



Chemical Resistant Fume Jet -



R10.1



- **Powerful Fume Jet ensure high efficiency and reliability in dispersion of fumes.**
- **Designers and engineers to specify the required dispersion height**
- **To prevent the plume down wash and limit exposure level that may be detrimental to the health**
- **Suitable for use in the test laboratory, hospital, food industry, electronic industry, chemical and electroplating industry, fumes cupboard, clean rooms engineering etc.**



Role

CHEMCO with over 25 years of manufacturing experience has become one of the world's leading Chemical Resistant Plastic Fan and Ventilator manufacturers.

The years of experience and know-how in the areas of plastics and its designing capabilities enable CHEMCO to develop a complete range of anti-corrosive Fume Jet dispersion stack.

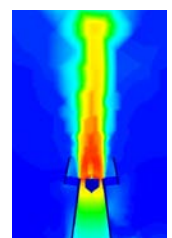
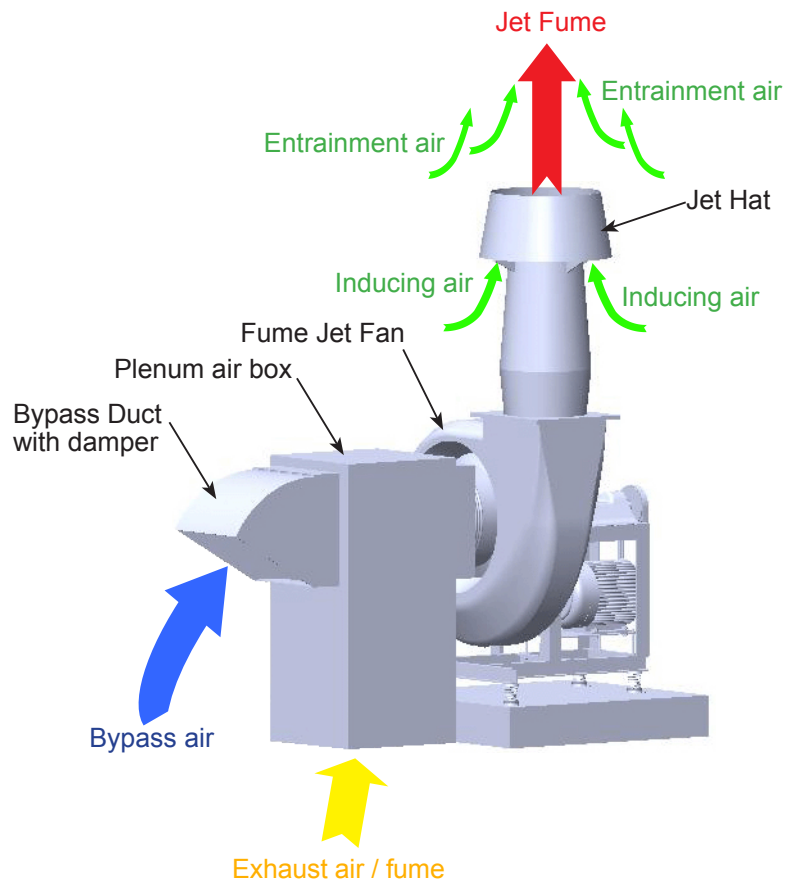
Products and Performance

CHEMCO Fume Jet mounted on fan, with casing build to a true volute form, is tested in accordance to AMCA 211 and AMCA 311 to give exact amount of air and velocity.

Fume Jet comes in 18 difference sizes. Capacity up to 90,000 cmh, static pressure up to 2200 Pa and Dispersion height up to 40 meter at 20Km/hr wind speed.

The cone is design to increase induce draft by up to 2.5 time the exhaust flow volume.

CHEMCO Chemical resistant plastic fans can be mounted with Fume Jet.





Fume Jet

CHEMCO Fume Jet is a vertical taper nozzle mounted on the fan outlet for dispersion of fumes to the atmosphere to prevent the contamination from settling and plugging.

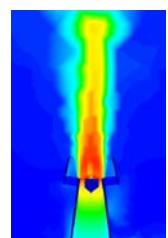
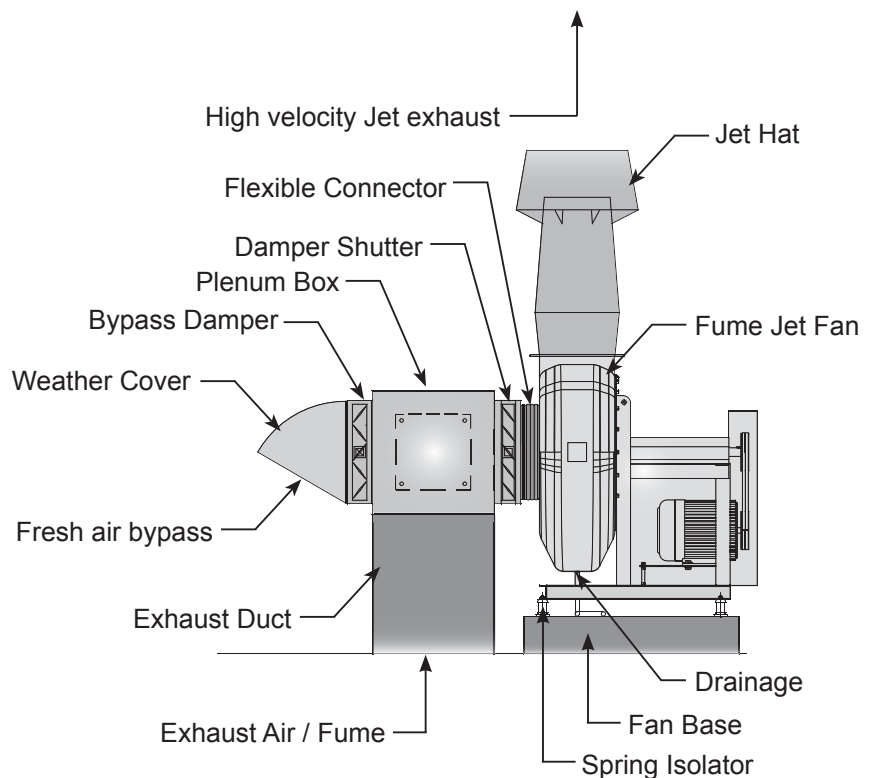
Fume Jet casing is extremely rigid to ensure it is free of vibration or drumming during operation. It is developed to give low noise level, trouble-free service.

