control - see certificate number TF-03
12	CV-09	Cla-Val	Valve - Pressure	Pressure Sustaining Valve	Cla-Val 92-01	29-May-08	Refer certificate for restrictions	Cross listed by Tyco Flow Control - see certificate number TF-04
75	DO01	Dorot	Valve-Pressure	Pressure relief	300 series	23/05/23	All sizes	Catalogue 05/2015
64	TY72	Erico	Brackets	Pipe clips	Blasemaster pipe clips	1/3/19		TFP1920, UL EX5226
78	Val-37	FFP	Valve - Alarm	Residential Valveset	FFP03 Residential Cvalveset	15-Mar-10		
75	Val-22	Fivalco	Valve - Butterfly	Supervised isolation valves	Firefly and Fireriser butterfly valves	31-Aug-09	Refer to certificate for details	
74	Val-24	Fivalco	Valve - Check	Check Valve	Fireriser Check Valve	25-Sep-09	Max Working Pressure 21bar	
77	Val-34	Globe Fire Sprinkler Corp	Valve - Alarm	Alarm Valve	Model H alarm Valves	16-Aug-11	Maximum Working Pressure 12 bar, unless supplied with DIN Class 16 flanges	UL Online Listing Certificate HLXS.EX6691

Fire Protection Valves cont.

Line Number	Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
FIRE PROTECTION VALVES								
76	Val-30	Global Safety Products	Valve - Butterfly	Supervised isolation valves	B0-G300 Monitored Isolation Valve	19-Oct-09	Maximum Working Pressure 17 bar	
77	Val-33	Globe Fire Sprinkler Corp	Valve - Butterfly	Isolation Valves	Model GLR300W and GLR300GGrooved Butterfly Valves	16-Aug-11	Maximum Working Pressure 20.7 bar	UL Online Listing Certificate VPLX.EX6690
79	Val-39	Globe Fire Sprinkler Corp	Valve - Butterfly	Isolation Valves	Model GL175Tand GL175G Grooved Butterfly Valves	16-Aug-11	Maximum Working Pressure 20.7 bar	UL Online Listing Certificate HMER.EX854
77	Val-35	Globe Fire Sprinkler Corp	Valve - Trim	Water Motor Alarm	Model WM Water Motor Alarm	16-Aug-11		UL Online Listing Certificate HLXS.EX6691
70	Val-40	Globe Fire Sprinkler Corp		Check Valve	RCV Check Valve	16-Aug-11	Maximum Working Pressure 20.7 bar	UL Online Listing Certificate VPLX.EX6691
57	Val-45	Jinan Meide Castings	Valve - Butterfly	Isolation Valve	XD381X		Maximum pressure 20.7 bar	UL cert
58	Val-46	Jinan Meide Castings	Valve - Gate	Isolation Valve	XZ81X, XZ41X, XZ41X-1, XZ51X	15/6/16	10 and 16 bar	UL Cert 20140925-Ex 15973, FM cert 3051606 & 3049856.
59	Val-47	Jinan Meide Castings	Valve - Gate	Check Valve	H44X2, H84X	15/6/16	10 and 16 bar	UL Cert 20140819-EX16203, FM cert 3051638 & 3047838
60	Val-48	Jinan Meide Castings	Valve - Butterfly	Isolation Valve	XD381X	15/6/16	10 and 16 bar	UL cert. 20141125-EX26413
62	Val-50	Jinan Meide Castings	Valve - Butterfly	Isolation Valve	XD381X	19/7/16	10 and 16 bar	UL cert. 20141125-EX26413
58	TY54	Pentair Flow Control	Valve - Gate	OS&Y	TMR OS&Y	15/2/18	Needs antitamper device	TFP1540, UL 20170314-EX26547, FM 3061736
78	TY47	Potter	Valve - Trim	Accelerator	VIZOR Electronic Dry Pipe Accelerator	15/2/18	4 yearly battery replacement	TFP1105, UL listing 20150402-EX6904, FM approval 0003044164.
56	TY52	Raphael Valves Industries	Valve - Pressure	Pressure Reducing Valve	PRV-1	15/2//2018	Inline finger strainer to be used	TFP1580, UL 20060501-EX6886, FM approval 3030706
57	TY53	Raphael Valves Industries	Valve - Pressure	Pressure relief	PRV-1	15/2/18	Indicating pintle	TFP1585, UL EX6111, FM approval 3037003
73	Val-25	Reliable	Valve - Alarm	Alarm Valve	Model E Alarm Check Valves	25-Sep-09		Reliable Bulletin 418 Rev K
74	Val-26	Reliable	Valve - Alarm	Preaction Valveset	DDX Single Interlock Dry Pilot Preaction System	25-Sep-09		Reliable Bulletins 735 Rev A,732 Rev C and 742
75	Val-27	Reliable	Valve - Alarm	Alarm Valve	Model E3 High Pressure Alarm Check Valves	28-Sep-09	Max Working Pressure 21bar	Reliable Bulletin 410 Rev E
76	Val-28	Reliable	Valve - Alarm	Water Motor Alarm	Model C1 Mechanical Sprinkler alarm	28-Sep-09		Reliable Bulletin 612 Rev I
63	TY71	Tyco	Pipe		Blazemaster pipe and fittings	1/3/19		TFP1915, UL 2017171208-EX5988, FM 0003038513
67	TY-028	Tyco	Valve - Alarm	Deluge Valve	Model DV-5 Deluge Valve	1-Oct-08	Any deviations from Manufacturer's Data Sheet to be specifically approved.	UL Online Certifications Directory VLFT.EX6022
68	TY-029	Tyco	Valve - Alarm	Dry Pipe Alarm Valve	Model DPV-1 Dry Pipe Valve	1-Oct-08		UL Online Certifications Directory VLJH.EX6021

