

## Part B. Stainless Steel Spherical Outside Surface Ball Bearings

### 1. Material

#### 1.1 Material for outer ring & inner ring

1.1.1 9Cr18 is adopted.

Table 1.1.2 9Cr18 chemical contents in percentage

Code	Chemical Contents %				
	C	Si $\leq$	Mn $\leq$	P $\leq$	S $\leq$
9Cr18	0.90~1.00	0.8	0.8	0.035	0.03

Table 1.2 Material for the other components

No.	Items	Material
1	Steel ball	9Cr18
2	Half cage	0Cr18Ni9
3	Seals	Silicon rubber + 1Cr18Ni9
4	Clinch	0Cr18Ni9
5	Slinger	0Cr18Ni9
6	Set screw	2Cr13 or 0Cr18Ni9

#### 1.3 Material for nipples

1.3.1 Stainless Steel 304 is adopted.

### 2. Tolerance

Table 2.1 Tolerances on outer ring (Unit: 0.001 mm)

Nominal bore diameter		Dm		Radial run-out
Over	Incl.	High	Low	
(mm)	(mm)			Max.
40	50	0	-11	20
50	80	0	-13	25
80	120	0	-15	35

**Table 2.2 Tolerances on inner ring (Unit: 0.001 mm)**

Nominal bore diameter d		dm Deviations		Radial run-out
Over ( mm )	Incl. ( mm )	High	Low	Max.
10	18	+18	0	12
18	30	+21	0	15
30	50	+25	0	18
50	80	+30	0	22

**3. Radial Clearance****(Unit: 0.001 mm)**

Nominal bore diameter d		Radial Clearance	
Over ( mm )	Incl. ( mm )	Min.	Max.
10	32	12	28
32	40	13	33
40	50	14	36
50	62	18	43