

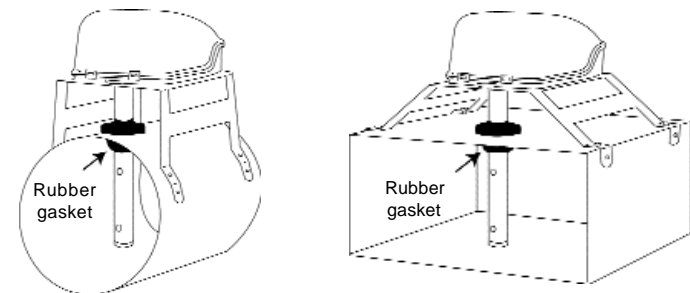
**NOTE - IMPORTANT!**

Do not drill any holes in the cover for signs/labels etc. Holes will cause air leakage and seriously disturb the function of the detector.

**Using the Optional Mounting Bracket**

When installing the SDP-2 on circular ducts or on insulated rectangular ducts use the optional Bracket (SDP-BRACKET). The bracket can also be used on ducts with a diameter as small as 100mm.

- The SDP-BRACKET is supplied flat and can easily be bent or shaped to fit a circular or rectangular duct.
- When using the bracket the diameter of the hole in the duct wall should be 50mm.
- The bracket should be fixed to the duct wall with appropriate fixings.
- The supplied rubber gasket should be used.



Circular Duct

Insulated Rectangular Duct

**Final Checks**

- The arrow of the cover must have the same direction as the airflow in the duct.
- Check that the rubber gasket between the cover and bottom of the SDP-2 is air-tight.
- Check that the plastic plug of the test hole is also air-tight.
- Check that the flow indicator oscillates ensuring proper air-flow through the detector.
- It is recommended that smoke from a smoke generator is introduced into the duct to check the function of the detector.

**Trouble Shooting**

**If only the Control Panel indicates an alarm/fault:**

- Check that the EOL device is fitted in the last smoke detector base on the zone (conventional panels only).

- Check that the EOL device is the correct type (conventional panels only).
- Check the loop for bad connections or short-circuits.
- Check the detector base with a voltmeter for approx 24Vdc and ensure the voltage is the correct polarity.

**If the Smoke Detector and Control Panel indicate an alarm without smoke (and cannot be reset):**

- Check the detector, it may be contaminated with dirt or condensation.
- Replace the detector as it may be faulty.

**Wiring Guide**

TO BASE CONTACT	YBN R/4 YBN R/4SK		YBO-R/5 YBO-R/5SK		YBO-R/5ZD YBO-R/5ZD		YBO-R/SCI	
	1	2	5	6	4	3	1	2
SDP-2 TERMINAL BLOCK	1 BLUE	2 RED	3 PINK	4 GREY	5 YELLOW	X GREEN	1	2
FROM LOOP / ZONE CABLE	YBN-R/1 YBN-R/1ASK		YBN-R/3		YBN-R/4 YBN-R/4SK		YBO-R/SCI	
	ZONE +VE IN	ZONE -VE OUT	LOOP/ZONE +VE IN	LOOP/ZONE +VE OUT	LOOP/ZONE -VE IN	LOOP/ZONE -VE OUT	LOOP +VE IN	LOOP +VE OUT
							RFMOT/IND -VE	RFMOT/IND +VE
							SCREEN	SCREEN

NOTE: Terminals 6 (BROWN) and 7 (WHITE) on the SDP-2 are NOT used and therefore not shown in the above table



World Class Leaders in Fire Detection since 1918

HOCHIKI EUROPE (UK) LIMITED  
GROSVENOR ROAD · GILLINGHAM BUSINESS PARK  
GILLINGHAM · KENT · ENGLAND ME8 0SA  
TELEPHONE: +44 (0)1634 260133  
FACSIMILE: +44 (0)1634 260132  
e-mail: sales@hochikieurope.com  
web: www.hochikieurope.com

Hochiki Europe (UK) Ltd. reserves the right to alter the specification of its products from time to time without notice. Although every effort has been made to ensure the accuracy of the information contained within this document it is not warranted or represented by Hochiki Europe (UK) Ltd. to be a complete and up-to-date description.

