Diameter series refer to the dimension series of outer diameter of the bearings with the same inner diameter. The outside dimensions are 7, 8, 9, 0, 1, 2, 3, 4, etc. which are increasing series.

Width series refer to the dimension of width dimension of the bearings with the same diameter. There are width dimensions are 7, 8, 9, 0, 1, 2, 3, 4, etc. which are increasing series.

The height series of thrust bearings correspond to the width series of radial bearings, with four increasing series of height dimensions, 7, 9, 1, 2, etc. See Table 2.1.

The bearing dimension series number are consist of the width (height) series codes and the diameter series codes.

See Fig. 2.4 and Fig. 2.5 for their relations.

For metric system tapered roller bearings, ISO 355 specifies that the diameter series of the relative inner diameters are represented by A, B, C, D, E, F and G, the outer diameters are increasing series, and width dimensions are represented by A, B, C, D and E, which are incremental, in addition, specifies the contact angle series (1, 2, 3, 4, 5, 6, 7), which are increasing series. The standards of China specify that the diameter series and width series are both 0, 1, 2 and 3.

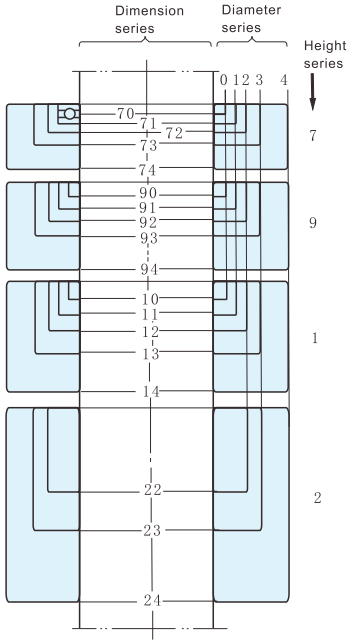

Fig. 2.5 Dimension series of thrust bearings

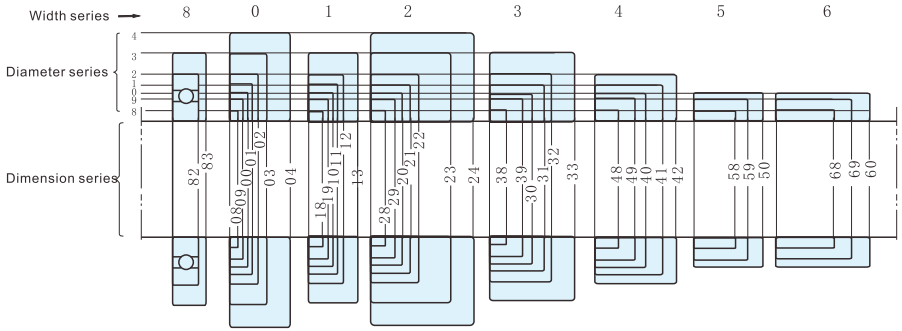

Fig. 2.4 Dimension series of radial bearings(excluding tapered roller bearings)

2.2 Structure of bearing number

Bearings number is consist of basic number. Prefix code and suffix code. In which basic number describes bearing type ,structure and size while prefix code or suffix code is bearing shape ,tolerance and some Supplementary specification when technical requirement is changed .

Table 2.2 Arrangement rules of bearing codes

	Prefix code	Basic number			Suffix code							
					1	2	3	4	5	6	7	8
Example	Whole set bearing component	Type code	Dimension series code	Inner diametercode	Internal structure	Transformation of seal and shield	Cage and its material	Bearing material	Class of tolerance	Clearance	Arrangement	Other
6204-2RZ/P53		6	(0)2	04		2RZ			P5	C3		

2.2 Basic number

Except needle roller bearings, the basic number of the bearing whose dimension conforms to any of GB/T273.1, GB/T273.2, GB/T273.3 and GB 3882 and consists of bearing type code, dimension Series code and inner diameter code.

Basic number:

In the basic number, when the bearing number is represented by letters, there shall be a space of half character between the the bearing dimensional series code, inner diameter code or mounting fit characteristic number.

For example: NU 2300

For general bearing types, dimension series code and bearing basic numbers consisting of bearing type code and dimension series code. See Table 2.3

