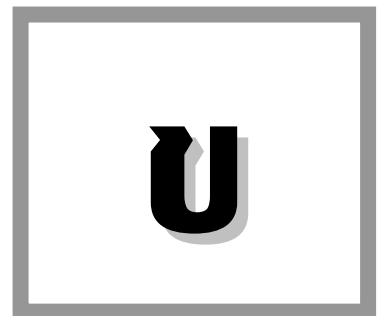




## **การหา Factor for Control Chart**



## Factor for Control Chart

Number of Observations	Chart for Averages			Chart for Standard Deviations					
	Factors for Control Limits			Factor for Central Line		Factor for Control Limits			
Sample, n	A	A <sub>1</sub>	A <sub>2</sub>	C <sub>2</sub>	1/C <sub>2</sub>	B <sub>1</sub>	B <sub>2</sub>	B <sub>3</sub>	B <sub>4</sub>
2	2.121	3.760	1.880	0.5642	1.7725	0	1.843	0	3.267
3	1.732	0.394	1.023	0.7236	1.3820	0	1.858	0	2.568
4	1.500	1.880	0.729	0.7979	1.2533	0	1.808	0	2.266
5	1.342	1.596	0.577	0.8407	1.1894	0	1.756	0	2.059
6	1.225	1.410	0.483	0.8686	1.1512	0.026	1.711	0.030	1.970
7	1.134	1.277	0.419	0.8882	1.1259	0.105	1.672	0.118	1.882
8	1.061	1.175	0.373	0.9027	1.1078	0.167	1.638	0.185	1.815
9	1.000	1.094	0.337	0.9139	1.0942	0.219	1.609	0.339	1.761
10	0.949	1.028	0.308	0.9227	1.0837	0.262	1.584	0.284	1.716
11	0.905	0.973	0.285	0.9300	1.0753	0.299	1.561	0.321	1.679
12	0.865	0.925	0.266	0.9359	1.0684	0.331	1.541	0.354	1.646
13	0.832	0.884	0.249	0.9410	1.0627	0.359	1.523	0.382	1.618
14	0.802	0.848	0.235	0.9153	1.0579	0.384	1.507	0.405	1.594
15	0.775	0.816	0.223	0.9400	1.0537	0.406	1.492	0.428	1.572
16	0.750	0.788	0.212	0.9523	1.0501	0.427	1.478	0.448	1.552
17	0.728	0.762	0.203	0.9551	1.0170	0.445	1.465	0.466	1.534
18	0.707	0.735	0.194	0.9576	1.0442	0.461	1.454	0.482	1.518
19	0.688	0.717	0.187	0.9599	1.0413	0.477	1.443	0.497	1.503
20	0.671	0.697	0.180	0.9619	1.0396	0.491	1.433	0.510	1.490
21	0.655	0.679	0.173	0.9638	1.0376	0.504	1.424	0.523	1.477
22	0.640	0.662	0.167	0.9655	1.0358	0.516	1.415	0.534	1.406
23	0.626	0.647	0.162	0.9670	1.0342	0.527	1.407	0.545	1.455
24	0.612	0.632	0.157	0.9684	1.0327	0.638	1.399	0.555	1.445
25	0.600	0.619	0.153	0.9696	1.0313	0.548	1.392	0.565	1.436
Over 25		$\sqrt{n}$	$\sqrt{n}$						

## Factor for Control Chart (ต่อ)

Number of Observations	Chart of Ranges						
	Factor for Central Line			Factor for Control Limits			
Sample, n	$d_2$	$1/d_2$	$D_3$	$D_1$	$D_2$	$D_3$	$D_4$
2	1.128	0.8865	0.853	0	3.686	0	3.267
3	1.693	0.5907	0.838	0	4.353	0	2.575
4	2.059	0.4857	0.880	0	4.698	0	2.282
5	2.328	0.4299	0.864	0	4.918	0	2.115
6	2.534	0.3945	0.848	0	5.078	0	2.004
7	2.704	0.3698	0.833	0.205	5.203	0.076	1.924
8	2.847	0.3512	0.829	0.387	5.307	0.136	1.864
9	2.970	0.3367	0.803	0.546	5.394	0.164	1.816
10	3.078	0.3249	0.797	0.687	5.469	0.223	1.777
11	3.173	0.3152	0.787	0.812	5.534	0.258	1.744
12	3.258	0.3068	0.778	0.924	5.592	0.284	1.716
13	3.336	0.2993	0.770	1.026	5.646	0.308	1.692
14	3.407	0.2935	0.762	1.121	5.693	0.329	1.671
15	3.472	0.2880	0.755	1.207	5.737	0.348	1.652
16	3.532	0.2831	0.749	1.285	5.779	0.364	1.635
17	3.588	0.2787	0.743	1.359	5.817	0.379	1.621
18	3.640	0.2747	0.739	1.426	5.854	0.392	1.608
19	3.689	0.2711	0.733	1.490	5.888	0.404	1.596
20	3.735	0.2677	0.723	1.548	5.922	0.414	1.586
21	3.778	0.2647	0.724	1.606	5.950	0.425	1.576
22	3.819	0.2918	0.720	1.659	5.979	0.434	1.566
23	3.858	0.2582	0.716	1.710	6.006	0.443	1.557
24	3.895	0.2567	0.712	1.759	6.031	0.452	1.548
25	3.931	0.2544	0.709	1.804	6.058	0.459	1.541
Over 25							