

UPRIGHT, Sprinkler Early Suppression, Fast Response K22.4



TECHNICAL DATA

STYLE	UPRIGHT Sprinkler Early Suppression, Fast Response ESFR
TEMPERATURE RESPONSE	Fast Response Hook Strut
COVERAGE	Standard Coverage
K-FACTOR	22.4 US (320 metric)
NOMINAL THREAD SIZE	1" BSPT (NPT Optional)
MAXIMUM WORKING PRESSURE	175PSI 12Bar
FACTORY HYDROSTATIC TEST PRESSURE	365 PSI
MINIMUM OPERATING PRESSURE	7 PSI 0.5Bar
TEMPERATURE RATING	74°C (165° F), 100°C(212° F)
APPROVALS	Refer Table
FINISH	Brass, Chrome Plated For other shades, contact JYCO Sales. For SIN Nos. JY8123, chrome plating will not be done on the threaded portion.
ORDERING INFORMATION	Style, Temperature Rating & Response, Thread type, Finish, Approval required- CCCF, CE
SIN NUMBER	UPRIGHT, QR: JY8123



DESCRIPTION

JYCO Upright sprinklers are designed for use in light and ordinary hazards. The temperature response is fast response (hook and strut). The sprinklers come with compact design, hook and strut type, available in several different finishes and temperature ratings. The sprinklers must be installed in position, and UPRIGHT sprinklers are to be installed in the UPRIGHT position.

SPRINKLER RATINGS

SPRINKLER TEMPERATURE CLASSIFICATION	NORMAL SPRINKLER TEMPERATURE RATING	MAXIMUM COVERAGE AREA	MINIMUM COVERAGE AREA
Ordinary	74°C (165°F)	100 ft2 (9,3 m2)	64 ft2 (5,8 m2)
Ordinary	100°C (212°F)	100 ft2 (9,3 m2)	64 ft2 (5,8 m2)

As per Table 6.2.5.1 NFPA 13

APPROVALS

Response Type	Orientation Type / SIN No.	Temperature Rating	Approval CCCF, CE		Code No
QR	UPRIGHT JY8123	74°C (165°F) 100°C (212°F)	√ √ √ √	√ √ √ √	T812374 T8123100

* Note: For SIN Nos. JY8123 the frame material can choose stainless steel or anti-corrosion.

MATERIAL SPECIFICATION	
Deflector	Brass
Hook and Strut	Brass
Cap	Copper *
Frame	Brass
Seal	Teflon Coated Washer

Sprinkler Operation

The Sprinkler operating device is state of the art heat responsive frangible hook and strut supplied by a world leader in this innovative technology. The hook and strut which expands when exposed to heat. When rated temperature is reached, the hook shatters and water flows through the sprinkler and strikes deflector, forming a uniform water spray pattern to control or extinguish fire.

Care and Handling

Sprinklers must be handled with due care, they must be stored at ambient temperature for best results and in a separate space in order NOT to allow metal parts coming in contact with sprinkler or hook. Storage as well as any onward shipment is to be made in original packaging only.

Always store the sprinklers with protective sprinkler caps. Do not remove the protective sprinkler caps until the sprinklers are installed in the system, in order to protect sprinklers from mechanical damage. Sprinklers caps must be removed carefully without touching / damaging the bulb element, before placing the system in service.

Sprinklers must be visually inspected carefully before installation. Sprinklers visibly damaged, dropped or exposed to temperature in excess of the maximum ambient temperature permitted, should never be installed.

Never install any hook and strut sprinkler if the hook is cracked or if there is a loss of strut from the frame. Sprinkler must be installed after the piping is in place to prevent mechanical damage.

Use Teflon Tape or soft thread sealant on male thread of the Sprinkler for the leak tight Sprinkler joint. Use proper wrench. The sprinkler must be hand tightened into the fitting. After hand tightening, use Sprinkler Wrench Model JP-L for wrench tightening into sprinkler fittings. A leak-tight 1" NPT/BSPT Sprinkler joint should be obtained by applying maximum torque of 19.0 N-m (14 lb-ft). Excessive tightening torque may distort the Sprinkler inlet and cause leakage.

Sprinkler must never be painted, plated or coated after they leave factory.

The JYCO Sprinkler described herein must be installed and maintained in accordance with the latest edition of JYCO technical data, the latest standard of National Fire protection Association (NFPA) and CE or to the standard of any other authorities having jurisdiction.

The owner is solely responsible for maintaining their fire protection system and device in proper operating condition.

