KENCO INJECTORS
Models KINJ, KINJM AND KRINJ
MAXIMUM ALLOWED PIPELINE FLOW RATE IN GALLONS PER MINUTE NOTE 4
CPVC INJECTORS
FOR LIQUIDS ONLY

	NOMINAL PROCESS PIPE DIAMETER, STD. WEIGHT																			
	NOM. DIA.	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8	10	12	14	16	18	20	24
	Actual I.D.	0.622	0.824	1.049	1.380	1.610	2.067	2.469	3.068	3.548	4.026	5.047	6.065	7.981	10.020	12.000	13.250	15.250	17.250	19.250	23.250
INSERTION LENGTH	1.75	50	88	142	246	334	551	786	1,214	1,624	2,091	3,286	4,745	8,216	12,950	18,574	22,645	29,997	38,381	47,797	69,724
	2.00	43	75	121	210	286	471	673	1,039	1,389	1,789	2,811	4,059	7,029	11,080	15,891	19,374	25,665	32,838	40,894	59,654
	3.00	26	46	74	129	175	289	412	636	851	1,096	1,722	2,487	4,307	6,788	9,736	11,870	15,724	20,119	25,055	36,549
	4.00	12	20	33	57	77	128	182	281	376	484	761	1,099	1,904	3,001	4,304	5,248	6,951	8,894	11,076	16,157
	5.00	9	16	26	45	61	101	144	222	296	382	600	866	1,500	2,364	3,391	4,134	5,477	7,008	8,727	12,730
	6.00	7	13	21	36	49	81	116	178	239	307	483	697	1,207	1,902	2,728	3,326	4,406	5,638	7,021	10,242
	7.00	6	11	17	30	40	67	95	147	197	253	398	575	995	1,568	2,249	2,742	3,632	4,647	5,788	8,443
	8.00	5	9	14	25	34	56	80	123	165	212	334	482	834	1,315	1,886	2,299	3,046	3,897	4,853	7,080
	8.50	5	8	13	23	31	52	74	114	152	196	307	444	769	1,212	1,738	2,119	2,807	3,591	4,472	6,524

HOW TO READ THE TABLE:

1. Locate the pipe diameter that the injector will be installed into along the top row.

2. Locate the desired insertion length along the left side column.

3. Locate the box where the pipe diameter and the insertion length intersect.

4. The number in the box is the maximum flow rate past the injector tip in the pipeline in gallons per minute for which an injector with that insertion length will not suffer structural damage.

EXAMPLE:

If you wish to install an injector with a 4" insertion length into a 2" nominal diameter pipe, the flow rate cannot exceed 128 gallons per min

Reference: Calculations used to formulate this chart are based on "Stress Analysis of Thermowells", J.E. Brock, Naval Postgraduate School, Monterey, 1974
ASME PTC 19.3 - 1974 Temperature Measurement

KENCO INJECTORS
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MAXIMUM ALLOWED PIPELINE FLOW RATE IN GALLONS PER MINUTE NOTE 4
CPVC INJECTORS
FOR LIQUIDS ONLY

