







**TABLE 6-9 TOLERANCE ZONES - INTERNAL DIMENSIONS (HOLES) (G10 ... G5, J8 ... J6) (ANSI B4.2)**

mm

SIZE	G10	G9	G8	G7	G6	G5	J8	J7	J6
OVER 0	0.042	0.027	+0.016	+0.012	+0.008	+0.006	+0.006	+0.004	+0.002
TO 3	+0.002	+0.002	+0.002	+0.002	+0.002	+0.002	-0.008	-0.006	-0.004
OVER 3	+0.052	+0.034	+0.022	+0.016	+0.012	+0.009	0.010	+0.006	+0.005
TO 6	+0.004	+0.004	+0.004	+0.004	+0.004	+0.004	-0.008	-0.006	-0.003
OVER 6	+0.063	+0.041	+0.027	+0.020	+0.014	+0.011	+0.012	+0.008	+0.005
TO 10	+0.005	+0.005	+0.005	+0.005	+0.005	+0.005	-0.010	-0.007	-0.004
OVER 10	+0.076	+0.049	+0.033	+0.024	0.017	+0.014	0.015	0.010	+0.006
TO 14	+0.006	+0.006	+0.006	+0.006	+0.006	+0.006	-0.012	-0.008	-0.005
OVER 14	+0.076	+0.049	+0.033	+0.024	0.017	+0.014	0.015	0.010	+0.006
TO 18	+0.006	+0.006	+0.006	+0.006	+0.006	+0.006	-0.012	-0.008	-0.005
OVER 18	+0.091	+0.059	+0.040	+0.028	+0.020	+0.016	+0.020	+0.012	+0.008
TO 24	+0.007	+0.007	+0.007	+0.007	+0.007	+0.007	-0.013	-0.009	-0.005
OVER 24	+0.091	+0.059	+0.040	+0.028	+0.020	+0.016	+0.020	+0.012	+0.008
TO 30	+0.007	+0.007	+0.007	+0.007	+0.007	+0.007	-0.013	-0.009	-0.005
OVER 30	+0.109	+0.071	+0.048	+0.034	+0.025	+0.020	0.024	0.014	0.010
TO 40	+0.009	+0.009	+0.009	+0.009	+0.009	+0.009	-0.015	-0.011	-0.006
OVER 40	+0.109	+0.071	+0.048	+0.034	+0.025	+0.020	0.024	0.014	0.010
TO 50	+0.009	+0.009	+0.009	+0.009	+0.009	+0.009	-0.015	-0.011	-0.006
OVER 50	+0.130	+0.084	+0.056	+0.040	0.029	+0.023	+0.028	0.018	0.013
TO 65	+0.010	+0.010	+0.010	+0.010	+0.010	+0.010	-0.018	-0.012	-0.006
OVER 65	+0.130	+0.084	+0.056	+0.040	+0.029	+0.023	+0.028	0.018	0.013
TO 80	+0.010	+0.010	+0.010	+0.010	+0.010	+0.010	-0.018	-0.012	-0.006
OVER 80	+0.152	+0.099	+0.066	+0.047	+0.034	+0.027	0.034	0.022	0.016
TO 100	+0.012	+0.012	+0.012	+0.012	+0.012	+0.012	-0.020	-0.013	-0.006
OVER 100	+0.152	+0.099	+0.066	+0.047	+0.034	+0.027	0.034	0.022	0.016
TO 120	+0.012	+0.012	+0.012	+0.012	+0.012	+0.012	-0.020	-0.013	-0.006
OVER 120	+0.174	+0.114	+0.077	+0.054	+0.039	+0.032	0.041	0.026	+0.018
TO 140	+0.014	+0.014	+0.014	+0.014	+0.014	+0.014	-0.022	-0.014	-0.007
OVER 140	+0.174	+0.114	+0.077	+0.054	+0.039	+0.032	0.041	0.026	+0.018
TO 160	+0.014	+0.014	+0.014	+0.014	+0.014	+0.014	-0.022	-0.014	-0.007
OVER 160	+0.174	+0.114	+0.077	+0.054	+0.039	+0.032	0.041	0.026	+0.018
TO 180	+0.014	+0.014	+0.014	+0.014	+0.014	+0.014	-0.022	-0.014	-0.007
OVER 180	+0.200	+0.130	+0.087	+0.061	+0.044	+0.035	0.047	0.030	+0.022
TO 200	+0.015	+0.015	+0.015	+0.015	+0.015	+0.015	-0.025	-0.016	-0.007
OVER 200	+0.200	+0.130	+0.087	+0.061	+0.044	+0.035	0.047	0.030	+0.022
TO 225	+0.015	+0.015	+0.015	+0.015	+0.015	+0.015	-0.025	-0.016	-0.007
OVER 225	+0.200	+0.130	+0.087	+0.061	+0.044	+0.035	0.047	0.030	+0.022
TO 250	+0.015	+0.015	+0.015	+0.015	+0.015	+0.015	-0.025	-0.016	-0.007
OVER 250	+0.227	+0.147	+0.098	+0.069	+0.049	+0.040	0.055	+0.036	0.025
TO 280	+0.017	+0.017	+0.017	+0.017	+0.017	+0.017	-0.026	-0.016	-0.007
OVER 280	+0.227	+0.147	+0.098	+0.069	+0.049	+0.040	0.055	+0.036	0.025
TO 315	+0.017	+0.017	+0.017	+0.017	+0.017	+0.017	-0.026	-0.016	-0.007
OVER 315	+0.248	+0.158	+0.107	+0.075	+0.054	+0.043	0.060	0.039	0.029
TO 355	+0.018	+0.018	+0.018	+0.018	+0.018	+0.018	-0.029	-0.018	-0.007
OVER 355	+0.248	+0.158	+0.107	+0.075	+0.054	+0.043	0.060	0.039	0.029
TO 400	+0.018	+0.018	+0.018	+0.018	+0.018	+0.018	-0.029	-0.018	-0.007
OVER 400	+0.270	+0.175	+0.117	+0.083	+0.060	+0.047	0.066	+0.043	+0.033
TO 450	+0.020	+0.020	+0.020	+0.020	+0.020	+0.020	-0.031	-0.020	-0.007
OVER 450	+0.270	+0.175	+0.117	+0.083	+0.060	+0.047	0.066	+0.043	+0.033
TO 500	+0.020	+0.020	+0.020	+0.020	+0.020	+0.020	-0.031	-0.020	-0.007





**TABLE 6-12 TOLERANCE ZONES - INTERNAL DIMENSIONS (HOLES) (K10 ... K5, M10 ... M5) (ANSI B4.2)**

mm

SIZE		K10	K9	K8	K7	K6	K5	M10	M9	M8	M7	M6	M5
OVER	0	0.000	0.000	0.000	0.000	0.000	0.000	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002
TO	3	-0.040	-0.025	-0.014	-0.010	-0.006	-0.004	-0.042	-0.027	-0.016	-0.012	-0.008	-0.006
OVER	3	<b>NUMERICAL VALUES FOR TOLERANCE ZONES IN THIS AREA NOT DEFINED</b>		+0.005	+0.003	+0.002	0.000	-0.004	-0.004	+0.002	0.000	-0.001	-0.003
TO	6			-0.013	-0.009	-0.006	-0.005	-0.052	-0.034	-0.016	-0.012	-0.009	-0.008
OVER	6			+0.006	+0.005	+0.002	+0.001	-0.006	-0.006	+0.001	0.000	-0.003	-0.004
TO	10			-0.016	-0.010	-0.007	-0.005	-0.064	-0.042	-0.021	-0.015	-0.012	-0.010
OVER	10			+0.008	+0.006	+0.002	+0.002	-0.007	-0.007	+0.002	0.000	-0.004	-0.004
TO	14			-0.019	-0.012	-0.009	-0.006	-0.077	-0.050	-0.025	-0.018	-0.015	-0.012
OVER	14			+0.008	+0.006	+0.002	+0.002	-0.007	-0.007	+0.002	0.000	-0.004	-0.004
TO	18			-0.019	-0.012	-0.009	-0.006	-0.077	-0.050	-0.025	-0.018	-0.015	-0.012
OVER	18			+0.010	+0.006	+0.002	+0.001	-0.008	-0.008	+0.004	0.000	-0.004	-0.005
TO	24			-0.023	-0.015	-0.011	-0.008	-0.092	-0.060	-0.029	-0.021	-0.017	-0.014
OVER	24			+0.010	+0.006	+0.002	+0.001	-0.008	-0.008	+0.004	0.000	-0.004	-0.005
TO	30			-0.023	-0.015	-0.011	-0.008	-0.092	-0.060	-0.029	-0.021	-0.017	-0.014
OVER	30			+0.012	+0.007	+0.003	+0.002	-0.009	-0.009	+0.005	0.000	-0.004	-0.005
TO	40			-0.027	-0.018	-0.013	-0.009	-0.109	-0.071	-0.034	-0.025	-0.020	-0.016
OVER	40			+0.012	+0.007	+0.003	+0.002	-0.009	-0.009	+0.005	0.000	-0.004	-0.005
TO	50			-0.027	-0.018	-0.013	-0.009	-0.109	-0.071	-0.034	-0.025	-0.020	-0.016
OVER	50		+0.014	+0.009	+0.004	+0.003	-0.011	-0.011	+0.005	0.000	-0.005	-0.006	
TO	65		-0.032	-0.021	-0.015	-0.010	-0.131	-0.085	-0.041	-0.030	-0.024	-0.019	
OVER	65		+0.014	+0.009	+0.004	+0.003	-0.011	-0.011	+0.005	0.000	-0.005	-0.006	
TO	80		-0.032	-0.021	-0.015	-0.010	-0.131	-0.085	-0.041	-0.030	-0.024	-0.019	
OVER	80		+0.016	+0.010	+0.004	+0.002	-0.013	-0.013	+0.006	0.000	-0.006	-0.008	
TO	100		-0.038	-0.025	-0.018	-0.013	-0.153	-0.100	-0.048	-0.035	-0.028	-0.023	
OVER	100		+0.016	+0.010	+0.004	+0.002	-0.013	-0.013	+0.006	0.000	-0.006	-0.008	
TO	120		-0.038	-0.025	-0.018	-0.013	-0.153	-0.100	-0.048	-0.035	-0.028	-0.023	
OVER	120		+0.020	+0.012	+0.004	+0.003	-0.015	-0.015	+0.008	0.000	-0.008	-0.009	
TO	140		-0.043	-0.028	-0.021	-0.015	-0.175	-0.115	-0.055	-0.040	-0.033	-0.027	
OVER	140		+0.020	+0.012	+0.004	+0.003	-0.015	-0.015	+0.008	0.000	-0.008	-0.009	
TO	160		-0.043	-0.028	-0.021	-0.015	-0.175	-0.115	-0.055	-0.040	-0.033	-0.027	
OVER	160		+0.020	+0.012	+0.004	+0.003	-0.015	-0.015	+0.008	0.000	-0.008	-0.009	
TO	180		-0.043	-0.028	-0.021	-0.015	-0.175	-0.115	-0.055	-0.040	-0.033	-0.027	
OVER	180		+0.022	+0.013	+0.005	+0.002	-0.017	-0.017	+0.009	0.000	-0.008	-0.011	
TO	200		-0.050	-0.033	-0.024	-0.018	-0.202	-0.132	-0.063	-0.046	-0.037	-0.031	
OVER	200		+0.022	+0.013	+0.005	+0.002	-0.017	-0.017	+0.009	0.000	-0.008	-0.011	
TO	225		-0.050	-0.033	-0.024	-0.018	-0.202	-0.132	-0.063	-0.046	-0.037	-0.031	
OVER	225		+0.022	+0.013	+0.005	+0.002	-0.017	-0.017	+0.009	0.000	-0.008	-0.011	
TO	250		-0.050	-0.033	-0.024	-0.018	-0.202	-0.132	-0.063	-0.046	-0.037	-0.031	
OVER	250		+0.025	+0.016	+0.005	+0.003	-0.020	-0.020	+0.009	0.000	-0.009	-0.013	
TO	280		-0.056	-0.036	-0.027	-0.020	-0.230	-0.150	-0.072	-0.052	-0.041	-0.036	
OVER	280		+0.025	+0.016	+0.005	+0.003	-0.020	-0.020	+0.009	0.000	-0.009	-0.013	
TO	315		-0.056	-0.036	-0.027	-0.020	-0.230	-0.150	-0.072	-0.052	-0.041	-0.036	
OVER	315		+0.028	+0.017	+0.007	+0.003	-0.021	-0.021	+0.011	0.000	-0.010	-0.014	
TO	355		-0.061	-0.040	-0.029	-0.022	-0.251	-0.161	-0.078	-0.057	-0.046	-0.039	
OVER	355		+0.028	+0.017	+0.007	+0.003	-0.021	-0.021	+0.011	0.000	-0.010	-0.014	
TO	400		-0.061	-0.040	-0.029	-0.022	-0.251	-0.161	-0.078	-0.057	-0.046	-0.039	
OVER	400		+0.029	+0.018	+0.008	+0.002	-0.023	-0.023	+0.011	0.000	-0.010	-0.016	
TO	450		-0.068	-0.045	-0.032	-0.025	-0.273	-0.178	-0.086	-0.063	-0.050	-0.043	
OVER	450		+0.029	+0.018	+0.008	+0.002	-0.023	-0.023	+0.011	0.000	-0.010	-0.016	
TO	500		-0.068	-0.045	-0.032	-0.025	-0.273	-0.178	-0.086	-0.063	-0.050	-0.043	

