

## Jet Blowers and Blast Nozzles

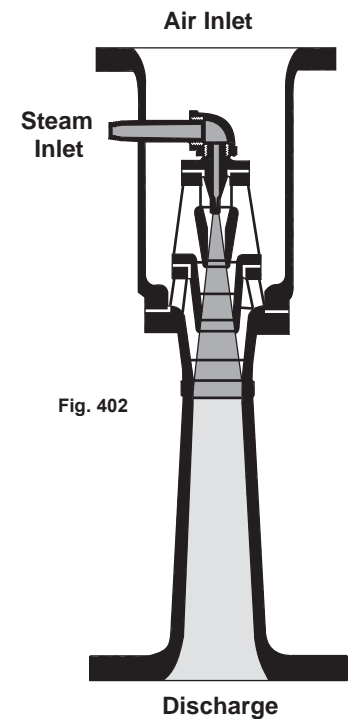
- VENTILATING, EXHAUSTING, PURGING
- LOW VACUUM APPLICATIONS

Jet Blowers utilize the ejector-venturi principle to move large volumes of air and other gases against low back pressures. The Fig. 402 jet blower normally utilizes high pressure steam as the motive force, but compressed air or gas at 15 psig or higher can also be used. They are furnished in cast iron, steel, stainless steel and non-ferrous metals including aluminum. Special models with high-capacity fixed nozzles can also be provided when required.

Operation of the Fig. 402 steam jet blower is relatively simple; high pressure gas enters through an inlet in the side of the unit and is directed through a pressure nozzle at high velocity and into a series of mixing nozzles. Here the suction gases are entrained by the motive gas and discharged through the venturi diffuser.

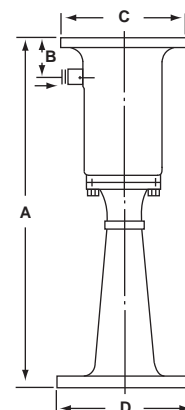
Jet blowers are used for ventilating and exhausting purposes in many industries. Typical applications are described on the following page. Contact the factory for sizing assistance.

For higher vacua or for moving air or gases against greater back pressures than provided for by this equipment, Schutte & Koerting manufactures a variety of other ejectors for these applications including Steam Jet Exhausters / Compressors (Bulletin 4E), Jet Compressors (Bulletin 4F); and Steam Jet Vacuum Pumps (Bulletin 5E-H).



**TABLE 1. SIZES AND DIMENSIONS - FIG. 402 STEAM JET BLOWERS**

Size No.	Connections, Inches			Dimensions, Inches				Lbs. Weight
	Discharge	Steam	Inlet	A	B	C	D	
00	3	3/8	4	19 1/4	2 3/16	7	7 1/2	34
0	4	1/2	5	26 1/4	2 1/4	8	9	50
1	5	1/2	8	34 5/8	2 5/16	11	10	84
1 1/2	6	3/4	9	41 3/4	2 5/8	12	11	100
2	7	3/4	11	46 7/8	2 3/4	14	12 1/2	140
2 1/2	8	3/4	12	57 7/8	2 11/16	15	13 1/2	240
3	10	1	14	65 1/2	2 15/16	17 1/2	16	320
3 1/2	12	1	16	75 3/8	3	19 1/2	19	410
4	14	1 1/4	18	86 1/4	3 1/8	21 1/2	21	750
6	18	1 1/2	24	111	4 3/8	28	25	1500
8	24	2	32	156 7/8	6 1/16	37 3/16	32	1800
10	<b>ON APPLICATION</b>							



