



Technical Bulletin

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Date: July 11, 2011 No.: 006
To: Customer Service, Engineering, Estimating, Operations, Sales, Valued JMP Dealers
Subject: *Isolator Fume Hoods, Airflow & Static Pressure Calculation Inconsistencies in Catalog*

Attached are the most up to date tables and calculations regarding the Airflow Criteria for the standard Isolator Bench Fume hoods. Recently, there has been some confusion due to the nomenclature in the catalog with regards to %50 open, versus 14" Open and alike. In order to simplify the criteria shown in the catalog, all airflow calculations will be based on either 18" vertical open, 28" vertical open, or %50 horizontal open.

All vertically open calculations involving the combination sash are with the horizontal panes of sash closed, and upper bypass closed. All horizontal calculations involving %50 open are with the vertical sash (if applicable) closed, but does include both bypasses.

Note: Numbers for Gen5 Bench Hoods where applicable are the same as on the isolator.

Note2: The F-121 Series Hoods are calculated with only one sash (side) vertically open. The airflow requirements have been increased to account for the bypass on opposite (closed) side.

Note3: All calculations for hoods with more than one sash (F-170, F-171, F-173, F-181 & F-183) are calculated with both left and right sashes in the designated open position at the same time.

If further calculations are required for a specific hoods based on a different size opening, or sash positions, please contact the factory for further assistance in determining what the proper airflow requirements should be.

Contact JMP for more information.

Fume Hood Engineering
Jamestown Metal Products, LLC

F-100 Series Bench Hood Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM
F-100-36	1 : 10"	325 CFM @ 0.06 "SP	506 CFM @ 0.14 "SP
F-100-48	1 : 10"	475 CFM @ 0.12 "SP	739 CFM @ 0.29 "SP
F-100-60	1 : 12"	625 CFM @ 0.14 "SP	972 CFM @ 0.35 "SP
F-100-72	1 : 12"	775 CFM @ 0.22 "SP	1206 CFM @ 0.53 "SP
F-100-96	2 : 10"	1075 CFM @ 0.15 "SP	1672 CFM @ 0.37 "SP

F-101 Series Bench Hood Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM	%50 Horizontal Open @ 100 FPM
F-101-48	1 : 10"	475 CFM @ 0.12 "SP	739 CFM @ 0.29 "SP	415 CFM @ 0.09 "SP
F-101-60	1 : 12"	625 CFM @ 0.14 "SP	972 CFM @ 0.35 "SP	549 CFM @ 0.11 "SP
F-101-72	1 : 12"	775 CFM @ 0.22 "SP	1206 CFM @ 0.53 "SP	692 CFM @ 0.18 "SP
F-101-96	2 : 10"	1075 CFM @ 0.15 "SP	1672 CFM @ 0.37 "SP	968 CFM @ 0.12 "SP
F-101-120	2 : 12"	1375 CFM @ 0.17 "SP	2139 CFM @ 0.42 "SP	1244 CFM @ 0.14 "SP
F-101-144	2 : 12"	1675 CFM @ 0.26 "SP	2606 CFM @ 0.62 "SP	1523 CFM @ 0.21 "SP

F-102 Series Bench Hood Air Flow Data

Catalog Number	Duct Diameter	%50 Horizontal Open @ 100 FPM
F-102-48	1 : 10"	445 CFM @ 0.10 "SP
F-102-60	1 : 12"	572 CFM @ 0.12 "SP
F-102-72	1 : 12"	714 CFM @ 0.19 "SP
F-102-96	2 : 10"	984 CFM @ 0.13 "SP

F-103 Series Bench Hood Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM
F-103-36	1 : 10"	325 CFM @ 0.06 "SP	506 CFM @ 0.14 "SP
F-103-48	1 : 10"	475 CFM @ 0.12 "SP	739 CFM @ 0.29 "SP
F-103-60	1 : 12"	625 CFM @ 0.14 "SP	972 CFM @ 0.35 "SP
F-103-72	1 : 12"	775 CFM @ 0.22 "SP	1206 CFM @ 0.53 "SP
F-103-96	2 : 10"	1075 CFM @ 0.15 "SP	1672 CFM @ 0.37 "SP
F-103-120	2 : 12"	1375 CFM @ 0.17 "SP	2139 CFM @ 0.42 "SP
F-103-144	2 : 12"	1675 CFM @ 0.26 "SP	2606 CFM @ 0.62 "SP