Material of PP, PE, PVC, PVDF, GRP, Epoxy coated steel or stainless steels.

Superior corrosion resistance quality.

The Fume Jet nozzle is designed to provide adequate exit velocities that will help prevent plume downwash.

Usually it is 1.5 times the maximum expected wind speed at the nozzle exit (U.S. EPA, 1985).



Dispersion Height

The flow rate, the minimum nozzle velocity and the wind speed determine the dispersion height. The wind dictates the speed and direction in which the bulk of the plume moves, and wind also affects the amount of dispersion that takes place.

The height to ensure that emissions do not result in excessive concentrations of the pollutant can be referring to (GEP) in 40 CFR 51 Section.

Service

CHEMCO always strives to offer the best "value for money" and to maintain its primary objective of ensuring that all our products are safe, easy to use, whilst offering reliable quality with the latest in design technology, incorporating all useful and practical features, leaving the customers with superior products and service.

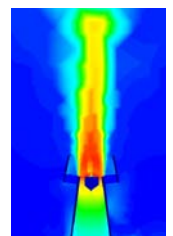


Quality, Testing and Certification

Fume Jet are produced to strict quality standards. Only the best quality materials are used.

Our assembly, logistic and R&D centre has been certified in accordance to ISO 9001-2008 ensuring that all our products meet the highest standards of quality and each item is carefully inspected before shipment to ensure customer satisfaction.

Our testing facilities was equipped with the latest state-of-the-art equipments Fans mounted with Fume Jet are rated and tested in accordance with the ISO5801 and AMCA 211, 260 and 311 standards. In many cases, factory acceptance tests (FAT) are arranged prior to delivery to ensure meeting all specification and standard.



Pressure Loss, Dispersion Height and Nozzle Velocity Selection

Example:

Flow volume at 3 m³/s with system static pressure 600 pa. Nozzle velocity at min 20 m/s, Wind Speed at 20 Km/hour. Minimal height from floor is 12 meter. Total Efficiency min 70%, Max. fan rpm at 1400.

- 1) Refer to the CHEMCO fan curve, select a fan to meet the above specification.
- 2) Base on fan curve CHEM 500 and 560 can perform the job.
- 3) Airs flowing through Fume Jet will encounters resistance to flow due to friction losses and turbulence losses

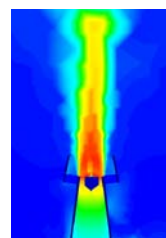
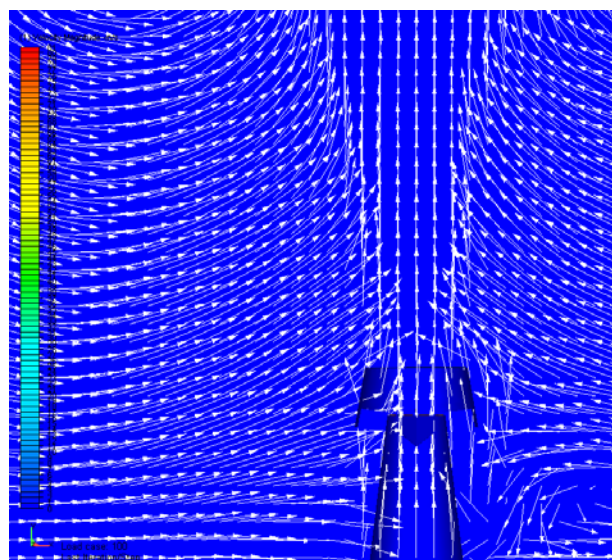
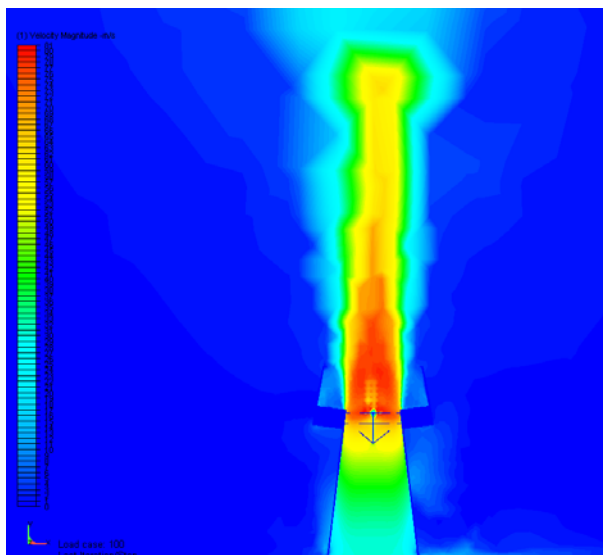
Refer to graph A2 "Pressure Loss due to Jet Action" for actual Pa required.

