

# 9. Bearing designation

The purpose of designation is that of identification of bearings, so that bearings with the same designation to be interchangeable both dimensionally and operationally no matter who the producers may be. Designations of URB rolling bearings are in accordance with those used by world-known bearing companies: SKF, FAG, INA, KOYO

etc. and they are standardized by national standard STAS 1679.

The complete designation of a bearing consists of a basic design and may include one or more supplementary designations (prefixes and suffixes), as shown in chart fig.9.1.

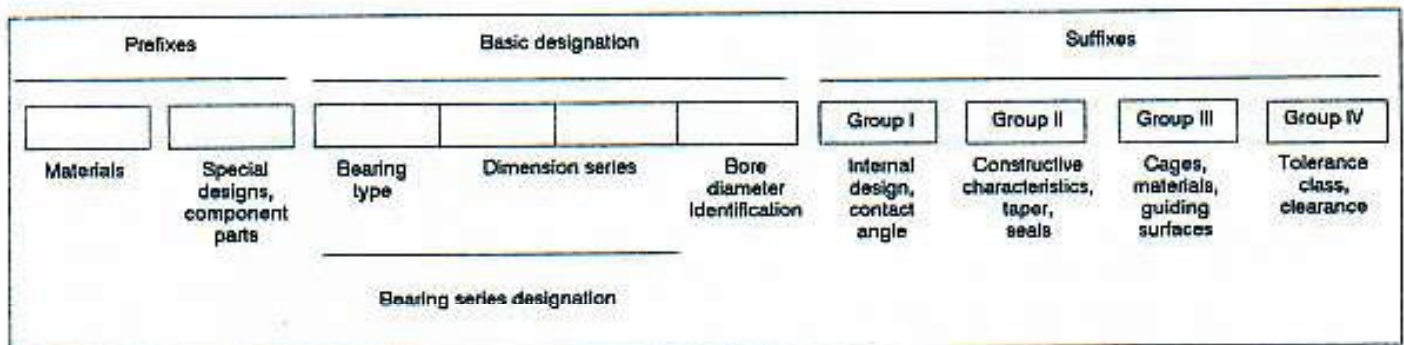


Fig. 9.1

The basic designation consists of an identification of the type of bearing (figure or letter), the series designation, in accordance with ISO and the bore diameter identification.

The designations of the bearing type and dimension series for main standardized and unstandardized bearing types are given in table 9.1.

Bore diameter identification consists of one, two or more figures as follows:

- bore diameter from 1 to 9 mm

- one figure, representing the bore diameter (e.g. 623, 608);

- bore diameter from 10 to 495 mm

- two figures, as follows: 00 for 10 mm, 01 for 12 mm, 02 for 15 mm, 03 for 17 mm, 04 and up to 99 for bore diameter from 20 to 495 mm. (bore diameter = bore diameter identification x 5, e.g. 6230, d = 150 mm);

- bore diameter of 500 mm and over 500 mm

- is stated directly separated by a slash, the same applies to the values which are not perfect multiples of 5, or if they include a decimal point (e.g. 610/560, 62/32, 62/1,5).

Dismountable single row deep groove ball bearings of magneto-type ( E, BO, L, M ), non-standardized needle roller bearings, needle roller and cage assemblies, support rollers, cam followers and other types of special bearings listed in this catalogue make an exception from this rule. In this cases, the values of bore diameter are stated (e.g. E15, L20, NA304520, K121515, NATR22).