**TABLE 6-13 TOLERANCE ZONES - INTERNAL DIMENSIONS (HOLES) (N10 ... N5, P10 ... P5) (ANSI B4.2)**

mm

SIZE	N10	N9	N8	N7	N6	N5	P10	P9	P8	P7	P6	P5
OVER 0	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006
TO 3	-0.044	-0.029	-0.018	-0.014	-0.010	-0.008	-0.046	-0.031	-0.020	-0.016	-0.012	-0.010
OVER 3	0.000	0.000	-0.002	-0.004	-0.005	-0.007	-0.012	-0.012	-0.012	-0.008	-0.009	-0.011
TO 6	-0.048	-0.030	-0.020	-0.016	-0.013	-0.012	-0.060	-0.042	-0.030	-0.020	-0.017	-0.016
OVER 6	0.000	0.000	-0.003	-0.004	-0.007	-0.008	-0.015	-0.015	-0.015	-0.009	-0.012	-0.013
TO 10	-0.058	-0.036	-0.025	-0.019	-0.016	-0.014	-0.073	-0.051	-0.037	-0.024	-0.021	-0.019
OVER 10	0.000	0.000	-0.003	-0.005	-0.009	-0.009	-0.018	-0.018	-0.018	-0.011	-0.015	-0.015
TO 14	-0.070	-0.043	-0.030	-0.023	-0.020	-0.017	-0.088	-0.061	-0.045	-0.029	-0.026	-0.023
OVER 14	0.000	0.000	-0.003	-0.005	-0.009	-0.009	-0.018	-0.018	-0.018	-0.011	-0.015	-0.015
TO 18	-0.070	-0.043	-0.030	-0.023	-0.020	-0.017	-0.088	-0.061	-0.045	-0.029	-0.026	-0.023
OVER 18	0.000	0.000	-0.003	-0.007	-0.011	-0.012	-0.022	-0.022	-0.022	-0.014	-0.018	-0.019
TO 24	-0.084	-0.052	-0.036	-0.028	-0.024	-0.021	-0.106	-0.074	-0.055	-0.035	-0.031	-0.028
OVER 24	0.000	0.000	-0.003	-0.007	-0.011	-0.012	-0.022	-0.022	-0.022	-0.014	-0.018	-0.019
TO 30	-0.084	-0.052	-0.036	-0.028	-0.024	-0.021	-0.106	-0.074	-0.055	-0.035	-0.031	-0.028
OVER 30	0.000	0.000	-0.003	-0.008	-0.012	-0.013	-0.026	-0.026	-0.026	-0.017	-0.021	-0.022
TO 40	-0.100	-0.062	-0.042	-0.033	-0.028	-0.024	-0.126	-0.088	-0.065	-0.042	-0.037	-0.033
OVER 10	0.000	0.000	-0.003	-0.008	-0.012	-0.013	-0.026	-0.026	-0.026	-0.017	-0.021	-0.022
TO 50	-0.100	-0.062	-0.042	-0.033	-0.028	-0.024	-0.126	-0.088	-0.065	-0.042	-0.037	-0.033
OVER 50	0.000	0.000	-0.004	-0.009	-0.014	-0.015	-0.032	-0.032	-0.032	-0.021	-0.026	-0.027
TO 65	-0.120	-0.074	-0.050	-0.039	-0.033	-0.028	-0.152	-0.106	-0.078	-0.051	-0.045	-0.040
OVER 65	0.000	0.000	-0.004	-0.009	-0.014	-0.015	-0.032	-0.032	-0.032	-0.021	-0.026	-0.027
TO 80	-0.120	-0.074	-0.050	-0.039	-0.033	-0.028	-0.152	-0.106	-0.078	-0.051	-0.045	-0.040
OVER 80	0.000	0.000	-0.004	-0.010	-0.016	-0.018	-0.037	-0.037	-0.037	-0.024	-0.030	-0.032
TO 100	-0.140	-0.087	-0.058	-0.045	-0.038	-0.033	-0.177	-0.124	-0.091	-0.059	-0.052	-0.047
OVER 100	0.000	0.000	-0.004	-0.010	-0.016	-0.018	-0.037	-0.037	-0.037	-0.024	-0.030	-0.032
TO 120	-0.140	-0.087	-0.058	-0.045	-0.038	-0.033	-0.177	-0.124	-0.091	-0.059	-0.052	-0.047
OVER 120	0.000	0.000	-0.004	-0.012	-0.020	-0.021	-0.043	-0.043	-0.043	-0.028	-0.036	-0.037
TO 140	-0.160	-0.100	-0.067	-0.052	-0.045	-0.039	-0.203	-0.143	-0.106	-0.068	-0.061	-0.055
OVER 140	0.000	0.000	-0.004	-0.012	-0.020	-0.021	-0.043	-0.043	-0.043	-0.028	-0.036	-0.037
TO 160	-0.160	-0.100	-0.067	-0.052	-0.045	-0.039	-0.203	-0.143	-0.106	-0.068	-0.061	-0.055
OVER 160	0.000	0.000	-0.004	-0.012	-0.020	-0.021	-0.043	-0.043	-0.043	-0.028	-0.036	-0.037
TO 180	-0.160	-0.100	-0.067	-0.052	-0.045	-0.039	-0.203	-0.143	-0.106	-0.068	-0.061	-0.055
OVER 180	0.000	0.000	-0.005	-0.014	-0.022	-0.025	-0.050	-0.050	-0.050	-0.033	-0.041	-0.044
TO 200	-0.185	-0.115	-0.077	-0.060	-0.051	-0.045	-0.235	-0.165	-0.122	-0.079	-0.070	-0.064
OVER 200	0.000	0.000	-0.005	-0.014	-0.022	-0.025	-0.050	-0.050	-0.050	-0.033	-0.041	-0.044
TO 225	-0.185	-0.115	-0.077	-0.060	-0.051	-0.045	-0.235	-0.165	-0.122	-0.079	-0.070	-0.064
OVER 225	0.000	0.000	-0.005	-0.014	-0.022	-0.025	-0.050	-0.050	-0.050	-0.033	-0.041	-0.044
TO 250	-0.185	-0.115	-0.077	-0.060	-0.051	-0.045	-0.235	-0.165	-0.122	-0.079	-0.070	-0.064
OVER 250	0.000	0.000	-0.005	-0.014	-0.025	-0.027	-0.056	-0.056	-0.056	-0.036	-0.047	-0.049
TO 280	-0.210	-0.130	-0.086	-0.066	-0.057	-0.050	-0.266	-0.186	-0.137	-0.088	-0.079	-0.072
OVER 280	0.000	0.000	-0.005	-0.014	-0.025	-0.027	-0.056	-0.056	-0.056	-0.036	-0.047	-0.049
TO 315	-0.210	-0.130	-0.086	-0.066	-0.057	-0.050	-0.266	-0.186	-0.137	-0.088	-0.079	-0.072
OVER 315	0.000	0.000	-0.005	-0.016	-0.026	-0.030	-0.062	-0.062	-0.062	-0.041	-0.051	-0.055
TO 355	-0.230	-0.140	-0.094	-0.073	-0.062	-0.055	-0.292	-0.202	-0.151	-0.098	-0.087	-0.080
OVER 355	0.000	0.000	-0.005	-0.016	-0.026	-0.030	-0.062	-0.062	-0.062	-0.041	-0.051	-0.055
TO 400	-0.230	-0.140	-0.094	-0.073	-0.062	-0.055	-0.292	-0.202	-0.151	-0.098	-0.087	-0.080
OVER 400	0.000	0.000	-0.006	-0.017	-0.027	-0.033	-0.068	-0.068	-0.068	-0.045	-0.055	-0.061
TO 450	-0.250	-0.155	-0.103	-0.080	-0.067	-0.060	-0.318	-0.223	-0.165	-0.108	-0.095	-0.088
OVER 450	0.000	0.000	-0.006	-0.017	-0.027	-0.033	-0.068	-0.068	-0.068	-0.045	-0.055	-0.061
TO 500	-0.250	-0.155	-0.103	-0.080	-0.067	-0.060	-0.318	-0.223	-0.165	-0.108	-0.095	-0.088



**TABLE 6-14 TOLERANCE ZONES - INTERNAL DIMENSIONS (HOLES) (R10 ... R5, S10 ... S5) (ANSI B4.2)**

mm

SIZE	R10	R9	R8	R7	R6	R5	S10	S9	S8	S7	S6	S5
OVER 0	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	-0.014	-0.014	-0.014	-0.014	-0.014	-0.014
TO 3	-0.050	-0.035	-0.024	-0.020	-0.016	-0.014	-0.054	-0.039	-0.028	-0.024	-0.020	-0.018
OVER 3	-0.015	-0.015	-0.015	-0.011	-0.012	-0.014	-0.019	-0.019	-0.019	-0.015	-0.016	-0.018
TO 6	-0.063	-0.045	-0.033	-0.023	-0.020	-0.019	-0.067	-0.049	-0.037	-0.027	-0.024	-0.023
OVER 6	-0.019	-0.019	-0.019	-0.013	-0.016	-0.017	-0.023	-0.023	-0.023	-0.017	-0.020	-0.021
TO 10	-0.077	-0.055	-0.041	-0.028	-0.025	-0.023	-0.081	-0.059	-0.045	-0.032	-0.029	-0.027
OVER 10	-0.023	-0.023	-0.023	-0.016	-0.020	-0.020	-0.028	-0.028	-0.028	-0.021	-0.025	-0.025
TO 14	-0.093	-0.066	-0.050	-0.034	-0.031	-0.028	-0.098	-0.071	-0.055	-0.039	-0.036	-0.033
OVER 14	-0.023	-0.023	-0.023	-0.016	-0.020	-0.020	-0.028	-0.028	-0.028	-0.021	-0.025	-0.025
TO 18	-0.093	-0.066	-0.050	-0.034	-0.031	-0.028	-0.098	-0.071	-0.055	-0.039	-0.036	-0.033
OVER 18	-0.028	-0.028	-0.028	-0.020	-0.024	-0.025	-0.035	-0.035	-0.035	-0.027	-0.031	-0.032
TO 24	-0.112	-0.080	-0.061	-0.041	-0.037	-0.034	-0.119	-0.087	-0.068	-0.048	-0.044	-0.041
OVER 24	-0.028	-0.028	-0.028	-0.020	-0.024	-0.025	-0.035	-0.035	-0.035	-0.027	-0.031	-0.032
TO 30	-0.112	-0.080	-0.061	-0.041	-0.037	-0.034	-0.119	-0.087	-0.068	-0.048	-0.044	-0.041
OVER 30	-0.034	-0.034	-0.034	-0.025	-0.029	-0.030	-0.043	-0.043	-0.043	-0.034	-0.038	-0.039
TO 40	-0.134	-0.096	-0.073	-0.050	-0.045	-0.041	-0.143	-0.105	-0.082	-0.059	-0.054	-0.050
OVER 40	-0.034	-0.034	-0.034	-0.025	-0.029	-0.030	-0.043	-0.043	-0.043	-0.034	-0.038	-0.039
TO 50	-0.134	-0.096	-0.073	-0.050	-0.045	-0.041	-0.143	-0.105	-0.082	-0.059	-0.054	-0.050
OVER 50	-0.041	-0.041	-0.041	-0.030	-0.035	-0.036	-0.053	-0.053	-0.053	-0.042	-0.047	-0.048
TO 65	-0.161	-0.115	-0.087	-0.060	-0.054	-0.049	-0.173	-0.127	-0.099	-0.072	-0.066	-0.061
OVER 65	-0.043	-0.043	-0.043	-0.032	-0.037	-0.038	-0.059	-0.059	-0.059	-0.048	-0.053	-0.054
TO 80	-0.163	-0.117	-0.089	-0.062	-0.056	-0.051	-0.179	-0.133	-0.105	-0.078	-0.072	-0.067
OVER 80	-0.051	-0.051	-0.051	-0.038	-0.044	-0.046	-0.071	-0.071	-0.071	-0.058	-0.064	-0.066
TO 100	-0.191	-0.138	-0.105	-0.073	-0.066	-0.061	-0.211	-0.158	-0.125	-0.093	-0.086	-0.081
OVER 100	-0.054	-0.054	-0.054	-0.041	-0.047	-0.049	-0.079	-0.079	-0.079	-0.066	-0.072	-0.074
TO 120	-0.194	-0.141	-0.108	-0.076	-0.069	-0.064	-0.219	-0.166	-0.133	-0.101	-0.094	-0.089
OVER 120	-0.063	-0.063	-0.063	-0.048	-0.056	-0.057	-0.092	-0.092	-0.092	-0.077	-0.085	-0.086
TO 140	-0.223	-0.163	-0.126	-0.088	-0.081	-0.075	-0.252	-0.192	-0.155	-0.117	-0.110	-0.104
OVER 140	-0.065	-0.065	-0.065	-0.050	-0.058	-0.059	-0.100	-0.100	-0.100	-0.085	-0.093	-0.094
TO 160	-0.225	-0.165	-0.128	-0.090	-0.083	-0.077	-0.260	-0.200	-0.163	-0.125	-0.118	-0.112
OVER 160	-0.068	-0.068	-0.068	-0.053	-0.061	-0.062	-0.108	-0.108	-0.108	-0.093	-0.101	-0.102
TO 180	-0.228	-0.168	-0.131	-0.093	-0.086	-0.080	-0.268	-0.208	-0.171	-0.133	-0.126	-0.120
OVER 180	-0.077	-0.077	-0.077	-0.060	-0.068	-0.071	-0.122	-0.122	-0.122	-0.105	-0.113	-0.116
TO 200	-0.262	-0.192	-0.149	-0.106	-0.097	-0.091	-0.307	-0.237	-0.194	-0.151	-0.142	-0.136
OVER 200	-0.080	-0.080	-0.080	-0.063	-0.071	-0.074	-0.130	-0.130	-0.130	-0.113	-0.121	-0.124
TO 225	-0.265	-0.195	-0.152	-0.109	-0.100	-0.094	-0.315	-0.245	-0.202	-0.159	-0.150	-0.144
OVER 225	-0.084	-0.084	-0.084	-0.067	-0.075	-0.078	-0.140	-0.140	-0.140	-0.123	-0.131	-0.134
TO 250	-0.269	-0.199	-0.156	-0.113	-0.104	-0.098	-0.325	-0.255	-0.212	-0.169	-0.160	-0.154
OVER 250	-0.094	-0.094	-0.094	-0.074	-0.085	-0.087	-0.158	-0.158	-0.158	-0.138	-0.149	-0.151
TO 280	-0.304	-0.224	-0.175	-0.126	-0.117	-0.110	-0.368	-0.288	-0.239	-0.190	-0.181	-0.174
OVER 280	-0.098	-0.098	-0.098	-0.078	-0.089	-0.091	-0.170	-0.170	-0.170	-0.150	-0.161	-0.163
TO 315	-0.308	-0.228	-0.179	-0.130	-0.121	-0.114	-0.380	-0.300	-0.251	-0.202	-0.193	-0.186
OVER 315	-0.108	-0.108	-0.108	-0.087	-0.097	-0.101	-0.190	-0.190	-0.190	-0.169	-0.179	-0.183
TO 355	-0.338	-0.248	-0.197	-0.144	-0.133	-0.126	-0.420	-0.330	-0.279	-0.226	-0.215	-0.208
OVER 355	-0.114	-0.114	-0.114	-0.093	-0.103	-0.107	-0.208	-0.208	-0.208	-0.187	-0.197	-0.201
TO 400	-0.344	-0.254	-0.203	-0.150	-0.139	-0.132	-0.438	-0.348	-0.297	-0.244	-0.233	-0.226
OVER 400	-0.126	-0.126	-0.126	-0.103	-0.113	-0.119	-0.232	-0.232	-0.232	-0.209	-0.219	-0.225
TO 450	-0.376	-0.281	-0.223	-0.166	-0.153	-0.146	-0.482	-0.387	-0.329	-0.272	-0.259	-0.252
OVER 450	-0.132	-0.132	-0.132	-0.109	-0.119	-0.125	-0.252	-0.252	-0.252	-0.229	-0.239	-0.245
TO 500	-0.382	-0.287	-0.229	-0.172	-0.159	-0.152	-0.502	-0.407	-0.349	-0.292	-0.279	-0.272