**Hochiki SDP-2 Duct Probe - Installation Instructions**

**Introduction**

Hochiki's Duct Probe housing allows a standard photoelectric smoke detection device, either a conventional detector or an analogue sensor, to be mounted on the outside of an air duct for the purpose of monitoring the air within the duct. Air within the duct is drawn via a pipe into the duct probe's housing. This allows constant sampling with a standard, LPCB approved smoke detector and makes smoke detection within the duct simple, effective and easy to maintain. Compatible Hochiki devices that can be used within the SDP-2 are:

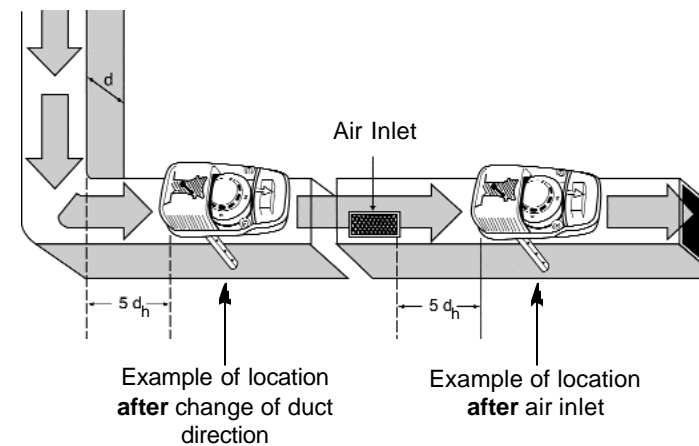
- ASX ACA-E (inc all variants)  
ALG-E (inc all variants)
- CDX SLR-E (inc all variants)

Compatible Hochiki Bases that can be used within the SDP-2 are:

- ASX YBO-R/SCI, YBN-R/3
- CDX YBO-R/5, YBO-R/5ZD, YBO-R/5SK,  
YBN-R/4, YBN-R/4SK  
YBN-R/6, YBN-R/6SK

**Mounting Position**

The SDP-2 should be installed with the arrow on the cover corresponding to the direction of airflow in the duct. The SDP-2 can be placed horizontally or vertically, on the top, side or bottom of the duct. Hochiki recommends that the SDP-2 is mounted away from heating, cooling or humidity devices following the same guidelines for flow monitors.



A distance of three times the duct diameter should be left before a damper, filter or change of duct direction, and five times the diameter after these devices.

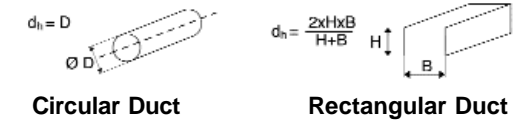
**NOTE:** The word "diameter" has been used throughout. In the case of square-section ducts this should be read to mean width.