- a) Chem 500 = 507 pa losses, new static pressure = 1107 pa
- b) Chem 560 = 267 pa losses, new static pressure = 867 pa

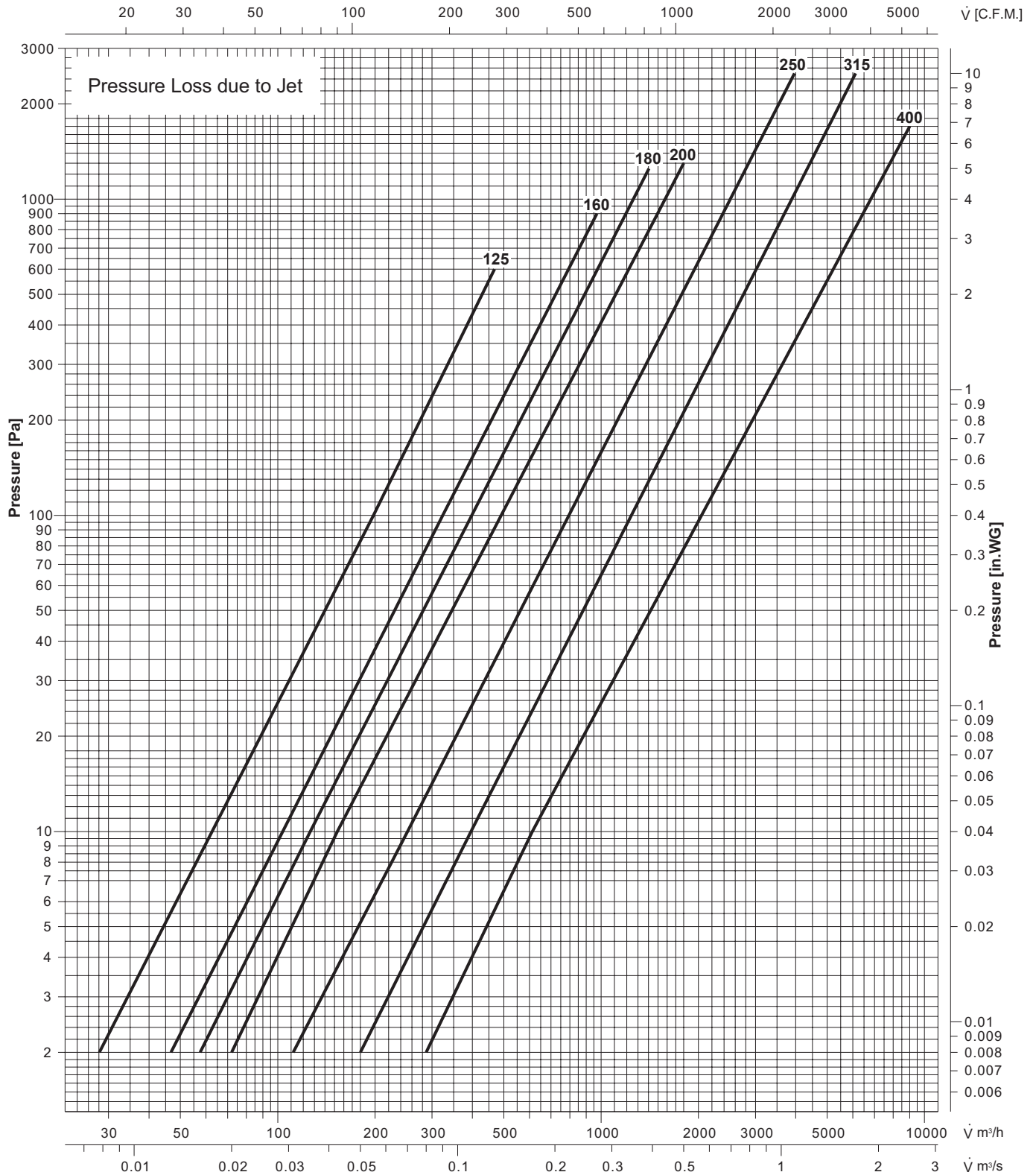
- 4) Fan selected:
 - a) Chem 500 with RPM at 1240, 5.0 Bkw, Total Efficiency: 75.4%
 - b) CHEM 560 with RPM at 935, 3.9 Bkw, Total Efficiency: 74.0%
- 5) Option (a) CHEM 500 is within the specification for efficiency at 75.4% and rpm at 1240.
- 6) Refer to the "Effective Height of Jet" graph B3. From 3 m³/s intersect CHEM 500 curve result 31.81m/s. Wind speed at 10 km/hour = 21.1 meters.
- 7) Effective height at 20 km/hour will be 21.1 divide by 2 = 10.55 meter.
- 8) Refer to CHEMCO Fume Jet dimensions chart for total height from floor level:

