# FJM-EL
# Electric Monitor

## Description

The SKUM FJM-EL Electric Monitor is a powerful fire suppression monitor with exceptional flow characteristics and remote control operation. The electric motors in the monitor drive the elevation and rotation movements. SKUM supply two FJM-EL Electric Monitor models; the MV (magnet valve) model and the LA (linear actuator) model. The MV model contains a solenoid valve to adjust and operate the fog and jet patterns. The LA model contains a linear actuator to adjust and operate the fog and jet patterns.

## Application

The SKUM FJM-EL Electric Monitor is designed for fixed mounting to deliver water and foam. The monitor can deliver varying water to fog patterns and is adjustable through remote control operation.

## Features

- Wide capacity range
- Adjustable flow to nominal capacity
- Compact and balanced design
- Low friction bearings for easy manoeuvres
- Long throw length
- Adjustable stream pattern
- Stainless steel and bronze corrosion-resistant construction
- Integrated electrical junction box
- Available with ATEX approved electrical equipment

## Connections

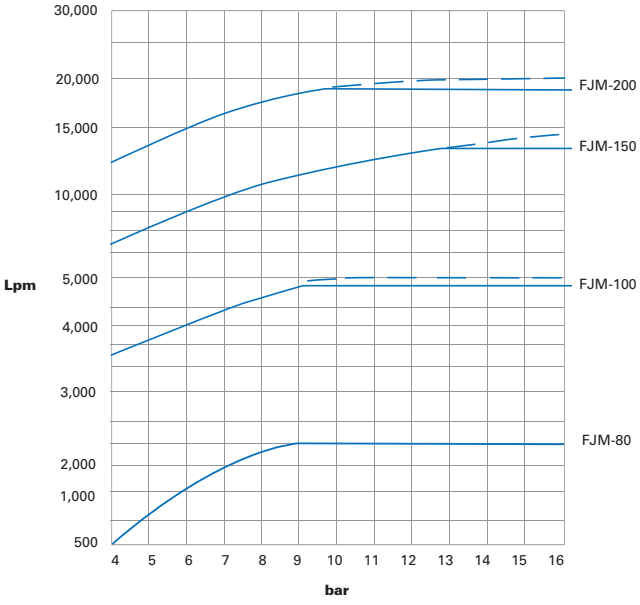
- The foam and water inlet is flanged according to DIN PN16, JIS 10 K, or ANSI 150 lb

## Optional components

The following components are available on request:

- Standard control cabinet and operating panel
- Custom-built solutions and control cabinet
- Power supply from 24 VDC to 440 VAC
- Harsh environment cast iron motors and gearboxes
- The S-version inbuilt inductor is available for most models
- The suction hose and valve is available for the S-versions

## Capacity ranges




## Listings and approvals

- Det Norske Veritas (DNV)
- Bureau Veritas (BV) only for the FJM-200 EL monitor
- Russian Maritime Register of Shipping (RMRS)
- CNBOP (Poland) available upon request

## Ordering information

When ordering the SKUM FJM-EL Electric Monitor, specify the following information:

- Part number
- Type
- Flange type
- Flow and pressure capacity
- Motor and solenoid voltage
- S-version foam induction
- Type of control cabinet and panel