**Air Flow Parameters**

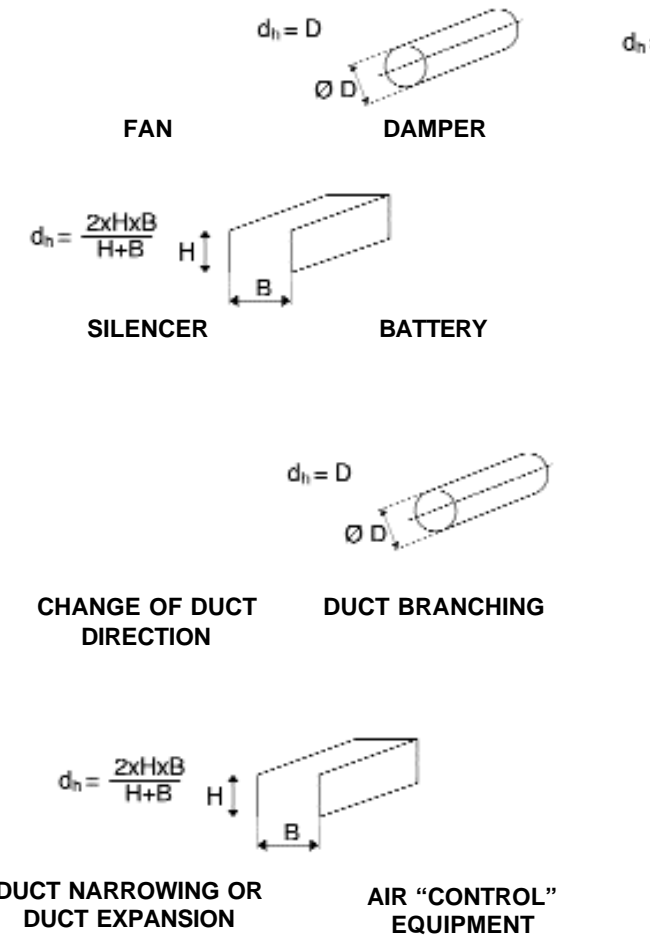
The SDP-2 Duct Probe will operate within the following air velocity range and should be installed to meet this requirement:

**1.0ms<sup>-1</sup> to 10.0ms<sup>-1</sup>**

**Hydraulic Diameters**



**Location Examples (GX represents duct probe)**

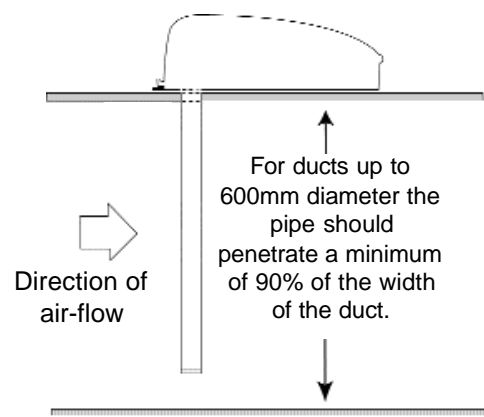


**Installation Procedure**

**STEP 1 - Selecting Pipe Length**

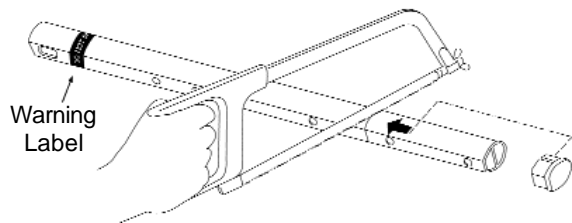
The supplied 600mm sampling pipe can only be used with ducts up to a maximum diameter of 600mm, but the pipe can be shortened if required (see Step 2).

- For ducts with a diameter greater than 600mm use the 1200mm sampling pipe cut to size but penetrating the whole width of the duct (see "Large Diameter Ducts" on Page 2).
- For ducts with a diameter greater than 1200mm contact Hochiki Europe Customer Support for advice (psupport@hochikieurope.com).