Fire Protection Valves cont.

Line Number	Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
FIRE PROTECTION VALVES								
69	TY-030	Tyco	Valve - Alarm	Preaction System - Double Interlock	Preaction system with DV-5 Valve, Double Interlock - Electric Pneumatic Actuation	1-Oct-08	Specific project approval of releasing system required. For freezer applications only	UL Online Certifications Directory VPZV.EX6107
70	TY-031	Tyco	Valve - Alarm	Preaction System - Single Interlock	Preaction System with DV-5 Deluge Valve, Single Interlock,.	1-Oct-08	Any deviations from Manufacturer's Data Sheet to be specifically approved.	UL Online Certifications Directory VLFT.EX6022
79	TY48	Tyco	Valve - Alarm	Alarm valve	AV-1-33	15/2/18	2000 kPa working pressure	TFP910, FM approvals guide, UL certificate 20161010-EX6872
66	TY75	Tyco	Valve - Alarm	Deluge valve	DV-5a deluge	26/6/19	Valve rated to 21 Bar	TFP1306, UL 20180208-EX6022, FM 0003056463
67	TY76	Tyco	Valve - Alarm	Deluge valve	DV-5a single interlock	26/6/19	Valve rated to 21 Bar	TFP1425, UL 20180208-EX6022, FM 0003056463
68	TY77	Tyco	Valve - Alarm	Deluge valve	DV-5a double interlock	26/6/19	Valve rated to 21 Bar	TFP1425, UL 20180208-EX6022, FM 0003056463
80	Val-42	Tyco	Valve - Butterfly	Isolation Valve	Model BFV-N Butterfly Valve	2-Dec-13	Maximum Working Pressure - 65mm to 200mm 20.7 bar, 250mm - 12 bar	FM Global Online Approvals Guide
81	TY49	Tyco	Valve - Butterfly	Butterfly valve	BFV-300/BFV-300C	15/2/18	200 - 200kpa 250 -1600 kPa 300-1200kPa	TFP1511, UL certicate 20151230-EX15071, FM approval 0003056718
82	TY50	Tyco	Valve - Butterfly	Butterfly valve	BFV-300/BFV-300C	15/2/18	200 - 200kpa 250 -1600 kPa 300-1200kPa	TFP1511, UL certicate 20151230-EX15071, FM approval 0003056718
72	TY81	tyco	Valve - Butterfly	Butterfly valve	BVN300 wafer butterfly valve	27/6/19	50-300mm	TFP1516, UL 20151230-EX15071, FM 0003056718
55	TY51	Tyco	Valve - Check	Check vlave	CV-1FR	15/2/18	2000 kPa working pressure	TFP950, UL certificate 20161010-EX6218, FM approval guide.
56	Val-41	Tyco	Valve - Gate	Isolation Valve	TM Series Gate valve, fitted with Potter OSYSU Supervsory Switch	2-Dec-13	Maximum Working Pressure - 20.7bar	UL On Line Directory HMRZ.EX15636 and USQT.S309
70	TY79	Tyco	Valve - Gate	Gate valve	TJR OS&Y vlave	27/6/19	50 - 400mm	TFP1541
71	TY80	Tyco	Valve - Gate	Gate valve	TJP NRS gate valve	27/6/19	50-600mm	TFP1546
73	TY84	Tyco	Valve - Pressure	Pressure reducing vlave	PRV-1a	27/7/20	50-200mm	TFP1581
74	TY85	Tyco	Valve - Pressure	Presure relief valve	RV-1a	27/7/20	50-200mm	TFP1586
76	Val-32	Tyco	Valve - Trim	Accelerator	Model QRS Electronic accelerator	6-Nov-09	Install strictly in accordance with data sheet	Tyco Data Sheet TFP1100 May 2009
69	TY78	Tyco	Valve - Trim	Solenoid valve	For use with DV5 & DV5a	26/6/19	12, 15, 16, 21 bar rated	TFP2180,
66	V-09	Victaulic	Valve - Alarm	Alarm Valve	Series 759 FireLock Alarm Check Valve	22-May-08	Use OEM Retard when needed	
71	V-15	Victaulic	Valve - Alarm	Alarm Valve	Series 751 Firelock Alarm Check Valve	29-Jan-09	Trim to be modified to comply with NZS4541. When used in a type Y configuration, factory supplied by-pass trim must be used.	UL Online Certifications Directory VPLX.EX5193
72	V-16	Victaulic	Valve - Alarm	Preaction Valveset	FireLock NTX Preaction valve sets	1-Sep-09	Maximum air pressures not to be exceeded	
70	Val-36	Watts Regulator	Valve - BFPU	Double Check Backflow Prevention Device	Model 757 Double Check Valve Assembly	3-Mar-10	Flush pipework before installation	UL Online Certification Directory BAEU.EX3185 and FM Certificate of Compliance Project Identifier 3021267

Fire Protection Valves cont.

