			H6	H7	H8	H9	Applicable part	Functional classification		Application example
Can be moved relatively	Clearance fit	Loose fit				c9	The part which allows a large clearance space or the part requires clearance space. The part which can be enlarged to make clearance space to make assembly easier. The part which requires proper clearance space in the high temperature.	Functionally, the part which requires large clearance space Expanse. Positioning error is large. Length of fit is long.		Piston ring and piston ring groove Fit of loosening safety pin
		Light rolling fit			d9	d9	The part which allows a large clearance space or the part requires clearance space.	For reducing Production cost Safety cost		Crank web and pin bearing (Side surface) Exhaust valve cage and traveling part of spring sheet Piston ring and piston ring groove
				e7	e8	e9	The part which allows a slight clearance space or the part requires clearance space (high grade fit). The bearing part which has slight clearance space and good lubrication. The bearing part which is working under the condition of high temperature, high speed and high load (high grade pressure feed lubrication).	The general rotating or traveling part. (The condition of good lubrication is required.)		Fit of exhaust valve seat Shoulder Bolts MSB (e9) Main bearing for crankshaft Stopper Bolts STBG (e9) General traveling part Puller Bolts PBNT (e9)
		Rolling fit	f6	f7	f7 f8		Fit which can be mobile due to proper clearance space (high grade fit). The general cold bearing part of grease or oil lubrication.	Ordinary fit parts. (Disassembling is often done.)		Insertion part of cooling exhaust valve cage Return Pins (f6) General shaft and bushing Runner Lock Pins (f6) Lever for link system and bushing
		Precision rolling fit	g5	g6			The continuous rotary part of light load precision machine. Fit which can be mobile in spite of small clearance space (spigot and positioning). Precision traveling part.	The part which requires precision movement without any slack.		Pin for link system and lever Key and key groove Valve stem of precision control valve Pusher Pins PSP (g6)
Cannot be moved relatively	Transition fit	Lubricated fit	h5	h6	h7 h8	h9	Fit which can be moved manually with using a lubricator (high grade positioning). Special precision traveling part. Stationary part which is not of great importance.	Capable of assembling and disassembling without damaging components.	Transmission of power cannot be done by only junction power of fit.	Fit of rim and boss Fit of toothed gear of precision gear mechanism Dowel Pins MSTH (h7) Sprue Bushings (h6)
		Push fit	h5 h6	js6			Mounting part which is given a little leeway. High-precision positioning where both are unmobile. Fit which can be assembled and disassembled by wood or lead hammer.			Fit between joint flanges Governor way and pin Fit of rim of toothed gear and boss
		Driving fit	js5	k6			Fit which can be assembled and disassembled by an iron hammer or hand press (Key or such items are required to prevent other components from rotating). High-precision positioning.			Fixation of gear pump shaft and casing Reamer bolt Press-fit Section of Tapered Pin Sets (k6)
			k5	m6			Same as the above for assembling and disassembling High-precision positioning which does not tolerate any clearance space.			Reamer bolt Dowel Pins MSTM (m6) Fixation of piston of hydraulic system and shaft Ball Buttons BBT (k5) Fit of joint flange and shaft
		Light press fit	m5	n6			Fit which requires considerable power for assembling and disassembling. High-precision fixed mounting. (Key or such items are required for large torque transmission.)		Small power can be transmitted by junction power of fit.	Flexible plate coupling and gear (passive side) Precision fit Leader Pins & Bushings (m5) Insertion of valve guide for inlet valve Angular Pins (m5)
	Interference fit	Press fit	n5 n6	p6			Fit which requires much power for assembling and disassembling. (Key or such items are required for large torque transmission.) However, when non-ferrous components are fitted together, press fit power will be activated. Standard press fit fixing between iron and iron or between bronze and copper.	Hard to disassemble without damaging components.		Insertion of valve guide for inlet valve Dowel Pins MST (p6) Fixation of gear and shaft (small torque) Stopper Pins STPN (p6) Flexible plate coupling and gear (active side)
		Cooling fit	p5	r6			Same as the above for assembling and disassembling Shrinkage fit, cooling fit and strong press fit for large dimension compo-nents.			Joint and shaft
		Shrinkage fit・Strong press fit	r5	s6 t6 u6 x6			Fixed firmly together, so that permanent assembling can be sought with shrinkage fit, cooling fit and strong press fit for assembling. Press fit for light alloy.		Considerable power can be transmitted by junction power of fit.	Fixation of bushing for bearing Insertion of valve guide for inlet valve Fixation of joint flange and shaft (large torque) Fixation of driving gear and boss Fixation of bushing for bearing

Printed in red are listed with applicable examples of mold parts.

