Ultra-Capacity Drain Traps

Capacities to 700,000 lb/hr (317,520 kg/hr)… Pressures to 450 psig (31 bar)

Armstrong ultra-capacity ball float drain traps are designed to meet exceptionally large capacity needs in draining water and other liquids from air or other gases under pressure.

Options. L and M Series drain traps are available with armored gauge glass with a maximum allowable pressure of 250 psig @ 425°F (17 bar @ 218°C). When ordering, be sure to specify "Liquid Drainer" or "LD." Example, LS-series LD, 2" (50 mm) NPT, 7/8" orifice.

For a fully detailed certified drawing, refer to:
L and M Series, CD #1010 **JD and KD Series, CD #1302**

Table LD-33. Maximum Operating Pressures for Handling Different Specific Gravity Liquids With Orifices Available in Ultra-Capacity Drain Traps

Model No.	Specific Gravity	1.00		.95		.90		.85		.80		.75		.70		.65		.60		.55		.50	
	Orifice Size	Maximum Operating Pressure																					
	in	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
JD	1-1/16	16	1.0	15	1.0	13	0.89	12	0.82	11	0.75	10	0.69	9	0.62	7	0.48	6	0.41	5	0.34	4	0.28
	3/4	35	2.4	32	2.2	30	2.0	27	1.8	24	1.6	22	1.5	19	1.3	16	1.0	14	0.97	11	0.75	9	0.62
	9/16	87	6.0	81	5.5	75	5.0	68	4.6	61	4.2	55	3.8	48	3.3	41	2.8	35	2.4	28	1.8	22	1.5
	1/2	146	10	135	9.0	125	8.5	113	8.0	102	7.0	91	6.2	81	5.5	69	4.8	59	4.0	47	3.2	37	2.6
	7/16	175	12	175	12	175	12	175	12	158	11	141	10	125	8.5	107	7.3	91	6.2	73	5.0	57	3.9
	3/8	250	17	232	16	214	15	195	13	177	12.2	159	10.9	140	9.7	122	8.4	103	7.1	85	5.9	67	4.6
	1/4	300	21	300	21	300	21	300	21	300	20.7	300	20.7	300	20.7	300	20.7	272	18.8	224	15.4	176	12.1
30KD	1-7/8 dual orifice	30	2	30	2	30	2	30	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50KD		50	3.5	50	3.5	50	3.5	50	3.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—
300KD		300	21	300	21	300	21	300	21	—	—	—	—	—	—	—	—	—	—	—	—	—	—
L to 250 psi (17 bar)	1-5/8	35	2.4	32	2.2	30	2.0	27	1.8	25	1.6	23	1.6	20	1.4	18	1.2	15	1.0	13	0.89	10	0.69
	1-1/8	116	8.0	108	7.4	100	7.0	92	6.3	84	5.8	76	5.2	68	4.7	60	4.1	52	3.6	44	3.0	36	2.5
	7/8	174	12	162	11	150	10.5	138	9.5	126	8.6	114	7.9	102	7.0	90	6.2	78	5.4	65	4.5	53	3.7
LS For all Pressures	11/16	*315	*22	*294	*20	*272	*19	250	17	228	16	206	14	184	13	162	11	141	9.7	119	8.2	97	6.7
	1/2	*450	*31	*450	*31	*450	*31	*450	*31	*450	*31	*400	*28	*354	*24	*298	*21	248	17	197	14	147	10
M to 250 psi (17 bar)	1-7/8 dual orifice	250	17	250	17	250	17	250	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MS For all Pressures	1-17/32 dual orifice	*450	*31	*450	*31	*450	*31	*450	*31	*450	*31	—	—	—	—	—	—	—	—	—	—	—	—

*These pressures applicable only to LS and MS models.

List of Materials

Table LD-34.

Name of Part		Material	
		Series JD, KD, L & M	Series LS & MS
Cap & Body	JD, KD	ASTM A395 Ductile Iron	ASTM A216 Grade WCB
	L, M	ASTM A48 Class 31	
Cap Extension*	L, LS	304 Stainless Steel, ASTM A351 Grade CF8	
	KD, M, MS	17-4 Ph, ASTM A747 Grade CB7Cu-1	
Cap Bolting		ASTM A193 Grade B 7**	ASTM A193 Grade B 7
Cap Gaskets		Flexible Graphite	
Float Mechanism		Stainless Steel	

* JD Series does not have cap extension.
**JD and KD Series - ASTM A307 Grade B.

Physical Data

Table LD-36. Ultra-Capacity Drain Traps

Trap Series	JD & KD		L & M		LS & MS	
	in	mm	in	mm	in	mm
"B"	13-1/16	332	20-1/4	514	20	508
"C"	9-5/8	244	14-3/4	375	15-1/4	387
"H"	13-7/8	352	19-3/4	502	20	508
"M"	6-1/2	165	11-5/16	287	11-5/16	287
"D"	3	76	4-3/16	106	4-3/16	106
"S"	—	—	3-3/4	95	3-3/4	95
"T"	—	—	12	305	12	305
Weight lbs (kg)	100 (45)		196 (89)		290 (132)	
Max. Allow. Pressure (Vessel Design)	300 psig @ 650°F (21 bar @ 343°C)		250 psig @ 450°F (17 bar @ 232°C)		450 psig @ 650°F (31 bar @ 338°C)	

JD, KD, L and M Series also may be used for steam service as float and thermostatic traps and as condensate controllers. Steam service capacities for all configurations are given in the Steam Trapping section of this catalog.

Connections Available

Table LD-35.

Model	Size		NPT	BSPT	SW	FLG
	in	mm				
JD	2	50	X	X	—	*
KD	2, 2-1/2, 3	50, 65, 80	X	X	—	*
L	2, 2-1/2	50, 65	X	X	—	X
M	3	80	X	X	—	X
LS	2, 2-1/2	50, 65	X	X	X	X
MS	3	80	X	X	X	X

*Flanged connections available. Consult factory.

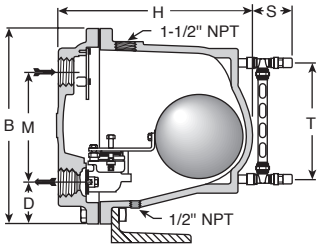


Figure LD-45.
L and LS Series

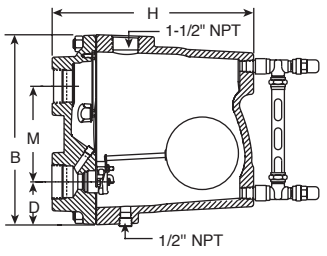
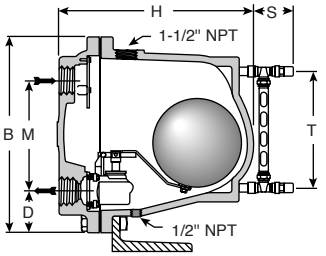


Figure LD-46.
JD and KD Series



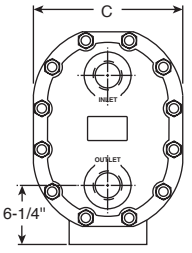


Figure LD-47.
M and MS Series

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit armstronginternational.com for up-to-date information.