Line Number	Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
FIRE PROTECTION VALVES								
73	V-12	Victaulic	Valve - Butterfly	Supervised Normally Closed Valve	Series 707 Firelock Butterfly Valve	22-Sep-08		UL Online Certifications Directory HLXS.EX3784
74	V-13	Victaulic	Valve - Butterfly	Floor Zone Module	Series 747M Zone Control Riser Module	30-Sep-08	Not suited for use with 10mm sprinklers	UL Online Certifications Directory VEOY. EX5986
78	Val-38	Victaulic	Valve - Butterfly	Supervised isolation valves	Firelock Series 705 Butterfly Valve	17-May-10		UL Online Listing Certificate HLXS.EX3784
75	V-10	Victaulic	Valve - Trim	Water Motor Alarm	Sries 760 FireLock Water Motor Alarm	22-May-08		
72	Val-44	Wilkins	Valve - BFPU	Backflow preventors	350, 375	5/5/16	Flush pipework before installation	UL cert, FM approval guide, SAI watermark
61	Val-49	YS valves	Valve - Gate	Isolation valve	YS-2811A, YS2812A	15/6/16	20 bar	UL test reports. FM approval guide
59	Val-51	Via-tech	Valve- Butterfly	Butterfly valve	EZ-Flo (NO)	1/10/21	65-200	Via tech datasheet, UL EX15283-20071029, FM approvals guide
60	Val-52	Via-tech	Valve-Butterfly	Butterfly valve	EZ-Flo (NC)	1/10/21	65-200	Via tech datasheet, UL EX15283-20071029, FM approvals guide
61	Val-53	Viking	Valve- Check	Check valve	D1 G1	1/10/21	65-200	F102688, UL HMER.EX1299, FM 0003042800
62	Val-54	Viking	Valve-Alarm	Alarm Valve	J1	1/10/21	80-200	F062293, UL VPLX.EX659, FM 0003042799

Miscellaneous Equipment

Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
MISCELLANEOUS EQUIPMENT							
M-57	AFT / Yong Won	Flexible dropper	Flexible dropper	YB28	23/5/16	Refer certificate	FM cert 28 Sept 2007, UL cert EX5202
M-46	Ames	Strainer	8000 strainer	150, 200, 200	28/7/15	Refer certificate	Ames data & flow test.
M-59	Ansul	Kitchen system	Piranaha System	423385	26/7/16	Refer certifiacte and Tyco manual	UL cert GMXH-EX5174
AQ-1	Aquatherm GmbH	Pipe	Plastic Pipe and fittings	Firestop	1-Nov-07	Refer to certificate for restrictions	See file
M-71	ATS Compressor	Compressor	Compressor	DCAP-5.5x2	9/11/17	Refer certicate	Company spec sheets
M-85	AusPress	Pipe	Pressfit system	20-150mm	12/3/18	refer certficate	FM listing, engineers deflection calculation
M-28	Ayvaz	Seismic joint	Seismic Pipe Assembly	Model U Flex	9-Nov-12	Refer to listing certificate	FM Approvals Report 3032070
M-48	CityContractors	Strainer	150 and 200 Strainers	150NB, 200NB	23/11/15	Refer certifiacte	Drawings, calculations and flow test results.
M110	Daejin Sanup - Genie	Flexible dropper	Flexible dropper	DJ28B	22/12/20	Refer certificate	FM and UL certificates
V-14	Dong-A Flexible Metal Tubes Ltd	Flexible dropper	Flexible sprinkler dropper assembly	Models DA-SP, Da-SPNm DA-SPW, DA-SPB, DA-SPNB and DA-SPWB	19-Nov-08	Refer to listing certificate	Refer listing application
M-34	Europress	Fittings	Pipe & fittings	Press fit product range	21/11/14	Refer to listing certificate	VDS
M-43	Europress	Flexible dropper	Flexible sprinkler dropper assembly	steelFix RS339L92	13/1/15	Refer certificate	FM & VDS approval
M-23	Fivalco	Flexible dropper	Flexible sprinkler dropper assembly	FX and FXB Quickconnect Flexible Sprinkler Droppers	10-Dec-10	Refer to listing certificate	FM Approval guide and UL File No. EX 15597
M-26	Fivalco Inc	Flexible dropper	Flexible sprinkler dropper assembly	FXB QuickConnect Braided	16-May-12	Refer to listing certificate	FM Approval Guide and UL Online Certifications Directory VENF.EX15597
M-29	Flexmaster	Seismic joint	Seismic Pipe Assembly	Model HSSVC and HSSUC Braided Seismic Connectors	27-May-13	Refer to listing certificate	
M107	Flextech	Seismic joint	Siesmic joint	U and V	5/1/20	Refer certficate	FM certificate
M108	Flextech	Seismic joint	Expansion joint	U and V	5/1/20	Refer certificate	FM certificate
M136	Flowcom	Fittings	Couplings	RC1, RC2, FC1, RF1	5/12/22	Refer certificate	UL and FM certificates
M-77	Framery Q	Meeting pod	Meeting pod	Q, 2Q	1/2/19	refer certificate	Inspecta
M-83	Framery Phone Booth	Meeting pod	Meeting pod	O	7/3/18	Refer certifiacte	Inspecta
M111	Framery	Meeting pod	Meeting pod	Framery One	3/3/21	Refer certifiacte	TN-21-51
M-70	Genie Systems dropper	Flexible dropper	Dropper	DJ25B, DJ32B	14/2/17	Refer certificate	FM 3055659, FM 30342416, UL 20130828-EX15083
M-84	Gripple	Brace pre 2020	GS range		9/3/18	refer certificate	Gripple datasheet
M113	Hangzhou Ehasse-Flexco	Flexible dropper	Flexible dropper	EH-8100-D	11/5/21	Refer certificate	FM approval
M-61	Hangzhou Ehasse-flex Co.	Flexible dropper	Flexible dropper	Ehasse	26/8/16	Refer certificate	FM3052014