**Table 1: Part details**

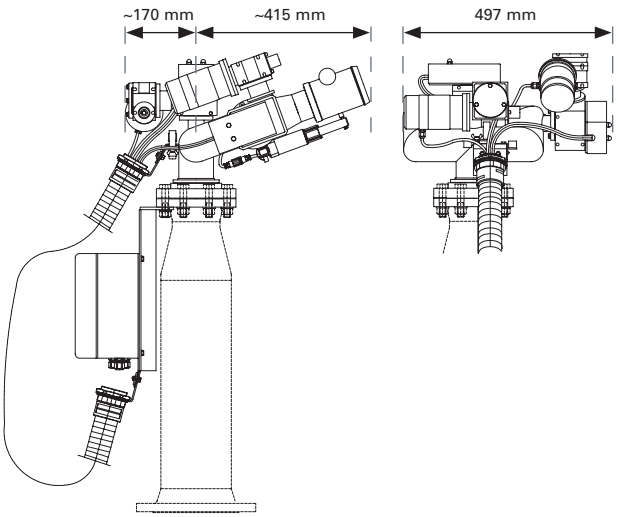
| Standard Environment Part No. | Harsh Environment CI Model Part No. | Description |
|---|---|---|
| **FJM-80 EL LA linear actuator model** | | |
| 161508107 | – | FJM-80 EL LA DIN ANSI[1,3] |
| 161508108 | – | FJM-80 EL LA POS DIN ANSI[3] |
| 168211118 | – | Standard junction box and protection hose assembly |
| **FJM-100 EL LA linear actuator model** | | |
| – | 163450155 | FJM-100 EL LA DIN |
| – | 163450159 | FJM-100 EL LA POS DIN |
| – | 163450162 | FJM-100 EL LA ANSI |
| – | 163650158 | FJM-100 EL LA Exde DIN |
| – | 163650165 | FJM-100 EL LA Exde ANSI |
| – | 163450169 | FJM-100 EL LA CI DIN with motors[4] |
| – | 163450176 | FJM-100 EL LA CI ANSI with motors[4] |
| – | 163650172 | FJM-100 EL LA CI Exde DIN with motors[5] |
| – | 163650179 | FJM-100 EL LA CI Exde ANSI with motors[5] |
| **FJM-150 EL LA linear actuator model** | | |
| – | 163455149 | FJM-150 EL LA DIN ANSI JIS |
| – | 163655151 | FJM-150 EL LA Exde DIN ANSI JIS |
| – | 163455156 | FJM-150 EL LA DIN ANSI JIS with motors[4] |
| – | 163450183 | FJM-150 EL LA POS DIN ANSI JIS with motors[4] |
| – | 163655158 | FJM-150 EL LA Exde DIN ANSI JIS with motors[5] |
| **FJM-100 EL MV** | | |
| – | 163410148 | FJM-100 EL MV DIN |
| – | – | FJM-100 EL MV POS DIN |
| – | 163410247 | FJM-100 EL MV ANSI |
| – | 163410153 | FJM-100 EL S MV DIN[2] |
| – | 163410252 | FJM-100 EL S MV ANSI[2] |
| – | 163610151 | FJM-100 EL MV Exde DIN |
| – | 163610253 | FJM-100 EL MV Exde ANSI |

| Standard Environment Part No. | Harsh Environment CI Model Part No. | Description |
|---|---|---|
| **FJM-150 EL MV** | | |
| – | 163415142 | FJM-150 EL MV DIN ANSI JIS |
| – | 163515145 | FJM-150 EL MV Exde DIN ANSI |
| – | 16345147 | FJM-150 EL S MV DIN ANSI JIS |
| **FJM-200 EL MV** | | |
| – | 163420144 | FJM-200 EL MV DIN |
| – | 163420243 | FJM-200 EL MV ANSI |
| – | 163420151 | FJM-200 EL MV DIN CI POS with motors[4] |
| – | 163620142 | FJM-200 EL MV EXD DIN |
| – | 163620241 | FJM-200 EL MV EXD ANSI |
| **Optional components** | | |
| – | 161010606 | FJM-100 suction hose Dia 2 in. x 3 m |
| – | 161015608 | FJM-150 suction hose Dia 2 in. x 3 m |
| 161008805 | | Weather cover for the FJM-80 monitor |
| 161010810 | | Weather cover for the FJM-100 monitor |
| 161015815 | | Weather cover for the FJM-150 monitor |
| 161020820 | | Weather cover for the FJM-200 monitor |