**TABLE 6-15 TOLERANCE ZONES - INTERNAL DIMENSIONS (HOLES) (T10 ... T5, U10... U5) (ANSI B4.2)**

mm

SIZE	T10	T9	T8	T7	T6	T5	U10	U9	U8	U7	U6	U5						
OVER 0	NUMERICAL VALUES FOR TOLERANCE ZONES IN THIS AREA NOT DEFINED							-0.018	-0.018	-0.018	-0.018	-0.018	-0.018					
TO 3								-0.058	-0.043	-0.032	-0.028	-0.024	-0.022					
OVER 3								-0.023	-0.023	-0.023	-0.019	-0.020	-0.022					
TO 6								-0.071	-0.053	-0.041	-0.031	-0.028	-0.027					
OVER 6								-0.028	-0.028	-0.028	-0.022	-0.025	-0.026					
TO 10								-0.086	-0.064	-0.050	-0.037	-0.034	-0.032					
OVER 10								-0.033	-0.033	-0.033	-0.026	-0.030	-0.030					
TO 14								-0.103	-0.076	-0.060	-0.044	-0.041	-0.038					
OVER 14								-0.033	-0.033	-0.033	-0.026	-0.030	-0.030					
TO 18								-0.103	-0.076	-0.060	-0.044	-0.041	-0.038					
OVER 18	NUMERICAL VALUES FOR TOLERANCE ZONES IN THIS AREA NOT DEFINED							-0.041	-0.041	-0.041	-0.033	-0.037	-0.038					
TO 24								-0.125	-0.093	-0.074	-0.054	-0.050	-0.047					
OVER 24							-0.041	-0.041	-0.041	-0.033	-0.037	-0.038	-0.048	-0.048	-0.048	-0.040	-0.044	-0.045
TO 30							-0.125	-0.093	-0.074	-0.054	-0.050	-0.047	-0.132	-0.100	-0.081	-0.061	-0.057	-0.054
OVER 30							-0.048	-0.048	-0.048	-0.039	-0.043	-0.044	-0.060	-0.060	-0.060	-0.051	-0.055	-0.056
TO 40							-0.148	-0.110	-0.087	-0.064	-0.059	-0.055	-0.160	-0.122	-0.099	-0.076	-0.071	-0.067
OVER 40							-0.054	-0.054	-0.054	-0.045	-0.049	-0.050	-0.070	-0.070	-0.070	-0.061	-0.065	-0.066
TO 50							-0.154	-0.116	-0.093	-0.070	-0.065	-0.061	-0.170	-0.132	-0.109	-0.086	-0.081	-0.077
OVER 50							-0.066	-0.066	-0.066	-0.055	-0.060	-0.061	-0.087	-0.087	-0.087	-0.076	-0.081	-0.082
TO 65							-0.186	-0.140	-0.112	-0.085	-0.079	-0.074	-0.207	-0.161	-0.133	-0.106	-0.100	-0.095
OVER 65	-0.075	-0.075	-0.075	-0.064	-0.069	-0.070	-0.102	-0.102	-0.102	-0.091	-0.096	-0.097						
TO 80	-0.195	-0.149	-0.121	-0.094	-0.088	-0.088	-0.222	-0.176	-0.148	-0.121	-0.115	-0.110						
OVER 80	-0.091	-0.091	-0.091	-0.078	-0.084	-0.086	-0.124	-0.124	-0.124	-0.111	-0.117	-0.119						
TO 100	-0.231	-0.178	-0.145	-0.113	-0.106	-0.101	-0.264	-0.211	-0.178	-0.146	-0.139	-0.134						
OVER 100	-0.104	-0.104	-0.104	-0.091	-0.097	-0.099	-0.144	-0.144	-0.144	-0.131	-0.137	-0.139						
TO 120	-0.244	-0.191	-0.158	-0.126	-0.119	-0.114	-0.284	-0.231	-0.198	-0.166	-0.159	-0.154						
OVER 120	-0.122	-0.122	-0.122	-0.107	-0.115	-0.116	-0.170	-0.170	-0.170	-0.155	-0.163	-0.164						
TO 140	-0.282	-0.222	-0.185	-0.147	-0.140	-0.134	-0.330	-0.270	-0.233	-0.195	-0.188	-0.182						
OVER 140	-0.134	-0.134	-0.134	-0.119	-0.127	-0.128	-0.190	-0.190	-0.190	-0.175	-0.183	-0.184						
TO 160	-0.294	-0.234	-0.197	-0.159	-0.152	-0.146	-0.350	-0.290	-0.253	-0.215	-0.208	-0.202						
OVER 160	-0.146	-0.146	-0.146	-0.131	-0.139	-0.140	-0.210	-0.210	-0.210	-0.195	-0.203	-0.204						
TO 180	-0.306	-0.246	-0.209	-0.171	-0.164	-0.158	-0.370	-0.310	-0.273	-0.235	-0.228	-0.222						
OVER 180	-0.166	-0.166	-0.166	-0.149	-0.157	-0.160	-0.236	-0.236	-0.236	-0.219	-0.227	-0.230						
TO 200	-0.351	-0.281	-0.238	-0.195	-0.186	-0.180	-0.421	-0.351	-0.308	-0.265	-0.256	-0.250						
OVER 200	-0.180	-0.180	-0.180	-0.163	-0.171	-0.174	-0.258	-0.258	-0.258	-0.241	-0.249	-0.252						
TO 225	-0.365	-0.295	-0.252	-0.209	-0.200	-0.194	-0.443	-0.373	-0.330	-0.287	-0.278	-0.272						
OVER 225	-0.196	-0.196	-0.196	-0.179	-0.187	-0.190	-0.284	-0.284	-0.284	-0.267	-0.275	-0.278						
TO 250	-0.381	-0.311	-0.268	-0.225	-0.216	-0.210	-0.469	-0.399	-0.356	-0.313	-0.304	-0.298						
OVER 250	-0.218	-0.218	-0.218	-0.198	-0.209	-0.211	-0.315	-0.315	-0.315	-0.295	-0.306	-0.308						
TO 280	-0.428	-0.348	-0.299	-0.250	-0.241	-0.234	-0.525	-0.445	-0.396	-0.347	-0.338	-0.331						
OVER 280	-0.240	-0.240	-0.240	-0.220	-0.231	-0.233	-0.350	-0.350	-0.350	-0.330	-0.341	-0.343						
TO 315	-0.450	-0.370	-0.321	-0.272	-0.263	-0.256	-0.560	-0.480	-0.431	-0.382	-0.373	-0.366						
OVER 315	-0.268	-0.268	-0.268	-0.247	-0.257	-0.261	-0.390	-0.390	-0.390	-0.369	-0.379	-0.383						
TO 355	-0.498	-0.408	-0.357	-0.304	-0.293	-0.286	-0.620	-0.530	-0.479	-0.426	-0.415	-0.408						
OVER 355	-0.294	-0.294	-0.294	-0.273	-0.283	-0.287	-0.435	-0.435	-0.435	-0.414	-0.424	-0.428						
TO 400	-0.524	-0.434	-0.383	-0.330	-0.319	-0.312	-0.665	-0.575	-0.524	-0.471	-0.460	-0.453						
OVER 400	-0.330	-0.330	-0.330	-0.307	-0.317	-0.323	-0.490	-0.490	-0.490	-0.467	-0.477	-0.483						
TO 450	-0.580	-0.485	-0.427	-0.370	-0.357	-0.350	-0.740	-0.645	-0.587	-0.530	-0.517	-0.510						
OVER 450	-0.360	-0.360	-0.360	-0.337	-0.347	-0.353	-0.540	-0.540	-0.540	-0.517	-0.527	-0.533						
TO 500	-0.610	-0.515	-0.457	-0.400	-0.387	-0.380	-0.790	-0.695	-0.637	-0.580	-0.567	-0.560						

**TABLE 6-16 TOLERANCE ZONES - INTERNAL DIMENSIONS (HOLES) (V10 ... V5, X10 ... X5) (ANSI B4.2)**

mm

SIZE	V10	V9	V8	V7	V6	V5	X10	X9	X8	X7	X6	X5	
OVER 0	NUMERICAL VALUES FOR TOLERANCE ZONES IN THIS AREA NOT DEFINED.						-0.020	-0.020	-0.020	-0.020	-0.020	-0.020	-0.020
TO 3							-0.060	-0.045	-0.034	-0.030	-0.026	-0.024	
OVER 3							-0.028	-0.028	-0.028	-0.024	-0.025	-0.027	
TO 6							-0.076	-0.058	-0.046	-0.036	-0.033	-0.032	
OVER 6							-0.034	-0.034	-0.034	-0.028	-0.031	-0.032	
TO 10							-0.092	-0.070	-0.056	-0.043	-0.040	-0.038	
OVER 10							-0.040	-0.040	-0.040	-0.033	-0.037	-0.037	
TO 14							-0.110	-0.083	-0.067	-0.051	-0.048	-0.045	
OVER 14							-0.039	-0.039	-0.039	-0.032	-0.036	-0.036	
TO 18							-0.109	-0.082	-0.066	-0.050	-0.047	-0.044	
OVER 18	-0.047	-0.047	-0.047	-0.039	-0.043	-0.044	-0.054	-0.054	-0.054	-0.046	-0.050	-0.051	
TO 24	-0.131	-0.099	-0.080	-0.060	-0.056	-0.053	-0.138	-0.106	-0.087	-0.067	-0.063	-0.060	
OVER 24	-0.055	-0.055	-0.055	-0.047	-0.051	-0.052	-0.064	-0.064	-0.064	-0.056	-0.060	-0.061	
TO 30	-0.139	-0.107	-0.088	-0.068	-0.064	-0.061	-0.148	-0.116	-0.097	-0.077	-0.073	-0.070	
OVER 30	-0.068	-0.068	-0.068	-0.059	-0.063	-0.064	-0.080	-0.080	-0.080	-0.071	-0.075	-0.076	
TO 40	-0.168	-0.130	-0.107	-0.084	-0.079	-0.075	-0.180	-0.142	-0.119	-0.096	-0.091	-0.087	
OVER 40	-0.081	-0.081	-0.081	-0.072	-0.076	-0.077	-0.097	-0.097	-0.097	-0.088	-0.092	-0.093	
TO 50	-0.181	-0.143	-0.120	-0.097	-0.092	-0.088	-0.197	-0.159	-0.136	-0.113	-0.108	-0.104	
OVER 50	-0.102	-0.102	-0.102	-0.091	-0.096	-0.097	-0.122	-0.122	-0.122	-0.111	-0.116	-0.117	
TO 65	-0.222	-0.176	-0.148	-0.121	-0.115	-0.110	-0.242	-0.196	-0.168	-0.141	-0.135	-0.130	
OVER 65	-0.120	-0.120	-0.120	-0.109	-0.114	-0.115	-0.146	-0.146	-0.146	-0.135	-0.140	-0.141	
TO 80	-0.240	-0.194	-0.166	-0.139	-0.133	-0.128	-0.266	-0.220	-0.192	-0.165	-0.159	-0.154	
OVER 80	-0.146	-0.146	-0.146	-0.133	-0.139	-0.141	-0.178	-0.178	-0.178	-0.165	-0.171	-0.173	
TO 100	-0.286	-0.233	-0.200	-0.168	-0.161	-0.156	-0.318	-0.265	-0.232	-0.200	-0.193	-0.188	
OVER 100	-0.172	-0.172	-0.172	-0.159	-0.165	-0.167	-0.210	-0.210	-0.210	-0.197	-0.203	-0.205	
TO 120	-0.312	-0.259	-0.226	-0.194	-0.187	-0.182	-0.350	-0.297	-0.264	-0.232	-0.225	-0.220	
OVER 120	-0.202	-0.202	-0.202	-0.187	-0.195	-0.196	-0.248	-0.248	-0.248	-0.233	-0.241	-0.242	
TO 140	-0.362	-0.302	-0.265	-0.227	-0.220	-0.214	-0.408	-0.348	-0.311	-0.273	-0.266	-0.260	
OVER 140	-0.228	-0.228	-0.228	-0.213	-0.221	-0.222	-0.280	-0.280	-0.280	-0.265	-0.273	-0.274	
TO 160	-0.388	-0.328	-0.291	-0.253	-0.246	-0.240	-0.440	-0.380	-0.343	-0.305	-0.298	-0.292	
OVER 160	-0.252	-0.252	-0.252	-0.237	-0.245	-0.246	-0.310	-0.310	-0.310	-0.295	-0.303	-0.304	
TO 180	-0.412	-0.352	-0.315	-0.277	-0.270	-0.264	-0.470	-0.410	-0.373	-0.335	-0.328	-0.322	
OVER 180	-0.284	-0.284	-0.284	-0.267	-0.275	-0.278	-0.350	-0.350	-0.350	-0.333	-0.341	-0.344	
TO 200	-0.469	-0.399	-0.356	-0.313	-0.304	-0.298	-0.535	-0.465	-0.422	-0.379	-0.370	-0.364	
OVER 200	-0.310	-0.310	-0.310	-0.293	-0.301	-0.304	-0.385	-0.385	-0.385	-0.368	-0.376	-0.379	
TO 225	-0.495	-0.425	-0.382	-0.339	-0.330	-0.324	-0.570	-0.500	-0.457	-0.414	-0.405	-0.399	
OVER 225	-0.340	-0.340	-0.340	-0.323	-0.331	-0.334	-0.425	-0.425	-0.425	-0.408	-0.416	-0.419	
TO 250	-0.525	-0.455	-0.412	-0.369	-0.360	-0.354	-0.610	-0.540	-0.497	-0.454	-0.445	-0.439	
OVER 250	-0.385	-0.385	-0.385	-0.365	-0.376	-0.378	-0.475	-0.475	-0.475	-0.455	-0.466	-0.468	
TO 280	-0.595	-0.515	-0.466	-0.417	-0.408	-0.401	-0.685	-0.605	-0.556	-0.507	-0.498	-0.491	
OVER 280	-0.425	-0.425	-0.425	-0.405	-0.416	-0.418	-0.525	-0.525	-0.525	-0.505	-0.516	-0.518	
TO 315	-0.635	-0.555	-0.506	-0.457	-0.448	-0.441	-0.735	-0.655	-0.606	-0.557	-0.548	-0.541	
OVER 315	-0.475	-0.475	-0.475	-0.454	-0.464	-0.468	-0.590	-0.590	-0.590	-0.569	-0.579	-0.583	
TO 355	-0.705	-0.615	-0.564	-0.511	-0.500	-0.493	-0.820	-0.730	-0.679	-0.626	-0.615	-0.608	
OVER 355	-0.530	-0.530	-0.530	-0.509	-0.519	-0.523	-0.660	-0.660	-0.660	-0.639	-0.649	-0.653	
TO 400	-0.760	-0.670	-0.619	-0.566	-0.555	-0.548	-0.890	-0.800	-0.749	-0.696	-0.685	-0.678	
OVER 400	-0.595	-0.595	-0.595	-0.572	-0.582	-0.588	-0.740	-0.740	-0.740	-0.717	-0.727	-0.733	
TO 450	-0.845	-0.750	-0.692	-0.635	-0.622	-0.615	-0.990	-0.895	-0.837	-0.780	-0.767	-0.760	
OVER 450	-0.660	-0.660	-0.660	-0.637	-0.647	-0.653	-0.820	-0.820	-0.820	-0.797	-0.807	-0.813	
TO 500	-0.910	-0.815	-0.757	-0.700	-0.687	-0.680	-1.070	-0.975	-0.917	-0.860	-0.847	-0.840	

