

General tolerance															
General tolerances for length and angle dimensions										See DINISO2768-1(1991-06)					
Tolerance grade	Length size														
	Edge tolerance (mm) Rated size range														
	0.5 to 3	3 to 6	6 to 30	30 to 120	120 to 400	400 to 1000	1000 to 2000	2000 to 4000							
f(precision)	±0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5	±0.8	±1.2	±2					
m(middle)	±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3	±4					
c(rough)	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3	±4	±6	±8					
v(very rough)	—	±0.5	±1	±1.5	±2.5	±4	±6	±8							
Tolerance grade	Radius and hypotenuse					Angular size									
	Edge tolerance(mm) Rated size range					Edge tolerance in degrees and minutes Nominal size range (shorter angled sides)									
	0.5 to 3	3 to 6	6 to 30	30 to 120	120 to 400	Exceed 6	to 10	10 to 50	50 to 120	120 to 400	Exceed 400				
f(precision)	±0.2	±0.5	±1	±1°	±0°30'	±0°20'	±0°10'	±0°5'							
m(middle)				±1°30'	±1°	±0°30'	±0°15'	±0°10'							
c(rough)				±3°	±2°	±1°	±0°30'	±0°20'							
v(very rough)	±0.4	±1	±2												
General tolerances for shape and position										See DINISO2768-2(1991-04)					
tolerance	Tolerancemm														
	Straightness and flatness						Verticality				Symmetry				beat
grade	Rated size range (mm)						Rated size range (mm) (Shorter angled sides)				Rated size range (mm) (shorter graphic elements)				
	arrive 10	10 arrive	30 arrive	100 arrive	300 arrive	100 arrive	arrive 100	100 arrive	300 arrive	1000 arrive	3000 arrive	arrive 100	100 arrive	300 arrive	1000 arrive
H	0.02	0.05	0.1	0.2	0.3	0.4	0.2	0.3	0.4	0.5	0.5				0.1
K	0.0	0.1	0.2	0.4	0.6	0.8	0.4	0.6	0.8	1	0.6		0.8	1	0.2
L	0.1	0.2	0.4	0.8	1.2	1.6	0.6	1	1.5	2	0.6	1	1.5	2	0.5
General Tolerances Length Dimensions and Angular Dimensions Shape and Position Tolerances															
tolerance	Length size														
	Edge tolerance (mm) Rated size range														
grade	0.5 to 3	3 to 6	6 to 30	30 to 120	120 to 400	400 to 1000	1000 to 2000	2000 to 4000	4000 to 8000						
f(precision)	±0.05	±0.05	±0.1	±0.15	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3	±4	±6	±8	
m(middle)	±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2	±3	±4	±6	±8	±10	±15	
c(rough)	±0.15	±0.2	±0.5	±0.8	±1.2	±2	±3	±4	±6	±8	±10	±15	±20	±30	
sg (very rough)	—	±0.5	±1	±1.5	±2	±3	±4	±6	±8	±10	±15	±20	±30	±45	
tolerance	Radius and hypotenuse					Angular size									
	Edge tolerancemm Rated size range					Edge tolerance in degrees and minutes Nominal size range (shorter angled sides)									
grade	0.5 to 3	3 to 6	6 to 30	30 to 120	120 to 400	arrive 10	10 to 50	50 to 120	120 to 400	Exceed 400					
f(precision)	±0.2	±0.5	±1	±2	±2	±1°	±30'	±20'	±0°10'	±5'					
m(middle)						±1°30'	±50'	±25'	±15'	±10'					
c(rough)						±3°	±2°	±1°	±30'	±20'					
v(very rough)	±0.4	±1	±2	±2	±2										
Tolerancemm															

tolerance grade	Straightness and flatness Rated size range							Symmetry	beat
	to 6	6 to 30	30 to 120	120 to 400	400 to 1000	1000 to 2000	2000 to 4000	shorter image  Shape element	
R	0.004	0.01	0.02	0.04	0.07	0.1	—	0.3	0.1
S	0.008	0.02	0.04	0.08	0.15	0.2	0.3	0.5	0.2
T	0.025	0.06	0.12	0.25	0.4	0.6	0.9	1	0.5
IN	0.1	0.25	0.5	1	1.5	2.5	3.5	2	1

Cooperation recommendation cooperation selection				
Cooperate with recommendation		See DIN7157(1966-01)		
Row 1	C11/h9,D10/h9,E9/h9,F8/h9,H8/f7,F8/h6,H7/f7,H8/h9,H7/h6,H7/n6,H7/r6,H8/x8或u8			
Line 2	C11/h11,D10/h11,H8/d9,H8/e8,H7/g6,G7/h6,H11/h9,H7/j6,H7/k6,H7/s6			
Coordination selection (example)		See DIN7157(1966-01)		
base hole	Properties/application examples		cardinal axis	
clearance fit				
	H8/d9	Large fit gap  Bushing on shaft	D10/h9	
	H8/e8	Obvious fit gaps: The parts can be easily moved against each other by hand.  Lever bearing, positioning ring on shaft	E9/H9	
	H8/f7	Larger fit gap: The parts can be easily moved against each other by hand.  Shaft-sliding bearing	F8/h9	
	H7/f7	Small fit gap: The parts can still be easily moved around each other by hand.  Universal sliding bearings, moving wheels, control pistons on cylinders	F8/h6	
	H7/g6	Slight fit gap: The parts can still be easily moved around each other by hand.  Pin in hole, inner shaft of sliding bearing	G7/h6	
	H8/h9	There is almost no noticeable fit: the parts can be easily moved against each other by hand.  Shaft sleeve, shaft positioning ring	H8/h9	
	H7/h6	The fit gap is quite small: it is still possible to move this part with hand force.  The center hole of the bearing cap, the punch punch in the punch plate	H7/h6	
Transition fit				
	H7/j6	To be precise, the fit gap is the fit transition: move this part with your hand or possible.  gear on shaft	not sure	
	H7/n6	To be precise, the fit gap is the fit transition: moving this part requires a small pressure.  Drill bushing, support pin within the device		
interference fit				
	H7/r6	Subtle Fit Transition: It takes a lot of pressure to move this part.  Shell inner bushing		

	H7/s6	Sufficient fit transition: It takes a lot of pressure to move this part. Plain bearing bushing, worm gear ring	not sure
	H8/u8	Large fit transition: This part can only be assembled by extension or contraction. Tight ring, wheel on shaft, shaft connector	
	H8/x8	Very large fit transition: This part can only be assembled by extension or contraction. Tight ring, wheel on shaft, shaft connector	