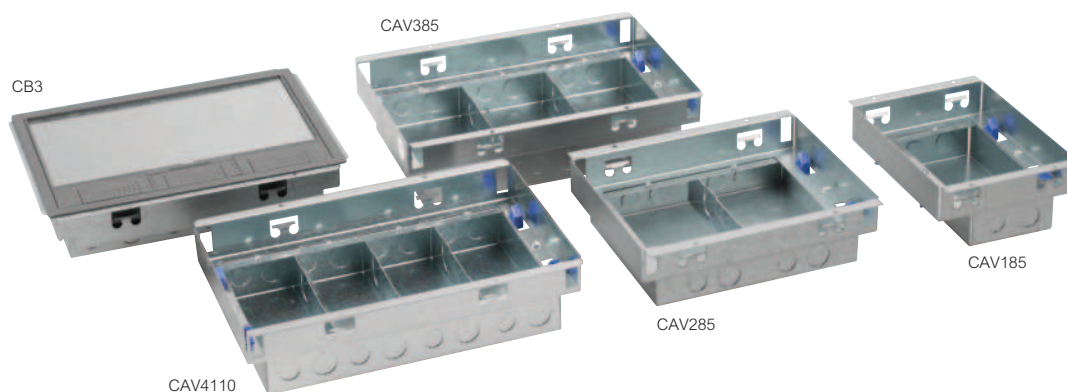
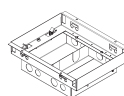
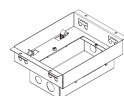


## cavity floor service outlet boxes



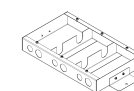
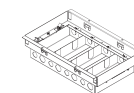
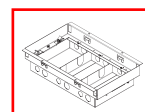
Cavity floor outlet boxes selection chart **p. 24-25**  
 Dimensions and technical information **p. 29**  
 Installation details **p. 30**

Pack	Cat. Nos.	<b>Cavity floor boxes</b>
1	CB3	<b>Contractor floor box</b> Supplied empty Ready to accept standard BS two gang wiring accessories Additional mounting plates not required Recommended hole cut-out size : 302-304 mm x 219-221 mm 7 mm lid recess Standard depth : 85 mm 20/25 mm knockouts to each compartment Manufactured from pre-galvanised steel to BS EN 10142 and 3, and polycarbonate/ABS 3 compartment contractor floor box
1	CAV185	<b>Floor box bases</b> Supplied empty Lids and trims are detailed on p. 27 Outlet plates are detailed on p. 27 <b>1 compartment floor box base</b> Recommended hole cut-out size : 165-167 mm x 203-205 mm 85 mm deep
1	CAV275	75 mm deep
1	CAV285	85 mm deep
1	CAV2110 <sup>1</sup>	110 mm deep



1 : 110 mm deep base boxes not suitable for edge trim lids

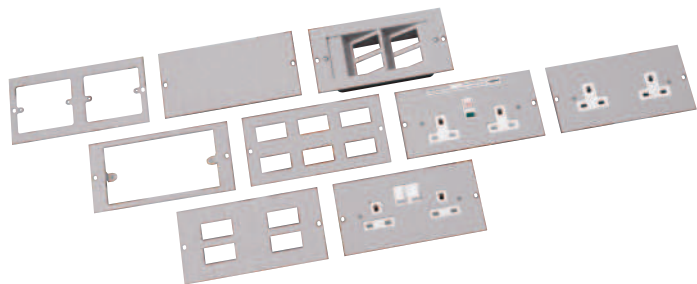
Pack	Cat. Nos.	<b>Cavity floor boxes (continued)</b>
1	CAV375	<b>3 compartment floor box base</b> Recommended hole cut-out size : 340-342 mm x 203-205 mm 75 mm deep
	CAV385	85 mm deep
	CAV3110 <sup>1</sup>	110 mm deep
1	CAV475	<b>4 compartment floor box base</b> Recommended hole cut-out size : 340-342 mm x 203-205 mm 75 mm deep
	CAV485	85 mm deep
	CAV4110 <sup>1</sup>	110 mm deep
1	SLAB1	<b>Slab floor box</b> 1 compartment
1	SLAB2	2 compartment
1	SLAB3	3 compartment
1	SLAB4	4 compartment