Miscellaneous Equipment cont.

Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
MISCELLANEOUS EQUIPMENT							
M114	Hangzhou Ehase-Flexco	Seismic joint	Siesmic joint	EHUG, EHUF, EHUT, EHVg, EHVf, EHVT	11/5/21	Refer certificate	FM approval
M115	Hangzhou Ehase-Flexco	Seismic joint	Expansion joint	EH-400SG, EH-500H, EH-600M	11/5/21	Refer certificate	FM approval
M-31	Hengshui Jenhus Steel Pipe	Pipe	65mm med and 150mm light galvanised steel pipe to BS1387	65mm med and 150mm light galvanised steel pipe to BS1387	16-Jul-13	Refer to listing certificate	Refer to listing certificate
M-22	Hilti	Fixing	Sprinkler hanger fixing	HUS-I-6 Screw Anchor	29-Sep-10	Refer to listing certificate	Hilti technical manual
M-39	Holykell	Direct Brigade Alarm	Pressure transducer	12-593 / HPT300-C1	5/12/14	Refer certificate	CE Certificate
M-47	Hose Supplies	Seismic joint	HoseMaster	braided only	18/11/15	Refer certificate	Hosemaster datasheet
M-30	Huludao City Steel Pipe Industrial Company	Pipe	ASTM A135 pipe to British Outside Diameters		1-Jul-13		
M-63	Hydroflow	Strainer	Strainer	100 - 250mm	7/9/16	Only tested to 5000 lpm	Aon flow test.
M134	Index	Fixing	Concrete fixing	Screwbolts: THE, TFE, TFN, THA, THT, THP, TFF, TFM, TFS	2/12/22	Refer certifiacte	ETA 20/0046
M135	Index	Fixing	Concrete fixing	Through bolt: MTP	2/12/22	Refer certificate	ETA 12/0397
M-64	Industrial Fittings (IFNZ)	Bracket pre2020	Split clip	15-150mm	11/10/16	Refer Certificate	Load testing certs
M-65	Industrial Fittings (IFNZ)	Bracket pre2020	Yoke clamp	50-250mm	11/10/16	Refer Certificate	Load testing certs
M-69	Industrial Fittings (IFNZ)	Bracket pre2020	Baseplates	BPM10W, BPM12W, BPM10W45, BPM12W45	7/4/17	Refer certificate	Load testing certs
M-18	Jinan Meide Casting Co Ltd	Fittings	Fittings - Grooved	MECH	8-Feb-10	Refer to listing certificate	UL Online Certifications Directory VIZA. EX6097
M-19	Jinan Meide Casting Co Ltd	Fittings	Fittings - Mechanical tees	MECH	8-Feb-10	Refer to listing certificate	UL Online Certifications Directory VIZM. EX6464
M-20	Jinan Meide Casting Co Ltd	Fittings	Fittings - Mechanical couplings	MECH	8-Feb-10	Refer to listing certificate	UL Online Certifications Directory VIZM. EX6464
M-67	Jinan Meide Casting Co Ltd	Fittings	Roll groove fitting	90, 90S, 130, 130S, 230, 300, 321G	13/2/17	Refer certificate	UL viza.ex6097
M-68	Jinan Meide Casting Co Ltd	Fittings	Roll groove coupling	1g, 1gs, 1gk, 1n, 321, 3g, 3gs, 3js, 3l	13/2/17	Refer certificate	UL viza.ex6464
M-60	Jinan Meide Casting Co Ltd	Pipe	Schedule 10 pipe	50mm-200mm	23/8/16	Refer certificate	FM 3057135, A795, AS4218.2.1
M-62	Jinan Meide Casting Co Ltd	Pipe	Schedule 10 pipe	50mm-200mm	7/9/16	Refer certificate	FM 3057135, A795, AS4218.2.1
M109	Jinan Meide Casting Co Ltd	Fittings	Roll groove	pipe fittings	20/11/20	Refer certificate	FM and UL certificates
M125	Jinan Meide Casting Co Ltd	Valves - trim	Flow switch	ZSJZYS	6/07/22	Refer certifctae	FM approved
M126	Jinan Meide Casting Co Ltd	Valves - trim	Valve position indicator	MXHQ	6/07/22	Refer certifctae	UL Certificate
M127	Jinan Meide Casting Co Ltd	Valves - trim	Pressure switch	YLKG-10, YLKG-40, YLKG-120	6/07/22	Refer certifctae	UL Certificate
M137	Jinan Meide Casting Co Ltd	Flexible dropper	Flexible dropper	FBC2 700 though 1800	28/02/23	Refer certificate	FM certificate
M-54	JY Pipe supports	Brace pre 2020	Seismic Bracing	MRG, MRS, MRZ range	27/04/216	Refer certificate	Calculations by PJ Hurdle CPEng
M-53	JY Pipe supports	Bracket pre2020	Pipe clamp	RLS18 60-400	27/04/216	Refer certificate	Calculations by PJ Hurdle CPEng
M-55	JY Pipe supports	Bracket pre2020	Pipe hanging	MRS-BP10, MRG-BP12, BP10/12A-C	27/04/216	Refer certificate	Calculations by PJ Hurdle CPEng