**TABLE 6-17 TOLERANCE ZONES - INTERNAL DIMENSIONS (HOLES) (Y10 ... Y5, Z10 ... Z5) (ANSI B4.2)**

mm

SIZE	Y10	Y9	Y8	Y7	Y6	Y5	Z10	Z9	Z8	Z7	Z6	Z5	
OVER 0	NUMERICAL VALUES FOR TOLERANCE ZONES IN THIS AREA NOT DEFINED.						-0.026	-0.026	-0.026	-0.026	-0.026	-0.026	-0.026
TO 3							-0.066	-0.051	-0.040	-0.036	-0.032	-0.030	
OVER 3							-0.035	-0.035	-0.035	-0.031	-0.032	-0.034	
TO 6							-0.083	-0.065	-0.053	-0.043	-0.040	-0.039	
OVER 6							-0.042	-0.042	-0.042	-0.036	-0.039	-0.040	
TO 10							-0.100	-0.078	-0.064	-0.051	-0.048	-0.046	
OVER 10							-0.050	-0.050	-0.050	-0.043	-0.047	-0.047	
TO 14							-0.120	-0.093	-0.077	-0.061	-0.058	-0.055	
OVER 14							-0.060	-0.060	-0.060	-0.053	-0.057	-0.057	
TO 18							-0.130	-0.103	-0.087	-0.071	-0.068	-0.065	
OVER 18	-0.063	-0.063	-0.063	-0.055	-0.059	-0.060	-0.073	-0.073	-0.073	-0.065	-0.069	-0.070	
TO 24	-0.147	-0.115	-0.096	-0.076	-0.072	-0.069	-0.157	-0.125	-0.106	-0.086	-0.082	-0.079	
OVER 24	-0.075	-0.075	-0.075	-0.067	-0.071	-0.072	-0.088	-0.088	-0.088	-0.080	-0.084	-0.085	
TO 30	-0.159	-0.127	-0.108	-0.088	-0.084	-0.081	-0.172	-0.140	-0.121	-0.101	-0.097	-0.094	
OVER 30	-0.094	-0.094	-0.094	-0.085	-0.089	-0.090	-0.112	-0.112	-0.112	-0.103	-0.107	-0.108	
TO 40	-0.194	-0.156	-0.133	-0.110	-0.105	-0.101	-0.212	-0.174	-0.151	-0.128	-0.123	-0.119	
OVER 40	-0.114	-0.114	-0.114	-0.105	-0.109	-0.110	-0.136	-0.136	-0.136	-0.127	-0.131	-0.132	
TO 50	-0.214	-0.176	-0.153	-0.130	-0.125	-0.121	-0.236	-0.198	-0.175	-0.152	-0.147	-0.143	
OVER 50	-0.144	-0.144	-0.144	-0.133	-0.138	-0.139	-0.172	-0.172	-0.172	-0.161	-0.166	-0.167	
TO 65	-0.264	-0.218	-0.190	-0.163	-0.157	-0.152	-0.292	-0.246	-0.218	-0.191	-0.185	-0.180	
OVER 65	-0.174	-0.174	-0.174	-0.163	-0.168	-0.169	-0.210	-0.210	-0.210	-0.199	-0.204	-0.205	
TO 80	-0.294	-0.248	-0.220	-0.193	-0.187	-0.182	-0.330	-0.284	-0.256	-0.229	-0.223	-0.218	
OVER 80	-0.214	-0.214	-0.214	-0.201	-0.207	-0.209	-0.258	-0.258	-0.258	-0.245	-0.251	-0.253	
TO 100	-0.354	-0.301	-0.268	-0.236	-0.229	-0.224	-0.398	-0.345	-0.312	-0.280	-0.273	-0.268	
OVER 100	-0.254	-0.254	-0.254	-0.241	-0.247	-0.249	-0.310	-0.310	-0.310	-0.297	-0.303	-0.305	
TO 120	-0.394	-0.341	-0.308	-0.276	-0.269	-0.264	-0.450	-0.397	-0.364	-0.332	-0.325	-0.320	
OVER 120	-0.300	-0.300	-0.300	-0.285	-0.293	-0.294	-0.365	-0.365	-0.365	-0.350	-0.358	-0.359	
TO 140	-0.460	-0.400	-0.363	-0.325	-0.318	-0.312	-0.525	-0.465	-0.428	-0.390	-0.383	-0.377	
OVER 140	-0.340	-0.340	-0.340	-0.325	-0.333	-0.334	-0.415	-0.415	-0.415	-0.400	-0.408	-0.409	
TO 160	-0.500	-0.440	-0.403	-0.365	-0.358	-0.352	-0.575	-0.515	-0.478	-0.440	-0.433	-0.427	
OVER 160	-0.380	-0.380	-0.380	-0.365	-0.373	-0.374	-0.465	-0.465	-0.465	-0.450	-0.458	-0.459	
TO 180	-0.540	-0.480	-0.443	-0.405	-0.398	-0.392	-0.625	-0.565	-0.528	-0.490	-0.483	-0.477	
OVER 180	-0.425	-0.425	-0.425	-0.408	-0.416	-0.419	-0.520	-0.520	-0.520	-0.503	-0.511	-0.514	
TO 200	-0.610	-0.540	-0.497	-0.454	-0.445	-0.439	-0.705	-0.635	-0.592	-0.549	-0.540	-0.534	
OVER 200	-0.470	-0.470	-0.470	-0.453	-0.461	-0.464	-0.575	-0.575	-0.575	-0.558	-0.566	-0.569	
TO 225	-0.655	-0.585	-0.542	-0.499	-0.490	-0.484	-0.760	-0.690	-0.647	-0.604	-0.595	-0.589	
OVER 225	-0.520	-0.520	-0.520	-0.503	-0.511	-0.514	-0.640	-0.640	-0.640	-0.623	-0.631	-0.634	
TO 250	-0.705	-0.635	-0.592	-0.549	-0.540	-0.534	-0.825	-0.755	-0.712	-0.669	-0.660	-0.654	
OVER 250	-0.580	-0.580	-0.580	-0.560	-0.571	-0.573	-0.710	-0.710	-0.710	-0.690	-0.701	-0.703	
TO 280	-0.790	-0.710	-0.661	-0.612	-0.603	-0.596	-0.920	-0.840	-0.791	-0.742	-0.733	-0.726	
OVER 280	-0.650	-0.650	-0.650	-0.630	-0.641	-0.643	-0.790	-0.790	-0.790	-0.770	-0.781	-0.783	
TO 315	-0.860	-0.780	-0.731	-0.682	-0.673	-0.666	-1.000	-0.920	-0.871	-0.822	-0.813	-0.806	
OVER 315	-0.730	-0.730	-0.730	-0.709	-0.719	-0.723	-0.900	-0.900	-0.900	-0.879	-0.889	-0.893	
TO 355	-0.960	-0.870	-0.819	-0.766	-0.755	-0.748	-1.130	-1.040	-0.989	-0.936	-0.925	-0.918	
OVER 355	-0.820	-0.820	-0.820	-0.799	-0.809	-0.813	-1.000	-1.000	-1.000	-0.979	-0.989	-0.993	
TO 400	-1.050	-0.960	-0.909	-0.856	-0.845	-0.838	-1.230	-1.140	-1.089	-1.036	-1.025	-1.018	
OVER 400	-0.920	-0.920	-0.920	-0.897	-0.907	-0.913	-1.100	-1.100	-1.100	-1.077	-1.087	-1.093	
TO 450	-1.170	-1.075	-1.017	-0.960	-0.947	-0.940	-1.350	-1.255	-1.197	-1.140	-1.127	-1.120	
OVER 450	-1.000	-1.000	-1.000	-0.977	-0.987	-0.993	-1.250	-1.250	-1.250	-1.227	-1.237	-1.243	
TO 500	-1.250	-1.155	-1.097	-1.040	-1.027	-1.020	-1.500	-1.405	-1.347	-1.290	-1.277	-1.270	