**Notes:**

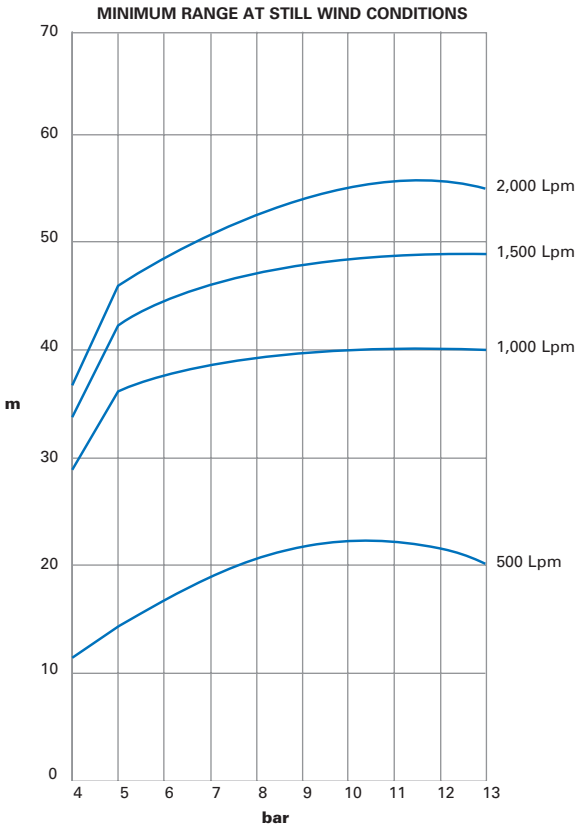
1. Not supplied with a terminal box or cable protection hose. Order separately (Part No. 168211118).
2. Excludes a suction hose.
3. Complete with 24 VDC motors.
4. Complete with motors.
   3 x 220-254/380-440 V 50 Hz, 3 phase, IP56
   3 x 220-277/386-480 V 60 Hz, 3 phase, IP56 linear motor 230 VAC
5. Complete with motors EExd 3 x 230/400 V, 50 Hz, 3 phase, IP56 linear motor 24 VAC.
6. Achieving the values listed in the range of jet graph depends on the monitor's elevation angle. For further details, see the length-height relationship graph.

