INTERNATIONAL STANDARD ISO 3464

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Textile machinery and accessories — Bearings for bottom rollers and allied dimensions — Caps with central nose and caps with side lugs

Matériel pour l'industrie textile — Roulements pour cylindres inférieurs et cotes de montage — Chapeaux à tenon central et chapeaux à positionnement latéral

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3464 was developed by Technical Committee ISO/TC 72, *Textile machinery and accessories*, and was circulated to the member bodies in November 1975.

It has been approved by the member bodies of the following countries :

Belgium	Mexico	United Kingdom
Brazil	Poland	U.S.S.R.
Czechoslovakia	Romania	Yugoslavia
France	South Africa, Rep. of	
Germany	Spain	
India	Switzerland	
Italy	Turkey	

The member body of the following country expressed disapproval of the document on technical grounds :

Japan

Printed in Switzerland

Textile machinery and accessories – Bearings for bottom rollers and allied dimensions – Caps with central nose and caps with side lugs

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the range of bearings for bottom rollers to be applied to spinning preparatory, spinning and doubling (twisting) machinery, together with the principal associated dimensions of the bottom rollers and the roller stands.

Two types of cap are included for use with these bearings (cap with central nose and cap with side lugs). The cap with central nose is primarily intended for new designs.

2 REFERENCES

ISO/R 286, *ISO system of limits and fits – Part 1 : General, tolerances and deviations.*

ISO 5233, *Textile machinery and accessories – Bottom fluted rollers for drafting systems.*[1]

1) At present at the stage of draft.

3 DIMENSIONS AND GENERAL BEARING DETAILS

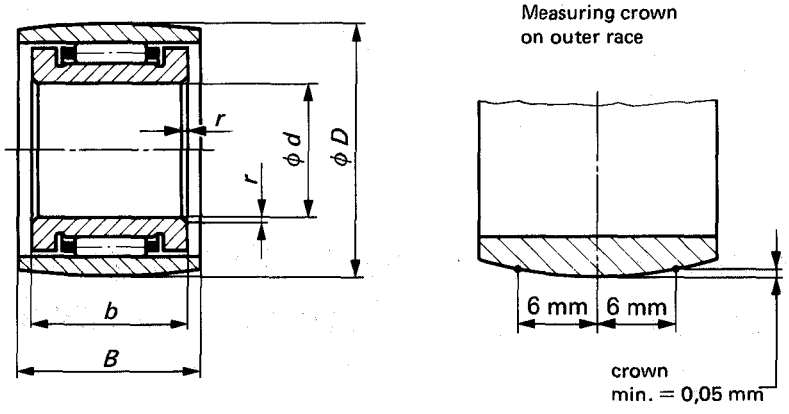


FIGURE 1 — **Bearing**

TABLE 1 — **Dimensions and technical details of bearings**

Values in millimetres
(except daN for carrying capacity)

	Symbol	Tolerance	Designation of bearing* : UWL 28	UWL 32	UWL 36	UWL 40	UWL 45
Outer race diameter	*D*	$^{0}_{-0,05}$	28	32	36	40	45
Inner race bore diameter	*d*	$^{0}_{-0,01}$	16,5	19	21	23	25
Outer race width	*B*		22	23	25	27	30
Inner race width	*b*	± 0,025	19	20	22	23,5	25
Minimum basic carrying capacity, daN**			600	800	1 000	1 200	1 500
Minimum radial play			0,015	0,015	0,015	0,015	0,015
Inner race radial run-out	R_i		0,009	0,009	0,013	0,013	0,013
Inner race lateral run-out	S_i		0,005	0,005	0,005	0,005	0,005
Inner race width variation	U_p		0,005	0,005	0,005	0,005	0,005
Inner race chamfer	*r*	$^{+0,4}_{-0,2}$	0,8	0,8	0,8	0,8	0,8

* UWL : Original German abbreviation for *Unter-Walzen-Lager.*

** 1 daN ≈ 1,02 kgf

4 DIMENSIONS OF BOTTOM ROLLERS

The characteristics given below are important for the mounting of the bearings. Details of the execution of the bottom rollers, however, are left to the manufacturer.