Cavity floor boxes and slab boxes are available pre-wired to tap-offs **p. 38-39**

## outlet plates for floor boxes

### power and data



 Cavity floor outlet boxes selection chart **p. 24-25**  
Dimensions and technical information **p. 29**  
Installation details **p. 30**

Plates to fit 1, 2 and 3 compartment boxes are all 100 mm wide  
Plates to fit 4 compartment boxes are 75 mm wide  
Non-standard sockets have a round earth pin  
Due to overall depth, RCD sockets and wave type data plates will NOT fit in the flush floor and shallow flush floor ranges (Cat. Nos. FFO/AFS)  
When using with underfloor duct systems (Cat. No. AFU) the outlet box must be raised by 8 mm from the lowest point to allow for wiring

Pack	Cat. Nos.		Power and data plates
	1, 2, 3 comp. 100 mm wide	4 comp. 75 mm wide	
1	SP3201	SP4201	<b>13 A standard socket plates</b>
1	SP3200	SP4200	Twin switched
1	SP3211	SP4211	Twin unswitched
1	SP3300	SP4300	Twin switched – clean earth
1	SP3310	SP4310	Triple unswitched
1	SP3310	SP4310	Triple unswitched – clean earth
1	SP3221	SP4221	<b>13 A non-standard socket plates</b>
1	SP3231	SP4231	Twin NS switched
1	SP3231	SP4231	Twin NS switched – clean earth
			<b>RCD socket plates</b>
			Double pole 30 mA passive will not trip in event of power failure. Eliminating need to manually reset all units after power failure
1	SP3202	SP4202	2 gang
1	SP3212	SP4212	2 gang – clean earth
			<b>Data plates</b>
1	SP3203	SP4203	37 x 22 mm – 2 cut-outs
1	SP3403	SP4403	37 x 22 mm – 4 cut-outs
1	SP3404	SP4404	37 x 22 mm – 4 cut-outs (wave plate)
1	SP3603	SP4603	37 x 22 mm – 6 cut-outs
1	SP3408	SP4408	47.5 x 23.5 mm – 4 cut-outs
			<b>General</b>
1	SP3205	-	2 x standard single outlet 60.3 mm
1	SP3105	-	Standard 2 gang outlet plate 120.6 mm
1	SP3106	SP4106	51 x 51 mm – 1 cut-out plate
1	SP3206	SP4206	51 x 51 mm – 2 cut-out plate
1	SP3000	SP4000	<b>Blank plate</b>
1	SP3107	SP4107	58 x 53.5 mm – 1 cut-out plate to accept Arteor mounting frame (Cat. No. 576016) <sup>(1)</sup>
1	SP3207	SP4207	58 x 53.5 mm – 2 cut-outs plate to accept 2 x Arteor mounting frames (Cat. No. 576016) <sup>(1)</sup>
50	SPSCREW		<b>Fasteners</b> M3.5 x 6 spare socket plate screws

1: For Arteor mounting frames, refer to the latest Wiring Devices catalogue


## lids and trims for floor boxes

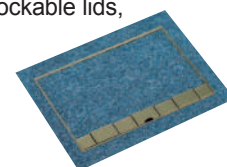


 Cavity floor outlet boxes selection chart **p. 24-25**  
Dimensions and technical information **p. 29**  
Installation details **p. 30**

Moulded lids and trims are manufactured from durable ABS and feature a quick fit / release ratchet system  
ABS lid and trim versions are supplied with 6 mm carpet recess  
Metal lid and trim versions are supplied with 8 mm recess  
Stainless steel is satin finish as standard  
Brass is polished finish as standard

Pack	Cat. Nos.		Floor box lids and trims
	1 comp.	2 comp.	
1	-	FBL2ABS	<b>1 and 2 compartment</b>
1	FBL1MCT	FBL2MCT	<b>Carpet trim</b>
1	FBL1SCT	FBL2SCT	ABS
1	FBL1BCT	FBL2BCT	Metal – grey
			Stainless steel
			Brass
1	-	FBL2COM	<b>Edge trim</b>
1	FBL1MET	FBL2MET	ABS lid/metal trim – ABS/grey
1	FBL1SET	FBL2SET	Metal – grey
1	FBL1BET	FBL2BET	Stainless steel
			Brass
			<b>3 and 4 compartment</b>
			<b>Carpet trim</b>
1	FBL3ABS	ABS	
1	FBL3MCT	Metal – grey	
1	FBL3SCT	Stainless steel	
1	FBL3BCT	Brass	
			<b>Edge trim</b>
1	FBL3COM	ABS lid/metal trim – ABS/grey	
1	FBL3MET	Metal – grey	
1	FBL3SET	Stainless steel	
1	FBL3BET	Brass	