## FJM-80 EL LA dimensions

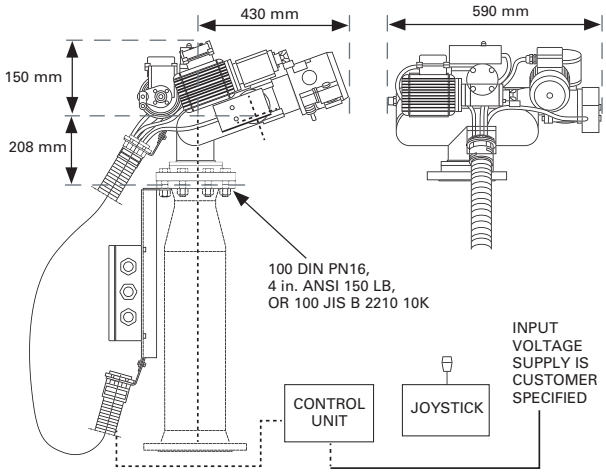



**Note:** Not supplied with a junction box and cable protection hose.

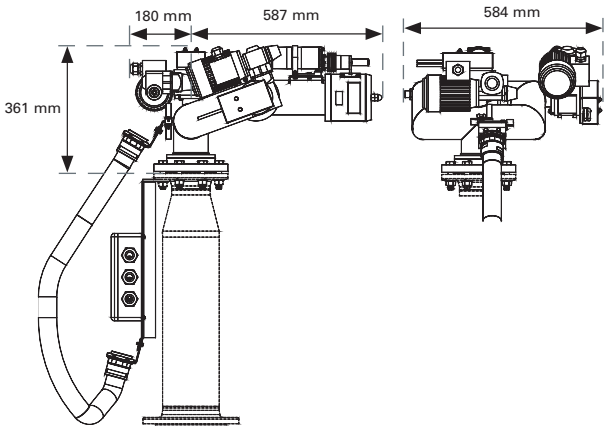
## FJM-80 jet range



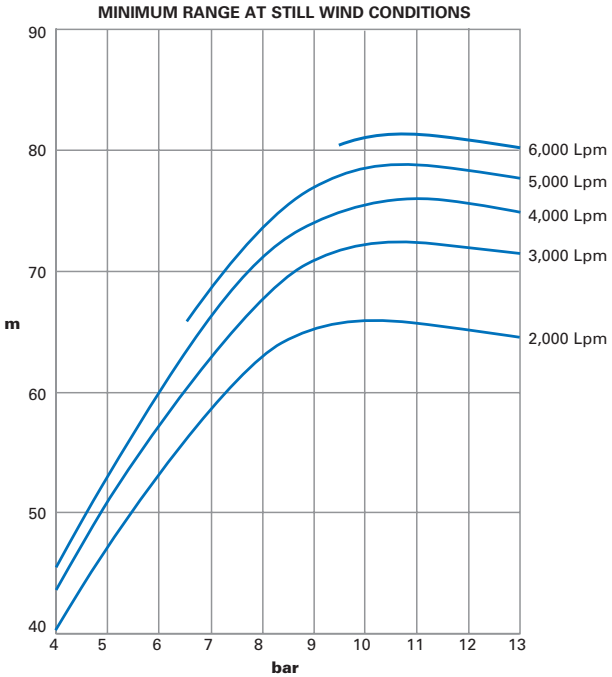

## FJM-100 EL MV dimensions




## FJM-100 EL LA dimensions

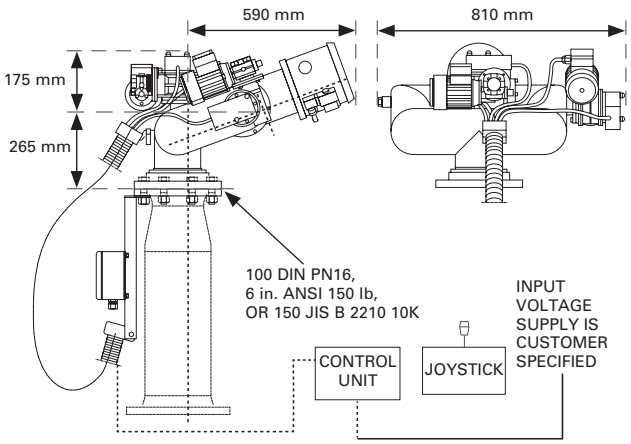



## FJM-100 jet range

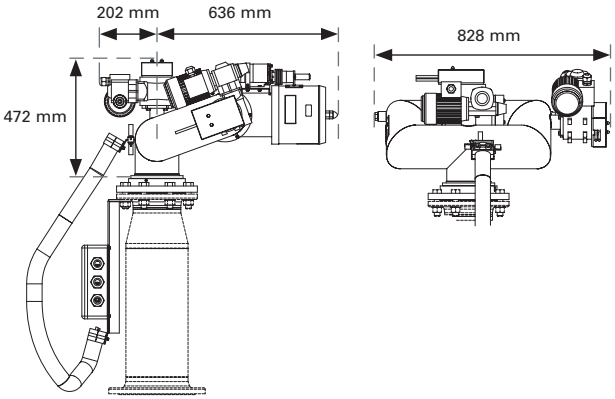



**Notes:** 1. Deduct 10% for the self-induction nozzle.
2. Reaction force (N) = 0.233 × (Lpm) × √p (bar).
3. Achieving the values in the range of jet graph depends on the monitor's elevation angle. See the length-height relationship graph.

