DOWNFLOW BOOTH QUESTIONNAIRE

DATE:

I. ABOUT YOUR COMPANY

**Fields required to be filled out*

1. NAME*

2. COMPANY*

3. ADDRESS*

4. EMAIL*

5. WEBSITE

6. PHONE NUMBER AND EXTENSION*

7. FAX

8. YOU WORK FOR*

(Please Tick)

- ☐ End User/Facility Owner
- ☐ Cleanroom Builder/Contractor
- ☐ Lab Builder/Contractor
- ☐ Distributor

9. EXISTING ESCO EQUIPMENT

10. REPEATED ORDER*

☐ Yes, SN: ☐ No

II. PROJECT INFORMATION

**Fields required to be filled out*

11. URS Available*

- ☐ Yes (please attach document)
- ☐ No

12. Industry*

- ☐ Pharmaceutical/Biotech
- ☐ Chemicals
- ☐ Food
- ☐ Soap and Detergents
- ☐ Cosmetics
- ☐ Paint
- ☐ Others, please specify:

13. Name of Project

14. Project Location*

15. Unit/s Required*

16. Deadline of submission for Tender*	
17. Timeline for Purchase	
18. Timeline for Installation	
19. Application*	
20. No. of users	
21. Type of Protection	☐ Operator Protection ☐ Product Protection ☐ Operator and Product Protection
22. Airflow Regime*	☐ Recirculating (*for non-volatile substances*) ☐ Single Pass (*for non-sterile volatile substances*) ☐ Single Pass w/ Downflow (*for sterile volatile substances*)
23. Exposure Level ***(Occupational Exposure Band)***	☐ 50-100 mcg/m³ (*standard*) ☐ 10-50 mcg/m³ ☐ 1-10 mcg/m³ ☐ <1 mcg/m³
24. Level of Need	☐ Have an approved budget (indicate:)) ☐ Preparing to submit a budget for approval ☐ Gathering information for future reference

Legend:
Recirculating: *For Operator, Product, & Environmental Protection*

Single Pass: *For Operator, & Environmental Protection*

Single Pass w/ Downflow: *For Operator, Product, & Environmental Protection*

III. DOWNFLOW BOOTH SPECIFICATION

**Fields required to be filled out*

25. Filter Change Option*

- ☐ Safe Change w/ Bag-In, Bag-Out (1.0 m back stack)
- ☐ Safe Change, No Bags (1.0 m back stack)
- ☐ Standard, No Bags (0.3 m/0.6 m back stack)

26. Classification of External & Internal Areas*

☐ Safe internal	☐ Safe external (*cleanroom*)
☐ ATEX internal	☐ ATEX external (*cleanroom*)
☐ ATEX Zone 0	☐ ATEX Zone 0
☐ ATEX Zone 1	☐ ATEX Zone 1
☐ ATEX Zone 2	☐ ATEX Zone 2
☐ ATEX Zone 20	☐ ATEX Zone 20
☐ ATEX Zone 21	☐ ATEX Zone 21
☐ ATEX Zone 22	☐ ATEX Zone 22

☐ More information: _____

27. Internal Height*
(add 500 mm to obtain external height)

- ☐ 21: 2100 mm
- ☐ 25: 2500 mm (max)

28. External Width*
(subtract 120 mm to obtain internal width)

☐ 16: 1600 mm	☐ 36: 3600 mm
☐ 18: 1800 mm	☐ 38: 3800 mm
☐ 20: 2000 mm	☐ 40: 4000 mm
☐ 24: 2400 mm	☐ 42: 4200 mm
☐ 26: 2600 mm	☐ 44: 4400 mm
☐ 28: 2800 mm	☐ 46: 4600 mm
☐ 30: 3000 mm	☐ 48: 4800 mm
☐ 32: 3200 mm	☐ 50: 5000 mm
☐ 34: 3400 mm	☐ Custom _____

29. Internal Depth*
(add back stack width to obtain external depth, depends on filter system)

☐ 08: 800 mm	☐ 20: 2000 mm
☐ 12: 1200 mm	☐ 24: 2400 mm (max)
☐ 16: 1600 mm	

30. Back Stack Depth*

**Please note that 0.3m bs can only be recommended for DFBs w/ < 1600mm Internal Depth*

- ☐ 10: 1.0 m
- ☐ 06: 0.6 m
- ☐ 03: 0.3 m **

31. Filtration System* ***(Check compatibility of option with back stack depth)***

☐ **Option A**
1.0 m back stack
Prefilter G3
Fine dust filter F8
Primary HEPA filter H13
Terminal HEPA filter H14
Distribution Screen
- ○ Perforated Stainless Steel Diffuser
- ○ PLF Screen (Polyester Mesh)

