

# THERMALLOY T type

(solid lubricant dispersal bearing)



Excluding products marked ※

## Material Characteristics

	Material Symbol		Operating Temperature °C	Max. Bearing Pressure	Max. Sliding Speed	Description
	Powder Carbon	Granulate Carbon				
※ Lead Bronze Alloy	30/6 30/8 30/12	30/8P 30/12P	-50~+200	49.0MPa 29.4 4.9	1.2m/min 30.0 60.0	Lead added bronze. General purpose material for use in air or water
Bronze Alloy	144SB6 144SB8 144SB12	144SB8P 144SB12P		49.0 29.4 4.9	1.2 30.0 60.0	Bronze with no lead added so can be used in food factory machinery. Can also be used in pure water
Special Bronze Alloy	144SB6W 144SB8W 144SB12W	144SB8PW 144SB12PW	-200~+350	39.2 19.6 2.9	1.2 30.0 60.0	Copper alloy which has excellent dimensional stability
Nickel-Copper-Iron Alloy	277NC8W 277NC12W 653NC8W		~+450 // ~+550	19.6 4.9 19.6	2.4 30.0 2.4	Excellent corrosion resistance, particularly in sea water
Iron Alloy	963/8W		~+600	19.6	2.4	Used when oxidation of the bearing is a problem
Nickel Alloy	Ni98/8W Ni98/12W		~+600	19.6 4.9	2.4 18.0	Used for bearings for atomic energy related and anti-radiation use. Has good corrosion resistance and operation in liquid is preferable.
Iron Nickel Alloy	831FN10W	831FN12PW	~+700	39.2	1.2	High temperature properties are good, strength is excellent.
	237NF10W			39.2		High temperature and corrosion resistance properties are excellent.

Note:  
 • The values given for maximum bearing pressure and maximum sliding speed are merely for guidance, and may vary dependant on other conditions. In addition, usage of the bearing at both maximum bearing pressure and maximum sliding speed is likely to cause heat generation and wear.  
 • Special material is prepared for use in a vacuum. Please consult us for more information.  
 • For usage below 200°C the W symbol is required only on lead-bronze alloy or bronze alloy materials.

## Important Notes on the Determination of Material Codes

① Each material code is composed of symbols that indicate the alloy series, the amount of graphite contained, and the state of graphite dispersal. When you have determined the material code from the upper table, we add a manufacturing-based classification code and indicate it on the label for the actual article and in the drawings.

**Examples**  
 Your selected code plus our added classification code.  
 30/8 -> 30/8-2Mo

**Meaning of the code**  
 In this example, "30/" is the alloy series, "8" is the percentage of powdered graphite, and "2Mo" is a code we add.  
 144SB12PW -> 144SB12P-2MoW  
 In this example, "144SBW" is the alloy series, "12P" is the percentage of powdered graphite, and "2Mo" is a code we add.

- ② The amount of graphite contained is normally 6%, 8%, 10%, or 12%.  
 ③ A powdered-graphite value of 8% and a granulated-graphite value of 12% (indicated by a "P" code) are nearly equivalent in terms of strength, and have an identical maximum specific load. Powdered graphite is effective in situations where contamination by external foreign matter does not occur, and granulated graphite is effective in situations susceptible to contamination by sand, iron filings, or the like.



## Material Dimension Table (All Parts with Chamfering Margin)

(Unit: mm)

Die No.	Outer diameter	Inner diameter	Length	Length	Length	Length	Remarks
<b>B20</b>	22	—					*1 For powdered graphite and lead-bronze, bronze, and special bronze alloys of B40 up to B120, values of up to 84ℓ are possible. For other than the above, values are up to 64ℓ. For granulated graphite, values are up to 64ℓ for all dies.
<b>B30</b>	32	—					
<b>B40</b>	43	—					
<b>B60</b>	63	—	44ℓ	54ℓ	64ℓ	84ℓ *1	
<b>B80</b>	83	—					
<b>B100</b>	103	—					
<b>B120</b>	123	—					
<b>R40</b>	43	17					*2 For powdered graphite and lead-bronze, bronze, and special bronze alloys other than R40, R50, R60B, or R70, values of up to 84ℓ are possible. For other than the above, values are up to 64ℓ. For granulated graphite, values are up to 64ℓ for all dies. For other than the above, values are up to 64ℓ. For granulated graphite, values are up to 64ℓ for all dies.
<b>R50</b>	52	23					
<b>R60A</b>	63	27					
<b>R60B</b>	63	38					
<b>R70</b>	72	43					
<b>R80A</b>	83	38					
<b>R80B</b>	83	47					
<b>R90</b>	93	57					
<b>R100A</b>	103	47					
<b>R100B</b>	103	67					
<b>R110</b>	113	77					
<b>R120A</b>	123	67					
<b>R120B</b>	123	87					
<b>R130A</b>	133	77	44ℓ	54ℓ	64ℓ	84ℓ *2	
<b>R130B</b>	133	97					
<b>R140A</b>	143	87					
<b>R140B</b>	143	97					
<b>R140C</b>	143	107					
<b>R150</b>	153	117					
<b>R160A</b>	163	107					
<b>R160B</b>	163	127					
<b>R170A</b>	173	117					
<b>R170B</b>	173	137					
<b>R180A</b>	183	137					
<b>R180B</b>	183	147					
<b>R190</b>	193	157					
<b>R200</b>	204	167					
<b>R220</b>	224	186					
<b>P65</b>	Height 65	Width 100	Thickness 29				For plate material (powdered graphite) and lead-bronze, bronze, and special bronze alloys, values of up to 34T are possible.
<b>P90</b>	90	130	29				

Notes:  
 • When ordering, please specify the material code and die dimensions.  
 • All granulated-graphite material other than \*1 or \*2 is up to 64ℓ.

## Die Dimensions

- All T type material has cutting margins on the outer-diameter, inner-diameter, and length faces.
- The minimum cutting margin is 2–4 mm for the diameter, and in the length direction is 4 mm on a side for iron or iron-nickel alloys and about 2 mm on a side for other materials.
- The material is round bar, hollow, and oblong.
- We perform complete finishing before delivery. Products are delivered with a grip margin in some cases.