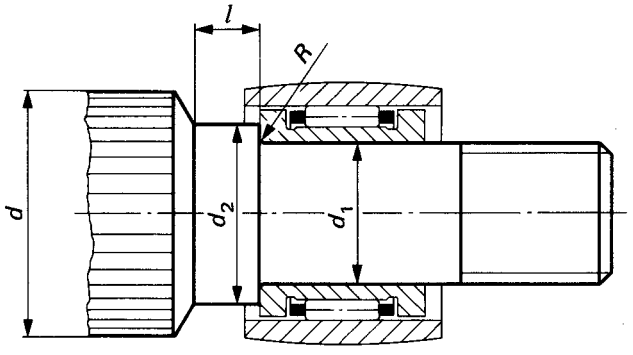


FIGURE 2

TABLE 2 – **Bottom roller diameters**

d* mm
(22)
25
27
(28)
30
32
35
38
40
45
50
55
60

* No fixed relationship between d and a particular size of bearing is specified. Use of the values in brackets is to be avoided as far as possible.

The values indicated are taken from ISO 5233.

TABLE 3 – **Dimensions of the journals of bottom rollers**

Values in millimetres

	Symbol	Tolerance	Designation of bearing :				
			UWL 28	UWL 32	UWL 36	UWL 40	UWL 45
Journal diameter	d_1	j5[1)]	16,5	19	21	23	25
Neck diameter	d_2		21	24	26	28	34
Neck length	l min.		6	8	10	10	12
Radius	R max.		0,5	0,5	0,5	0,5	0,5

1) ISO/R 286.

5 DIMENSIONS OF CAPS AND ROLLER STANDS

5.1 Cap with central nose

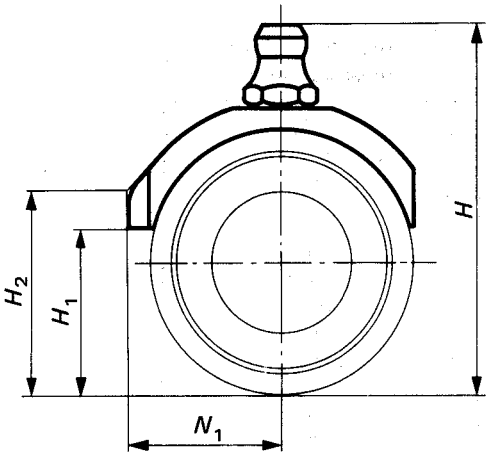
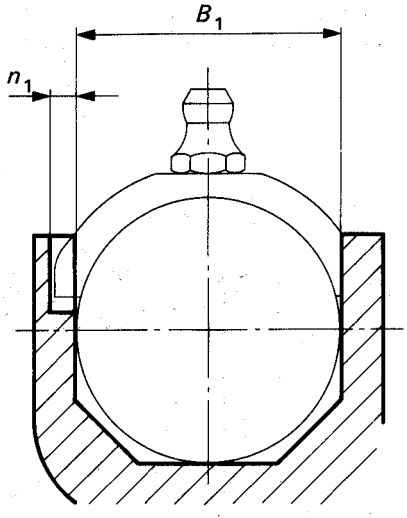
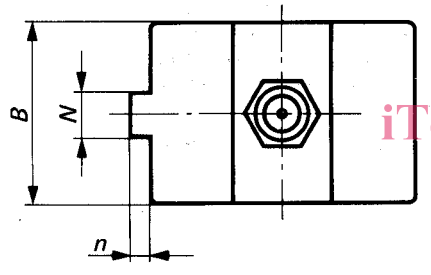


TABLE 4 – **Width of bearing seating**

B_2* mm
20
22
24
25
26
30

* No fixed relationship between B_2 and a particular size of bearing is specified. Recommended size of $B_2 \leqslant B$ (see table 1).





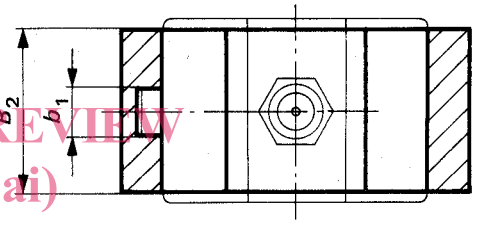


FIGURE 3 – **Cap with central nose**

FIGURE 4 – **Bearing seating for cap with central nose**

TABLE 5 – **Main dimensions of caps with central nose and of bearing seatings**

Values in millimetres

	Symbol	Tolerance	Designation of bearing :				
			UWL 2800	UWL 3200	UWL 3600	UWL 4000	UWL 4500
Nose width	N	$^{0}_{-0,2}$	5,9	5,9	5,9	5,9	5,9
Nose extension	N_1 max.		16,5	18,5	20,5	22,5	25
Overall height	H max.		42	48	52	58	63
Nose height	H_1 min.		17	19	21	23	25,5
Nose height	H_2 max.		23	25	27	29	31,5
Nose projection	n max.		2,5	2,5	2,5	2,5	2,5
Bearing seating	B_1	$^{+0,15}_{+0,05}$	28	32	36	40	45
Groove width	b_1	$^{+0,2}_{+0,05}$	6	6	6	6	6
Groove depth	n_1 min.		3	3	3	3	3