 Metal lids and trims can be powder coated to any RAL reference. Other options, such as lockable lids, are available to special order  
**Contact us on +44 (0) 870 608 9020**



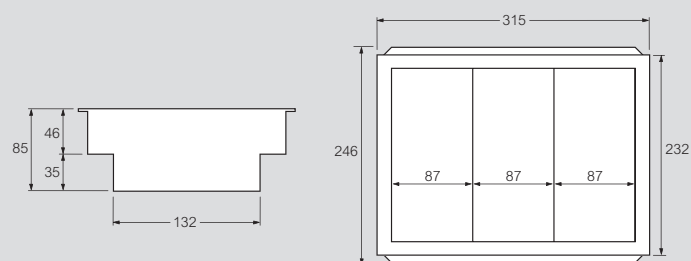
# cavity floor service outlet boxes

## technical information

### ■ Cavity floor service outlet boxes

#### Contractor floor box (Cat. No. CB3)

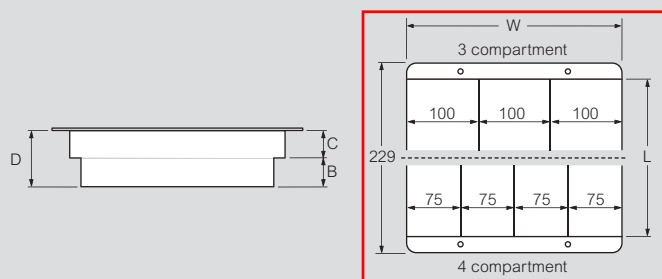
Cut-out 302-304 mm x 219-221 mm



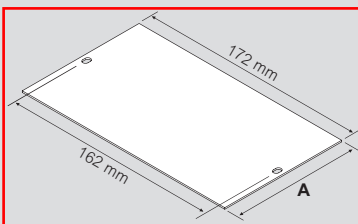
#### Floor box bases

Cat. Nos. CAV1..., CAV2..., CAV3... and CAV4...

Cat. No.	D	B	C	Cutout		Plate Size
				W	L	
CAV185	85	45	40	165	203	100
CAV275	75	35	40	263	203	100
CAV285	85	45	40	263	203	100
CAV2110	110	45	65	263	203	100
CAV375	75	35	40	340	203	100
CAV385	85	45	40	340	203	100
CAV3110	110	45	65	340	203	100
CAV475	75	35	40	340	203	75
CAV485	85	45	40	340	203	75
CAV4110	110	45	65	340	203	75

