6. MOUNTING OF FBJ PILLOW BLOCK UNITS

6.1 Mounting on Shaft

Table 6.1
TIGHTENING TORQUE FOR SET SCREW

| Bearing Number	Set Screw	Tightening Torque
SB201~SB203	M 5X0.8	30
SER201~SER203		
SB204~SB207	M 6X1	40
SER204~SER206		
UC201~UC206		
(SSUC201~SSUC206)		
UCX05		
UC305~UC306		
SB208	M 8X1	85
SER207~SER209		
UC207~UC209		
(SSUC207~SSUC209)		
UCX06~UCX08		
UC307		
SER210~SER212	M 10X1.25	175
UC210~UC212		
(SSUC210~SSUC212)		
UCX09~UCUCX11		
UC308~UC309		
UC213~UC218	N 12X1.5	280
UCX12~UCX17		
UC310~UC314		
UC315~UC316	M 14X1.5	350
UC317~UC319	M 16X1.5	560
UC320	M 18X1.5	620

Fig 6.1
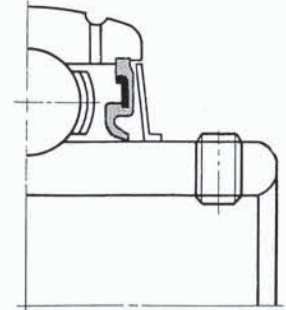
Fig 6.1.1

6.1.1 Set Screw Method

Two knurled cup-point, self locking, socket-head set screws (Fig 6.1) fitted at 120° apart in the extended inner ring of the bearing insert.

For standard loads and moderate speeds simply mount the bearing unit into position and tighten down the set screw to the recommended torque value. Additional security can be achieved by spot drilling the shaft to accommodate the set screw point. Using the correct size of socket head wrench tightens the set screw to recommended torque.

A lock washer is provided which prevents the locknut backing off when one of the tabs is engaged with the corresponding notch in the locknut.

6.1.2 Eccentric Lock Collar Method

Here, an eccentric diameter formed on the extended inner ring of the bearing which engages a similarly formed eccentric diameter in the bore of a separate collar.

Locking is achieved by turning the collar in the direction of shaft rotation until the eccentric diameters of both collar and inner ring are fully engaged. The collar is provided with a blind hole to facilitate tightening when locking the bearing to the shaft. The set screw when tightened to the recommended torque values prevents the collar backing off in service.
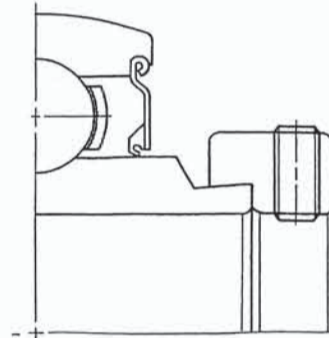

Fig 6.1.2

6.1.3 Adapter Sleeve Method

This consists of a standard adapter sleeve, locknut and lock washer.

When fitting the bearing to the shaft, care must be taken to ensure that the locknut is not over tightened as this can reduce or eliminate the required bearing internal clearance, resulting in premature failure.

The proper tightening condition can be obtained, firstly tightening the locknut by hand and then rotating 2/5 to 3/5 revolutions by a spanner.

A lock washer is provided which prevents the lock nut backing off when one of the tabs is engaged with the corresponding notch in the locknut.
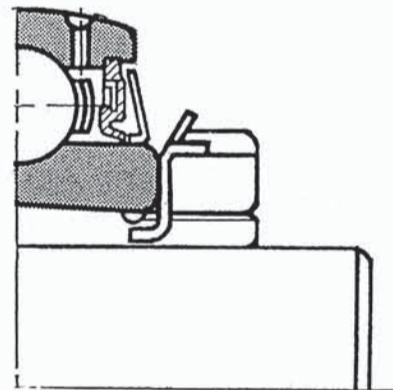

Fig 6.1.3

6.2 Shaft Selection

Standard mounting of cylindrical bore insert bearing to the shaft is loose fit. Still, selection of shaft has to consider the speed of the insert bearing. Below table provide you the dimensional accuracy of your shaft to be made for loose fit, in order to facilitate you smooth running.

Table 6.2.1

Shaft Dia		Shaft Tolerance (m)							
(mm)		j6		h6		h7		h8	
Over	incl	Max	Min	Max	Min	Max	Min	Max	Min
10	18	+ 8	- 3	0	-11	0	-18	0	-27
18	30	+ 9	- 4	0	-13	0	-21	0	-33
30	50	+11	- 5	0	-16	0	-25	0	-39
50	80	+12	- 7	0	-19	0	-30	0	-46
80	120	+13	- 9	0	-22	0	-35	0	-54
120	180	+14	-11	0	-25	0	-40	0	-63
Limit of dn value		above 120000		above 100000 up to 120000		above 60000 up to 100000		60000 and below	

dn value = d (shaft diameter in mm) x n (speed in rpm)

6.3 Mounting of Housing

To prevent any damage to the insert bearing due to faulty installation, Housing unit should always be bolted to a base which is to be flat and rigid. The bearing center alignment angle of +3° is required for the mounting base. In case of bearing unit with cover, this angle is restricted to +1°.