**TABLE 6-18 TOLERANCE ZONES - EXTERNAL DIMENSIONS (SHAFTS) (a14 ... a9, b14 ... b9) (ANSI B4.2)**

mm

SIZE	a14	a13	a12	a11	a10	a9	b14	b13	b12	b11	b10	b9
OVER 0	-0.270	-0.270	-0.270	-0.270	-0.270	-0.270	-0.140	-0.140	-0.140	-0.140	-0.140	-0.140
TO 3	-0.520	-0.410	-0.370	-0.330	-0.310	-0.295	-0.390	-0.280	-0.240	-0.200	-0.180	-0.165
OVER 3	-0.270	-0.270	-0.270	-0.270	-0.270	-0.270	-0.140	-0.140	-0.140	-0.140	-0.140	-0.140
TO 6	-0.570	-0.450	-0.390	-0.345	-0.318	-0.300	-0.440	-0.320	-0.260	-0.215	-0.188	-0.170
OVER 6	-0.280	-0.280	-0.280	-0.280	-0.280	-0.280	-0.150	-0.150	-0.150	-0.150	-0.150	-0.150
TO 10	-0.640	-0.500	-0.430	-0.370	-0.338	-0.316	-0.510	-0.370	-0.300	-0.240	-0.208	-0.186
OVER 10	-0.290	-0.290	-0.290	-0.290	-0.290	-0.290	-0.150	-0.150	-0.150	-0.150	-0.150	-0.150
TO 14	-0.720	-0.560	-0.470	-0.400	-0.360	-0.333	-0.580	-0.420	-0.330	-0.260	-0.220	-0.193
OVER 14	-0.290	-0.290	-0.290	-0.290	-0.290	-0.290	-0.150	-0.150	-0.150	-0.150	-0.150	-0.150
TO 18	-0.720	-0.560	-0.470	-0.400	-0.360	-0.333	-0.580	-0.420	-0.330	-0.260	-0.220	-0.193
OVER 18	-0.300	-0.300	-0.300	-0.300	-0.300	-0.300	-0.160	-0.160	-0.160	-0.160	-0.160	-0.160
TO 24	-0.820	-0.630	-0.510	-0.430	-0.384	-0.352	-0.680	-0.490	-0.370	-0.290	-0.244	-0.212
OVER 24	-0.300	-0.300	-0.300	-0.300	-0.300	-0.300	-0.160	-0.160	-0.160	-0.160	-0.160	-0.160
TO 30	-0.820	-0.630	-0.510	-0.430	-0.384	-0.352	-0.680	-0.490	-0.370	-0.290	-0.244	-0.212
OVER 30	-0.310	-0.310	-0.310	-0.310	-0.310	-0.310	-0.170	-0.170	-0.170	-0.170	-0.170	-0.170
TO 40	-0.930	-0.700	-0.560	-0.470	-0.410	-0.372	-0.790	-0.560	-0.420	-0.330	-0.270	-0.232
OVER 40	-0.320	-0.320	-0.320	-0.320	-0.320	-0.320	-0.180	-0.180	-0.180	-0.180	-0.180	-0.180
TO 50	-0.940	-0.710	-0.570	-0.480	-0.420	-0.382	-0.800	-0.570	-0.430	-0.340	-0.280	-0.242
OVER 50	-0.340	-0.340	-0.340	-0.340	-0.340	-0.340	-0.190	-0.190	-0.190	-0.190	-0.190	-0.190
TO 65	-1.080	-0.800	-0.640	-0.530	-0.460	-0.414	-0.930	-0.650	-0.490	-0.380	-0.310	-0.264
OVER 65	-0.360	-0.360	-0.360	-0.360	-0.360	-0.360	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200
TO 80	-1.100	-0.820	-0.660	-0.550	-0.480	-0.434	-0.940	-0.660	-0.500	-0.390	-0.320	-0.274
OVER 80	-0.380	-0.380	-0.380	-0.380	-0.380	-0.380	-0.220	-0.220	-0.220	-0.220	-0.220	-0.220
TO 100	-1.250	-0.920	-0.730	-0.600	-0.520	-0.467	-1.090	-0.760	-0.570	-0.440	-0.360	-0.307
OVER 100	-0.410	-0.410	-0.410	-0.410	-0.410	-0.410	-0.240	-0.240	-0.240	-0.240	-0.240	-0.240
TO 120	-1.280	-0.950	-0.760	-0.630	-0.550	-0.497	-1.110	-0.780	-0.590	-0.460	-0.380	-0.327
OVER 120	-0.460	-0.460	-0.460	-0.460	-0.460	-0.460	-0.260	-0.260	-0.260	-0.260	-0.260	-0.260
TO 140	-1.460	-1.090	-0.860	-0.710	-0.620	-0.560	-1.260	-0.890	-0.660	-0.510	-0.420	-0.360
OVER 140	-0.520	-0.520	-0.520	-0.520	-0.520	-0.520	-0.280	-0.280	-0.280	-0.280	-0.280	-0.280
TO 160	-1.520	-1.150	-0.920	-0.770	-0.680	-0.620	-1.280	-0.910	-0.680	-0.530	-0.440	-0.380
OVER 160	-0.580	-0.580	-0.580	-0.580	-0.580	-0.580	-0.310	-0.310	-0.310	-0.310	-0.310	-0.310
TO 180	-1.580	-1.210	-0.980	-0.830	-0.740	-0.680	-1.310	-0.940	-0.710	-0.560	-0.470	-0.410
OVER 180	-0.660	-0.660	-0.660	-0.660	-0.660	-0.660	-0.340	-0.340	-0.340	-0.340	-0.340	-0.340
TO 200	-1.810	-1.380	-1.120	-0.950	-0.845	-0.775	-1.490	-1.060	-0.800	-0.630	-0.525	-0.455
OVER 200	-0.740	-0.740	-0.740	-0.740	-0.740	-0.740	-0.380	-0.380	-0.380	-0.380	-0.380	-0.380
TO 225	-1.890	-1.460	-1.200	-1.030	-0.925	-0.855	-1.530	-1.100	-0.840	-0.670	-0.565	-0.495
OVER 225	-0.820	-0.820	-0.820	-0.820	-0.820	-0.820	-0.420	-0.420	-0.420	-0.420	-0.420	-0.420
TO 250	-1.970	-1.540	-1.280	-1.110	-1.005	-0.935	-1.570	-1.140	-0.880	-0.710	-0.605	-0.535
OVER 250	-0.920	-0.920	-0.920	-0.920	-0.920	-0.920	-0.480	-0.480	-0.480	-0.480	-0.480	-0.480
TO 280	-2.220	-1.730	-1.440	-1.240	-1.130	-1.050	-1.780	-1.290	-1.000	-0.800	-0.690	-0.610
OVER 280	-1.050	-1.050	-1.050	-1.050	-1.050	-1.050	-0.540	-0.540	-0.540	-0.540	-0.540	-0.540
TO 315	-2.350	-1.860	-1.570	-1.370	-1.260	-1.180	-1.840	-1.350	-1.060	-0.860	-0.750	-0.670
OVER 315	-1.200	-1.200	-1.200	-1.200	-1.200	-1.200	-0.600	-0.600	-0.600	-0.600	-0.600	-0.600
TO 355	-2.600	-2.090	-1.770	-1.560	-1.430	-1.340	-2.000	-1.490	-1.170	-0.960	-0.830	-0.740
OVER 355	-1.350	-1.350	-1.350	-1.350	-1.350	-1.350	-0.680	-0.680	-0.680	-0.680	-0.680	-0.680
TO 400	-2.750	-2.240	-1.920	-1.710	-1.580	-1.490	-2.080	-1.570	-1.250	-1.040	-0.910	-0.820
OVER 400	-1.500	-1.500	-1.500	-1.500	-1.500	-1.500	-0.760	-0.760	-0.760	-0.760	-0.760	-0.760
TO 450	-3.050	-2.470	-2.130	-1.900	-1.750	-1.655	-2.310	-1.730	-1.390	-1.160	-1.010	-0.915
OVER 450	-1.650	-1.650	-1.650	-1.650	-1.650	-1.650	-0.840	-0.840	-0.840	-0.840	-0.840	-0.840
TO 500	-3.200	-2.620	-2.280	-2.050	-1.900	-1.805	-2.390	-1.810	-1.470	-1.240	-1.090	-0.995

**TABLE 6-19 TOLERANCE ZONES - EXTERNAL DIMENSIONS (SHAFTS) (c13 ... c8, d12 ... d7) (ANSI B4.2)**

mm

SIZE		c13	c12	c11	c10	c9	c8	d12	d11	d10	d9	d8	d7
OVER	0	-0.060	-0.060	-0.060	-0.060	-0.060	-0.060	-0.020	-0.020	-0.020	-0.020	-0.020	-0.020
TO	3	-0.200	-0.160	-0.120	-0.100	-0.085	-0.074	-0.120	-0.080	-0.060	-0.045	-0.034	-0.030
OVER	3	-0.070	-0.070	-0.070	-0.070	-0.070	-0.070	-0.030	-0.030	-0.030	-0.030	-0.030	-0.030
TO	6	-0.250	-0.190	-0.145	-0.118	-0.100	-0.088	-0.150	-0.105	-0.078	-0.060	-0.048	-0.042
OVER	6	-0.080	-0.080	-0.080	-0.080	-0.080	-0.080	-0.040	-0.040	-0.040	-0.040	-0.040	-0.040
TO	10	-0.300	-0.230	-0.170	-0.138	-0.116	-0.102	-0.190	-0.130	-0.098	-0.076	-0.062	-0.055
OVER	10	-0.095	-0.095	-0.095	-0.095	-0.095	-0.095	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050
TO	14	-0.365	-0.275	-0.205	-0.165	-0.138	-0.122	-0.230	-0.160	-0.120	-0.093	-0.077	-0.068
OVER	14	-0.095	-0.095	-0.095	-0.095	-0.095	-0.095	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050
TO	18	-0.365	-0.275	-0.205	-0.165	-0.138	-0.122	-0.230	-0.160	-0.120	-0.093	-0.077	-0.068
OVER	18	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.065	-0.065	-0.065	-0.065	-0.065	-0.065
TO	24	-0.440	-0.320	-0.240	-0.194	-0.162	-0.143	-0.275	-0.195	-0.149	-0.117	-0.098	-0.086
OVER	24	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.065	-0.065	-0.065	-0.065	-0.065	-0.065
TO	30	-0.440	-0.320	-0.240	-0.194	-0.162	-0.143	-0.275	-0.195	-0.149	-0.117	-0.098	-0.086
OVER	30	-0.120	-0.120	-0.120	-0.120	-0.120	-0.120	-0.080	-0.080	-0.080	-0.080	-0.080	-0.080
TO	40	-0.510	-0.370	-0.280	-0.220	-0.182	-0.159	-0.330	-0.240	-0.180	-0.142	-0.119	-0.105
OVER	40	-0.130	-0.130	-0.130	-0.130	-0.130	-0.130	-0.080	-0.080	-0.080	-0.080	-0.080	-0.080
TO	50	-0.520	-0.380	-0.290	-0.230	-0.192	-0.169	-0.330	-0.240	-0.180	-0.142	-0.119	-0.105
OVER	50	-0.140	-0.140	-0.140	-0.140	-0.140	-0.140	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
TO	65	-0.600	-0.440	-0.330	-0.260	-0.214	-0.186	-0.400	-0.290	-0.220	-0.174	-0.146	-0.130
OVER	65	-0.150	-0.150	-0.150	-0.150	-0.150	-0.150	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100
TO	80	-0.610	-0.450	-0.340	-0.270	-0.224	-0.196	-0.400	-0.290	-0.220	-0.174	-0.146	-0.130
OVER	80	-0.170	-0.170	-0.170	-0.170	-0.170	-0.170	-0.120	-0.120	-0.120	-0.120	-0.120	-0.120
TO	100	-0.710	-0.520	-0.390	-0.310	-0.257	-0.224	-0.470	-0.340	-0.260	-0.207	-0.174	-0.155
OVER	100	-0.180	-0.180	-0.180	-0.180	-0.180	-0.180	-0.120	-0.120	-0.120	-0.120	-0.120	-0.120
TO	120	-0.720	-0.530	-0.400	-0.320	-0.267	-0.234	-0.470	-0.340	-0.260	-0.207	-0.174	-0.155
OVER	120	-0.200	-0.200	-0.200	-0.200	-0.200	-0.200	-0.145	-0.145	-0.145	-0.145	-0.145	-0.145
TO	140	-0.830	-0.600	-0.450	-0.360	-0.300	-0.263	-0.545	-0.395	-0.305	-0.245	-0.208	-0.185
OVER	140	-0.210	-0.210	-0.210	-0.210	-0.210	-0.210	-0.145	-0.145	-0.145	-0.145	-0.145	-0.145
TO	160	-0.840	-0.610	-0.460	-0.370	-0.310	-0.273	-0.545	-0.395	-0.305	-0.245	-0.208	-0.185
OVER	160	-0.230	-0.230	-0.230	-0.230	-0.230	-0.230	-0.145	-0.145	-0.145	-0.145	-0.145	-0.145
TO	180	-0.860	-0.630	-0.480	-0.390	-0.330	-0.293	-0.545	-0.395	-0.305	-0.245	-0.208	-0.185
OVER	180	-0.240	-0.240	-0.240	-0.240	-0.240	-0.240	-0.170	-0.170	-0.170	-0.170	-0.170	-0.170
TO	200	-0.960	-0.700	-0.530	-0.425	-0.355	-0.312	-0.630	-0.460	-0.355	-0.285	-0.242	-0.216
OVER	200	-0.260	-0.260	-0.260	-0.260	-0.260	-0.260	-0.170	-0.170	-0.170	-0.170	-0.170	-0.170
TO	225	-0.980	-0.720	-0.550	-0.445	-0.375	-0.332	-0.630	-0.460	-0.355	-0.285	-0.242	-0.216
OVER	225	-0.280	-0.280	-0.280	-0.280	-0.280	-0.280	-0.170	-0.170	-0.170	-0.170	-0.170	-0.170
TO	250	-1.000	-0.740	-0.570	-0.465	-0.395	-0.352	-0.630	-0.460	-0.355	-0.285	-0.242	-0.216
OVER	250	-0.300	-0.300	-0.300	-0.300	-0.300	-0.300	-0.190	-0.190	-0.190	-0.190	-0.190	-0.190
TO	280	-1.110	-0.820	-0.620	-0.510	-0.430	-0.381	-0.710	-0.510	-0.400	-0.320	-0.271	-0.242
OVER	280	-0.330	-0.330	-0.330	-0.330	-0.330	-0.330	-0.190	-0.190	-0.190	-0.190	-0.190	-0.190
TO	315	-1.140	-0.850	-0.650	-0.540	-0.460	-0.411	-0.710	-0.510	-0.400	-0.320	-0.271	-0.242
OVER	315	-0.360	-0.360	-0.360	-0.360	-0.360	-0.360	-0.210	-0.210	-0.210	-0.210	-0.210	-0.210
TO	355	-1.250	-0.930	-0.720	-0.590	-0.500	-0.449	-0.780	-0.570	-0.440	-0.350	-0.299	-0.267
OVER	355	-0.400	-0.400	-0.400	-0.400	-0.400	-0.400	-0.210	-0.210	-0.210	-0.210	-0.210	-0.210
TO	400	-1.290	-0.970	-0.760	-0.630	-0.540	-0.489	-0.780	-0.570	-0.440	-0.350	-0.299	-0.267
OVER	400	-0.440	-0.440	-0.440	-0.440	-0.440	-0.440	-0.230	-0.230	-0.230	-0.230	-0.230	-0.230
TO	450	-1.410	-1.070	-0.840	-0.690	-0.595	-0.537	-0.860	-0.630	-0.480	-0.385	-0.327	-0.293
OVER	450	-0.480	-0.480	-0.480	-0.480	-0.480	-0.480	-0.230	-0.230	-0.230	-0.230	-0.230	-0.230
TO	500	-1.450	-1.110	-0.880	-0.730	-0.635	-0.577	-0.860	-0.630	-0.480	-0.385	-0.327	-0.293

