

CONVEYING FREE-FLOWING GRANULAR SOLIDS AND POWDERS

ELMRIDGE 'TGS Series' Gas-Jet Solids Eductors typically use compressed air or other pressurized gas as the Motive fluid (steam can be used in some applications), and operate on the Venturi principle to pump and convey free-flowing granular solids and powders. Pressurized gas/vapor is discharged through the Eductor nozzle, emerging at a relatively high velocity, creating a zone of lower pressure contained within the Suction Chamber of the Eductor. The Suction solids are fed to this lower pressure zone, where a transfer of momentum from the Motive fluid to the Suction material occurs, causing the Suction material to be accelerated and pumped. Standard 'TGS Series' Gas-Jet Solids Eductors have been designed for the optimal combination of obtainable Suction Solids Flowrate versus eductor Discharge Pressure. Motive gas/vapor nozzles are typically designed to provide a downstream conveying velocity of approximately 4000 feet/minute. Operating characteristics (Compressed Air Motive based on 100 lb/cu-ft granular free-flowing solids), for standard models are shown below, and special units are also available to meet your specifications. Standard materials of construction are PVC, CPVC, Bronze/Brass, Cast Iron/Steel, all Carbon Steel, and 316L Stainless Steel. Ceramic liners are also available. Other materials are available upon request. Threaded, flanged, sanitary, buttweld, or socket weld connections (except Cast Iron), depending on configuration.

See our TGST Series Gas-Jet Solids Eductor datasheet for Vacuum Pick-Up Eductors



SEE INDIVIDUAL DIMENSIONAL DRAWINGS BY STYLE

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Table 1 **Approx. Suction Capacity (lb/hr), Air Consumption (scfm), and Avail. Disch. Press. (psig) for TGS Series Gas-Jet Solids Eductors using 70 Deg F Dry Air (each Oper. Press. uses a different nozzle) (100 lb/cu-ft powder, Gravity fed, Atmospheric Suction)**

Model Number		Operating Air Pressure (psig)								
		2	3	4	5	6	8	10	12	14
TGS3	Suction Capacity (lb/hr)	17	35	50	61	72	89	103	115	125
	Air Consumption (scfm)	17	17	17	17	17	17	17	17	17
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS4	Suction Capacity (lb/hr)	30	63	91	112	131	163	189	210	229
	Air Consumption (scfm)	30	30	30	30	30	30	30	30	30
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS5	Suction Capacity (lb/hr)	55	115	165	204	239	296	344	382	417
	Air Consumption (scfm)	55	55	55	55	55	55	55	55	55
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS6	Suction Capacity (lb/hr)	99	207	297	367	430	533	619	688	751
	Air Consumption (scfm)	99	99	99	99	99	99	99	99	99
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS7	Suction Capacity (lb/hr)	178	373	535	661	774	959	1115	1238	1351
	Air Consumption (scfm)	178	178	178	178	178	178	178	178	178
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS8	Suction Capacity (lb/hr)	237	495	710	877	1028	1273	1479	1643	1793
	Air Consumption (scfm)	237	237	237	237	237	237	237	237	237
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS9	Suction Capacity (lb/hr)	314	657	942	1165	1365	1690	1964	2181	2381
	Air Consumption (scfm)	314	314	314	314	314	314	314	314	314
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS10	Suction Capacity (lb/hr)	416	871	1249	1544	1809	2241	2604	2892	3157
	Air Consumption (scfm)	416	416	416	416	416	416	416	416	416
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS11	Suction Capacity (lb/hr)	556	1162	1667	2060	2414	2990	3474	3858	4212
	Air Consumption (scfm)	561	561	561	561	561	561	561	561	561
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS12	Suction Capacity (lb/hr)	721	1507	2162	2672	3131	3878	4506	5004	5463
	Air Consumption (scfm)	732	732	732	732	732	732	732	732	732
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS13	Suction Capacity (lb/hr)	974	2036	2921	3611	4230	5239	6089	6761	7381
	Air Consumption (scfm)	974	974	974	974	974	974	974	974	974
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS14	Suction Capacity (lb/hr)	1293	2703	3878	4794	5617	6956	8084	8977	9800
	Air Consumption (scfm)	1293	1293	1293	1293	1293	1293	1293	1293	1293
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS15	Suction Capacity (lb/hr)	1716	3588	5148	6365	7457	9235	10733	11918	13010
	Air Consumption (scfm)	1716	1716	1716	1716	1716	1716	1716	1716	1716
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
TGS16	Suction Capacity (lb/hr)	2272	4750	6815	8425	9871	12225	14207	15777	17222
	Air Consumption (scfm)	2272	2272	2272	2272	2272	2272	2272	2272	2272
	Avail. Disch. Press. (psig)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3

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This table is a guide only and may not be suitable by itself for sizing Gas-Jet Solids Eductors. It will be our pleasure to assist you.