CHEM 500 fan height = 1.283 + JH = 1.085
E(H)=10.55

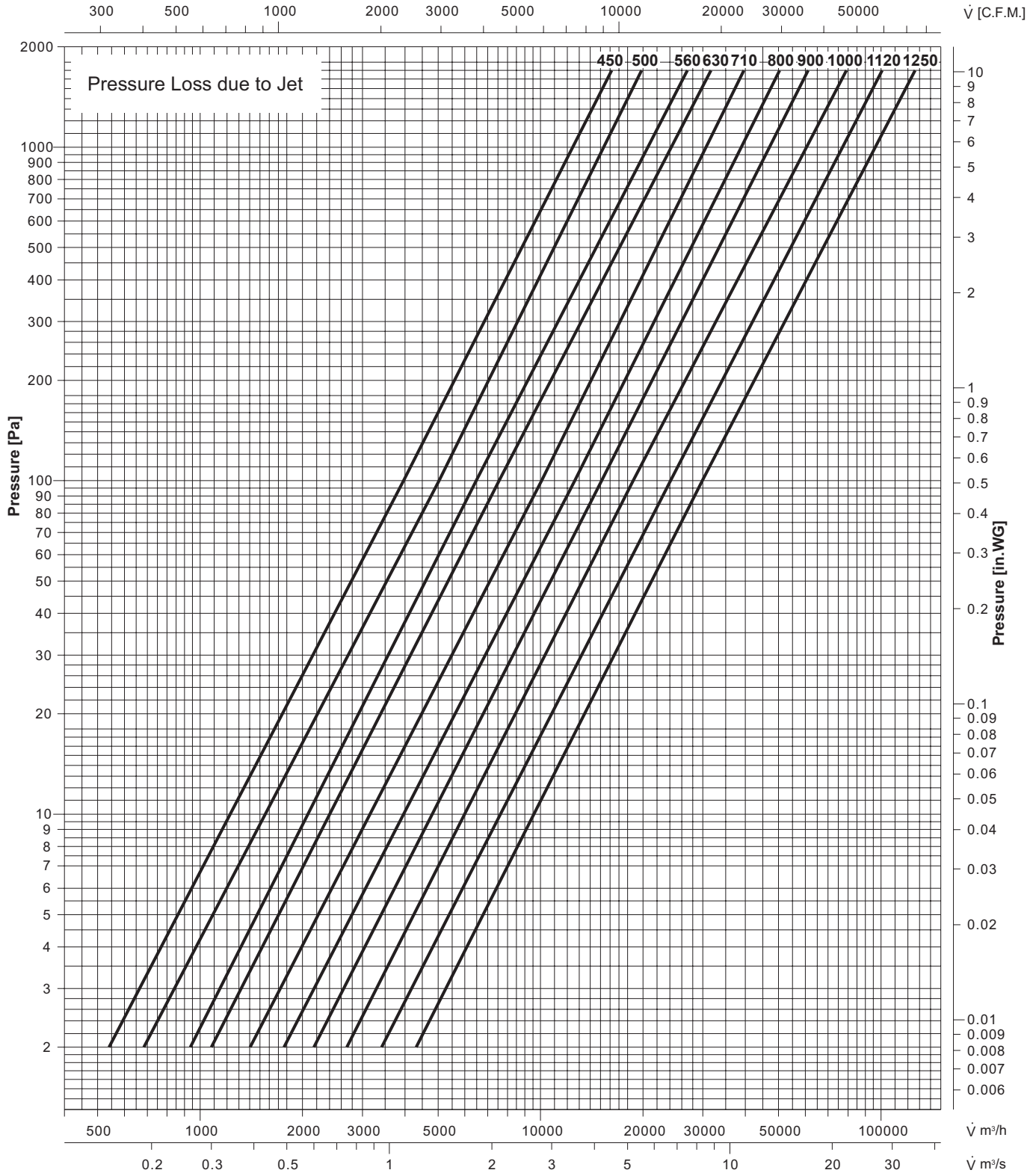
Total Height equal to 12.92 meters.



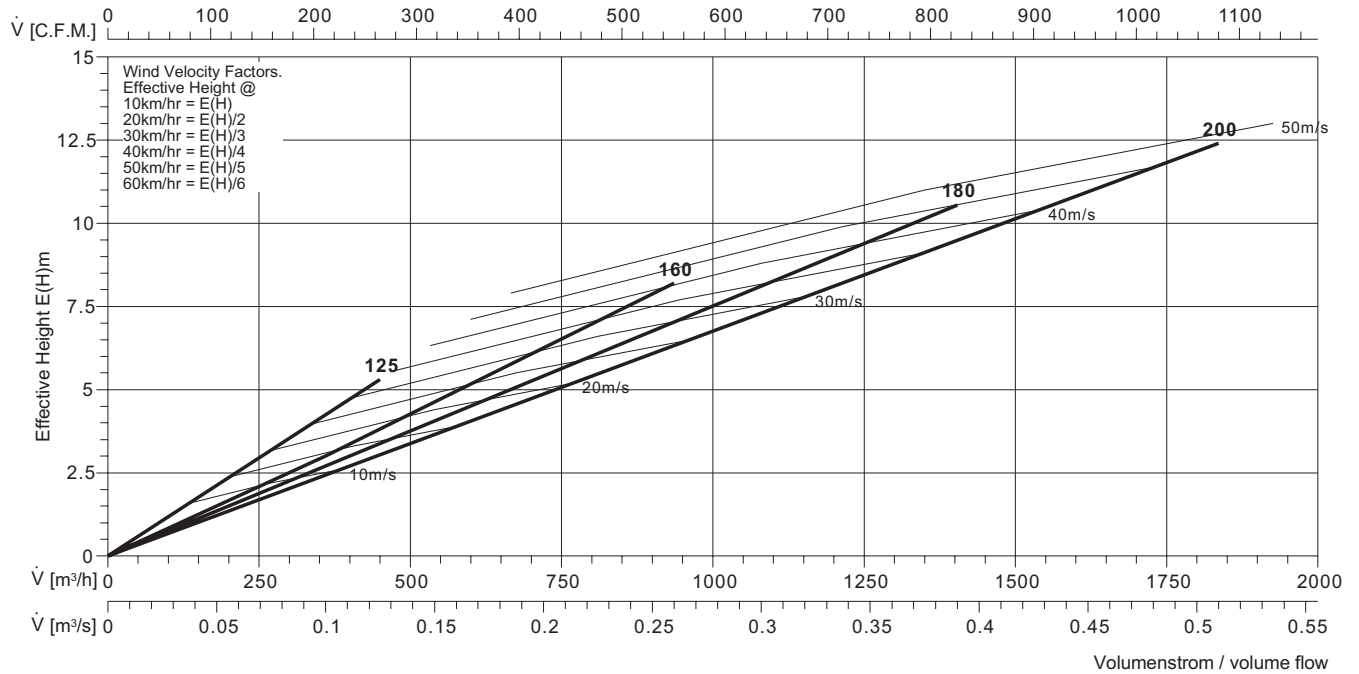
Pressure Loss due to Jet Action Fan Sizes CHEM 125 to 400