**TABLE 6-20 TOLERANCE ZONES - EXTERNAL DIMENSIONS (SHAFTS) (e11 ... e6, f10 ... f5) (ANSI B4.2)**

mm

SIZE	e11	e10	e9	e8	e7	e6	f10	f9	f8	f7	f6	f5
OVER 0	-0.014	-0.014	-0.014	-0.014	-0.014	-0.014	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006
TO 3	-0.074	-0.054	-0.039	-0.028	-0.024	-0.020	-0.046	-0.031	-0.020	-0.016	-0.012	-0.010
OVER 3	-0.020	-0.020	-0.020	-0.020	-0.020	-0.020	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010
TO 6	-0.095	-0.068	-0.050	-0.038	-0.032	-0.028	-0.058	-0.040	-0.028	-0.022	-0.018	-0.015
OVER 6	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025	-0.013	-0.013	-0.013	-0.013	-0.013	-0.013
TO 10	-0.115	-0.083	-0.061	-0.047	-0.040	-0.034	-0.071	-0.049	-0.035	-0.028	-0.022	-0.019
OVER 10	-0.032	-0.032	-0.032	-0.032	-0.032	-0.032	-0.016	-0.016	-0.016	-0.016	-0.016	-0.016
TO 14	-0.142	-0.102	-0.075	-0.059	-0.050	-0.043	-0.086	-0.059	-0.043	-0.034	-0.027	-0.024
OVER 14	-0.032	-0.032	-0.032	-0.032	-0.032	-0.032	-0.016	-0.016	-0.016	-0.016	-0.016	-0.016
TO 18	-0.142	-0.102	-0.075	-0.059	-0.050	-0.043	-0.086	-0.059	-0.043	-0.034	-0.027	-0.024
OVER 18	-0.040	-0.040	-0.040	-0.040	-0.040	-0.040	-0.020	-0.020	-0.020	-0.020	-0.020	-0.020
TO 24	-0.170	-0.124	-0.092	-0.073	-0.061	-0.053	-0.104	-0.072	-0.053	-0.041	-0.033	-0.029
OVER 24	-0.040	-0.040	-0.040	-0.040	-0.040	-0.040	-0.020	-0.020	-0.020	-0.020	-0.020	-0.020
TO 30	-0.170	-0.124	-0.092	-0.073	-0.061	-0.053	-0.104	-0.072	-0.053	-0.041	-0.033	-0.029
OVER 30	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025
TO 40	-0.210	-0.150	-0.112	-0.089	-0.075	-0.066	-0.125	-0.087	-0.064	-0.050	-0.041	-0.036
OVER 40	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050	-0.025	-0.025	-0.025	-0.025	-0.025	-0.025
TO 50	-0.210	-0.150	-0.112	-0.089	-0.075	-0.066	-0.125	-0.087	-0.064	-0.050	-0.041	-0.036
OVER 50	-0.060	-0.060	-0.060	-0.060	-0.060	-0.060	-0.030	-0.030	-0.030	-0.030	-0.030	-0.030
TO 65	-0.250	-0.180	-0.134	-0.106	-0.090	-0.079	-0.150	-0.104	-0.076	-0.060	-0.049	-0.043
OVER 65	-0.060	-0.060	-0.060	-0.060	-0.060	-0.060	-0.030	-0.030	-0.030	-0.030	-0.030	-0.030
TO 80	-0.250	-0.180	-0.134	-0.106	-0.090	-0.079	-0.150	-0.104	-0.076	-0.060	-0.049	-0.043
OVER 80	-0.072	-0.072	-0.072	-0.072	-0.072	-0.072	-0.036	-0.036	-0.036	-0.036	-0.036	-0.036
TO 100	-0.292	-0.212	-0.159	-0.126	-0.107	-0.094	-0.176	-0.123	-0.090	-0.071	-0.058	-0.051
OVER 100	-0.072	-0.072	-0.072	-0.072	-0.072	-0.072	-0.036	-0.036	-0.036	-0.036	-0.036	-0.036
TO 120	-0.292	-0.212	-0.159	-0.126	-0.107	-0.094	-0.176	-0.123	-0.090	-0.071	-0.058	-0.051
OVER 120	-0.085	-0.085	-0.085	-0.085	-0.085	-0.085	-0.043	-0.043	-0.043	-0.043	-0.043	-0.043
TO 140	-0.335	-0.245	-0.185	-0.148	-0.125	-0.110	-0.203	-0.143	-0.106	-0.083	-0.068	-0.061
OVER 140	-0.085	-0.085	-0.085	-0.085	-0.085	-0.085	-0.043	-0.043	-0.043	-0.043	-0.043	-0.043
TO 160	-0.335	-0.245	-0.185	-0.148	-0.125	-0.110	-0.203	-0.143	-0.106	-0.083	-0.068	-0.061
OVER 160	-0.085	-0.085	-0.085	-0.085	-0.085	-0.085	-0.043	-0.043	-0.043	-0.043	-0.043	-0.043
TO 180	-0.335	-0.245	-0.185	-0.148	-0.125	-0.110	-0.203	-0.143	-0.106	-0.083	-0.068	-0.061
OVER 180	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050
TO 200	-0.390	-0.285	-0.215	-0.172	-0.146	-0.129	-0.235	-0.165	-0.122	-0.096	-0.079	-0.070
OVER 200	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050
TO 225	-0.390	-0.285	-0.215	-0.172	-0.146	-0.129	-0.235	-0.165	-0.122	-0.096	-0.079	-0.070
OVER 225	-0.100	-0.100	-0.100	-0.100	-0.100	-0.100	-0.050	-0.050	-0.050	-0.050	-0.050	-0.050
TO 250	-0.390	-0.285	-0.215	-0.172	-0.146	-0.129	-0.235	-0.165	-0.122	-0.096	-0.079	-0.070
OVER 250	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.056	-0.056	-0.056	-0.056	-0.056	-0.056
TO 280	-0.430	-0.320	-0.240	-0.191	-0.162	-0.142	-0.266	-0.186	-0.137	-0.108	-0.088	-0.079
OVER 280	-0.110	-0.110	-0.110	-0.110	-0.110	-0.110	-0.056	-0.056	-0.056	-0.056	-0.056	-0.056
TO 315	-0.430	-0.320	-0.240	-0.191	-0.162	-0.142	-0.266	-0.186	-0.137	-0.108	-0.088	-0.079
OVER 315	-0.125	-0.125	-0.125	-0.125	-0.125	-0.125	-0.062	-0.062	-0.062	-0.062	-0.062	-0.062
TO 355	-0.485	-0.355	-0.265	-0.214	-0.182	-0.161	-0.292	-0.202	-0.151	-0.119	-0.098	-0.087
OVER 355	-0.125	-0.125	-0.125	-0.125	-0.125	-0.125	-0.062	-0.062	-0.062	-0.062	-0.062	-0.062
TO 400	-0.485	-0.355	-0.265	-0.214	-0.182	-0.161	-0.292	-0.202	-0.151	-0.119	-0.098	-0.087
OVER 400	-0.135	-0.135	-0.135	-0.135	-0.135	-0.135	-0.068	-0.068	-0.068	-0.068	-0.068	-0.068
TO 450	-0.535	-0.385	-0.290	-0.232	-0.198	-0.175	-0.318	-0.223	-0.165	-0.131	-0.108	-0.095
OVER 450	-0.135	-0.135	-0.135	-0.135	-0.135	-0.135	-0.068	-0.068	-0.068	-0.068	-0.068	-0.068
TO 500	-0.535	-0.385	-0.290	-0.232	-0.198	-0.175	-0.318	-0.223	-0.165	-0.131	-0.108	-0.095

**TABLE 6-21 TOLERANCE ZONES - EXTERNAL DIMENSIONS (SHAFTS) (g9 ... g4, j7 ... j5) (ANSI B4.2)**

mm

SIZE		g9	g8	g7	g6	g5	g4	j7	j6	j5
OVER	0	-0.002	-0.002	-0.002	-0.002	-0.002	-0.002	0.006	0.004	0.002
TO	3	-0.027	-0.016	-0.012	-0.008	-0.006	-0.005	-0.004	-0.002	-0.002
OVER	3	-0.004	-0.004	-0.004	-0.004	-0.004	-0.004	0.008	0.006	0.003
TO	6	-0.034	-0.022	-0.016	-0.012	-0.009	-0.008	-0.004	-0.002	-0.002
OVER	6	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.010	0.007	0.004
TO	10	-0.041	-0.027	-0.020	-0.014	-0.011	-0.009	-0.005	-0.002	-0.002
OVER	10	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006	0.012	0.008	0.005
TO	14	-0.049	-0.033	-0.024	-0.017	-0.014	-0.011	-0.006	-0.003	-0.003
OVER	14	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006	0.012	0.008	0.005
TO	18	-0.049	-0.033	-0.024	-0.017	-0.014	-0.011	-0.006	-0.003	-0.003
OVER	18	-0.007	-0.007	-0.007	-0.007	-0.007	-0.007	0.013	0.009	0.005
TO	24	-0.059	-0.040	-0.028	-0.020	-0.016	-0.013	-0.008	-0.004	-0.004
OVER	24	-0.007	-0.007	-0.007	-0.007	-0.007	-0.007	0.013	0.009	0.005
TO	30	-0.059	-0.040	-0.028	-0.020	-0.016	-0.013	-0.008	-0.004	-0.004
OVER	30	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009	0.015	0.011	0.006
TO	40	-0.071	-0.048	-0.034	-0.025	-0.020	-0.016	-0.010	-0.005	-0.005
OVER	40	-0.009	-0.009	-0.009	-0.009	-0.009	-0.009	0.015	0.011	0.006
TO	50	-0.071	-0.048	-0.034	-0.025	-0.020	-0.016	-0.010	-0.005	-0.005
OVER	50	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.018	0.012	0.006
TO	65	-0.084	-0.056	-0.040	-0.029	-0.023	-0.018	-0.012	-0.007	-0.007
OVER	65	-0.010	-0.010	-0.010	-0.010	-0.010	-0.010	0.018	0.012	0.006
TO	80	-0.084	-0.056	-0.040	-0.029	-0.023	-0.018	-0.012	-0.007	-0.007
OVER	80	-0.012	-0.012	-0.012	-0.012	-0.012	-0.012	0.020	0.013	0.006
TO	100	-0.099	-0.066	-0.047	-0.034	-0.027	-0.022	-0.015	-0.009	-0.009
OVER	100	-0.012	-0.012	-0.012	-0.012	-0.012	-0.012	0.020	0.013	0.006
TO	120	-0.099	-0.066	-0.047	-0.034	-0.027	-0.022	-0.015	-0.009	-0.009
OVER	120	-0.014	-0.014	-0.014	-0.014	-0.014	-0.014	0.022	0.014	0.007
TO	140	-0.114	-0.077	-0.054	-0.039	-0.032	-0.026	-0.018	-0.011	-0.011
OVER	140	-0.014	-0.014	-0.014	-0.014	-0.014	-0.014	0.022	0.014	0.007
TO	160	-0.114	-0.077	-0.054	-0.039	-0.032	-0.026	-0.018	-0.011	-0.011
OVER	160	-0.014	-0.014	-0.014	-0.014	-0.014	-0.014	0.022	0.014	0.007
TO	180	-0.114	-0.077	-0.054	-0.039	-0.032	-0.026	-0.018	-0.011	-0.011
OVER	180	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	0.025	0.016	0.007
TO	200	-0.130	-0.087	-0.061	-0.044	-0.035	-0.029	-0.021	-0.013	-0.013
OVER	200	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	0.025	0.016	0.007
TO	225	-0.130	-0.087	-0.061	-0.044	-0.035	-0.029	-0.021	-0.013	-0.013
OVER	225	-0.015	-0.015	-0.015	-0.015	-0.015	-0.015	0.025	0.016	0.007
TO	250	-0.130	-0.087	-0.061	-0.044	-0.035	-0.029	-0.021	-0.013	-0.013
OVER	250	-0.017	-0.017	-0.017	-0.017	-0.017	-0.017	0.026	0.016	0.007
TO	280	-0.147	-0.098	-0.069	-0.049	-0.040	-0.033	-0.026	-0.016	-0.016
OVER	280	-0.017	-0.017	-0.017	-0.017	-0.017	-0.017	0.026	0.016	0.007
TO	315	-0.147	-0.098	-0.069	-0.049	-0.040	-0.033	-0.026	-0.016	-0.016
OVER	315	-0.018	-0.018	-0.018	-0.018	-0.018	-0.018	0.029	0.018	0.007
TO	355	-0.158	-0.107	-0.075	-0.054	-0.043	-0.036	-0.028	-0.018	-0.018
OVER	355	-0.018	-0.018	-0.018	-0.018	-0.018	-0.018	0.029	0.018	0.007
TO	400	-0.158	-0.107	-0.075	-0.054	-0.043	-0.036	-0.028	-0.018	-0.018
OVER	400	-0.020	-0.020	-0.020	-0.020	-0.020	-0.020	0.031	0.020	0.007
TO	450	-0.175	-0.117	-0.083	-0.060	-0.047	-0.040	-0.032	-0.020	-0.020
OVER	450	-0.020	-0.020	-0.020	-0.020	-0.020	-0.020	0.031	0.020	0.007
TO	500	-0.175	-0.117	-0.083	-0.060	-0.047	-0.040	-0.032	-0.020	-0.020



