

Technical Bulletin

K-Factors for Meter Fittings and Spools



GENERAL INFORMATION

The accuracy of Seametrics flow meters depends on the accuracy of the K-factor for each meter fitting or spool piece. Tee fittings and spool-type meters are wet-calibrated in the factory before shipping to the customer, and the K-factor appears on a label on each individual fitting or meter. Saddle and weldolet fittings cannot be factory-calibrated because the K-factor will vary depending on the type of pipe on which the meter is installed.

SADDLE AND WELDOLET FITTINGS

The charts below give K-factors for EX800 (magmeter), TX80 (turbine), and IP800 (paddlewheel) series meters installed in saddle or weldolet fittings on various pipes. On the chart that corresponds to your meter type, locate your pipe size and type. Enter the corresponding K-factor into your controller.

K-FACTORS FOR SADDLE AND WELDOLET FITTINGS

TX80 K-factors are valid for meters purchased **BEFORE January 1, 2011** only.

For TX80 meters purchased **AFTER January 1, 2011** use the K-factor calculator on the Seametrics website: seametrics.com/k-factor-calculator

	IP800 SERIES				TX80 SERIES				EX800 SERIES				
	3"	4"	6"	8"	3"	4"	6"	8"	3"	4"	6"	8"	10"
PVC/Steel Sch. 40	34.246	19.221	7.830	4.611	17.410	10.110	4.457	2.133	64.061	37.297	16.498	9.552	6.073
PVC/Steel Sch. 80	38.329	21.844	8.779	4.980	19.486	11.195	4.940	2.336	71.660	41.278	18.276	10.460	6.663
Stainless Steel (10S)	30.331	16.581	7.045	4.270	15.420	9.030	4.057	1.958	56.770	33.329	15.024	8.774	5.618
Stainless Steel (40S)	34.246	19.221	7.830	4.611	17.410	10.110	4.457	2.133	64.061	37.297	16.498	9.552	6.073
Copper Tubing (Type L)	37.167	20.774	8.505	4.873	18.895	10.746	4.799	2.276	69.497	39.632	17.757	10.193	6.579
Copper Tubing (Type K)	38.145	21.420	8.846	5.027	19.392	11.015	4.975	2.362	71.317	40.620	18.403	10.576	6.825
Brass Pipe	34.381	19.545	7.658	4.591	17.478	10.242	4.370	2.122	64.311	37.781	19.166	9.505	6.073
Duct. Iron (Class 52)	28.137	20.576	7.238	4.213	14.176	9.202	4.157	1.738	52.212	33.961	15.393	8.648	5.639

NOTE: These K-factors are in Pulses Per Gallon. To convert to Pulses Per Liter (for displays prior to 6/2015), divide by 3.785.

For tee fittings and spool-type meters, see next page.



NOMINAL K-FACTORS FOR TEE FITTINGS AND SPOOL-TYPE METERS

All Seametrics S-series and WT-series flow meters are custom-calibrated with water to derive a single K-factor that will produce the stated flow meter accuracy and linearity over the entire flow meter range. All tee-type meter fittings for IP800 (paddlewheel), TX80 (turbine), and EX800 (magmeter) series insertion meters are also wet-calibrated to derive an individual K-factor for each device. This K-factor is written on the Serial Number label and also on the meter or tee fitting itself (below the label) in indelible ink.

However, it is sometimes useful to know the nominal (average) K-factor for control planning purposes, or in case the individual meter K-factor is no longer readable. The charts below contain nominal K-factors for S-series meters, WT-series meters, and tee fittings for 800-series insertion meters. Please note: The calibrated K-factor on any given Seametrics factory-calibrated meter or fitting will be specific to that unit and therefore somewhat different from these nominal figures.

Nominal K-Factors on Tee Fittings for Insertion Meters				
Pipe Size	Pipe Type	IP800	TX80	EX800
1/2"	Brass	497	.	.
	PVC	714	.	.
	Stainless Steel	510	.	.
	Carbon Steel	458	.	.
3/4"	Brass	343	.	.
	PVC	416	.	.
	Stainless Steel	323	.	.
1"	Carbon Steel	300	.	.
	Brass	219	.	559
	PVC before 10/04	230	.	641
	PVC after 10/04	263	.	753
	Carbon Steel	195	.	474
1-1/2"	Stainless Steel	206	.	500
	Brass	145	129	329
	PVC before 10/07	98	126	289
	PVC after 10/07	93	93.5	267
	Carbon Steel	68	61	194
2"	Stainless Steel	62	55	171
	Brass	90	87	227
	PVC	52	43	156
	Carbon Steel	64	65	187
	Stainless Steel	58	52	155
3"	Brass	37	30	95
4"	Brass	24	16	52

Pipe Size	SEB	SES	SPT	SPX
	Nominal K-Factor			
3/8"	N/A	N/A	1394	1417
1/2"	550	535	634	658
3/4"	330	390	476	468
1"	N/A	220	250	254

WT-Series Meters		
Pipe Size	Spool Type	Nominal K-Factor
2"	PVC	42.75
	Carbon Steel	63.97
	Stainless Steel	53.38
3"	PVC	10.11
	Carbon Steel	8.93
	Stainless Steel	7.53
4"	PVC	6.18
	Carbon Steel	5.18
	Stainless Steel	4.67
6"	PVC	1.92
	Carbon Steel	1.77
	Stainless Steel	1.67
8"	Carbon Steel	1.01
	Stainless Steel	.92

NOTE: These K-factors are in Pulses Per Gallon. To convert to Pulses Per Liter (for displays prior to 6/2015), divide by 3.785.