### STEP 2 - Adjusting Pipe Length

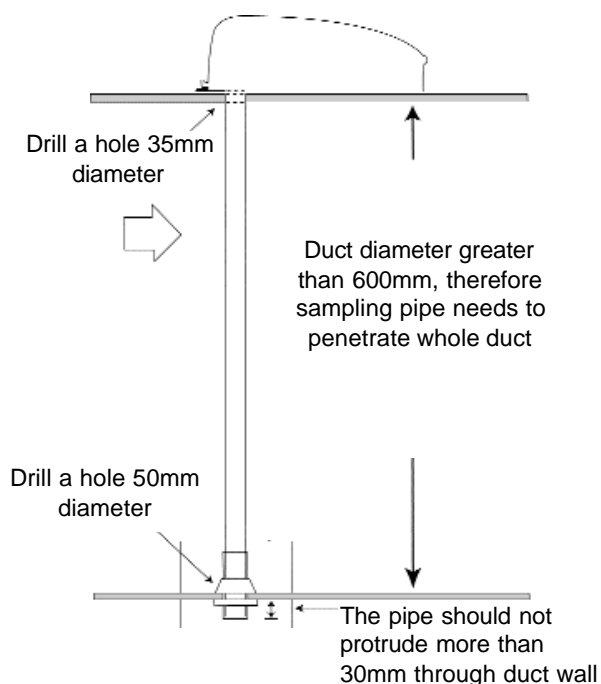
- After measuring the diameter of the duct and deducing the length of pipe required, shorten the pipe if necessary. The pipe should penetrate a minimum of 90% of the width of the duct.
- Do not cut the end of the pipe with warning label.
- Only cut between sampling holes.
- Once cut to length insert the end plug.



### Large Diameter Ducts

When using a sampling pipe within a duct greater than 600mm diameter the pipe should penetrate the whole duct:

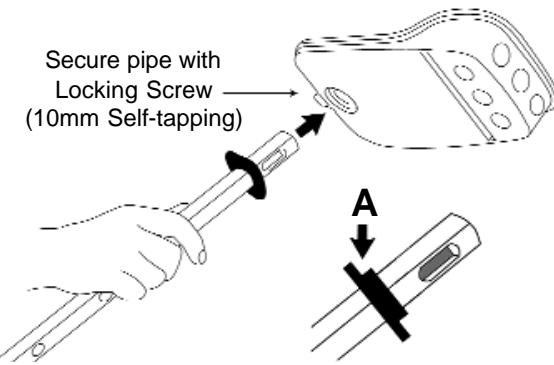
- Shorten the pipe to correct length if required
- Insert the end plug
- Fit the end plastic gasket
- Fit the rubber gasket



### STEP 3 - Fit Sampling Pipe to SDP-2

Before fitting the pipe to the unit, remove the cover and the air-flow block. With the sampling pipe cut to length, fit it to the underside of the SDP-2 unit:

- Mount the gasket (A) on to the pipe the correct way round (see below)
- Push the pipe into the hole in the underside of the unit (the pipe is specially shaped to only fit the correct way round).
- Tighten the locking screw to secure the pipe to the unit.



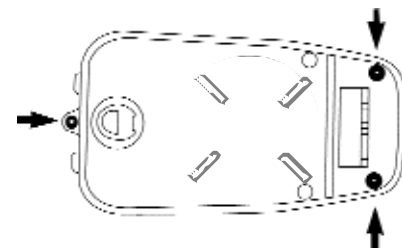
### STEP 4 - Drill Hole in Duct

Before mounting the SDP-2, drill a hole in the duct for the sampling pipe:

- Without bracket - hole diameter = 35mm
- With bracket - hole diameter = 50mm (see "Using the Optional Mounting Bracket" on page 4).

### STEP 5 - Mounting the SDP-2 on the Duct

- Carefully mount the SDP-2, inserting the sampling pipe into the hole in the duct wall.
- Secure the SDP-2 with the supplied three 25mm Self-tapping screws (positions shown).



### NOTE - IMPORTANT!

The arrow on the SDP-2 cover must have the same direction as the air-flow within the duct.