Miscellaneous Equipment cont.

Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
MISCELLANEOUS EQUIPMENT							
A-001	Kofulso	Flexible dropper	Flexible sprinkler dropper assembly	Easyflex DKFB-SP	19-Nov-08	Refer to listing certificate	Refer listing application
M-24	Kofulso	Flexible dropper	Flexible sprinkler dropper assembly	Easyflex Flexible Drpper Assemblies, with TBS, MSB and HSB Bracket Systems	19-Apr-11	Refer to listing certificate	FM Approval guide and UL Online Certifications Directory VENF.EX6276
M116	Mayer Stainless	Pipe	Press fit system	Meayer NZ press fit range	14/6/21	Refer certifiacte	Castco testing
M-50	Orangebox	Meeting pod	Air3 office	Air23 - Air 29	1/2/16	Refer certificate	BRE report
M-74	Pedrollo	Pump	Pump	PKM pumps	22/6/17	refer certificate	suppliers statement
M120	Pipeline industries	Seismic joint	Seismic joint	Custom	19/05/22	Refer certificate	PHDesign test report
M-99	Pertonic	Direct Brigade Alarm	DBA	SGD-DBA: X Y Res	19/8/19	refer certioficate	External test report
M-35	Polargy	Drop Out Ceiling	Drop Out Ceiling	RFB, 15mm & 20mm. YJ28-SBA Bracket	17-Nov-14	Refer certificate	UL File BLME.R4036
M105	Reliable	Flexible dropper	Flexible dropper	RFB, 15mm & 20mm	24/1/20	Refer certificate	FM approval table
M-04	Reliable	Guards	Model C Sprinkler Guards	Sprinkler Guards	19-Oct-09	Refer to listing certificate for comptiable sprinklers	Bulletin 208 Model F
M-25	Reliable	Guards	Sprinkler Guard	Model D5 Sprinkler Guard	1-Jun-11	Refer to listing certificate for range of heads listed with	UL Online certifications directory VFJV.MS25
M112	Room	Meeting pod	Meeting pod	Room	4/3/21	Refer certificate	Redacted test report
M-79	Sanha Gmbh	Pipe	SS Pipe and fittings	Kempress system	9/11/17	refer certificate	FM approvals and VDs
M-80	Sanha Gmbh	Pipe	Fe Pipe and fittings	Kempress system	9/11/17	refer certificate	FM approvals and VDs
M-27	Seung Jin Ind Co Ltd	Flexible dropper	Flexible sprinkler dropper assembly	Seung-Jin Flexible Sprinkler Drops	24-Oct-12	Refer to listing certificate	UL Certificate 093003-EXC5967 dated 30 Sep 2009
M106	Seung Lin Industries	Flexible dropper	Flexible dropper	Flexone SJ32B-Txxx-SE	31/1/20	Refer certificate	FM approval table
M131	Shield	Fittings	Couplings	All couplings, rigid and flexible	10/11/22	Refer certificate	FM
M132	Shield	Fittings	Mechanical tee	Grooved and threaded outlet, and back to back	10/11/22	Refer certificate	FM
M133	Shield	Fittings	Fitting	Roll groove elbows, tees, cap and reducers	10/11/22	Refer certificate	FM
M100	Shurjoint	Fittings	Roll goove coupling	7705, 7706, K9, Z05	24/1/20	Groove to specification	FM approval table
M101	Shurjoint	Fittings	Flange adaptors	7041,	24/1/20	Groove to specification	FM approval table
M102	Shurjoint	Fittings	Elbows and tees	7110, 7111, 7112, 7113, 901, 903	24/1/20	Groove to specification	FM approval table
M103	Shurjoint	Fittings	Reducers	7150, 7151	24/1/20	Groove to specification	FM approval table
M104	Shurjoint	Fittings	Mechanical tees	7721, 7722, 723	24/1/20	Groove to specification	FM approval table
M87	Sikla	Bracket pre2020	Duo DRS pipe clip	10-100mm	14/2/19	refer certificate	sikla test data
M88	Skila	Bracket pre2020	D-3G pipe clip	10-300mm	14/2/19	refer certifiacte	VdS and FM aprovals
M91	Stainless Design	Brace pre 2020	Seismic bracket compomnent	80-150	21/3/19	refer certificate	SGS testing
M92	Stainless Design	Brace pre 2020	Seismic bracket compomnent	SB-RM	21/3/19	refer certificate	Internal test report
M93	Stainless Design	Brace pre 2020	Seismic bracket compomnent	SB-PB 20-32	21/3/19	refer certificate	Internal test report
M97	Stainless Design	Brace pre 2020	Seismic bracket compomnent	DMB 10-16	21/3/19	refer certificate	Internal test report