Exposure to ultraviolet or direct sunlight for extended period may cause the hook strut to fade. Colourless or faded coloured hook strut are not a problem, as long as the hook strut has not been affected. The loss of colour of the hook strut will not effect sprinkler performance, as long as the hook strut is intact and not damaged. The loss of colour may be an issue in identifying sprinkler temperature rating, but the temperature rating is still stamped on the sprinkler deflector.

Inspection Testing and Maintenance

Refer to NFPA 25 for inspection testing and maintenance requirement or to the authority having jurisdiction. For details of warranty, refer JYCO's current price list, conditions of sale or contact JYCO directly.

Note:

In case of using JY8123 sprinklers as part of CE Approved Low Expansion Foam Systems, the certification of the system is contingent upon piping designed and installed in accordance with NFPA 11 and/ or CE Global Property Loss Prevention Data Sheet 4-12, Foam-Water Sprinkler Systems.

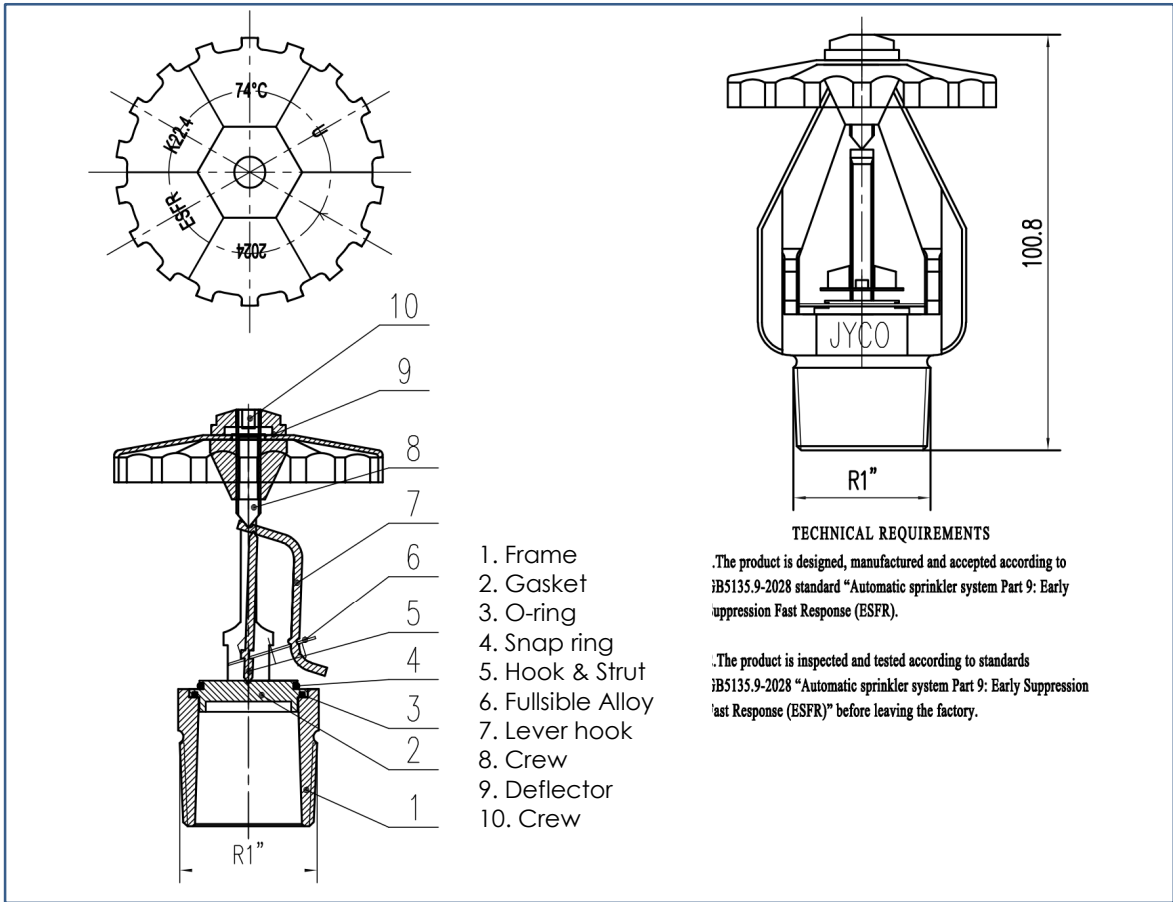
The Model ESFR-22 UPRIGHT Sprinklers provide the system designer with hydraulic and sprinkler placement options not presently available to the traditional ESFR sprinklers having nominal K-factors of 14.0 and 16.8. In particular, the Model ESFR-22 Sprinkler is designed to operate at substantially lower-end head pressures, as compared to ESFR Sprinklers having nominal K-factors of 14.0 and 16.8. This feature offers flexibility when sizing system piping, as well as possibly reducing or eliminating the need for a system fire pump.