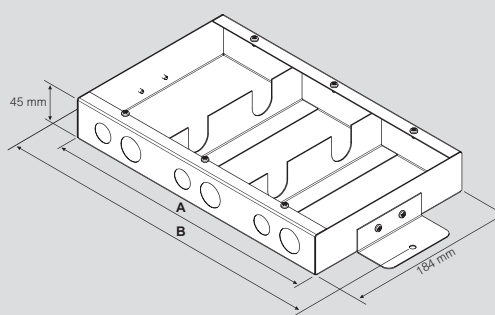


### ■ Outlet plates



	A
1, 2, 3 comp.	100
4 comp.	75

### ■ Slab boxes



Cat. No.	A	B
Slab 1	102	162
Slab 2	202	262
Slab 3	302	362
Slab 4	302	362

All dimensions (mm) are nominal



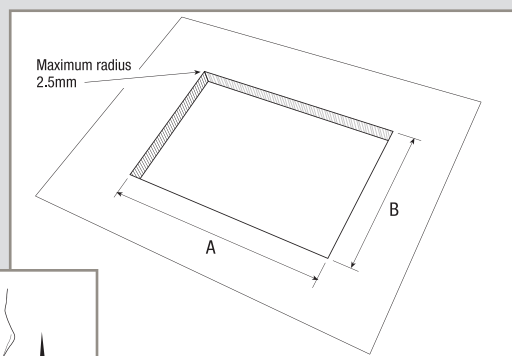
# cavity floor service outlet boxes

## installation

### Cut hole in floor tile

1

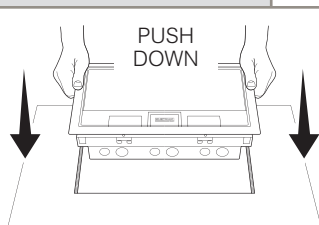
	Minimum	Maximum	Minimum	Maximum
	A	B	A	B
1 compartment	165 mm	167 mm	203 mm	205 mm
2 compartment	263 mm	265 mm	203 mm	205 mm
3 compartment	340 mm	342 mm	203 mm	205 mm
4 compartment	340 mm	342 mm	203 mm	205 mm



### Install box

2

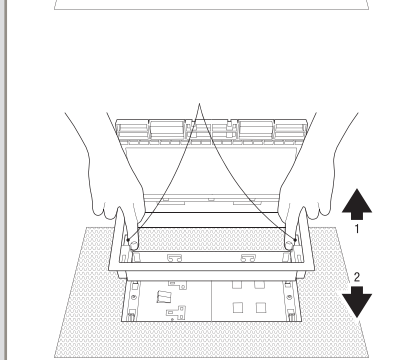
Lower base box into aperture and push firmly down  
This will engage the fixing latches



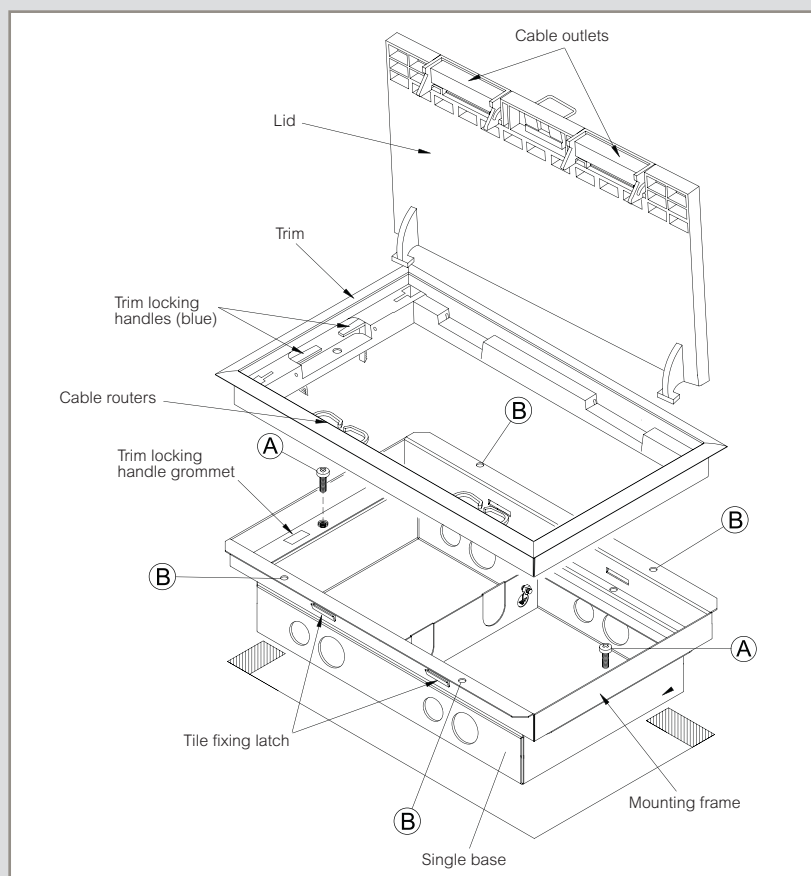
### Fitting lid and trim

3

Lid and trim is a simple push fit  
1 The ratchets allow the trim to find its own level on top of the final floor finish  
2 To remove, lift out by releasing the blue locking handles



FOR SAFETY : All cables exiting boxes must be positioned into the cable routers on box trim and exit box via cable outlets  
Lid and lid handle must always be placed in the closed positions  
When using metal lid and trims, the lifting device at the centre of the lid is not to be used as a cable exit