Miscellaneous Equipment cont.

Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
MISCELLANEOUS EQUIPMENT							
M-86	Stainless Desgin	Bracket pre2020	CJ pipe bracket	20-200mm	22/5/18	refer certificate	SGS test report INZ61900-01
M95	Stainless Design	Bracket pre2020	Pipe bracket	SC 20 - 200	21/3/19	refer certificate	Internal test report
M96	Stainless Design	Bracket pre2020	Pipe bracket	LPC 20 - 200	21/3/19	refer certificate	Internal test report
M98	Stainless Design	Bracket pre2020	Pipe bracket	WMC 20 - 200	21/3/19	refer certificate	Internal test report
M-49	Steel & Tube	Fixing	M10 wedge nut	m10wd	1/2/16	Refer certificate	Branz report
M-33	STRAUB	Fittings	Pipe Coupling	Grip-L	19-Jun-14	Refer to Listing certificate	Lloyd's Register Certificate Number 94/20035 (E10) 8 May 2013
M-37	Suco	Direct Brigade Alarm	FBA pressure switch	12-575	5/12/14	Refer certificate	UL Online file E184784
M89	Tasman PFV	Bracket pre2020	MZW pipe clip	15-150mm	22/2/19	refer certificate	SGS testing
M90	Tasman PFV	Bracket pre2020	HMZ yoke clip	50-150mm	22/2/19	refer certificate	SGS testing
M-75	Tasman PFV	Strainer	Strainer	100, 150, 200	31/7/17	refer certificate	test and suppliers calcs
M130	Tewa Spray	Valves - trim	Flow switch	WFAR-TS and WFAR-2 - 8	1/11/22	Refer certificate	UL and FM
TY82	Tyco	Fittings	Roll groove coupling	Style 579 coupling	2/10/19	refer certificate	External test report
TY40	Tyco Electrical & Metal Products	Pipe	Steel Pipe	Allied XL Pipe	1-Oct-09	Refer listing certificate	Refer listing application
TY-34.1	Tyco Fire and Building products	Guards	Sprinkler Guard	Model G1 Guard	1-Oct-09	Refer to data sheet	Data Sheet TFP780
TY-34.2	Tyco Fire and Building products	Guards	Sprinkler Guard	Model G 2 Guard	1-Oct-09	Refer to data sheet	Data Sheet TDFP782
TY-34.3	Tyco Fire and Building products	Guards	Sprinkler Guard	Model WSG-2 Guard	1-Oct-09	Refer to data sheet	Data Sheet TDFP782
TY-34.4	Tyco Fire and Building products	Guards	Sprinkler Guard	Model G4 Guard	1-Oct-09	Refer to data sheet	Data Sheet TFP780
TY-34.5	Tyco Fire and Building products	Guards	Sprinkler Guard	Model WS-2 Water Shield	1-Oct-09	Refer to data sheet	Data Sheet TDFP782
TY-32	Tyco Fire and Building products	Valve - trim	Deluge Valve Accessory	FTR-1 Fixed Temperature Release	1-Oct-09	Use in accordance with data sheet listed spacings	Data Sheet TFP1388
TY-33	Tyco Fire and Building products	Water mist	Water Mist Nozzle	AM-24 Water Mist Nozzle, OH 2 System	1-Oct-09	Specific project review required. Install and design in accordance with Data Sheet	Data Sheet TD1172
TS-01	Tyco Safety Products	Direct Brigade Alarm	Direct Brigade Alarm	Vigilant Compact DBA- Type X	1-Oct-07		TSP Letter 28 Sep 07
TS-02	Tyco Safety Products	Direct Brigade Alarm	Direct Brigade Alarm	Vigilant Compact DBA- Type Y	1-Oct-07		TSP Letter 28 Sep 08
M-66	Unifi	Meeting pod	Portable office	Urban	9/2/16	Refer certificate	
M-56	Victaulic	Fittings	Mechanical pipe joiner	009N		Refer certificate	FM approval guide
M-72	Victaulic	Fittings	HDPE coupler	63-225	22/5/17	refer certificate	FM cert 0003058480
M-73	Victaulic	Fittings	HDPE Coupler	63-225	22/5/17	refer certificate	FM cert 0003058480
M-21	Victaulic	Flexible dropper	Flexible sprinkler dropper assembly	Aquaflex AF Sprinkler fittings	6-Apr-10	Refer to listing certificate	UL Onlie Certifications Diorectory VENF. EX15217