1.1 Commonly used hole-basis fits

Basic hole	Tolerance zone class of shaft																	
	Clearance fit							Transition fit			Interference fit							
H6						g5	h5	js5	k5	m5								
					f6	g6	h6	js6	k6	m6	n6*	p6*						
H7					f6	g6	h6	js6	k6	m6	n6	p6*	r6*	s6	t6	u6	x6
				e7	f7		h7	js7										
H8					f7		h7											
				e8	f8		h8											
			d9	e9														
H9			d8	e8			h8											
		c9	d9	e9			h9											
H10	b9	c9	d9															

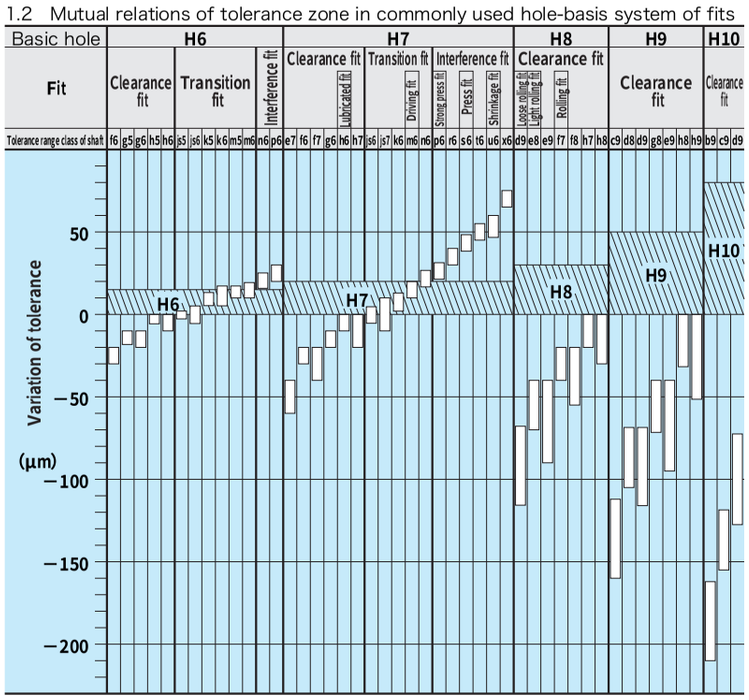
Notice＊Fits will make exceptions according to the size steps.

2.1 Commonly used shaft-basis system of fits

Basic shaft	Tolerance zone class of hole																	
	Clearance fit							Transition fit			Interference fit							
h5							H6	JS6	K6	M6	N6*	P6						
h6					F6	G6	H6	JS6	K6	M6	N6	P6*						
					F7	G7	H7	JS7	K7	M7	N7	P7*	R7	S7	T7	U7	X7	
h7				E7	F7		H7											
					F8		H8											
h8			D8	E8	F8		H8											
			D9	E9			H9											
h9			D8	E8			H8											
		C9	D9	E9			H9											
	B10	C10	D10															

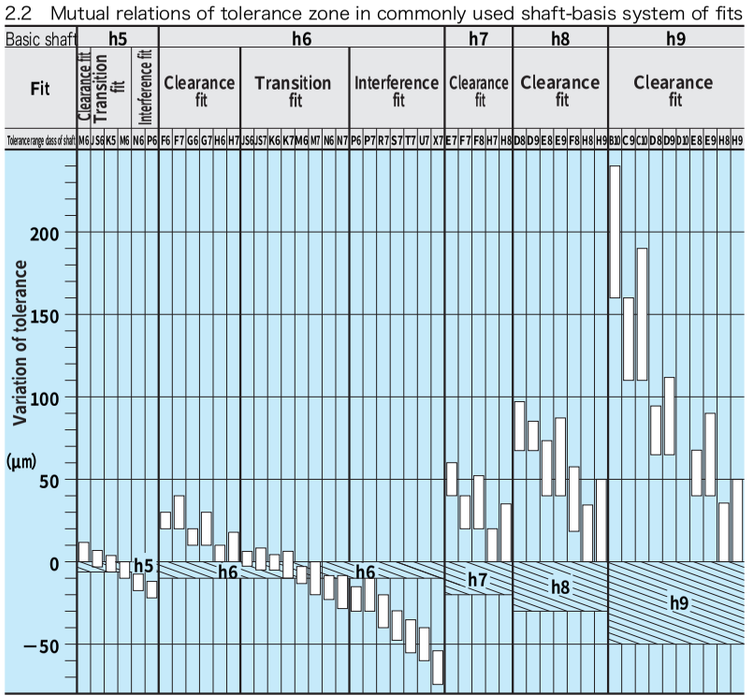
Notice＊Fits will make exceptions according to the size steps.

1.2 Mutual relations of tolerance zone in commonly used hole-basis system of fits



＊This table shows the case when basic size is over 18mm to 30mm.

2.2 Mutual relations of tolerance zone in commonly used shaft-basis system of fits



＊This table shows the case when basic size is over 18mm to 30mm.