

MIXING AND PUMPING FREE-FLOWING GRANULAR SOLIDS AND POWDERS

ELMRIDGE 'TLS Series' Liqui-Jet Solids Eductors use liquid under pressure as the Motive fluid, and effectively pump or convey granular solids or slurries. Inlet liquid pressures for this type of eductor are typically in a range from 10 to 100 psig. Solids flowrate and available discharge pressure are a function of eductor selection and material properties, however, when a dry-feed eductor (dry feed hopper), is used, discharge pressure is generally limited to approximately 10 to 15 psig. A 'washdown' style of feed hopper is also available, and can dramatically increase the Suction capacity and available Discharge pressure of a given eductor by reducing or eliminating the amount of ambient air that must be compressed by the eductor. Standard 'TLS Series' Liqui-Jet Solids Eductors have been designed for the optimal combination of obtainable Suction Solids Flowrate and eductor Discharge Pressure. Approximate operating characteristics (Water 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, butt weld, or socket weld connections (except Cast Iron), depending on configuration.



**SEE INDIVIDUAL DIMENSIONAL
DRAWINGS BY STYLE**

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Table 1

**Approx. Suction Capacity (cu-ft/hr), Water Consumption (usgpm),
and Avail. Disch. Press. (psig) for TLS Series Liqui-Jet Solids Eductors
using 70 Deg F Motive Water
(100 lb/cu-ft powder, Gravity fed, Atmospheric Suction)**

Model Number		Operating Water Pressure (psig)								
		20	30	40	50	60	80	100	120	140
TLS3	Suction Capacity (cu-ft/hr)	4	5	6	7	8	9	10	11	11
	Water Consumption (usgpm)	3.9	4.8	5.6	6.0	6.8	7.9	8.8	9.6	10.4
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS4	Suction Capacity (cu-ft/hr)	8	10	11	13	14	16	18	19	21
	Water Consumption (usgpm)	7.2	8.8	10.2	11.1	12.5	14.4	16.1	17.6	19.0
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS5	Suction Capacity (cu-ft/hr)	14	18	20	23	25	29	32	35	38
	Water Consumption (usgpm)	13.0	16.0	18.5	20.1	22.8	26.2	29.2	32.0	34.5
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS6	Suction Capacity (cu-ft/hr)	26	32	37	41	45	52	58	64	69
	Water Consumption (usgpm)	23.4	28.8	33.3	36.2	41.0	47.2	52.6	57.6	62.1
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS7	Suction Capacity (cu-ft/hr)	47	57	66	74	81	94	105	115	124
	Water Consumption (usgpm)	42.1	51.8	59.9	65.1	73.9	84.9	94.6	104	112
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS8	Suction Capacity (cu-ft/hr)	62	76	88	98	108	124	139	152	165
	Water Consumption (usgpm)	55.9	68.8	79.6	86.4	98.0	113	126	138	148
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS9	Suction Capacity (cu-ft/hr)	82	101	116	130	143	165	184	202	219
	Water Consumption (usgpm)	74.2	91.4	106	115	130	150	167	183	197
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS10	Suction Capacity (cu-ft/hr)	109	134	154	173	189	219	245	268	290
	Water Consumption (usgpm)	98.4	121	140	152	173	198	221	242	261
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS11	Suction Capacity (cu-ft/hr)	145	179	206	230	253	292	326	358	387
	Water Consumption (usgpm)	133	163	189	205	233	267	298	326	352
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS12	Suction Capacity (cu-ft/hr)	189	232	267	299	328	379	423	464	502
	Water Consumption (usgpm)	173	213	246	267	303	348	388	426	459
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS13	Suction Capacity (cu-ft/hr)	255	313	361	404	443	512	572	627	678
	Water Consumption (usgpm)	230	283	327	356	404	464	517	566	611
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS14	Suction Capacity (cu-ft/hr)	338	416	479	536	588	679	759	832	900
	Water Consumption (usgpm)	306	376	435	472	536	616	686	752	811
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS15	Suction Capacity (cu-ft/hr)	449	552	636	711	780	902	1008	1104	1195
	Water Consumption (usgpm)	406	499	577	627	711	817	911	998	1076
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8
TLS16	Suction Capacity (cu-ft/hr)	595	731	843	942	1033	1194	1334	1462	1582
	Water Consumption (usgpm)	537	661	764	830	942	1082	1206	1322	1425
	Avail. Disch. Press. (psig)	2.0	3.0	4.0	5.0	5.9	7.8	9.8	11.8	13.8

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