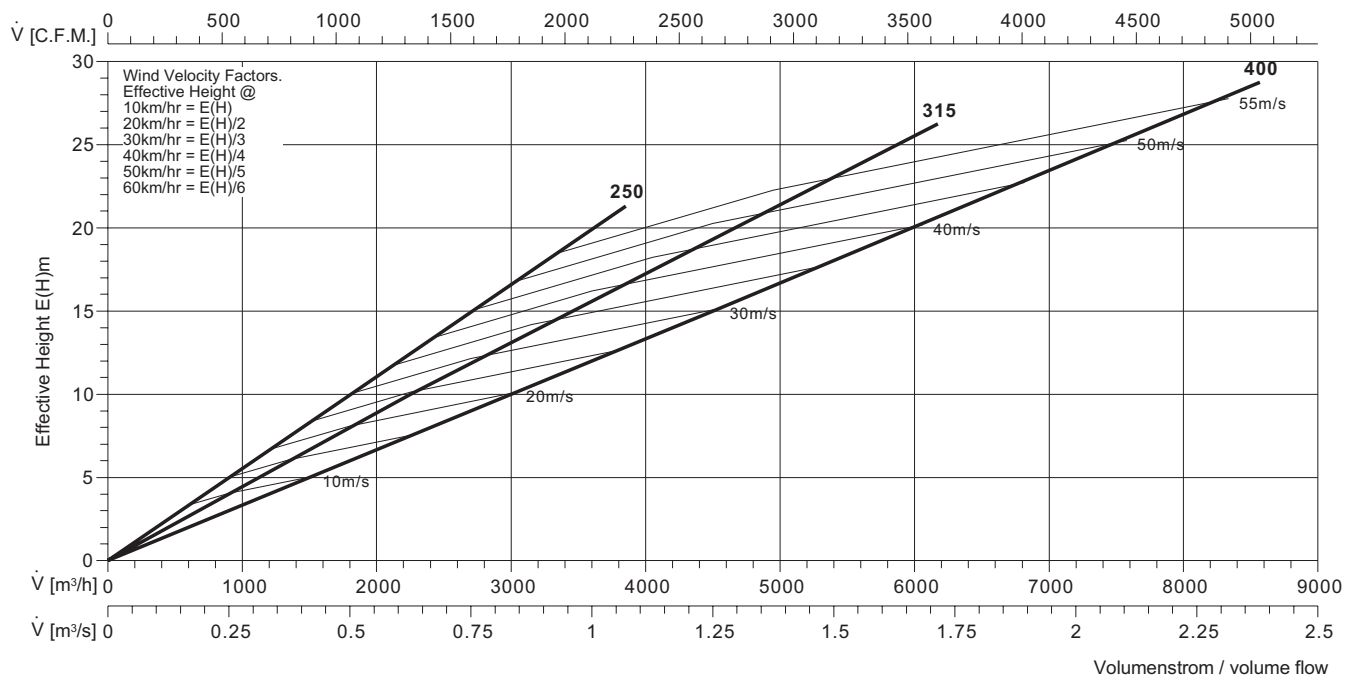
Pressure Loss due to Jet Action Fan Sizes CHEM 450 to 1250



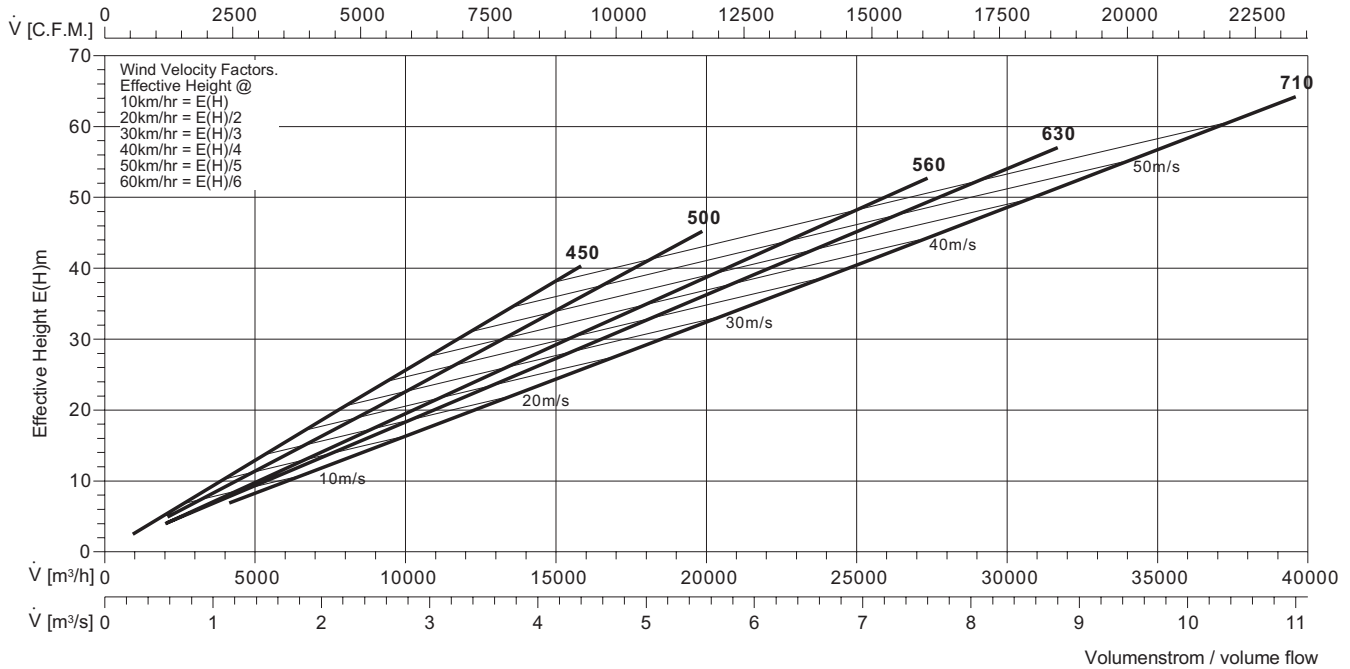
Effective Height of Jet (K=7) Fan Sizes CHEM 125 to 200