5.2 Cap with side lugs

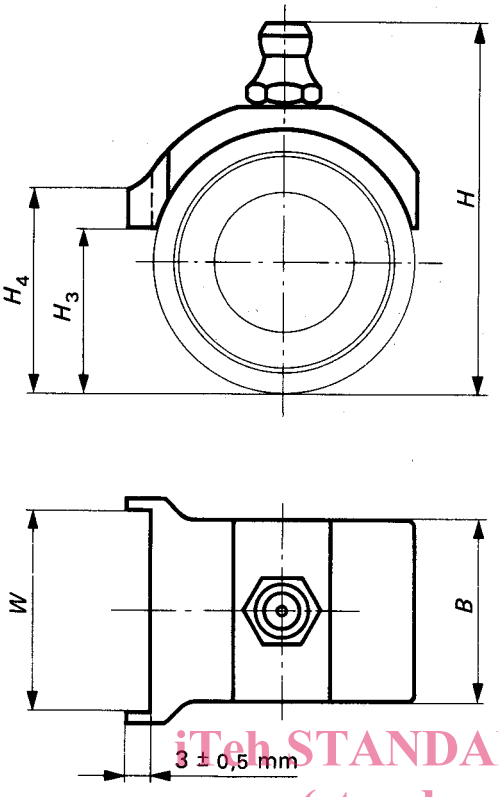


FIGURE 5 — **Cap with side lugs**

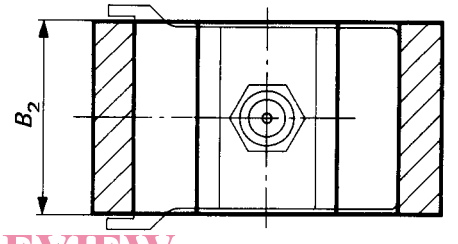


FIGURE 6 — **Bearing seating for caps with side lugs**

TABLE 6 — **Main dimensions of caps with side lugs and of bearing seatings**

Values in millimetres

	Symbol	Tolerance	Designation of bearing :				
			UWL 2820 UWL 2822 UWL 2824	UWL 3220 UWL 3222 UWL 3224	UWL 3620 UWL 3622 UWL 3624 UWL 3626	UWL 4024 UWL 4025 UWL 4026 UWL 4030	UWL 4524 UWL 4525 UWL 4526 UWL 4530
Overall height	H max.		42	48	52	58	63
Lug height	H_3 min.		16	19	21	24	29
Lug height	H_4 max.		24	27	29	32	37
Bearing seating	B_1	+ 0,15 + 0,05	28	32	36	40	45

TABLE 7 — **Distances of side lugs W and widths of bearing seatings B_2**

Values in millimetres

Bearing	W	B_2	Bearing	W	B_2	Bearing	W	B_2	Bearing	W	B_2	Bearing	W	B_2
UWL 2820	20,2	20	UWL 3220	20,2	20	UWL 3620	20,2	20						
UWL 2822	22,2	22	UWL 3222	22,2	22	UWL 3622	22,2	22						
UWL 2824	24,2	24	UWL 3224	24,2	24	UWL 3624	24,2	24	UWL 4024	24,2	24	UWL 4524	24,2	24
									UWL 4025	25,2	25	UWL 4525	25,2	25
						UWL 3626	26,2	26	UWL 4026	26,2	26	UWL 4526	26,2	26
									UWL 4030	30,2	30	UWL 4530	30,2	30

6 ORDER SPECIFICATION

The designation used for ordering a bearing for bottom rollers is composed of the three letters UWL, followed by two digits indicating the outer race diameter. If the bearing is to be furnished with a cap, two further digits shall be added : 00 for caps with central nose, or, in the case of caps with side lugs, two digits giving the nominal value B_2 for the width of the bearing seating.

Examples :

– Bottom roller bearing with outer race diameter $D = 32$ mm :

Bearing UWL 32 – ISO 3464

– Bottom roller bearing with outer race diameter $D = 40$ mm and with cap with central nose :

Bearing UWL 4000 – ISO 3464

– Bottom roller bearing with outer race diameter $D = 36$ mm, with cap with side lugs and with width of bearing seating $B_2 = 24$ mm :

Bearing UWL 3624 – ISO 3464