Table 2.3

Bearing type	Type code	Dimension series code		Bearing number
		Width series	Diameter series	
Double row angular contact ball bearing	(0) (0)	3 3	2 3	3200 3300
Self-aligning ball bearing	1 (1) 1 (1)	(0) 2 (0) 2	2 2 3 3	1200 2200 1300 2300
Spherical roller bearing	2 2 2 2 2 2 2 2	1 2 2 3 3 3 4 4	3 2 3 0 1 2 0 1	21300 22200 22300 23000 23100 23200 24000 24100
Spherical thrust roller bearing	2 2 2	9 9 9	2 3 4	29200 29300 29400
Tapered roller bearing	3 3 3 3 3 3 3 3 3 3	0 0 1 2 2 2 2 3 3 3	2 3 3 0 2 3 9 0 1 2	30200 30300 31300 32000 32200 32300 32900 33000 33100 33200
Double row deep groove ball bearing	4 4	(2) (2)	2 3	4200 4300
Thrust ball bearing	5 5 5 5	1 1 1 1	1 2 3 4	51100 51200 51300 51400
Double direction thrust ball bearing	5 5 5	2 2 2	2 3 4	52200 52300 52400
Thrust ball bearing with spherical seat washer	5 5 5	1 1 1	2 3 4	53200[1)] 53300 53400
Double direction thrust ball bearing with spherical seat washer	5 5 5	2 2 2	2 3 4	53200[2)] 53300 53400
Deep groove ball bearing	6 6 6 6 16 6 6 6 6	1 3 1 1 (0) (1) (0) (0) (0)	7 7 8 9 0 0 2 3 4	61700 63700 61800 61900 16000 6000 6200 6300 6400

Bearing type	Type code	Dimension series code		Bearing number
		Width series	Diameter series	
Angular contact ball bearing	7 7 7 7 7	1 (1) (0) (0) (0)	9 0 2 3 4	71900 7000 7200 7300 7400
Cylindrical roller thrust bearing	8 8	1 1	1 2	81100 81200
Cylindrical roller bearing without rib on inner ring	NU NU NU NU NU NU	1 (0) 2 (0) 2 (0)	0 2 2 3 3 4	NU 1000 NU 200 NU 2200 NU 300 NU 2300 NU 400
Cylindrical roller bearing with single rib on inner ring	NJ NJ NJ NJ NJ	(0) 2 (0) 2 (0)	2 2 3 3 4	NJ 200 NJ 2200 NJ 300 NJ 2300 NJ 400
Cylindrical roller bearing with single rib on inner ring and loose rib	NUP NUP NUP NUP	(0) 2 (0) 2	2 2 3 3	NUP 200 NUP 2200 NUP 300 NUP 2300
Cylindrical roller bearing without rib on outer ring	N N N N N N	1 (0) 2 (0) 2 (0)	0 2 2 3 3 4	N 1000 N 200 N 2200 N 300 N 2300 N 400
Cylindrical roller bearing with single rib on outer ring	NF NF NF	(0) (0) 2	2 3 3	NF 200 NF 300 NF 2300
Double row cylindrical roller bearing	NN	3	0	NN 3000
Double row cylindrical roller bearing without rib on inner ring	NNU	4	9	NNU 4900
Ball bearing units set screw locking	UC UC	2 3		UC 200 UC 300
Ball bearing units with tapered bore	UK UK	2 3		UK 200 UK 300
Ball bearing units with eccentric collar	UEL UEL	2 3		UEL 200 UEL 300
Four-point contact ball bearing	QJ QJ	(0) (0)	2 3	QJ 200 QJ 300
Needle roller bearing	NA	4 4 6	8 9 9	NA 4800 NA 4900 NA 6900

Note: The "( )" in the table denotes that the number is omitted .
1) Dimension series are respectively 12, 13, 14, expressed as 32, 33, 34.
2) Dimension series are respectively 22, 23, 24, expressed as 42, 43, 44.

2) Dimension series

The bearing dimension series code consist of width (height) series and diameter series .See Table 2.4 for the dimension series of radial bearing and thrust bearing.

Table 2.4

Diameter series code	Radial bearing								Thrust Bearing			
	Width series code								Height series code			
	8	0	1	2	3	4	5	6	7	9	1	2
	Diameter series code											
7	–	–	17	–	37	–	–	–	–	–	–	–
8	–	08	18	28	38	48	58	68	–	–	–	–
9	–	09	19	29	39	49	59	69	–	–	–	–
0	–	00	10	20	30	40	50	60	70	90	10	–
1	–	01	11	21	31	41	51	61	71	91	11	–
2	82	02	12	22	32	42	52	62	72	92	12	22
3	83	03	13	23	33	–	–	–	73	93	13	23
4	–	04	–	24	–	–	–	–	74	94	14	24
5	–	05	–	–	–	–	–	–	–	95	–	–

2.4 Inside diameter code

1) The dimension space of standard inner diameter is shown in Table 2.5.

Table 2.5 Dimension space

Bearing nominal inner diameter d mm		Standard inner diameter mm	Base
Over	Up to		
—	1.0	0.6	-
1.0	3.0	1, 1.5, 2, 2.5	0.5 mm space
3.0	10	3, 4, ···, 9	1 mm space
10	20	10, 12, 15, 17	-
20	35	20, 22, 25, 28, 30, 32	Normal dimension R20 series
35	110	35, 40, 45, ···, 105	5 mm space
110	200	110, 120, 130, ···, 190	10 mm space
200	500	200, 220, 240, ···, 480	20 mm space
500	2500	500, 530, ···, 2500	Normal dimensionR40 series