	NOMINAL PROCESS PIPE DIAMETER, .375" WALL THICKNESS																			
	NOM. DIA.	14	16	18	20	24	30	32	34	36	38	40	42	44	46	48	50	52	54	56	60
	Actual I.D.	13.250	15.250	17.250	19.250	23.250	29.250	31.250	33.250	35.250	37.250	39.250	41.250	43.250	45.250	47.250	49.250	51.250	53.250	55.250	59.250
INSERTION LENGTH	6	3,326	4,406	5,638	7,021	10,242	16,211	18,503	20,948	23,543	26,291	29,190	32,240	35,442	38,796	42,301	45,958	49,767	53,727	57,838	66,516
	7	2,742	3,632	4,647	5,788	8,443	13,362	15,252	17,267	19,407	21,671	24,061	26,575	29,215	31,979	34,869	37,883	41,022	44,286	47,676	54,829
	8	2,299	3,046	3,897	4,853	7,080	11,205	12,790	14,479	16,274	18,173	20,176	22,285	24,498	26,816	29,239	31,767	34,399	37,137	39,979	45,977
	8.5	2,119	2,807	3,591	4,472	6,524	10,325	11,786	13,343	14,996	16,746	18,592	20,535	22,575	24,711	26,944	29,273	31,699	34,221	36,840	42,368
	9	1,960	2,596	3,322	4,137	6,034	9,551	10,901	12,341	13,871	15,489	17,197	18,994	20,881	22,857	24,922	27,076	29,320	31,653	34,075	39,188
	10	1,685	2,232	2,855	3,556	5,187	8,210	9,371	10,609	11,924	13,315	14,783	16,328	17,950	19,649	21,424	23,276	25,205	27,210	29,293	33,688
	11	1,466	1,941	2,484	3,093	4,512	7,142	8,152	9,229	10,372	11,583	12,860	14,204	15,615	17,092	18,637	20,248	21,926	23,670	25,482	29,305
	12	1,285	1,702	2,178	2,712	3,957	6,262	7,148	8,092	9,095	10,156	11,276	12,455	13,692	14,987	16,341	17,754	19,225	20,755	22,343	25,696
	13	1,135	1,503	1,923	2,395	3,493	5,529	6,311	7,145	8,030	8,967	9,956	10,997	12,089	13,233	14,428	15,676	16,975	18,325	19,728	22,688
	14	1,010	1,338	1,712	2,132	3,110	4,922	5,618	6,360	7,148	7,982	8,863	9,789	10,761	11,779	12,843	13,954	15,110	16,312	17,561	20,196
	15	894	1,184	1,515	1,887	2,752	4,356	4,972	5,629	6,327	7,065	7,844	8,664	9,525	10,426	11,368	12,351	13,374	14,438	15,543	17,875
	16	786	1,042	1,333	1,660	2,422	3,833	4,375	4,953	5,566	6,216	6,901	7,623	8,380	9,173	10,001	10,866	11,767	12,703	13,675	15,727
	17	701	928	1,187	1,479	2,157	3,414	3,897	4,411	4,958	5,537	6,147	6,790	7,464	8,170	8,908	9,679	10,481	11,315	12,180	14,008
	18	623	826	1,056	1,315	1,919	3,037	3,466	3,924	4,411	4,925	5,468	6,040	6,640	7,268	7,925	8,610	9,323	10,065	10,835	12,461
	19	563	746	954	1,188	1,734	2,744	3,132	3,545	3,985	4,450	4,940	5,457	5,999	6,566	7,160	7,778	8,423	9,093	9,789	11,258
	20	507	672	860	1,070	1,561	2,471	2,821	3,194	3,589	4,008	4,450	4,915	5,403	5,915	6,449	7,007	7,587	8,191	8,818	10,141
	21	460	609	779	971	1,416	2,241	2,558	2,896	3,255	3,635	4,035	4,457	4,900	5,363	5,848	6,353	6,880	7,427	7,996	9,195
	22	421	558	714	889	1,297	2,053	2,343	2,652	2,981	3,329	3,696	4,082	4,488	4,912	5,356	5,819	6,301	6,803	7,323	8,422
	23	383	507	648	807	1,178	1,864	2,128	2,409	2,707	3,023	3,356	3,707	4,075	4,461	4,864	5,285	5,723	6,178	6,651	7,649
	24	352	467	597	744	1,085	1,717	1,960	2,219	2,494	2,785	3,092	3,416	3,755	4,110	4,482	4,869	5,272	5,692	6,128	7,047

HOW TO READ THE TABLE:

1. Locate the pipe diameter that the injector will be installed into along the top row.

2. Locate the desired insertion length along the left side column.

3. Locate the box where the pipe diameter and the insertion length intersect.

4. The number in the box is the maximum flow rate past the injector tip in the pipeline in gallons per minute for which an injector with that insertion length will not suffer structural damage.

EXAMPLE:

If you wish to install an injector with a 16" insertion length into a 24" nominal diameter pipe, the flow rate cannot exceed 2,422 gallons per min

Reference: Calculations used to formulate this chart are based on "Stress Analysis of Thermowells", J.E. Brock, Naval Postgraduate School, Monterey, 1974
ASME PTC 19.3 - 1974 Temperature Measurement