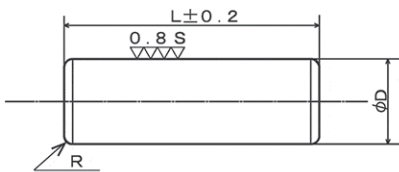
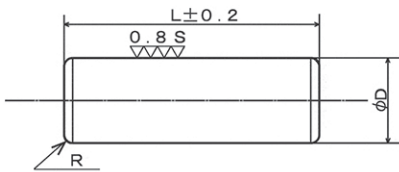


## Hole & Shaft Tolerances Dowel Pin Tolerance and Hole Fit Standards

Basic Size		Locational Transition			Locational Transition			Locational Interference			Medium Drive			Force		
		Hole H7	Shaft k6	Fit'	Hole H7	Shaft n6	Fit'	Hole H7	Shaft p6	Fit'	Hole H7	Shaft s6	Fit'	Hole H7	Shaft u6	Fit'
1	Max	1.010	1.006	+0.010	1.010	1.010	+0.006	1.010	1.012	+0.004	1.010	1.020	-0.004	1.010	1.014	-0.008
	Min	1.000	1.000	-0.006	1.000	1.004	-0.010	1.000	1.006	-0.012	1.000	1.014	-0.020	1.000	1.018	-0.024
1.2	Max	2.210	1.206	+0.010	1.210	1.210	+0.006	1.210	1.212	+0.004	1.210	1.220	-0.004	1.210	1.224	-0.008
	Min	1.200	1.200	-0.006	1.200	1.204	-0.010	1.200	1.206	-0.012	1.200	1.214	-0.020	1.200	1.328	-0.024
1.6	Max	1.610	1.606	+0.010	1.610	1.610	+0.006	1.610	1.612	+0.004	1.610	1.620	-0.004	1.610	1.624	-0.008
	Min	1.600	1.600	-0.006	1.600	1.604	-0.010	1.600	1.606	-0.012	1.600	1.614	-0.020	1.600	1.618	-0.024
2	Max	2.010	2.006	+0.010	2.010	2.010	+0.006	2.010	2.012	+0.004	2.010	2.020	-0.004	2.010	2.024	-0.008
	Min	2.000	2.000	-0.006	2.000	2.004	-0.010	2.000	2.006	-0.012	2.000	2.014	-0.030	2.000	2.018	-0.024
2.5	Max	2.510	2.506	+0.010	2.510	2.510	+0.006	2.510	2.512	+0.004	2.510	2.520	-0.004	2.510	2.524	-0.008
	Min	2.500	3.500	-0.006	2.500	2.504	-0.010	2.500	2.506	-0.012	2.500	2.514	-0.020	2.500	2.518	-0.024
3	Max	3.010	3.006	+0.010	3.010	3.010	+0.006	3.010	3.012	+0.004	3.010	3.020	-0.004	3.010	3.024	-0.008
	Min	3.000	3.000	-0.006	3.000	3.004	-0.010	3.000	3.006	-0.012	3.000	3.014	-0.020	3.000	3.018	-0.024
4	Max	4.012	4.009	+0.011	4.012	4.016	+0.004	4.012	4.020	0.000	4.012	4.027	-0.007	4.012	4.031	-0.011
	Min	4.000	4.001	-0.009	4.000	4.008	-0.016	4.000	4.012	-0.020	4.000	4.019	-0.027	4.000	4.023	-0.031
5	Max	5.012	5.009	+0.011	5.012	5.016	+0.004	5.012	5.020	0.000	5.012	5.027	-0.007	5.012	5.031	-0.011
	Min	5.000	5.001	-0.009	5.000	5.008	-0.016	5.000	5.012	-0.020	5.000	5.019	-0.027	5.000	5.023	-0.031
6	Max	6.012	6.009	+0.011	6.012	6.016	+0.004	6.012	6.020	0.000	6.012	6.027	-0.007	6.012	6.031	-0.011
	Min	6.000	6.001	-0.009	6.000	6.008	-0.016	6.000	6.012	-0.020	6.000	6.019	-0.027	6.000	6.023	-0.031
8	Max	8.015	8.010	+0.014	8.015	8.019	+0.005	8.015	8.024	0.000	8.015	8.032	-0.008	8.015	8.037	-0.013
	Min	8.000	8.001	-0.010	8.000	8.010	-0.019	8.000	8.015	-0.024	8.000	8.023	-0.032	8.000	8.028	-0.037
10	Max	10.015	10.010	+0.014	10.015	10.019	+0.005	10.015	10.024	0.000	10.015	10.032	-0.008	10.015	10.037	-0.013
	Min	10.000	10.001	-0.010	10.000	10.010	-0.019	10.000	10.015	-0.024	10.000	10.023	-0.037	10.000	10.028	-0.042
12	Max	12.018	12.012	+0.017	12.018	12.023	+0.006	12.018	12.029	0.000	12.018	12.039	-0.010	12.018	12.044	-0.015
	Min	11.000	12.001	-0.012	12.000	12.012	-0.023	12.000	12.018	-0.029	12.000	12.028	-0.039	12.000	12.033	-0.044
16	Max	16.018	16.012	+0.017	16.018	16.023	+0.006	16.018	16.029	0.000	16.018	16.039	-0.010	16.018	16.044	-0.015
	Min	16.000	16.001	-0.012	16.000	16.012	-0.023	16.000	16.018	-0.029	16.000	16.028	-0.039	16.000	16.033	-0.044
20	Max	20.021	20.015	+0.019	20.021	20.028	+0.005	20.021	20.035	-0.001	20.021	20.048	-0.014	20.021	20.054	-0.020
	Min	20.000	20.002	-0.015	20.000	20.015	-0.028	20.000	20.022	-0.035	20.000	20.035	-0.048	20.000	20.041	-0.054