Opening lid to an angle of 30° and lifting upwards will detach lid from trim. Inserting lid into the opposite side of trim will change direction of the lid

Cable routers can also be removed and attached to opposite side of trim

A) Base can be detached from mounting frame by releasing screws (A)  
This enables the base to be connected to the services and left under floor tiles for protection until the carpet, lid and trim are fitted

B) Box can be screw fitted to floor tile by using holes (B) in mounting frame  
(If hole in tile is outside maximum tolerance Use 4 x No.8 25 mm self tapping screws)

An automatic warning of power failure to all pumps motor control panels (in the case of AC supply, of any one phase of the supply) shall be given visually and audibly at the main fire services/AFA workstation. Power for this warning system shall be connected to a separately switched sub-circuit different from that feeding the motor, or alternatively connected to where the power is taken from a battery instead of the mains supply. The battery must be trickle-charged and have a capacity sufficient to provide an alarm for 72 hours duration.

The monitoring devices shall be connected electrically to the AFA control panel and the signals shall be repeated to the local pump control panel.

## 6.5.2 Products

### 6.5.2.1 Sprinkler Heads

The sprinkler heads shall, unless otherwise specified, generally be quartzoid bulb spray pattern suitable for pendent or upright position installation. Temperature rating of sprinkler heads shall be generally 68°C or unless otherwise stated. The nominal orifice size in mm shall be marked on each sprinkler body or its deflector, to L.P.C. Rules.

The types of sprinkler heads to be used in the building shall be generally as described below, the FS Sub-Contractor should ensure the exact temperature rating requirement suit actual site condition. However the FS Sub-Contractor shall submit the sample and technical details of sprinkler heads to the Architect for approval prior to ordering and installation.

Service Area	Temperature rating	Type
Under false ceiling for front of floor areas	68°C	Recessed type with chromium plated bronze cover plate
Inside false ceiling void and other area	68°C	Conventional pattern
Under floor / ceiling slab	68°C	Conventional pattern
Basement	68°C	Fast response type conventional pattern with Cage protection
Kitchen	93°C	Conventional pattern Conventional pattern with Cage protection for sprinkler installed near exhaust hood and cooking areas
Skylight	93°C	Fast response type conventional pattern

Sprinkler head exposed under false ceiling shall be recessed type. Where the sprinkler heads are fitted to false ceiling, they shall be of flush pattern and provided with adjustable screwed type anodized aluminium plate to seal up the gap between the pipe and ceiling tiles. All metal parts of the sprinkler heads shall be chromium plated brass, and the cover plate of the sprinkler heads shall be chromium plated bronze type. The covering plates for those sprinkler heads installed external to the Building shall be complete with an additional corrosion resistant finish as consented by the Architect. The colour of the cover plates shall be to the consent of the Architect. Samples of plates shall be submitted to the with the sprinkler heads for Architect consent before order and installation.

