

RECOMMENDED TOLERANCE GRADES
[Wallach, 1981]

TYPICAL APPLICATION		SLIP GAUGES, PRODUCTION AND WEAR TOLERANCES GAUGES AND MEASURING INSTRUMENTS		PARTS SUBJECT TO VERY TIGHT TOLERANCES, PRECISION BEARINGS, PRECISION ASSEMBLIES		PRECISION ENGINEERED DESIGNS (GENERAL)		ENGINEERING WORK IN GENERAL, GIVING SCOPE FOR WIDER TOLERANCES		ROUGH WORK, STEEL STRUCTURES, CASTINGS, AGRICULTURAL MACHINERY	
Lapping, Honing											
Cylindrical grinding											
Surface grinding											
Diamond turning											
Diamond boring											
Broaching											
Reaming											
Turning											
Boring											
Milling											
Planing, Shaping											
Drilling											
Nominal Size [mm]		Difference between top and bottom limit [µm] [BS 4500]									
Over	Up to and including	IT 4	IT 5	IT 6	IT 7	IT 8	IT 9	IT 10	IT 11	IT 12	IT 13
-	3	3	4	6	10	14	25	40	60	100	140
3	6	4	5	8	12	18	30	48	75	120	180
6	10	4	6	9	15	22	36	58	90	150	220
10	18	5	8	11	18	27	43	70	110	180	270
18	30	6	9	13	21	33	52	84	130	210	330
30	50	7	11	16	25	39	62	100	160	250	390
50	80	8	13	19	30	46	74	120	190	300	460
80	120	10	15	22	35	54	87	140	220	350	540
120	180	12	18	25	40	63	100	160	250	400	630
180	250	14	20	29	46	72	115	185	290	460	720
250	315	16	23	32	52	81	130	210	320	520	810
315	400	18	25	36	57	89	140	230	360	570	890
400	500	20	27	40	63	97	155	250	400	630	970
500	630	-	-	44	70	110	175	280	440	700	1100
630	800	-	-	50	80	125	200	320	500	800	1250
800	1000	-	-	56	90	140	230	360	560	900	1400
1000	1250	-	-	66	105	165	260	420	660	1050	1650
1250	1600	-	-	78	125	195	310	500	780	1250	1950
1600	2000	-	-	92	150	230	370	600	920	1500	2300
2000	2500	-	-	110	175	280	440	700	1100	1750	2800
2500	3150	-	-	135	210	330	540	860	1350	2100	3300