



# SmokeVent SLCS

## Installation and Maintenance Instructions

**THESE INSTRUCTIONS MUST BE READ FULLY BEFORE COMMENCING INSTALLATION**

### IMPORTANT NOTE

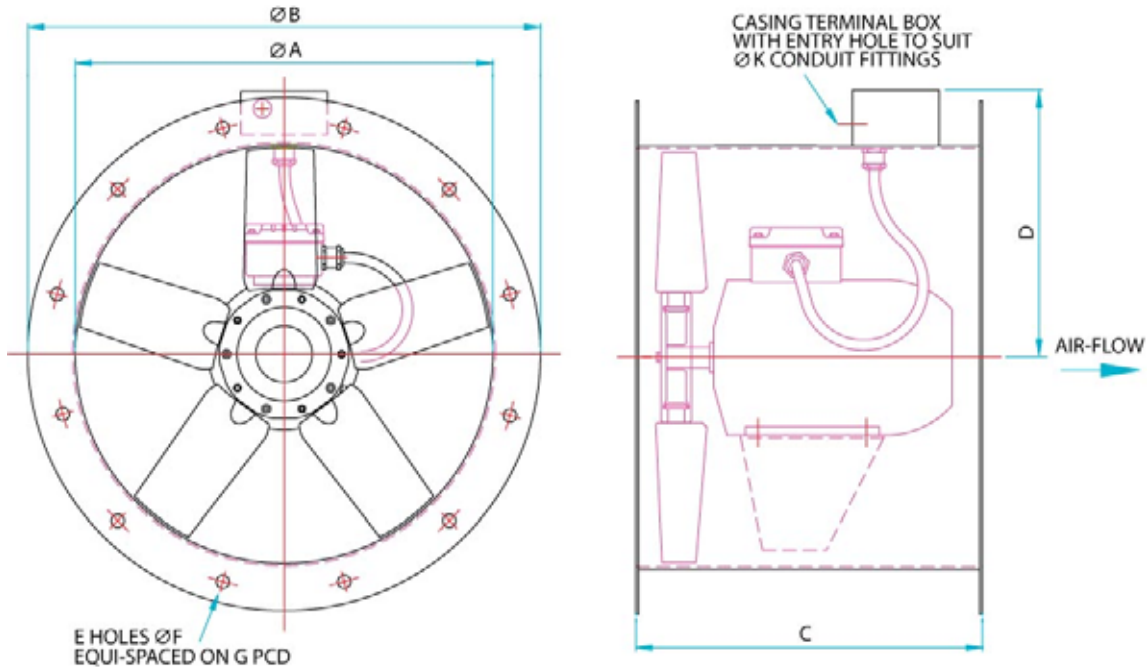
SmokeVent Axial Fan Units are part of a declared/tested and certified product range as defined within EN12101-3:2002. They may not be modified, altered or disassembled without the prior agreement of Elta Fans Ltd. They are manufactured under strict quality procedures and carry their own product CE mark under EC Certificate of Conformity No: 0086-CPD-493001. A full range of fan accessories have also been tested and certified. The use of items not supplied by Elta Fans Ltd may invalidate the certification under which the overall equipment is supplied.

SmokeVent fans provide a critical/lifesaving function in the event of their operation in the smoke mode and must be inspected and maintained under a verifiable maintenance system in accordance with these instructions.

Code	Supply	FL Amps	Output kW	r/min
SLCS400/4-3	400V/3Ph/50Hz	1.36	0.55	1430
SLCS400/2-3A	400V/3Ph/50Hz	2.78	1.32	2760
SLCS400/2-3B	400V/3Ph/50Hz	7.27	3.30	2810
SLCS500/4-3A	400V/3Ph/50Hz	1.56	0.66	1410
SLCS500/4-3B	400V/3Ph/50Hz	2.53	1.10	1440
SLCS500/2-3A	400V/3Ph/50Hz	5.36	2.64	2800
SLCS500/2-3B	400V/3Ph/50Hz	11.7	6.33	2845
SLCS560/4-3A	400V/3Ph/50Hz	1.56	0.66	1410
SLCS560/4-3B	400V/3Ph/50Hz	3.19	1.50	1420
SLCS630/4-3A	400V/3Ph/50Hz	2.92	1.32	1390
SLCS630/4-3B	400V/3Ph/50Hz	5.94	3.00	1410
SLCS710/4-3A	400V/3Ph/50Hz	5.80	2.53	1390
SLCS710/4-3B	400V/3Ph/50Hz	9.18	4.80	1410

Code	A	B	C	D	E	F	G	K	Weight kg
SLCS400/4-3	400	475	400	260	8	12	450	20	35
SLCS400/2-3A	400	475	400	260	8	12	450	20	37
SLCS400/2-3B	400	475	400	260	8	12	450	20	42
SLCS500/4-3A	500	585	400	310	12	12	560	20	41
SLCS500/4-3B	500	585	400	310	12	12	560	20	45
SLCS500/2-3A	500	585	400	310	12	12	560	20	47