Miscellaneous Equipment cont.

Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
MISCELLANEOUS EQUIPMENT							
M-44	Victaulic	Flexible dropper	Flexible sprinkler dropper assembly	VicFlex - AH1, AH2, AB1, AB2, AB4, AB7, AB10	20/1/15	Refer certificate	UL cert VENF.EX152217. FM Approval guide
M-78	Victaulic	Flexible dropper	Flexible dropper	AH3 flexible hose	18/9/17	refer certificate	FM approval guide
M94	Viega Megapress	Pipe	Pressfit system	15 - 100mm	16/7/19	refer certificate	FM 0003047543
M117	Viking	Fittings	Couplings	VK-RC, VK-RCA, VK-FC, VK-FCH, VK-DC	14/07/21	Refer certificate	FM approval
M118	Viking	Fittings	Fittings	VK-E90, VK-E45, VK-E22, VK-E11, VK-ET, VK-RTG, VK-RTT, VK-CX, VK-EC, VK-ECD, VK-FAP, VK-FAA, VK-FTP, VK-SFP, VK-SFA, VK-ER, VK-CRG, VK-CRT,	14/07/21	Refer certificate	FM approval
M119	Viking	Fittings	Mechanical tees	VK-ST, VK-MTG, VK-MTG2, VK-MTT, VK-MTT2,	14/07/21	Refer certificate	FM approval
VT-01	Vitech	Direct Brigade Alarm	FBA Pressure Sensors	WIKI Model A-10	19-Jun-09		
M-17	Vietch	Direct Brigade Alarm	Fire Brigade Alarm	Type X & Y Fire Brigade Alarm	29-Mar-10	Refer to listing certificate	Refer to listing certificate
M-36	ViTech	Direct Brigade Alarm	FBA power supply	12-800 series	5/12/14	Refer certificate	NZS4512
M-38	ViTech	Direct Brigade Alarm	FBA pump start output	X & Y FBA	5/12/14	Refer certificate and O&M	
M-40.1	ViTech	Direct Brigade Alarm	Fire Brigade Alarm X	Type X FBA	5/12/14	Refer certificate	ViTech User manual
M-40.2	ViTech	Direct Brigade Alarm	Fire Brigade Alarm Y	Type Y FBA	5/12/14	Refer certificate	ViTech User manual
M-40.3	ViTech	Direct Brigade Alarm	Fire Brigade Alarm Res	Residential FBA	5/12/14	Refer certificate	ViTech User manual
M-45	ViTech	Direct Brigade Alarm	Signal Generating Device	SGD	7/4/15	Refer certificate	ADT history log
M-41	ViTech	Valve - Ball	Anti-interference - ball valve	Ball valve anti-interference device	8/12/14	Refer certificate	ViTech wiring diagram
M-42	ViTech	Valve - Gate	Anti-interference - secol	Secol replacement anti-interference device	8/12/14	Refer certificate	ViTech wiring diagram
M-76	Watermist	Water mist	Hydramist	(A)MPU	18/9/17	refer certificate	LPBC cert
M-58	Weifang East Steel	Pipe	Schedule 10 pipe	50mm - 200mm	20/6/16	Refer certificate	FM cert 3049283, A795, AS4218.2.1
M121	Weflo Valve	Valves - trim	Valve position indicator	TIP-1, TIP-2	14/06/22	Refer certifiacte	FM approval
M122	Weflo Valve	Valves - trim	Valve position indicator	TOSY-1, TOSY-2	14/06/22	Refer certifiacte	FM approval
M123	Weflo Valve	Valves - trim	Pressure switch	TPS	14/06/22	Refer certifiacte	UL Certificate
M124	Weflo Valve	Valves - trim	Flow switch	TF020 - TF100	14/06/22	Refer certifiacte	UL Certificate
M128	Wika Instruments India	Valves - trim	Flow switch	WIKAF FSD	28/09/22	Refer certificate	UL and FM
M-82	Wormald	Strainer	Strainer	100 - 200 mm	16/2/18	Refer certificate	Design review. Subject to performance test
M129	Yong Won Enc Ltd	Flexible dropper	Flexible dropper	YB33 (700 - 1800mm)	6/10/22	Refer certificate	UL and FM
M-32	Young Jin Flex Co Ltd	Flexible dropper	Flexible sprinkler dropper assembly	Model YJ27-SB Flexible Hoses (braided)	18-Dec-13	Refer to listing certificate	FM Approvals Report Project Identifier 3037930 Class 1637, July 22, 2010
M-51	Zhejiang Tronflex	Flexible dropper	Flexifire flexible dropper	AF25BR 700 - 1800	30/3/16	Refer certifiacte	FM and UL test reports