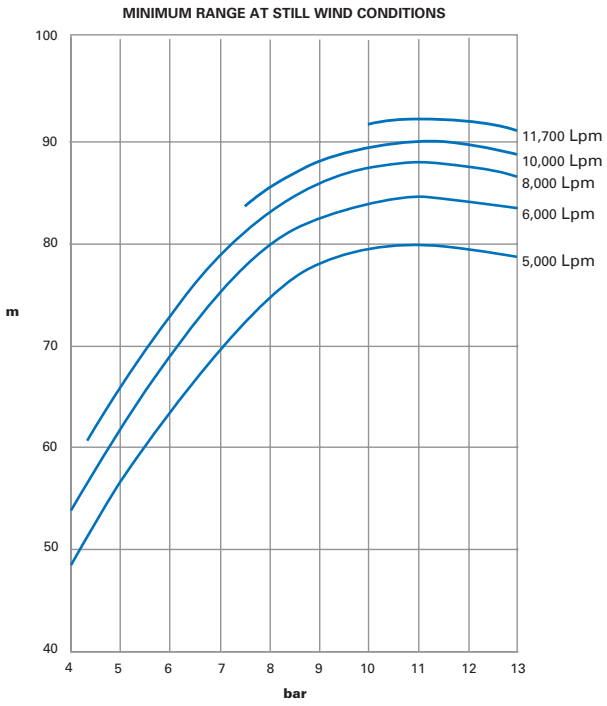
## FJM-150 EL MV dimensions




## FJM-150 EL LA dimensions

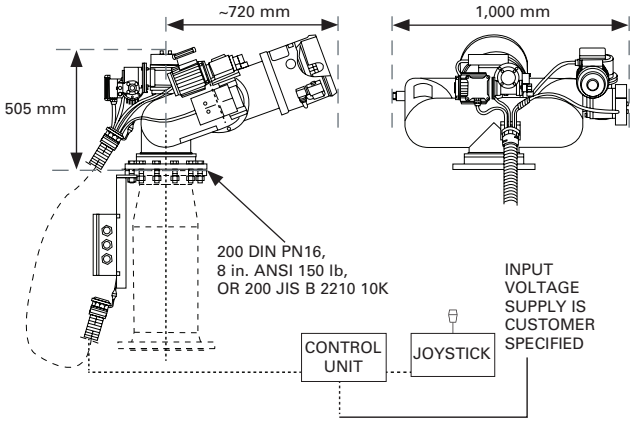



## FJM-150 jet range

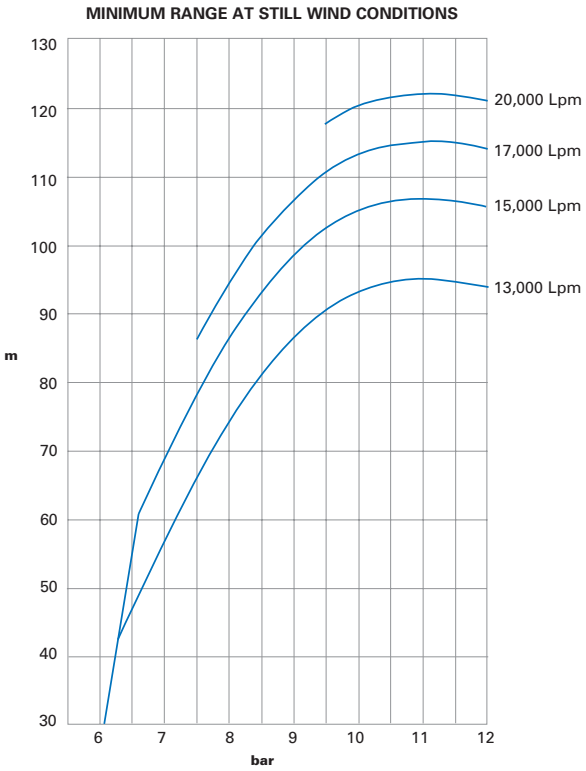



**Note:** Achieving the values in the range of jet graph depends on the monitor's elevation angle. See the length-height relationship graph.

## FJM-200 EL MV dimensions




## FJM-200 jet range




**Notes:** 1. Deduct 10% for self induction nozzle.

2. Reaction force (N) = 0.233 × (Lpm) × √p (bar)

3. Achieving the values in the range of jet graph depends on the monitor's elevation angle. See the length-height relationship graph.