F-121 Series Bench Hood / Pass-Through Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM (One Sash Only Open)	28" Vertical Open @ 100 FPM (One Sash Only Open)
F-121-48	1 : 10"	581 CFM @ 0.18 "SP	844 CFM @ 0.38 "SP
F-121-60	1 : 12"	764 CFM @ 0.21 "SP	1111 CFM @ 0.45 "SP
F-121-72	1 : 12"	947 CFM @ 0.33 "SP	1378 CFM @ 0.70 "SP
F-121-96	2 : 10"	1314 CFM @ 0.23 "SP	1911 CFM @ 0.48 "SP

Note: Calculations of F-121 Include Bypass Opening of Side Not Opened.

F-170 Series Bench Hood / Fixed Center Post Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM
F-170-96	2 : 10"	950 CFM @ 0.12 "SP	1478 CFM @ 0.29 "SP
F-170-120	2 : 12"	1250 CFM @ 0.14 "SP	1944 CFM @ 0.35 "SP
F-170-144	2 : 12"	1550 CFM @ 0.22 "SP	2411 CFM @ 0.53 "SP

Note: Calculations of F-170 Include Both Sashes Raised.

F-171 Series Bench Hood / Fixed Center Post Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM	%50 Horizontal Open @ 100 FPM
F-171-96	2 : 10"	950 CFM @ 0.12 "SP	1478 CFM @ 0.29 "SP	831 CFM @ 0.09 "SP
F-171-120	2 : 12"	1250 CFM @ 0.14 "SP	1944 CFM @ 0.35 "SP	1098 CFM @ 0.11 "SP
F-171-144	2 : 12"	1550 CFM @ 0.22 "SP	2411 CFM @ 0.53 "SP	1384 CFM @ 0.18 "SP

Note: Calculations of F-171 Include Both Sashes Open.

F-173 Series Bench Hood / Fixed Center Post Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM
F-173-96	2 : 10"	950 CFM @ 0.12 "SP	1478 CFM @ 0.29 "SP
F-173-120	2 : 12"	1250 CFM @ 0.14 "SP	1944 CFM @ 0.35 "SP
F-173-144	2 : 12"	1550 CFM @ 0.22 "SP	2411 CFM @ 0.53 "SP

Note: Calculations of F-173 Include Both Sashes Vertically Open.

F-181 Series Bench Hood / Dual Postless Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM	%50 Horizontal Open @ 100 FPM
F-181-96-2	2 : 10"	1075 CFM @ 0.15 "SP	1672 CFM @ 0.37 "SP	904 CFM @ 0.11 "SP
F-181-120-2	2 : 12"	1375 CFM @ 0.17 "SP	2139 CFM @ 0.42 "SP	1189 CFM @ 0.13 "SP
F-181-144-2	2 : 12"	1675 CFM @ 0.26 "SP	2606 CFM @ 0.62 "SP	1475 CFM @ 0.20 "SP

Note: Calculations of F-181 Include Both Sashes Open.

F-183 Series Bench Hood / Dual Postless Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM
F-183-96-2	2 : 10"	1075 CFM @ 0.15 "SP	1672 CFM @ 0.37 "SP
F-183-120-2	2 : 12"	1375 CFM @ 0.17 "SP	2139 CFM @ 0.42 "SP
F-183-144-2	2 : 12"	1675 CFM @ 0.26 "SP	2606 CFM @ 0.62 "SP

Note: Calculations of F-183 Include Both Sashes Vertically Open.

F-183 Series Bench Hood / Quad Postless Air Flow Data

Catalog Number	Duct Diameter	18" Vertical Open @ 100 FPM	28" Vertical Open @ 100 FPM
F-183-96-4	2 : 10"	1075 CFM @ 0.15 "SP	1672 CFM @ 0.37 "SP
F-183-120-4	2 : 12"	1375 CFM @ 0.17 "SP	2139 CFM @ 0.42 "SP
F-183-144-4	2 : 12"	1675 CFM @ 0.26 "SP	2606 CFM @ 0.62 "SP

Note: Calculations of F-183 Include All (4) Sashes Vertically Open.