

[TECHNICAL DATA] BASIS OF SELECTION FOR FITS

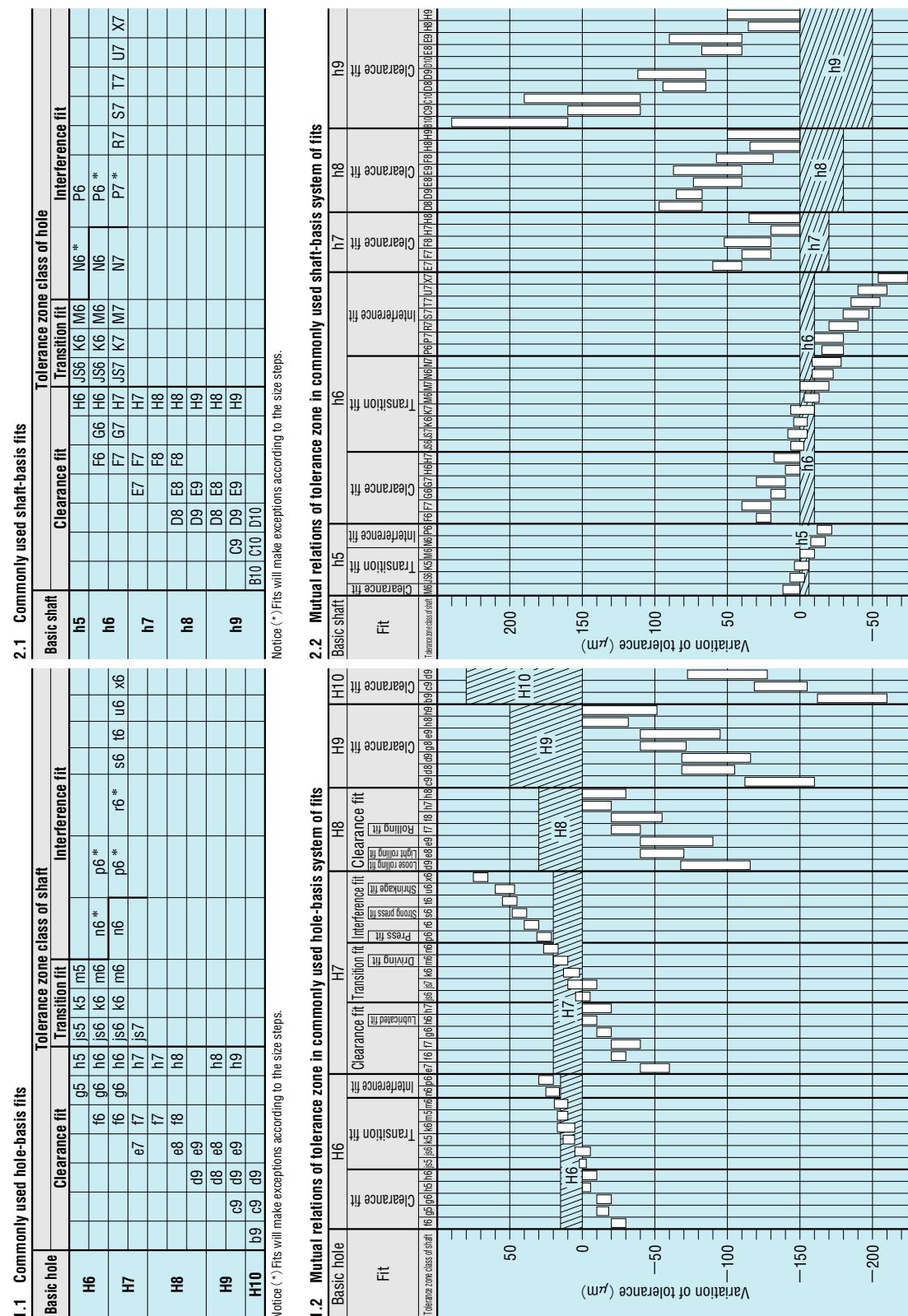
Excerpt from "Usage of JIS series"
Manual for Designing
(Precision Ver.)

	H6	H7	H8	H9	Applicable part	Functional classification	Application example
			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
		d9	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). Fit which can be mobile due to proper clearance space (high grade fit). The general cold bearing part of grease or oil lubrication.	T the general rotating or traveling part (The condition of good lubrication is required.) Ordinary fit parts. (Disassembling is often done.)	Fit of exhaust valve seat Main bearing for crankshaft General traveling part Stripper bolt M18B (e9) Insertion part of cooling exhaust valve cage General shaft and bushing Guide lifter pin (g6) Lever for lling system and bushing
f6	f7	f8			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
g5	g6				Fit which can be moved manually with using a lubricator (high grade positioning). Stationary part which is not of great importance.		Fit of rim and boss Dowel pin M3TH (h7) Fit of toothed gear of precision gear mechanism
h5	h6	h7	h8		Mounting part which is given a little leeway. High-precision positioning where both are immovable.		Fit between joint flanges Governor way and pin Fit of rim of toothed gear and boss
i5	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 Dowel pin MSTM (m6) Fixation of piston of hydraulic system and shaft Fit of joint flange and shaft
k5	m6				Same as the above for assembling and disassembling. High-precision positioning which does not tolerate any clearance space.		Precision fit Punch SPAS, etc. (m5) Insertion of valve guide for inlet valve Straight side MSD, etc. (h5) Insertion of valve guide for outlet valve Die MHD, etc. (m5) Fixation of gear and shaft (small torque) Flexible plate coupling and gear (active side)
j5	s6				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.
m5	n6				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 fitting between iron and iron or between bronze and copper.)		Considerable power can be transmitted by junction power of fit.
p5	r6				Same as the above for assembling and disassembling. Shrinkage fit, cooling fit and strong press fit for large dimension components.		Considerable power can be transmitted by junction power of fit.
r5	s6				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.		Fixation of driving gear and boss
t6	u6			x6			Fixation of bushing for bearing
							Insertion of valve seat for inlet valve Dowel pin MST (j6) Fixation of joint flange and shaft (large torque) Fixation of bushing for bearing

ⓘ Press die parts are shown in the application example for the item written in red letters.

[TECHNICAL DATA] SYSTEM OF LIMITS AND FITS

Excerpt from JIS B 0401(1986)



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