## **2. VALUE ENGINEERING**

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## Value Engineering

ITEM	TQ No.	Proposed VE Items	Manufacturer / Origin	Remarks
VE Item No.				
1		Sprinkler Pumps, alternative spec, manufacturers and country of manufacture, consider providing Grunfoss or Other manufacture in lieu of Vogel sprinkler pumps	Grundfos / Singapore	
2		Sprinkler Pumps, alternative spec, consider providing single outlet pump with combined pressure reducing valves in lieu of multi stage outlet pump as specified.	Grundfos / Singapore	
3		Sprinkler Heads, delete sprinklers at office perimeter next to blind box as marked up on Arup drawing number 3.03_3.04 FS VE List	Reliable / USA	
4		Sprinkler Pipe Work, check quantities of sprinkler range pipe work in offices, as shown on Arup's drawing number 3.03_3.04 FS VE List	Seah / Vietnam	
5		Sprinkler Pipe Work, Delete red identification painting of all sprinkler pipe work and provide identification bands only.		
6		Valves and fittings, alternative spec, manufacturers and country of manufacture of butterfly valves, gate valves, check valves and strainers etc. Consider using KVS fittings (from Turkey) in lieu of Toyo fittings (from Thailand / China)	KVS / Turkey	
7		Pipe Work, alternative spec, manufacturers and country of manufacture, consider using alternative pipe manufacture e.g. PA pipe (from China) in lieu of Kubuta pipe work (from Japan)	PA / China	
8		Pipe Work, alternative spec, manufacturers and country of manufacture, consider using welded / flanged jointed (galv) steel pipe work in lieu of grooved galv pipe with Victaulic joints for pipe diameters greater than 65mm		
9		Hydrant Pumps, alternative spec, manufacturers and country of manufacture, consider providing Grunfoss or Other manufacture in lieu of Vogel sprinkler pumps	Grundfos / Singapore	
10		Hose Reels, Delete hose reel cabinets in public areas in Podium as marked up on Arup's drawing number, and assume stainless steel cabinets provided by main contracture under Architectural finishes.		
11		Foam Extinguishing System, delete foam system to local fuel oil storage and fuel pump in basement and substitute with standard self activating gas extinguishers as shown on Arup's drawing number 3.14_3.15 FS VE FS-03, 04, 05, 06 & 3.14_3.15 FS VE	Tyco / USA	
12		Foam Extinguishing System, delete foam system to local fuel oil storage day tank at roof level serving generators and substitute with standard self activating gas extinguishers as shown on Arup's drawing (number FS VE 3.15).	Tyco / USA	
13		Motor Control Centers (MCC's), alternative manufacturers, alternative panel components and country of manufacture, e.g., ABB, Siemens, Korean, Vietnamese, China etc. or other recommended manufacturers of MCC's which are more competitive.	ABB / Vietnam	

**# Not applicable for this option as the Automatic Fire Alarm system has been omitted.**



### **3. TECHNICAL DATA**

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## TECHNICAL DATA

## MICROMATIC® STANDARD RESPONSE CONVENTIONAL SPRINKLER VK118 (K5.6)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

### 1. DESCRIPTION

Viking Micromatic® Standard Response Conventional (Old Style) VK118 Sprinklers are small, thermosensitive, glass-bulb spray sprinklers available in several different finishes, temperature ratings, and K-Factors to meet design requirements. The special Polyester, and Polytetrafluoroethylene (PTFE), coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive atmospheres and are listed as corrosion resistant as indicated in the Approval Chart.

Viking standard response sprinklers may be ordered and/or used as open sprinklers (glass bulb and pip cap assembly removed) on deluge systems. Refer to Ordering Instructions in section 3.



### 2. LISTINGS AND APPROVALS



**cULus Listed:** Category VNIV



**VdS Approved:** Certificate G414005



**LPCB Approved**



**CE Certified:** Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2001

**NOTE:** Other International approval certificates are available upon request.

Refer to Approval Chart 1 and Design Criteria for cULus Listing requirements.

### 3. TECHNICAL DATA

#### Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)\*

Maximum Working Pressure: 175 psi (12 bar)

Factory tested hydrostatically to 500 psi (34.5 bar)

Thread size: 1/2" NPT, 15 mm BSP

Nominal K-Factor: 5.6 U.S. (80.6 metric\*\*)

Glass-bulb fluid temperature rated to -65 °F (-55 °C)

Overall Length: 2-3/16" (56 mm)

\*cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar).

The minimum operating pressure for LPCB and CE Approvals ONLY is 5 psi (0.35 bar).

\*\* Metric K-factor measurement shown is in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

#### Material Standards:

Frame Casting: Brass UNS-C84400 or QM Brass

Deflector: Brass UNS-C26000

Bulb: Glass, nominal 5 mm diameter

Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape

Screw: Brass UNS-C36000

Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

For PTFE Coated Sprinklers: Belleville Spring-Exposed, Screw-Nickel Plated, Pip Cap-PTFE Coated

For Polyester Coated Sprinklers: Belleville Spring-Exposed

**Ordering Information:** (Also refer to the current Viking price list.)

Order Micromatic® Standard Response Conventional Sprinkler VK118 by first adding the appropriate suffix for the sprinkler finish and then the appropriate suffix for the temperature rating to the sprinkler base part number.

Viking Technical Data may be found on  
The Viking Corporation's Web site at  
<http://www.vikinggroupinc.com>.  
The Web site may include a more recent  
edition of this Technical Data Page.