



Flexible Conduit Systems

## Type SP PVC Coated Flexible Conduit

### Description

SP is a flexible galvanised steel core conduit coated in a PVC cover for extra protection against the elements.

The PVC coating makes the actual conduit weatherproof and water resistant.

The system with fittings achieves an IP54 rating and a possible IP65 with use of a different fitting.

### Applications

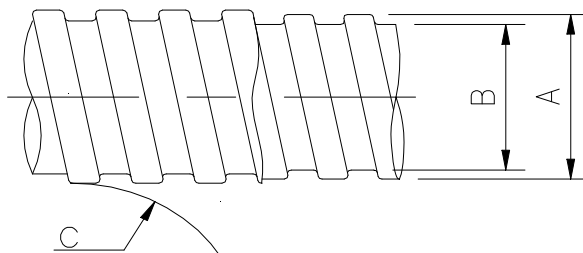
SP has a wide range of applications, it can be typically found in machine tools, air conditioning/heating, mechanical handling, refrigeration, CCTV, computer/underfloor wiring, motors and generators making this a versatile product.

The conduit comes in black as standard but can also be made to order in grey and orange. All colours are UV resistant. Black is recommended for outdoor use.

### Approvals

SP conduit approvals are detailed below...

IEC BS 61386  
CE LVD



| Part Number | Conduit size (NW) | US Trade (Inch) | O/D A | Min Bore B | Bend radius C |
|-------------|-------------------|-----------------|-------|------------|---------------|
| SP10        |                   | 1/4             | 10.0  | 6.8        | 25            |
| SP12        |                   | 5/16            | 14.0  | 10.3       | 30            |
| SP16        |                   | 3/8             | 17.0  | 13.0       | 35            |
| SP20        |                   | 1/2             | 21.5  | 16.9       | 45            |
| SP25        |                   | 3/4             | 26.0  | 21.4       | 55            |
| SP32        |                   | 1               | 34.0  | 28.1       | 60            |
| SP40        |                   | 1 1/4           | 44.5  | 37.7       | 80            |
| SP50        |                   | 1 1/2           | 55.0  | 48.4       | 90            |
| SP63        |                   | 2               | 64.5  | 57.5       | 115           |
| SP75        |                   |                 | 79.0  | 70.0       | 150           |

Note : dimensions are in mm

| Fittings associated with SP conduit |   |
|-------------------------------------|---|
| A type                              | Straight scroll fitting with external thread and ferrule        |
| B type                              | Straight scroll swivel fitting with external thread and ferrule |
| M type                              | Straight swivel for installation IP65 fitting                   |
| F type                              | Straight scroll fitting with female internal thread and ferrule |
| C type                              | Smooth entry bush with ferrule                                  |
| E type                              | Conduit terminator  |
| 90° and 45° elbows also available   |   |



IEC 61386

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**Conduits**  
Document ref. SP Version 2



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## Type SP PVC Coated Flexible Conduit

### Specifications

Material: Galvanised Steel Core  
PVC Coating  
Colour: Black, grey, orange  
IP rating: IP54, IP65 with M Type fitting

### Performance characteristics

The tables below provide test data for SP Conduits in accordance with leading standards

Contact us for chemical compatibility data

| Duration (Hours) | Standard          | Temperature (°C) | Relative humidity (%) |
|------------------|-------------------|------------------|-----------------------|
| 168              | EN50086/ IEC61386 | 23               | 50                    |

### Performance Characteristics

| Test type | Method/ Standard | Requirement | Value |
|-----------|------------------|-------------|-------|
|-----------|------------------|-------------|-------|

#### Mechanical performance

|                           |                |                                     |        |
|---------------------------|----------------|-------------------------------------|--------|
| Crush strength @ 23°C     | EN50086-1      | <25% crush with >90% recovery       | 1250N  |
| Crush strength @ 23°C     | AFX norm C1989 | 10% Crush, Instantaneous Value      | 2200   |
| Impact strength @ 23°C    | EN50086-1      | No cracks. < 20% deformation        | 20 J   |
| Impact strength @ -25°C   | EN50086-1      | No cracks. < 20% deformation        | 6 J    |
| Tensile strength@ 23°C    | EN50086-1      | With M Type Fitting                 | 1000 N |
| Tensile strength@ 23°C    | AFX norm T1987 | Ultimate pull-out of M-Type Fitting | 1450 N |
| Static bend radius @ 23°C | AFX norm S1985 |                                     | 45mm   |

#### Thermal performance

|                           |             |                     |       |
|---------------------------|-------------|---------------------|-------|
| Minimum temperature       | EN50086-2-3 | Dynamic 5000 cycles | -5°C  |
| Maximum temperature       | EN50086-2-3 | Dynamic 5000 cycles | 90°C  |
| Dynamic Bend Radius @-5°C | EN50086-2.3 | 5000 Cycles @ 50mm  | Pass  |
| Minimum Static            | -           | Permanent use       | -15°C |
| Maximum Static            | -           | Permanent use       | 70°C  |
| Maximum short term        | -           | 3000 hours maximum  | 90°C  |

#### Flammability, smoke and toxicity (FST) performance

| Test type        | Standard / method | Requirement                         | Result | Unit      |
|------------------|-------------------|-------------------------------------|--------|-----------|
| Halogen Free     | LUL               | < 0.5 %                             | NO     | Yes/No    |
| Phosphorus Free  | LUL               | < 0.5 %                             | Yes    | Yes/No    |
| Sulphur Free     | LUL               | < 0.5 %                             | Yes    | Yes/No    |
| Oxygen Index     | ISO 4589          | % Oxygen to support combustion      | 28     | %         |
| Glow wire rating | IEC 695           | No ignition, Extinguish within 2 s  | 850    | °C        |
| Flammability     | UL94              | Vertical (V0,V2) or Horizontal (HB) | V0     |           |
| Flammability     | EN50086-1         | 1kW burner @ 45°                    | Pass   | Pass/Fail |
| I Classification | NFF16-101         | Oxygen Index & Glow wire            | -      |           |
| F Classification | NFF16-101/102     | Smoke density & Toxicity            | -      |           |
| Smoke Density    | ATS1000           | in Flaming mode < 100 @ 4 mins      | -      | Pass/Fail |
|                  | ATS1000           | in Non-Flaming mode < 100 @ 4 mins  | -      | Pass/Fail |
| Toxicity         | NES713 Issue 3    | Smoke Toxicity ≤ 5.0 or ≤ 10.0      | -      | Pass/Fail |

**Notes:** values are based on nominal 20mm conduit size  
MBR = minimum bend radius  
OD = outside diameter  
Tests carried out using 20mm M-Type Fitting

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