**TABLE 6-22 TOLERANCE ZONES - EXTERNAL DIMENSIONS (SHAFTS) (h16 ... h1) (ANSI B4.2)**

mm

SIZE	h16	h15	h14	h13	h12	h11	h10	h9	h8	h7	h6	h5	h4	h3	h2	h1
OVER 0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 3	-0.600	-0.400	-0.250	-0.140	-0.100	-0.060	-0.040	-0.025	-0.014	-0.010	-0.006	-0.004	-0.003	-0.002	-0.0012	-0.0008
OVER 3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 6	-0.750	-0.480	-0.300	-0.180	-0.120	-0.075	-0.048	-0.030	-0.018	-0.012	-0.008	-0.005	-0.004	-0.003	-0.0015	-0.0010
OVER 6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 10	-0.900	-0.580	-0.360	-0.220	-0.150	-0.090	-0.058	-0.036	-0.022	-0.015	-0.009	-0.006	-0.004	-0.003	-0.0015	-0.0010
OVER 10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 14	-1.100	-0.700	-0.430	-0.270	-0.180	-0.110	-0.070	-0.043	-0.027	-0.018	-0.011	-0.008	-0.005	-0.003	-0.0020	-0.0012
OVER 14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 18	-1.100	-0.700	-0.430	-0.270	-0.180	-0.110	-0.070	-0.043	-0.027	-0.018	-0.011	-0.008	-0.005	-0.003	-0.0020	-0.0012
OVER 18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 24	-1.300	-0.840	-0.520	-0.330	-0.210	-0.130	-0.084	-0.052	-0.033	-0.021	-0.013	-0.009	-0.006	-0.004	-0.0025	-0.0015
OVER 24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 30	-1.300	-0.840	-0.520	-0.330	-0.210	-0.130	-0.084	-0.052	-0.033	-0.021	-0.013	-0.009	-0.006	-0.004	-0.0025	-0.0015
OVER 30	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 40	-1.600	-1.000	-0.620	-0.390	-0.250	-0.160	-0.100	-0.062	-0.039	-0.025	-0.016	-0.011	-0.007	-0.004	-0.0025	-0.0015
OVER 40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 50	-1.600	-1.000	-0.620	-0.390	-0.250	-0.160	-0.100	-0.062	-0.039	-0.025	-0.016	-0.011	-0.007	-0.004	-0.0025	-0.0015
OVER 50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 65	-1.900	-1.200	-0.740	-0.460	-0.300	-0.190	-0.120	-0.074	-0.046	-0.030	-0.019	-0.013	-0.008	-0.005	-0.0030	-0.0020
OVER 65	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 80	-1.900	-1.200	-0.740	-0.460	-0.300	-0.190	-0.120	-0.074	-0.046	-0.030	-0.019	-0.013	-0.008	-0.005	-0.0030	-0.0020
OVER 80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 100	-2.200	-1.400	-0.870	-0.540	-0.350	-0.220	-0.140	-0.087	-0.054	-0.035	-0.022	-0.015	-0.010	-0.006	-0.0040	-0.0025
OVER 100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 120	-2.200	-1.400	-0.870	-0.540	-0.350	-0.220	-0.140	-0.087	-0.054	-0.035	-0.022	-0.015	-0.010	-0.006	-0.0040	-0.0025
OVER 120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 140	-2.500	-1.600	-1.000	-0.630	-0.400	-0.250	-0.160	-0.100	-0.063	-0.040	-0.025	-0.018	-0.012	-0.008	-0.0050	-0.0035
OVER 140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 160	-2.500	-1.600	-1.000	-0.630	-0.400	-0.250	-0.160	-0.100	-0.063	-0.040	-0.025	-0.018	-0.012	-0.008	-0.0050	-0.0035
OVER 160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 180	-2.500	-1.600	-1.000	-0.630	-0.400	-0.250	-0.160	-0.100	-0.063	-0.040	-0.025	-0.018	-0.012	-0.008	-0.0050	-0.0035
OVER 180	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 200	-2.900	-1.850	-1.150	-0.720	-0.460	-0.290	-0.185	-0.115	-0.072	-0.046	-0.029	-0.020	-0.014	-0.010	-0.0070	-0.0045
OVER 200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 225	-2.900	-1.850	-1.150	-0.720	-0.460	-0.290	-0.185	-0.115	-0.072	-0.046	-0.029	-0.020	-0.014	-0.010	-0.0070	-0.0045
OVER 225	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 250	-2.900	-1.850	-1.150	-0.720	-0.460	-0.290	-0.185	-0.115	-0.072	-0.046	-0.029	-0.020	-0.014	-0.010	-0.0070	-0.0045
OVER 250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 280	-3.200	-2.100	-1.300	-0.810	-0.520	-0.320	-0.210	-0.130	-0.081	-0.052	-0.032	-0.023	-0.016	-0.012	-0.0080	-0.0060
OVER 280	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 315	-3.200	-2.100	-1.300	-0.810	-0.520	-0.320	-0.210	-0.130	-0.081	-0.052	-0.032	-0.023	-0.016	-0.012	-0.0080	-0.0060
OVER 315	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 355	-3.600	-2.300	-1.400	-0.890	-0.570	-0.360	-0.230	-0.140	-0.089	-0.057	-0.036	-0.025	-0.018	-0.013	-0.0090	-0.0070
OVER 355	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 400	-3.600	-2.300	-1.400	-0.890	-0.570	-0.360	-0.230	-0.140	-0.089	-0.057	-0.036	-0.025	-0.018	-0.013	-0.0090	-0.0070
OVER 400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 450	-4.000	-2.500	-1.550	-0.970	-0.630	-0.400	-0.250	-0.155	-0.097	-0.063	-0.040	-0.027	-0.020	-0.015	-0.0100	-0.0080
OVER 450	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000
TO 500	-4.000	-2.500	-1.550	-0.970	-0.630	-0.400	-0.250	-0.155	-0.097	-0.063	-0.040	-0.027	-0.020	-0.015	-0.0100	-0.0080

**TABLE 6-23 TOLERANCE ZONES - EXTERNAL DIMENSIONS (SHAFTS) (js16 ... js1) (ANSI B4.2)**

mm

SIZE	js16	js15	js14	js13	js12	js11	js10	js9	js8	js7	js6	js5	js4	js3	js2	js1
<b>OVER 0</b>	0.300	0.200	0.125	0.070	0.050	0.030	0.0200	0.0125	0.0070	0.0050	0.0030	0.0020	0.0015	0.00100	0.00060	0.00040
<b>TO 3</b>	-0.300	-0.200	-0.125	-0.070	-0.050	-0.030	-0.0200	-0.0125	-0.0070	-0.0050	-0.0030	-0.0020	-0.0015	-0.00100	-0.00060	-0.00040
<b>OVER 3</b>	0.375	0.240	0.150	0.090	0.060	0.0375	0.0240	0.0150	0.0090	0.0060	0.0040	0.0025	0.0020	0.00125	0.00075	0.00050
<b>TO 6</b>	-0.375	-0.240	-0.150	-0.090	-0.060	-0.0375	-0.0240	-0.0150	-0.0090	-0.0060	-0.0040	-0.0025	-0.0020	-0.00125	-0.00075	-0.00050
<b>OVER 6</b>	0.450	0.290	0.180	0.110	0.075	0.045	0.0290	0.0180	0.0110	0.0075	0.0045	0.0030	0.0020	0.00125	0.00075	0.00050
<b>TO 10</b>	-0.450	-0.290	-0.180	-0.110	-0.075	-0.045	-0.0290	-0.0180	-0.0110	-0.0075	-0.0045	-0.0030	-0.0020	-0.00125	-0.00075	-0.00050
<b>OVER 10</b>	0.550	0.350	0.215	0.135	0.090	0.055	0.0350	0.0215	0.0135	0.0090	0.0055	0.0040	0.0025	0.00150	0.00100	0.00060
<b>TO 14</b>	-0.550	-0.350	-0.215	-0.135	-0.090	-0.055	-0.0350	-0.0215	-0.0135	-0.0090	-0.0055	-0.0040	-0.0025	-0.00150	-0.00100	-0.00060
<b>OVER 14</b>	0.550	0.350	0.215	0.135	0.090	0.055	0.0350	0.0215	0.0135	0.0090	0.0055	0.0040	0.0025	0.00150	0.00100	0.00060
<b>TO 18</b>	-0.550	-0.350	-0.215	-0.135	-0.090	-0.055	-0.0350	-0.0215	-0.0135	-0.0090	-0.0055	-0.0040	-0.0025	-0.00150	-0.00100	-0.00060
<b>OVER 18</b>	0.650	0.420	0.260	0.165	0.105	0.065	0.0420	0.0260	0.0165	0.0105	0.0065	0.0045	0.0030	0.00200	0.00125	0.00075
<b>TO 24</b>	-0.650	-0.420	-0.260	-0.165	-0.105	-0.065	-0.0420	-0.0260	-0.0165	-0.0105	-0.0065	-0.0045	-0.0030	-0.00200	-0.00125	-0.00075
<b>OVER 24</b>	0.650	0.420	0.260	0.165	0.105	0.065	0.0420	0.0260	0.0165	0.0105	0.0065	0.0045	0.0030	0.00200	0.00125	0.00075
<b>TO 30</b>	-0.650	-0.420	-0.260	-0.165	-0.105	-0.065	-0.0420	-0.0260	-0.0165	-0.0105	-0.0065	-0.0045	-0.0030	-0.00200	-0.00125	-0.00075
<b>OVER 30</b>	0.800	0.500	0.310	0.195	0.125	0.080	0.0500	0.0310	0.0195	0.0125	0.0080	0.0055	0.0035	0.00200	0.00125	0.00075
<b>TO 40</b>	-0.800	-0.500	-0.310	-0.195	-0.125	-0.080	-0.0500	-0.0310	-0.0195	-0.0125	-0.0080	-0.0055	-0.0035	-0.00200	-0.00125	-0.00075
<b>OVER 40</b>	0.800	0.500	0.310	0.195	0.125	0.080	0.0500	0.0310	0.0195	0.0125	0.0080	0.0055	0.0035	0.00200	0.00125	0.00075
<b>TO 50</b>	-0.800	-0.500	-0.310	-0.195	-0.125	-0.080	-0.0500	-0.0310	-0.0195	-0.0125	-0.0080	-0.0055	-0.0035	-0.00200	-0.00125	-0.00075
<b>OVER 50</b>	0.950	0.600	0.370	0.230	0.150	0.095	0.0600	0.0370	0.0230	0.0150	0.0095	0.0065	0.0040	0.00250	0.00150	0.00100
<b>TO 65</b>	-0.950	-0.600	-0.370	-0.230	-0.150	-0.095	-0.0600	-0.0370	-0.0230	-0.0150	-0.0095	-0.0065	-0.0040	-0.00250	-0.00150	-0.00100
<b>OVER 65</b>	0.950	0.600	0.370	0.230	0.150	0.095	0.0600	0.0370	0.0230	0.0150	0.0095	0.0065	0.0040	0.00250	0.00150	0.00100
<b>TO 80</b>	-0.950	-0.600	-0.370	-0.230	-0.150	-0.095	-0.0600	-0.0370	-0.0230	-0.0150	-0.0095	-0.0065	-0.0040	-0.00250	-0.00150	-0.00100
<b>OVER 80</b>	1.100	0.700	0.435	0.270	0.175	0.110	0.0700	0.0435	0.0270	0.0175	0.0110	0.0075	0.0050	0.00300	0.00200	0.00125
<b>TO 100</b>	-1.100	-0.700	-0.435	-0.270	-0.175	-0.110	-0.0700	-0.0435	-0.0270	-0.0175	-0.0110	-0.0075	-0.0050	-0.00300	-0.00200	-0.00125
<b>OVER 100</b>	1.100	0.700	0.435	0.270	0.175	0.110	0.0700	0.0435	0.0270	0.0175	0.0110	0.0075	0.0050	0.00300	0.00200	0.00125
<b>TO 120</b>	-1.100	-0.700	-0.435	-0.270	-0.175	-0.110	-0.0700	-0.0435	-0.0270	-0.0175	-0.0110	-0.0075	-0.0050	-0.00300	-0.00200	-0.00125
<b>OVER 120</b>	1.250	0.800	0.500	0.315	0.200	0.125	0.0800	0.0500	0.0315	0.0200	0.0125	0.0090	0.0060	0.00400	0.00250	0.00175
<b>TO 140</b>	-1.250	-0.800	-0.500	-0.315	-0.200	-0.125	-0.0800	-0.0500	-0.0315	-0.0200	-0.0125	-0.0090	-0.0060	-0.00400	-0.00250	-0.00175
<b>OVER 140</b>	1.250	0.800	0.500	0.315	0.200	0.125	0.0800	0.0500	0.0315	0.0200	0.0125	0.0090	0.0060	0.00400	0.00250	0.00175
<b>TO 160</b>	-1.250	-0.800	-0.500	-0.315	-0.200	-0.125	-0.0800	-0.0500	-0.0315	-0.0200	-0.0125	-0.0090	-0.0060	-0.00400	-0.00250	-0.00175
<b>OVER 160</b>	1.250	0.800	0.500	0.315	0.200	0.125	0.0800	0.0500	0.0315	0.0200	0.0125	0.0090	0.0060	0.00400	0.00250	0.00175
<b>TO 180</b>	-1.250	-0.800	-0.500	-0.315	-0.200	-0.125	-0.0800	-0.0500	-0.0315	-0.0200	-0.0125	-0.0090	-0.0060	-0.00400	-0.00250	-0.00175
<b>OVER 180</b>	1.450	0.925	0.575	0.360	0.230	0.145	0.0925	0.0575	0.0360	0.0230	0.0145	0.0100	0.0070	0.00500	0.00350	0.00225
<b>TO 200</b>	-1.450	-0.925	-0.575	-0.360	-0.230	-0.145	-0.0925	-0.0575	-0.0360	-0.0230	-0.0145	-0.0100	-0.0070	-0.00500	-0.00350	-0.00225
<b>OVER 200</b>	1.450	0.925	0.575	0.360	0.230	0.145	0.0925	0.0575	0.0360	0.0230	0.0145	0.0100	0.0070	0.00500	0.00350	0.00225
<b>TO 225</b>	-1.450	-0.925	-0.575	-0.360	-0.230	-0.145	-0.0925	-0.0575	-0.0360	-0.0230	-0.0145	-0.0100	-0.0070	-0.00500	-0.00350	-0.00225
<b>OVER 225</b>	1.450	0.925	0.575	0.360	0.230	0.145	0.0925	0.0575	0.0360	0.0230	0.0145	0.0100	0.0070	0.00500	0.00350	0.00225
<b>TO 250</b>	-1.450	-0.925	-0.575	-0.360	-0.230	-0.145	-0.0925	-0.0575	-0.0360	-0.0230	-0.0145	-0.0100	-0.0070	-0.00500	-0.00350	-0.00225
<b>OVER 250</b>	1.600	1.050	0.650	0.405	0.260	0.160	0.1050	0.0650	0.0405	0.0260	0.0160	0.0115	0.0080	0.00600	0.00400	0.00300
<b>TO 280</b>	-1.600	-1.050	-0.650	-0.405	-0.260	-0.160	-0.1050	-0.0650	-0.0405	-0.0260	-0.0160	-0.0115	-0.0080	-0.00600	-0.00400	-0.00300
<b>OVER 280</b>	1.600	1.050	0.650	0.405	0.260	0.160	0.1050	0.0650	0.0405	0.0260	0.0160	0.0115	0.0080	0.00600	0.00400	0.00300
<b>TO 315</b>	-1.600	-1.050	-0.650	-0.405	-0.260	-0.160	-0.1050	-0.0650	-0.0405	-0.0260	-0.0160	-0.0115	-0.0080	-0.00600	-0.00400	-0.00300
<b>OVER 315</b>	1.800	1.150	0.700	0.445	0.285	0.180	0.1150	0.0700	0.0445	0.0285	0.0180	0.0125	0.0090	0.00650	0.00450	0.00350
<b>TO 355</b>	-1.800	-1.150	-0.700	-0.445	-0.285	-0.180	-0.1150	-0.0700	-0.0445	-0.0285	-0.0180	-0.0125	-0.0090	-0.00650	-0.00450	-0.00350
<b>OVER 355</b>	1.800	1.150	0.700	0.445	0.285	0.180	0.1150	0.0700	0.0445	0.0285	0.0180	0.0125	0.0090	0.00650	0.00450	0.00350
<b>TO 400</b>	-1.800	-1.150	-0.700	-0.445	-0.285	-0.180	-0.1150	-0.0700	-0.0445	-0.0285	-0.0180	-0.0125	-0.0090	-0.00650	-0.00450	-0.00350
<b>OVER 400</b>	2.000	1.250	0.775	0.485	0.315	0.200	0.1250	0.0775	0.0485	0.0315	0.0200	0.0135	0.0100	0.00750	0.00500	0.00400
<b>TO 450</b>	-2.000	-1.250	-0.775	-0.485	-0.315	-0.200	-0.1250	-0.0775	-0.0485	-0.0315	-0.0200	-0.0135	-0.0100	-0.00750	-0.00500	-0.00400
<b>OVER 450</b>	2.000	1.250	0.775	0.485	0.315	0.200	0.1250	0.0775	0.0485	0.0315	0.0200	0.0135	0.0100	0.00750	0.00500	0.00400
<b>TO 500</b>	-2.000	-1.250	-0.775	-0.485	-0.315	-0.200	-0.1250	-0.0775	-0.0485	-0.0315	-0.0200	-0.0135	-0.0100	-0.00750	-0.00500	-0.00400

NOTE: Some js deviations in the grades 7 to 11 have been rounded off to 1/2(IT - 0.001) when IT values is odd.