Nominal Diameter	1.6	2	2.5	3	4	5	6	8	10	12	13	16	20	
D	Basic Dimension													
	1.6	2	2.5	3	4	5	6	8	10	12	13	16	20	
D	Tolerance													
	h7			0			0			0			0	
R Dimension	0.5	0.8	0.8	1.5	1.5	1.5	2	2	2	2	2.5	3		
Circularity	2 μm			3 μm			4 μm			5 μm				
L Tolerance	±0.2													



Nominal Diameter	1.6	2	2.5	3	4	5	6	8	10	12	13	16	20	
D	Basic Dimension													
	1.6	2	2.5	3	4	5	6	8	10	12	13	16	20	
D	Tolerance													
	m6			+0.008			+0.012			+0.015			+0.018	
R Dimension	0.5	0.8	0.8	1.5	1.5	1.5	2	2	2	2	2.5	3		
Circularity	2 μm			3 μm			4 μm			5 μm				
L Tolerance	±0.2													

DIA.	NOMINAL SIZE RANGE IN INCHES & MILLIMETERS														
	> .039 to .118 in 1 to 3 mm	.118 to .236 in 3 to 6 mm	.236 to .394 in 6 to 10 mm	.394 to .709 in 10 to 18 mm	.709 to 1.181 in 18 to 30 mm	1.181 to 1.969 in 30 to 50 mm	1.969 to 3.150 in 50 to 80 mm	3.150 to 4.724 in 80 to 120 mm	4.724 to 7.874 in 120 to 180 mm						
FIT		VALUES (From / To) IN INCHES													
Hole	H6	+ .0024	+ .0031	+ .0035	+ .0043	+ .0051	+ .0063	+ .0075	+ .0087	+ .0098					
	g5	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		- .0016	- .0020	- .0024	- .0031	- .0035	- .0043	- .0051	- .0059	- .0067	- .0075				
Shaft	h5	- .0016	- .0020	- .0024	- .0031	- .0035	- .0043	- .0051	- .0059	- .0067					
	k5	+ .0016	+ .0024	+ .0028	+ .0035	+ .0043	+ .0051	+ .0059	+ .0067	+ .0075	+ .0083				
		0.0000	+ .0004	+ .0008	+ .0008	+ .0008	+ .0008	+ .0012	+ .0012	+ .0016	+ .0016				
Hole	H7	+ .0039	+ .0047	+ .0059	+ .0071	+ .0087	+ .0102	+ .0116	+ .0131	+ .0146	+ .0161	+ .0177	+ .0192	+ .0207	
	f6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
		- .0024	- .0039	- .0051	- .0063	- .0079	- .0098	- .0118	- .0142	- .0169	- .0208				
Shaft	g6	- .0024	- .0039	- .0051	- .0063	- .0079	- .0098	- .0118	- .0142	- .0169					
	h6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		- .0028	- .0047	- .0055	- .0067	- .0079	- .0098	- .0114	- .0134	- .0154	- .0174				
Hole	H8	+ .0055	+ .0071	+ .0087	+ .0106	+ .0130	+ .0154	+ .0181	+ .0213	+ .0248					
	e8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		- .0055	- .0079	- .0098	- .0126	- .0157	- .0197	- .0236	- .0283	- .0335	- .0394				
Shaft	f8	- .0055	- .0079	- .0098	- .0126	- .0157	- .0197	- .0236	- .0283	- .0335					
	h8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		- .0055	- .0071	- .0087	- .0106	- .0130	- .0154	- .0181	- .0213	- .0248	- .0288				
Hole	H9	+ .0079	+ .0106	+ .0130	+ .0157	+ .0197	+ .0244	+ .0291	+ .0343	+ .0394					
	e9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		- .0079	- .0110	- .0136	- .0169	- .0209	- .0252	- .0299	- .0354	- .0417	- .0486				
Shaft	f9	- .0079	- .0110	- .0136	- .0169	- .0209	- .0252	- .0299	- .0354	- .0417					
	h9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		- .0079	- .0118	- .0142	- .0169	- .0205	- .0244	- .0291	- .0343	- .0394	- .0446				
Hole	H11	+ .0114	+ .0146	+ .0177	+ .0217	+ .0268	+ .0323	+ .0381	+ .0442	+ .0506					
	e11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		- .0114	- .0146	- .0177	- .0217	- .0268	- .0323	- .0381	- .0442	- .0506	- .0574				
Shaft	f11	- .0114	- .0146	- .0177	- .0217	- .0268	- .0323	- .0381	- .0442	- .0506					
	h11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
		- .0114	- .0143	- .0172	- .0212	- .0260	- .0315	- .0374	- .0434	- .0494	- .0555				