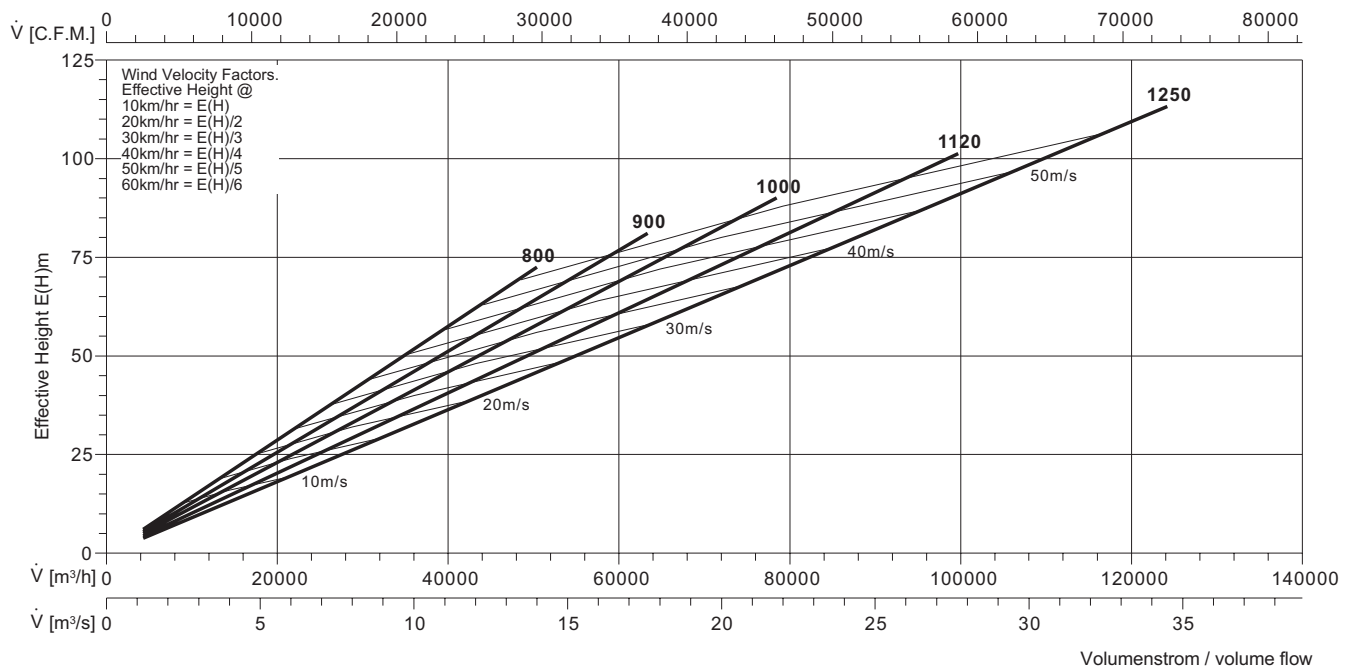
Effective Height of Jet (K=7) Fan Sizes CHEM 250 to 400



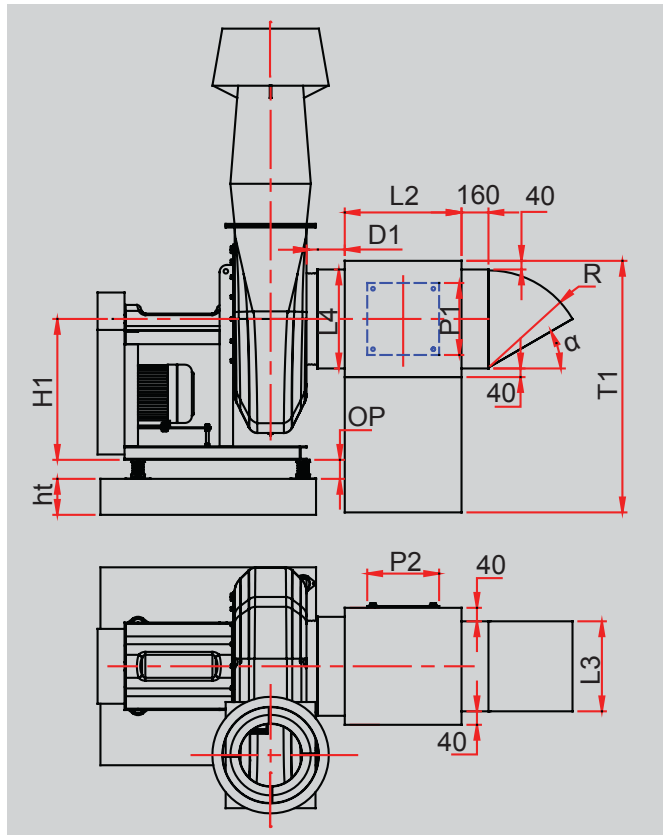
Effective Height of Jet (K=7) Fan Sizes CHEM 450 to 710