**TABLE 6-24 TOLERANCE ZONES - EXTERNAL DIMENSIONS (SHAFTS) (k9 ... k4, m9 ... m4) (ANSI B4.2)**

mm

SIZE	k9	k8	k7	k6	k5	k4	m9	m8	m7	m6	m5	m4
OVER 0	0.025	0.014	0.010	0.006	0.004	0.003	0.027	0.016	0.012	0.008	0.006	0.005
TO 3	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.002	0.002	0.002	0.002
OVER 3	0.030	0.018	0.013	0.009	0.006	0.005	0.034	0.022	0.016	0.012	0.009	0.008
TO 6	0.000	0.000	0.001	0.001	0.001	0.001	0.004	0.004	0.004	0.004	0.004	0.004
OVER 6	0.036	0.022	0.016	0.010	0.007	0.005	0.042	0.028	0.021	0.015	0.012	0.010
TO 10	0.000	0.000	0.001	0.001	0.001	0.001	0.006	0.006	0.006	0.006	0.006	0.006
OVER 10	0.043	0.027	0.019	0.012	0.009	0.006	0.050	0.034	0.025	0.018	0.015	0.012
TO 14	0.000	0.000	0.001	0.001	0.001	0.001	0.007	0.007	0.007	0.007	0.007	0.007
OVER 14	0.043	0.027	0.019	0.012	0.009	0.006	0.050	0.034	0.025	0.018	0.015	0.012
TO 18	0.000	0.000	0.001	0.001	0.001	0.001	0.007	0.007	0.007	0.007	0.007	0.007
OVER 18	0.052	0.033	0.023	0.015	0.011	0.008	0.060	0.041	0.029	0.021	0.017	0.014
TO 24	0.000	0.000	0.002	0.002	0.002	0.002	0.008	0.008	0.008	0.008	0.008	0.008
OVER 24	0.052	0.033	0.023	0.015	0.011	0.008	0.060	0.041	0.029	0.021	0.017	0.014
TO 30	0.000	0.000	0.002	0.002	0.002	0.002	0.008	0.008	0.008	0.008	0.008	0.008
OVER 30	0.062	0.039	0.027	0.018	0.013	0.009	0.071	0.048	0.034	0.025	0.020	0.016
TO 40	0.000	0.000	0.002	0.002	0.002	0.002	0.009	0.009	0.009	0.009	0.009	0.009
OVER 40	0.062	0.039	0.027	0.018	0.013	0.009	0.071	0.048	0.034	0.025	0.020	0.016
TO 50	0.000	0.000	0.002	0.002	0.002	0.002	0.009	0.009	0.009	0.009	0.009	0.009
OVER 50	0.074	0.046	0.032	0.021	0.015	0.010	0.085	0.057	0.041	0.030	0.024	0.019
TO 65	0.000	0.000	0.002	0.002	0.002	0.002	0.011	0.011	0.011	0.011	0.011	0.011
OVER 65	0.074	0.046	0.032	0.021	0.015	0.010	0.085	0.057	0.041	0.030	0.024	0.019
TO 80	0.000	0.000	0.002	0.002	0.002	0.002	0.011	0.011	0.011	0.011	0.011	0.011
OVER 80	0.087	0.054	0.038	0.025	0.018	0.013	0.100	0.067	0.048	0.035	0.028	0.023
TO 100	0.000	0.000	0.003	0.003	0.003	0.003	0.013	0.013	0.013	0.013	0.013	0.013
OVER 100	0.087	0.054	0.038	0.025	0.018	0.013	0.100	0.067	0.048	0.035	0.028	0.023
TO 120	0.000	0.000	0.003	0.003	0.003	0.003	0.013	0.013	0.013	0.013	0.013	0.013
OVER 120	0.100	0.063	0.043	0.028	0.021	0.015	0.115	0.078	0.055	0.040	0.033	0.027
TO 140	0.000	0.000	0.003	0.003	0.003	0.003	0.015	0.015	0.015	0.015	0.015	0.015
OVER 140	0.100	0.063	0.043	0.028	0.021	0.015	0.115	0.078	0.055	0.040	0.033	0.027
TO 160	0.000	0.000	0.003	0.003	0.003	0.003	0.015	0.015	0.015	0.015	0.015	0.015
OVER 160	0.100	0.063	0.043	0.028	0.021	0.015	0.115	0.078	0.055	0.040	0.033	0.027
TO 180	0.000	0.000	0.003	0.003	0.003	0.003	0.015	0.015	0.015	0.015	0.015	0.015
OVER 180	0.115	0.072	0.050	0.033	0.024	0.018	0.132	0.089	0.063	0.046	0.037	0.031
TO 200	0.000	0.000	0.004	0.004	0.004	0.004	0.017	0.017	0.017	0.017	0.017	0.017
OVER 200	0.115	0.072	0.050	0.033	0.024	0.018	0.132	0.089	0.063	0.046	0.037	0.031
TO 225	0.000	0.000	0.004	0.004	0.004	0.004	0.017	0.017	0.017	0.017	0.017	0.017
OVER 225	0.115	0.072	0.050	0.033	0.024	0.018	0.132	0.089	0.063	0.046	0.037	0.031
TO 250	0.000	0.000	0.004	0.004	0.004	0.004	0.017	0.017	0.017	0.017	0.017	0.017
OVER 250	0.130	0.081	0.056	0.036	0.027	0.020	0.150	0.101	0.072	0.052	0.043	0.036
TO 280	0.000	0.000	0.004	0.004	0.004	0.004	0.020	0.020	0.020	0.020	0.020	0.020
OVER 280	0.130	0.081	0.056	0.036	0.027	0.020	0.150	0.101	0.072	0.052	0.043	0.036
TO 315	0.000	0.000	0.004	0.004	0.004	0.004	0.020	0.020	0.020	0.020	0.020	0.020
OVER 315	0.140	0.089	0.061	0.040	0.029	0.022	0.161	0.110	0.078	0.057	0.046	0.039
TO 355	0.000	0.000	0.004	0.004	0.004	0.004	0.021	0.021	0.021	0.021	0.021	0.021
OVER 355	0.140	0.089	0.061	0.040	0.029	0.022	0.161	0.110	0.078	0.057	0.046	0.039
TO 400	0.000	0.000	0.004	0.004	0.004	0.004	0.021	0.021	0.021	0.021	0.021	0.021
OVER 400	0.155	0.097	0.068	0.045	0.032	0.025	0.178	0.120	0.086	0.063	0.050	0.043
TO 450	0.000	0.000	0.005	0.005	0.005	0.005	0.023	0.023	0.023	0.023	0.023	0.023
OVER 450	0.155	0.097	0.068	0.045	0.032	0.025	0.178	0.120	0.086	0.063	0.050	0.043
TO 500	0.000	0.000	0.005	0.005	0.005	0.005	0.023	0.023	0.023	0.023	0.023	0.023

**TABLE 6-25 TOLERANCE ZONES - EXTERNAL DIMENSIONS (SHAFTS) (n9 ... n4, p9 ... p4) (ANSI B4.2)**

mm

SIZE	n9	n8	n7	n6	n5	n4	p9	p8	p7	p6	p5	p4
OVER 0	0.029	0.018	0.014	0.010	0.008	0.007	0.031	0.020	0.016	0.012	0.010	0.009
TO 3	0.004	0.004	0.004	0.004	0.004	0.004	0.006	0.006	0.006	0.006	0.006	0.006
OVER 3	0.038	0.026	0.020	0.016	0.013	0.012	0.042	0.030	0.024	0.020	0.017	0.016
TO 6	0.008	0.008	0.008	0.008	0.008	0.008	0.012	0.012	0.012	0.012	0.012	0.012
OVER 6	0.046	0.032	0.025	0.019	0.016	0.014	0.051	0.037	0.030	0.024	0.021	0.019
TO 10	0.010	0.010	0.010	0.010	0.010	0.010	0.015	0.015	0.015	0.015	0.015	0.015
OVER 10	0.055	0.039	0.030	0.023	0.020	0.017	0.061	0.045	0.036	0.029	0.026	0.023
TO 14	0.012	0.012	0.012	0.012	0.012	0.012	0.018	0.018	0.018	0.018	0.018	0.018
OVER 14	0.055	0.039	0.030	0.023	0.020	0.017	0.061	0.045	0.036	0.029	0.026	0.023
TO 18	0.012	0.012	0.012	0.012	0.012	0.012	0.018	0.018	0.018	0.018	0.018	0.018
OVER 18	0.067	0.048	0.036	0.028	0.024	0.021	0.074	0.055	0.043	0.035	0.031	0.028
TO 24	0.015	0.015	0.015	0.015	0.015	0.015	0.022	0.022	0.022	0.022	0.022	0.022
OVER 24	0.067	0.048	0.036	0.028	0.024	0.021	0.074	0.055	0.043	0.035	0.031	0.028
TO 30	0.015	0.015	0.015	0.015	0.015	0.015	0.022	0.022	0.022	0.022	0.022	0.022
OVER 30	0.079	0.056	0.042	0.033	0.028	0.024	0.088	0.065	0.051	0.042	0.037	0.033
TO 40	0.017	0.017	0.017	0.017	0.017	0.017	0.026	0.026	0.026	0.026	0.026	0.026
OVER 40	0.079	0.056	0.042	0.033	0.028	0.024	0.088	0.065	0.051	0.042	0.037	0.033
TO 50	0.017	0.017	0.017	0.017	0.017	0.017	0.026	0.026	0.026	0.026	0.026	0.026
OVER 50	0.094	0.066	0.050	0.039	0.033	0.028	0.106	0.078	0.062	0.051	0.045	0.040
TO 65	0.020	0.020	0.020	0.020	0.020	0.020	0.032	0.032	0.032	0.032	0.032	0.032
OVER 65	0.094	0.066	0.050	0.039	0.033	0.028	0.106	0.078	0.062	0.051	0.045	0.040
TO 80	0.020	0.020	0.020	0.020	0.020	0.020	0.032	0.032	0.032	0.032	0.032	0.032
OVER 80	0.110	0.077	0.058	0.045	0.038	0.033	0.124	0.091	0.072	0.059	0.052	0.047
TO 100	0.023	0.023	0.023	0.023	0.023	0.023	0.037	0.037	0.037	0.037	0.037	0.037
OVER 100	0.110	0.077	0.058	0.045	0.038	0.033	0.124	0.091	0.072	0.059	0.052	0.047
TO 120	0.023	0.023	0.023	0.023	0.023	0.023	0.037	0.037	0.037	0.037	0.037	0.037
OVER 120	0.127	0.090	0.067	0.052	0.045	0.039	0.143	0.106	0.083	0.068	0.061	0.055
TO 140	0.027	0.027	0.027	0.027	0.027	0.027	0.043	0.043	0.043	0.043	0.043	0.043
OVER 140	0.127	0.090	0.067	0.052	0.045	0.039	0.143	0.106	0.083	0.068	0.061	0.055
TO 160	0.027	0.027	0.027	0.027	0.027	0.027	0.043	0.043	0.043	0.043	0.043	0.043
OVER 160	0.127	0.090	0.067	0.052	0.045	0.039	0.143	0.106	0.083	0.068	0.061	0.055
TO 180	0.027	0.027	0.027	0.027	0.027	0.027	0.043	0.043	0.043	0.043	0.043	0.043
OVER 180	0.146	0.103	0.077	0.060	0.051	0.045	0.165	0.122	0.096	0.079	0.070	0.064
TO 200	0.031	0.031	0.031	0.031	0.031	0.031	0.050	0.050	0.050	0.050	0.050	0.050
OVER 200	0.146	0.103	0.077	0.060	0.051	0.045	0.165	0.122	0.096	0.079	0.070	0.064
TO 225	0.031	0.031	0.031	0.031	0.031	0.031	0.050	0.050	0.050	0.050	0.050	0.050
OVER 225	0.146	0.103	0.077	0.060	0.051	0.045	0.165	0.122	0.096	0.079	0.070	0.064
TO 250	0.031	0.031	0.031	0.031	0.031	0.031	0.050	0.050	0.050	0.050	0.050	0.050
OVER 250	0.164	0.115	0.086	0.066	0.057	0.050	0.186	0.137	0.108	0.088	0.079	0.072
TO 280	0.034	0.034	0.034	0.034	0.034	0.034	0.056	0.056	0.056	0.056	0.056	0.056
OVER 280	0.164	0.115	0.086	0.066	0.057	0.050	0.186	0.137	0.108	0.088	0.079	0.072
TO 315	0.034	0.034	0.034	0.034	0.034	0.034	0.056	0.056	0.056	0.056	0.056	0.056
OVER 315	0.177	0.126	0.094	0.073	0.062	0.055	0.202	0.151	0.119	0.098	0.087	0.080
TO 355	0.037	0.037	0.037	0.037	0.037	0.037	0.062	0.062	0.062	0.062	0.062	0.062
OVER 355	0.177	0.126	0.094	0.073	0.062	0.055	0.202	0.151	0.119	0.098	0.087	0.080
TO 400	0.037	0.037	0.037	0.037	0.037	0.037	0.062	0.062	0.062	0.062	0.062	0.062
OVER 400	0.195	0.137	0.103	0.080	0.067	0.060	0.223	0.165	0.131	0.108	0.095	0.088
TO 450	0.040	0.040	0.040	0.040	0.040	0.040	0.068	0.068	0.068	0.068	0.068	0.068
OVER 450	0.195	0.137	0.103	0.080	0.067	0.060	0.223	0.165	0.131	0.108	0.095	0.088
TO 500	0.040	0.040	0.040	0.040	0.040	0.040	0.068	0.068	0.068	0.068	0.068	0.068