Brackets and Braces Equipment

Cert. No.	Manufacturer	Category	Description	Model	Listing Date	Notes	Reference
BRACKETS AND BRACES EQUIPMENT							
BB019	Caddy	Bracket-2020	Pipe clamp	CMP10, CMP12, VMP10, VMP12, Eric15 60-165, Eric18 60-273, MPZ20, HDN 081-173	25/01/23	SGS test reports	
BB009	Flamco	Fixing-2020	Beam clamp	BC10, BC12			
BB001a	Friuslider	Fixing - 2020	Friuslide concrete anchor	FM753 M8- M16	22-Jun-20	Stainless model not listed	Friuslider brochure, ETA-09/0056
BB007	Hisener	Fixing - 2020	Base plate	M10 & M12	14-Jun-21		SGS test
BB010	IFNZ	Bracket-2020	Pipe clip	MR			
BB011	IFNZ	Bracket-2020	Yoke clamp	PCYK			
BB021	IFNZ	Bracket-2020	Yoke clamp	BPM10W, BPM10W45, BPM12W, BPM12W45	2/06/23	AUT analysis of yeild load	Chain and rigging destructive test
BB020	Jinan Meide	Bracket-2020	Pipe clamp	GAU9, GSB9, GSC9, GSD9, GSJ9, GSL9, GSM9, GSP9, GSU9, GSV9,	20/03/23	FM approvals PR462099 and PR460795, UL certifiacte EX28632	pear type need braced
BB012	JY Pipe supports	Bracket-2020	Pipe clamp	RLS18 60-400			
BB013	JY Pipe supports	Bracket-2020	Pipe clamp	MRG, MRS, MRZ range			
BB015	JY Pipe supports	Bracket-2020	Base plate	MRZ & MRG			
BB015	JY Pipe supports	Bracket-2020	Pipe clamp	GPS medium duty saddle			
BB008	nVent Caddy	Fixing-2020	Sway brace Components	CSBSTU, CSBMA, CSBQGO, CSBBRS3MEG, CSBIB, CSBBRS1MEG, CSBBC075EG, CSBBRP, CSBBARJEG, CSBUNIV, CSBEZU			
BB014	nVent Caddy	Bracket-2020	Pipe clamp	Macrofix 20mm-50mm			
BB003	PHD	Brace - 2020	Sway brace Components	Fig 010, 015, 030, 031, 035, 045	5-Nov-20		PHD brouchre and FM certificates
BB004	Polyplas	Brace - 2020	Sway brace Components	RS-0, RS-S, RS-R, RS-DD, RS-DDR, RS-SE, RS-SER	4-Mar-21	Alternative standard to ANS/FM1950	
BB006	Polyplas	Brace - 2020	Sway brace Components		5-Mar-21	Alternative standard to ANS/FM1950	
BB017	TasmanPFV	Bracket-2020	Pipe clamp	15-100 munzing rings	22/06/23	SGS test reports	
BB002a	Toge dubel	Fixing -2020	Toge concreete anchor	TSM 8 - TSM 14	22-Jun-20	Mimumum embedment	Toge brochure, ETA-15/0514
BB005	Zip Cip	Brace - 2020	Sway brace Components			Alternative standard to ANS/FM1950	

Pumps

Cert. No.	Manufacturer	Agent	Description	Model	Listing Date	Notes	Reference
PUMPS							
M-81	Aline Pump	A Line	Pump Controller	FPCS12D, FPCS24D	8/02/18	initial install to be tested	Design review and workshop visit.
M52	Fire Pump Technology	Fire Pump Technology	Governer speed controller		19/05/17	Pre 2020	Refer certificate
P-06	Galbraith Engineering	Galbraith Engineering	Linear ram speed controller		29-Apr-22		
P-02	Homesafe		FireSafe Inverter	7.5-40kVa	21-Apr-13		
TD-01	Mercedes Benz	Transmissions and Diesel	Diesel Engine	OM-447A	19-Aug-08		
P-03	Primepumps	Tasman Pipe Fitting and Valve	Diesel Engine		28/5/20		
P-04	Primepumps	Tasman Pipe Fitting and Valve	Electric Motor		58/05/2020		
P-05	Pumpset Technology	Pumpset Technology	Diesel controller	DCF20	28-Sep-21		
P-07	Pumpset Technology	Pumpset Technology	Linear ram speed controller		29-Apr-22		
P-08	Pumpset Technology	Pumpset Technology	Diesel fuel line	PT10 & PT12	14-Jun-22		
M16	Tyco Safety Products	Grinnell Pumpo & Fabrication	Diesel Pump Controller	FPC-07	11-Nov-09	Refer to listing certificate	Refer to listing certificate