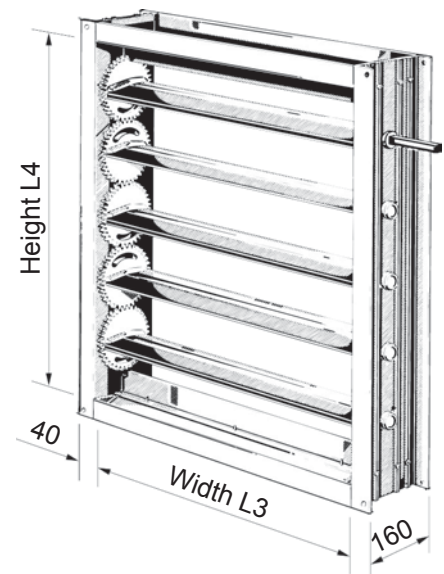
Effective Height of Jet (K=7) Fan Sizes CHEM 800 to 1250



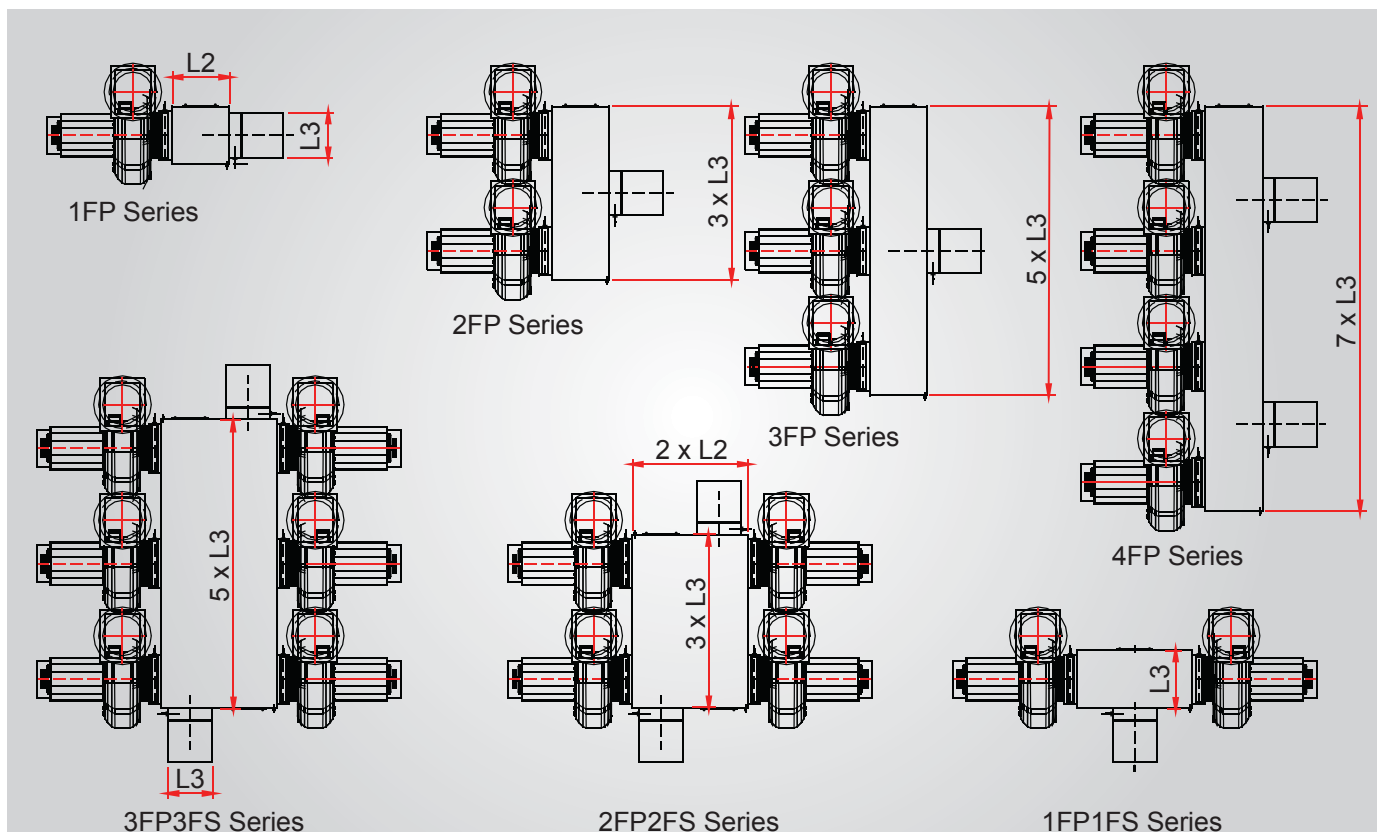
1FP Series



Damper



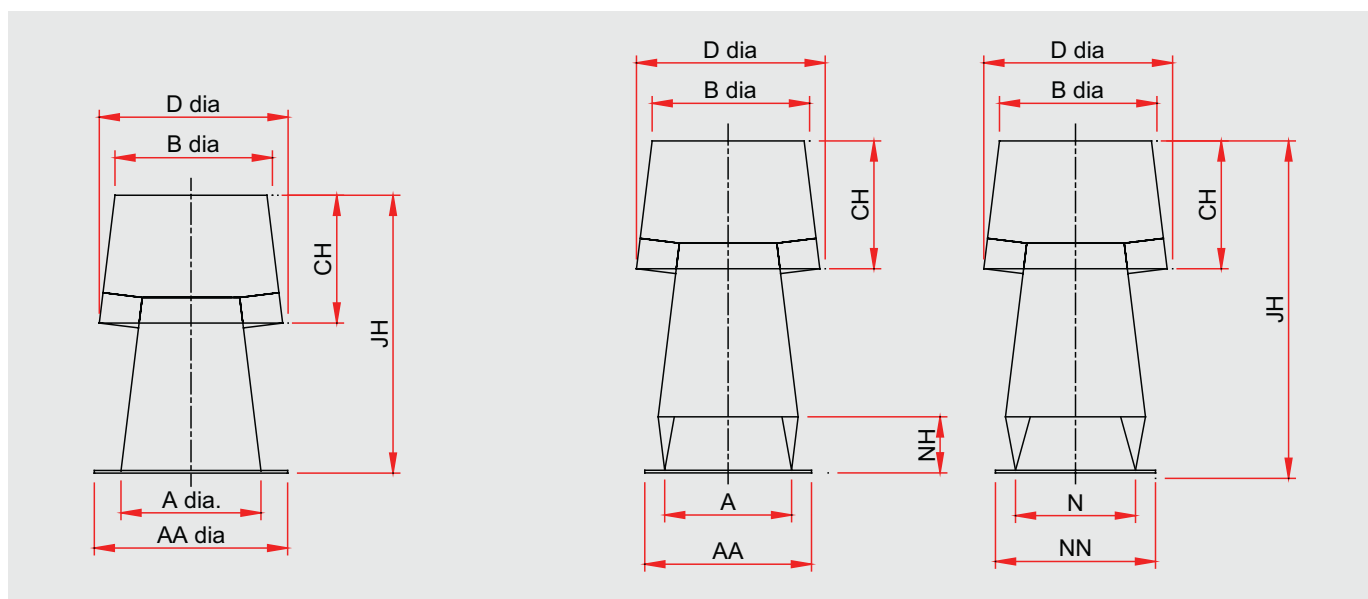
Various type of preferred plenum layout system



Dimensions

Fan Model size	D1 [mm]	L2 [mm]	L3 [mm]	L4 [mm]	H1 [mm]	ht [mm]	OP [mm]	P1 [mm]	P2 [mm]	R [mm]	α [°]	T1 [mm]
125	190	210	210	160	278	150	50	140	190	160	30	598
160	190	210	210	310	341	150	50	290	190	310	30	736
180	190	240	210	310	377	150	50	290	190	310	30	772
200	210	260	310	310	414	150	50	290	290	310	30	809
250	210	310	310	310	529	200	90	290	290	310	30	964
315	210	410	410	460	605	200	90	400	390	460	30	1165
400	235	410	410	460	632	200	90	400	390	460	30	1192
450	235	460	510	460	685	200	90	400	400	460	30	1245
500	235	510	510	610	783	200	90	400	400	610	30	1418
560	235	610	610	610	870	200	90	400	400	610	30	1505
630	235	710	710	760	939	200	90	400	400	760	30	1649
710	235	760	810	760	1030	250	90	400	400	760	30	1790
800	235	810	810	910	1130	250	114	400	400	910	30	1989
900	235	1010	1010	1060	1278	250	114	400	400	1060	30	2212
1000	235	1060	1210	1060	1375	300	114	400	400	1060	30	2359
1120	235	1120	1210	1210	1550	300	114	400	400	1210	30	2609
1250	235	1360	1410	1360	1700	300	114	400	400	1360	30	2834

Fume Jet Nozzles



Fan Model	AA	NN	A	N	B	D	CH	NH	JH	Fan Height
size	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]