SLCS500/2-3B	500	585	450	310	12	12	560	25	68
SLCS560/4-3A	560	645	400	340	12	12	620	20	43
SLCS560/4-3B	560	645	400	340	12	12	620	20	49
SLCS630/4-3A	630	715	400	375	12	12	690	20	52
SLCS630/4-3B	630	715	450	375	12	12	690	20	64
SLCS710/4-3A	710	795	450	425	16	12	770	20	67
SLCS710/4-3B	710	795	470	425	16	12	770	25	111



## 1.0 GENERAL

- 1.1 It is important these Installation and Maintenance Instructions are fully adhered to.
- 1.2 Full details of the unit supplied are shown on the product nameplate. The product CE nameplate must be checked to ensure that the stated **Fire Class**, together with the indicated **Temperature** and **Time** are equal to or greater than the installation into which the fan unit is being placed. If in doubt about any detail contact Elta Fans Ltd or its agents for clarification.
- 1.3 All electrical installation must be carried out by suitably qualified and competent personnel in accordance with all current statutory requirements.
- 1.4 These instructions cover only the Elta Fans Ltd product and do not include the supply or installation of any safety equipment that may be required e.g. adequate guarding or protection from rotating parts and proper electrical isolation.
- 1.5 Any declarations made by Elta Fans Ltd about product installation and safety, are dependant on the fan equipment being used within installations which themselves meet the requirements of the relevant Standards and Directives appropriate to the site.
- 1.6 The fan is designed for use in an ambient temperature of  $-20^{\circ}\text{C}$  up to  $+40^{\circ}\text{C}$  and up to 95% relative humidity. The fan is not suitable for corrosive or explosive atmospheres.
- 1.7 The installer should provide easy access to the fan to facilitate future maintenance.
- 1.8 The installer should ensure the fan is adequately supported by the use of tested and certified accessories.
- 1.9 This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the product by a person responsible for their safety. Children should be supervised to ensure that they do not play with the product.

**2.0 STORAGE**

- 2.1 If the fan is not to be used immediately then it should be stored in a clean, dry, vibration free location.
- 2.2 The impeller must be spun by hand (ensuring that it does not come to rest in the same position) on a monthly basis to prevent hardening of the grease and possible damage to the bearings.

**3.0 INSTALLATION**

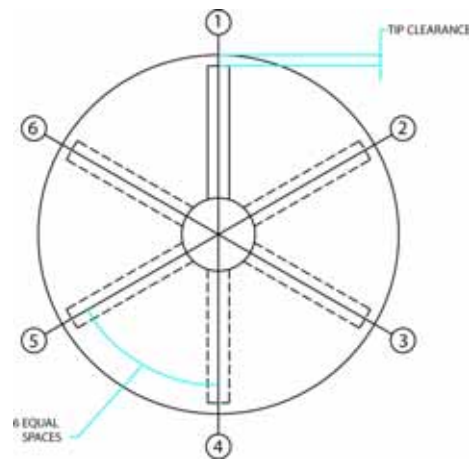
**WARNING – The fan must be isolated from the power supply during installation and maintenance. The fan must be earthed in accordance with the local regulations.**

- 3.1 Upon receipt, the fan equipment should be visually inspected to check for any damage. Ensure that the impeller is free to rotate.
- 3.2 Successful fan operation in the event of a fire is dependent on the installed fan having the required impeller blade tip clearance. The min/max tip clearances must be checked and recorded to ensure that no transit or site damage/changes to these clearances has occurred.

Min/Max Tip Clearances for EN12101-3 F300 Fan					
Fan Dia	Tip Clearance - mm		Fan Dia	Tip Clearance - mm	
	Minimum	Maximum		Minimum	Maximum
250	5.0	6.3	900	7.0	8.8
315	5.0	6.3	1000	8.0	10.0
400	5.5	6.9	1120	8.5	10.6
500	5.5	6.9	1250	10.0	12.5
560	5.5	6.9	1400	11.0	13.8
630	6.0	7.5	1600	12.0	15.0
710	6.0	7.5	1800	13.5	16.9
800	6.5	8.1	2000	14.5	18.1

- 3.3 Select one impeller blade and position it at each of the six radial positions per the diagram below. Note down the measured tip clearance in the adjacent table.

Fan Dia .....	Tip Clearance - mm		
	Measured	Minimum	Maximum
1		.....	.....
2			
3			
4			
5			
6			



- 3.4 The recorded tip clearances together with a copy of these instructions should be kept within a site product/plant file for subsequent reference by fire authorities/other relevant bodies.
- 3.5 If there are any queries concerning the fan equipment, Elta Fans Ltd should be contacted prior to the installation.
- 3.6 The fan must be securely mounted in the desired position to suit the application. The fan can be mounted in both horizontal and vertical installations for both 'Reservoir' and 'Non-Reservoir' applications.
- 3.7 In order to protect the fan from any adverse vibrations, or to avoid any transmission from the fan to the surroundings, it is recommended that full unit vibration isolation is utilized.
- 3.8 Check the details on the motor rating plate to ensure that the correct power supply (voltage, frequency and phase) is available.  
An incorrect power supply will lead to permanent damage to the fan motor.
- 3.9 Refer to the appropriate wiring diagram. Ensure that all earth connections are made.