The Model ESFR-22 Sprinklers can eliminate the use of in-rack sprinklers when protecting high-piled storage of specific materials up to the following heights:

- NFPA: 40 ft (12,2 m) with ceilings up to 45 ft (13,7m)
- FM: 45 ft (13,7 m) with ceilings up to 50 ft (15,2 m)

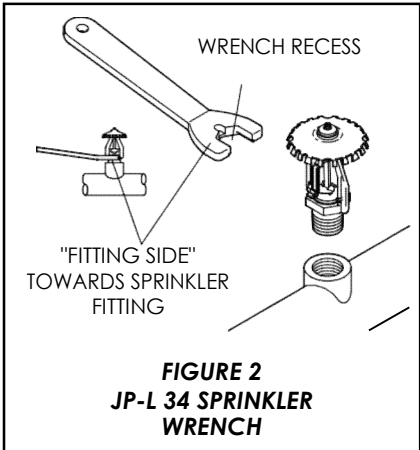
For more specific criteria, see Table B and the applicable design standard. The Model ESFR-22 Sprinklers are listed by Underwriters Laboratories (UL) for specific applications with a maximum storage height of 43 ft (13,1 m) with a maximum ceiling height of 48 ft (14,6 m) without the requirement for in-rack sprinklers. Refer to the Specific Application Listing (UL) for the design criteria.

UPRIGHT SPRINKLER



MODEL ESFR UPRIGHT SPRINKLER, 22.4K EARLY SUPPRESSION, FAST RESPONSE

SPRINKLER WRENCH



Item	Description
Sprinkler Identification Number (SIN)	JY8123
K-factor, gpm/psi ^{1/2} (Lpm/bar ^{1/2})	22.4 gpm/psi ^{1/2} (320 Lpm/bar ^{1/2})
Temperature Rating °F (°C)	165°F (74°C) 212°F (100°C)
Thread Size	1 in. NPT or ISO 7-R 1
Sprinkler Orientation	UPRIGHT
Maximum Working Pressure, psi (bar)	175 psi (12,1 bar)

TABLE A
MODEL ESFR UPRIGHT SPRINKLER
TECHNICAL DATA

LIMITED WARRANTY

JYCO FIRE CORP. hereby referred to as JYCO FIRE warrants to the original purchaser of the fire protection products manufactured by JYCO FIRE and to any other person to whom such equipment is transferred, that such products will be free from defect in material and workmanship under normal use and care, for two (2) years from the date of shipment by JYCO FIRE. Products or Components supplied or used by JYCO FIRE, but manufactured by others, are warranted only to the extent of the manufacturer's warranty. No warranty is given for product or components which have been subject to misuse, improper installation, corrosion, unauthorized repair, alteration or un-maintained. JYCO FIRE shall not be responsible for system design errors or improper installation or inaccurate or incomplete information supplied by buyer or buyer's representatives. JYCO FIRE will repair or replace defective material free of charge, which is returned to our factory, transportation charge prepaid, provided after our inspection the material is found to have been defective at the time of initial shipment from our works. JYCO FIRE shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of the product including damages for injury to person, damages to property and penalties resulting from any products and components manufactured by JYCO FIRE. JYCO FIRE shall not be liable for any damages or labour charges or expense in making repair or adjustment to the product. JYCO FIRE shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data & services. In no event shall JYCO FIRE's product liability exceed an amount equal to the sale price. The foregoing warranty is exclusive and in lieu of all other warranties and representation whether expressed, implied, oral or written, including but not limited to, any implied warranties or merchantability or fitness for a particular purpose. All such other warranties and representations are hereby cancelled.

NOTICE :

The equipment presented in this bulletin is to be installed in accordance with the latest publication standards of NFPA or other similar organisations and also with the provision of government codes or ordinances wherever applicable.

The information provided by us is to the best of our knowledge and belief, and consist of general guidelines only. Site handling and installation control is not in our scope. Hence we give no guarantee for result and take no liability for damages, loss or penalties whatsoever, resulting from our suggestion, information, recommendation or damages due to our product.

Product development is a continuous programme of JYCO FIRE CORP . and hence the right to modify any specification without prior notice is reserved with the company.

**JYCO****JYCO FIRE CORP.**

Protecting What Matters Most to You

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