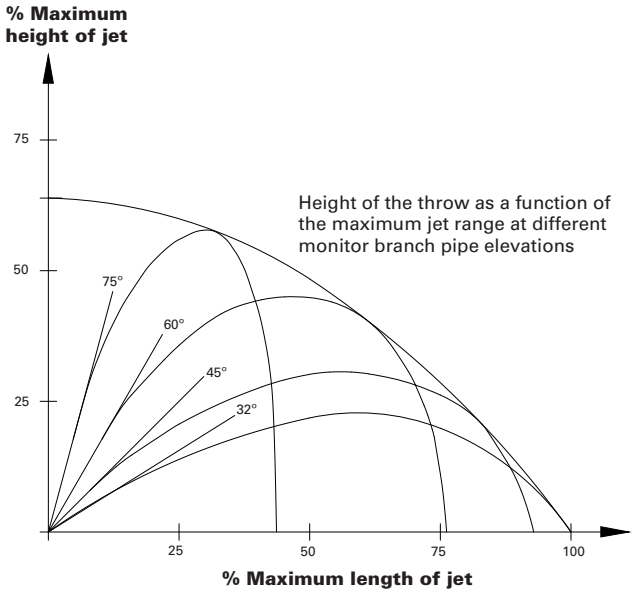
## Performance data

**Table 2: Performance data**

| FJM series standard | FJM-80 | FJM-100 | FJM-150 | FJM-200 |
|---|---|---|---|---|
| **Maximum water capacity** | 2,000 Lpm | 6,000 Lpm | 11,700 Lpm | 20,000 Lpm |
| **Minimum water capacity** | 500 Lpm | 1,000 Lpm | 3,000 Lpm | 8,000 Lpm |
| **Design pressure** | 4 bar to 16 bar | 4 bar to 16 bar | 4 bar to 16 bar | 4 bar to 13 bar |
| | Optimum<br>10 bar to 12 bar | Optimum<br>10 bar to 12 bar | Optimum<br>10 bar to 12 bar | Optimum<br>10 bar to 12 bar |
| **Rotation** | ±175° | ±175° | ±175° | ±175° |
| **Elevation (MV)** | – | –70° or +70° | –70° or +70° | –60° or +70° |
| **Elevation (LA)** | –65° or +70° | –90° or +70° | –90° or +70° | – |
| **Weight** | 28.5 kg | 69 kg | 98 kg | 139 kg |

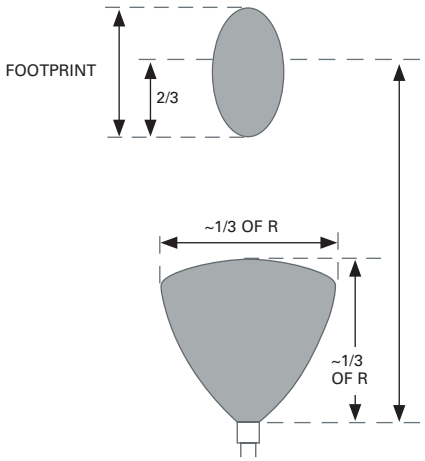
| FJM series inbuilt inductor | FJM-100 S | FJM-150 S |
|---|---|---|
| **Maximum water capacity** | 6,000 Lpm | 11,700 Lpm |
| **Minimum water capacity** | 1,000 Lpm | 3,000 Lpm |
| **Design pressure** | 4 bar to 16 bar | 4 bar to 16 bar |
| | Optimum<br>10 bar to 12 bar | Optimum<br>10 bar to 12 bar |
| **Maximum foam capacity** | 320 Lpm | 600 Lpm |
| **Rotation** | ±178° | ±178° |
| **Elevation** | –45° or +70° | –45° or +70° |
| **Suction connection** | 2 in. BSP male | 2 in. BSP male |
| **Weight** | 72 kg | 101 kg |

## Length-height relationship




Reaction force (N) = 0.233 x Q (Lpm) x √p (bar)

## Average fog/jet pattern in still air




**Note:** 1. This diagram applies to all FJM monitors.
2. R = Jet range.

**Note:** The converted values in this document are provided for dimensional reference only and do not reflect an actual measurement.

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