**Designation of the type and dimension series for the main standardized and non-standardized bearings**

**Tabelul 9.1**

Bearing design	Bearing type identification	Series designation	Standardized	Non-standardized	Example	Bearing design	Bearing type identification	Series designation	Standardized	Non-standardized	Example
	6	17, 00, 04	18, 10, 22	50, 69	61952 6208		K			K d.D.B	K 202820
	4	22	23		4204 4305		KK			KK d.D.B.	KK608620
	E	E	B0		E15 L20		Wa		1	Wa 1 d.	Wa 1070
			L0						2	Wa 2 d.	Wa 2830
			M							Wa d.D.B	Wa 18022070
	10	10, 03	02, 23	05...09	1205 11210 1508		2	39, 41, 23		51...59	22216 25130
			22					30, 22, 13			
								40, 32			
								31			
	7	18, 02, 28	28, 03	05...09	71832A 7210 7522		3	29, 02, 13		40...49	32010 32208 34115
			19, 04					20, 22, 23			
			10					30, 32			
								31, 03			
	QJ	02	03	05...09	QJ 212 QJ 505		35	9, 2 <sup>1)</sup>		04...08	35130 35514
								0, 3			
								1			
	0	32	33	34...35	3207 3424D		36	0, 2 <sup>1)</sup>		04...08	36060
								1, 3			
	NU	18	28	10	NU208 NU5140		5	11, 13		51...59	51115 51212 55144
								12, 14			
	NJ	02	03	03	NJ2206 NJ5140		5	22		61...69	62205 62308 66120
								23			
								24			
	N	22	03	03	N310 N5161M		Ry	85		66...69	Ry6540 Ry6661
	NUP	04			NUP208 NUP5410		23	44			23420 234720
								47			
	NNU	49		51...57	NNU4920 NNS124		8	11		51...59	81115 81220 85115
								12			
	NN	30		51...57	NN3015		6	93		51...59	89312 85312
	NNU	69	60		NNU6064 4NNU5146		8	22		61...69	82210 82315 86144
								23			
								24			
	NA	46	49	40	NA4905 NA121815 NA 85/26		9	94		51...59	99450 95140
	NA	89			NA8912		2	92		95...99	29240 29344 29548
								93			
								94			
	RHNA				RHNA d.D.B RHNA 303825		ANK				ANK 2035

1) Bearings with dimensions corresponding only to the diameter series.

## Prefixes

Prefixes are letter-identifications which indicate the material, other than steel for bearings or component parts of bearing. The prefix for material is separated by a horizontal line from the rest of designation.

### Prefixes for materials

<b>H</b>	- heat-resisting steel (e.g. H - NUP 210)
<b>M</b>	- copper alloy (e.g. M - 6008)
<b>S</b>	- plastics, glass, ceramics etc. (e.g. S - 6204)
<b>T</b>	- case - hardening steel (e.g. T - 35352)
<b>X</b>	- stainless steel (e.g. X - 8202)

### Prefixes for special designs or parts of bearings

<b>BL</b>	- single row deep groove ball bearings with maximum number of balls (e.g. BL6208)
<b>K</b>	- cage with rolling elements of dismountable bearing (e.g. KNU205)
<b>L</b>	- free ring of dismountable bearing (e.g. LNU205) (interchangeable ring, e.g. L30205)
<b>R</b>	- dismountable bearing without free ring (e.g. RNU205; RN205)
<b>E</b>	- shaft washer of thrust ball bearing (e.g. E51210)
<b>W</b>	- housing washer of thrust ball bearing (e.g. W51216)
<b>WS</b>	- shaft washer of roller thrust bearing (e.g. WS81108)
<b>GS</b>	- housing washer of roller thrust bearing (e.g. GS 81112)

<b>LS</b>	- axial washer, thickness greater than 1 mm (e.g. LS 2035)
<b>AS</b>	- axial washer, thickness less than 1 mm or less (e.g. AS 2035)

## Suffixes

Suffixes are used to identify various constructive modifications of the bearing in comparison to normal design. They are classified in four different groups, as follows:

<b>Group I</b>	- Modifications of internal design, design with increased basic load (e.g. A, C, E etc.), contact angle (e.g. A, B, C) and others.
<b>Group II</b>	- Modifications of external design, tapered bore, groove on outer ring etc. (e.g. 30205A, 1210K, 6210NR, 6310-2RS)
<b>Group III</b>	- Modifications of cage design, material, guiding surfaces etc. (e.g. 6205TN, NU310MA).
<b>Group IV</b>	- Modifications of normal design regarding tolerance classes, bearing radial or axial clearance, stability of dimensions at high temperatures, bearing matching etc. (e.g. 6206P5, 6310P53, NU210SO, 7010CDB).

These suffixes for bearing designation are listed considering the groups they belong to, at the beginning of each bearing group.