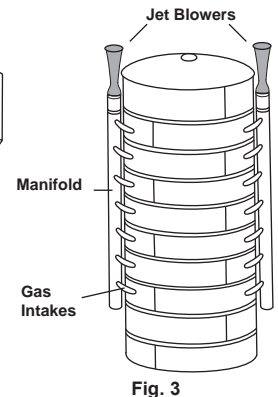
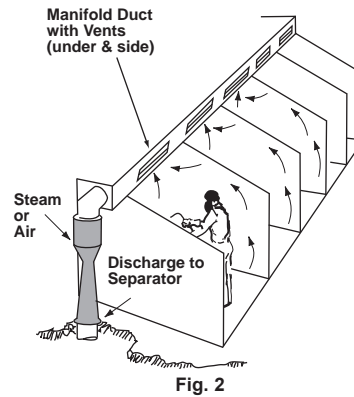
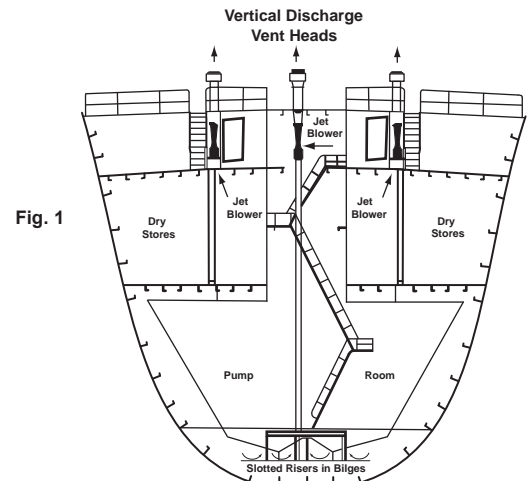
**APPLICATIONS - JET BLOWERS**

Schutte & Koerting jet blowers are used in many applications where large volumes of air must be moved against relatively low back pressures. They are used for exhausting, ventilating, purging, cooling and low pressure vacuum pumping. Some specific uses include degassing tanks and vessels, purging and venting, cooling products and processes, ventilating small confined areas and providing auxiliary back up for electrical blowers and fans. Below are three applications demonstrating the versatility of these blowers.

*Fig. 1* - Schutte & Koerting blowers are also used in shipboard applications to remove toxic or explosive fumes from below-deck holds. Here again, the jet blower does not present the sparking hazards associated with electrical fans and has no moving parts to wear or malfunction.

*Fig. 2* - Jet blowers can be used in metal fabricating plants to remove the fumes and vapors from welding stalls and induce fresh air. A single blower combined with a manifold system will serve an entire area using low pressure steam or air.

*Fig. 3* - Here two jet blowers are used to ventilate a grain silo where pocketing of gases could cause an explosion if sparked. Twin vertical manifolds connect the blowers to gas intakes which extend into enclosed chambers in the silo. Since there are no electrical components or moving parts, the blower system minimizes the likelihood of an explosion.



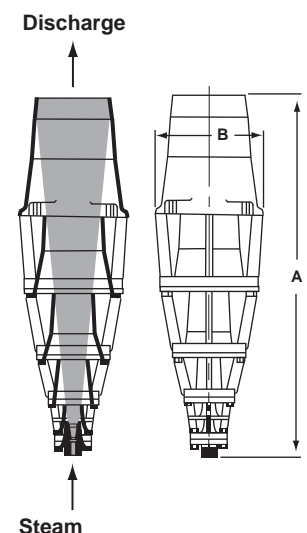
**BLAST NOZZLES**

Schutte & Koerting Fig. 418 blast nozzles are used for increasing draft in stacks where occasional peak loads have to be met or for temporary use in a short steel stack while a permanent brick stack is being erected. An added benefit is that the moisture in the steam has a damping action which

tends to cool combustible vapors.

These nozzles are made of cast iron and are of the same general design as those used in the Fig. 402 jet blower except that the discharge tail and the body around the suction nozzles have been omitted since the Fig. 418 nozzles are intended for installation in a stack or flue.

The performance of Fig. 418 blast nozzles depends upon the steam pressure used and the size of the duct or chimney in which they are used. Contact factory for performance and application assistance.



**TABLE 2. SIZES AND DIMENSIONS OF BLAST NOZZLES, FIG. 418**

Size No.	Dia. Steam Pipe In Inches	Dimensions, Inches		Weight In Lbs.
		A	B	
00	3/8	8 1/4	3 1/2	10
0	1/2	11 3/8	4 1/2	15
1	1/2	15 3/8	5 3/4	25
1 1/2	3/4	18 1/2	6 1/2	35
2	3/4	21 1/4	7 1/2	50
2 1/2	3/4	26 3/4	9	70
3	1	30 3/4	10	100
3 1/2	1	35 7/8	12	150
4	1 1/4	42	14	200
6	1 1/2	60 1/4	19 1/4	400
8	2	82 7/8	25 1/2	600
10	2 1/2	119 1/4	38	1050