☐ **Option B**
1.0 m back stack
Prefilter G3
Fine dust filter F8
Primary HEPA filter H13
Terminal HEPA filter H14

☐ **Option C**
1.0 m back stack
Prefilter G3
Fine dust filter F8
Terminal HEPA filter H13
Distribution Screen PLF
- ○ Perforated Stainless Steel
- ○ Polyester Mesh

☐ **Option D**
0.6 m back stack
Prefilter G3
Fine dust filter F8
Terminal HEPA filter H14

☐ **Option E**
0.3 m back stack
Carbon filter
Terminal HEPA filter H14

☐ **Option F**
0.3 m back stack
Prefilter G3
Terminal HEPA filter H14

32. Fan Filter Access*

- ☐ A: Internal to booth
- ☐ B: External to booth

33. Local Operating System (LOP) Location

- ☐ L: Left panel
- ☐ R: Right panel

34. Bleed Position

- ☐ T: Top
- ☐ F: Front
- ☐ Others: _____

MATERIAL OF CONSTRUCTION

35. Ceiling Plenum

- ☐ A: SS 316
- ☐ B: SS 304
- ☐ C: White PC EG Steel

36. Side Panels, Rear Wall Panels, Exhaust Plenum

- ☐ A: SS 316
- ☐ B: SS 304
- ☐ C: White PC EG Steel

37. Filter Housings, Fan Boxes, Spacer *(if present)* and Transition

- ☐ A: SS 316
- ☐ B: SS 304
- ☐ C: White PC EG Steel

38. Plinth

- ☐ A: SS 316
- ☐ B: SS 304
- ☐ C: White PC EG Steel

39. Exhaust Grilles

- ☐ A: SS 316
- ☐ B: SS 304
- ☐ C: White PC EG Steel

40. Exterior Side Panels

- ☐ A: SS 316
- ☐ B: SS 304
- ☐ C: White PC EG Steel

41. Curtains

- ☐ Not needed
- ☐ Front PVC
- ☐ Side Wall PVC
- ☐ Front and Side Wall PVC

42. Voltage Assembly

- ☐ A: 230V 50Hz 1Ph 0.3 m back stack
- ☐ B: 400V 50Hz 3Ph 1.0/0.6 m back stack
- ☐ C: 208V 60Hz 3Ph 0.6 m back stack
- ☐ D: 480V 60 Hz 3Ph 1.0/0.6 m back stack
- ☐ E: 120V 60Hz 1Ph 0.3 m back stack

43. Main Control Panel (MCP) Location*

- ☐ OR: Onboard right
- ☐ OL: Onboard left
- ☐ OF: Onboard front
- ☐ RM: Remote mounted

44. Control Type *(Check compatibility of option with back stack depth)*

Legend:
PLC: *Programmable Logic Controller*

PB: *Push Button*

PDI: *Pressure Differential Indicator*

PDT: *Pressure Differential Transmitter*

HMI: *Human Machine Interface*

☐ **Option 1**
PLC/PB's/PDI/PDT
1.0/0.6 m back stack
Allen-Bradley Comp.
Closed loop

☐ **Option 2**
PLC/PB's/PDI/PDT
1.0/0.6 m back stack
Siemens Components
Closed loop

☐ **Option 3**
PLC/HMI/PDT
1.0/0.6 m back stack
Allen-Bradley Comp.
Closed loop

☐ **Option 4**
PLC/HMI/PDT
1.0/0.6 m back stack
Siemens Components
Closed loop

☐ **Option 5**
PDI/PDT
0.3 m back stack
Sentinel Gold
Open loop

45. Cooling Type

☐ CC: Chilled water

☐ DX: Direct expansion

46. Other Options

☐ 01: High Containment Screen
- ○ Integrated
- ○ Portable

☐ 02: Benches, SST or Granite tables, W x D
- ○ Fixed to booth
- ○ Stand alone

☐ 03: Computer Monitor Mounting Screen

☐ 04: Airlock

☐ 05: UV Light Guards

☐ 06: Two additional Electrical Outlets

☐ 07: Pass through

☐ 08: Side Wall Fire Sprinkler Penetration

☐ 09: Top-Ceiling Fire Sprinkler Penetration

☐ 10: Material Handling

☐ 11: Vision Panel

☐ 12: Sound Insulation

☐ 13: Ethernet & RS-232 Pass Through Connections

☐ 14: Bumper Rails

☐ 15: Temperature and RH Sensors

☐ 16: Drum Tipper

☐ 17: RH control

☐ 18: Earth Bar

Important: *Save the completed PDF form (use menu File - Save).*