3.10 Suitably rated flexible conduit should be used for connection to the fan terminal box.

**Note: The flexible conduit should not be used as an earth conductor.**

3.11 Means for electrical disconnection must be incorporated in the wiring installation in accordance with the relevant wiring and electrical regulations.

3.12 Precaution must be taken to locate the exhaust discharge terminal so as to avoid the backflow of gases into the room from the open flue of gas or other fuel burning appliances.

#### 4.0 ACCESSORY INSTALLATION

**Note: Only certified and tested accessories should be used. The use of non-certified accessories may invalidate the fan certification.**

4.1 DAMPERS – Damper blades should be moved through their full range to ensure smooth operation. If the damper is not supplied fitted to the fan unit, the orientation and operation of the dampers should be checked carefully upon installation to the adjacent fan/ductwork items.

4.2 FLEXIBLE CONNECTORS – Ensure that the ductwork is correctly aligned and the connectors are not over taut yet not too slack.

4.3 ANTI-VIBRATION MOUNTINGS – These will be of spring type in compression and will be fitted (or provided for fitting) under the fan mounting feet.

#### 5.0 START-UP

5.1 Before power is supplied to the unit, check that the wiring is correct as per the fan connection diagram.

5.2 At initial start-up, check that impeller rotation and airflow direction is correct.

5.3 Check that the motor amperage draw does not exceed the nameplate rating.

#### 6.0 FAN MAINTENANCE

6.1 Inspection of the fan at least once every 12 months is recommended to ensure that the motor, fan blades, and supporting guards, are clean. Any build up of dust and deposits on the blades or guards should be removed using a non-abrasive cleaner.

6.2 All fastenings should be checked for tightness. In addition, all rotating items should be checked.

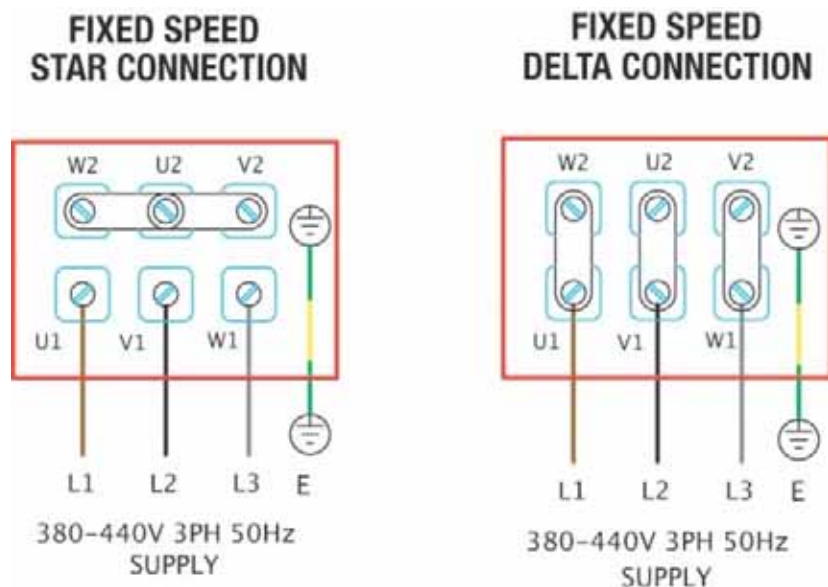
6.3 Bearings are of the 'sealed for life' type and will not need a detailed inspection.

6.5 Fan accessories should be checked, cleaned and replaced as necessary.

**WARNING – Fuses/circuit breakers are used to provide short circuit protection only. A starter panel with overload protection should be used to protect the motor. All motor protection devices must be automatically by-passed and/or deactivated in the event of a fire.**

**Only a suitably qualified and competent person may carry out maintenance after the electrical supply has been isolated.**

#### WIRING



## GUARANTEE

Elta Fans Ltd will, free of charge, within a period of 1 year from the date of despatch from their works, repair or at its option replace any goods which are proved to have defects as a result of defective materials or workmanship. The goods MUST be returned to Elta Fans Ltd carriage paid for examination.

### **Elta Fans Ltd**

17 Barnes Wallis Road  
Segensworth East Industrial Estate  
Fareham, Hampshire, PO15 5ST, United Kingdom

**Visit:** [eltafans.com](http://eltafans.com)

**e-mail:** [mailbox@eltafans.co.uk](mailto:mailbox@eltafans.co.uk)

**Applied Technology:** **Tel:** +44(0) 1489 566500

**Fax:** +44(0) 1489 566555

**Building Services:** **Tel:** +44(0) 1384 275800

**Fax:** +44(0) 1384 275810

**Export:** **Tel:** +44(0) 1489 566500

**Fax:** +44(0) 1489 566555

SLCS Inst Issue 2: 30-01-08