125	185	-	121	-	131	158	78	-	260	458
160	220	-	154	-	167	202	99	-	331	571
180	240	-	174	-	189	228	112	-	375	636
200	260	-	194	-	211	254	124	-	417	701
250	310	-	245	-	266	321	157	-	527	881
315	375	-	309	-	335	405	198	-	664	1044
400	480	-	392	-	426	513	251	-	843	1142
450	520	450	420	365	480	579	283	199	968	1135
500	580	500	470	410	537	648	317	223	1085	1283
560	640	550	550	480	630	760	372	261	1271	1420
630	720	610	600	510	677	817	400	281	1367	1569
710	805	685	675	570	760	917	449	315	1533	1777
800	994	737	840	583	858	1035	506	356	1731	1926
900	1104	814	930	661	961	1159	567	399	1939	2152
1000	1198	921	1023	746	1071	1291	632	443	2159	2437
1120	1326	1016	1150	840	1204	1452	711	499	2429	2751
1250	1490	1143	1283	939	1344	1621	794	557	2712	3043

Your competent partner for ventilation and air-conditioning.

» **New:**
Inducing Fans

» **New:**
Fume Jet

» **New:**
Turbo Pressure Chemical Resistant Centrifugal Fans

» Chemco Fans

» Mix-Flow Fans

» Axial Flow Fans for Smoke Extract 400°C/2h

» Centrifugal Fans

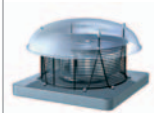
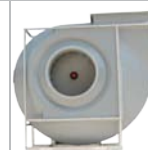
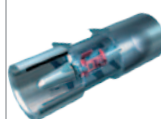
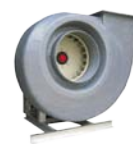
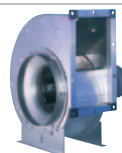
» Tube Fans

» Duct Fans

» Roof Fans

» Air-extract Boxes

» Car-Park Jet Fans



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