### SUPPLIED SCREW GUIDE

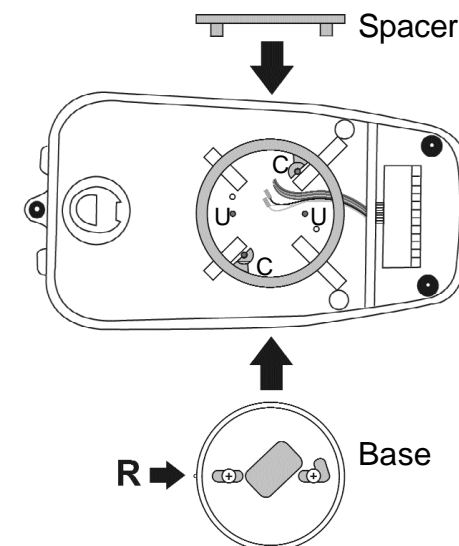


### STEP 6 - Installing Detector/Sensor/Base

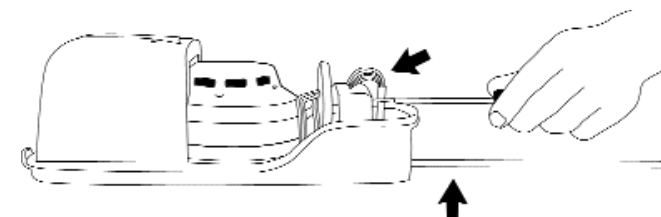
The smoke detector or sensor is mounted on a base which is fixed and wired to the SDP-2. Depending on which type of base is being used, the spacer (supplied) may be required to raise the height of the detector or sensor. The table below identifies when the spacer should be used:

RANGE	BASE	USE SPACER
ASX	YBO-R/SCI	NO
	YBN-R/3	YES
CDX	YBO-R/5	NO
	YBO-R/5ZD	NO
	YBO-R/5SK	NO
	YBN-R/4	YES
	YBN-R/4SK	YES

- If using the spacer, first slot this onto the fixing posts marked "C" inside the SDP-2 ensuring it is the correct way up (see diagram) and that the cable-ribbon is underneath. Then fix the base to the SDP-2 on top of the spacer with the two 20mm screws (supplied) using the fixing posts marked "U" (see diagram) passing the cable-ribbon through the base. Ensure that the rib (see "R" below) on the side of the base is pointing towards the sampling pipe.



- Connect the base to the wires from the terminal block within the SDP-2. Use the wiring guide on page 4.
- External cabling should be passed through the knock-out holes located at the end of the SDP-2 housing and suitable glands must be used. Connect the cabling to the terminal block using the wiring guide on page 4.



- Once base is fixed and connected, mount the sensor /detector ensuring the rib lines up with one on the base and points towards the sampling pipe.

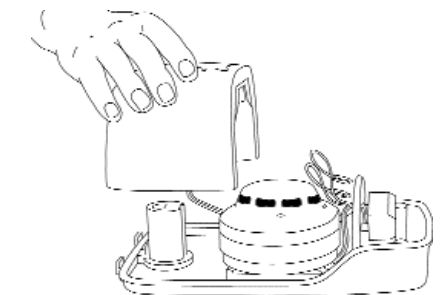
### NOTE - IMPORTANT!

### When using Hochiki CONVENTIONAL Optical Smoke Detectors.

If only **one** smoke detector is connected to the Control Panel, this detector's base should be fitted with an End Of Line (EOL) device compatible with that Control Panel. When **several** smoke detectors are connected to one Control Panel, the EOL device should be connected to the last base. There should only be one EOL device per zone.

### STEP 7 - Re-fitting Air-Flow Block

Carefully slot the air-flow block back onto the SDP-2 ensuring it makes good contact with the base of the unit.



### NOTE - IMPORTANT!

Once the unit is assembled and fitted, check the flow indicator. This is a metal disc suspended on a wire in the recess on top of the air-flow block. Note that the indicator oscillates but does not rotate. If the indicator does not move, you should firstly check the air-flow within the duct and secondly your positioning of the SDP-2.

### STEP 9 - Testing Smoke Detection

To test the detector/sensor before fitting the cover to the SDP-2 use smoke from a match or an approved test gas.



### STEP 10 - Fitting Cover

Fit the cover ensuring rear tabs (B) are located properly. Then secure the cover in place with supplied screws ensuring the unit is air-tight.